

# OWNERS MANUAL

SERIAL NUMBER

MODEL NO. 931014 S-10G  
MANUAL LIFT W/FRONT AND  
REAR ROCKSHAFT  
SERIAL NO. 000101 AND UP

MODEL NO. 931013 S-14G  
HYDRAULIC LIFT W/FRONT AND  
REAR ROCKSHAFT  
SERIAL NO. 000101 AND UP

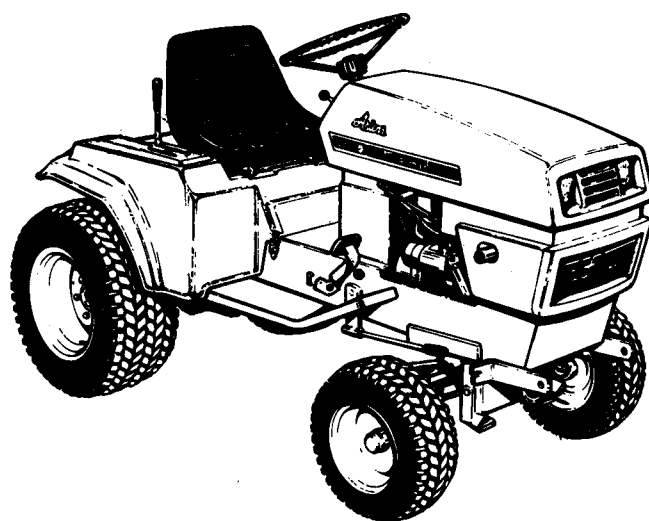
PART NO. 31974

# *Ariens*

## 10-14 HP

### GEAR

## Garden Tractors



**ARIENS COMPANY**



**BRILLION, WIS. 54110**

**WARNING**  
**BRAKES WILL NOT STOP TRACTOR**  
**UNLESS CLUTCH PEDAL IS DEPRESSED**  
**OR SHIFT SELECTOR IS IN NEUTRAL.**

**LIFT SELECTOR**  
 FRONT, CENTER, REAR, REAR LIFT, FRONT AND CENTER LIFT

**PARKING BRAKE**  
 DEPRESS BRAKE PEDAL THEN ENGAGE PARKING BRAKE LOCK, ENGAGE, DISENGAGE

78392

**CAUTION**  
 BEFORE DISCONNECTING POWER TAKE OFF FROM TRACTOR, RELEASE FLOAT SPRING.

78373



**READ ALL DECALS AND FOLLOW DIRECTIONS CAREFULLY.**

DEPRESS BRAKE PEDAL THEN ENGAGE PARKING BRAKE LOCK. ENGAGED  
 ← DISENGAGED

78311

**GEAR**

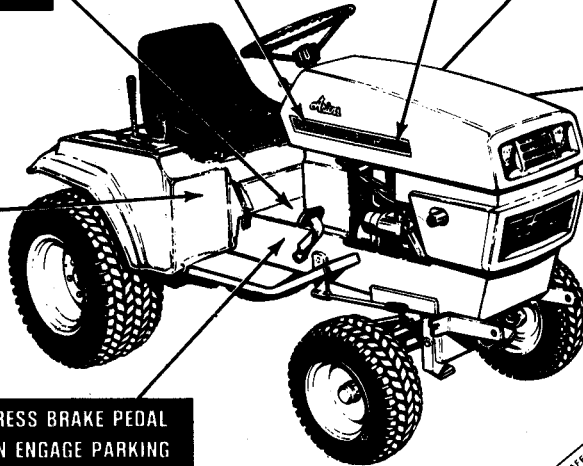
L.H. 78362  
 R.H. 78361

**S-14G**

S-14G R.H. 78374  
 S-14G L.H. 78375  
 S-10G R.H. 78363  
 S-10G L.H. 78364

**LIFT SELECTOR**

78278



**DOWN UP ATTACHMENT REAR LIFT FORWARD**

78340  
 S-10 G ONLY

MODEL CONFORMS TO SAFETY STANDARDS ANSI B 71.3 1975  
 OPA  
 Outdoor Power Equipment Institute  
 MODEL TESTED BY INDEPENDENT LABORATORY

78226

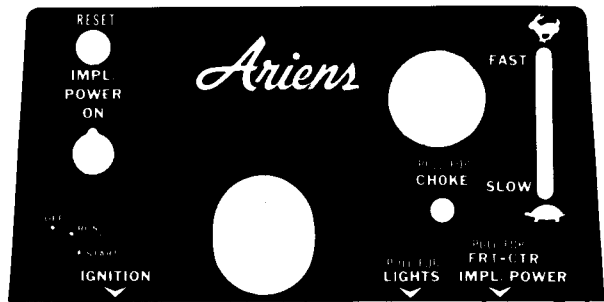
**INSTRUCTIONS FOR SAFE OPERATION**

1. Know the controls and how to stop quickly. READ THE OWNER'S MANUAL.
2. Do not allow children to operate the vehicle. Do not allow adults to operate it without proper instruction.
3. Do not carry passengers. Keep children and pets a safe distance away.
4. Clear the work area of objects which might be picked up and thrown.
5. Disengage all attachment clutches and shift into park before attempting to start the engine.
6. Disengage power to attachment, stop the engine and place shift lever to "Park-Start" position before leaving the operator's position.
7. Disengage power to attachment and stop the engine before making any repairs or adjustments.
8. Disengage power to attachment when transporting or not in use.
9. Take all possible precautions when leaving the vehicle unattended, such as disengaging the power take-off, lowering the attachment, shifting into park, setting the parking brake, stopping the engine, and removing the key.
10. Do not stop or start suddenly when going uphill or downhill. Mow up and down the face of steep slopes; never across the face.
11. Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.
12. Stay alert for holes in the terrain and other hidden hazards.
13. Use care when pulling loads or using heavy equipment.
  - a. Use only approved drawbar hitch points.
  - b. Limit loads to those you can safely control.
  - c. Do not turn sharply. Use care when backing.
  - d. Use counterweight(s) or wheel weights when suggested in the owner's manual.
14. Watch out for traffic when crossing or near roadways.

# DECALS FOR MODELS 931013 & 931014 GEAR TRACTOR



78282  
S-10 G ONLY



DASH PANEL - 78341



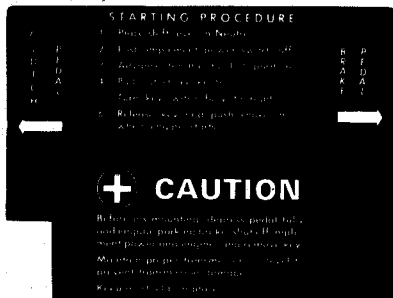
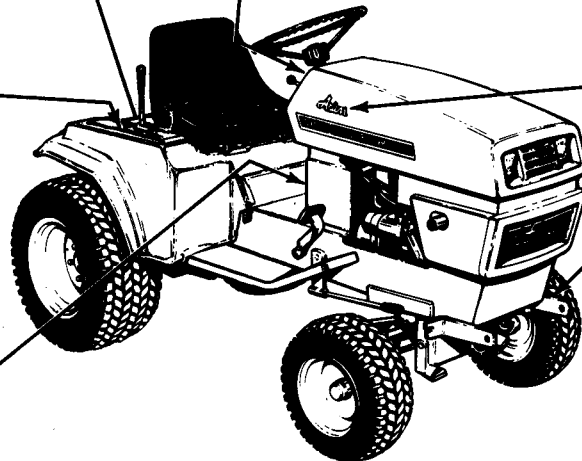
S-14G  
78387



S-10G  
78388



78252



78367



78281  
S-10 G ONLY

COMPLIANCE WITH CANADIAN RADIO INTERFERENCE REGULATIONS CERTIFIED  
REPLACE SPARK PLUG WITH RESISTOR SPARK PLUG ONLY!  
CERTIFIÉ CONFORME AU RÈGLEMENT CANADIEN SUR LE BROUILLAGE RADIOÉLECTRIQUE  
REPLACER LA ROUGIE PAR UNE ROUGIE À RÉSISTANCE SEULEMENT!

78400

(UNDER HOOD, NEXT TO SPARK PLUG)

## BE AWARE OF SAFETY DECALS

15. When using any attachments, never direct discharge of material toward bystanders nor allow anyone near the vehicle while in operation.
16. Handle gasoline with care—it is highly inflammable.
  - a. Use approved gasoline container.
  - b. Never remove the cap of the fuel or add gasoline to a running or hot engine, or fill the fuel tank indoors. Wipe up spilled gasoline.
  - c. Open doors if the engine is run in the garage—exhaust fumes are dangerous. Do not run the engine indoors.
17. Keep the vehicle and attachments in good operating condition, and keep safety devices in place.
18. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
19. Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.
20. To reduce fire hazard, keep the engine free of grass, leaves, or excessive grease.
21. The vehicle and attachments should be stopped and inspected for damage after striking a foreign object, and the damage should be repaired before restarting and operating the equipment, see numbers 6 & 7 opposite page.
22. Do not change the engine governor settings or overspeed the engine.
23. When using the vehicle with mower, proceed as follows:
  - a. Mow only in daylight or in good artificial light.
  - b. Never make a cutting height adjustment while the engine is running if the operator must dismount to do so.
  - c. Shut the engine off when removing the grass catcher or unclogging chute.
  - d. Check the blade mounting bolts for proper tightness at frequent intervals.
24. Check the grass catcher bags frequently for wear or deterioration. Replace with new bags for safety protection.

# CONTROLS

**1** **Implement Power Control Switch** (Figure 1). Pull the switch out (ON) to engage the electromagnetic clutch to drive the mower and front mounted attachments.

*NOTE: This switch ① must be pushed in (OFF) to disengage the drive before the engine will start or to allow engine to keep running if the operator gets off the seat.*

**2** **Implement Power Indicator Light** (Figure 1). This light glows red when the implement power control switch ① is pulled out to indicate that the mower or front mounted attachment is engaged.

**3** **Throttle Lever** (Figure 1). Raise the lever to increase engine speed. Lower the lever to decrease engine speed.

**4** **Ignition Switch** (Figure 1). Turn the key fully clockwise to start the engine and release when the engine starts. Turn the key counterclockwise to stop the engine.

**5** **Choke Control** (Figure 1). Pull choke control out when attempting to start a cold engine or when starting during cold weather. When engine starts, gradually push choke in. Normally, it is not necessary to use the choke when starting a warm engine.

**6** **Light Switch** (Figure 1). Pull the switch out to turn on the front and rear lights. The ignition key must be turned on before the lights work.

**7** **Seat Safety Interlock Switch** (Figure 1) This switch, located in the seat, is closed by the operators weight. If the operator leaves the seat for any reason while the PTO is "ON" or the shift lever is not in "NEUTRAL" the PTO clutch and engine ignition are both shut off. When the PTO is "OFF" and the shift lever is in "NEUTRAL" leaving the seat will not cause the engine to stop.

**8** **Hydraulic Lift** (Figure 1) (Model S-14G only). This lever controls the hydraulic system used to raise and lower attachments. The lever has four positions — UP, HOLD, DOWN and FLOAT. The normal out-of-use position is the "HOLD" position, whereby the attachment will not raise or lower. When it is desired to raise the implement, move the lever to the "UP" position, to lower the attachment move the lever to the "DOWN" position. Place the lever in the "FLOAT" position to allow the attachments to follow the ground contours.

**9** **Ammeter** (Figure 1). The ammeter indicates the rate of battery charge or discharge. The indicator should register on the (+) side of the dial when the engine is running at any speed above a slow idle. When the engine is idling or with a fully charged battery, the ammeter may not show charge. Should the ammeter register on the (-) side of the dial for an extended period of time with the engine running, it indicates the alternator is not charging the battery. Check the battery connections or contact your dealer.

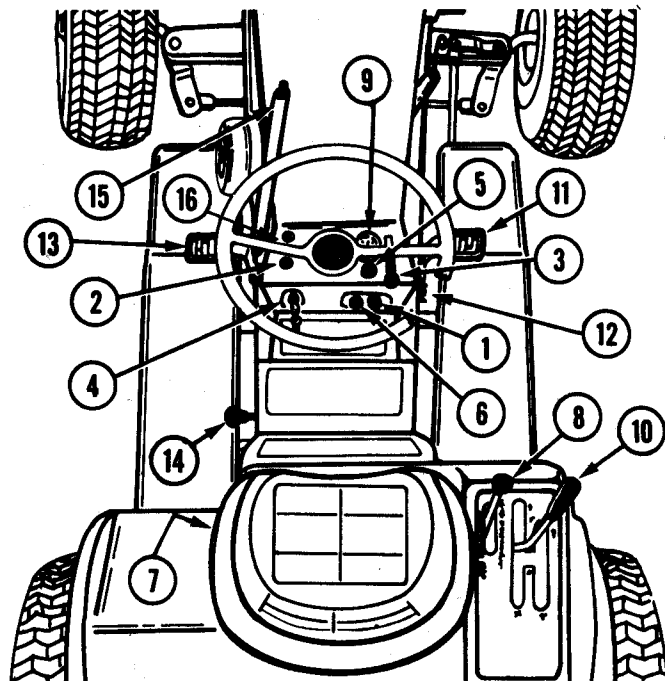


FIGURE 1

**10** **Gear Shift Lever** (Figure 1) This lever selects any of four forward speeds or reverse.  
*NOTE: This lever must be placed in the NEUTRAL position before engine will start.*

**11** **Brake Pedal** (Figure 1) When this pedal is depressed the friction brakes will be applied to stop the tractor, **DEPRESS THE CLUTCH PEDAL ⑬ BEFORE ATTEMPTING TO STOP THE TRACTOR WITH THE WHEEL BRAKES.**

**12** **Parking Brake** (Figure 1) The parking brake is a latch that locks the brake pedal. To apply the parking brake, depress the brake pedal, flip up the parking brake latch. ⑫ To disengage the parking brake, depress the brake pedal and push down the latch.

**13** **Clutch Pedal** (Figure 1) Depressing this pedal removes the idler pulley from the drive belt and disconnects the engine from the drive train. Depress the clutch to shift gears or before attempting to stop.

**14** **Lift Selector** - Connects the attachment lift to front/center or rear rock shaft. See page 12 and Figure 23 for operation.

**15** **Manual Lift Lever** (Figure 1) (Model S-10G only). To raise attachment, press the thumb release, pull lever rearward and lock in the raised position. To lower attachment, press the thumb release and move lever forward. This lever is spring loaded to the rear position when the manual lift assist springs are engaged.

**16** **Implement Reset Button** - Press to restart PTO in the event the operator leaves the seat momentarily. Under these conditions the PTO and engine ignition will be shut off. If the operator sits down before the engine stops revolving, the engine will restart, but the PTO will not start until the reset button ⑯ is pushed. If the engine stops, the normal starting procedure (Implement switch ① OFF; Shift lever ⑩ in NEUTRAL) must be followed.

# OPERATION

To run the tractor in REVERSE, shift to reverse gear.

## PRE-STARTING INSPECTION

Prior to starting the engine for each day's operation, the following checks and services should be performed:

- Check oil in engine crankcase. Add oil as required to maintain proper level.
- Check fuel supply. Use regular gasoline only.
- Check air filter for excessive dirt. Clean as required.
- Make visual check with regards to safety precautions, obstructions, lubrication, and maintenance.

## STARTING THE ENGINE

Use the following procedure to start the engine:

- Place the gear shift lever in the "Neutral" position, shown in Figure 2.

**NOTE:** This is a safety feature. The engine will not start unless the shift lever is in neutral.

- Be sure the Implement Power Control Switch (1) Figure 1, is pushed in (OFF).

**NOTE:** This is a safety feature. The engine will not start unless the switch is off (pushed in).

- Raise throttle lever (3) Figure 1, to approximately 1/3 fast position.

- Pull choke control (5) Figure 1, all the way out if engine is cold. If engine is warm, little or no choke may be required.

- Turn ignition key (4) Figure 1, clockwise all the way. Release key as soon as the engine starts and push choke button in. In cold weather it may be necessary to push choke in gradually until engine warms up. If engine fails to start on the first attempt, turn key to off, wait a few minutes and try again. Do not operate the starting motor continuously for more than 30 seconds at a time.

Always allow engine to warm up before applying load. In below freezing weather, allow engine to run at a fast idle for a period of at least 5 minutes before using the tractor. Serious internal damage to the engine could result if this procedure is not followed.

## OPERATING THE TRACTOR – GEAR SHIFT LEVER

When the gear shift lever is placed in the neutral position the interlock switch is closed and the engine can be started: the rear wheels are not in gear and the tractor may be pushed around by hand as required after releasing the parking brake.

To run the tractor FORWARD, shift to one of the four forward speeds. Speed for each gear (with engine at full throttle) is shown below:

1st Gear	.7 mph
2nd Gear	2.1 mph
3rd Gear	3.7 mph
4th Gear	5.4 mph
Reverse Gear	2.9 mph

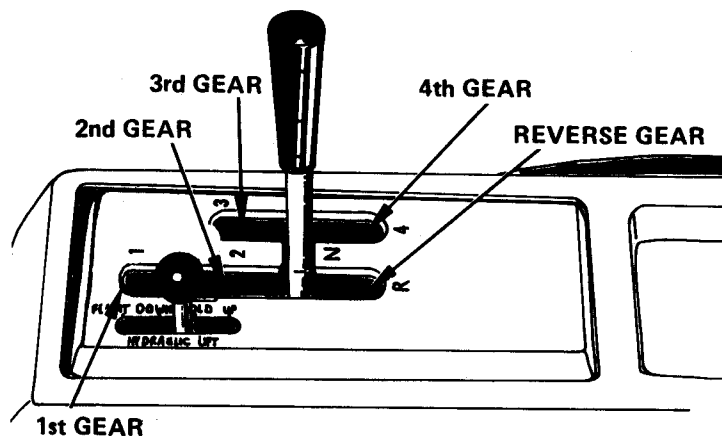


FIGURE 2

In general, best results will be secured by running the tractor engine at full throttle while selecting the gear that gives the desired ground speed. This insures that the attachment operates at maximum efficiency.

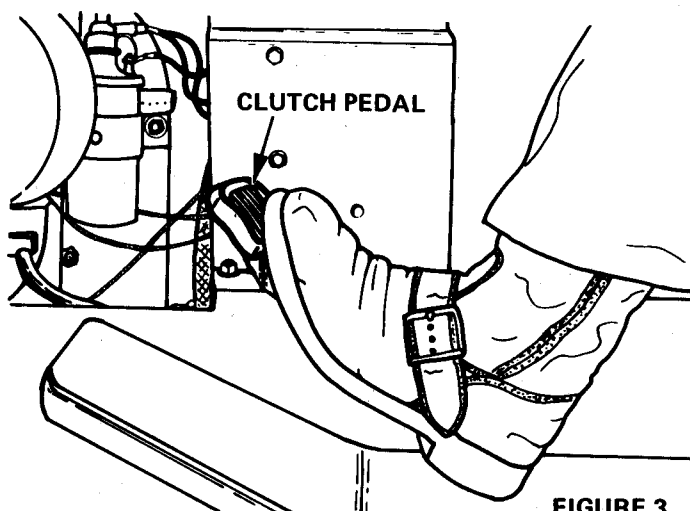


FIGURE 3

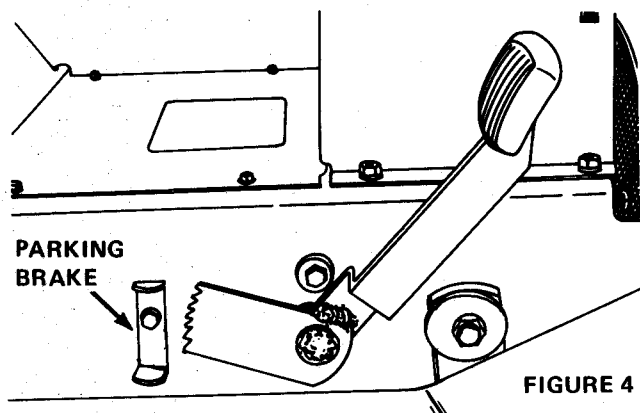
## THROTTLE LEVER SETTING

When operating power driven attachments such as the mower, snow thrower or the rotary tiller, run the engine at full throttle unless the attachment operator's manual specifies otherwise. Use the shift control lever, not the throttle lever to select a safe travel speed when using power driven attachments.

Safe or proper travel speed depends on the attachment used as well as the type of terrain or lawn, field and garden conditions in which the tractor is operated.

## STOPPING THE TRACTOR

To stop the tractor, depress the clutch pedal (13) and depress the brake pedal (11). Then place the shift lever in the "Neutral" position and set the parking brake. Figure 4.



## STOPPING THE ENGINE

Always use the following procedure to stop the engine:

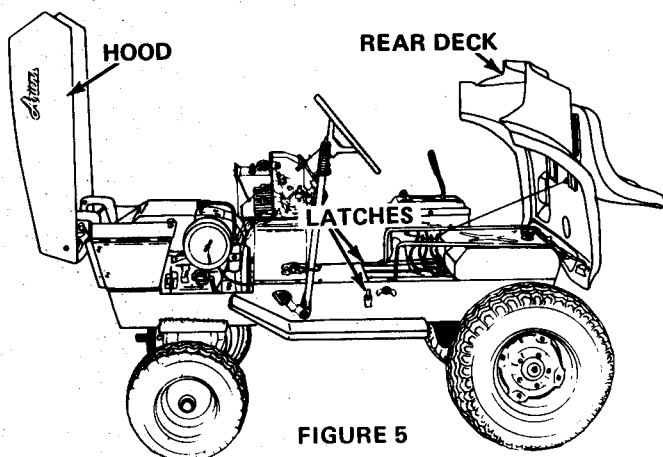
1. Move the gear shift lever (10) Figure 1, in "Neutral" position, depress the brake pedal and set the parking brake (Figure 4).
2. Disengage Implement Power Control Switch (1) Figure 1, and rear driven attachments.
3. Lower attachment so that it is resting on the floor or ground.
4. Lower the throttle lever (3) Figure 1, and allow engine to idle for a short period before turning it off.
5. Turn the ignition key (6) Figure 1, counterclockwise to stop engine.



**IMPORTANT** — Remove ignition key before dismounting from tractor. This will prevent children and inexperienced operators from starting the tractor.

## RAISING THE REAR DECK

The transaxle and control linkage are readily accessible by raising the rear deck, shown in Figure 5. To raise the rear deck, place the shift control lever in the "Neutral" position, release the two latches and raise the rear deck to its stop.



**CAUTION:** Always shut off engine before raising the rear deck. Be sure to lock the rear deck down with the latches provided before operating the tractor.

## RAISING THE HOOD

The engine, battery and electrical components are readily accessible by raising the hood, see Figure 5. To raise the hood grasp each side and raise it up and forward to its stop.



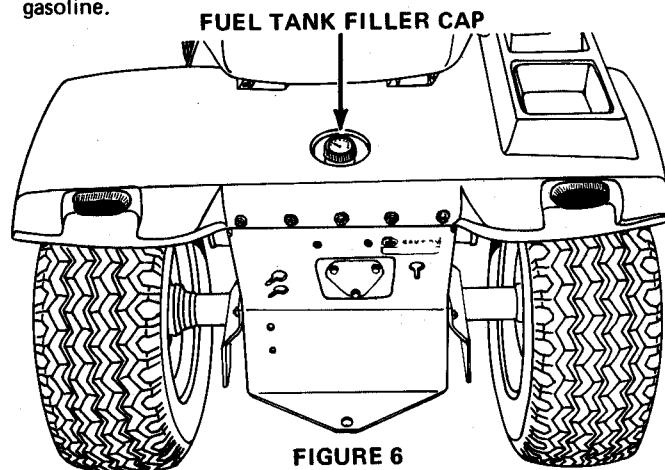
**CAUTION: ALWAYS SHUT ENGINE OFF BEFORE RAISING HOOD. NEVER TOUCH MUFFLER, EXHAUST PIPE OR ENGINE UNTIL THEY HAVE HAD TIME TO COOL AFTER OPERATING THE ENGINE.**

## FILLING THE TANK

The fuel tank filler cap is located behind the seat, see Figure 6. Wipe the dust and dirt from around the cap before removing it to prevent dirt from falling into the tank while filling. Use an approved gasoline container and keep it clean.

The fuel tank capacity is 4.5 gallons.

Use regular grade gasoline. Be sure the gasoline is clean and fresh. Do not use premium gasoline. Do not mix oil with gasoline.



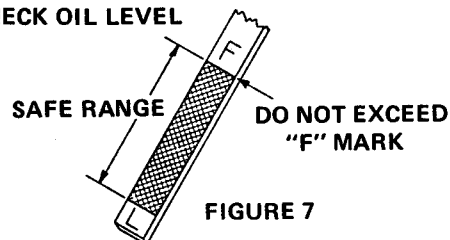
# LUBRICATION

## ENGINE

Check the engine crankcase oil level daily or every 5 hours operation. It is essential that the oil level be maintained in the "safe" operating range as shown in Figure 7 at all times or serious engine damage could result.

To check the oil, stop engine and wipe all dirt and dust from around the dip stick, Figure 8. Pull dip stick out, wipe off the oil, re-insert dip stick and push it down tight. Pull the dip stick out and observe the oil level. Add sufficient oil of the proper viscosity to bring the oil up to the "fill" (F) mark, see Figure 7. Be sure tractor is level when checking oil.

## CHECK OIL LEVEL



**DO NOT OVERFILL** — Oil level must never exceed full mark. Oil capacity of the engine crankcase is 4 U.S. pints.

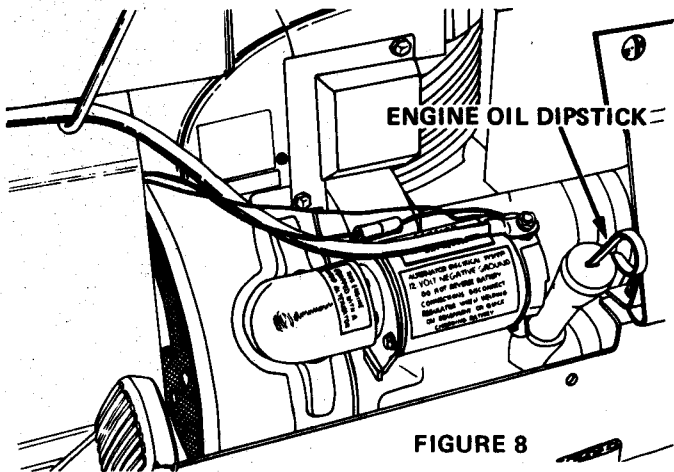


FIGURE 8

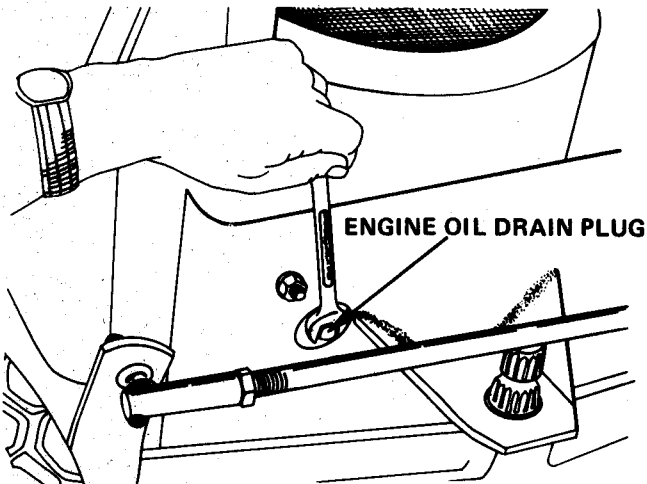
Use Ariens Gard-N-Yard oil (SAE 10W-30 SE classification) when using lawn and garden attachments. Use Ariens Sno-Thro oil (SAE 5W-20 SE classification) when using snow removal attachments.

### CHANGE ENGINE OIL

When the tractor is new, the oil should be changed after the first 5 hours of operation.

Under normal operating conditions, the oil should be changed every 25 hours of operation. If extremely dusty or dirty conditions prevail, change oil more frequently, use a filter precleaner, consult Engine Manual.

Drain the crankcase by removing the drain plug, shown in Figure 9, and allow the oil to drain into a container. If possible, run engine just prior to changing oil, as the oil will flow more freely and carry away more contamination when hot.



NOTE: Bottom of engine shown. FIGURE 9

Replace drain plug. Remove dip stick and refill crankcase with 4 U.S. pints of oil. Check oil on the dip stick to see that the oil level is at the full (F) mark. Do not overfill.

### TRANSAXLE OIL GRADE AND VISCOSITY

Ariens MP-90 Gear Lube or an equivalent oil meeting the requirements of the American Petroleum Institute (A.P.I.) should be used. Oil viscosity (weight) should be SAE 90 and is recommended for year-round use.

### TRANSAXLE OIL LEVEL

The oil level in the transaxle should be checked every 25 hours of operation or monthly.

Use the following procedure to check the transaxle oil level:

1. Drive tractor onto level ground.
2. Stop engine.
3. Wipe dirt from around the oil level filler plugs. See Figure 10.
4. Remove filler plug. Oil level should level with the filler plug hole, see Figure 10.
5. If necessary, use a small funnel to add sufficient MP-90 oil to bring the oil up to the proper level. Replace plug.

Be very careful to prevent dirt and foreign materials from entering the transaxle when checking or adding oil.

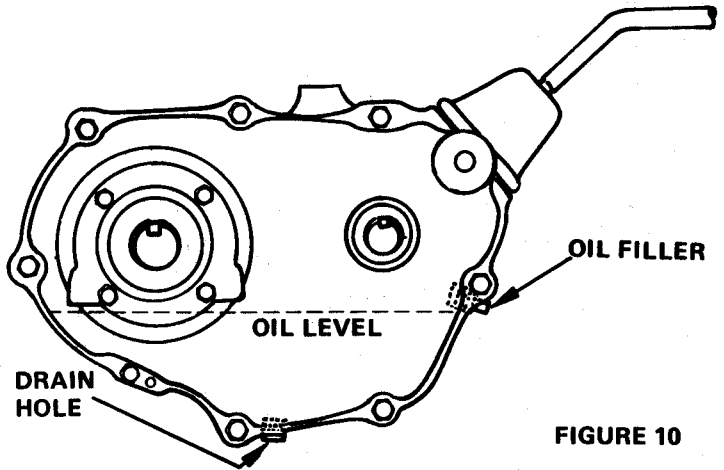


FIGURE 10

### HYDRAULIC LIFT OIL LEVEL (Model 931013 only)

The hydraulic lift system should seldom require additional hydraulic fluid unless a leak should develop. The hydraulic fluid is stored in a reservoir/cooler located under the floor panel in front of the seat. To check oil level, drive the tractor on to level ground; move the hydraulic lift lever to the "DOWN" position until the lift cylinder is fully retracted. Remove the panel. The hydraulic reservoir is now exposed. Clean away all dirt and remove the pipe plug at the front of the reservoir. The oil level should be to the bottom of the edge as shown in Figure 11. Rock the machine while looking down the fill hole to be sure of the oil level position. If additional oil is required, fill to the proper level with SAE 10W-30 Gard-N-Yard oil or equivalent by removing the top plug, adding oil, and removing the front plug, again, to set the oil level. Replace all pipe plugs, clean excessive dirt from the cooler fins and replace floor panel.

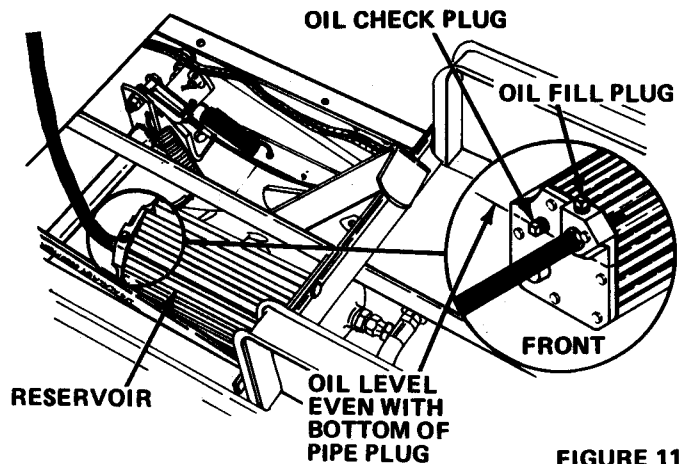


FIGURE 11

## GREASE STEERING SYSTEM

Under normal conditions the steering system should be lubricated every 50 hours of operation or quarterly whichever occurs first. The following list of grease fittings are identified in Figure 12. Wipe each fitting clean before and after lubrication! Use a good grade of general purpose grease such as Ariens Multi-Purpose grease.

Rotate steering wheel clockwise until the spindle arm contacts the axle stop and fill gearbox until grease is forced out around the cam follower adjusting screw.

- ① Steering gearbox.
- ② Left king pin.
- ③ Front L.H. Wheel
- ④ Axle pivot
- ⑤ Right king pin.
- ⑥ Front R.H. Wheel

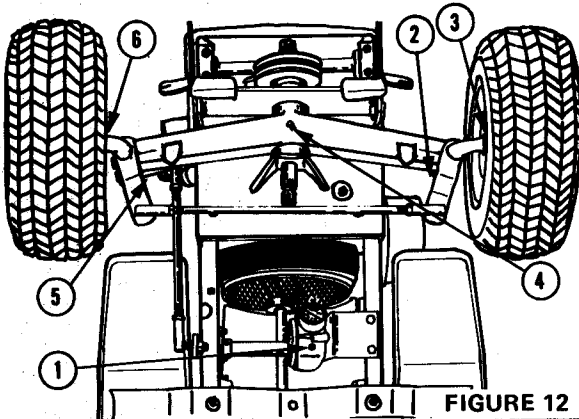


FIGURE 12

## MAINTENANCE

**NOTE THAT ALL ENGINE SERIAL NUMBERS HIGHER THAN THOSE LISTED BELOW HAVE A GOVERNOR SETTING OF 3250 RPM, NO LOAD (+ 75 RPM). IDLE SET AT 1600 RPM, NO LOAD.**

10 H.P. MODEL NO. K241S SERIAL NO. 7541007  
14 H.P. MODEL NO. K321S SERIAL NO. 8117916

### OUR METER

The hour meter is available as an optional accessory for all Ariens Garden Tractors models.

The hour meter is located under the engine hood, on the right side, just ahead of the dash panel. The hour meter will record the actual time the engine operates. Keep a record of hour meter readings in order to perform Maintenance and Lubrication services at the recommended hourly intervals.

### AIR FILTER SERVICE

Check the air filter daily or every 5 hours of operation. When operating in extremely dusty conditions, check the air filter daily. A precleaner is available. Consult the Engine Manual.

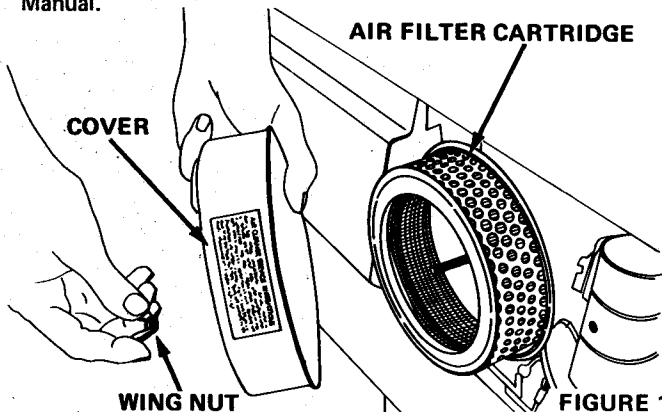


FIGURE 13

To clean the cartridge, remove the wing nut and the cover, shown in Figure 13, and then remove the cartridge. Gently tap the cartridge on a flat surface. Do not use any liquid cleaner to wash cartridge. Do not use compressed air to remove dirt as this may rupture the cartridge.

Examine cartridge carefully and replace it with a new one if it is bent, crushed or if there is a noticeable loss of power. Re-assemble cartridge and cover making sure it seats around the back plate. Install wing nut and tighten finger tight.



**IMPORTANT:** Do not run engine with air filter removed.

### BATTERY SERVICE

Check the battery electrolyte level once each month. Add distilled water to bring the level to the bottom of the split ring in the filler tube of each cell.

Each spring and fall remove corrosion from the terminals and apply a light coat of grease to the terminals. Keep battery cables securely tightened to terminals and be sure battery is properly fastened down in battery holder at all times. Keeping battery clean will prolong battery life.

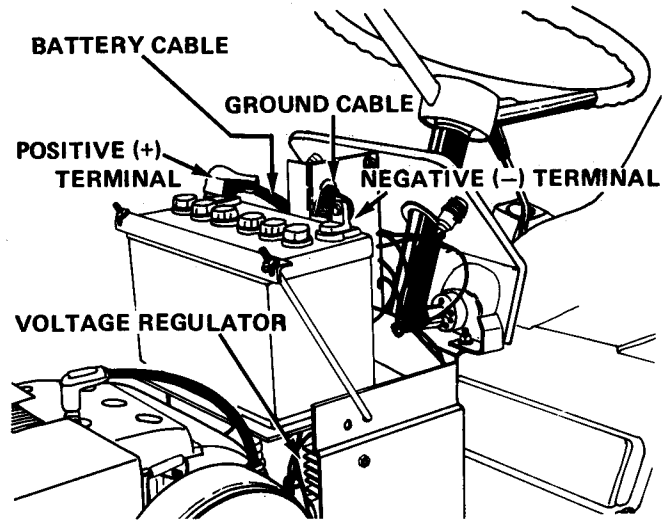


FIGURE 14



**CAUTION:** Storage batteries give off highly inflammable hydrogen gas. Do not allow sparks or flame near battery. Do not lay tools across battery terminals which may cause a spark resulting in an explosion.

Maintain the battery at full charge during storage and during winter months to prevent freezing. When water is added during freezing weather, run the engine at least one hour to thoroughly mix the water and electrolyte.

When installing the battery, make certain that the ground cable is connected to the negative (-) terminal on the battery, see Figure 14. Be sure the battery cable is connected to the positive (+) terminal.



**WARNING:** Reversed battery cables or reversed cables from a battery charger or booster battery can cause damage to the regulator rectifier (Figure 16). Always disconnect plug from the regulator rectifier before using a charger, booster battery or when electric welding is done on the tractor.



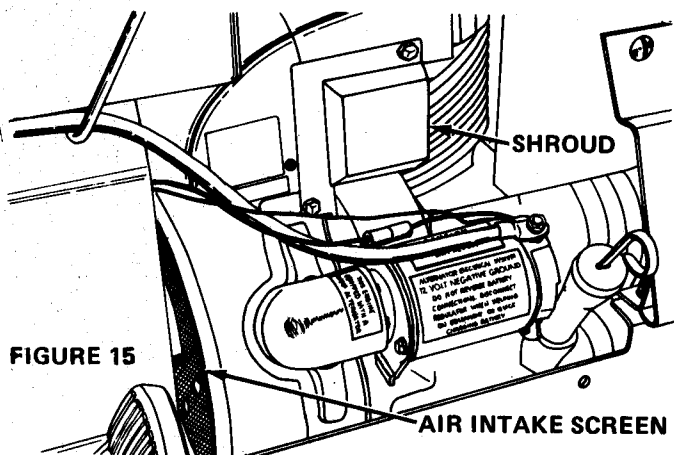


FIGURE 15

The engine is air cooled. Air must circulate freely around the engine from the air intake screen shown in Figure 15 and over the cooling fins in the cylinder head and block to prevent overheating.

Every 50 hours of operation or quarterly check the air intake screen. Wipe away any dirt or debris which has collected on the screen. Remove the shroud, Figure 15 and inspect the cooling fins. Remove any dirt, or chaff accumulations from the cooling fins with compressed air. Replace shroud.

#### TIRE PRESSURES

Check tire pressure at least once each month. Inflate tires to pressures shown in the chart below. Use a low pressure tire gauge for accurate readings.

TIRE SIZE	LOADING		
	Light (Lawn Work)	Medium (Sno-Thro)	Heavy
Front 16 x 6.50 x 8	8 p.s.i.	12 p.s.i.	16 p.s.i.
Rear 23 x 8.50 x 12 23 x 10.50 x 12	6 p.s.i. (Lawn Work)	8 p.s.i. (Rotary - Tiller)	10 p.s.i.

Keep tires properly inflated at all times. Over-inflation will cause operator discomfort. Under-inflation will cause short tire life. Always see that the tire valve caps are in place and securely tightened to prevent air loss.

#### FUEL PUMP AND FILTER

The engine may fail to start due to lack of fuel at the carburetor if the fuel pump shown in Figure 16 loses its prime. This can occur when the fuel tank is run dry or may be due to evaporation of fuel from the system after a storage period. In either case, make certain there is fresh fuel in the tank and operate the priming lever on the fuel pump several times to start fuel flow.

If a faulty fuel pump is suspected, see your Ariens dealer.

When dirt or other foreign material is allowed to enter the fuel tank it will collect in the fuel filter shown in Figure 16. This will eventually cause fuel stoppage. The filter can be disassembled and cleaned.

### LUBRICATION AND PERIODIC SERVICE SCHEDULE

Hours of Operation/ Time Interval	Service Required
Every 5 Hours or Daily	Check Engine Crankcase Oil Service Engine Air Filter
Every 25 Hours or Monthly	Service Battery Check Tire Pressures Check Transaxle Oil Level Change Engine Oil Clean Park Lock Assembly Grease Steering System
Every 50 Hours or Quarterly	Clean Reservoir/Cooler Fins Check Spark Plug
Every 250 Hours or Yearly	Clean Fuel Filter

*NOTE: When tractor is new, change the engine oil after the first five hours of operation.*

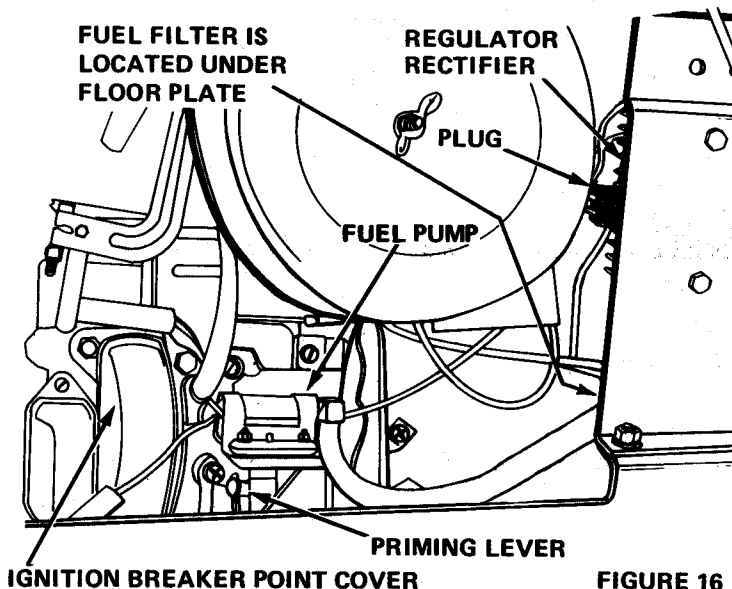


FIGURE 16

## ADJUSTMENTS



**CAUTION: ARIENS RECOMMENDS THE CUSTOMER CONSULT HIS LOCAL ARIENS DEALER FOR PROPER ADJUSTMENTS. THE USE OF IMPROPER TOOLS OR INCORRECT ADJUSTMENT COULD RESULT IN DAMAGE TO THE TRACTOR OR INJURY TO OPERATOR.**

#### SEAT ADJUSTMENT

The seat is adjustable forward and backward to seven positions. To adjust seat position, grasp seat back and raise seat. Slide the seat forward or backward as required to the most comfortable position.

#### FRONT WHEEL TOE-IN ADJUSTMENT

Proper toe-in of the front wheels is necessary to assure proper steering and to reduce tire wear. The proper amount of toe-in is when the front of the wheels are 1/16" to 1/8" closer together than the rear of the wheels, measured at the horizontal centerline of the rim flange.

If the steering develops a wandering characteristic or if excessive tire wear develops, the toe-in of the front wheels should be checked. If the toe-in is incorrect, adjust as follows:

1. Loosen jam nuts A and B, Figure 19.
2. Rotate tie-rod until toe-in is correct. Shorten tie-rod to decrease toe-in. Lengthen it to increase toe-in.
3. Tighten jam nuts A and B after correct toe-in is obtained.

### BRAKE ADJUSTMENT

The tractor brakes will require adjustment when the brake pedal depresses over two inches. To adjust the brakes proceed as follows:

1. Block up the rear of the tractor with the wheels off the ground.
2. Remove the wheel lug nuts and remove the wheel.
3. Insert a screw driver in the slot in the brake drum (See Figure 17) and tighten the star washer until the brakes are snug and the drum does not turn. Back off the star washer one full turn.
4. Replace the wheel and secure with the wheel lug nuts. Repeat adjustment on the opposite wheel.

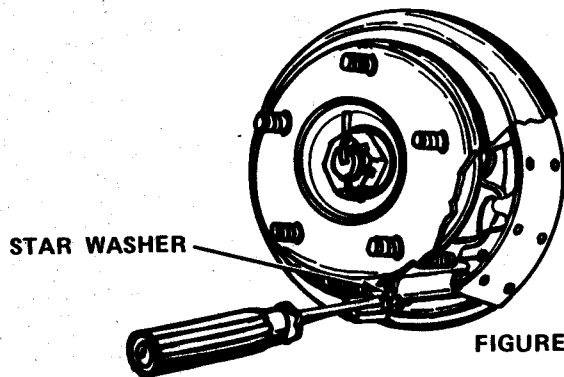


FIGURE 17

### STEERING GEAR ADJUSTMENT

If loose play is noticed in the steering system after continued use, the steering gear may require adjusting to remove excessive backlash between the gears. Adjust steering gear using the following procedure:

1. Raise front of tractor so that the tires clear the ground.
2. Remove cotter pin identified in Figure 19.
3. Loosen jam nut C, Figure 19 and turn adjusting screw out (counter-clockwise) 1½ turns.
4. Tighten adjusting plug, Figure 19, to 10-14 ft. lbs. of torque.
5. Rotate adjusting plug out slightly to align nearest slot in the plug with the cotter pin hole and reinstall the cotter pin.
6. Hold jam nut and turn adjusting screw, Figure 19, clockwise (in) until backlash is removed from steering wheel. **DO NOT FORCE ADJUSTING SCREW.** Torque jam nuts 35-45 ft. lbs. while holding adjusting screw in position.
7. Turn steering wheel from lock to lock and check for binding or dragging inside gearbox. If any binding or dragging exists, it will be necessary to loosen the adjusting screw and/or the adjusting plug slightly until steering wheel turns freely with no loose play.

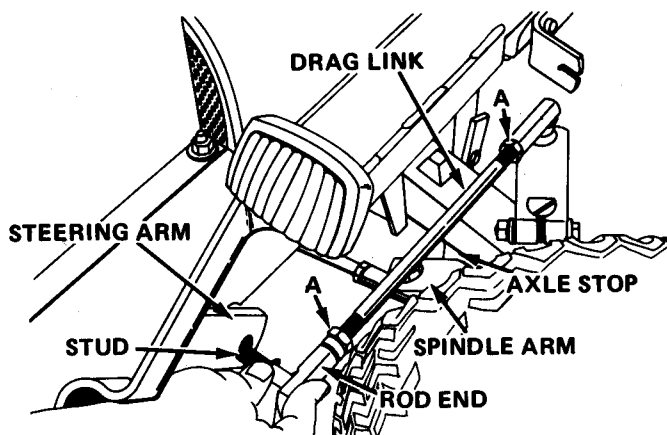


FIGURE 18

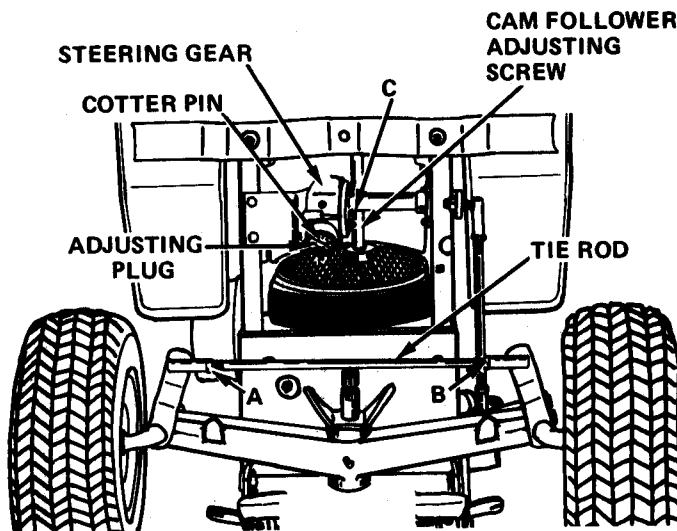


FIGURE 19

### STEERING STOP ADJUSTMENT

When making a full right hand turn, the spindle arm should contact the axle stop as shown in Figure 18. When making a full left hand turn, the left spindle arm should contact the left axle stop. Proceed as follows to adjust the steering stops.

1. Rotate front wheels to the right until right spindle arm contacts the axle stop, Figure 18.
2. Remove drag link rod end from steering arm, Figure 18, and loosen jam nuts A.
- 2a. Rotate steering wheel clockwise until steering gear bottoms. Back off 1/8-1/4 turn counter clockwise.
3. Rotate drag link as required while preventing the loose rod end from turning until the stud is approximately ½ hole to the rear of hole in steering arm, Figure 18. Be sure axle stop contacts steering arm.
4. Reinstall rod end stud in steering arm and tighten jam nuts A.
5. Rotate wheels completely to the left. The left spindle arm should contact left axle stop. If it does not, repeat step 2 and shorten drag links slightly until both spindle arms contact their respective axle stops when making full turns in either direction.

## REAR WHEEL TREAD ADJUSTMENT

The rear wheels are normally assembled in the narrow tread position, shown in Figure 20. The wheels can be turned on the hubs for a wider tread. The wide tread provides greater stability on hillsides and on rough terrain.

Remove the wheel lug nuts, turn the wheels around with the valve stems inward and re-assemble on the hub.

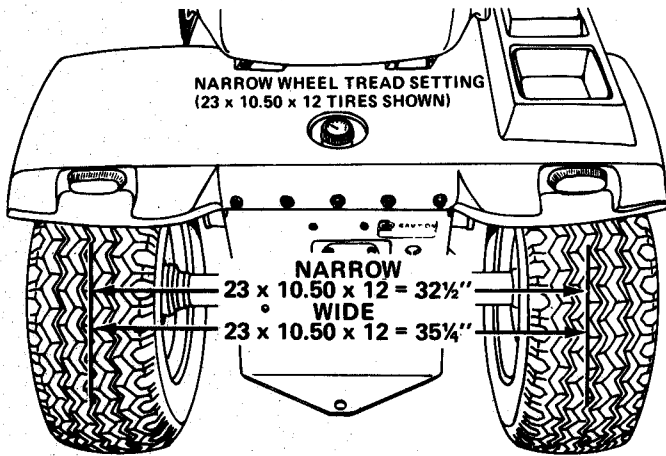


FIGURE 20

If Chevron tread tires are used, remove the wheel lug nuts and re-assemble the wheels on opposite sides of the tractor with the valve stems turned inward. Interchanging the wheels is necessary to maintain proper direction of rotation for traction tires.

## MANUAL LIFT OPERATION

Manual Lift Lever (Figure 21) (Model S-10G only). To raise attachment, depress thumb release and pull lever to the rear until the locking pin engages in the proper quadrant notch to obtain desired attachment height. To lower attachment, depress thumb release and push lever forward. After the attachment touches the ground the force from the lift assist springs will resist the forward motion of the lift lever. The amount of resistance is relative to the spring adjustment.

The two springs shown in Figure 24 are used to provide lift assist. The tension on these springs should be adjusted using the chains shown in Figure 22, so the front mounted attachments can be raised or lowered with the lift lever by the operator.



**CAUTION: WHEN ADJUSTING CHAIN TENSION ALWAYS GRASP CHAIN HANDLE FIRMLY (NOT THE CHAIN) AS CONSIDERABLE TENSION IS ON THE CHAIN AND INJURY TO THE HANDS COULD RESULT.**

The center rock shaft shown in Figure 24 is used to raise and lower the rotary mower. This rock shaft is connected to the manual lift lever through the link. The connection at the rock shaft is made through the slotted hole which allows the rock shaft to move up and down when in the lowered position, allowing the mower to float without causing the lift lever to move.

The center rock shaft pan flotation spring, shown in Figure 24 provides mower flotation. The tension on the spring can be increased or decreased by presetting the latch bar to a different notch when the pan is fully raised. The bottom notch provides the greatest flotation.

The front/center or rear rock shaft is selected for operation by the manual lift lever by the lift selector knob, Figure 23. To change selection, locate selector knob to proper end and rotate the mechanical lift lever past the last notch to the overtravel area. This allows the selector latch to change position. This allows a rear attachment to be used without removing the front/center attachment, or vice versa.

## HYDRAULIC LIFT OPERATION

The hydraulic lift system is standard equipment on the S-14G.

The hydraulic control lever is located on the control console, shown in Figure 2. It is a four position lever to perform four functions, UP, HOLD, DOWN and FLOAT. The normal out-of-use position is the "HOLD" position whereby the attachment will not lower or raise. When it is desired to raise the attachment, the lever is pulled to the "UP" position and the cylinder is actuated to lift the attachment. When the lever is moved to the "DOWN" position, the oil pressure in the cylinder is reversed and the cylinder forces the attachment down.

When an attachment is being used which is designed to follow ground contours, the lever should be placed in the "FLOAT" position. The cylinder is then free to move as the attachment position requires.

Figure 25 shows the components of the hydraulic lift system. The hydraulic pump supplies the oil flow from the oil reservoir/cooler. Oil flow to and from the cylinder is controlled by the valve.

When the cylinder is extended or retracted, the bell crank pivots and raises or lowers both the front and center rock shafts at the same time through the front and center rock shaft linkages shown in Figure 25. The connection to the center rock shaft is made through the slotted hole which allows the center rock shaft to move up and down, allowing the mower to float independent of the flotation provision in the hydraulic system.

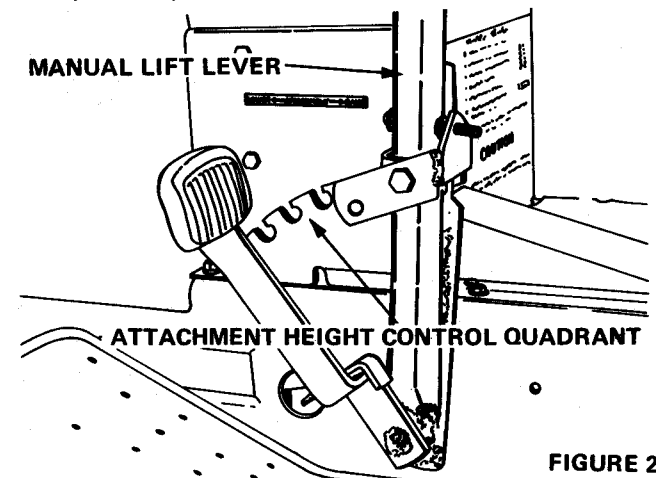
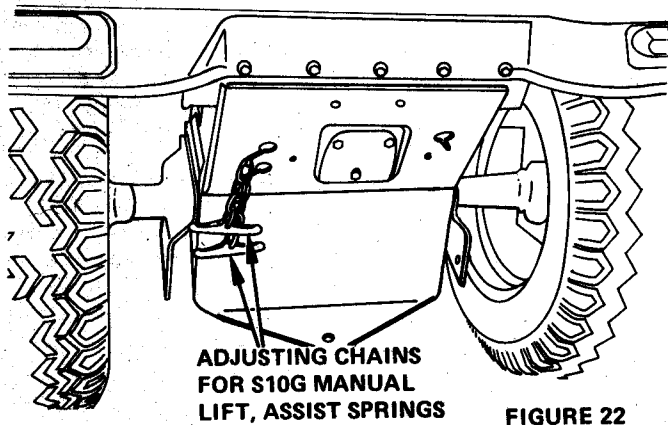


FIGURE 21

The center rock shaft pan flotation spring shown in Figure 25 provides mower flotation. The torsion on the spring can be increased or decreased by presetting the latch bar to a different notch when the pan is fully raised. The bottom notch provides the greatest flotation.

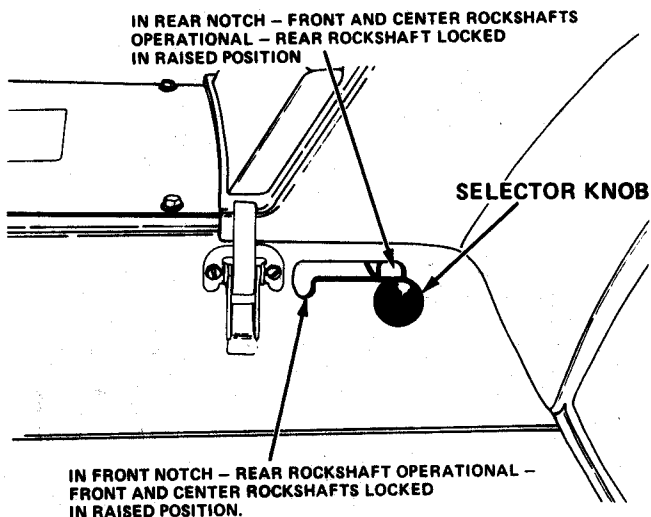


**FIGURE 22**

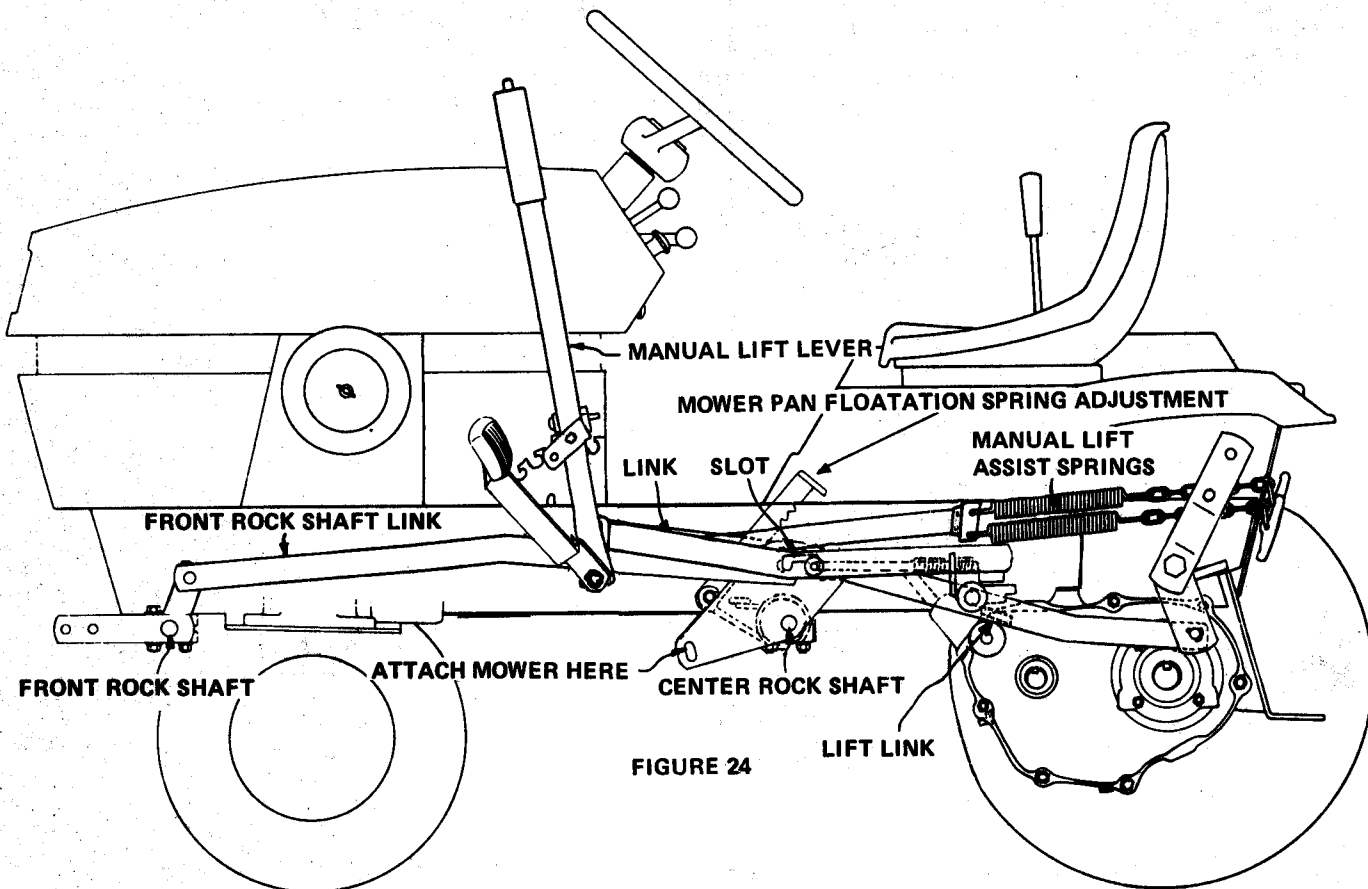
**CAUTION** - WHEN ADJUSTING CHAIN TENSION ALWAYS GRASP CHAIN HANDLE FIRMLY (NOT THE CHAIN) AS CONSIDERABLE TENSION IS ON THE CHAIN AND INJURY TO THE HANDS COULD RESULT.

**HYDRAULIC LIFT REAR ROCK SHAFT**

The rear rock shaft comes with a lift selector device so that the front and center rock shafts can be operated independently of the rear rock shaft while utilizing only one hydraulic cylinder. The alternately latched, split lift linkage system holds the front and center rock shafts in their raised positions while the rear rock shaft is operated by the cylinder or vice versa. This allows a rear mounted attachment to be used without removing the front or center mounted attachments and vice versa.



**FIGURE 23**



**FIGURE 24**

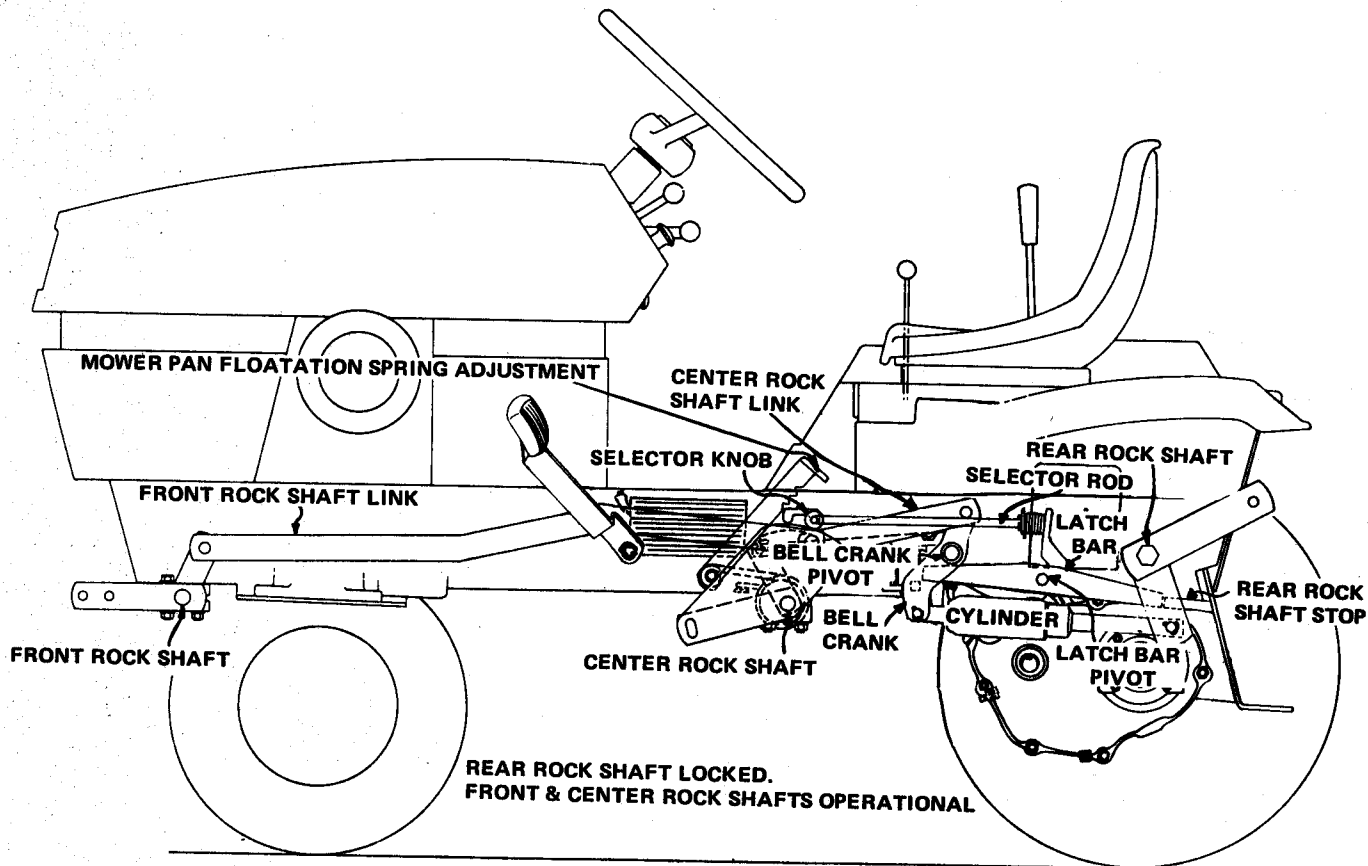


FIGURE 25

## STORAGE

### PREPARATION FOR STORAGE

1. Remove all oil, grease and dirt from engine and transmission.
2. Clean the tractor exterior and tires thoroughly, removing all mud, dirt and grease.
3. Touch up all unpainted and exposed areas with paint to prevent rust.
4. Change engine oil.
5. Disconnect fuel line at fuel filter and drain fuel tank. Run the engine until the fuel is exhausted from the system. Drain the carburetor by loosening the nut on the bottom of the carburetor bowl. Clean the fuel filter.
6. Remove and clean the battery. Check electrolyte level and have battery fully charged. Store battery in a cool, dry place where it will not freeze.
7. Remove the spark plug and pour one tablespoon of SAE 30 oil into the cylinder. Turn engine over manually at least two revolutions.

8. Re-gap spark plug. Replace if required.

9. Grease the steering system.

10. Store tractor in a cool, dry place to reduce tire deterioration. Block up tractor to take the weight off the tires.

11. Inspect tractor for visible signs of wear, breakage or damage. Order any parts required and make necessary repairs to avoid delays when starting next season.

*NOTE: Your authorized Ariens dealer is trained and equipped to service your tractor. A periodic check-up by your dealer will help to reduce your maintenance costs.*

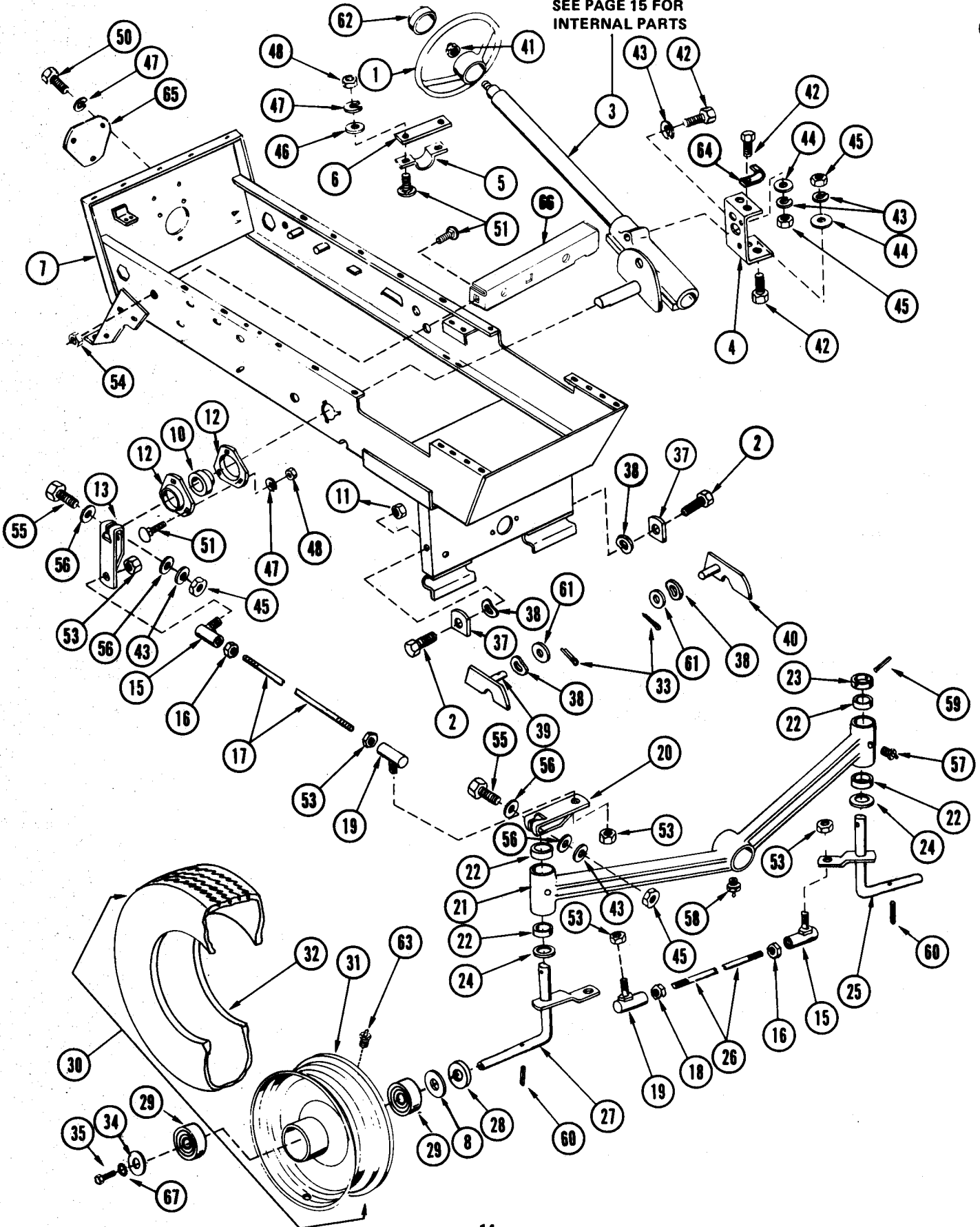
### PREPARATION FOR USE AFTER STORAGE

1. Replace battery and check electrolyte level.
2. Fill fuel tank with fresh, clean regular gasoline.
3. Check transmission oil level.
4. Check tire inflation.
5. Check oil level in hydraulic reservoir - Model 931013 only.

# FRAME, STEERING, FRONT WHEEL

GEAR MODELS 931013 & 931014

SEE PAGE 15 FOR  
INTERNAL PARTS

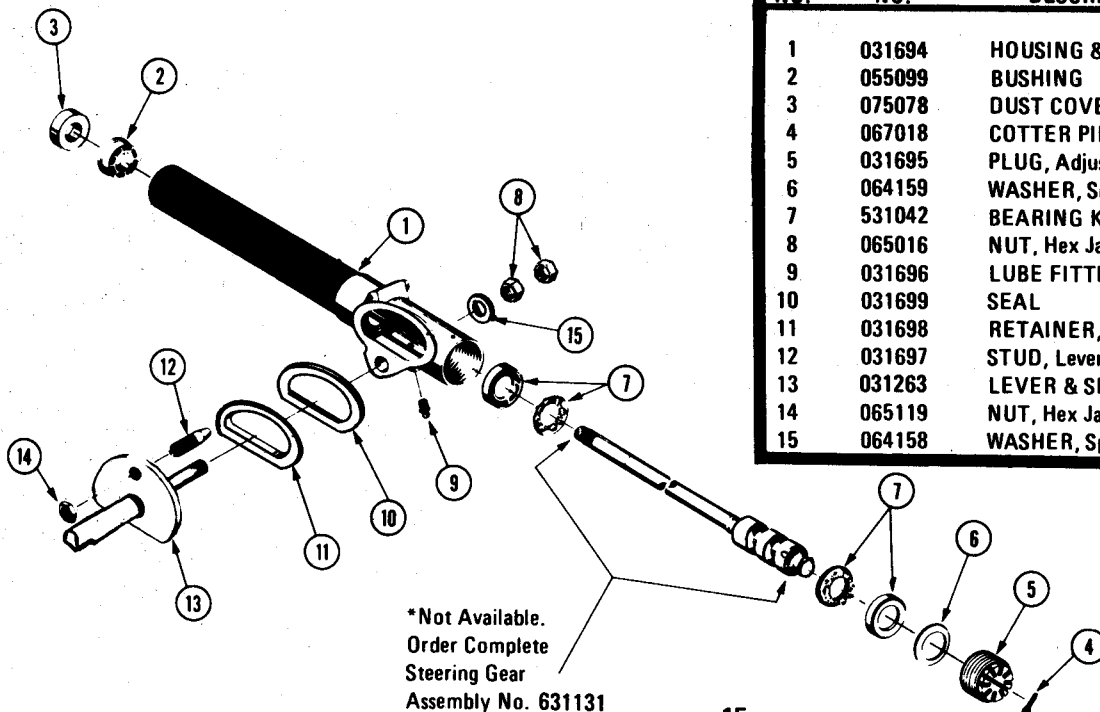


# FRAME, STEERING, FRONT WHEEL

## GEAR MODELS 931013 & 931014

REF NO.	PART NO.	DESCRIPTION	NO REQ'D	REF NO.	PART NO.	DESCRIPTION	NO REQ'D
1	031084	STEERING WHEEL	1	34	031568	WASHER, SPECIAL	2
2	059004	CAP SCREW, HH, 3/8 - 16 x 1	2	35	059154	CAPSCREW, 3/8 x 6 x 3/4 Grade 5	2
3	631131	STEERING GEAR ASS'Y	1	36	063006	LOCKWASHER, 1/2"	1
4	031173	BRACKET, Mounting	1	37	029013	LOCK STOP	2
5	031038	CLAMP	1	38	029024	WASHER, Spring	4
6	031049	PAD	1	39	029014	LATCH R.H.	1
7	531065	FRAME (for Model 931014)	1	40	029015	LATCH L.H.	1
	531066	FRAME (for Model 931013)	1	41	065117	NUT, Hex Jam, 5/8"	1
8	064063	WASHER	AR	42	059145	CAP SCREW, HH, 3/8 x 1" GR.5	7
10	054101	BALL BEARING	1	43	063021	LOCKWASHER, 3/8"	8
11	065098	LOCKNUT, 3/8"	2	44	064008	WASHER, Flat, 3/8"	4
12	031020	BEARING FLANGE	2	45	065018	NUT, Hex, 3/8"	5
13	031262	STEERING ARM	1	46	064002	WASHER, Flat, 5/16"	2
14	064126	WASHER, 2" OD. x 9/16" ID x .135 Thick	1	47	063003	LOCKWASHER, 5/16"	8
15	031130	BALL JOINT, L.H.	2	48	065015	NUT, Hex, 5/16"	5
16	065105	NUT, Hex Jam 1/2" - 20 UNF (L.H.)	2	50	059022	CAP SCREW, HH, 5/16 x 3/4	3
17	031929	DRAG LINK, 11-1/8" Long	1	51	062015	BOLT, Carriage, 5/16 x 1"	7
18	065044	NUT, Hex Jam 1/2 - 20 UNF (R.H.)	6	52	059146	CAP SCREW, HH, 1/2 x 1-1/4" GR. 5	1
19	031129	BALL JOINT, R.H.	2	53	065121	LOCKNUT	5
20	031175	STEERING ARM	1	54	065042	LOCKNUT	2
21	531011	FRONT AXLE W/BUSHING, ZERKS	1	55	059152	CAP SCREW, HH, 3/8 x 2-1/2	1
22	055091	BUSHING	4	56	064131	WASHER, Flat, 3/8"	2
23	031140	SPINDLE COLLER, L.H.	1	57	022093	ZERK FITTING	2
24	075067	WASHER, 1-1/32 ID x 1-3/4 OD. x .060 Thick	2	58	031121	ZERK FITTING, 90°	1
25	031552	SPINDLE, L.H.	1	59	058037	ROLL PIN, 1/4 x 1-3/4	1
26	031169	ROD, 18-1/2" Long	1	60	058004	ROLL PIN	2
27	031551	SPINDLE, R.H.	1	61	064043	WASHER	2
28	064029	WASHER	2	62	031083	CAP	1
29	054121	RADIAL BEARING	4	63	010353	ZERK FITTING	2
30	631084	FRONT WHEEL ASS'Y - Consists of	2	64	069094	CLAMP	1
31		071110 RIM	1	65	031031	COVER	1
32		071103 TIRE	1	66	031734	BRACE	1
33	067024	PIN, cotter 1/8 x 3/4	2	67	063030	LOCKWASHER EXT.	2

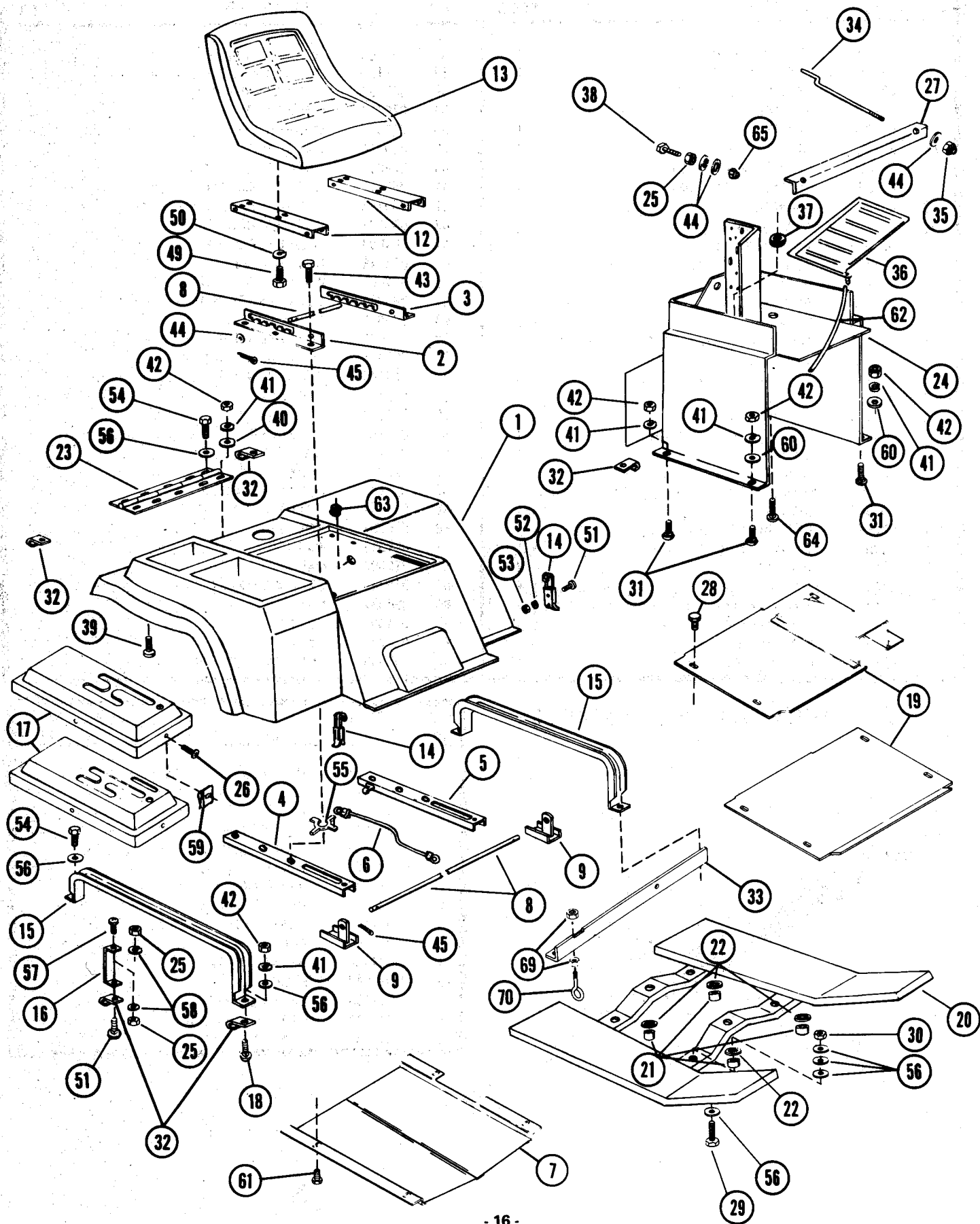
## STEERING GEAR ASSEMBLY



REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D
1	031694	HOUSING & TUBE ASSEMBLY	1
2	055099	BUSHING	1
3	075078	DUST COVER	1
4	067018	COTTER PIN, 1/8" x 1/2"	1
5	031695	PLUG, Adjusting	1
6	064159	WASHER, Special	1
7	531042	BEARING KIT	2
8	065016	NUT, Hex Jam, 3/4"	2
9	031696	LUBE FITTING, 1/4" Straight	1
10	031699	SEAL	1
11	031698	RETAINER, Seal	1
12	031697	STUD, Lever	1
13	031263	LEVER & SHAFT	1
14	065119	NUT, Hex Jam, 9/16"	1
15	064158	WASHER, Special	1

# REAR DECK, SEAT, DASH SUPPORT, RUNNING BOARD

GEAR MODELS 931013 & 931014





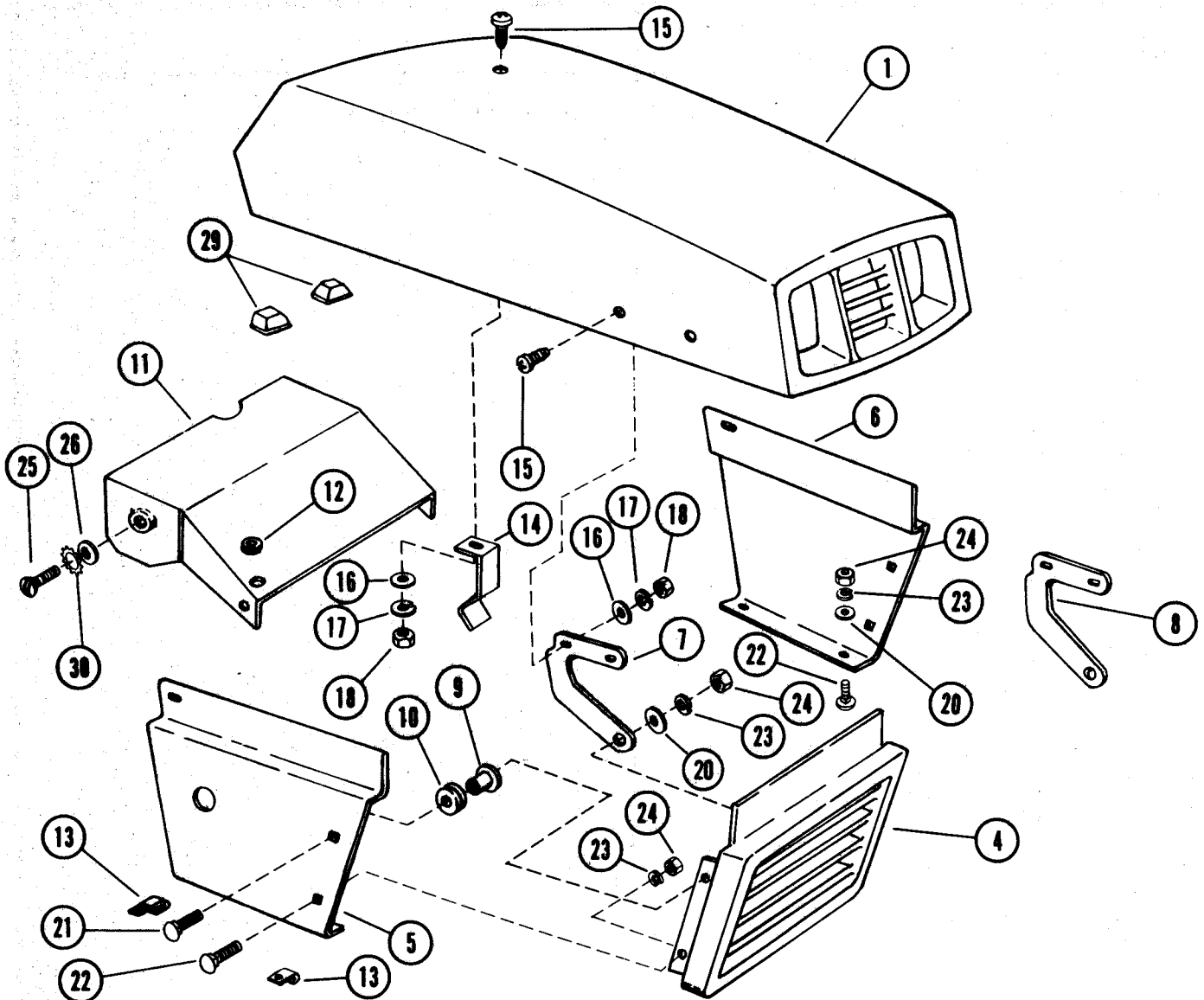
# REAR DECK, SEAT, DASH SUPPORT, RUNNING BOARD

GEAR MODELS 931013 & 931014

REF NO.	PART NO.	DESCRIPTION	NO REQ'D	REF NO.	PART NO.	DESCRIPTION	NO REQ'D
1	031713	REAR DECK	1	35	065070	NUT, Crown	2
2	031132	SEAT BRACKET, right hand	1	36	031701	BATTERY TRAY	1
3	031133	SEAT BRACKET, left hand	1	37	075065	GROMMET	1
4	031197	SEAT SUPPORT	1	38	059150	CAP SCREW, HH, 1/4 x 1-1/2	1
5	031134	SUPPORT	1	39	061042	SCREW, Machine, Truss H, 5/16 x 3/4	4
6	069102	CABLE, 24"	1	40	064123	WASHER, Flat, 5/16	4
7	031798	BOTTOM COVER	1	41	063003	LOCKWASHER, 5/16	10
8	031135	ROD, 12-5/16" Long	2	42	065015	NUT, Hex, 5/16	10
9	031131	CHANNEL	2	43	074043	SCREW, Self-Tapping, HH, No. 10 x 1/2"	6
12	031711	CHANNEL	2	44	064127	WASHER, Flat, 1/4"	6
13	031710	SEAT	1	45	067003	PIN, Cotter, 1/16 x 1/2"	4
14	031094	CLAMP	2	49	059023	CAP SCREW, HH, 3/8" x 3/4"	4
15	031517	CHANNEL	2	50	063021	LOCKWASHER, 3/8"	4
16	031055	SUPPORT	1	51	061012	SCREW, Machine R.H. No. 10-32 x 1/2"	5
17	531070	CONSOLE DECK - Model 931014	1	52	063026	LOCKWASHER, No. 10	4
	531071	CONSOLE DECK - Model 931013	1	53	065026	NUT, Hex, No. 10-32	4
18	062034	BOLT, Carriage, 5/16 - 18 x 3/4	2	54	074017	SCREW, Self-Tapping, HH, 5/16 x 3/4	5
19	531073	FLOOR PLATE - Model 931013	1	55	031556	X WASHER	1
	531072	FLOOR PLATE - Model 931014	1	56	064002	WASHER, Flat, 5/16	17
20	031569	RUNNING BOARD	1	57	061039	SCREW, Machine, Truss H, 1/4 x 3/4	1
21	031019	SPACER	4	58	063002	LOCKWASHER, 1/4"	2
22	075066	GROMMET	4	59	065089	SPEED NUT	4
23	031028	HINGE	1	60	064123	WASHER	2
24	531068	DASH SUPPORT - Model 931014	1	61	070015	FLANGE, Whizlock Screw	4
	531069	DASH SUPPORT - Model 931013	1	62	031709	HOSE	1
25	065032	NUT, Hex, 1/4"	3	63	075044	GROMMET	1
26	074044	SCREW, Self-Tapping, No. 10 x 3/8"	4	64	062015	CARRIAGE BOLT - Model 931013 only)	1
27	031086	BATTERY TIE DOWN	1	65	065099	NUT	1
28	070015	FLANGE WHIZLOCK SCREW, 5/16-18 x 1/2	4	69	065040	LOCKNUT	2
29	059069	CAP SCREW, HH, 5/16 x 1-1/4	4	70	010289	EYE BOLT	1
30	065042	LOCKNUT, Hex, 5/16"	4				
31	062011	BOLT, Carriage, 5/16 x 3/4	4				
32	069094	"J" CLAMP	4				
33	031784	SUPPORT BRACE	1				
34	031089	ROD, Battery Tie Down	2				

# HOOD, GRILL, HEADLIGHTS AND HEAT SHIELD

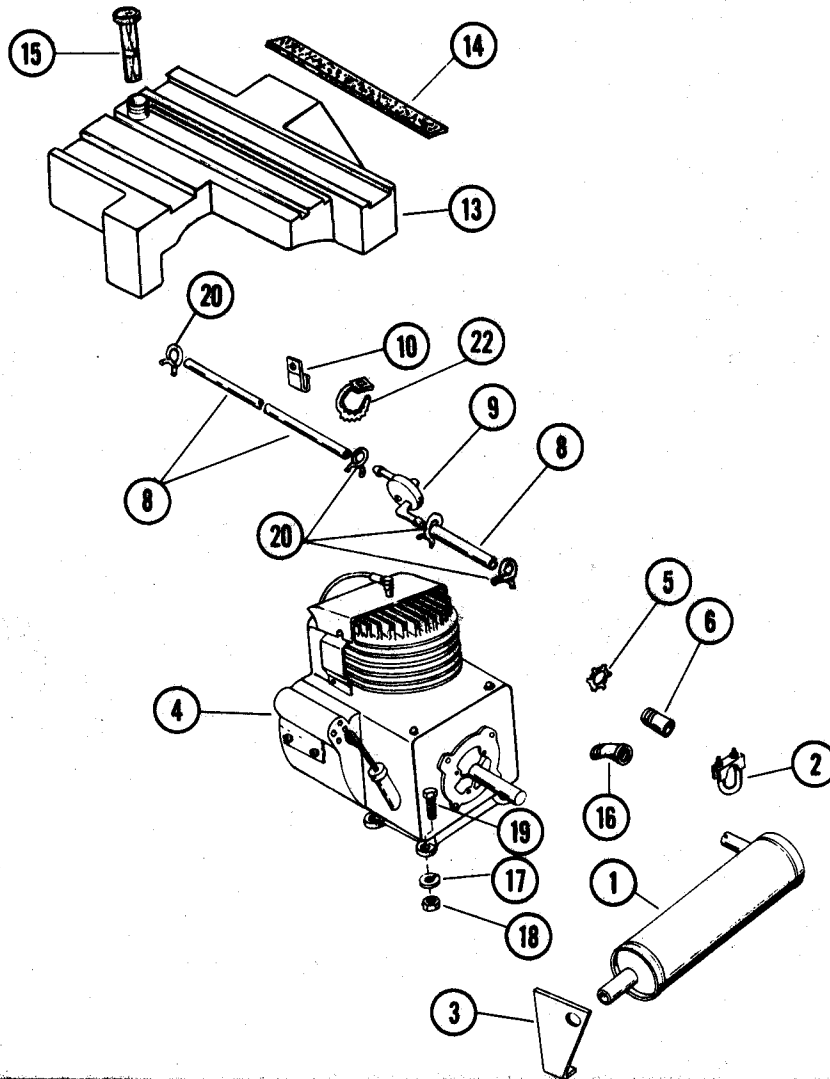
GEAR MODELS 931013 & 931014



REF NO.	PART NO.	DESCRIPTION	NO. REQ'D.	REF NO.	PART NO.	DESCRIPTION	NO. REQ'D.
1	531056	HOOD, S-10G	1	20	064008	WASHER, Flat, 3/8"	6
	531055	HOOD, S-14G	1	21	062032	BOLT, Carriage 3/8" x 2	2
4	031046	GRILL	1	22	062013	BOLT, Carriage, 3/8" x 1-	6
5	031139	SIDE, Right Hand	1	23	063021	LOCKWASHER, 3/8"	8
6	031138	SIDE, Left Hand	1	24	065018	NUT, Hex, 3/8"	8
7	031185	HINGE, Right Hand	1	25	061042	SCREW, Machine, Truss H, 5/16 x 3/4	2
8	031186	HINGE, Left Hand	1	26	064123	WASHER, Flat, 5/16"	2
9	031145	SPACER, 3/4"	2	29	075058	HOOD STOP	2
10	075064	GROMMET	2	30	063018	STAR LOCKWASHER	2
11	031986	MUFFLER SHIELD, S-10G, S-14G	1				
12	075066	GROMMET	1				
13	069094	"J" CLAMP	2				
14	031093	LATCH	1				
15	061039	SCREW, Machine, Truss H, 1/4 x 3/4	5				
16	064127	WASHER, Flat, 1/4"	5				
17	063002	LOCKWASHER, 1/4"	5				
18	065032	NUT, Hex, 1/4"	5				

# MUFFLER, FUEL LINES & TANK

GEAR MODELS 931013 & 931014

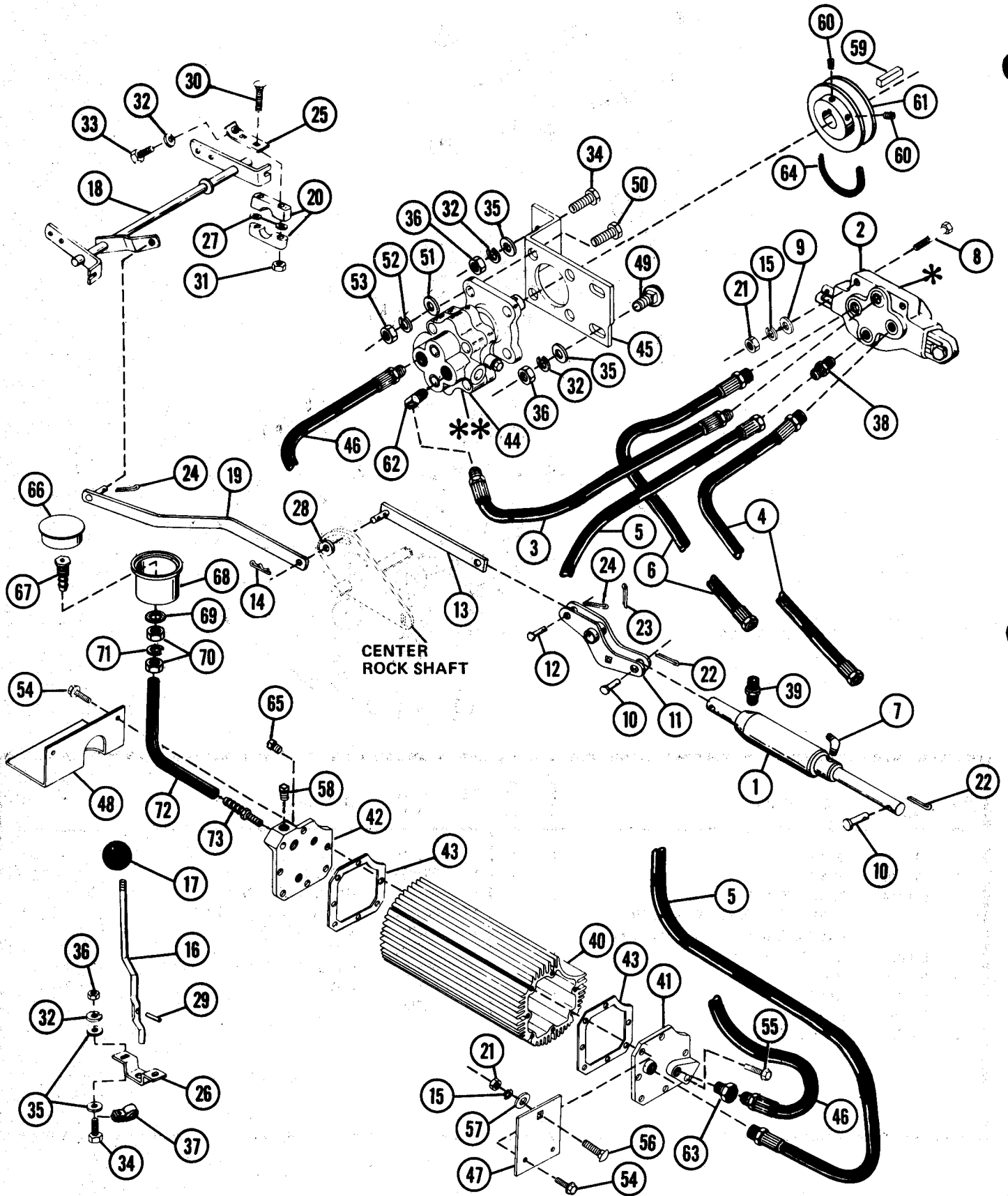


REF NO.	PART NO.	DESCRIPTION			REF. NO.	PART NO.	DESCRIPTION		
			931014	931013				931014	931013
1	031155	MUFFLER	1	1	13	031818	TANK, Fuel	1	1
2	031266	CLAMP	1	1	14	031904	FOAM 6" Long	AR	AR
3	031082	BRACKET, Muffler	1	1	15	031819	GAS GAUGE & CAP	1	1
4		ENGINE, S-10, Kohler No. 46725D	1		16	031190	ELBOW, Street, 45°, 1-1/4		1
		ENGINE, S-14 Kohler No. 321-S 60238		1	17	063021	LOCKWASHER, 3/8	4	4
5	070039	LOCKNUT, Special	1	1	18	065018	NUT, Hex, 3/8	4	4
6	031180	PIPE, Nipple	1	1	19	059151	CAP SCREW, HH, 3/8 x 1-1/2 GR.5	4	4
8	030020	HOSE 55"	1	1	20	029172	HOSE CLAMP	4	4
9	029108	FILTER, Fuel	1	1	22	069053	TIE	1	1
10	069094	"J" CLAMP	1	1					

\*Order Replacement Engine and Replacement Engine Parts From Your Nearest Kohler Service Central

# HYDRAULIC LIFT AND FRONT ROCK SHAFT

GEAR MODEL 931013 ONLY



# HYDRAULIC LIFT AND FRONT ROCK SHAFT

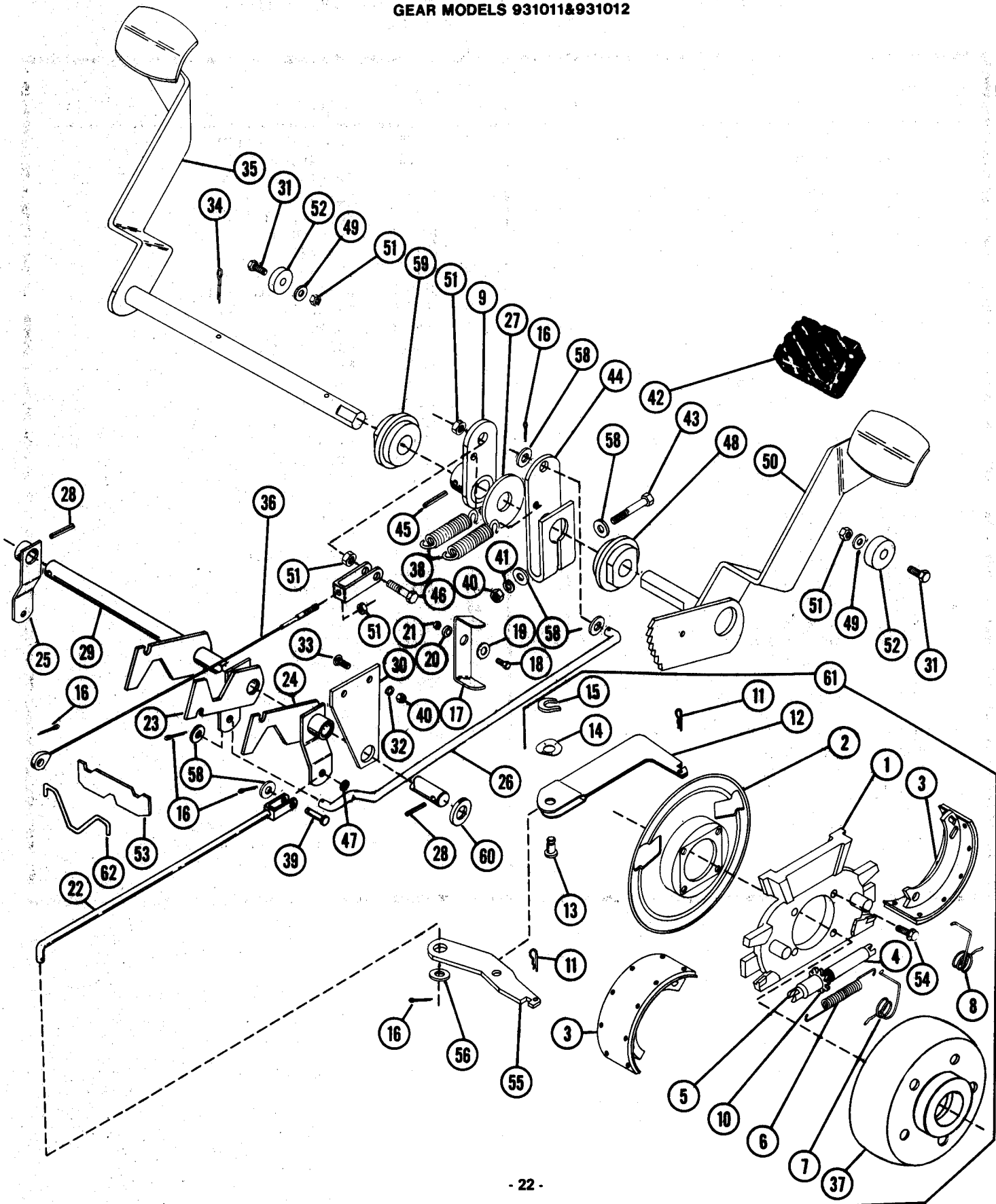
GEAR MODEL 931013 ONLY

REF NO.	PART NO.	DESCRIPTION	NO REQ'D.	REF NO.	PART NO.	DESCRIPTION	NO REQ'D.
1	531067	CYLINDER ASS'Y (includes adapters)	1	41	031787	CIRCULATION COVER	1
* 2	031170	VALVE	1	42	030009	FILLER COVER	1
3	031779	HOSE, 20" Long, Pump to Valve	1	43	031789	GASKET RESERVOIR	2
4	031692	HOSE, 27½" Long, Valve to Cylinder	1	**44	031727	PUMP HYDRAULIC	1
5	031778	HOSE, 19" Long, Valve to Reservoir	1	45	031794	PUMP MOUNTING BRACKET	1
6	031058	HOSE, 24½" Long, Valve to Cylinder	1	46	031781	HOSE, 14" Pump to Reservoir	1
7	031780	ADAPTER, 1/4 to 9/16, 45°	1	47	031783	BRACKET	1
8	059050	CAP SCREW, HH, 1/4 x 1-1/2	2	48	031782	BRACKET, Mounting	1
9	064127	WASHER, Flat, 1/4"	2	49	062011	BOLT, Carriage 5/16-18 x 3/4"	2
10	031051	PIN, Clevis	2	50	059004	CAP SCREW, 3/8-16 x 1	4
11	031063	BELL CRANK	1	51	064078	WASHER	4
12	068061	PIN	1	52	063021	LOCKWASHER	4
13	031500	LINK	1	53	065018	NUT, 3/8-16	4
14	067029	HAIRPIN COTTER	1	54	074027	TAPTITE	12
15	063002	LOCKWASHER, 1/4"	3	55	074059	TAPTITE	2
16	031189	CONTROL ROD	1	56	062012	BOLT, Carriage 1/4-20 x 3/4"	1
17	075052	KNOB	1	57	064007	WASHER	1
18	531005	FRONT ROCKSHAFT	1	58	001138	PIPE PLUG	1
19	031015	CONNECTOR LINK	1	59	066032	KEY	1
20	029011	BEARING BLOCK	4	60	060008	SETSCREW	2
21	065032	NUT, Hex, 1/4"	6	61	031795	SHEAVE	1
22	067004	PIN, Cotter, 1/8 x 1	2	62	031797	ADAPTOR	1
23	067006	PIN, Cotter, 3/16 x 1-1/4	1	63	031788	ADAPTOR 3/8 to 9/16	1
24	067026	PIN, Cotter, 3/16 x 1"	2	64	072088	BELT	1
25	031014	BRACE	1	65	004226	PIPE PLUG	1
26	031076	BRACKET	1	66	030013	COVER	1
27	064115	SHIM, .005 Thick	4	67	030011	FITTING	1
28	064009	WASHER, Flat, 3/4	1	68	030012	OIL EXPANSION CUP	1
29	058053	GROOVE PIN, 1/4 x 3/4	1	69	030014	FIBER WASHER	1
30	062005	BOLT, Carriage, 3/8 x 2-1/4	4	70	065075	NUT	2
31	065039	LOCKNUT, Hex, 3/8	4	71	063019	LOCKWASHER	1
32	063003	LOCKWASHER, 5/16"	6	72	030008	HOSE, 16" Long	1
33	059134	CAP SCREW, HH, 5/16 x 1-1/4 GR.5	1	73	030010	CONNECTOR	1
34	059022	CAP SCREW, HH, 5/16 x 3/4	3				
35	064002	WASHER, Flat, 5/16	7				
36	065015	NUT, Hex, 5/16	2				
37	069094	J - CLAMP	1				
38	031495	ADAPTOR, 9/16	1				
39	031634	ADAPTOR	1				
40	031785	OIL RESERVOIR	1				

\*531041 Section Repair Kit Available  
 \*531057 Spool Repair Kit Available  
 \*\*531075 Pump Repair Kit Available for most maintenance repairs.

# REAR BRAKE & CLUTCH ASSEMBLY

GEAR MODELS 931011&931012



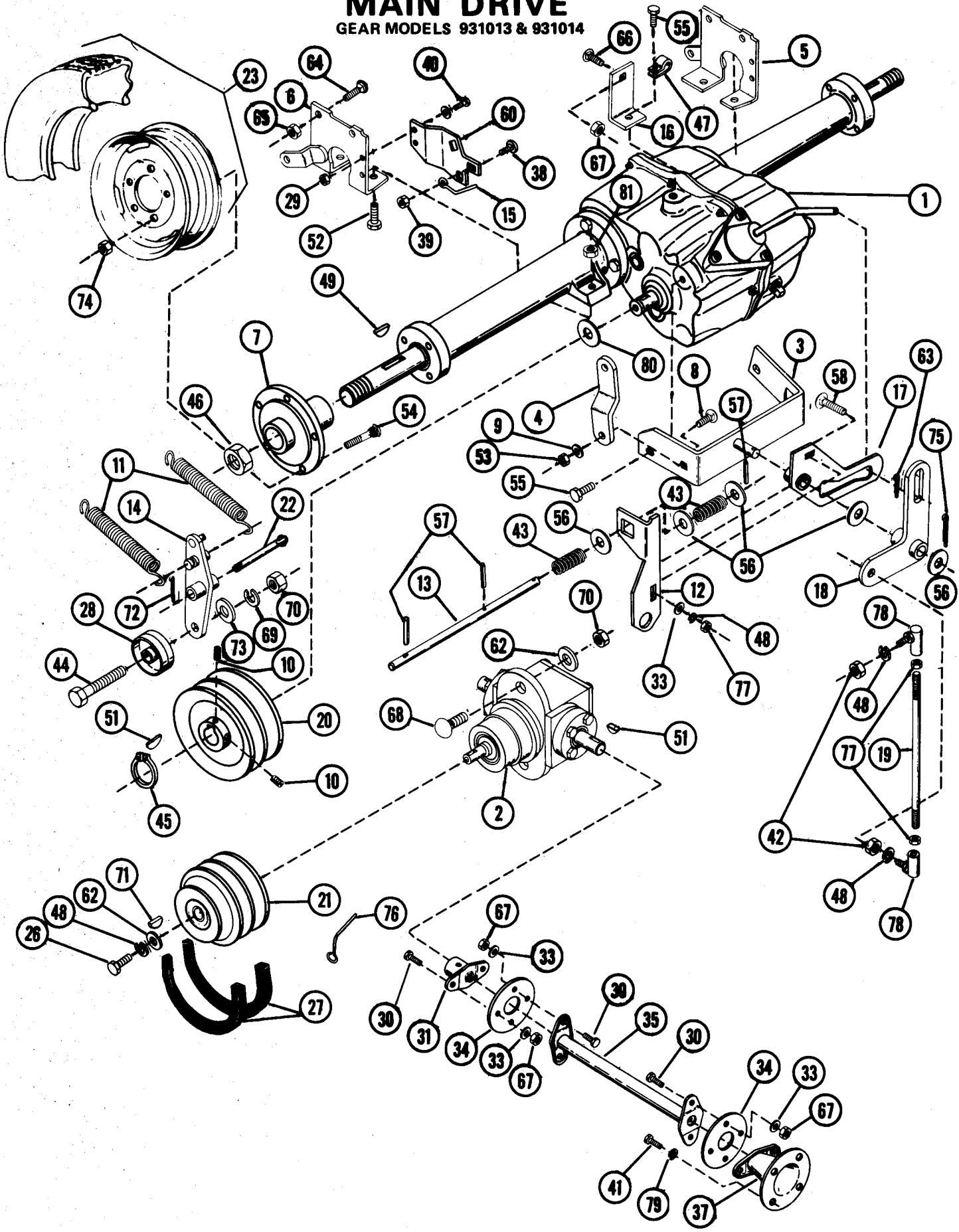
# REAR BRAKE & CLUTCH ASSEMBLY PARTS

GEAR MODELS 931013 & 931014

REF NO.	PART NO	DESCRIPTION	NO REQ'D		REF NO.	PART NO	DESCRIPTION	NO REQ'D	
			931014	931013				931014	931013
1	031679	TORQUE, Spider	2	2	33	062013	BOLT, Carriage 3/8" x 1"	4	4
2	031678	DUST SHIELD	2	2	34	067006	PIN, Cotter 3/16" x 1-1/4"	1	1
3	531039	BRAKE SHOE (sold in sets of two only)	2	2	35	031791	L. H. PEDAL		1
4	031680	PIVOT NUT	2	2		031762	L.H. PEDAL	1	
5	031682	SOCKET, Adjusting Screw	2	2	36	069113	CLUTCH CABLE	1	1
6	083162	SPRING, Adjusting Shoe	2	2	37	031674	BRAKE DRUM	2	2
7	083161	SPRING, Shoe Return, L.H.	2	2	38	083122	SPRING	2	2
8	083160	SPRING, Shoe Return, R.H.	2	2	39	013303	CLEVIS PIN	2	2
9	031763	CLUTCH ARM	1	1	40	065018	NUT, Hex 3/8"	5	5
10	031681	ADJUSTING SCREW, (star wheel)	2	2	41	063021	LOCKWASHER, 3/8"	1	1
11	067032	HAIR PIN RETAINER	4	4	42	075051	PEDAL PAD	2	2
12	031675	STRUT & LEVER ASSEMBLY	2	2	43	059030	CAP SCREW, HH 3/8" x 2-1/4"	1	1
13	031677	PIN	2	2	44	031505	ARM, Brake	1	1
14	064156	WAVE WASHER	2	2	45	058003	ROLL PIN	1	1
15	031702	RETAINER CLIP	2	2	46	059135	CAP SCREW, 5/16-18 x 3/4	1	1
16	067001	PIN, Cotter 3/32" x 3/4"	7	7	47	075055	GROMMET	2	2
17	031507	BRAKE LATCH	1	1	48	055095	BUSHING	1	1
18	059001	CAP SCREW, HH, 1/4" x 3/4"	1	1	49	064002	WASHER, 5/16"	1	2
19	064127	WASHER, Special	1	1	50	031504	R.H. PEDAL	1	1
20	011091	SPACER, Bushing	1	1	51	065042	LOCKNUT, Hex 5/16"	3	4
21	065040	LOCKNUT, Hex, 1/4"	1	1	52	025135	SPACER	1	2
22	031935	ROD	2	2	53	031936	BAL. LINK	1	1
23	031939	ARM	1	1	54	074046	FLANGE WHIZLOCK SCREW	8	8
24	031940	ARM	1	1	55	031676	PARK BRAKE LEVER	2	2
25	031938	BRAKE ARM	2	2	56	064057	WASHER, 5/16"	2	2
26	031808	BRAKE ROD	1	1	58	064043	WASHER	7	7
27	064048	WASHER, Flat 3/8"	1	1	59	055095	BUSHING		2
28	058040	PIN, Drive 1/4" x 1-1/4"	2	2		055096	BUSHING	1	
29	031941	BRAKE SHAFT	1	1	60	064062	WASHER	AR	AR
30	031509	PLATE	2	2	61	631107	R.H. BRAKE ASSEMBLY	1	1
31	059003	CAP SCREW, HH 5/16"	1	2		631108	L.H. BRAKE ASSEMBLY	1	1
32	063004	LOCKWASHER, 3/8"	4	4	62	031937	CLIP	1	1

# MAIN DRIVE

GEAR MODELS 931013 & 931014





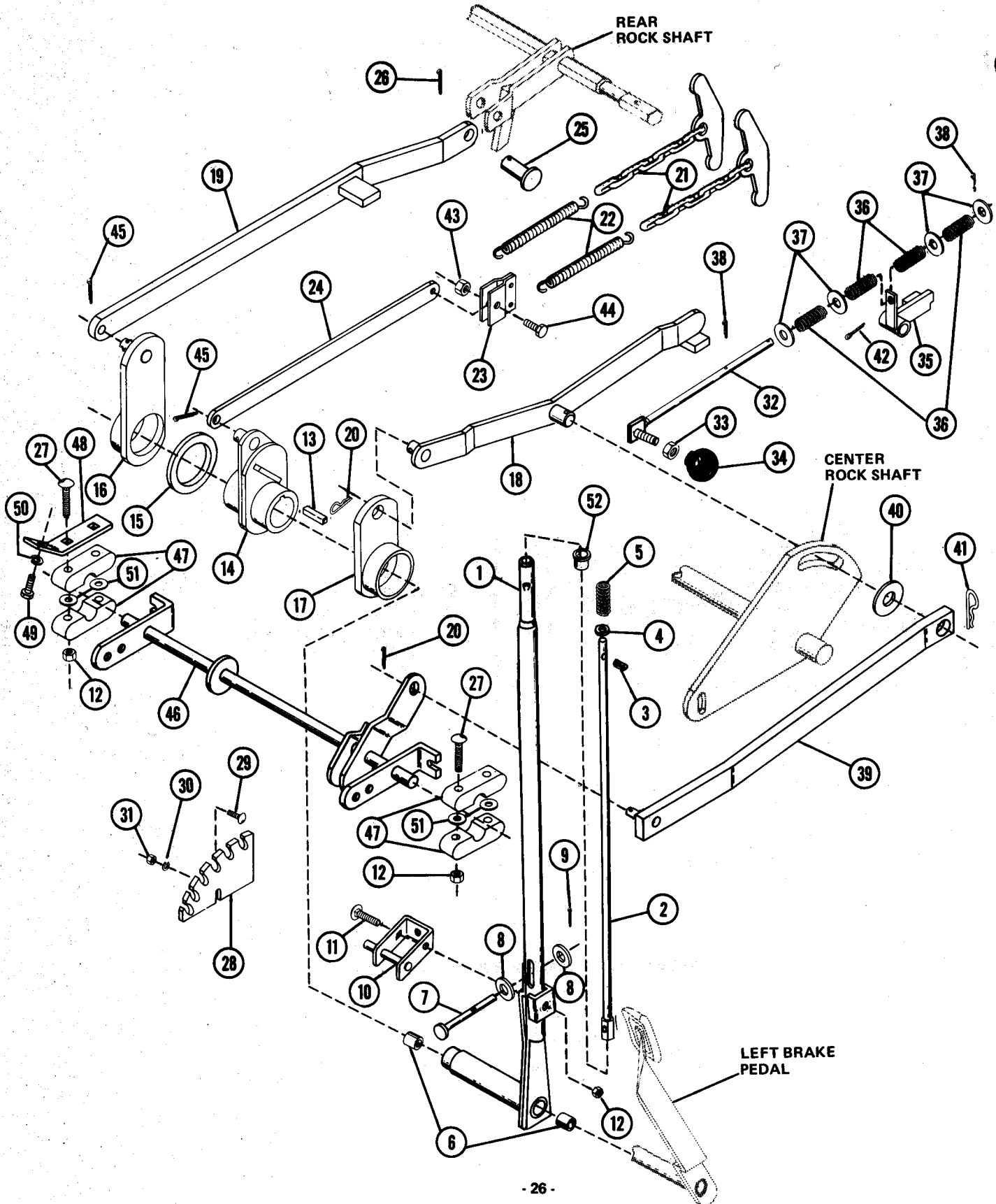
# MAIN DRIVE

## GEAR MODELS 931013 & 931014

REF NO.	PART NO.	DESCRIPTION	NO REQ'D	REF NO.	PART NO.	DESCRIPTION	NO REQ'D
1		* TRANSAXLE	1	41	059099	CAP SCREW, HH, 3/8-16 x 5/8 Grade 5	4
2		* T-DRIVE HEAD ASSEMBLY	1	42	065115	LOCKNUT	2
3	031771	BRACKET	1	43	083120	COMPRESSION SPRING	2
4	031821	STRAP	1	44	059068	CAP SCREW, 3/18 - 16 x 2	1
5	031766	SUPPORT - L.H. Axle	1	45	057012	SNAPPING EXTENSION	1
6	031685	SUPPORT - R.H. Axle	1	46	065120	NUT, Hex Jam	2
7	031728	WHEEL HUB	2	47	069094	J- Clamp	1
8	062028	BOLT, Carriage 3/8-16 x 1 Gr. 5	1	48	063003	LOCKWASHER, 5/16	3
9	064043	WASHER	1	49	066030	KEY, Woodruff 1/4" x 1-1/8"	2
10	060032	SETScrew	2	51	066003	KEY, Woodruff No. 9	2
11	083168	SPRING EXT.	2	52	059151	CAP SCREW, 3/8-16 x 1-1/2" GR 5	4
12	031956	BRACKET	1	53	065039	LOCKNUT	1
13	031958	ROD	1	54	070044	LUG BOLT	10
14	031743	IDLER ARM	1	55	070031	SCREW, Whizlock	3
15	031755	BELT FINGER	3	56	064003	WASHER	5
16	031735	BRACKET	1	57	058009	ROLL PIN, 1/8 x 1	2
17	031957	BELL CRANK	1	58	059028	CARRIAGE BOLT 5/16 x 3/4	1
18	031773	BELL CRANK	1	59	064007	WASHER, 1/4 Standard	2
19	031793	ROD	1	60	031949	BELT FINGER MOUNT	1
20	031772	SHEAVE	1	62	064002	WASHER	2
21	031742	SHEAVE	1	63	067024	COTTER PIN, 1/8 x 3/4	4
22	031744	IDLER PIN	1	64	062047	BOLT, Carriage 1/2-13 x 1-1/4 GR5	4
23	631002	TIRE & WHEEL ASSEMBLY S-14G	2	65	065127	LOCKNUT, 1/2-13 GRC	4
	071105	TIRE, 23 x 10.50 x 12	2	66	062015	BOLT, Carriage 5/16-18 x 1	1
	071106	WHEEL RIM W/Valve	2	67	065042	LOCKNUT	7
23	631097	TIRE & WHEEL ASSEMBLY S-10G only	2	68	062016	BOLT, Carriage	2
	071114	TIRE, 23 x 8.50 x 12	2	70	065039	LOCKNUT, 3/16	3
	071115	WHEEL RIM	2	71	066014	KEY, Woodruff No. 61	1
26	059135	CAP SCREW, 5/16-18 x 3/4	1	72	067004	PIN COTTER, 5/32 x 1	1
27	072090	V-BELT, Matched Set	1	73	064008	WASHER 3/8	1
28	073055	IDLER	1	74	065114	LUG NUT	10
29	065040	LOCKNUT	2	75	067016	COTTER PIN	1
30	059022	CAP SCREW, HH. 5/16-18 x 3/4	8	76	031755	BELT FINGER	1
31	031953	COUPLING, Input	1	77	065061	JAM NUT	3
33	064002	WASHER, Flat 5/16"	8	78	003086	BALL JOINT	2
34	031952	SPACER COUPLING	2	79	063021	LOCKWASHER 3/8"	4
35	531093	DRIVE SHAFT ASSEMBLY, W/Roll Pin	1	80	064164	WASHER, .805/.842 x 2 x 16 Ga.	1
37	031978	DRIVE COUPLING	1	81	065122	LOCKNUT, 3/8-16 GRC	4
38	062010	BOLT, Carriage 3/8-16 x 3/4	3	82	067021	COTTER PIN, 1/8 x 1-1/2	1
39	065053	LOCKNUT, 3/4"	3				
40	059001	CAP SCREW	2				

\*See Your Nearest Tecumseh Service Central For Repairs  
 Tec. Model No. 2335 Transaxle  
 Tec. Model No. 3179-P91 T-Drive Head Assy.

# MODEL 931014 MANUAL LIFT & LINKAGE ASSEMBLY PARTS

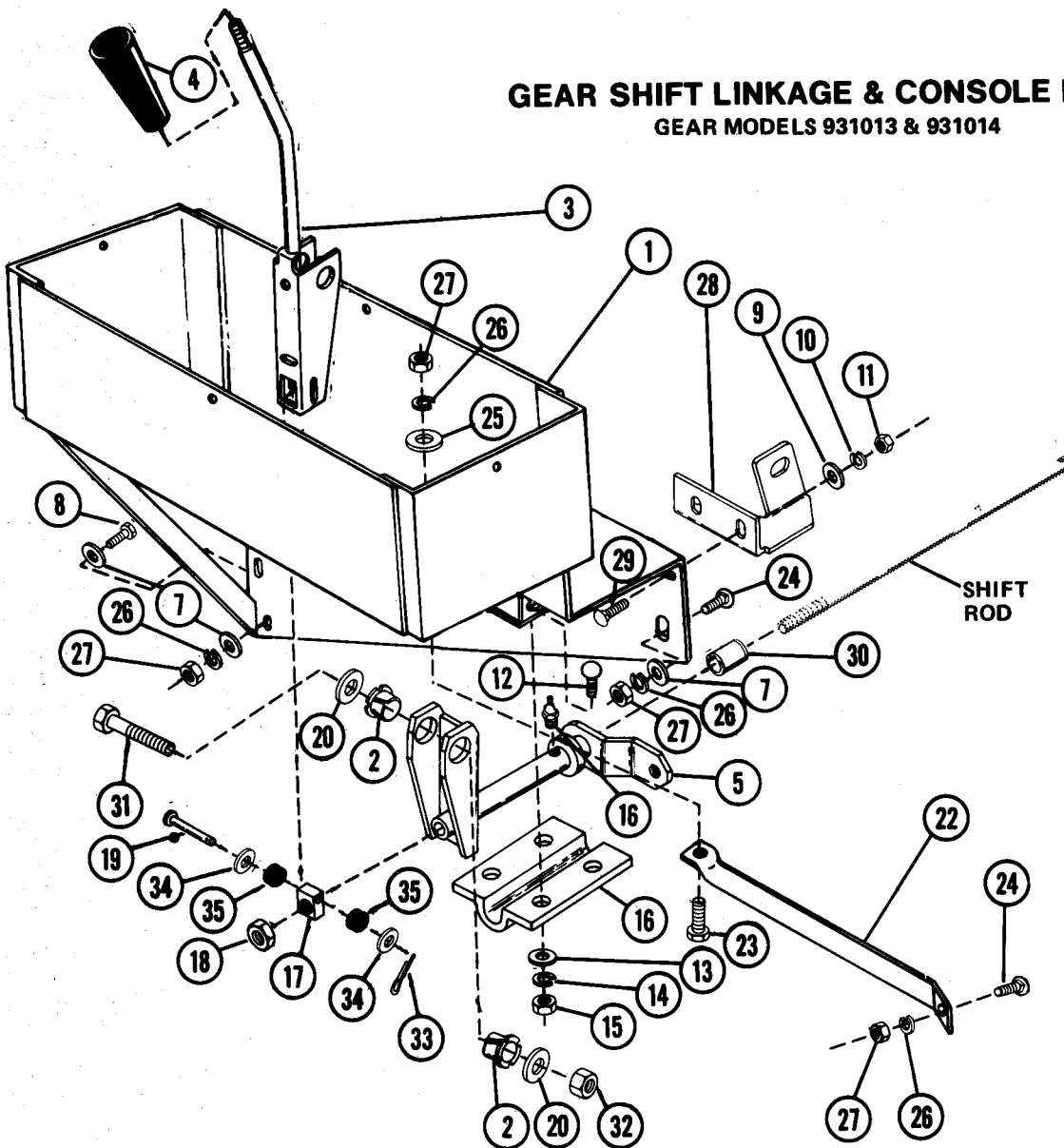


# MODEL 931014 MANUAL LIFT & LINKAGE ASSEMBLY PARTS LIST

REF NO	PART NO	DESCRIPTION	NO REQ'D	REF NO	PART NO	DESCRIPTION	NO REQ'D
1	031759	LIFT HANDLE	1	26	067004	COTTER PIN	1
2	031760	PLUNGER	1	27	062005	CARRIAGE BOLT 3/8 x 2-1/4	4
3	058034	PIN, Roll 1/8" x 3/4"	1	28	031764	QUADRANT	1
4	064096	WASHER, Special	1	29	062010	BOLT, Carriage 3/8-16 x 3/4	2
5	083104	SPRING	1	30	063021	LOCKWASHER	2
6	055057	BUSHING SLEEVE	2	31	065018	NUT	2
7	031775	PIN	1	32	031748	LATCH ROD - Model 931011	1
8	064127	WASHER	2	33	065001	NUT, Jam	1
9	067003	COTTER PIN	1	34	075052	KNOB	1
10	031761	LATCH	1	35	031747	LATCH	1
11	062050	CARRIAGE BOLT, 3/8-16 x 2-3/4	1	36	083105	COMPRESSION SPRING	4
12	065039	LOCKNUT	1	37	064043	WASHER	4
13	066022	KEY, Straight	1	38	067024	COTTER PIN	2
14	031745	ARM	1	39	031015	FRONT ROCK SHAFT, Connector Link	1
15	064160	WASHER, Special	1	40	064009	WASHER	1
16	031757	ARM	1	41	067029	PIN, Hair Cotter	1
17	031758	ARM	1	42	067006	COTTER PIN	1
18	031746	CENTER LIFT LINK	1	43	065042	LOCKNUT, 5/16-18	1
19	031729	REAR LIFT LINK	1	44	059022	CAP SCREW, 5/16-18 x 3/4	1
20	067026	COTTER PIN	2	45	067026	COTTER PIN	2
21	031017	CHAIN	2	46	531005	FRONT ROCK SHAFT	1
22	083107	SPRING	2	47	029011	BLOCK	4
23	031753	SPRING CLIP	1	48	031014	BRACE	4
24	031813	STRAP	1	49	059134	CAP SCREW, 5/16-18 x 1-1/4 Gr. 5	1
25	031051	CLEVIS PIN	1	50	063003	LOCKWASHER	1
				51	064115	SHIM, .005 Thick	AR
				52	055021	FLANGED BUSHING	1

# GEAR SHIFT LINKAGE & CONSOLE PARTS

GEAR MODELS 931013 & 931014

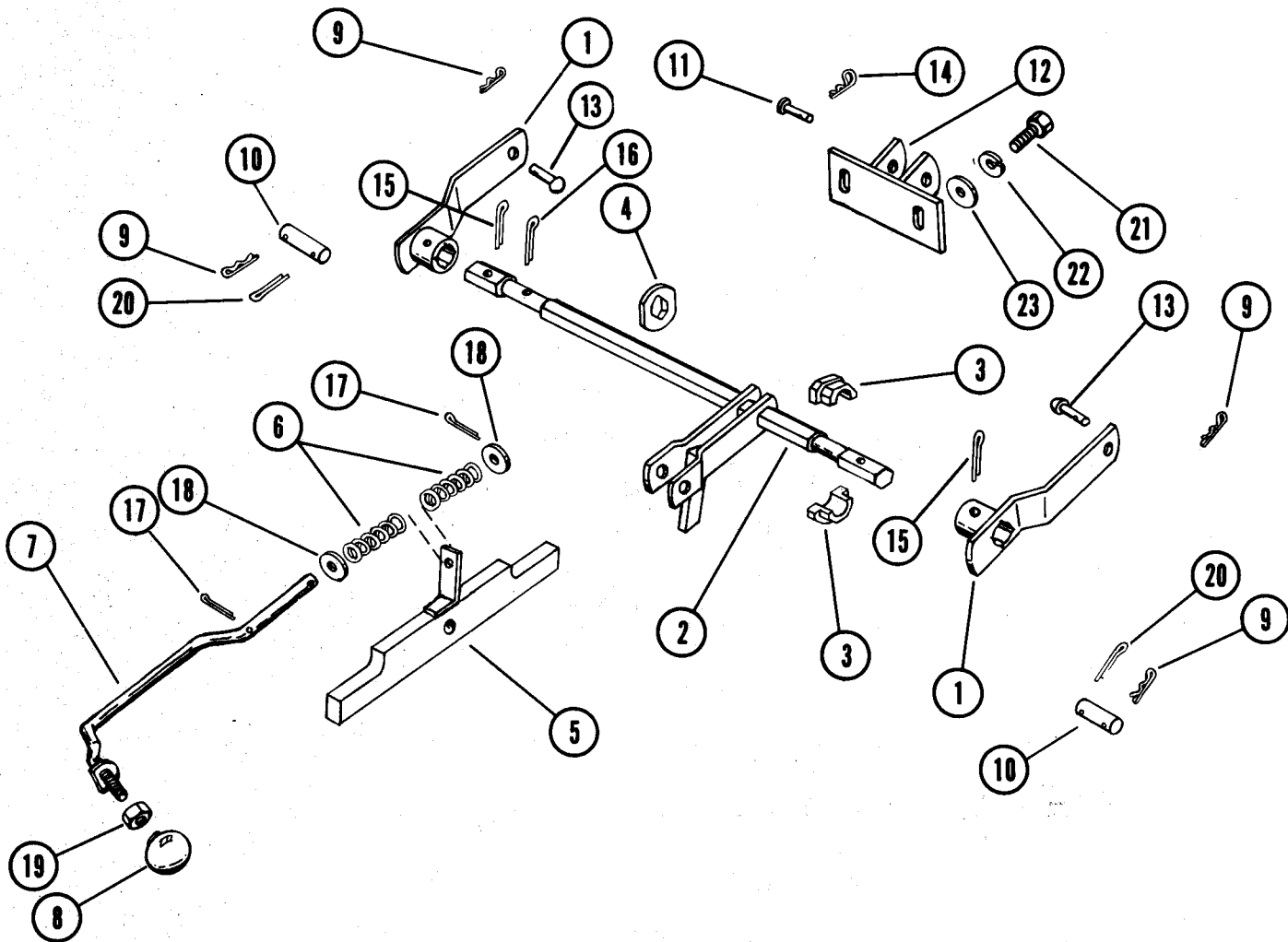


## GEAR SHIFT LINKAGE & CONSOLE PARTS LIST

GEAR MODELS 931013 & 931014

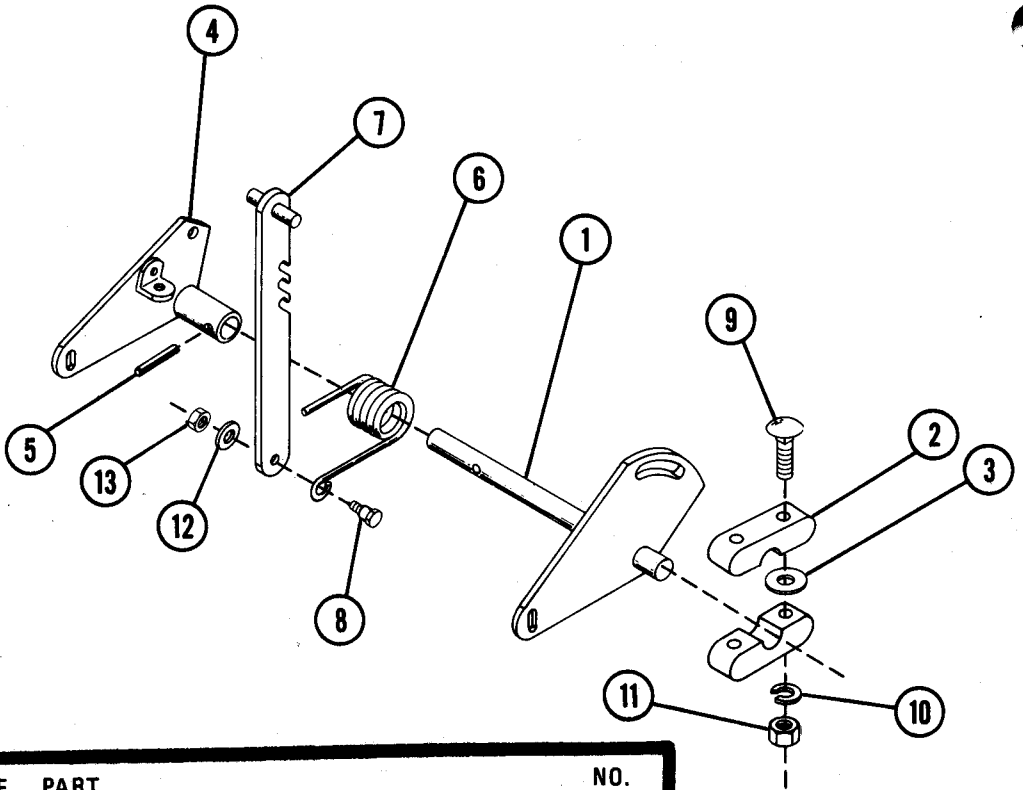
REF NO.	PART NO.	DESCRIPTION	NO REQ'D	REF NO.	PART NO.	DESCRIPTION	NO REQ'D
1	031736	CONTROL BOX	1	19	031960	SHAFT PIN	1
2	055101	BUSHING FLANGE	2	20	064121	WASHER	2
3	031955	SHIFT HANDLE	1	21	067004	COTTER PIN	1
4	075049	HANDLE	1	22	031024	BRACE	1
5	631121	SHIFT LEVER	1	23	059023	CAP SCREW, 3/8-16 x 3/4	1
6	031737	SHIFT SUPPORT	1	24	062013	BOLT, Carriage, 3/8-16 x 1	3
7	064008	WASHER	4	25	064008	WASHER, 3/8	1
8	059004	CAPSCREW, 3/8-16 x 1"	1	26	063021	LOCKWASHER	5
9	064002	WASHER, 5/16	3	27	065018	NUT	5
10	063003	LOCKWASHER	3	28	031765	SWITCH BRACKET	1
11	065015	NUT	3	29	062011	BOLT, Carriage, 5/16-18 x 3/4	2
12	062017	BOLT, Carriage 1/4-20 x 5/8	4	30	055100	SLEEVE BUSHING	2
13	064007	WASHER 1/4 Standard	4	31	059185	CAPSCREW	1
14	063002	LOCKWASHER 1/4	4	32	065019	LOCKNUT	1
15	065032	NUT 1/4-20	4	33	067001	COTTER PIN	1
16	022093	ZERK FITTING	1	34	064037	WASHER	2
17	031967	ADJUSTING BLOCK	1	35	075044	GROMMET	2
18	065046	LOCKNUT	1				

# REAR ROCK SHAFT



REF NO.	PART NO.	DESCRIPTION	NO. REQ'D.
1	031534	ARM	2
2	031497	SHAFT	1
3	055085	BEARING, Rockshaft	4
4	031693	WASHER, 1-1/32 Hex	1
5	031498	LATCH	1
6	083105	SPRING	2
7	031499	LATCH ROD	1
8	075052	KNOB	1
9	067022	HAIRPIN COTTER	4
10	031012	PIN	2
11	031008	PIN, Clevis	1
12	031007	BRACKET	1
13	068055	RIVET, Drilled	2
14	067029	HAIRPIN COTTER	1
15	067025	PIN, Cotter, 3/16 x 2	2
16	067012	PIN, Cotter, 3/16 x 1-1/2	1
17	067024	PIN, Cotter, 1/8 x 3/4	2
18	064043	WASHER, Flat, 3/8	2
19	065001	NUT, Hex, Jam, 3/8	1
20	067004	PIN, Cotter, 1/8 x 1	2
21	059023	CAP SCREW, HH, 3/8 x 3/4	2
22	063021	LOCKWASHER, 3/8	2
23	064004	WASHER, Flat, 3/8	2

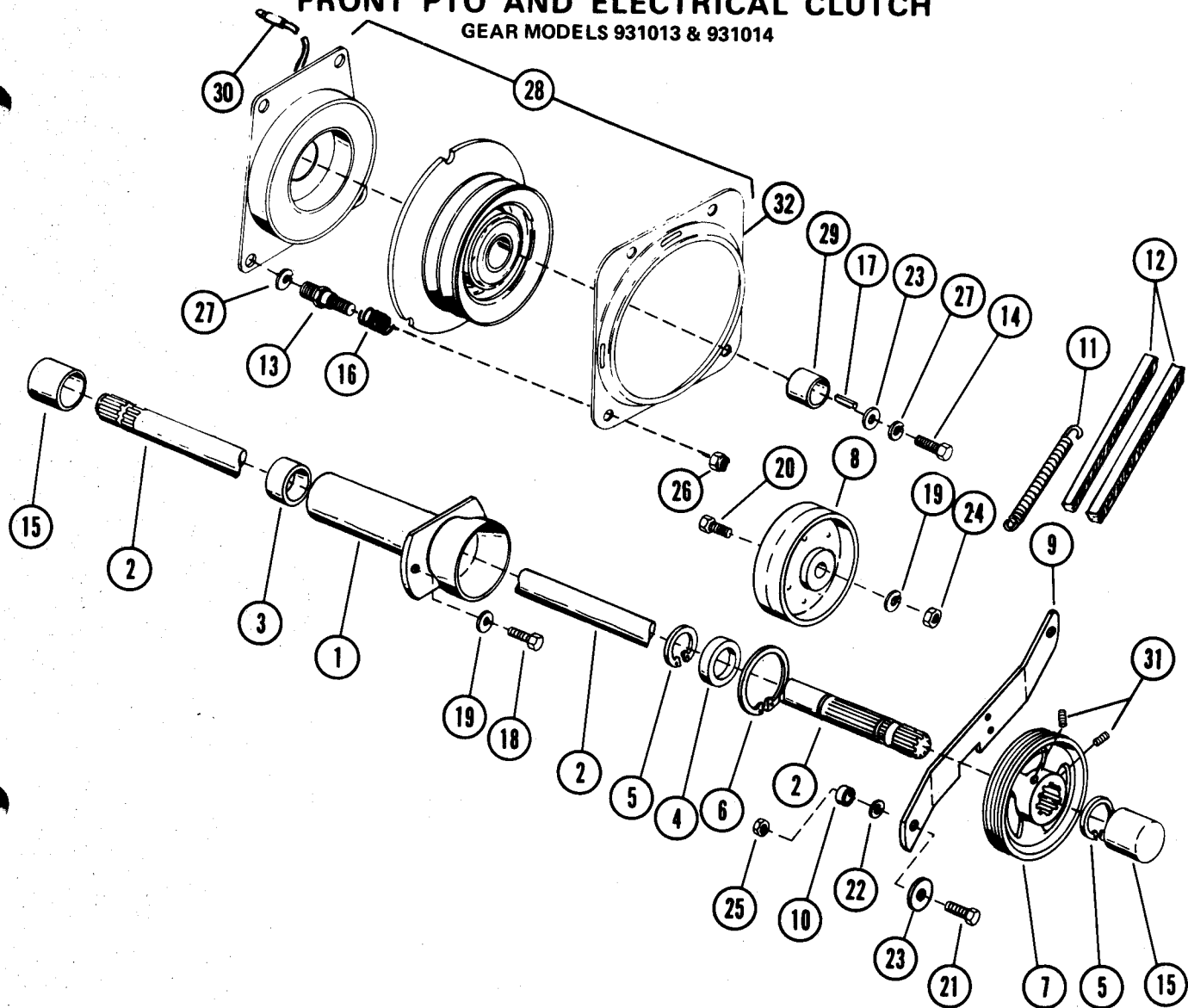
# CENTER ROCK SHAFT



REF NO.	PART NO.	DESCRIPTION	NO. REQ'D.
1	031790	CENTER ROCK SHAFT	1
2	029011	BEARING BLOCK	4
3	064115	SHIM, .005 Thick	4
4	031811	R.H. ROCKSHAFT LEVER	1
5	058063	PIN GROOVE, 1/4 x 2	1
6	083167	SPRING, Torsion	1
7	031809	SPRING HANDLE	1
8	011120	BOLT, Shoulder	1
9	062005	BOLT, Carriage, 3/8 x 2-1/4	4
10	063021	LOCKWASHER, 3/8	4
11	065018	NUT, Hex, 3/8	4
12	064003	WASHER	1
13	065039	LOCKNUT	1

# FRONT PTO AND ELECTRICAL CLUTCH

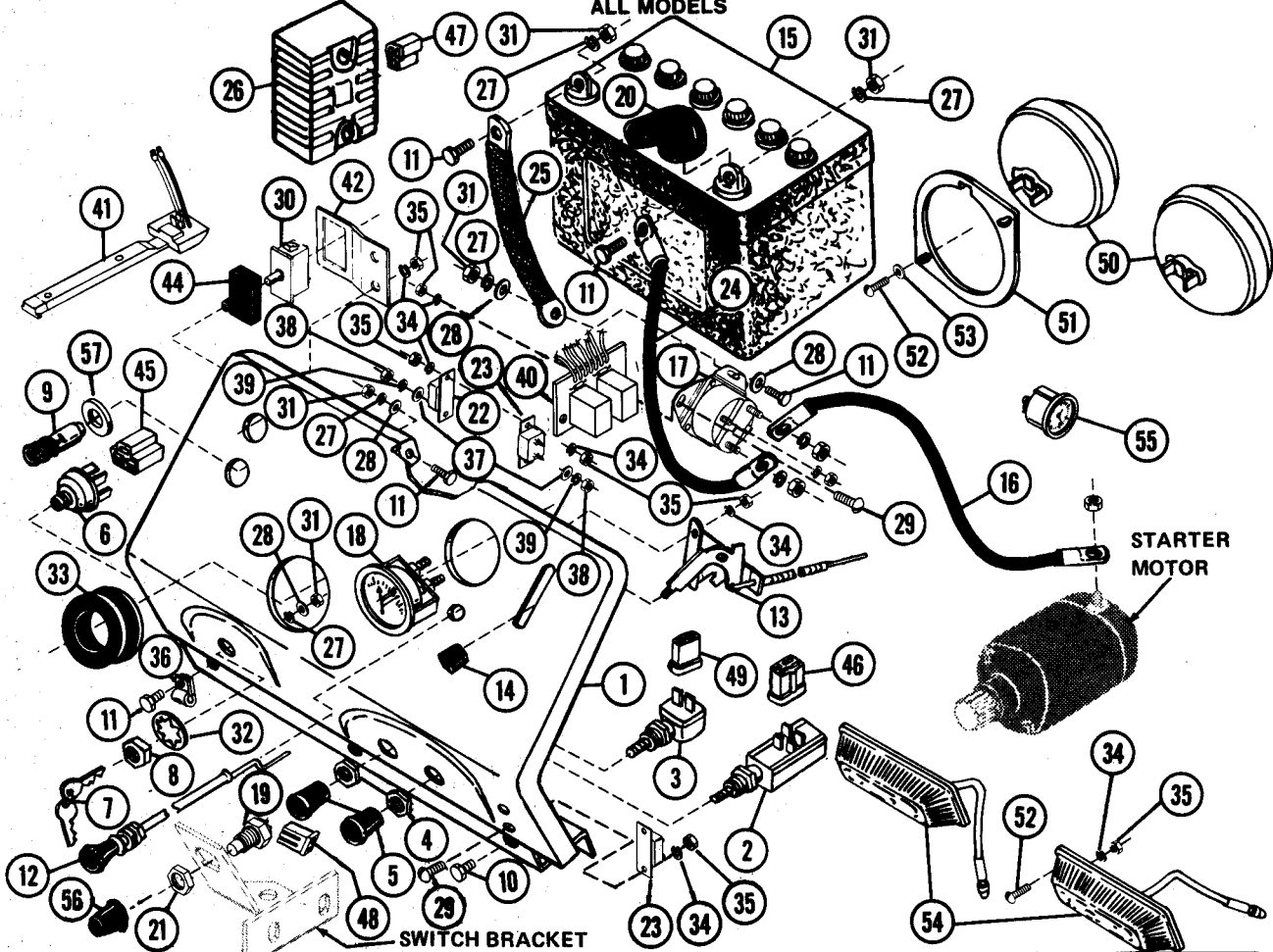
GEAR MODELS 931013 & 931014



REF NO.	PART NO.	DESCRIPTION	NO REQ'D	REF NO.	PART NO.	DESCRIPTION	NO REQ'D
1	531013	PTO HOUSING W/Needle Bearing	1	17	066027	KEY, Square, 1/4 x 5/8"	1
2	031183	SHAFT	1	18	059023	CAP SCREW, HH, 3/8 x 3/4	2
3	054102	NEEDLE BEARING	1	19	063021	LOCKWASHER, 3/8"	3
4	054052	BEARING	1	20	059068	CAP SCREW, HH, 3/8" x 2	1
5	057062	EXTERNAL SNAP RING	2	21	059042	CAP SCREW, HH, 1/2" x 1-1/4	1
6	057024	SNAP RING	1	22	031158	SHIM SPACER	1
7	031979	SHEAVE	1	23	064045	WASHER, Special	2
8	073055	IDLER PULLEY	1	24	065018	NUT, Hex, 3/8"	1
9	031148	IDLER ARM	1	25	065097	NUT, Hex, 1/2"	1
10	031157	SPACER	1	26	065116	LOCKNUT, 5/16"	4
11	083176	SPRING	1	27	063005	LOCKWASHER, 7/16"	5
12	072076	"V" BELT - Matched Set of Two	1	28	531023	CLUTCH	1
13	031544	STUD	4	29	031358	SLEEVE	1
14	059142	CAP SCREW, HH, 7/16 x 1	1	30	031265	TERMINAL	1
15	075060	COVER, PTO Shaft	2	31	060012	SET SCREW	2
16	083148	SPRING	4	32	031545	PLATE	1

# DASH, CONTROLS AND ELECTRICAL

ALL MODELS

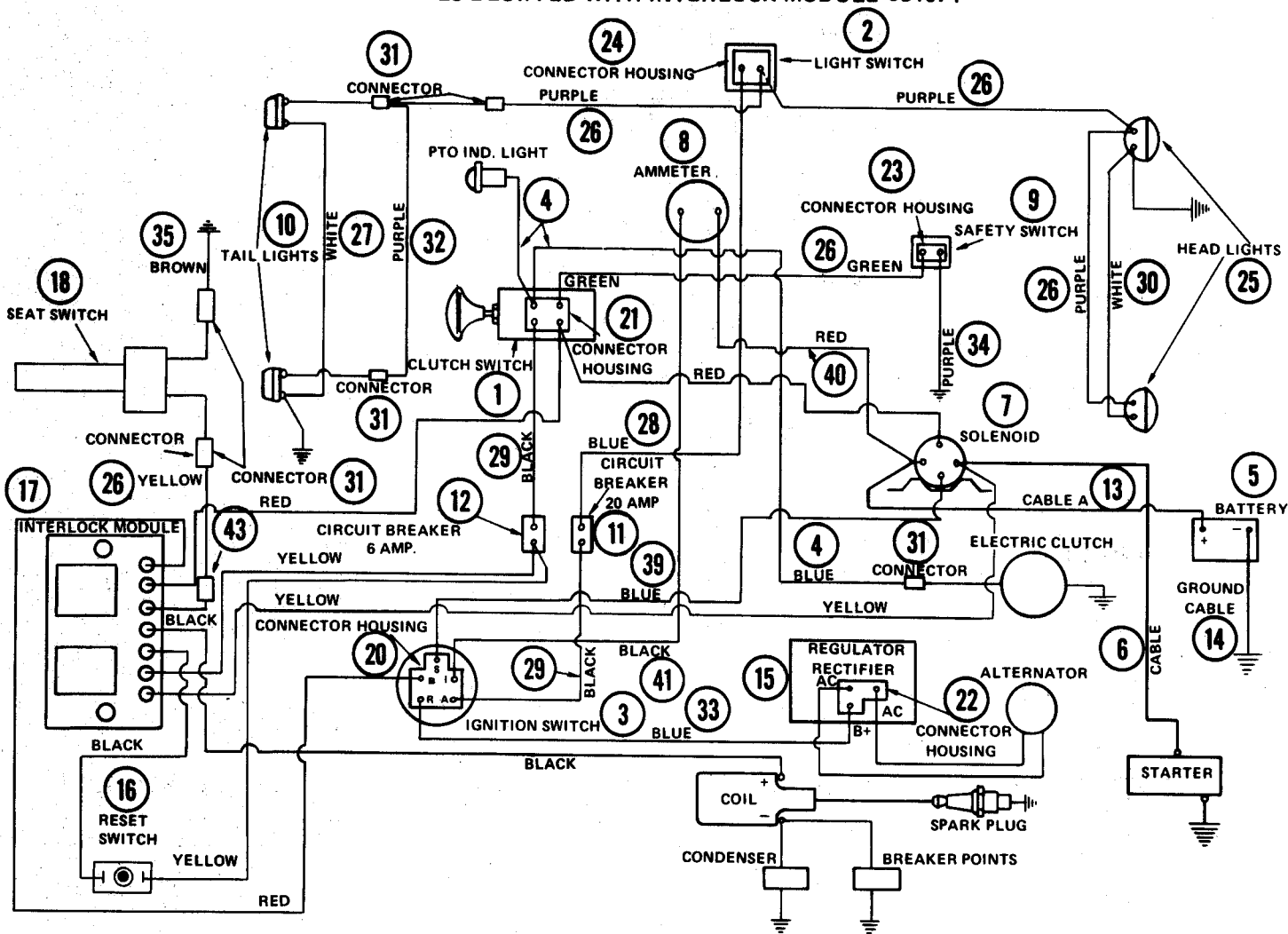


REF NO.	PART NO.	DESCRIPTION	NO. REQ'D	REF NO.	PART NO.	DESCRIPTION	NO. REQ'D
1	531058	DASH W/Decal	1	30	025172	SWITCH	1
2	031150	SWITCH, Clutch	1	31	065032	NUT, Hex, 1/4"	8
3	031151	SWITCH, Lights	1	32	063029	LOCKWASHER, Internal Tooth, 9/16"	1
4	065104	NUT, Jam, 1/2"	2	33	075061	GROMMET	1
5	075068	KNOB, Switch	2	34	063011	LOCKWASHER, External Tooth, No. 10	14
6	031152	SWITCH, Ignition	1	35	065055	NUT, Hex, No. 10-24	14
7	013157	KEY SET	1	36	031070	CLIP	2
8	065106	NUT, Special, 9/16"	1	37	064141	WASHER	4
9	031179	PTO Indicator & Wire Ass'y	1	38	065026	NUT	4
10	074043	SCREW, Self-Tapping, No. 10 x 1/2	4	39	063011	LOCKWASHERS	4
11	059001	CAP SCREW, HH, 1/4 x 3/4	8	40	531074	RELAY - Diode	1
12	069103	CHOKE CONTROL ASS'Y	1	41	031716	SEAT SWITCH	1
13	069104	THROTTLE CONTROL	1	42	031833	BRACKET - Switch	1
14	075019	KNOB, Throttle Control	1	43	031839	RELAY - Clutch Control	1
15	031085	BATTERY, 12 Volt	1	44	075045	RUBBER BOOT	1
16	031111	CABLE ASS'Y, Solenoid to Starter	1	45	023478	CONNECTOR HOUSING, 5 Wire	1
17	031720	SOLENOID STARTER SWITCH	1	46	023595	CONNECTOR HOUSING, 4 Wire	1
18	031117	AMMETER	1	47	031106	CONNECTOR HOUSING, 3 Wire	1
19	029131	SWITCH, Safety	1	48	029170	CONNECTOR HOUSING, 2 Wire	1
20	075057	INSULATOR	1	49	031105	CONNECTOR	1
21	065096	NUT, Special, 5/8"	1	50	031149	HEAD LIGHT	2
22	031102	CIRCUIT BREAKER, 20 Amp	1	51	031159	RETAINER RING	2
23	031108	CIRCUIT BREAKER, 6 Amp	1	52	061040	SCREW, Machine, Truss H. No. 10-1/2"	8
24	031110	CABLE ASS'Y, Battery to Solenoid	1	53	064001	WASHER	8
25	031103	CABLE ASS'Y, Battery to Ground	1	54	631006	TAIL LIGHT	2
26	031109	REGULATOR RECTIFIER	1			BULB - for item 54 GE 1895 (not ill.)	2
27	063002	LOCKWASHER, 1/4"	8	55	031375	LENS - Red for item 54 (not ill.)	2
28	064127	WASHER, Flat 1/4"	4		031962	HOUR METER	1
29	061012	MACHINE SCREW, No. 10-24 x 1/2	2				



# ELECTRICAL WIRING DIAGRAM

## ALL MODELS EQUIPPED WITH INTERLOCK MODULE 531074

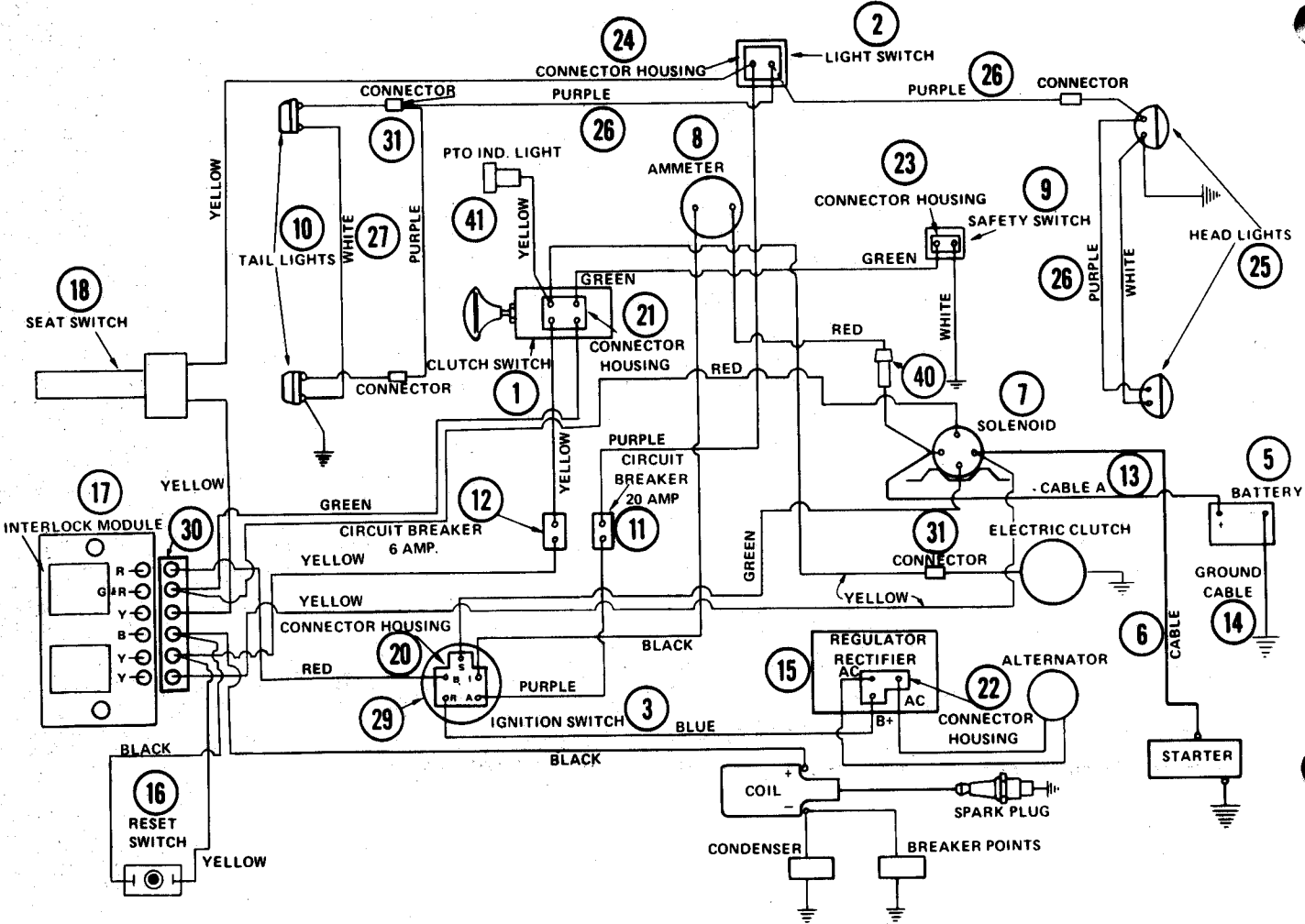


REF NO.	PART NO.	DESCRIPTION	NO. REQ'D	REF NO.	PART NO.	DESCRIPTION	NO. REQ'D
1	031150	SWITCH, Clutch	1	25	031149	HEAD LIGHT	2
2	031151	SWITCH, Lights	1	26	031722	WIRE HARNESS, 2 Wire	1
3	031152	SWITCH, Ignition	1	27	031147	WIRE HARNESS, 35" Long (white)	1
4	031179	PTO Indicator & Wire Ass'y	1			Ground for Tail Lites	1
5	031085	BATTERY, 12 Volt	1	28	031114	WIRE HARNESS, 6½" Long (blue)	1
6	031111	CABLE ASS'Y, Solenoid to Starter	1			Brake to Lite Switch	1
7	031720	SOLENOID STARTER SWITCH	1	29	031113	WIRE HARNESS, 7½" Long (black) 20 Amp	1
8	031117	AMMETER	1			Circuit Breaker to Ign. Switch. 6 Amp	
9	031107	SWITCH, Safety	1			Circuit Breaker to Clutch Switch	2
10	631006	TAIL LIGHT	2	30	031104	WIRE HARNESS, (white) Ground for Head Lite	1
11	031102	CIRCUIT BREAKER, 20 Amp	1	31	031101	WIRE CONNECTOR	7
12	031108	CIRCUIT BREAKER, 6 Amp	1	32	031168	WIRE ASS'Y, 44½" Long	1
13	031110	CABLE ASS'Y, Battery to Solenoid	1	33	031119	WIRE, Ignition to Rectifier (blue)	1
14	031103	CABLE ASS'Y, Battery to Ground	1	34	031721	WIRE, Wire to Ground (purple)	1
15		REGULATOR RECTIFIER	1	35	031712	WIRE, Seat Switch to Ground	1
		KOHLER 237335	1	39	031715	WIRE, (blue) Switch to Solenoid	1
16	025172	SWITCH, Reset	1	40	031823	WIRE, (red)	1
17	531099	INTERLOCK MODULE	1	41	031824	WIRE, (black) Ammeter to Switch	1
18	031716	SEAT SWITCH	1	43	031895	CONNECTOR	1
20	023478	CONNECTOR HOUSING, 5 Wire	1			031192	1
21	023595	CONNECTOR HOUSING, 4 Wire	1			BULB (For Item No. 4, PTO Light)	1
22	031106	CONNECTOR HOUSING, 3 Wire	1				
23	031895	CONNECTOR HOUSING, 2 Wire	1				
24	031105	CONNECTOR	1				

# ELECTRICAL WIRING DIAGRAM

## GEAR MODELS

EQUIPPED WITH INTERLOCK MODULE 31976 OR 531099



REF NO.	PART NO.	DESCRIPTION	NO. REQ'D	REF NO.	PART NO.	DESCRIPTION	NO. REQ'D
1	031150	SWITCH, Clutch	1	25	031149	HEAD LIGHT	2
2	031151	SWITCH, Lights	1	26	030002	WIRE HARNESS, Headlight & Clutch	1
3	031152	SWITCH, Ignition	1	27	030001	WIRE HARNESS, Tail Light	1
5	031085	BATTERY, 12 Volt	1	29	030003	DASH HARNESS	1
6	031111	CABLE ASS'Y, Solenoid to Starter	1	30	030004	INTERLOCK MODULE HARNESS	1
7	031720	SOLENOID STARTER SWITCH	1	31	031101	WIRE CONNECTOR	7
8	031117	AMMETER	1	40		STD, 30a SAE FUSE	1
9	031107	SWITCH, Safety	1	41	031983	PTO INDICATOR LIGHT	1
10	631006	TAIL LIGHT	2		030016	STD, 12 PSB LAMP	1
11	031102	CIRCUIT BREAKER, 20 Amp	1				
12	031108	CIRCUIT BREAKER, 6 Amp	1				
13	031110	CABLE, Battery to Solenoid	1				
14	031103	CABLE, Battery to Ground	1				
15		REGULATOR RECTIFIER KOHLER 237335, 12, 14 & 16	1				
16	025172	SWITCH, Reset	1				
17	031976	INTERLOCK MODULE	1				
18	031716	SEAT SWITCH	1				
20	023478	CONNECTOR HOUSING, 5 Wire	1				
21	023595	CONNECTOR HOUSING, 4 Wire	1				
22	031106	CONNECTOR HOUSING, 3 Wire	1				
23	029170	CONNECTOR HOUSING, 2 Wire	1				
24	031105	CONNECTOR	1				

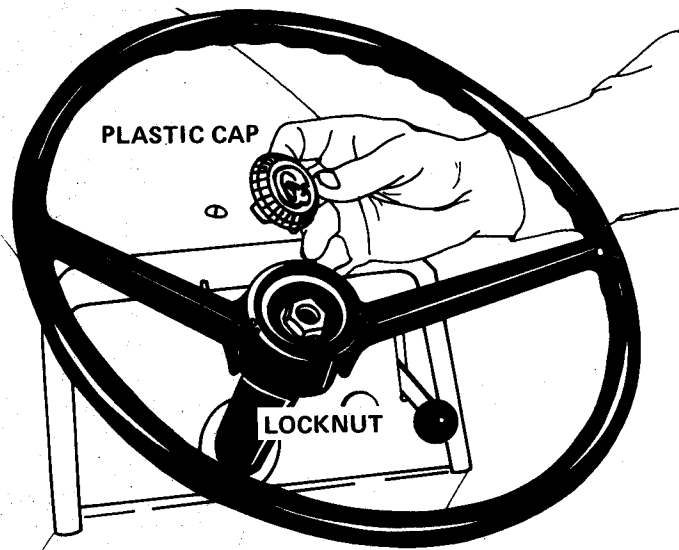


Figure 1A

**STEERING WHEEL**

Install steering wheel on the column as shown in Figure 1A. Secure with nut provided. Place the plastic cap firmly in the steering wheel hub.

**SERVICE BATTERY**

Remove the battery from the tractor. This will prevent any accidentally spilled electrolyte from damaging the tractor.

Electrolyte is not furnished with the tractor. Use only battery grade sulphuric acid electrolyte with 1.265 specific gravity plus or minus 0.005 corrected to 80° F.

Prepare battery as follows:

1. Remove vent plugs.
2. With battery removed from the tractor, fill each cell with electrolyte until electrolyte level rises to split ring at the bottom of the filler tube. **DO NOT OVERFILL.**
3. After filling cells, wait five to ten minutes and add additional electrolyte if necessary to bring electrolyte to proper level.
4. Charge battery with a 12 volt charger for 30 minutes at 4 to 6 amps.
5. After charging, add electrolyte until level is up to the split ring in the filler tube. Thereafter, add only clean, distilled water as use and time requires.
6. Replace vent caps. Clean and dry battery exterior.



**CAUTION:** Electrolyte contains sulphuric acid which is harmful to skin, eyes and clothing. Handle with extreme care. If spillage occurs on body or clothing, rinse at once with water.

**INSTALL BATTERY**

Place the battery in the battery carrier as shown in Figure 2A with the positive (+) terminal to the right side of the tractor.

Secure the battery in place with the battery hold down bolts, flat washers and locknuts as shown in Figure 2A. Do not overtighten these bolts.

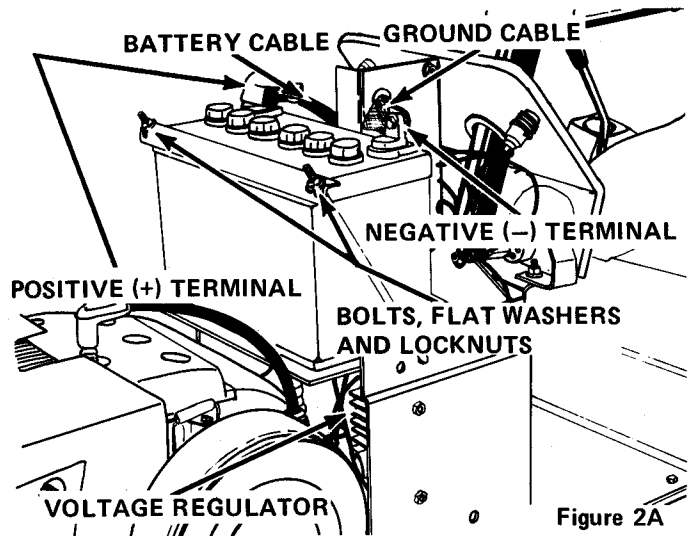


Figure 2A

Attach the battery cable to the positive (+) terminal and the ground cable to the negative (-) terminal as shown in Figure 2A. Tighten the cables to the terminals securely.

Coat the terminals and battery cable ends with a light coat of grease or petroleum jelly to prevent corrosion.

Remove perforated circles from battery activation label to indicate month and year sold.

**ENGINE**

Fill the engine crankcase (Fig. 3A & 4A). Use Ariens Gard-N-Yard MS 10W-30 oil when using lawn and garden attachments and SE 5W-20 when using snow removal attachments.

Do not overfill – Oil level must never exceed full mark.

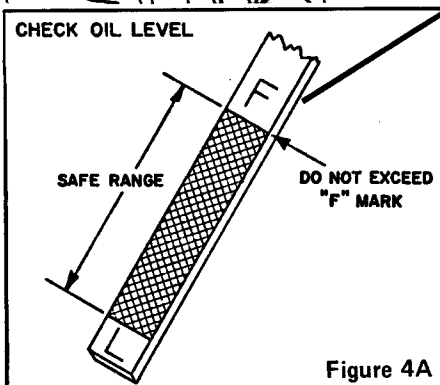
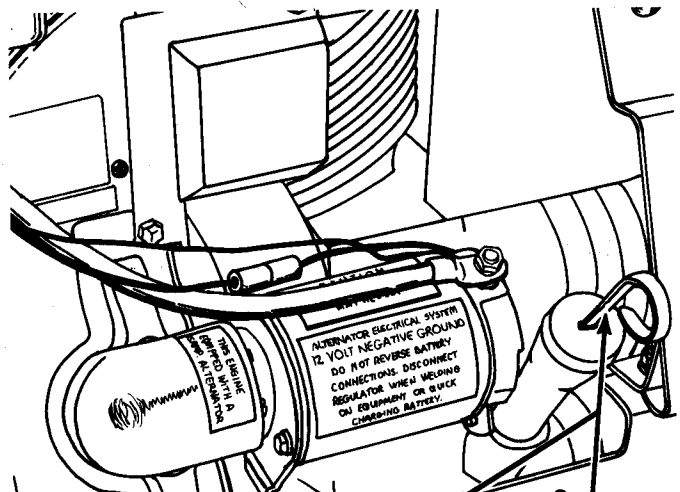


Figure 4A

DIPSTICK

Figure 3A

## CHECK TRANSAXLE OIL LEVEL

The oil level in the rear end should be checked every 25 hours of operation or monthly.



**CAUTION:** Proper oil level is essential for protection against severe damage to the transaxle.

Use the following procedure to check the transaxle oil level:

1. Drive tractor onto level ground.
2. Stop engine.
3. Wipe dirt from around the oil level filler plugs. See Figure 6A.
4. Remove filler plug. Oil level should level with the filler plug hole, see Figure 6A.
5. If necessary, use a small funnel to add sufficient MP-90 oil to bring the oil up to the proper level. Replace plug.

Be very careful to prevent dirt and foreign materials from entering the transaxle when checking the oil.



**IMPORTANT:** Do not push or tow tractor at high speed. Load tractor on truck or trailer when delivering to purchaser.

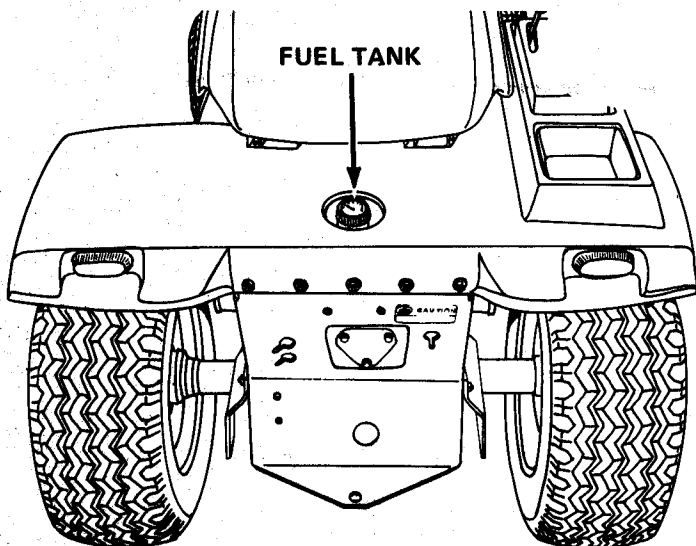


Figure 5A

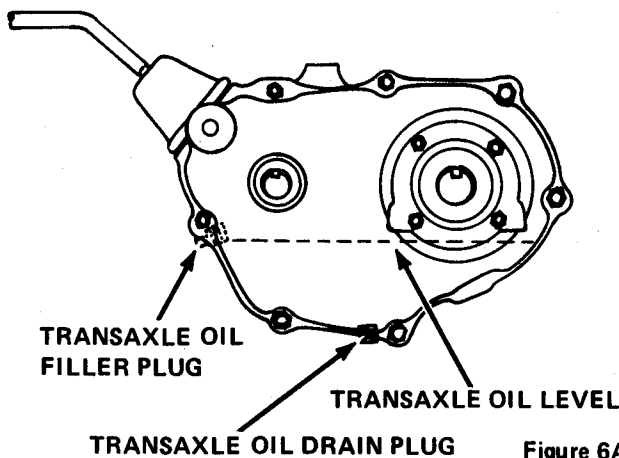


Figure 6A

## FILL FUEL TANK

Fill fuel tank with regular grade gasoline. Do not use premium gasoline. Figure 5A.

## CHECK TIRE PRESSURE

Inflate tires to pressures shown in the chart below. Use a low pressure tire gauge for accurate readings.

TIRE SIZE	LOADING		
	Light	Medium	Heavy
Front 16 x 6.50 x 8	(Lawn Work) 8 p.s.i.	(Sno-Thro) 12 p.s.i.	16 p.s.i.
Rear 23 x 10.50 x 12	(Lawn Work) 6 p.s.i.	(Rotary-Tiller) 8 p.s.i.	10 p.s.i.

## CHECK SAFETY INTERLOCK SYSTEM

To make sure that the safety interlock system has not become disconnected or damaged in shipment, check to see that the tractor will not start unless:

- a. The shift lever is in the NEUTRAL position.
- b. Implement Power Control Switch is in the OFF (In) position.

If the engine starts with above controls in any other position, the safety interlock must be corrected before delivery.

## DELIVERY

Using the Owner's Manual as a guide, instruct the customer as follows:

1. Instruct the customer on the operation of the tractor. Emphasize safety and discuss the safety information in the Owner's Manual.
2. Advise customer to change oil in the engine crankcase after the first five hours of operation.
3. Explain how to perform the recommended lubrication and periodic service.
4. Explain maintenance and adjustment instructions.
5. Demonstrate how to mount and dismount attachments.
6. Make certain the customer has his Owner's Manual.
7. Explain Ariens Warranty Policy. Fill out and return Ariens Warranty Registration Card.