

# OWNER'S GUIDE

10 CENTS

## Model No.

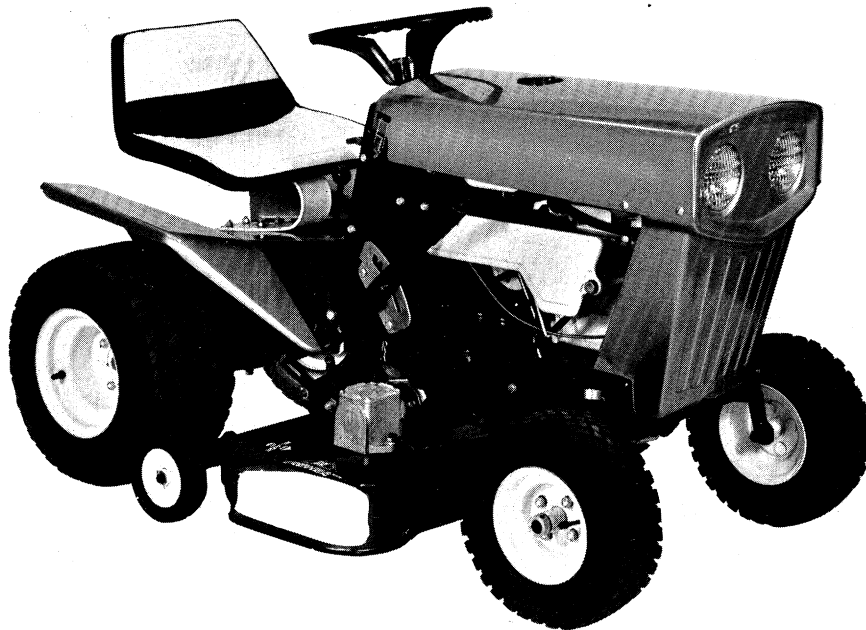
140-659 (Recoil Starter)

140-669 (Electric Starter)

190-651 (32" Mowing Unit)

## GARDEN TRACTOR

WITH 32" ROTARY MOWER



### WARRANTY

For one year from date of purchase, MTD Products Inc. will replace for the original purchaser, free of charge, F.O.B. factory or authorized service firm, any part or parts found to be defective in material or workmanship. All transportation charges on parts submitted for replacement under this warranty must be paid by the purchaser. This warranty does not include replacement of parts which become inoperative through misuse, excessive use, accident, neglect, improper maintenance or alterations by unauthorized persons. This warranty does not include the engine, motor, battery, battery charger or any component parts thereof. For service on these units refer to the applicable manufacturer's warranty.

The above warranty will apply only to the original owner and will be effective only if the warranty card has been properly processed. It will not apply where the unit has been used commercially.

Warranty service is available through your local authorized service dealer or distributor. UNDER NO CIRCUMSTANCES WILL THE RETURN OF A COMPLETE UNIT BE ACCEPTED BY THE FACTORY UNLESS PRIOR WRITTEN PERMISSION HAS BEEN EXTENDED.

**MTD PRODUCTS INC • 5389 WEST 130TH ST. • P.O. BOX 2741 • CLEVELAND, OHIO 44111**

Form No. 770-2409

## SPECIFICATIONS

Cutting Width	Over All Height	Over All Width w/Mower	Over All Width w/o Mower	Turn Radius Inside	Over All Length	Weight	Tires – Rear	Tires – Front
32"	32"	34"	29"	24"	54"	140-659 435 Lbs.	18:00 x 6.50 Pneumatic	12:50 x 4.50 Pneumatic
						140-669 467 Lbs.	18:00 x 9.50 Pneumatic	12.50 x 4.50 Pneumatic

## INDEX

	PAGE
WARRANTY .....	1
SAFETY RULES .....	3
ASSEMBLY .....	3
OPERATING YOUR TRACTOR .....	7
LUBRICATION AND MAINTENANCE .....	9
ADJUSTMENTS .....	10
TRACTOR PARTS LIST .....	13
TRANSAXLE PARTS LIST .....	18
CUTTING UNIT PARTS LIST .....	19

## ATTACHMENTS and ACCESSORIES

190-652	42" Angle Snow Blade .....	95 lbs.
190-653	10 cu. ft. dump utility cart .....	125 lbs.
190-658	30" Snow Blower .....	125 lbs.
190-659	32" Spike Aerator .....	55 lbs.
190-660	30" x 18" Drum Roller .....	65 lbs.
190-664*	18:00 x 6.50 – 8 Chains .....	15 lbs.
190-656	18:00 x 9.50 – 8 Chains .....	22 lbs.

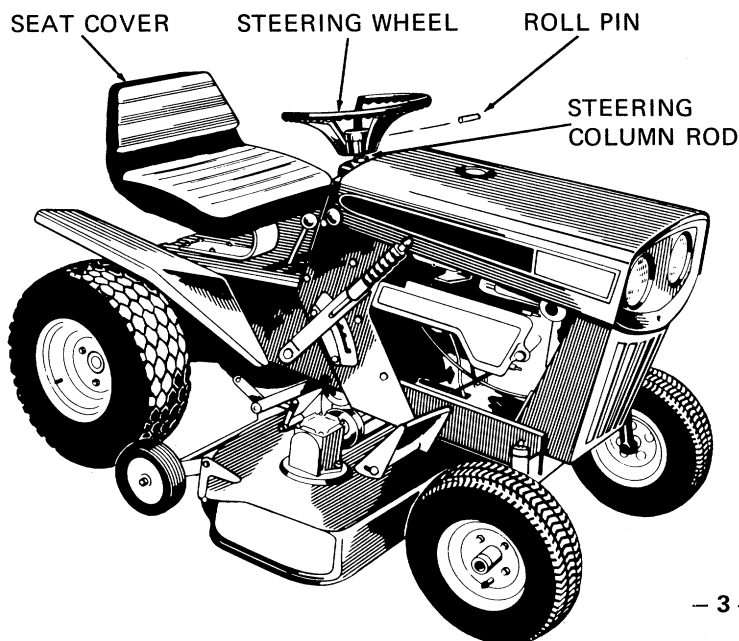
\* Chains should be used with the 190-652 Snow Blade and the 190-658 Snow Blower.

## SAFETY TIPS FOR GARDEN TRACTORS AND ATTACHMENTS

Improper use of riding lawn mowers, garden tractors and attachments on the part of the operator can result in injury. To reduce this possibility, give complete and undivided attention to the job at hand.

1. Know the controls and how to stop quickly — READ THE OWNER'S MANUAL.
2. Do not allow children to operate machine; nor adults to operate it without proper instruction.
3. Clear work area of objects which might be picked up and thrown.
4. Disengage all clutches and shift into neutral before starting motor. Keep hands, feet and clothing away from power driven parts.
5. Do not carry passengers. Keep children and pets a safe distance away.
6. Never direct discharge of any material toward by-standers nor allow anyone near machine while in operation.
7. Disengage power to any attachment and stop motor before leaving operator position.
8. Take precautions when leaving machine unattended (to avoid accidental starting, rolling away, accidental dropping of any attachment, etc.)
9. Disengage power to any attachment whenever it is not in use or when traveling from one work area to another.
10. Stay alert for holes and other hidden hazards.
11. Know what is behind you before backing up.
12. Beware of steep slopes; reduce speed on all side slopes and sharp turns to prevent tipping or losing control.
13. Don't stop or start suddenly when going uphill or downhill.
14. Use extra care when pulling loads or using heavy equipment. (Refer to your owner's manual)
15. Watch out for traffic when near roadways.
16. Handle gasoline with care — it is highly flammable.
  - A. Use approved gasoline container.
  - B. Never add gasoline to running motor — fill tank out of doors and wipe up spilled gasoline.
  - C. Replace gasoline cap securely.
  - D. Open doors if motor is run in garage — exhaust gases are dangerous.
17. Keep machine in good operating condition and keep safety devices in place. Use guards as instructed in owner's manual.
18. Disengage power to any attachment and stop motor before making repairs or adjustments.
19. While operating the mower, if any foreign object is struck, stop the mower and inspect for damage. Do not restart or operate the mower until all damage has been repaired.

## ASSEMBLY AND PRE-OPERATING INSTRUCTIONS



### STEERING WHEEL ASSEMBLY

1. Insert roll pin in the steering wheel just far enough to start it.
2. Be sure the pinion is in the center of the segment. Ten teeth from either end. See Fig. 22 & 16.
3. Hold the steering column rod from the bottom being sure the pinion is engaged with the gear segment.
4. Drive roll pin in the steering wheel through the steering column rod.

## SEAT COVER

Slip the seat cover over the seat. Tie the string and tuck the ends into the cover.

## INSTRUCTIONS FOR ACTIVATING DRY CHARGED BATTERIES

### WARNING

SINCE BATTERY ACID IS CORROSIVE TO METALS, DO NOT POUR INTO ANY SINK OR DRAIN. RINSE EMPTY ELECTROLYTE CONTAINERS AND MUTILATE BEFORE DISCARDING. IF ACID IS ACCIDENTALLY SPILLED ON BATTERY DURING FILLING OR CHARGING, OR ON BENCH OR CLOTHING, ETC., FLUSH OFF WITH CLEAR WATER AND NEUTRALIZE WITH SODA OR AMMONIA SOLUTION.

1. Place battery to be filled on bench or workbench. Never activate battery in mower. Remove vent plugs from all cells.
2. Fill each cell carefully using battery grade 1.250-1.265 specific gravity Sulfuric Acid to 3/8" above the top of the separators or to the split ring.
3. Allow battery to set for 20 minutes. Battery can then be installed, however, to have maximum capacity the battery should be placed on a charger after the 20 minutes setting period. Battery can be charged at maximum of 35 amperes until the specific gravity reading is 1.265-1.275.
4. The battery should be checked with a hydrometer after every 25 hours of operation. If the specific gravity is less than 1.225 remove battery and recharge.
5. The battery should be kept clean. Any deposits of acid should be neutralized with soda and water. Be careful not to get this solution in the cells. Coat the terminals with a thin coat of grease.
6. If the battery is not going to be used in the winter, remove the battery and store in a cool, dry place. Do not store directly on a concrete floor as this will drain the battery. Recharge whenever the specific gravity is less than 1.225.

**725-117**

EAST PENN  
9AL

### Battery Specifications

**32 AMP. HRS. AT 20 HRS.  
PLATES PER CELL 9  
ASSEMBLY LEFT HAND  
WEIGHT WET 22 LBS.  
WEIGHT DRY 17 LBS.**

**ELECTROLYTE 2 QUARTS  
SPLASH PROOF VENTS  
TERMINALS (L) TYPE  
1/4 BOLT FOR NEGATIVE  
5/16 BOLT FOR POSITIVE**

**SIZE 7-3/4 X 5-1/8 X 7-17/64**

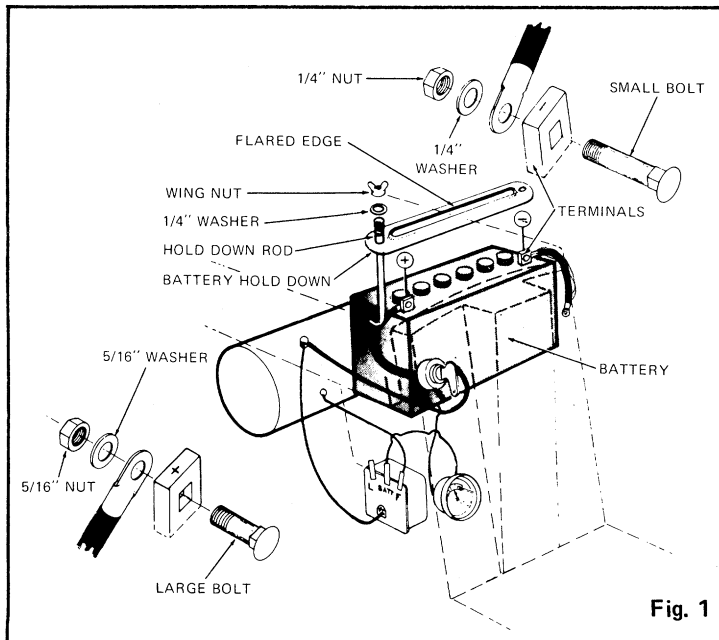


Fig. 1

### PLACING BATTERY IN MOWER

1. Open hood of mower by loosening the black knobs on the side of the hood and lift the hood until it stays up.
2. Place the battery with the terminals to the rear of the mower. Hook both hold down rods under the battery case and place the battery hold down over the battery caps with the flared edge up as shown in Figure 2.
3. Place a 1/4" washer over the end of each rod and secure with two wing nuts.
4. Attach the negative terminal to the battery post with the 1/4" bolt, washer and nut as illustrated in Figure 1.
5. Attach the positive terminal to the battery post with the 5/16" bolt, washer and nut as illustrated in Figure 1.

### CUTTING UNIT ASSEMBLY

To assemble the cutting unit, lubricate the wheel bearings with multi-purpose automotive grease and place wheels on the axle. Add one washer to each wheel and secure with cotter pin. See Figure 2.

## ATTACHING THE CUTTING UNIT

1. Move the lift lever handle on the mower all the way down.
2. Move the blade engagement lever to "BLADE OFF" position.
3. Turn the height adjustment screw clockwise until the unit is in the lowest cutting position.
4. Drive or push the right rear wheel of the mower onto a brick or board to raise it about 2".
5. Have all six linkage arms towards the front of the unit. See Figure 2.
6. Slide the cutting unit under the mower. From the front of the mower, grasp both front linkage arms and roll the cutting unit all the way back until it touches the tie rods and fasten both linkage arms to the pins on the mower. Secure with cotter-hairpins. See Figure 4.
7. Lift the cutting unit slightly with your right hand and attach the rear, slotted links to the level extension. Secure with one washer and cotter-hairpin.
8. With your left hand depress the lift lever until the center links line up with the center weld pins in the frame of the riding mower. Secure with cotter-hairpins. See Figure 5.
9. Remove the large bolt holding the front of the belt guard and swing the belt guard out of the way.
10. With the lift lever depressed all the way attach the belt over the engine pulley. See Figure 6.
11. Reassemble belt guard.

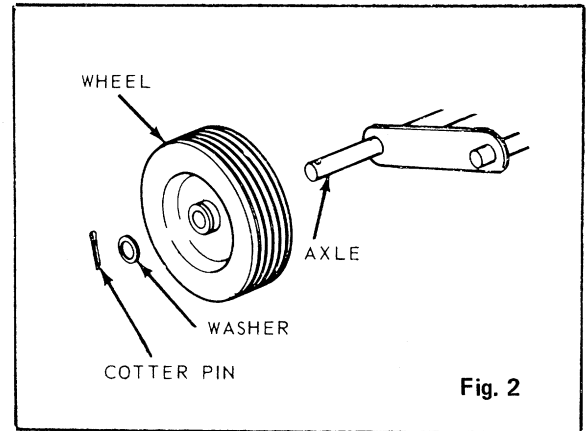


Fig. 2

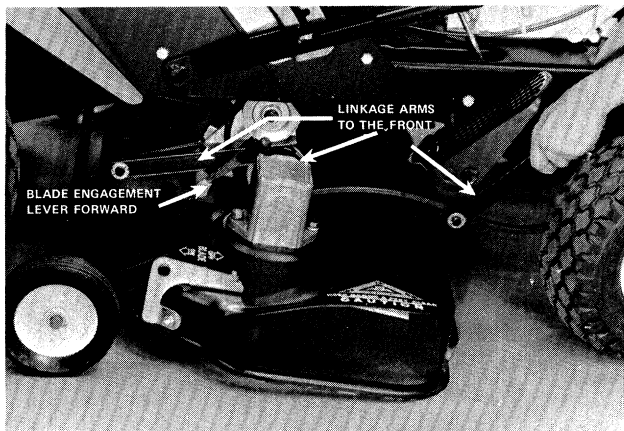


Fig. 3

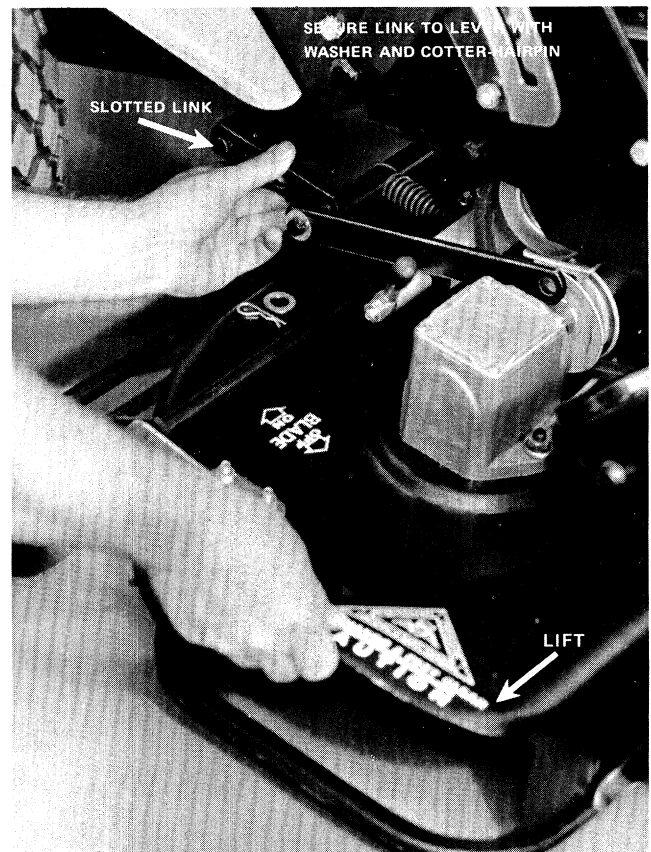


Fig. 4

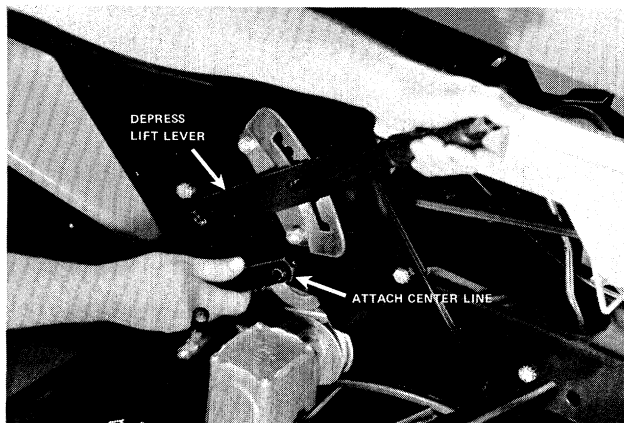


Fig. 5

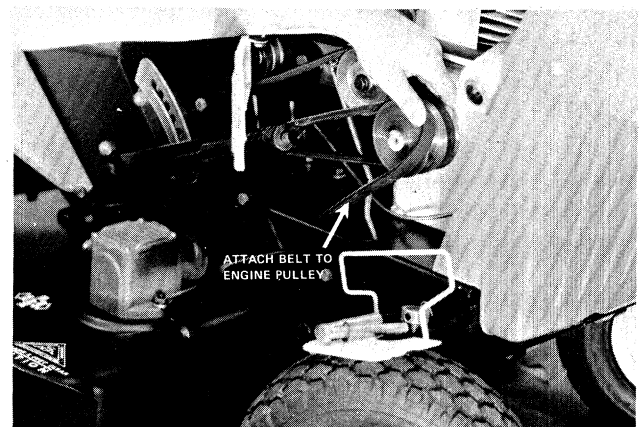


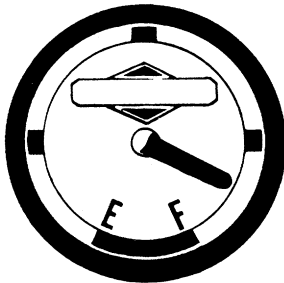
Fig. 6

## ADD OIL TO ENGINE BEFORE STARTING

Add 2¾ pints of a high quality detergent oil (above 32° F use SAE 30W. Below 32° F use SAE 10W) to the crankcase and fill the gasoline tank with "regular gasoline." The tractor is shipped with all tires inflated to excessive pressure to protect the tractor during shipment. It is important to reduce the pressure to 15 psi before using the tractor.

## KNOW YOUR MOWER

GASOLINE GAUGE



THROTTLE CONTROL

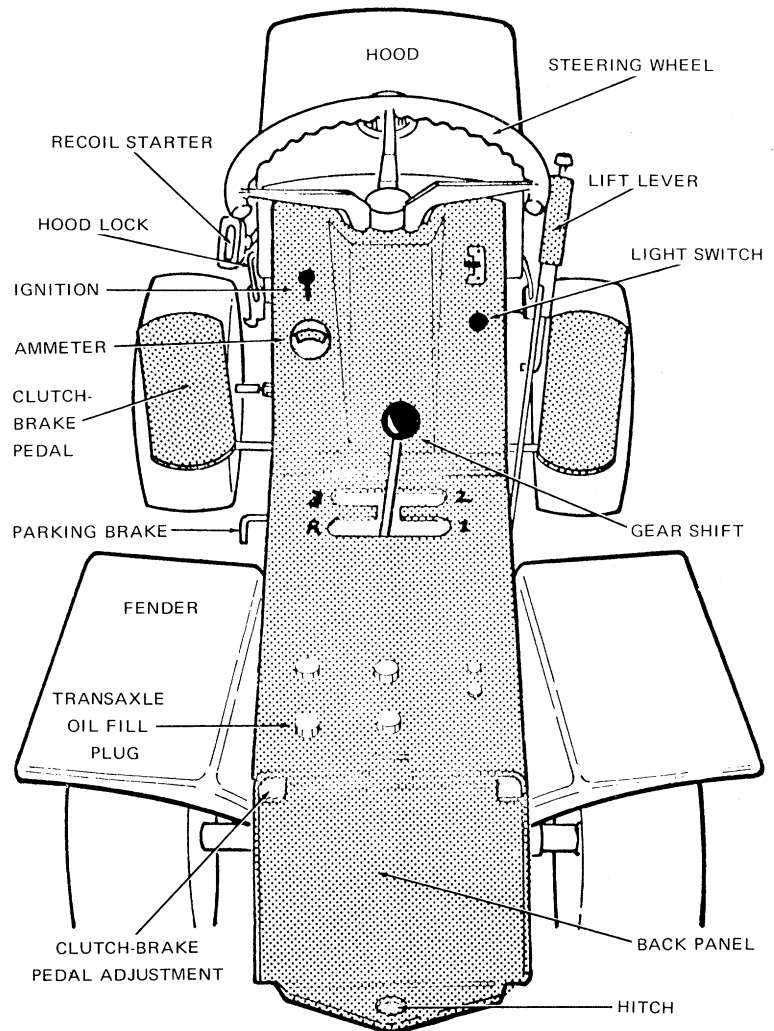
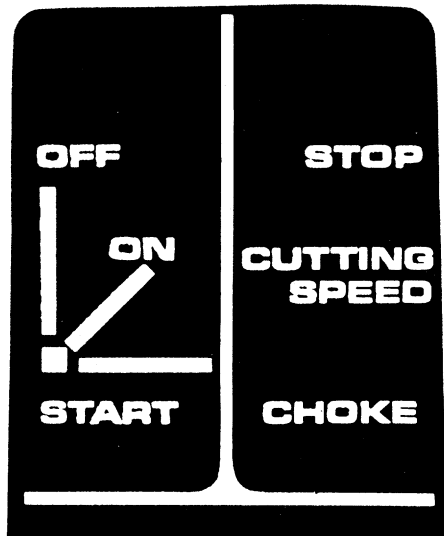


Fig. 7

### CHOKE

The engine has a "choke-a-matic" choke. Move the throttle lever all the way up to place in the choke position. One lever operates the choke, regulates the engine speed and stops the engine.

### LIFT LEVER

The lift lever is used to raise and lower the accessories such as the mower unit or snow blade in or out of position. To operate the lift lever, push forward slightly, depress the push cap on the top of the lever and move the lever either direction.

### GASOLINE TANK

May be filled without opening the hood. ONE GALLON CAPACITY.

### PARKING BRAKE

The parking brake is located on the left side of the tractor. To set the parking brake depress the clutch-brake pedal as far as possible and turn the parking brake lever clockwise until it tightens and holds the clutch-brake pedal down. To release, turn the parking brake lever counter-clockwise one turn.

## TRANSMISSION

**1st Gear** . . . To climb steep hills, to hold back the tractor on downgrades and to pull heavy loads. MAXIMUM SPEED 2 MPH.

**2nd Gear** . . . NORMAL GRASS CUTTING RANGE. MAXIMUM SPEED 4 MPH.

**3rd Gear** . . . High speed for traveling with a light load over smooth surfaces. MAXIMUM SPEED 6 MPH.

**Reverse Gear** . . . To back up the tractor.

## GEAR SHIFT LEVER

Three speeds forward and one in reverse. Do not shift gears while the tractor is in motion. Pick the gear to match the workload.

## CLUTCH

The combination clutch and brake pedal can be operated with either foot or both by depressing the foot pedals. Depress all the way to declutch and brake. The clutch is operated by a V-Belt idler.

## BRAKE

The brake is on the two rear wheels by means of a band that grips the transmission shaft. It is operated by depressing the Clutch-Brake Pedal all the way.

## SEAT

Adjustable to four positions by removing the single hex nut under the seat spring and repositioning the seat and tightening the nut.

## LIGHTS

(Electric Start Model Only) Pull light switch out to operate.

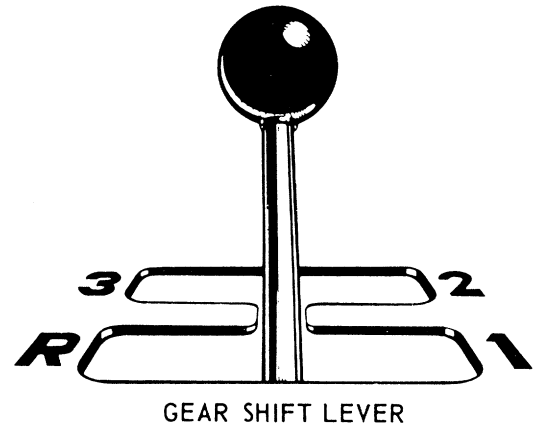


Fig. 8

## FUEL SHUT-OFF VALVE AND IN-LINE FUEL FILTER

The fuel shut-off valve is to be used when the tractor is being stored for a period of time.

The in-line fuel filter is the "throw away" type. Replace the entire filter as necessary by removing the spring clips on the fuel line with a pair of pliers.

## TIRE PRESSURE

Front . . . 15 psi    Back . . . 15 psi

Overinflation causes slippage of rear wheels and underinflation causes excessive wear or sometimes causes inner tube damage.

# OPERATING YOUR TRACTOR

A brief break-in period is necessary to insure maximum engine life. This consists of running the engine at half speed for a period of time required to use one tank full of gasoline. This is necessary on the initial run only. It is also recommended that the crankcase oil be changed after the first five hours of operation. This allows for the removal from the crankcase of any impurities which may have accumulated during the break-in period.

## PRECAUTIONS

1. Do not fill the gasoline tank while the engine is running. Be careful not to spill gasoline on the engine.
2. Clean grass and leaves from the fins and air screen so the engine will not overheat.
3. Always remove the spark plug wire before making any adjustments or working on the unit. Turning the blade by hand can accidentally start the engine and cause injury if the sparkplug wire is connected.

## STARTING INSTRUCTIONS

(See Fig. 7)

### ELECTRIC START

1. Check engine oil. Fill to "FULL" mark on dipstick.
2. Be sure fuel shut off valve is open and the spark plug wire is connected.
3. Put gear shift lever in neutral.
4. Depress clutch-brake pedal. It may be held in position by tightening the parking brake.
5. Move the throttle lever to "CHOKE" position.
6. Insert key and turn clockwise and allow the starter to crank the engine.
7. After the engine starts, slowly return the throttle to the running position.
8. To stop the engine, move the throttle lever to "STOP" position.

### RECOIL STARTER

1. Check engine oil. Fill to *Full Mark* on dipstick.
2. Be sure fuel shut off valve is open and the sparkplug wire is connected.
3. Put gear shift lever in neutral.
4. Depress clutch-brake pedal. It may be held in position by tightening the parking brake.
5. Move the throttle lever to "Choke" position.
6. While seated on the tractor pull the starter rope with a quick steady motion with your left hand.
7. Slowly return the throttle lever to the running position after the engine has started.

**STOPPING THE BLADES IN THE CUTTING UNIT.** Move the blade engagement lever forward to stop the blades from rotating. Do not attempt to work on the unit or remove grass from the chute without stopping the engine. The blade engagement lever should be forward (Blade Off) when starting the engine. See Fig. 9.

### PUTTING THE TRACTOR IN MOTION (see Fig. 7-8)

1. Advance the throttle. When using the tractor for work loads, such as mowing or dozing, the engine should be running from  $\frac{3}{4}$  to full throttle to prevent strain on the engine to operate equipment using the tractor engine as the source of power.

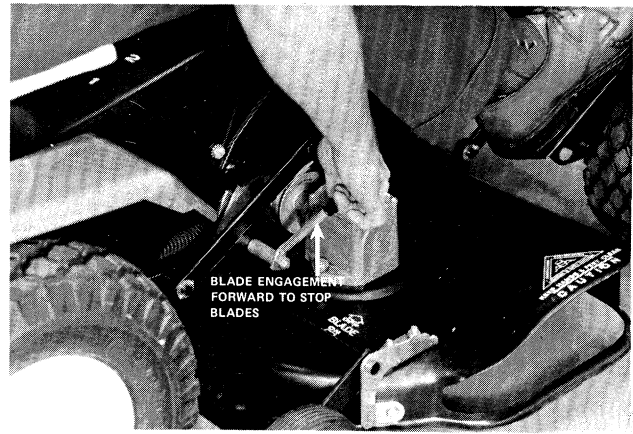


Fig. 9

2. Depress the Clutch-Brake pedal completely and move the gear shift lever to an appropriate gear to match the workload. Be sure that the tractor is NOT in motion when you change gears.
3. Release the Clutch-Brake pedal and you will put the tractor in motion.
4. To stop the mower, move the throttle control to "STOP" position. The ignition is automatically grounded. Keep the throttle control in "STOP" position at all times when the tractor is not in use.

### CUTTING HEIGHT ADJUSTMENT (see Fig. 10)

Turn the height adjustment screw on the left hand side of the mowing unit counter-clockwise to lower the cutting height. The mowing can be adjusted to cut between  $1\frac{1}{2}$ " and  $3\frac{1}{2}$ ". Be sure the lift lever is all the way UP when mowing so that the wheels on the mowing unit support the weight of the mowing unit.

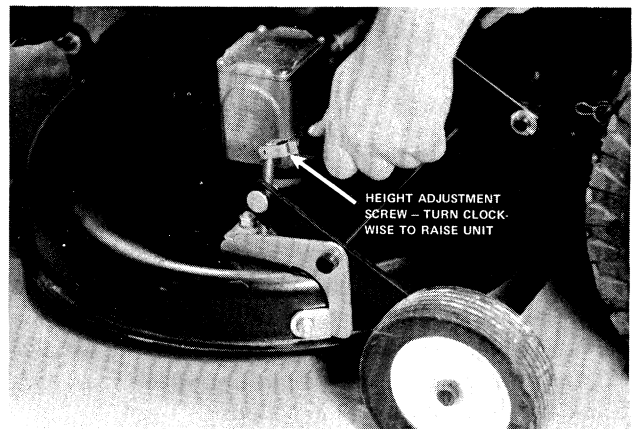


Fig. 10

## LUBRICATION & MAINTENANCE

1. *Engine* — See Engine Manual — Use high quality detergent oil. Above 32° F use SAE 30. Below 32° use SAE 10.
2. *Transaxle* — The transaxle is lubricated at the factory with three pints of SAE 90 E.P. oil. When replacing or adding oil fill until it begins to overflow through filler plug. Maintain oil at this level. When checking and lubricating transaxle remove the left rear bolt that holds the transaxle to the tractor frame and add oil through this hole. (see Fig. 7).

### GREASE FITTINGS

3. *Steering Pins* — Use automotive multipurpose grease. Use hand or pressure type gun.

### APPLY AUTOMOTIVE MULTI-PURPOSE TYPE GREASE TO THE FOLLOWING LOCATIONS.

4. Guide slot for steering segment.
5. Pinion gear for steering.
6. Mower unit pivot pin.
7. Steering pivot pin (turn steering to either side to lubricate bearing surface).
8. Front axle pivot bolt.

### APPLY MACHINE OIL TO THE FOLLOWING LOCATIONS.

9. Clutch-Brake Pedal pivot point.
10. Lift lever pivot point.
11. Idler pivot and idler arm.

The following items are permanently lubricated and require no additional lubrication.

1. All idler bearings.
2. Tie rod ends.
3. All wheel bearings.
4. All steering column bearings.

NEVER LUBRICATE OR PERFORM MAINTENANCE WHILE THE ENGINE IS RUNNING OR THE SPARKPLUG WIRE IS CONNECTED TO THE PLUG.

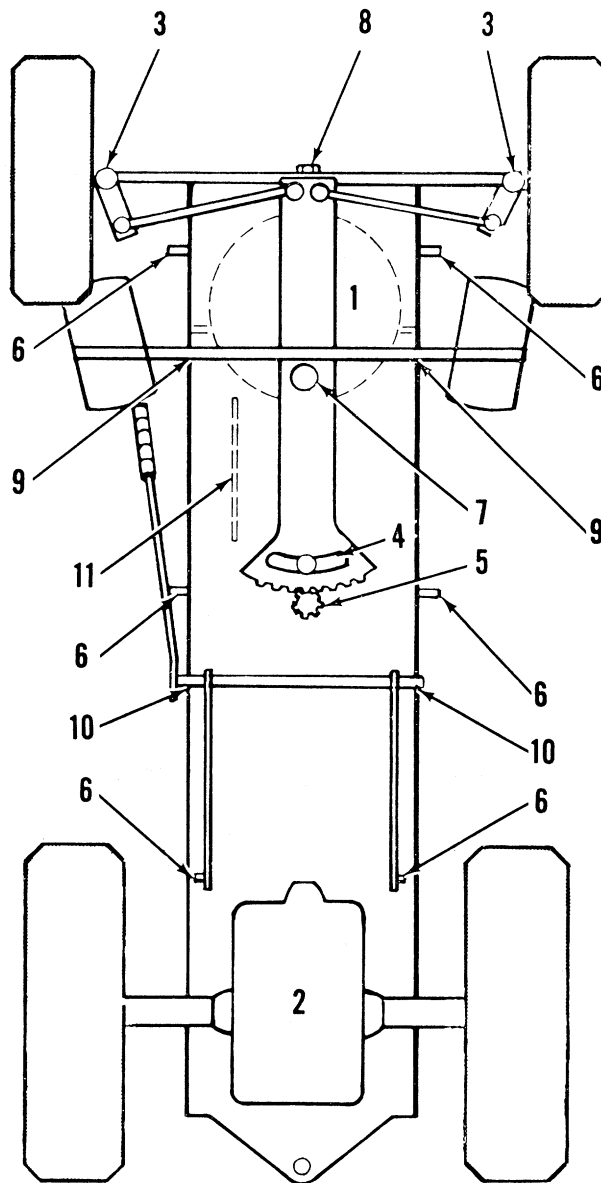


Fig. 11

SCHEDULE OF LUBRICATION AND MAINTENANCE	SEE NOTES	AFTER EVERY 24 HRS. OF OPERATION	ONCE EACH SEASON
Change Engine Oil	(1)	X	—
Replace Fuel Filter	(2)	—	X
Clean Air Filter	(1)	X	—
Clean and Gap Spark Plug	(6)	—	X
Change Transaxle Oil	(3)	—	X
Check Tire Pressure	(4)	X	—
Grease Fittings	(5)	X	—
Oil and Grease Points		X	—

### Notes:

1. See Engine Manual.
2. Replace fuel filter once each season or as necessary.
3. Drain from bottom plug. Fill and check oil level from plug on the front side of the transaxle.
4. Front and Rear Tires 15 psi.
5. Use hand or pressure type gun.
6. Set plugs at .025.

## LUBRICATION – CUTTING UNIT (See Fig. 24)

**RIGHT ANGLE DRIVES** – Check oil level after every 25 hours of operation. Lubricate with 4 oz. of E.P.G. Lithium grease. Grease level should cover input shaft.

**WHEELS** – Grease once each season with a hand or pressure type grease gun. Use multipurpose automotive type grease.

**LINKAGE ARMS** – Lubricate after every 25 hours of use. Use multi-purpose automotive type grease on the pins on the frame (See A, B and C).

**ALL OTHER MOVING PARTS** – Lubricate once each season with light machine oil.

## ADJUSTMENTS

### WHEEL ADJUSTMENT (See Fig. 12 & 13)

The caster (forward slant of the kingpin) and the camber (tilt of the wheels out at the top) requires no adjustment. Automotive steering principles have been used to determine the caster and camber on the tractor. The front wheels should toe-in 1/8 inch. To adjust the toe-in, loosen

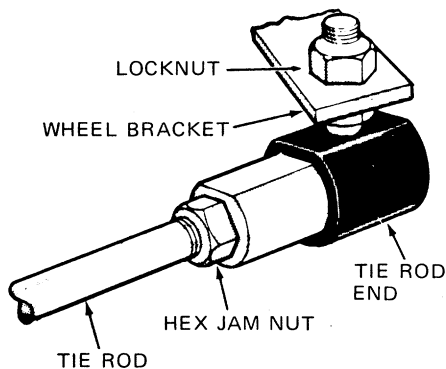


Fig. 12

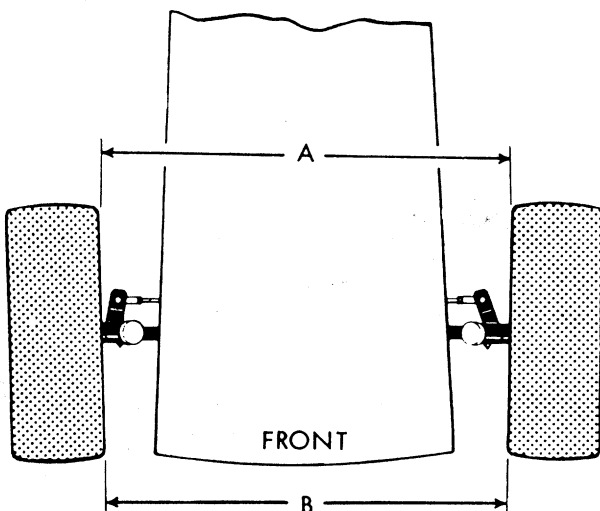


Fig. 13

the hex jam nut, remove the elastic locknut, drop the tie-rod end out of the hole in the steering arm and screw the tie-rod end in or out to make the adjustment (Fig. 13). The distance "B" must be less than "A" by 1/8 inch.

## ENGINE

For engine adjustments see the engine manual.

### WHEEL REMOVAL

**Front** . . . Loosen the set screw and remove the collar. The wheel pulls off by hand.

**Rear** . . . Remove the snap ring with Walde's Truarc Plier No. 4. The wheel pulls off by hand.

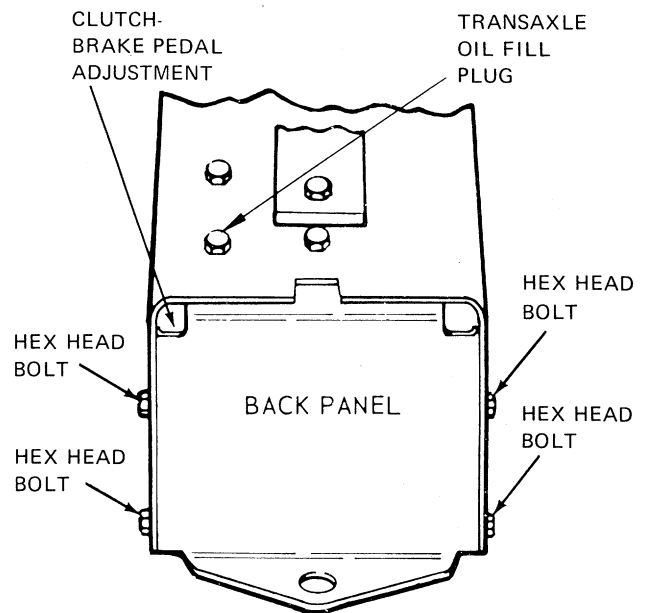


Fig. 14

### CLUTCH-BRAKE PEDAL ADJUSTMENT

(See Fig. 14 & 15)

To adjust the angle of the clutch-brake pedal, remove the cotter pin on the clutch rod and turn the clutch rod in or out of the ferrule to obtain the most comfortable angle of the pedal when the pedal is released. After making any adjustments be sure the belt guard does not rub on the belt.

The brake adjustment is made by using a deep well socket and a wrench and turning the adjusting nut through the opening on the back panel or by using a standard wrench and removing the hex head bolts and removing the back panel.

The brake should be adjusted so that when the pedal is depressed completely the belt guard is *NOT* lower than the top edge of the engine pulley. Over-adjustment will cause excessive belt wear.

**NOTE:** DO NOT ALLOW SPRING TENSION IDLER TO PIVOT BEYOND THIS POINT WHEN BRAKE IS APPLIED. ADJUST BRAKE TO PLACE SPRING TENSION IDLER IN PROPER POSITION.

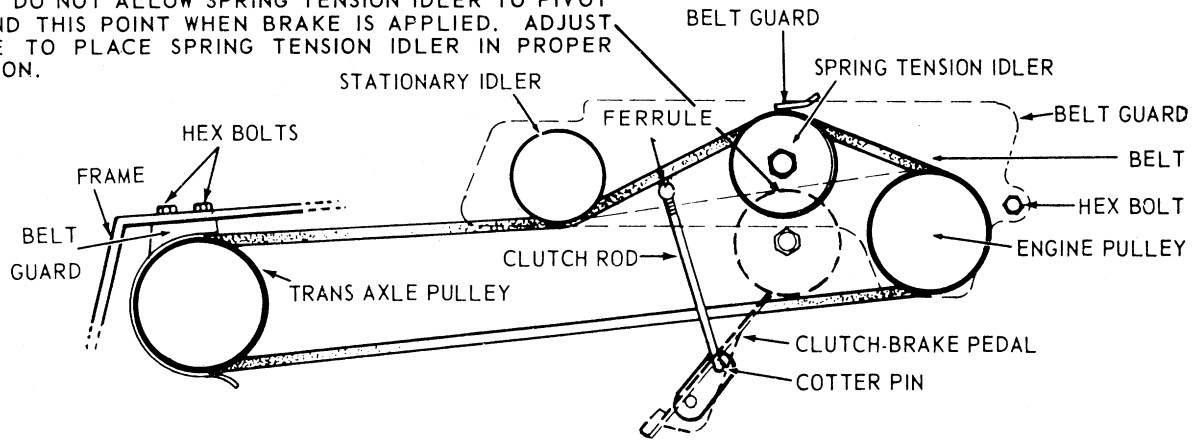


Fig. 15

#### ENGINE BELT REMOVAL (See Fig. 15)

To remove the engine belt...

1. Remove the belt guard and the trap out assembly by removing the large hex bolt holding the belt guard in place. The belt guard can be pivoted out of the way.
2. Depress the Clutch-Brake pedal all the way and tighten the parking brake.
3. Remove the back panel and remove the two hex bolts on the right hand side of the frame under the seat and remove the rear belt guard.
4. Remove the hex nut on the spring tension idler and remove the belt guard and belt.
5. Replace belt and re-assemble.

#### STEERING ADJUSTMENT (See Fig. 16)

The "play" or looseness of the steering can be adjusted by loosening the two hex bolts on the bracket and lightly tapping the bracket towards the front of the tractor. If the pinion gear becomes worn it can be rotated one half turn by removing the pin.

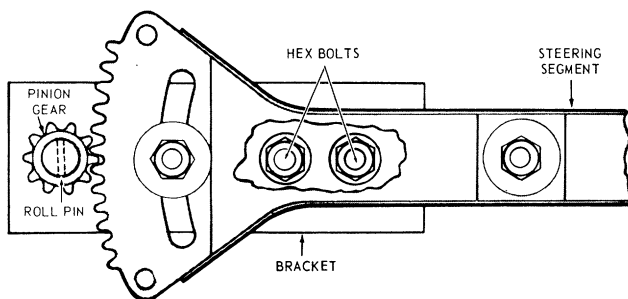


Fig. 16

#### BELT ADJUSTMENT

The belts are automatically adjusted by the idlers.

#### CUTTING UNIT BELT REMOVAL (See Fig. 24)

The belt is a standard size 21/32" x 48".

1. Remove the hex head cap screw (46) and hex nut (2) on the V-Belt idler (45).
2. Remove both hex head cap screws (32) and hex nuts (38) holding the left hand right angle drive to the deck.
3. Remove the "E" ring (14) on the shaft (21) with a screwdriver and slide the collar (24) towards the center of the mowing unit.
4. Remove the belt.
5. Reassemble.

#### REMOVING AND SHARPENING THE BLADES

The blades are held with a hex centerlock nut (30) and a spring lockwasher (31). To remove, wrap the blade's cutting edge with a rag and remove the hex centerlock nut (30).

When grinding or filing the blades to sharpen them, remove equal amounts of metal from both edges to keep the blade in balance. The blade can be tested for balance by balancing it on a knife blade held in a vise. Remove metal from the heavy side until it balances directly over the center hole in the blade. When replacing the blade, be sure that the air-foil is turned up and the blades are timed. (See below).

#### TIMING THE BLADES (See Fig. 17)

The blades have to be timed whenever the belt is removed or the shaft is disconnected from the right angle drive. To time, remove the "E" ring (14) with a screwdriver on the shaft (21), slide the collar (24) towards the center of the unit and turn the blades so they are perpendicular to each other as shown. Slide the collar back and put the "E" ring back in place.

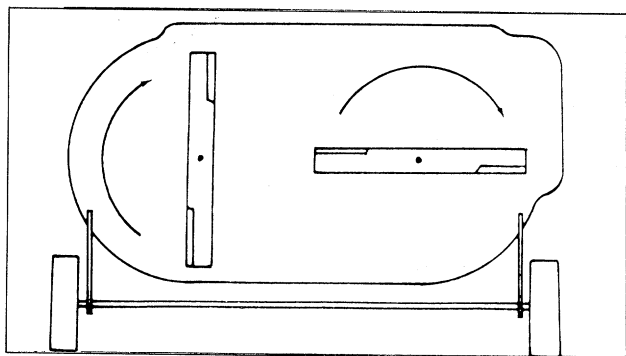


Fig. 17

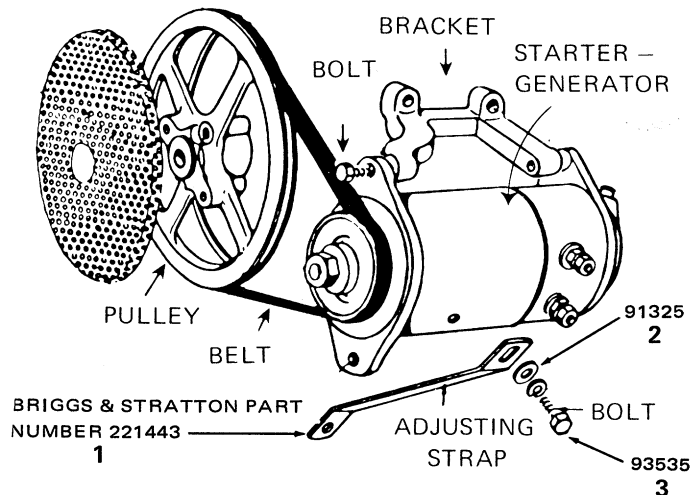


Fig. 18

PARTS 1, 2, & 3 ORDER FROM BRIGGS & STRATTON

## STARTER-GENERATOR BELT ADJUSTMENT:

(See Fig. 18)

After the first ten hours of operation and periodically thereafter, the belt should be tightened or checked on the starter-generator. If the starter-generator turns over and the engine does not crank or there is a high pitched squeel when the starter-generator is turned on, it is an indication of a loose belt. To tighten, LOOSEN the two bolts on the bracket and LOOSEN the two bolts on the adjusting strap. Swing the starter-generator away from the engine, towards the rear of the mower, until the belt is tight. (Belt should deflect  $\frac{1}{4}$ " when depressed with your thumb.) Tighten all bolts.

## TROUBLE SHOOTING

An uncut strip of grass down the center of the path of the cutting unit can be caused by the following:

1. Engine speed is too slow. The engine should be running a near full speed.

2. Wrong gear selection. Second gear is for normal grass cutting. Heavy grass should be cut in first gear.
3. Short blade (s). Everytime a blade is sharpened, it is shortened slightly. When balancing the blade, grind from the back side, not the end to balance. The blade should measure at least 16-3/8" from tip to tip measured on the diagonal.
4. Dull blades can leave an uncut strip of grass.
5. Be sure the blades are NOT installed upside down. The air foil on the back of the blade should always be up when the deck is in the cutting position.
6. The blade drive belt may be slipping. This can be caused by:
  - a. worn drive belt
  - b. weak spring on the tension bracket (39).
  - c. worn drive pulley on the right angle drive unit.

NOTE: This instruction manual covers various models and all accessories shown do not necessarily apply to your model mower.



MTD PRODUCTS INC extends its warranty only on the mower. If repairs or service is needed on the engine, please contact your nearest, authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines - Gasoline".

# ILLUSTRATION AND PARTS LIST FOR 12 VOLT ELECTRIC SYSTEM

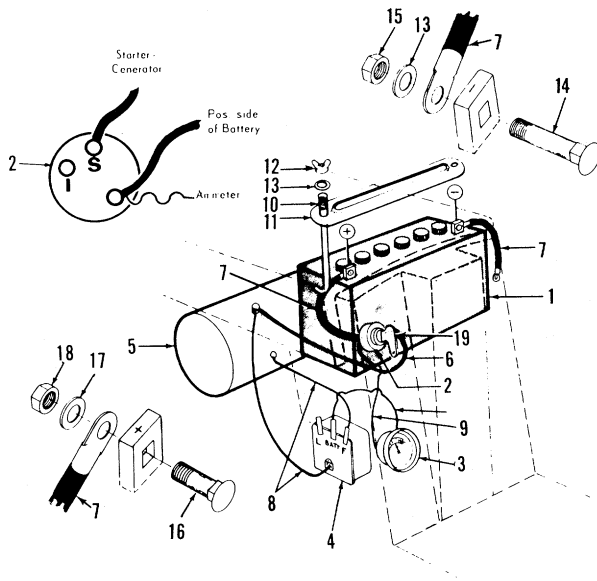


Fig. 19C

Illus. No.	Part No.	DESCRIPTION
1	725-117	Battery-Willard Model No. HDDLM9L 7-3/4 x 5-1/8 x 7-17/64" 32 Amp Hrs.
2	725-118	Switch - Cole Herse 95511B
3	725-119	Ammeter - Stewart Warner D-357-W
4	725-120	Regulator - Delco-Remy
5	725-143	Starter - Generator
6	725-121	Electric Wire 17.25"
7	725-122	Electric Wire 7.25" (2 req'd)
8	725-123	Electric Wire 14 Ga. 9.50" (3 req'd)
9	725-124	Electric Wire 14 Ga. 3.5"
10	711-222	Battery Hold Down Rod
11	321-8821	Battery Hold Down
12	712-113	Wing Nuts
13	736-329	Spring Lockwasher 1/4"
14	710-134	Carriage Bolt 1/4-20 x 5/8 lg.
15	712-287	Hex Nut 1/4-20 Thd.
16	710-260	Carriage Bolt 5/16-18 x 5/8 lg.
17	736-119	Spring Lockwasher 5/16"
18	712-267	Hex Nut 5/16-18 Thd.
19	725-128	Key - Ignition Switch

## ILLUSTRATION AND PARTS LIST FOR HEAD LIGHTS AND WIRING

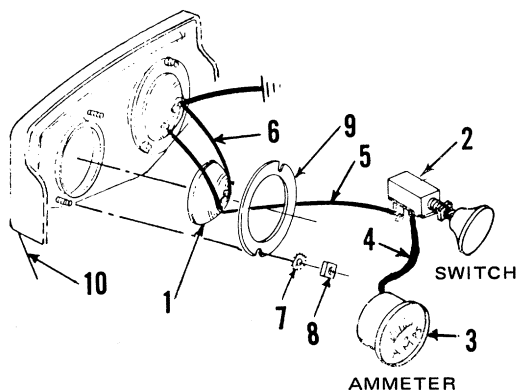


Fig. 19A

Illus. No.	Part No.	DESCRIPTION
1	725-133	Head Light
2	725-131	Switch
3	725-119	Ammeter
4	725-136	Wire 7-1/4
5	725-141	Wire 32-1/4
6	725-142	Wire 5-1/2
7	736-607	Lockwasher
8	712-121	Hex Nut
9	417-9960	Headlight Ring
10	417-9958	Grille

## ILLUSTRATION AND PARTS LIST FOR STARTER-GENERATOR

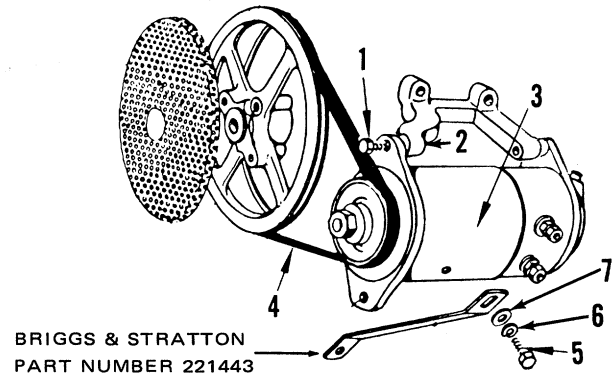


Fig. 19B

Illus. No.	Part No.	DESCRIPTION
1	710-380	Hex Head Cap Screw 5/16-18 x 1-3/4 lg.
2	712-267	Hex Nut 5/16-18 Thd.
3	725-143	Starter - Generator
4	754-134	V-Belt 3/8 x 33-1/8 lg.
5	710-408	Hex Head Cap Screw 5/16-18 x 3/4 lg.
6	736-119	Spring Lockwasher 5/16"
7	736-107	Flat Washer

# GARDEN TRACTOR PART NUMBERS

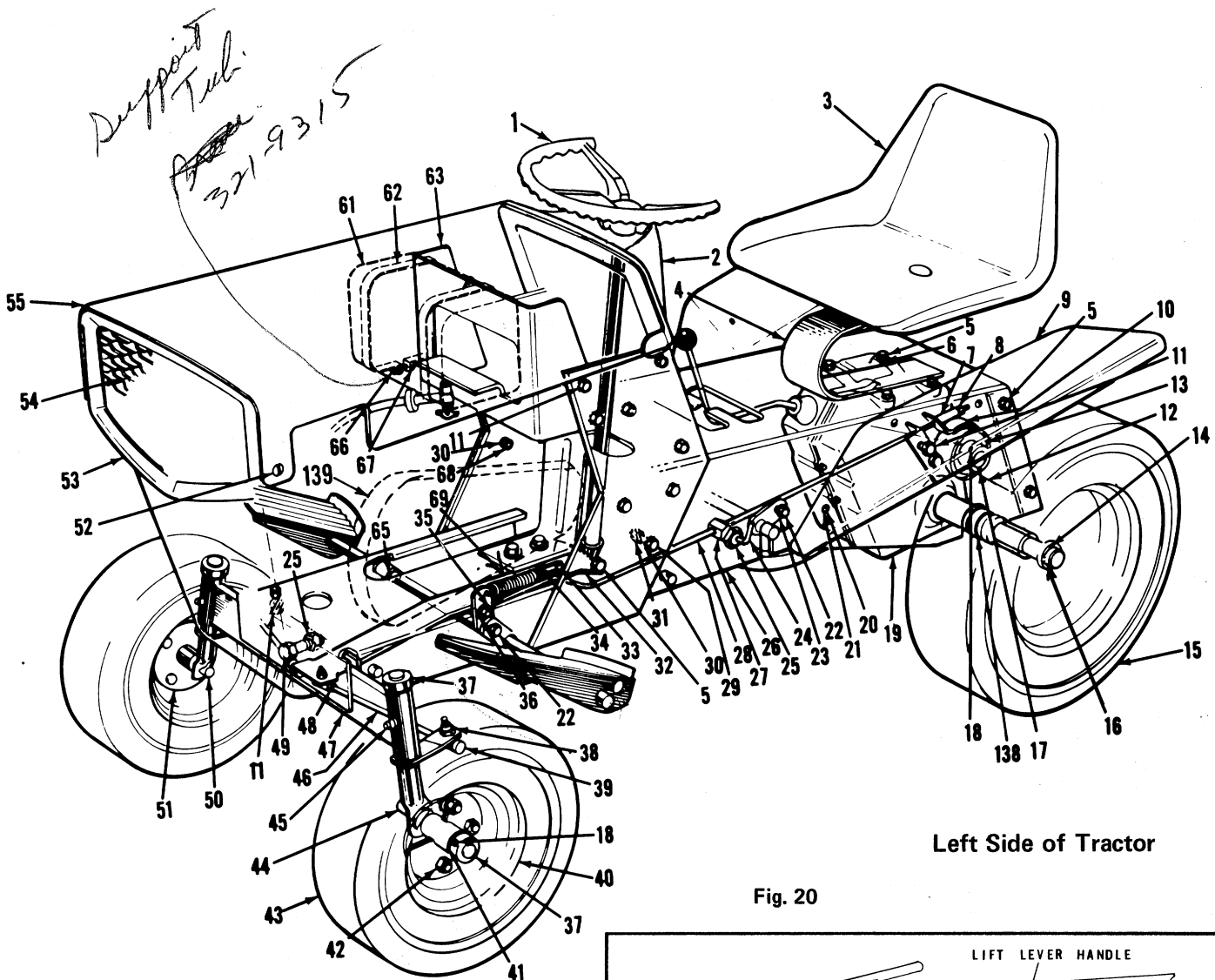
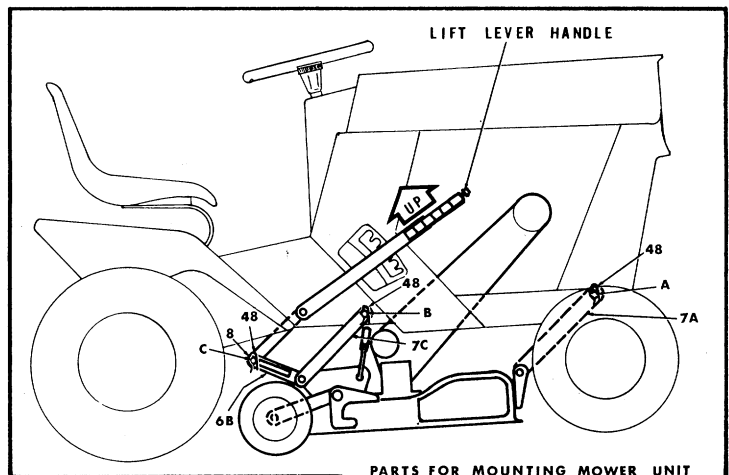
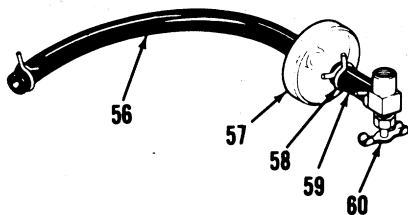


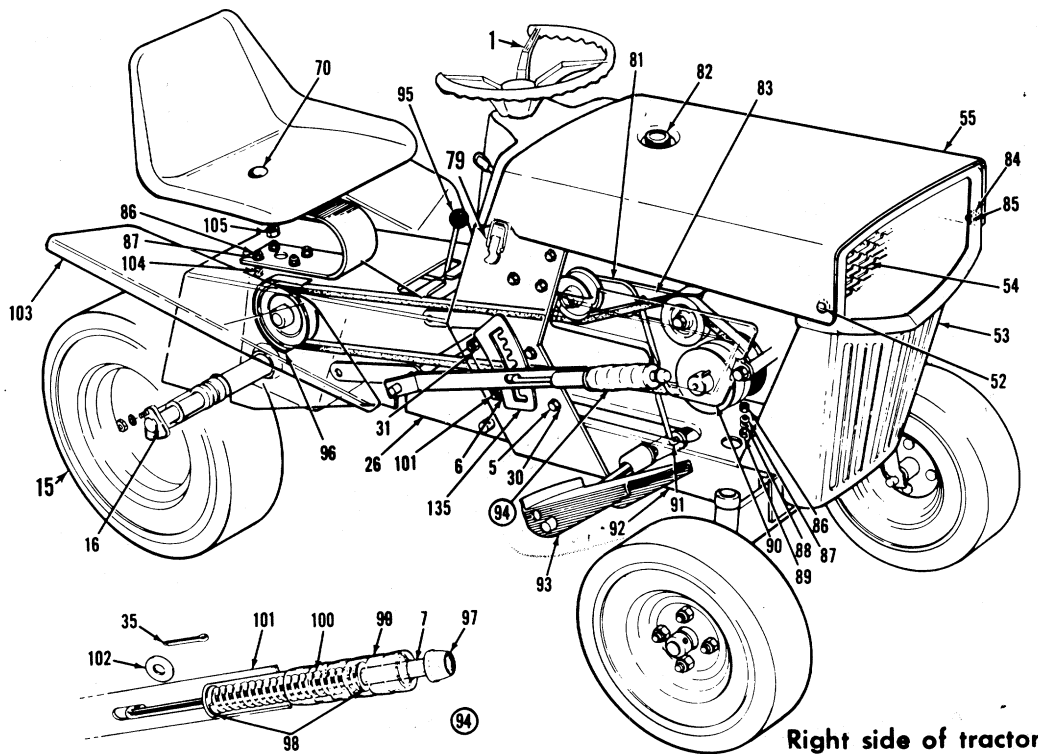
Fig. 20



PARTS FOR MOUNTING MOWER UNIT

REF. NO.	PART NO.	DESCRIPTION
A	---	weld pin 2 req.
B	---	weld pin 2 req.
C	---	weld pin 2 req.
6B	321-8631	lockout link 2 req.
7A	321-8632	deck link 2 req.
7C	321-8632	deck link 2 req.
8	736-466	flat washer 2 req.
48	714-101	hair pin 6 req.

When ordering replacement parts, be sure to specify your mower model number, part number, description of part, and the number of parts required . . . Parts and service should be handled by your nearest authorized service firm as recommended by your dealer. Request for parts and service received at the factory will be forwarded to the appropriate Central Service Distributor in your area for handling.



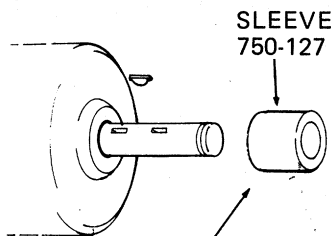
Right side of tractor

## TERRA TIRES

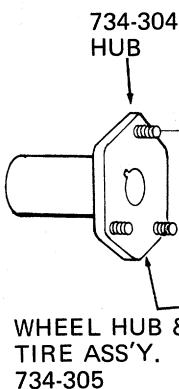
FRONT 12.50 X 4.50-6			
TUBE TYPE		TUBELESS	
501-10164	Wheel Assembly - Complete	502-10108	Wheel Assembly - Complete
312-10164	Rim Only	312-10108	Rim Only
734-218	Tire Only 12.50 x 4.50-6	734-298	Tubeless 12.50 x 4.50-6
734-219	Tube Only 12.50 x 4.50-6	312-8783	Hub
312-8783	Hub	734-255	Valve Stem
REAR 18.00 X 6.50-8			
TUBE TYPE		TUBELESS	
505-9262	Wheel Assembly - Complete	504-9262	Wheel Assembly - Complete
312-9262	Rim Only	312-9262	Rim Only
734-308	Tire Only 18.00 x 6.50-8	734-294	Tubeless 18.00 x 6.50-8
734-310	Tube Only 18.00 x 6.50-8	312-9265	Hub
* 312-9265	Hub LONG	734-255	Valve Stem
REAR 18.00 X 9.50-8		FRONT 13.00 X 5.00-6	
TUBELESS		TUBELESS	
734-305	Wheel Assembly - Complete	503-10108	Wheel Assembly - Complete
734-303	Rim Only	312-10108	Rim Only
734-302	Tubeless 18.00 x 9.50-8	734-321	Tubeless 13.00 x 5.00-6
734-304	Hub SHORT	734-255	Valve Stem
750-127	Sleeve 1.63 x 1.06 x .97		

734-4447  
734-0449  
734-0448  
11313

\* #89562 HUB CAN BE SUBSTITUTED  
BY  
(1) 750-0127 SPACER  
(1) 11313 HUB

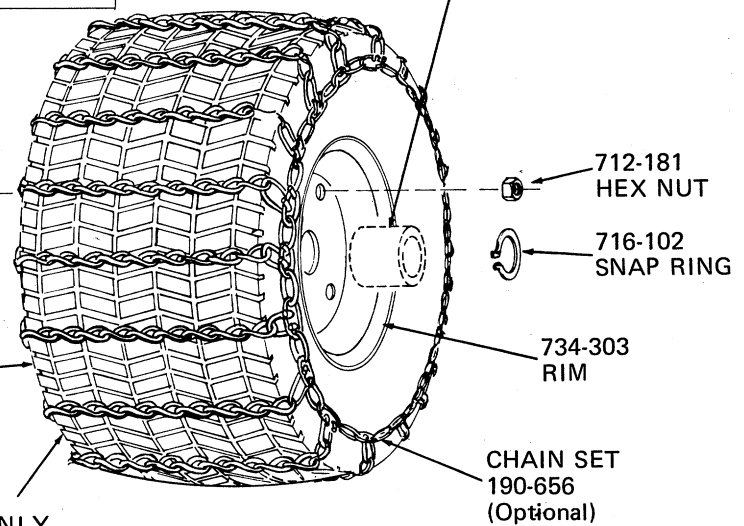


1. PLACE SLEEVE HERE WHEN USING CHAINS ON TERRA TIRES



WHEEL HUB & TIRE ASS'Y.  
734-305

734-302  
TIRE ONLY



PLACE SLEEVE HERE WHEN  
2. USING 32" GRASS CUTTING  
ATTACHMENT

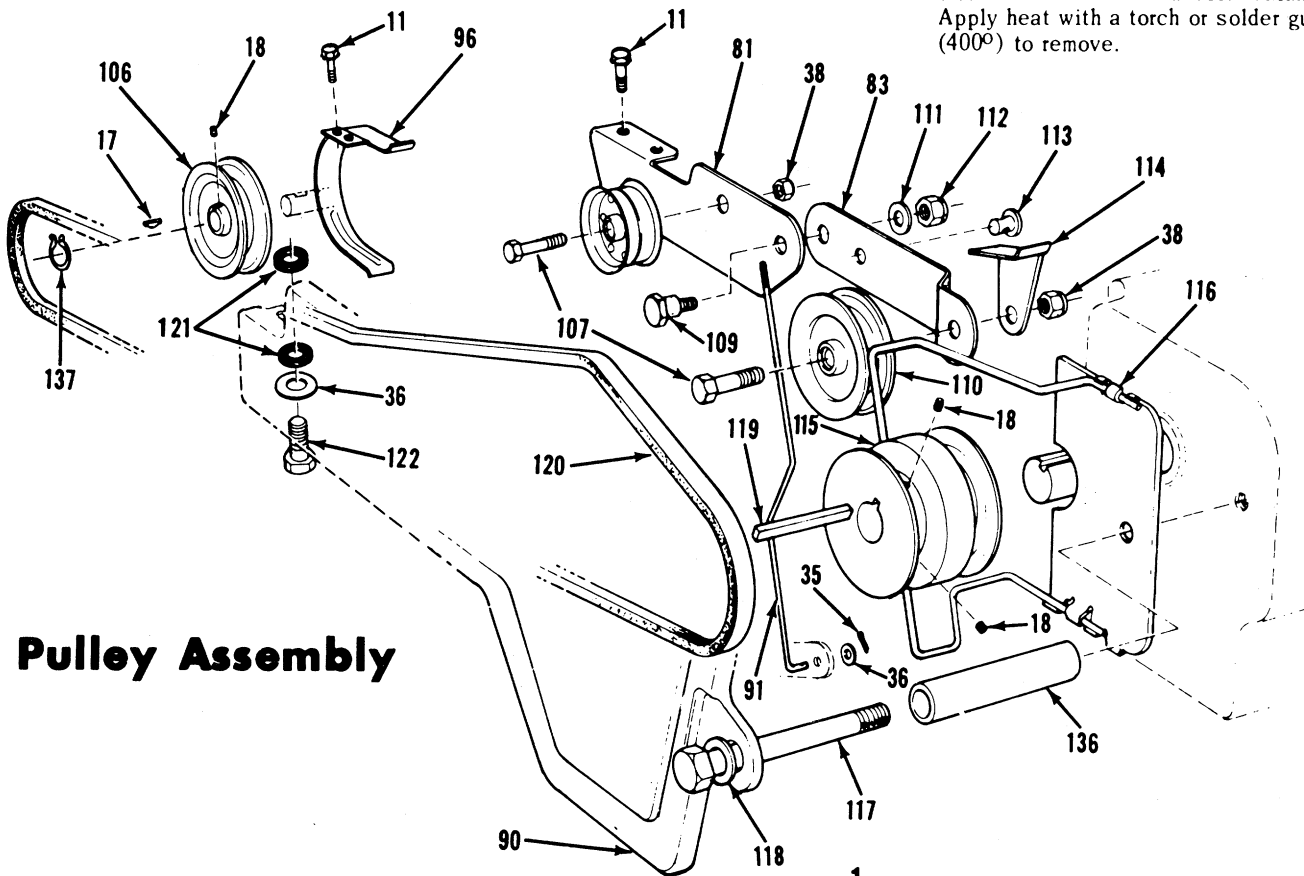
712-181  
HEX NUT

716-102  
SNAP RING

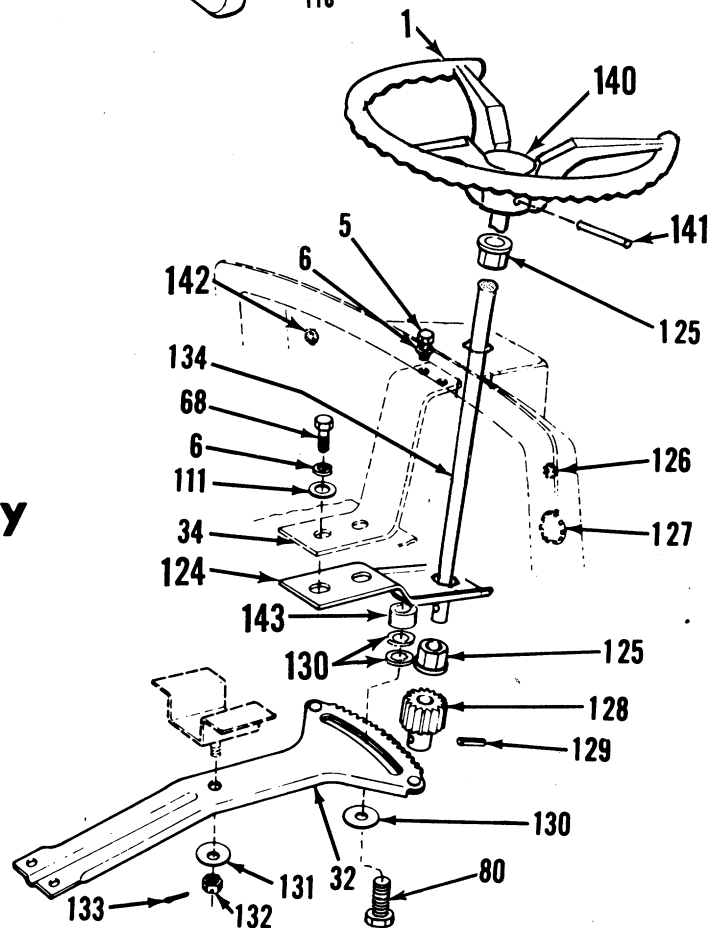
734-303  
RIM

CHAIN SET  
190-656  
(Optional)

**NOTE:** Set screw in engine pulley is treated with a nut and bolt sealant. Apply heat with a torch or solder gun (400°) to remove.



## Pulley Assembly



## Steering Assembly

Fig. 22

# PARTS LIST FOR GARDEN TRACTOR MODELS 140-659, 140-669

Illus. No.	Part No.	DESCRIPTION	Illus. No.	Part No.	DESCRIPTION	Illus. No.	Part No.	DESCRIPTION
1	723-205	Steering Wheel Assy.	44	394-8609	Axle Assy - Front Left Hand	97	726-106	Push Cap †
2	394-10090	Dash Panel Assy. (Recoil)	45	737-107	Grease Fitting, Alemite 3005	98	736-300	Flat Washer 3/8 ID x 7/8 OD x 16 Ga. *
3	394-10094	Dash Panel Assy. (Electric)	46	711-209	Tie Rod			Grip †
4	312-8535	Seat Assembly	47	394-8614	Pivot Bar Assy	99	305-8818	Compression Spring †
5	723-232	Seat Cushion (not shown)	48	712-111	Hex Jam Nut 3/8-24 Thd. *	100	732-156	Left Handle Assy †
6	723-146	Seat Spring	49	710-298	Hex Hd. Bolt 5/8-18 x 3-1/2 lg. *	101	394-8642	Flat Washer
7	710-216	Hex Head Cap Screw 3/8-16 x 3/4 lg. *	50	394-8608	Axle Assy - Front - Right Hand	102	736-133	7/16 ID x 1-3/8 OD x 14 Ga. *
8	736-169	Spring Lockwasher 3/8 Scr. *	51	312-8783	Hub Assy	103	417-8694	Fender - Right Hand
9	750-124	Spacer Tube †	52	710-255	Truss Head Machine Screw 1/4-20 x 3/4 lg. *	104	710-444	Hex Head Cap Screw 5/16-18 x 1 lg. *
10	712-429	Hex Elastic Nut 5/16-18 Thd. *	53	417-8670	Grill Panel - (Recoil)	105	712-384	Hex Centerlock Nut 1/2-13 Thd. *
11	417-8695	Fender Left Hand	54	417-9958	Grill Panel - (Electric)	106	756-118	Pulley
12	310-8622	Brake Assy - complete	55	417-10100	Top Hood Assy	107	710-113	Hex Head Cap Screw 3/8-24 x 1-5/8 (Heat Treat) *
13	710-198	Sems Hex Head Cap Screw 5/16-18 x 3/4 lg. *	56	723-153	Gas Hose 10-1/2 lg. Rubber	108	756-117	Flat Idler
14	394-8597	Frame Plate Assy.	57	723-154	Gas Filter Carter FN-3630-S	109	710-373	Shoulder Bolt
15	711-205	Brake Disc.	58	723-157	Hose Clamp 1/2 OD - Eaton R8	110	756-116	V-Idler
16	711-207	Hi Pro Key HP #708 *	59	723-152	Gas Hose 1-1/2 lg. Rubber	111	736-300	Flat Washer 3/8 ID x 7/8 OD x 16 Ga. *
17	714-113	Rear Wheel Assy.	60	723-159	Gas Valve Dexter	112	712-430	Hex Elastic Nut 3/8-16 Thd. *
18	504-9262	Rear Wheel Assy. (140-650), (140-665)	61	723-149	Gas Tank	113	310-8664	Ferrule - Adjustable
19	734-305	Rear Wheel Assy. (140-655), (140-660)	62	723-151	Strap - Gas Tank	114	756-140	Engine Sheave
20	716-102	Snap Ring Truarc 5100-100 *	63	394-8638	Battery Box Assy	115	394-8689	Belt Keeper
21	714-314	Hi Pro Key HP #606 *	64	710-188	Allen Set Screw Cup Pnt. 1/4-28 x 3/16 lg. *	116	710-285	Hex Head Cap Screw 1-2-20 x 3-3/4 lg. *
22	710-421	Allen Set Screw Cup Pnt. 5/16-18 x 1/4 lg. *	65	712-492	Square Nut 1/4-20 Thd. *	117	736-114	Lockwasher 1/2 Screw *
23	717-125	Transaxle Gear Box	66	710-279	Phillips Fillister Hd. Mach. Scr. 1/4-20 x 1-3/4 lg. *	118	754-114	Square Key 1/4 sq. x 2 lg. *
24	710-179	Hex Head Thd. Cut. Screw 1/4-20 x 1/2 Type F *	67	710-192	Hex Hd. Cap Scr. 3/8-16 x 1 lg. *	119	754-112	V-Belt 21/32 x 80 lg. *
25	736-222	External Lockwasher 1/4 Scr. *	68	710-253	Extension Spring	120	736-161	Rubber Washer
26	710-209	Sems Hex Head Cap Screw 3/8-16 x 5/8 lg. *	69	732-155	Carriage Bolt 1/2-13 x 1 lg. *	121	710-122	Hex Head Cap Screw 5/16-24 x 1 lg. *
27	394-8644	Pivot Mounting Bracket	70	712-147	Control Knob	122	394-10043	Lower Mounting Bracket
28	711-207	Lock Handle	71	722-111	Throttle Control (complete)	123	748-227	Bearing
29	712-923	Centerlock Jam Nut 5/8-18 Thd. *	72	746-126	Hex Head Cap Scr.	124	726-112	Plug Button 5/8 Pin (Recoil)
30	394-8589	Frame Sub-Ass'y - Rear	73	723-209	Hood Lock	125	726-113	Plug Button 2 3/32 dia. (Recoil)
31	711-206	Ferrule - Brake Lock	74	710-344	3/4-16 x 1 1/2 lg. *	126	717-127	Spur Gear
32	711-203	Brake Rod	75	394-8620	Clutch Mount Brkt. Assy	127	715-247	Roll Pin 3/16 Dia. x 1 lg. *
33	711-220	Hex Head Step Bolt	76	723-155	Clutch Bracket	128	310-7386	Flat Washer
34	736-148	External Lockwasher 3/8 Scr. *	77	310-9200	Flat Washer 9/32 ID x 5/8 OD x 16 Ga. *	129	736-112	Belleville Washer 17/32 ID x 1-5/8 OD x 18 Ga. *
35	712-798	Hex Nut 3/8-16 Thd. *	78	736-463	Hex Elastic Nut 1/4-20 Thd. *	130	712-114	Castle Nut 1/2-20 Thd. *
36	394-8599	Steering Segment Assy	79	712-324	Hex Nut 5/16-18 Thd. *	131	714-115	Cotter Pin 1/8 Dia. x 1 lg. *
37	726-106	Push Cap 1/4 Dia.	80	736-119	Spring Lockwasher 5/16 Scr. *	132	711-403	Steering Column Rod
38	394-8618	Reinforcement Brkt. Assy	81	736-607	Ext. Lockwasher 5/16 Scr. *	133	310-8630	Index Bracket
39	714-474	Cotter Pin 1/8 Dia. x 3/4 lg. *	82	710-380	Hex Head Cap Screw 5/16-18 x 1-3/4 lg. *	134	750-125	Sleeve
40	736-264	Flat Washer 5/16 S.A.E. *	83	394-8838	Belt Guard	135	716-102	Snap Ring
41	748-386	Collar	84	711-218	Clutch Rod	136	736-163	Washer
42	712-116	Hex Elastic Nut 3/8-24 Thd. *	85	394-8591	Frame Sub-Ass'y - Front	137	312-9284	Belt Guard - Engine
43	723-156	Tie Rod End	86	394-8653	Foot Pedal Assy	138	723-207	Steering Wheel Cap
44	312-10108	Wheel Rim - Front	87	310-8817	Foot Handle Assy (complete)	139	715-121	Spirol Pin 1/4 x 2 lg.
45	502-10108	Wheel Assy. - complete **	88	722-109	Knob - Shift Red	140	750-141	Plug - Button (Recoil)
46	748-143	Bearing - Flange	89	394-8616	Guard Assy - Belt	141	321-9315	Spacer
47	712-181	Hex Nut Top Lock 3/8-16 Thd. *	90			142	750-127	Support Tube
48	502-10108	Front Wheel Assy. (140-650, 140-655), (140-660, 140-665)	91			143		Space (not shown)

\*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

†Part of Lift Handle Assembly (complete) 310-8817.

When ordering this part the prefix (first three numbers) designate the color. Use the appropriate prefix to order your parts.

For example 313-8695 Fender Left Hand . . . Coppertone 313 / Yellow Gold 317 / Terra Cotta 330 / Scarlet Red 347 / Sierra Red 371

\*\*When ordering tires include all the information on the sidewall of the tire such as the size and brand name.

Recommended spark plug replacement AC No. LM46 and Autolite No. AU 7PM.

754-134-START-65W

# PARTS ILLUSTRATION FOR TRANSAXLE 717-125

(PEERLESS MODEL 1205)

Ref. No.	Part No.	DESCRIPTION	Ref. No.	Part No.	DESCRIPTION
1	784095	Lever & Housing Ass'y (Includes Nos. 2 thru 7)	34	778021	Gear, Spur (26 Teeth)
2	792016	Ring, Snap	35	786014	Spacer
3	792001	Ring, Quad	36	778022	Gear, Spur (22 Teeth)
4	792002	Pin, Roll	37	786015	Spacer
5	784088	Housing, Shift Lever	38	778023	Gear, Spur (16 Teeth)
6	784094	Keeper, Shift Lever	39	776015	Shaft, Input
7	784096	Lever Shift	40	778024	Spur Gear, Input Shaft
8	784056	Rod Ass'y, Shift (Includes Nos. 9 thru 12)	41	780001	Washer
9	792003	Spring	42	786017	Spacer
10	792004	Ball, Steel	43	778036	Gear, Output
11	784004	Fork, Shifter	44	778041	Pinion, Output
12	784057	Rod, Shifter	45	788008	Seal, Oil
13	784054	Rod Assembly, Shift (Includes Nos. 9, 10, 11, 14 and 55)	46	782022	Hsg. & Bushing Ass'y, L.H. Axle (Includes No. 51)
14	784055	Rod, Shifter	46A	782023	Hsg. & Bushing Ass'y, R.H. Axle (Includes No. 51)
15	774067	Axle w/ 2 Key Seats - L.H.	47	772045	Cover Assembly, Transaxle (Includes Nos. 57 & 58)
15A	774068	Axle w/ 2 Key Seats - R.H.	48	770033	Case Assembly, Transaxle (Includes Nos. 56 & 57)
16	780042	Washer, Thrust	49	792007	Screw, Socket Head Cap 1/4-20 x 3/4
17	792020	Screw, Hex Hd. Cap 1/4-20 x 2-1/4	50	786026	Pin, Dowel
18	792006	Lockwasher, 1/4"	51	780054	Bushing
19	778033	Gear, Ring	52	792010	Plug, Pipe
20	786019	Pin, Drive	53	778039	Gear, Bevel
21	786027	Block Drive	54	792018	Ring, Snap
22	778014	Pinion, Bevel	55	792017	Ring, Snap
23	776022	Pinion & Bushing Ass'y, Idler	56	780011	Bearing
25	776014	Shaft & Bearing Ass'y, Shifter (Includes No. 26)	57	780013	Bearing
26	780018	Bearing	58	780055	Bearing
27	778037	Gear, Idler	59	792012	Screw, Socket Head Set 3/8-16 x 3/8
28	776032	Shaft, Idler	60	788009	Seal, Oil
29	784074	Stop, Shifter	64	776008	Shaft, Reverse Idler
30	788026	Gasket, Case to Cover	65	786008	Spacer, Reverse Idler
31	788003	Gasket, Shift	66	778016	Idler, Reverse
32	778019	Lever Housing	68	780039	Bearing, Thrust
33	778020	Gear, Shifting	69	774029	Carrier, Differential
			70	774028	Carrier, Differential

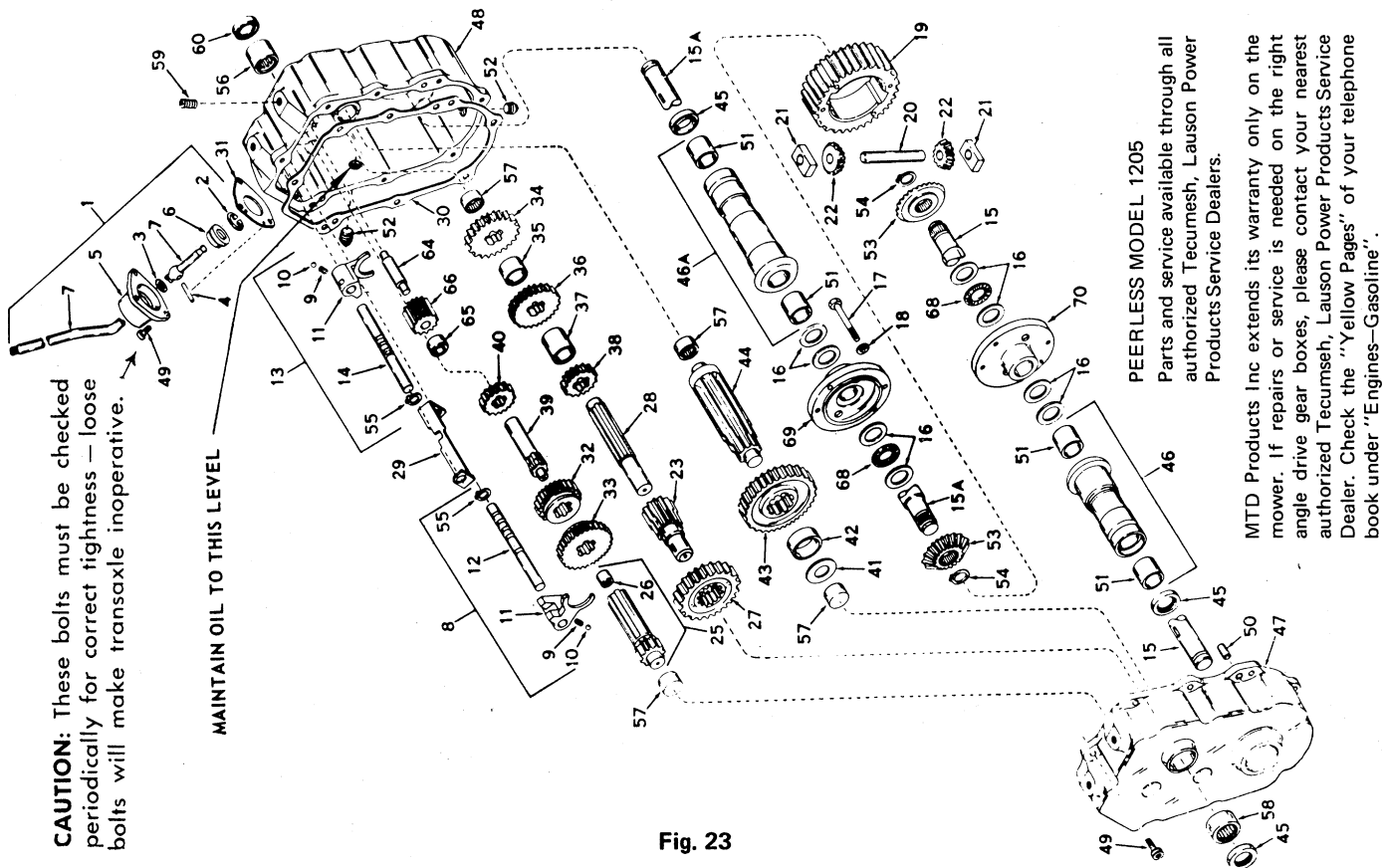


Fig. 23

# 32" MOWING UNIT

MODEL NO. 190-651

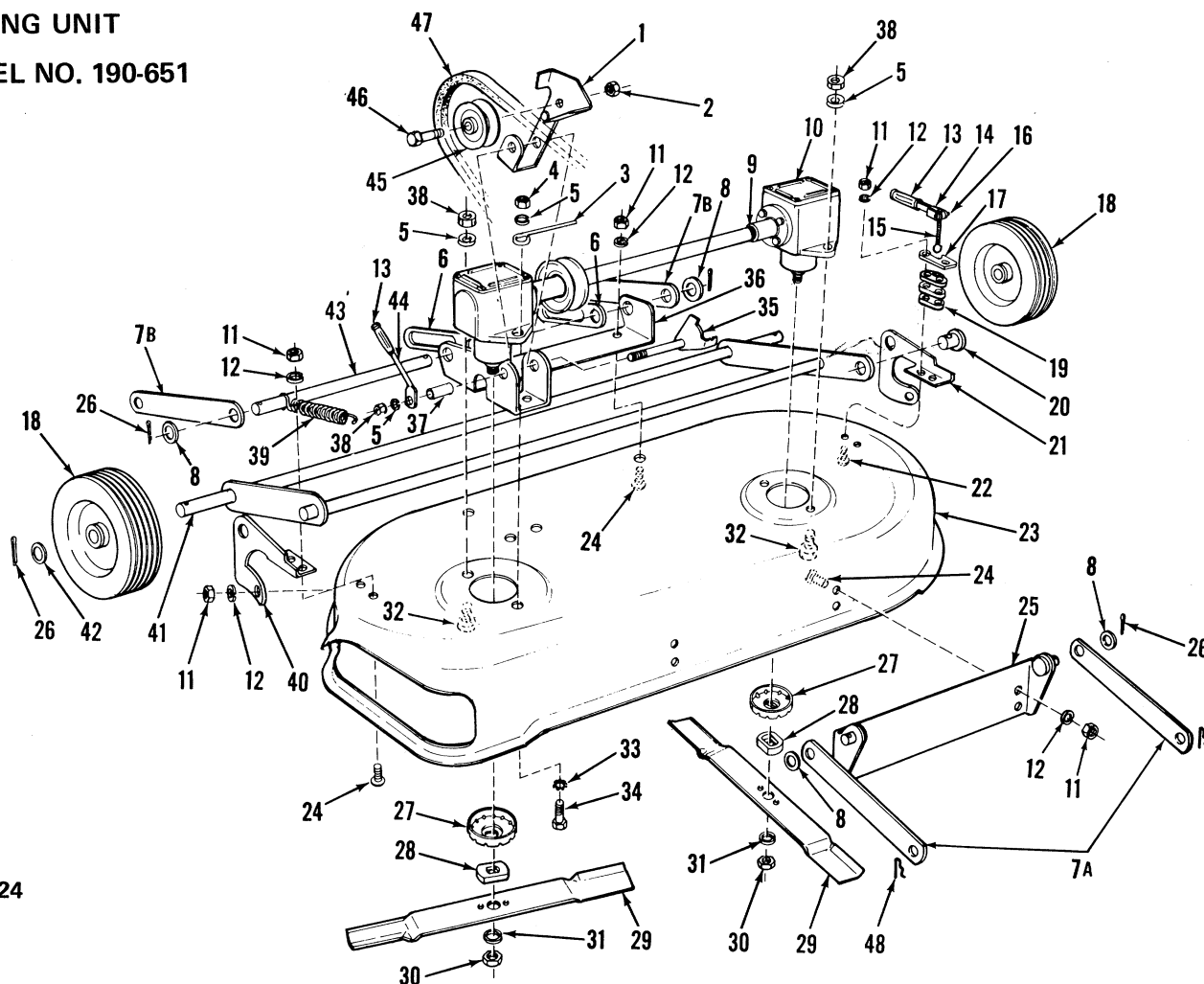


Fig. 24

## PARTS LIST FOR MOWING UNIT

Illus. No.	Part No.	DESCRIPTION	Illus. No.	Part No.	DESCRIPTION
1	310-8627	Idler Bracket Assembly	25	321-8666	Front Deck Bracket Assembly
2	712-116	Hex Elastic Nut 3/8-24 Thread *	26	714-115	Cotter Pin 1/8 Dia. x 1" long *
3	723-148	Belt Guard	27	310-8855	Cup - Drive
4	712-711	Hex Jam Nut 3/8-24 Thread *	28	748-140	Drive Collar
5	736-169	Spring Lockwasher for 3/8 Screw *	29	742-119	Mower Blade
6	321-8631	Lockout Link	30	712-923	Center lock Jam Nut 5/8-18 Thread *
7	321-8632	Deck Link	31	736-158	Spring Lockwasher for 5/8 Screw *
8	736-466	Flat Washer 17/32 I.D. x 15/16 O.D. - 18 GA. *	32	710-253	Hex Head Cap Screw 3/8-16 x 1" long *
9	716-107	"E" Ring *	33	736-148	Ext. Lockwasher for 3/8 Screw *
10	717-126	Right Angle Drive Assembly	34	710-191	Hex Head Cap Screw 3/8-24 x 1-1/4 long *
11	712-267	Hex Nut 5/16-18 Thread *	35	321-8664	Lockout Bracket Assembly
12	736-119	Spring Lockwasher 5/16 Screw *	36	321-8652	Rear Deck Bracket
13	305-2186	Grip	37	750-126	Spacer
14	310-8696	Adj. Handle Assembly	38	712-798	Hex Nut 3/8-16 Thread *
15	711-204	Adj. Screw	39	732-178	Spring
16	715-103	Roll Pin 1/8 Dia. x 3/4 long *	40	321-8636	Mounting Bracket - R.H.
17	310-8634	Keeper Plate	41	321-8684	Wheel Bracket Assembly
18	734-225	Wheel Assembly	42	736-116	Flat Washer .625 I.D. x .937 O.D. .062
19	310-8633	Spacer Plate (3)	43	321-8668	Shaft
20	710-202	Adj. Ferrule	44	310-8662	Lockout Handle
21	321-8637	Mounting Bracket - L.H.	45	756-116	V-Idler
22	710-161	Carriage Bolt 5/16-18 x 1-1/4 long *	46	710-113	Hex Head Cap Screw 3/8-24 x 1-5/8 long *
23	321-8678	Deck Assembly	47	754-113	"V" Belt 21/32 x 48 long *
24	710-260	Carriage Bolt 5/16-18 x 5/8 long *	48	714-101	Cotter-Hairpin

\* For faster service obtain standard nuts, bolts, and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

# RIGHT ANGLE DRIVE MODEL NO. 717-126 (PEERLESS MODEL RA 15752)

FOR 32" MOWING UNIT 190-651

## PEERLESS MODEL RA 15752

Parts and service available through all authorized Tecumseh, Lauson Power Products Service Dealers (Peerless). Check the "Yellow Pages" of your telephone book under "Engines—Gasoline".

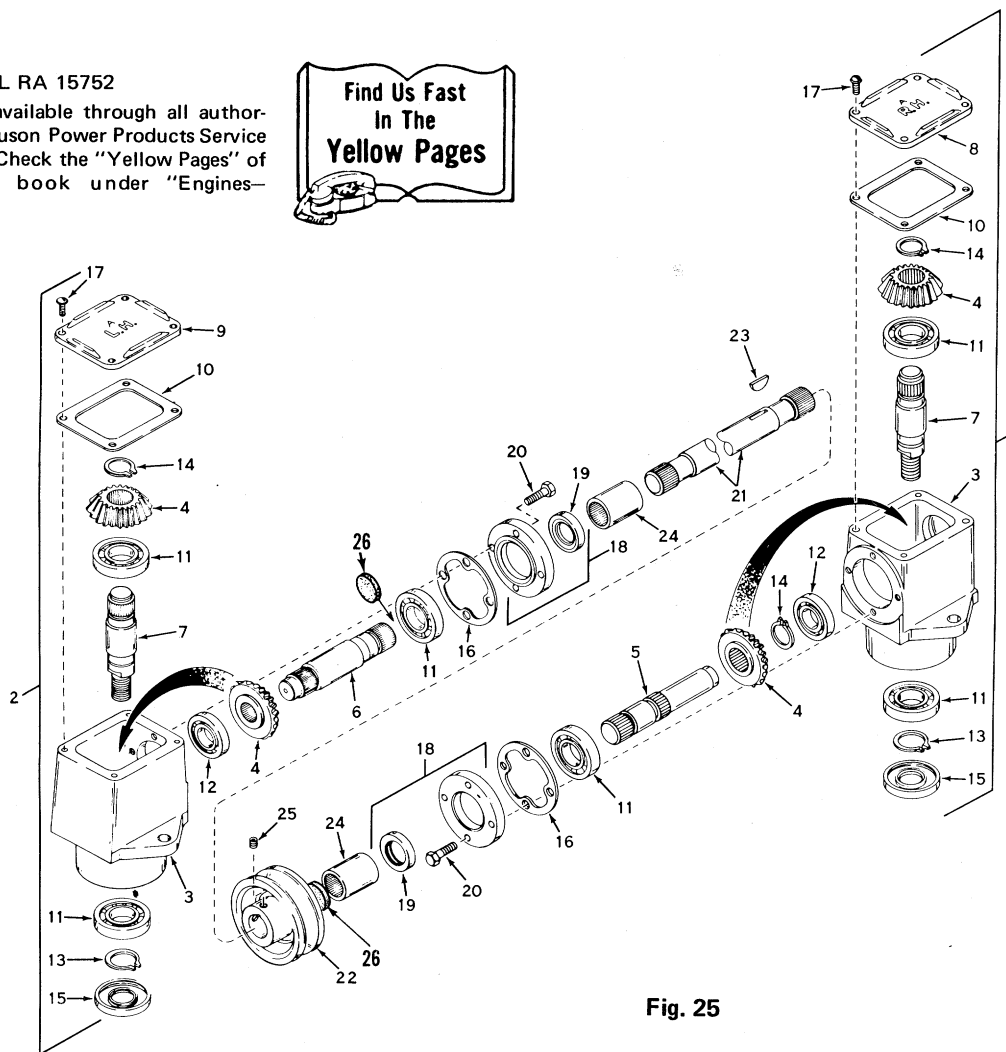


Fig. 25

## PARTS LIST FOR RIGHT ANGLE DRIVE MODEL NO. 717-126 (PEERLESS MODEL RA 15752)

Ref. No.	Part Number	PART NAME
1	794001	Head Assy., Right Hand (Incl. Nos. 3, 4, 5, 7, 8 and 10 thru 18)
2	794002	Head Assy., Left Hand (Incl. Nos. 3, 4, 6, 7, and 9 thru 18)
3	770026	Housing, Right Angle Drive
4	778046	Gear, Miter
5	776040	Shaft, Input Pinion
6	776041	Shaft, Input Pinion
7	776042	Shaft, Output
8	772034	Cover, Right Hand
9	772035	Cover, Left Hand
10	788028	Gasket, Cover
11	780034	Bearing, Ball
12	780024	Bearing, Ball
13	788019	Ring, Snap
14	788018	Ring, Snap
15	788029	Seal, Oil
16	788030	Gasket, Cap
17	792025	Screw, Rd. Hd. Self Tap, 10-24 x 1/2
18	786029	Cap & Seal Assy., Retainer (Incl. Nos. 19 & 20)
19	788031	Seal, Oil
20	792026	Screw, Hex Hd., 1/4-20 x 7/8
21	776043	Shaft, Input Connector
22	786037	Sheave
23	788020	Key, Woodruff, 3/16 x 3/4
24	786031	Coupling, Input Shaft
25	792027	Set Screw, Knurled Hd. Cup Pt., 5/16-24 x 1/4
26	1135-X 1	Felt Disc