

OWNER'S GUIDE

10 CENTS

Model No. 181-850

ELECTRIC 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.

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

SAFETY RULES

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

CAUTION: THE BLADES TURN SILENTLY. AFTER THE SWITCH HAS BEEN TURNED OFF. THE BLADES WILL CONTINUE TO ROTATE FOR A PERIOD OF FIFTEEN SECONDS.

Wait for at least ninety seconds after disconnecting power supply before any maintenance is performed. Be sure plug is removed from power outlet!

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. Inspect electric extension cord regularly and replace it if damaged.
3. **NEVER** place hands or feet under mower or near discharge chute while motor is running.
4. Do not use, or let stand, in rain.
5. Switch off motor and disconnect electric extension supply cord immediately when finished mowing.
6. Disconnect electric extension cord when storing mower.
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 motor 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.
10. While operating the mower, if any foreign object is struck, stop the mower and inspect for damage. Do not restart or operate mower until all damage has been repaired.

181-850

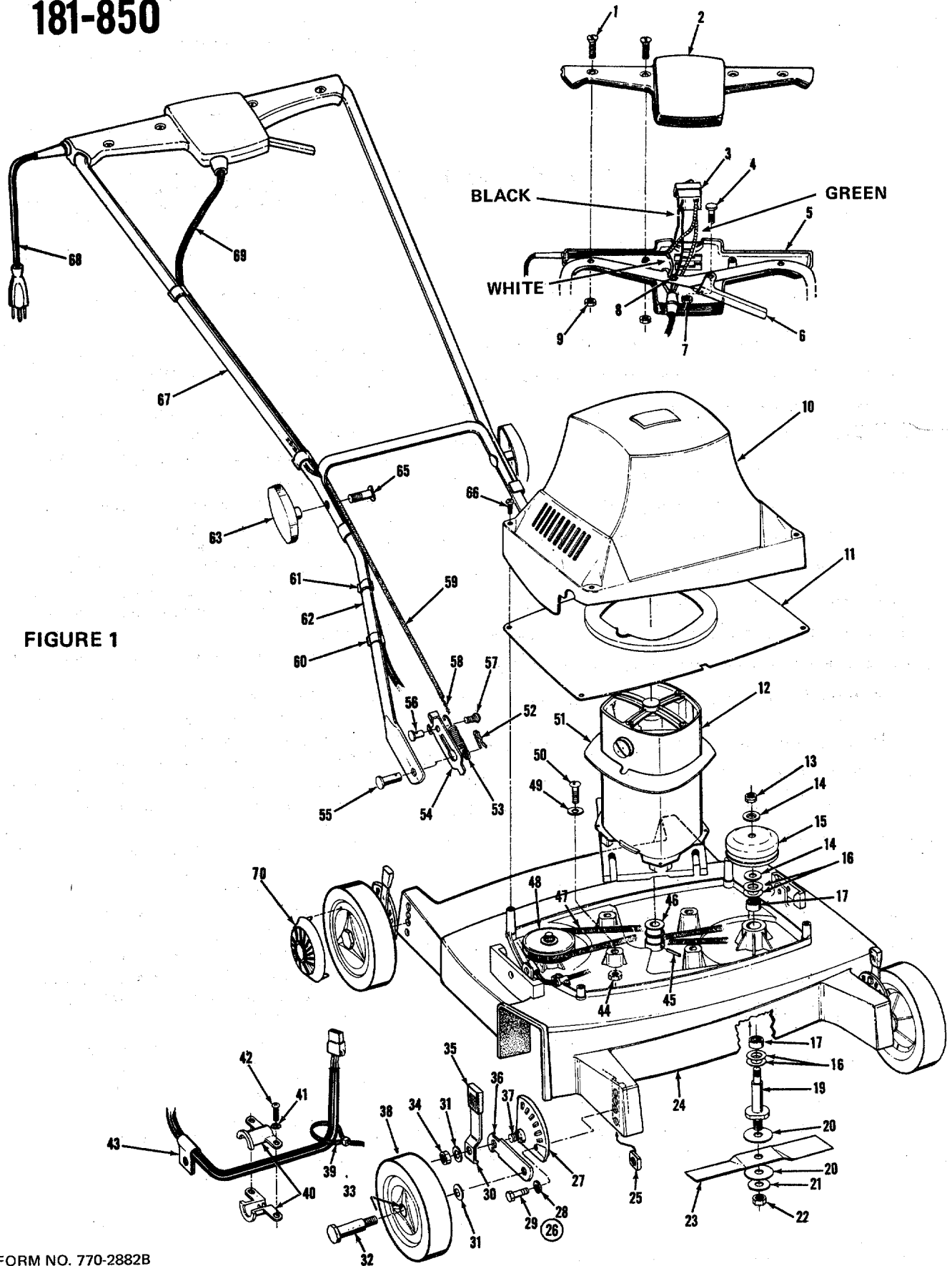


FIGURE 1

PARTS LIST FOR 181-850 ELECTRIC MOWER

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	710-424	Phillips Drive Oval Head Screw 8 – 32x1-1/8 Long *	37	710-362	Hex Bolt – Special
2	305-10214	Handle Cover – Right Hand	38	505-9383	Wheel Assy.
3	725-163	Switch	39	725-157	Cable Tie
4	710-166	Truss Head Cap Screw 1/4-20 x 1-1/8 Long *	40	305-10126	Strain Relief Connector
5	305-10213	Handle Cover – Left Hand	41	736-147	External Lockwasher No.10 *
6	310-10215	Handle – Up Stop	42	710-423	Pan Head Phillips Drive Self Tap Screw 10 – 24x5/8 Long Type F *
7	712-107	Centerlock Nut 1/4-20 Thread *	43	731-137	Nylon Clamp
8	710-148	Hex Head Slotted Self Tap Screw 8 – 32x3/8 Long *	44	712-219	Elastic Stop Nut 1/4-20 Thread *
9	712-223	Hex Nut – 32 Thread *	45	715-249	Roll Pin
10	305-10876	Motor Cover	46	711-412	Motor Pulley
11	300-10200	Baffle	47	754-141	Flat Belt
12	725-162	Motor	48	310-10137	Spindle Pulley
13	712-116	Hex Elastic Nut 3/8-24 Thread *	49	736-209	Flat Washer 17/64 IDx3/4 ODx16 GA.
14	736-206	Washer *	50	710-420	Pan Head Slot Drive Screw 1/4-20x1-1/2 Long *
15	310-10138	Spindle Pulley	51	735-111	Rubber Gasket
16	736-212	Thrust Washer	52	714-104	Hair Pin Cotter
17	741-136	Roller Bearing **	53	732-195	Spring
18	310-9691	Height Adj. Ass'y Left Hand	54	310-10216	Up Stop Bracket
19	711-411	Blade Spindle	55	711-415	Clevis Pin
20	736-110	Fiber Washer 17/32 IDx1-23/32x1/16	56	711-416	Ferrule
21	736-208	Flat Washer 33/64 IDx1-1/2 ODx14 GA.	57	710-132	Round Head Screw 8 – 32x3/8 Long *
22	712-285	Hex Nut Nylock 1/2-20 Thread *	58	727-148	Braided Cable
23	742-114	Blade	59	727-147	Conduit
24	719-154	Deck	60	727-123	Cord Clips
25	712-220	Square Nut 3/8-16x5/8 Square *	61	746-145	Cable Clips
26	310-9692	Height Adj. Assy. Right Hand	62	310-10176	Lower Handle
27	310-9682	Index Plate	63	305-9966	Knob Handle
28	736-148	Ext. Lockwasher – 3/8 Screw *	65	710-405	Curved Head Screw 5/16-18x1-3/4 Long *
29	710-253	Hex Head Cap Screw 3/8-16x1 Long *	66	710-422	Pan Head Phillips Drive Screw Self Tap 1/4-20x5/8 Type F *
30	310-8313	Spring Lever w/Knob	67	310-10198	Upper Handle
31	736-105	Belleville Washer	68	725-167	Cord Set I
32	738-102	Axle Bolt	69	725-168	Cord Set II
33	741-114	Ball Bearing	70	305-9871	Hub Cap
34	712-214	Lock Nut	71	310-10140	Pull Gage (see Figure 4)
35	305-7520	Knob	72	310-10139	Blade Wrench (Not Shown)
36	310-7492	Pivot Bar	73	710-287	Self Tap Screw #6-32 x 1/4 (Hub Cap Screw)

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

** NOTE: CAUTION – See Fig. 1 – If roller bearings must be replaced, be sure that the seal is the opposite way of the arrow shown in Fig. 1.

* Extension Cord 725-174 (Optional) – Carroll cable, 100 ft., 16 gauge, 3 wire, round. Also available through most hardware and department stores.

ILLUSTRATED PARTS FOR ELECTRIC MOTOR

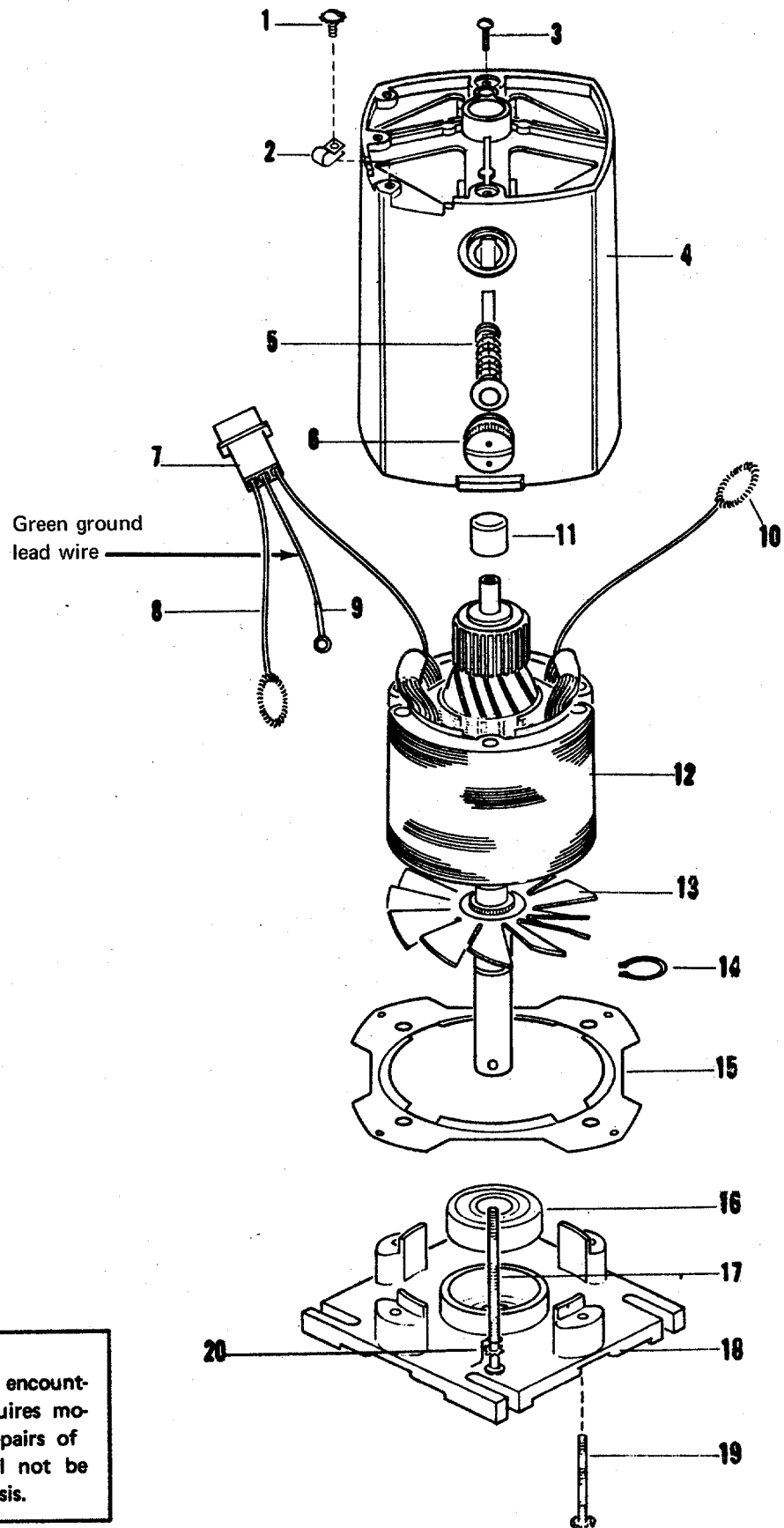


FIGURE 2

- NOTE -

Major motor difficulties encountered under warranty requires motor replacement . . . repairs of armatures and fields will not be accepted on a warranty basis.

PARTS LIST FOR ELECTRIC MOTOR (XL9005B)

REF. NO.	XL9005B PART NO.	DESCRIPTION	REF. NO.	XL9005B PART NO.	DESCRIPTION
1	XX1005	Screw	11	XL8167	Sleeve Bearing
2	XX802	Cord Clamp	12	XL8161	Field Assembly
3	XX1005	Screw — Locks Brush Holder	13	XL8158	Armature Assembly
4	XL8165	Motor Housing Assembly	14	XL8160	Snap Ring
5	XL8031	Carbon Brush & Spring	15	XL8164	Motor Baffle
6	XL8032	Brush Cap	16	XL8092	Large Bearing
7	XL8163	Pin Housing Connector	17	XX1105	Field Screw
8	XL8168	Lead & Spring Assemblt	18	XL8166	Mounting Plate Assembly
9	XL8162	Ground Lead Assembly	19	XX1104	Screw — Holds Key 18 to 4
10	XL8051	Spring	20	XL8090	Clip

BELT ADJUSTMENT

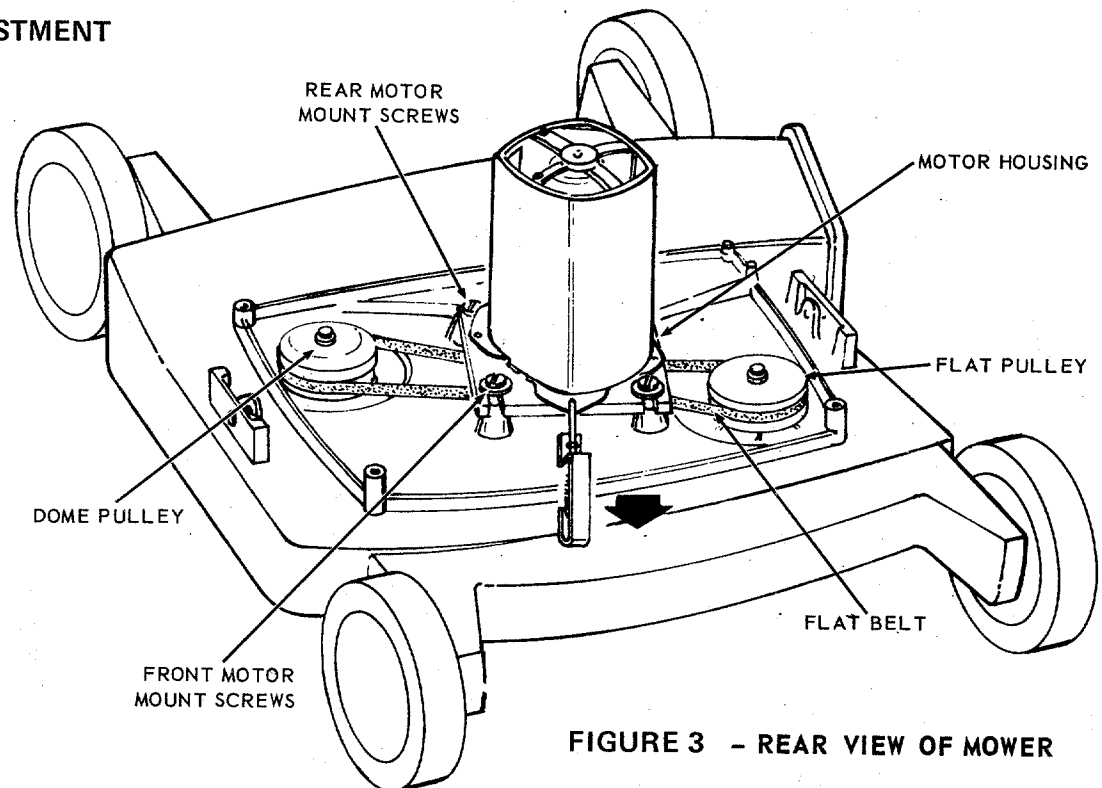


FIGURE 3 - REAR VIEW OF MOWER

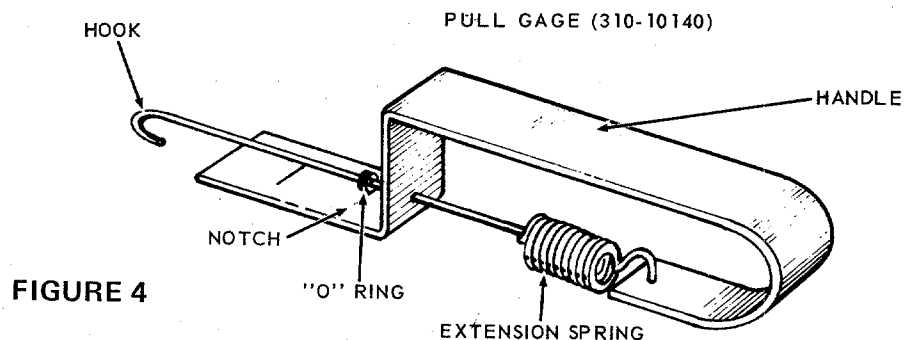


FIGURE 4

ADJUSTMENT:

CAUTION: Do not at any time make any adjustments to your mower without first checking the following:

1. Turn the toggle switch to the off position.
2. Disconnect the extension cord.
3. Make sure the blades have stopped rotating.

BELT ADJUSTMENT: (See Figs. 3 and 4)

The drive belts have been tensioned properly at the factory and should not require adjustment during the first several seasons the mower is used.

If the mower with a sharp blade no longer produces a clean cut with either one or both of the blades and the motor runs at higher than normal speeds in thick grass, the belts should be re-tightened.

NOTE: Before attempting adjustment, be sure that the blades are sharp since dull blades are most often the cause of poor cutting.

It is very important that the procedure outlined below be followed very closely when re-tensioning the belts in order to obtain proper cutting performance and maximum life of the belts and components.

1. DISCONNECT THE ELECTRIC PLUG FROM THE EXTENSION CORD.
2. Remove the motor covering by loosening the 4 mounting screws and pull up. Remove the baffle.
3. Loosen but do not remove 4 motor mounting screws so that the motor is free to slide on the mounting pads. Turn screws 1 1/2 to 2 turns maximum to adjust best — NO more than 2 turns.
4. Using the pull gage, slide the O ring on the extension spring of the handle so that it lines up with the notch on the bracket nearest the spring, with the pull gage at rest.
5. Place the hook of the pull gage into hole of the motor plate (see fig. 3) on the back side of the mower. (The dis-

charge chute is on the front side of the mower.)

6. Pull on the pull gage in the direction shown, perpendicular to the center line of the drive pulleys. Pull until the O ring lines up with the second notch on the bracket.

7. While holding the pull gage, so that the O ring lines up with the appropriate mark, turn one of the drive pulleys through several revolutions by hand to seat the belt properly; then tighten 2 of the motor mounting screws. Release the pressure on the pull gage and tighten the other 2 mounting screws.

8. Check by feel for equal tension on the belts and re-tension them if they are not tensioned alike.

9. Check to be sure that the power cord is clear of the belts and pulleys. Replace the baffle and motor cover.

INSTALLING NEW BELTS:

The above procedure should be followed with the exception that the steps listed below should be followed in place of step 3 above.

3A Unscrew the four motor screws so that the nuts will drop out from the bottomside of the deck. **CAUTION:** Observe motor housing relation to the deck. Motor must be re-mounted in the same direction.

3B Remove the old belts from the blade pulleys and lift the motor off the deck.

3C Place new belts, with the printed side out, on the motor pulley and lower the motor onto the deck so that the projection on the motor housing where the power cord enters it is closest to the side of the chute opening. Make sure that the upper belt on the motor pulley goes to the upper blade pulley, etc. Place the belt on the blade pulleys.

3D Screw the motor mounting bolts into the hex nuts which are trapped in the slots in the underside of the deck but **DO NOT TIGHTEN**. Tighten rear motor mounting screws and back off 1 - 1/2 turns — **THIS IS VERY IMPORTANT**. If the rear motor mounting screws are too loose when tightening the belts, the motor will be cocked causing improper belt tension. Return to step 4 above.

BLADE SHARPENING:

Blades should be kept sharp at all times in order to obtain a smooth cut. Dull blades will tear the grass rather than cut it, giving the lawn a brownish appearance.

To Sharpen Blades:

1. Disconnect the electric cord.
2. Place the mower on the chute side, letting it balance on the chute and the wheels.
3. Place special wrench supplied with the mower on the flat shoulder of the blade spindle and block wrench against underside of deck. This keeps the spindle from moving. †
4. Using 3/4" wrench or an adjustable crescent wrench remove blade nuts. CAUTION: When removing blade nuts, keep hands away from both blades.
5. When re-sharpening blades, be sure that the blades are balanced.
6. When replacing the blade on the spindle, check with figure 1 for correct assembly. Be sure the blade nuts are tight.

LUBRICATION:

WHEELS: Wheel bearings are ball bearing. They require lubrication periodically with light oil (S.A.E. No. 10 or 20).

MOTOR: The motor has been pre-oiled and will not require further lubrication for approximately 20 hours of op-

† Wrench part number 310-10139.

eration. Lubricate every 20 hours thereafter with SAE 20 motor oil. See service notes.

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.

STORAGE: The following steps should be taken to prepare the mower for storage.

1. Clean and lubricate mower thoroughly as described in the preceeding instructions.
2. Coat mower's cutting blades with chassis grease to prevent rust.
3. Place blocks under the deck to raise tires clear of the floor.
4. Store mower in dry, clean area.

MOWING HINTS:

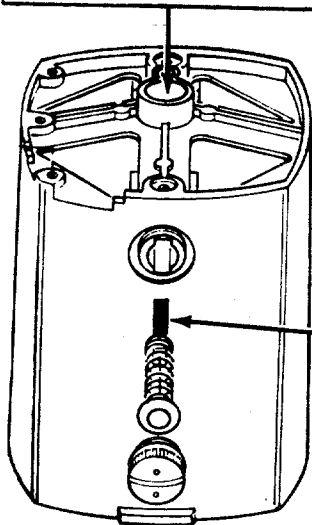
For best results, do not cut wet grass. It tends to stick to the underside of the mower thus preventing proper discharge of grass clippings. If heavy wet grass must be cut, reduce walking speed to allow more effective distribution of the clippings.

Begin mowing at the point nearest the electrical outlet keeping the cord close to the outlet and out of the way of the mower. Cut grass moving away from the outlet so that the cord lies in the cut portion of the lawn. Be sure that the clippings are discharged on the cut portion of the lawn.

EXTENSION CABLE LENGTH IN FEET		
UP TO 100'	100' to 200'	200' to 300'
Required Wire Size (A.W.G.) In Cable		
16 Ga.	14 Ga.	12 Ga.

LUBRICATION NOTE:

Upper Bearing — Use SAE 20 Motor Oil
Do Not Over Lubricate!

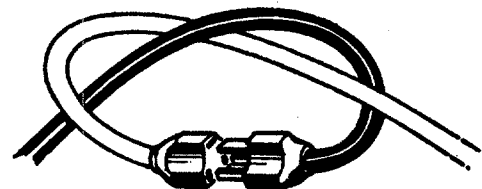


When replacing the brushes it is important that they are put back in the exact same way that they were removed.



REPLACE BRUSHES
WHEN WORN TO 3/8"

SERVICE NOTES



IF MOTOR FAILS TO START

1. Check connection between motor and extension cord.
2. Check connection between extension cords (if more than one is used.)
3. Check connection between power outlet and extension cord.
4. Check switch.
5. Check power outlet.

TO REMOVE MOTOR

1. Remove motor shroud.
2. Pull off motor leads.
3. Remove ground connection on motor frame.
4. Remove mounting bolts.