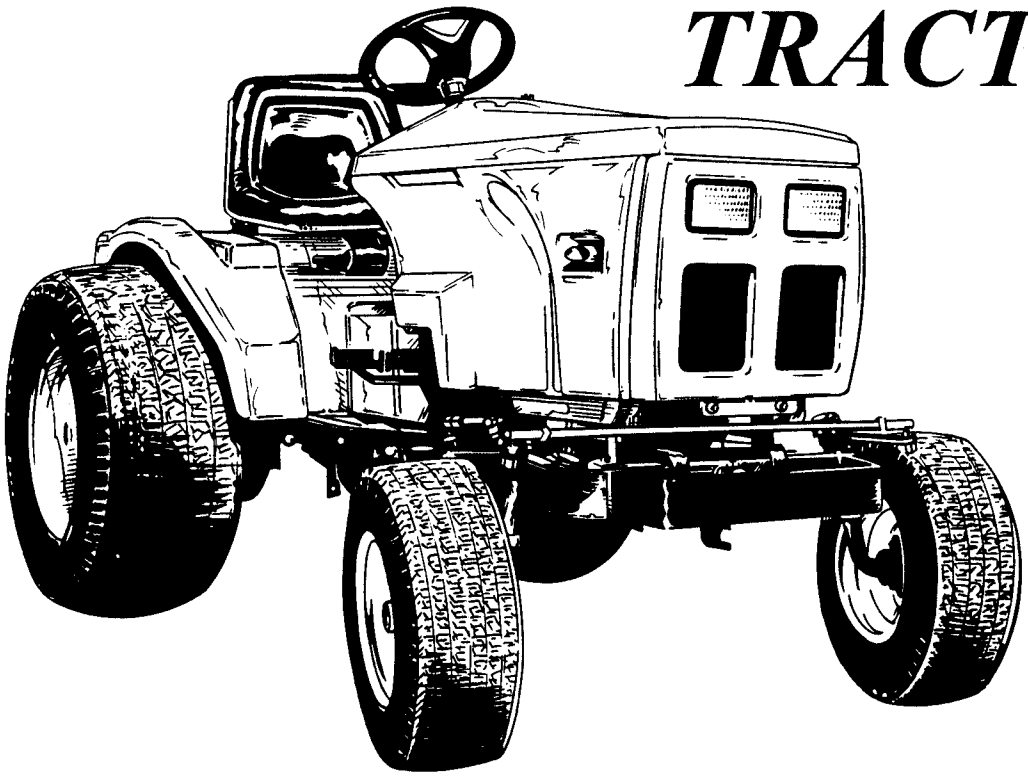
Safety Instructions & Operator's Manual

SNAPPER®

MODEL MGT1800G GARDEN TRACTOR



Thank you for buying a SNAPPER product! Before operating the Tractor, read and follow the **"IMPORTANT SAFETY INSTRUCTIONS"** on Page 3, all other instructions contained in this manual and the accompanying booklet **"About Power Mower Safety".** Lawn mowers and all power equipment, can be potentially dangerous if used improperly. ***REMEMBER:*** *SAFETY REQUIRES CAREFUL USE IN ACCORDANCE WITH INSTRUCTIONS AND COMMON SENSE.*

SNAPPER® **McDonough, GA., 30253 U.S.A.**

MANUAL No. 2-8574 (I.R. 3/95)

IMPORTANT SAFETY INSTRUCTIONS

WARNING: This powerful cutting machine is capable of amputating hands and feet and can throw objects that can cause injury and damage! Failure to observe the following SAFETY instructions could result in serious injury or death. Carefully read this manual and question your dealer if something is not clear. Should the dealer be unable to answer to your satisfaction, write or call the Customer Service Department at SNAPPER, McDonough, Georgia, 30253 (Phone 404-954-2500).

PROTECTION FOR CHILDREN

1. DO NOT allow children in yard when machine is operated (even with the blade OFF).
2. DO NOT allow children to ride on machine or on attachments (even with the blade OFF).
3. DO NOT allow pre-teenage children to operate machine.
4. Only responsible teenagers with mature judgement shall be allowed to operate machine and only under close supervision.

PROTECTION AGAINST TIPOVERS

1. DO NOT operate machine on slopes exceeding 15 degrees (27% grade).
2. On slopes above 10 degrees (18% grade), exercise extreme CAUTION. Turn blade OFF when traveling uphill, also reduce speed and avoid sharp turns.
3. Avoid uphill starts. If machine is stopped going uphill, turn blade OFF and back slowly down the slope.
4. DO NOT mow under any condition where traction or stability is doubtful without first test driving over the terrain with blade OFF.
5. Stay alert for holes and other hidden hazards. Keep away from ditches, washouts, culverts, fences and protruding objects.
6. DO NOT mow back and forth across face of slopes.
7. KEEP A SAFE DISTANCE (at least three feet) away from edge of ditches and other drop offs.

OTHER IMPORTANT PRECAUTIONS

1. Read and follow operator's manuals and instructions furnished with attachments.
2. Only mature, responsible persons shall operate the machine.
3. Mount and dismount the machine from left side.
4. Wear appropriate protective clothing when mowing, such as, long pants and substantial footwear, not barefoot or with open sandals.
5. Practice operation of machine with blade OFF to learn controls and develop skill.
6. Persons under the influence of alcohol or drugs must NOT operate machine.
7. Know how to STOP blade and engine quickly in preparation for emergencies.
8. Keep people and pets a safe distance from machine.
9. Shields, deflectors, switches, blade controls and other safety devices must be in proper position and functional.

OTHER IMPORTANT PRECAUTIONS

10. Clear area to be worked of wire, rocks and other objects that could cause injury if thrown by blade.
11. STOP blade, STOP engine and remove key when leaving machine.
12. DO NOT operate machine unless properly seated with feet on foot rests or pedal.
13. Keep hands and feet away from rotating blade underneath deck. Never place foot on ground while blade is ON or when machine is in motion.
14. Turn blade OFF, STOP engine and wait for blade to STOP before attempting to unclog grass or leaves to prevent loss of fingers or hand.
15. Blade must be switched OFF except when cutting grass. Set cutter in highest position when mowing over rough ground.
16. Deflector or grass catcher must be in position. Never point discharge at people, passing cars, windows or doors. Watch out for traffic when crossing or near roadways.
17. Operate in reverse only with careful observation of entire area behind the machine. DO NOT mow in reverse unless absolutely necessary.
18. Service machine and make adjustments only when engine is stopped.
19. Have machine serviced by an authorized SNAPPER dealer at least once a year and have the dealer install any new SAFETY devices.
20. Use only genuine SNAPPER replacement parts to assure that original standards are maintained.
21. Tighten all nuts, bolts and screws frequently, then check, adjust, repair or replace brakes as needed.
22. Lubricate machine at intervals specified in manual to prevent controls from binding.
23. Mow only in daylight or with good artificial light.
24. Handle gasoline with care! Never remove cap while engine is running. Fill tank outdoors only with engine STOPPED and cool. Clean spilled gasoline from machine. Store gasoline in approved container, out of the reach of children, in well ventilated, unoccupied building.
25. DO NOT change engine governor speed settings or overspeed engine.
26. Check grass catcher components frequently for signs of wear or deterioration and replace as needed to prevent injury from items going through weak or worn spots.
27. Exercise CAUTION when pulling loads. Limit loads to those you can safely control and attach loads to hitch plate as specified with SNAPPER attachment instructions.

Table of Contents

Safety Information

To obtain maximum benefit...

Proper maintenance and service are essential to obtaining the maximum benefit from your tractor. Follow the recommendations provided in this manual. Record the tractor's serial number in the space provided on the next page. Keep this manual readily accessible for referencing.

Before operating the tractor...

It is the responsibility of the user to understand and perform proper operating procedures. Read this manual thoroughly and understand the use of the tractor completely before operating the tractor. Be aware of the dangers inherent in the use of this type of product. Read, understand, and follow all DANGER, CAUTION, and WARNING messages both in this manual and on the tractor.

⚠ DANGER

DANGER - Indicates that serious injury or death WILL result if instructions are not followed.

⚠ WARNING

WARNING - Indicates a strong possibility that serious injury or death could result if instructions are not followed.

⚠ CAUTION

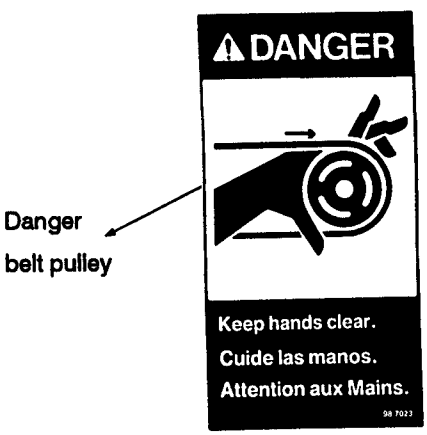
CAUTION - Indicates a possibility that minor injury can result if instructions are not followed.

IMPORTANT NOTICE

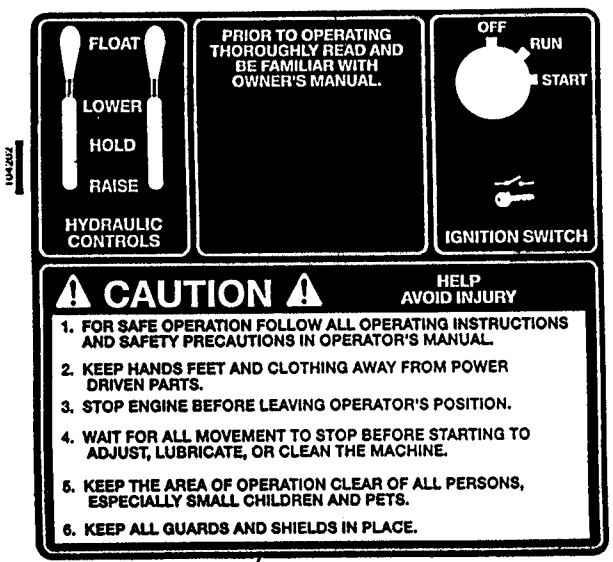
IMPORTANT NOTICE - Indicates that equipment or property damage can can result if instructions are not followed.

Caution baffle removal

(Located under hood on engine baffle)



Danger belt pulley



Lower console

Warning 3–point hitch (Located on frame at rear of tractor)

Note

All rights are reserved to make changes without notice. Information and illustrations in this document are the most current available and are not binding in detail.

IMPORTANT note for owners living in California: The engine on this tractor is NOT equipped with a spark arresting muffler. Use of this equipment in grass, brush or forest land without properly maintained and functioning exhaust spark arrester is in violation of California State Law Section 4442 PRC.

Familiarization

This Owner's Manual provides operational and maintenance instructions for the 1618GV/MGT1800G tractor. The 1618GT/MGT1800G is a twin cylinder engine gear garden tractor.

Serial Number

The serial number of your tractor is located on the left-hand side of the frame as shown in the following diagram. Record it in the space provided below. This will be useful in ordering parts or accessories for the tractor.

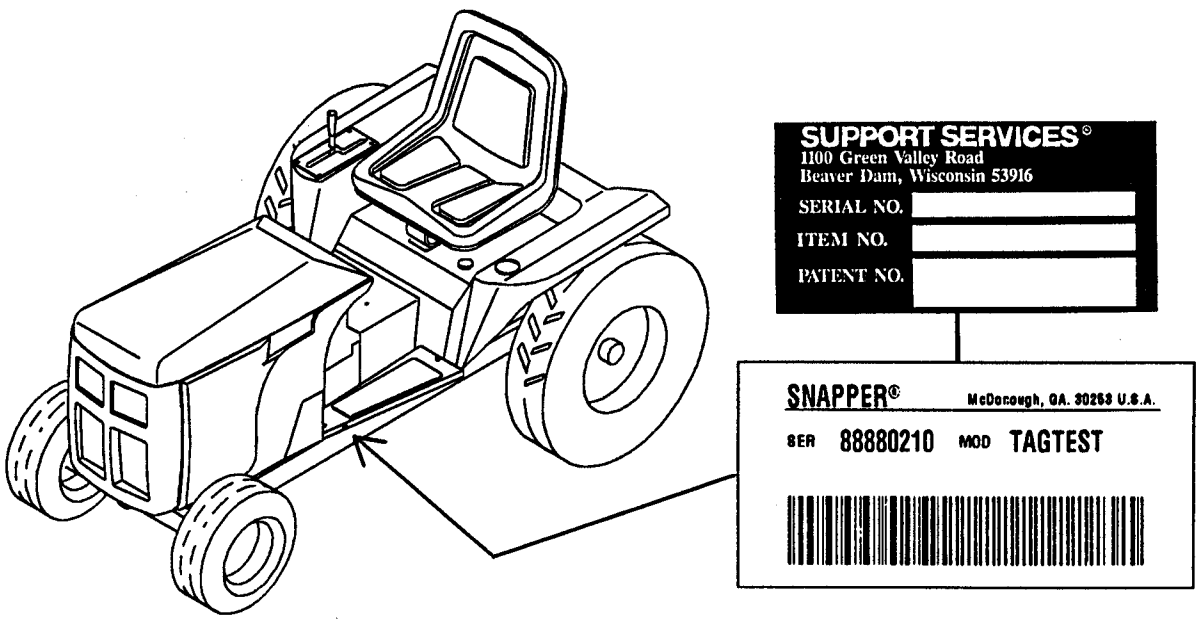


Figure 1. Location of serial number.

Ordering Parts

When ordering parts it is necessary to provide the following information. Record your tractor's serial number in the space provided.

- Model number 1618GV/MGT1800G
- Serial number _____
- Part number
- Part name
- Part quantity

Tractor controls and gauges are shown in Figures 2 through 9 and described as follows. Locate these controls on your tractor and know how to use them before operating the tractor.

Left–hand and right–hand sides of the tractor are on a person's left and right, respectively, when seated on the tractor facing forward.

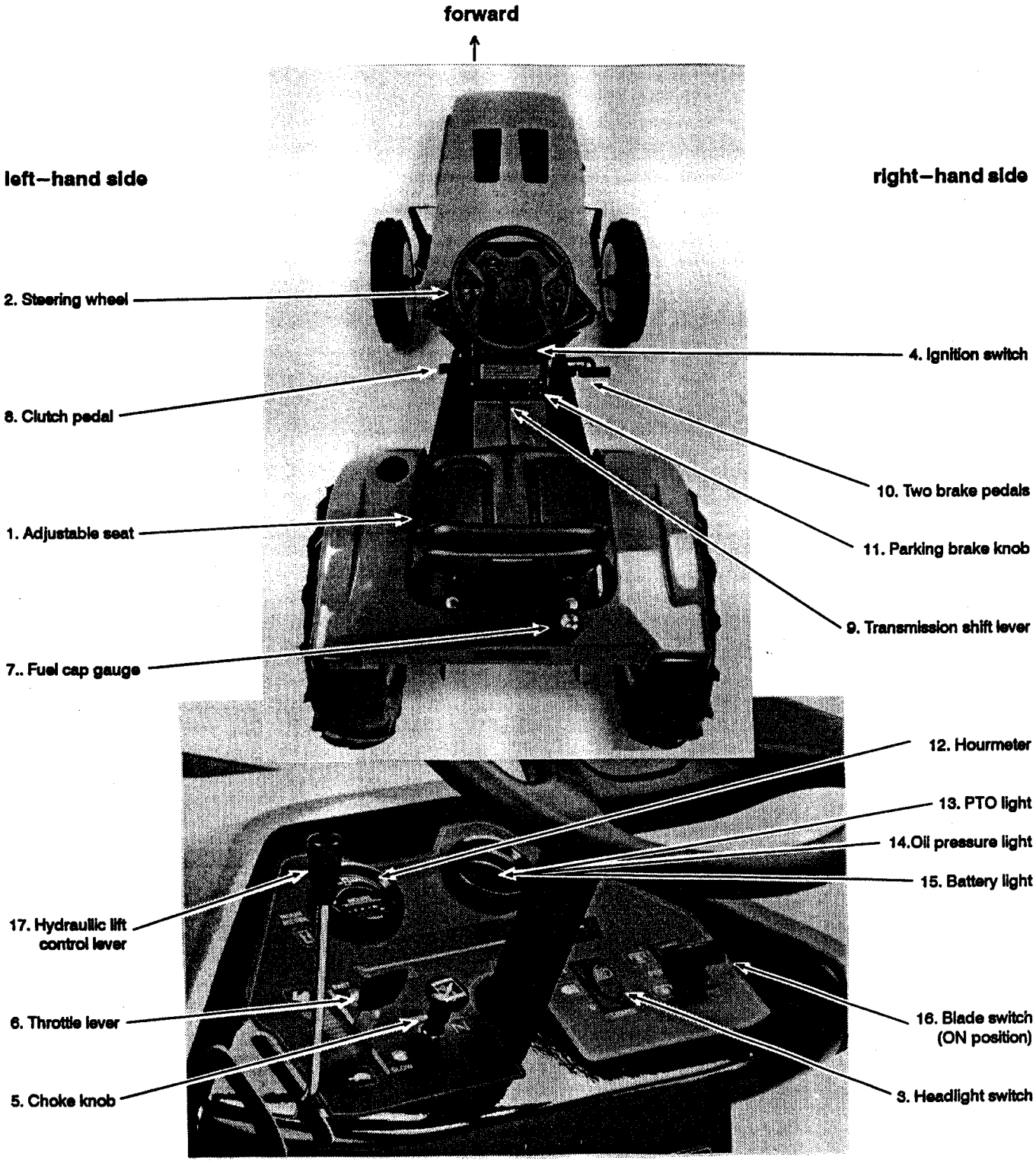


Figure 2. Operator controls.

Basic controls

1. **ADJUSTABLE SEAT** – moves forward or back, up to 3". (Refer to Figure 2)

Loosen two seat knobs on the seat support plate and slide seat assembly to suit. Tighten seat knobs.

2. **STEERING WHEEL** – controls the front wheels of the tractor for steering. (Refer to Figure 2)

3. **HEADLIGHT SWITCH** – controls the tractor's headlights. (Refer to Figure 2)

Push switch to '≡D' to turn headlights on. Push switch down to turn headlights off.

Note: The ignition switch must be "RUN" for headlights to light. Headlights go off when ignition switch is turned to the "OFF" position.

4. **IGNITION SWITCH** – starts and stops the engine. This is a 3-position, key–actuated switch. (Refer to Figures 2 & 3)

Turn key to the "START" position to start engine. When released, the key automatically returns to the "RUN" position. Turn key to the "OFF" position to stop engine.

NOTE: Do not crank engine for more than 10 seconds. Refer to "Starting the engine" on page 10 in this manual.

5. **CHOKE KNOB** – provides richer fuel-air mixture in the engine's carburetor for cold starting. (Refer to Figure 2)

Pull the knob out when starting the engine. Push it in shortly after engine begins to run. Refer also to "Starting the engine in cold weather" on page 11 in this manual.

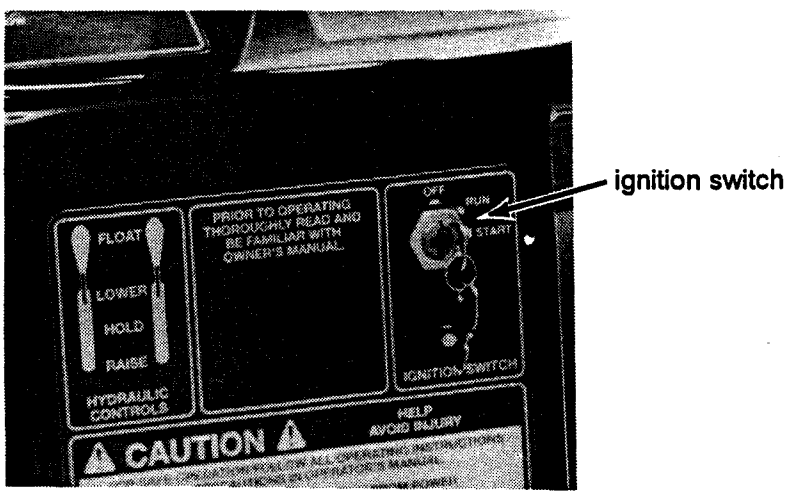


Figure 3. Ignition switch.

Basic controls (continued)

6. **THROTTLE LEVER** – controls the engine speed. (Refer to Figure 2)

Move upward (toward rabbit) to increase engine speed (rpm). Move downward (toward turtle) to decrease engine speed.

Set lever midway between the fast position and slow position when starting engine.

Throttle speed requirements vary depending on the operation and the attachment being used. Refer to the attachment manual for information. Also refer to "Tractor Operation" starting on page 10 in this manual.

⚠ WARNING: Gasoline is highly flammable. Always stop the engine and turn off all electrical systems, including headlights, when dispensing fuel. Dispense fuel outdoors. DO NOT smoke or be near any flames or sparks while dispensing fuel. Replace fuel cap securely after dispensing fuel.

7. **FUEL CAP** and **GAUGE** – shows fuel level and unscrews for dispensing of fuel into tank (Refer to Figures 2 & 4). Use only unleaded, minimum octane 87 gasoline.

Always ensure that the small fuel cap breather hole is not clogged.

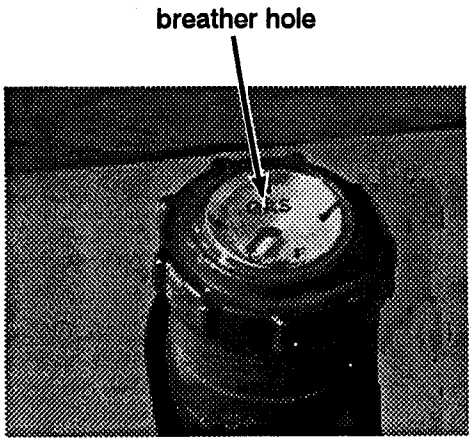


Figure 4. Fuel cap and gauge.

8. **CLUTCH PEDAL** – engages/disengages the clutch between the engine and transmission. (Refer to Figures 2 & 5). This pedal must be depressed, disengaging the clutch, to start the engine and to shift gears (up or down). It should be depressed when slowing or stopping the tractor. Refer to "Tractor Operation" starting on page 10 in this manual.

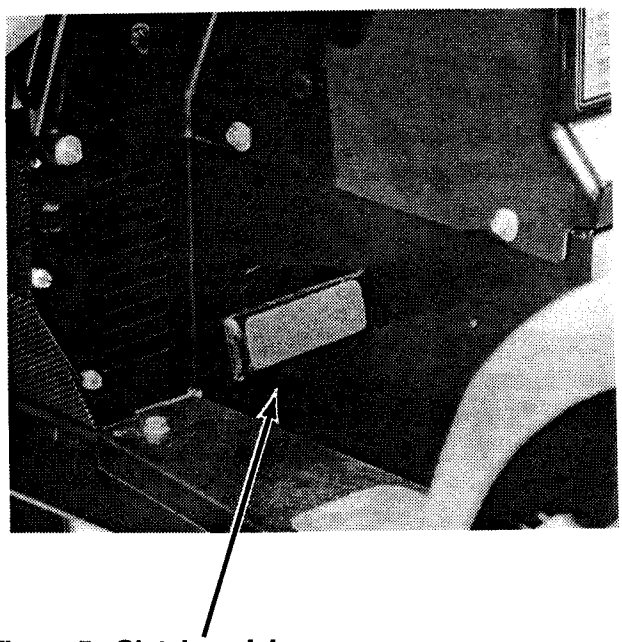


Figure 5. Clutch pedal.

Basic controls (continued)

9. **TRANSMISSION SHIFT LEVER** – hand operated to control the direction (forward/reverse) and speed of the tractor in conjunction with the throttle settings and use of the clutch pedal. (Refer to Figures 2 & 6)

IMPORTANT NOTICE: ALWAYS put lever in 1st gear when leaving tractor unattended, always shut off tractor, and set parking brake.

To change gears – depress and hold the clutch pedal, bring tractor to a complete stop, shift the transmission shift lever to desired position, then slowly release the clutch pedal.

Neutral – the lever should be in neutral before starting the tractor.

Forward – shift into gear according to desired speed. (Refer to Figure 6)

Gear	Desired speed mph
1	.0 – 0.9
2	.0 – 2.8
3	.0 – 4.1
4	.0 – 7.3

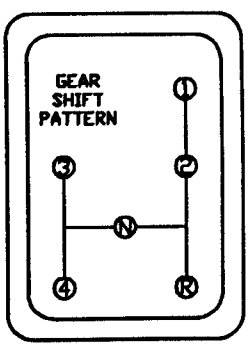


Figure 6. Gear shift pattern

Reverse – shift into 'R' to back up (0 – 3.5 mph).

10. **THE TWO BRAKE PEDALS** – control the brakes. The pedals are located on the right-hand side of the tractor. The **LEFT PEDAL** controls the left wheel and the **RIGHT PEDAL** controls the right wheel. (Refer to Figures 2 & 7).

To slow or stop the tractor under normal operating conditions depress both pedals together. To assist turning with a heavy load, to make tight turns, or to enhance traction on ice or other poor tractive surfaces depress each pedal individually.

Always apply brakes gradually.

11. **PARKING BRAKE KNOB** – latches the brake to lock the rear wheels. It is located on the right-hand side of the console. (Refer to Figures 2 & 7).

IMPORTANT NOTICE: ALWAYS lock the brakes when leaving tractor unattended.

To lock the brakes – Depress both brake pedals together. While pedals are depressed, pull up on parking brake knob, rotate it to right into short slot, and release. The parking brake is now engaged. If brakes do not latch, refer to "Troubleshooting" on page 13 in this manual.

To release brakes – Depress both brake pedals together. While pedals are depressed, pull up on parking brake knob, rotate it to left into long slot, and release. Slowly release pedals. The parking brake will disengage. If brakes do not release, refer to "Troubleshooting" on page 13 in this manual.

NOTE: When 1) the parking brake is latched, 2) the transmission is in neutral, and 3) the blade switch is "OFF", the engine will continue running without operator being in seat.

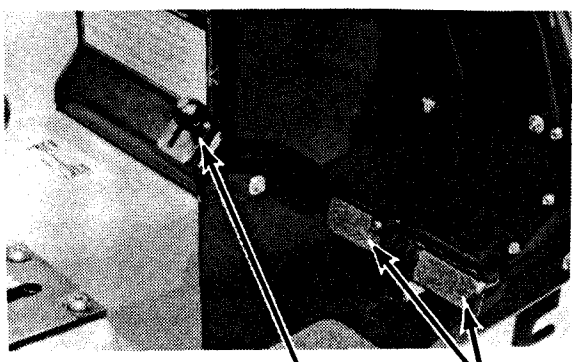


Figure 7. Parking brake knob and brake pedals.

Console gauges

12. **HOURMETER** – tells number of hours the tractor has operated. (Refer to Figures 2 & 8). It runs when ignition switch is "ON." Do not leave ignition "ON" when engine is not running. Use hourmeter as a guide for when to do scheduled maintenance.

13. **PTO LIGHT** – illuminates when electric clutch / PTO is engaged. (Refer to Figures 2 & 8).

14. **OIL PRESSURE LIGHT** – signals low oil pressure when lit. (Refer to Figures 2 & 8). It illuminates momentarily when the ignition switch is "ON", but the engine is not running (e.g., during starting sequence).

IMPORTANT NOTICE : The low oil pressure light should go off once the engine is running. If light remains on, shut engine off immediately. Refer to "Troubleshooting" on page 13 in this manual. Engine will fail if the problem is not resolved.

15. **BATTERY LIGHT** – illuminates when battery is discharging. (Refer to Figures 2 & 8). It lights momentarily during starting sequence. It should be off when the engine is running above idle. If not, shut the engine off and refer to "Troubleshooting" on page 14 in this manual to find the source of the problem.

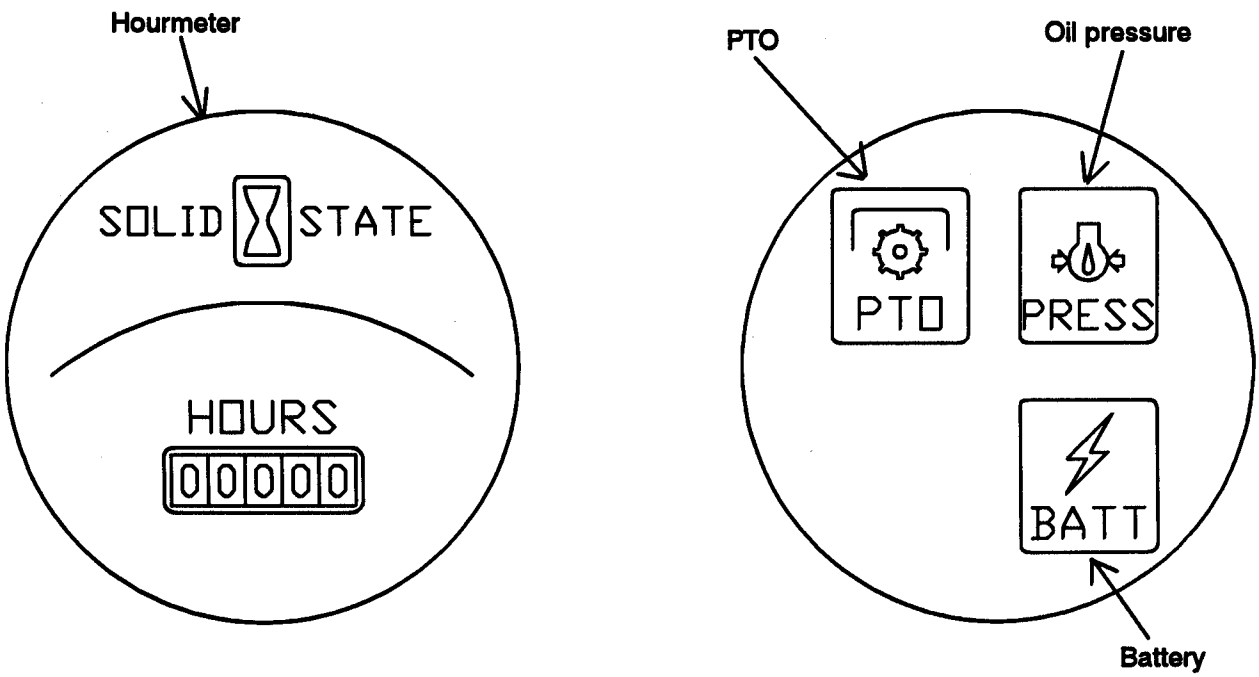


Figure 8. Console gauges.

Attachment controls

All rotary attachments are controlled by an electric clutch / PTO (power take off). All front, middle, and rear attachments are raised and lowered by the standard hydraulic lift system. An optional auxiliary lift system allows independent operation of rear attachments.

IMPORTANT NOTICE: ALWAYS lower implements fully to the ground when leaving tractor unattended.

16. **BLADE SWITCH** – starts and stops the electric clutch on the front of the engine for the power take off (PTO). The electric clutch drives all front and middle rotary implements. (Refer to Figures 2 & 9).

The electric clutch engages when the switch is pulled down and lifted to the "ON" position. The electric clutch disengages when the switch is moved to the "OFF" position.

17. **HYDRAULIC LIFT CONTROL LEVER** – controls the attachments. It is linked to a hydraulic control valve. (Refer to Figures 2 & 9).

To lower the front and rear implements – push the lever partially forward. When the lever is released it returns to its center (hold) position. The attachments "hold" their lowered positions.

To raise the front and rear implements – pull the lever to the rear. When the lever is released, it returns to its center (hold) position. The attachments "hold" their raised positions.

To float the implements (seek their own best operating levels) – push the lever fully forward through a slight detent. When the lever is released it remains in the forward position until pulled out of the detent.

Lever control

↑ implements float
↑ implements lower
– implements hold
↓ implements raise

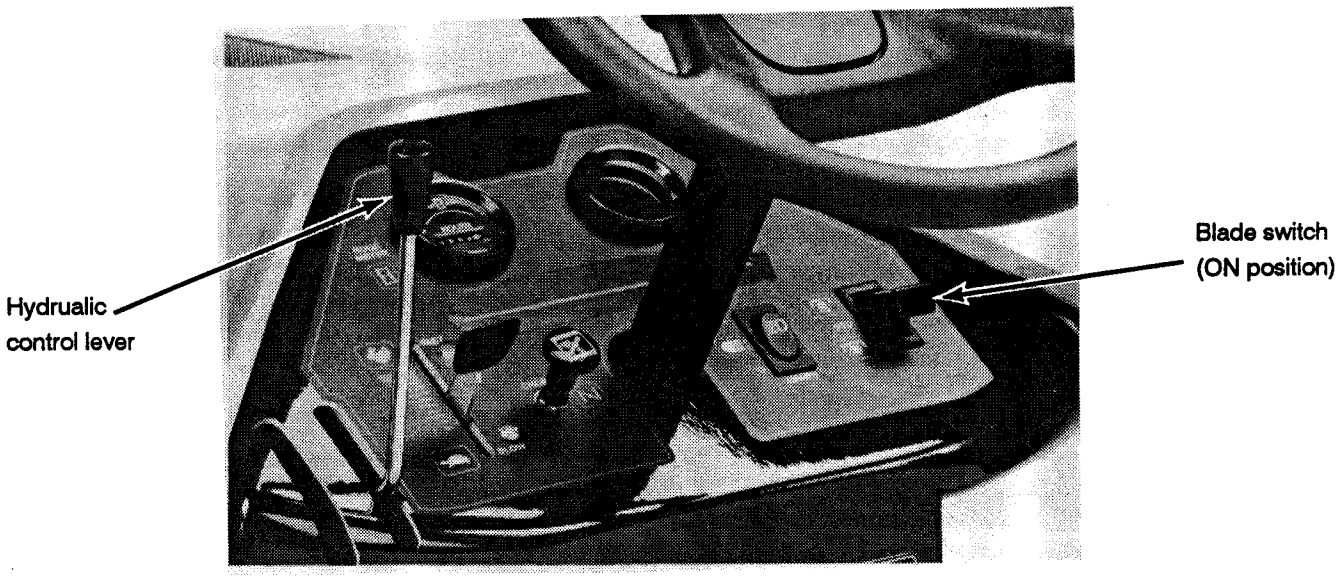


Figure 9. Hydraulic control lever and blade switch.

IMPORTANT: BEFORE starting or operating the tractor, READ all manuals and UNDERSTAND the operation of all tractor controls and attachments. FOLLOW all safety messages.

While driving the tractor

1. Stay alert for holes and other hidden hazards. Keep away from ditches, washouts, culverts, fences and protruding objects.

2. DO NOT operate machine on slopes exceeding 15 degrees (27% grade). On slopes above 10 degrees (18% grade) exercise extreme CAUTION. Turn attachments OFF when traveling uphill. Also reduce speed and avoid sharp turns.

3. When operating on slopes greater than 10° use front and rear wheel weights and low speed ranges. DO NOT operate machine on slopes exceeding 15 degrees (27% grade).

4. When pulling loads use front wheel weights or front weight rack with counterweights. Use low speed ranges and apply power slowly. Pull from frame mounted towbar only. Do not pull from any other place on the tractor frame.

5. Never dismount until tractor is stopped, all power shut off, and parking brake lever engaged.

6. Never leave the tractor unattended with the engine running.

7. Never leave the ignition key in an unattended tractor.

8. Do not disconnect any safety interlocks. They are provided for the protection of the operator, especially when his or her attention may be momentarily distracted.

Starting the engine

1. Ensure that the fuel shutoff valve on the bottom side of the fuel tank is open (vertical). (Refer to Figure 10).

NOTE: Safety interlocks prevent the tractor from starting when steps 2, 3, and 4 are not done.

2. Be seated on the tractor.

3. Ensure that the transmission shift lever is in neutral.

4. Make sure blade switch is in "OFF" position (down).

5. Set the throttle lever about halfway between slow (turtle) and fast (rabbit) and pull the choke knob out..

IMPORTANT NOTICE : To prevent over-heating of the starting motor, limit continuous cranking to 10 seconds. Allow a full 60 second delay before attempting to recrank. If there is a false start, the engine must be completely stopped before making another attempt at starting.

6. Turn the ignition key to "Start" and release it immediately after the engine starts. Push choke in halfway.

7. After engine is warm push choke in all the way. Then push throttle lever down until engine idles.

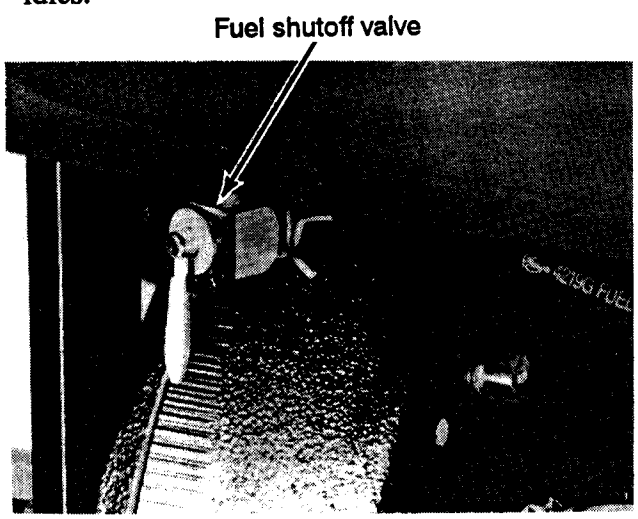


Figure 10. Fuel shutoff valve.

Starting the engine in cold weather

1. Use lighter oil. Refer to Engine manual for correct oil usage. Do not use starting fluids. Keep the battery fully charged (cranking power is greatly reduced at low temperatures).

2. Follow the procedure for "Starting the engine" except allow the engine to warm up before pushing the choke in.

Starting the tractor, driving the tractor and operating attachments

⚠ WARNING: Check to be sure that the area around the tractor and attachment, and in the path you intend to travel, is clear of people, pets, and other obstacles.

Tractor ground speed and engine speed requirements vary depending on operating conditions and the attachment being used.

The PTO attachment drive is independent of the transmission setting, so the tractor ground speed can be slowed without reducing the speed of the attachment (engine rpm).

1. If a PTO driven attachment is being used increase engine rpm with the throttle to half speed. Engage the electric clutch (turn blade switch "ON").

After both engine and attachment are running, operate throttle to gradually increase engine rpm up to operating speed. Engine speed below half throttle is not recommended while PTO driven attachments are engaged. Refer to attachment manual for recommended operating speed. Refer also to "Attachment controls" on page 9 in this manual.

2. To put the tractor in motion - use the transmission shift lever and clutch pedal:

IMPORTANT NOTICE: Tractor should be at a complete stop before shifting.

To drive forward - from neutral, reduce engine RPM, depress clutch pedal, and move shift lever into desired gear.

To drive backward - from neutral, decrease engine RPM, depress clutch pedal. Move shift lever into reverse (R). Slowly release clutch pedal.

NOTE: A safety interlock switch stops the engine and attachment if the operator leaves the tractor seat without pushing the blade switch to "OFF", putting the transmission in neutral, and locking the brakes.

Brake operation

To lock the brakes - Depress both brake pedals together. While pedals are depressed, pull up on parking brake knob, rotate it to right into short slot, and release. The parking brake is now engaged. If brakes do not latch, refer to "Troubleshooting" on page 13 in this manual.

To release brakes - Depress both brake pedals together. While pedals are depressed, pull up on parking brake knob, rotate it to left into long slot, and release. Slowly release pedals. The parking brake will disengage. If brakes do not release, refer to "Troubleshooting" on page 13 in this manual.

IMPORTANT NOTICE: Always put the transmission shift lever in first gear, fully lower the attachments, lock the brake, and remove the key before leaving the tractor.

Troubleshooting

Malfunction	Probable Cause	No	Yes	Corrective Action	Ref.
Engine will not turn over	1. Improper starting	Go to #2	→	1. Check starting procedure.	Pg. 10
	2. Dead battery	Go to #3	→	2. Charge battery or replace.	Pg. 20
	3. Clutch pedal not depressed.	Go to #4	→	3. Depress pedal.	Pg. 10
	4. Blade switch on.	Go to #5	→	4. Push blade switch down.	Pg. 10
	5. Operator not seated	Go to #6	→	5. Operator must be seated.	Pg. 10
	6. Open electrical circuit.	Go to #7 Corrective Action	→	6. Check for blown fuse, loose connections, broken wires or grounded leads.	Pg. 21
				7. Contact your authorized dealer.	—
Engine will turn over but will not start.	1. Empty fuel tank	Go to #2	→	1. Fill tank	—
	2. Seat safety switch open.	Go to #3	→	2. Operator must be seated	Pg. 10
	3. Fuel shutoff valve closed.	Go to #4	→	3. Open shutoff valve.	Pg. 10
	4. Faulty spark plug.	Go to #5	→	4. Remove and check spark plug	Pg. 25
	5. Faulty ignition connections.	Go to #6	→	5. Check for disconnected lead wires.	Pg. 21
	6. Air cleaner clogged.	Go to #7	→	6. Clean element.	Pg. 23
	7. Engine flooded (strong fuel odor).	Go to #8 Corrective Action	→	7. Push choke in and try again.	Pg. 5
				8. Contact your authorized dealer.	—
Engine starts but stalls in a few seconds.	1. Fuel tank empty.	Go to #2	→	1. Fill tank	—
	2. Fuel shutoff valve closed.	Go to #3	→	2. Open shutoff valve.	Pg. 10
	3. Incorrect idle adjustment.	Go to #4	→	3. Adjust carburetor.	*
	4. Engine to cold.	Go to #5	→	4. Leave choke partially pulled out until engine warms up.	Pg. 10
	5. Drive train lubricants to cold.	Go to #6	→	5. Run in neutral or use low gear setting until warm.	Pg. 10
	6. Faulty fuel relay.	Go to #7 Corrective Action	→	6. Replace fuel relay.	—
				7. Contact your authorized dealer.	—
Engine idles poorly.	1. Idle speed too slow.	Go to #2	→	1. Adjust idle speed.	*
	2. Idles improperly	Go to #3	→	2. Check idle fuel adjustment.	*
	3. Faulty spark plug.	Go to #4 Corrective Action	→	3. Check spark plug.	Pg. 25
				4. Contact your authorized dealer.	—
Engine overheats.	1. Engine screen or cooling fins clogged.	Go to #2	→	1. Clean out debris.	Pg. 23
	2. Oil level too high or too low.	Go to #3	→	2. Check oil level.	Pg. 24
	3. Fuel mixture too lean.	Go to #4	→	3. Adjust carburetor.	*
	4. Engine overload.	Go to #5 Corrective Action	→	4. Reduce load. Allow engine to cool.	—
				5. Contact your authorized dealer.	—

— Contact your nearest dealer for assistance.

* Refer to the engine manufacturer's Owner's Manual for more information.

Troubleshooting

Malfunction	Probable Cause	No	Yes	Corrective Action	Ref.
Engine "Oil" pressure light on.	1. Low oil level.	Go to #2	→	1. Check and add oil.	Pg. 24
	2. Excessive slope operation.	Go to #3	→	2. See "Safety" section.	T. O. C
	3. Engine not running.	Go to #4	→	3. Normal momentarily.	——
		Corrective Action		4. Contact your authorized dealer.	——
Engine continues to run when turned off.	1. Defective wiring or ignition switch.	Go to #2 Corrective Action	→	1. Pull choke knob out to flood engine. Check wiring and connections to engine. Check ignition switch circuit through switch.	Pg. 21
		Go to #3		2. Contact your authorized dealer.	——
One or both headlights do not light.	1. Ignition switch off.	Go to #2	→	1. Turn ignition key to "On".	Pg. 5
	2. Open electrical circuit.	Go to #3	→	2. Check fuses.	Pg. 21
	3. One or both lamps out.	Go to #4	→	3. Replace bulbs.	Pg. 21
	4. Dead battery.	Go to #5	→	4. Charge battery or replace.	Pg. 20
	5. Loose connection or broken or grounded wire.	Go to #6	→	5. Check wiring and connections between ignition switch, light switch and lights.	Pg. 21
	6. Defective light switch.	Go to #7 Corrective Action	→	6. Replace light switch.	——
				7. Contact your authorized dealer.	——
Electric clutch malfunction.	1. Loose connection.	Go to #2	→	1. Check connections and fuses.	Pg. 21
	2. Out of adjustment.	Go to #3	→	2. Readjust.	Pg. 22
	3. Defective blade switch.	Go to #4	→	3. Replace switch.	——
	4. Defective electric clutch.	Go to #5 Corrective Action	→	4. Replace electric clutch.	——
				5. Contact your authorized dealer.	——
Transmission grinds.	1. Lubrication level low or incorrect lubricant.	Go to #2	→	1. Check and add oil if necessary. See "Transmission".	Pg. 30
	2. Clutch linkage out of adjustment.	Go to #3	→	2. See dealer for adjustment.	——
	3. Improper shifting procedure.	Go to #4 Corrective Action	→	3. See "Tractor Controls" and "Tractor Operation".	Pg. 6
				4. Contact your authorized dealer.	——
Excessive transmission noise.	1. Lubrication level low or incorrect lubrication.	Go to #2 Corrective Action	→	1. Check and/or change oil. Check for leaks.	Pg. 30
				2. Contact your authorized dealer.	——
Excessive differential or final drive noise.	1. Loss of lubricant.	Go to #2 Corrective Action	→	1. Add oil as required, check for leaks and repair.	Pg. 29
				2. Contact your authorized dealer.	——
Brakes ineffective (If brakes won't kill engine but do stop forward motion, they are normal.)	1. Out of adjustment.	Go to #2	→	1. Adjust brake at clevis.	Pg. 19
	2. Worn brake band.	Go to #3	→	2. Replace brake band.	——
	3. Oil in brake band.	Go to #4 Corrective Action		3. Clean or replace.	——
				4. Contact your authorized dealer.	——

Troubleshooting

Malfunction	Probable Cause	No	Yes	Corrective Action	Ref.
Hydraulic lift does not work properly.	1. Low oil level.	Go to #2	→	1. Check and fill to 3" from top.	Pg. 27
	2. Worn valve, cylinder, or pump.	Go to #3	→	2. Adjust tension. See "Hydraulic system".	Pg. 27
	3. Pinched or broken hose.	Go to #4	→	3. Correct or replace.	Pg. 27
		Corrective Action		4. Contact your authorized dealer.	——
No power steering.	1. Worn power steering unit.	Go to #2	→	1. See dealer for replacement.	——
	2. Worn power steering cylinder.	Go to #3	→	2. See dealer for replacement.	——
	3. Worn transmission charge pump.	Go to #4	→	3. See dealer for replacement.	——
	4. Low oil level.	Go to #5	→	4. Check and fill hydraulic tank to recommended level.	Pg. 27
		Corrective Action		5. Contact your authorized dealer.	——
Battery light does not go out.	1. Bad or corroded battery cables.	Go to #2	→	1. Clean or replace battery cables.	Pg. 20
	2. Bad test timer module.	Go to #3	→	2. Replace test timer module.	
	3. Bad battery.	Go to #4	→	3. Check battery or replace if necessary.	Pg. 20
	4. Malfunction in charger system.	Go to #5	→	4. See your dealer.	——
		Corrective Action		5. Contact your authorized dealer.	——

Maintenance

General

Maintaining and cleaning the tractor will keep it in prime safety and operating condition. Detailed instructions on how to service the tractor are on the following pages. Perform the maintenance as recommended. For future reference keep a log, on page 65, of when maintenance was done.

⚠ WARNING ⚠

Before performing maintenance on the tractor, put the transmission shift lever in 1st gear, ensure blade switch is off, fully lower the attachment, lock the brake and turn off engine. Failure to do so could result in personal injury or even death.

Maintenance summary

The summary below shows when to service the tractor under normal conditions. The tractor's hourmeter tells the number of hours the tractor has been used. Service may need to be done more frequently, especially under unusual conditions, such as heavy dirt, dust, etc.

Check before every use...

belts
engine oil
fasteners
fuel level
guards & shields
hydraulic oil
transmission lube

Check during and after every use...

air cleaner
air intake screens

Check after first 5 hours...

battery
engine oil & filter (change)
fittings
hydraulic oil
transmission lube

Check every 25 hours...

air cleaner (clean)
battery
brakes
engine cooling fins
fittings (grease)
hydraulic hoses & fittings
tire pressure

Check every 100 hours...

air cleaner (change)
differential (lube)
engine air intake/cooling system (clean)
engine oil & filter (change)
final drive (lube)
fuel filter (change)
fuel screen (clean)
spark plugs (change)
wheel bearings (pack)

Fuel, oils, grease, and lubricants

Battery water . distilled water

Differential lube .. 80/90 gear lube – 2 pints

Engine oil 10W30 year-round above 32° F – 2 qts.
5W30 below 32° F

Final drive lube .. 80/90 gear lube – 1.5 pints each

Fitting grease . lithium based grease

Fuel .. unleaded gasoline, 87 min. octane – 8.25 gals.

Hydraulic oil .. Dexron II hyd. oil – 2.25 gals.

Transmission lube special (Dealer) blend – 1-1/2 pints

Belts

Check the PTO and attachment drive belts periodically for wear, cuts, breaks, and frayed conditions. Replace worn or damaged belts. Clean only with a clean, dry cloth.

For details on replacing attachment belts refer to the attachment manual.

Body

The side panels, hood, front grille, and rear fender comprise the body. These sections are made of fiber reinforced plastic.

Maintenance and cleaning supplies can be obtained at automotive parts dealers or discount store automotive departments. Replacement parts can be ordered from your Dealer.

Cleaning the body

Keep the tractor free of debris, dirt, and grease. Remove mud, ice, or snow after use to prevent hardening or freezing.

Be sure side and top screens are clear. Cleaning may help in the discovery of minor discrepancies before they become troublesome.

Use only a car wash soap to wash. Never use dish or laundry soap as it will remove wax.

Use a premium paste wax on hood, body, and dash areas every six months in order to maintain a smooth surface finish and color (more frequently in extreme conditions). Use of "rubbing" compound can remove small scratches.

Removing the body

In some instances, removal of the body facilitates cleaning, lubrication, and adjustments. Generally, removal is not necessary. If removal is desired follow these steps:

Side panels

1. Raise the hood by pulling it up from the edge that is closest to the steering wheel.

2. Each side panel is secured at the top with two cam-locs. Flip the cam-locs out. Turn them 90°, aligning them with the slots in the side panel. Lift panel off.

Hood

3. The hood is secured to the tractor with two prop rods. Remove the prop rods from the interior support structure by loosening the nuts from the hinge clips. Lift hood, with prop rods attached, from the tractor.

Front grille

4. The front grille is secured to the tractor with screws, washers, and nuts. Loosen these items.

5. Ensure right side panel is already removed, as explained in steps 1 and 2.

6. Disconnect the headlight wires at the main wiring harness (on right side, near engine starter). Remove screws, washers, and nuts. Carefully remove grille, pulling headlight wires through opening.

Brakes

The tractor is equipped with two individually controlled rear wheel brakes. The brake system was pre-adjusted at the factory for maximum braking efficiency.

The brakes should be checked after 25 hours of tractor operation, or sooner if necessary. The brakes are connected to actuating arms at the rear of the tractor.

Checking

Depress one of the pedals. There should be approximately 1/2" of free travel on the pedal before resistance is encountered. This means the brake bands are tight on the drum. If free travel is excessive or inexcessive refer to the adjusting procedure.

The pedal may be depressed another three or four inches but this will merely compress the override spring. Little or no additional pressure will be brought to bear on the drum.

Adjusting

When adjustment becomes necessary, the brake for each wheel should be adjusted separately. Refer to Figure 11 and do the following steps:

1. Loosen the locking nuts (Item 26A) located forward of the clevis (Item 4).

2. Adjust nut (Item 26B) to obtain the desired free travel. Adjusting the nut rearward, against the clevis (Item 4), will loosen the brake band. Adjusting the nut forward, away from the clevis, will tighten the brake band.

3. Tighten locking nut (Item 26A) against adjustment nut (Item 26B) to secure nuts.

4. Adjust the override spring nut (Item 17) located behind override spring (Item 14) inside clevis (Item 4). Nut should be adjusted so override spring is approximately 2-1/4" in length.

5. Follow the same procedure for the brake on the other side of the tractor. Recheck free travel and parking latch engagement.

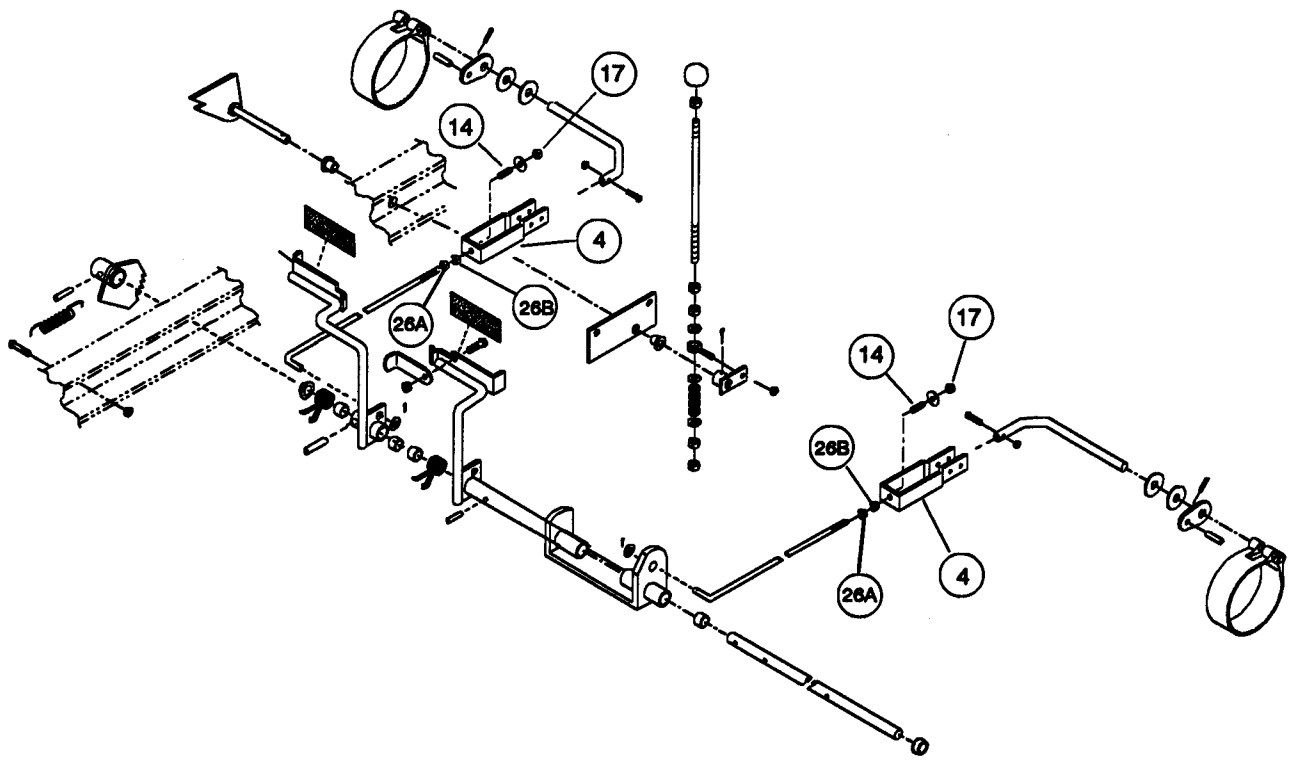


Figure 11. Brake adjustment

Clutch

Through prolonged use the friction surfaces of the clutch disc may become worn. The following adjustment will not increase pressure on the surfaces but will relocate the clutch pedal.

NOTE: A slipping clutch is an indication of wear and the need for eventual replacement of the friction disc in the clutch.

To adjust the clutch refer to Figure 12 and do the following steps:

1. Detach clevis (Item 21) from the clutch shaft (Item 13) by removing quick change key (Item 23) and clevis pin (Item 22).

2. Pull clutch pedal (Item 43) back until it stops.

3. Pivot clutch shaft (Item 13) forward, gently, until it stops, indicating contact with the throwout bearing.

4. Adjust clevis (Item 21) on rod (Item 46) until holes in clevis (Item 21) are aligned with the hole in clutch pedal shaft (Item 13).

5. Turn clevis (Item 21) out exactly 1-1/2 full turns. Reattach clevis to clutch shaft (Item 13). Check clutch pedal "free travel".

There should be about 1/4" of low force travel on the pedal from its rearmost position to the point where resistance is felt.

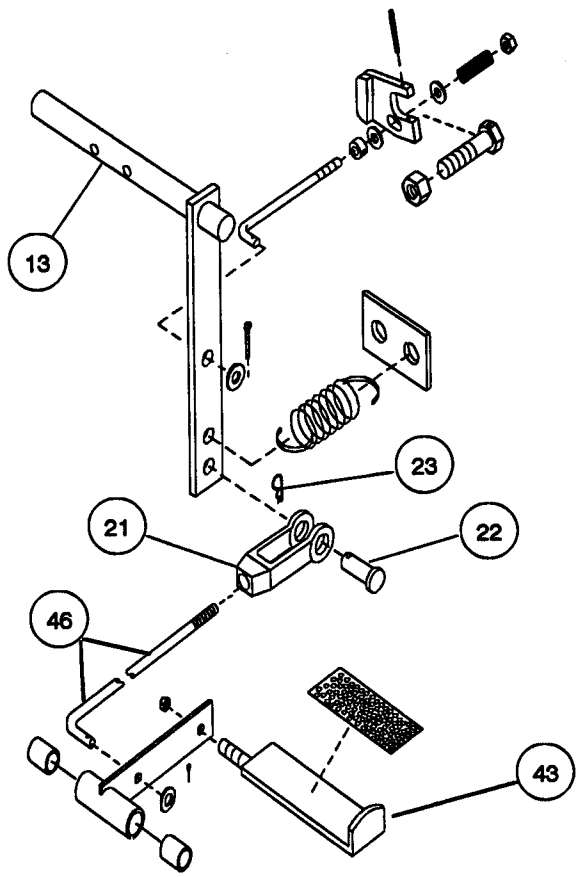


Figure 12. Clutch adjustment

Electrical system

WARNING: Before checking or servicing any part of the electrical system, first disconnect the black (–) battery cable. Then disconnect the red (+) cable. Failure to do so could cause severe burns.

Battery

WARNING: Dangerous Acid, Explosive Gases. DO NOT smoke or light a match near the battery! Hydrogen gas may be present and is explosive. Batteries contain sulfuric acid. Keep batteries and acid out of reach of children. Avoid contact with skin, eyes, and clothing. Flush immediately with water for 15 minutes if acid splashes on skin. Seek medical help.

WARNING: Batteries produce explosive hydrogen gas while being charged. Ventilate the area when charging the battery. Keep cigarettes, sparks, open flame, and other sources of ignition away at all times.

WARNING: Remove all jewelry when working on battery. Failure to do so could result in severe burns.

Checking the battery

Battery cables are color–coded. Remember that to:

*Remove the cable clamps: black (–) is first.

*Connect the cable clamps: black (–) is last.

The battery should be checked every 25 hours of operation or once a week, whichever is less.

To check the battery:

1. Open hood. The battery is located directly behind console. First disconnect the black (–) battery cable. Then disconnect the red (+) battery cable.

2. Being VERY CAREFUL not to splash liquid, remove the filler caps.

3. The electrolyte level should be at the bottom of the filler tubes. If the electrolyte is low, add clean distilled water. Do not overfill.

In freezing weather run the engine briefly after adding water. This mixes the water and electrolyte and prevents freezing.

4. Clean corrosion and dirt from cables, connections, and top of battery. Refer to "Cleaning the battery" on page 20 in this manual. Dirt and corrosion can cause self-discharging of battery. Apply a coat of a corrosion preventative to terminals.

5. First connect the red (+) battery cable. Then connect the black (–) cable. Tighten battery connections. Keep connections tight at all times to prevent arcing, pitting of connections, and eventual battery failure.

Electrical system (continued)

Battery (continued)

Removing the battery

WARNING: Dangerous Acid, Explosive Gases. DO NOT smoke or light a match near the battery! Keep batteries and acid out of reach of children. Avoid contact with skin, eyes, and clothing. Flush immediately with water for 15 minutes if acid splashes on skin. Seek medical help.

1. Raise the hood and locate battery and cables.

2. Remove both side panels. Refer to "Removing the body – side panels" on page 16.

3. The battery cables are color–coded. The black cable connects to the negative terminal on the battery. The red cable connects to the positive terminal on the battery.

ALWAYS disconnect the black (–) cable first. Slide clamp cover back, away from battery. Loosen screw and nut securing clamp to the (–) battery terminal.

Then remove the red (+) cable from the battery by sliding clamp cover back and loosening screw and nut securing the clamp to (+) battery terminal.

4. Remove the holder bar by loosening the wing nuts from the bolts. Make sure battery filler caps are closed to prevent liquid from splashing.

5. Remove battery and set it on a wooden rack or bench.

Cleaning the battery

1. Remove battery. (Refer to this page.)

2. To prevent any corrosive matter on cables from falling into tractor, gently pull cables to one side of tractor. Allow cables to hang over the side of tractor.

3. Clean cable clamps and battery terminals with a solution sold in automotive departments for said purpose. Inspect cables for damage.

Charging the battery

WARNING: Batteries produce explosive hydrogen gas while being charged. Ventilate the area when charging the battery. Keep cigarettes, sparks, open flame, and other sources of ignition away at all times.

If unfamiliar with charging the battery, refer to the charger manufacturer's instructions.

Replacing the battery

See your Dealer to make sure you have correct volts and amps before replacing your battery.

Installing the battery

1. Set battery on shelf. Position holder bar on battery.

2. Secure battery by fastening holder bar to shelf with bolts and wing nuts.

3. ALWAYS connect the red (+) cable first by securing clamp around positive battery terminal with screw and nut. Then connect black (–) cable by securing clamp around negative battery terminal with screw and nut.

4. Tighten both cables. Keep connections tight at all times to prevent arcing, pitting of connections, and eventual battery failure. Slide covers over clamps.

5. Replace side panels and close hood.

Electrical system (continued)

Connections and wiring

The electrical connections and wiring should be checked at least every 25 hours of tractor operation. Make sure that connections are clean and tight and that wires are not rubbing on anything.

Fuses

If an electrical failure occurs, check the fuses. They are located in front of the console on the right side of the tractor.

To check a fuse, pull it out of its socket. A fuse is not working if the metal inside is broken. Replace a broken fuse with one that has the same amperage.

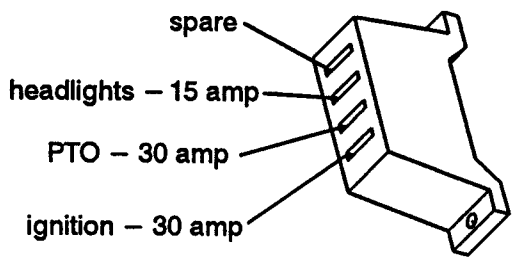


Figure 13. Fuses.

Gauge light bulbs

To replace a light bulb in the console:

1. Open hood. Rotate the black bulb holder 1/4 turn counterclockwise. Pull unit out of opening.

2. Pull bulb out. Replace with bulb of the same type and wattage.

3. Insert unit in opening. Rotate 1/4 turn clockwise to fasten. Close hood.

Headlights

If a headlight needs replacing:

1. Open hood. Remove side panels. Remove front grille, disconnecting headlight wires. Refer to "Removing the Body" on page 16 for further information.

2. Rotate the black bezel dial (Refer to Figure 14) 1/4 turn counterclockwise. Pull unit out of opening. Pull bulb out. Replace bulb with one of the same type and wattage. Insert unit in opening. Rotate dial 1/4 turn clockwise to fasten.

3. Reconnect wires. Replace front grille and side panels.

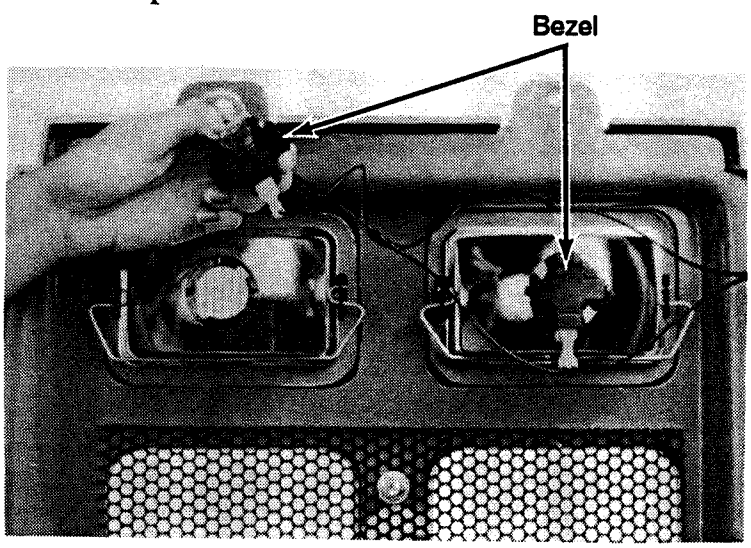


Figure 14. Headlights.

Electric clutch

The electric clutch needs no lubrication. If oil or grease inadvertently contaminates its working surfaces remove the contaminants by turning engine off and allowing it to cool. Then pour a generous quantity of a cleaning fluid, such as ammonia, between the working surfaces.

The clutch portion of this clutch/brake combination unit is self-adjusting.

The brake section may require adjustment depending on usage.

DANGER: Never attempt to check or adjust the PTO or electric clutch while the engine is running. This will result in personal injury or damage to property. Push blade switch down to "OFF" position, stop tractor engine, and remove key before adjusting the PTO or electric clutch.

To adjust the brake:

1. Be sure engine is cool and not running. Turn off blade switch.

2. Raise hood. Remove side panels. Remove belt from electric clutch pulley (see attachment manual for instructions.)

NOTE: Refer to Figure 15 when attempting steps 3 thru 9.

3. Place a shim, .012" - .015" thick, in each of the three slots in the brake flange. Slots are located by the locknuts.

WARNING: Prior to adjusting brake ensure engine is not running. Failure to do so could cause injury.

4. Turn ignition switch to run (engine must not be running), turn on the blade switch.

5. Loosen the locknuts holding the flange. Push the flange until it bottoms. Retighten locknuts using caution not to over torque them and damage the flange.

6. Turn off the blade switch. Remove the shims.

7. Check the gaps to be sure they are between .005" - .023". Readjust as required.

8. Reinstall the belt.

9. Start the engine and check the clutch operation. If the engine drags when the PTO is either OFF or ON, recheck the gap. The gap must be within the range of .005" - .023" on all three studs. Readjust if necessary.

10. Reinstall side panels.

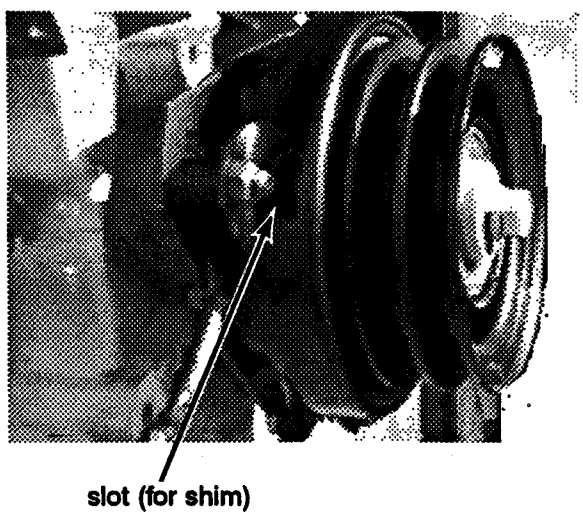


Figure 15. Electric clutch (side view)

Engine

NOTE: If differences are encountered, the engine manufacturer's Owner's Manual should override this manual.

The three main causes of major engine failure are:
1. Insufficient cooling air.
2. Low oil or dirty oil.
3. Dirty carburetor air.

The engine is air-cooled. Air is drawn into the area around the engine from the rear by flywheel fins.

To prevent the engine failure or overheating, the air filter, air intake screens, and engine cooling fins **must be kept clean and unobstructed at all times.**

Air cleaner

The air cleaner is a porous paper filter with a foam precleaner wrapped around it. It removes dust as air circulates through its surfaces. A clogged air cleaner reduces engine power and leaves unburned fuel in the engine.

The air cleaner should be checked after every use of the tractor. Clean it every 25 hours (sooner if operating in unusual conditions, such as heavy dust, etc.). Replace it every 100 hours.

Checking, cleaning, replacing

To check, clean, replace the air filter, refer to Figure 16 and do the following steps:

1. Turn the engine off. Open hood.

2. Locate the square, plastic unit which houses the air cleaner. Unlatch it at the sides. Remove the top. Check bottom plate to be sure it is securely mounted and undamaged.

3. Remove wing nut from air filter cover. Remove cover. Remove filter.

4. **Precleaner** – Remove the foam precleaner that is wrapped around the air cleaner. Shake out debris. Wash the precleaner in detergent and water. Rinse, dry, and lightly oil. Squeeze out excess oil. DO NOT WASH or OIL the PAPER FILTER.

5. **Paper filter** – HANDLE CAREFULLY. Replace filter if rubber gaskets or paper surfaces are damaged or very dirty.

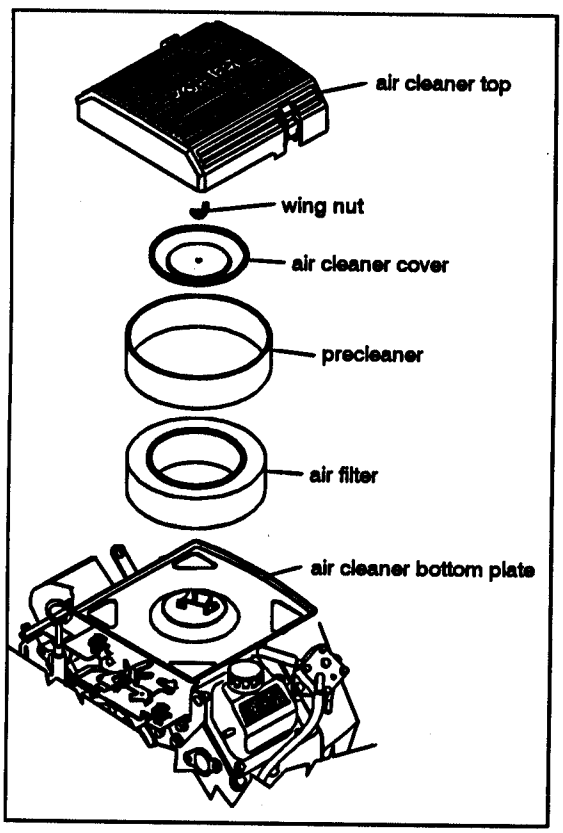


Figure 16. Air cleaner.

Engine (continued)

To ensure proper cooling, the external surfaces of the engine should be kept clean **at all times.**

IMPORTANT NOTICE: Operating the engine with a blocked grass screen, dirty or plugged cooling fins, and/or cooling shrouds removed will cause engine damage due to overheating.

Air intake/cooling system

Every 100 hours of operation (more often under extremely dusty or dirty conditions) cooling fins should be cleaned. Refer to the engine manufacturer's Owner's Manual or see your local Dealer.

Air intake screens

The air intake screens are located on either side of the tractor, near the middle. Check screens after every use. Dirty screens can cause engine to overheat. Check during use if operating in heavy dust or debris.

Cleaning

To clean air intake screens:

1. Remove all debris, grass, etc. that has collected on the screens, blocking the holes.

2. Wipe the screens and rinse with a hose.

Carburetor

Lack of power accompanied by black sooty exhaust smoke usually indicates that the fuel mixture is too rich. A clogged air cleaner can cause the same symptoms. Check the air cleaner first. The carburetor may not need adjustment. Refer to the engine manufacturer's Owner's Manual if adjustment is necessary.

Oil and filter

The engine oil should be checked before every use of the tractor. The oil and filter should be changed after the first five hours of operation and every 100 hours thereafter. Dipstick and oil fill are on top of engine.

Checking oil

To check oil level:

1. Pull dipstick (Refer to Figure 17) completely out of the crankcase. Wipe off oil. Reinsert dipstick completely.

2. Remove dipstick and read level.

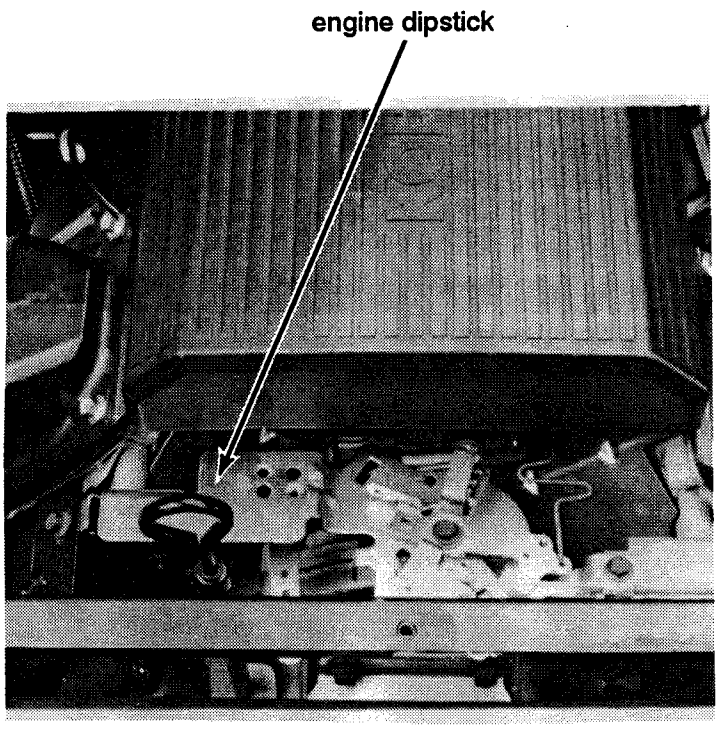


Figure 17. Engine dipstick.

Engine (continued)

Changing oil and filter

CAUTION: Hot engine oil can cause burns.

Hot oil drains more freely and carries away more impurities than cool oil. Either run the engine for about five minutes to thoroughly warm the oil, or drain the oil while the engine is hot. USE EXTREME CAUTION! Dispose of oil properly.

To change oil and filter:

1. Remove engine drain cap and filter (Refer to Figure 18). Drain oil into pan.

2. Replace cap and filter. Refill to full (F) mark on dipstick. DO NOT OVERFILL. Clean up spilled oil.

3. Start engine. Oil light should go out within 10 seconds. If it does not, turn off engine immediately and refer to "Troubleshooting" on page 13 in this manual.

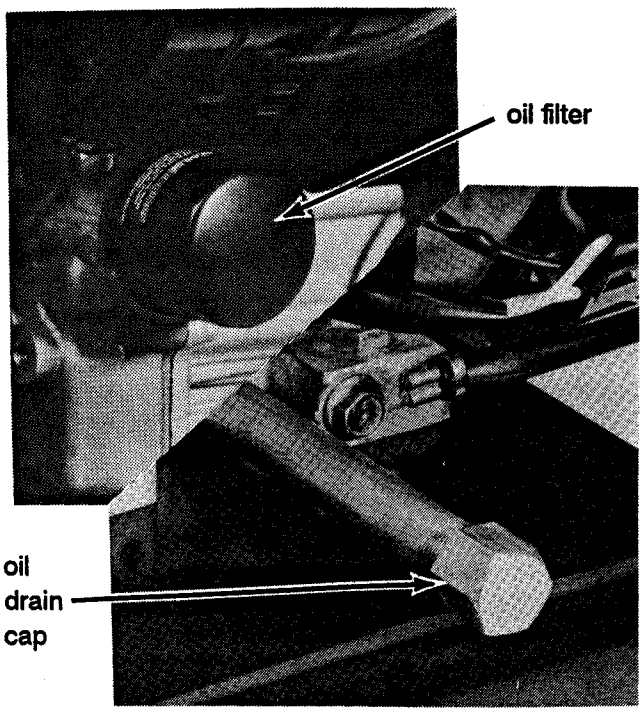


Figure 18. Engine oil filter and drain cap.

Spark plugs

After every 100 hours of use, check the condition of each spark plug and reset the gap. The gap gradually widens as the electrodes wear under normal conditions. To check each plug:

WARNING: Before checking or servicing any part of the electrical system, first disconnect the black (–) battery cable. Then disconnect the red (+) cable. Failure to do so could cause severe burns.

1. Open the hood. Remove the side panels. First disconnect the black (-) battery cable. Then disconnect the red (+) battery cable.

2. Disconnect the lead wire from the top of the plug. Clean the area around the plug to prevent dirt from dropping into the engine.

3. Using care not to crack or break ceramic insulation material, remove the spark plug.

4. Check condition of electrodes. If the plug has a light coating of gray or tan, this usually indicates normal conditions.

A white, blistered coating may indicate overheating. A black coating usually comes from operating with an overrich fuel mixture.

5. Replace both spark plugs even if only one is badly fouled or in poor condition.

6. If the old plug is in good condition, reset the gap to .040 inches.

7. Using a torque wrench, tighten each plug to 18 – 22 ft-lbs.

8. Reconnect lead wires from coil. First connect the red (+) battery cable. Then connect the black (-) battery cable. Replace side panels, and close hood.

Fuel system

The tractor has a fuel screen at the fuel shutoff valve and an in-line fuel filter. They should be cleaned or changed after every 100 hours of use.

When adding fuel use fresh, unleaded gasoline with an octane rating of at least 87.

WARNING: Handle fuel carefully. Always stop the engine and turn off all electrical systems, including the headlights, when servicing the fuel system. Do not permit smoking in the area. Keep flames and sparks away from the area.

Adding fuel

1. Check gauge in fuel tank cap behind seat for fuel remaining in tank.

2. Clean area around the fuel tank cap. Add fuel as required. Avoid spilling fuel.

IMPORTANT NOTICE: DO NOT ADD OIL TO THE GASOLINE. DO NOT USE GASOLINE/ALCOHOL BLENDS.

3. Wipe off any spilled fuel with rags. Allow spilled fuel and vapors to dissipate before turning on any part of the electrical system including the ignition. Place wipe-up rags in a well-ventilated area for drying.

4. Make sure the fuel tank cap breather hole (refer to page 6) is open. If it is plugged, a vacuum is created and fuel cannot be drawn from the tank by the engine's fuel pump.

5. With fuel line shutoff valve open, (refer to page 10) check for leaks in the fuel tank, fuel lines and connections, fuel pump, and carburetor. Correct all leaks before starting engine.

6. When the tractor is left unattended, the rear fuel shutoff valve should be closed (turn clockwise).

Fuel screen and filter

To clean/replace the screen in the tank:

1. Close the fuel line shutoff valve at the rear of tractor (under fuel tank).

2. Disconnect fuel line at the fuel shutoff valve. Collect fuel from line in a suitable container

3. Reopen the shutoff valve. Drain the fuel from the tank into a suitable container.

4. Pull entire shutoff valve out of tank with a twisting motion.

5. Clean the screen or replace shutoff valve. Reinstall shutoff valve. Reconnect fuel line. Fill fuel tank. Open fuel shutoff. Check for leaks.

To replace the filter in the fuel line:

1. Close fuel line shutoff valve.

2. Slide the hose clamps off. Remove the filter. Refer to Figure 19. Collect fuel in a suitable container.

3. Add new filter with arrow pointing toward carburetor. Reinstall hose and clamps.

4. Open fuel filter shutoff. Check for leaks.

Figure 19. In-line fuel filter.

Hydraulic system

The hydraulic system consists of the power steering, cylinders, valves, hoses, and fittings. The cylinders and valves are not repairable. Contact your Dealer for replacement.

WARNING: Keep body and hands away from pin hole leaks that eject hydraulic fluid under high pressure. When searching for leaks use paper or cardboard, not hands.

WARNING: Make sure all hydraulic fluid connections are tight. Make sure all hydraulic hoses and lines are in good condition before applying pressure to the hydraulic system.

Hydraulic hoses and fittings may be replaced by the user. After replacing components check fluid level of hydraulic tank. Refill if necessary. Run the tractor and check for leaks. Wipe any spilled oil off the tractor.

WARNING: Hoses under pressure! Escaping fluids can penetrate skin and require immediate surgical treatment. Release all hydraulic system pressure before servicing hydraulic system.

CAUTION: Make certain implements are fully lowered to the ground before servicing any hydraulic component.

CAUTION: Do not loosen hose fittings while the engine is running. Do not overtighten fittings. Damage will result from too much force. Tighten only enough to prevent leakage. Teflon thread sealant can be used on pipe threads if necessary.

Hoses and fittings

The hoses and fittings should be checked at least every 25 hours of tractor operation. The hoses should not be loose or cracked and the fittings should be tight. If they are not in good condition obtain replacements from your Dealer.

Oil

The oil in the hydraulic tank, located under the front left corner of the seat, should be at 3" below the top. DO NOT OVERFILL. Check the oil level regularly. To check oil, unscrew the cap and look in tank. Fill with Dexron II hydraulic oil.

Hydraulic system (continued)

Pump

The hydraulic pump is not repairable. See your Dealer for replacement.

A heavy duty compression spring on the belt tension adjusting rod minimizes belt wear during engine start-up surges and maintains tension on the belt as it stretches through use.

Tension on this spring is set at the factory and should not require further adjustment under normal use.

To replace the belt refer to Figure 20 and do the following steps:

1. Relieve the tension on the tension adjusting rod spring (Item 5) by turning the nut (Item 6) on the lower end of the rod (Item 7).

2. Loosen the two setscrews (Item 8) holding the driveshaft (Item 1) to the flywheel adapter shaft (Item 4) and slide the drive shaft back on the clutch input shaft. Retain key (Item 9).

3. Loop the belt (Item 3) over the pulley (Item 10) on the flywheel adapter shaft and the groove sheave (Item 2).

4. Replace and tighten the setscrews in the drive shaft. Turn the nuts on the lower end of the rod 'in' until the spring is almost fully compressed, approximately .060" between coils.

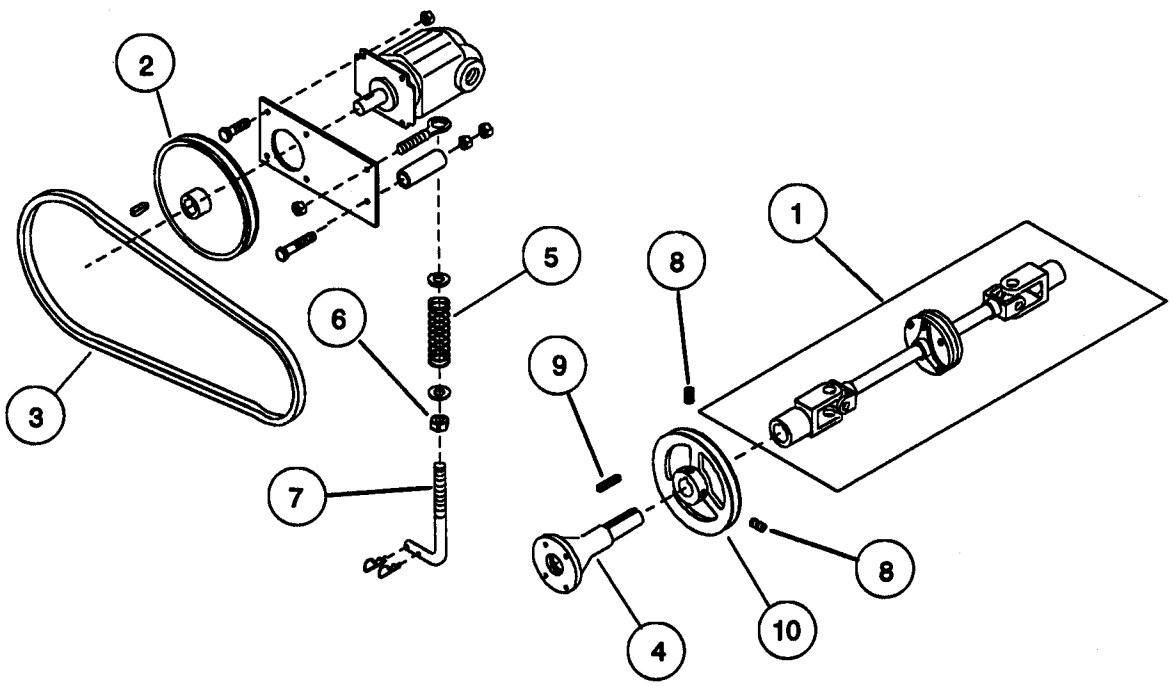


Figure 20. Hydraulic pump belt

Lubrication

To maintain optimum performance, certain areas of the tractor should be cleaned and lubricated at various intervals. Follow the recommended steps to prevent premature or excessive wear of the parts.

Differential

The differential should be lubricated every 100 hours of tractor use. It is located at the rear of the tractor, under the fuel tank. (Refer to Figure 21). To lubricate the differential:

1. Clean the exposed area of the rubber plug (Refer to Figure 21) and clean the area around the plug.

2. Pull the rubber plug. Fill the differential to the bottom of the hole with 80/90 gear lube. Replace plug.

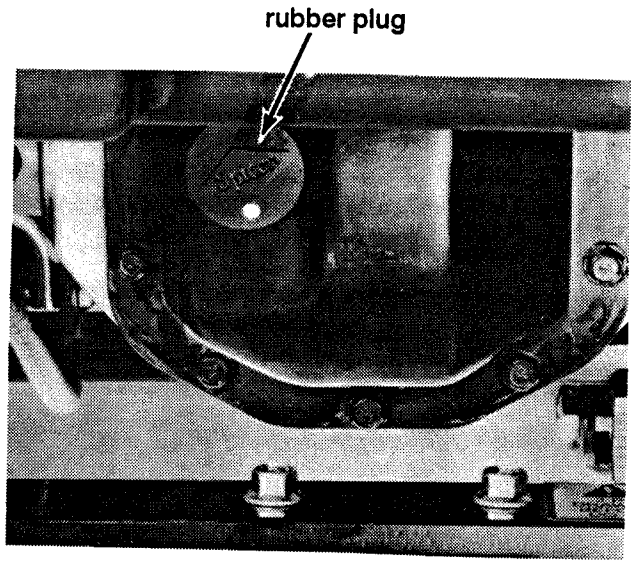


Figure 21. Differential.

Final drive

The final drive should be lubricated every 100 hours of tractor use. The final drive consists of two gear assemblies. They are to the inside of the rear wheels, connected by the differential (Refer to Figure 22). To lubricate the final drive do the following to each gear assembly:

1. Clean the exposed areas of the fill plug and the check plug. Clean the areas around the plugs.

2. Remove the fill and check plugs. Add 80/90 gear lube in fill hole until lube runs out the check hole. Replace plugs, making sure that the vented plug is inserted in the fill hole.

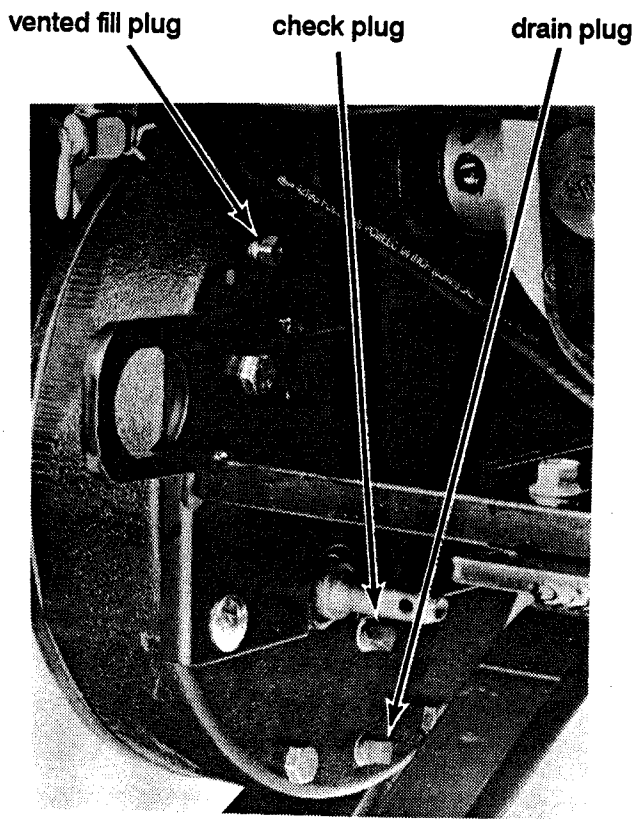


Figure 22. Final drive.

Lubrication (continued)

Gear transmission

The transmission oil level should be checked before every use of the tractor. To check/add lube:

1. Raise hood. Unscrew dipstick. Unfold dipstick. Wipe clean.

2. Insert unfolded (straight) dipstick fully into casing. Remove dipstick. Read level according to notched markings. Lube should be at the full (F) mark. If necessary, add 'special blend' lube (see your Dealer) to bring lube level to full.

IMPORTANT NOTICE: Serious damage to the transmission can occur if the dipstick is not folded during operation.

3. Fold dipstick. Reinsert and screw in dipstick.

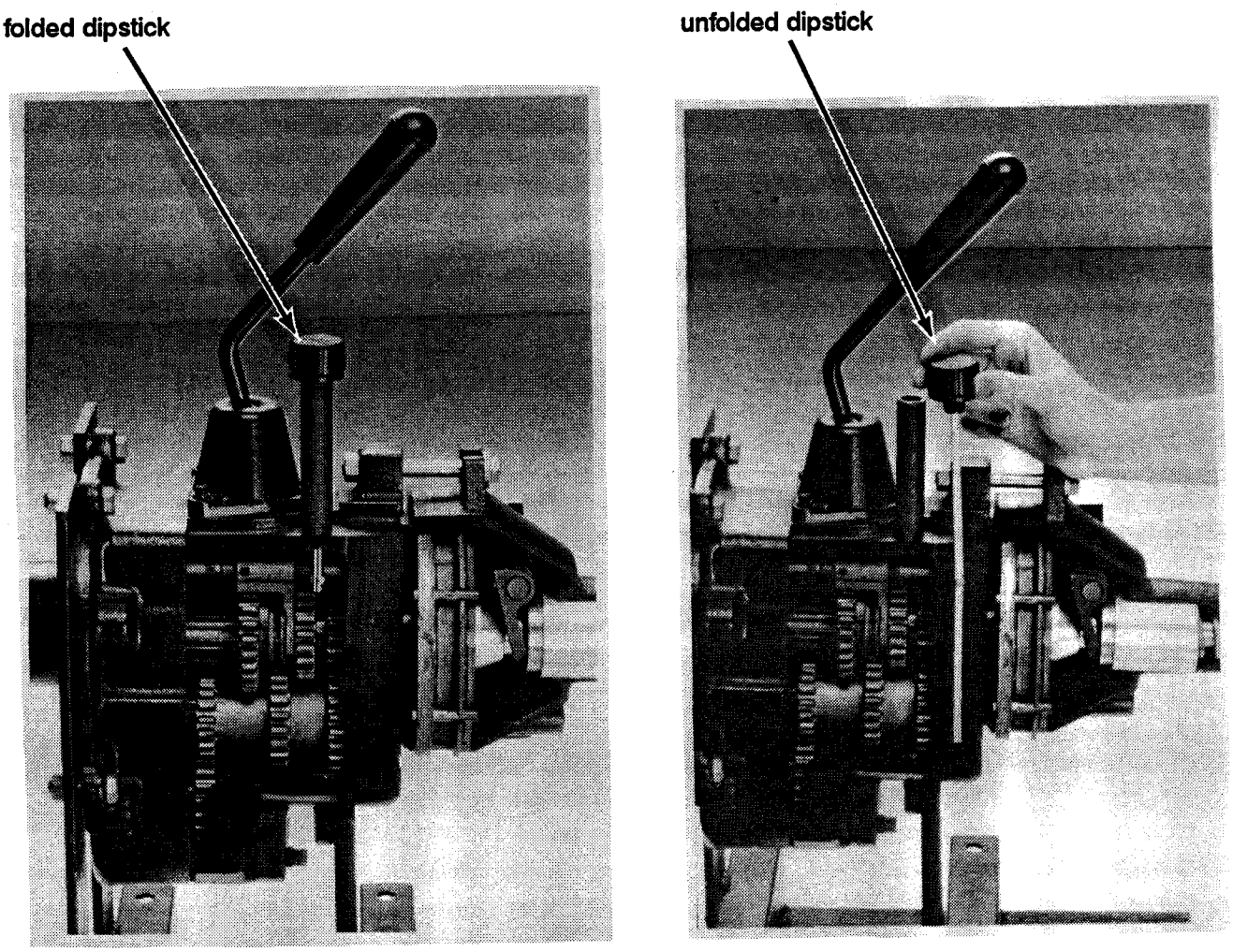


Figure 23. Transmission.

Lubrication (continued)

Steering spindle grease fittings

The front steering spindle grease fittings, one on each spindle, should be greased every 25 hours of tractor use. To grease the fittings refer to Figure 24 and do the following steps:

1. Jack up the tractor and support it with blocks or jack stands.

2. Using lithium based grease, grease the fittings (Item 5) until the grease oozes out. Then turn the steering wheel a few times to distribute the grease.

Support bar grease fitting

The front support bar grease fitting should be greased every 25 hours of tractor use. To grease the fitting refer to Figure 24 and do the following steps:

1. Jack up the tractor and support it with blocks or jack stands.

2. Using lithium based grease, grease into the fitting (Item 4) until the grease oozes out. Then turn the steering wheel a few times to distribute the grease.

Wheel bearings

The front wheel bearings should be packed every 100 hours of tractor use. There are two bearings in each front wheel hub. To pack the bearings refer to Figure 24 and do the following to each front wheel:

1. Jack up the tractor and support it with blocks or jack stands.

2. Remove the tire and wheel assembly by removing the five nuts (Item 14) from the studs (Item 13).

3. Remove the dust cap (Item 12), cotter pin (Item 17), nut (Item 15), and washer (Item 16). Pull the hub assembly off the spindle.

4. Remove the outer bearing (Item 10). Place the hub upside down on a workbench. Remove the inner bearing and seal (Items 10, 11) .

5. Clean the bearings and hub with a non-flammable solvent. Inspect the bearings and hub for cracks, stress or pitting. Replace the bearing and race if either is damaged.

6. Pack the inner and outer bearings with an approved wheel bearing grease. Place a small amount of grease inside the hub, in the dust cap, and on the spindle.

7. Place the inner bearing in the hub. Install the seal so it is flush with the hub flange. Place the hub on the spindle. Install the outer bearing, washer, and nut. Mount the tire and wheel assembly.

8. While spinning the wheel, snug the nut down to seat the bearing, being careful not to exert over 12 ft.-lbs. of force. Back the nut off 1/4 to no more than 1/2 turn. Finger-tighten the nut until the cotter pin hole in the spindle lines up with the hole in the nut.

9. Install the cotter pin. Endplay should measure between .001" - .008". If not, readjust by repeating step 8.

10. Lock the cotter pin in place. Install the dust cap over the nut.

Lubrication (continued)

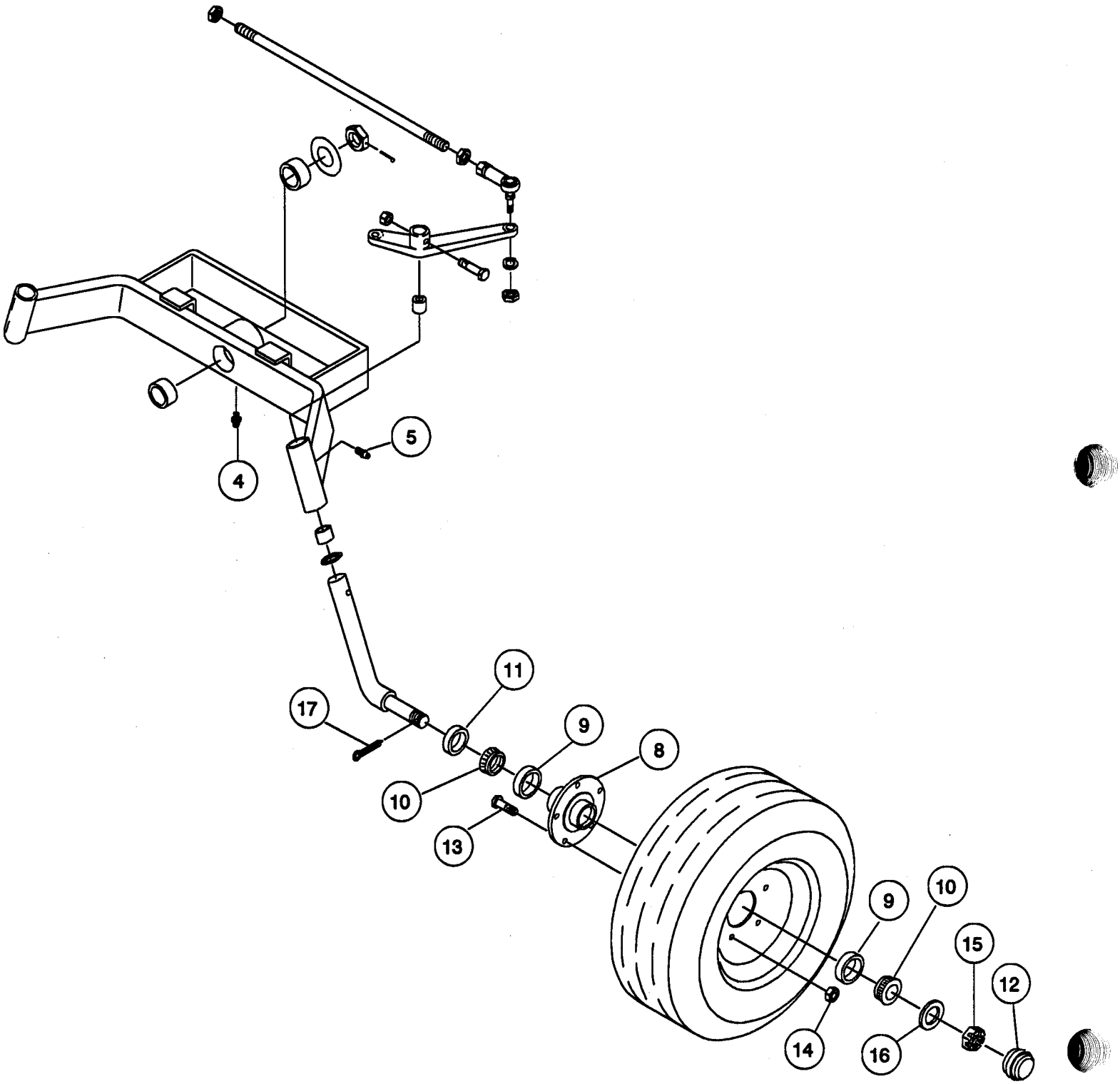


Figure 24. Front end grease fittings and wheel bearings.

Tires and wheels

Tire maintenance

Proper tire maintenance is one of the most important factors in the satisfactory performance of your tractor. Observe the following tire care rules for best results:

1. Immediately wipe spilled oil and gasoline from tires. Do not park in spilled oil. Petroleum products attack rubber. Clean chemicals from tires as soon as possible.

2. Avoid sharp objects which may cut or puncture tires.

3. Avoid "bruising" tires by striking hard objects with heavily loaded tractor or at high speeds.

4. Do not "spin" tires during start-up.

5. Do not brake to skidding stops.

Tire pressure

A correctly inflated tire results in good traction with the least wear.

Maintain proper inflation.

Underinflation may cause rim slipping, excessive wear, and a low or uneven cut when mowing.

An underinflated tire may appear to be properly inflated but will buckle when the tractor pulls a load. Sidewalls will eventually break.

Overinflation may cause the rear wheels to slip under load and cause faster tire wear as a smaller part of the tire is in contact with the ground.

A correctly inflated tire results in good traction with the least wear. The recommended pressure may vary depending upon the load. Refer to "Tractor Specifications" 62 on page in this manual for tire combination air requirements and load capacity.

Tread width

Tread width refers to the spread or spacing between the center lines of the two rear wheels or the two front wheels of the tractor.

When moving on slopes or rough uneven ground, it is important to have as wide a spread as possible between the wheels. This makes the tractor more stable and reduces the possibility of a "rollover."

REAR WHEELS - to increase the tread width from the standard position mount the right rear wheel on the left side and the left rear wheel on the right side. Switching wheels from one side to the other will maintain the proper direction of tire rotation. (Note: Does not apply to 13.5-15 wheels.)

Changing wheels

To remove a wheel and tire:

1. Remove any wheel weights. Block the other wheels to prevent the tractor from rolling.

2. Raise the tractor with a jack under the frame. Support the tractor with blocks or jack stands to prevent it from falling.

3. Remove wheel bolts and carefully slide the wheel and tire from the tractor.

Tires and wheels (continued)

Wheel weights

Added weight to the front and/or rear wheels can make tractor operation easier and safer under certain conditions.

REAR WHEELS – added weight on the rear wheels will be helpful:

- When pulling – the weights will give added traction and reduce slippage.
- In maintaining traction with a heavy load at the front of the tractor (such as with a snowblower or bulldozer blade).

FRONT WHEELS – front counterweights mounted on the front wheels or on the front weight rack will be helpful:

- In balancing the lifting action caused by rear-mounted attachments.
- To prevent loss of steering when driving up a slope.
- When pulling heavy loads on rough ground.

Wheel weights should be used in pairs to give an equal amount of added weight on each side of the tractor.

Operating with weight on only one side will cause uneven tire wear. This can cause improper operation of some attachments such as a rotary mower.

NOTE: Do not exceed three weights per wheel, six suitcase counterweights or any combination of loads that will exceed the rated tire capacity.

REAR WEIGHT RACK OR WEIGHT BOX OPTION – a weight rack or weight box may be mounted on the 3-point hitch.

DUAL REAR WHEELS – spacer kits are available that allow the addition of an extra wheel to the outside of each rear wheel. Dual rear wheels will increase stability and add traction. (NOTE: Does not apply to 13.5 - 15 wheels.)

When the tractor is not to be used for an extended period of time, it should be prepared for storage. This helps to extend its life, keep it in prime condition, and make it ready for future use.

The tractor should be stored in a dry and protected place. Unnecessary exposure to sun, wind, rain, or snow may have harmful effects on its appearance and usefulness.

The tractor should be started up and driven at least every six months to maintain critical lubrication coverage on moving parts.

Engine

To prepare the engine for storage:

1. Change the oil. Run the engine long enough to thoroughly warm the old oil in the crankcase before draining. (Refer to "Engine" on page 23).

2. Run the engine for about five minutes after adding new oil supply.

3. Close the fuel shutoff valve and run engine until fuel in carburetor is used up.

WARNING: Handle fuel carefully. Always stop the engine and turn off all electrical systems, including the headlights, when servicing the fuel system. Do not permit smoking in the area. Keep flames and sparks away from the area.

4. Using a pair of notched pliers on the hose clamp, disconnect the fuel line from the fuel shutoff valve. Drain fuel line in a suitable container.

5. Reopen the fuel shutoff valve and drain fuel tank in a suitable container. When empty, remove fuel filter from valve and wash out as required. Reinstall valve and replace in tank.

IMPORTANT NOTICE: It is important to perform these fuel line functions because gum will eventually form in the tank, line, and carburetor if the system is not used.

Gum in the carburetor jets and passages makes engine starting difficult. Gum can be dissolved with acetone or a 50-50 mixture of alcohol and benzol.

6. Remove each spark plug and pour one tablespoon of good quality lubricating oil into each cylinder. Crank the engine two or three times to distribute the oil over the cylinder walls.

7. Recheck the gap and reinstall each plug.

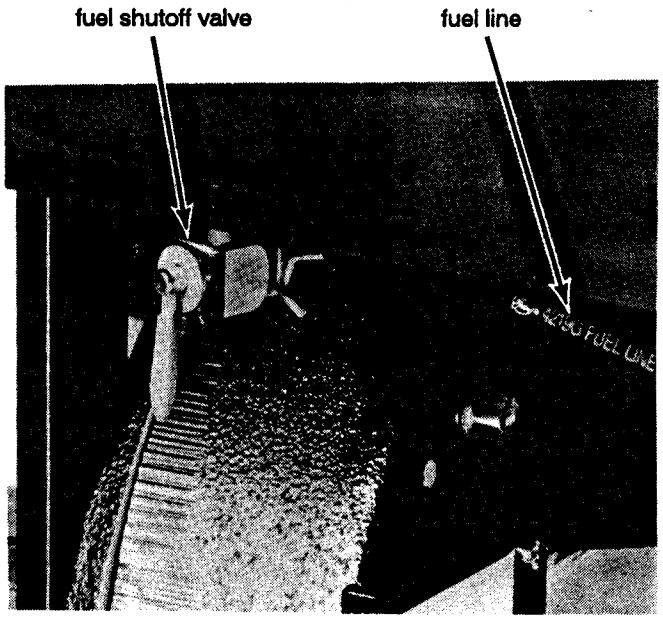


Figure 25. Fuel shut off valve and fuel line.

Battery

WARNING: Before checking or servicing any part of the electrical system, first disconnect the black (–) battery cable. Then disconnect the red (+) cable. Failure to do so could cause severe burns.

1. To remove and store the battery refer to "Removing the battery" on page 20. First disconnect the black (-) battery cable. Then disconnect the red (+) cable.

Refer to "Cleaning the battery" on page 20 to clean any corrosion that may have accumulated around the posts. Store the battery on a wooden rack or bench in a cool, dry place.

2. The battery should be checked every 30 to 60 days while in storage and should be recharged if necessary. When a battery becomes discharged, the electrolyte contains more water than acid. In this discharged condition, the battery could freeze and possibly crack during cold winter weather.

3. When reinstalling the battery, refer to page 20 "Installing the battery" in this manual. First connect the red (+) cable. Then connect the black (-) cable.

Keep connections tight at all times to prevent arcing, pitting of connections, and eventual battery failure.

Lubrication

Completely lubricate the tractor. Refer to "Lubrication" on page 29.

Body

1. Wash, clean, and wax the hood and body sections.

2. Paint rust-preventative oil over any area where raw metal is exposed (except pulley grooves). Do not use crankcase oil as it is not a rust preventative.

Tires

1. Store the tractor so that the tires are protected from direct sunlight.

2. Place jack stands or blocks under the tractor so that the load is off the tires.

If the tractor cannot be placed on blocks, check the tires at regular intervals and reinflate as necessary to keep them at recommended pressure.

The tractor is equipped with front hitch blocks, a lift weldment, and a towbar for attaching implements.

In addition to these standard features, optional features can be added to enhance the tractor's capabilities. These optional features include the addition of a rear PTO, an auxiliary hydraulic lift, and a 3–point hitch. See your Dealer for a list of standard and optional attachments.

Standard Features

Front hitch blocks

Two sets of metal bars are permanently affixed to the bottom front of the tractor frame (Refer to Figure 26). Round horizontal slots are on the leading edge of each bar. Holes for mounting pins are located above and behind the slots on the frontmost blocks. All front–mounted attachments have mounting rods or studs that fit into the slots. They are secured with blank bolt pins and quick change keys on the front blocks.

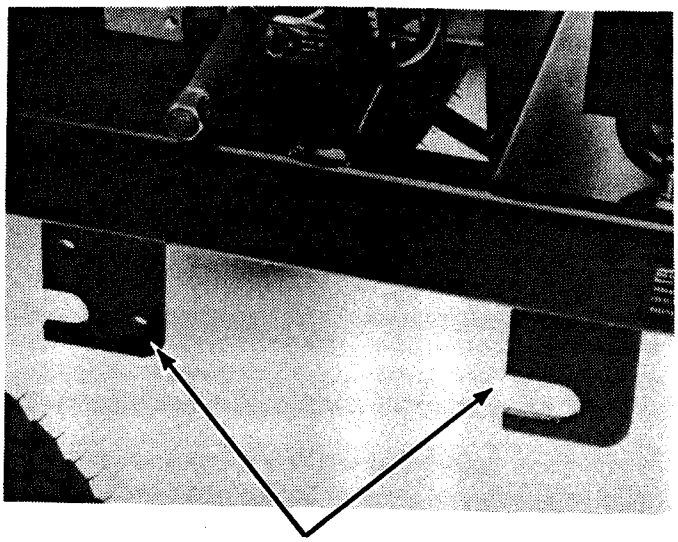


Figure 26. Front hitch blocks.

Middle lift weldment

A lift weldment is mounted on the underside of the tractor between the frame side members. This weldment rotates forward or backward as the implement lift system is activated. The arm(s) that is used depends on the attachment.

Rear towbar

The rear–mounted towbar (Refer to Figure 27) is used when pulling trailers, spreaders, yard carts, or any other implement (unless the 3–point hitch is installed).

CAUTION: Never pull from any other part of the tractor frame.

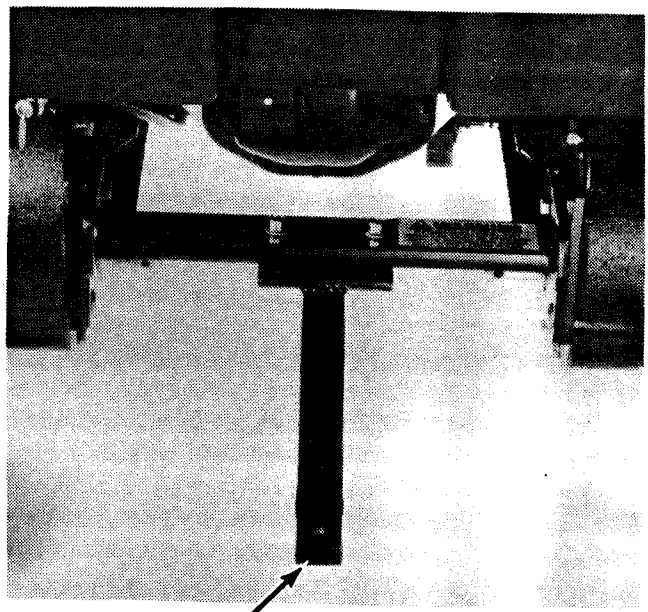


Figure 27. Towbar.

Optional features

3–Point hitch

The 3-point hitch is for pulling category "O" implements and attachments. When installed, it should be used for all pulling.

Auxiliary hydraulic lift

The auxiliary hydraulic lift allows rear-mounted implements to be raised/lowered independently of the front and center–mounted implements.

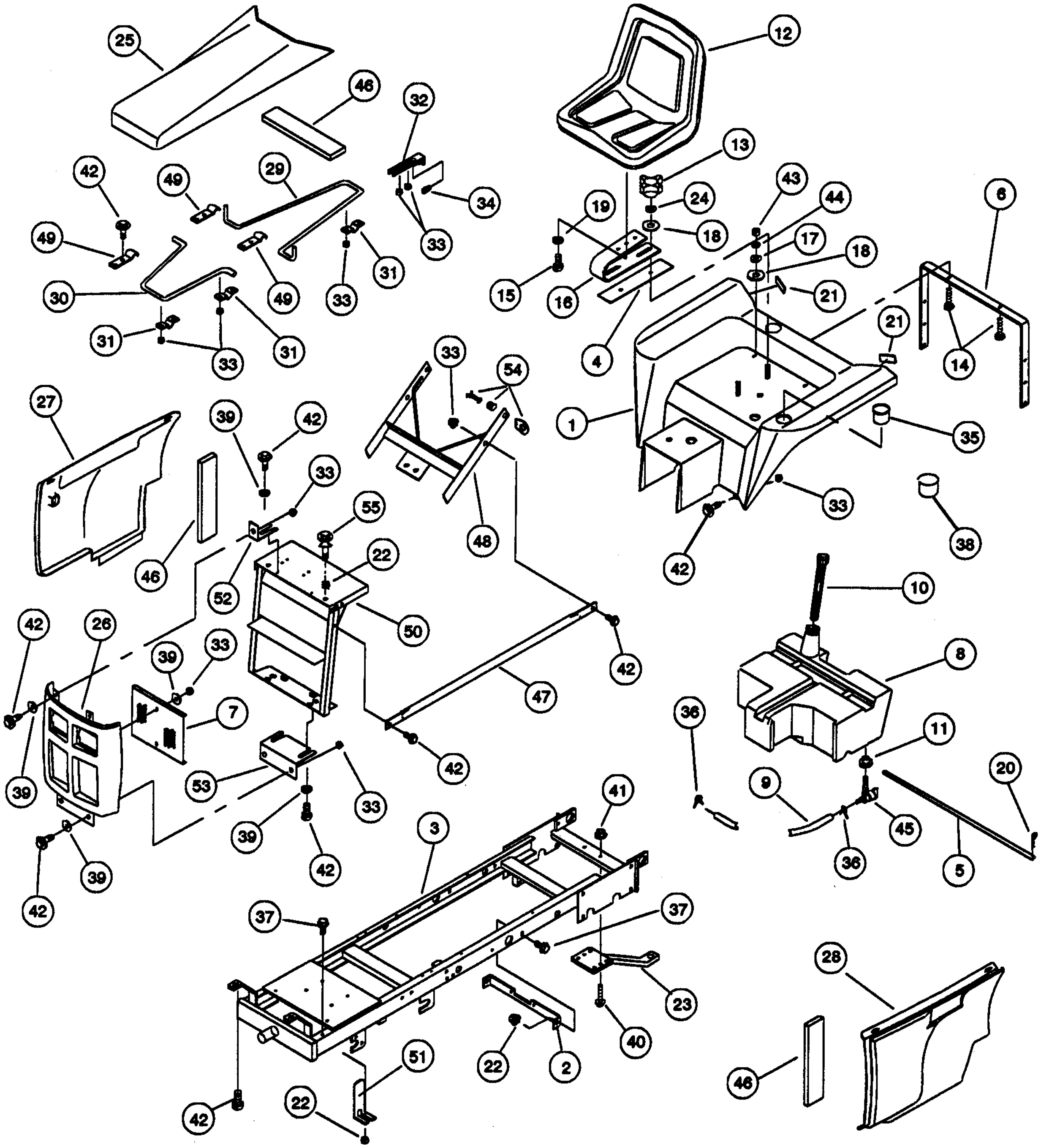
Rear PTO

The rear PTO is used to power rear-mounted rotary attachments, such as flail and sickle mowers and rototillers.

Body

ITEM NO.	PART NO.	QTY	PART NAME	DESCRIPTION
1	104057	1	Body	Fender – orange
(1)	104125	1	Body	Fender – (red)
2	01–0518–00	1	Bracket	Transmission support
3	103751	1	Frame	Weldment
4	01–6101–00	1	Plate	Seat spring support
5	01–6540–00	1	Rod	Fuel tank support
6	01–6890–00	1	Support	Fender body
7	103991	1	Screen	Grille
8	01–7501–00	1	Tank	Gas 8–¼ gallon
9	104275	1	Line	Fuel
10	03–0900–00	1	Cap	Fuel gauge
11	03–2502–00	1	Grommet	Valve, fuel tank
12	03–7107–00	1	Seat	14" Back
13	100921	2	Knob	Seat
14	84–1027–00	2	Bolt	Carr 3/8 NC x 1–½
15	84–1062–00	1	Screw	HHC ½ NC x 1
16	01–7112–00	1	Bracket	Spring seat mount
17	84–3037–00	2	Washer	Flat, 3/8 type N
18	84–3061–00	4	Washer	Flat, ½ type W
19	84–3110–00	1	Washer	Lock ½ regular
20	84–4034–00	2	Key	.072 Quick change
21	03–6702–00	2	Reflector	Rear
22	103124	6	Nut	Flange 3/8 NC serrated
23	01–1304–00	1	Drawbar	Stationary
24	84–3770–00	2	Washer	Lock INT ½
25	103987	1	Hood	Top – orange
(25)	104122	1	Hood	Top – (red)
26	103990	1	Grille	Front – orange
(26)	104121	1	Grille	Front – (red)
27	103988	1	Hood	Panel RH – orange
(27)	104123	1	Hood	Panel RH – (red)
28	103989	1	Hood	Panel LH – orange
(28)	104124	1	Hood	Panel LH – (red)
29	103967	1	Rod	Hood prop rear
30	104281	1	Rod	Hood prop front
31	103978	3	Clip	Hinge
32	104409	1	Bracket	Hood latch
33	200183	18	Nut	Flange ¼ NC serrated
34	104365	1	Plunger	3/8 Dia. ball
35	104134	1	Cupholder ..	Drop–in
36	85–0044–00	2	Clamp	Hose SAE J536b, type E
37	103140	4	Screw	HWH 3/8 NC x 1
38	104493	1	Sleeve	Rubber
39	10287	10	Washer	Flat ¼ type W
40	104187	2	Screw	HWH 7/16 NC x 2
41	102998	2	Nut	Flange 7/16 NC serrated
42	104188	22	Screw	HWH ¼ NC x ¾
43	84–0041–00	2	Nut	HX 3/8 NC
44	84–3020–00	2	Washer	Lock 3/8 regular
45	104197	1	Valve	Fuel 90° tank mount
46	104174	4.5	Foam	2" wide x .50 thick
47	104277	2	Rod	Support
48	104278	1	Bracket	Rear
49	104280	3	Clip	Mounting
50	104282	1	Bracket	Front
51	104377	2	Bracket	Retaining
52	104410	2	Clip	Mounting grille top
53	104411	1	Clip	Mounting grille bottom
54	104221	4	Fastener	Camloc ¼ turn
55	104447	2	Screw	Nylon Thumb 3/8 x 1.00

Body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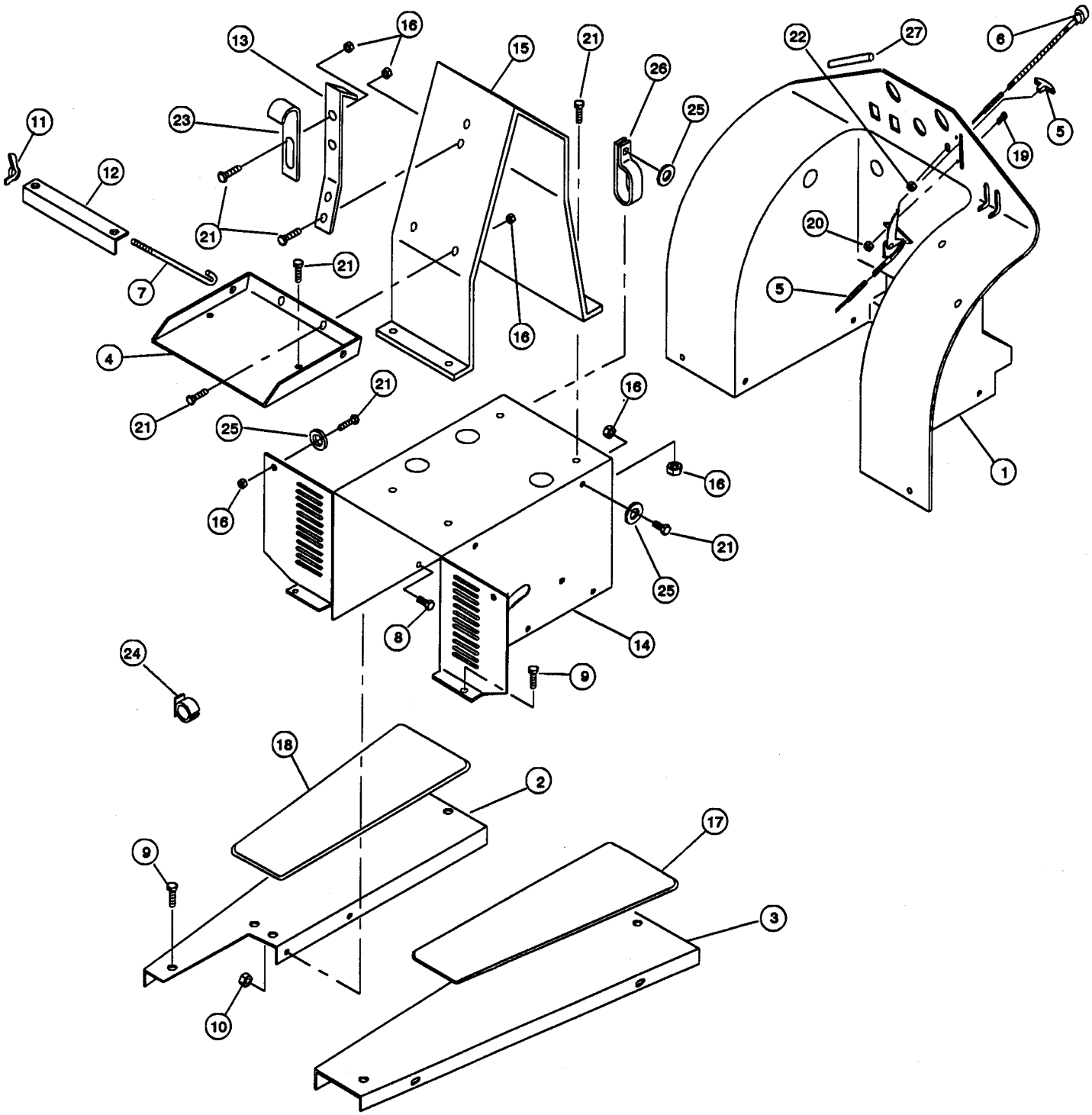
Console

ITEM NO.	PART NO.	QTY	PART NAME	DESCRIPTION
1	104003	1	**Console**	Fiber reinforced plastic
2	01–6308–00	1	**Plate**	Footrest RH
3	01–6309–00	1	**Plate**	Footrest LH
4	103977	1	**Shelf**	Battery
5	103993	1	**Control**	Throttle
6	103992	1	**Control**	Choke
7	84–1014–00	2	**Bolt**	"L" ¼ NC x 8–5/16
8	10435	4	**Screw**	HWH 5/16 NC x 5/8
9	84–2044–00	6	**Screw**	HWH 5/16 NC x ¾ Tap
10	102996	4	**Nut**	Flange 5/16 NC serrated
11	104004	2	**Nut**	Wing ¼–20 NC
12	103966	1	**Bar**	Battery holder
13	103981	1	**Bar**	Console Support
14	104016	1	**Support**	Bottom Console
15	104000	1	**Support**	Steering gear
16	200183	16	**Nut**	Flange ¼ NC serrated
17	01–6303–00	1	**Pad**	Foot–LH anti–slip
18	01–6304–00	1	**Pad**	Foot–RH anti–slip
19	104097	2	**Screw**	THM #8–32 x 5/8
20	104098	2	**Nut**	Lock #8–32 Nylon insert
21	104188	18	**Screw**	HWH ¼ NC x ¾
22	104189	1	**Nut**	Jam HX 3/8 NF
23	104002	1	**Latch**	Hood
24	02–4717–00	1	**Clip**	Hold down
25	10287	7	**Washer**	Flat ¼ type W
26	102190	1	**Clamp**	½ Double tube
27	104566	2	**Molding**	Trim lok 4" lg.

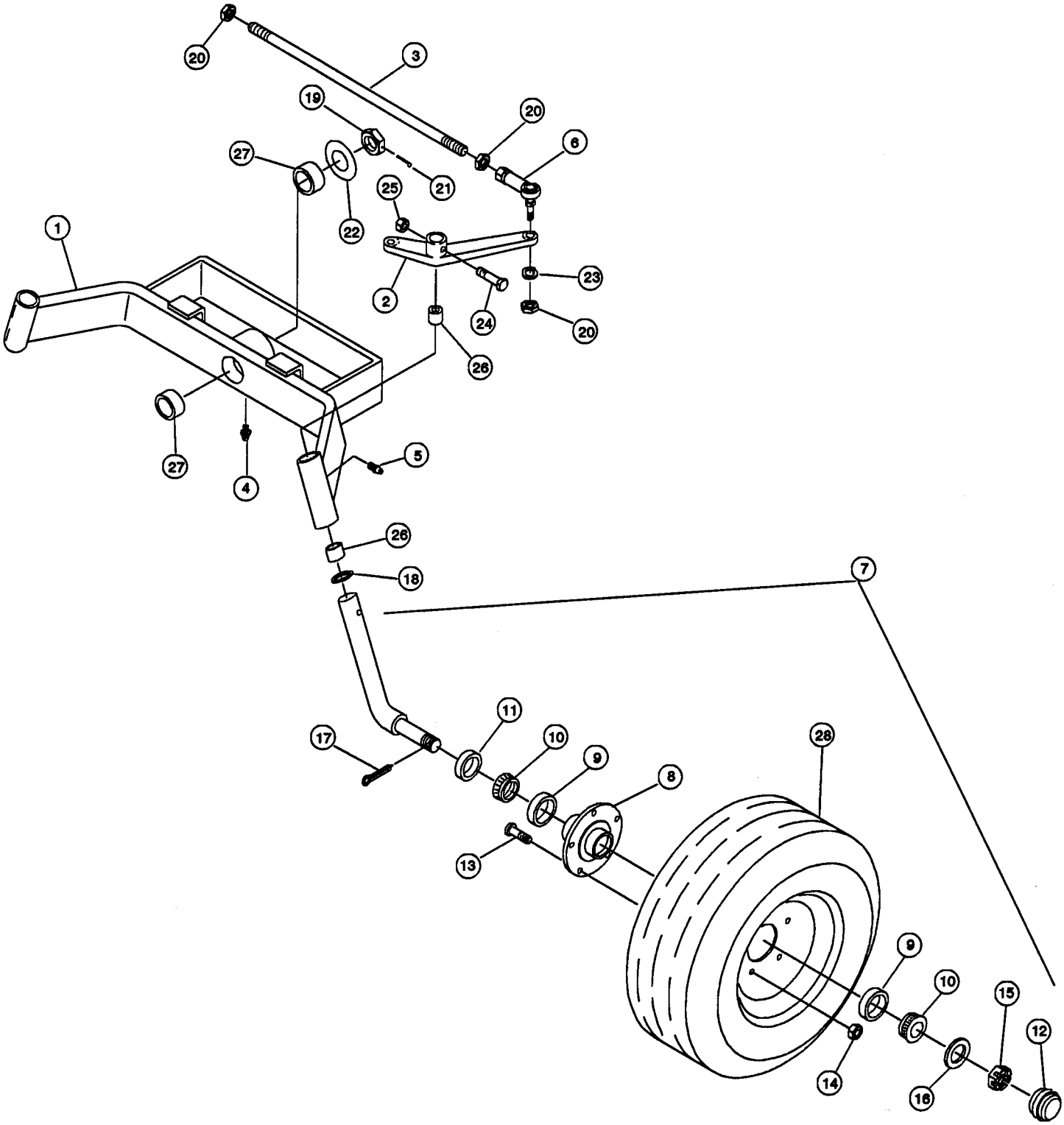
Console



Front end assembly and front wheels

ITEM NO.	PART NO.	QTY	PART NAME	DESCRIPTION
1	01–0212–00	1	**Bar**	Front axle support
2	01–0220–00	1	**Spindle**	Steering arm, RH
(2)	01–0221–00	1	**Spindle**	Steering arm, LH
3	01–0910–00	1	**Rod**	Tie, coupling 28" lg.
4	03–2122–00	1	**Fitting**	Grease ¼"–28 90°
5	03–2102–00	2	**Fitting**	Grease ¼"–28 short
6	03–4107–00	2	**Knuckle**	Rod end ½" NF threads
7	103709	2	**Spindle**	Front ASM (includes items 8–17)
8	103824	2	**Hub**	Assembly (includes items 9 & 13)
9	103828	4	**Cup**	Bearing, 1.00 bore
10	103829	4	**Cone**	Bearing 1.00 cup
11	103827	2	**Seal**	1–¼ ID x ¼ wide
12	103830	2	**Cap**	Hub, 2" dia.
13	103825	10	**Stud**	Wheel, ½–20 x 1–7/8
14	103826	10	**Nut**	Wheel, ½–20
15	84–0073–00	2	**Nut**	HX ¾ NF slotted RH
16	84–3070–00	2	**Washer**	Flat ¾ type N
17	101867	2	**Pin**	Cotter 5/32 dia. x 1–¾
18	80–0024–00	2	**Bearing**	Thrust
19	84–0080–00	1	**Nut**	HX 1–1/8 NF slotted
20	84–0131–00	4	**Nut**	HX ½ NF
21	84–4020–00	1	**Key**	Cotter 5/32 x 1–½
22	84–3077–00	1	**Washer**	Flat 1–1/8 type N
23	84–3110–00	2	**Washer**	Lock ½ regular
24	102522	2	**Screw**	HHC 7/16 NC x 2–¼
25	102127	2	**Nut**	Lock (center) 7/16 NC
26	80–0013–00	4	**Bushing**	1–1/8 ID x 1–3/8 OD x 1
27	80–0019–00	2	**Bushing**	Sleeve, 1–½ ID x 1 lg
28	103875	2	**Tire & Wheel**	Three rib front AG.

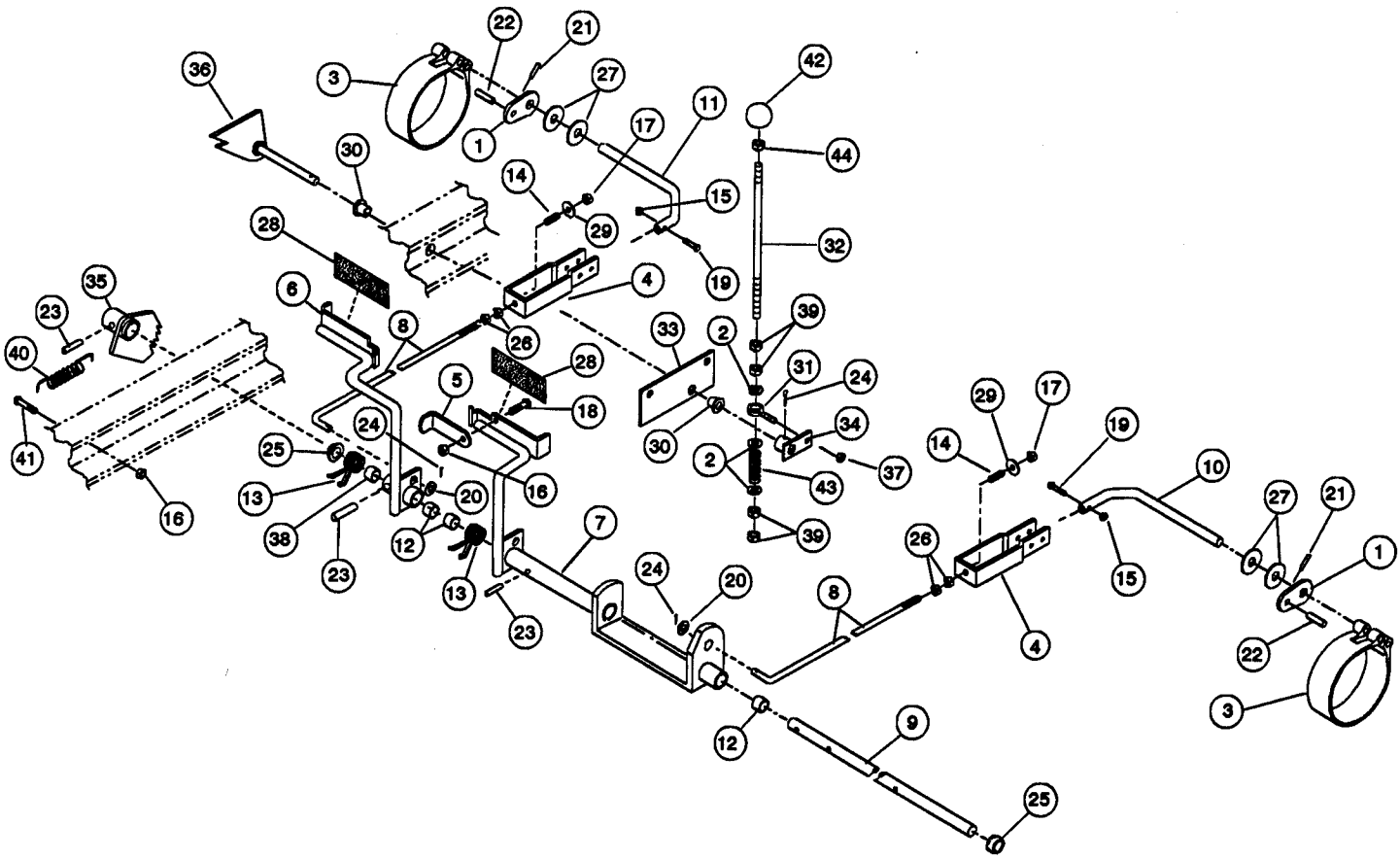
Front end assembly and front wheels



Brake system

ITEM NO.	PART NO.	QTY	PART NAME	DESCRIPTION
1	01–0104–00	2	**Arm**	Brake, 2.3 lg.
2	84–3090–00	3	**Washer**	Flat ¼ type N
3	01–0513–00	2	**Band**	Brake, 4" Dia., 2 loop
4	01–2510–00	2	**Clevis**	Brake, 5–5/8 lg.
5	01–4701–00	1	**Latch**	Brake pedal
6	104242	1	**Pedal**	Brake, right side
7	104550	1	**Pedal**	Brake, left side
8	01–6510–00	2	**Rod**	Brake, 26.5" lg.
9	104555	1	**Shaft**	Brake
10	01–8716–00	1	**Shaft**	Brake actuating, left side
11	01–8717–00	1	**Shaft**	Brake actuating, right side
12	80–0017–00	3	**Bushing**	7/8 o.d. x ¾ i.d. x 5/8 lg.
13	83–1031–00	2	**Spring**	Torsion brake .121 wd
14	83–1032–00	2	**Spring**	Compress 1 x .177
15	84–0010–00	2	**Nut**	Lock Hx ¼ NC
16	104496	2	**Nut**	Lock 5/16 NC nylon insert
17	84–0110–00	2	**Nut**	Lock Hx 3/8 NF patch
18	84–2042–00	1	**Screw**	BHCS 5/16 NC x 1–¼
19	84–2355–00	2	**Screw**	HHC ¼ NC x 1–½
20	84–3037–00	2	**Washer**	Flat 3/8 type N
21	84–4009–00	2	**Pin**	Roll, 7/32 Dia. x 1–¼ lg.
22	84–4024–00	2	**Pin**	3/8 Dia. x 1–½ lg.
23	84–4027–00	3	**Pin**	Drive, 5/16 Dia. x 1–3/8 lg.
24	84–4013–00	3	**Pin**	Cotter, 3/32 Dia. x 5/8 stl.
25	80–0015–00	2	**Bushing**	Flanged, ¾ ID x ½ lg.
26	84–0109–00	4	**Nut**	Hx, 3/8 NF
27	84–3062–00	4	**Washer**	Flat, 5/8 type N
28	102748	2	**Pad**	Grit, brake pedal
29	10325	2	**Washer**	Flat, 3/8 type W
30	104244	2	**Bushing**	Flange, .312 ID x 3/8
31	104245	1	**Bolt**	Eye 10–24 x 3/8 eye
32	104246	1	**Rod**	Actuator, parking brake
33	104235	1	**Plate**	Support, parking brake
34	104237	1	**Link**	Parking brake
35	104243	1	**Brake**	Parking
36	104236	1	**Lock**	Parking brake
37	84–0030–00	1	**Nut**	Lock #10–24 nylon insert
38	102615	1	**Bushing**	7/8 x ¾ x 3/8 lg.
39	10289	4	**Nut**	Hx ¼ NC
40	103137	1	**Spring**	Extension .500 x .063
41	10285	1	**Screw**	HHC 5/16 NC x 1
42	104471	1	**Knob**	1.00 dia x 1/4–20 thread
43	100261	1	**Spring**	Compress .482 x .047
44	104077	1	**Nut**	Jam Hx ¼ NC

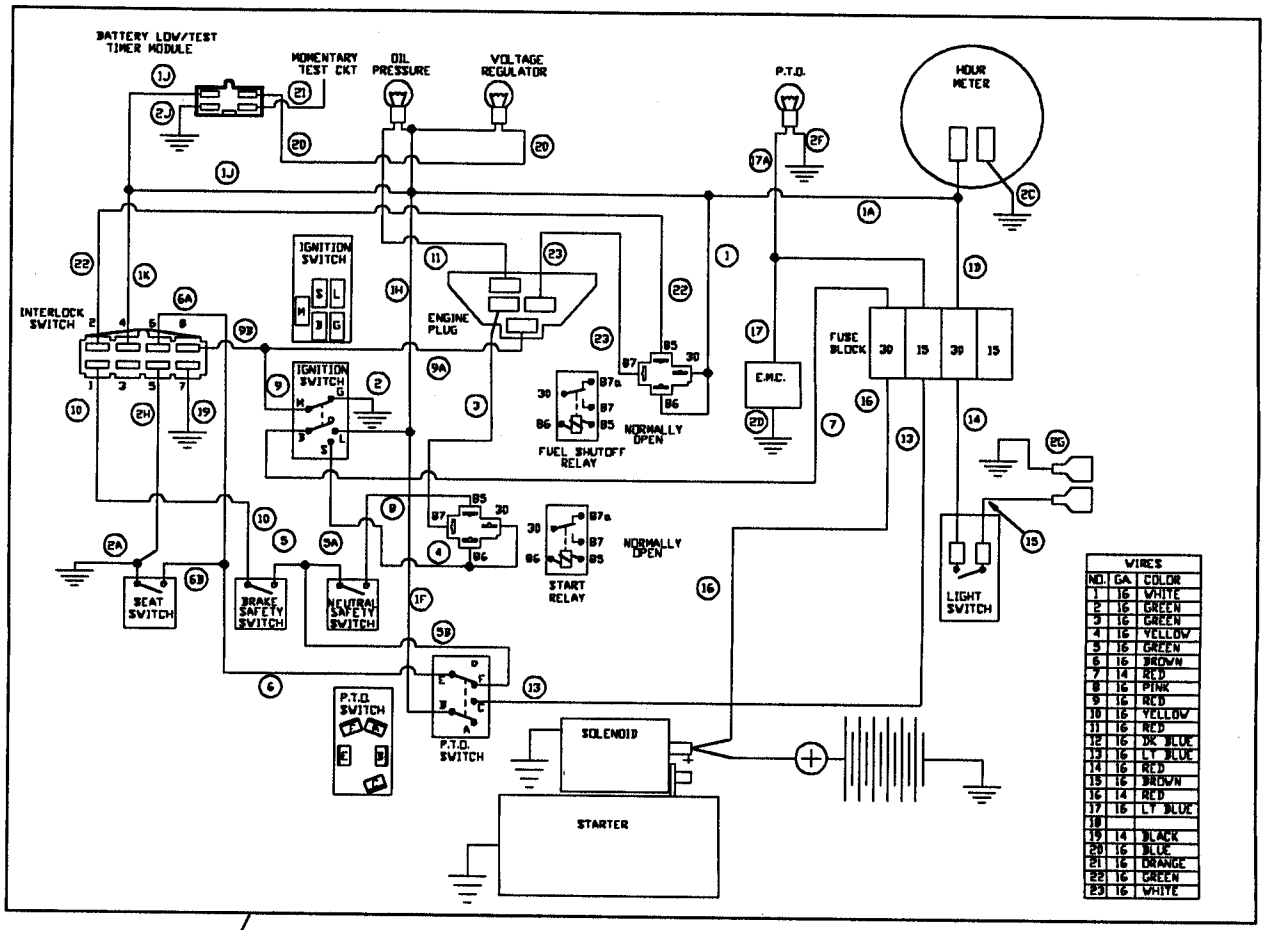
Brake system

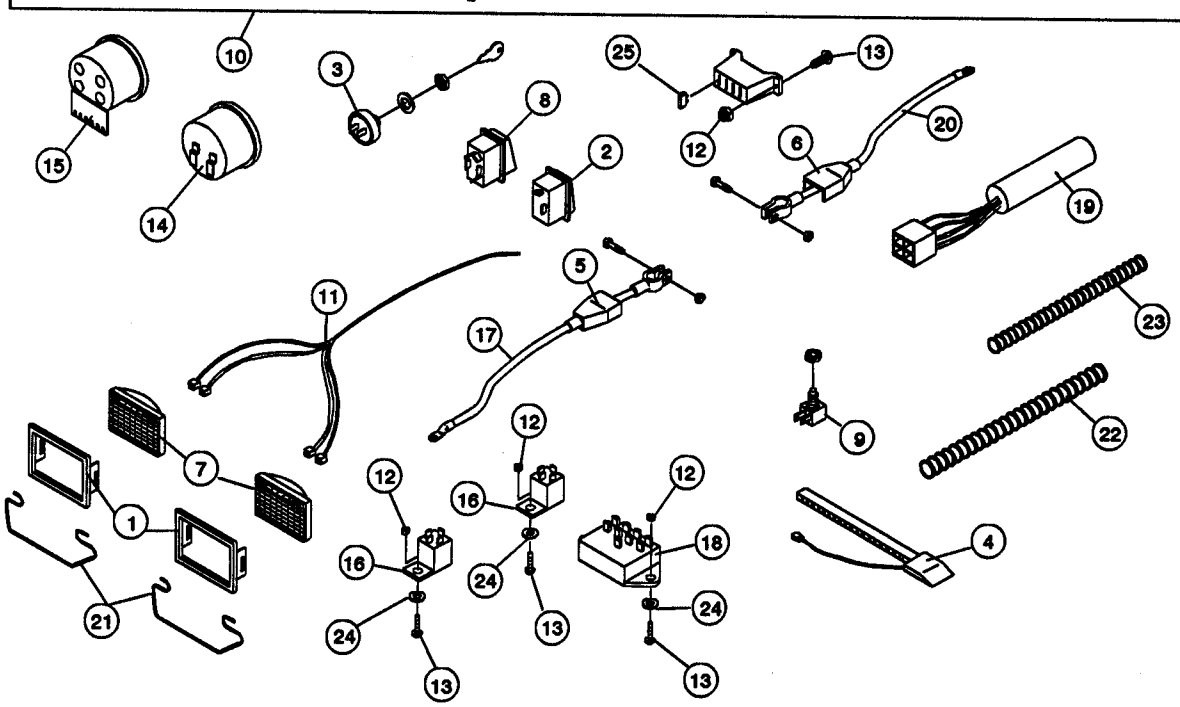


Electrical system

ITEM NO.	PART NO.	QTY	PART NAME	DESCRIPTION
1	103949	2	**Bezel**	Lamp, snap–head
2	103964	1	**Switch**	Rocker–light
3	03–2018–00	1	**Switch**	Ignition, 3–position
4	03–2033–00	1	**Switch**	Seat, N.O. beam type
5	03–2034–00	1	**Cover**.....	Battery term–pos. red
6	03–2035–00	1	**Cover**.....	Battery term–neg. black
7	103948	2	**Lamp**	Head
8	103963	1	**Switch**	Safety toggle
9	03–7115–00	2	**Switch**	Hi/Lo, hydro/brake
10	103650	1	**Harness**	Main wiring
11	103994	1	**Harness**	Headlight
12	84–0030–00	6	**Nut**	Lock #10–24 nylon insert
13	84–2368–00	6	**Screw**	RHM #10–24 x ¾
14	103951	1	**Meter**	Hour
15	103950	1	**Light**	Cluster
16	104107	2	**Relay**	12VDC SPDT
17	104131	1	**Cable**	Pos. battery 30"
18	104254	1	**Interlock**	Solid stat ignition
19	104257	1	**Module**	Battery low / test timer
20	104272	1	**Cable**	Neg. battery 30"
21	104315	2	**Retainer**	Headlight
22	104369	1	**Conduit**	3.5ft., .35 corr. nylon
23	104370	1	**Conduit**	1.5ft., .50 corr. nylon
24	100920	4	**Washer**	Flat, #10
			Fuse	15 amp/30 amp, purchase locally

Electrical system

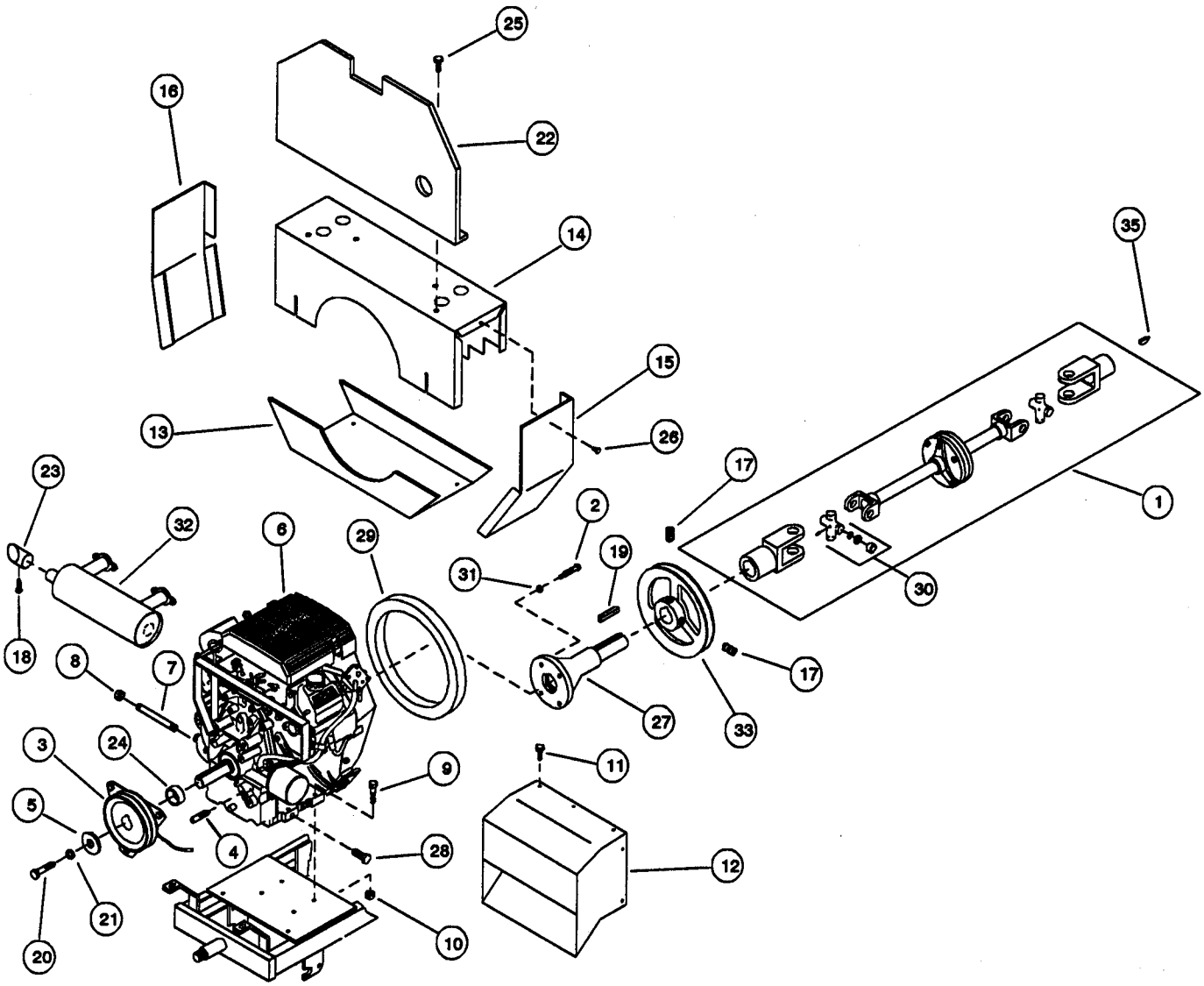




Engine, drive shaft, baffles, and muffler

ITEM NO.	PART NO.	QTY	PART NAME	DESCRIPTION
1	104331	1	**Drive Shaft** ..	Command 18/20 HP
2	103707	4	**Screw**	SHC M8 x 1.25 x 30
3	103646	1	**Clutch**	EMC, bearing mounted
4	103660	1	**Stud**	3/8 NC x 1–7/16"
5	103104	1	**Washer**	1.38 x .47 x .25
6	103704	1	**Engine**	Kohler 18HP Command
7	23–7921–00	1	**Fitting**	3/8 MP nipple x 5" lg.
8	23–7922–00	1	**Fitting**	Cap 3/8 NPT female
9	84–2100–00	4	**Screw**	HHC 3/8 NC x 1–¾
10	103124	4	**Nut**	Flange 3/8 NC serrated
11	103706	7	**Screw**	HWH M6 x 1 x 12
12	103982	1	**Shroud**	Muffler, command
13	104064	1	**Baffle**	Intake, bottom
14	103985	1	**Baffle**	Intake, top
15	103979	1	**Screen**	Intake, LH
16	104063	1	**Screen**	Intake, RH
17	10506	2	**Screw**	Set 3/8 NC x ½
18	104294	1	**Screw**	Self drill No. 8
19	104333	1	**Key**	¼ square x 2
20	84–2170–00	1	**Screw**	HHC 7/16 NF x 1–½
21	84–3030–00	1	**Washer**	Lock 7/16 regular
22	103986	1	**Baffle**	Isolation
23	104286	1	**Pipe**	Exhaust command engine
24	104220	1	**Spacer**	1.50 x 1.13 x .32
25	104188	2	**Screw**	HWH ¼ NC x ¾
26	84–2370–00	8	**Screw**	HWH ¼ NC x ½ tap
27	104332	1	**Adapter**	Driveshaft 18HP
28	104196	2	**Screw**	HWH M8 x 1.25 x 16
29	104174	4.5	**Foam**	2" wide x ½ thick
30	09–3700–00	2	**Assembly** ...	Universal joint
31	84–3020–00	4	**Washer**	Lock 3/8 reg.
32	Kohler	1	**Muffler**	Supplied through Kohler
33	104334	1	**Sheave**	"A" 4.20 P.D. 1.00 bore
34	98–4002–00	3.50	**Oil**	10W–30
35	84–4042–00	1	**Key**	Woodruff 3/16 x ¾

Engine, drive shaft, baffles, and muffler



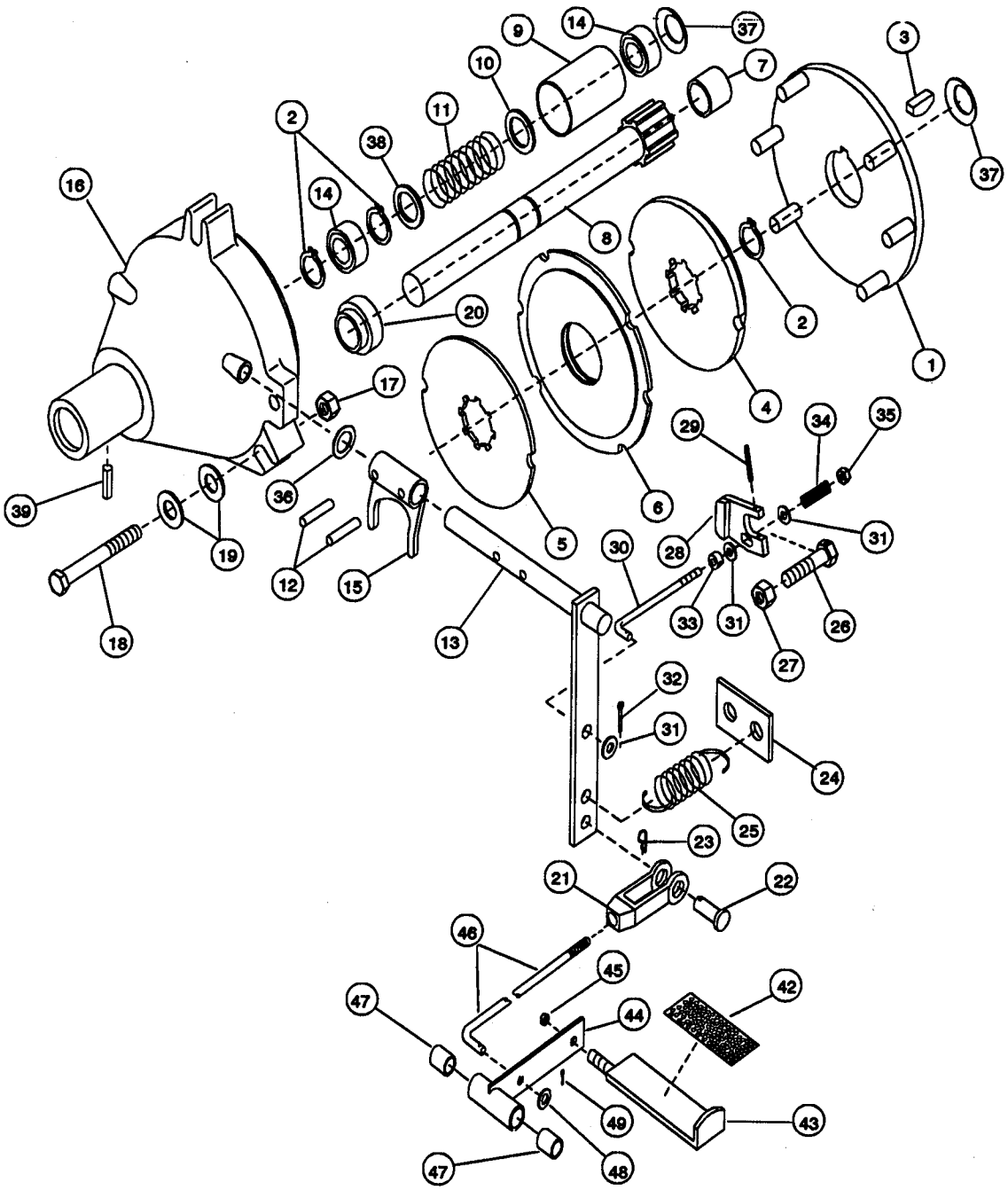
Clutch

ITEM NO.	PART NO.	QTY	PART NAME	DESCRIPTION
–	100268	1	**Assembly** ...	Clutch
1	100267	1	**Plate**	Clutch output, six pin
2	99–0011–00	3	**Ring**	Snap retaining ¾" dia
3	84–4043–00	1	**Key**	Woodruff 3/16 x 5/8
4*		1	**Disc**	Clutch 3/8" thick
5*		1	**Plate**	Pressure 3/16" thick
6	02–6306–00	1	**Plate**	Clutch pressure, six slot
7	80–0031–00	1	**Bushing**	½" ID x ¾" lg.
8	02–7113–00	1	**Shaft**	Clutch input, 8–¾" lg.
9	02–7117–00	1	**Sleeve**	Clutch throwout bearing
10	84–3070–00	1	**Washer**	¾" SAE flat
11	83–0121–00	1	**Spring**	Compression, 3–¼" lg.
12	84–4018–00	2	**Pin**	Drive 5/32" dia x 7/8"
13	100263	1	**Shaft**	Clutch throwout
14	80–0029–00	2	**Bearing**	Ball
15	02–2104–00	1	**Fork**	Throwout
16	02–2908–00	1	**Housing**	Clutch
17	84–0110–00	3	**Nut**	3/8" NF hex lock
18	84–2130–00	3	**Screw**	3/8" NF x 3–¼" HHC
19	84–3037–00	6	**Washer**	3/8" SAE flat
20	02–7116–00	1	**Sleeve**	Clutch pressure 1–5/32 lg.
21	03–0903–00	1	**Clevis**	Clutch 5/16" yoke plastic
22	84–4030–00	1	**Pin**	Clevis 5/16" dia x 31/32"
23	84–4034–00	1	**Key**	Quick change .072 wire
24	01–0309–00	1	**Bracket**	Clutch spring
25	83–0130–00	1	**Spring**	Extension ¾ dia x 2–¼" lg
26	100256	1	**Screw**	Mounting
27	84–0131–00	1	**Nut**	½" NF
28	100260	1	**Brake**	Snubber
29	100257	1	**Pin**	Spring
30	100265	1	**Rod**	Reach
31	84–3090–00	3	**Washer**	¼" flat
32	100270	1	**Pin**	Cotter
33	100262	1	**Collar**	Set
34	100261	1	**Spring**	Compression
35	84–0010–00	1	**Nut**	¼" NC lock
36	84–3058–00	0–2	**Washer**	Shim ¾ x ½ x 1/32 thick
37	83–1037–00	2	**Washer**	Waved spring ¾" ID
38	84–3072–00	1	**Washer**	1–3/8 x ¾ x .094 thick
39	84–4048–00	1	**Pin**	Roll ¼" x ½"
40	02–0018–00	1	**Assembly** ...	Clutch input shaft (Includes Items 2, 7, 8, 9, 10, 11, 14, 20, 53 & 54)
41	100480	1	**Kit**	Snubber brake (Includes Items 1, 27, 28, 29, 30, 31, 32, 33, 34, 35 & 36)
42	101624	1	**Grit pad**	Brake pedal
43	01–6112–00	1	**Pedal**	Clutch pad
44	104551	1	**Pedal**	Clutch with bushings
45	84–0050–00	1	**Nut**	½" NC
46	01–6500–00	1	**Rod**	Clutch
47	104554	2	**Bearing**	Needle ¾" ID x ¾" lg.
48	84–3012–00	1	**Washer**	Flat 5/16"
49	80–4013–00	1	**Pin**	Cotter 3/32" dia x 5/8"

*Sold as a kit only. Order 02–1306–00 to get both plates.

Warning: High spring force (approximately 200lbs.). Special tools and procedures are required for safe disassembly of components. Service as assembly only is recommended.

Clutch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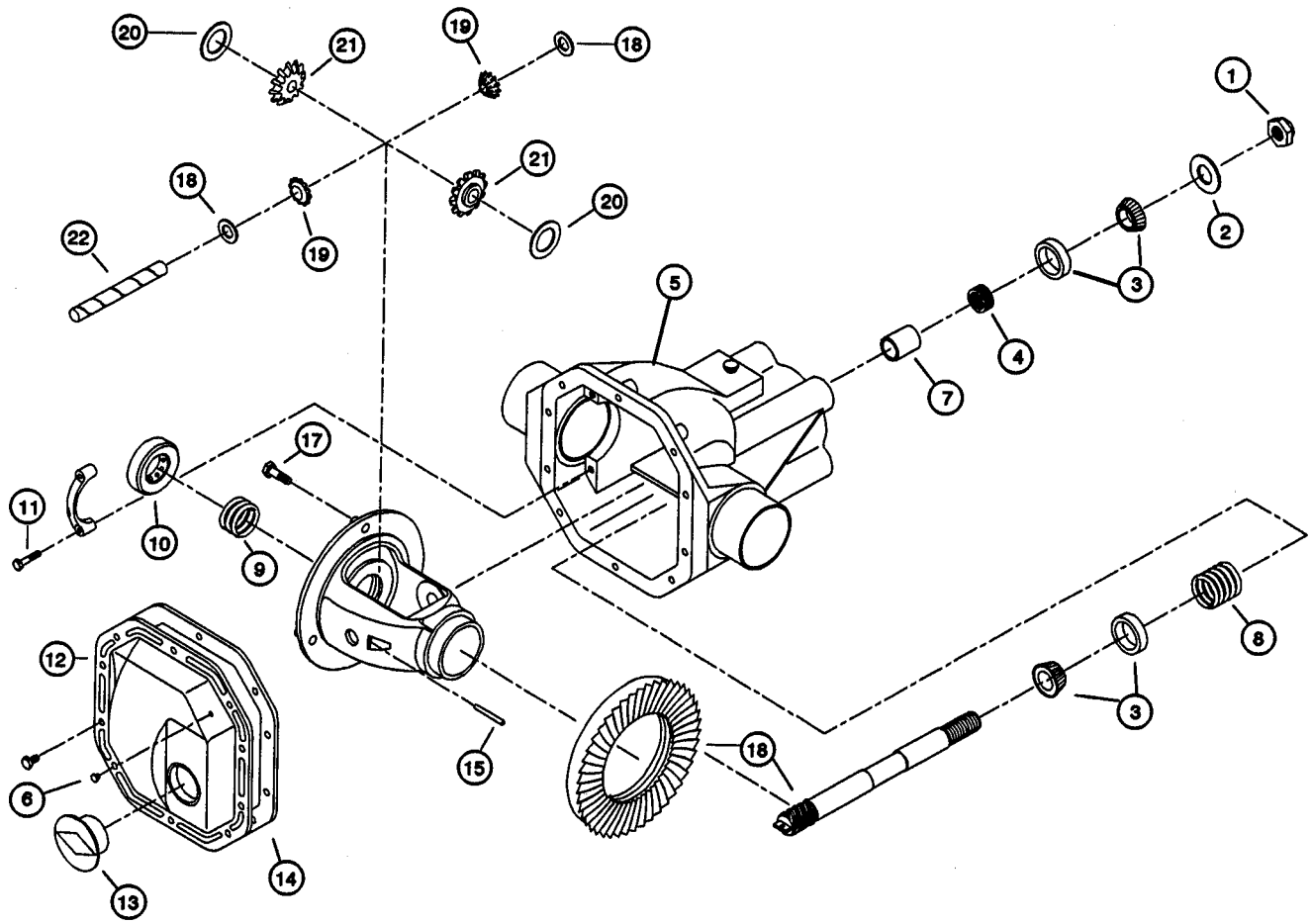
Differential

ITEM NO.	PART NO.	QTY	PART NAME	DESCRIPTION
1	09-9333	1	**Nut**	Pinion Shaft
2	09-9354	1	**Slinger**	Oil
3	09-9322	2	**Bearing**	Cup and cone
4	09-9347	4	**Shim**	Set, front pinion
5		1	**Housing**	Differential (not serviced)
6	09-9316	1	**Plug**	Vent
7	09-9356	1	**Spacer**	Pinion bearing
8	09-9348	4	**Shim**	Set, rear pinion shaft
9	09-9349	3	**Shim**	Set
10	09-9358	2	**Bearing**	Ball
11		4	**Bolt**	Bearing cap (not serviced)
12	09-9321	1	**Assembly**	Cover, differential
13	09-9315	1	**Plug**	Cover
14		1	**Gasket**	Cover, use silicone sealer
15		1	**Pin**	Groove (not serviced)
16	09-9334	1	**Assembly**	Gear & pinion, 5.17 :1 ratio
17	09-9346	3	**Screw**	Drive gear
18	09-9341	2	**Washer**	Pinion
19	09-9338	2	**Mate**	Pinion
20	09-9353	2	**Washer**	Thrust side gear
21	104328	2	**Gear**	Side 24 T
22	09-9340	1	**Shaft**	Pinion mate
23	102205	1	**Differential**	Complete assembly
24	98–4006	2	**Lube**	Pints, 80/90 gear

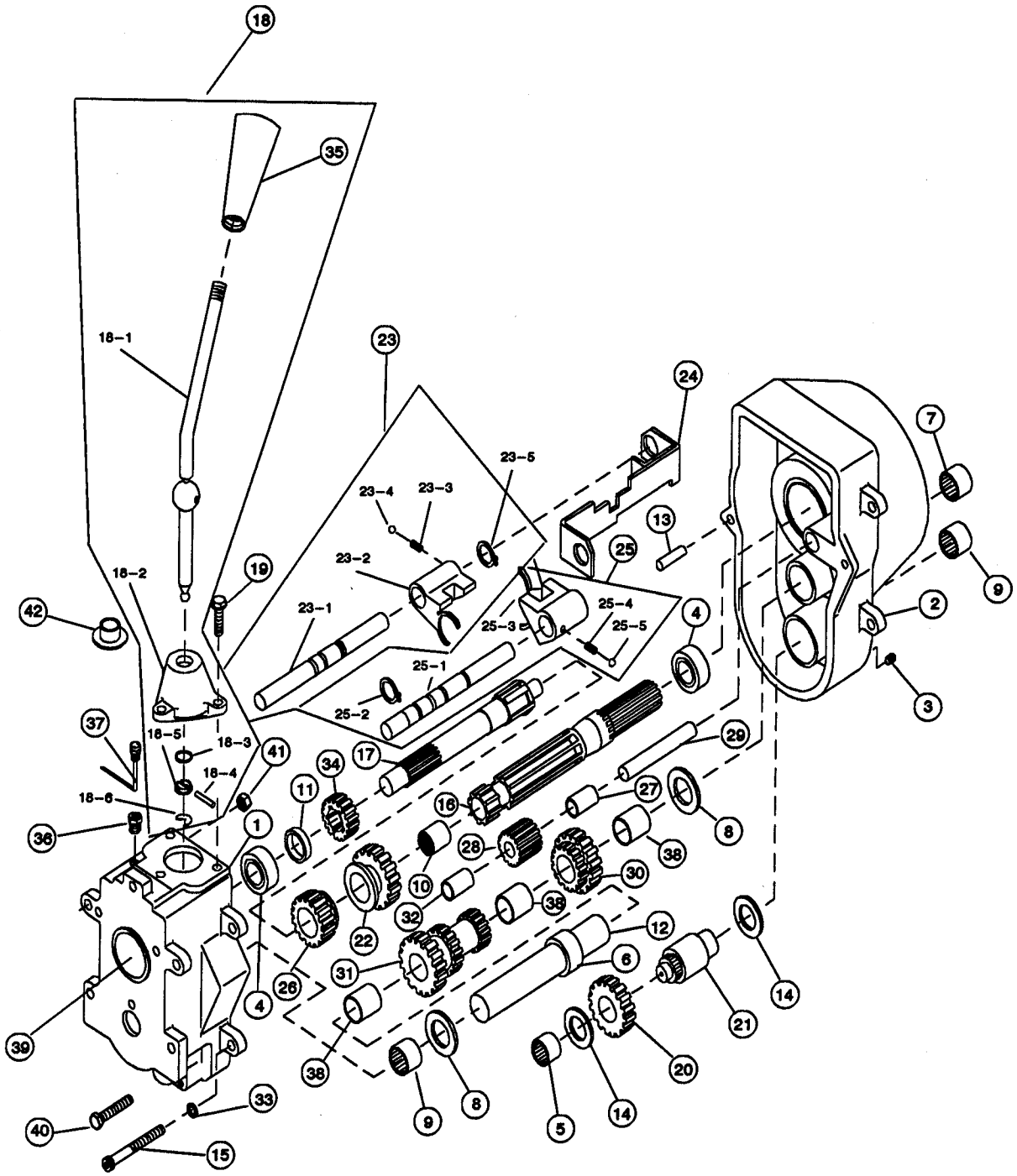
Differential



4–speed transmission

ITEM NO.	PART NO.	QTY	PART NAME	DESCRIPTION
(–)	03–7504–00	1	Assembly	Transmission
1	02–0914–00	1	Case	Front
2	03–0931–00	1	Case	Rear
3	23–6302–00	1	Plug	Pipe, ¼" solid
4	80–0029–00	2	Bearing	Ball
5	80–0032–00	1	Bearing	Needle, ¾" i.d. x 1" o.d. open
6	83–0056–00	1	Spacer	Cluster gear
7	80–0033–00	1	Bearing	Needle, ¾" i.d. x 1" o.d. closed
8	80–0036–00	2	Bearing	Thrust, race, 1/16"
9	80–0035–00	2	Bearing	Needle, 7/8" i.d. x ¾" wide
10	80–0021–00	1	Bearing	Needle, 7/16" i.d. x ½" lg.
11	83–0057–00	1	Spacer	Input shaft, 3/16"
12	03–6800–00	1	Shaft	Counter (Includes 83–0056 spacer)
13	84–4017–00	2	Pin	Dowel, ¼" dia. x ½" lg.
14	80–0034–00	2	Bearing	Thrust, race, 1/32"
15	84–2383–00	4	Screw	3/8" NC x 2–¾" SHC
16	03–6803–00	1	Shaft	Output (Includes 80–0021 bearing)
17	02–6802–00	1	Shaft	Input
18	01–0107–00	1	Assembly	Shift lever and housing
18–1	01–4709–00	1	Lever	Shift (Included in 01–0107 assembly)
18–2	03–2912–00	1	Housing	Housing (Included in 01–0107 assembly)
18–3	03–6805–00	1	O–Ring	Seal (Included in 01–0107 assembly)
18–4	84–4028–00	1	Pin	Pivot (Included in 01–0107 assembly)
18–5	03–6503–00	1	Retainer	Shift Lever (Included in 01–0107 assy)
18–6	85–3501–00	1	Ring	Snap, Internal (Included in 01–0107 assy)
19	84–2371–00	3	Screw	¼" NC x ¾", flanged hex head
20	03–2517–00	1	Gear	22 Teeth
21	03–6802–00	1	Shaft	Pinion
22	03–2520–00	1	Gear	Shifting, 26 teeth
23	03–0105–00	1	Assembly	Shift rod, high
23–1	03–6501–00	1	Rod	Shift, high (Included in 03–0105 assy)
23–2	03–2123–00	1	Fork	Shifting (Included in 03–0105 assembly)
23–3	83–0129–00	1	Spring	Detent (Included in 03–0105 assembly)
23–4	03–0532–00	1	Ball	3/16" Dia. (Included in 03–0105 assy)
23–5	85–1701–00	1	Ring	Snap (Included in 03–0105 assembly)
24	03–0107–00	1	Assembly	Shifter stop
25	03–0106–00	1	Assembly	Shift rod, low
25–1	03–6502–00	1	Rod	Shift, low (Included in 03–0105 assy)
25–2	85–1701–00	1	Ring	Snap (Included in 03–0105 assembly)
25–3	03–2123–00	1	Fork	Shifting (Included in 03–0105 assembly)
25–4	83–0129–00	1	Spring	Detent (Included in 03–0105 assembly)
25–5	03–0532–00	1	Ball	3/16" dia. (Included in 03–0105 assy)
26	03–2528–00	1	Gear	Shifting, 22 teeth
27	83–0053–00	1	Spacer	¾" x 3/8" x 1–1/6"
28	03–2529–00	1	Gear	Reverse Idler, 12/13 teeth
29	84–4056–00	1	Pin	Dowel, 3/8" x 3–½"
30	03–2518–00	1	Assembly	Gear cluster (Includes 80–6801–00 bushing)
31	03–2527–00	1	Assembly	Gear cluster (Includes 80–6801–00 bushing)
32	80–0037–00	1	Bushing	½" x 3/8" x 1–1/8"
33	84–3020–00	4	Washer	3/8" Reg. lock
34	03–2521–00	1	Gear	16 Teeth
35	03–4104–00	1	Handle	Shift lever, 3/8" NC, tapered
36	03–8404–00	1	Vent	Air standpipe
37	01–0550–00	1	Vent	Breather air with hinged dipstick
38	80–6801–00	3	Bushing	Grooved, .876 i.d. x 7/8 lg.
39	85–0175–00	1	Ring	Retaining
40	84–2142–00	4	Screw	3/8" NF x 2" HHC
41	84–0110–00	4	Nut	3/8" NF, lock
42	03–2511–00	1	Grommet	Shift lever
(–)	98–4012–00		Oil	4–Speed

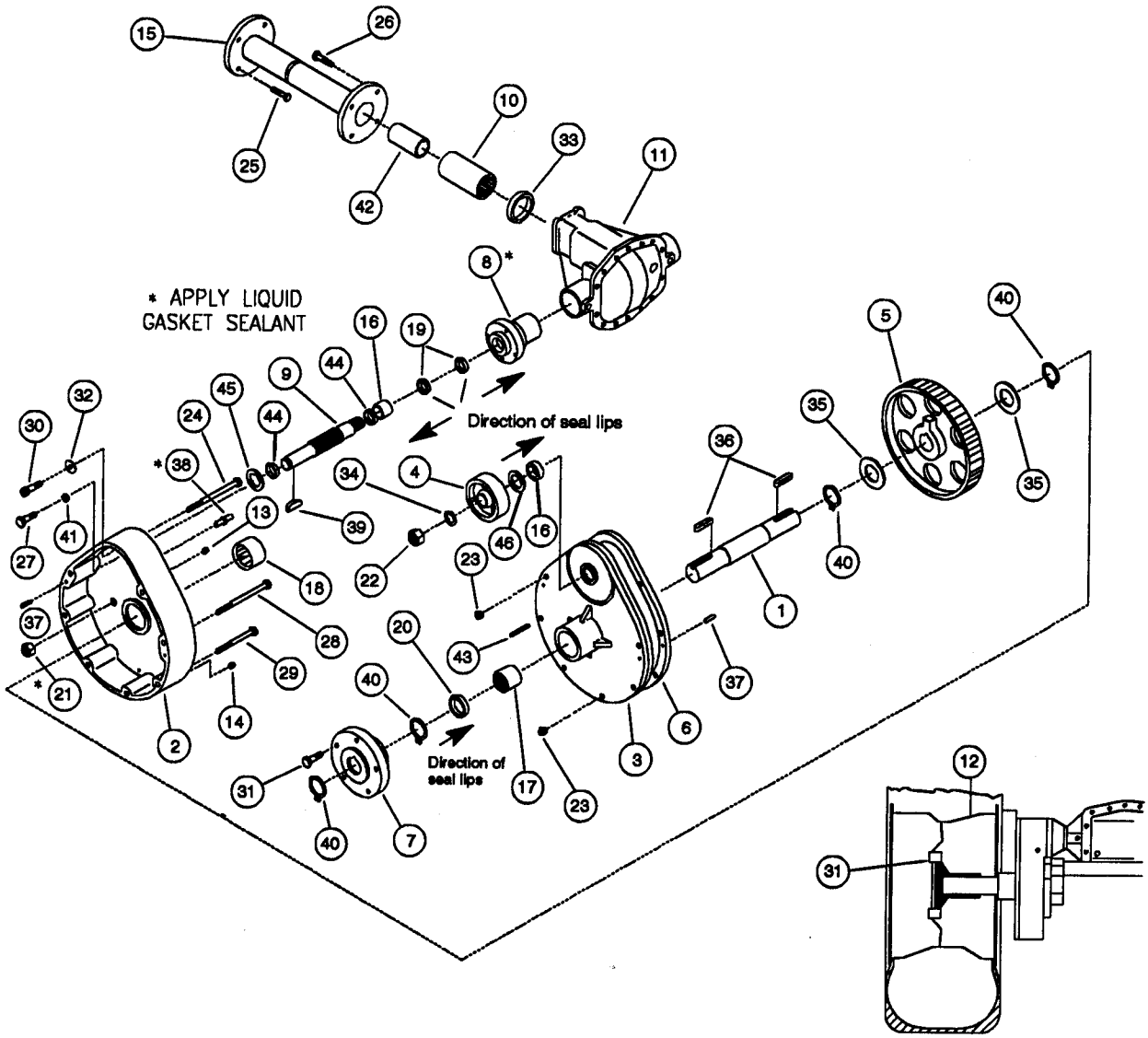
4–speed transmission



Final Drive

ITEM NO.	PART NO.	QTY	PART NAME	DESCRIPTION
1	01–0105–00	2	**Axle**	Rear wheel
2	01–1000–00	1	**Case**	Gear, right hand
(2)	01–1003–00	1	**Case**	Gear, left hand
3	01–1002–00	2	**Cover**.....	Gear case
4	01–1303–00	2	**Drum**	Brake, 3–29/32" OD
5	01–2502–00	2	**Gear**.....	Side, 109 teeth
6	01–2515–00	2	**Gasket**.....	Side cover
7	01–2916–00	2	**Hub**	6–Hole, rear wheel
8	01–2940–00	1	**Housing**	Bearing, right side
(8)	01–2941–00	1	**Housing**	Bearing, left side
9	102002	1	**Pinion**	16 Tooth, right hand (Effect. s/n 002003201)
(9)	102001	1	**Pinion**	16 Tooth, left hand (Effect, s/n 002003201)
10	03–0906–00	1	**Coupling**....	Drive shaft
11	102205	1	**Differential** ..	5.17:1
12	03–8707–00	2	**Wheel**	Rear, 16"
13	23–6301–00	2	**Plug**	Pipe, ¼" vented
14	23–6302–00	4	**Plug**	Pipe, ¼" solid
15	32–7505–00	1	**Tube**.....	Transmission to differential
16	80–0006–00	4	**Bearing**	Roller
17	80–0010–00	2	**Bearing**	Cover, axle bearing
18	80–0012–00	2	**Bearing**	Needle, 1½" ID x 1–7/8" OD
19	82–0100–00	4	**Seal**	1" ID x 1¼" OD x 1/8"
20	101094	2	**Seal**	Oil
21	84–0062–00	2	**Nut**	5/8"–11, hex, 45°
22	104510	2	**Nut**	¾" NC, hex oval
23	102998	12	**Nut**	7/16" NC flange
24	84–1024–00	6	**Bolt**	Carriage, 7/16" NC x 5"
25	103027	4	**Screw**	5/16" NC x 1.00 HWH
26	103140	4	**Screw**	3/8" NC x 1.00 HWH
27	84–2170–00	6	**Screw**	7/16" NF x 1½" HHC
28	104192	2	**Screw**	7/16" NC x 5½" HHC
29	104193	4	**Screw**	7/16" NC x 4" HHC
30	84–2240–00	2	**Screw**	7/16" NF x 1½" SHC
31	84–2250–00	12	**Screw**	½" NF x 1–1/16" Spec.
32	84–3031–00	2	**Washer**	7/16" High–collar, lock
33	84–3070–00	1	**Washer**	¾" flat
34	84–3075–00	2	**Washer**	Lock, internal tooth
35	84–3762–00	4	**Washer**	Thrust, 1½" ID x 2¾" OD
36	103220	4	**Key**.....	Square, 3/8" x 1½" Lg hardened
37	84–4017–00	4	**Pin**	Dowel, ¼" dia. x ½" lg
38	84–1166–00	2	**Pin**	Hitch, 5/8" dia. x 3–7/8" lg.
39	84–4042–00	2	**Key**.....	Woodruff #9
40	85–0150–00	8	**Ring**	Snap, 1½" external
41	84–3030–00	6	**Washer**	Lock, 7/16"
42	83–1021–00	1	**Spacer**.....	1" OD x 1" lg.
43	84–4052–00	2	**Pin**	Drive, ¼" dia. 2.25" lg.
44	80–0038–00	4	**Race**	Thrust
45	83–1038–00	2	**Washer**	Wave
46	101032	2	**Seal**	1 ID x 1.5 OD
47	98–4006–00	6	**Lube**	Pints, 80/90 gear

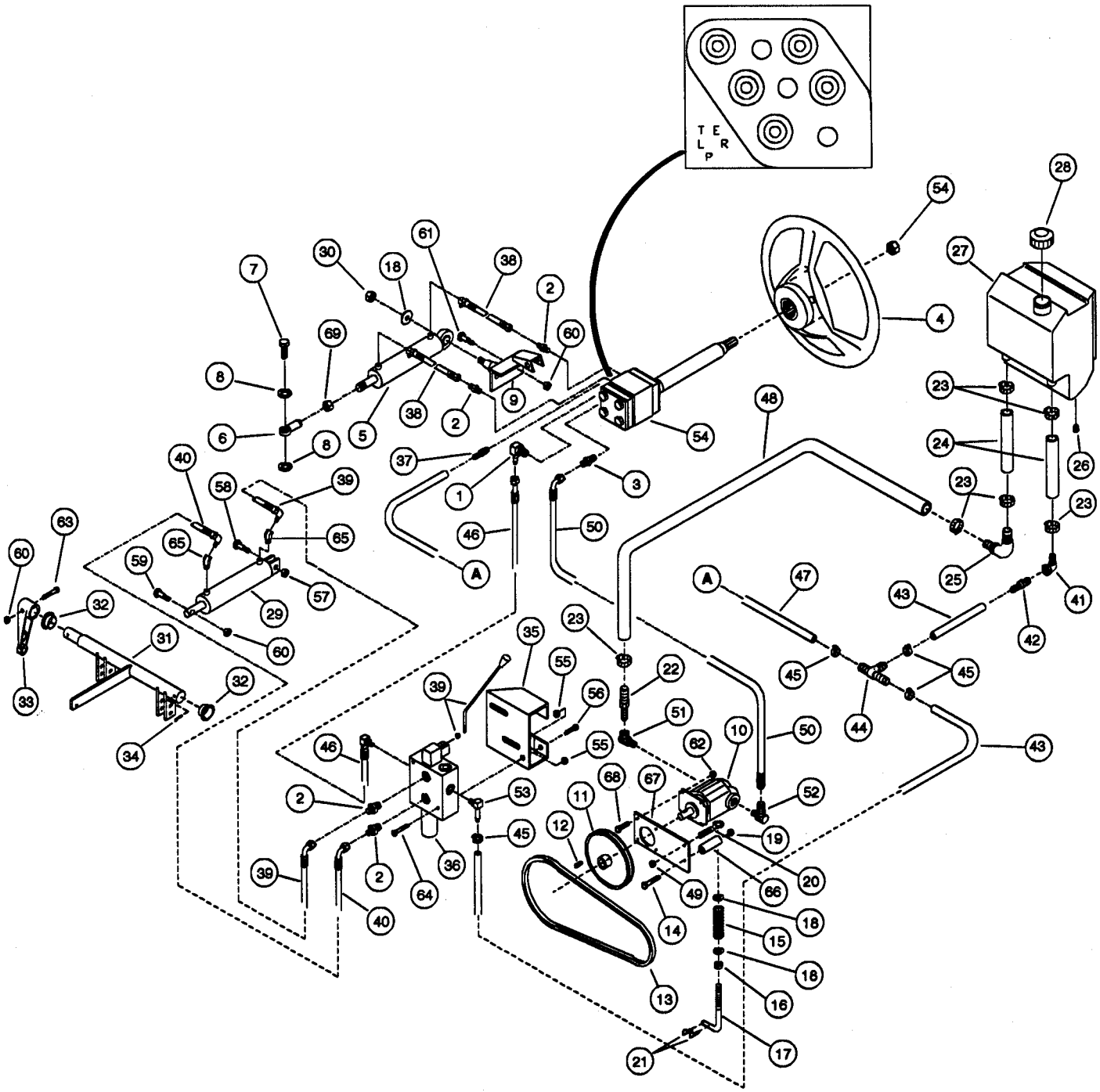
Final Drive


* APPLY LIQUID GASKET SEALANT
Direction of seal lips
Direction of seal lips

Hydraulic Plumbing

ITEM NO.	PART NO.	QTY	PART NAME	DESCRIPTION
1	101221	1	Fitting	3/8 MB – 3/8 MJ 90°
2	101981	4	Fitting	3/8 MB – ¼ MJ
3	103906	1	Fitting	3/8 MB – 3/8 MJ
4	103941	1	Wheel	Steering complete
5	23–0907–00	1	Cylinder	Power steering M/L
6	03–4108–00	1	Rod	End, .500 UNF 28
7	84–1171–00	1	Screw	HHC ½" NF x 1½"
8	84–3110–00	2	Washer	Lock ½" regular
9	103762	1	Bracket	Cylinder mount (gear)
10	23–6307–00	1	Pump	Hydro 3.3GPM 16/24 M85
11	86–0010–00	1	Sheave	5.38" OD V groove
12	84–4010–00	1	Key.....	1/8 SQR x 1"
13	81–0029–00	1	Belt	29" lg
14	84–1020–00	1	Bolt	Carr 7/16 NC x 2½"
15	83–1032–00	1	Spring	Compress 1.000 x .177
16	104654	1	Nut	HX ½" NC nylok
17	84–1015–00	1	Bolt	"L" ½" NC x 5
18	84–3059–00	3	Washer	Flat ½" type N
19	104517	1	Nut	Hx 7/16 NC nylok
20	84–1002–00	1	Bolt	Eye 3/8 NC x 1
21	84–4034–00	2	Key.....	.072 wire quick change
22	23–7909–00	1	Fitting	½" MP – ¾" Barb
23	85–0043–00	6	Clamp	Hose
24	23–2918–00	2	Hose stub ...	¾" ID suction x 2.25"
25	23–7935–00	1	Elbow	¾" x ¾" nylon 90°
26	23–6300–00	1	Plug	Drain–Hydraulic tank
27	23–7601–00	1	Tank	Hydraulic
28	23–7602–00	1	Cap	Hydraulic tank
29	23–0905–00	1	Cylinder	10.5 solidram ½"
30	84–0130–00	1	Nut	Lock HX ½" NF
31	11–6800–00	1	Shaft	Mower lift weldment M85
32	80–0014–00	2	Bushing.....	Flange 1.25 ID
33	11–0101–00	1	Arm	Lift Hyd outboard
34	84–4020–00	1	Key.....	Cotter 5/32 x 1½"
35	103848	1	Bracket	Valve mounting
36	104050	1	Valve	1–spool
37	23–7929–00	2	Fitting	3/8 MB – 3/8 Barb
38	103998	2	Hose	PS cyl R/F–PS Gear L/R
39	104018	1	Hose	Valve A–cyl rear
40	104019	1	Hose	Valve B–cyl front
41	35–2102–00	1	Fitting	½" MP – 3/8" FPS
42	23–7930–00	1	Fitting	3/8" MP – 3/8" Barb
43	23–2915–00	2	Hose	3/8" low pressure x 26"
44	23–7934–00	1	Hose	Tee white nylon 3/8 Barb
45	85–0040–00	4	Clamp	Hose 5/8 clinch type
46	103995	1	Hose	Central valve in power steering
47	23–2917–00	1	Hose	3/8 low pressure x 22"
48	104058	1	Hose	¾ low pressure x 45"
49	84–0040–00	1	Nut	Hx 3/8 NC center locking
50	104061	1	Hose	Steering gear P–pump out
51	23–7927–00	1	Fitting	3/8 MP – ½" FPS
52	102751	1	Fitting	3/8 MP – 3/8 MJ 90
53	102673	1	Fitting	3/8 MB – 3/8 Barb 90
54	104110	1	Gear	PWR Steering (gear drive)
55	200183	4	Nut	Flange ¼" NC serrated
56	104188	2	Screw	HWH ¼ NC x ¾"
57	103395	1	Nut	Flange ½" NC serrated
58	84–2227–00	1	Screw	HHC ½" NC x 2¾"
59	102522	1	Screw	HHC 7/16 NC x 2¼"
60	102998	4	Nut	Flange 7/16 NC serrated
61	104194	2	Screw	HWH 7/16 NC x 1¼"
62	103124	4	Nut	Flange 3/8 NC serrated
63	104187	1	Screw	HWH 7/16 NC x 2"
64	102994	2	Screw	HWH ¼ NC x 1.00
65	23–7914–00	1	Fitting	3/8 MP – 3/8 FP 45
66	104270	1	Spacer.....	.88 x .50 x 1.21
67	104271	1	Plate	Pump MTG Hyd
68	84–2101–00	4	Screw	HHC 3/8 NC x 1¼"
69	84–0132–00	1	Nut	Jam ½" NF
70	101353		Fluid.....	Transmission, Dextron

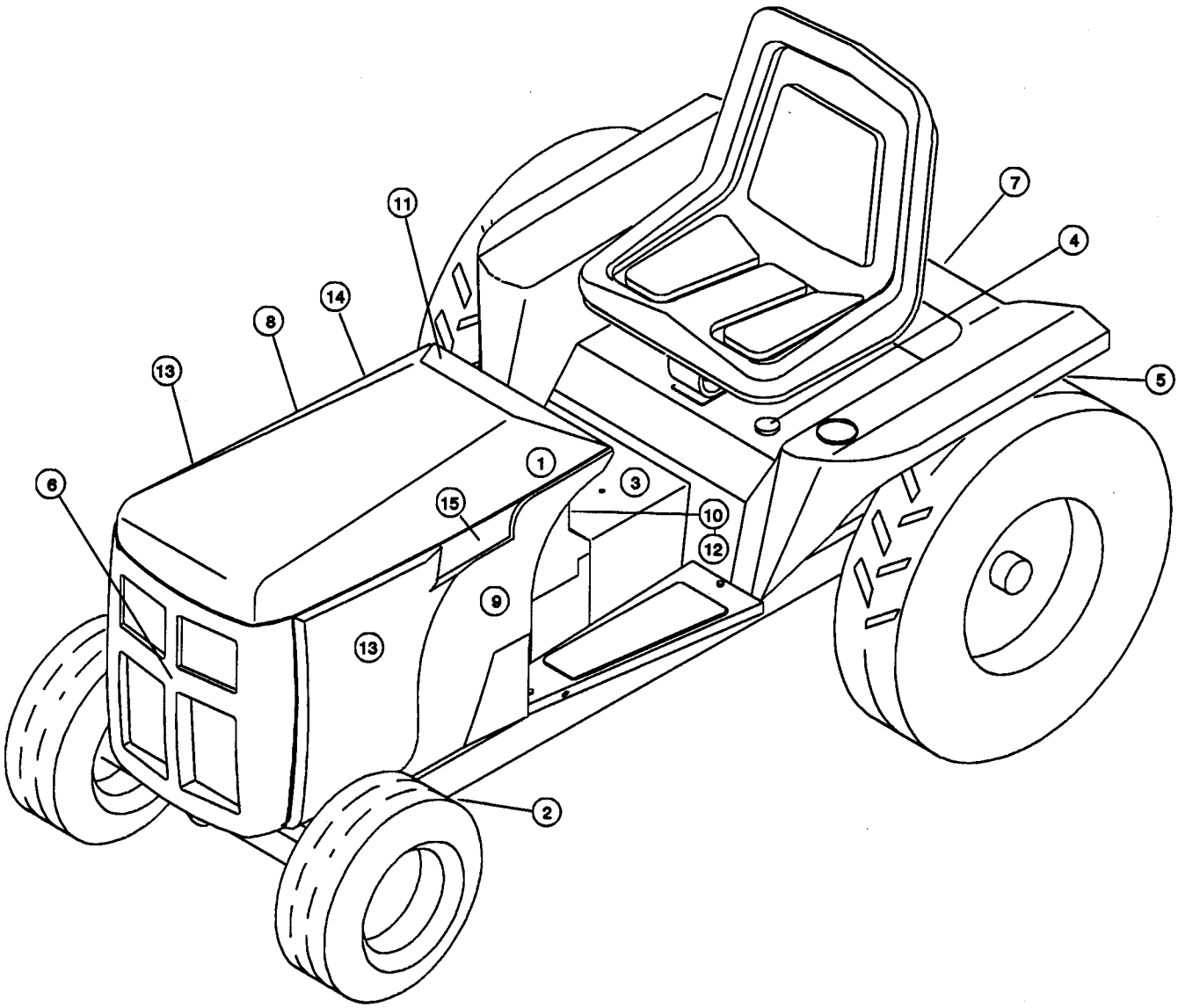
Hydraulic Plumbing



Decals

ITEM NO.	PART NO.	QTY	PART NAME	DESCRIPTION
1	98-6968-00	1	**Decal**	Caution baffle removal (Located under hood on engine baffle)
2	98-7023-00	2	**Decal**	Danger belt pulley
3	98-6973-00	1	**Decal**	4 speed shift pattern
4	103169	1	**Decal**	Dextron II oil only
5	98-6971-00	1	**Decal**	Warning 3-point hitch (Located on frame at rear of tractor)
6	104145	1	**Emblem**	Grille - 1618GV
(6)	104200	1	**Emblem**	Grille - MGT1800G
7	104146	1	**Emblem**	Fender rear - 1618GV
(7)	104216	1	**Emblem**	Fender rear - MGT1800G
8	104147	1	**Decal**	RH side panel - 1618GV
(8)	104214	1	**Decal**	RH side panel - MGT1800G
9	104148	1	**Decal**	LH side panel - 1618GV
(9)	104215	1	**Decal**	LH side panel - MGT1800G
10	104156	1	**Decal**	Lower console - 1618GV
(10)	104202	1	**Decal**	Lower console - MGT1800G
11	104158	1	**Decal**	Upper console - 1618GV
(11)	104204	1	**Decal**	Upper console - MGT1800G
12	104239	1	**Decal**	Parking brake (Located on lower slope of console)
13	104407	2	**Emblem**	Side panel - 1618GV only
14	104228	1	**Decal**	RH side panel - MGT1800G
15	104227	1	**Decal**	LH side panel - MGT1800G

Decals



Tractor Specifications

Tires:				
Rear: Lug, 2 ply	8.0-16 (31-3/4" o.d.)			
Lug, 4 ply		8.3-16 (31-5/16" o.d.)		
Power Torque				
Lawn, 2 ply			8.0-16 (31-1/4" o.d.)	
Turf, 4 ply rating				13.5-15 (30-3/4" o.d.)
Air Pressure	10 lbs.	18 lbs.	10 lbs.	10 lbs.
Load Capacity/Tire	750 lbs.	850 lbs.	750 lbs.	595 lbs.
Front: Rib, 4 ply	4.0-12 (20-¼" o.d.)	4.0-12 (20-¼" o.d.)	4.0-12 (20-¼" o.d.)	
Lawn, 2 ply				8-10 (19-½" o.d.)
Air Pressure	40 lbs.	40 lbs.	40 lbs.	12 lbs.
Load Capacity/Tire	750 lbs.	750 lbs.	750 lbs.	1450 lbs.
Dimensions:				
Length Overall	84"	84"	84"	83"
Wheelbase	58"	58"	58"	58"
Width	43-¾"	44"	43-¾"	53"
Tread, Rear	35-¾"	35-¾"	35-¾"	41-½"
Tread, Front	36"	36"	36"	38-½"
Toe In	±1/4"	±1/4"	±1/4"	±1/4"
Tread Adjustment, Rear	±5-½"	±5-½"	±5-½"	0
Height (at steering wheel)	51"	51"	51"	51"
Clearance (ground to frame)	15-¾"	15-¾"	15-¾"	15-¾"
Turning Radius	43"	43"	43"	38"
Weight:				
Base Tractor with Wheels	978 lbs.	987 lbs.	965 lbs.	1019 lbs.
Wheel Weight, Rear, Pair	118 lbs.	118 lbs.	118 lbs.	N/A
Wheel Weight, Front, Pair	47 lbs.	47 lbs.	47 lbs.	N/A
Suitcase Weights	50 lbs. ea.	50 lbs. ea.	50 lbs. ea.	50 lbs. ea.

Ground speeds, mph (approx.):

First gear	0.0 to 0.9
Second gear	0.9 to 2.8
Third gear	2.8 to 4.1
Fourth gear	4.1 to 7.3
Reverse	0.0 to 3.5

Gear reductions ratios:

First gear	425 : 1
Second gear	141 : 1
Third gear	79 : 1
Fourth gear	53 : 1
Reverse	102 : 1

Capacities :

Fuel Tank	8.25 Gallons (approx.) – minimum 87 octane unleaded gasoline
Engine Crankcase	2 Quarts (approx.) – 10W30 (5W30 below 32°)
Differential	2 Pints (approx.) – 80/90 gear lube
Final Drive Cases	1.5 Pints each – 80/90 gear lube
Hydraulic Tank	2.25 Gallons – Dextron II
Transmission	1 pint – special blend, see your Dealer

Tractor Specifications

ENGINE: Kohler® Model CH18

- 18 hp, 30 ft/lb torque at 2500 rpm.
- V–Twin cylinders with 3.03" bore and 2.64" stroke.
- 38 cu. in. displacement.
- Four-cycle, air-cooled 15 amp negative ground battery ignition.
- Spin-on filter and Oil Sentry™ light.

ELECTRICAL SYSTEM: (by Kohler) 12-volt starting motor, geared to engine flywheel. Three-position key switch, 15 amp flywheel-mounted alternator and rectifier-regulator supply 12-volt battery current. Batteries: 45 amp hr.

TRANSMISSION: Four speeds forward, one reverse. "H" shift pattern with extension for "first" gear. Reductions: First 7.83:1, Second 2.64:1, Third 1.47:1, Fourth 1.00:1, Reverse 1.92:1.

DIFFERENTIAL: (by Dana Corp.) Hypoid. Reduction ratio 5.17:1.

FINAL DRIVE: Spur bull gear keyed to 1-½" diameter wheel axles. Reduction: 6.813:1.

ADJUSTABLE REAR TREAD WIDTH: Tread widths may be changed by reversing tires and wheels on hubs. See Dimension Table for maximum adjustments.

POWER STEERING: Eaton Mini-Series 291 Steering Control Unit. Maximum System Pressure: 1500 PSI [70 bar]. Maximum operating temperature: 200° F [93° C].

BRAKES: Cast drum and band. Individual or combined actuation. Parking brake latch.

FRAME: Welded construction. Front wheel support bar 1" x 3" solid steel; pivots on 1-½" diameter pivot stud and two bushings.

Attachments and Accessories

Refer to Chart for referencing these numbers.

❶ – Also requires 811501 Mounting kit, 803801 Weight box or 803001 Rear Weight Rack with seven 101725 Suitcase Weights, 35031 36" Bucket or 35041 48" Bucket.

❷ – Requires 70004 Tiller Hitch.

❸ – Optional: 102601 Drift Bar (pair), 102604 Super Hardened Cutting Edge, 102603 Skid Shoes – side (pair), 103158 Spring Lift Assist Kit.

❹ – Optional: 809501 Caster Wheel Kit.

❺ – Optional: 103158 Spring Lift Assist Kit.

❻ – Required to drive 70046 or 808001 Tiller Assembly.

❼ – Does not fit 13.5 or 15.5 – 15 Rear Tire/Wheels.

✘ = Required Part

✓ = Optional Accessory

Refer above to reference numbers 1 – 7.

Model No.	Attachment Description	Necessary Accessories								
		43001 Tool Bar	51007 Blade Hitch	60051 Mower Hitch	802901 PK/UT Conversion kit	803701 3–Pt. Hitch Cat "O"	805901 Drive Shaft	810201 Aux. lift kit rear	810901 PTO Rear	101725 Suitcase Weights 50lbs. ea.
09007	R. O. P. S.									
09012	Wheel Weights 16" Pair ❼									
09019	Chains 8.0–16 Tires Pair									
09022	Chains 13.5–15 Tires Pair									
09116	16" Dual Wheel Spacer Kit ❼									
41011	Disc Harrow with 11" Blades					✘		✓		
41012	Disc Harrow with 16" Blades					✘		✓		
42101	Plow with 12" Moldboard					✘		✓		
43001	Tool Bar					✘		✓		
43020	Disc Hillers – Pair	✘				✘		✓		
45010	Furrower, with12" Shank	✘				✘		✓		
45020	Cultivator Kit with 6 Teeth	✘				✘		✓		

Continued on next page.

Attachments and Accessories

✘ = Required Part

✓ = Optional Accessory

Refer to previous page to reference numbers 1 – 7.

Model No.	Attachment Description	Necessary Accessories								
		43001 Tool Bar	51007 Blade Hitch	60051 Mower Hitch	802901 PK/UT Conversion kit	803701 3–Pt. Hitch Cat "O"	805901 Drive Shaft	810201 Aux. lift kit rear	810901 PTO Rear	101725 Suitcase Weights 50lbs. ea.
51003	V–Plow with Wings to 60"		✘							
51540	54" Blade		✘							
53001	Hay Rake 6ft.					✘		✓		
56002	60" Grader Blade, Rear					✘		✓		
70046	46" Rototiller (belt driven) ❷					✘		✓	✘	
800701	54" Blade ❺				✘					
800802	51" Rotary Broom ❹				✘					
803001	Rear Weight Rack					✘		✓		
803102	Front End Loader ❶					✘		✓		
803701	3 Point Hitch, Cat. "O"							✓		✘
803801	Weight Box					✘		✓		
806001	47" Snowblower with H'Crank ❸				✘		✘			
807302	All Weather Cab									
808001	46" Rototiller (shaft driven)					✘		✓	✘	
810201	Aux. Lift Kit, Rear					✘				
810801	48" Snowblower with Hitch									
810901	PTO Rear 2000 RPM ❻									
811101	Mower 48"			✘						
811201	Mower 60"			✘						

Maintenance Record

Use the following chart as a reference for doing maintenance and to record the dates when your tractor is serviced. The service intervals are recommended maximums and should not be exceeded. Perform maintenance more often under severe or unusual operating conditions.

Number of tractor (hourmeter) hours

√ – check ♦ – clean ⊕ – change	Before/ during every use	After initial 5 hours	25	50	75	100
Air cleaner	√		♦	♦	♦	⊕
Air intake screens	√ ♦					
Air intake/cooling system						♦
Battery		√	√	√	√	√
Belt(s)	√					
Brakes			√	√	√	√
Connections & wiring (electrical)			√	√	√	√
Differential						√
Engine oil	√	⊕				⊕
Engine oil filter		⊕				⊕
Fasteners, guards, shields	√					
Final drive						√
Fittings (grease)		√	√	√	√	√
Fuel level	√					
Fuel screen/filter						♦ ⊕
Hoses & fittings			√	√	√	√
Hydraulic oil	√					
Spark plugs						√
Tire pressure			√	√	√	√
Transmission oil	√					
Wheel bearings						♦ pack

Notes

SNAPPER.

TWO YEAR LIMITED WARRANTY

Snapper, through any authorized Snapper dealer, will replace, free of charge, any part or parts found upon examination by the factory, to be defective in material or workmanship or both, as follows:

- For two (2) years from purchase date for the original purchaser's residential, non-commercial use.
- For one (1) year from purchase date for the original purchaser's commercial, rental, or other non-residential use.
- For one (1) year from purchase date for any dealer tractor used for demonstration.

All transportation costs incurred by the purchaser in submitting material to the Snapper dealer for replacement under this warranty must be paid by the purchaser.

This warranty does not apply to parts that have been damaged by accident, alteration, abuse, improper lubrication, normal wear, or other cause beyond Snapper's control, nor does it cover accessories, attachments or components warranted by others, including: Engine & Engine Parts warranted by Kohler Co.; Snow Blower "Header" assemblies warranted by Haban Manufacturing Company; and Tires warranted by Goodyear Tire & Rubber Co.

There is no other express warranty.

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to two (2) years from purchase date for the original purchaser's residential, non-commercial use [one (1) year from purchase for the original purchaser's commercial, rental, or other non-residential use, and one (1) year from purchase date for dealer demonstration tractors] and to the extent permitted by law, any and all implied warranties are excluded. This is the exclusive remedy. Liabilities for incidental and consequential damages, under any and all warranties, are excluded.

Some states do not allow limitations on how long an implied warranty lasts, and/or do not allow the exclusion or limitation of incidental and consequential damages, so the above limitation and 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.

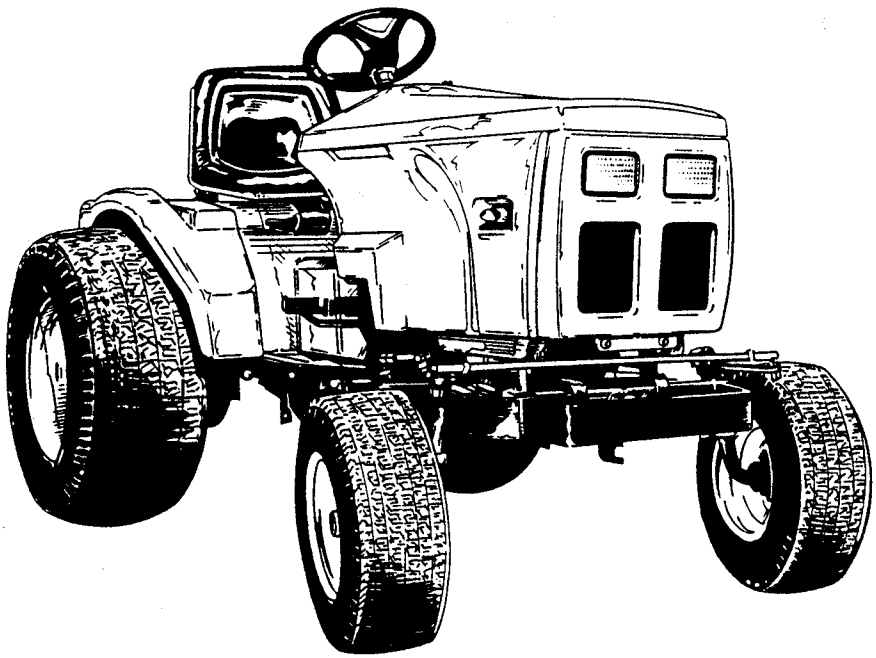
WARNING: THE USE OF REPLACEMENT PARTS OTHER THAN GENUINE SNAPPER PARTS MAY IMPAIR THE SAFETY OF SNAPPER PRODUCTS AND WILL VOID ANY LIABILITY AND WARRANTY BY SNAPPER ASSOCIATED WITH THE USE OF SUCH PARTS.

IMPORTANT: Please fill out the attached Snapper Product Registration Card immediately and mail to the address on the Product Registration Card.

Safety Instructions & Operator's Manual

SNAPPER®

MODEL MGT1800G GARDEN TRACTOR



SNAPPER® McDonough, GA., 30253 U.S.A.

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