Your New

Model No. 139-470

RIDING 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 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.

SAFETY RULES

Your rotary mower is a precision piece of power equipment, not a plaything. Therefore exercise extreme caution at all times.

1. Remove all sticks, stones wire and other hazardous items from lawn before mowing. Such items are dangerous to both the mower and individuals in the vicinity of the mower.
2. Always disconnect spark plug cable during repair or refueling operations.
3. Always start engine from side opposite discharge chute.
4. **NEVER** place hands or feet under mower or near discharge chute while engine is running.
5. Always stop engine when not cutting grass.
6. Do not fill gas tank while engine is running. Do not spill gasoline on hot engine.
7. Keep children and pets away from area at all times during mowing operation. Never allow mower to discharge grass toward any person.
8. Do not attempt to start engine while mower is resting in high grass.
9. **Check all nuts and bolts, particularly the blade bolts, for tightness. This is especially important during the initial operation period. Make this same check periodically thereafter.**

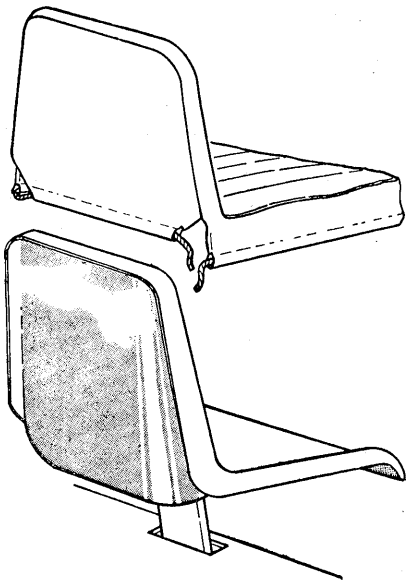
NOTE: Should excessive vibration develop, check your blade and crankshaft immediately. Do not operate mower with an unbalanced blade, a damaged blade or a damaged crankshaft.

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

FORM NO. 770-1892

ASSEMBLY INSTRUCTIONS

Add 2¾ pints of a high quality detergent oil (above 32° F use SAE 30W. Below 32° F use SAE low) to the crankcase and fill the gasoline tank with "regular" gasoline. The rider mower is shipped with all tires inflated to excessive pressure to protect the mower during shipment. It is important to reduce the pressure to 7-10 psi before use.



SEAT COVER

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

Assemble Steering Wheel (See Fig. 17)
Line up the front wheels so they are straight. Slide the steering wheel over the steering shaft and line up the hole in the steering wheel with the hole in the steering shaft. Insert the spirol pin and drive it in with a hammer.

KNOW YOUR MOWER

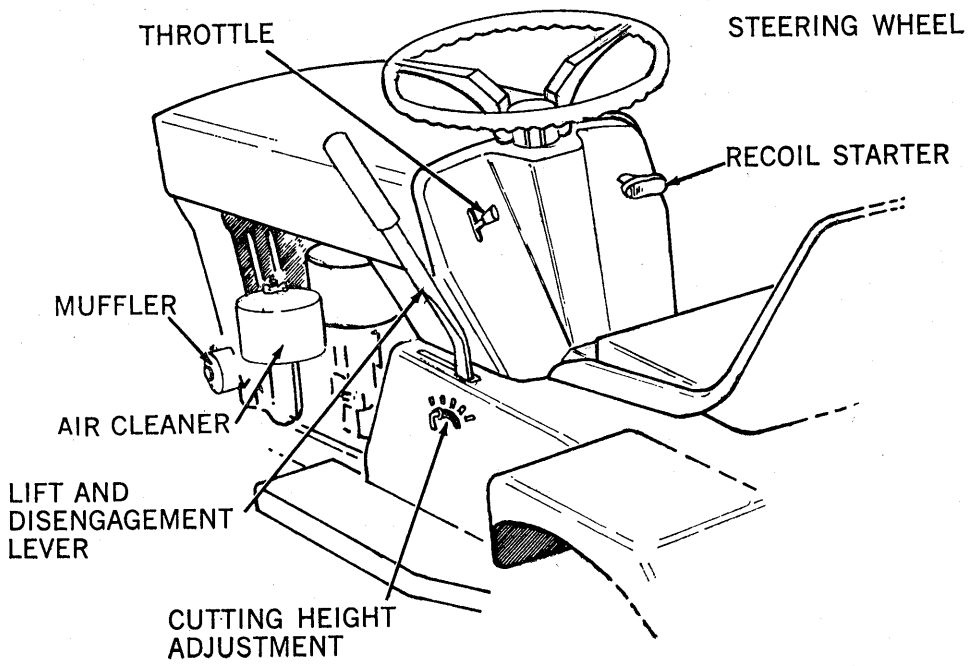


Figure 1. Left Side of Mower

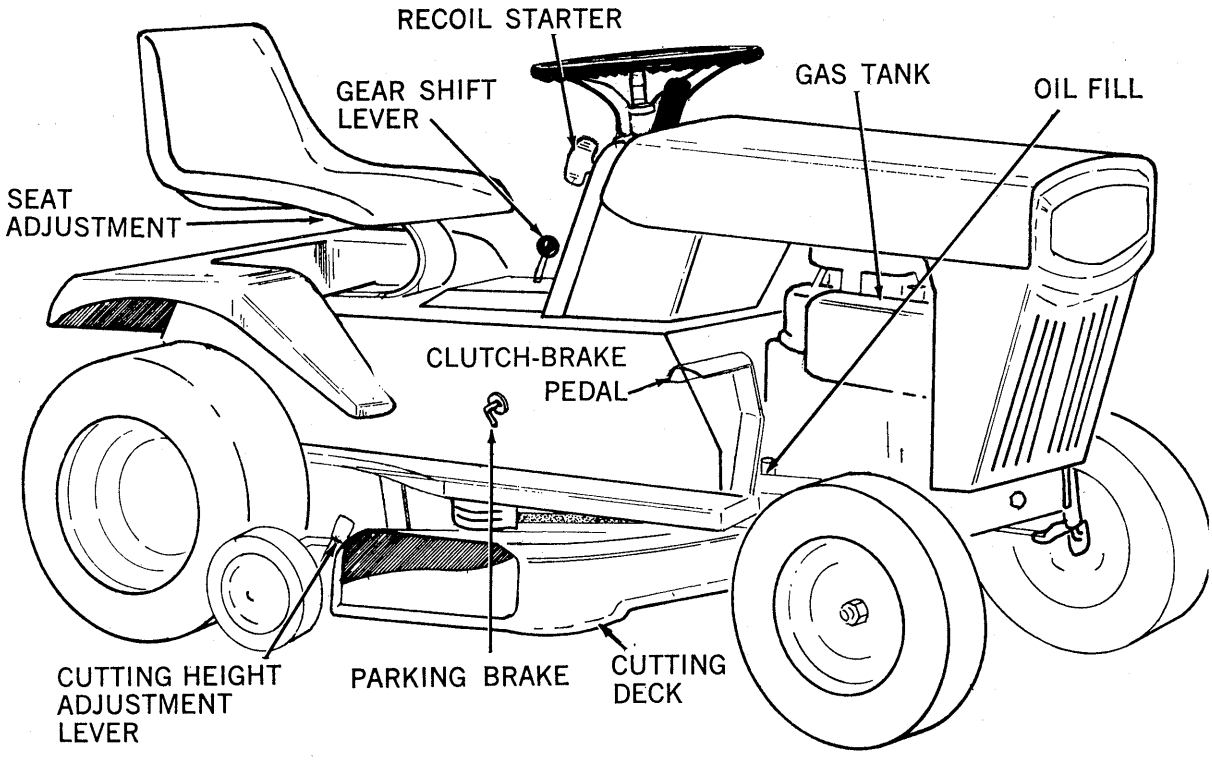


Figure 2. Right Side of Mower

This Owner's Manual should be read in its entirety before you operate your MTD Rider Mower. The more you know and understand about the machine and its operation, the better job it will do for you. While reading the manual, compare the illustrations with your mower to familiarize yourself with the locations of various controls, lubrication points, attachments, and adjustment features.

Study the operating instructions and safety precautions thoroughly to insure proper functioning of your mower and to prevent injury to yourself and others. Be sure to save this manual for future reference.

Figures 1 and 2 will aquaint you with the locations of the controls and major assemblies.

CLUTCH-BRAKE PEDAL — The combination clutch-brake pedal (see Figure 2), is operated with your right foot. Depress all the way to declutch and brake. The clutch mechanism is operated by a V-belt idler with a safety air cylinder. To engage the clutch RELEASE YOUR FOOT FROM THE PEDAL QUICKLY and let the air cylinder engage the clutch at exactly the right speed. The brake is on the rear wheels and is operated by means of a brake band that grips the drum on the rear axle when the clutch-brake pedal is depressed all the way.

PARKING BRAKE — The parking brake is located on the right hand side of the mower (see Fig. 2). To set the brake, depress the clutch-brake pedal as far as possible and turn the parking brake lever clockwise to the "LOCK" position (see Fig. 3) until it tightens and holds the clutch-brake pedal down. To release, turn the parking brake lever counter-clockwise one turn.

Figure 3. Parking Brake

CHOKE—The engine has a "choke-a-matic choke. Move the throttle control lever all the way down (see Fig. 4), to place it in the choke position. One lever operates the choke, regulates the engine speed, and stops the engine.

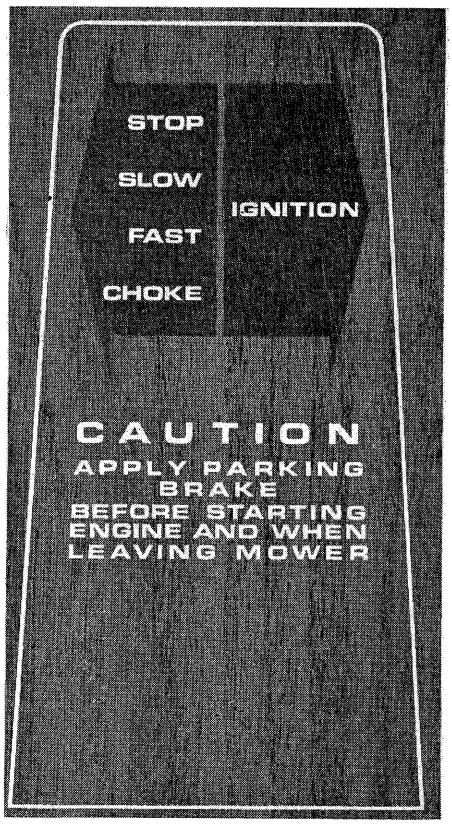


Figure 4. Choke Position on Throttle Control Lever

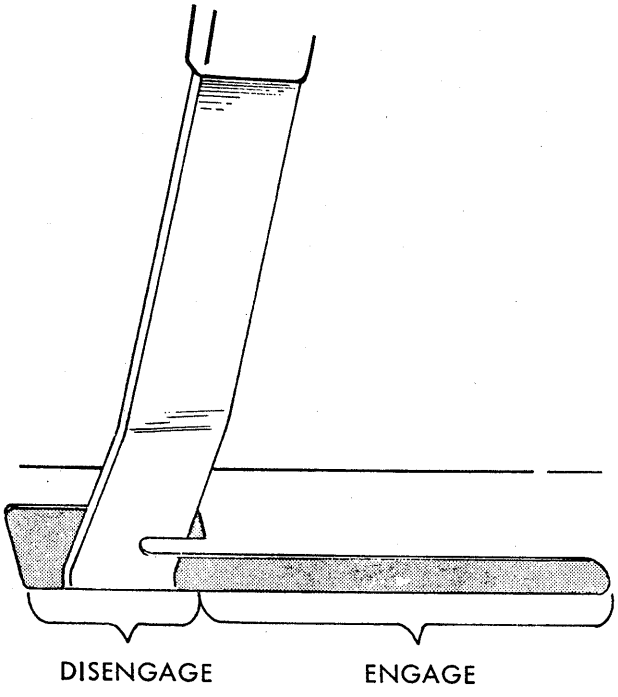


Figure 5. Lift and Disengagement Lever

LIFT AND DISENGAGEMENT LEVER—The lift and disengagement lever is used to raise and lower the mowing deck (see Fig. 5). When the lever is pulled to DISENGAGE position the blades WILL NOT revolve. When it is necessary to drive the mower over a small obstruction such as a clump of dirt or a root, place the lift and disengagement lever back in DISENGAGE position. This will raise the deck and the blades will automatically stop revolving.

GEAR SHIFT LEVER—The rider mower has three speeds forward and one in reverse (see Fig. 6).

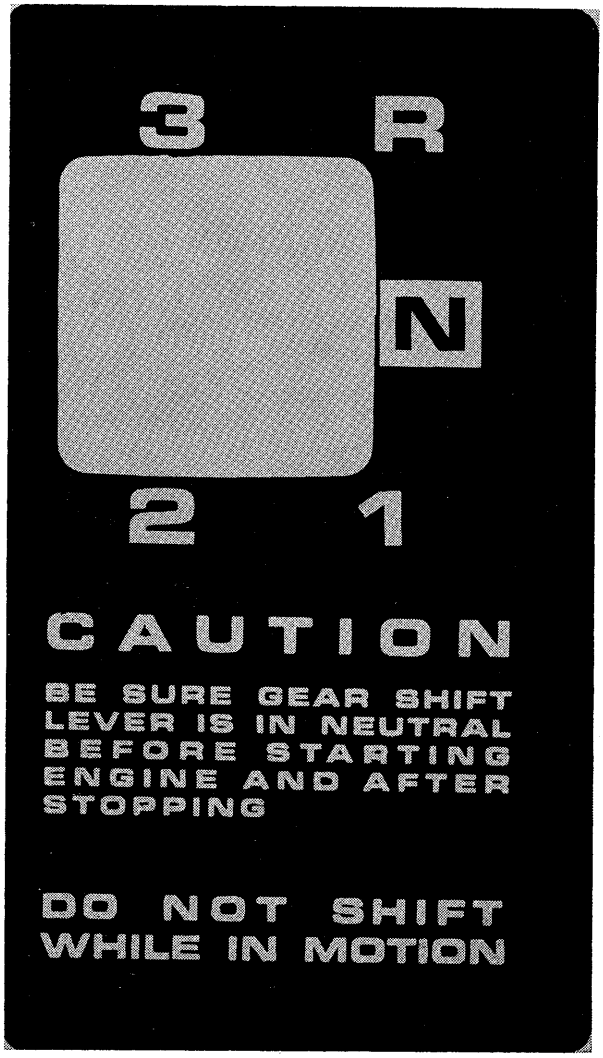


Figure 6. Gear Shift Positions

CAUTION

DO NOT SHIFT GEARS WHILE THE RIDER IS IN MOTION.

1st GEAR—For steep hills, mowing extra heavy grass, and holding back the mower on downgrades.

2nd GEAR—For normal grass-mowing range.

3rd GEAR—For high speed use normally to travel to and from the work area.

REVERSE GEAR—For backing up the rider mower.

NOTE

Depress the clutch - brake pedal completely when you shift gears. Do not shift gears while the mower is in motion.

FUEL SHUT-OFF VALUE—A fuel shut-off valve is located under the gasoline tank (see Fig. 7). Shut off the valve when the mower is being stored for a period of time. Turn the valve clockwise to shut off the fuel flow.

OPENING HOOD — Release airplane type latches on each side of the hood. The entire hood and grille pivots forward.

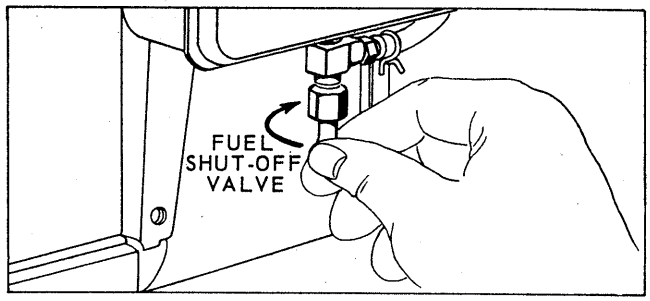


Figure 7. Fuel Shut-Off Valve

TOOL BOX—A tool box for storage of small garden tools is located under the hood adjacent to the dash panel.

SEAT—The seat is adjustable to four positions by removing the single hex nut under the seat spring, repositioning the seat, and tightening the nut.

DIFFERENTIAL—The rear axle differential allows one rear wheel to turn faster than another during turns. Differential action eliminates scuffing of the turf by the rear wheels and permits sharper and easier turning.

TIRE PRESSURE—
Front 7 to 10 psi
Rear 7 to 10 psi

Over-inflation may cause slippage of rear wheels. Under-inflation may cause excessive wear, inner tube damage, or an uneven cut.

KNOW HOW TO STOP YOUR MOWER

STOPPING ENGINE—Move the throttle control to STOP position (see Fig. 4).

STOPPING MOWER—Depress the clutch - brake pedal with your right foot. This declutches the engine as well as applies the brakes.

STOPPING BLADES FROM REVOLVING — With your left hand pull the lift lever back to DISENGAGE position (see Fig. 5). It can be held in this position by pulling it all the way to the rear and moving it to the left. This operation will stop the blades from rotating as well as raise the mowing deck. The left lever should be in this position when traveling to and from the work area.

NOTE

Disconnect spark plug wire when the mower is stopped. When stopping the mower for any length of time REMOVE THE SPARK PLUG.

STARTING INSTRUCTIONS

1. Be sure the crankcase is filled with oil as recommended in this manual and put regular gasoline in the fuel tank.
2. Be sure fuel shut-off valve is open.
3. Attach wire to spark plug and put lift lever in DISENGAGE position.
4. Put gear shift lever in neutral.
5. Depress clutch-brake pedal. It may be held in position by tightening the parking brake.
6. Move throttle control lever to START position.
7. While seated on the mower, or standing behind it, pull the starter rope with a quick steady motion with your right hand.
8. Slowly return the throttle control lever to the running position after the engine has started.

PUTTING RIDER MOWER IN MOTION

1. Advance the throttle control lever from ¾ to full throttle to prevent strain on the engine and to maintain the necessary speed of the engine to operate the cutting blades.
2. Depress the clutch-brake pedal completely and move the gear shift lever to an appropriate gear to match the workload.

NOTE

The ground speed of the mower is determined by the gear you select. Your throttle control lever should always be set from ¾ to full throttle when you are mowing grass. Do not shift gears while the mower is in motion.

3. Release your foot from the clutch-brake pedal quickly and let the air cylinder engage the clutch at the exact right speed. This will put the rider mower in motion.
4. To stop the engine, move the throttle control lever to STOP position. The ignition is automatically grounded. Keep the throttle control in STOP position at all times when the rider mower is not in use.

NOTE

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 (5) hours of operation. This allows for the removal from the crankcase of any impurities which may have accumulated during the break-in period.

CHECKS TO PERFORM IF MOWER WILL NOT START

1. Be sure that there is gasoline in the gasoline tank.
2. Be sure the spark plug wire is connected.
3. Be sure the fuel valve is open.
4. Be sure the choke valve is shutting properly. See adjustment section.
5. Be sure air filter is clean. See maintenance.
6. Clean out chaff and dirt which affects the cooling of the engine. See maintenance section.
7. Be sure spark plug is clean. To insure starting, the spark plug should be changed once a year.
8. Your carburetor may require adjustment. Adjust it as outlined in adjustment section.
9. Check for flooding. Remove spark plug. If wet, plug should be dried.
10. Check magneto. Hold spark plug wire 3/16 inch from engine. Spark should jump from the terminal to the engine when cranked. If no spark occurs, have the magneto tested.

ADJUSTMENTS

CARBURETOR ADJUSTMENTS

Carburetors are adjusted at the factory and normally do not need adjustment unless they have been disassembled.

INITIAL ADJUSTMENT AFTER RE-ASSEMBLY

Turn needle valve clockwise until it just closes.

CAUTION: Valve may be damaged by turning it in too far. Now open needle valve 1⅛ turns counterclockwise. Close idle valve in same manner and open 1⅛ turns. This initial adjustment will permit the engine to be started and warmed up prior to final adjustment.

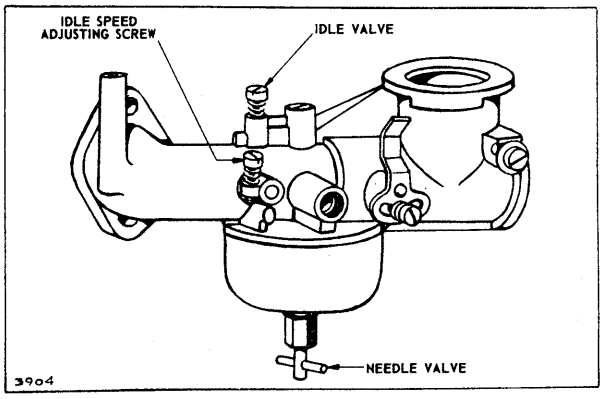


Figure 8.

FINAL ADJUSTMENT

Turn needle valve in until engine misses (lean mixture). Then turn it out past a smooth operating point until engine runs unevenly (rich mixture). Now turn needle valve to the mid-point between rich and lean so the engine runs smoothly.

Hold throttle at idle position and set idle speed adjusting screw until fast idle is obtained (1750 RPM). Hold throttle in idle position and turn idle valve in (lean) and out (rich) until engine idles smoothly. Then reset idle speed adjusting screw so that engine idles at 1750 RPM. Release throttle—engine should accelerate without hesitation or sputtering. If engine does not accelerate properly, the carburetor should be re-adjusted to a slightly richer mixture.

CHOKE-A-MATIC CARBURETOR CONTROLS

(See Fig. 9)

Proper choke and stop switch operation is dependent upon proper adjustment of remote controls on the powered equipment.

To Check Operation of Choke-A-Matic Controls

A. Move remote control lever to "Choke" position. The carburetor choke should be closed.

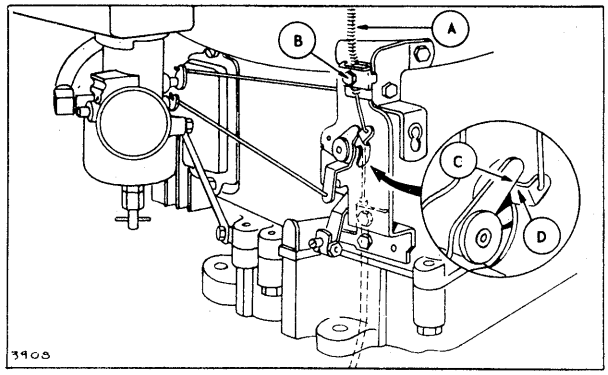


Figure 9.

B. Move remote control to "Stop" position. Governor control lever should make full contact with stop switch.

To Adjust

Place remote control lever on equipment in FAST (high speed) position. Loosen control casing clamp screw "B". Move control casing "A" and wire until lever "D" touches choke operating link at "C". Tighten casing clamp screw "B".

CUTTING HEIGHT—Your rider mower is designed to mow grass from 1½ to 3⅝ inches high. To disengage the power to the blades move the lift and disengagament lever to the DISENGAGE position. The blades will not rotate when the lift lever is in this position. However, ALWAYS shut the engine off and disconnect the spark plug wire when cleaning grass from the discharge chute.

There are two ways to set the mowing height on your rider mower. One setting is for rough mowing and the other is for normal mowing.

NORMAL MOWING—Set your mowing height with the individual wheel adjusters located on the deck (see Fig. 10). Move the individual height adjustment levers forward to lower the cut of grass. Move the height adjustment handle all the way to LOW CUT position. Place the lift and disengagement lever in FULL ENGAGE position. This will allow the deck to "float" and follow the contour of the ground.

ROUGH TERRAIN MOWING—With the lift and disengagement lever in DISENGAGE position, unscrew the height adjustment handle until it can be moved to the desired mowing height (see Fig. 11) and tighten it. Set the individual wheel adjusters so that the wheels clear the ground by ¼ inch to prevent scalping.

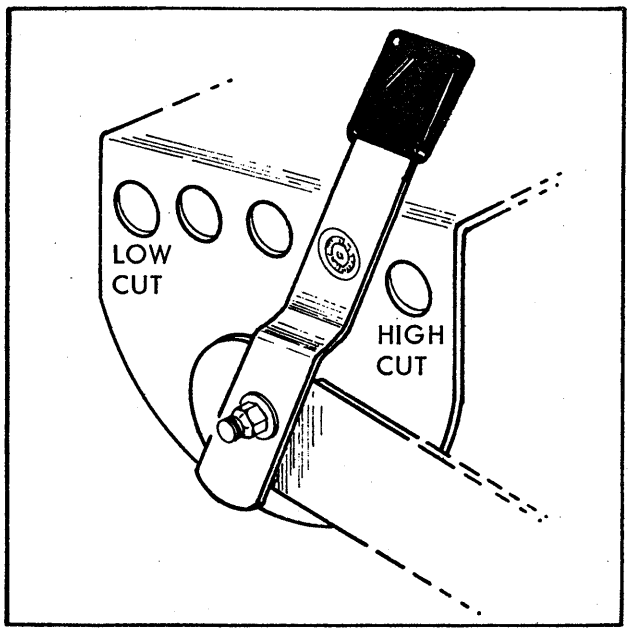


Figure 10. Mowing Height Adjustment

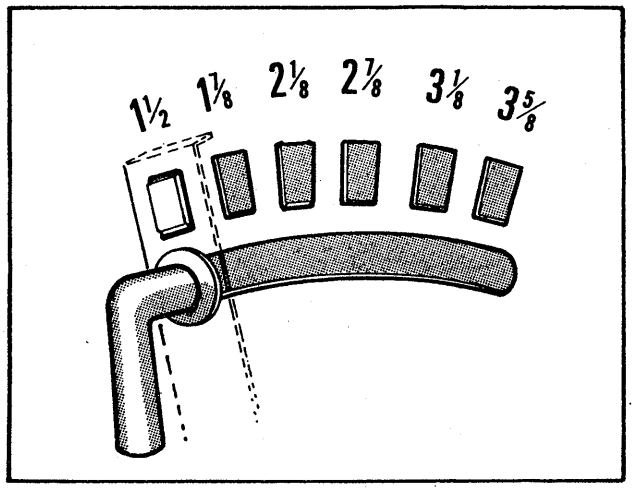


Figure 11. Lift Lever Adjustment

CHAIN—The spring-loaded idlers take up any slack in the chain and require no adjustments.

SEAT—The seat is adjustable to four positions by removing the single hex nut under the seat spring, repositioning the seat, and tighening the nut.

TIE ROD ADJUSTMENT—The front wheels should toe-in ⅛ inch. To adjust the toe-in, loosen the hex jam nut, remove the locknut, drop the tie rod end out of the hole in the wheel bracket, and screw the tie rod end in or out to make the adjustment (see Fig. 12). The distance "B" must be less than "A" by ⅛ inch (see Fig. 13).

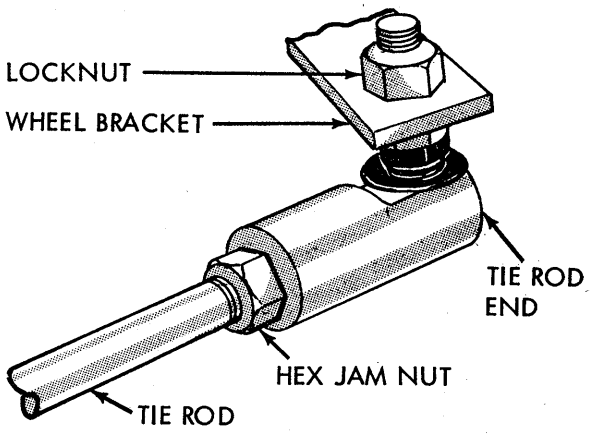


Figure 12. Tie Rod Adjustment

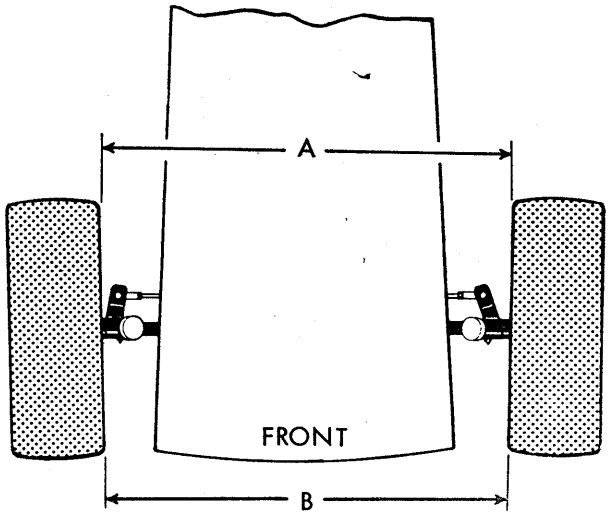


Figure 13. Tie Rod Adjustment Check

BELT ADJUSTMENT—(Refer to "Mowing Unit—Exploded View," Fig. 19). If, after 50 hours or more of operation, the blade drive belt (Ref. No. 128) slips in the highest mowing position while mowing heavy grass, or if the idler bracket assembly (Ref. No. 17) touches the mower frame when it is engaged, make the necessary belt adjustments as follows: loosen the four hex head cap screws (Ref. No. 105) and hex nuts (Ref. No. 106); loosen the bolt that holds the engine bracket (Ref. No. 146) to the engine; move the engine forward as far as it will go; and then tighten all bolts and nuts. If further adjustment is necessary, replace the belts and move the engine towards the rear of the mower as far as it will go. It is recommended for best operation, that both belts (Ref. No. 128 and 129) be replaced at the same time.

BRAKE ADJUSTMENT—To take up the adjustment on the brake, tighten the hex nut on the brake lining with a socket wrench (see Fig. 14). This nut can be adjusted through the slot in the back panel of the rider mower. Turn the nut one revolution and check the brakes. Repeat as necessary to have proper braking power.

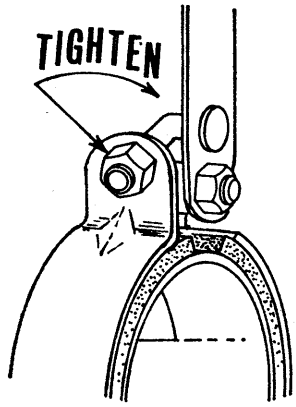


Figure 14. Brake Adjustment

MAINTENANCE

BEARINGS—Lifetime graph oil front wheel bearings and rear axle spherical bearings require little lubrication. However, a light film of oil applied to these bearings will reduce normal friction. Maintain a light film of oil on the chain at all times, except where mower is used under extremely dusty conditions. Lubricate all other moving parts with light oil after every 25 hours of operation. Bearings in the clutch idler and the blade spindles are permanently sealed and require no lubrication.

TRANSMISSION—The transmission is filled at the factory and requires no further lubrication.

BLADES—Sharp and balanced blades are essential for efficient mowing and long mower and engine life. When sharpening blades, file equal amounts of metal from each side. The blades should be balanced before they are reinstalled. An unbalanced blade will cause excessive vibration and undue wear on the mower and the engine. When reassembling, all parts must be installed in their proper order and fastened securely.

NOTE

All set screws are held in place with a bolt and nut sealant (such as Loctite). To remove set screws, heat the set screw to approximately 400° F with a butane or similar torch and then remove with an Allen wrench. When replacing the set screws, it is not necessary to remove all the old traces of the sealant; however, they must be free of grease and oil before applying more sealant. Gasoline will clean these parts.

MOWER DECK—The underside of the mower deck should be cleaned after each period of use as grass clippings, leaves, dirt, and other matter will accumulate. This accumulation of grass clippings, etc., is undesirable as it will invite rust and corrosion and may cause an uneven discharge of grass clippings at the next mowing.

The deck may be cleaned by tilting the mower on its rear wheels until the seat supports the entire unit. Scrape clean with a suitable tool or by washing with a stream of water from a garden hose. Be sure to disconnect the spark plug wire and ground it while performing this maintenance.

CAUTION

Do not direct the stream of water at a hot engine as damage to the engine may result.

Remove spark plug wire and ground before attempting any adjustments on the mower.

CHANGING BELTS—To change either belt, tip the mower on its rear wheels until it rests on the seat. Disconnect and ground the spark plug wire.

Changing Mowing Unit Belt:

1. Place the lift and disengagement lever in ENGAGE position.
2. Remove the belt guard on the double groove engine pulley by removing the two hex nuts (see Fig. 15).
3. Remove the belt guards on the two blade spindle pulleys on the deck by removing two hex nuts.
4. Remove the cotter hair pins and washers from the four FRONT linkage arms.
5. Place the lift and disengagement lever in DISENGAGE position and remove the belt.
6. Reassemble with the new belt.

Changing Transmission Drive Belt:

1. Place the lift and disengagement lever in ENGAGE position.
2. Remove the belt guard on the double groove engine pulley by removing the two hex nuts (see Fig. 15).
3. Place the lift and disengagement lever in DISENGAGE position, and remove the mowing unit belt from the engine pulley.
4. Remove the cotter hair pins and washers from the four FRONT linkage arms.
5. Remove the steering rod from the wheel bracket by removing the hex nut.
6. Remove the "E" ring and set screw on the transmission pulley, and pull the pulley out enough for the belt to be removed.
7. Remove the belt.
8. Reassemble with the new belt.

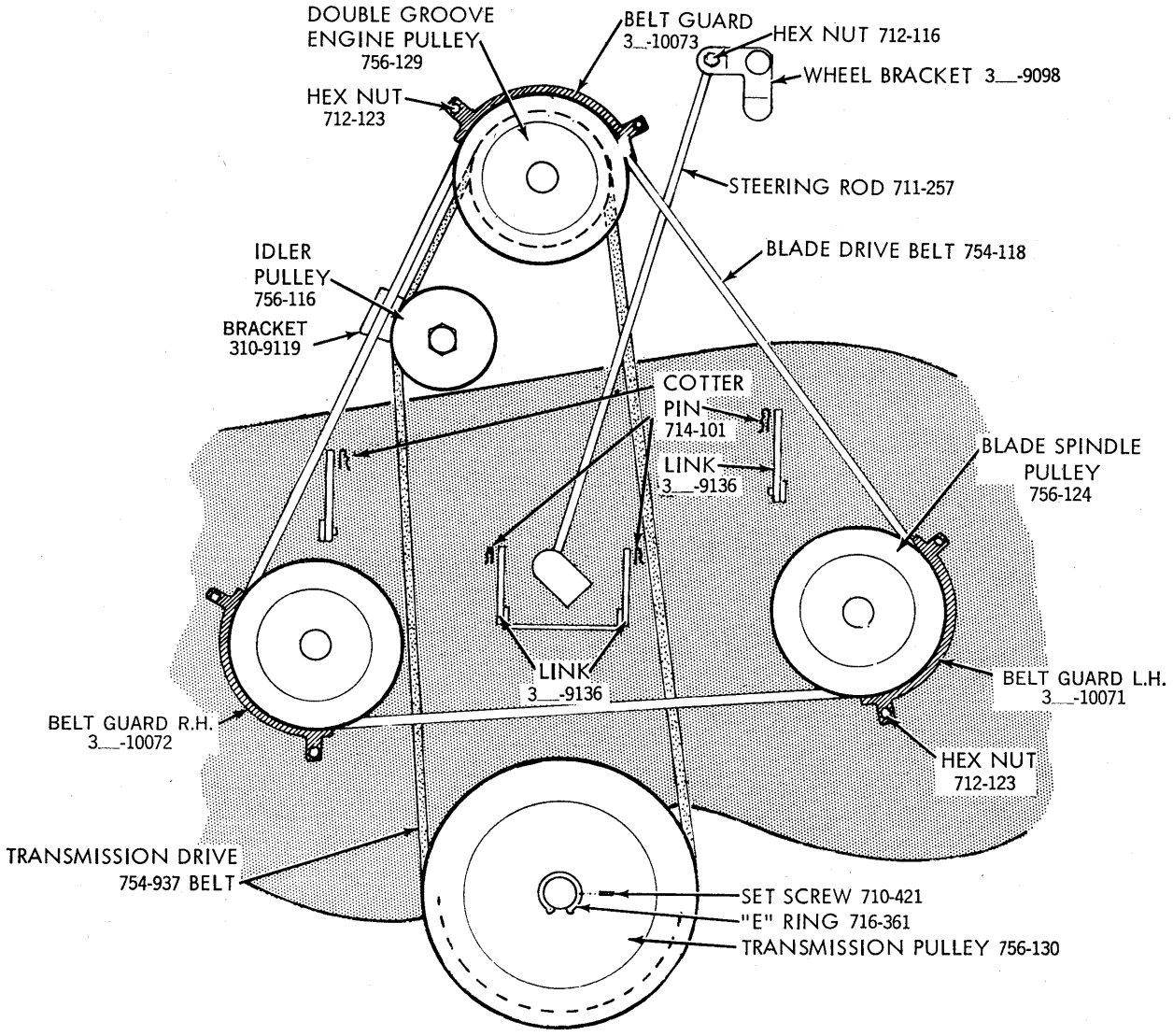


Figure 15. Bottom View of Rider Mower

REMOVING AND SHARPENING BLADES — Remove the bolt (see Fig. 16) and lockwasher. Pull the blade spindle. The adapter can be removed by removing both the bolt and the nut.

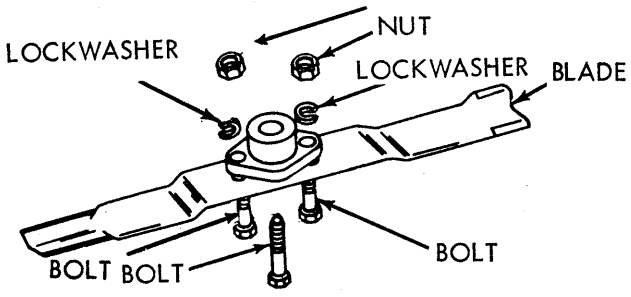


Figure 16. Blade Removal

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

AIR CYLINDER ASSEMBLY (REF. TO FIG. 18)

The rubber grommet #136 has a .012 hole drilled in it to release the clutch engagement. If it becomes necessary to clean out this hole, use a piece of wire .012 or smaller. To lubricate, place two drops of oil in the air cylinder assembly #137 through the ⅛" diameter intake hole in the cylinder once each season.

OFF SEASON STORAGE

NOTE

Engines to be stored over 30 days should be completely drained of fuel to prevent gum deposits forming on essential carburetor parts, fuel filter, fuel lines, and tank.

1. Remove all fuel from tank. Run the engine until it stops from lack of fuel. The small amount of fuel that remains in the sump of the tank should then be removed by absorbing it with a clean, dry cloth.
2. While engine is still warm, drain oil from crankcase. Refill with fresh oil.
3. Remove spark plug, pour 1 ounce of SAE-30 oil into cylinder, and crank slowly to distribute oil. To prevent accidental starting, DO NOT replace the spark plug.
4. Clean dirt and chaff from cylinder, cylinder head fins, and blower housing.
5. Clean all grass from underside of deck.
6. Clean the air filter.
7. Place blocks under frame of mower so that the wheels are off the ground.
8. Cover all bare metal parts, such as the mowing edge of the blades, with grease to prevent rusting.
9. Cover the mower with a tarpaulin, or other protective covering.

139-470 RIDING MOWER

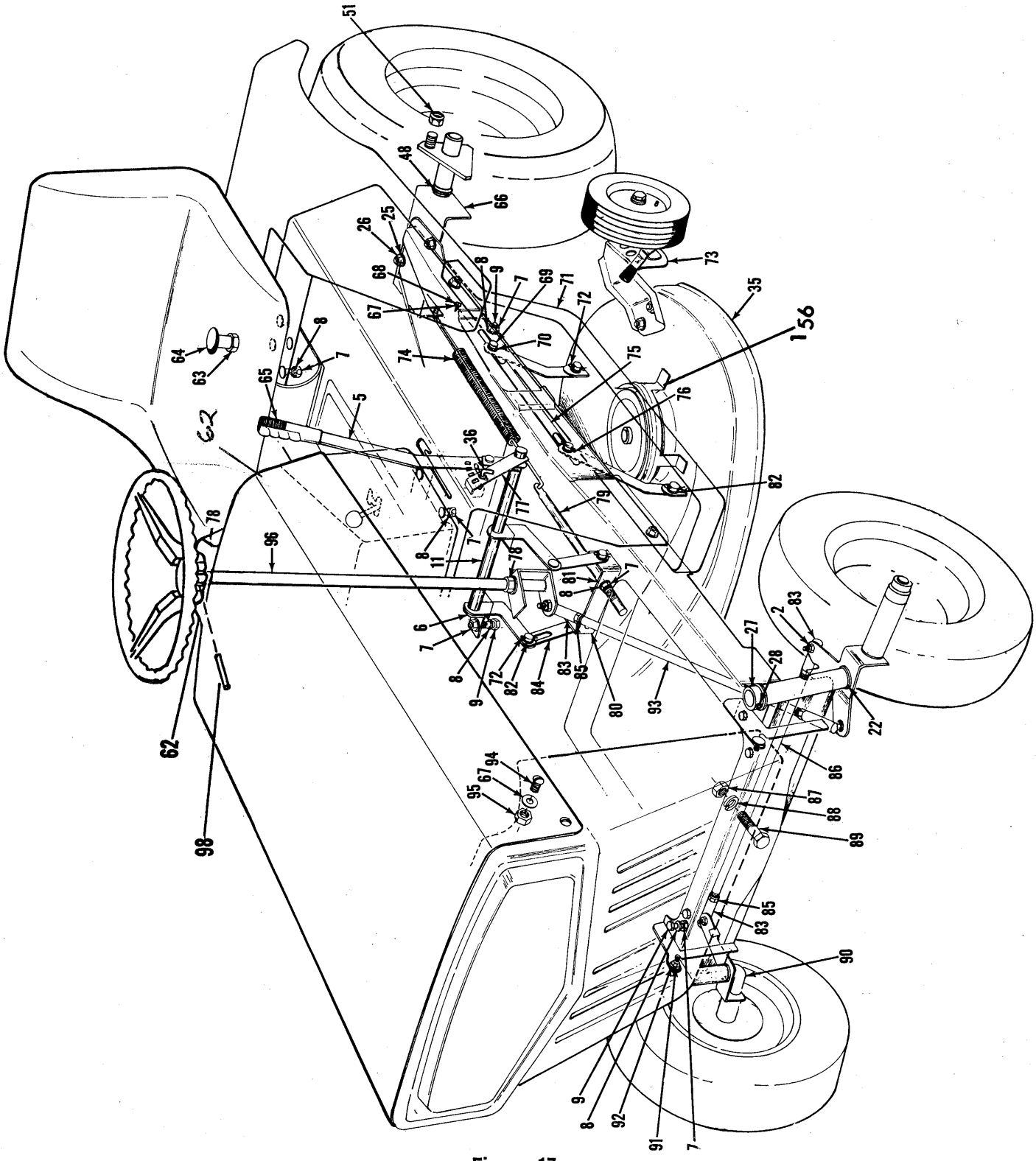


Figure 17.

When ordering parts give the following information:

1. Model number
2. Part number
3. Part name
4. Color of part

139-470 RIDING MOWER

723-225
LAS CAULE

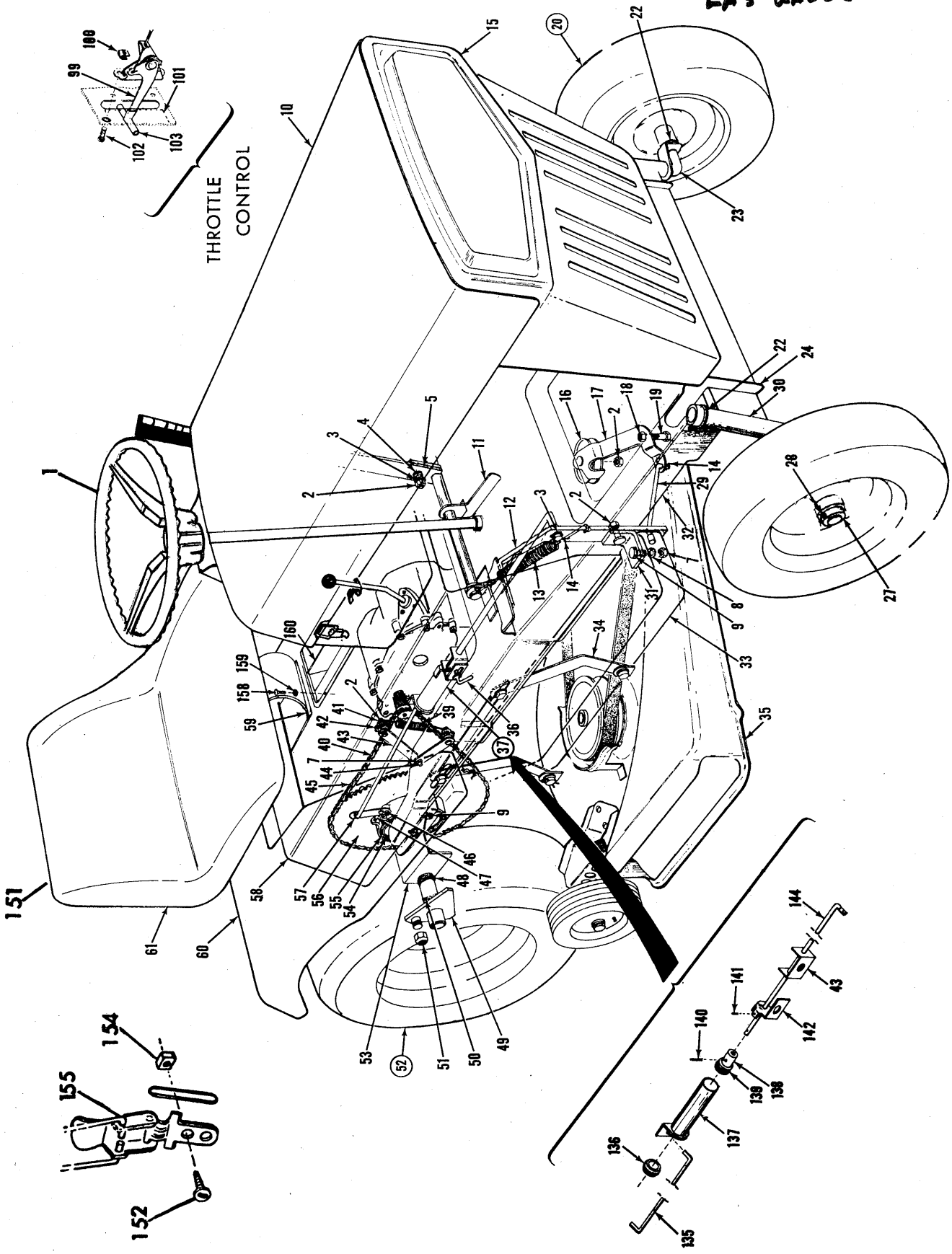


Figure 18.

139-470 RIDING MOWER

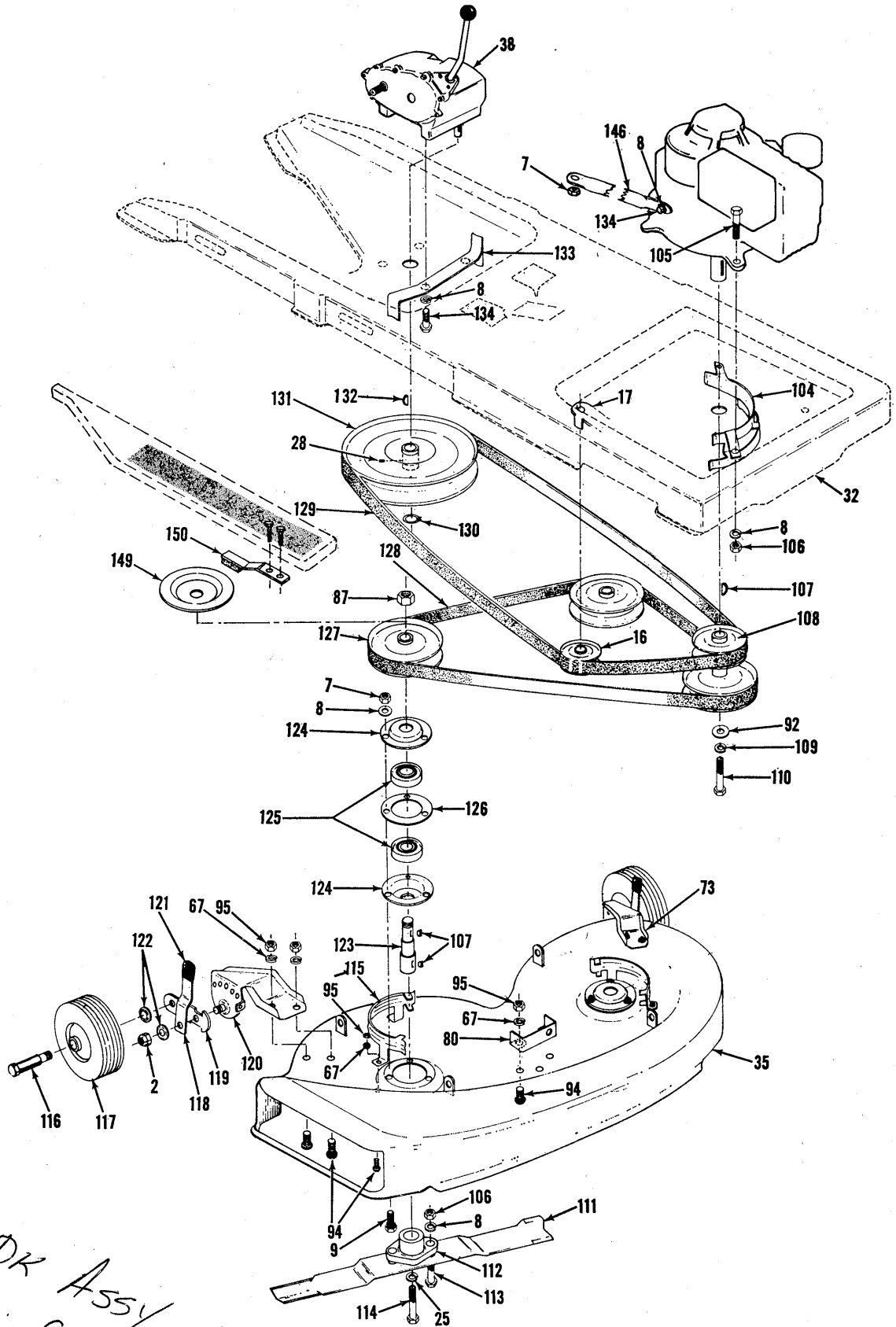
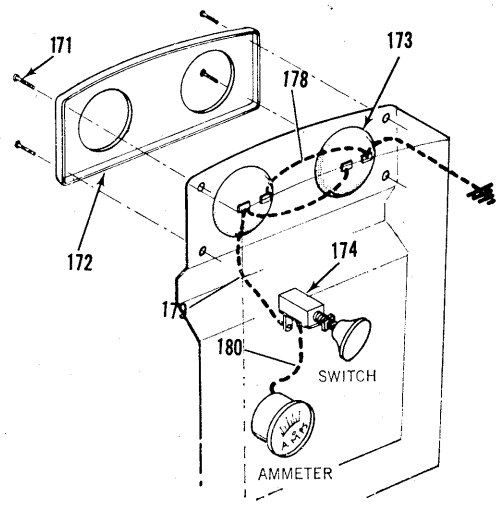
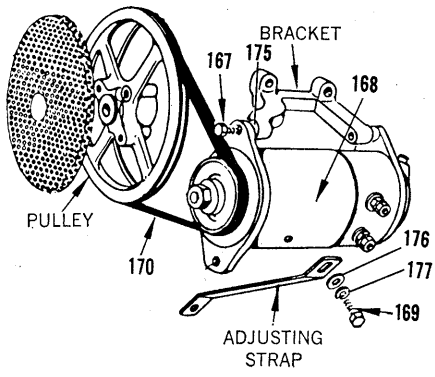
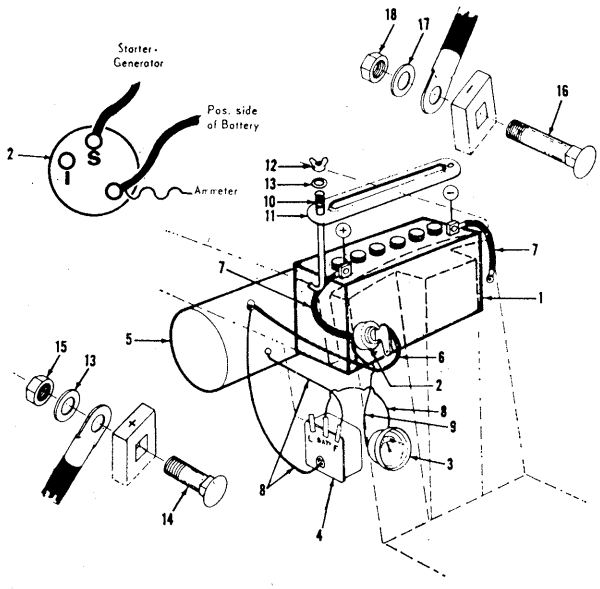


Figure 19.

DK Assy
9902 Comp.







Ref. No.	Part No.	Description
1	725-117	Battery - Willard Model No. HDDLM9L 7-3/4 x 5-5/32 x 7-11/32" 32 amp hrs.
2	725-118	Switch - Cole Herse 95511B
3	725-119	Ammeter - Stewart Warner D-357W
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	711-122	Battery Hold down rod
11	321-8821	Battery Hold down
12	712-113	Wing nuts
13	736-1[illegible]	Spring lockwasher 5/16"
14	710-260	Carriage bolt, 5/16-18 x 5/7 Lg.
15	712-267	Hex Nut 5/16 - 18 Thd.
16	710-134	Carriage Bolt 1/4-20 x 5/8 Lg.
17	736-329	Spring Lockwasher 1/4"
18	712-187	Hex Nut 1/4-20 Thd.

INSTRUCTIONS FOR ACTIVATING DRY CHARGED BATTERIES

1. Place battery to be filled on bench or workbench. Never activate battery in tractor. 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 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.

CAUTION

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.

PARTS LIST — RIDER MOWER MODEL NO. 139-470

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST.

1. The PART NUMBER
2. The PART NAME
3. MODEL NUMBER

DO NOT use Reference Numbers when ordering Repair Parts, always use Part Numbers.

Your lawn mower is right hand (R.H.) or left hand (L.H.) as you ride.

REF. NO.	PART NO.	DESCRIPTION
1	723-204	Steering Wheel Assembly
2	712-116	Hex Elastic Stopnut 3/8-24 thd.
3	736-300	Flat Washer*
4	732-168	Compression Spring
5	310-9134	Lift Handle
6	394-9128	Height Adjustment Mounting Bracket
7	712-267	Hex Nut 5/16-18 thd.*
8	736-119	Spring Lockwasher 5/16 Screw*
9	710-322	Sims Hex Head Cap Screw 5/16-18 x 1" lg.*
10	31E-9992	Hood Front
11	310-9102	Lift Handle Assembly
12	394-9114	Foot Pedal Assembly
13	732-182	Extension Spring
14	714-507	Cotter Pin 3/4 lg.*
15	371-9989	Grille
16	756-116	Idler
17	310-9167	Idler Bracket Assembly
18	712-181	Hex Nut Top Lock 3/8-16 thd.*
19	711-110	Shoulder Bolt 3/8-16 thd.
20	501-10109	Wheel Ass'y Complete
	734-298	Pneu Tire—Tubeless
22	748-855	Flange Bearing
23	394-9098	Axle Assembly—Front L.H.
24	394-9968	Front Pivot Bracket
27	711-169	Collar
28	710-421	Allen Set Screw 5/16-18 x 1/4 lg.*
29	310-9149	Clutch Rod
30	394-9093	Pivot Bar Assembly

REF. NO.	PART NO.	DESCRIPTION
31	394-9122	Foot Pedal Pivot Bracket Assembly
32	394-9807	Frame
33	394-9324	Foot Rest, R.H.
34	394-9077	Deck Link Assembly
35	394-9070	Deck Assembly
36	710-309	Adjusting Screw
37	310-9142	Air Cylinder Assembly Complete—See detail drawing for parts.
38	717-132	Transmission—3 Speed
39	732-169	Extension Spring
40	713-723	Master Link #40 Chain only
41	712-195	Palnut
42	723-168	Sprocket Idler
43	310-9812	Sprocket Idler Bracket Assembly
44	711-105	Shoulder Bolt
45	713-113	Roller Chain w/master link #40 x 39 lg.
46	712-105	Hex Center Locknut 1/4-20 thd.*
47	711-152	Adjusting Link
48	748-151	Flange Bearing
49	312-9154	Hub Assembly—Rear
50	715-107	Spiral Pin
51	712-193	Cone Nuts
52	502-9262	Wheel Assembly Rear—Complete
	312-9262	Rim
	734-252	Tire only 16.00 x 6.50
	734-253	Tube only 16.00 x 6.50
53	394-9124	Bearing Bracket Assembly R.H.

*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.

PARTS LIST — RIDER MOWER MODEL NO. 139-470

REF. NO.	NO. PART	DESCRIPTION
54	310-9055	Brake Cup
55	901-9116	Brake Band—Complete
56	310-9814	Sprocket
57	310-9135	Pivot Lever
58	394-9632	Upper Frame Assembly
59	723-136	Seat Spring
60	31E-9132	Fender Assembly
61	312-8535	Seat Assembly
62	394-9986	Dash Panel Assembly 394-10035
63	712-384	Hex Nut ½ x 13*
64	710-385	Carriage Bolt ½-13 x 1 lg.
65	305-8118	Grip
66	394-9126	Bearing Bracket Ass'y L.H.
67	736-329	Spring Lockwasher ¼ Screw*
68	710-179	Hex Head Thd. Cut Screen ¼-20 x ½ lg.*
69	748-152	Pin
70	736-860	Flat Washer
71	394-9325	Foot Rest L.H.
72	714-101	Hairpin Cotter
73	394-9081	Wheel Bracket Ass'y L.H.
74	732-191	Extension Spring
75	394-9131	Connecting Rod
76	714-115	Cotter Pin
77	394-9100	Adjustment Bracket Assembly
78	748-227	Flange Bearing
79	310-9139	Spring Adjusting Rod
80	394-9073	Deck Bracket Assembly
81	736-107	Flat Washer
82	736-160	Flat Washer
83	723-156	Ball Joint
84	394-9136	Link Slotted
85	712-711	Hex Jam Nut ⅜-24 thd.*
86	711-256	Tie Rod
87	712-923	Locknut ⅝-18 thd.*
88	736-158	Spring Lockwasher—⅝*
89	710-312	Hex Head Cap Screw ⅝-18 x 1.3 lg.
90	394-9095	Axle Assembly Front R.H.
91	712-430	Elastic Stopnut ⅜-16 thd.
92	736-133	Flat Washer
93	711-257	Steering Rod

REF. NO.	PART NO.	DESCRIPTION
94	710-286	Truss Head Mach. Scr. ¼-20 x ¼ lg.*
95	712-287	Hex Nut ¼-20 thd.*
96	394-9993	Steering Shaft
97	736-156	Flat Washer
98	715-121	Spiral Pin
99	746-127	Control Complete
100	712-147	Speed Nut
101	775-1825	Control Label
102	710-473	Truss Head Mach. Scr. 10-24 x ½ lg.
103	722-111	Knob only
104	394-10073	Engine 2-Step Belt Guard
105	710-442	Hex Head Cap Screw 5/16-24 x 1½ lg.*
106	712-123	Hex Nut 5/16-24 thd.*
107	714-365	Key HiPro #505
108	756-129	Two-Step Engine Pulley
109	736-171	Spring Lockwasher 7/16*
110	710-191	Hex Head Cap Screw 3/8-24 x 1.75 Lg
111	394-9150	Blade—15" (2 Reqd.)
112	748-100	Blade Adapter
113	710-117	Hex Head Cap Screw 5/16-24 x 1 lg.* Heat Treated
114	710-113	Hex Head Cap Screw ⅜-24 x 1 ⅝ lg.* Heat Treated
115	394-10072	Belt Guard—Blade Spindle R.H.
116	738-119	Axle Bolt—Cutting Unit
117	734-225	Wheel Assembly
118	310-9008	Spring Lever Assembly
119	310-7492	Wheel Pivot Bar
120	394-9079	Wheel Bracket Assembly R.H.
121	305-7520	Knob-Red-Height Adjuster
122	736-105	Belleville Washer
123	711-255	Blade Spindle
124	310-8253	Housing
125	741-919	Ball Bearing
126	310-9103	Spacer
127	310-9956	Pulley 4.75" dia.
128	754-118	"V"-Belt 21/32 x 63 lg. (Blade Drive Belt)

*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.

PARTS LIST — RIDER MOWER MODEL NO. 139-470

REF. NO.	PART NO.	DESCRIPTION
129	754-937	"V"-Belt 21/32x59 lg. (Trans. Drive Belt)
130	716-361	Snap Ring-Truarc 5101—5/8 Dia.
131	756-130	Pulley
132	714-314	Key Hi Pro #506
133	394-9811	Belt Guard—Transmission
134	710-259	Hex Head Cap Screw 5/16-18 x 5/8 lg.*
135	310-9148	Brake Rod Rear#
136	735-105	Grommet#
137	310-9143	Cylinder Assembly#
138	748-153	Piston#
139	735-103	"O-"Ring#
140	715-248	Roll Pin 3/16 x 3/4 lg.#
141	715-106	Spiral Pin#
142	310-9146	Cylinder Bracket#
143	310-9140	Parking Brake Bracket#
144	310-9147	Brake Rod Front#
145	901-9694	Differential—See Detail Drawing
146	312-9159	Engine Bracket
147	736-174	Spring Washer 5/8 ID
	775-1366	Label—Shifting Pattern Fig. 6
	723-167	Foot Pad (not shown)
	775-1129	Label — Parking Brake Fig. 3
149	310-9322	Brake Disc

REF. NO.	PART NO.	DESCRIPTION
150	310-9326	Brake Shoe
151	723-203	Seat Cover
152	710-132	Rd Hd Mach Scr #8-32x3/8 lg*
153	712-142	Hex Nut 8-32 thd*
154	736-168	Ext Lockwasher #8 Scr* (Not shown)
155	723-209	Head Catch
156	394-10071	Belt Guard—Blade Spindle L.H.
158	710-883	Rd. Hd. Mach. Scr. 1/4-20 x 1/2 lg.*
159	736-498	Lockwasher 1/4"*
160	394-9808	Upper Frame Cover Assembly
167	710-407	NNCS 5/16-15x1 3/4 lg—Heat Treated
168	725-143	Starter-Generator
169	710-408	NNCS 5/16-18x3/4 lg—Heat Treated
170	754-134	V Belt 3/8x33 1/2 lg
171	710-346	Oval Hd Scr 1/4-20x1 1/2 lg
172	31E-9984	Head Lamp Bezel
173	725-131	Light Switch
174	725-133	Headlight
175	712-267	Hex Nut 5/16-18 thd*
176	736-107	Flat Washer 21/64x5/8x1/16*
177	736-119	Spring Lockwasher 5/16 Scr*
178	725-142	Wire 5 1/2 lg
179	725-141	Wire 32 1/4
180	725-136	Wire 7 1/4 lg
181	723-211	CASTANA + CAP
182	723-213	VALVE
183	723-210	HOSE 6 1/2
184	723 178	HOSE 8 1/2
185	723-154	FILTER
186	723-157	CLAMP

#Part of Air Cylinder Assembly - Complete 310-9142

*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.

**Your riding mower may have either tube or tubeless tires. Consult the chart below for ordering service parts.

When ordering service parts include all the information on the side wall of the tire such as the size and brand name.

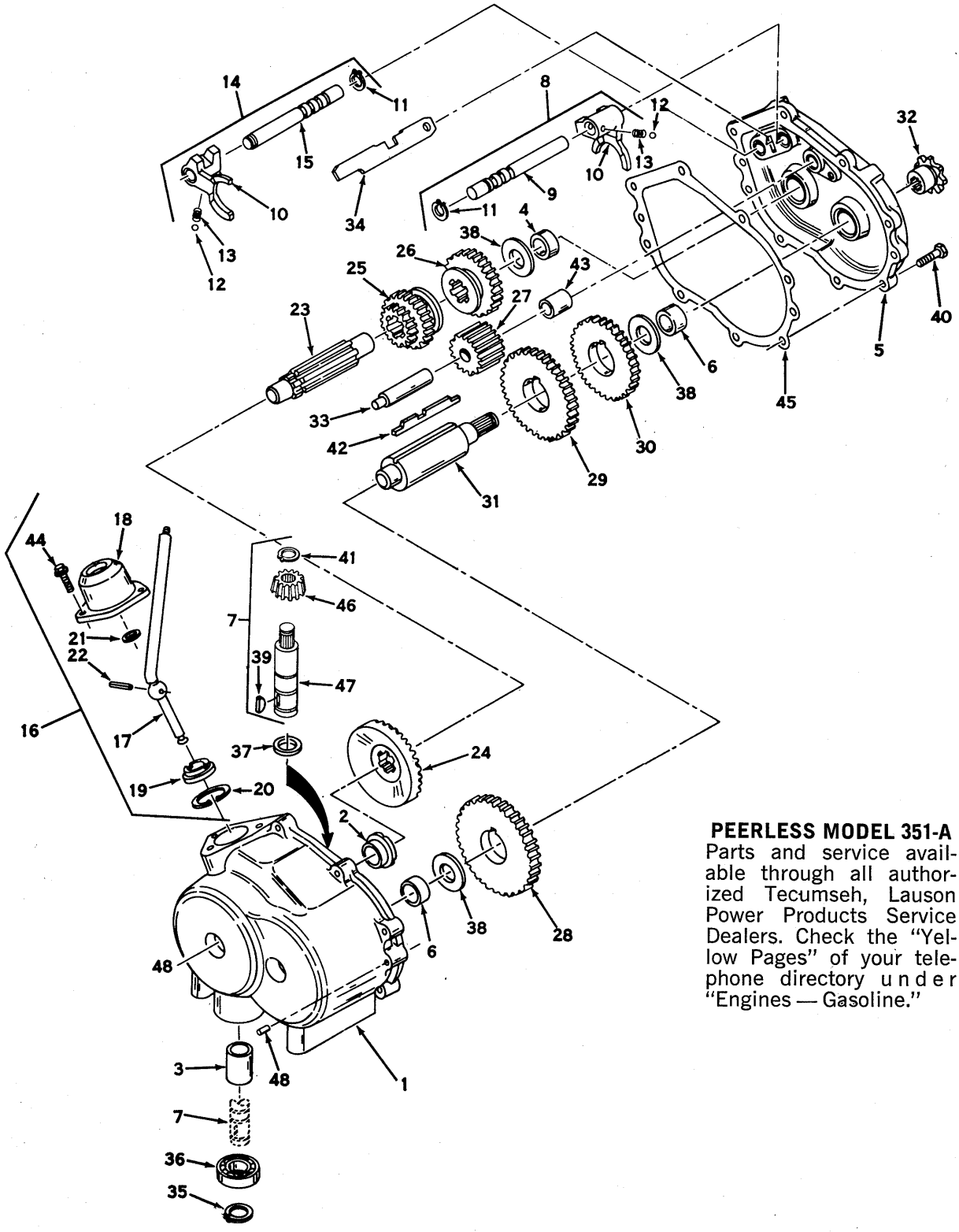
FRONT

Tube Type		Tubeless	
501-8780	Wheel Assembly Complete	501-10109	Wheel Assembly Complete
312-8780	Rim Only	312-10104	Rim Only
734-218	Tire 12.5 x 4.50-6	734-298	Tire Tubeless 12.5 x 4.50-6
734-219	Tube 12.5 x 4.50-6	734-255	Valve Stem

REAR

502-9262	Wheel Assembly Complete	503-9262	Wheel Assembly Complete
312-9262	Rim Only	312-9262	Rim Only
734-252	Tire 16.00 x 6.50	734-275	Tire Tubeless 16.00 x 6.50
734-253	Tube 16.00 x 6.50	734-255	Valve Stem

717-132A REVERSING TRANSMISSION (Peerless 351A)



PEERLESS MODEL 351-A
Parts and service available through all authorized Tecumseh, Lauson Power Products Service Dealers. Check the "Yellow Pages" of your telephone directory under "Engines — Gasoline."

Figure 26. Transmission—Exploded View

PARTS LIST FOR 717-132A REVERSING TRANSMISSION (Peerless 351A)

REF. NO.	PART NO.	DESCRIPTION
1	770048	Case Assy., Transmission (Incl. Nos. 2, 3 and 6)
2	780079	Bearing, Bronze
3	780087	Bearing, Bronze
4	780080	Bearing, Bronze
5	772060	Cover Assy., Transmission (Incl. Nos. 4 and 6)
6	780081	Bushing, Bronze
7	776091B	Shaft and Gear Assy., Input (Incl. Nos. 41, 46, 47)
8	784079	Rod Assy., Shift (Incl. Nos. 9 thru 13)
9	784083	Rod, Shift
10	784004	Fork, Shifter
11	792017	Ring, Retainer
12	792004	Ball, Steel
13	792003	Spring
14	784128	Rod Assy., Shift (Incl. Nos. 10 thru 13 and 15)
15	784129	Rod, Shift
16	784145	Lever and Housing Assy., Shift (Incl. Nos. 17 thru 22)
16a	784145	Lever and Housing Assy., Shift (Incl. Nos. 17a thru 21 and 22a)
17	784144	Lever, Shift
17a	784146	Lever, Shift
18	784088	Housing, Shift Lever
19	784094	Keeper, Shift Lever
20	792016	Ring, Snap
21	792001	Ring, Quad
22	792002	Pin, Roll 3/16 x 1-5/16
23	776079	Shaft, Shifter
24	778070	Gear, Bevel (33 teeth)
25	778071	Gear, Shift (1st and 2nd)
26	778072	Gear, Shift (3rd and Rev.)
27	778073	Idler, Reverse
28	778074	Gear (39 teeth)
29	778062	Gear (34 teeth)
30	778075	Gear (30 teeth)
31	776080	Shaft, Output
32	786049	Sprocket (8 teeth) (#40 chain size)
33	776081	Shaft, Reverse Idler
34	784132	Stop, Shifter
35	792035	Ring, Retainer
36	780092	Bearing, Ball
37	780082	Bearing, Thrust
38	780001	Washer
39	792045	Key, Woodruff #61
40	792046	Screw, Hex hd. self tap, 1/4-20x1
41	788040	Ring, Retainer
42	792034	Key, Counter shaft
43	786036	Spacer, Reverse Idler
44	792007	Screw, Socket hd. cap, 1/4-20x3/4
45	788041	Gasket, Transmission
46	778077	Pinion, Input
47	776098	Shaft, Input
48	786026	Pin, Dowel

901-9694 PARTS LIST—DIFFERENTIAL

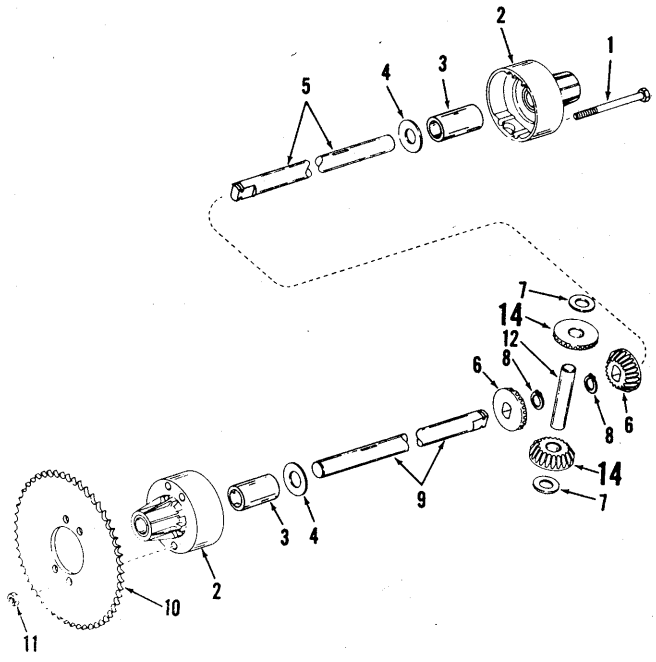
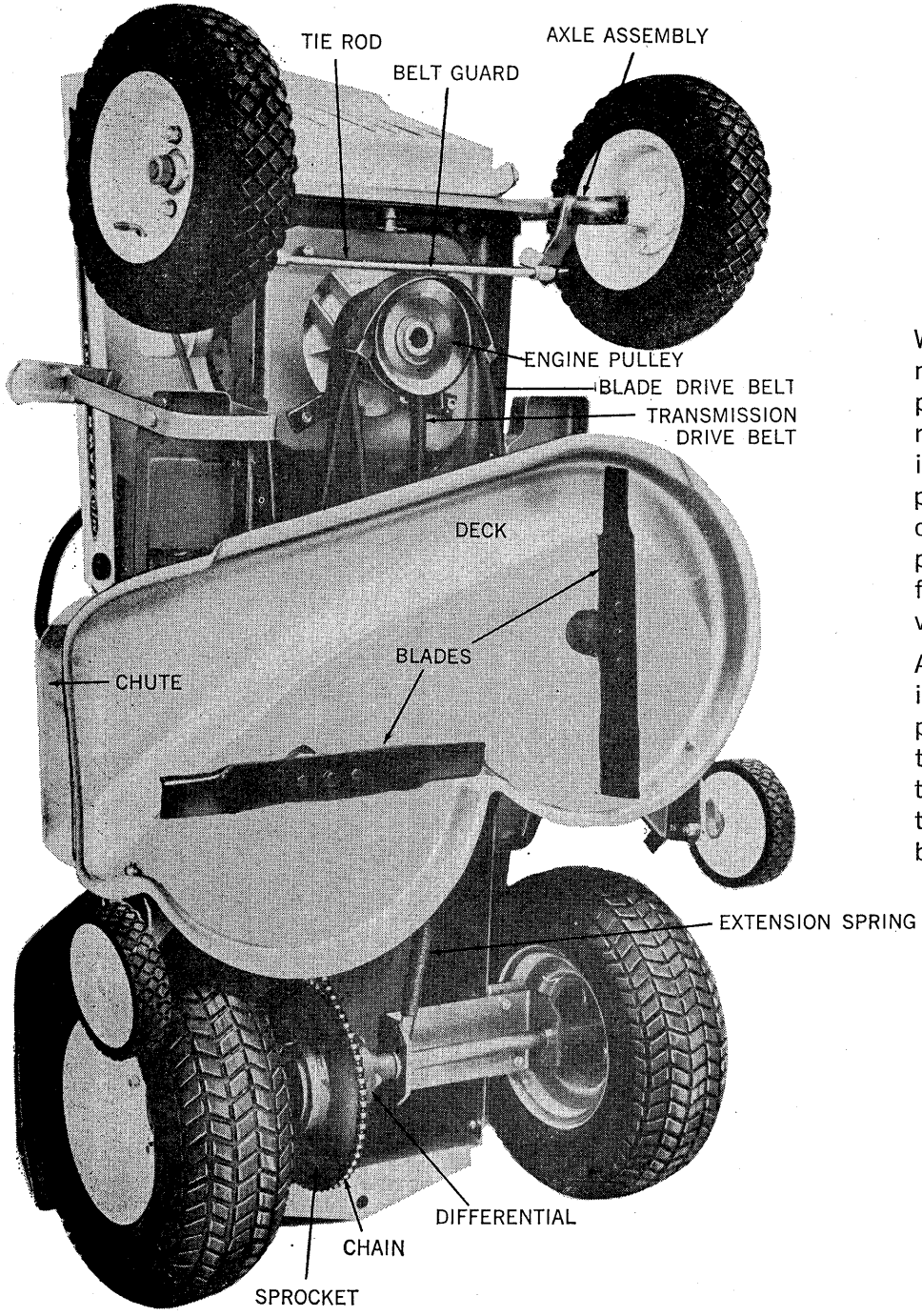


Figure 27. Differential—Exploded View

REF. NO.	PART NO.	DESCRIPTION	APPROX. SELL. PRICE
1	710-363	Hex Head Cap Screw 5/16-18 x 4" lg.*	$ .20
2	719-150	Differential Housing (2 Req'd)	7.50
3	748-169	Sleeve Bearing (2 Req'd)	.50
4	736-188	Washer (2 Req'd)	.20
5	738-121	Shaft	7.00
6	748-156	Miter Gear (EA) Double D Hole	1.90
7	736-182	Flat Washer (2 Req'd)	.20
8	716-101	Truarc Snap Ring (2 Req'd)	.40
9	738-122	Shaft	6.00
10	310-9814	Sprocket	
11	712-267	Hex Nut 5/16-18 thd*	.20
12	711-276	Drive Pin	3.00
13	715-123	Dowel Pins (Not Shown)	
14	748-158	Miter Gear-Round Hole	1.90

*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.

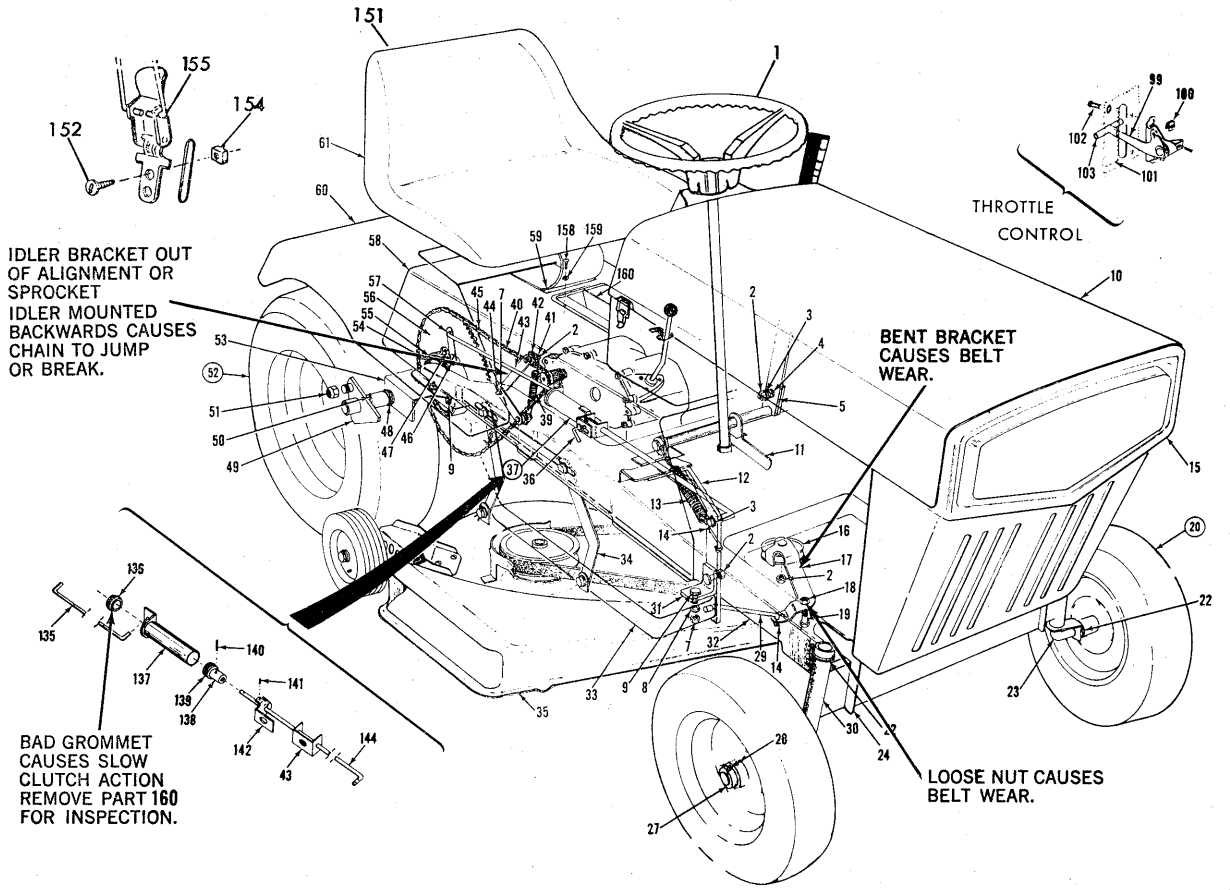
SERVICE TROUBLE SHOOTING

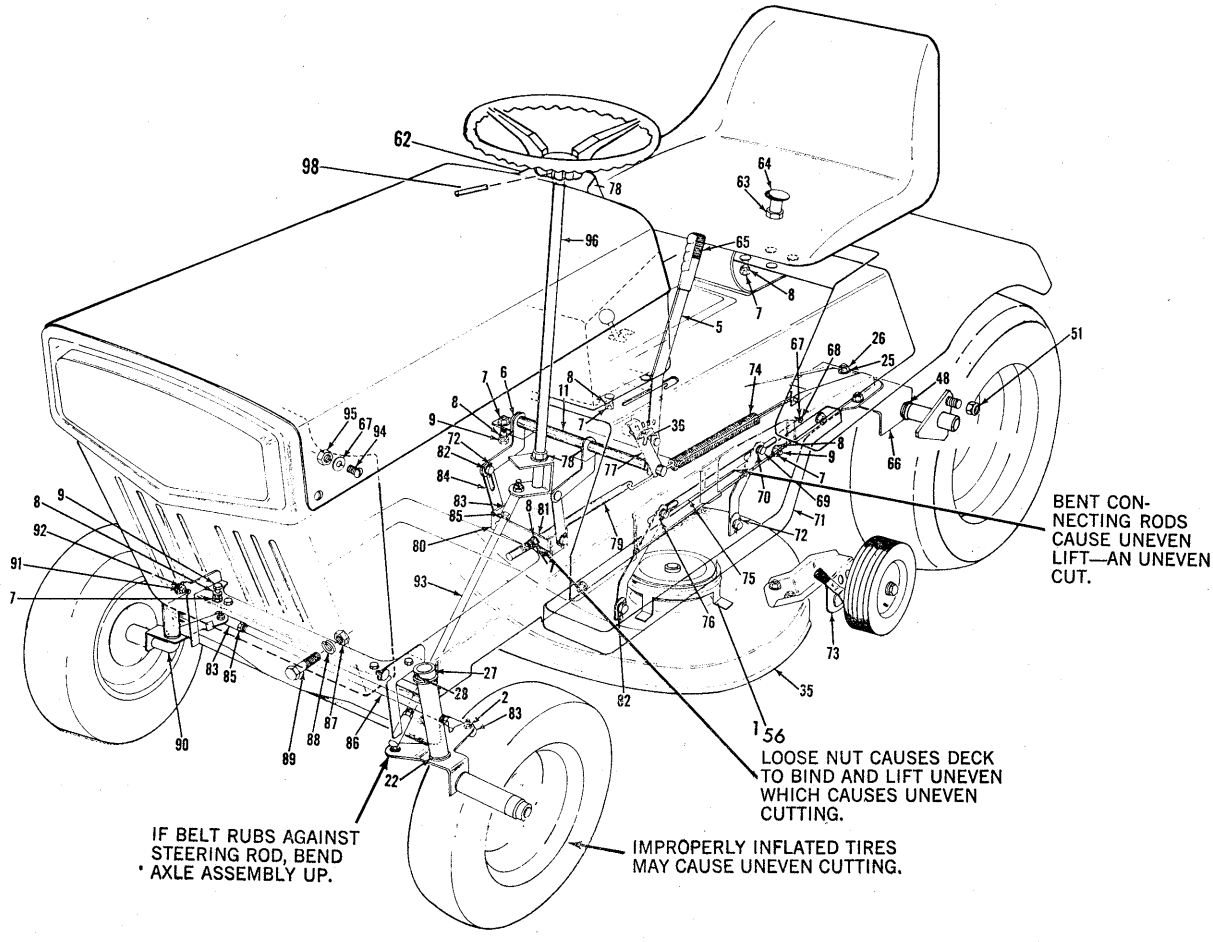


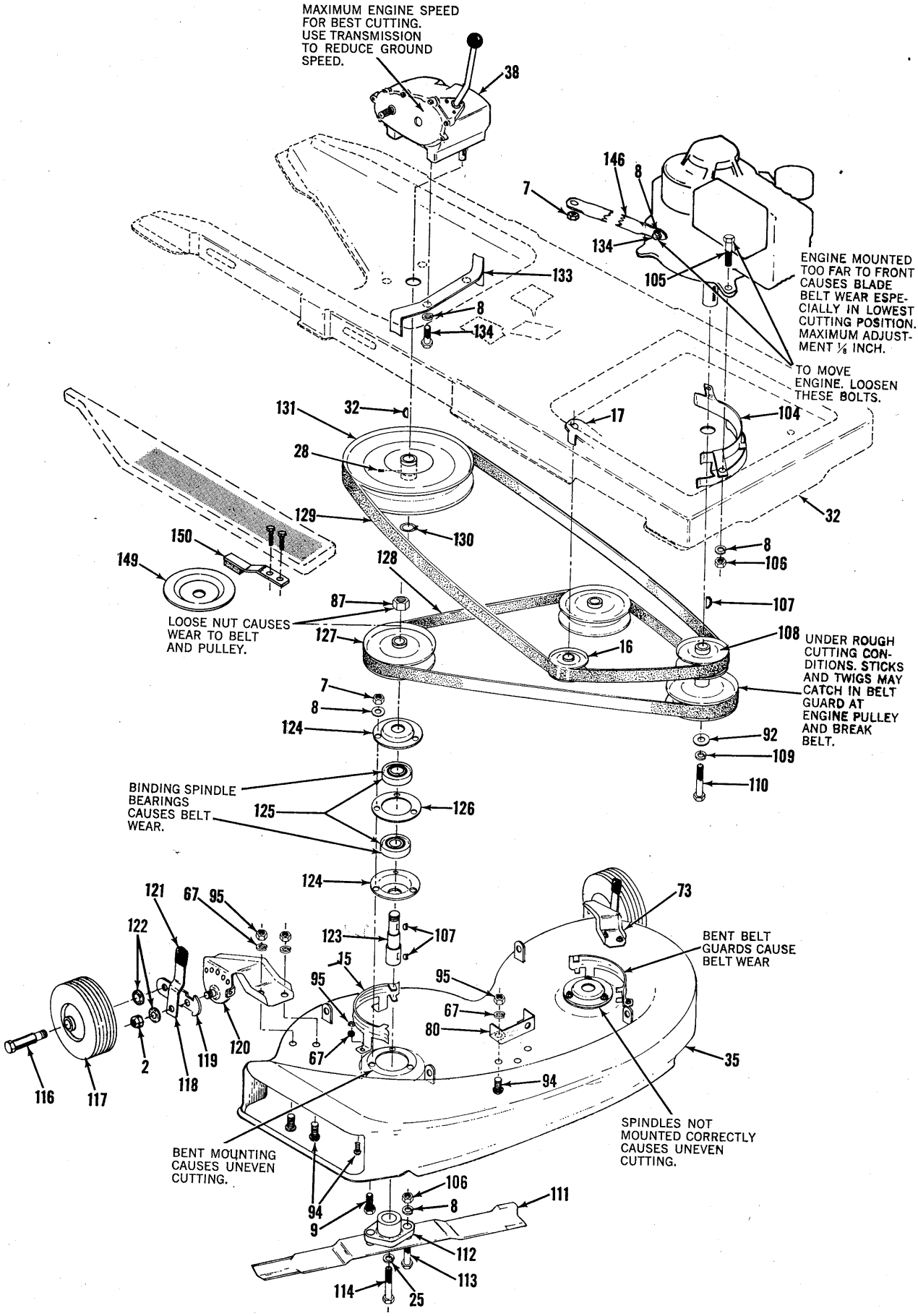
NOTE

When working on the mower it is recommended placing it in the maintenance position as shown in Fig. 30. Place a piece of plastic film under the gas cap and tighten it. The plastic prevents gasoline from draining from the air vent in the cap.

After placing the mower in the normal position pull the recoil starter through with throttle in the stop position several times to clear any possible oil in the cylinder.


IDLER BRACKET OUT OF ALIGNMENT OR SPROCKET IDLER MOUNTED BACKWARDS CAUSES CHAIN TO JUMP OR BREAK.
BENT BRACKET CAUSES BELT WEAR.
THROTTLE CONTROL
BAD GROMMET CAUSES SLOW CLUTCH ACTION REMOVE PART 160 FOR INSPECTION.
LOOSE NUT CAUSES BELT WEAR.


BENT CONNECTING RODS CAUSE UNEVEN LIFT—AN UNEVEN CUT.
LOOSE NUT CAUSES DECK TO BIND AND LIFT UNEVEN WHICH CAUSES UNEVEN CUTTING.
IF BELT RUBS AGAINST STEERING ROD, BEND AXLE ASSEMBLY UP.
IMPROPERLY INFLATED TIRES MAY CAUSE UNEVEN CUTTING.



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