



MODEL NO. 03602—60001 & UP  
MODEL NO. 03603—60001 & 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.

## 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. 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.

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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PROTOTYPE

# Safety

## Training

1. Read the instructions carefully. Be familiar with the controls and the proper use of the equipment.
2. Never allow children or people unfamiliar with these instructions to use the lawn mower. Local regulations may restrict the age of the operator.
3. Never mow while people, especially children, or pets are nearby.
4. Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.
5. Do not carry passengers.
6. All drivers should seek and obtain professional and practical instruction. Such instruction should emphasize:
  - the need for care and concentration when working with ride-on machines;
  - control of a ride-on machine sliding on a slope will not be regained by the application of the brake. The main reasons for loss of control are:
    - insufficient wheel grip;
    - being driven too fast;
    - inadequate braking;
    - the type of machine is unsuitable for its task;
    - lack of awareness of the effects of ground conditions, especially slopes;
    - ##incorrect hitching and load distribution.

## Preparation

1. While mowing, always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.

2. Thoroughly inspect the area where the equipment is to be used and remove all objects which may be thrown by the machine.
3. **WARNING—Petrol is highly flammable.**
  - Store fuel in containers specifically designed for this purpose.
  - Refuel outdoors only and do not smoke while refueling.
  - Add fuel before starting the engine. Never remove the cap of the fuel tank or add petrol while the engine is running or when the engine is hot.
  - If petrol is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until petrol vapors have dissipated.
  - Replace all fuel tanks and container caps securely.
4. Replace faulty silencers.

## Operation

1. Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.
2. Mow only in daylight or in good artificial light.
3. Before attempting to start the engine, disengage all blade attachment clutches and shift into neutral.
4. Do not use on slopes of more than:
  - Never mow side hills over 5°
  - Never mow uphill over 10°
  - Never mow downhill over 15°
5. Remember there is no such thing as a “safe” slope. Travel on grass slopes requires particular care. To guard against overturning:

- do not stop or start suddenly when going up or downhill;
  - engage the clutch slowly, and always keep the machine in gear, especially when travelling downhill;
  - machine speeds should be kept low on slopes and during tight turns;
  - stay alert for bumps and hollows and other hidden hazards;
  - never mow across the face of the slope, unless the lawn mower is designed for this purpose.
6. Use care when pulling loads or using heavy equipment.
    - Use only approved drawbar hitch points.
    - Limit loads to those you can safely control.
    - Do not turn sharply. Use care when reversing.
    - Use counterweight(s) or wheel weights when suggested in the instruction handbook.
  7. Watch out for traffic when crossing or near roadways.
  8. Stop the blades rotating before crossing surfaces other than grass.
  9. When using any attachments, never direct discharge of material toward bystanders nor allow anyone near the machine while in operation .
  10. Never operate the lawn mower with defective guards, shields or without safety protective devices in place.
  11. Do not change the engine governor settings or overspeed the engine. Operating the engine at excessive speeds may increase the hazard of personal injury.
  12. Before leaving the operator's position:
    - disengage the power take-off and lower the attachments;
    - change into neutral and set the parking brake;
    - stop the engine and remove the key.
  13. Disengage the drive to attachments when transporting or not in use.
  14. Stop the engine and disengage the drive to the attachment
    - before refueling;
    - before removing the grass catcher;
    - before making height adjustments unless the adjustment can be made from the operator's position.
    - before clearing blockages;
    - before checking, cleaning or working on the lawnmower;
    - after striking a foreign object. Inspect the lawnmower for damage and make repairs before restarting and operating the equipment.
  15. Reduce the throttle setting during engine runout and, if the engine is provided with a shutoff valve, turn the fuel off at the conclusion of mowing.

## Maintenance and Storage

1. Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
2. Never store the equipment with petrol in the tank inside a building where fumes may reach an open flame or spark.
3. Allow the engine to cool before storing in any enclosure.
4. To reduce the fire hazard, keep the engine, silencer, battery compartment and petrol storage area free of grass, leaves, or excessive grease.
5. Check the grass catcher frequently for wear or deterioration.
6. Replace worn or damaged parts for safety.

7. If the fuel tank has to be drained, this should be done outdoors.
8. Be careful during adjustment of the machine to prevent entrapment of the fingers between moving blades and fixed parts of the machine.
9. On multi-bladed machines, take care as rotating one blade can cause other blades to rotate.
10. When the machine is to be parked, stored or left unattended, lower the cutting means unless a positive mechanical lock is used.

## Sound & Vibration Levels

### Sound Levels

This unit has an equivalent continuous A-weighted sound pressure at the operator ear of: 88 dB(A), based on measurements of identical machines per 84/538/EEC.

This unit has a sound power level of 98 dB(A)/1pW, based on measurements of identical machines per procedures outlined in Directive 79/113/EEC and amendments

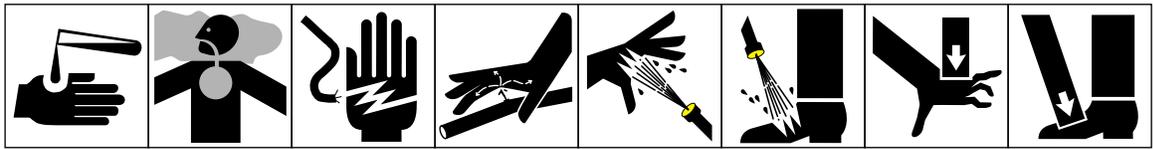
### Vibration Levels

This unit has a vibration level of 9.0 m/s<sup>2</sup> at the posterior, based on measurements of identical machines per ISO 2631 procedures.

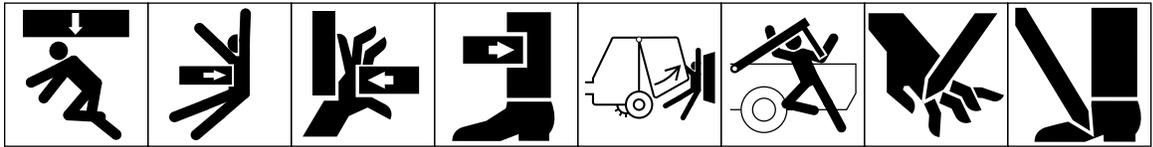
This unit does not exceed a vibration level of 0.5 m/s<sup>2</sup> at the posterior based on measurements of identical machines per ISO 2631 procedures.

PROTOTYPE

# Symbol Glossary



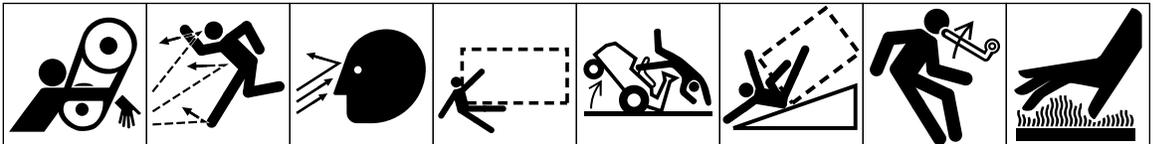
Caustic liquids, chemical burns to fingers or hand  
 Poisonous fumes or toxic gases, asphyxiation  
 Electrical shock, electrocution  
 High pressure fluid, injection into body  
 High pressure spray, erosion of flesh  
 High pressure spray, erosion of flesh  
 Crushing of fingers or hand, force applied from above  
 Crushing of toes or foot, force applied from above



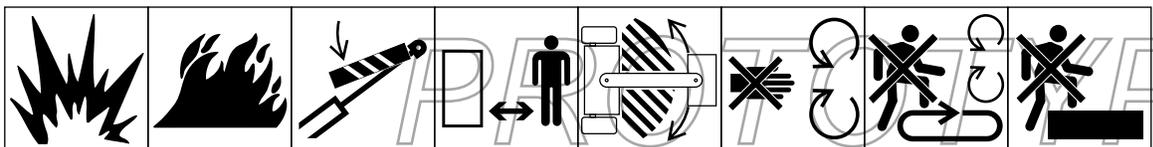
Crushing of whole body, applied from above  
 Crushing of torso, force applied from side  
 Crushing of fingers or hand, force applied from side  
 Crushing of leg, force applied from side  
 Crushing of whole body  
 Crushing of head, torso and arms  
 Cutting of fingers or hand  
 Cutting of foot



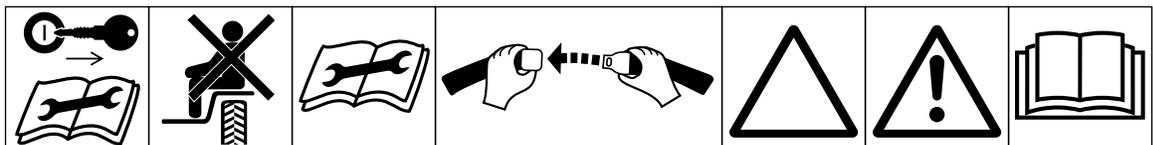
Cutting or entanglement of foot, rotating auger  
 Severing of foot, rotating knives  
 Severing of fingers or hand, impeller blade  
 Wait until all machine components have completely stopped before touching them  
 Severing of fingers or hand, engine fan  
 Whole body entanglement, implement input drive line  
 Fingers or hand entanglement, chain drive



Hand & arm entanglement, belt drive  
 Thrown or flying objects, whole body exposure  
 Thrown or flying objects, face exposure  
 Runover/backover, (relevant machine to appear in dashed box)  
 Machine tipping, riding mower  
 Machine rollover, ROPS (relevant machine to appear in dashed box)  
 Stored energy hazard, kickback or upward motion  
 Hot surfaces, burns to fingers or hands



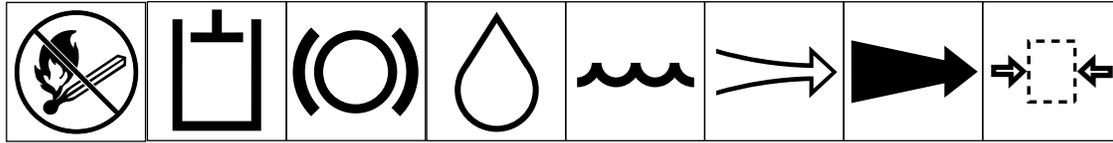
Explosion  
 Fire or open flame  
 Secure lifting cylinder with locking device before getting in hazardous area  
 Stay a safe distance from the machine  
 Stay clear of articulation area while engine is running  
 Do not open or remove safety shields while engine is running  
 Do not step on loading platform if PTO is connected to tractor & engine is running  
 Do not step



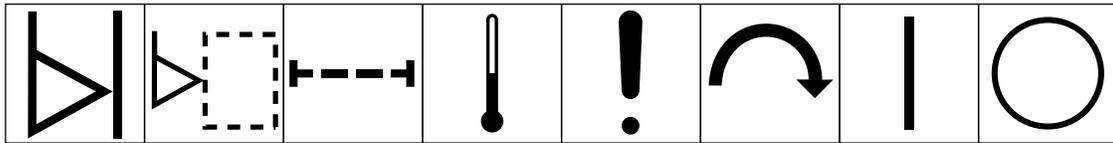
Shut off engine & remove key before performing maintenance or repair work  
 Riding on this machine is allowed only on a passenger seat & only if the driver's view is not hindered  
 Consult technical manual for proper service procedures  
 Fasten seat belts  
 Safety alert triangle  
 outline safety alert symbol  
 Read operator's manual



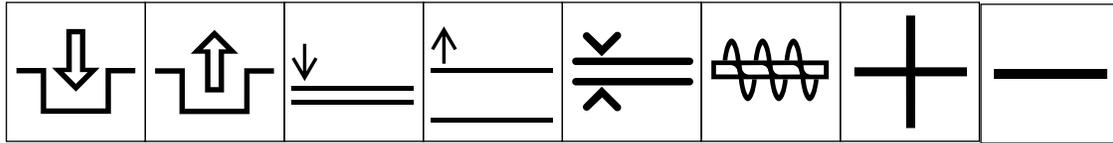
Eye protection must be worn    Head protection must be worn    Hearing protection must be worn    Caution, toxic risk    First aid    Flush with water    Engine    Transmission



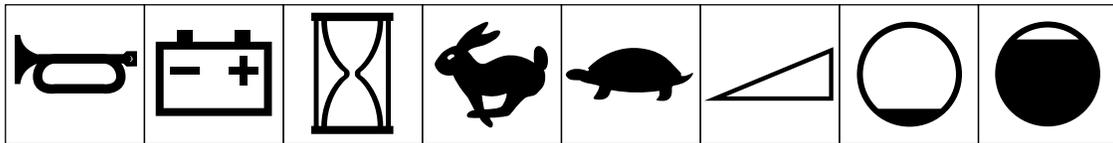
Fire, open light & smoking prohibited    Hydraulic system    Brake system    Oil    Coolant (water)    Intake air    Exhaust gas    Pressure



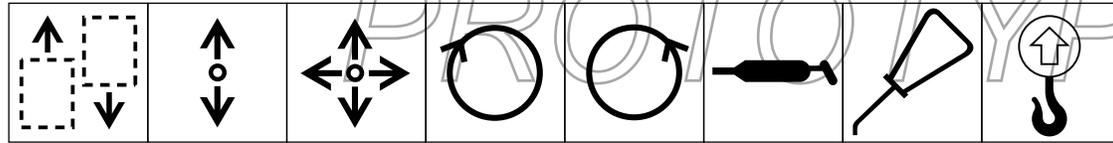
Level indicator    Liquid level    Filter    Temperature    Failure/Malfunction    Start switch/mechanism    On/start    Off/stop



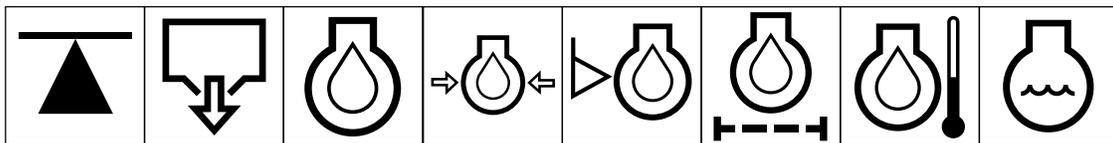
Engage    Disengage    Attachment lower    Attachment raise    Spacing distance    Snow thrower, collector auger    Plus/increase/positive polarity    Minus/decrease/negative polarity



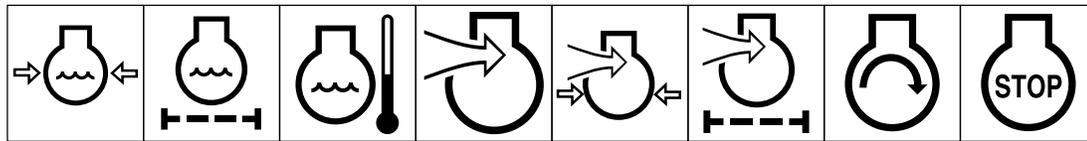
Horn    Battery charging condition    Hourmeter/elapsed operating hours    Fast    Slow    Continuous variable, linear    Volume empty    Volume full



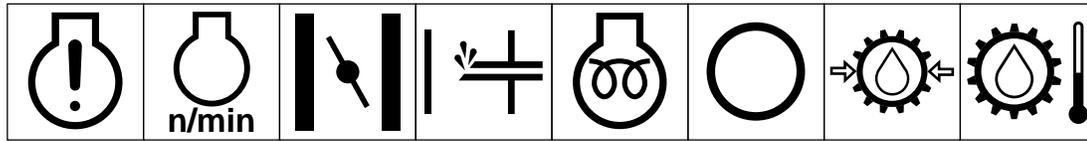
Machine travel direction, forward/rearward    Control lever operating direction, dual direction    Control lever operating direction, multiple direction    Clockwise rotation    Counter-clockwise rotation    Grease lubrication point    Oil lubrication point    Lift point



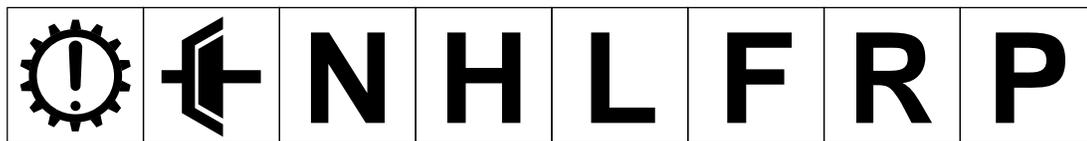
Jack or support point    Draining/emptying    Engine lubricating oil    Engine lubricating oil pressure    Engine lubricating oil level    Engine lubricating oil filter    Engine lubricating oil temperature    Engine coolant



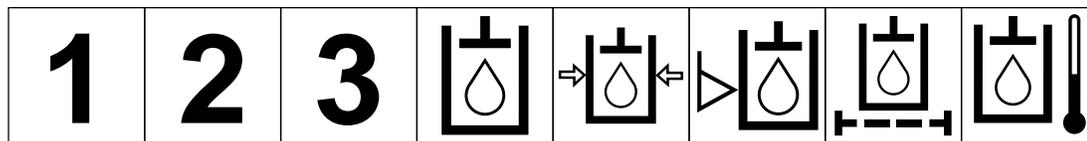
Engine coolant pressure   Engine coolant filter   Engine lubricating oil pressure   Engine intake/combustion air   Engine intake/combustion air pressure   Engine intake/air filter   Engine start   Engine stop



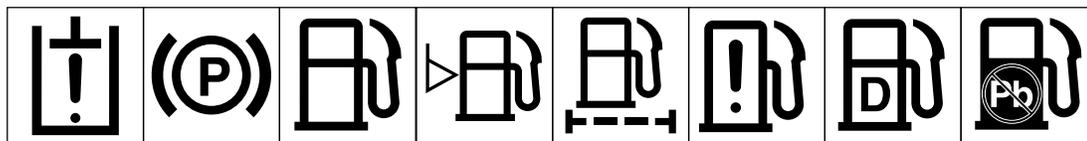
Engine failure/malfunction   Engine rotational speed/frequency   Choke   Primer (start aid)   Electrical preheat (low temperature start aid)   Transmission oil   Transmission oil pressure   Transmission oil temperature



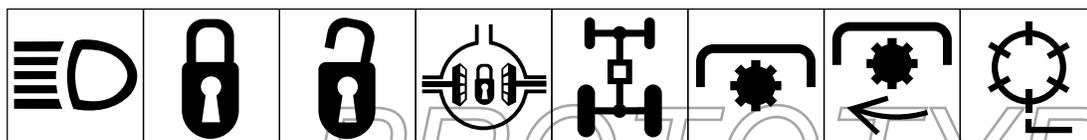
Transmission failure/malfunction   Clutch   Neutral   High   Low   Forward   Reverse   Park



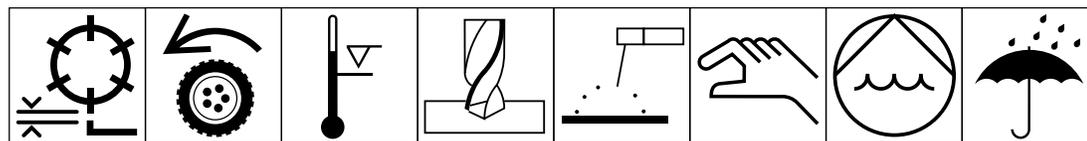
First gear   Second gear   Third gear (other #'s may be used until the maximum # of forward gears is reached.)   Hydraulic oil   Hydraulic oil pressure   Hydraulic oil level   Hydraulic oil filter   Hydraulic oil temperature



Hydraulic oil failure/malfunction   Parking brake   Fuel   Fuel level   Fuel filter   Fuel system failure/malfunction   Diesel fuel   Unleaded fuel



Headlights   Lock   Unlock   Differential lock   4-Wheel drive   Power Take-Off   Power Take-Off, rotational speed   Reel cutting element



Reel cutting element, height adjustment   Traction   Above working temperature range   Drilling   Manual metal arc welding   Manual   0356 Water pump   0626 Keep dry



0430 weight   Do not dispose in the garbage   CE logo

# 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 l (5.3 qt) with the filter.

**Cooling System:** Capacity is 13.2 l (3.5 gal) of a 50/50 mixture of Peugeot recommended anti-freeze.

**Fuel System:** Capacity is 53 l (14 gal) of #1 or #2 diesel fuel.

**Hydraulic System:** Reservoir capacity is 24.6 l (6.5 gal). Replaceable spin-on filter element.

**Traction System:** Ground speed: Low Range; 0—10.5 km/h (0– 6.5 mph); 0–8.8 km/h (0–5.5 mph) with mechanical speed limiter interlock forward and 0–4.8 km/h (0–3 mph) reverse. High Range; 0–24 km/h (0–15 mph); 0–20 km/h(0–12.4 mph) with mechanical speed limiter interlock) forward and 0–8 km/h (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 grade EP gear lubrication. 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 lubrication. Capacity is 80 oz.

**Tires/Wheels:** High flotation turf tread tires on demountable rims. Front tires: (2) 26 x 12.0-12, 8-ply. Rear tires: (2) 20 x 10.0-10, 6 ply. Tire pressure 103–138 kPa (15-20 psi.)

**Cutting Unit Drive System:** Adjustable reel speed to match clip to ground speed. Reel speed variable from

Approximately 500—1,200 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 individual wheel and parking brakes on front traction wheels. Brakes controlled by individual pedals operated by the left foot. Dynamic braking through a closed-loop hydrostatic drive.

**Electrical System:** 12-volt battery with 530 cold-cranking amps @ 0 degrees F. 55-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 the engine if the operator gets off the seat while the cutting unit drive switch is engaged. Prevents the engine from starting unless the traction pedal is in neutral and the cutting units are disengaged. Prevents the cutting units from operating unless the axle shift is in the LO range and the cutting units are lowered. Prevents the engine from starting unless the 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:**

**Width-of-Cut:** 205 cm (81 in)

**Overall Width:**

Cutting Units Raised. 165 cm (65 in)

Cutting Units Down 228 cm (90 in)

**Overall Length:** 254 cm (100 in)

**Height:** 147 cm (58 in)

With Roll Over Protection  
System installed 208 cm (82 in)

**Recommended Height-of-Cut:**

5-Blade Cutting Unit: 2.54–10 cm (1–4 in)

7-Blade Cutting Unit: 1.27–5 cm (1/2–2 in)

11-Blade Cutting Unit: .95–1.9 cm (3/8–3/4 in)

**Wheel Tread:**

(Front). 132 cm (52 in)

(Rear) 111.8 cm (44 in)

**Wheel Base:** 132 cm (52 in)

**Dry Weight:**

2-Wheel Drive with 5-Blade Cutting Units &  
skids = 980 kg (2,625 lbs)

2-Wheel Drive with 7- or 11-Blade Cutting Units  
& rollers = 1092 kg (2,925 lbs)

4-Wheel Drive with 5-Blade Cutting Units &  
skids = 1017 kg (2,725 lbs)

4-Wheel Drive with 7- or 11-Blade Cutting Units  
& rollers = 1129 (3,025 lbs)

PROTOTYPE

# Before Operating

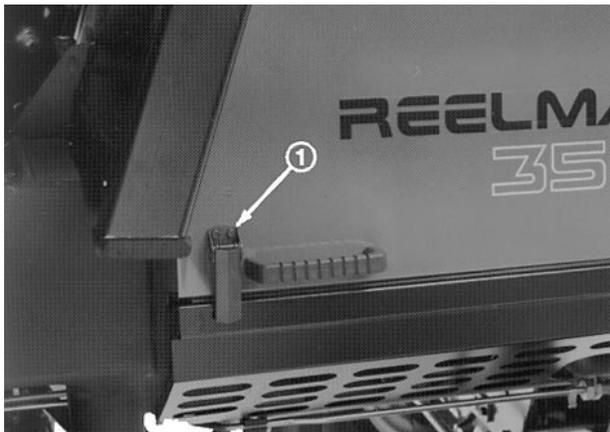
## CHECK THE ENGINE OIL

### CAUTION

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

Crankcase capacity is 5.0 l (5.3 qt) with the filter.

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



**Figure 1**

1. Hood Latch

2. Remove the dipstick from the tube cap, wipe it clean and reinstall it into the tube cap. Pull it out again and check the oil level on the dipstick: The oil level must always be in the notch area on the dipstick.
3. If the oil level is low, remove the tube cap and add SAE 15W-40 CD oil until the level reaches the top of notch on the dipstick. **DO NOT OVERFILL.**
4. Install the oil tube cap.
5. Close the hood and secure the latch.



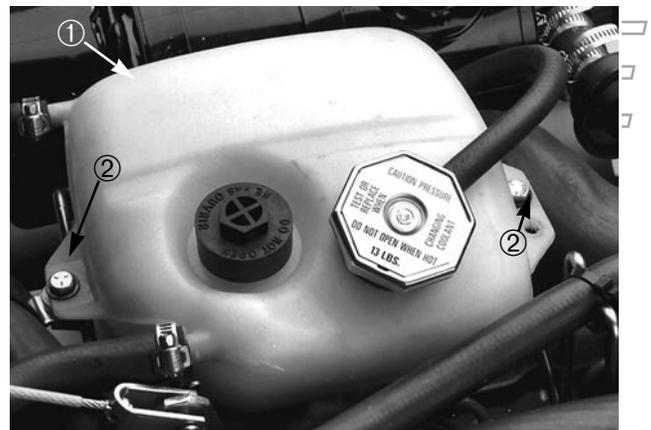
**Figure 2**

1. Dipstick/Tub Cap

## CHECK THE COOLING SYSTEM

Capacity of the system is 13.2 l (3.5 gal).

1. Park the machine on a level surface. Release the hood latch and open the hood.
2. Check the coolant level. The coolant level should be up to or above the mounting tabs on the tank, when the engine is cold.
3. If coolant is low, remove the 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.**



**Figure 3**

1. Degasser tank  
2. Mounting tabs

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

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

## FILL THE FUEL TANK

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



Figure 4

1. Fuel tank cap

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

**Note:** For temperatures below 0° C (32° F), No. 1 diesel fuel or a blend should be used.

4. Close the hood and secure the latch.

## CHECK HYDRAULIC CIRCUIT OIL

The hydraulic system is designed to operate on Mobil DTE 26 or equivalent anti-wear hydraulic fluid. The machine's reservoir is filled at the factory with 24.6 l (6.5 gal) of fluid. However, check the level of hydraulic fluid before the engine is first started and daily thereafter.

**! 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 the fuel tank while the engine is running, hot, or when the machine is in an enclosed area. Always fill the fuel tank outdoors and wipe up any spilled diesel fuel before starting the engine. Store fuel in a clean, safety-approved container and keep the cap in place. Use diesel fuel for the engine only; not for any other purpose.

### 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 the 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 15–22.7 l (4–6 gal) of hydraulic oil. Order Part No. 44-2500 from your Authorized Toro Distributor.

1. Park the machine on a level surface. Make sure the machine has been operated so the oil is warm. Release the hood latch and open the hood. Check the level of oil by viewing the sight gauge. If the oil is visible in gauge, the oil level is sufficient.
2. If the oil level is not visible in gauge, remove the cap from hydraulic oil reservoir and slowly fill the reservoir with Mobil DTE 26 or equivalent hydraulic oil until the level reaches middle (maximum) of the sight gauge. **DO NOT OVERFILL.**

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

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

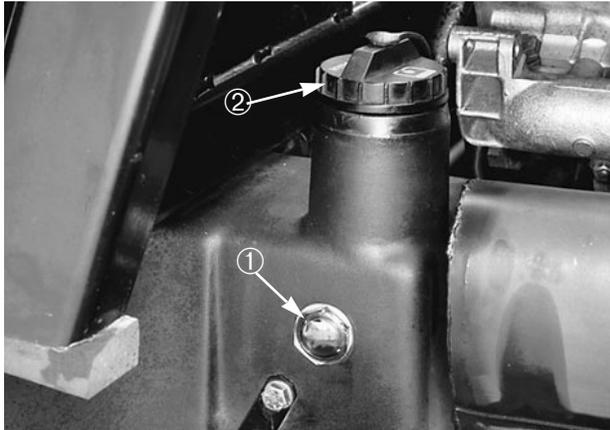


Figure 5

1. Sight gauge
2. Hydraulic reservoir cap

## CHECK FRONT AXLE OIL LEVEL

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

1. Park the machine on a level surface.
2. Remove access panel (Fig. 6), in front of the seat, to expose the front axle /dipstick.
3. Unscrew the dipstick cap (Fig. 7) from the filler neck and wipe it with a clean rag. Screw the dipstick cap finger tight onto the filler neck. Unscrew the dipstick and check the level of lubricant. If the level is not within 1/2 inch from the groove in the dipstick, add enough to raise the level to the groove mark. **DO NOT OVERFILL** by more than 1.2 cm (1/2 in) above the groove.

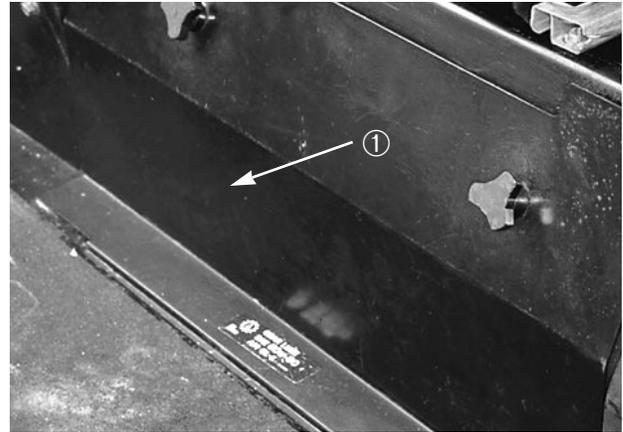


Figure 6

1. Access Panel

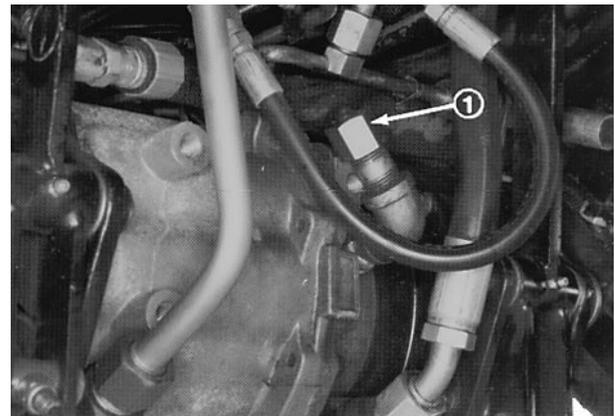


Figure 7

1. Dipstick cap

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

## CHECK THE REAR AXLE LUBRICANT (Model 03603 Only) Fig. 8

The rear axle is shipped from the factory filled with SAE 80-90 wt gear lubrication. However, check the level before the 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 the axle

and make sure lubricant is up to the bottom of the hole. If the 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 8

1. Check plug
2. Fill Plug

## 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 103–138 kPa (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

## CHECK THE REEL-TO-BEDKNIFE CONTACT

Each day before operating, check the reel-to-bedknife contact, regardless of whether or not quality of cut had previously been acceptable. There must be light contact across the full length of the reel and bedknife.



### WARNING

Torque the front wheel nuts to 61–75 Nm (45–55 ft-lb) and the rear wheel nuts or bolts to 115–136 Nm (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 correct torque could result in failure or loss of the wheel and may result in personal injury.

PROTOTYPE

# Controls

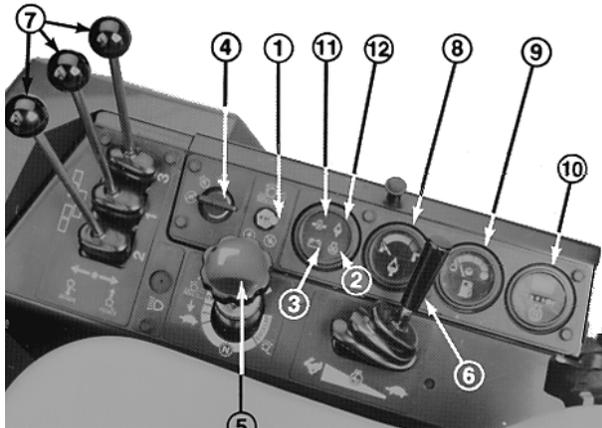
**Cutting Unit Engagement Switch** (Fig 9)—Used to start and stop cutting unit operation. Lift the switch and move it forward to actuate the cutting units.

**Glow Plug Indicator** (Fig. 9)—Automatically actuates the proper glow period when the ignition key is turned to the ON position. Illuminates when glow plugs are actuated. When the glow plugs are heated sufficiently, the light goes off indicating the engine is ready to start.

**Charge Indicator** (Fig. 9)—Illuminates when the system charging circuit malfunctions.

**Key Switch** (Fig 9)—Three positions: OFF, ON and START. Turn the key to START and release the key when the engine begins running. To stop the engine, turn the key to OFF.

**Reel Speed Control** (Fig 9)—Turn the knob clockwise to increase reel speed, counter-clockwise to decrease speed or to backlap.



**Figure 9**

1. Cutting unit engagement switch
2. Glow plug indicator
3. Charge indicator
4. Key Switch
5. Reel speed control
6. Throttle control
7. Cutting unit lift controls
8. Coolant temperature gauge
9. Fuel gauge
10. Hour meter
11. Engine oil pressure warning light
12. Engine coolant temperature warning light

**Throttle Control** (Fig 9)—Move the control forward to increase engine speed, backward to decrease it.

**Cutting Unit Lift Controls** (Fig 9)—The two outside levers raise and lower the two outside the cutting units. The center lever raises and lowers the center cutting unit. The engine must be running to lower the cutting units. When the cutting units are lifted, the reels automatically stop. To lower the cutting units just touch levers momentarily. .

**Coolant Temperature Gauge** (Fig 9)—Shows temperature of engine coolant.

**Fuel Gauge** (Fig. 9)—Shows amount of fuel in the tank.

**Hour Meter** (Fig. 9)—Shows the total hours the machine has been operated.

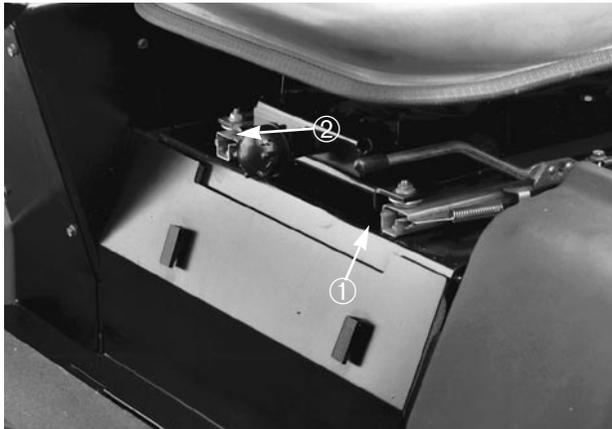
**Engine Oil Pressure Warning Light** (Fig 9)—Indicates dangerously low engine oil pressure.

**Engine Coolant Temperature Warning Light** (Fig. 9)—The red light illuminates and the engine stops when the coolant temperature exceeds 110° C (230° F.)

**Seat** (Fig. 10)—The seat adjusting lever on left side of the seat allows a 10 cm (4-in) fore and aft adjustment. The seat adjusting knob on the front of the seat, adjusts the seat for the operator's weight.

**Traction Pedal** (Fig. 11)—Controls forward and reverse operation. Depress the top of the pedal to move forward and the bottom to move backward. Ground speed depends on how far the pedal is depressed. For no-load, maximum ground speed, fully depress the pedal while the throttle is in FAST. For maximum power under load or when going uphill, keep engine rpm high by having the throttle in FAST and the traction pedal partially engaged. If engine rpm begins to decrease due to load, gradually reduce the traction pedal pressure until the engine speed is increased.

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



**Figure 10**

1. Seat adjusting lever
2. Seat adjusting knob

**Speed Selector** (Fig. 11)—The cam lever at the side of the traction pedal can be rotated to maintain desired speed. Rotating the lever forward decreases speed. Rotating it backward increases speed.



**Figure 11**

1. Traction pedal
2. Speed Selector
3. Axle shift lever
4. Lockout knob

**Axle Shift Lever** (Fig. 11)—Located on the right side of the console, the lever selects the front drive mode. Pull out the lockout knob and move the lever rearward for mowing operation. Move it forward for transport operation, then release the knob to lock your selection. The middle position (N) is for towing.

**CAUTION:** The machine must be on a flat surface with its brakes engaged when shifting the axle from the HI to LO position.



**Figure 12**

1. Brake pedals
2. Parking brake latch
3. Steering wheel tilt lever

**Brake Pedals** (Fig. 12)—Two foot pedals at the lower left operate individual wheel brakes for turning assistance, parking and to aid in obtaining better sidehill traction. The locking pin is for parking.

**Parking Brake Latch** (Fig. 12)—A knob on the left side of the console actuates the parking brake lock. To engage the parking brake, connect the pedals with the locking pin, push down on both pedals and pull the parking brake latch out. To release the parking brake, depress both pedals until the parking brake latch retracts.

**Steering Wheel Tilt Lever** (Fig. 12)—This lever on the left side of the console lets you adjust the steering wheel for your comfort.

**Transport Latches** (Fig. 13)—Three latches secure

the cutting units in the upright position for transport.

**Horn**—In the center of the steering wheel. Operates only when the key switch is ON.

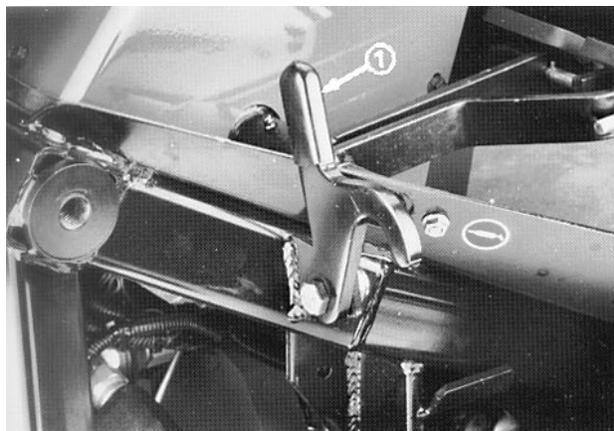


Figure 13

1. Transport latch (

3)

# Operating Instructions

## STARTING AND STOPPING

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

## PRIMING THE FUEL SYSTEM (Fig. 14 & 15)

**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 the hood.
2. Insert a 3/16 inch hose over the bleed screw and run the other end into a container to catch the fuel.
3. Loosen the fuel filter/water separator bleed screw (Fig. 14) a few turns. Pump the priming plunger until a steady stream of fuel comes out of the hole in the bleed screw. When the fuel stops foaming, tighten the bleed screw during the downstroke of the priming plunger. Wipe up any spilled fuel.

4. Pump the priming plunger until you feel resistance. Try to start the engine. If the engine does not start repeat step 3.

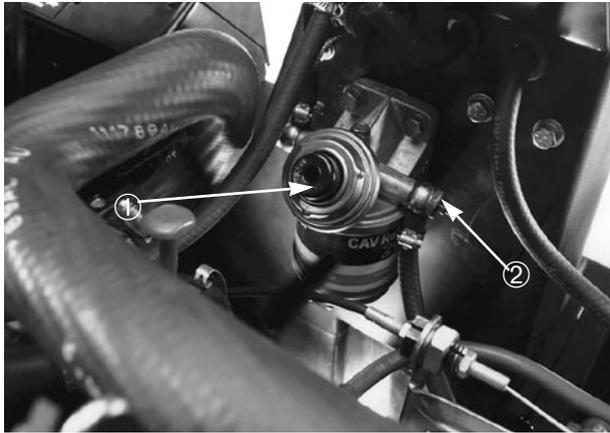


Figure 14

1. Primer plunger
2. Bleed screw

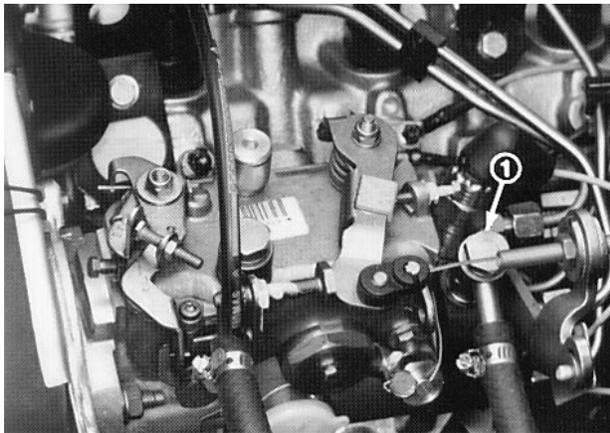


Figure 15

1. Injection pump fitting

**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. 15) and repeat the bleeding procedure.

## CHECKING THE INTERLOCK SYSTEM.

The interlock system prevents the engine from cranking or starting unless the traction pedal is in NEU-

TRAL and the cutting unit engagement switch is DIS-ENGAGED. In addition, the engine will stop when the cutting unit engagement switch is engaged or the traction pedal is depressed when the operator is 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 the interlock system is operating. If a switch is defective, replace it before operating. Regardless of whether the switches are operating correctly 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 the cutting units to the ground. Stop the engine.
2. Move the cutting unit engagement switch to DIS-ENGAGED and remove your foot from the traction pedal.
3. Turn the ignition key to START. The engine should crank. If the engine cranks, go to step 4. If the engine does not crank, there may be a malfunction in the interlock system.
4. Rise off the seat and engage the cutting unit engagement switch while the engine is running. The engine should stop within 2 seconds. If the engine stops, the switch is operating correctly; thus, go to step 5. If the engine does not stop, there is a malfunction in the interlock system.
5. Rise off the seat and depress the traction pedal while the engine is running and the cutting unit engagement switch is DIS-ENGAGED. The engine should stop within 2 seconds. If the engine stops, the switch is operating correctly; thus, continue operation. If the engine does not stop, there is a malfunction in the interlock system.

## OPERATING CHARACTERISTICS

**Familiarization**—Before mowing grass, practice operating the machine in an open area. Start and stop the engine. Operate in forward and reverse. Lower and raise the cutting units simultaneously and individually. Engage and disengage the 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 a 4-wheel drive machine, always use the seat belt and roll over protection system together and have the seat pivot retaining pin installed.

Another characteristic to consider is brake pedal operation. The brakes can be used to help turn 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: Suppose when operating on a side-hill, the uphill wheel slips and loses traction. If this occurs, depress the 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 the cutting unit transport latches. Start the engine, move axle shift lever rearward to the MOW position and move the throttle to FAST so the engine is running at maximum speed. To move forward and cut grass, press the traction pedal forward. Maintain traction pedal contact with the speed selector to assure a consistent clip and quality of cut.

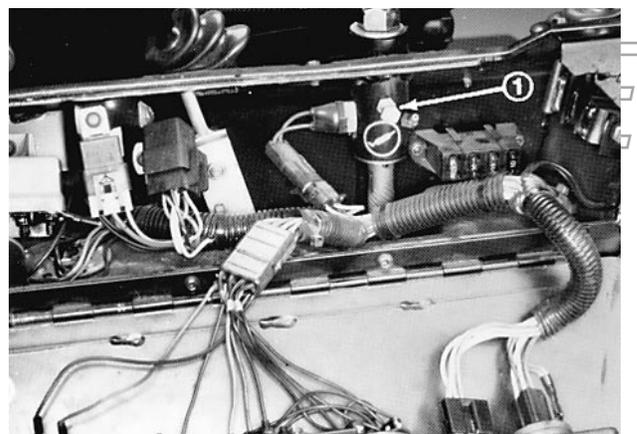
**Transport**—After mowing, raise the cutting units by

pulling back on the lift control levers. Hold the levers back until the cutting units are fully raised. Lock the cutting units in place with the transport latches. Move the axle shift lever forward to the HI position. When driving from one area to another, always shift the axle to the LO position before encountering a slope. Never shift from HI to LO while on a slope. Stop the machine on a flat surface, engage the brakes and shift before climbing the slope. Be careful when driving between objects so you do not accidentally damage the machine or the cutting units. Use extra care when operating the 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 The traction Unit**—Use only a rigid tow bar if it is necessary to tow the machine. Make sure the axle shift lever is in NEUTRAL and only tow the machine forward. Use a trailer for normal transport. Move the axle shift lever to LO before loading the 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. 17) to determine approximate settings for reel speed and ground speed.

**Note:** To lock the reel speed setting so it cannot be changed while operating the machine, tighten the cap-screw on the reel speed shaft. (Fig. 16).



**Figure 16**

1. Reel speed locking capscrew

## CUTTING CHARTS

Relate height of cut and ground speed to required reel speed setting on reel speed knob  
 Note: 1 = 500 rpm; 2 = 700 rpm; 3 = 900 rpm; 4 = 1,200 rpm

### Recommended Reel Speed Settings

**5-Blade Reel**

	Ground Speed in KM/H				
	5	6	8	10	11
25	1	1	2	2	
31	1	2	4	3	3
38		1	2	4	3
50			1	3	2
63				1	1

**8-Blade Reel**

	Ground Speed in KM/H				
	5	6	8	10	11
13	3	4			
16	2	3	4		
19	2	2	3	4	
25		1	2	3	3
31		1	2	3	3

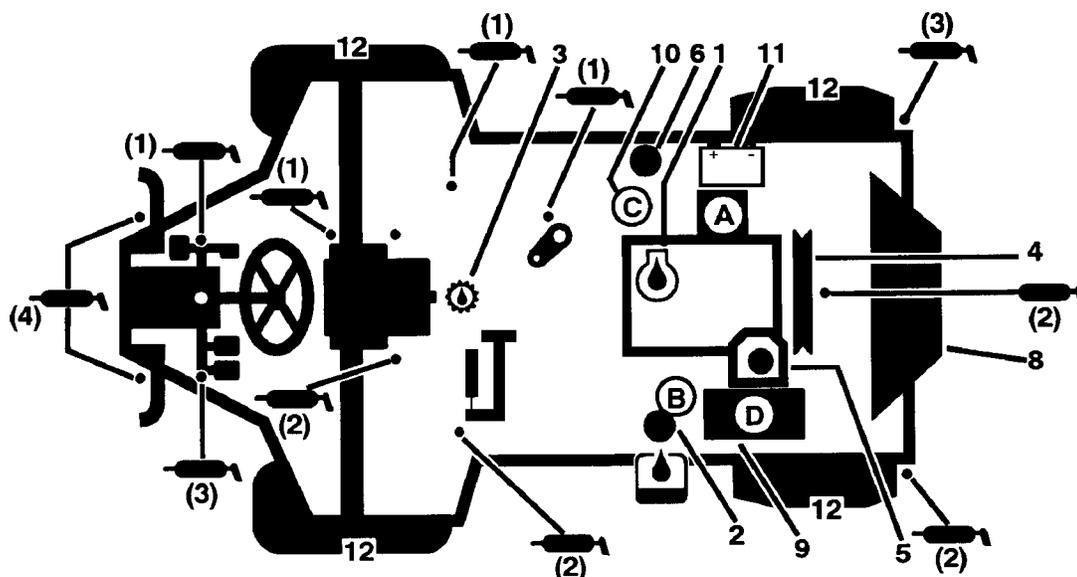
**11-Blade Reel**

	Ground Speed in KM/H				
	5	6	8	10	11
10	2	3	4		
13	1	2	3	4	4
16	1	1	2	3	4
19		1	1	2	3

Figure 17

PROTOTYPE

## Service Interval —2-Wheel Drive



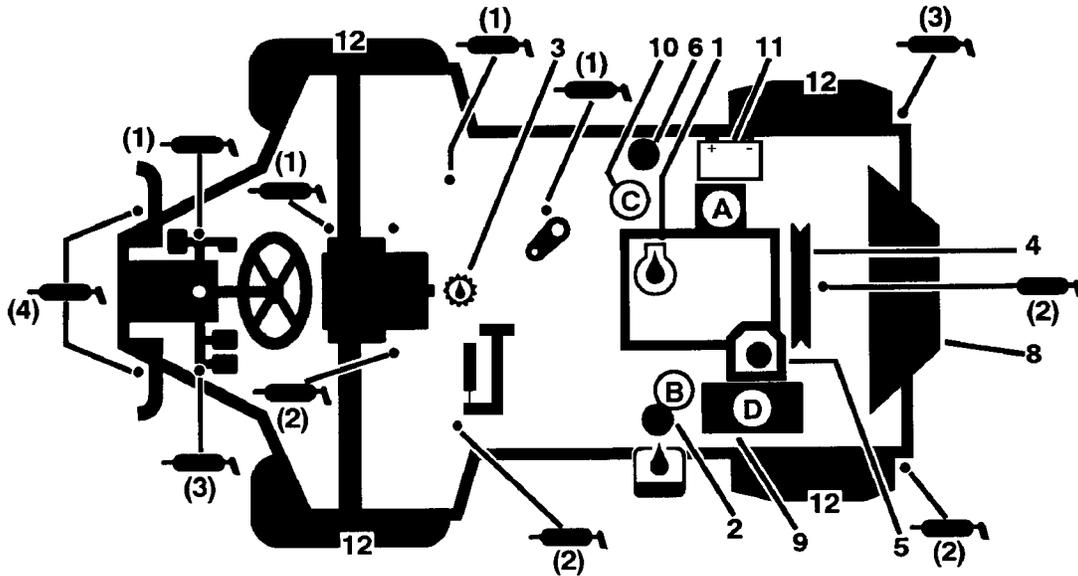
### CHECK/SERVICE

- |                              |                                         |
|------------------------------|-----------------------------------------|
| 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. Fan belt                  | 10. Water separator/fuel filter         |
| 6. Fuel—Diesel only          | 12. Tire pressure (1–1.5 bar/15-20 psi) |

### FLUID SPECIFICATIONS/CHANGE INTERVALS

	Fluid Type	Capacity	Change Intervals		Filter Part No.
			Fluid	Filter	
Engine Oil	SAE 15W-40 CD	5 L	50 hours	100 hours	74-7970A
Hydraulic Oil	Mobil DTE 26	24.6 L	500 hours	500 hours	86-3010B
Axle Oil	SAE 80-90 E.P.		750 hours		
Fuel Filter				400 hours	76-5220C
Air Cleaner	Clean @ 50 hours			250 hours	27-7110D
Fuel	>0°C No. 2-D	53 L	<b>Drain and flush, 2 years</b>		
	<0°C No. 1.-D				
Coolant	50/50 Peugeot recommended anti-freeze	13.25 L			

# Service Interval —4-Wheel Drive



## 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. Rear axle oil             | 10. Water separator/fuel filter |
| A. Fill                      | 11. Battery                     |
| B. Check (2)                 | 12. Fan belt                    |
| 5. Coolant level/fill        | 13. Tire pressure               |
| 6. Fuel—Diesel only          | (1–1.5 bar/15-20 psi)           |

	Fluid Type	Capacity	Change Intervals		Filter Part No.	
			Fluid	Filter		
<b>Engine Oil</b>	SAE 15W-40 CD	5 L	50 hours	100 hours	74-7970A	
<b>Hydraulic Oil</b>	Mobil DTE 26	24.6 L	500 hours	500 hours	86-3010B	
<b>Axle Oil</b>	SAE 80-90 E.P.		750 hours			
<b>Fuel Filter</b>				400 hours	76-5220C	
<b>Air Cleaner</b>	Clean @ 50 hours			250 hours	27-7110D	
<b>Fuel</b>	>0°C	No. 2-D	53 L	<b>Drain and flush, 2 years</b>		
	<0°C	No. 1.-D				
<b>Coolant</b>	50/50 Peugeot recommended anti-freeze	13.25 L				

# 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 you operate the machine 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 the machines— #1 Lift arm pivot (1), #1 lift cylinder (1), brake arm pivots (2) (Fig. 18); #2 & 3 lift arm pivots (2), #2 & #3 lift cylinders (2), brake pivot (1) (Fig. 19); brake pivots (2) (Fig. 20); traction pedal pivot (1) (Fig. 21); reel speed shaft (1) (Fig. 22); traction adjuster (1) (Fig. 23) and the transmission shift linkage (1) (Fig. 28)

Two-wheel drive machines—cylinder end (2), tie rod assembly (2) (Fig. 24); center pivot (1), spindles (2) (Fig. 25).

Four-wheel drive machines—tie rod assemblies (2), center pivot (1), axle knuckles (2) (Fig. 26); cylinder ends (2) (Fig. 27).

1. Wipe the 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.

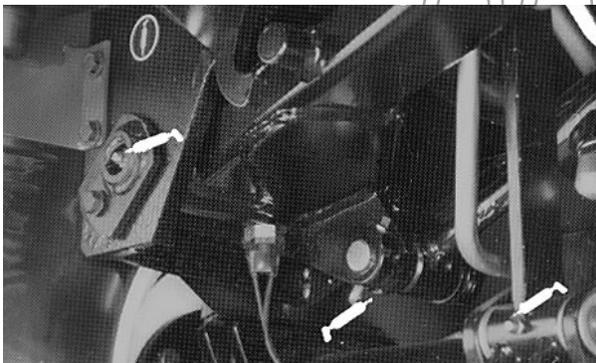


Figure 18

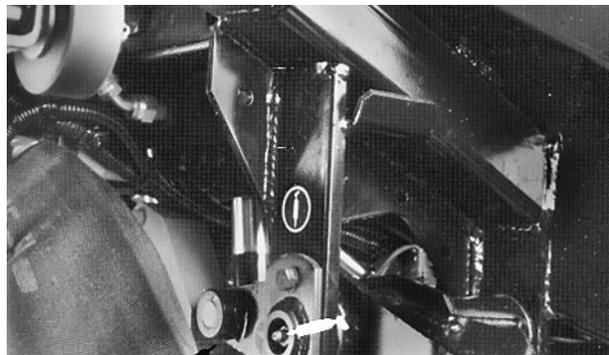


Figure 19

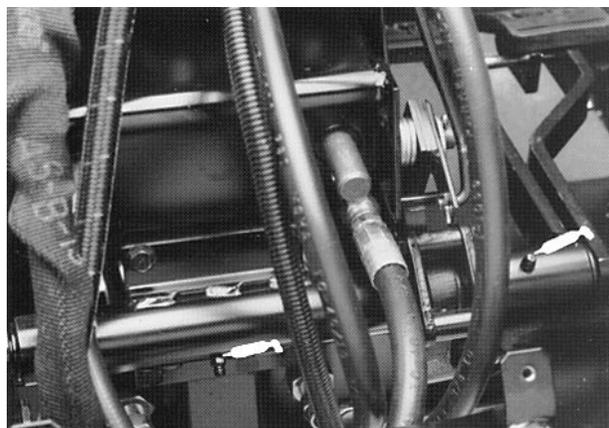


Figure 20



Figure 21

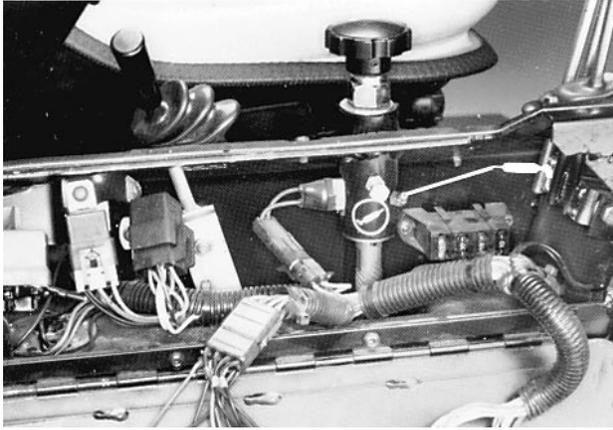


Figure 22

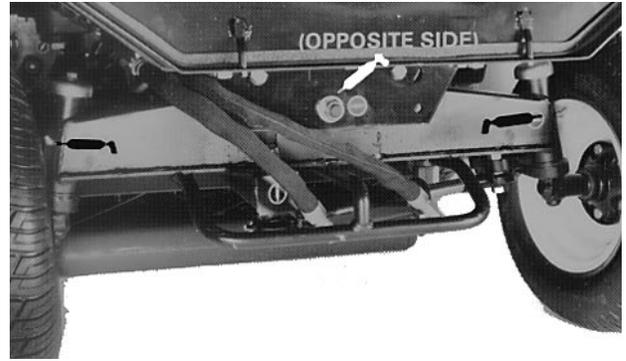


Figure 25

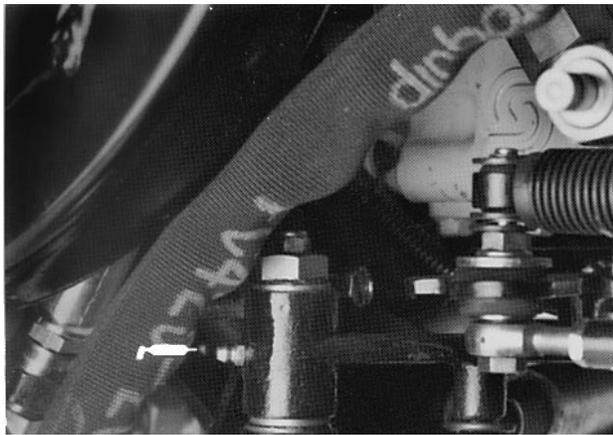


Figure 23

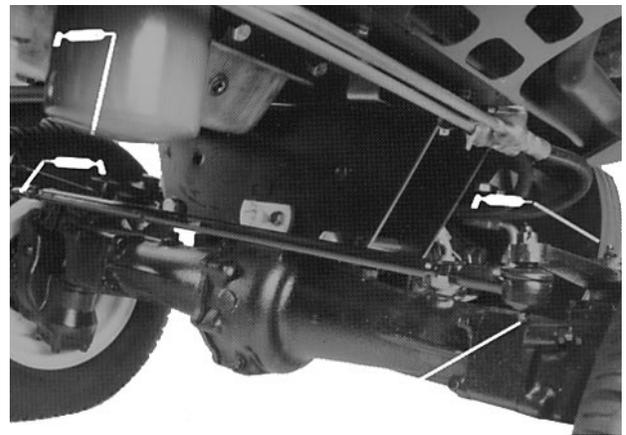


Figure 26



Figure 24



Figure 27

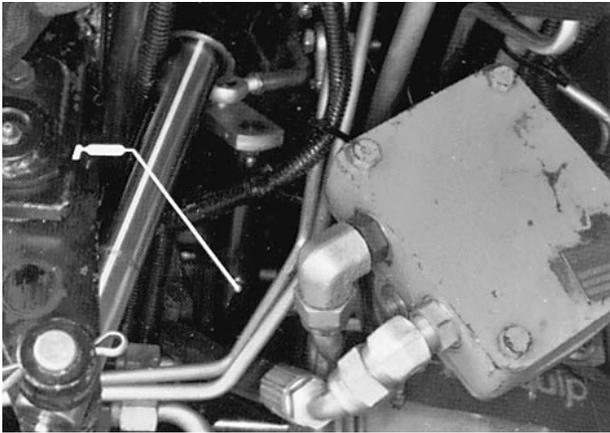


Figure 28

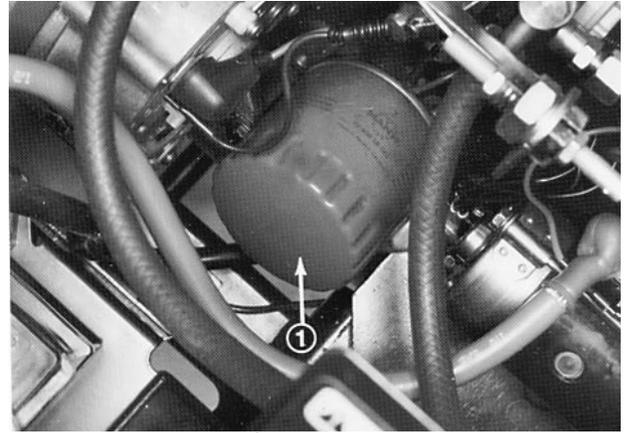


Figure 31

1. Oil filter

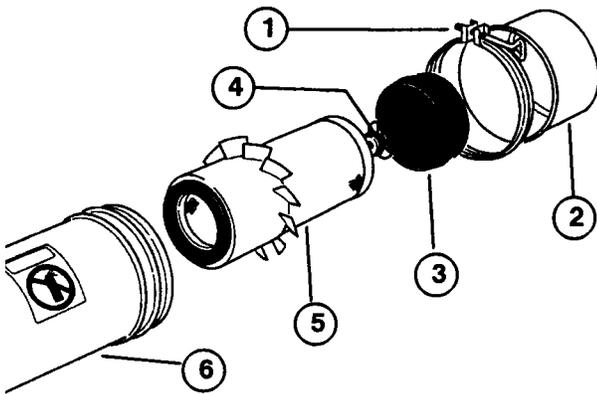


Figure 29

1. Thumb Screw
2. Dust cup
3. Baffle
4. Wing nut & gasket
5. Filter element
6. Air cleaner body

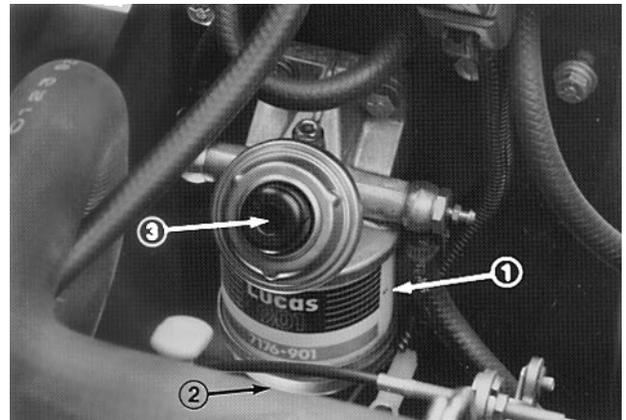


Figure 32

1. Fuel filter/water separator
2. Drain screw
3. Primer plunger

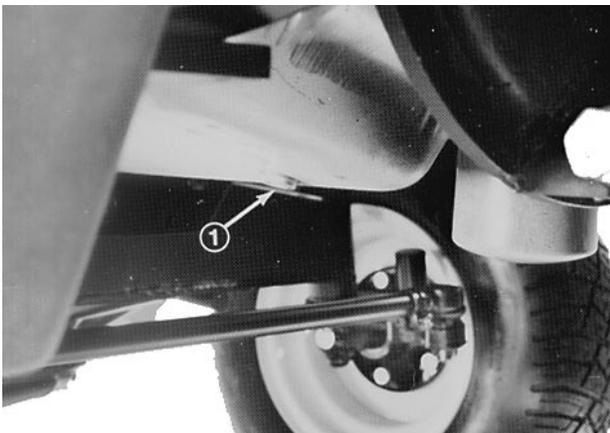


Figure 30

1. Drain plug

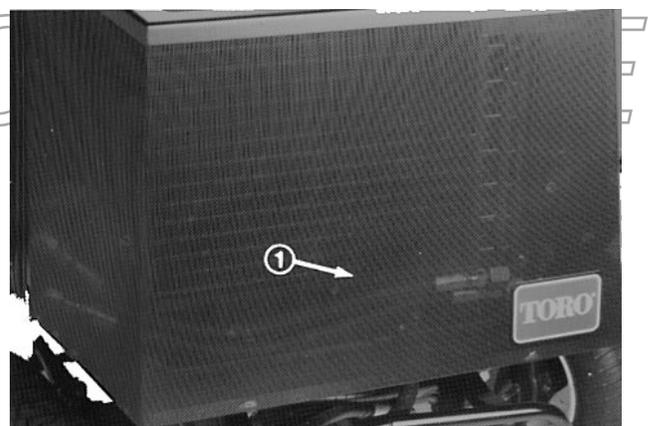
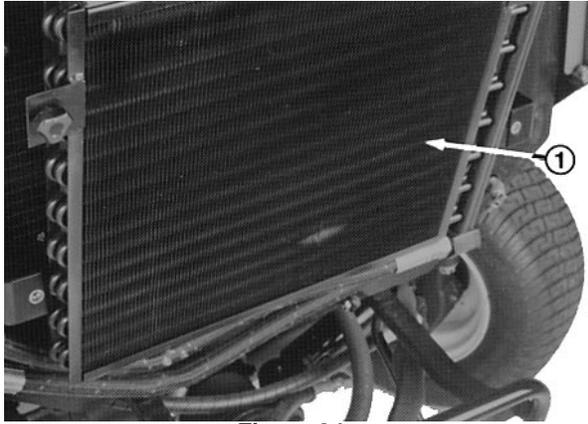


Figure 33

1. Rear screen



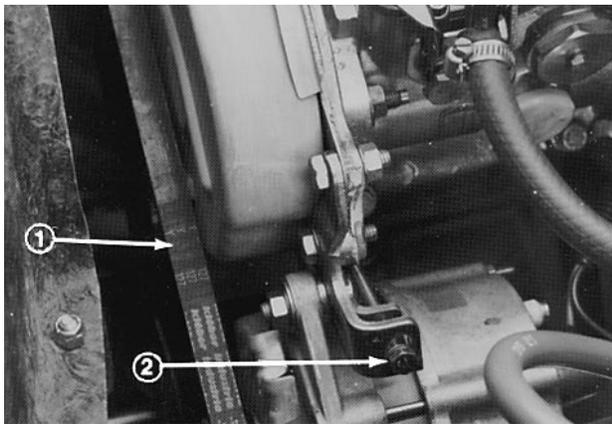
**Figure 34**

- 1. Oil cooler



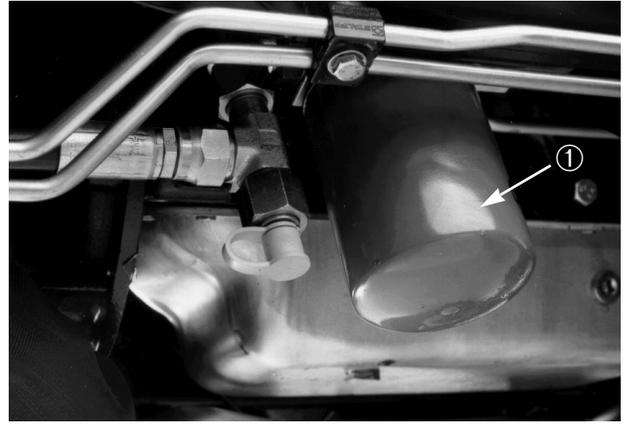
**Figure 37**

- 1. Sight gauge



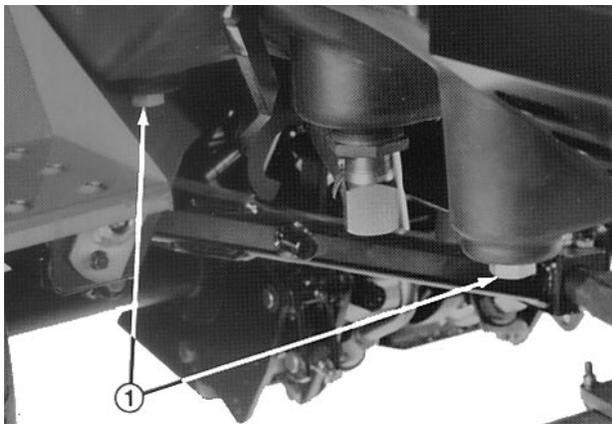
**Figure 35**

- 1. Fan belt
- 2. Adjusting screw



**Figure 38**

- 1. Hydraulic filter



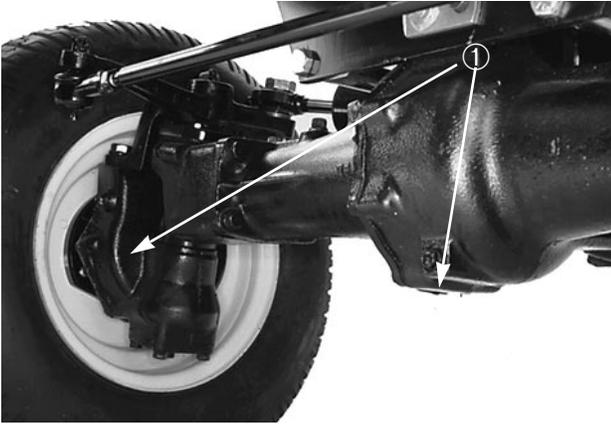
**Figure 35**

- 1. Hydraulic reservoir drain plugs



**Figure 39**

- 1. Front axle drain plug



**Figure 40**

1. Drain plugs (2)

*PROTOTYPE*

# Preparation For Seasonal Storage

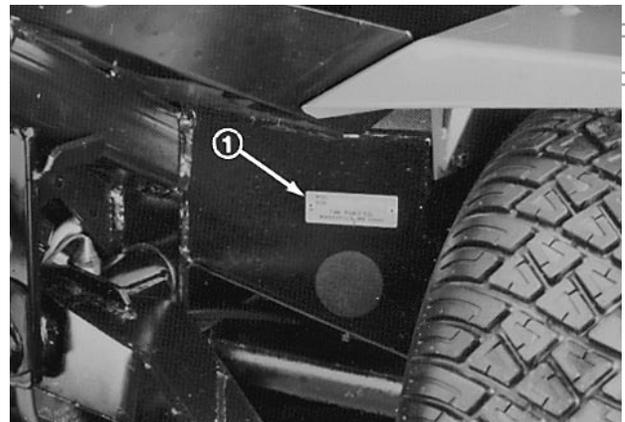
## Traction Unit

1. Thoroughly clean the traction unit, cutting units and the engine.
2. Check the tire pressure. Inflate all tires to 103–138 kPa (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.
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. Secure 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

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.



## 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 the oil pan with 5 l (5.3 qt) of SAE 15W—40 CD motor oil.