

FOREWORD

Congratulations, and welcome to the fabulous world of **HX1302/HX1402** ownership, where serious work is made fun again!

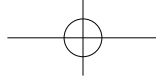
This versatile tractor is a culmination of the entire tractor and diesel knowledge gained by the **Daedong IND. Co., LTD** over the years since 1947 and has been designed with the finest materials, under rigid quality control standards.

Knowledge of tractor operation is essential for many years of dependable service and reliability. To help new owner's familiarize themselves with the **KIOTI HX1302/HX1402**, an owner's manual with helpful information regarding safe operation and maintenance has been provided with your purchase. If the information you seek is not found in this manual, please contact your authorized **KIOTI** dealer for assistance.

Please feel free to contact **KIOTI** with your questions/concerns.

< NOTE >

- Read this manual carefully and keep it handy for future reference.
- When leasing or transferring this tractor, deliver this manual together with the tractor.
- The specifications in this manual are subject to change without notice.



ISO 3600 STANDARDS

This manual was compiled in compliance with the ISO 3600, standards and the instructions contained here comply with the requirements of the Machinery Directive 2010/52/EU in force in the European Community. For tractors sold or used outside the European Community, local laws will prevail.

Main protections on the tractors discussed in this manual.

DESCRIPTION	CABIN
1. ROPS (Protection against overturning)	Yes
2. FOPS (Protection against objects falling from above)	No
3. OPS (Protection against penetration of objects from sides) protection against hazardous chemicals	No (Category I)

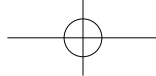


TABLE OF CONTENTS

SECTION

■ SAFETY PRECAUTIONS	1
■ IDENTIFICATION WARRANTY	2
■ SPECIFICATIONS.....	3
■ DESCRIPTION OF OPERATING SYSTEM	4
■ MONITOR OPERATION	5
■ OPERATION	6
■ 3-POINT HITCH IMPLEMENT AND LOADER OPERATION	7
■ MAINTENANCE	8
■ STORAGE AND FLUIDS DISPOSAL.....	9
■ TROUBLESHOOTING.....	10
■ INDEX.....	11

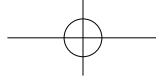


TABLE OF CONTENTS

SAFETY PRECAUTIONS	1-1	DECALS	1-33
PRECAUTIONS BEFORE OPERATION	1-2	DECAL MAINTENANCE	1-38
GENERAL PRECAUTIONS	1-2	IDENTIFICATION WARRANTY	2-1
RISK OF OVERTURNING	1-8	VEHICLE IDENTIFICATION NUMBERS	2-2
PRECAUTIONS DURING OPERATION	1-11	TRACTOR SERIAL NUMBER	2-2
WHEN STARTING THE ENGINE	1-11	ENGINE SERIAL NUMBER	2-2
WHEN DRIVING THE TRACTOR	1-15	ESSENTIAL REPLACEMENT PARTS	2-4
PARKING THE TRACTOR	1-17	OILS AND FLUIDS	2-4
OPERATING THE PTO	1-17	FILTERS	2-5
WHEN USING THE 3-POINT HITCH	1-18	BELTS AND RUBBER PARTS	2-5
PRECAUTIONS DURING SERVICING	1-19	OTHER COMPONENTS	2-6
PRECAUTIONS WHEN USING THE LOADER ..	1-24	WARRANTY	2-7
PRECAUTIONS WHEN USING	1-27	SPECIFICATIONS	3-1
PRECAUTIONS WHEN CLEANING THE TRAC-		GENERAL SPECIFICATIONS	3-2
TOR	1-30	EXTERNAL DIMENSIONS	3-2
SAFETY DECAL MAINTENANCE	1-31	GENERAL SPECIFICATIONS	3-3
DECAL MOUNTING LOCATION	1-31	NOISE LEVELS	3-6
		MACHINE VIBRATION	3-7

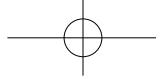


TABLE OF CONTENTS

TRAVELING SPEEDS	3-8	BATTERY CHARGING LAMP	4-17
IMPLEMENT LIMITATIONS	3-10	HEAD LIGHT HIGH BEAM LAMP	4-17
STANDARD SIZE BY IMPLEMENT	3-10	TURN SIGNAL LAMPS	4-17
DESCRIPTION OF OPERATING SYSTEM	4-1	GLOW PLUG LAMP	4-18
EXTERIOR VIEW	4-4	PARKING BRAKE LAMP	4-18
SWITCHES	4-5	PTO LAMP	4-18
MOUNTING LOCATION	4-5	4WD LAMP	4-19
KEY SWITCH	4-6	DRAFT LAMP	4-19
COMBINATION SWITCH	4-7	BRAKE(ONE SIDE) LAMP	4-20
HAZARD LAMP SWITCH	4-9	CRUISE PTO LAMP	4-20
DPF REGENERATION SWITCH	4-9	DPF REGENERATION WARNING LAMP	4-21
ECO/MODE SELECTION SWITCH	4-11	DPF REGENERATION UNDERWAY LAMP	4-21
INSTRUMENT PANEL	4-13	CHECK ENGINE WARNING LAMP	4-25
TACHOMETER / HOUR METER	4-14	DEF LEVEL WARNING LAMP	4-25
PTO SPEED MARK	4-14	DEF QUALITY LAMP	4-26
FUEL GAUGE	4-15	WATER-IN-FUEL WARNING LAMP	4-26
ENGINE COOLANT TEMPERATURE GAUGE	4-15	FUEL LEVEL WARNING LAMP	4-27
ENGINE OIL PRESSURE WARNING LAMP	4-16	EMISSION WARNING LAMP	4-27
		GENERAL ERROR CODE DISPLAY	4-28
		OPERATING THE CONTROLS	4-29
		SHUTTLE SHIFT LEVER	4-30



TABLE OF CONTENTS

RANGE GEAR SHIFT LEVER	4-31	POSITION CONTROL LEVER AND SWITCH	4-47
CREEP SPEED LEVER	4-32	ADJUSTING THE HEIGHT OF THE RIGHT HAND CONTROL ARM.....	4-48
PTO SHIFT LEVER.....	4-34	DIFFERENTIAL LOCK PEDAL (REAR)	4-49
PTO SELECTION LEVER	4-34	SEAT ADJUSTMENT	4-49
CLUTCH PEDAL	4-35	JOYSTICK LEVER.....	4-53
BRAKE PEDAL.....	4-36	DOUBLE ACTING LEVERS	4-55
TILT STEERING.....	4-37	EXTERNAL LIFT CONTROL SWITCH.....	4-56
TELESCOPING FUNCTION	4-37	CABIN SYSTEMS	4-57
PARKING BRAKE LEVER.....	4-37	INTERIOR DEVICES	4-57
FOOT THROTTLE	4-38	EXTERIOR DEVICES.....	4-58
HAND THROTTLE LEVER.....	4-38	ENTRANCE	4-58
PTO MAIN SWITCH.....	4-39	EXIT	4-59
PTO AUTO/MANUAL SWITCH	4-40	REAR WINDOW	4-59
AUTO DRAFT FUNCTION	4-41	WORKING LIGHT	4-60
REMOTE PTO OPERATION	4-41	WIPER	4-60
4WD SWITCH.....	4-43	ANTENNA.....	4-61
AUTO 2WD SWITCH	4-44	ROOM LAMP	4-62
WORK/TRAVEL RESPONSE BUTTON	4-45	ACCESSORY	4-62
CALIBRATION BUTTON	4-45	OPTIONAL COOL/WARM STORAGE (OPTION).....	4-64
BEACON LIGHT BUTTON (IF EQUIPPED WITH A BEACON LIGHT).....	4-45	SUNSHADE.....	4-64
DEFROST BUTTON	4-46		

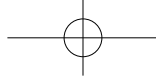


TABLE OF CONTENTS

SUNROOF.....	4-65	USB MUSIC.....	5-14
HEATER AND AIR CONDITIONER	4-65	BLUETOOTH MUSIC	5-15
7-PIN POWER SOCKET	4-70	USB MOVIE.....	5-16
TIRES, WHEELS AND BALLAST	4-71	BLUETOOTH PHONE	5-17
INFLATION PRESSURES.....	4-72	SYSTEM SETTING → DISPLAY	5-22
TREAD.....	4-73	SYSTEM SETTING → SOUND	5-26
WHEEL TORQUE AND DIRECTION.....	4-75	SYSTEM SETTING → BLUETOOTH SETUP	5-29
ADDITIONAL WEIGHT(IF EQUIPPED)	4-76	SYSTEM SETTING → DATE AND TIME	5-35
MONITOR.....	5-1	SYSTEM SETTING → LANGUAGE	5-36
HARD KEY.....	5-2	SYSTEM SETTING → SYSTEM INFO	5-37
HOME	5-3	SYSTEM SETTING → SYS DIAGNOSIS	5-40
ALL MENU	5-4	SYSTEM SETTING → UNITS.....	5-42
VEHICLE INFO	5-5	UPDATE	5-43
ENGINE SETTING.....	5-6	OPERATION	6-1
MISSION SETTING	5-7	PRE-OPERATION CHECKS	6-2
HITCH SETTING.....	5-8	OPERATING THE ENGINE	6-3
WORK LIGHT SETTING	5-11	STARTING THE ENGINE.....	6-3
REAR CAMERA	5-12	STOPPING THE ENGINE	6-7
RADIO.....	5-13	WARMING UP	6-8
		JUMP STARTING.....	6-9

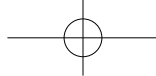


TABLE OF CONTENTS

OPERATING THE TRACTOR	6-10	CONNECTING THE TOP LINK.....	7-7
ADJUSTING CONTROLS	6-10	ADJUSTMENT OF TELESCOPIC STABILIZERS	7-8
PARKING	6-14	DRAW BAR.....	7-9
TURNING	6-16	PTO & PTO SHIELD	7-10
DRIVING ON SLOPES	6-16	INSTALLING PTO SHAFT.....	7-10
PRECAUTIONS WHEN ENTERING/EXITING THE WORK FIELD.....	6-17	LOADER.....	7-12
PRECAUTIONS WHILE DRIVING ON THE ROAD ..	6-17	DRIVING ON SLOPE.....	7-13
TRAILERING THE TRACTOR	6-18	JOYSTICK LEVER.....	7-14
PRECAUTIONS WHEN USING POWER STEERING	6-19	MAINTENANCE.....	8-1
3-POINT HITCH CONTROL SYSTEM	6-21	MAINTENANCE CHECK LIST.....	8-3
REMOTE HYDRAULIC	6-21	DAILY CHECK LIST.....	8-3
CONNECTING AND DISCONNECTING AN IMPLE- MENT.....	6-24	MAINTENANCE SCHEDULE CHART.....	8-5
3-POINT HITCH IMPLEMENT AND LOADER OPERATION	7-1	MAINTENANCE SCHEDULE CHART BY OPERAT- ING HOURS	8-8
REMOVAL AND INSTALLATION OF 3-POINT HITCH IMPLEMENT (WITH PTO SHAFT).....	7-2	LUBRICANTS.....	8-10
OPERATION OF 3-POINT HITCH IMPLEMENTS	7-6	PERFORMING DAILY CHECKS.....	8-12
ADJUSTMENT OF TOP LINK.....	7-6	HOW TO OPEN THE HOOD.....	8-12
		WALK AROUND INSPECTION.....	8-12
		CHECKING AND ADDING FUEL.....	8-13

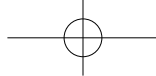


TABLE OF CONTENTS

CHECKING TRANSMISSION FLUID LEVEL	8-14	CLEANING AND CLEANING AND REPLACING ENGINE AIR FILTER.....	8-26
CHECKING AND ADDING DEF	8-15	CHECKING FUEL LINES	8-27
CHECKING ENGINE OIL LEVEL	8-17	BATTERY.....	8-28
CHECKING COOLANT LEVEL.....	8-18	BATTERY SWITCH.....	8-29
CLEANING GRILL, RADIATOR SCREEN	8-18	ADJUSTING BRAKE PEDAL	8-30
CLEANING AIR CONDITIONER CONDENSER	8-19	ADJUSTING AIR CONDITIONER BELT TENSION ..	8-31
CHECKING BRAKE AND CLUTCH PEDALS.....	8-20	EVERY 200 HOURS	8-32
CHECKING GAUGES, METER AND WARNING LAMPS.....	8-20	CHECKING RADIATOR HOSE AND CLAMP	8-32
CHECKING LIGHTS	8-20	CHECKING INTAKE AIR LINE.....	8-33
CHECKING SEAT BELT AND CABIN.....	8-20	CHECKING POWER STEERING HOSE AND OIL LINE.....	8-33
ADJUSTING FAN BELT TENSION	8-20	ADJUSTING TOE-IN.....	8-34
CHECKING BRAKE PEDALS	8-21	EVERY 400 HOURS	8-35
BRAKE PEDAL RESTING HEIGHT	8-21	CHANGING FRONT AXLE CASE OIL	8-35
CHECKING BRAKE FLUID	8-22	CHANGING OIL IN THE PLANETARY HUBS	8-36
BLEEDING BRAKE FLUID.....	8-23	REPLACING TRANSMISSION FLUID AND FILTER	8-36
REMOVING WATER FROM THE FUEL FILTER.....	8-24	EVERY 500 HOURS OR ANNUALLY	8-39
CHECKING WHEEL BOLT / NUT TORQUE	8-24	CHANGING ENGINE OIL AND REPLACING FILTER	8-39
EVERY 50 HOURS	8-24	REPLACING FUEL FILTER	8-41
LUBRICATION AND GREASE LOCATIONS	8-24		
EVERY 100 HOURS	8-26		

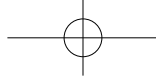
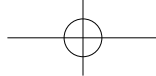







TABLE OF CONTENTS

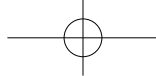
EVERY 1,000 HOURS	8-42	REPLACING FUEL LINE.....	8-64
ADJUSTING ENGINE VALVE CLEARANCE.....	8-42	REPLACING INTAKE AIR LINE.....	8-64
EVERY 400 HOURS OR ANNUALLY	8-43	STORAGE AND FLUIDS DISPOSAL.....	9-1
REPLACING AIR CLEANER PRIMARY ELEMENT..	8-43	TRACTOR STORAGE	9-2
EVERY 2 YEARS.....	8-44	DAILY STORAGE.....	9-2
FLUSHING COOLING SYSTEM AND CHANGING		LONG-TERM STORAGE.....	9-2
COOLANT	8-44	USING TRACTOR AFTER STORAGE.....	9-4
SERVICE AS REQUIRED.....	8-46	USAGE AND FLUIDS DISPOSAL.....	9-5
DRAINING WATER FROM BELLHOUSING	8-46	TROUBLESHOOTING	10-1
REPLACING CABIN AIR FILTERS.....	8-46	ENGINE TROUBLESHOOTING	10-2
CHECK AND CLEAN CABIN AIR FILTERS	8-47	TRACTOR TROUBLESHOOTING.....	10-4
CHECKING AND REPLACING WINDSHIELD WIP-		INDEX.....	11-2
ERS.....	8-49		
REPLACING FUSE.....	8-52		
REPLACING CABIN FUSE	8-55		
SLOW BLOW FUSE	8-56		
REPLACING LIGHT BULBS	8-57		
CHECKING THE REFRIGERANT	8-63		
REPLACING RADIATOR HOSE AND CLAMP	8-64		
REPLACING POWER STEERING LINE.....	8-64		



SAFETY AND VEHICLE DAMAGE WARNING

This manual includes information titled as **DANGER**, **WARNING**, **CAUTION**, **IMPORTANT** and **NOTE**. These titles indicate the following:

 DANGER	This indicates that a condition may result in harm, serious injury or death to you or other persons if the warning is not heeded. The signal word “DANGER” is to be limited to the most extreme situations.
 WARNING	This indicates that a condition may result in harm, serious injury or death to you or other persons if the warning is not heeded. Follow the advice provided with the warning.
 CAUTION	This indicates that a condition may result in damage to your vehicle or its equipment if the caution is not heeded. Follow the advice provided with the caution.
 IMPORTANT	This mark indicates emphasis on notable characteristics of working procedures, and information about technology for easier operation.
 NOTE	This indicates that interesting or helpful information is being provided.



UNIVERSAL SYMBOLS

Various universal symbols have been used on the instruments and controls of your **KIOTI** tractor.

Below is a list of the universal symbols and their meanings.



Fuel-level



Engine coolant-temperature



Parking brake



Battery charging condition



Engine oil-pressure



Turn signal



PTO engaged



Differential lock



Position control-lowered position



Hazard warning lights



Headlight-low beam



Headlight-high beam



Four-wheel drive-on



Fast



Slow



Creep



High range



Middle range



Low range



Neutral position



Coolant



Preheat



QT lamp



H : High speed



L : Low speed



Draft control



Auto-level



Depth control



Position control up, turn



Position control up, reverse

AUTO Auto switch



Single brake light



SAFETY PRECAUTIONS

PRECAUTIONS BEFORE OPERATION 1-2

GENERAL PRECAUTIONS1-2

RISK OF OVERTURNING1-8

PRECAUTIONS DURING OPERATION..... 1-11

WHEN STARTING THE ENGINE..... 1-11

WHEN DRIVING THE TRACTOR1-15

PARKING THE TRACTOR.....1-17

OPERATING THE PTO.....1-17

WHEN USING THE 3-POINT HITCH.....1-18

PRECAUTIONS DURING SERVICING 1-19

PRECAUTIONS WHEN USING THE LOADER 1-24

PRECAUTIONS WHEN USING 1-27

PRECAUTIONS WHEN CLEANING THE TRACTOR .. 1-30

SAFETY DECAL MAINTENANCE..... 1-31

DECAL MOUNTING LOCATION1-31

DECALS1-33

DECAL MAINTENANCE1-38

1

1



PRECAUTIONS BEFORE OPERATION

GENERAL PRECAUTIONS

A careful operator is the best operator. Most accidents can be avoided by observing certain precautions. To help prevent accidents, use these safety precautions, and pay attention to the job at hand. If you can prevent an accident, your time will have been well spent.

The individuals should never be allowed to operate this machine.

- Those under the influence of alcohol or drugs.
- Pregnant women or individuals who may have physical or cognitive impairments that may inhibit their ability to enter/exit or operate the machine safely.
- Individuals who are under the age of 18.
- Individuals who do not possess a valid driver's license.
- Those who are fatigued, sick or

under the influence of medicine.

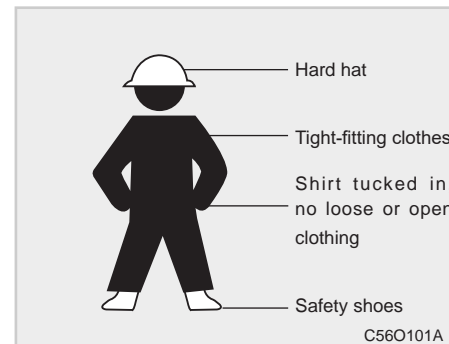
- Individuals who have not read and understand the contents of this owner's manual.
- Individuals who have not been trained on the safe and proper operation of this equipment.

Do not operate the machine if you are sleepy or extremely tired. Failure to do so could lead to an accident.

NOTE

- **Local, state and provincial regulations may vary on operator requirements and guidelines. Follow all guidelines and laws as set forth in your local, state or provincial regulations.**

RECOMMENDED ATTIRE WHEN OPERATING OR WORKING ON THIS MACHINE



Please wear the appropriate working clothes.



This tractor is designed for use in agricultural settings and applications. This tractor should be used in conjunction with equipment designed and manufactured for agricultural applications that are intended to be pulled by a drawbar or attached to a 3-point hitch of the proper size and category matching to this unit and if needed, powered by a type one 540 RPM shaft or a type two 1,000 RPM shaft.

Use other than the specified cannot be covered by warranty. The manu-

facturer is not liable for any damage resulting from unauthorized use, and such action can lead to a dangerous situation to a user. Authorized use means complying with operation, service and repair standards set forth by the manufacturer as outlined in this manual.

This tractor should be operated by a well-trained and skilled person familiar with the machine and the information provided in this manual. Service and maintenance should be performed by an Authorized **KIOTI** Dealer or a skilled technician familiar with this tractor.

Always follow local, state or provincial regulations regarding health, safety and traffic regulations when operating or maintaining this equipment. The manufacturer is not liable for any damages or injuries resulting from the improper use, maintenance or unapproved modification of this tractor.



1

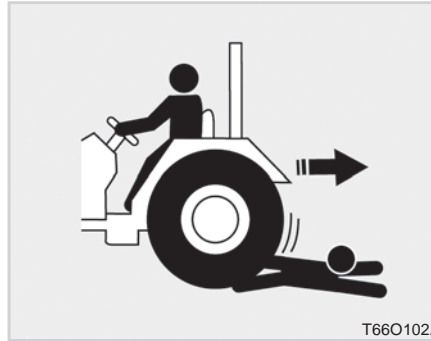
1. It is recommended that you read and understand this entire manual before operation of your new tractor. Failure to do so could result in accidents or injury.

Persons have read and understand this manual and are properly.

2. Only persons who are properly trained should be allowed to operate the tractor.
3. Read and follow all warning labels and decals affixed to the tractor and included in this manual.



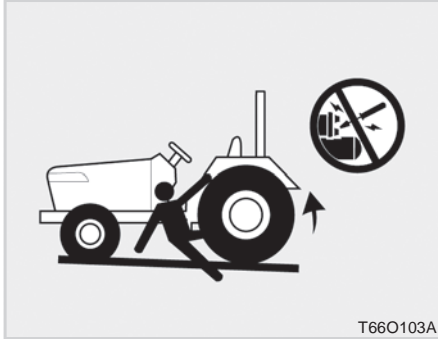
4. Replace any missing or damaged decals as soon as it is practical. A list of decals is shown on page 1-31 through 37.



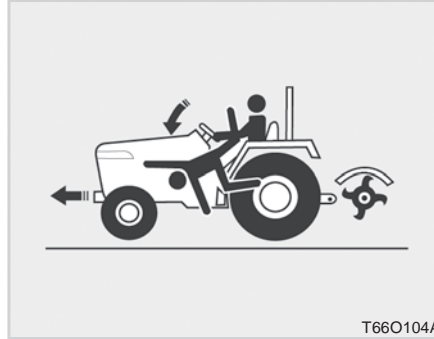
depressed and there are no people around the tractor before starting the engine to avoid accidents .

8. Before making reverse movements with your tractor, you should always check to see that the path around and behind the tractor is clear of obstructions or people.

5. Keep safety decals clean of dirt and debris.
6. Watch where you are going at all times so that you are able to avoid obstacles that may make contact with your tractor or may cause personal injury.
7. When starting the tractor make sure you are seated in the operator's station with your seatbelt fastened. Always visually survey the area and make sure the parking brake is engaged, the tractor is in neutral, the clutch pedal and brake pedals are

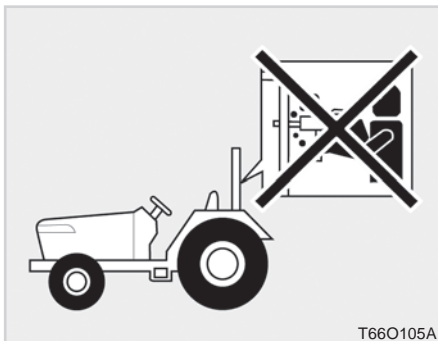


9. Never operate this tractor or any other agricultural equipment while under the influence of alcohol, drugs or while fatigued.
10. When working with or in the vicinity of other tractors or mobile equipment, be sure to communicate with the other operators so everyone knows which operations and work will be performed simultaneously. Always watch for other moving equipment or persons and be sure to yield the right of way to prevent accidents.
11. Never start your tractor by shorting across the starter solenoid.

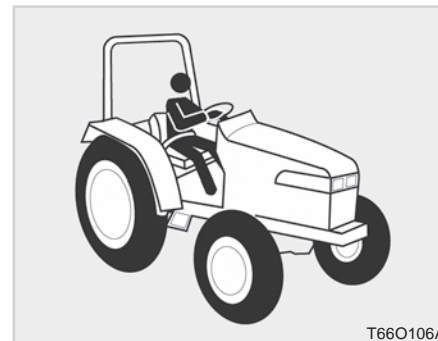


12. Never start the engine while standing on the ground.
13. Only the operator should ride on the tractor is equipped with a factory installed instructor seat with seatbelt. Always remember that the instructor seat is designed and intended to be used as an instructional aide to assist trained and seasoned operators with the training and development of new operators on the safe operation of the machine. It is not intended to carry passengers or be utilized as a method of transportation.

14. Keep bystanders away from the tractor while in operation.
15. When getting on and off the tractor, handholds and step plates should always be used. This will help to prevent accidental slips, trips & falls.
16. Be sure to scrape off mud or soil from your shoes before mounting the tractor.



19. No alterations or modifications should be made to your **KIOTI** tractor .



17. All persons using this tractor should have read and understood this manual carefully. DO NOT operate this machine without first being trained by a qualified operator or the Authorized **KIOTI** Dealer on the safe operation of the machine.
18. Never get off the tractor without setting the brake, placing the transmission in neutral without setting the parking brake, lowering the implement to the ground and shutting of the tractor.

20. Before starting your tractor you should depress the clutch and make sure that all shift levers are in the neutral position and parking brake is applied.



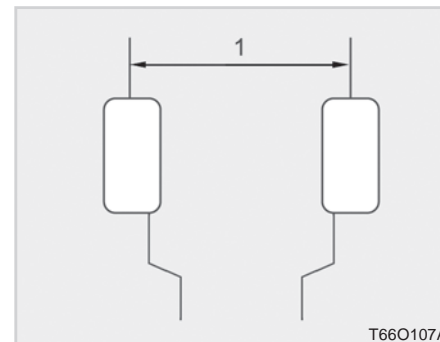
21. For your safety, it is recommended to only operate this tractor with a factory installed ROPS locked in the upright position or a factory installed cabin.

NOTE

- Always use the seat belt when the tractor is equipped with a **ROPS** and **CAB**. Never use the seat belt when tractor is not equipped with a **ROPS**. (**ROPS**: Roll-Over Protective Structures)

WARNING

- **A ROPS (CAB) structure should never be modified by welding, cutting or grinding as this can weaken the ROPS structure. If any component of the ROPS is damaged or removed, operation of the tractor should cease immediately until the ROPS structure has been repaired with new parts or replaced.**
- **If the ROPS structure is loosened or removed for any reason, operation of the tractor should cease immediately until the ROPS structure has been returned to its original position and all bolts have been properly torqued.**
- **Operating the tractor without a properly installed ROPS (cab) structure could cause severe injury or death**

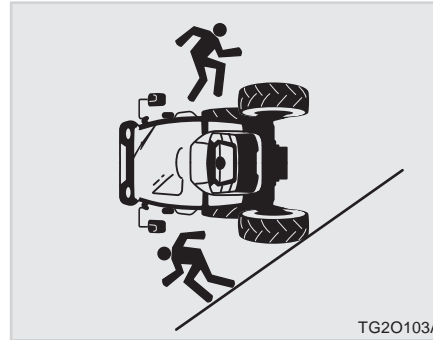
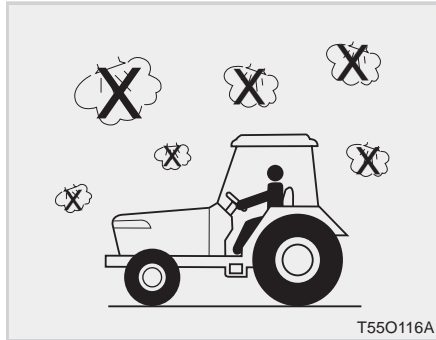


(1) Tread

22. Use extra caution when driving tractors with narrow tread setting on slopes on uneven terrain.



RISK OF OVERTURNING



against the floor securing your bottom and back into the seat. Never attempt to get off the seat or the tractor while it is still in motion or rolling. Once the tractor has come to a complete stop and is stable, you may slowly open the nearest door, if equipped, remove your seatbelt and begin to exit the tractor.

IMPORTANT

- These are a few representative examples of situations that could potentially lead to a machine roll-over and safe operating procedures to help avoid the risk.

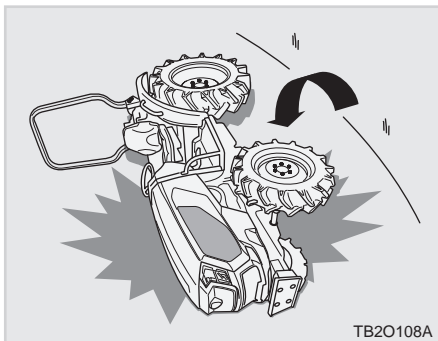
WARNING

- *The cabin on this tractor is not certified for spraying applications where harmful chemicals or vapors may be inhaled. Never operate this tractor in areas contaminated with harmful chemicals or vapors without the use of approved personal safety equipment to protect the operators lungs, eyes and skin from dangerous or harmful chemicals and vapors.*

Always use seat belt when the tractor is equipped with a **ROPS** and **CAB**. Never use the seat belt when tractor is not equipped with a **ROPS**. (**ROPS**: Roll-Over Protective Structures).

For your safety, tractors must always be equipped with safety belts designed and manufactured in accordance with the manufacturer's specifications.

In case of roll-over, hold the steering wheel and firmly press your feet



Tips to help avoid a loss of control or machine roll-over :

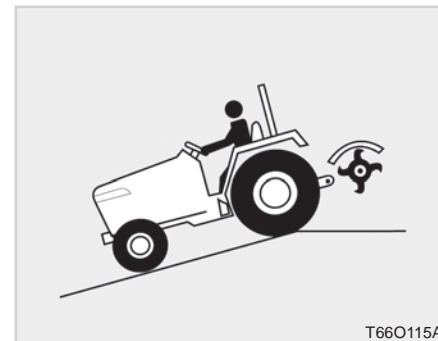
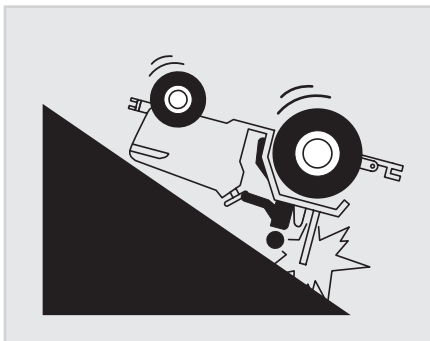
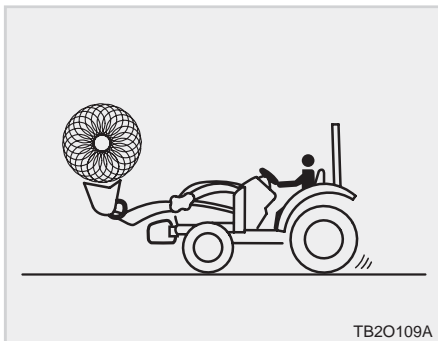
- Increasing the wheel tread setting will improve stability on slopes and uneven terrain.
adjust the wheel tread settings to the maximum permissible width based on the following conditions:
 - terrain
 - implements/attachments used
 - work performed
 - load carried on the machine

- Lock both brake pedals together before driving on road.
- Reduce your speed according to work conditions. new bullet point: If the tractor is equipped with a front loader, carry the bucket and load as low as possible at all times
- Reduce speed when hauling a load or towing an implement.
- Slow down before making wide turns to prevent loss of control or roll-over.
- Travel slowly on rough or uneven terrain to prevent the tractor from bouncing or jumping.
- Never haul or tow more than the manufacturer's recommended capacities. Towing or hauling loads exceeding the maximum recommended capacity can lead to a loss of control, jack-knifing, roll-over or equipment damage.

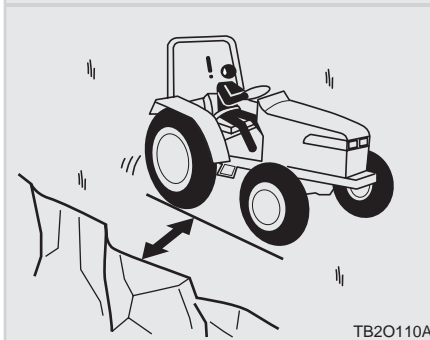
- When hauling or towing, travel slowly and use extreme caution when going downhill. Use the same gear for downhill descents as you would for uphill climbs. Use the engine throttle to control speed. Make sure the tractor is securely placed in gear and the clutch is released before beginning the downhill descent. Engage 4wd when on soil or gravel roads for improved traction.

WARNING

- ***NEVER disengage the clutch or attempt to shift gear after you have started downhill.***



- Always travel up and down slopes, never sideways. Always keep the load facing up the slope. Never place the load facing downward as a loss of traction may occur resulting in loss of control, over-turn.
- Do not put any overloads on a front implement or a trailer. Use suitable counter-weights to keep the tractor stable.
- NEVER use your tractor to round up farm animals.

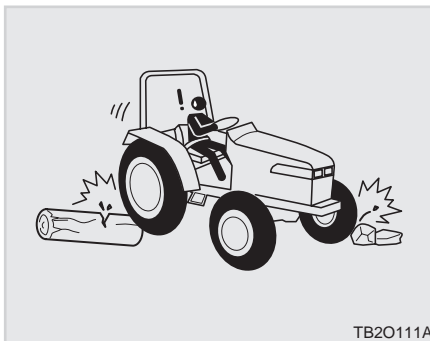
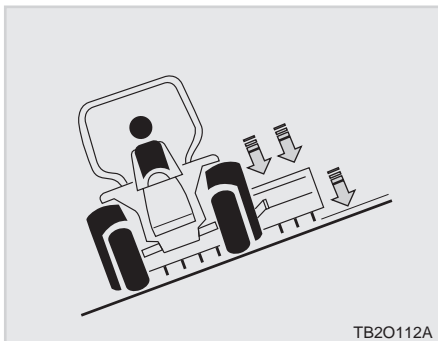


- When operating near ditches and banks, always keep your tractor behind the shear line. Avoid ditches, embankments and river-banks which might cave in.

- Always drive straight up or down a slope, never across it. When traveling up or down a slope, keep the heavy end of the tractor and the implement pointed uphill.



PRECAUTIONS DURING OPERATION WHEN STARTING THE ENGINE

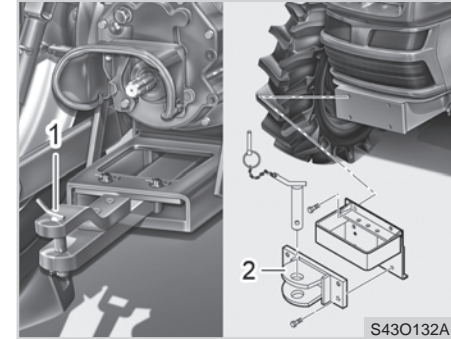
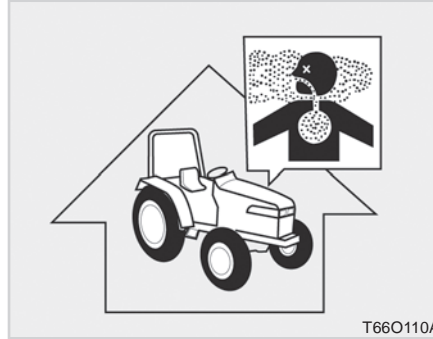


1

- If you must drive across a slope, keep attachments close to the ground and do not raise them. When traveling with mounted implements, keep the implements on the uphill side if possible. Keep the implements close to the ground and do not raise them.

- Avoid crossing steep slopes if possible. If you must do so, travel slowly and avoid any holes or depressions on the downhill side. Avoid any stumps, rocks, bumps or raised areas on the uphill side.

1. Avoid accidental contact with gear shift levers while the engine is running. Unexpected tractor movements could result in injury, damage to equipment or property.



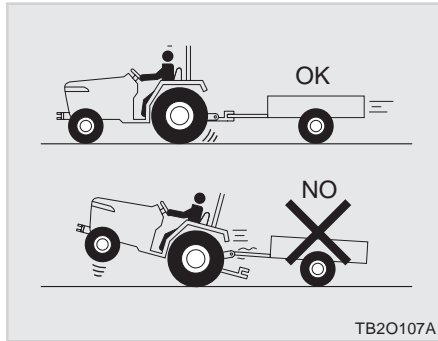
(1) Drawbar

(2) Towing Hook

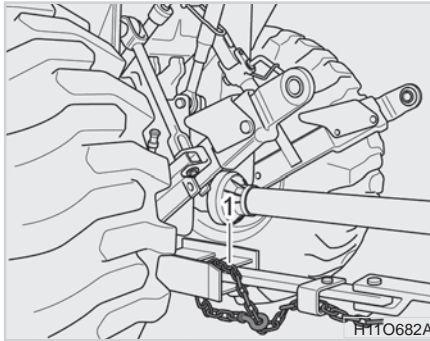
2. Do not park your tractor on a steep incline. Always place the tractor in neutral, engage the parking brake and shut the engine off before dismounting the tractor.

3. Do not operate your tractor in an enclosed building without proper ventilation. Exhaust containing carbon monoxide can cause serious injury or death.

4. Pull only from the drawbar or pull implements designed, engineered and manufactured to attach and pull from the three-point hitch. Never hitch anything to the axle housing or any other point on the tractor aside from those mentioned above. Pulling from any other location only increase the risk of serious personal injury or death.



6. Improper use of the draw-bar, even if correctly positioned, can cause a rear overturn.
7. Do not overload an attachment or towed equipment. Use proper counterweights to maintain tractor stability. Hitch heavy loads to the draw-bar only.



8. Check for the correct coupling between the implement and the tractor drawbar. See the Towing Attachments chapter.
9. Adding front end or rear wheel ballast is always recommended for a tractor utilized for towing or pulling heavy loads. Forms of ballast include weights added to the front frame or rear wheels or liquid ballast in the rear tires. Always follow the manufacturer's recommended guidelines when adding ballast.

10. A safety chain will help control drawn equipment should it be accidentally separated from the draw-bar while transporting. Using the proper adaptor parts, attach the chain to the tractor draw-bar support or other specified anchor location. Provide only enough slack in the chain to permit turning. Towed implements should be supplied with a safety chain provided by the manufacturer. In the event your towed implement does not have a safety chain, consult with the equipment manufacturer or see your Authorized **KIOTI** Dealer for a chain with a strength rating equivalent to or greater than the gross weight of the towed implement.



11. If the front of the tractor tends to rise up when heavy implements are attached to the three point hitch, weights should be installed on the tractor. Do not operate the tractor with a light front end.

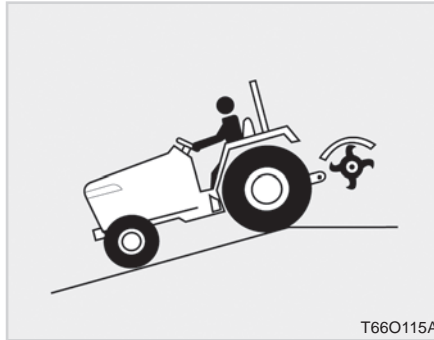
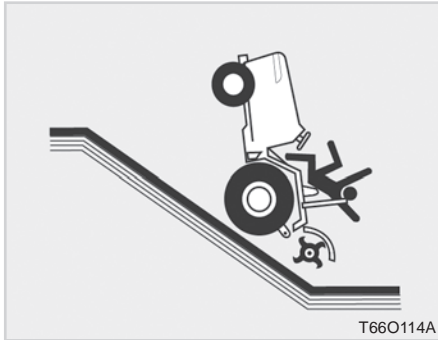


12. Always use the proper ballast weight on your tractor when using rear implements.
13. Watch front and rear to avoid obstacles at row ends, near trees and around other obstructions.

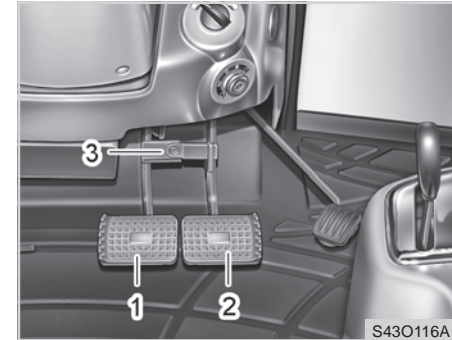
! WARNING

- ***Drive carefully to avoid injury from penetration of objects from sides, because this machine does not comply to OPS.***

14. Do not leave equipment in the raised position when the tractor is stopped or unattended.
15. When using implements or attachments with your tractor you should first read their respective owner's manual. You should always keep their safe operation procedures in mind.
16. You should be familiar with your equipment and its limitations.
17. If abused or used incorrectly your tractor can become dangerous to you and bystanders. Overloading your tractor or using unsafe equipment can also be dangerous and should be avoided. Refer to the "Specifications of Implement Limitation", which outlines the maximum load for safe tractor operation.



WHEN DRIVING THE TRACTOR



(1) Brake Pedal (L) (2) Brake Pedal (R)
(3) Brake Pedal Lock

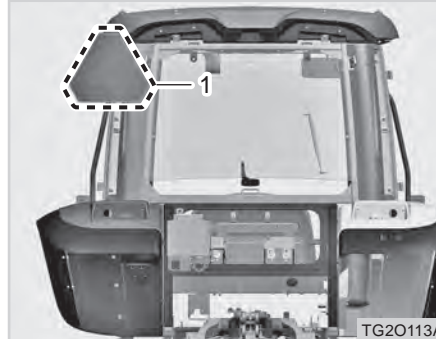
18. Driving forward out of a ditch or steep inclines can cause the tractor to tip over backwards. To avoid this you should back out of these positions. Four wheel drive tractors can give you a false sense of security in the tractor's ability to maneuver out of these positions, so extra caution should be taken.
19. Never try to get on or off a moving tractor.

20. When working in groups, always let the others know what you are going to do before you do it.
21. Never "freewheel". Disengaging the clutch or shifting into neutral while descending a slope could lead to a loss of control.
22. Do not operate near ditches, holes, embankments, or other terrain features which may collapse under the tractor's weight. The risk of tractor upset is even higher when the ground is loose or wet.

1. Lock the brake pedals together when traveling at road speeds. Brake both wheels simultaneously when making an emergency stop. Uneven braking at road speeds could cause the tractor to turn suddenly causing a loss of control or a roll-over.



2. Always slow the tractor before turning. Turning at high speed may cause a loss of control or tractor roll-over.



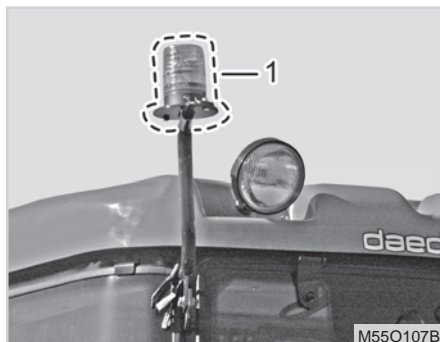
(1) SMV Emblem

3. Make sure that the Slow Moving Vehicle (SMV) sign is clean and visible. Use hazard lights as required.
4. Observe all local traffic and safety regulations.
5. Turn the headlights on. Dim them when meeting another vehicle.
6. Drive at speeds that allow you to maintain control at all times.
7. Do not apply the differential lock while traveling at road speeds.

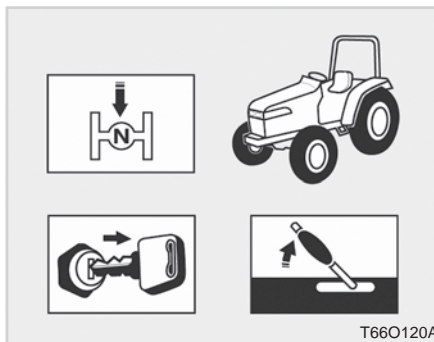
8. Avoid sudden movements of the steering wheel as this can cause a loss of control of the tractor. This risk is especially great when traveling at road speeds.
9. Do not operate and towing an implement while the tractor is on the road. Always lock the three-point hitch in the raised position before traveling on the road with a three-point hitch implement.
10. When towing other equipment, use a safety chain and place an SMV emblem on it as well.



PARKING THE TRACTOR



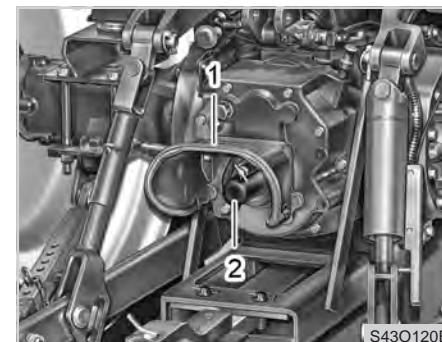
(1) Warning beacon light



11. When driving the tractor after sunset, be sure to turn on the headlight and warning beacon light (if equipped) to improve visibility of the tractor to on-coming traffic.

1. Disengage the P.T.O, lower all implements, place all control levers in the neutral position, set the parking brake, stop the engine and remove the key before dismounting the tractor.

OPERATING THE PTO



(1) P.T.O Shaft Cover
(2) P.T.O Shaft Cap

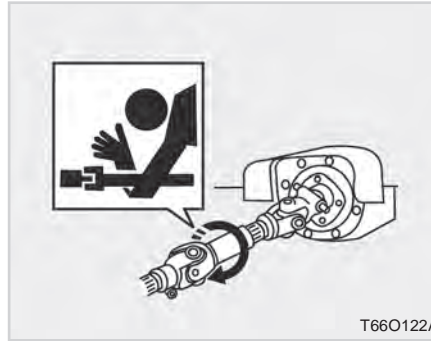
1. Make sure the tractor is in neutral, the parking brake is set, all implements and attachments have been lowered to the ground, the engine is off, the key has been removed and all components have come to a complete stop before connecting, disconnecting, adjusting cleaning or servicing any PTO driven equipment.
2. Keep the P.T.O shaft cover in place at all times. Re-install the P.T.O shaft cap when the shaft is not in use.



3. Before installing or using P.T.O driven equipment, read the manufacturer's manual and review the safety labels attached to the equipment.

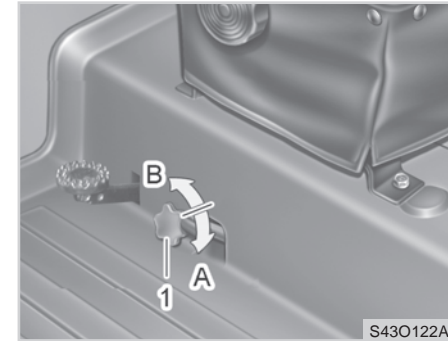
! WARNING

- **Before operating any implement, especially PTO powered implements, always make sure that all bystanders are well away from the tractor.**
- **When using the PTO drive with a stationary tractor, always make sure that the transmission is in neutral and that the parking brake is applied.**
- **Before starting up any PTO-driven implement hitched to the three-point linkage, lift the implement to its full height and check that at least 1/4 of the total length of the telescopic section of the drive shaft is engaged at all times.**
- **Ensure that implements and attachments are properly installed and that the tractor and implement PTO shaft splines and dimensions and power specifications match.**



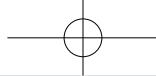
4. When operating stationary P.T.O driven equipment, always place the transmission in neutral and apply the tractor parking brake and place chocks behind and in front of the rear wheels. Stay clear of all rotating parts.
5. Do not attach a PTO driven implement if the implements safety shields are damaged or not in place. Rotating shafts are an entanglement hazard.

WHEN USING THE 3-POINT HITCH



(1) 3-point hitch lowering speed knob
(A) "SLOW" (B) "FAST"

1. Use the 3-point hitch only with equipment designed for 3-point hitch usage.
2. When using a 3-point hitch mounted implement, be sure to install the proper counterbalance weight on the front of the tractor if the front end becomes light when raising the implement.



PRECAUTIONS DURING SERVICING

3. When transporting on the road, pull the position control lever all the way to the rear of the slot and allow the lever to slide into the “LOCK” position to hold the implement in the raised position during travel.



1

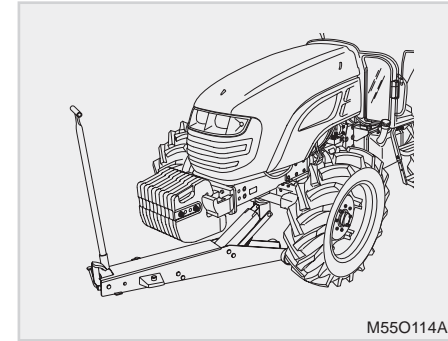
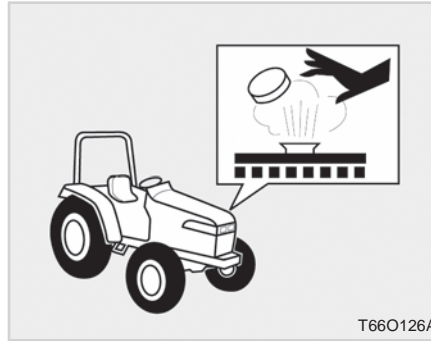
In order to service your tractor you must park it on a flat level surface, set the parking brake, place the gear shift lever in neutral stop the engine and remove the key.

1. Do not smoke while working around the battery or when refueling your tractor. Keep all sparks and flames away from the battery and fuel tank. The battery presents an explosive hazard because it gives off hydrogen and oxygen etc. especially when recharging.

2. Allow the tractor time to cool off before servicing any part that may have become hot while the tractor was running.
3. Always set the parking brake, place the transmission in neutral, lower all implements or attachments to the ground, shut the engine off and remove the key before refueling or performing any work on the tractor. Avoid overfilling or spilling fuel. Wipe up or rinse off any spilled fuel before operating the tractor.



4. Before jump starting a dead battery, read and follow all of the instructions. (Refer to the page 6-9)
5. It is recommended to keep a fire extinguisher close to your fueling station in case of fire.



6. Do not remove the radiator cap while the coolant is hot. When cool, slowly rotate the cap to the first stop and allow sufficient time for excess pressure to escape. After all the pressure is released remove the cap completely. If your tractor is equipped with a coolant recovery tank, add coolant there rather than to the radiator.

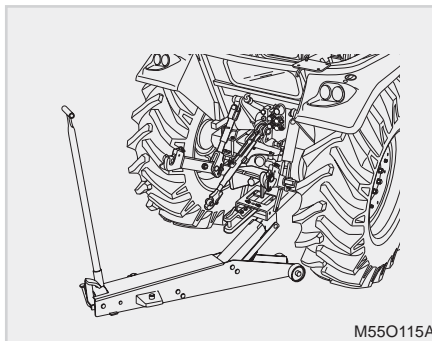
7. If the tractor must be lifted for servicing, Use a jack or other lifting device sufficiently rated to lift the tractor. Always support a lifted tractor with jack stands or other approved support devices, never rely on a jack or other lifting device to support the tractor in a suspended application alone..

8. Before lifting any tractor, be sure to engage the parking brake, place the transmission in neutral, lower



any implements or attachments to the ground, turn the engine off and remove the key. It is also recommended to add chocks in front and behind one wheel that will remain on the ground.

9. When lifting the tractor, especially at the rear, the tractor can pivot on the front axle causing the tractor to lean to one side. Before lifting the tractor, it is recommended to insert wooden wedges between the front axle and the tractor frame to prevent the tractor from suddenly leaning to one side.



10. Only use jacks or other approved lifting devices sufficiently rated to lift the tractor.

When lifting the entire tractor, always apply the jack or other lifting device to the center of the front axle and underneath the center of the drawbar frame (rear).

It is also recommended to install wooden wedges between the front axle and tractor frame before lift-

ing the unit to prevent the tractor from pivoting on the front axle and leaning to one side.

If only lifting one tire to repair a flat or for another purpose, place the jack or other lifting device underneath the front axle or the drawbar frame closest to the tire you are trying to lift so as not to lift the entire front or rear axle at one time.

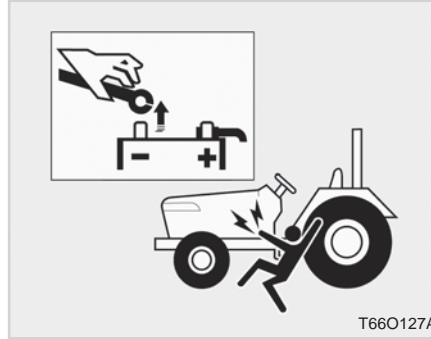
Always install wheel chocks in front and rear of a tire that will maintain contact with the ground when only lifting one tire or side of the tractor at a time.

11. No decals for the lifting points are applied on the tractor, as they would be, too difficult to apply in the available spaces and would be all too easily removed or defaced during normal operation of the tractor.



 **NOTE**

- Apply the jack lift to the lifting points according to the information provided and follow the recommended guidelines and safety procedures.



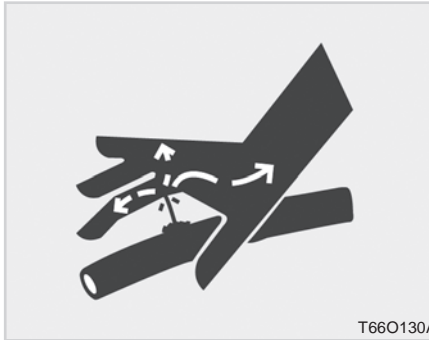
12. When working on the tractor's electrical system, disconnect the battery cables to prevent accidental shock or system overload.



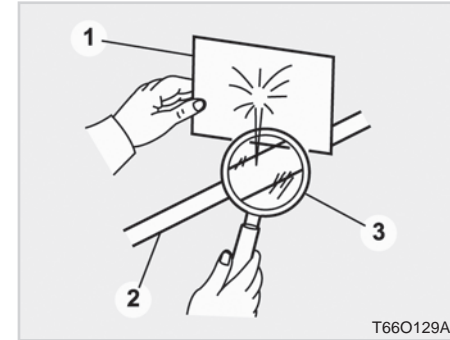
13. Tire mounting should be done by qualified professionals, with the proper equipment.
14. Maintaining correct tire pressure is important for the life of your tires. Do not inflate the tires above the recommended pressure. (Provided on the tire sidewall by the manufacturer.)
15. Securely support the tractor with the aid of approved lifting equip-



ment like a jack and support devices like a jack stand when changing the wheels or wheel tread settings.



T66O130A



T66O129A

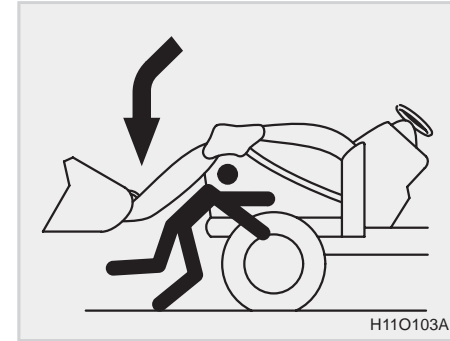
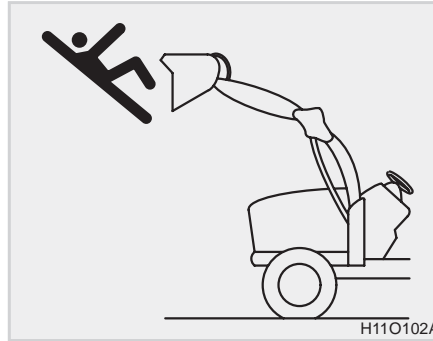
- (1) Cardboard (3) Magnifying Glass
(2) Hydraulic Line

16. Make sure that the wheel bolts have been tightened to the specified torque.
17. Escaping hydraulic fluid under pressure has sufficient force to penetrate skin, causing serious personal injury. Be sure to release all residual pressure before disconnecting hydraulic lines.
Before adding pressure to the hydraulic system, make sure that all connections are tight and that all lines, pipes and hoses are free of damage.

18. Fluid escaping from pinholes may be invisible. Do not use hands to search for suspected leaks;
Use a piece of cardboard or wood, instead. Use of safety goggles or other eye protection is also highly recommended. If injured by escaping fluid, see a medical doctor at once. This fluid can produce gangrene and/or severe allergic reactions.



PRECAUTIONS WHEN USING THE LOADER

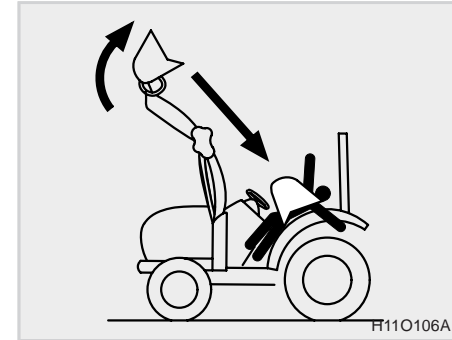
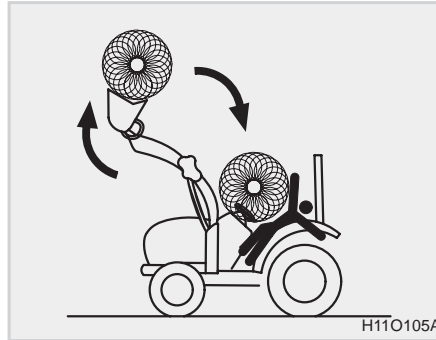
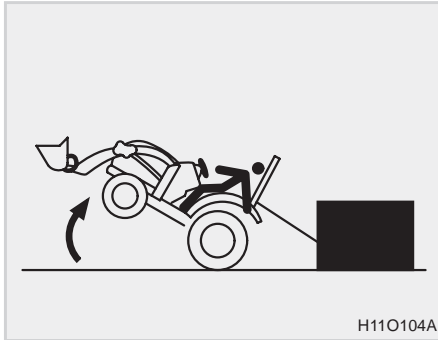


19. Keep environmental pollution in mind. When replacing coolant or oil, capture used fluids in approved containers and dispose of fluids through local recycling centers or other approved fluid disposal services.

Be sure to observe all relevant regulations when you dispose of the engine oil, transmission oil, fuel, coolant, filters and battery.

1. Never let anyone get in the loader or use the loader as a workbench. Otherwise, it may lead to a fatal injury or even death.

2. Do not stand or work under a raised loader or get close to it. Also, lower the loader arm onto the ground before leaving the tractor. Otherwise, it may lead to a fatal injury or even death.



1

3. Pull only from the drawbar or pull implements designed, engineered and manufactured to attach and pull from the three-point hitch. Never hitch anything to the axle housing or any other point on the tractor aside from those mentioned above. Pulling from any other location only increases the risk of serious personal injury or death.

4. Never attempt to pick up or handle objects not designed for the loader or attachment on the loader. Large objects like round bales that are moved without the proper attachment like a bale spear can easily fall off and damage the tractor, bystander or hit the operator resulting in injury or death.

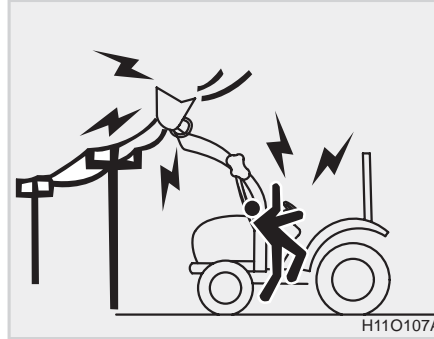
Always carry any load as close to the ground as possible while driving

5. Before disconnecting the loader or attaching a loader to the tractor, visually inspect the unit and confirm there are no loose or missing hardware, leaks or other items that may require repair. Also carefully inspect the loader to make sure the locking handles and mechanism are in the "locked" position and the attachment (bucket, forks, etc.) is securely and properly connected to the loader.



⊕ IMPORTANT

- **A ROPS with sunshade or cab are Roll Over Protective Structures designed to minimize risk of operator injury when paired with a properly fastened seat belt in the event of a tractor roll-over. These are not substitutes for a FOPS, Falling Objects Protective Structure and will not protect the operator from falling objects.**
- **Avoid driving the vehicle into a dangerous area such as falling rocks zone.**



6. Do not allow loader arms or attachment to contact electrical power lines. Electrocutation may cause serious injury or death.



7. Never allow passengers on the tractor or loader under any circumstances.

Always keep bystanders out of the working area of any equipment.



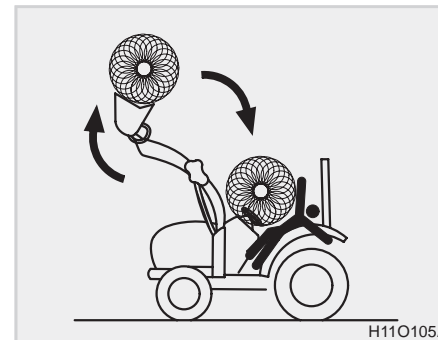
PRECAUTIONS WHEN USING

WARNING

- *Only use the KIOTI loader designed, engineered and manufactured to fit this HX tractor. Utilizing non-OEM loaders could cause tractor damage or operator injury if not designed, engineered and manufactured to properly fit this tractor.*
- *Never modify this equipment under any circumstances.*
- *Always consult with your Authorized KIOTI Dealer for service, maintenance or repairs.*
- *Always use the tractor and front end loader as prescribed by the owner's manual.*

IMPORTANT

- It is recommended to keep the tractor and loader owner's manuals together in the storage compartment of the tractor for reference as needed to ensure the correct and safe operation of the equipment at all times.
- It is recommended that you read and understand this entire manual and the loader owner's manual before operation of your new tractor and loader. Failure to do so could result in accidents or injury.



1

WARNING

- *Follow all recommended safety guidelines when operating this tractor! When operating the tractor in conjunction with a loader, the tractor balance can be upset easily when handling loads improperly, working on slopes or uneven terrain and when traveling too fast for the working conditions.*

**⚠ WARNING**

- ***Always inspect loader attachments to confirm they are properly installed on the loader (see loader owner's manual) and utilize the correct attachment for the work being performed to minimize the risk for objects falling off or down the loader arms which could damage the tractor or cause injury or death to the operator or bystanders.***

- Side mounted, three-point hitch implements make a wider arc when turning than towed equipment. Make certain to maintain enough clearance for safe turning.
- When using implements towed or mounted to the three-point hitch, it is important to read and follow the implement manufacturer's guidelines for the proper attachment and safe operating conditions to ensure compatibility with this tractor and

minimize opportunity to damage the tractor, implement or pose risk of injury to the operator or bystanders.

- This tractor is outfitted with a category II, three-point hitch. All three-point mounted implements used with this tractor should be outfitted with category II mounting dimensions or with category I mounting dimensions in conjunction with bushings or adapters to meet category II mounting pin dimensions.

Never attempt to use a three-point implement when not properly connected to the tractor at all three points. Operating three-point implements improperly attached or outside the manufacturer's recommended guidelines could cause damage to the tractor, implement or risk of injury to the operator or bystanders.

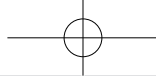
PTO shafts can be a rotating hazard! Always inspect driveline shields for damage or missing components. The PTO shaft shield should rotate

independently of the shaft itself and should be secured by chain or other device to prevent shield rotation during operation.

Never operate a PTO powered implement with missing or damaged guards or shields! Failure to comply could lead to serious injury or death for the operator or bystanders who may be near a rotating shaft.

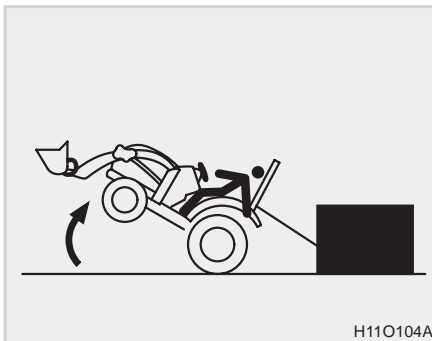
⚠ WARNING

- ***A cab or ROPS will not protect the operator from falling objects! Always follow the manufacturer's guidelines for the safe operation of this tractor when outfitted with a loader or when operating in conditions where falling objects may be a potential hazard.***



To reduce risks, the following precautions should be used.

- Only use loader designed, engineered and manufactured by **KIOTI** to fit this tractor.
- Only use specific loader implements and attachments designed, engineered and manufactured in accordance with SAE J2513/ISO24410 for the operation to be performed. Strictly follow the directions and warnings in the loader's operator's manual.
- Use the tractor and loader or implements with caution and drive on firm, level or gently sloping ground and avoid slopes, pits, excavations and ditches whenever possible.
- If a front end loader is installed, always keep the ROPS in the locked, upright position and wear your seat belt (always wear your seatbelt on cab models) to minimize risk of injury in the event of a roll-over. Follow all recommended guidelines and safety procedure outlined in the tractor and loader owner's manuals.



- Pull only from the drawbar or pull implements designed, engineered and manufactured to attach and pull from the three-point hitch. Never hitch anything to the axle housing or any other point on the tractor aside from those mentioned above. Pulling from any other location only increases the risk of serious personal injury or death.
- Improper use of the drawbar, even if correctly positioned, can cause a

rear overturn.

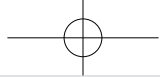
- Adding front end or rear wheel ballast is always recommended for a tractor utilized for towing or pulling heavy loads. Forms of ballast include weights added to the front frame or rear wheels or liquid ballast in the rear tires. Always follow the manufacturer's recommended guidelines when adding ballast
- **DO NOT** overload an attachment or towed equipment. Use proper counterweights to maintain tractor stability. Hitch heavy loads to the drawbar only.
- Check for the correct coupling between the implement and the tractor drawbar. See the Towing Attachments section.
- Never try to add more ballast to the tractor to compensate for lifting, pulling or towing more than the maximum recommend load as outlined by the tractor manufacturer.

1

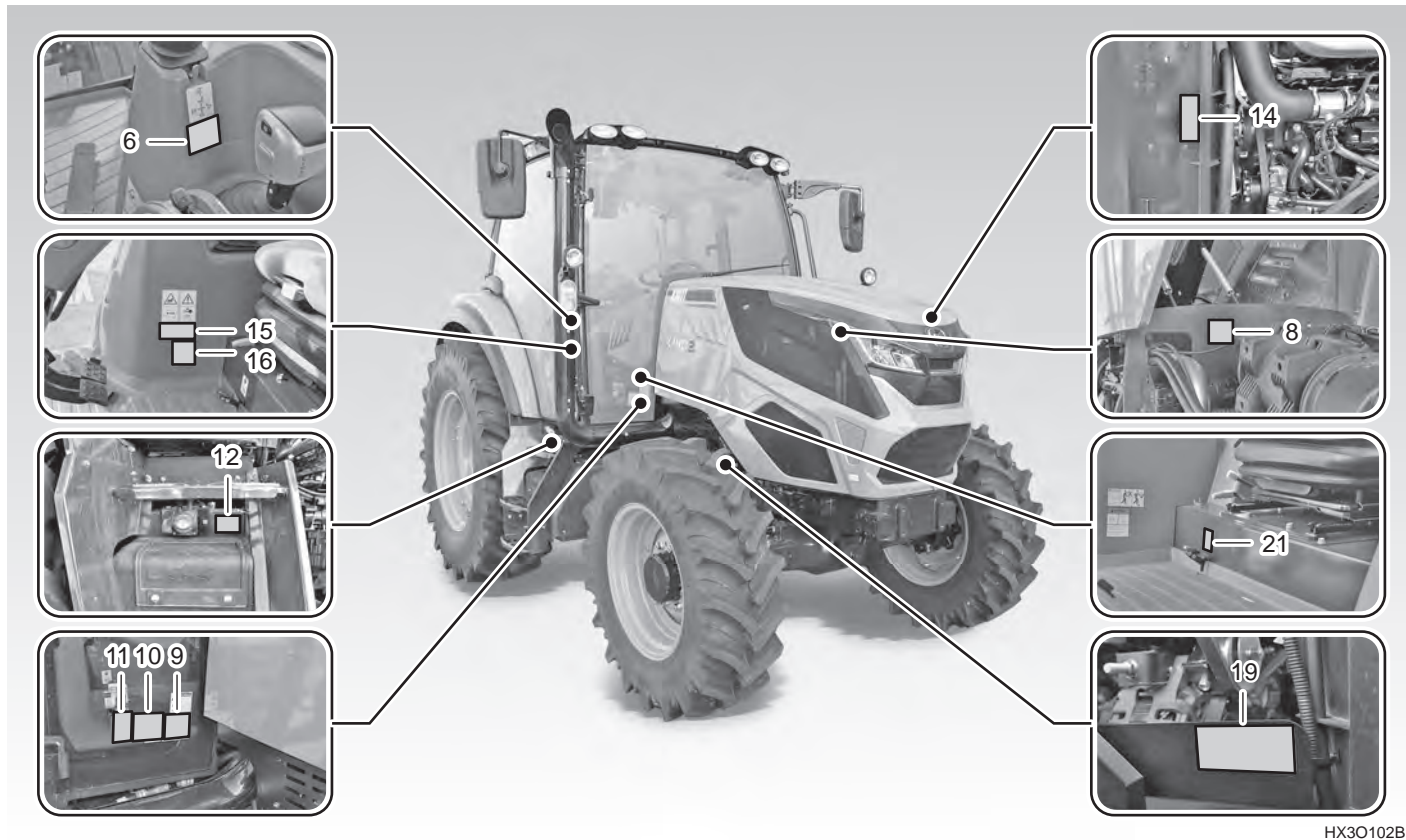


PRECAUTIONS WHEN CLEANING THE TRACTOR

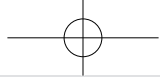
- Keep work surfaces and engine compartments clean.
- Before cleaning the machine, always lower attachments and implements to the ground, place the transmission in neutral, engage the parking brake, turn the engine off and remove the key.
- Always follow the manufacturer's recommended guidelines when using cleaning agents, aerosols, etc. Use personal protective equipment (PPE) including gloves, safety glasses, etc as recommended by the cleaning supply manufacturer.
- Clean steps, pedals and floor. Remove grease or oil. Brush away dust or mud. In winter, scrape away snow and ice. Remember - slippery surfaces are dangerous.
- Avoid using harsh or abrasive cleaning agents like paint thinner or acids on plastic parts to prevent marring, staining or cracking. Only use a damp, soft cloth with a water and mild soap solution to clean the instrument cluster, smart arm rest, etc.
- Remove and put away any tools, buckets, chains and hooks that may clutter the operator station and become a trip hazard or could interfere with access to controls.



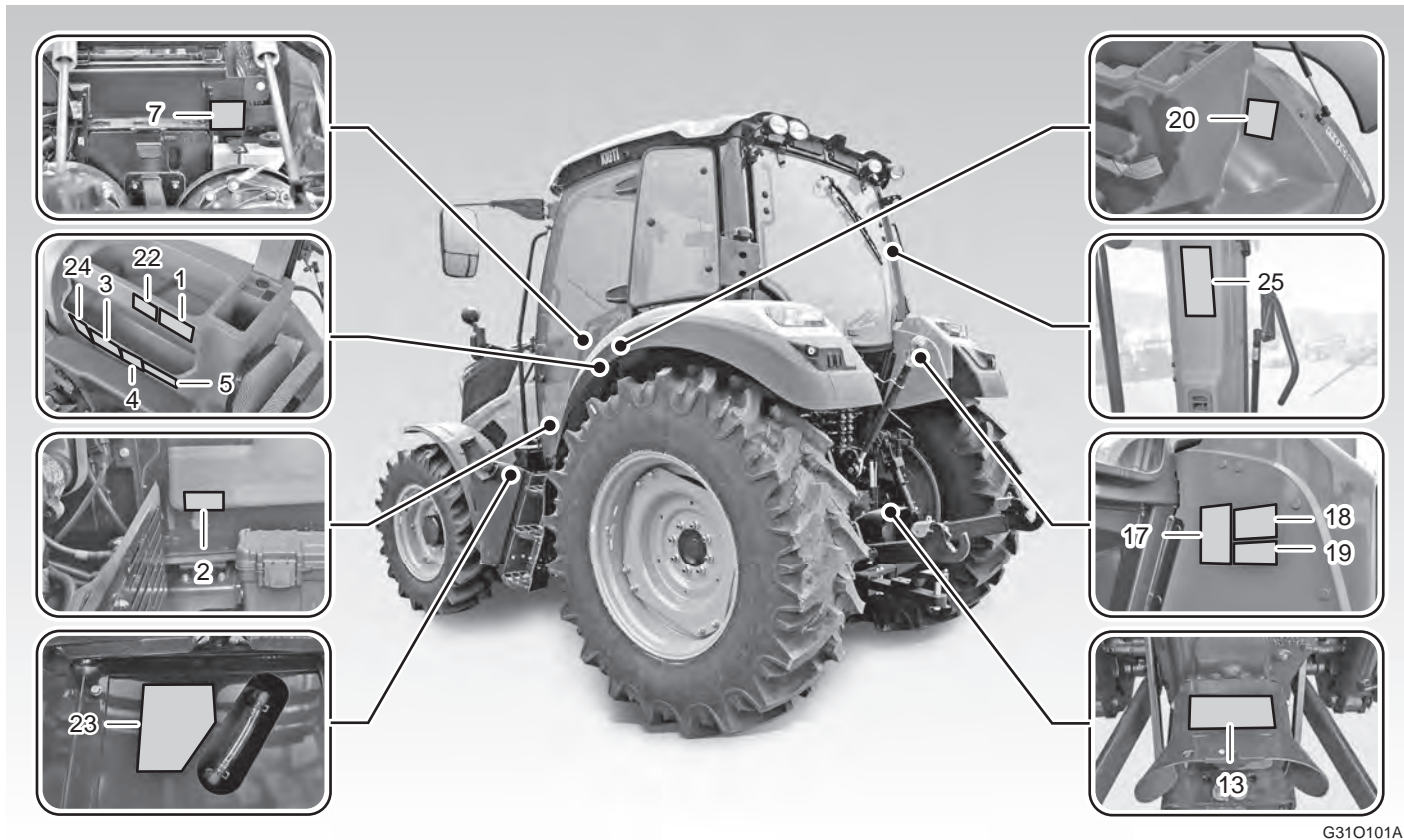
SAFETY DECAL MAINTENANCE DECAL MOUNTING LOCATION



HX30102B



1-32 HX1302/1402

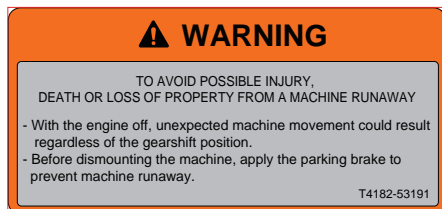


G31O101A

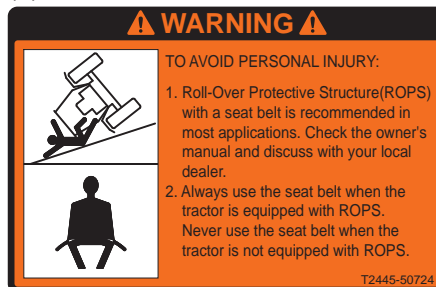


DECALS

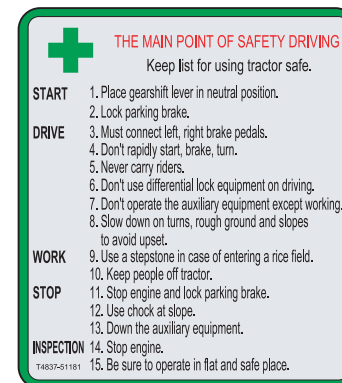
(1) Part No. : T4182-53191



(3) Part No. : T2445-50724

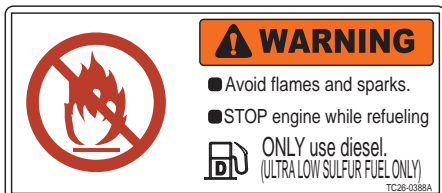


(4) Part No. : T4837-51181

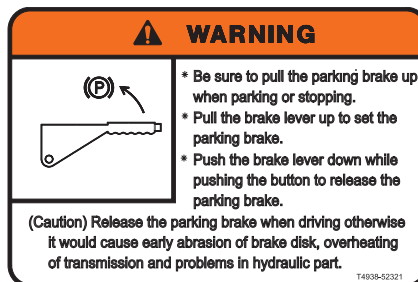


1

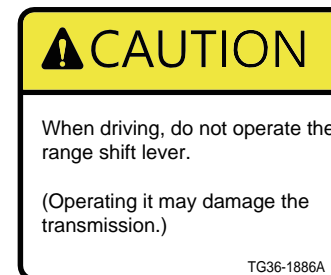
(2) Part No. : TC26-0388A



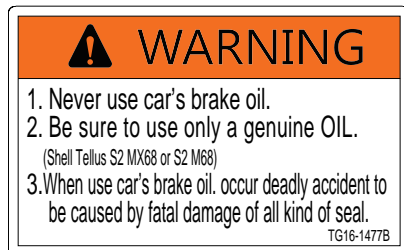
(5) Part No. : T4938-52321



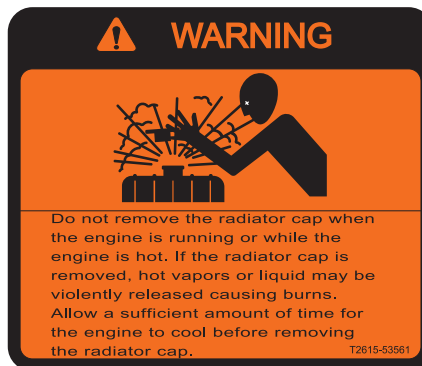
(6) Part No. : TG36-1886A



(7) Part No. : TG16-1477B



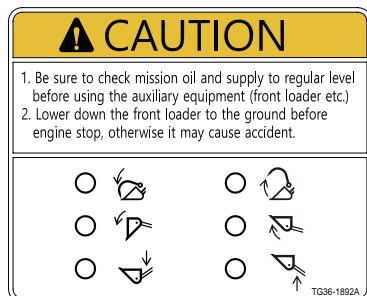
(8) Part No. : T2615-53561



(9) Part No. : T2615-55112



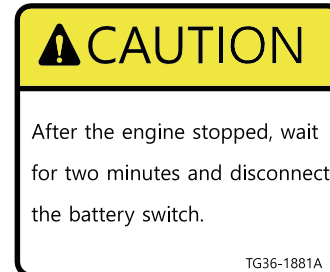
(10) Part No. : TG36-1892A



(11) Part No. : T4938-53551

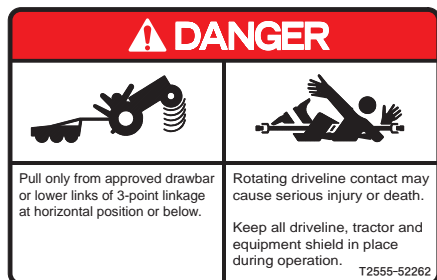


(12) Part No. : TG36-1881A





(13) Part No. : T2555-52262



(14) Part No. : T4625-52351



(15) Part No. : TG36-1885A

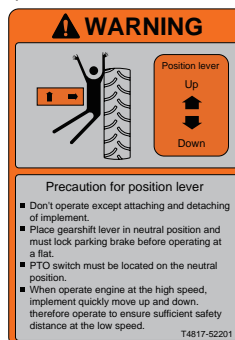


1

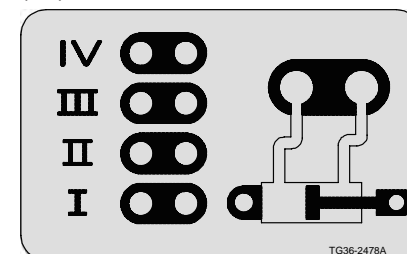
(16) Part No. : T4938-52351



(17) Part No. : T4817-52201



(18) Part No. : TG36-2478A

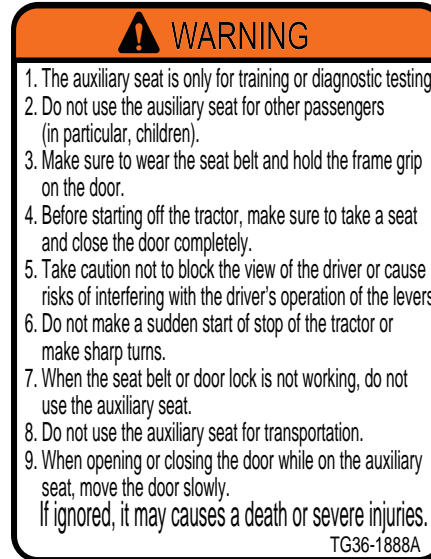




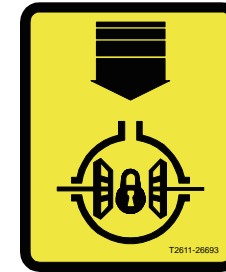
(19) Part No. : TG16-1530B



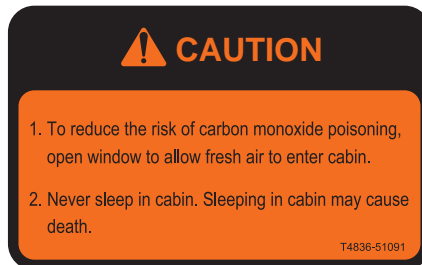
(20) Part No. : TG36-1888A



(21) Part No. : T2611-26693



(22) Part No. : T4836-51091

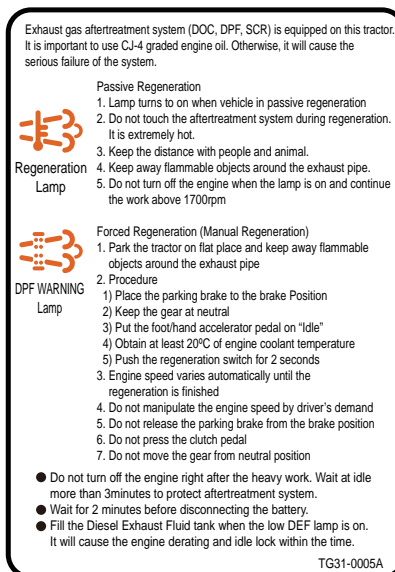




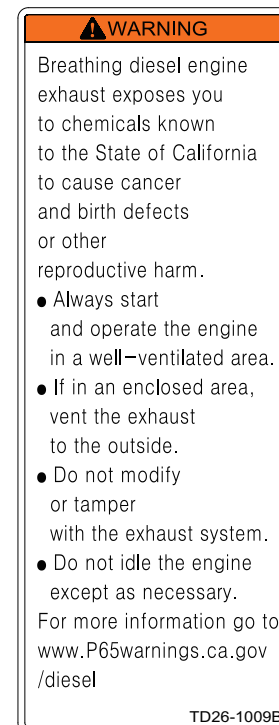
(23) Part No. : TG36-1882A

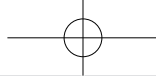


(24) Part No. : TG31-0005A



(25) Part No. : TD26-1009B





DECAL MAINTENANCE

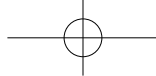
Safety decals are attached to the tractor as quick visual reminders of the safe operating guidelines as outlined in this owner's manual. Always follow the instructions provided on the decals and this owner's manual.

CAUTION

- **Keep the decals clean and intact.** If any decal is dirty, wash it with soap and dry with a soft cloth.
- **Never clean a decal with chemicals or abrasive cleaners** as they could damage the decal.
- **Do not spray high-pressure water directly onto the decal.** The decal could be forcibly removed from the tractor by a spray from pressurized water.

IMPORTANT

- **If a decal is damaged or lost, contact your local KIOTI dealer to acquire and install a replacement decal.**
- **When replacing a decal, wash the surface with soap and water and dry thoroughly.** Install the new decal in the original position, while pressing gently as the decal is laid in place to remove air bubbles from underneath the surface.
- **If a decal is attached to a component requiring replacement, install a new decal when the component is replaced.**



IDENTIFICATION WARRANTY

VEHICLE IDENTIFICATION NUMBERS.....2-2

TRACTOR SERIAL NUMBER.....2-2

ENGINE SERIAL NUMBER2-2

ESSENTIAL REPLACEMENT PARTS.....2-4

OILS AND FLUIDS.....2-4

FILTERS2-5

BELTS AND RUBBER PARTS2-5

OTHER COMPONENTS2-6

WARRANTY.....2-7

2

2



VEHICLE IDENTIFICATION NUMBERS

TRACTOR SERIAL NUMBER

ENGINE SERIAL NUMBER



(1) Tractor Serial Number Plate

This number is to identify the tractor and the plate is attached to the left side of the front axle frame.



(1) Engine Serial Number

The engine number is stamped on the cylinder block under the exhaust manifold in the left side of the tractor.

Your Authorized **KIOTI** Dealer can help you keep your tractor in top shape for the duration of your ownership. After reading this manual thoroughly, you will find that you can do some of the regular maintenance yourself.

When in need of parts, warranty or major service, be sure to contact your Authorized **KIOTI** Dealer for assistance.

Keeping your tractor and engine serial numbers in this manual and providing them when ordering parts helps your dealer provide the correct parts for your tractor everytime.



• **Tractor Model Name :**

• **Tractor Serial No :**

• **Engine Serial No :**

• **Date of Purchase :**

To be filled in by purchaser.



ESSENTIAL REPLACEMENT PARTS OILS AND FLUIDS

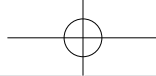


H11O204A

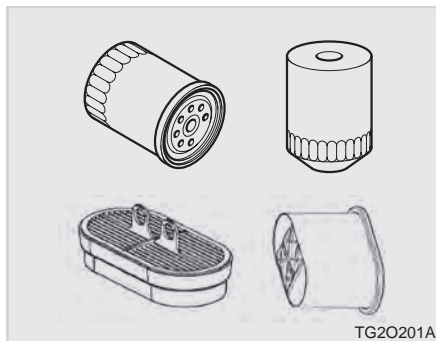
Your **KIOTI** Tractor uses multiple oils and fluids during operation. Replacing those fluids with the same or equivalent products for lubrication, corrosion and cooling is important to maintain the performance and life expectancy of your tractor for years to come.

When the oils or fluids are low, contaminated or have degraded due to usage, the performance and protection of your tractor are at risk. Following the recommended maintenance schedule provided in the manual or establishing your own maintenance schedule based on the recommendations set forth in the manual will keep your tractor performing at its optimum level.

No.	ITEM	SPECIFICATION		CAPA [U.S.gal.(L)]
1	Engine oil (Filter included)	CK-4. 10W-30 from -30F to 90F. 15W-40 from 0F to 120F		3.9 (15)
2	DEF	DEF comprised of a 32.5% DEF solution, meeting the requirements of ISO 22241		4.7 (18)
3	Transmission fluid	Daedong Shell BP Petro-Canada Phillips 66 Valvoline	: S-UTF 38 : Donax-TD Low Vis , Spirax S3 TLV : AUTRAN SYN 295 : Duratran XL Synthetic Blend : PowerTran™ Fluid Low Vis : Unitrac Low Viscosity	16.6 (63)
4	Grease	SAE multi purpose type grease		A little
5	Antifreeze	Fresh clean water with ethylene glycol (50 : 50)		4.7 (18)



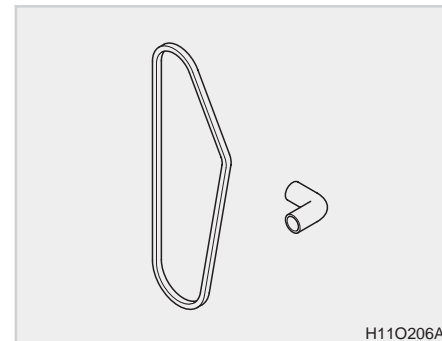
FILTERS



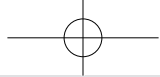
Filters for the engine, transmission, air cleaner, and cabin are consumables that purify oil and air. Make sure to replace these items when changing oil or as recommended in the maintenance schedule provided in this manual.

No.	PART NO	DESCRIPTION	QTY
1	EJ14-0022B	Engine Oil Filter	1
2	TG34-0358A	Oil Strainer	1
3	T5710-38031	Hydraulic Filter	1
4	TG34-0016A	Hydraulic Filter	1
5	T4125-38021	Hydraulic Filter (Power-Shift Valve)	1
6	EJ15-0024A	Fuel Filter Element	1
7	P608665A	Air Filter Ass'y	1
8	P606121	Air Inner Filter	1
9	TG36-2359A	Cabin Filter	1

BELTS AND RUBBER PARTS



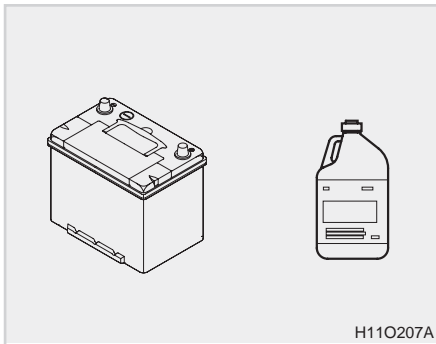
Belts, hoses and boots, which are made of rubber, weaken and begin to harden and crack as they age. It is recommended to perform regular inspections of the belts, hoses and boots and replace items when they begin to show the initial signs of aging rather than waiting till they fail which could lead to more complex and costlier repairs.



2-6 HX1302/1402

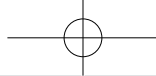
OTHER COMPONENTS

No.	PART NO	DESCRIPTION	QTY
1	EJ16-0037B	Fan Belt	1
2	TG36-2349A	A/C Belt	1



The battery condition is very important for engine start performance especially in winter.

No.	DESCRIPTION	QTY
1	230 AH / 1,100 cold crank amps.	1



WARRANTY

KIOTI will repair or replace, at **KIOTI**'s option, any part covered under the **KIOTI** written warranty statement applicable at the time of retail sale, that is determined by **KIOTI** to be defective in material or workmanship during the applicable warranty period. In order to obtain warranty repairs, the purchaser (or subsequent transferee, as applicable) must deliver the product, at the purchaser's expense, along with proof of purchase to any authorized **KIOTI** dealer. To be effective, this Limited Warranty must be activated by **KIOTI**'s receipt of the product registration, executed by the original purchaser of the relevant product and the selling dealer.

1. Owner Responsibilities

- (1) Follow the recommended guidelines for use and maintenance intervals as outlined in the Owner's Manual.
- (2) Failure to perform maintenance as recommended in the Owner's Manual or use genuine **KIOTI** parts could lead to diminished life expectancy of the product.

2. Warranty Repair Procedure

Consult your Authorized **KIOTI** Dealer for warranty questions or repairs.

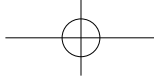
3. Warranty Transfer

The warranty for any **KIOTI** tractor may be transferred to any subsequent owner within the warranty period. Consult your Authorized **KIOTI** Dealer for assistance.

4. Warranty Termination

The warranty for any **KIOTI** product immediately terminates For any tractor or product sold at public auction, sold as salvage or scrap or is damaged beyond physical repair.





MEMO





SPECIFICATIONS

GENERAL SPECIFICATIONS 3-2

EXTERNAL DIMENSIONS3-2

GENERAL SPECIFICATIONS.....3-3

NOISE LEVELS3-6

MACHINE VIBRATION3-7

TRAVELING SPEEDS..... 3-8

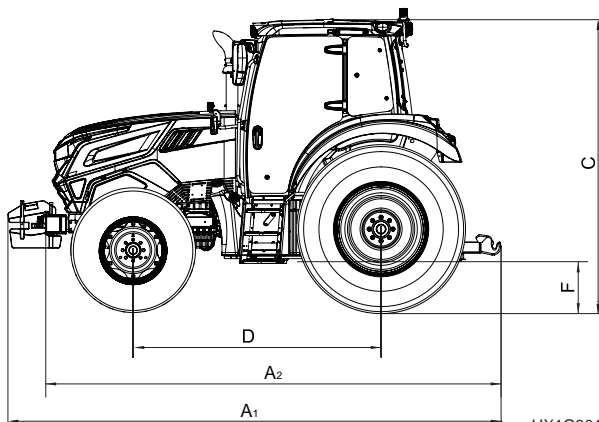
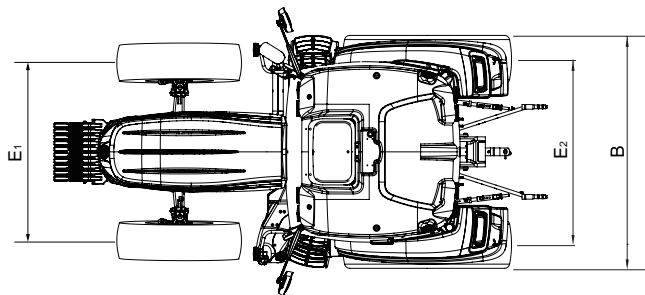
IMPLEMENT LIMITATIONS 3-10

STANDARD SIZE BY IMPLEMENT3-10

3

3

GENERAL SPECIFICATIONS EXTERNAL DIMENSIONS



HX10301A

※ These dimensions are measured with standard tires (AG) installed on the CABIN model tractor.

in. (mm)

ITEM	MODEL		REMARK
	HX1302ATC	HX1402ATC	
1. Overall length (A1)	192.4 (4,887)	←	
2. Overall length (A2)	177.9 (4,518)	←	
3. Overall width (B)	89.2 (2,267)	←	
4. Overall height (C)	114.4 (2,906)	←	
5. Wheel base (D)	102.3 (2,600)	←	
6. Tread (E1)	73.0 (1,854)	←	
7. Tread (E2)	70.9 (1,800)	←	
8. Ground clearance (F)	19.5 (496)	←	

※ E1 : Front wheel tread

E2 : Rear wheel tread



GENERAL SPECIFICATIONS

ITEM			MODEL		Remark
			HX1302ATC-NA	HX1402ATC-NA	
Engine	Model		4J383TA-TP5B	←	
	No.of cylinders		4	←	
	Total displacement	cu in. (cc)	233.9 (3,833)	←	
	Bore & Stroke	in. (mm)	4.06 X 4.53 (103 X 115)	←	
	Engine Gross(Base) Power	HP (kW)	130.1 (97.0)	140.1 (104.5)	
	Rated PTO Power	HP (kW)	109 (81.5)	120 (89.8)	
	Rated Revolution	rpm	2,200	←	
Capacity	Fuel tank	U.S.gal. (ℓ)	60.7 (230)	←	
	DEF tank	U.S.gal. (ℓ)	4.7 (18)	←	
	Transmission Oil	U.S.gal. (ℓ)	16.6 (63)	←	
	Front axle Oil	U.S.gal. (ℓ)	2.6 (10.0)	←	
	Front axle case	U.S.gal. (ℓ)	0.2 + 0.2 (0.9 + 0.9)	←	
	Engine Oil (filter include)	U.S.gal. (ℓ)	3.9 (15)	←	
	Engine Coolant	U.S.gal. (ℓ)	4.7 (18)	←	



3-4

HX1302/1402

ITEM				MODEL		Remark
				HX1302ATC-NA	HX1402ATC-NA	
Drive Train	Main Clutch Type			Multi wet disc clutch	←	
	Transmission	Shuttle Type		Power shuttle	←	
		Main Gear Shift		Power Shift 8 stage	←	
		Range Gear Shift		Synchromesh 2 stages	←	
		Creep Gear Shift		Constant Mesh 2 stages	←	
		No. of speeds		F32 X R32	←	
	Traveling Speeds (AG) mph (km/h)		Forward	0.22 ~ 23.23 (0.35 ~ 37.39)	←	
			Reverse	0.21 ~ 23.07 (0.35 ~ 37.13)	←	
	Front wheel drive			Electric/hydraulic engagement	←	
	Main Brake Type			Wet Disc	←	
Tire Size	Agricultural			Rear mechanical Front limited slip	←	
Hydraulic	Pump			lpm 166.8 (Main: 119.0 / Steering: 47.8)	←	
	Steering			Hydrostatic Power Steering	←	
	3 Point Lift Control Type			Electronic control	←	
	3-point hitch type			Category II	←	



ITEM				MODEL		Remark
				HX1302ATC-NA	HX1402ATC-NA	
Hydraulic	Lift Capacity	@24 in. behind lift pointlbs (kgf)		8,492 (3,852)	←	
		@lift point lbs (kgf)		10,322 (4,682)	←	
	No. of standard remote ports on the valves		6	←		
	No. of joystick controlled front ports		6	←		
PTO	Rear	Type		Independent	←	
		PTO shaft specifications		SAE 13/8" 6 spline (540) SAE 13/8" 21 spline (1,000)	←	
		3 speeds	1st (at 2,200 rpm)	540	←	
			2nd (at 1,600 rpm)	540E	←	
			3rd (at 2,200 rpm)	1,000	←	
Min, turning radius (with brakes) ft (mm)				165 (4,200)	←	
Weight with Cabin and AG tires lbs (kgf)				10,944 (4,964)	←	
Max. Draw-bar vertical load lbs (kgf)				3,307 (1,500)	←	
Max. towing capacity at the drawbar. lbs (kgf)				15,000 (8,000)	←	

※ The specifications are subject to change without notice.



NOISE LEVELS

Item	Tractors with Cabin			Remark
Regulation	2018/985 Annex II	2018/985 Annex II (Stationary)	1322/2014(RVCR) Annex III	-
Permissible sound level	84,0dB(A)	83,0dB(A)	82,4dB(A)	Tested by Method2

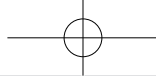
※ Note: Data supplied by the manufacturer, approval values pending.

Result of the sound level test (external)

Measured in accordance with Annex II to Commission Delegated Regulation (EU) 2018/985, as last amended by Commission Delegated Regulation (EU) 2020/1564

Driver-perceived sound level

Measured according to Annex VIII to Commission Delegated Regulation (EU) No 1322/2014, as last amended by Commission Delegated Regulation (EU) 2018/830



MACHINE VIBRATION

WARNING

- *The vibration level transmitted to each individual operator is dependent upon multiple different parameters. Some of those parameters relate to the unique individual, some to the tractor, attachments/implements being used, terrain and speed.*
- *Excessive vibrations can cause discomfort for the operator and in some extreme cases, potentially risk health and safety with prolonged exposure.*
- *Maintain the tractor and attachments/implements in good operating condition according to the recommended service guides in the owner's manual.*
- *Keep tires in good condition and follow the manufacturer's recommended inflation pressures.*
- *Maintain the seat in good condition and adjusted correctly for height and weight.*
- *Perform daily equipment inspections to confirm steering and brakes are in proper working condition. Always look for loose hardware, leaks, etc. and items that need to be repaired before beginning work.*

IMPORTANT

- **More information on Whole Body Vibration (WBV) on agricultural tractors can be found in more specific publications and the relative risks can be taken into account following the laws of the country. In order to correctly estimate statistical values based on your daily work on the tractor, a specific measure instrument is required, such a three-axis accelerometer applied to the seat**

In accordance to Commission Delegated Regulation (EU) No. 1322/2014 the following table shows vibration levels measured on seats, in aws.

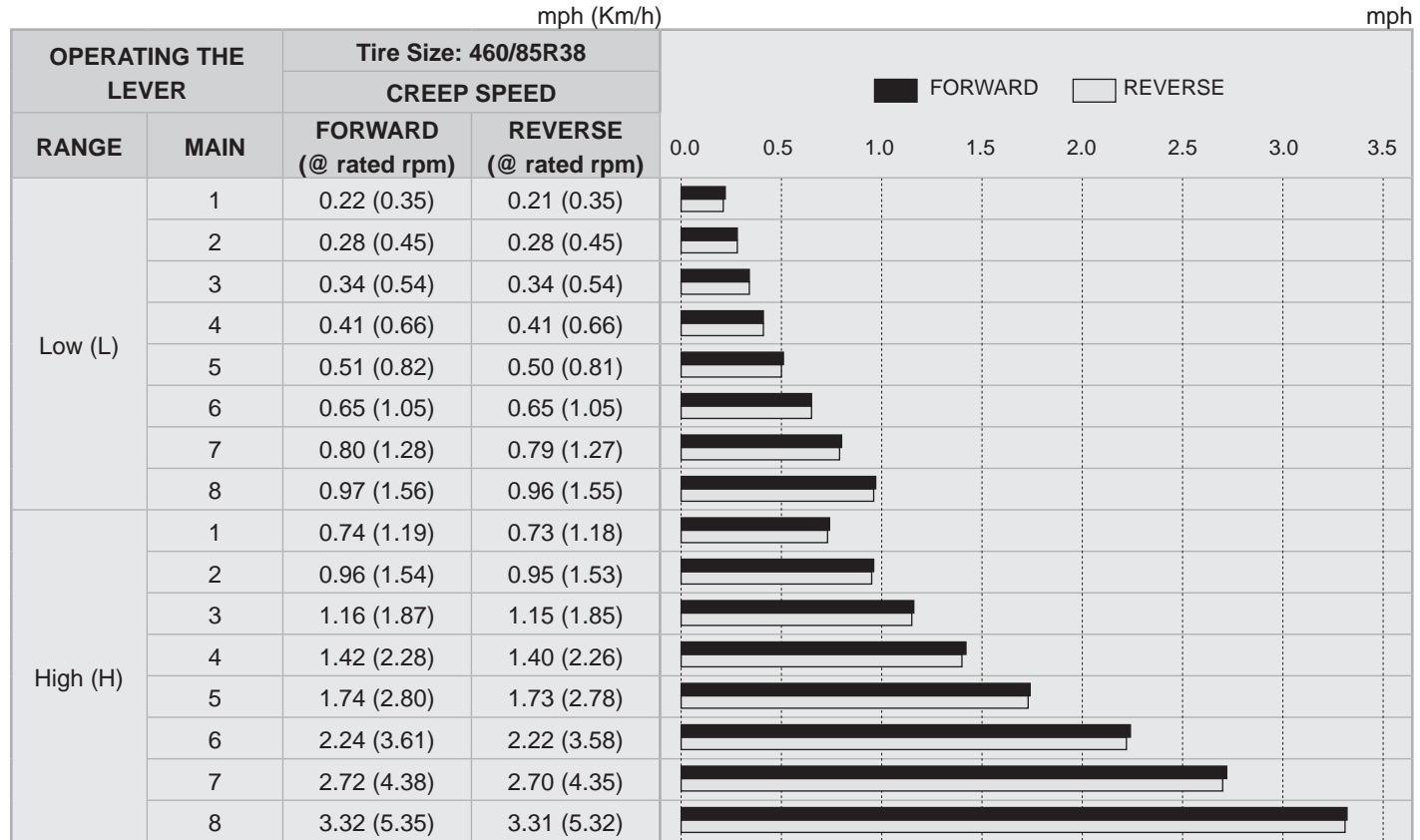
Operator's Vibration level			
Seat type	Commission Delegated Regulation (EU)	Light-weight operator	Heavy-weight operator
MSG95G/731	1322/2014	1.10 m/s ²	0.90 m/s ²

* aws = Correct weighted value of the vibration acceleration (m/s²)



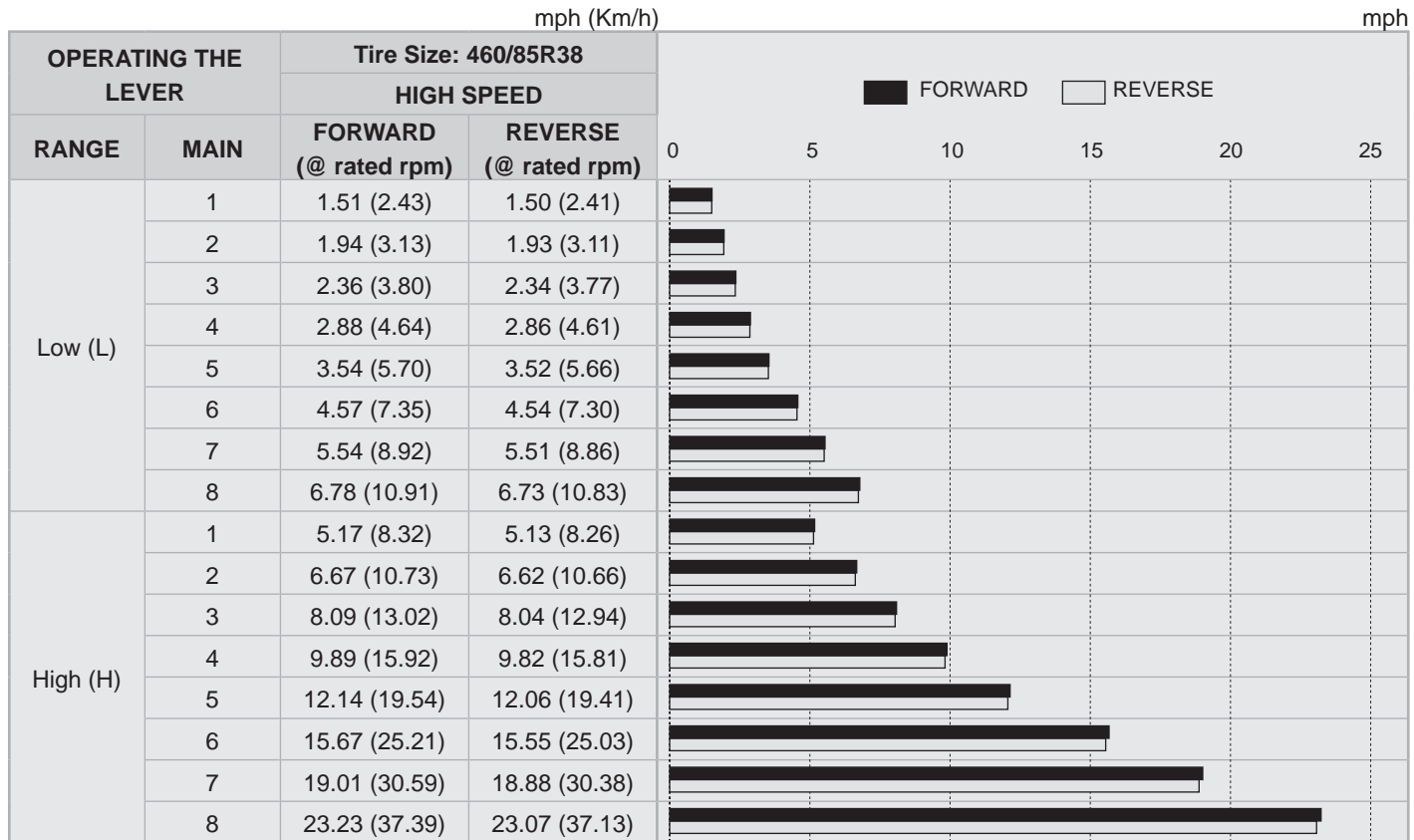
3-8 HX1302/1402

TRAVELING SPEEDS



※ Specifications are subject to change without notice.

G310301A



※ Specifications are subject to change without notice.

G310302A

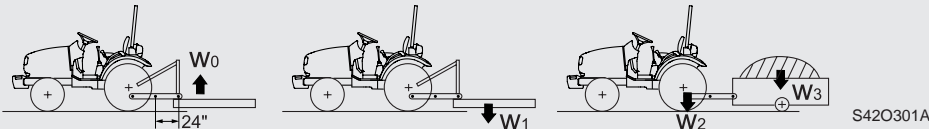


IMPLEMENT LIMITATIONS STANDARD SIZE BY IMPLEMENT

This **KIOTI** tractor has been thoroughly tested for proper performance with implements sold or approved by **KIOTI**. Use with implements which are not sold or approved by **KIOTI** and which exceed the maximum specifications listed below, or which are otherwise unfit for use with this **KIOTI** tractor may result in malfunctions or failures to the tractor, damage to other property and injury to the operator or others. [Any malfunctions or failures to the tractor resulting from use with improper implements are not covered by the warranty.]

Model \ Item	Tread (max. width) Standard for agricultural tires Front Wheel: 380/85R28 / Rear Wheel: 460/85R38		Lifting Capacity max. loading weight W ₀ (24 in. aft of hitch)
	Front	Rear	
	HX1302/1402	73.0 in. (1,854 mm)	



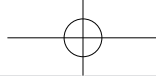
Model \ Item	Actual figures		Trailer or trailed implement Max. weight W_3 Max. capacity
	Implement weight W_1 and / or size	Max. Drawbar Load W_2	
HX1302/1402	As in the following list (shown on the next page)	3,307 lbs. (1,500 kg)	15,000 lbs. (8,000 kg)
Lifting Capacity max. weight(W_0) The maximum weight that can be applied to the tractor's three-point lower links, 24" away from the hitch.			
Implement weight The maximum weight that can be applied to the tractor's three-point lower links, at the hitch point			
Max. drawbar load (downward load on the tip of the drawbar in it's shortest length from center of tractor).....3,307 lbs. W_2			
Trailer loading weight The max. combined weight for trailer (trailer + payload)			
			

NOTE : Implement size may vary depending on soil operating conditions.



IMPLEMENT	DESCRIPTION	REMARKS
Field cultivator	Max. width	144 in maximum or rated for 95 PTO HP w/FWA
Disc	Max. width	144 in pull type or rated for 70 drawbar HP or 120 in lift type or rated for 70 drawbar HP
Discbine or baler		Meets tractor PTO HP specification
Loader	Max. Bucket width	84 in. (2,134 mm) bucket
Tiller	Max. Cutting width	Not recommended unless rated for 95 PTO HP
Box Blade	Max. Cutting width	96 in. (2,438 mm) maximum or rated for 95 PTO HP w/FWA
Rear Blade	Max. Cutting width	180 in. (4,572 mm) maximum or rated for 95 PTO HP w/FWA
Rotary Cutter	Max. Cutting width	Not to exceed 240 in. (6,096 mm) pull type or 144" lift type or a 95 PTO HP rating.
Aerator	Max. width	120 in. (3,048 mm) maximum or rated for 95 PTO HP w/FWA
Landscape Rakes	Max. width	144 in. (3,658 mm) maximum or rated for 95 PTO HP w/FWA

NOTE : This is a sample of attachments commonly used. Before purchasing or implement or attachment on a **KIOTI** Tractor, please review the specifications to determine if it is a compatible product. Damages or failures due to improper or use of an attachment or implement that is not compatible will not be covered by warranty. If you have questions concerning product compatibility or warranty, please consult with your authorized **KIOTI** Dealer.



DESCRIPTION OF OPERATING SYSTEM

EXTERIOR VIEW 4-4

SWITCHES..... 4-5

MOUNTING LOCATION	4-5
KEY SWITCH.....	4-6
COMBINATION SWITCH.....	4-7
HAZARD LAMP SWITCH	4-9
DPF REGENERATION SWITCH.....	4-9
ECO/MODE SELECTION SWITCH	4-11

INSTRUMENT PANEL 4-13

TACHOMETER / HOUR METER	4-14
PTO SPEED MARK.....	4-14
FUEL GAUGE	4-15
ENGINE COOLANT TEMPERATURE GAUGE...	4-15
ENGINE OIL PRESSURE WARNING LAMP...	4-16
BATTERY CHARGING LAMP	4-17
HEAD LIGHT HIGH BEAM LAMP	4-17
TURN SIGNAL LAMPS	4-17
GLOW PLUG LAMP	4-18
PARKING BRAKE LAMP	4-18
PTO LAMP	4-18

4WD LAMP	4-19
DRAFT LAMP	4-19
BRAKE(ONE SIDE) LAMP	4-20
CRUISE PTO LAMP	4-20
DPF REGENERATION WARNING LAMP ...	4-21
DPF REGENERATION UNDERWAY LAMP ...	4-21
CHECK ENGINE WARNING LAMP	4-25
DEF LEVEL WARNING LAMP	4-25
DEF QUALITY LAMP	4-26
WATER-IN-FUEL WARNING LAMP	4-26
FUEL LEVEL WARNING LAMP	4-27
EMISSION WARNING LAMP	4-27
GENERAL ERROR CODE DISPLAY	4-28

OPERATING THE CONTROLS 4-29

SHUTTLE SHIFT LEVER	4-30
RANGE GEAR SHIFT LEVER.....	4-31
CREEP SPEED LEVER	4-32
PTO SHIFT LEVER	4-34
PTO SELECTION LEVER	4-34
CLUTCH PEDAL	4-35
BRAKE PEDAL.....	4-36

4

4



DESCRIPTION OF OPERATING SYSTEM

TILT STEERING	4-37
TELESCOPING FUNCTION.....	4-37
PARKING BRAKE LEVER	4-37
FOOT THROTTLE	4-38
HAND THROTTLE LEVER	4-38
PTO MAIN SWITCH	4-39
PTO AUTO/MANUAL SWITCH.....	4-40
AUTO DRAFT FUNCTION.....	4-41
REMOTE PTO OPERATION	4-41
4WD SWITCH	4-43
AUTO 2WD SWITCH	4-44
WORK/TRAVEL RESPONSE BUTTON.....	4-45
CALIBRATION BUTTON.....	4-45
BEACON LIGHT BUTTON (IF EQUIPPED WITH A BEACON LIGHT).....	4-45
DEFROST BUTTON.....	4-46
POSITION CONTROL LEVER AND SWITCH...	4-47
ADJUSTING THE HEIGHT OF THE RIGHT HAND CONTROL ARM.....	4-48
DIFFERENTIAL LOCK PEDAL (REAR).....	4-49
SEAT ADJUSTMENT	4-49
JOYSTICK LEVER	4-53

DOUBLE ACTING LEVERS	4-55
EXTERNAL LIFT CONTROL SWITCH	4-56

CABIN SYSTEMS 4-57

INTERIOR DEVICES	4-57
EXTERIOR DEVICES	4-58
ENTRANCE	4-58
EXIT	4-59
REAR WINDOW	4-59
WORKING LIGHT	4-60
WIPER.....	4-60
ANTENNA	4-61
ROOM LAMP	4-62
ACCESSORY.....	4-62
OPTIONAL COOL/WARM STORAGE (OPTION)	4-64
SUNSHADE	4-64
SUNROOF	4-65
HEATER AND AIR CONDITIONER	4-65
7-PIN POWER SOCKET	4-70
TIRES, WHEELS AND BALLAST.....	4-71
INFLATION PRESSURES	4-72

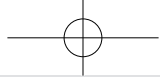


DESCRIPTION OF OPERATING SYSTEM

TREAD 4-73
WHEEL TORQUE AND DIRECTION 4-75
ADDITIONAL WEIGHT(IF EQUIPPED)..... 4-76

4

4



4-4 HX1302/1402

EXTERIOR VIEW



HX3O438B

(1) Working Lamp (FRT/RR)

(2) Wiper

(3) Rear View Mirror

(4) Muffler

(5) Front combination light:
turn signal/clearance light

(6) Working Lamp

(7) Step

(8) Bonnet/Hood

(9) Head Lamp

(10) Top Link

(11) Lift Rod

(12) Lower Link

(13) Draw-bar

(14) Tail Lamp

(15) Front Fender (not compatible
with loader equipped models)

(16) PTO Shaft

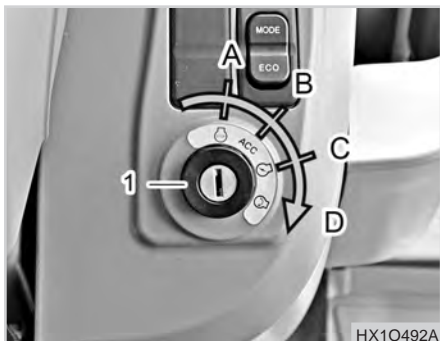
SWITCHES MOUNTING LOCATION



- (1) Instrument Panel
- (2) Combination Switch
(Turn signals, headlights & horn)
- (3) Hazard Lamp Switch
- (4) DPF Regeneration Switch
- (5) ECO Mode Switch
- (6) Key Switch



KEY SWITCH



(1) Key switch

(A) OFF

(B) ACC

(C) ON

(D) START

• OFF (A)

When the key switch is in position "A", the engine and all electrical devices in the vehicle are turned off. However, flasher lights and turn signal lights can be operated along with their indication lamps on the dash board.

• ACC (B)

When the key switch is turned to position "B", the accessory position, the radio operates in addition to the flasher and turn signal lights.

• ON (C)

Position "C" indicates the "ON" position. As soon as the key switch is turned to this position, the instrument panel will illuminate and all of the warning indicators like the oil pressure lamp and the battery lamp will display while the automatic pre-heating function is activated (based on temperature). When the pre-heat function is operating, the corresponding lamp will display on the instrument panel for approximately 9 seconds. Wait till the lamp goes out before starting the engine.

• START (D)

Position "D" indicates "Start." In order to start the engine, make sure the PTO is off, depress the clutch pedal and rotate the key to the start position. As soon as the engine is started, release the key then the key will return to position "C."



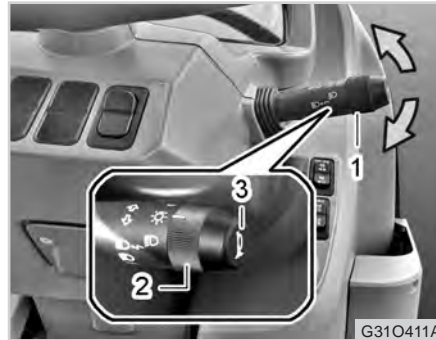
CAUTION

- **Stop the engine immediately if the oil pressure warning lamp does not go off within 5 seconds after the engine is started. The engine may be damaged if operated with low oil pressure after a few minutes.**
- **If the battery charge warning lamp does not go off after the engine is started, check the electrical systems, such as the alternator, for damage. Continuing to use the engine under this condition can discharge the battery or damage other electrical devices.**

NOTE

- The ignition is key non-directional so it is easy to insert and remove. It is not recommended to leave the tractor unattended with the key in the ignition to prevent unauthorized use of the tractor which could lead to equipment, property or personal injury.
- The horn, turn signal and hazard lamps can be operated without the key inserted.

COMBINATION SWITCH



(1) Turn Signal Light Switch
(2) Head Light Switch (3) Horn Switch

The combination switch consists of the head light, turn signal light, and horn switches. Its function by its position is as follows :

"OFF" : Head light and tail light "OFF"

☰☉ : Low beam and tail light "ON"

☰☉ : High beam "ON"

↔ : Turn signal light and tail light "ON"

☰☉☑ : Head light "OFF" and instrument panel + tail light + clearance lights "ON"

HEAD LIGHT SWITCH



(1) Head Light Switch
(A) OFF (B) Instrument Panel ON
(C) Low Beam ON (D) High Beam ON

The head light can only be operated while the while the key switch is turned to the "ON" position. Turning the head light switch clockwise one click will illuminate the instrument panel lights while turning it one more click will illuminate the low beam head lights.

Push the stalk downward to switch to high beams. Return the stalk to it's original position to return to low beams.



⚠ WARNING

- ***Driving with high beam head lights while on the road can impair an approaching vehicles visibility. When traveling on public highways, it is recommended to only use high beam headlights when necessary to gain full vision of the road ahead when there are no approaching vehicles in sight. Use the high beam head lights only if necessary.***

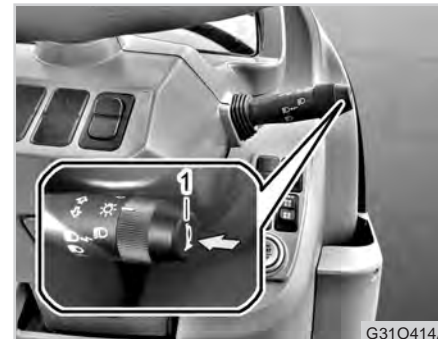
TURN SIGNAL LIGHT SWITCH



(1) Turn Signal Light Switch
(A) Left Turn (B) Right Turn

The turn signal lights are used when turning the vehicle left or right. Pulling the lever up blinks the left turn signal light while pushing the lever down blinks the right turn signal light.

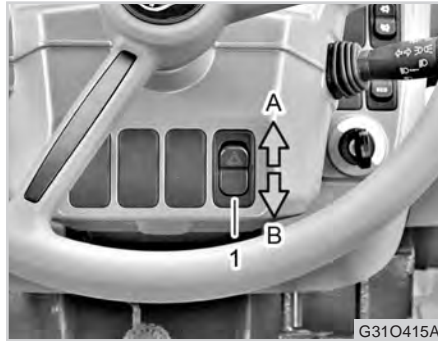
HORN SWITCH



(1) Horn Switch

The horn switch can be operated without the key inserted. Press the end of the combination switch inward to sound the horn.

HAZARD LAMP SWITCH



(1) Hazard Lamp Switch
(A) ON (B) OFF

This switch can be used to warn other vehicles that they are approaching a low-speed tractor traveling on a public highway. Pressing this switch up illuminates the red triangle in the switch and flashes the hazard lights. When traveling on a public road, always turn the hazard lights on as a warning to approaching vehicles. When making a turn, use the turn signal switch to signal the turning direction and the light on the turning side will continue

to flash while the one on the opposite side will illuminate solid (not flashing). When the turn signal switch is returned to the off position, the hazard lights will resume flashing till the hazard lamp switch is turned off.

CAUTION


- The hazard lamps can be operated without the key inserted.
- If the hazard lamps are turned on for an extended period of time while the engine is stopped, the battery can be discharged. Therefore, use them only in emergency.

DPF REGENERATION SWITCH



(1) DPF Regeneration Switch
(A) Activation (B) Deactivation

DPF MANUAL REGENERATION

When the DPF regeneration warning lamp () illuminates, please follow the recommended guidelines below.

MANUAL REGENERATION

1. Park the tractor on a flat, level surface in an open area away from buildings or items that may be damaged by heat.
2. Place the transmission in neutral and engage the parking brake.



3. With the engine at "idle", depress the regeneration switch for 2 seconds and wait for the engine RPM's to increase.
4. Once engaged, the ECU will operate the engine on a pre-set schedule:
 - HIGH IDLE: To raise the coolant temperature to an acceptable range, approximately 10 minutes
 - MAX RPM'S: To perform the regeneration, approximately 25 minutes
 - HIGH IDLE: To allow the exhaust system an opportunity to cool down, approximately 3 minutes
 - IDLE: Signifying to the operator that the manual regeneration cycle is complete
- Once the manual regeneration function is engaged, do not:
 - Change engine RPM's
 - Turn the engine off
 - Release the parking brake
 - Depress the clutch pedal

- Place in gear
- Try to operate the tractor
- Failure to follow these guidelines will result in the termination of the manual regeneration cycle.
- The regeneration cycle will take approximately 35 minutes to complete.
- When the engine has returned to idle after completing the regeneration cycle, the tractor may be returned to work.
- If the tractor will not be returning to work, allow the engine to idle for approximately 5 minutes before turning off to allow the unit sufficient time to cool down.

NOTE

- During regeneration of the DPF, captured particles are burned. It is not uncommon to see small puffs of smoke or notice a change in the exhaust smell during the regeneration process.

REGENERATION DEACTIVATION

Once underway, it is recommended to allow the regeneration process to operate normally till completion. The deactivation button allows the operator to suspend regeneration when unfavorable circumstances arise.

Examples of circumstances when regeneration should be suspended by the operator:

1. Work is complete and engine RPM's are reduced below 1,700 RPM's. In this case, the ECU will automatically suspend the regeneration until parameters to conduct regeneration or met.
2. Working in confined areas
3. Working in enclosed areas
4. Working in environments where dry vegetation or other flammable materials may be in a close proximity to the exhaust .
5. Other unfavorable conditions identified by the operator during the course of work

⚠ CAUTION

Follow the recommendations outlined below to protect the engine and emissions components of your tractor.

- Only use ULSD diesel fuel from a clean source. ULSD (Ultra-Low Sulfur Diesel, below 15 PPM Sulfur)
- Only use the recommended viscosity engine oil with a minimum rating of CJ-4.
- Always keep the engine oil in the safe operating range (as identified on the engine dipstick).
- Change the engine oil and filter as outlined in the recommended maintenance schedule.
- Avoid any unnecessary engine idling.
- Always idle the engine for 2 minutes after work before turning the engine off to allow sufficient time for cool down.

⚠ CAUTION

Follow the recommendations outlined below to protect the engine and emissions components of your tractor.

- Never place the shift lever in the neutral position when driving downhill.
- Never use oil or fuel additives unless they meet or exceed the requirements for SAE and ASTM standards for exhaust emissions and diesel fuel for use in on-highway vehicles produced after 2010 or off-road vehicles produced after 2014.
- Avoid driving with any warning lamp illuminated.
- Always keep the engine area clean and do not allow dry debris, grass, or animal nests to accumulate underneath the hood, especially in the area of any exhaust or fuel components.

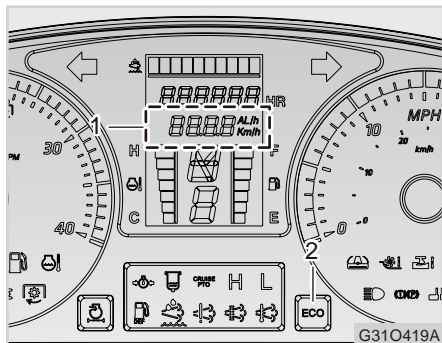
ECO/MODE SELECTION SWITCH



(1) ECO/MODE selection switch
(A) MODE Switch (B) ECO Switch

- MODE switch (A)
There are 4 selections or "modes" available on the display depending on your needs:

No.	ITEM	DESCRIPTION
1	-	Odometer
2	LH	Instant fuel consumption
3	ALH	Average fuel consumption
4	L	Total fuel consumption



(1) Fuel consumption indicator
(2) ECO Lamp

• ECO range comparison

Engine The ECO indicator can be turned "ON" or "OFF" by pressing the ECO switch. When "ON" the ECO indicator will illuminate in a color reflecting the current rate of fuel consumption:

White	Operation below 1,000 RPM's or fuel efficiency below 2.1 gallons/hr (8 L/hr)
Green	Fuel efficiency - 2.1 gallons/hr to 4.0 gallons/hr (8.1-15.5 L/hr)
Red	Fuel efficiency - greater than 4.1 gallons/hr (15.6 L/hr)

• ECO switch (B)

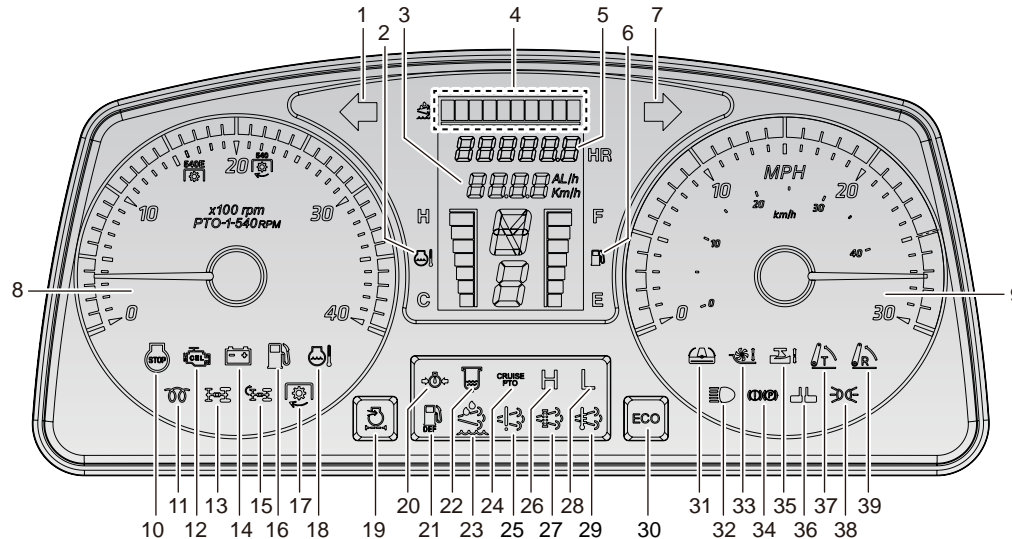
The ECO indicator can be turned "ON" or "OFF" by pressing the ECO switch. When "ON" the ECO indicator will illuminate in different colors reflecting the current rate of fuel consumption:

- White illumination = Economical fuel consumption.
- Green = Average fuel consumption.
- Red = High fuel consumption.

INSTRUMENT PANEL

Symbols marked with an * illuminate when the key switch is turned to the "ON" position. Symbols marked with a ** illuminate when the engine is started (and should go out after 5 seconds).

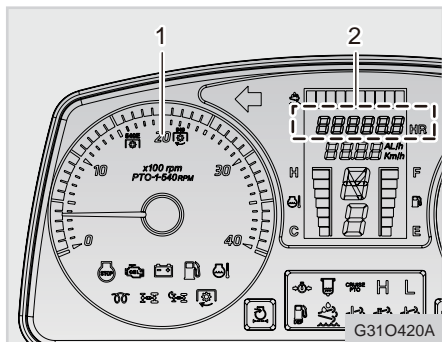
※ Not all symbols are utilized in the North American market.



G31O418A

- | | | | |
|--|--|---------------------------------------|---------------------------------------|
| (1) Turn Signal Lamp (LH) | (11) Glow Plug Lamp | (21) DEF Low Level Warning Lamp** | (31) Horizontal Auto |
| (2) Coolant Temperature Gauge* | (12) Engine Check Lamp** | (22) Water Sensor Warning Lamp** | (32) High Beam Lamp |
| (3) Odometer/Fuel consumption is illuminated | (13) 4WD Operation Lamp*(park on, brakes locked) | (23) DEF Quality Lamp | (33) Auto tilling depth |
| (4) DEF Level | (14) Battery Charge Warning Lamp* | (24) Cruise PTO Lamp** | (34) Parking Brake Lamp* (if engaged) |
| (5) Hour Meter / Error Code* | (15) QT | (25) Emission Warning Lamp** | (35) Auto Draft |
| (6) Fuel Gauge | (16) Low Fuel Level Warning Lamp | (26) High Speed Lamp* if selected | (36) One Side Brake Lamp |
| (7) Turn Signal Lamp (RH) | (17) PTO ON Lamp | (27) DPF Regeneration Warning Lamp** | (37) Turn Up |
| (8) Tachometer* | (18) Coolant Temperature Warning Lamp | (28) Low Speed Lamp* if selected | (38) Tail Lamp |
| (9) Speedometer | (19) Air Filter Clogging Warning Lamp | (29) DPF Regeneration Underway Lamp** | (39) Back Up |
| (10) Engine Shut Down Warning Lamp | (20) Engine Oil Pressure Warning Lamp** | (30) ECO | |

TACHOMETER / HOUR METER



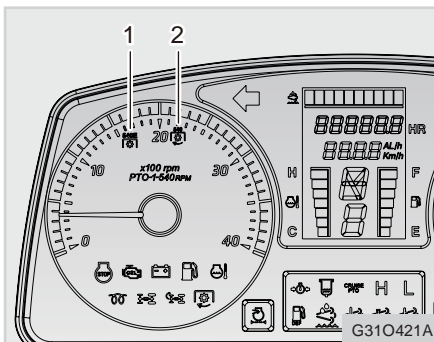
- (1) Tachometer
(2) Hour meter

Engine tachometer indicates the number of engine revolutions per minute.

Hour meter indicates the total operating time of the tractor to six digits.

The hour meter does not operate if the engine is stopped even if the key switch is left in the "ON" position.

PTO SPEED MARK



- (1) 540 (at engine 2,200 rpm)
(2) 540E (at engine 1,600 rpm)

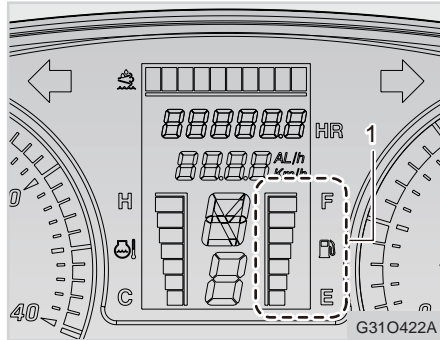
When the PTO shifter is set to 540 RPM, set the engine speed to align with the corresponding 540 indicator on the tachometer (1).

When the PTO shifter is set to 540E, set the engine speed to align with the corresponding 540E indicator on the tachometer (2).

For general use or heavy loads, it is recommended to use 540 RPM for the PTO output shaft.

For light duty applications where full engine power is not required, the PTO shifter should be placed in the 540E position. Matching the engine speeds to the corresponding 540E indicator on the tachometer will conserve fuel when operating under these light duty applications.

FUEL GAUGE



(1) Fuel Gauge
E: Empty F: Full

This indicates the remaining fuel level in the fuel tank.

- **F** : FULL
- **E** : Empty, replenish the tank.

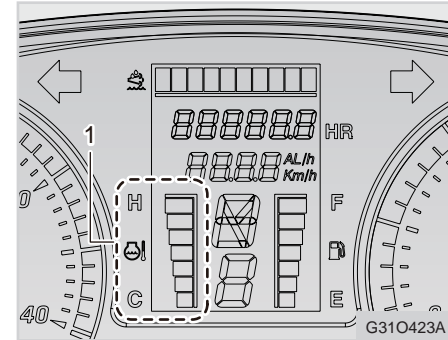
NOTE

- Only use ULSD diesel fuel (15 PPM sulfur) from a clean source. The fuel system and engine can be damaged if operated with fuel not meeting the proper specification.

NOTE

- #2 diesel is the most common diesel fuel available and is satisfactory for year round use in many circumstances (depending on geographical location). In colder climates, #1 diesel fuel or a blend of #2 & #1 diesel fuel may be available to combat some of the problems of diesel when exposed to cold temperatures like gelling or poor starting.
- Only use an ULSD diesel (15 PPM) meeting ASTM specifications for #2 or #1 diesel fuel.
- Only use clean fuel! Contaminated fuel can lead to premature engine or fuel system failure.
- The fuel gauge may move on slopes or hills indicating a higher fuel level than what is actually in the tank.

ENGINE COOLANT TEMPERATURE GAUGE



(1) Coolant Temperature Gauge
C: Cold H: Hot

This gauge indicates the coolant temperature after the key switch is turned to the "ON" position.

- **C** : Coolant is cold.
- **H** : Coolant is hot.

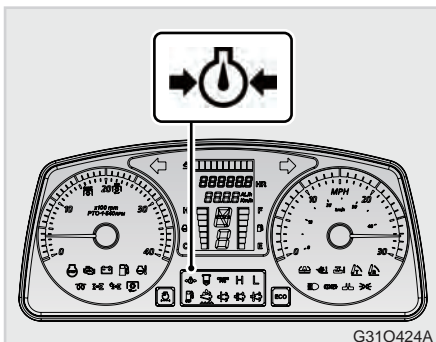
The range marked in "H" in the figure indicates an abnormal engine temperature. Reduce engine RPM and load immediately! Inspect the tractor and make sure the hood screens and radiator are clear of any debris that may limit cooling air to the radiator.

⚠ CAUTION

Control the work load! If the temperature gauge enters the "H" zone, follow these steps immediately:

1. Stop work immediately.
2. Bring the engine down to a high idle (approximately 1,500 RPM's).
3. Allow the engine to cool for 5 minutes and return to normal operating temperature before turning the engine off.
4. Place the transmission in neutral, engage the parking brake, bring the engine to idle and turn the engine off. Remove the key.
5. Inspect the engine area to be sure the hood screens and radiator are clear of any debris to allow good airflow to the engine area.
6. Resume work but lighten the load to keep the coolant temperature in the normal operating range.

ENGINE OIL PRESSURE WARNING LAMP



This lamp comes on when the engine oil pressure is low.

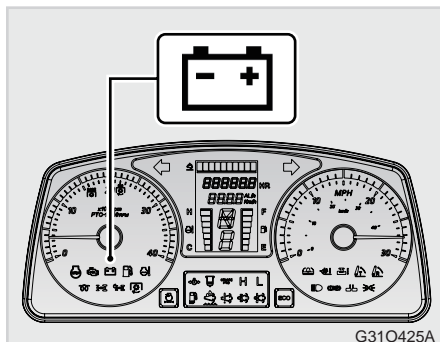
If this lamp comes on while driving, stop the engine immediately and check the engine oil level.

If this lamp comes on even with the specified engine oil level, stop operation immediately and have the tractor checked by your local Authorized KIOTI Dealer.

⚠ CAUTION

- The engine can be severely damaged if operated when the oil level is below the minimum required range fill range.
- The engine can be severely damaged if driving or operating the tractor with the engine oil warning lamp ON.

BATTERY CHARGING LAMP

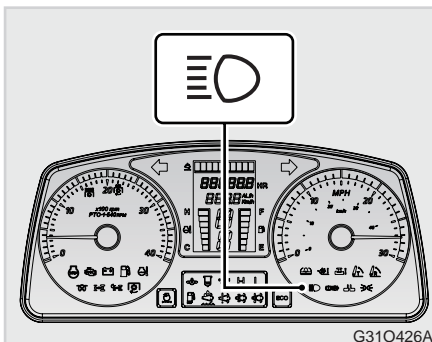


The battery charging lamp illuminates when the key switch is turned to the ON position. This lamp should go out immediately after the engine starts.

! CAUTION

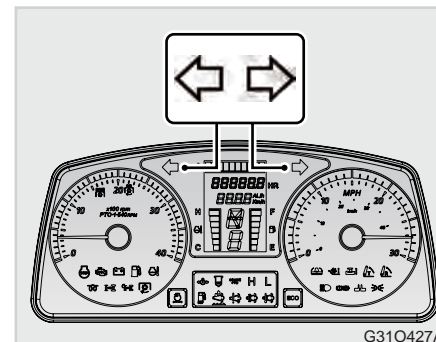
- If this warning lamp comes on while driving, the charging system, such as the alternator, is malfunctioning and is not properly charging the battery. Stop use immediately and have the tractor checked by your local Authorized KIOTI Dealer.

HEAD LIGHT HIGH BEAM LAMP



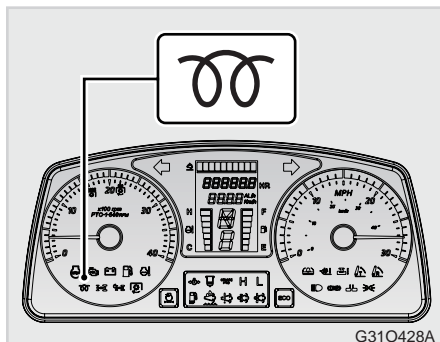
This lamp illuminates in blue when the high beam headlights are switched on. Driving with high beam head lights while on the road can impair an approaching vehicles visibility. When traveling on public highways, it is recommended to only use high beam headlights when necessary to gain full vision of the road ahead when there are no approaching vehicles in sight.

TURN SIGNAL LAMPS



Operating the turn signal lamp switch up and down illuminates the corresponding signal lamp in green.

GLOW PLUG LAMP

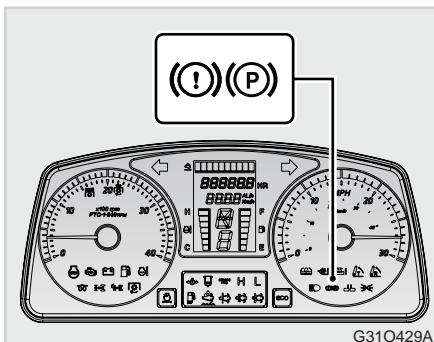


G31O428A

When the key switch is turned to the "ON" position, the glow plug lamp illuminates (when the engine is cold). When the glow plug lamp goes out, start the engine and allow the engine to warm up for 2-5 minutes, depending on ambient temperature, before beginning work.

If the glow plug light does not illuminate, the engine does not require pre-heating and may be started immediately. It is recommended to follow the warm up procedure if the engine has not been started or operated for several hours.

PARKING BRAKE LAMP



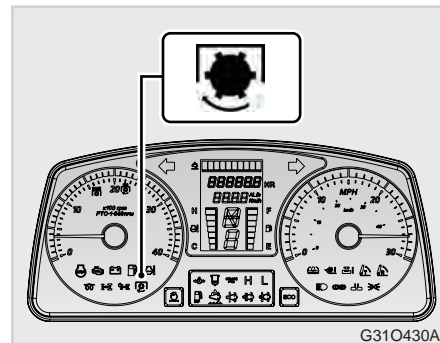
G31O429A

When the parking brake is actuated, the parking brake light illuminates on the dash.

**CAUTION**

- If this lamp is ON even with the parking brake released, have the tractor checked by your local Authorized KIOTI Dealer.

PTO LAMP



G31O430A

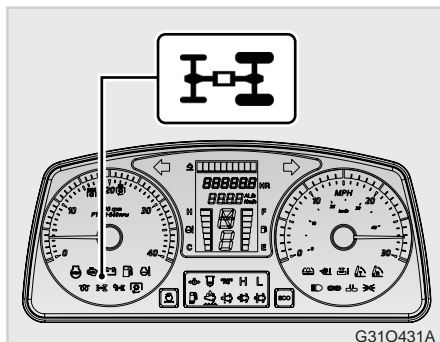
When the PTO is engaged, the PTO lamp illuminates on the dashboard.

When starting the tractor, the PTO must be in the off position.

**CAUTION**

- Set the PTO switch to the "OFF" position in order to start the engine.

4WD LAMP



G31O431A

When the 4wd is engaged, the 4wd lamp illuminates on the dashboard. The 4wd can be engaged with the 4wd switch.

When the tractor is operated with the individual brake pedals locked together, the 4wd will automatically engage under the following conditions:

1. When the brake pedals are depressed.

2. When the parking brake is engaged.

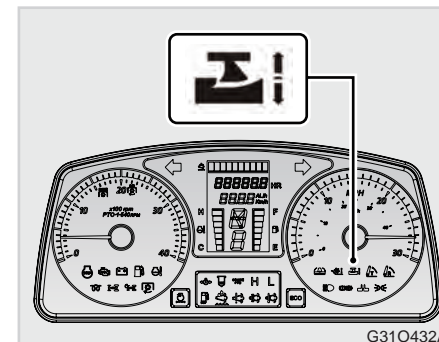
If the individual brakes pedals are not locked together, the 4wd will not automatically engage when both brake pedals are depressed at the same time.



CAUTION

- Using the brakes as a turn assist under heavy load can reduce the life expectancy of the LSD front differential and the brakes themselves. Repetitive use could also cause damage to the front/rear axles or the brakes themselves.

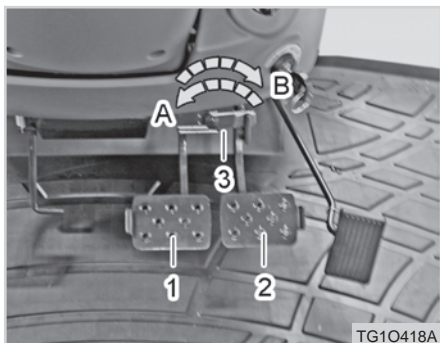
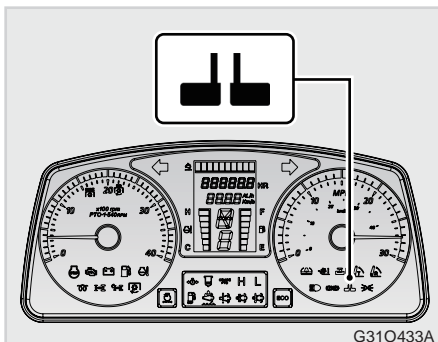
DRAFT LAMP



G31O432A

The draft lamp illuminates on the dashboard when the draft control has been activated. Depress the draft button one time to activate and the light will illuminate on the dashboard. To turn draft control off, depress the button a second time and the light will turn off.

BRAKE(ONE SIDE) LAMP



(1) Brake Pedal (LH) (2) Brake Pedal (RH)
 (3) Pedal Interlock
 (A) Unlock (B) Lock

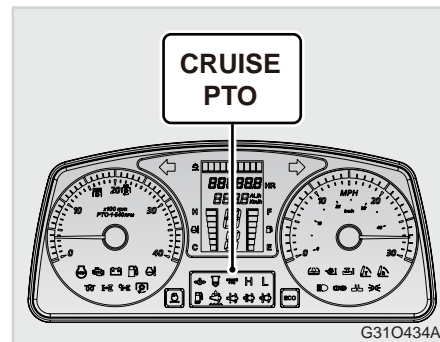
This lamp indicates the operating status of the brake. (One side)

The brake (one side) lamp will illuminate on the dashboard when the brake pedal interlock has been "unlocked". When the brake pedals are "unlocked", independent braking of the left or right side will occur by depressing the individual corresponding brake pedal.

⊕ IMPORTANT

- When traveling on the road or at speed, be sure to "lock" the brake pedals together. Failure to do so could cause loss of control resulting in damage to equipment, property or personal injury should a situation requiring sudden braking occur.

CRUISE PTO LAMP



The cruise PTO can set the engine RPM's and enable to operator to increase/decrease by 50 RPM's each time the +/- switch is depressed.

📖 NOTE

- Cruise PTO will only operate if the engine RPM's are set to 1,300 RPM's or above.

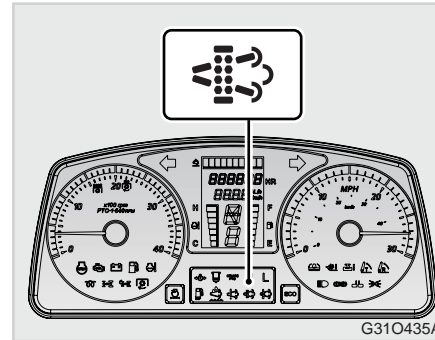
To activate cruise PTO, you will need to perform the following (with engine RPM's at 1,300 or above):

1. Depress the cruise PTO switch to turn the function on.
2. Depress the -/SET switch to activate. Once activated the cruise PTO lamp will illuminate on the dash.
3. Toggle the +/- switch to increase or decrease engine RPM's by 50 RPM's each time.

NOTE

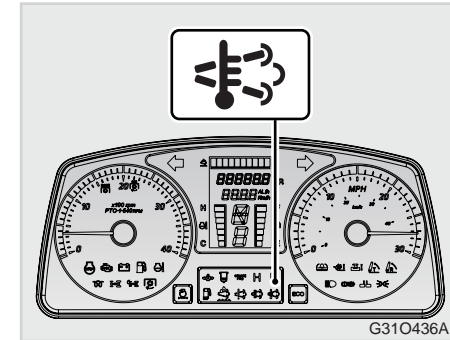
- Once activated, engine RPM's can not be reduced below 1,300 RPM's.
- The hand/foot throttle will no longer control engine RPM's below the established "cruise" set-point. RPM's can be raised above the set point with the throttle but not below.
- To de-activate cruise PTO, simply turn the cruise pto switch off.

DPF REGENERATION WARNING LAMP



The DPF warning lamp will illuminate if there is an issue with the exhaust after treatment system. If this lamp is illuminated solid or is flashing, the aftertreatment system will require a manual regeneration to be performed. Follow the steps outlined on page 4-9 to perform a manual regeneration.

DPF REGENERATION UNDERWAY LAMP



This lamp comes on while the regeneration process is being performed in the DPF.

The light will illuminate anytime a regeneration is being performed.

Automatic regeneration: The ECU recognizes all parameters for a regeneration are satisfied and "automatically" performs a regeneration during tractor operation.

Manual regeneration: The operator "manually" performs a regeneration by following the guideline provided on page 4-9.

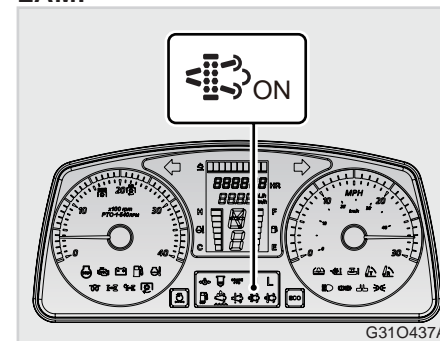
⊕ IMPORTANT

- If the DPF regeneration under-way lamp is illuminated during operation, please keep the engine rpm at 1,600 or greater until the regeneration is complete. Lowering the engine RPM's below 1,600 will "automatically" suspend the regeneration process until parameters are satisfied again and regeneration can resume.

⚠ WARNING

- *Exhaust components become hot during engine operation and can cause serious injury and burns.*
- *Exhaust components can reach temperatures as high as 1,200°F (650°C) during regeneration. Keep the engine area, especially around exhaust components clear of trash and debris.*
- *Failure to keep the engine area clear of debris could lead to risk of fire.*

DPF REGENERATION WARNING LAMP



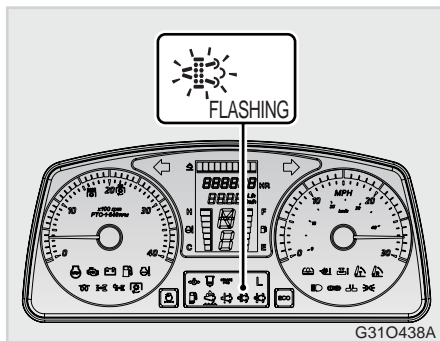
1. Stage 1 warning lamp illuminated solid

: DPF Soot Level 120% - 160%

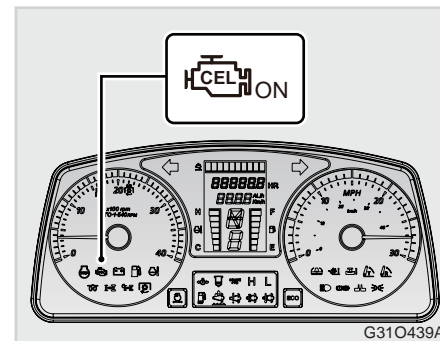
Manual regeneration required

Maximum engine RPM's will be limited to 1,900.

Follow the guideline on page 4-9 to perform a manual regeneration.



If the DPF is not regenerated in the stage 1 warning state, the warning lamp flashes. In this state, make sure to perform DPF regeneration process. (see page 4-9)



4

2. Stage 2 warning lamp flashing

: DPF Soot Loading Level 160% - 200%

Manual regeneration required

Maximum engine RPM's will be limited to 1,900.

Follow the guideline on page 4-9 to perform a manual regeneration.

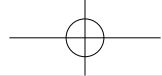
3. Stage 3 warning lamp for DPF clogging. CEL is illuminated on the dashboard.

: DPF Soot Loading Level 200% or higher

Manual regeneration prohibited

Maximum engine RPM's will be limited to 1,300.

Please contact your local Authorized **KIOTI** Dealer for assistance.



If a DPF regeneration is not performed during stage 2, the check engine lamp will illuminate and the engine goes into a limited operational status. At this point, the DPF may require replacement.

! WARNING

- *In the warning level 3 (CEL lamp ON), both manual and automatic regeneration processes cannot be performed.*
- *When the DPF warning lamp comes on, make sure to perform the manual regeneration as the automatic regeneration cannot be performed.*

! WARNING

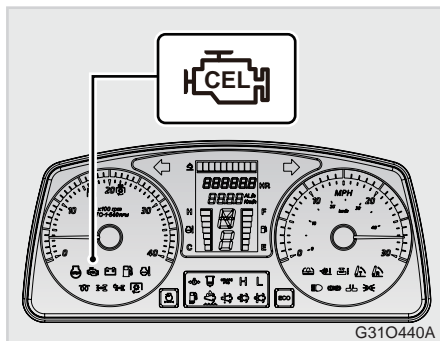
MANUAL REGENERATION

- *Park the tractor on a flat, level surface in an open area away from buildings or items that may be damaged by heat.*
- *Place the transmission in neutral and engage the parking brake.*
- *With the engine at "idle", depress the regeneration switch for 2 seconds and wait for the engine RPM's to increase.*
- *Once engaged, the ECU will operate the engine on a pre-set schedule:*
 - *HIGH IDLE: to raise the coolant temperature to an acceptable range, approximately 10 minutes.*
 - *MAX RPM'S: to perform the regeneration, approximately 25 minutes*
 - *HIGH IDLE: to allow the exhaust system an opportunity to cool down, approximately 3 minutes*

! WARNING

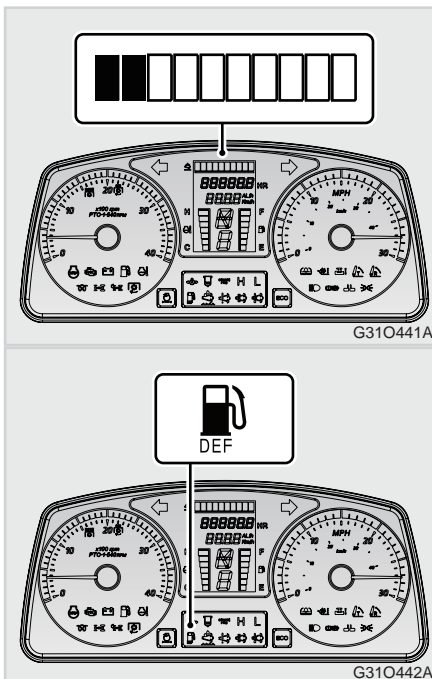
- *IDLE: signifying to the operator that the manual regeneration cycle is complete.*
- *Once the manual regeneration function is engaged, do not:*
 - *Change engine RPM's*
 - *Turn the engine off*
 - *Release the parking brake*
 - *Depress the clutch pedal*
 - *Place in gear*
 - *Try to operate the tractor*
- *Failure to follow these guidelines will result in the termination of the manual regeneration cycle.*

CHECK ENGINE WARNING LAMP



The CEL lamp illuminates on the dashboard when the ECU recognizes any malfunction or loss of signal from any engine or fuel sensor.

DEF LEVEL WARNING LAMP



The DEF level warning lamp will illuminate on the dashboard when the DEF level in the tank reaches 20% capacity. The emissions warning lamp will illu-

minate on the dashboard along with the DEF level warning lamp when the level in the tank reaches 10% capacity. Light conditions:

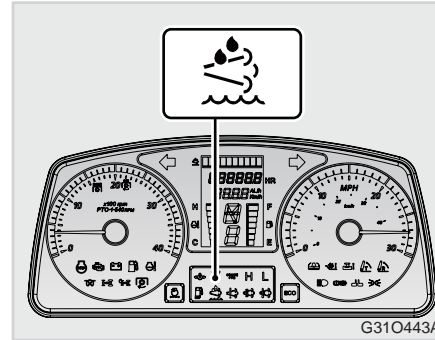
- 20% or less: DEF level warning lamp illuminates
- 10% or less: DEF level warning lamp + emissions warning lamp illuminates. Engine receives a maximum torque reduction of 25%
- 5% or less: DEF level warning lamp + emissions warning lamp (SLOW FLASH). Engine receives a maximum torque reduction of 25% and engine RPM's will be limited to 1,900.
- 2.5% or less: DEF level warning lamp + emissions warning lamp (RAPID FLASH). Engine receives a torque reduction of 50% and engine RPM's will be limited to 1,300.



WARNING

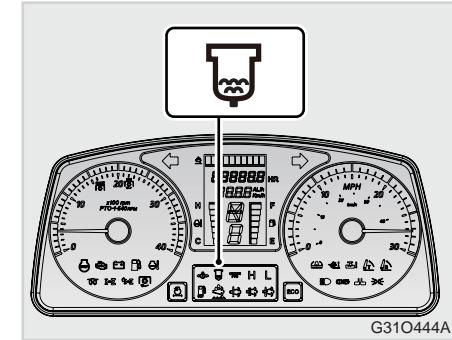
- *Failure to keep the DEF level within the safe working limits will cause a limitation of engine maximum torque and RPM's.*
- *Be sure to only use a DEF that meets or exceeds the requirements of ISO 22241*
- *Failure to follow these recommended guidelines could lead to a loss of performance or equipment damage.*

DEF QUALITY LAMP



Lights up when DEF quality is out of standard. After being turned on, the emission lamp turns on or flashes according to the elapsed time and the engine output decreases. After 20 hours, the engine stop warning light turns on.

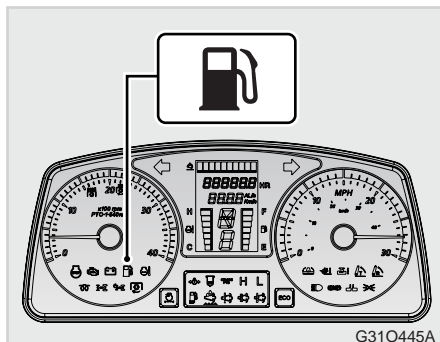
WATER-IN-FUEL WARNING LAMP



When approximately 5 ounces of water (155 cc) is accumulated in the fuel filter, the water in fuel warning lamp will illuminate on the dashboard.

When this light is on, stop the engine immediately and drain water from the fuel filter. In severe cases, more in-depth service including filter and fuel system maintenance may be required.

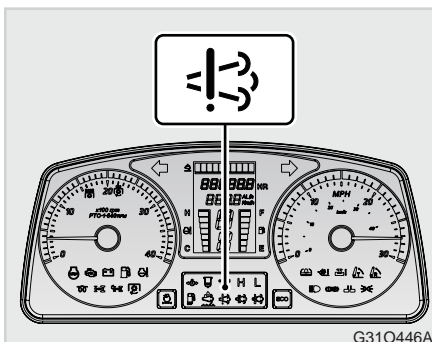
FUEL LEVEL WARNING LAMP



The fuel level warning lamp will illuminate on the dashboard when the fuel level in the tank drops below a safe operating level.

It is highly recommended to add fuel immediately when this light comes on to prevent damage to the engine or fuel system.

EMISSION WARNING LAMP

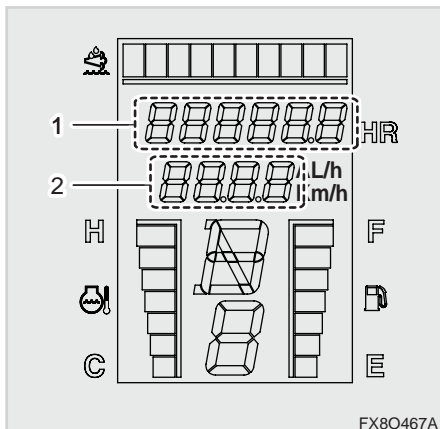


The emission warning lamp will illuminate on the dashboard when an error or malfunction with the emissions system is detected.

When this light comes on, you should stop operation immediately and contact your local Authorized **KIOTI** Dealer for assistance. Failure to stop operation and have the system diagnosed and repaired could lead to a loss of power and function.

Prolonged use without repair could lead to catastrophic engine or emissions system damage.

GENERAL ERROR CODE DISPLAY



- (1) ECU SPN, TCU and General Error Code
(2) ECU FMI Error Code

If a general error occurs, the code will be displayed on the hourmeter or odometer section of the LCD.

⚠ WARNING

- **Contact to local Authorized KIOTI Dealer for assistance.**

► GENERAL ERROR CODES

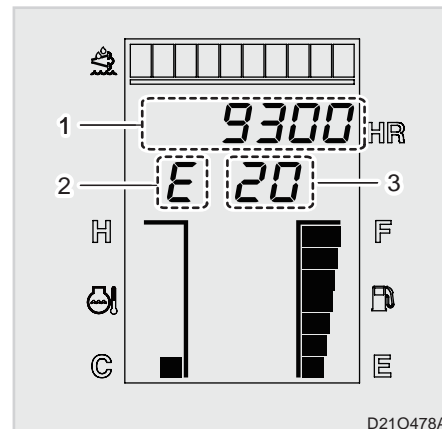
NO.	DISPLAY	DESCRIPTION
1	ERR-001	No Signal at TACHO Input
2	ERR-002	No Signal at Water Temp
5	ERR-009	No Signal at HOUR Input

📖 NOTE

- Some error codes may not be displayed depending on the model.

► POWER SHUTTLE CONTROLLER ERROR CODE

NO.	DISPLAY	DESCRIPTION
1	tcu001	Clutch pedal sensor
2	tcu002	Transmission oil temp. sensor

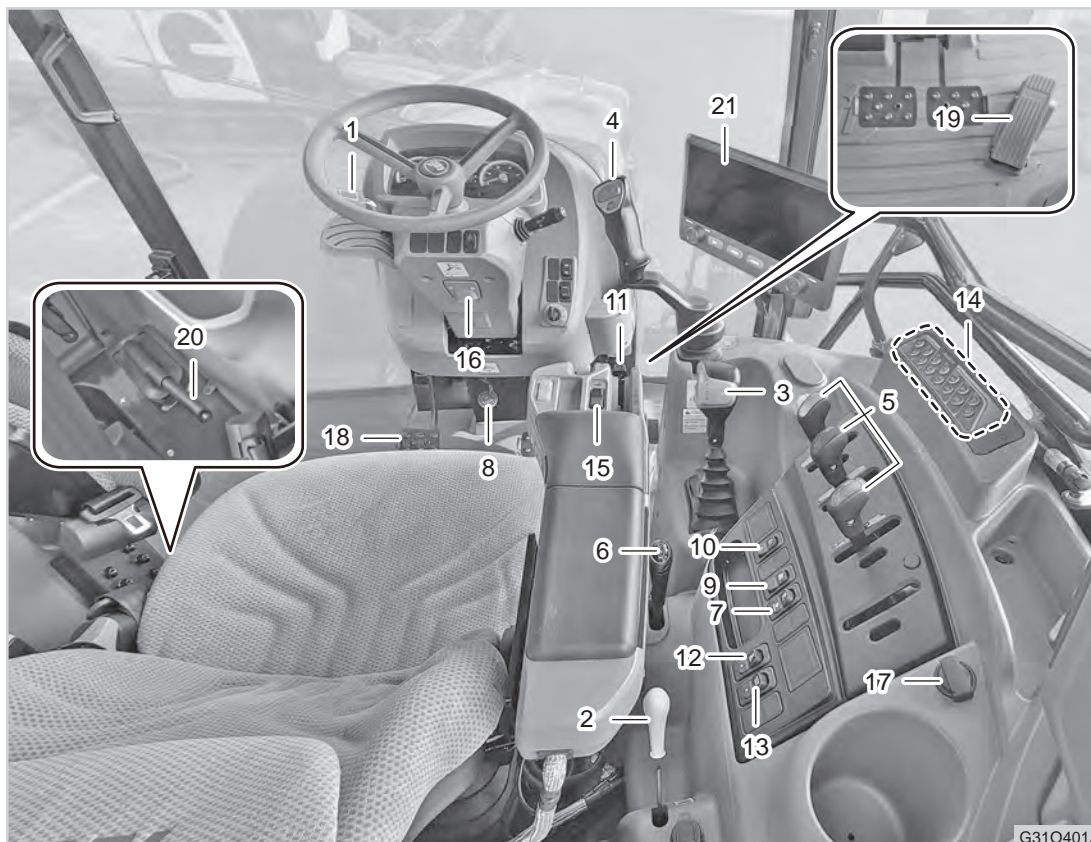


- (1) SPN (Suspect Parameter Number) Code
(2) ECU: E
(3) FMI (Failure Mode Indicator) Code

ECU and TCU general error codes are shown in the hourmeter or odometer section of the display.

Contact your local Authorized **KIOTI** Dealer for assistance should an error code be present in the display.

OPERATING THE CONTROLS



- (1) Shuttle Shift Lever
- (2) PTO Shift Lever
- (3) Range Gear Shift Lever
- (4) Joy-Stick Lever
- (5) Double Acting Lever
- (6) Creep Speed Lever
- (7) PTO Auto/Manual Switch
- (8) Steering Column Tilt
- (9) Draft Control Switch
- (10) Turn-up/Back-up switch
- (11) Position Control Lever
- (12) 4WD Switch
- (13) AUTO 2WD Switch
- (14) Control Panel
- (15) 3-PT Raise/Lower switch
- (16) Column Telescoping Handle
- (17) USB Charge Port
- (18) Clutch Pedal
- (19) Foot Throttle
- (20) Parking Brake Lever
- (21) LCD Monitor



SHUTTLE SHIFT LEVER



(1) Shuttle Shift Lever
(F) Forward (N) Neutral (R) Reverse

This lever is used to select forward or reverse driving.

Simply move the lever to the forward or reverse position to quickly and efficiently shuttle between directions with or without the use of the clutch.

Be sure to return the shuttle lever to the neutral position before leaving the operator's station for any reason.

CAUTION

- It is recommended to reduce the tractor's travel speed before changing directions, especially when operating with a heavy load to prevent loss of control or damage to machine or property.

HOW TO SWITCH BETWEEN FORWARD DRIVING AND REVERSE DRIVING (P/ SHUTTLE)

- To switch between the forward driving and reverse driving, Lift the lever slightly and gently push it forward to select the forward direction. Lifting the lever slightly and gently pulling it back selects the reverse direction.
- If the tractor is cold or has just been started, operate the shuttle at a low engine speed for the first 5-10 minutes to allow the engine and transmission to warm up before engaging in work.
- When the transmission temperature is cold, it is not uncommon for the shuttle to shift harsher than normal. Always warm the engine and transmission for a minimum of 5-10 minutes before engaging in work.

NOTE

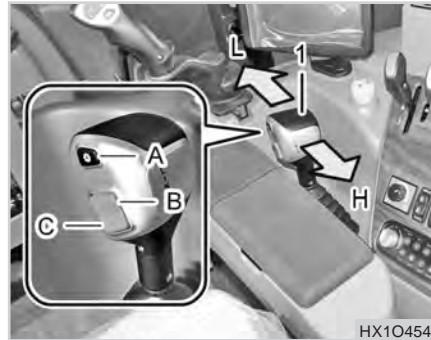
- Depending on location, a longer warm-up time may be required for extreme cold climates.

RANGE GEAR SHIFT LEVER

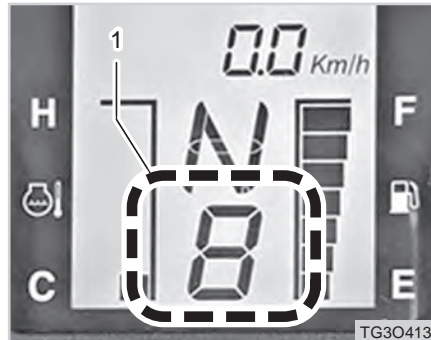
- The shuttle lever can be operated regardless of the tractor's traveling speed however, to protect the drivetrain, the shuttle will only change directions when the tractor is at speeds of 9 mph (14.5 km/h) or less.
- When placing the shuttle shift lever in the neutral position, power is cut off, to the clutch pack resulting in decrease of the machine speed and eventually stopping of the machine.

CAUTION

- **It is recommended to reduce the tractor's travel speed before changing directions, especially when operating with a heavy load to prevent loss of control or damage to machine or property.**



(1) Range Gear Shift Lever
(A) Automatic Shift Switch
(B) Shift Switch (Upshift)
(C) Shift Switch (Downshift)



(1) Shift Gear Displayed On Instrument Cluster

This is the range shift gear lever used for shifting of High and Low speeds.

-. Push the lever forward for low speed and pull it backward for high speed.

Always ensure the vehicle is at a complete stop before shifting.

The upshift and downshift buttons (B, C) on the lever allow you to shift between 1st and 8th gear.

The "Auto" button (A) is for an automatic shifting. When set to "On," the transmission automatically shifts from 1st to 8th gear as you press the accelerator pedal.



<INSTRUCTIONS FOR USE>

Manual Shifting

Range shift gear Lever: Push forward for low speed, pull backward for high speed.

Select the desired gear (1st or 2nd) with shift buttons and start driving. To shift while driving, press the Up or Down button.

Automatic Shifting

"Auto" Button (A): Set to "On."

Range shift gear Lever: Push forward for low speed, pull backward for high speed.

Press the accelerator pedal to start. The transmission will automatically shift when the engine RPM is reached to preset one.

CREEP SPEED LEVER



(1) Creep Speed Lever

The creep speed lever can be set to three positions: Creep Speed, Neutral, and High Speed.

When the transmission temperature is low, you may need to apply more force than usual.

<OPERATING THE CREEP SPEED LEVER>

1. Ensure the vehicle is stationary and press the clutch pedal before shifting the creep speed lever.

2. If the lever does not move smoothly or makes unusual noises:

- Place the lever in the Neutral position.
- Engage and disengage the clutch, then attempt to shift the lever again.

<OPERATION AFTER WARMING UP>

If the transmission temperature is low, warm up the engine sufficiently.

After warming up, to make shifting the creep speed lever easier:

Place the range shift lever in the Neutral position.

Then shift the creep speed lever as needed.

⚠ CAUTION

- To operate the creep speed lever, press the clutch pedal and wait till the tractor is completely stopped.

 **CAUTION**

- When the lever is in the "HI" position, increased driving speed can lead to a dangerous situation. Make sure to put the lever in the "LOW" position when driving backwards.
- The tractor is not braked by depressing the brake pedal without depressing the clutch pedal at a low speed as rotational force of the axle has a major effect at a low speed. Therefore, disengage the clutch before depressing the brake pedal to stop the tractor.
- To shift gears, fully depress the clutch pedal.

Position the creep speed lever in the "H" position in normal conditions, and shift it to the "C" position only when necessary.

When the creep speed is selected, the rotational force of the axle has major effect on the tractor. (Mechanical)

Misuse of this lever can result in malfunction or damage. Therefore, note the followings:

1. It is recommended to use the creep speed under the following conditions

- Using a PTO tiller to cultivate deeply or extremely shallow
- When it is not possible to work at the standard speed due to hard soil
- When transplanting
- When working with a trencher. (Agricultural)
- When towing or using equipment with "loaders" or "unloaders" in planting or harvesting applications

2. It is recommended not to use the creep speed under the following conditions

- When attempting to free a stuck tractor from mud or ruts
- When towing or trailing
- When working with a loader

3. Precautions for creep speed

- Fully depress the clutch pedal and shift slowly
- Start off the tractor with the parking brake released.
- Depress the brake pedal after disengaging the clutch to stop the tractor.

 **CAUTION**

- **Always depress the clutch pedal when depressing the brake pedal at low speeds (creep speeds and low range especially) to have effective stopping. Without depressing the clutch pedal, the transmission gearing may overpower braking force extending stop times and accelerating brake wear.**



PTO SHIFT LEVER



(1) PTO Shift Lever

This lever is used to shift to one of the 3 PTO speeds as follow:

(rpm)

1st @2,200	2nd @1,600	3rd @2,200
540	540E	1,000

NOTE

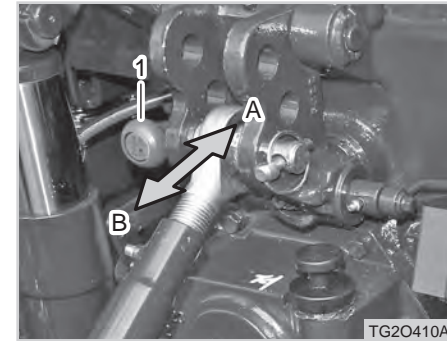
- The PTO shaft should be switch to the 21 spline shaft when using the 1,000 speed PTO

CAUTION

To avoid personal injury :

- Disengage the PTO, place the transmission in neutral, engage the parking brake, stop the engine, remove the key and allow all rotating components to come to a complete stop before connecting, disconnecting, adjusting, or cleaning any PTO driven equipment.

PTO SELECTION LEVER



(1) PTO Selection Lever

(A) Independent PTO

(B) Ground Speed PTO

You can select independent PTO operation or ground speed (by transmission speed ratio) PTO.

To select an operating mode; stop the tractor completely, reduce the engine speed to idle, turn PTO switch to "OFF" position, put all shift lever on neutral position and now select the PTO operating mode.

INDEPENDENT PTO

The independent PTO mode is used for normal PTO operations. It operates continuously at a constant speed, independent of the transmission speed selections. The PTO shaft turns in a clockwise direction. (As viewed from the rear of the tractor)

GROUND SPEED PTO

The PTO speed will be proportional to the tractor speed. The PTO shaft will stop when the tractor is stopped. It is important to note the PTO shaft will rotate in the opposite direction when the tractor is in reverse.

CLUTCH PEDAL



(1) Clutch Pedal

Make sure to depress the clutch pedal fully. To start off smoothly, put the main and range shift levers into the proper positions shift the shuttle into the desired direction of travel and release the clutch pedal slowly.

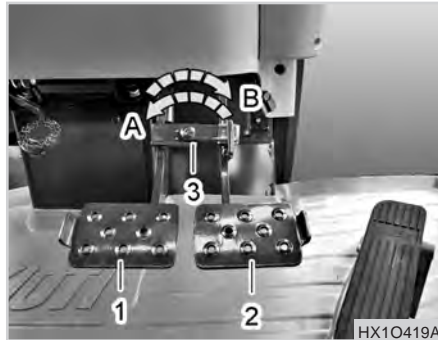
It is not necessary to depress the clutch pedal when shifting shuttle lever as the electro-hydraulic clutch system is applied to this tractor.

⊕ IMPORTANT

- **Never put your foot onto the clutch pedal during driving. There can be a malfunction in the hydraulic clutch.**
- **Be sure to depress the clutch pedal fully when shifting main gear or range gear.**
- **For applications requiring the operator to feather the clutch to creep or softly engage the clutch, the foot pedal must be used.**



BRAKE PEDAL



(1) Brake Pedal (L) (2) Brake Pedal (R)
(3) Pedal Interlock
(A) Unlock (B) Lock

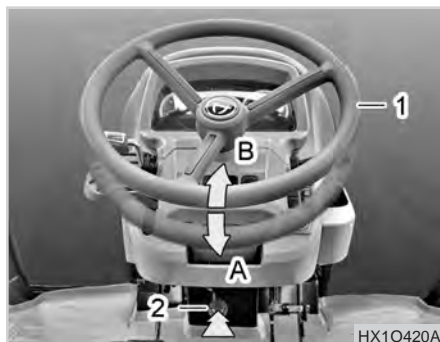
1. Make sure to link the left and right brake pedals as shown in the figure while driving on a road. Diminished braking or loss of control could occur if only one brake pedal is depressed while traveling at high speeds.
2. To make a sharp turn in a work field, Unlock the brake lock, and then turn the steering wheel while depressing the brake pedal on the turning side.
3. Using the brakes as a turning aide while in 2wd is an effective tool.

Using the brakes as a turning aide while in 4wd or under heavy load can reduce the life expectancy of the LSD front differential and the brakes themselves. Repetitive use could also cause damage to the front/rear axles or the brakes themselves.

WARNING

- *When traveling on the road or at speed, be sure to "lock" the brake pedals together. Failure to do so could cause loss of control resulting in damage to equipment, property or personal injury should a situation requiring sudden braking occur.*
- *Using QUICK-TURN with the corresponding brake can reduce the turning radius more than with QUICK-TURN alone however, using the brakes as a turn assist while in 4wd or under heavy load can reduce the life expectancy of the LSD front differential and the brakes themselves. Repetitive use could also cause damage to the front/rear axles or the brakes themselves.*

TILT STEERING



(1) Steering wheel
(A) Lowering
(2) Tilt Pedal
(B) Lifting

The angle of the steering wheel can be adjusted for the driver's comfort. Hold the steering wheel with both hands, depress the tilt pedal lightly and then adjust the position of the steering wheel as desired.

⚠ WARNING

- ***Do not adjust the tilt steering while driving.***

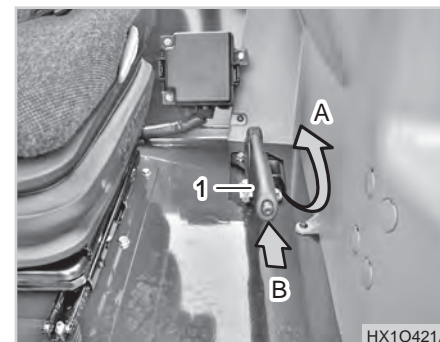
TELESCOPING FUNCTION



(1) Telescoping Lever
(A) Pull
(2) Steering wheel

The telescoping lever is used to adjust the height of the steering wheel. With the telescoping lever pulled, pull the steering wheel upward or push downward to adjust it to the desired height.

PARKING BRAKE LEVER



(1) Parking Brake Lever
(A) Pull
(B) Push

To engage the parking brake, pull the lever up to "A" position. To release the parking brake, pull up and press the thumb button. Then, while holding the button in, lower the brake lever.



WARNING

To avoid possible injury, death or loss of property from a machine runaway :

- *With the engine off, the tractor may move unexpectedly regardless of the gear shift position.*
- *Before leaving the tractor, apply the parking brake to prevent machine runaway.*

CAUTION

- **If the vehicle is driven with the parking brake partially or completely engaged, it may cause premature wear of the parking brakes or lead to drivetrain failure.**

FOOT THROTTLE



(1) Foot Throttle

The foot throttle controls the engine rpm. The engine rpm's increase as the foot throttle is pushed while rpm's lower as the foot throttle is released.

The foot throttle is great for traveling (shifting through the main speeds) and light duty functions where a set engine speed is not required.

HAND THROTTLE LEVER





(1) Hand Throttle Lever



Slow



Fast

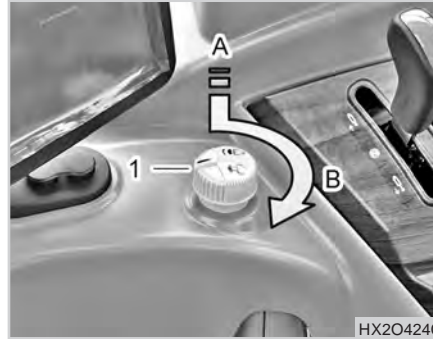
The hand throttle lever controls the engine rpm. The engine accelerates to its full speed by pushing the hand throttle lever ( position) completely forward while pulling the lever ( position) decelerates the engine.

The hand throttle lever is mainly used while working in a field, PTO applications, and when a set engine speed or high torque is required.

PTO MAIN SWITCH

CAUTION

- It is recommended to use the foot throttle when traveling, especially on the road, as the operator can slow the tractor quicker as the throttle is released when the brakes are activated.
- If the engine stalls while the hand throttle lever is engaged, the engine rpm's will not respond till the lever is returned to idle (home) position and re-engaged.



(1) PTO Main Switch

(A) Press

(B) Turn

The PTO switch turns the PTO on/off to supply power from the tractor to the implement.

Press and turn the knob clockwise to engage to the PTO. To disengage the PTO, just push down the knob slightly. Then, the switch knob is returned to its original position.

Make sure to put this switch into the "OFF" position before starting. Otherwise, the engine cannot be started.

The rear PTO rotates at 540 rpm (or the rated speed based on the PTO shift lever position) when the engine speed is approx. 2,115 rpm.

IMPORTANT

- When engaging the PTO, lower the engine speed, engage the PTO, and then increase the engine RPM's gradually in order to prevent impact load to the PTO from sudden or harsh engagement.



CAUTION

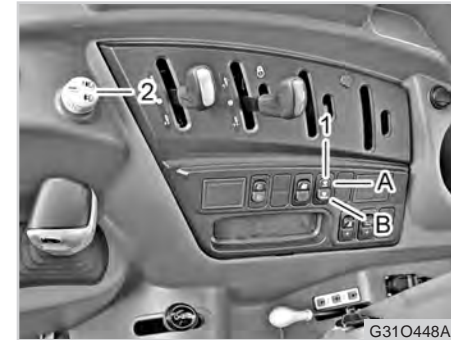
To avoid personal injury and/or accidental equipment damage :

- Before connecting or disconnecting anything from the PTO, be sure the PTO switch is in the "OFF" position, the transmission is in neutral, the parking brake is engaged, the engine is off and the key has been removed from the ignition.
- Inspect the tractor PTO safety shield before and after each use. The shield should be in place, free of cracks, breaks or damage and should cover the tractor PTO shaft from the top and sides.
- Always inspect the implement PTO shaft safety shielding before connecting the PTO shaft to the tractor. All shields should be in place, free of cracks, breaks or damage and should rotate independently of the PTO shaft itself.

CAUTION

- Use caution when working around rotating PTO shafts. Wear tight fitting clothing and keep hair and jewelry tucked neatly away. Remember, loose clothing, hair and jewelry can quickly be snagged by a rotating shaft causing severe injury or death.
- Keep people away from the tractor and implement while working. Always keep people away from rotating shafts/PTO while in operation.

PTO AUTO/MANUAL SWITCH



(1) PTO Auto/Manual Switch

(2) PTO on/off switch

(A) PTO - Auto (B) PTO - Manual

The PTO main switch must be in the OFF position before starting the engine. Otherwise, the engine will not start.

- In "AUTO" mode, the PTO will turn on/off automatically based on the position of the 3-pt hitch (when the PTO "ON/OFF" switch is in the ON position). When the lift arms are lowered, the PTO will engage. When the lift arms are raised, the PTO will turn off.

- In "MANUAL" mode, PTO operation is controlled by the PTO "ON/OFF" switch only. When the PTO switch is in the ON position, the PTO remains on, regardless of the position of the lift arms. When the PTO switch is placed in the OFF position, the PTO turns off.

⊕ IMPORTANT

- **When engaging the PTO, lower the engine speed, engage the PTO, and then increase the engine RPM's gradually in order to prevent impact load to the PTO from sudden or harsh engagement.**

AUTO DRAFT FUNCTION



(1) Auto Draft ON/OFF Switch
(A) ON (B) OFF

It is a switch that automatically executes the work under the previously set condition without any additional manipulation when re-entering the machine after lifting due to traction resistance during traction work according to the set traction force value of the armrest dial.

REMOTE PTO OPERATION



(1) External PTO switch

The external PTO switch can be used to perform the following functions:

1. To rotate the PTO shaft slowly to align the splines of the tractor shaft with the splines of the implement PTO shaft.



To rotate the PTO shaft from the rear of the tractor as a connection aide, perform the following steps:

- Transmission and shuttle are in neutral
- Parking brake is engaged
- The engine is at idle
- The PTO switch is OFF.
- Depress the external PTO switch on the tractor fender. The PTO will rotate slowly to aide in the connection of the implement PTO shaft.

2. To engage the PTO from the rear of the tractor to utilize the tractor as a stationary power unit when the Remote PTO Switch is activated in the cabin.

To utilize the tractor as a stationary power unit, perform the following steps:

- Transmission and shuttle are in neutral
- Parking brake is engaged
- The engine is at idle
- The PTO switch is ON
- Auto/Manual switch in "Manual"
- The remote PTO switch is on

A buzzer will sound in the cabin signifying that you can leave the operator's station.

- Depress the external PTO switch and hold for 4 seconds and the PTO shaft will begin to rotate (The buzzer in the cab silences).
- Return to the cab and increase the engine RPM's gradually in order to prevent impact load to the PTO from sudden or harsh engagement.

3. Deactivation

While the PTO shaft rotates, it can be deactivated under the following conditions.

- The external PTO switch is pressed once.
- The remote PTO switch is turned off.
- The PTO switch is turned off.

NOTE

- The PTO is automatically de-activated if the parking lever is released, while the PTO is being controlled with the external PTO switch. Therefore, avoid releasing the parking brake or driving the vehicle while controlling the PTO with the external PTO switch in order to prevent injury.
- If the parking brake is re-engaged before any other conditions are changed, the PTO will re-activate.

4WD SWITCH




(1) 4WD Switch

(A) 4WD

(B) OFF

Operate the switch to select 4WD (four-wheel drive). Press the top to select 4WD mode, press the bottom to turn it off.

SWITCH	TURNING	LAMP
2WD	Normal turning	Lamp OFF
4WD	Normal turning	4WD lamp ON 

CAUTION

- Do not activate the 4WD function on a paved road or while driving at a high speed. It may cause damage to the tractor, premature axle or LSD failure or lead to an accident.
- Before driving at a high speed, confirm that the switch is set in the 2WD position.
- Do not operate in 4WD on hard surfaces or pavement. Operating the tractor in 4WD on hard surfaces, pavement or at speeds greater than 5 MPH(8 KMH) for extended periods of time can lead to abnormal tire wear, reducing the overall life expectancy of the tire. When operating on highways and hard surfaces at speeds greater than 5 MPH(8 KMH), unusual driving characteristics may be exhibited and could cause accidents or loss of control.

4WD OPERATION

The 4WD function is used to increase traction power by driving the front and rear wheels (4 wheels). To engage the 4WD, press the upper section of the 4WD switch. 4WD operation is controlled electronically when the engagement button is depressed. Engagement can be performed while the unit is moving if additional traction is required.

The 4WD function is useful under the following conditions:

1. When additional traction is required due to soil conditions, wet environments, etc.
2. When towing a trailer at slow speeds or using a loader.
3. When working on sand.
4. When working on uneven terrain or on slopes.

CAUTION

To avoid accidents:

- **Do not activate the 4WD function while driving on a road. The 4WD should not be used on a paved road as driving characteristics change, which could lead to loss of control, premature driveline damage, and accelerated tire wear.**
- **While the 4WD is engaged, drive the vehicle at low speeds as steering and braking characteristics may differ.**
- **The 4WD can be activated even while the vehicle is moving. However, noise or shift shock may occur during 4WD engagement in this case. To ensure safe driving, it is recommended to engage the 4WD after bringing the machine to a complete stop.**

AUTO 2WD SWITCH



(1) Auto 2WD Switch

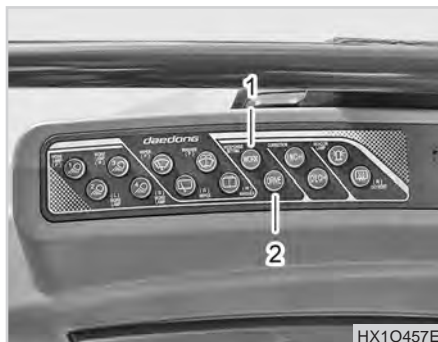
(A) ON

(B) OFF

When the 4WD and AUTO 2WD switches are turned on, if a speed exceeding a certain level (over 20 km/h) is detected during 4WD operation, it automatically changes to 2WD suitable for driving.

And if the speed of the tractor gets under 15 km/h, 4WD will work automatically.

WORK/TRAVEL RESPONSE BUTTON



- (1) Working mode
(2) Traveling mode

Press the Work or Travel button to operate the tractor according to the usage.

CAUTION

- **Make sure to press the Work button before any agricultural work.**

CALIBRATION BUTTON



- (1) Calibration Button

The calibration button is used for the tuning and adjustment of the shuttle controls, clutch pedal or after repairs have been performed. Do not attempt to adjust the functions of the shuttle or clutch by yourself. Please contact your authorized **KIOTI** Dealer for assistance.

BEACON LIGHT BUTTON (IF EQUIPPED WITH A BEACON LIGHT)

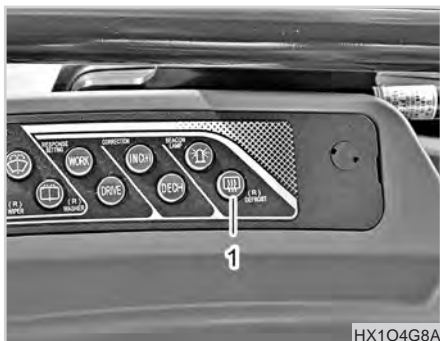


- (1) Beacon Light Button

Follow all federal, state or local guidelines for beacon light requirements (if required).

When equipped with a beacon, please be sure to turn the beacon light when traveling to improve visibility and help prevent accidents.

DEFROST BUTTON



(1) Defrost Button

- The tractor is equipped with a rear window defroster to quickly clear humidity, ice, etc from the rear glass for visibility.
- Depress the defrost button to turn the rear window defroster on. When on, the button should illuminate.
- Depress the defrost button again to turn the rear window defroster off. When off, the button is not illuminated.

NOTE

- Once the rear glass defogger is activated, it is automatically deactivated after 15 minutes of operation.
- If the defroster needs to be activated further for clearer rear view, press the switch again.

CAUTION

- **Avoid using any sharp tools or abrasive cleaner on the rear glass.**
- **When cleaning or working on the rear glass, be careful not to scratch or damage the heating wires on the glass.**
- **Activating the defroster with the engine stopped can discharge the battery. Make sure to start and run the engine before activating the defroster.**
- **Deactivate after the rear window has been cleared. If the defroster is operated for an extended period of time, the electrical system or defroster could be damaged.**

POSITION CONTROL LEVER AND SWITCH



- (1) Position control lever
(2) Lift/lower switch
(3) Lock Lever

Three-point operation can be controlled using the one-touch switch or the position control lever mounted in the arm rest.

1. Position control lever

This lever is used to adjust and maintain the implement in a certain position. Push it down to lower the implement and pull it up to lift the implement.

To set the lever in the transport position, move the lever rearward to the maximum height. Gently shift the lever away from you and slide rearward to align the lever into the transport position which locks the lever in place.

2. One-touch lifting/lowering switch

Press the lifting switch once to lift the lift arm up to the position set by the upper limit position dial. Pressing the lowering switch once lowers the lift arms to the lower limit set by the position control lever.

3. Lock Lever

In order to limit the lowering height of implements, Turn the lock lever in the desired direction.

CAUTION

- **The position control lever will move with minimal force from the fingers. The lever can be damaged if a heavy force is applied.**

NOTE

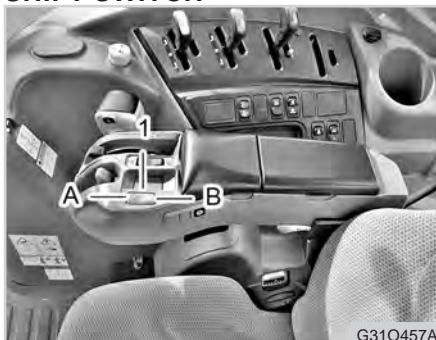
<Integrated safety feature>

- To ensure the driver's safety, the implement cannot be raised or lowered after the engine has been turned off:
- If the position control lever is moved after the engine is turned off, the three-point hitch will not adjust to the new setting after the engine is re-started

<To release the integrated safety feature>

- Start the engine cycle the position control lever or press the up/down button.
- After the integrated safety feature is released, the lift will function normally.

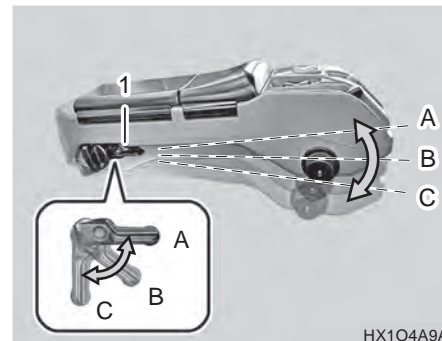
SHIFT SWITCH



(1) Shift switch
(A) (+)Up-Shift
(B) (-)Down-Shift

The shift switch on the arm rest can be used to shift from 1st to 8th speed. Press the up-shift switch to upshift or the down-shift switch to downshift. you can see the current speed of gear shift on the cluster.

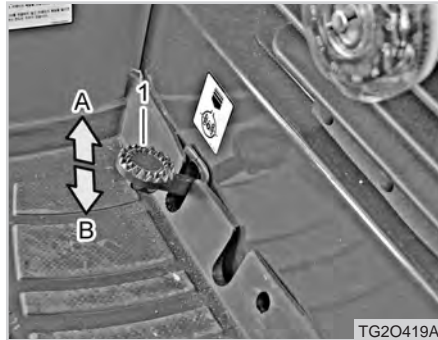
ADJUSTING THE HEIGHT OF THE RIGHT HAND CONTROL ARM



(1) Position Control Lever
(A) High (B) Middle (C) Low

The height of the right hand control arm can be adjusted using its position control lever. The height of the controller can be chosen among the three levels (high, middle and low). To adjust the height, pull up the controller slightly, adjust the height using the lever, and then push the controller back down.

DIFFERENTIAL LOCK PEDAL (REAR)



(1) Differential Lock Pedal
(A) Release to Disengage
(B) Depress to Engage

The differential lock is a traction aide that engages the rear differential to rotate both rear wheels at the same speed.

Depressing the pedal engages the differential lock while releasing the pedal disengages the differential lock.

Use this system under the following conditions.

1. When any wheel slips and the tractor does not move in the field.

CAUTION

- The differential lock should only be engaged while driving the tractor at slow speeds. If the differential lock pedal does not move or the differential lock does not engage, release the pedal and depress it again.
- Before engaging the differential lock, reduce the engine speed. After engaging it, increase the engine RPM's as needed.
- The tractor should be operated in a straight line when the differential lock is engaged. When engaged, the tractor will resist steering or making turns and continued operation of the differential lock while attempting to steer the tractor through a turn could damage the rear differential.

SEAT ADJUSTMENT FORE/AFT ADJUSTMENT



(1) Seat Adjustment Lever

To adjust the seat position, raise lever (1) and slide the seat to the desired position, and then release the lever.

Make sure that the seat is firmly fixed by moving it gently after adjustment.

**⚠ WARNING**

- *Never Leave the driver's seat while the engine running.*
- *Before leaving the seat, always set the parking brake, place the transmission in neutral, lower all implements or attachments to the ground, shut the engine off and remove the key.*

⚠ CAUTION

- **Do not put a hand between the seat and the slides when adjusting the seat position to prevent accidental injury to the hands or fingers.**

SEATBACK RECLINING

(1) Seatback Adjustment Lever

To change the seatback angle, raise the lever (1) on the left of the seat and adjust the recline angle of the seat. Release the lever to allow the seat to lock in the desired recline position.

SWIVEL ROTATION FUNCTION

(1) Swivel lever

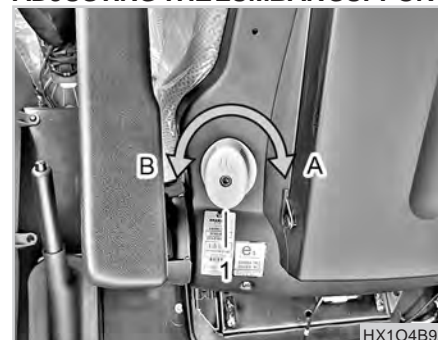
Raise the lever to swivel the chair to the left or right. Release the lever to allow the seat to lock into the desired position.

**ADJUSTING ARMREST ANGLE***(1) Angle Adjustment Wheel*

The angle of the armrest can be adjusted by turning the angle adjustment wheel which is located under the left-hand armrest.

ADJUSTING THE HEADREST HEIGHT*(1) Headrest*

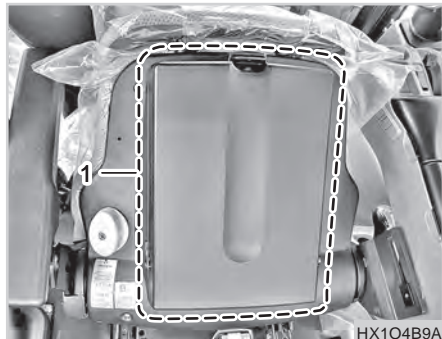
The height of the headrest can be adjusted easily by pulling it up or pushing it down.

ADJUSTING THE LUMBAR SUPPORT*(1) Lumbar Support Control Lever
(A) Convex/outward (B) Concave/inward*

The lumbar support is installed within the seatback cushion. According to the body shape of the operator, turn the lumbar support control lever on the back of the seatback clockwise to make the lumbar support protrude outward placing more support against the lower back or turn it counter-clockwise to make the lumbar support move inward, placing less support against the lower back.



DRIVER'S SEAT'S STORAGE BOX



(1) Storage Box

The storage box is mounted on the back of the seatback and has a spring-loaded cover which closes automatically when released.

This is an excellent place to store the owner's manuals for the tractor, loader and commonly used implements for quick reference as needed.

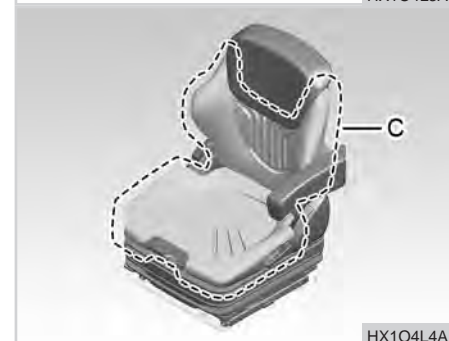
SEAT BELT



(1) Seat Belt

The seat belt is self-retracting type. Always fasten the seat belt before operating the tractor.

SEAT HEATING SYSTEM



- (1) Seat
(A) ON
(B) OFF
(C) Heating area



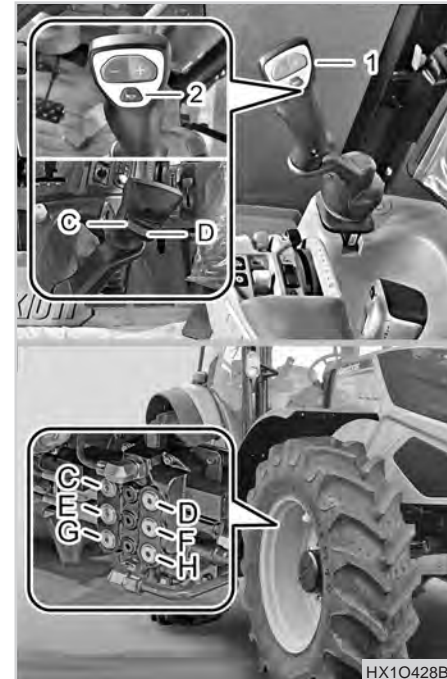
JOYSTICK LEVER

The seat is equipped with a heating system. Press the heating switch on the left side of the seat back down to heat the seat, and press it up to turn it off.



(1) Joystick Lever

This joystick lever is used to operate the front end loader when attached to the tractor.



- | | |
|--------------------|----------------------|
| (1) Joystick Lever | (2) Horn Switch |
| (C) Releasing Grab | (D) Engaging Grab |
| (E) Bucket Dump | (F) Bucket Roll Back |
| (G) Boom Down | (H) Boom Up |



This joystick lever is used mainly to operate the front end loader which attached to the tractor.

Six valves are installed as standard. The vertical movement of the bucket and boom can be controlled by the lever (↕). In addition, three buttons are available; the implement grab can be operated using the two buttons located on the front section of the joystick lever. The button on the rear section of the lever is used to sound the horn.

C		Releas- ing grab	D		Engag- ing grab
E		Bucket Dump	F		Bucket Rollback
G		Boom Down	H		Boom Up

HORN SWITCH

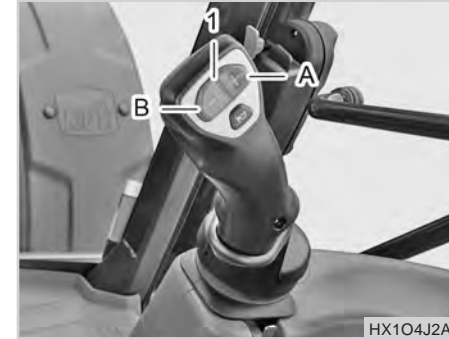


(1) Horn Switch

The horn switch can be operated without the key inserted. Pressing this switch sounds the horn.

The joystick lever also includes buttons to shift between high speed and low speed in the transmission and a horn button for convenient access when operating the tractor with a loader.

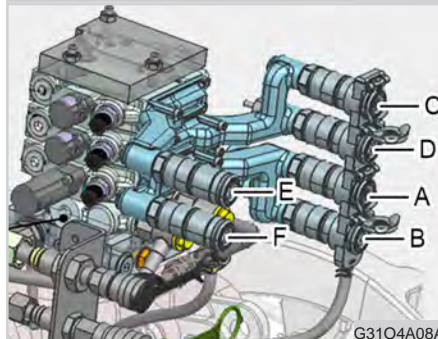
SHIFT SWITCH



(1) Shift switch
(A) (+)Up-Shift
(B) (-)Down-Shift

If you press this button while driving, you can shift from low to high speed in a total of 8 speeds. You can check the current shifting status through a lamp on the instrument panel.

DOUBLE ACTING LEVERS



- (1) Double Acting Lever (Detent & Floating Type)
 (2) Double Acting Lever (Self Return Type)
 (3) Double Acting Lever (Self Return Type)
 (A) Port A (B) Port B (C) Port C
 (D) Port D (E) Port E (F) Port F

The double acting lever is used to control an auxiliary hydraulic implement installed to rear.

Pushing the lever supplies hydraulic fluid to Port "B", while pulling the lever supplies hydraulic fluid to Port "A".

SELF RETURN TYPE

When the lever is pushed or pulled, the lever automatically returns to the neutral position when you release your hand after pushing or pulling the lever.

Therefore, it is suitable for hydraulic equipment used when manual hydraulic pressure is required, such as hydraulic cylinders.

DETENT & FLOATING VALVE TYPE

When the lever is pushed or pulled, the lever is fixed in that state, and hydraulic pressure can be continuously used even when the hand is released.

Therefore, it is suitable for use in hydraulic equipment that uses hydraulic pressure continuously, such as hydraulic motors.

In addition, pushing the lever in detent position one more, it will stay in that position, that means floating function.

so even if you release the lever, the lever is fixed in the floating position, so you can use floating continuously.

Port	Type
E/F	Self Return Type
C/D	Self Return Type
A/B	Detent & Floating Type

EXTERNAL LIFT CONTROL SWITCH



(1) External Lift Control Switch (LH)
(2) External Lift Control Switch (RH)

To make implements easier to removal and install, there is a lift control switch installed on the right fender and a lift control switch on the left fender. Also, the safety lock function is activated after the lift control switch is operated. This prevents lifting from being performed when the position control lever in the cabin is operated.

In this case, deactivate the safety lock function before using the lever.

NOTE

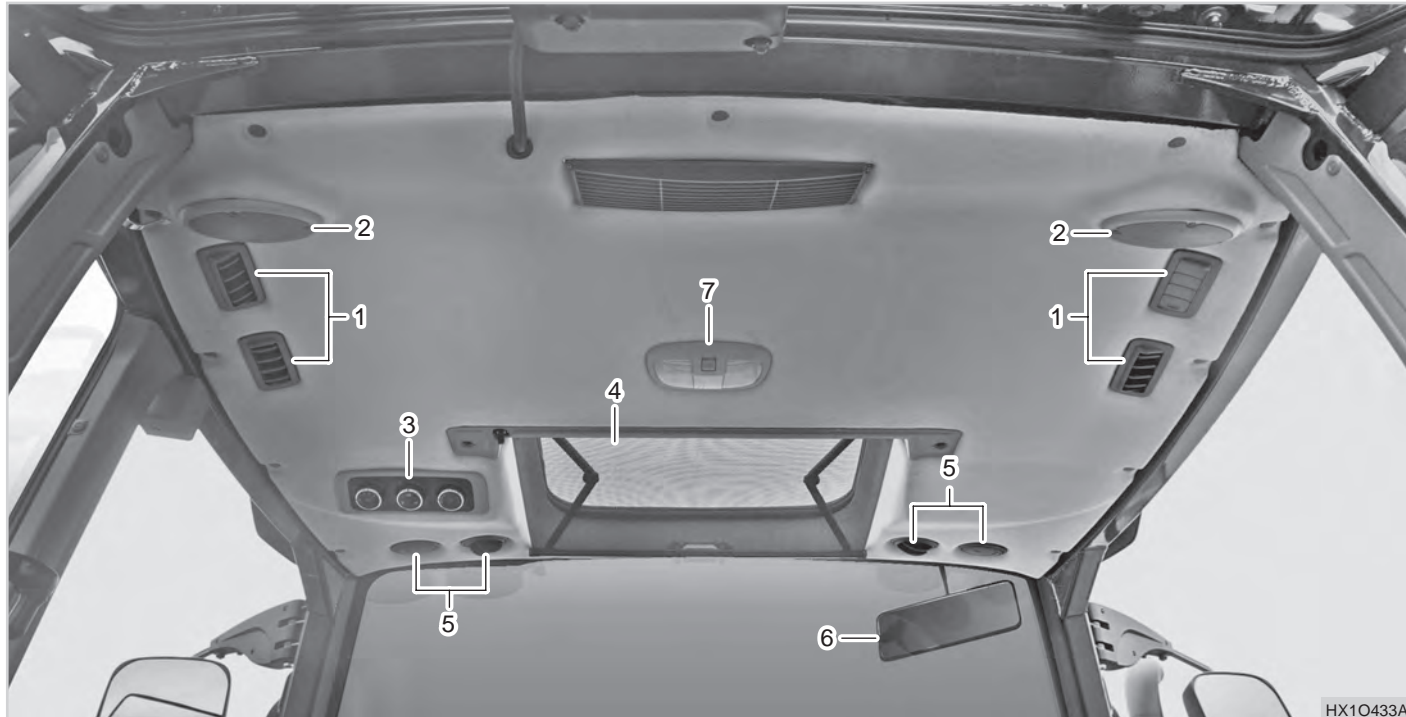
- Once the external position control switch is operated, the safety lock is activated. To control lifting in the cabin, deactivate the safety lock.

WARNING

- ***When adjusting the hitch safety lock, the main shift lever and PTO shift lever should be set to neutral. Also, apply the parking brake and idle the engine. Then, push the draft control lever forward and keep it in the freely movable range.***



CABIN SYSTEMS INTERIOR DEVICES



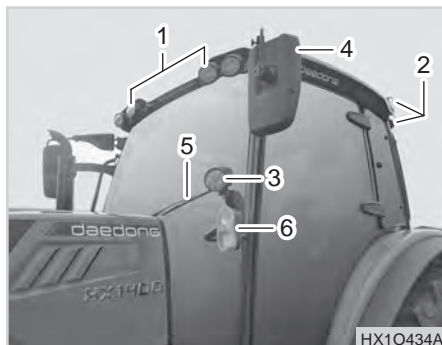
(1) Operator air vents
(2) Speaker
(3) Heater/Air Conditioner Controls

(4) Sunroof Screen
(5) Windshield defroster vents
(6) Rear-view Mirror

(7) Interior Lamp



EXTERIOR DEVICES



- | | |
|--------------------------|----------------------|
| (1) Front work lights | (2) Rear work lights |
| (3) Auxiliary work light | (4) Sideview Mirror |
| (5) Wiper | (6) Combination Lamp |

1. The cabin is designed optimally for the driver's comfort and convenience.
2. This tractor has large windows and side view mirrors for excellent visibility in all directions.
3. The cabin can be kept comfortable and pleasant with factory installed heat and air for your convenience.
4. The cabin is ROPS (Roll Over Pro-

tective Structure) certified. Always wear your seatbelt for safety when operating the tractor.

ENTRANCE



- (1) Door Handle

Pull the handle to open the door. The door can be locked by turning the lock cylinder on the outer side of the door with the ignition key.

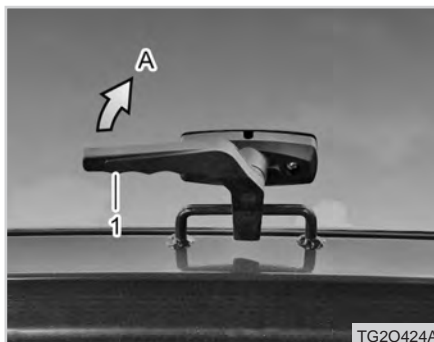
EXIT



(1) Door Lever

Push the lever to open the door to exit the cabin.

REAR WINDOW



(1) Rear window handle
(A) Rotate upward to open the window

Pull the handle slightly inward and rotate the handle upward to open the rear window.

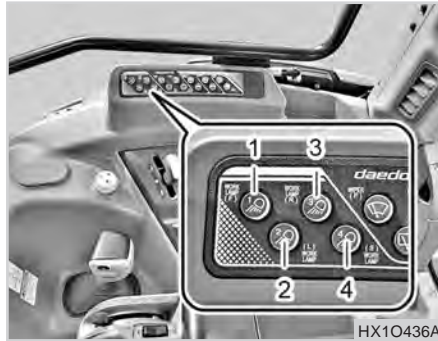
To close the window, pull the handle gently inward, rotating the handle downward to lock in the "closed" position.

 **WARNING**

- *Operating the tractor with certain implements could prevent the window from opening. Be sure to check if there is enough space to open the window to prevent damage and breakage by an implement.*
- *Never operate the tractor with the door open as it is likely that the door may be damaged or broken due to impact with foreign objects.*



WORKING LIGHT



- (1) Working Light Switch (Front)
- (2) Working Light Switch (Auxiliary work light)
- (3) Working Light Switch (Rear)
- (4) Working lights switch (optional side)

Work lights are installed on the roof front, roof rear and on top of the combination lights as standard equipment. Optional roof side working lights are available. To turn on the work light, press the corresponding work light switch. The ignition key switch must be in the "ON" position at this time.

⚠ WARNING

- *Do not drive the tractor on a road with the work lights ON at night.*
- *The approaching or following vehicle's visibility can be disturbed, which is very dangerous for both drivers.*
- *Always use the flashers (hazard) lamps when operating the tractor on highways.*

ESCORT FUNCTION

When stopping the engine with the work lamps illuminated the work lamps will remain illuminated for 30 seconds to allow the operator time to exit the cabin safely.

WIPER



- (1) Wiper Operating Switch (Front)
- (2) Wiper Operating Switch (Rear)
- (3) Washer Switch (Front)
- (4) Washer Switch (Rear)

1. Press the button marked (wiper) to turn on the power.
2. When the washer button is pressed while the ignition key switch is in the "ACC" or "ON" position, washer fluid is sprayed through wiper to clean the window.



(1) Washer Fluid Reservoir

3. The washer fluid reservoir is installed on the rear of the tractor, adjacent to the left rear fender.

! WARNING

- **Normal water can be used as the washer fluid, but it is recommended to use washer fluid made exclusively for vehicles. Especially, make sure to use seasonal washer fluid in winter to prevent freezing.**
- **The washer fluid pump can be damaged if you are trying to spray washer fluid when the tank is empty. Therefore, be sure to check the fluid level before driving.**
- **Spray enough washer fluid and operate the wiper if there is dirt on the window. Operating the wiper while the window is frozen could cause damage to the wiper or motor. In this case, operate the wiper after increasing the cabin temperature enough to defrost the wiper.**

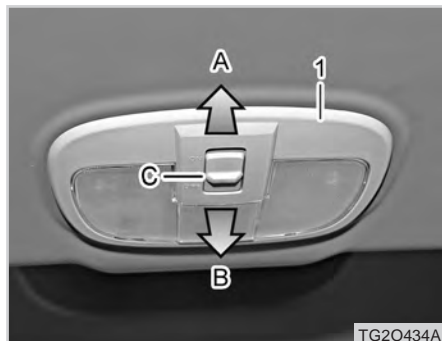
ANTENNA



(1) Antenna

In case of poor reception, verify the antenna is angled away from the cab for maximum efficiency.

ROOM LAMP



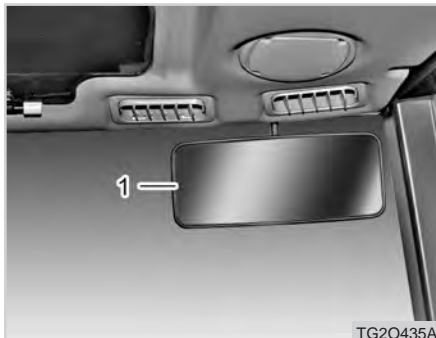
(1) Room Lamp
(A) ON (B) OFF
(C) Auto ON

Push the interior lamp lever to the ON position to turn on the interior lamp. When opening the left-hand door with the interior lighting lever in the middle position, the interior lamp will illuminate when the door is open and turn off when the door is closed.

CAUTION

- The room lamp can be operated without the key inserted. However, turning it on for an extended period of time can discharge the battery.

ACCESSORY INSIDE REAR VIEW MIRROR

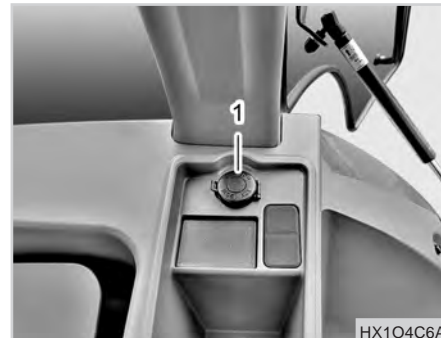


(1) Rearview Mirror

The cabin is equipped with an inside rearview mirror for the driver's convenience.

Adjust the angle of the mirror before driving to secure a clear rear view.

POWER SOCKET AND USB CHARGING PORT



(1) Power Socket
(2) USB Charge

The power socket (1) can be used as a power supply for an external device. It can be used while the ignition switch is in the ON position or the engine is running.

An external device with a USB port can be charged using the USB charging port (2), which is located on the right side of the driver's seat.

3-PIN POWER SOCKETS & BANANA JACKS



(1) 3-Pin Power Socket
(2) Banana Jacks

The 3-pin sockets are located on the left and right sides behind the driver's

seat. They can be used to power implement displays/controllers or other various products as required.

The banana jacks can be used as a power source for a device using (+) & (-) poles for power supply.

CUP HOLDER AND STORAGE



(1) Cup Holder & Storage

There are storage areas and cup holders on the left and right sides of the operator's seat.

OPTIONAL COOL/WARM STORAGE (OPTION)



(1) Cooler/Warm storage

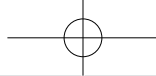
There is an optional cooler/warmer available. The cooler conveniently fits in the storage area on the left side of the operator's seat to keep beverages cool or lunch warm. (Ref to the cooler owner`s manual)

SUNSHADE



(1) Sunshade

To block the sunlight coming in through the sunroof, lock the sunshade in place over the sunroof. When it is no longer needed, unhook and store it.



SUNROOF



(1) Sunroof Lever

(2) Sunroof

1. Use the sunroof to let fresh air flow into the cab.
2. To open the sunroof, pull downward on the lever and push forward to unlock. Gently raise the sunroof and pull the lever rearward to lock it in the open position.
3. Pull the lever gently in the reverse order of opening to close the sunroof.

HEATER AND AIR CONDITIONER



(1) Fan Speed Control Dial

(2) Vent Mode Control Dial

(3) Temperature Control Dial

(4) Air Conditioner Switch

(5) Recirculation Switch

The fan will operate when the key is in the ACC or ON positions. The AC will only operate when the engine is running.



⚠ WARNING

- *Do not leave passengers or pets unattended in the cabin. Their health could be threatened as internal temperatures rise quickly in hot weather or on sunny days.*
- *Use the fresh air mode in normal conditions and use the air recirculation mode when rapid or maximum cooling is required. Continued operation in the air recirculation mode can cause the inside to become stuffy, causing headaches, drowsiness, or frost on the windows. Do not operate in the recirculation mode for an extended period of time.*

FAN SPEED CONTROL DIAL



The fan speed for the heater and air conditioner can be adjusted in four positions.

AIR CONDITIONER SWITCH



Press it to activate the air conditioner and press it again to deactivate the air conditioner. A light will illuminate in the dial when the A/C is on.

The temperature can be adjusted by the temperature control dial and the fan speed control.

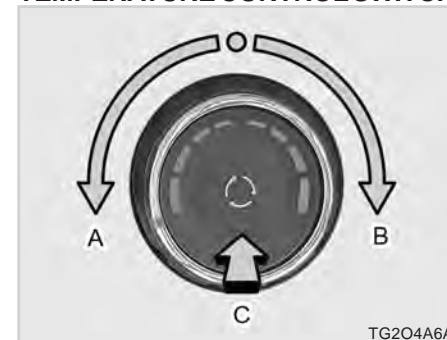
VENT MODE CONTROL DIAL



- : When the dial is turned to the Defrost () position, next to the front windshield to help defrost the window for visibility.

- : When the vent mode control dial is turned to the () position, air comes out from the 4 vents on the left and right of the operator.
- : When the dial is turned to the Bi-level () position, air comes out from 4 vents next to the front windshield and 4 vents on the left and right side.

TEMPERATURE CONTROL SWITCH



(A) Cooling
(C) Recirculation

(B) Heating

Use this dial to obtain the desired temperature. Turn it to the right (red) for warm air and to the left (blue) for cool air.

The temperature control dial only controls the amount of water passing through the heater core to warm or cool the air passing through the vents. Therefore, if setting it to high temperature with the A/C on, the A/C cooling performance is diminished.



Press the recirculation button to block the air from outside. In the recirculation mode, the A/C cools the air inside the cabin only (and the heater core heats the inside air only), enabling rapid cooling and heating. This mode can be used to block dust, odor or gas from the outside as well.

However, as fresh air cannot be introduced into the cabin, and the cabin is not ventilated in this mode, the air quality in the cabin can be degraded. Therefore, make sure to use the fresh air mode or open the window occasionally.

 **CAUTION**

- **After parking the tractor under direct sunlight for an extended period of time, open all the windows to remove hot air in the cabin and operate the A/C.**
- **Keep the windows closed while the A/C is in operation for effective cooling.**
- **Turn off the air conditioner for better engine power when the work load rapidly increases.**
- **When the tractor is stationary and being used in high load work, reduce the A/C operation period as the engine may be overheated.**
- **If cold air does not come out from the vents after several hours of operations, turn the fan and A/C off and rotate the temperature dial to "hot" and allow the system to thaw out for 5 to 10 minutes before turning the A/C on again**

 **CAUTION**

- **Be sure you operate the air conditioner once or twice a month in winter season to lubricate the A/C compressor and other A/C components.**

AIR CONDITIONER MAINTENANCE

Make sure to follow the instructions below to keep the air conditioner in the best operating condition :

1. Operation in winter season :

During the winter time, run the air conditioner once or twice every month to lubricate the A/C compressor and other A/C components.

2. Air conditioner condenser care:

If there is foreign material in the A/C condenser and engine radiator, their cooling performance may be diminished. Always keep the A/C condenser and engine radiator clean for optimal cooling performance. When cleaning, use compressed air to blow material out of the cooling fins. Always avoid bending or damaging the cooling fins when cleaning.

3. Operation in summer season :

Make sure to check the tension of the A/C belt before using the A/C frequently.

CAUTION

- **The A/C system is charged with new refrigerant that does not destroy the ozone layer. Be careful when servicing the A/C system.**
- **Do not use unspecified refrigerant and compressor oil, or the air conditioner system could be seriously damaged.**
- **The performance of the A/C diminishes when the refrigerant is insufficient. However, charging the air conditioner with excessive refrigerant affects its performance negatively. Therefore, have the system checked by an Authorized KIOTI Dealer is A/C performance is not adequate.**

CAUTION

- **A/C system uses new refrigerant R-134A. the use of the wrong refrigerant can cause a malfunction of the system such as compressor failure. Be sure proper refrigerant is used prior to charging the system.**
- **Water in the A/C system can cause a system malfunction and damage A/C components.**
- **An insufficient amount of oil in the compressor will cause poor lubrication and compressor failure.**
- **Excessive amounts of oil in the compressor may lead to a system malfunction.**
- **Refrigerant and compressor oil levels should be checked or replaced if the following occurs:**
 - Refrigerant or oil leaks from A/C system
 - Serious refrigerant leaks
 - After repair of A/C system or part replacement



CAUTION

- Only a qualified and certified A/C technician or an Authorized KIOTI Dealer should perform any maintenance, repair or tests on the tractor's A/C system.

WARNING

- *Have the air conditioner serviced by qualified service personnel. If it is serviced by an unqualified person, he/she can be injured by the refrigerant under high pressure.*

A/C REFRIGERANT INSPECTION

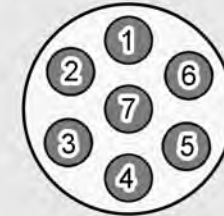
If the refrigerant is insufficient, A/C performance becomes inefficient. Also overcharging has a bad effect on the system. If malfunction is detected, have it serviced at a local Authorized KIOTI Dealership.

Item	New Refrigerant	Compressor Oil
Type	R-134a	PAG oil
Charging amount	0.9 kg (1.984 lbs)	265 cc (8.961 oz)

WARNING

- *If you sleep or rest in a stationary tractor with the A/C or heat on, you could suffer from Carbon Monoxide inhalation, leading to serious injury or death.*
- *When keeping the A/C on for an extended period of time, inside air can become impure. Therefore, draw outside air and ventilate the cabin regularly.*

7-PIN POWER SOCKET



HX10445A

(1) Power Connector

The 7-pin socket is installed on the rear of the tractor.

This supplies power to the brake lamps, turn signal lamps, and marker lamps on an implement or trailer.

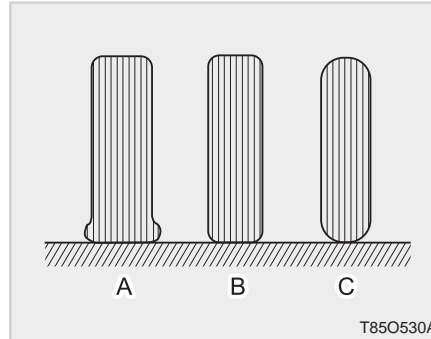
TIRES, WHEELS AND BALLAST

GENERAL TIRE INFORMATION

No	Circuit	Color of wire
1	Ground	W
2	Clearance, Side marker, And id lamps	B
3	Left turn and hazard lamps	Y
4	Stop lamps and anti-lock demces	R
5	Right turn and gazard lamps	G
6	Tail, rear clearance, marker, & license plate lamps	Br
7	Auxiliary circuit(Center)	L

⚠ WARNING

- *When driving on a road with an implement which has exterior lamps, such as hay baler or a trailer, make sure to turn on those lamps by connecting them to the 7-pin socket in order to prevent an accident.*
- *Be sure to confirm the proper operation of the implement lamps after connecting to the 7-pin socket. Consult your Local Authorized KIO-TI Dealer for assistance if required.*



(A) Insufficient
(C) Excessive

(B) Standard

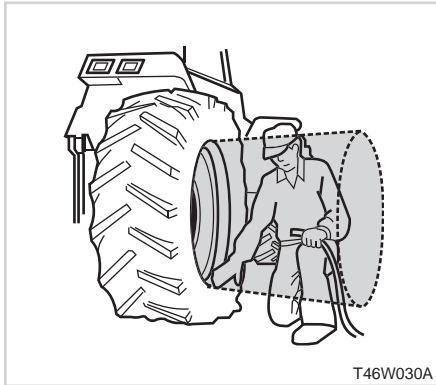
⚠ WARNING

- *Do not disassemble or assemble a tire. If it is necessary to disassemble/assemble a tire, let a qualified service person complete the task.*

Though the tire pressure is factory-set to the prescribed level, it naturally drops slowly in the course of time. Thus, check it everyday and inflate as necessary.

⚠ WARNING

- *Do not use tires larger or smaller than specified as this impacts the performance, driving characteristics and could damage the tractor driveline.*



T46W030A

⚠ WARNING

- **Use caution when inflating or checking air pressure.**

INFLATION PRESSURES

Always maintain the proper tire inflation pressure. Make sure the tire pressure does not exceed the pressure recommended by the manufacturer as provided on the tire sidewall.

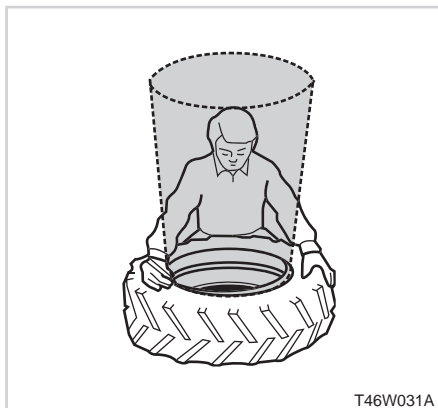
Class	Tire Sizes	Inflation Pressure
Front	380/85R28	2.0 kg/cm ² , 196.1 Kpa, 28.4 psi
Rear	460/85R38	2.0 kg/cm ² , 196.1 Kpa, 28.4 psi

*AG : Agricultural Tire

📖 NOTE

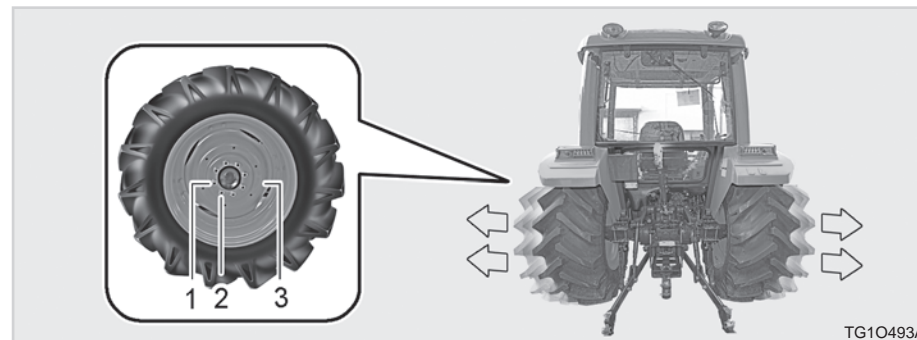
- Keep the front tire pressure to maximum when using a front end loader or front suitcase weights.
- If tires with a different size from the ones already in use are installed, contact the Local Authorized **KIOTI** Dealer for the front/rear wheel speed ratio. Improper wheel speed ratio can result in excessive tire wear, erratic driving characteristics or catastrophic driveline damage.

TREAD



⚠ WARNING

- *Do not weld or apply heat to the tire rim or disc. The tire can explode due to the rapidly increased pressure in the tire.*
- *Check tires for inflation pressure, damage, deformation, and excessive wear. Inspect rims and discs for damage, loose or missing hardware daily.*



(1) Bolt

(2) Rim Bolt

(3) Rim

The rear axle tread width are adjustable by changing the installation of the tire (together with rim) to the disk, to suit the type or condition of work.

⚠ WARNING

- *The front wheel tread width(center to center) on tractors equipped with front loader must not exceed 69.5 in. (1.77 m).*

**⚠ WARNING**

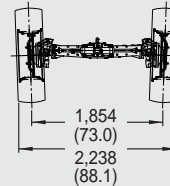
Never operate tractor with a loose rim, wheel, or axle.

- **Always tighten nuts or bolts to the specified torque.**
- **Be sure to perform inspections daily.**

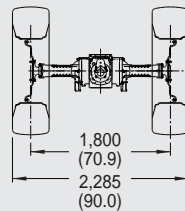
mm (in.)

STANDARD

Front
(380/85R28)



Rear
(460/85R38)



HX1O4H4U

Tightening torque**Wheel nut**

28 ~ 32.5 kgf·m
274.6 ~ 318.7 N·m
202.53 ~ 235.06 ft·lbs

Rim bolt

28 ~ 34.0 kgf·m
274.6 ~ 333.4 N·m
202.53 ~ 245.90 ft·lbs

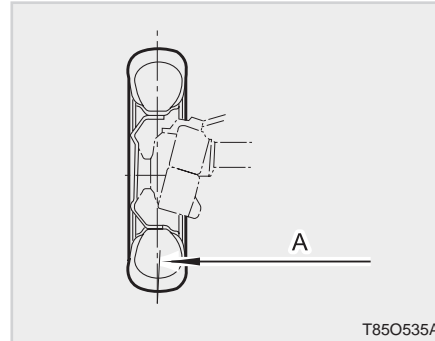
⚠ WARNING

- **Use tires approved by Kioti only.**
- **Assemble the tires as shown in the chart on page 4-72.**
- **Contact your Local Authorized Kioti Dealer if it is necessary to change the tire specification or installation method.**

※The above specifications are based on agricultural tires.

WHEEL INSTALLATION DIRECTION

For agricultural tires, make sure to install them with their arrow marks on their side pointing in the forward driving direction.

**WHEEL TORQUE AND DIRECTION
FRONT WHEEL INSTALLATION
PATTERN**


(A) Tread

Front tread width should not exceed 69.5 inches when outfitted with a loader or front weights. Consult with your Local Authorized **KIOTI** Dealer should your specific application require front tread adjustment.

The owner is responsible for repairs resulting from any damage caused by improper modification or unapproved tread settings which are not covered by warranty.

Tightening torque of wheel bolt (nut)

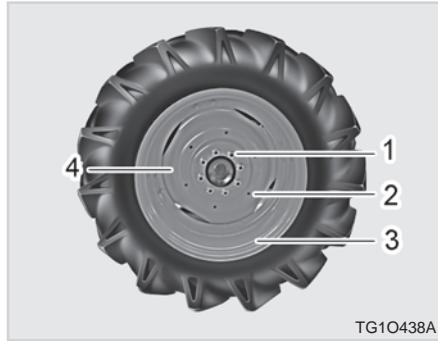
17~19 kgf.m
166.7~186.3 N.m
122.95 - 137.41 ft-lbs

⚠ WARNING

- *Use tires approved by KIOTI only.*
- *Assemble the tires as shown in the chart on page 4-72.*
- *Contact your local KIOTI Dealer if it is necessary to change the tire specification or installation method.*



REAR WHEEL INSTALLATION PATTERN



- (1) Wheel Nut
(3) Rim
- (2) Rim Bolt
(4) Disc

The rear axle tread width are adjustable by changing the installation of the tire (together with rim) to the disk, to suit the type or condition of work.

ADDITIONAL WEIGHT(IF EQUIPPED) ADDITIONAL FRONT WEIGHT



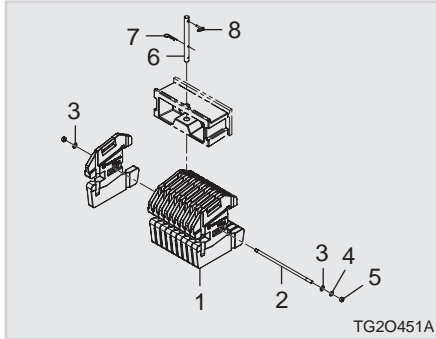
- (1) Additional Front Weight

If the loader is not installed, attach a weight kit to the front of the tractor for additional ballast when using three-point implements or heavy drawbar loads.

If a heavy implement is installed at the three-point or the drawbar the front wheels may be lifted. Add sufficient weight to maintain stability and control.

When the front tires are excessively loaded, it may become difficult to steer the tractor under certain conditions. The front tires may be worn faster, especially if not inflated to the manufacturer's recommended inflation pressure.

COMPONENTS FOR ADDITIONAL FRONT WEIGHT



- (1) Weight (2) Bolt
(3) Plain Washer (4) Spring Washer
(5) Nut (6) Weight Lock Pin
(7) Clip Pin (8) Lift Rod Lock Pin

When installing or removing a weight, always check the tire inflation pressure and adjust it as necessary.

Front weights are available through your Local Authorized **KIOTI** Dealer.

Max. load

1,102 lbs (500 kg)
(50 kg x 10 Pieces)

 **CAUTION**

- **Additional weight might be needed for transporting heavy implements.**
- **Reduce speed regardless of additional weight when driving on a bumpy or rough road with an implement raised on the three-point hitch or attached to the drawbar to reduce the risk for loss of control or an accident.**

 **IMPORTANT**

- **Attach sufficient weight for stability without adding excessive ballast leading to premature tire and component wear.**

LIQUID BALLAST

Adding liquid ballast in the form of water + calcium or other forms of approved liquid ballast is possible.

 **NOTE**

- Liquid injection should be performed by qualified service personnel only.
- For assistance, please contact your Local Authorized **KIOTI** Dealer.

If one liter of water is mixed with 0.4 kg of calcium, this liquid does not freeze down at -45 °C (-49 °F).

For a tire without a tube, fill it with a water and calcium solution at least to the valve stem level (75%).

If the tire without a tube is not filled with water and calcium solution sufficiently, a part of the rim is exposed, which could lead to corrosion of the rim.

For a tire with a tube, fill it up to 90% of its level.

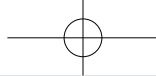


4-78

HX1302/1402

NOTE

- Liquid injection should be performed by qualified service personnel only.
- For assistance, please contact your Local Authorized **KIOTI** Dealer.



MONITOR

HARD KEY 5-2

HOME 5-3

ALL MENU 5-4

VEHICLE INFO 5-5

ENGINE SETTING 5-6

MISSION SETTING 5-7

HITCH SETTING 5-8

WORK LIGHT SETTING 5-11

REAR CAMERA 5-12

RADIO 5-13

USB MUSIC 5-14

BLUETOOTH MUSIC 5-15

USB MOVIE 5-16

BLUETOOTH PHONE 5-17

SYSTEM SETTING → DISPLAY 5-22

SYSTEM SETTING → SOUND 5-26

SYSTEM SETTING → BLUETOOTH SETUP... 5-29

SYSTEM SETTING → DATE AND TIME 5-35

SYSTEM SETTING → LANGUAGE 5-36

SYSTEM SETTING → SYSTEM INFO 5-37

SYSTEM SETTING → SYS DIAGNOSIS... 5-40

SYSTEM SETTING → UNITS 5-42

UPDATE 5-43

5

5



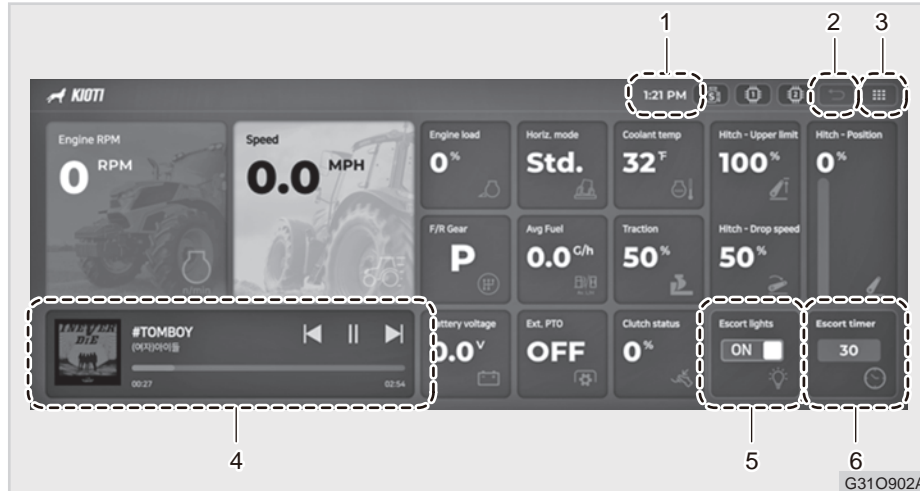
HARD KEY



NO.	KEY		DESCRIPTION
1	SET	Short KEY	This is used to sequentially switch to Hitch Setting → Transmission Setting → Engine Setting → Work Lamp Setting.
2	HOME	Short KEY	This is used to enter the HOME screen.
3	MEDIA	Short KEY	This is used to switch to Radio → USB Media → Bluetooth sequentially.
4	INFO	Short KEY	This is used to switch to Vehicle Information→ All Menu sequentially.
5	ENCODER (LH)	Turning	This is used to scroll the list up/down.
		Short KEY	This is used to select an item.
6	ENCODER (RH)	Turning	Volume
		Short KEY	Mute On/Off
		Long KEY	AV On/Off
7	RESET	Short KEY	HW RESET



HOME



(1) Current Time

(2) Previous Screen

(3) Full Menu

(4) Media Player Widget

(5) Lighting ON/OFF Button

(6) Illumination Duration Setting Button

This screen provides an overview of the system's operating status and allows you to play media files and set escort lights.

1. Current Time:

It displays the current time.

2. Previous Screen:

Press this button to return to the previous screen.

3. Full Menu:

Press this button to display the entire menu for easy navigation.

4. Media Player Widget:

You can play or stop the current song, play the previous or next song, and more.

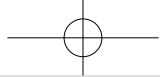
5. Lighting ON/OFF Button :

Use this button to toggle the escort light on or off.

6. Illumination Duration Setting Button:

Use this button to adjust the escort light illumination time.

5



ALL MENU



The Full Menu screen allows you to easily navigate to the desired system screen by selecting each button.

You can quickly access settings for various systems, including Vehicle Info, Engine Setting, Transmission Setting, Hitch Setting, and Work Light Setting, as well as media features like Rearview Camera, Radio, USB Music, USB Movie, Bluetooth Music, Bluetooth Phone, and System Setting.

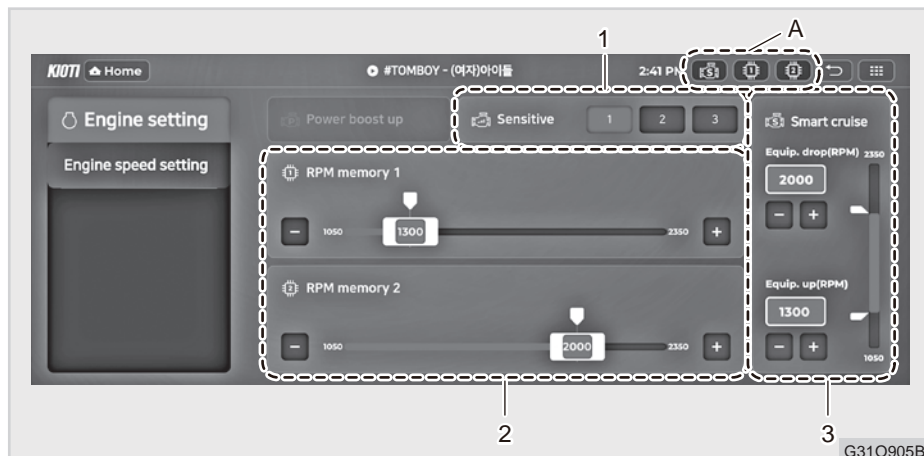


VEHICLE INFO



This screen displays engine information, battery voltage, coolant temperature, fuel consumption, driving speed, and clutch status of the vehicle.

ENGINE SETTING



(1) Sensitive

(2) RPM Memory

(3) Smart Cruise

The RPM Memory feature lets you select one of two stored RPM values, saving you from repeatedly adjusting the accelerator.

1. Sensitive:

You can select the sensitivity to reach the set RPM of smart cruise, memory 1 and 2.

1: slow, 2: medium, 3: fast

2. RPM Memory:

You can select either RPM Memory 1 or RPM Memory 2 and set the desired engine RPM. After setting, if the accelerator pedal is pressed with both the parking brake and brake pedal released, the engine will rise to the set RPM and remain there.

- ※ Select the sensitivity by selecting the icon or in part A at the top of the screen.

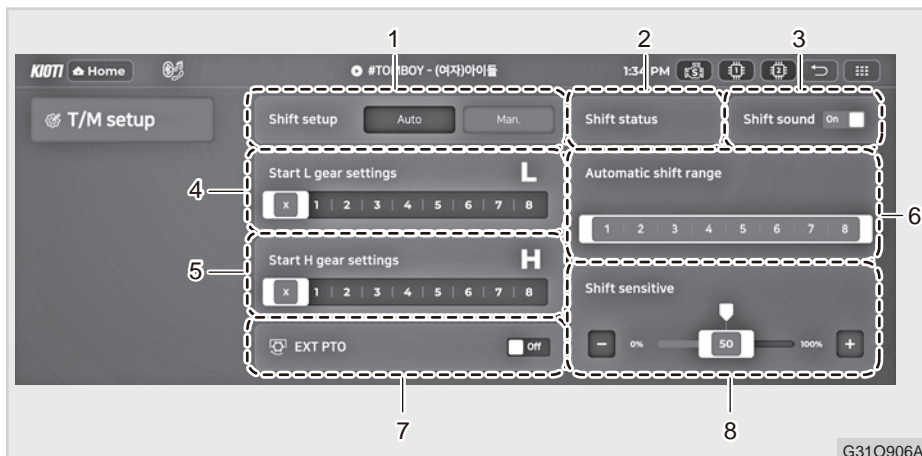
3. Smart Cruise:

With Smart Cruising, the engine RPM is automatically controlled within set upper and lower speed limits based on the implement height.

- ※ Select the sensitivity by selecting the icon in part A at the top of the screen.



MISSION SETTING



(1) Shift Setup

(2) Shift Status

(3) Shift Sound

(4) Start L Gear Settings

(5) Start H Gear Settings

(6) Automatic Shift Range

(7) EXT OTP

(8) Shift Sensitive

This screen allows you to adjust settings related to the transmission.

1. Shift Setup:

This lets you set the gear shift to Automatic or Manual.


2. Shift Status:

This feature displays the current gear state.


3. Shift Sound:

This lets you set the shift sound on or off.

4. Start L Gear Settings:

This allows you to set the start L gear. You can adjust the value by moving the slider ().

5. Start H Gear Settings:

This allows you to set the start H gear. You can adjust the value by moving the slider ().




6. Automatic Shift Range:

You can adjust the automatic shift range. (Set the range by adjusting the left and right square boxes.)

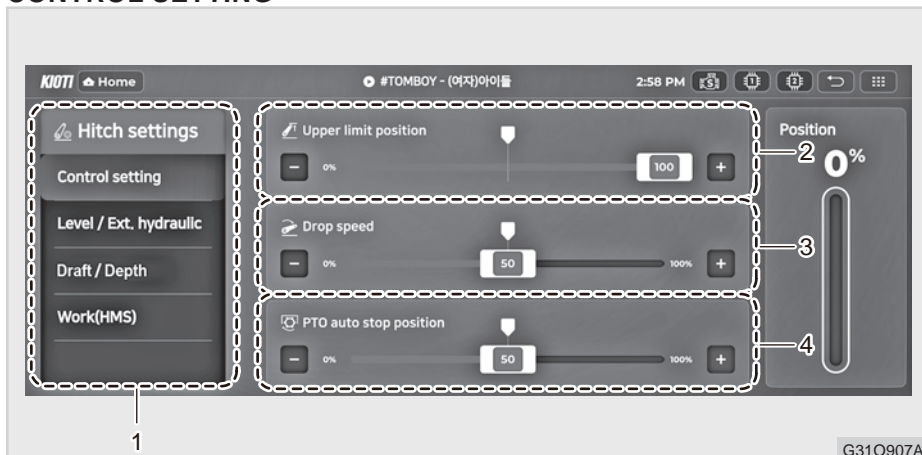
7. EXT PTO:

This lets you turn the external PTO on or off.

8. Shift Sensitive:

You can adjust the shift sensitivity. Use the slider () and  and  buttons to adjust the shift sensitivity.

HITCH SETTING CONTROL SETTING



(1) Selecting Hitch Settings
(2) Upper Limit Position

(3) Drop Speed
(4) PTO Auto Stop Position

2. Upper Limit Position:

You can set the upper limit position of the hitch.

3. Drop Speed:




You can set the lowering speed of the hitch.

4. PTO Auto Stop Position:

You can set the automatic stop position for the PTO.

This screen is for adjusting the basic hitch settings.

In the Hitch Settings screen, you can set the upper limit position, lowering speed, and PTO auto-stop position for the hitch.

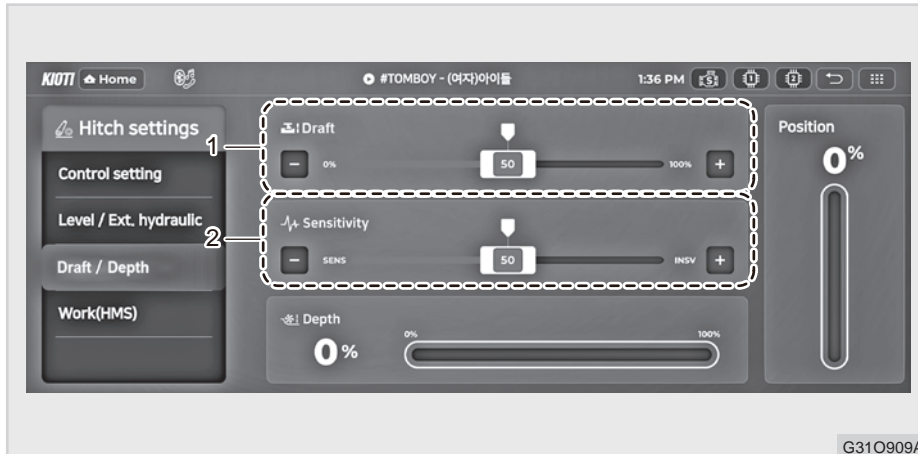
Each item can be adjusted by moving the  slider. The  and  buttons can be used to make fine adjustments.

1. Selecting Hitch Settings

You can select Control setting, Level/Ext. hydraulic, Traction/Depth, or Work(HMS) to display detailed settings for adjustment.






DRAFT / DEPTH



(1) Draft

(2) Sensitivity

This screen allows you to adjust the traction and plowing depth of the hitch. You can set the traction, sensitivity and plowing depth to suit your work needs. Each item can be adjusted by moving the  slider. The  and  buttons can be used to make fine adjustments.

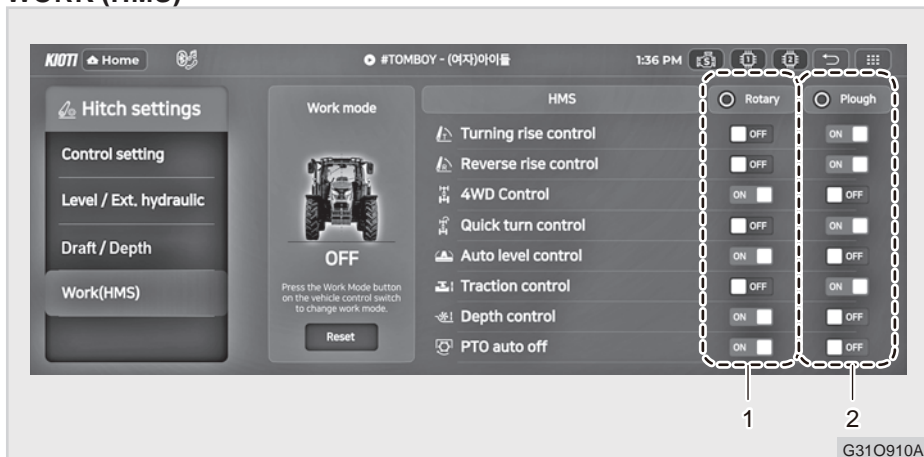
1. Draft:

Adjusts the depth of the implement (Draft) when pulling a three-point tillage implement like a plow.

2. Sensitivity:

Adjusts the reaction rate of the implement in draft mode.

WORK (HMS)



(1) Rotary ON/OFF

(2) Plough ON/OFF

This screen lets you set the features for rotary and plough modes.

1. Rotary ON/OFF:

You can turn each feature ON or OFF for the rotary work mode.

2. Plough ON/OFF:

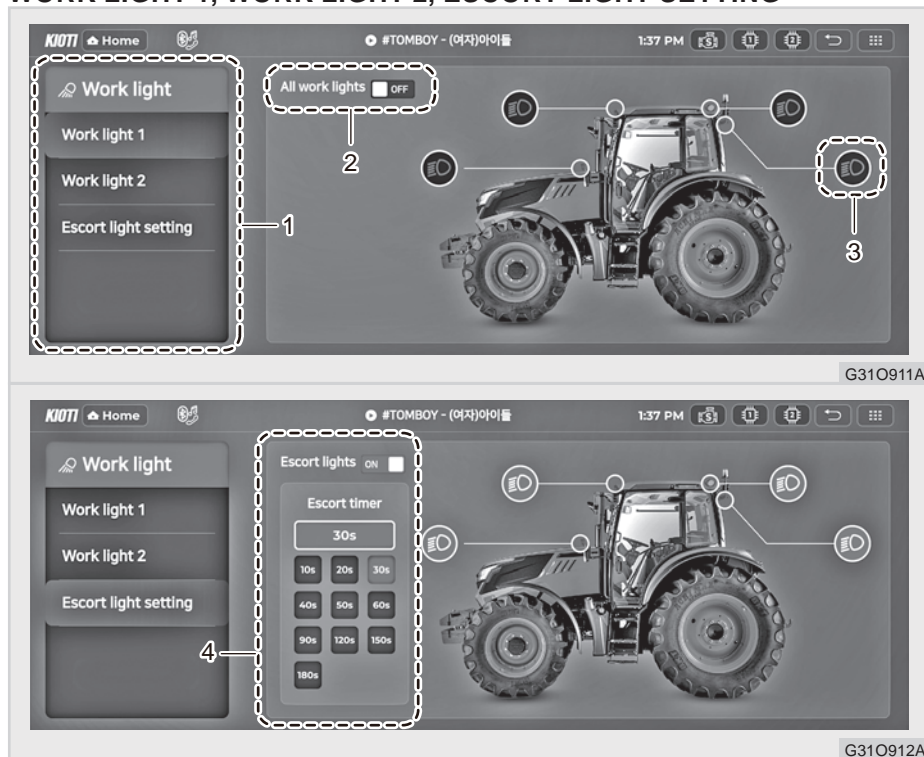
You can turn each feature ON or OFF for the plough work mode.



WORK LIGHT SETTING



WORK LIGHT 1, WORK LIGHT 2, ESCORT LIGHT SETTING



(1) Selecting Work Light
(2) All Work Lights ON/OFF

(3) Individual Work Light ON/OFF
(4) Setting Escort Timer

This screen allows you to adjust settings for the work light.

Work Light 1 and Work Light 2 can be individually adjusted to suit your work needs.

The escort light time, which determines how long the work lights stay on after the ignition is turned off, can be set from 10 to 180 seconds.

1. Selecting Work Light:

You can select Work Light 1, Work Light 2, or Escort Light Setting to display detailed settings for adjustment. You can set different turn-on modes for the work light by selecting work light 1 or work light 2.

2. All Work Lights ON/OFF :

You can turn the entire work lights ON or OFF.

3. Individual Work Light ON/OFF:

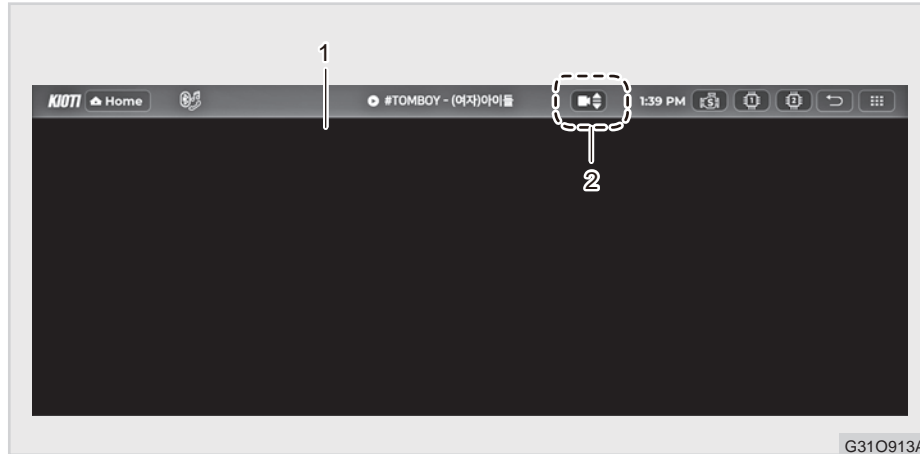
You can turn each work light ON or OFF individually at different locations.

4. Setting Escort Timer:

You can select the escort timer.



REAR CAMERA



(1) Rear View

(2) Selecting View Angle

This screen allows you to adjust settings for the camera.

You can view the rear through the camera.

1. Rear View:

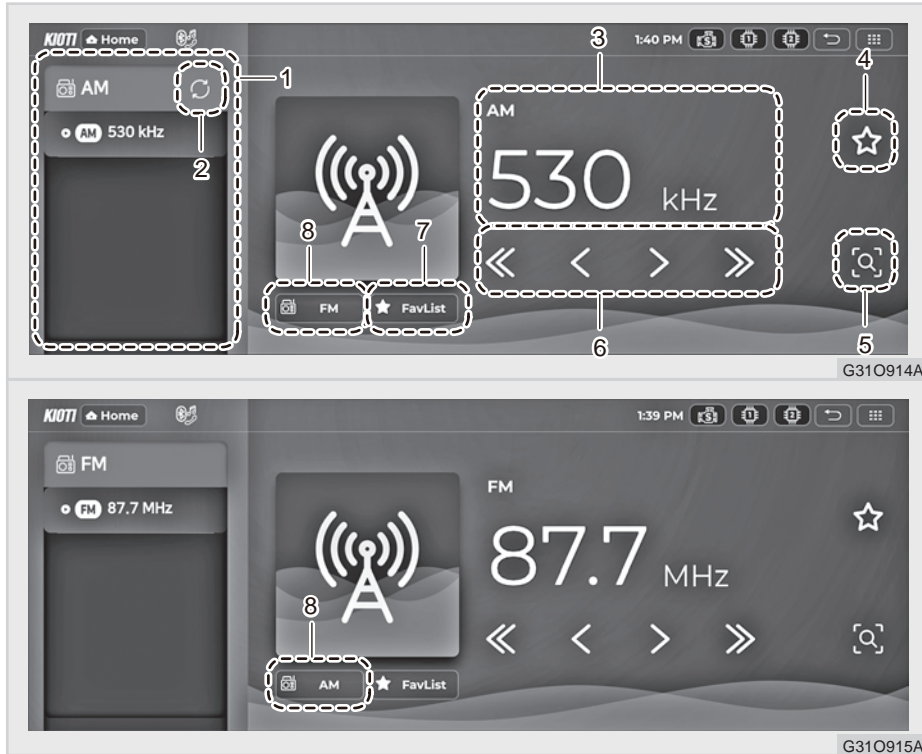
The rear-view camera activates, allowing you to check the rear view on the screen.

2. Selecting View Angle:

Use the view angle button to select the upper, middle, or lower camera view.



RADIO



- (1) Searching For And Selecting A Frequency
(2) Refresh (AM) and Auto Search (FM)
(3) Displaying The Current Frequency
(4) Favorite And Unfavorite

- (5) Searching For Frequencies
(6) Frequency Control Buttons
(7) Favorites
(8) FM/AM Switching

This screen allows you to adjust settings for the radio.

You can search for and select FM, AM, or your favorite radio station.

1. Searching for and selecting a frequency:

You can search for and select an FM or AM frequency, or choose a favorite radio station.

2. Refresh (AM) and Auto Search (FM):

For AM radio, the system refreshes the frequency. For FM radio, the system automatically searches for a frequency.

3. Displaying the Current Frequency:

The current radio frequency is displayed. When receiving FM stereo, the 'STEREO' icon appears.

4. Favorite and Unfavorite: Tap the icon to favorite or unfavorite the currently playing channel.

5. Searching for Frequencies: Navigate and scan for radio frequencies. The detected frequency plays for 5 seconds before the system searches for the next frequency.

USB MUSIC



6. Frequency control buttons:

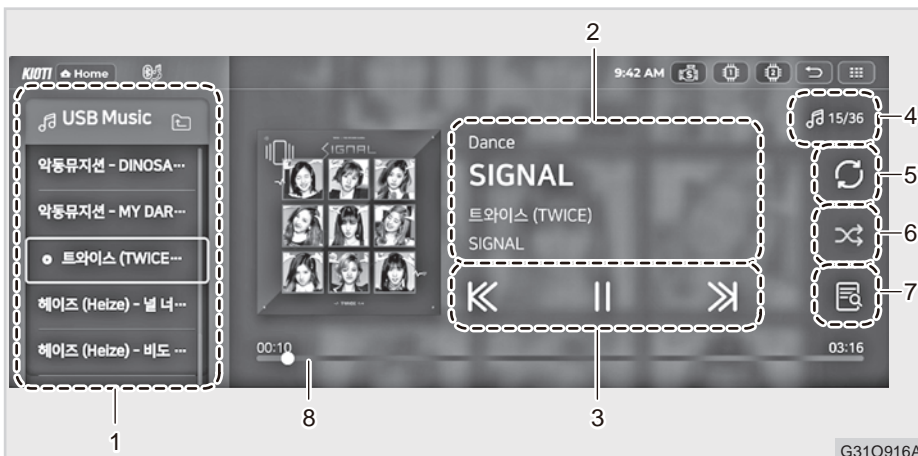
You can manually adjust the frequency in increments of 0.1 for FM and 9 for AM, or automatically skip to the next station.

7. Favorites:

You can quickly view a list of your favorites.

8. FM/AM Switching:

Select the icon to toggle between FM and AM radio.



- | | |
|---|------------------|
| (1) Searching For Folders And Files | (5) Repeat |
| (2) Information About The Song Being Played | (6) Shuffle |
| (3) Previous/Pause/Next | (7) Details |
| (4) Number Of Songs Playing/Total Number Of Songs | (8) Progress Bar |

1. Searching for Folders and Files:

You can browse folders and music files in the USB Music menu.

2. Information About the Song Being Played:

You can view details about the song you're playing.

3. Previous/Pause/Next:

You can play or stop the current song, or skip to the next or previous song.



BLUETOOTH MUSIC



4. Number of Songs Playing/Total Number of Songs:

The currently playing song and the total number of songs in the playlist are displayed.

5. Repeat:

You can choose to play a song repeatedly. The options are: Repeat Off, Repeat Current File, Repeat Playlist (Folder), and Repeat All Songs.

6. Shuffle:

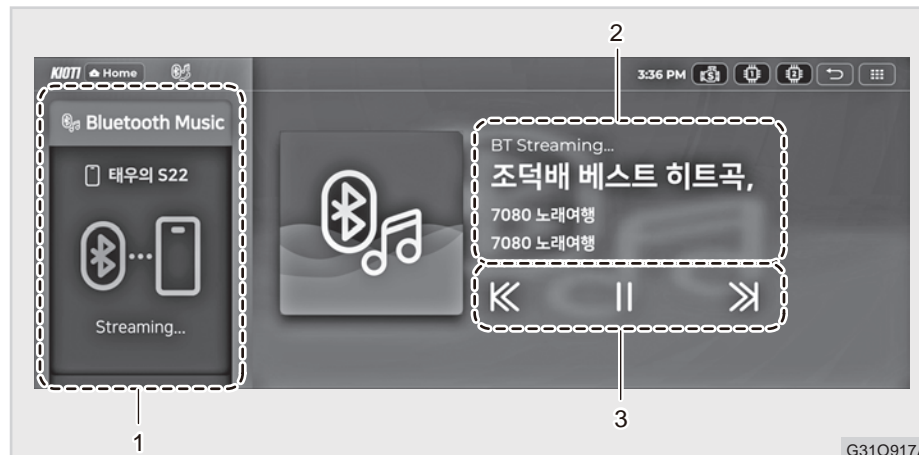
You can activate the shuffle playback feature. The options are: Shuffle Off, Shuffle Playlist (Folder), and Shuffle All Songs.

7. Details:

You can view more information about the file you're playing.

8. Progress bar:

It shows the progress of the currently playing song, and you can adjust the playback position by touching the progress bar to move it left or right.



(1) Searching For Folders And Files

(2) Information About The Song Being Played

(3) Previous/Pause/Next

You can play music files from your paired phone when Bluetooth is enabled.

1. Searching for Folders and Files:

You can browse folders and music files on the paired device.

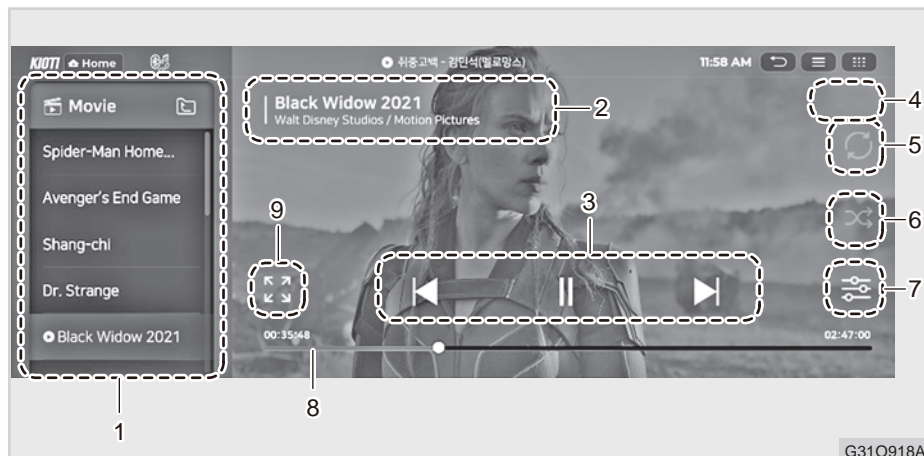
2. Information About the Song Being Played:

You can view details about the song you're playing.

3. Previous/Pause/Next:

You can play or stop the current song, or skip to the next or previous song.

USB MOVIE



- (1) Searching For Folders And Files
 (2) Information About The Video Being Played
 (3) Previous/Pause/Next
 (4) Number Of Videos Playing/Total Number Of Videos

- (5) Repeat
 (6) Shuffle
 (7) Details
 (8) Progress Bar
 (9) Full Screen

1. Searching for Folders and Files:

You can browse folders and video files in the USB Movie menu.

2. Information About the Video Being Played:

You can view details about the video you're playing.

3. Previous/Pause/Next:

You can play or stop the current video, or skip to the next or previous video.

4. Number of Videos Playing/Total Number of Videos:

The currently playing video and the total number of videos in the playlist are displayed.

5. Repeat:

You can choose to play a song repeatedly. The options are: Repeat Off, Repeat Current File, Repeat Playlist (Folder), and Repeat All Songs.

6. Shuffle:

You can activate the shuffle playback feature. The options are: Shuffle Off, Shuffle Playlist (Folder), and Shuffle All Videos.

7. Details:

You can view more information about the file you're playing.

8. Progress bar:

It shows the progress of the currently playing video, and you can adjust the playback position by touching the progress bar to move it left or right.

9. Full Screen:

You can play video files in full screen.

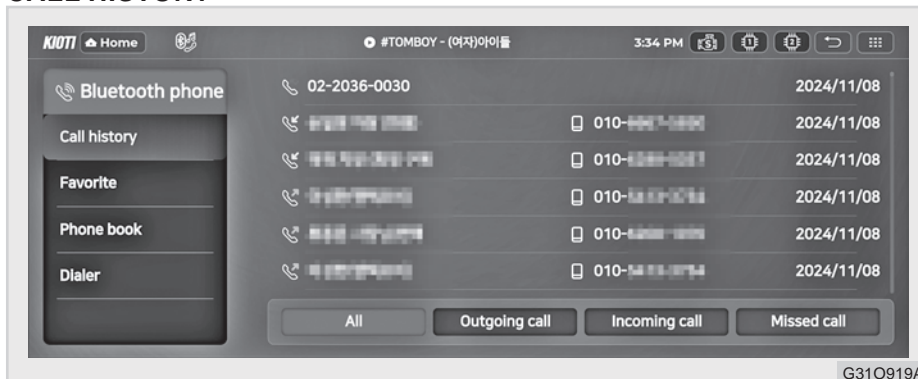


BLUETOOTH PHONE



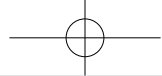
The Bluetooth Phone menu is activated when a Bluetooth device is registered through System Settings → Bluetooth Settings.

CALL HISTORY



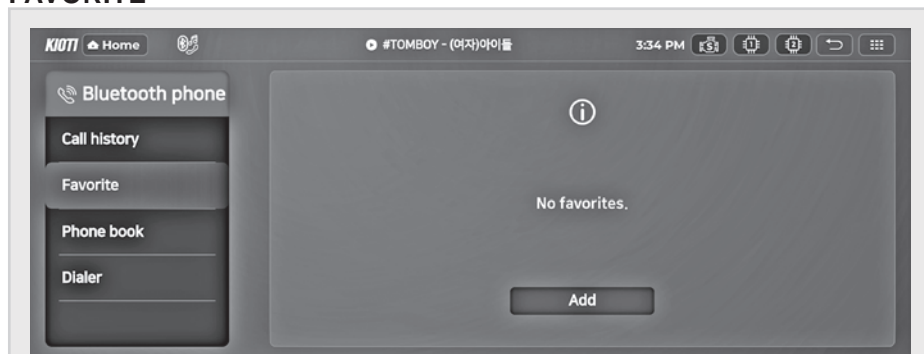
If call logs are available for the paired device, they will be displayed.

Use the buttons to view the entire call log, outgoing calls, incoming calls, or missed calls.



5-18 HX1302/1402

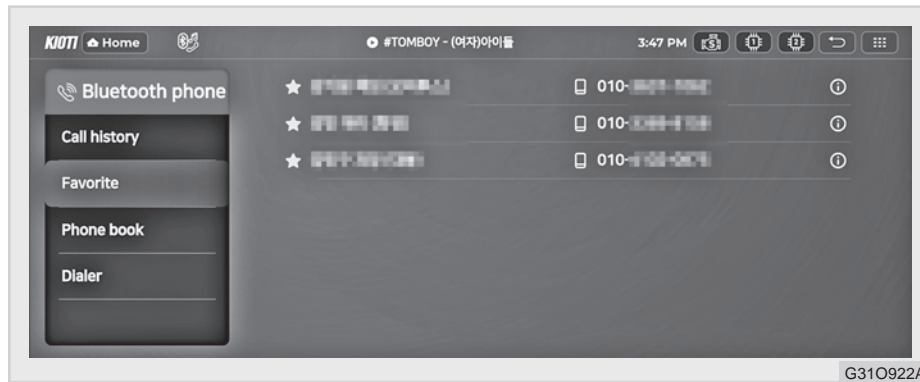
FAVORITE



G31O920A



G31O921A



Contacts marked as favorites in your phonebook are displayed. If you don't have any favorites, tap the Add button to go to your phonebook and set them as favorites.



PHONE BOOK



The first click on the Phonebook tab will download contacts from the paired device. Afterward, only newly added or modified contacts will be downloaded.

The phonebook is organized into Favorites, Names, Contacts, and Contact Icons, and you can use Quick Search scrolling to find the contact you want.



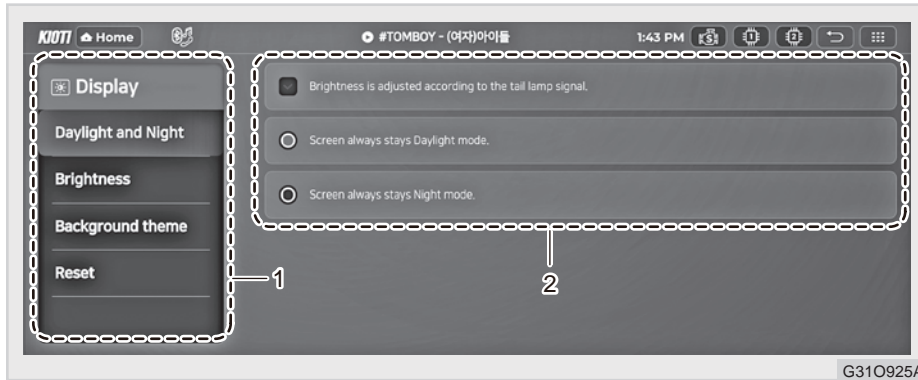
DIALER



You can make calls through the dialer.



SYSTEM SETTING → DISPLAY DAYLIGHT AND NIGHT



(1) Display Settings

(2) Daylight and Night

1. Display settings:

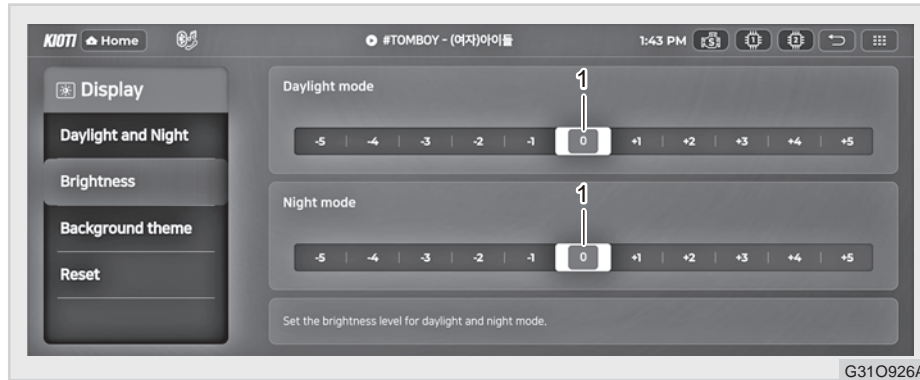
You can select and navigate to the screens for;
Daylight and Night Settings, Brightness, Background Theme, Reset.

2. Daylight and Night:

- You can select the menu as below,
- Brightness is adjusted according to the tail lamp signal.
 - Screen always stays Daylight mode.
 - Screen always stays Night mode.



BRIGHTNESS



(1) Brightness Settings

You can adjust the screen brightness for both Daylight and Night modes.

1. Brightness Settings:

You can adjust the brightness by moving the slider ().



5-24 HX1302/1402

BACKGROUND THEME



You can select a display background theme.

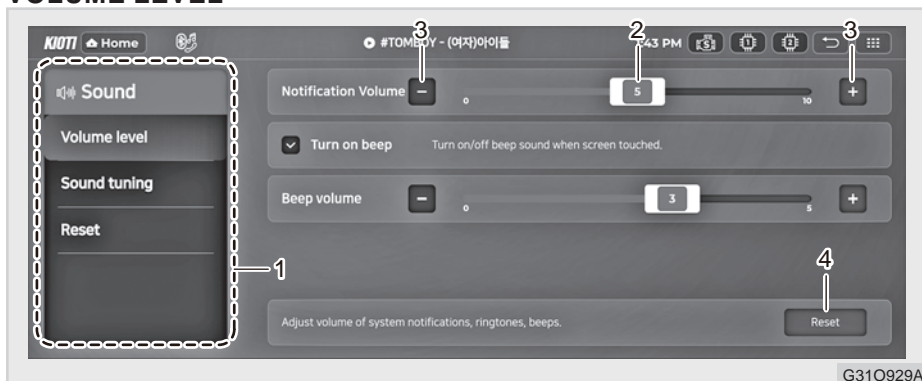


RESET



You can reset all display settings to their factory default values.

SYSTEM SETTING → SOUND VOLUME LEVEL



(1) Sound settings
(2) Slider

(3) Fine adjustment
(4) Reset

You can adjust sound settings, including Treble, Midrange, Bass, and the left/right balance.



1. Sound settings:

You can select and navigate to screens for sound settings, including Volume Level, Sound Tuning, and Reset.

2. Slider:

You can easily adjust the value by moving the slider .

3. Fine adjustment:

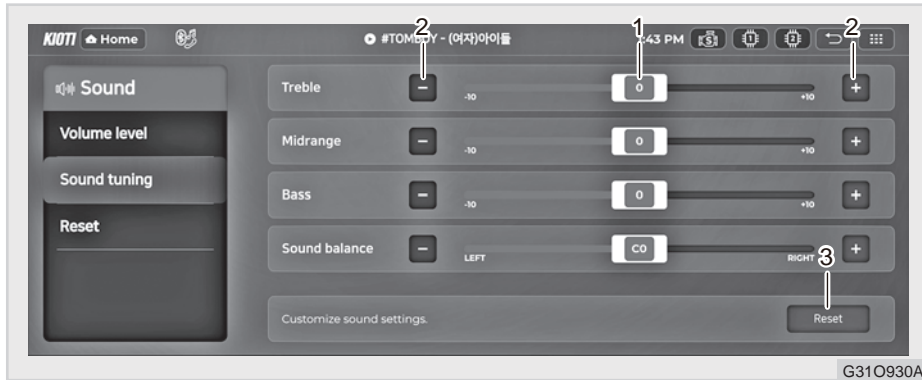
Use the   buttons to adjust the value precisely.

4. Reset:

You can reset the current settings.



SOUND TUNING



(1) Slider

(2) Fine adjustment



(3) Reset

You can adjust the sound volume for the system alarm, ringtone, and beep.

1. Slider:

You can easily adjust the value by moving the slider .

2. Fine adjustment:

Use the   buttons to adjust the value precisely.

3. Reset:

You can reset the current settings.



5-28 HX1302/1402

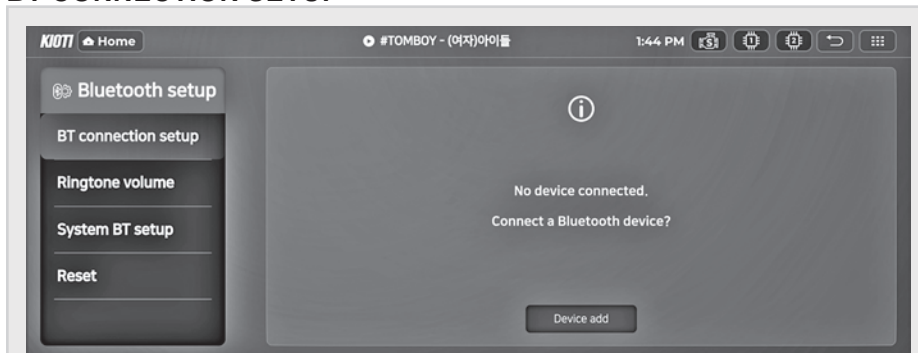
RESET



You can reset all sound settings to their factory default values.



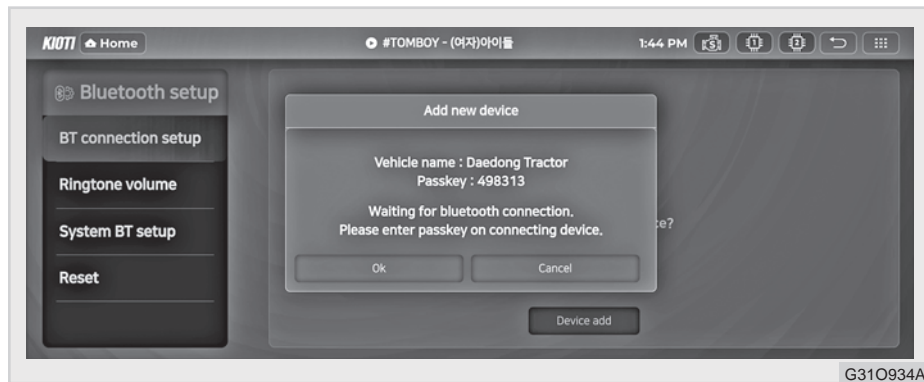
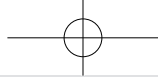
SYSTEM SETTING → BLUETOOTH SETUP BT CONNECTION SETUP



G31O932A



G31O933A

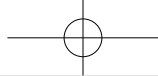


You can connect a Bluetooth device by using the Add New Device button and entering the passkey '498313' on your Bluetooth device.

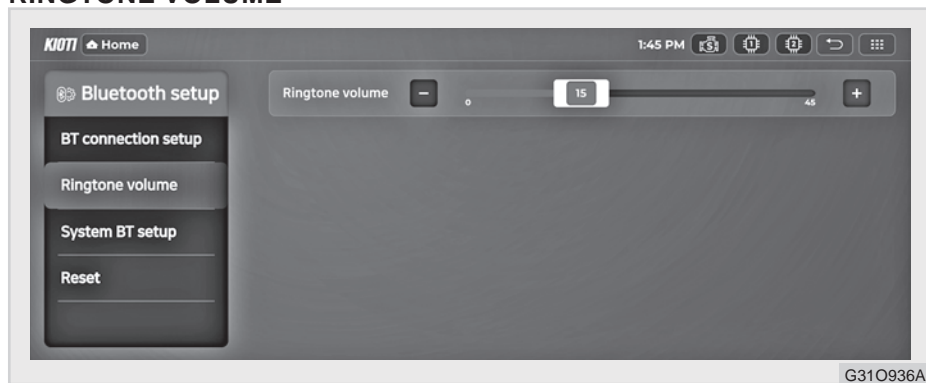
The passkey is a value provided by the Bluetooth device and may vary by device.



Once the Bluetooth connection is complete, press the OK button to download your call logs and phonebook.



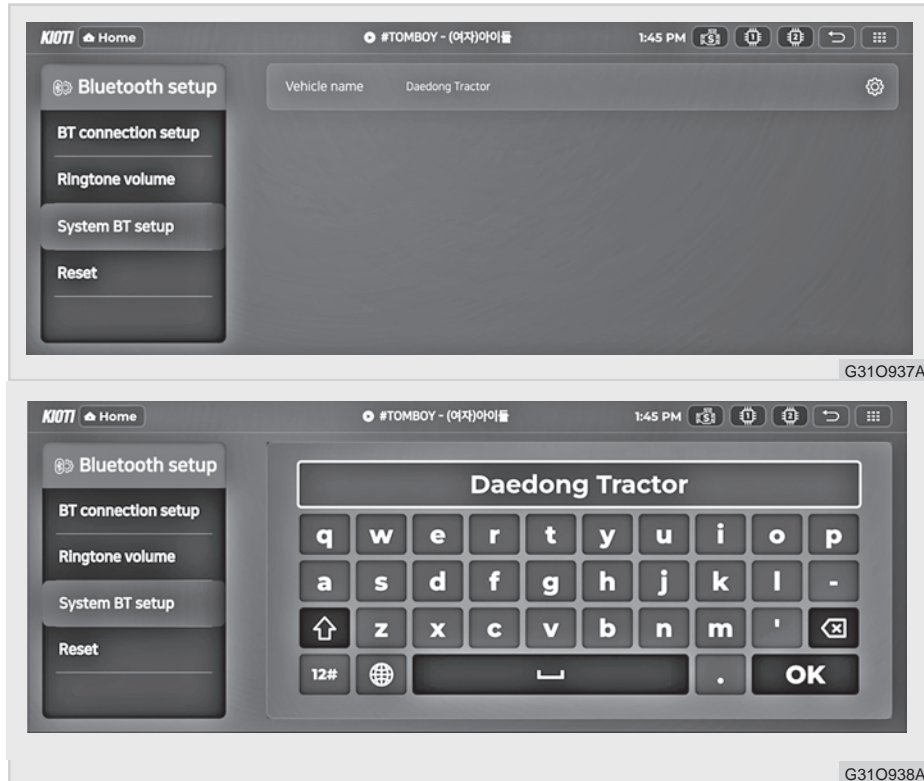
RINGTONE VOLUME



You can adjust the Bluetooth ringtone volume from 0 to 45.



SYSTEM BT SETUP



You can change the name of the vehicle through the System BT Setup menu.
(Default value: Daedong Tractor)



5-34

HX1302/1402

RESET



G31O939A

The Reset button allows you to reset the Bluetooth Setup.



SYSTEM SETTING → DATE AND TIME

DATE AND TIME



(1) Adjusting Date And Time (Increment)

(2) Adjusting Date And Time (Decrement)

(3) Applying TMU Time

(4) Time Display Format

4. Time Display Format:

You can set the time display format to either 12-hour or 24-hour. When the 24-hour format is selected, AM/PM will not be displayed.

This menu allows you to adjust the date and time, as well as set other options.

1. Adjusting Date and Time (Increment):

When changing the date and time, you can increment the numbers or toggle between AM and PM.

2. Adjusting Date and Time (Decrement):

When changing the date and time, you can decrement the numbers or toggle between AM and PM.

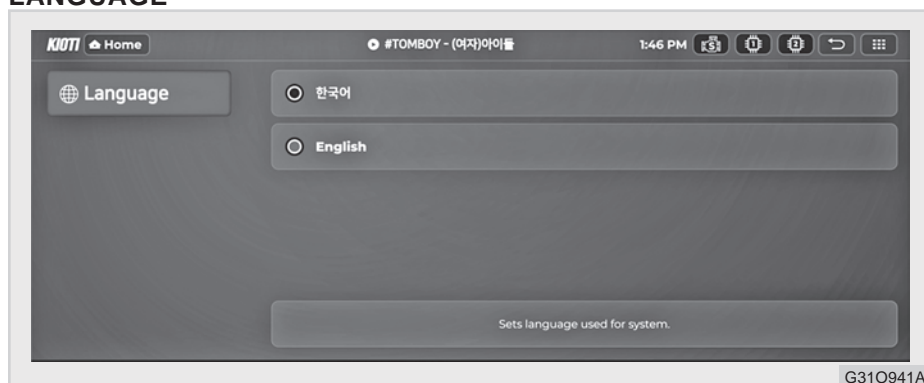
3. Applying TMU Time:

Receive information from the TMU to automatically adjust the date and time.



5-36 HX1302/1402

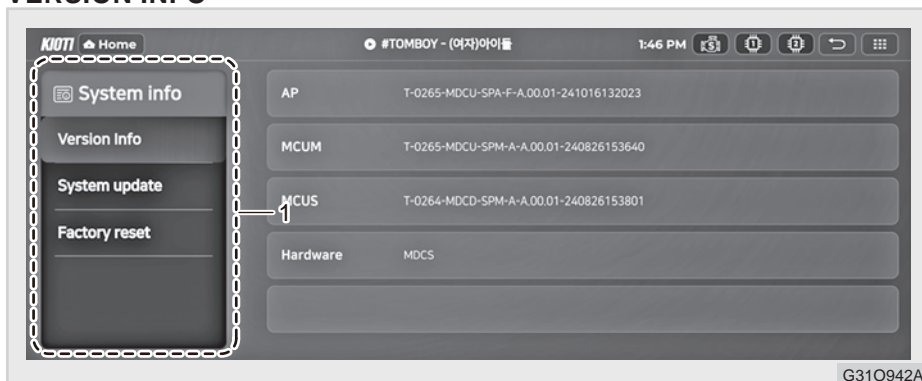
SYSTEM SETTING → LANGUAGE LANGUAGE



The system language can be set to either Korean or English.



SYSTEM SETTING → SYSTEM INFO VERSION INFO

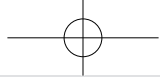


(1) System Info

This screen allows you to check your system's software, firmware, and hardware versions, as well as your device's unique number, and update the system.

1. System Info:

You can select and navigate to screens for system version information, system updates, and factory reset.



SYSTEM UPDATE



For devices that support system updates, updates can enhance the functionality of your device.

Do not turn off the power or start the vehicle during the system update. Follow the on-screen prompts to complete the update.

NOTE

- If you need a system update, please contact your nearest KIOTI dealer.



FACTORY RESET



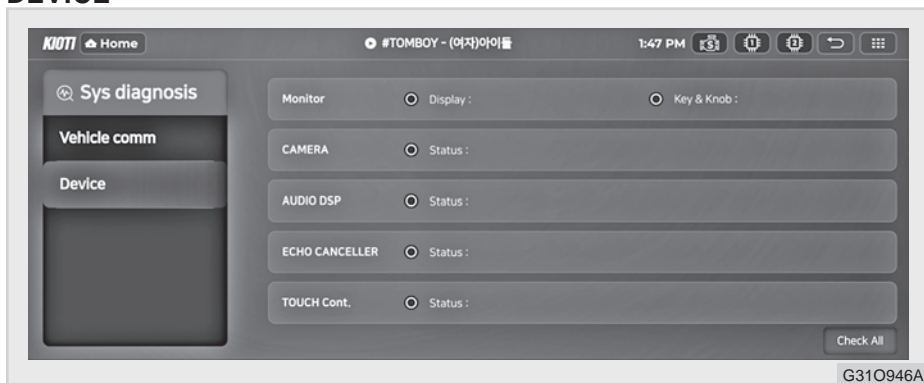
All settings in the system are reset to factory default values.



SYSTEM SETTING → SYS DIAGNOSIS VEHICLE COMMUNICATION



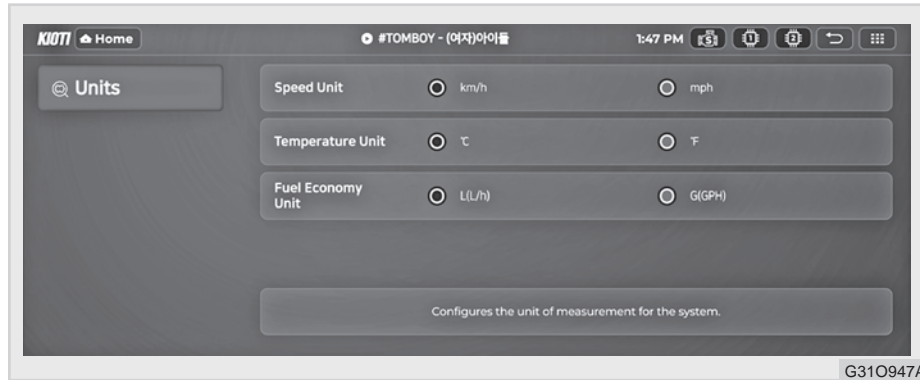
Press the Check All button to check the status of the vehicle's Cluster, ECU, PCU, and HCU.

**DEVICE**

Press the Check All button to check the status of the product's Monitor, CAMERA, AUDIO DSP, ECHO CANCELLER, TOUCH CONDITION, and Key & Knob.



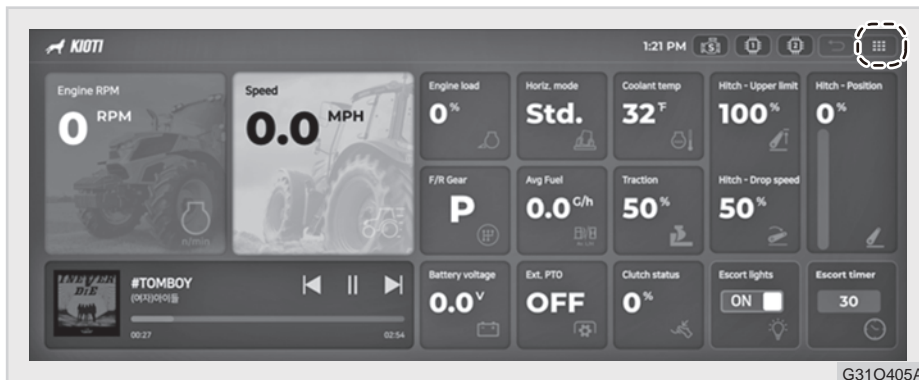
SYSTEM SETTING → UNITS UNITS



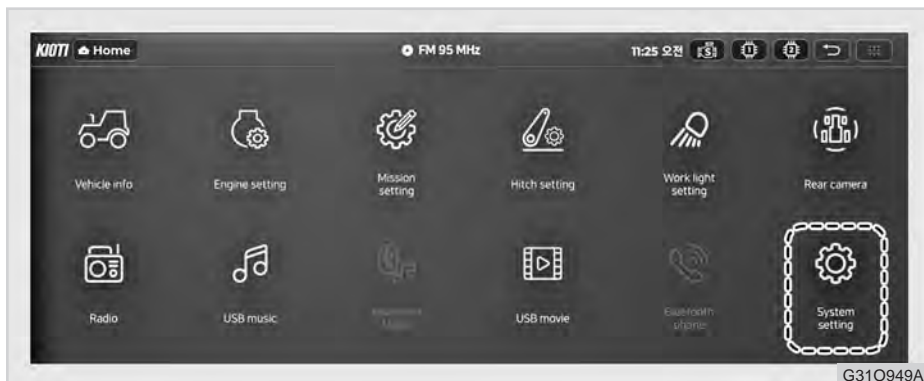
You can set the Speed Unit, Temperature Unit, and Fuel Economy Unit.



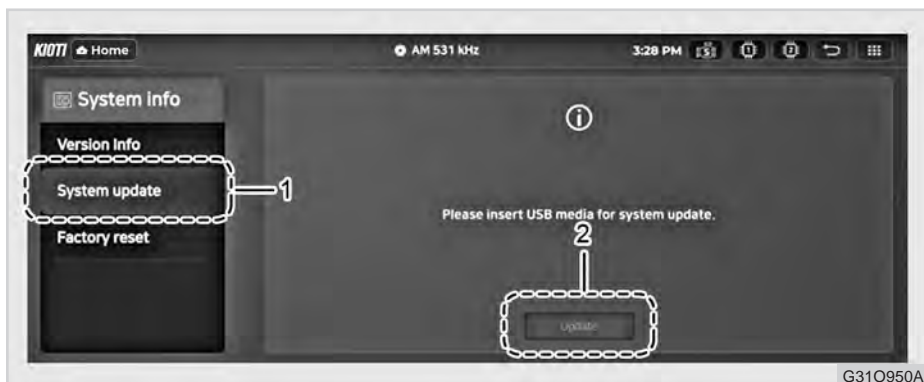
UPDATE



1. Prepare a USB memory stick.
(FAT32 format)
2. Save SW binary file to USB memory stick.
Please contact the closest KIOTI dealer to get the update file.
3. Insert a USB memory stick into the USB port on the back of the monitor.
4. Click All Menu on the home screen.



5. Click System Settings in All Menu.



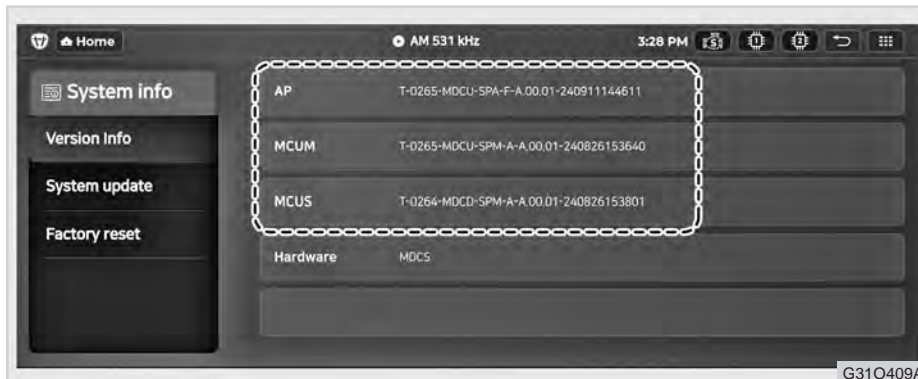
6. Click System Update (1) in System Settings.

(If you have SW binary on your USB memory stick, the “Update” button (2) will be activated.)



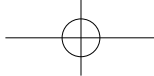
G31O951A

7. Click the Ok button to proceed with the SW update.



G31O409A

8. Check version information after SW update



MEMO





OPERATION

PRE-OPERATION CHECKS 6-2

OPERATING THE ENGINE 6-3

STARTING THE ENGINE6-3

STOPPING THE ENGINE.....6-7

WARMING UP6-8

JUMP STARTING6-9

OPERATING THE TRACTOR 6-10

ADJUSTING CONTROLS.....6-10

PARKING6-14

TURNING6-16

DRIVING ON SLOPES6-16

PRECAUTIONS WHEN ENTERING/EXITING THE WORK
FIELD.....6-17

PRECAUTIONS WHILE DRIVING ON THE ROAD.....6-17

TRAILERING THE TRACTOR.....6-18

PRECAUTIONS WHEN USING POWER STEERING.....6-19

3-POINT HITCH CONTROL SYSTEM.....6-21

REMOTE HYDRAULIC6-21

CONNECTING AND DISCONNECTING AN IMPLEMENT6-24

6

6



PRE-OPERATION CHECKS

It is a good practice to know the condition of your tractor before you start it. You should perform routine checks before each use.

CAUTION

- **Park the tractor on level ground, place the transmission in neutral, apply the parking brake, lower any implements or attachments to the ground, turn the engine off and remove the key before making any inspections or repairs of the tractor and equipment.**
Refer to the "DAILY CHECK LIST" in section 8 "MAINTENANCE", for the daily pre-operation checks that should be performed before use.
- **Be sure to read and understand all safety related messages titled "DANGER", "WARNING", and "CAUTION" thoroughly for safe operation.**

DAILY CHECKLIST

- Walk around inspection.
- Engine oil level.
- DEF (Urea) level
- Transmission oil level.
- Coolant level.
- Clean the front grill and radiator screen.
- Air cleaner element.
- Brake pedal free play.
- All dash gauges and indicators.
- Head lights, tail lights, and working lights.
- Accessible wiring harness for any damage.
- Seat belt and **ROPS** for damage.
- All "DANGER" and "WARNING" decals.
- Fuel level.
- Tire pressure and wheel bolt tightening condition.
- 3-point hitch and secure pins.

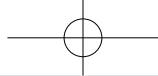
- walk around the machine + implements & attachments and look for leaks, loose or missing hardware or damage.

For more detailed information, reference Chapter 8, "MAINTENANCE".

INITIAL OPERATION

Driving a new tractor at a high speed or under heavy load can affect its durability.

Make sure to run the tractor at the proper work load and speed for the initial operation of 10 to 20 hours.



TIPS FOR BREAKING-IN

1. Start the engine and idle the engine at a low speed for 3 to 4 minutes before starting work.
2. Increase the idling time in cold weather.
3. Do not drive the tractor maximum speed (full throttle) on the road.
4. Work the machine at 50%-75% load rating. It is not recommended to operate or work at 100% load rating for the first 20 hours.
5. Idle the engine at a low speed for 2 to 3 minutes before stopping it.
6. Repeat these procedures for the first 20 hours of operation. After the initial break-in period has expired, the tractor may be operated at 100% load rating.

ENGINE STOP FUNCTION WHEN LEAVING THE DRIVER'S SEAT (EU MARKET ONLY, NOT INSTALLED ON NORTH AMERICAN MODELS)

• Condition:

If the driver leaves the seat for more than 2 seconds, the engine will automatically shut off.

• For continued engine operation when the operator leaves the seat:

1. The shuttle must be in the "N" neutral position
2. The parking brakes must be on

When these two conditions are met, the engine will continue to run if the operator leaves the seat for more than 2 seconds.

OPERATING THE ENGINE STARTING THE ENGINE

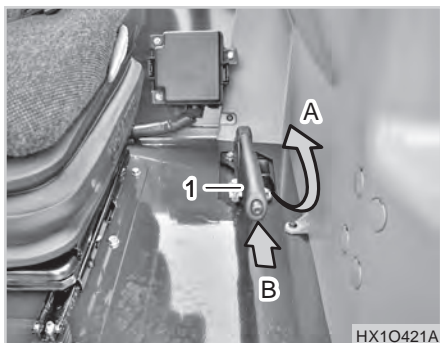
⚠ WARNING

To avoid accidents :

- *Be sure to read and understand the warning and caution decals on the tractor thoroughly.*
- *Run the engine only in a well-ventilated area, or you may be exposed to Carbon Monoxide.*
- *Never start the engine unless you are in the driver's seat. The tractor can abruptly start off, resulting in an injury or accident.*

⊕ IMPORTANT

- **Use of a starting aid can cause serious damage to the engine and will not be covered under warranty**
- **Never try to start the engine for more than 10 seconds at a time. Continued operation of the starter could lead to starter motor or battery damage.**



(1) Parking Brake Lever

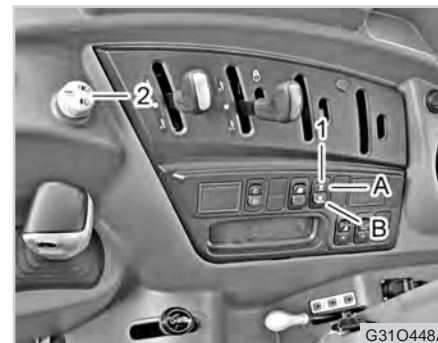
(A) Pull

(B) Push

1. Make sure there are no obstacles around the tractor.
2. Gently raise the parking brake lever to engage the parking brake.
3. Make sure the parking brake light is illuminated on the dash

NOTE

- When the parking brake is engaged, the parking brake lamp on the instrument cluster illuminates. When released, the parking brake lamp is turned off.



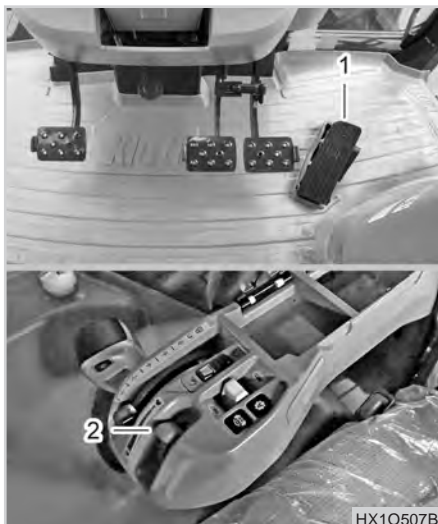
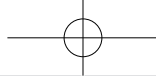
(1) PTO Auto/Manual Switch

(2) PTO Main Switch

(A) AUTO

(B) MANUAL

4. Press the PTO switch to the "OFF" position.
5. Make sure the main shift, range and the shuttle levers are all in neutral.



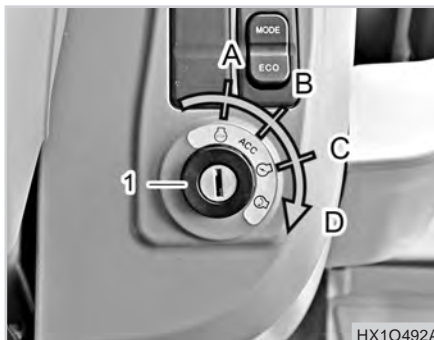
(1) Foot Throttle
(2) Hand Throttle

 Slow

 Fast

6. Place the speed control lever in the "slow" or idle position.

7. Depress the clutch pedal. (The engine cannot be started if the shuttle shift lever is not in the neutral position or the PTO main switch is not in the OFF position.)



(1) Key Switch

(A) OFF (B) ACC

(C) MAIN/ON (D) Start

8. Insert the key into the key switch and turn it "ON". Wait until the glow plug indicator goes out. When the glow plug indicator goes out, rotate the key to the "START" position and hold till the engine starts.

NOTE

If the engine doesn't start within 10 seconds, release the key and wait 30 seconds and repeat step 8 again.

NOTE

OPERATING PRINCIPLE OF THE PREHEATING SYSTEM

- When the ignition switch is set in the "ON" position, the engine is automatically preheated. As soon as the preheat indicator goes off, start the engine.
- After starting the engine, in the "ON" position, post-heating is variable depending on the coolant temperature.

WARNING

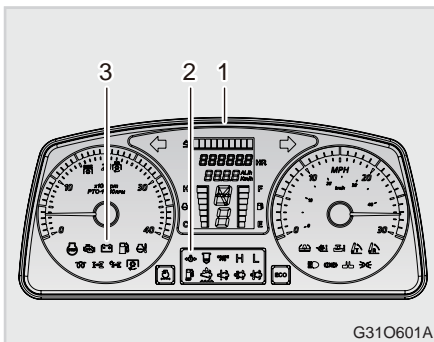
- **Never operate the start motor for 10 consecutive seconds as it consumes a lot of battery power. If the engine cannot be started within 10 seconds, wait for 30 seconds and try again.**
- **Never try to start the engine while the flywheel is turning.**

9. When the engine starts, release the key. The key is automatically turned back to the "ON" position.

⚠ WARNING

- ***Do not turn the key switch to the "Start" position while the engine is running.***

10. Warm up the engine for 3 to 4 minutes (10 minutes in winter) after releasing the clutch I before beginning any work.



G31O601A

- (1) Instrument Panel
(2) Engine Oil Pressure Warning Lamp
(3) Charge Warning Lamp

11. Check to see that all the warning lamps on the instrument cluster turn "OFF". If any lamp remains on, immediately stop the engine and determine the cause.

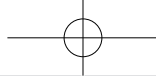
CHECKING WARNING LAMPS

1. If the oil pressure warning lamp(2) does not go off in 4 to 5 seconds after the engine is properly started, stop the engine immediately and check the engine oil level. If the engine oil level is proper, contact your Local Authorized **KIOTI** Dealer for assistance.

⚠ WARNING

- ***The engine can be severely damaged if it is run with the oil pressure warning lamp ON.***

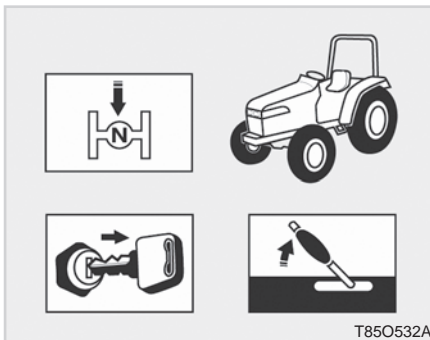
2. If the charge warning lamp(3) does not go off in 4 to 5 seconds after the engine is properly started, it means that the battery is not being charged. Have the charging system, such as the battery and alternator, checked.
3. Refer to "Instrument panel" chapter 4, page 4-13 for information about other indicators and lamps.



STOPPING THE ENGINE

⚠ WARNING

- *If driving the tractor for an extended period of time with the charge warning lamp ON, the battery may be discharged and the tractor's electrical system may be damaged.*



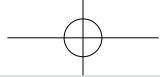
1. Make sure to reduce the engine RPM to an idle before stopping the engine.
2. Depress the clutch pedal and put all shift levers in the neutral position, make sure the PTO is OFF, engage the parking brake and lower any implements or attachments to the ground
3. Run the engine at the idle speed for approx. 2 to 3 minutes, and then turn the key switch to the "OFF" position to stop the engine.

⚠ WARNING

- *Never touch the muffler or heat shielding until they have had several hours to cool after running after running the engine or driving the tractor.*

+ IMPORTANT

- Turn off all the electrical devices and remove the ignition key before leaving the tractor.
- Do not leave the tractor outside unattended. It can be stolen as the key used for all KIOTI tractors are the same.
- The horn, turn signal lamp and hazard lamp can be operated without the key inserted. Therefore, using these components without the engine started can discharge the battery.



WARMING UP

It is recommended always to warm up the engine before driving in order to maintain the durability of the engine.

NOTE

- In case of abrupt acceleration with cold engine, the engine speed is automatically limited according to the oil pressure and temperature in order to protect the turbocharger from damage.
- Warm up the engine for 3 to 4 minutes at the low idle speed to utilize optimum performance of the engine.

HOW TO WARM THE ENGINE

1. Start the engine and run it at an idle and without and without load for approx. 3 to 4 minutes.
2. In cold weather (below 32 °F or 0 °C), increase the warming up time to 10 minutes.
3. If it is very cold (0 °F or -18 °C), warm the engine for approx. 15 minutes.
4. After 5 minutes, the throttle can be increased to 1,400 RPM's to increase the engine coolant temperature.
5. The engine has been sufficiently warmed to begin light work when the temperature gauge on the instrument panel has a minimum of 2 bars illuminated.
6. To prevent engine damage in cold weather, do not engage in heavy work until the engine has reached it's normal operating range (minimum of 3 bars illuminated on the instrument panel).

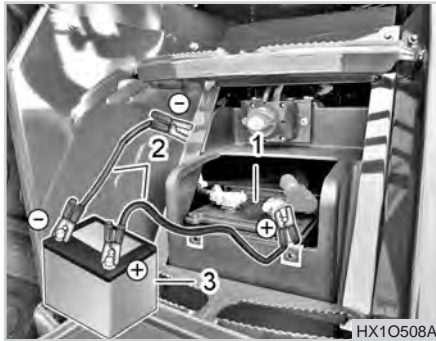
7. Run the engine at idle for approx. 2 to 3 minutes before stopping the engine after work.

WARNING

- ***Warming up the engine excessively increases fuel consumption over an extended period of time.***
- ***To prevent accidents or damage to the tractor or property, never leave the tractor unattended while warming up or when in operation.***



JUMP STARTING



(1) Tractor Battery (2) Jumper Cables
(3) Helper Battery

If the battery is discharged and the engine cannot be started, it is possible to start the engine by connecting the discharged battery to a battery from another tractor or other extra battery.

1. Check that the voltage of the discharged battery is same as the voltage of the other tractor or vehicle for jump start. (Specification for this tractor: 12V)
2. Check the length of the jump cable

and position another tractor near the tractor with the discharged battery. Then, put all the shift levers in the neutral position, apply the parking brake, and stop the engine.

3. Wearing proper PPE including gloves and goggles or safety glasses, access the battery of each tractor.
4. Connect the alligator clips on both ends of the red positive cable to the positive terminals of both batteries.
5. Connect one clip of the black negative cable to the negative terminal of the normal battery and the other clip to the negative terminal of the discharged battery or to the frame of the tractor with the discharged battery.
6. Start the engine of the tractor with the normal battery and increase the engine RPM's to a high idle.
7. Start the engine of the tractor with the discharged battery.

8. Disconnect the black cable from the negative battery terminals of both of the tractors.
9. Disconnect the red cable from the positive terminal of both batteries.
10. Run the engine for at least 30 minutes to charge the discharged battery.
11. If the battery is discharged again, replace it or check the charging system, such as the alternator.

OPERATING THE TRACTOR ADJUSTING CONTROLS



(1) Seat Adjustment Lever

1. Adjust the seat to the desired position and fasten the seat belt before starting the tractor.

⚠ WARNING

- *After adjusting the seat, push forward/backward several time to ensure the seat is securely latched and does not move freely.*
- *Do not adjust the seat while driving. The seat may move suddenly and could cause loss of control or operator injury.*

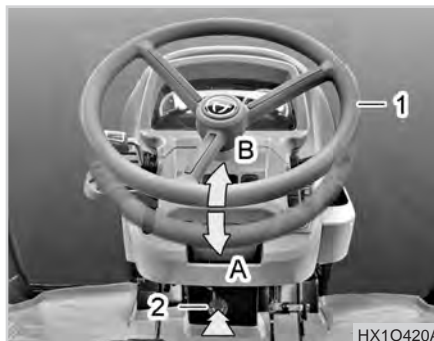


(1) Seat Belt

2. Always fasten your seat belt before starting the tractor or performing any work.

**⚠ WARNING**

- *Always wear the seat belt when the tractor is outfitted with a cab or a ROPS in the locked and upright position.*
- *If the seat belt is worn across the abdomen or waist, not the hips, operator injury may occur in the event of an accident or impact.*
- *Do not wear the seat belt if the cab/ROPS has been removed or if the ROPS is in the down or folded position.*

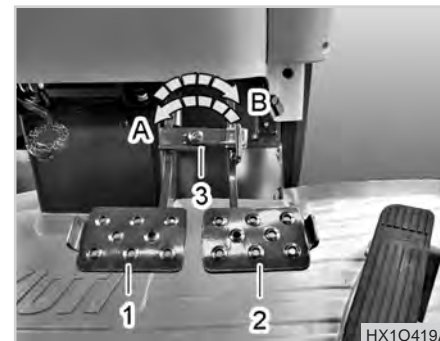


(1) Steering wheel (2) Tilt Pedal
(A) Lowering (B) Lifting

3. Adjust the steering wheel to the preferred position before starting the tractor.

⚠ WARNING

- *Do not adjust the tilt angle of steering wheel while driving. The operator could lose grip on the steering wheel leading to an accident.*



(1) Brake Pedal (LH)
(2) Brake Pedal (RH)
(3) Pedal Interlock
(A) Unlock (B) Lock

4. Keep the brake pedals interlocked together as much as possible, especially while traveling on the road.

⚠ WARNING



- *If depressing only one brake pedal at a high speed, the tractor can change directions suddenly causing a loss of control leading to an accident or rollover.*



(1) Position Control Lever
(2) One-touch lift/lower switch

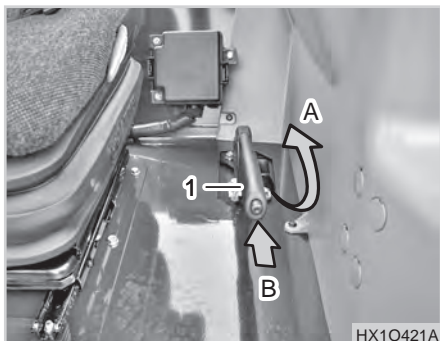
5. Pull the position control lever backward to raise the attachment on the 3-point hitch or push it forward to lower the attachment.
6. When used in conjunction with the upper limit position dial, the one-touch switch can be used to raise & lower the attachment and return it to the desired upper or lower limit with the push of a button.



(1) Hand Throttle Lever (2) Accel Pedal
 Fast  Slow

7. Engine RPM's can be changed incrementally by two methods.

- Depressing the foot accelerator pedal increases engine RPM's, releasing the pedal decreases engine RPM's.
- Sliding the hand throttle lever forward increases the engine RPM's, sliding the lever rearward decreases the engine RPM's.

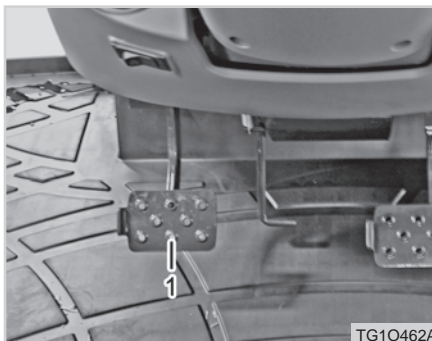


(1) Parking Brake Lever

(A) Pull

(B) Push

8. To release the parking brake lever, pull up and press the thumb button. Then, while holding the button in, lower the brake lever.



(1) Clutch Pedal

9. Depress the clutch pedal to stop the tractor, change gears/ranges. Release the pedal slowly to engage the transmission to start movement.

**CAUTION**

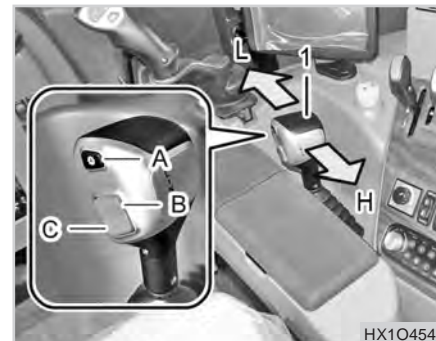
To avoid accidents :

- Do not release the clutch pedal abruptly. The tractor may start off abruptly, resulting in rollover.



(1) Shuttle Shift Lever

(F) Forward (N) Neutral (R) Reverse



(1) Range Gear Shift Lever

(A) Automatic Shift Switch

(B) Shift Switch (Upshift)

(C) Shift Switch (Downshift)



10. Shift the range lever to L or H, then select the desired main speed (1 to 8).
11. Shift the shuttle lever to forward or reverse, then gradually release the clutch pedal to move the vehicle.

CAUTION

- **NEVER rest your foot on the clutch pedal while driving. The clutch may slip causing premature wear to the clutch discs.**
- **Be sure to depress the clutch pedal quickly when stopping and release it slowly when starting off.**
- **Do not change the tractor speed abruptly for safe driving.**
- **When driving on slopes, hills or loading/unloading the tractor, be sure to select a slow and safe working speed. DO NOT try to shift while going up/down slopes or when loading/unloading. Loss of control or machine run away could occur due to sudden speed increase due to a missed shift or accidental disengagement of the transmission.**

PARKING



(1) Chocks

(2) Parking Brake Lever

1. This tractor is equipped with a separate parking brake.



2. Pull the parking brake lever (2) to engage the parking brake.
3. Before leaving the tractor after parking be sure to engage the parking brake, lower any implement or attachment to the ground, place the transmission in neutral, turn the engine off and remove the key from the ignition before exiting the tractor.
4. If it is necessary to leave the tractor with the engine running, put all the shift levers in the neutral position, lower any implement or attachment to the ground, lower the engine RPM's to an idle and firmly apply the parking brake.
5. When parking the tractor on a slope, it is recommended to insert wheel chocks at a minimum of two wheels in addition to the application of the parking brake.
6. In order to release the parking brake, pull up and press the thumb button. Then, while holding the button in, lower the brake lever.

 **WARNING**

- *The brake pad can be rapidly worn if you drive with the parking brake applied.*
- *Never park the tractor on a steep slope under any circumstances.*

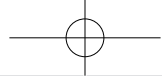
 **WARNING**

To avoid possible injury, death or loss of property from a machine runaway :

- *With the engine off, the tractor may move unexpectedly regardless of the gear shift position.*
- *Before leaving the tractor under any circumstances, apply the parking brake!*

 **IMPORTANT**

- The tractor may move slowly with the engine running even though the main and shuttle shift levers are in the neutral position. This is normal and is due to fluid friction in the transmission. This symptom may occur during cold temperatures when the engine is running and low or medium range is selected with one of the 4 travel speeds engaged and the shuttle in NEUTRAL. To prevent this condition, be sure to apply the parking brake and not release the parking brake until the operator is ready to begin work.
- **NEVER** leave the tractor without applying the parking brake for any reason.
- **Do not park the tractor on tall grass or hay. If grass or hay contacts a hot exhaust system, a fire could occur.**



TURNING

Always reduce engine speed and make turns slowly to maintain control of the tractor and any implements or attachments.

WARNING

To prevent accidents due to loss of steering control :

- ***If you turn at high speed, the tractor can turn over.***
- ***Never use the differential lock while attempting to turn. A serious accident can occur.***

DRIVING ON SLOPES

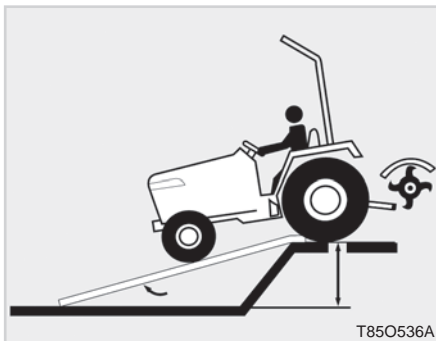
1. Drive according to the conditions of the slope/hill. Always travel at a safe speed and do not try to overload the engine going uphill or when traveling with heavy loads.
2. Select a lower gear before starting uphill to prevent the engine from stalling under load.
3. Drive at a slow speed when traveling downhill. Always select a low gear before starting downhill. NEVER try to change gears on a downhill slope as machine runaway is possible if the operator can't complete a downshift under load.

WARNING

- ***Be sure the Left and Right brake pedals are locked together before traveling on the road or working on slopes.***
- ***Do not disengage the clutch or put the shift lever in the neutral position on a slope. Otherwise, a runaway condition could occur.***
- ***Before entering a steep slope, move the shift lever down to a proper gear and never try to move the shift lever on a slope. "A" serious accident can occur.***



PRECAUTIONS WHEN ENTERING/EXITING THE WORK FIELD



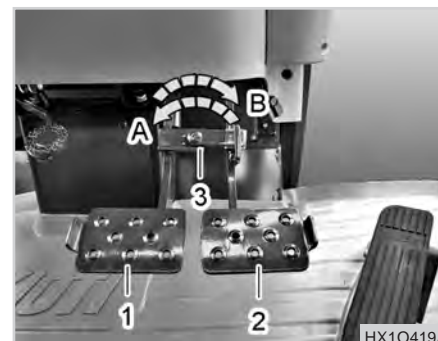
1. Make sure that the left and right pedal are interlocked.
2. Enter and exit fields through a driveway whenever possible. When crossing ditches or banks, always approach straight and do not attempt to cross at an angle.
3. If crossing a deep ditch or steep bank, it is recommended to turn around and cross or approach with the rear wheels first to maintain control. Use 4wd to assist with traction and control if necessary.

PRECAUTIONS WHILE DRIVING ON THE ROAD



(1) Turn Signal Light

1. Always turn the flasher lights on when traveling on the road. When turning left or right, be sure to alert other drivers on the road with the turn signals.
2. Do not use high beam headlights when another vehicle is approaching from the opposite direction to prevent diminishing the other driver's visibility.
3. Always interlock the left and right brake pedal while driving on the road.



- (1) Brake Pedal (LH) (2) Brake Pedal (RH)
(3) Pedal Interlock
(A) Unlock
(B) Lock (Whenever traveling on the road)

⚠ WARNING

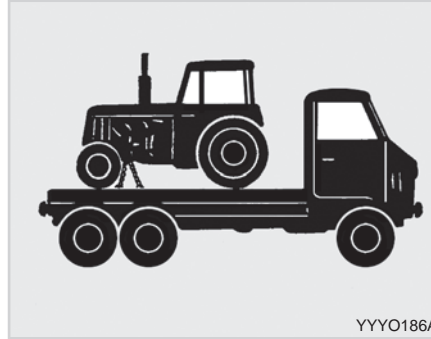
- **When you are driving on the road, observe all local traffic and safety regulations. If not, you can have an accident.**
- **No passengers should be permitted on the tractor while traveling on the road, even if the tractor is outfitted with an instructor seat and seatbelt.**



TRAILERING THE TRACTOR

WARNING

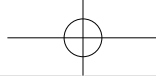
- *In the event the tractor breaks down while driving on the road, move it to a safe place to service before attempting any repairs to minimize the risk for an accident or injury.*



WARNING

- *Secure the tractor and attachments/implements to the truck/trailer with DOT approved straps or chains with sufficient weight ratings to cover the combined weight of the tractor + attachments/implements. Be aware of the height of the loaded tractor and avoid low clearance areas.*

1. It is recommended to load the tractor by backing onto the truck or trailer slowly in a low gear. Use spotters to assist with safe loading if possible.
2. If the engine stalls out halfway, step on the brake pedal at once, and then release the pedal slowly to gently roll back to flat ground. Restart the engine, select a lower gear and begin loading again.



PRECAUTIONS WHEN USING POWER STEERING



(1) Steering wheel

1. The power steering function is activated only while the engine is running. The steering wheel may require slightly more force to rotate when the engine is running at a slow speed or more weight is applied to the front axle.

When the engine is off, the steering wheel may be rotated for emergency steering but will require a significant amount of force to be applied as there will be no hydraulic assistance from the hydraulic pump under this condition.

2. If you operate the steering wheel, with the tractor stopped, more force may be required to turn the wheel than when the tractor is moving. Additional front weights, loader, etc. may also increase the force required to turn the steering wheel, especially while the machine is stopped.
3. When a loader is mounted, adjust the air pressure of the front wheel to its maximum specification. Adding rear counter ballast to the three-point hitch is also recommended to improve the machine balance when lifting loads.
4. When turning the steering wheel to its end, the operating sound of the safety valve (Relief valve) can be heard. Do not hold the steering wheel against the relief valve for extended periods of time as hydraulic temperatures may increase and damage the hydraulic system of the tractor.

NOTE

The power steering system in this tractor is a load reaction, full hydraulic type.

- The full hydraulic system means that power necessary for power steering is transferred by hydraulic fluid only and therefore mechanical devices, like a rack and pinion or gearbox are not installed to the tractor. While driving down the road or working in the field, the steering wheel can continue to slowly rotate even though the front wheels have stopped steering to the left or the right. This differs from a highway truck or car, where the steering wheel will turn to the left or right until it reaches a stop.
- The load reaction type means that the reaction force or impact applied to the front axle is transferred to the steering wheel.

**⚠ WARNING**

- *When driving on a road with an implement attached to the rear of the tractor, steering/drivability can be diminished. Driving at reduced speeds when traveling with rear implements or attachments is recommended.*
- *If malfunction occurs while driving on a road, stop the tractor in a safe place and service it. If it is not possible to move the tractor, turn on the hazard lights and set a warning triangle behind the tractor to alert on-comers of the machine in the road.*

⚠ WARNING

- *The center of gravity of the tractor is higher compared to other common vehicles, so the possibility of the roll-over accident is very high. Be extra careful when driving on slopes, bumpy roads, with holes or puddles and narrow roads. Be sure to always fasten your seatbelt and keep the doors and windows closed while operating on roads. For ROPS units, always keep the ROPS in the upright, locked position and wear your seatbelt. NEVER wear a seatbelt on a ROPS unit when the ROPS is in the down position.*

⚠ WARNING

- *If stopping the engine while driving, the steering performance can become deteriorated due to loss of hydraulic power, resulting in a severe accident. Never stop the engine while driving.*
- *Always keep both hands on the steering wheel while driving on the road.*



3-POINT HITCH CONTROL SYSTEM POSITION CONTROL LEVER



G31O456A

- (1) Position Control Lever
(2) One-touch lift/lower switch

► POSITION CONTROL

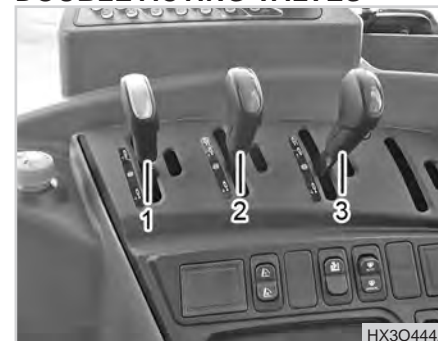
1. The position control lever is used to lift or lower the three-point hitch (lower links).
2. Pushing the lever forward lowers the lower links while pulling the lever backward lifts the lower links.

3. The height of the lower link is precisely controlled proportional to the position of the lever.
4. The lower links are raised by hydraulic pressure supplied by the tractor. The lower links are lowered by the weight of the implement and are not lowered by hydraulic pressure and do not have hydraulic down pressure applied at any time.
5. Therefore, the implement attached to the lower link may be lifted by protrusion on the ground known as "floating".

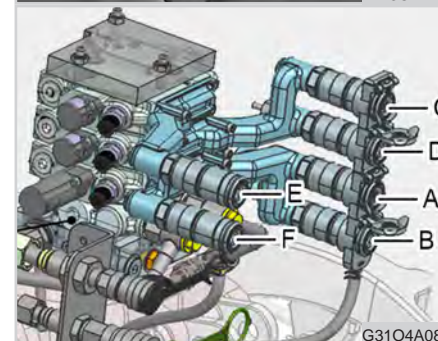
NOTE

- If the position of the position control lever is changed before/after the engine is started, the three-point hitch will not move due to the safety interlock function.
- To release the three-point safety interlock, depress the lift/lower switch one time or cycle the position control lever one time.

REMOTE HYDRAULIC DOUBLE ACTING VALVES



HX3O444A



G31O4A08A

- (1) Double Acting Lever (Detent & Floating Type)
(2) Double Acting Lever (Self Return Type)
(3) Double Acting Lever (Self Return Type)
(A) Port A (B) Port B (C) Port C
(D) Port D (E) Port E (F) Port F



SELF RETURN TYPE

When the lever is pushed or pulled, the lever automatically returns to the neutral position when you release your hand after pushing or pulling the lever.

Therefore, it is suitable for hydraulic equipment used when manual hydraulic pressure is required, such as hydraulic cylinders.

DETENT & FLOATING VALVE TYPE

When the lever is pushed or pulled, the lever is fixed in that state, and hydraulic pressure can be continuously used even when the hand is released.

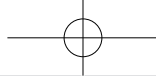
Therefore, it is suitable for use in hydraulic equipment that uses hydraulic pressure continuously, such as hydraulic motors.

In addition, pushing the lever in detent position one more, it will stay in that position, that means floating function. so even if you release the lever, the lever is fixed in the floating position, so you can use floating continuously.

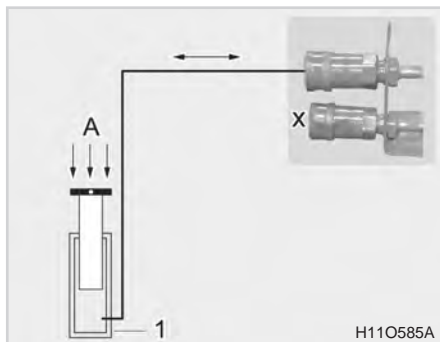
Port	Type
E/F	Self Return Type
C/D	Self Return Type
A/B	Detent & Floating Type

⊕ IMPORTANT

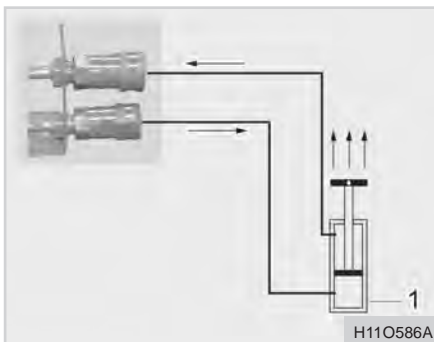
- Put the detent valve operating lever into the neutral position when the hydraulic implement is not in use. If the detent valve is kept in the operating position for an extended period of time, the relief valve is kept open and the temperature of the hydraulic fluid rises, leading to damage of various hydraulic parts, such as oil seals and O-rings.
- When the detent valve is in operation without an implement attached, the relief valve is opened placing unnecessary load on the hydraulic circuit and engine. Continued operation could lead to loss of power and damage to the hydraulic system.
- It is hard to start the engine while the detent valve is in operation. This is especially true in winter.



SINGLE ACTING AND DOUBLE ACTING CYLINDER



(1) Single Acting Cylinder
(A) External Load



(1) Double Acting Cylinder

This tractor is equipped with the remote valve of the double acting type. However, this valve can also be used with a single acting hydraulic cylinder.

1. Connect one end of the hydraulic port to the single acting cylinder as shown in the figure. The hydraulic pressure is properly supplied to the cylinder. However, when the hydraulic pressure is released, the cylinder is contracted only if there is outer force, such as the weight of the implement.

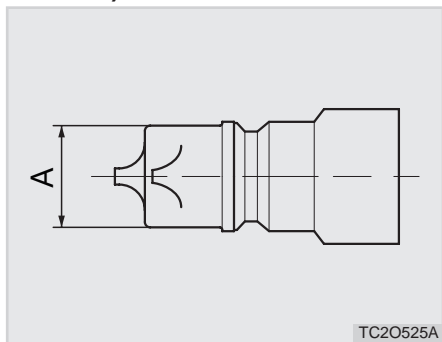
2. To contract the cylinder, operate the lever to the opposite direction of the expansion. Then, the hydraulic fluid is supplied from the hydraulic pump to the hydraulic port which is not connected, and the pressure rises as the port is blocked. However, this pressure is released as the relief valve opens.

3. When the cylinder is contracted, the hydraulic fluid returns to the transmission through the same hose which extends the cylinder.

⊕ IMPORTANT

- It is recommended to use the double acting cylinder instead of the single acting cylinder if the implement will be operated frequently and continuously. If using the single acting cylinder too frequently or for an extended period of time, the hydraulic fluid can be overheated, resulting in deterioration of the hydraulic parts' durability as the main relief valve opens when the cylinder is contracted.

4. When operating a double acting hydraulic cylinder, moving the double acting lever in one direction will extend the cylinder with hydraulic supplied from the tractor and moving the lever in the opposite direction will contract the cylinder allowing hydraulic fluid to return to the transmission.

PT1/2 COUPLER SOCKET (IMPLEMENT)

(A) Diameter

The hose unions used must comply with 1/2" ISO standards.

Dimension (A) must be between 20.48 and 20.56 mm (0.806 and 0.809 in.).

CONNECTING AND DISCONNECTING AN IMPLEMENT CONNECTION

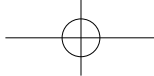
1. Turn the engine off before connecting an implement to the tractor's hydraulic valves.
2. Move the double acting valve lever forward and backward 4 to 5 times to release the pressure in the hydraulic line of the tractor. Otherwise, it is hard to connect the couplers, and hydraulic fluid can be sprayed from the line and get in to your eyes while connecting them.
3. Remove any foreign material around the male and female couplers. If foreign material enters the hydraulic components, it can lead to malfunction of the system.
4. Open the dust-proof cover of the female coupler of the tractor and insert the male coupler of the implement. A clicking sound is heard when the couplers are engaged.
5. Pull the hydraulic hose of the implement to check that the couplers are properly connected.
6. Start the engine and check the operating status and leakage.

DISCONNECTION

1. Turn the engine off before disconnecting an implement from the tractor's hydraulic valves.
2. Release any residual pressure in the hydraulic hoses of the implement and tractor by operating the double acting valve lever 4 to 5 times.
3. Remove any foreign material around the couplers.
4. Keep the implement balanced by removing any load applied. (Lowering it onto the ground, for example)
If disconnecting the hose while outer load is applied to the implement, it is hard to connect the implement in the future.
5. Remove the male coupler by pushing the female coupler boss of the tractor backward.
6. Close the dust-proof cover of the female coupler of the tractor. Wrap the male coupler of the implement with a plastic bag or another type of cover to prevent contamination.

**⚠ WARNING**

- *Hydraulic hoses under pressure will be hard to connect or dis-connect and can spray fluid under pressure when trying to connect.*
- *Always wear safety glasses and gloves when connecting/dis-connecting an implements hydraulic hoses to the tractor.*
- *Always purge hydraulic pressure from hydraulic hoses before disconnecting from the tractor by turning the engine off, lowering the implement to the ground and cycling the remote valve lever 4-5 times in each direction before dis-connecting the hoses from the tractor's hydraulic circuit.*



MEMO





3-POINT HITCH IMPLEMENT AND LOADER OPERATION

REMOVAL AND INSTALLATION OF 3-POINT HITCH IMPLEMENT (WITH PTO SHAFT) 7-2

OPERATION OF 3-POINT HITCH IMPLEMENTS.... 7-6

ADJUSTMENT OF TOP LINK7-6

CONNECTING THE TOP LINK.....7-7

ADJUSTMENT OF TELESCOPIC STABILIZERS7-8

DRAW BAR.....7-9

PTO & PTO SHIELD7-10

INSTALLING PTO SHAFT.....7-10

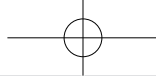
LOADER..... 7-12

DRIVING ON SLOPE.....7-13

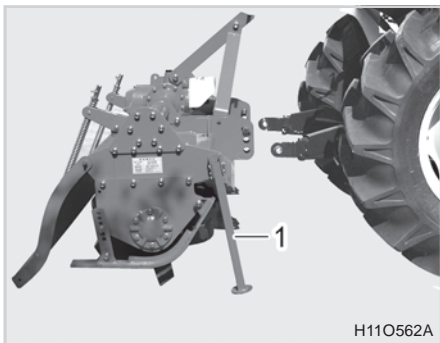
JOYSTICK LEVER.....7-14

7

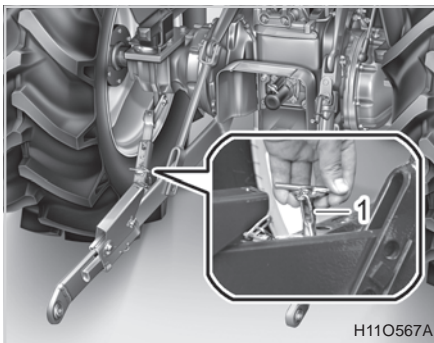
7



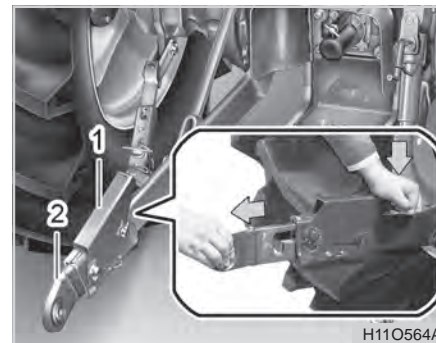
REMOVAL AND INSTALLATION OF 3-POINT HITCH IMPLEMENT (WITH PTO SHAFT)



(1) Implement Support



(1) Telescopic Stabilizers Pin



(1) Latch

(2) Lower Link End

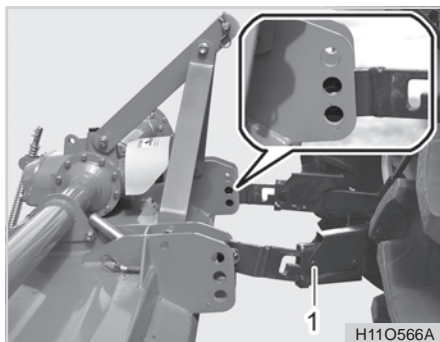
1. Drive the tractor backwards to move close to an implement (approx. 1-2 inches). Then, adjust the height of the lower link to be parallel to the pins of the implement.
2. Put all the shift levers in the neutral position, stop the engine, and apply the parking brake.

3. Remove both of the Telescopic Stabilizers pins allowing the lower links to swing outward towards the rear tires.

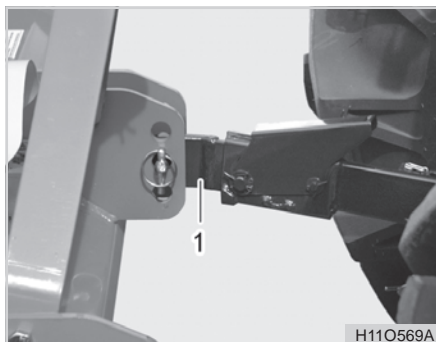
4. Press the latch to pull out the telescopic link ends.

IMPORTANT

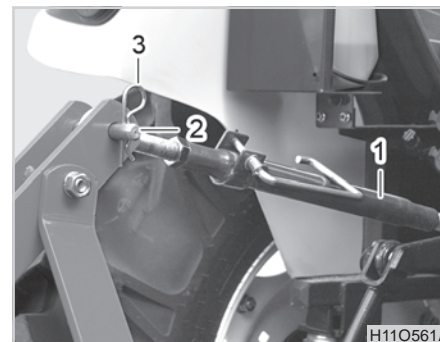
- When removing/installing an implement, remove the telescopic stabilizer pins to use the lower link end (cassette type) effectively.



(1) Lower Link



(1) Lower Link End

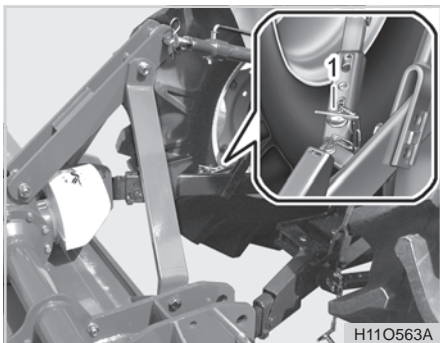
(1) Top Link
(2) Lock pin

(3) Snap Pin

5. Connect the lower links to the implement with the pins supplied with the implement

6. Start the engine and slowly drive backwards sliding the telescopic link ends back into the lower links. A verbal "click" should be heard when the ends lock into position. Before operating the machine, a visual inspection should be made to confirm the telescopic link ends are in the locked position (telescopic end is pushed into the lower link & latch is resting against the lower link at the end closest to the telescoping end of the lift arm).

7. Release the top link from its bracket and turn it to adjust its length to align with the upper bracket mounting hole of the implement. Then, connect it to the mounting hole, insert the lock pins, and secure it with the snap pin. Remove the implement support as necessary.



(1) Telescopic Stabilizers Pin

8. Turn the top link to level the implement. Then, move the implement to the left and right, and secure it into the proper position by fitting the telescopic stabilizers lock pin
9. With the engine off and the implement on the ground, place the PTO shifter inside the tractor cab in neutral. Align the splines of the tractor shaft with the implement shaft. Depress the lock button or

slide the coupler rearward on the implement shaft and slide the implement shaft on the tractor shaft releasing the coupler so it locks in the groove on the tractor shaft. Make sure the coupler locks by pushing & pulling the shaft several times.

IMPORTANT

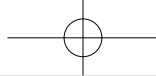
- **Consult your Local Authorized KIOTI Tractor Dealer for adjustment of the PTO shaft length.**

IMPORTANT

- **When reviewing the PTO shaft or adjusting the length, make sure there is a minimum of 152 mm (6 inches) of overlap of the PTO shaft tubes when the shaft is extended to its maximum working length between the tractor and the piece of equipment. Also make sure there is 76 mm (3 inches) of clearance between the shaft tube ends and the universal joints at both ends when the PTO shaft is at its shortest working length between the tractor piece of equipment. If not, DO NOT USE the PTO shaft and consult your Local Authorized KIOTI Tractor Dealer for assistance.**
- **Move the joint back and forth to check that its lock pin is properly seated to the groove of the PTO shaft.**



10. Remove the implement in the reverse order of installation and use the implement support as necessary.



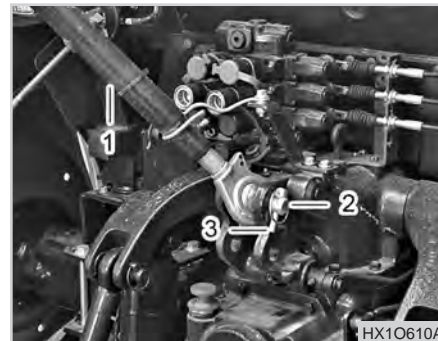
OPERATION OF 3-POINT HITCH IMPLEMENTS



HX10612A

- (1) Top Link (2) Lift Rod (L) (3) Lift Rod (R) (4) Telescopic stabilizer (5) Lower Link (6) Draw Bar (7) Lift Cylinder (8) PTO Shaft

ADJUSTMENT OF TOP LINK



HX10610A

- (1) Top Link (2) Pin (3) Lynch Pin

1. Install the top link to the desired position (see page 7-7) and install the pin and lynch pin.
2. To connect and adjust the top link:
 - Release the top link from the storage bracket.
 - Loosen the lock nut and hold the portion of the center link that connects to the implement.
 - To increase the length, rotate the barrel adjusting lever of the top link



clockwise. To reduce the length, rotate the barrel adjusting lever of the top link counter-clockwise.

- Attach the top link to the implement with the pins supplied with the implement.
- Adjust the top link to level the implement to the desired position.
- Tighten the jam nut against the barrel of the top link to prevent movement during operation

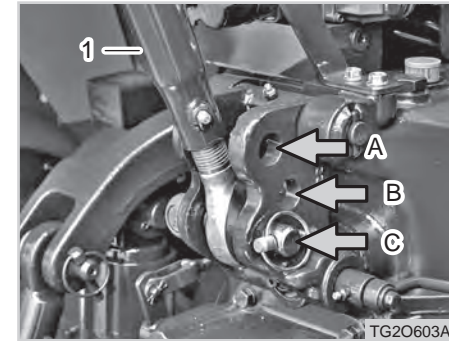
⚠ WARNING

- ***Stop the engine and lower the attached implement onto the ground before detaching the implement from the lower link. Ensure that the attached implement is firmly supported and there is no pressure remained in the hydraulic system to remove the lower link holding the pin. To remove any residual pressure, push and pull the hydraulic control lever front and back several times.***

📖 NOTE

- When there is no implement attached, lock the lower links in a position so they do not contact the tires with the telescopic stabilizer lock pins.
- Secure the top link into the storage bracket.

CONNECTING THE TOP LINK



(1) Top Link

When attaching an implement, connect it according to its draft as follow.

- A: No draft required. Examples include a rotary cutter, post hole digger, sprayer, etc.
- B: Heavy draft required. Examples include a plow, chisel plow, sub-soiler, etc.
- C: Light draft required. Examples include field cultivator, drag harrow, road blade (for leveling, spreading gravel)

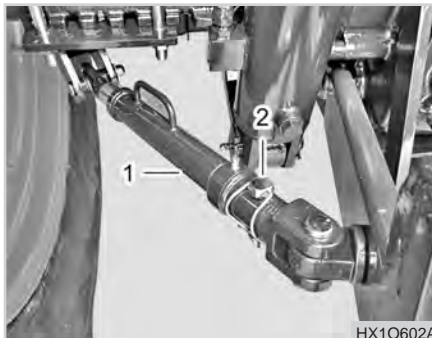


1. Adjust the angle of the implements to the desired position by shortening or lengthening the top link.
2. Adjustment of the top link will vary based on the implements used.

 **CAUTION**

- When you are attaching an implement not requiring any raft, mount the assembling spot of the top link into the hole "A".
- When you are attaching an implement. (Like plow)
Requiring some draft, mount the top link into the hole "B", "C".

ADJUSTMENT OF TELESCOPIC STABILIZERS



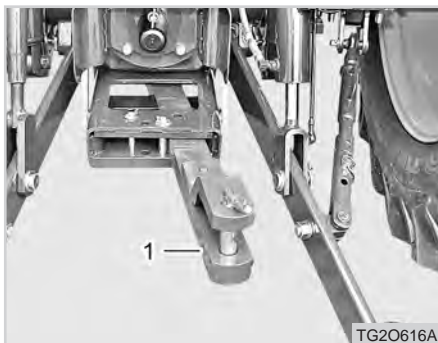
(1) Telescopic Stabilizers (EU version shown)
(2) Pin

1. Adjust the stabilizer to control horizontal sway of the implement. It is also used to center or offset the implement on the back of the tractor.
2. To adjust the stabilizer, remove the lock pins (L & R sides) and adjust to the desired position is obtained. Re-install the lock pins.

3. For an implement requiring an exact position, place the lock pins in a "fixed" hole. For drafting implements like a plow, box blade or implements that can move slightly side-side, place the lock pins in a slotted hole.



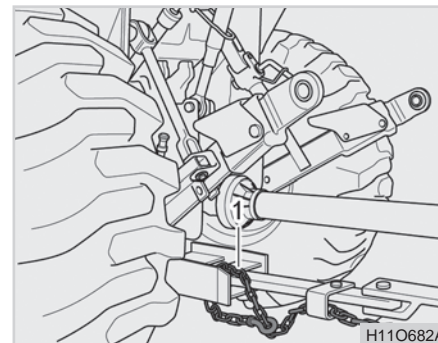
DRAW BAR



(1) Draw Bar

The draw bar is used to pull an implement, such as a cutter, harrow, sprayer, trailer, etc. This tractor is equipped with a "step" drawbar. For PTO applications, the "step" should be lower than the main line of the drawbar to lower the height of the towed implement and increase the distance between the top of the drawbar and the implement PTO shaft. For non-PTO applications, the drawbar may be flipped to position the "step" upward

to raise the implement above the main line of the drawbar to level the implement to the desired height while in tow. Make sure to check the max. towing weight of the implement and max. vertical load that can be applied to the draw bar.



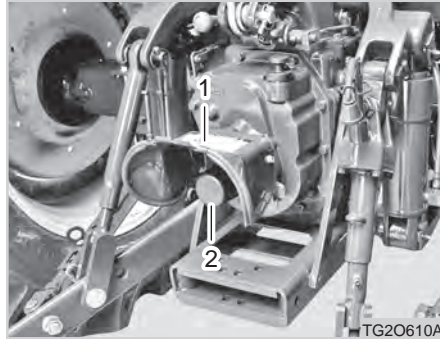
(1) Safety Chain

WARNING

- **Never use any other part for pulling except draw bar. Pulling with top link, ROPS and etc. will cause damage to the tractor and could lead to a fatal accident.**
- **Be sure to install an auxiliary safety chain when connecting a trailer or other towed implement.**



PTO & PTO SHIELD



(1) PTO safety shield
(2) PTO Shaft Cap

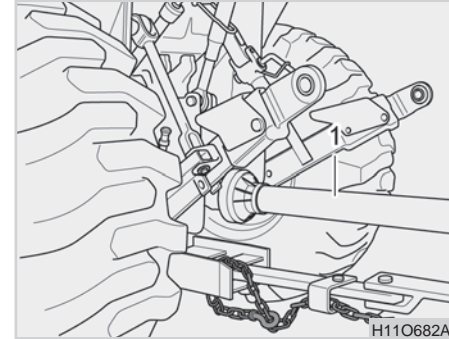
Before connecting an implement to the PTO, remove the PTO shaft cap and raise the PTO safety shield for improved access. Once the implement PTO shaft has been connected to the tractor & fitment confirmed, lower the PTO safety shield into place to guard against entanglement with rotating objects.

SPECIFICATION

PTO type	Nominal diameter	Number and type of splines	Nominal PTO rated rotational frequency	Recommended PTO power at rated engine speed(kW)
1	35mm (1.377 in.)	6 straight splines	540 rpm	HX1302: 83 kw (111 HP) HX1402: 91 kw (122 HP)
			750 rpm	HX1302: 82 kw (110 HP) HX1402: 90 kw (121 HP)
			1,000 rpm	HX1302: 82 kw (110 HP) HX1402: 90 kw (121 HP)

PTO shield guard	Category	Regulation
	T1	Compliance with ISO500-1

INSTALLING PTO SHAFT



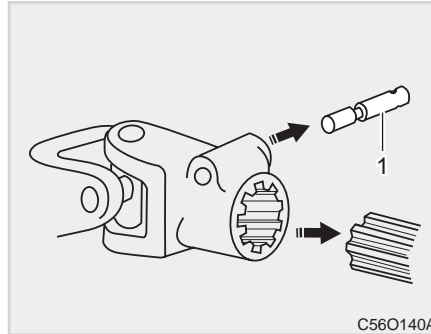
(1) PTO shaft

1. Consult your Local Authorized **KIO-TI** Tractor Dealer for adjustment of the PTO shaft length.
2. When reviewing the PTO shaft or adjusting the length, make sure there is a minimum of 152 mm (6 inches) of overlap of the PTO shaft tubes when the shaft is extended to its maximum working length between the tractor and the piece of equipment. Also make sure there is 76 mm (3 inches) of clearance



between the shaft tube ends and the universal joints at both ends when the PTO shaft is at its shortest working length between the tractor piece of equipment. If not, DO NOT USE the PTO shaft and consult your Local Authorized **KIOTI** Tractor Dealer for assistance.

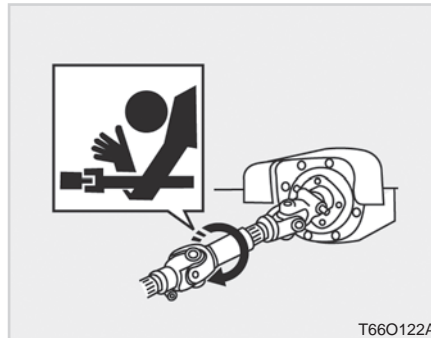
3. Move the joint forward and backwards to ensure the lock pin is properly seated into the groove of the tractor's PTO shaft.

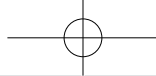


(1) Lock Pin

⚠ WARNING

- ***Make sure the PTO safety shield is in place before engaging the PTO.***
- ***The PTO shaft and universal joint shaft should not be interfered by any surrounding parts.***
- ***Never go close to the rotating PTO shaft or universal joint shaft. A severe accident can happen.***





7-12 HX1302/1402

LOADER



- (1) Loader Mounting Bracket
- (2) Boom Cylinder
- (3) Loader parking stand
- (4) Boom
- (5) Grill Guard
- (6) Tilt Cylinder
- (7) Bucket

For detailed information about installation and use of the front loader, refer to the KL 1155 loader owner's manual.

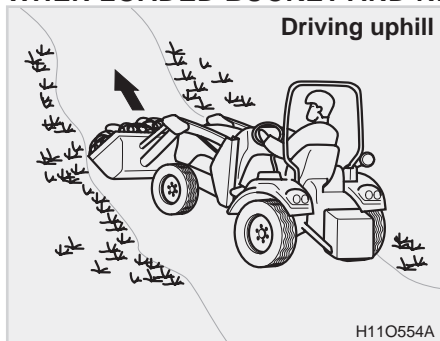
IMPORTANT

- **Check the transmission fluid level and add fluid as necessary after installing an implement.**

HX1O605A



DRIVING ON SLOPE WHEN LOADED BUCKET AND REAR BALLAST ARE INSTALLED



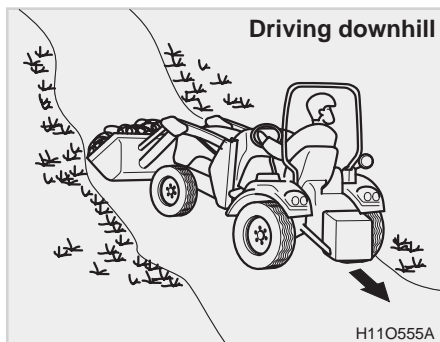
the bucket end of the tractor uphill. In other words, drive forward uphill and backward downhill.

WARNING

To avoid injuries:

- *Keep the loader arm as low as possible when driving, especially when carrying a load or when working on a slope.*

WHEN UNLOADED BUCKET AND REAR BALLAST ARE INSTALLED



When driving uphill with a loaded bucket and rear ballast installed, keep



When driving downhill with an empty bucket and rear ballast installed, keep



JOYSTICK LEVER

the rear ballast facing uphill. In other words, drive backward uphill and forward downhill.

Use the 4WD to increase traction when driving on a slope with the loaded bucket and rear ballast installed.

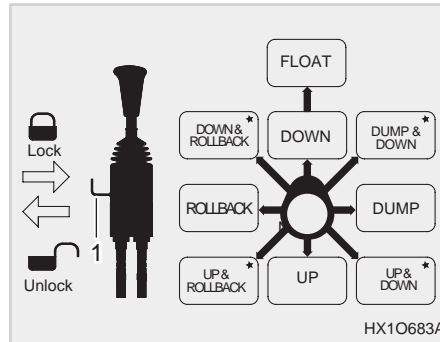
Set the bucket and implement as low as possible for vehicle stability and safety while driving.



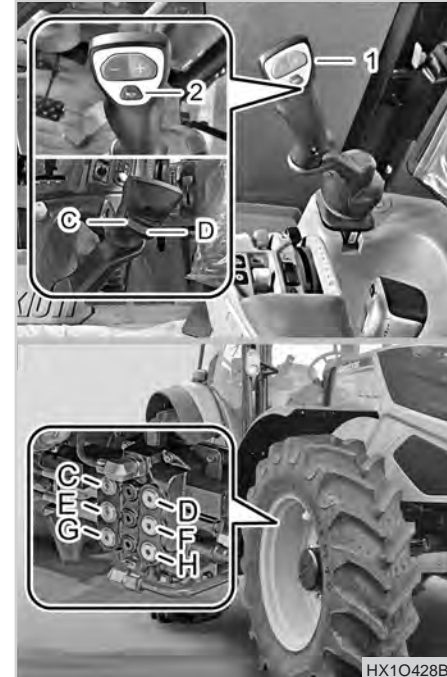
(1) Joystick Lever

PARKING WITH THE LOADER INSTALLED

When parking the tractor with a loader installed or other implements/attachments installed, always lower the bucket and other implements/attachments to the ground before exiting the tractor.



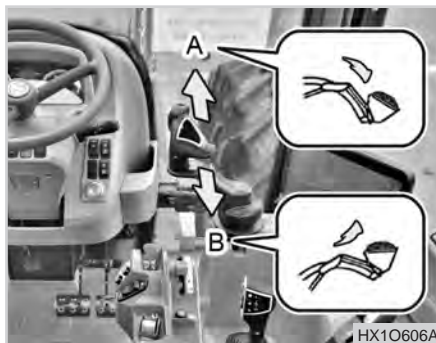
(1) Joystick Lock Lever



- (1) Joystick Lever
- (2) Horn Switch
- (C) Releasing Grab
- (D) Engaging Grab
- (E) Bucket Dump
- (F) Bucket Roll Back
- (G) Boom Down
- (H) Boom Up

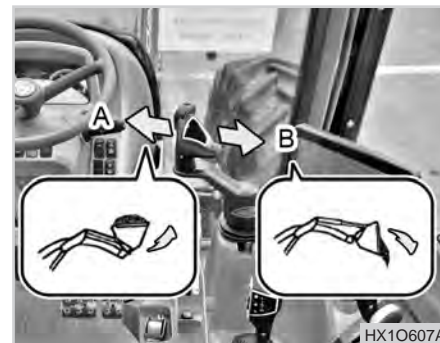


C		Releas- ing grab	D		Engag- ing grab
E		Bucket Dump	F		Bucket Rollback
G		Boom Down	H		Boom Up



(A) Boom Down

(B) Boom Up



(A) Bucket Roll Back

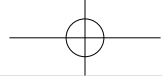
(B) Bucket Dump

1. Boom up/down

Pulling the joystick lever back (B) lifts the boom of the loader while pushing it forward (A) lowers the loader boom.

2. Roll back & dump

"Roll back" means that the bucket scoops up. To operate this function, move the joystick lever to the left (A). "Dump" means that the bucket dumps. To operate this function, move the joystick lever to the right (B).



3. Up & roll back

The boom can be lifted and the bucket can scoop up by operating the joystick lever to the rear left position (7 o'clock position). These two operations can be performed simultaneously under most circumstances.

4. Up & dump

The boom can be lifted and the bucket can dump by operating the joystick lever to the rear right position (5 o'clock position). These two operations can be performed simultaneously under most circumstances.

5. Locking/unlocking joystick

Pressing the joystick lock lever in locks the joystick while pulling it outward unlocks the joystick as shown in the figure.

WARNING

- ***Be sure to lock the joystick lever when a loader is not installed or the loader is not in operation to prevent accidental movement of the loader or pressurization of the hydraulic circuit (loader not installed).***
- ***Do not leave the tractor with the boom off the ground under any circumstances to prevent accidental movement of the loader while entering/exiting the cabin.***
- ***When the joystick lever is not in use, lock it since the implement can fall down if the lever is operated accidentally.***

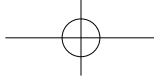
IMPORTANT

- **If the boom or bucket is not operating, properly, lower the bucket onto the ground, stop the engine, and reduce all hydraulic pressure. Then, check all the hydraulic for leaks, debris, or signs of inadequate oil flow.**
- **Before connecting or disconnecting the hydraulic hose coupling for the loader, lower the boom onto the ground, stop the engine, and move the joystick lever in all directions several times to remove residual pressure in the system and make connecting/dis-connecting easier.**

**⚠ WARNING**

To avoid accidents:

- *Pressurized diesel fuel or hydraulic fluid may be sprayed on your skin or eyes, leading to a severe injury or even death.*
- *To check for hydraulic leaks, use a small board or other object to block spraying fluids. Always wear proper PPE including safety goggles and gloves.*
- *If your eyes come into contact with hydraulic fluid, seek medical attention immediately.*
- *Never try to disconnect hydraulic hoses and couplers while the tractor and attachment/implement are in operation. Release the hydraulic circuit pressure by lowering the implement/attachment to the ground, turning the engine off and operating the joystick or control lever multiple times in all directions.*



MEMO





MAINTENANCE

8

MAINTENANCE CHECK LIST.....8-3

DAILY CHECK LIST8-3

MAINTENANCE SCHEDULE CHART8-5

MAINTENANCE SCHEDULE CHART BY
OPERATING HOURS8-8

LUBRICANTS.....8-10

PERFORMING DAILY CHECKS.....8-12

HOW TO OPEN THE HOOD8-12

WALK AROUND INSPECTION8-12

CHECKING AND ADDING FUEL8-13

CHECKING TRANSMISSION FLUID LEVEL...8-14

CHECKING AND ADDING DEF8-15

CHECKING ENGINE OIL LEVEL.....8-17

CHECKING COOLANT LEVEL8-18

CLEANING GRILL, RADIATOR SCREEN...8-18

CLEANING AIR CONDITIONER CONDENSER...8-19

CHECKING BRAKE AND CLUTCH PEDALS...8-20

CHECKING GAUGES, METER AND
WARNING LAMPS.....8-20

CHECKING LIGHTS8-20

CHECKING SEAT BELT AND CABIN8-20

ADJUSTING FAN BELT TENSION8-20

CHECKING BRAKE PEDALS8-21

BRAKE PEDAL RESTING HEIGHT8-21

CHECKING BRAKE FLUID8-22

BLEEDING BRAKE FLUID8-23

REMOVING WATER FROM THE FUEL
FILTER.....8-24

CHECKING WHEEL BOLT / NUT TORQUE ...8-24

EVERY 50 HOURS8-24

LUBRICATION AND GREASE LOCATIONS ...8-24

EVERY 100 HOURS8-26

CLEANING AND CLEANING AND RE-
PLACING ENGINE AIR FILTER8-26

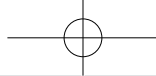
CHECKING FUEL LINES.....8-27

BATTERY8-28

BATTERY SWITCH8-29

ADJUSTING BRAKE PEDAL8-30

ADJUSTING AIR CONDITIONER BELT
TENSION.....8-31



MAINTENANCE

EVERY 200 HOURS 8-32

- CHECKING RADIATOR HOSE AND CLAMP ... 8-32
- CHECKING INTAKE AIR LINE 8-33
- CHECKING POWER STEERING HOSE
AND OIL LINE 8-33
- ADJUSTING TOE-IN 8-34

EVERY 400 HOURS 8-35

- CHANGING FRONT AXLE CASE OIL 8-35
- CHANGING OIL IN THE PLANETARY HUBS ... 8-36
- REPLACING TRANSMISSION FLUID
AND FILTER 8-36

EVERY 500 HOURS OR ANNUALLY 8-39

- CHANGING ENGINE OIL AND REPLACING
FILTER 8-39
- REPLACING FUEL FILTER 8-41

EVERY 1,000 HOURS 8-42

- ADJUSTING ENGINE VALVE CLEARANCE ... 8-42

EVERY 400 HOURS OR ANNUALLY ... 8-43

- REPLACING AIR CLEANER PRIMARY
ELEMENT 8-43

EVERY 2 YEARS 8-44

- FLUSHING COOLING SYSTEM AND
CHANGING COOLANT 8-44

SERVICE AS REQUIRED 8-46

- DRAINING WATER FROM BELLHOUSING ... 8-46
- REPLACING CABIN AIR FILTERS 8-46
- CHECK AND CLEAN CABIN AIR FILTERS ... 8-47
- CHECKING AND REPLACING WIND-
SHIELD WIPERS 8-49
- REPLACING FUSE 8-52
- REPLACING CABIN FUSE 8-55
- SLOW BLOW FUSE 8-56
- REPLACING LIGHT BULBS 8-57
- CHECKING THE REFRIGERANT 8-63
- REPLACING RADIATOR HOSE AND CLAMP ... 8-64
- REPLACING POWER STEERING LINE 8-64
- REPLACING FUEL LINE 8-64
- REPLACING INTAKE AIR LINE 8-64



MAINTENANCE CHECK LIST

DAILY CHECK LIST

SERVICE SCHEDULE		Page
ITEM	SERVICE REQUIRED	
1. 3 Point hitch & drawbar	Check operation and condition of pins, links and bars.	
2. Brake & clutch pedal	Clean brake pedals, foot throttle, clutch pedal and footrest area.	8-20
3. Brake oil level	Check oil level and add as needed.	8-22
4. Coolant level	Check coolant level cold, add premixed coolant as needed.	8-18
5. DEF level	Check DEF level and add as needed.	8-15
6. Engine oil level	Check the oil level and add as needed. Do not overfill.	8-17
7. Fan belt, A/C belt	Check the belt tension and adjust if loose.	8-20
8. Front axle oil level	Check oil level and add as needed.	
9. Fuel level	Check fuel level and add as needed.	8-13
10. Gauge, meter, warning lamps, lights	Check for instrument operation (Gauge, meter, warning lamps, lights)	8-20
11. Parking brake	Check operation and adjust if required.	
12. PTO cover & guard condition	Inspect the splines. Replaced damaged or missing shields and guards.	
13. Radiator & Coolers cleaning	Clean debris from oil cooler, radiator screen and grills.	8-18
14. Seat belt	Check the condition of seat belt and mounting hardware. Repair or replace as needed.	8-20



SERVICE SCHEDULE		Page
ITEM	SERVICE REQUIRED	
15. Tire pressure & damage	Check for wear, damaged tires and checking tire inflation.	4-74
16. Transmission oil level	Check oil level and add as needed.	8-14
17. Wheel bolt and nut torque	Check for loose wheel nuts / bolts	8-24

※ For detailed information about maintenance codes, refer to the corresponding section in each chapter.



MAINTENANCE SCHEDULE CHART

NO.	ITEM	Classifi- cation	Run hour (interval)													Run age			If neces- sary	Emis- sion parts	Page
			Initial 50 hours	50	100	200	250	400	500	600	800	1000	1500	3000	1 Year	2 Year	3 Year				
1	Greasing	Apply		○																	8-24
2	Air cleaner element	Clean			○													○	#		8-43
	Battery	Check			○													○			8-28
	Brake pedal free play	Adjust			○																8-30
	Clutch pedal free play	Adjust			○																
	Fan belt, A/C belt	Adjust			○													○			8-20
	Fuel line	Check			○														#		
3	Intake air hose	Check				○															
	Power steering hose and oil line	Check				○															8-33
	Radiator hoses & clamps	Check				○															8-32
	Toe-in	Adjust				○															8-34
4	Hydraulic oil filter	Replace	○					○										○			

⊕ IMPORTANT

- The items listed above "#" marked items are registered as emission related critical parts by KIOTI in U.S. EPA exhaust emission standard non-road emission regulation. As the engine owner, you are responsible for the performance of the required maintenance on the above instruction.
- Engine should be operated, used and maintained in accordance with the owner's manual in order to maintain the emissions performance of the engine.



NO.	ITEM	Classifi- cation	Run hour (interval)												Run age			If neces- sary	Emis- sion parts	Page
			Initial 50 hours	50	100	200	250	400	500	600	800	1000	1500	3000	1 Year	2 Year	3 Year			
5	Air cleaner element	Replace						○							○			○	#	
	Front axle oil	Change						○												8-35
6	Engine oil & Filter (CRDI - Tier4, Stage V)	Change	○						○						○			○		8-39
7	Cabin air filter	Replace							○						○					8-46
	Fuel filter element	Replace							○									○	#	8-41
8	Front axle pivot	Adjust								○										
9	Transmission oil	Change									○							○		8-36
10	Engine valve clearance	Adjust										○								8-42
11	Coolant	Change											○			○				8-44
	Fuel injection nozzle / Injection pressure	Check											○						#	

⊕ IMPORTANT

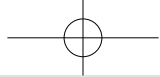
- The items listed above "#" marked items are registered as emission related critical parts by KIOTI in U.S. EPA exhaust emission standard non-road emission regulation. As the engine owner, you are responsible for the performance of the required maintenance on the above instruction.
- Engine should be operated, used and maintained in accordance with the owner's manual in order to maintain the emissions performance of the engine.



NO.	ITEM	Classifi- cation	Run hour (interval)													Run age			If neces- sary	Emis- sion parts	Page
			Initial 50 hours	50	100	200	250	400	500	600	800	1000	1500	3000	1 Year	2 Year	3 Year				
12	Injection pump	Check												○					#		
13	Cooling system flushing	Clean														○				8-44	
14	Brake oil	Refill																○			
	Battery	Replace																○		8-27	
	Bulb	Replace																○		8-57	
	Fan belt, A/C belt	Replace																○			
	Fuel line	Replace																○	#	8-64	
	Fuse	Replace																○		8-52	
	Intake air hose	Replace																○		8-64	
	Power steering hose and oil line	Replace																○		8-64	
	Radiator hose and clamp	Replace																○		8-64	

⊕ IMPORTANT

- The items listed above "#" marked items are registered as emission related critical parts by KIOTI in U.S. EPA exhaust emission standard non-road emission regulation. As the engine owner, you are responsible for the performance of the required maintenance on the above instruction.
- Engine should be operated, used and maintained in accordance with the owner's manual in order to maintain the emissions performance of the engine.



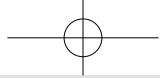
8-8

HX1302/1402

MAINTENANCE SCHEDULE CHART BY OPERATING HOURS

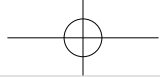
Run hour	Check List													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
50	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>								
100	<input type="checkbox"/>	<input type="checkbox"/>												
150	<input type="checkbox"/>													
200	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											
250	<input type="checkbox"/>													
300	<input type="checkbox"/>	<input type="checkbox"/>												
350	<input type="checkbox"/>													
400	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>									
450	<input type="checkbox"/>			<input type="checkbox"/>										
500	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>							
550	<input type="checkbox"/>					<input type="checkbox"/>								
600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>						
650	<input type="checkbox"/>													
700	<input type="checkbox"/>	<input type="checkbox"/>												
750	<input type="checkbox"/>													
800	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				<input type="checkbox"/>					
850	<input type="checkbox"/>			<input type="checkbox"/>										

Run hour	Check List													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
900	<input type="checkbox"/>	<input type="checkbox"/>												
950	<input type="checkbox"/>													
1000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>			<input type="checkbox"/>				
1050	<input type="checkbox"/>					<input type="checkbox"/>								
1100	<input type="checkbox"/>	<input type="checkbox"/>												
1150	<input type="checkbox"/>													
1200	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>			<input type="checkbox"/>						
1250	<input type="checkbox"/>			<input type="checkbox"/>										
1300	<input type="checkbox"/>	<input type="checkbox"/>												
1350	<input type="checkbox"/>													
1400	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											
1450	<input type="checkbox"/>													
1500	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>				<input type="checkbox"/>			
1550	<input type="checkbox"/>					<input type="checkbox"/>								
1600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				<input type="checkbox"/>					
1650	<input type="checkbox"/>			<input type="checkbox"/>										
1700	<input type="checkbox"/>	<input type="checkbox"/>												



Run hour	Check List													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1750	<input type="radio"/>													
1800	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					<input type="radio"/>						
1850	<input type="radio"/>													
1900	<input type="radio"/>	<input type="radio"/>												
1950	<input type="radio"/>													
2000	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>			<input type="radio"/>				
2050	<input type="radio"/>			<input type="radio"/>		<input type="radio"/>								
2100	<input type="radio"/>	<input type="radio"/>												
2150	<input type="radio"/>													
2200	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>											
2250	<input type="radio"/>													
2300	<input type="radio"/>	<input type="radio"/>												
2350	<input type="radio"/>													
2400	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>			<input type="radio"/>	<input type="radio"/>					
2450	<input type="radio"/>			<input type="radio"/>										
2500	<input type="radio"/>	<input type="radio"/>					<input type="radio"/>							
2550	<input type="radio"/>					<input type="radio"/>								

Run hour	Check List													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2600	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>											
2650	<input type="radio"/>													
2700	<input type="radio"/>	<input type="radio"/>												
2750	<input type="radio"/>													
2800	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>									
2850	<input type="radio"/>			<input type="radio"/>										
2900	<input type="radio"/>	<input type="radio"/>												
2950	<input type="radio"/>													
3000	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
Every 1 year			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>							
Every 2 year										<input type="radio"/>			<input type="radio"/>	
Every 3 year												<input type="radio"/>		
If necessary		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>							<input type="radio"/>



LUBRICANTS

To prevent serious equipment damage, use only genuine **KIOTI** fluids, oils and greases, or equivalents.

NO.	SECTION	CAPACITY [U.S.gal. (L)]	LUBRICANTS
1	Fuel	60.7 (230)	Ultra-low sulfur diesel (Sulfur content: 15 ppm or less)
2	Coolant	4.7 (18.0)	An antifreezing solution(Ethylene glycol) + Pure water (50 : 50)
3	Engine oil (Filter Included)	3.9 (15)	CK-4. 10W-30 from -30F to 90F. 15W-40 from 0F to 120F
4	DEF	4.7 (18)	DEF solution meeting ISO 22241
5	Transmission oil	16.6 (63)	Daedong : S-UTF 38 Shell : Donax-TD Low Vis , Spirax S3 TLV BP : AUTRAN SYN 295 Petro-Canada : Duratran XL Synthetic Blend Phillips 66 : PowerTran™ Fluid Low Vis Valvoline : Unitrac Low Viscosity
6	Front axle oil	2.6 (10.0)	Gear Oil(SAE 80W-90, API GL4)
7	Front axle planetary drive case (LH, RH)	0.2 + 0.2 (0.9 + 0.9)	
8	Brake fluid	0.12 (0.47)	Shell Tellus S2 M 68 or Shell Tellus S2 MX 68
9	Grease - Ref to "Grease fitting location" in chapter 8.	Until grease comes out from gaps	SAE multi-purpose type grease Universal joint: MOLYKOTE G-1011

**⚠ WARNING**

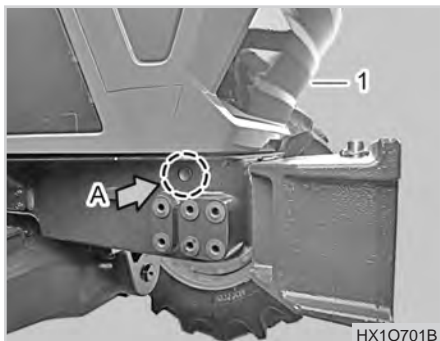
- *Check the oil level daily. Correct the oil level, if needed, before operating.*
- *Always check and add oil with the tractor on a flat, level surface.*
- *Do not deliberately tamper with or misuse the engine emissions control system; in particular with regard to deactivating or not maintaining an exhaust gas recirculation (EGR).*
- *Maintenance or improper operation or performance of the emissions control system should be reviewed, performed or repaired immediately. Continued operation without performing maintenance or repairs could lead to serious engine damage.*
- *Only use clean, filtered No. 2 or No.1 (winterized) ULSD diesel fuel from a reliable, clean source. Dirty or contaminated fuel can cause premature fuel system wear or component damage.*
- *Use the following fuel to maintain the performance of the emissions control system. Fuel with Sulphur content not greater than 10 mg/kg (15 PPM North America), cetane number not less than 45 (40 minimum in North America) and FAME content not greater than 8% v/v (5% biodiesel maximum in North America) shall be used.*

⊕ IMPORTANT

- **Your HX tractor is designed to use a high quality lubricant engineered and tested to meet or exceed the requirements of Daedong/KIOTI UTF-38, low-viscosity specification.**
For best performance and long-life durability, use only Daedong/KIOTI UTF-38 or a multi-purpose fluid with equivalent specifications to, or exceeding Daedong/KIOTI UTF-38 and is designed for use in transmissions, differentials, brake and hydraulic systems to reduce wear, prevent brake chatter, enhance powershift performance and provide excellent fluidity in cold and warm climates.
In situations where Daedong/KIOTI UTF-38 is not readily available, there are some examples of fluids with similar performance characteristics to Daedong/KIOTI UTF-38:

PERFORMING DAILY CHECKS

HOW TO OPEN THE HOOD



(1) Hood release
(A) Push

1. To open the hood, while pushing down and holding the front section of the hood, press the hood release inward, and then raise the hood.
2. To close the hood, press the front section of the hood until it is locked into its original position.
3. Do not apply excessive force to the hood release or to the front grill to prevent damage when opening and closing the hood.



(1) Hood

CAUTION

- **Never open the hood while the engine is running.**

NOTE

- If noise/squeaks are produced from the hood during driving, check the rubber molding. If damaged, replace it.

WALK AROUND INSPECTION

For your own safety and maximum service life of the machine, make a thorough daily inspection before operating the machine or starting the engine.

CAUTION

To avoid personal injury:

- **Place the transmission in neutral, apply the parking brake, lower any implements/ attachments to the ground, turn the engine off and remove the key from the ignition before performing any maintenance or inspections. Always perform inspections and maintenance on level ground.**

Look around and under the tractor for items such as loose bolts, trash build-up, oil or coolant leaks, broken or worn parts.



CHECKING AND ADDING FUEL



(1) Fuel fill cap

To prevent overtightening, the fuel fill cap has a built in ratchet. To loosen the cap, rotate slowly counterclockwise. To tighten the cap, rotate clockwise till the cap "clicks".

WARNING

- ***Make sure to use clean, filtered, ULSD diesel fuel only.***

Fuel Tank Capacity

60.7 U.S.gal. (230 L)

1. Turn the key switch to "ON", check the amount of fuel by fuel gauge.
2. If the needle on the fuel gauge is close to "E" or the fuel level is low, open the fuel tank fill cap and add fuel.
3. After adding the fuel, reinstall the fuel tank fill cap.



CAUTION

To avoid personal injury :

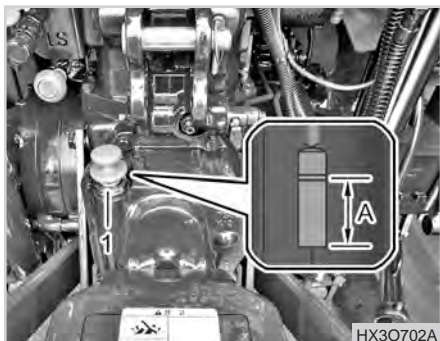
- **Do not smoke while refueling.**
- **Add fuel in a well-ventilated area.**
- **Be sure to stop the engine before refueling.**
- **Dirt or sand contained in fuel may cause the fuel injection pump to malfunction, use the strainer when refuelling.**



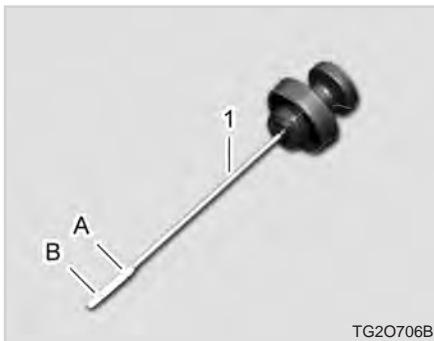
IMPORTANT

- **Be careful not to spill during refueling. If a spill occurs, clean it up immediately to reduce the risk of fire.**
- **If unit is not used for a long time, check the fuel for moisture and contaminants (biological agents) before using to prevent damage to the fuel system or engine.**

CHECKING TRANSMISSION FLUID LEVEL



(1) Oil Dipstick
(A) Oil level is acceptable within range



(1) Oil Dipstick
(A) Upper Limit
(B) Lower Limit

1. Park the machine on a flat surface, lower the implement/attachments to the ground.
2. Depress the brake pedals and apply the parking brake.
3. Set all shift levers into the neutral position.
4. Stop the engine and remove the key from the ignition.

5. Wait five minutes after turning the engine off to allow fluid to return to sump. Pull clean it, and then insert it into its original position. Then, pull it out again and check if the oil level is within the specified range.
6. If the oil level is too low, add some new oil so that the level is within the allowable range. (Refer to "Lubricant" in this chapter for fluid specs)

⊕ IMPORTANT

- If the oil level is low, do not operate the tractor until the oil level has been returned to the normal operating range.
- Never add oil over the upper limit.
- Be sure to check the oil level after installing hydraulic implements/attachments. Add the fluid as needed.
- Check the oil level with the cylinders of an implement extended and check again with cylinders retracted. Add the oil to adjust average oil level in the range of the oil limit. (Upper or lower)



CHECKING AND ADDING DEF



(1) DEF fill cap (2) DEF level gauge
(A) Proper DEF level

The DEF tank is located on the left side of the tractor adjacent to the fuel tank. As the DEF is used to reduce Nitrogen Oxides from the exhaust stream, period replenishment is required oxide, add it to the tank periodically.

1. Purpose

It is used to convert the exhaust gas into harmless nitrogen and water in order to reduce the emissions and enhance the fuel efficiency.

2. Capacity

3 - 5 liters (1.32 gallons) of DEF is used for 100 liters (26.42 gallons) of fuel based on the standard work load. Therefore, carry extra DEF always and add it when necessary. (Approx. 8 - 10 liters (2.11-2.64 gallons) of DEF is consumed while 200 liters (52.83 gallons) of fuel is consumed.

- DEF tank capacity: 20 liters (5.28 gallons)

⚠ WARNING

- **ONLY use new, clean DEF from a reputable source that meets the requirements of ISO 22241.**
- **The aftertreatment system can be damaged if a homemade DEF solution is used, DEF is diluted or substance other than DEF is used.**
- **Do not add fuel or other chemicals to the DEF tank. DEF is extremely sensitive and chemicals, debris or contaminants could cause DEF quality issues and/or DEF injection system issues.**







 **CAUTION**

- **NEVER attempt to make a urea solution on your own. ALWAYS use a genuine DEF from a reputable source that meets the requirements of ISO 22241. Examples include AdBlue, Blue DEF, Store brand DEF from Autozone, NAPA, etc.**
- **DEF is available through most auto parts stores, service stations, ag dealerships, etc.**

3. Symptoms for low DEF level

When the DEF level is low, the corresponding warning lamp on the instrument cluster turns on. If DEF is not added under this condition, the engine power is derated, making the machine inoperable.

<Make sure to add DEF if this lamp comes on.>

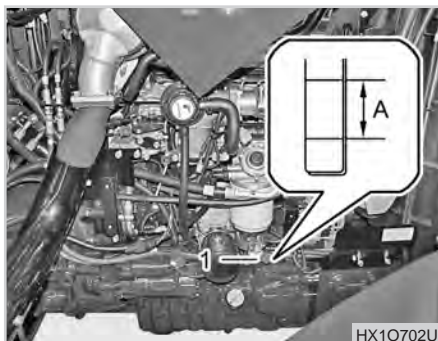
Level	Countermeasures	
Step 1	 DEF	ON
Step 2	 DEF	  After blinking, the engine power is derated.

 **CAUTION**

- **If the DEF level is dropped to a certain level, but additional DEF is not added into the tank, the engine power is derated, and the engine can run only at a low idling speed.**
- **If the DEF level warning lamp turns on, add DEF into the tank immediately.**
- **If adding modified or altered DEF or other substances to the DEF tank, the engine power may be de-rated and possible emissions system damage could occur.**



CHECKING ENGINE OIL LEVEL



(1) Engine Oil Dipstick
(A) Oil Level is Acceptable Within This Range

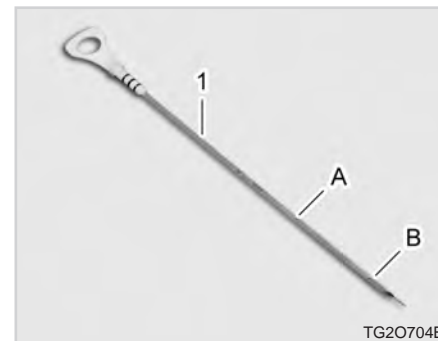
1. Check the engine oil daily.
2. Park the tractor on level ground, lower any implements/attachments to the ground, place the transmission in neutral, apply the parking brake, turn the engine off and remove the key from the ignition.
3. If the engine was just running, wait for approx. 5 minutes before checking the oil level.



CAUTION

To avoid personal injury :

- Be sure to stop the engine before checking the oil level.



(1) Engine Oil Dipstick
(A) Upper Limit (B) Lower Limit

4. Pull out the oil dipstick, clean it, and then insert it into its original position. Then, pull it out again and check if the oil level is within the specified range.
5. If the oil level is too low, add some new oil so that the level is within the allowable range.



⊕ IMPORTANT

- Never mix oil from 2 different manufacturers or different viscosities.
- Do not start the engine when the oil level is below lower limit.
- Wipe the oil dipstick with a clean cloth or tissue. If foreign material enters the oil sump, it can lead to a malfunction of the engine.
- Never add oil over the upper limit.

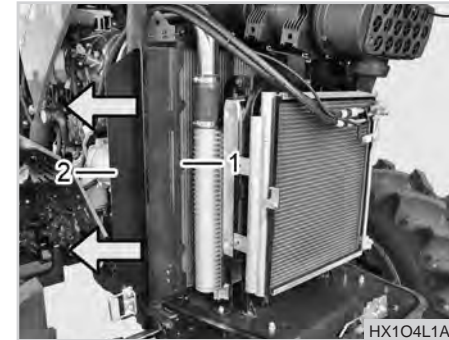
CHECKING COOLANT LEVEL



(1) Coolant Reservoir Tank
(A) MIN (Lack)

1. Check to see that the coolant level is at the "MIN" or higher level in the reservoir tank.
2. When the coolant level drops in the reservoir tank, replenish with a 50:50 mix of water and ethylene glycol. Return the coolant level back to the "MIN" mark or higher.
3. The tractor is filled at the factory the factory with a mixture of anti-freeze (ethylene glycol) and water in a ratio of 50 : 50 which is usable in any season.

CLEANING GRILL, RADIATOR SCREEN



(1) Blocking plate (2) Radiator Screen

1. Check bonnet front grill and screens to be sure they are clean of debris.
2. Open the A/C condenser for improved access to the oil coolers. The radiator side screens also open for improved access to the radiator for cleaning(1).
3. Put out the radiator screen(2) and remove all the foreign material.



CLEANING AIR CONDITIONER CONDENSER

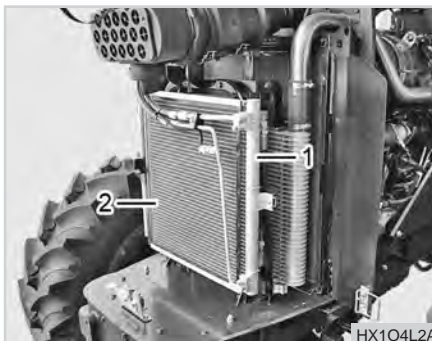
CAUTION

To avoid accidents :

- Be sure to stop the engine before raising the hood for service or maintenance.

IMPORTANT

- Bonnet Grill and screen must be clean from debris to prevent engine from overheating and to allow good air flow to the air cleaner, radiator and oil coolers.



(1) Condenser

(2) Dust screen

CAUTION

- Be sure to stop the engine before cleaning. If the condenser is blocked by dirt or debris, clean with compressed air or wipe gently.

1. Open the hood.
2. Remove the condenser screen and clean.
3. Rotate the 1/2 turn bolt and open the condenser for better accessibility for cleaning.
4. Clean with compressed air or gently wiping debris away.



CHECKING BRAKE AND CLUTCH PEDALS

1. The brake and clutch pedals should be inspected for free travel, and smooth operation.
2. You should adjust these pedals if an incorrect measurement is found. (Refer to the instructions for adjusting the clutch and brake pedals on page 8-30.)

NOTE

- When depressing the brake pedals independently, both brake pedals should move to the same position.

CHECKING GAUGES, METER AND WARNING LAMPS

1. Inspect the instrument panel for broken gauge (s), meter (s) and warning lamps.
2. Replace if broken.

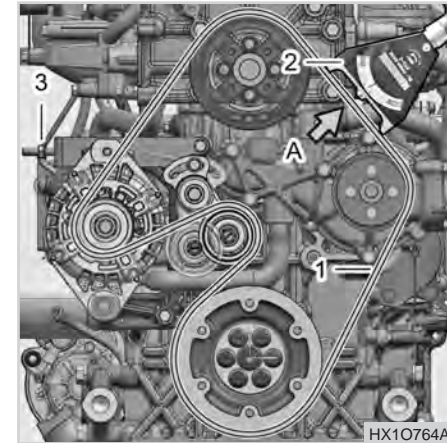
CHECKING LIGHTS

1. Inspect the lights for broken bulbs and lenses.
2. Replace if broken.

CHECKING SEAT BELT AND CABIN

1. Always check the condition of the seatbelt and attaching hardware before operating the tractor.
2. Replace if damaged.

ADJUSTING FAN BELT TENSION



- (1) Fan Belt (2) Tension Gauge
(3) Tension Adjustment Nut
(A) Tension Measurement Area

In order to extend the fan belt's life, the tension of the belt should be correctly adjusted to prevent slippage. The belt tension should be inspected regularly according to the following procedure :

1. Stop the engine lower all implements/attachments to the ground, place the transmission in neutral, apply the parking brake, turn the engine off and remove the key from



the ignition.

2. Open the hood.
3. Measure the belt tension at the tension measurement area (A) with a tension gauge.

Belt deflection for proper fan belt tension (A)

When replacing a new belt	800 ± 50N or more when measured with a Denso tension gauge
When adjusting	550 ± 50N or more when measured with a Denso tension gauge

4. If the tension is insufficient, turn the tension adjusting bolt clockwise to adjust the tension to the standard tension range.
5. Replace the fan belt if it is damaged, cracked or worn.

⚠ CAUTION

To avoid personal injury :

- Be sure to stop the engine before checking belt tension.

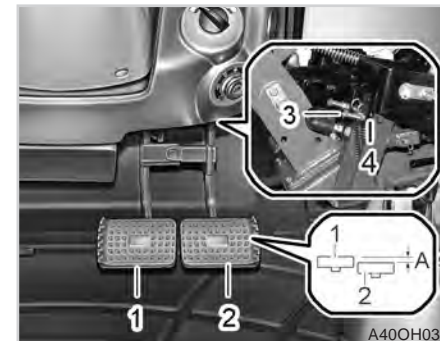
CHECKING BRAKE PEDALS

1. The brake pedals should be inspected for free travel, and smooth operation.
2. You should adjust the pedals if an incorrect measurement is found.

NOTE

- When checking the brake pedals independently, both brake pedals should move to the same position.

BRAKE PEDAL RESTING HEIGHT



- (1) Brake Pedal (LH) (2) Brake Pedal (RH)
(3) Stop/Resting bolt
(A) Resting difference between brake pedals

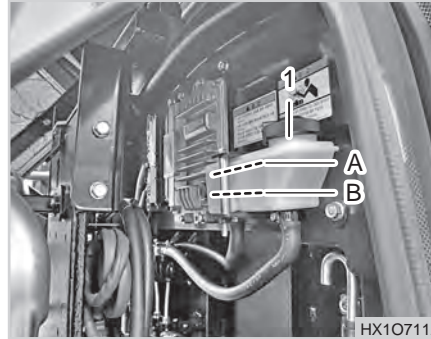
1. Unlock the brake pedals and depress each pedal individually 2-3 times.
2. If the difference between two pedals' resting height is out of the specified value, adjust the stop/resting bolt to bring the resting height of the pedals in the recommended tolerance. Tighten the mounting nut firmly.
3. Check the pedal free play (page 8-31) and confirm both pedals are within the recommended tolerance.



CHECKING BRAKE FLUID

**Resting height difference between
brake pedals (LH, RH)**

Less than 0.276 in. (7 mm)



(1) Brake fluid reservoir

(A) High level

(B) Low level

Add brake fluid to maintain the fluid level between the upper and lower limits.



CAUTION

- Never drive the tractor if the brake fluid is not within the safe operating range.
- Use only KIOTI approved brake fluid. See specifications on page 8-10.

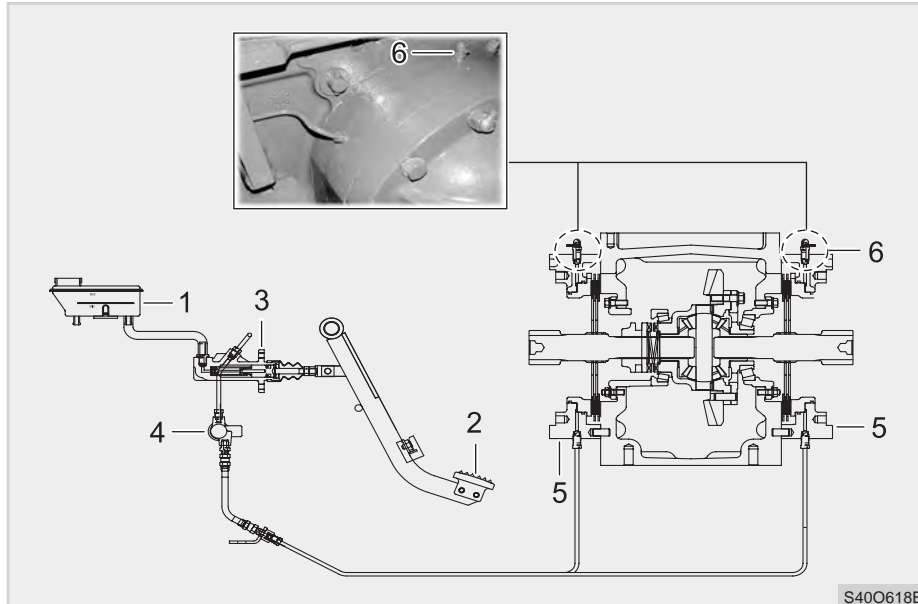


CAUTION

- After maintenance or repair, be sure to bleed air from the brake system.
- Air in the system can cause the brakes to fade or have inadequate operating pressure leading to an accident.



BLEEDING BRAKE FLUID



1. Fill the brake fluid reservoir (1) to the upper limit.
2. Install a transparent plastic hose to the bleeder of the brake case (5) to collect the fluid.
3. Unscrew the brake bleeder (6) 1/2 turn from the brake case (5)
4. Depress the brake pedal slowly till it stops. While holding the pedal down, close the bleeder. Once tightened, release the brake pedal and allow it to return to the upright position. Add fluid to the reservoir to maintain a fluid level

at the upper limit.

5. Repeat the step 4 until there are no air bubble coming out of the bleeder.
6. After bleeding is completed, tighten the bleeder with the brake pedal (2) depressed.
7. Bleed the opposite side brake line by repeating the steps from 2 to 6.
8. The fluid level of the brake fluid reservoir (1) should be at the upper limit after bleeding both the left and right sides.

Brake Fluid Capacity

0.12 U.S.gal. (0.47 L)

WARNING

- ***Only use brake fluid meeting the requirements specified on page 8-10. Using a fluid other than specified could lead to brake pedal fade or component failure resulting in loss of braking performance, damage to property or injury.***

REMOVING WATER FROM THE FUEL FILTER



(1) Fuel filter

(2) Drain plug

1. Water and dust in fuel are accumulated in the filter. Loosen the drain plug from the bottom of the fuel filter to drain any impurities.
2. After draining, tighten the plug by hand. (Do not use a tool.)
3. Start the engine, and check for fuel leakage.

CHECKING WHEEL BOLT / NUT TORQUE



(1) Front Wheel Bolt / Nut

(2) Rear Wheel Bolt / Nut

Check wheel bolts and nuts regularly especially when new. If they are loose, tighten them as follows.

Item		Tightening Torque
Front wheel	Nut	28~32.5 kgf·m (202.5-235 ft-lbs)
	Bolt	28~34 kgf·m (202.5-245.9 ft-lbs)
Rear wheel	Bolt	37.5~44 kgf·m (271-318 ft-lbs)
	Nut	37.5~44 kgf·m (271-318 ft-lbs)

EVERY 50 HOURS LUBRICATION AND GREASE LOCATIONS

Apply a high quality, multi-purpose grease with molybdenum disulfide at each location every 50 hours of operation. In wet or dusty conditions, greasing more frequently may be required.



(1) Front Bracket Axle Pivot



(1) Lift cylinder and lower link pivot points LH/RH sides)



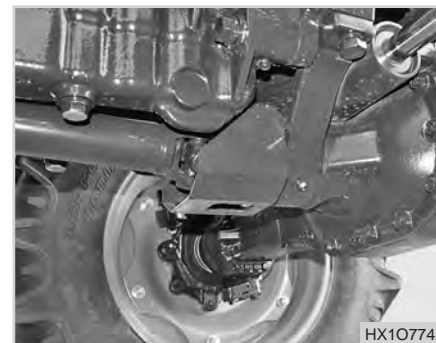
HX10759A

(1) Bevel Gear Case, LH/RH



HX10714A

(1) Bracket, Front axle support



HX10774A

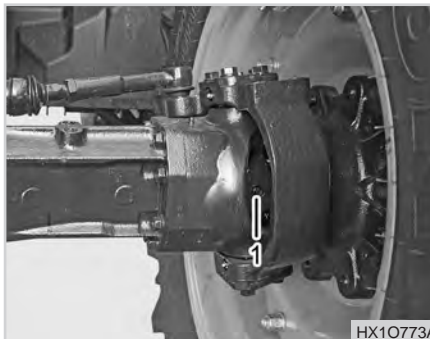
(1) 4WD shaft u-joints



HX10766A

(1) Top Link

(2) Lift cover



HX10773A

(1) Front axle shaft u-joints

+ IMPORTANT

- Lubricate each position every 10 hours of operation when working in damp or muddy conditions.
- Before applying grease, clean the area around the grease zerks thoroughly. Replace damaged or missing grease zerks immediately.

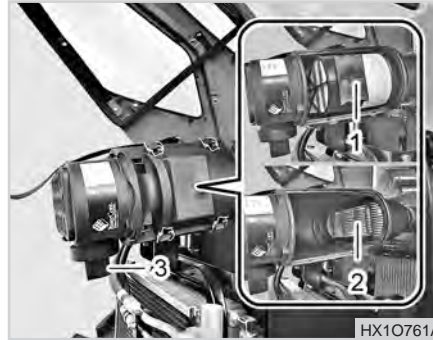


EVERY 100 HOURS CLEANING AND CLEANING AND REPLACING ENGINE AIR FILTER

CAUTION

To avoid personal injury :

- Never operate the tractor with a loose rim or wheel.
- Any time bolts and nuts are loosened, retighten to specified torque.
- Check all bolts and nuts frequently and keep them tight.



(1) Filter Element Ass'y (2) Filter Assembly
(3) Evacuator Valve

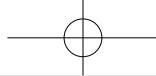
If the air cleaner is not maintained in a good condition, the lifetime of the engine can be shortened, excessive soot can be produced, and engine performance may be reduced. Therefore, the filter should be inspected frequently. Its replacement interval can be changed according to operating conditions. Replace the filter according to the following procedure :

1. Open the hood and inspect the air cleaner housing for damage.

2. Release the air cleaner retaining clips and remove the front cover.
3. Clean the inside of the air cleaner housing by wiping it gently with a clean, damp cloth.
4. Remove the filter element assembly and the filter assembly. Inspect the housing for damage and wipe with a clean, damp cloth. Install a new filter assembly and filter element assembly.
5. Install the front cover and secure in place with the retaining clips.

NOTE

- When installing the cover, make sure that the dust evacuator valve is facing downward.
- NEVER attempt to remove the air cleaner cover or filter elements while the engine is running as personal injury or damage to the engine may occur!



CAUTION

- **Use only Genuine KIOTI Filters.** Use of aftermarket filters could cause performance issues or lead to engine damage.
- **Make sure that no dust enters the system by installing the cover securely after inspection, cleaning or filter replacement.**
- **When removing the filter, be careful not to let foreign material enter the air inlet.**
- **The mass air flow sensor is installed behind the air cleaner. DO NOT apply compressed air into the air cleaner housing while the filter assembly has been removed.**

CHECKING AIR CONDITIONER HOSES

Inspect the A/C hoses for signs of damage, abrasion and oily residue which may be a sign of a leak.

CHECKING CABIN ISOLATORS

Inspect the cabin isolators for signs of wear or damage.

CHECKING FUEL LINES



(1) Fuel Hose

Although checking the fuel lines connections thoroughly is recommended every 100 hours, the lines should be inspected visually for signs of leaks or damage before each use.

1. If the hose clamps are loose, re-tighten as required.
2. The fuel lines are made of rubber and ages regardless of period of service. Change the fuel lines together with the hose clamps every two years and securely tighten.



3. If the fuel lines and hose clamps are damaged or deteriorate in less than two years due to environmental conditions, replace as needed to prevent leaks and maintain proper engine performance.

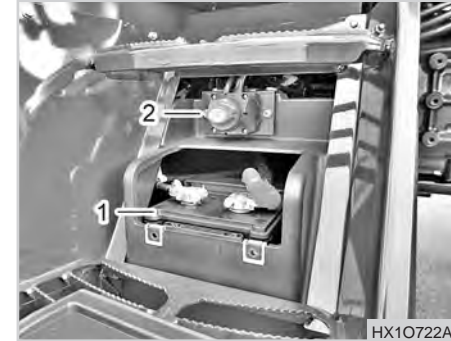
⚠ WARNING

- ***NEVER perform a daily inspection or inspection to fuel system components while the engine is running.***
- ***The fuel lines are subject to wear and aging based on the environment and operating conditions. Failure to perform periodic inspections may lead to a fuel leak. Fuel leaking on a hot engine or exhaust components could lead to a fire resulting in potential damage to property or personal injury.***

⊕ IMPORTANT

- **When changing fuel pipes, be careful not to allow dust or dirt to enter the fuel system. Contaminations in the fuel system could damage the fuel system or injection pump. Pay extra caution to the fuel pump to prevent dust from entering it.**

BATTERY PRECAUTIONS FOR HANDLING



(1) Battery

(2) Power Switch

It is important to inspect the battery periodically.

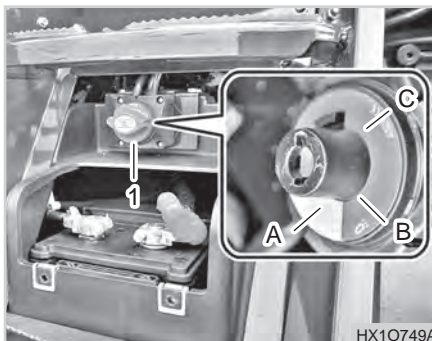
1. The battery cable should always be clean and firmly connected. When installing a new or used battery, clean the terminals and connections before connection.
2. Inspect the battery and cable for damage and corrosion.
3. Apply grease, terminal pads or protection spray to the terminals and cable end in order to prevent corrosion.



WARNING

- **Battery gases can explode. Do not expose the battery to flames or sparks. It may cause a fire.**
- **Battery fluid contains sulfuric acid that can burn you. Do not allow battery fluid to contact your eyes, skin, or painted surfaces. If you accidentally get it in your eyes or on your skin, flush with water and seek immediate medical attention.**
- **ALWAYS use proper PPE when handling batteries including safety goggles and gloves.**
- **An AGM battery is utilized to help prevent corrosion due to acid spillage. When replacing the battery, use an AGM style battery of the proper voltage and amperage to maintain starting performance and minimize the risk for fire or electrical damage.**

BATTERY SWITCH



- (1) Power Switch
(A) Power Off (Off) (B) Power Supply (On)
(C) Remove The Handle

When the battery switch is set in the "OFF" position (red background), power is blocked. When it is in the "ON" position (green background), power is supplied. Set the switch in the "OFF" position for long-term storage.

CHARGING

Contact the battery dealer for proper charging instruction.

CAUTION

- **The charge warning lamp comes on if the charging system is not producing sufficient voltage to maintain the battery charge. If it comes on while driving, have the system checked or repaired by your local Authorized Kioti Dealer.**
- **Keep the battery fully charged to maintain optimal starting performance. In winter or extremely cold climates, keeping the battery fully charged is the best way to prevent battery freezing**
- **Do not attempt to start the tractor with a frozen battery. In the event the battery freezes, remove the battery from the tractor and place it in a warm location away from heat sources and wait for the battery to thaw before charging and re-installing in the tractor.**



CAUTION

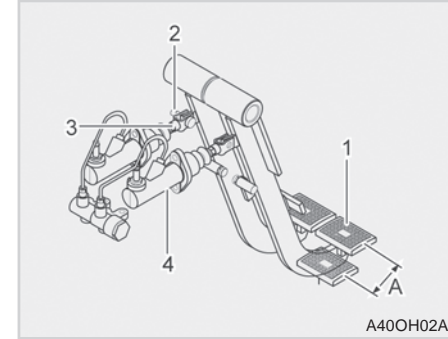
- If the battery is not securely installed, the battery case and electrolytes could be damaged by vibration.
- Never check the charge status of the battery by placing a metal object across the posts as this could cause the battery to explode, personal injury or severe electrical system damage. Only check the battery charge status with a volt meter or battery tester/charger designed to load and test the batteries condition.

DIRECTIONS FOR STORAGE

1. When storing the tractor for any period of time, turn the power switch to the off position. For an extended period of storage greater than 1 month, remove the battery from the tractor and store in a dry place away from heat sources and direct sunlight.
2. The battery self-discharges while it is stored.

Charge the battery once every 2 months while in storage for battery maintenance.

**ADJUSTING BRAKE PEDAL
BRAKE PEDAL FREE PLAY**



- (1) Brake Pedal (2) Push Rod
(3) Lock Nut (4) Master Cylinder
(A) Free Play

1. Slightly depress the brake pedal and measure its free play.
2. If the free play is out of the specification, adjust the length of the push rod.
3. Tighten the lock nut firmly after adjustment.
4. Check the pedal resting height (page 8-22) and confirm both pedals are within the recommended tolerance.



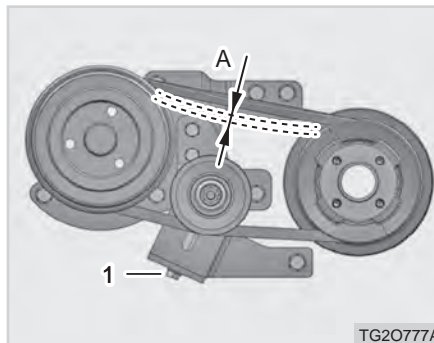
ADJUSTING AIR CONDITIONER BELT TENSION

Pedal Free Travel (A)

0.591 ~ 1.181 in. (15~30 mm)

WARNING

- *If the brake pedal free play is not set correctly, the brakes may partially engage or "drag" while in use causing excessive heat build-up, poor braking performance and premature brake wear.*



(1) Adjusting Bolt
(A) Adjusting Belt Tension

1. Never attempt to inspect or perform maintenance while the engine is running.
2. Press the belt between the pulleys with a force of 9.92 lbs. (4.5 kgf) and adjust the belt tension according to the below specification.

Tension of air conditioner belt (A)

Belt deflection at point A:
0.39 inches (10 mm)

3. If the belt is cracked, worn or will not adjust to the correct specification, replace with a new belt.

CAUTION

- **Stop the engine before inspecting the conditioner belt.**



EVERY 200 HOURS CHECKING RADIATOR HOSE AND CLAMP



(1) Radiator Hose (2) Clamp

Check to ensure the radiator hoses are free from damage and are tightened properly every 200 hours or every 6 months, whichever comes first. It is also recommended to inspect visually for signs of leaks or damage before each use.

1. If the hose clamps are loose or water leaks from hose, tighten clamps securely.

2. If the radiator hoses are swollen, hardened, cracked, or otherwise damaged, you must replace the hoses. Failure to do so could lead to coolant loss and engine damage. NEVER attempt to perform an inspection or perform maintenance while the engine is running or if the cooling system is still hot, after operation. Always allow the cooling system sufficient time to cool down before initiating any type of maintenance or repair.

OVERHEATING PRECAUTIONS

Take the following actions in the event the coolant temperature reaches the boiling point, what is called "Over-heating".

1. Stop the machine in a safe place, the transmission in neutral, apply the parking brake and lower any implements/attachments to the ground. Bring the engine to a high idle, approximately 1,200 RPM's.
2. Allow the engine to operate at a resting high idle for 5 minutes unless there are visible signs of rapid coolant loss. For rapid coolant loss, stop the engine immediately.
3. Wait 15 minutes after turning the engine off to allow the tractor to cool off. If there are no signs of steam, you may open the hood and perform a visual inspection. If steam is still exiting from underneath the hood, wait till there are no signs of steam before opening the hood.



4. Allow the system to cool to a safe temperature before attempting any repairs. Consult with your Local Authorized **KIOTI** Dealer for assistance as required. (Make sure to refer to "Engine troubleshooting" in chapter 8 before starting the engine)

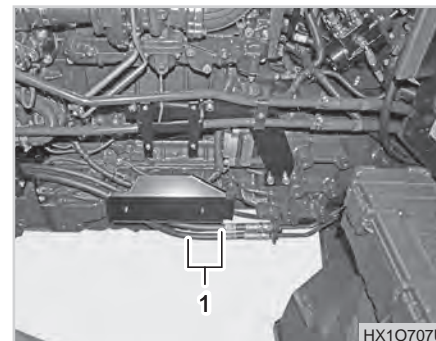
CHECKING INTAKE AIR LINE



(1) Air intake from intercooler

1. Inspect hoses, clamps and bands for signs of damage, deterioration and loose or missing hardware.
2. Tighten loose clamps. If the hoses and clamps are damaged, you must replace them at once. Failure to do so could lead to engine damage.

CHECKING POWER STEERING HOSE AND OIL LINE

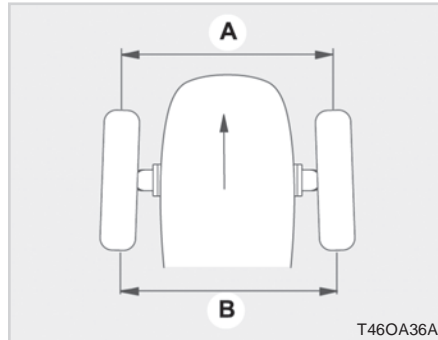


(1) Power Steering Oil Line

1. Visually inspect the steering lines for leaks and damage daily.
2. If damage is found you should replace the hose at once.



ADJUSTING TOE-IN ADJUSTING PROCEDURE



(A) Wheel - to - wheel distance at front
(B) Wheel - to - wheel distance at rear

1. Park tractor on a flat place
2. Turn steering wheel so front wheels are pointed straight ahead.
3. Lower the implement/attachment to the ground, engage the parking brake, turn the engine off and remove the key from the ignition.

4. Measure the FRONT tread distance from the center of the left front tire to the center of the right front tire. This distance should be measure at the same height as the centerline of the front axle.
5. Measure the REAR tread distance from the center of the left front tire to the center of the right front tire. This distance should be measure at the same height as the centerline of the front axle.
6. Front distance should be 0.08~0.31 in. (2~8mm) less than rear distance. If not, adjust ball joint length

NOTE

How to determine which side to adjust:

- Measure the front tractor frame at the same height as the centerline of the front axle.
- Mark the middle of the frame
- Measure from the middle of the frame to the middle of the LF & RF tires and record the measurement
- If the distance is equal, any changes to the toe-in will have to be made to both the Left & Right sides (if 1/2" movement is needed, each side is adjusted 1/4").
- If the distance is not equal, for toe-in: changes will need to be made to the side with the greatest distance from the center of the tractor. For toe-out: changes will need to be made to the side with the smallest distance from the center of the tractor.



EVERY 400 HOURS CHANGING FRONT AXLE CASE OIL

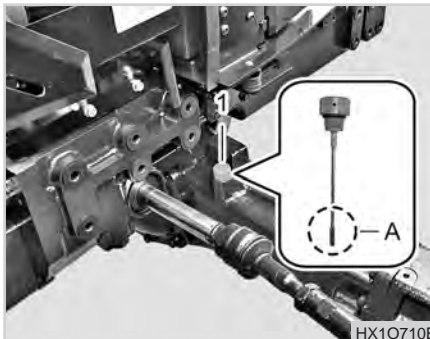
TOE-IN JUSTMENT



(1) Tie Rod

(2) Tie Rod Lock Nut

1. Loosen the lock nut and turn the turnbuckle to adjust the rod length until the proper toe-in measurement is obtained.
2. Check the toe-in value after the tie rod is adjusted.
3. Adjust it again if necessary.

(1) Oil Filler Plug
(A) Fill mark

(2) Drain Plug

1. To drain the differential, un-thread the oil filler plug and remove the recessed allen head drain plug underneath the front axle 3rd member. Catch all used oil in a pan for recycling or disposal.
2. After draining, reinstall the drain plug.
3. Add new oil to the specified level through the oil fill port.
4. Check the fluid level with the dipstick. Add oil as necessary to bring the oil level to the fill mark(A) on the dipstick.

NOTE

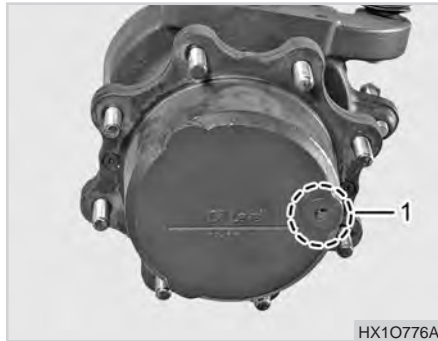
To check the fluid level, with the dipstick threaded into the axle housing.

Front Axle Oil Capacity

2.6 U.S.gal. (10 L)



CHANGING OIL IN THE PLANETARY HUBS

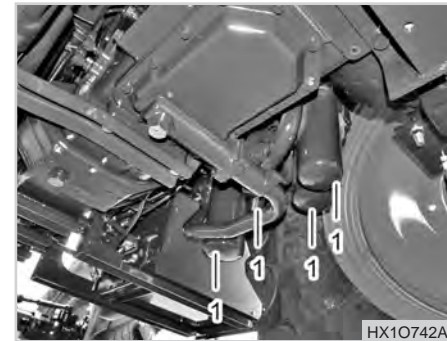


(1) Allen head drain/fill plug

- 1 With the parking brake engaged, lift the front axle so both front wheels are approximately 2 inches off the ground.
- 2 Rotate one wheel until the allen head drain/fill plug is pointed towards the ground (the level/fill line should be vertical.)
- 3 Insert a small wooden wedge between the tractor frame and the front axle to rotate the axle over slightly making the wheel touch the ground.

- 4 Remove the allen plug and allow the oil to drain. Catch the used oil in a pan for recycling or disposal.
- 5 Once the oil has drained, remove the wedge, raise the front tire gently and rotate till the drain/fill hole is level (the level/fill line will be horizontal).
- 6 Lower the front axle to the ground. Insert a funnel into the fill port and begin adding fresh oil slowly. When oil begins to seep out of the fill hole, remove the funnel and allow any excess fluid to drain, bringing the oil level to full.
- 7 Re-insert the allen head drain/fill plug and repeat for the opposite side.

REPLACING TRANSMISSION FLUID AND FILTER

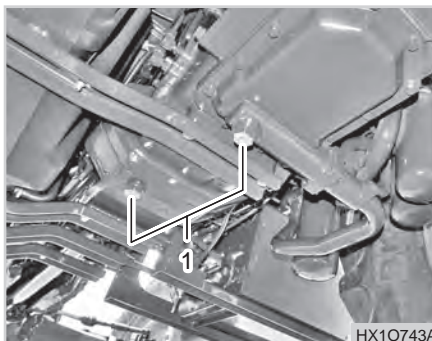


(1) Transmission oil filter x 2

The transmission fluid should be changed if it is contaminated or every 800 hours of operation. When changing the transmission fluid, be sure to change the transmission filters as well. The recommended service interval on the transmission filters is after the initial 50 hours of operation and every 400 hours afterwards.

**NOTE**

The filters are changed every 400 hours and 800 hours. The fluid is changed every 800 hours.

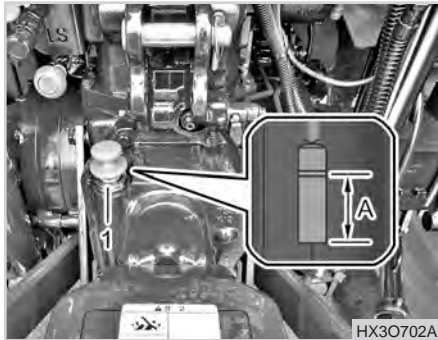


(1) Drain Plugs

used fluid for recycling or disposal. If the fluid does not flow freely, remove the transmission dipstick from the fill port to allow the case to breathe.

4. While the fluid is draining, remove the two hydraulic filter from the filter base using a filter wrench.

1. Drive the tractor for approximately 10-15 minutes to allow the transmission fluid to warm up.
2. Park on a level surface, place the transmission in neutral, lower any implements/attachments to the ground, apply the parking brake, turn the engine off and remove the key from the ignition.
3. To drain the used fluid, place containers underneath the transmission case at the two drain plugs. Remove the drain plugs and collect the



(1) Oil Dipstick
(A) Oil level is acceptable within this range

5. Apply a thin film of clean oil onto the O-ring of the new filters and install. Tighten firmly by hand, 3/4 of a turn after the o-ring contacts the filter base.
6. Re-install the drain plugs and tighten. Re-fill the transmission case with fresh oil. Bring the fluid level within the safe operating range indicated on the dipstick.

7. Run the engine for a few minutes and then stop to inspect for leaks. After sitting for 5 minutes, check the fluid level and add as needed to bring up to the safe operating range as indicated on the dipstick.

Transmission Oil Capacity

16.6 U.S.gal. (63 L)

⚠ CAUTION

To avoid personal injury :

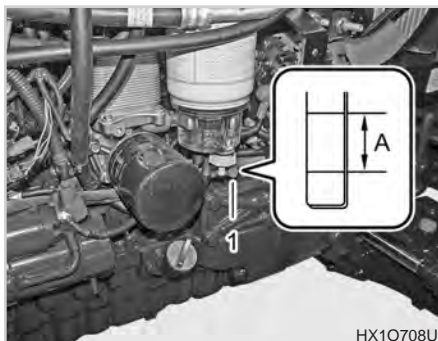
- Be sure to stop the engine before changing the fluid or replacing the filter.
- Cool down the fluid sufficiently. You can get burned by hot fluid.

⊕ IMPORTANT

- To prevent serious damage to the hydraulic system, use only a KIOTI genuine filter.
- Do not operate the tractor with heavy load right after changing the transmission fluid. Run the engine at medium speed for a few minutes to prevent damage to the hydraulic system.



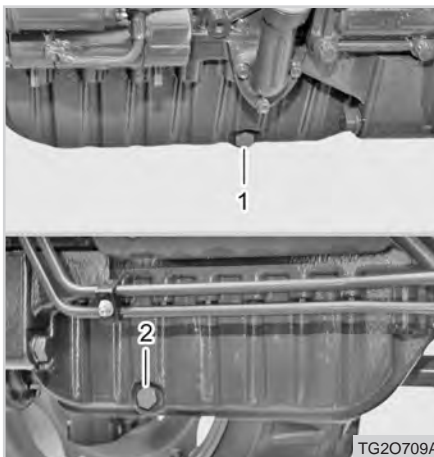
EVERY 500 HOURS OR ANNUALLY CHANGING ENGINE OIL AND REPLACING FILTER



HX10708U

(1) Oil Dipstick

(A) Oil level is acceptable within this range



TG20709A

(1) Drain Plug (RH) (2) Drain Plug (LH)



HX10709U

(1) Engine Oil Filter

1. Drive the tractor for approximately 10 minutes to allow the engine oil to warm up.

2. Park on a level surface, place the transmission in neutral, lower any implements/attachments to the ground, apply the parking brake, turn the engine off and remove the key from the ignition.

3. Remove the drain plugs from the oil pan and collect the used oil in a container for recycling or disposal.

4. Remove the oil filter behind the cooling fan on the right side of the engine.

5. Apply a thin film of new oil the the filter o-ring. Install the new filter and tighten firmly by hand 3/4 of a turn after the o-ring contacts the filter base.

6. Re-install the drain plugs and tighten. Re-fill the engine with fresh oil. Bring the fluid level within the safe operating range indicated on the dipstick.



Engine Oil Capacity (Filter Included)

3.9 U.S.gal. (15 L)

7. Run the engine for approx. 5 minutes to inspect for leaks.
8. Engine oil pressure warning lamp should go off after 10 seconds of running. If the engine oil pressure warning lamp stays on, stop the engine.
9. After sitting for 5 minutes, check the fluid level and add as needed to bring up to the safe operating range as indicated on the dipstick.

NOTE

- The engine oil filter should be replaced when changing the engine oil.

WARNING

- *The engine oil is very hot while the engine is running or right after the engine is stopped. Use caution when removing the drain plugs to not encounter hot fluids.*
- *Always use proper PPE when performing maintenance. Avoid oil contact while changing or adding engine oil. Wear gloves to protect the hands and safety goggles to protect the eyes.*

WARNING

- *Prolonged and repeated contact with the oil may cause skin disorders and skin cancer. If skin contact is made, wash thoroughly with soap or hand cleanser as soon as possible.*
- *Keep used oil out of reach of children.*
- *Only use engine oils meeting CK-4 specification or higher to prevent damage to the emissions components.*
- *Using oils that do not meet minimum recommended specifications could lead to premature engine or emissions component failure and may not be covered by warranty.*

**⚠ CAUTION**

To avoid personal injury :

- Be sure to stop the engine before changing the oil or replacing the filter.
- Check the engine oil level before daily. If the engine oil is insufficient, the engine can be damaged, and this is not covered by warranty. Be sure to add engine oil when its level is below the lower limit on the oil dipstick.
- Only dispose of used oil and filters in approved manners as approved by local regulations.

⊕ IMPORTANT

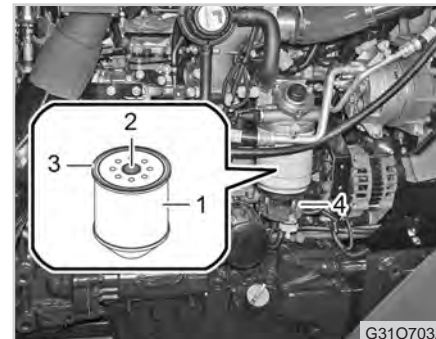
- Use only KIOTI genuine engine oil and filters to insure smooth operation and durability of the engine.

REPLACING FUEL FILTER

(1) Fuel filter

(2) Drain plug

1. Thoroughly clean the outside surfaces of the fuel filter assembly. Open the drain plug at the bottom of the filter to drain the fuel. Collect the used fuel in a container for recycling or disposal.
2. Unplug the connector for the water separator. Using a strap wrench or filter wrench, loosen the water separator and remove it from the bottom of the fuel filter. Wipe with a clean cloth.



(1) Fuel Filter cartridge (2) Thread

(3) O-Ring Seal (4) Water Separator

3. Using a strap wrench or filter wrench, loosen the fuel filter and remove it from the filter base.
5. Lubricate the o-ring seal with fresh fuel. Install the filter onto the filter head and tighten firmly by hand. Be sure to rotate the filter 1/8"-1/4" of a turn after the o-ring touches the filter base.
6. Remove the original o-ring and install a new o-ring on the water separator. Lubricate the new o-ring seal with fresh fuel.



7. Re-install the water separator onto the fuel filter and tighten firmly by hand. Be sure to rotate the separator 1/8"-1/4" of a turn after the o-ring touches the fuel filter base.
8. Remove the original o-ring and install a new o-ring on the drain plug. Lubricate the new o-ring seal with fresh fuel. Re-install the drain plug and tighten firmly by hand. Be sure to rotate the drain plug 1/8"-1/4" of a turn after the o-ring touches the water separator base.



CAUTION

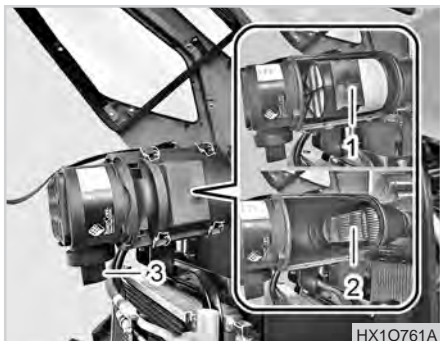
- **Do not allow dirt to enter the fuel system. Before attempting any service or maintenance, clean the area around the fuel filter, fuel lines, etc. Do not leave the fuel system open or uncovered. Always use a clean cloth or paper towel to cover open fittings, lines, etc. to prevent dirt or debris from entering the system while repairs or maintenance are being performed.**

EVERY 1,000 HOURS ADJUSTING ENGINE VALVE CLEARANCE

This service can have an adverse affect on engine performance and longevity if performed incorrectly. Please consult with your Local Authorized **KIOTI** Dealer to perform this maintenance.



EVERY 400 HOURS OR ANNUALLY REPLACING AIR CLEANER PRIMARY ELEMENT



(1) Filter Element Assembly
(2) Filter Assembly
(3) Evacuator Valve

1. The air cleaner uses a dry element. **NEVER** apply oil.
2. Dust should not accumulate in the evacuator valve. If dust is not sifting out as it should, remove and clean the evacuator valve with a mild detergent and clean cloth. Clean the element and filter assembly every week. If the tractor is operated in extremely dusty conditions, daily inspection is required.

3. If the element is stained with carbon, dust or oil, replace the filter.

4. For filter replacement, refer to the instruction on pages 8-26 and 8-27.

To clean the element, use only clean dry compressed air on the inside of the element. Air pressure at the nozzle must not exceed 29 psi (2 kgf/cm²). Maintain reasonable distance between the nozzle and the filter.

⊕ IMPORTANT

- The air cleaner will only fulfill its function if it is correctly and regularly maintained. A poorly maintained air cleaner will mean loss of power, excessive fuel consumption and a reduction in engine life.
- **NEVER** run the engine with the air filter removed.

⊕ IMPORTANT

- Be sure to refit the cap with the arrow ↑ (on the rear of cover) upright. If the cap is improperly fitted, the evacuator valve will not be able to sift dust out causing an increased frequency in filter maintenance or replacement.
- Be sure to visually inspect the air cleaner and intake components frequently for signs of cracking, deterioration. Even a small amount of debris entering the intake system can cause serious engine issues in a short period of time.

EVACUATOR VALVE

Open the evacuator valve once a week under ordinary conditions or daily when used in dusty conditions to get rid of large particles of dust and dirt.



EVERY 2 YEARS FLUSHING COOLING SYSTEM AND CHANGING COOLANT



(1) Drain Petcock

1. Park on a level surface, place the transmission in neutral, lower any implements/attachments to the ground, apply the parking brake, turn the engine off and remove the key from the ignition. Allow the radiator and engine to cool before performing any repairs or maintenance.
2. To drain the coolant, open the radiator drain petcock and remove the radiator cap. The radiator cap must

be removed to allow the system to breathe to drain all of the coolant from the radiator. Collect all used coolant in a container for recycling or disposal.

3. After all coolant is drained, close the drain petcock.
4. Fill the radiator with a 50:50 mix of fresh water and ethylene glycol.



(1) Reservoir Tank
(A) Min (Fill Level)

6. After filling the radiator, fill the reservoir with a 50:50 mix of fresh water and ethylene glycol to the "MIN" mark or higher. DO NOTY OVERFILL.
7. Start and operate the engine for 10-15 minutes with the heater turned on to help purge any air from the system.
8. Stop the engine and let it cool.
9. Check coolant level of reservoir tank and radiator. Add coolant if necessary.

**Coolant capacity**

4.7 U.S.gal. (18.0 L)

 **CAUTION****To avoid accidents :**

- Do not remove the radiator cap while the coolant is hot. You can get burnt by hot steam. Only remove the radiator cap if it is warm or cool to the touch. **NEVER** remove if **HOT**.
- Even though the coolant is cooled down, turn the cap to its first stop and then wait until it is depressurized before removing the cap completely.

 **IMPORTANT**

- Do not start engine without coolant.
- Use clean, fresh water and anti-freeze to fill the radiator and reservoir tank.
- When the anti-freeze is mixed with water, the anti-freeze mixing ratio must be no less than 50% mixture of water and anti-freeze.
- Securely tighten radiator cap.
- If the cap is loose or improperly fitted, water may leak out and the engine could overheat.
- If the radiator cap has to be removed, follow the caution above and securely retighten the cap.
- If coolant leaks from the radiator or engine, contact your Local Authorized KIOTI Dealer for assistance.

This tractor is factory filled with a 50:50 mixture of ethylene glycol and water.

If the antifreeze has been replaced by water at any time, the coolant can freeze when temperatures drop below 32° leading to damage to the engine block and radiator.

Be sure to drain and refill any system that utilizing water with a ratio of water and ethylene glycol before cooler seasons arrive.

When mixing brands or types of antifreeze, flush the cooling system several times before adding the final fill of ethylene glycol and water.

Vol. % Antifreeze	Freezing Point		Boiling Point	
	°F	°C	°F	°C
40	-12	-24	222	106
50	-34	-37	226	108

* At 760 mmHg Hg (atmospheric pressure), a higher boiling point is achieved through the pressurization of the cooling system.



NOTE

- The temperatures shown on the left are industry standards that necessitate a minimum glycol content in the concentrated anti-freeze.
- When the coolant level drops due to evaporation, add water only. In case of leakage, add anti-freeze and water in the specified mixing ratio.
- Antifreeze absorbs moisture. Keep unused antifreeze in a tightly container and dispose of it properly based on local regulations.
- Do not use radiator cleaning agents when antifreeze has been added to the cooling water. (Antifreeze contains an anti-corrosive agent, which will react with the radiator cleaning agent forming sludge which may affect engine components and the cooling system's efficiency leading to engine damage.)

SERVICE AS REQUIRED DRAINING WATER FROM BELLHOUSING



(1) Drain Plug

1. The bellhousing includes a drain plug to remove moisture that may accumulate through condensation over time.
2. To drain the water from the bellhousing, remove the drain plug and collect water in a container for recycling or disposal. Re-install the drain plug and tighten firmly after all moisture has been removed.

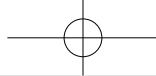
REPLACING CABIN AIR FILTERS



(1) Bolt

(2) Filter

1. Remove the nuts from the filter cover over the left cabin door. Remove the cover and filter.
2. Clean or replace the filter as needed. To clean the element, use only clean dry compressed air, gently blowing across the element from the inside (cabin side) outward. Air pressure at the nozzle must not exceed 29 psi (2 kgf/cm²). Maintain reasonable distance between the nozzle and the filter.



3. Re-install the element and cover.
Repeat for the opposite side of the cabin and the rear side of the cabin.

 **NOTE**

There are four (4) cabin filters in total, one (1) each on the left and right sides of the cabin and two (2) on the rear of the cabin.

 **WARNING**

- *The filtration system on this tractor cab has no protection against harmful chemicals, aerosols or other airborne agents. The filtration system collects dust and large particles as air enters the cabin through the four (4) intake locations.*
- *If the tractor is being used to spray chemicals, aerosols or other airborne agents that may be harmful to humans, the filtration system will not provide any protection to the operator. To prevent inhalation of harmful agents, the operator will need to source and wear PPE recommended by the chemical manufacturer including masks designed and manufactured to protect against the airborne agents being sprayed.*

CHECK AND CLEAN CABIN AIR FILTERS

Check and clean the cabin air filters every 100 hours or more frequently when operating in extremely dusty environments. Keep the air filter clean for efficient operation of the heating and cooling system. Replace with genuine parts if damaged or when the filter cannot be cleaned.

 **WARNING**

- *Cab air filters remove dust in the air, but are not capable of removing chemicals used in spraying crops or in weed control. Many chemicals used for these purposes are toxic when improperly used, and can be hazardous to operators and others in the area.*
- *Follow the instructions of the chemical manufacturers and spray application equipment regarding required PPE, prohibitions against inhalation of dust or spray, personal hygiene practices, and other precautions noted by the manufacturers.*



IMPORTANT

- **Always wear protective clothing, e.g.: overalls, goggles, gloves and face mask when preparing equipment for chemical spraying operations and ALWAYS follow the chemical manufacturers instructions regarding PPE and safe handling procedures of any products used.**

The cabin air filters should be checked weekly or daily if used in extreme conditions. The standard paper element has the following efficiency with a maximum differential pressure increase of 2 mbar. SAE gross gauze mesh 99.5%.

NOTE

- This element provides no protection against harmful chemicals, aerosols or other airborne agents.

CAUTION

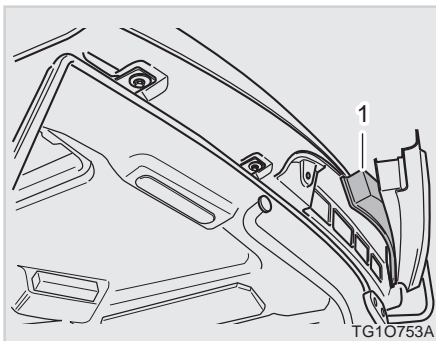
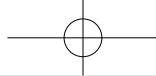
- **The Manufacturer has no responsibility what so ever, either direct or indirect, for the design, manufacture and availability of special filters and/or changes to the air intake or filtration system of the cab for spraying, mining or other applications outside of it's intended purpose.**
- **This cab HVAC system has been designed and tested for optimal performance in agricultural settings. Altering or modifying the cab in any way for spraying, mining or other applications outside of it's intended purpose can significantly alter the performance of the HVAC system and have a significant impact on operator health.**
- **Always wear individual protections when working in particularly dusty environment.**

NOTE

- **Use Genuine KIOTI filters to maintain peak heating and air conditioning performance.**

IMPORTANT

- **Dispose of filters correctly in accordance with local regulations. Be responsible for the environment.**

**⚠ WARNING**

- **Remove the cabin air filters and cover the air intake ports with tape or other product before washing the cab. If the cab is washed and the filters are not removed, use caution to not spray water onto the filters or the filter covers to prevent damage and deterioration of the cabin filters.**

⚠ WARNING

- **If spraying, spreading or projecting any chemical, agent or aerosol into the air, always follow the component manufacturer's recommendations for proper PPE required for handling and breathing those components. Be sure to utilize the recommended PPE even when inside the tractor cabin as the cab filtration system will not provide any protection against airborne chemicals, agents or aerosols of any kind.**

CHECKING AND REPLACING WINDSHIELD WIPERS
WIPER INSPECTION AND ARM REMOVAL

(1) Wiper

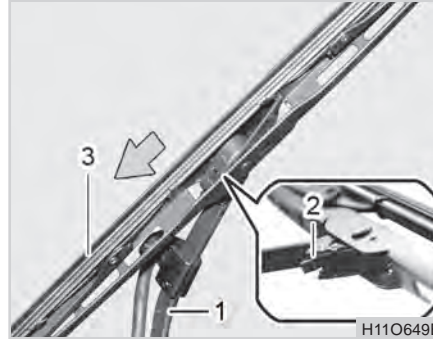
Check the operation and wear of the wiper blades frequently.

To remove the wiper arm, raise the cap at the base of the arm and remove the securing nut. Disconnect the washer fluid line from the wiper arm. Gently wiggle the arm left and right while pulling to slide the arm off the splined shaft. Once off, the blade can be replaced or a new arm with blade installed.

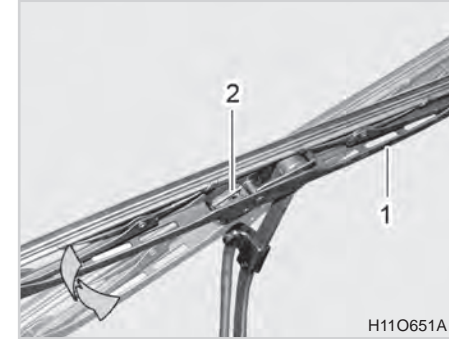


Re-install in the reverse order. Be sure to align the wiper arm in the same position as it was removed so it does not touch any portion of the metal windshield frame during operation.

WIPER BLADE REPLACEMENT



(1) Wiper Arm
(2) Attaching lever
(3) Wiper Blade



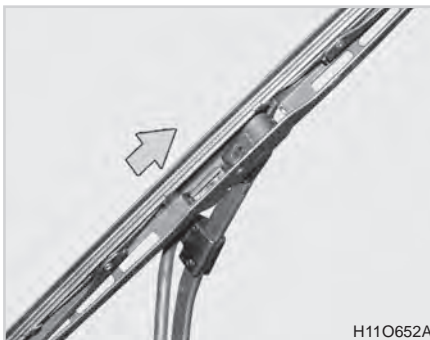
(1) Wiper Blade
(2) Locking tab

1. Pull the wiper arm away from the windshield and allow it to rest at 90° degrees.
2. Rotate the wiper blade and locate the locking tab (item 2). Depress the locking tab and slide the wiper blade off the arm.

3. Align the new wiper blade with the wiper arm. Be sure to position the blade so the locking tab will slide into the u-shaped portion of the wiper arm. Be sure the wiper blade is positioned so the rubber edge will contact the windshield when lowered into position.

**⚠ CAUTION**

- When the wiper blade is separated, the wiper arm should not be placed against the glass as it could scratch or severely damage the glass.

**⚠ CAUTION**

- When cleaning the windshield, pull the wiper arm away from the windshield and allow it to rest at 90° degrees. Spray water or cleaner on the glass and wipe with a clean cloth.
- If the wiper blade is frozen to the glass in cold weather or there is washer fluid, do not operate the windshield wiper.
- In order to prevent damage to the wiper blade, never use synthetic detergent, thinner or solvent on the windshield.

4. Slide the wiper blade into the u shape of the wiper arm. When connected, a "clicking" sound is heard. Gently push/pull the wiper blade to make sure it is securely fastened to the wiper arm.
5. Lower the wiper arm against the windshield.



REPLACING FUSE



(1) Fuse Box Cover

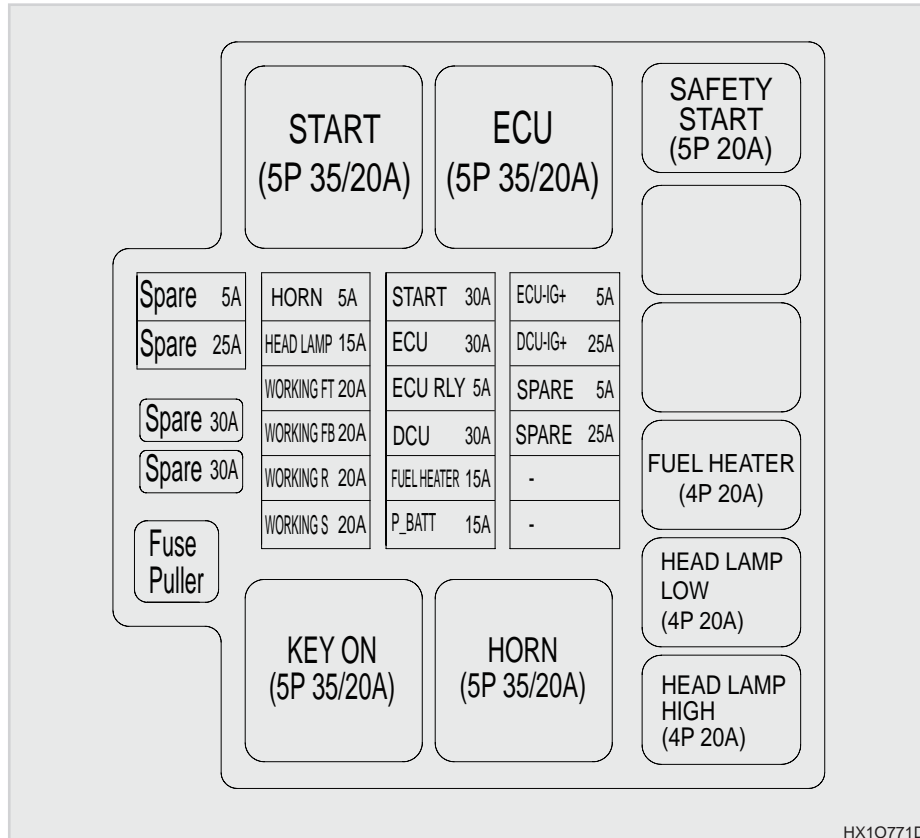


(1) Fuse Storage Case

(2) Box

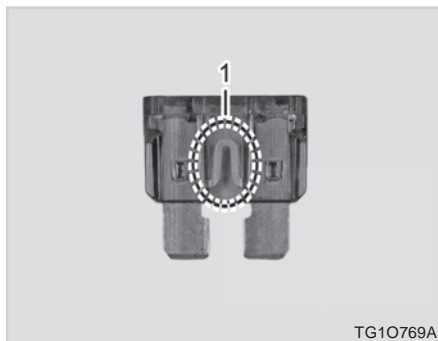
Fuses protect the tractor electrical system from potential damage. A blown fuse indicates that there is an overload or short somewhere in the electrical system.

The fuse box is located on the right side of the tractor, underneath the cabin steps.

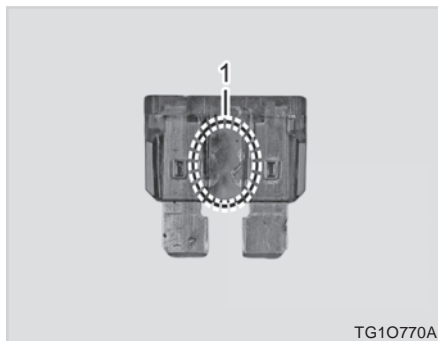
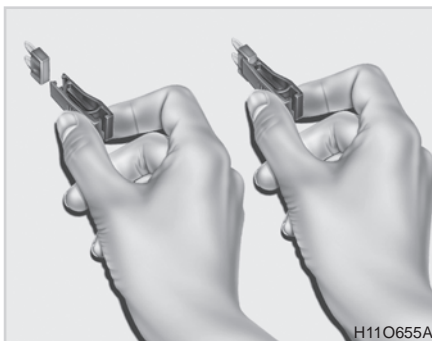


The fuse box lid includes a diagram on the inside with relay and fuse rating and location. Remove and replace relays and fuses according to the instructions below :

1. Park the tractor on a level surface, place the transmission in neutral, apply the parking brake, lower implements/attachments to the ground, turn the engine off and remove the key from the ignition.
2. Turn the battery switch to the "OFF" position, remove the fuse box cover and remove the fuse box lid. Using the diagram in the lid, locate the relay or fuse in question. Relays can be removed and replaced by hand as required. To remove and install fuses, use the fuse pullers included in the fuse box to grip and secure fuses for removal and installation.



(1) Normal Fuse



(1) Blown Fuse

3. If the fuse is blown, replace it with a new fuse with same capacity. Make sure it is firmly installed.
4. Install the fuse box lid and install the fuse box cover.

WARNING

- **Never use a fuse with a capacity higher than specified on the label included inside the fuse box lid.**
- **Use of higher amperage fuses, steel wire, foil or other unapproved modifications could cause severe damage to the electrical system and components or cause the system to overheat and catch fire.**

NOTE

- If a replacement fuse blows quickly, there is a high probability the electrical circuit is overloaded or has a potential short. Contact your Local Authorized **KIOTI** Dealer for assistance.
- If a fusible link, relay or other electrical component is fails, contact you Local Authorized **KIOTI** Dealer for assistance.



REPLACING CABIN FUSE

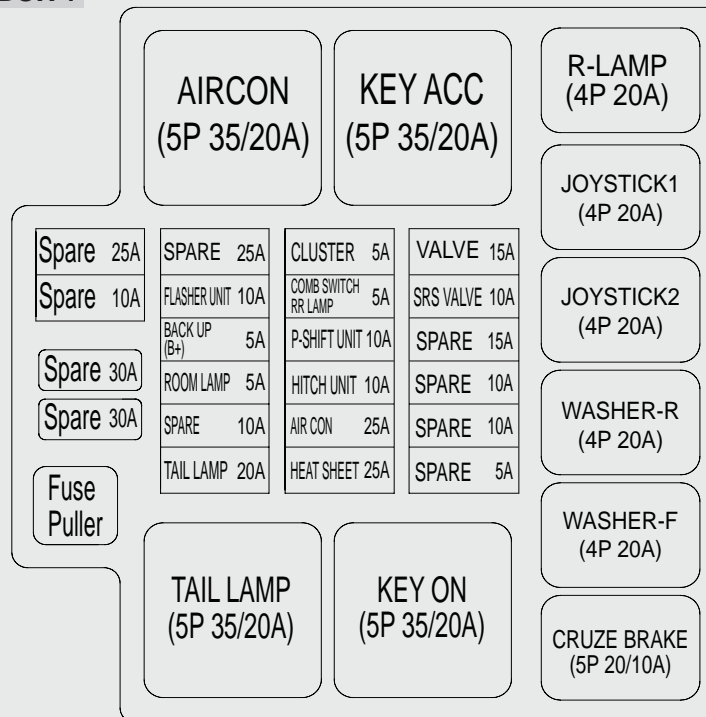


(1) Fuse Box 1

(2) Fuse Box 2

The fuse boxes inside the cabin are located behind the driver's seat and protects the majority of the electrical components inside the cabin. For removal and replacement, follow the instructions provided on pages 8-52 through 8-56.

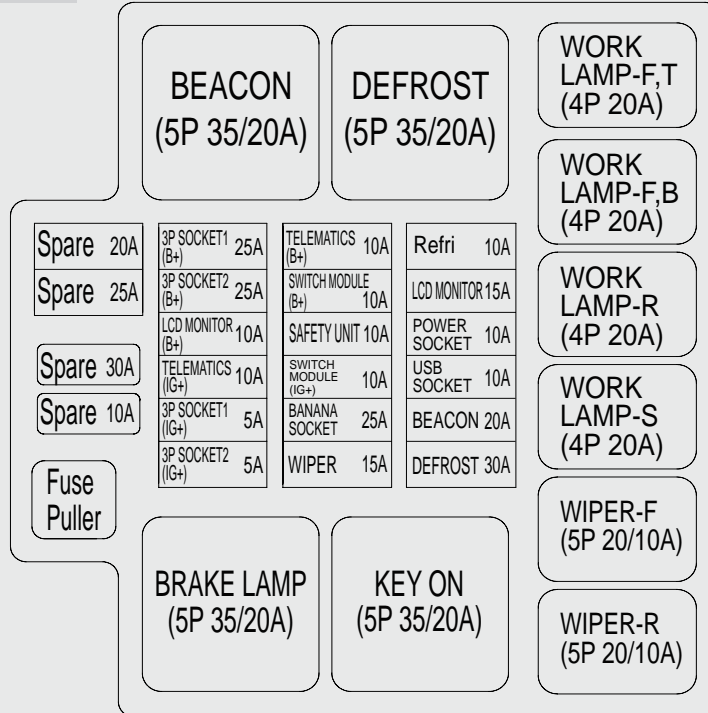
FUSE BOX 1



G31O701A



FUSE BOX 2



G31O702A

SLOW BLOW FUSE



(1) Slow Blow Fuse

The slow blow fuse is designed to withstand heavy loads yet protect the electrical system when an overload occurs. If you find a blown slow blow fuse, replace it with a new, genuine **KIOTI** part and review the electrical circuit for issues.

Slow Blow Fuse

60A (yellow)
140A (maroon)



⊕ IMPORTANT

- Not all fuses are manufactured equally. Using a non-KIOTI slow blow fuse could lead to electrical system damage in the event a short or overload situation occur.
- Refer to the chapter "Troubleshooting" in this manual or contact your Local Authorized KIOTI Dealer for assistance in diagnosing and repairing electrical system issues.

REPLACING LIGHT BULBS

The bulb capacities used in this tractor are listed in the table below.

No.	Bulb		Capacity
1	Headlamp		24W LED
2	Position lamp (Front)		5W
3	Turn signal lamp		21W
4	Work lamp		24W LED
5	Cluster	Charging warning light	3W
	Indicator	Others	1.4W
6	Backup lamp		21W

HEADLAMP

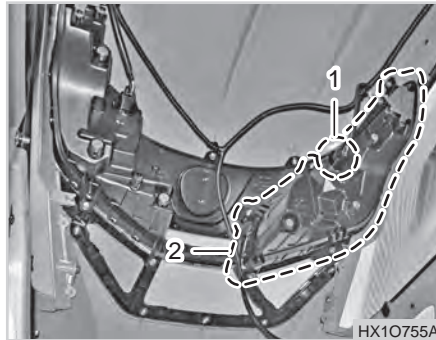


(1) Handle

(A) Push

(B) Lift Open

1. Park the tractor on a level surface, place the transmission in neutral, apply the parking brake, lower implements/attachments to the ground, turn the key off and remove the key from the ignition. It is also recommended to turn the battery switch to the off position before performing any repairs to the electrical system.



(1) Connector
(2) LED Lamp Assembly

2. Disconnect the wiring harness connector.
3. Remove the mounting nuts and gently slide the LED lamp assembly out of the hood.
4. Install in reverse order.

WARNING

- *If using a non-OEM bulb with a different rating, the electrical system could be damaged or possibly cause a fire.*
- *Use genuine KIOTI replacement bulbs and assemblies.*

CAUTION

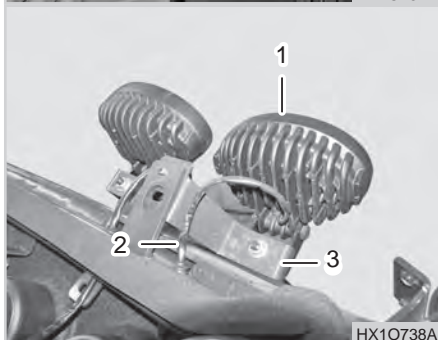
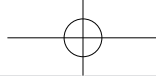
- The headlamps could temporarily fog up when sprayed with water or when operating the tractor in the rain due to a large temperature change between ambient and the temperature inside the lens of the light. This is a temporary and normal situation depending on environmental conditions.

REPLACING THE LED WORK LAMPS

LED work lights are installed to increase visibility. When replacing a work light, you must replace it as a work light assembly, not as a single lamp.

CAUTION

- There is a risk of fire if you do not use genuine headlights, so be sure to use genuine parts.



(1) LED work lamp (2) Wiring
(3) Work lamp mounting bracket

1. Park the tractor on a level surface, place the transmission in neutral, apply the parking brake, lower implements/attachments to the ground, turn the key off and remove the key from the ignition. It is also recommended to turn the battery switch to the off position before performing any repairs to the electrical system.

Remove the LED work lamp assembly from the mounting bracket.

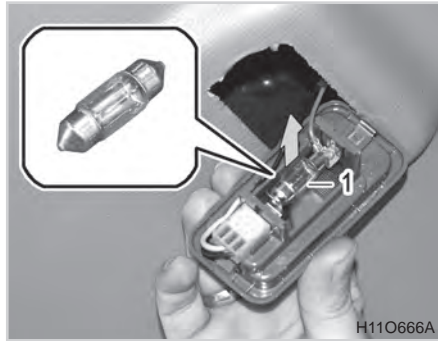
2. Disconnect the wires going to the lamp assembly. Plug the new lamp assembly into the tractor wiring harness. Mount the new light to the mounting bracket and tighten firmly.

ROOM LAMP



(1) Room Lamp

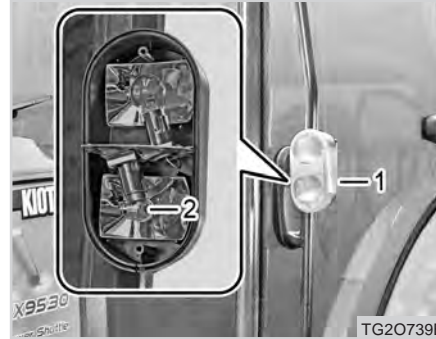
1. Using a small, flat screwdriver, gently pry the room lamp downward.



(1) Room Lamp Bulb

2. Remove the room lamp lamp bulb up and disconnecting it from the holder. Install a new lamp and assemble in reverse order. Install a new bulb.

TURN SIGNAL LAMP (FRONT)

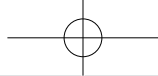


(1) Turn Signal Lamp (FRT)
(2) Turn Signal Lamp (FRT) Bulb

1. Park the tractor on a level surface, place the transmission in neutral, apply the parking brake, lower implements/attachments to the ground, turn the key off and remove the key from the ignition. It is also recommended to turn the battery switch to the off position before performing any repairs to the electrical system.

Unscrew the lens cover and remove it from the light assembly.

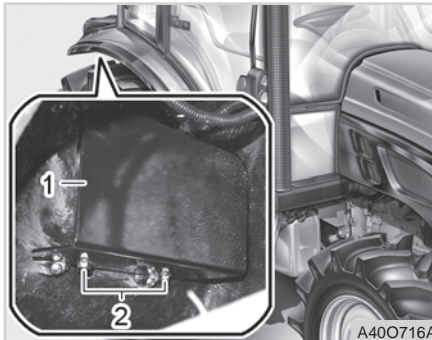
2. Press the bulb downward and turn counterclockwise to remove.
 3. Align the tabs of the new bulbs in the holder slots. Press down and rotate the bulb clockwise to install.
- Assemble the lens cover in reverse order.



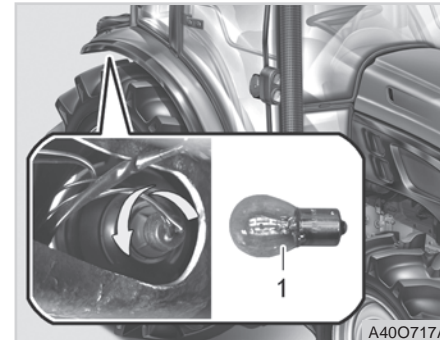
TURN SIGNAL LAMP (REAR)



(1) Turn Signal Lamp (RR)



(1) Protective Cover
(2) Mounting Bolt



(1) Turn Signal Lamp (RR) Bulb

1. Park the tractor on a level surface, place the transmission in neutral, apply the parking brake, lower implements/attachments to the ground, turn the key off and remove the key from the ignition. It is also recommended to turn the battery switch to the off position before performing any repairs to the electrical system.

2. Unscrew the mounting bolts from the inside of the rear fender.

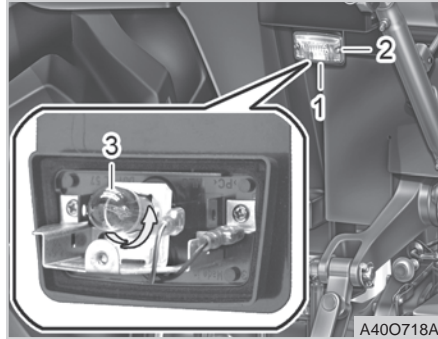
3. Press the bulb inward and turn counterclockwise to remove.

Align the tabs of the new bulb in the holder slots. Press inward and rotate the bulb clockwise to install.

Assemble the light to the rear fender in reverse order.



LICENSE PLATE LAMP



- (1) Reverse Lamp
(2) Mounting Bolt
(3) Reverse Lamp Bulb

1. Park the tractor on a level surface, place the transmission in neutral, apply the parking brake, lower implements/attachments to the ground, turn the key off and remove the key from the ignition. It is also recommended to turn the battery switch to the off position before performing any repairs to the electrical system.

Unscrew the lens cover and remove it from the light assembly.

Press the bulb inward and turn counterclockwise to remove.

Align the tabs of the new bulb in the holder slots. Press inward and rotate the bulb clockwise to install.

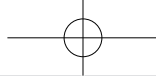
Assemble the light to the windshield washer reservoir shield in reverse order.

⚠ CAUTION

- Do not touch the bulb if it is still illuminated or right after it is turned off. You can be burnt by a hot bulb.
- For some bulbs which require delicate handling seek assistance from your Local Authorized Kioti Dealer.
- Do not touch the glass part of a halogen bulb. The bulb life can be shortened by finger prints, dust and moisture, or the bulb even can be broken. Clean it with a soft, dry cloth.

⚠ CAUTION

- Halogen bulbs contain compressed gas and can explode if dropped or scratched. Therefore, never use a bulb if it is scratched or was dropped.
- When separating a cover by prying it off with a screwdriver, be careful not to damage the cover or mounting surfaces.
- Before replacing a bulb, park the tractor on a level surface, place the transmission in neutral, apply the parking brake, lower implements/attachments to the ground, turn the key off and remove the key from the ignition. It is also recommended to turn the battery switch to the off position before performing any repairs to the electrical system.
- Install a new bulb with the same capacity after removing the original bulb.



CHECKING THE REFRIGERANT

Insufficient refrigerant adversely affects the A/C performance. Excessive refrigerant can also impact the A/C systems performance and damage components in the circuit.

If the operation of the A/C system seems inadequate or the system will not function, contact your Local Authorized **KIOTI** Dealer for assistance.

CAUTION

- **Park the tractor on a level surface, place the transmission in neutral, apply the parking brake, lower implements/attachments to the ground, turn the key off and remove the key from the ignition before performing any inspections or maintenance to the A/C system.**

- Refrigerant capacity: 900 g (1.98 lbs)
- Lubricant: PAG oil, 265 cc (8.3 cu.in.)

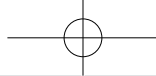
WARNING

- *To prevent injury from escaping high pressure fluids, only have an Authorized KIOTI Dealer or a certified HVAC technician perform any repairs to the HVAC system.*

SYSTEM PRESSURE CHECKS (PERFORMED BY CERTIFIED HVAC TECHNICIANS OR AUTHO- RIZED KIOTI DEALER ONLY)

1. Operate the A/C as follows:

- Engine rpm: Approx. 1,500 rpm
- Temperature control switch: Maximum cooling
- Blower speed control dial: Level 4
- A/C switch: ON



8-64

HX1302/1402

REPLACING RADIATOR HOSE AND CLAMP

1. See pages 8-34.

REPLACING POWER STEER- ING LINE

1. See pages 8-35.

REPLACING FUEL LINE

1. See pages 8-29.

REPLACING INTAKE AIR LINE

1. See pages 8-35.

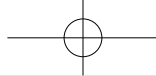


STORAGE AND FLUIDS DISPOSAL

TRACTOR STORAGE	9-2
DAILY STORAGE	9-2
LONG-TERM STORAGE	9-2
USING TRACTOR AFTER STORAGE	9-4
USAGE AND FLUIDS DISPOSAL	9-5

9

9



TRACTOR STORAGE DAILY STORAGE

1. Before putting your tractor and equipment away after a hard days work clean the radiator and engine areas with compressed air or other methods to remove dust and debris. If possible, blowing dust off the entire machine or gently rinsing with a hose makes daily inspections for leaks and loose hardware quick and easy.
2. Whenever possible, store the tractor under cover.

WARNING

- *When operating the tractor in an enclosed area, ventilate the area to release exhaust gases to the outside. Exhaust gases are colorless and mostly odorless but can be extremely harmful and even cause death if exposed for long periods of time.*

3. Remove weights from the tractor. Disconnect any implements mounted to the three-point hitch.
4. Check the cooling system as winter approaches to be sure the anti-freeze mixture is sufficient to prevent freezing in your area.
5. Turn the battery switch to the "off" position after exiting the tractor. Always remove the ignition key and store it separately from the tractor.

LONG-TERM STORAGE

Follow the instructions below if the tractor is not to be used for a long period of time (greater than 2 months between uses). This is to operate the tractor again with minimum preparation after long-term storage. Repeat this procedure if the tractor hasn't been used for one year.

IMPORTANT

- **If the tractor is not used for an extended period of time, follow the instructions below to prevent corrosion and performance deterioration of the tractor while it is stored.**

1. Inspect for loose or missing hardware. Tighten or replace as necessary.
2. Grease all zerks on the tractor. Apply a light grease film on areas where bare metal is exposed and will rust.
3. Detach the weights from the tractor body.

4. Inflate the tires to a maximum pressure. When parked on dirt, it is recommended to park the tractor on 1"-2" thick blocks to raise the tires off the ground slightly to minimize deterioration from moisture changes in the soil.
5. Change the engine oil and filter and the engine to circulate oil throughout the engine for 10 minutes before placing in storage.
6. With all attachments lowered to the ground, coat any exposed areas like loader cylinder rods, 3-point lift cylinder rods with a light film of grease.
7. Remove the battery from the tractor. Store the battery following the battery storage procedures on page 7-30.
8. Keep the tractor in a dry place where the tractor is sheltered from rain. If stored outside cover the tractor if possible.

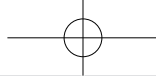
9. Clean the engine area and remove dust, debris and items that pests or rodents may utilize for nesting. Wash the tractor if possible to remove all dust, fluids, etc from the outside of the machine.
10. Add grease to all the grease fitting.
11. Flush the cooling system and drain water from it. Refill with a 50:50 solution of fresh water and ethylene glycol or a stronger solution of glycol if the ambient temperatures require a lower freeze point.
12. When possible, store the tractor on stands (adequately sized for the weight of the tractor) to remove any weight from the tires.
13. Set all control neutral and apply the parking brake.
14. Cover the exhaust pipe or any open tubes to prevent pests or rodents from trying to nest in these areas.

15. Treat the fuel with an additive to increase cetane rating and aide with moisture intrusion. Fill the fuel tank to full. Also fill the DEF tank to full.

 **NOTE**

Keeping the fuel and DEF tanks full will help prevent condensation build-up in the tanks during storage.

16. Attach a tag to the tractor to confirm the storage condition, date, hours on the unit, etc.
17. Interlock the brake pedals and apply the parking brake.
18. Remove the battery from the tractor in winter and store it indoors.



USING TRACTOR AFTER STORAGE

CAUTION

To avoid injury :

- **NEVER** perform any repairs, maintenance or attempt to clean the tractor while the engine is running.
- **Never** run the engine in an enclosed area without proper ventilation system in order to prevent poisoning by exhaust gas.
- **When** storing the tractor, remove the key from the switch and store it separately in order to prevent an unauthorized person from operating the tractor and being injured.
- **Cover** the tractor after the muffler and the engine have cooled down.
- **If** the battery is not removed as part of the storage process, turn the battery switch to "off" and disconnect both the positive and negative terminals from the battery.

1. Check the tire air pressure and inflate the tires if they are low.
2. Install a fully charged battery.
3. Check the fan belt tension.
4. Check all fluid levels. (Engine oil, transmission/hydraulic oil, engine coolant, front axle fluid and fluids for any implements or attachments connected to the tractor.)
5. Check the DEF level in the tank and add DEF as necessary.
6. Remove grease from the exposed cylinder rods and other areas applied to prevent corrosion and rust build-up.
7. Apply grease to the lubrication points.
8. Remove the cover from the exhaust pipe and any other areas covers may have been applied.
Raise the hood and inspect the engine area for debris, rodent nesting, cut or damaged electrical wires due to rodents or pests.
9. Get onto the tractor and start the engine. Allow the engine to idle for 3-5 minutes before operating any portion of the tractor.
10. Check the instrument panel for any warning lights or indicators that do not go out after the engine is started. After operating the engine for 3-5 minutes, begin operating the 3-point hitch, clutch, brakes, etc. while the tractor is in neutral. Cycle each system a minimum of 5 times to move fluids through each circuit.
11. Drive the tractor outside in an open area for 5-10 minutes. Shift through all gears in low range and medium range while increasing engine speed to around 1,500 RPM's. Engage the PTO (with no implement attached) and operate for 3-5 minutes while driving the tractor.
Stop the tractor on a flat, level surface and disengage the PTO.



USAGE AND FLUIDS DISPOSAL

Place the transmission in neutral, apply the parking brake, lower any implements or attachments to the ground, turn the engine off and remove the key from the ignition.

Walk around the tractor again and inspect for loose or missing hardware. Raise the hood and inspect for leaks, loose clamps, or anything that may require maintenance. After sitting for 5 minutes, re-check all fluids again. Top off as necessary.

12. Start the engine, release the parking brake, and check the brake condition while driving forward. Adjust the brake pedals if necessary.
13. Operate the tractor for another 15 minutes.

Stop the tractor on a flat, level surface and disengage the PTO. Place the transmission in neutral, apply the parking brake, lower any implements or attachments to the

ground, turn the engine off and remove the key from the ignition.

Walk around the tractor again and inspect for loose or missing hardware. Raise the hood and inspect for leaks, loose clamps, or anything that may require maintenance. After sitting for 5 minutes, re-check all fluids again. Top off as necessary.

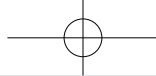
In order to protect the environment, dispose of all fluids and parts by following all local regulations for disposal, recycling, etc. :

1. When changing the oil or coolant by yourself, be careful not to spill it and dispose or recycle used oil or coolant through available resources that meet Federal, state/provincial and local regulations.



MEMO





TROUBLESHOOTING

ENGINE TROUBLESHOOTING 10-2

TRACTOR TROUBLESHOOTING..... 10-4

10

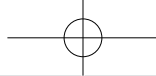
10



This troubleshooting chart summarizes simple service items for users who are familiar with mechanical systems. For more detailed service items, contact your Local Authorized **KIOTI** Dealer.

ENGINE TROUBLESHOOTING

CAUSE	COUNTERMEASURES
1. Difficulty starting engine	<ul style="list-style-type: none">• Check the fuel tank and fuel filter for leaks, damage hoses, loose clamps, etc.• Drain water from the filter, look for signs of waxing/gelling in cold weather.• As all fuel will be filtered by the filter, if there should be water of other foreign matters on the filter, replace the filter.
	<ul style="list-style-type: none">• Air or water mixed in fuel system.• If air is in the fuel filter or injection lines, the fuel pump will not work properly.• Inspect all fuel lines for damage, loose or missing hardware, signs of leakage, etc.• Loosen air vent screw over fuel filter and cycle the hand pump on the filter head. Tighten the air vent when fuel is discharged with no air bubbles when the pump is actuated.
	<ul style="list-style-type: none">• Valve clearance needs minimum specifications• Take your unit to your Local Authorized KIOTI Dealer to have the valve clearance adjusted. When the engine is cold:<ul style="list-style-type: none">- Inlet : 0.25 mm (0.010 in.)- Exhaust : 0.30 mm (0.012 in.)
	<ul style="list-style-type: none">• Engine oil become thick in cold weather and engine cranks slow.• Change grade of oil according to the weather. (10W-30 from -30F to 90F. 15W-40 from 0F to 120F)
	<ul style="list-style-type: none">• Check battery condition.• Remove the battery and have it load tested to confirm it meets minimum specifications at your Local Authorized KIOTI Dealer or a local auto parts store.



CAUSE		COUNTERMEASURES
1. When engine is difficult to start	• Start motor does not rotate when key switch is turned	• Make sure the clutch pedal is fully depressed.
		• Place the PTO switch in the "OFF" position
		• Inspect the battery for loose connections, corroded terminals, etc.
2. Low HP or engine performance	• Valve out of adjustment	• Take your unit to your Local Authorized KIOTI Dealer to have the valve clearance adjusted. When the engine is cold: - Inlet : 0.25 mm (0.010 in.) - Exhaust : 0.30 mm (0.012 in.)
	• Air cleaner is dirty	• Clean the element at every 100 hours of operation. • Replace the element after 1 year of operation or more frequently if operated in extremely dusty environments.
3. Heavy exhaust smoke or white color	• Check the fuel filter condition and for water contamination. Replace if needed. • Check the fuel system for damaged hoses, loose or missing hardware, leaks, etc.	• Select good quality fuel. Temperature - Above -10°C (14°F) - Below -10°C (14°F) Fuel type NO.2 Diesel NO.1 Diesel

※ Consult your Local Authorized **KIOTI** Dealer for assistance.



TRACTOR TROUBLESHOOTING

CAUSE		COUNTERMEASURES
1. When tractor does not move while engine is running	• Shift lever is in neutral position	• Check the shift levers.
	• Parking brake is applied	• Release the parking brake.
2. Clutch is not operating correctly	• Clutch slips (does not pull under load)	• Contact Your Local Authorized KIOTI Dealer.
	• Clutch cannot be disengaged	
3. Brakes do not operate correctly	• Brake does not operate or only one brake pedal operates	• The brake pedal play is excessive. Adjust the play.
		• Brake fluid is low. Check the brake fluid in the reservoir and top off as needed.
		• If the brakes do not stop the tractor, suspend use immediately and contact your Local Authorized KIOTI Dealer for assistance.
	• Brake pedal does not return properly	• The brake return spring is damaged. Replace it.
4. Steering wheel is not operating correctly	• Steering wheel is heavy or vibrates	• Remove cap from master cylinder and confirm cap breather is operating correctly. If the pedals will not return, suspend use immediately and contact your Local Authorized KIOTI Dealer for assistance.
		• Check the toe-in and adjust as needed.
		• Check tire inflation. Left side and right sides pressures should be the same. Inflate to the manufacturer's recommended pressure.
	• Steering wheel play is excessive	• Loose or missing wheel hardware or damaged wheel. Tighten, replace or repair as needed.
		• Inspect the steering shaft, steering motor and tie rod ends for excessive wear or damage. Replace worn or damaged components as required.

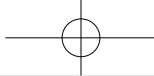


CAUSE	COUNTERMEASURES
5. Hydraulic system issues	• Oil is leaking
	• Hose clamp is loose. Re-tighten it.
	• Cracked hydraulic pipe. Remove and replace with a new pipe.
	• Check for a blown fuse. Check all settings and adjustments in the arm rest and adjust as needed.
• 3-point hitch does not operate	• Inspect for leaks, broken or damaged lift cylinder and linkages. Repair or replace as needed.
	• The transmission fluid is insufficient. Fill to the specified level.
	• The hydraulic oil filter is clogged. Replace.
	• Inspect for leaks, broken or damaged lift cylinder and linkages. Repair or replace as needed.
• 3-point hitch does not raise	• Set the draft control lever to the "Deep" position.
	• Select the highest top link hole to decrease draft sensitivity.
	• The fuse is blown. Check the wiring and replace the fuse.
	• The bulb is blown. Replace it
• 3-point hitch vibrates	• The ground terminals have a poor connection.
	• The switch is not functioning. Check and change the switch.
	• Check the battery and alternator.
	• The horn switch is faulty. Replace it.
6. Electrical system issues	• Headlamps do not turn on
	• The wiring is faulty. Repair or replace it.
	• The horn is damaged. Repair or replace it.
	• Battery is not charging
• Horn does not sound	



CAUSE		COUNTERMEASURES
6. Electrical system issues	• Turn signal lamps do not blink	• The bulb is blown. Replace it.
		• The hazard flasher is faulty. Repair or replace it.
		• The switch is not functioning. Check and change the switch.
	• Work lamps do not come on	• The bulb is blown. Replace it.
7. Heater/air conditioner system issues	• Fan speed is slow or no air is coming out of the vents	• The switch is not functioning. Check and change the switch.
		• The fan speed control switch are faulty. Check, repair and replace as needed.
		• The air intake filters are clogged. Clean or replace as needed.
		• The fuse is blown. Check the wiring and replace the fuse.
	• Abnormal noise occurs	• The compressor belt is loose. Adjust the belt tension.
		• Internal HVAC components are damaged. Inspect, repair and replace as needed.
	• Refrigerant and oil are leaking	• A hose or o-ring are leaking. Repair or replace as needed.
		• The hose securing bolt is loose or missing. Tighten or replace as needed.
	• Diminished cooling performance	• The refrigerant is insufficient. See your Local Authorized KIOTI Dealer.
		• The compressor is faulty. Repair or replace it.
	• Compressor clutch does not operate	• The voltage is low. Inspect and replace the fuse, relay or wiring.

※ Consult your Local Authorized **KIOTI** Dealer for assistance.



INDEX

INDEX..... 11-2

11

11



NUMERIC

3-PIN POWER SOCKETS & BANANA JACKS.....	4-63
3-POINT HITCH CONTROL SYSTEM	6-21
3-POINT HITCH IMPLEMENT AND LOADER OPERA- TION	7-1
4WD LAMP	4-19
4WD SWITCH	4-43
7-PIN POWER SOCKET	4-70

A

A/C REFRIGERANT INSPECTION	4-70
ACCESSORY	4-62
ADDITIONAL FRONT WEIGHT	4-76
ADDITIONAL WEIGHT(IF EQUIPPED)	4-76
ADJUSTING AIR CONDITIONER BELT TENSION	8-31
ADJUSTING ARMREST ANGLE	4-51
ADJUSTING BRAKE PEDAL	8-30
ADJUSTING CONTROLS	6-10
ADJUSTING ENGINE VALVE CLEARANCE	8-42
ADJUSTING FAN BELT TENSION	8-20
ADJUSTING PROCEDURE	8-34
ADJUSTING THE HEADREST HEIGHT	4-51
ADJUSTING THE HEIGHT OF THE RIGHT HAND CONTROL ARM	4-48

ADJUSTING THE LUMBAR SUPPORT	4-51
ADJUSTING TOE-IN	8-34
ADJUSTMENT OF TELESCOPIC STABILIZERS	7-8
ADJUSTMENT OF TOP LINK	7-6
AIR CONDITIONER MAINTENANCE	4-69
AIR CONDITIONER SWITCH	4-66
ALL MENU	5-4
ANTENNA	4-61
AUTO 2WD SWITCH	4-44
AUTO DRAFT FUNCTION	4-41

B

BACKGROUND THEME	5-24
BATTERY	8-28
BATTERY CHARGING LAMP	4-17
BATTERY SWITCH	8-29
BEACON LIGHT BUTTON (IF EQUIPPED WITH A BEACON LIGHT)	4-45
BELTS AND RUBBER PARTS	2-5
BLEEDING BRAKE FLUID	8-23
BLUETOOTH MUSIC	5-15
BLUETOOTH PHONE	5-17
BRAKE PEDAL	4-36
BRAKE PEDAL FREE PLAY	8-30



BRAKE PEDAL RESTING HEIGHT	8-21
BRAKE(ONE SIDE) LAMP	4-20
BRIGHTNESS	5-23
BT CONNECTION SETUP	5-29

C

CABIN SYSTEMS	4-57
CALIBRATION BUTTON	4-45
CALL HISTORY	5-17
CHANGING ENGINE OIL AND REPLACING FILTER ..	8-39
CHANGING FRONT AXLE CASE OIL	8-35
CHANGING OIL IN THE PLANETARY HUBS	8-36
CHARGING	8-29
CHECK AND CLEAN CABIN AIR FILTERS	8-47
CHECK ENGINE WARNING LAMP	4-25
CHECKING AIR CONDITIONER HOSES	8-27
CHECKING AND ADDING DEF	8-15
CHECKING AND ADDING FUEL	8-13
CHECKING AND REPLACING WINDSHIELD WIPERS	8-49
CHECKING BRAKE AND CLUTCH PEDALS	8-20
CHECKING BRAKE FLUID	8-22
CHECKING BRAKE PEDALS	8-21
CHECKING CABIN ISOLATORS	8-27
CHECKING COOLANT LEVEL	8-18

CHECKING ENGINE OIL LEVEL	8-17
CHECKING FUEL LINES	8-27
CHECKING GAUGES, METER AND WARNING LAMPS	8-20
CHECKING INTAKE AIR LINE	8-33
CHECKING LIGHTS	8-20
CHECKING POWER STEERING HOSE AND OIL LINE	8-33
CHECKING RADIATOR HOSE AND CLAMP	8-32
CHECKING SEAT BELT AND CABIN	8-20
CHECKING THE REFRIGERANT	8-63
CHECKING TRANSMISSION FLUID LEVEL	8-14
CHECKING WARNING LAMPS	6-6
CHECKING WHEEL BOLT / NUT TORQUE	8-24
CLEANING AIR CONDITIONER CONDENSER	8-19
CLEANING AND CLEANING AND REPLACING EN- GINE AIR FILTER	8-26
CLEANING GRILL, RADIATOR SCREEN	8-18
CLUTCH PEDAL	4-35
COMBINATION SWITCH	4-7
COMPONENTS FOR ADDITIONAL FRONT WEIGHT ..	4-77
CONNECTING AND DISCONNECTING AN IMPL- EMENT	6-24
CONNECTING THE TOP LINK	7-7
CONNECTION	6-24
CONTROL SETTING	5-8



CREEP SPEED LEVER	4-32
CRUISE PTO LAMP	4-20
CUP HOLDER AND STORAGE	4-64

D

DAILY CHECK LIST	8-3
DAILY CHECKLIST	6-2
DAILY STORAGE	9-2
DATE AND TIME	5-35
DAYLIGHT AND NIGHT	5-22
DECAL MAINTENANCE	1-38
DECAL MOUNTING LOCATION	1-31
DECALS	1-33
DEF LEVEL WARNING LAMP	4-25
DEF QUALITY LAMP	4-26
DEFROST BUTTON	4-46
DESCRIPTION OF OPERATING SYSTEM	4-1
DEVICE	5-41
DIALER	5-21
DIFFERENTIAL LOCK PEDAL (REAR)	4-49
DIRECTIONS FOR STORAGE	8-30
DISCONNECTION	6-24
DOUBLE ACTING LEVERS	4-55
DOUBLE ACTING VALVES	6-21

DPF REGENERATION SWITCH	4-9
DPF REGENERATION UNDERWAY LAMP	4-21
DPF REGENERATION WARNING LAMP	4-22
DPF REGENERATION WARNING LAMP	4-21
DRAFT LAMP	4-19
DRAINING WATER FROM BELLHOUSING	8-46
DRAW BAR	7-9
DRIVER'S SEAT'S STORAGE BOX	4-52
DRIVING ON SLOPE	7-13
DRIVING ON SLOPES	6-16

E

ECO/MODE SELECTION SWITCH	4-11
EMISSION WARNING LAMP	4-27
ENGINE COOLANT TEMPERATURE GAUGE	4-15
ENGINE OIL PRESSURE WARNING LAMP	4-16
ENGINE SERIAL NUMBER	2-2
ENGINE SETTING	5-6
ENGINE TROUBLESHOOTING	10-2
ENTRANCE	4-58
ESSENTIAL REPLACEMENT PARTS	2-4
EVERY 1,000 HOURS	8-42
EVERY 100 HOURS	8-26
EVERY 2 YEARS	8-44



EVERY 200 HOURS	8-32
EVERY 400 HOURS	8-35
EVERY 400 HOURS OR ANNUALLY	8-43
EVERY 50 HOURS	8-24
EVERY 500 HOURS OR ANNUALLY	8-39
EXIT	4-59
EXTERIOR DEVICES	4-58
EXTERIOR VIEW	4-4
EXTERNAL DIMENSIONS.....	3-2
EXTERNAL LIFT CONTROL SWITCH.....	4-56

F

FACTORY RESET	5-39
FAN SPEED CONTROL DIAL.....	4-66
FAVORITE	5-18
FILTERS	2-5
FLUSHING COOLING SYSTEM AND CHANGING COOLANT	8-44
FOOT THROTTLE	4-38
FORE/AFT ADJUSTMENT.....	4-49
FRONT WHEEL INSTALLATION PATTERN.....	4-75
FUEL GAUGE	4-15
FUEL LEVEL WARNING LAMP	4-27

G

GENERAL ERROR CODE DISPLAY	4-28
GENERAL PRECAUTIONS	1-2
GENERAL SPECIFICATIONS	3-2
GENERAL SPECIFICATIONS	3-3
GENERAL TIRE INFORMATION.....	4-71
GLOW PLUG LAMP	4-18
GROUND SPEED PTO	4-35

H

HAND THROTTLE LEVER	4-38
HARD KEY	5-2
HAZARD LAMP SWITCH.....	4-9
HEAD LIGHT HIGH BEAM LAMP	4-17
HEAD LIGHT SWITCH.....	4-7
HEADLAMP.....	8-57
HEATER AND AIR CONDITIONER	4-65
HITCH SETTING	5-8
HOME	5-3
HORN SWITCH	4-8
HORN SWITCH	4-54
HOW TO OPEN THE HOOD.....	8-12
HOW TO WARM THE ENGINE	6-8



I

IDENTIFICATION WARRANTY	2-1
IMPLEMENT LIMITATIONS	3-10
INDEPENDENT PTO	4-35
INDEX	11-2
INFLATION PRESSURES	4-72
INSIDE REAR VIEW MIRROR	4-62
INSTALLING PTO SHAFT	7-10
INSTRUMENT PANEL	4-13
INTERIOR DEVICES	4-57

J

JOYSTICK LEVER	4-53
JOYSTICK LEVER	7-14
JUMP STARTING	6-9

K

KEY SWITCH	4-6
------------------	-----

L

LANGUAGE	5-36
LICENSE PLATE LAMP	8-62
LIQUID BALLAST	4-77
LOADER	7-12

LONG-TERM STORAGE	9-2
LUBRICANTS	8-10
LUBRICATION AND GREASE LOCATIONS	8-24

M

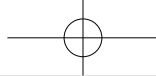
MACHINE VIBRATION	3-7
MAINTENANCE	8-1
MAINTENANCE CHECK LIST	8-3
MAINTENANCE SCHEDULE CHART	8-5
MAINTENANCE SCHEDULE CHART BY OPERATING HOURS	8-8
MISSION SETTING	5-7
MONITOR	5-1
MOUNTING LOCATION	4-5

N

NOISE LEVELS	3-6
--------------------	-----

O

OILS AND FLUIDS	2-4
OPERATING THE CONTROLS	4-29
OPERATING THE ENGINE	6-3
OPERATING THE PTO	1-17



OPERATING THE TRACTOR	6-10
OPERATION	6-1
OPERATION OF 3-POINT HITCH IMPLEMENTS	7-6
OPTIONAL COOL/WARM STORAGE (OPTION).....	4-64
OTHER COMPONENTS	2-6
OVERHEATING PRECAUTIONS	8-32

P

PARKING	6-14
PARKING BRAKE LAMP	4-18
PARKING BRAKE LEVER	4-37
PARKING THE TRACTOR	1-17
PERFORMING DAILY CHECKS	8-12
PHONE BOOK	5-20
POSITION CONTROL LEVER.....	6-21
POSITION CONTROL LEVER AND SWITCH.....	4-47
POWER SOCKET AND USB CHARGING PORT	4-62
PRECAUTIONS BEFORE OPERATION.....	1-2
PRECAUTIONS DURING OPERATION	1-11
PRECAUTIONS DURING SERVICING	1-19
PRECAUTIONS FOR HANDLING.....	8-28
PRECAUTIONS WHEN CLEANING THE TRACTOR....	1-30
PRECAUTIONS WHEN ENTERING/EXITING THE WORK FIELD.....	6-17

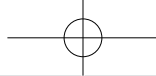
PRECAUTIONS WHEN USING.....	1-27
PRECAUTIONS WHEN USING POWER STEERING ...	6-19
PRECAUTIONS WHEN USING THE LOADER.....	1-24
PRECAUTIONS WHILE DRIVING ON THE ROAD	6-17
PRE-OPERATION CHECKS.....	6-2
PT1/2 COUPLER SOCKET (IMPLEMENT)	6-24
PTO & PTO SHIELD	7-10
PTO AUTO/MANUAL SWITCH	4-40
PTO LAMP.....	4-18
PTO MAIN SWITCH	4-39
PTO SELECTION LEVER	4-34
PTO SHIFT LEVER	4-34
PTO SPEED MARK	4-14

R

RADIO.....	5-13
RANGE GEAR SHIFT LEVER	4-31
REAR CAMERA	5-12
REAR WHEEL INSTALLATION PATTERN	4-76
REAR WINDOW	4-59
REMOTE HYDRAULIC	6-21
REMOTE PTO OPERATION.....	4-41
REMOVAL AND INSTALLATION OF 3-POINT HITCH IMPLEMENT (WITH PTO SHAFT).....	7-2



REMOVING WATER FROM THE FUEL FILTER.....	8-24	SEAT ADJUSTMENT.....	4-49
REPLACING AIR CLEANER PRIMARY ELEMENT.....	8-43	SEAT BELT.....	4-52
REPLACING CABIN AIR FILTERS	8-46	SEAT HEATING SYSTEM.....	4-52
REPLACING CABIN FUSE	8-55	SEATBACK RECLINING.....	4-50
REPLACING FUEL FILTER	8-41	SERVICE AS REQUIRED	8-46
REPLACING FUEL LINE.....	8-64	SHIFT SWITCH.....	4-48
REPLACING FUSE	8-52	SHIFT SWITCH.....	4-54
REPLACING INTAKE AIR LINE	8-64	SHUTTLE SHIFT LEVER.....	4-30
REPLACING LIGHT BULBS	8-57	SINGLE ACTING AND DOUBLE ACTING CYLINDER..	6-23
REPLACING POWER STEERING LINE	8-64	SLOW BLOW FUSE	8-56
REPLACING RADIATOR HOSE AND CLAMP.....	8-64	SOUND TUNING	5-27
REPLACING THE LED WORK LAMPS	8-58	SPECIFICATIONS	3-1
REPLACING TRANSMISSION FLUID AND FILTER	8-36	STANDARD SIZE BY IMPLEMENT	3-10
RESET	5-25	STARTING THE ENGINE.....	6-3
RESET	5-28	STOPPING THE ENGINE	6-7
RESET	5-34	STORAGE AND FLUIDS DISPOSAL.....	9-1
RINGTONE VOLUME.....	5-32	SUNROOF.....	4-65
RISK OF OVERTURNING	1-8	SUNSHADE.....	4-64
ROOM LAMP.....	8-59	SWITCHES.....	4-5
ROOM LAMP.....	4-62	SWIVEL ROTATION FUNCTION.....	4-50
S		SYSTEM BT SETUP.....	5-33
SAFETY DECAL MAINTENANCE.....	1-31	SYSTEM SETTING → BLUETOOTH SETUP	5-29
SAFETY PRECAUTIONS	1-1	SYSTEM SETTING → DATE AND TIME	5-35
		SYSTEM SETTING → DISPLAY	5-22



SYSTEM SETTING → LANGUAGE	5-36
SYSTEM SETTING → SOUND	5-26
SYSTEM SETTING → SYS DIAGNOSIS	5-40
SYSTEM SETTING → SYSTEM INFO	5-37
SYSTEM SETTING → UNITS	5-42
SYSTEM UPDATE	5-38

T

TACHOMETER / HOUR METER	4-14
TELESCOPING FUNCTION	4-37
TEMPERATURE CONTROL SWITCH	4-67
TILT STEERING	4-37
TIRES, WHEELS AND BALLAST	4-71
TOE-IN JUSTMENT	8-35
TRACTION / DEPTH	5-9
TRACTOR SERIAL NUMBER	2-2
TRACTOR STORAGE	9-2
TRACTOR TROUBLESHOOTING	10-4
TRAILERING THE TRACTOR	6-18
TRAVELING SPEEDS	3-8
TREAD	4-73
TROUBLESHOOTING	10-1
TURN SIGNAL LAMP (FRONT)	8-60
TURN SIGNAL LAMP (REAR)	8-61

TURN SIGNAL LAMPS	4-17
TURN SIGNAL LIGHT SWITCH	4-8
TURNING	6-16

U

UNITS	5-42
UPDATE	5-43
USAGE AND FLUIDS DISPOSAL	9-5
USB MOVIE	5-16
USB MUSIC	5-14
USING TRACTOR AFTER STORAGE	9-4

V

VEHICLE COMMUNICATION	5-40
VEHICLE IDENTIFICATION NUMBERS	2-2
VEHICLE INFO	5-5
VENT MODE CONTROL DIAL	4-67
VERSION INFO	5-37
VOLUME LEVEL	5-26

W

WALK AROUND INSPECTION	8-12
WARMING UP	6-8
WARRANTY	2-7

WATER-IN-FUEL WARNING LAMP	4-26
WHEEL INSTALLATION DIRECTION	4-75
WHEEL TORQUE AND DIRECTION	4-75
WHEN DRIVING THE TRACTOR	1-15
WHEN LOADED BUCKET AND REAR BALLAST ARE INSTALLED.....	7-13
WHEN STARTING THE ENGINE	1-11
WHEN UNLOADED BUCKET AND REAR BALLAST ARE INSTALLED.....	7-13
WHEN USING THE 3-POINT HITCH	1-18
WIPER	4-60
WIPER BLADE REPLACEMENT	8-50
WIPER INSPECTION AND ARM REMOVAL.....	8-49
WORK (HMS)	5-10
WORK LIGHT 1, WORK LIGHT 2, ESCORT LIGHT SETTING.....	5-11
WORK LIGHT SETTING	5-11
WORK/TRAVEL RESPONSE BUTTON	4-45
WORKING LIGHT	4-60