# OWNERS GUIDE

10 CENTS

Model Nos. 130-340

# 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, 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.

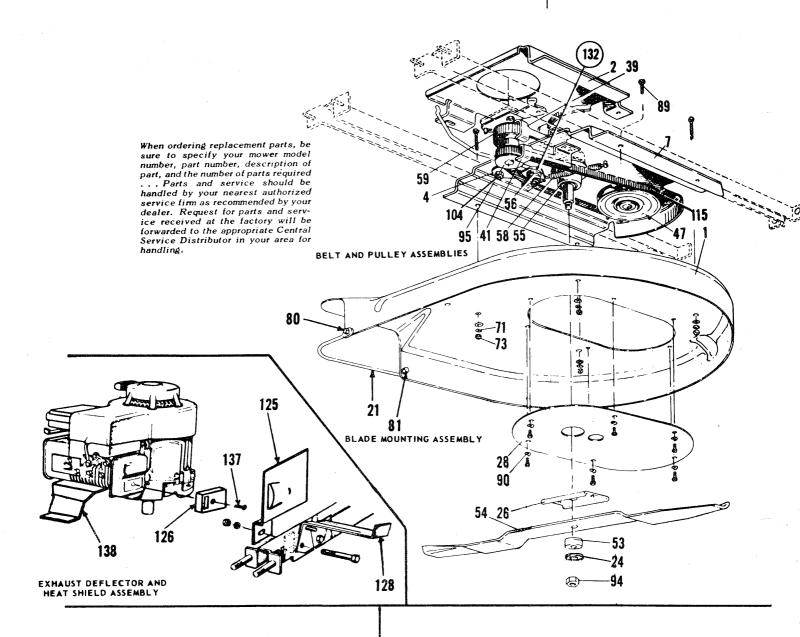
Warranty service is available through your local authorized service dealer or distributor. UNDER NO CIRCUM-STANCES WILL THE RETURN OF A COMPLETE UNIT BE ACCEPTED BY THE FACTORY UNLESS PRIOR WRITTEN PERMISSION HAS BEEN EXTENDED.

# SAFETY RULES

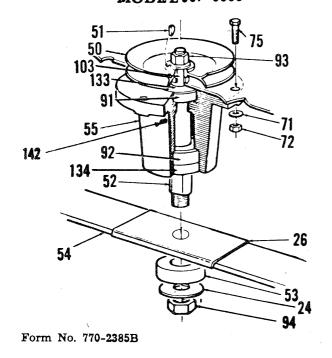
Your rotary mower is a precision piece of power equipment, not a plaything. Therefore exercise extreme caution at all times.

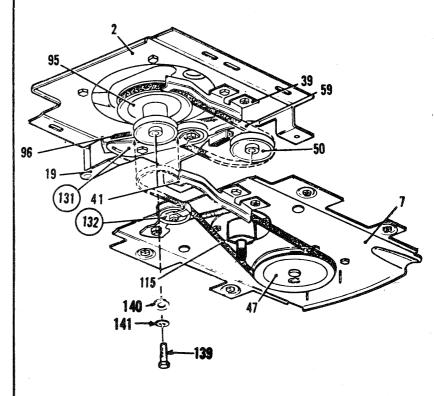
- Remove all sticks, stones, wire and other hazardous items from lawn before mowing. Such items are dangerous to both the mower and individuals in the vicinity of the mower.
- 2. Always disconnect spark plug cable during repairs or refueling operations.
- 3. Always start engine from side opposite discharge chute.
- 4. NEVER place hands or feet under mower or near discharge chute while engine is running.
- Do not tilt mower at extreme angle while engine is running. Cut grass on hills and banks sideways, not up and down.
- 6. Always stop engine when not cutting grass.
- 7. Do not fill gas tank while engine is running. Do not spill gasoline on hot engine.
- 8. Keep children and pets away from area at all times during mowing operation. Never allow mower to discharge grass toward any person.
- Do not attempt to start engine while mower is resting in high grass.
- 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.
- 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.

WARNING: 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.



# TIMEEN BLADE SPINDLE MODEL 901- 9385





#### 901-8500 REVERSING TRANSMISSION

## **IMPORTANT TRANSMISSION NOTES**

Some rules must be followed to secure the maximum service life from this unit.

The shift lever should never be forced. Shifting should be done slowly. The clutch should be released fully each time the mower is changed from reverse to forward or forward to reverse. Shifting must never be done without de-clutching. After the shift lever has been moved to the desired position. it must not be held there forcefully. The results of disregarding these rules can mean an inoperative transmission.

Abusive use can cause the yoke of the detent shaft to bend. This bent part, riding inside the clutch collar and rubbing the sides of the center groove builds up excessive heat, scores the clutch collar and builds up metal on the yoke. When enough metal is built up on this yoke, one of several things occur. The built-up metal seizes the clutch and the transmission apparently freezes up. The built-up metal seizes the clutch collar and snaps the detent shaft assembly where the yoke is swaged in place. The built-up metal expands so rapidly that the clutch collar is split into two parts. If the yoke is bent on one movement of the lever, on the

next movement it may seize so rapidly as to snap the detent shaft assembly. This can occur with no metal build-up. In all cases, the scored clutch collar, the build-up metal on the yoke, and a bent yoke indicate abusive use.

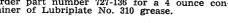
Sometimes after a period of use the transmission will not remain in forward position. This is again the result of abuse rather than use. Operating without proper de-clutching wears away the inner part of the larger bevel gear and because a large radius assumes the place of the necessary flat surface there, the clutch collar tends to slip back out of position. This occurs most often on the forward gear because it is used most often.

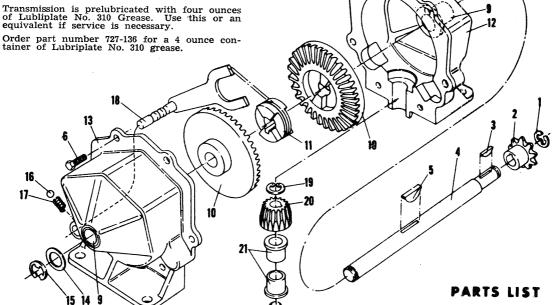
When repairs are necessary to correct the results of improper operation, it should be noted that the transmission carries four ounces of lubricant. At the factory Lubriplate No. 70-A grease is used to pack this unit. We suggest it or an equivalent when repairs are made in the field.

Transmissions operated in the proper manner will give a maximum of service with a minimum of maintenance. The manner of operation determines the life of the unit.

## LUBRICATION NOTE

For ease of shifting, use a few drops of oil as needed.





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# GEAR SHIFTING INSTRUCTIONS

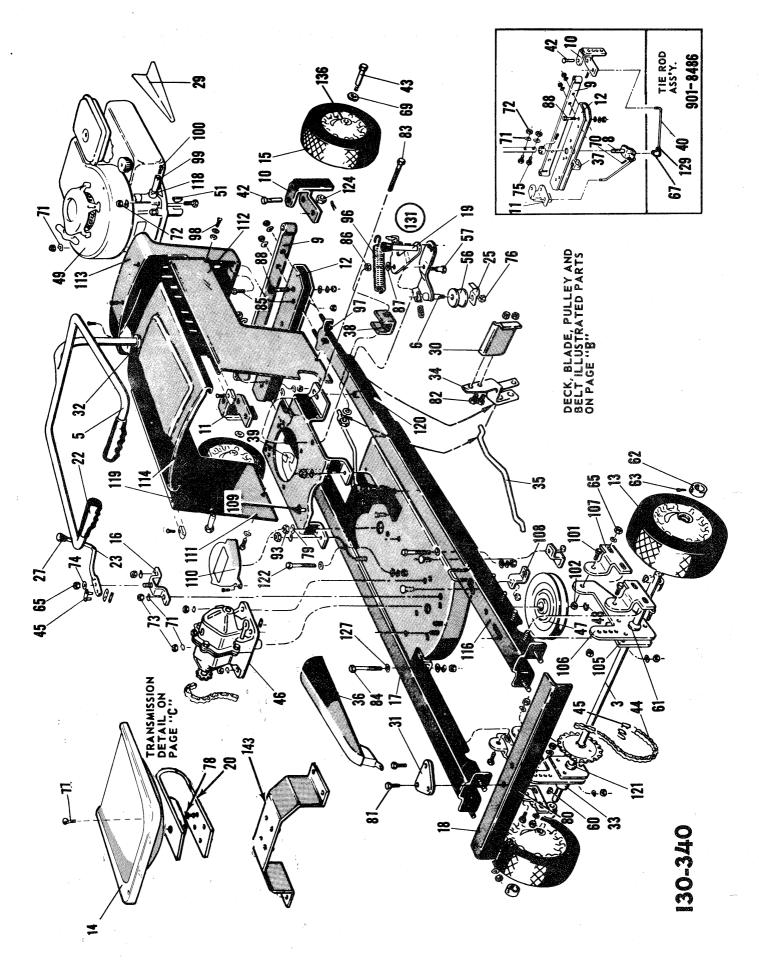
It is sometimes impossible to shift from one position to another if the Clutch Collar (Illus. 11) is not aligned with the Bevel Gear (Illus. 10). In order to mesh the gears and thus permit shifting it is necessary to:

- 1. Move mower forward or backward if engine is not running.
- 2. Depress clutch pedal slightly if engine is running.

To be assured of long, trouble free service, it is suggested that the shift lever never be forced into position, and that when the gears are meshed, they are meshed fully and not just part way. Following the above suggestions will eliminate wear which might otherwise take place in the internal area of the transmission gears and Clutch Collar.

Key No.	Part No.	Déscription	Key No.	Part No.	Description
1 2	716-104 748-852	"E" Ring Truarc 5133-50 Sprocket 8T, #41	14 15	736-116 716-106	Washer "E" Ring Truero 5133-62
3 4 5 6	714-110 711-854 '714-126 710-258	Key Hi-Pro HP 503 Shaft Output Key Hi-Pro # 606 * Hex Hd. Cap Screw 1/4-20 x 5/8 *	16 17 18 19 20	741-862 732-863 310-8583 716-865 748-866	Ball-Detent Spring-Detent Detent Shaft Assy. Snap Ring #3100-50 Bevel Pinion
9 10 11 12 13	748-855 748-856	Bearing Bevel Gear Clutch Collar Housing Half	21 22 23 24 25	748-867 714-110 711-869 716-361 714-868 727-136	Bearing Key Hi-Pro HP 503 Shaft Input Snap Ring Key Woodruff = 9 * Lubricant 4 oz.

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 the parts list.



Form No. 770-2385D

PARTS LIST FOR MODEL NO. 130-340

EF. PART DESCRIPTION	710-240 Hex Hd. Cutting Scw. 10-32x½ lg.* 777-939 Pipe Nipple * 777-940 Square Head Pipe Plug 777-940 Hex Hd. Cap Scrw. 10-34x¾ lg.* 777-940 Square Head Pipe Plug 771-940 Hex Elastic Stopnut %-24 thd.* 712-116 Hex Elastic Stopnut %-24 thd.* 713-718-218 Shoulder Bolt 710-7792 Bearing Plate 710-7794 Adj. Wheel Hanger 710-7794 Bearing Plate 710-7794 Bearing Plate 710-7794 Hood Side Panel - L.H. 710-7794 Hood Side Panel - L.H. 712-770 Hood Side Panel - R.H. 712-770 Speed Nut 712-771 Hood Top Panel 712-770 Speed Nut 712-771 Speed Nut 712-18 Hex Palnut 712-18 Hex Palnut 712-18 Hex Palnut 712-77 Hex Palnut 712-77 Hex Jam Nut %-24 thd. * 712-77 Trans. Idler Assy - (complete) 726-154 Washer 5/16 SAE * 710-197 Trans. Idler Assy - (complete) 736-154 Washer 710-152 Hex Head Cap Scw. %-24x1 lg. * 736-154 Washer 736-154 Screw Sield 736-165 Serew Sield 736-165 Serew 736-165 Serew 736-165 Serew 736-165 Hex Head Cap Scw. %-24x1 lg. * 736-169 Serew 737-108 Serew 7312-8359 Fender LH. 738-36 Hex Head Cap Scw. %-24x1 lg. * 736-169 Serew 736-169 Hex Hed Thd. Cut. Scr #10-32 7312-8359 Fender LH.
REF NO.	100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
DESCRIPTION	Engine Pulley - 4" **  Key - Hi Pro #505 Blade Spindle ** Blade Spindle ** Blade Spindle Housing ** Blade - 24" Blade Spindle Housing ** Idler Bearing Assembly Shoulder Bolt Tension Spring "V" Belt - ½ x 30 Gates* Key - Hi Pro #506* Spherical Bearing Collar Schew-Allen Cup Point 5/16-18 x ¼ 1g. * Set Screw - Allen Cup Point ½/16-18 x ¼ 1g. * Set Screw - Allen Cup Point ½/16-18 x ¼ 1g. * Set Screw - Allen Cup Point ½/16-18 x ¼ 1g. * Set Screw - Allen Cup Point ¼-28x¼ 1g. (Engine pulley not shown)  Elastic Stop Nut 5/16-18 thd. * Name Plate - Model No. Tie Rod End Washer - Fender Washer - Fender Washer - Fender Washer * Hex Nut 5/16-24 thread * Hex Nut 5/16-24 thread * Hex Nut 5/16-24 thread * Hex Ha. Cap Scw. ½/20x½ 1g. * Hex Ha. Cap Scw. ½/20x½ 1g. * Hex Hd. Cap Scw. 5/16-18x2¼ 1g. * Hex Hd. Cap Scw. 5/16-18x2½ 1g. * Hex Jam Nut ½-20 thd. * Hex Jam Nut ½-20 thd. * Hex Centerlock Nut ¾-18 thd. * Bearing - Lower ** Hex Centerlock Nut ¾-18 thd. * Hex Centerlock Nut ¾-20 thd. * Hex Jam Nut ½-20 thd. * Hex Centerlock Nut ¾-20 thd. * Hex Centerlock Nut ¾-18 thd. * Hex Pulley - Two Step
PART NO.	310-9925 714-365 711-274 711-274 711-367 719-119 710-373 714-138 714-138 710-421 710-421 710-429 710-289 710-289 710-289 710-289 710-289 710-289 710-289 710-176 710-176 710-176 710-176 710-176 710-176 710-176 710-176 710-176 710-176 710-176 710-176 710-176 710-176 710-176 710-289 710-176
REF.	62322222222222222222222222222222222222
DESCRIPTION	31E-9376   Deck Assembly   Blae5891   Axle Assembly   Axle Assembly   Axle Assembly   Axle Assembly   Axle Assembly   Blae6   Blae6   Assembly   Blae6   Blae6   Assembly   Blae6   Blae784   Handle Assembly   Assembly   Blae6   Blae784   Blae6   Bracket Assembly   Blae6   Blae7865   Blae6   Blae7865   Blae6   Bracket Assembly   Blae7865   Blae6   Bracket Assembly   Blae6   Bracket
PART NO.	31E-9376 312-8569 312-8569 312-8569 312-7847 312-7842 312-7842 312-7842 312-7842 312-7843 312-9336 312-9336 312-9336 312-9336 312-9337 312-9387 310-7364 310-7364 310-7364 310-7364 310-7364 310-7364 310-7364 310-7367 310
REF.	1284601121111111111111111111111111111111111

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 Blade Spindle Assembly (Complete) 901-9385.

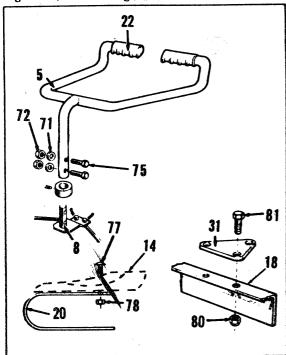
#### GENERAL INSTRUCTIONS

Your new riding mower is a machine designed to eliminate the hard work connected with mowing grass. It is constructed of the highest quality materials throughout and will give many years of useful service if given the proper maintenance and care. Your riding mower is not a toy, but rather a useful machine and should not be used by anyone until they fully understand the operating instructions. The safety rules noted in this manual should be observed at all times.

#### **ASSEMBLY INSTRUCTIONS**

Your new riding mower is shipped preassembled except for the handle, the seat, and the trailer hitch. These are assembled as follows:

- 1. Insert handle bar assembly post (5) through center hole of front hood (114). Attach to steering post assembly (8) and secure with cap screws (hex head 5/16-24 x 1-1/4 lg.) (75), lockwashers (71) and hex nuts (72).
- 2. Position trailer hitch (31) on center of rear frame section (18) and fasten with cap screws (hex head 1/4-20 x 1/2 lg.) (81), and hex locknuts (80).
- 3. Place seat (14) on seat bracket (20) and secure with carriage bolt (1/2-13 x 1 lg.) (77) and locknut (78).



# OPERATING INSTRUCTIONS

Before starting mower, read and understand both your mower instructions and your engine instructions. Learn and observe all safety rules at all times.

Service engine in accordance with the engine manufacturer's recommendations. Fill gas tank with clean, fresh, regular grade gasoline. Fill engine crankcase with oil of the grade recommended in the engine instructions. BE SURE CRANKCASE IS FULL.

Place transmission shift lever (23) in "Neutral" or center position. The engine should be started ONLY when the transmission is in "Neutral". Be sure that the blade engaging lever (19) is in the "Disengage" position when starting engine. Blade should always be in "Disengage" position except during actual mowing operations.

When ready to start engine, place throttle control in "Choke" position and start engine in accordance with engine instructions. After engine starts, move throttle control to desired engine speed. The engine is stopped by placing the throttle control in "Stop" position.

A brief break-in period is essential to insure maximum engine and mower life. This consists of running the engine at half speed for a period of time required to use one tankful of gasoline. This is necessary on the initial run only. It is also recommended that the crankcase oil be changed, initially, after the first four or five hours of operation. This allows for the removal from the crankcase of any impurities which may have accumulated during the break-in period. Subsequent oil changes should be made at intervals of 25 hours, or as working conditions dictate. Always check oil level before using your mower. BE SURE CRANKCASE IS FULL.

After the engine is operating, the transmission gears may be shifted to either forward or reverse drive position. The transmission should not be shifted unless the foot pedal is released. Drive motion ceases when the pedal is released.

It is most important to understand that the pedal functions as follows:

- 1. To provide drive motion when depressed.
- 2. To stop drive motion when released.

Details on gear shifting appear on the transmission page. Read and understand these before operating your mower. Drive your mower to the cutting area with the blade disengaged. Engage the blade only when you are ready to cut the grass. The cutting blade may be engaged in the following manner:

- 1. Release foot pedal.
- 2. Move engine throttle control to fast position.
- 3. SLOWLY move blade engaging lever to "Engage" position. The blade is now in motion. The throttle control can now be moved to a slower speed if so desired. The blade is stopped by reversing the blade engaging lever to its opposite position (Disengaged).

Engine compression serves as a brake to hold mower back when cutting on a downward slope. To reduce speed or to brake when mowing downhill, slow engine speed with throttle control and keep pedal depressed. By this procedure, engine compression will keep the mower under control on downward slopes.

To stop engine, move throttle control to "Stop" position. In this position, the ignition is automatically grounded. Keep throttle control in "Stop" position at all time when mower is not in use.

#### **ADJUSTMENTS**

The cutting height is adjusted by relocating the position of the wheels. The wheels are relocated as follows:

- Place rear frame section (18) on a block high enough to raise wheels off the ground.
- Remove cap screws (101) from rear adjustment wheel hanger supports (107) and move to the holes which give the desired cutting height.
- 3. Tighten cap screws securely.

- Remove block from under rear frame section and place under front wheel support bar assembly (9) to raise front wheels off the ground.
- Remove front axle bolts (43) and relocate in holes relative to rear wheel adjustment.
- Tighten bolts securely and remove block from under front wheel support bar assembly.

Additional cutting height adjustment can be gained by relocating blade spacers (53) on the blade spindle (52) in relation to the blade (54). When using this adjustment, be sure blade adapter assembly parts are reassembled correctly and securely.

The chain (44) may require adjustment after a period of use. Chain adjustment may also be necessary when the height adjustment is changed. The chain is adjusted as follows:

- 1. Loosen elastic stop nuts (65) on two rear adjustment wheel hanger supports (107).
- Move rear axle assembly (3) forward or backward as needed to make the proper adjustment.
- 3. Tighten elastic stop nuts securely.

**CAUTION:** Undue wear will develop if the chain is tightened excessively.

Because of the construction of the clutch pedal and clutch assembly, belt adjustment should not be necessary.

# TIE RODS (Refer to drawing on page D)

Front Wheel Toe In is adjustable by removing cotter pins (70), loosening hex nut (129) and screwing the tie rod (67) in or out to obtain the proper toe in. (Approximately 1/8" toe in at the outer edge of the front of the tire.) The tie rods should be adjusted so that the clearance between the wheels and frame is equal when the handle is turned to either extreme.

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 the old traces of the sealant, however, it must be free of grease and oil before applying more sealant. Gasoline will clean these parts.

#### MAINTENANCE AND LUBRICATION

Follow engine instructions for proper engine maintenance and lubrication. Lifetime graphoil front wheel bearings and rear axle bronze spherical bearings require little lubrication. However, a light film of oil applied to these bearings will reduce normal friction. A light film of oil should be maintained on the chain at all times except where mower is used under extremely dusty conditions.

The transmission is filled at the factory. If service is necessary, repack with four ounces of Lubriplate No. 70-A grease or its equivalent.

A sharp and balanced blade is essential for efficient mowing and long mower and engine life. When the blade is sharpened, equal amounts of metal must be filed from each side. The blade should be balanced before it is 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 (see drawing) and fastened securely.

Should replacement of the blade drive "V" belt become necessary, it can be done in the following manner:

- 1. Remove the three cap screws (122) which secure the engine mounting assembly (2) on the right side.
- 2. Loosen the three cap screws (122) on the left side.
- Raise up the right side of the engine mounting assembly and place one of the removed nuts under it as a wedge to hold it up.
- 4. Reach through the front of the right side panel (112) and remove lower belt (115) from two stage pulley (95). Push the lower belt back out of the way of the pulley.
- 5. Slightly spring upper belt guard (39) and release belt from upper part of two stage pulley.
- Remove blade belt guard (110) from over blade spindle pulley (50).
- Remove belt from blade spindle pulley (50). Remove belt from blade engaging idler pulley (56). Move blade brake to side and push belt forward.
- From front of right side panel, pull belt forward and remove from two stage pulley.

Replace this belt as follows:

- From front of right side panel, work new belt under two stage pulley. Push to rear past blade brake at rear of engine mounting assembly.
- From blade spindle pulley position, pull belt through but do not mount on blade spindle pulley.
- Move belt into position on idler pulley. Now move belt into position on blade spindle pulley.
- From front of right side panel, spread upper belt guard slightly to allow positioning of belt on upper part of two stage pulley.
- Replace lower belt on lower part of two stage pulley. Push both upper and lower belt guards back into position.
- Remove wedge (nut) from under engine mounting assembly.
   Replace cap screws and nuts. Tighten all nuts securely.
   Replace blade belt cover.

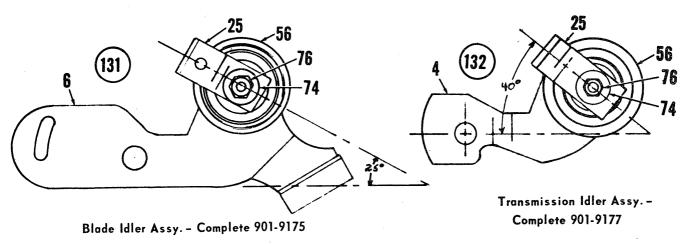
The mower drive belt is replaced as follows:

- Position mower on side (left). Remove blade and blade adapter assembly. Remove inspection plate (28).
- Remove snap ring from large pulley (47). Remove large pulley.
- 3. Remove belt from idler pulley.
- 4. From front of right side panel, remove belt from lower part of two stage pulley and pull through.
- Reverse this procedure to replace belt. Replace inspection plate and blade assembly. Be sure blade assembly is properly assembled and securely fastened.

#### STORAGE

All grass and dirt should be removed from top surface and bottom of mower base. Cover unpainted metal parts, including the blade, with a coating of grease to prevent rust. Prepare engine in accordance with engine instructions. Place wooden blocks under frame to raise wheels from the floor. The storage place should be a clean, dry one.

# SERVICE NOTES



NOTE: When servicing the underside of mower, disconnect spark plug wire and ground to prevent accidental starting.

#### CREEPING OR BELT WEAR

The position of the belt clip on the idler bracket assembly is important for proper operation of your mower. Improper position of the belt clip can cause damage to the belt or it can allow the mower to "creep" when the clutch pedal is not depressed. Proper positioning will not allow the belt clip to touch the belt when the belt is tightened. It also "traps" the belt away from the engine pulley when the belt is loose. The drawing above shows the correct position for the belt clip. Adjustment is made by loosening the hex nut, adjusting belt clip to position shown and retightening hex nut securely.

## BELT WEAR - Pulleys

For proper belt wear, all pulleys, including the idler pulley, must be on the same plane. Improper alignment will cause rapid belt wear.

#### DRIVE PULLEYS

Alignment may be made by removing inspection plate under deck. Check alignment with a straight edge. The transmission pulley is held in place with a snap ring. It should not need adjustment. The engine pulley is held in position by a set screw. The set screw is treated with a nut and bolt sealant. The set screw can be removed with an Allen Wrench while applying heat with a small torch. The sealant disintegrates at 400°. The idler bracket assembly is held in position by a shoulder bolt. If realignment is needed, it is necessary to bend bracket up or down as alignment requires. Care must be taken not to damage the belt clip.

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

#### **BLADE PULLEYS**

Raise front of mower approximately a foot off the ground and support it with blocks, sight down blade belt from front of mower. Note if blade idler pulley is in line with blade spindle pulley and top section of engine pulley. If alignment is necessary, bend idler bracket assembly up or down as needed. Do not damage or bend be t clip on idler bracket assembly.

### BELT WEAR - Belt Guards & Clips

Belt guards and clips if improperly positioned will cause premature belt wear. All belt guards and clips must completely clear the belt when the belt is tightened. They should also assist in freeing the belt from the engine pulley when the belt is loose. The belt clip on the blade idler bracket assembly may be checked by removing the top belt guard. Observe belt and pulley action while operating the blade disengage lever. The belt clip on the drive idler bracket assembly may be checked by removing the inspection plate under the deck. Observe belt and pulley action while operating the clutch pedal.

#### **CREEPING**

"CREEPING" may be caused if the idler bracket assembly does not move all the way back when the clutch pedal is released. This may be caused by insufficient spring pressure; a bent clutch control rod or a binding idler bracket. Check by removing the inspection plate under deck. Observe idler pulley action while operating the clutch pedal. If idler bracket binds, lubricate with an all purpose grease.

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".

