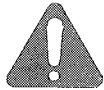


MODEL NO. 03602 – 40001 & UP  
MODEL NO. 03603 – 40001 & UP

## OPERATOR'S MANUAL

### REELMASTER® 3500 D TRACTION UNITS

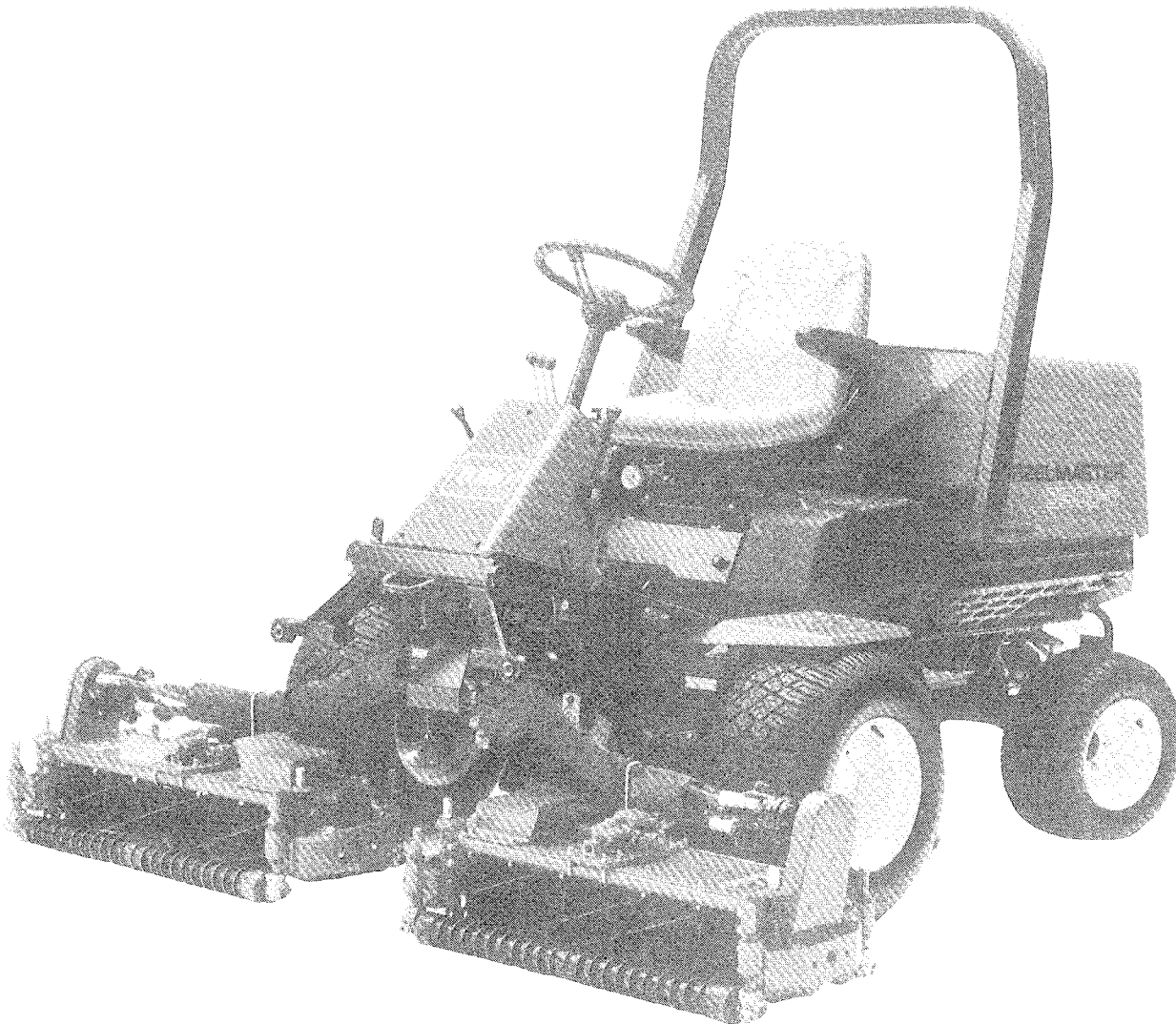
To understand this product, and for safety and optimum performance, read this manual before starting the engine. Pay special attention to **SAFETY INSTRUCTIONS** highlighted by this symbol.



It means **CAUTION, WARNING or DANGER** – personal safety instruction. Failure to comply with the instruction may result in personal injury.



The REELMASTER 3500 D conforms to the American National Standards Institute's safety standards for riding mowers: thus, TORO proudly displays the ANSI safety seal.



# FOREWORD

This operator's manual has instructions on safety, proper set-up and operation, adjustments and maintenance. Therefore, anyone involved with the product, including the operator, should read and understand this manual. Major sections are:

- Safety Instructions
- Set-up Instructions
- Before Operating
- Operating Instructions
- Maintenance

This manual emphasizes safety, mechanical and general product information. **DANGER**, **WARNING** and **CAUTION** identify safety messages. Whenever the triangular safety alert symbol appears, understand the safety message that follows. For complete safety instructions, read pages 4 – 5. **IMPORTANT** highlights special mechanical information and **NOTE** emphasizes general product information worthy of special attention.

## OPTIONAL SPARK ARRESTER

In some places a spark arrester muffler must be used because of local, state or federal regulations. The spark arrester available from your local Toro Distributor is approved by the United States Department of Agriculture and the United States Forest Service. If a spark arrester muffler is required, order the following part from your Authorized Toro Distributor: (1) 77-3990 Spark Arrester Muffler

When the mower is used or operated on any California forest, brush or grass covered land, a properly operating spark arrester must be attached to the muffler. The operator is violating state law, Section 442 Public Resources Code if a spark arrester is not used.

Whenever you have questions or need service, contact your local authorized Toro Distributor. In addition to having a complete line of accessories and professional turf care service technicians, the distributor has a complete line of genuine TORO replacement parts to keep your machine operating properly. Keep your TORO all TORO. Buy genuine TORO parts and accessories.

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# SAFETY INSTRUCTIONS

The REELMASTER 3500-D was tested and certified by TORO for compliance with the B71.4-1990 specifications of the American National Standards Institute. Although hazard control and accident prevention partially are dependent upon the design and configuration of the machine, these factors are also dependent upon the awareness, concern, and proper training of the personnel involved in the operation, transport, maintenance, and storage of the machine. Improper use or maintenance of the machine can result in

injury or death. To reduce the potential for injury or death, comply with the following safety instructions.

## BEFORE OPERATING

1. Read and understand the contents of this manual before starting and operating the machine. Become familiar with the controls and know how to stop the machine and engine quickly. A free replacement manual is available by sending the complete model and serial number to:

The Toro Company  
8111 Lyndale Avenue South  
Minneapolis, Minnesota 55420.

2. Never allow children to operate the machine. Do not allow adults to operate machine without proper instruction. Only trained operators who have read this manual should operate this machine.

3. Never operate the machine when under the influence of drugs or alcohol.

4. Keep all shields, safety devices and decals in place. If a shield, safety device or decal is defective, illegible or damaged, repair or replace it before operating the machine. Also tighten any loose nuts, bolts or screws to ensure machine is in safe operating condition.

5. Always wear substantial shoes. Do not operate machine while wearing sandals, tennis shoes, sneakers or when barefoot. Do not wear loose fitting clothing that could get caught in moving parts and possibly cause personal injury. Wearing safety glasses, safety shoes, long pants and a helmet is advisable and required by some local ordinances and insurance regulations.

6. Assure interlock switches are adjusted correctly so engine cannot be started unless traction pedal is in NEUTRAL and cutting units are DISENGAGED.

7. Remove all debris or other objects that might be picked up and thrown by the reels or fast moving components from other attached implements. Keep all bystanders away from operating area.

8. Since diesel fuel is highly flammable, handle it carefully:

A. Use an approved fuel container.

B. Do not remove fuel tank cap while engine is hot or running.

C. Do not smoke while handling fuel.

D. Fill fuel tank outdoors and only to within an inch from the top of the tank, not the filler neck. Do not overfill.

E. Wipe up any spilled fuel.

## WHILE OPERATING

9. Sit on the seat when starting and operating the machine.

10. Before starting the engine:

A. Engage the parking brake.

B. Make sure traction pedal is in NEUTRAL and cutting units are DISENGAGED. Move axle shift to HI or LO position.

C. After engine is started, release parking brake and keep foot off traction pedal. Machine must not move. If movement is evident, the neutral return mechanism is adjusted incorrectly; therefore, shut engine off and adjust until machine does not move when traction pedal is released. Refer to Adjusting Traction Drive for Neutral, page 31.

11. Seating capacity is one person. Therefore, never carry passengers.

12. Do not run engine in a confined area without adequate ventilation. Exhaust fumes are hazardous and could possibly be deadly.

13. Check interlock switches daily for proper operation. Do not rely entirely on safety switches - use common sense. If a switch fails, replace it before operating the machine. The interlock system is for your protection, so do not bypass it. Replace all interlock switches every two years.

14. Using the machine demands attention and to prevent loss of control:

A. Operate only in daylight or when there is good artificial light.

B. Drive slowly

C. Watch for holes or other hidden hazards.

D. Look behind machine before backing up.

E. Do not drive close to a sand trap, ditch, creek or other hazard.

F. Reduce speed when making sharp turns and turning on a hillside.

G. Avoid sudden stops and starts.

15. Traverse slopes carefully. Do not start or stop suddenly when traveling uphill or downhill. Never shift axle when moving. Machine must be on a flat surface and / or brakes must be engaged to prevent freewheeling.





## SAFETY INSTRUCTIONS

**16.** Operator must be skilled and trained in how to drive on hillsides. Failure to use caution on slopes or hills may cause loss of control and vehicle to tip or roll possibly resulting in personal injury or death.

**17.** When operating 4 wheel drive machine, always use the seat belt and ROPS together and have seat pivot retaining pin installed.

**18.** This product may exceed noise levels of 85 dB(A) at the operator position. Ear protectors are recommended, for prolonged exposure, to reduce the potential of permanent hearing damage.

**19.** If engine stalls or loses headway and cannot make it to the top of a slope, do not turn machine around. Always back slowly straight down the slope.

**20.** Raise cutting units and latch them securely in transport position before driving from one work area to another.

**21. DON'T TAKE AN INJURY RISK!** When a person or pet appears unexpectedly in or near the mowing area, STOP MOWING. Careless operation, combined with terrain angles, ricochets, or improperly positioned guards can lead to thrown object injuries. Do not resume mowing until area is cleared.

**22.** Do not touch engine, muffler or exhaust pipe while engine is running or soon after it is stopped. These areas could be hot enough to cause burns.

**23.** If cutting unit strikes a solid object or vibrates abnormally, stop immediately, turn engine off, set parking brake and wait for all motion to stop. Inspect for damage. If reel or bedknife is damaged, repair or replace it before operating. Do not attempt to free blocked cutting unit by reversing reel direction. Damage to hydraulic system and/or reel may result.

**24.** Before getting off the seat:

- A. Set parking brake.
- B. Move traction pedal to neutral and axle shift to HI or LO position.
- C. Disengage cutting units and wait for reels to stop.
- D. Stop engine and remove key from switch.
- E. Do not park on slopes unless wheels are chocked or blocked.

**25.** Use only a rigid tow bar if it becomes necessary to tow machine. Use trailer for normal transport.

### MAINTENANCE

**26.** Before servicing or making adjustments, stop engine and remove key from the switch.

**27.** Make sure machine is in safe operating condition by keeping all nuts, bolts and screws tight.

**28.** Make sure all hydraulic line connectors are tight, and all hydraulic hoses and lines are in good condition before applying pressure to the system.

**29.** Keep body and hands away from pin hole leaks or nozzles that eject high pressure hydraulic fluid. Use cardboard or paper to find hydraulic leaks. Hydraulic fluid escaping under pressure can penetrate skin and cause injury. Fluid accidentally injected into the skin must be surgically removed within a few hours by a doctor familiar with this form of injury or gangrene may result.

**30.** Before disconnecting or performing any work on the hydraulic system, all pressure in system must be relieved by lowering cutting units to the ground and stopping engine.

**31.** If major repairs are ever needed or assistance is desired, contact an Authorized Toro Distributor.

**32.** To reduce potential fire hazard, keep engine area free of excessive grease, grass, leaves and dirt. Clean protective screen on back of machine frequently.

**33.** If engine must be running to perform maintenance or an adjustment, keep hands, feet, clothing and other parts of the body away from cutting units and other moving parts. Keep all bystanders away.

**34.** Do not overspeed the engine by changing governor setting. To assure safety and accuracy, have an Authorized Toro Distributor check maximum engine speed.

**35.** Shut engine off before checking or adding oil to the crankcase.

**36.** Disconnect battery before servicing the machine. If battery voltage is required for troubleshooting or test procedures, temporarily connect the battery.

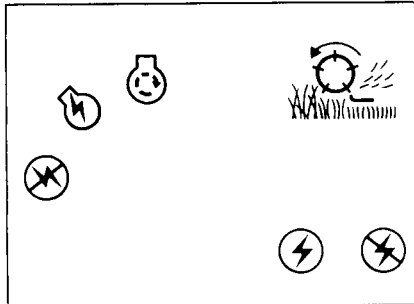
**37.** Toro recommends that two people be used to backlap reels. Each person has specific duties and must communicate with one another. Refer to Cutting Unit Operator's Manual for specific backlapping instructions.

**38.** At the time of manufacture, the machine conformed to the safety standards for riding mowers. To assure optimum performance and continued safety certification of the machine, use genuine Toro replacement parts and accessories. Replacement parts and accessories made by other manufacturers may result in non-conformance with the safety standards, and the warranty may be voided.



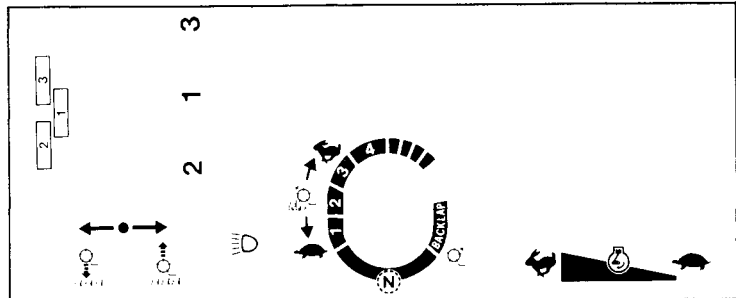
## SAFETY AND INSTRUCTION DECALS

The following safety and instruction decals are affixed to the traction unit. If any decal becomes illegible or damaged, install a new decal. Part numbers are listed below and in your Parts Catalog.



ON RIGHT HAND CONSOLE  
( Part No. 76-8700 )

Key Switch – Off, On & Start;  
Cutting Unit Engagement Switch –  
Stop & Start



ON RIGHT HAND CONSOLE  
( Part No. 76-8710 )

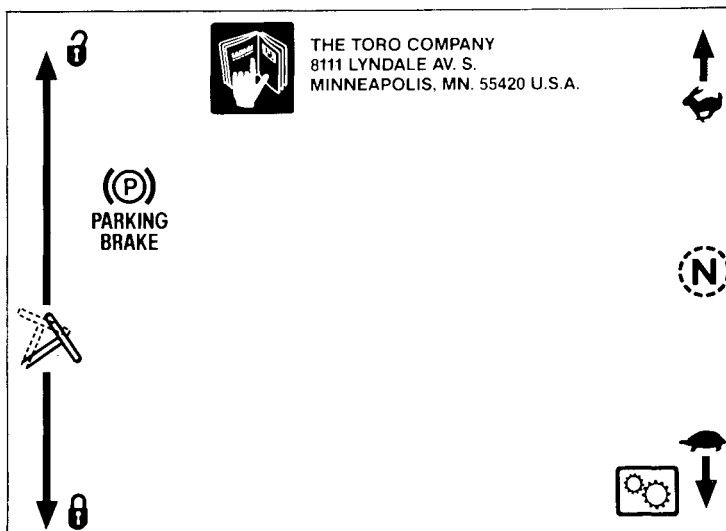
Cutting Unit Lift Controls – Raise & Lower  
Reel Speed Control – Increase or Decrease  
Throttle Control – Increase or Decrease Speed  
Light Switch – Optional



ON LEFT FLOOR PLATE  
(Part No. 92-1370)  
Parking Requirements

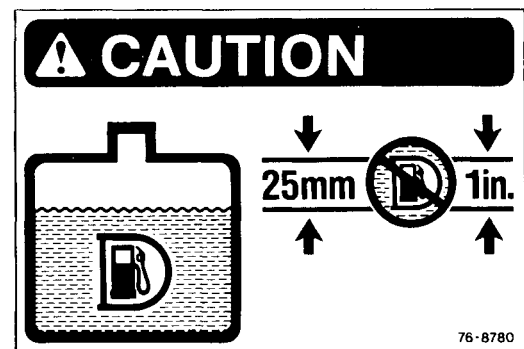


ON AIR CLEANER  
( Part No. 76-8770 )  
Do Not Use Starting Fluid



ON TOWER  
( Part No. 76-8720 )

Steering Wheel Tilt – Lock & Unlock  
Parking Brake Latch – Engage  
Ground Speed Selector – Hi, N & LO



ON FUEL SPLASH GUARD  
( Part No. 76-8780 )

Fill Fuel Tank To No More Than  
than One Inch Below Bottom Of Filler Neck  
With No. 2 Diesel Fuel.



# SAFETY AND INSTRUCTION DECALS

**RM 3500-D 4WD  
QUICK REFERENCE AID**

**CHECK/SERVICE**

- ENGINE OIL LEVEL/FILL
- HYDRAULIC OIL LEVEL/FILL
- FRONT AXLE OIL LEVEL/FILL
- REAR AXLE OIL
  - FILL
  - CHECK (2)
- COOLANT LEVEL/FILL
- FUEL-DIESEL ONLY
- GREASE POINTS (22)
- RADIATOR SCREEN
- AIR CLEANER
- WATER SEPARATOR/FUEL FILTER
- BATTERY
- FAN BELT
- TIRE PRESSURE (1-1.5 BAR/15-20 PSI)

**FLUID SPECIFICATIONS/CHANGE INTERVALS**

*See operator's manual for initial changes.	FLUID TYPE	CAPACITY		CHANGE INTERVAL		FILTER PART NO.
		L	USA	FLUID	FILTER	
ENGINE OIL	SAE 15W-40 CD	5	5.3 QT	50 HRS	100 HRS	74-7970 (A)
HYD. CIRCUIT OIL	Mobil DTE 26	24.6	6.5 G	500 HRS	500 HRS	86-3010 (B)
AXLE OIL	SAE 80-90 E.P.			750 HRS		
FUEL FILTER					400 HRS	76-5220 (C)
AIR CLEANER	Clean @ 50 hrs.				250 HRS	27-7110 (D)
FUEL	>32°F/0°C NO. 2-D <32°F/0°C NO. 1-D	53	14 GAL.			
COOLANT	50/50 Peugeot recommended anti-freeze	13.25	3.5 GAL.			

Drain and flush, 2 yrs.

92-5845

ON RIGHT HAND CONSOLE FRONT  
(Part No. 92-5846, Model 03602)  
(Part No. 92-5845, Model 03603)

Quick Reference Aid

**⚠ DANGER**

TO MINIMIZE THE RISK OF PERSONAL INJURY OR DEATH COMPLY WITH THE FOLLOWING SAFETY INSTRUCTIONS.  
READ AND UNDERSTAND OPERATORS MANUAL BEFORE OPERATING THIS MACHINE.

LOS OPERADORES DEBEN ESTAR MUY BIEN CAPACITADOS EN UNA OPERACION SEGURA.

- USE EXTREME CAUTION ON HILLS AND SLOPES.
  - SEAT BELT SHOULD ALWAYS BE USED WHEN OPERATING WITH ROLL-OVER PROTECTION STRUCTURE. SEAT PIVOT RETAINING PIN MUST BE INSTALLED.
  - GO SLOW AND AVOID SHARP TURNS ON SLOPES TO AVOID ROLLOVER.
  - CUTTING UNITS MUST BE LOWERED WHEN GOING DOWN SLOPES FOR STEERING CONTROL.
  - OPERATOR MUST BE SKILLED AND TRAINED IN SLOPE OPERATION.
- CARRY NO RIDERS. KEEP PEOPLE AND PETS A SAFE DISTANCE FROM MACHINE.
- LIFT AND SECURE CUTTING UNITS BEFORE TRANSPORTING.
- KEEP ALL GUARDS IN PLACE.
- BEFORE LEAVING OPERATOR'S POSITION:
  - MOVE TRACTION PEDAL TO NEUTRAL.
  - DISENGAGE CUTTING UNIT DRIVE.
  - SET PARKING BRAKE.
  - SHUT OFF ENGINE - REMOVE KEY.
- STOP ENGINE BEFORE ADDING FUEL OR SERVICING MACHINE.
- CHECK PERFORMANCE OF ALL INTERLOCK SWITCHES DAILY.
- BEFORE TOWING OR BACKLAPPING SEE OPERATOR'S MANUAL FOR INSTRUCTIONS.

ON REAR OF TOWER  
(Part No. 76-8810)\*

Operating & Safety Instructions

**⚠ WARNING**

77-3300

ON FAN SHROUD  
(Part No. 76-8750)

Keep Hands Away From Rotating Fan

**GEAR LUBE**  
**SAE 80W-90**  
**API GL-5**

50 70-2560

ON ACCESS PANEL & FUEL TANK SUP-  
PORT  
(Part No. 70-2560)

Gear Lube Requirements

\* 76-8811 German, 76-8812 French, 76-8813 Dutch, 76-8814 Swedish, 76-8815 Spanish, 76-8816 Italian, 76-8817 Danish, 76-8818 Japanese.

# SPECIFICATIONS

**Engine:** Peugeot, four—cycle, four cylinder, 1.9 liter (1900 cc) displacement, liquid cooled diesel engine. 23.5:1 compression ratio. Low idle — 1600 rpm, high idle — 2500 rpm. Oil capacity is 5.3 qts. with filter.

**Cooling System:** Capacity is 3.5 gal. of 50/50 mixture of Peugeot recommended anti—freeze.

**Fuel System:** Capacity is 14 gal. of #1 or #2 diesel fuel.

**Hydraulic System:** Reservoir capacity is 6.5 gal. Replaceable spin—on filter element.

**Traction System:** Ground speed: Low Range; 0 - 6.5 m.p.h (0 — 5.5 m.p.h. with mechanical speed limiter interlock) forward and 0 -3 reverse. High Range; 0-15 mph (0 — 12.4 m.p.h. with mechanical speed limiter interlock) forward and 0-5 mph reverse.

**Front Axle:** Two speed axle is designed to withstand heavy duty slope operation and side loading. Separate mowing and transport selections for faster and more efficient machine operation. Neutral position allows easy towing. Lubricated with SAE 80-90 wt. EP gear lube. Capacity is 144 oz.

**Rear Axles:** Two Wheel Drive — The large diameter wheel spindles are designed for durability and long wear, yet provide superior stability and maneuverability. Four Wheel Drive - Heavy duty, agricultural type. Hydraulic drive with “on demand” over running clutch and balanced weight distribution provides superior traction on hillsides. Lubricated with SAE 80-90 wt. EP gear lube. Capacity is 80 oz.

**Tires/Wheels:** High flotation turf tread tires on de—mountable rims. Front tires: (2) 26 x 12.0—12, 8ply. Rear tires: (2) 20 x 10.0—10, 6 ply. Tire pressure 15—20 psi.

**Cutting Unit Drive System:** Adjustable reel speed to match clip to ground speed. Reel speed variable from approx. 500 -1200 rpm forward to 200-600 rpm reverse (for backlap operation).

**Seat:** (Model 30772) Adjustable fore and aft travel and weight.

**Diagnostic System:** Test ports for: Forward traction, cutting circuit, lift and counterbalance circuit, steering circuit and charge circuit.

**Steering System:** Automotive type, full power.

**Brakes:** Totally enclosed, non asbestos, dry multi-disc 5-5/8" individual wheel and parking brakes on front traction wheels. Brakes controlled by individual pedals operated by the left foot. Dynamic braking through closed-loop hydrostatic drive.

**Electrical System:** 12 volt battery with 530 cold cranking Amps @ 0 degrees F. 55 amp amp alternator, ammeter, starter, key switch and automatic temperature controlled glow plug controller. Separately fused, run, reel and instrument/accessory circuits.

**Interlock System:** Designed to stop engine if operator gets off seat while cutting unit drive switch is engaged. Prevents engine from starting unless traction pedal is in neutral and cutting units are disengaged. Prevents cutting units from operating unless axle shift is in LO range and cutting units are lowered. Prevents engine from starting unless reel speed control is in NEUTRAL.

## Warning Lights:

- Glow plug indicator
- Engine oil pressure warning
- Engine coolant temperature warning
- Charge indicator

## Indicators:

- Engine coolant temperature gauge
- Fuel gauge
- Hour meter

## General Specifications (approx.):

**Width—of—Cut:** 81 in.

### Overall Width:

- Cutting Units Raised 65 in.
- Cutting Units Down 90 in.

**Overall Length:** 100 in.

### Height:

58 in.  
With ROPS installed 82 in.

### Recommended Height—of—Cut:

- 5 Blade Cutting Unit: 1 — 4 in.
- 7 Blade Cutting Unit: 1/2 — 2 in.
- 11 Blade Cutting Unit: 3/8 — 3/4 in.

### Wheel Tread: (Front)

52 in.

(Rear)

44 in.

### Wheel Base:

52 in.

### Dry Weight:

2 Wheel Drive with 5 Blade Cutting Units & skids = 2625 lbs.

2 Wheel Drive with 7 or 11 Blade Cutting Units & rollers = 2925 lbs.

4 Wheel Drive with 5 Blade Cutting Units & skids = 2725 lbs.

4 Wheel Drive with 7 or 11 Blade Cutting Units & rollers = 3025 lbs.

## OPTIONAL EQUIPMENT

5 Blade L. H. Cutting Unit, Model No. 03752  
(1 per machine)

5 Blade R. H. Cutting Unit, Model No. 03753  
(2 per machine)

# SPECIFICATIONS

7 Blade L. H. Cutting Unit, Model No. 03754  
(1 per machine)

7 Blade R. H. Cutting Unit, Model No. 03756  
(2 per machine)

11 Blade L. H. Cutting Unit, Model No. 03741  
(1 per machine)

11 Blade R. H. Cutting Unit, Model No. 03751  
(2 per machine)

L. H. Dethatcher Reel, Model No.03730  
(1 per machine)

R. H. Dethatcher Reel, Model No.03732  
(2 per machine)

Cutting Unit Floating Head Kit, Model No. 03640  
(1 per machine)

Cutting Unit Fixed Head Kit, Model 03642  
(1 per machine)

Front Roller Kit, Model No. 03646 (1 per machine)

Wiehle Roller Kit, Model No. 03644 (1 per machine)

Sectional Roller Kit, Model No. 03648 (1 per machine)

Rear Roller Scraper Kit, Part No. 59–5960  
(1 per cutting unit)

Front Roller Scraper Kit, Part No. 62–6220  
(1 per cutting unit)

Side Skid Kit, Model No. 03650 (1 per machine)

Roll Over Protection Kit, Contact Your Local Toro Distributor (Standard on Model 03603).

Deluxe Seat Kit, Model No. 30772

Arm Rest Kit, Model 30707

Low Seat Option, Contact Your Local Toro Distributor

Additional Weights, Contact Your Local Toro Distributor

Dethatcher Tipper Bracket (#1 Center)  
Part No. 77–4220

Pre–Cleaner Assembly, Part No. 92–2574

Adjustable Counterbalance Kit, Part No. 82–4940

4 Post Canopy Kit, Contact Your Local Toro Distributor

Cab, Contact Your Local Toro Distributor

Windshield Kit, Contact Your Local Toro Distributor

## LOOSE PARTS CHART

**Note:** Use this chart as a checklist to assure all parts necessary for assembly have been shipped. Without any of these parts, total set-up cannot be completed.

DESCRIPTION	QTY.	USE
Nuts	10	Mount front wheels.
Nuts	4	Mount rear wheels (2 wheel drive only)
Bolts	4	Mount rear wheels (4 wheel drive only)
Steering wheel	1	Mount steering wheel and horn assembly
Nut	1	
Horn Assembly	1	
Manual tube	1	Install on right underside of seat
R–Clamp	2	
Spacers	4	Use to install Deluxe Seat Kit, Model 30772
Nuts	4	
Seat Belts	1	Install seat belts to seat (Model 03603 only)
Capscrew 7/16 x 20 –1–1/4"	2	
Lockwasher	2	
Flatwasher 1–1/2" O.D.	2	
Flatwasher 1–1/4" O.D.	2	
Roll Bar	1	Mount roll bar to frame (Model 03603 only)
Capscrew 1/2 x13–6–1/2"	2	
Locknut 1/2–13	2	
Flatwasher 1–1/16" O.D.	4	
Capscrew 1/2 x13–3/4"	2	
Lockwasher	2	
Ignition Key	1	
Operator's Manual (Traction Unit)	2	Read before operating machine.
Parts Catalog	1	Fill out and return to Toro
Registration Card	1	
Commercial Product Set–Up Card	1	

# SET-UP INSTRUCTIONS

## INSTALL FRONT WHEELS (Fig. 1)

1. Mount wheels and torque nuts to 45-55 ft-lb.

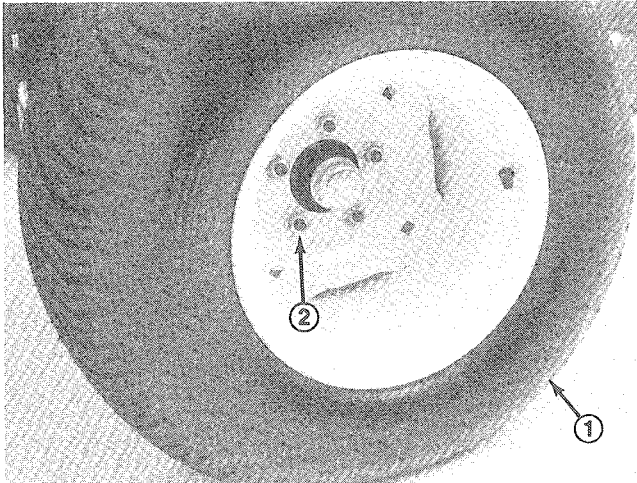


Figure 1

1. Front Wheel      2. Nuts

## INSTALL REAR WHEELS (Fig. 2)

**Note:** Rear wheels are mounted with nuts on 2 wheel drive machines and bolts are used on 4 wheel drive machines.

1. Remove and retain nuts or bolts securing rear wheels to shipping brackets.

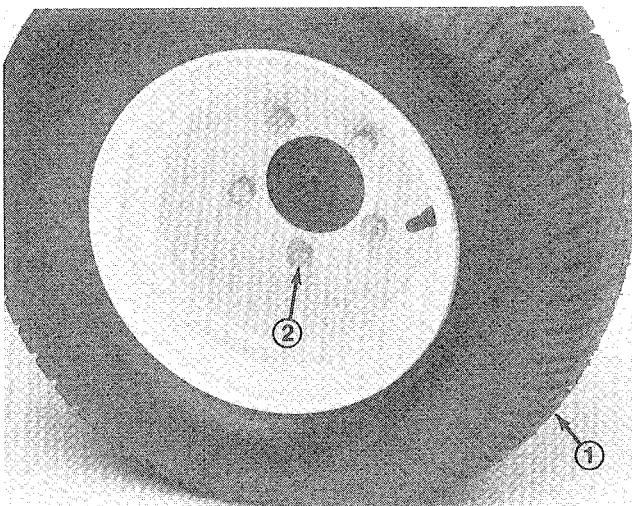


Figure 2

1. Rear Wheel      2. Nuts shown

2. Using shipping nuts or bolts and nuts or bolts supplied in loose parts, mount wheels and torque fasteners to 85-100 ft-lb.

## INSTALL STEERING WHEEL AND HORN BUTTON (Fig. 3)

1. Slide steering wheel over horn wire and onto shaft. Secure wheel to shaft with jam nut and tighten it to 70 ft-lb.
2. Hook plastic fitting of horn wire into slot in mounting plate. Using (1) of (3) mounting screws, secure mounting plate and bent tab to steering wheel hub. Complete assembly with other (2) screws.
3. Assemble small cap, spring and large cap into horn hub so they fit over ball and fitting on horn wire.
4. Rotate horn button onto housing locking assembly together.

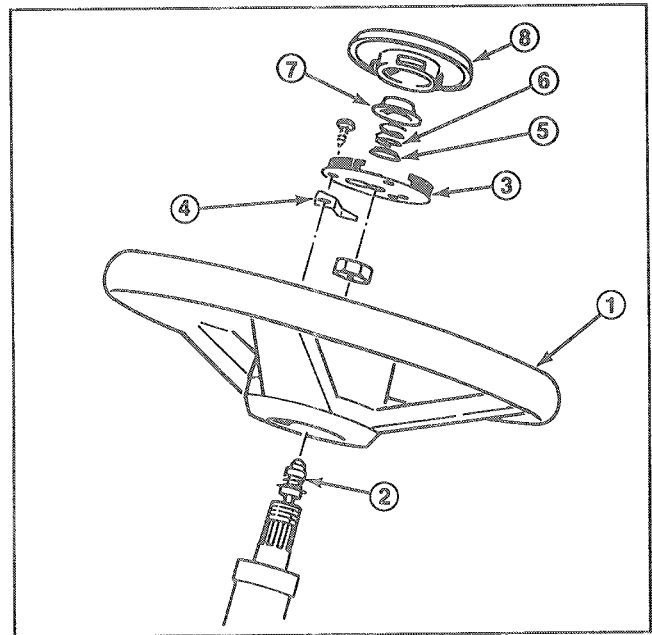


Figure 3

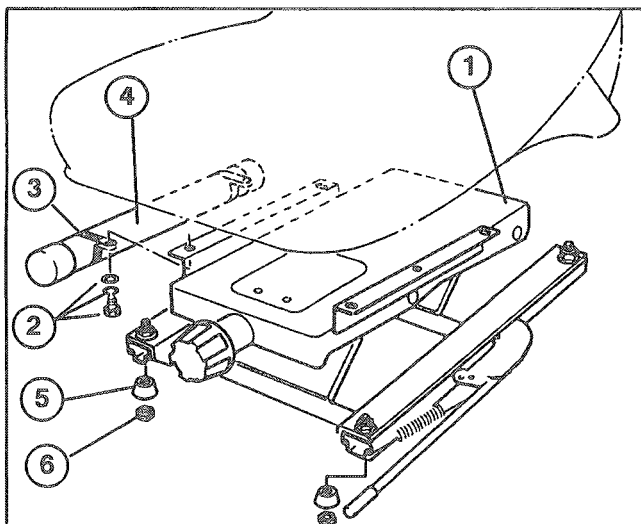
1. Steering Wheel	5. Small Cap
2. Plastic Fitting	6. Spring
3. Mounting Plate	7. Large Cap
4. Bent Tab	8. Horn Button

## INSTALL SEAT (Fig. 4 -6)

The Reelmaster 3500-D is shipped without a seat assembly. Seat Kit, model 30772 must be installed.

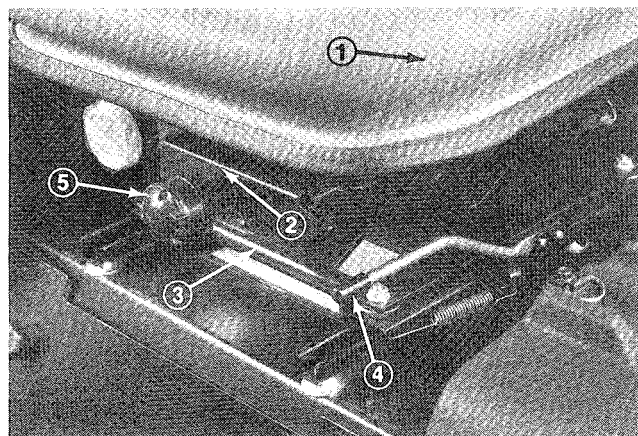
1. Assemble seat suspension to the (4) capscrews on seat bottom and install a lockwasher and flatwasher at all (4) locations. Install an R-clamp over right front and right rear capscrews of seat and install and tighten nuts to secure all (4) locations. Install manual tube into R-clamps.
2. Install spacers onto mounting studs and secure with (4) jam nuts.

# SET-UP INSTRUCTIONS



**Figure 4**

- 1. Adjustable Suspension Unit
- 2. Capscrew, Lockwasher & Flatwasher
- 3. R-clamp (2)
- 4. Manual Tube
- 5. Spacers
- 6. Jam nuts



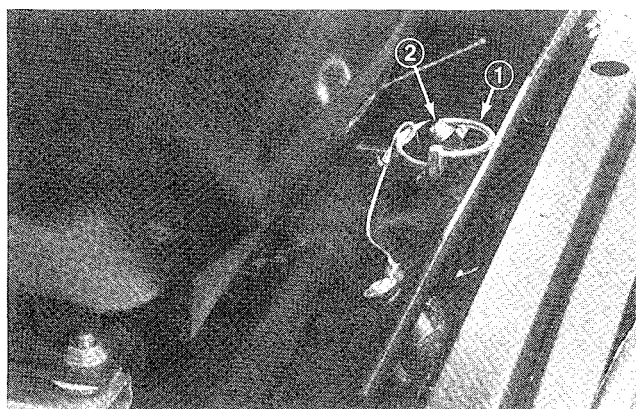
**Figure 6**

- 1. Seat
- 2. Suspension Assembly
- 3. Mounting Plate
- 4. Adjustment Handle
- 5. Adjustment Knob

## INSTALL SEAT BELTS TO SEAT (Fig. 7) (Standard on Model 03603 only)

**Note:** Seat belts are available as an option for model 03602, but must be used with a roll bar (ROPS).

2. Remove lynch pin from seat latch pin (Fig. 5).



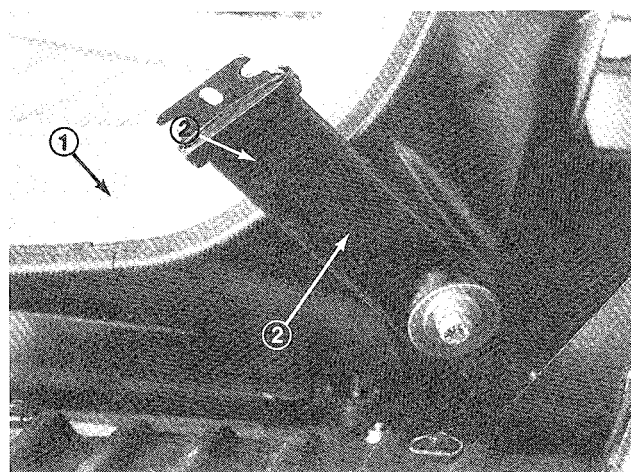
**Figure 5**

- 1. Lynch Pin
- 2. Seat Latch Pin

3. Mount seat suspension assembly to seat support and secure with lockwashers and nuts.

4. Pivot seat down and push lynch pin through seat latch stud.

5. Adjust seat for operator comfort and weight. To adjust seat fore and aft, pull handle on left side of seat assembly outward. After moving seat to desired location, release handle to lock seat into position. To adjust for operators weight, turn spring tension knob . on front of seat; clockwise to increase tension, counterclockwise to decrease spring tension.



**Figure 7**

- 1. Seat
- 2. Seat Belts

**NOTE:** When operating 4 wheel drive machine, always use the seat belt and ROPS together and have seat pivot retaining pin installed.

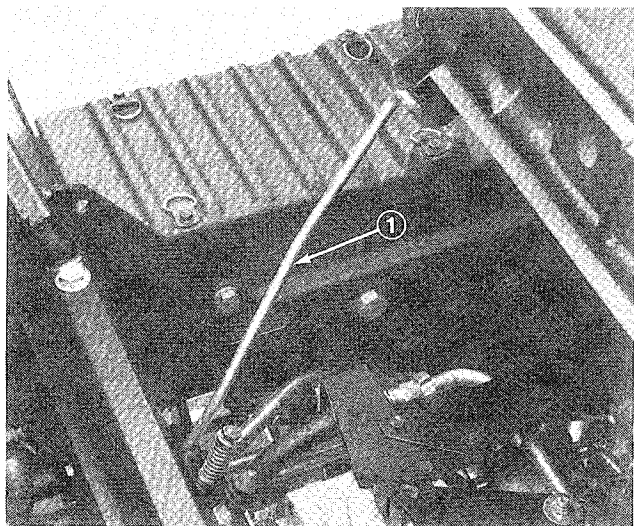


# SET-UP INSTRUCTIONS

## INSTALL ROLL BAR (Fig. 8-9) (Standard on Model 03603 only)

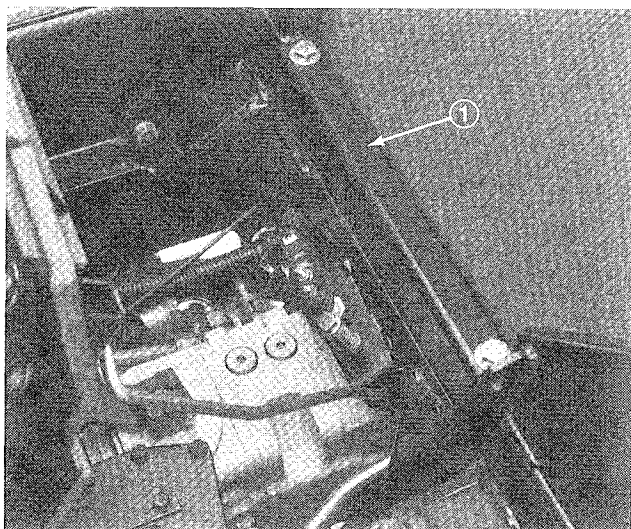
**Note:** Roll bar is available as an option for model 03602, but must be used with seat belt.

1. Remove lynch pin from seat latch pin (Fig. 5) and pivot seat support forward. Hold up seat with prop rod (Fig. 8).



**Figure 8**  
1. Seat Prop Rod

2. Lower roll bar onto frame, aligning mounting holes as shown in fig. 9.
3. Secure each side of roll bar to frame with a 1/2 x 13 - 3/4" lg. capscrew and lockwasher. Secure back of roll bar to frame with (2) 1/2 x 13 - 6-1/2" lg. capscrews, flatwashers (1-1/16" O.D.) and 1/2 - 13 locknuts. Tighten all fasteners securely.



**Figure 9**  
1. Roll Bar

4. Pivot seat down and push lynch pin through seat latch stud.

**NOTE:** When operating 4 wheel drive machine, always use the seat belt and ROPS together and have seat pivot retaining pin installed.

## CONNECT BATTERY (Fig. 10)

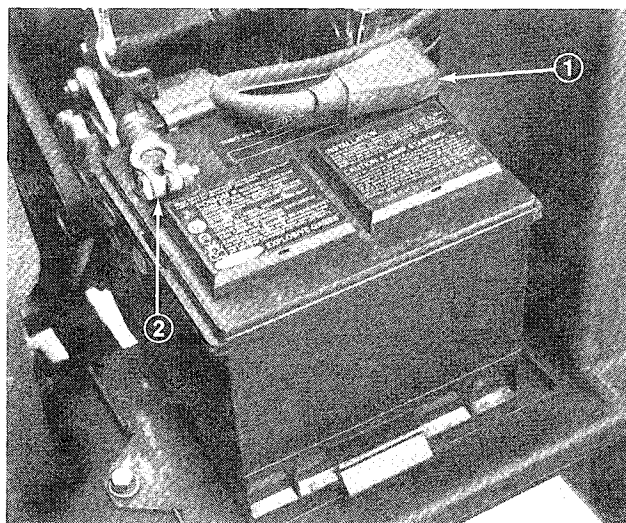
1. Release latch and open hood. Ensure battery is securely fastened in place. If battery needs charging, be sure at least one battery cable (preferably, the negative (-) cable) is disconnected from the battery before connecting the charger.



### CAUTION

Wear safety goggles and rubber gloves when working with electrolyte. Charge the battery in a well ventilated area so gases produced while charging can dissipate. Since the gases are explosive, keep open flame and electrical spark away from the battery; do not smoke. Nausea may result if the gases are inhaled. Unplug charger from electrical outlet before connecting to, or disconnecting charger leads from battery posts.

2. Slide the red, positive battery cable onto the positive battery post and tighten nut securely.



**Figure 10**

1. Positive Battery Cable    2. Negative Battery Cable

3. Slide the black, negative battery cable onto the negative battery post and tighten nut securely.

**Note:** Make sure battery cables do not contact each other or any moving parts or hot areas.



# SET-UP INSTRUCTIONS



## WARNING

Connecting cables to the wrong post could result in personal injury and/or damage to the electrical system.

4. Coat both battery connections with either Grafo 112X (skin over) grease, Toro Part No. 505-47, petroleum jelly or light grease to prevent corrosion and slide rubber boot over positive terminal.

## INSTALL CUTTING UNITS

1. Remove cutting units from cartons. Install desired mounting kit, adjust and mount to traction unit per Operator's manual for the cutting unit.

# BEFORE OPERATING



## CAUTION

Before servicing or making adjustments to the machine, stop engine and remove key from the switch.

## CHECK ENGINE OIL (Fig. 11&12)

Crankcase capacity is 5.3 qt. with filter.

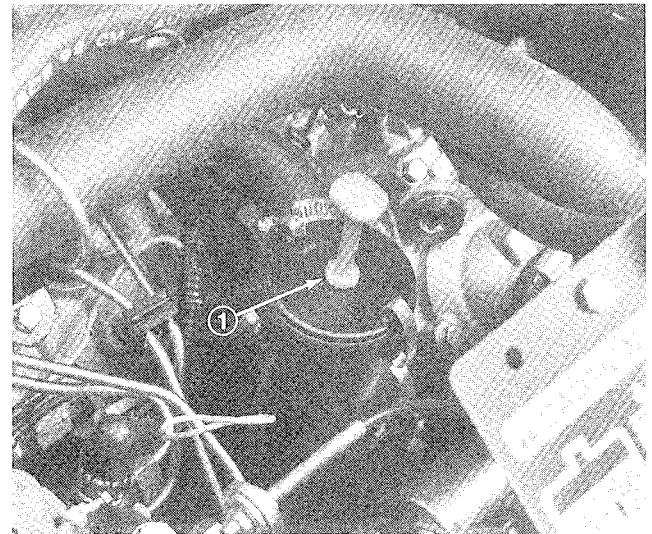
1. Park machine on a level surface. Release hood latch and open hood.



**Figure 11**  
1. Hood Latch

2. Remove dipstick from tube cap, wipe clean and reinstall dipstick into tube cap. Pull it out again and check oil level on dipstick: Oil level must always be in notch area on dipstick.

3. If oil level is low, remove tube cap and add SAE 15W-40 CD oil until level reaches top of notch on dipstick. DO NOT OVERFILL.



**Figure 12**  
1. Dipstick / Tube Cap

4. Install oil tube cap.
5. Close hood and secure latch.

## CHECK COOLING SYSTEM (Fig. 13)

Capacity of system is 3.5 gal.

1. Park machine on a level surface. Release hood latch and open hood.
2. Check coolant level. Coolant level should be up to or above mounting tabs on degasser tank, when engine is cold.

## BEFORE OPERATING

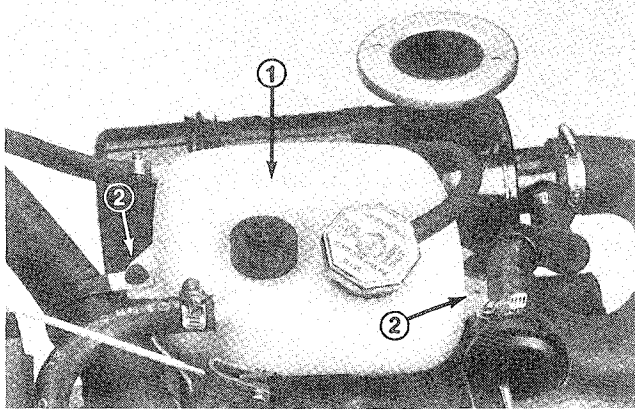


Figure 13  
1. Degasser Tank      2. Mounting Tabs

3. If coolant is low, remove degasser tank cap and add a 50/50 mixture of water and Peugeot recommended anti-freeze. **DO NOT USE WATER ONLY OR ALCOHOL/METHANOL BASE COOLANTS.**

**IMPORTANT:** Do not remove black plastic cap on degasser tank.

4. Install degasser tank cap.
5. Close hood and secure latch.

### FILL FUEL TANK (Fig. 14)

1. Park machine on a level surface. Release hood latch and open hood.
2. Remove fuel tank cap.

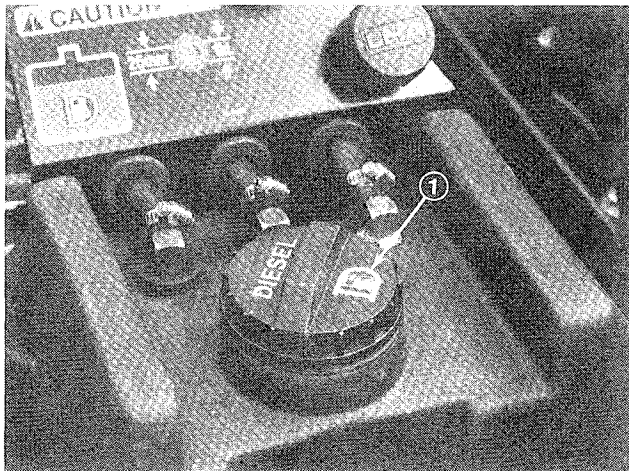


Figure 14  
1. Fuel Tank Cap

3. Fill tank to no more than one inch below bottom of filler neck with No. 2 diesel fuel. **DO NOT OVER FILL.** Then install cap.

**Note:** For temperatures below 32 degrees F., No. 1 diesel fuel or a blend should be used.



## DANGER

Because diesel fuel is highly flammable, use caution when storing or handling it. Do not smoke while filling the fuel tank. Do not fill fuel tank while engine is running, hot, or when machine is in an enclosed area. Always fill fuel tank outside and wipe up any spilled diesel fuel before starting the engine. Store fuel in a clean, safety-approved container and keep cap in place. Use diesel fuel for the engine only; not for any other purpose.

4. Close hood and secure latch.

### CHECK HYDRAULIC CIRCUIT OIL (Fig. 15)

The hydraulic system is designed to operate on Mobil DTE 26 or equivalent anti-wear hydraulic fluid. The machines reservoir is filled at the factory with approximately 6.5 gallons of fluid. However, check level of hydraulic fluid before engine is first started and daily thereafter.

#### Hydraulic Oil (Recommended brands):

Mobil	DTE 26
Shell	Tellus 68
Amoco	Rykon Oil #68
Conoco	Super Hydraulic Oil 68
Exxon	Nuto 68
Kendall	Kenoil R&O AW 68
Pennzoil	Penreco 68
Phillips	Magnus A 68
Standard	Energol HLP 68
Sun	Sunvis 831 WR
Union	Unax AW 68
Chevron	AW Hydraulic Oil 68

**Note:** All are interchangeable.

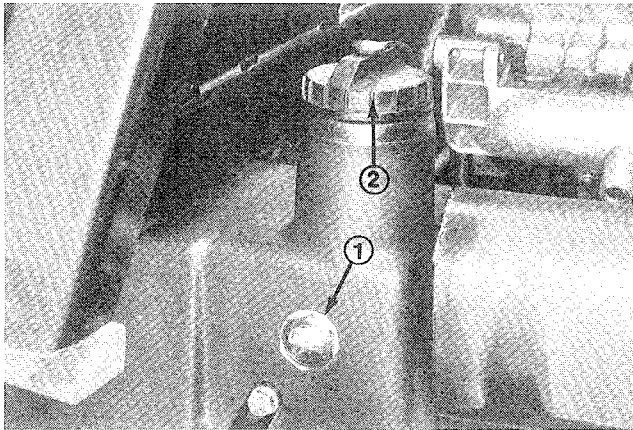
**IMPORTANT:** Use only hydraulic oils specified. Other fluids could cause system damage.

**Note:** A red dye additive for the hydraulic system oil is available in 2/3 oz. bottles. One bottle is sufficient for 4-6 gal. of hydraulic oil. Order Part No. 44-2500 from your Authorized Toro Distributor

1. Park machine on a level surface. Make sure machine has been operated so oil is warm. Release hood latch and open hood. Check level of oil by viewing sight gauge. If oil is visible in gauge, oil level is sufficient.

# BEFORE OPERATING

2. If oil level is not visible in gauge, remove cap from hydraulic oil reservoir and slowly fill reservoir with Mobil DTE 26 or equivalent hydraulic oil until level reaches middle (maximum) of sight gauge. DO NOT OVERFILL.



**Figure 15**  
1. Sight Gauge 2. Hydraulic Reservoir Cap

**IMPORTANT:** To prevent system contamination, clean top of hydraulic oil containers before puncturing. Assure pour spout and funnel are clean.

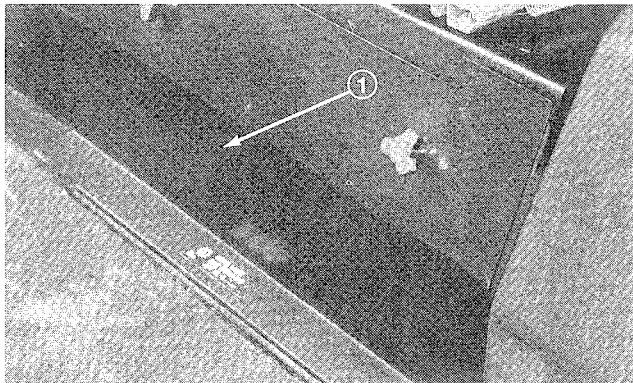
3. Install reservoir cap, close hood and secure latch.

## CHECK FRONT AXLE OIL LEVEL

(Fig. 16 & 17)

The front axle is shipped from the factory filled with SAE 80–90 wt. gear lube. However, check level before engine is first started and every 50 hours thereafter. Capacity is 128 oz.

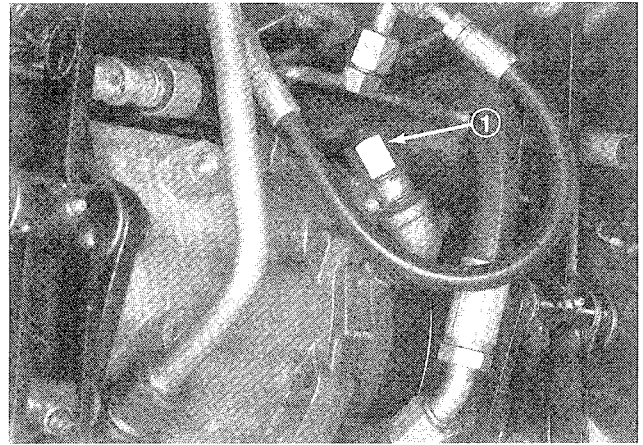
1. Park machine on a level surface.
2. Remove access panel (Fig. 16), in front of seat, to expose front axle / dipstick.



**Figure 16**  
1. Access Panel

3. Unscrew dipstick cap (Fig. 17) from the filler neck and wipe it with a clean rag. Screw dipstick cap finger tight onto filler neck. Unscrew the dipstick and

check level of lubricant. If level is not within 1/2 inch from the groove in the dipstick, add enough to raise level to groove mark. DO NOT OVERFILL by more than 1/2 inch above groove.



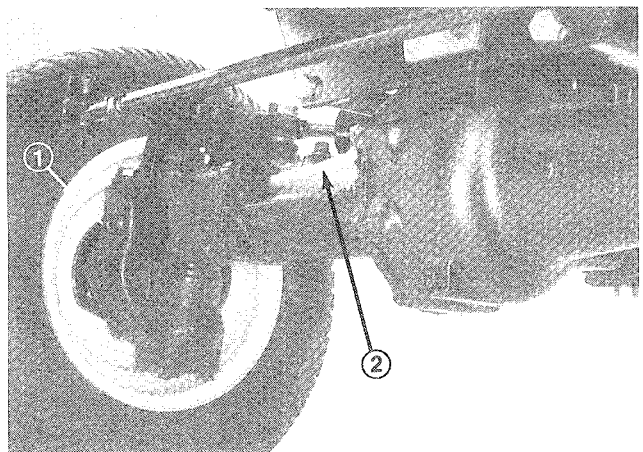
**Figure 17**  
1. Dipstick Cap

4. Screw dipstick filler cap finger—tight onto filler neck. It is not necessary to tighten cap with a wrench.

## CHECK REAR AXLE LUBRICANT (Model 03603 Only) (Fig. 18)

The rear axle is shipped from the factory filled with SAE 80–90 wt. gear lube. However, check level before engine is first started and every 50 hours thereafter. Capacity is 80 oz.

1. Position the machine on a level surface.
2. Remove a check plug from one end of axle and make sure lubricant is up to bottom of hole. If level is low, remove the fill plug and add enough lubricant to bring the level up to the bottom of the check plug holes.



**Figure 18**  
1. Check Plug 2. Fill Plug

# BEFORE OPERATING

## CHECK TIRE PRESSURE

The tires are over-inflated for shipping. Therefore, release some of the air to reduce the pressure. Correct air pressure in the front and rear tires is 15-20 psi.

**IMPORTANT:** Maintain even pressure in all tires to assure a good quality—of—cut and proper machine performance. DO NOT UNDER INFLATE.

## CHECK TORQUE OF WHEEL NUTS OR BOLTS



### WARNING

Torque front wheel nuts to 45-55 ft-lb and rear wheel nuts or bolts to 85-100 ft-lb after 1-4 hours of operation and again after 10 hours of operation and every 250 hours thereafter. Failure to maintain proper torque could result in failure or loss of wheel and may result in personal injury.

## CHECK REEL TO BEDKNIFE CONTACT

Each day before operating, check reel to bedknife contact, regardless if quality of cut had previously been acceptable. There must be light contact across the full length of the reel and bedknife (refer to Adjusting Reel to Bedknife in Cutting Unit Operator's Manual).

# KNOW YOUR CONTROLS

**Cutting Unit Engagement Switch** (Fig. 19) — Used to start and stop cutting unit operation. Lift switch and move forward to actuate cutting units.

**Glow Plug Indicator** (Fig.19) — Automatically actuates proper glow period when ignition key is turned to ON position. Illuminates when glow plugs are actuated. When glow plugs are heated sufficiently, light goes off indicating engine is ready to start.

**Charge Indicator** (Fig.19) — Illuminates when system charging circuit malfunctions.

**Key Switch** (Fig. 19) — Three positions: OFF, ON and START. Rotate key to START and release key when engine begins running. To stop engine, rotate key to OFF.

**Reel Speed Control** (Fig. 19) — Rotate knob clockwise to increase reel speed, counter-clockwise to decrease speed or to backlap.

**Throttle Control** (Fig. 19) — Move control forward to increase engine speed, backward to decrease speed.

**Cutting Unit Lift Controls** (Fig. 19) — The two outside levers raise and lower the two outside cutting units. The center lever raises and lowers the center cutting unit. Engine must be running to lower cutting units. When cutting units are lifted, reels automatically stop. To lower cutting units just touch levers momentarily.

**Coolant Temperature Gauge** (Fig. 19) — Shows temperature of engine coolant.

**Fuel Gauge** (Fig.19) — Shows amount of fuel in tank.

**Hour Meter** (Fig.19) — Shows total hours that machine has been operated.

**Engine Oil Pressure Warning Light** (Fig. 19) — Indicates dangerously low engine oil pressure.

**Engine Coolant Temperature Warning Light** (Fig.19) — The red light illuminates and the engine stops when temperature of coolant exceeds 230° F.

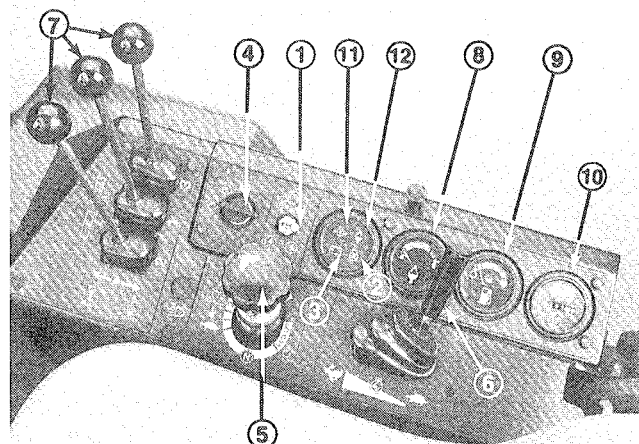


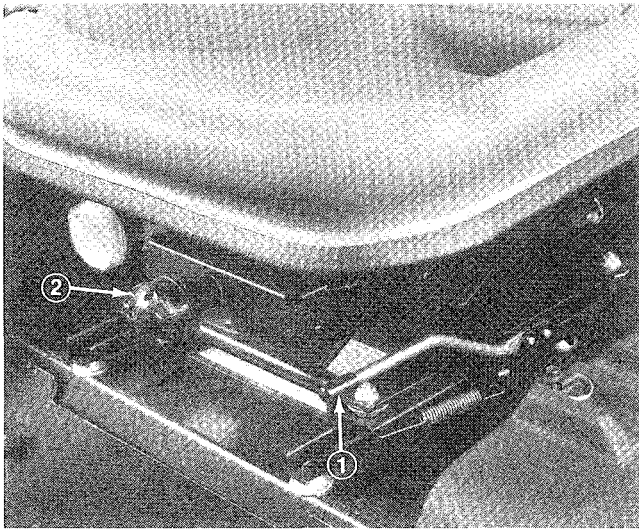
Figure 19

- |                                   |  |
|-----------------------------------|--|
| 1. Cutting Unit Engagement Switch | 8. Coolant Temperature Gauge                 |
| 2. Glow Plug Indicator            | 9. Fuel Gauge                                |
| 3. Charge Indicator               | 10. Hour Meter                               |
| 4. Key Switch                     | 11. Engine Oil Pressure Warning Light        |
| 5. Reel Speed Control             | 12. Engine Coolant Temperature Warning Light |
| 6. Throttle Control               |  |
| 7. Cutting Unit Lift Controls     |  |



# KNOW YOUR CONTROLS

**Seat (Fig. 20)** – Seat adjusting lever on left side of seat allows 4 inch fore and aft adjustment. Seat adjusting knob on front of seat, adjusts seat for operators weight.



**Figure 20**

1. Seat Adjusting Lever 2. Seat Adjusting Knob

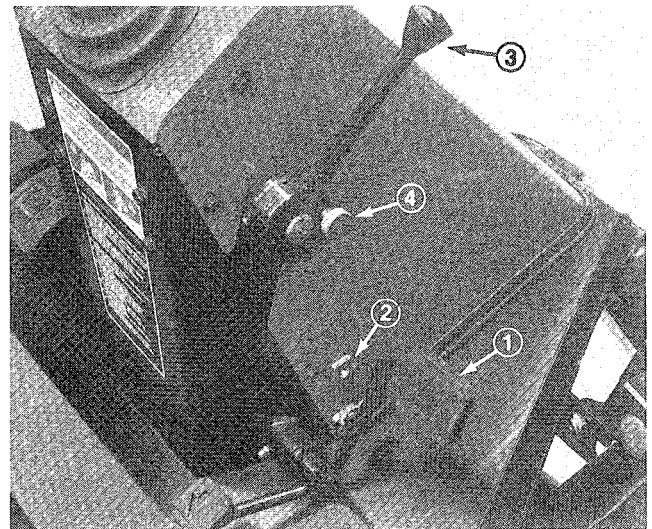
**Traction Pedal (Fig. 21)** – Controls forward and reverse operation. Depress top of pedal to move forward and bottom to move backward. Ground speed depends on how far pedal is depressed. For no load, maximum ground speed, fully depress pedal while throttle is in FAST. For maximum power under load or when going uphill, keep engine rpm high by having throttle in FAST and traction pedal partially engaged. If engine rpm begins to decrease due to load, gradually reduce traction pedal pressure until engine speed is increased.

To stop, reduce foot pressure on traction pedal and allow it to return to center position. On extreme downhill slopes, apply pressure to REVERSE side of pedal, or operate with heel on REVERSE and toe on FORWARD portion of pedal.

**Speed Selector (Fig. 21)** - Cam lever at side of traction pedal can be rotated to maintain desired speed. Rotating lever forward decreases speed and backward increases speed.

**Axle Shift Lever (Fig. 21)** – Located on right side of console, lever selects front drive mode. Pull out lockout knob, move lever rearward for mowing operation and forward for transport operation, then release knob to lock selection. Middle position (N) is for towing.

**CAUTION:** Machine must be on a flat surface and brakes engaged when shifting axle from HI to LO position.



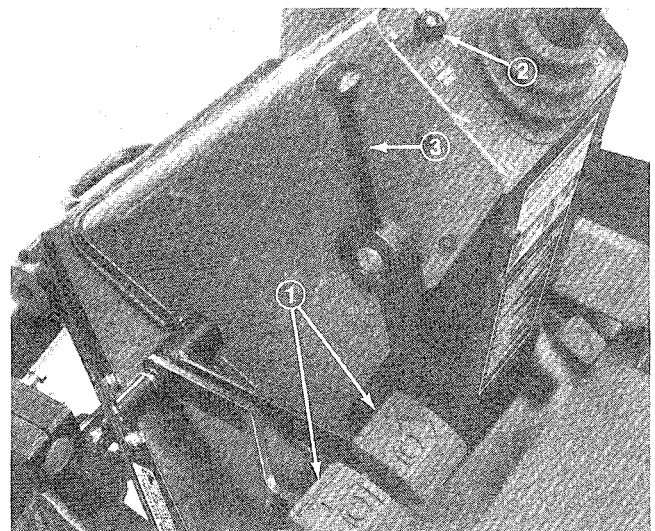
**Figure 21**

1. Traction Pedal 3. Axle Shift Lever  
2. Speed Selector 4. Lockout Knob

**Brake Pedals (Fig. 22)** – Two foot pedals at the lower left operate individual wheel brakes for turning assistance, parking and to aid in obtaining better sidehill traction. Locking pin is for parking.

**Parking Brake Latch (Fig. 22)** – A knob on the left side of console actuates parking brake lock. To engage parking brake, connect pedals with locking pin, push down on both pedals and pull parking brake latch out. To release parking brake, depress both pedals until parking brake latch retracts.

**Steering Wheel Tilt Lever (Fig. 22)** – Lever on left side of console allows steering wheel to be adjusted for operator comfort.

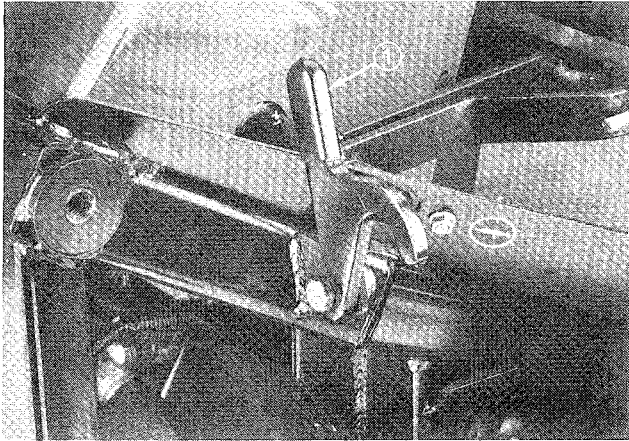


**Figure 22**

1. Brake Pedals 3. Steering Wheel Tilt Lever  
2. Parking Brake Latch

# KNOW YOUR CONTROLS

**Transport Latches (Fig. 23)** –Three latches secure cutting units in upright position for transport operation.



**Figure 23**  
1. Transport Latch (3)

**Horn** – In center of steering wheel. Operates only when key switch is in ON.

## OPERATING INSTRUCTIONS

### STARTING AND STOPPING

1. Sit on the seat, keep foot off traction pedal. Assure parking brake is engaged, traction pedal is in NEUTRAL and cutting unit engagement switch is in the DISENGAGED position.
2. Turn ignition switch to ON position. When glow plug indicator light goes off, engine is ready to START.
3. Turn ignition key to START. Release key when engine starts.
4. To stop, disengage and move all controls to NEUTRAL and set parking brake. Turn key to OFF and remove it from switch. Raise and latch all cutting units in transport position.

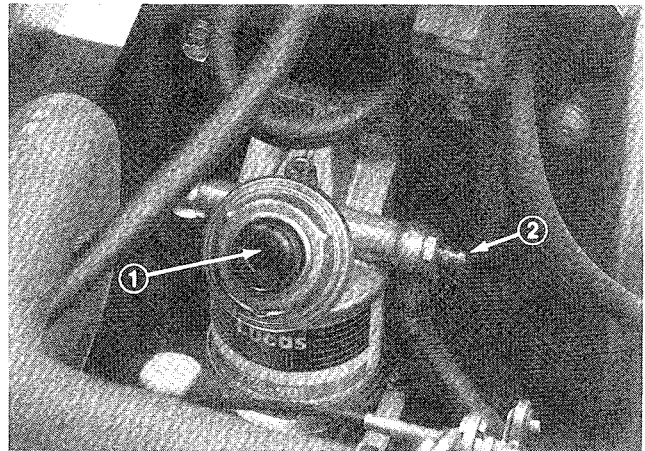
### PRIMING FUEL SYSTEM (Fig. 24 & 25)

**IMPORTANT:** The fuel system may need to be primed when a new engine is started for the first time, if it runs out of fuel or if maintenance is performed on the fuel system.

1. Unlatch and raise hood.
2. Insert a 3/16" hose over bleed screw and run other end into a container to catch fuel.

3. Loosen fuel filter / water separator bleed screw (Fig. 24) a few turns. Pump priming plunger until a steady stream of fuel comes out of hole in bleed screw. When fuel stops foaming, tighten the bleed screw during the downstroke of the priming plunger. Wipe up any spilled fuel.

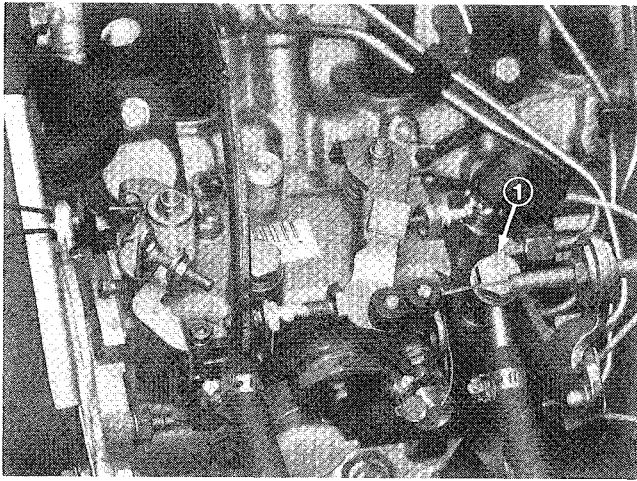
4. Pump priming plunger until resistance is felt. Try to start engine. If engine does not start repeat step 3.



**Figure 24**  
1. Primer Plunger 2. Bleed Screw

**Note:** It may be necessary to bleed the air out of the fuel line between the fuel filter / water separator and the injection pump. To do this, loosen the fitting on the injection pump (Fig. 25) and repeat bleeding procedure.

# OPERATING INSTRUCTIONS



**Figure 25**  
1. Injection Pump Fitting

## CHECKING INTERLOCK SYSTEM.

The purpose of the interlock system is to prevent the engine from cranking or starting unless the traction pedal is in NEUTRAL and the cutting unit engagement switch is DISENGAGED. In addition, the engine will stop when the cutting unit engagement switch is engaged or traction pedal is depressed with operator off the seat.



## CAUTION

THE INTERLOCK SWITCHES ARE FOR THE OPERATOR'S PROTECTION, SO DO NOT DISCONNECT THEM. CHECK OPERATION OF THE SWITCHES DAILY TO ASSURE INTERLOCK SYSTEM IS OPERATING. IF A SWITCH IS DEFECTIVE, REPLACE IT BEFORE OPERATING. REGARDLESS IF SWITCHES ARE OPERATING PROPERLY OR NOT, REPLACE THEM EVERY TWO YEARS TO ASSURE MAXIMUM SAFETY. DO NOT RELY ENTIRELY ON SAFETY SWITCHES – USE COMMON SENSE!

1. In a wide open area free of debris and bystanders, lower cutting units to the ground. Stop engine.
2. Move cutting unit engagement switch to DISENGAGED position and remove foot from traction pedal so it is fully released.
3. Rotate the ignition key to START. Engine should crank. If engine cranks, proceed to step 4. If engine does not crank, there may be a malfunction in the interlock system.

4. Raise off the seat and engage the cutting unit engagement switch while the engine is running. The engine should stop within 2 seconds. If engine stops, the switch is operating correctly; thus, proceed to step 5. If engine does not stop, there is a malfunction in the interlock system.

5. Raise off the seat and depress the traction pedal while engine is running and the cutting unit engagement switch is DISENGAGED. The engine should stop within 2 seconds. If engine stops, the switch is operating correctly; thus, continue operation. If engine does not stop, there is a malfunction in the interlock system.

## OPERATING CHARACTERISTICS

**Familiarization** – Before mowing grass, practice operating machine in an open area. Start and stop the engine. Operate in forward and reverse. Lower and raise cutting units simultaneously and individually. Engage and disengage reels. Operate with all cutting units down, then with only an individual cutting unit. When you feel familiar with the machine, practice operating around trees and obstacles. Also drive up and down slopes at different speeds.

**WARNING:** When operating 4 wheel drive machine, always use the seat belt and ROPS together and have seat pivot retaining pin installed.

Another characteristic to consider is the operation of the brake pedals. The brakes can be used to assist in turning the machine. However, use them carefully, especially on soft or wet grass because the turf may be torn accidentally. Another benefit of the brakes is to maintain traction. For example: When operating on a sidehill, the uphill wheel slips and loses traction. If this situation occurs, depress uphill brake pedal gradually and intermittently until the uphill wheel stops slipping, thus, increasing traction on the downhill wheel.

**CAUTION:** This product may exceed noise levels of 85 dB(A) at the operator position. Ear protectors are recommended, for prolonged exposure, to reduce the potential of permanent hearing damage.

**Warning System** – If a warning light comes on during operation, stop the machine immediately and correct the problem before continuing operation. Serious damage could occur if the machine is operated with a malfunction.

**Mowing** – When you are at the area to be mowed, release cutting unit transport latches.

Start engine, move axle shift lever rearward to Mow position and move throttle to FAST so engine is running at maximum speed. To move forward and cut grass, press traction pedal forward. Maintain traction pedal contact with speed selector to assure a consistent clip and quality-of-cut.

# OPERATING INSTRUCTIONS

**Transport** – When mowing is complete, raise cutting units by pulling back on lift control levers. Hold levers back until cutting units are fully raised. Lock cutting units in place with transport latches. Move axle shift lever forward to HI position. When driving from one area to another, always shift axle to LO position before encountering a slope. Never shift from HI to LO position while on a slope. Stop machine on a flat surface, engage brakes and shift before climbing the slope. Be careful when driving between objects so you do not accidentally damage the machine or cutting units.

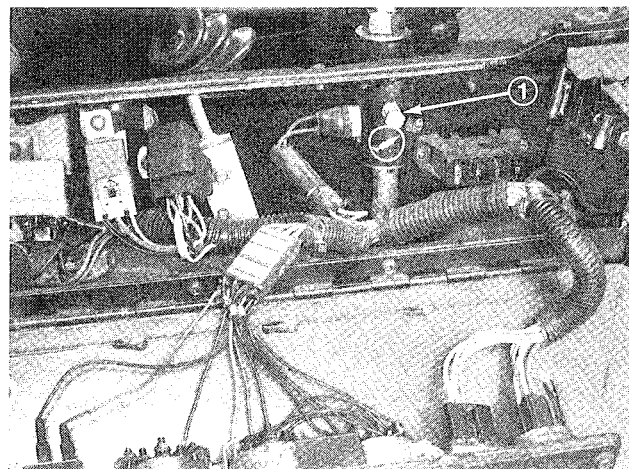
Use extra care when operating machine on slopes. Drive slowly and avoid sharp turns on slopes to prevent rollovers. The cutting units must be lowered when going downhill for steering control.

**Pushing Or Towing Traction Unit** – Use only a rigid tow bar if it becomes necessary to tow machine. Make sure axle shift lever is in NEUTRAL position and only tow the machine forward. Use trailer for normal transport. Move axle shift lever to LO position before loading machine on a trailer.

**Matching Ground Speed and Reel Speed** – Vary reel speed (while maintaining constant ground speed) to establish the best quality of cut for the area being

mowed. Reel speeds either too fast or too slow for conditions may effect the quality of cut. See clip chart (Fig. 27) to determine approximate settings for reel speed and ground speed.

**Note:** To lock reel speed setting so it cannot be changed while operating machine, tighten capscrew on reel speed shaft. (Fig. 26)



**Figure 26**

**1. Reel Speed Locking Capscrew**

## CUTTING CHARTS

Relate HOC and ground speed to required reel speed setting on reel speed knob

Note: 1 = 500 RPM; 2 = 700 RPM; 3 = 900 RPM and 4 = 1200 RPM (Fig. 27).

\* Speeds are approximate

### Recommended Reel Speed Settings

#### 5 Blade Reel

HOC	Ground Speed In MPH				
	3	4	5	6	7
1	1	1	2	2	N/R
1.25	1	2	2	3	3
1.5	N/R	1	2	3	3
2	N/R	N/R	1	1	2
2.5	N/R	N/R	N/R	1	1

#### 7 Blade Reel

HOC	Ground Speed In MPH				
	3	4	5	6	7
1/2	3	4	N/R	N/R	N/R
5/8	2	3	4	N/R	N/R
3/4	2	2	3	4	N/R
1	N/R	1	2	3	3
1.25	N/R	1	2	3	3

#### 11 Blade Reel

HOC	Ground Speed In MPH				
	3	4	5	6	7
3/8	2	3	4	N/R	N/R
1/2	1	2	3	4	4
5/8	1	1	2	3	4
3/4	N/R	1	1	2	3

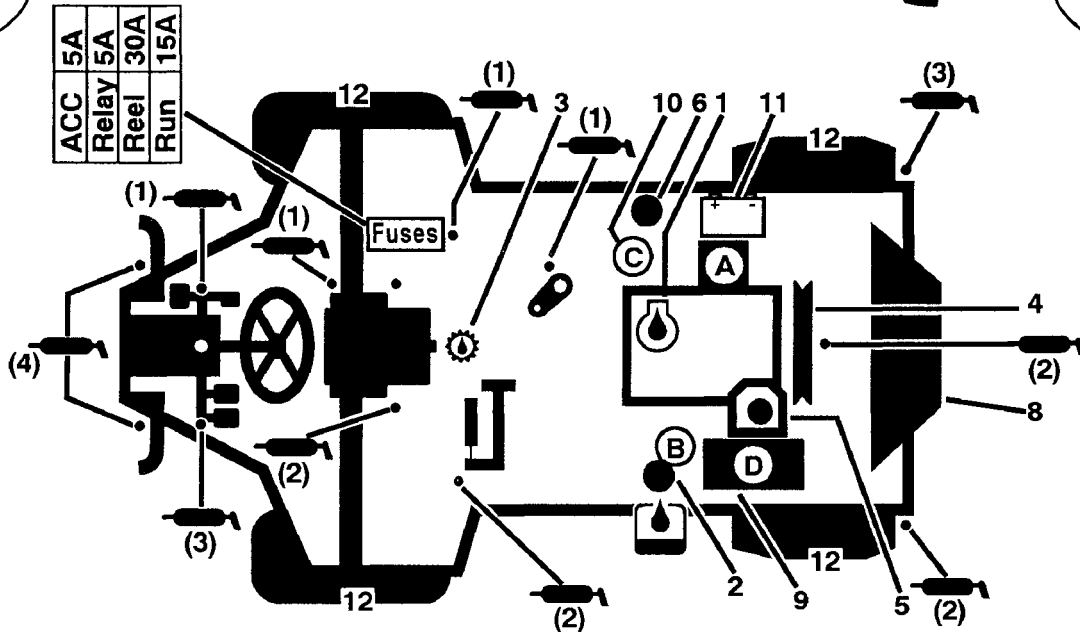
Note: N/R = Not Recommended

**Figure 27**



# SERVICE INTERVAL CHART—2 Wheel Drive

## RM 3500-D 2WD QUICK REFERENCE AID



### CHECK/SERVICE

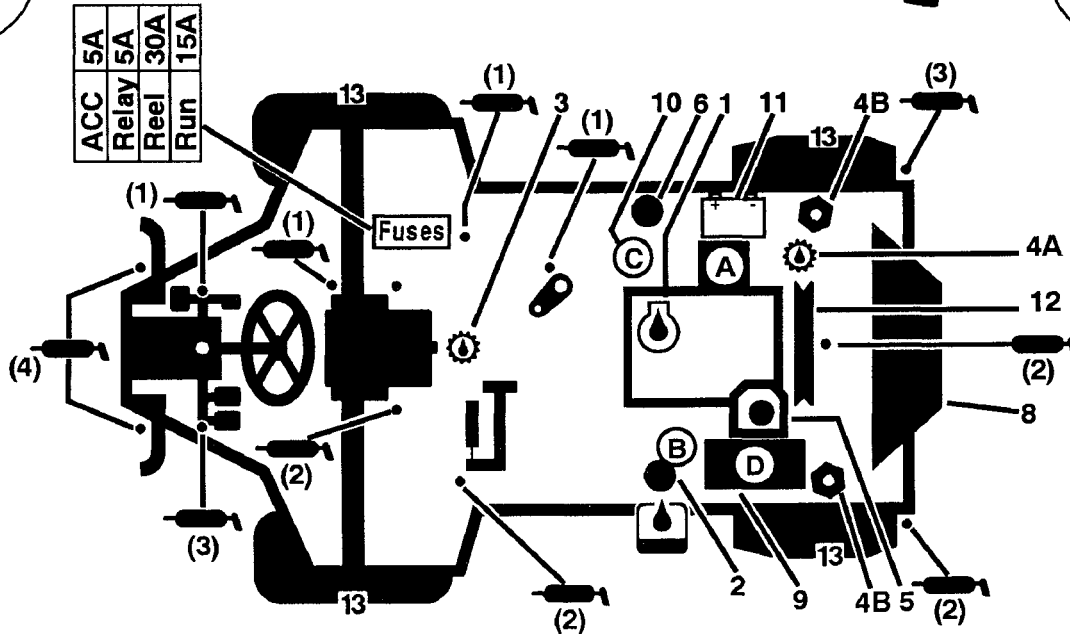
- |                              |   |
|------------------------------|---|
| 1. ENGINE OIL LEVEL/FILL     | 7. GREASE POINTS (22)                   |
| 2. HYDRAULIC OIL LEVEL/FILL  | 8. RADIATOR SCREEN                      |
| 3. FRONT AXLE OIL LEVEL/FILL | 9. AIR CLEANER                          |
| 4. FAN BELT                  | 10. WATER SEPARATOR/FUEL FILTER         |
| 5. COOLANT LEVEL/FILL        | 11. BATTERY                             |
| 6. FUEL-DIESEL ONLY          | 12. TIRE PRESSURE (1-1.5 BAR/15-20 PSI) |

### FLUID SPECIFICATIONS/CHANGE INTERVALS


*See operator's manual for initial changes.		FLUID TYPE		CAPACITY		CHANGE INTERVAL		FILTER PART NO.
				L	USA	FLUID	FILTER	
ENGINE OIL		SAE 15W-40 CD		5	5.3 QT	50 HRS	100 HRS	74-7970 (A)
HYD. CIRCUIT OIL		Mobil DTE 26		24.6	6.5 G	500 HRS	500 HRS	86-3010 (B)
AXLE OIL		SAE 80-90 E.P.				750 HRS		
FUEL FILTER							400 HRS	76-5220 (C)
AIR CLEANER		Clean @ 50 hrs.					250 HRS	27-7110 (D)
FUEL	>32F°0°C	NO. 2-D	53	14	GAL.	Drain and flush, 2 yrs.		
	<32F°0°C	NO. 1-D						
COOLANT		50/50 Peugeot recommended anti-freeze	13.25	3.5				

92-5846

# RM 3500-D 4WD QUICK REFERENCE AID



1. ENGINE OIL LEVEL/FILL
2. HYDRAULIC OIL LEVEL/FILL
3. FRONT AXLE OIL LEVEL/FILL
4. REAR AXLE OIL
  - A. FILL
  - B. CHECK (2)
5. COOLANT LEVEL/FILL
6. FUEL-DIESEL ONLY

7. GREASE POINTS (22) 
8. RADIATOR SCREEN
9. AIR CLEANER
10. WATER SEPARATOR/FUEL FILTER
11. BATTERY
12. FAN BELT
13. TIRE PRESSURE  
(1-1.5 BAR/15-20 PSI)

*See operator's manual for initial changes.		FLUID TYPE		CAPACITY		CHANGE INTERVAL		FILTER
				L	USA	FLUID	FILTER	PART NO.
ENGINE OIL		SAE 15W-40 CD	5	5.3 QT	50 HRS	100 HRS	74-7970	(A)
HYD. CIRCUIT OIL		Mobil DTE 26	24.6	6.5 G	500 HRS	500 HRS	86-3010	(B)
AXLE OIL		SAE 80-90 E.P.			750 HRS			
FUEL FILTER						400 HRS	76-5220	(C)
AIR CLEANER		Clean @ 50 hrs.				250 HRS	27-7110	(D)
FUEL	>32F°0°C	NO. 2-D	53	14 GAL.	Drain and flush, 2 yrs.			
	<32F°0°C	NO. 1-D						
COOLANT		50/50 Peugeot recommended anti-freeze	13.25	3.5 GAL.				

92-5845

# LUBRICATION

## GREASING BEARINGS AND BUSHINGS

(Fig. 28–38)

The traction unit has grease fittings that must be lubricated regularly with No. 2 General Purpose Lithium Base Grease. If machine is operated under normal conditions, lubricate all bearings and bushings after every 25 hours of operation.

1. The traction unit bearings and bushings that must be lubricated are:

Two and Four wheel drive machines – #1 Lift arm pivot (1), #1 lift cylinder (1), brake arm pivots (2) (Fig. 28); #2 & 3 lift arm pivots (2), #2 & #3 lift cylinders (2), brake pivot (1) (Fig. 29); brake pivots (2) (Fig. 30); traction pedal pivot (1) (Fig. 31); reel speed shaft (1) (Fig. 32); traction adjuster (1) (Fig. 33) and the transmission shift linkage (1) (Fig. 38)

Two wheel drive machines – cylinder end (2), tie rod assembly (2) (Fig. 34); center pivot (1), spindles (2) (Fig. 35).

Four wheel drive machines – tie rod assemblies (2), center pivot (1), axle knuckles (2) (Fig. 36); cylinder ends (2) (Fig. 37)..

1. Wipe grease fitting clean so foreign matter cannot be forced into the bearing or bushing.
2. Pump grease into the bearing or bushing.
3. Wipe up excess grease.

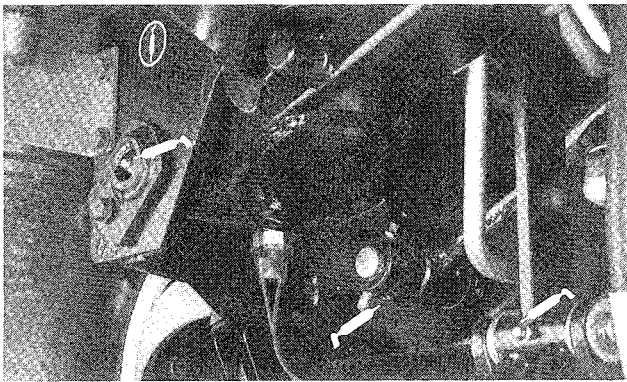


Figure 28

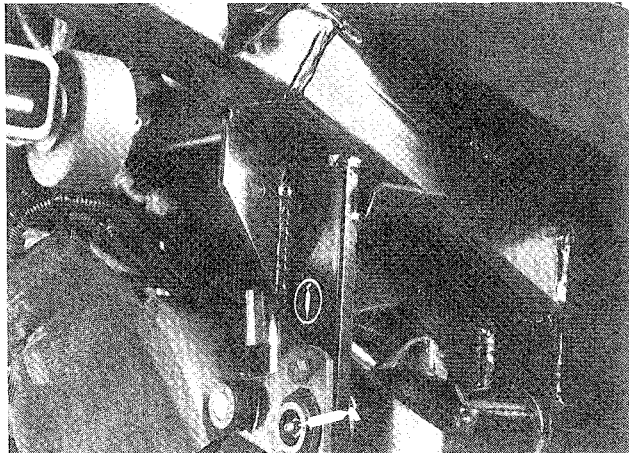


Figure 29

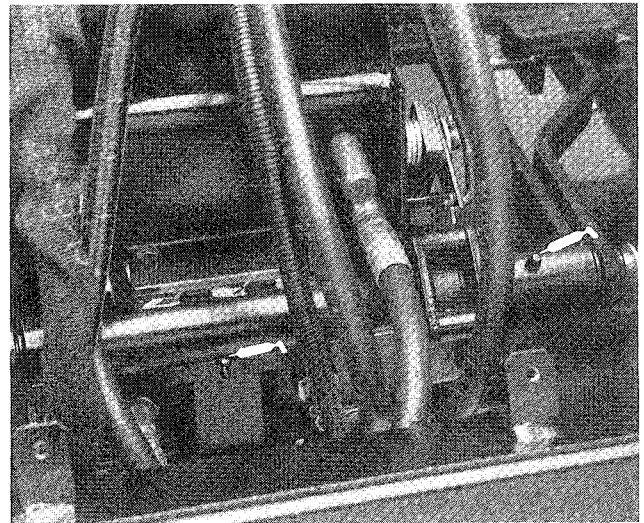


Figure 30

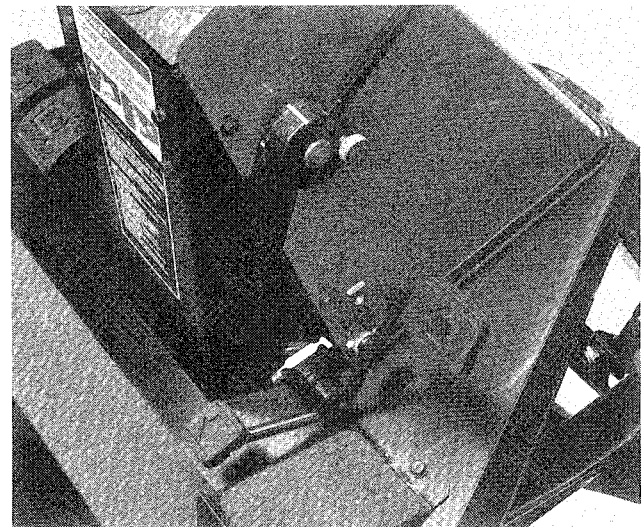


Figure 31

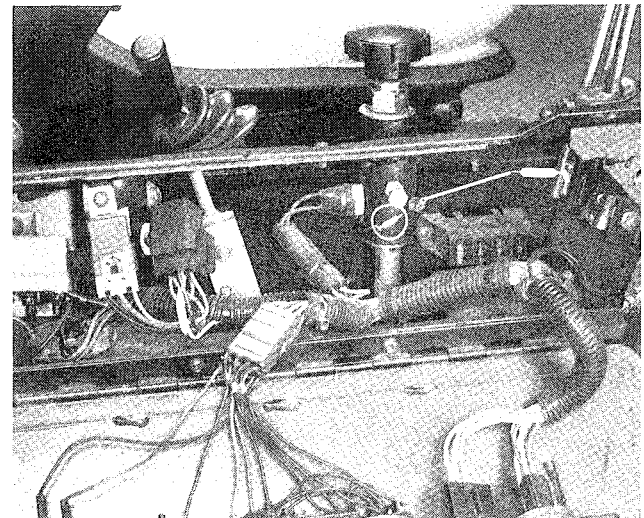


Figure 32

# LUBRICATION

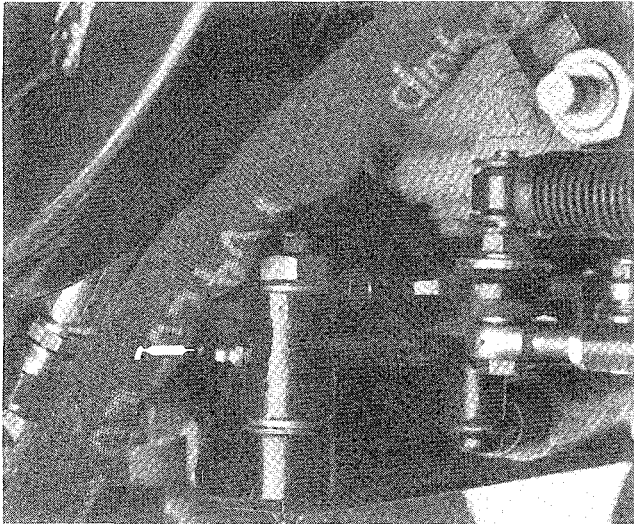


Figure 33

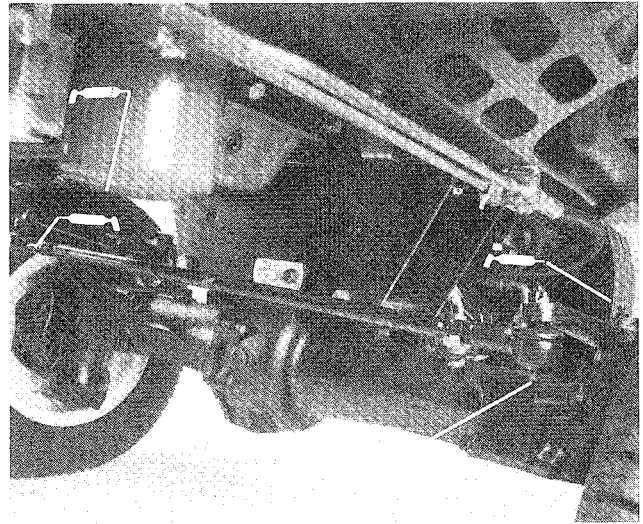


Figure 36

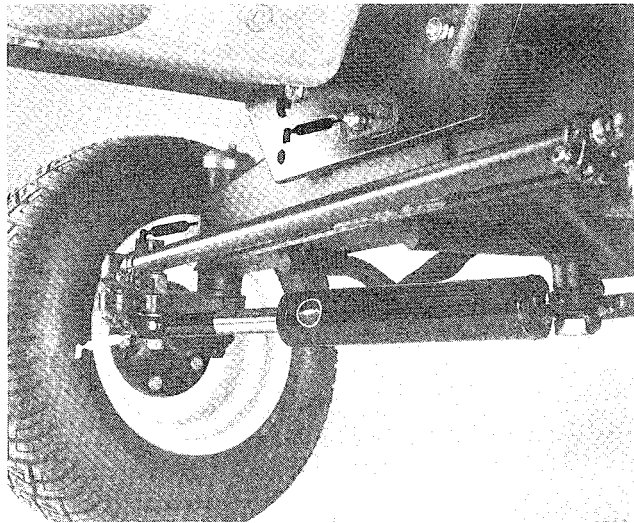


Figure 34

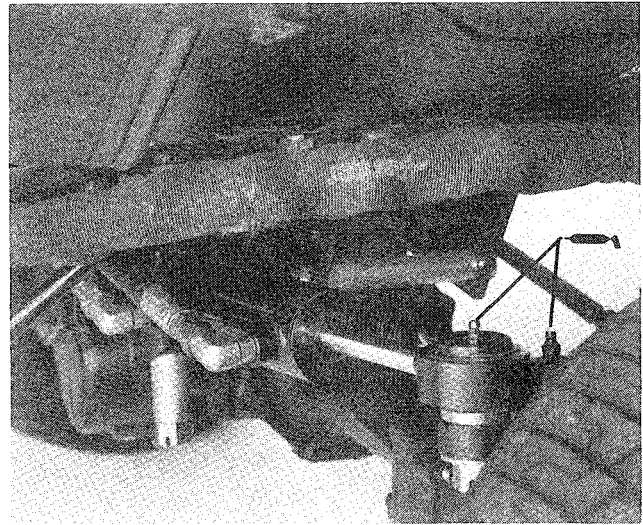


Figure 37

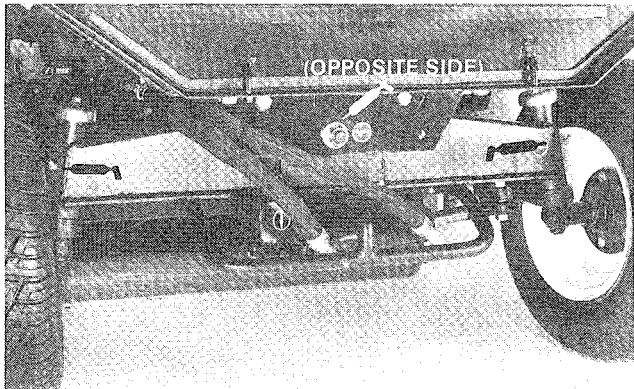


Figure 35

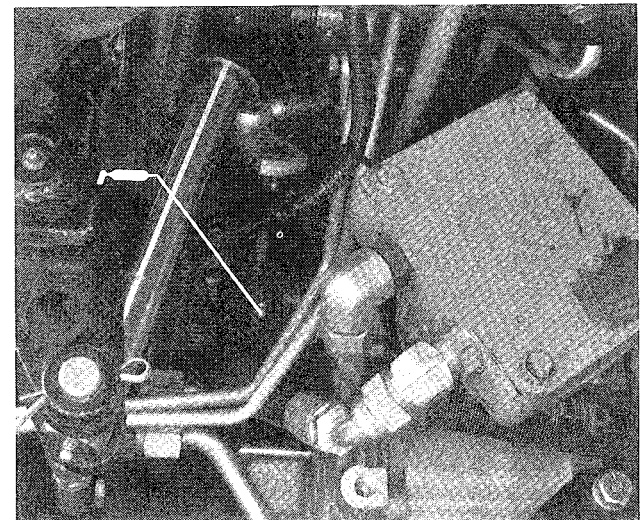


Figure 38

# AIR CLEANER MAINTENANCE



## CAUTION

Before servicing or making adjustments to the machine, stop engine and remove key from the switch.

### GENERAL MAINTENANCE PRACTICES

Inspect air cleaner and hose periodically to maintain maximum engine protection and to ensure maximum service life.

1. Assure hose between air cleaner and carburetor is clamped securely in place. Replace the hose if it is cracked or punctured.
2. Check air cleaner body for dents and other damage which could possibly cause an air leak. Replace a damaged air cleaner body.
3. Be sure dust cup is sealing around air cleaner body.
4. Mounting screws and nuts holding air cleaner in place must be tight.
5. Inlet cap on hood must be free of obstruction.

### SERVICING DUST CUP AND BAFFLE (Fig. 39)

Inspect the dust cup and rubber baffle once a week or every 50 hours operation. However, daily or more frequent inspection is required when operating conditions are extremely dusty and dirty. Never allow dust to build up closer than one inch from the rubber baffle.

**Note:** If conditions are extremely dusty and dirty, begin by checking dust cup and baffle after each day's operation to establish approximately how long an interval passes before dust cup should be emptied. Base further maintenance requirements on this figure. These conditions may be particularly prevalent if the rear discharge cutting unit is attached.

1. Loosen thumb screw until dust cup and baffle can be removed. Separate dust cup and baffle.
2. Dump dust out of the dust cup. After cleaning cup and baffle, assemble and reinstall both parts.

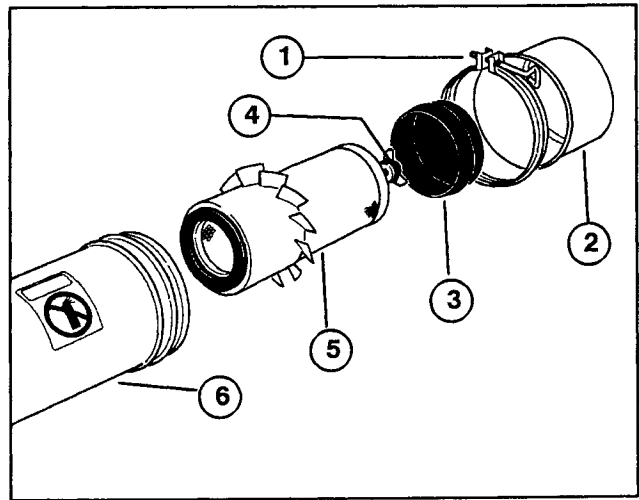


Figure 39

- |                |                      |
|----------------|----------------------|
| 1. Thumb Screw | 4. Wing Nut & Gasket |
| 2. Dust Cup    | 5. Filter Element    |
| 3. Baffle      | 6. Air Cleaner Body  |

### SERVICING AIR CLEANER FILTER (Fig.39 )

Service the air cleaner filter every 250 hours or more frequently in extreme dusty or dirty conditions by washing or using compressed air. Replace the element after every six cleanings (1500 hours) or annually, whichever comes first.

1. Remove and service dust cup; refer to Servicing Dust Cup and Baffle, page 25.
2. Remove wing nut w/gasket and slide filter element out of air cleaner body.
3. Clean the element by washing it in a solution of filter cleaner (Toro Part No. 27-7220) and water, or blow dirt out of filter by using compressed air.

**Note:** Compressed air is recommended when element must be used immediately after servicing because a washed element must be dried before it is used. By comparison, washing the element cleans better than blowing dirt out with compressed air. Remember, though, filter must be washed when exhaust soot is lodged in the filter pores.

#### Washing Method

**IMPORTANT:** Do not remove plastic fin assembly because washing removes dust from beneath fins.

- A. Prepare a solution of filter cleaner and water and soak filter element about 15 minutes. Refer to directions on filter cleaner carton for complete information.
- B. After soaking filter for 15 minutes, rinse it with clear water. Maximum water pressure must not exceed 40 psi to prevent damage to the filter element.



## AIR CLEANER MAINTENANCE

C. Dry filter element using warm, flowing air(160°F ) max), or allow element to air-dry. Do not use compressed air or a light bulb to dry the filter element because damage could result.

### Compressed Air Method

**IMPORTANT:** Do not remove plastic fin assembly because back-blowing with compressed air removes dust from beneath fins.

A. Blow compressed air from inside to the outside of dry filter element. Do not exceed 100 psi to prevent damage to the element.

B. Keep air hose nozzle at least one inch from pleated paper, and move nozzle up and down while rotating the filter element. Inspect element when dust and dirt are removed; refer to Inspecting Filter Element, page 26.

4. Wipe inside of air cleaner body with a damp cloth to remove excess dust. Slide filter into air cleaner body and secure it in place with wing nut and gasket.

5. Reinstall dust cup and baffle. Move thumb screw behind air cleaner body and tighten it securely.

### INSPECTING FILTER ELEMENT (Fig. 39)

1. Place bright light inside filter.

2. Rotate filter slowly while checking for cleanliness, ruptures, holes, and tears. Replace defective filter element.

3. Check fin assembly, gasket, and screen for damage. Replace filter if damage is evident.

## ENGINE MAINTENANCE



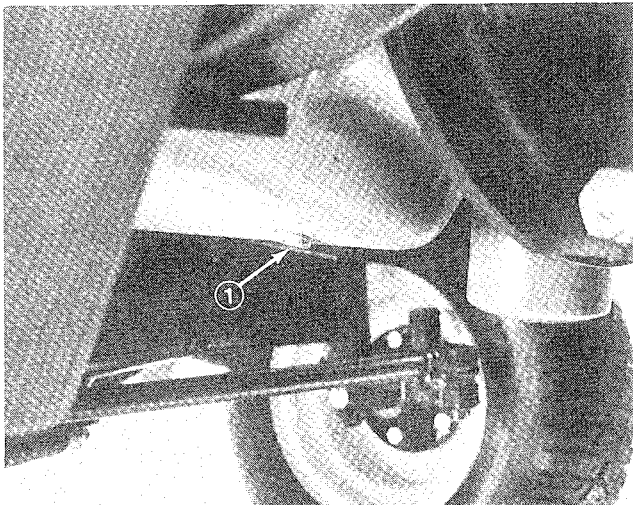
### CAUTION

Before servicing or making adjustments to the machine, stop engine and remove key from the switch.

### ENGINE OIL AND FILTER (Fig. 40)

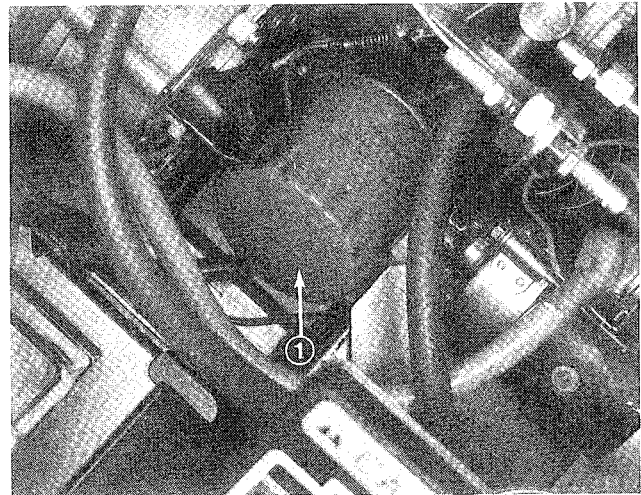
Change oil and filter initially after the first 50 hours of operation, thereafter change oil every 50 hours and filter every 100 hours.

1. Remove drain plug (Fig. 40) and let oil flow into drain pan. When oil stops, install drain plug and new plug seal.



**Figure 40**  
1. Drain Plug

2. Remove oil filter (Fig. 41). Apply a light coat of clean oil to the new filter seal before screwing it on. **DO NOT OVER-TIGHTEN.**



**Figure 41**  
1. Oil Filter

3. Add 15W-40 CD oil to crankcase. Capacity is 5.3 quarts with filter.

### FUEL SYSTEM (Fig. 42)

#### Fuel Tank

Drain and clean fuel tank every 400 hours of operation or yearly, whichever comes first. Also, drain and clean tank if fuel system becomes contaminated or if machine is to be stored for an extended period. Use clean fuel to flush out the tank.

# ENGINE MAINTENANCE



## DANGER

Because diesel fuel is highly flammable, use caution when storing or handling it. Do not smoke while filling the fuel tank. Do not fill fuel tank while engine is running, hot, or when machine is in an enclosed area. Always fill fuel tank outside and wipe up any spilled diesel fuel before starting the engine. Store fuel in a clean, safety-approved container and keep cap in place. Use diesel fuel for the engine only; not for any other purpose.

### Fuel Lines and Connections

Check lines and connections every 400 hours or yearly, whichever comes first. Inspect for deterioration, damage, or loose connections.

### Draining Fuel Filter / Water Separator

Drain water or other contaminants from fuel filter / water separator daily.

1. Place a clean container under fuel filter.

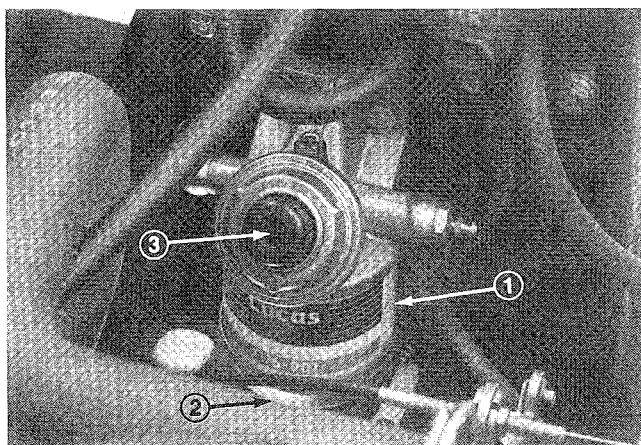


Figure 42

1. Fuel Filter / Water Separator
2. Drain Screw
3. Primer Plunger

2. Loosen drain screw on bottom of fuel filter and press primer plunger until only fuel is evident draining into container.

3. Tighten drain screw.

### Changing Fuel Filter

Replace fuel filter if fuel flow becomes restricted, after every 400 hours of operation or annually, whichever comes first.

1. Unscrew bottom filter cap from filter assembly. Remove cap, gaskets, o-ring and filter from assembly. Note position of gaskets and o-ring when disassembling from filter.

3. Install new filter, gaskets, o-ring with filter assembly cap.

4. Prime fuel system, refer to Priming Fuel System, page 18.

### ENGINE COOLING SYSTEM (Fig. 43)

1. Removing Debris – Remove debris from rear screen, oil cooler and radiator daily, clean more frequently in dirty conditions.

**IMPORTANT:** Never spray water onto a hot engine as damage to engine may occur.

- A. Turn engine off, release hood latch and raise hood. Clean engine area thoroughly of all debris. Close hood.

- B. Unscrew knobs and remove rear screen (Fig.43). Clean screen thoroughly.

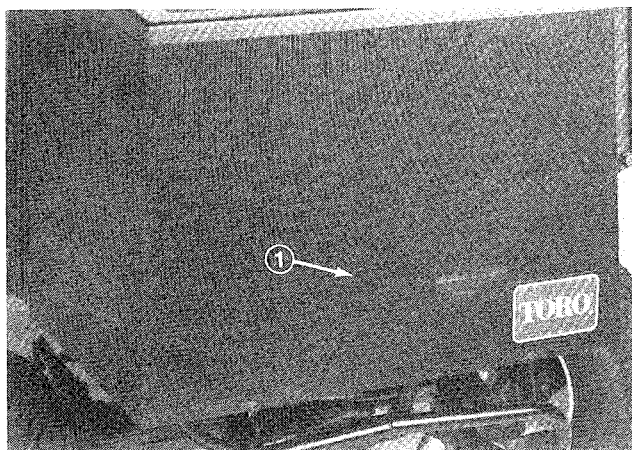


Figure 43

1. Rear Screen

- C. Unscrew knobs and pivot oil cooler rearward. Clean both sides of oil cooler and radiator area thoroughly with compressed air. Open hood and blow debris out toward back of machine. Pivot oil cooler back into position and tighten knobs.

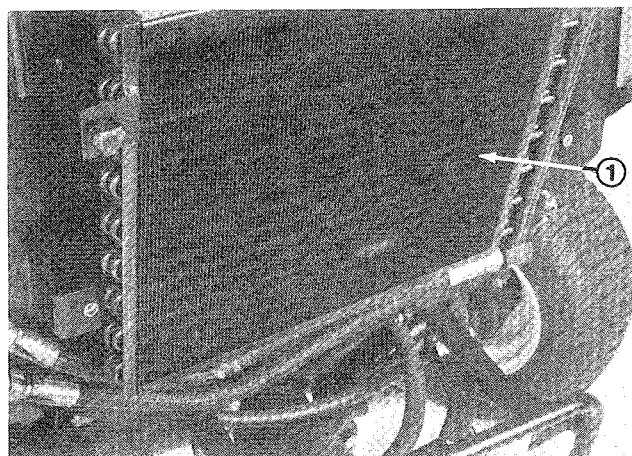


Figure 44

1. Oil Cooler

**Note:** Upper portion of fan shroud may be easily unbolted from machine to simplify cleaning.

- D. Install rear screen and tighten knobs.

# ENGINE MAINTENANCE

**2. Maintaining Cooling System** – Capacity of the system is 3.5 gal. Always protect cooling system with a 50/50 solution of water and Peugeot recommended anti-freeze. DO NOT USE WATER ONLY IN COOLING SYSTEM.

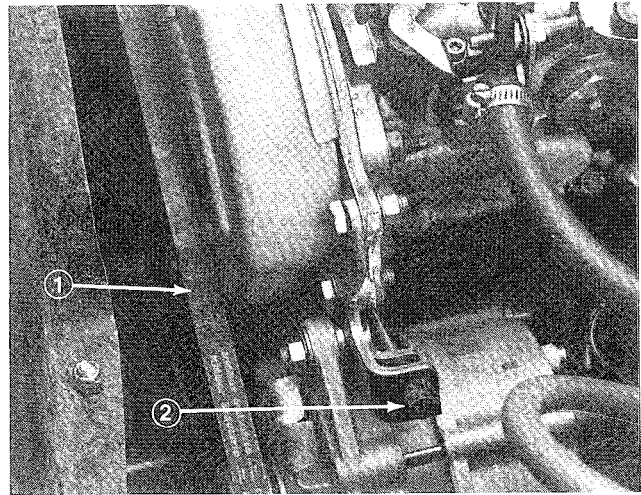
A. After every 100 operating hours, tighten hose connections. Replace any deteriorated hoses.

B. After every 2 years, drain and flush the cooling system. Add anti-freeze (refer to Check Cooling System, Page 13).

## ENGINE FAN BELT (Fig. 45)

Check condition and tension of fan belt (Fig. 45) frequently. It is recommended that belt be replaced after every 800 hours of operation.

1. Proper tension will allow 1/4 in. deflection on the belt midway between the pulleys, when pressed firmly with thumb.



**Figure 45**

1. Fan Belt 2. Adjusting Screw

2. If deflection exceeds 1/4 in., loosen alternator mounting bolts. Adjust alternator belt tension by adjusting tension screw. Check deflection of belt again to assure tension is correct.



# HYDRAULIC MAINTENANCE



## CAUTION

Before servicing or making adjustments to the machine, stop engine and remove key from the switch.

### CHANGING HYDRAULIC OIL (Fig. 46 & 47)

Normally, change hydraulic oil after every 500 operating hours. If oil becomes contaminated, contact your local TORO distributor because the system must be flushed. Contaminated oil looks milky or black when compared to clean oil.

1. Turn engine off, release hood latch and raise hood.
2. Remove drain plugs (Fig. 46) from both ends of reservoir and let hydraulic oil flow into drain pan. Reinstall and tighten plugs when hydraulic oil stops draining.

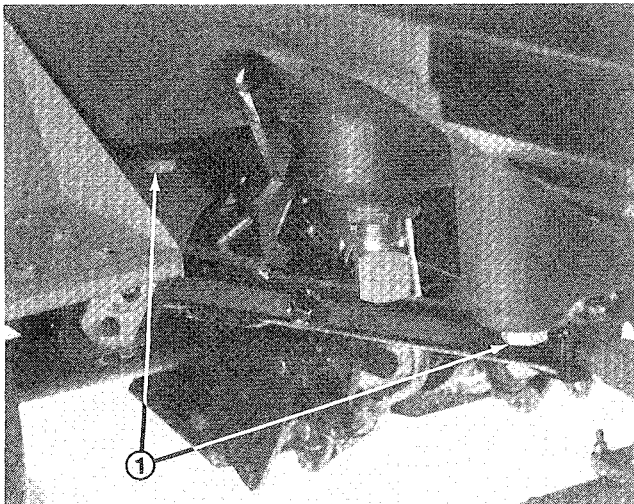


Figure 46

1. Hydraulic Reservoir Drain Plugs

3. Fill reservoir with approximately 6.5 gallons of hydraulic oil. Refer to Check Hydraulic Circuit Oil (Page 14).

**IMPORTANT:** Use only hydraulic oils specified. Other fluids could cause system damage.

4. Install reservoir cap, lower hood and latch. Start engine and use all hydraulic controls to distribute hydraulic oil throughout the system. Also check for leaks. Then stop the engine.

5. With cutting units raised and oil warm, look into sight gauge (Fig. 47). If hydraulic oil is not visible, add enough to raise level to middle (maximum) of sight gauge. To prevent over filling, do not fill if oil is cold. **DO NOT OVER FILL.**

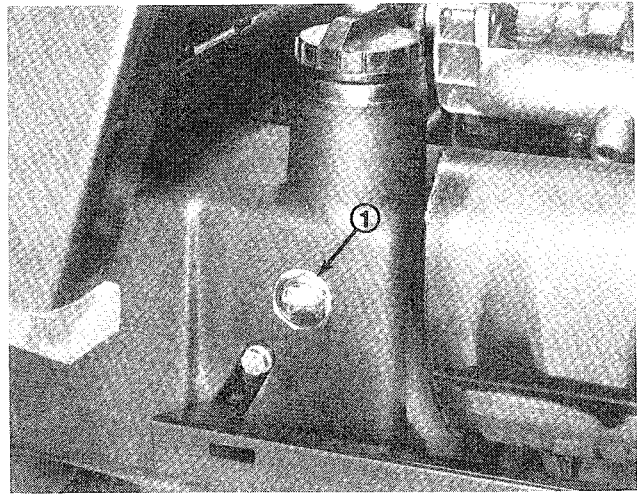


Figure 47

1. Sight Gauge

### REPLACING HYDRAULIC FILTER (Fig. 48)

Initially, change filter after the first 50 operating hours, thereafter, every 500 operating hours or annually, whichever comes first.

Only the Toro replacement filter (Part No. 86-3010) can be used in the hydraulic system.

**IMPORTANT:** Use of any other filter may void the warranty on some components.

1. Turn engine off, release hood latch and raise hood.
2. Clean area around filter mounting area (Fig. 48). Place drain pan under filter and remove filter.

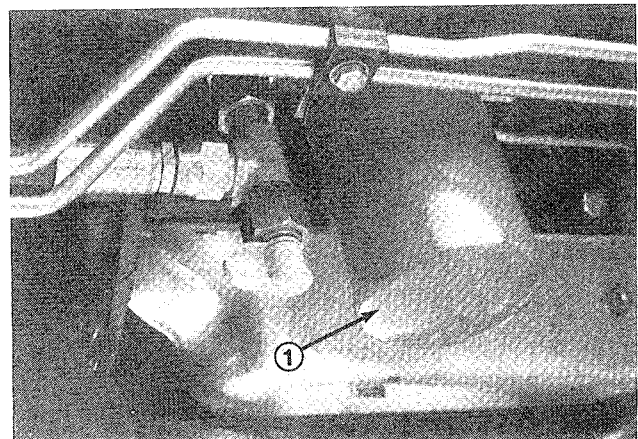


Figure 48

1. Hydraulic Filter

3. Lubricate new filter gasket and fill the filter with hydraulic oil.

# HYDRAULIC MAINTENANCE

4. Assure filter mounting area is clean. Screw filter on until gasket contacts mounting plate. Then tighten filter one-half turn.
5. Start engine and let run for about two minutes to purge air from the system. Stop the engine and check oil level. Also check for any leaks.

## CHECKING HYDRAULIC LINES AND HOSES

After every 100 operating hours, check hydraulic lines and hoses for leaks, kinked lines, loose mounting supports, wear, loose fittings, weather deterioration and chemical deterioration. Make all necessary repairs before operating.



### WARNING

Keep body and hands away from pin hole leaks or nozzles that eject high pressure hydraulic fluid. Use cardboard or paper to find hydraulic leaks. Hydraulic fluid escaping under pressure can penetrate skin and cause injury. Fluid accidentally injected into the skin must be surgically removed within a few hours by a doctor familiar with this form of injury or gangrene may result.

## HYDRAULIC SYSTEM TEST PORTS

(Fig. 49 – 52 )

The test ports are used to test the hydraulic circuits. Check all pressures when engine is at full speed and hydraulic oil is at normal operating temperature. Contact your local Toro distributor for assistance.

1. Traction Forward has a normal relief setting of approximately 5000 psi and 100–140 psi charge pressure.
2. Cutting unit Counterbalance normal settings are  
Hot Oil: 300–400 psi  
Cold Oil: 400–600 psi  
Lift circuit relief pressure is approximately 2150–2300 psi when counterbalance setting is 300 psi.

3. Cutting Circuit has a normal relief setting of approximately 2540 psi.

4. Steering Circuit has a normal relief setting of approximately 1200 psi.

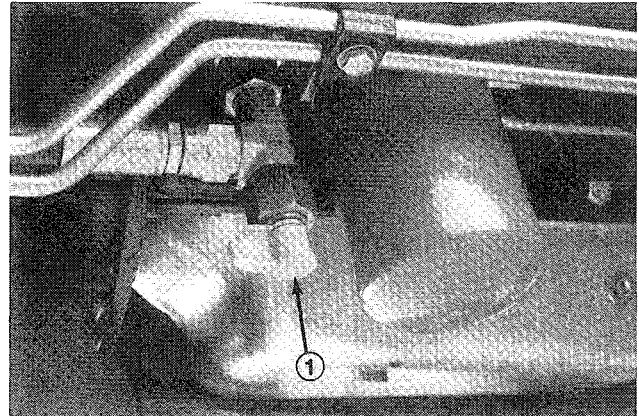


Figure 49

1. Charge Pressure

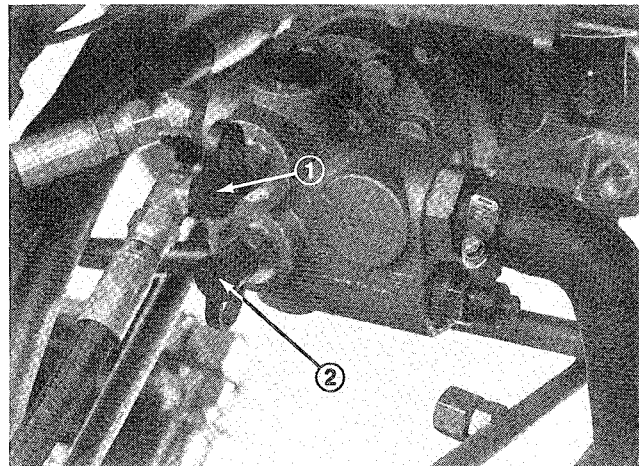


Figure 50

1. Counterbalance/Lift Circuit  
2. Steering Circuit

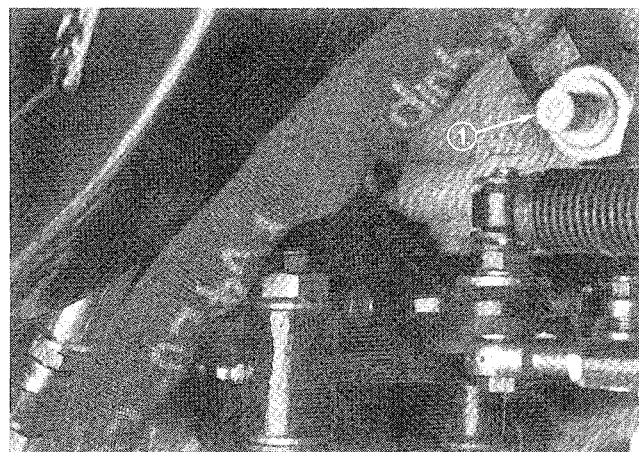
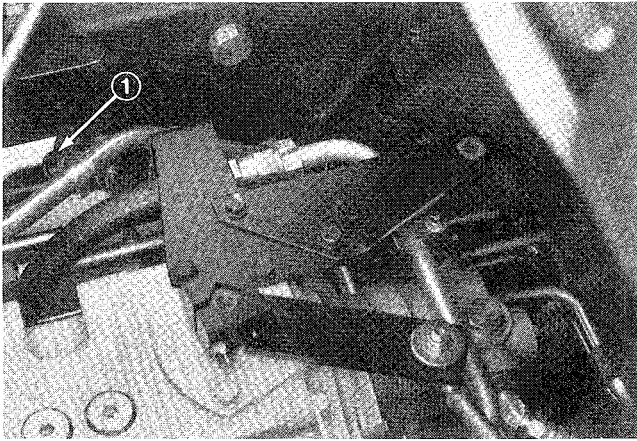


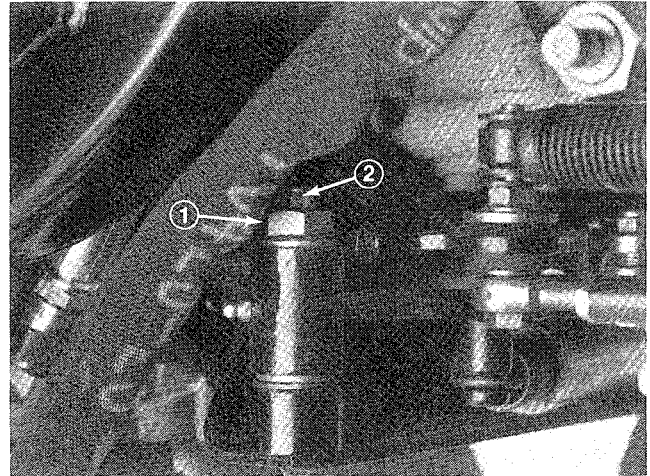
Figure 51

1. Cutting Circuit

# HYDRAULIC MAINTENANCE



**Figure 52**  
1. Traction Forward Circuit



**Figure 53**  
1. Traction Adjustment Cam  
2. Locknut

## ADJUSTING TRACTION DRIVE FOR NEUTRAL (Fig. 53)

The machine must not creep when traction pedal is released. If it does creep, an adjustment is required.

1. Park machine on a level surface, shut engine off and move shift lever to "HI" position. Depress only the right brake pedal and engage the parking brake.
2. Jack up left side of machine until front tire is off the shop floor. Support machine with jack stands to prevent it from falling accidentally.
3. Under right side of machine, loosen locknut on traction adjustment cam.
4. Start engine and rotate cam hex in either direction until wheel ceases rotation.



## WARNING

Engine must be running so final adjustment of the traction adjustment cam can be performed. To guard against possible personal injury, keep hands, feet, face and other parts of the body away from the muffler, other hot parts of the engine, and other rotating parts.

5. Tighten locknut locking adjustment.
6. Stop the engine and release the right brake. Remove jack stands and lower the machine to the shop floor. Test drive the machine to make sure it does not creep.

# AXLE MAINTENANCE



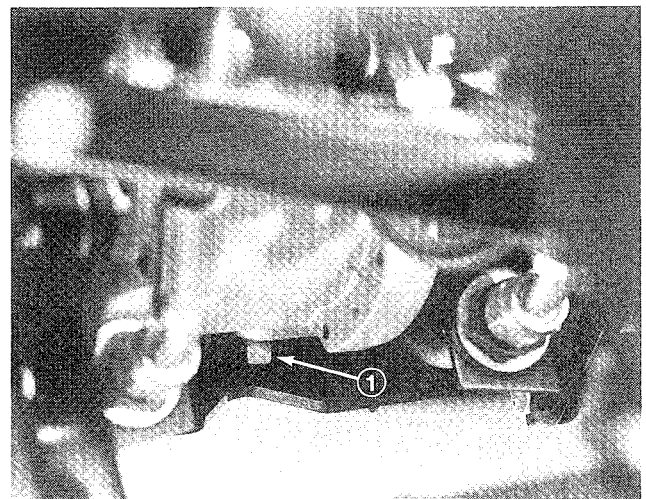
## CAUTION

Before servicing or making adjustments to the machine, stop engine and remove key from the switch.

## CHANGING FRONT AXLE LUBRICANT (Fig. 54)

After every 500 hours of operation the oil in the rear axle must be changed.

1. Position machine on a level surface.
2. Clean area around the drain plug.



**Figure 54**  
1. Front Axle Drain Plug

3. Remove plug allowing oil to drain into drain pans.



## AXLE MAINTENANCE

4. After oil is drained, reinstall drain plug into axle.
5. Fill axle with lubricant; refer to Check Front Axle Oil Level, page 15.

### CHANGING REAR AXLE LUBRICANT (Model 03603 only) (Fig. 55)

After every 500 hours of operation the oil in the rear axle must be changed.

1. Position machine on a level surface.
2. Clean area around the (3) drain plugs, (1) on each end and (1) in the center.

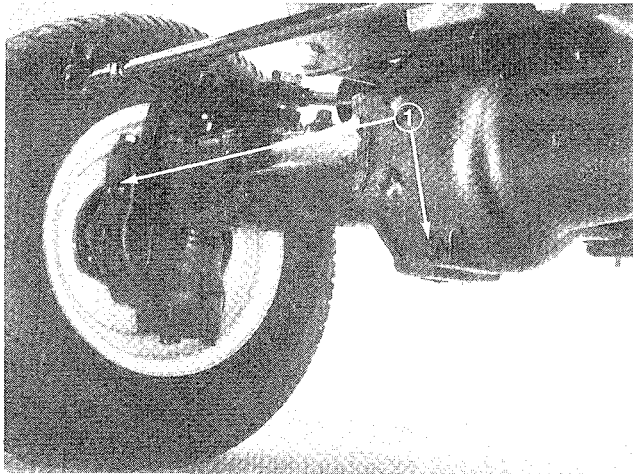


Figure 55  
1. Drain Plugs (3)

3. Remove plugs allowing oil to drain into drain pans.
4. After oil is drained, apply thread locking compound on drain plug threads and reinstall in axle.

5. Fill axle with lubricant; refer to Check Rear Axle Lubricant, page 15.

### REAR WHEEL TOE-IN (Fig. 56)

After every 800 operating hours or annually, check rear wheel toe-in.

1. Measure center-to-center distance (at axle height) at front and rear of steering tires. Front measurement must be 1/4 in. less than rear measurement.

2. To adjust, loosen clamps at both ends of tie rods.

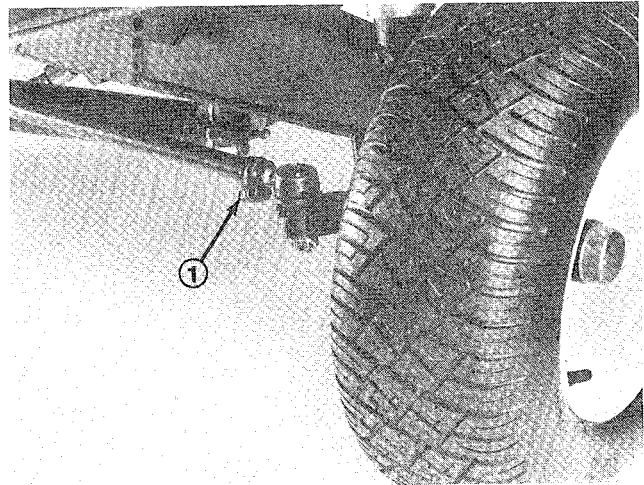


Figure 56  
1. Tie Rod Clamps

3. Rotate tie rod to move front of tire inward or outward.
4. Tighten tie rod clamps when adjustment is correct.

## BRAKE MAINTENANCE

### ADJUSTING SERVICE BRAKES (Fig. 57)

Adjust the service brakes when there is more than 1-1/2" of "free travel" of the brake pedal, or when the brakes do not work effectively. Free travel is the distance the brake pedal moves before braking resistance is felt.

1. To reduce free travel of brake pedals, tighten nut on brake rod adjuster, 1/2 turn at a time, until desired "Free play" in pedal is achieved.

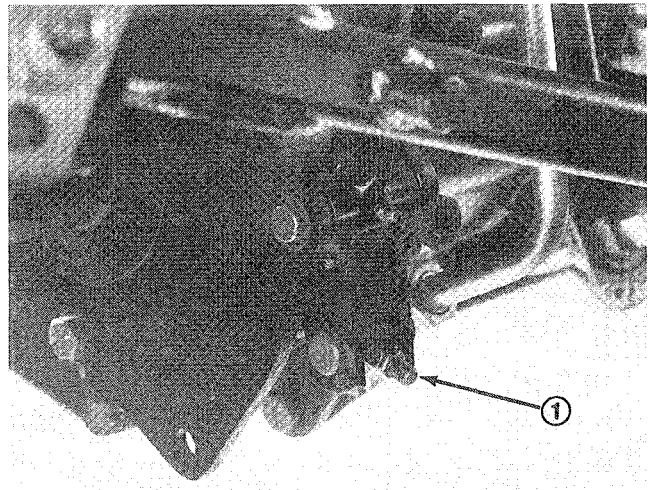


Figure 57  
1. Brake Rod Adjuster

# ELECTRICAL MAINTENANCE



## CAUTION

Before servicing or making adjustments to the machine, stop engine and remove key from the switch.

### BATTERY CARE

**IMPORTANT:** Before welding on the machine, disconnect ground cable from the battery to prevent damage to the electrical system.

**Note:** Check battery condition weekly or after every 50 hours of operation. Keep terminals and entire battery case clean because a dirty battery will discharge slowly. To clean the battery, wash the entire case with solution of baking soda and water. Rinse with clear water. Coat the battery posts and cable connectors with Grafo 112X (skin-over) grease (Toro Part No. 505-47) or petroleum jelly to prevent corrosion.

### FUSES (Fig. 58)

There are 4 fuses in the machines electrical system. They are located inside control panel.

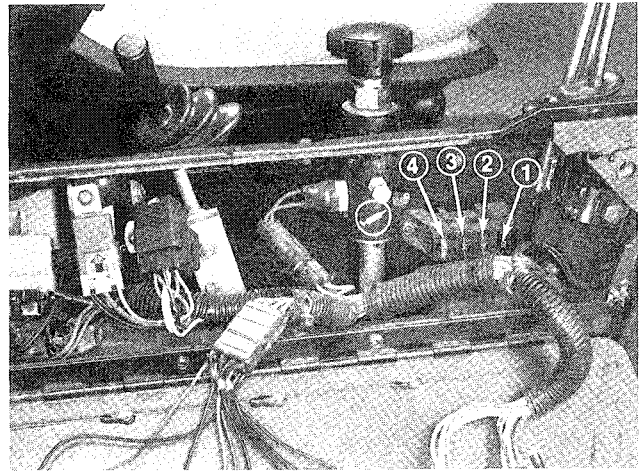


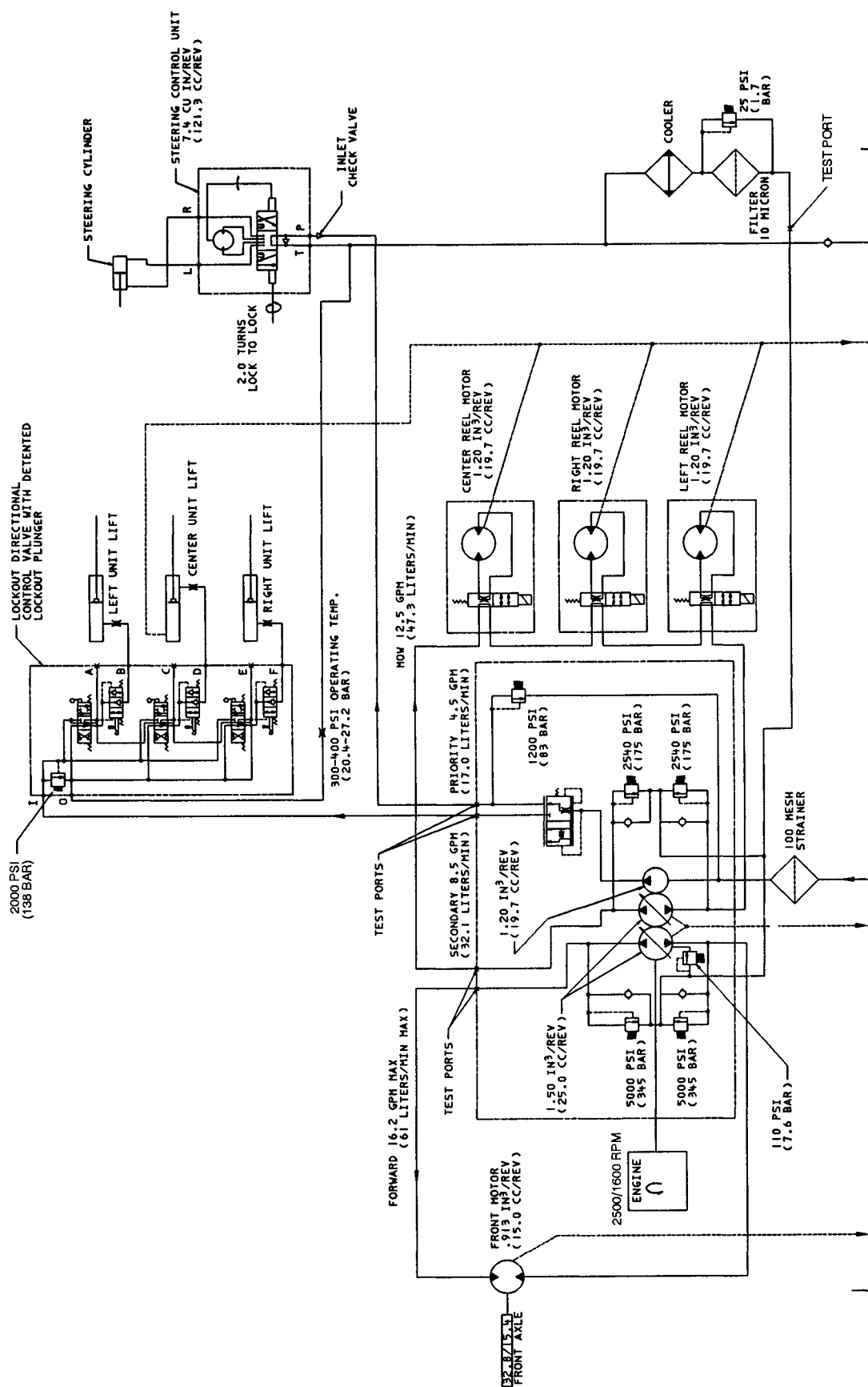
Figure 58

- |               |              |
|---------------|--------------|
| 1. ACC Fuse   | 3. Reel Fuse |
| 2. Relay Fuse | 4. Run FUse  |

FUSES	
ACC	5A
RELAY	5A
REEL	30A
RUN	15A



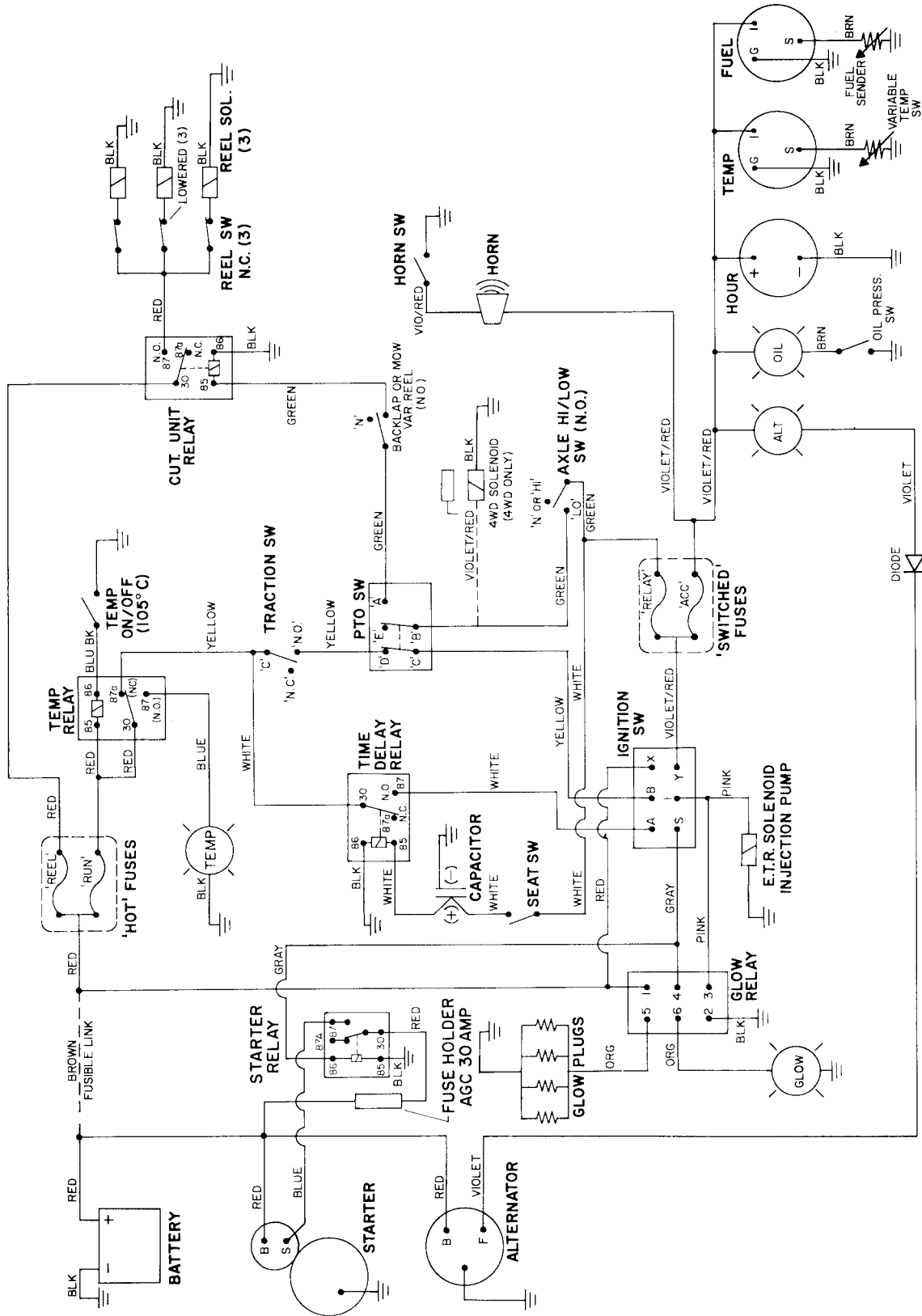
## HYDRAULIC SCHEMATIC—2 WHEEL DRIVE



The diagram illustrates a complex hydraulic system with the following components and specifications:

- Engine:** 2500/1600 RPM, 110 PSI (7.6 BAR).
- Pumps and Motors:**
  - Front Motor:** 9.9 in³/REV (15.0 CC/REV), 12.6:1 gear ratio.
  - Rear Motor:** 2.01 in³/REV (32.9 CC/REV).
  - Center Reel Motor:** 1.20 in³/REV (19.7 CC/REV).
  - Right Reel Motor:** 1.20 in³/REV (19.7 CC/REV).
  - Left Reel Motor:** 1.20 in³/REV (19.7 CC/REV).
- Valves and Actuators:**
  - Lockout Directional Control Valve:** 2000 PSI (103 BAR), with detented lockout plunger.
  - Steering Control Unit:** 7 in³/REV (121.3 CC/REV).
  - Lockout Unit Lift:** 2.0 TURNS LOCK TO LOCK.
  - Center Unit Lift:** 2.0 TURNS LOCK TO LOCK.
  - Right Unit Lift:** 2.0 TURNS LOCK TO LOCK.
- Filters and Strainers:**
  - 100 Mesh Strainer:** 110 PSI (7.6 BAR).
  - Filter:** 10 MICRON, 25 PSI (1.7 BAR).
- Pressure Ratings:**
  - 2000 PSI (103 BAR):** Lockout valve.
  - 1200 PSI (83 BAR):** Priority valve.
  - 2540 PSI (175 BAR):** Secondary valve.
  - 5000 PSI (345 BAR):** Test ports.
  - 110 PSI (7.6 BAR):** Strainer.
  - 300-400 PSI (20.4-27.2 BAR):** Operating temperature range.
- Flow and Capacity:**
  - Forward:** 16.2 GPM MAX (61 LITERS/MIN MAX).
  - Priority:** 4.5 GPM (17.0 LITERS/MIN).
  - Secondary:** 8.5 GPM (32.1 LITERS/MIN).

## ELECTRICAL SCHEMATIC



# PREPARATION FOR SEASONAL STORAGE

## Traction Unit

1. Thoroughly clean the traction unit, cutting units and the engine.
2. Check the tire pressure. Inflate all tires to 15–20 psi.
3. Check all fasteners for looseness; tighten as necessary.
4. Grease or oil all grease fittings and pivot points. Wipe up any excess lubricant.
5. Lightly sand and use touch-up paint on painted areas that are scratched, chipped, or rusted. Repair any dents in the metal body.
6. Service the battery and cables as follows:
  - a. Remove the battery terminals from the battery posts.
  - b. Clean the battery, terminals, and posts with a wire brush and baking soda solution.
  - c. Coat the cable terminals and battery posts with Grafo 112X skin-over grease (Toro Part No. 505-47) or petroleum jelly to prevent corrosion.
  - d. Slowly recharge the battery every 60 days for 24 hours to prevent lead sulfation of the battery.

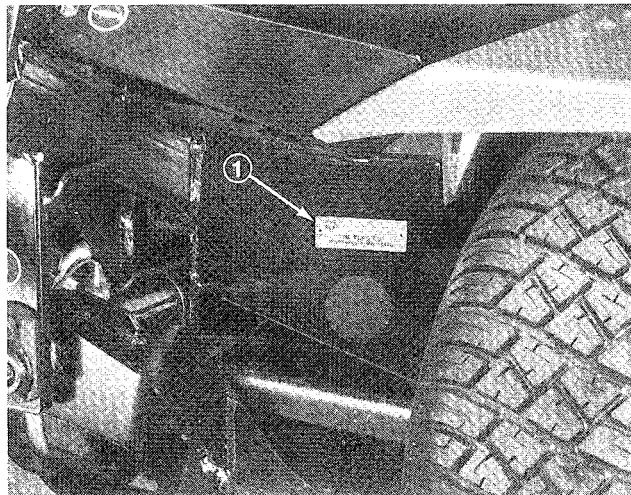
## Engine

1. Drain the engine oil from the oil pan and replace the drain plug.
2. Remove and discard the oil filter. Install a new oil filter.
3. Refill oil pan with 5.3 quarts of SAE15W-40 CD motor oil.
4. Start the engine and run at idle speed for approximately two minutes.
5. Stop the engine.
6. Thoroughly drain all fuel from the fuel tank, lines and the fuel filter/water separator assembly.
7. Flush the fuel tank with fresh, clean diesel fuel.
8. Resecure all fuel system fittings.
9. Thoroughly clean and service the air cleaner assembly.
10. Seal the air cleaner inlet and the exhaust outlet with weatherproof tape.
11. Check anti-freeze protection and add a 50/50 solution of water and Peugeot recommended anti-freeze as needed for expected minimum temperature in your area.

## PRODUCT IDENTIFICATION

### MODEL AND SERIAL NUMBER (Fig. 59)

The model and serial number is on a plate that is mounted on the left front frame member. Use model and serial number in all correspondence and when ordering parts.



**Figure 59**

1. Model & Serial Number Plate

## MAINTENANCE CHART

[illegible]



## MAINTENANCE CHART

[illegible]

## The Toro Promise

### A One Year Limited Warranty

*The Toro Company promises to repair your TORO product if defective in materials or workmanship. The following time periods from the date of purchase apply:*

**Commercial Products ..... 1 Year**

*The cost of parts and labor are included, but the customer pays the transportation costs on walk rotary mowers with cutting unit widths of less than 25".*

If you feel your TORO Product is defective and wish to rely on The Toro Promise, the following procedure is recommended:

1. Contact your Authorized TORO Distributor or Commercial Dealer (the Yellow Pages of your telephone directory is a good reference source).
2. The TORO Distributor or Commercial Dealer will advise you on the arrangements that can be made to inspect and repair your product.
3. The TORO Distributor or Commercial Dealer will inspect the product and advise you whether the product is defective and, if so, make all repairs necessary to correct the defect without an extra charge to you.

If for any reason you are dissatisfied with the distributor's analysis of the defect or the service performed, you may contact us.

Write:

TORO Commercial Products Service Department  
8111 Lyndale Avenue South  
Minneapolis, MN 55420

The above remedy of product defects through repair by an Authorized TORO Distributor or Commercial Dealer is the purchaser's sole remedy for any defect.

**THERE IS NO OTHER EXPRESS WARRANTY. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE ARE LIMITED TO THE DURATION OF THE EXPRESS WARRANTY.**

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This Warranty applies only to parts or components which are defective and does not cover repairs necessary due to normal wear, misuse, accidents, or lack of proper maintenance. Regular, routine maintenance of the unit to keep it in proper operating condition is the responsibility of the owner.

All warranty repairs reimbursable under The Toro Promise must be performed by an Authorized Toro Commercial Dealer or Distributor using Toro approved replacement parts.

Repairs or attempted repairs by anyone other than an Authorized TORO Distributor or Commercial Dealer are not reimbursable under the TORO Promise. In addition, these unauthorized repair attempts may result in additional malfunctions, the correction of which is not covered by warranty.

**THE TORO COMPANY IS NOT LIABLE FOR INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE USE OF THE PRODUCT INCLUDING ANY COST OR EXPENSE OF PROVIDING SUBSTITUTE EQUIPMENT OR SERVICE DURING PERIODS OF MALFUNCTION OR NON-USE.**

Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

#### COUNTRIES OTHER THAN THE UNITED STATES OR CANADA

Customers who have purchased TORO products exported from the United States or Canada should contact their TORO Distributor (Dealer) to obtain guarantee policies for your country, province, or state. If for any reason you are dissatisfied with your Distributor's service or have difficulty obtaining guarantee information, contact the TORO importer. If all other remedies fail, you may contact us at The Toro Company.