

FOREWORD

Congratulations, and welcome to the fabulous world of **CS2530CH / CS2530CH-EU / CS2230H / CS2530H / CS2530H-EU** ownership, where serious work is made fun again!

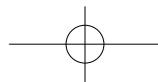
This versatile tractor is a culmination of the entire tractor and diesel knowledge gained by the Daedong Mobility Co.LTD, since 1947 and has been designed with the finest materials, and quality control standard.

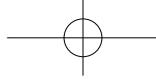
Knowledge of tractor operation is essential for many years of dependable service and reliability. To help new owners familiarize themselves with the **CS2530CH / CS2530CH-EU / CS2230H / CS2530H / CS2530H-EU**, it is the policy of **KIOTI** tractor to provide an owner's manual which includes helpful information about tractor safety, operation and maintenance. If the information you seek is not found in this manual, your **KIOTI** tractor dealer will be happy to help you.

Please feel free to contact **DAEDONG MOBILITY CO.LTD** with your questions/concerns.

< NOTE >

- Make sure to read this manual carefully and keep it reading accessible 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 EU 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	NON CABIN	CABIN
1. ROPS (protection against overturning)	Yes	Yes
2. FOPS (protection against objects falling from above)	No	No
3. OPS (protection against penetration of objects from sides) protection against hazardous chemicals	No (Category I)	No (Category I)

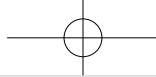
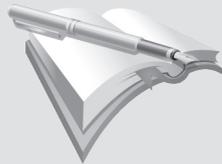
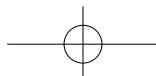


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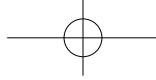


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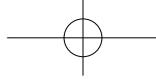


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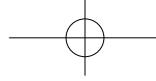


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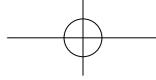


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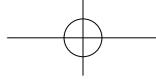


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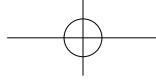
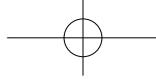


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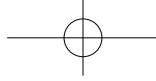
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SAFETY AND VEHICLE DAMAGE WARNING

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

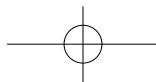
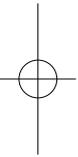
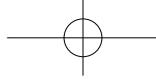
 WARNING	<p>This indicates that a condition may result in harm, serious injury or death to you or other persons if the warning is not heeded. Follow the advice provided with the warning.</p>
 CAUTION	<p>This indicates that a condition may result in damage to your vehicle or its equipment if the caution is not heeded. Follow the advice provided with the caution.</p>
 IMPORTANT	<p>This mark indicates emphasis on notable characteristics of working procedures, and information about technology for easier operation.</p>
 NOTE	<p>This indicates that interesting or helpful information is being provided.</p>



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.

	Turn L		High Beam		Check Engine
	Gear N		Tail Lamp		High Temp Warning
	Seat		Glow		Low Fuel
	Pedal Brake		Charge		Cruise
	PTO		Engine Oil		ECO
	Turn R		Parking Brake		



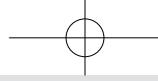


SAFETY PRECAUTIONS

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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.

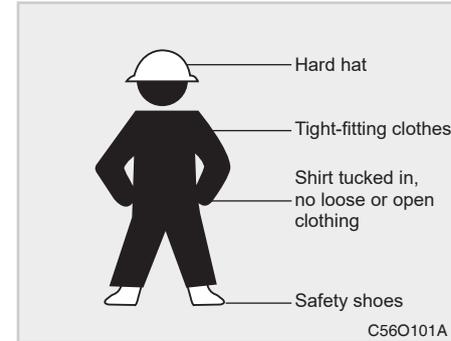
- Individuals who have not read and understand the contents of this owner's manual.
- Individuals who have not been trained on the safe and proper operation of this equipment.

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.



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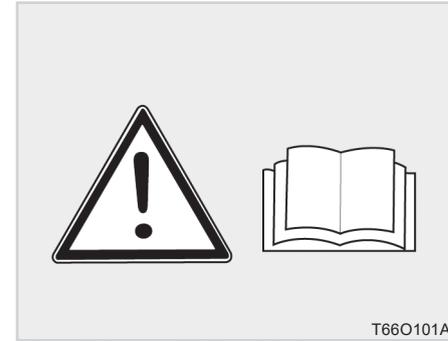
This tractor is designed for use in agricultural settings and applications. This tractor should be used in conjunction with equipment designed and manufactured for agricultural applications that are intended to be pulled by a drawbar or attached to a 3-point hitch of the proper size and category matching 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.

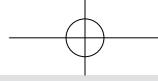
This tractor should be operated by a well-trained and skilled person familiar with the machine and the information provided in this manual. Service and maintenance should be performed by an Authorized **KIOTI** Dealer or a skilled technician familiar with this tractor.

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.



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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.
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.



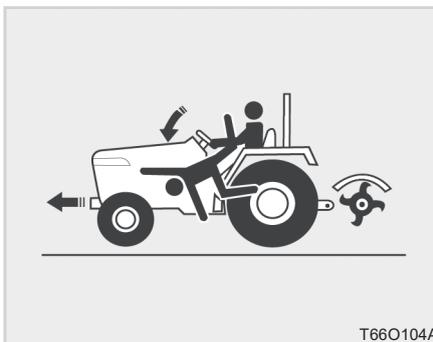
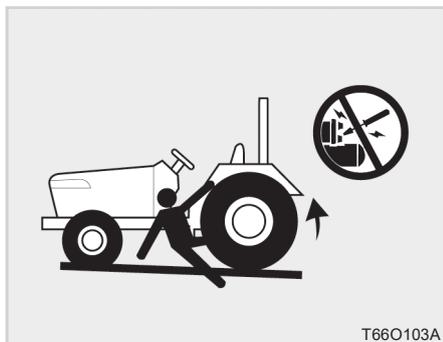
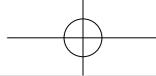
4. Replace any missing or damaged decals as soon as it is possible. A list of decals is shown on page 1-31 through 40.



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

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

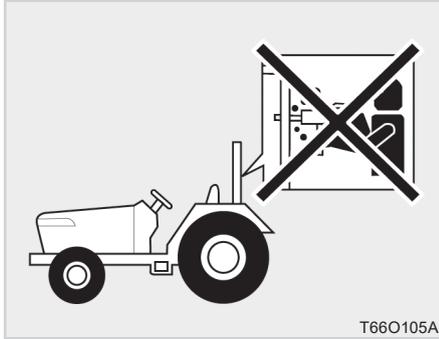
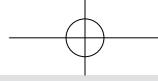
8. Before making reverse movements with your tractor, you should always check to see that the path around and behind the tractor is clear of obstructions or people.



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.

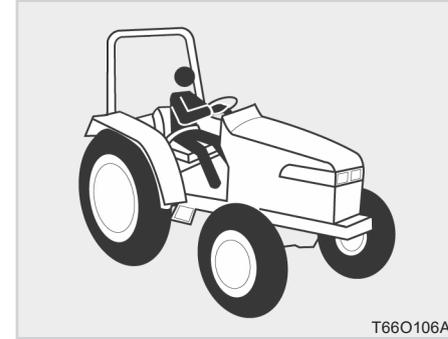
12. Never start the engine while standing on the ground.
13. Only the operator should ride on the tractor is equipped with a factory installed instructor seat with seatbelt. Always remember that the instructor seat is designed and intended to be used as an instructional aide to assist trained and seasoned 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.

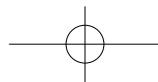


17. All persons using this tractor should have read and understood this manual completely. DO NOT operate this machine without first being trained by a qualified operator or the Authorized **KIOTI** Dealer on the safe operation of the machine.

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





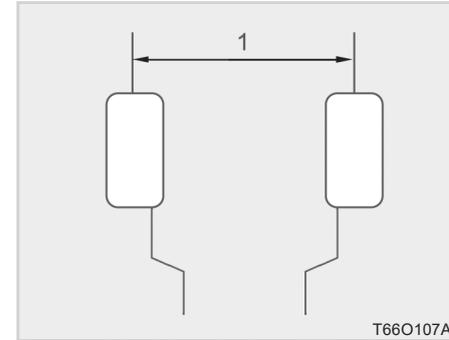
21. For your safety, it is recommended to only operate this tractor with a factory installed ROPS locked in the upright position or a factory installed cabin.

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)

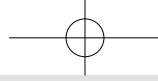
WARNING

- **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 should has been returned to its original position and all bolts have be properly torqued.**
- **Operating the tractor without a properly installed ROPS (cab) structure could cause severe injury or death**

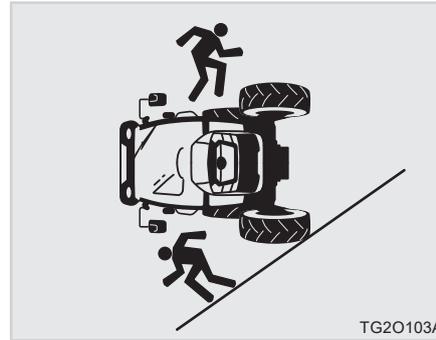
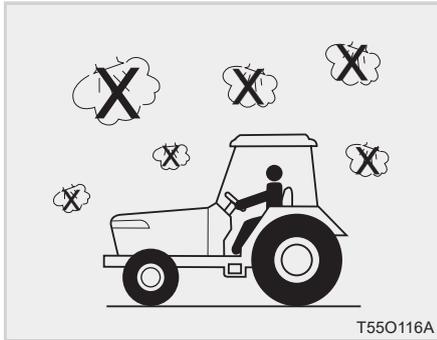


(1) Tread

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.**

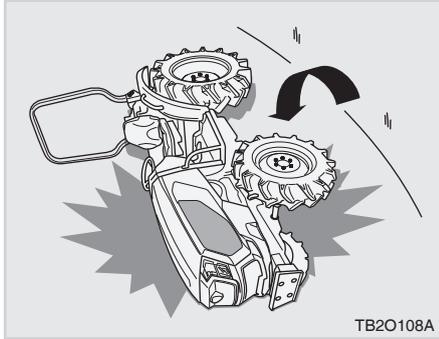
⚠ WARNING

- ***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

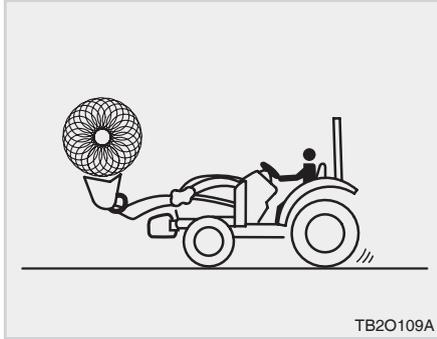
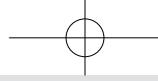
- Lock both brake pedals together before driving on road.
- Reduce your speed according to work conditions.
- If the tractor is equipped with a front loader, carry the bucket and load as low as possible at all times.
- Reduce speed when hauling a load or towing an implement.
- Slow down before making 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.

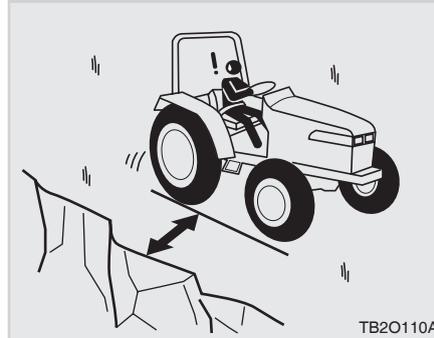
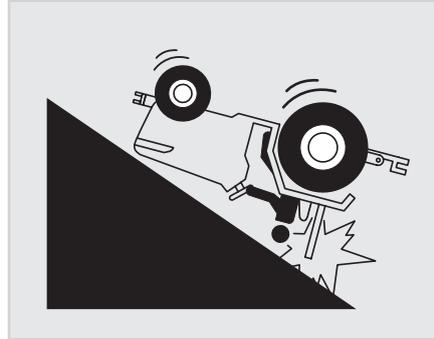
⚠ WARNING

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

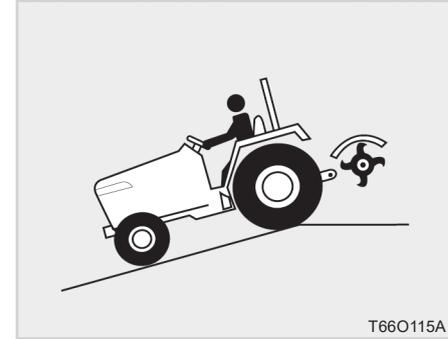
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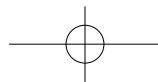
- Always travel up and down slopes, never sideways. Always keep the load facing up the slope. Never place the load facing downward as a loss of traction may occur resulting in loss of control, over-turn.
- Do not put any overloads on a front implement or a trailer. Use suitable counter-weights to keep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

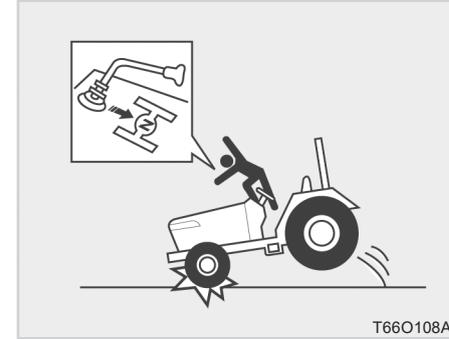
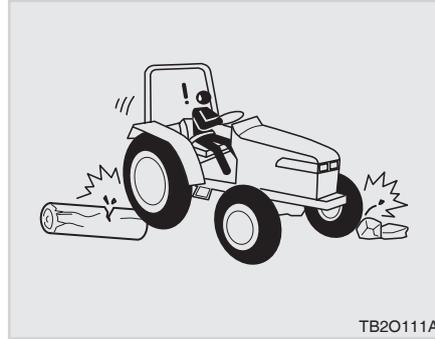
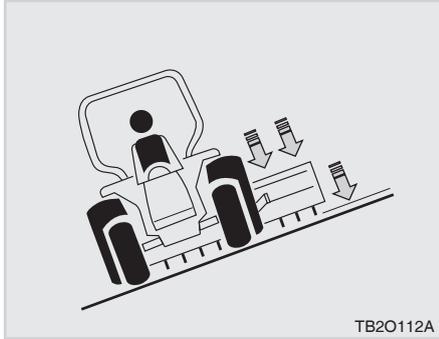


- Always drive straight up or down a slope, never across it. When traveling up or down a slope, keep the heavy end of the tractor and the implement pointed uphill.





PRECAUTIONS DURING OPERATION WHEN STARTING THE ENGINE

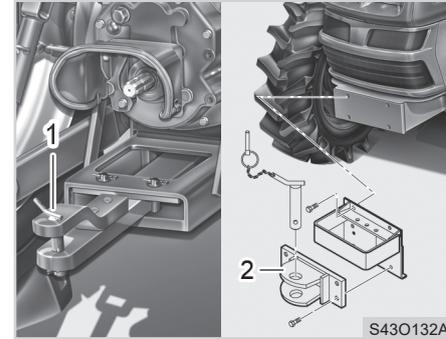
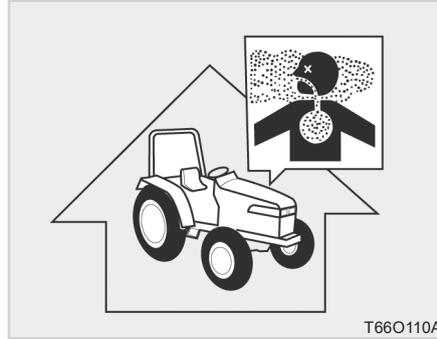


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- If you must drive across a slope, keep attachments close to the ground and do not raise them. When traveling with mounted implements, keep the implements on the uphill side if possible. Keep the implements close to the ground and do not raise them.

- 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.



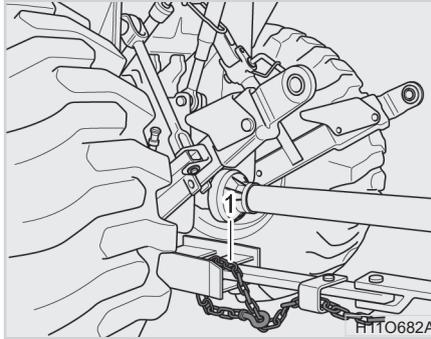
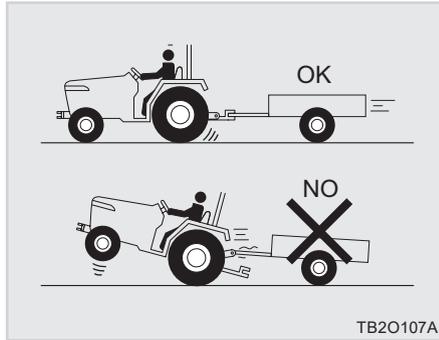
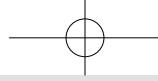
(1) Drawbar

(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.

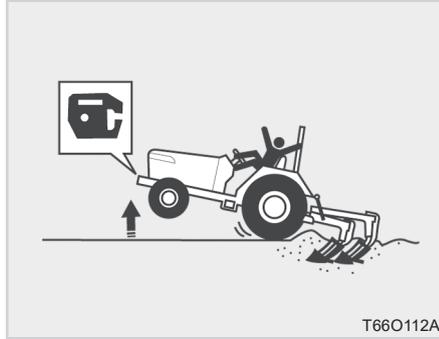


5. Improper use of the draw-bar, even if correctly positioned, can cause a rear overturn.
6. Do not overload an attachment or towed equipment. Use proper counterweights to maintain tractor stability. Hitch heavy loads to the draw-bar only.

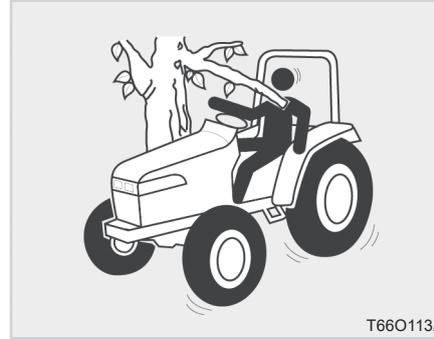
7. Check for the correct coupling between the implement and the tractor drawbar. See the Towing Attachments chapter.
8. Adding front end or rear wheel ballast is always recommended for a tractor utilized for towing or pulling heavy loads. Forms of ballast include weights added to the front frame or rear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

9. 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.

1



10. 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.



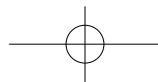
11. Always use the proper ballast weight on your tractor when using rear implements.

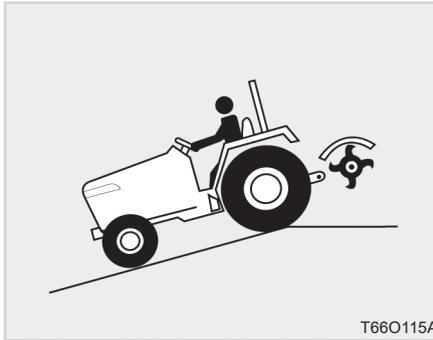
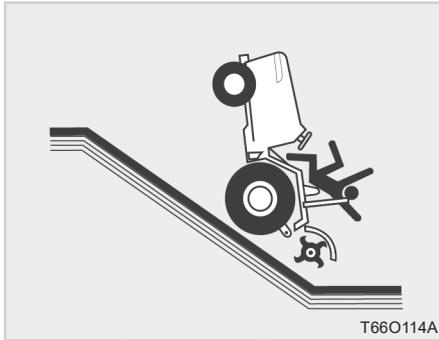
12. Watch front and rear to avoid obstacles at row ends, near trees and around other obstructions.

⚠ WARNING

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

13. Do not leave equipment in the raised position when the tractor is stopped or unattended.
14. 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.
15. You should be familiar with your equipment and its limitations.
16. 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.





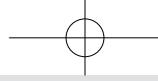
17. Driving forward out of a ditch or steep inclines can cause the tractor to tip over backwards. To avoid this you should back out of these positions. Four wheel drive tractors can give you a false sense of security in the tractor's ability to maneuver out of these positions, so extra caution should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

19. When working in groups, always let the others know what you are going to do before you do it.
20. Never "freewheel". Disengaging the clutch or shifting into neutral while descending a slope could lead to a loss of control.
21. 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.

WARNING

- *Use exclusively front loader approved by the tractor's manufacturer, with CE mark and parallelogram type.*
- *The installation and modification of the tractor must be carried out with the highest technical standards by specialised workshops with qualified personnel. Such workshops must be able to guarantee and attest the risk analysis provided for in the Machinery Directive 2006/42/EC concerning the foreseen and predictable use of the tractor with front loader, in order to carry out all required adaptations of the tractor.*
- *Use the front loader and all supplied equipment as prescribed by the loader's operator manual.*

1



WHEN DRIVING THE TRACTOR

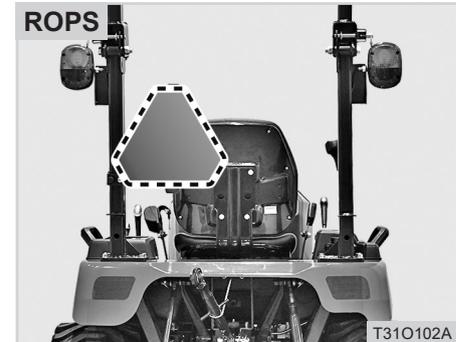
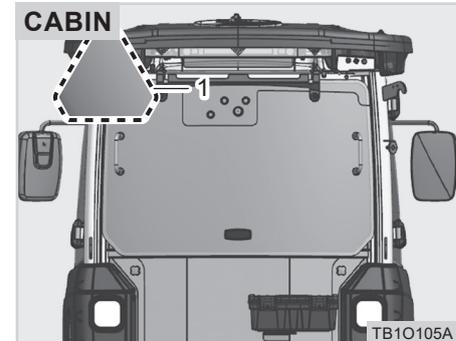


(1) Brake Pedal (2) Parking Brake

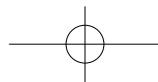
1. Depress the brake pedal firmly when making an emergency stop. Uneven braking at road speeds could cause the tractor to tip over.



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.

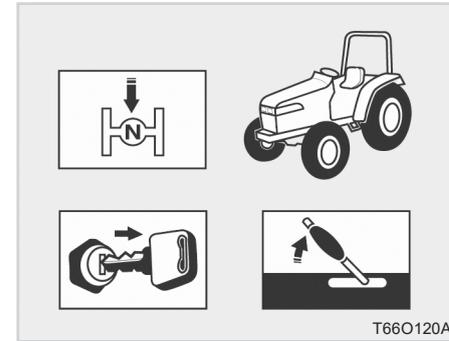


T31O103A

(1) Headlight

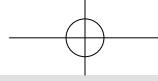
11. When driving the tractor after sunset, be sure to turn on the headlight and warning beacon light (if equipped) to improve visibility of the tractor to on-coming traffic.

PARKING THE TRACTOR

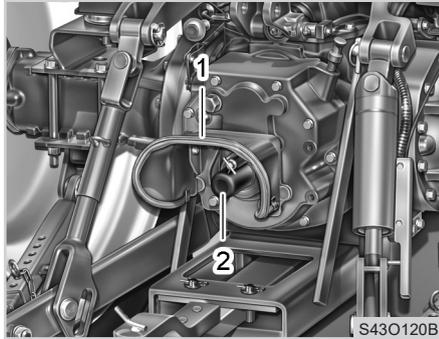


T66O120A

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



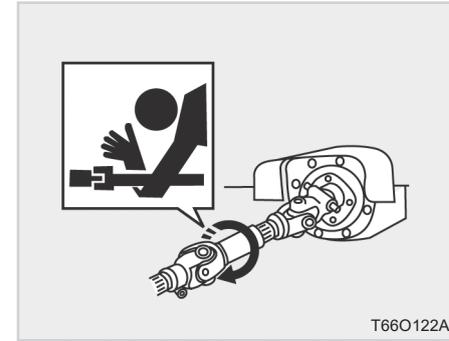
- (1) P.T.O Shaft Cover
- (2) P.T.O Shaft Cap

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.

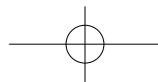
3. Before installing or using P.T.O driven equipment, read the manufacturer's manual and review the safety labels attached to the equipment.

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.*

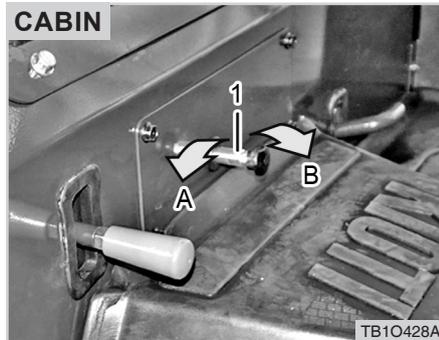


4. When operating stationary P.T.O driven equipment, always place the transmission in neutral and apply the tractor parking brake and place chocks behind and in front of the rear wheels. Stay clear of all rotating parts.
5. Do not attach a PTO driven implement if the implements safety shields are damaged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





WHEN USING THE 3-POINT HITCH



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

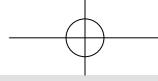
1. Use the 3-point hitch only with equipment designed for 3-point hitch usage.
2. When using a 3-point hitch mounted implement, be sure to install the proper counterbalance weight on the front of the tractor if the front end becomes light when raising the implement.
3. When transporting on the road,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

PRECAUTIONS DURING SERVICING

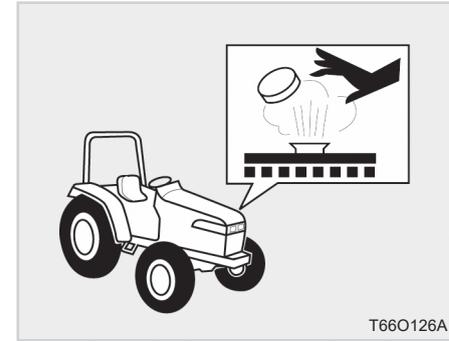


In order to service your tractor you must park it on a flat level surface, lower all attachments and implements to the ground, set the parking brake, place the gear shift lever in neutral stop the engine and remove the key.

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.

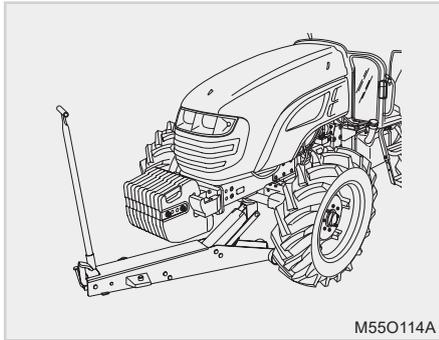
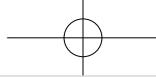


4. Before jump starting a dead battery, read and follow all of the instructions. (Refer to the page 5-11)
5. It is recommended to keep a fire extinguisher close to your fueling station in case of fire.



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.

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.
- Failure to follow these instructions may result in injury.

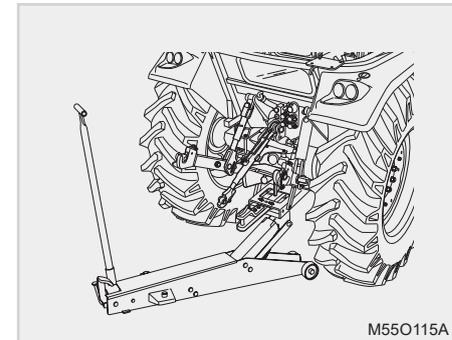


7. If the tractor must be lifted for servicing, use a jack or other lifting device sufficiently rated to lift the tractor. Always support a lifted tractor with jack stands or other approved support devices, never rely on a jack or other lifting device to support the tractor in a suspended application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

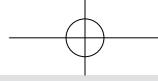
9. When lifting the tractor, especially at the rear, the tractor can pivot on the front axle causing the tractor to lean to one side. Before lifting the tractor, it is recommended to insert wooden wedges between the front axle and the tractor frame to prevent the tractor from suddenly leaning to one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

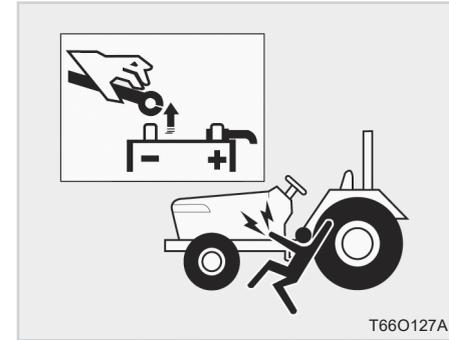
If only lifting one tire to repair a flat or for another purpose, place the jack or other lifting device underneath the front axle or the drawbar frame closest to the tire you are trying to lift so as not to lift the entire front or rear axle at one time.

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.

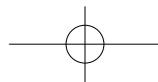
11. No decals for the lifting points are applied on the tractor, as they would be, too difficult to apply in the available spaces and would be all too easily removed or defaced during normal operation of the tractor.

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.

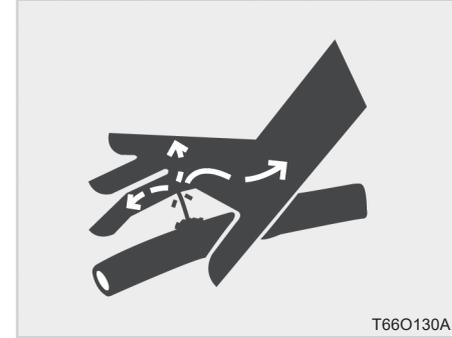




ment like a jack and support devices like a jack stand when changing the wheels or wheel tread settings.

! WARNING

- **Old tires may explode at the rim contact area due to internal pressure. When checking or inflating tires, keep your face and body away from the danger zone.**

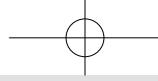


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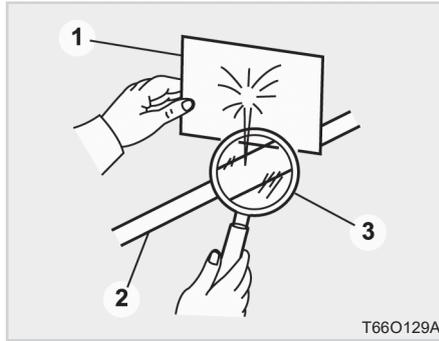
13. Tire mounting should be done by qualified professionals, with the proper equipment.
14. Maintaining correct tire pressure is important for the life of your tires. Do not inflate the tires above the recommended pressure. (Provided on the tire sidewall by the manufacturer.)
15. Securely support the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

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.

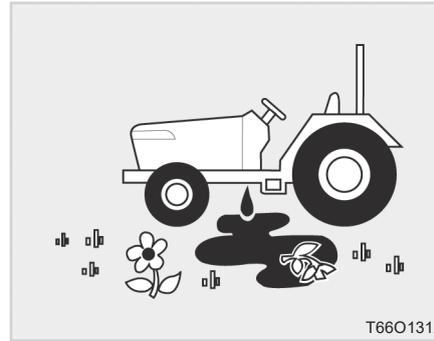
Before adding pressure to the hydraulic system, make sure that all connections are tight and that all lines, pipes and hoses are free of damage.



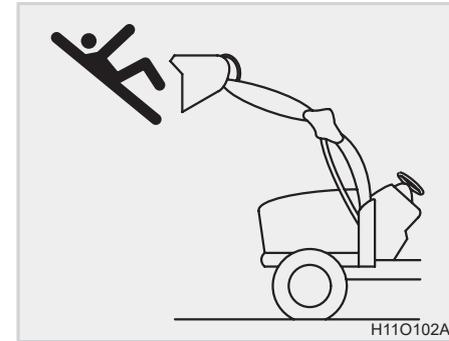
PRECAUTIONS WHEN USING THE LOADER



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



T66O131A



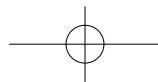
H11O102A

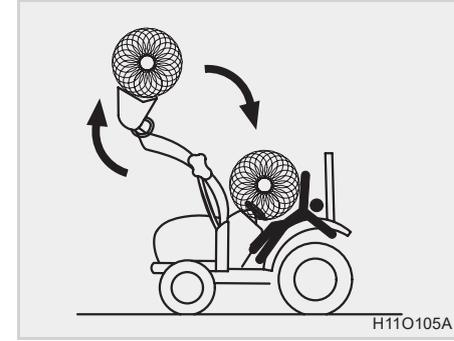
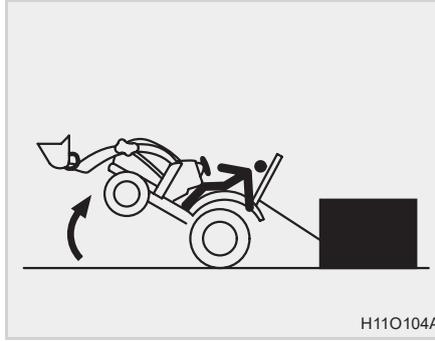
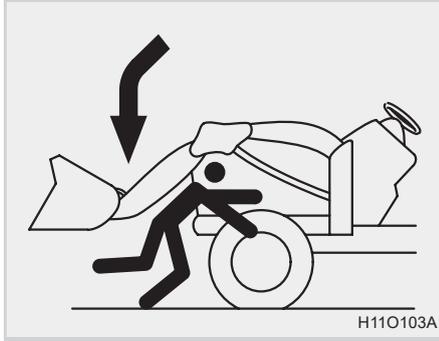
18. Fluid escaping from pinholes may be invisible. Do not use hands to search for suspected leaks; Use a piece of cardboard or wood, instead. Use of safety goggles or other eye protection is also highly recommended. If injured by escaping fluid, see a medical doctor at once. This fluid can produce gangrene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

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.





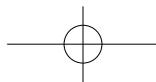
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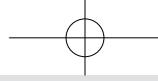
2. Do not stand or work under a raised loader or get close to it. Also, lower the loader arm onto the ground before leaving the tractor. Otherwise, it may lead to a fatal injury or even death.

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.

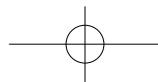


⊕ IMPORTANT

- **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. Electrocution 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.

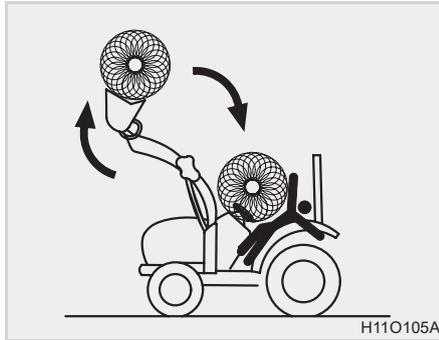
⚠ WARNING

- *Only use the KIOTI loader designed, engineered and manufactured to fit this CS 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.

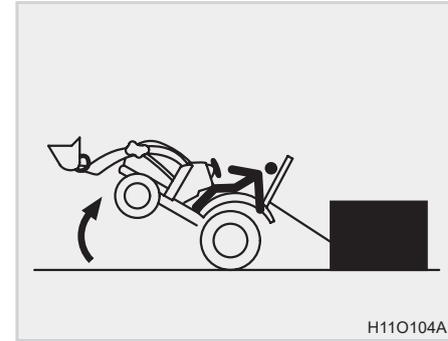
Never operate a PTO powered implement with missing or damaged guards or shields! Failure to comply could lead to serious injury or death for the operator or bystanders who may be near a rotating shaft.

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.***

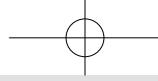
To reduce risks, the following precautions should be used.

- 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 procedures outlined in the tractor and loader owner's manuals.



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- 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.

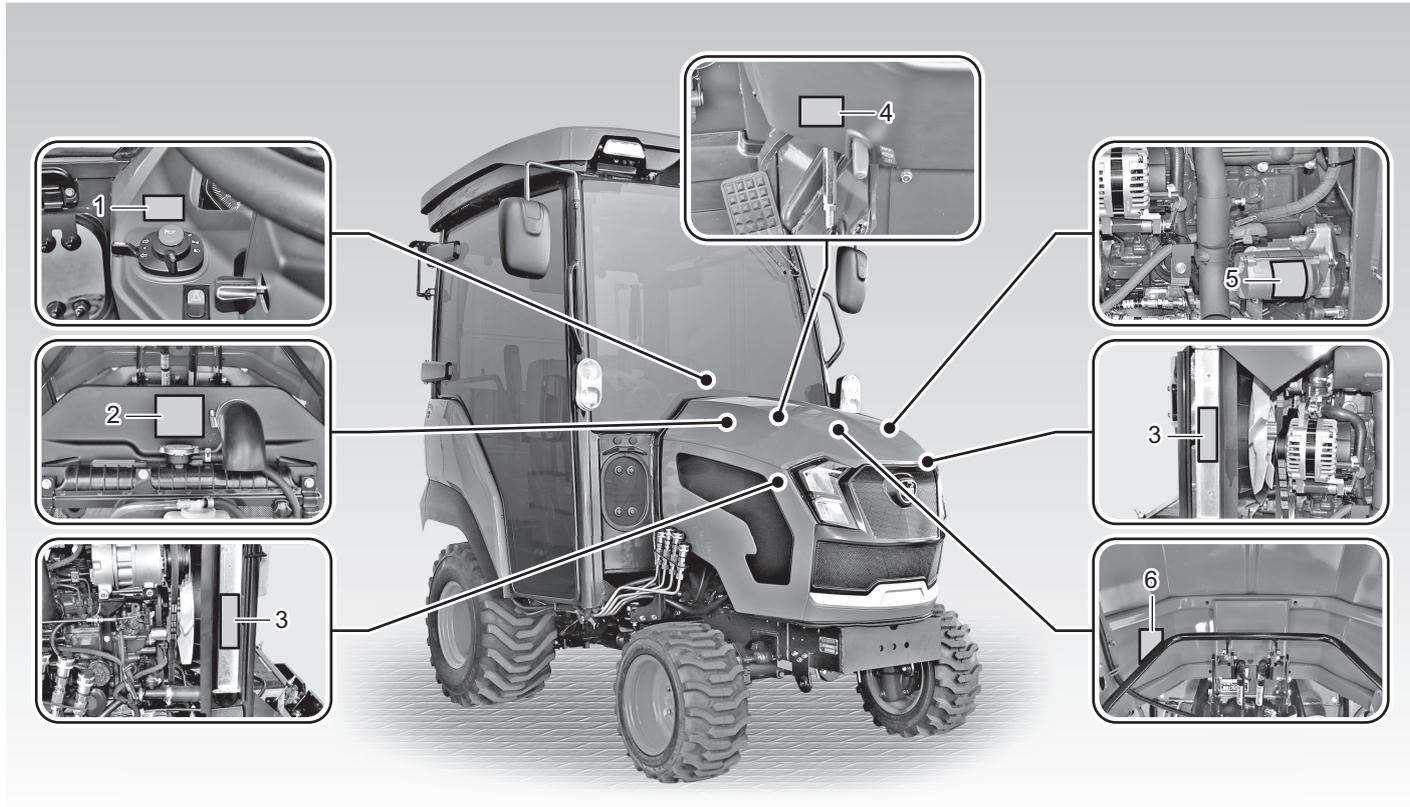


PRECAUTIONS WHEN CLEANING THE TRACTOR

- 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.
- 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.

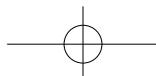


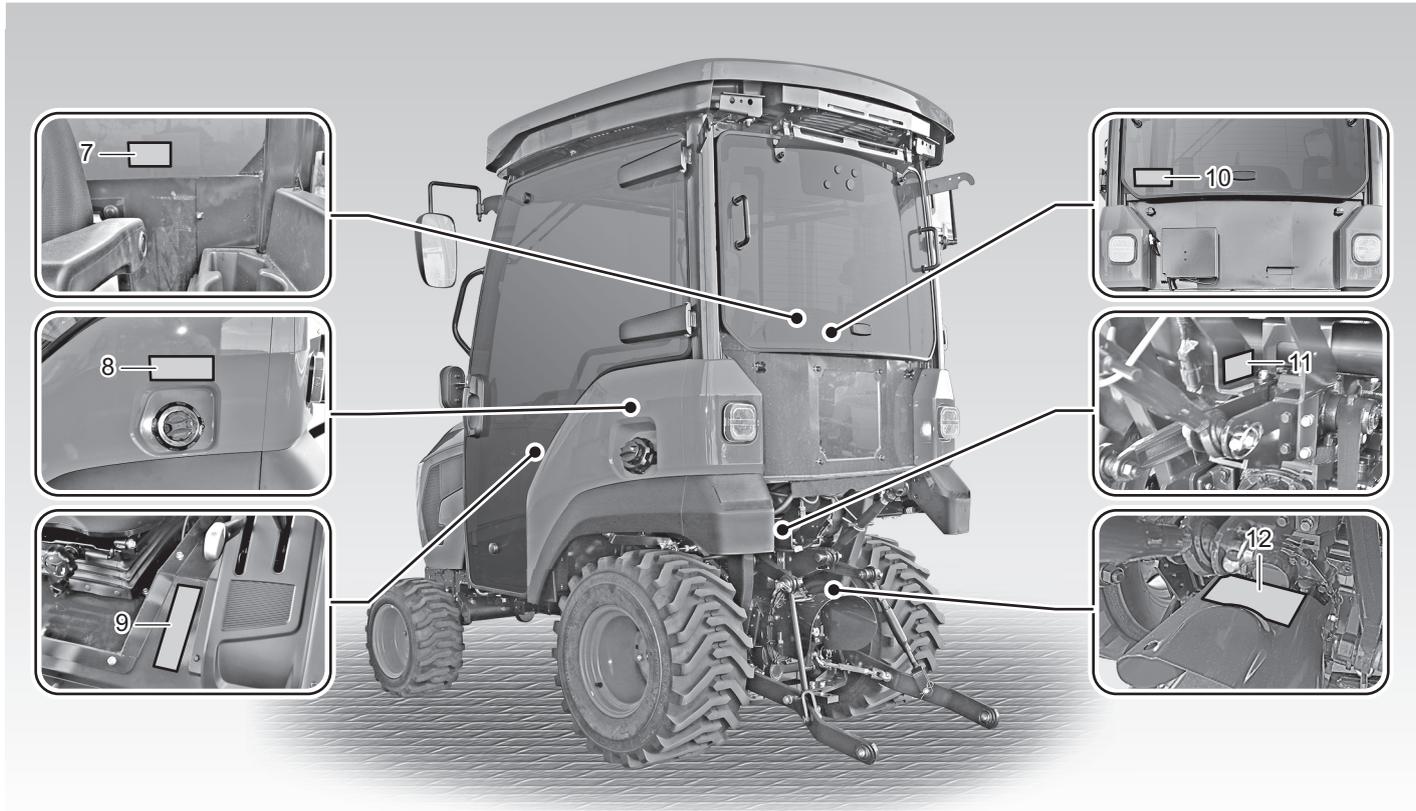
SAFETY DECAL MAINTENANCE DECAL MOUNTING LOCATION [CABIN]



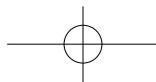
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T31O105A





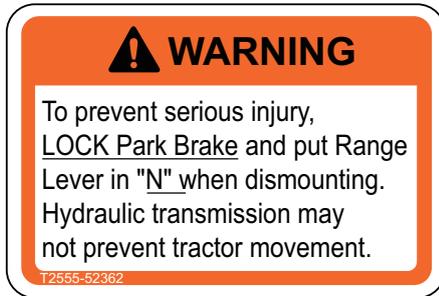
T31O106A



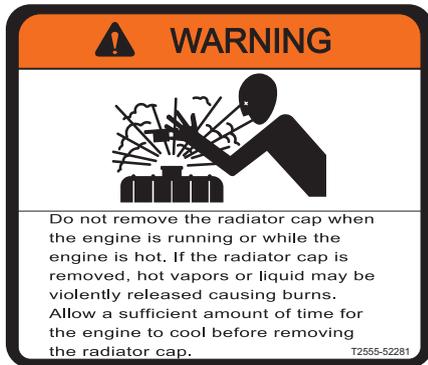


DECALS

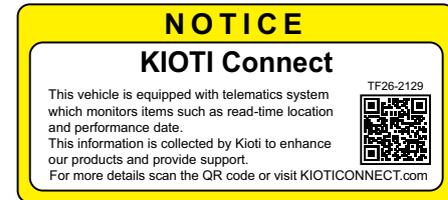
(1) Part No. : T2555-52362



(2) Part No. : T2555-52281



(3) Part No. : T4625-52351

(4) Part No. : TF26-2129 (US)
TF26-2133 (EU)

1

(5) Part No. : T2555-52332



(6) Part No. : TB36-2376A (EU Only)

	
<p>EN) Contains fluorinated greenhouse gases BG) Съдържа флуорсъдържащи парникови газове ES) Contiene gases fluorados de efecto invernadero CS) Obsahuje fluorované skleníkové plyny DK) Indeholder fluorholdige drivhusgasser DE) Enthält fluorierte Treibhausgase ET) sisaldab fluoritud kasvuhoonegaase EL) Περιέχει φθοριούχα αέρια του θερμοκηπίου FR) Contient des gaz à effet de serre fluorés GA) Contains fluorinated greenhouse gases HR) Sadržava fluorirane stakleničke plinove IT) Contiene gas fluorurati a effetto serra LV) Satur fluorētas siltumnīcefekta gāzes LT) sudėtyje yra fluorintų šiltnamio efektą sukeliančių dujų HU) Fluortartalmú üvegházhatású gázokat tartalmaz MT) Fih gassijiet flworurati b'effett ta' serra NL) Bevat gefluoreerde broeikasgassen PL) Zawiera fluorowane gazy cieplarniane PT) Contém gases fluorados com efeito de estufa RO) Conține gaze fluorurate cu efect de seră SK) obsahuje fluórované skleníkové plyny SL) vsebuje fluorirane toplogredne pline FI) Sisältää fluorattuja kasvihuonekaasuja SV) Innehåller fluorerade växthusgaser</p>	
<p>HFC - 134a GWP : 1430 Total mass : 0.45 kg Total eq(CO₂) : 0.64 t</p>	
<small>TB36-2376A</small>	

(7) Part No. : TF26-1786A (EU Only)

<h2>Emergency Exits</h2>	
	<p>In emergency, open escapable door to exit</p>
<small>TF26-1786A</small>	

(8) Part No. : TC26-0388A

	<p>WARNING</p> <ul style="list-style-type: none"> ● Avoid flames and sparks. ● STOP engine while refueling
<p> ONLY use diesel. (ULTRA LOW SULFUR FUEL ONLY)</p>	
<small>TC26-0388A</small>	

(9) Part No. : TB36-2193

 WARNING
<p>Before starting and operation</p> <ul style="list-style-type: none"> ▶ Read and understand the owner's manual before operating the tractor, attachments or implements ▶ Clear the area of bystanders. ▶ Familiarize yourself with the layout and operation of controls. ▶ Operate the tractor with the ROPS in the raised and locked position and wear your seat belt.
<p>Start the engine only from the operator's seat with the transmission in neutral, PTO disengaged, parking brake set and/or the clutch depressed and the implements/attachments lowered to the ground with the controls in the lowered position.</p>
<p>Slow down on turns, rough ground and slopes to avoid upset.</p>
<p>DO NOT permit anyone but the operator to ride on the tractor. NO PASSENGERS!</p>
<p>Lock brakes together, use warning lights and SMV emblem while driving on roads.</p>
<p>Lower the attachment to the ground, place the transmission in neutral, set the parking brake, turn the engine off and remove the key before leaving the seat.</p>
<p>Avoid accidental contact with gear shift lever while engine is running. Unexpected tractor movement can result.</p>
<p>FAILURE TO FOLLOW THE RECOMMENDED INSTRUCTIONS OUTLINED IN THE OWNER'S MANUAL OR WARNING DECALS COULD LEAD TO SERIOUS INJURY OR DEATH. (Replacement manuals may be sourced through your Local Authorized KIOTI Dealer)</p>
<small>TB36-2193</small>



(10) Part No. : TB36-2137

⚠ WARNING	
	▶ Glass may shatter from impact or vibration during backhoe use when open.
	▶ Remove the rear glass for backhoe operation to prevent injury from shattered glass.
	▶ Glass removal should be performed from the ground. Do not attempt to remove the rear glass while standing or sitting on the backhoe. TB36-2137

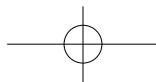
(12) Part No. : T2555-52262

⚠ DANGER	
Pull only from approved drawbar or lower links of 3-point linkage at horizontal position or below.	Rotating driveline contact may cause serious injury or death. Keep all driveline, tractor and equipment shield in place during operation. T2555-52262

1

(11) Part No. : TG16-1530B

	Be sure to use the genuine Daedong / KIOTI oil or equivalent oil specified in owner's manual. Otherwise, this may cause machine failure which may not be covered under warranty. TG16-1530B
KIOTI OIL ONLY	



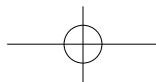


1-36 CS2530CH / CS2530CH-EU / CS2230H / CS2530H / CS2530H-EU

DECAL MOUNTING LOCATION [ROPS]

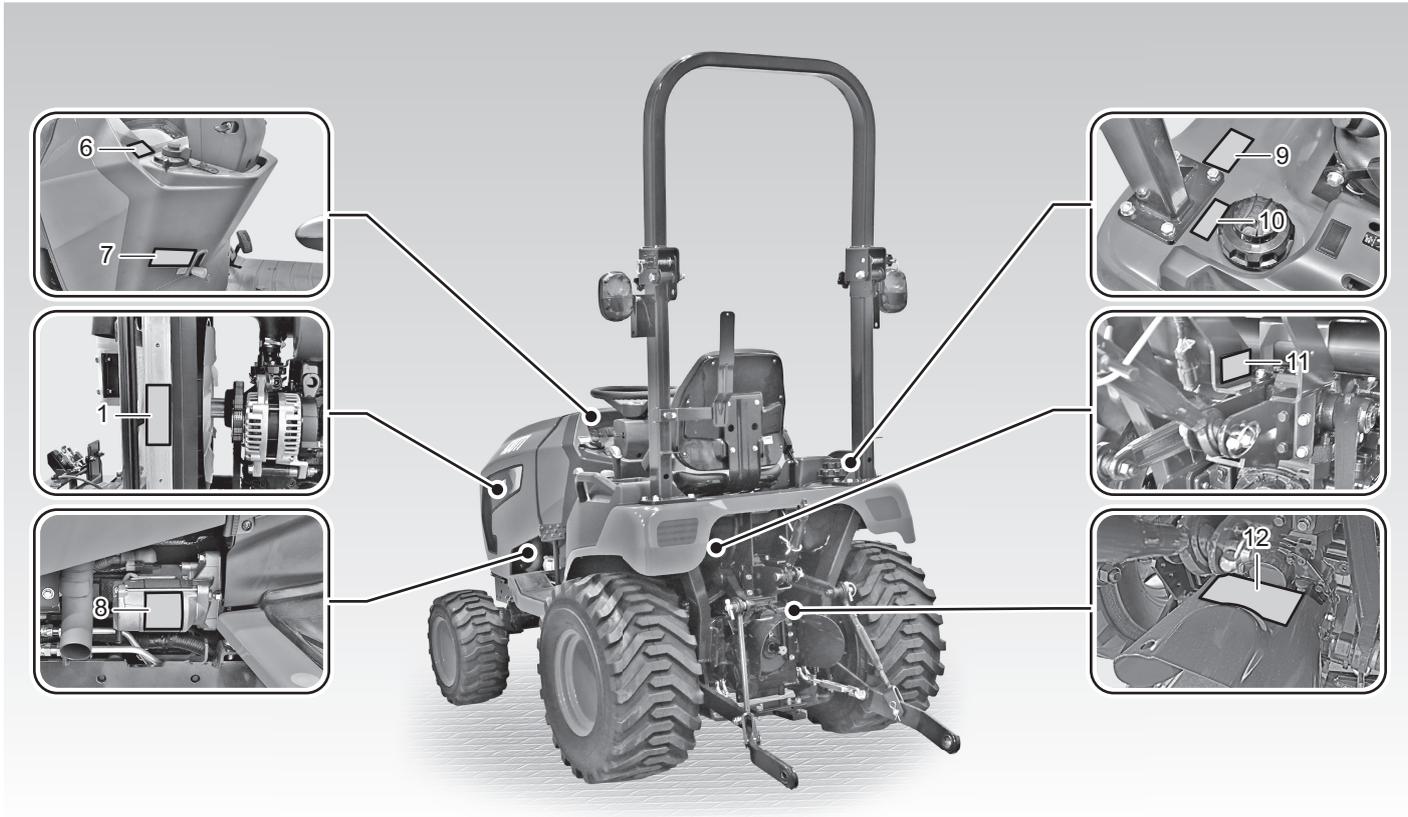


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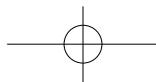




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T31O108A





DECALS

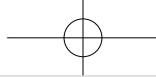
(1) Part No. : T4625-52351



(2) Part No. : TB36-2193

⚠ WARNING
<p>Before starting and operation</p> <ul style="list-style-type: none"> ▶ Read and understand the owner's manual before operating the tractor, attachments or implements ▶ Clear the area of bystanders. ▶ Familiarize yourself with the layout and operation of controls. ▶ Operate the tractor with the ROPS in the raised and locked position and wear your seat belt.
<p>Start the engine only from the operator's seat with the transmission in neutral, PTO disengaged, parking brake set and/or the clutch depressed and the implements/attachments lowered to the ground with the controls in the lowered position.</p>
<p>Slow down on turns, rough ground and slopes to avoid upset.</p>
<p>DO NOT permit anyone but the operator to ride on the tractor. NO PASSENGERS!</p>
<p>Lock brakes together, use warning lights and SMV emblem while driving on roads.</p>
<p>Lower the attachment to the ground, place the transmission in neutral, set the parking brake, turn the engine off and remove the key before leaving the seat.</p>
<p>Avoid accidental contact with gear shift lever while engine is running. Unexpected tractor movement can result.</p>
<p>FAILURE TO FOLLOW THE RECOMMENDED INSTRUCTIONS OUTLINED IN THE OWNER'S MANUAL OR WARNING DECALS COULD LEAD TO SERIOUS INJURY OR DEATH. (Replacement manuals may be sourced through your Local Authorized KIOTI Dealer)</p>

TB36-2193



(3) Part No. : TB36-2194

⚠ D A N G E R



- ▶ Improper operation of the tractor can lead to an accident or rollover.
- ▶ DO NOT operate the tractor without the ROPS raised and the locking pins in position.
- ▶ DO NOT attach ropes or chains to the ROPS for pulling.
- ▶ Lower the ROPS for low clearance ONLY. Return the ROPS to the upright position and insert the locking pins immediately after low clearance operation or for transport.
- DO NOT use the seat belt when operating with the ROPS in the lowered position. Failure to comply could result in death or serious injury.
- ▶ ALWAYS wear seat belt with ROPS in raised position.



TB36-2194

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(4) Part No. : TB36-2376A (EU Only)




EN] Contains fluorinated greenhouse gases
 BG] Съдържа флуорсъдържащи парникови газове
 ES] Contiene gases fluorados de efecto invernadero
 CS] Obsahuje fluorované skleníkové plyny
 DK] Indeholder fluorholdige drivhusgasser
 DE] Enthält fluorierte Treibhausgase
 ET] sisaldab fluoritud kasvuhooaegase
 EL] Περιέχει φθοριούχα αέρια του θερμοκηπίου
 FR] Contient des gaz à effet de serre fluorés
 GA] Contains fluorinated greenhouse gases
 HR] Sadržava fluorirane stakleničke plinove
 IT] Contiene gas fluorurati a effetto ta'
 LV] Satur fluorētās siltumnīcefekta gāzes
 LT] sudėtyje yra fluorintų šiltnamio efektą sukeliančių dujų
 HU] Fluortartalmú üvegházhatású gázokat tartalmaz
 MT] Fih gassijiet flworurati b'effett ta' serra
 NL] Bevat gefluoreerde broeikasgassen
 PL] Zawiera fluorowane gazy cieplarniane
 PT] Contém gases fluorados com efeito de estufa
 RO] Conține gaze fluorurate cu efect de seră
 SK] obsahuje fluórované skleníkové plyny
 SL] vsebuje fluorirane toplogredne pline
 FI] Sisältää fluoraattuja kasvihuonekaasuja
 SV] Innehåller fluorerade växthusgaser

HFC - 134a GWP : 1430
Total mass : 0.45 kg Total eq(CO₂) : 0.64 t

TB36-2376A

(5) Part No. : T2555-52281

⚠ WARNING



Do not remove the radiator cap when the engine is running or while the engine is hot. If the radiator cap is removed, hot vapors or liquid may be violently released causing burns. Allow a sufficient amount of time for the engine to cool before removing the radiator cap.

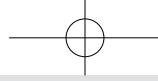
T2555-52281

(6) Part No. : T2555-52362

⚠ WARNING

To prevent serious injury,
LOCK Park Brake and put Range
 Lever in "N" when dismounting.
 Hydraulic transmission may
 not prevent tractor movement.

T2555-52362



(7) Part No. : TF26-2129 (US)
TF26-2133 (EU)

NOTICE	
KIOTI Connect	
<p>This vehicle is equipped with telematics system which monitors items such as read-time location and performance data. This information is collected by Kioti to enhance our products and provide support. For more details scan the QR code or visit KIOTICONNECT.com</p>	<p>TF26-2129</p>

(9) Part No. : T2555-52231

WARNING	
	<p>Operate controls only from Tractor seat. Failure to comply could result in death or serious injury.</p>
<small>T2555-52231</small>	

(11) Part No. : TG16-1530B

<p>KIOTI OIL ONLY</p>	<p>Be sure to use the genuine Daedong / KIOTI oil or equivalent oil specified in owner's manual. Otherwise, this may cause machine failure which may not be covered under warranty.</p> <p style="text-align: right;"><small>TG16-1530B</small></p>
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(8) Part No. : T2555-52332

DANGER
<ul style="list-style-type: none"> Start engine only from operators seat, If safety start switch is bypassed engine can start with transmission in gear. Do not connect or short across terminals on starter solenoid. <p>Starting in gear causing runaway can result in serious injury.</p> <p style="text-align: right;"><small>T2555-52332</small></p>

(10) Part No. : TC26-0388A

	<p>WARNING</p> <ul style="list-style-type: none"> Avoid flames and sparks. STOP engine while refueling <p> ONLY use diesel. (ULTRA LOW SULFUR FUEL ONLY)</p> <p style="text-align: right;"><small>TC26-0388A</small></p>
--	--

(12) Part No. : T2555-52262

DANGER	
<p>Pull only from approved drawbar or lower links of 3-point linkage at horizontal position or below.</p>	<p>Rotating driveline contact may cause serious injury or death.</p> <p>Keep all driveline, tractor and equipment shield in place during operation.</p> <p style="text-align: right;"><small>T2555-52262</small></p>



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.**

SAFETY DECAL LOCATIONS

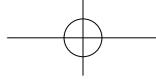
IMPORTANT

- **Warning decals are visible when getting on backhoe. Refer to the left and right hands used in this manual, It's the position of the operator when seated in the operating position of backhoe.**

1

CARE OF SAFETY DECALS

1. Keep safety decals clean and free of obstructing material.
2. Clean safety decals with soap and water and dry with a soft cloth.
3. Replace damaged or missing safety decals with new decals from your Kioti Dealer.
4. If a component with a safety decal(s) affixed is replaced with a new part, make sure new safety decal(s) are attached in the same location(s) as the replaced components.
5. Mount new safety decals by applying on a clean dry surface and pressing air bubbles to outside edges.

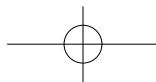


MEMO



daedong mobility

KIOTI





PRECAUTIONS BEFORE OPERATION

VEHICLE IDENTIFICATION NUMBER 2-2

PRODUCTION NUMBER2-2

ENGINE NUMBER2-2

TRANSMISSION NUMBER.....2-3

ESSENTIAL REPLACEMENT PARTS 2-4

OILS AND FLUIDS2-4

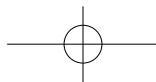
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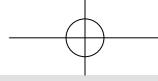
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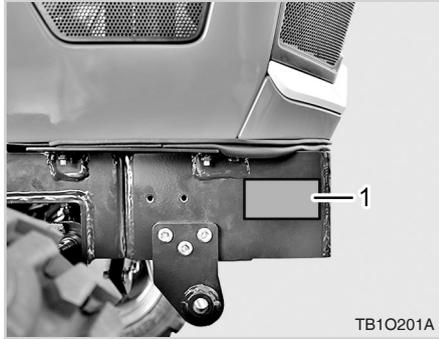
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2





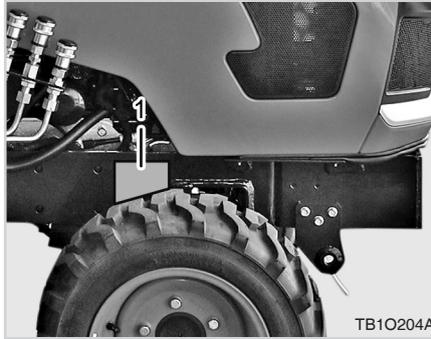
**VEHICLE IDENTIFICATION NUMBER
PRODUCTION NUMBER
[US MODEL]**



(1) S/N Identification Plate

This number is to identify the vehicle, and its plate is attached on the front right side of the front axle frame.

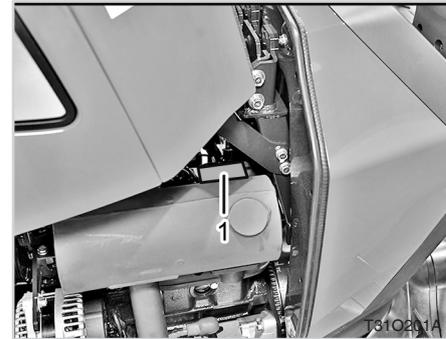
[EU MODEL]



(1) S/N Identification Plate

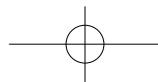
This number is to identify the vehicle, and its plate is attached on the rear right side of the front axle frame.

ENGINE NUMBER



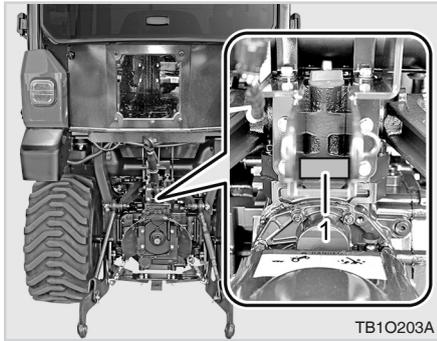
(1) Engine Serial Number

The engine number is engraved on the cylinder head cover.





TRANSMISSION NUMBER



(1) Transmission Serial Number

The transmission number is stamped on the transmission case on the P.T.O cover.

Your dealer is interested in your new tractor and has the desire to help you get the most value from it. After reading this manual thoroughly, you will find that you can do some of the regular maintenance yourself.

However, when in need of parts, warranty or major service, be sure to see your **KIOTI** dealer. For service, contact the **KIOTI** dealership from which you purchased your tractor or your local authorized **KIOTI** dealer.

When in need of parts, be prepared to give your dealer both the tractor and engine serial numbers.

Before using non-**KIOTI** approved implements, contact your nearest dealer, regarding safety application of the implement.

• Tractor Model Name:

• Tractor Serial No:

• Engine Serial No:

• Date of Purchase:

To be filled in by purchaser.

ESSENTIAL REPLACEMENT PARTS OILS AND FLUIDS

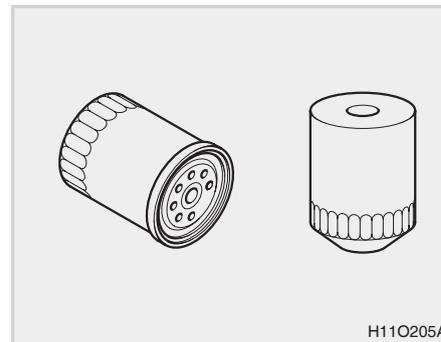


Various oils and fluids are used in this tractor for operation, lubrication, cooling, and anti-corrosion of various parts. If oil or fluid is insufficient, contaminated or degraded, it can cause poor performance, incorrect operation, and seized parts of the tractor, leading to malfunctions.

Regularly add or change the fluid specified below keep the tractor in perfect condition.

ITEM	SPECIFICATION	U.S. gal. (L)
Engine Oil (Included filter)	SAE 15W40, API CK-4 class or higher	0.98 (3.7)
Transmission fluid	DAEDONG UTF55 Exxonmobil Mobilfluid 424 BP: Tractran UTH Exxonmobil Hydraulic 560 Shell: Donax TD	2.75 (10.4)
Grease	SAE multi purpose type grease	Apply in moderation
Anti-freeze	Fresh clean water with ethylene glycol (50:50)	0.53 (2.0)

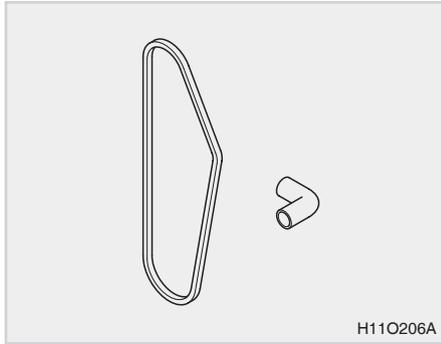
FILTERS



Filters for the engine, transmission, air cleaner, and A/C are consumables that purify oil and air. Make sure to replace these items when changing oil.

PART NO	DESCRIPTION	QTY
E5205-32091	Engine oil filter	1
T2555-38031	Hydraulic filter	1
T2555-38021	HST Hyd. filter	1
T2555-55411	Fuel Filter	1
TB36-2135A	Air filter	1

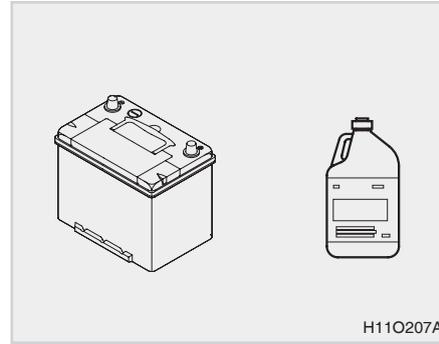
BELTS AND RUBBER PARTS



Belts, hoses and boots, which are made of rubber, get weakened and cracked as they age. If these parts remain in this state, they can be broken "OFF", leading to a serious problem in the tractor. Therefore, regularly replace the items indicated below to prevent an accident.

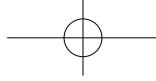
PART NO	DESCRIPTION	QTY
C9180-32121	Fan belt	1
TB36-2035A	A/C belt	1

OTHER COMPONENTS



The battery is a very important consumable component that supplies power to the alternator when the engine is started.

Therefore, make sure to check its discharging condition daily, including its life span and electrolyte condition.

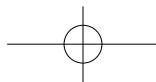


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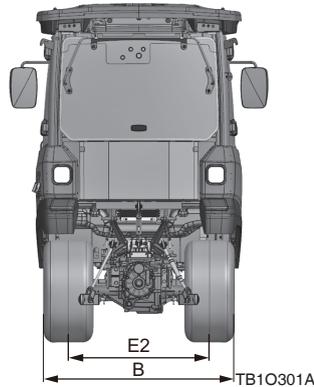
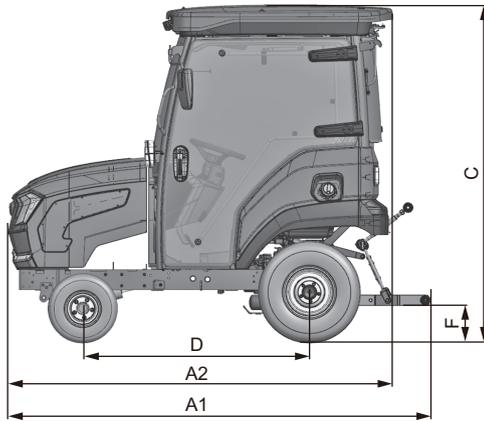
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3

GENERAL SPECIFICATIONS EXTERNAL DIMENSIONS

CABIN



in. (mm)

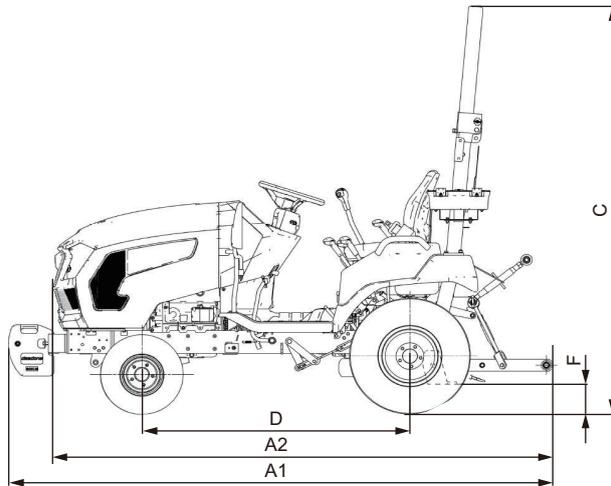
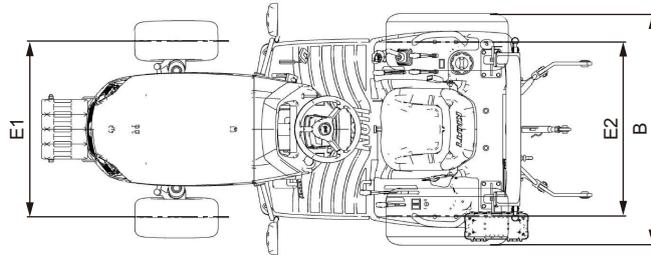
ITEM	CS2530CH / CS2530CH-EU
1. Overall length (A1)	107.09 (2,720)
2. Overall length (A2)	93.90 (2,385)
3. Overall width (B)	48.35 (1,228)
4. Overall height (C)	82.68 (2,100)
5. Wheel base (D)	55.12 (1,400)
6. Tread (E1)	36.34 (923)
7. Tread (E2)	36.38 (924)
8. Min. ground clearance (F)	6.38 (162)

- ※ A1: Overall length(includes 3-pt hitch)
- ※ A2: Overall length (without 3-pt hitch)
- ※ E1: Front wheel tread
- ※ E2: Rear wheel tread

※ There may be differences in specifications depending on the tire size.



ROPS [US]



T31O301A

in. (mm)

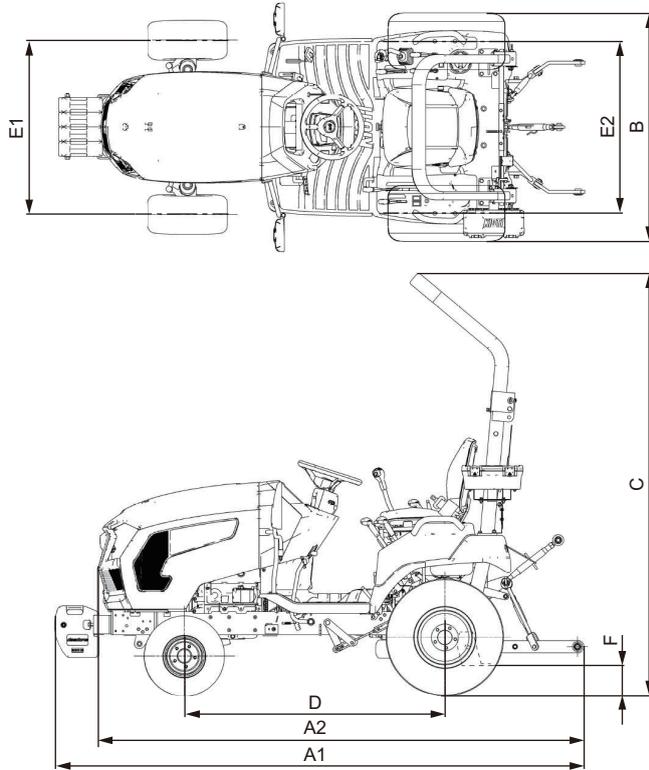
ITEM	CS2230H / CS2530H
1. Overall length (A1)	116.14 (2,950)
2. Overall length (A2)	102.95 (2,615)
3. Overall width (B)	48.35 (1,228)
4. Overall height (C)	87.56 (2,224)
5. Wheel base (D)	55.12 (1,400)
6. Tread (E1)	36.34 (923)
7. Tread (E2)	36.38 (924)
8. Min. ground clearance (F)	6.38 (162)

- ※ A1: Overall length(includes front weight)
 A2: Overall length (without front weight)
 E1: Front wheel tread
 E2: Rear wheel tread

※ There may be differences in specifications depending on the tire size.



ROPS [EU]



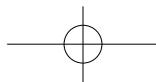
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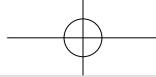
in. (mm)

ITEM	CS2530H-EU
1. Overall length (A1)	116.14 (2,950)
2. Overall length (A2)	102.95 (2,615)
3. Overall width (B)	48.35 (1,228)
4. Overall height (C)	89.84 (2,282)
5. Wheel base (D)	55.12 (1,400)
6. Tread (E1)	36.34 (923)
7. Tread (E2)	36.38 (924)
8. Min. ground clearance (F)	6.38 (162)

- ※ A1: Overall length(includes front weight)
- A2: Overall length (without front weight)
- E1: Front wheel tread
- E2: Rear wheel tread

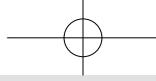
※ There may be differences in specifications depending on the tire size.





MAJOR SPECIFICATIONS

ITEM		CS2530CH	CS2530CH-EU	CS2230H	CS2530H	CS2530H-EU	
Engine	Model	3L123-TH4A		3L123-TH4D	3L123-TH4C		
	Number of cylinders	3					
	Total displacement	cc		1,233			
	Bore and stroke	in. (mm)		3.07 x 3.36 (78 x 86)			
	Engine gross power	HP (kw)		24.5 (18.3)	21.0 (15.7)	24.5 (18.3)	
	Rated revolution	rpm		3,000			
Capacities	Fuel tank	U.S.gal. (L)		6.7 (25.5)			
	Engine oil (Included filter)	U.S.gal. (L)		0.98 (3.7)			
	Transmission oil	U.S.gal. (L)		2.75 (10.4)			
	Engine coolant	U.S.gal. (L)		0.53 (2.0)			
	Front axle oil	U.S.gal. (L)		0.53 (2.0)			
Drive train	Clutch		None				
	Transmission	Type	HST				
		Main	Infinite				
		Range	2 range (High/Low)				



3-6

CS2530CH / CS2530CH-EU / CS2230H / CS2530H / CS2530H-EU

ITEM		CS2530CH	CS2530CH-EU	CS2230H	CS2530H	CS2530H-EU
Drive train	Ground speed (Tire for Industrial)	mp/h (km/h)	Forward	0 ~ 14.47 (0 ~ 23.29)		
			Reverse	0 ~ 9.9 (0 ~ 15.93)		
	4-wheel drive		Mechanical			
	Brake		Wet disc type			
	Differential lock		Rear Standard			
Tires	Industrial	Front	18x8.5-10 R4(8PR)			
		Rear	26x12.00-12 R4(8PR)			
	Turf	Front	18x8.5-10 R3(8PR)			
		Rear	26x12.00-12 R3(8PR)			
Hydraulic system	Pump capacity		gpm (L / min)		6.97 (26.4)	
	Steering		Power Steering			
	3 Point Lift Control Type		Inching			
	3-point hitch		SAE Category I			
	Max. lifting capacity lbs. (kg)	24in. (61cm) Behind		700 (318)		
		Lower link end		1,580 (715)		



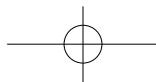
ITEM		CS2530CH	CS2530CH-EU	CS2230H	CS2530H	CS2530H-EU
P.T.O	Rear	Type	Independent			
		P.T.O shaft	1- 3/8" 6 splines			
		Speed (P.T.O rpm/engine rpm)	540 / 2,897			
	Mid (optional)	P.T.O shaft (*)	16/32" 15 splines			
		Speed (P.T.O rpm@engine rpm)	2,200 / 3,235			
		Min. turning radius (with one rear wheel braked)	8.33 (2,540)			
Weight		lbs. (kg)		2,403 (1,090)	1,735 (787)	

※ The specifications are subject to change without notice.



OPTION / STANDARD LIST

ITEM	CS2530CH	CS2530CH-EU	CS2230H	CS2530H	CS2530H-EU
4WD	STD	STD	STD	STD	STD
Rear PTO	STD	STD	STD	STD	STD
Mid PTO	STD	STD	STD	STD	STD
Front Weight	OPT	OPT	OPT	OPT	OPT
Rear Weight	STD	STD	OPT	OPT	OPT
Remote Hydraulic Valve	OPT	STD	OPT	OPT	STD
Joystick valve	STD	STD	STD	STD	STD
Rear View Mirror	STD	STD	OPT	OPT	OPT
Parking Brake	STD	STD	STD	STD	STD
Battery	-	STD	-	-	STD
Horn	STD	STD	STD	STD	STD
7 Pin Socket	OPT	STD	-	-	STD
Head Lamp	STD	STD	STD	STD	STD
Front Work Light	STD	STD	OPT	OPT	-
Rear Work Light	OPT	OPT	OPT	OPT	OPT

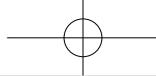




ITEM	CS2530CH	CS2530CH-EU	CS2230H	CS2530H	CS2530H-EU
Signal Lamp	STD	STD	STD	STD	STD
Power Socket	STD	STD	STD	STD	STD
USB Socket	STD	STD	STD	STD	-
Beacon	OPT	STD	-	-	STD
Cruise	STD	OPT	STD	STD	OPT
Stereo	OPT	OPT	-	-	-
Air Conditioner	STD	STD	-	-	-
Heater	STD	STD	-	-	-
Rear Window Wiper	OPT	OPT	-	-	-
Rear Window Hot-Wire	STD	STD	-	-	-
Seat Armrest	STD	STD	OPT	OPT	OPT
Sunvisor	STD	STD	-	-	-
Sun Canopy	-	-	OPT	OPT	OPT
Front Hitch	OPT	OPT	OPT	OPT	OPT
Front Grille Guard	OPT	OPT	OPT	OPT	OPT

ITEM	CS2530CH	CS2530CH-EU	CS2230H	CS2530H	CS2530H-EU
SMV sign	STD	STD	OPT	OPT	STD
PTO Cover	STD	STD	STD	STD	STD
Cup Holder	STD	STD	STD	STD	STD
Filter Guard	OPT	OPT	OPT	OPT	OPT
3rd Function Joystick	OPT	OPT	OPT	OPT	OPT
LCD monitor	OPT	OPT	-	-	-
Rear View Camera	OPT	OPT	-	-	-
Telematics	STD	-	STD	STD	STD
Front turn signal guard	OPT	OPT	-	-	-
HST RPM linkage device	-	OPT	-	-	OPT

※ The specifications are subject to change without notice.



NOISE LEVELS AS PERCEIVED BY THE OPERATOR

The following tables give the noise level values, measured from the driver's seat in instantaneous conditions in compliance with standards 2009/76/EC(dBA) - annex II (without load) - and when driving by in compliance with standard 2009/63/EC(dBA).

Tractors without Cabin			
Model	Directive of The European Parliament and of the Council	Noise level at the operator's ear according to 2009/76/EC	Noise level in motion according to 2009/63/EC
CS2530CH / CS2530CH-EU / CS2230H / CS2530H / CS2530H-EU	2003/37/EC	81.6 dB(A)	79.4 dB(A)

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

3

VIBRATION LEVELS OF THE TRACTOR EXPOSITION TO VIBRATIONS

WARNING

- *The vibration level transmitted to the body as a whole depend on different parameters, some of them relating to the machine, others to the terrain and many specific for the operator. The prevailing parameters are the type of terrain or work surface and the ground speed.*
- *Vibrations cause discomfort for the operator and in some cases put his/her health and safety at risk.*
- *Make sure that the tractor is in good condition and that all routine servicing is correctly and regularly carried out.*
- *Check tire pressure and the steering and braking systems.*
- *Check that the operator's seat and adjustment systems are in good condition, then adjust the seat to the operator's weight and size.*

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 EU Directive 78/764/EC the following table shows vibration levels measured on seats, in aws.

Operator's Vibration level			
Seat type	Directive of The European Parliament and of the Council	Light-weight operator	Heavy-weight opeartor
W08SSS	78/764/EEC	1.24 m/s ²	1.24 m/s ²

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



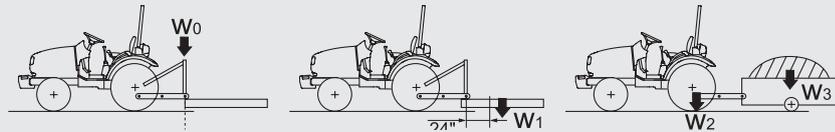
IMPLEMENT LIMITATIONS STANDARD IMPLEMENT DIMENSIONS

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)		Lifting Capacity max. loading weight W_0 (24 in. aft of hitch)
		Front	Rear	
ALL		1,133 mm (44.61 in.)	1,228 mm (48.35 in.)	449 kg (990 lbs.)

Model	Item	Actual figures		Trailer loading weight W_3 Max. capacity
		Implement weight W_1 and / or size	Max. Drawbar Load W_2	
ALL		As in the following list (shown on the next page)	310 kg (683 lbs.)	2,000 kg (4,409 lbs.)

Lifting Capacity max. loading weight The max. allowable load which can be put on the lower link ends : W_0
 Implement weight The implement's weight which can be put on the 24 in. aft of hitch : W_1
 Max. drawbar load W_2
 Trailer loading weight The max. loading weight for trailer (without trailer's weight) : W_3

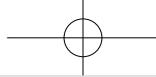


TB1O302A

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

in. (mm)

IMPLEMENT	DESCRIPTION	SPECIFICATIONS	REMARKS
1. Loader	Max. Bucket width	66 (1,676)	
2. Backhoe with sub frame	Max. Digging depth	90 (2,280)	Do not use 3 point hitch while operating backhoe
3. Tiller	Max. Working width	65 (1,650)	
4. Box blade	Max. Cutting width	84 (2,133)	
5. Rear blade	Max. Cutting width	84 (2,133)	
6. Rotary cutter	Max. Cutting width	65 (1,650)	
7. Grooming mower	Max. Cutting width	72 (1,828)	
8. Aerator	Max. Width	72 (1,828)	
9. Landscape rakes	Max. Cutting width	84 (2,133)	



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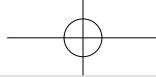
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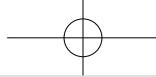
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EXTERIOR VIEW

[CABIN]

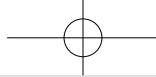


- (1) Working Lamp
- (2) Wiper
- (3) Side View Mirror
- (4) Turn Signal Lamp
- (5) Hood

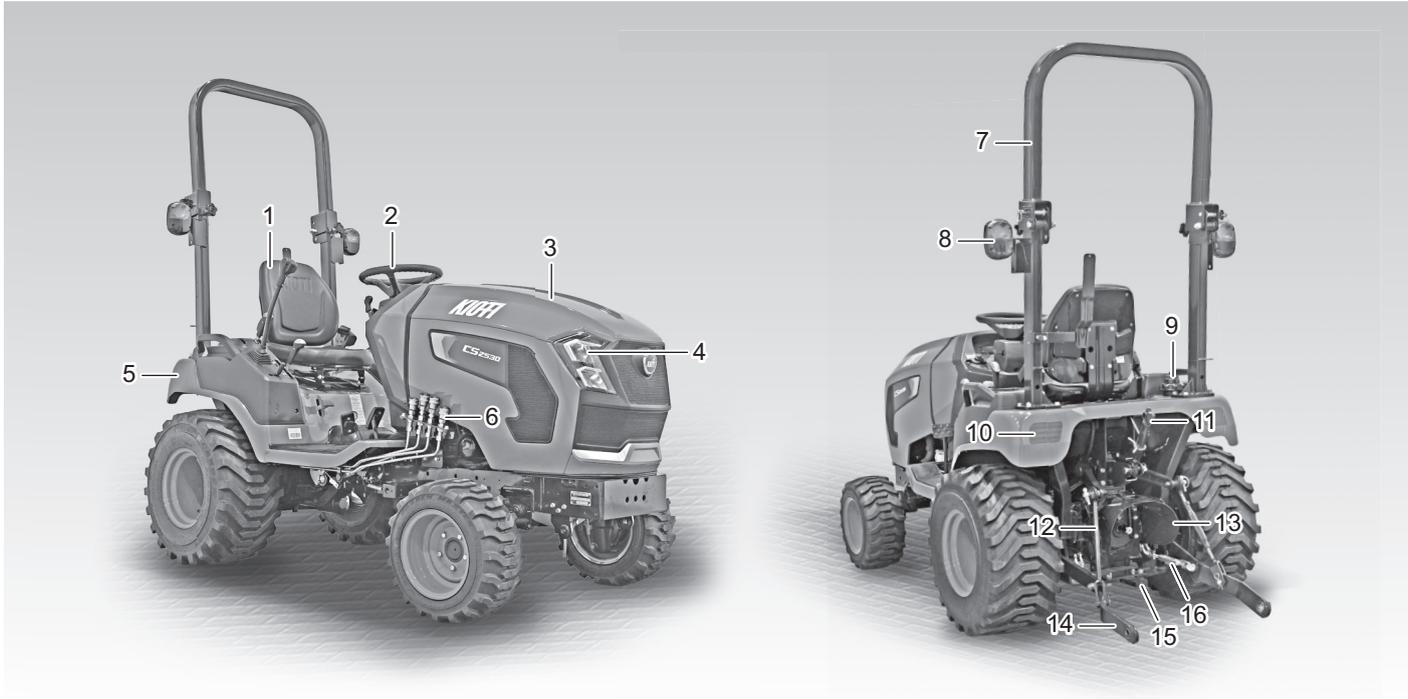
- (6) Head Lamp
- (7) Top Link
- (8) Lift Rod
- (9) Lower Link
- (10) Draw Bar

- (11) Combination Lamp
- (12) PTO Shaft
- (13) Washer Fluid Tank (Rear)
- (14) Washer Fluid Tank (Front)
- (15) Joystick Valve Port

T310401A



[ROPS]



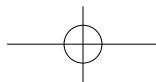
T31O402A

- (1) Seat
- (2) Steering Wheel
- (3) Hood
- (4) Head Lamp

- (5) Fender
- (6) Joystick Valve Port
- (7) ROPS
- (8) Combination Lamp

- (9) Fuel Tank Cap
- (10) Reflector
- (11) Top Link
- (12) Lift Rod

- (13) PTO Shaft Cover
- (14) Lower Link
- (15) Draw Bar
- (16) Check Link



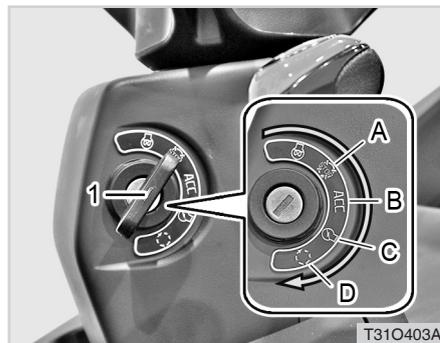
MOUNTING LOCATION



(1) Combination Switch
 (2) Key Switch
 (3) Hazard Lamp Switch

(4) Cruise ON/OFF Switch
 (5) Tilt Lever

KEY SWITCH



(1) Key Switch
 (A) Stop (B) ACC
 (C) ON (D) Start

-  (A)

When the key switch is in position "A", the engine and all electrical devices in the vehicle are turned off.

However flasher lights can be operated along with their indication lamps on the dash board.



- **ACC (B)**

When the key switch is turned to the position "B", flasher lights, horn, power socket, USB socket and 3rd function valve can be operated.

-  **(C)**

The position "C" indicates the "ON" position. As soon as the key switch is turned to this position, the oil pressure warning lamp and battery charge warning lamp comes on. (These turn off after the engine is started)

For "Safety start OPC(Operator Presence Control)", see page 5-3.

 **CAUTION**

Caution before starting Engine.

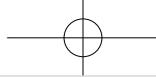
- 1. Under normal condition, warning lamp turns on about one second at the time of Key-On, and then turns off automatically.**
 - 2. In case of warning lamp flashing, confirm flashing pattern. Refer to the warning indications at the time of error detection.**
 - 3. Ensure to Key-Off at the time of error rectify procedure.**
 - 4. Key-On again to confirm the recovery after correcting error.**
- Do not operate Engine except in case of emergency.**

 **NOTE**

- The preheating operation will automatically be activated in this position "C" (ON). The automatic preheat operation is indicated by the glow plug indicator. Make sure to preheat the engine until the glow plug indicator goes off (Approx. 8 seconds) in cold weather before turning key switch to start position.

-  **(D)**

The position "D" indicates "Start". As soon as the engine is started, release the key then the key will return to the position "C".

**⊕ IMPORTANT**

- To start the engine, place the range shift lever in the neutral position and PTO lever in the OFF position. Then, sit on the seat and turn the key switch to the START position.

📖 NOTE

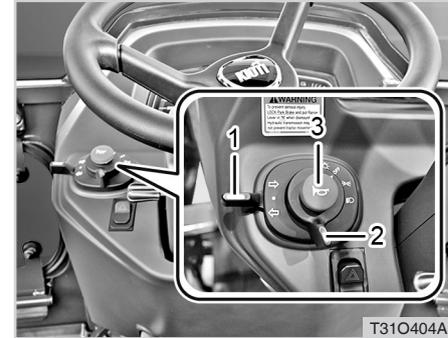
- For “OPC(Operator Presence Control)”, see page 5-3.

⚠ CAUTION

- Stop the engine immediately if the oil pressure warning lamp does not go off after the engine is started. The engine may be severely damaged.
- 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 key is not directional and can be inserted in any direction. Also, be careful not to leave the tractor unattended as the same key is used for all **KIOTI** tractors. It can be stolen.
- The horn and hazard lamp can be operated without the key inserted.

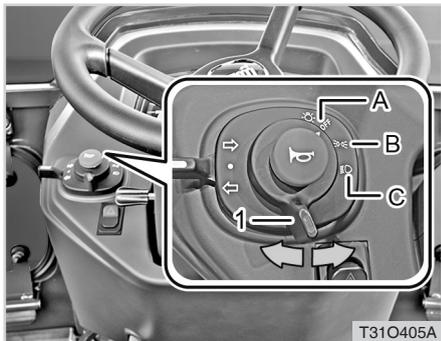
COMBINATION SWITCH

- (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”
-  : Head light “OFF” and tail light “ON”
-  : Low beam and tail light “ON”

HEAD LIGHT SWITCH



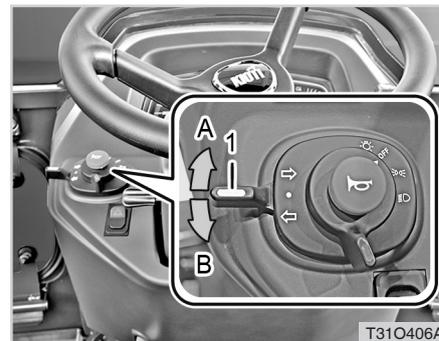
(1) Head Light Switch
 (A) OFF (B)  (C) 

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

⚠ WARNING

- *Driving with high beam head light disturbs an approaching vehicle's visibility for safe driving. Use the high beam head lights only if necessary.*

TURN SIGNAL LIGHT SWITCH



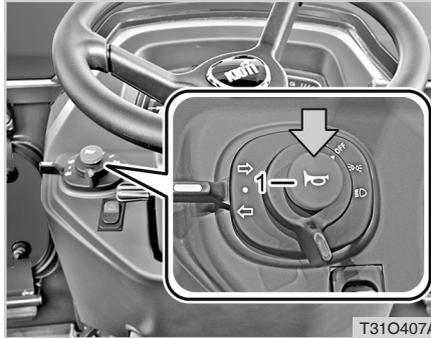
(1) Turn Signal Light Switch
 (A) Right Turn (B) Left Turn

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

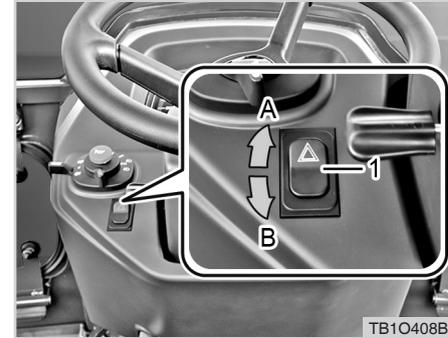
At the same time, the  lamp or the  lamp on the instrument panel turns on by operating this switch.

**NOTE**

- The turn signal light lever is not the self-return type. Therefore, make sure to return the lever manually after turning the vehicle.
- The turn signal lamps can be operated without the key inserted.

HORN SWITCH*(1) Horn Switch*

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

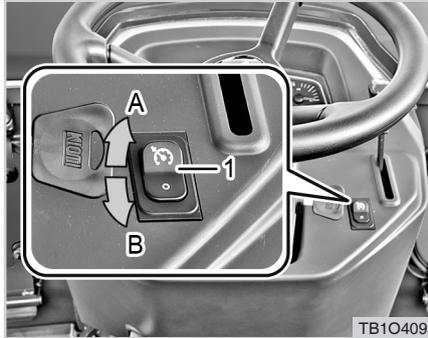
HAZARD LAMP SWITCH*(1) Hazard Lamp Switch
(A) ON (B) OFF*

This switch can be used to warn other vehicles when malfunction occurs in the tractor while driving on a public road. Pressing this switch blinks the hazard lamp and returning it turns off the lamp. The turn signal lights can be operated while this switch is pressed to operate the hazard lamps.

CRUISE OPERATION SWITCH

⚠ CAUTION

- 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.
- The hazard lamp can be operated without the key inserted.



(1) Cruise Operation Switch
(A) ON (B) OFF

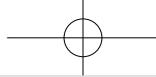
⚠ WARNING

- *Never use the cruise control function on a public or bumpy road or during turning.*

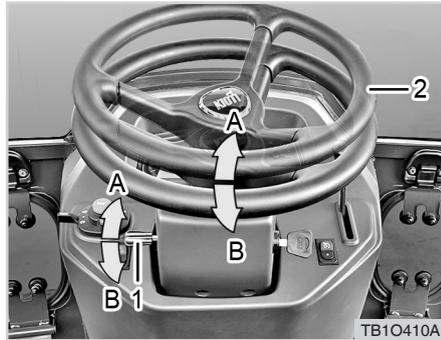
To activate the cruise control function, set the desired speed and press the switch to the “ON” position.

Depress the HST pedal to increase the driving speed in order to accelerate at a constant speed. To deactivate the cruise function, depress the brake pedal or press the switch to the “OFF” position.

The cruise function is not activated during reverse.



TILT LEVER WITH AIR CYLINDER



(1) Tilt Lever
(A) Down

(2) Steering Wheel
(B) Up

The vertical angle of the steering wheel can be adjusted as desired.

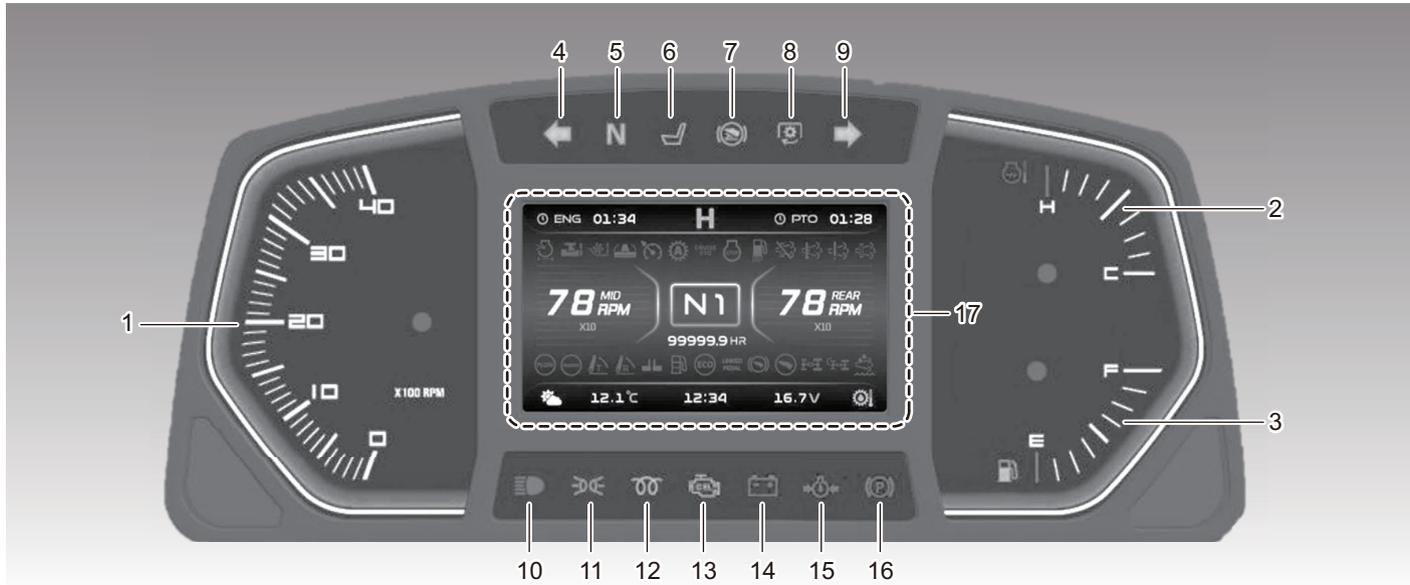
Pull up the tilt lever, adjust the steering wheel position and push down the tilt lever to fix the wheel.

 **CAUTION**

- **Never adjust the steering wheel position during driving. Otherwise, A personal injury can occur.**

INSTRUMENT PANEL VIEW

Symbols on the instrument panel come on when the key switch is turned to the “ON” position.



TB10449A

- (1) Tachometer
- (2) Coolant Temperature Gauge
- (3) Fuel Gauge
- (4) Turn Signal Light (LH)
- (5) Neutral Indicator
- (6) Seat Indicator

- (7) Pedal Brake Indicator
- (8) P.T.O Indicator
- (9) Turn Signal Light (RH)
- (10) High Beam Indicator
- (11) Tail Lamp Indicator
- (12) Glow Plug Indicator

- (13) Engine Check Warning Lamp
- (14) Battery Charge Warning Lamp
- (15) Engine Oil Pressure Warning Lamp
- (16) Parking Brake Indicator
- (17) LCD

TACHOMETER



(1) Tachometer

It indicates the engine rpm and one division represents 100 rpm.

FUEL GAUGE



(1) Fuel Gauge
 "E" : Empty "F" : Full

This indicates the remaining fuel level after the key switch is turned to the "ON" position.

- **F** : Fuel is fully filled. (6.7 U.S.gal.)
- **E** : Replenish the fuel tank.

If driving is continued with the needle below "E", the  lamp will flash for 30 seconds and then turn on. Additionally, the warning buzzer sounds 3 times and the warning pop-up appears for 3 seconds.

 **NOTE**

- Make sure to use only correct fuel as the engine can be damaged if unqualified fuel is used.
- Use fuel for winter season in cold weather to start the engine easier.

ENGINE COOLANT TEMPERATURE GAUGE



(1) Coolant Temperature Gauge
 (2) Normal Engine Temperature
 "C" : Cold "H" : Hot

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

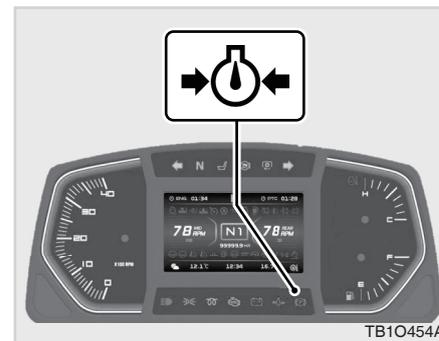
- **C** : Coolant is cold.
- **H** : Coolant is hot.

When the needle approaches "H", the  lamp flashes. At the same time, the warning buzzer sounds and the warning pop-up appears. For more information about "Warning pop-ups", see page 4-25.

CAUTION

- Make sure to control the work load so that the needle is not in the red zone.
- If the needle stays in the red zone, do not stop the engine immediately. Instead, reduce the work load to cool down the engine before stopping the engine.
- Make sure to keep the front grill clean so that air is sucked through it freely for fast cooling.

ENGINE OIL PRESSURE WARNING LAMP



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

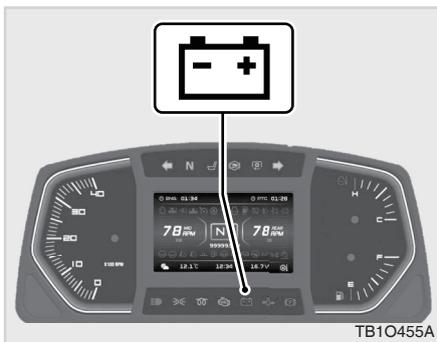
This lamp is turned On when the starting switch is turned On before starting the engine but turned Off after starting the engine. When  lamp is turned on, a warning buzzer sounds and a warning pop-up appears at the same time. If these warnings occur while driving, stop the engine immediately and check the engine oil level.

BATTERY CHARGING LAMP

If this lamp comes on even with the specified engine oil level, have the tractor checked by your local **KIOTI** dealer or workshop immediately.

CAUTION

- If the oil level is below the specified range, the engine can seize.
- The engine can be severely damaged if driving or operating the tractor with the engine oil warning lamp "ON".



Even after starting the engine, the lamp lights up when the battery voltage falls below 12.5V.

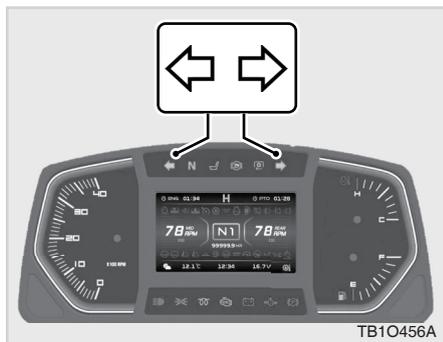
4

This lamp is turned On when the starting switch is turned On before starting the engine, but turned Off after starting the engine.

CAUTION

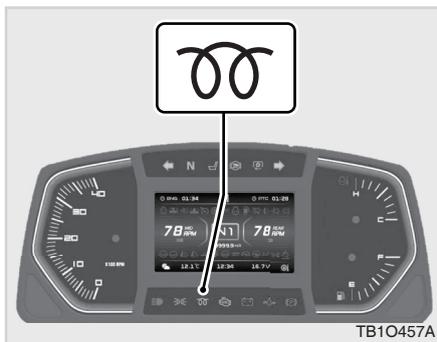
- If this warning lamp comes on while driving, the charging system, such as the alternator, is malfunctioning. Therefore, turn off all electrical devices and have the tractor checked by your local **KIOTI Dealer** or workshop as soon as possible.

TURN SIGNAL LAMP



Operating the turn signal lamp switch turns on the corresponding lamp in green.

GLOW PLUG INDICATOR

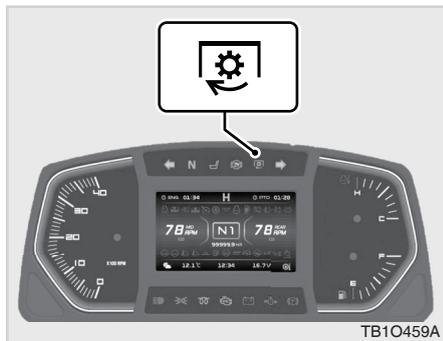


This indicates the operating condition of the preheat system. When the key switch is turned to the “ON” position, this indicator comes on for approx. 8 seconds. It is recommended to start the engine as soon as this indicator goes off for best starting performance. This indicator may not turn on if the engine is warm. In this case, the engine can be started without the preheat operation.

NOTE

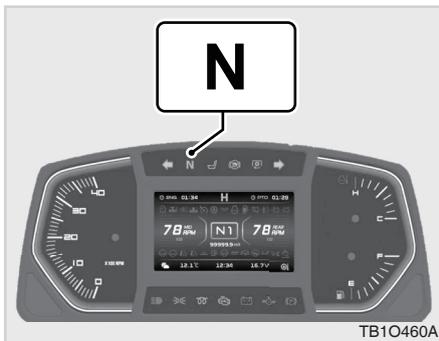
- The illumination time of the pre-heat indicator is different by the coolant temperature. When the coolant temperature is below -15 degrees, it is turned on for approx. 15 seconds.

PTO INDICATOR



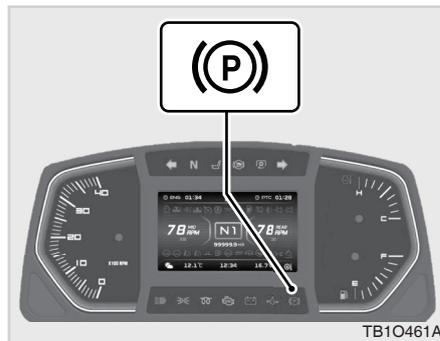
During PTO operation, this lamp on the instrument panel illuminates.

NEUTRAL INDICATOR



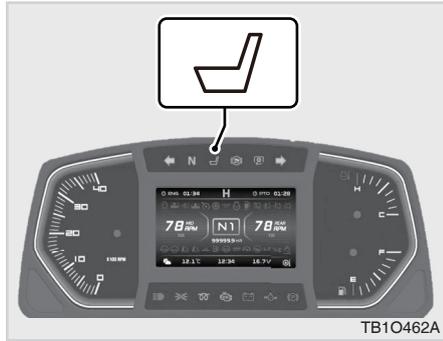
When the range shift lever is in neutral position, this lamp on the instrument panel turns on. If it is shifted to High or Low speed, this lamp goes out.

PARKING BRAKE INDICATOR



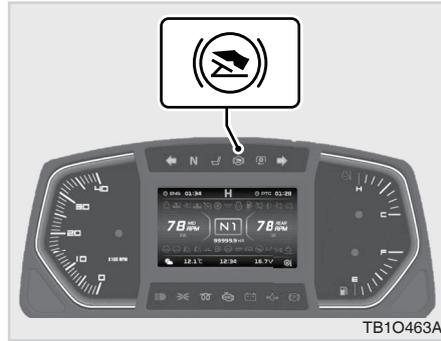
While the parking brake is applied, this lamp on the instrument panel turns on.
If the tractor moves with the parking brake applied, the warning buzzer sounds.

SEAT INDICATOR



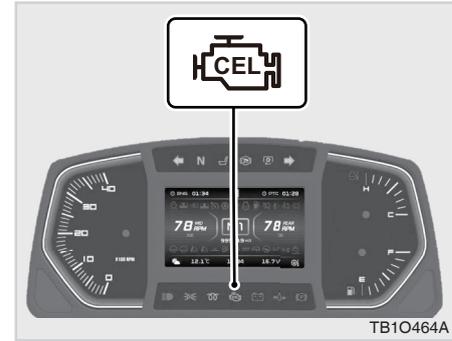
If not seated while the key is in on position, this lamp lights up. This is related to OPC(Operator Presence Control). See page 5-3 “OPC” for more information.

PEDAL BRAKE INDICATOR



This lamp comes on if you do not press the brake pedal before starting the engine with the key turned on. After the engine start, this lamp goes out regardless of whether the brake pedal is applied. This is related to safety engine start control, see page 5-4 “SAFETY ENGINE START CONTROL” for more information.

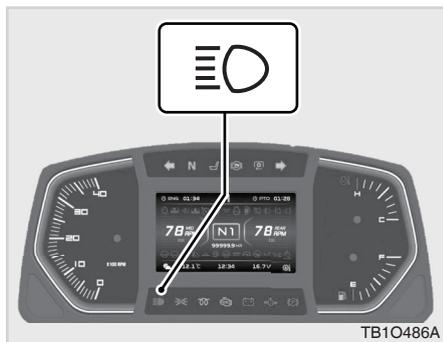
ENGINE CHECK WARNING LAMP



(1) Engine Check Warning Lamp

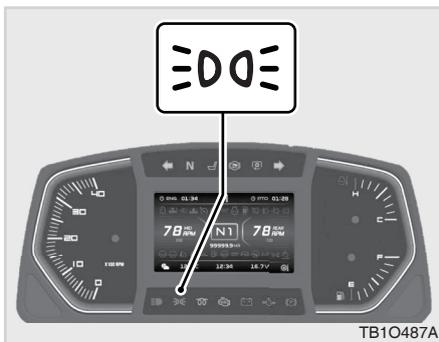
If an engine error is detected, this lamp turns on and a pop-up warning appears on the LCD. In this case, ask your nearest **KIOTI** dealer for help.

HIGH BEAM INDICATOR



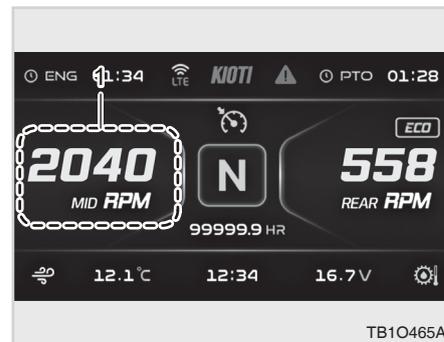
When the head light set to the high beam position, this lamp on the instrument panel turns on.

TAIL LAMP INDICATOR



When the head light set to the tail lamp position, this lamp on the instrument panel turns on.

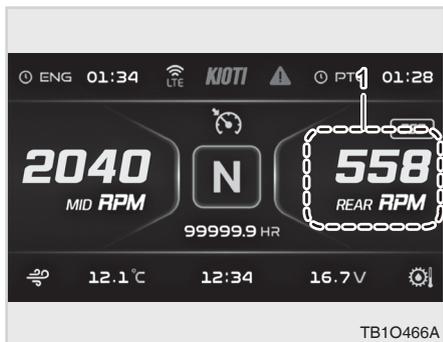
MID PTO RPM



(1) Mid PTO RPM

It shows MID PTO rpm(=Engine rpm x 0.68).

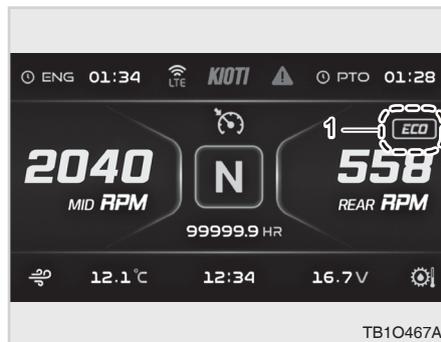
REAR PTO RPM



(1) Rear PTO RPM

It shows Rear PTO rpm(=Engine rpm x 0.186)

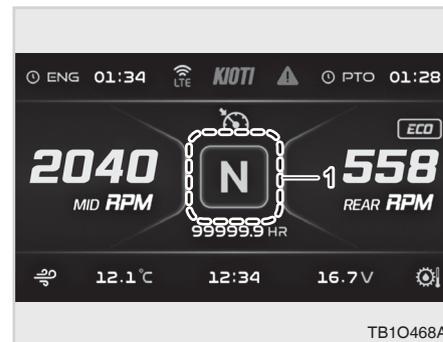
REAR PTO ECO INDICATOR



(1) Rear PTO ECO Indicator

This lamp comes on at around 3,000rpm of engine speed during rear PTO operation.

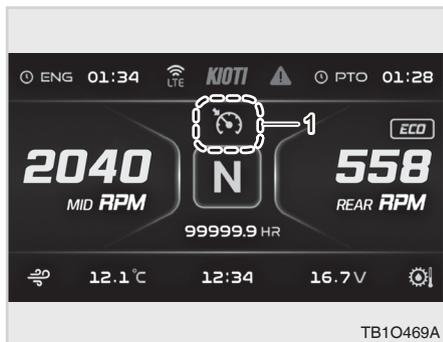
NEUTRAL INDICATOR



(1) Neutral Indicator

This lamp lights up when the range shift lever is in neutral. When shifting to high or low speed, this lamp goes out. See page 4-28 “RANGE SHIFT LEVER” for more information.

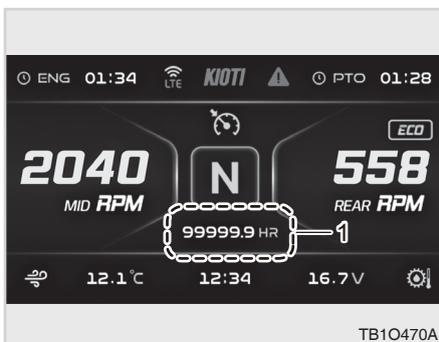
CRUISE CONTROL INDICATOR



(1) Cruise Control Indicator

It lights up when cruise control is activated and goes out when it is canceled. See 4-10 “CRUISE OPERATION SWITCH” for more information.

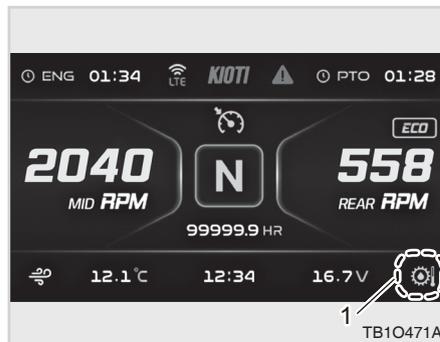
HOUR METER



(1) Hour Meter

Engine operating hours are displayed for the entire life of the tractor.

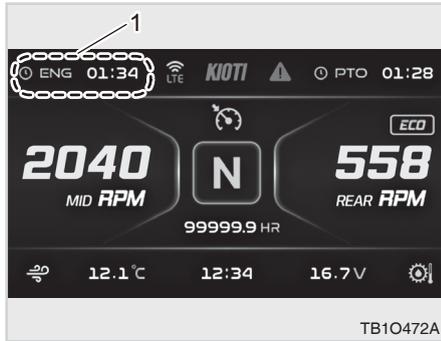
TRANSMISSION OIL TEMPERATURE INDICATOR



(1) Transmission Oil Temperature Indicator

This lamp indicates the transmission(=hydraulic) oil temperature. Lights green in normal condition. If it turns yellow, it means your transmission (=hydraulic) fluid is hotter than usual. If it turns red, it means the transmission (=hydraulic) fluid is very hot. If this lamp turns yellow or red during operation, reduce the workload. If this scenario persists, contact your nearest **KIOTI** dealer for assistance.

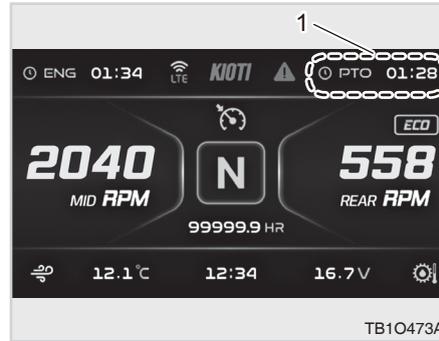
ENGINE HOUR METER



(1) Engine Hour Meter

This lamp indicates engine run time from the most recent engine start time. If the driver stops and restarts the engine, this time clock will restart at 0:00.

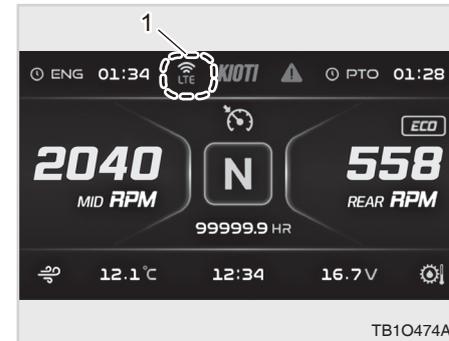
PTO HOUR METER



(1) PTO Hour Meter

This lamp indicates the PTO run time from the most recent PTO start time. If the driver stops and restarts the PTO while the engine is running, the PTO hour meter will stop and restart from the current accumulated PTO operating time. If the driver stops and restarts the engine, this timer will start at 0:00.

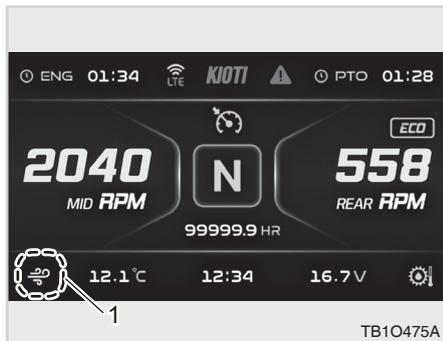
LTE INDICATOR



(1) LTE Indicator

This lamp displays the status of the communication signal with TMS. When this lamp is on, drivers can use various **KOTI** TMS services (such as below) through the mobile phone app.

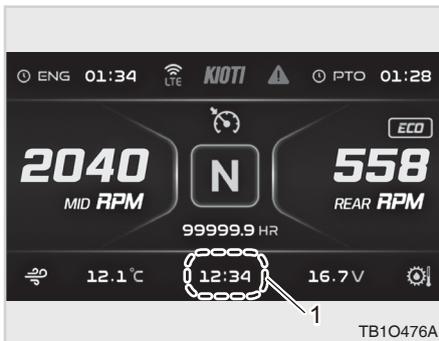
WEATHER CONDITIONS INDICATOR



(1) Weather Condition Indicator

This lamp shows the current weather conditions. To use this service, please download the app to your mobile phone and register for the **KIOTI TMS** service.

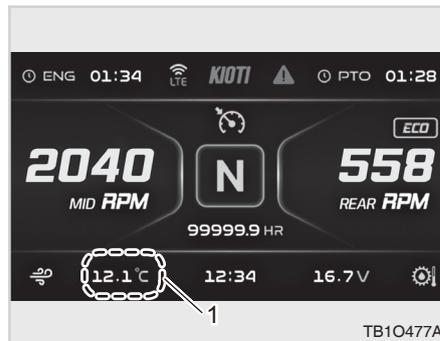
CURRENT TIME INDICATOR



(1) Current Time Indicator

This lamp displays the current time. To use this service, please download the app to your mobile phone and register for the **KIOTI TMS** service.

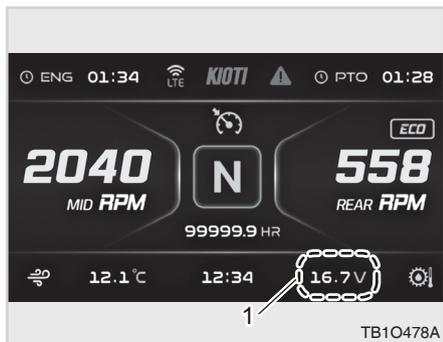
CURRENT TEMPERATURE INDICATOR



(1) Current Temperature Indicator

This lamp indicates the current temperature. To use this service, please download the app to your mobile phone and register for the **KIOTI TMS** service.

VOLTAGE STATUS INDICATOR



(1) Voltage Status Indicator

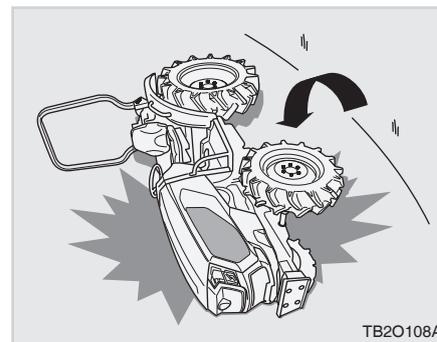
This lamp shows the voltage status of the battery.

WOW FUNCTION



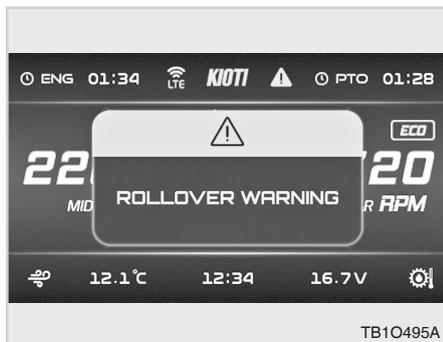
When first started, all needles on the instrument panel move to the highest point and then return to their original position. If the engine is restarted before a certain period of time after stopping, this function does not operate.

ROLL-OVER WARNING



When roll-over concerns occur, a warning buzzer sounds and pop-up warning appears on LCD for 3 seconds only for TMS registrants. If this condition continues for 3 minutes, the alarm reoccurs. To use this service, download the app to your mobile phone and register with the **KIOTI TMS** service.

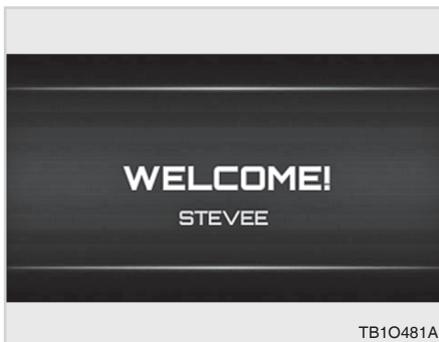
POP-UP WARNINGS



A pop-up warning appears on the LCD in the following cases:

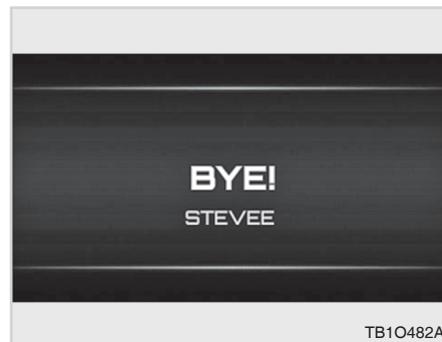
Engine overheating, Transmission oil overheating (for 3 seconds), Low oil pressure, Check engine (for 3 seconds), Fuel shortage(for 3 seconds), Roll-over warning(for 3 seconds, TMS users only), Consumable replacement notification (TMS users only), DTC warning (Engine Oil Pressure Error, Engine Check Error, Battery Charge Error, HRS Disconnected Error).

WELCOMING DISPLAY



Displayed on the LCD for 3 seconds right after startup. It is not displayed if the engine is restarted within 20 seconds after stopping. For TMS users, a nickname can be registered and displayed. To use this service, download the app on your phone and sign up for the **KIOTI** TMS service. The nickname can be up to 6 capital letters. If you have not registered a nickname, only “WELCOME!” is displayed.

CLOSING DISPLAY



It is displayed on the LCD for 2 seconds right after the engine stops. The nickname registration method is the same as above.

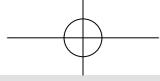
OPERATING THE CONTROLS

[CABIN]

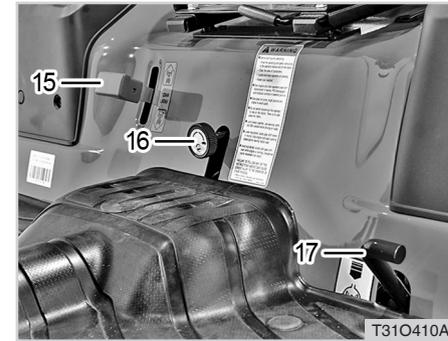
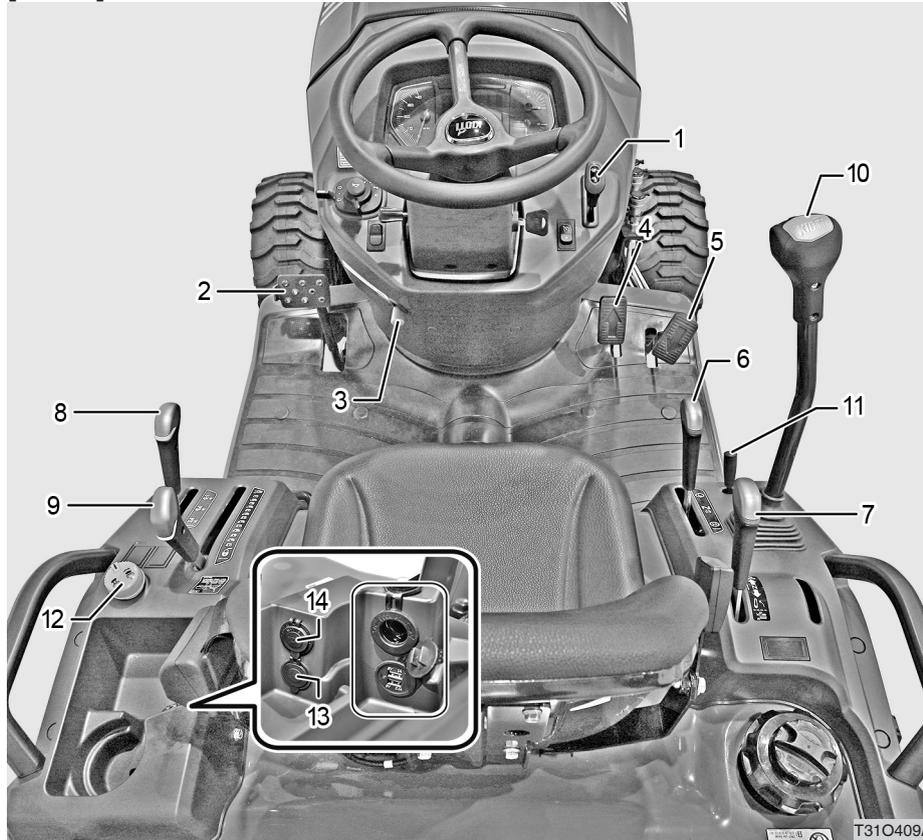


- (1) Hand Throttle Lever
- (2) Brake Pedal
- (3) Parking Brake Lever
- (4) HST Forward Pedal
- (5) HST Reverse Pedal
- (6) Range Gear Shift Lever
- (7) Lift Position Control Lever
- (8) PTO Select Lever
- (9) Mower Deck Lever
- (10) Joystick Lever
- (11) Joystick Lock Lever
- (12) PTO ON/OFF Switch
- (13) Defrost ON/OFF Switch
- (14) Stereo/Aux Switch
(If equipped)
- (15) USB Charge Port
- (16) Power Socket
- (17) Front Wheel Drive Lever
- (18) Lifting Arm Speed Control Lever
- (19) Differential Lock Pedal

T31O408A



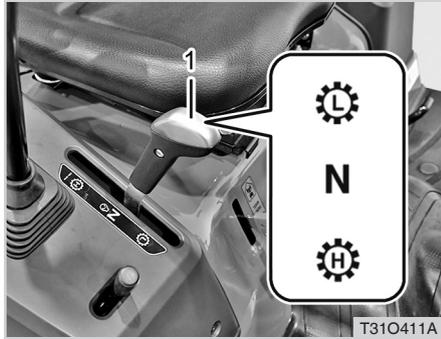
[ROPS]



4

- (1) Hand Throttle Lever
- (2) Brake Pedal
- (3) Parking Brake Lever
- (4) HST Forward Pedal
- (5) HST Reverse Pedal
- (6) Range Gear Shift Lever
- (7) Lift Position Control Lever
- (8) PTO Select Lever
- (9) Mower Deck Lever
- (10) Joystick Lever
- (11) Joystick Lock Lever
- (12) PTO ON/OFF Switch
- (13) USB Charge Port
- (14) Power Socket
- (15) Front Wheel Drive Lever
- (16) Lifting Arm Speed Control Lever
- (17) Differential Lock Pedal

RANGE GEAR SHIFT LEVER



(1) Range Shift Lever
 (H) High Speed (L) Low Speed
 (N) Neutral

High and low speeds can be selected by the range shift lever.

Follow the instruction below if a problem occurs during shifting this lever:

1. Apply the brake to completely stop the tractor.
2. Put the range shift lever into the neutral position.
3. Shift the range shift lever into the desired position with the HST pedal released.
4. If necessary, lightly press and release the HST pedal and try again.

CAUTION

- Never put the range shift lever into the high speed position during driving backward as it is dangerous to drive at a high speed.
- Be sure to full stop the tractor before moving this lever.
- Make sure to shift the range gear shift lever to neutral before engine starting because there is safety function for safety starting.

BRAKE PEDAL

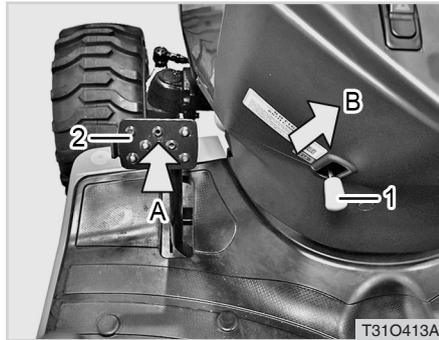


(1) Brake Pedal

1. The brake pedal is located on the left side of the tractor and it is to control braking of the rear wheels.
2. For this tractor, the left and right brake pedals are not separated.



PARKING BRAKE LEVER



(1) Parking Brake Lever (2) Brake Pedal
(A) Depressing (B) Pressing Up

To stop the tractor, depress the brake pedal and pull the lever up to apply the parking brake.

The parking brake is automatically released by depressing and then releasing the brake pedal.

While the parking brake is applied, the (P) lamp on the instrument panel turns on.

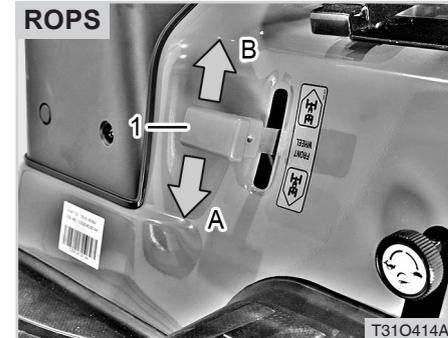
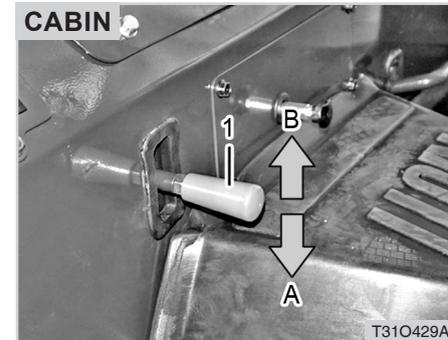
For "Parking brake OPC(Operator Presence Control)", see page 5-3.

CAUTION

- If the vehicle is driven with the parking brake partially or completely engaged, it may cause early wear of the brake discs.

If the tractor moves with the parking brake applied, the warning buzzer sounds.

FRONT WHEEL DRIVE LEVER



(1) Front Wheel Drive Lever (4WD)
(A) "ON" (B) "OFF"

Using the 4WD is the best way to increase the vehicle traction. Push the 4WD lever up to engage, pull to disengage.

The 4WD function can be used under the following conditions:

1. If high traction is needed in a humid area.
2. When towing a trailer or using a loader.
3. When working on a sandy surface.

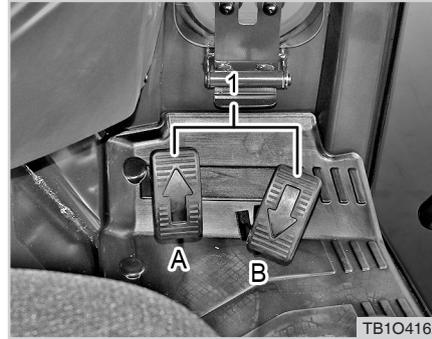
Be sure to full stop the tractor before engaging or disengaging the 4WD.

⚠ CAUTION

To avoid accident:

- Engage only when the vehicle is stationary.
- While the 4WD is engaged, drive the vehicle with low speed as steering and braking characteristics may differ.
- The 4WD should not be used on a paved road as tires can be worn faster.

FORWARD/REVERSE DRIVING PEDALS



(1) Forward/Reverse Driving Pedals
(A) Forward (B) Reverse

Left pedal is for forward driving and right pedal is for reverse driving.

⊕ IMPORTANT

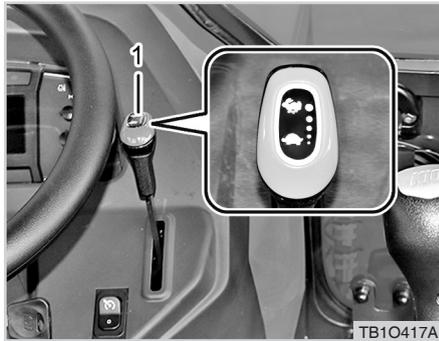
- "Unlike a gas pedal, these forward/reverse driving pedals act like a main speed shift in a mechanical tractor." Therefore, depress them deeper to obtain higher speed with lower torque and release them to obtain lower speed with higher torque.

⊕ IMPORTANT

- For heavy load job, such as front end loader operation, use low speed of the range shift lever.



HAND THROTTLE LEVER



(1) Hand Throttle Lever



Decrease



Increase

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

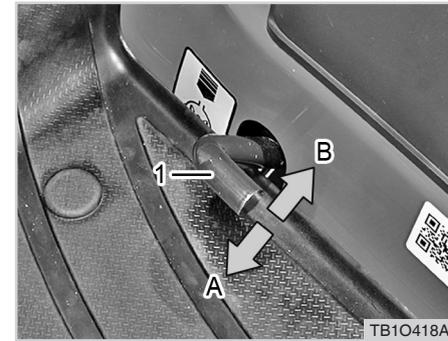
The hand throttle lever is mainly used while working in a field or operating the mower.



CAUTION

- Using the accelerator lever during driving on the road can lead to an accident as it becomes hard to decelerate the tractor rapidly.

DIFFERENTIAL LOCK PEDAL



(1) Lock pedal

(A) Release to "Disengage"

(B) Depress to "Engage"

The differential lock is to secure the differential system and keep the wheel rotation on both sides the same in order to enhance the traction of the rear axle.

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

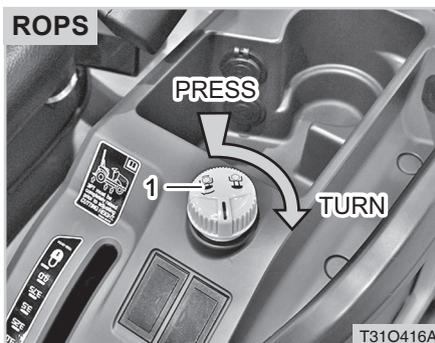
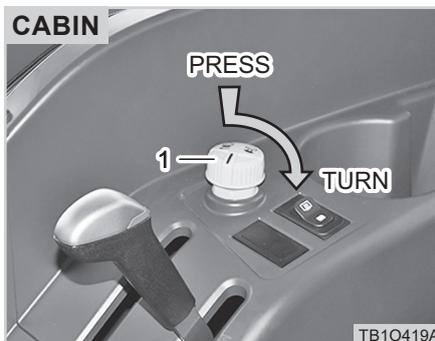
PTO SWITCH (ON / OFF)

Use this system under the following conditions:

1. When any wheel slips and the tractor does not move in the field.
2. When it is hard to escape a soft or muddy field.

⚠ CAUTION

- Engage the differential lock while the rear wheels are turning. If the differential lock pedal does not move when depressing it, try to depress it again after releasing it.
- When engaging the differential lock, reduce the engine speed. After engaging it, accelerate the tractor.
- Make sure to set the steering wheel in the straight ahead position while the differential lock is in use. Otherwise, the differential system can be damaged.



(1) PTO Switch

The PTO switch is used to supply power from the tractor to the implement.

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

To activate the PTO, press and turn the switch clockwise. To deactivate it, press the switch once.

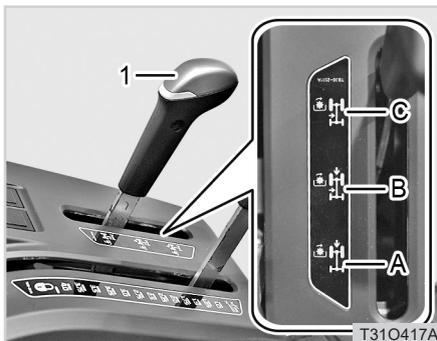
⚠ CAUTION

To avoid personal injury and accident:

- Before disassembling or cleaning the PTO system, make sure that the PTO switch is in the “OFF” position, the engine is stopped, and all parts are stopped.
- Always keep the PTO driving part clean. Also, check the PTO cover is closed while PTO is in operation.
- Disengage the PTO while driving the tractor on a public road.
- Be careful not to get your hand, foot, cloth, or hair into any rotating part while the PTO is in operation. You can be severely injured.

Make sure that no one is around the tractor and implement while the PTO is in operation.

PTO SELECTION LEVER



(1) PTO Selection Lever
 (A) Rear PTO (B) Mid PTO + Rear PTO
 (C) Mid PTO

First select the PTO function before engaging PTO with main switch. In case of using this lever while working PTO, the PTO gears in transmission might be broken.

For “PTO OPC(Operator Presence Control)”, see page 5-3.

CUTTING HEIGHT ADJUSTMENT LEVER



(1) Cutting Height Adjustment Lever

Cutting height is controlled by the height adjustment control lever. The cutting height can be set to seven different heights.

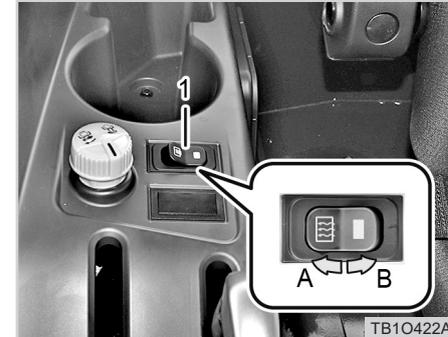
⊕ IMPORTANT

- Deck must be in the "full up" position before cutting height can be changed. Do Not attempt to change cutting height with deck in any other position than "full up".
- When gauge wheels are properly adjusted, gauge wheels will not contact the ground! Gauge wheels are not meant to continuously contact the ground, the wheels act as anti scalp rollers on the four corners of the deck.

Gauge wheels must be adjusted according to the cutting height setting. Use the following chart for gauge wheel position.

CUTTING HEIGHT POSITION (On control lever)	FRONT and REAR GAUGE WHEEL HEIGHT (ground to center of wheel)
1.0"	2.60 in. (66 mm)
1.5"	3.07 in. (78 mm)
2.0"	3.58 in. (91 mm)
2.5"	4.09 in. (104 mm)
3.0"	3.82 in. (97 mm)
3.5"	4.29 in. (109 mm)
4.0"	4.02 in. (102 mm)

DEFROST ON/OFF SWITCH [CABIN MODEL ONLY]



(1) Defrost ON/OFF Switch
(A) ON (B) OFF

- Use this function when the rear view cannot be secured due to frost or freezing on the rear glass in winter.
- Start the engine and press the A part of the rear glass defogger switch. Then, the rear glass defogger is activated to defrost the glass in order to obtain clear rear view. (The switch "ON" indicator is illuminated)
- When clear rear view through the rear glass is obtained, press the B portion of the switch to deactivate the defogger. (To prevent battery discharge)

 **NOTE**

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

**SEAT ADJUSTMENT
SEAT SLIDING**

(1) Seat Adjustment Lever

To adjust the seat position, pull the lever (1) to left under the front of the seat, 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.

 **CAUTION**

- Do not put a hand between the seat and the slides when adjusting the seat position. You can get injured unexpectedly.

 **IMPORTANT**

- The seat is equipped with a safety device that stops the engine when the driver's seat is not occupied.

⚠ WARNING

- *Never Leave the driver's seat while the engine running.*
- *Before leaving the seat, be sure to turn off any implements which are equipped with rotating blades such as rotary tiller, rotary cutter, mid/rear mower, snow blower, etc. and turn off the engine.*

CUSHION STRENGTH ADJUSTMENT [CABIN MODEL ONLY]



(1) Cushion Adjustment Lever

The seat cushion can be adjusted according to the weight of the driver. Turning the cushion adjustment lever (1) on the front of the seat to the (-) direction makes the cushion softer while turning it to the (+) direction makes the cushion firmer.

SEAT BELT CABIN



ROPS



(1) Seat Belt

HYDRAULIC SYSTEM POSITION CONTROL LEVER

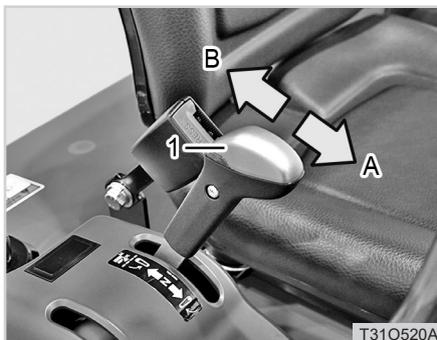
The seat belt is self-retracting type. Make sure to fasten the seat belt before driving.

⚠ WARNING

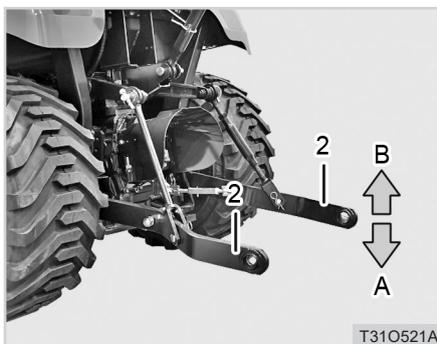
- **Always fasten the seat belt when the tractor has ROPS properly. Otherwise, never wear the seat belt.**
- **Make sure that the seat belt is not twisted. It cannot work properly, leading to a dangerous situation.**

⚠ WARNING

- **Be extra careful not to let any part of your body under the tractor or an implement when lowering an implement.**



T31O520A



T31O521A

(1) Position Control Lever

(2) Lower Link

(A) Lowering

(B) Lifting

The position control lever is to operate the hydraulic lift arm to lift and lower a 3-point hitch implement.

To lower an implement, move the lever forward. To raise an implement, move the lever backward.

The position control lever is automatically returned to its neutral position when the lift arm reaches its upper limit position.

⊕ IMPORTANT

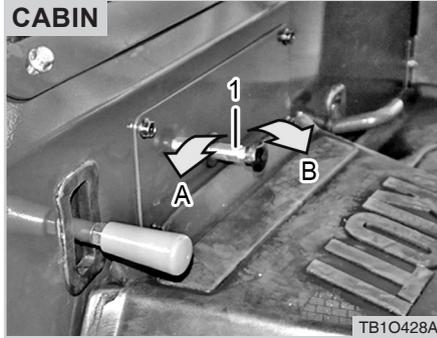
- **When lifting and lowering the lift arm, make sure to place the position control lever to the neutral position in order to stop the lift arm at the desired position.**

⚠ WARNING

- **Make sure that there is no one around before lowering an implement.**

LIFTING ARM (LOWER LINK) DROP SPEED CONTROL LEVER

CABIN



TB1O428A

ROPS



T31O104A

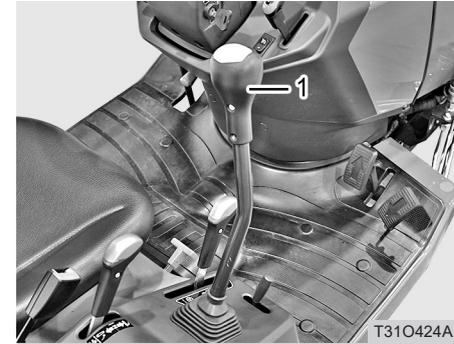
(1) Lowering speed control lever
(A) High Speed (B) Low Speed

Turning the lever counterclockwise increases the lowering speed while turning it clockwise decreases the lowering speed. Also, turning it clockwise to its end can fix the implement to a certain position.

NOTE

- This lever does not control the lifting speed of the lifting arm.

JOYSTICK LEVER



T31O424A

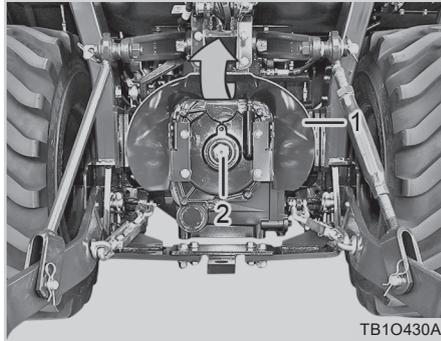
(1) Joystick Lever

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

For detailed information, refer to "Handling Loader" in Chapter 6.



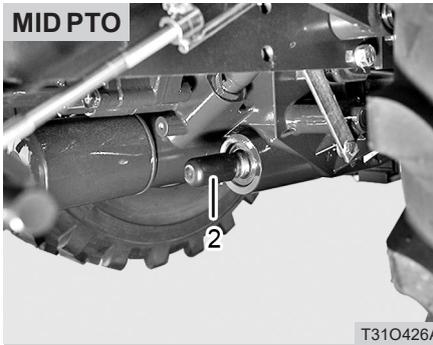
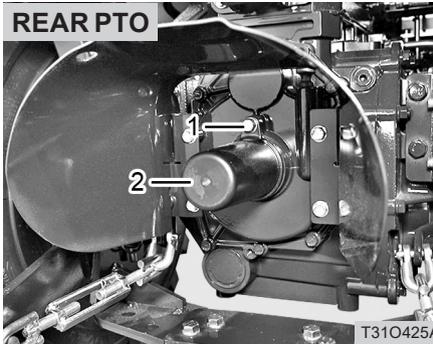
PTO SHAFT COVER & CAP



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

Equipped with a flip-over type PTO cover. After connecting the drive shaft of the implement, close the PTO cover again.

The implement shaft must be of the double U-joint type with protective cover.



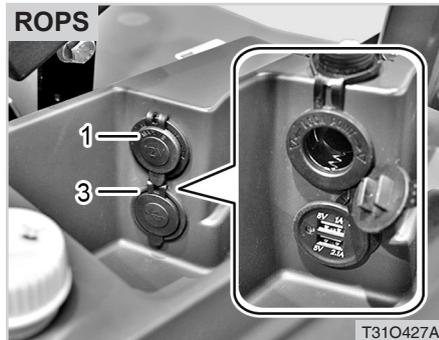
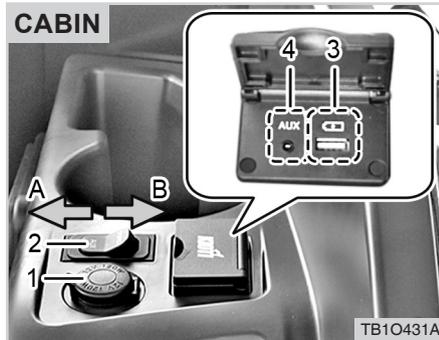
(1) Bolt

(2) PTO Shaft Cap

The PTO shaft is equipped with a cap for safety.

When the PTO is not in use, be sure to reinstall the PTO cap.

ACCESSORY SYSTEM POWER SOCKET & USB CHARGE



- (1) Power Socket
 (2) Stereo/AUX Select Switch
 (3) Rechargeable USB Port
 (4) Ear Phone Holder
 (A) Stereo (B) Power Outet/USB

A cigar jack-type power socket (1) and USB charging port (2) are provided.

They can be used when the ignition key is in the ON position.

Regardless of the Stereo-AUX SW, the cigar jack power outlet can be used when the key is ON and the USB charger can be used when the key is ON or ACC.

If the optional stereo is not installed, connect the mobile device to the ear-phone holder and then turn on the auxiliary amplifier by switching the STEREO-AUX switch to the AUX position to hear the sound from the mobile device loudly through the indoor speakers.

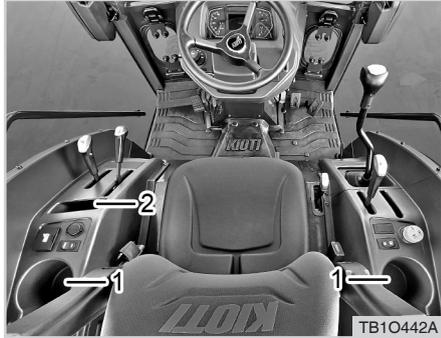
If you install an optional Bluetooth stereo, you can hear sound from the stereo or Bluetooth by switching this STEREO-AUX switch to the STEREO position.

⚠ CAUTION

- Always keep the covers closed when not in use as moisture or dust may enter and cause a short circuit.



CUP HOLDER [CABIN MODEL]



(1) Cup Holder (2) Cell phone holder

There are two cup holders on the left and right fenders, and one cell phone holder on the left fender.

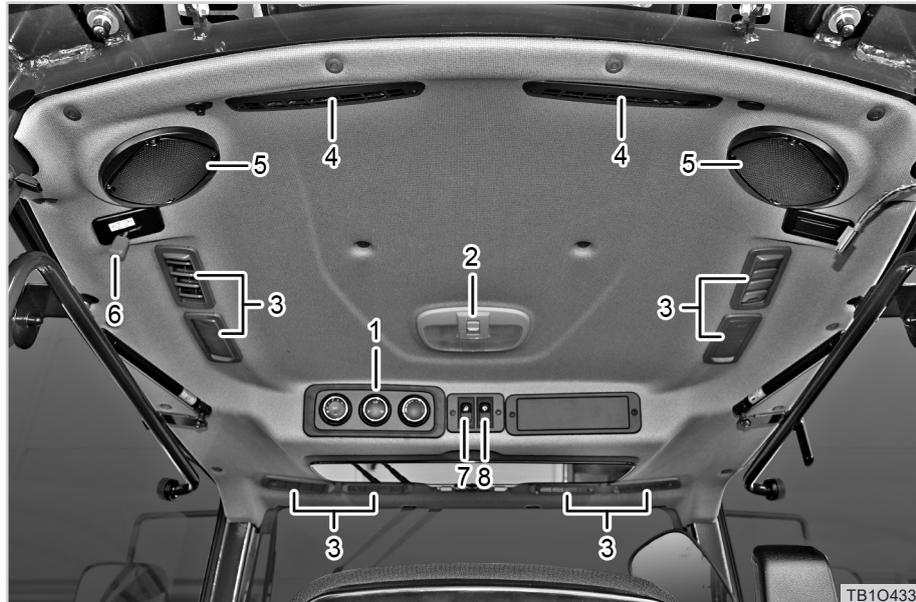
[ROPS MODEL]



(1) Cup Holder & Storage

The cup holder and storage are installed to the left fender for driver's convenience.

CABIN SYSTEM INTERIOR DEVICES



- (1) Heater/Air Conditioner Switch
- (2) Room Lamp
- (3) Air Vent (In)
- (4) Air Vent (Out)
- (5) Speaker
- (6) Air Recirculation And Fresh Air Mode Lever
- (7) Work Light Switch
- (8) Wiper Switch

TB1O433A



EXTERIOR DEVICES



- (1) Work Light (FR)
(2) Antenna
(3) Wiper (FRT/RR)
(4) Outside Rearview Mirror

- (5) Door Handle
(6) Turn Signal Lamp
(7) Front Loader Quick Connect Window

1. This is a verified cabin that has passed the official ROPS test.
2. The wide windshield provides a wide field of view.
3. Powerful air conditioner and heater help driver work comfortably.
4. Front LED work lights (1) with excellent illumination are provided as standard. Rear LED work lights are available as an option.
5. A sturdy double arm wind brush (3) is installed as standard.
6. A quick connect window (7) is equipped to allow easy attachment and detachment of the front loader.

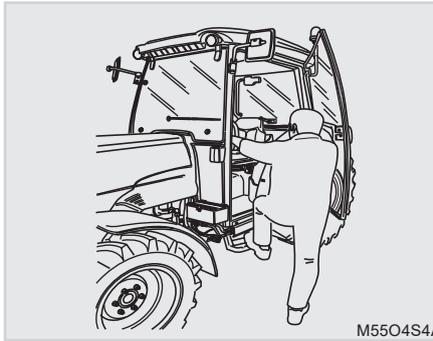
ENTRANCE



(1) Door Handle

A sturdy grip-type door handle is applied.

The door can be locked from the outside using the ignition key.



Since there is a joystick lever on the left door when entering,

UNLOCKING THE DOOR



(1) Door Lever

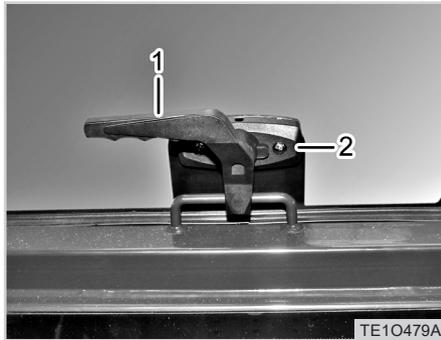
To open the door in the cabin, push the lever outwards.

⚠ WARNING

- ***When boarding, hold the cabin handle with your left hand and the inner door handle with your right hand and use the steps.***
- ***When getting off, it is recommended to hold the handles on both sides and step backwards.***
- ***To avoid injury, never jump off.***



REAR WINDOW



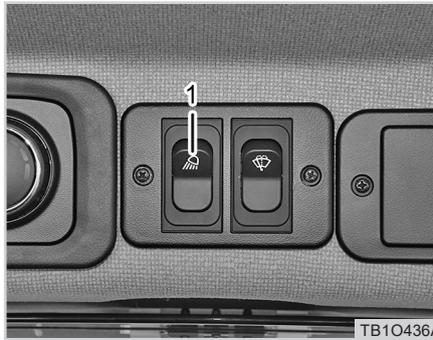
- (1) Handle Of Rear Window
(2) Locking Device

When opening or closing the rear window, gently pull the handle inward and turn it.

WARNING

- ***The rear window may not be opened due to an implement. Make sure there is enough space to open the window.***

WORKING LIGHT



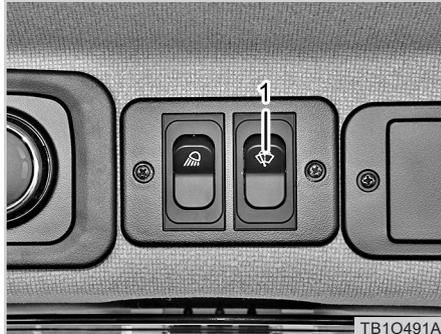
- (1) Working Light Switch
(2) Working Light (Front)

The front work light is mounted on the front top of the roof, and its operating switch is located on the front top panel in the cabin.

IMPORTANT

- Normal water can be used as the washer fluid, but it is recommended to use the washer fluid made exclusively for vehicles. Especially, make sure to use seasonal washer fluid in winter.
- The washer fluid motor can be damaged if you are trying to spray the washer fluid when its tank is empty. Therefore, make sure to check the fluid level before driving.

WIPER



TB1O491A



TB1O492A

(1) Wiper Operating Switch (Front)
(2) Wiper (Front)

1. To turn on, position the switch marked (wiper) to the “ON” position.



TB1O493A

(1) Washer Fluid Tank

2. The washer fluid is sprayed through the nozzle of the wiper by pressing the switch again with the key switch in the “ACC” or “ON” position.
3. The washer fluid for the windshield is installed in the rear auxiliary fender left hand and right side.

⊕ IMPORTANT

- Normal water can be used as the washer fluid, but it is recommended to use the washer fluid made exclusively for vehicles. Especially, make sure to use seasonal washer fluid in winter.
- The washer fluid motor can be damaged if you are trying to spray the washer fluid when its tank is empty. Therefore, make sure to check the fluid level before driving.
- Spray enough washer fluid and operate the wiper if there is dirt on the window. When operating the wiper while it is frozen to the window, its fuse can be blown. In this case, operate the wiper after increasing the cabin temperature enough to defrost the wiper.
- Wiper blade can be damaged if operated on a window that is iced over.

BLUETOOTH STEREO [OPTION]

- (1) Bluetooth player / Radio
(2) Power (PWR) switch

Bluetooth stereo is available as an option. Please contact your nearest **KIOTI** official dealer.

ANTENNA

- (1) Antenna

If stereo reception is poor, check the angle of the antenna and whether it is in contact.

INDOOR LAMP

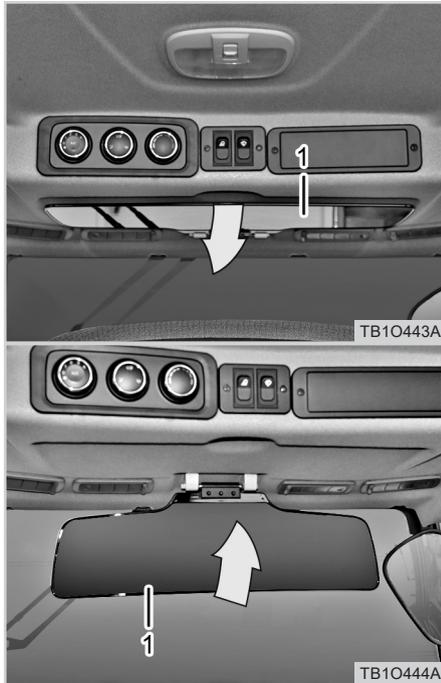
- (1) Indoor Lamp

If you slide the lever button, the indoor lamp will be turned on. If you slide it back, it will be turned off.

CAUTION

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

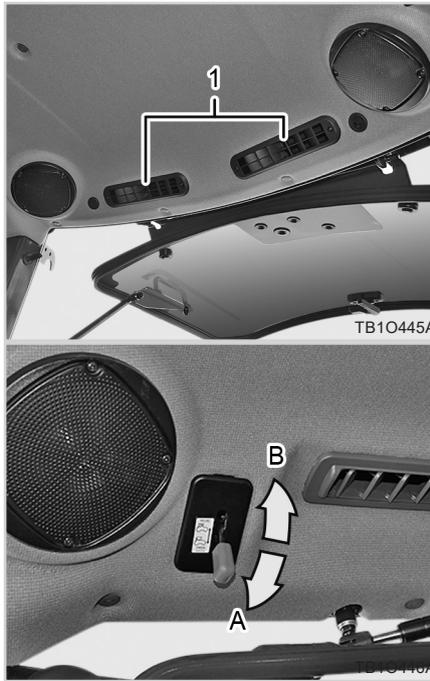
SUN VISOR



(1) Sun Visor

Pull it down to block the sunlight.
Keep it folded unless necessary.

AIR RECIRCULATION & VENTILATION



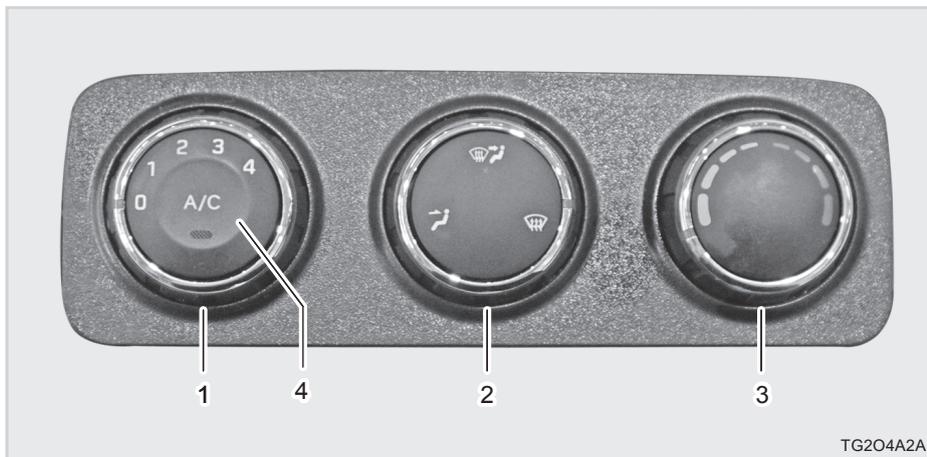
(1) Air Vent (Out)
(A) Ventilation (Fresh)

There is an air ventilation and recirculation lever on the ceiling at the rear of the cabin. Pull the lever to A for ventilation, and pull it to B for recirculation.

WARNING

- This cabin is not designed for spraying chemicals and cannot block polluted outside air from entering.

HEATER AND AIR CONDITIONER



(1) Fan Speed Control
(2) Vent Mode Control

(3) Temperature Control
(4) Air Conditioner Switch

The air conditioner should be operated with the engine running.

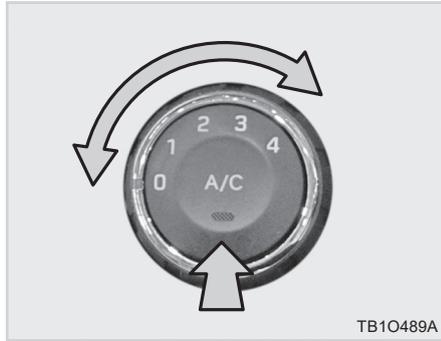
⚠ WARNING

- **Do not leave a child alone in the cabin. His/her health can be threatened as internal temperature rises rapidly in hot weather or on a sunny day.**

⚠ WARNING

- **Use the ventilation mode in normal conditions and use the recirculation mode only if necessary. Continued operation of the air recirculation mode can cause the inside to become stuffy, causing headaches, drowsiness, or frost on the windows. Do not operate the recirculation mode for an extended period of time.**

FAN SPEED CONTROL



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

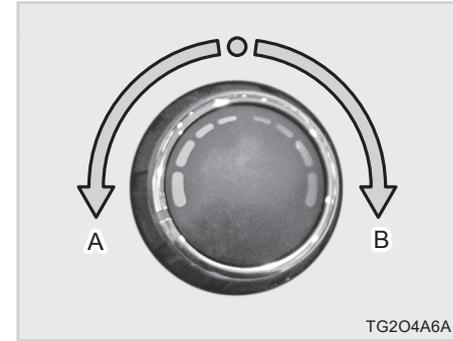
Press it to turn on the air conditioner and press it again to turn it off.

VENT MODE CONTROL



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

TEMPERATURE CONTROL



(A) Cool

(B) Hot

The desired temperature can be set by adjusting this dial. Warm air flows out by turning it clockwise (red), and cool air flows out by turning it counter-clockwise. (Blue)

The temperature control dial only controls the amount of air flowing through the heater and air conditioner.

Therefore, unnecessary load can be applied to the air conditioner if this dial is set to the high temperature with the A/C in operation.

**⚠ WARNING**

- *If you sleep with the air conditioner or heater in operation, you may be suffocated to death.*
- *If 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.*

⚠ CAUTION

- **Keep the windows closed while the A/C is in operation for effective operation.**
- **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.**
- **Make sure you operate the air conditioner once or twice a month in winter season to prevent refrigerant leakage and facilitate the compressor lubrication for durability of the A/C components.**
- **If the tractor has been parked under strong sunlight for a long period of time, open the windows to ventilate the cabin before operating the A/C.**

AIR CONDITIONER MAINTENANCE

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

1. Air conditioner condenser care:

If there is foreign material in the A/C condenser and engine radiator, their cooling performance may be deteriorated. Therefore, always keep them clean for their optimal cooling performance. When cleaning the core of the condenser, use a soft brush and water carefully not to bend it.

2. Before operation in summer season:

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

Replace the air-con filter once a year before starting summer season.

⚠ 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 becomes poor when the refrigerant is insufficient. However, charging the air conditioner with excessive refrigerant affects its performance negatively. Therefore, have the system checked by a KIOTI Dealer if malfunction is found.

SPECIFICATIONS FOR A/C REFRIGERANT AND LUBRICANT

Item	New refrigerant	Compressor oil
Type	HFC-134a	UCON488
Charging amount	0.45 kg	120 g

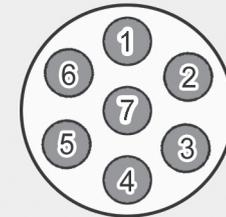
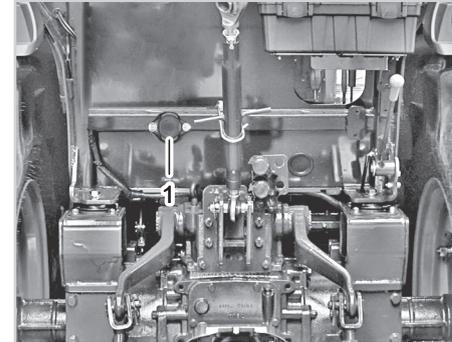
⚠ WARNING

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

⚠ CAUTION

- Be careful when handling refrigerant because it contains fluorinated greenhouse gases
 - Industry fluorinated greenhouse gases name : HFC-134a
 - Global warming potential values : 1430
 - Quantity in weight : 0.45 kg
 - CO2 equivalent : 0.64 ton

7-PIN SOCKET ((IF EQUIPPED))



TB1O494A

(1) Power Connector

The 7-pin socket is available as an option.

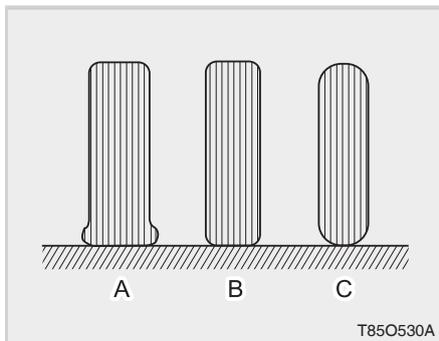
This supplies power to the brake lamps, turn signal lamps, and position lamps of the trailer.

TIRES & WHEELS

No.	Circuit	Color of wire
1	Turn Signal (LH)	Y
2	Spare	L
3	Ground	W
4	Turn Signal (RH)	G
5	Illumination (RH)	Br
6	Stop lamp	R
7	Illumination (LH)	B

⚠ WARNING

- **When driving on a road with an implement which has exterior lamps, such as a trailer, make sure to turn on those lamps by connecting them to the 7-pin socket in order to prevent an accident.**
- **Make sure to check for proper operation after connecting the 7-pin socket to the trailer. It may not operate depending on the trailer specifications. Consult your local KIOTI Dealer for this issue.**



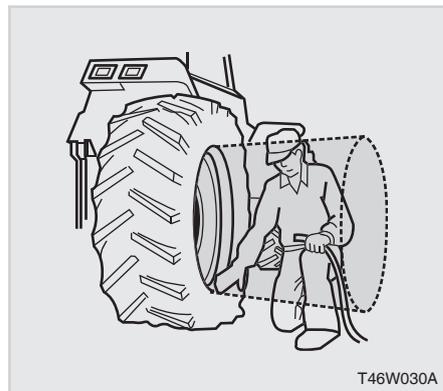
(A) Insufficient
(C) Excessive

(B) Standard

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



4

⚠ WARNING

- **Old tires may explode at the bead due to internal pressure. When checking or inflating tires, keep your face and body away from the danger zone shown in the picture.**

WHEEL TORQUE AND DIRECTION WHEEL BOLT AND NUT TORQUE

Front	88 N·m (8.97 kgf·m)
Rear	122 N·m (12.44 kgf·m)

WARNING

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

INFLATION PRESSURE

Always maintain the proper tire inflation pressure. Make sure the tire pressure does not exceed the pressure recommended in the manual.

ITEM		TIRE SIZES	INFLATION PRESSURE
Front	AGR	-	-
	Turf	18x8.5-10 R3 (8PR)	0.6~1.4 kg/cm ² , 60~140 Kpa, 8.7~20.3 psi
	IND	18x8.5-10 R4 (8PR)	0.6~1.4 kg/cm ² , 60~140 Kpa, 8.7~20.3 psi
Rear	AGR	-	-
	Turf	26x12.00-12 R3 (8PR)	0.8~1.4 kg/cm ² , 80~140 Kpa, 11.6~20.3 psi
	IND	26x12.00-12 R4 (8PR)	0.8~1.4 kg/cm ² , 80~140 Kpa, 11.6~20.3 psi

※ IND... for Industrial.

NOTE

- When using a front loader, keep the front tire pressure at the maximum allowable limit.
- If you wish to install tires of a different size from the standard tires, consult with a **KIOTI** dealer to verify the front and rear wheel speed ratios.
- Use of unsuitable tires can result in excessive tire wear, interference, and damage to the transmission.

ADDITIONAL WEIGHT (OPTIONAL) ADDITIONAL FRONT WEIGHT



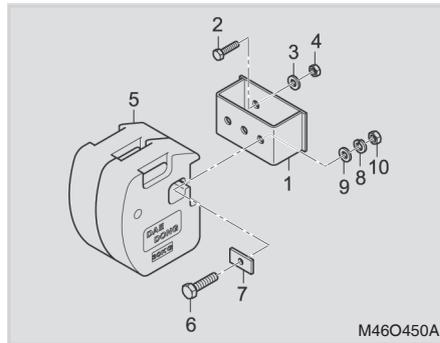
(1) Additional Front Weight

If a heavy implement is installed at the rear or when towing a heavy trailer, the front wheels may be lifted. Add sufficient weight to keep steer ability and to prevent rollover.

If sufficient weight, such as front loader, is applied to the front wheels, remove the extra front weight.

If the front tires are heavily loaded and it becomes hard to steer the tractor, the tires can be worn faster and the durability of the front axle can be deteriorated.

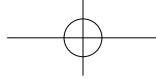
COMPONENTS FOR ADDITIONAL FRONT WEIGHT



- | | |
|---------------------------|-------------------|
| (1) Weight Bracket, Front | (6) Bolt |
| (2) Bolt | (7) Spacer |
| (3) Plain Washer | (8) Spring Washer |
| (4) Nut | (9) Plain Washer |
| (5) Balance Weight | (10) Nut |

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

The front weights are available at the **KIOTI** Dealer.

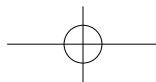


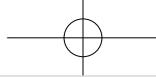
MEMO



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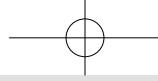


OPERATION

5

5

PRE-OPERATION	5-2	TURNING	5-18
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PRE-OPERATION

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

CAUTION

- **Stop the tractor on level ground, stop the engine, and apply the parking brake before checking or repairing it.**
Refer to “Daily inspection” in the section “Service”.

CHECK ITEM

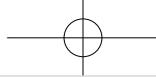
- Check the engine oil level.
- Check the transmission oil level.
- Check the coolant level.
- Clean the grill and radiator screen.
- Check the air cleaner filter.
- Check the brake pedal.
- Check all dash gauges and indicators.
- Check head lights, tail lights, and all working lights.
- Check the seat belt and **ROPS** for damage.
- Check fuel level.
- Check all danger and warning decals.
- Visually check tire inflation and wheel bolt tightening.

For detailed information, refer to “Maintenance interval” in chapter 7.

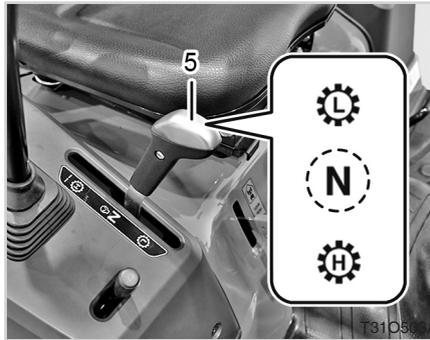
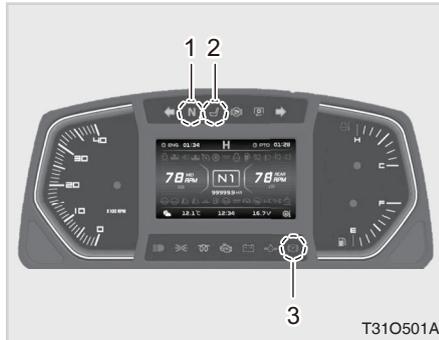
INITIAL OPERATION

Driving a new tractor at a high speed or with maximum load is not recommended.

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



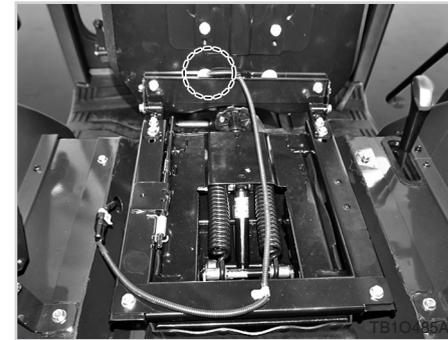
CHECKING OPC (OPERATOR PRESENCE CONTROL) PARKING BRAKE & RANGE SHIFT LEVER



- (1) Neutral Indicator
- (2) Seat Indicator
- (3) Parking Brake Indicator
- (4) Parking Brake lever
- (5) Range Shift Lever

If the driver gets off the seat without applying the parking brake or placing the range shift lever in neutral, the engine will shut off within 3 seconds.

SEAT SWITCH



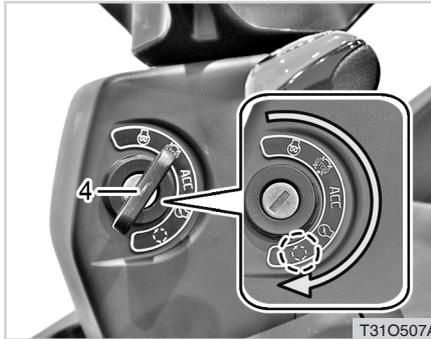
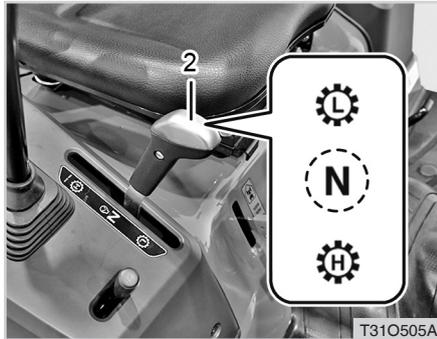
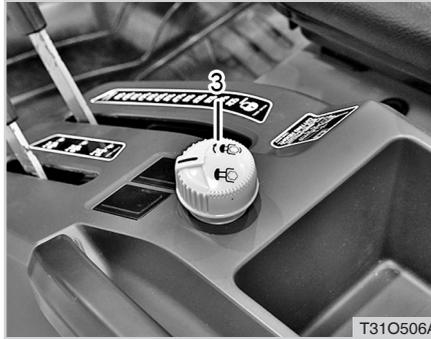
5

The seat switch is mounted inside of the seat bottom.

When the driver leaves the seat, actuation of the plunger of this switch shuts off the engine under certain conditions.



SAFETY START



(1) Brake Pedal
(2) Range Gear

(3) PTO Switch
(4) Key Switch

For safe starting, the driver must step on the brake, place the range gear in neutral, turn off the PTO switch, and operate the ignition key while seated in the seat. If even one of these is missing, the engine will not start.

TIPS FOR BREAKING-IN

1. Start the engine and idle the engine at a low speed for 3 to 4 minutes in advance.
2. Increase the idling time in cold weather.
3. Idle the engine at a low speed for 2 to 3 minutes before stopping it.



OPERATING THE ENGINE STARTING THE ENGINE

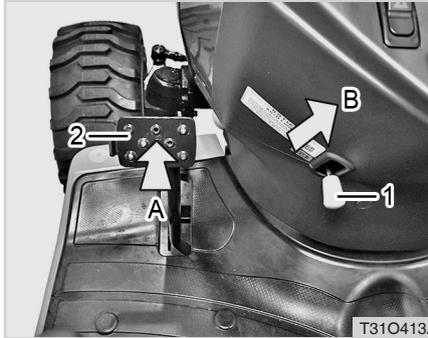
⚠ WARNING

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 can be suffocated by exhaust fumes.*
- *Never start the engine unless you are on the driver's seat.*
The tractor can abruptly start off, resulting in an injury or accident.

⊕ IMPORTANT

- **Using an additive so the engine will start more easily can damage the engine. And it will not be covered by warranty.**
- **Never try to start the engine for over 10 seconds consecutively to protect the start motor and battery from damage.**

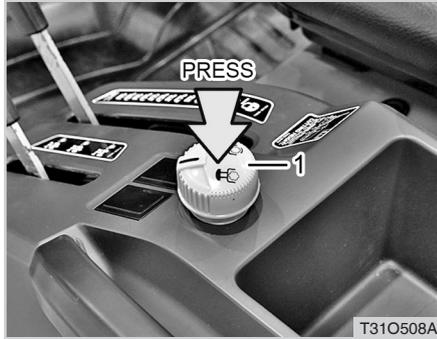


(1) Parking Brake Lever (2) Brake Pedal
(A) Depressing (B) Pressing Up

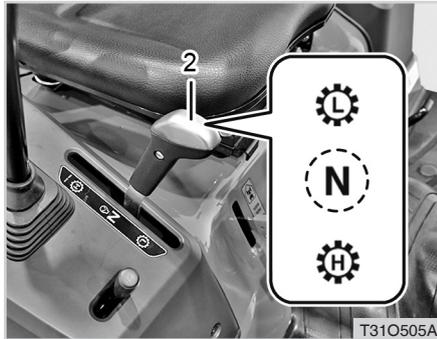
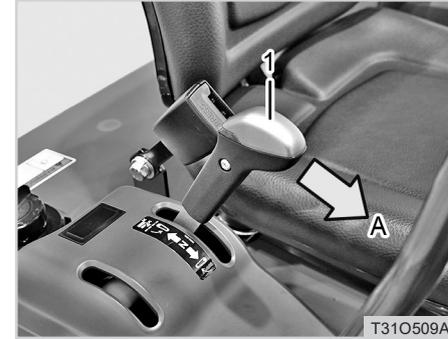
⊕ IMPORTANT

- **Make sure that the brake pedals are fully depressed before pulling the parking brake lever up.**

1. Make sure there is no hazardous obstacle around the tractor.
2. Make sure the parking brake is set
 - (1) Depress the parking brake pedal and pull the lever up. (Check that the parking brake lamp on the dash board illuminates)
 - (2) To release the parking brake press the brake pedals again.



3. Place the PTO switch to the “OFF” position. (Engine cannot be started while the PTO is engaged)
4. Set range shift lever in the neutral position.



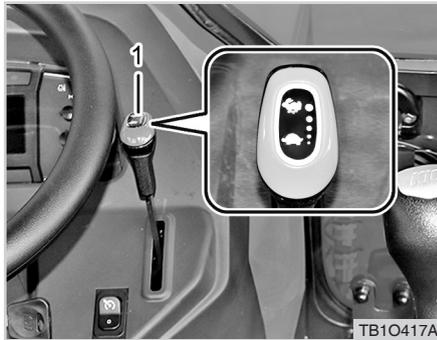
- (1) Position Control Lever
- (A) Lowering

- (1) PTO Switch
- (2) Range Shift Lever

5. Lower the attachment by pushing the position control lever forward.

⚠ WARNING

- ***Make sure that no one is around the implement or behind the tractor.***



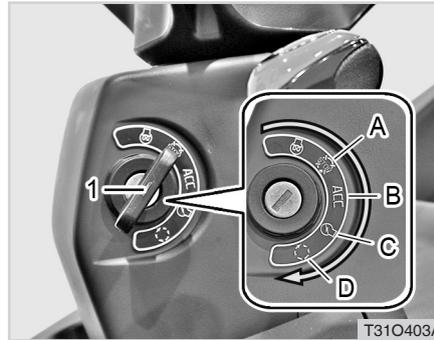
TB1O417A

(1) Hand Throttle Lever

"High"

"Low"

6. Pull the hand throttle lever to "Low" position.



T31O403A

(1) Key Switch

(A) Stop

(B) ACC

(C) ON

(D) Start

7. Insert the key into the key switch and turn it "ON" and maintain it until the preheat lamp is turned off.

While pre-heating, the pre-heat lamp on the dash board illuminates.

It is normal that the charge warning lamp and engine oil pressure warning lamps come on when the key is in "ON" position before the engine start.

NOTE

Operating principle of auto pre-heating system.

- The pre-heating lamp comes on for 8 seconds. It goes off when the key switch is turned to the "Start" or "Stop" position.

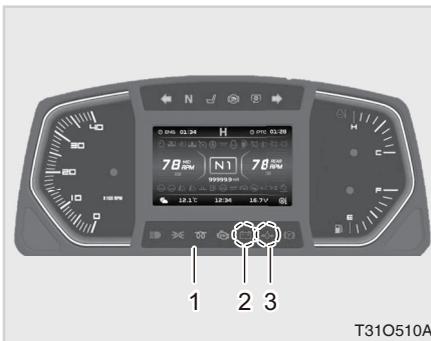
The engine should be started before or right after the pre-heating lamp goes off. After the engine is started, post-heat is performed for 15 seconds with the key switch in the "ON" position.

- The post-heating is a function to keep the glow plugs activated for approx. 15 seconds after the engine is started in order to enhance the engine combustion performance and to reduce harmful emissions right after engine start.

⚠ WARNING

- **Never operate the start motor for more than 10 consecutive seconds as it consumes an excess of battery power. If the engine cannot be started within 10 seconds, wait for 30 seconds and try again.**
- **Never try to crank while the engine is running.**

8. When the engine is started, release the key. Then, the key is automatically turned back to the "ON" position.
9. Warm up the engine for 3 to 4 minutes (10 minutes in winter).



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

10. Ensure that all the warning lamps on the instrument cluster are "OFF".

If any lamp remains on, immediately stop the engine and determine the cause.

ENGINE CHECK 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 **KIOTI Dealer**.

⚠ WARNING

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

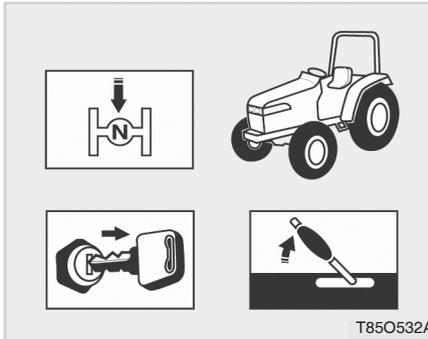
2. If the charge warning lamp (3) does not go "OFF" in 4 to 5 seconds after the engine is properly started, it means that the battery is not being charged. Have the charging system, such as the battery and alternator, serviced.
3. Refer to "Instrument panel" in chapter 4 for detailed information about 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 can be discharged and the tractor's electrical system can be damaged.*



1. Make sure to reduce the engine rpm before stopping the engine.
2. Put all shift levers in the neutral position.
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 hot covers until they are cooled down after running the engine or driving the tractor.*

⊕ IMPORTANT

- Turn off all the electrical devices and remove the ignition key before leaving the tractor.
- The horn, turn signal lamp and hazard lamp can be operated without the key inserted. However, using these components without the engine started for long time 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. Before warming up the engine, make sure that each part in the engine is properly lubricated and each hydraulic part is in a perfect condition.

HOW TO WARM UP ENGINE

1. Start the engine and run it at a low speed and without load for approx. 3 to 4 minutes.
2. In cold weather, increase the warming up time to 10 minutes.
3. If it is very cold, warm up the engine for approx. 15 minutes.
4. The engine throttle can be open for 50 % in order to shorten the warming up time.
5. The engine is sufficiently warmed up when the temperature gauge on the instrument panel indicates 1/4 of the normal temperature range, regardless of the warming-up time.
6. Do not increase the work load rapidly after starting work.
7. Run the engine without load for approx. 2 to 3 minutes before stopping the engine after work.

WARNING

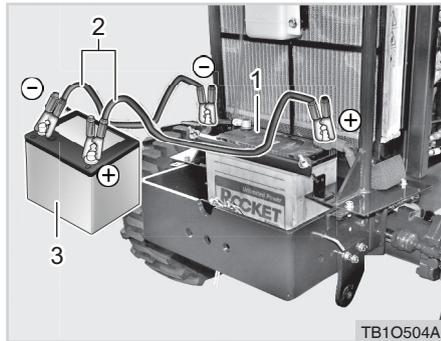
- *Warming up the engine excessively increases fuel consumption and affects the durability of the tractor negatively.*
- *Never leave the tractor unattended while warming up.*

WARNING

- *Be sure to apply parking brake while warming up the engine.*



JUMP STARTING THE ENGINE

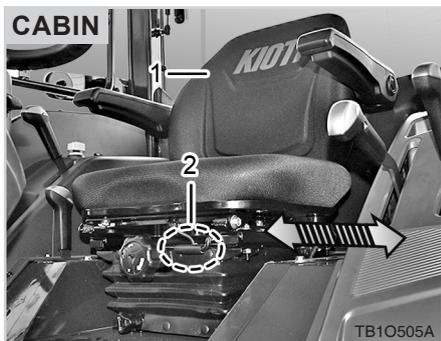


(1) Dead Battery
(2) Jumper Cables
(3) Helper Battery

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 the battery specification for the voltage of the discharged and another 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. Wear protective glasses and gloves and open the hoods of both tractors. Remove the battery terminal cover as necessary.
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 tractor body with the discharged battery. Make sure to connect the clip to a part of the frame without paint.
6. Start the engine of the tractor with the charged battery.
7. Start the engine of the tractor with the discharged battery.
8. Disconnect the black cable.
9. Disconnect the red cable.
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 DRIVING



(1) Seat
(2) Seat Adjustment Lever (Sliding)

1. Adjust the seat location.

⚠ WARNING

- *Check if the seat is securely locked after the seat adjustment.*
- *Do not adjust the seat while driving. The seat may move suddenly causing the loss of control of the tractor.*

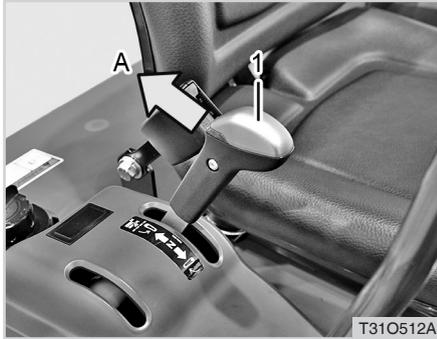
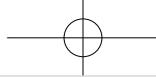


(1) Seat Belt

2. Fasten the seat belt.

⚠ WARNING

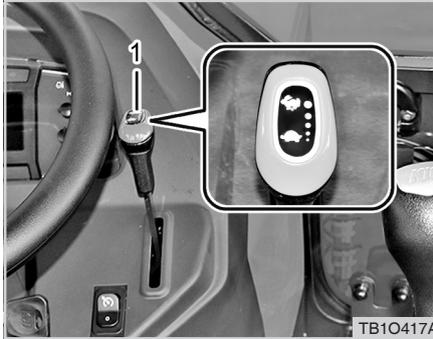
- *Always wear the seat belt.*
- *If the seat belt is worn across the abdomen or waist, not the hips, an injury can occur in case of an accident or impact.*
- *Do not wear the seat belt if the ROPS is not installed or folded.*



T31O512A

(1) Position Control Lever
(A) Lifting

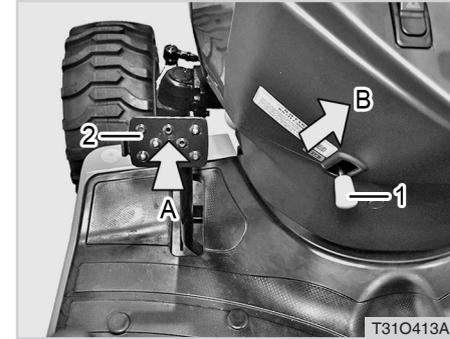
3. Pull the position control lever backward to raise the attachment.



TB1O417A

(1) Hand Throttle Lever
Decrease Increase

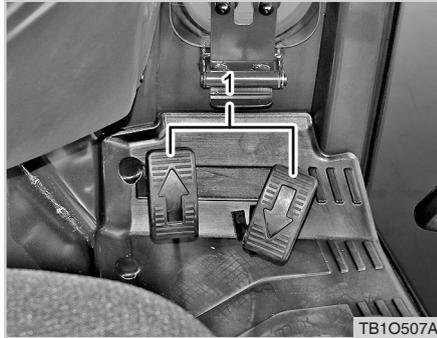
4. Increase slowly the engine RPM from idle speed to medium speed.



T31O413A

(1) Parking Brake (2) Brake Pedal
(A) Depressing (B) Pressing Down

5. Release the parking brake. (Depress the brake pedal lightly to release)



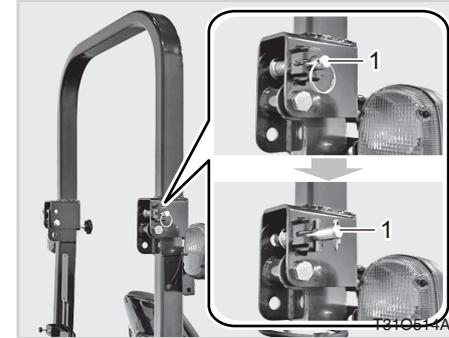
(1) Forward / Reverse Driving Pedals
(2) Range Shift Lever

6. Shift the range shift lever and depress the forward/reverse driving pedal to move the tractor.

CAUTION

- Do not change the tractor speed abruptly for safe driving.
- When driving on a slope or loading or unloading the tractor to a transporting vehicle, reduce the speed in advance so that there is no need to shift the gear in the middle of the slope.

FOLDING THE ROPS

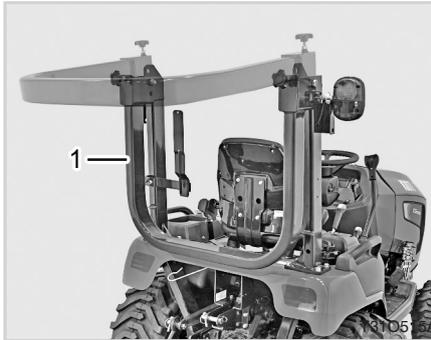


(1) Set Pin

1. Pull the set pin forward and rotate it 90° to secure.

**⚠ CAUTION**

- You should always stop the engine, remove the key and set the parking brake before raising or folding the ROPS.
- Always perform such tasks from a safe and stable position at the rear of the tractor.
- It is very dangerous to drive with the ROPS folded. Fold the ROPS only when there is absolutely no possibility for roll over. If the situation changes, unfold the ROPS immediately.

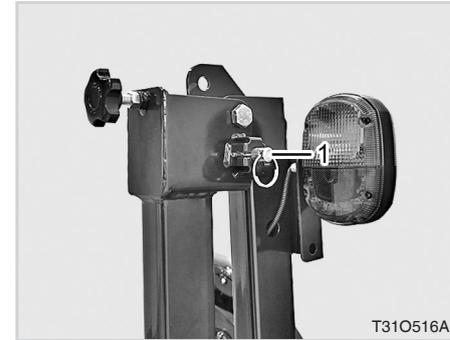


(1) ROPS

2. Fold the ROPS.

⚠ CAUTION**To avoid personal injury:**

- Hold the ROPS tightly with both hands and fold the ROPS slowly and carefully.



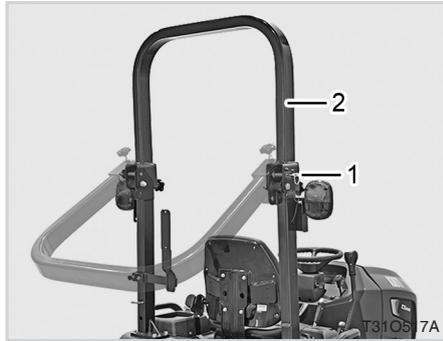
(1) Set Pin

3. Align the set pin with the groove, then pull it to release.

⚠ CAUTION**To avoid accidents:**

- Make sure the pins are properly installed and secured.

RAISING THE ROPS TO UPRIGHT POSITION



(1) Set Pin (2) ROPS

1. Pull the set pin forward.
2. Raise **ROPS** to the upright position.

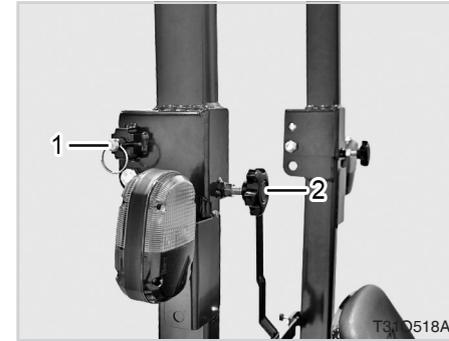
⚠ CAUTION

To avoid accidents:

- Make sure to set the ROPS upright and fasten the seat belt during work.

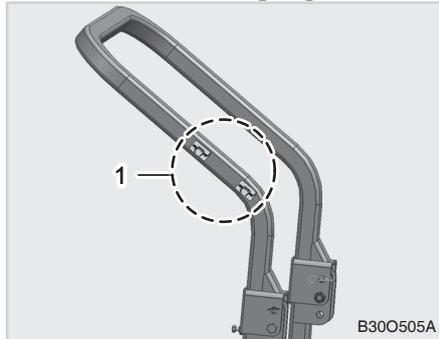
If it is necessary to work with it folded, do not fasten the seat belt.

It can be dangerous in case of tractor rollover.



(1) Set Pin (2) Grip Bolt

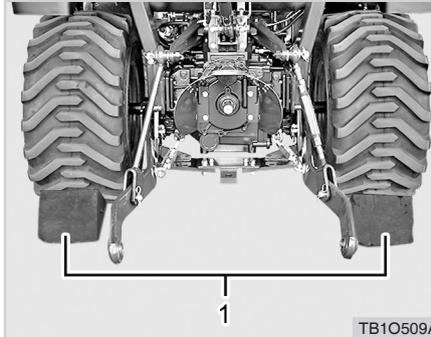
3. Align the set pin with the groove, then pull it to release.
4. Fix the ROPS with grip bolt.

**GRASPING POINT [EU]**

(1) Grasping Point Label

⚠ CAUTION

- **Make sure to hold the Grasping point and fold or unfold the ROPS. Otherwise, it may lead to injury.**

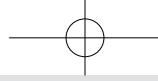
PARKING

(1) Chocks



(2) Parking Brake Lever

1. This tractor is not equipped with a separate parking brake. However uses the brake pedals instead.
2. Pull the parking brake lever (2) up with the brake pedals depressed fully to engage the pedals with the latch. If the braking force is insufficient, depress the pedals more firmly.
3. Before leaving the tractor after parking it, make sure to stop the P.T.O, lower the implement onto the ground, and stop the engine.
4. If it is necessary to leave the tractor with the engine running, put all the shift levers in the neutral position and apply the parking brake firmly.
5. When parking the tractor on a slope, stop the engine with the parking brake applied and engage the low speed gear.
6. If it is necessary to park the tractor on a slope with the engine running, chock all four wheels (1) and perform Steps 3 and 4 above.



7. In order to release the parking brake, depress the brake pedals firmly again.

⚠ WARNING

- *The brake disc can be rapidly worn if you drive with the parking brake applied.*
- *Never park the tractor on a steep slope in any circumstance. A severe accident can happen.*

⊕ IMPORTANT

- The tractor may move slowly with the engine running even though the HST pedals are in the neutral position. This is normal and is due to the fluid friction in the transmission. This symptom can easily occur when the engine rpm is high, the low speed gear is selected by the range shift lever, and the viscosity of the transmission fluid is high due to low temperature. To prevent this symptom, make sure to apply the parking brake.
- Get off the tractor after checking that the tractor is completely stopped and the parking brake is firmly applied.

Do not park the tractor on tall grass or hay. If grass or hay touches the muffler, it can cause fire.

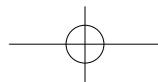
TURNING

Turn slowly by lowering the engine speed.

⚠ 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 turning. A serious accident can occur.*





DRIVING ON SLOPE

1. Please drive according to the conditions of the slope at safe speed so that the engine is not under heavy load.
2. Make sure to shift to the lower gear in order to prevent the engine from stalling on an uphill.
3. On the downhill slope, drive at low speed.

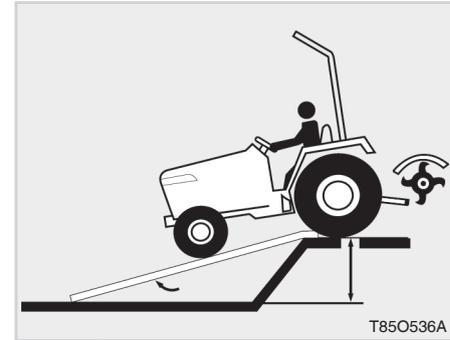
IMPORTANT

- "Unlike a gas pedal, these HST pedals act like a main shift in a mechanical tractor". Therefore, depress them deeper to obtain higher speed with lower torque and release them to obtain lower speed with higher torque.
- For heavy load job, such as front end loader operation, use low speed of the range shift lever.

WARNING

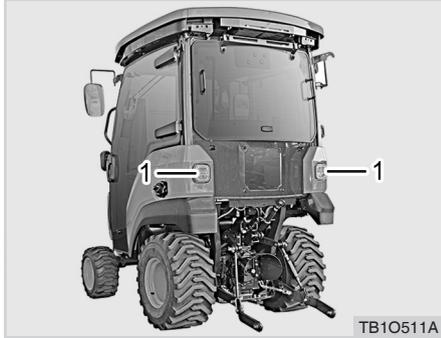
- *Make sure that the brake pedal and differential lock pedal are surely released.*
- *Before entering a steep slope, move the shift lever down to a proper gear and never try to move the shift lever on a slope. A serious accident can occur.*

ENTERING INTO LOWER LAND



1. Enter and exit the lower land by driving the tractor at a right angle to the bank.
2. When going up, lower the implement not to let the front wheel rise. Raise the implement as soon as the front and rear wheels are over the bank.
3. It is recommended to use the 4WD and drive backward when moving onto a bank.

PRECAUTIONS WHILE DRIVING ON THE ROAD



(1) Direction Indicator

1. When you change the driving direction on the road, let other car know your direction by using the turn signals.
2. When you meet another car in the opposite direction in the night, do not use high beam head lights.

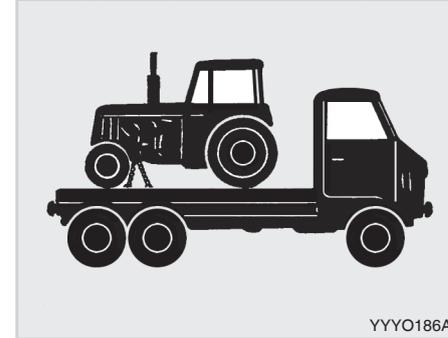


(1) Brake Pedal

⚠ WARNING

- ***When you are driving on the road, observe all local traffic and safety regulations.***
- ***Only the operator should ride on the tractor unless a passenger seat is installed.***
- ***If the tractor breaks down while driving on the road, park on the side of the road and turn on the flasher lights.***

LOADING INTO AND UNLOADING OUT OF THE TRUCK



1. When you load the tractor, do it by driving backward.



POWER STEERING PRECAUTIONS

WARNING

- *When transporting the tractor with a truck, fix the tractor firmly onto the truck and be sure to aware the height of loaded tractor to avoid to hit the ceiling of the tunnel or the bottom of the bridge.*
- *Make sure to follow this instruction as such accidents really happen.*



(1) Power Steering Handle

1. The power steering function is activated only while the engine is running. The steering wheel can be operated but becomes very difficult when the engine is stopped.
2. If you operate the steering wheel with the tractor loaded, using an implement or loader, the steering wheel operation can be somewhat difficult. Operate the steering while tractor is in motion.

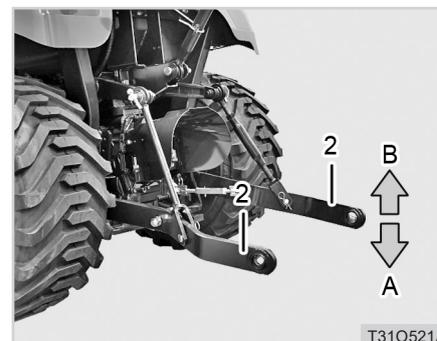
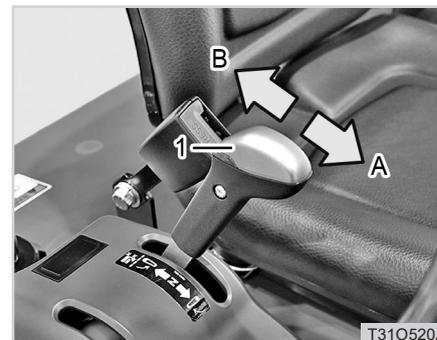
3. When a loader is mounted, adjust the air pressure of the front wheel to its maximum specification and mount weight or implement on the 3 point hitch of the tractor, and remove the front weight to make the front and rear balance more stable for safe working.
4. When turning the steering wheel to its end, the operating sound of the safety valve (relief valve) can be heard. Do not continuous to operate the steering wheel to a maximum right or left turn when you hear the relief valve continually. (OK for a short period of time). The temperature of the hydraulic fluid may rise, causing malfunctions.

⚠ WARNING

- *When driving on a road with an implement attached to the rear of the tractor, the traction of the front wheels becomes poor, resulting in poor steerability. In this case, attach a proper front weight.*
- *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, set a warning triangle behind the tractor. Otherwise, a rear end accident may occur.*
- *The center of gravity of the tractor is higher compared to other common vehicles, so the possibility of a roll-over accident is very high. Be extra careful when driving on a lateral slope, bumpy road, road with puddles, and narrow road. Make sure to set the ROPS (if equipped) in its original position and fasten the seat belt.*

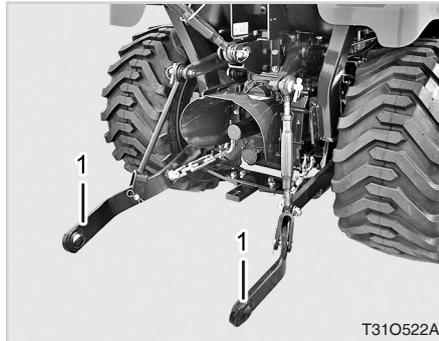
⚠ WARNING

- *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.*
- *Do not release the steering wheel to return to the straight-ahead position after turning. The steering wheel in this tractor is not a self-return type.*

3-POINT HITCH CONTROL SYSTEM

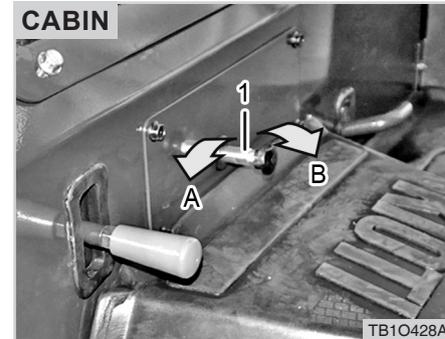
- (1) Position Control Lever (2) Lower Link
(A) Lowering (B) Lifting

The 3-point hitch can be controlled by the position control lever.

**POSITION CONTROL***(1) Lower Link*

1. The position control lever is used to lift or lower the lifting arm (lower link) of the 3-point hitch.
2. Pushing the lever forward lowers the lower link while pulling the lever backward lifts the lower link.
3. The lower link is lifted by the hydraulic of the tractor while it is lowered by potential energy of its own weight.

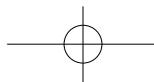
4. Therefore, the implement attached to the lower link may be lifted by protrusion on the ground when it is lowered to the ground. It is called as "floating."



*(1) Lowering Speed Control Lever
(A) High Speed (B) Low Speed*



5. The lowering speed of the lower link is proportional to the applied weight but can be controlled by adjusting the draining passage of the hydraulic fluid. (See “Lifting arm speed control lever” on Page 4-38.)





TRANSPORTING

TRANSPORTING TRACTOR..... 6-2
 LOADING INTO AND UNLOADING OUT OF THE TRUCK6-2
 TYING THE TRACTOR TO TRANSPORT.....6-4
 HOW TO TOW THE TRACTOR.....6-5

6

6



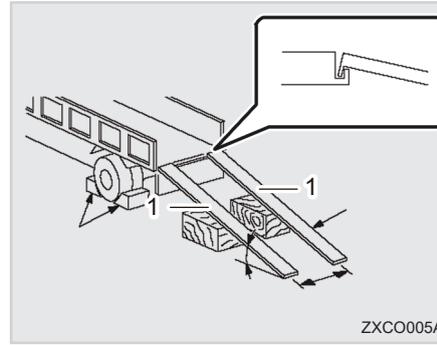
TRANSPORTING TRACTOR

Tractors are best transported in flat-bed carriers. Use chains to secure the tractor to the carrier.

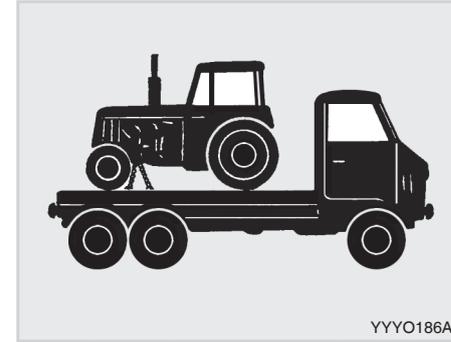
The axles and tractor frame are suitable attachment points.

Before transporting the tractor on truck or trailer, make sure that the hood is securely closed and doors, roof hatch (if equipped) and windows are properly closed.

LOADING INTO AND UNLOADING OUT OF THE TRUCK

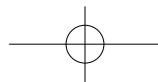


(1) Loading Ramps



1. Check the width of the cargo bed of a transporting vehicle or trailer.
2. Set ramps to the transporting vehicle firmly.
3. The length of the loading ramps should be at least four times the height of the loading bed.

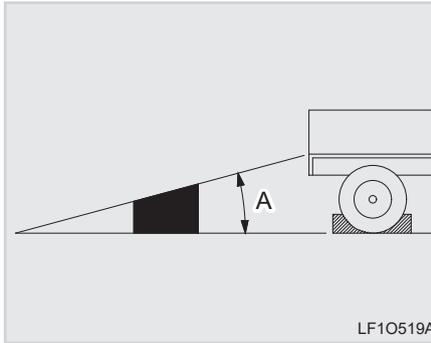
4. It is recommended to back the tractor onto the transporting vehicle and drive the tractor OFF in the forward direction.



**⚠ WARNING**

- *When transporting the tractor with a truck, fix the tractor firmly onto the truck and be sure to aware the height of loaded tractor to avoid to hit the ceiling of the tunnel or the bottom of the bridge.*

5. Be sure to keep the speed down when loading/unloading.
6. After loading the tractor onto the transport vehicle, apply the parking brake, then tie it down to the cargo bed with chains or straps. Utilize proper tying points on the tractor.



(A) Within 12°

7. Be sure to Confirm the overall height of the vehicle with the tractor loaded, make sure that does not exceed the maximum height for travel under bridges or through tunnels.



TYING THE TRACTOR TO TRANSPORT



T31O601A

(1) Tying Strap

Point for tying the tractor. (Front)



CAUTION

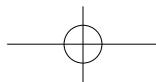
- Select appropriate tie straps for the weight of the tractor.



T31O602A

(1) Tying Strap

Point for tying the tractor. (Rear)



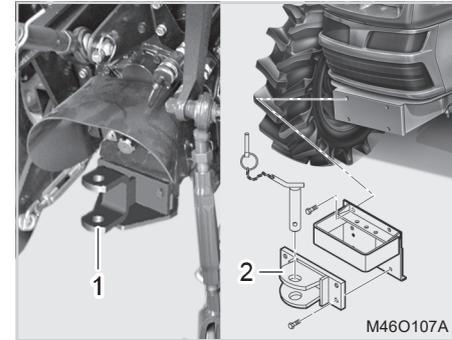


HOW TO TOW THE TRACTOR



(1) Lashing Strap

If you use a wheel as a tying point, tie it at the front and back of the wheel.



(1) Draw-bar

(2) Towing Hook

1. Range Shift lever to neutral position.
2. Adjust the steering wheel so that all wheels point in a straight line.
3. Towing the tractor using an optional towing hook or draw-bar.



6-6

CS2530CH / CS2530CH-EU / CS2230H / CS2530H / CS2530H-EU

 **CAUTION**

- **Never tow the tractor faster than 10 km/h (6 mph).**
- **When the engine is not running, more force is required to turn the steering wheel.**

 **IMPORTANT**

- **Be sure to disengage the front-wheel drive.**
- **NEVER HITCH ANYTHING TO THE AXLE HOUSING OR ANY OTHER POINT.**



3-POINT HITCH IMPLEMENT AND LOADER OPERATION

7

REMOVAL AND INSTALLATION OF 3-POINT HITCH IMPLEMENT (WITH P.T.O SHAFT) 7-2

MID-MOWER7-2

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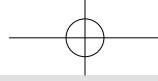
HANDLING LOADER 7-11

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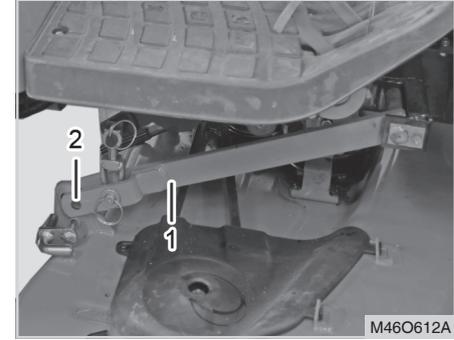
JOYSTICK VALVE PORT7-18



REMOVAL AND INSTALLATION OF 3-POINT HITCH IMPLEMENT (WITH P.T.O SHAFT) MID-MOWER



(1) Lift Control Lever



(1) Lift

(2) Connection Linkage

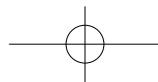
1. Park the tractor on level ground and apply the parking brake.

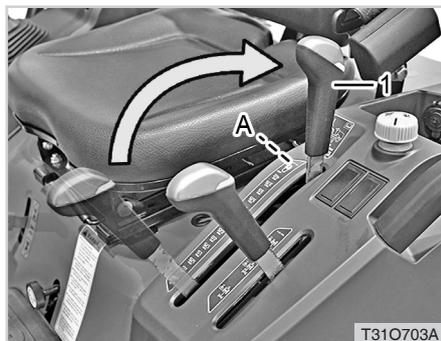
2. To lift the lower link, pull the lift control lever backward and stop the engine.

3. Roll the mower deck under the tractor and position for connection to the lift linkage.

⊕ IMPORTANT

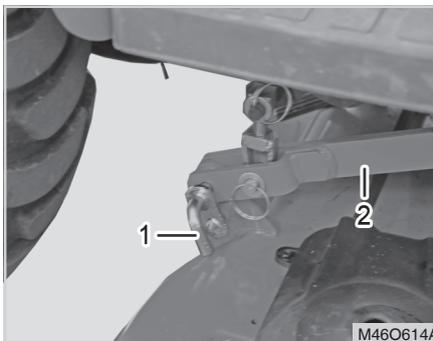
- When rolling the mower deck under the tractor, be very careful not to strike the hydraulic filter with the mower deck.





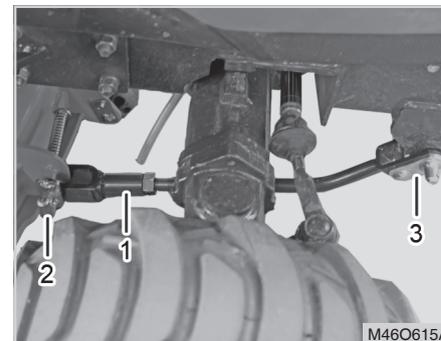
(1) Mower Height Control Lever

4. Place the mower height adjustment lever in the A position.



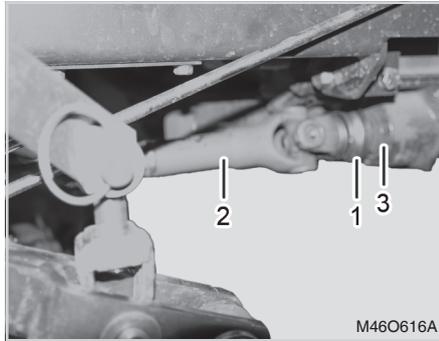
(1) Spring Loaded Handle
(2) Rear Linkage

5. Connect the rear linkage to the deck using the spring-loaded handle.



(1) Front Linkage
(2) Spring Loaded Handle
(3) Loaded Handle

6. Connect the front linkage to the mower deck using the spring-loaded handle. Connect the opposite end of the front linkage to the tractor using the spring loaded handle.



(1) Locking Collar (2) Drive Shaft
(3) PTO Shaft

7. Pull the drive shaft locking collar towards the front of the tractor and slide the drive shaft onto the PTO shaft.

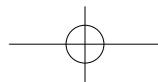
+ IMPORTANT

- Be sure that the locking collar is locked onto PTO shaft prior to operating the mower deck.

+ IMPORTANT

- When the mower deck is lowered to the lowest point and the universal joint drive shaft length is extended to its maximum, the engagement length of the telescopic section must be at least 6 inches.
- When the mower deck is raised to the highest point and the universal joint drive shaft length is retracted to the minimum, there must be at least 3 inches of clearance to prevent the hitting in the telescopic section.
- Be sure to shake both ends of the drive shaft on the tractor side and the mower side to check that the lock pins are properly seated.
- Consult your local KOTI dealer for safer drive shaft selection.

8. Remove the implement in the reverse order of installation and use the implement support as necessary.





HOW TO ADJUST THE HEIGHT OF MOWER DECK



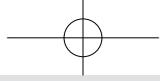
(1) Position Lever



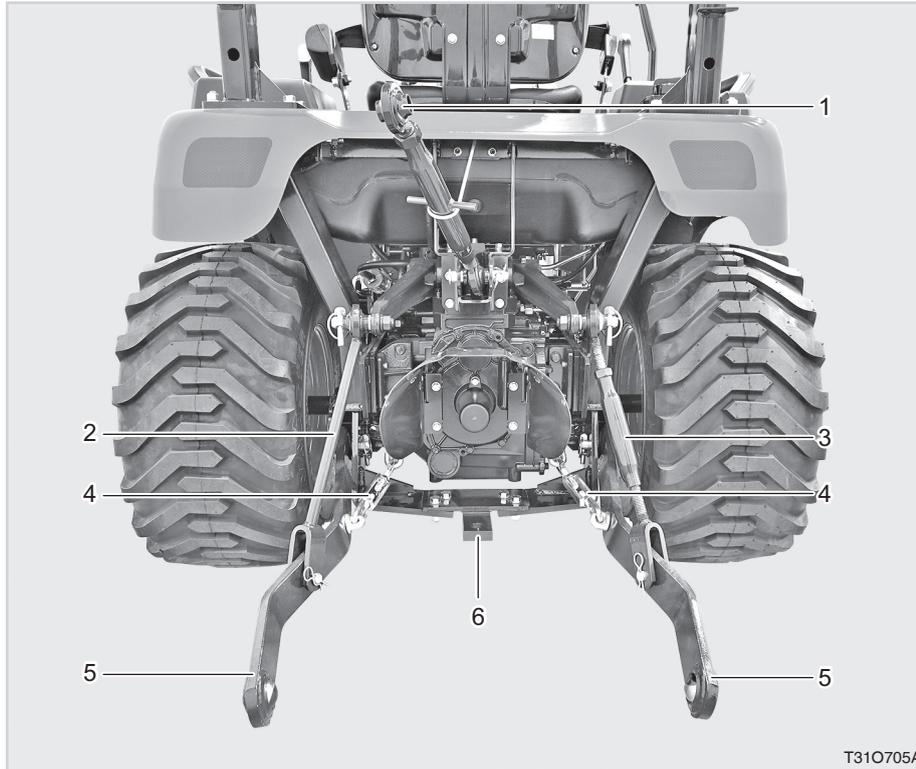
(1) Mower Height Control Lever

After mower installation, pull the position lever to lift the mid mower. (At this time, the rear lever link is interlocked.)

Move the mower height control lever to the desired position, lower the position lever until the mower deck stop lowering. Now release the position lever.



OPERATION TIP FOR 3-POINT HITCH

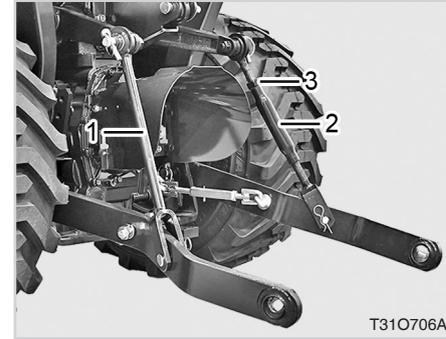


(1) Top Link
(2) Lift Rod (LH)

(3) Adjustable Lift Rod (RH)
(4) Check Link

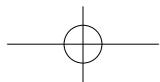
(5) Lower Link
(6) Drawbar

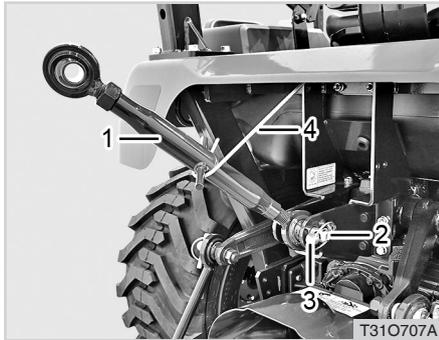
HOW TO ADJUST OF THE LIFT ROD



(1) Lift Rod (LH) (2) Turnbuckle
(3) Lock Nut

1. Adjust the implement level by turning the turnbuckle of adjustable lift rod.
2. After adjustment, fix it with the lock nut



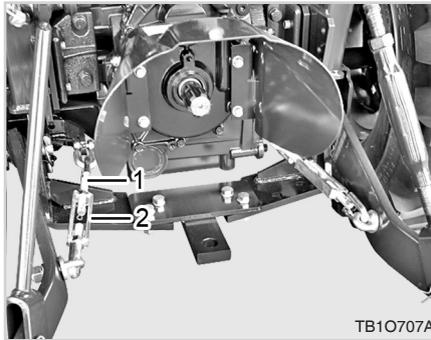
**ADJUSTMENT OF TOP LINK**

(1) Top Link (2) Pin
(3) Retainer Pin (4) Top Link Hook

1. Install the top link to the desired position, and install the pin and retainer pin.
2. Fix Top link with lock nut after adjusting.

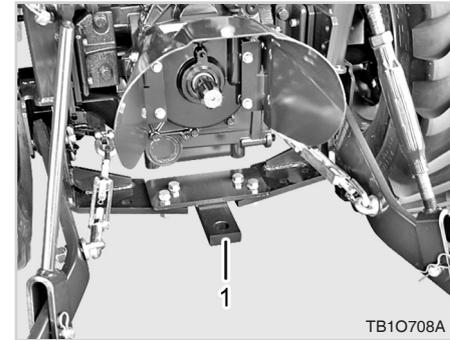
NOTE

- After removing the rear implement adjust the length of check link (LH/RH) so that it does not contact with the rear tire.
- Secure the top link to the storage hook.

ADJUSTMENT OF STABILIZER

(1) Check Link (2) Turnbuckle

1. Adjust the check link to control horizontal sway of the implement.
2. To adjust the check link, pull out the pin and adjust it and put the pin back.

DRAFT HITCH AND TRAILER

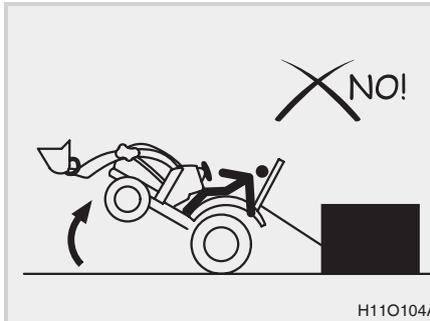
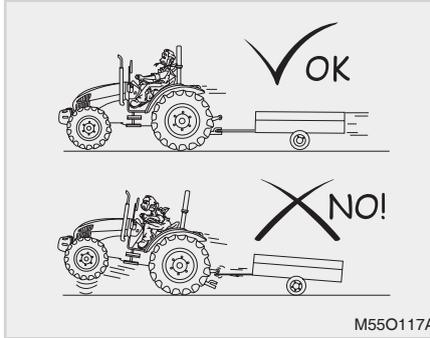
(1) Draw Bar

The draw bar is used to pull an implement, such as a trailer. This tractor is equipped with a fine draw bar. Make sure to check the max. towing weight of the trailer and max. vertical load that can be applied to the draw bar.



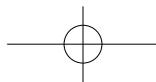
CAUTION

- When using an implement that is attached to the draw bar, such as a trailer, check if the towing hitch is firmly attached.



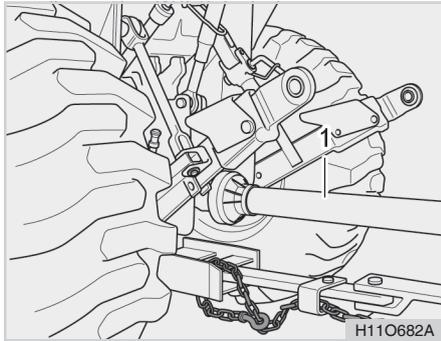
WARNING

- **Never use any other part for pulling except draw bar. Pulling with top link, ROPS and etc. may cause a fatal accident.**
- **Be sure to install the auxiliary safety chain when installing a trailer.**
- **Improper use of the draw-bar, even if correctly positioned, can cause a rear overturn.**
- **Do not overload an attachment or towed equipment. Use proper counterweights to maintain tractor stability. Hitch heavy loads to the draw-bar only.**
- **Make sure that there is nobody nor an obstacle between tractor and trailer.**





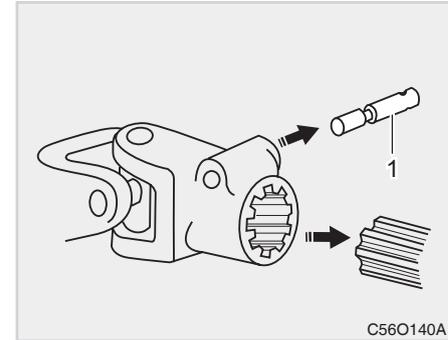
SELECTION AND INSTALLATION OF IMPLEMENT DRIVE SHAFT



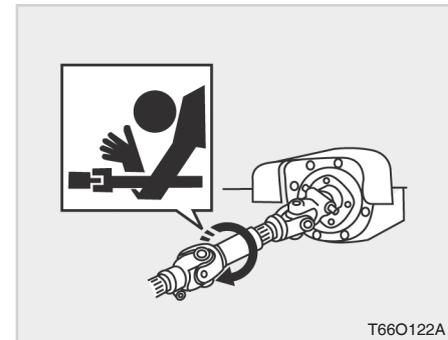
(1) PTO Shaft

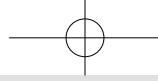
1. Consult your local **KIOTI** dealer for safer drive shaft selection.
2. When the rear implement is raised to the maximum point and the universal joint drive shaft length is extended to its maximum, the engagement length of the telescopic section must be at least 6 inches.

3. When the rear implement is lowered to the ground and the universal joint drive shaft length is retracted to the minimum, there must be at least 3 inches of clearance to prevent hitting in the telescopic section.
4. Be sure to shake both ends of the drive shaft on the tractor side and the implement side to check that the lock pins are properly seated.



(1) Lock Pin



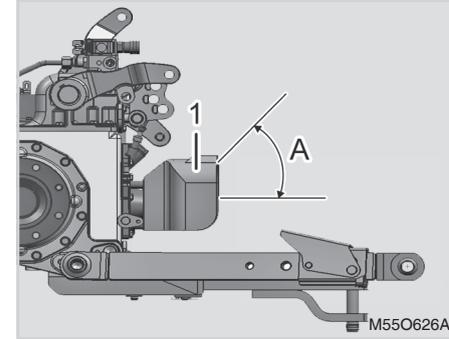


⚠ WARNING

- *Make sure that the PTO safety cover is in its position before driving the PTO shaft.*
- *Never go close to the rotating drive shaft or tractor PTO shaft. A severe accident can happen.*
- *Before driving an implement with the PTO, 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 gears are in neutral and that the parking brake is applied.*
- *Surrounding parts should not interfere with the tractor PTO and drive shaft.*

⚠ WARNING

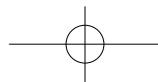
- *Before starting up any PTO-driven implement hitched to the three-point linkage, lift the implement to its full height and check that at least 1/4 of the total length of the telescopic section of the drive shaft is engaged.*



(1) PTO Cover
(A) Allowable angle of universal joint : 50°

Refer to the chart below when installing of an universal joint.

The type of PTO shaft	Allowable angle of universal joint
SAE 1-3 / 8" 6 splines	50 degree





HANDLING LOADER



- (1) Loader Mounting Bracket
- (2) Boom Cylinder
- (3) Boom
- (4) Bucket

For detailed information about installation and use of the front loader, refer to the separate manual for the loader.

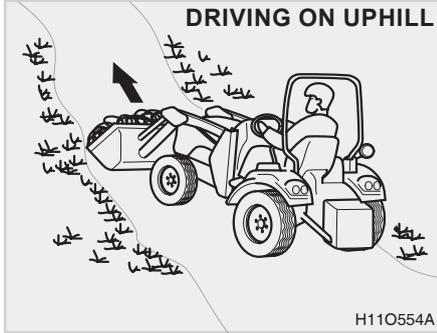
+ IMPORTANT

- Check the transmission fluid level and add fluid as necessary after installing an attachment or implement related to the hydraulic fluid, such as a loader or backhoe.

7

TB10709A

DRIVING ON SLOPE WHEN LOADED BUCKET AND REAR BALLAST ARE INSTALLED

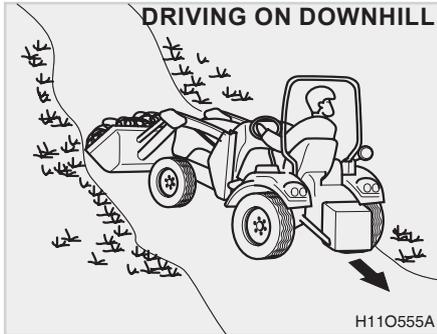


When driving uphill with a loaded bucket and rear ballast installed, keep the heavier end of the tractor higher. In other words, drive forward on uphill and backward on downhill.

⚠ WARNING

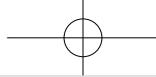
To avoid accident:

- *Keep the loader arm as low as possible when driving on a slope.*



WHEN UNLOADED BUCKET AND REAR BALLAST ARE INSTALLED



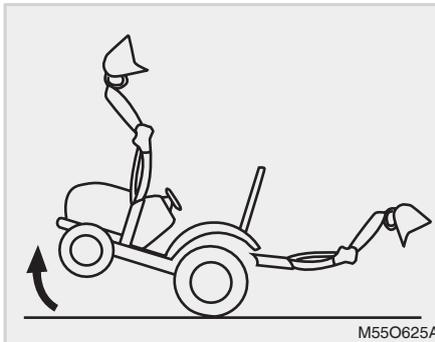


When driving on downhill with an empty bucket and rear ballast installed, keep the rear ballast toward the higher level of the ground. In other words, drive backward on uphill and forward on downhill.

Use the 4WD to increase traction when driving on a slope with a loaded bucket and rear ballast installed.

Set the bucket and implement high on a rough surface so that they are not caught by obstacles.

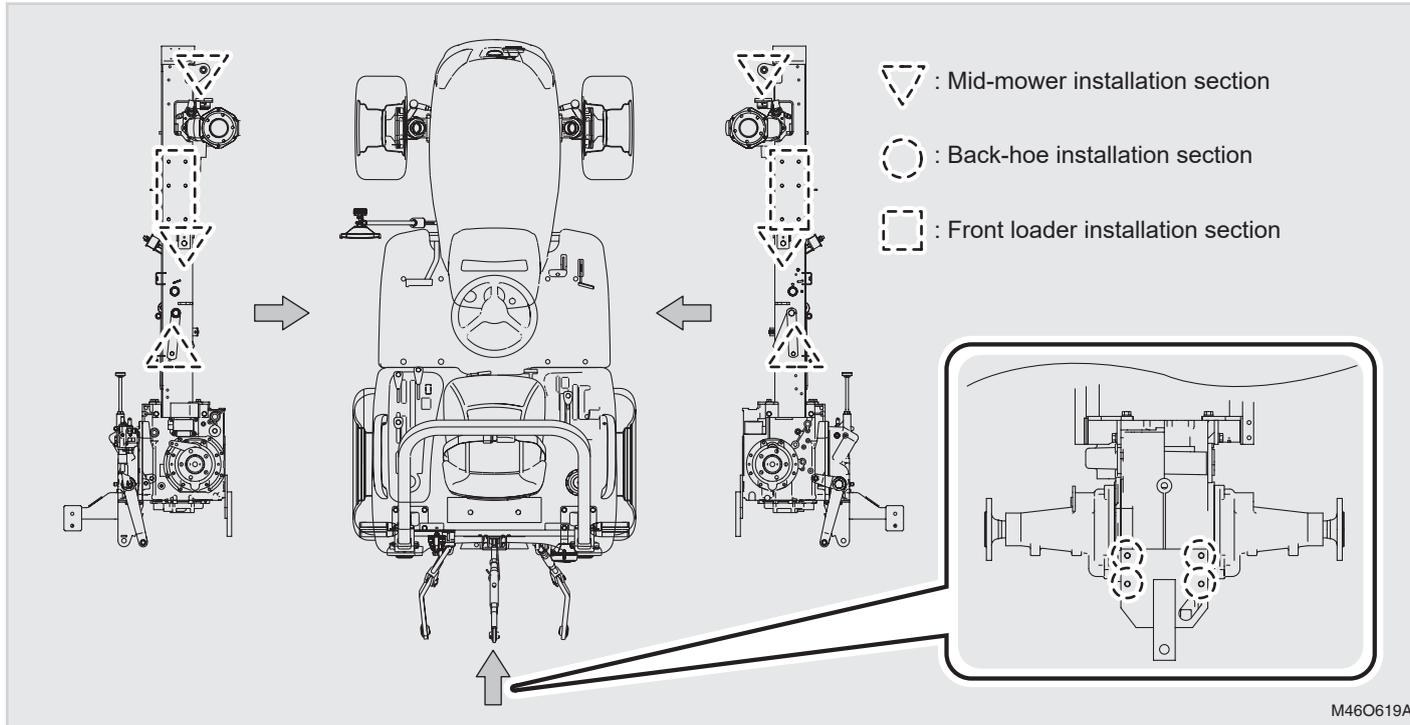
PARKING WITH LOADER INSTALLED



WARNING

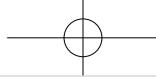
- *When parking the tractor which is equipped with a loader or backhoe, make sure that the loader or the boom of the backhoe is lowered on the ground. Otherwise, the tractor can become unstable, leading to an unexpected accident, such as roll over.*

ATTACHING POINTS FOR IMPLEMENT



⚠ WARNING

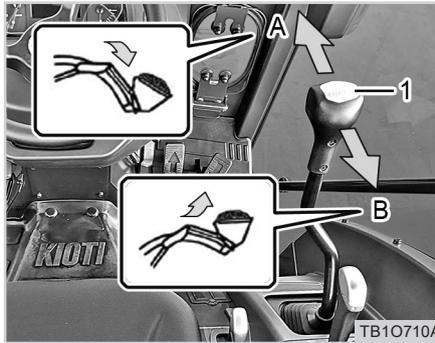
- *When you install the front loader or backhoe, securely tighten the bolt for mounting brackets at indicated point as above.*



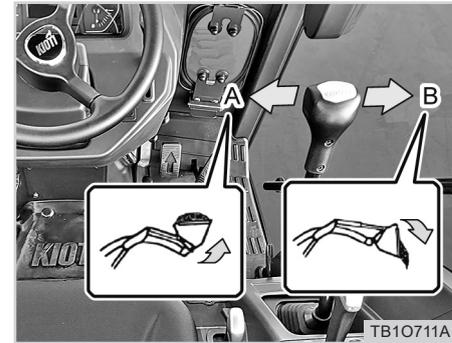
JOYSTICK LEVER



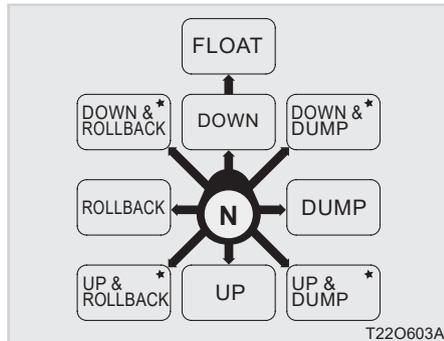
(1) Joystick Lever



(1) Joystick Lever
(A) Boom Down (B) Boom Up



(A) Bucket Roll Back (B) Bucket Dump

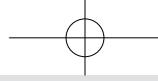


1. Up and down of boom

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

To roll back the bucket, move the joystick lever to the left (A). To dump the bucket, move the joystick lever to the right (B).



3. Float

The floating function is activated when the joystick lever is pushed one position further to forward from the down position. When the lever is in this position, the boom moves up and down freely along the surface of the ground as the hydraulic line is opened from the valve to the boom cylinder. This function is useful when removing soft objects on hard ground (for example, when removing snow or sand on paved road).

WARNING

- *If moving the lever to the floating position while the boom is up in the air, the boom can fall freely and lead to an accident.*

4. Down & Roll back

The boom can be lowered and the bucket can be rolled back at the same time by operating the joystick lever to the front left position (10 o'clock position). However, the operation time may not be shortened much since the boom is lowered first and then the bucket is rolled back later due to unbalanced hydraulic pressure in the hydraulic circuit.

5. Down & Dump

The boom can be lowered and the bucket can dump at the same time by operating the joystick lever to the front right position (2 o'clock position). However, these two operations may not be performed simultaneously due to unbalanced hydraulic pressure in the hydraulic circuit.

6. Up & Roll back

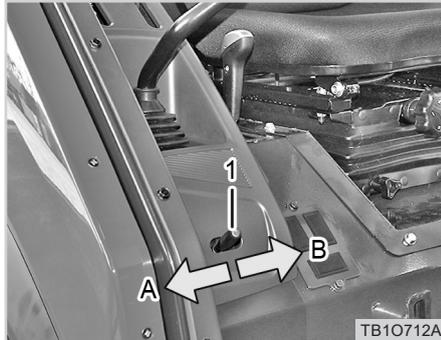
The boom can be lifted and the bucket can scoop up at the same time by operating the joystick lever to the rear left position (7 o'clock position). However, these two operations may not be performed simultaneously due to unbalanced hydraulic pressure in the hydraulic circuit.

7. Up & Dump

The boom can be lifted and the bucket can dump at the same time by operating the joystick lever to the rear right position (5 o'clock position). However, the operation time may not be shortened much since the bucket dumps first and then the boom is lifted later due to the unbalanced hydraulic pressure in the hydraulic circuit.



8. Locking / Unlocking joystick



(1) Joystick Lock Lever
(A) Lock (B) Unlock

Pulling the joystick lock lever to A, locks the joystick, while pulling it to B, unlocks the joystick as shown in the figure.

! WARNING

- **Lock the joystick lever when the loader is not being operated. Otherwise, the driver may unintentionally touch the joystick, causing an accident.**

! WARNING

- **Do not leave the tractor with the boom off the ground in any circumstances. If it is necessary, lock the joystick lever.**

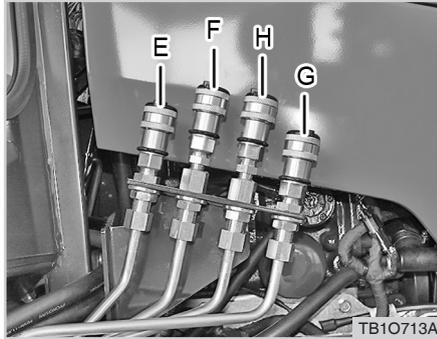
+ IMPORTANT

- If the boom or bucket is not operating properly, lower the bucket onto the ground, stop the engine and move the joystick lever to remove all hydraulic pressure in the system. Then, check all the hydraulic connections and reconnect them correctly.
- Before connecting or disconnecting the hydraulic hose coupling from the loader, lower the boom onto the ground, stop the engine, and move the joystick lever front and back, left and right for several times to remove residual pressure in the hydraulic hose.

! WARNING

- **Pressurized diesel fuel or hydraulic fluid may be sprayed on your skin or eyes, leading to a severe injury or even death.**
- **To inspect for leaks, use a board and wear protective gloves and goggles.**
- **If your eyes come into contact with the hydraulic fluid, seek medical attention immediately.**
- **Never try to disconnect the tube and quick coupler while the tractor and implement are in operation. Release the pressure by operating the lever after the engine is stopped.**

JOYSTICK VALVE PORT



(E) Bucket Roll Back (F) Bucket Dump
(G) Boom Up (H) Boom Down

PORT	DIRECTION	FUNCTION
E		Bucket Roll Back
F		Bucket Dump
G		Boom Up
H		Boom Down



MAINTENANCE

8

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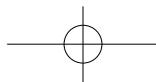
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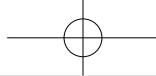
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MAINTENANCE

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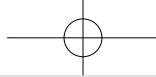


MAINTENANCE CHECK LIST

DAILY CHECK CHART

SERVICE SCHEDULE		MAINTENANCE CODES
ITEM	SERVICE REQUIRED	
Engine oil	Check the oil level and add needed. Do not overfill	E
Hydraulic (Trans / Diff) fluid	Check level and add as needed	D
Engine air filter and air system	Check condition indicator (if equipped) Check for leaks and damaged components. Do not use compressed air to clean elements	T
Engine cooling system	Clean debris from oil cooler, radiator, screen and grills Check coolant level, add premixed coolant as needed	F, G, AH
Seat belt	Check the condition of seat belt and mounting hardware. Repair or replace as needed	
Tires	Check for wear, damage, air pressure on the tires	
Parking brake	Check operation and adjust if needed	
Brake pedal	Check brake performance and adjust brake rod	H
General items	Check for loose or broken parts, instrument, loose wheel nuts / bolts, oil leaks and damaged or missing decals.	Q, AG, AH, AM
P.T.O	Inspect the splines and PTO cover	
Three-point linkage	Check operation and condition of pins, links and bars	
Implements (If equipped)	Check mounting hardware for loose or broken parts	

※ For detailed information about maintenance codes, refer to the corresponding section in each chapter.



MAINTENANCE SCHEDULE CHART

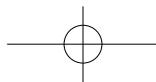
NO.	Item	Maintenance Interval	Run Hour										Run Age		Remarks	Maintenance codes		
			10	50	100	200	250	400	600	800	1500	3000	1 Year	2 Year				
1	Engine oil & Filter	Change		⊙			○							○			L	
		Check		○														E
2	Transmission oil filter	Replace		⊙		○											M	
3	HST oil filter	Replace		⊙		○											M	
4	Transmission fluid	Change						○									M	
	Transmission fluid level	Check	⊙														D	
5	Front axle oil	Change						○									N	
	Front axle oil level	Check	⊙															
6	Front axle pivot	Adjust							○									
7	Engine start system	Check		○														
8	Greasing	Apply		○													P	
9	Wheel bolt torque	Check		○													Q	
10	Battery condition	Check			○											*3	W	
11	Air cleaner element	Check	⊙															
		Clean			○											*1	#	T, AF
		Replace				○						○		*2				



NO.	Item	Maintenance Interval	Run Hour										Run Age		Remarks	Maintenance codes		
			10	50	100	200	250	400	600	800	1500	3000	1 Year	2 Year				
12	Fuel filter element	Replace				○											#	
13	Fan belt, Air-con belt	Adjust			○												*3	V
14	Clutch pedal free play	Adjust		⊙	○													H, R
15	Brake pedal free play	Adjust		⊙	○													O
16	Radiator hose and clamp	Check				○												Z
		Replace												○				
17	Radiator grill	Clean	⊙															
18	Power steering hose and oil line	Check				○												AA
		Replace												○				
19	Fuel line	Check			○													#
		Replace												○				
20	Intake air line	Check				○												X
		Replace												○	*3			
21	Toe-in	Adjust				○												Y
22	Engine valve clearance	Adjust								○								
23	Fuel injection nozzle injection pressure	Check									○							#



NO.	Maintenance Interval		Run Hour										Run Age		Remarks	Maintenance codes	
			10	50	100	200	250	400	600	800	1500	3000	1 Year	2 Year			
24	Injection pump	Check											○			#	
25	Cooling system	Clean												○			G
26	Coolant	Replace												○			AE
	Coolant level	Check	◐														
27	Air-con filter	Replace											○				
28	Fuel system	Check													*3		C, S
29	Fuse	Replace													*3		AG, AH
30	LED lights	Replace													*3		AI
31	Seat belt	Check	○														
32	Tire pressure & damage	Check	○														
33	Parking brake	Check	○														
34	PTO cover	Check	○														
35	3-point hitch & drawbar	Check	○														
36	Pin fastening	Check	○														



**⊕ IMPORTANT**

- **⊙ must be done after the first 10 or 50 hours of operation.**
 - * 1 Air cleaner should be cleaned more often in dusty conditions than in normal condition.
 - * 2 Every year or every 6 times of cleaning. * 3 Replace only if necessary.
- **The items listed above (# marked) 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.**



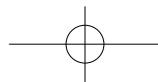
LUBRICANTS

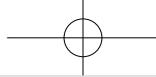
To prevent serious equipment damage, use only genuine **KIOTI** fluids, oils and greases, or equivalents.

No.	Section	Capacity [U.S.gal. (L)]	Lubricants
1	Fuel	6.7 (25.5)	Ultra-low sulfur diesel (Sulfur content: 15 ppm or less)
2	Engine Oil (Included filter)	0.98 (3.7)	Oil Viscosity : SAE 15W40, API CK-4 class or higher
3	Engine coolant	0.5 (2.0)	An antifreezing solution(Ethylene glycol) + Pure water (50:50)
4	Transmission oil	2.75 (10.4)	Daedong : UTF 55 Shell : Donax-TD, Exxonmobil : Mobilfluid 424 Exxon Hydraul 560 BP : Tractran UTH
5	Front axle oil	0.53 (2.0)	SAE 90 gear oil or better, or same as T/M oil
6	Apply grease • Front axle support • Brake pedal • Brake lever • Top link holder • Control lever	As needed or check daily	SAE Multi purpose type grease

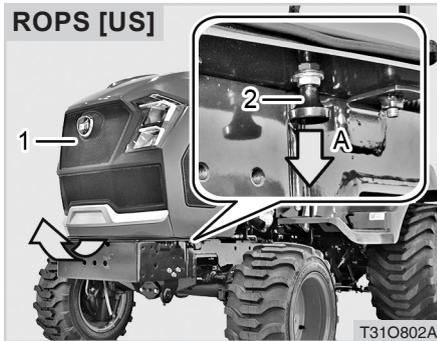
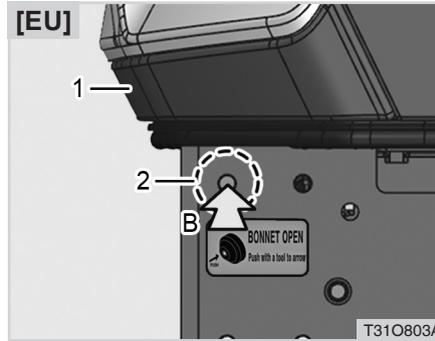
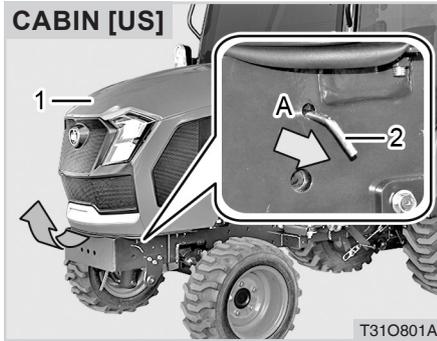
WARNING

- **Check the oil level regularly. Correct the oil level, if needed, before operating equipment.**
- **Always check and add oil with the tractor off on a flat, level surface.**





MAINTENANCE CODE HOW TO OPEN THE HOOD (A)



(1) Hood
(A) Pull

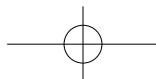
(2) Handle (Button)
(B) Push

(1) Hood

1. It is very easy to open the hood with one touch pulling handle. (For EU models, open the hood by pressing the button with the tool.)
2. To close the hood, press its front down until it is locked by latch.
3. Do not apply excessive force to the handle to fix it. The hood can be damaged.

⚠ CAUTION

- **Never open the hood while the engine is running.**



REFUELING (C)



(1) Fuel Tank Cap

Make sure to use pure and high-quality diesel fuel.

Fuel tank capacity

6.7 U.S.gal. (25.5 L)

1. Turn the key switch to "ON" to check fuel level.
2. If the needle on the fuel gauge is near to the red zone ("E") or the fuel level is low, open the fuel tank filler cap and add fuel.
3. After adding fuel, close the fuel tank cap.

⚠ CAUTION

To avoid personal injury:

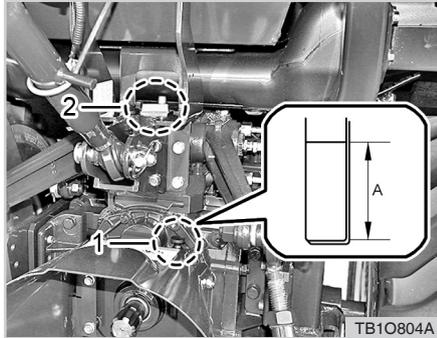
- Do not smoke while refueling.
- Add the fuel in a well-ventilated area.
- Be sure to stop the engine before refueling.
- Dirt or sand contaminate in fuel may cause the fuel injection pump to malfunction, use the strainer when refuelling.

⊕ IMPORTANT

- Be careful not to let the fuel tank become empty, otherwise air will enter the fuel system, necessitating bleeding before next engine start.

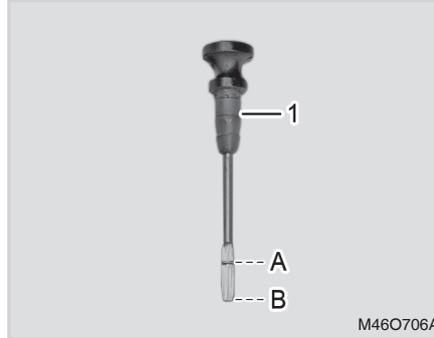


CHECKING TRANSMISSION FLUID LEVEL (D)



(1) Oil Dipstick (2) Oil Filler Plug
(A) Range of acceptable oil level

1. Park the machine on a flat surface, lower the implement and shut "OFF" engine.
2. Depress the brake pedals and apply the parking brake.
3. Set all shift levers into the neutral position.
4. Stop the engine.



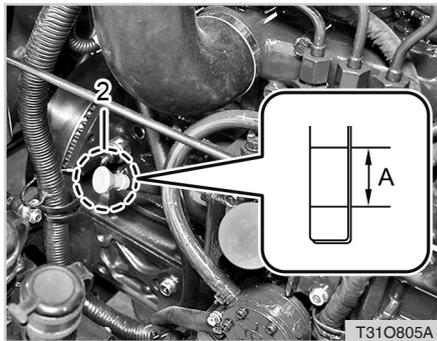
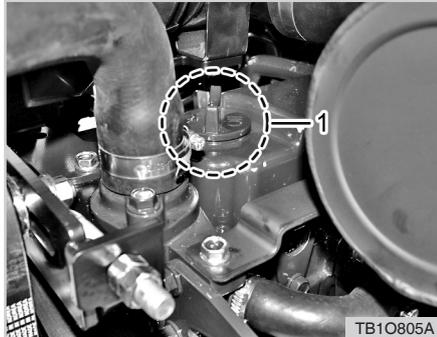
(1) Oil Dipstick
(A) Upper Limit (B) Lower Limit

5. 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.
6. If the oil level is too low, add some new oil so that the level is within the allowable range.

⊕ IMPORTANT

- If oil level is low, do not run engine.
- Never add the oil over the upper limit.

CHECKING ENGINE OIL LEVEL (E)



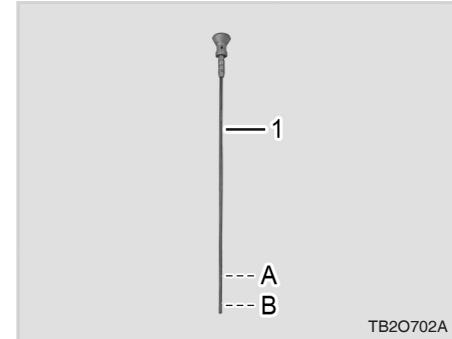
(1) Oil Inlet Plug (2) Dipstick
(A) Range of acceptable oil level

1. Park the tractor on level ground and lower the implement.
2. If the engine was just stopped, wait for approx. 10 minutes before checking the oil level.

CAUTION

To avoid personal injury:

- Be sure to stop the engine before checking the oil level.

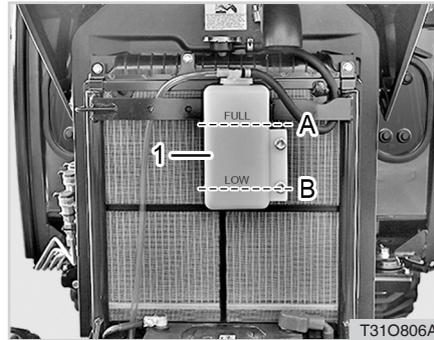


(1) Dipstick
(A) Upper Limit (B) Lower Limit

3. 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.
4. If the oil level is too low, add some new oil so that the level is within the allowable range.

**⊕ IMPORTANT**

- When using oil of different maker or viscosity from the previous one, remove all of the old oil. Never mix two different types of oil.
- Never add the oil over the upper limit of the dipstick.

CHECKING COOLANT LEVEL (F)

(1) Reserve Tank
(A) FULL (B) LOW

1. Check to see that the coolant level is between the "FULL" and "LOW" marks of reservoir tank.
2. When the coolant level drops due to evaporation, add water only up to the full level.
In case of leakage, add anti-freeze and water mixture in the specified mixing ratio up to the FULL level.
3. The tractor is furnished with a mixture of anti-freeze and water in a ratio of 50:50 which is usable in any season.

CLEANING GRILL, RADIATOR SCREEN (G)

(1) Radiator Screen (2) Bolt
(A) Pull

1. Check front grill and screens to be sure they are clean of debris.
2. Unscrew the bolt, lift out the radiator screen and remove all the foreign material.

⚠ CAUTION**To avoid accidents:**

- Be sure to stop the engine before removing the screen.

⊕ IMPORTANT

- Hood Grill and screen must be clean to prevent engine overheating and to allow clean air intake for the air cleaner.

CHECKING BRAKE PEDALS (H)

1. The brake pedal should be inspected for free travel.
2. Adjust it if an incorrect measurement is found.

CHECKING GAUGES AND SENSORS (I)

1. Inspect the instrument panel for broken gauge(s), sensors.
2. Replace if broken.

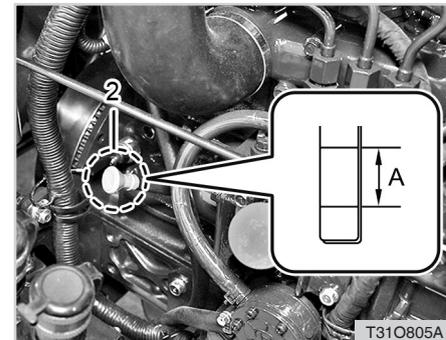
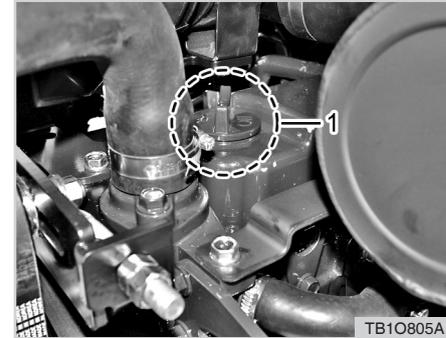
CHECKING LIGHTS (J)

1. Check weather any LED lights are broken.
2. Replace if broken.

CHECKING SEAT BELT AND ROPS (K)

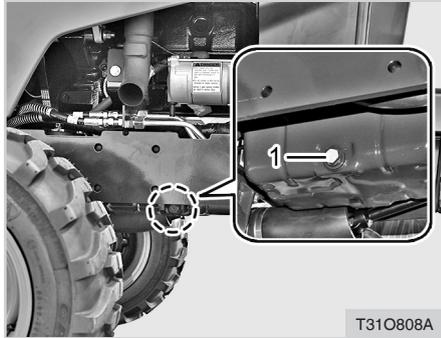
1. Always check condition of seat belt and **ROPS** attaching hardware before operating tractor.
2. Replace if damaged.

CHANGING ENGINE OIL AND REPLACING FILTER (L)



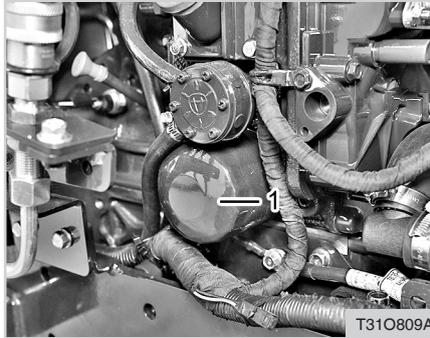
(1) Oil Inlet Plug (2) Dipstick
(A) Range of acceptable oil level

1. Park the tractor on level ground and start the engine to warm it up.



(1) Drain Plug

2. Stop the engine, apply the parking brake.
3. To drain the used oil, remove the drain plug at the bottom of the engine and drain the oil completely. All the used oil can be drained out easily when the engine is still warm.
4. Remove engine oil filler cap to allow easy draining of engine oil.



(1) Engine Oil Filter

5. Remove the oil filter behind the cooling fan on the right side of the engine.
6. Apply a thin film of oil to the O-ring of a new filter and tighten new filter firmly by hand.
7. Add the engine oil to the specified level.

Oil capacity (with filter)

0.98 U.S.gal. (3.7 L)

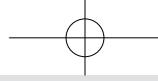
8. Run the engine for approx. 5 minutes.
9. Check the engine oil level again with the oil dipstick. If the level is low, add more oil.

 **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. Be careful not to get burned.*
- *Avoid oil contact while changing or adding engine oil and wear eye protection to prevent injury to eyes.*
- *Keep the used oil out of reach of children.*



 **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 every operation of the tractor. 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 mark of the oil dipstick.
- Store used engine oil, transmission oil, oil filters, etc. safely in a designated location in accordance with environmental protection regulations, and dispose of them at a designated collection agency. Careless disposal may result in severe penalties under environmental laws.

 **IMPORTANT**

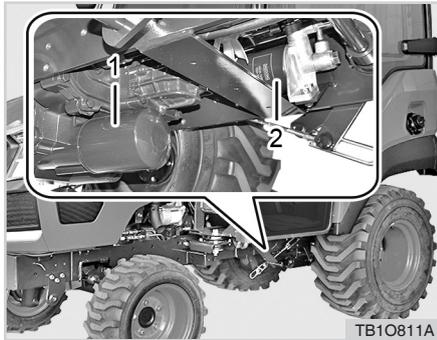
- Use only KIOTI genuine engine oil and filters to insure smooth operation and durability of the engine.

REPLACING TRANSMISSION FLUID AND FILTER (M)

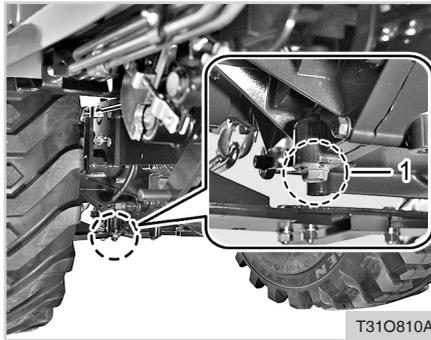
The transmission fluid should be changed if it is contaminated or after the transmission is serviced.

When changing the transmission fluid, make sure to change the fluid filter.

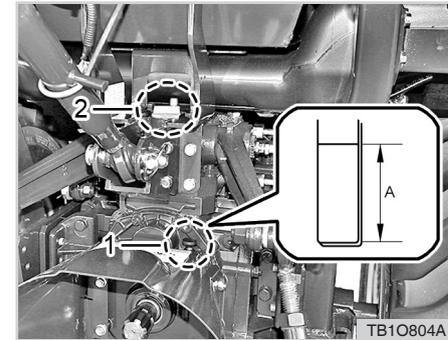
However, replace only the filter after initial 50 hour operation.



(1) Oil Filter Cartridge
(2) HST Hydraulic Filter Cartridge



(1) Drain Plug



(1) Gauge (2) Oil Filler Plug
(A) Oil level is acceptable within range

1. Park the tractor on a level ground and start the engine to warm it up.
2. Stop the engine, apply the parking brake.

3. To drain the used fluid, place the oil pan under the transmission case and turn the drain plug counterclockwise to drain the fluid completely.

If the fluid does not flow out freely, unscrew the plug on the side of the hydraulic cylinder on the left of the top link bracket.

4. Unscrew the fluid filter from the rear right section on the tractor using a filter wrench.

5. Apply a thin film of clean oil onto the O-ring of a new filter.

6. Tighten the filter firmly until it contacts the mounting surface. Tighten the filter a half turn further by hand.

7. Run the engine for a few minutes and then stop it.

8. Check the fluid level and add fluid to the specified level.

Oil capacity

2.75 U.S.gal. (10.4 L)

9. Make sure that the transmission fluid does not leak through the seal.

⚠ 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 burnt by hot fluid.

⊕ IMPORTANT

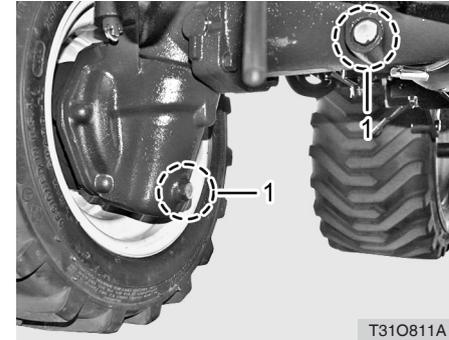
- To prevent serious damage to the hydraulic system, use only a KIOTI genuine filter.
- Do not operate the tractor immediately after changing the transmission fluid. Run the engine at medium speed for a few minutes.



(1) Air Bleeding Plug

⊕ IMPORTANT

- When adding the fluid, unscrew the bleeding plug on the left of the hydraulic cylinder. Otherwise, the fluid can overflow.

CHANGING FRONT AXLE OIL (N)

(1) Drain Plug



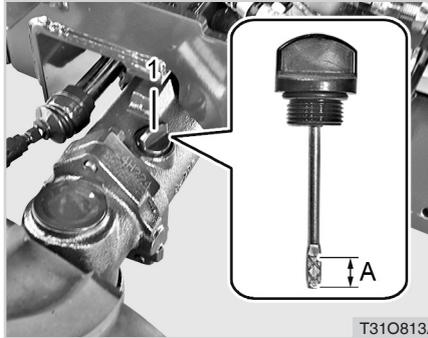
(2) Oil Filler Plug



1. To drain the used oil, remove the drain plugs on the front axle and drain the oil completely.
2. After draining reinstall the drain plugs.
3. Remove the oil filler plug.
4. Add new oil to the to the specified level.

Oil capacity

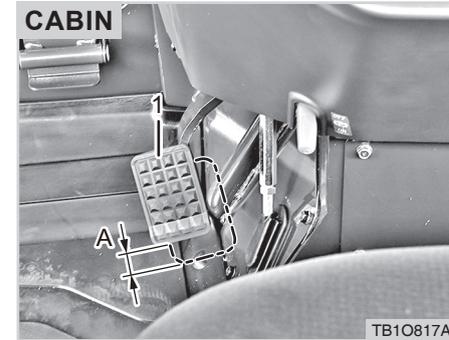
0.53 U.S.gal. (2.0 L)



T31O813A

- (1) Oil Filler Plug
 (A) Oil level is acceptable within range

5. Tighten the oil filler plug after replenishment.
6. Check the oil level after 15 minutes and add oil as necessary.

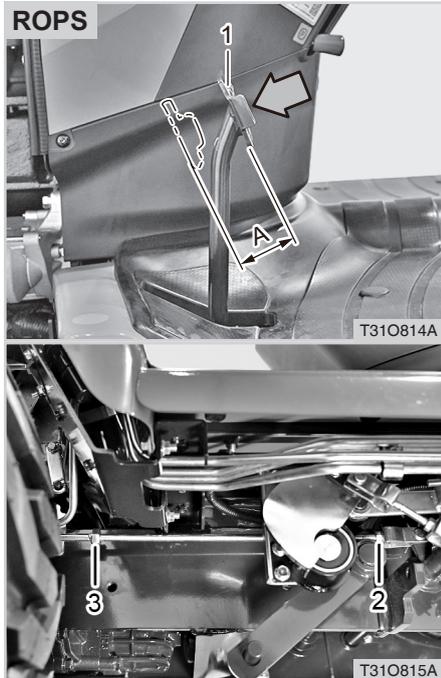
ADJUSTING BRAKE PEDAL (O)

TB1O817A



TB1O840A

- (1) Brake Pedal
 (2) Lock Nut
 (3) Turn Buckle
- (A) Free Play



(1) Brake Pedal (A) Free Play
 (2) Lock Nut
 (3) Brake rod

Prolonged use of the brake pedal increases its free play.

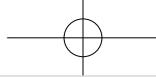
The brake pedal free play can be adjusted as follows:

1. Release the brake and measure the height of pedal from the floor.
2. Depress the brake pedal slightly until some resistance is felt. Then, measure the height of pedal from the floor.
3. The difference between two heights is the free play. When adjustments are needed, loosen the lock nut and turn the turn buckle (For ROPS model, turn the brake rod) until the free play reduced to standard value.

Proper brake pedal free travel (A)
 0.39 in. (10 mm)

4. After adjustment, tighten the lock nut firmly.

 CAUTION
<ul style="list-style-type: none"> • Stop the engine and chock the wheels before checking brake pedal.



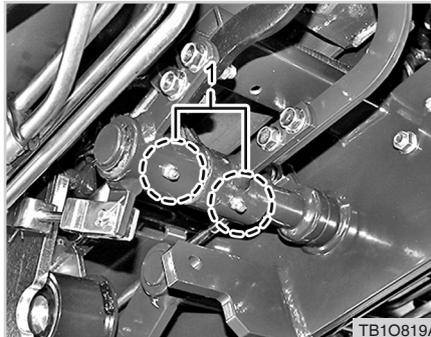
LUBRICATING GREASE FITTINGS (P)

Apply high-quality multi-purpose grease onto the positions in the figure at every 50 hours of operation or whenever necessary and record the operating time when applying it.



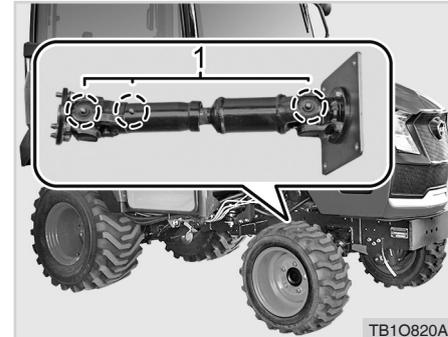
(1) Front Bracket Axle Pivot

TB1O818A



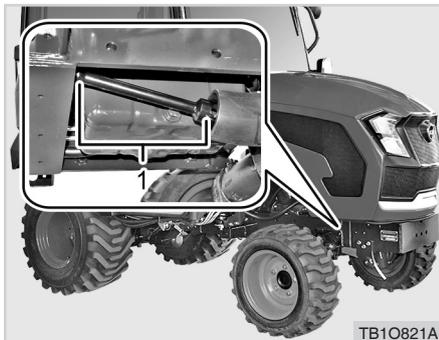
(1) HST Pedal

TB1O819A



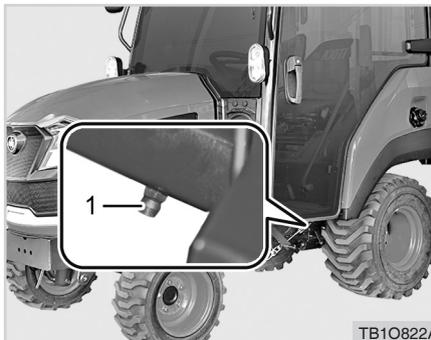
(1) Main Shaft Joint

TB1O820A



(1) 4WD Joint

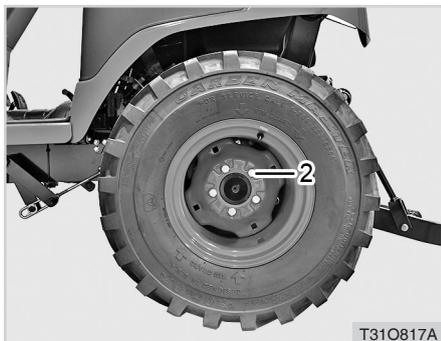
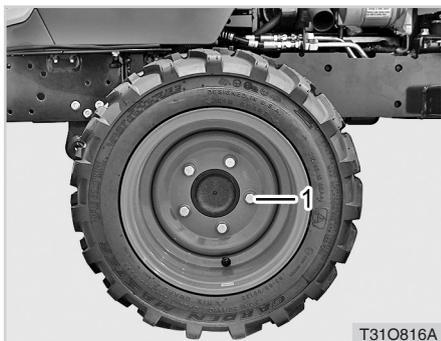
TB1O821A



(1) Brake Shaft

TB1O822A

CHECKING WHEEL BOLT TORQUE (Q)



(1) Front Wheel Bolt
(2) Rear Wheel Bolt

Check wheel bolts and nuts regularly. If they are loose, tighten them as follows.

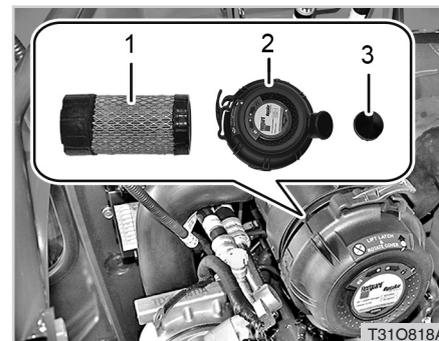
Item		Tightening torque
Front wheel	Bolt	64.9 ft-lbs (88 N·m) (8.97 kgf·m)
Rear wheel	Bolt	90.0 ft-lbs (122 N·m) (12.44 kgf·m)

⚠ CAUTION

To avoid personal injury:

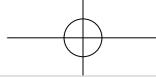
- Never operate tractor with a loose rim, wheel, or axle.
- Check all bolts and nuts frequently and keep them tight.

REPLACING AIR CLEANER (T)



(1) Element (2) Cap
(3) Evacuator Valve

1. The air cleaner uses a dry element. Never apply oil.
2. Remove and clean the dust cap and the element every week. If the tractor is operated in extremely dusty conditions, daily inspection is required.
3. When cleaning the element, refer to the instructions that follow.
4. If the element is stained with carbon, dust or oil, replace the filter.



To clean the element, use only clean dry compressed air to 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.

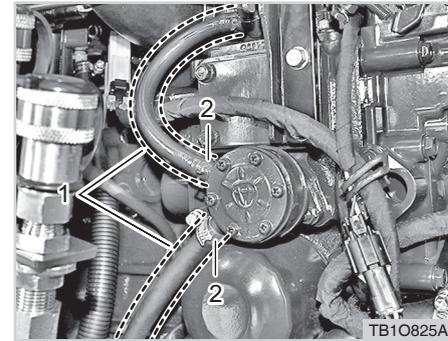
⊕ IMPORTANT

- 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.
- Do not run the engine with filter element removed.
- Be sure to refit the cap with the arrow ↑ (on the rear of cover) upright. If the cap is improperly fitted, evacuator valve will not function and dust will adhere to the element.

EVACUATOR VALVE

Clean the evacuator valve frequently.

CHECKING FUEL LINES (U)

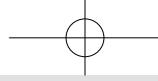


(1) Fuel Pipe

(2) Tightening Band

Although checking the fuel pipe connection is recommended every 100 service hours, it should be done every 6 months if operation does not exceed 100 hours in 6 months.

1. If the fuel pipes and hose clamps are found damaged or deteriorated then change them immediately.
2. After the fuel pipe and hose clamps have been changed, bleed the fuel system.

**⚠ WARNING**

- **Stop the engine when checking the items above.**
- **The fuel pipes are subject to wear and aging. Failure to perform periodic inspections may lead to a fuel leak. Fuel leaking on a hot engine could cause a fire.**

⊕ 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.**

BLEEDING FUEL SYSTEM (AK)

The fuel line for the **KIOTI** engine is designed to be bled automatically. If the engine still cannot be started even after 4~5 times of cranking, bleed as followed:

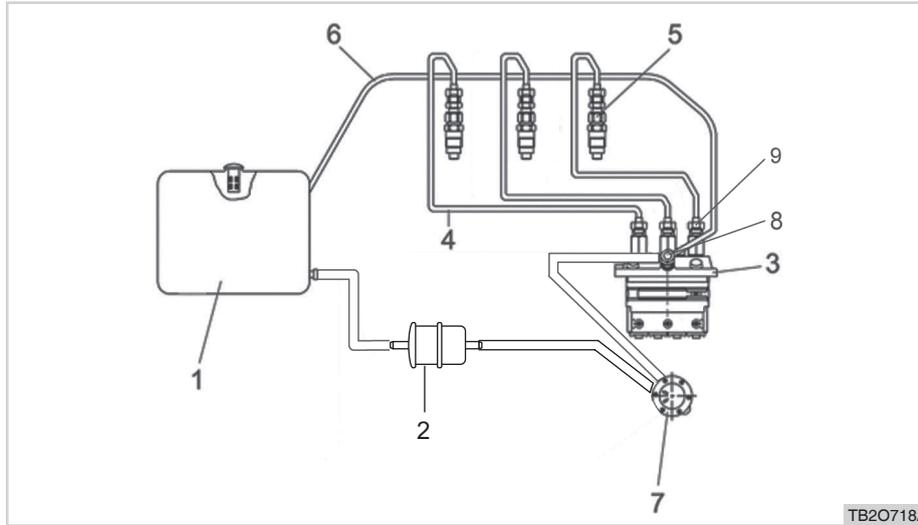
Do not crank the engine for more than 5 seconds continuously at a time to protect the start motor and battery.

📖 NOTE

- It is recommended to start servicing after filling the fuel tank to its top for easy bleeding.

1. Park the vehicle on level ground and apply the parking brake firmly.
2. Make sure that the fuel is sufficient in the fuel tank. If necessary, fill the fuel tank with fuel.
3. Unscrew the bleeding bolt (8) slightly and crank the engine. Check that air comes out of the gap.

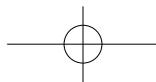
4. When air bubbles are not seen any more in the fuel leaking tighten the bleeding bolt and try to start the engine 2~3 times again.
5. If the engine still cannot be started, unscrew two or three nozzle holder nuts (9) and crank the engine to check that air comes out.
6. When air bubbles are not seen any more in the leaking fuel, tighten the nuts and start the engine.
7. Check for fuel leakage after starting the engine.



- (1) Fuel Tank
- (2) Fuel Filter
- (3) Fuel Injection Pump

- (4) Injection Pipe
- (5) Injection Nozzle
- (6) Fuel Overflow Pipe (Hose)

- (7) Fuel Feed Pump
- (8) Bleeding Bolt
- (9) Nozzle Holder Nut



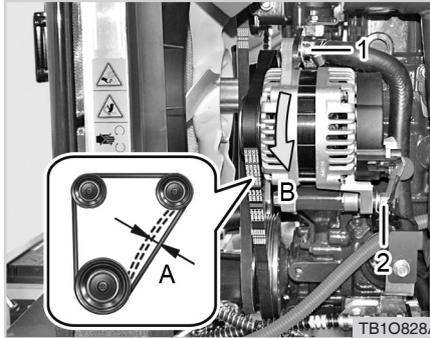
CHECKING INJECTION NOZZLE AND FUEL INJECTION PUMP

The injection nozzle and injection pump can be inspected only by a qualified service personnel. For detailed information, contact your KIOTI Dealer.

⊕ IMPORTANT

- **Modifying sealed parts in the fuel system, such as the flow limit bolt and engine rpm limit bolt, is strictly prohibited by the emission regulations. If such regulations are not followed, it will not be covered by warrant and will void any warranty.**

ADJUSTING FAN BELT TENSION (V)



- (1) Adjusting bolt (2) Mounting bolt
(A) Adjusting belt tension (B) Pull

In order to extend the fan belt life-time, the tension of the belt should be correctly adjusted. The belt tension should be inspected regularly according to the following procedure:

1. Stop the engine and apply the parking brake.
2. Open the hood.
3. Apply moderate thumb pressure to the belt (A) between the crankshaft pulley and alternator pulley to check for tension.

Proper fan belt tension (A)

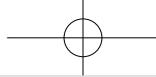
Adjust the tensioner pulley so that the belt deflection is 0.39 ~ 0.47 in. (10 ~ 12 mm) when the area between the alternator and the fan pulley is pressed with a force of 10 kgf.

4. If tension is incorrect, loosen the alternator mounting bolt and adjusting bolt. Pull the alternator outward using a pry bar to reach the proper belt tension.
5. Be sure to retighten the alternator mounting bolt and adjusting bolt securely after adjusting belt tension.
6. Replace the fan belt if it is damaged, cracked or worn.

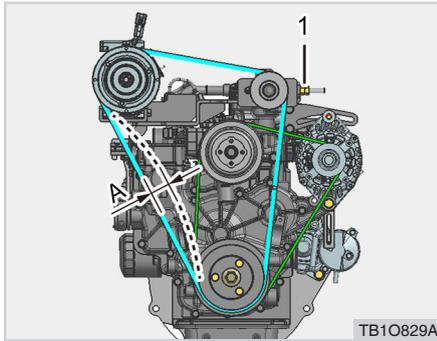
⚠ CAUTION

To avoid personal injury:

- **Be sure to stop the engine before checking belt tension.**



ADJUSTING AIR CONDITIONER BELT TENSION (V)



(1) Adjusting bolt
(A) Adjusting belt tension

1. Stop the engine and apply the parking brake.
2. Press the belt between the pulleys with force of 9.92 lbs. (4.5 kgf) and adjust the belt tension according to the below specification.

Tension of air conditioner belt (A)

When pressing the middle point of the belt : 0.39 in. (10 mm)

3. Replace the damaged belt.



CAUTION

- Stop the engine before checking air conditioner belt.

BATTERY (W) PRECAUTIONS FOR HANDLING



(1) Battery

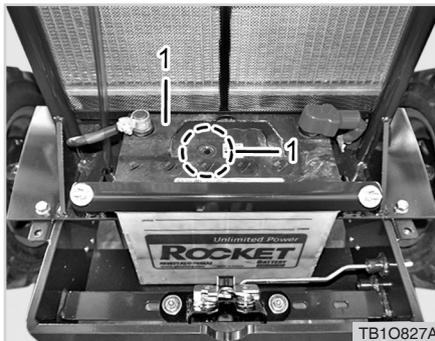
If the battery is insufficiently charged, the engine is hard to start.

1. The battery cable should always be firmly connected. When installing a new or used battery, clean its terminals and the end of the cable.
2. Check the battery and cable for damage and corrosion.

⚠ WARNING

- **The battery gas can explode. Do not expose the battery to flames or sparks. It may cause a fire.**
- **The battery fluid contains sulfuric acid that can burn you. Do not allow the battery fluid to contact your eyes, skin, or painted surfaces. If you accidentally get it in your eyes or on your skin, flush the site of contact with water and contact your doctor.**
- **Be sure to wear eye protection while working on the battery. The battery fluid can hurt your eyes.**
- **Use only the battery with the specified voltage. Otherwise, it may cause a fire.**

BATTERY INSPECTION



(1) Battery

(2) Sight Glass

Check the battery sight glass (if equipped) frequently to keep the battery in the best condition.

- Green: Battery normally charged
- Black: Battery discharged, immediate charge required
- White: Battery replacement required

CHARGING

1. To slow charge the battery, connect the battery positive terminal to the charger positive terminal and the negative to the negative, and then recharge in the standard fashion.
2. Boost charging is only for emergencies. It will partially charge the battery at a high rate and in a short time. Failure to do this will shorten the battery's service life.
3. When the battery is discharged again and should be replaced, replace it with a new one with same specification and capacity.

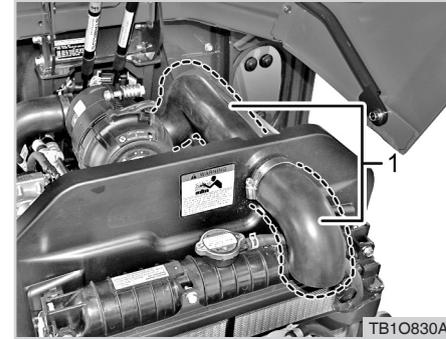
Battery type	Volts (v)
US MODEL : 55Ah EU MODEL : 45Ah	12

**⚠ CAUTION**

- **The charge warning lamp comes on if the charging system is defective. If it comes on while driving, have the system checked or repaired by your local KIOTI Dealer.**
- **Keep the battery fully charged. If the battery fluid concentration is too low during the winter season, the battery may be frozen.**
- **Do not start the engine when the battery is frozen. Try to warm it up first.**
- **If the battery is not securely installed, the battery case could be damaged by vibration. Tighten the battery securely.**
- **Never check the charge status of the battery by placing a metal object across the poles. Use an ampere meter.**

DIRECTION FOR STORAGE OF BATTERY

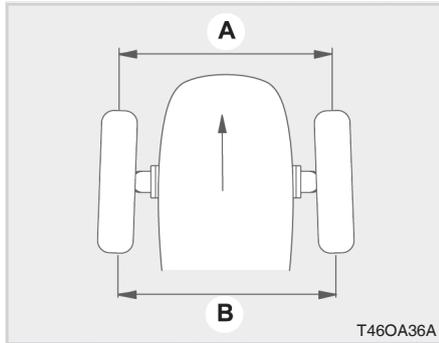
1. When storing the tractor for a long period, remove the battery from tractor, store in a dry place out of direct sunlight.
2. The battery self-discharges while it is stored.
Recharge it once every three months in hot seasons and once every six months in cold seasons.

CHECKING INTAKE AIR LINE (X)

(1) Air Line Hose

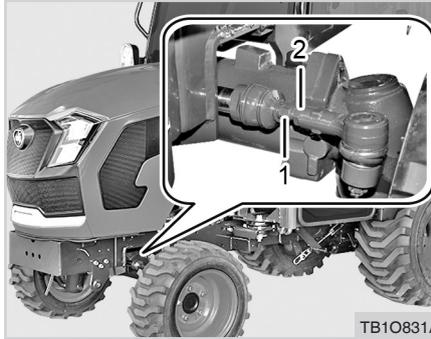
1. If the hose clamps are loose, tighten clamps securely.
2. If the hoses and clamps are damaged, you must replace them at once. Failure to do so could lead to engine damage.

ADJUSTING TOE-IN (Y)



(A) Wheel - to - wheel distance at front
(B) Wheel - to - wheel distance at rear

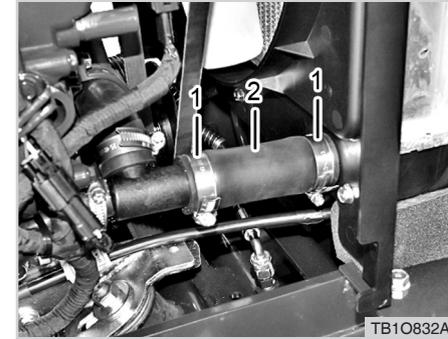
1. Park tractor on a flat level area.
2. Turn steering wheel so front wheels are pointed straight ahead.
3. Lower the implement, lock the parking brake and stop the engine.
4. Measure distance between tire center.
5. Measure distance between tire center at the rear of tire.
6. Front distance should be 0.08~0.31 in. (2~8 mm) less than rear distance. If not, adjust the steering tie rod length.



(1) Tie Rod Lock Nut (2) Tie Rod

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.

CHECKING RADIATOR HOSE AND CLAMP (Z)



(1) Clamp (2) Hose

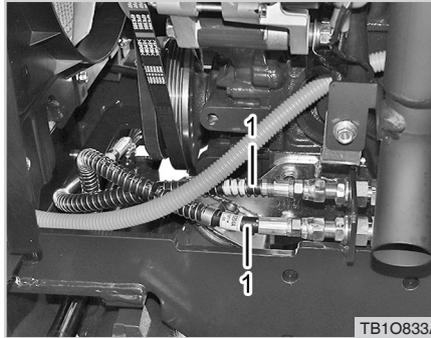
Check to ensure the radiator hoses are free from damage and are tightened properly every 200 hours or every 6 months, whichever comes first.

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, replace the hoses. Failure to do so could lead to coolant loss and engine damage.

**PRECAUTION AT OVERHEATING**

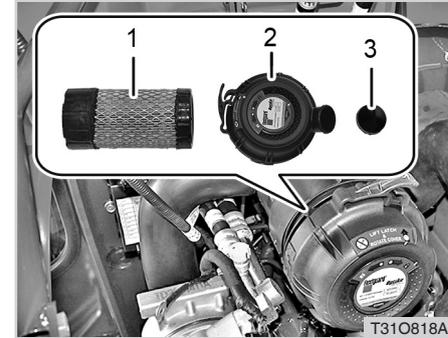
Take the following actions in the event the coolant temperature reaches the boiling point, what is called "Over-heating".

1. Stop the machine in a safe place and keep the engine idling.
2. After 5 minutes of unloaded idling, shut the engine down.
3. Keep yourself away from the tractor for another 10 minutes or until steam has stopped blowing out of the engine.
4. Make sure that there is no danger and inspect the cause of the overheating.
5. Contact your local **KIOTI** dealer.

POWER STEERING LINE (AA)

(1) Power Steering Oil Line

1. Check to see that all hydraulic lines and hose fittings are tight and undamaged.
2. If damage is found you should replace the hose at once.

REPLACING AIR CLEANER FILTER (AF)

(1) Filter (2) Cap
(3) Evacuator Valve

If the air cleaner is not in good condition, the lifetime of the engine can be shortened, excessive soot can be produced, and the engine power can be deteriorated. Therefore, the filter should be inspected frequently. Its replacement interval can be changed according to driving conditions. Replace the filter according to the following procedure:

1. Open the hood and check the suction hose and air cleaner housing for damage.

FLUSH COOLING SYSTEM AND CHANGING COOLANT (AJ)

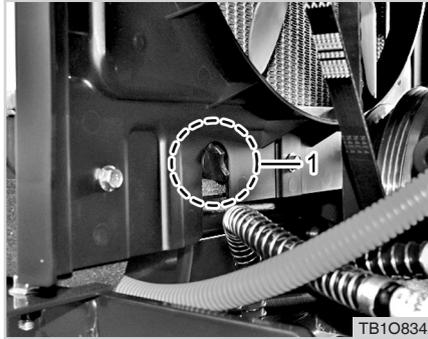
2. Unscrew the air cleaner clip and remove the cover.
3. Clean the inside of the air cleaner housing by blowing compressed air through it.
4. Replace the filter and check the housing for damage.
5. Install the cover and fix it with the clip.

NOTE

- When installing the cover, make sure that the dust collection valve is heading downward.

CAUTION

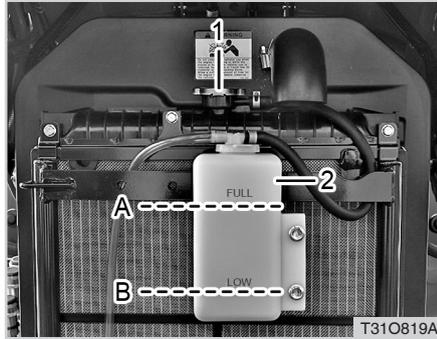
- **Use only a genuine KIOTI filter. Use of a non-recommended filter can cause damage to the engine.**
- **Make sure that no dust bypass the filter element by installing the cover firmly.**
- **When removing the filter, be careful not to let foreign material enter the air inlet.**



(1) Drain plug

1. Park the tractor on level ground, stop the engine and let the engine cool down.
2. To drain coolant, remove the drain plug from the radiator and turn the radiator cap to the 1st notch to release pressure in the radiator. Then, remove the cap completely.
3. After all coolant is drained, fit the drain plug.

4. Use clean, fresh water or with cleaning agent.
5. When use the cleaning agent, flow the manufactures instruction.



(1) Radiator cap (2) Reservoir tank
(A) FULL (B) LOW

6. Install the radiator cap securely.
7. Start and idle the engine for few minutes.
8. Stop the engine and let it cool.
9. Drain water and cooling system cleaner and close drain cock. Then, fill with antifreeze and water mixture and close radiator cap securely.
10. Run tractor at idle until up to operating temperature.

11. Check the coolant level in the reservoir tank. If the level is low, add coolant.

Coolant capacity

0.92 U.S.gal. (3.5 L)

⚠ CAUTION**To avoid accidents:**

- Do not remove the radiator cap while the coolant is hot. Steam or scalding liquids released from hot cooling system can burn you seriously. Cool down the engine first.
- 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%.
- Securely tighten radiator cap. If the cap is loose or improperly fitted, water may leak out and the engine could overheat.
- If the coolant leaks, contact your local KIOTI Dealer.

ANTI-FREEZE

This tractor is filled with 50% of ethylene glycol at factory.

If the anti-freeze has been replaced by tap water later on, the coolant can be frozen, leading to damage to the cylinder and radiator when the ambient temperature is below 0°C.

Therefore, make sure to change water into anti-freeze before winter season comes.

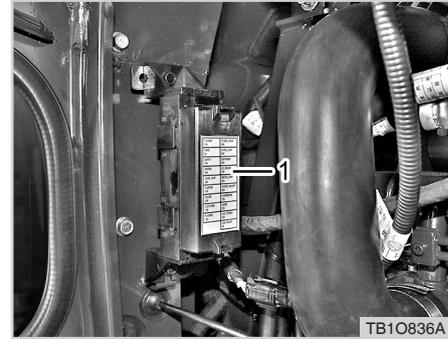
When changing the anti-freeze with one of another type, flush the cooling system several times and contact a professional for the mixture ratio.

Vol. % Anti-freeze	Freezing Point		Boiling Point*	
	°F	°C	°F	°C
40	-12	-24	222	106
50	-34	-37	226	108

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.
- Anti-freeze absorbs moisture. Keep unused anti-freeze in a tightly sealed container.

REPLACING FUSE (AN)

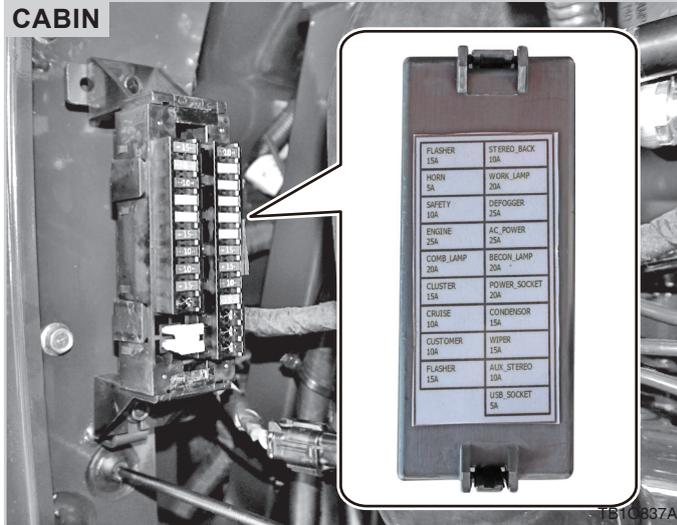


(1) Fuse Box

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.

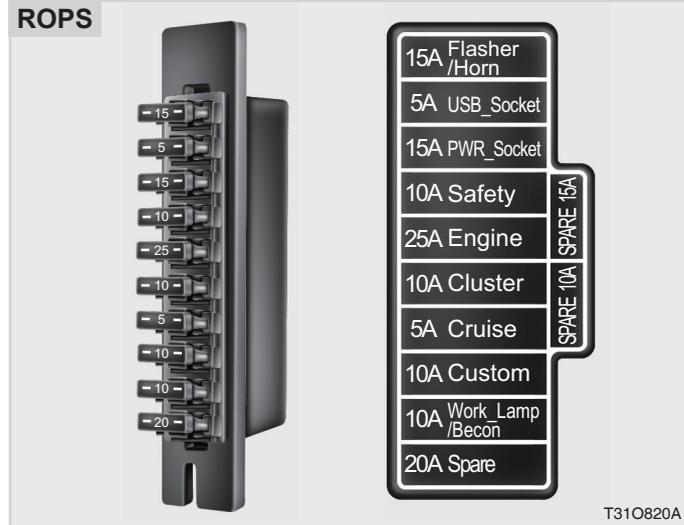


CABIN



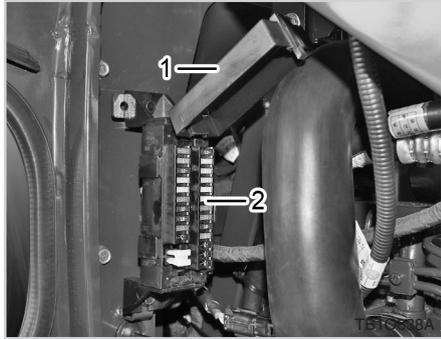
Fuse panel is located under the right side of the instrument panel.

ROPS



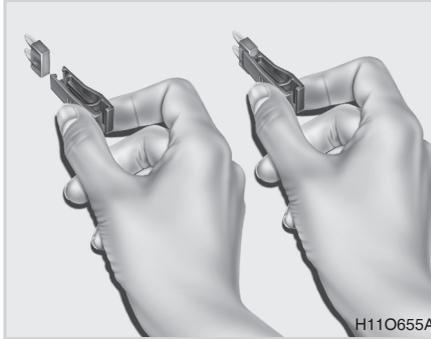
The fuse box is located on the right side shield plate in the engine room.

추후 양산품 위치 확인



(1) Box cover

(2) Fuse



There are letters indicating the fuse capacity and location on the cover of the fuse panel. Replace the fuse according to the following procedure:

1. Turn the key switch to the "OFF" position and turn "OFF" all the electrical devices.
2. Open the fuse box cover and check the fuse in question using fuse tongs.

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 cover.

⚠ WARNING

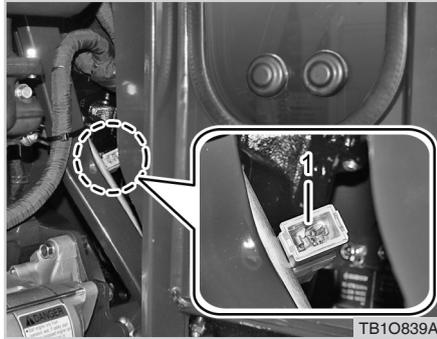
- *Never use a fuse with the capacity higher than specified on the fuse box cover.*
- *If using a faulty fuse, steel wire, or foil, the electrical device can be damaged or even can catch a fire.*

📖 NOTE

- **If the replaced fuse blows again, it is probable that the wiring system is faulty. In this case, contact your local KIOTI Dealer.**
- **If the fusible link, relay or other electrical component is faulty, contact your local KIOTI Dealer.**



SLOW BLOW FUSE (AP)



(1) Slow Blow Fuse

The slow blow fuse is to protect the electric wiring. If it is blown, find and repair the cause and replace it with a new genuine **KIOTI** part.

If it is blown again, contact your local **KIOTI** dealer.

⊕ IMPORTANT

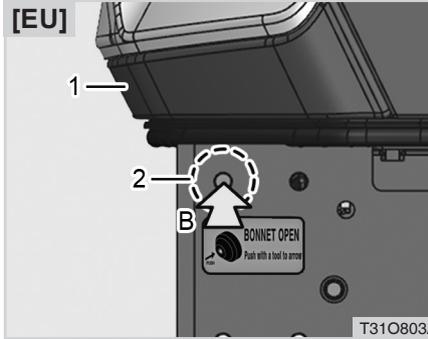
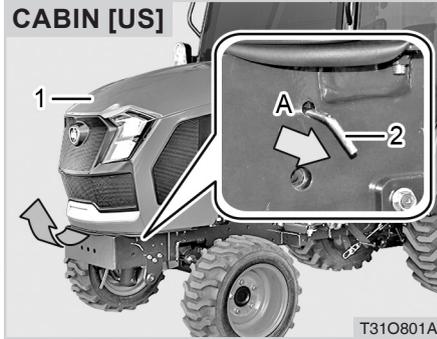
- Using a non-approved slow-blow fuse can damage electrical systems in the tractor severely.

REPLACING LED LIGHTS (AQ)

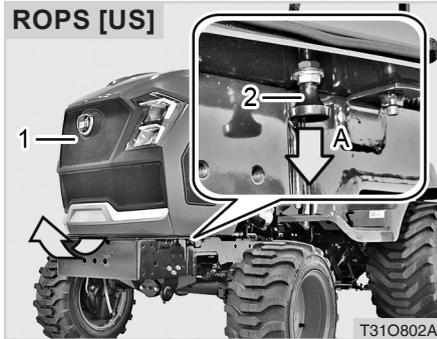
The LED lights capacities used in this tractor are listed in the table below.

No.	Application		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

**HEAD LAMP
CABIN [US]**

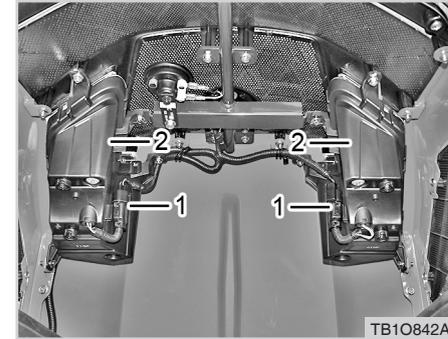


ROPS [US]



(1) Hood
(A) Pull

(2) Handle (Button)
(B) Push



(1) Connector
(2) LED Lamp Assembly

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 recommended to disconnect the battery negative cable.

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**

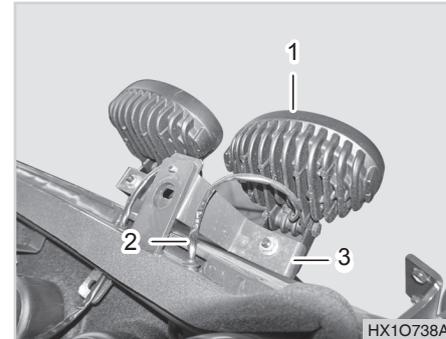
- *If a non-KIOTI OEM LED lights with different rating is used, the electrical system could be damaged or possibly cause a fire.*
- *Use genuine KIOTI LED lights.*

⚠ 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. This is a temporary and normal.**

WORK LAMP

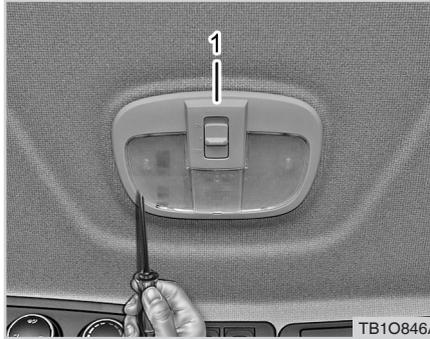
The LED work lamps are designed to enhance visibility during work. For the LED work lamps, when they need replacement, replace the whole assembly.

**REPLACING THE LED WORK LAMPS
[CABIN MODEL ONLY]**

- (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. 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.

INDOOR LAMP [CABIN MODEL ONLY]



(1) Indoor Lamp

1. Fit a flat-bladed screwdriver into the edge of the indoor lamp and pry off the indoor lamp cover.
2. Remove the indoor lamp by pulling it up. Install a new one.

TURN SIGNAL LAMP (FRONT) [CABIN MODEL ONLY]



(1) Turn Signal Lamp (FRT)

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.

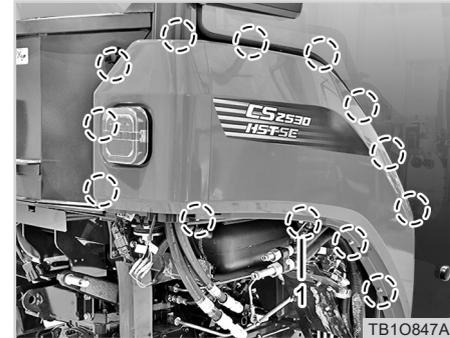


2. Press the lamp downward and turn counterclockwise to remove.
3. Align the tabs of the new lamps in the holder slots. Press down and rotate the lamp clockwise to install. Assemble the lens cover in reverse order.

COMBINATION LAMP [CABIN MODEL]



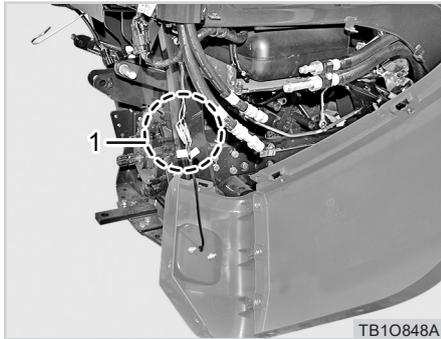
(1) Combination Lamp



(1) Mounting Bolt

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 recommended to disconnect the battery negative cable.

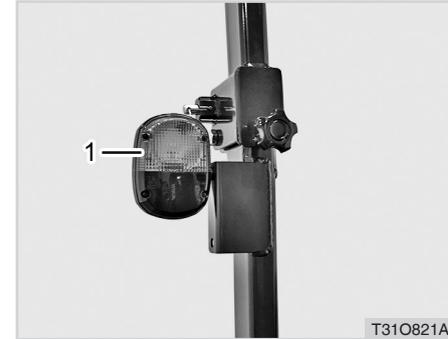
2. Loosen the bolts attached to the rear panda (LH/RH).



(1) Connector
(2) Combination Lamp Assembly

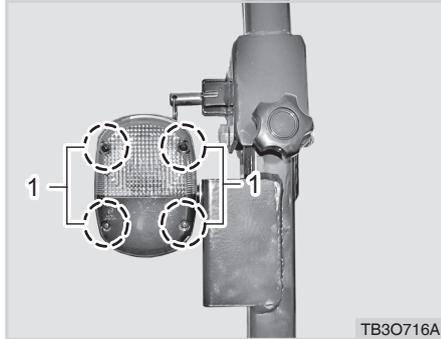
3. Disconnect the connector connected to the combination lamp.
4. The combination lamp (LH/RH) is replaced with assembly because it uses LEDs.

COMBINATION LAMP [ROPS MODEL]



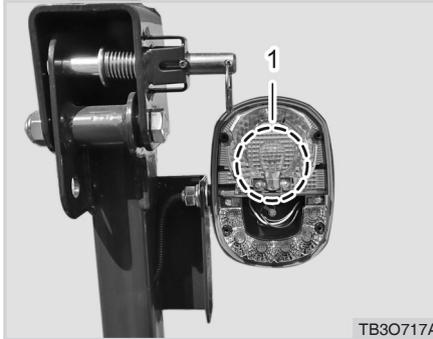
(1) Combination Lamp

1. The combination lamp is installed on the ROPS.



(1) Bolt

2. Unscrew the lens mounting bolt to remove the lens.



(1) Combination Lamp Bulb

3. With the bulb pressed downward, turn it counterclockwise to remove it. Replace it with a new one.

 **CAUTION**

- Do not touch the bulb if it is still illuminated or right after it is turned "OFF". You can be burned by the hot bulb.
- For some bulbs which require delicate handling or work process, contact your local KIOTI Dealer.
- Do not touch the illuminating glass part of the halogen bulb. The bulb life can be shortened by finger prints, dust and moisture, or the bulb even can be broken. Clean it with soft cloth.
- The halogen bulb contains compressed gas, so it can explode if dropping or scratching it. Therefore, never use a bulb if it is scratched or was dropped.

 **CAUTION**

- When separating the cover by prying it “OFF” with a screwdriver, be careful not to damage it.
- Before replacing a bulb, make sure to put the key switch and the switch for the corresponding bulb to the “OFF” position.
- Install a new bulb with the same capacity after removing the installed bulb.



STORAGE AND DISPOSAL

TRACTOR STORAGE 9-2

 DAILY STORAGE.....9-2

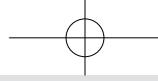
 LONG-TERM STORAGE.....9-2

USING TRACTOR AFTER STORAGE 9-3

DISPOSAL 9-4

9

9



TRACTOR STORAGE DAILY STORAGE

1. Keep the tractor clean when it is stored. Make sure to wash it after work.
2. Store it indoors if possible. If it should be kept outside, cover it.

WARNING

- *When operating the tractor in an enclosed area, ventilate the area to release exhaust gas to the outside. The exhaust gas is colorless and not visible, but is harmful.*

3. Remove the battery from the tractor in winter and store it indoors.
4. Add anti-freeze to the tractor in winter season in order to prevent the radiator from freezing.
5. Remove the ignition key and store it separately.

LONG-TERM STORAGE

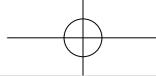
Follow the instructions below if the tractor is not to be used for a long period of time (max. 1 year). This is to operate the tractor again with minimum preparation after long-term storage. Repeat this procedure if the tractor hasn't been used for one year.

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. Check the bolts and nuts for looseness, and tighten if necessary.
2. Apply grease to tractor areas where bare metal will rust also to pivot areas.
3. Detach the weights from the tractor body.

4. Inflate the tires to a pressure a little higher than usual.
5. Change the engine oil and run the engine to circulate oil throughout the engine parts for about 5 minutes.
6. With all implements lowered to the ground, coat any exposed hydraulic cylinder piston rods with grease.
7. Remove the battery from the tractor. Store it separately.
8. Keep the tractor in a dry place where the tractor is sheltered from rain.
9. Clean the engine components as well as the tractor.
10. Add grease to all the lubrication filler ports of the tractor.
11. Replace any worn or damaged component.
12. Attach a tag onto the tractor to inform the storage condition of the tractor.



USING TRACTOR AFTER STORAGE

CAUTION

To avoid injury:

- **Never clean the tractor body 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 to be removed, disconnect its negative terminal. The wiring can be gnawed by rodents, leading to a fire.**

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)
5. Remove grease from the exposed cylinder rod.
6. Apply grease to the lubrication points.
7. Get onto the tractor and start the engine.
8. Check if the instrument panel and all parts operate correctly while running the engine for a few minutes.
9. Drive the tractor outside and check if it is operating properly. Park the tractor outside and idle engine for at least 5 minutes. Stop the engine and visually inspect the tractor. Check if there is leakage.

10. Start the engine, release the parking brake, and check the brake condition while driving forward. Adjust the brake pedals if necessary.
11. Stop the engine and check for leakage. Repair any part as required.

CAUTION

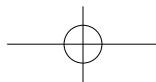
- **If the battery is not to be removed, disconnect its negative terminal at least. The wiring can be gnawed by rodents, leading to a fire.**



DISPOSAL

In order to protect the environment, use and dispose of the tractor keeping the following in mind:

1. When changing the oil or coolant by yourself, be careful not to spill it. Store used engine oil, transmission oil, oil filters, etc. safely in a designated location in accordance with environmental protection regulations, and dispose of them at a designated collection agency. Careless disposal may result in severe penalties under environmental laws.
2. Never leave or discard the expired tractor or implement without discretion on your own, but contact your local **KIOTI** Dealer to dispose it according to the regulations.





TROUBLESHOOTING

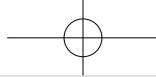
ENGINE TROUBLESHOOTING 10-2
TRACTOR TROUBLESHOOTING..... 10-4

10

This troubleshooting chart summarizes simple service items for users who are familiar with mechanical systems. For more information, contact your local **KIOTI** Dealer.

ENGINE TROUBLESHOOTING

CAUSE		COUNTERMEASURES
1. When engine is difficult to start	• Fuel is thick and doesn't flow.	• Check the fuel tank and fuel filter.
		• Remove water, dirt and other impurities.
		• All fuel will be filtered by the filter, if there should be water or other foreign material on the filter, replace the filter.
	• Air or water mixed in fuel system.	• If air is in the fuel filter or injection lines, the fuel pump will not work properly.
		• To attain proper fuel injection pressure, check carefully for loosened fuel cap nut, etc.
	• Thick carbon deposits on injection nozzle.	• Loosen air vent screw over fuel filter and fuel injection pump to eliminate all the air in the fuel system.
		• This is caused when water or dirt is mixed in the fuel. Clean the nozzle injection piece, being careful not to damage the nozzle.
	• Valve clearance is wrong	• Check to see if nozzle is working properly or not, if not, install a new nozzle.
• Engine oil become thick in cold weather and engine cranks slow.	• Contact KIOTI dealer.	
• Actuator driver malfunction	• Change grade of oil according to the weather (temperature).	
• Speed sensor malfunction	• Check the actuator and wire connection	
	• Check the speed sensor and wire connection. Adjust the air gap between ring gear and the tip of sensor	

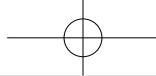


CAUSE		COUNTERMEASURES						
1. When engine is difficult to start	<ul style="list-style-type: none"> Start motor does not rotate when key switch is turned 	<ul style="list-style-type: none"> Depress the clutch pedal unless depressed (Manual type). 						
		<ul style="list-style-type: none"> Put the P.T.O switch to the "OFF" position. 						
		<ul style="list-style-type: none"> If the switch or start motor is faulty, have it repaired in a workshop. 						
		<ul style="list-style-type: none"> If any terminal is loose or corroded, clean or fix it firmly. 						
2. When engine power is insufficient	<ul style="list-style-type: none"> Valve out of adjustment 	<ul style="list-style-type: none"> Contact KIOTI dealer. 						
	<ul style="list-style-type: none"> Air cleaner is dirty 	<ul style="list-style-type: none"> Clean or replace the element at every 100 to 200 hours of operation. 						
	<ul style="list-style-type: none"> Fuel injection pressure is wrong 	<ul style="list-style-type: none"> Contact KIOTI dealer. 						
	<ul style="list-style-type: none"> Pressure sensor malfunction 	<ul style="list-style-type: none"> Check the sensor wire connection and resistance. 						
	<ul style="list-style-type: none"> Speed sensor malfunction 	<ul style="list-style-type: none"> Check the sensor wire connection. 						
	<ul style="list-style-type: none"> Actuator position sensor malfunction 	<ul style="list-style-type: none"> Check the actuator and wire connection. 						
3. When color of exhaust is bad	<ul style="list-style-type: none"> Fuel is of extremely poor quality 	<ul style="list-style-type: none"> Select good quality fuel. <table border="0"> <tr> <td>Temperature</td> <td>Fuel type</td> </tr> <tr> <td>- Above 14°F (-10°C)</td> <td>NO.2 Diesel</td> </tr> <tr> <td>- Below 14°F (-10°C)</td> <td>NO.1 Diesel</td> </tr> </table>	Temperature	Fuel type	- Above 14°F (-10°C)	NO.2 Diesel	- Below 14°F (-10°C)	NO.1 Diesel
	Temperature	Fuel type						
- Above 14°F (-10°C)	NO.2 Diesel							
- Below 14°F (-10°C)	NO.1 Diesel							
<ul style="list-style-type: none"> Nozzle is bad 	<ul style="list-style-type: none"> If necessary, replace with new nozzle. 							

※ If you do not find the cause of trouble, consult your local **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. Brake is not operating properly	• Brake does not operate or only one brake pedal operates	• The brake pedal play is excessive. Adjust the play. • The brake lining is worn or stuck. Have it replaced in a workshop.
	• Brake pedal does not return properly	• The brake return spring is damaged. Replace it. • Grease is insufficient on each mating surface. Remove rust and apply grease.
3. Steering wheel is not operating properly	• Steering wheel is heavy or vibrate	• The toe-in is incorrect. Adjust it. • The tire inflation pressure is different. Inflate the left and right tires into the specified pressure. • Each connection is loose. Re-tighten each connection and replace the part.
	• Steering wheel play is excessive	• The steering wheel shaft is worn. Have it repaired in a workshop. • Metal parts are worn. Have them repaired in a workshop. • Each connection has play. Tighten the connection again.



CAUSE		COUNTERMEASURES
4. Hydraulic system is faulty	• Oil is leaked from pipe or hose	• O-rings are damaged. Replace them.
		• The pipe is cracked. Have it repaired in a workshop.
	• 3-point hitch cannot be lowered	• Check the down speed adjusting value (knob)
		• The valve and cylinder are damaged. Contact KIOTI dealer.
	• 3-point hitch cannot be lifted	• The transmission fluid is insufficient. Add it to the specified level.
		• The oil filter is clogged. Replace it.
• 3-point hitch vibrates by itself	• The hydraulic filter, valve or pump is malfunctioning. Contact KIOTI dealer.	
	• Each sensor malfunctioning, Contact KIOTI dealer.	
5. Electric system is faulty	• Headlamps cannot be turned on or are dim.	• Select the highest top link hole.
		• The fuse is blown. Check the wiring and replace the fuse.
		• The LED lamp is broken. Replace it.
		• The ground and terminal wirings are poorly contacted. Check and clean them.
		• The battery voltage level is low. Charge the battery.

CAUSE		COUNTERMEASURES
5. Electric system is faulty	• Battery cannot be charged	• Check the battery and alternator.
	• Horn does not sound	• The horn switch is faulty. Replace or see KIOTI dealer.
		• The wiring is faulty. Replace or contact KIOTI dealer.
		• The horn is damaged. Repair or replace it.
	• Turn signal lamps do not blink	• The LED lamp is broken. Replace it.
		• The blinking device is faulty. Repair or replace it.
		• The ground and terminal wirings are poorly contacted. Check and clean them.
	• Work lamps do not come on	• The LED lamp is broken. Replace it.
		• The ground and terminal wirings are poorly contacted. Check and clean them.

※ If you do not find the cause of trouble, consult your local **KIOTI** dealer for assistance.