

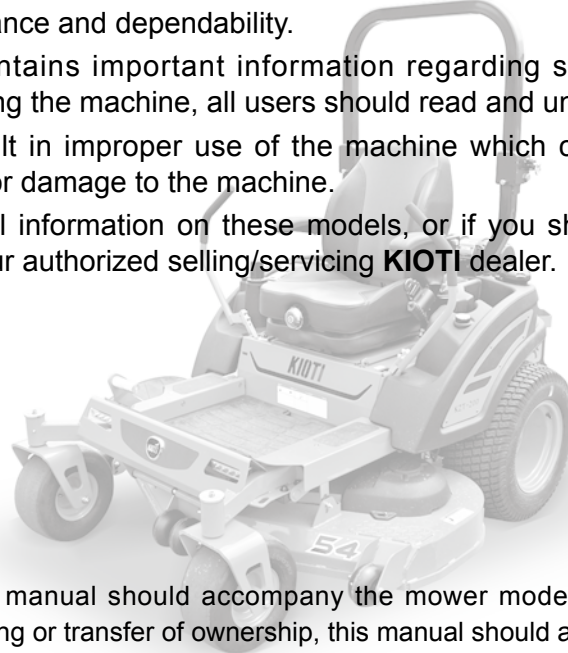
FOREWORD

Thank you for choosing the **KIOTI ZXR/ZXC** series brand of zero turn mowers. Our products are designed to provide maximum performance and dependability.

The following manual contains important information regarding safety, operation, maintenance and adjustment. Before operating the machine, all users should read and understand the manual in its entirety.

Failure to do so may result in improper use of the machine which could result in personal injury to the operator, bystanders, and/or damage to the machine.

For questions or additional information on these models, or if you should require service for your **KIOTI** product, please contact your authorized selling/servicing **KIOTI** dealer.



NOTE

It is recommended that this manual should accompany the mower model during normal day-to-day service, for reference. In the case of leasing or transfer of ownership, this manual should accompany the mower.

DISCLAIMER

The specifications within this manual are subject to change without notice.

TABLE OF CONTENTS



SECTION

■ SAFETY PRECAUTIONS	1
■ SERVICE	2
■ SPECIFICATIONS	3
■ FUNCTION DESCRIPTION AND OPERATING TIPS	4
■ OPERATION	5
■ MAINTENANCE	6
■ STORAGE AND DISPOSAL	7
■ TROUBLESHOOTING	8
■ PART ILLUSTRATIONS	9
■ INDEX	10

TABLE OF CONTENTS

SAFETY PRECAUTIONS	1-1	MOWER SERIAL NUMBER	2-2
PRECAUTION BEFORE OPERATION.....	1-2	ENGINE SERIAL NUMBER.....	2-2
SAFE OPERATION PRACTICES	1-3	TRANSAXLE NUMBER.....	2-2
OWNERS RESPONSIBILITY	1-3	SERVICE	2-3
OPERATING	1-4	SUPPLYING SERVICE PARTS	2-3
DRIVING ON SLOPE	1-6	SERVICING ENGINE AND DRIVE TRAIN COMPONENTS.....	2-4
PARKING.....	1-9	GENUINE PARTS.....	2-4
MAINTENANCE.....	1-9	SPECIFICATIONS.....	3-1
STORING	1-11	SPECIFICATIONS.....	3-2
TRANSPORTING	1-11	ZXR RESIDENTIAL MODELS	3-2
USING THE ROPS	1-12	ZXC COMMERCIAL MODELS	3-5
USING A SPARK ARRESTOR.....	1-13	TORQUE TIGHTENING CHART	3-8
SAFETY DECAL MAINTENANCE	1-15	SAE FASTENER TORQUE CHART	3-8
DECAL MOUNTING LOCATION	1-15	TORQUE TIGHTENING CHART	3-9
DECALS	1-16	METRIC FASTENER TORQUE CHART	3-9
DECAL MAINTENANCE.....	1-18	FUNCTION DESCRIPTION AND OPERATING TIPS.....	4-1
ABOUT SERVICE	2-1		
VEHICLE IDENTIFICATION NUMBER.....	2-2		

TABLE OF CONTENTS

EXTERIOR VIEW	4-2	MOWER DECK MOUNTING	5-2
DESCRIPTION OF OPERATING SYSTEM	4-3	MOWER DECK DISMOUNTING	5-4
DISPLAY PANEL	4-3	OPERATING THE ENGINE	5-4
STEERING LEVERS	4-10	STARTING THE ENGINE	5-4
THROTTLE LEVER	4-10	JUMP STARTING	5-7
CHOKE LEVER	4-11	STOPPING THE ENGINE	5-8
PARKING BRAKE	4-11	MOWER OPERATION	5-8
SEAT BELT	4-12	TIPS FOR BREAKING-IN	5-8
SEAT	4-12	OPERATION	5-9
ROPS	4-13	STOPPING	5-16
DECK LIFT PEDAL	4-13	MOVING MOWER WHEN THE ENGINE IS STOPPED	5-17
DECK HEIGHT ADJUST DIAL	4-14	PARKING	5-17
FUEL GAUGE	4-14	TOWING	5-18
CUP HOLDER	4-15	TRANSPORTING	5-18
DC POWER OUTLET	4-15	HOW TO USE THE MOWER PROFICIENTLY	5-19
TIRES	4-16	MOWER PERFORMANCE TIPS	5-19
WHEEL	4-17	ADJUSTING CUTTING HEIGHT	5-20
OPERATION	5-1	OPERATING MOWER	5-20
DECK MOUNTING / DISMOUNTING	5-2	BATTERY & FUSE ACCESS	5-21
		HOW TO LIFT THE MOWER	5-22

TABLE OF CONTENTS

CLEANING MOWER DECK	5-23	ADJUSTING TRANSAXLE DRIVE BELT TENSION	6-14
WASHING MOWER	5-23	MOUNTING AXLE BELT	6-14
MAINTENANCE	6-1	CHECKING PARKING BRAKE.....	6-16
RECOMMENDED MAINTENANCE SCHEDULES...	6-3	ADJUSTING THROTTLE CONTROL AND CHOCK	6-17
LUBRICANTS	6-5	CHECKING AND CHARGING BATTERY.....	6-17
DAILY CHECK	6-6	EVERY 200 HOURS	6-19
GENERAL INFORMATION.....	6-6	REPLACING ENGINE OIL FILTER	6-19
CHECKING ENGINE OIL LEVEL	6-6	REPLACING TRANSAXLE OIL FILTER.....	6-19
CHECKING AND ADDING FUEL	6-7	CHECKING TRANSAXLE FLUID HOSE.....	6-21
CHECKING AND CLEANING AIR INTAKE SCREEN	6-8	CLEANING ENGINE SHROUD	6-22
CHECKING TRANSAXLE FLUID LEVEL.....	6-9	EVERY 400 HOURS	6-22
LUBRICATION.....	6-10	REPLACING FUEL FILTER.....	6-22
EVERY 50 HOURS	6-11	EVERY 500 HOURS	6-22
AIR FILTER MAINTENANCE	6-11	ADJUSTING PTO ELECTRIC CLUTCH	6-22
EVERY 100 HOURS	6-12	EVERY 1 YEAR.....	6-25
CHANGING ENGINE OIL.....	6-12	REPLACING AIR CLEANER ELEMENT	6-25
CHECKING SPARK PLUG	6-13	CHECKING SPARK PLUG	6-25
CHECKING FUEL LINES/FUEL FILTER	6-13	SERVICE AS REQUIRED	6-26
		REPLACING FUSES	6-26

TABLE OF CONTENTS

CHECKING BLADE.....	6-26	MOWER TROUBLESHOOTING	8-7
INSPECTION AND SHARPENING BLADE.....	6-27	PART ILLUSTRATIONS	9-1
REPLACING BLADE	6-27	HOW TO READ PART ILLUSTRATIONS	9-3
REPLACING MOWER BELT	6-28	01A. 48" MULCHING KIT GROUP (OPTION)	9-4
ADJUSTING BELT TENSION.....	6-29	01B. 54" MULCHING KIT GROUP (OPTION)	9-6
ADJUSTING TRAVEL.....	6-29	01C. 60" MULCHING KIT GROUP (OPTION).....	9-8
ADJUSTING ANTI-SCALP ROLLER.....	6-32	02. LAMP GROUP (OPTION).....	9-10
ADJUSTING DECK LEVEL	6-32	03. HITCH KIT GROUP (OPTION).....	9-12
ADJUSTING DECK RAKE.....	6-33	04. ANTI SCARP ROLLER GROUP (OPTION).....	9-14
STORAGE AND DISPOSAL.....	7-1	10A. ENGINE GROUP	9-18
MOWER STORAGE.....	7-2	10B. ENGINE GROUP	9-20
DAILY STORAGE	7-2	10C. ENGINE GROUP	9-22
LONG-TERM STORAGE.....	7-2	10D. ENGINE GROUP	9-24
USING MOWER AFTER LONG TERM STORAGE.....	7-3	20A. FUEL TANK GROUP.....	9-26
USAGE AND DISPOSAL.....	7-4	20B. FUEL TANK GROUP.....	9-28
TROUBLESHOOTING.....	8-1	21A. FUEL LINE GROUP.....	9-30
TROUBLESHOOTING.....	8-2	30A. TRANS AXLE GROUP.....	9-34
ENGINE TROUBLESHOOTING.....	8-2	30A. TRANS AXLE GROUP.....	9-36
BATTERY TROUBLESHOOTING	8-6	30A. TRANS AXLE GROUP.....	9-38
		30B. TRANS AXLE GROUP.....	9-40
		30B. TRANS AXLE GROUP.....	9-42

TABLE OF CONTENTS





30B. TRANS AXLE GROUP	9-44	60C. MOWER DECK GROUP	9-88
33A. PTO CLUTCH GROUP	9-46	60C. MOWER DECK GROUP	9-90
33B. PTO CLUTCH GROUP	9-48	80A. MAIN HARNESS GROUP	9-98
35A. FRONT WHEEL GROUP	9-50	80B. MAIN HARNESS GROUP	9-100
35B. FRONT WHEEL GROUP	9-52	81A. BATTERY HARNESS GROUP	9-102
36A. REAR WHEEL TIRE GROUP	9-54	81B. BATTERY HARNESS GROUP	9-104
36B. REAR WHEEL TIRE GROUP	9-56	82A. CONTROL PANEL GROUP	9-106
40. STEERING GROUP	9-58	82A. CONTROL PANEL GROUP	9-108
40. STEERING GROUP	9-60	82B. CONTROL PANEL GROUP	9-110
45. PARKING BREAK GROUP	9-62	82C. CONTROL PANEL GROUP	9-112
50. MAIN FRAME GROUP	9-64	83. BATTERY GROUP	9-114
51. FLOOR GROUP	9-66	84. SWITCH GROUP	9-116
60A. MOWER DECK GROUP	9-68	85A. RELAY GROUP	9-118
60A. MOWER DECK GROUP	9-70	85B. RELAY GROUP	9-120
60A. MOWER DECK GROUP	9-72	86. LAMP GROUP	9-122
60A. MOWER DECK GROUP	9-74	87. ETC GROUP	9-124
60B. MOWER DECK GROUP	9-76	90A. SEAT GROUP	9-126
60B. MOWER DECK GROUP	9-78	90B. SEAT GROUP	9-128
60B. MOWER DECK GROUP	9-80	90C. SEAT GROUP	9-130
60B. MOWER DECK GROUP	9-82	90D. SEAT GROUP	9-132
60C. MOWER DECK GROUP	9-84	91. SEAT PLATE GROUP	9-134
60C. MOWER DECK GROUP	9-86	92A. REAR BUMPER GROUP	9-136

TABLE OF CONTENTS

- 92B. REAR BUMPER GROUP 9-138
- 93. ROPS GROUP 9-140
- 95A. DECAL GROUP 1 9-142
- 95A. DECAL GROUP 1 9-144
- 95B. DECAL GROUP 1 9-146
- 95B. DECAL GROUP 1 9-148
- 95A. DECAL GROUP 2 9-150
- 95B. DECAL GROUP 2 9-152
- 95C. DECAL GROUP 2 9-154
- INDEX..... 10-1**

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>

SYMBOLS MARK

Various universal symbols have been used on the instruments and controls of your **KIOTI** mower. Below is a list of the symbols mark and their meanings.



Engine Oil Indicator



Battery Charging Condition



Parking Brake



Operator Presence Indicator



Neutral Position Indicator



PTO ON



PTO OFF



Headlight



High Speed



Low Speed



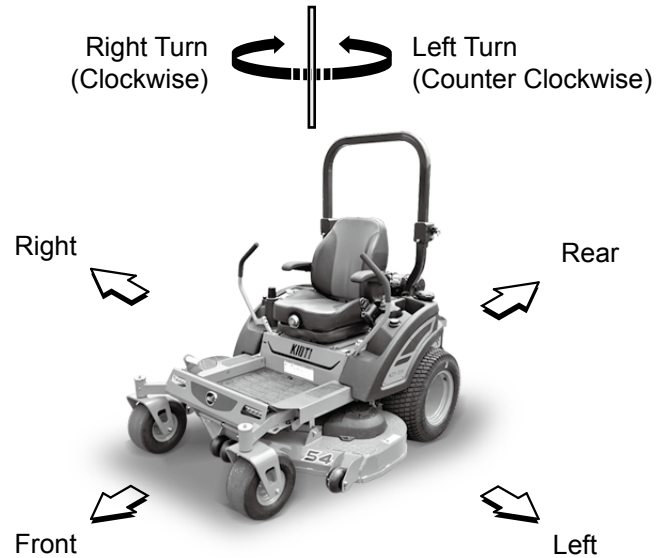
Parking Brake (Engage)



Parking Brake (Disengage)

TERMS FOR DIRECTIONS

The front, rear, left and right directions referred in this manual are the directions seen from an operator in the driver's seat.



SAFETY PRECAUTIONS

1

1

PRECAUTION BEFORE OPERATION.....	1-2
SAFE OPERATION PRACTICES	1-3
OWNERS RESPONSIBILITY	1-3
OPERATING	1-4
DRIVING ON SLOPE.....	1-6
PARKING	1-9
MAINTENANCE	1-9
STORING	1-11
TRANSPORTING	1-11
USING THE ROPS	1-12
USING A SPARK ARRESTOR	1-13
SAFETY DECAL MAINTENANCE	1-15
DECAL MOUNTING LOCATION.....	1-15
DECALS.....	1-16
DECAL MAINTENANCE	1-18

PRECAUTION BEFORE OPERATION

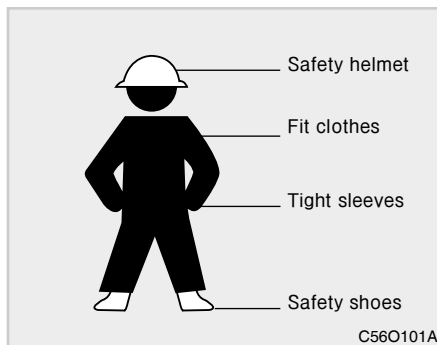
To ensure safe mower operation, be sure to read this manual completely and carefully, understanding all aspects operation and safety precautions. Only use the machine in accordance to the safety guidelines within this manual.

The safety symbols such as danger, warning, and caution are displayed on the parts requiring special care, so please be particularly careful when using.

NOTE

- Please read this manual carefully and understand it.

For best cutting performance, always mow with the throttle lever in the fast position.



1. Please wear the appropriate work clothes. Avoid loose clothing and jewelry. Tie back long hair. Failure to adhere can cause safety issues during operation or maintenance of this machine.
2. Survey the area you plan to cut before operating the mower. Identify any safety hazards as well as areas unsuitable for safe mower operation.
3. Remove all hazards such as stones, wires, wood, large sticks and other foreign objects from the mowing area before cutting. Make sure there are no people or pets in the mowing area that could be injured from debris ejected from the mower deck.
4. Gasoline is highly flammable and has the danger of fire and/or explosion. To prevent injury and property damage, adhere to all flammable warnings on the machine, the gas dispenser, and follow safe practices during fueling.
5. Fuel is flammable, handle with care. Always fill the fuel tank outdoors, never in-doors or inside enclosed trailers. Use a funnel or spout to prevent fuel spillage. Clean up any spillage before starting the machine.
6. Use only approved fuel containers when storing fuel.
7. Equipment used for fueling must

comply with the SAE J137 and/or ANSI/ASAE S279 when driven on public roadways.

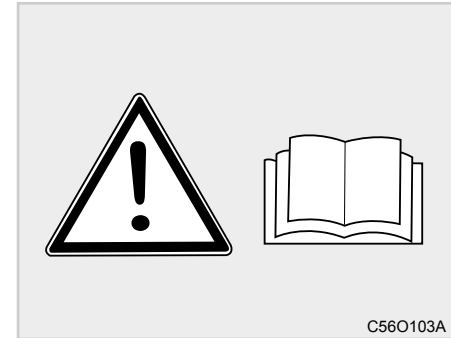
NOTE

- If the machine is driven on public Roads, it must comply with applicable state and local ordinances as well as SAE, ANSI/ASAE standards. Contact your local authorities for regulations and specific equipment requirements.
8. During refueling, sparks may occur due to static electricity. Avoid personal and property damage from fire or explosion caused by fuel.
 9. Gasoline is harmful or fatal to the human body. Long term exposure to vapor may cause cancer or other diseases, so please wear protective equipment or avoid inhaling vapor.
 10. Inspect the machine and attachments before each use to

ensure they are in good working condition. If issues are found, do not operate until they are fixed or resolved.

11. Always keep the machine clean. Built up dust, oil and debris can cause a fire, leading to injury.
12. Always check tire pressure, engine oil level, and fuel level before operating.
13. Before refueling: Make sure the engine is off and has cooled off. Hot engine parts can potentially ignite spilled fuel.
14. Do not operate without the side discharge chute installed and in the down position, unless a grass catcher or mulch plate is installed.
15. Check the blade mounting bolts before each use to ensure proper tightness.

SAFE OPERATION PRACTICES OWNERS RESPONSIBILITY



If owner intends to loan or rent the machine to another party, it is the owner's responsibility to provide a copy of the manual and explain the safe operation guidelines as outlined in this manual. The following points should be covered:

1. The Operators should be familiar with the safe operation of the machine, driver controls, and safety symbols.
2. All operators and mechanics need

OPERATING

to be trained, and the owner is responsible for training the users

3. Do not allow unqualified or untrained people to operate or repair the equipment.
4. The following should never be allowed to operate this machine:
 - Those under the influence of alcohol or drugs.
 - Women that are pregnant.
 - Those under 18.
 - Those without driver's license.
 - Those who are fatigued, sick, or have a medical condition that may prevent normal operation. Amputees and those with neurological disorders, may not qualify to operate this machine.
5. Do not wear headphones to listen to music or audio while operating this machine.
6. Disclaimer: If damage or injury occurs to persons or property as a direct result of operator error, the operator and/or the owner is liable.



The safety of this machine depends on the Operator! Failure to adhere to the safety information contained within this manual may result in bodily injury or death. The ability to assess potential hazards and accident prevention are dependent on the training and awareness of the persons involved the transport, operation and storage of this equipment. It is the owner's responsibility to make sure every

operator is properly trained on the safety information and the operation of this machine. The owner is liable for any damage to property, or injuries occurring to themselves or other people.



WARNING

- ***DO NOT operate this mower on steep slopes. To check if the slope is too steep, attempt to back the mower up the edge of the slope with the mower deck in the down position. If the wheels do not slip or loose traction, proceed as slow as possible with extreme caution.***

1. Only allow people that are proficient in operating and are familiar with safe driving regulations to operate.
2. Before starting engine, make sure PTO switch is in the OFF position, and that the parking brake is ON.

3. The driver must always sit on the seat before starting the engine.
4. If starting engine indoors, make sure the area is well ventilated so exhaust fumes can escape.
5. Only operate the mower in clear weather during the daytime or early evening with proper artificial lighting. Do not operate during rainy weather or during thunderstorms. Mowing in wet conditions will reduce the quality of the grass cut and can cause loss of traction.

 **NOTE**

- If caught in a storm, stop the machine immediately and seek shelter.

6. Be careful not to touch the hot parts with your body or foreign objects.

 **CAUTION**

- **Engine parts during operation become very hot. Do not touch engine, muffler or moving parts. Make sure that these areas are kept free from foreign matter such as leaves or grass.**

7. Never carry passengers. Do not operate the mower, especially when children or pets are in the work area.
8. Be careful when approaching corners, shrubs, trees, or other objects that may obscure your vision.
9. Avoid excessive, sudden stops, as well as rapid accelerations, especially at high speeds. Failure to do so may cause loss of control, leading to damage or injury.
10. Avoid driving on steep banks with weak ground or grassy areas,

especially when ground is wet.

11. When working in groups, always communicate the work plan with the group to avoid safety issues.
12. When backing up, always turn your head and look backwards.
13. During operation: scan the ground ahead of you for obstructions, especially at row ends, near trees and other other obstructions.
14. Never attempt to exit a mower in motion, unless your life is in danger and it is the only option. Always shut down the mower before exiting.
15. To minimize risk of overturning, be sure to slow down when braking on sloped roads.
16. Always hold the steering levers with both hands and place your two feet on the machine's floor when driving.
17. Do not operate the machine without the mower deck installed.

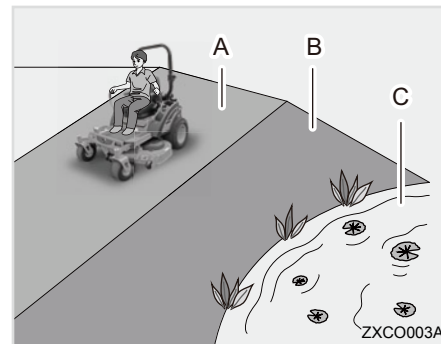
18. Do not cut area in reverse motion unless it is unavoidable.
19. During operation, if steering control is lost, immediately apply the parking brake. Inspect the machine and correct the problem before continuing on.
20. If the mower chute becomes clogged, ensure the engine is off, the steering levers are in neutral, the parking brake is set and the blades have come to a complete stop, before attempting to clear the discharge.
21. When using attachments, ensure the discharge of material does not affect bystanders while in operation.



WARNING

- **DO NOT use hands to dislodge a clogged discharge chute. Use a stick or similar item to remove clogged material only after the engine is turned off, the steering levers are in neutral, the parking brake is set and the blades have stopped completely.**

DRIVING ON SLOPE



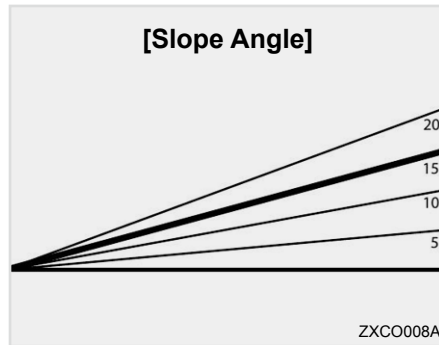
- (A) Safe Range (Slope less than 15 degrees)
 (B) Dangerous Range (Slope more than 15 degrees)
 (C) Water



WARNING

- **DO NOT operate this mower on steep slopes. To check if the slope is too steep, attempt to back the mower up the edge of the slope with the mower deck in the down position. If the wheels do not slip or lose traction, proceed as slow as possible with extreme caution.**

1. Be careful when stopping or turning mowers on a slope, as it may cause loss of traction or overturning. It is the responsibility of the operator to drive safely on a slope.
2. If the machine suddenly stops when you are working on a slope, the machine may slip. In such a case, immediately apply the parking brake.
3. Driving on wet grass over steep slopes may cause loss of traction and control. Slipping on or around ridges, ditches, steep banks, and wheels falling into water can cause loss of control or overturning, which can result in severe injury or death. Determine if the area can be safely navigated with the



- mower before attempting to cut.
4. Do not operate mower on a slope when wet, especially slopes greater than 15 degrees. Failure to adhere may cause loss of control.
5. For areas around drop-offs, ditches, steep banks or water, cut the grass using a walk behind mower and/or a hand trimmer.
6. Remove obstacles such as stones and trees in the work area or mark them. Overgrown grass can hide obstacles.

7. Take special care when changing the direction on a slope. Slow down on the slope when changing direction.
8. Avoid sudden accelerations when travelling uphill as this may cause the mower to tilt backwards and loose control.
9. Keep in mind that wet grass, steep slopes or downhill roads can cause the mower to lose traction. Loss of traction on the drive wheel may cause the mower to slip or damage the brakes and steering system.
10. Operating on sloped, rough terrain at high speeds can cause the mower to overturn. Be familiar with the area and its characteristics before operating the mower.
11. Always avoid suddenly starting or stopping on slopes. If the tire loses its grip, disengage the PTO and slowly pull out of the slope.

12. Use caution when operating machine on inclines when a grass catcher is installed.
13. Survey the cutting area to identify holes, rocks, roots and other hidden hazards on the terrain. Keep away from any steep slopes or drop-offs. Be aware of any over-head obstructions, such as low hanging tree limbs or building overhangs.
14. Disengage the PTO switch to stop the blades from spinning before backing the mower up in reverse. Do not mow in reverse unless it is absolutely necessary, move slowly and maintain a constant lookout for hazards. Be sure to survey the area before operating in reverse.
15. Disengage the PTO switch to stop the blades from spinning before crossing side walks, roadways or gravel drives.

16. In the event of hitting an obstacle during cutting, stop the machine immediately and inspect for damage to the cutting blades and mower. If damage has occurred, repair the damage before restarting and operating the machine.



WARNING

- ***Stay off slopes too steep for safe operation. To check if the slope is too steep, attempt to back the mower up the edge of the slope with the mower deck in the down position. If the wheels do not slip or loose traction, proceed as slow as possible with extreme caution. Operate the machine smoothly with no sudden starts or turns.***
- ***Under no circumstances should this machine be driven on slopes greater than 15 degrees.***



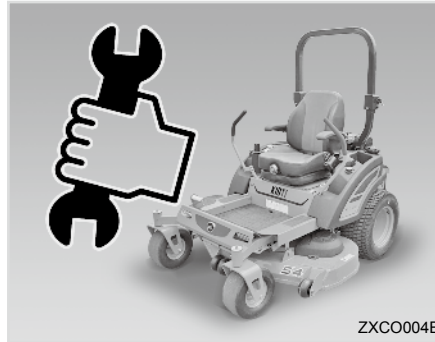
WARNING

- ***Always reduce speed when operating on slopes, turning and when travelling over wet or slick surfaces.***
- ***Do not operate near embankments, ditches or drop-offs. Failure to adhere may cause a roll over.***
- ***Never tow on a slope. The weight of the equipment being towed may cause loss of traction or control.***
- ***Use caution when loading and unloading the machine onto trucks or trailers. Back up the ramp to load and drive down the ramp forward to unload.***
- ***Use only an approved full width loading ramp with an angle no greater than 15 degrees.***
- ***No untrained personnel should be permitted to operate, load or unload the machine.***

PARKING

1. Place all control levers in the neutral lock position, set the parking brake, stop the engine.
2. Never leave the vehicle without setting the parking brake and shutting off the mower.
3. The mower should be parked on a flat level surface, however, if parking on a slope is unavoidable, chock the wheels appropriately after setting the parking brake.
4. If a malfunction occurs while on a public roadway, pull off the roadway to a safe area away from traffic to make repairs.

MAINTENANCE



1. Before servicing, make sure the PTO is in the off position, the parking brake is set, and the engine is turned off.
2. Do not smoke while working around the battery or when refueling your machine. 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 especially when recharging.
3. Before servicing any engine or mechanical mower parts, allow the mower to adequately cool down after operation.
4. Before working on the mower electrical system, first disconnect the negative (-) battery cable from the battery terminal post.
5. For jump starting a dead battery, read and follow all of the instructions in chapter 5.
6. Tire mounting should only be done by qualified professionals, with the proper equipment.
7. Maintaining correct tire pressure is important for the life of your tires. Do not inflate the tires above the recommended pressure specified in the owner's manual. (Ref to page 4-16)
8. Securely support the vehicle when changing wheels.
9. If inspecting fluid lines for leaks, take care to handle lines appropriately. Improper handling of the lines can cause fluid leaks

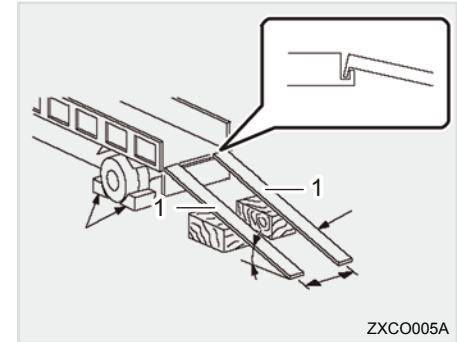
- under high pressure. Use eye protection while handling fluid lines. Hydraulic fluid can cause severe allergic reaction and gangrene if absorbed into the skin at high velocity.
10. No alterations or modifications should be made to the machine. Alterations or modifications may adversely affect function and/or performance of the unit, cause safety issues, and void the manufacturer warranty.
 11. Help **KIOTI** protect the environment. When changing fluids, make sure that they are contained and disposed of properly. Be sure to observe all relevant regulations for the handling and disposal of engine oil, trans-axle fluid, fuel, filters, and batteries.
 12. Do not dispose of waste on ground, drain, or river. Find an appropriate way to dispose of it in an environmentally friendly manner or recycle it through the recycling center.
 13. When disposing of engine, transmission oil or antifreeze, dispose of it in a place equipped with disposal facilities. Failure to observe this may cause environmental pollution.
 14. Reinstall the covers that have been removed by inspection, maintenance, etc., after the maintenance check.
 15. To avoid injuries when inspecting the condition of the mower blades, where gloves or cover the blade before touching. If damage is found, replace the blade. Do not attempt to straighten bent blades, this will affect the performance and strength of the blade.
 16. Please keep first aid kits and fire extinguishers in case of emergency.
 17. Do not adjust or repair the engine while operating it.
 18. Never perform maintenance to this machine while the engine is running unless specifically specified to do so. Keep hands, feet, and loose clothing away from all moving parts.
 19. Before performing maintenance or cleaning, make sure the machine is on a level, safe surface, the PTO switch is in the off position, the steering levers are in the neutral position, the parking brake is set and the engine is turned off.
 20. Disconnect the negative (-) battery terminal before proceeding with any repairs.
 21. Do not change any engine settings, especially the governor settings. See the manufacturer's engine manual for information on engine settings.
 22. Keep the cutting unit, drives, engine and muffler free of lawn debris, excessive oil and dirt to reduce the chance of a fire hazard.

23. Use care when checking the cutting blades. Do not touch the blades directly, wear safety gloves or use a blade buddy to hold the blades during removal.
24. Only Replace a worn or bent blade. NEVER straighten or weld a worn blade.
25. Take care when servicing the hydraulic pressure lines or with components with stored energy.
26. Use jack stands to support the machine or components when required. NEVER use a jack to support the machine while performing work.

STORING

1. After daily operation, clean unit and store indoors as much as possible.
2. For other detailed storing methods and precautions, see Storage and Disposal in chapter 8.
3. Let the engine cool completely before storing.
4. DO NOT store machine near open flames.
5. DO NOT store fuel near flames or drain the fuel indoors.
6. Charge batteries in open, well ventilated area, away from spark and flames. Unplug charger before connecting or disconnecting battery. Wear protective clothing and eye protection when handling a battery.

TRANSPORTING



(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 length of the loading bed.
4. It is recommended to drive backward onto the transporting vehicle to drive out of it more easily later.

USING THE ROPS

5. Be sure to keep the speed down when loading/unloading.
6. After driving onto the transport vehicle, secure the vehicle first by setting the parking brake, then tying down to the transport with chains or straps. Take care with placement to not affect mower finish.
7. During vehicle transporting, pay attention to motor vehicle laws, mark the transport with the applicable decals or markings.
8. Be sure to Confirm the overall height of the vehicle with the mower loaded, make sure that does not exceed the maximum height for travel under bridges or through tunnels.



(1) ROPS

1. ROPS (Roll Over Protective Structure) is equipped to protect driver when the mower is rolled over. When the ROPS is folded in the down position, there is nothing to protect the operator during a vehicle roll-over.

Lower the ROPS bar only when absolutely necessary. Do not wear the seat belt when the ROPS is in the DOWN position. Always wear

the seat belt when the ROPS is in the UP position.

2. A ROPS should never be modified by welding, grinding or cutting, as this can weaken the ROPS structure. If any components of the ROPS unit is damaged, it must be replaced. If the ROPS unit is removed or loosened for any reason, the parts should be fitted back to their original positions and all bolts should be properly torqued.
3. In case of an emergency, make sure that the seat belt can be released quickly.
4. Make sure that the ROPS does not come into contact with branches or wires when passing under them.
5. Never repair a damaged ROPS, replace it with OEM **KIOTTI** parts. Contact your local **KIOTTI** dealer before replacing.
6. Any accessories, modifications or

attachments added to the ROPS must be approved by KIOTI.

7. It is recommended to inspect the condition of the seat belt before each use for signs of damage. Belts showing signs of cuts, fraying, extreme wear, stiffness, abrasion to the belt webbing or damage to the latch, buckle or hardware should be replaced before the machine is used.



WARNING

- ***Failure to properly inspect and maintain the seat belt system can lead to serious injury or death.***



WARNING

When the ROPS is folded in the down position, there is nothing to protect the operator during a vehicle roll-over.

- ***Lower the ROPS bar only when absolutely necessary.***
- ***DO NOT wear the seat belt when the ROPS is in the DOWN position.***
- ***ALWAYS wear the seat belt when the ROPS is in the UP position.***
- ***Check the area before operating for proper overhead clearance.***
- ***DO NOT come in contact with any overhead object with the ROPS bar.***

USING A SPARK ARRESTOR

A spark arrester is a mechanical device constructed of nonflammable materials specifically for the purpose of trapping and retaining carbon and other flammable particles over 0.0232 of an inch in size from the exhaust flow of an internal combustion engine that uses hydrocarbon fuels or which is qualified and rated by the United States Forest Service.

This device has become required equipment to prevent fires from the use of combustion engines around dry vegetation.

California, Public Resource Code, section 4442.6, states that it is unlawful to use or operate an internal combustion engine on any forest covered, brush covered, or grass covered land unless the engine is equipped with a spark arrester, maintained in effective working order. Other states or federal areas may have similar laws.

To meet any and all federal, state

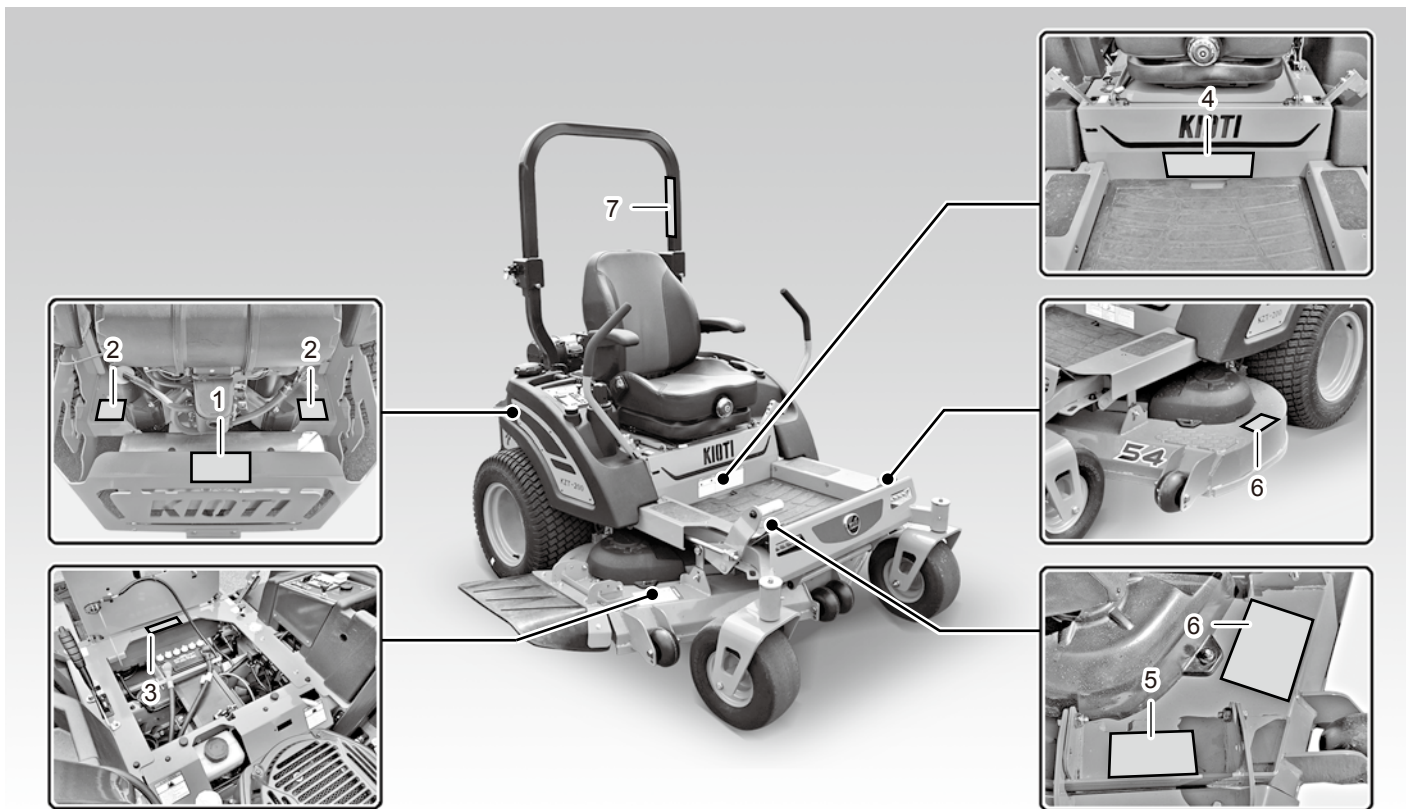
or local laws, the operator should contact their state or local authorities, and/or fire agencies for laws and regulations pertaining to these requirements.

 **NOTE**

- This mower does not come with a spark arrestor installed. To obtain a spark arrestor for this machine, contact your local authorized **KIOTI** selling dealer. Use only the approved part recommended by the engine manufacturer. Contact your dealer for more information.
- Remember to check the condition of the spark arrestor daily. Replace every 500 hours or as needed.

SAFETY DECAL MAINTENANCE

DECAL MOUNTING LOCATION



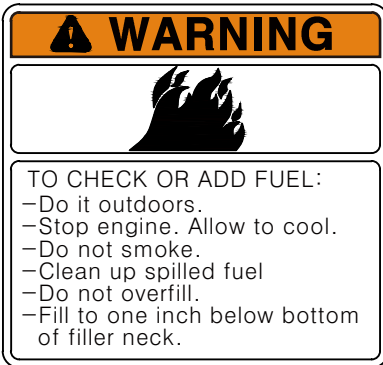
1

DECALS

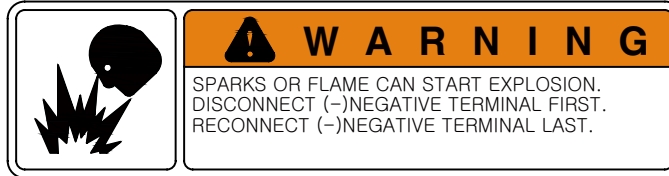
1. Part No.: Z2131-95201



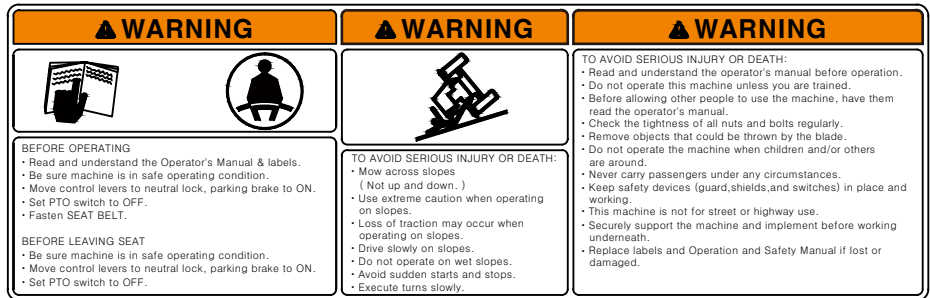
2. Part No.: Z2131-95211





3. Part No.: Z2131-95231








4. Part No.: Z2131-95201





5. Part No.: MM605-12422

 WARNING	
	<p>SHIELD MISSING/OPEN DO NOT OPERATE Replace or close shield before operating machine. Failure to comply could result in death or serious injury.</p>

6. Part No.: MM605-12434

 DANGER	
	<p>STAND CLEAR/THROWN OBJECTS</p> <ul style="list-style-type: none"> • DO NOT stand near mower when in operation. • Clear area of bystanders and objects that may be thrown.
	<p>NO RIDERS</p> <ul style="list-style-type: none"> • DO NOT ALLOW to ride on mowing unit.
	<p>ROTATING BLADES</p> <ul style="list-style-type: none"> • DO NOT put hands or feet under or into mower when engine is running.
	<p>DO NOT OPERATE MOWER</p> <ul style="list-style-type: none"> • Without grass discharge deflector in place or entire grass catcher installed.
<p>Failure to comply could result in death or serious injury.</p>	

7. Part No.: Z2131-95321

 WARNING

<p>When the ROPS is folded in the down position, there is nothing to protect the operator during a vehicle roll-over.</p> <p>Lower the ROPS bar only when absolutely necessary.</p> <p>DO NOT wear the seat belt when the ROPS is in the DOWN position.</p> <p>ALWAYS wear the seat belt when the ROPS is in the UP position.</p> <p>Operate the machine smoothly, no sudden turns, starts, or stops.</p> <p>Check the area before operating for proper overhead clearance.</p> <p>DO NOT come in contact with any overhead object with the ROPS bar.</p> <p style="text-align: right;">Z2131-95321</p>

DECAL MAINTENANCE

Safety decals are attached to the mower for safe operation. Make sure to follow the instruction on the decals as well as the following instruction:



CAUTION

- **Keep the decals clean and intact.** If any decal is dirty, wash it with soap and dry with a soft cloth.
- **Never use a solvent, such as a thinner or acetone, since it can ruin the decals.**
- **Do not spray high-pressure water directly onto the decal.** The decal may be damaged.



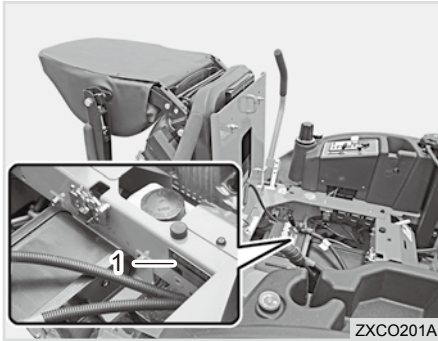
IMPORTANT

- **If a decal is damaged or lost, contact your local KIOTI dealer immediately to install a new decal.**
- **Make sure to attach the decal in the correct position cleanly without bubbles after cleaning its mounting surface.**
- **If a decal is attached to a component to be replaced, replace the decal as well.**

ABOUT SERVICE

VEHICLE IDENTIFICATION NUMBER.....	2-2
MOWER SERIAL NUMBER.....	2-2
ENGINE SERIAL NUMBER.....	2-2
TRANSAXLE NUMBER.....	2-2
SERVICE	2-3
SUPPLYING SERVICE PARTS	2-3
SERVICING ENGINE AND DRIVE TRAIN COMPONENTS.....	2-4
GENUINE PARTS	2-4

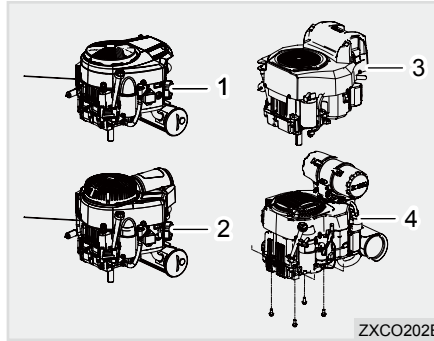
VEHICLE IDENTIFICATION NUMBER MOWER SERIAL NUMBER



(1) Model and Production Serial Number Plate

The production serial number is located at the upper right part of the main frame under the seat.

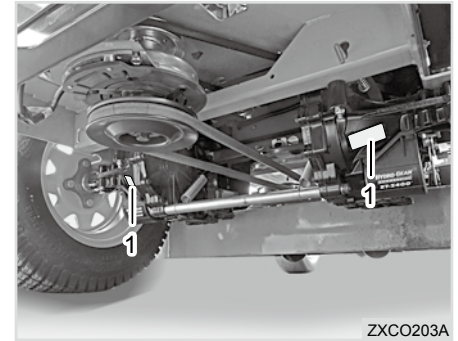
ENGINE SERIAL NUMBER



(1) Briggs & Stratton Professional Series
(2) Briggs & Stratton Commercial Series
(3) Kohler ZT Series (4) Kohler CV Series

The engine model and serial number can be found on the label attached to the left and right covers of the engine.

TRANSAXLE NUMBER



(1) Transaxle Serial Number

The transaxle serial numbers are attached to the left and right transaxle cases.

SERVICE

Your local **KIOTI** dealer has the right service solutions for all of your **KIOTI** products and can provide the correct methods for service and maintenance. We recommend you contact your authorized **KIOTI** dealer for all repairs. Use only approved **KIOTI** service parts from an authorized dealer.

NOTE

- The replacement of any parts on this machine by any other manufacturer other than original **KIOTI** brand parts may adversely affect the performance, safety or longevity of this machine.
- Use of anything other than original **KIOTI** brand parts will void the manufacturers warranty.

In case of mechanical trouble, refer to “Troubleshooting” in chapter 8 of this manual. If the problem cannot be corrected, please contact your nearest authorized dealer.

► INFORMATION REQUIRED BEFORE CONTACTING A DEALER

- Model and product serial number.
- In case of engine, the engine serial number.
- Circumstances of breakdown. (What kind of work, gear position, etc)
- Amount of work done. (Square footage or number of hours)
- Other information in as much detail as possible surrounding the circumstances of the breakdown.

SUPPLYING SERVICE PARTS

Service parts for this machine are available through your local servicing dealer. When it comes to special parts during the service term, please contact your dealer ahead of time to confirm parts availability, to avoid downtime of the machine. Machines out of production, or discontinued may have limited parts availability. Contact your local dealer to verify the part is still available.

SERVICING ENGINE AND DRIVE TRAIN COMPONENTS

The detail service and repair of the engine, hydraulic pumps and gearboxes are not covered in this manual. Any of these components needing service, especially during the limited warranty period, should only be performed by your authorized **KIOTI** dealer. Any unauthorized work performed during the limited warranty period may void the warranty.

GENUINE PARTS

KIOTI genuine (OEM) parts and fluids pass the strictest standards for quality and performance. Please use only genuine **KIOTI** parts for safety and longevity.

SPECIFICATIONS

SPECIFICATIONS.....	3-2
ZXR RESIDENTAL MODELS.....	3-2
ZXC COMMERCIAL MODELS	3-5
TORQUE TIGHTENING CHART	3-8
SAE FASTENER TORQUE CHART	3-8
TORQUE TIGHTENING CHART	3-9
METRIC FASTENER TORQUE CHART.....	3-9

SPECIFICATIONS

ZXR RESIDENTIAL MODELS

ITEM		ECONOMY MODEL			STANDARD MODEL			
		ZXR48	ZXR54	ZXR60	ZXR48 SE	ZXR54 SE	ZXR60 SE	
Engine	Maker	Briggs & Stratton			Kohler			
	Model	Professional Series			Confidant Series (ZT720/730/740)			
	Gross power	HP	22	24	27	21	23	25
	Displacement	cc	724	←	810	725	747	←
	Max speed	rpm	3,600			←		
	Choke		Auto			Manual	Auto	
	Battery		12V 20Ah			←		
Capacities	Fuel tank	U.S. gal.	7.5			←		
	Engine oil	U.S. gal.	1.98			←		
	Transaxle oil	U.S. gal.	5.1			←		
Dimensions	Overall length	in.	80.7	←	81.7	80.7	←	81.7
	Overall width (Discharge chute down)	in.	60.7	67.3	72.6	60.7	67.3	72.6
	Overall height (ROPS up)	in.	70.5	←	71.5	←	←	←

ITEM			ECONOMY MODEL			STANDARD MODEL			
			ZXR48	ZXR54	ZXR60	ZXR48 SE	ZXR54 SE	ZXR60 SE	
Dimensions	Wheelbase	in.	48.5	←	49.5	48.5	←	49.5	
	Tread	Front	in.	35	←	36.4	35	←	36.4
		Rear	in.	40.9			←		
Weight (Approx)		lbs.	1,001	1,019	1,055	1,011	1,030	1,059	
Tires	Front		13 x 5 - 6	←	13 x 6.5 - 6	13 x 5 - 6	←	13 x 6.5 - 6	
	Rear		22 x 9.5 - 10	←	23 x 9.5 - 12	←	←	←	
Drive system	Maker		Hydro gear						
	Speeds	Forward	mph	8	←	9	←	←	←
		Reverse	mph	4	←	←	←	←	←
	Pump / Motor		cc	10 / 16			←		
	Transaxle			ZT2800	←	ZT3200	←	←	←
	Parking brake			Internal integrate in axle			←		
PTO clutch	Torque	Nm (ft-lb)	170 (125.4)			←			
	Clutch type		Electric			←			

ITEM		ECONOMY MODEL			STANDARD MODEL			
		ZXR48	ZXR54	ZXR60	ZXR48 SE	ZXR54 SE	ZXR60 SE	
Mower	Mounting method	Parallel linkage			←			
	Adjustment of cutting height	Dial type			←			
	Deck width	48	54	60	48	54	60	
	Cutting height	1.5 ~ 5.0			←			
	Deck type	Fabric			←			
	Discharge chute type	Side (Molded rubber)			←			
	Deck thickness	10-Gauge with 7-gauge at edge area			←			
	Number of blades	3			←			
Others	Headlight	Option			Standard			
	ROPS (Foldable)	Standard			←			
	Seat	Suspension	Option			Standard		
		Seat belt	Standard			←		

※ The specifications are subject to change without notice.

ZXC COMMERCIAL MODELS

ITEM		ECONOMY MODEL			STANDARD MODEL			
		ZXC48	ZXC54	ZXC60	ZXC48 SE	ZXC54 SE	ZXC60 SE	
Engine	Maker	Briggs & Stratton			Kohler			
	Model	Commercial Series			CV682	CV732	CV742	
	Gross power	HP	23	25	27	22.5	23.5	25
	Displacement	cc	724	←	810	694	747	←
	Max speed	rpm	3,600			←		
	Choke		Manual lever			←		
	Battery		12V 20Ah			←		
Capacities	Fuel tank	U.S. gal.	12.5			←		
	Engine oil	U.S. gal.	1.98			←		
	Transaxle oil	U.S. gal.	5.1			←		
Dimensions	Overall length	in.	80.7	←	81.7	80.7	←	81.7
	Overall width (Discharge chute down)	in.	60.7	67.3	72.6	60.7	67.3	72.6
	Overall height (ROPS up)	in.	71.5			←		

ITEM			ECONOMY MODEL			STANDARD MODEL			
			ZXC48	ZXC54	ZXC60	ZXC48 SE	ZXC54 SE	ZXC60 SE	
Dimensions	Wheelbase	in.	48.5	←	49.5	48.5	←	49.5	
	Tread	Front	in.	35	←	36.4	35	←	36.4
		Rear	in.	40.9			←		
Weight (Approx)		lbs.	1,033	1,052	1,075	1,055	1,073	1,094	
Tires	Front		13 x 6.5 - 6			←			
	Rear		23 x 9.5 - 12	←	23 x 10.5 - 12	←	←	←	
Drive system	Maker		Hydro gear						
	Speeds	Forward	mph	9	←	10	←	←	←
		Reverse	mph	4	←	4.5	←	←	←
	Pump / Motor		cc	10 / 16	←	12 / 16	←	←	←
	Transaxle			ZT3200	←	ZT3400	←	←	←
	Parking brake			Internal integrate in axle			←		
PTO clutch	Torque	Nm (ft-lb)	271 (200)			←			
	Clutch type		Electric			←			

ITEM		ECONOMY MODEL			STANDARD MODEL			
		ZXC48	ZXC54	ZXC60	ZXC48 SE	ZXC54 SE	ZXC60 SE	
Mower	Mounting method	Parallel linkage			←			
	Adjustment of cutting height	Dial type			←			
	Deck width	in.	48	54	60	48	54	60
	Cutting height	in.	1.5 ~ 5.0			←		
	Deck type	Fabric			←			
	Discharge chute type	Side (Molded rubber)			←			
	Deck thickness	10-Gauge with 7-gauge at edge area			←			
	Number of blades	3			←			
Others	Headlight	Option			Standard			
	ROPS (Foldable)	Standard			←			
	Seat	Suspension	Standard (1.5 inch suspension)			Standard (3.0 inch suspension & High back)		
		Seat belt	Standard			←		




※ The specifications are subject to change without notice.

TORQUE TIGHTENING CHART

SAE FASTENER TORQUE CHART

SAE FASTENER TORQUE CHART

Note : Use these torques, unless special torques are specified. Values are for UNC and UNF thread fasteners, plated or unplated as received from supplier. Fasteners can be dry or lubricated with normal engine oil.
Values do not apply if graphite, moly-disulphide or other extreme pressure lubricant is used.

SAE Grade	2				5				8*			
Bolt head identification (see note 1)												
Bolt Size	lb-ft				lb-ft				lb-ft			
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1/4	5	6	7	8	9	11	12	15	12	15	16	20
5/16	10	12	14	16	17	20.5	23	28	24	29	33	39
3/8	20	23	27	31	35	42	48	57	45	54	61	73
7/16	30	35	41	47	54	64	73	87	70	84	95	114
1/2	45	52	61	70	80	96	109	130	110	132	149	179
9/16	65	75	88	102	110	132	149	179	160	192	217	260
5/8	95	105	129	142	150	180	203	244	220	264	298	358
3/4	150	185	203	251	270	324	366	439	380	456	515	618
7/8	160	200	217	271	400	480	542	651	600	720	814	976
1	250	300	339	406	580	696	787	944	900	1080	1220	1464
1 1/8					800	880	1085	1193	1280	1440	1736	1953
1 1/4					1120	1240	1519	1681	1820	2000	2468	2712
1 3/8					1460	1680	1980	2278	2380	2720	3227	3688
1 1/2					1940	2200	2631	2983	3160	3560	4285	4827




Note : Bolt head identification marks as per grade. Manufacturing marks will vary. * Thick nuts must be used with Grade 8 bolts.

TORQUE TIGHTENING CHART

METRIC FASTENER TORQUE CHART

METRIC FASTENER (ISO) TORQUE CHART

Note : Use these torques, unless special torques are specified. Values are for UNC and UNF thread fasteners, plated or unplated as received from supplier. Fasteners can be dry or lubricated with normal engine oil. Values do not apply if graphite, moly-disulphide or other extreme pressure lubricant is used.

ISO Class No.	8.8		10.7		12.9	
Bolt head identification (see note 1)						
Bolt Size	Nm		Nm		Nm	
	Min.	Max.	Min.	Max.	Min.	Max.
M4	3	4	4	5	Because of the low ductility of these fasteners, the torque range is to be determined individually for each application. As a general rule, the torque ranges specified for grade 10.9 fasteners can be used satisfactorily on 12.9 fasteners. * M14 is not a preferred size.	
M5	6.5	8	9.5	11		
M6	10.5	12	15	17.5		
M8	26	31	37	43		
M10	52	61	73	87		
M12	90	107	125	150		
*M14	144	172	200	245		
M16	217	271	310	380		
M20	434	515	610	730		
M24	675	815	1050	1275		
M30	1250	1500	2000	2400		
M36	2175	2600	1120	1240		

Note : Bolt head identification marks as per grade. Manufacturing marks will vary.

MEMO



EXTERIOR VIEW 4-2

DESCRIPTION OF OPERATING SYSTEM 4-3

 DISPLAY PANEL.....4-3

 STEERING LEVERS.....4-10

 THROTTLE LEVER4-10

 CHOKE LEVER.....4-11

 PARKING BRAKE4-11

 SEAT BELT4-12

 SEAT4-12

 ROPS4-13

 DECK LIFT PEDAL4-13

 DECK HEIGHT ADJUST DIAL4-14

 FUEL GAUGE4-14

 CUP HOLDER.....4-15

 DC POWER OUTLET4-15

 TIRES.....4-16

 WHEELS4-17

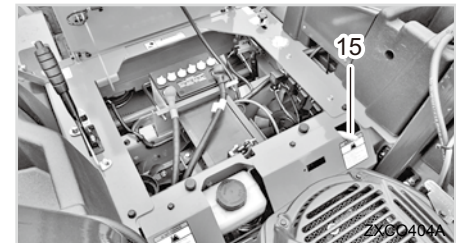
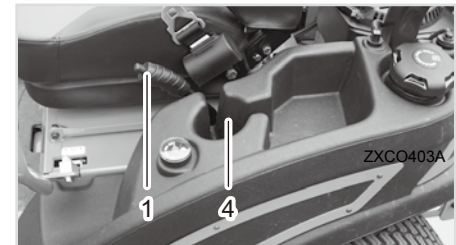
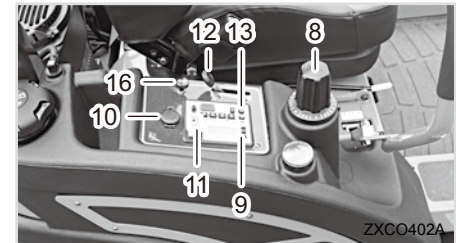
EXTERIOR VIEW



- (1) Parking Brake Lever
- (2) Steering Levers
- (3) Seat Belt
- (4) Cup Holder

- (5) Seat
- (6) ROPS
- (7) Deck Lift Pedal
- (8) Deck Height Control Dial

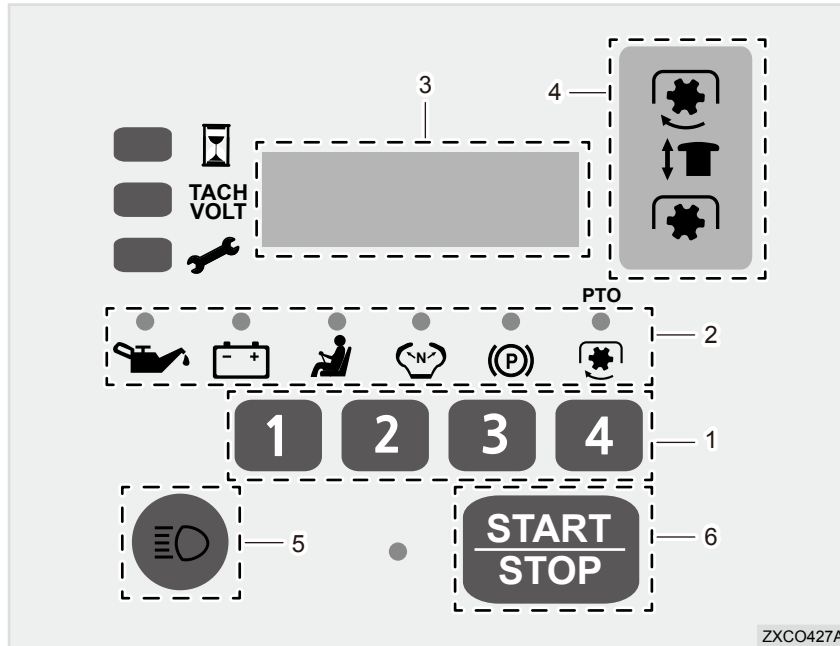
- (9) Display Panel
- (10) DC Power Outlet
- (11) PTO Switch
- (12) Throttle Lever



- (13) Headlight Switch
- (14) Headlight
- (15) Seat Release Lever
- (16) Choke Lever

DESCRIPTION OF OPERATING SYSTEM DISPLAY PANEL

The display panel controls the operation of the mower.



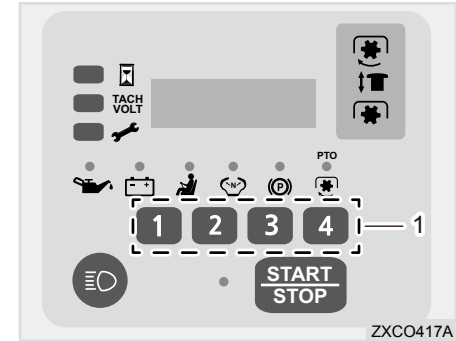
ZXC0427A

(1) Start-Up Code
(2) Warning Lights

(3) Display Modes
(4) PTO Switch

(5) Headlight Button
(6) Start/Stop Button

START-UP CODE



(1) Start-Up Code

For safety and security, a start-up code must be entered before the mower can be operated. Use the four numbered buttons, 1 through 4 to enter the code.

From the factory, the default code programmed is 1-2-3-4. When the correct code is entered, the hour meter will be show on the display and the panel lights will turn on.

 **NOTE**

- The start-up code can be changed from the default code by the owner. If the start-up code is longer than five numbers, only the last five numbers pressed will be shown on the display.

If the incorrect code is entered, "WRONG CODE" will flash on the display. The correct code must be entered before the mower can be operated.

If the operator is not in the seat, the system will shut down 15 seconds after the start-up code is entered. If the operator is in the seat, the system will shut down in 15 minutes unless the engine is started.

<CHANGING THE START-UP CODE >

The start-up code can be changed by the owner. Decide what code you would like to change to, then

write down the code in a safe place, to be accessed in case the code is forgotten. Only the **KIOTI** dealer can reset a forgotten start-up code. The start-up code must be between 1 and 12 digits.

To change the start-up code, the engine must be stopped and the PTO switch in the "OFF" position.

Example code of 43214 is shown.

1. Write down the new start-up code.
2. Hold the one (1) and two (2) buttons down until "CHNGE CODE" is shown, followed by a blank screen.
3. Enter the new code into the module using the one (1), two (2), three (3) and four (4) buttons. If the code is more than five digits long, only the last five digits pressed will be shown.
4. Pull up on the PTO switch. If the new code is accepted, the message "ENTERCODE AGAIN" will be displayed. Reenter the new code

and push the PTO switch down.

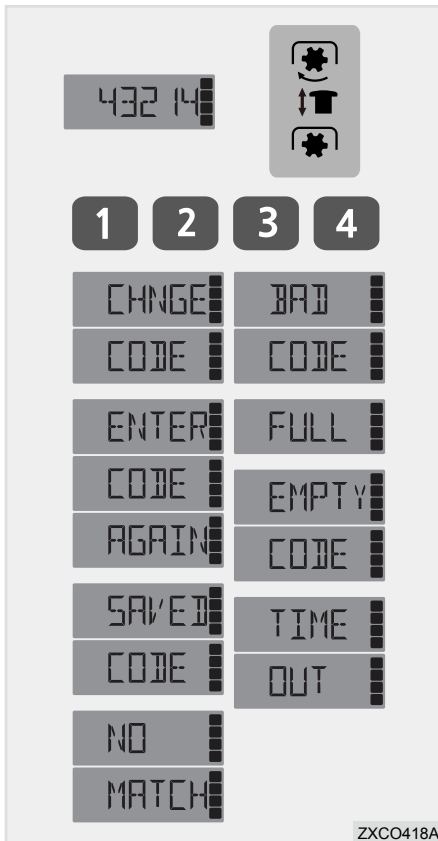
5. If the new code is entered correctly both times, "SAVED CODE" will be displayed and the new code is active. If the code is not entered correctly the second time, "NO MATCH" is shown and the process must be started again.

Some code combinations are not usable. If the new code is not usable, "BAD CODE" will be displayed when the PTO switch is pulled up. Push the PTO switch down and start the process again with a different code.

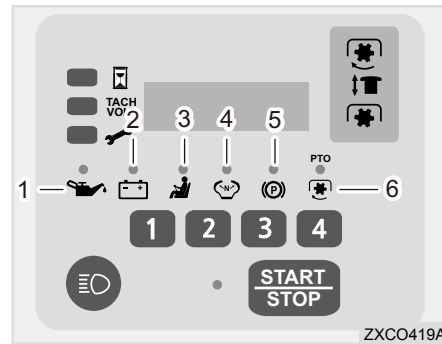
If more than 12 digits are entered, the display will show "FULL". Only the first twelve digits pressed are accepted.

If the PTO switch is pulled up without entering a code, "EMPTY CODE" is shown and the process must be started again.

If a button is not pressed for 10 seconds, "TIME OUT" will be displayed and the process must be



WARNING LIGHTS



- (1) Engine Oil (2) Battery Voltage
 (3) Operator Presence (4) Neutral Position
 (5) Parking Brake (6) PTO Switch

Six red lights alert the operator of the mower status.

► Engine Oil

The red engine oil pressure light indicates low engine oil pressure. Shut down the mower immediately.

Inspect the oil level in the engine. If the oil light remains on with the oil at proper level, shut off the engine and tow or trailer the mower back to a service area. Never operate the engine with the oil light on, severe damage to the engine can occur.

► Battery Voltage

The battery voltage light indicates the system voltage is below 12 VDC or above 15 VDC. Have the battery charging system checked.

► Operator Presence

The operator in seat light indicates the seat switch is in the open position. The operator must be in the seat to start the engine. The engine will stop if the operator leaves the seat with the PTO switch "ON", parking brake disengaged or the steering levers out of the neutral position.

► Neutral Position

The neutral position light indicates the steering levers are not in the neutral position.

► Parking Brake

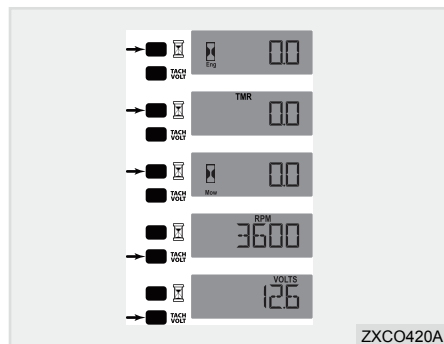
The parking brake light indicates the

parking brake is disengaged.

► PTO Switch

The PTO switch light indicates the PTO switch is in the "ON" position.

DISPLAY MODES



(1) Display Mode

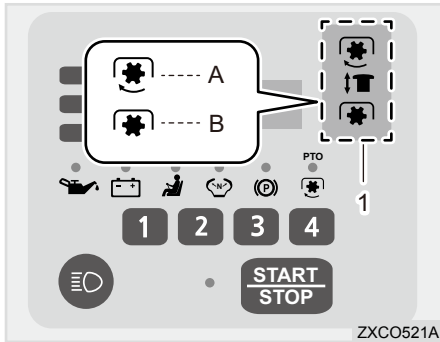
During normal operation, the display panel can show the engine hour meter, service timer, blade run time, the engine speed and the system voltage on the LCD display. Alarms and error codes will override the display modes.

To display the engine hour meter, service timer or blade run time, press the hour meter button on the left side of the display. Press the hour meter button again to cycle between the screens.

To reset the service timer, press and release the hour meter button until the service timer screen is on the display. Press and hold the hour meter button until the counter resets. The blade run time and engine hour meter cannot be reset.

To display the engine speed or the system voltage, press the "TACH/VOLT" button on the left side of the display. Press the button again to cycle between engine speed and system voltage.

PTO SWITCH



(1) PTO Switch

(A) ON

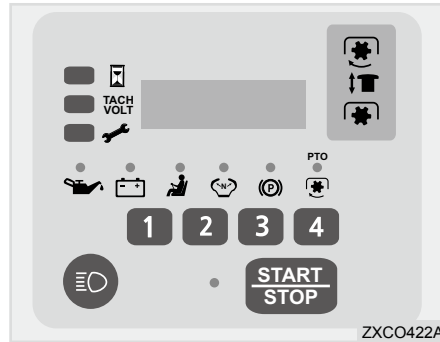
(B) OFF

The PTO switch is a 2-position knob type switch to engage and to disengage the cutting unit. The PTO switch must be in the "OFF" position to start the engine. Pull on the yellow knob to move the switch to the "ON" position. When the PTO switch is in the "ON" position, the cutting unit is engaged and the PTO switch light is on.

⊕ IMPORTANT

- Always mow with the throttle lever in the fast position.

HEADLIGHT BUTTON



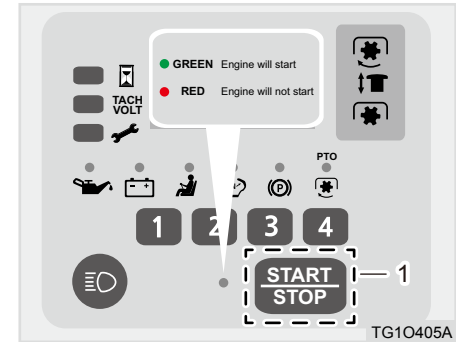
(1) Headlight Button

Press and release the headlight button to turn on the lights. Press the button again to turn off the lights.

📖 NOTE

- Your console may have a headlight button but may not be equipped with headlights. Contact your dealer to purchase this accessory.

START/STOP BUTTON



(1) Start/Stop Button

The START/STOP button is used to start or stop the engine. The engine can only be started when the start engine light to the left of the "START/STOP" button is green.

The following conditions must be met for the start engine light to change to green. If any of the conditions are not met, the light will be red.

1. The start-up code must be correctly entered.
2. The operator must be in the seat. (Operator presence light is "OFF")
3. The parking brake must be engaged (Parking brake light is "OFF")
4. The steering levers must be in the neutral position. (Neutral light is "OFF")
5. The PTO switch in the "OFF" position. (PTO switch light is "OFF")

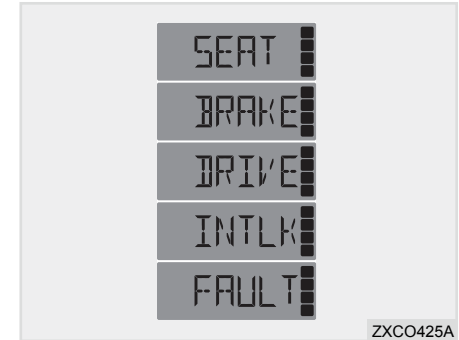
NOTE

- The engine oil light will be on until the engine starts. If the light does not go off in 10 seconds after the engine starts, the engine will stop.

When the start engine light is green, press and hold both sides of the "START/STOP" button to start the engine. Release the switch when the engine starts.

To stop the engine, press and release the "START/STOP" button.

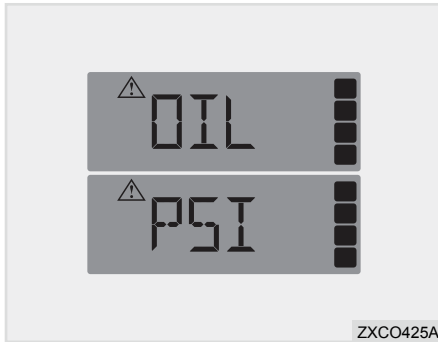
ALARMS



(1) Bypassed or Failed Safety Interlocks Alarm

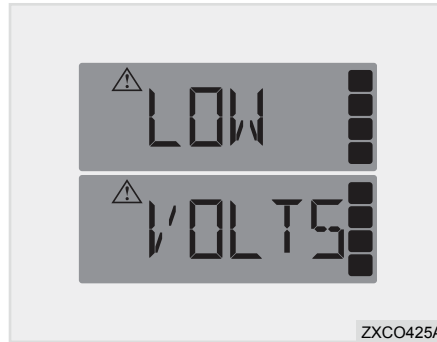
When the display panel detects a failed or bypassed switch, the indicator light for that switch will turn on and "SEAT BRAKE DRIVE INTLK FAULT" will flash on the display.

The console will allow the mower to operate for a short time after detecting the fault to return the mower to the service area to be repaired. The engine operation will be disabled until the display panel detects the switch in the open position.



(1) Low Oil Alarm

When low oil pressure is detected for 10 seconds with the engine running, "OIL PSI" will be displayed and the engine oil light will flash. Shut down the mower to reset the alarm. Do not operate the engine with the oil pressure light on.



(1) Low Voltage Alarm

If the panel detects system voltage below 12 VDC for 90 seconds, "LOW VOLTS" will be on the display and the battery voltage light will flash. The alarm is reset when system voltage rises above 12 VDC or the mower is shut down.

SERVICE ALERTS

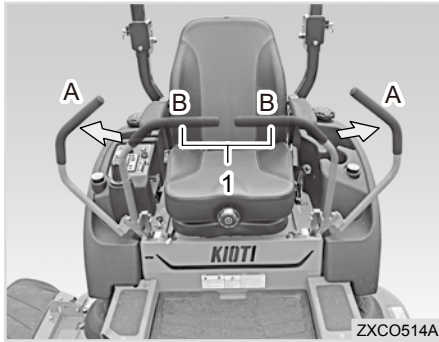
Your console is programmed to alert the operator of upcoming service as follows: First time, nonreoccurring break in oil change at 20 hours followed by normal reoccurring intervals of 100 hrs.

A gentle reminder will start flashing the "CHG OIL" alert 5 hours before service is due followed by a "CHG OIL NOW" message when service is due.

<Resetting Alert>

Enter operator code to power up the console, depress and hold down the service alert button (indicated with wrench) for 6 ~ 9 seconds; display shows "00000" when reset occurs. Reset can occur at any time within the service interval.

STEERING LEVERS



(1) Steering Levers
(A) Neutral Lock (B) Neutral

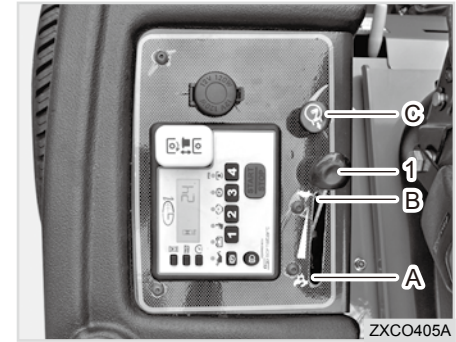
The steering levers are used together to propel the mower forwards or backwards, to turn, and to accelerate or brake.

Turn to section 5-11 for instructions on operation.

⚠ CAUTION


- Do not move steering levers from forward to reverse or reverse to forward position rapidly. Sudden direction changes could cause loss of control or damage to the machine or property.
- Operate at medium speed until you are used to operating the machine.


THROTTLE LEVER



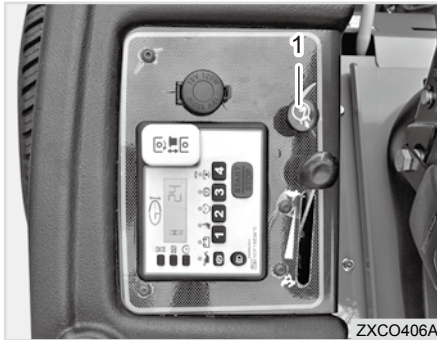
(1) Throttle Lever
(A) Increase (B) Decrease (C) Choke

Moving the throttle lever back and forth will change the engine speed as shown below.

 : Moving the lever forward increases the engine speed.

 : Moving the lever backward decreases the engine speed.

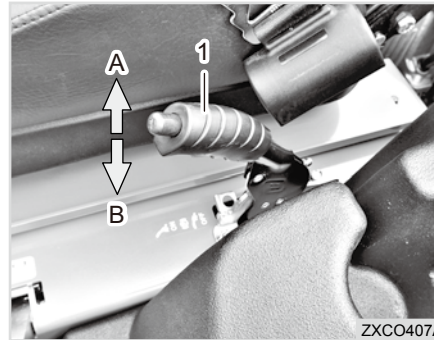
CHOKE LEVER



(1) Choke Lever

The Choke lever is used when starting the engine from a cold start. If your model is equipped with a manual choke lever, before starting the engine, pull the choke lever to the full open position, then start the engine. Once the engine is running, push the choke lever back to its resting position.

PARKING BRAKE



(1) Parking Brake Lever

(A) Engaged

(B) Disengaged

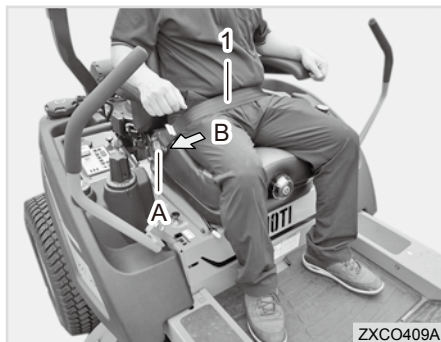
The parking brake is equipped to secure the mower from movement when it is stopped. The Parking brake can also be used to stop the mower in an emergency. To engage the parking brake: pull up on the handle to its full upright position. To release the parking brake: Push the button on the tip of the handle, then push the brake lever back to its resting position.



CAUTION

- To Prevent unwanted mower movement, when exiting the machine, always stop the engine with the start button, then apply the parking brake.

SEAT BELT



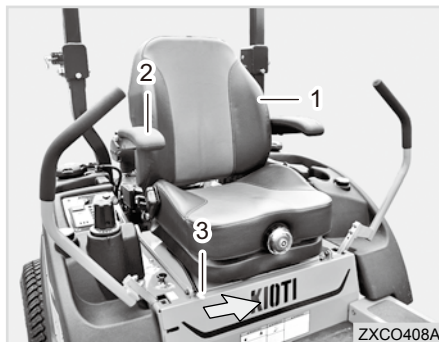
(1) Seat Belt
(A) Release Button (B) Release

Seat belts are self-retracting. Always fasten the seat belt before driving.

⚠ WARNING

- ***The seat belt should only be used to secure the operator when a ROPS (Roll Over Protective System) is installed on the mower and extended to the upright position. Never wear the seat belt when the ROPS is in the Folded or down position, or if there is no ROPS unit installed.***

SEAT



(1) Seat (2) Arm Rest
(3) Seat Adjustment Lever

To adjust the seat back and forth, push the seat adjustment lever at the bottom front of the seat to the side to move the seat to the desired position and release the lever.

If the backrest adjustment function is installed, if you pull the lever upwards, the seat tilts forward. Adjust the backrest while the lever is pulled to the desired angle and then release the lever.

Use the armrest adjusting screw under the armrest to adjust to the desired angle.

⚠ WARNING

- ***Only adjust the seat when the machine is stopped.***
- ***When the seat is adjusted to the desired position, push gently on the seat deck and backrest to ensure it has locked in place.***
- ***The operator should always be the only passenger on the mower.***

ROPS



(1) ROPS

(2) Folding Fix Pin

The ROPS (Roll Over Protective System) is an integrated safety device, designed to protect the operator in the event of a vehicle roll over. To function as an effective safety device, the ROPS should be extended to the full, upright position as pictured above and the seat belt should be worn. The ROPS should only be lowered if the area the mower is travelling in is affected by an obstruction from overhead, such

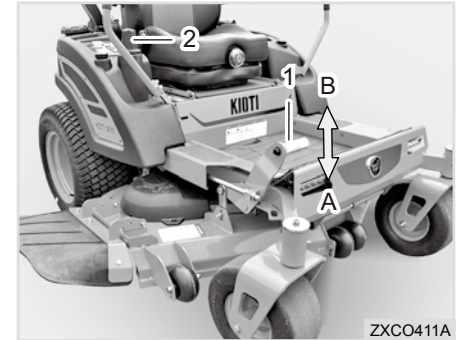
as a tree or lower building overhang. When using the machine with the ROPS in the lowered position, the seat belt should NOT be worn. To Raise or Lower the ROPS: Pull the Fix Pins from each side of the support bar, then raise or lower, then install the fix pins into the available holes, making sure the pins lock in place.



WARNING

- ***The seat belt should always be fastened when the ROPS is in the UP position. Never wear the seat belt when the ROPS is folded in the DOWN position.***

DECK LIFT PEDAL



(1) Deck Lift Pedal

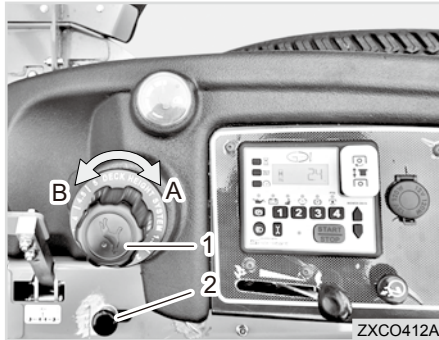
(2) Deck Height Adjust Dial

(A) Raise and Lock

(B) Lower

The deck lift pedal is used to manually raise and lower the mower deck. In order to set the cutting height of the mower deck, press the deck lift pedal, then adjust the cutting height with the deck height adjustment dial.

DECK HEIGHT ADJUST DIAL



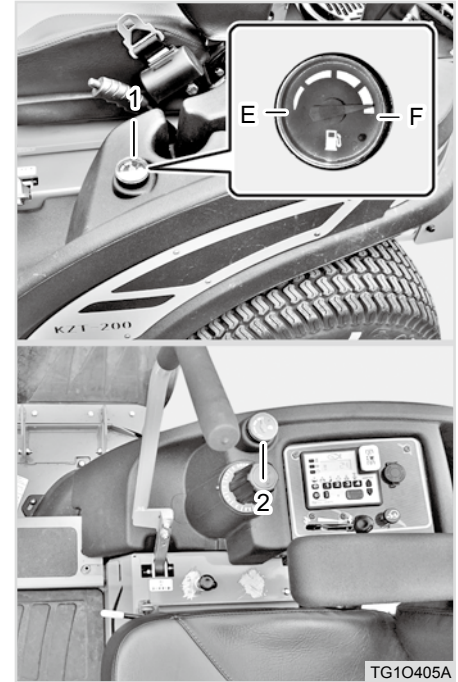
- (1) Deck Height Adjust Dial
 (2) Deck Release Lever
 (A) Short (B) Tall

With the deck raised in the highest locked position, Use the deck Height Adjustment Dial to adjust the cutting height of the mower blades. Turn the dial to the Right-A to shorten the height and to the Left-B to lengthen the height. Use the numbers on the dial as a guide. It is recommended to use a higher cut height when cutting tall grass and rough terrain, and a lower height when mowing flat, soft low grass.

Once the desired deck height is selected, to lower the mower deck:

1. Press and hold the Deck Lift Pedal .
2. Pull and hold the Deck release lever.
3. Release the deck lift pedal to lower to cutting height.

FUEL GAUGE



- (1) Fuel Gauge (LH) (2) Fuel Gauge (RH)
 (E) Empty (F) Full

You can check the amount of fuel. If you continue to run while you are

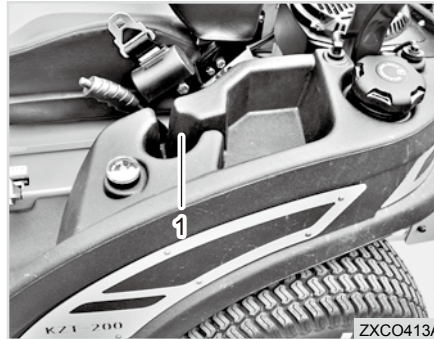
running low on fuel, air may enter the fuel supply, so be sure to replenish it before it runs out.

Residential models come equipped with a left side fuel tank. Commercial models are equipped with dual, left and right side fuel tanks.

⊕ IMPORTANT

- **Make sure to use only automotive unleaded 87 octane or higher fuel that does not to exceed 10% ethanol. Any other type/rated fuel may cause damage to the engine or mower components.**
- **Use fuel for winter season in cold weather to start the engine easier.**

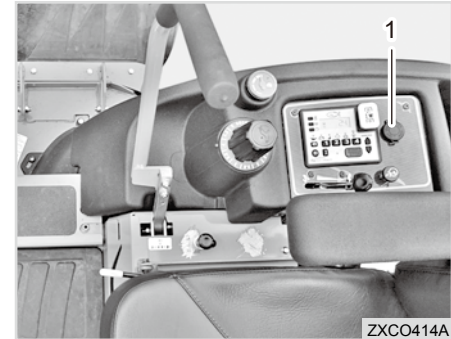
CUP HOLDER



(1) Cup Holder

The cup holder is equipped at the top left of the fuel tank to allow cans or cups to be stowed. Take care when traveling over bumps or on slopes as drink may be ejected.

DC POWER OUTLET



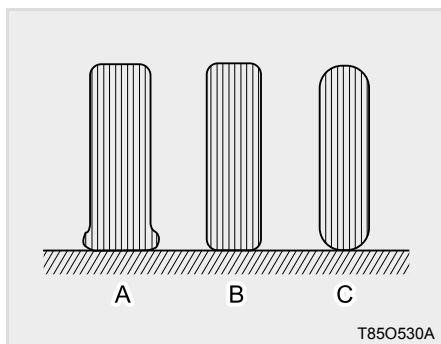
(1) DC Power Outlet

The DC power outlet is located on the rear of the display panel.

⊕ IMPORTANT

- **Do not use DC power outlet for purposes other than charging mobile phones.**

TIRES



(A) Under Inflated (B) Properly Inflated
(C) Over Inflated

Tire pressure is filled to the required psi at the factory. The pressure will fluctuate with ambient air temperature, as well as the temperature of the tire rubber. Check and adjust the tire pressure before each use.

ITEM	TIRE INFLATION PRESSURE
Front	170 kPa (1.7 kgf/cm , 25 psi)
Rear	110 kPa (1.1 kgf/cm , 13 psi)

WARNING

- *Inflating air above the specified pressure may cause the tire to rupture and result in an accident. Particularly, when front tires are loaded with compressed air, pressure may suddenly rise.*
- *Do not attempt to remove the tire from the wheel hub. If service is necessary, take wheel/tire assembly to a qualified Titan tire service center or your local KIOTI servicing dealer.*

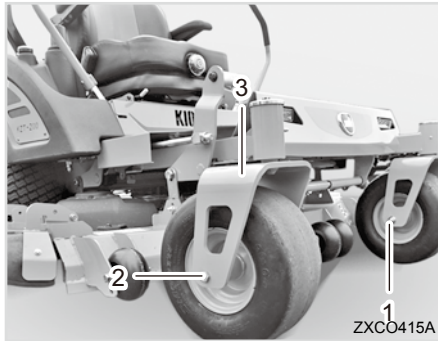
CAUTION

- **Do not operate with loose rim, wheels, or axle bolts.**
- **If bolts are loose, tighten them with the specified torque and check them frequently.**

IMPORTANT

- **Do not use tires other than specified ones.**

WHEEL FRONT WHEEL



(1) Nut
(2) Wheel Bolt
(3) Wheel Support Fork Bracket

The install and removal method of front wheel I is as follows.

1. Park the machine on a flat surface, stop the engine, and engage the parking brake.
2. Lift the front part of the machine safely.
3. Remove the nuts and wheel bolts, then remove the wheel from the support fork.
4. Remount the wheels into support

fork bracket, make sure the fork is oriented for forward movement, then insert the wheel bolt from the outside. Tighten to the torque specs listed below.

⊕ IMPORTANT

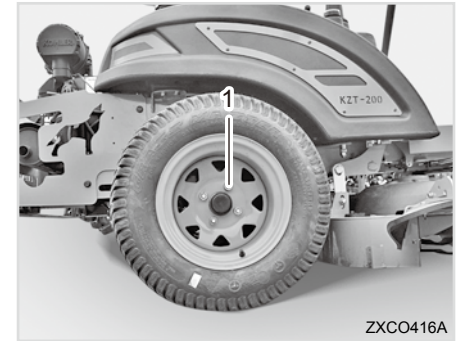
- Insert the front wheel bolt from the outside of the bracket.
- Be sure to tighten the nut little by little so that it rotates smoothly when turning the front wheel by hand.

MODEL	FRONT TIRE SIZE
ZXR48/54 ZXR48SE/54SE	13 x 5 - 6
ZXR60/60SE ZXC ALL	13 x 6.5 - 6

TIGHTENING TORQUE OF WHEEL BOLT (NUT)

20 ~ 25 N · m
(14.75 ~ 18.4 ft · lb)
(2.0 ~ 2.5 kgf · m)

REAR WHEEL



(1) Wheel Nut / Bolt

When replacing the rear wheel, tighten the nut with the following torque. After tightening, recheck the torque after running about 7874 in. (656 ft)

MODEL	REAR TIRE SIZE
ZXR48/54	22 x 9.5 - 10
ZXR60 ZXR48SE/54SE ZXC48/54/60	23 x 9.5 - 12
ZXC48SE/54SE ZXC60SE	23 x 10.5 - 12

TIGHTENING TORQUE OF WHEEL BOLT (NUT)

120 N · m
(88.5 ft.- lb)
(12.2 kgf · m)

OPERATION

DECK MOUNTING / DISMOUNTING .. 5-2

MOWER DECK MOUNTING 5-2

MOWER DECK DISMOUNTING 5-4

OPERATING THE ENGINE 5-4

STARTING THE ENGINE 5-4

JUMP STARTING..... 5-7

STOPPING THE ENGINE..... 5-8

MOWER OPERATION 5-8

TIPS FOR BREAKING-IN 5-8

OPERATION 5-9

STOPPING..... 5-16

MOVING MOWER WHEN THE ENGINE IS
STOPPED..... 5-17

PARKING 5-17

TOWING 5-18

TRANSPORTING..... 5-18

HOW TO USE THE MOWER PROFI- CIENTLY 5-19

MOWER PERFORMANCE TIPS 5-19

ADJUSTING CUTTING HEIGHT 5-20

OPERATING MOWER 5-20

BATTERY & FUSE ACCESS 5-21

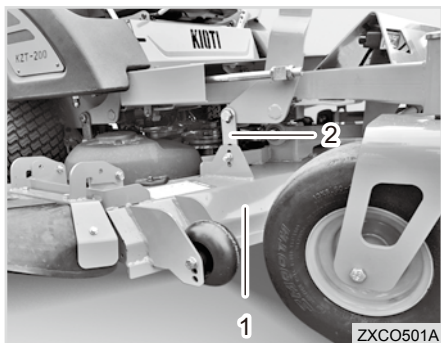
HOW TO LIFT THE MOWER..... 5-22

CLEANING MOWER DECK..... 5-23

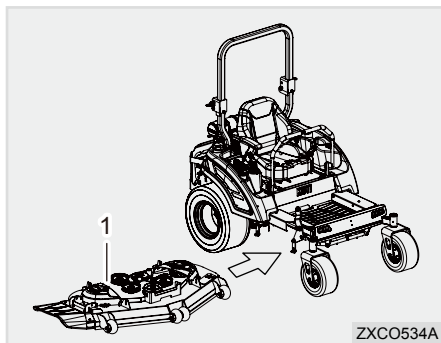
WASHING MOWER..... 5-23

5

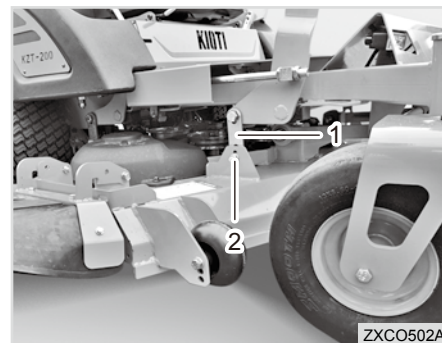
DECK MOUNTING / DISMOUNTING MOWER DECK MOUNTING



(1) Mower Deck (2) Lift Link



(1) Mower Deck



(1) Lift Link (2) Mounting Hardware

1. Before mounting the mower deck, lift the lift link up and adjust the deck height adjust dial to 3 inch position.

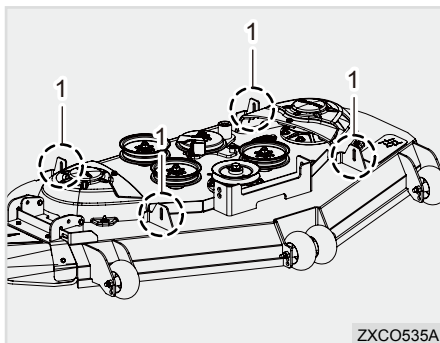
2. Change the direction of the front tire as shown above and place the mower deck on the right side of the machine.

3. Push the mower deck under the machine and lower the lift link.

4. Attach the lift link to the mower deck with mounting hardware.

CAUTION

- Before mounting the mower deck:
 1. Park mower on a level surface
 2. Turn engine off
 3. Apply the parking brake
 4. Set the PTO lever to the OFF position.



ZXC0535A

(1) Lifting Position

⊕ IMPORTANT

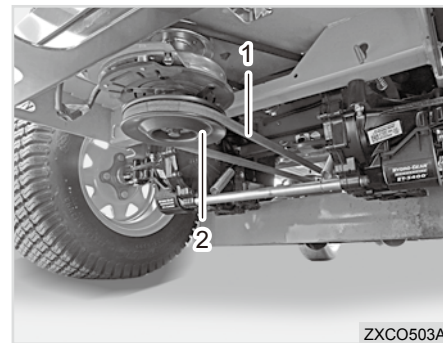
- When fixing the mower deck, make sure to balance the four positions.

5. After adjusting the distance between the ground and blade descent to 3 inches, tighten the deck mounting bolts. (4 pieces)

- Deck assembly left/right height adjustment: Less than 0.12 inches (3mm)
- Deck assembly front/back height adjustment: Less than 0.24 inches (6mm) (front needs to be lower than back)
- Tighten the deck mounting bolts as following.

TIGHTENING TORQUE

59 ~ 69 N · m
 (43 ~ 51 ft · lb)
 (6 ~ 7 kgf · m)



ZXC0503A

(1) PTO Belt

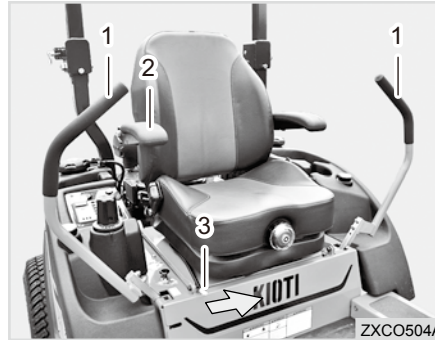
(2) Engine Pulley

5. After mounting the mower, check the mower height. If necessary, connect the mower belt to the PTO clutch and adjust the mower height.

MOWER DECK DISMOUNTING

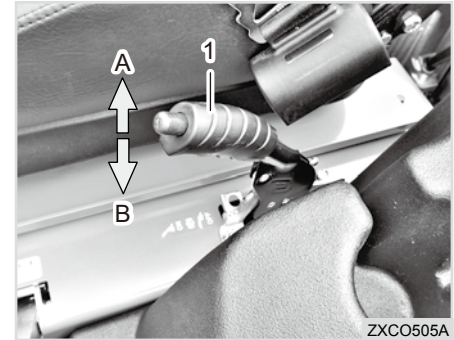
When removing the mower deck, follow the steps described in mounting section in reverse order.

OPERATING THE ENGINE STARTING THE ENGINE



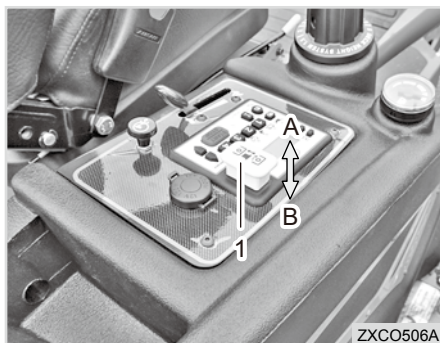
(1) Steering Levers (2) Arm Rest
(3) Seat Adjustment Lever

1. Adjust the seat to a position that allows easy access to the pedal and handles. Refer to section 4-12 for more information on seat adjustment.

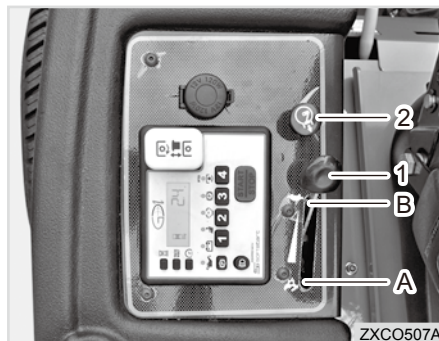


(1) Parking Brake Lever
(A) Engaged (B) Disengaged

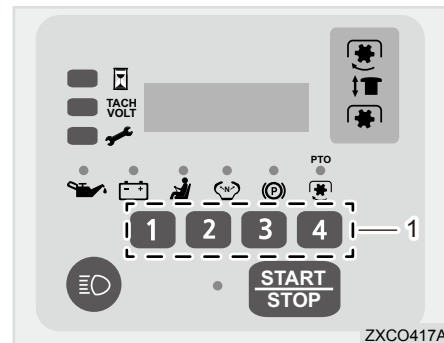
2. Apply the parking brake. Refer to chapter 5 for tips on engaging or disengaging parking brakes.



(1) PTO Switch
(A) ON (B) OFF



(1) Throttle Lever (2) Choke
(A) Fast (B) Slow



(1) Start-Up Code

3. Check that the PTO switch is on the "OFF" position.
4. Set the steering levers to the "neutral lock" position.

5. Set the throttle lever to the "Slow speed" position. If starting up is difficult, place it somewhere in the middle. In winter, place the choke lever up. For models with choke levers, pull the choke lever and then start it for smooth starting during initial startup. When the engine starts and remains running, move the choke lever back to the OFF position and adjust engine idle with the throttle lever.

6. Enter the start-up code and then start the engine.

+ IMPORTANT

- **Start-up only works when the PTO switch is "OFF", the parking brake is engaged, the steering control levers are "neutral lock" and the driver is seated on the seat.**

7. Warm up the engine at medium speed and start-up according to below depending on the outside temperature.

<Starting up at low temperature>

To protect the battery and the starting device, never turn the ignition on for more than 10 seconds.

<Warming up during cold weather >

It is recommended always to warm up the engine for about 5 minutes 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.



WARNING

- *Before starting the engine, be sure to sit on the seat and make sure that the steering levers are in the "neutral lock" position and that the parking brake is engaged. Also make sure that the PTO switch is in the "OFF" position.*
- *Do not start the engine on the ground or start the engine by connecting the starter terminal and the safety switch directly because there is a risk of sudden movement.*
- *If you are driving indoors, be sure to provide adequate ventilation. If ventilation is insufficient carbon monoxide poisoning may happen due to exhaust gas.*



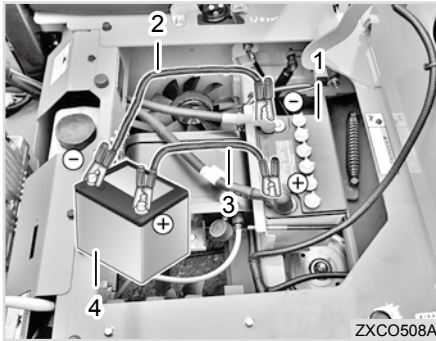
CAUTION

- **DO NOT USE STARTING FLUIDS.** The use of starting fluids in the air intake system can be explosive and/or cause an engine runaway situation that could result in engine damage and personal injury.

While driving, observe that the parts operate smoothly and stop the engine immediately if any of the following occur.

- If the engine rotation suddenly falls or rises
- When suddenly making strange noises
- When the exhaust gas suddenly comes out black

JUMP STARTING



(1) Dead Battery (2) Jumper Cables (-)
 (3) Jumper Cables (+) (4) Helper Battery

If the battery becomes discharged and the mower will not start, it is possible to jump-start the discharged battery with one from a working mower or spare battery.

Slide the seat lock lever to the right and lift the seat to see the battery.

1. Make sure that the battery used to jump start the discharged one matches in voltage. Use only a 12 volt battery for this mower.
2. Check the length of the jumper cable and position another mower near the mower 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 seat of mower, then 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 mower body with the discharged battery. Make sure to connect the clip to the body part without paint.
6. Start the engine of the mower with the normal battery.
7. Start the engine of the mower

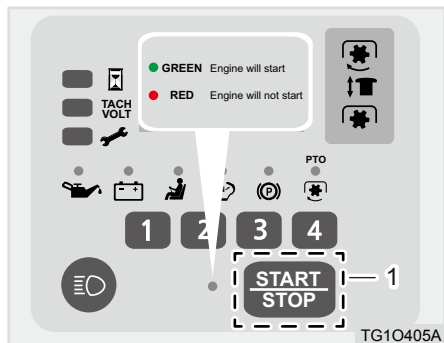
with the discharged battery.

8. Disconnect the black cable from the negative battery terminals of both of the mower.
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.

⊕ IMPORTANT

- **When connecting the cable, make sure that the (+) and (-) terminals are not in direct contact with each other.**
- **Do not allow cables to get caught in parts.**

STOPPING THE ENGINE



(1) Start/Stop Button

1. Place the throttle lever in the "Slow speed" position and leave at idle state. Press the START/STOP button on the display panel to stop the engine.
2. Ensure the PTO is in the OFF position, raise the mower deck, engage the parking brake, set the steering levers to the neutral lock position, then exit the machine.

⊕ IMPORTANT

- Do not stop the engine when the machine is on a slope for an extended period. The engine oil can enter the carburetor or muffler through the valve unit.
- Place the throttle control lever in the half speed position to help prevent the engine from backfiring before stopping the engine.

MOWER OPERATION TIPS FOR BREAKING-IN

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

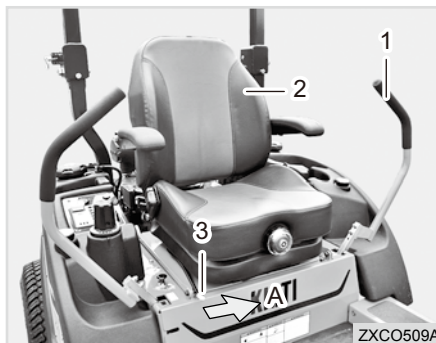
Make sure to run the mower at the proper work load and speed for the initial operation of 50 hours.

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. Do not drive the mower at the maximum speed on a road.
4. Never apply excessive load during work.
5. Idle the engine at a low speed for 2 to 3 minutes before stopping it.

OPERATION

⚠ WARNING

- *On a slope, when the engine stops, immediately apply the parking brake so that the unit does not move.*
- *Avoid driving with people other than the driver and be sure to sit down on the seat and drive.*
- *Do not drive in ditches or other places that are likely to collapse.*
- *Avoid sudden acceleration and sudden stopping, and be sure to operate at low speed when turning.*
- *When backing up, make sure that there are no people or obstacles around you.*

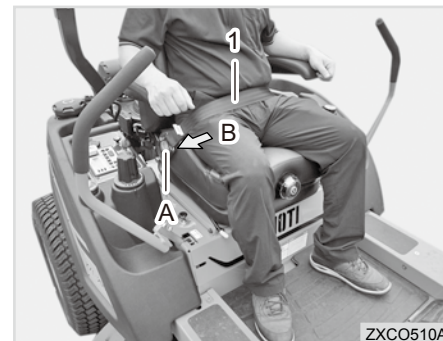


- (1) Steering Lever (2) Seat
(3) Seat Adjustment Lever (A) Pull

1. Sit on the seat and adjust the position of the seat to an appropriate position.

⚠ 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 steering levers.*

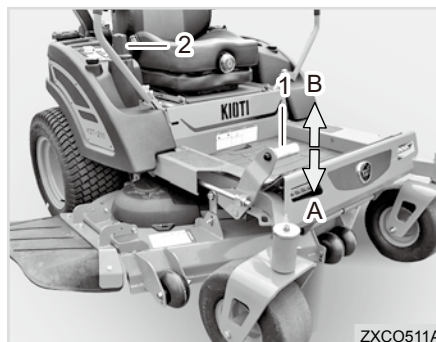
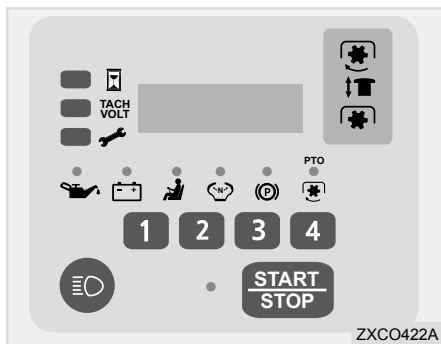


- (1) Seat Belt
(A) Release Button (B) Release

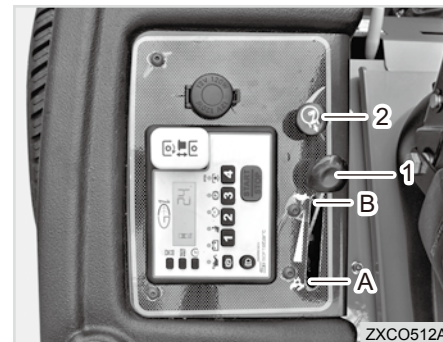
2. Fasten the seat belt.

⚠ WARNING

- *Be sure to fasten your seat belt if the mower is equipped with the ROPS.*
- *The seat belt should go around your pelvis or as low as possible, not your waist or abdomen. Otherwise, the seat belt cannot protect you properly.*



(1) Deck Lift Pedal (2) Deck Height Adjust Dial
(A) Raise and Lock (B) Lower



(1) Throttle Lever (2) Choke Lever
(A) Increase (B) Decrease

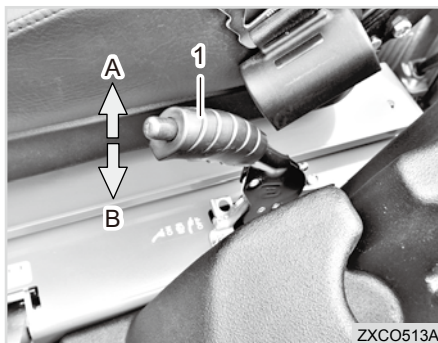
3. Start the engine according to the engine start-up procedure.

4. Press the deck lift pedal and rotate the mower deck adjustment dial to raise the mower deck to the desired height.

5. Use the throttle lever to slowly accelerate the engine speed from idle to medium speed.

⊕ IMPORTANT

- **When operating, set the throttle lever to "medium speed" or higher and do not operate at low speed.**



(1) Parking Brake Lever
(A) Engaged (B) Disengaged

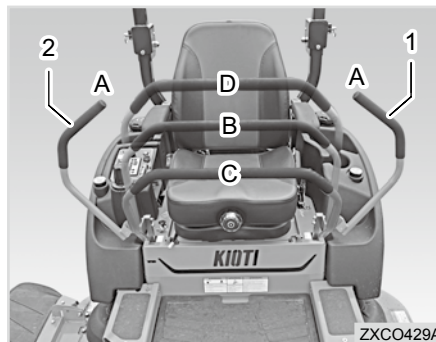
6. Slide the parking brake downwards to release it.



WARNING

- **Do not park on steep slopes with the engine running under any circumstances. It can cause serious accidents.**

DRIVING CONTROLS



(1) Steering Levers (LH) (2) Steering Levers (RH)
(A) Neutral Lock (B) Neutral
(C) Forward (D) Reverse

7. Use the steering levers together to propel the mower forward, reverse, to turn, as well as accelerate or brake. A description follows:

► MOVING FORWARD

Push both the left and right steering levers forward at the same time away from you slowly to propel the mower forward.

► MOVING REVERSE

Pull both the left and right steering levers at the same time towards you slowly to propel the mower in reverse.

► TURNING

To turn in either left or right direction when the mower is moving, to turn right-move just the Left steering lever, keeping other lever steady. To turn left-move just the Right steering lever, keeping the other lever steady.



CAUTION

- **Practice in a large area at low speed to learn how to use the steering levers.**
- **When riding on the machine or when checking or adjusting, engage the parking brake and set the steering lever to "neutral lock".**

The speed and travel direction of this machine is controlled by the steering levers. Perform the following starting sequence.

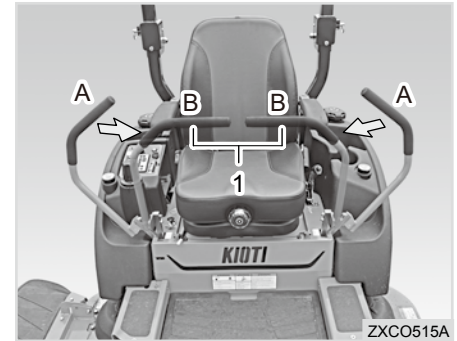
 **CAUTION**

- **When the engine is stopped, the steering lever cannot control the machine.**

1. Enable the starting sequence on the number pad.
2. Start the engine and release the parking brake.
3. Move both steering levers from the neutral lock position (A) to the Neutral (B) Position.
4. Increase the Engine RPM Lever to the High position.
5. Slowly move the steering levers to learn how the mower reacts to the steering.

 **IMPORTANT**

- **Adjustment of the tracking in regards to the steering levers should only be performed by a qualified KIOTI dealer. Do not attempt to adjust in the field.**

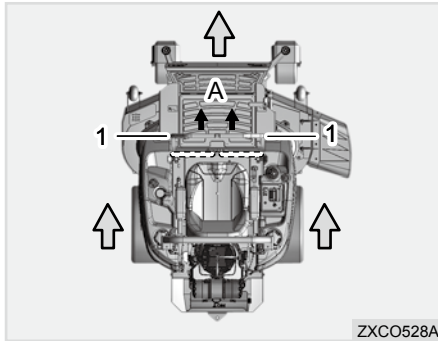


(1) Steering Levers

(A) Neutral Lock (B) Neutral

► **NEUTRAL**

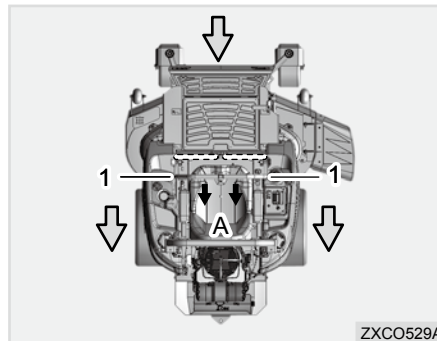
Moving both steering levers inward from "Neutral Lock" will result in "Neutral". The engine cannot be restarted in this position.



(1) Steering Levers
(A) Forward

► FORWARD

"Slowly" Push both steering levers forward at the same time to move the machine forward.



(1) Steering Levers
(A) Reverse

► REVERSE

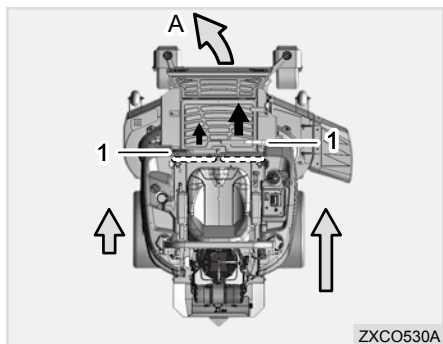
"Slowly" Pull both steering levers toward you at the same time to move the machine in reverse.

⚠ WARNING

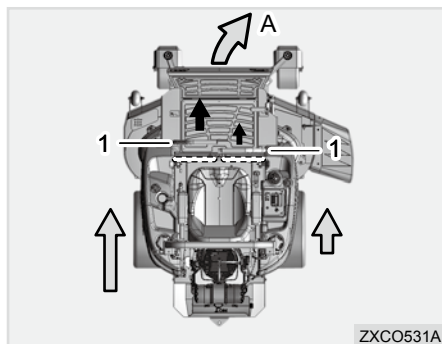
- **Observe the terrain to be traveled on to identify hazards before proceeding. Remove all obstructions and clear the area. Failure to do so could result in injury or property damage.**

⚠ WARNING

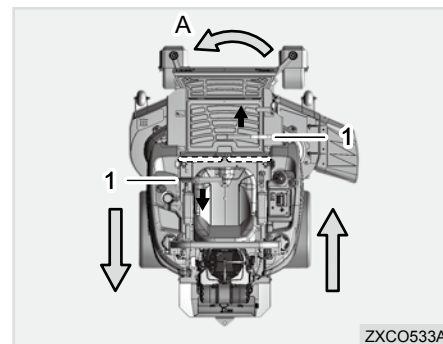
- **Disengage the PTO switch to turn power off to mower deck before backing in reverse. DO NOT mow in reverse unless absolutely necessary.**



(1) Steering Levers
(A) General Left Turn



(1) Steering Levers
(A) General Right Turn



(1) Steering Levers
(A) Sharp Left Turn

► GENERAL LEFT TURN

If you push the right steering lever more forward than the left steering lever, the machine will turn to the left.

► GENERAL RIGHT TURN

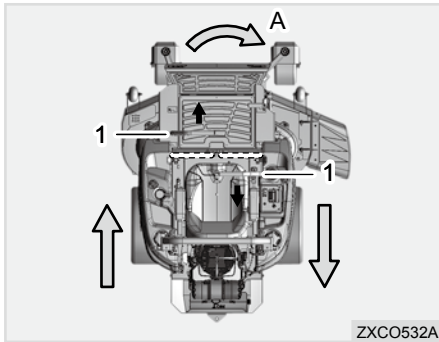
If you push the left steering lever more forward than the right steering lever, the machine will turn to the right.

► SHARP LEFT TURN

Push the right steering lever forward and at the same time pull the left steering lever backward, and the machine will turn quickly to the left.

⊕ IMPORTANT

- Make sure to stop the machine before performing a sharp turn.



(1) Steering Levers
(A) Sharp Right Turn

► SHARP RIGHT TURN

Push the left steering lever forward and at the same time pull the right steering lever backward, and the machine will turn quickly to the right.

⊕ IMPORTANT

- **Make sure to stop the machine before performing a sharp turn.**

RESTARTING ON A SLOPE

When you need to restart after stopping at a slope, follow the procedure below.

1. Engage the parking brake so that the machine does not move, and start the engine with the steering lever in the neutral lock position.
2. Release the parking brake.
3. Set the throttle lever to "medium speed" and move the steering lever slowly inwards to "neutral".
4. Move the machine slowly and carefully by operating the steering levers.
5. This mower is designed for traction and stability under normal, dry mowing conditions. Caution should be used when traveling on slopes, especially if the grass is wet. Wet grass reduces traction and steering control. If traveling on a slope that is wet, the ROPS bar should be in the UP position and the seat belt fastened. Refer to the section on ROPS safety for guidelines.
6. Stay two cut widths (width of the mower deck) away from ditches, slopes and drop-offs.
7. To prevent loss of control and roll over situations, do not start or stop quickly, avoid unnecessary turns and travel at a slow speed. If loss of traction occurs, disengage the PTO and proceed slow off of the slope.
8. Avoid sudden starts when driving uphill. This may cause the machine to tip back-wards.
9. Be careful when traveling down hill, the machine weight will transfer to the front of the machine, causing the drive wheels to slip and loose braking or steering control. Do not drive on slopes greater than 15 degrees.
10. Control of the machine sliding on a slope will not be regained by application of the parking brake.

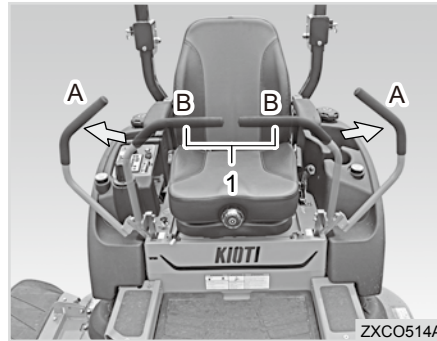
WARNING

- **DO NOT operate this mower on steep slopes. To check if the slope is too steep, attempt to back the mower up the edge of the slope with the mower deck in the down position. If the wheels do not slip or loose traction, proceed a slow as possible with extreme caution.**

CAUTION

- **If you stop or change direction on a slope, the machine may lose control and be dangerous, so please be fully aware of the above information and pay special attention to it.**

STOPPING



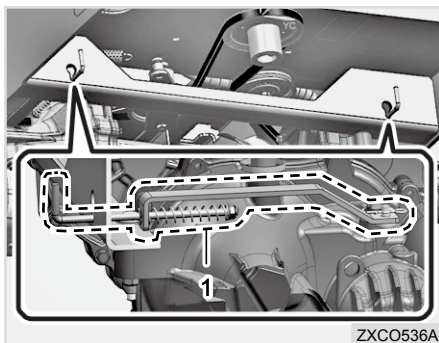
(1) Steering Levers
(A) Neutral Lock (B) Neutral

If the steering lever is set to the "neutral lock" position, the machine will stop. Starting the engine is only possible at this location.

1. Stop the machine by moving both steering levers to the "neutral" position.
2. Move both steering levers to the "neutral lock" position and engage the parking brake.

3. Move the throttle lever to the medium speed position and set the PTO switch to "OFF" and lower the deck to ground.
4. Stop the engine.

MOVING MOWER WHEN THE ENGINE IS STOPPED

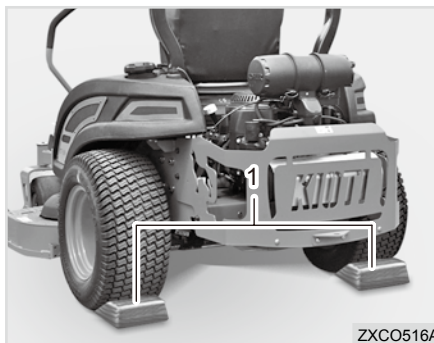


ZXC0536A

(1) Transaxle Bypass Levers

To move the mower without running the engine, the left and right transaxles must be put into the bypass position. To do so, locate the left and right transaxle bypass levers as indicated in the photo, then position the levers into the neutral position, disengage the parking brake and move the machine by hand. Once it is in the desired position, re-engage the parking brake, then return both transaxle bypass levers to the engaged position.

PARKING



ZXC0516A

(1) Chocks

If you need to park on a slope, place the chocks behind the wheels so that the machine cannot roll down.

1. Stop movement of the mower by positioning the steering levers to the Neutral position.
2. Pull the parking brake lever to engage the parking brake.
3. Set both steering levers to the "neutral lock" position, pull the throttle lever to lower the speed, and then turn the PTO switch "OFF".

4. Press the START / STOP button to stop the engine.



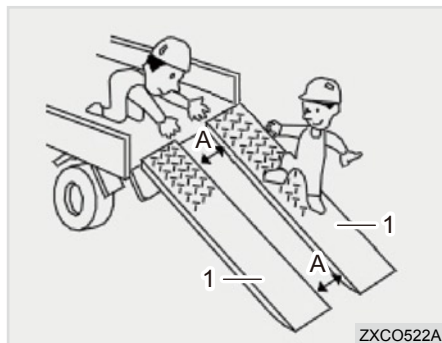
CAUTION

- **Make sure the mower is completely stopped and that the parking brake is securely engaged, and then get off the mower.**
- **Do not park on hay or straw. Contact with the muffler may cause a fire.**

TOWING

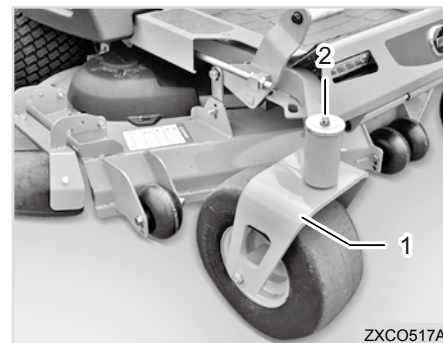
1. NEVER allow anyone in or on equipment being towed.
 2. Only Tow with a machine that has a hitch designed for towing. Do not attach towing equipment except at the designated hitch point.
 3. Do not exceed the weight limit for towed equipment which is 250 lbs.
 4. NEVER tow on slopes. The weight of the equipment may cause loss of traction and control.
 5. Zero turning is not recommending when towing a trailer as it will cause damage to the trailer and/or mower.
 6. Allow extra distance to stop when towing and travel as slow as possible.
 7. DO NOT exceed the maximum Tongue weight of 50lbs. Exceeding the maximum tongue weight may cause the mower to tip over backwards.
4. When loading, go up reverse, and when unloading, advance down.

TRANSPORTING

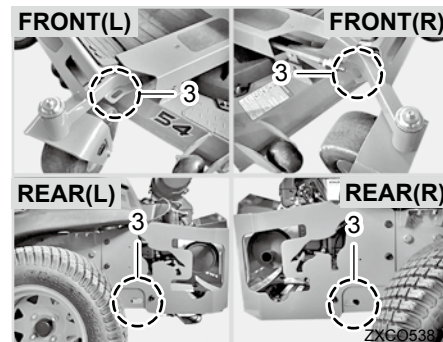


(1) Loading Ramp
(A) Parallel

1. Place the machine on the truck and secure it firmly. When securing, use the mower transportation holes at the front and rear of the mower to tie ropes. (Refer to photo right)
2. When transporting over long distances, lift the deck with the deck lift pedal.
3. Operate the steering levers slowly as there is a risk of falling when loading or unloading the mower into the truck.



ZXC0517A



ZXC0538A

(1) Cast Support Assembly (2) Bolt
(3) Transportation Holes

4. When loading, go up reverse, and when unloading, advance down.

HOW TO USE THE MOWER PROFICIENTLY

MOWER PERFORMANCE TIPS

5. When getting off, please use a loading ramp that is longer and wider than the tire's.

CAUTION

- **Do not tow this unit as it may damage the transaxle.**
- **Make sure that the Vehicle you are using to transport with has all the lighting and markings required by law.**

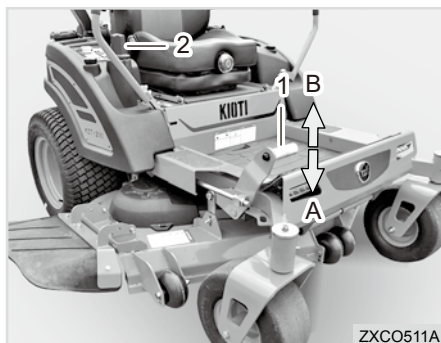
1. When cutting grass with the mower deck for the first time, select a flat area and cut a small section slowly, overlapping each cut a little bit.
2. Take into account the obstacles such as trees, fences, and buildings, as the proper cutting method depends on the size and shape of the land.
3. The ideal cutting height of the grass is about 1.97~3.15 inches and it is best to not to cut it too often or too short. To maintain green grass, do not cut more than a third of the grass height at a time.
4. If the height of the grass is very high, work once at the maximum cutting height and then cut again at the desired height.
5. For optimum cut appearance in the lawn, cut when the grass is driest, such as afternoon or early evening.

6. When cutting tall or wet grass (higher than 8"), for best results, the area should be cut twice. Raise the mower deck to the highest position for the first pass, then adjust the deck to the desired height and proceed with the second pass.
7. This machine is designed to provide an optimal cut when the engine speed is at the highest RPM setting. Cutting at a lower RPM setting will diminish the quality of the quality of the cut and may cause the mower to tear the grass instead of cutting.

WARNING

- ***DO NOT operate this mower without the discharge chute, grass catcher or mulching kit properly attached.***

ADJUSTING CUTTING HEIGHT

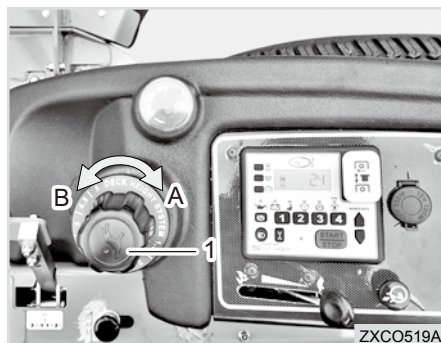


(1) Deck Lift Pedal (2) Deck Height Adjust Dial
(A) Raise and Lock (B) Lower

1. Before adjusting the cutting height, check that the air pressure of all tires is the specified value.
2. To set the cutting height, press the deck lift pedal and raise the mower deck up as high as possible. Turn the deck height adjustment dial to adjust the height to the desired height.

WARNING

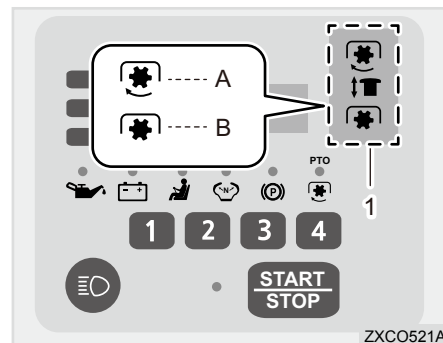
- ***Do not operate the mower while in the transport position.***



(1) Deck Height Adjust Dial
(A) Short (B) Tall

3. If the height of the wastelands or grass is high, adjust the cutting height higher. Lower settings should only be used on soft lawns that require short grass.
4. Press the deck lift pedal to change the mower deck from the "moving" position to the "operating" position.

OPERATING MOWER



(1) PTO Switch
(A) ON (B) OFF

1. Sit on the seat and start the engine.
2. Set the PTO switch to "ON". If the PTO switch is in the "ON" position, and the driver gets off the seat, the engine will automatically stop due to the safety device.
3. Release the parking brake and push the throttle lever forward to increase the speed.
4. Move the steering lever while cutting grass.

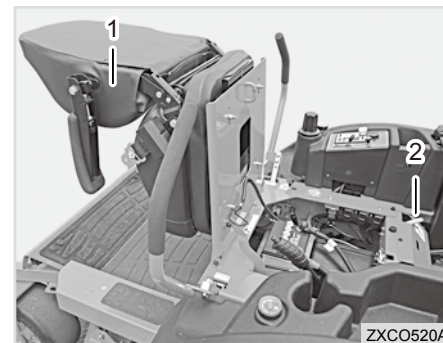
⚠ DANGER

- *Never put hands into the discharge chute while the engine is running for any reason.*
- *If the mower discharge becomes clogged, ensure the engine is off, the steering levers are in neutral, the parking brake is set and the engine/blades have come to a complete stop.*

⊕ IMPORTANT

- Do not work on the machine with the brake applied.
- Clean the radiator and radiator nets to prevent the engine from overheating.
- Always set the throttle lever to the "high" position for best cutting performance.
- If the area to be cut is very overgrown, cut with the deck in the highest position on the first cut, then cut again at the desired height.
- If the mower speed is too fast or the blade speed drops due to overheating from overgrown or dense areas, the grass will not be cut clean.
- When not mowing, set the PTO switch to the "OFF" position and raise the mower to the highest position.

BATTERY & FUSE ACCESS



(1) Seat

(2) Seat Fix Release Lever

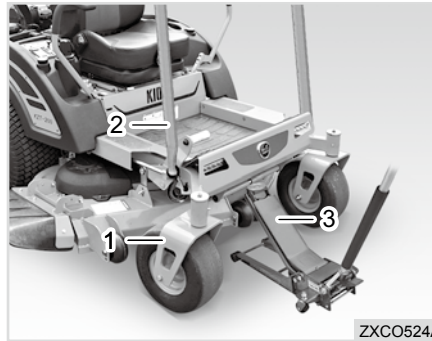
To access the battery and fuse panel:

1. Pull the seat release lever to release the lock.
2. Pull the seat fully to the locked position.
3. To lower the seat, unlock it and lower it slowly.

HOW TO LIFT THE MOWER

CAUTION

- When raising the seat, make sure it is positioned all the way forward at a 90 degree angle as shown in the photo above.



(1) Cast Support Assembly (2) Rope
(3) Jack

CAUTION

- Do not work under the machine when it is not firmly secured with a support stand or wheel chocks.

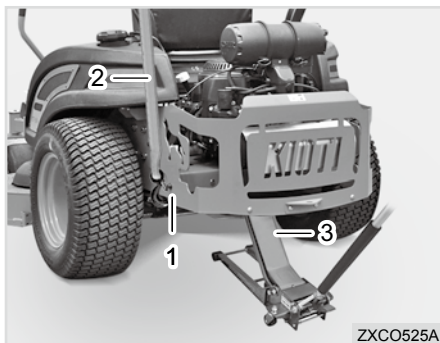
1. The mower must be lifted when maintaining the cutting blades or removing debris from inside the deck.
2. When lifting the front of the mower, you can lift the cast support assembly with tow strap, rated for the weight of the mower or lift it to the front of the main frame with the jack. Do not lift the mower deck part.

CLEANING MOWER DECK

1. Lift the mower and clean it with a water hose or air.

⚠ CAUTION

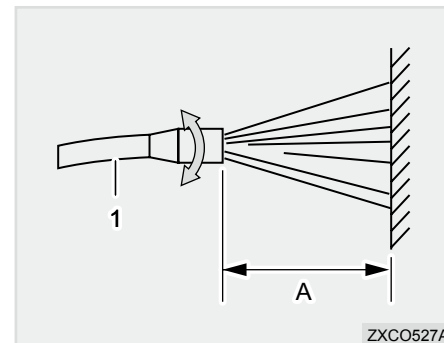
- Before starting the engine, be sure to sit on the seat and check that each steering lever is in the "neutral lock" position, the speed adjustment lever is in "low" and that the parking brake is engaged.
- Make certain and check that the PTO switch is "OFF".
- Be careful so that the water hose does not get caught in the mower.



(1) Rear Bumper (2) Rope
(3) Jack

3. When lifting the rear of the mower, lift the rear frame with a rope or jack.

WASHING MOWER



(1) High-pressure Washer
(A) At least 6.56 feet

Improper use of a water high pressure washer may cause personal injury or malfunction/damage to the machine. Please familiarize yourself with the use of the pressure washer before cleaning.

Spread the water by spreading at least 6.56 feet away from the mower.

Take care when using a power washer in close proximity to the following areas of the mower:

1. Electrical Parts: Disconnection or damage may occur to the wire harnesses or cables, which can potentially cause a fire.
2. Hydraulic hoses: Do not apply direct water pressure to the hydraulic lines, doing so may cause hoses to break or come loose, causing oil to leak at a high velocity.
3. Moving Mechanical Parts: Direct high pressure water to the engine and drive parts can cause malfunction and damage.

**WARNING**

- ***DO NOT wash a hot or running engine. Cold water will damage the engine. Use compressed air to clean off the engine if it is still hot or wait until the engine is cool before washing.***

MAINTENANCE

6

RECOMMENDED MAINTENANCE SCHEDULES..... 6-3

LUBRICANTS 6-5

DAILY CHECK 6-6

GENERAL INFORMATION 6-6

CHECKING ENGINE OIL LEVEL..... 6-6

CHECKING AND ADDING FUEL..... 6-7

CHECKING AND CLEANING AIR INTAKE SCREEN..... 6-8

CHECKING TRANSAXLE FLUID LEVEL 6-9

LUBRICATION 6-10

EVERY 50 HOURS..... 6-11

AIR FILTER MAINTENANCE..... 6-11

EVERY 100 HOURS..... 6-12

CHANGING ENGINE OIL 6-12

CHECKING SPARK PLUG 6-13

CHECKING FUEL LINES/FUEL FILTER 6-13

ADJUSTING TRANSAXLE DRIVE BELT TENSION 6-14

MOUNTING AXLE BELT 6-14

CHECKING PARKING BRAKE 6-16

ADJUSTING THROTTLE CONTROL AND CHOCK.. 6-17

CHECKING AND CHARGING BATTERY 6-17

EVERY 200 HOURS..... 6-19

REPLACING ENGINE OIL FILTER..... 6-19

REPLACING TRANSAXLE OIL FILTER 6-19

CHECKING TRANSAXLE FLUID HOSE 6-21

CLEANING ENGINE SHROUD 6-22

EVERY 400 HOURS..... 6-22

REPLACING FUEL FILTER 6-22

EVERY 500 HOURS..... 6-22

ADJUSTING PTO ELECTRIC CLUTCH 6-22

EVERY 1 YEAR..... 6-25

REPLACING AIR CLEANER ELEMENT..... 6-25

CHECKING SPARK PLUG 6-25

SERVICE AS REQUIRED 6-26

REPLACING FUSES 6-26

MAINTENANCE

CHECKING BLADE	6-26
INSPECTION AND SHARPENING BLADE ...	6-27
REPLACING BLADE.....	6-27
REPLACING MOWER BELT	6-28
ADJUSTING BELT TENSION	6-29
ADJUSTING TRAVEL	6-29
ADJUSTING ANTI-SCALP ROLLER	6-32
ADJUSTING DECK LEVEL.....	6-32
ADJUSTING DECK RAKE	6-33

RECOMMENDED MAINTENANCE SCHEDULES

To prevent accidents, breakdowns and keep your work in good condition, regular inspections and maintenance are required.

MAINTENANCE SERVICE INTERVAL	MAINTENANCE PROCEDURE
1. After the first 50 hours	<ul style="list-style-type: none"> • Change the engine oil.
2. After the first 100 hours	<ul style="list-style-type: none"> • Check the wheel hub slotted nut torque specifications.
	<ul style="list-style-type: none"> • Check the wheel lug nuts.
	<ul style="list-style-type: none"> • Check the park brake adjustment .
3. After the first 250 hours	<ul style="list-style-type: none"> • Change the hydraulic filter and fluid.
4. Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level.
	<ul style="list-style-type: none"> • Check the mower blades .
	<ul style="list-style-type: none"> • Check the safety interlock system.
	<ul style="list-style-type: none"> • Check the rollover protections systems (ROPS) knobs.
	<ul style="list-style-type: none"> • Check the seat belt.
	<ul style="list-style-type: none"> • Check for loose hardware.
	<ul style="list-style-type: none"> • Clean the engine and exhaust system area.
	<ul style="list-style-type: none"> • Clean the hydro fan cooling guards, hydro cooling fins, and fan.
	<ul style="list-style-type: none"> • Clean the grass and debris build-up from the machine and cutting deck. • Clean the grass build-up from under the cutting deck.
5. Every 50 hours	<ul style="list-style-type: none"> • Check the hydraulic oil level.
	<ul style="list-style-type: none"> • Check the tire pressures.
	<ul style="list-style-type: none"> • Check the condition of the belts.
	<ul style="list-style-type: none"> • Check spark arrester. (if equipped)

MAINTENANCE SERVICE INTERVAL	MAINTENANCE PROCEDURE
6. Every 100 hours	• Change the engine oil.
	• Lubricate the deck lift pivots.
	• Remove the engine shrouds and clean the cooling fins.
	• Check the spark plugs.
7. Every 250 hours	• Replace the primary air cleaner element - check secondary air cleaner element; replace if dirty.
8. Every 500 hours	• Replace the secondary air cleaner element
	• Change the hydraulic filter and fluid. (Every 250 hours if using Mobil 1 15WSO)
	• Check the wheel hub slotted nut torque specifications .
	• Check the wheel lug nuts.
9. Yearly	• Check the park brake adjustment.
	<ul style="list-style-type: none"> • Grease the deck and pump idler pivots. • Grease the front caster pivots.

IMPORTANT

- **Air cleaner should be cleaned more often in dusty conditions than in normal condition.**
- **Do not attempt to repair major parts that have a significant impact on product performance and get it repaired at specified dealers.**

LUBRICANTS

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

NO.	ITEM	CAPACITY	LUBRICANTS
1	Fuel	Residential: 7.5 U.S. gal. Commercial: 12.5 U.S. gal.	Automobile unleaded or unleaded gasoline 87 octane or higher
2	Engine oil	0.48 U.S. gal.	Engine oil : API service Classification SG, SH, SJ or higher Above 10 °C (50 °F)... SAE 30 Between -18 °C(0 °F) TO 38 °C (100 °F)... SAE 10W - 30 Below 0 °C (32 °F)... SAE 5W - 30
3	Transaxle fluid	1.4 U.S. gal.	Engine oil : API service Classification SL SAE20W-50

※ Oil amount when the oil level is at the upper level of the oil level gauge.



WARNING

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

DAILY CHECK GENERAL INFORMATION

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

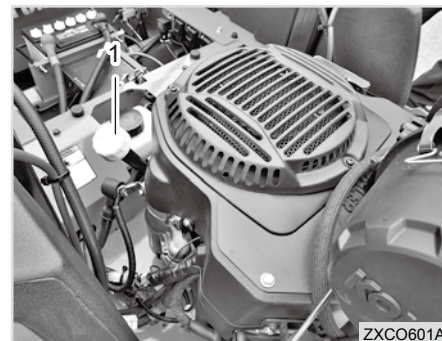
1. If any abnormality is detected during the previous day, check that there is no problem before using it.
2. Perform a pre operation check by walking around the machine, looking for the following:
 - Loose bolts or nuts
 - Loose mower deck mounts
 - Any damage or deformation of the body
 - Oil or fluid leakage

For detailed information, refer to “Recommended maintenance schedules” in this chapter.

CAUTION

- **Engage the parking brake or put a wheel chock on the rear wheel while the engine is stationary and inspect and maintain the machine on a level surface.**
- **If fuel or fluid spills, clean it thoroughly.**
- **The battery, wiring, muffler or surrounding areas of the engine can catch on fire if there is debris or spilled fuel present. Check and clean as needed.**
- **Only perform engine inspection and/or maintenance while the engine is cool. Do not remove covers or touch parts around the engine until it has cooled down.**

CHECKING ENGINE OIL LEVEL



(1) Oil Filler Neck

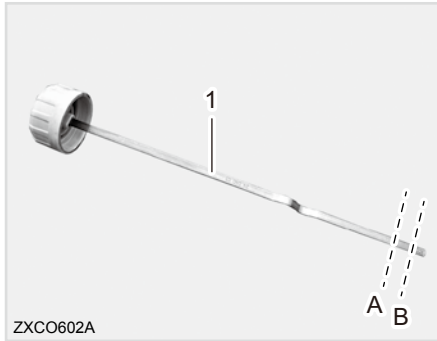
1. Check the engine oil daily.
2. Park the mower on a level ground and lower the mower deck.
3. If the engine was just running, wait for approx. 5 minutes before checking the oil level.

CAUTION

To avoid injury:

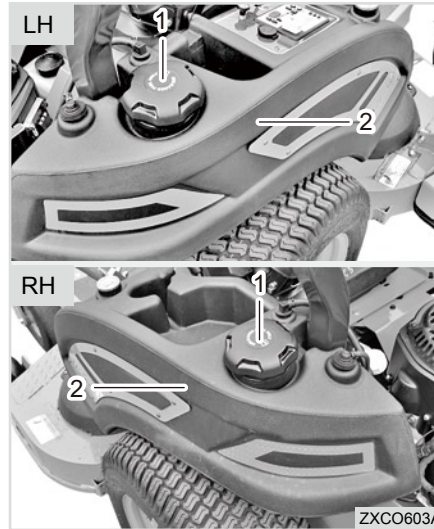
- **Be sure to stop the engine before checking the oil level.**

CHECKING AND ADDING FUEL



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

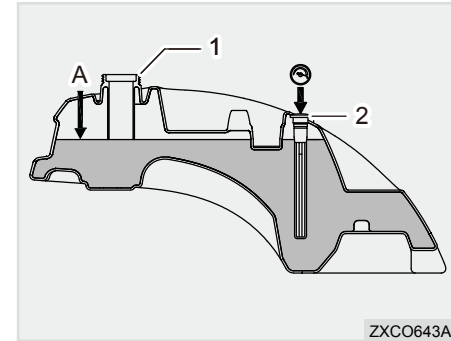
4. Pull out the oil dipstick, clean it, and then insert it into its original position. Then, pull it out again and check if the oil level is within the specified range.
5. If the oil level is too low, add new oil so that the level is within the allowable range.



(1) Fuel Tank Cap (LH/RH)
(2) Fuel Tank (LH/RH)

The fuel tank is located on the left and right side of the seat. (the left side for residence model).

Make sure to use pure and high-quality gasoline (unleaded) fuel.



(1) Filler Neck (2) Fuel Gauge
(A) Fuel Level

1. Check the amount of fuel by fuel gauge.
2. If the fuel level is low, open the fuel tank filler cap and add the fuel.
3. When refueling is completed, turn the fuel tank cap clockwise until it makes a clicking noise.

⚠ DANGER

- *To avoid injury from burns, allow the mower to cool before removing the fuel tank cap and refueling.*

⚠ WARNING

- *Fuel in the fuel tank can become pressurized. Open fuel cap slowly in a well ventilated area, wait for pressure to be released to avoid serious or fatal injury from discharged spraying fuel. No smoking or open flames.*

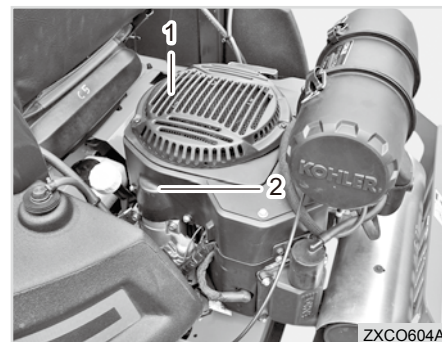
⚠ CAUTION

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.
- As dirt or sand contained in fuel may cause the fuel injection pump to malfunction, use the strainer when refuelling.
- Only refill the fuel to the bottom of the fuel inlet.

⊕ IMPORTANT

- Be careful not to let the fuel tank become empty. Otherwise air will enter the fuel system, necessitating bleeding before next engine start.
- Be careful not to spill during refueling. If a spill occur, wipe it off at once, or it may cause a fire.
- If unit is not used for a long time, make sure the fuel viscosity is suitable for the cold weather.

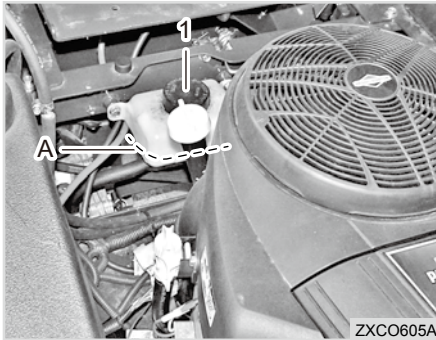
CHECKING AND CLEANING AIR INTAKE SCREEN

(1) Air Intake Screen (2) Engine Shroud

Daily or after 5 hours of use, check that the air intake screen and air inlet are clean. Dust or stains around the air intake screen, air inlet or around the engine cooling area will reduce cooling performance.

1. Make sure that the air intake is free of grass pieces and debris
2. If the screen is dirty, clean the screen with a brush or cloth.
3. Remove all dust and dirt from the engine shroud.

CHECKING TRANSAXLE FLUID LEVEL



(1) Oil Filler Neck (A) Lower Limit

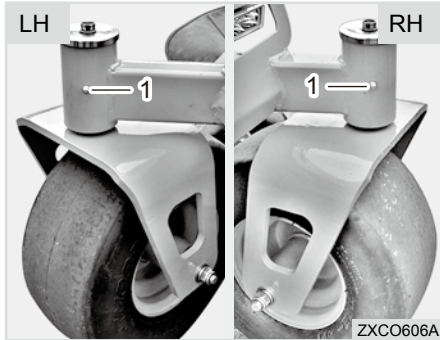
⊕ IMPORTANT

- If the oil level drops too low, do not start the engine.

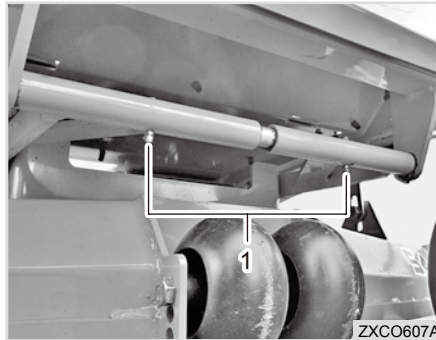
1. Park the mower on a level ground and lower the implement.
2. Make sure the parking brake is set, set all shift levers into the neutral position.
3. Stop the engine.
4. If the oil level is too low, add some new oil so that the level is within the allowable range.

LUBRICATION

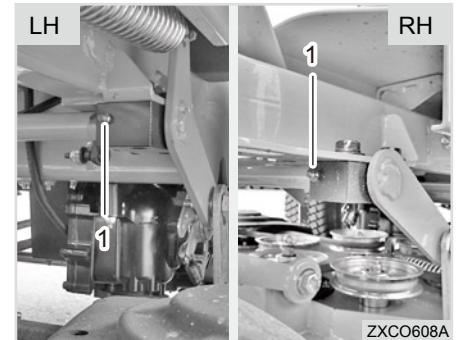
Apply quality multi-purpose grease to the following locations specified in the following figure when necessary. Also, record the operating hour on every application.



(1) Front Cast Support Pipe (LH/RH)

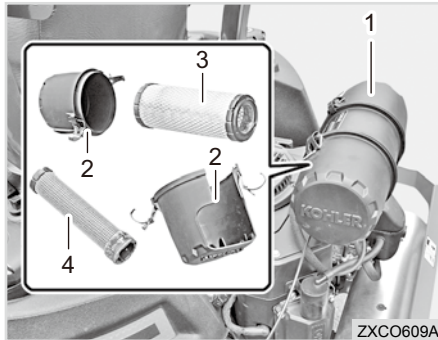


(1) Deck Front Link Pipe (LH/RH)



(1) Shaft Support Bracket (LH/RH-Front)

EVERY 50 HOURS AIR FILTER MAINTENANCE



(1) Air Cleaner (2) Air Cleaner Cover
(3) Primary Element (4) Secondary Element

1. Open the air filter cover and remove the primary element and the secondary element. There is only a primary filter for residential model.
2. The air filter uses a dry element. Never apply oil.
3. Do not service the filter unless it should be cleaned.
4. To clean the filter, use only clean dry compressed air on the inside of the filter. Air pressure at the nozzle

must not exceed 2 kgf/cm² (29 psi). Maintain reasonable distance between the nozzle and the filter.

⊕ IMPORTANT

- Clean them more often in dusty areas.
- Do not start the engine with the filter removed.

CHECK SPARK ARRESTER (IF EQUIPPED)

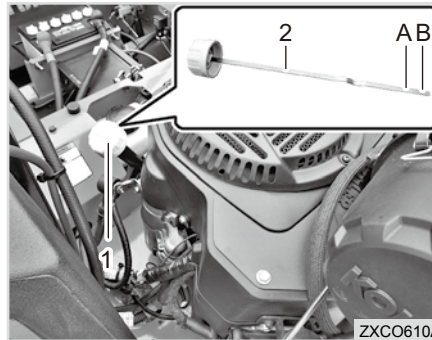
If you do not have a spark arrester equipped, do not refuel or start the engine.

1. Stop the engine and wait for all moving parts to stop before removing the key and engaging the parking brake.
2. Wait for the muffler to cool.
3. Replace the arrester if damage is found on the screen or welds.
4. If screen clogging is observed, remove the arrester, remove loose particles from the arresters, and clean the screen with a wire brush.

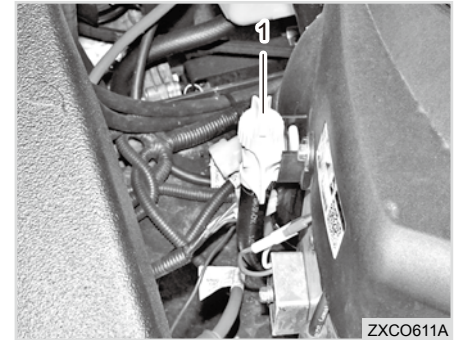
⚠ CAUTION

- Hot exhaust components can ignite gasoline vapors even after the engine has shut down.
- Flames that are exhausted during engine operation may ignite flammable materials. A fire may cause injury or property damage.

EVERY 100 HOURS CHANGING ENGINE OIL



(1) Oil Filler Neck (2) Oil Gauge
(A) Upper Limit (B) Lower Limit



(1) Drain Plug

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

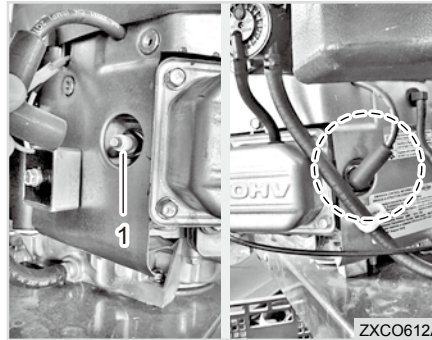
2. Stop the engine, apply the parking brake and remove the drain plug.
3. Place the oil pan under the engine and unscrew the drain plug counterclockwise to drain the oil completely. All the used oil can be drained out easily when the engine is still warm.
4. Open the oil inlet so that the engine oil is easily drained.

5. Refill the engine oil to the specified amount through the oil filler neck.

⚠ WARNING

- *The engine oil is very hot while the engine is running or right after the engine is stopped. Be careful not to be burnt.*
- *Avoid oil contact while changing or adding engine oil and wear eye protection to prevent eye contact.*
- *Prolonged and repeated contact with the engine oil may cause skin disorders and skin cancer. If skin contact is made, wash thoroughly with soap or hand cleaner as soon as possible.*
- *Keep the used oil out of reach of children.*

CHECKING SPARK PLUG

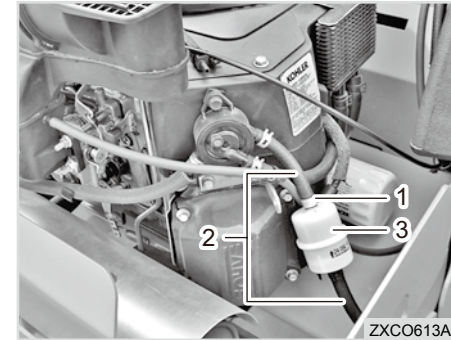


(1) Spark plug (Both Sides)

Check the spark plug condition and gap every 100 hours and replace the spark plug every year.

1. Remove the spark plug wire from the spark plug.
2. Remove the plug using a spark plug wrench.
3. Check spark plug for cracks, wear and damage, and replace spark plug if necessary.

CHECKING FUEL LINES/FUEL FILTER



(1) Pipe Clamp (2) Fuel Line
(3) Fuel Filter

1. The fuel hose is made of rubber so it ages regardless of the maintenance cycle.
2. Replace aged fuel hose along with the hose clamp and tighten firmly.
3. Check the fuel filter and replace it immediately if it is blocked by dust or dirt. To replace the fuel filter, contact your **KIOTI** dealer.

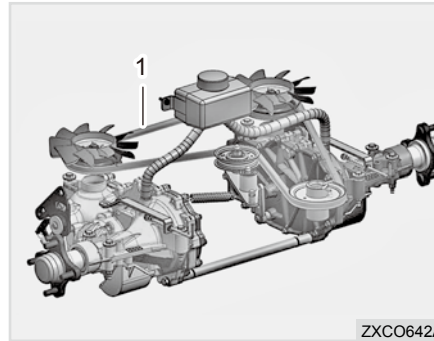
⚠ CAUTION

- Stop the engine when checking the following items.
- Inspect the fuel pipe regularly. 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 disconnecting the fuel pipe for replacement, plug both ends with cloth or paper to prevent dust or foreign material from entering it. Otherwise, the fuel injection pump can be damaged. Pay extra caution to the fuel pump to prevent dust from entering it.

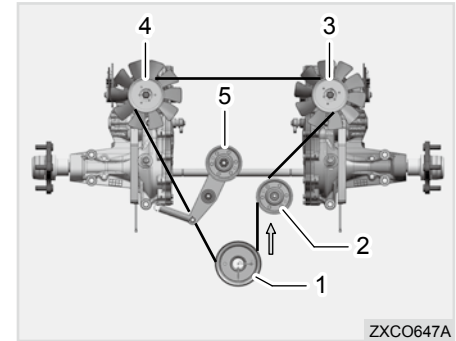
ADJUSTING TRANSAXLE DRIVE BELT TENSION



(1) Drive Belt

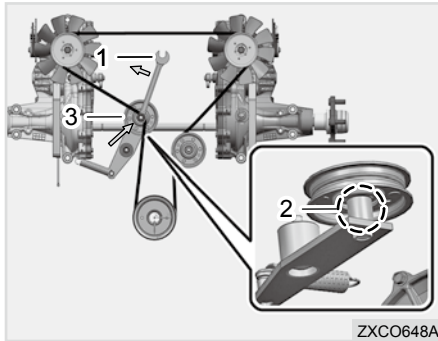
The transaxle drive belt is automatically adjusted and does not need adjustment.

MOUNTING AXLE BELT



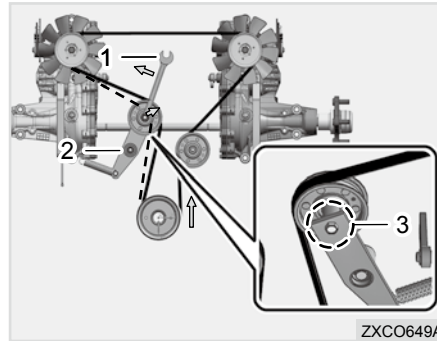
- (1) Pulley No. 1 (2) Pulley No. 2
 (3) Pulley No. 3 (4) Pulley No. 4
 (5) Pulley No. 5

1. Put the axle belt on the pulley No.1, 2, 3, 4 pulley in the order as above drawing.



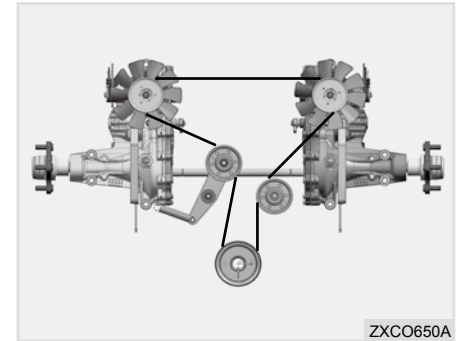
(1) Spanner 17 mm (2) Spacer
(3) Pulley No. 5

2. Using a Spanner (17 mm), hold the nut on the upside of No. 5 pulleys and push it above drawing and then put the axle belt on the spacer under the No. 5 pulley.



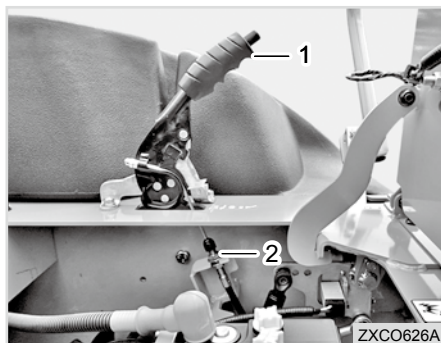
(1) Spanner 14 mm (2) Bracket
(3) Bolt

3. Using spanner (14 mm) hold the bolt of under the bracket, push it above drawing and then put the Axle belt on the No. 5 pulley.



4. Make sure the axle belt path is correct.

CHECKING PARKING BRAKE



(1) Parking Brake

(2) Lock Nut

The parking brake linkage should be adjusted whenever the parking brake lock latch is placed in the “Engage” position and the parking brake will not prevent the mower from moving. If the following procedures do not allow you to engage the parking brake properly, contact your **KIOTI** dealer for further brake adjustments.

1. Loosen the fixed nut on the parking brake.

2. Check the operating force of the parking brake, and adjust if lacking.

WARNING

- *Do not operate the mower if the parking brake is not operable. Possible severe injury could result.*

IMPORTANT

- **Improper adjustment of the parking brake can damage the machine.**
3. Place the steering levers in the "neutral lock" position and stop the engine.
 4. If the machine does not move, it is correctly adjusted.

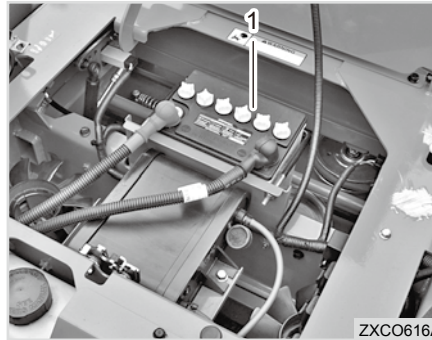
NOTE

- If this procedure does not achieve proper brake adjustment, please contact your authorized **KIOTI** dealer.

ADJUSTING THROTTLE CONTROL AND CHOCK

These adjustments must be performed by your Authorized **KIOTI** dealer to ensure proper and efficient running of the engine. Should either need adjustment, contact your authorized **KIOTI** service center.

CHECKING AND CHARGING BATTERY



(1) Battery

Periodically check the battery condition and charge level in accordance with the manufactures recommendation.

Mishandling the battery shortens the service life and adds to maintenance costs. If the battery is insufficiently charged, the headlights may dim and the engine is hard to start. It is important to inspect the battery periodically.

1. The battery cable should always be clean and firmly connected. When installing a new or used battery, clean its terminals.
2. Check the battery and cable for damage and corrosion.
3. Apply grease to the terminals and cable end in order to prevent corrosion.



WARNING

Batteries produce explosive gas:

- **Always charge the battery in a well ventilated area to allow the gases produced during charging to dissipate.**

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 and should be replaced, replace it with a new one with same

BATTERY TYPE	VOLTS (V)
300 CCA/ SP-35 or equivalent	12

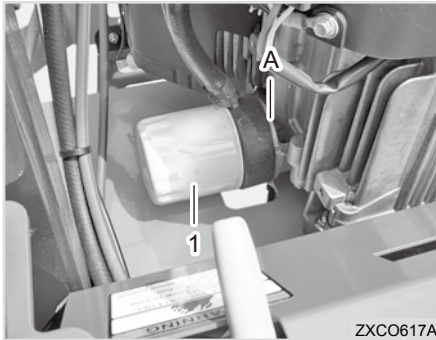
CAUTION

- **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.**
- **Never check the charge status of the battery by placing a metal object across the posts. Use a voltmeter or hydrometer.**

DIRECTION FOR STORAGE

1. When storing the tractor for a long period, remove the battery from tractor and 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.

EVERY 200 HOURS REPLACING ENGINE OIL FILTER



(1) Engine Oil Filter
(A) Mounting Surface

1. Apply a thin film of oil to the O-ring of a new filter and tighten the new filter firmly by hand.
2. Fill the engine oil to the specified level and turn filter clockwise until rubber seal contacts the filter adapter then tighten filter an additional 1/2 to 3/4 turn.
3. Operate briefly and check for oil leaks on the sealing surface as the engine oil may be reduced after replacing the filter.

4. Check the engine oil level again with the oil gauge. If the level is low, add more oil.

⚠ CAUTION

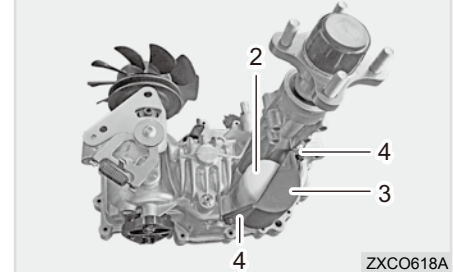
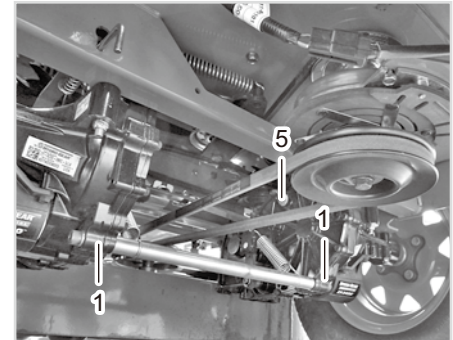
- Be sure to stop the engine before changing the fluid or replacing the filter.
- Do not dispose of used oil and oil filter into drainage and other places not designated by regulations. Observe applicable regulations when disposing used oil and filters.

⊕ IMPORTANT

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

ENGINE OIL SAE 10W-30

REPLACING TRANSAXLE OIL FILTER



(1) Transaxle (2) Transaxle Oil Filter
(3) Filter Guide (4) Hex. Flange Bolt
(5) Air Bleeding Port Plug

1. Install the bypass valve.

2. Remove hex flange bolts and filter guard and remove debris around oil filter.
3. Place the oil pan under the oil filter and remove the oil filter.
4. If oil spills, check all parts for excessive wear or damage and replace if necessary.
5. Wipe off the filter assembly surface and apply shallow oil on the new filter O-ring.
6. Fit the new filter by hand and touch the filter O-ring against the filter surface, then rotate 3/4 to one turn.
7. Replace the filter guard with three hex flange bolts. At this time, torque the bolts to 7.35 N-m (5.42 lbf-ft).
8. Repeat steps 2 to 7 for the opposite transaxle.
9. Dispose of the used filter and the used oil in an appropriate container and dispose of in an approved disposal facility.
10. Disconnect the air breather port from the left and right side transaxles before refilling. This will ensure that the transaxle is vented while filling the oil.
11. Remove the cap on the transaxle fluid tank in the machine frame.
12. Fill the oil until oil appears at the bottom of the breather port and attach the breather port plug to the transaxle.
13. Fill the transaxle with oil through the transaxle fluid tank until the "Full Cold" line is reached in the transaxle fluid tank.
14. Reinstall the transaxle fluid tank cap by hand. Be careful not to over-tighten.
15. Proceed to the air bleeding procedure.

► AIR BLEEDING PROCEDURE

Due to the efficiency of the air in all hydrostatic systems, bleeding air from the unit is very important. Air is inefficient because it is faster in compression and expansion than approved oils for use in all hydrostatic systems.

This air bleeding procedure must be carried out every time the entire hydrostatic system is serviced.

The following symptoms may occur if air exists in the hydrostatic system:

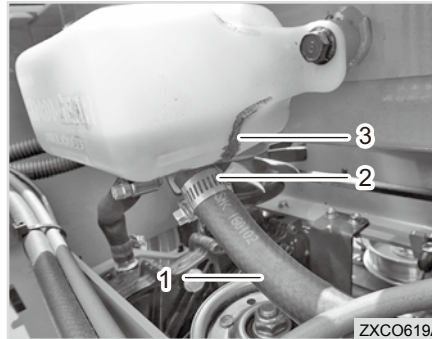
1. Noisy operation.
2. Lack of output and driving force after short-term operation.
3. High operating temperature and excessive expansion of oil.

Check that the fluid level of the transaxle is adequate before starting. The following procedure works best when the machine's wheel is off the ground. Repeat under normal

operating conditions. If this task is difficult, it should be done in a free space with no objects or people.

1. Release the brakes.
2. Slowly move the steering levers forward and backward (5 or 6 times) when the bypass valve is open and the engine is running.
3. With the bypass valve closed and the engine running, slowly move the steering levers forward and backward (5 to 6 times). After stopping the engine, check the oil level and replenish the oil.
4. Repeat steps 2 and 3 until all air is completely removed from the unit. When the transaxle operates at normal noise levels and smoothly moves back and forth at normal speed, the transmission is considered to have been bled of air.

CHECKING TRANSAXLE FLUID HOSE



(1) Transaxle Fluid Hose (2) Hose Clamp
(3) Transaxle Fluid Tank

1. Tighten the transaxle fluid hose and hose clamps and check for damage.
2. If the oil hose is worn or damaged, replace or repair it immediately.

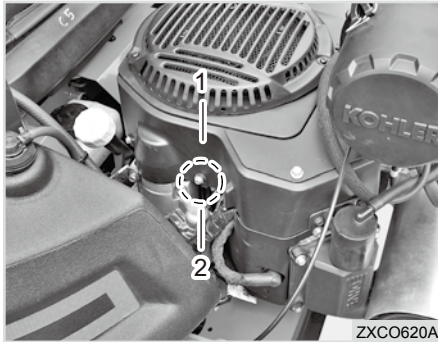
CAUTION

- Always stop the engine before checking the oil hoses.
- Immediately after the engine has stopped, wait for a while as oil may become hot and cause burns.

SPEC

SAE 20W 50

CLEANING ENGINE SHROUD



(1) Engine Shroud (2) Mounting Bolt

1. Remove engine shroud mounting bolts and remove shroud.
2. Check if the engine's cooling fan is covered with dust and clean with compressed air.

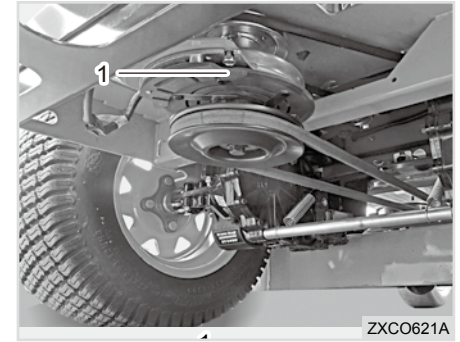
CAUTION

- **Allow the engine to cool before removing the shroud.**
- **When cleaning, protect your eyes and face from foreign matter and objects.**

EVERY 400 HOURS REPLACING FUEL FILTER

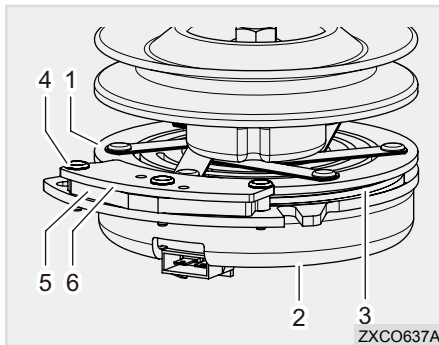
Replace it every 400 hours, or if the fuel filter is clogged, immediately. When replacing, contact **KIOTI** dealer where you purchased it.

EVERY 500 HOURS ADJUSTING PTO ELECTRIC CLUTCH



(1) PTO Electric Clutch

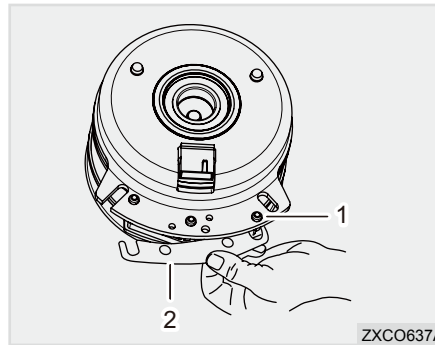
The PTO electromagnetic clutch has two functions for mower operation. In addition to starting and stopping power flow to the cutter blades, the clutch acts as a brake to help stop the blade rotation if the PTO is off or the operator's presence control is triggered.



- (1) Armature
 (2) Field Shell
 (3) Rotor
 (4) Brake Mounting Bolt
 (5) Brake Spacer
 (6) Brake Pole

No adjustment required. On devices with a 60 inch deck, however, clutch brakes can wear out to the point where the clutch is no longer engaged. Removing shims will extend the clutch life.

REMOVING SHIM



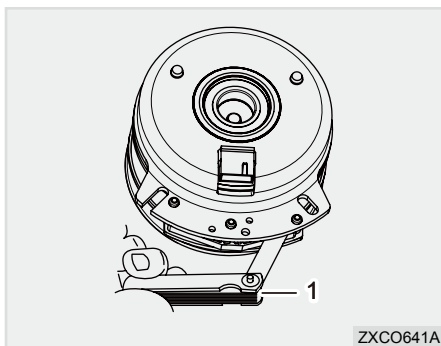
- (1) Brake Mounting Bolt (2) Shim

1. Stop the engine and wait for all moving parts to stop before removing the key. Engage the parking brake and allow the machine to cool completely before removal process.
2. Use a pneumatic line to blow debris under the brake pawl and around the brake spacers.
3. Check the condition of wiring, connectors and terminals. If necessary, clean or repair.

4. Check that the clutch connector has 12V when the PTO switch is connected.
5. Measure the gap between the rotor and armature and proceed to the next step if the gap is greater than 0.04 in.
 - Loosen the two brake mounting bolts from one half to a full turn.

⊕ IMPORTANT

- **Do not remove the brake pole from the field shell / armature. The brake pole must be fitted to match the armature and must be consistent after the shim has been removed to ensure proper brake torque.**

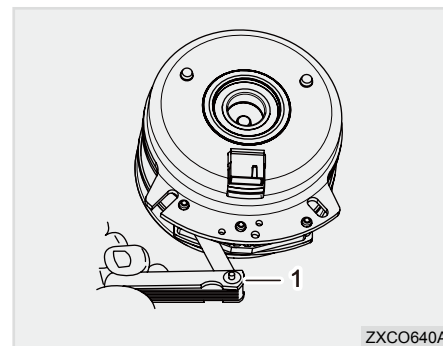


(1) Feeler Gauge

- Use a pliers or remove the shims by holding the tabs by hand. (Do not discard the shim until the correct clutch function is verified)
- Use pneumatic lines to blow debris away under the brake pole and around the brake spacers.
- Re-tighten each bolt to 13 N-m (1.3 kgfm or 9.6 ft-lb) \pm 0.7 N-m (0.07 kgfm or 0.52 ft-lb).

- Use a 0.010 inch feeler gauge to check for gap widths between the rotor and armature surfaces on either side of the brake pole as shown. (In some cases it is difficult to measure true gaps due to the way rotors and armatures face each other (peaks and valleys).)
- If the gap is less than 0.010 in, refer to the section on troubleshooting and reinstall the shim and proceed with the check.

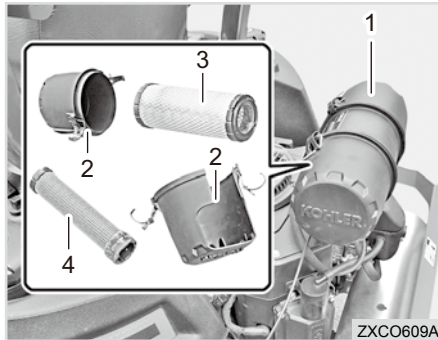
- If there is enough gap, proceed to the safety check as follows.



(1) Feeler Gauge

- Sit on the seat and start the engine.
- Make sure the blades Do Not engage with the PTO switch "off" and the clutch disengaged. If the clutch is not connected properly, refer to the troubleshooting section
- Check that the PTO switch is "OFF" and the clutch is disengaged from the blade. If the clutch doesn't disengage, refer to the troubleshooting section and reinstall the shim.

EVERY 1 YEAR REPLACING AIR CLEANER ELEMENT



(1) Air Cleaner (2) Air Cleaner Cover
(3) Primary Element (4) Secondary Element

If the condition of the air cleaner element is poor, the life of the engine may be shortened and excessive smoke generation and engine output may be reduced. Therefore, the filter should be inspected from time to time and the time of replacement may vary depending on the operating conditions.

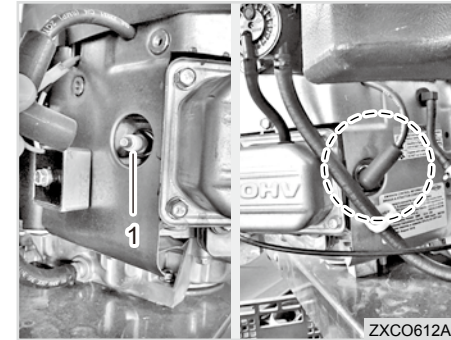
1. Inspect the intake hose and air cleaner housing for damage.

2. Loosen the air cleaner clip and remove the cover.
3. Clean the inside of the air cleaner housing thoroughly.
4. Replace the air cleaner element and inspect the housing for damage.
5. Attach cover and secure with clip.

CAUTION

- **Use genuine parts for the elements. Using similar parts may damage the inside of the engine and the sensor.**
- **Tighten the cover firmly to prevent dust from entering.**
- **Do not allow dust or foreign matter to enter the air intake port when removing the element.**

CHECKING SPARK PLUG

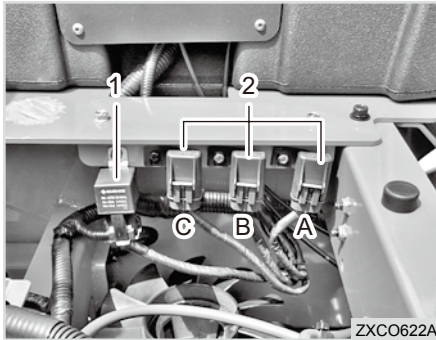


(1) Spark Plug (Both Sides)

Check the spark plug condition and clearance every 100 hours and replace the spark plug every year. Refer to Spark Plug Inspection for replacement.

SERVICE AS REQUIRED

REPLACING FUSES



(1) Relay

(2) Fuse Box

1. Lift up the seat and remove the shorted fuse.
2. Replace it with a new fuse of the same capacity in the correct position and tighten it.

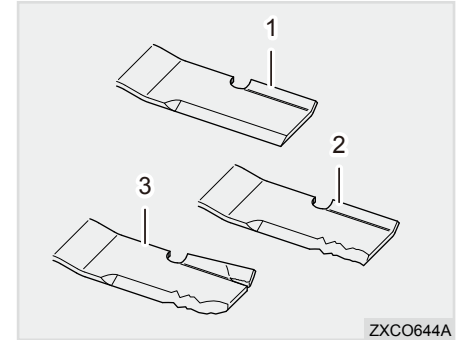
⊕ IMPORTANT

- **Never use wire or silver foil as a fuse replacement.**

3. The main fuse protects the following functions.

NO	PROTECTION CIRCUIT	CAPACITY
A	Regulate	25A
B	Control panel	20A
C	Power outlet	10A

CHECKING BLADE



(1) New Blade

(2) Worn Blade

(3) Cracked Blade

1. Lift the side discharge cover to see the blade.
2. The blade should always be sharp like new blade.
3. Blades should be inspected and replaced if excessive wear or cracking is present. A dull blade can be sharpened and re-used.
4. Always check how loose the fastening bolt of the blade is before operation, and tighten it with the specified torque when loose.

BLADE TIGHTENING TORQUE

103 ~ 118 N · m
 (76 ~ 87 ft - lb)
 (10.5 ~ 12.0 kgfm)

⚠ WARNING

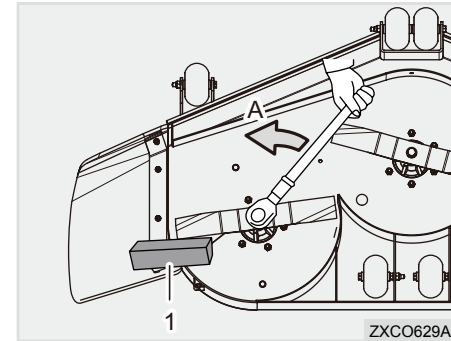
- *Improperly equipped blades or related components used to secure the blade are extremely dangerous. If you do not use the original parts or if they are installed incorrectly, the blades or other parts may protrude causing serious injury or death.*
- *Always wear the proper hand and eye protection when working with cutter blades.*

⚠ CAUTION

- **Make sure to stop the engine when checking the blades.**
- **When touching the blade, wear leather gloves or cover the end of the blade with a cloth.**

INSPECTION AND SHARPENING BLADE

1. Make sure that the engine is off, the parking brake is set, and the blades have stopped moving completely.
2. Raise the mower deck to its highest, locked position.
3. Use care when checking the cutting blades. Do not touch the blades directly, wear safety gloves or use a blade buddy to hold the blades during removal.
4. Only Replace a worn or bent blade. NEVER straighten or weld a worn blade.
5. When sharpening blades: DO not sharpen blades beyond 1/3 of the width of the blade. Sharpen cutting edge at the same bevel as the original.

REPLACING BLADE

(1) Block
 (A) Loosen

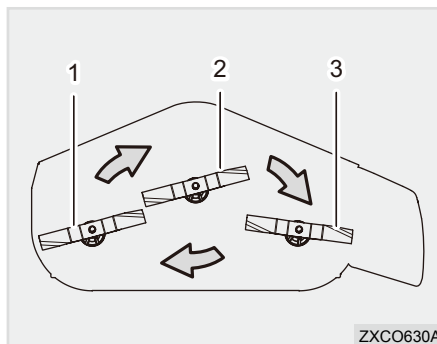
1. When replacing the blade, hold the front part.
2. Separate the mower deck from the mower and make the blade visible.
3. Use a box wrench or put a block between the blades and the mower housing to ensure that the spindle on the pulley nut does not rotate when detaching the blade bolts.
4. When sharpening the blade,

secure the blade to the vise firmly. Use a large mill file to sharpen until it is sharpened according to the original angle.

- To check the balance of the blade, pass a small rod through the center hole. If the blade is unbalanced, file the heavy side of the blade until the blade is balanced.
- When mounting the blade, be sure to insert the spring between the blade and the bolt
- Remove grass and dirt from above and inside the mower before inspecting or replacing the blade. In particular, clean the inside of the belt cover. If not cleaned, the life of the belt will be shortened.

⊕ IMPORTANT

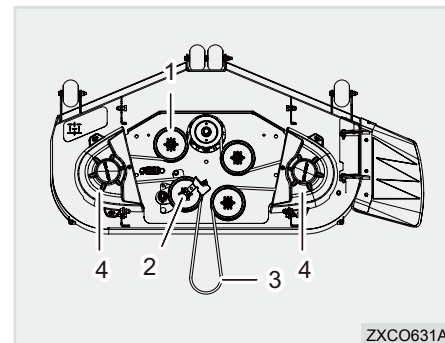
- When removing the blade mounting bolts, use an appropriate socket wrench



(1) Blade (LH) (2) Blade (Center)
(3) Blade (RH)

- Tighten the blade mounting bolts to a torque of 103 to 118 N-m (76 to 87 ft-lb or 10.5 to 12.0 kgfm).
- To prolong the life of the blade, periodically change the position to as shown in the figure above.

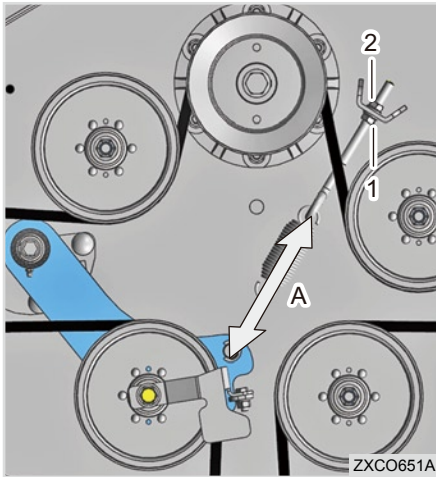
REPLACING MOWER BELT



(1) Tension Pulley (2) Bolt
(3) Belt (4) Belt Cover

- Remove the mower deck from the machine by following the procedure in "Mower Deck Dismounting".
- Remove the left and right belt covers from the mower deck.
- Remove the tension pulley and remove the belt
- To install a new belt, follow the above steps in reverse order.
- Tighten the tension pulley tightly with a torque of 77.6 to 90.2 Nm (57.2 to 66.5 ft-lb or 7.9 to 9.2 kgfm).

ADJUSTING BELT TENSION



(1) Nut 1 (2) Nut 2
(A) Adjusting Length of Belt Tension

1. Loosen the nut 1.
2. Tighten or loosen nut 2 and set the length of "A" as follows.

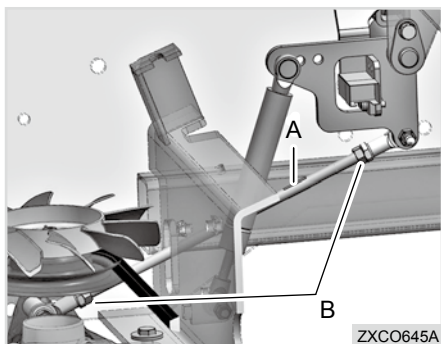
DECK SIZE	ADJUSTING LENGTH
48"	7.1"±0.2" (180mm±5mm)
54"	7.5"±0.2" (190mm±5mm)
60"	8.3"±0.2" (210mm±5mm)

3. Tighten nut 1.
4. Check the tension of the belt.

ADJUSTING TRAVEL

Neutral or tracking adjustments will need to be made if:

1. The steering control levers are in the neutral position and the machine creeps forward or backward. (See Neutral Adjustment).
2. The steering control levers are in the full forward position and the mower pulls to one side or the other when traveling in a forward direction. (See Tracking Adjustment)



(A) Adjust here

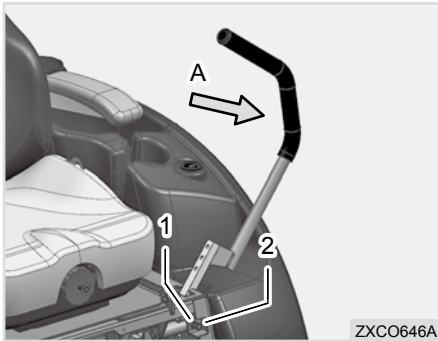
(B) Loosen the jam nut

► NEUTRAL ADJUSTMENT

1. Be sure the dump valve levers are in the run position and the steering control levers are in the neutral lock position.
2. With an operator in the seat, start the engine and disengage the parking brake.
3. Run the engine at full operating speed and check if the machine creeps forward or backwards.

► NEUTRAL ADJUSTMENT

1. Be sure the dump valve levers are in the run position and the steering control levers are in the neutral lock position.
2. With an operator in the seat, start the engine and disengage the parking brake.
3. Run the engine at full operating speed and check if the machine creeps forward or backwards.
4. Adjust the RH wheel by loosening the jam nuts on the steering control rod and turning the adjustment rod until the drive wheel turns in the forward direction. Turn the adjustment nut back until the drive wheel stops moving. Turn the adjustment nut an additional 1/2 turn.
5. Tighten the jam nuts and repeat for the LH wheel.
6. Actuate the steering control levers forward and reverse several times and return them to the neutral position.
7. Check that the drive wheels remained in neutral and readjust if necessary.



(1) Jam Nut (2) Tracking Adjust Bolt
 (A) Move steering lever out To the neutral position

► TRACKING ADJUSTMENT

1. If at full speed the mower pulls right, it is an indication that the left wheel is turning faster than the right wheel. To adjust this condition, proceed as follows:
 - Stop the machine and place the steering control levers in the neutral position. Loosening the jam nut and turn the tracking adjustment bolt for the LH pump inward (Clockwise). This will cause the

- control rod to stroke the LH pump less, slowing down the LH wheel.
2. If at full speed the mower pulls left, it is an indication that the right wheel is turning faster than the left wheel. To adjust this condition, proceed as follows:
 - Stop the machine and place the steering control levers in the neutral position. Loosening the jam nut and turn the tracking adjustment bolt for the RH pump inward (clockwise). This will cause the control rod to stroke the RH pump less, slowing down the RH wheel.
3. Tighten the nut after adjustment.

⚠ CAUTION

- **Stop the engine and remove the key from the ignition before making any adjustments. Wait for all moving parts to come to a complete stop before beginning work.**

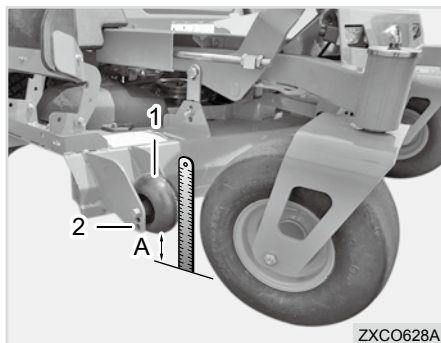
⚠ CAUTION

- **The engine and drive unit can get hot during operation causing burn injuries. Allow engine and drive components to cool before making any adjustments.**

📖 NOTE

- Before proceeding with this adjustment, be sure that the caster wheels turn plus pivot freely and that the tire pressure in the drive wheels is correct. If the tire pressure is not correct, the machine will pull to the side with the lower pressure.

ADJUSTING ANTI-SCALP ROLLER



(1) Anti-Scalp Roller (2) Height Adjust Hole
(A) Ground Height: 0.75 in.

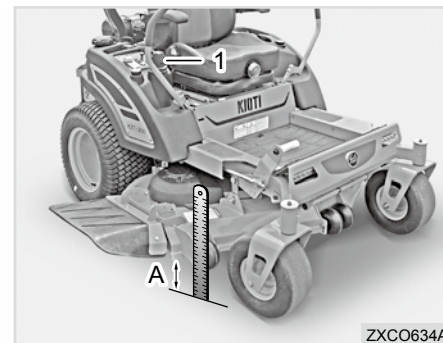
1. Inspect machine tire air pressure and inflate to the correct pressure.
2. Start the engine and lift the mower deck to the carrying location.
3. Rotate the cutting height adjustment dial to adjust the height and lower the mower deck.
4. Adjust the auxiliary wheels to approximately 0.75 inches from the ground and adjust the remaining rollers to the same height.

5. Attach the auxiliary wheels rollers with attaching hardware.

⊕ IMPORTANT

- Check the auxiliary wheels adjustments whenever the mower deck cutting height changes.
- It is recommended that all the anti-scalp rollers be kept off the ground to minimize scuffing.

ADJUSTING DECK LEVEL



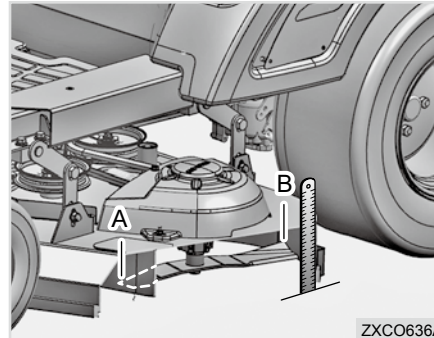
(1) Cutting Height Adjust Dial
(2) Height Adjust

1. Loosen the right fixing nut of the main unit and turn the height adjustment dial so that the blade height is 3 inches.
2. Tighten the fixing nut. Make the same adjustment on the left as well.
3. Measure the left and right blade heights to the ground and adjust to make the left and right measured values to be less than 0.12 inches.

ADJUSTING DECK RAKE

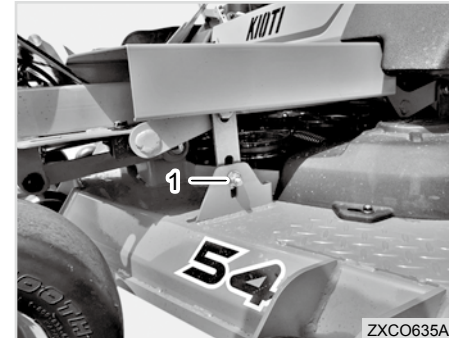
CAUTION

- Park the machine on a level surface, engage the parking brake and turn off the PTO switch.
- Stop the engine when checking and adjusting the mower deck height.



(A) Front

(B) Rear



(1) Lock Nut

1. Lift the mower deck to the height it will be moved to.
2. Turn the blade height adjustment dial to 3 inches.
3. Put 2 inch blocks under both sides of the mower deck. Be careful that the auxiliary wheels do not get on the block at this time.
4. Lower the mower deck and loosen the front and rear fixing nuts.
5. Loosen the lock nut and adjust so that the height of the blade is 3 inches.
6. Tighten the lock nut.
7. Make sure that the difference between the front height of the blade and the back height is less than 0.24 inches and the front is set lower than the rear. If not, you will need to adjust again.

MEMO



STORAGE AND DISPOSAL

MOWER STORAGE	7-2
DAILY STORAGE.....	7-2
LONG-TERM STORAGE	7-2
USING MOWER AFTER LONG TERM STORAGE	7-3
USAGE AND DISPOSAL	7-4

7

MOWER STORAGE

DAILY STORAGE

1. Keep the mower 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 mower 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 mower in winter and store it indoors.
4. Please clean the mower properly before storing because it may become spoiled by the moisture contained in the grass being cut.

LONG-TERM STORAGE

IMPORTANT

- **If the mower is not used for an extended period of time, follow the instructions below to prevent corrosion and performance deterioration of the mower while it is stored.**

1. Check the bolts and nuts for looseness, and tighten if necessary.
2. Apply grease to mower areas where bare metal will rust also to pivot areas.
3. Detach the weights from the mower 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 all for about 5 minutes.
6. Drain fuel tank, fuel lines, and carburetor, or use a fuel stabilizer,

to prevent deterioration, of the gasoline. If you choose to use a fuel stabilizer, follow the manufacturers recommendations, and add the correct amount for the capacity of the fuel system. Fill the fuel tank with clean, fresh gasoline. Run the engine for 2~3 minutes to get stabilized fuel into the carburetor.

7. With mower deck lowered to the ground, coat any exposed area with grease.
8. Remove the battery from the mower. Store the battery following the battery storage procedures. (See section "Battery" in Chapter Maintenance)
9. Keep the mower in a dry place where the mower is sheltered from rain. Cover the mower.
10. Clean the engine components as well as the mower.
11. Add grease to all the grease fitting.

USING MOWER AFTER LONG TERM STORAGE

12. Chock the frame in order to remove the weight from the tires.
13. Install the cover to the exhaust pipe.
14. Attach a tag onto the mower to inform the storage condition of the mower.



CAUTION

- **Never clean the mower body while the engine is running.**
- **Remove text: statement is incorrect, mower does not operate with a removable key.**
- **Cover the mower after the muffler and the engine have cooled down.**
- **If you are not removing the battery during the storage period, disconnect the negative battery terminal from the battery to protect the mower electrical system.**

1. Check the tire air pressure and inflate the tires if they are low.
2. Install the battery. Check that the battery is fully charged before installing it.
3. Check all fluid levels.
4. Remove grease from the exposed cylinder rod.
5. Apply grease to the lubrication points.
6. Get onto the mower and start the engine.
7. Check if the instrument panel and all parts operate correctly while running the engine for a few minutes.
8. Drive the mower outside and check if it is operating properly. Park the mower outside and idle engine for at least 5 minutes. Stop the engine and visually inspect the

mower. Check if there is leakage.

9. Start the engine, release the parking brake.
10. Stop the engine and check for leakage. Repair any part as required.

USAGE AND DISPOSAL

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

1. When changing the oil or coolant by yourself, be careful not to spill it and dispose used oil and coolant properly according to the applicable regulations.
2. Never leave or discard the expired mower or implement, but contact your local **KIOTI** Dealer to dispose it according to the regulations.
3. Avoid working under high load as it can cause excessive exhaust gas, which is harmful to the environment.

TROUBLESHOOTING	8-2
ENGINE TROUBLESHOOTING	8-2
BATTERY TROUBLESHOOTING	8-6
MOWER TROUBLESHOOTING	8-7

TROUBLESHOOTING

ENGINE TROUBLESHOOTING

CAUSE		COUNTERMEASURES
1. When engine does not start	• Start-up code is not correct	• Enter the correct start-up code and press the START / STOP button.
	• Steering levers position is not correct	• Set steering levers to "Neutral lock"
	• There is no driver in the seat	• Driver gets seated
	• The parking brake lever is at the wrong place	• Engage the parking brake
	• The position of the PTO switch is incorrect	• Set the PTO switch to the "OFF" position.
	• Battery is discharged	• Replace battery
	• Fuse short circuit	• Short circuited fuse replacement
	• Relay or switch defective	• See your KIOTI dealer
2. When starting engine is difficult	• Fuel is depleted	• Refuel
	• Clogged or damaged fuel hose or fuel filter	• Clean or replace fuel line or see your KIOTI dealer
	• Poor fuel quality	• Change fuel and fuel filters
	• Water and dust in the fuel system	• Fuel change or see your KIOTI dealer
	• Spark plug defects	• Adjust spark plug gap, or replace

CAUSE		COUNTERMEASURES
2. When starting the engine is difficult	• Dirty or clogged air cleaner	• Clean or replace air cleaner
	• Fuse short	• Replace fuse
	• Electrical connections are corroded or loose	• Clean and check electrical connections
	• Relay or switch defective	• See your KIOTI dealer
	• Battery is weak	• Cleaning the battery cable or charging if necessary
3. Insufficient engine power	• Engine overload	• Reduce engine speed
	• Engine oil level low	• Refill engine oil
	• Fuel filter clogging	• Replace fuel filter
	• Air cleaner contamination	• Clean or replace air cleaner
	• Low oil pressure	• Check oil level and replenish if necessary
	• Spark plug defect	• Adjust or replace spark plug
4. When engine rotation is rough	• Spark plug defect	• Adjust spark plug gap, or replace
	• Defective carburetor or ignition coil	• See your KIOTI dealer
	• Clogged air cleaner	• Clean or replace air cleaner
	• Choke is incorrectly adjusted	• See your KIOTI dealer

CAUSE		COUNTERMEASURES
4. When engine rotation is rough	<ul style="list-style-type: none"> • Poor fuel quality 	<ul style="list-style-type: none"> • Change fuel and fuel filters
5. When the exhaust color is white or blue	<ul style="list-style-type: none"> • Excessive engine oil 	<ul style="list-style-type: none"> • Reduce engine oil level to specified value
	<ul style="list-style-type: none"> • Piston ring worn or stuck 	<ul style="list-style-type: none"> • See your KIOTI dealer
6. When the exhaust gas color is black or gray	<ul style="list-style-type: none"> • Engine overload 	<ul style="list-style-type: none"> • Reduce load
	<ul style="list-style-type: none"> • Low grade fuel use 	<ul style="list-style-type: none"> • Use specified oil
	<ul style="list-style-type: none"> • Clogged fuel filter 	<ul style="list-style-type: none"> • Replace fuel filter
	<ul style="list-style-type: none"> • Clogged air filter 	<ul style="list-style-type: none"> • Clean or replace air cleaner
	<ul style="list-style-type: none"> • Choke is not open enough 	<ul style="list-style-type: none"> • Check choke position
7. When the engine overheats	<ul style="list-style-type: none"> • Engine overload 	<ul style="list-style-type: none"> • Reduce speed and load
	<ul style="list-style-type: none"> • Engine oil shortage 	<ul style="list-style-type: none"> • Refill engine oil
	<ul style="list-style-type: none"> • Contamination of engine air intake and cooling fins 	<ul style="list-style-type: none"> • Clean engine air intake and cooling fins
	<ul style="list-style-type: none"> • Clogged air cleaner element 	<ul style="list-style-type: none"> • Clean or replace air cleaner element
	<ul style="list-style-type: none"> • Engine speed is too low 	<ul style="list-style-type: none"> • Operate engine speed at “high speed”
	<ul style="list-style-type: none"> • Driving to fast 	<ul style="list-style-type: none"> • Drive slower

	CAUSE	COUNTERMEASURES
8. When the engine does not idle	• Spark plug defect	• Adjust spark plug gap, or replace
	• Carburetor problems	• See your KIOTI dealer

※ If you have any question, contact your **KIOTI** Dealer.

BATTERY TROUBLESHOOTING

CAUSE		COUNTERMEASURES
1. When the starter does not work	• The battery is not charged	• Sufficiently recharge battery
	• Bad contact of battery terminals	• Clean and reconnect battery terminals
	• Expired battery life	• Replace battery
	• Defective wiring and switch	• See your KIOTI dealer
2. When the headlights do not light or are dark	• Fuse short circuit	• Inspect and replace fuse
	• Bulb short circuit	• Replace bulb
	• Insufficient battery capacity	• Recharge battery
3. When the battery cannot be recharged	• Expired battery life	• Replace battery
	• Bad alternator	• Inspect and repair alternator
4. When the terminal becomes hot due to severe corrosion of the terminal	• Insufficient terminal tightening	• Clean and re-tighten terminals

※ If you have any question, contact your **KIOTI** Dealer.

MOWER TROUBLESHOOTING

	CAUSE	COUNTERMEASURES
1. When engine rotates but the mower does not move	• Parking brake is applied	• Release the parking brake
	• Insufficient transaxle oil	• Transaxle oil replenishment
2. When you cannot drive smoothly	• Insufficient transaxle oil	• Transaxle oil replenishment
	• Clogged filter	• Replace filter
3. When the mower moves when the steering lever is set to "neutral lock"	• Neutral adjustment of HST shift link is not possible	• See your KIOTI dealer
	• Adjustment linkage pivot stuck	• Applying lubricant to the linkage
4. When the blades do not rotate	• PTO device defect	• See your KIOTI dealer
	• Mower belt wear and tear	• Replace mower belt
	• Mower belt is not correctly connected	• Reconnect mower belt
	• Mower belt is off	• Reinstall mower belt on the pulley
5. When the outlet is clogged	• Grass is too wet	• Dry out grass before operating
	• Grass is too long	• Increase cutting height and cut grass twice
	• Engine speed too low	• Increase engine speed
	• Cutting speed too fast	• Reduce cutting speed

	CAUSE	COUNTERMEASURES
6. When the mower belt slips	• Weak tension spring	• Replace tension spring
	• Accumulated grass in pulley	• Clean the pulley cleanly
	• Worn out mower belt	• Replace mower belt
7. When cut grass comes out	• Working speed too fast	• Slow down work speed
	• Engine rotation too slow	• Increase engine speed to maximum
	• Grass is long	• Increase cutting height and cut grass twice
	• Worn or damaged blade	• Replace with new blade
	• Pulley deposition inside the mower deck	• Clean inside the mower deck
8. When cutting is uneven	• Mower deck is not level	• Keep mower deck level
	• Working speed too fast	• Slow work speed
	• Dull blade	• Sharpen blade
	• Worn out blade	• Sharpen blade
	• Low tire pressure	• Inflate tire to specified air pressure
9. When vibration is severe	• Grass accumulated at mower deck or pulley	• Clean mower deck or pulley

	CAUSE	COUNTERMEASURES
9. When vibration is severe	• Broken belt	• Replace with new belt
	• Twisted belt	• Repair belt twist
	• Broken pulley	• Replace with new pulley
	• Bad blade balance	• Replace with new blade or balance blade
10. When the blade cuts soil	• Low blade height	• Raise blade height
	• Fast rotation speed	• Fast rotation speed
	• Un-even terrain	• Adjust tire pressure and auxiliary wheel
	• Bent blade	• Replace with new blade
	• Fast rotation speed	• Lower rotation speed
12. When the mower's load is high	• Engine rotation too slow	• Increase engine speed to maximum
	• Working speed too fast	• Slow downwork speed
	• Grass is accumulated or tangled on mower spindle	• Clean mower
	• Front of the mower is too low	• Adjust mower deck

※ If you have any question, contact your **KIOTI** Dealer.

MEMO



PART ILLUSTRATIONS

HOW TO READ PART ILLUSTRATIONS...9-3

01A. 48" MULCHING KIT GROUP (OPTION) ...	9-4
01B. 54" MULCHING KIT GROUP (OPTION) ...	9-6
01C. 60" MULCHING KIT GROUP (OPTION)....	9-8
02. LAMP GROUP (OPTION).....	9-10
03. HITCH KIT GROUP (OPTION).....	9-12
04. ANTI SCARP ROLLER GROUP (OPTION).....	9-14
10A. ENGINE GROUP	9-18
10B. ENGINE GROUP	9-20
10C. ENGINE GROUP	9-22
10D. ENGINE GROUP	9-24
20A. FUEL TANK GROUP.....	9-26
20B. FUEL TANK GROUP.....	9-28
21A. FUEL LINE GROUP	9-30
30A. TRANS AXLE GROUP	9-34
30A. TRANS AXLE GROUP	9-36
30A. TRANS AXLE GROUP	9-38
30B. TRANS AXLE GROUP	9-40
30B. TRANS AXLE GROUP	9-42
30B. TRANS AXLE GROUP	9-44

33A. PTO CLUTCH GROUP	9-46
33B. PTO CLUTCH GROUP	9-48
35A. FRONT WHEEL GROUP	9-50
35B. FRONT WHEEL GROUP	9-52
36A. REAR WHEEL TIRE GROUP	9-54
36B. REAR WHEEL TIRE GROUP	9-56
40. STEERING GROUP	9-58
40. STEERING GROUP	9-60
45. PARKING BREAK GROUP	9-62
50. MAIN FRAME GROUP	9-64
51. FLOOR GROUP	9-66
60A. MOWER DECK GROUP	9-68
60A. MOWER DECK GROUP	9-70
60A. MOWER DECK GROUP	9-72
60A. MOWER DECK GROUP	9-74
60B. MOWER DECK GROUP	9-76
60B. MOWER DECK GROUP	9-78
60B. MOWER DECK GROUP	9-80
60B. MOWER DECK GROUP	9-82
60C. MOWER DECK GROUP.....	9-84
60C. MOWER DECK GROUP.....	9-86

60C. MOWER DECK GROUP.....	9-88	92A. REAR BUMPER GROUP.....	9-136
60C. MOWER DECK GROUP.....	9-90	92B. REAR BUMPER GROUP.....	9-138
80A. MAIN HARNESS GROUP.....	9-98	93. ROPS GROUP	9-140
80B. MAIN HARNESS GROUP.....	9-100	95A. DECAL GROUP 1	9-142
81A. BATTERY HARNESS GROUP.....	9-102	95A. DECAL GROUP 1	9-144
81B. BATTERY HARNESS GROUP.....	9-104	95B. DECAL GROUP 1	9-146
82A. CONTROL PANEL GROUP	9-106	95B. DECAL GROUP 1	9-148
82A. CONTROL PANEL GROUP	9-108	95A. DECAL GROUP 2	9-150
82B. CONTROL PANEL GROUP	9-110	95B. DECAL GROUP 2	9-152
82C. CONTROL PANEL GROUP	9-112	95C. DECAL GROUP 2	9-154
83. BATTERY GROUP	9-114		
84. SWITCH GROUP	9-116		
85A. RELAY GROUP.....	9-118		
85B. RELAY GROUP.....	9-120		
86. LAMP GROUP	9-122		
87. ETC GROUP	9-124		
90A. SEAT GROUP	9-126		
90B. SEAT GROUP	9-128		
90C. SEAT GROUP	9-130		
90D. SEAT GROUP.....	9-132		
91. SEAT PLATE GROUP	9-134		

HOW TO READ PART ILLUSTRATIONS

This parts manual contains information on genuine parts of **KIOTI** products for repair and appropriate service. Whenever in need of parts, you will find the correct parts for repair and replacement throughout this manual.

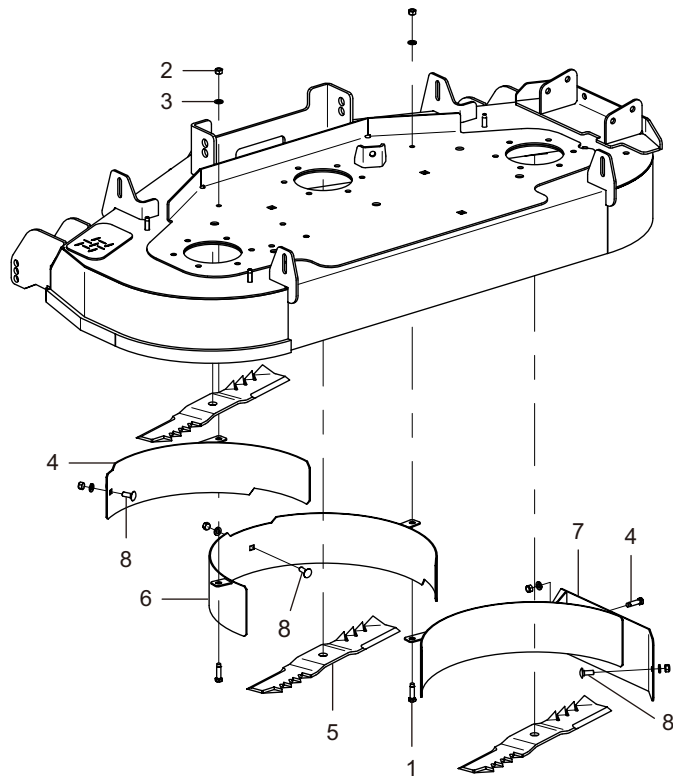
In order to extend and/or maintain a good performance of your machine we strongly recommend you to use **KIOTI** genuine parts.

Please carefully read the manual and follow the instructions or figures which will help your parts ordering and repair job, but please refer to our Workshop manual for repairs as this manual does not contain information on repair procedures.

ITC	INTERCHANGEABILITY DESCRIPTION	REMARKS
—→	<ul style="list-style-type: none"> • Old part replaces new part, but the new part can't replace the old part. 	
<---	<ul style="list-style-type: none"> • New part replaces old part, but the old part can't replace the new part. 	
<-0->	<ul style="list-style-type: none"> • Basically this mark means old part can't replace new part (one to one [x]), but can be replaced with the new part with some other extra parts together. 	
<-X->	<ul style="list-style-type: none"> • Old and new part are not interchangeable at all. 	
<—→	<ul style="list-style-type: none"> • Old and new part are interchangeable. 	

※ All data and illustrations in this manual are subject to variations in build specification. This information was correct at the time of issue, but **KIOTI** policy is one of continuous improvement and the right to change specifications, equipment or design at any time, without notice, is reserved.

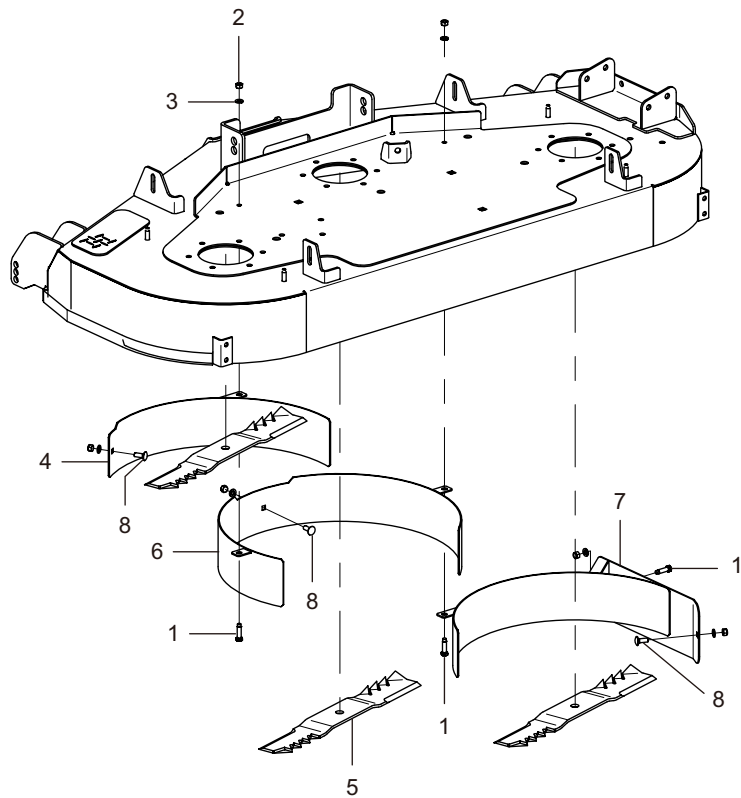
01A. 48" MULCHING KIT GROUP (OPTION)



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01153-50825	BOLT	3			3				
2	02310-50080	LOCK NUT	6			6				
3	04512-50080	SPRING WASHER	6			6				
4	Z2111-00113	MUCHING KIT ASS`Y, LH	1			1				
5	Z2111-00151	MULCHING BLADE	3			3				
6	Z2111-00213	MUCHING KIT ASS`Y, MID	1			1				
7	Z2111-00313	MUCHING KIT ASS`Y, RH	1			1				
8	Z2131-92121	BOLT	3			3				

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

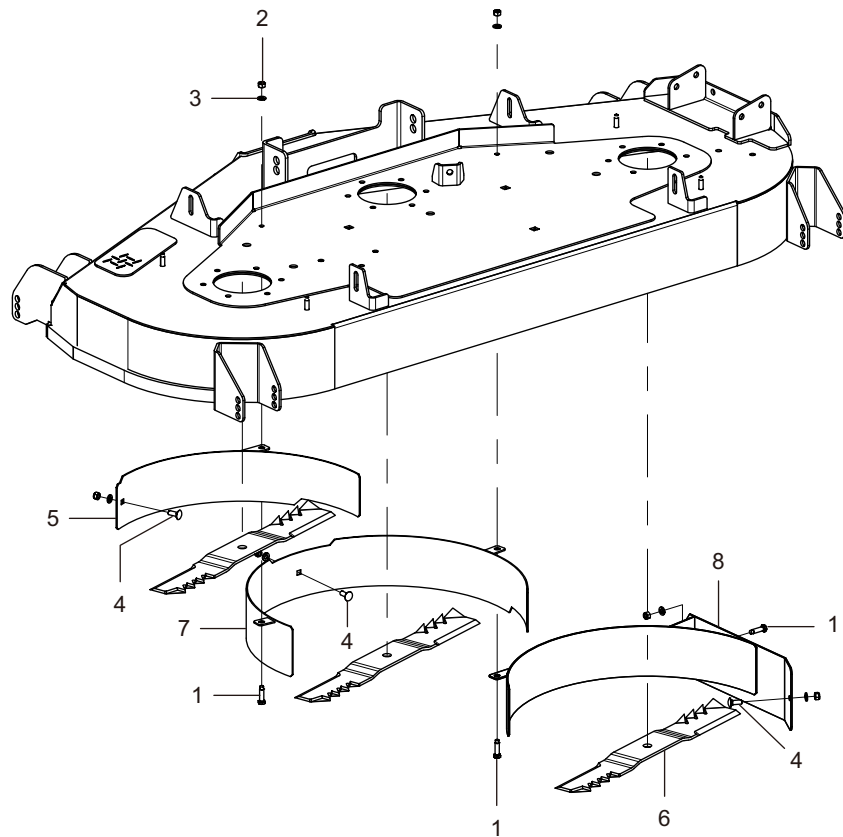
01B. 54" MULCHING KIT GROUP (OPTION)



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01153-50825	BOLT		3			3			
2	02310-50080	LOCK NUT		6			6			
3	04512-50080	SPRING WASHER		6			6			
4	Z2131-00113	MUCHING KIT ASS`Y, LH		1			1			
5	Z2131-00151	MULCHING BLADE		3			3			
6	Z2131-00213	MUCHING KIT ASS`Y, MID		1			1			
7	Z2131-00313	MUCHING KIT ASS`Y, RH		1			1			
8	Z2131-92121	BOLT		3			3			

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

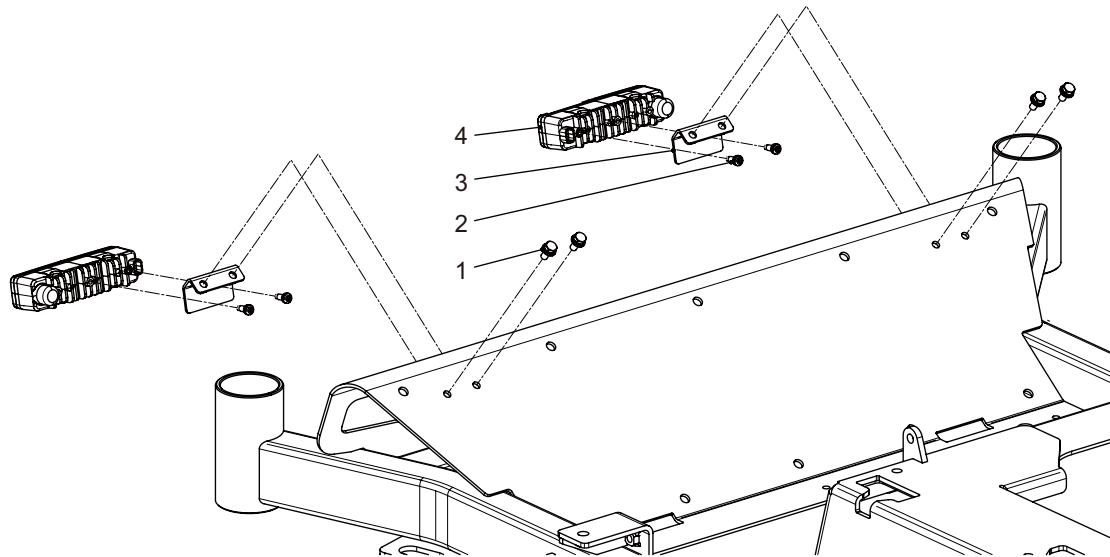
01C. 60" MULCHING KIT GROUP (OPTION)



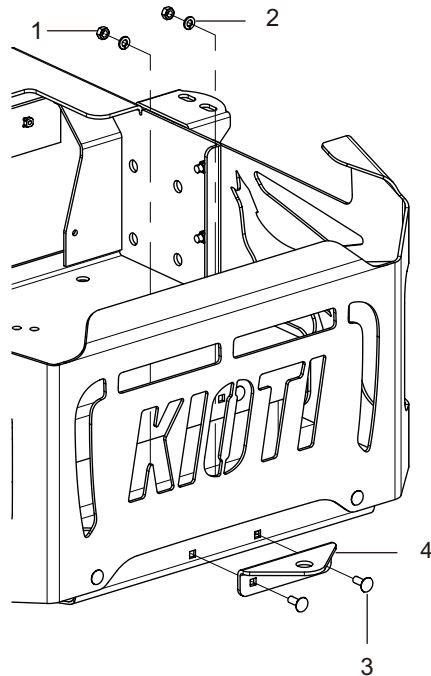
NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01153-50825	BOLT			3			3		
2	02310-50080	LOCK NUT			6			6		
3	04512-50080	SPRING WASHER			6			6		
4	Z2131-92121	BOLT			3			3		
5	Z2151-00113	MUCHING KIT ASS`Y, LH			1			1		
6	Z2151-00151	MULCHING BLADE			3			3		
7	Z2151-00213	MUCHING KIT ASS`Y, MID			1			1		
8	Z2151-00313	MUCHING KIT ASS`Y, RH			1			1		

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

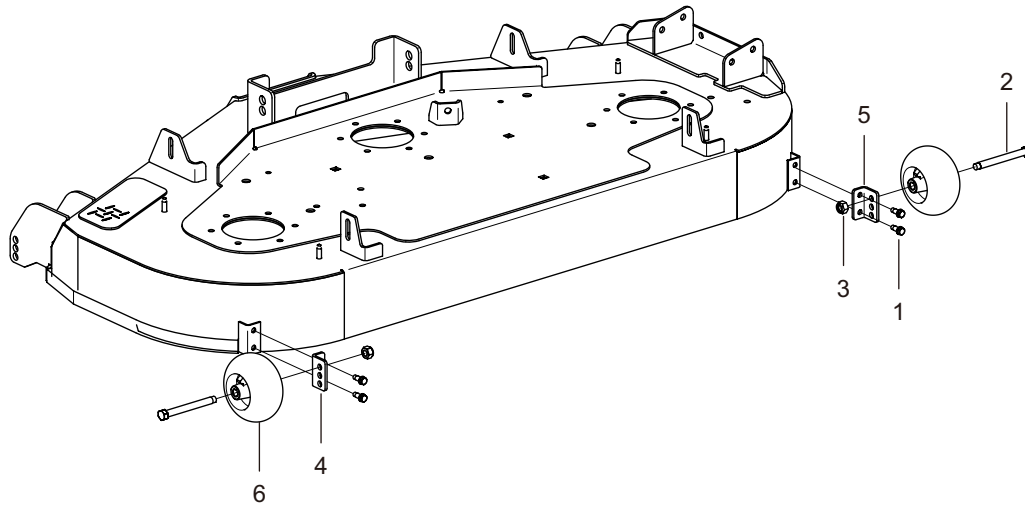
02. LAMP GROUP (OPTION)



03. HITCH KIT GROUP (OPTION)



04. ANTI SCARP ROLLER GROUP (OPTION)



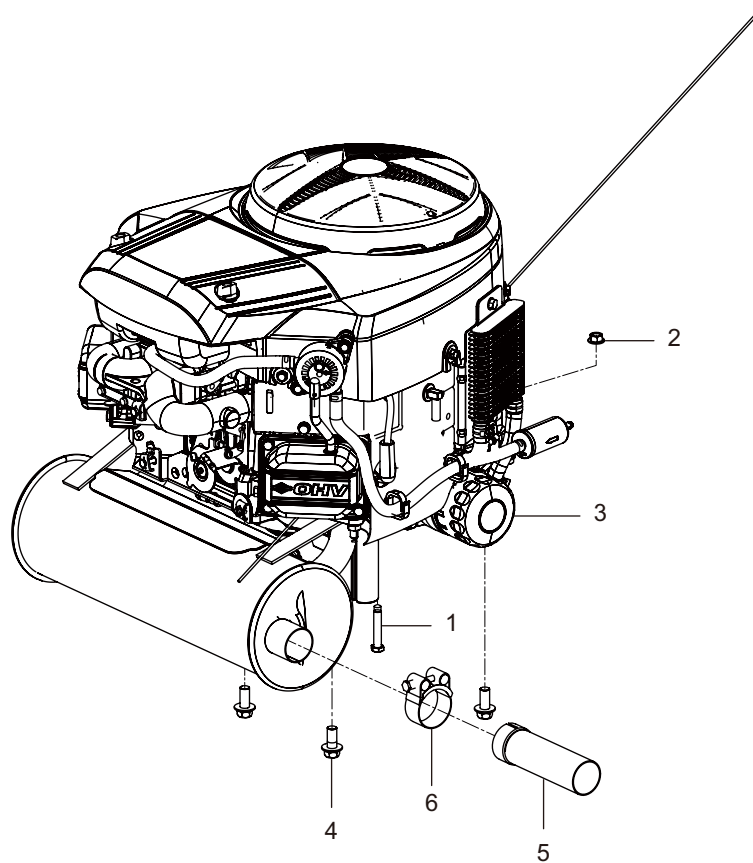
NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01123-50816	WITH WASHER BOLT		4			4			
2	01176-51201	BOLT		2			2			
3	02310-50080	LOCK NUT		2			2			
4	Z2131-00411	ROLLER BRACKET, LH		1			1			
5	Z2131-00421	ROLLER BRACKET, RH		1			1			
6	Z2131-62431	MOWER DECK ROLLER		2			2			

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01025-50614	WITH WASHER BOLT	1	1	1	1	1	1		
2	02310-50100	LOCK NUT	4	4	4	4	4	4		
3	02763-50080B	FLANGE NUT	2	2	2	2	2	2		
4	T5310-69802	WORK LAMP ASS'Y	2	2	2	2	2	2		
5	Z2131-00511	WORK LAMP BRKT, LH	1	1	1	1	1	1		
6	Z2131-00521	WORK LAMP BRKT, RH	1	1	1	1	1	1		
7	Z2131-00531	WORK LAMP SWITCH ASS'Y	1	1	1	1	1	1		
8	Z2131-00541	U BOLT	2	2	2	2	2	2		
9	Z2131-03301	WORK LAMP SWITCH ASS'Y	1	1	1	1	1	1		
10	Z2131-03101	WIR'G WORK LAMP ASS'Y	1	1	1	1	1	1		

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

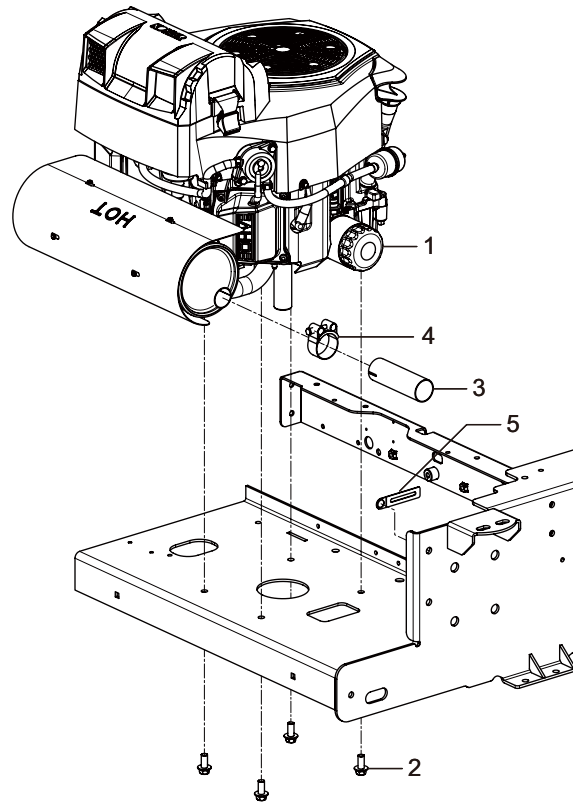
10A. ENGINE GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01153-50840	BOLT	1	1	1					
2	02763-50080	FLANG NUT	1	1	1					
3	Z1121-10101	ENGINE 22HP, B&S PROFESSIONAL	1							
3	Z1141-10101	ENGINE 24HP, B&S PROFESSIONAL		1						
3	Z1171-10101	ENGINE 27HP, B&S PROFESSIONAL			1					
4	Z1131-11901	SELF TAPPING BOLT	3	3	3					
5	Z2131-10351	MUFFLER PIPE (B&S)	1	1	1					
6	Z2131-10361	MUFFLER CLAMP (B&S)	1	1	1					

※ QTY: A:ZXR48, B:ZXR54, C:ZXR60, D:ZXR48SE, E:ZXR54SE, F:ZXR60SE

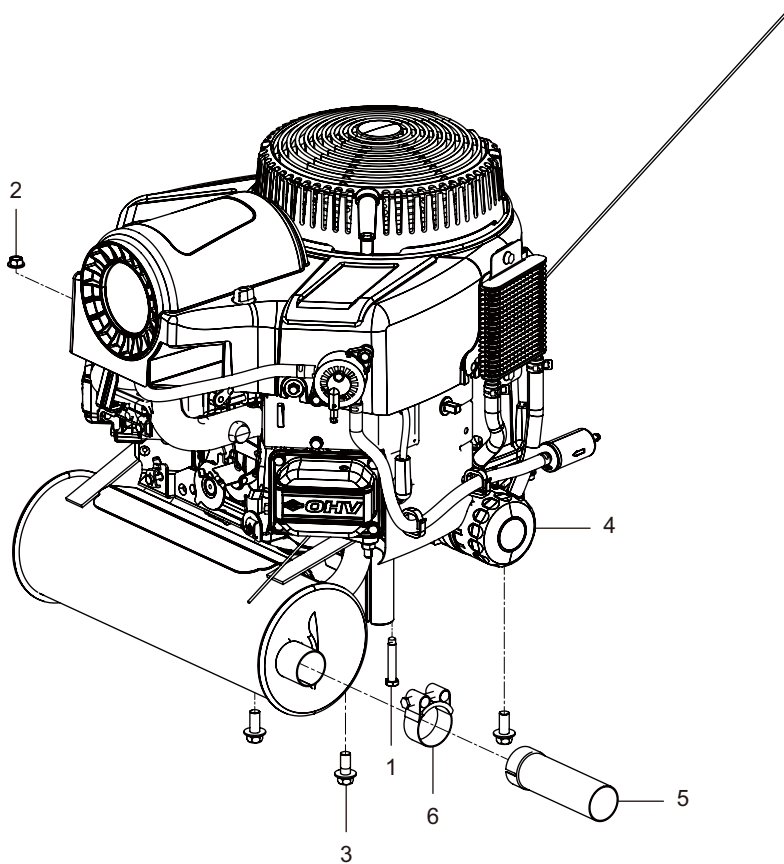
10B. ENGINE GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	Z1111-11101	ENGINE (ZT720)				1				
1	Z1131-11101	ENGINE (ZT730)					1			
1	Z1151-11101	ENGINE (ZT740)						1		
2	Z1131-11901	SELF TAPPING BOLT				4	4	4		
3	Z2131-11351	MUFFLER PIPE (KOHLER)				1	1	1		
4	Z2131-11361	MUFFLER CLAMP (KOHLER)				1	1	1		
5	32240-3446-1	WIR'G CLAMP				1	1	1		

※ QTY: A:ZXR48, B:ZXR54, C:ZXR60, D:ZXR48SE, E:ZXR54SE, F:ZXR60SE

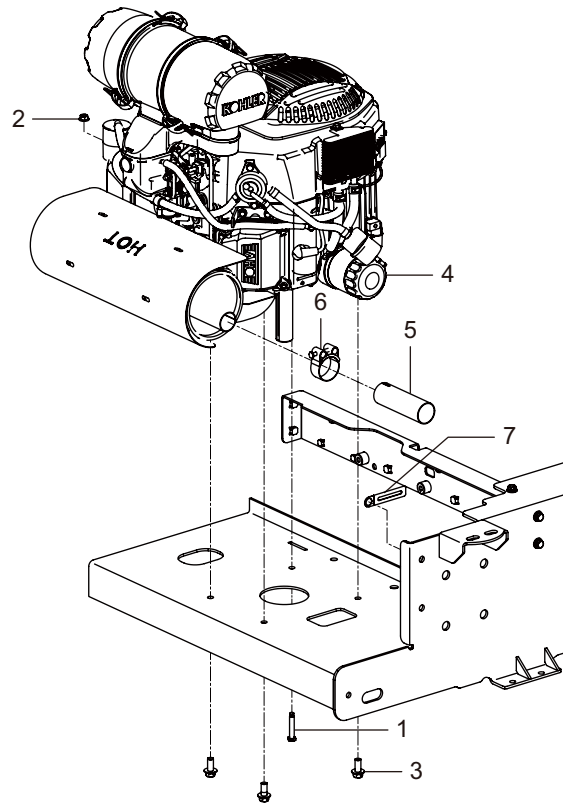
10C. ENGINE GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01153-50840	BOLT	1	1	1					
2	02763-50080	FLANG NUT	1	1	1					
3	Z1131-11901	SELF TAPPING BOLT	3	3	3					
4	Z2131-10101	23HP ENGINE, B&S COMMERCIAL	1							
4	Z2151-10101	25HP ENGINE, B&S COMMERCIAL		1						
4	Z2171-10101	27HP ENGINE, B&S COMMERCIAL			1					
5	Z2131-10351	MUFFLER PIPE (B&S)	1	1	1					
6	Z2131-10361	MUFFLER CLAMP (B&S)	1	1	1					

※ QTY: A:ZXC48, B:ZXC54, C:ZXC60, D:ZXC48SE, E:ZXC54SE, F:ZXC60SE

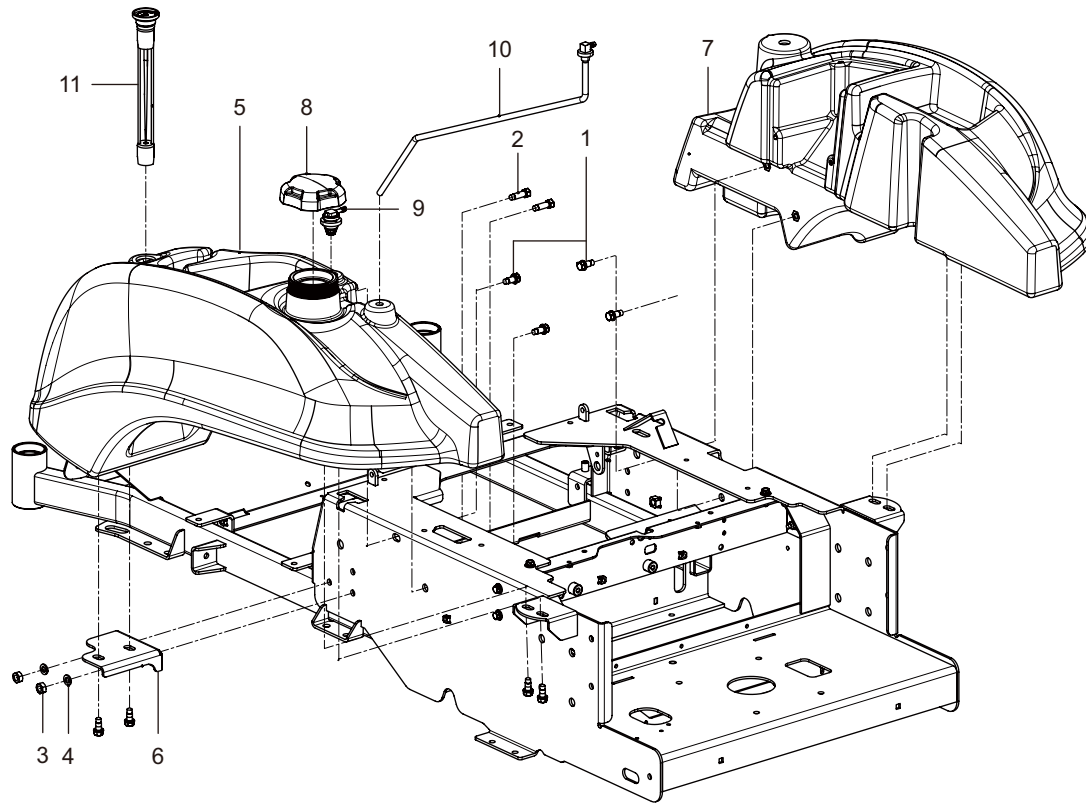
10D. ENGINE GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01153-50840	BOLT				1	1	1		
2	02763-50080	FLANGED NUT				1	1	1		
3	Z1131-11901	SELF TAPPING BOLT				3	3	3		
4	Z2121-11101	ENGINE (CV682)				1				
4	Z2131-11101	ENGINE (CV732)					1			
4	Z2151-11101	ENGINE (CV742)						1		
5	Z2131-11351	MUFFLER PIPE (KOHLER)				1	1	1		
6	Z2131-11361	MUFFLER CLAMP (KOHLER)				1	1	1		
7	32240-3446-1	WIR'G CLAMP				1	1	1		

※ QTY: A:ZXC48, B:ZXC54, C:ZXC60, D:ZXC48SE, E:ZXC54SE, F:ZXC60SE

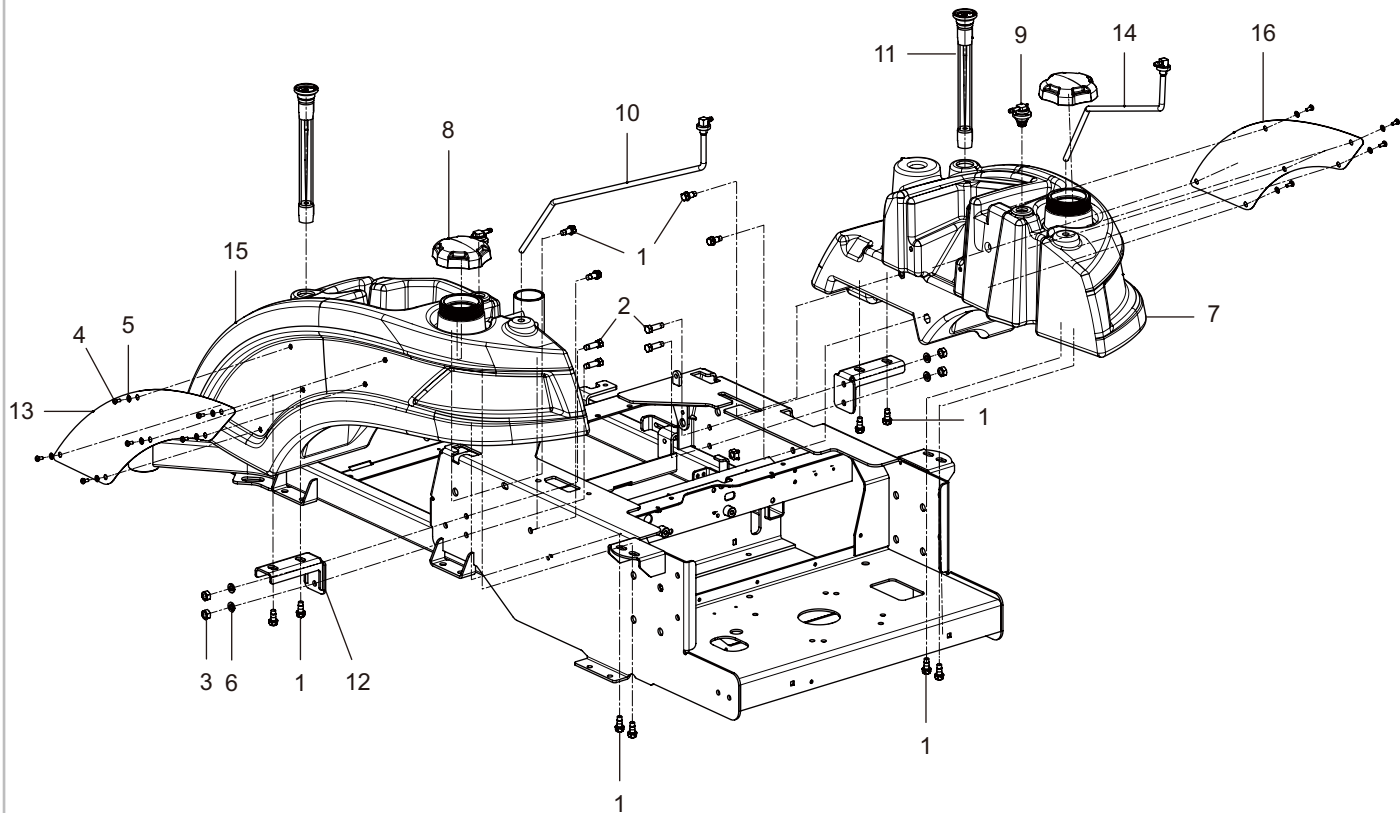
20A. FUEL TANK GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01135-51020	WITH WASHER BOLT	10	10	10	10	10	10		
2	01176-51025	BOLT	2	2	2	2	2	2		
3	02176-50100	NUT	2	2	2	2	2	2		
4	04512-50100	SPRING WASHER	2	2	2	2	2	2		
5	Z1131-20102	FUEL TANK ASS`Y, LH	1	1	1	1	1	1		
6	Z1131-20162	FRONT MOUNTING, FUEL TANK	1	1	1	1	1	1		
7	Z1131-20201	FUEL TANK ASS`Y, RH	1	1	1	1	1	1		
8	Z2131-20121	CAP, FUEL TANK	1	1	1	1	1	1		
9	Z2131-20131	SLOSH VALVE	1	1	1	1	1	1		
10	Z2131-20142	FUEL PICK-UP, LH	1	1	1	1	1	1		
11	Z2131-20151	GAUGE, FUEL	1	1	1	1	1	1		

※ QTY: A:ZXR48, B:ZXR54, C:ZXR60, D:ZXR48SE, E:ZXR54SE, F:ZXR60SE

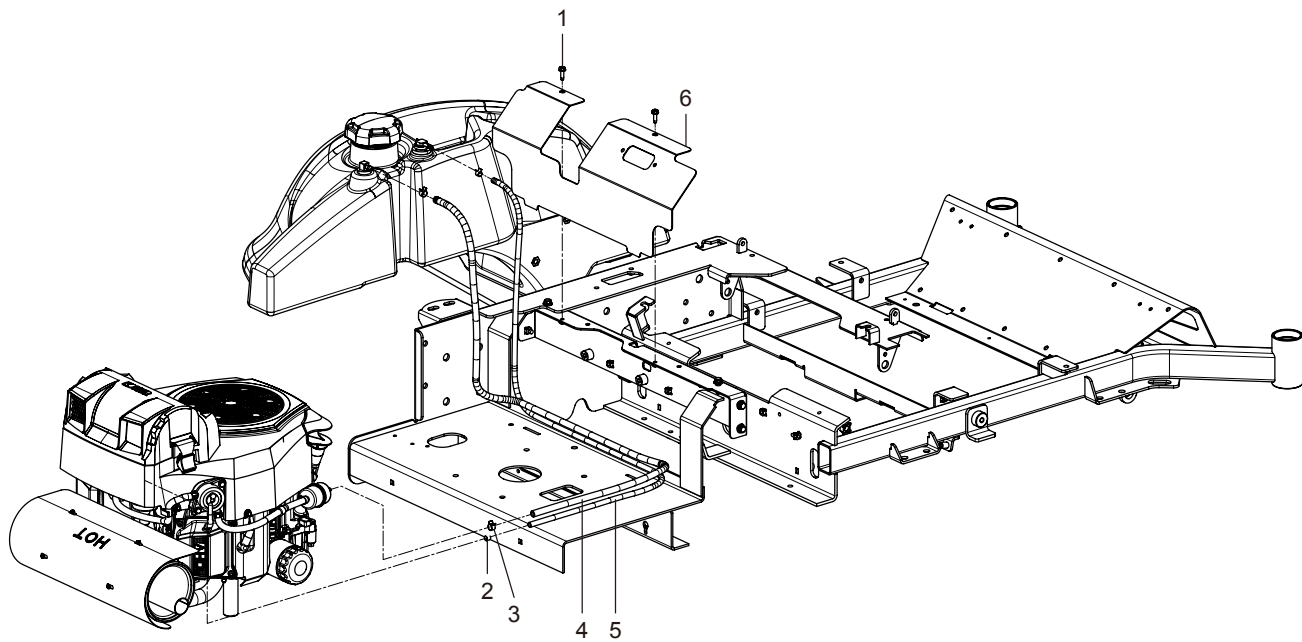
20B. FUEL TANK GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01135-51020	WITH WASHER BOLT	12	12	12	12	12	12		
2	01176-51025	BOLT	4	4	4	4	4	4		
3	02176-50100	NUT	4	4	4	4	4	4		
4	03027-50512B	SCREW	12	12	12	12	12	12		
5	04013-50050B	PLAIN WASHER	12	12	12	12	12	12		
6	04512-50100	SPRING WASHER	4	4	4	4	4	4		
7	Z2131-20112	BODY, FUEL TANK RH (COMMERCIAL)	1	1	1	1	1	1		
8	Z2131-20121	CAP, FUEL TANK	2	2	2	2	2	2		
9	Z2131-20131	SLOSH VALVE	2	2	2	2	2	2		
10	Z2131-20142	FUEL PICK-UP, LH	1	1	1	1	1	1		
11	Z2131-20151	GAUGE, FUEL	2	2	2	2	2	2		
12	Z2131-20162	FRONT MOUNTING, FUEL TANK	2	2	2	2	2	2		
13	Z2131-20173	DECAL PLATE, FUEL TANK LH	1	1	1	1	1	1		
14	Z2131-20182	FUEL PICK-UP, RH	1	1	1	1	1	1		
15	Z2131-20212	BODY, FUEL TANK LH (COMMERCIAL)	1	1	1	1	1	1		
16	Z2131-20273	DECAL PLATE, FUEL TANK RH	1	1	1	1	1	1		

※ QTY: A:ZXC48, B:ZXC54, C:ZXC60, D:ZXC48SE, E:ZXC54SE, F:ZXC60SE

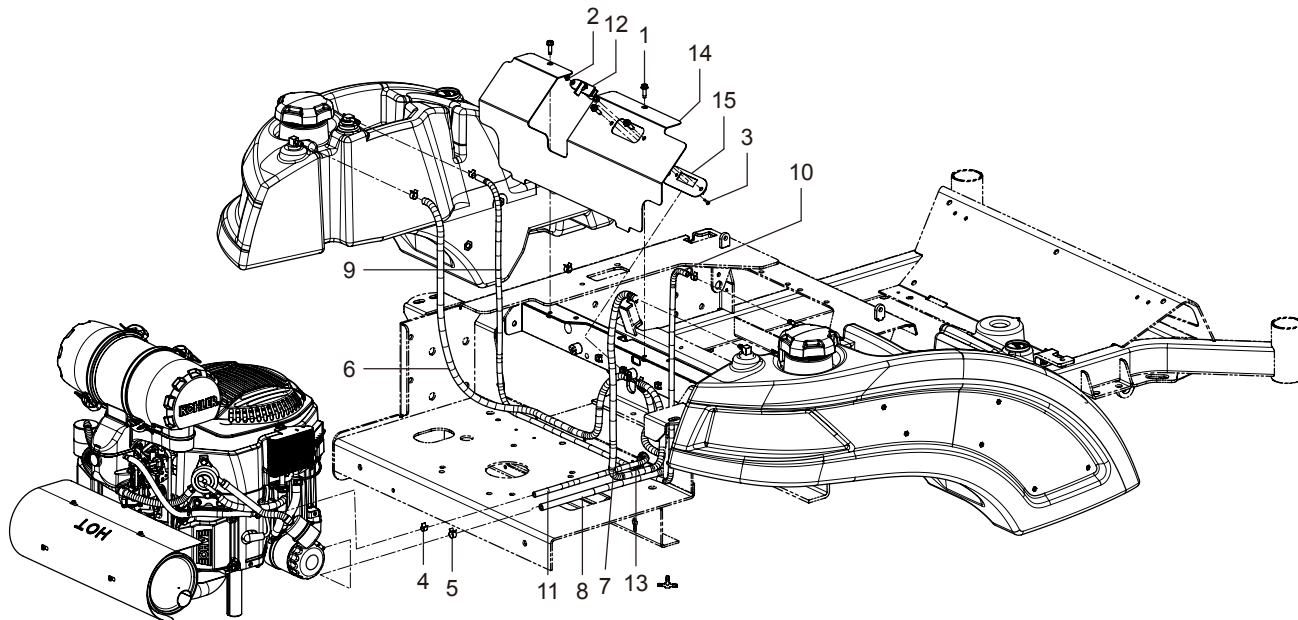
21A. FUEL LINE GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01754-50616B	FLANGE BOLT	2	2	2	2	2	2		
2	09318-88085	CLIP 1	2	2	2	2	2	2		
3	09318-88115	CLIP 2	2	2	2	2	2	2		
4	Z1131-21111	FUEL LINE	1	1	1	1	1	1		
5	Z1131-21163	VAPOR LINE	1	1	1					
5	Z1131-21173	VAPOR LINE				1	1	1		
6	Z2131-21513	REAR COVER	1	1	1	1	1	1		

※ QTY: A:ZXR48, B:ZXR54, C:ZXR60, D:ZXR48SE, E:ZXR54SE, F:ZXR60SE

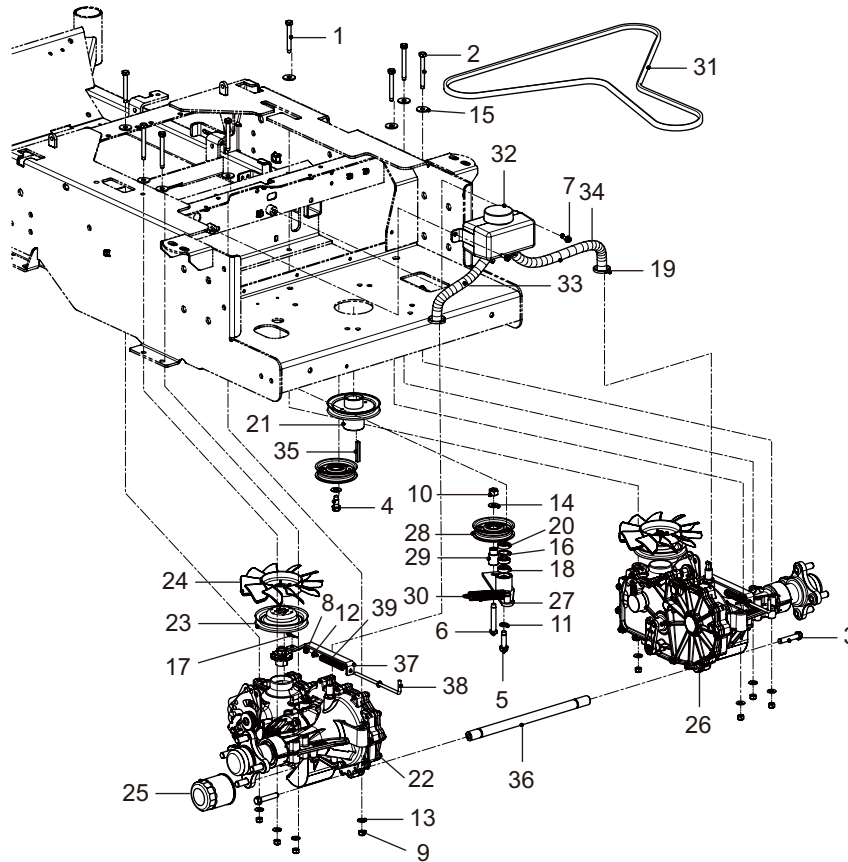
21B. FUEL LINE GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01754-50616B	FLANGE BOLT	4	4	4	4	4	4		
2	02761-50040	FLANGE NUT	1	1	1	1	1	1		
3	03054-50412	SCREW	1	1	1	1	1	1		
4	09318-88085	CLIP 1	6	6	6	6	6	6		
5	09318-88115	CLIP 2	6	6	6	6	6	6		
6	Z2131-21112	FUEL LINE	1	1	1	1	1	1		
7	Z2131-21121	FUEL LINE	1	1	1	1	1	1		
8	Z2131-21131	FUEL LINE	1	1	1					
8	Z2131-21141	FUEL LINE				1	1	1		
9	Z2131-21162	VAPOR LINE	1	1	1	1	1	1		
10	Z2131-21172	VAPOR LINE	1	1	1	1	1	1		
11	Z2131-21191	VAPOR LINE	1	1	1	1	1	1		
12	Z2131-21301	3WAY FUEL VALVE	1	1	1	1	1	1		
13	Z2131-21311	TEE	1	1	1	1	1	1		
14	Z2131-21513	REAR COVER	1	1	1	1	1	1		
15	Z2131-21521	BRACKET, 3 WAY VALVE	1	1	1	1	1	1		

※ QTY: A:ZXC48, B:ZXC54, C:ZXC60, D:ZXC48SE, E:ZXC54SE, F:ZXC60SE

30A. TRANS AXLE GROUP



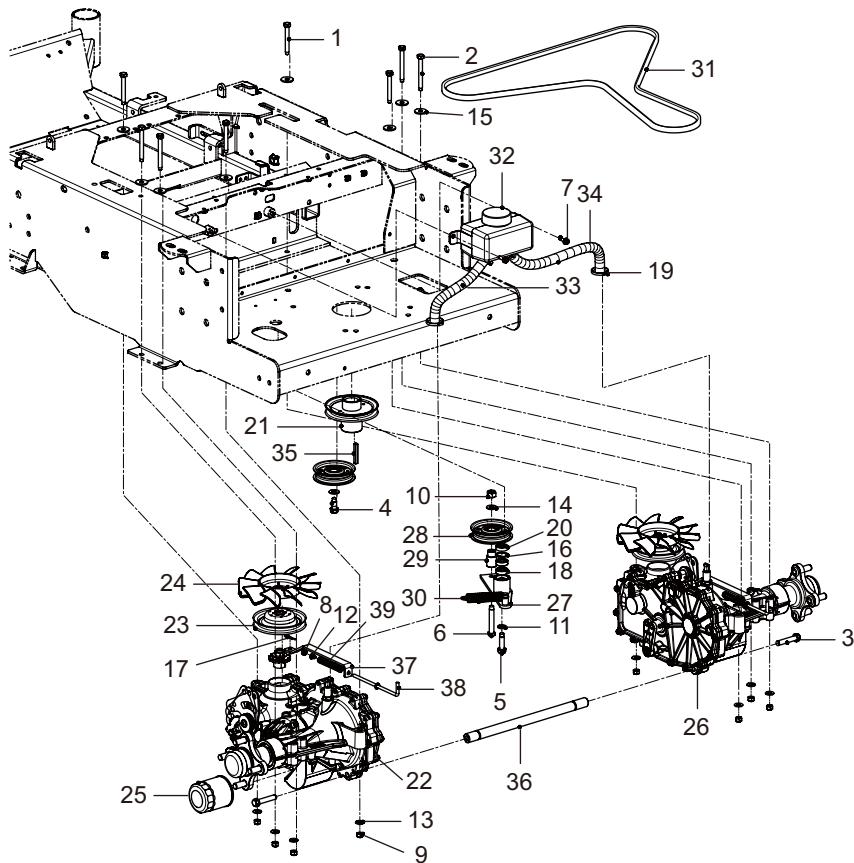
NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01056-50860	BOLT	4	4	4	4	4	4		
2	01056-50870	BOLT	4	4	4	4	4	4		
3	01123-51050	WITH WASHER BOLT	2	2	2	2	2	2		
4	01133-51018	WITH WASHER BOLT	1	1	1	1	1	1		
5	01133-51030	WITH WASHER BOLT	1	1	1	1	1	1		
6	01173-51055	BOLT	1	1	1	1	1	1		
7	01754-50616B	FLANGE BOLT	2	2	2	2	2	2		
8	02310-50060	LOCK NUT	2	2	2	2	2	2		
9	02310-50080	LOCK NUT	8	8	8	8	8	8		
10	02310-50100	LOCK NUT	1	1	1	1	1	1		
11	04011-50100	PLAIN WASHER	1	1	1	1	1	1		
12	04013-50060	PLAIN WASHER	2	2	2	2	2	2		
13	04013-50080	PLAIN WASHER	8	8	8	8	8	8		
14	04013-50100	PLAIN WASHER	2	2	2	2	2	2		
15	04015-50080	PLAIN WASHER	8	8	8	8	8	8		
16	04611-00260	SNAP RING	1	1	1	1	1	1		
17	05515-50600	SNAP PIN	2	2	2	2	2	2		
18	08141-06000	BALL BEARING	2	2	2	2	2	2		

※ QTY: A:ZXR48, B:ZXR54, C:ZXR60, D:ZXR48SE, E:ZXR54SE, F:ZXR60SE

NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
19	09318-87032	HOSE CLAMP	4	4	4	4	4	4		
20	09500-16267	OIL SEAL	1	1	1	1	1	1		
22	Z1111-30101001	TRANSAXLE BASE(LH)	1	1						
22	Z2111-30101001	TRANSAXLE BASE(LH)			1	1	1	1		
23	Z2131-30101002	TRANSAXLE PULLEY	2	2	2	2	2	2		
24	Z2131-30101003	TRANSAXLE FAN	2	2	2	2	2	2		
25	Z2131-30101004	TRANSAXLE FILTER	2	2	2	2	2	2		
26	Z1111-30201001	TRANSAXLE BASE(RH)	1	1						
26	Z2111-30201001	TRANSAXLE BASE(RH)			1	1	1	1		
21	Z2111-31111	PULLEY ASS`Y, B&S ENGINE	1	1	1					
21	Z2131-31111	PULLEY ASS`Y, KOHLER ENGINE				1	1	1		
27	Z2131-31212	IDLE ARM ASS`Y, TRANSAXLE	1	1	1	1	1	1		
28	Z2131-31251	IDLE PULLEY ASS`Y, TRANSAXLE	2	2	2	2	2	2		
29	Z2131-31271	SHAFT, IDLE PULLEY	1	1	1	1	1	1		
30	Z2131-31281	TENSION SPRING, IDLE PULLEY	1	1	1	1	1	1		
31	Z2131-31291	BELT, TRANSAXLE	1	1	1	1	1	1		
32	Z2131-31301	EXPENSION TANK	1	1	1	1	1	1		
33	Z2131-31311	FUEL HOSE LH	1	1	1	1	1	1		

※ QTY: A:ZXR48, B:ZXR54, C:ZXR60, D:ZXR48SE, E:ZXR54SE, F:ZXR60SE

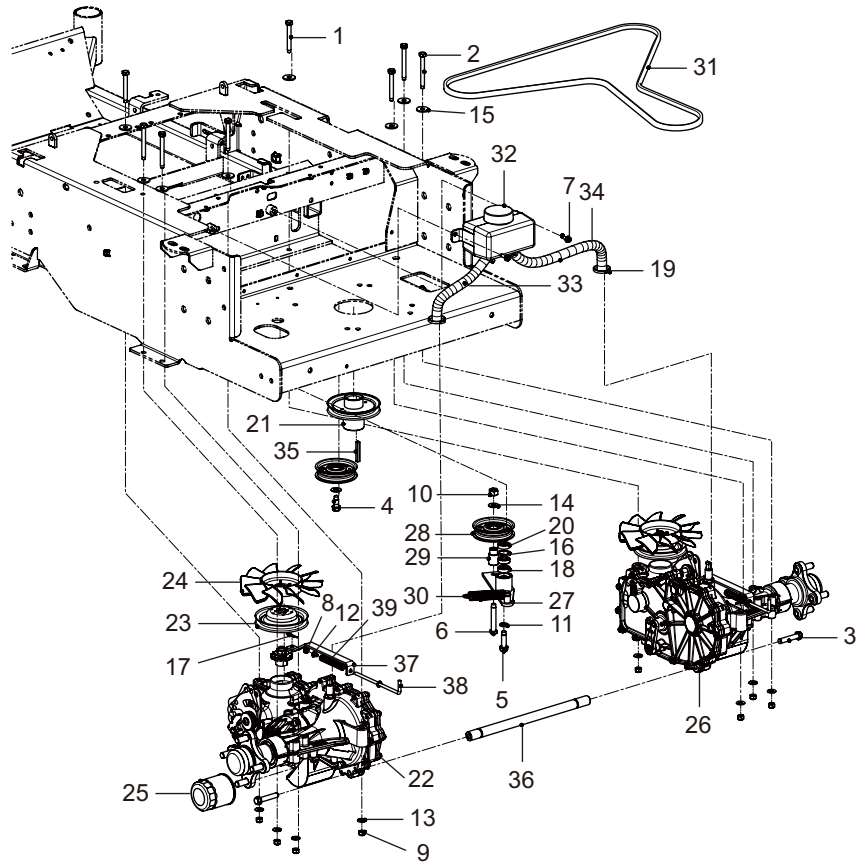
30A. TRANS AXLE GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
34	Z2131-31323	FUEL HOSE RH	1	1	1	1	1	1		
35	Z2131-31331	KEY	1	1	1	1	1	1		
36	Z2131-31401	HYDRO AXLE CONNECT BAR	1	1	1	1	1	1		
37	Z2131-31411	BRACKET, TRANSAXLE	2	2	2	2	2	2		
38	Z2131-31422	ROD, TRANSAXLE	2	2	2	2	2	2		
39	Z2131-31431	SPRING	2	2	2	2	2	2		

※ QTY: A:ZXR48, B:ZXR54, C:ZXR60, D:ZXR48SE, E:ZXR54SE, F:ZXR60SE

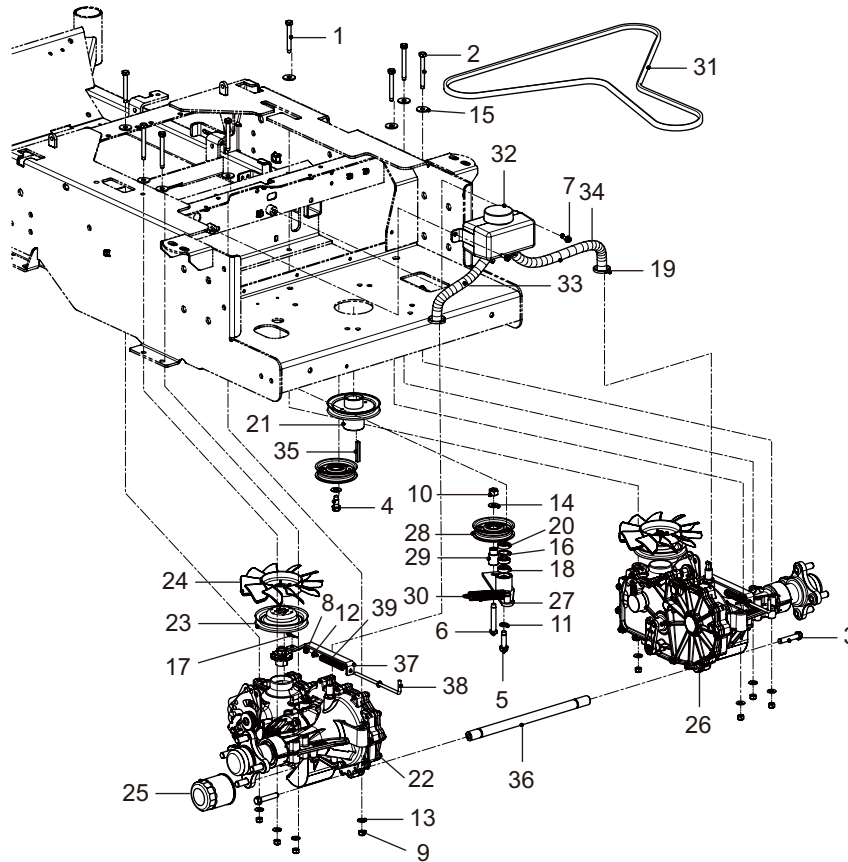
30B. TRANS AXLE GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01056-50860	BOLT	4	4	4	4	4	4		
2	01056-50870	BOLT	4	4	4	4	4	4		
3	01123-51050	WITH WASHER BOLT	2	2	2	2	2	2		
4	01133-51018	WITH WASHER BOLT	1	1	1	1	1	1		
5	01133-51030	WITH WASHER BOLT	1	1	1	1	1	1		
6	01173-51055	BOLT	1	1	1	1	1	1		
7	01754-50616B	FLANGE BOLT	2	2	2	2	2	2		
8	02310-50060	LOCK NUT	2	2	2	2	2	2		
9	02310-50080	LOCK NUT	8	8	8	8	8	8		
10	02310-50100	LOCK NUT	1	1	1	1	1	1		
11	04011-50100	PLAIN WASHER	1	1	1	1	1	1		
12	04013-50060	PLAIN WASHER	2	2	2	2	2	2		
13	04013-50080	PLAIN WASHER	8	8	8	8	8	8		
14	04013-50100	PLAIN WASHER	2	2	2	2	2	2		
15	04015-50080	PLAIN WASHER	8	8	8	8	8	8		
16	04611-00260	SNAP RING	1	1	1	1	1	1		
17	05515-50600	SNAP PIN	2	2	2	2	2	2		
18	08141-06000	BALL BEARING	2	2	2	2	2	2		

※ QTY: A:ZXC48, B:ZXC54, C:ZXC60, D:ZXC48SE, E:ZXC54SE, F:ZXC60SE

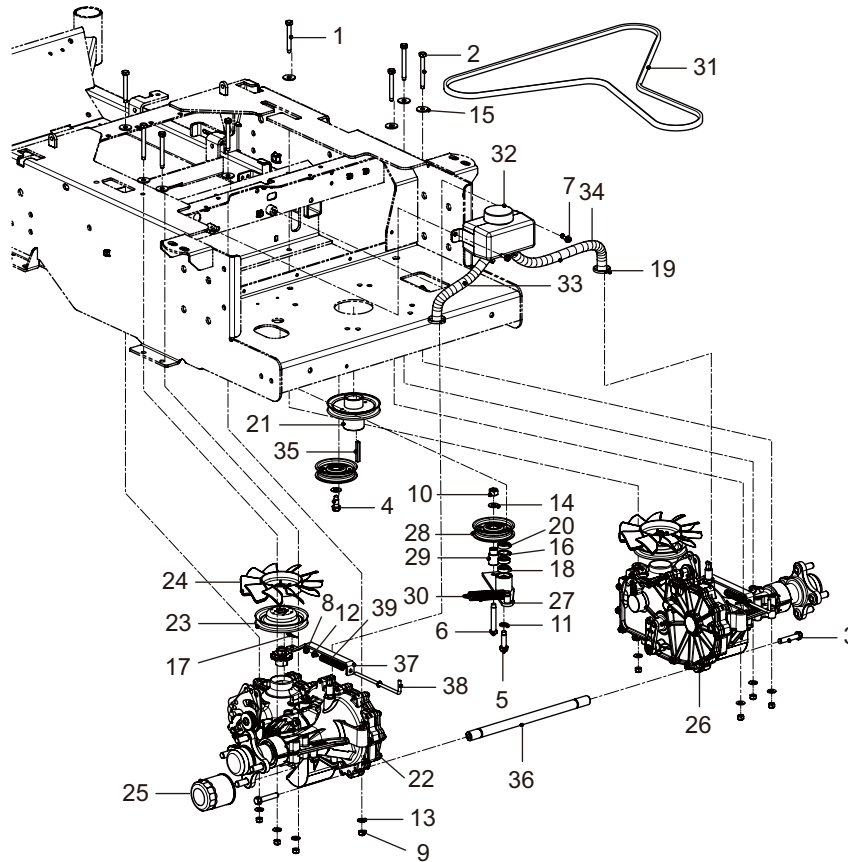
30B. TRANS AXLE GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
19	09318-87032	HOSE CLAMP	4	4	4	4	4	4		
20	09500-16267	OIL SEAL	1	1	1	1	1	1		
22	Z2111-30101001	TRANSAXLE BASE(LH)	1	1						
22	Z2131-30101001	TRANSAXLE BASE(LH)			1	1	1	1		
23	Z2131-30101002	TRANSAXLE PULLEY	2	2	2	2	2	2		
24	Z2131-30101003	TRANSAXLE FAN	2	2	2	2	2	2		
25	Z2131-30101004	TRANSAXLE FILTER	2	2	2	2	2	2		
26	Z2111-30201001	TRANSAXLE BASE(RH)	1	1						
26	Z2131-30201001	TRANSAXLE BASE(RH)			1	1	1	1		
21	Z2111-31111	PULLEY ASS`Y, B&S ENGINE	1	1	1					
21	Z2131-31111	PULLEY ASS`Y, KOHLER ENGINE				1	1	1		
27	Z2131-31212	IDLE ARM ASS`Y, TRANSAXLE	1	1	1	1	1	1		
28	Z2131-31251	IDLE PULLEY ASS`Y, TRANSAXLE	2	2	2	2	2	2		
29	Z2131-31271	SHAFT, IDLE PULLEY	1	1	1	1	1	1		
30	Z2131-31281	TENSION SPRING, IDLE PULLEY	1	1	1	1	1	1		
31	Z2131-31291	BELT, TRANSAXLE	1	1	1	1	1	1		
32	Z2131-31301	EXPENSION TANK	1	1	1	1	1	1		
33	Z2131-31311	FUEL HOSE LH	1	1	1	1	1	1		

※ QTY: A:ZXC48, B:ZXC54, C:ZXC60, D:ZXC48SE, E:ZXC54SE, F:ZXC60SE

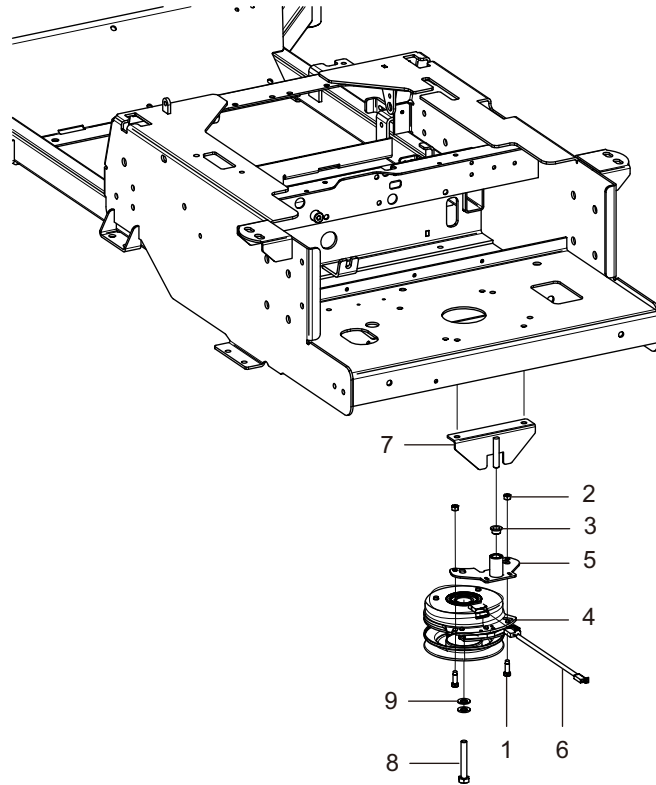
30B. TRANS AXLE GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
34	Z2131-31323	FUEL HOSE LH	1	1	1	1	1	1		
35	Z2131-31331	KEY	1	1	1	1	1	1		
36	Z2131-31401	HYDRO AXLE CONNECT BAR	1	1	1	1	1	1		
37	Z2131-31411	BRACKET, TRANSAXLE	2	2	2	2	2	2		
38	Z2131-31422	ROD, TRANSAXLE	2	2	2	2	2	2		
39	Z2131-31431	SPRING	2	2	2	2	2	2		

※ QTY: A:ZXC48, B:ZXC54, C:ZXC60, D:ZXC48SE, E:ZXC54SE, F:ZXC60SE

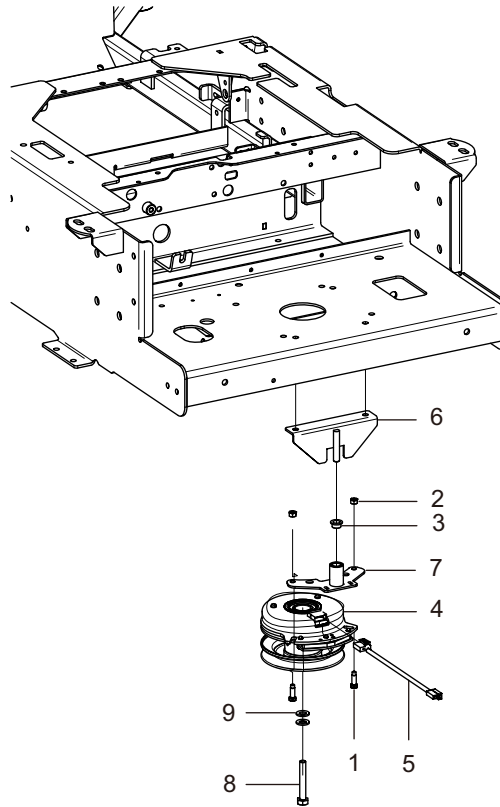
33A. PTO CLUTCH GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01153-50820	BOLT	2	2	2	2	2	2		
2	02310-50080	LOCK NUT	2	2	2	2	2	2		
3	U3215-47131	BUSH-BRAKE PEDAL PIVOT	1	1	1	1	1	1		
4	Z1131-33101	PTO CLUTCH ASS`Y	1	1	1	1	1	1		
5	Z1131-33171	MTG ASS`Y, PTO CLUTCH STOP	1	1	1	1	1	1		
6	Z2131-33131	LEAD WIRE ASSEMBLY	1	1	1	1	1	1		
7	Z2131-33142	BRACKET ASS`Y, PTO CLUTCH MTG	1	1	1	1	1	1		
8	Z2131-33212	BOLT	1	1	1	1	1	1		
9	Z2131-33221	WASHER	2	2	2	2	2	2		

※ QTY: A:ZXR48, B:ZXR54, C:ZXR60, D:ZXR48SE, E:ZXR54SE, F:ZXR60SE

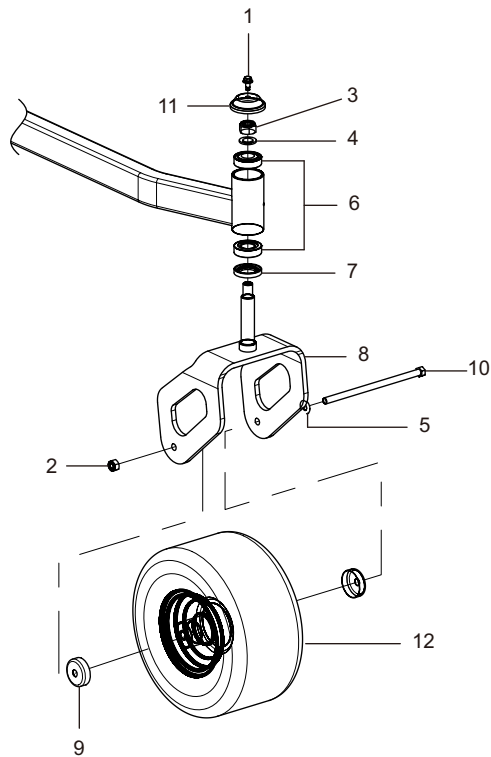
33B. PTO CLUTCH GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01153-50820	BOLT	2	2	2	2	2	2		
2	02310-50080	LOCK NUT	2	2	2	2	2	2		
3	U3215-47131	BUSH-BRAKE PEDAL PIVOT	1	1	1	1	1	1		
4	Z2131-33101	PTO CLUTCH ASS'Y	1	1	1	1	1	1		
5	Z2131-33131	LEAD WIRE ASSEMBLY	1	1	1	1	1	1		
6	Z2131-33142	BRACKET ASS'Y, PTO CLUTCH MTG	1	1	1	1	1	1		
7	Z2131-33171	MTG ASS'Y, PTO CLUTCH STOP	1	1	1	1	1	1		
8	Z2131-33212	BOLT	1	1	1	1	1	1		
9	Z2131-33221	WASHER	2	2	2	2	2	2		

※ QTY: A:ZXC48, B:ZXC54, C:ZXC60, D:ZXC48SE, E:ZXC54SE, F:ZXZXC60SE

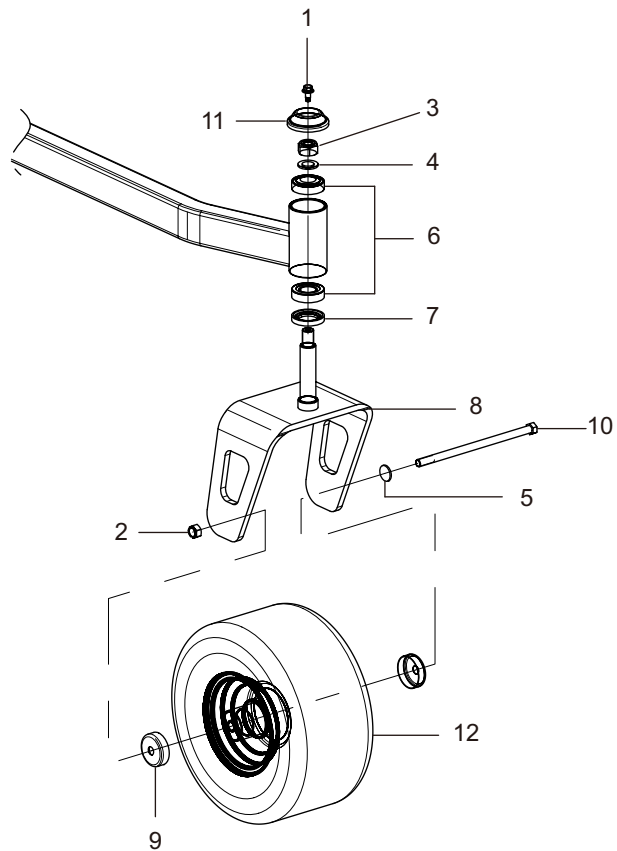
35A. FRONT WHEEL GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01125-50814	WITH WASHER BOLT	2	2	2	2	2	2		
2	Z2131-35221	LOCK NUT	2	2	2	2	2	2		
3	02310-50180	LOCK NUT	2	2	2	2	2	2		
4	04011-50180	PLAIN WASHER	2	2	2	2	2	2		
5	04013-50120	PLAIN WASHER	2	2	2	2	2	2		
6	08711-30205	TAPER ROLLER BEARING	4	4	4	4	4	4		
7	09503-25208	SEAL	2	2	2	2	2	2		
8	Z1121-35105	CASTER SUPPORT ASS'Y	2	2		2	2			
8	Z1171-35105	CASTER SUPPORT ASS'Y			2			2		
9	Z2131-35131	HUB CAP	4	4	4	4	4	4		
10	Z1121-35172	BOLT	2	2		2	2			
10	Z2131-35172	BOLT			2			2		
11	Z2131-35213	CAP, CASTER	2	2	2	2	2	2		
12	Z1121-35311	FRONT CASTER ASS'Y	2	2		2	2			
12	Z2131-35311	FRONT CASTER ASS'Y			2			2		

※ QTY: A:ZXR48, B:ZXR54, C:ZXR60, D:ZXR48SE, E:ZXR54SE, F:ZXR60SE

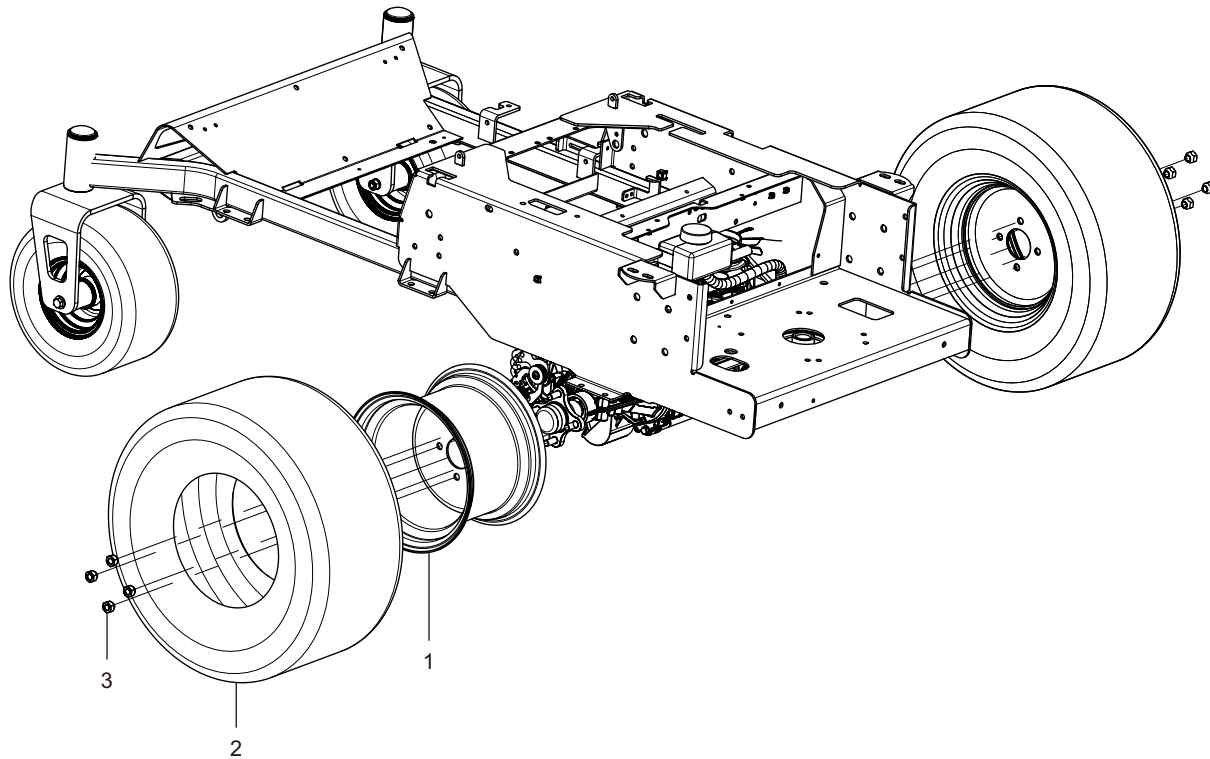
35B. FRONT WHEEL GROUP



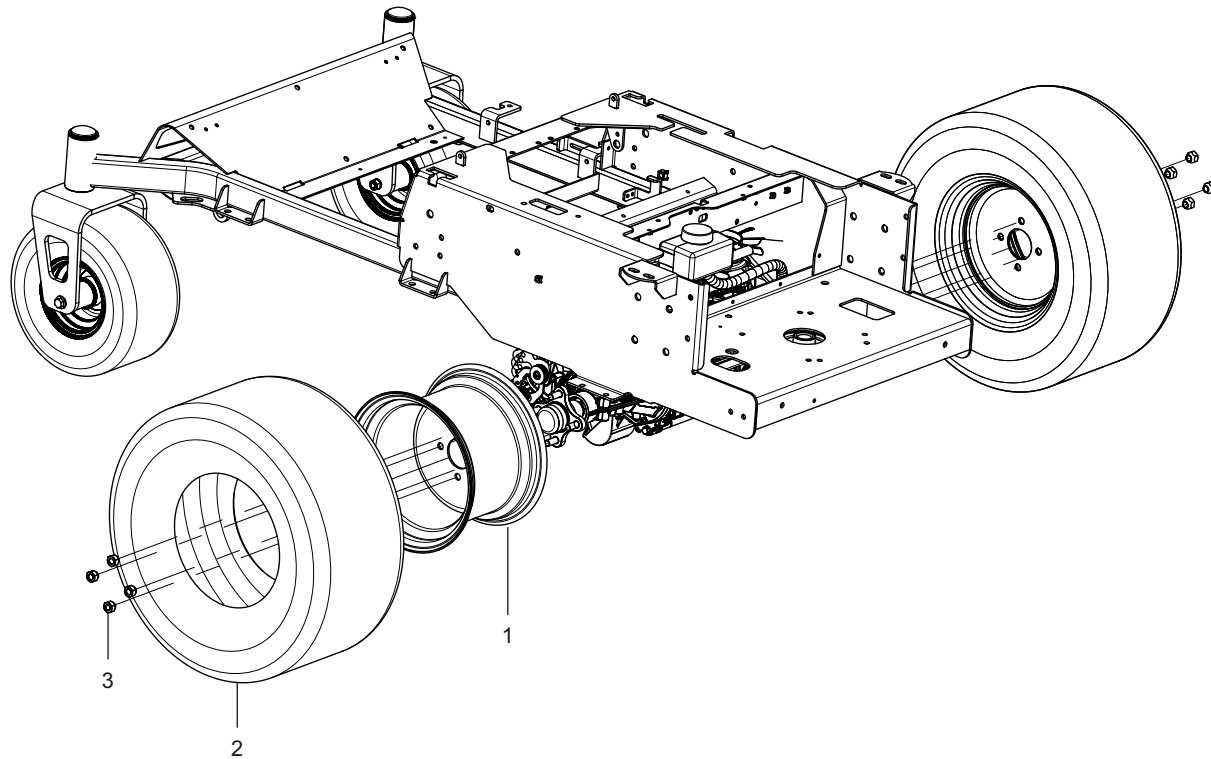
NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01125-50814	WITH WASHER BOLT	2	2	2	2	2	2		
2	Z2131-35221	LOCK NUT	2	2	2	2	2	2		
3	02310-50180	LOCK NUT	2	2	2	2	2	2		
4	04011-50180	PLAIN WASHER	2	2	2	2	2	2		
5	04013-50120	PLAIN WASHER	2	2	2	2	2	2		
6	08711-30205	TAPER ROLLER BEARING	4	4	4	4	4	4		
7	09503-25208	SEAL	2	2	2	2	2	2		
8	Z2131-35105	CASTER SUPPORT ASS'Y	2	2	2	2	2	2		
9	Z2131-35131	HUB CAP	4	4	4	4	4	4		
10	Z2131-35172	BOLT	2	2	2	2	2	2		
11	Z2131-35213	CAP, CASTER	2	2	2	2	2	2		
12	Z2131-35311	FRONT CASTER ASS'Y	2	2	2	2	2	2		

※ QTY: A:ZXC48, B:ZXC54, C:ZXC60, D:ZXC48SE, E:ZXC54SE, F:ZXC60SE

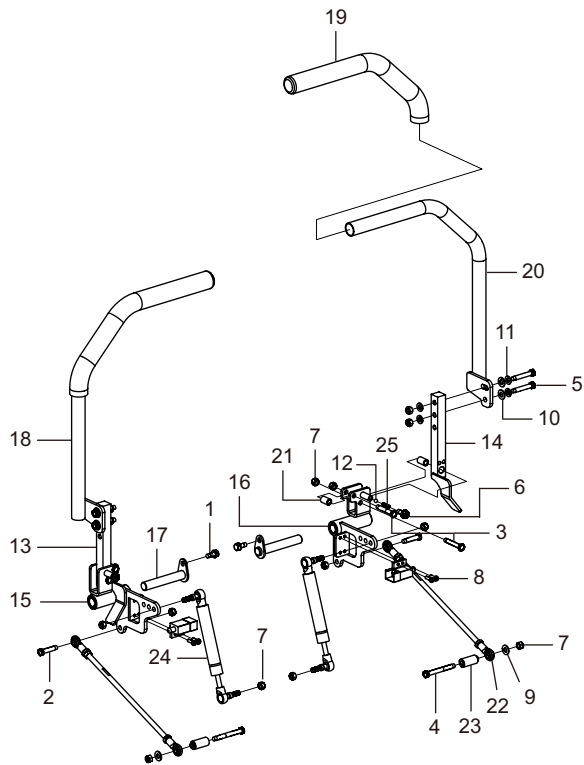
36A. REAR WHEEL TIRE GROUP



36B. REAR WHEEL TIRE GROUP



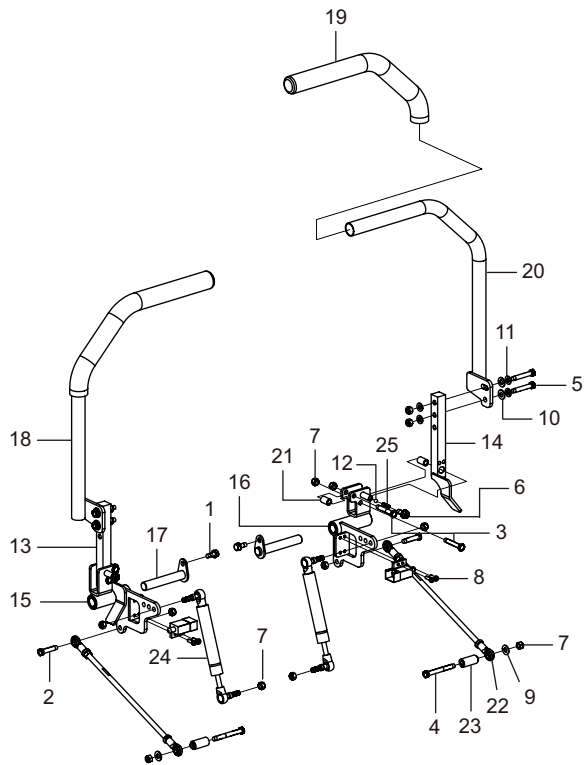
40. STEERING GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01123-50812	WITH WASHER BOLT	2	2	2	2	2	2		
2	01153-50830	BOLT	2	2	2	2	2	2		
3	01153-50840	BOLT	4	4	4	4	4	4		
4	01153-50860	BOLT	2	2	2	2	2	2		
5	01155-50840	BOLT	4	4	4	4	4	4		
6	01754-50812	FLANGE BOLT	2	2	2	2	2	2		
7	02310-50080	LOCK NUT	16	16	16	16	16	16		
8	03024-50516	SCREW	4	4	4	4	4	4		
9	04013-50080	PLAIN WASHER	2	2	2	2	2	2		
10	04014-50080	PLAIN WASHER	4	4	4	4	4	4		
11	04512-50080	SPRING WASHER	8	8	8	8	8	8		
12	07715-00401	BALL	2	2	2	2	2	2		
13	Z2131-41112	WLDMT-CONTROL BAR, LH	1	1	1	1	1	1		
14	Z2131-41212	WLDMT-CONTROL BAR, RH	1	1	1	1	1	1		
15	Z2131-41312	WLDMT-CONTROL BOX BARCKET ASS`Y, LH	1	1	1	1	1	1		
16	Z2131-41412	WLDMT-CONTROL BOX BARCKET ASS`Y, RH	1	1	1	1	1	1		
17	Z2131-41511	CONTROL BOX, SHAFT ASS`Y	2	2	2	2	2	2		
18	Z2131-41611	HANDLE LEVER, LH	1	1	1	1	1	1		

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE//ZXC54SE, F:ZXR60SE,ZXC60SE

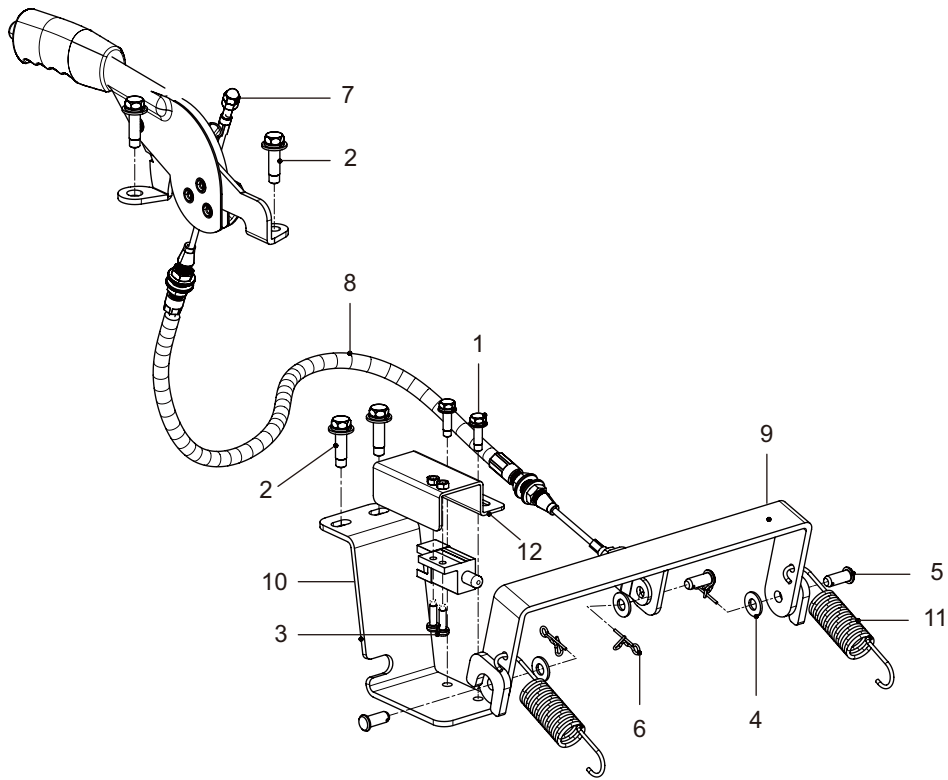
40. STEERING GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
19	Z2131-41621	HANDLE GRIP	2	2	2	2	2	2		
20	Z2131-41631	HANDLE LEVER(RH)	1	1	1	1	1	1		
21	Z2131-41652	BUSHING	4	4	4	4	4	4		
22	Z2131-41724	ROD, CONTROL	2	2	2	2	2	2		
23	Z2131-41752	SPACER, CONTROL ROD 2	2	2	2	2	2	2		
24	Z2131-41761	DAMPER ASSEMBLY	2	2	2	2	2	2		
25	Z2131-41811	RETURN SPRING	2	2	2	2	2	2		

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE//ZXC54SE, F:ZXR60SE,ZXC60SE

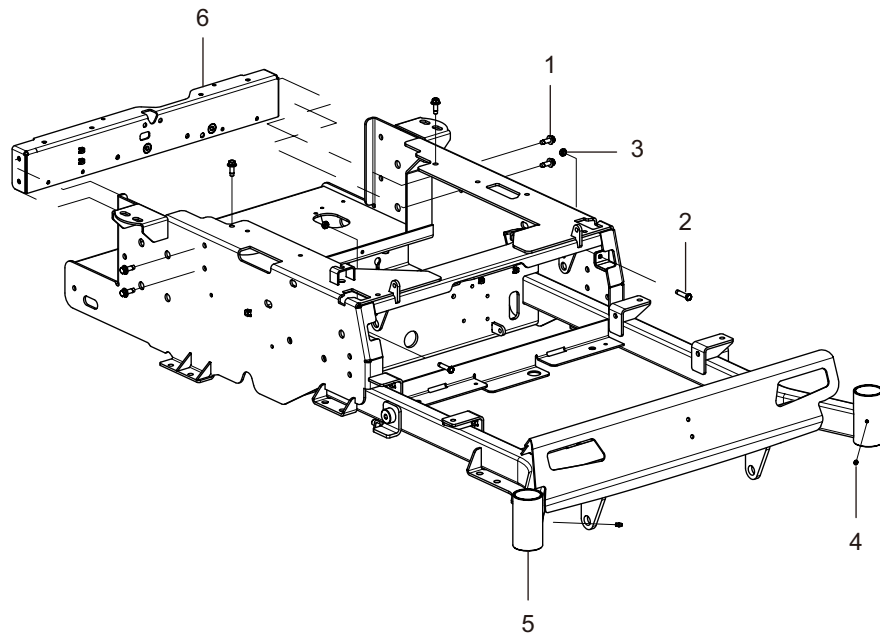
45. PARKING BREAK GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01025-50618	WITH WASHER BOLT	2	2	2	2	2	2		
2	01125-50825	WITH WASHER BOLT	4	4	4	4	4	4		
3	03024-50516	SCREW	2	2	2	2	2	2		
4	04013-50080	PLAIN WASHER	3	3	3	3	3	3		
5	05122-50820	JOINT PIN	3	3	3	3	3	3		
6	52300-3412-1	SNAP PIN	3	3	3	3	3	3		
7	Z2131-45201	PARKING BREAK	1	1	1	1	1	1		
8	Z2131-45211	CABLE ASS`Y, PARKING	1	1	1	1	1	1		
9	Z2131-45224	PARKING BRAKE LINK BRACKET	1	1	1	1	1	1		
10	Z2131-45232	PARKING BRAKE SWITCH BRACKET	1	1	1	1	1	1		
11	Z2131-45241	RETURN SPRING	2	2	2	2	2	2		
12	Z2131-45252	SWITCH COVER	1	1	1	1	1	1		

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

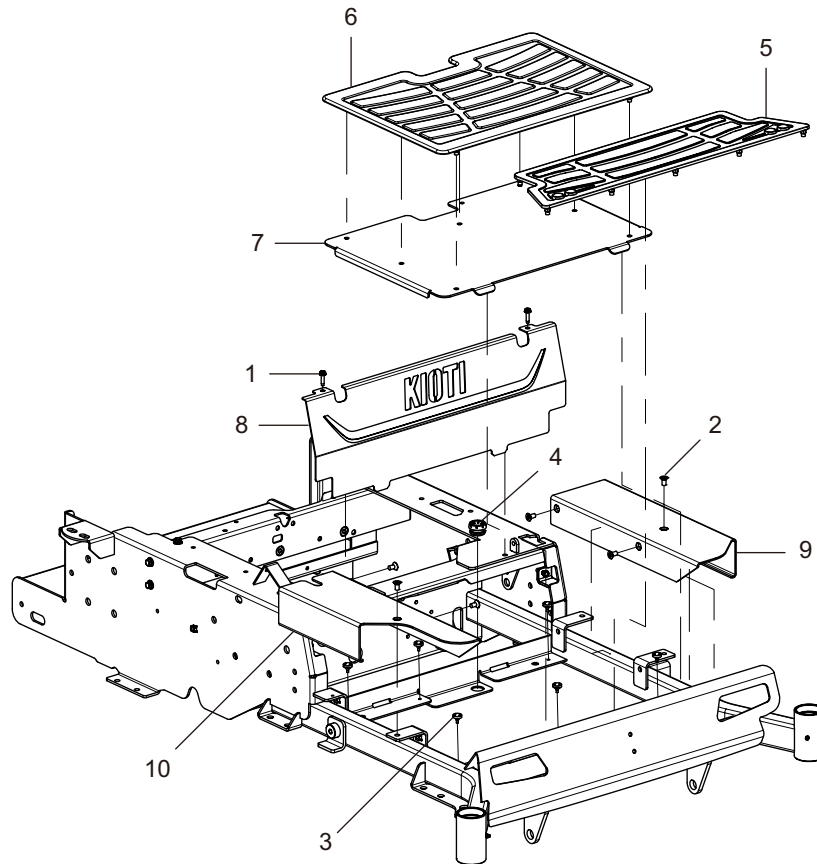
50. MAIN FRAME GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01125-50820B	WITH WASHER BOLT	6	6	6	6	6	6		
2	01153-50830	BOLT	2	2	2	2	2	2		
3	02112-50080	NUT	2	2	2	2	2	2		
4	06613-10675	GREASE NIPPLE	2	2	2	2	2	2		
5	Z2131-50008	MAIN FRAME ASS'Y	1	1		1	1			
5	Z2151-50008	MAIN FRAME ASS'Y			1			1		
6	Z2131-50114	SEAT SUPPORT BRACKET	1	1	1	1	1	1		

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

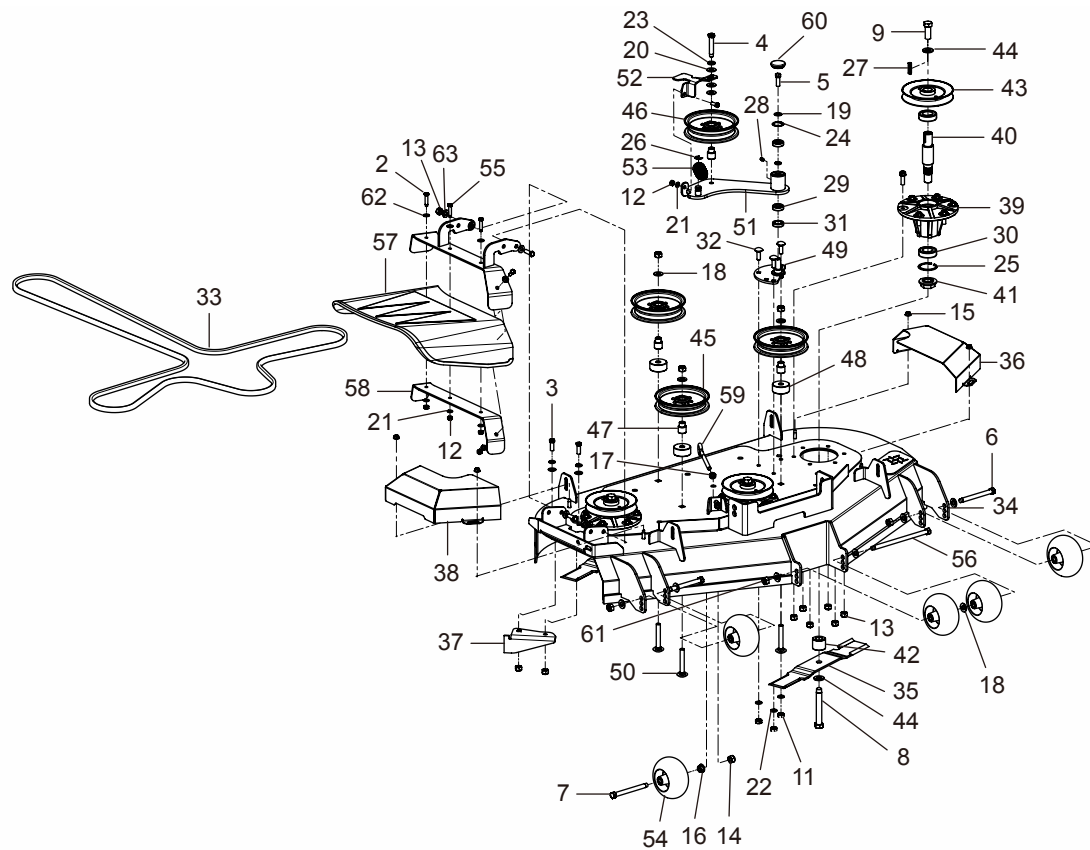
51. FLOOR GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01754-50620B	FLANGE BOLT	2	2	2	2	2	2		
2	03016-50816	SCREW	6	6	6	6	6	6		
3	T2555-55851	CUSHION	6	6	6	6	6	6		
4	U3215-83701	SEAT RUBBER MOUNT	1	1	1	1	1	1		
5	Z2131-51112	FRONT MAT	1	1	1	1	1	1		
6	Z2131-51121	FLOOR MAT	1	1	1	1	1	1		
7	Z2131-51131	FOOT PLATE	1	1	1	1	1	1		
8	Z2131-51144	FRONT COVER, SEAT	1	1	1	1	1	1		
9	Z2131-51151	SUB STEP, LH	1	1	1	1	1	1		
10	Z2131-51162	SUB STEP, RH	1	1	1	1	1	1		

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

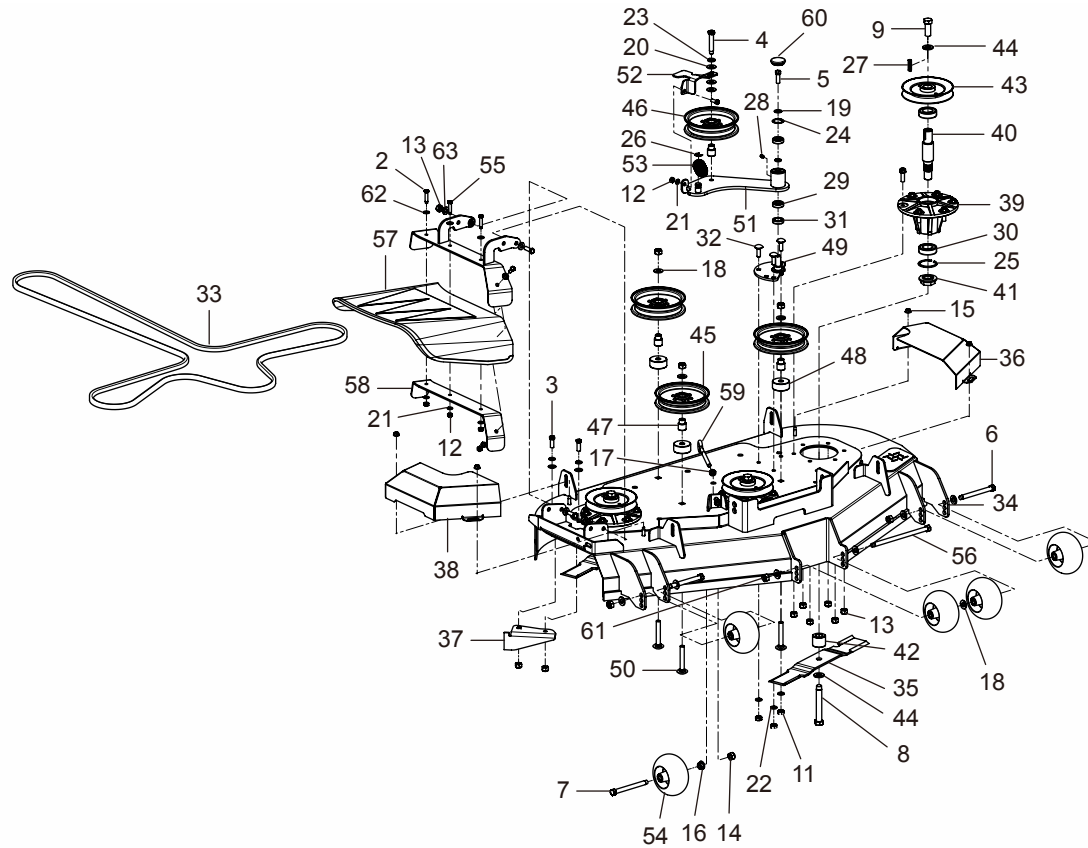
60A. MOWER DECK GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01153-50820	BOLT	1			1				
2	01153-50830	BOLT	4			4				
3	01173-51028	BOLT	4			4				
4	01173-51255	BOLT	1			1				
5	01176-51030	BOLT	1			1				
6	01176-51202	BOLT	2			2				
7	01176-51203	BOLT	1			1				
8	01176-51600	BOLT	3			3				
9	01176-51640	BOLT	3			3				
10	01774-51030	FLANGE BOLT	18			18				
11	02014-50100	NUT	3			3				
12	02054-50080	NUT	5			5				
13	02310-50100	LOCK NUT	22			22				
14	02310-50120	LOCK NUT	6			6				
15	02763-50080B	FLANGE NUT	4			4				
16	02771-50120	FLANGE NUT	1			1				
17	02783-50100	FLANGE NUT	2			2				
18	04013-50120	PLAIN WASHER	10			10				

※ QTY: A:ZXR48/ZXC48, B:ZXR54./ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

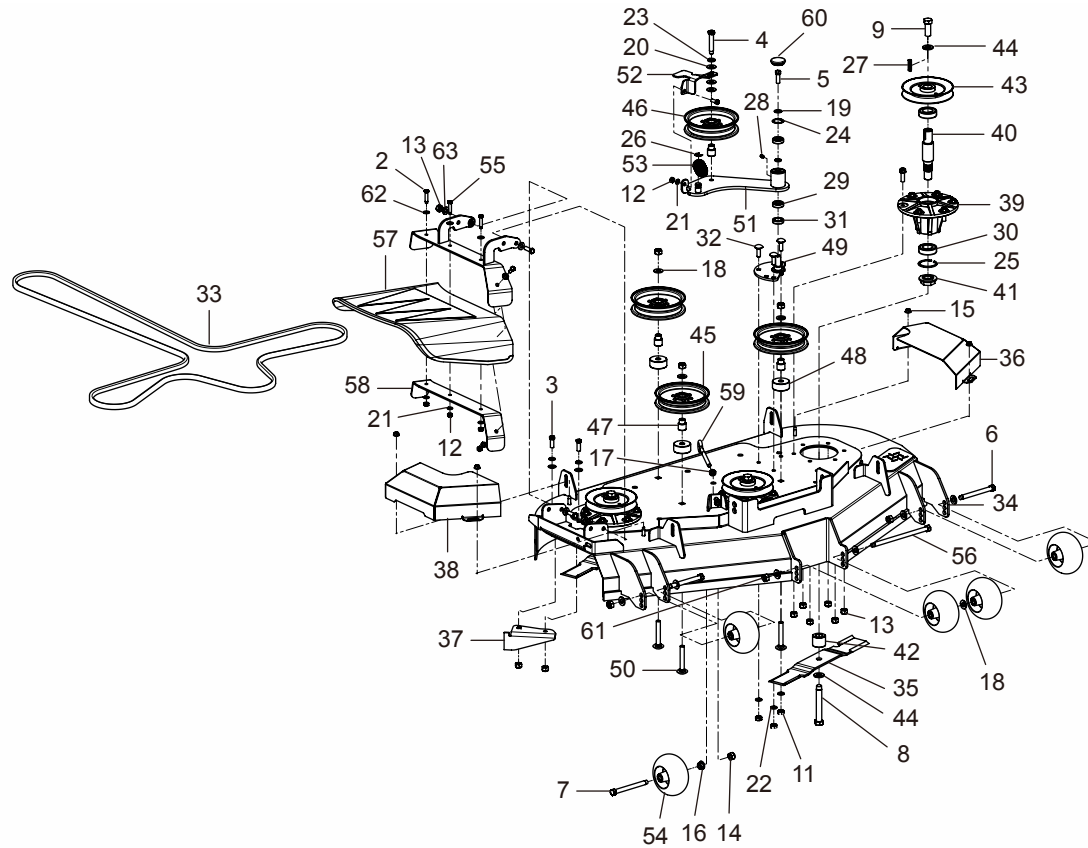
60A. MOWER DECK GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
19	04014-50100	PLAIN WASHER	1			1				
20	04014-50120	PLAIN WASHER	3			3				
21	04512-50080	SPRING WASHER	5			5				
22	04512-50100	SPRING WASHER	6			6				
23	04512-50120	SPRING WASHER	1			1				
24	04611-00320	SNAP RING	1			1				
25	04611-00520	SNAP RING	3			3				
26	04613-50120	SNAP RING	1			1				
27	05911-00735	KEY	3			3				
28	06613-10675	GREASE NIPPLE	1			1				
29	08141-06002	BALL BEARING	2			2				
30	08141-06205	BALL BEARING	6			6				
31	09500-22327	OIL SEAL	1			1				
32	C1510-41141	BOLT	3			3				
33	Z2111-33111	BELT, MOWER DECK	1			1				
34	Z2111-61115	MOWER DECK ASS'Y	1			1				
35	Z2111-62152	NOTCHED BLADE, BOLUNT	3			3				
36	Z2111-62412	PULLEY COVER, LH	1			1				

※ QTY: A:ZXR48/ZXC48, B:ZXR54./ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

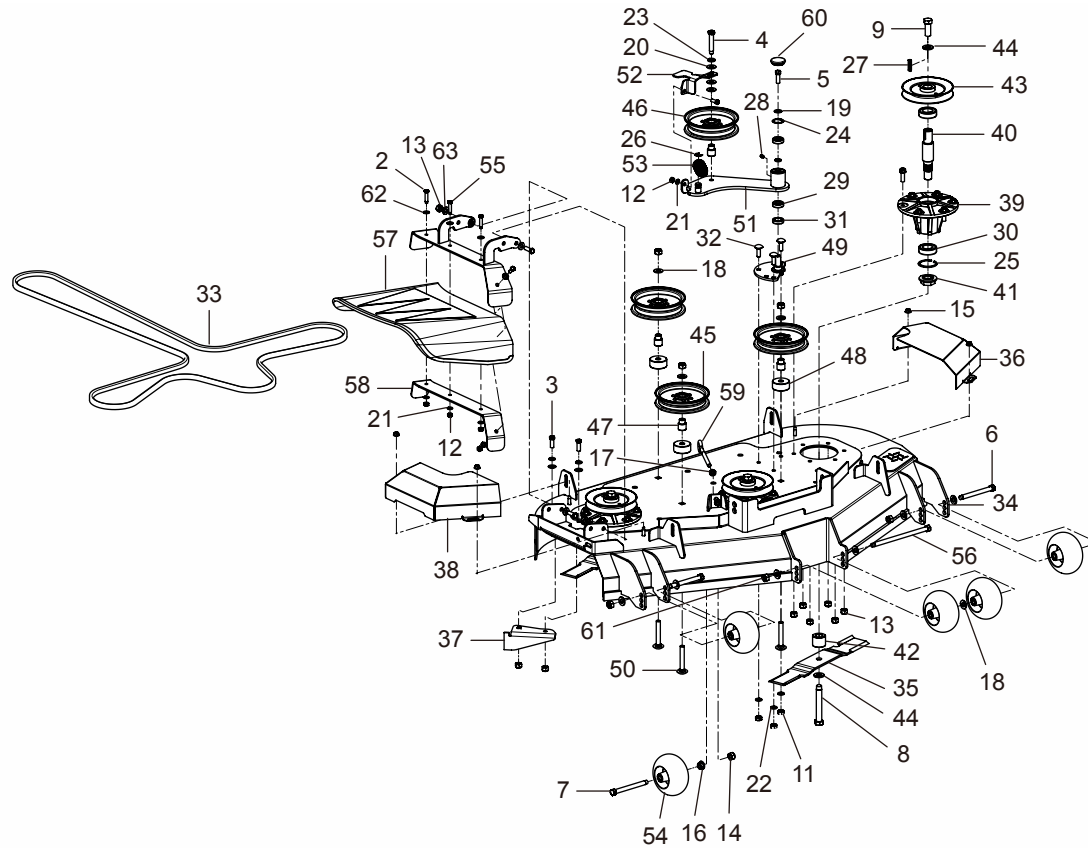
60A. MOWER DECK GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
37	Z2111-62442	BRACKET	1			1				
38	Z2111-62512	PULLEY COVER, RH	1			1				
39	Z2131-62111	HOLDER, SHAFT	3			3				
40	Z2131-62123	SHAFT	3			3				
41	Z2131-62131	NUT, SHAFT	3			3				
42	Z2131-62142	SPACER	3			3				
43	Z2131-62162	PULLEY, MOWER DECK	3			3				
44	Z2131-62171	WASHER, SPRING	6			6				
45	Z2131-62191	TENSION PULLEY, MOWER DECK	2			2				
46	Z2131-62201	TENSION PULLEY, MOWER DECK	2			2				
47	Z2131-62231	COLLAR UPPER PULLEY	4			4				
48	Z2131-62241	COLLAR PULLEY	3			3				
49	Z2131-62261	PULLEY ARM, TENSION	1			1				
50	Z2131-62271	BOLT	3			3				
51	Z2131-62303	SUPPORT, TENSION PULLEY	1			1				
52	Z2131-62372	TENSION PULLEY BRKT	1			1				
53	Z2131-62381	TENSION SPRING	1			1				
54	Z2131-62431	MOWER DECK ROLLER	5			5				

※ QTY: A:ZXR48/ZXC48, B:ZXR54./ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

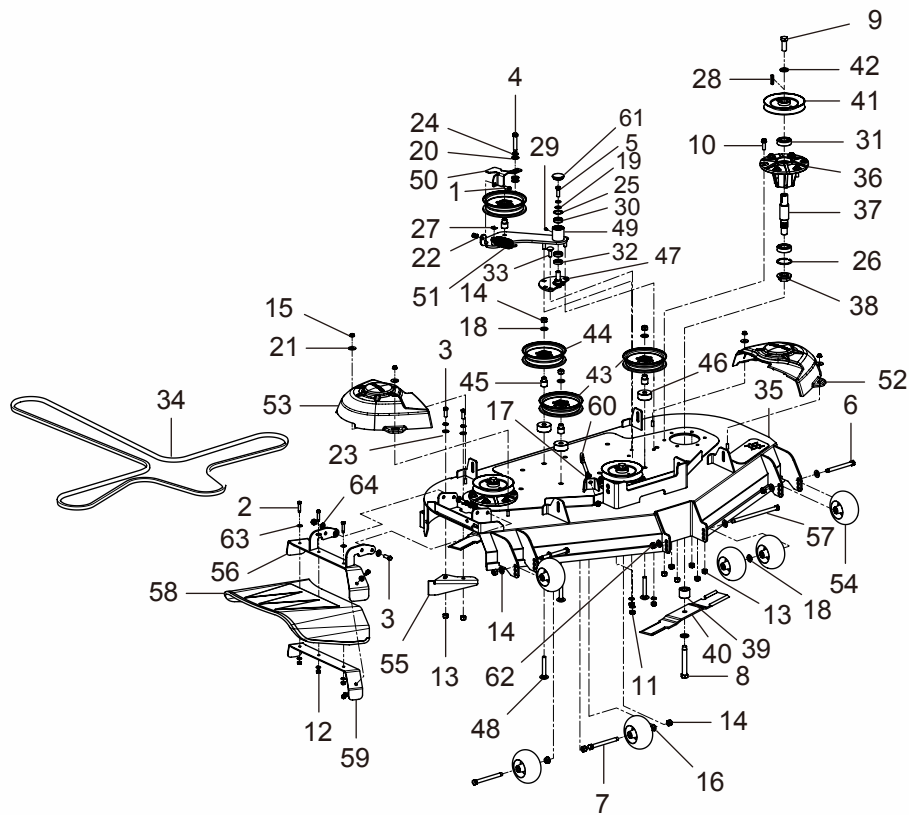
60A. MOWER DECK GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
55	Z2131-62454	DECK CHUTE BRKT, UPPER	1			1				
56	Z2131-62462	ROLLER BOLT	1			1				
57	Z2131-62481	CHUTE, DECK	1			1				
58	Z2131-62491	DECK CHUTE BRKT, LOWER	1			1				
59	Z2131-62512	BOLT, BELT TENSION	1			1				
60	Z2131-62281	CAP	1			1				
61	Z2131-35221	LOCK NUT	1			1				
62	04013-50080	PLAIN WASHER	4			4				
63	04013-50100	PLAIN WASHER	6			6				

※ QTY: A:ZXR48/ZXC48, B:ZXR54./ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

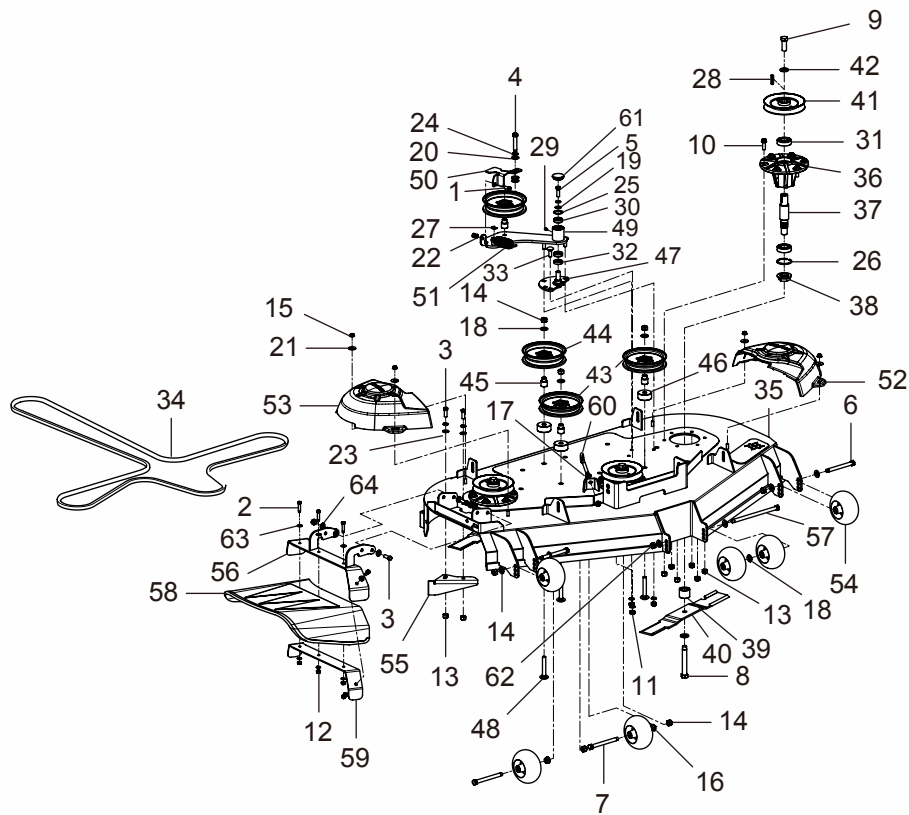
60B. MOWER DECK GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01153-50820	BOLT		1			1			
2	01153-50830	BOLT		4			4			
3	01173-51028	BOLT		4			4			
4	01173-51255	BOLT		1			1			
5	01176-51030	BOLT		1			1			
6	01176-51202	BOLT		2			2			
7	01176-51203	BOLT		2			2			
8	01176-51640	BOLT		3			3			
9	01176-51600	BOLT		3			3			
10	01774-51030	FLANGE BOLT		18			18			
11	02014-50100	NUT		3			3			
12	02054-50080	NUT		5			5			
13	02310-50100	LOCK NUT		22			22			
14	02310-50120	LOCK NUT		7			7			
15	02763-50080B	FLANGE NUT		4			4			
16	02771-50120	FLANGE NUT		2			2			
17	02783-50100	FLANGE NUT		2			2			
18	04013-50120	PLAIN WASHER		10			10			

※ QTY: A:ZXR48/ZXC48, B:ZXR54./ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

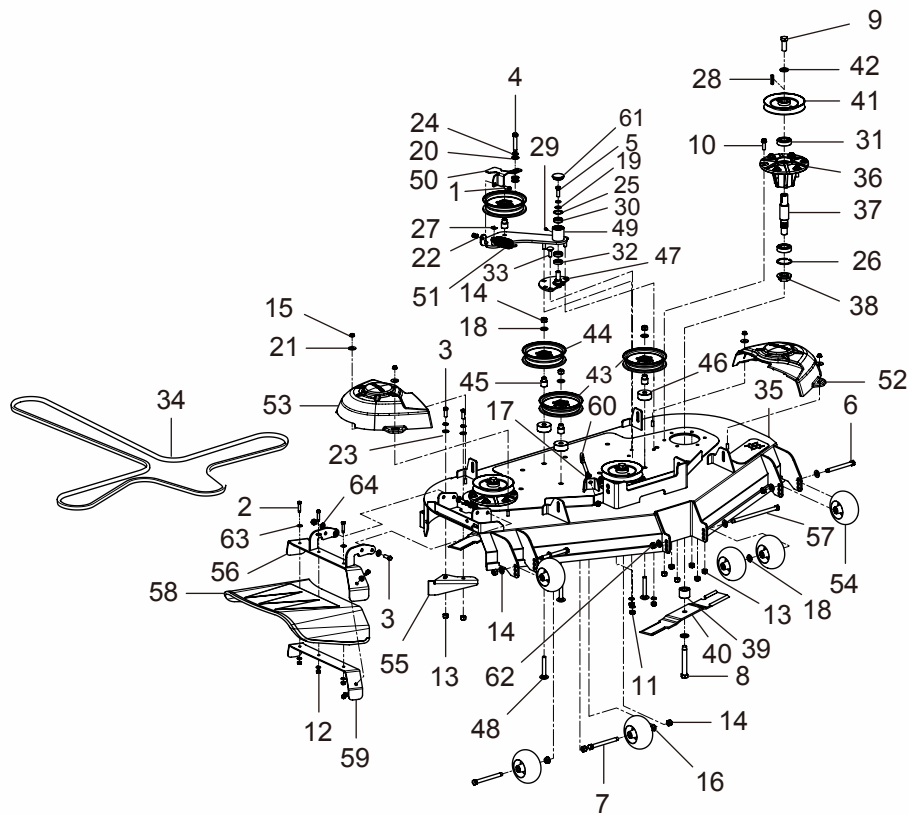
60B. MOWER DECK GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
19	04014-50100	PLAIN WASHER		1			1			
20	04014-50120	PLAIN WASHER		3			3			
21	04015-50080B	PLAIN WASHER		4			4			
22	04512-50080	SPRING WASHER		5			5			
23	04512-50100	SPRING WASHER		6			6			
24	04512-50120	SPRING WASHER		1			1			
25	04611-00320	SNAP RING		1			1			
26	04611-00520	SNAP RING		3			3			
27	04613-50120	SNAP RING		1			1			
28	05911-00735	KEY		3			3			
29	06613-10675	GREASE NIPPLE		1			1			
30	08141-06002	BALL BEARING		2			2			
31	08141-06205	BALL BEARING		6			6			
32	09500-22327	OIL SEAL		1			1			
33	C1510-41141	BOLT		3			3			
34	Z2131-33111	BELT, MOWER DECK		1			1			
35	Z2131-61115	MOWER DECK ASS'Y		1			1			
36	Z2131-62111	HOLDER, SHAFT		3			3			

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

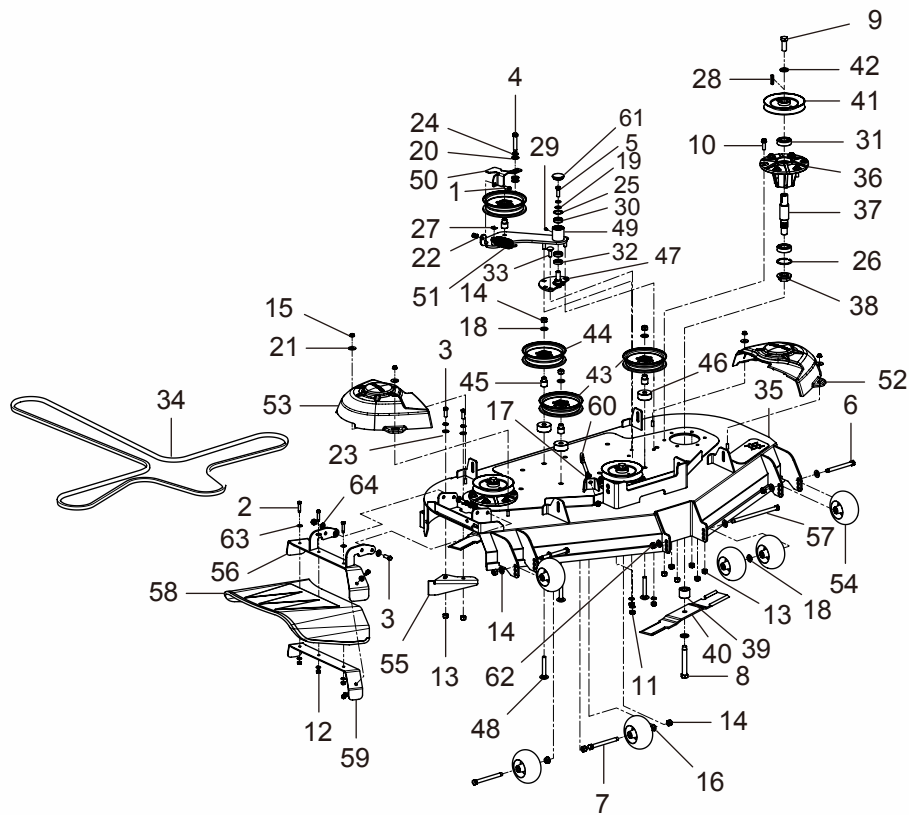
60B. MOWER DECK GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
37	Z2131-62123	SHAFT		3			3			
38	Z2131-62131	NUT, SHAFT		3			3			
39	Z2131-62142	SPACER		3			3			
40	Z2131-62152	NOTCHED BLADE, BLOUNT		3			3			
41	Z2131-62162	PULLEY, MOWER DECK		3			3			
42	Z2131-62171	WASHER, SPRING		6			6			
43	Z2131-62191	TENSION PULLEY, MOWER DECK		2			2			
44	Z2131-62201	TENSION PULLEY, MOWER DECK		2			2			
45	Z2131-62231	COLLAR UPPER PULLEY		4			4			
46	Z2131-62241	COLLAR PULLEY		3			3			
47	Z2131-62261	PULLEY ARM, TENSION		1			1			
48	Z2131-62271	BOLT		3			3			
49	Z2131-62303	SUPPORT, TENSION PULLEY		1			1			
50	Z2131-62372	TENSION PULLEY BRKT		1			1			
51	Z2131-62381	TENSION SPRING		1			1			
52	Z2131-62412	COVER, PULLEY, LH		1			1			
53	Z2131-62421	COVER, PULLEY, RH		1			1			
54	Z2131-62431	MOWER DECK ROLLER		6			6			

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

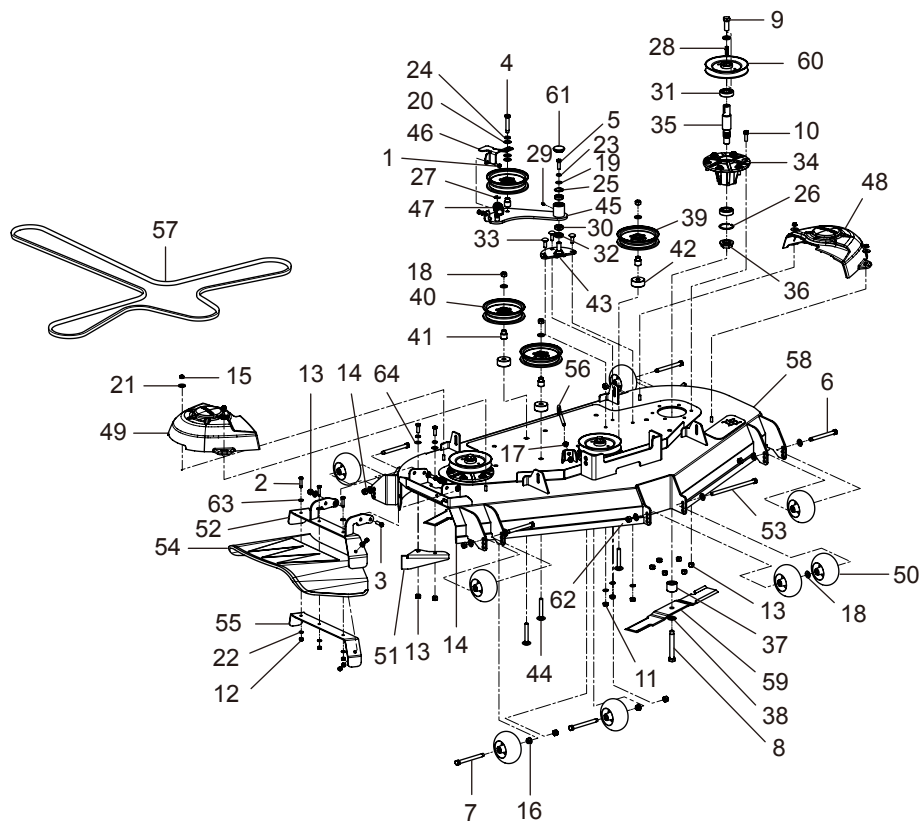
60B. MOWER DECK GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
55	Z2131-62443	BRACKET		1			1			
56	Z2131-62454	DECK CHUTE BRKT, UPPER		1			1			
57	Z2131-62462	ROLLER BOLT		1			1			
58	Z2131-62481	CHUTE , DECK		1			1			
59	Z2131-62491	DECK CHUTE BRKT, LOWER		1			1			
60	Z2131-62512	BOLT, BELT TENSION		1			1			
61	Z2131-62281	CAP		1			1			
62	Z2131-35221	LOCK NUT		1			1			
63	04013-50080	PLAIN WASHER		4			4			
64	04013-50100	PLAIN WASHER		6			6			

※ QTY: A:ZXR48,ZXC48, B:ZXR54,ZXC54, C:ZXR60,ZXC60, D:ZXR48SE,ZXC48SE, E:ZXR54SE,ZXC54SE, F:ZXR60SE,ZXC60SE

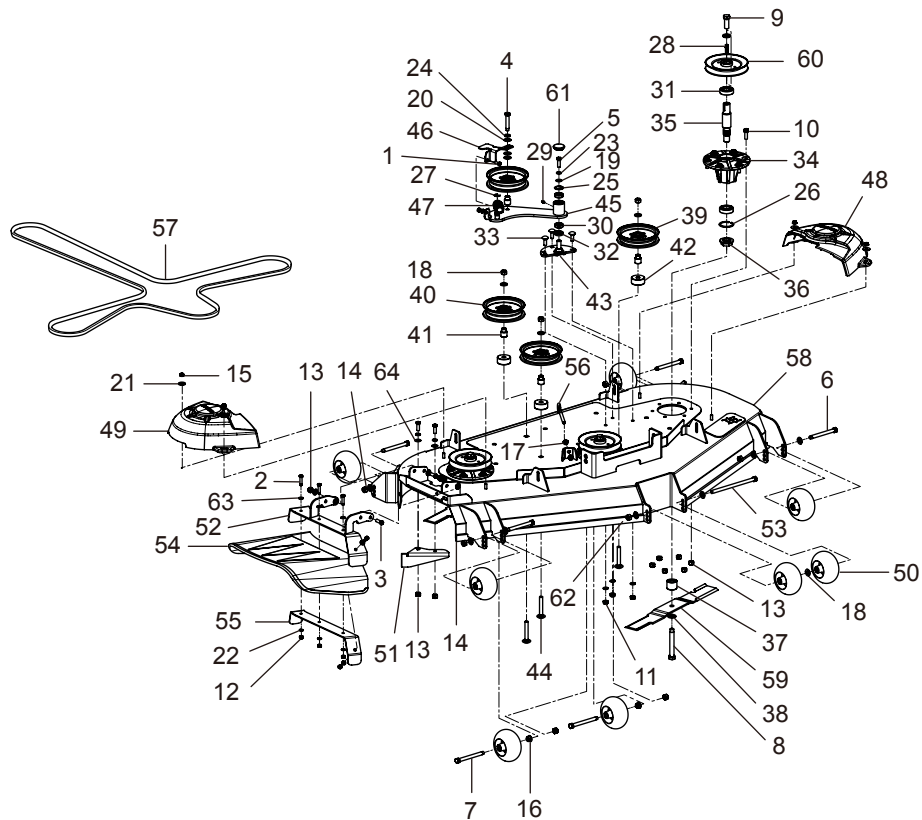
60C. MOWER DECK GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01153-50820	BOLT			1			1		
2	01153-50830	BOLT			4			4		
3	01173-51028	BOLT			4			4		
4	01173-51255	BOLT			1			1		
5	01176-51030	BOLT			1			1		
6	01176-51202	BOLT			4			4		
7	01176-51203	BOLT			2			2		
8	01176-51600	BOLT			3			3		
9	01176-51640	BOLT			3			3		
10	01774-51030	FLANGE BOLT			18			18		
11	02014-50100	NUT			3			3		
12	02054-50080	NUT			5			5		
13	02310-50100	LOCK NUT			22			22		
14	02310-50120	LOCK NUT			9			9		
15	02763-50080B	FLANGE NUT			4			4		
16	02771-50120	FLANGE NUT			2			2		
17	02783-50100	FLANGE NUT			2			2		
18	04013-50120	PLAIN WASHER			14			14		

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

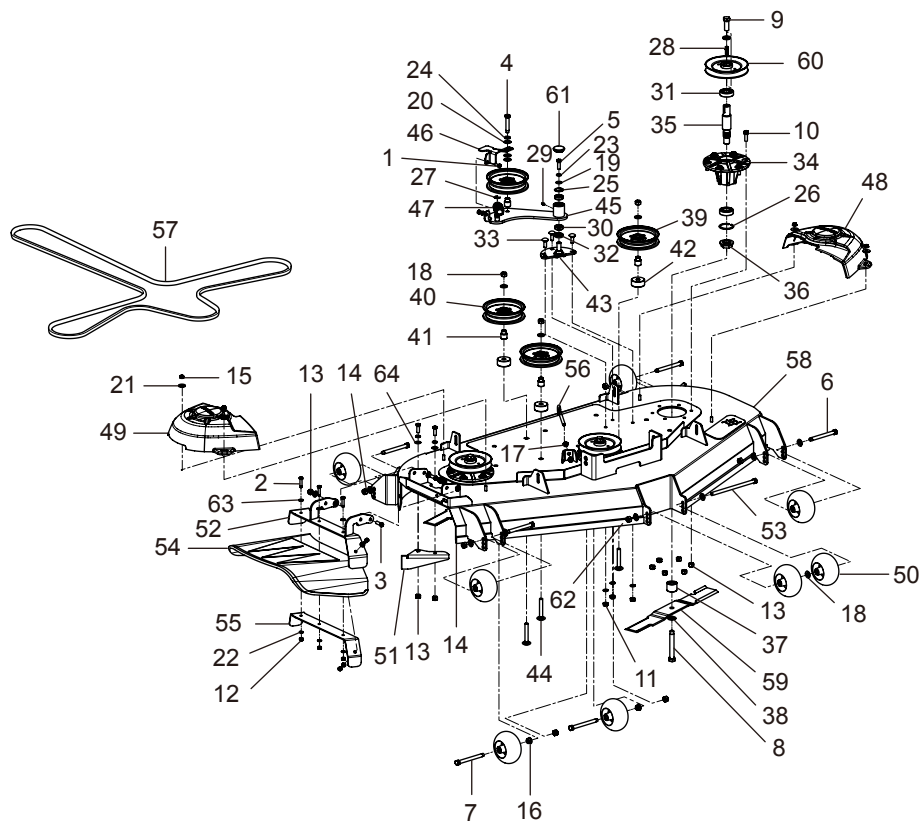
60C. MOWER DECK GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
19	04014-50100	PLAIN WASHER			1			1		
20	04014-50120	PLAIN WASHER			3			3		
21	04015-50080B	PLAIN WASHER			4			4		
22	04512-50080	SPRING WASHER			5			5		
23	04512-50100	SPRING WASHER			6			6		
24	04512-50120	SPRING WASHER			1			1		
25	04611-00320	SNAP RING			1			1		
26	04611-00520	SNAP RING			3			3		
27	04613-50120	SNAP RING			1			1		
28	05911-00735	KEY			3			3		
29	06613-10675	GREASE NIPPLE			1			1		
30	08141-06002	BALL BEARING			2			2		
31	08141-06205	BALL BEARING			6			6		
32	09500-22327	OIL SEAL			1			1		
33	C1510-41141	BOLT			3			3		
34	Z2131-62111	HOLDER, SHAFT			3			3		
35	Z2131-62123	SHAFT			3			3		
36	Z2131-62131	NUT, SHAFT			3			3		

※ QTY: A:ZXR48,ZXC48, B:ZXR54,ZXC54, C:ZXR60,ZXC60, D:ZXR48SE,ZXC48SE, E:ZXR54SE,ZXC54SE, F:ZXR60SE,ZXC60SE

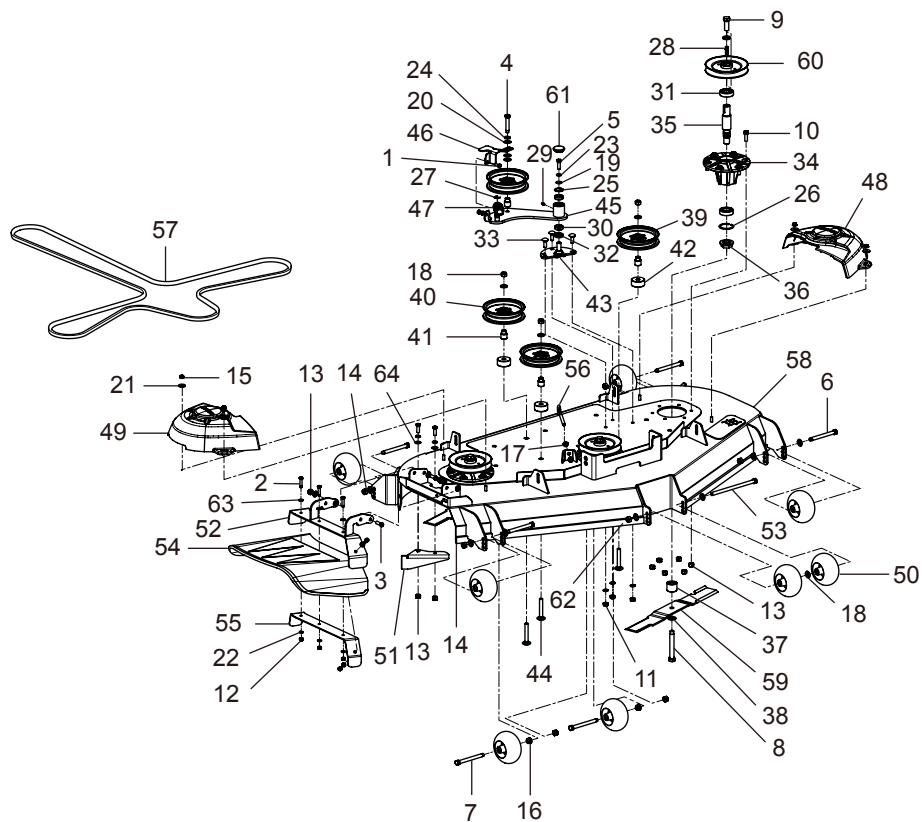
60C. MOWER DECK GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
37	Z2131-62142	SPACER			3			3		
38	Z2131-62171	WASHER, SPRING			6			6		
39	Z2131-62191	TENSION PULLEY,MOWER DECK			2			2		
40	Z2131-62201	TENSION PULLEY,MOWER DECK			2			2		
41	Z2131-62231	COLLAR UPPER PULLEY			4			4		
42	Z2131-62241	COLLAR PULLEY			3			3		
43	Z2131-62261	PULLEY ARM, TENSION			1			1		
44	Z2131-62271	BOLT			3			3		
45	Z2131-62303	SUPPORT, TENSION PULLEY			1			1		
46	Z2131-62372	TENSION PULLEY BRKT			1			1		
47	Z2131-62381	TENSION SPRING			1			1		
48	Z2131-62412	COVER, PULLEY, LH			1			1		
49	Z2131-62421	COVER, PULLEY, RH			1			1		
50	Z2131-62431	MOWER DECK ROLLER			8			8		
51	Z2131-62443	BRACKET			1			1		
52	Z2131-62454	DECK CHUTE BRKT,UPPER			1			1		
53	Z2131-62462	ROLLER BOLT			1			1		
54	Z2131-62481	CHUTE , DECK			1			1		

※ QTY: A:ZXR48,ZXC48, B:ZXR54,ZXC54, C:ZXR60,ZXC60, D:ZXR48SE,ZXC48SE, E:ZXR54SE,ZXC54SE, F:ZXR60SE,ZXC60SE

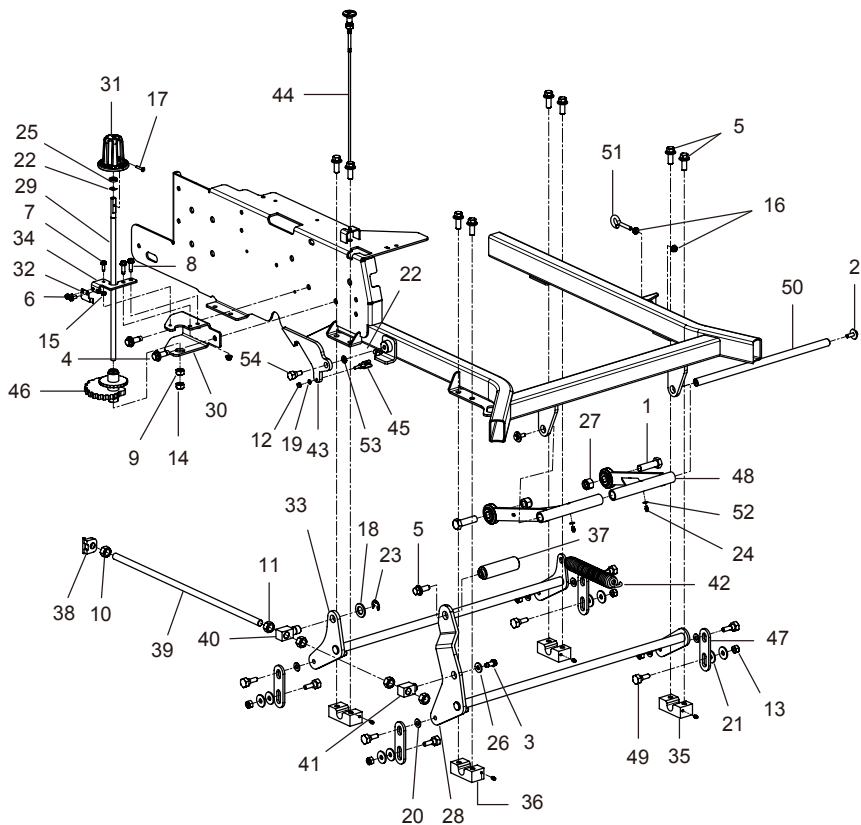
60C. MOWER DECK GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
55	Z2131-62491	DECK CHUTE BRKT, LOWER			1			1		
56	Z2131-62512	BOLT, BELT TENSION			1			1		
57	Z2151-33111	BELT, MOWER DECK			1			1		
58	Z2151-61115	MOWER DECK ASS'Y			1			1		
59	Z2151-62152	NOTCHED BLADE, BOLUNT			3			3		
60	Z2151-62162	PULLEY, MOWER DECK			3			3		
61	Z2131-62281	CAP			1			1		
62	Z2131-35221	LOCK NUT			1			1		
63	04013-50080	PLAIN WASHER			4			4		
64	04013-50100	PLAIN WASHER			6			6		

※ QTY: A:ZXR48,ZXC48, B:ZXR54,ZXC54, C:ZXR60,ZXC60, D:ZXR48SE,ZXC48SE, E:ZXR54SE,ZXC54SE, F:ZXR60SE,ZXC60SE

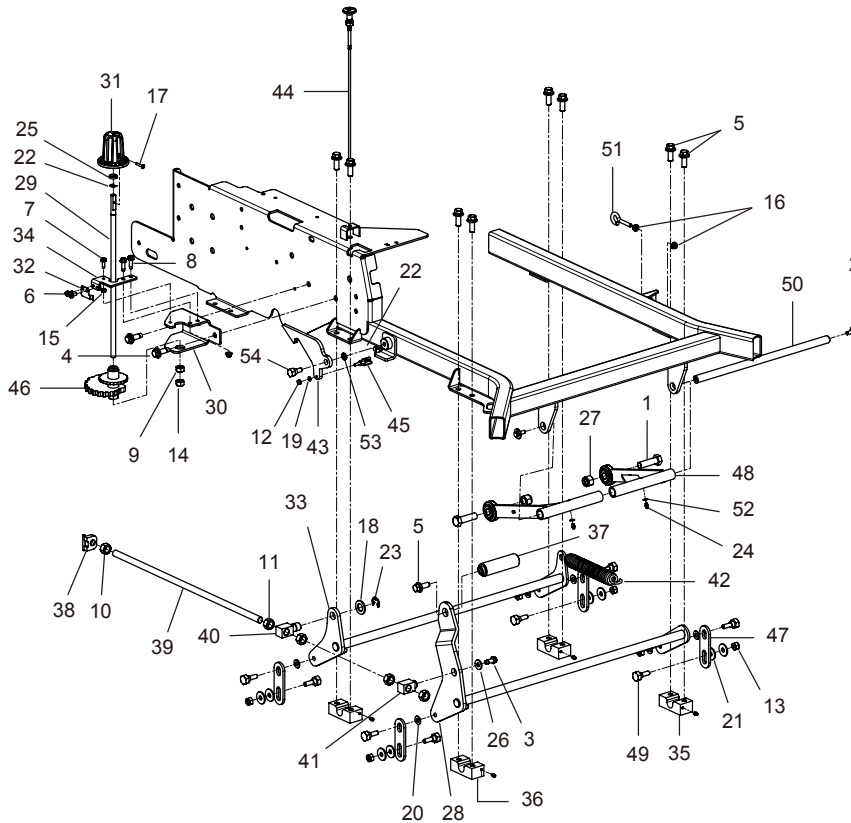
70. DECK LIFT GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01073-51655	BOLT	2	2	2	2	2	2		
2	01127-50825B	WITH WASHER BOLT	2	2	2	2	2	2		
3	01133-51018	WITH WASHER BOLT	1	1	1	1	1	1		
4	01135-51230B	WITH WASHER BOLT	2	2	2	2	2	2		
5	01135-51235B	WITH WASHER BOLT	9	9	9	9	9	9		
6	01754-50614	FLANGE BOLT	2	2	2	2	2	2		
7	01754-50616	FLANGE BOLT	1	1	1	1	1	1		
8	01754-50820	FLANGE BOLT	2	2	2	2	2	2		
9	02076-50120	NUT	1	1	1	1	1	1		
10	02172-50160	NUT	1	1	1	1	1	1		
11	02174-50160	NUT	4	4	4	4	4	4		
12	02310-50060	LOCK NUT	1	1	1	1	1	1		
13	02310-50100	LOCK NUT	8	8	8	8	8	8		
14	02310-50120	LOCK NUT	1	1	1	1	1	1		
15	02761-50060	FLANGE NUT	1	1	1	1	1	1		
16	02763-50080	FLANGE NUT	3	3	3	3	3	3		
17	03056-50525B	SCREW	1	1	1	1	1	1		
18	04011-50200	PLAIN WASHER	1	1	1	1	1	1		

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

70. DECK LIFT GROUP



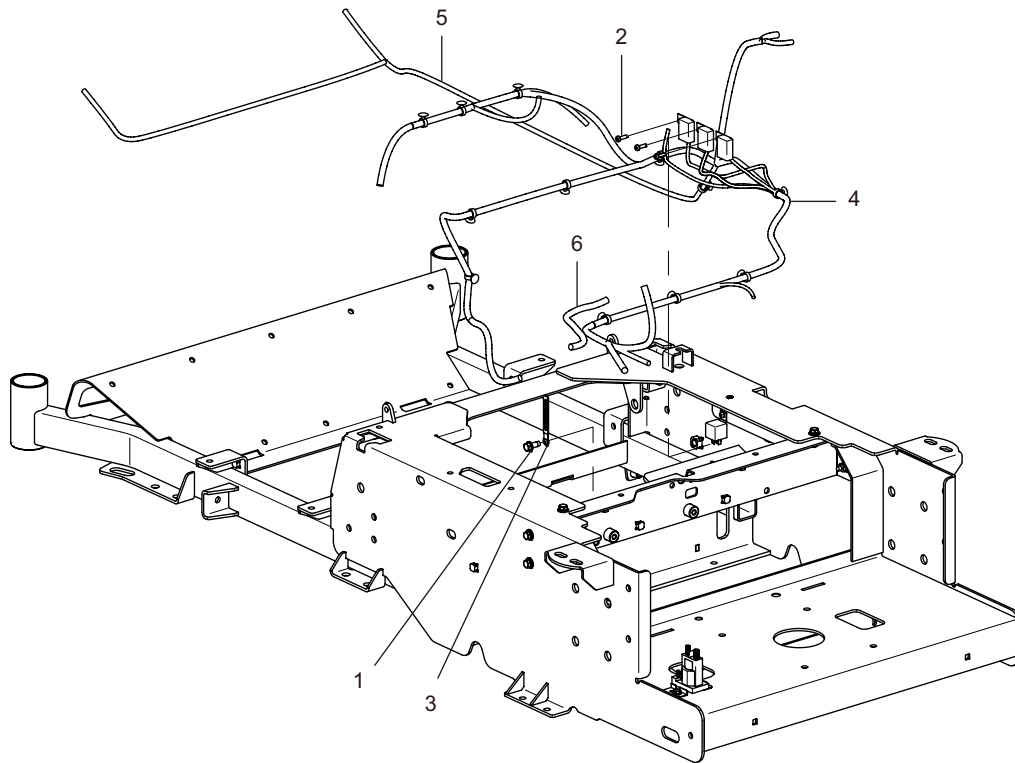
NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
19	04012-50060	PLAIN WASHER	1	1	1	1	1	1		
20	04013-50100	PLAIN WASHER	8	8	8	8	8	8		
21	04015-50100	LOCK NUT	8	8	8	8	8	8		
22	04613-50090	SNAP RING	1	1	1	1	1	1		
23	04613-50150	SNAP RING	1	1	1	1	1	1		
24	06613-10675	GREASE NIPPLE	6	6	6	6	6	6		
25	08121-06801	BALL BEARING	1	1	1	1	1	1		
26	G1511-99781	PLAIN WASHER	1	1	1	1	1	1		
27	T2181-97191	SELF LOCK NUT(M16)	2	2	2	2	2	2		
28	Z2131-70111	ASS`Y, FRONT LIFT BAR	1	1	1	1	1	1		
29	Z2131-70152	HANDLE BAR	1	1	1	1	1	1		
30	Z2131-70162	DECK HEIGHT CONTROL MT	1	1	1	1	1	1		
31	Z2131-70171	GRIP, DECK HEIGHT ADJUST	1	1	1	1	1	1		
32	Z2131-70181	SPRING PLATE	1	1	1	1	1	1		
33	Z2131-70212	ASS`Y, REAR LIFT BAR	1	1	1	1	1	1		
34	Z2131-70231	HOLD BRACKET	1	1	1	1	1	1		
35	Z2131-70311	BRACKET, SHAFT SUPPORT, LH	2	2	2	2	2	2		
36	Z2131-70321	BRACKET, SHAFT SUPPORT, RH	2	2	2	2	2	2		

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
37	Z2131-71511	DECK LIFT PEDAL	1	1	1	1	1	1		
38	Z2131-72111	DECK HEIGHT ADJUSTMENT ASS`Y	1	1	1	1	1	1		
39	Z2131-72142	DECK CONNECTING ROD	1	1	1	1	1	1		
40	Z2131-72162	DECK CONNECTING ROD HINGE	1	1	1	1	1	1		
41	Z2131-72191	CONNECTING ROD HINGE(FR)	1	1	1	1	1	1		
42	Z2131-72201	DECK LIFT SPRING	1	1	1	1	1	1		
43	Z2131-72213	HOOK, DECK LOCK	1	1	1	1	1	1		
44	Z2131-72232	CABLE, DECK LOCK	1	1	1	1	1	1		
45	Z2131-72244	ROD, DECK LOCK	1	1	1	1	1	1		
46	Z2131-74113	DECK HEIGHT CONTROL ASS`Y	1	1	1	1	1	1		
47	Z2131-76112	ROD, LIFT	4	4	4	4	4	4		
48	Z2131-76122	DECK LIFT FRONT LINK	2	2	2	2	2	2		
49	Z2131-76131	SHOULDER BOLT	8	8	8	8	8	8		
50	Z2131-76191	DECK LIFT FRONT SHAFT	1	1	1	1	1	1		
51	Z2151-62501	LINK, BELT TENSION	1	1	1	1	1	1		
52	04512-50060	SPRING WASHER	2	2	2	2	2	2		
53	04512-50100	SPRING WASHER	1	1	1	1	1	1		
54	Z2131-76141	SHOULDER BOLT	1	1	1	1	1	1		

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

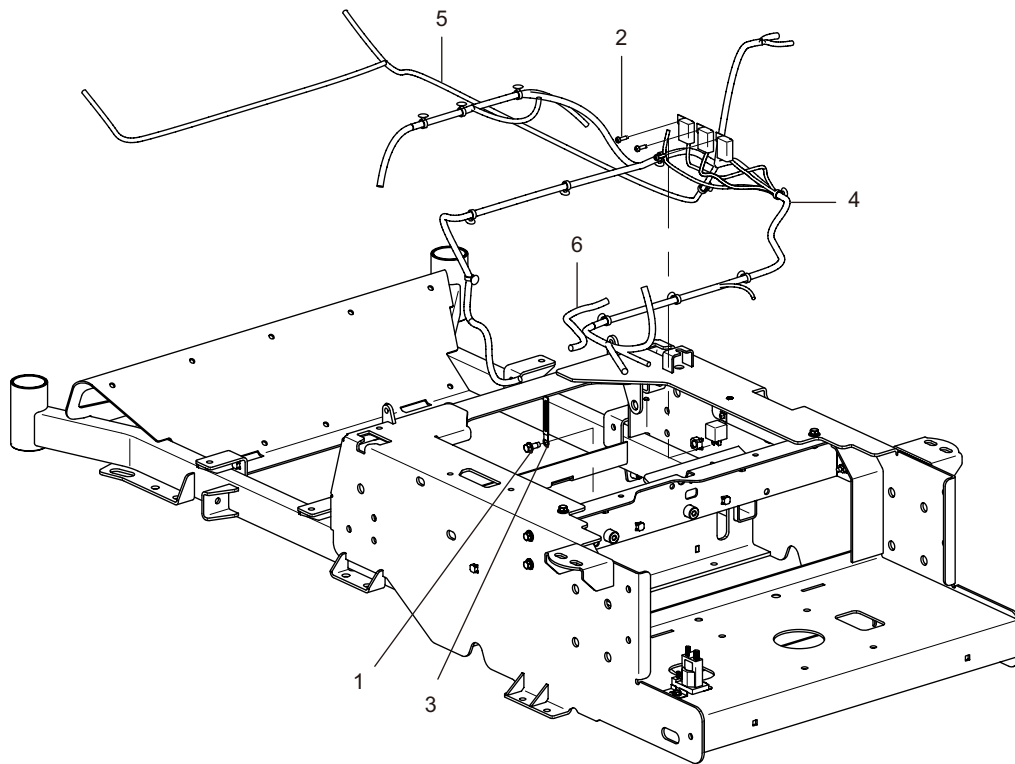
80A. MAIN HARNESS GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01754-50814	FLANGE BOLT	1	1	1	1	1	1		
2	03024-50516	SCREW	3	3	3	3	3	3		
3	37150-3447-1	WIR'G CLAMP	1	1	1	1	1	1		
4	T2198-82571	WIR'G CLAMP	12	12	12	12	12	12		
5	Z2171-80102	WIR'G MAIN ASS'Y	1	1	1	1	1	1		
6	Z2131-80201	WIR'G GROUND ASS'Y	1	1	1	1	1	1		

※ QTY: A:ZXR48, B:ZXR54, C:ZXR60, D:ZXR48SE, E:ZXR54SE, F:ZXR60SE

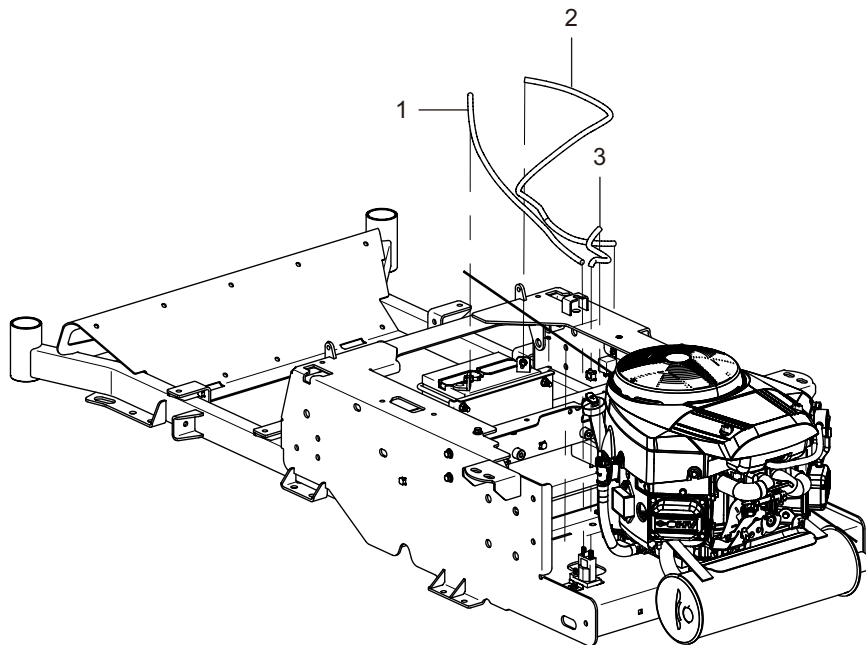
80B. MAIN HARNESS GROUP



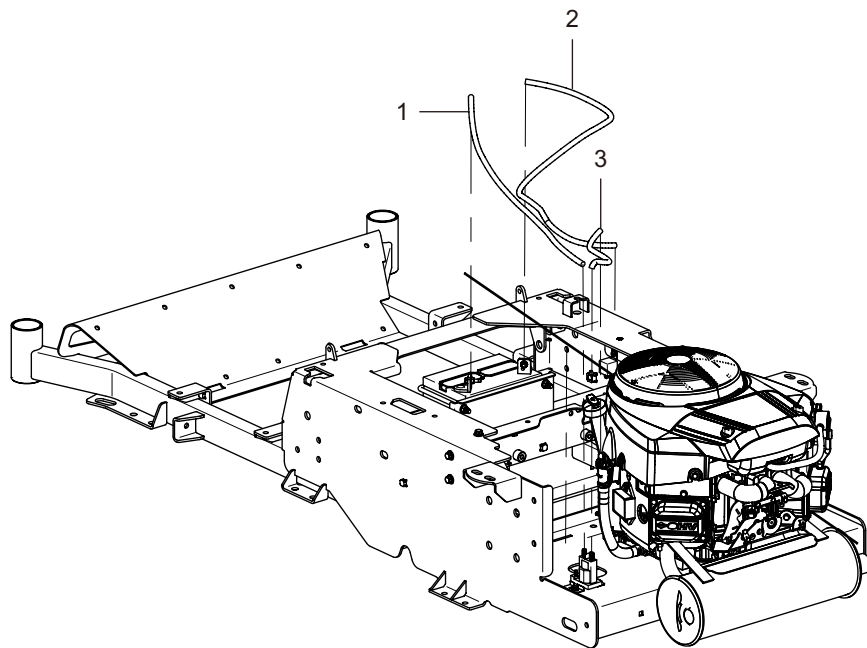
NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01754-50814	FLANGE BOLT	1	1	1	1	1	1		
2	03024-50516	SCREW	3	3	3	3	3	3		
3	37150-3447-1	BAND CABLE	1	1	1	1	1	1		
4	T2198-82571	WIR'G CLAMP	12	12	12	12	12	12		
5	Z2171-80102	WIR'G MAIN ASS'Y	1	1	1					
5	Z2131-80102	WIR'G MAIN ASS'Y				1	1	1		
6	Z2131-80201	WIR'G GROUND ASS'Y	1	1	1					

※ QTY: A:ZXC48, B:ZXC54, C:ZXC60, D:ZXC48SE, E:ZXC54SE, F:ZXC60SE

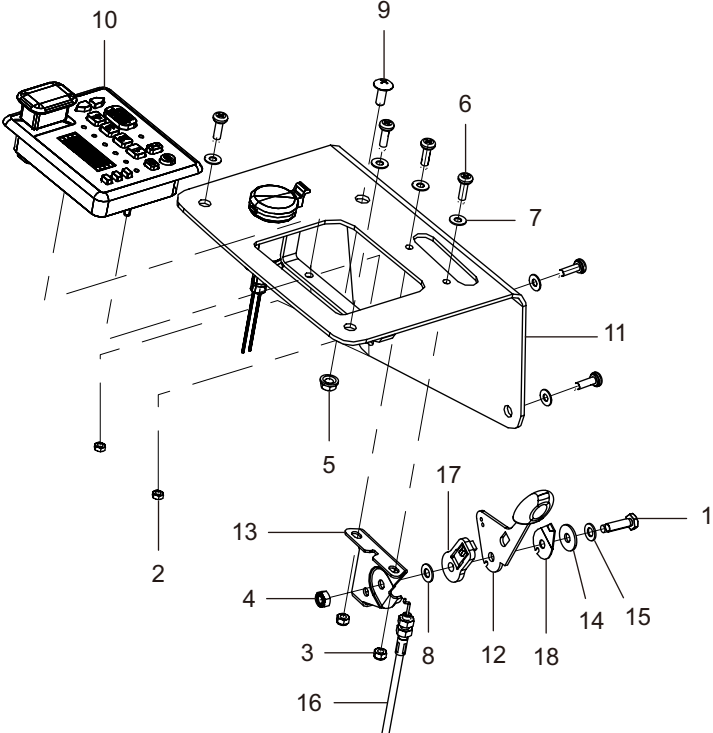
81A. BATTERY HARNESS GROUP



81B. BATTERY HARNESS GROUP



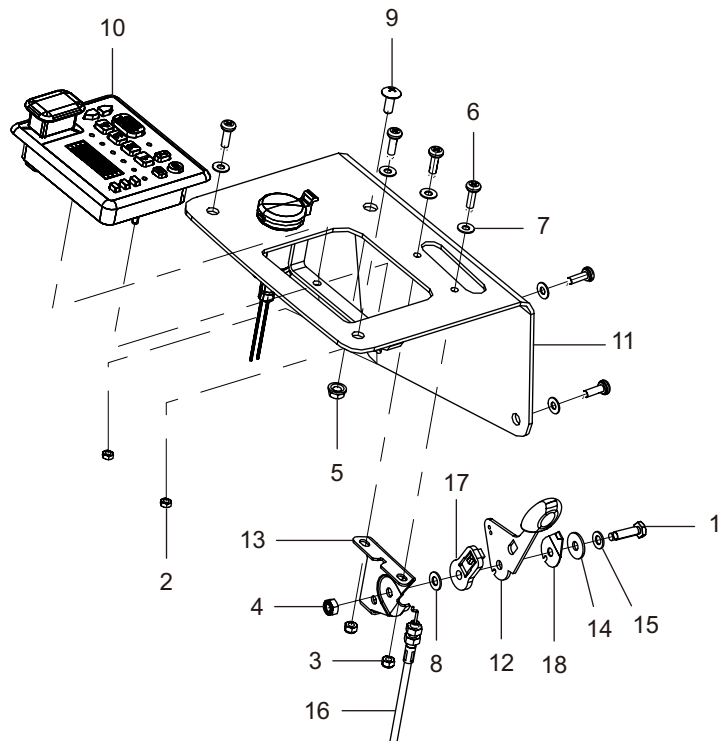
82A. CONTROL PANEL GROUP



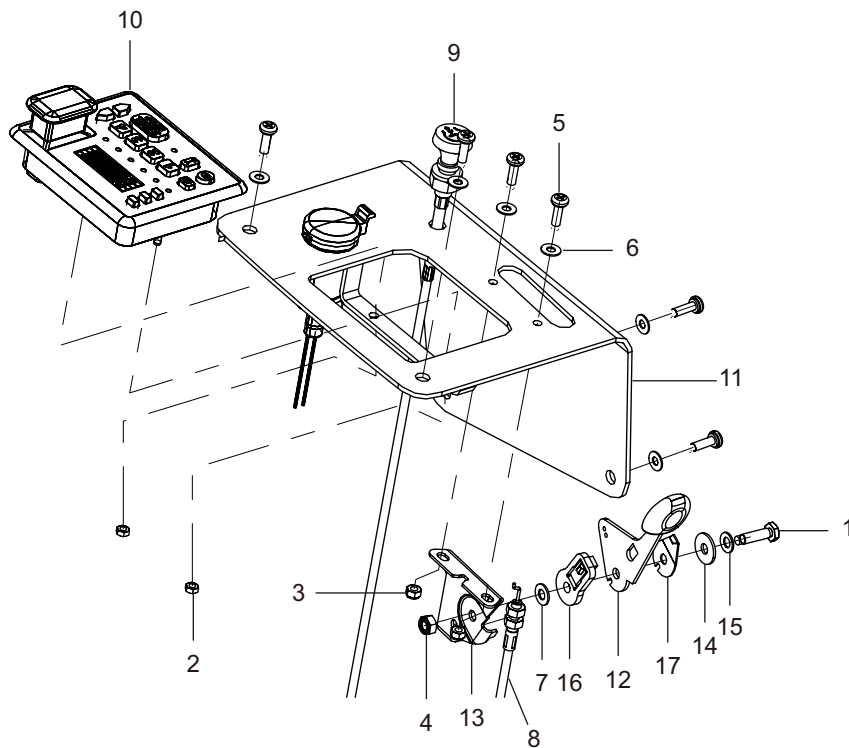
NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01053-50620	BOLT	1	1	1		1	1		
2	02054-50040	NUT	2	2	2		2	2		
3	02310-50050	LOCK NUT	2	2	2		2	2		
4	02310-50060	LOCK NUT	1	1	1		1	1		
5	02761-50060	FLANGE NUT	1	1	1		1	1		
6	03027-50516B	SCREW	6	6	6		6	6		
7	04013-50050B	PLAIN WASHER	6	6	6		6	6		
8	04013-50060	PLAIN WASHER	1	1	1		1	1		
9	U3215-81552	SCREW (BLACK)	1	1	1		1	1		
10	Z2131-82101	CONTROL PANEL	1	1	1		1	1		
11	Z2131-82113	PANEL, SWITCH CONTROL	1	1	1		1	1		
12	Z2131-82212	LEVER, THROTTLE CONTROL	1	1	1		1	1		
13	Z2131-82223	PLATE 1, THROTTLE LEVER	1	1	1		1	1		
14	Z2131-82241	WASHER	1	1	1		1	1		
15	Z2131-82251	WASHER, SPRING	1	1	1		1	1		
16	Z2131-82262	CABLE, THROTTLE	1	1	1					
16	Z1111-82262	CABLE, THROTTLE					1	1		
17	Z2131-82272	STOPPING BLOCK	1	1	1		1	1		

※ QTY: A:ZXR48, B:ZXR54, C:ZXR60, D:ZXR48SE, E:ZXR54SE, F:ZXR60SE

82A. CONTROL PANEL GROUP



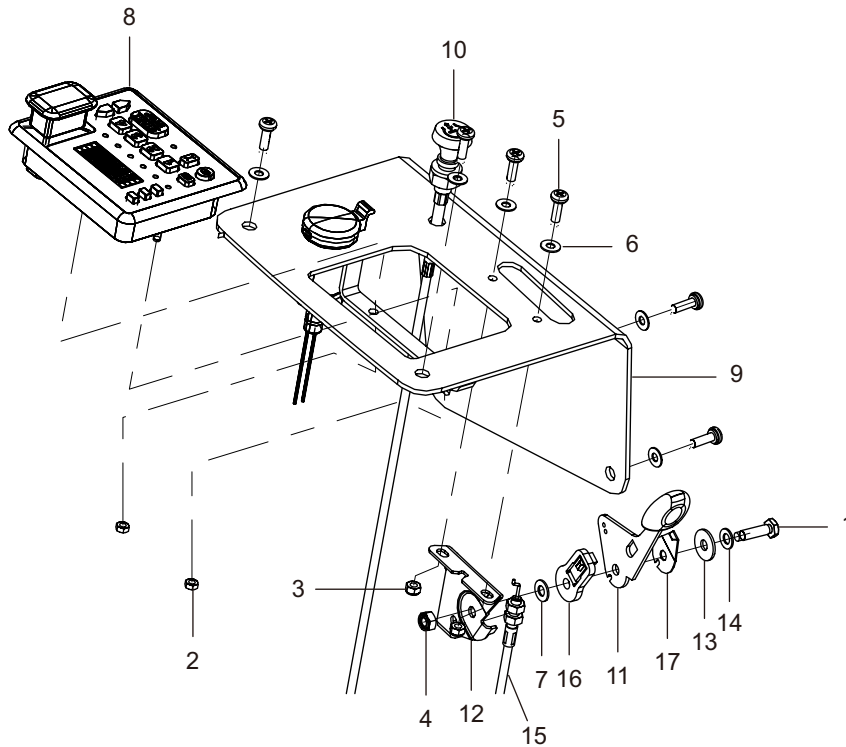
82B. CONTROL PANEL GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01053-50620	BOLT				1				
2	02054-50040	NUT				2				
3	02310-50050	LOCK NUT				2				
4	02310-50060	LOCK NUT				1				
5	03027-50516B	SCREW				6				
6	04013-50050B	PLAIN WASHER				6				
7	04013-50060	PLAIN WASHER				1				
8	Z1111-82262	CABLE, THROTTLE				1				
9	Z1131-82122	CABLE, CHOKE				1				
10	Z2131-82101	CONTROL PANEL				1				
11	Z2131-82113	PANEL, SWITCH CONTROL				1				
12	Z2131-82212	LEVER, THROTTLE CONTROL				1				
13	Z2131-82223	PLATE 1, THROTTLE LEVER				1				
14	Z2131-82241	WASHER				1				
15	Z2131-82251	WASHER, SPRING				1				
16	Z2131-82272	STOPPING BLOCK				1				
17	Z2131-82282	SPRING PLATE				1				

※ QTY: A:ZXR48, B:ZXR54, C:ZXR60, D:ZXR48SE, E:ZXR54SE, F:ZXR60SE

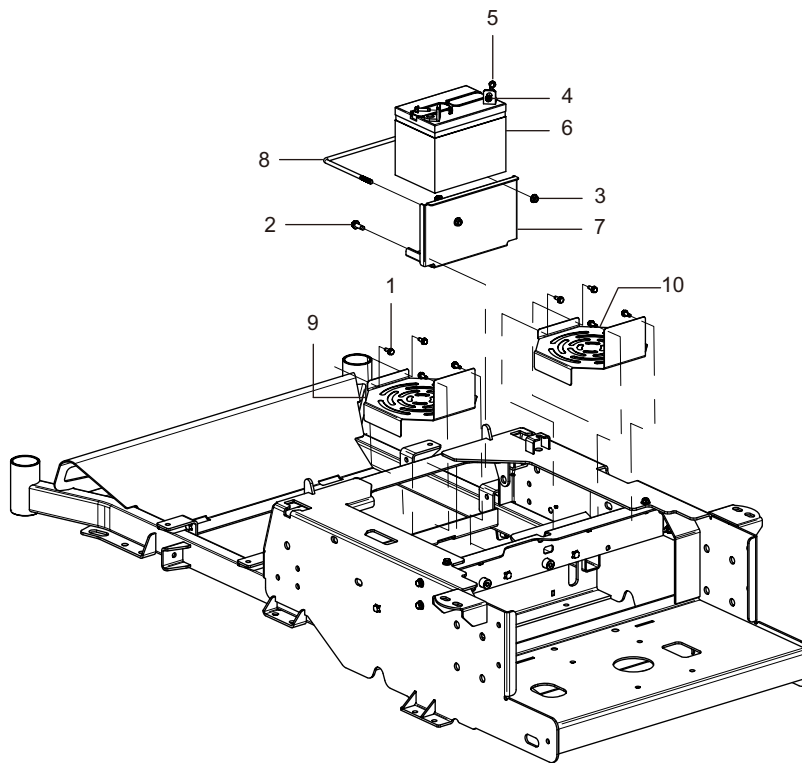
82C. CONTROL PANEL GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01053-50620	BOLT	1	1	1	1	1	1		
2	02054-50040	NUT	2	2	2	2	2	2		
3	02310-50050	LOCK NUT	2	2	2	2	2	2		
4	02310-50060	LOCK NUT	1	1	1	1	1	1		
5	03027-50516B	SCREW	6	6	6	6	6	6		
6	04013-50050B	PLAIN WASHER	6	6	6	6	6	6		
7	04013-50060	PLAIN WASHER	1	1	1	1	1	1		
8	Z2131-82101	CONTROL PANEL	1	1	1	1	1	1		
9	Z2131-82113	PANEL, SWITCH CONTROL	1	1	1	1	1	1		
10	Z1131-82122	CABLE, CHOKE	1	1	1					
10	Z2131-82121	CABLE, CHOKE				1	1	1		
11	Z2131-82212	LEVER, THROTTLE CONTROL	1	1	1	1	1	1		
12	Z2131-82223	PLATE 1, THROTTLE LEVER	1	1	1	1	1	1		
13	Z2131-82241	WASHER	1	1	1	1	1	1		
14	Z2131-82251	WASHER, SPRING	1	1	1	1	1	1		
15	Z2131-82262	CABLE, THROTTLE	1	1	1	1	1	1		
16	Z2131-82272	STOPPING BLOCK	1	1	1	1	1	1		
17	Z2131-82282	SPRING PLATE	1	1	1	1	1	1		

※ QTY: A:ZXC48, B:ZXC54, C:ZXC60, D:ZXC48SE, E:ZXC54SE, F:ZXC60SE

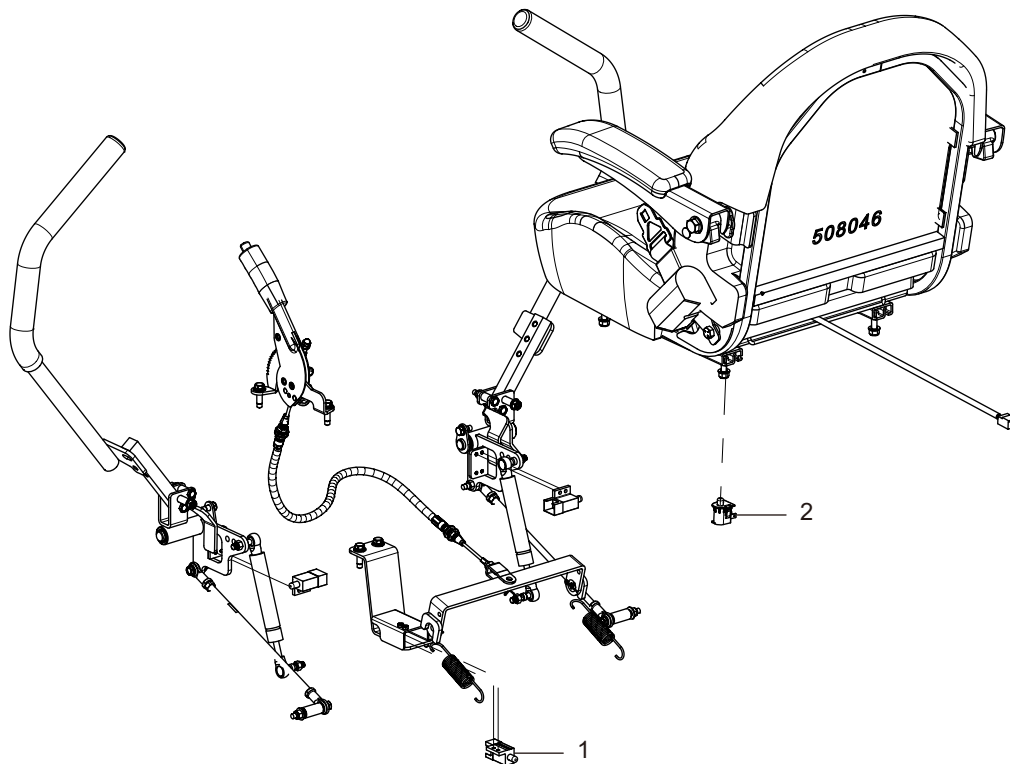
83. BATTERY GROUP



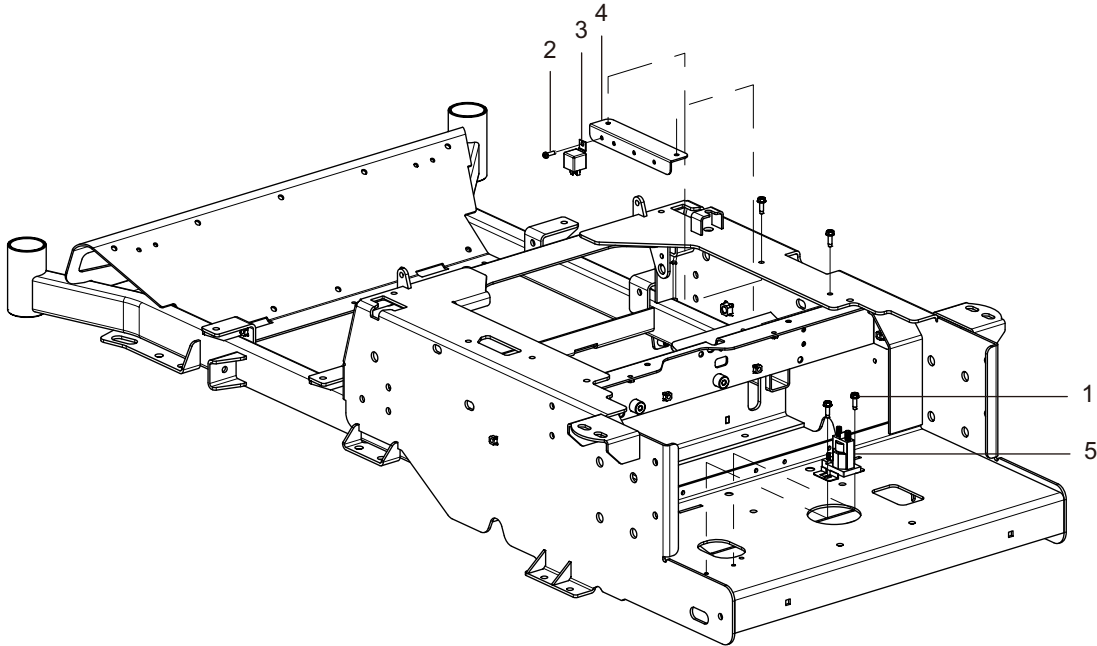
NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01754-50614	FLANGE BOLT	8	8	8	8	8	8		
2	01754-50818	FLANGE BOLT	2	2	2	2	2	2		
3	02763-50080	FLANGE NUT	2	2	2	2	2	2		
4	G1511-99311	FLANGE NUT	2	2	2	2	2	2		
5	G1511-99691	FLANGE BOLT	2	2	2	2	2	2		
6	Z2131-83101	BATTERY ASS'Y	1	1	1	1	1	1		
7	Z2131-83112	BRKT, BATTERY	1	1	1	1	1	1		
8	Z2131-83121	U BOLT, BATTERY	1	1	1	1	1	1		
9	Z2131-83134	PLATE, RH	1	1	1	1	1	1		
10	Z2131-83143	PLATE, LH	1	1	1	1	1	1		

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

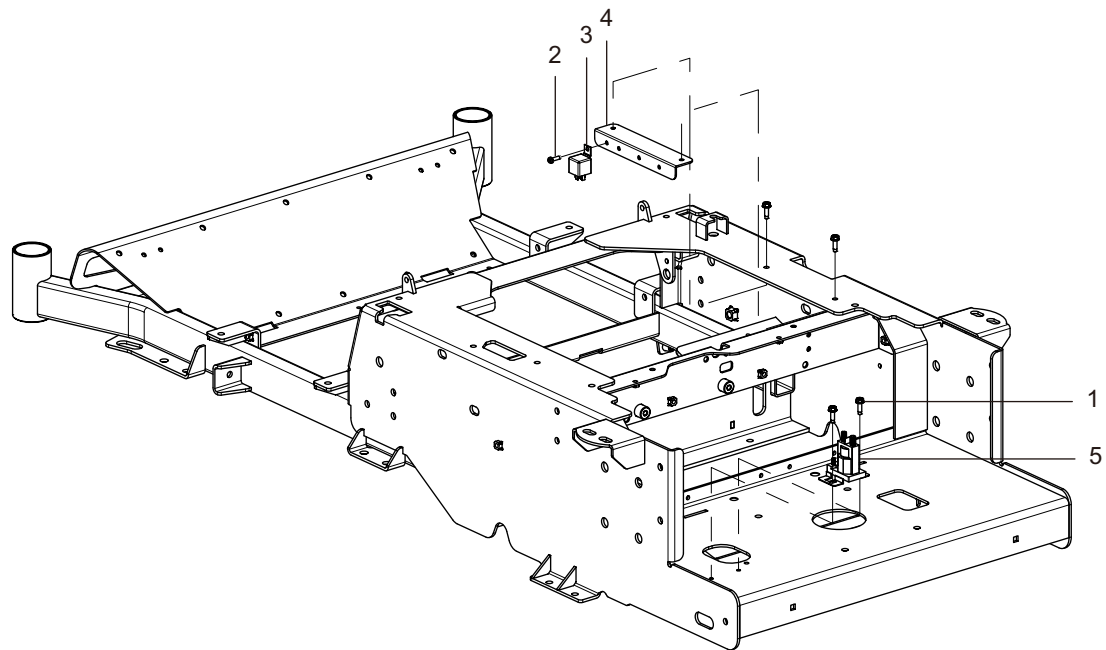
84. SWITCH GROUP



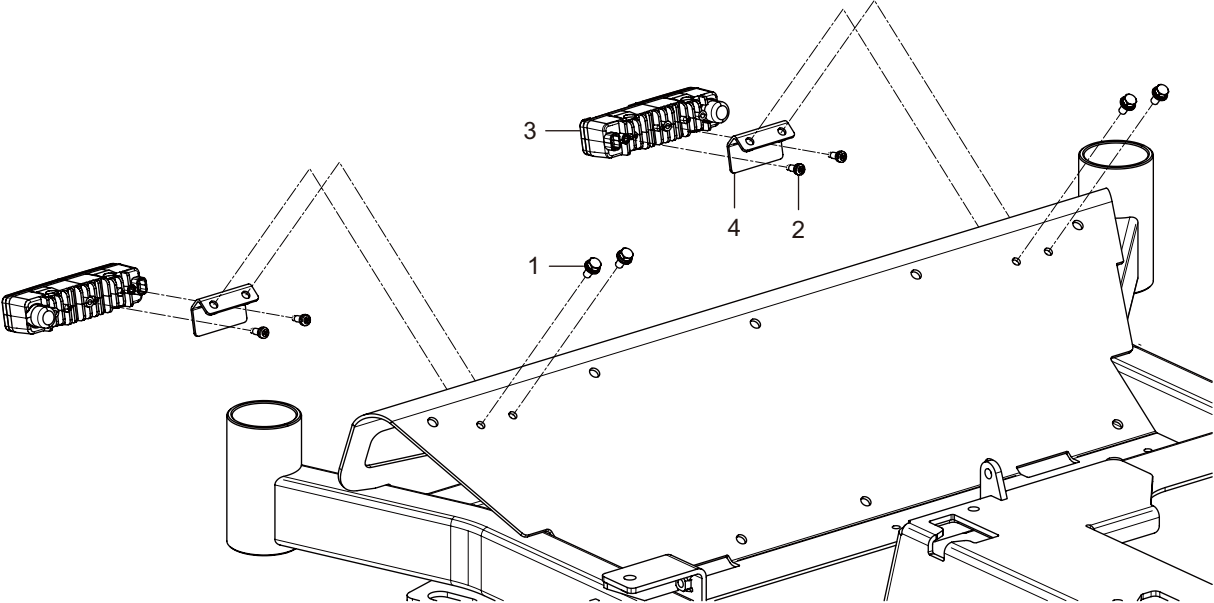
85A. RELAY GROUP



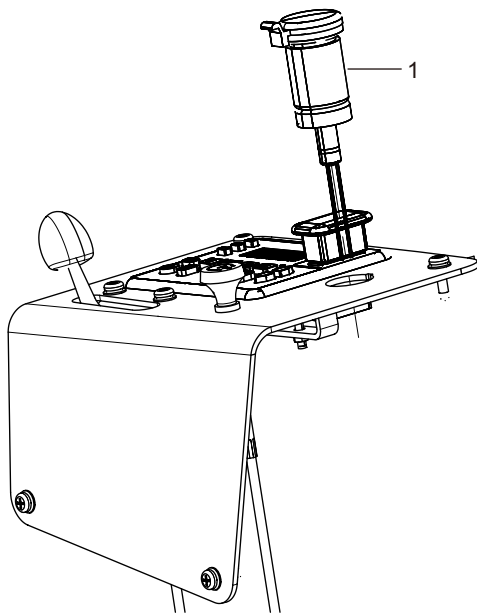
85B. RELAY GROUP



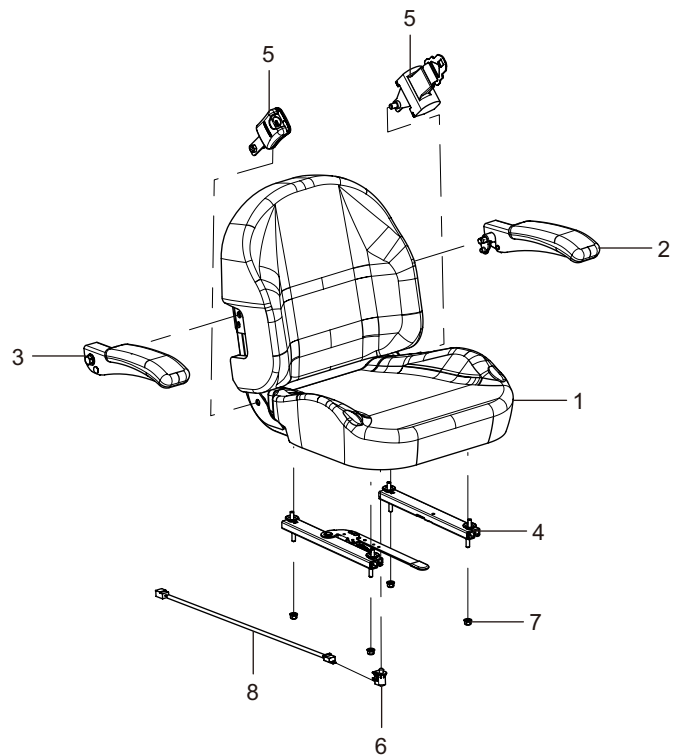
86. LAMP GROUP



87. ETC GROUP



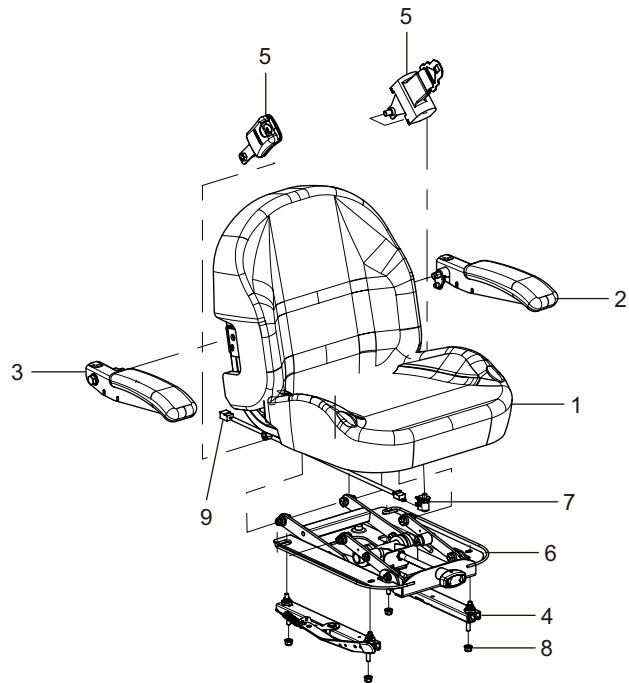
90A. SEAT GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	Z1121-90101001	SEAT BODY ASS'Y	1	1	1					
2	Z1121-90101002	ARM REST, LH	1	1	1					
3	Z1121-90101003	ARM REST, RH	1	1	1					
4	Z1121-90101004	TRACK, SEAT	1	1	1					
5	Z2131-90101005	SEAT BELT ASS'Y	1	1	1					
6	Z2131-84301	SEAT SWITCH	1	1	1					
7	Z2131-90111	FLANGE NUT, SELF LOCK	4	4	4					
8	Z2131-90121	SEAT SWITCH WIRE ASS'Y	1	1	1					

※ QTY: A:ZXR48, B:ZXR54, C:ZXR60, D:ZXR48SE, E:ZXR54SE, F:ZXR60SE

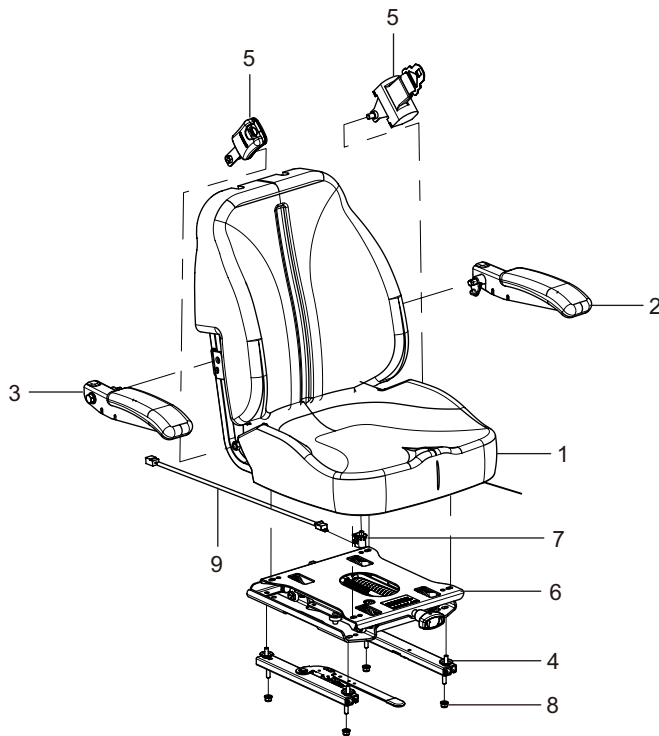
90B. SEAT GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	Z1131-90101001	SEAT BODY ASS'Y				1	1	1		
2	Z1131-90101002	ARM REST,LH				1	1	1		
3	Z1131-90101003	ARM REST,RH				1	1	1		
4	Z1131-90101004	TRACK,SEAT				1	1	1		
5	Z2131-90101005	SEAT BELT ASS'Y				1	1	1		
6	Z1131-90101006	SEAT ADJUST ASS'Y				1	1	1		
7	Z2131-84301	SEAT SWITCH ASS'Y (NO)				1	1	1		
8	Z2131-90111	FLANGE NUT, SELF LOCK				4	4	4		
9	Z2131-90121	SEAT SWITCH WIRE ASS'Y				1	1	1		

※ QTY: A:ZXR48, B:ZXR54, C:ZXR60, D:ZXR48SE, E:ZXR54SE, F:ZXR60SE

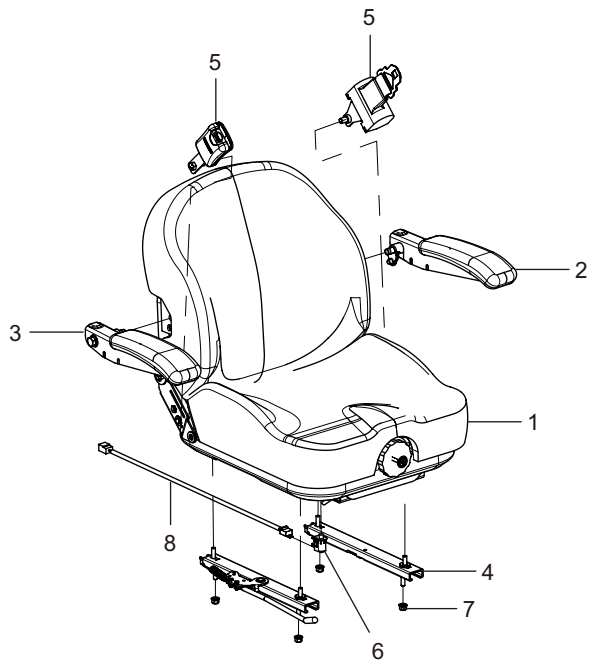
90C. SEAT GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	Z2131-90101001	SEAT BODY ASS'Y	1	1	1					
2	Z1131-90101002	ARM REST, LH	1	1	1					
3	Z1131-90101003	ARM REST, RH	1	1	1					
4	Z1121-90101004	TRACK, SEAT	1	1	1					
5	Z2131-90101005	SEAT BELT ASS'Y	1	1	1					
6	Z2131-90101006	SEAT ADJUST ASS'Y	1	1	1					
7	Z2131-84301	SEAT SWITCH ASS'Y (NO)	1	1	1					
8	Z2131-90111	FLANGE NUT, SELF LOCK	4	4	4					
9	Z2131-90121	SEAT SWITCH WIRE ASS'Y	1	1	1					

※ QTY: A:ZXC48, B:ZXC54, C:ZXC60, D:ZXC48SE, E:ZXC54SE, F:ZXC60SE

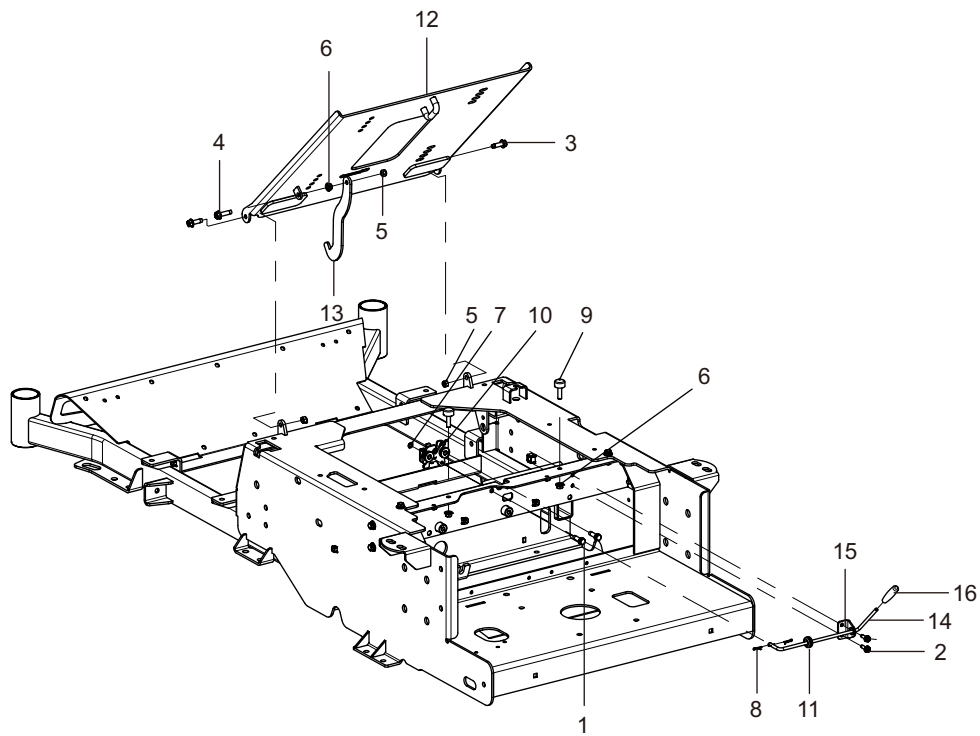
90D. SEAT GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	Z2151-90101001	SEAT BODY ASS'Y				1	1	1		
2	Z1131-90101002	ARM REST, LH				4	4	4		
3	Z1131-90101003	ARM REST, RH				4	4	4		
4	Z2151-90101004	TRACK, SEAT				1	1	1		
5	Z2131-90101005	SEAT BELT ASS'Y				4	4	4		
6	Z2131-84301	SEAT SWITCH ASS'Y (NO)				4	4	4		
7	Z2131-90111	FLANGE NUT, SELF LOCK				1	1	1		
8	Z2131-90121	SEAT SWITCH WIRE ASS'Y				4	4	4		

※ QTY: A:ZXC48, B:ZXC54, C:ZXC60, D:ZXC48SE, E:ZXC54SE, F:ZXC60SE

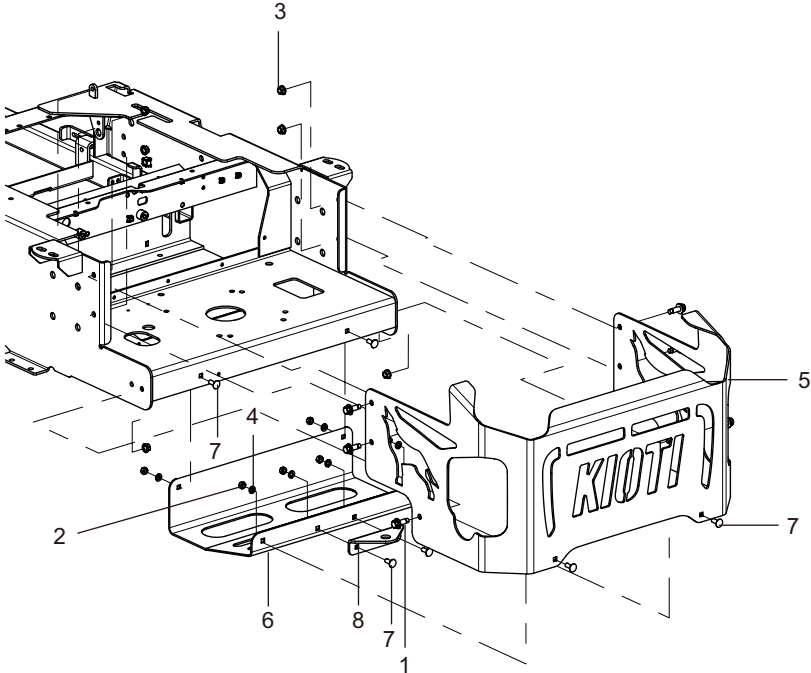
91. SEAT PLATE GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01123-50822	WITH WASHER BOLT	2	2	2	2	2	2		
2	01754-50616B	FLANGE BOLT	2	2	2	2	2	2		
3	01754-50820B	FLANGE BOLT	2	2	2	2	2	2		
4	01754-50825B	FLANGE BOLT	1	1	1	1	1	1		
5	02310-50080B	LOCK NUT	3	3	3	3	3	3		
6	02763-50080B	FLANGE NUT	3	3	3	3	3	3		
7	04012-50060	PLAIN WASHER	1	1	1	1	1	1		
8	05525-50600	SNAP PIN	2	2	2	2	2	2		
9	T2350-55881	BOLT ADJUSTING	2	2	2	2	2	2		
10	T4145-60582	LATCH ASS`Y	1	1	1	1	1	1		
11	T4682-50251	GROMMET	1	1	1	1	1	1		
12	Z2131-91115	SEAT PLATE	1	1	1	1	1	1		
13	Z2131-91162	SEAT BRACKET	1	1	1	1	1	1		
14	Z2131-91171	LATCH ROD	1	1	1	1	1	1		
15	Z2131-91181	LATCH ROD BRACKET	1	1	1	1	1	1		
16	Z2131-91192	GRIP	1	1	1	1	1	1		

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

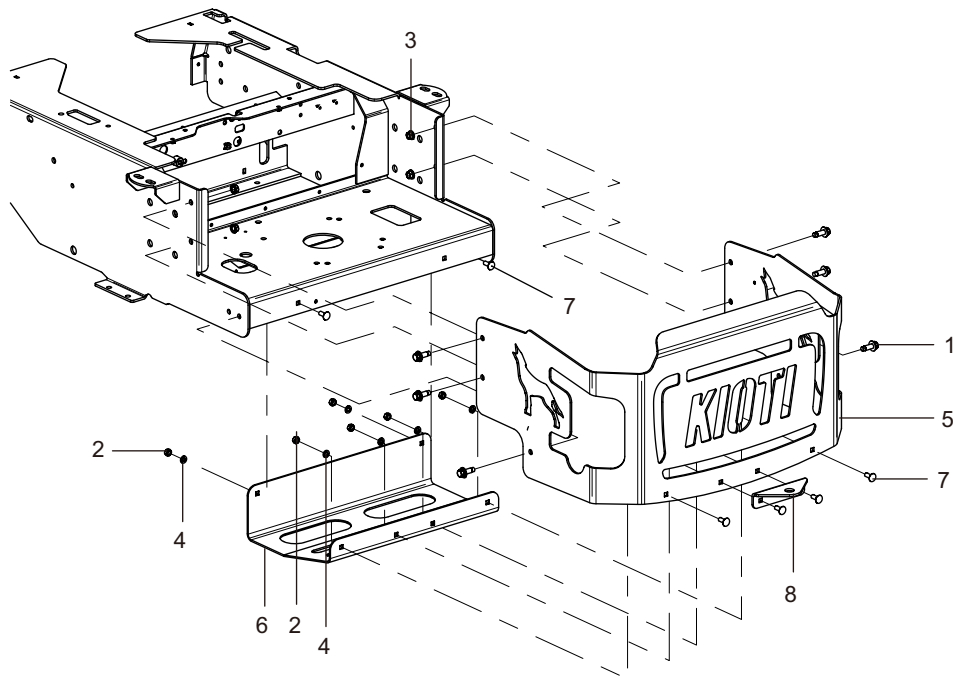
92A. REAR BUMPER GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01135-51025B	WITH WASHER BOLT	6	6	6	6	6	6		
2	02054-50080	NUT	4	4	4	6	6	6		
3	02783-50100B	FLANGE NUT	6	6	6	6	6	6		
4	04512-50080	SPRING WASHER	4	4	4	6	6	6		
5	Z1131-92101	BUMPER, REAR	1	1	1	1	1	1		
6	Z2131-92112	GUARD, MUFFLER	1	1	1	1	1	1		
7	Z2131-92121	BOLT	4	4	4	6	6	6		
8	Z2131-92131	DRAWBAR BRACKET				1	1	1		

※ QTY: A:ZXR48, B:ZXR54, C:ZXR60, D:ZXR48SE, E:ZXR54SE, F:ZXR60SE

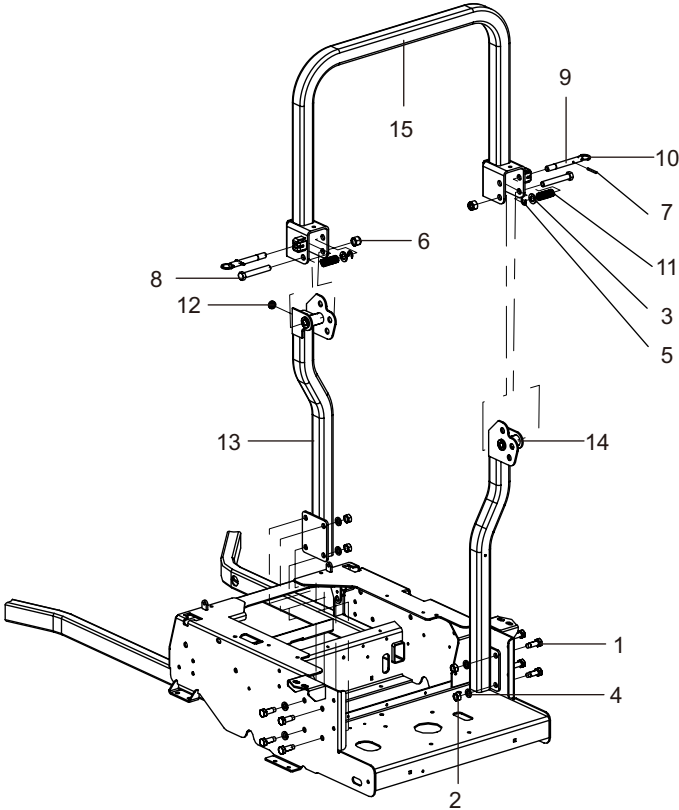
92B. REAR BUMPER GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01135-51025B	WITH WASHER BOLT	6	6	6	6	6	6		
2	02054-50080B	NUT	6	6	6	6	6	6		
3	02783-50100B	FLANGE NUT	6	6	6	6	6	6		
4	04512-50080	SPRING WASHER	6	6	6	6	6	6		
5	Z2131-92101	BUMPER, REAR	1	1	1	1	1	1		
6	Z2131-92112	GUARD, MUFFLER	1	1	1	1	1	1		
7	Z2131-92121	BOLT	6	6	6	6	6	6		
8	Z2131-92131	DRAWBAR BRACKET	1	1	1	1	1	1		

※ QTY: A:ZXC48, B:ZXC54, C:ZXC60, D:ZXC48SE, E:ZXC54SE, F:ZXC60SE

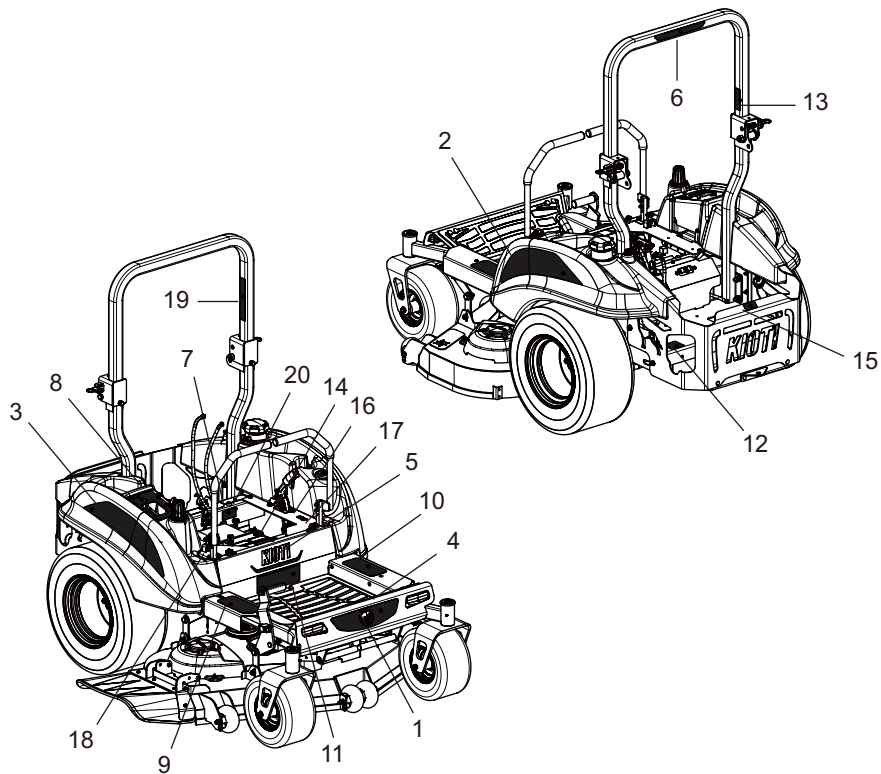
93. ROPS GROUP



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	01076-51430	BOLT	8	8	8	8	8	8		
2	02076-50140	NUT	4	4	4	4	4	4		
3	04011-50160	PLAIN WASHER	2	2	2	2	2	2		
4	04512-50140	SPRING WASHER	4	4	4	4	4	4		
5	04613-50120	SNAP RING	2	2	2	2	2	2		
6	T2181-97191	SELF LOCK NUT(M16)	2	2	2	2	2	2		
7	T2555-58761	SPRING PIN	2	2	2	2	2	2		
8	T2555-97181	BOLT	2	2	2	2	2	2		
9	T2555-97211	PIN, ROPS	2	2	2	2	2	2		
10	T2555-97222	SPRING	2	2	2	2	2	2		
11	T2555-97232	SPRING	2	2	2	2	2	2		
12	T4682-50251	GROMMET	2	2	2	2	2	2		
13	Z2131-93103	ROPS, LH	2	2	2	2	2	2		
14	Z2131-93204	ROPS, RH	1	1	1	1	1	1		
15	Z2131-93304	ROPS, UPR	1	1	1	1	1	1		

※ QTY: A:ZXR48/ZXC48, B:ZXR54/ZXC54, C:ZXR60/ZXC60, D:ZXR48SE/ZXC48SE, E:ZXR54SE/ZXC54SE, F:ZXR60SE/ZXC60SE

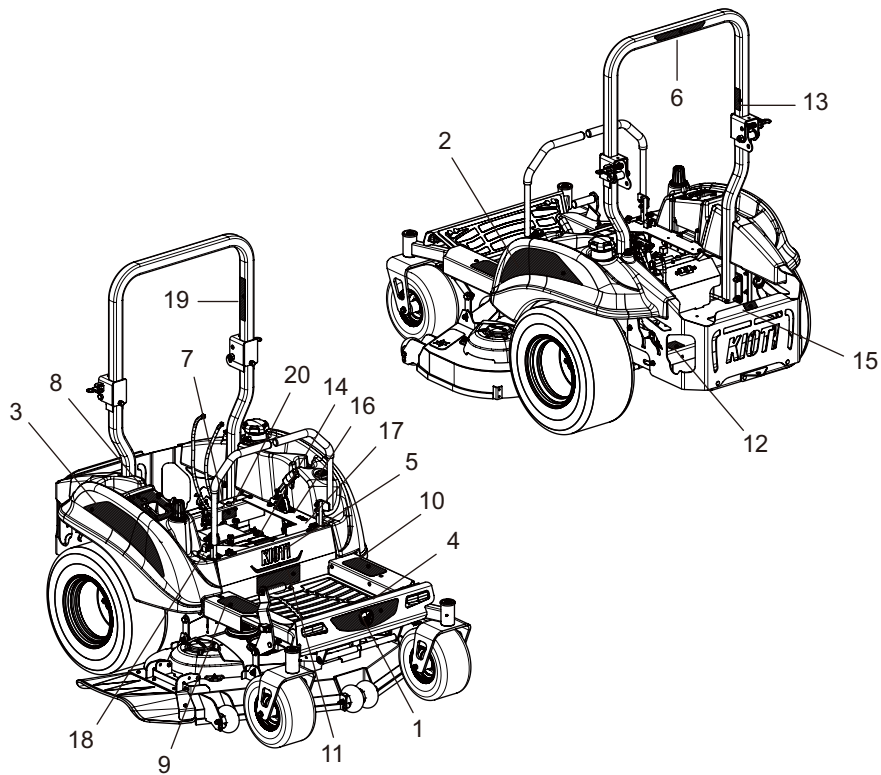
95A. DECAL GROUP 1



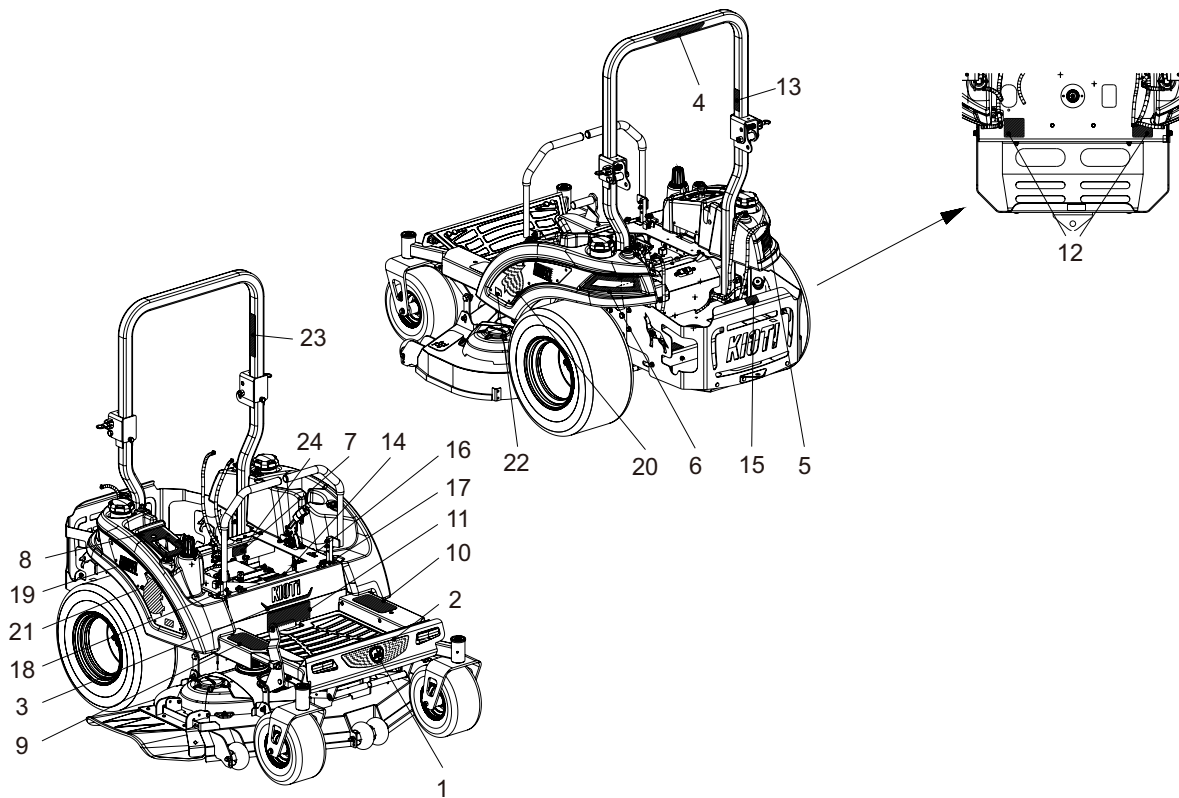
NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	T5245-55461	CAP, HANDLE	1	1	1	1	1	1		
2	Z2111-95103	FUEL TANK DECAL, LH	1	1	1					
2	Z2111-95202	FUEL TANK DECAL, LH				1	1	1		
3	Z2111-95113	FUEL TANK DECAL, RH	1	1	1					
3	Z2111-95212	FUEL TANK DECAL, RH				1	1	1		
4	Z2131-95104	DECAL, FRONT	1	1	1	1	1	1		
5	Z2131-95112	DECAL, FRONT COVER	1	1	1	1	1	1		
6	Z2131-95121	DECAL, ROPS	1	1	1	1	1	1		
7	Z2131-95152	LABEL-PRODUCT	1	1	1	1	1	1		
8	Z2131-95162	LABEL	1	1	1	1	1	1		
9	Z2131-95181	DECAL, NONSLIP (LH)	1	1	1	1	1	1		
10	Z2131-95191	DECAL, NONSLIP (RH)	1	1	1	1	1	1		
11	Z2131-95202	CAUTION LABEL	1	1	1	1	1	1		
12	Z2131-95211	WARNING LABEL	1	1	1	1	1	1		
13	Z2131-95221	ROPS LABEL	1	1	1	1	1	1		
14	Z2131-95232	WARNING LABEL	1	1	1	1	1	1		
15	Z2131-95241	LABEL	1	1	1	1	1	1		
16	Z2131-95251	LABEL, PARKING BRAKE	1	1	1	1	1	1		

※ QTY: A:ZXR48, B:ZXR54, C:ZXR60, D:ZXR48SE, E:ZXR54SE, F:ZXR60SE

95A. DECAL GROUP 1



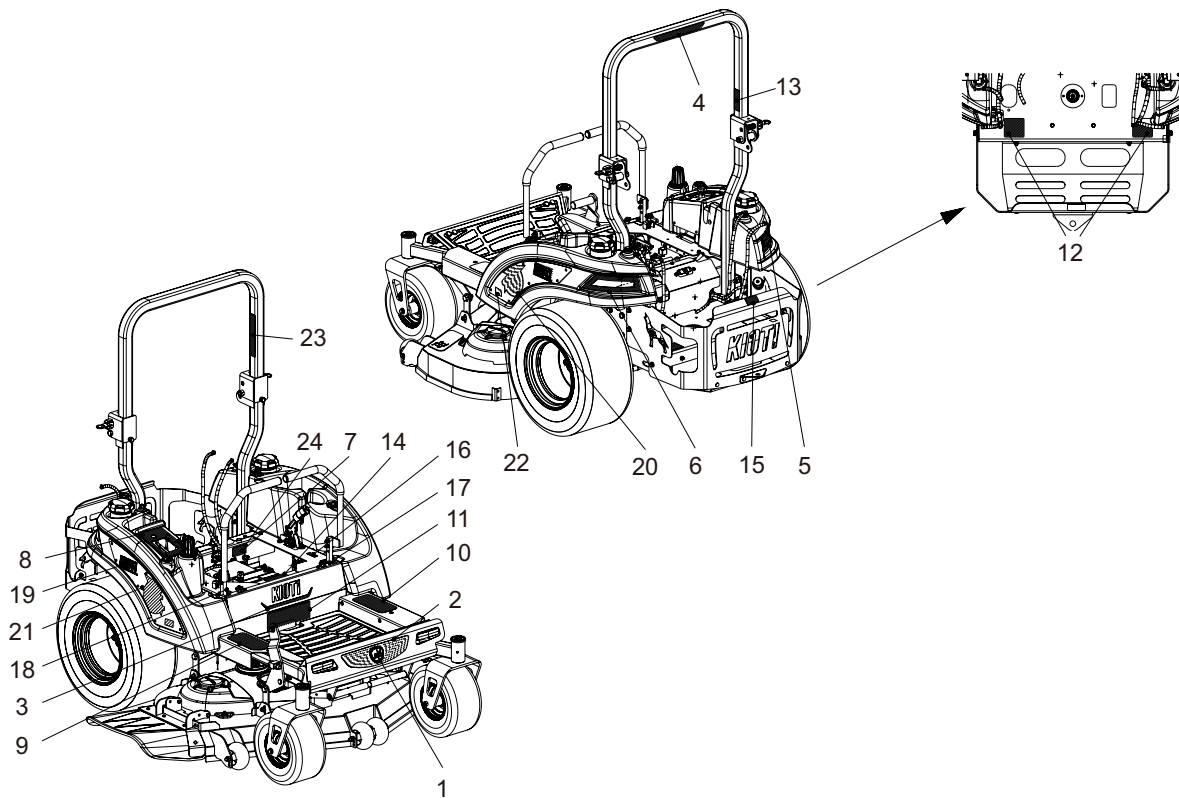
95B. DECAL GROUP 1



NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
1	T5245-55461	CAP, HANDLE	1	1	1	1	1	1		
2	Z2131-95104	DECAL, FRONT	1	1	1	1	1	1		
3	Z2131-95112	DECAL, FRONT COVER	1	1	1	1	1	1		
4	Z2131-95121	DECAL, ROPS	1	1	1	1	1	1		
5	Z2131-95131	DECAL, FUEL TANK REAR LH	1	1	1	1	1	1		
6	Z2131-95141	DECAL, FUEL TANK REAR RH	1	1	1	1	1	1		
7	Z2131-95152	LABEL-PRODUCT	1	1	1	1	1	1		
8	Z2131-95162	LABEL	1	1	1	1	1	1		
9	Z2131-95181	DECAL, NONSLIP (LH)	1	1	1	1	1	1		
10	Z2131-95191	DECAL, NONSLIP (RH)	1	1	1	1	1	1		
11	Z2131-95202	CAUTION LABEL	1	1	1	1	1	1		
12	Z2131-95211	WARNING LABEL	2	2	2	2	2	2		
13	Z2131-95221	ROPS LABEL	1	1	1	1	1	1		
14	Z2131-95232	WARNING LABEL	1	1	1	1	1	1		
15	Z2131-95241	LABEL	1	1	1	1	1	1		
16	Z2131-95251	LABEL, PARKING BRAKE	1	1	1	1	1	1		
17	Z2131-95261	STEERING LEVER LABEL(LH)	1	1	1	1	1	1		
18	Z2131-95271	STEERING LEVER LABEL(RH)	1	1	1	1	1	1		

※ QTY: A:ZXC48, B:ZXC54, C:ZXC60, D:ZXC48SE, E:ZXC54SE, F:ZXC60SE

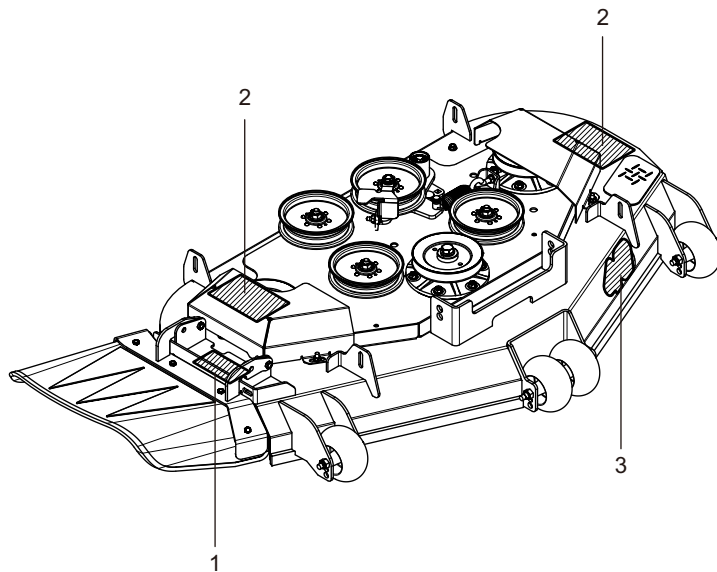
95B. DECAL GROUP 1



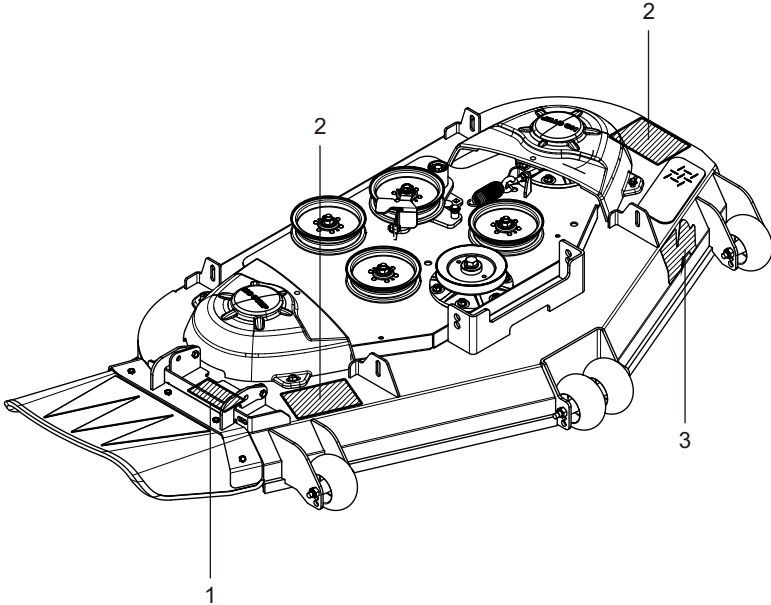
NO.	PART NO.	PART NAME	Q'TY						I.C	REMARKS
			A	B	C	D	E	F		
19	Z2131-95282	KIOTI LABEL	2	2	2	2	2	2		
20	Z2131-95292	ZXC DECAL, LH	1	1	1	1	1	1		
21	Z2131-95302	ZXC DECAL, RH	1	1	1	1	1	1		
22	Z2131-95312	SE LABEL				2	2	2		
23	Z2131-95321	WARNING LABEL	1	1	1	1	1	1		
24	05611-10308	RIVET	4	4	4	4	4	4		

※ QTY: A:ZXC48, B:ZXC54, C:ZXC60, D:ZXC48SE, E:ZXC54SE, F:ZXC60SE

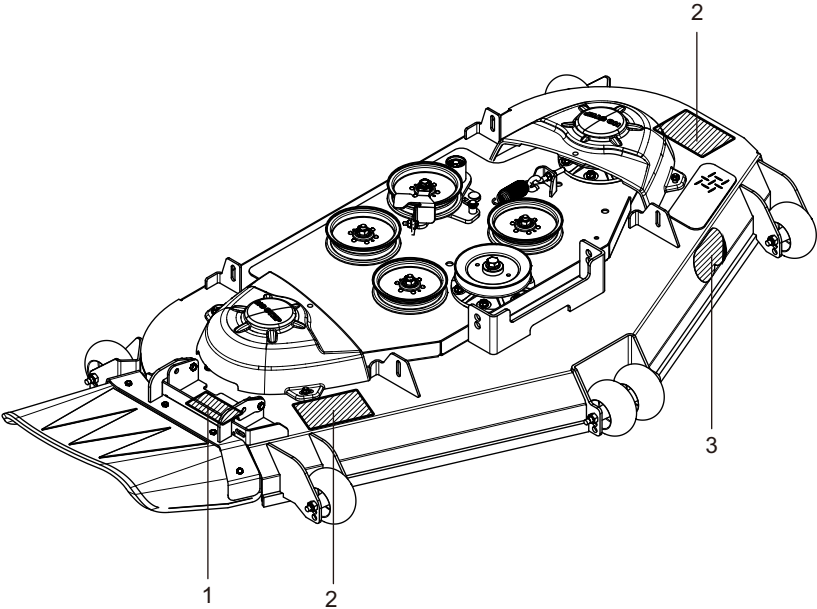
95A. DECAL GROUP 2



95B. DECAL GROUP 2



95C. DECAL GROUP 2



MEMO



INDEX..... 10-2

NUMERIC

01A. 48" MULCHING KIT GROUP (OPTION)	9-4	40. STEERING GROUP	9-60
01B. 54" MULCHING KIT GROUP (OPTION)	9-6	45. PARKING BREAK GROUP	9-62
01C. 60" MULCHING KIT GROUP (OPTION).....	9-8	50. MAIN FRAME GROUP	9-64
02. LAMP GROUP (OPTION)	9-10	51. FLOOR GROUP	9-66
03. HITCH KIT GROUP (OPTION).....	9-12	60A. MOWER DECK GROUP	9-68
04. ANTI SCARP ROLLER GROUP (OPTION)	9-14	60A. MOWER DECK GROUP	9-70
10A. ENGINE GROUP	9-18	60A. MOWER DECK GROUP	9-72
10B. ENGINE GROUP	9-20	60A. MOWER DECK GROUP	9-74
10C. ENGINE GROUP	9-22	60B. MOWER DECK GROUP	9-76
10D. ENGINE GROUP	9-24	60B. MOWER DECK GROUP	9-78
20A. FUEL TANK GROUP	9-26	60B. MOWER DECK GROUP	9-80
20B. FUEL TANK GROUP	9-28	60B. MOWER DECK GROUP	9-82
21A. FUEL LINE GROUP	9-30	60C. MOWER DECK GROUP	9-84
30A. TRANS AXLE GROUP	9-34	60C. MOWER DECK GROUP	9-86
30A. TRANS AXLE GROUP	9-36	60C. MOWER DECK GROUP	9-88
30A. TRANS AXLE GROUP	9-38	60C. MOWER DECK GROUP	9-90
30B. TRANS AXLE GROUP	9-40	80A. MAIN HARNESS GROUP	9-98
30B. TRANS AXLE GROUP	9-42	80B. MAIN HARNESS GROUP	9-100
30B. TRANS AXLE GROUP	9-44	81A. BATTERY HARNESS GROUP	9-102
33A. PTO CLUTCH GROUP	9-46	81B. BATTERY HARNESS GROUP	9-104
33B. PTO CLUTCH GROUP	9-48	82A. CONTROL PANEL GROUP	9-106
35A. FRONT WHEEL GROUP	9-50	82A. CONTROL PANEL GROUP	9-108
35B. FRONT WHEEL GROUP	9-52	82B. CONTROL PANEL GROUP	9-110
36A. REAR WHEEL TIRE GROUP	9-54	82C. CONTROL PANEL GROUP	9-112
36B. REAR WHEEL TIRE GROUP	9-56	83. BATTERY GROUP	9-114
40. STEERING GROUP	9-58	84. SWITCH GROUP	9-116
		85A. RELAY GROUP	9-118

85B. RELAY GROUP.....	9-120
86. LAMP GROUP.....	9-122
87. ETC GROUP.....	9-124
90A. SEAT GROUP.....	9-126
90B. SEAT GROUP.....	9-128
90C. SEAT GROUP.....	9-130
90D. SEAT GROUP.....	9-132
91. SEAT PLATE GROUP.....	9-134
92A. REAR BUMPER GROUP.....	9-136
92B. REAR BUMPER GROUP.....	9-138
93. ROPS GROUP.....	9-140
95A. DECAL GROUP 1.....	9-142
95A. DECAL GROUP 1.....	9-144
95A. DECAL GROUP 2.....	9-150
95B. DECAL GROUP 1.....	9-146
95B. DECAL GROUP 1.....	9-148
95B. DECAL GROUP 2.....	9-152
95C. DECAL GROUP 2.....	9-154

A

ABOUT SERVICE.....	2-1
ADJUSTING ANTI-SCALP ROLLER.....	6-32
ADJUSTING BELT TENSION.....	6-29
ADJUSTING CUTTING HEIGHT.....	5-20
ADJUSTING DECK LEVEL.....	6-32
ADJUSTING DECK RAKE.....	6-33
ADJUSTING PTO ELECTRIC CLUTCH.....	6-22

ADJUSTING THROTTLE CONTROL AND CHOCK.....	6-17
ADJUSTING TRANSAXLE DRIVE BELT TENSION.....	6-14
ADJUSTING TRAVEL.....	6-29
AIR FILTER MAINTENANCE.....	6-11
ALARMS.....	4-8

B

BATTERY & FUSE ACCESS.....	5-21
BATTERY TROUBLESHOOTING.....	8-6

C

CHANGING ENGINE OIL.....	6-12
CHARGING.....	6-18
CHECK SPARK ARRESTER (IF EQUIPPED).....	6-11
CHECKING AND ADDING FUEL.....	6-7
CHECKING AND CHARGING BATTERY.....	6-17
CHECKING AND CLEANING AIR INTAKE SCREEN.....	6-8
CHECKING BLADE.....	6-26
CHECKING ENGINE OIL LEVEL.....	6-6
CHECKING FUEL LINES/FUEL FILTER.....	6-13
CHECKING PARKING BRAKE.....	6-16
CHECKING SPARK PLUG.....	6-13
CHECKING SPARK PLUG.....	6-25
CHECKING TRANSAXLE FLUID HOSE.....	6-21
CHECKING TRANSAXLE FLUID LEVEL.....	6-9
CHOKE LEVER.....	4-11
CLEANING ENGINE SHROUD.....	6-22

C	
CLEANING MOWER DECK	5-23
CUP HOLDER	4-15
D	
DAILY CHECK	6-6
DAILY STORAGE	7-2
DC POWER OUTLET	4-15
DECAL MAINTENANCE	1-18
DECAL MOUNTING LOCATION	1-15
DECALS	1-16
DECK HEIGHT ADJUST DIAL	4-14
DECK LIFT PEDAL	4-13
DECK MOUNTING / DISMOUNTING	5-2
DESCRIPTION OF OPERATING SYSTEM	4-3
DIRECTION FOR STORAGE	6-18
DISPLAY MODES	4-6
DISPLAY PANEL	4-3
DRIVING CONTROLS	5-11
DRIVING ON SLOPE	1-6
E	
ENGINE SERIAL NUMBER	2-2
ENGINE TROUBLESHOOTING	8-2
EVERY 1 YEAR	6-25
EVERY 100 HOURS	6-12
EVERY 200 HOURS	6-19
EVERY 400 HOURS	6-22
EVERY 50 HOURS	6-11
EVERY 500 HOURS	6-22
EXTERIOR VIEW	4-2
F	
FRONT WHEEL	4-17
FUEL GAUGE	4-14
FUNCTION DESCRIPTION AND OPERATING TIPS	4-1
G	
GENERAL INFORMATION	6-6
GENUINE PARTS	2-4
H	
HEADLIGHT BUTTON	4-7
HOW TO LIFT THE MOWER	5-22
HOW TO READ PART ILLUSTRATIONS	9-3
HOW TO USE THE MOWER PROFICIENTLY	5-19
I	
INDEX	10-1
INSPECTION AND SHARPENING BLADE	6-27

JUMP STARTING 5-7

L

LONG-TERM STORAGE 7-2

LUBRICANTS 6-5

LUBRICATION 6-10

M

MAINTENANCE 1-9

MAINTENANCE 6-1

METRIC FASTENER TORQUE CHART 3-9

MOUNTING AXLE BELT 6-14

MOVING MOWER WHEN THE ENGINE IS STOPPED 5-17

MOWER DECK DISMOUNTING 5-4

MOWER DECK MOUNTING 5-2

MOWER OPERATION 5-8

MOWER PERFORMANCE TIPS 5-19

MOWER SERIAL NUMBER 2-2

MOWER STORAGE 7-2

MOWER TROUBLESHOOTING 8-7

O

OPERATING 1-4

OPERATING MOWER 5-20

OPERATING THE ENGINE 5-4

OPERATION 5-1

OPERATION 5-9

OWNERS RESPONSIBILITY 1-3

P

PARKING 1-9

PARKING 5-17

PARKING BRAKE 4-11

PART ILLUSTRATIONS 9-1

PRECAUTION BEFORE OPERATION 1-2

PTO SWITCH 4-7

R

REAR WHEEL 4-17

RECOMMENDED MAINTENANCE SCHEDULES 6-3

REMOVING SHIM 6-23

REPLACING AIR CLEANER ELEMENT 6-25

REPLACING BLADE 6-27

REPLACING ENGINE OIL FILTER 6-19

REPLACING FUEL FILTER 6-22

REPLACING FUSES 6-26

REPLACING MOWER BELT 6-28

REPLACING TRANSAXLE OIL FILTER 6-19

RESTARTING ON A SLOPE 5-15

ROPS 4-13

S

SAE FASTENER TORQUE CHART.....	3-8
SAFE OPERATION PRACTICES.....	1-3
SAFETY DECAL MAINTENANCE.....	1-15
SAFETY PRECAUTIONS.....	1-1
SEAT	4-12
SEAT BELT.....	4-12
SERVICE	2-3
SERVICE ALERTS.....	4-9
SERVICE AS REQUIRED.....	6-26
SERVICING ENGINE AND DRIVE TRAIN COMPONENTS	2-4
SPECIFICATIONS.....	3-1
SPECIFICATIONS.....	3-2
START/STOP BUTTON.....	4-7
STARTING THE ENGINE.....	5-4
START-UP CODE.....	4-3
STEERING LEVERS.....	4-10
STOPPING.....	5-16
STOPPING THE ENGINE.....	5-8
STORAGE AND DISPOSAL.....	7-1
STORING	1-11
SUPPLYING SERVICE PARTS.....	2-3

T

THROTTLE LEVER.....	4-10
TIPS FOR BREAKING-IN.....	5-8

TIRES.....	4-16
TORQUE TIGHTENING CHART.....	3-8
TORQUE TIGHTENING CHART.....	3-9
TOWING.....	5-18
TRANSAXLE NUMBER.....	2-2
TRANSPORTING.....	5-18
TRANSPORTING	1-11
TROUBLESHOOTING	8-1
TROUBLESHOOTING	8-2

U

USAGE AND DISPOSAL.....	7-4
USING A SPARK ARRESTOR	1-13
USING MOWER AFTER LONG TERM STORAGE	7-3
USING THE ROPS.....	1-12

V

VEHICLE IDENTIFICATION NUMBER.....	2-2
------------------------------------	-----

W

WARNING LIGHTS	4-5
WASHING MOWER.....	5-23
WHEEL.....	4-17

Z

ZXC COMMERCIAL MODELS.....	3-5
ZXR RESIDENTAL MODELS.....	3-2