

8 h.p. tractor

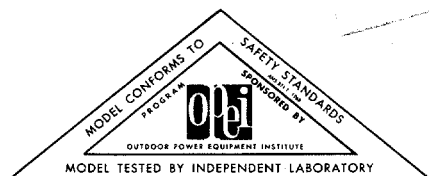
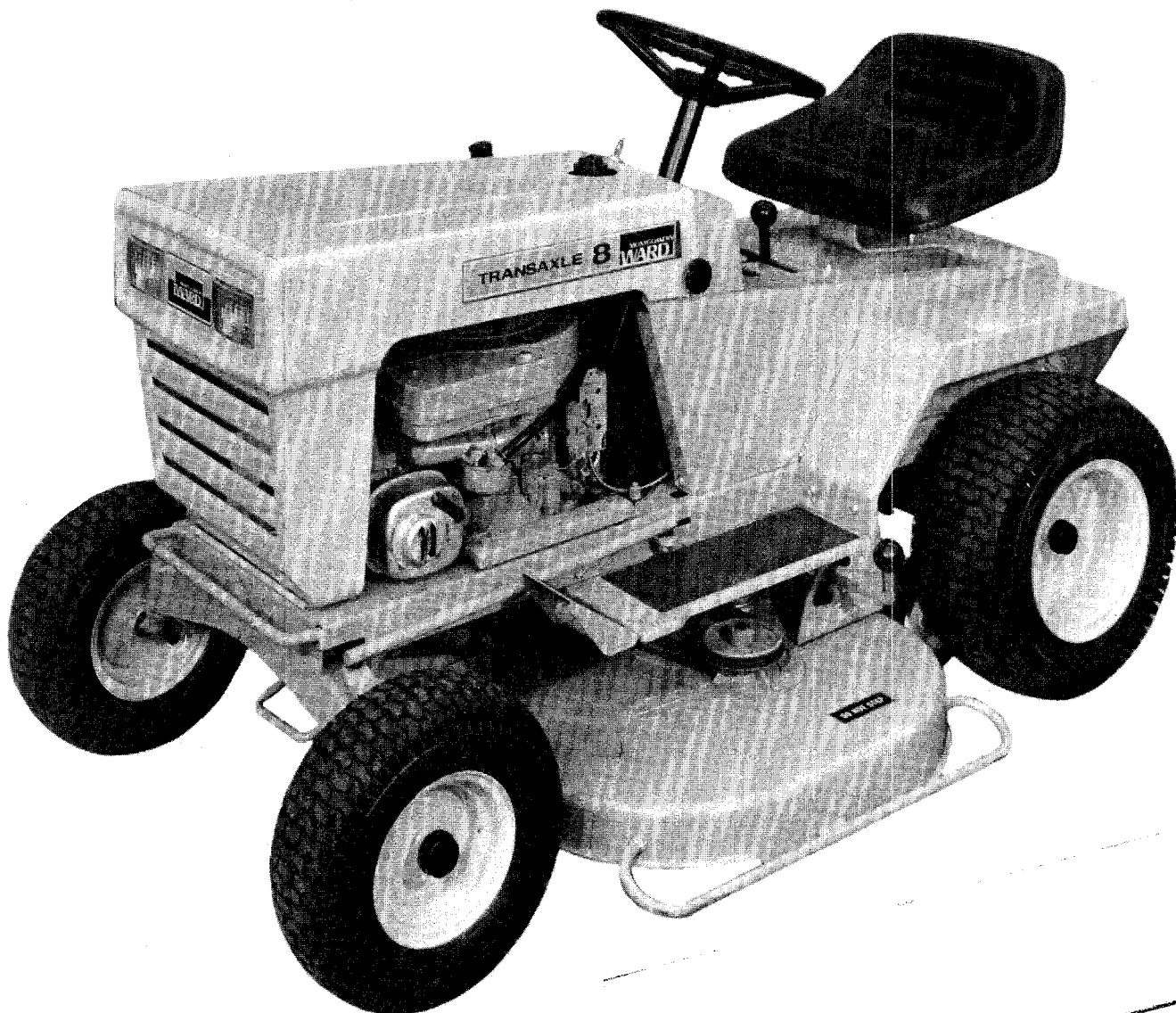
8 H.P. TRACTOR

MODEL ZYJ-1398A

Form No. 89 TRAC-92B*

**MONTGOMERY
WARD**

owner's guide and PARTS LIST



RULES FOR SAFE OPERATION

Your Tractor is a precision piece of power equipment. Engineering skill and experience have been combined to provide the ultimate in safety and efficiency. As with any type of power equipment, carelessness or error on the part of the operator can result in injury. Exercise extreme caution at all times.

TRAINING

1. **KNOW YOUR MACHINE.** Read the Owner's Guide Manual carefully — learn how to operate your tractor properly, and how to stop quickly.
2. **NEVER** allow children or young teenagers to operate a power mower. (Do not allow adults to operate without proper instruction.)
3. **KEEP CHILDREN AND PETS AWAY** from area at all times during mowing operation.
DO NOT carry passengers.

PREPARATION

1. **MAKE SURE THE LAWN IS CLEAR** of sticks, stones, wire and hazardous items before mowing. Such items are dangerous to both the tractor and individuals in the vicinity of the mower.
2. **DO NOT** operate equipment when barefoot or wearing open sandals. Always wear substantial footwear.
3. **ADD FUEL** before starting engine. Do not fill gasoline tank indoors, when engine is running, or while engine is still hot. Wipe off any spilled gasoline before starting engine.
4. **DISENGAGE ALL BLADE AND DRIVE CLUTCHES AND SHIFT TRANSMISSION TO NEUTRAL** before starting engine, also disengage transmission by depressing clutch-brake pedal fully.

OPERATION

1. **STOP ENGINE** and disengage power to attachments before leaving operator position to make any repairs or adjustments.
2. **DISENGAGE POWER** to attachments when transporting or not in use.
3. **CAUTION** when leaving vehicle unattended, disengage attachments, shift into Neutral, set parking brake, stop engine and remove key.
4. **DO NOT STOP OR START SUDDENLY** when going uphill or downhill. Mow up and down the face of steep slopes. **NEVER** across the face. Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Exercise caution when changing direction on slopes.
5. **CAUTION** — Watch out for traffic when crossing or near roadways.
6. **NEVER** direct discharge of material toward bystanders when using any attachments nor allow anyone near vehicle while in operation.
7. **HANDLE GASOLINE WITH CARE** — it is highly flammable.
 - A. Use approved gasoline container.
 - B. Never remove cap or add gasoline to a running or hot engine or fill fuel tank indoors. Wipe off spilled gasoline.
 - C. Do not run engine indoors — exhaust fumes are dangerous.
8. **ALWAYS CHECK FOR DAMAGE** if you should strike some foreign object. Vehicle and attachment should be stopped to inspect for and repair any damage before restarting engine and operating.
9. **WHEN USING VEHICLE MOWER:**
 - A. Mow only in daylight or in good artificial light.
 - B. Shut engine off when unclogging chute or cleaning grass from cutting deck.
 - C. Always stop engine and disconnect spark plug wire before attempting any repairs or adjustments. To lift front of machine, use handle lift rod keeping hands away from pivoting front axle.
 - D. **DO NOT** change engine governor settings or overspeed engine.
10. **NEVER** store equipment with gasoline in the tank inside a building where fumes may reach open flame or spark.
11. **TO REDUCE FIRE HAZARD** keep free of grass, leaves or excessive grease.
12. **BEFORE STORING** in any enclosure allow engine to cool.
13. **STAY ALERT** for holes in terrain and other hidden hazards.
14. **KEEP VEHICLE AND ATTACHMENTS** in good operating condition and keep safety devices in place.
15. **DO NOT** put hands or feet near or under rotating parts.

SUGGESTIONS FOR MORE EFFICIENT, and MAINTENANCE-FREE OPERATION

GENERAL MOWING :

1. Always keep mower blades "Knife" sharp, balanced, and underside of mower housing clean for maximum cutting efficiency. It is not advisable to cut off more than 1/3 of the total length of the grass at any one mowing.
2. Always start engine with tractor on level surface with blade clutch disengaged and transmission in Neutral. After starting, let engine warm up several minutes at slow speed before starting to mow.
3. When mowing under normal conditions, run tractor at 3/4 to full throttle for best results.
4. When cutting tall heavy growth, or on rough ground, place mower in highest cut position and tractor in slowest ground speed, then gradually reduce to desired cutting height over course of two or three mowings.

MAINTENANCE :

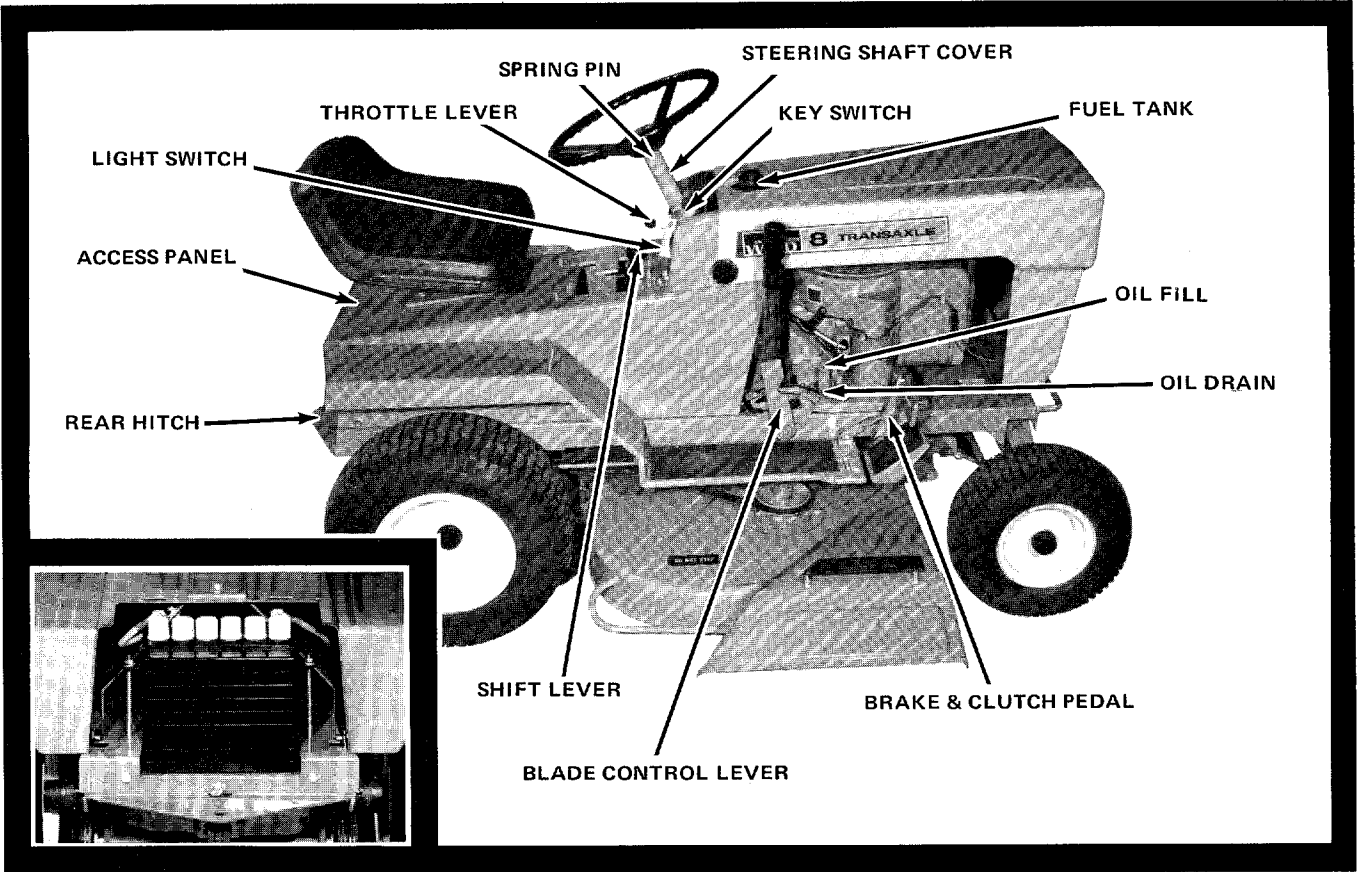
Your Tractor like all machines with moving parts, must receive care and maintenance. The following tips, if used, will contribute many trouble-free hours to your tractor.

1. Check engine oil level frequently, or every 5 hours of mowing. Make sure dirt and debris is cleaned off oil fill area before removing plugs. Clean air cleaner foam filter and re-soak in clean oil once every 5-10 hours or more often in dry dusty conditions.
2. Keep tractor clean, especially the underside of mower housing. Check cutting blades occasionally to see that they are securely fastened.
3. Check all nuts, bolts and screws occasionally for tightness to be sure tractor and mower are in good operating condition.
4. Should excessive vibration develop, check your blade and bearing shaft immediately. Do not operate mower with an unbalanced blade, a damaged blade or a damaged bearing shaft.
5. The tractor front wheel bearings are pre-lubricated at the factory and should be greased approximately every 5 hours.
6. If you are going to store your tractor for any length of time (30 days or longer), it is important that the following steps be taken:
 - A. Drain the gas tank and carburetor. Start the engine and run it until out of gas. Gasoline left in the engine will leave gum deposits in the carburetor and gas tank.
 - B. Clean engine of all foreign matter.
 - C. Lubricate cylinder by removing the spark plug and pouring one ounce of clean lubricating oil through the spark plug hole into the cylinder. Crank engine slowly to spread oil and replace spark plug.
7. Battery may need re-charging if stored for a long period of time. If battery is not removed from tractor, disconnect negative ground wire when re-charging battery. Refer to battery activation card for proper charging information. This card should be saved with the Owner's Guide Manual.

Check battery electrolyte level after 25 hours of use or every 30 days. Maintain level with distilled or demineralized water. Avoid overfilling. Keep top of battery clean by periodically washing with a brush dipped in ammonia or bicarbonate of soda solution followed by flushing with clean water. Keep battery hold down clamp tight to prevent vibration of battery, but do not overtighten as this may warp case.

Battery cable connectors must be kept tight on terminals to provide a good contact. If corrosion occurs at terminals, disconnect cables and clean connectors and terminals separately. Coat connectors with petroleum jelly and re-install.

CAUTION: 110-volt plug-in charger will not bring battery up to charge unless cable is disconnected from negative (—) side of battery. **DO NOT** run engine with battery disconnected unless fuse is removed from fuse holder. Failure to remove fuse can result in electrical sparking and alternator damage.
8. The transaxle is pre-lubricated. Every 25 hours of operation check the oil level by removing the fill plug. Use S.A.E. 90 extra duty transmission oil to fill if level is below plug opening. Change oil every 50 hours.
9. The disc brake wear pads are replaceable should they no longer respond to adjustment. Refer to clutch and brake pedal adjustments section to reset brake linkage if pads are replaced, or adjustment is necessary.
10. Just as your automobile needs professional mechanical maintenance from time to time, so does your tractor and its air-cooled engine. A yearly tune-up and check by your Wards Service Center is recommended to avoid breakdowns and unnecessary delays during the mowing season.



UNPACKING AND SET-UP

1. Be sure carton is right side up. Open carton and fold ends flat on floor. Remove inner pack and roll unit out of carton.
NOTE: Battery electrolyte is located in inner pack.
2. Place wheel over steering shaft and attach securely with spring pin provided.
3. Check position of seat on seat spring for comfort and foot control. Change position to suit leg length.
4. Assemble rear hitch to frame with the fasteners provided. Place the bend angle under and inside of the frame.

BEFORE STARTING ENGINE

1. Place unit on a level surface. Remove oil filler plug and fill crankcase to overflowing with Ward's detergent oil. Above 32°F. use S.A.E. 30. Below 32°F. use S.A.E. 10W. See your Engine Manual.
2. Fill fuel tank with a good grade of regular clean fresh gasoline. (Do not mix oil with gasoline.)

BATTERY ACTIVATING INSTRUCTIONS

To fill battery with Electrolyte, remove the battery access panel. Use extreme caution when filling battery.

IMPORTANT: Refer to the Battery Instruction Card in the Parts Package for complete filling and charging instructions.

STARTING ENGINE

This unit is equipped with a **SAFETY START INTERLOCK SYSTEM** which will allow engine to crank without starting. To start, the gear shift lever **MUST** be in Neutral position, clutch-brake pedal **MUST** be depressed fully and blade control lever **MUST** be in "OFF" detent. Move throttle control lever to choke position, turn key to start position, and hold until engine starts.

When engine starts, move throttle lever to idle or slow position until engine warms up. If engine should fail to start, refer to your Engine Instruction Manual.

TO STOP, turn key to Off position.

NOTE: Continuous cranking of the starting motor for periods over one minute should be avoided. The engine can be rope-started should the battery be discharged. Rope is enclosed in Small Parts Package.

BEFORE MOWING

1. Always mount unit from left side as shown, using the step provided on frame.
2. Try your TRACTOR in a large open space with engine throttle in slow position. Learn to start, stop and back up with the cutting unit disengaged during this trial run.
3. In rough areas, raise the cutting unit to high cut position (see Height of Cut section).
4. Remove stones, wire, cans, boards, bones, or other solid objects from area to be mowed.

OPERATION OF CONTROLS

ENGINE

For maximum mowing performance, move throttle lever to 3/4 or open position. For complete engine operating instructions, refer to Engine Manual found in the Small Parts Package. To stop engine, turn key to OFF position.

TRANSMISSION SHIFTING

To shift from Neutral to speed selected or Reverse with engine running, be sure foot pedal is depressed half-way. **DO NOT FORCE LEVER IN EITHER DIRECTION.** If lever will not move to desired position, release foot pedal slightly and depress again to half-way position (this will permit the gears to align themselves), then move lever to desired position, making sure lever is engaged fully and not half-way between Neutral and the selected speed or Reverse.

FOOT PEDAL

To propel tractor, slowly release foot pedal. To stop, depress foot pedal fully. Brake is automatically engaged when pedal is fully depressed. To clutch transmission for shifting, depress pedal to half-way position.

For **PARKING**, depress pedal fully and lift parking brake locking lever and engage with pedal.

MOWER BLADES

"ON-OFF" CONTROL

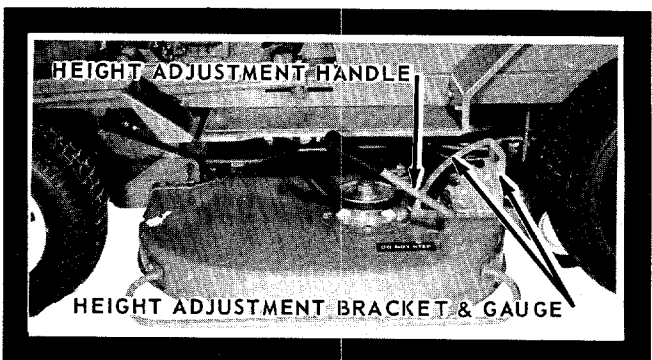
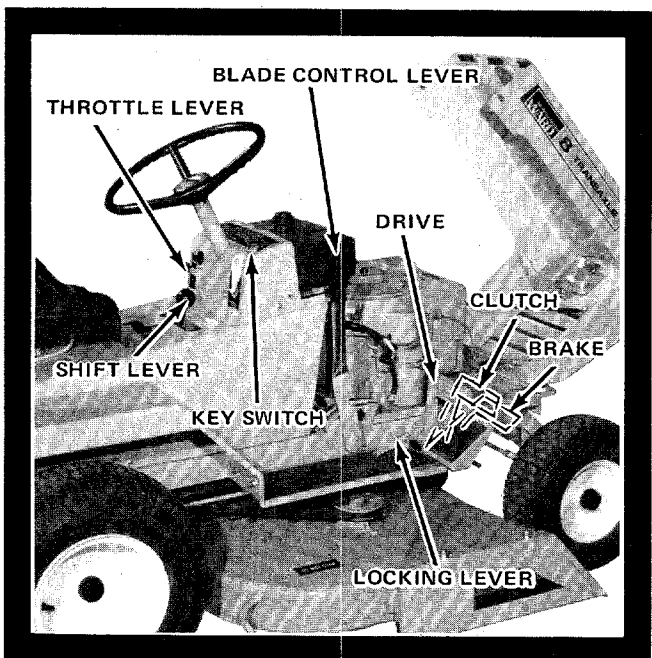
To engage rotary blades, move control lever back out of "OFF" detent and release. Lever will then engage itself. **DO NOT FORCE LEVER FORWARD.** To stop rotary blades, move control lever back into "OFF" detent.

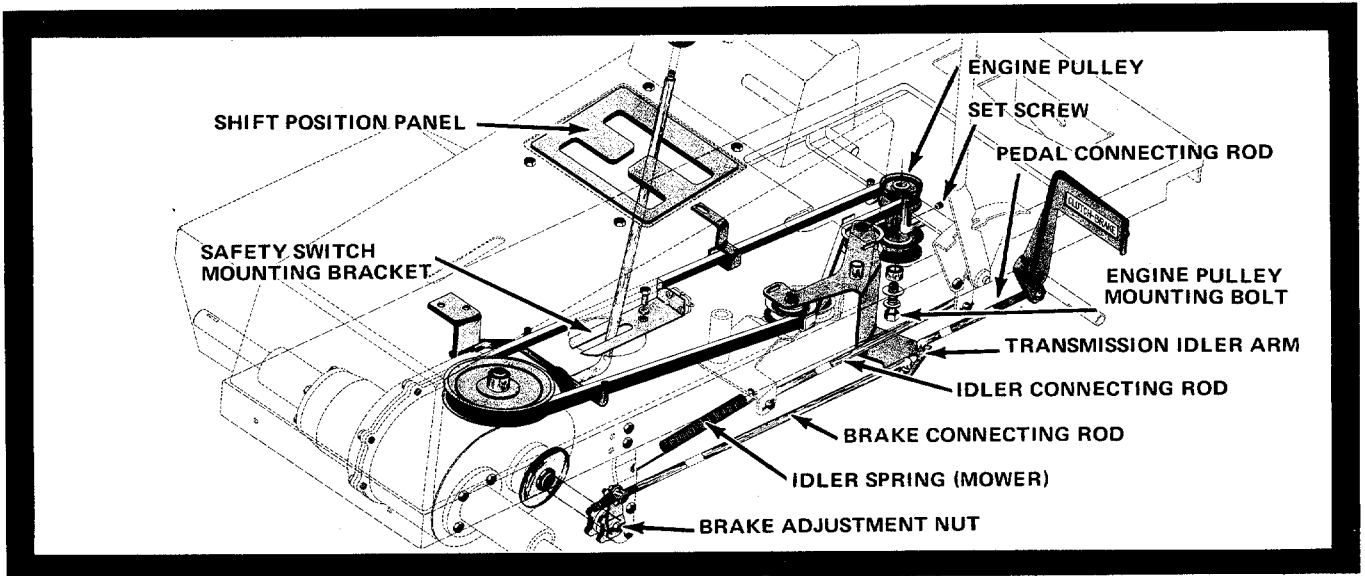
NOTE: Use extreme caution at all times while the rotary blades are rotating.

GENERAL: The speed of the mower blades is controlled by the engine throttle control setting, while the ground speed is controlled mainly by the transmission lever position. Set the throttle to obtain the desired mower blade speed, then shift the transmission lever to the desired traveling speed.

HEIGHT OF CUT ADJUSTMENT

Lift the height adjustment handle out of the notches on the height adjustment bracket and move to the desired height of cut and reset in notch.





TRANSMISSION DRIVE BELT REPLACEMENT

Remove spark plug wire.

1. To facilitate the removal and replacement of the transmission drive belt, remove the cutting unit. Drain oil and gasoline from the engine and tilt the unit on its side. Remove battery before tilting on side.
2. Remove the bolts holding the shift position panel and remove the panel.
3. Remove the mower idler spring and the mower drive idler arm connecting rod.
4. Remove the engine drive pulley mounting bolt. Loosen the set screw in the lower engine pulley hub and remove the pulley.
5. Remove bolt and bushing from safety switch bracket and slip off shift lever.
6. Remove the old belt, slipping it first up and off the

transmission pulley, off the engine pulley, and off the two transmission drive idlers. Then, work the belt up and over the transmission lever for removal.

7. To replace the new belt, reverse the above steps. Make certain the belt is inside the belt guide rods, near the engine drive pulley and the transmission pulley and inside the two belt restrictor brackets. **NOTE:** The front transmission drive idler (flat) should be on the outside of the belt and the rear transmission drive idler ("V" Type) should be on the inside of the belt. Refer to belt diagram decal on underside of right foot rest for correct belt installation.

8. Replace the shift position panel.

9. Refer to Brake and Pedal Adjustments for proper brake and linkage adjustment after replacing the belt.

10. The belt restrictor brackets are self-locating when repositioned in the guide slots.

CLUTCH AND BRAKE PEDAL ADJUSTMENT

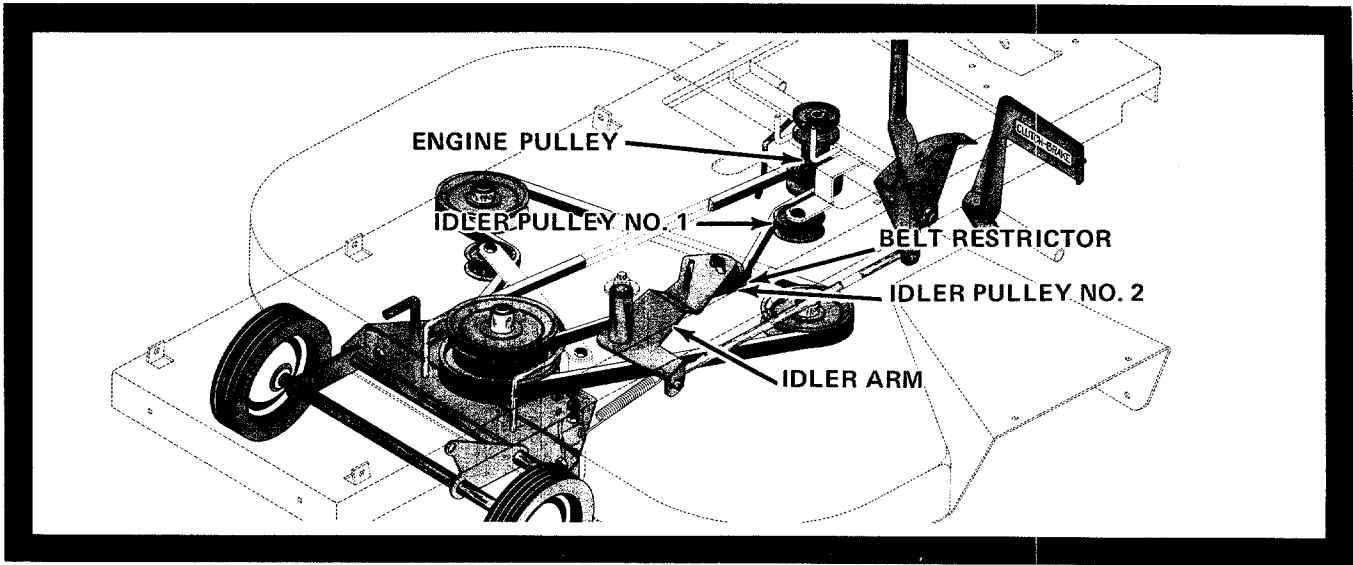
ADJUSTMENTS

NOTE: Make all adjustments with engine turned off and wire removed from the spark plug. (Fasten wire to cylinder head at least 1" away from spark plug.)

To adjust the vertical angle of the brake and clutch pedal, remove the cotter pin from the pedal connecting rod and thread the rod out or in to position the pedal. Normal wear of the disc brake may necessitate a slight adjustment to provide good braking action without too much pedal movement. Turn the brake adjustment nut (clockwise) 1/8 turn at a time and check. Move the transmission lever to the Neutral position and roll the tractor, by hand, and check the braking action by depressing the brake pedal all the way down.

CAUTION: Only tighten the brake adjustment nut 1/8 turn at a time (do not overtighten) to prevent brake drag and undue wear.

The brake connecting rod may occasionally need adjustment if stretching occurs in the transmission drive belt or when replacing the belt. The front end of the rod connects into the slotted hole in the transmission drive idler arm and may be disconnected for adjustment by removing the cotter pin and washer. With the brake-clutch pedal in the drive position, and the brake connecting rod held back toward brake, adjust the rod by threading it in or out until the rod end is centered in slot of idler arm. This adjustment should be maintained to avoid dragging of the brake or slipping of the belt and to allow movement of the pedal to the clutch position before application of the brake.



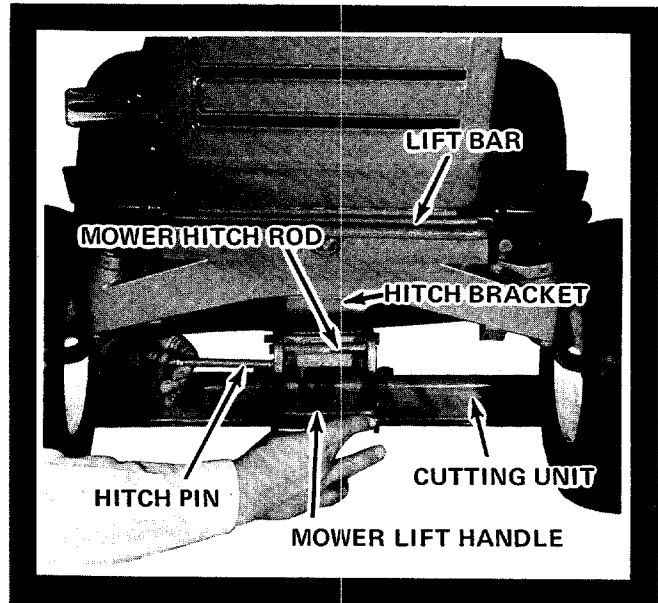
MOWER DRIVE BELT ADJUSTMENT

This belt is of special high strength construction, however after 5 to 10 hours of operation, slight adjustment may be necessary. To adjust, move idler (1) towards engine pulley 1/8". To check belt tension, raise mower height of cut to highest position, belt must release when disengaged.

Repeat the adjustment if more belt take-up is needed. Additional adjustment is provided with idler (2) when idler (1) has been moved the full length of slot. To adjust, move idler (2) towards the outside; when moving this idler, relocate belt restrictor in positioning slot.

REMOVAL OF CUTTING UNIT

1. Lower the cutting unit to the lowest height of cut for removal of the cutting unit. Move the mower lever back into the "OFF" detent.
2. Remove the hairpin cotter and pull out the hitch pin.
3. Slip the mower drive belt off the bottom rim of the engine drive pulley, and out of the mower drive idler and belt restrictor. Move the mower lever out of the "OFF" detent and release to enable belt removal from between the blade brake mechanism.
4. Lift the front end of the cutting unit by the mower lift handle and move back slightly to disconnect the mower hitch rod from the hitch bracket, and lower the cutting unit.
5. Push the front of the tractor by the lift bar, and roll the front wheels back over the top of the cutting unit for removal.
6. Reverse these steps to re-install cutting unit to the tractor. Refer to belt diagram on mower deck for correct drive installation. **NOTE:** Make sure mower lever is in engaged position (forward) when installing cutting unit and position drive belt between blade brake mechanism before moving to "OFF" detent.

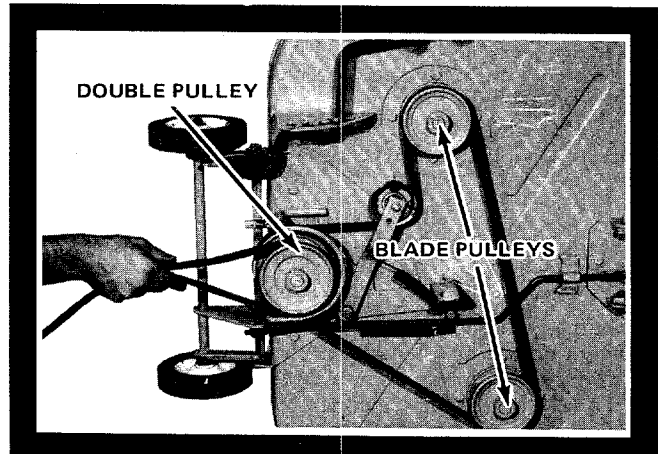


CUTTING UNIT BELT REPLACEMENT

1. Remove the cutting unit from tractor.
2. Release the tension on the idler arm and pulley and lift the worn belt from the blade pulleys.
3. Pull the worn belt, from the rear, to the double pulley assembly and lift it over the pulley.
4. Reverse the above procedure and assemble the new belt over the pulleys.

NOTE: Be sure the idler pulley is on the outside of the belt. Refer to belt diagram on mower deck for correct belt installation.

NOTE: All belts are of special construction and should only be replaced with original equipment parts from your Wards Service Center.



THROTTLE CONTROL ADJUSTMENT

1. Move the throttle control lever located on the control panel, to the Fast position detent.
2. Loosen the cable clamp screw of the engine carburetor holding the throttle control cable.
3. Move the cable and wire up until the throttle lever is in contact with the choke lever as shown. Tighten the cable clamp screw.
4. Operate the throttle control lever a few times to check the movement to full Choke and Fast positions.

DUAL CIRCUIT ALTERNATOR

LIGHT WIRE — This wire goes to the light switch which has three (3) positions, running lights — off — emergency lights. When engine is running and lights are needed, move switch to running lights position. When engine is not running or is turned off and lights are needed, move switch to emergency lights position.

BATTERY WIRE — This wire supplies current for charging the battery, which has a fuse connection.

FUSE REPLACEMENT

WARNING: For electrical safety always disconnect battery negative (-) cable before removing fuse. Replace fuse before reconnecting battery cable. Failure to follow this procedure can result in electrical sparking and alternator damage.

Check fuse every 25 hours for good filament, or if engine alternator fails to maintain battery charge, replace with AGC 15 amp. fuse.

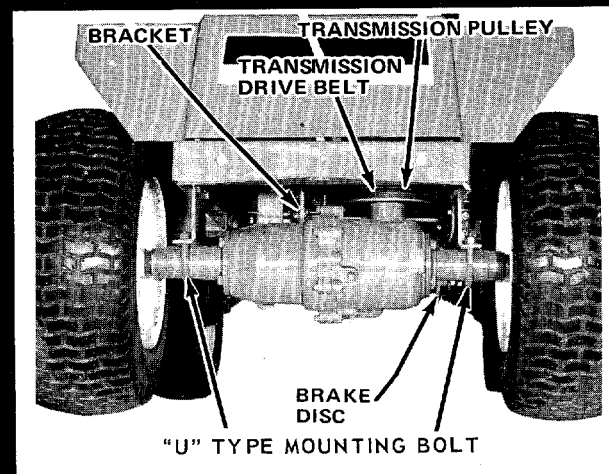
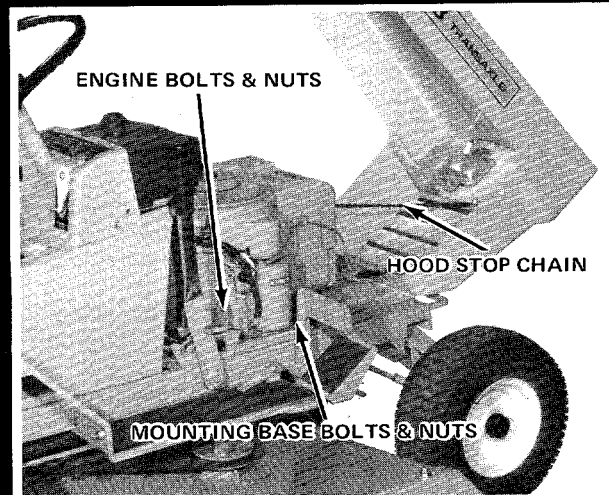
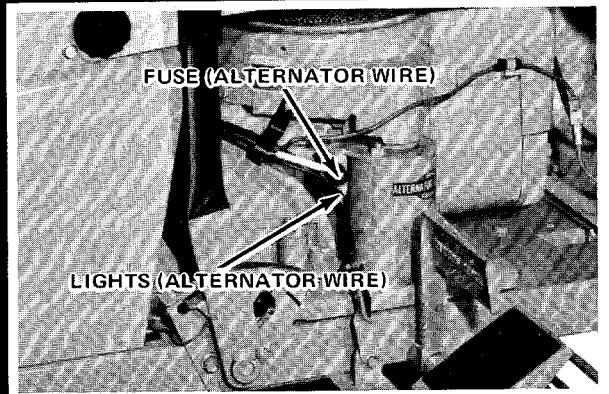
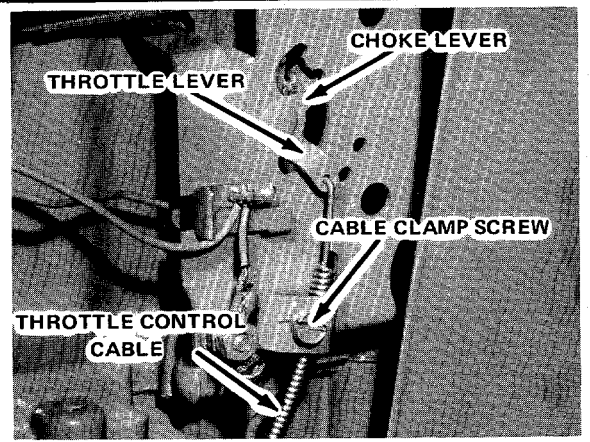
NOTE: Contact your Wards Service Center if replacement of fuse does not correct problem.

ENGINE REPLACEMENT OR REMOVAL

1. Remove the cutting unit and the mower drive belt.
 2. Remove the hood locking knobs and hinge the hood and grille assembly forward.
 3. Disconnect the wiring to the engine and headlights. The headlight wire can be disconnected at the base of the grille. Identify each wire with tape or tag as they are removed. (Refer to wiring diagram.) **NOTE:** Remove ground wire from battery before disconnecting any wires to prevent accidental grounding or sparking.
 4. Remove nut holding hood cable and carefully tilt hood all the way forward.
 5. Loosen the throttle clamp screw and disconnect the throttle control.
 6. Disconnect the rubber fuel line from the engine carburetor and drain gasoline into a gasoline can. **CAUTION:** Do not handle gasoline near any sparks or flame.
 7. Remove the bolt from the center of the engine drive pulley, loosen the socket set screw, and slide the pulley off of the shaft.
 8. Remove oil drain plug and let oil drain into pan.
 9. Remove the four engine mounting base bolts and nuts, lift the engine and mounting base off the unit.
 10. Remove the bolts and nuts from the base of the engine to remove the mounting base.
- To replace the engine, reverse the above steps.

TRANSMISSION REPLACEMENT

1. Prop under the back end of the tractor so that the wheels are free. Remove the two rear wheels.
2. Remove the round knob from the transmission shift lever and shift the lever to the Neutral position.
3. Prop under the transmission to prevent it from suddenly dropping. Remove the two "U" type mounting bolts and the two bolts from the bracket on the left hand side of the transmission. Lower the transmission carefully.
4. To re-mount the transmission, reverse the above steps, remembering to place the transmission lever in the Neutral position. It is important to center the brake disc before retightening "U" bolts.



LUBRICATION

CHANGING ENGINE OIL

Drain oil when engine is warm. To drain oil, place pan under frame directly beneath oil drain. Remove oil drain plug and allow oil to drain completely. Replace drain plug.

See Engine Manual for complete engine lubrication and service instructions.

LUBRICATION POINTS

Lubricate every five hours of operation with S.A.E. 20 weight engine oil, unless otherwise noted.

1. Grease Zerks on Front Wheels
2. Grease Steering Gear
3. Pedal Pivot Point
4. All Connecting Rod Joints
5. All Pivot Points
6. Mower Lift Mechanism
7. Mower Wheels
8. Mower Hitch
9. Mower Lever
10. Throttle Control
11. Transmission (See Maintenance Section)
12. Blade Brake Assembly

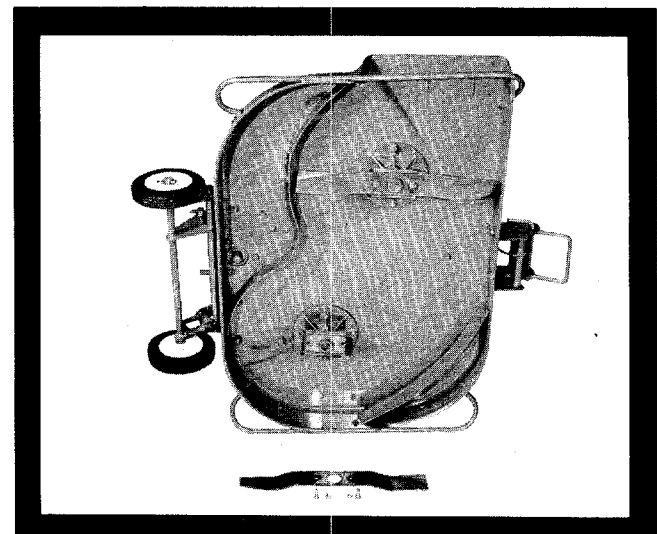
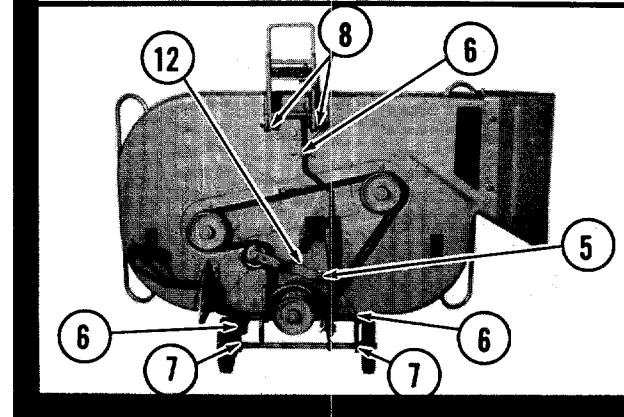
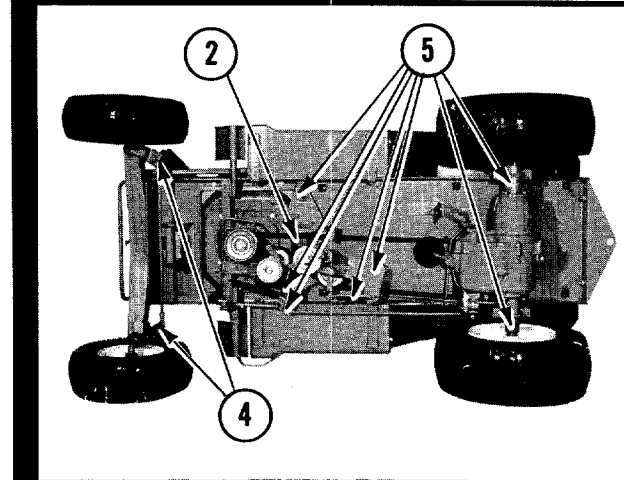
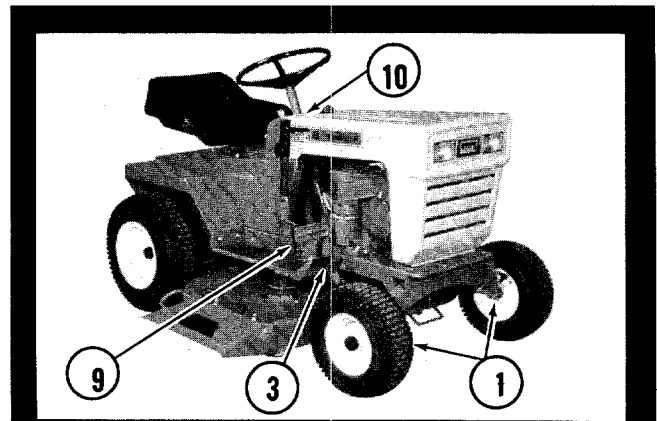
AFTER BREAK-IN PERIOD (FIRST 3 TO 4 HOURS OF OPERATION), CHECK ALL BOLTS AND NUTS FOR TIGHTNESS, INCLUDING BLADE RETAINING NUTS. LUBRICATE AS SHOWN.

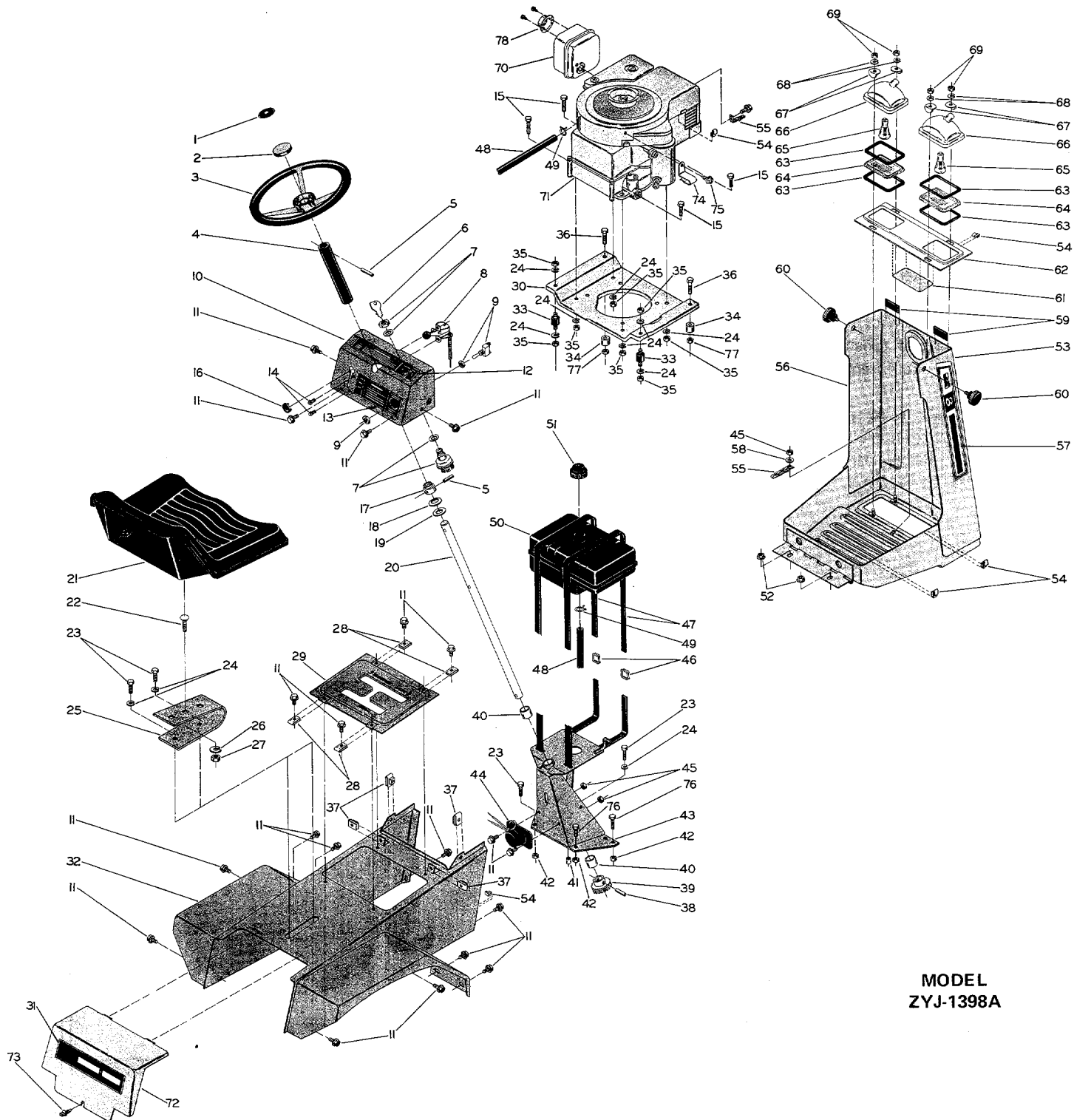
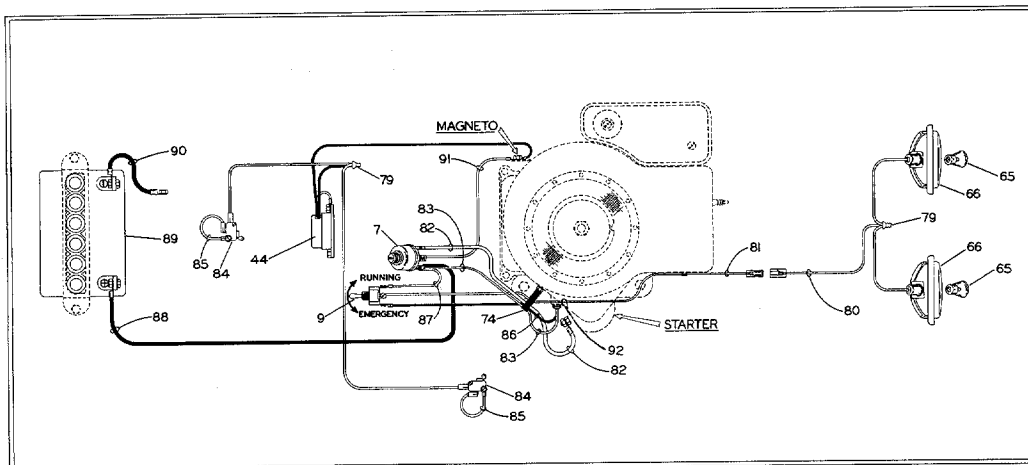
TO REPLACE BLADES

1. Be sure engine is stopped, disconnect spark plug wire and secure at least 1" away from spark plug.
2. Remove blade nuts, bolts, and lockwashers.
3. Remove blades and replace with new ones.
4. When replacing blades, be sure that blade offset is as shown. Tighten retaining nuts securely to bolts.
5. Sharpen dull blades maintaining proper balance.

TIRE CARE

The tires on this riding mower are pneumatic. To insure proper tire life, air pressure of 14 to 16 pounds **MUST BE MAINTAINED IN THE REAR TIRES**. Air Pressure of 10 to 12 pounds **MUST BE MAINTAINED IN THE FRONT TIRES**. Flat tires may be taken to the nearest service station for repairs.





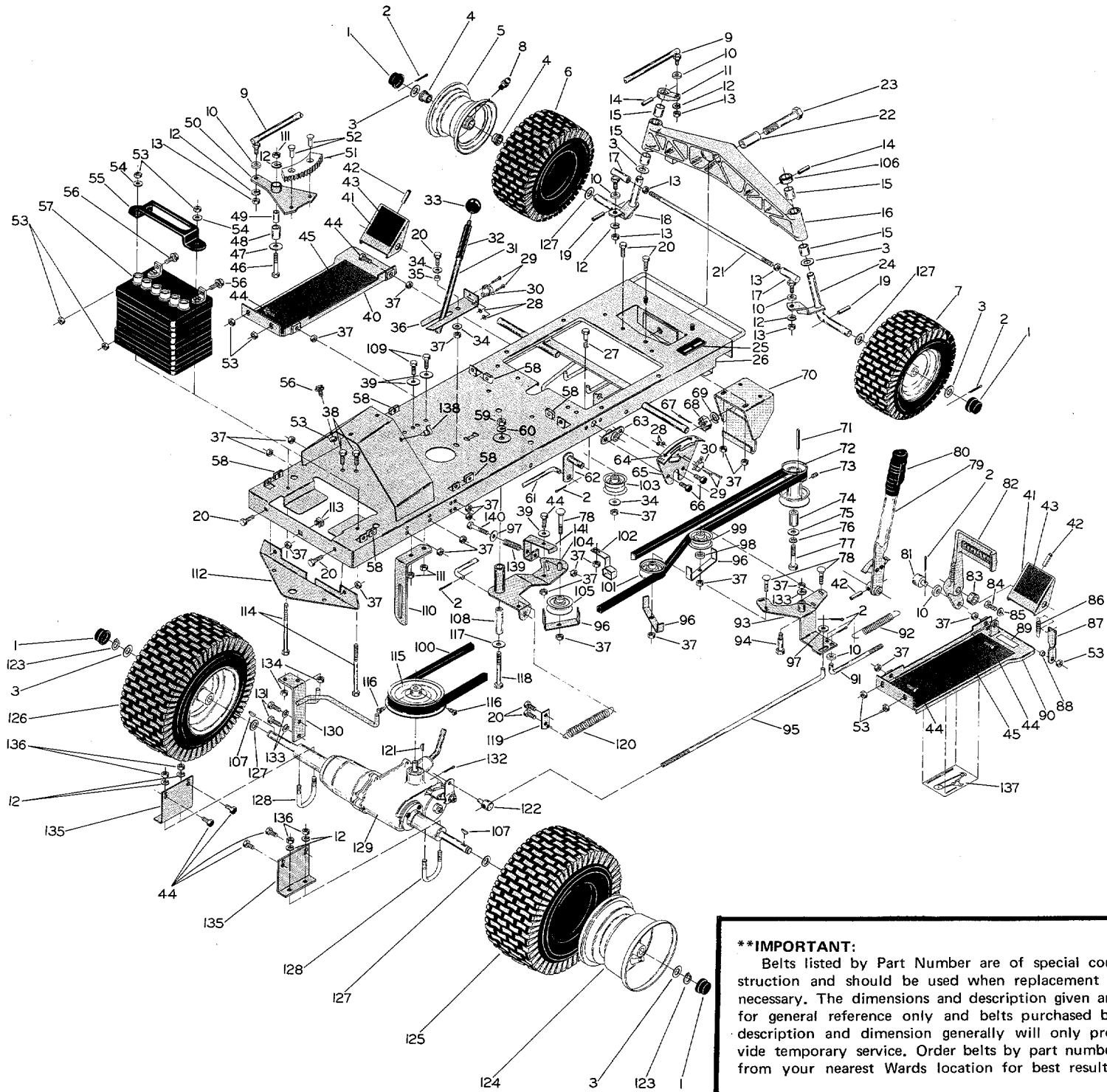
MODEL
ZYJ-1398A

PARTS LIST

MODEL ZYJ-1398A

REF. PART NO.	PART NO.	DESCRIPTION	REF. PART NO.	PART NO.	DESCRIPTION
1.	1616-549	Decal — Steering Wheel Cap	49.	42398	Ring — Fuel Line Clamp
2.	22363	Cap — Steering Wheel	50.	41965	Tank — Gasoline
3.	41442	Steering Wheel	51.	42370	Cap — Fuel Tank
4.	1624-181-40	Tube — Steering Wheel Shaft	52.	1538-22	Nut — Flanged Whizlock
* 5.	40049	Pin — Spring	53.	4215-5-62	Assembly — Hood & Grille
6.	1646-29	Key — Ignition	54.	1689-28	Clip — Wire
7.	41549	Switch — Ignition	55.	1654-38-40	Chain — Hood Stop
8.	42003	Control — Engine Throttle	56.	4616-465	Decal — Hood Side L.H.
9.	1160-16	Switch — Light	57.	4616-464	Decal — Hood Side R. H.
10.	3159-15-61	Assembly — Control Panel	*58.	40892	Washer — S.A.E. ¼
11.	40070	Bolt — Flanged Whizlock ¼-20 x ½	59.	42425	Pad — Plastic Foam
12.	1616-532	Decal — Control Panel	60.	1643-57	Knob — Knurled
13.	2616-519	Decal — Operations	61.	1616-420	Decal — Light Panel
14.	41475	Screw — Hex Washer Head # 8-32 x ½	62.	3709-21-62	Panel — Head Light
15.	40352	Bolt — Hex Head 5/16-18 x 1-¼	63.	1653-24	Gasket — Head Light
16.	41433	Plug — Plastic	64.	1743-6	Lens — Head Light
17.	22243-40	Collar — Steering Shaft	65.	1744-3	Bulb — Head Light G.E. # 1195
18.	1543-47	Washer — Bowed Spring	66.	1744-2	Head Light (Less Gaskets and Lens)
19.	1540-107	Washer — Flat Steel 25/32 x 1-¼ x 1/32	67.	1543-43	Washer — Special
20.	22245	Shaft — Steering	*68.	40155	Washer — Lock ¼
21.	3164-17	Seat	*69.	1534-26	Nut — Hex ¼-20
22.	41540	Bolt — Carriage ½-13 x 1"	70.	3195-15	Muffler
*23.	3-79	Bolt — Hex Head 5/16-18 x ¾	71.	— —	Engine — B & S 8 H.P. (Model 190707 Type 0765-02)
*24.	40149	Washer — Lock 5/16	72.	4709-39-61	Panel — Battery Access
25.	41379-61	Spring — Seat	73.	40441	Bolt — Thumb
26.	41651	Washer — Lock ½	74.	42369	Clip — Wire Support
27.	1534-25	Nut — Hex ½ -13	75.	1522-12	Screw — Sheet Metal
28.	42104	Nut — Speed Grip	76.	40157	Bolt — Hex Head 5/16-18 x 5/8
29.	22242-61	Panel — Shift Position	77.	42373	Nut — Hex Lock 5/16-18
30.	4641-15-61	Base — Engine	78.	1556-33	Deflector — Muffler
31.	3616-447	Decal — Rear Frame Cover	79.	1610-17	Connector — Wire
32.	4118-66-61	Assembly — Rear Frame Cover	80.	1188-2	Assembly — Wire # 14 x 25"
33.	41382	Shock Mount	81.	1188-4	Assembly — Wire # 14 x 27"
34.	22550-61	Bushing — Engine Mount Spacer	82.	1188-27	Assembly — Wire # 6 x 18"
35.	1534-20	Nut — Hex 5/16-18	83.	— —	Fuse Wire # 18 x 17"
36.	42351	Bolt — Hex Head 5/16-18 x 1-½ (Grade 5)	84.	1160-26	Switch — Actuating
37.	42005	Nut — Speed Grip	85.	1188-72	Assembly — Wire # 18 x 4"
38.	40219	Pin — Spring 5/16 Dia. x 1-¼	86.	1188-45	Assembly — Wire # 16 x 18"
39.	22246	Gear — Helical L. H.	87.	1188-6	Assembly — Wire # 14 x 12"
40.	40562	Bushing — ¾ x 1½ x 1"	88.	1188-3	Assembly — Wire # 6 x 35"
41.	22244-61	Bushing — Gear Guide	89.	42310	Battery — 12 Volt
42.	1538-6	Nut — Hex 5/16-18	90.	1188-18	Assembly — Wire # 6 x 5-½"
43.	61586-40	Assembly — Steering Post (Incl. Ref. No. 40)	92.	1561-2	Fuse — 7.5 AMP AGC
44.	2160-21	Assembly — Electronic Switch			
45.	1538-30	Nut — Hex — ¼-20			
46.	42148	Buckle — Strapping			
47.	42378	Strapping — Nylon			
48.	1715-3	Fuel Line			

*Standard Hardware Item - May be Purchased Locally.



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**MODEL
 ZYJ-1398A**

PARTS LIST

MODEL ZYJ-1398A

NOTE: Your Tractor is Right Hand (R.H.) or Left Hand (L.H.) as you mow.

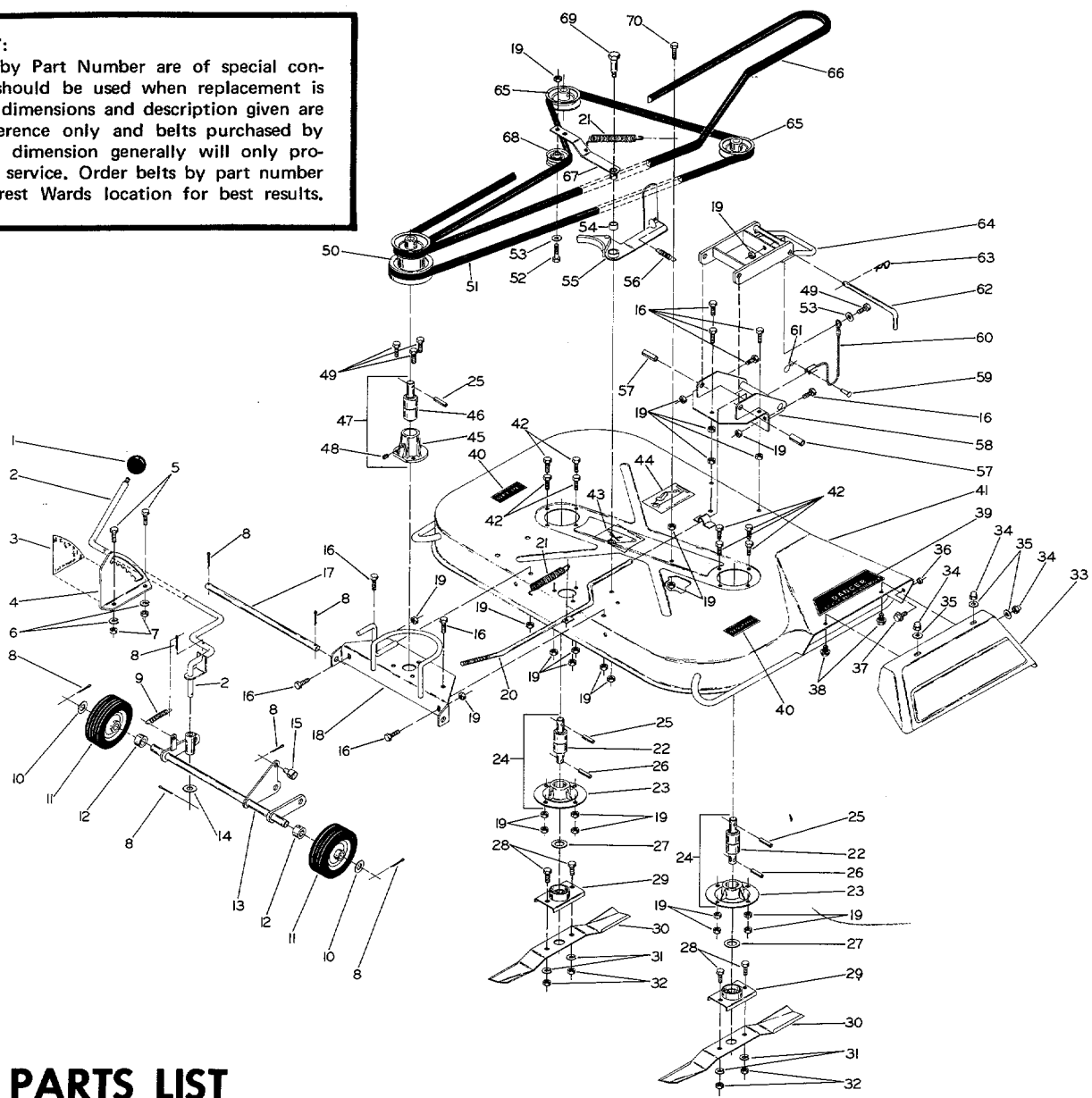
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
	1. 41502	Cap - Hub	70.	61852-61	Assembly - Hitch
*	2. 40035	Pin - Cotter 1/8 Dia. x 1"	71.	22514	Key - Square 1/4 Sq. x 2-1/4
3.	40891	Washer - Flat Steel 25/32 x 1-5/8 x 1/16	72.	2120-68	Pulley - Special Combination
4.	42414	Bushing - Flanged Wheel	* 73.	1161	Screw - Set 5/16-18
5.	0110-47-62	Rim - Wheel (Complete W/Bushings)	74.	22305	Bushing - Steel
6.	42415	Tire - Tubeless 13" x 5.00-6	* 75.	40896	Washer - Standard Wrought 1/2
7.	2108-153-62	Wheel - Complete	* 76.	41087	Washer - Lock 7/16
8.	1691-17	Fitting - Grease Zerk	77.	41227	Bolt - Hex Head 7/16-20 x 2-1/4
9.	41968-61	Rod - Steering Connecting	78.	40899	Bolt - Carriage 5/16-18 x 1-1/4
10.	1543-58	Washer - Rubber	79.	2169-42-61	Assembly - Mower Engaging Lever
11.	22238-61	Casting - Collar & Arm	80.	42384	Grip - Plastic
* 12.	1542-8	Washer - Lock 3/8	81.	22357-40	Link - Rod Connecting
13.	1538-29	Nut - Hex Lock 3/8-24	82.	3663-18-61	Pedal
* 14.	41-040	Pin - Spring 1/4 Dia. x 1-1/2	83.	22269-61	Bushing - Spacer
15.	1652-84	Bearing - Sintered Iron	* 84.	1509-34	Bolt - Hex Head 1/2-20 x 3/4
16.	22257-61	Assembly - Axle Pivot (Incl. No's 15 & 22)	* 85.	40892	Washer - S.A.E. 1/4
17.	41954	Ball Joint	86.	1642-116	Spring - Extension
18.	61601-61	Assembly - Axle Spindle L. H.	87.	1609-477-61	Bracket - Parking Brake
19.	40804	Pin - Spring 3/16 Dia. x 1-1/4	88.	1657-76	Bushing - Pivot
* 20.	1509-37	Bolt - Hex Head 5/16-18 x 5/8	89.	1616-498	Decal - Parking Brake
21.	22259-61	Rod - Radius	90.	2207-4-61	Assembly - Foot Rest R. H.
22.	1652-83	Bearing - Sintered Iron	91.	22337-40	Rod - Pedal Connecting
23.	1509-122	Bolt - Hex (Special) 3/4-10 x 4"	92.	1642-96	Spring - Extension
24.	61602-61	Assembly - Axle Spindle	93.	2169-28-61	Assembly - Idler Arm
25.	1605-602	Decal - Name Plate	94.	40118	Bolt - Shoulder (Special)
26.	4168-68-61	Assembly - Frame Chassis	95.	22251-40	Rod - Connecting Brake
* 27.	40079	Bolt - Hex Head 5/16-18 x 1-1/4	96.	22545-61	Bracket - Belt Restrictor
28.	1538-35	Nut - Hex #4-40	* 97.	40156	Washer - S.A.E. 5/16
29.	1501-29	Screw - Slotted Rd. Hd. #4-40 x 3/4	98.	20142	Washer - 11/16 x 1" x 1/4
30.	1160-26	Switch - Actuating	99.	60799	Assembly - Idler Pulley
31.	See Page 15	Lever - Shift	* 100.	41980	Belt - "V" Special "A" Section 4L670
32.	42247	Tube - Plastic	101.	41027	Pulley - Idler "V"
33.	41451	Knob - Round (Plastic)	102.	22396	Bracket - Belt Guide
* 34.	40148	Washer - Standard Wrought 5/16	103.	1626-70	Assembly - Pulley (Flat Idler)
35.	1657-74	Bushing - Pivot	104.	3189-26-61	Assembly - Idler Arm
36.	1609-450-61	Bracket - Switch Mount	105.	42040	Pulley - Idler "V"
37.	1538-6	Nut - Hex Lock 5/16-18	106.	22258	Collar - Axle Spindle
* 38.	1509-17	Bolt - Hex Head 5/16-18 x 1"	107.	42012	Key - Woodruff 3/16 x 7/8
39.	1540-69	Washer - 25/64 x 1-1/2 x 11 Ga.	108.	1648-59	Tube - Idler Pivot
40.	61584-61	Assembly - Foot Rest L. H.	* 109.	1509-99	Bolt - Hex Head 3/8-16 x 1"
41.	61588-61	Assembly - Toe Rest	110.	22310-61	Yoke - Mower Guide
* 42.	40048	Pin - Spring - 1/4" Dia. x 1"	111.	1538-24	Nut - Hex Lock 3/8-16
43.	41984	Pad - Anti Skid	112.	3609-509-61	Bracket - Rear Hitch
* 44.	3-79	Bolt - Hex Head 5/16-18 x 3/4	113.	42192	Nut - Speed Grip
45.	42381	Pad - Foot Rest	114.	1509-124	Bolt - Hex Head 1/2-20 x 5-1/4
46.	40888	Bolt - Hex Head 3/8-16 x 2-1/4 (Grade 5)	115.	42138	Pulley - Transmission
47.	40867	Washer - Flat Steel 13/32 x 1-1/2 x 9 Ga.	116.	1508-22	Screw - Set (Sq. Head)
48.	42041	Bushing - Sintered Bronze	* 117.	41256	Washer - S.A.E. 1/2
49.	30078	Tube - Steel	118.	1509-123	Bolt - Hex Head 1/2-13 x 4
50.	61587-61	Assembly - Steering Sector & Arm (Inc. No's 48, 51, 52)	119.	1606-171-61	Plate - Spring Mount
50.	61610-61	Assembly - Steering Sector Arm (Less Bushings & Gear)	120.	41977	Spring - Extension
51.	42031	Gear - Segment	121.	42011	Key - Woodruff 3/16 x 5/8
52.	42047	Rivet - Countersunk Flat Head	122.	22250-40	Link - Rod Connecting
53.	1538-30	Nut - Hex Lock 1/2-20	123.	40735	Ring - Retaining 3/4
* 54.	1540-99	Washer - Standard Wrought 1/2	124.	0110-48-62	Rim - Wheel (Complete)
55.	42393-40	Bracket - Battery Hold Down	125.	42415-6	Tire - Tubeless 16 x 6.50-8
56.	40070	Bolt - Flanged Whizlock 1/2-20 x 1/2	126.	3108-154-62	Wheel - Complete
57.	42310	Battery - 12 Volt 54 Plate 32 AMP. HR. (LM-9L)	127.	1540-107	Washer - Flat Steel 25/32 x 1-5/8 x 1/32
58.	40115	Nut - Speed "U" Type 1/2-20	128.	22247	Bolt - "U"
59.	1534-25	Nut - Hex 1/2-13	129.	See Page 15	Transaxle - Complete
* 60.	41651	Washer - Lock 1/2	130.	61592-61	Assembly - Torque Bracket
61.	1683-88-40	Rod - Connecting	131.	40890	Bolt - Hex Head 5/16-18 x 1" (Grade 5)
62.	61598-61	Assembly - Arm	132.	41767	Pin - Cotter 3/32 Dia. x 3/4
63.	61599-61	Assembly - Pivot	* 133.	40149	Washer - Lock 5/16
64.	42023	Decal - Mower On-Off	134.	42373	Nut - Hex Lock 5/16-18
65.	3606-157-61	Plate - Lock-Out	135.	2609-447-61	Bracket - Transmission Hanger
66.	41962	Bolt - Whizlock 5/16-18 x 1/2	136.	40340	Nut - Hex 3/8-16
* 67.	40795	Pin - Cotter 1/8 Dia. x 1-1/2	137.	42367	Decal - Belt Diagram
68.	1539-81	Nut - Hex Slotted 3/4-10	138.	1689-33	Clip - Wire Support
* 69.	1541-6	Washer - Lock 3/4	139.	1642-120	Spring - Compression
			140.	1509-146	Bolt - Hex Head 5/16-18 x 2-1/4 (Grade 5)
			141.	1609-499-61	Bracket - Blade Brake Engaging

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**SEE IMPORTANT NOTE

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PARTS LIST

MODEL ZYJ-1398A

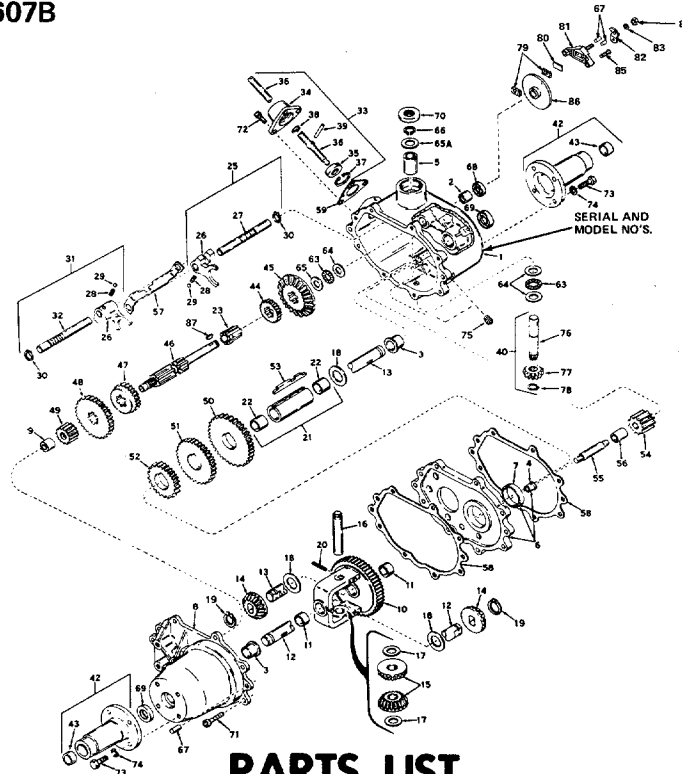
REF. PART NO.	DESCRIPTION	REF. PART NO.	DESCRIPTION
1. 41451	Knob - Round	36. 1657-53	Bushing - Spacer
2. 22234-40	Assembly - Height Position Lever	37. 1513-36	Bolt - Flanged Whizlock 1/4-20 x 5/8
3. 42025	Decal - Height Adjustment	38. 40070	Bolt - Flanged Whizlock 1/4-20 x 1/2
4. 22266-61	Bracket - Height Position	39. 1616-504	Decal - Caution
*5. 1509-93	Bolt - Hex Head 3/8-16 x 3/4	40. 42024	Decal - Do Not Step
*6. 1542-8	Washer - Lock 3/8	41. 4152-14-61	Assembly - Mower Deck
*7. 40340	Nut - Hex 3/8-16	*42. 3-79	Bolt - Hex Head 5/16-18 x 3/4
*8. 40035	Pin - Cotter 1/8 x 1"	43. 42366	Decal - Belt Diagram
9. 41994	Spring - Extension	44. 42413	Decal - Belt Diagram (Tractor to Mower)
10. 40082	Washer - Flat Steel 41/64 x 1" x 14 Ga.	45. 22279	Casting - Pulley Bearing
11. 42389-41	Wheel	46. 22362	Bearing - Integral Shaft
12. 42390	Washer - 41/64 x 1" 5/16	47. 61874	Assembly - Pulley Spindle
13. 61606-61	Assembly - Axle	48. 40809	Screw - Set 1/4-20 x 3/8
14. 41485	Washer - Flat Sleet 17/32 x 1-3/16 x 14 Ga.	*49. 1509-17	Bolt - Hex Head 5/16-18 X1"
15. 21989	Link - Rod Adjustment	50. 2626-97-61	Pulley - Double
16. 1509-37	Bolt - Hex Head 5/16-18 x 5/8	**51. 1651-53	Belt - "V" Special (4L620)
17. 22260-61	Shaft - Axle Pivot	*52. 40152	Bolt - Hex Head 5/16-18 x 1-1/2
18. 3132-100-61	Assembly - Wheel Mounting Bracket	*53. 40148	Washer - Standard Wrought 5/16
19. 1538-6	Nut - Hex 5/16-18	54. 1657-81	Bushing - Bronze
20. 61607-61	Assembly - Connecting Rod	55. 3169-43-61	Assembly - Blade Brake (Includes Ref. No. 54)
21. 41423	Spring - Extension	56. 1642-99	Spring - Extension
22. 22361	Bearing - Integral Shaft	57. 42123	Pin - Spring 1/2 Dia. x 1-1/4
23. 22364	Casting Mower Spindle	58. 61604-61	Assembly - Hitch Mounting
24. 61873	Assembly - Mower Spindle (Complete) (Incl. No's. 22 & 23)	59. 41468	Pin - Cable Connector
25. 40219	Pin - Spring 5/16 Dia. x 1-1/4	60. 41990	Cable - Complete W/Connecting Yoke
26. 42107	Pin - Spring 5/16 Dia. x 1-3/16	61. 40140	Pin - Hairpin Cotter
27. 40894	Washer - Flat Steel 25/32 x 1-7/8 x 16 Ga.	62. 22256-61	Pin - Hitch
28. 42121	Bolt - Hex Head 5/16-18 x 3/4 (Grade 5)	63. 1547-5	Pin - Hairpin Cotter
29. 41991	Adapter - Blade Mount	64. 61593-61	Assembly - Hitch
30. 3604-45	Blade - Mower	65. 42065-61	Pulley - "V"
*31. 40149	Washer - Lock 5/16	**66. 41969	Belt - "V" Special 5L500
32. 42122	Nut - Hex 5/16-18	67. 61608-61	Assembly - Idler Arm
33. 4556-27-61	Deflector - Missile	68. 60962	Assembly - Idler Pulley
34. 1537-3	Nut - Acorn 1/4-20	69. 40118	Bolt - Shoulder (Special)
*35. 1540-99	Washer - Standard Wrought 1/4	70. 1509-41	Bolt - Hex Head 5/16-18 x 1-1/4

** SEE IMPORTANT NOTE

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TRANSAXLE PARTS LIST

TECUMSEH MODEL 607B



PARTS LIST MODEL ZYJ - 1398A

REF. NO.	PART NO.	PART NAME	REF. NO.	PART NO.	PART NAME
1	770063	Case Assy., Transaxle (Incl. Nos. 2, 3 & 5)	43	780066	Bushing, Bronze
2	780086	Bearing, Needle	44	778024	Gear (16 teeth)
3	780059	Bearing, Bronze	45	778057	Gear, Bevel (33 teeth)
4	780060	Bearing, Bronze	46	776138	Shaft, Shifter & Brake
5	780061	Bearing, Bronze	47	778058	Gear, Shifting (2nd & 3rd)
6	786033	Plate Assy., Center (Incl. Nos. 4 & 7)	48	778059	Gear, Shifting (1st & Rev.)
7	780062	Bearing, Bronze	49	778060	Gear, Spur (12 teeth)
8	772042	Cover Assy., Transaxle (Incl. Nos. 3 & 9)	50	778061	Gear, Countershaft drive (39 teeth)
9	780063	Bearing, Needle	51	778062	Gear, Countershaft (34 teeth)
10	778053	Gear Assy., Differential (Incl. No. 11)	52	778063	Gear, Countershaft (25 teeth)
11	780064	Bearing, Bronze	53	792034A	Key, Countershaft
12	774097	Axle, Left hand	54	778064	Idler, Reverse
13	774096	Axle, Right hand	55	776057	Shaft, Reverse Idler
14	778067	Gear, Bevel	56	786036	Spacer, Reverse Idler
15	778068	Pinion, Bevel	57	784087	Stop, Shifter
16	786034	Pin, Drive	58	788033	Gasket, Case & Cover
17	780065	Washer, Thrust	59	788003	Gasket, Shift lever housing
18	780001	Washer, Thrust	63	780071	Bearing, Thrust
19	788038	Ring, Snap	64	780072	Washer, Thrust
20	792040	Pin, Roll	65	780073	Washer, Thrust
21	786035	Sleeve Assy., Countershaft (Incl. No. 22)	65A	780096	Washer, Thrust
22	780066	Bearing, Bronze	66	792035	Ring, Snap
23	776090	Shaft, Idler	67	786026	Pin, Dowel
25	784079	Rod Assy., Shift (1st & Rev.) (Incl. Nos. 26 thru 30)	68	788043	Seal, Oil
26	784004	Fork, Shift	69	788009	Seal, Oil
27	784083	Rod, Shift	70	788035	Seal, Oil
28	792003	Spring	71	792036	Screw, Socket hd. cap, 1/4-20 x 1/4
29	792004	Ball, Steel	72	792007	Screw, Socket hd. cap, 1/4-20 x 3/4
30	792017	Ring, Snap	73	792037	Screw, Hex hd., 5/16-18 x 1
31	784084	Rod Assy., Shift (2nd & 3rd) (Incl. Nos. 28, 29, 30 & 32)	74	792029	Lockwasher, 5/16"
32	784085	Rod, Shift	75	792039	Plug, Pipe, 1/8"
33	784112	Lever & Housing Assy., Shift (Incl. Nos. 34 thru 39)	76	776100	Shaft, Input
34	784088	Housing, Shift lever	77	778077	Pinion, Input
35	784094	Keeper, Shift lever	78	788040	Ring, Retaining
36	784113	Lever, Shift	79	790006	Pad, Brake
37	792016	Ring, Snap	80	790007	Plate, Brake pad
38	792001	Ring, Quad	81	790005	Holder, Brake pad
39	792049	Pin, Drive	82	790008	Lever, Brake
40	776055B	Shaft & Gear Assy., Input (Incl. Nos. 76, 77 & 78)	83	792076	Washer, Flat
42	782035	Housing Assy., Axle (Incl. No 43)	84	792075	Nut, Lock
			85	792073	Screw, Hex hd. cap, 1/4-20 x 1 1/4 thr'd forming
			86	790009	Disk, Brake
			87	792045	Key, Woodruff #61

* Input shaft and gear assembly was staked together on early production units, and must be serviced as an assembly.



HOW TO OBTAIN SERVICE

The merchandise you have purchased from us has been carefully engineered and manufactured under Wards rigid quality standards and should give you satisfactory and dependable operation. However, like all mechanical merchandise, it may occasionally require adjustment or maintenance.

Should you ever need technical assistance, please contact or write your nearest Wards Retail Store, Service Center, Catalog Store or Catalog House.

Provide the following:

1. Model, serial number and all of the other data shown on the model plate.
2. The date and the Wards branch from which you purchased your merchandise.
3. State briefly the trouble you are having.



how to obtain replacement parts

Replacement Parts may be obtained from your Wards Retail Store, Service Center, Catalog Store, or Catalog House and will be made available at current prices. If requested, prices will be quoted in advance when not listed.

When requesting replacement parts, be sure to give the model and serial number which is shown on the model plate. Also give the part number and the name of the part as shown in the parts list.

If you order by mail, you will pay the transportation charges from the shipping point.

