ERKUNT

ÇİFTÇİNİN GÜCÜ

MİSKET 26B USER MANUAL

MİSKET 26B

ABBREVIATION LIST

Abbreviations	Definitions
ROPS	Roll-over protective structure
2WD	Two wheel drive
4WD	Four wheel drive
RH/LH	Right-hand and left-hand sides are determined by facing in the direction of forward travel
ASAE	American society of agricultural engineers, USA
RPM	Revolutions per minute
PTO	Power take off
MFD	Mechanical front drive
SMV	Slow moving vehicle
SAE	Society of automotive engineers, USA
MPH	Miles per hour
psi	Pound per square inch
GPM	Gallon per minute

INTRODUCTION

Read this manual before you start the engine or operate your tractor. If you need any more information, see your authorized service.
This operator's manual contains information on the operation, lubrication and maintenance of your tractor. The information contained is comprehensive and essential, and is designed to assist you, even if inexperienced, in utilizing your tractor.
How well your tractor continues to give satisfactory performance depends greatly upon the manner in which it is operated. It is, therefore, requested that this manual be read carefully and kept ready for use so that the operation and maintenance service will properly be carried out in order to keep the tractor in top mechanical condition at all times.
Should any information as to your tractor be required, consult your local dealer or distributor stating the machine and engine serial numbers of the tractor concerned. We are sure you will be happy with your tractor.

SAFETY ALERT SYMBOL

This safety alert symbol indicates important safety messages in this manual.
When you see this symbol, carefully read the message that follows and be alert to the possibility of personal injury or death.

Safety decals on this machine which use the words DANGER, WARNING, CAUTION, IMPORTANT or NOTE, are defined as follows:

⚠DANGER Indicates an immediately hazardous situation which, if not avoided, could result in death or serious injury.

⚠WARNING Indicates an potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠CAUTION Indicates an potentially hazardous situation which if not avoided, may result in minor or moderate injury.

IMPORTANT Indicates that equipment or property damage could result if instructions are not followed.

NOTE Gives helpful information.

GENERAL TABLE OF CONTENTS

SERIAL NUMBER

Write your machine Model Name and Serial Numbers of major components on the lines provided. If needed, give these numbers to your dealer when you need parts or information for your machine.

1. TRACTOR MODEL NUMBER _____

2. TRACTOR SERIAL NUMBER _____

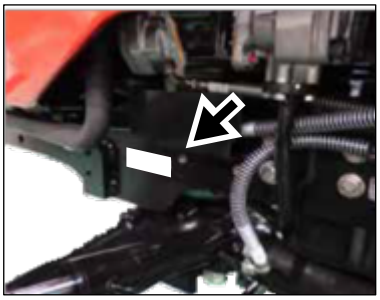
3. ENGINE SERIAL NUMBER _____

4. ROPS SERIAL NUMBER(Only Open Model) _____

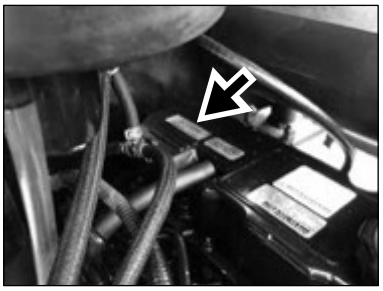
Serial Number Locations

TRACTOR MODEL NUMBER

SERIAL NUMBER PLATE

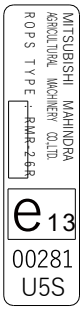


ENGINE SERIAL NUMBER

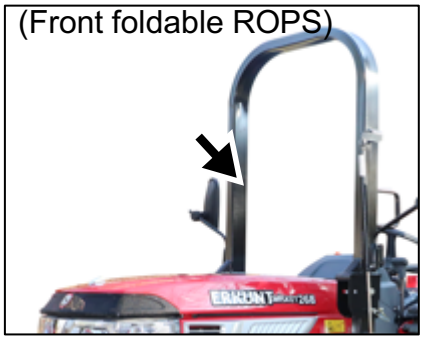


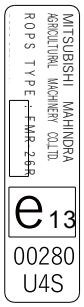
ROPS SERIAL NUMBER PLATE

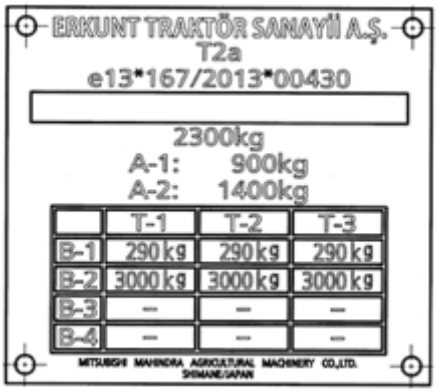
(Rear foldable ROPS)



(Front foldable ROPS)







SAFETY PRECAUTIONS

REMEMBER: "SAFETY" IS ONLY A WORD UNTIL IT IS PUT INTO PRACTICE

Improper handling of the tractor could cause an accident. Prior to the operation of the tractor, be sure to read this Manual carefully and have a through understanding of all of the contents. In particular, the instructions given in this section entitled "Safety Precautions" must be strictly followed.

GENERAL OPERATING SAFETY PRECAUTION

1. Observe all the safety precautions in this manual when operating the tractor.
2. Operate the tractor while wearing tight clothing that allows easy movement. Avoid loose jackets, mufflers, ties, scarves, or loose shirt sleeves to prevent from being caught by moving parts.
3. Always work when you are in good physical condition by taking sufficient rest to avoid overwork.
4. DO NOT allow children or adults having no knowledge of the tractor or tractor operation, to operate the tractor.
5. Never allows riders on the tractor, linkage drawbar or attachment while traveling and operating them.
6. If the tractor is transferred or loaned, the operator manual must go with the tractor and be provided to the operator.
7. All general safety regulations for prevent the accident must be followed as well as the instructions given in the operator manual.
8. Whenever driving on public roads, always check the road safety prior to driving and follow the local traffic regulations.
9. ROPS(Roll Over Protective Structure) is a special safety unit. If a ROPS is replaced with non-genuine ROPS and/or parts or physically damaged by a tractor accident such as rolling-over, the operator can not get the protection by the ROPS. Do not modify the ROPS and all relevant parts in any cases. Prohibited modifications such as welding, drilling holes and cutting will deteriorate the safety structure and will not provide the same protection. If a ROPS and/or ROPS parts are damaged, replace with a new ROPS and parts immediately. Do not make repairs.
10. ROPS label is adhered on each ROPS. ROPS serial number is indicated on the ROPS label. Refer to page 1 for the adhered place of a ROPS label.
11. If a tractor without ROPS rolls over when driving, serious accident and injury may occur. Detaching of the ROPS from the tractor is permitted only when the ROPS is required to check or replaced with a new ROPS. Do not operate the tractor while the ROPS is detached.
12. The ROPS is equipped on the tractor for the purpose of the operator safety and the safety function will be enhanced by using seat belt. Seat belt is important part of ROPS and wear and securely fasten it. Make sure that the seat belt is not twisted or pinched when use it.
13. Operation, maintenance and repair of the tractor should be carried out by person who has enough knowledge of the tractor and related safety regulations.
14. When refueling, be particularly careful first to stop the engine completely to prevent the fuel from igniting. Never refuel in the presence of an open flame or while smoking.
15. When starting the tractor, operating any attachment or engaging the PTO make sure that no one is in the way, especially children.
16. When starting the engine in an enclosed area or building, ensure proper ventilation by opening the doors and/or windows to prevent carbon monoxide inhalation. Mount the extension exhaust pipe on the tractor which has a cabin.

INTENDED USE

1. This tractor is designed for driving by one operator for farm work or comparable work.(intended use)
2. Use in any other way other than the above is considered as contrary to the intended use. The manufacturer assume no liabilities whatsoever for any damage or injury resulting from the misuse. All the risks caused by it must be born solely by the operator.
3. Compliance with and strict adherence to the conditions of operation, service and repair as specified by the manufacturer also constitutes the part of essential elements for the intended use.
4. The manufacturer will not be responsible for damage of machine or injury if tractor is modified without our permission.

OPERATION OF THE TRACTOR

Before driving the tractor, follow these rules:

1. Before starting and Driving the Tractor
   Operate the tractor only when seated properly in operator's seat and keep a firm grip on the steering wheel at all times. Never attempt to perform any operation of the tractor from anywhere else, on or off the tractor. Always wear a "hard hat" when operating the tractor.
2. Starting and Driving the Tractor
   Always operate the tractor at the proper speeds which enable you to keep the tractor in complete control.
   To start traveling, lower the engine speed and release the clutch pedal slowly.
   Slow down when operating the tractor on rough round.
   Never attempt to jump on or off from moving tractor.
3. Traveling on Off-Load
   This tractor has not been allowed to travel roads and streets, it is possible to be travel on only off-road.
   For traveling on off-road, be sure to lock both brake pedals together before driving to prevent either brake from acting independently.
   Never operate the differential lock while driving at high speed or traveling on the off-road. For driving the 4WD tractor on the off-road, be sure to place the 4WD shift lever in OFF position.
4. Steering and Turning the Tractor
   Slow down your tractor and disengage the differential lock before going into a turn, being careful to prevent any attachments mounted on the front or rear from hitting anyone or anything.
5. Towing and Operating on Hills
   For towing work on downward slope, place the shift lever in low speed and use engine brake.
   Never try to reduce the speed with brake only. Towing a heavy object on a hill is highly hazardous. Widen the tread of the tractor and mount the wheel weight or chassis weight to increase the stability and operate with extra precaution.
   When operating the tractor on either a steep slope or flat ground, be sure not to suddenly steer, brake, clutch or operate attachments.
   DO NOT operate the tractor at the edge of cliff or slope. Be particularly careful right after the rain when soil is soft and may give way easily.

LEAVING THE TRACTOR

1. Before leaving the tractor, stop the engine, remove the key, apply the parking brake and make sure that the engine has come to a complete stop, and any attachment is completely touching the ground.
2. DO NOT leave the operator`s seat when driving.

IMPLEMENTS

1. For towing, be sure to use the drawbar only. Set the hitch point below the center line of the rear axle. When using a chain, never try to move forward abruptly.
2. Avoid operating the tractor on an extreme slope that appears hazardous, when forced to operate on such slope, use extra care. Driving forward out of a ditch or mired condition or up a steep slope could cause tractor to tip over rearward. Back out of such situation does not permit you back out, use the front wheel weight or the chassis weight for balancing the tractor lengthwise. Also in case any extra-heavy rear mounting. Attachments is used, try to obtain better balance in this manner.
3. To mount or operate attachment, follow the instruction manual for the particular attachment for safe operation.
4. When using agricultural chemicals with an attachment on the tractor, always follow the instructions in the manual for the attachment as well as the instructions provided by the chemical manufacturer.

PTO OPERATION

1. Always stop the engine before connecting or disconnecting the drive shaft of implements.
2. Guards for PTO shaft and implement drive shaft must be fitted.
3. High-inertia implements do not stop the motion immediately when the PTO is disengaged. Clean and adjust it only after the implement fully stops.
4. Cover the PTO shaft with a guard when not using.

BASIC SAFETY REQUIREMENTS FOR MAINTENANCE

Always follow these maintenance instructions before operating the tractor:

1. Immediately repair the head lights and work lamps required to conform to traffic regulations where the tractor is operated.
2. Keep tractor steps clean to avoid accidents due to slippage.
3. Be sure to engage the brake and lower any attachment or implement before disassembling any part.
4. Never adjust or service the tractor when it is in motion or while the engine is running. Always adjust the brake or clutch properly in accordance with the adjusting procedure in the instruction book.
5. DO NOT remove the radiator cap while the engine is running. Shut down the engine and wait until it cools sufficiently. For removal, turn the cap to the first stop to relieve pressure. To replace the coolant, use the coolant recovery tank.
6. Hydraulic oil or fuel escaping under pressure can penetrate the skin, causing serious injury. Before disconnecting oil or fuel lines, be sure to relieve all pressure. Before restoring pressure after repair, be sure all connections are tight and all hydraulic components are in normal condition. If injured by leaked fluid, see a doctor immediately for proper treatment.
7. Before starting any work on electrical equipment or work that may cause you to touch the electrical parts accidentally, first disconnect the battery cables. Never remove the rubber cap cover at the positive terminal of the battery cable end. Before connecting the battery to the charger, make sure that the charger switch is in "OFF" position.
   Be sure to connect the charger to the correct terminals on the battery (positive to positive, negative to negative).
   A great amount of hydrogen gas is generated by the battery when it is being charged. Take precautions against fire: DO NOT have any exposed flame in the area where you are working.

Be sure not to cause any leakage of the electrolyte, since it will corrode the skin or clothing. In case of accident as described below, immediately seek first aid, and see a doctor immediately for proper treatment.

a) If the diluted sulphuric acid from the battery has gotten into the eyes: Clean the eyes with a lot of clean running water for more than 15 minutes, while opening the eyes widely, and see a doctor immediately for proper treatment.
b) If the diluted sulphuric acid from the battery has been swallowed: Rinse the mouth with clean water immediately, and see a doctor immediately for proper treatment.
c) If diluted sulphuric acid has gotten on the skin of clothing: Wash away the diluted euphoric acid completely with a lot of clean running water and neutralize with soap solution. Then rinse with water.
d) If the diluted sulphuric acid is spilled: Wash away with a lot of water or neutralize with slacked lime or bicarbonate of soda.

8. Stop the engine and make sure the PTO shift lever is in Neutral before performing any of the following services, including.

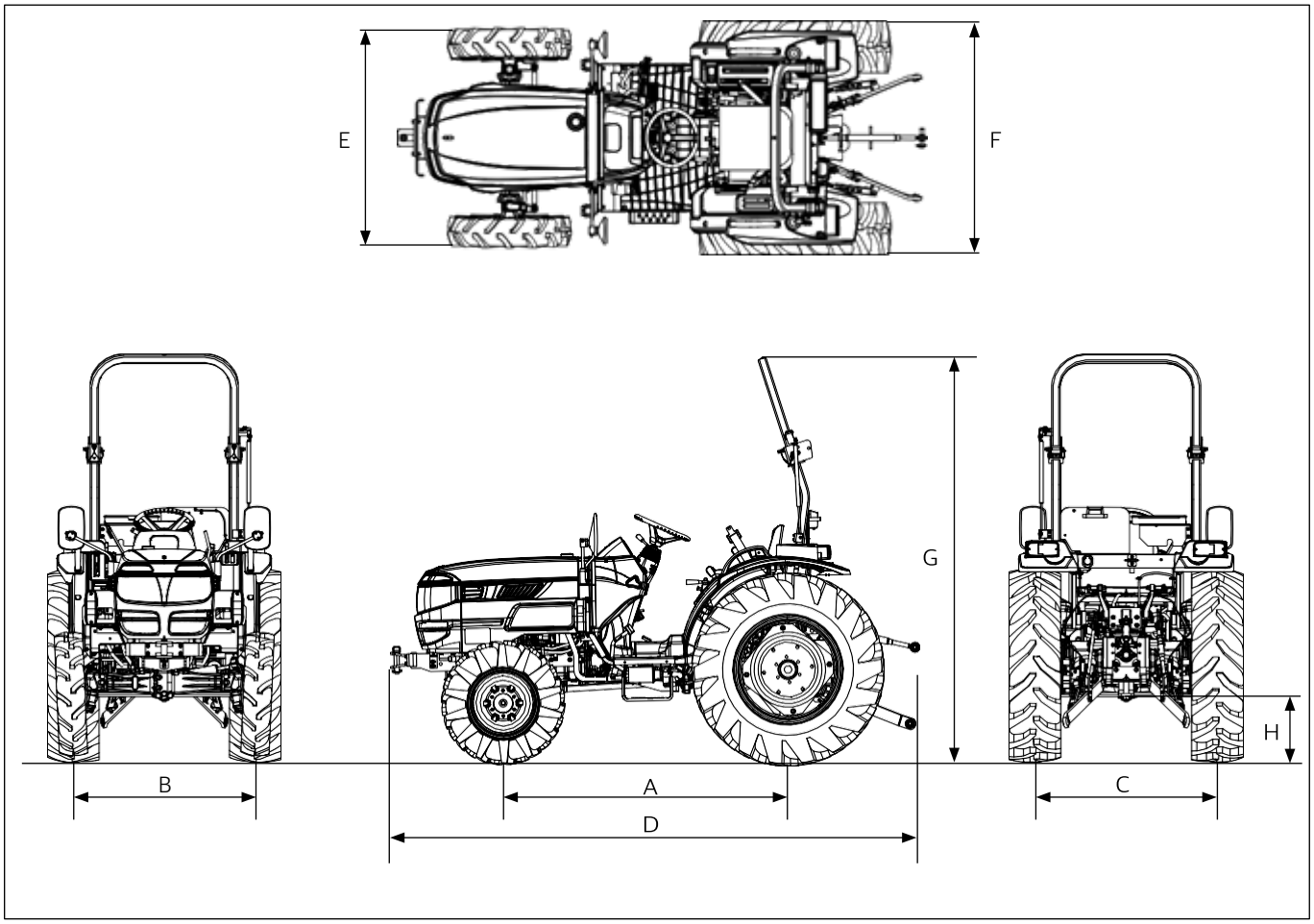
a) Removal of the propeller shaft between PTO and any attachment.
b) Adjustment of PTO drive train and hitch.
c) Adjustment or cleaning of PTO driven attachment.

9. The steering wheel always has built-in play to some extent, which is required for smooth meshing of sector gear and pinion gear.
10. Always inspect the amount of the play. DO NOT operate the tractor if there is too much or too little play in the steering.
11. Dispose oil, fuel and filters in compliance with local regulations. DO NOT waste oil on the ground or field, or into a drain.
12. DO NOT try to fit a tire unless the worker has the proper facility, equipment and experience to carry out the job safely.
13. Disconnect the battery cable on (-) terminal side before starting any repair works on electrical system.
14. Use genuine parts. Any defectives or damages arising from using non-genuine parts are not covered by warranty.
15. Inspection and adjustment must be carried out after the muffler, the engine and oils are cooled down.
16. DO NOT touch the muffler, the engine unit, the PTO shaft and implements while the engine is rotating.
17. DO NOT touch the engine and surrounding parts including muffler while the engine is hot. To prevent burn injury, never drain or replenish or refill oil and fuel because the oil temperature is very high. Hot water may spray out and it will be cause of burn injury if the radiator cap is removed while the engine is hot.

TRACTOR ACCESS

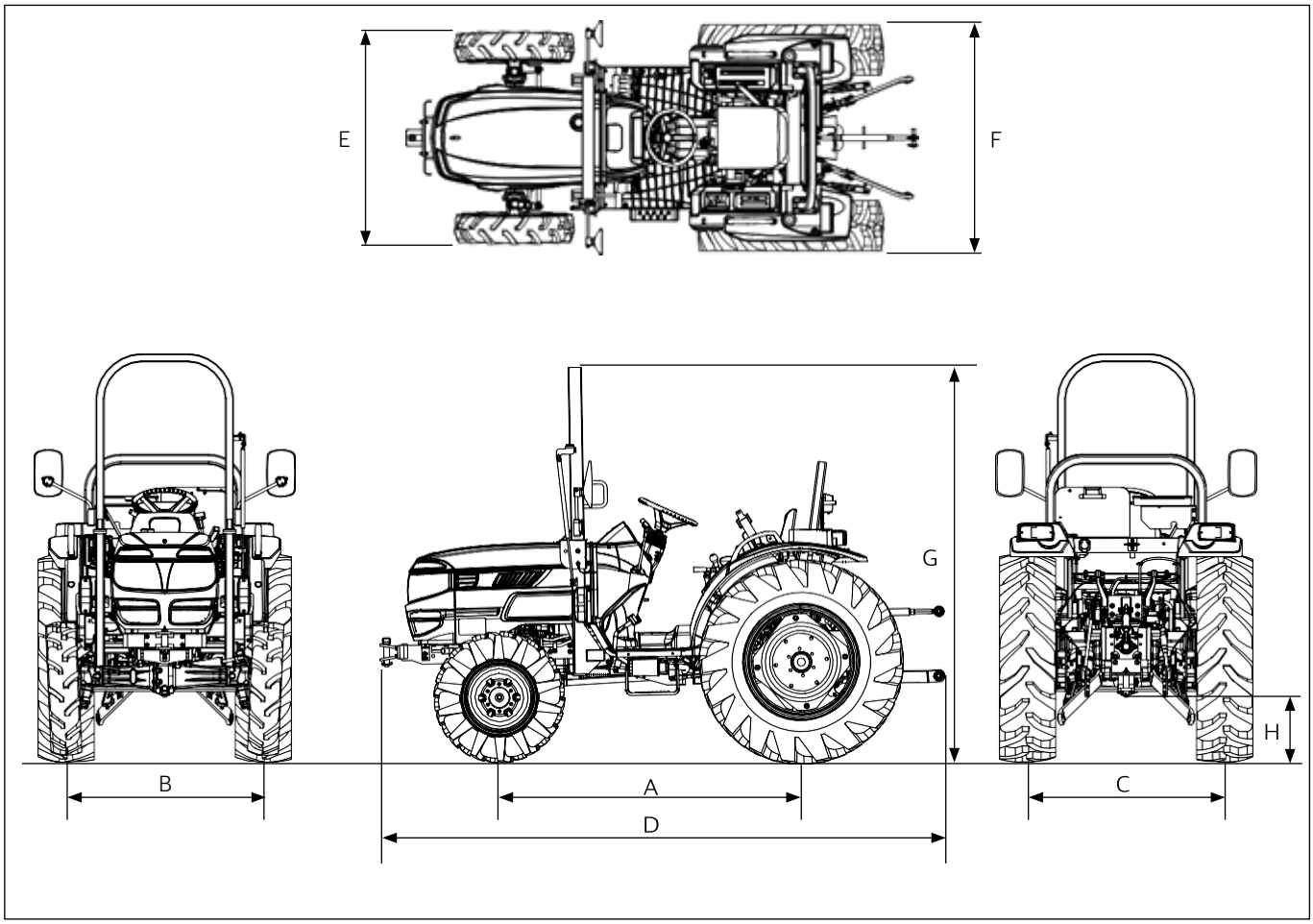
Jumping on or off the tractor can cause an injury. Always face the tractor, use the handrails and sub step, and get on or off slowly. Do not use the controls as hand holds to prevent inadvertent machine movements.
When boarding or leaving the tractor be sure to hold the handrails.

GENERAL DIMENSIONS (MECHANICAL TRANSMISSION & HST-REAR ROPS TYPE)



	Model	Misket 26B			
	Tire	Agri	Agri	Agri	Turf
	Front	7-14	7-16	7-16	215/80D15
	Rear	9.5-24	11.2-24	12.4-24	355/80D20
A	Wheel Base	1710 mm			
B	Front Tire Track	1095 mm	1086 mm	1086 mm	1107 mm
C	Rear Tire Track	1016 mm	1090 mm	1090 mm	1138 mm
D	Length with front weight hanger	3190 mm			
E	Front Width	1326 mm	1317 mm	1317 mm	1374 mm
F	Rear Width	1249 mm	1374 mm	1400 mm	1483 mm
G	Height	2363 mm	2389 mm	2413 mm	2375 mm
H	Ground Clearance	302 mm	325 mm	325 mm	317 mm

GENERAL DIMENSIONS (MECHANICAL TRANSMISSION-FRONT ROPS TYPE)



	Model	Misket 26B			
	Tire	Agri	Agri	Agri	Turf
	Front	7-14	7-16	7-16	215/80D15
	Rear	9.5-24	11.2-24	12.4-24	355/80D20
A	Wheel Base	1710 mm			
B	Front Tire Track	1095 mm	1086 mm	1086 mm	1107 mm
C	Rear Tire Track	1016 mm	1090 mm	1090 mm	1138 mm
D	Length with front weight hanger	3190 mm			
E	Front Width	1326 mm	1317 mm	1317 mm	1374 mm
F	Rear Width	1249 mm	1374 mm	1400 mm	1483 mm
G	Height	2184 mm	2210 mm	2234 mm	2196 mm
H	Ground Clearance	302 mm	325 mm	325 mm	317 mm

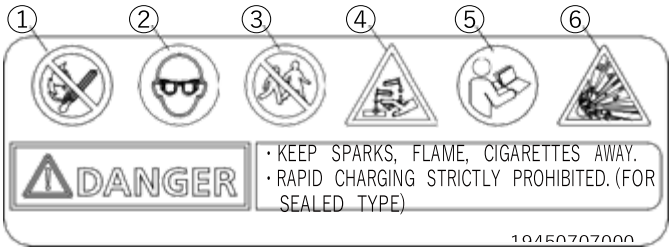
AXLE LOADS & TIRE LOAD CARRYING CAPACITY

Tire Type	Front Type		Maximum Front Axle Load(kg)	Rear Type		Maximum Rear Axle Load(kg)	Maximum Total Load (kg)
	Size	Load Capacity(kg)		Size	Load Capacity(kg)		
Agri	7-14 4PR	375	750	9.5-24 6PR	950	1400	2150
	7-16 4PR	412	824	11.2-24 4PR	850	1400	2224
	7-16 4PR	412	824	12.4-24 4PR	950	1400	2224
Turf	215/80D15 4PR	450	900	355/80D20 4PR	1090	1400	2300

PICTORIAL SAFETY LABELS

The pictorial safety labels affixed are intended to alert persons to potential hazards. The hazard is identified by a pictorial in the safety alert triangle or by the safety alert symbol alone. An adjacent pictorial provides instructions and information on how to avoid the hazard.

(1) Part No. 19450707000



① Keep away cigarettes, flames or sparks.

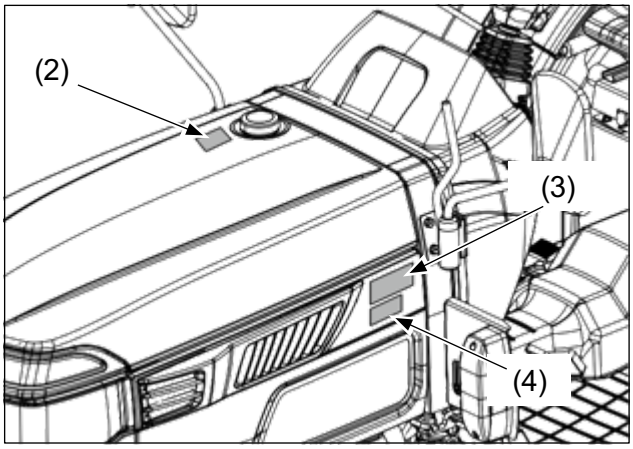
② Always shield eyes and face from battery.

③ Keep out of reach of children.

④ Poison causes severe burns.
Contains sulfuric acid.

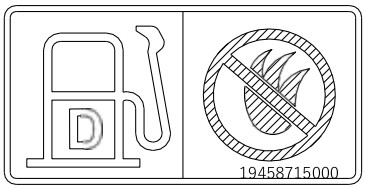
⑤ Read and understand operator's manual.

⑥ Danger explosive gases.



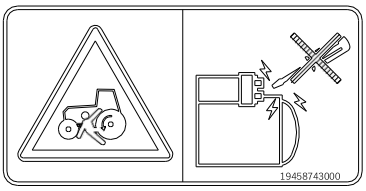
(2) Part No. 19458715000

Diesel fuel only. No fire.



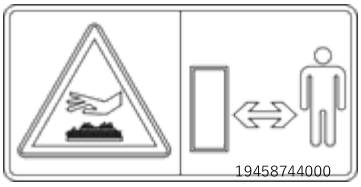
(3) Part No. 19458743000

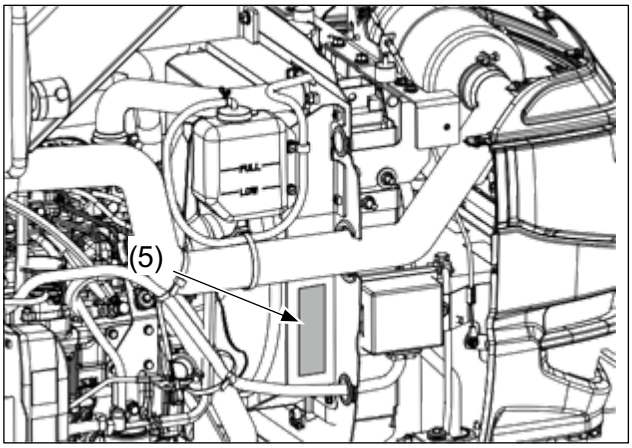
Start engine from operator's seat only.

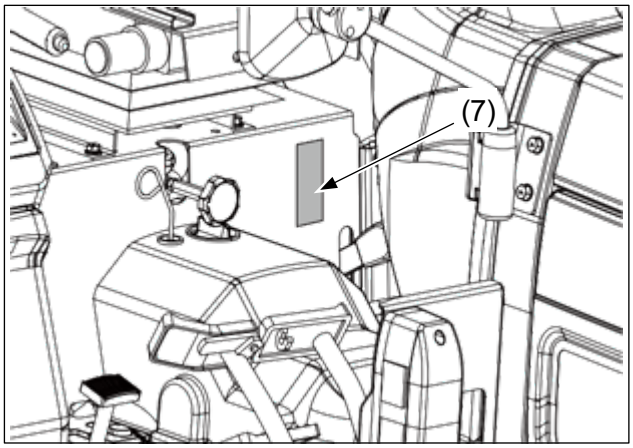


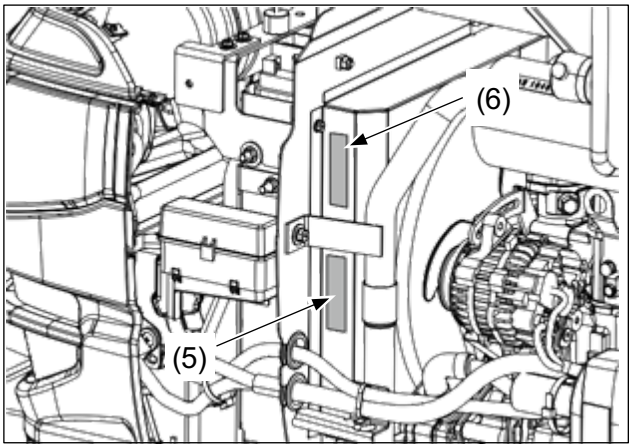
(4) Part No. 19458744000

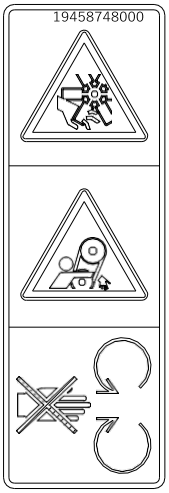
Do not touch hot surface like muffler, etc.



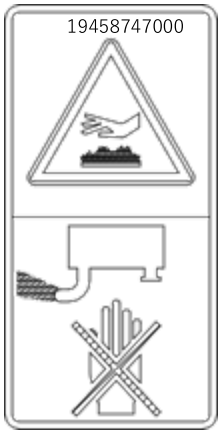




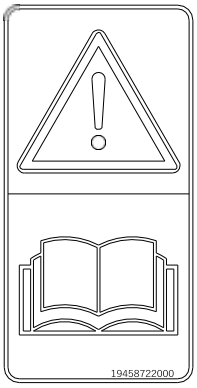




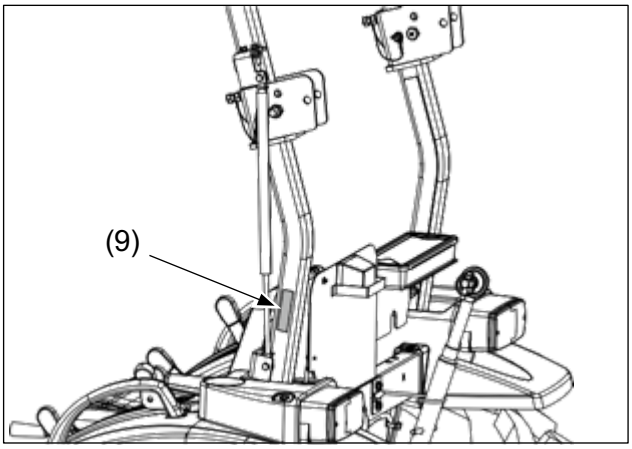
(5) Part No. 19458748000
Do not get your hands close to engine fan and fan belt.

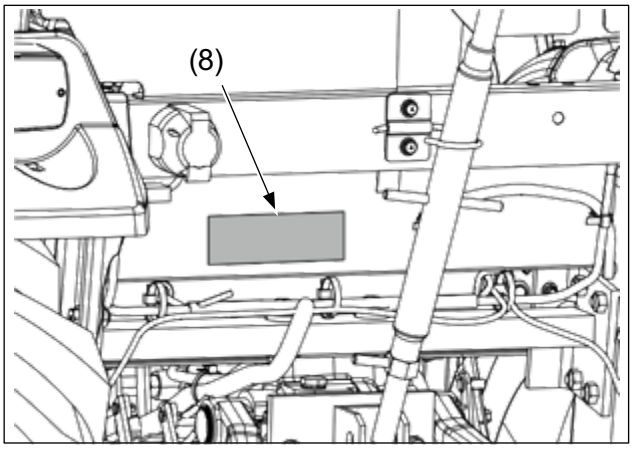


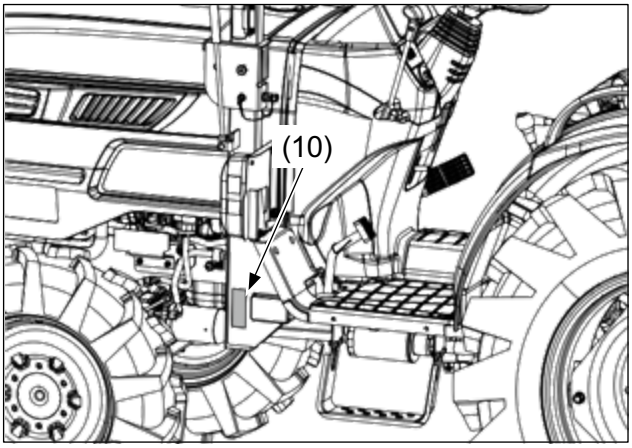
(6) Part No. 19458747000
Do not touch hot surface like muffler, etc



(7) Part No. 19458722000
Carefully read operator's manual before handling the machine.
Observe instructions and safety rules when operating.

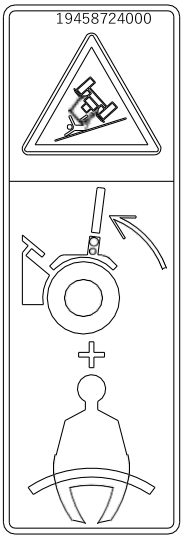






(8) Part No. 19458745000

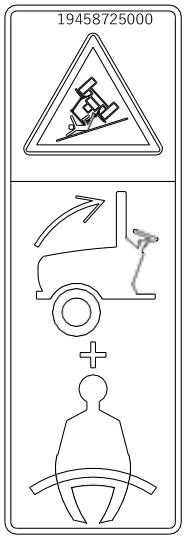
Do not stand by implement or between implement and tractor while operating.



(9) Part No. 19458724000

Always lock ROPS in uprighe position unless it has to be folded down to allow operation underneath trees or bushes.

When ROPS is locked in upright position, seat belt should be used.



(10) Part No. 19458725000

Always lock ROPS in upright position unless it has to be folded down to allow operation underneath trees or bushes.

When ROPS is locked in upright position, seat belt should be used.

CARE OF PICTORIAL SAFETY LABELS

- Keep pictorial safety labels clean and free from obstructing material.
- Clean pictorial safety labels with soap and water, dry with a soft cloth.
- Replace damaged or missing pictorial safety labels with new labels from your local MITSUBISHI Dealer.
- If a component with pictorial safety label(s) affixed is replaced with new part, make sure new label(s) is (are) attached in the same location(s) as the replaced component.
- Mount new pictorial safety labels by applying on a clean dry surface and pressing any bubbles to outside edge.

ROLL OVER PROTECTIVE STRUCTURE (ROPS)

Foldable ROPS Frame

WARNING

- When improperly operated, this tractor can roll over or upset. Use of the ROPS and seat belt minimize the possibility of injury or death if rollover or upset occurs. For low clearance use only, the ROPS can be lowered. No protection is provided in this position and the seat belt should not be fastened. For all other uses, secure the ROPS in the upright position and the fasten the seat belt.

ROPS is foldable so that the tractor can be operated in places such as orchards where the height is restricted. See Folding the ROPS in this manual.

Normal Operating Position

For normal operation, including transport, always use the foldable ROPS in the secured upright position with a fastened seat belt for full rollover protection.

(Rear foldable ROPS)

(Front foldable ROPS)

Low Clearance Positions

For low clearance operation, such as operating in buildings, orchards or vineyards, the ROPS can be lowered and secured in the down position.
No rollover protection is provided in the lowered positions and the seat belt should not be fastened. When the low clearance operation is completed, return the ROPS to the secured upright position for all other tractor uses and transport.

(Rear foldable ROPS)

(Front foldable ROPS)

INPORTANT: When the ROPS frame is in the lowered position, make sure there is clearance between the frame and hitch mounted equipment. Slowly raise the hitch to maximum height to check for necessary clearance. For drawbar attached and/or PTO driven equipment, check for clearance including turning corners.

Tractor Roll Over

ROPS is a special safety unit. After an accident, The ROPS must be replaced so that you will get the same protection as a new ROPS.
ROPS, the seat, the seat belts and all the mounting, accessories and wiring inside the operator's protective area must be carefully checked after a tractor accident and all parts with damage should be replaced immediately. DO NOT TRY TO MAKE REPAIRS WELDING THE ROPS.

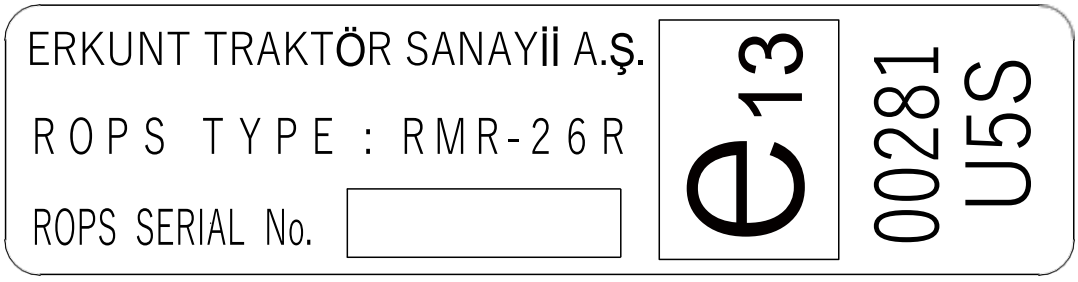
Safety Rules

1. DO NOT make modification to the ROPS. Example, welding an accessory to the ROPS, or drilling a hole in the ROPS.
2. Special fasteners are used to install the operator protective parts. Replacement parts must be the same as given in the Parts Catalog for your tractor.

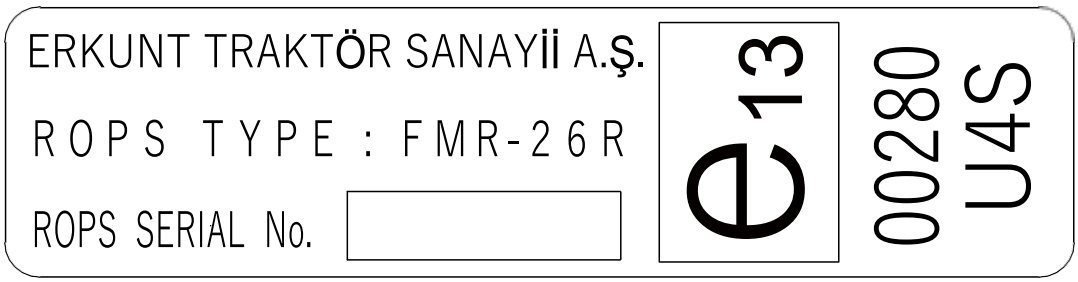
ROPS Label

1. ROPS is equipped with a ROPS label.
2. The label contains the ROPS serial number and applicable standards.

(Rear foldable ROPS)



(Front foldable ROPS)



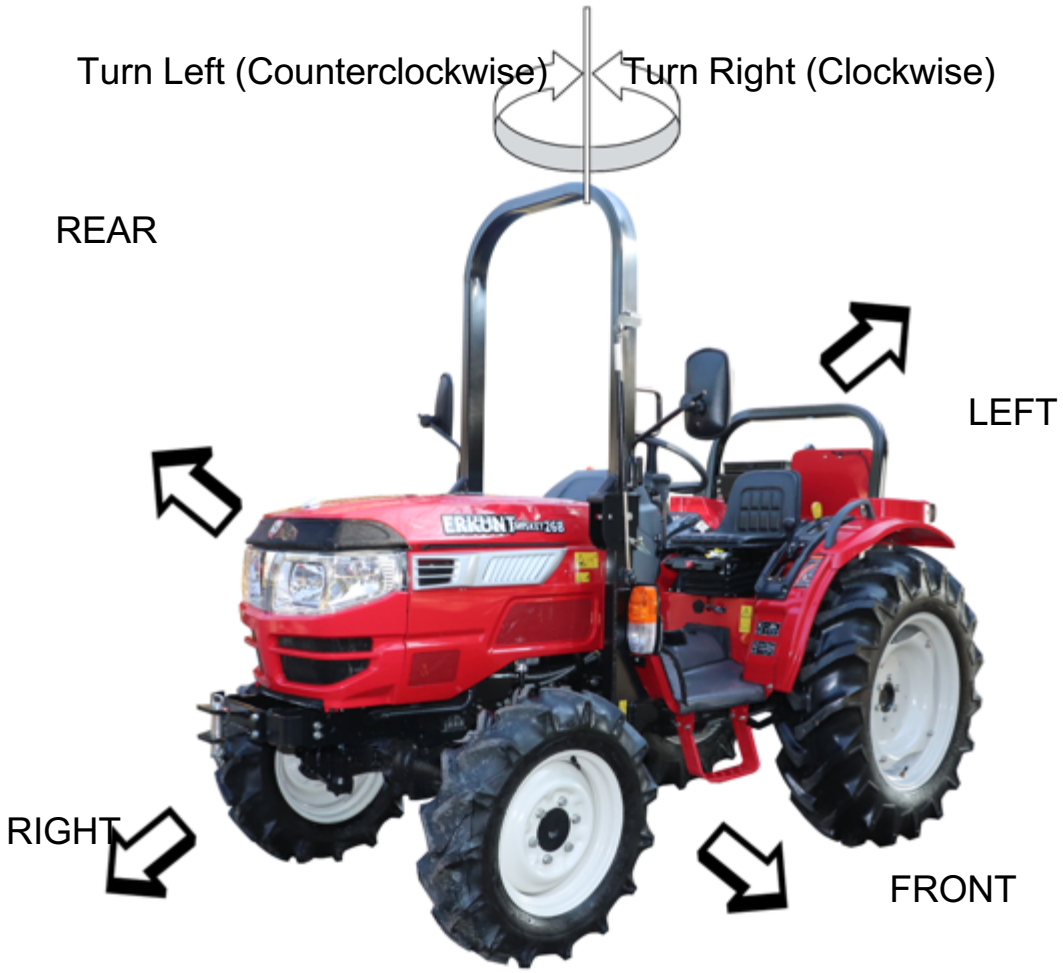
PRIOR TO USE

TERMS AND GLOSSARY

Left-Hand and Right-Hand

Expressions such as LEFT, RIGHT, FRONT, or REAR used in this manual should be understood in accordance with following rules:

FRONT means the front grill end while REAR means the lifting arm end of the tractor. LEFT or RIGHT means the left or right hand side of the tractor looking forward from operator's seat.



Definition of Signs

Item to be followed are indicated with the following signs in this instruction manual.

⚠**DANGER** ⚠**WARNING** ⚠ **CAUTION** : important items for safety are categorized in three levels and described. Please be sure to read thoroughly

NOTE: Points to bring out the full performance of the machine are described. If not followed, it may cause machine damage.

INSTRUMENTS/CONTROLS

OPERATORS SEAT

Seat can be adjustable for each operator as follows.

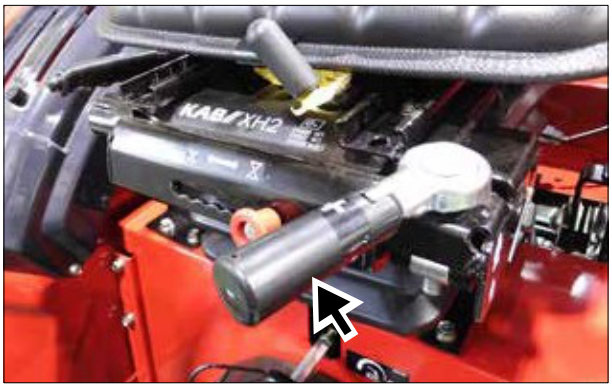
WARNING

- Do not adjust the seat while operating the tractor. It may cause to loss of control and freak accident and injury may occur.

① Weight Adjustment

1. In case of operator's weight is heavy, move the adjustment grip to left.
2. In case of operator's weight is light, move the adjustment grip to right.

② Seat Height Adjustment



Adjust the seat height according to the operator height.

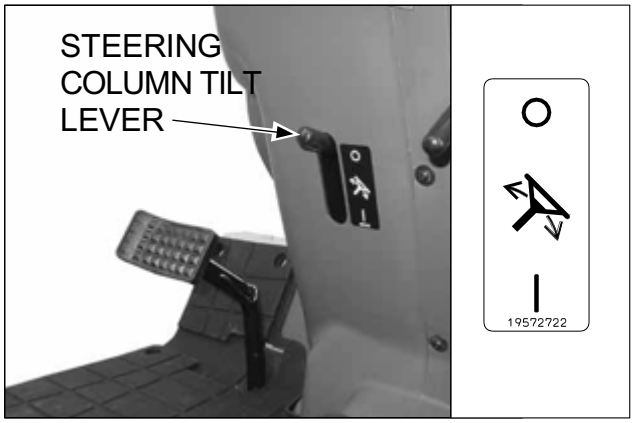
1. In case of operator's height is tall, turn the knob to right.
2. In case of operator's height is short, turn the knob to left.

*When you adjust the seat height, it is easier to adjust it when the weight set is in the lighter position.

③Horizontal Adjustment

1. Move the lever outward and move the seat rearward or forward to required position,then release the lever.
2. Push the seat rearward to make sure that the lock is engaged.

STEERING COLUMN TILT

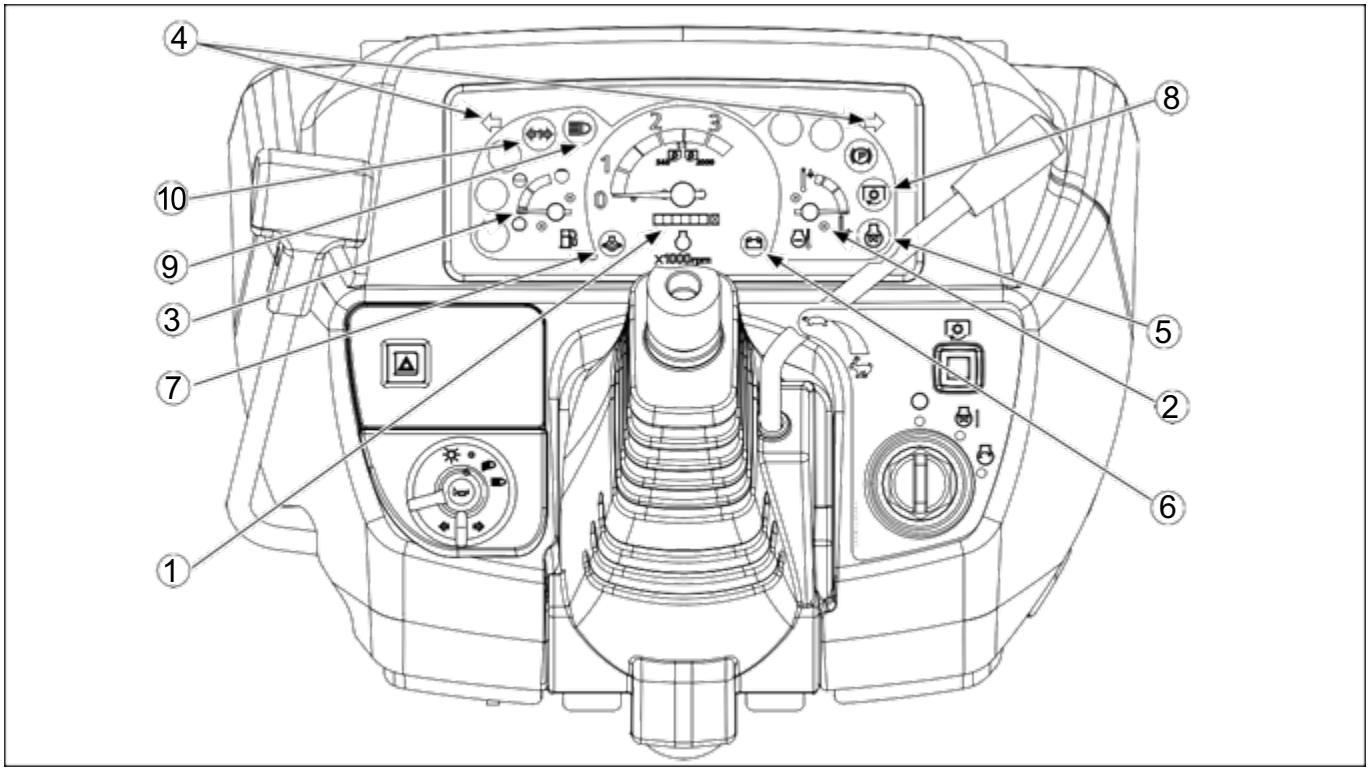


The steering wheel angle can be adjusted in three positions by the lever located under the steering column.

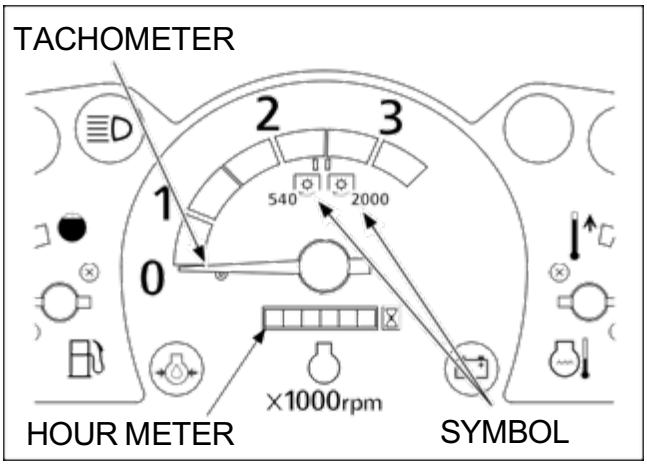
To adjust the position of the steering wheel, use following procedure.

1. Move the lever fully downward to disengage the latch from the column.
2. Move the steering wheel rearward or forward to the required position, then return the lever upward to lock the steering column.
3. Make sure that the lock is engaged.

INSTRUMENTS AND INDICATORS



1. Tachometer and Hour Meter

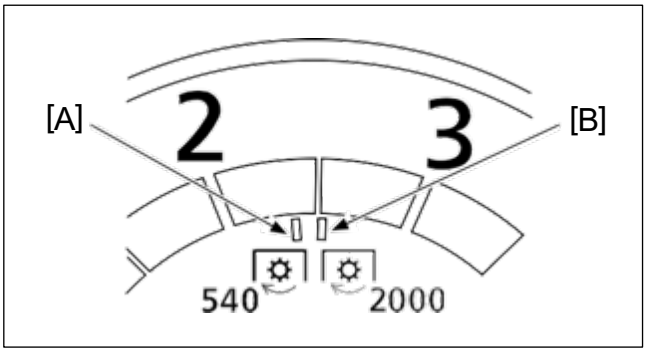


- The tachometer shows the engine speed in revolutions per minute (RPM). A symbol on the face indicates the correct Power Take Off (PTO) operating speed.

- The tachometer displays "Engine revolution speed / minute" (RPM) .

- The symbol of the shape of the cogwheel directs the speed that uses appropriate PTO.

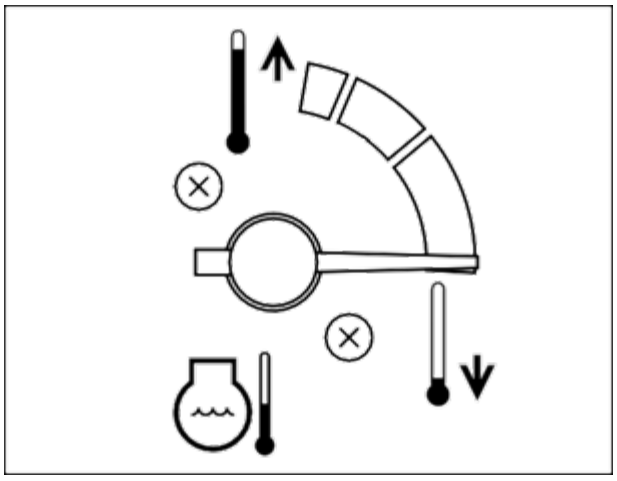
- The hour meter displays the adjusting time at the engine driving time.



White line [A] shows the 540 rpm of the Rear PTO speed.

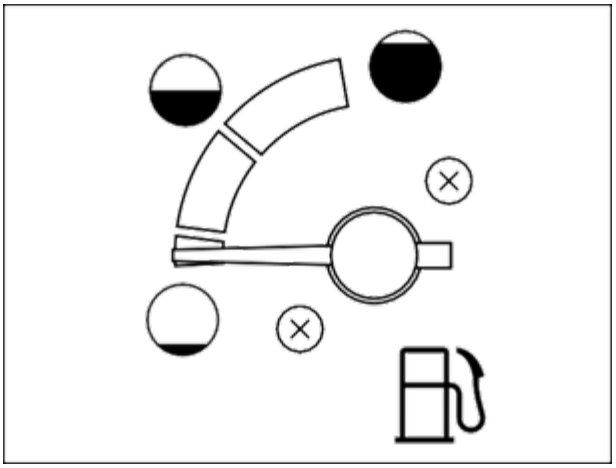
White line [B] shows the 2000 rpm of the MID PTO speed.

2. Engine Coolant Temperature Gauge



The gauge indicates the coolant temperature when the starter key switch is in ON position. If the engine overheats, the pointer moves turns the up side into ↑ position area. In this case, stop the engine immediately and check for the cause.

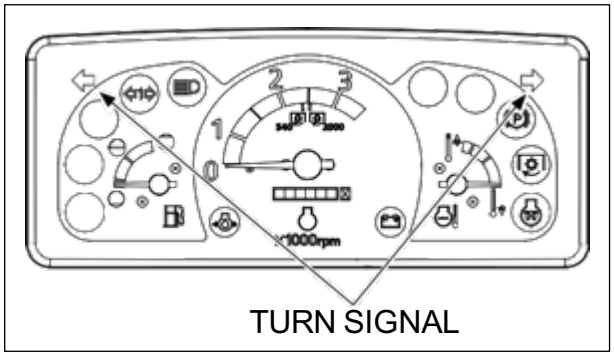
3. Fuel Gauge



The meter shows how much fuel is in the tank.

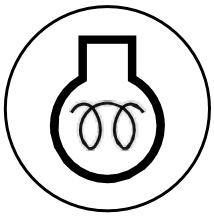
NOTE: The pointer can be in lowest position when the starter key switch is in the OFF position.To get a fuel level indication, turn the starter key switch to the ON position.

4. Turn Signal Indicators



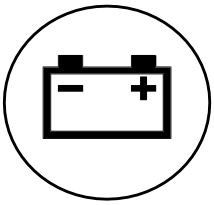
The LH indicator on the TACHOMETER will operate when the turn signal switch is turned to the left. The RH indicator will operate when the switch is turned to the right.
Both indicators will operate ON and OFF when hazard switch is pushed down.

5. Engine Glow Plug Indicator



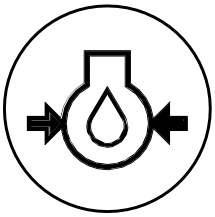
This signal indicates the correct functioning of the glow plug circuit. When the glow plugs have reached the correct temperature for engine starting, the glow plug indicator lamp will be turned off.

6. Charge Indicator



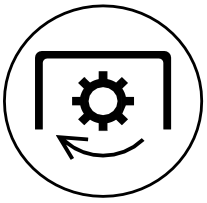
The charge indicator shows the battery is being discharged. If the lamp illuminates during operation, stop the engine and check for the cause.

7. Engine Oil Pressure Indicator



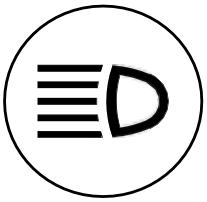
The engine oil pressure indicator shows low engine oil pressure. If the engine oil pressure drops below its normal pressure, the engine oil pressure indicator will turn on. Shut off the engine immediately. Check for the cause.

8. Independent PTO Clutch Indicator (Gear Drive Only)



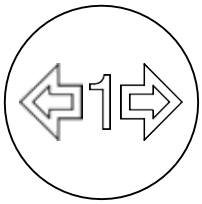
This signal indicates the INDEPENDENT PTO CLUTCH is ON or OFF.
NOTE:This signal indicates blinks by turning on the INDEPENDENT PTO CLUTCH is ON with the REAR PTO CONTROL LEVER at neutral position.

9. High Beam Indicator



This signal indicates the head light high beam is ON or OFF.
The INDICATOR illuminates when the head light is on high beam position.

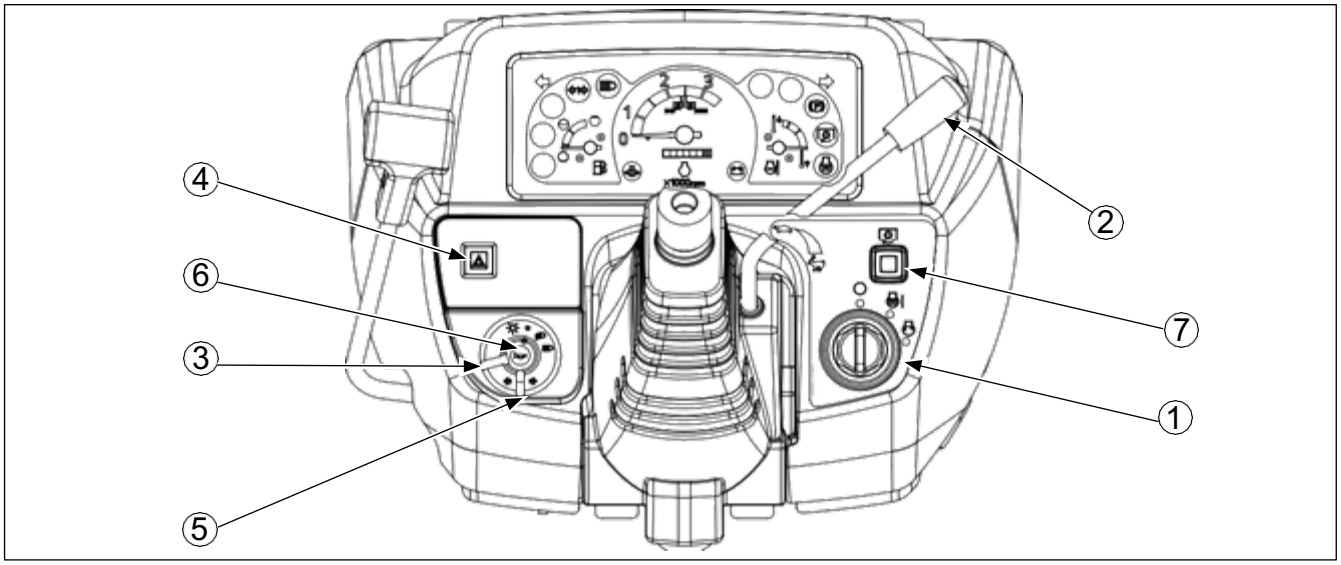
10. Trailer Indicator



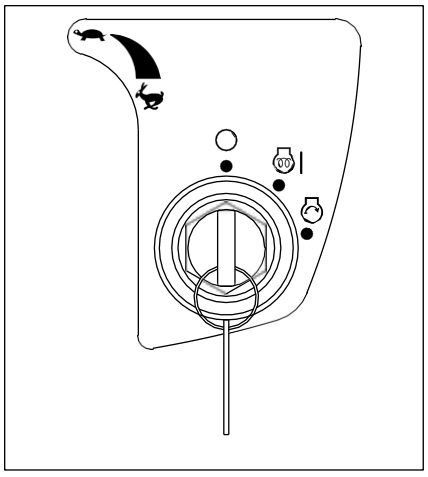
This signal indicates blinks by turning on turn switch or hazard warning switch with trailer power socket connected to trailer.

OPERATING CONTROLS

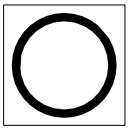
Control Switches



1. Starter Key Switch

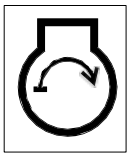


The starter key switch can be removed in the OFF position. Three switch positions are as follows:



Position (OFF)
Engine and all lamps except the turn signal and flasher lamps are turned off.

Position (HEAT)&(ON)
First position clockwise from OFF. In this position (Engine not running) energizes the glow plugs. The charge indicator, glow plug indicator and oil pressure indicator will illuminate.
The fuel gauge and temperature gauge will show correct values.

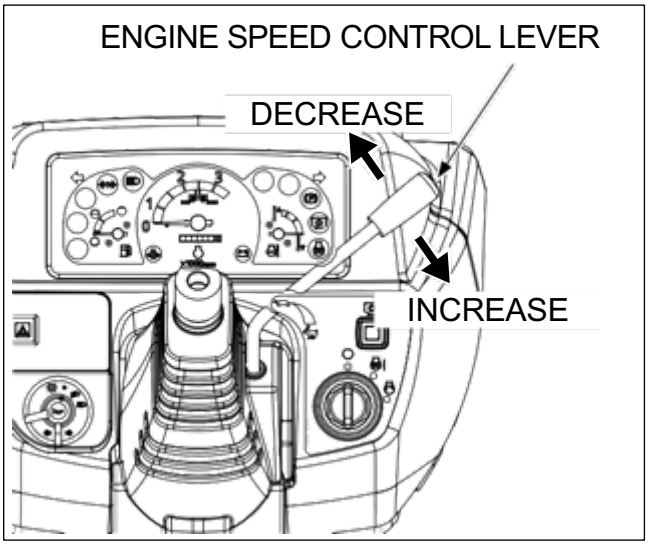


Position(START)
Turn the key fully clockwise against the force of the spring in the switch. The starter motor will turn the engine. Release the key immediately when the engine starts. (P40~P43)

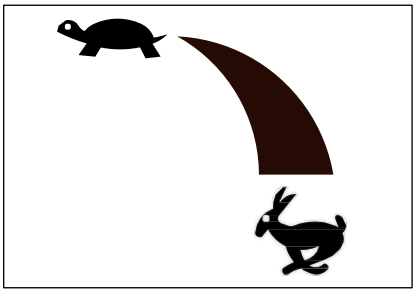
NOTE: To prevent operation by persons not authorized and the possible discharge of the battery, remove the starter key when you leave the tractor.

IMPORTANT: DO NOT keep the starter key switch in the ON position for a long time when the tractor is not operating.

2. Engine Speed Control Lever



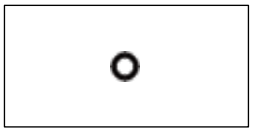
Pull the engine speed control lever to the rearward to increase the engine speed. Push the engine speed control lever forward to decrease the engine speed.



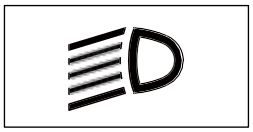
3. Lamp switch

Three position switch as follows:

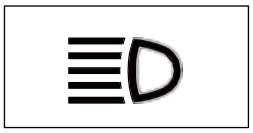
ALL lamps are OFF. (Turn signal and flasher lamps can be turned on.)



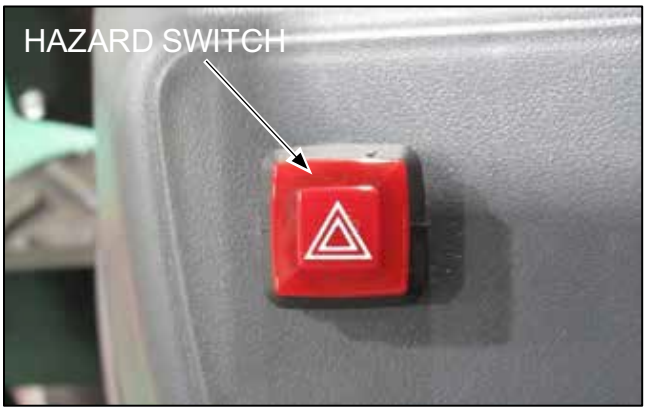
First position clockwise illuminates head lamps, instrument panel rear red lamp.



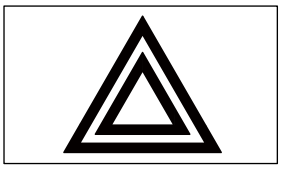
Second position is for head lamp high beam.



4. Hazard switch



To flash the Flasher Lamps whenever the tractor is operated or traveling on roads.

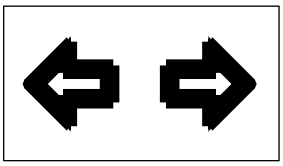


5. Turn Signal Switch

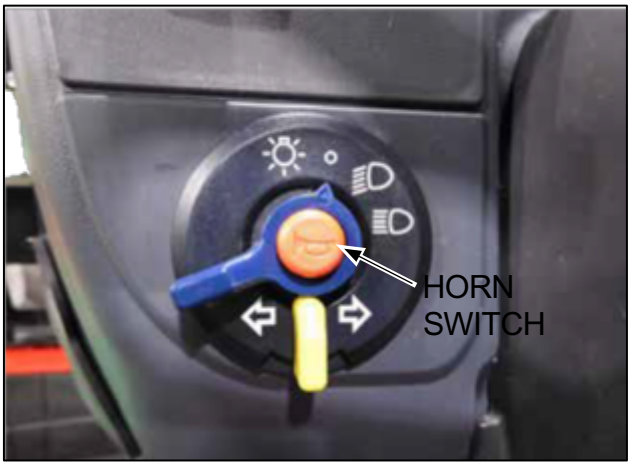
To indicate that you are going to turn the tractor to the RIGHT, move the turn signal switch to right. To indicate that you are going to turn the tractor to the LEFT, move the turn signal switch to left. Center position is OFF.

The corresponding right and left direction indicator lights and indicator on the instrument panel will flash.

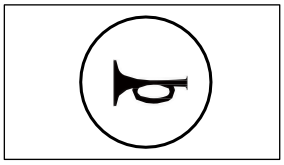
Turn signal is active when the key switch is the "ON" position.



6. Horn Switch



Press the button to energize the horn.

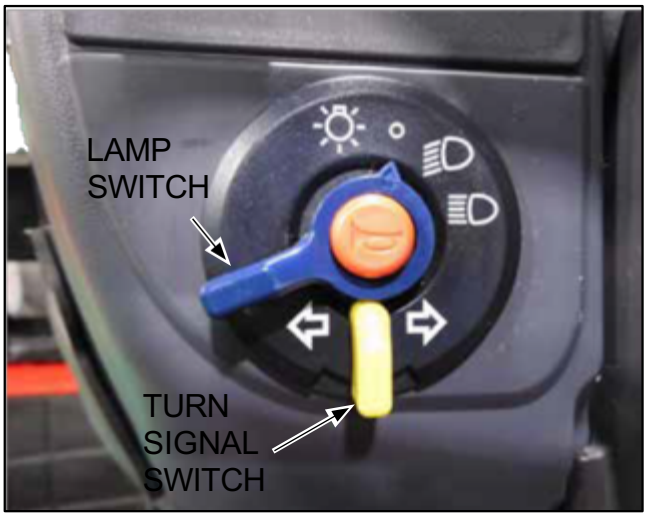


7. REAR PTO Intention Switch

The engine will stop if you leave the seat with the REAR PTO turned on. If you press and hold the INTENSION SWITCH (about 3 seconds), a buzzer sounds, the INTENSION SWITCH lights up, and the engine will not stop.

NOTE: The Intention switch will not operate unless the PARK BRAKE LEVER is pulled. For vehicles equipped with the MID PTO, the INTENSION SWITCH will not operate unless the MID PTO is in the OFF position.

WARNING LAMPS



Push the hazard switch down to operate the flasher lamps flashes.

When the turn signal switch is moved the right to make a right turn, the RH flasher lamp will illuminate ON and OFF.

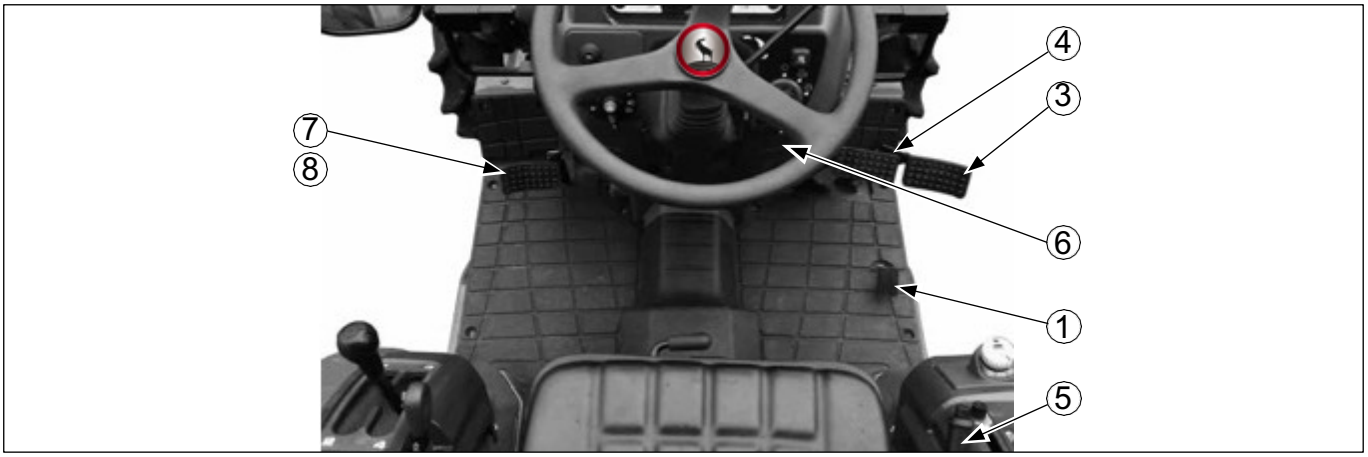
When the turn signal switch is moved the left to make a left turn, the LH flasher lamp will illuminate ON and OFF.

When the turn signal switch is returned to the center position, both the flasher lamps will OFF.

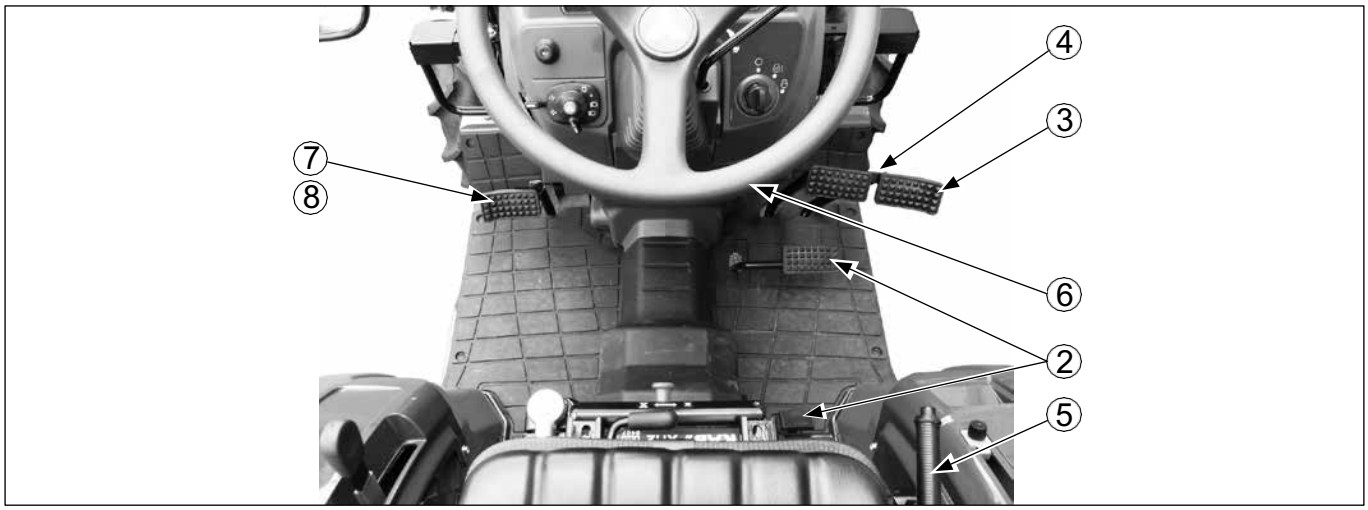
IMPORTANT: When towing an implement or wagon by the tractor, the complete rear area warning system (amber warning lamps, rear red lamp and SMV emblem) must be easily seen by any vehicle operator coming near the tractor.

CONTROL LEVERS AND PEDALS

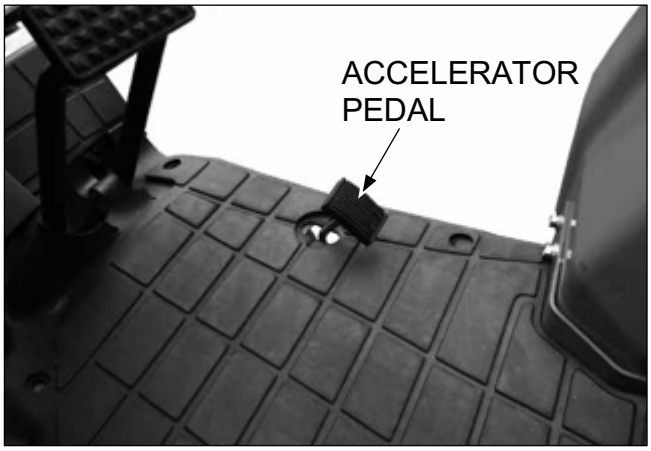
(Gear Drive)



(Hydrostatic Drive)



1.Accelerator Pedal (Gear Drive Only)



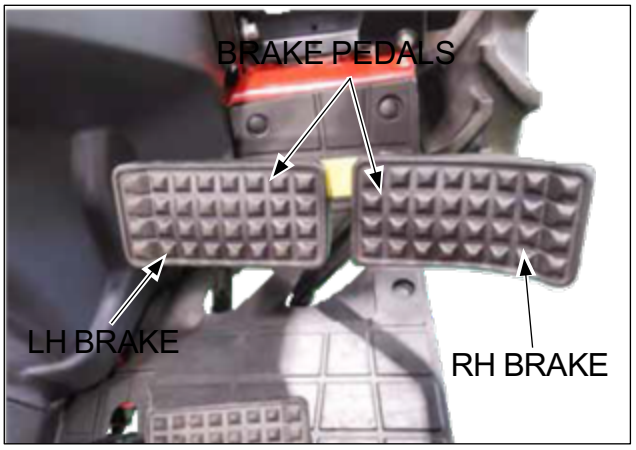
Use this pedal when operating the tractor on the road. Press the pedal down to increase the engine speed.

NOTE: The engine speed control lever must be set to give the slowest engine speed when the accelerator pedal is used.

2. Speed Ratio Control Pedal (Hydrostatic Drive Only)

The control pedal is centralized to the neutral position by spring load. Press down on the front pedal to increase the forward speed. Press down on the rear pedal to increase the reverse speed.

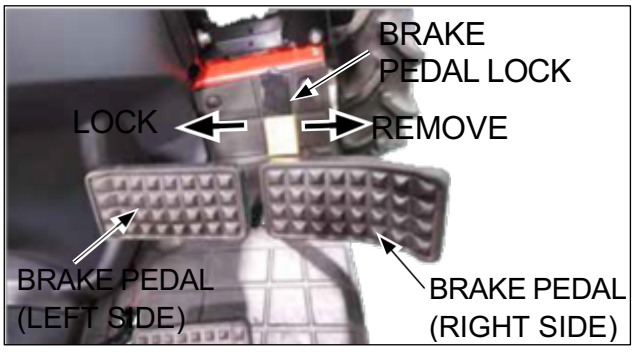
3. Brake Pedals



The pedals when locked together, provides braking to both rear wheels for stopping the tractor. When the brake pedals are unlocked, the pedals are used for individual braking of the rear wheels to aid in turning the tractor in soft soil conditions.

Press the RH brake pedal down to slow or stop the RH rear tractor wheel, press the LH brake pedal down to slow or slow or stop the LH rear wheel. The tractor will turn in the direction of the wheel that is slowed or stopped.

4. Brake Pedal Lock



The brake pedal lock is located at the brake pedal arms and is used to lock the two brake pedals together so that both brakes are applied.

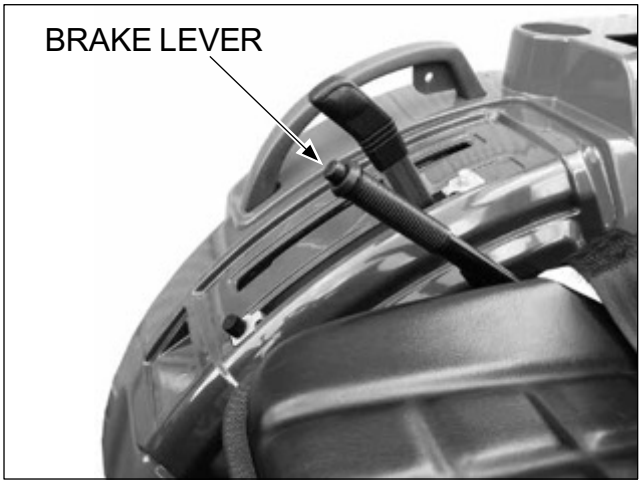
CAUTION

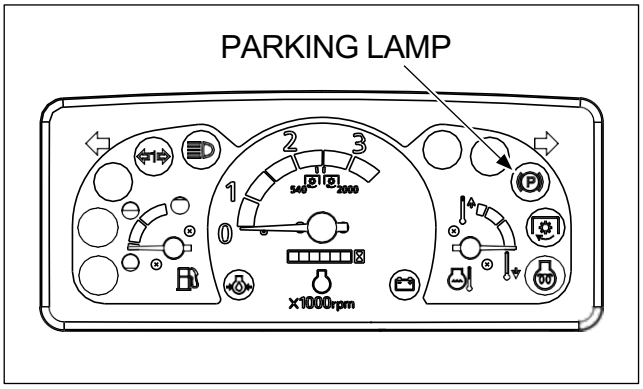
- Brake pedals must be locked together for road travel.
  This will insure uniform brake application and maximum stopping ability.

WARNING

- Extra weight and bad traction conditions such as mud or ice increase your stopping distance. Remember that liquid in the tires, weight on the machine or wheels, tank filled with fertilizer, herbicides or insecticides – all these add weight and increase the distance you need in which to stop.

5. Park Brake Lever





1. Pull the brake lever to apply it. Push the button to release and put the lever back. While the parking brake is applied, the parking lamp in the meter panel is lit and notifies you that the parking brake is applied.

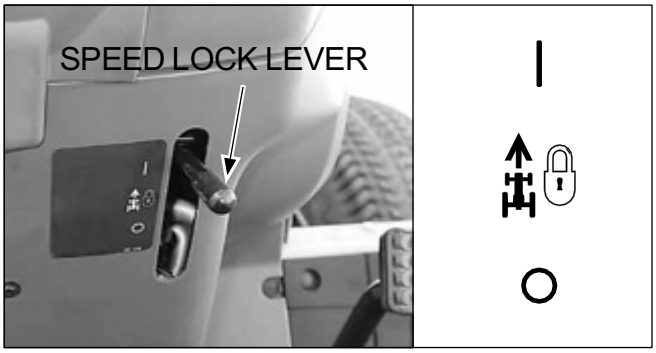
2. Before getting off the tractor, disengage the PTO, lower all implements to the ground, place all control levers in their neutral positions, set the parking brake, stop the engine and remove the key.

3. If it is necessary to park on an incline, be sure to check the wheels to prevent accidental rolling of the machine.

(Hydrostatic drive)
It is free on engine brake with the range lever engaged, be sure set the parking brake.

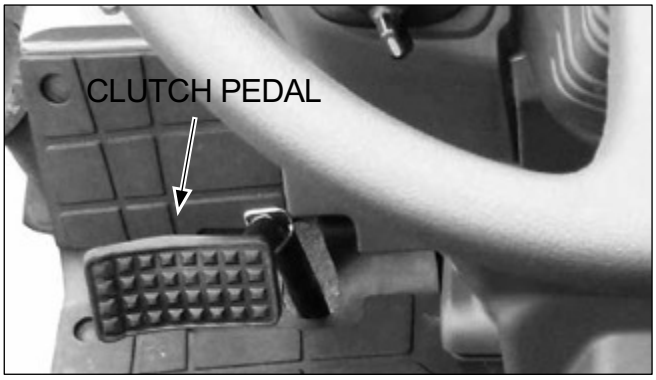
NOTE:The buzzer will sound if the operator stands up without pulling the brake lever. Pull the brake lever to apply the brake.

6. Speed Lock Lever (Hydrostatic Drive Only)



To keep a constant forward travel speed, move the lever fully upward, while holding the speed ratio control pedal at the desired speed. It does not work in reverse.

7. Clutch Pedal



The clutch must be disengaged when starting the engine, stopping the tractor, storing the tractor, press the brake pedal hard and operating the following levers, gear shift lever, REAR PTO lever, MID PTO lever, MFD lever, shuttle lever.

7-1. SINGLE CLUTCH (Hydrostatic Drive)

Pedal has two positions as follows:

1. Pedal completely released – Transmission and PTO engaged.
2. Pedal completely depressed – Transmission and PTO disengaged.

7-2. SINGLE CLUTCH (Gear Drive)

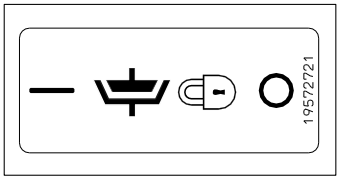
Pedal has two positions as follows:

1. Pedal completely released – Transmission engaged.
2. Pedal completely depressed – Transmission disengaged.

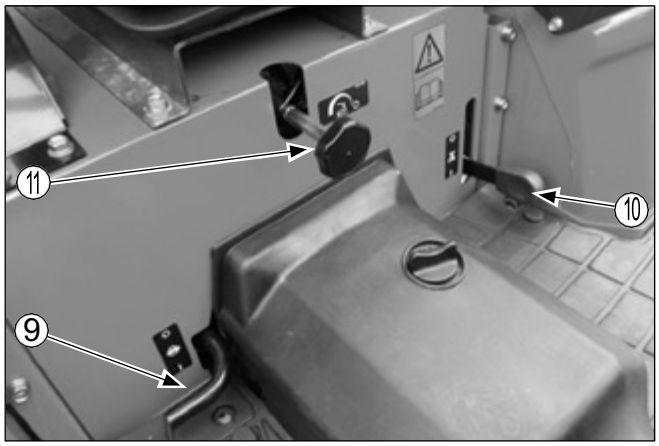
NOTE:PTO is controlled by Independent PTO switch.

8. Clutch Lock Latch

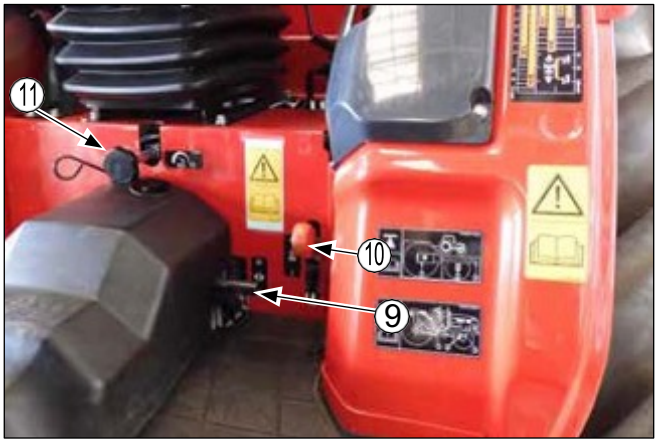
For long term storage, lock the clutch pedal in the disengaged position. This will prevent the clutch disc from sticking to the engine flywheel.



(Gear Drive)



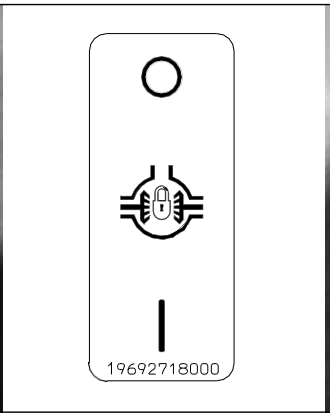
(Hydrostatic Drive)



9. Differential Lock Pedal

Press the pedal down to engage the differential lock. A spring inside of the differential lock pushes it out of engagement when pedal is released.

(Gear Drive)



(Hydrostatic Drive)

NOTE: When engaging the differential lock, press the clutch pedal down or press speed ratio control pedal to Neutral, to stop the wheels that are rotating, then press the differential lock pedal. DO NOT operate the differential lock pedal while the wheels are rotating.

WARNING

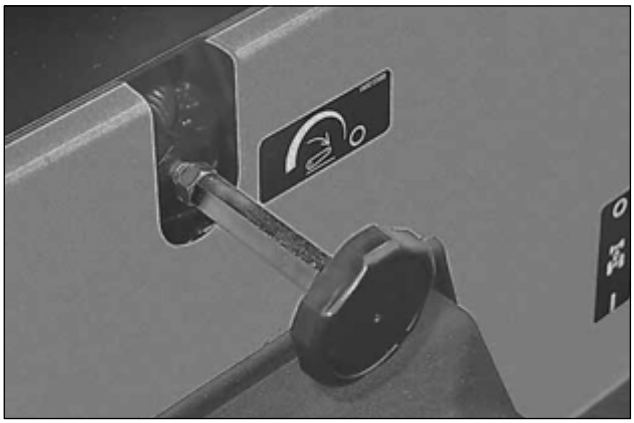
- DO NOT drive on roads, or at high speed anywhere, with the differential lock engaged. Difficult steering will occur, and can result in an accident. In field operation, use the differential lock for traction improvement, but release for turning at row ends.

10. MFD Control Lever

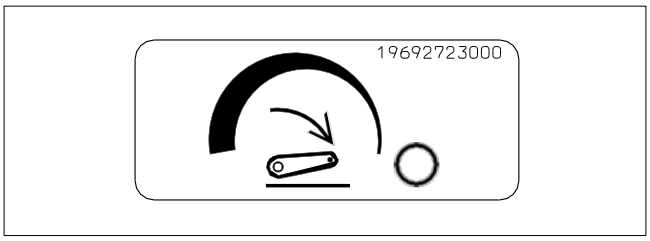
To engage the MFD (Mechanical Front Drive), move the MFD control lever downward. Move the lever upward to disengage MFD (drive to the rear wheels only).

IMPORTANT: The clutch pedal must be pressed down to operate the MFD lever.

11. Hydraulic Flow Control Knob



Use the hydraulic flow control knob to adjust the hitch lowering speed. Adjust the lowering speed to provide smooth operation of the hitch with the implement being used. Turn the knob fully clockwise to lock the hitch in position. See Hitch Lowering Speed Adjustment in this manual for more information.

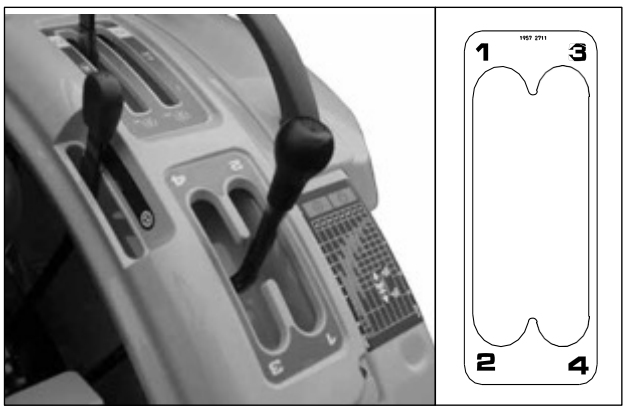


CONTROL LEVERS

(Gear Drive)

(Hydrostatic Drive)

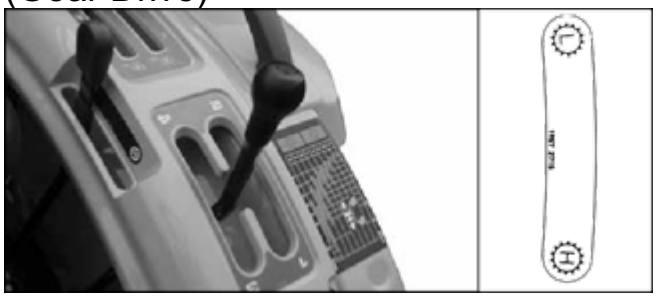
1. Gear Shift Lever(Gear Drive Only)



The gear shift lever is used to shift the transmission gears into any of four speeds.

2. Range Shift Lever

(Gear Drive)



Move the range shift lever forward to place the transmission in H range. Move the lever rearward to place the transmission in L range.

(Hydrostatic Drive)

Move the range shift lever forward to place the transmission in H range. Move the lever to the rearward to place the transmission in M or L range. The center position between M and L or H and M places the transmission in N.

NOTE: Be sure the range shift lever is in N (Engine start) position when starting the engine.

3. Shuttle Shift Lever

(Gear Drive Only)

The shuttle shift lever is used to shift the transmission gear into forward of reverse position. Move the shuttle shift lever forward (← position) to the forward position. Move the shuttle shift lever rearward (→ position) to the reverse position. The center position between ← and → places the transmission in N position. (Neutral)

NOTE: Be sure the shuttle shift lever is in N (Engine start) position when starting the engine.

4. Rear PTO Control Lever

(Gear Drive)

Move the lever forward to engage the REAR PTO. Move the lever rearward to disengage the Rear PTO.

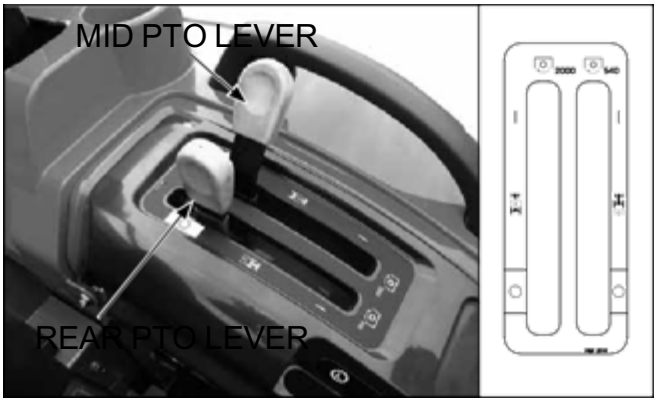
NOTE: Be sure the Rear PTO control lever is in OFF position when starting the engine.

(Hydrostatic Drive)

Move the lever forward to engage the Rear PTO. Move the lever rearward to disengage the Rear PTO.

NOTE: Be sure the Rear PTO control lever is in OFF position when starting the engine.

5. Mid PTO Control Lever (Hydrostatic Drive Only (If Equipped))



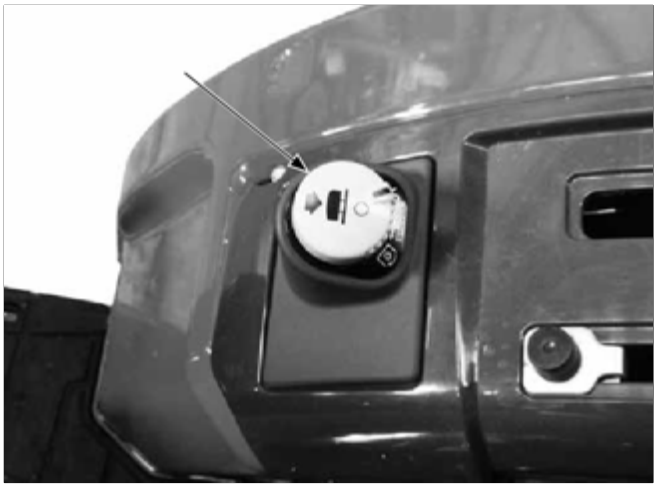
Move the lever forward to engage the Mid PTO. Move the lever rearward to disengage the Mid PTO.

NOTE: Be sure the Mid PTO control lever is in OFF position when starting the engine.

NOTE:

The Rear and Mid PTO shaft can be operated at the same time.

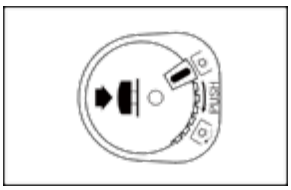
6. PTO Switch (Gear Drive Only)



PTO switch is used to engage or disengage the Independent PTO clutch. Turn clockwise PTO switch to engage the PTO clutch (turning the PTO shaft). Push the PTO switch to disengage the PTO clutch (stop the turning of PTO shaft).

The PTO indicator lamp on the instrument panel lights up when the PTO switch is in the ON position.

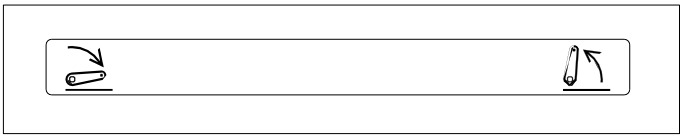
The PTO indicator light will flash when the PTO switch is in the OFF position.



NOTE: Be sure the PTO switch is in OFF position when starting the engine.

7. Hitch Control Lever

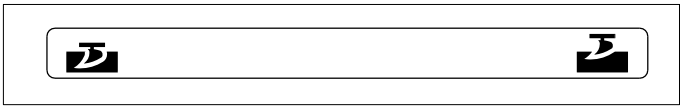
Use this lever for control the position of the hitch. Move the lever forward to lower the Three point hitch. Move the lever to the rearward to raise the Three point hitch.



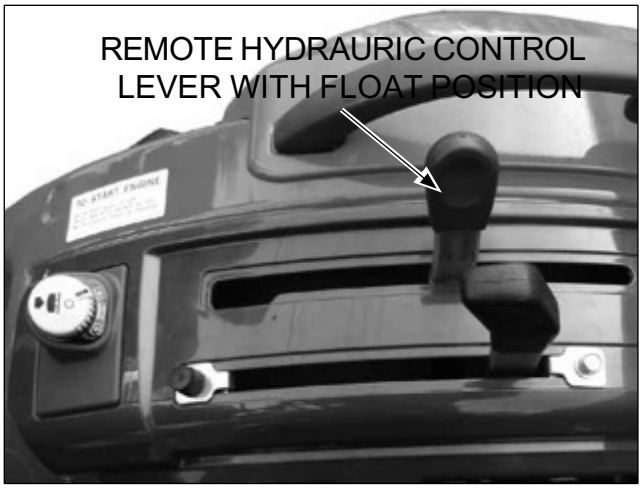
8 .Draft Control Lever (If Equipped)

Use draft control with soil engage implements to maintain a constant load on the tractor through variable soil conditions. For light load operation, move the lever to the rear. For heavy load operation, move the lever forward. To stop the draft control, move the lever fully forward.

See “operating with draft control” in this manual for more information.

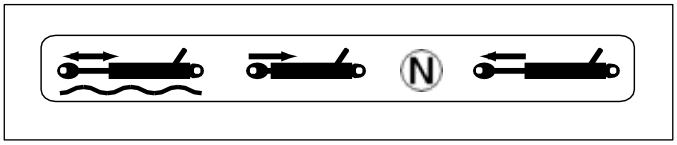


9 .Remote Hydraulic Control Lever with Float Position (If Equipped)



A double acting remote control valve is available for your tractor.The remote hydraulic control lever which operates the remote control valve is located on the RH side fender.

See "remote hydraulic control" in this manual for more information.



OPERATING INSTRUCTIONS

BEFORE STARTING THE ENGINE

Before starting your tractor for the first time and before each operating period after that, make these checks:

1. Make sure all persons who operate or do maintenance on the tractor understand that clean fuel is important.

2. Check all lubrication fittings for grease as given in the Lubrication Chart.

3. Check the oil level in the engine crankcase. Check the fluid level in the transmission.

4. Check the tractor fuel tank is filled with clean fuel that has the specifications given in this manual.

NOTE: Clean around the fuel tank cap before you remove cap.

5. Check the fuel system, cooling system and engine oil pan for leaks.

6. Check the fan belt is adjusted correctly.

7. Remove any water or sediment from the fuel filter cup.

8. Check the air pressure of the tires.

9. Make sure the PTO safety guard is installed.

10. Check the coolant level in the radiator and reservoir bottle. Add water and ethylene glycol coolant as needed.

RUN – IN PROCEDURE

If run-in instructions for a new engine are not followed, you can cause damage to piston rings and cylinder walls.

LOAD

Never operate an engine immediately under full load. Allow the engine to warm up before operating it at full load. Run-in the engine carefully as shown in the table.

Period	Engine Speed Control Lever Position	Load
1st Hour	Fully advanced	Maintain engine speed 100 RPM above full load governed speed
2nd Through 5th Hour	Fully advanced	Full load governed speed with occasional short periods of lighter load

NO LOAD

DO NOT run the engine at idle speed. When not operating the engine with a load, you can keep the correct engine operating temperature if you run the engine at approximately 1500 RPM.

REAR WHEEL BOLTS

After the first 10 hours of operation, check the rear wheel bolts. Tighten all wheel bolts to the torque give in the Wheel Mounting Torques in this manual (see page 88).

FRONT WHEEL BOLTS

After the first 10 hours of operation, check the front wheel bolts. Tighten the bolts to the torques shown in the Wheel Mounting Torques in this manual (see page 88).

FRONT FRAME BOLTS

After the first 10 hours of operation, check the front frame bolts. Tighten the bolts to the torque shown below.

FRONT FRAME MOUNTING TORQUES

Size (M12), 12Bolts. ..... 110 N-m (81 Lbf-ft)

LOWER LINK BRACKET BOLTS

After the first 10 hours of operation, check the Lower Link Bracket bolts.
Tighten the bolts to the correct tightening 39 to 44 N-m (29 to 33 Lbf-ft).

NORMAL STARTING PROCEDURE

IMPORTANT: It is very important that enough lubricant reaches the engine parts before operating the engine at rated speed.

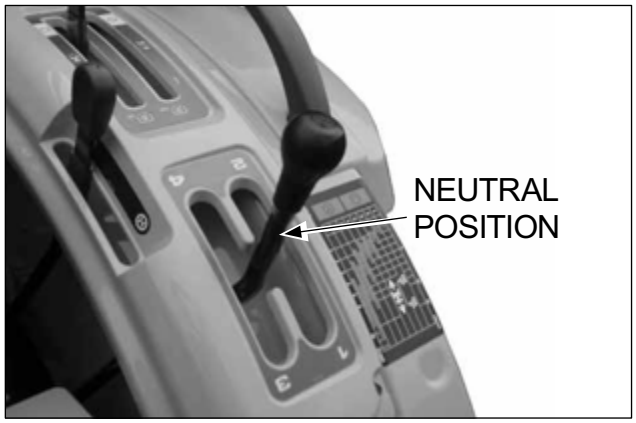
WARNING

- Operate controls only when seated in the operators seat.
- Engine can start with transmission in gear when neutral or safety start switch is by-passed:

1. DO NOT connect across terminals on starter.
2. Attach a booster battery by connecting the positive terminal of the booster battery to the “positive terminal” provided or to the positive terminal of the machine battery. Connect the negative terminal of the booster battery to the chassis of the machine.
   Then use recommended starting procedures from operators seat.
3. When necessary, repair electrical system components promptly so that “jump starting” will not be attempted.
   Machine run-away can cause injury or death to operator and bystanders.

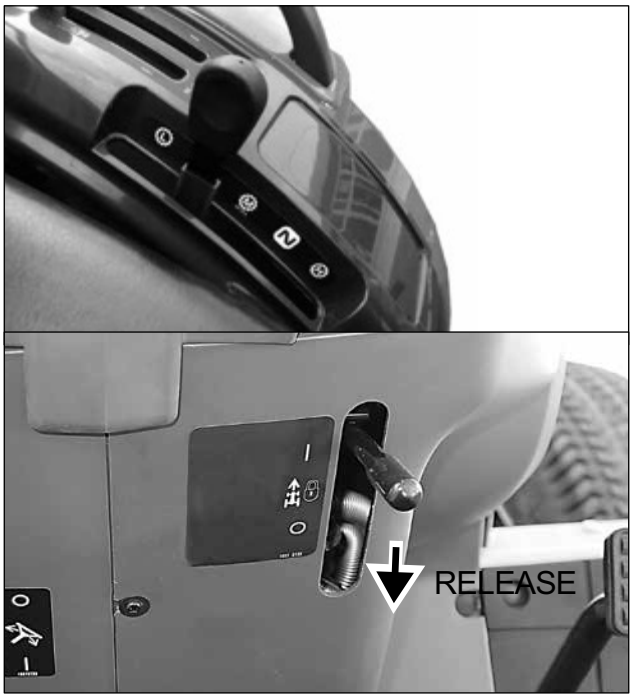
- Before starting the engine, be sure all operating controls are in neutral or park lock position. This will eliminate accidental movement of the machine or start up of power driven equipment.

STEP 1 (Gear Drive)



Put the gear shift lever in the Neutral position.

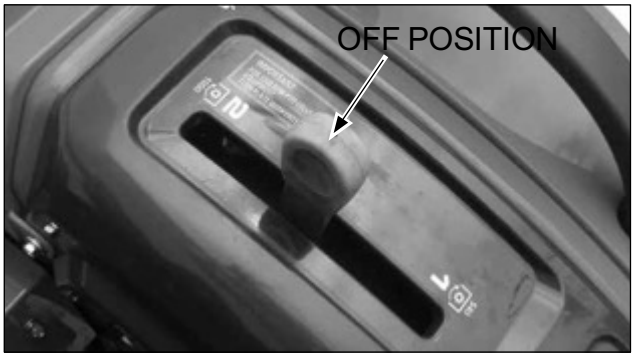
(Hydrostatic Drive)



Put the range shift lever in the Neutral position and the Speed Lock Lever to be released.

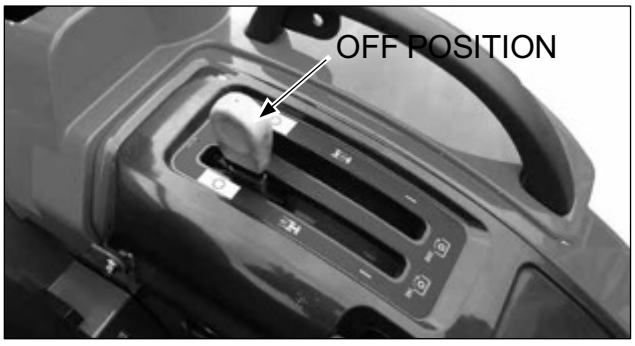
STEP 2

(Gear Drive)



Put the REAR PTO and MID PTO control levers (If equipped) in the OFF (Engine start) position.

(Hydrostatic Drive)



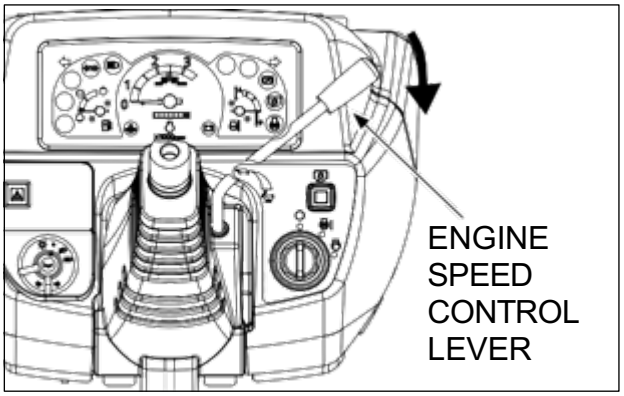
STEP 3 (Gear Drive)

Put the SHUTTLE lever in the N (Engine start) slot.

(Hydrostatic Drive)

HST control pedal in the N position.

STEP 4

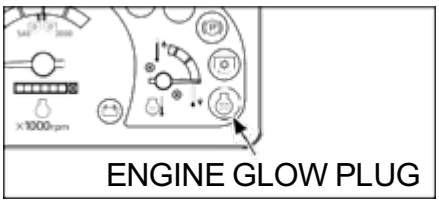


Put the engine speed control lever at the middle position.

STEP 5

Turn the starter key switch to the heat & ON position.

Wait until the glow plug indicator lamp is put out.

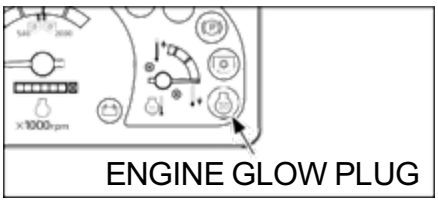


STEP 6

Sit in the operation's seat and depress the clutch pedal.

STEP 7

Turn key switch to start position until engine starts, but no more than 10 seconds, then release the key. Run engine for two minutes at 1500 RPM.



STEP 8

When the engine starts, check the oil pressure indicator. If the indicator stays on, stop the engine and find out what is wrong.

NOTE: If the oil pressure indicator stays on after the engine starts, stop the engine and check the oil level in the crankcase. Add oil if necessary. Start the engine, if the indicator is still on, DO NOT operate the engine. Operating the engine without oil pressure will damage engine bearings and other engine parts. See your dealer. If you stand up from the seat while driving, the engine will stop.

IMPORTANT:

1. If the engine starts and then stops, wait for the starting motor to stop turning before you turn the key switch to START position again.
2. DO NOT use the starter motor for more than 10 seconds without stopping. Wait one minute between starts so the starter motor can cool.
3. If engine stops when operating with a load, immediately start the engine again to prevent overheating caused by stopping the flow of oil for cooling and lubrication.
4. If the charge indicator comes on during operation, determine and correct the cause to avoid complete discharge of the battery and possible damage to other components of the electrical system. See your Dealer.
5. If the coolant temperature indicator comes on, remove the load and allow the engine to run at 1500 rpm until the indicator goes out. If the indicator does not go out within one minute, stop the engine and determine the cause.

Starting Procedure for Hydrostatic Drive Tractors After Transporting on Truck or Flatcar

IMPORTANT: Hydrostatic transmission can jump into gear without warning, if the fluid leaks out of the control system. This can occur due to vibration if the tractor is transported on a truck or flat car. It can also happen if the transmission is drained or if the tractor sits still for very long periods. If any of these have happened, start the tractor as follows:

1. Put the range shift control lever into the neutral slot and release the speed lock lever to permit the speed ratio control pedal to return to neutral position.
2. Lock the brake pedals together, press down on the brake pedals.
3. Pull the engine speed control lever and start the engine. Set the engine speed to about 1000 RPM.
4. Slowly move the range shift lever to H range for high speed engagement.

If gear clash is obvious the engine should be shut off immediately and the tractor unloaded by other means. Tow the tractor with the range shift lever in neutral to an area where the transmission can be checked by your Dealer. Refer to Towing the Tractor in this manual.

If there is no obvious gear clash, drive the tractor in the normal manner.

COLD TEMPERATURE OPERATION

To start and operate your tractor during cold ambient temperatures, take the following procedures:

1. BATTERY – Must have a full charge.

2. FUEL – Must be clean and with no water. See Fuel Specifications in this manual (see page 109).

3. ENGINE OIL – Must have the correct viscosity for the ambient temperature range.

4. TRANSMISSION HYDRAULIC FLUID – Use Hydraulic Transmission fluid.

5. COOLING SYSTEM – Must have ethylene glycol solution for protection.

6. TIRES – If there is liquid in the tires, the tires must have protection against temperatures below 0°C(32°F). See your Dealer.

7. STOPPING THE ENGINE – Run the engine at idle speed for a short period of time to permit the engine temperature to decrease before stopping.

8. CONDENSATION IN FUEL TANK – To prevent condensation in the fuel tank and water entering the fuel system, fill the fuel tank after each operating day.

9. FUEL FILTER CUP – During cold ambient temperatures, make sure to remove water from the fuel filter cup each day.

NOTE: DO NOT use ether as a cold temperature starting aid.

IMPORTANT: During cold ambient temperatures, never run the engine at low idle speed for long time.

When cold ambient temperatures, the engine will not heat to or keep the rated operating temperatures can cause damage to the engine. Take the following procedures to warm the engine and transmission oil, and to keep the correct operating temperatures.

1. WARMING THE ENGINE AND TRANSMISSION.
   A. To heat the transmission oil to operating temperature, run the engine at 1500 RPM for approximately five minutes.

IMPORTANT: Operating the tractor with cold transmission oil can cause rough tractor operation with possible injury to the operator.

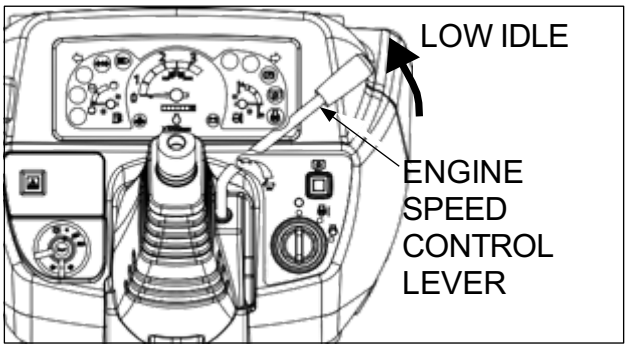
2. KEEP ENGINE AT CORRECT OPERATING TEMPERATURE.
   A. Never run the engine below 1500 RPM.
   B. Put a cover in front of the grille to control the amount of air going through the radiator.

3. STOPPING THE ENGINE
   A. Run the engine at slow speed for a short period of time. This will permit the engine temperature to decrease gradually before stopping the engine.

STOPPING THE ENGINE

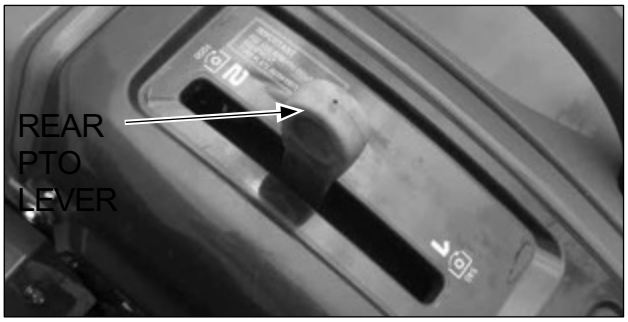
IMPORTANT: When stopping the engine after operating under heavy load, run the engine at 1500 RPM for a short period of time. This will allow the engine temperature to decrease gradually.

STEP1



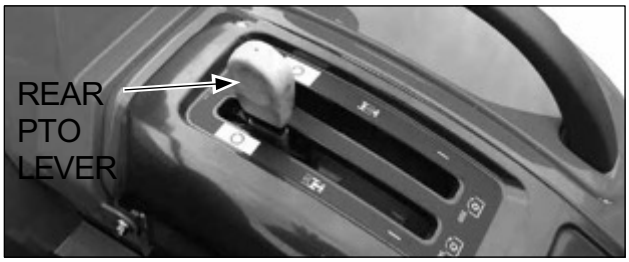
Move the engine speed control lever to run engine at idle speed for three to five minutes to decrease the temperature of engine.

STEP2 (Gear Drive)



Put the REAR PTO control lever, MID PTO control lever (If equipped) and the range shift lever in the OFF or neutral position.

(Hydrostatic Drive)



STEP3

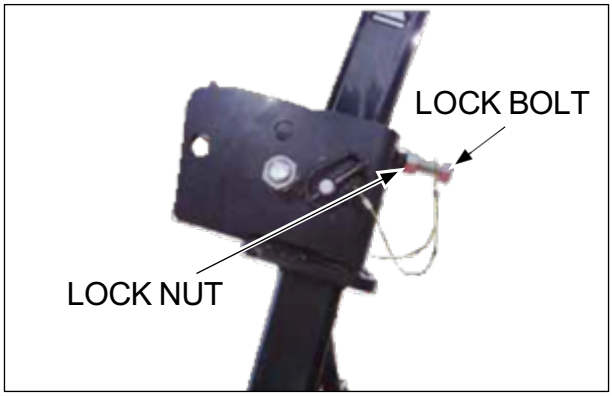
Turn key switch to OFF position.Remove the key.

FOLDABLE ROPS FRAME

Holding and Adjustment

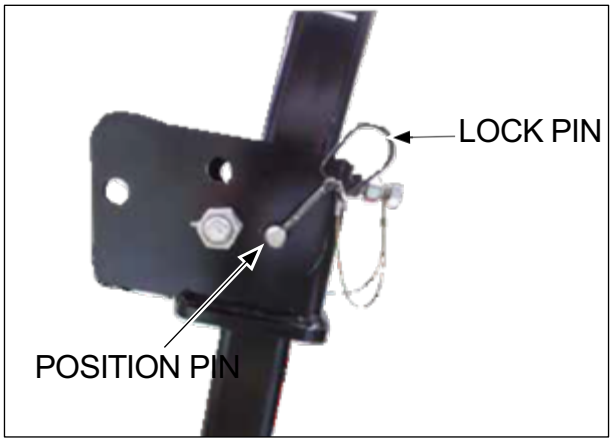
(Rear Foldable ROPS)

STEP1



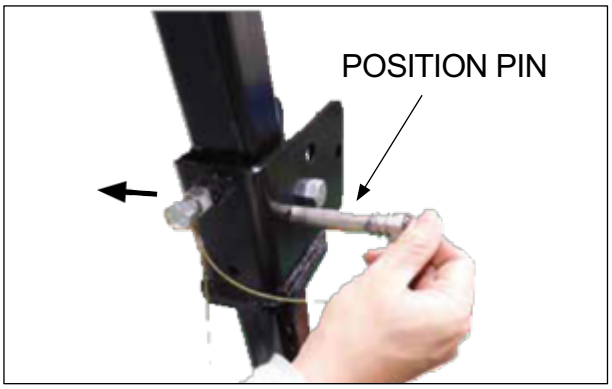
Loosen the lock nut and the lock bolt.

STEP2



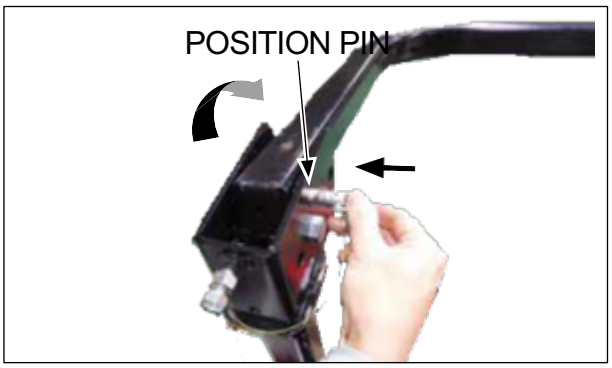
Remove the lock pin from the position pin.

STEP3



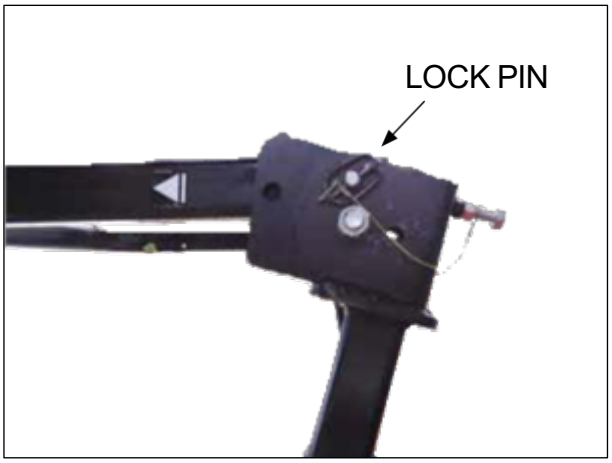
While holding the ROPS bar CAREFULLY remove the position pins.

STEP4



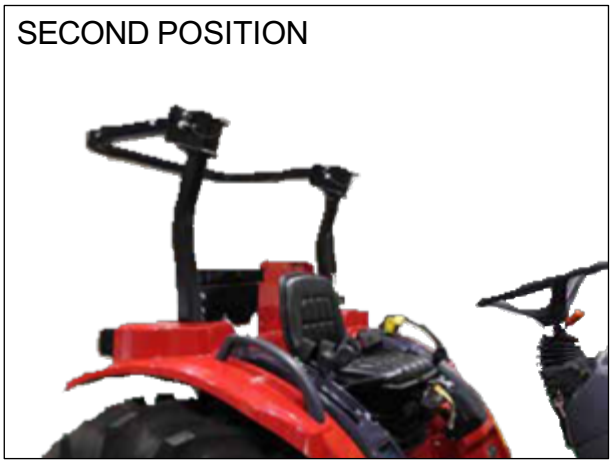
Down the ROPS bar slowly for the second position.
While holding the ROPS bar carefully install the position pins.

STEP5

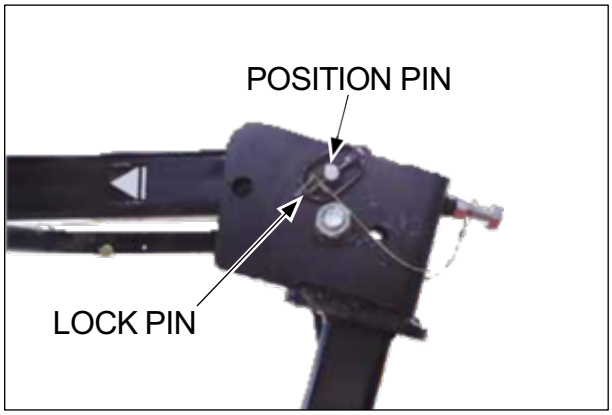


Install the lock pin to the position pin.

SECOND POSITION

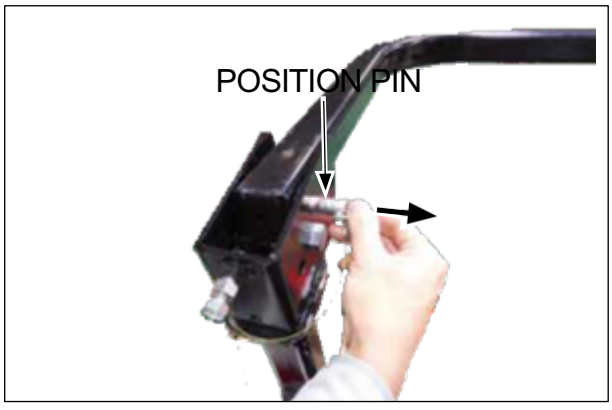


STEP6



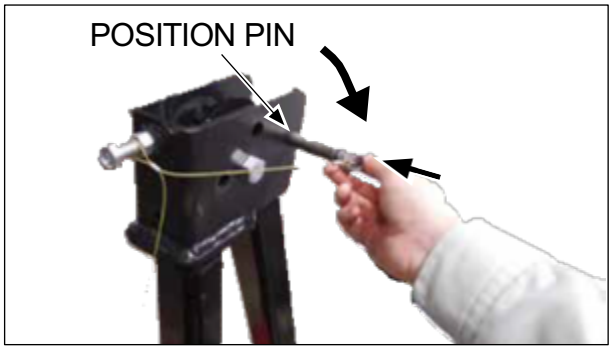
Remove the lock pin from the position pin.

STEP7



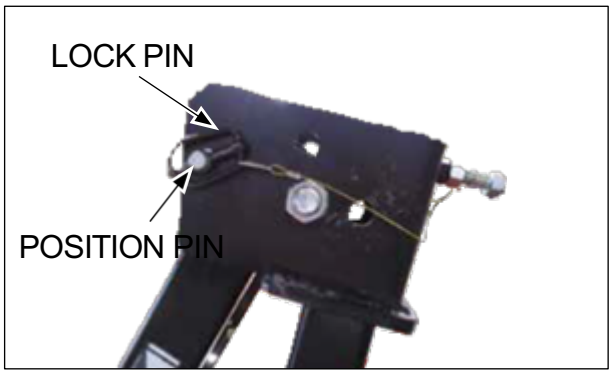
While holding the ROPS bar, CAREFULLY remove the position pins.

STEP8



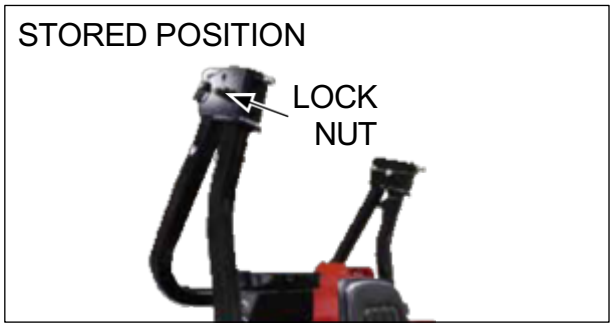
Down the ROPS bar slowly from the second position.
While holding the ROPS bar carefully install the position pins.

STEP9



Install the lock pin to the position pin.

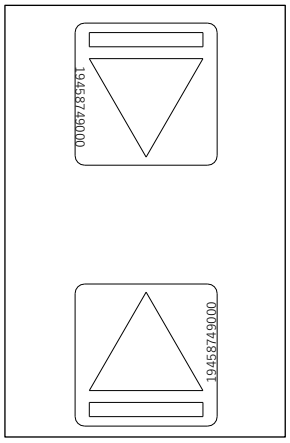
STORED POSITION



Adjustment of Foldable ROPS.
If you feel less friction when the ROPS is at the upright position , tighten the Lock Nut until you feel the right friction in the movement.

WARNING

- Rollover protection is provided only with proper assembly. Lock pins, must be in place. Correct parts may be obtained from your dealer.



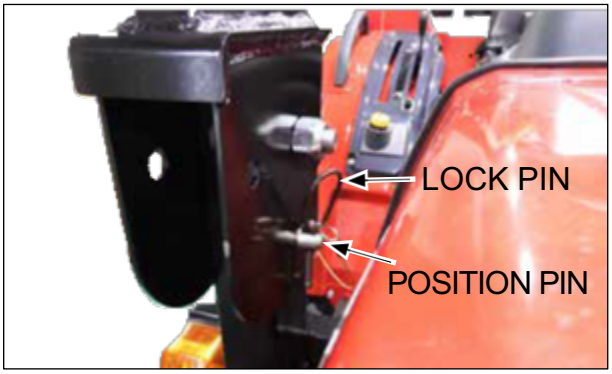
CAUTION
• While holding the ROPS bar, grab the limited area, between two labels.

Holding and Adjustment

(Front Foldable ROPS)

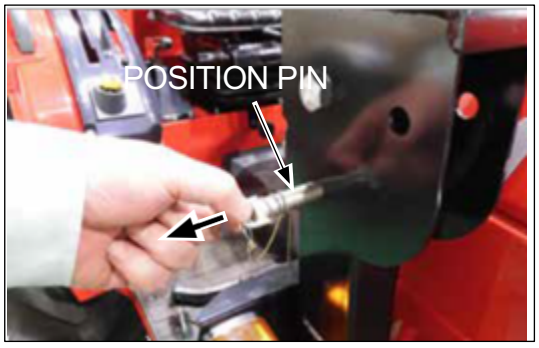
NORMAL OPERATING POSITION

STEP1



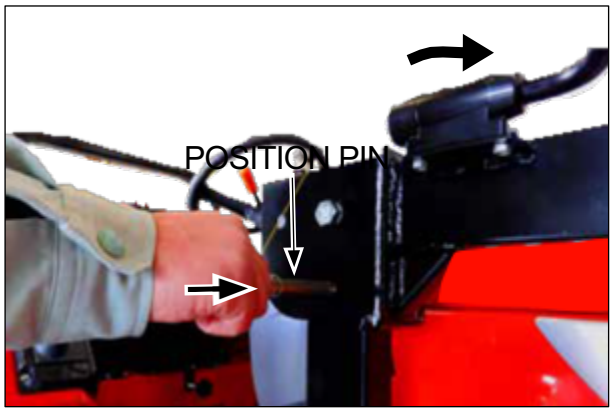
Remove the lock pin from the position pin.

STEP2



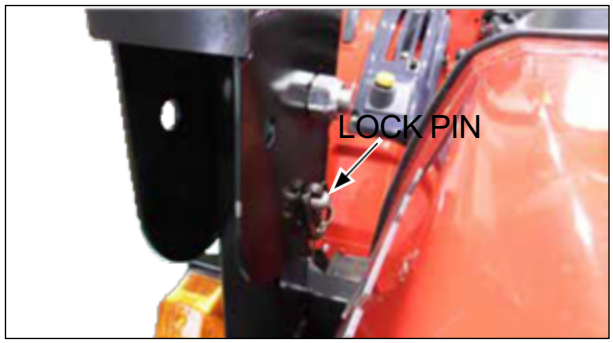
While holding the ROPS bar CAREFULLY remove the position pins.

STEP3



Down the ROPS bar slowly form the normal operating position.
While holding the ROPS bar carefully install the position pins.

STEP4

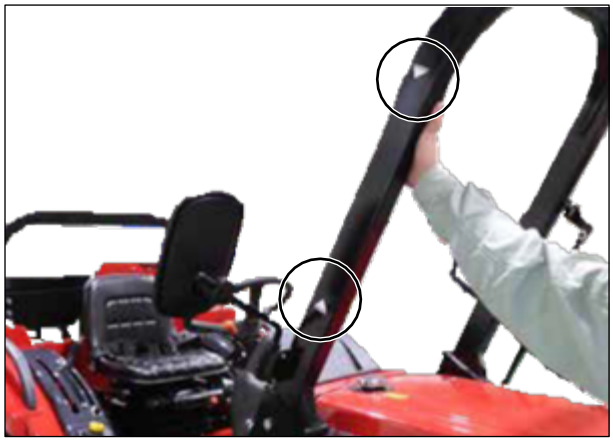


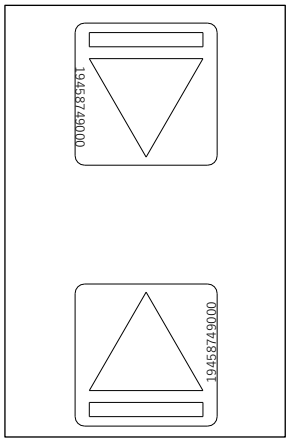
Install the lock pin to the position pin.

STORED POSITION

WARNING

- Rollover protection is provided only with proper assembly. Lock pins, must be in place. Correct parts may be obtained from your dealer.





CAUTION
• While holding the ROPS bar, grab the limited area, between two labels.

TOWING THE TRACTOR

WARNING

- Make sure that the weight of a trailed vehicle that is not equipped with brakes, NEVER EXCEEDS the weight of the machine that is towing the vehicle.
  Stopping distance increases with increasing speed as the weight of the towed load increases, especially on hills and slopes.

When towing a tractor use the following procedures:

STEP 1

Make sure all controls are in the neutral position and the park brake is disengaged.

STEP 2

Use a rigid tow bar and safety chains to pull the tractor.

Attach the tow bar and safety chains to the front tow hook.

STEP 3

Do not pull the tractor faster than 5 km/h (3 mph).

STEP 4

Disengage the mechanical front drive (MFD).

STEP 5

Disengage the differential lock.

STEP 6

(Gear Drive)

Make sure the shuttle lever and the main shift lever are placed in the neutral position.

(Hydrostatic Drive)

Make sure the HST pedal and the sub shift lever are placed in the neutral position.

NOTE: Check brake operation.

IMPORTANT: When the engine is not running, there is no power assistance to the steering. Use extreme caution when towing with the engine stopped.

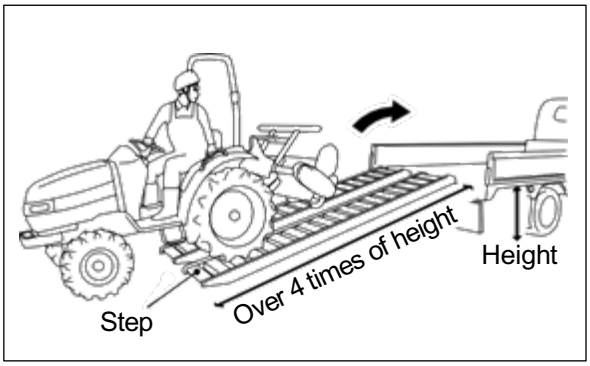
HOW TO TRANSPORT TRACTOR

WARNING

- Load and unload with presence and induction of assistant.
- Keep the tractor clear of children and people.
- Use a non-slip step with sufficient strength, width (sufficient for wheels not coming off), length (four time higher than the height of loading platform), and hook.
- Load and unload in flat place where the step does not incline by the weight of tractor.
- Hang the hook of step straight against the loading platform so that there is no gap with the loading platform and it does not scoot down.
- Do not change the driving direction on steps. Keep the tractor moving in the center of the steps. Serious accident and personal injury may occur by falling from the steps if the operator fails to do so.
- If the tractor requires to change the driving direction on steps, unload the tractor from the steps and adjust the direction.
- Do not use the main shift lever, clutch pedal, differential lock, and single brake during loading and unloading to the vehicle. The tractor may suddenly turn or fall.
- Load in reverse and unload in forward at low speed. Also, do not operate the steering wheel unnecessarily.
- When transporting the tractor on the track, apply parking brake and fix it with ropes.

STEP 1

Use a vehicle which does not exceed its laden weight and is the sufficient size for not sticking out a part of the tractor when a tractor is loaded. Stop the engine of the vehicle, set the gear shift to “1” or “Reverse”, apply parking brake, and place a wheel chock.



STEP 2

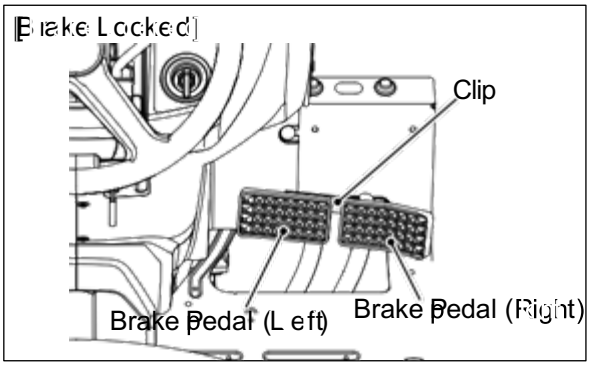
Use a non-slip step with sufficient strength, width (sufficient for wheels not coming off), length (four time higher than the height of loading platform), and hook. Hang the hook of step straight against the loading platform according to the gap with tread of tires of tractor.

Specifications for step

Length	Four times higher or more than the height of the loading platform of vehicle
Width	More than 60 cm
Quantity	2
Strength	1 step is resistant enough for weight over 1,500 kg

STEP 3

Lock the both brake pedals together.



STEP 4

Make sure that differential lock is unlocked.

STEP 5

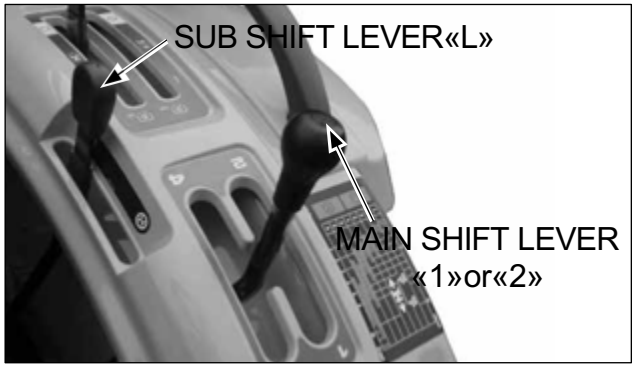
Set the PTO shift lever to the neutral position.

STEP 6

Align the tires of tractor and the step.

STEP 7

Set the main shift lever to the low speed position (speed as shown in the below drawing) and set the MFD control lever to the MFD. Load in reverse and unload in forward.



STEP 8

When the engine stops on the way, depress on the brake pedal, release the brake gradually, get off the tractor and restart the engine.

STEP 9

Carefully operate the steering wheel so that the wheels do not come off.

STEP 10

After loading is completed, follow these rules:

1. GEAR DRIVE: Put the gear shift lever in 1st position and put the range shift lever in the L position and shuttle shift (over in F or R) position.
   HYDROSTATIC DRIVE: Move the speed lock lever to OFF position and put the range shift lever in the L position.
2. Lock the brake pedals together, pull the parking brake lever up fully to securely apply the parking brake.
3. Fix the tractor with ropes.

GEAR DRIVE TRANSMISSION

The gear drive transmission has forward and a reverse gear section and a four-speed main shift gear section, and a two-speed range section. This arrangement gives eight forward and eight reverse speeds.

Transmission Operation

1. Press the clutch pedal and stop the tractor. Move the gear shift lever to the gear needed.

2. Move the range shift lever to the position needed, H, L (The tractor must be stopped before the range lever is operated.)

3. Move the shuttle lever to Forward or Reverse position.

4. Release the clutch pedal slowly.

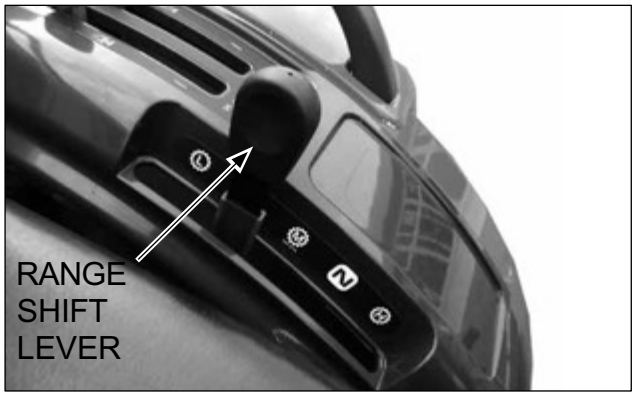
[Gear shift lever] **[Range shift lever]** **[Shuttle lever]**

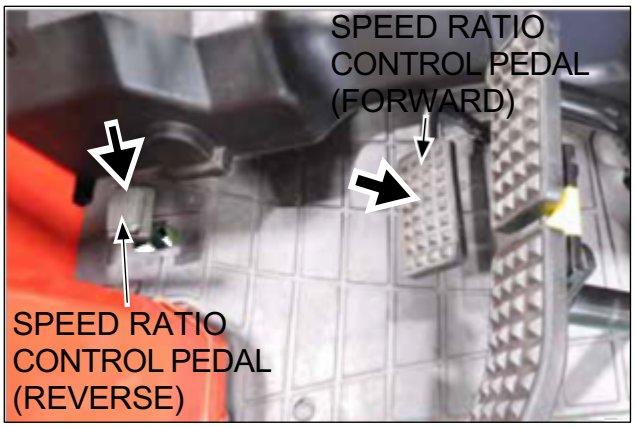
IMPORTANT: Before selecting a new range, press the clutch pedal and stop the tractor. DO NOT change the range when the tractor is moving.

HYDROSTATIC DRIVE TRANSMISSION

The Hydrostatic drive transmission has a forward/reverse hydrostatic section and a three-speed range section. This arrangement gives three forward and three reverse speeds ranges.

Transmission Operation





1. Press the clutch pedal fully and stop the tractor. Move the range shift lever to the position H, M or L.

2. Release the clutch pedal slowly.

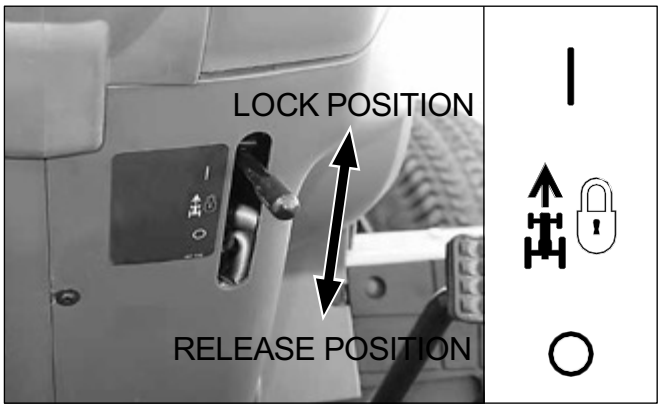
3. Operate the speed ratio control pedal to move the tractor.
   To shift from reverse to forward or from forward to reverse, reduce the speed and switch to depress the speed ratio control pedal one from other.

IMPORTANT: Before selecting a new range, stop the tractor and press the clutch pedal. DO NOT change range when the tractor is moving.

WARNING
- Travel speed should be such that complete control and machine stability is maintained at all times. Where possible, avoid operating near ditches, embankments and holes. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.

HYDROSTATIC SPEED LOCK LEVER(HYDROSTATIC DRIVE ONLY)

The speed ratio control pedal of hydrostatic drive has a speed lock lever.
This lever is used to keep a constant forward speed without controlling the pedal. It can not be used for reverse speed. The lever is located under the instrument panel.
Operate the speed lock lever as follows:



1. Determine forward speed as you need by pressing the speed ratio control pedal forward.

2. Move the lock lever upward to lock the position of the pedal. (It can keep the forward speed constant)

3. Release the pedal.

4. To release the lock, move the lock lever downward.

NOTE:
The speed ratio control pedal will return to neutral position, and the tractor will stop,If the pedal is not pressed.

5. Increase of forward speed, speed ratio can be obtained to max.Capital speed by pressing the pedal forward while the lock lever is in lock position.
However,decrease of forward speed ratio or change to reverse speed can not be obtained, while the lock lever is in lock position.

6. To decrease forward speed ratio or change to reverse speed, press your foot on the pedal first,then release the lock lever. Control speed ratio or direction with the foot pedal.

NOTE:
1. The lock lever can not be released by pressing the brake pedal.
2. The lock lever can not be released by pressing the hydrostatic speed ratio control pedal.
3. Make sure to keep the lock lever in the off position when starting the tractor.
4. Return the lock lever to the off position when stopping the tractor.

MECHANICAL FRONT DRIVE (MFD)

Use the 4WD to obtain improved traction in loose, sandy or wet soil conditions. 4WD will also give improved steering control and will reduce soil compaction. 4WD can be engaged or disengaged as needed by the 4WD control lever located on the LH side below the operators seat.

To engage the 4WD, depress the clutch pedal down, stop the tractor and move the 4WD control lever down to the ON position.

IF THE 4WD IS DIFFICULT TO ENGAGE, DO THE FOLLOWING:

1. Move the range shift lever to L range.
2. Slowly release and depress the clutch pedal to move the tractor forward or rearward small amount.
3. Depress the clutch pedal and stop the tractor.
4. Move the 4WD control lever until fully engaged with proper force.

To disengage the 4WD, depress the clutch pedal, stop the tractor and move the 4WD control lever up to the OFF position.

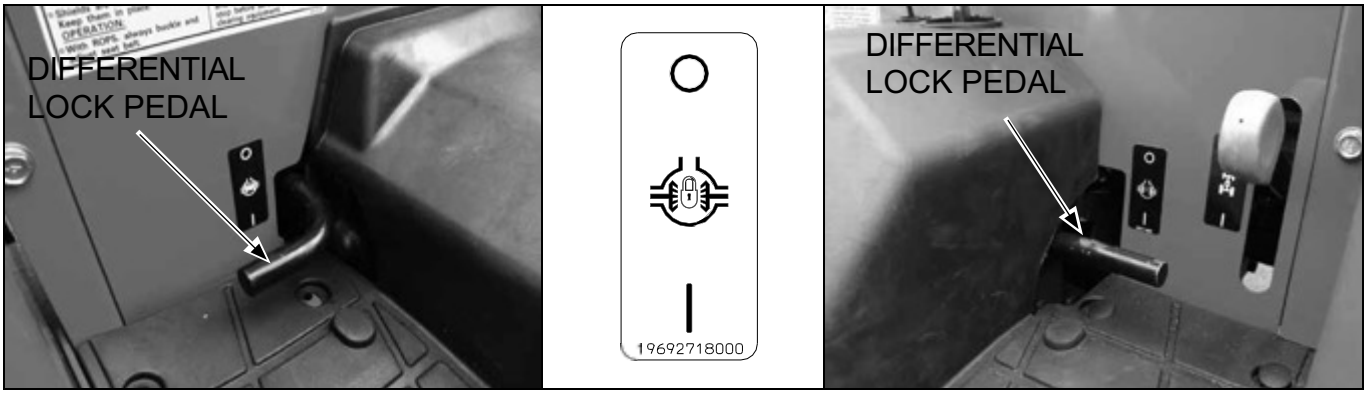
IF THE 4WD IS DIFFICULT TO DISENGAGE, DO THE FOLLOWING:

1. Move the range shift lever to L range.
2. Slowly release and depress the clutch pedal to move the tractor forward or rearward small amount.
3. Depress the clutch pedal and stop the tractor.
4. Move there 4WD control lever up until completely disengaged.

WARNING
- Tractors equipped with mechanical front drive (MFD) have increased traction and can climb steeper slopes. Stay off slopes too steep for safe operation. To prevent rear overturns, back up steeper slopes.

DIFFERENTIAL LOCK

(Gear Drive) (Hydrostatic Drive)



RIGHT SIDE of the transmission LEFT SIDE of the transmission

Your tractor has a differential lock that will make both rear wheels turn at the same speed. The differential lock prevents loss of power when one wheel does not have traction but the other wheel does have traction. It also provides a straight in line steering aid when opening up the field and to control implement overlap.

TO ENGAGE THE DIFFERENTIAL LOCK:

Depress and hold the differential lock pedal down.

IMPORTANT:DO NOT engage the differential lock while one rear wheel is rotating and the other rear wheel is stopped. Always stop the wheel that is rotating and then engage the differential lock.

IMPORTANT: When you engage or disengage the differential lock, the front wheels must be in the straight forward position. Before turning the tractor, disengage the differential lock.

TO DISENGAGE THE DIFFERENTIAL LOCK:

The differential lock will disengage when the differential lock pedal is released. If the differential lock does not disengage easily, press down on either brake pedal instantaneously.

WARNING

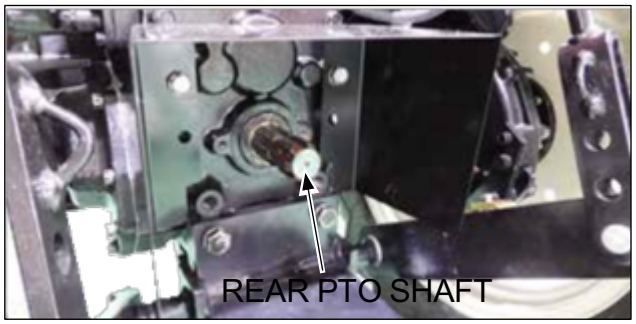
- DO NOT drive on roads, or at high speed anywhere, with the differential lock engaged. Difficult steering will occur, and can result in an accident. In field operation, use the differential lock for traction improvement, but release for turning at row ends.

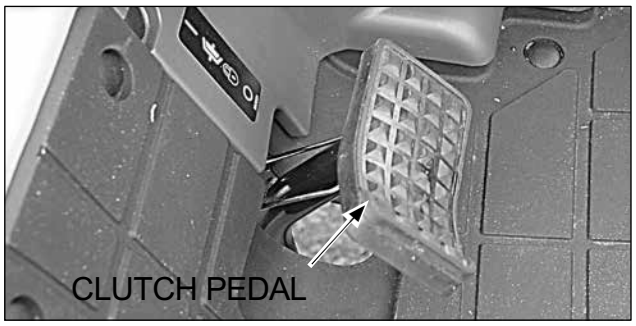
POWER TAKEOFF (REAR PTO):HYDROSTATIC DRIVE

WARNING

- PTO driven machinery can cause serious injury or death, usually due to wrapped clothing. When required by the job to be in the drive shaft area, stay clear of rotating parts. Before working on the drive shaft, or servicing or clearing the driven machine, where applicable on this tractor, put the PTO clutch lever in the DISENGAGE position, the PTO lever in the NEUTRAL or OFF, and STOP the engine.

Rear PTO





The rear PTO is a 540 RPM with a 34.9 mm (1 3/8 inch) diameter 6 spline output shaft.

ENGAGE THE REAR PTO AS FOLLOWS:

1. Push the clutch pedal fully.
2. Move the PTO control lever to the ON position.
3. Release the clutch pedal slowly.

DISENGAGE THE REAR PTO AS FOLLOWS:

1. Push the clutch pedal fully.
2. Move the PTO control lever to the OFF (Engine Start) position.
3. Release the clutch pedal slowly.

NOTE: Keep the PTO control lever in the OFF (Engine Start) position when starting the engine and when the PTO is not being used. Sit in the seat when operating the PTO control lever. Engine shuts off when standing up from seat while using PTO.

The following table shows the required speed to get the required Rear PTO output shaft speed.

PTO Output Shaft Speed	Required Engine Speed
540 RPM	2376 RPM

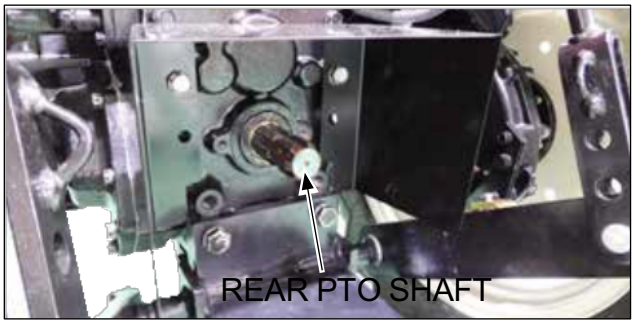
IMPORTANT: Read and learn to understand the operators manuals supplied with any PTO driven equipment which may be attached to the machine.

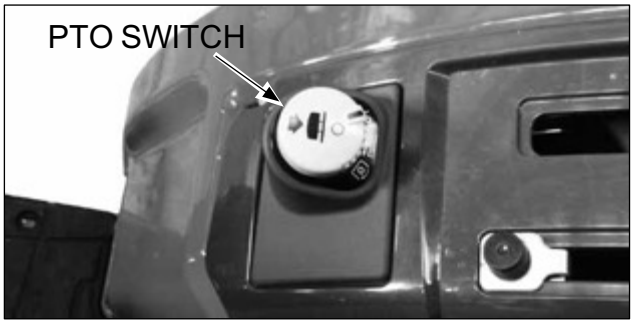
POWER TAKEOFF (REAR PTO):GEAR DRIVE

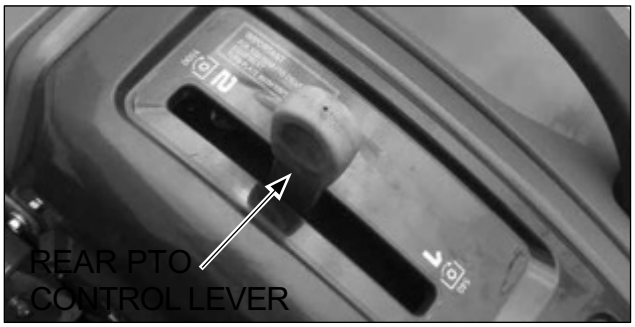
WARNING

- PTO driven machinery can cause serious injury or death, usually due to wrapped clothing. When required by the job to be in the drive shaft area, stay clear of rotating parts. Before working on the drive shaft, or servicing or clearing the driven machine, where applicable on this tractor, put the PTO clutch lever in the DISENGAGE position, the PTO lever in the NEUTRAL or OFF, and STOP the engine.

Rear PTO







The rear PTO is a 540 RPM and 1000 RPM with a 34.9 mm (1 3/8 inch) diameter 6 spline output shaft.

ENGAGE THE REAR PTO AS FOLLOWS:

1. Confirming disengage the clutch, pushing the PTO switch.
2. Move the PTO control lever to the ON position.
3. Turn right PTO switch to engage the PTO clutch. (turning the PTO shaft)

DISENGAGE THE REAR PTO AS FOLLOWS:

1. Push the PTO switch to disengage the PTO clutch. (stop the turning of PTO shaft)
2. Move the PTO control lever to the OFF (Engine Start) position.

NOTE: Keep the PTO control lever in the OFF (Engine Start) position when starting the engine and when the PTO is not being used. Sit in the seat when operating the PTO control lever. Engine shuts off when standing up from seat while using PTO.

The following table shows the required speed to get the required Rear PTO output shaft speed. Push the PTO switch in the emergency. The rotation of PTO stops.

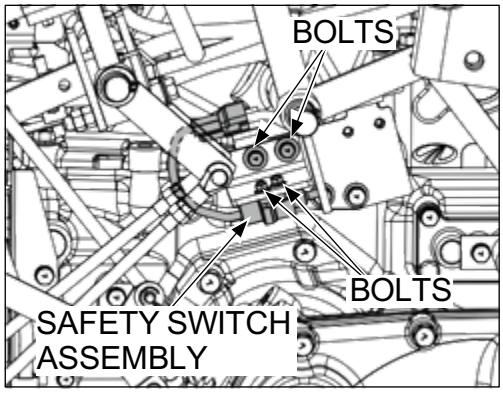
PTO Output Shaft Speed	Required Engine Speed
540 RPM	2376 RPM
1000 RPM	2421 RPM

IMPORTANT: Read and learn to understand the operators manuals supplied with any PTO driven equipment which may be attached to the machine.

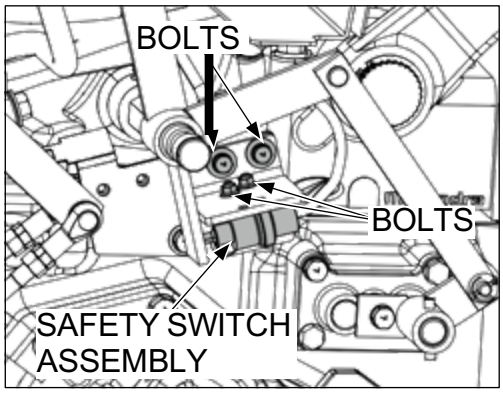
PTO OUTPUT SHAFT SPEED

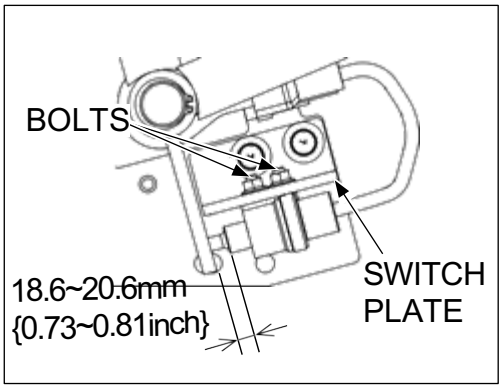
To use PTO 540 RPM, use the safety switch assembly as the condition when you receive the tractor.

To use PTO 1000 RPM, reverse the safety switch assembly by the following procedure



1. Remove the fixing bolts and safety switch assembly.

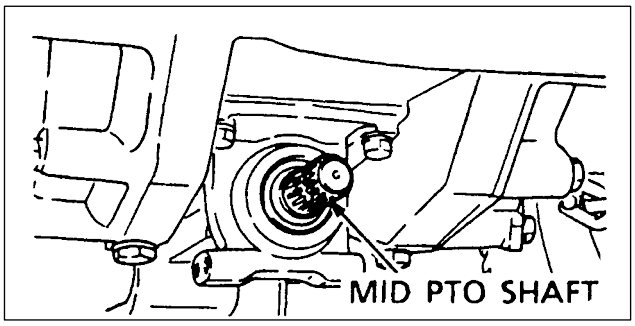




2. Reverse the safety switch assembly.
3. Adjustment of the safety switch assembly by bolts. Set as shown in the figure.
4. Fix the safety switch assembly by bolts.

POWER TAKEOFF (MID PTO):HYDROSTATIC DRIVE

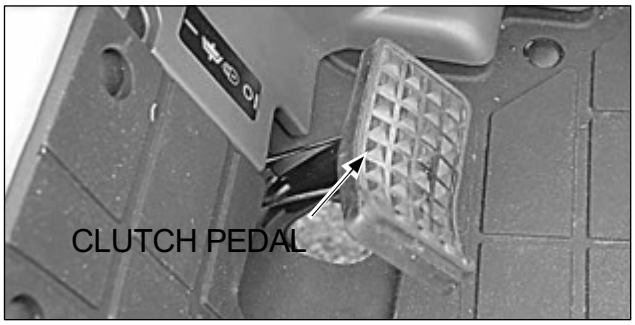
Mid PTO (If Equipped)



The Mid PTO has a 25.4 mm(1 inch) diameter 15 spline output shaft.

ENGAGE THE MID PTO AS FOLLOWS:

1. Press the clutch pedal fully.
2. Move the Mid PTO control lever to the ON position.
3. Release the clutch pedal slowly.



DISENGAGE THE MID PTO AS FOLLOWS:

1. Push the clutch pedal fully.
2. Move the Mid PTO control lever to the OFF (Engine Start) position.
3. Release the clutch pedal.

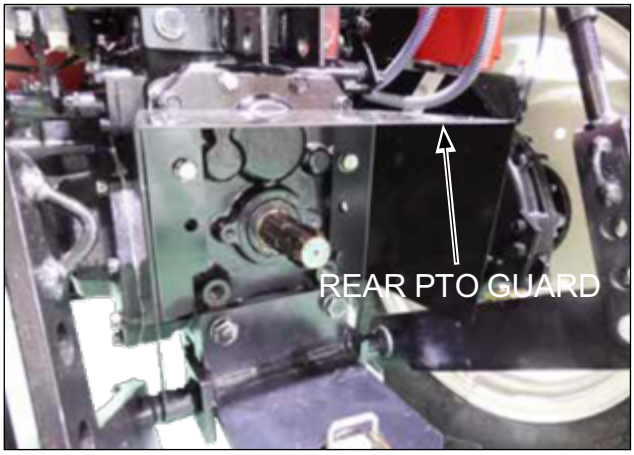
NOTE: Keep the Mid PTO control lever in the OFF (Engine Start) when starting the engine and when the PTO is not being used.

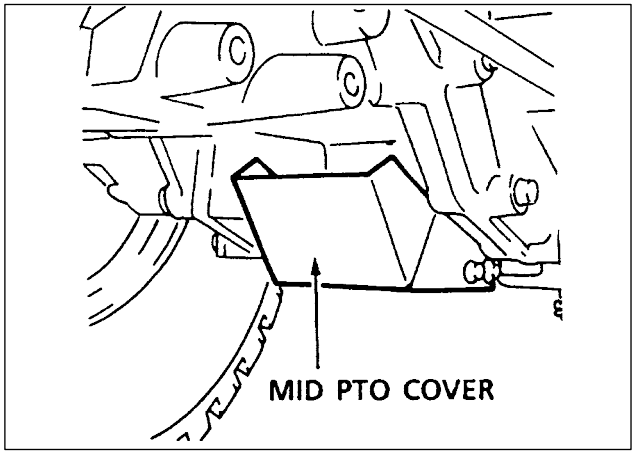
The following table shows the required engine speed to get the required Mid PTO output shaft speed.

Mid PTO Output Shaft Speed	Required Engine Speed
2000 RPM	2525 RPM

POWER TAKEOFF GUARDS

All tractors have a safety guard for the Rear PTO shaft and safety cover for the Mid PTO shaft.





WARNING

- Whenever a PTO driven machine is in operation, the PTO guard must be in place for most operations to prevent injury to the operator or bystanders. Where attachments, such as pumps, are installed on the PTO shaft (especially if the tractor PTO guard is moved upward or removed) extended shielding equivalent to the PTO guard must be installed with the attachment. Install the PTO guard to its original position immediately when the attachment is removed.

PTO OPERATING SAFETY

For the safe operation of the PTO, follow these safe operating procedures.

Three Point Hitch Connecting Implements

1. Connect the implement to the hitch.
   See THREE POINT HITCH SYSTEM in this manual.
2. Connect the implement drive line to the tractor.
3. Check the drive line for correct length and for free telescopic movement by lifting and lowering hitch system. The correct length is important to prevent the drive line from hitting bottom or from separating in any tractor implement operating position.

Drawbar Connecting Implements

1. Connect the implement hitch to the drawer with a hardened steel pin. Make sure the pin is securely held in place with a cotter pin or lock pin and does not make contact with the implement drive line.
2. Connect the implement hitch to the tractor drawbar before connecting the implement drive line to the PTO.
3. Connect the implement drive line to the tractor. Check the drive line for correct length and for free telescopic movement. The correct length is important to prevent the drive line from hitting bottom or from separating in any tractor or implement operating position.

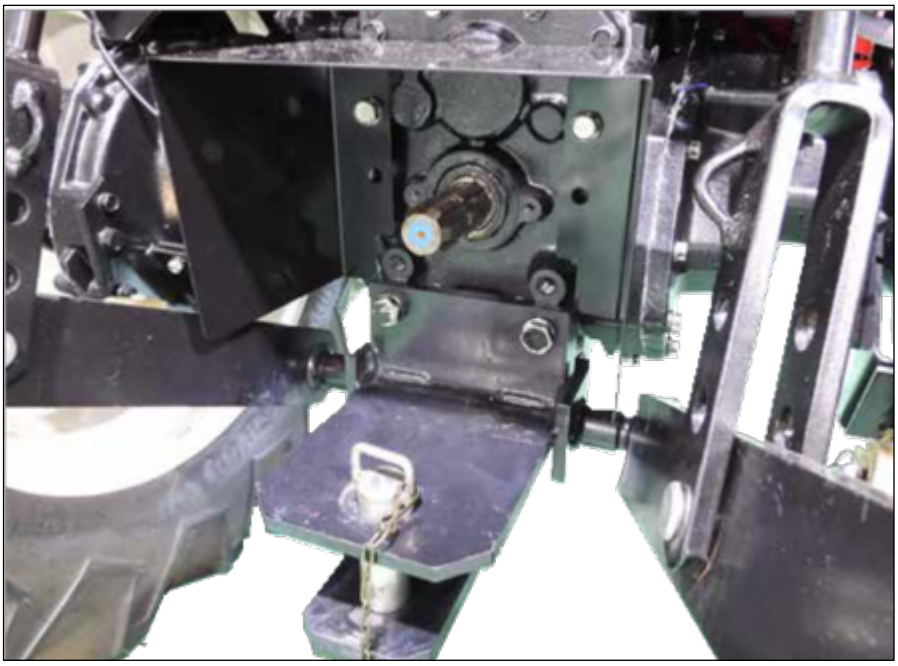
WARNING

- PTO driven machinery can cause serious injury. Before working on or near the PTO shaft, or servicing or clearing the driven machine, put the PTO lever in the DISENGAGE position and STOP the engine.
- When doing stationary PTO work and dismounting from the tractor with the PTO running, keep clear of all moving parts as they are a potential safety hazard.

IMPORTANT: Follow the implement manufacturers recommendations in adjusting and aligning the implement and implement drive line with the tractor.

DRAWBAR

Your tractor is equipped with a drawbar. Use the drawbar for connecting all pull-behind implements.

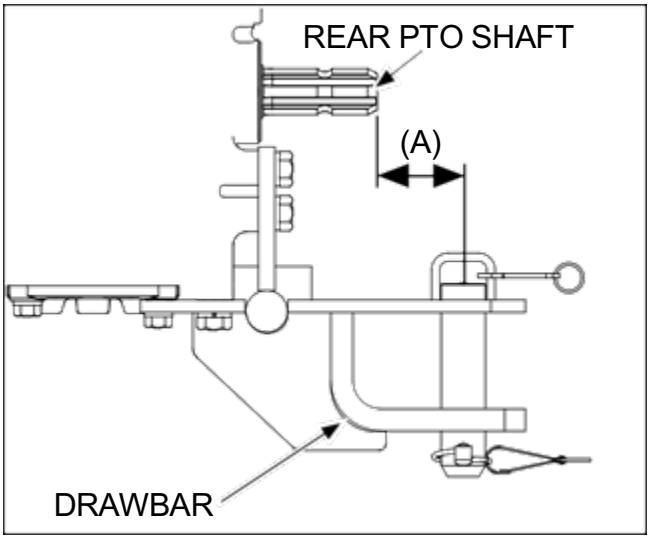


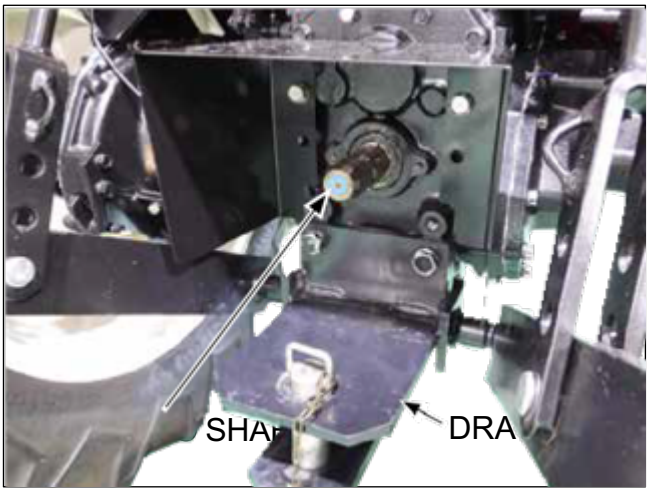
WARNING

- Try to balance the load primarily on the implement wheels –as in loading a trailer or spreader. Avoid overloading the drawbar. Add front end weights for improved stability. Engage the clutch smoothly, avoid jerking and use the brakes cautiously to avoid jackknifing.
- Rear upset can result if pulling from wrong location on tractor. Hitch only to the draw bar. Use 3 point hitch only with the implements designed for its use – not as a draw bar.
- Recognize the linkage structure and the hitch travel. Keep the body out of the travel range of the hitch and linkage.

CONNECTING IMPLEMENT TO DRAWBAR

The correct connection of the implement to the drawbar will prevent stress on both the tractor and the implement.
To assure proper tractor operation and optimum implement performance, the implement must be connected to the drawbar correctly.





1. Connect pull-behind implements to the drawbar only.

2. Use a hardened steel hitch pin to connect the implement to the drawbar. Make sure the pin is held securely in place with a lock pin.

3. When working with the drawbar, raise the lower links as high as possible to prevent interference between the lower links and the implement.

4. The drawbar provides the standard hitch distance from the end of the PTO shaft to the centerline of the rear hole in the drawbar. This is necessary for safe PTO operation of trailing type equipment.

PTO RPM	PTO SHAFT DIAMETER	DIMENSION (A)
540	1.375 In (34.9 mm)	2.4 In (62 mm)

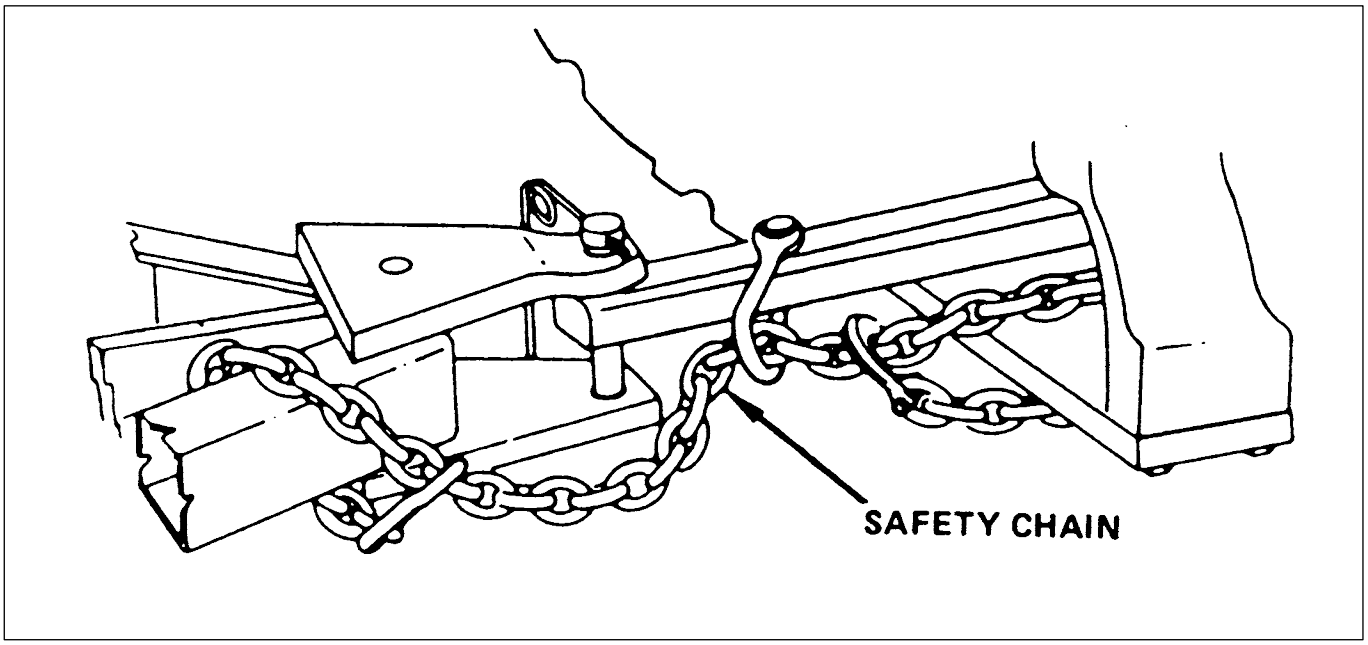
Towable Mass and Vertical Load

Rear tires	Maximum permissible vertical load	Maximum allowed trailed mass
9.5-24	500 kg (1102 lbs)	3000 kg (6615 lbs)
11.2-24		
12.4-24		
355/80D20		

WARNING
- Usage varies from product to product. Use the implement by the proper method in accordance with the individual operator`s manual.

SAFETY CHAIN

When towing equipment on a highway, use a safety chain as an auxiliary connection between the tractor and the towed equipment. The safety chain must have a rating greater than the gross load of the towed equipment. Connect the chain to the tractor drawbar support and the towed equipment as shown in the illustration. Check the adjustment of the safety chain by turning the tractor completely to the right and left. Adjust the chain as necessary.

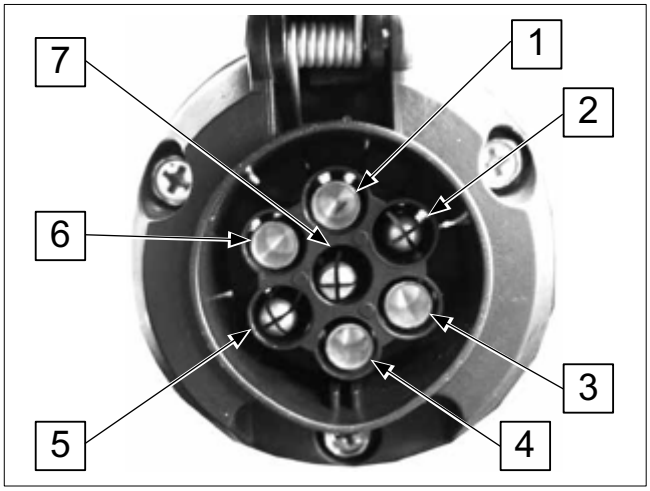


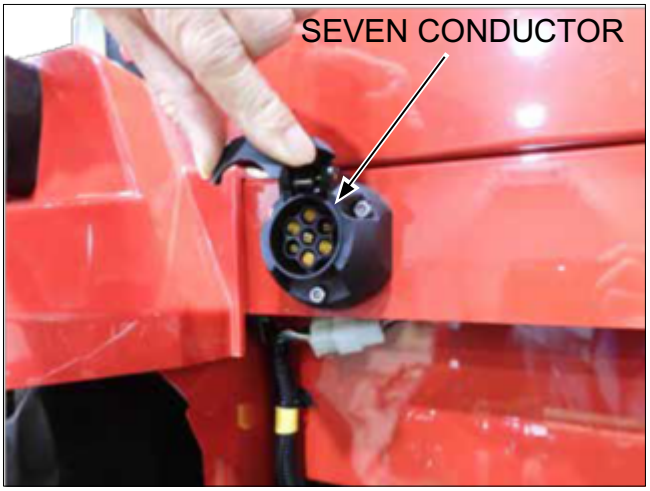
AUXILIARY POWER CONNECTION

The seven conductor electrical connector is a SAE J560, self grounded outlet socket. The outlet socket gives electrical power to operate the electrical systems of implements, warning lamps and trailers.

A breakaway connector socket is available at the rear of the tractor and is identified as "Highway Lighting". This connector serves as a plug-in connection for flashing warning, turn signal lamps and tail lamps on trailing equipment.

Refer to the implement operator's manual for proper usage.



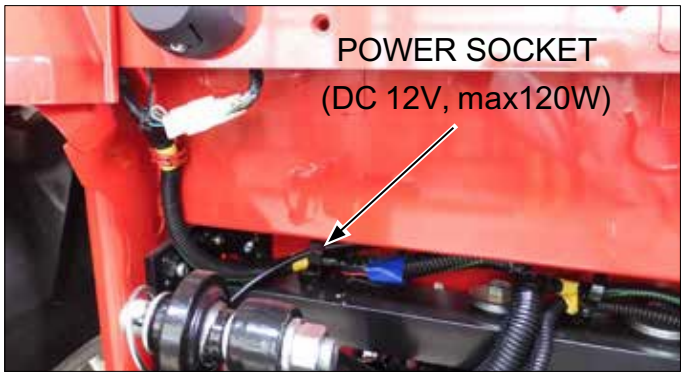


	Conductor Ident.	Wire cord	Lamp and Signal Circuit
1	-	Green / Black	Left Flashing & Turn Signal Lam p
2	-	-	Not used
3	-	Black	Ground
4	-	Green/ White	Right Flashing & Turn Signal Lam p
5	-	Green/Orange	Position Lamps
6	-	White / Red	Stop Lamps
7	-	Green/Orange	Position Lamps

NOTE: Use a 21W flasher lamp on the trailer side.

If you anything other than 21W, the direction indicator may not work properly.

ELECTRICAL POWER SOCKET



A power socket is supplied for use with the implement and electrical equipment.

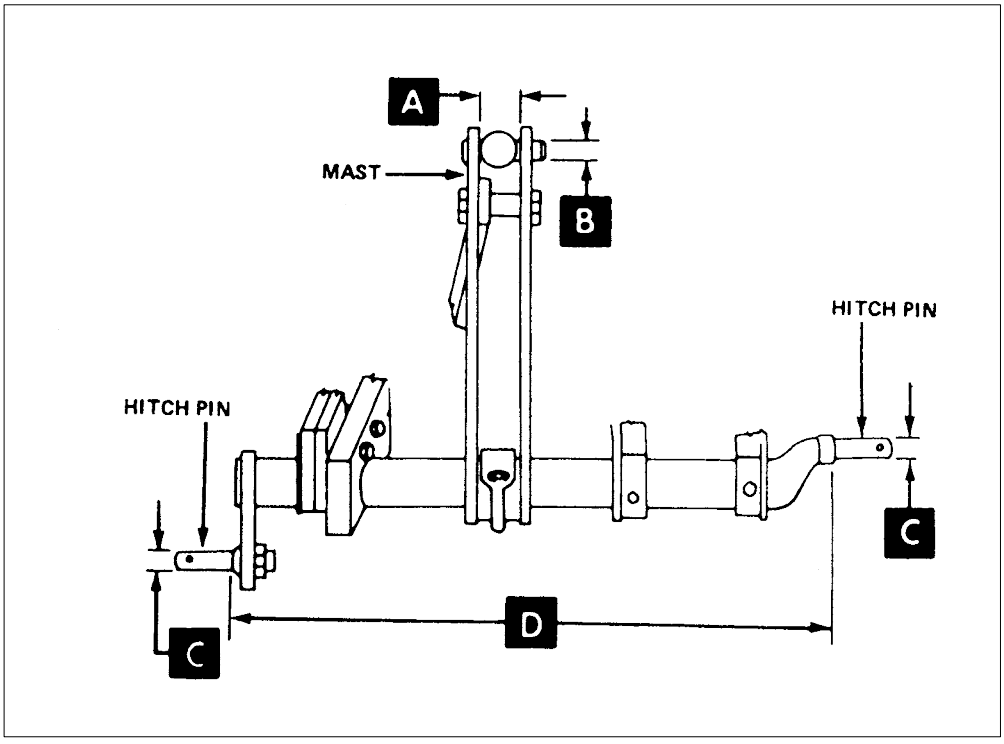
FIELD OPERATION

THREE POINT HITCH SYSTEM

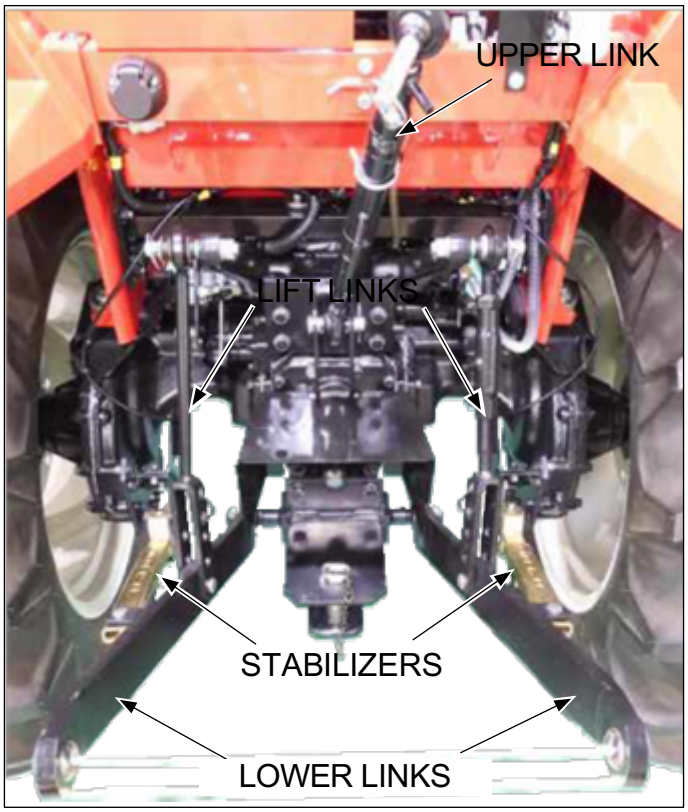
The three point hitch system gives position control and draft control (If equipped) of implements. This tractor is equipped with a category I hitch.

The three point hitch dimensions are shown in the following table.

Implement identification Dimensions	Category I Implement
A - Gap in top of implement mast	44.5 mm (1-3/4 inch)
B - Diameter of holes in top of Implement mast	19.1 mm (3/4 inch)
C - Diameter of hitch pins	22.2 mm (7/8 inch)
D - Lower Hitch Pin Inner Shoulder Spread	682.6 mm (26-7/8 inch)

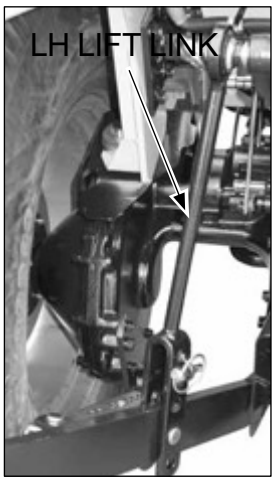


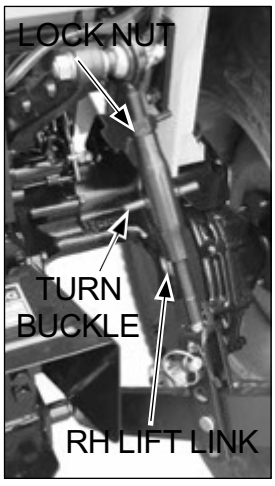
HITCH SYSTEM ADJUSTMENTS



The upper and lower links must be adjusted correctly so the implement can work at the needed depth and the links are free to move up and down with the shape of the ground.

Lift Links

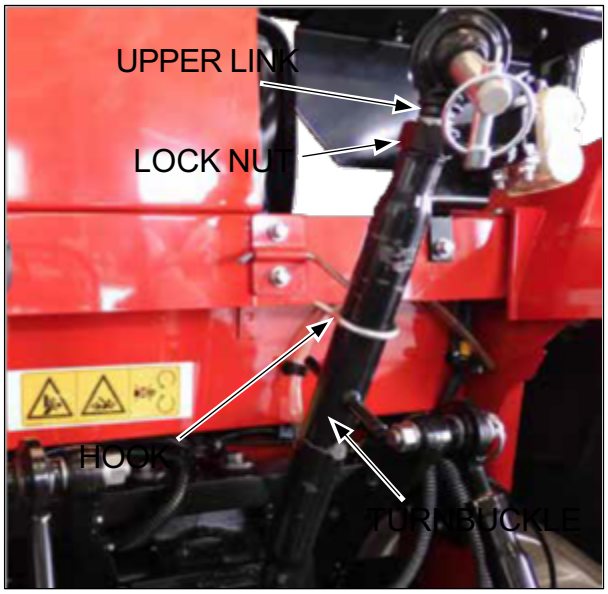




1. Connect the lift links to the lift arm of the tractor and to the lower links. Make sure the lift links are installed on the proper side as shown.
2. The RH side lift link is adjustable by the turnbuckle to obtain the desired position of the hitch point.
   Turn the turnbuckle clockwise to shorten the link or counterclockwise to lengthen the link.

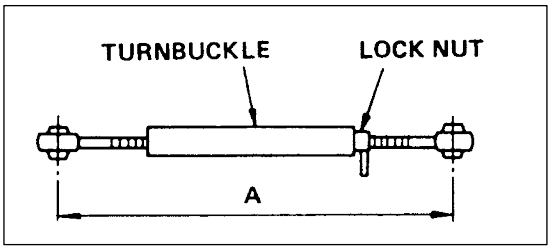
IMPORTANT: After the lift link is adjusted, make sure the locknut is tightened against the turnbuckle.

Upper Link



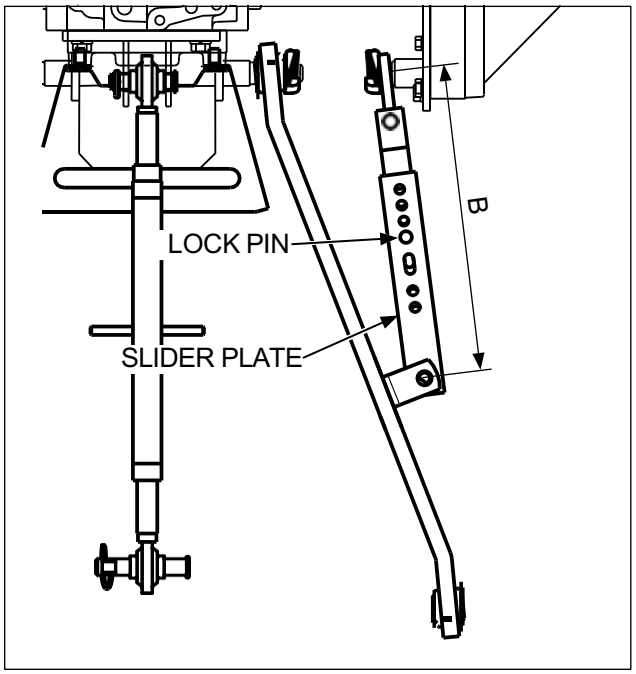
The length A of the upper link can be adjusted from 470 to 750 mm (18.5 to 29.5 inches).

Turn the turnbuckle clockwise to shorten the link or counterclockwise to lengthen the link.



IMPORTANT: After the upper link is correctly adjusted, make sure the lock nut is tightened against the turnbuckle.

Stabilizer



When side movement of the hitch is undesirable or hazardous, the lateral swing is adjusted by select hole on the stabilizer. Slide REAR STABILIZER and adjust hole REAR and FRONT STABILIZER set clevis pin the hole.

IMPORTANT: After making final adjustments carefully raise the implement to make sure that there is proper clearance between the implement and tractor components.

NOTE: Insert pin to hole in clevis pin surely.

IMPORTANT: When the implement is not installing, adjusting to B=325mm(12.8inch) or more length of the stabilizer.
Even if lower links shakes, it checks that it is not in contact with a tire.
stabilizer may be changed or damaged if tire contacts lower links**.**

IMPORTANT: Adjust holes to prevent any damage on the stabilizer.
When the implement sways right or left, the stabilizer on the opposite side should be pulled with a tension.

HITCH OPERATION

Connecting Implement to Hitch

WARNING
- Be careful that no object exists between the tractor and implement when moving the 3 point hitch.
- Keep well away from the linkage and implement when operating the 3 point hitch. Otherwise, injury may occur due to contacting with moving equipments.
- Clearance zone may not be obtained depending on the movement of the implement installed.
- Usage varies from product to product. Use the implement by the proper method in accordance with the individual operator`s manual.

To connect an implement to the hitch, use the following procedure:

NOTE: Be sure the tractor and implement are on level ground.

1. Put the drawbar in the storage position.
2. Slowly move the tractor backwards to the implement.
3. When the hitch points on the tractor and implement are in the correct position, stop the tractor.
4. Apply the park brake and stop the engine.
5. Connect the implement to the Upper and Lower Links.
6. Adjust the Upper and Lower Links as necessary. See Hitch System Adjustments in this manual.

Disconnecting Implement from Hitch

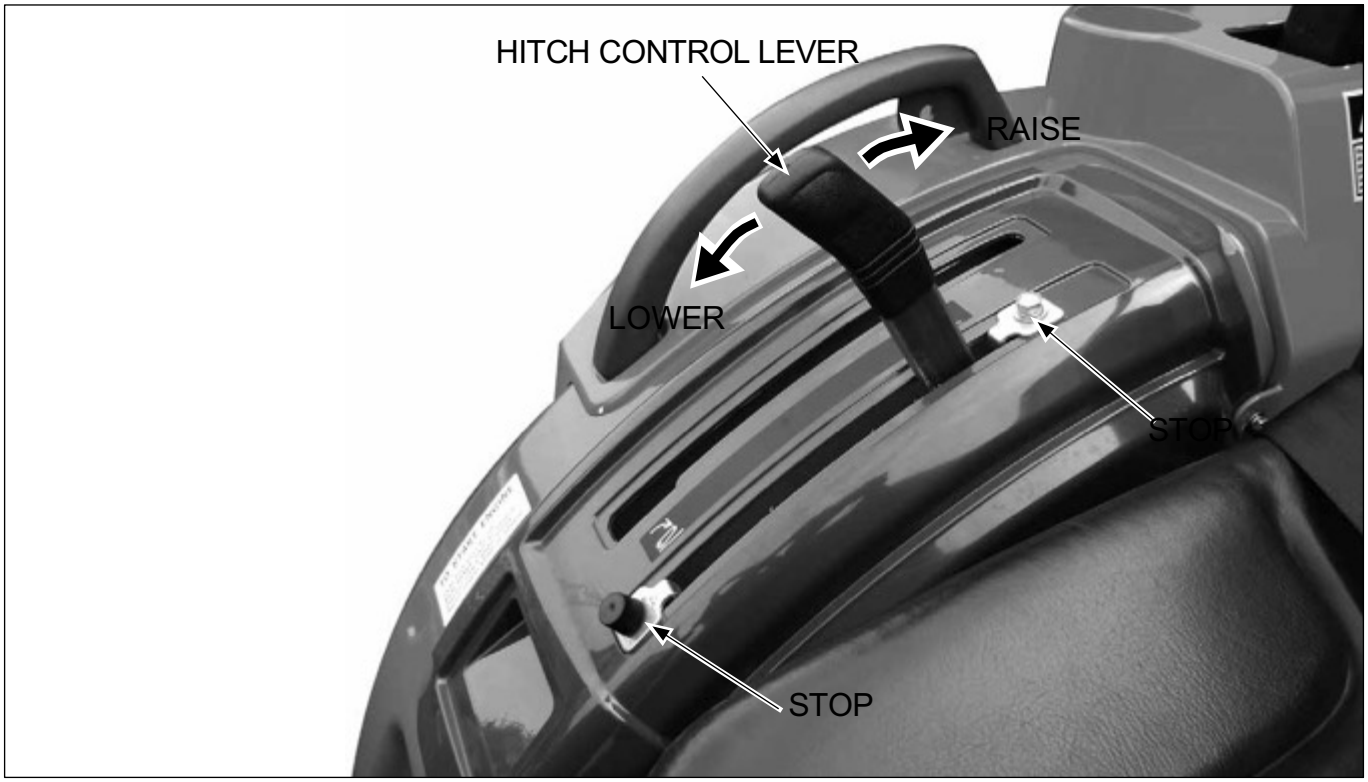
To disconnect an implement from the hitch, use the following procedure:

NOTE: Be sure the tractor and implement are on level ground.

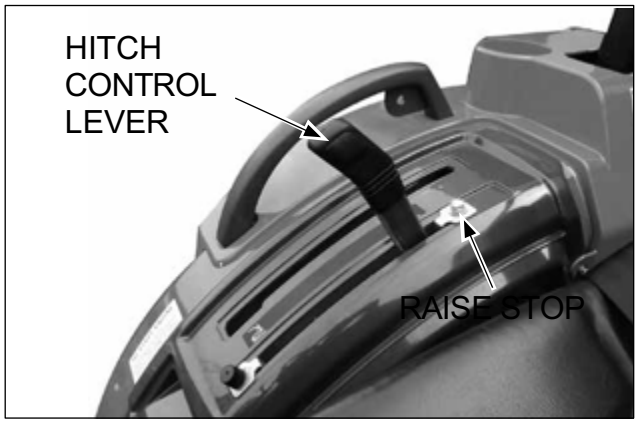
1. Stop the tractor completely and apply the park brake.
2. Disengage the PTO, lower the implement to the ground.
3. Gear Drive: Place the gear shift and range shift levers in Neutral.
   Hydrostatic Drive: Release the speed lock lever, and place the range shift lever in Neutral.
4. Stop the engine and remove the key from the key switch before leaving the tractor.
5. Disconnect the implement from the hitch.

NOTE: Be sure the tractor and implement are stable and free from any tendency to roll over.

Hitch Control Lever

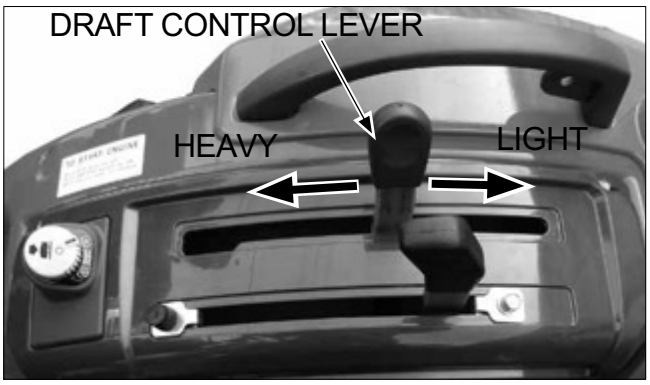


The hitch control lever is used to raise or lower the implement mounted to the three point hitch. To raise the hitch, move the lever to the rear. To lower the hitch, move the lever forward. Adjustable stops are provided for use whenever it is desirable to return the hitch control lever to the same operating position.



IMPORTANT: Set the position of the raise stop to obtain sufficient free play of the lift arm at the highest position when hitch control lever is moved until the lever is reached to the raise stop.

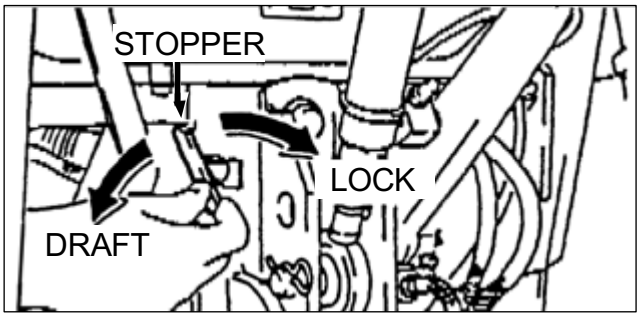
Draft Control Lever (If Equipped)



Draft control can be used to automatically lift and lower an implement to maintain a constant load through variable soil conditions.
The amount of draft can be adjusted for the implement being used.

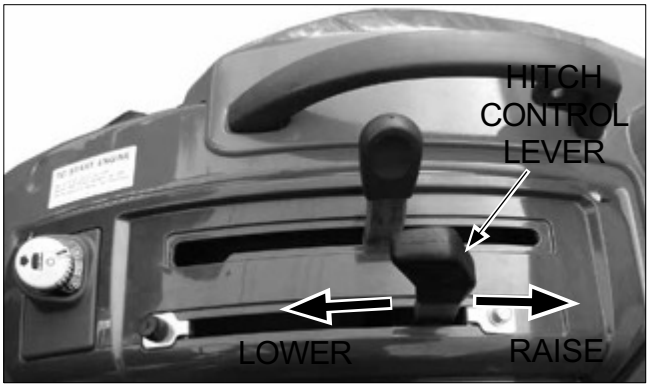
To select the correct position for the draft control lever, the tractor and implement must be operated in a field.

STEP1



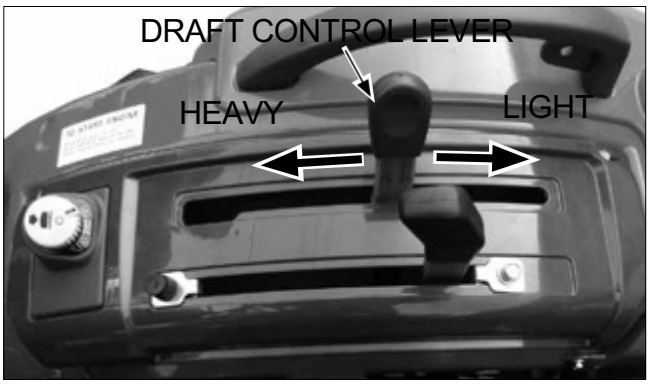
Lower the implement and rotate the stopper located on the top of the upper link bracket.

STEP2



Slowly move the hitch control lever forward until the implement is at the needed depth.

STEP3



Move the draft control lever rearward to select the correct position of the lever.
If the implement is lifting up, move the lever forward.
If the engine RPM is decreasing, move the lever rearward.
The depth of the implement will be automatically controlled by the draft on the implement.

Operating with Draft Control

For example, the draft control adjustment for a moldboard plow is as follows:

1. Set the upper link at the 560 mm (22-inches) length, between pin and pin.

2. Place the draft control lever at the center of its operating range.

3. Starting at the end of the field, move the hitch control lever fully forward to the LOWER position and drive ahead several meters.

4. Stop the tractor and adjust the length of the upper link to level the plow front to rear.

5. Adjust the lift link turnbuckle to level the plow side to side.

6. After the plow has been leveled, adjust the draft control lever either forward (to go deeper) or rearward (for shallower depth) until the desired depth is reached.

7. If the drop action of the plow is too fast, rotate the hydraulic flow control knob slowly until the plow reacts at the desired speed. See Hitch Lowering Speed Adjustment in this manual.

8. When the control levers are set for the field conditions, set the stop so the hitch control lever is returned to this position each time the plow is lowered into the ground.

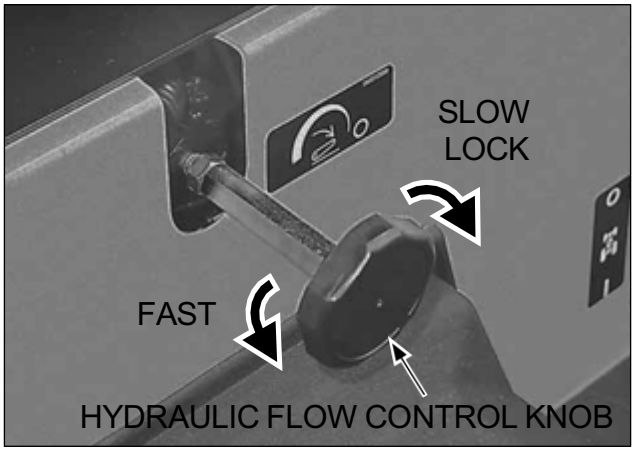
9. When reaching the end of the field, move the hitch control lever rearward to lift the plow to transport position.

10. Re-enter the field and lower the plow by moving the hitch control lever forward to the stop.

11. The plow will maintain the desired depth as previously set by the draft control lever.

Hitch Lowering Speed Adjustment

To adjust the hitch lowering speed, use the following procedure:



1. Move the hitch control lever forward to lower the implements.
2. Turn the hydraulic flow control knob to adjust the lowering speed. Turn the knob counter clockwise to increase the lowering speed. Turn the knob clockwise to decrease the speed or lock the hitch.
3. After adjusting the speed, raise the hitch and then lower it to check the speed.

NOTE: When transporting the tractor on the road with the implement mounted on the three point hitch, always set flow control knob to the LOCK position.

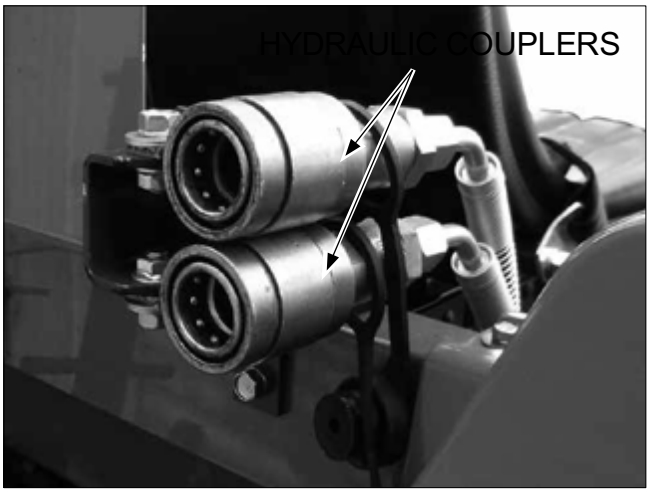
IMPORTANT: Never park a tractor with an implement in the raised position. Moving the hitch control lever forward will lower the implement even though the engine is not running. If it is necessary to service the implement in the raised position, use jack stands to safely block the implement in place. Put the hydraulic flow control knob in the LOCK position.

WARNING
- Lower or block elevated implements and other attachments before servicing or when leaving the equipment.

REMOTE HYDRAULIC CONTROL VALVE (IF EQUIPPED)

A double acting remote hydraulic control valve with a "float position", is available from your Dealer.
If equipped, the control lever is located on the right side.

Connect the implement hoses to the remote hydraulic couplers so that the implement lowers when the control lever is pushed forward and raises when the lever is pulled rearward.
Switch the hoses if the implement works in the opposite way.



REMOTE HYDRAULICS OPERATION

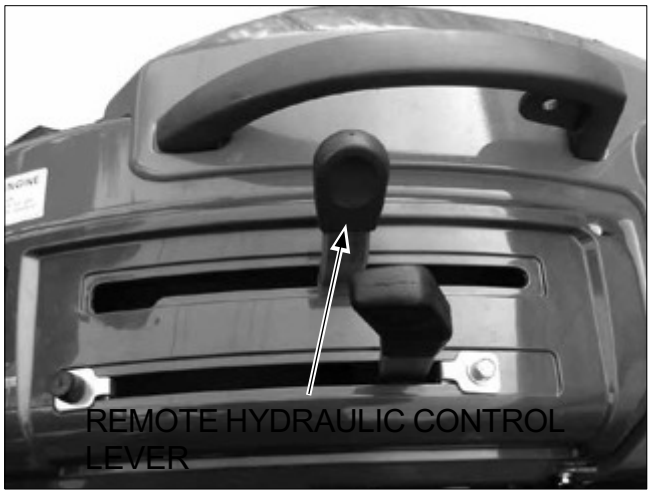
Float Operation

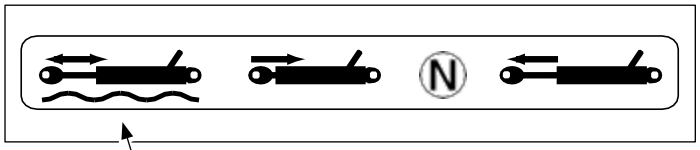
To operate the remote hydraulics in a float condition, move the control lever fully forward to the detent position.
The lever will not return to neutral automatically when in the float position.

IMPORTANT:If implement is attached that has single acting cylinders, always use the "FLOAT" position when lowering. Continual use of the "LOWER" position will cause overheating and possible damage to the hydraulic system.

NOTE:The control lever for the remote hydraulic valve must be in the neutral for the three point hitch to operate.

IMPORTANT:Never park a tractor with an implement in the raised position. Moving the control lever forward will lower the implement even though the engine is not running. If it is necessary to service the implement in the raised position, use jack stands to safely block the implement in place. Put the hydraulic flow control knob in the LOCK position.

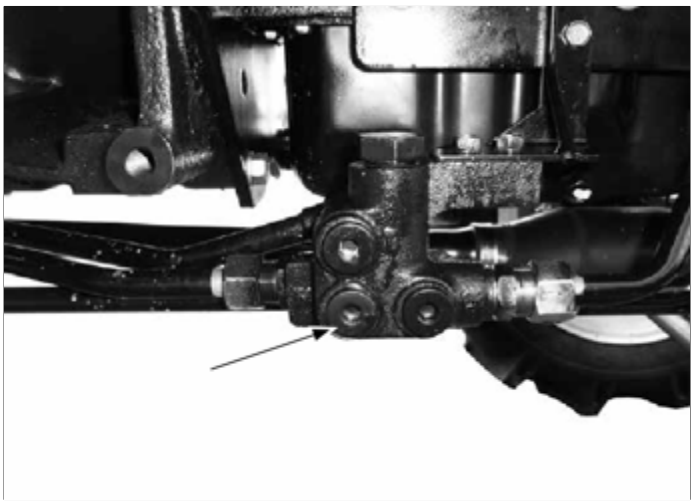


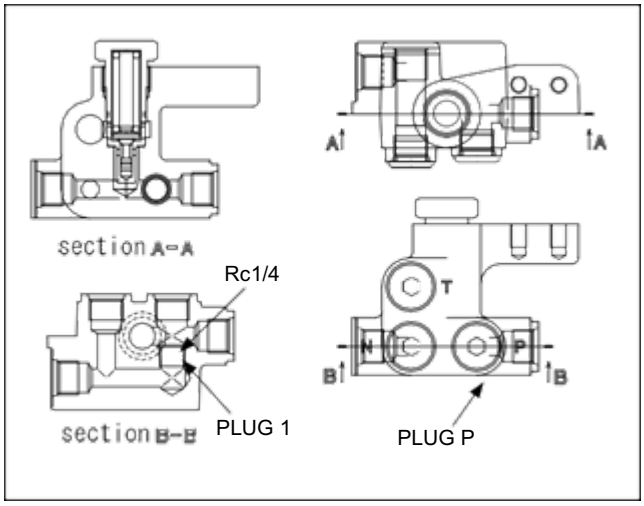


"FLOAT" POSITION

HYDRAULIC BLOCK

A hydraulic block is located on the right side of the tractor. This block can provide an external hydraulic circuit for loader use or other applications. See your dealer.





IMPORTANT: Never park a tractor with an implement in the raised position. Moving the hitch control lever forward will lower the implement even though the engine is not running. If it is necessary to service the implement in the raised position, use jack stands to safely block the implement in place. Put the hydraulic flow control knob in the LOCK position.

IMPORTANT:

Removing the Plug P when connecting the loader to the hydraulic block.

Installing plug 1 to the Rc1/4. (tightening torque 21to29N-m{15to21Lbf-ft})

(DO NOT close the port in the hydraulic block when there is no plug 1.)

When Remote attachment is not installed, plug 1 is removed. Afterwards, please install Plug P. (tightening torque 49to58.8N-m{35to44 Lbf-ft})

When the above is neglected, the hydraulic apparatus will be disadvantaged.

Adding Fluid After Connecting Cylinders and Hoses

Operate the engine at a moderate idle speed. Set the stroke stop at the yoke end of the cylinder rod to provide maximum stroke. Then operate the cylinder in both directions about ten times at least by moving the control lever up and down.

This will fill the cylinder and hoses with fluid and remove the air from the system. Fill the cylinder completely, stop the engine and check the fluid level with the transmission dipstick.

Add sufficient,clean specified fluid to bring the oil up to the proper level.
See TRANSMISSION AND HYDRAULIC LUBRICATION in this manual.

NOTE: If any of the hydraulic units are removed and replaced for any reason, check the oil level and add the specified fluid to the transmission to bring the oil up to the proper level.

WARNING

- When remote cylinders are connected to the hydraulic system, cycle the control lever about three times to remove air from the cylinder and hoses. With air in the system, raised equipment can drop accidentally and cause personal injury or machine damage.
- Hydraulic oil or diesel fuel leaking under pressure can penetrate the skin and cause infection or other injury.
- To Prevent Personal Injury:
- Relieve all pressure, before disconnecting fluid lines.
- Before applying pressure, make sure all connections are tight and components are in good condition.
- Never use your hand to check for suspected leaks under pressure.
- Use a piece of cardboard or wood for this purpose.
- If injured by leaking fluid, see your doctor immediately.
- The implement should be lowered to the ground before uncoupling of the remote hydraulic hoses.
- Lower or block elevated implements and other attachments before servicing or when leaving the equipment.

TIRES/WHEELS/SPACING/BALLAST

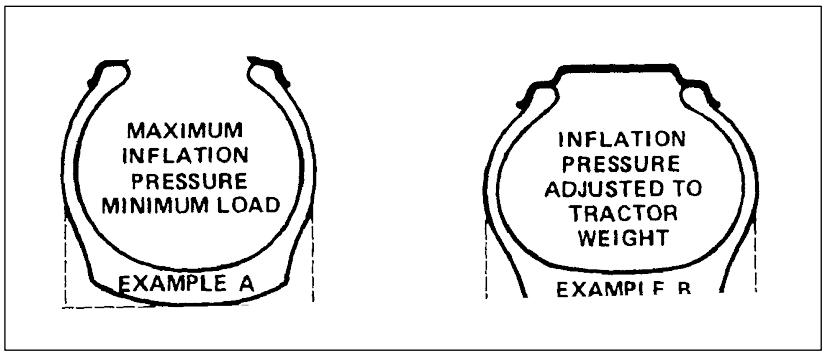
TIRE AND RIM EQUIPMENT

Tire Inflation Specifications

For normal tractor operation use the inflation pressure shown in the tire and wheel chart. The inflation pressure are based on cold inflation pressure recommendations by Tire and Rim Association Inc.
For maximum tractor performance, always adjust the tire pressure within the minimum/maximum range, to conform with the actual load on the tires. Under normal conditions, use the minimum pressure rating for general drawbar work. Use the higher pressure rating, up to the maximum, for heavy three point hitch mounted equipment, or heavy front and mounted equipment.

"Example A" shows the cross section of a tire inflated for maximum load but with a minimum load on the tire. The tire tread is not making full contact with the ground which will give poor performance.

"Example B" shows the cross section of a tire with inflated pressure correctly adjusted to the load on the tire. The tire tread is making full contact with the ground which will give maximum performance.



Tire pressure can also be adjusted as required to safety the following requirements.

A. Severe Service. Tire pressure can be increased 28 kPa (4 psi) more than the maximum pressure shown in the chart, for tires used in severe service. Severe service includes the furrow tire in regular plowing operations, the downhill tire in plowing and in other hillside operations.
B. Tires With Liquid Ballast. Inflate the tires 14 kPa (2 psi) more than maximum pressure shown in the chart. This will compensate for aeration that occurs when the tires are in motion.

IMPORTANT: During transportation on a railroad car or trailer, the tractor tires are often inflated to higher than normal operating pressures. Before using your tractor, check the air pressure in the tires to make sure that the air pressure does not exceed the maximum pressures shown in the tire and wheel equipment chart.

WARNING

- A tire can explode during inflation and cause serious injury or death. Never increase air pressure beyond 35 psi to seat the bead on the rim. Replace a tire if it has a defect. Replace a wheel rim which has cracks, wear or severe rust. Make sure that all the air is removed from a tire before removing the tire from the rim. Never use force on an inflated or partially inflated tire. Make sure the tire is correctly seated before inflating.

Tire Load Capacity

The maximum load capacity, shown in the tire pressure and load capacity chart, is of the wheel with the tire inflated to the maximum pressure. DO NOT exceed the maximum load capacity of the tire.

TYPE	POSITON	TIRE SIZE	PLY RATING	MAX. LOAD CAPACITY AT MAX. INFLATION PRESSURE		INFLATION PRESSURE	
				(kg)	(lb)	(kPa)	(psi)
AG. TIRES	FRONT	7-14	4PR	370	816	177	26
	REAR	9.5-24	6PR	940	2073	220	32
	FRONT	7-16	4PR	405	893	177	26
	REAR	11.2-24	4PR	845	1863	120	18
	FRONT	7-16	4PR	405	893	177	26
	REAR	12.4-24	4PR	945	2084	118	17
TURF TIRES	FRONT	215/80D15	4PR	435	959	157	23
	REAR	355/80D20	4PR	825	1819	98	14

WARNING

- DO NOT remove, install or make repairs to a tire on a rim. Take the tire and rim to a tire shop where persons with special training and special safety tools are available. If the tire is not in correct position on the rim, or if too full of air, the tire bead can loosen on one side and cause air to leak at high speed and with large force. Because the air leak can thrust the tire in any direction, and with much force, you will be in danger of injury.

Check Air Pressure

Tire Pressure Check Interval … Every 50 hours of operation or weekly.

Check the condition of the tires and rims for wear or damage. Keep the tires inflated to the recommended pressures. See Tire and Wheel Specifications in this manual for recommended inflation pressures for each tire size.

For tires equipped with liquid ballast, check the air pressure as follows:

1. Use an air-water gauge. The valve must be at the bottom of the tire to get an accurate reading.
2. Use a standard air gauge as follows:
   A. The valve must be at the top of the tire.
   B. Measure the rim diameter.
   C. Add 3.5 kPa (1/2 psi) for each 305 mm (12 inches) of rim diameter to the standard gauge reading.

Tire Inflation Procedure

WARNING

- A tire can explode during inflation and cause serious injury or death. Never increase air pressure beyond 35 psi to seat the bead on rim. Replace a tire if it has a defect. Replace a wheel rim which has cracks, wear or severe rust. Make sure that all the air is removed from a tire before removing the tire from the rim. Never use force on an inflated or partially inflated tire. Make sure the tire is correctly seated before inflating.

DO NOT inflate a tire that has had a complete loss of air. If the tire has lost all air pressure, have a qualified tire mechanic service the tire.

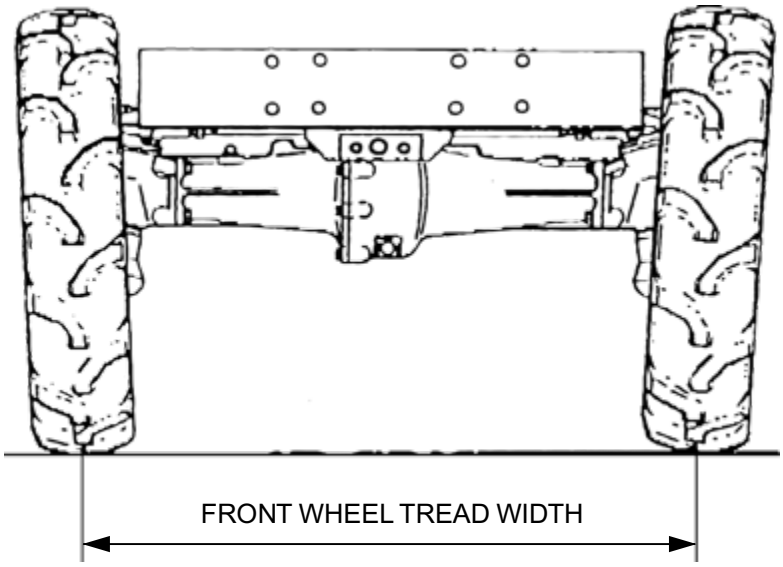
To ADD air to a partly inflated tire, use the following procedure:

1. Use an air hose with a remote shutoff valve and a self – locking air chuck.
2. Stand behind the tread of the tire and make sure all persons are away from the side of the tire before you start to add air.
3. Inflate the tire to the recommended air pressure. DO NOT inflate the tire more than the recommended pressure.

NOTE: Tires can be inflated 28 kPa (4 psi) over maximum recommended in chart when tractor is used for heavy draft operation and ground compaction is not a problem.

FRONT WHEEL TREAD POSITIONS

See Wheel Mounting Torques in this manual for instructions on changing the wheel tread.
Measure the tread width between the centers of each tire at a point as near the ground as possible.

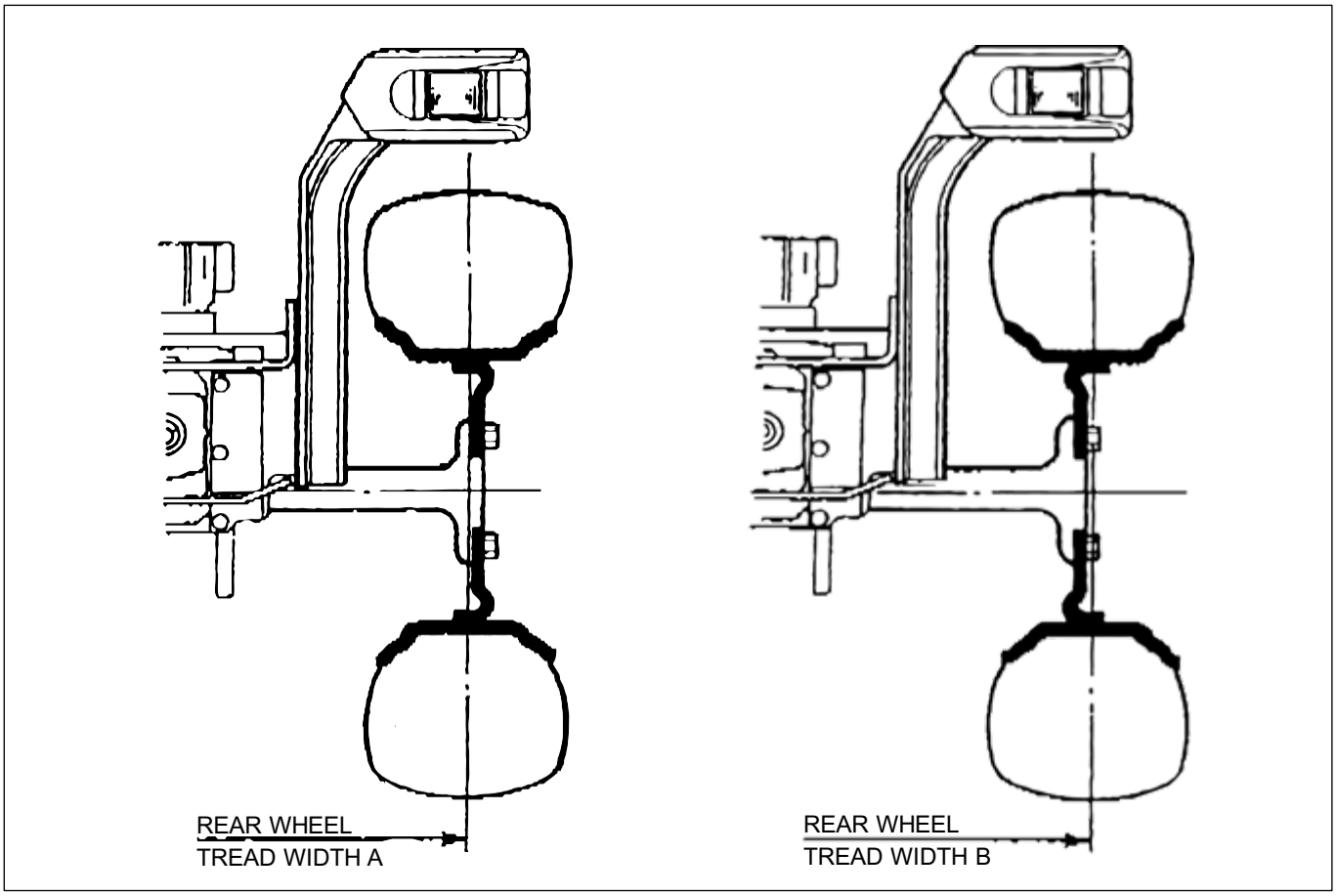


Tire Size	Front Wheel Tread Width
7-14 R1	1095mm (43.1inch)
7-16 R1	1085mm (42.7inch)
215/80D15	1110mm (43.7inch)

REAR WHEEL TREAD POSITIONS

Wheel Treads

One tread width is available for this tractor and the tread width can be adjusted by reversing the wheels.

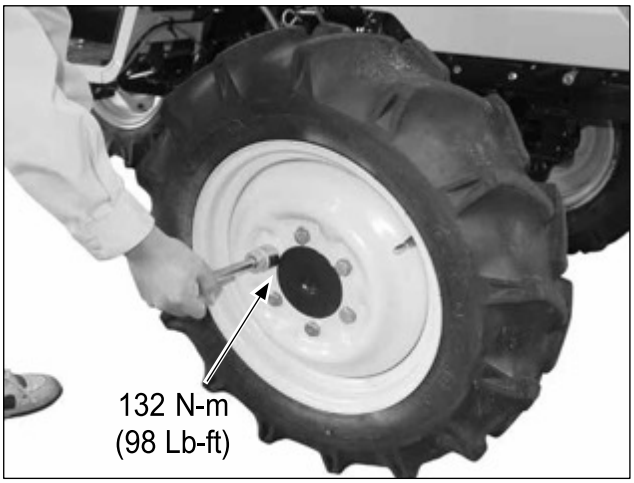


	9.5-24 R1	11.2-24 R1	12.4-24 R1	355/80D20 TURF
Rear Wheel Tread Width A	"1015mm (40.0Inch)"	"1090mm (42.9Inch)"	"1090mm (42.9Inch)"	-
Rear Wheel Tread Width B	"1160mm (45.7Inch)"	"1090mm (42.9Inch)"	"1090mm (42.9Inch)"	"1140mm (44.9Inch)"

NOTE: The rear wheels of 355/80D20 TURF tires are non-reversible type and must be assembled with the valve side out.

IMPORTANT: Make sure tires are installed for correct rotation direction to obtain proper traction.

WHEEL MOUNTING TORQUES



The front wheels are tightened with six bolts for MFD to the axle hubs.
The rear wheels are tightened with six bolts to the rear axle hubs.

Torques for wheel bolts as follows:

BOLTS POSITIONS	TORQUE
Front wheel disc to axle hub bolts	132 N-m(98 Lb-ft)
Rear wheel disc to axle hub bolts	132 N-m(98 Lb-ft)

Check the bolts to keep them tight at the intervals recommended in the Service Chart in this manual.

IMPORTANT: Check the wheel bolts after the first 10 hours of operation and every 100 hours of operation. Also do this procedure any time the wheel is removed.

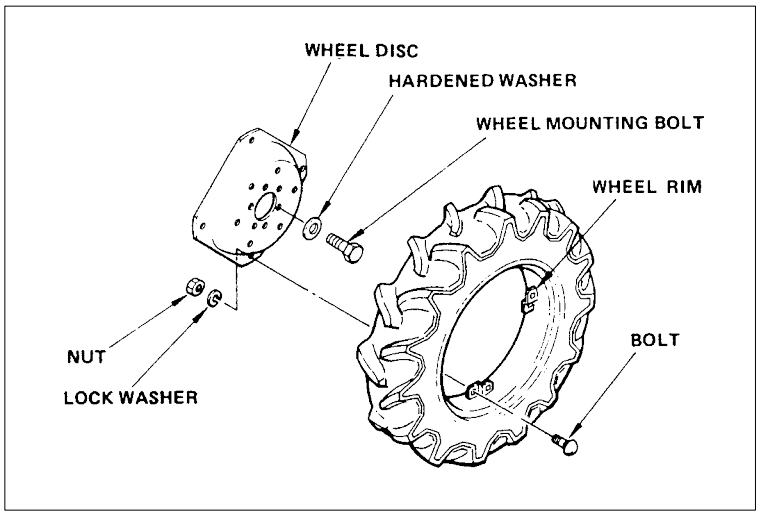
NOTE:

1. The front wheel of tires must always be assembled with the valve side out.
2. When putting the wheels on the axle, make sure that the tires rotate in the correct direction. See Tire Installation in this manual.

REAR WHEEL ADJUSTMENT

Tractor Equipped with Adjustable Wheels

If you need to change the position of the discs and rims of the wheels, use the following procedure:



1. Put blocks at the front wheels, lift the rear of the tractor and put blocks under the tractor.

2. Remove six wheel mounting bolts at each wheel to remove rear wheels from rear axle.

3. Remove wheel disc from the wheel rim at each wheel.

4. Install the wheel discs and rims in the required position shown in the Rear Wheel Tread Positions in this manual.

5. Tighten the wheel rim to wheel disc nuts to a torque of 152 to 172 N-m (112 to 127 Lbf-ft).

6. Put the rear wheels on the rear axle and tighten the wheel mounting bolts with hardened washers to a torque of 118 to 132 N-m (87 to 98 Lbf-ft).

NOTE: When putting the wheels on the axle, make sure that the tires rotate in the correct direction. See Tire Installation in this manual.

IMPORTANT: When adjusting wheels, check the nut and the bolt torques after 10 hours of operation and every 100 hours thereafter.

TIRE SIZE COMBINATIONS-MFD

Your MFD Tractor must use front and rear tire combinations that are correctly matched. The use of recommended tire combinations will give maximum tractor performance, extended tire and reduced wear on drive train components.

IMPORTANT: The tire size combinations shown below are specified to provide matched ground speeds of the front and rear tires. Mixing worn and new tires or tires of different diameters or loaded radii can give incorrect ground speed match. When replacing tires, consult your Dealer.

TYPE	POSITON	TIRE SIZE	PLY RATING
AG. TIRES	FRONT	7-14	4PR
	REAR	9.5-24	6PR
	FRONT	7-16	4PR
	REAR	11.2-24	4PR
	FRONT	7-16	4PR
	REAR	12.4-24	4PR
TURF TIRES	FRONT	215/80D15	4PR
	REAR	355/80D20	4PR

TRACTOR BALLAST

Ballast for your tractor includes front-end weights, rear wheel weights and liquid ballast in the rear tires. Front-end weights improve the steering characteristic when heavy hitch loads cause a movement of tractor weight from the front to the rear wheels. Rear wheel weights and adding liquid to the rear tires increase traction by putting weight on the driving wheels.

IMPORTANT: The Maximum operating weight of tractor should not exceed the following values. The operating weight of tractor includes the weight of tractor, ballast weight and implement.

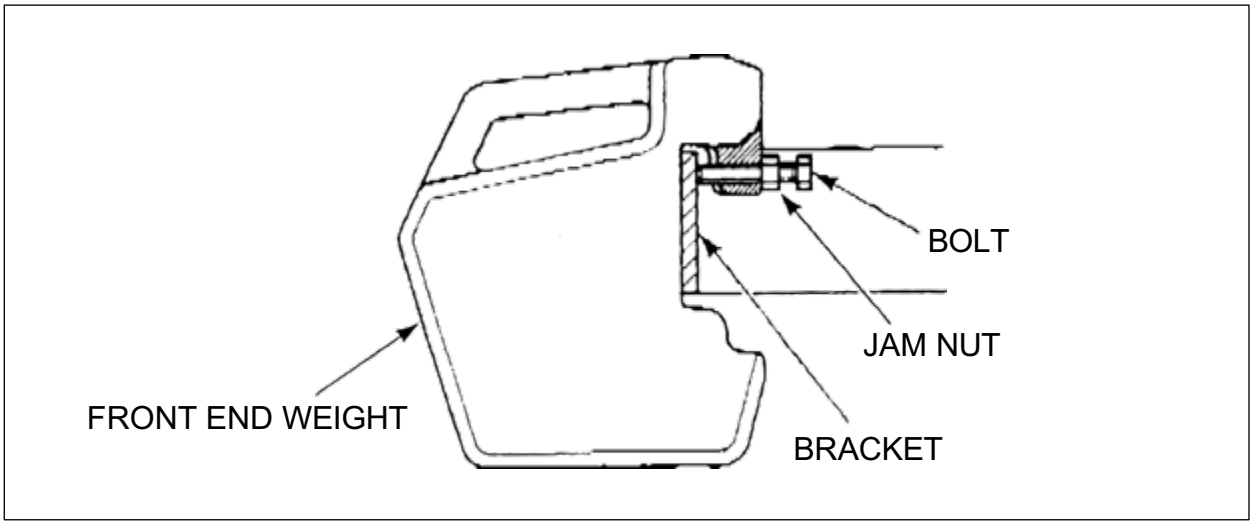
Size	Front Axle	Rear Axle	Total
7-14 4PR	750kg(1653lbs)	1400kg(3086lbs)	2150kg(4739lbs)
7-16 4PR	824kg(1816lbs)		2224kg(4902lbs)
215/80D15 4PR	900kg(1984lbs)		2300kg(5070lbs)

Front End Weights

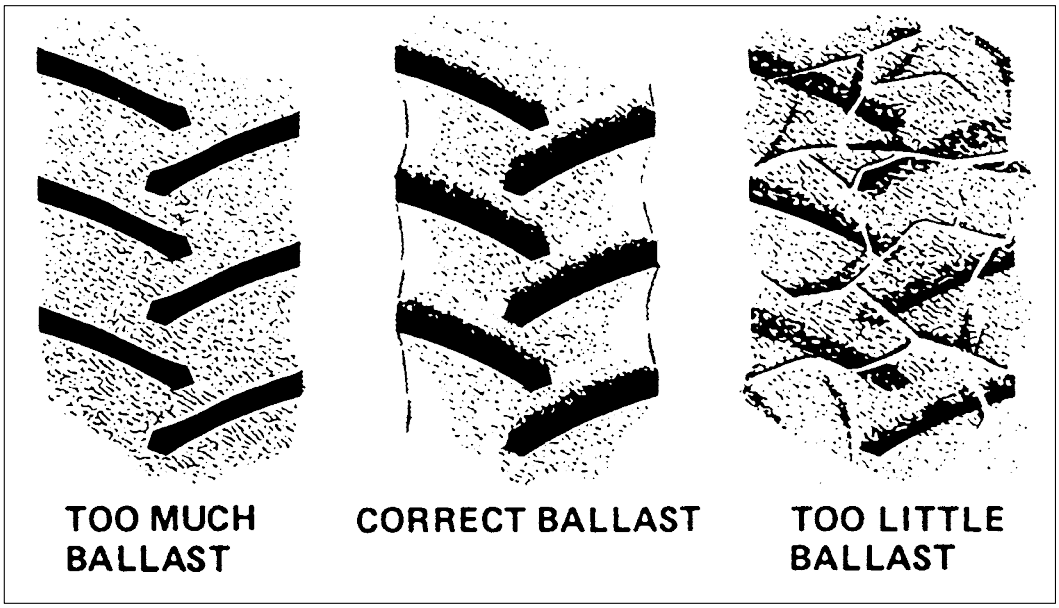
Front-end weights can be mounted on the front-end bracket of the tractor with locking bolts and nuts. The weights, locking bolts and nuts are available from your Dealer. A maximum of 2 weights at 22 kg (49 lbs) each can be installed, depending on implement application and soil conditions.

IMPORTANT: Refer to the operator`s manual of implements regarding the minimum ballasting weights for implements.

Use front-end weights as needed to provide effective steering control and front end stability and to achieve maximum operating efficiency and tractor filed performance.



NOTE: When you have too much ballast installed on the tractor, you will see the clear shape of the tire tread in the ground which is an indication of no slippage. With too little ballast, the tire tread marks will not show because of the tire slippage.



LUBRICATION AND MAINTENANCE

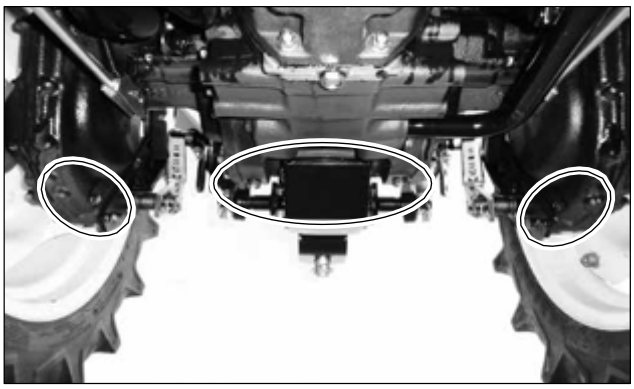
The tractor is adjusted before shipment; however, wearing and slacking are caused along its use. Perform inspection and readjustment periodically and replace parts which exceeded its service limit to maintain the tractor in optimum condition at all time.

WARNING: For burn, fire and injury accident prevention.

- When cleaning and performing inspection, adjustment, and maintenance, park the tractor on wide flat place, apply parking brake, lower the implement, and stop the engine to stop the movement of all parts before performing the work.
- Wait until the engine cools down before performing inspection and maintenance of the engine and its surroundings.
- When cleaning and performing inspection, adjustment, and maintenance with the implement lifted, set the flow control grip to the <FIX>, make sure that the implement does not lower, and place stand under the implement.
- Place all the covers back to where removed before starting the engine.
- Request the inspection and maintenance to the dealer for parts not listed in the below periodical inspection and maintenance list.
- Check and read the operator`s manual for the proper usage of the implements before using implements on the tractor.

WARNING: When raising your vehicle

- Use the appropriate jack to lift up the chassis from the ground.
- Park the tractor on safe, hard and flat ground. Jack may be falling down if working on unstable ground such as the slope or soft ground and it will be cause of injury.
- Before jacking up the tractor, stop the engine and apply the park brake securely. Keep the tractor stationary by placing wheel stoppers at front and behind of tires.
- Lower the implement to the down position when the tractor is required to jack up while attaching the implement on it.
- Be careful not to get under the tractor or vibrate the chassis when jacking up the tractor.
- Be careful not to jack up more than requires. Tractor gets unstable if it is jacked up too high.
- Using method of the jack varies from product to product. Use the jack by the proper method in accordance with the individual operator`s manual.
- Support at the axle when the jack is used.



Periodical Inspection and Maintenance List

Perform inspection and maintenance referring to the “Periodical Inspection and Maintenance List” so that the correct functions are performed and the safe condition is maintained at all times.

This “Periodical Inspection and Maintenance List” is referential. Adjust as necessary in case of errors.

Service point	No.of points	Frequency in hours					Description
		Clean	Change	Check	Grease	Drain	
Engine oil level	1			Daily			
Front axle tie rod end	3				10		
Brake pedal boss	4				10		
Transmission oil level	1			Daily			
Radiator coolant level	1			Daily			
Fuel filter cup	1	10		Daily			
Air cleaner	1	10		Daily			
Fan belt tension	1			Daily			
Grill and radiator area	1	Daily		Daily			
Tire pressure	4			50			
Fuel tank water drain plug	1					50	
Engine oil	1		100				First time:50
Wheel retaining bolt and nuts	24			100			
Engine oil filter	1		100				First time:50
Transmission oil	1		200				First time:100
Hydrostatic filter (Hydrostatic drive)	1		300				First time:100
Hydraulic filter	1		300				
MFD-front axle lubricant	1		200				First time:100
Clutch pedal	1			200			
Brake pedal	2			200			
Air induction systems	1			200			
Engine valve clearance (See NOTE 1)	-			200			
ROPS	-			200			
Cooling system	-	Y	Y			Y	
Air cleaner filter element (See NOTE 2)	1	50	50				
All linkage pivot points (See NOTE 3)	-	AY					
Threads of 3-point hitch links	2				AY		
Fuel filter	1		AY				
Hydraulic system	-			AY			
Battery water level and terminals	-	AY		AY			
Engine frame bolts	12			50			First time:10

MARK Y: Yearly or 1000 Hours, Whichever occur first.
AY: Yearly or as needed.
Note 1: Consult your Dealer.
Note 2: Replace element after 10 cleanings or yearly.
Note 3: Apply gear oil.

NOTE: Contact the dealer when disposing any machinery or parts.

- For waste disposal
- Dampening or incineration of wastes causes environmental pollution and may be subjected to punishment according to the law.
  - When draining waste fluid from the equipment, use a drip pan.
  - Do not drain on the ground, river, lake, or ocean.
  - Contact the dealer and dispose according to the laws and regulations when disposing or incinerating waste oil, fuel, coolant (antifreeze), refrigerant, solution, filter, battery, rubbers, and other hazardous materials.

OIL SUPPLY, LUBRICATION AND WATER SUPPLY LIST

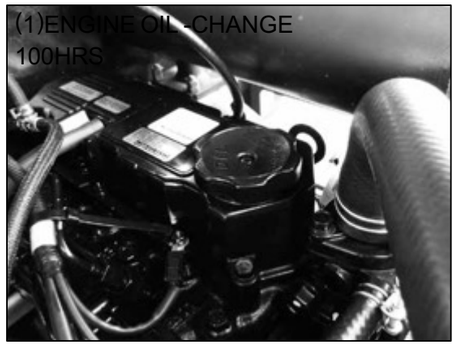
System Capacities

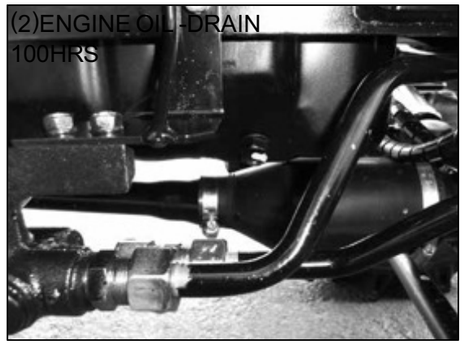
SYSTEM	TYPE		METRIC MEASURE	IMPERIAL
Engine	Engine oil	No filter change	3.7 Liters	3.9 QTS
		With filter change	4.2 Liters	4.4 QTS
Fuel tank	Diesel fuel	-	24.5 Liters	6.5 Gallons
Radiator	Coolant	Engine and radiator	4.2 Liters	4.4 QTS
		Coolant bottle	0.4 Liters	0.4 QTS
Transmission case	Gear oil	Gear oil	33 Liters	35 QTS
		Hydrostatic drive	34 Liters	36 QTS
Front axle	Gear oil	-	4.0 Liters	4.2 QTS

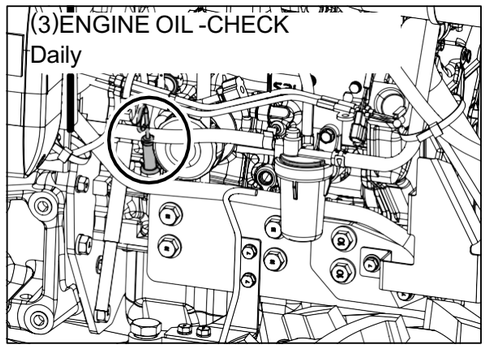
Lubrication Table

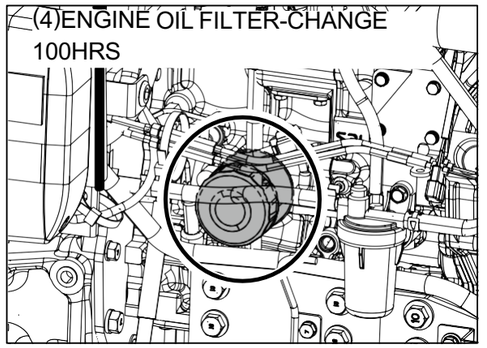
Application	Kind of Oil	API Classification	Ambient temperature	Grade (SAE No.)		Description
				Single	Multi	
Engine	Engine Oil	CF	-25° C (-14° F)	5W	5W-20	Use high Grade Diesel Oil
			-20-0° C (-4-32° F)	10W	10W-30 15W-40	Engine Oil
			-10-10° C (14-50° F)	20W		
			0-20° C (32-68° F)	20		Use high Grade Diesel Oil
			10-30° C (50-86° F)	30		
			30° C (86° F)	40	20W-40	
Transmission oil front axle oil	Hydraulic Transmission Fluid	Hydraulic Transmission Fluid				
Grease Nipple	Grease	–				

OIL SUPPLY , OIL LEVEL CHECK , GREASE SUPPLY , FILTERS CHANGE

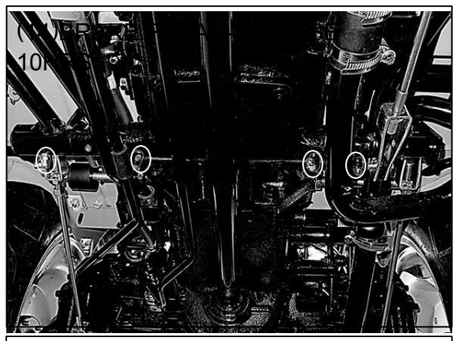

(1)ENGINE OIL -CHANGE
100HRS

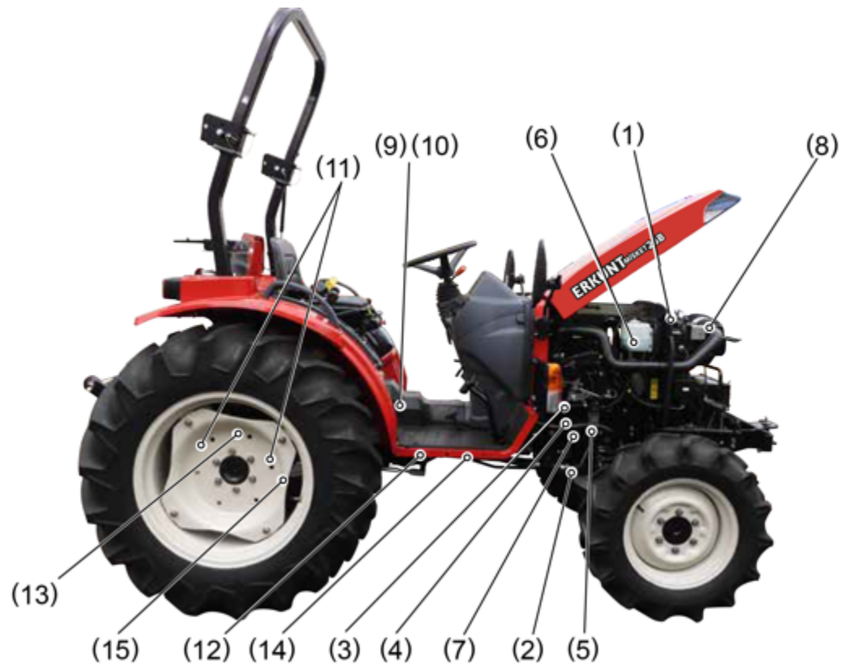

(2)ENGINE OIL-DRAIN
100HRS


(3)ENGINE OIL -CHECK
Daily

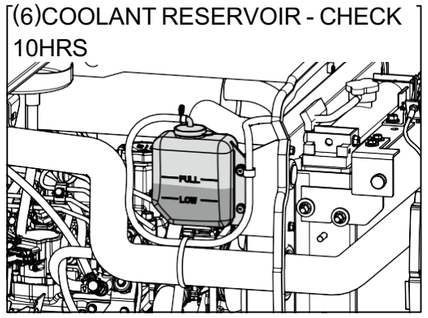

(4)ENGINE OIL FILTER-CHANGE
100HRS

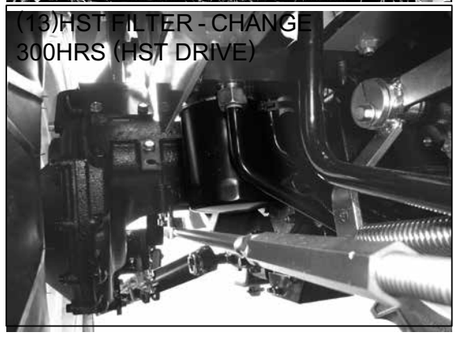

(5)FUEL FILTER-CHECK
10HRS

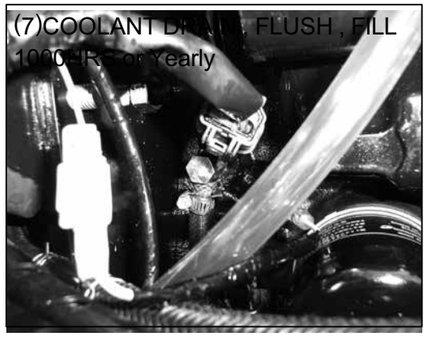

(14)GREASE
10HRS

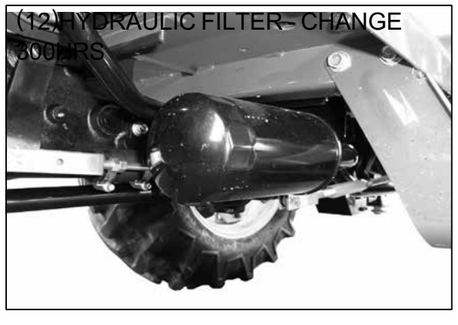


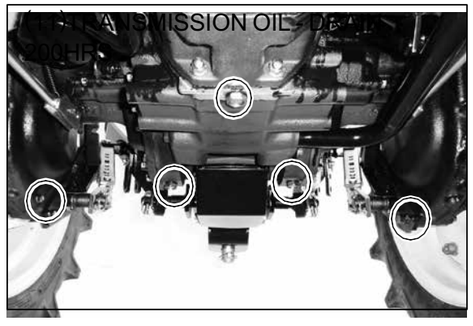

(15)BRAKE ROD - GREASE
10HRS


(6)COOLANT RESERVOIR - CHECK
10HRS


(13)HST FILTER - CHANGE
300HRS (HST DRIVE)


(7)COOLANT DRAIN , FLUSH , FILL
1000HRS or Yearly


(12)HYDRAULIC FILTER– CHANGE
300HRS

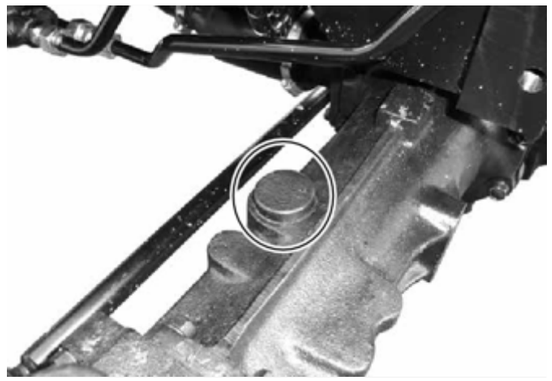

(11)TRANSMISSION OIL - DRAIN
300HRS

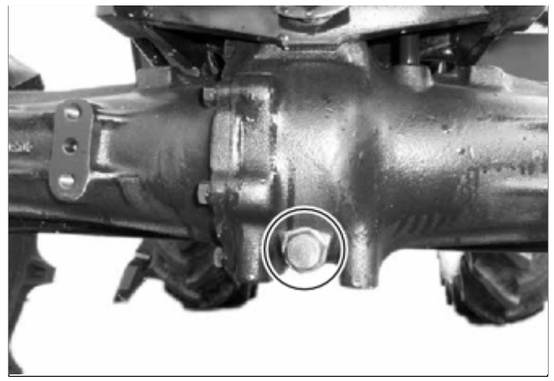

(10)TRANSMISSION OIL - CHECK
Daily (GEAR DRIVE)


(9)TRANSMISSION OIL - CHECK
Daily (HST DRIVE)


(8)AIR CLEANER - CHANGE
When necessary

OIL SUPPLY , OIL LEVEL CHECK , GREASE SUPPLY



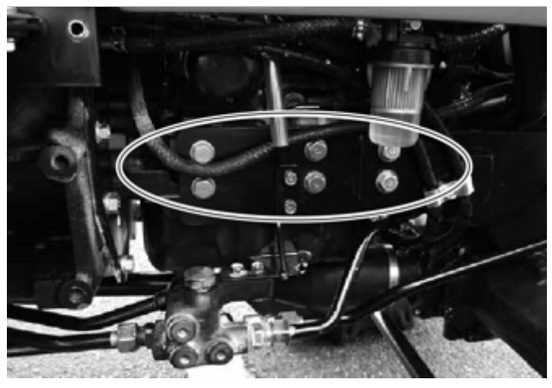


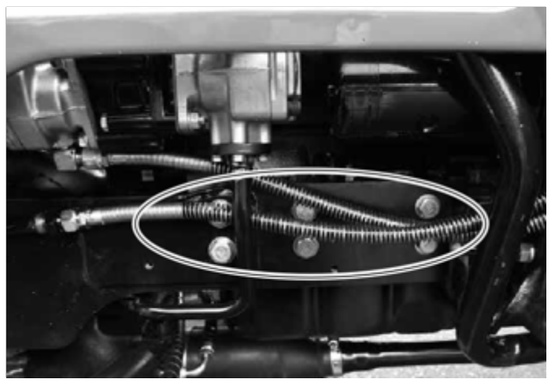
ENGINE FRAME BOLTS-CHECK

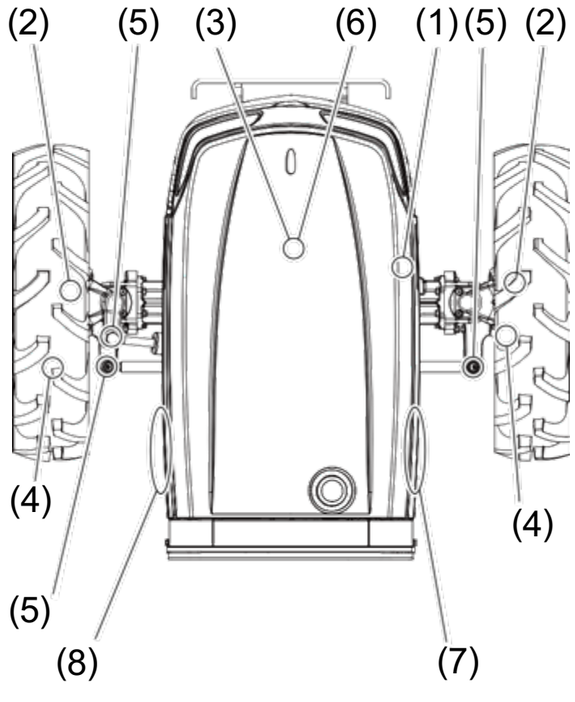
LUBRICATING GREASE FITTINGS

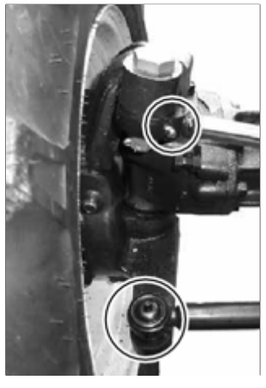
Tightening torque

110N-m(81 Lb-ft)

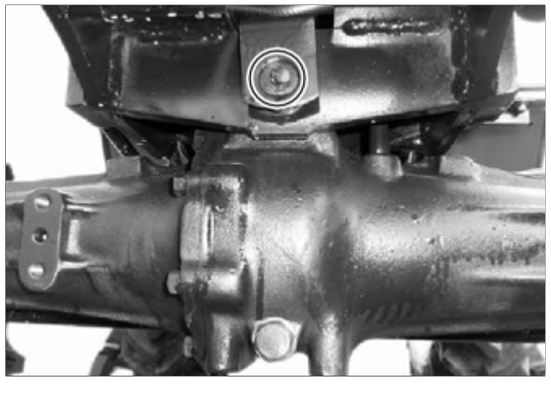








- GREASE



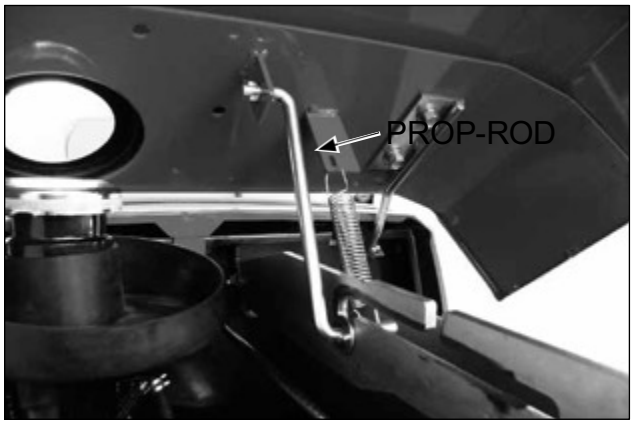
HOOD

To do maintenance work on the engine lubrication system, cooling system, fuel system and air induction system, you must lift the tractor hood and remove the side cover and front grill.

STEP1

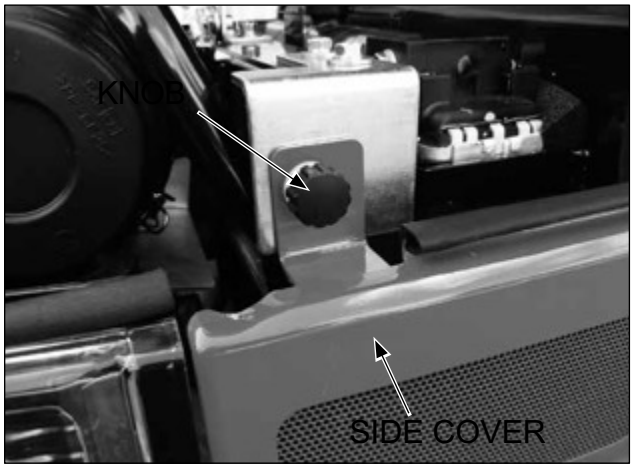
Push the release rod inside the cylinder with the rod.

STEP2



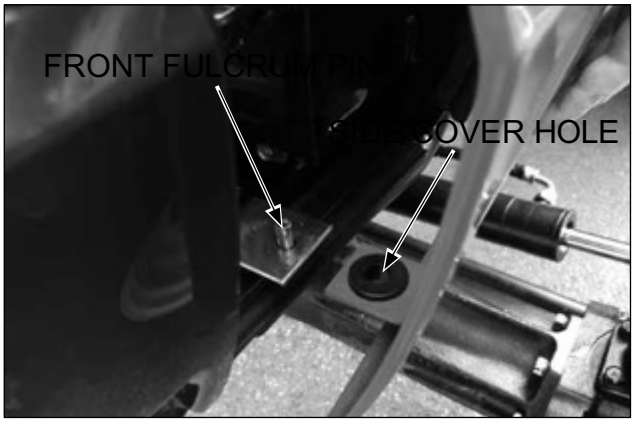
The hood is fixed with the prop-rod in the automatic operation when opening the hood.

STEP3



Remove the knob bolt. (The following procedures are the same for both sides.)

STEP4

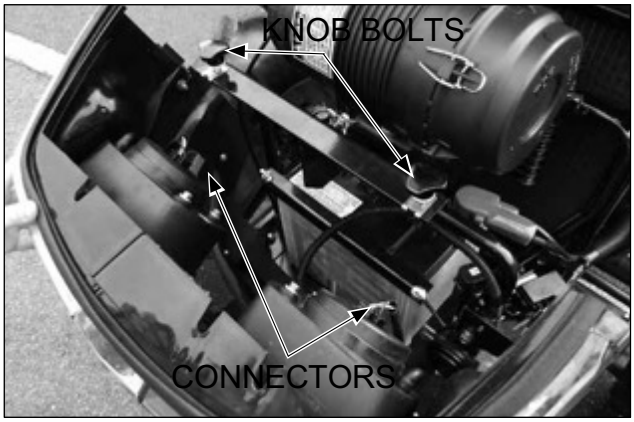


Lift the front of the side cover and remove from fulcrum pin.

STEP5

Slide the side cover as pulling it frontward, and remove the side cover.

STEP6

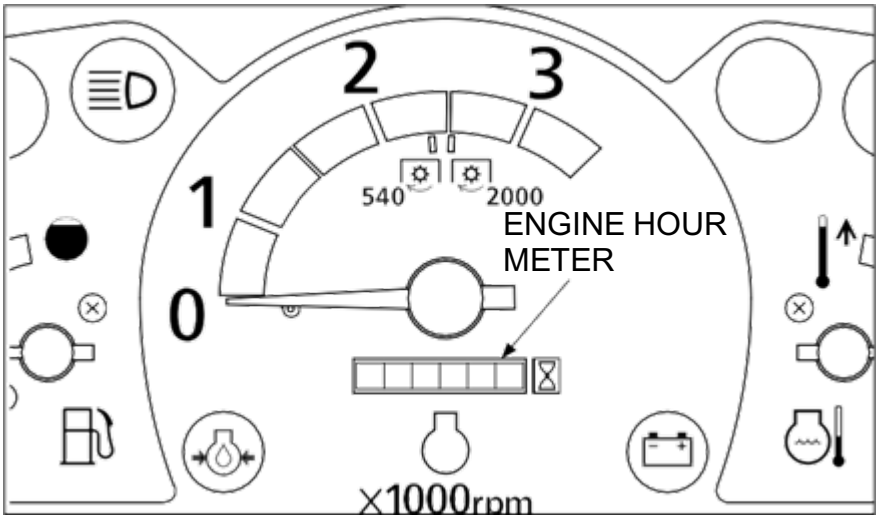


Loosen the knob bolts.
Remove two connectors of headlight and remove the front grill.

SERVICE HOUR INTERVAL

Service your tractor at the intervals and locations given on the Lubrication and Service Chart. When you service your tractor, use only high quality lubricants.

Engine Hour Meter



The engine hour meter shows the total amount of actual engine operated hours of the tractor. The first number to the right side displays added one by one every six minutes and is a black number on a white surface. The remaining numbers are displays added one by one every one hour and is a white number on a black surface. Use the hour meter along with the Lubrication Chart to service your tractor at the correct time periods.

Service After First 50 Hours

1. Engine Oil
   Drain all the oil from the crankcase while the engine is warm and refill with new oil to the upper Notch (full) on the engine oil dipstick. See Engine Oil Change in this manual.

2. Engine Oil Filter
   Replace the engine oil filter. See Engine Oil Filter in this manual.

3. Transmission & Hydraulic System
   (1) Transmission Oil
   Check the level of the transmission oil. Add the specified fluid as needed to maintain proper level. See Transmission Oil Level (Gear Drive) or Transmission Oil Level (Hydrostatic Drive) in this manual.

   (2) Hydrostatic Filter (Hydrostatic Drive)
   Replace the filter with a new one. See Hydrostatic Filter in this manual.
   (3) Hydraulic Filter
   Replace filter with a new one. See Hydraulic filter in this manual.

4. Front Axle Lubricant (MFD)
   Change the oil. See FRONT AXLE LUBRICATION (MFD) in this manual.

5. Radiator Core
   Inspect the radiator core and clean if necessary. See COOLING SYSTEM in this manual.

6. Hoses and Connections between Air Cleaner and Manifold.
   Inspect for loose fit or leakage. See AIR INDUCTION SYSTEM in this manual.

7. Water Pump, Fan and Alternator Belt Tension.
   Check the belt for tension, replace if necessary. See Fan Belt Adjustment in this manual.

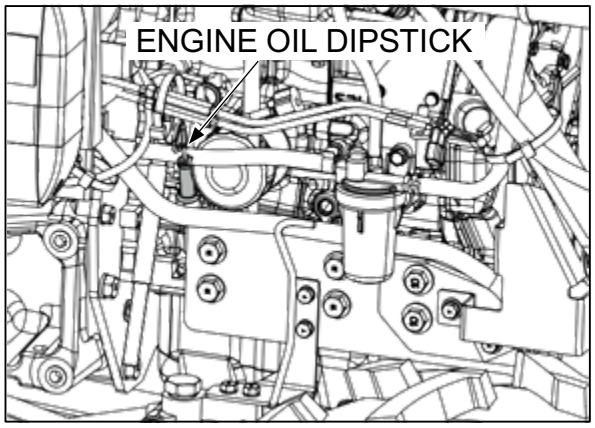
ENGINE LUBRICATION

Service Specifications

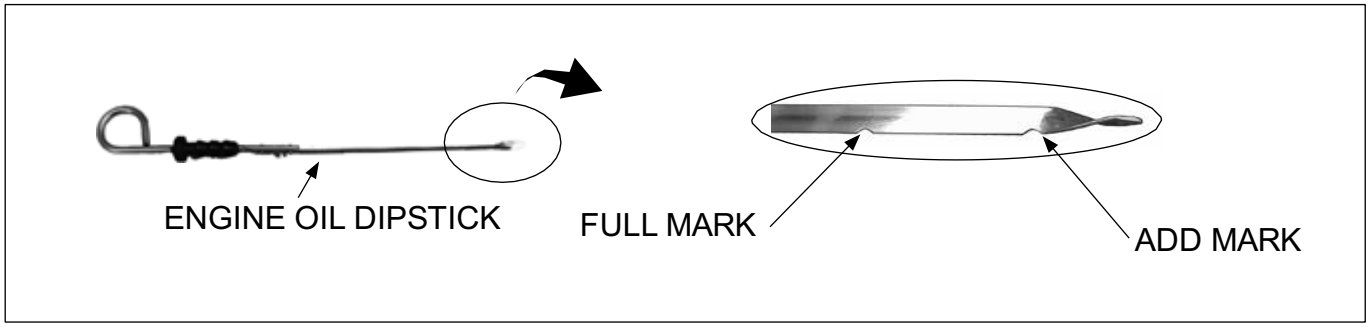
Oil Level Check Interval..... Daily
Oil Change Interval……Every 100 hours (See NOTE)
Oil Type……See Lubrication Table in this manual.
Oil Capacity .....No Filter Change..... 3.7 Liters (3.9 QTS)
With Filter Change ..... 4.2 Liters (4.4 QTS)

NOTE: Change the engine oil after the first 50 hours of operation and then use the regular change interval. Change the engine oil more frequently when the operating conditions are severe, such as, operating in very high or very low ambient temperatures.

Engine oil level



To check the engine oil level, put the tractor on level ground and stop the engine. Pull the dipstick out, wipe the dipstick with a dry cloth and install the dipstick to check the oil level. If the oil level is below the A (Add) mark, add oil to raise the oil level to the F (Full) mark. DO NOT raise the oil level above the F (Full) mark.

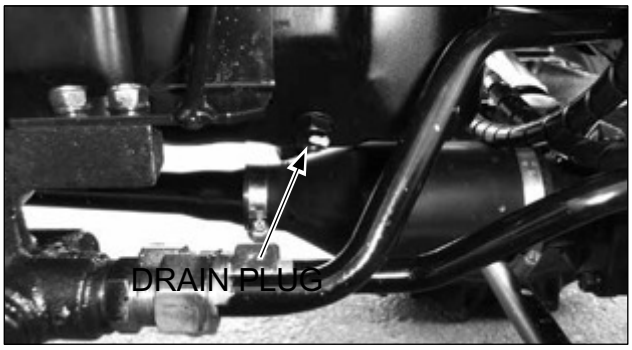


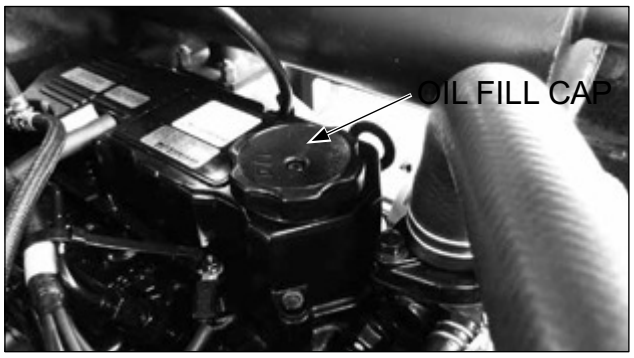
INPORTANT: The level should be checked before starting or 5 minutes after the engine has been shut off.

Engine Oil Change

To change the engine oil, put the tractor on level ground and stop the engine. Change the engine oil as follows:

NOTE: For best results change the oil while the engine is still warm from operation.





1. Remove the oil pan drain plug and drain the oil from the engine.
2. See Engine Oil Filter in this manual, if the filter needs to be changed.
3. Install the drain plug to the oil pan. Tighten the plug to a torque of 50 to 60 N-m (36 to 43 Lbf-ft).
4. Put the correct type and amount of new oil into the engine. See Engine Oil Selection in this manual for the recommendation of oil type.

IMPORTANT: DO NOT use the oil level dipstick as a guide when you fill the oil to engine crankcase. Check the amount of oil when you install.

5. Start the engine Run the engine for five minutes at 1200 rpm.
   Check for oil leaks at the filter base and drain plug.

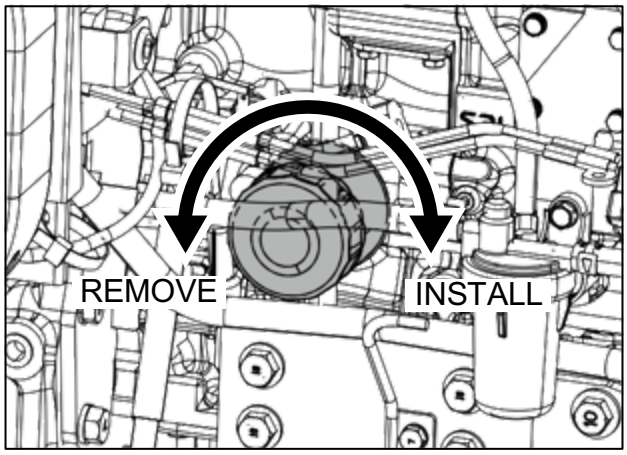
6. Stop the engine. Wait approximately five minutes for the oil return to the oil pan. Check the oil level on the dipstick and add oil if needed.

Engine Oil Filter

Change Interval… .....Every 100 hours (See NOTE)

NOTE: Change the engine oil filter after the first 50 hours of operation and then use the regular change interval.

IMPORTANT: Change the oil filter at the recommended time interval. Your Dealer has approved genuine filters. DO NOT use other type filters.



Change the engine oil filter as follows:

1. Drain the oil from the engine.See Engine Oil Change in this manual.

2. Turn the oil filter counterclockwise to remove. Use a filter wrench, if necessary.

3. Apply clean oil to the O-ring on the new filter.

4. Install the filter. Turn the filter until the O-ring comes in contact with the case surface. Tighten the filter an additional 2/3 turns by hand.

IMPORTANT:DO NOT use a filter wrench to install the oil filter. When the filter is too tight, you can cause damage to the O-ring and filter.

5. Put new oil in the engine. See Engine Oil change in this manual.

ENGINE COOLANT

Service Specifications

Coolant Change Interval…… Every 1000 hours or once per each year whichever reaches first.

Capacity of System

Engine and Radiator…	4.2 Liters (4.4 QTS)
Coolant reserve bottle…	0.4 Liters (0.4 QTS)
Thermostat	71°C to 82°C (160°F to 180° F)
Radiator Cap Pressure….	88 kPa (12.8 psi)

Daily before starting the engine, check the coolant level the coolant reserve bottle. The coolant level should be between the "FULL" and "LOW" lines when the engine is cool.

Pressure Cooling System

WARNING

- Check and service cooling system according to maintenance instructions. Hot coolant can spray out if pressure cap is removing while system is hot. To remove radiator cap, let system cool, turn to first notch, and then wait until all pressure is released. Scalding can result from fast removal of radiator cap.

1. The pressure cap on a pressure cooling system has a control valve that operates as a SAFETY RELIEF VALVE to keep the pressure within the system operating range. Operating the engine without a pressure cap or with a pressure cap but not setting value to operate at the correct pressure can cause damage.

2. A pressure cooling system decreases the loss of coolant caused by evaporation or boiling. The system must have good seals at the radiator cap, hoses and hose connections. It is important that you stop ALL LEAKS OF ANY SIZE as soon as the leaks are found. A small leak can become a large flow when pressure is increased in the cooling system. While the tractor is in operation, a weak hose can break and cause injury or damage. Check all hoses and hose connections with frequency. KEEP HOSES, HOSE CONNECTIONS AND PRESSURE CAP IN GOOD CONDITION.

Coolant Solutions

Your tractor cooling system is equipped with an ethylene glycol coolant solution that has a high boiling point.

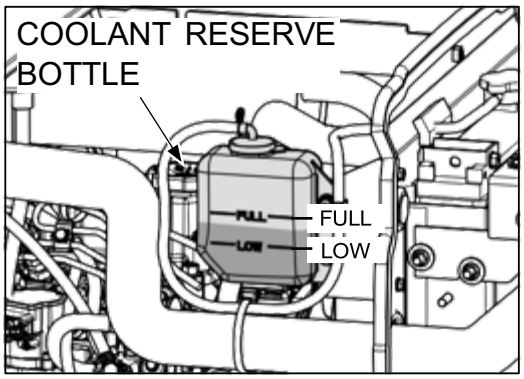
IMPORTANT: Change the coolant solution at the change interval recommended in this manual (See Lubrication and service Chart). The heat generated by the diesel engine a natural change in the inhibitors in the coolant, which results in loss of corrosion protection. The loss of the inhibitors may cause water pump cavitations and cylinder block erosion.
Install only ethylene glycol coolant solution in the cooling system. Use a good quality, high boiling point, ethylene glycol that does not have any additives to stop leaks. DO NOT install any rust inhibitors that are not approved. It is possible that the rust inhibitors and ethylene glycol will not mix and work against each other to decrease corrosion protection, from deposits in the cooling system and cause damage to the cooling system and the radiator.

DO NOT use a low boiling point, alcohol type coolant solution.
The boiling point of alcohol is below the tractor minimum operating temperature; loss of coolant due to evaporation will result.

IMPORTANT: Always have a minimum of 50 percent ethylene glycol coolant in the cooling system at all times and at all ambient temperature ranges. DO NOT install more than 50 percent ethylene glycol in the cooling system unless the ambient air temperature will be less than -34°F. More than 50 percent ethylene glycol decreases heat transfer and will cause the engine surface temperature to be higher than normal.

Cleaning the Cooling System

IMPORTANT:NEVER PUT COOLANT IN A HOT ENGINE: THE ENGINE BLOCK OR CYLINDER HEADS CAN GET CRACKS BECAUSE OF THE DIFFERENCE IN TEMPERATURE BETWEEN THE METAL AND THE COOLANT.



Clean the cooling system each time the coolant is changed. See the Lubrication and Service Chart in this manual for recommended change intervals. Clean the system as follows:

1. Remove the hose to drain the coolant. Close the plug after the system is empty.

2. Install a good type of radiator cleaner and fill the system with clean water. Follow the instructions given with the radiator cleaner.

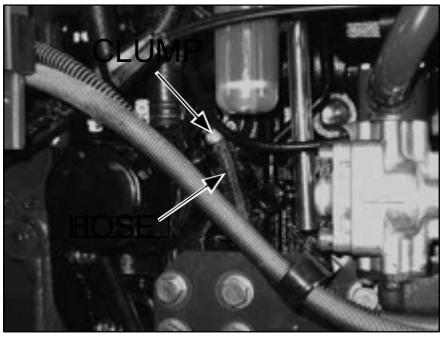
3. Remove the radiator cleaner solution. Flush the system with clean water.

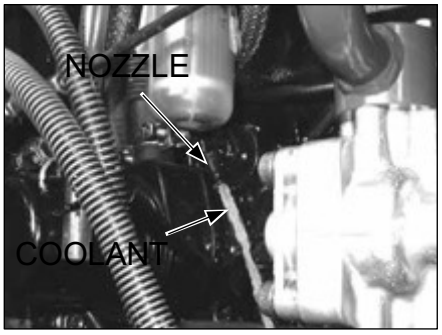
4. Fill the cooling system with the coolant solution specified in this manual. Install coolant system treatment (If required). See Coolant Solutions in this manual for more information.

5. Check the hoses, radiator, pump and reservoir bottle for leaks.

IMPORTANT: Never drain the coolant when the engine is hot.

NOTE: After the cooling system is completely filled, run the engine for approximately five minutes to remove all air from the system. Check the coolant level and add coolant if needed.





FUEL SYSTEM

WARNING
- Never refuel the machine when the engine is hot or running. Never smoke while refueling.
- Engine fuel is flammable and can cause a fire or an explosion. DO NOT fill the fuel tank or service the fuel system near an naked flame, welding, burning cigars, cigarettes etc.

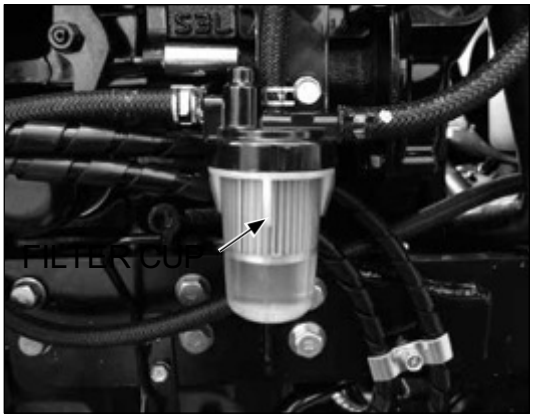
Service Specifications

Fuel Filter Cup Service Interval…… Every 10 Hours
Fuel Filter Element Change… ..... Replace when loss of power or misfiring occurs

This type of filter element cannot be cleaned. Change the filter element when the engine is misfiring or a loss of power is evident. It is necessary to remove the air from the system after each replacement.
Only a filter recommended by your Dealer should be used to be sure that it is both effective and capable of withstanding the required suction or pressure without damage to the filter element.
Fill the fuel tank at the end of each day to reduce condensation.

NOTE: DO NOT fill the fuel tank to its full capacity. Space is required for vapor expansion in the event of a temperature change. A tank filled to capacity may overflow if exposed to a rise in temperature or direct sunlight.

Water Removal from the Filter Cup



Before starting each day's work, check for water or sediment in the filter cup. If water or sediment is in the cup, close the fuel shut-off valve, remove filter cup, clean and reinstall.

NOTE: Be careful not to allow dirt, water and other foreign materials to get into the filter when cleaning the cup.

Diesel Fuel Specifications

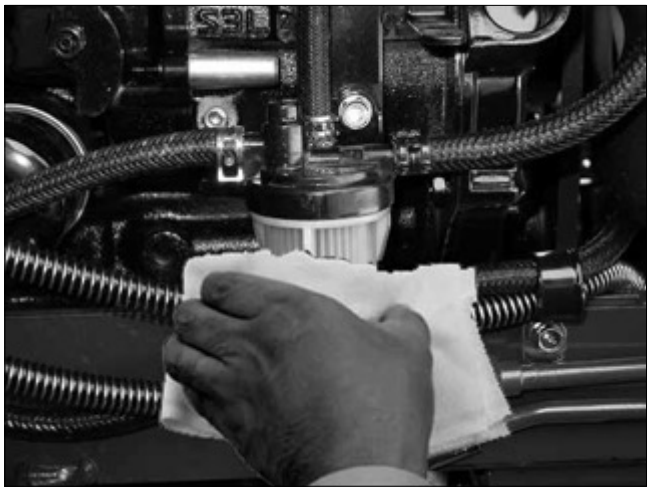
Use a good grade of Number Two Diesel Fuel in your Diesel Engine. DO NOT use other types of fuel. The use of other fuels will result in loss of engine power and high fuel consumption.

NOTE: When the temperature is very cold, the use of a mixture of Number one and number Two Diesel Fuel is permitted for a short period of time. See your fuel Dealer for winter fuel requirements in your area.

Fuel Filter Element Replacement

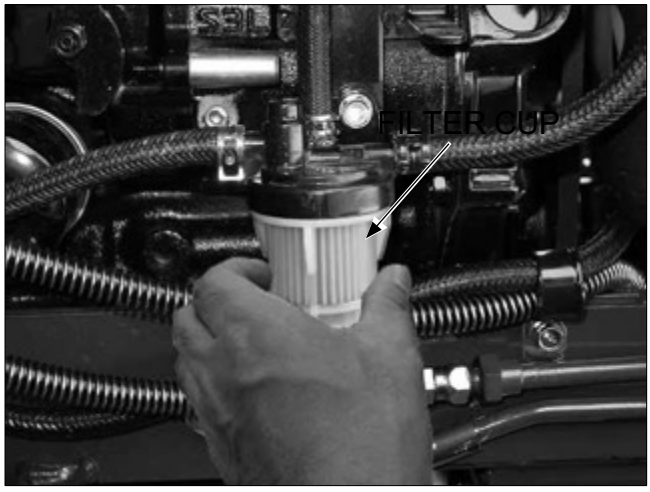
To replace the filter element, use following procedure:

STEP 1



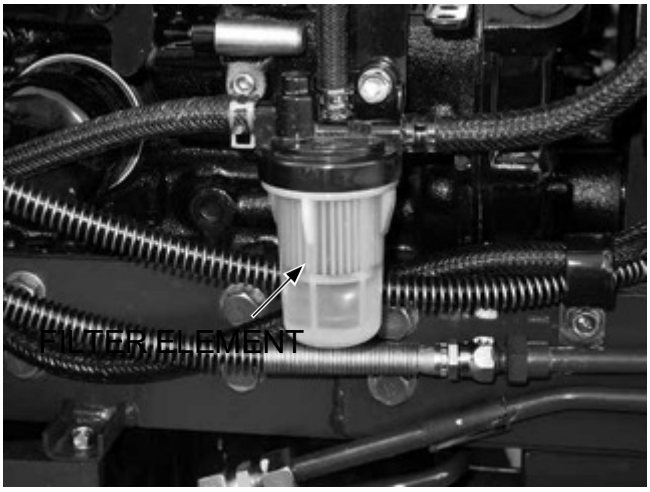
Clean the outside of the filter body and cup to prevent dirt or foreign materials from entering into the system.

STEP 2



Loosen the filter cup. Remove filter cup. Valve is closed, and fuel stop when put on and take off cup.Remove old filter element and clean inside of filter cup.

STEP 3



Install new filter element. Assemble filter cup and retaining nut to filter body.

NOTE: Be sure O-rings are in place on the filter body and filter cup.

STEP 4

Clean off the fuel from the engine. Start the engine to check for fuel leaks around the filter, lines and fittings.

NOTE: If the engine does not have power with a full load after you have done the filter service and removed the air from the system, see your Dealer to find and correct the cause.

Fuel System Air Removal

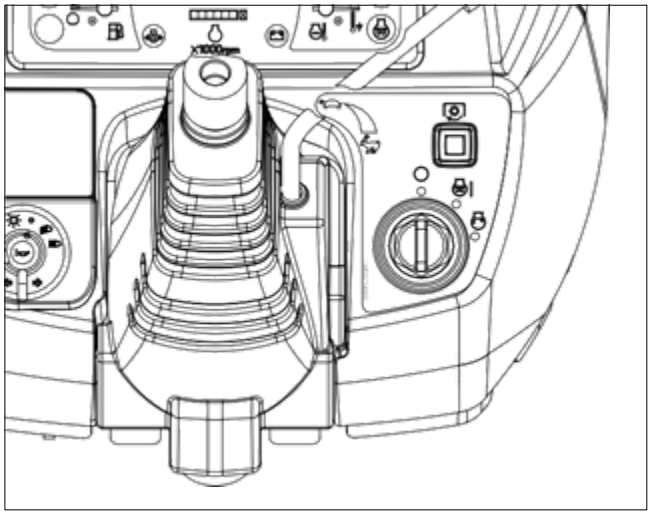
AIR MUST BE REMOVED FROM THE FUEL SYSTEM.
AIR CAN ENTER THE FUEL SYSTEM WHEN:

1. The engine stopped caused from lack of fuel.
2. The fuel filter has been replaced or the filter cup has been cleaned.
3. Any connections between the injection pump and fuel tank have been loosened or disconnected for any reasons.
4. The tractor has not been operated for long time.
5. The fuel pump has not operated correctly.

NOTE: This tractor has the function which discharges the air included in the fuel system automatically. The air exhaust procedure is as follows.

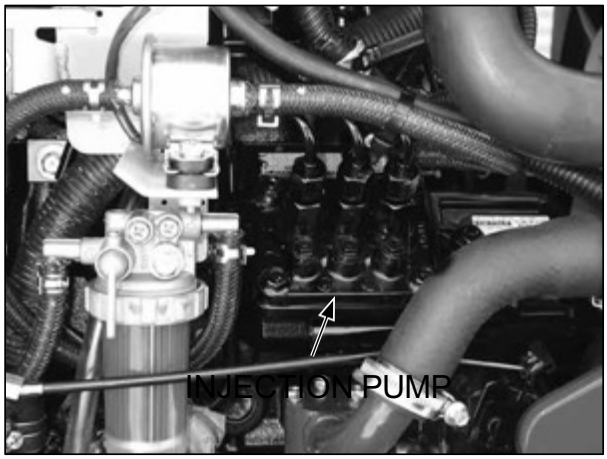
To remove air from the fuel system, turn off the engine and use the following procedures:

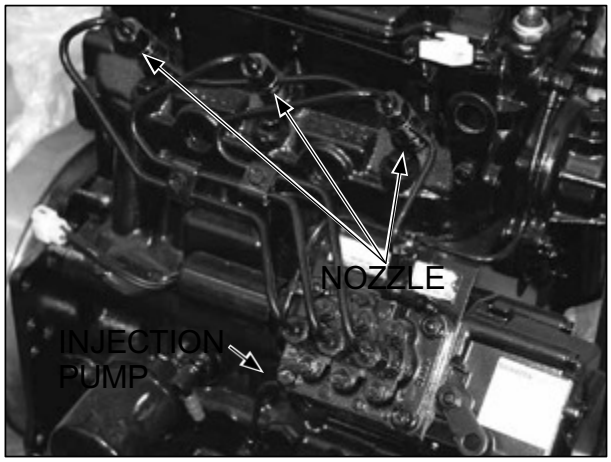
STEP 1



(1) If fuel tank is empty, refuel more than 5 liter (5.3 QTS).
(2) Turn the starter key switch to the position of [ ], and keep it for 10 seconds. (at [ ], engine doesn't start)
(3) Turn the starter key switch from [ ] to [ ], then engine starts.
(4) If engine doesn't start, repeat the (2), (3).

Fuel Injection Pump and Nozzle Check





The fuel injection pump and nozzles are precision units and must be serviced only by your dealer.

The injection pump is correctly set and sealed at the factory and should not require an adjustment. Whenever adjustment or repairs are necessary, see your dealer. DO NOT tamper with any of the pump units.

WARNING

- Hydraulic oil or diesel fuel leaking under pressure can penetrate the skin and cause injection or other injury.
- To Prevent Personal Injury:

1. Relieve all pressure, before disconnecting fluid lines.
2. Before applying pressure, make sure all connections are tight and components are in good condition.
3. Never use your hand to check for suspected leaks under pressure.
4. Use a piece of cardboard or wood for this purpose.
5. If injured by leaking fluid, see your doctor immediately.

AIR INDUCTION SYSTEM

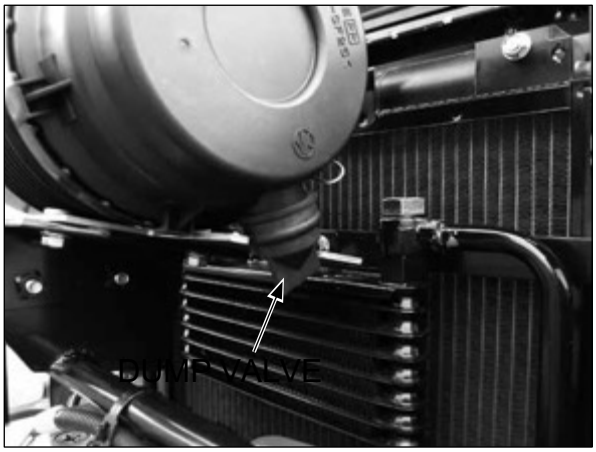
The air induction system components require service at different intervals according to local operating conditions.

Service Specifications

Dump Valve…… Clean daily or every 10 hours
Filter Element
Clean Element… .....When necessary
Replace Element… ..... After 10 cleanings or When necessary or yearly
System Inspection… ..... Every 200 hours or yearly whichever occurs first

Your tractor is equipped with a dry-type air cleaner with a replaceable element.

IMPORTANT: Service the air induction system at the given service intervals. Correct maintenance will make longer life of the engine. Keep all connections on the outlet hose tight.



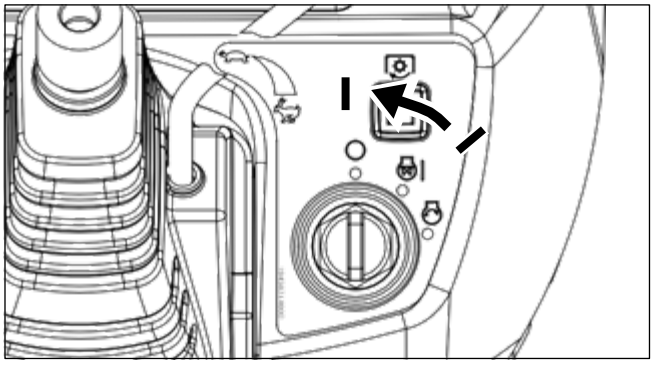
Dump Valve

The dust in the filter case should be dumped daily by using the dump valve when operating in extremely dusty conditions.

Air Filter Element Removal

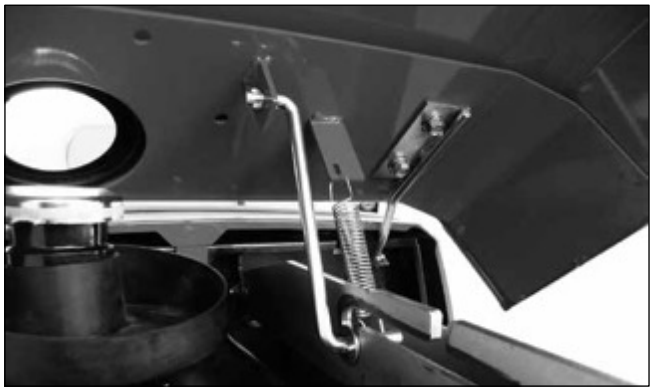
Avoid over servicing the air filter element. The filter element should be removed for cleaning only when restriction causes a power loss.

STEP 1



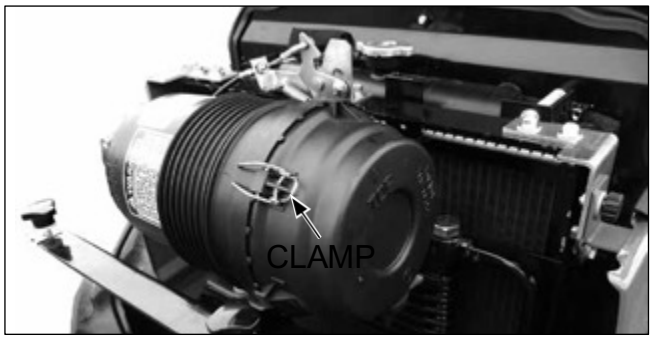
Stop the engine.

STEP 2



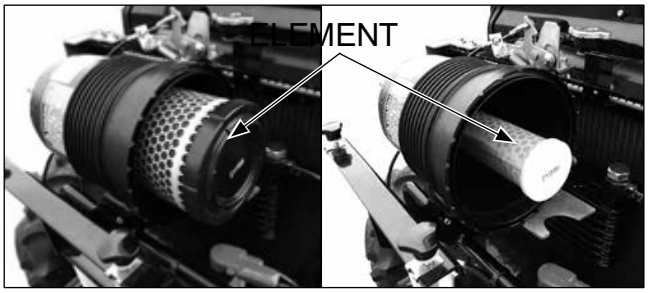
Open the hood.

STEP 3



When servicing the air filter element, unhook the clamp and remove element by pulling it straight out very carefully. Clean interior of canister.

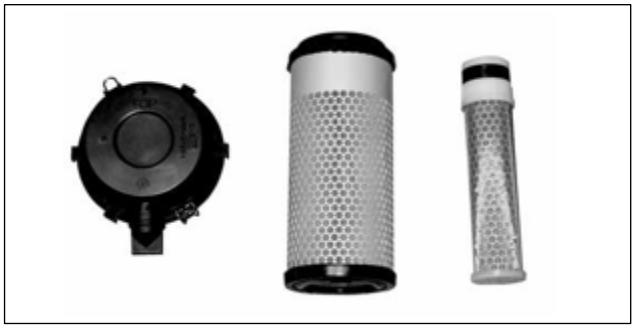
STEP 4



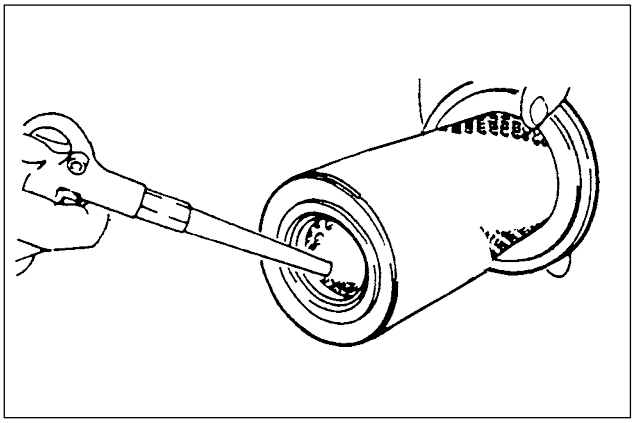
After replacing the new or cleaned element, install and tighten the wing bolt.

NOTE: Never attempt to remove the element from the air cleaner while the engine is running.

When installing the element, inspect the element gasket. If the gasket or element surface is damaged, replace the element immediately.



Element Cleaning

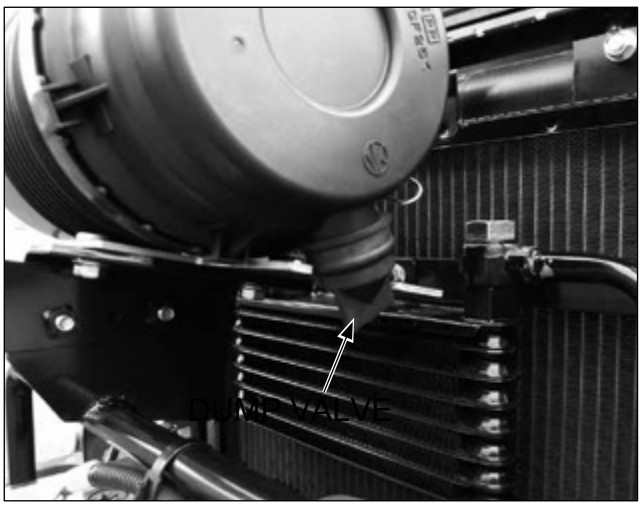


Use clean, dry compressed air up and down the pleats on the clean side (inside) of the element.
Continue this until the element is clean.

NOTE:

1. The paper element must be handled with care. DO NOT hit the element against a hard surface.
2. Air pressure at the nozzle must not exceed 689 kPa (100 psi).
3. It may be necessary to replace the element sooner if the time interval between servicing becomes short indicating the element dose not respond to cleaning (soot contaminated).

System Inspection



Check the dump valve and the all hoses for cracks and wear. Replace if needed. All the connections on the hoses must be tight. All the gaskets must be in good condition and the bolts must be drawn up tight.

NOTE: Inspect the hoses and connections after the first 50 hours of operation and replace when necessary.

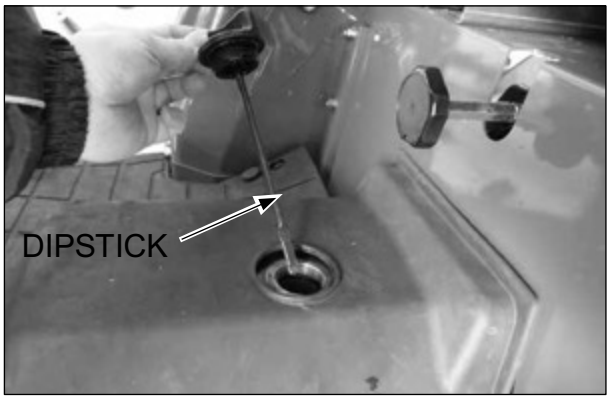
TRANSMISSION AND HYDRAULIC LUBRICATION

Service Specifications

Oil Level Check Interval ..... Daily
Oil Change Interval… ..... Every 200 hours.
Oil Capacity Gear Drive… ..... 33 Liters (35 QTS).
Hydrostatic Drive..... 34 Liters (36 QTS).
Oil Type Gear Drive… ..... HYDRAULIC TRANSMISSION FLUID
Hydrostatic Drive… ..... HYDRAULIC TRANSMISSION FLUID
Hydraulic System Check… ..... Yearly inspect for leaks, cracks and abrasion. Tighten fittings or replace as needed.

Transmission Oil Level

(Gear Drive)



To check the transmission fluid level, put the tractor on level ground.
Unscrew the filler cap with dipstick and wipe it clean. Check the level, DO NOT screw in cap when checking. If the fluid level is below the lower line of the dipstick, add the recommended fluid to raise the fluid level between the F (Full) and L(Low)marked position.

(Hydrostatic Drive)

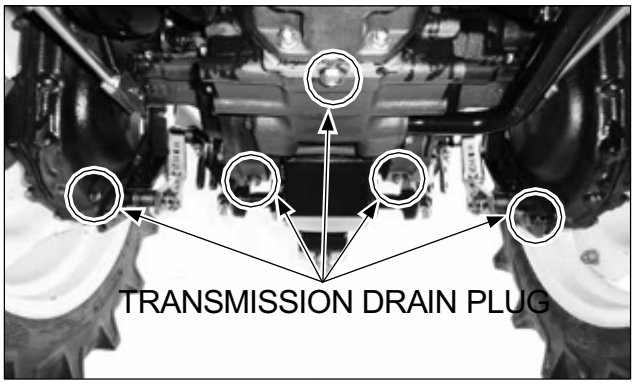
Before checking the oil level, at hydrostatic drive tractor run the engine for three to five minutes at 1500 RPM with the speed ratio control lever, range shift lever and PTO control lever in Neutral or OFF position. Afterwards, stop engine. Then check the oil level in the transmission.

To check the transmission oil level, put the tractor on level ground.

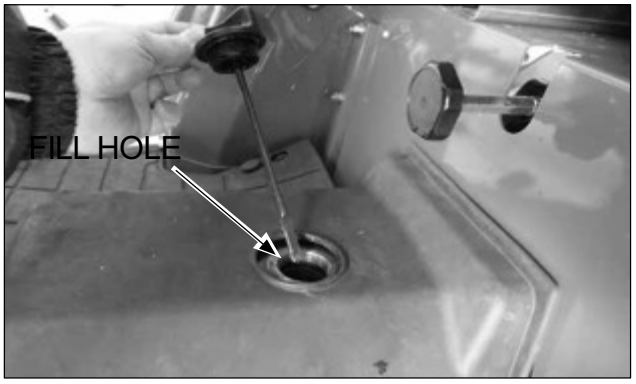
Check the oil level on the transmission dipstick. If the oil level is below the lower line of the dipstick, add the recommended oil to the transmission to raise the oil level to the F (FULL) marked position.

Transmission Oil Change

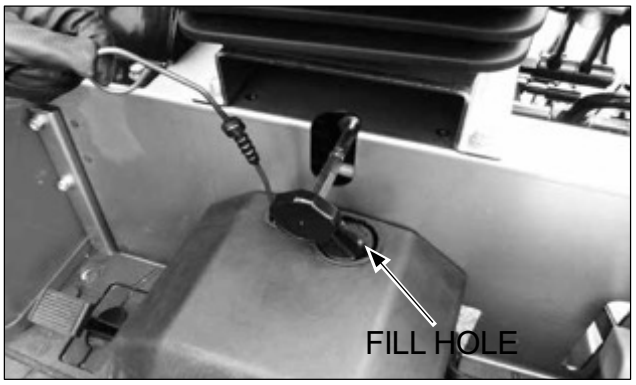
Oil Change Interval..... Every 200 hours



(Gear Drive)



(Hydrostatic Drive)



To change the transmission oil, use the following procedure:

1. Put the tractor on level ground, apply the park brake and stop the engine. Move the range shift lever to L position.

2. Remove the drain plugs from the transmission case. (5 pieces)

NOTE: For best results, drain the oil when the oil is warm.

3. Replace the hydraulic filter. See Hydraulic Filter in this manual.

4. Replace hydrostatic filter if needed, see Hydrostatic Filter (Hydrostatic Drive) in this manual.

5. Install the drain plugs with a seal washer and tighten to a torque of 39 to 44 N-m (29 to 33 Lbf-ft).

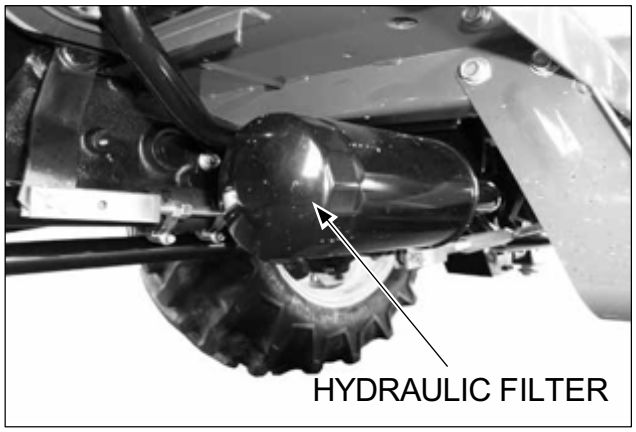
6. Add the recommended oil through the fill hole and check the oil level.

7. Start the engine and check for leaks.

8. Recheck the oil level after stopping the engine. If the oil level is low, add oil up to the specified level.

Hydraulic Filter (Gear and Hydrostatic Drive)

Change Interval…..... Every 300 hours (See NOTE)



NOTE: Replace the hydraulic filter after the first 100 hours of operation and every 300 hours of operation thereafter. Your Dealer has approved genuine filters. DO NOT use other type filters.

CHANGE THE HYDRAULIC FILTER AS FOLLOWS:

1. Put the tractor on level ground, move the range shift lever to the L position and apply the park brake.

2. Put an oil canister under the hydraulic filter.

3. Turn the filter counterclockwise to remove. Use a filter wrench if necessary.

4. Apply clean oil to the O-ring on the new filter.

5. Install the filter. Turn the filter until the O-ring comes in contact with the case surface. Tighten the filter an additional 2/3 turns by hand.

IMPORTANT: DO NOT use a filter wrench to install the hydraulic filter.
When the filter is too tight, you can cause damage to the O-ring and filter.

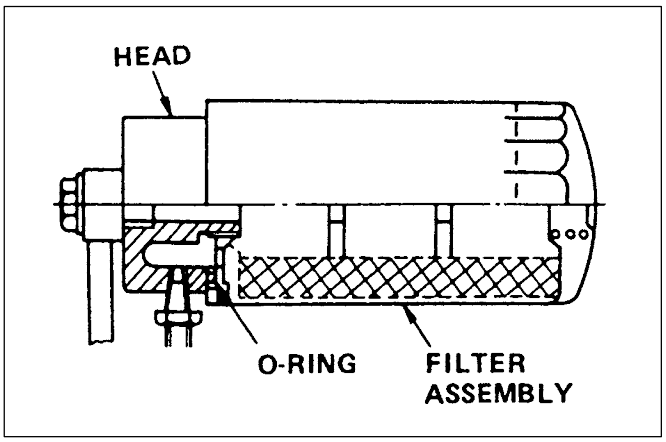
6. Wipe around the hydraulic filter with a dry cloth.

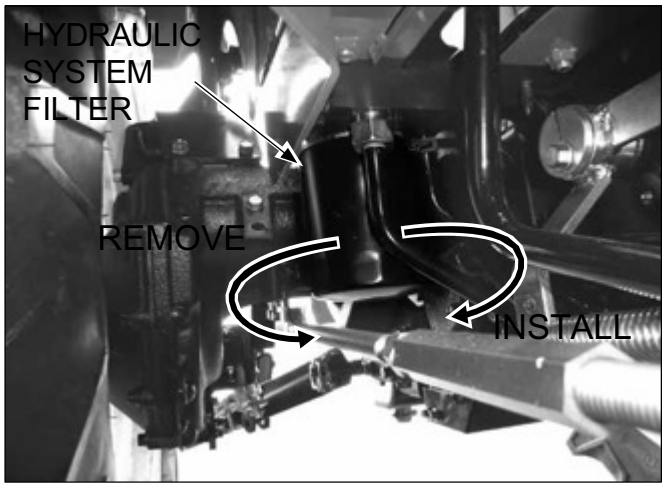
7. Change the transmission oil. See Transmission Oil Change in this manual.

Hydrostatic System Filter (Hydrostatic Drive)

Filter Change Interval… Every 300 hours (See NOTE)

NOTE: Change the filter after the first 100 hours of operation and every 300 hours of operation thereafter. Replace the filter more frequently when operating under unusual dirt and dust conditions. Your Dealer has approved genuine filters. DO NOT use other type filters.





When the transmission fluid filter needs changing, change the filter as follows:

1. Drain the transmission oil. See Transmission Oil Change in this manual.
2. Remove the hydrostatic system filter by turning it counterclockwise. Use a filter wrench, if necessary.
3. Apply clean oil to the O-ring on the new filter.
4. Install the new filter. Turn the filter clockwise until the O-ring comes in contact with the filter head surface. Tighten the filter an additional 2/3 turns by hand.
5. Add the transmission oil through the fill port and check the oil level.
6. Run the engine and check for leaks.
7. After stopping the engine, check the oil level. If it is low, add clean oil.

HOSES

DANGER: For fire prevention
- Check if fuel is leaking from damages (crack, torn part, looseness of joint) of the fuel hose, peeling of external material and joint, and if leaking, replace it immediately to prevent fire.

WARNING: For burn, fire, and injury prevention
- Check for looseness of joint of the radiator hose. If the radiator hose comes off during operation, hot water blows up.
- Check for looseness of joint of the power steering hose and oil leakage. If oil leaks, the power steering does not function, causing an accident.

Service Specifications

Fuel hose and power steering hose change interval… .....Every 2 years

Inspection

Check the fuel hose, radiator hose, and power steering hose for fuel, water, and oil leakage due to deterioration and damages and the tightening band for slackness.

After Replacement of Power Steering Hose

After replacing the power steering hose, turn the steering wheel to left and right completely to release the air in the hydraulic circuit.

After Replacement of Fuel Hose

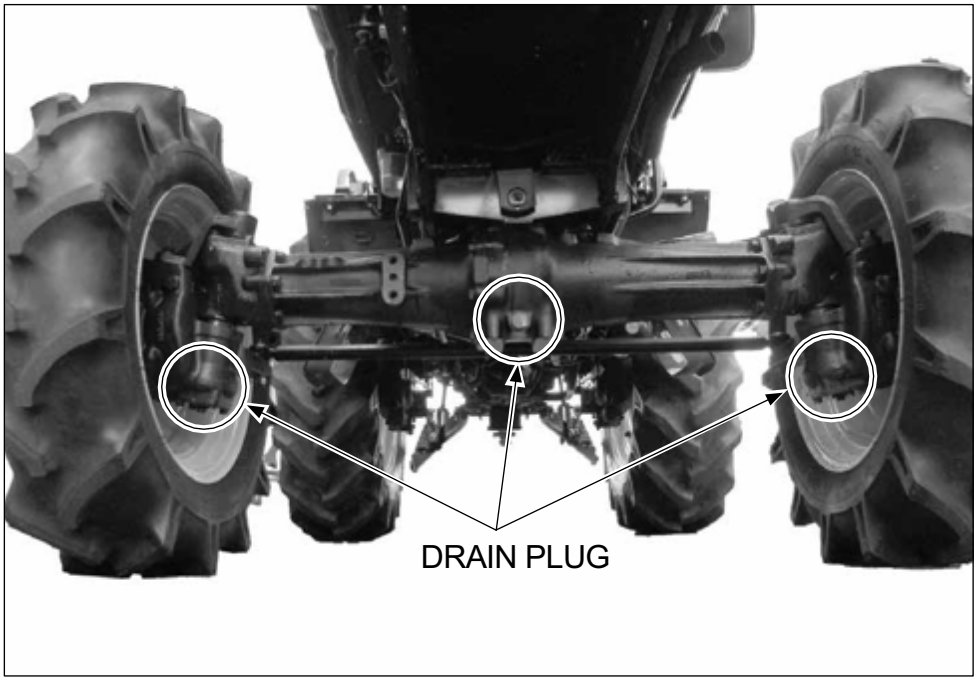
After the fuel hose is replaced, release the air. (see P112)

FRONT AXLE LUBRICATION (MFD)

Service Specifications

Oil Change Interval..... Every 200 hours (See NOTE)
Oil Capacity..... 4.0 Liters (4.2 QTS)
Oil Type ..... Hydraulic Transmission Fluid

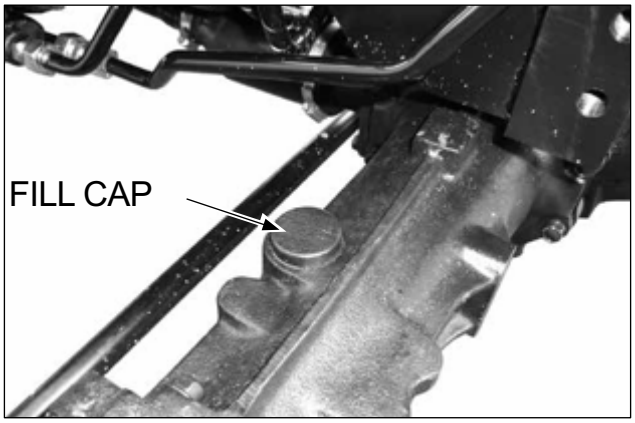
NOTE: Change the oil after the first 100 hours of operation and then every 200 hours of operation.

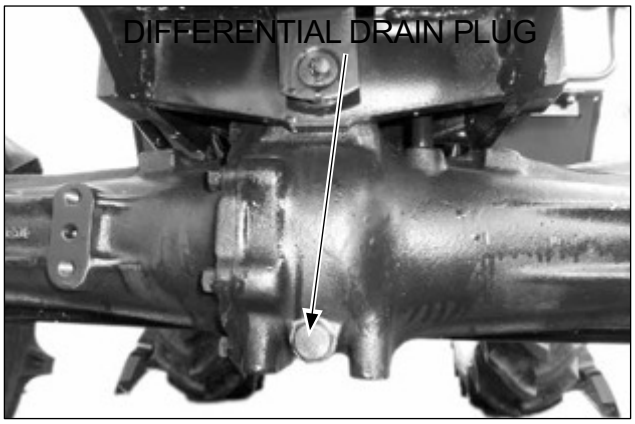


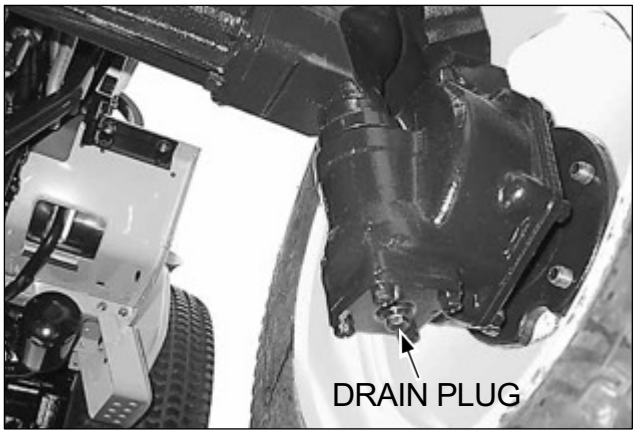
Front Axle Oil Level

To check the front axle oil level, put the tractor on level ground. Remove the oil level plugs located on the rear of the both gear cases. If the oil level is low, add the recommended oil type through the fill hole located on the RH side of axle housing until the oil begins to flow out of the level plugholes.

Front Axle Oil Change







1. To change the front axle oil, put the tractor on level ground. Put the range lever in L, engage the park brake and stop the engine.

2. Remove the fill cap located on the right side of axle housing, the differential drain plug located in the bottom of the housing and the gear case drain plugs located on the bottom of both side gear cases to drain the oil.

3. Install the differential and both gear cases drain plugs. Remove the oil level plugs located on both gear cases. Add the recommended oil through the fill hole until the oil begins to flow out the level plugholes. Install the oil level plugs and the fill cap.

NOTE: For best results, drain the oil when the oil is warm.

COOLING SYSTEM

Grill Screens and Radiator Area

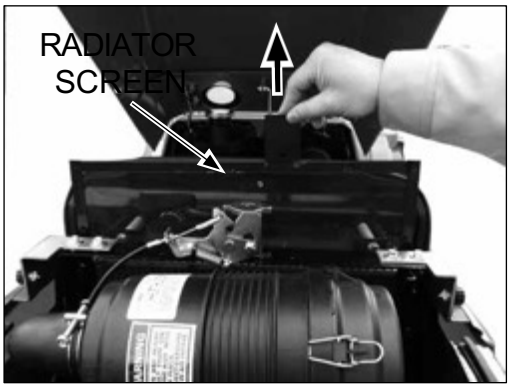
Grille Screens and Radiator Area
Service Interval…..Every 50 hours or more frequently if required.

To clean the radiator screen, put the tractor on level ground, apply the park brake and stop the engine.

STEP1

Open the hood.

STEP2



Lift the radiator screen.

STEP3
Clean the radiator screen and the surrounding area.

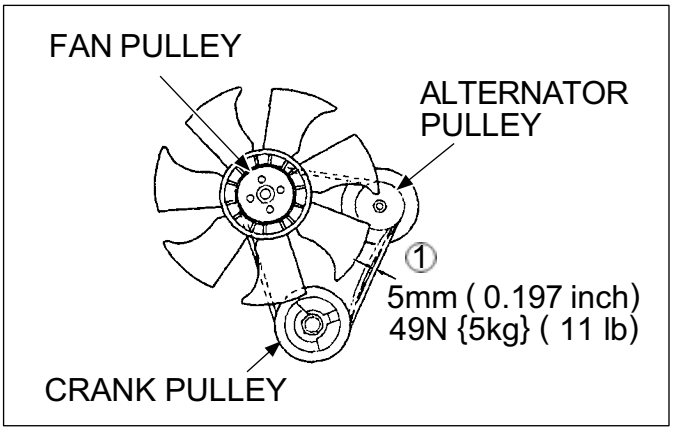
STEP4
Install the radiator screen.
Lower the hood.

Fan Belt Adjustment

Fan Belt Tension Check Interval… ..... Daily or after 10 Hours

NOTE: Adjust the belt tension after the first 50 hours of operation and replace when it needed.

Measure the fan belt for correct tension. Check to see if the belt deflection is about 5mm (0.2 inch) when pushing the belt with 49N{5 kg} (11 lb) load at point ①.



WARNING
• Rotating fan and belts. Contact can injure. Keep clear.

To adjust the fan belt tension, loosen the adjusting bolt and pivot nut of the alternator. Move the alternator away from the engine until as shown above. Tighten the adjusting bolt and pivot nut to a torque of 16 N-m (12 Lbf-ft).

NOTE: Too much tension will cause alternator and water pump bearing failure and belt wear. Too little tension will cause a decrease in alternator output and belt wear.

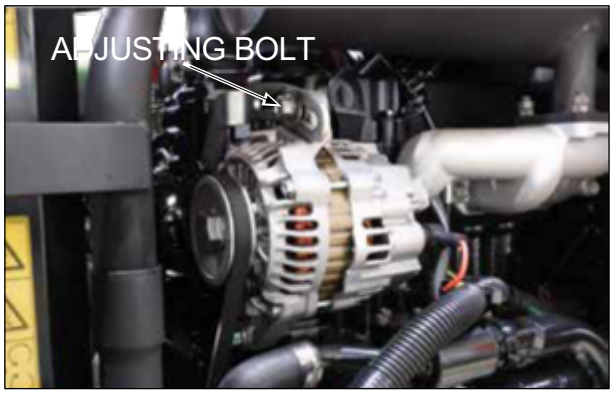
Fan Belt Replacement

To replace the fan belt, use following procedure:

STEP1

Open the hood and remove the side cover.

STEP2



Loosen the alternator-adjusting bolt.

STEP3

Loosen the alternator pivot nut and push the alternator toward the engine to remove the belt.

STEP4

Install new fan belt and adjust the belt tension. See Fan Belt Adjustment in this manual for instructions.

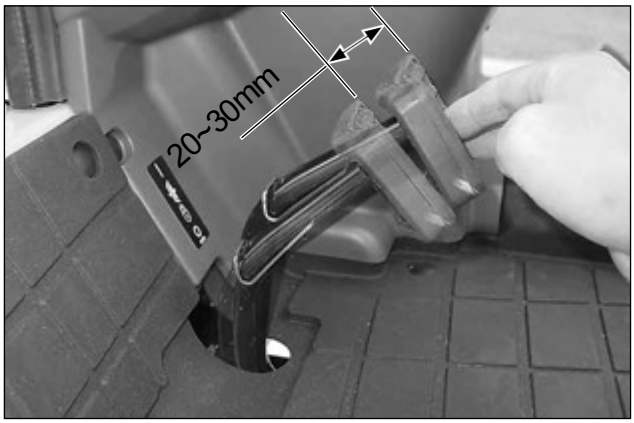
CLUTCH PEDAL ADJUSTMENT

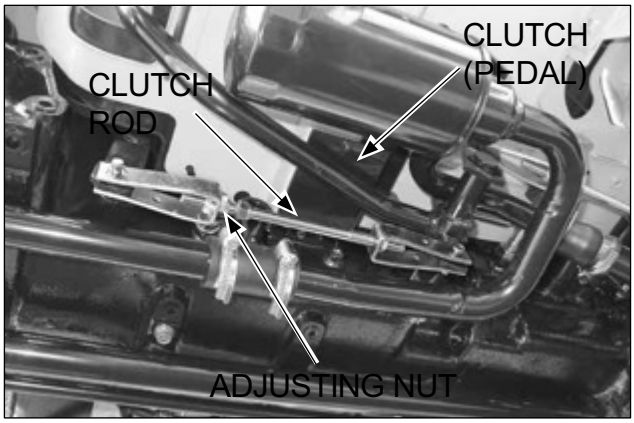
Service Specifications

Clutch Pedal Check and Adjustment Interval…… Every 200 hours of operation or yearly
Free Pedal Movement ..... … 20-30mm (0.8-1.2 inch)

Free Movement Adjustment

Clutch pedal free movement is very important and must be checked at the recommended intervals. If there is no free movement, the clutch disc will wear quickly. If there is too much free movement, the clutch will not disengage correctly and the transmission will be difficult to shift.





1. Put the tractor on level ground, move the range shift lever in the L position, apply the park brake, stop the engine and adjust the clutch pedal free movement as follows:

2. Push the clutch pedal down by hand, to measure the amount of pedal free movement.

3. The pedal free movement must be within the specification shown in the photograph.

4. Loosen the lock nut of clutch rod.

5. Adjust the pedal free movement as necessary with the adjusting nuts on the clutch rod.
   - To increase free movement, loosen the lock nut and turn the adjusting nut in.
   - To increase free movement, loosen the lock nut and turn the adjusting nut out.

6. Tighten the nuts to a torque of 44 to 54 N-m (32 to 40 Lbf-ft).

BRAKE PEDAL ADJUSTMENT

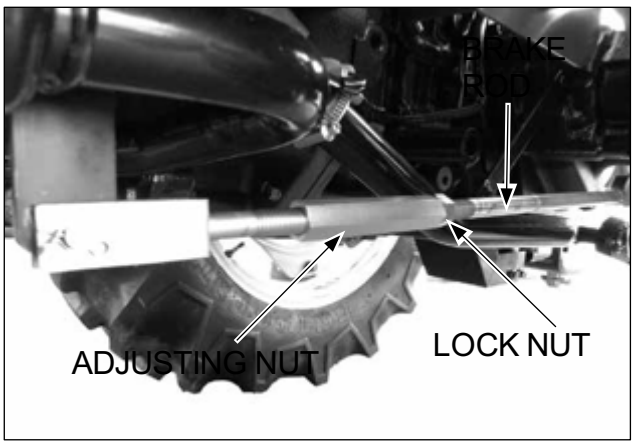
Service Specifications

Brake Pedal Check and Adjustment Interval…..Every 200 hours or yearly
Free Pedal Movement Specification… .....35 to 45mm (1.38 to 1.77inch)

Brake pedal free movement is very important and must be checked at the recommended intervals. If there is no free movement, the brake disks will wear quickly.
If there is too much free movement, accidents may occur. If there is not the same free movement between LH pedal and RH pedal, it may cause serious accidents.

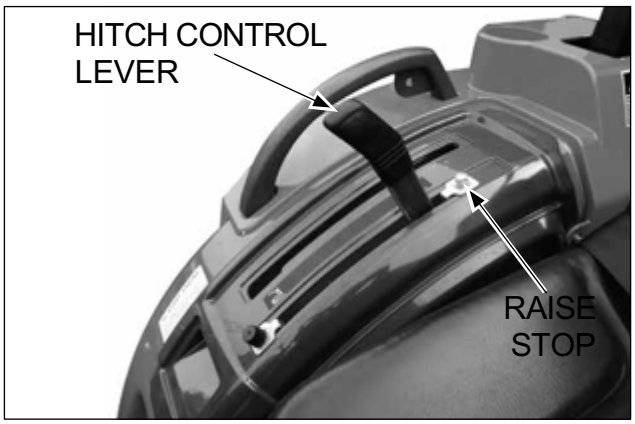
Put the tractor on level ground, move the range lever in the L position.
Stop the engine.

Loosen lock nut and rotate the brake rod to make a free play of 35 to 45 mm (1.38 to 1.77 inch.) at the brake pedal.
(Free movement between LH pedal and RH pedal : not more than 5mm(0.2 Inch)).
With this free movement is obtained, tighten the lock nut.

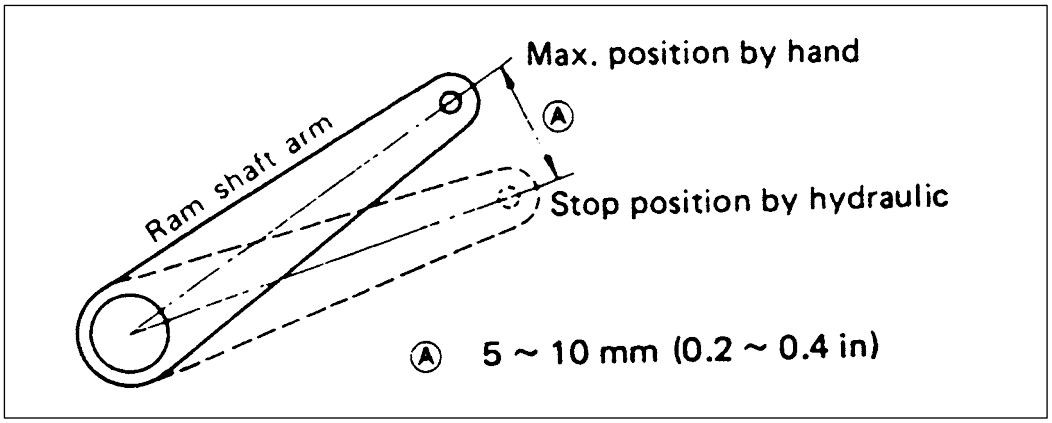


Confirm that the right and left brakes operate simultaneously by running the tractor.
If not, adjust both of them by means of the brake rods.

RAISE STOP SETTING POSITION



If raise stop setting position is incorrect, the hydraulic pump might be damaged. Therefore carefully adjust as below.



1. Disconnect an implement from the hitch. (See Disconnecting Implement from Hitch in this manual.)

2. Disconnect LH and RH lifts rods from the lift arms.

3. Start the engine.

4. Move the hitch control lever rearward to raise the lift arm to the maximum lifting position.

5. With the arm so raised, stop the engine.

6. Check a free play of the lift arm to be 5 to 10 mm at the top of the lift arm by hands.

7. If the free play is insufficient, move the raise stop forward and check again with the same procedure as before.

ELECTRICAL SYSTEM

GENERAL SERVICE INFORMATION

Alternator Charging System

Follow these general rules to prevent damage to the electrical system:

1. Before working on the electrical system, disconnect the battery cables.

2. DO NOT make a reverse battery connection.

3. When you use an auxiliary for starting, connect positive-to-positive and negative on the auxiliary to the tractor side rail as a ground.

4. When charging the tractor battery, disconnect the battery cables from the battery terminals. DO NOT use a battery-charging machine for starting the tractor.

5. Never operate the tractor when the battery cables are disconnected.

6. When you do maintenance on the engine, prevent foreign material from entering alternator.

7. If you must do welding, disconnect the battery. Put the welder ground cable as close as you can to the weld area. DO NOT put the ground cable where the current can flow through bearings or along channels with wire harnesses.

SPECIFICATIONS

Electrical System

Type of System.....12 Volt, Negative Ground
Battery .....12 Volt, 490 CCA
Alternator .....12 Volt, 50 Ampere Output
Voltage Regulator ..... IC Built in Alternator
Starter Motor.....12 Volt, 1.7 kw with Solenoid Switch
Head Lamp .....55/60 Watt
Front Flasher Lamp .....21 Watt
Position Lamp.....5 Watt
Rear Flasher Lamp.....21 Watt
Brake Lamp .....21 Watt
Rear Position Lamp .....5 Watt
Registration plate Lamp.....10 Watt
Panel Lamp .....3.4 Watt
Turn Indication Lamp .....1.7 Watt
Indicator Lamp.....1.7 Watt

FUSE(A) DETAILS	
(a)15A	HEAD LAMP
(b)10A	ALTERNATOR, GLOW CONTROLLER ELECMAGNET PUMP PANEL INDICACTOR
(c)10A	TAIL LAMP, REGISTRATION PLATE LAMP POSITION LAMP, HORN
(d)10A	BRAKE LAMP
(e)10A	ECU, ELEC GOVERNOR
(f)15A	EXTRA POWER SUPPLY PTO VALVE

FUSE(B) DETAILS	
(g)10A	MAIN
(h)10A	HAZARD
(i)15A	ECU BAT

BATTERY

Auxiliary Battery Connections

DANGER

- When charging the battery, it generates a great amount of high-flammable hydrogen gas and it may cause fire explosion. Keep fire away and take caution for not generating any sparks.
- When charging the battery, remove the battery from the tractor.
- When setting on and off the battery, stop the engine and remove the key.
- Charge the battery at well ventilated place so as not to accumulate hydrogen gas.
- When charging the battery, remove all the vent plugs. (In case of battery requiring water refilling)
- The electrolyte is highly-venomous dilute sulfuric acid; therefore, be careful not to spill out. The electrolyte may cause a loss of vision or burning.
- When charging, the electrolyte may scatter. Protect the eyes with such as glasses and take caution not to let it spilled on the clothes or skin.
- When the electrolyte is attached to eye, skin, or clothes, wash well with a lot of water and drink a lot of water if swallowed. If it enters eye or is swallowed, have a medical diagnosis.
- If the battery is used or charged with the electrolyte level indicating below the [LOWER LEVEL] shown on the side of battery, the battery may explode. Immediately refill to the level between the [LOWER LEVEL] and [UPPER LEVEL].

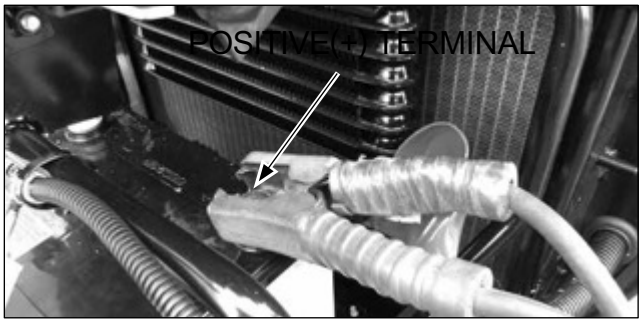
WARNING

- Engine can start with transmission in gear when neutral or safety start switch is by-passed:

1. DO NOT connect across terminals on starter.
2. Attach a booster battery by connecting the positive terminal of the booster battery to the "positive terminal" provided or to the positive terminal of the machine battery. Connect the negative terminal of the booster battery to the chassis of the machine.
   Then use recommended starting procedures from operators seat.
3. When necessary repair electrical system components promptly so that "jump starting" will not be attempted.
   Machine run-away can cause injury or death to operator and bystanders.

When connecting an auxiliary battery or charger to the tractor battery, make sure you connect positive-to-positive and negative on the auxiliary battery to the tractor side rail as a ground.
DO NOT connect auxiliary battery cables across the terminals of the starter. Start the engine from the operator's seat.

IMPORTANT: This is the only safe method to start the tractor engine with an external power supply. Any other method of starting can cause injury or death to the operator or other persons.

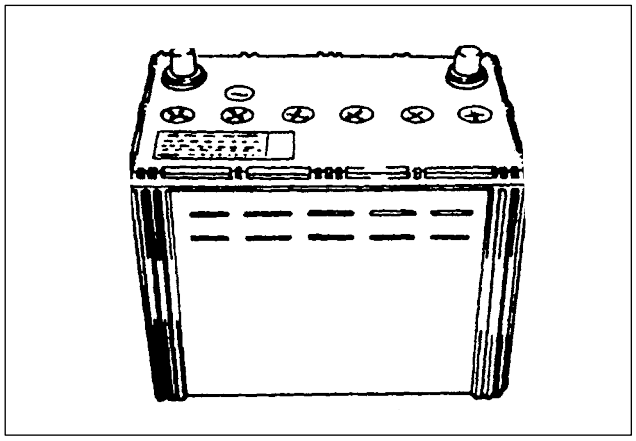


Connect the positive (+) cable clamp of the auxiliary battery to the positive cable terminal of the tractor battery.

Connect the negative (-) cable clamp of the auxiliary battery to the tractor side rail as a ground.

IMPORTANT: Always connect the negative cable last and disconnect the negative cable first to avoid a spark at the battery. A spark can cause a battery explosion and cause injury.

Battery Cables and Terminals



The battery Terminals must be kept clean and tight. A good method to clean terminals is to use Battery Saver. If Saver is not available, remove all corrosion with a wire brush, then wash with a weak solution of baking soda or ammonia. Put some petroleum jelly or light grease on terminals to prevent corrosion.

Removal and Installation of Battery

To remove the battery, disconnects the battery cables and remove the battery bracket. When the battery is installed, make sure the cables are installed on the correct terminals. This is a 12-volt,
negative ground electrical system and must be so connected.

NOTE: When removing the battery, disconnect the negative cable from the battery first and when install the batter, reconnect negative cable last for safety reasons.

IMPORTANT: DO NOT start or operate the engine with the electrical system not completely connected.

When Charging the Battery

IMPORTANT: Battery can explode during boosting or charging. Always wear proper eye protection, such as a safety goggles.

If the electric circuit inside the battery is broken, charging can generate a spark inside the battery, which can cause it to explode. If the battery is discharged, and the reason for discharge is unknown and if the lamps or horn DO NOT indicate some battery voltage, check the battery with a volt meter for an open circuit using following procedure.

1. Disconnect the negative (-) cable.
2. Connect the voltmeter across battery terminals.
3. If there is no voltage present, an open internal circuit is indicated.
   Replace the battery.
4. If voltage is present, the battery is OK to charge. Charge the battery with a current of 4 amperes for 5 to 10 hours. To charge the battery quickly for urgent need, use a current amperes in accordance with battery manual. A current larger than specified will cause liquid overflow due to foaming.
5. The specific gravity of electrolyte of a fully charged battery is 1.280 at 20°C (68°F).

NOTE:

1. If using a battery charger, be certain the charger is turned off before connecting to the battery.
2. Charge the battery in a well ventilated area.
3. DO NOT attempt to charge a frozen battery.

WARNING

- When working around storage batteries, remember that all of the exposed metal parts are "live". Never lay a metal object across the terminals because a spark or short circuit may result.

When Battery is Not in Use

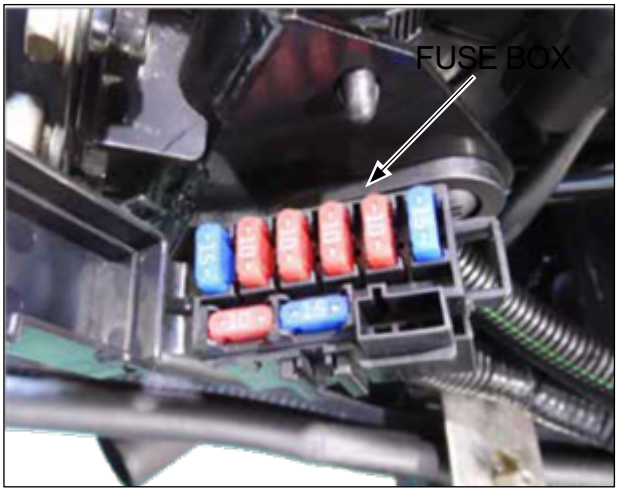
When the tractor is not in use, the battery will need a charge every three mouths to keep the specific gravity at or above 1.240. A storage battery not in use will slowly discharge. A battery that has discharged can freeze at low ambient temperature and cause damage to the battery and tractor.

FUSES

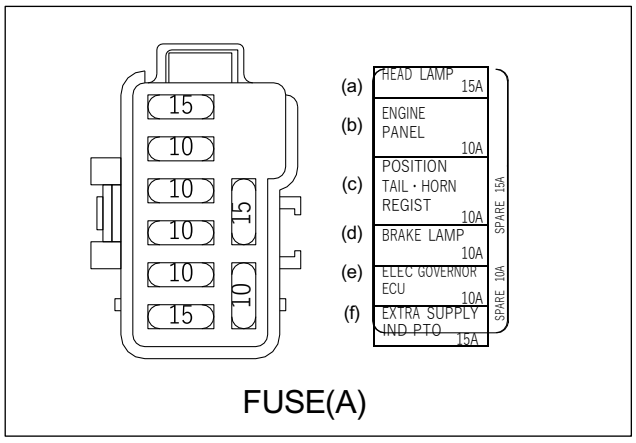
A fuse is provided in order to prevent accident in case there is an error in the wiring circuit.
When an error is recognized in electric system during operation, check the fuse.

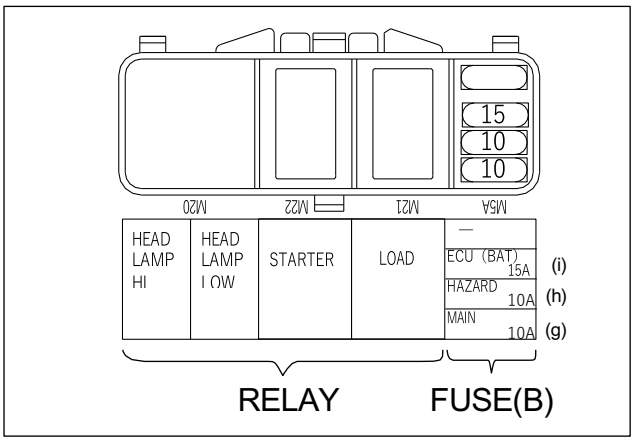
Fuse Box

Cartridge type fuses are used for headlamps, rear red lamps, instrument lamps, turn signals and flasher lamps, and rear work lamps (if equipped).
The fuses are in the fuse box located at left side of engine room.
If a short circuit occurs, the fuse will burn out and break the circuit preventing damage to the electrical system.



When opening the lid of the fuse box, push the lock part and the lid is opened.



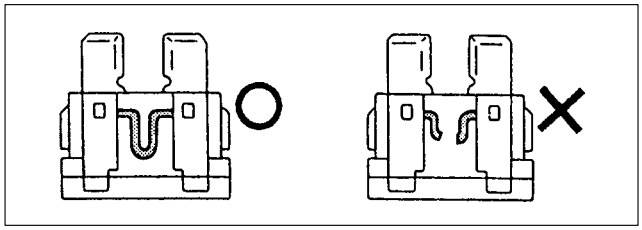


Fuse Replacement

WARNING: For fire prevention
- Do not use a fuse with capacity different from the one for the attached fuse. Also, do not use a wire or wrapping foil in the place of the fuse. If used, it will cause a overheating of the wire.

(1) Set the key to <O>.
(2) Remove the fuse.
(3) If the fuse shows as the X marked on the right side of the drawing, the fuse is burnt out.

Replace with a spare fuse



NOTE:
If the fuse continues burnt out after replacement, request a check to the dealer.

Line Fuse

If the electrical circuit is accidently grounded or a reverse battery connection is made, the line fuse located on the LH side of the engine will burn out and break the circuit to prevent to damage the wiring harness and alternator charging system.
If electrical problems occur, the line fuse must be checked for continuity to determine if one of the circuits is broken, see your dealer to replace and correct.

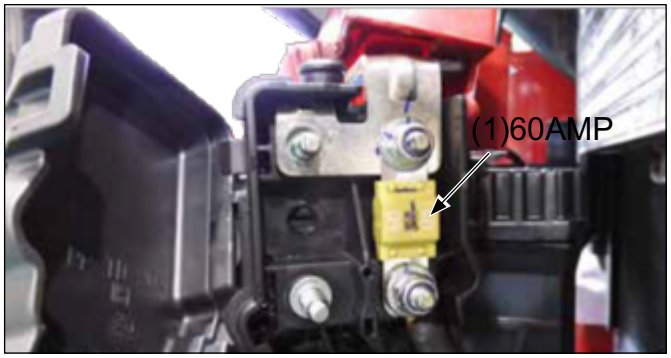


Fig:Protection of the main electrical machinery circuit

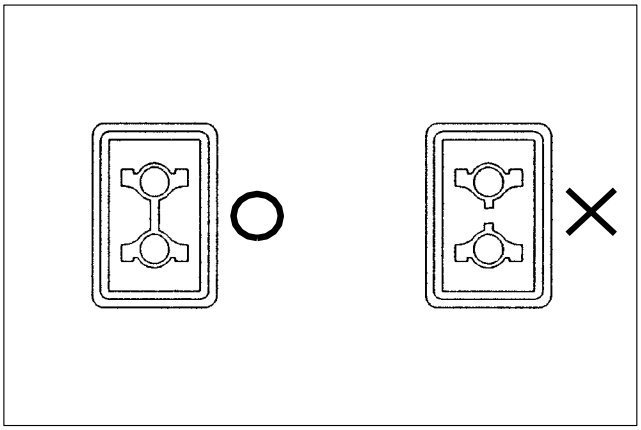
NOTE:
Exchange of the fuse is performed by opening the lid.

Replacement of Fuse (For Line Fuse)

WARNING: For fire prevention
- Do not use a fuse with capacity different from the one for the attached fuse (for line fuse). Also, do not use a wire or wrapping foil in the place of the fuse (for line fuse). If used, it will cause a overheating of the wire.

(1) Remove the battery (-) terminal.

(2) If the fuse (for line fuse) shows as the X marked on the right side of the below drawing, the fuse is burnt out. Replace with a spare fuse (for line fuse)



NOTE:

If the fuse burnt out, request a check to the dealer.

LONG-TERM STORAGE

STORING THE TRACTOR

When your tractor is not to be used for some time, it should be stored in a dry and protected place. Leaving your tractor outdoors, exposed to the elements, will shorten its life. Follow the procedure outlined below when your tractor is placed in storage for periods up to approximately six months.
See your Dealer for the procedure on longer storage periods.

A. Store the tractor so the tires are protected from light. Before storing the tractor, clean the tires thoroughly, Jack up the tractor, when it is to be out of service for a long period. If not jacked up, inflate the tires at regular intervals.

B. Run the engine long enough to thoroughly warm the oil in the crankcase, and then drain the oil. Change the oil filter as instructed in Engine Oil Filter. Refill the crankcase with new oil as specified in Engine Oil Selection in this manual and run the engine for five minutes.

C. Fill the fuel tank with a good grade of Number Two diesel engine fuel.
If this grade has not been used regularly, drain the fuel and refill. Run the engine for about five minutes to circulate the fuel through the injection system.

D. Drain flush and fill the cooling system with an antifreeze mixture ratio to protect the engine to the lowest anticipated temperature or a minimum of 50 % antifreeze and add cooling system conditioner. See COOLING SYSTEM in this manual.

E. DO NOT remove the battery from the tractor, except for prolonged storage at below freezing temperature. The battery should be fully changed to prevent freezing of electrolyte. Disconnect the negative ground cable at the battery to prevent possible discharge.

F. Clutch assembly may become bound together if a tractor is not used for an extended period of time. A clutch lock latch is provided on your tractor to lock the clutch in the disengaged position and should be used to prevent this condition if your tractor is not used for an extended period of time.

REMOVING FROM STORAGE

Be sure that the grade of oil in the engine crankcase is as specified in Engine Oil Selection in this manual.

A. Loosen the fuel tank drain plug and fuel filter cup, and be sure all water and sediment have drained from the fuel system before closing.
Tighten the drain plug and replace the filter cup.

B. Check the level of the coolant in the radiator.

C. Check engine oil level.

D. Check hydraulic fluid level.

E. See that the battery is fully charged and that the terminal connections are clamped tightly.

F. On hydrostatic drive tractors, follow the same procedure for starting as Starting Procedure for Hydrostatic Drive Tractors after Transporting on truck or flatcar in this manual.

G. Start the engine and let it run slowly.

IMPORTANT: Keep the doors wide open and move the machine outside of the storage room immediately to avoid danger from exhaust fumes. DO NOT accelerate the engine rapidly or operate it at high speed immediately after starting.

CAUTION AT VEHICLE WASHING

If the pressure washer is operated incorrectly, it may cause an injury or damage, breakage, and failure of the tractor. Refer to the operator's manual and labels of the pressure washer for correct operation.

WARNING

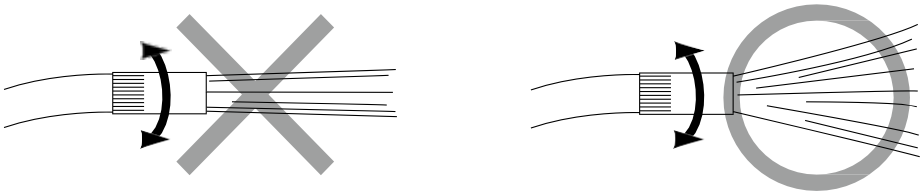
• For burn, fire, and injury prevention:

Diffuse the washing nozzle so as not to damage the tractor and wash it more than 2m away from it. If sprayed directly or washed inappropriately close to the tractor, the followings may occur.

1. It may cause a fire due to damage and disconnection of coating of electric wiring.
2. Highly compressed oil may be sprayed due to damage of the hydraulic hose, and it may damage the tractor.
3. It may cause damage, breakage, or failure of the tractor.

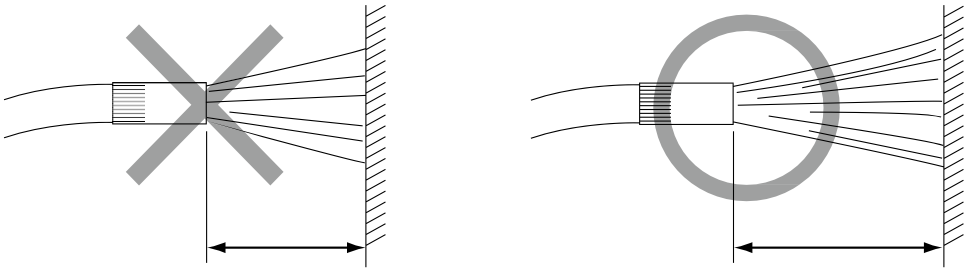
e.g.) (1) Peeling of stickers and labels
(2) Failure by entry to electric components or engine and radiator
(3) Damages of rubber parts such as tire and oil seal, plastic parts such as decorative cover, and glasses.
(4) Peeling of paint and coating

DIRECT CAR WASHING STRICTLY PROHIBITED



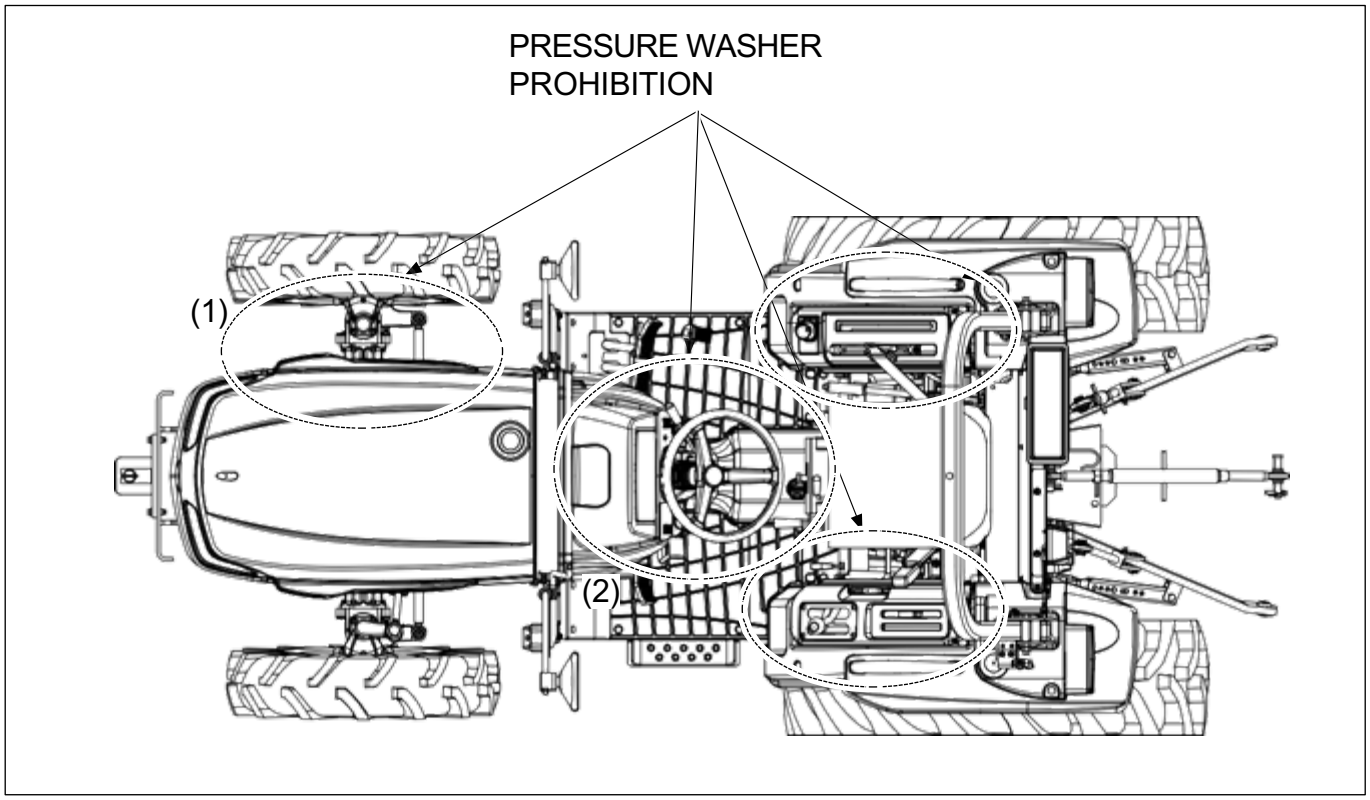
DIRECT SPRAY DIFFUSIVE SPRAY

CLOSE CAR WASHING STRICTLY PROHIBITED

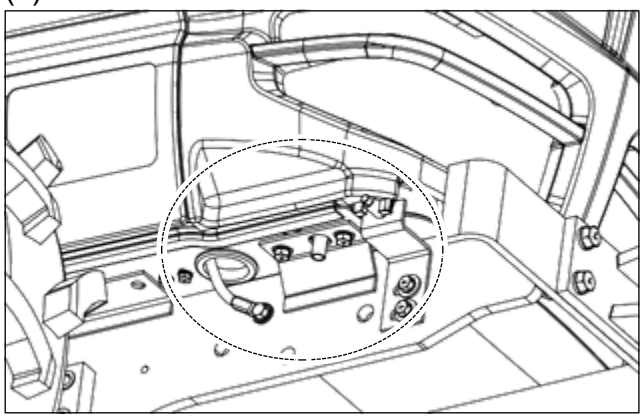


LESS THAN 2m (6.7ft) MORE THAN 2m (6.7ft)

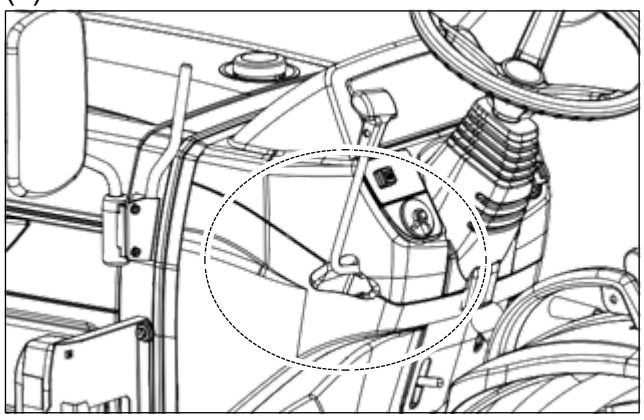
IMPORTANT: When washing the tractor with pressure washer, DO NOT directly spray the water to the meter panel, steering column, battery and electric components. Cause damage to the electric components. DO NOT spray the water to the electric wiring part around the engine. It may cause an engine start failure.



(1)



(2)



IMPORTANT: When washing the tractor with pressure washer, DO NOT directly spray the water to glass and roof (reduce water pressure).

TROUBLESHOOTING

When an error occurs, immediately determine the cause and take countermeasures not to worsen the status.
If a cause cannot be determined, or error repeats after adjustment, contact the distributor and have it inspected.
In that case, inform the model type and serial number along the trouble status.

WARNING: For injury accident prevention
- Place the tractor on flat place, apply parking brake, lower the attachment, stop the engine, and wait until movement of each part stops when cleaning, inspecting, adjusting, and performing maintenance.
- Wait until the engine cools down when performing inspection and maintenance around the engine.

1. Engine

1. Engine does not start. Trouble at starting.

Condition	Cause	Countermeasures	Ref. page
❶ Starter does not rotate by turning the key.	○ Operation lever is not in neutral or OFF. Not sitting properly in the seat.	• Set all control levers to neutral and sit on the seat.	–
	○ Clutch pedal is not pressed sufficiently.	• Step on the pedal completely.	
	○ Battery discharge	• Recharge or replace the battery.	132 to 134
	○ Removal, looseness, or corrosion of battery terminal	• Clean the terminal, tighten firmly, and apply grease for corrosion prevention.	132 to 134
	○ Fuse (g) or (1) fusing	• Check the wiring and replace the fuse.	135 to 137
❷ Starter rotates but engine does not start.	○ Low fuel or empty in fuel tank.	• Refuel	–
	○ Fuel filter clogging	• Clean or replace the filter.	111
	○ Air entry in fuel system	• Bleed air.	112
	○ Fuse (b) or (e) fusing	• Check the wiring and replace the fuse.	135 to 137

2. Insufficient engine output and engine stop

Condition	Cause	Countermeasures	Ref. page
❶ Engine rotation is irregular.	○ Air entry in fuel system	• Bleed air.	112
	○ Fuel filter water or dust clogging	• Clean or replace the filter.	111
	○ Fuel leakage of piping	• Tighten clamp and replace pipes.	–
	○ Spray nozzle water or dust clogging	• Repair at service dealer.	–
❷ Engine rotates excessively.	○ Governed clogging	• Repair at service dealer.	–
❸ Engine suddenly stops during operation.	○ Low fuel	• Refuel and bleed air.	112
	○ Fuse (e) or (g) or (1) fusing	• Check the wiring and replace the fuse.	135 to 137
	○ Nozzle failure	• Repair at service dealer and replace.	–
	○ Engine seizing due to insufficient oil	• Repair at service dealer.	–
	○ Not sitting properly in the seat.	• Sit on the seat.	–
❹ Engine is overheated.	○ Radiator clogging	• Clean the radiator screen.	124
	○ Insufficient coolant water	• Feed coolant water.	106 to 108
	○ Slackness or damage of fan belt	• Adjust the belt tension or replace.	125 to 126
	○ Low engine oil	• Supply oil to the specified level.	104
❺ Exhaust gas of engine is white. (except for immediately after start)	○ Excessive engine oil amount	• Inspect and adjust.	104
❻ Exhaust gas of engine is black.	○ Air cleaner clogging	• Clean the element.	115 to 116
	○ Poor fuel quality	• Replace to specified type of fuel.	109 to 110
❼ Engine output failure	○ Air cleaner clogging	• Clean the element.	115 to 116
	○ Low fuel or fuel filter clogging	• Check fuel system.	109 to 110
❽ Oil lamp is lit during operation.	○ Low engine oil amount	• Supply to the specified amount.	103
	○ Low viscosity of engine oil	• Replace to oil with appropriate viscosity.	104
	○ Engine oil filter clogging	• Replace the oil filter.	105
❾ Charge lamp is lit during operation.	○ Slackness or damage of fan belt	• Adjust the tension or replace the belt.	125 to 126

2. Driving and Operating Unit

1. Tractor does not start. Brake is not applied.

Condition	Cause	Countermeasures	Ref. page
❶ Clutch slips.	○ Pedal adjustment failure ○ Wear and seizing of clutch lining	• Adjust the play amount of pedal. • Replace the clutch at service dealer.	127 –
❷ Clutch cannot be engaged.	○ Pedal adjustment failure ○ Agglutination of clutch lining	• Adjust the play amount of pedal. • Repair at service dealer.	127 –
❸ Poor braking or one side braking	○ Excessive play amount of brake pedal ○ Wear and seizing of brake lining ○ Difference in pressing amount of each side	• Adjust the play amount of pedal. • Replace the brake disc at service dealer. • Step on the both brake pedals equally.	128 – 128
❹ Poor return of brake pedals	○ Brake return spring is damaged. ○ Insufficient grease of each oscillating part	• Replace the spring. • Lubricate.	– 97

2. Power Steering

Condition	Cause	Countermeasures	Ref. page
❶ Steering wheel rotates idle.	○ Low oil level (transmission oil) ○ Damage and oil leakage of pipes ○ Pump failure	• Supply transmission oil to the specified amount. • Retighten or replace. • Repair at service dealer.	117 – –
❷ Operation of steering wheel is stiff. Steering wheel cannot be controlled properly.	○ Uneven air pressure in tires ○ Play at rod end ○ Excessive viscosity of used oil	• Set the air pressure of both tires at the specified amount. • Repair at service dealer. • Replace oil or perform warm-up operation sufficiently.	83 to 85 – –
❸ Front wheels stagger. (Excessive play amount of steering wheel)	○ Looseness of joint ○ Play at rod end ○ Air entry in hydraulic cylinder	• Retighten. • Repair at service dealer. • Check the oil level and bleed air.	– – –
❹ Abnormal noise from hydraulic circuit	○ Low oil level (transmission oil) ○ Insufficient warm-up operation ○ Hydraulic oil filter clogging	• Supply transmission oil to the specified amount. • Perform warm-up operation sufficiently. • Replace hydraulic oil filter. • Repair if pipes are deformed.	117 – 119 to 120 –

3. Hydraulic Unit

1. Hydraulic Systems

Condition	Cause	Countermeasures	Ref. page
❶ Abnormal noise from hydraulic circuit	○ Low oil level (transmission oil)	• Supply transmission oil to the specified amount.	117
	○ Insufficient warm-up operation	• Perform warm-up operation sufficiently.	–
	○ Hydraulic oil filter clogging	• Replace hydraulic oil filter.	119 to 120
		• Repair if pipes are deformed.	–
❷ Lift arm cannot be lifted.	○ Low oil level (transmission oil)	• Supply transmission oil to the specified amount.	117
	○ Hydraulic oil filter clogging	• Replace.	–
	○ Gear pump failure	• Repair at service dealer.	–
	○ Control valve failure	• Repair at service dealer.	–
❸ Oil leakage in pipes	○ Looseness of each joint	• Retighten.	–
	○ Pipe cracks	• Repair at service dealer.	–
❹ Lift arm cannot be lowered.	○ Flow control lever is in <FIX> position.	• Set to the <FAST> position.	78
	○ Control valve failure	• Repair at service dealer.	–

4. Electric and Automatic Control Unit

1. Electric Systems

Condition	Cause	Countermeasures	Ref. page
❶ Parts of electric components cannot be actuated.	○ Fusing	• Check the wiring and replace each fuse.	135 to 137
❷ Lamp indicator cannot be lit or flickered.	○ Dead bulb	• Replace each bulb.	156
❸ Sounds buzzer	○ Park brake lever is not pulled sufficiently	–	30

NOTE:

When inspecting for any errors, inspect the disconnection of wiring connection, poor contact, and earth failure.

Have it inspected when fusing repeats.

SPECIFICATIONS

DIESEL ENGINE

General

TYPE Three Cylinders, Four Cycle, Valve in Cylinder Head, Cross Flow Porting

FIRING ORDER 1-3-2
BORE ..... 78mm (3.071 inch)
STROKE ..... 92mm (3.622 inch)
PISTON DISPLACEMENT 1318cm3 (80.43 inch3)
COMPRESSION RATIO ..... 22.0 to 1
GOVERNOR ENGINE SPEED WITHOUT LOAD ..... 2690 to 2710 RPM
RATED ENGINE SPEED ..... 2500 RPM
ENGINE IDLE SPEED ..... 970 to 1000 RPM
MAXIMUM HORSE POWER (Manufacturing Rating) ..... 25.9 PS at 2500 RPM
VALVE CLEARANCE (Intake and Exhaust Cold Engine) ..... 0.25 mm (0.010 inch)
EMISSION REGULATIONS ..... EU Stage 5 Regulations

IMPORTANT: Valve clearance adjustment must be made when the engine is not running and is cold.

Engine Lubrication System

OIL PRESSURE .....49 kPa (7.1psi)

Fuel System

Fuel Injection Pump ..... BOSCH M type ND-PFR, DENSO

Fuel Injectors..... Throttle Type, DENSO

Air Intake System

TYPE ..... Dry Type Air Cleaning System with Double Filter

Cooling System

TYPE .....Pressure System, Thermostat Controlled Bypass, Impeller Type Pump

RADIATOR.....New Rectangle Fin Type

THERMOSTAT .....Start to Open at Approx.76.5°C(170°F) Fully Open at 90°C (194°F)

PRESSURE CAP..... 88.0kPa (12.8psi)

WATER TEMPERATURE ..... Thermometer on Instrument Panel

POWER TRAIN

Tractor Brakes

TYPE ..... Wet Disk Plate Type
OPERATION ..... Mechanical
PARKING BRAKES ..... Hand Operating Lock Type

Transmission

TYPE

GEAR DRIVE ..... Synchromesh on Shuttle (Forward-Reverse Position) and main Gear Shift of constant mesh with Two Ranges of Selective Sliding Gears

HYDROSTATIC DRIVE ..... Hydrostatic Transmission with Three Ranges of Selective Sliding Gears

RANGES OF SELECTIVE SLIDING GEARS

GEAR SELECTION

GEAR DRIVE ..... 8 Speeds Forward and 8 Speeds Reverse

HYDROSTATIC DRIVE ..... 3 Speed ranges in Forward and Reverse with Variable Speeds.

SHIFT CONTROL

GEAR DRIVE ..... Actuated by Two Shift Levers on the LH Fender and shuttle lever on the column.

HYDROSTATIC DRIVE ..... Actuated by Pedal on the RH Step and lever on the LH Fender

OIL COOLER ..... Hydrostatic Drive only

Clutch

TYPE, DIAMETER

GEAR DRIVE .....Dry, Single Disc, Diaphragm Type, 215mm (8.46 Inch)

HYDROSTATIC DRIVE .....Dry, Single Disc, Diaphragm Type, 215mm (8.46 Inch)

OPERATION .....Mechanical

Mechanical Front Drive (MFD)

FRONT AXLE .....Spiral Bevel Gear Type Differential with Bevel Gear Reductions

Differential Lock

TYPE

GEAR DRIVE .....Controlled by Pedal on the RH Step and Mechanically Actuated

HYDROSTATIC DRIVE .....Controlled by Pedal on the LH Step and Mechanically Actuated

Steering

TYPE OF STEERING.....Hydrostatic Type

Hitch System

TYPE .....Three Point, Category Ⅰ

TYPE CONTROL.....Positions Control

TYPE VALVE .....Three Positions,Lift,Hold and lower

LIFTING CAPACITY AT 24"BEHIND LIFT POINT (Per ASAE S349.1)

. .....780kg (1720 lbs)

TYPE OF CYLINDER..... Single Acting Type

Hydraulic System

HYDRAULIC PUMP TYPE ..... Front Mounted, Engine Driven, Pressure Loading Gear Type

CAPACITY

PUMP FOR THREE POINT HITCH ..... 28.5 l/min (7.5GPM) at 2500 Engine RPM

PUMP FOR POWER STEERING..... 12.2 l/min (3.3GPM) at 2500 Engine RPM

MAXIMUM SYSTEM PRESSURE ..... 15211 kPa (2205psi)

AUXILIARY CONNECTOR..... Front Hydraulic Block

CONNECTOR SIZE..... 9.5mm (3/8 inch)

Rear Power Takeoff (PTO)

PTO Type

GEAR DRIVE ..... Independent PTO

HYDROSTATIC DRIVE ..... Live PTO (With internal over running clutch)

LOCATION ..... At the rear of transmission

ROTATION ..... Clockwise from rear of tractor

SHAFT SIZE ..... 34.9 mm (1.375 Inch) Diameter, 6Splines

SPEED ..... 540 RPM at 2376 Engine RPM

MID Power Takeoff (PTO) Option

PTO Type

GEAR DRIVE ..... Independent PTO

HYDROSTATIC DRIVE ..... Live PTO

LOCATION ..... At the Bottom of Transmission

ROTATION ..... Clockwise from rear of tractor

SHAFT SIZE ..... 25.4mm (1 Inch) Diameter, 15Splines

SPEED ..... 2000 RPM at 2525 Engine RPM

Drawbar

TYPE ..... Fixed Type

DISTANCE FROM HITCH HOLE TO THE END OF PTO SHAFT ..... 62mm (2.4 inch)

MAXIMUM VERTICAL LOAD ON DRAWBAR ..... 500kgf (1102 lbf)

APPROXIMATE TRACTOR DIMENSIONS

OVERALL LENGTH (TO END OF LOWER LINK) ..... 3080 mm (121.2 inch)

OVERALL WIDTH (TO END OF TIRE) ..... 1400 mm (55.1 inch)

HEIGHT (TO TOP OF ROPS)

- REAR ROPS ..... 2391 mm (94.1 inch)
- FRONT ROPS ..... 2208 mm (86.9 inch)

WHEELBASE ..... 1710 mm (67.3 inch)

GROUND CLEARANCE ..... 330 mm (13.0 inch)

TURNING RADIUS (WITH BRAKE ASSISTANCE) ..... 2400 mm (94.5 inch)

WEIGHT

- GEAR DRIVE (12.4-24)
  - REAR ROPS ..... 1186 kg (2615 lbs)
  - FRONT ROPS ..... 1198 kg (2641 lbs)
- HYDROSTATIC DRIVE (12.4-24)
  - REAR ROPS ..... 1190 kg (2623 lbs)

SPEED CHART

Gear Drive

Range shift	Gear shift	Tire size	Speed : km/h	
			F	R
L	1	AG tires (Front/Rear) 7-16/12.4-24	1.6	1.3
	2		2.3	1.9
	3		3.4	2.9
	4		5.2	4.3
H	1		5.9	4.9
	2		8.3	7.0
	3		12.6	10.5
	4		19.1	16.0
MAX			20.7	17.3

Hydrostatic Drive

Range shift	Tire size	F	R
L	AG tires (Front/Rear) 7-16/12.4-24	0 - 4.7	0 - 2.4
M		0 - 8.8	0 - 4.3
H		0 - 19.6	0 - 9.8
MAX		0 - 21.2	0 - 10.6

NOISE LEVELS

1. Results of sound level test.
   Moving.....79 dB(A)
   Stationary .....77 dB(A)
   Engine speed 2500rpm

NOTE:
Measured in accordance with Regulation(EU) No.2015/96

2. Driver-perceived noise level .....85 dB(A)

NOTE:
Measured in accordance with Regulation(EU) No 1322/2014

VIBRATION LEVELS

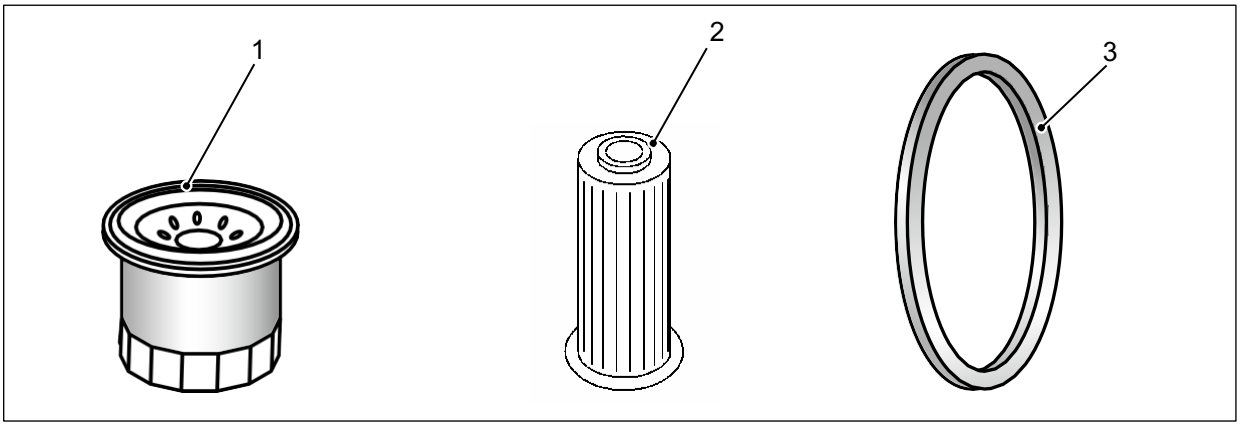
1. Vibration level ..... Heavy driver(97kg) 0.98 m/s^2
   Light driver(60kg) 1.14 m/s^2

NOTE:
Measured in accordance with Regulation(EU) No 1322/2014

APPENDIX TABLE

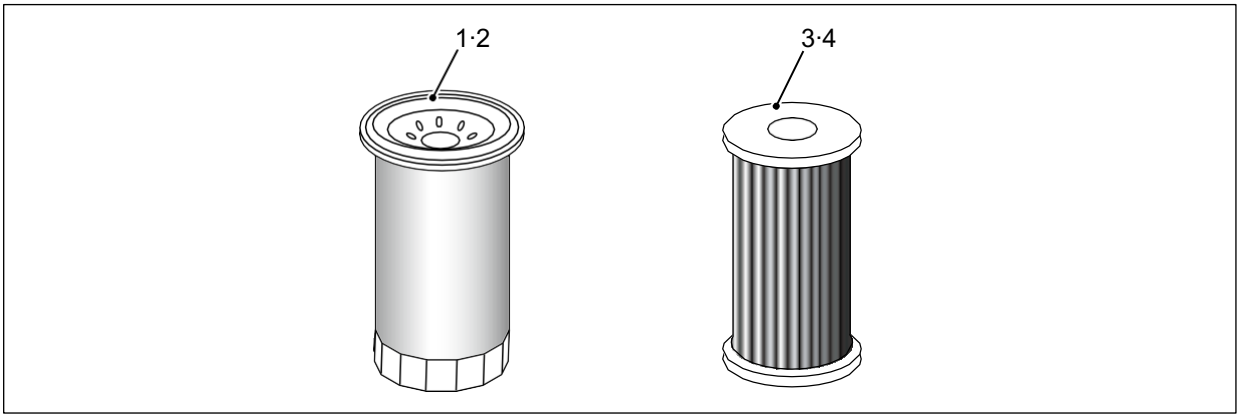
CONSUMABLES

1. Engine



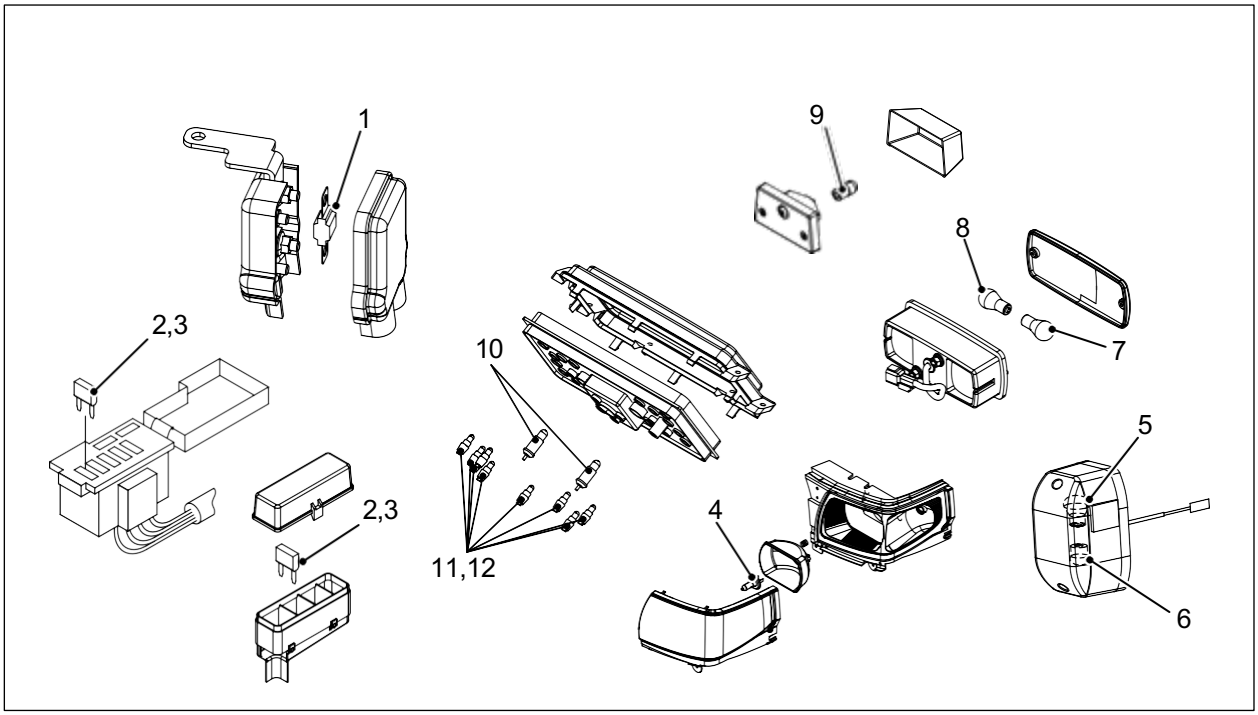
No.	Parts No.	Parts name	Quantity	Type	Remarks
1	31A40-02101	Filter assy, oil	1		
	31S94-02160	Oil filter comp			
2	31A62-00317	Element	1		Fuel filter
	31S94-03400	Element			Fuel filter
3	MD041704	V-belt	1		
	31S94-01130	Belt			

2. Air cleaner and hydraulic line



No.	Parts No.	Parts name	Quantity	Type	Remarks
1	1964 2509 000	Filter	1		
2	1968 2581 000	Filter oil	1		Hydrostatic drive
3	1040 0511 200	Element assy	1		
4	1969 0531 100	Element, inner	1		

3. Electric components



No.	Parts No.	Parts name	Quantity	Type	Remarks
1	1945 0726 300	FUSE	1	60A	
2	0980 1001 506	FUSE	4	15A	
3	0980 1001 006	FUSE	7	10A	
4	1040 5511 500	HEAD LAMP	2	12V 55/60W	
5	0980 8122 104	FRONT FLASHER LAMP	2	12V21W	Front combi lamp
6	3688 3036 500	POSITION LAMP	2	12V5W	Front combi lamp
7	0980 8122 104	REAR FLASHER LAMP	2	12V21W	Rear combi lamp
8	1956 6731 200	BRAKE LAMP / REAR POSITION LAMP	2	12V21/5W	Rear combi lamp
9	1215 0105 300	REGISTRATION PLATE LAMP	1	12V10W	
10	1046 2854 400	PANEL LAMP	2	12V3.4W	
11	1046 2854 500	TURN INDICATION LAMP	2	12V1.7W	
12	1046 2854 500	INDICATOR LAMP	7	12V1.7W	

ATTACHMENT

No.	Code No.	Parts name	Machine model		Remarks
			G	H	
1	BW-F1	Front end wight	○	○	20kg
2	MPE2836	Mid PTO attachment		○	
3	SVDE2836	Auxiliary valve attachment	○	○	
4	DCE2836	Draft-control attachment	○	○	

DETAIL INDEX

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