

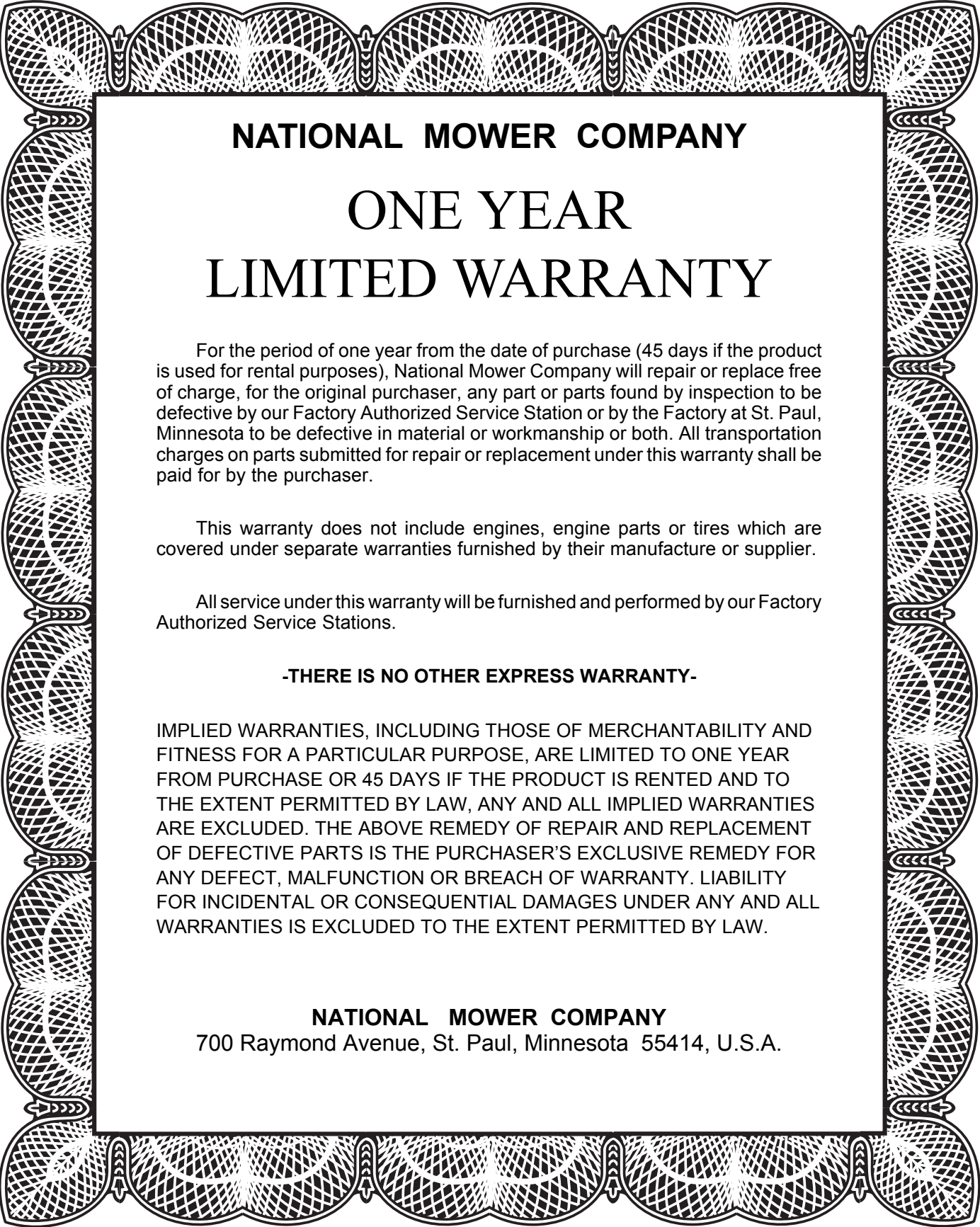
# **68" SR TRIPLEX – CE OWNER'S MANUAL**

**Includes Operation, Maintenance and  
Parts Lists for SR 68" and DL 68"**

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**NATIONAL MOWER CO.** 700 Raymond Ave., P.O. Box 14299, St. Paul, Minnesota 55114-0299, U.S.A.  
Phone (651) 646-4079 – Fax (651) 646-2887  
[www.nationalmower.com](http://www.nationalmower.com)

**OCTOBER – 2001**



# NATIONAL MOWER COMPANY

## ONE YEAR LIMITED WARRANTY

For the period of one year from the date of purchase (45 days if the product is used for rental purposes), National Mower Company will repair or replace free of charge, for the original purchaser, any part or parts found by inspection to be defective by our Factory Authorized Service Station or by the Factory at St. Paul, Minnesota to be defective in material or workmanship or both. All transportation charges on parts submitted for repair or replacement under this warranty shall be paid for by the purchaser.

This warranty does not include engines, engine parts or tires which are covered under separate warranties furnished by their manufacture or supplier.

All service under this warranty will be furnished and performed by our Factory Authorized Service Stations.

**-THERE IS NO OTHER EXPRESS WARRANTY-**

IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM PURCHASE OR 45 DAYS IF THE PRODUCT IS RENTED AND TO THE EXTENT PERMITTED BY LAW, ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED. THE ABOVE REMEDY OF REPAIR AND REPLACEMENT OF DEFECTIVE PARTS IS THE PURCHASER'S EXCLUSIVE REMEDY FOR ANY DEFECT, MALFUNCTION OR BREACH OF WARRANTY. LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES UNDER ANY AND ALL WARRANTIES IS EXCLUDED TO THE EXTENT PERMITTED BY LAW.

**NATIONAL MOWER COMPANY**  
700 Raymond Avenue, St. Paul, Minnesota 55414, U.S.A.

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## DECLARATION OF CONFORMITY

according to Directive 89/392/EEC

We NATIONAL MOWER COMPANY

.....  
(Name of supplier)

700 Raymond Avenue, St. Paul, Minnesota 55114 U.S.A.

.....  
(Full address of the manufacturer—authorized representative in the community must also give the business name and address of the manufacturer)

declare under our sole responsibility, that the product

68" NATIONAL TRIPLEX MOWER  
(Make and model)

to which this declaration relates corresponds to the relevant basic safety and health requirements of the Directive 89/392/EEC, (if applicable)  
and to the requirements of other relevant Directives:

EN292-1&2--EN294--EN349

.....  
(Title and/or number and date of issue of the other Directives)

(If applicable)

For the relevant implementation of the safety and health requirements mentioned in the directives, the following standard(s) and/or technical specification(s) has (have) been respected:

ANSI B71.4

.....  
(Title and/or number and date of issue of standard(s) and/or technical specification(s))

St. Paul, MN, USA  
10/15/2001

(Place and date of issue)



(Name, function and signature of the authorized person)

# SPECIFICATIONS

## DIMENSIONS & WEIGHT– MOWER

Overall Length .....	79.13" (201 cm)
Width, Wing Mowers Folded .....	61.8" (157 cm)
Width, Wing Mowers Down .....	76" (193 cm)
Height .....	39.37"(100 cm)
Weight (empty) .....	639.5 lbs. (290 kg)

## ENGINE – BRIGGS & STRATTON

Engine Type .....	Forced Air Cooled, 4-cycle, Horizontal Shaft, OHV Engine
Number Of Cylinders .....	One
Bore and Stroke .....	2.99" x 2.17" (76 x 55 mm)
Piston Displacement .....	215cc
Maximum Horsepower .....	7.5 hp (5.6 kW) / 3600 rpm (Corrected per SAE J1349)
Maximum Torque .....	12.5 ft/lbs (16.5 N-m) at 2500 rpm
Direction Of Rotation .....	Counterclockwise Facing The PTO Shaft
Fast Idle Speed .....	4000 rpm
Slow Idle Speed .....	1750 rpm
Fuel .....	Unleaded Gasoline (Petrol)
Fuel Tank Capacity .....	4.80 US qt (4.54)
Minimum Specific Fuel Consumption Ratio .....	240 gr/hp-hr (322 gr/kW-hr)
Oil .....	Engine Oil SAE 10W-30
Oil Capacity .....	1.90 US pt (.90)
Carburetor .....	Float Type with Fixed Main Jet
Balancing .....	Reciprocating Balancer
Ignition .....	Flywheel Magneto, Transistor Type
Spark Plug .....	Resistor Type
Starter .....	Recoil Starter with Automatic Compression Release
Governor .....	Mechanical
Lubrication Type .....	Splash with Low Oil Shut-off System
Air Cleaner .....	Dual Element
Muffler .....	Low Tone Type
Lighting Coil .....	12 V–25 W
Charging Coil .....	10 A
Net Weight (Engine) .....	59.1 lbs (26.8 kg)
Dimensions (L x W x H) .....	13.5" x 15.6" x 17.0" (344.5 x 395.5 x 432.5 mm)

## DISPOSAL NUMBERS

Gasoline (Petrol), Lead Free .....	54104
Engine Oil .....	54112
Fiberglass Parts .....	57103
Tires .....	57502
Gear Oil .....	54112
Grease .....	54202
Plastic Tanks .....	57127

## NOISE EMISSION AND VIBRATION

Sound*:	Operator Position .....	86 dBA
	Sound Power Level (LwA) .....	99 dBA
Vibration*:	Maximum Vibration 16.1 m/s <sup>2</sup> RMS	
	Location .....	Left Hand

\*Operating Condition: Engine rpm–3400, Unit Stationary

# IMPORTANT

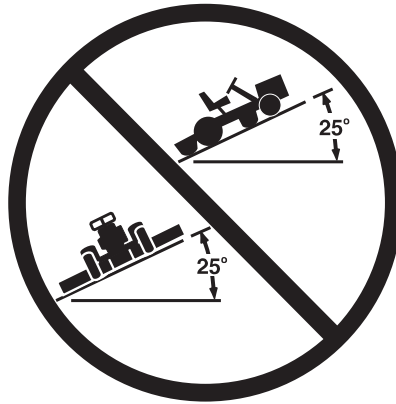
## National Mower Safe Operation Practices For Riding Mowers

1. Know control functions and how to stop quickly. READ THE OWNER'S MANUAL.
2. Wear approved safety glasses or goggles when operating the mower.
3. Do not allow children to operate mower. Do not allow adults to operate mower without proper instruction.
4. Do not carry passengers. Keep children and pets at a safe distance from an operating mower.
5. Clear the work place of objects which might be picked up by the blades and thrown.
6. Disengage all reel clutches and shift into neutral before attempting to start the engine (motor). Disengage main clutch before shifting reel clutches.
7. Disengage power to the reels and stop the engine (motor) before leaving the operator's position.
8. Disengage power to the reels and stop the engine (motor) before making any repairs or adjustments.
9. Disengage power to the reels when transporting or not in use.
10. Take all possible precautions when leaving the mower unattended, such as, shifting into neutral, setting the parking brake, stopping the engine and removing the ignition key.
11. Do not stop or start suddenly when going uphill or downhill. Mow up and down the face of steep slopes – never across steep slopes. **Do not exceed a slope of 25° in any direction.**
12. Reduce travel speed on slopes and in sharp turns to prevent tipping or loss of control. Use extreme caution when changing direction on slopes.
13. Watch for holes in the terrain and other hidden hazards.
14. Watch for dangerous traffic when crossing or near roadways.
15. Never direct the discharge of material from operating reels toward bystanders nor allow anyone near the mower.
16. Handle gasoline (petrol) with CAUTION - it is highly flammable.
  - a. Use an approved gasoline (petrol) container.
  - b. Never remove the fuel tank cap or add gasoline (petrol) to a running or hot engine. Never fill the fuel tank indoors. Wipe spilled gasoline (petrol) immediately.
  - c. Open garage doors to allow ventilation if engine is run inside – exhaust fumes are dangerous. Do not run engine in any enclosed area.
17. Keep the mower in good operating condition. Make sure that all safety switches are operating properly and all safety guards are in place at all times, except during servicing.
18. Keep all nuts, bolts, and screws tight to be sure that the mower is in a safe working condition.
19. Never store the mower, with gasoline (petrol) in the tank, inside a building where fumes could reach an open flame or spark. Allow the engine to cool before storing in any enclosure.
20. Keep the engine free of grass, leaves or excessive grease to reduce a fire hazard.
21. The mower and reels should be stopped and inspected for damage after striking a foreign object. The damage should be repaired before restarting and operating the mower.
22. Do not change the engine governor settings or overspeed the engine.
23. Proceed as follows when mowing:
  - a. Mow only in the daylight or in good artificial light.
  - b. Never make a cutting height adjustment while the engine (motor) is running.
  - c. Shut the engine (motor) off when removing grass or unclogging reels.
24. This machine is to be used only as a grass cutter or lawn mower.

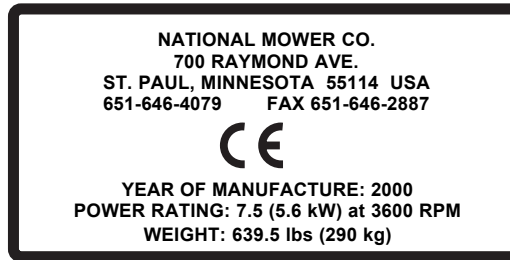
**WARNING**– California, USA residents are required by law (CA PRC 4442 & CA H & SC 13005) to equip their engines with spark arresters when operating in flammable vegetation. Arresters must be obtained from your engine dealer and are not available from National Mower Company.

# TRANSFER IDENTIFICATION

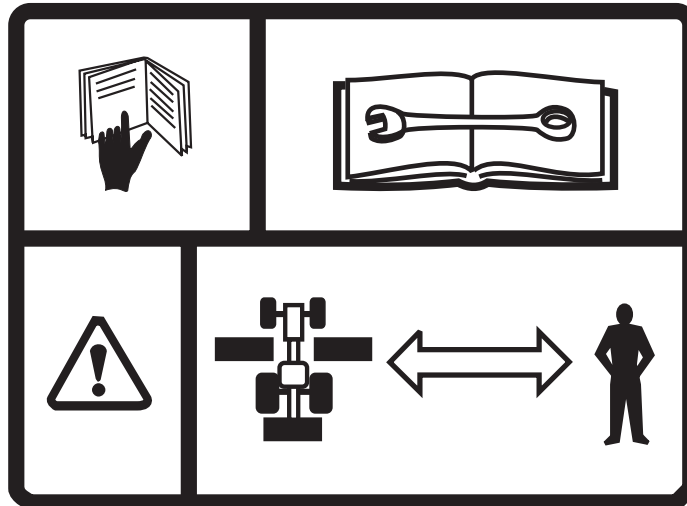
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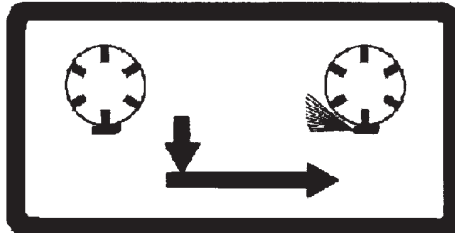


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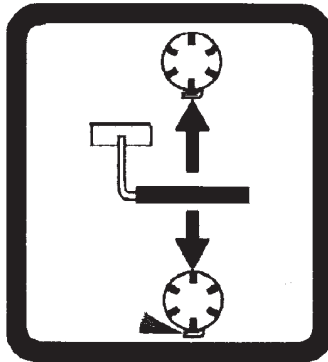




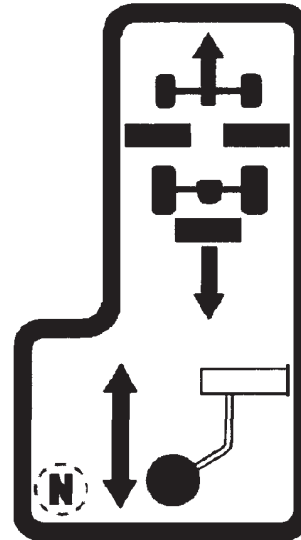
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7



8



9

NO.	PART NO.	TRANSFER DESCRIPTION
1	07358	Do not exceed 25° slope. Located on main belt shield.
2	07358	Manufacturer's identification and specifications. Located on the main belt shield.
3	07358	Read Operator's Manual. Refer to manual for adjustments. Caution: Machine is used only as a lawn mower. Keep bystanders away. Located on main belt shield.
4	07363	Sound power level. Located on main belt shield.
5	07363	Sound Level, operator's position. Located on main belt shield.
6	07359	Forward, Neutral and Reverse positions. Located on main belt shield.
7	07359	Rear mower clutch engagement. Located on the rear mower shield.
8	07359	Wing mower clutch engagement. Located on main belt shield.
9	07359	Engine clutch lever: Back, Neutral & Forward. Located on main belt shield.



## INTRODUCTION

This machine has been designed to meet European CE Safety Standards. Metric equivalents are provided wherever possible for users outside the United States.

This manual has been prepared by National Mower Company as an aid to users for assembly, maintenance, adjustment and ordering replacement parts. Additional

information will gladly be furnished by calling or writing the manufacturer or his authorized agent.

Please furnish us with the Model Number, Serial Number and Date of Purchase when contacting us about your machine. Designations of right, left, front and rear are used as if the operator was sitting in the mower seat.

## RECEIPT OF SHIPMENT

Carefully inspect your machine and crate for damage that could have occurred during shipment. If damages or shortages are noted, have the transportation company's representative note this on the bill of lading.

### NOTE

Claims for shipping damages must be noted by the consignee at the point of destination and filed with the transportation company that delivers the shipment.

## UNCRATING INSTRUCTIONS

In order to prevent possible damage to the machine or personal injury, the following uncrating procedure must be followed:

1. Position Crate 1 as shown in Figure A, on a hard, level surface.
2. Cut and remove all Steel Banding (2, Fig. A).
3. Remove the entire top of the crate. Unbolt Seat (3, Fig. A) from crate bracing and lay seat aside for installation later. Save the bolt and washer to use for mounting the seat mounting member.

4. Lift Rear Mower (4, Fig. A) off the crate supporting members and set aside for later attachment.

### CAUTION

**Handle mowers carefully with protective gloves. Reels rotate freely and are very sharp.**

5. Make sure Wing Mowers (5, Fig. A) are secure to the mower frame with Wing Mower Hooks (15, Fig. B).
6. Knock down all sides of crate and remove. Roll mower backwards off of crate base.

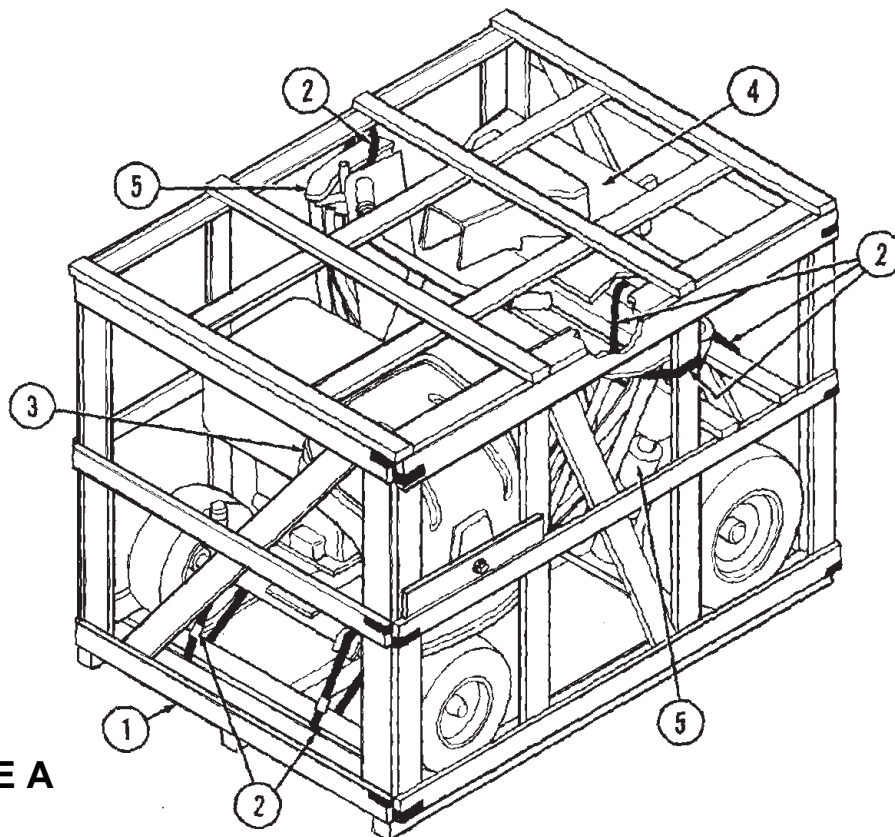


FIGURE A

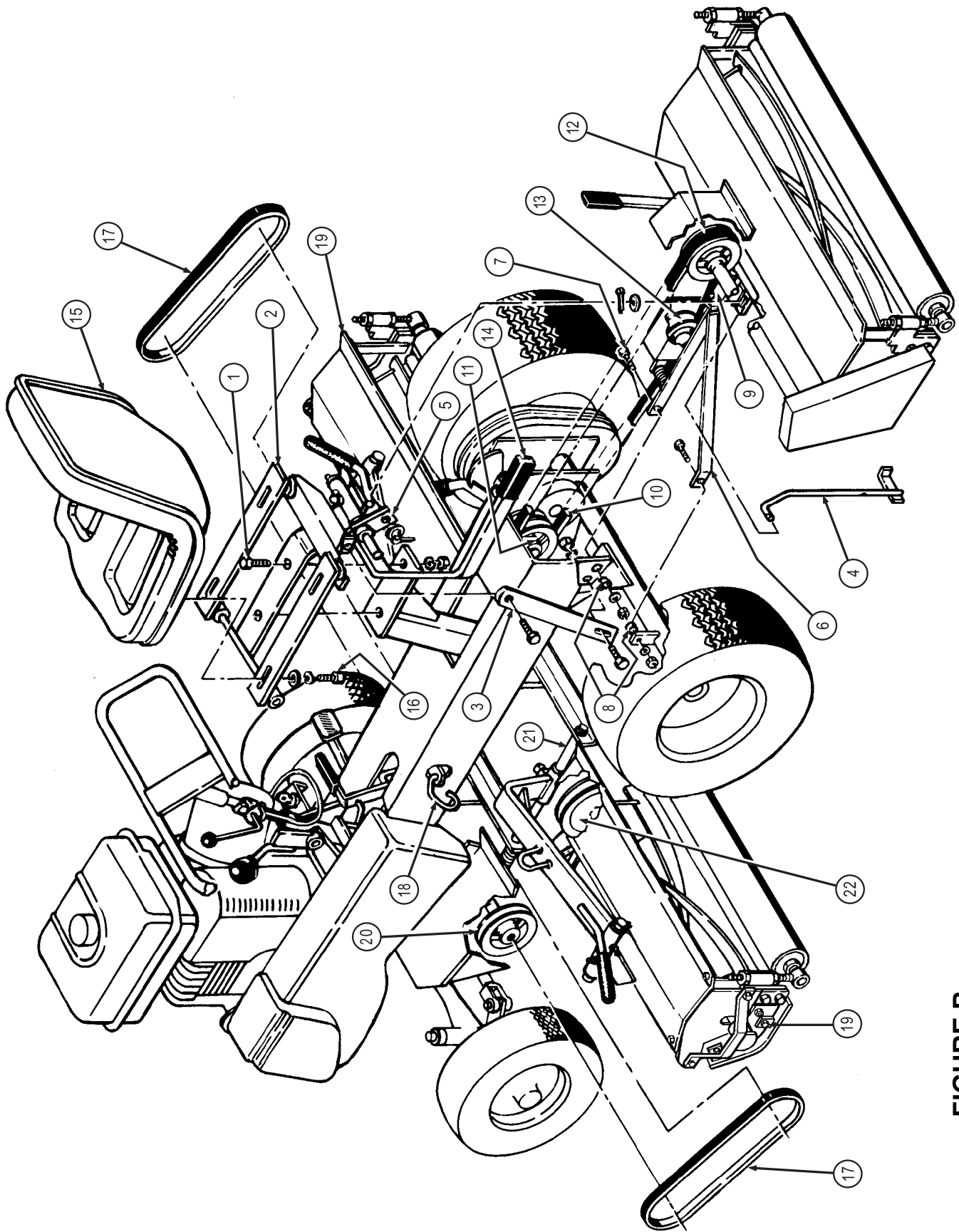


FIGURE B

# ASSEMBLY INSTRUCTIONS

## REAR MOWER

1. Remove two 1/2" x 1-1/2" Hex Head Bolts (1, Fig. B) and nuts from the shipping position in the Seat Hinge assembly (2, Fig. B). Position Seat Hinge Assembly with pivot facing rearward, over the seat mount of the mower frame and fasten with Bolts (1, Fig. B) and lock nuts.
2. Pivot Seat Brace (3, Fig. B) from the axle so that the top end aligns with the tab at the back of the seat hinge assembly. Fasten with a 5/16" x 1" Hex Head Bolt, Lock Washer and Hex Nut.
3. Remove the Lifter Tee (4, Fig. B) from the shipping position in the Pivot Tube (5, Fig. B) and set aside cotter pin and washer for later use. Insert the rod end of lifter tee through the slotted hole in the pad on the rear mower frame and secure with the cotter pin and washer as shown.
4. Fasten Rear Mower Pull Rod (6, Fig. B) inner leg by removing Bolts (7, Fig. B) and reinserting it through pull rod and attaching flanges on tractor axle. Note that Spacers (8, Fig. B) must be in each pivot point to allow free movement of the pull rod.
5. Attach Pull Rod (6, Fig. B) to Pivot Tube (9, Fig. B) with Pin (3, Fig. K on page 17) and Spacers (1, Fig. K). NOTE: Before completing assembly, it will be necessary to refer to the rear Mower Drive Belt Tension section and Figure K, page 17 for adjusting belt tension.
6. Install Rear Mower Belt (10, Fig. B) from Countershaft Pulley (11, Fig. B) to outer Drive Pulley (12, Fig. B). Idler Pulley (13, Fig. B) must ride on top of lower belt to provide proper tension. NOTE: It will be necessary to raise rear mower to allow enough slack to get belt over pulleys.

## SEAT

1. Fasten Seat (15, Fig. B) to seat mounts by threading four 5/16" x 1" Hex Bolts (16, Fig. B), through 5/16" lockwashers, through holes in seat mounts and into the threaded holes in the bottom of the seat.

## WING MOWERS

1. Remove Wing Mower Belts (17, Fig. B) from the steering column.
2. Unlock Hooks (18, Fig. B) from Wing Mower Assemblies (19, Fig. B), lower them carefully to the ground. Slip wing mower belts over Countershaft Pulleys (20, Fig. B).
3. Block mower wheels to prevent mower from moving forward. Pull Wing Mower Assemblies (19, Fig. B) forward so that they slide on Pull Rods (21, Fig. B) and compress springs. This will allow enough slack to enable belts to be installed over Reel Pulleys (22, Fig. B).

## ENGINE

### CAUTION

MOWER IS SHIPPED WITH DRY ENGINE. DO NOT START ENGINE UNTIL OIL IS ADDED TO CRANKCASE. See Engine Manual for additional information.

## DIFFERENTIAL

Grease has been installed in the differential at the factory. Refer to the Maintenance Section, page 7, for additional information.

# OPERATION

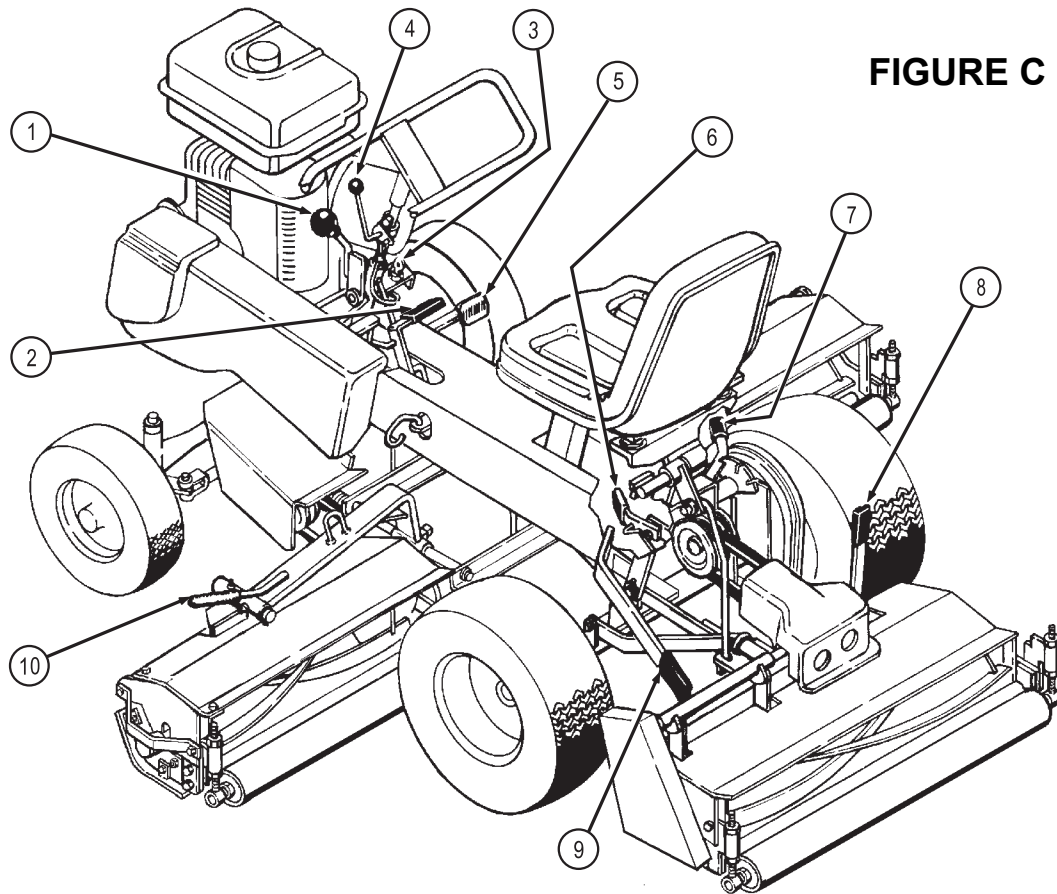


FIGURE C

The following is a description of the machine controls and their function. Refer to Figure C.

1. **Engine Clutch Lever** (labeled Mowing Clutch) – Engages power for travel and mowing. Down position is disengaged and up position is engaged. **IMPORTANT** – Engage slowly before full engagement. Always disengage the drive when stopping or leaving the machine. See Caution Decal.

## CAUTION

The engine clutch lever has an electrical interlock and engine will not start if clutch is engaged. For added safety, the interlock system should be checked periodically to ensure that it is adjusted to function properly.

2. **Wing Mower Clutch** – Engages drive to wing mowers. Pull lever back and down to engage. Never engage drive unless wing mowers have been lowered to cutting position.

3. **Ignition Key Switch** – Provides a means to secure the mower when unattended. Turn the key clockwise to unlock the ignition.

4. **Throttle Control** – Regulates mowing and travel speeds. Moving the control handle back or lowering it will reduce engine speed for starting and idling engine. Push forward to increase engine speed. Never operate mower at speeds faster than necessary to do a good, safe job.

5. **Brake** – Is designed to slow the mower and lock the rear wheels in the full stop position. Depress the foot pedal to engage. Note: It is best to slow the mower with the throttle and then disengage clutch lever before applying brake. This prevents excessive wear and engine overload.

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6. **Parking Brake Lever** – Provides a lock for the brake. Push brake lever forward, over center, to lock. Pulling brake lever back, toward the rear of the machine will disengage the brake.

7. **Shifter Lever** – Located on the mower differential, this control has three positions: Forward, Neutral (center position), and Reverse. The lever must be pulled toward the center of the machine to clear the notch in the stop disc and positioned securely in the new notch. **IMPORTANT:** Never shift while machine is in motion because it could cause damage to the gears. Always disengage engine clutch before attempting to shift.

8. **Rear Mower Clutch Shifter Lever** – Engages drive to the rear mower. Pull lever forward and toward the center of the machine to engage sliding jaw clutch. To disengage, pull lever forward and out to engage locking pin. Never engage the drive unless the rear mower has been lowered to the cutting position.

9. **Rear Mower Lifter Handle** – Raises rear mower to the transport position. Pull handle up, forward and over center to lock it in an up position.

10. **Wing Mower Lifter Handles** – Raises wing mower to the transport position. Lift wing mowers until they can be secured with hooks on frame.

## CAUTION

Moving machinery can be dangerous if not operated properly. Follow all safe operating suggestions listed on Safe Operation Practices, Page 6.

# MAINTENANCE

## LUBRICATION

Figure D shows the top view of the 68" Triplex Mower with guards removed. Lubricate the machine at the recommended locations and intervals using the proper lubricants to ensure maximum service and long life of your machine. Refer to the engine manual (separately furnished) for proper lubrication and maintenance instructions.

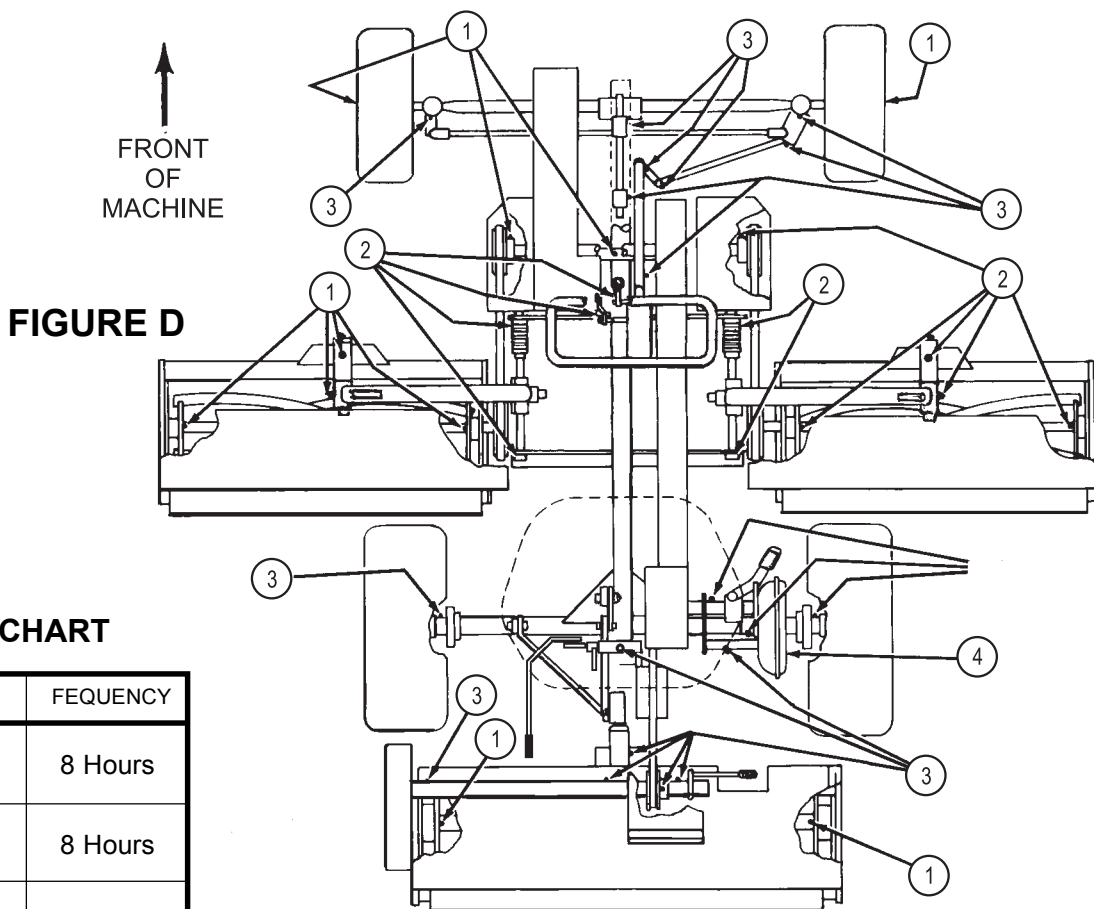
Since the mower does not operate at high speeds, the grease level in the differential is not critical providing that there is sufficient grease to coat the gears.

Unless leakage is evident, it is recommended that the

grease be checked once each year. Check grease level by loosening the bolts in the differential case flanges and spreading case halves. It is not necessary to totally disassemble the case or remove the wheels for this inspection. Add Multi-purpose Gear Grease such as Pennzoil No. 303 or equivalent if necessary. Total grease capacity is 1-1/2 pounds.

**CAUTION**

Do not use oil in the differential case in place of grease—it will leak through the seals.

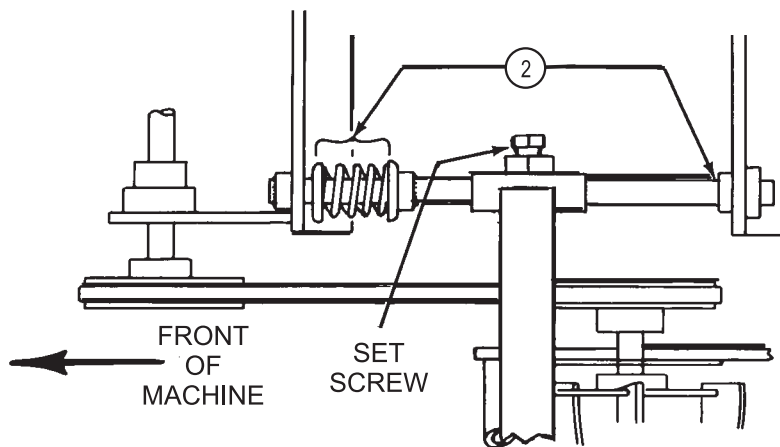


### LUBRICATION CHART

ITEM	GREASE	OIL	FEQUENCY
1	■		8 Hours
2		■	8 Hours
3	■		30 Hours
4	Gear Grease		Yearly

### IMPORTANT

Figure E shows the top view of the left wing mower with guards removed and shows the proper lubrication locations. These areas on both wing mowers must be free of dirt and grass clippings and be well lubricated for proper drive belt tension and operation. Support collars for the wing mower pull rods must be kept in alignment to maintain belt tension.



**FIGURE E**

## BED KNIFE REPLACEMENT

When the bed knife becomes damaged or too worn to keep sharp, it must be replaced. Design improvements have made bed knife replacement easier with bolt-on construction. Follow the procedure below.

1. The backbar (1, Fig. F), bed knife (2, Fig. F) and fasteners have been assembled at the factory under tension. To ease replacement and prevent misalignment of components, the leading edge of the backbar must be tack welded two or three places before the old fasteners are removed.

2. Remove shoulder nuts (3, Fig. F) and flat head screws (4, Fig. F). If shoulder nuts are badly rusted or

corroded, they may have to be cut off and screws driven out to be removed.

3. Clean the bottom surface of the backbar for maximum metal contact with the new bed bar.

4. Fasten the new bed knife to the bottom of the backbar in the position shown (bent edge up). Shoulder of shoulder nuts must be seated firmly in the backbar and screws must be flush with the bottom of the bed knife.

5. Torque shoulder nuts 35 to 40 ft/lbs.

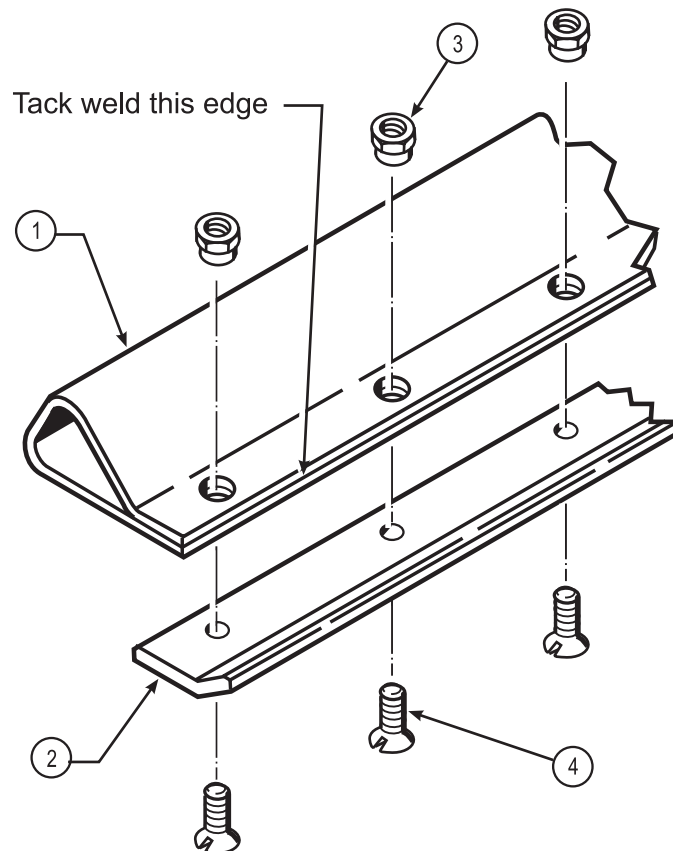


FIGURE F



## LAPPING PROCEDURE

### INTRODUCTION

Back lapping is a very important step in maintaining sharp reel blades on the rear and wing mowers.

This procedure should be performed when the reel blades and the bed knife become slightly rounded and the grass is not cut cleanly with only a slight bed knife adjustment. Also, after grinding the bed knife and reels, you should back lap to establish a perfect match between the bed knife and reel blades.

### RECOMMENDED STEPS

1. Adjust the bed knife to the reel so that the bed knife is level with the reel and light contact is maintained.
2. Reels must be run in a reverse direction to be lapped. Remove the lower drive belts and attach a back lapping machine (not supplied by National Mower) to the reels. Follow the instructions furnished by the machine manufacturer.

3. Apply the lapping compound with the reels running, using a 2" or a 3" brush. Apply the compound evenly to the moving blades.

Many types of compounds are available for lapping. However, we recommend a good pre-mixed water soluble compound. Many different grit ranges are available. Pre-mixed compound saves the time required to mix, eliminates the waste of abrasive, rinses off easily with water and is available in all grit ranges from course to extra fine.

4. Stop the reel and examine both bed knife and reel blades to see that the cutting edges are uniformly sharp. If not, gradually tighten the reel adjuster bolts (see Figure I, Page 16) and repeat Step 3 until the proper sharpness results.

5. Rinse off the compound thoroughly with water to remove all abrasive. Check for sharpness and readjust the bed knife if necessary. Reel to bed knife contact should be adjusted to easily cut a sheet of paper (see Adjustments, Page 16 for detailed instructions).

### DANGER !

Be extremely careful not to let the brush, your fingers or your clothing get caught in the reels. Use approved safety glasses to protect your eyes from flying particles and abrasives.

### GRINDING

Reels must be ground at 25° in the direction shown below by the arrow in Figure G. Back grind until reel blades are free from roundness, dents and nicks. Spin grind to remove all burrs. All blades must be on the same diameter. For maximum cutting efficiency, grind bed knife top and front edges at 5° as shown in Figure H.

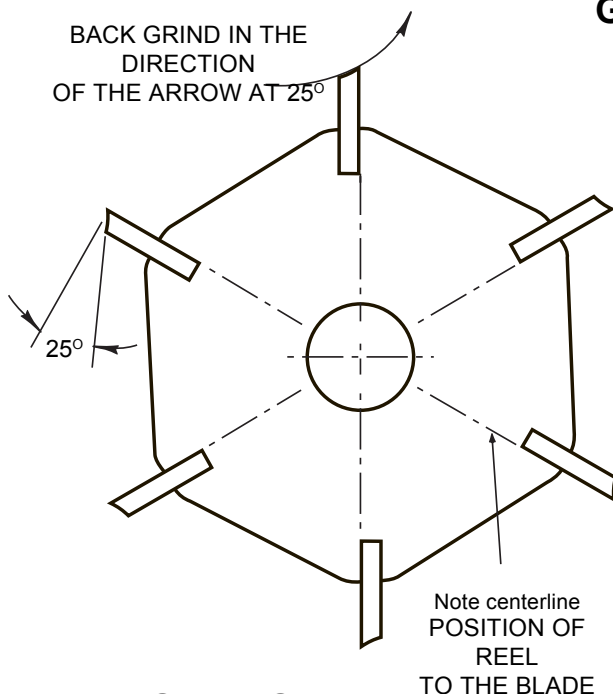


FIGURE G

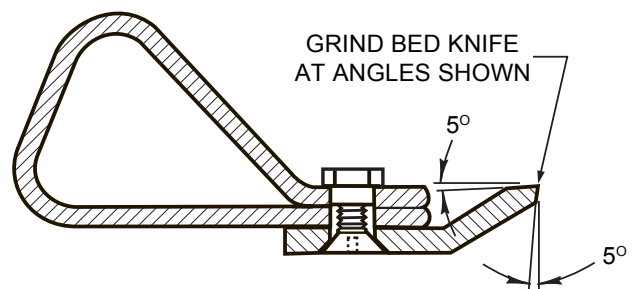


FIGURE H

# ADJUSTMENTS

**DANGER !**

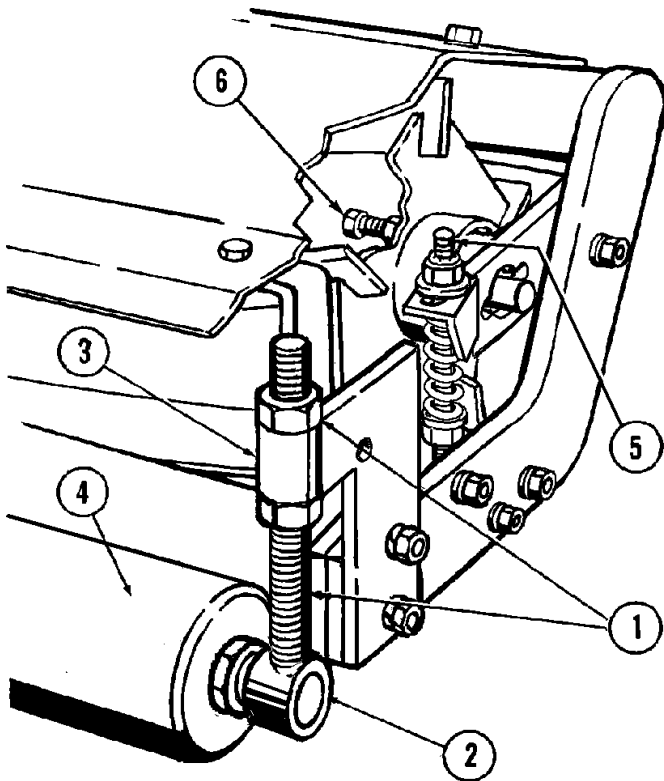
To ensure safety, all of the following adjustments must be made only after the engine clutch lever has been disengaged and the ignition key and spark plug wire have been removed.

## HEIGHT OF CUT

The height of cut is variable and may be adjusted on both wing mowers and the rear mower by loosening the top and bottom Adjusting Nuts (1, Fig. 1) which hold Roller Adjusters (2, Fig. 1) in Roller Brackets (3, Fig. 1). Roller (4, Fig. 1) may then be moved up and down.

It is important to get all rollers adjusted to the same height so that there will be uniform cutting across the

**NOTE**  
Guards removed or cut  
away to show detail



**FIGURE 1**

entire width of the mower. Do not adjust by sight. Place the mower on a hard, level surface. Loosen the Adjusting Nuts (1, Fig. 1) on each side of reel assemblies and place a board or gauge plate of the desired height under each bed knife back bar. Tighten bolts securely.

## REEL TO BED KNIFE ADJUSTMENT

The reel is adjusted to a fixed position bed knife. This construction allows a more rugged and durable frame and retains the proper adjustment longer. The Reel Adjuster Bolt (5, Fig. 1) regulates reel distance from the bed knife.

To reduce the distance, turn the upper hex adjuster nut on each side of the reel down. Proceed slowly and do not overadjust—use about 1/8 of a turn on each side at first. Do not adjust one side more than the other unless the reel is obviously out of alignment. Do not get the reel so tight that it is hard to turn by hand. A too tight reel will wear much faster. Ideally, the reel should “wipe” or lightly touch the bed knife. It is not necessary to adjust or change the position of the lower adjustment nut.

Proper cutting action may be tested by holding paper strips between the reel and the bed knife. Turn the reel by hand and check to see if the assembly cuts the paper all the way across the width of the bed knife. Make sure that the adjusting and the locking nuts on both side are tightened securely.

**DANGER !**

Handle reel assemblies carefully with protective gloves.

Reels rotate freely and are very sharp. Special care should be taken in the area where the reel contacts the bed knife.

## REEL END PLAY ADJUSTMENT

With extended use, normal wear of the reel bearings will cause end play. This condition could cause uneven wear to mower parts and uneven cutting of turf.

Test for end play periodically by trying to move the reel from side to side in the frame. If there is ANY movement, adjust the bearings by loosening the lock nut on the adjustment bolt (6, Fig. 1) which is located on the inside right end of the reels, and turning the adjustment bolt IN one half turn or less. Do not overtighten. An overtightened bearing will cause excessive bearing wear. Test again for end play and if reel is rotating freely and end play is not noticeable, tighten the lock nut.



**BRAKE ADJUSTMENT**

The foot brake is properly adjusted if it slows the machine when depressed and can be locked when the pedal is depressed fully.

Adjust brake tension by removing cotter pin and brake pedal pin and turning brake clevis located under pedal on brake rod. When adjustment is complete, attach clevis to pedal with pin and cotter pin.

**WING MOWER DRIVE BELT TENSION**

Proper Belt tension allows mowers to be driven without slippage but loose enough to be deflected slightly at a point midway between the pulleys. An overtight belt will cause excessive bearing wear and a slipping belt causes excessive belt wear. **IMPORTANT:** Never allow oil to get on the belt which could cause slipping.

Adjust tension by loosening set screw (Fig. E) in the wing mower pull arm, sliding the mower rearward and retightening set screw.

**REAR MOWER DRIVE BELT TENSION**

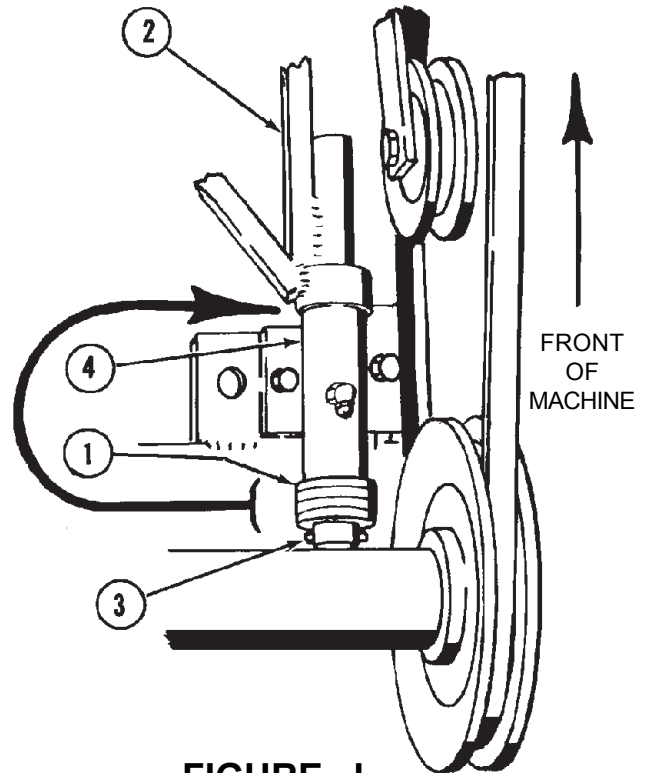
Follow the recommendations above for determining proper tension and refer to Figure J.

Spacers (1, Fig. J) are provided on the rear mower Pull Rod (2, Fig. J) to adjust the belt tension. Remove Pin (3, Fig. J) from the end of the pull rod and slip out the pull rod from the Pivot Tube (4, Fig. J). Move as many spacers as necessary to the location indicated and reassemble.

**ENGINE DRIVE BELT (Engine to Main Countershaft)**

Belt tension is increased by loosening the four engine mounting bolts and sliding the engine forward in the slotted frame holes. Test for the proper tension as detailed

**NOTE**  
Guards removed to show detail



**FIGURE J**

for the wing mower adjustment. When tension is correct, tighten all the bolts securely.

**MAIN DRIVE BELT (Main Countershaft to Rear Drive)**

Belt tension is increased by loosening the four bolts holding the Main Countershaft Housing (45, Fig. 3) and sliding the housing forward in the slotted frame holes. **NOTE** - It will probably be necessary to loosen or remove belt guards to reach the adjustment bolts. Also, if this belt is adjusted, it will probably be necessary to readjust the engine belt.

## TROUBLE-SHOOTING

### Tractor Unit

Situation	Things To Check
Engine will not start	Turn ignition switch to on Ensure that there is sufficient gasoline (petrol) in the tank Make sure safety switch is making contact and mowing clutch is down Look for a loose wire on Ignition or spark plug wire not connected Operator must be positioned on seat to depress presence switches Interlock system inoperative—check wiring, see Figure K
Tractor will not move forward	Gear selector must be in one of the drive positions Engine drive clutch must be engaged (rearward and up) Drive belts too loose (see page 17) Visually check to see that pulleys are not slipping on shafts If everything above is OK, check for a damaged gear in the gear box
Tractor will not move rearward	Same as above. If all of the above check OK, check the reverse gear in the gear box
Tractor will not stop	Ensure that the main clutch is disengaged (brake will not stop engine) Brake adjustment or service may be needed (see page 17)

### Cutting Units

Situation	Things To Check
Wing and/or rear mower will not cut	Bed knife to reel position may be out of adjustment (see page 16) Drive belts or drive chains may need tightening Visually check that both the drive pulleys and the shafts are rotating
Cutting units will not turn.	Clutches may not be engaged Look for anything that could be jammed between the reel and the bed knife Drive belts or drive chains may need tightening Visually check that both the drive pulleys and the shafts are rotating
Units will not stop turning	Disengage all clutches
Uneven cut	Height of cut not the same on each cutting unit (see page 16) Check to see if any part is bent Something jammed in cutting unit pivots, not allowing them to float

**Electrical System (DL 68" only)** Check wiring connections and switch operation—see Figure 9, page 34

**DANGER !**

**All adjusting must be made with the engine off.  
Do not do any investigation of the working parts of the machine with the motor running.  
Always turn the engine off!**

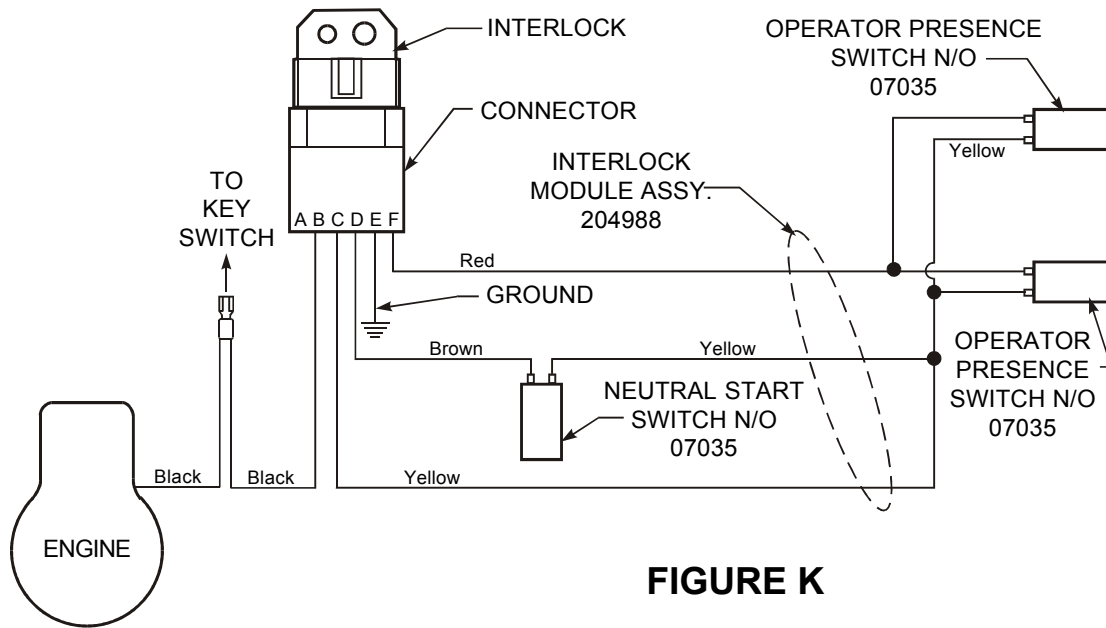


FIGURE K

## PARTS LIST

*Note: For your records and future ordering, fill in the following information.*

DATE PURCHASED	MODEL NO.	SERIAL NO.

### ORDERING INFORMATION

**When ordering replacement parts, always furnish:**

1. Your complete name, address and phone number.
2. Model Number and Serial Number (stamped on the main frame rear axle gusset below seat).
3. Part Number (it is recommended that the correct number be verified with a current Master Price List).
4. The full Description of the part.
5. Quantity desired (quantity shown is the total number of parts contained in the particular view shown).

If the Part Number and the Description of your order do not agree, the Part Number will be used to fill your order.

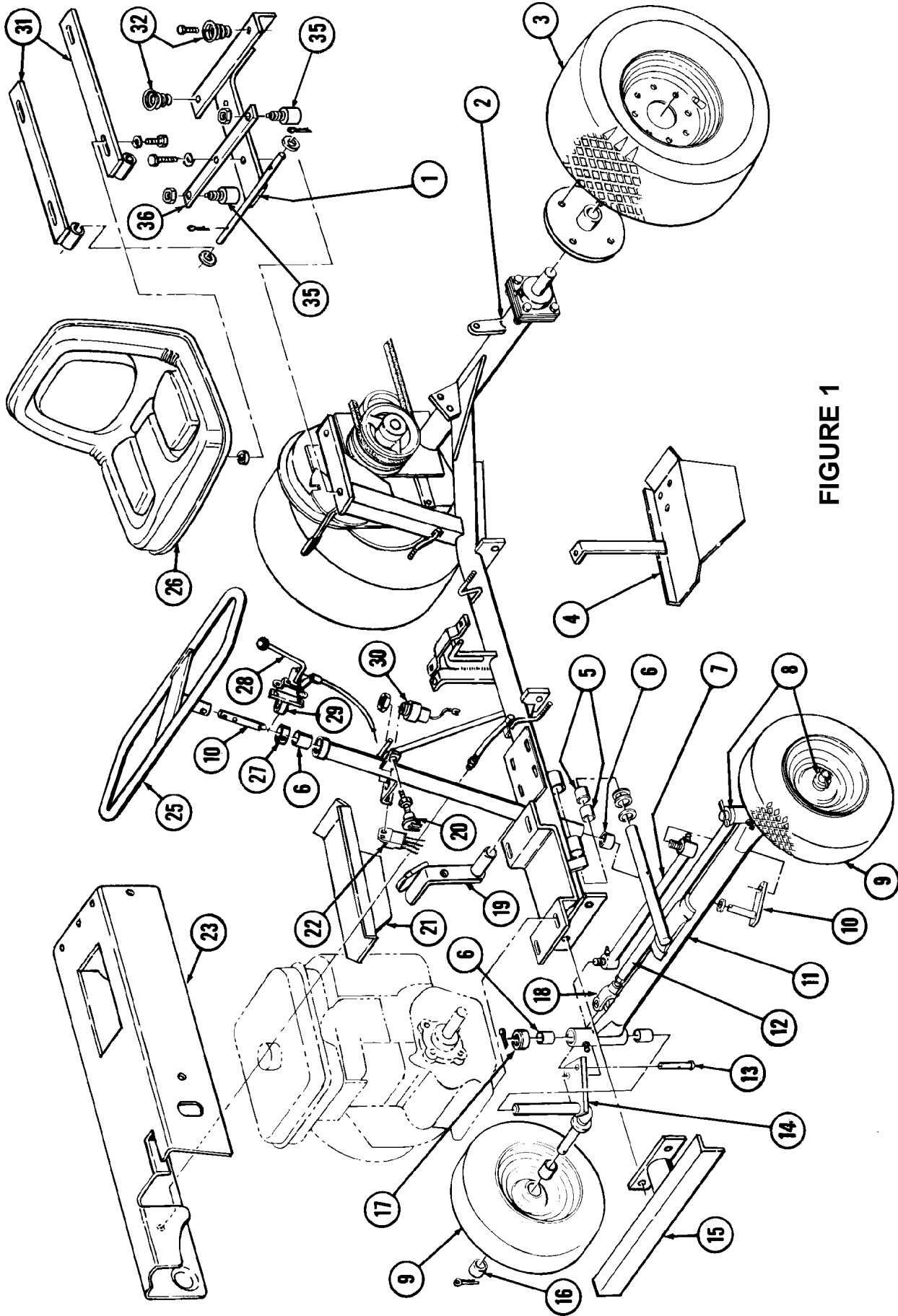


FIGURE 1

WHEN ORDERING, STATE THE MODEL AND SERIAL NUMBERS OF THE MOWER

**FIGURE 1 — FRAME & RUNNING GEAR**

Item	Part No.	Description	Qty.
1	200818	SEAT MOUNT	1
2	200002	FRAME	1
3	07018	REAR TIRE & WHEEL ASSEMBLY	2
4	200085	FOOT REST, Left Hand	1
5	201961	BUSHING, Axle Pivot	2
6	06002	BUSHING, Spindle and Steering Post	6
7	09014	DRAG LINK	1
8	200193	KING PIN, Left Hand	1
9	07038	TIRE & WHEEL	2
10	200094	SHAFT, Steering	1
11	200186	AXLE ASSEMBLY, Front	1
12	201851	TIE ROD	1
13	04003	PIN, Clevis Tie Rod	1
14	200196	KING PIN, Right Hand	1
15	200033	BUMPER, Front	1
16	06112	BEARING, Wheel Hub	4
17	02602	DUST CAP, 3/4" I.D.	2
	02603	DUST CAP, 7/8" I.D.	2
18	200863	CLEVIS, Threaded, Tie Rod	1
19	200104	PEDAL, Brake	1
20	07035	SWITCH, Safety	1
21	200139	FOOT REST, Right Hand	1
22	204988	SWITCH, Interlock	1
23	09016	GUARD, Main Belt	1
24	—	Not used	—
25	200200	STEERING WHEEL	1
26	07036	SEAT	1
27	200199	COLLAR, Steering Shaft	1
28	07032	THROTTLE CONTROL, (Includes conduit and wiring)	1
29	200203	BRACKET, Throttle Control	1
30	07034	SWITCH, Key, Briggs & Stratton and Kawasaki	1
31	200814	HINGE, Seat	2
32	04512	SPRING, Seat	2
33	-----	DECALS (Transfers) for CE Models — See Pages 7 & 8	AR
34	200867	BALL JOINT	2
35	07035	SWITCH, Seat	2
36	204987	BRACKET, Seat Switch	1

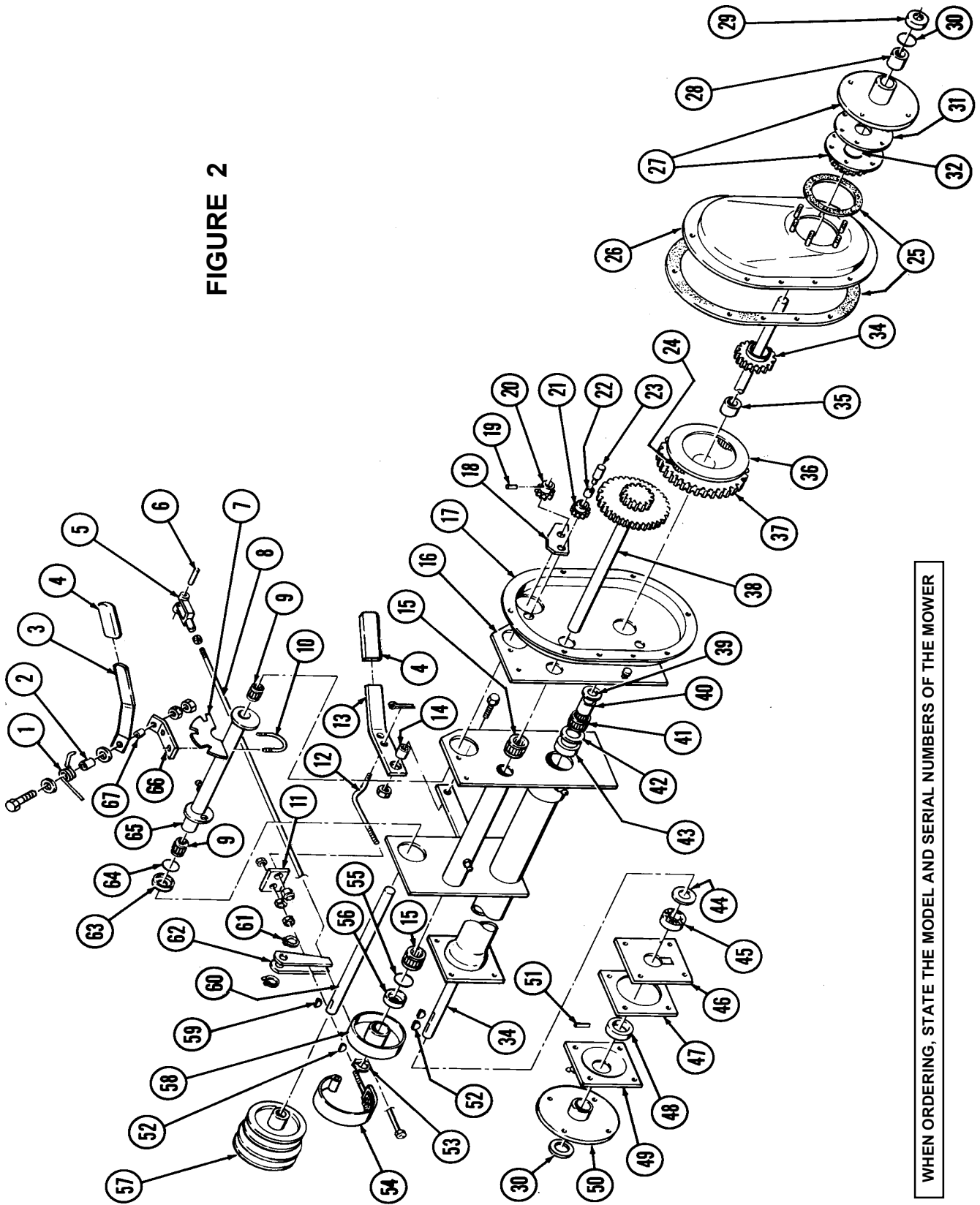


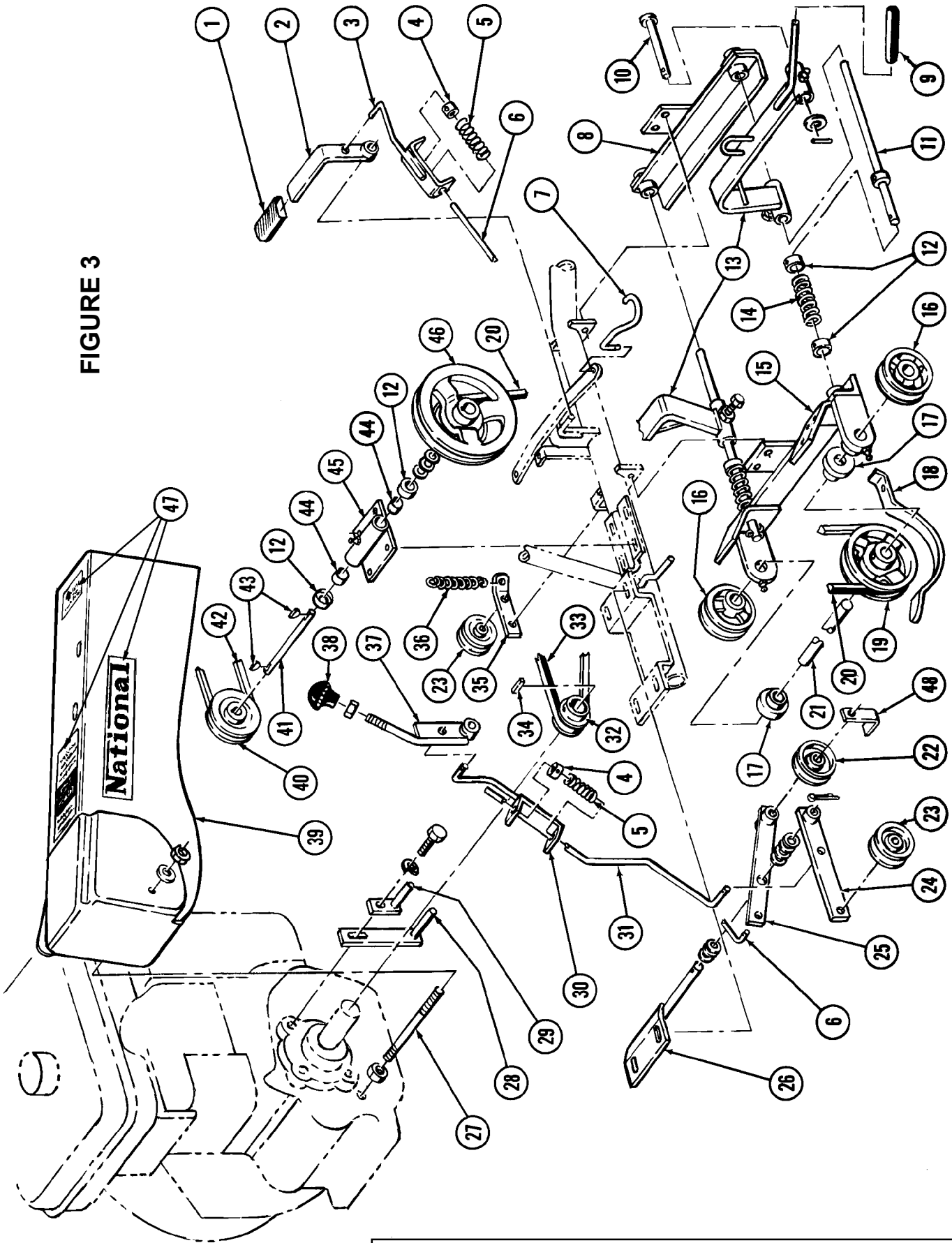
FIGURE 2

WHEN ORDERING, STATE THE MODEL AND SERIAL NUMBERS OF THE MOWER

FIGURE 2 — REAR END

Item	Part No.	Description	Qty.	Item	Part No.	Description	Qty.
1	04502	SPRING, Shifter Lever	1	36	09012	RETAINING RING, Pinion gear	1
2	200675	BUSHING, Shifter Lever Bushing	1	37	200066	BULL GEAR ASSEMBLY, Complete	1
3	200064	SHIFTER LEVER	1	38	200070	SHAFT UNIT, Intermediate	1
4	07007	GRIP, Shifter	1	39	02607	WASHER, 1-1/8" I.D.	1
5	04021	CLEVIS, Brake	1	40	200088	SLEEVE, Axle Bearing	1
6	04022	PIN, Brake Pedal, 3/8" x 1-1/4"	1	41	06103	BEARING, Right Axle	1
7	200061	STOP DISC, Shifter	1	42	02510	SPACER, Right Axle	1
8	200103	ROD UNIT, Brake	1	43	03510	SEAL, Rear Axle	1
9	06102	NEEDLE BEARING, Rear Countershaft	2	44	02510	WASHER, Bearing, Left Axle, 1-1/8"	1
10	08010	U-BOLT, Shifter	1	45	06104	BEARING, Left Axle	1
11	201432	BRACKET, Parking Brake Pull	1	46	200687	SHIM, Left Axle, 10 Ga.	AR
12	08037	ROD, Formed, Parking Brake	1	200821	SHIM, Left Axle, 14 Ga.	AR	
13	201433	LEVER, Parking Brake	1	47	200685	SPACER, Left Axle, 1/32"	AR
14	200676	BUSHING	1	200688	SHIM, Axle Spacer, 22 Ga.	AR	
15	06101	NEEDLE BEARING, Intermediate Shaft	2	200095	COLLAR, Rear Axle	1	
16	07003	GASKET, Back Plate Cover	1	49	200096	CAP, Left Axle	1
17	200234	COVER, Differential Case, Inside	1	50	200090	WHEEL HUB, Left Rear	1
18	200051	SLIDING WASHER, Differential Case	1	51	04016	PIN, Collar, Rear Axle, 1/4" x 1-3/4"	1
19	04008	PIN, Spring (Roll Pin), 5/16" x 1-1/8"	1	52	04013	KEY, Woodruff, #11	4
20	200054	GEAR, Shifting, 11 Tooth	1	53	04020	LOCK RING, 7/8"	1
21	200050	GEAR, Reverse	1	54	200099	BRAKE BAND ASSEMBLY	1
22	06003	BUSHING, Reverse Gear	1	55	03502	O-RING, 7/8"	1
23	200049	SHAFT, Reverse Gear	1	56	02603	DUST CAP, 7/8"	1
24	200069	PINION, Differential	4	57	03618	PULLEY, Step	1
25	07009	GASKET SET, Differential	1	58	200097	BRAKE DRUM	1
26	200065	COVER, Differential Case, Outside	1	59	04012	KEY, Woodruff, #9	1
27	200079	HUB, Rear Wheel, Right	1	60	200055	SHAFT, Shifting Countershaft	1
28	06005	BUSHING, Rear Wheel Hub	2	61	04011	LOCK RING, 3/4"	1
29	200680	DUST WASHER, 1-1/8"	1	62	200102	LEVER, Brake Band	1
30	03504	O-RING, 1-1/8"	1	63	02602	DUST CAP, 3/4"	1
31	200084	SPLIT DISC SEAL, Wheel Hub, Right Rear	1	64	03511	O-RING, 3/4"	1
32	03503	SEAL, Oil	1	65	200056	COUNTERSHAFT CARRIER UNIT, Shifting	1
34	200075	AXLE ASSEMBLY, Rear	1	66	200063	CARRIER, Shifter	1
35	06004	BUSHING, Bull Gear	2	67	200676	BUSHING, Shifter Lever	1

FIGURE 3

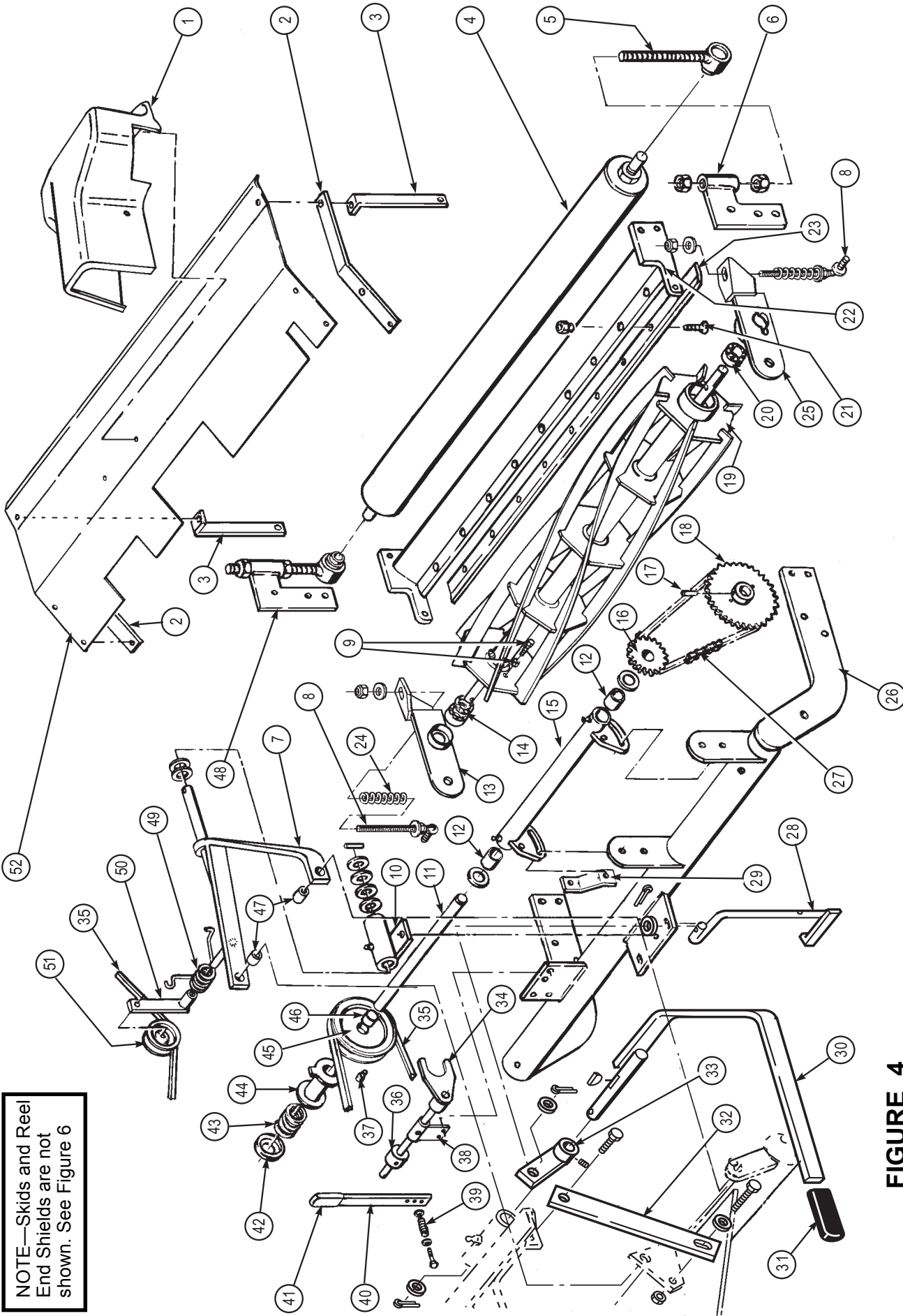


WHEN ORDERING, STATE THE MODEL AND SERIAL NUMBERS OF THE MOWER



FIGURE 3 — DRIVE MECHANISM & SIDE SUPPORTS

Item	Part No.	Description	Qty.	Item	Part No.	Description	Qty.
1	07023	GRIP, Lever, '96 and up	1	25	200176	ARM, Countershaft Idler	1
2	200167	LEVER, Lower Countershaft Control	1	26	200173	BRACKET, Idler Pivot	1
3	200170	ROD	1	27	202445	STUD, Belt Guide	1
4	200182	COLLAR, Lock	2	28	201541	BELT GUIDE, Lower	1
5	04503	SPRING	2	29	201538	BELT GUIDE, Upper	1
6	200172	ROD, Countershaft Idler Control	1	30	200165	ROD, Main Clutch, Upper	1
7	200655	HOOK, Wing Mower, Left Hand	1	31	08021	ROD, Main Clutch, Lower	1
	200656	HOOK, Wing Mower, Right Hand	1	32	03609	PULLEY, Motor	1
8	200137	PULL ANGLE, Wing Mower, Rear	1	33	03903	BELT, Engine, Kawasaki, 6844 Gates Rated	1
9	07226	GRIP, Wing Mower Arm	2	34	200208	KEY, Square, Engine,	1
10	201880	PIN, Wing Mower Arm	2	35	200184	ARM, Main Belt Idler	1
11	200151	PULL ROD, Wing Mower	2	36	04501	SPRING, Main Belt Idler Arm	1
12	02602	DUST CAP, 3/4" I.D.	4	37	200163	LEVER, Engine Clutch	1
13	201536	PULL ARM, Wing Mower, Left and Right Hand	2	38	07024	KNOB, Clutch Lever	1
14	04505	SPRING, Wing Mower Pull Rod	2	39	09002	GUARD, Engine Clutch	1
15	200128	CARRIER, Lower Countershaft	1	40	03606	PULLEY, Main Countershaft	1
16	03615	PULLEY, Lower Countershaft	2	41	200157	COUNTERSHAFT, Main	1
17	06105	BEARING, Lower Countershaft	2	42	03902	BELT, Drive, B66	6
18	200136	BELT GUIDE, Pulley	1	43	04013	KEY, Woodruff, #11	2
19	03603	PULLEY, Lower Countershaft Drive	1	44	06006	BUSHING, Main Countershaft Housing	1
20	03901	BELT, Countershaft, A29	1	45	200154	HOUSING, Main Countershaft	1
21	200135	COUNTERSHAFT, Lower	1	46	200158	STEP PULLEY, Main Countershaft	1
22	03607	PULLEY, Countershaft Idler	1	47	07037	TRANSFER SET, 68" Triplex - CE	1
23	03608	IDLER, Engine Clutch	2	48	200530	GUIDE, Belt, High Speed Pulley	1
24	200179	ARM, Engine Clutch	1				
			1				



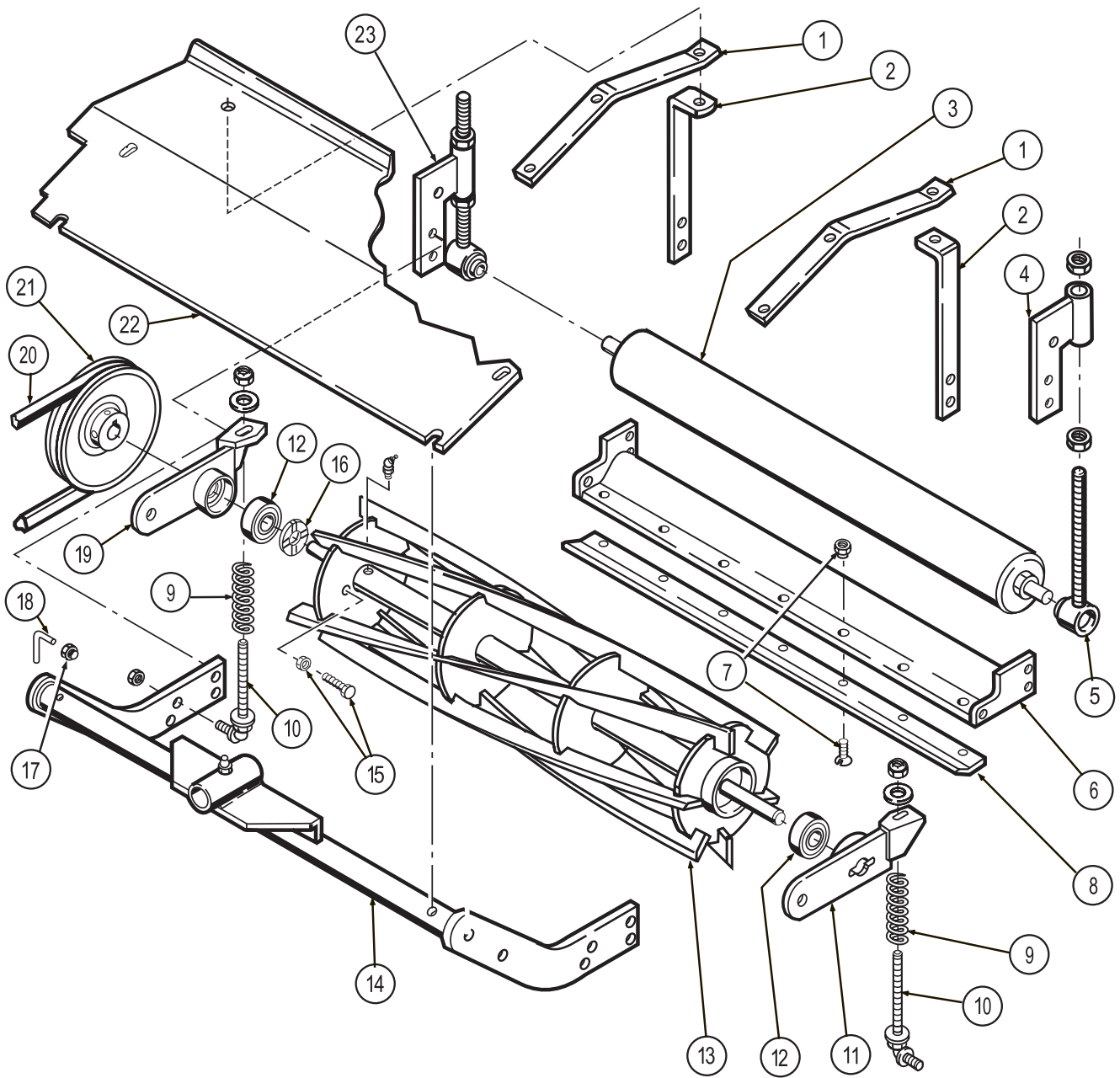
NOTE—Skids and Reel End Shields are not shown. See Figure 6

WHEN ORDERING, STATE THE MODEL AND SERIAL NUMBERS OF THE MOWER

FIGURE 4

FIGURE 4 — REAR MOWER

Item	Part No.	Description	Qty.	Item	Part No.	Description	Qty.
1	09170	GUARD, Clutch, Rear Mower, '96 and up	1	26	200223	FRAME, Rear Mower	1
2	201513	BRACKET, Shield	2	27	07481	CHAIN, Roller, Rear Mower	1
3	200235	UPRIGHT, Shield	2	28	203452	LIFTER TEE, Rear Mower	1
4	203173	ROLLER	1	29	200214	BRACKET, Guard	1
5	302847	ADJUSTER, Roller Bracket, L.H.	1	30	202251	LIFTER HANDLE, Rear Mower	1
	302848	ADJUSTER, Roller Bracket, R.H.	1	31	07039	GRIP, Lifter Handle	1
6	203248	ROLLER BRACKET, L.H.	1	32	202301	BRACE, Seat	1
7	200109	PULL YOKE, Rear Mower	1	33	202249	PIVOT TUBE, Rear Mower	1
8	200236	REEL TAKE-UP ASSEMBLY	2	34	200271	SHIFTER YOKE, Rear Mower	1
9	200256	ADJUSTING SCREW & NUT, Bearing	2	35	03905	BELT, Rear Mower, A42	1
10	200237	PIVOT TUBE, Rear Mower	1	36	200388	SHIFTER LUG	1
11	200263	COUNTERSHAFT	1	37	05022	PIN, Clutch	2
12	06006	BUSHING, Countershaft	2	38	200273	BRACKET, Clutch Lever	1
13	201735	REEL CARRIER ASSEMBLY, Right Hand	1	39	202438	SPRING	1
14	201437	TAKE-UP, Reel Bearing	2	40	200276	LEVER, Clutch Shifter	1
15	200261	HOUSING, Countershaft, Rear Mower	1	41	07022	GRIP, Shifter Clutch	1
16	03116	SPROCKET, Countershaft	1	42	02602	DUST CAP, 3/4" I.D.	1
17	04008	PIN, Sprocket Hub, 5/16" x 1-1/8"	1	43	04506	SPRING, Clutch	1
18	03115	SPROCKET, Reel	1	44	200266	CLUTCH, Sliding Jaw, Rear Mower	1
19	200241	REEL ASSEMBLY, Rear Mower, 6 Blade	1	45	200264	PULLEY ASSEMBLY, Countershaft	1
20	06120	BEARING, Reel	2	46	06007	BUSHING, Countershaft Pulley	1
	06121	CUP, Reel Bearing	2	47	200123	BUSHING, Pull Yoke	2
21	02109	SCREW, Bed Knife (sold as a set with nut below)	9	48	203172	ROLLER BRACKET, R.H.	1
	201802	NUT, Bed Knife Screw	9	49	04504	SPRING, Idler	1
22	201773	BED KNIFE FRAME ASSEMBLY, Rear Mower	1	50	200115	IDLER ARM UNIT, Rear Mower	1
23	201407	BED KNIFE, 30"	1	51	03607	PULLEY, Idler	1
24	04549	SPRING, Adjusting	2	52	201519	SHIELD, Rear Mower	1
25	201734	REEL CARRIER ASSEMBLY, Left Hand	1				

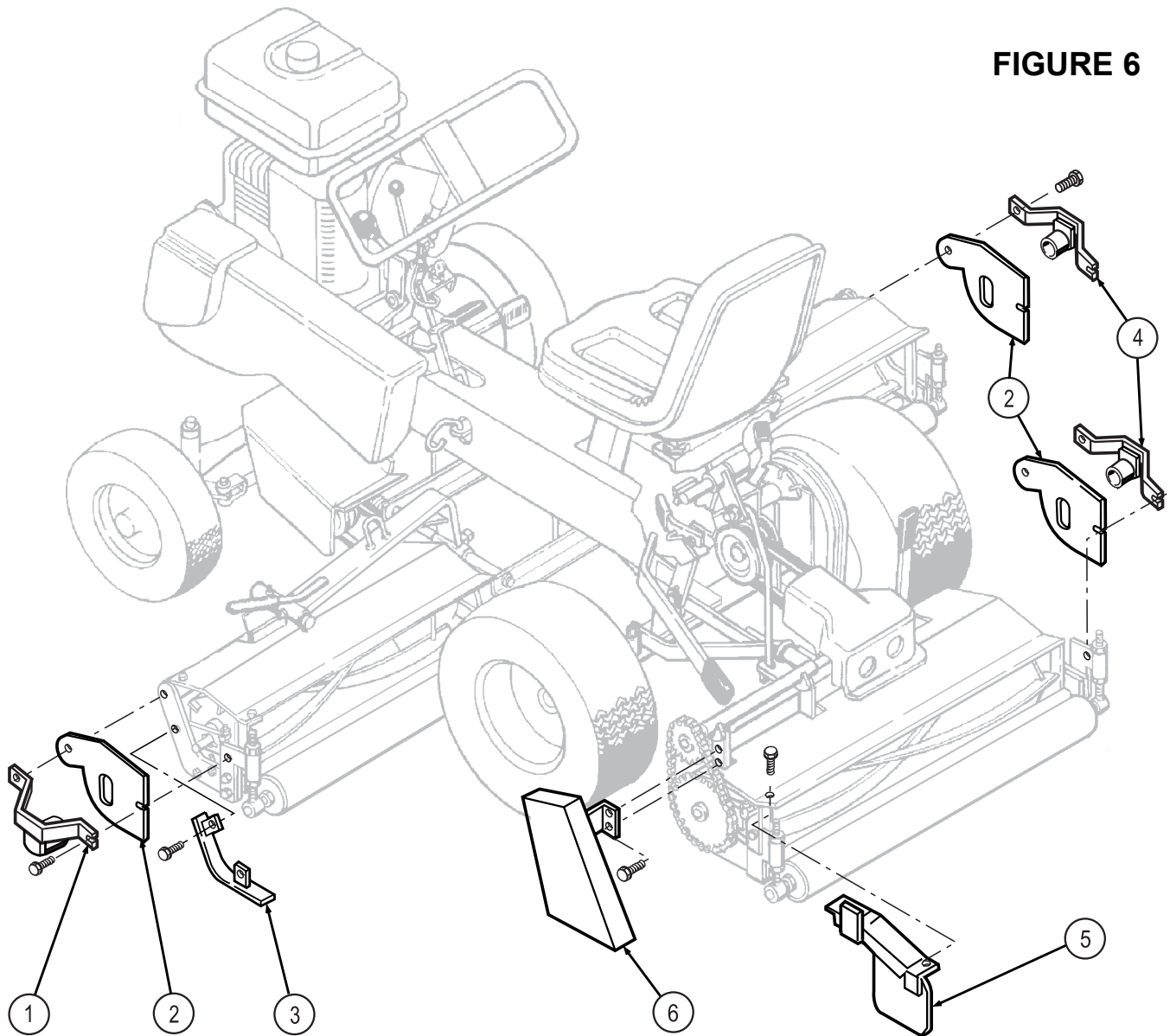


**FIGURE 5**

**FIGURE 5 — WING MOWERS**

<b>Item</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	201513	BRACKET, Shield	4
2	200235	UPRIGHT, Shield	4
3	203250	ROLLER	2
4	203248	ROLLER BRACKET, L.H.	2
5	302847	ADJUSTER, Roller, L.H.	2
	302846	ADJUSTER, Roller, R.H.	2
6	201775	FRAME, Bed Knife, Bolt-on	2
7	201460	SCREW, Flat Head	14
	201802	NUT, Bed Knife Screw	14
8	201504	BED KNIFE, 21",	2
9	04549	SPRING, Reel Adjusting	2
10	200236	REEL TAKE-UP ASSEMBLY	4
11	201734	REEL CARRIER ASSEMBLY, Left Hand	2
12	06120	BEARING, Reel, (Includes Race)	4
13	200296	REEL ASSEMBLY, 6 Blade	2
14	201781	FRAME, Wing Mower	2
15	200256	ADJUSTING SCREW & NUT, Bearing	2
16	201437	TAKE-UP WASHER, Reel Bearing	2
17	201383	CAP SCREW (Special), Pulley Scraper	2
18	200287	PULLEY SCRAPER	2
19	201735	REEL CARRIER ASSEMBLY, Right Hand	2
20	03932	BELT, A35, Wing Mower	2
21	03601	PULLEY	2
22	201520	SHIELD, Right Hand	1
	201521	SHIELD, Left Hand	1
23	203172	ROLLER BRACKET, R.H.	2

**FIGURE 6**



**FIGURE 6 — SKIDS, REEL END SHIELDS & GUARDS**

Item	Part No.	Description	Qty.
1	203728	SKID BAR, L.H.	1
2	202959	SHIELD, Wing Mower	3
3	201585	SKID, Mower	2
4	203727	SKID BAR, R.H.	2
5	202410	GUARD, Inside, Rear Mower	1
6	202281	CHAIN GUARD, Rear Mower	1

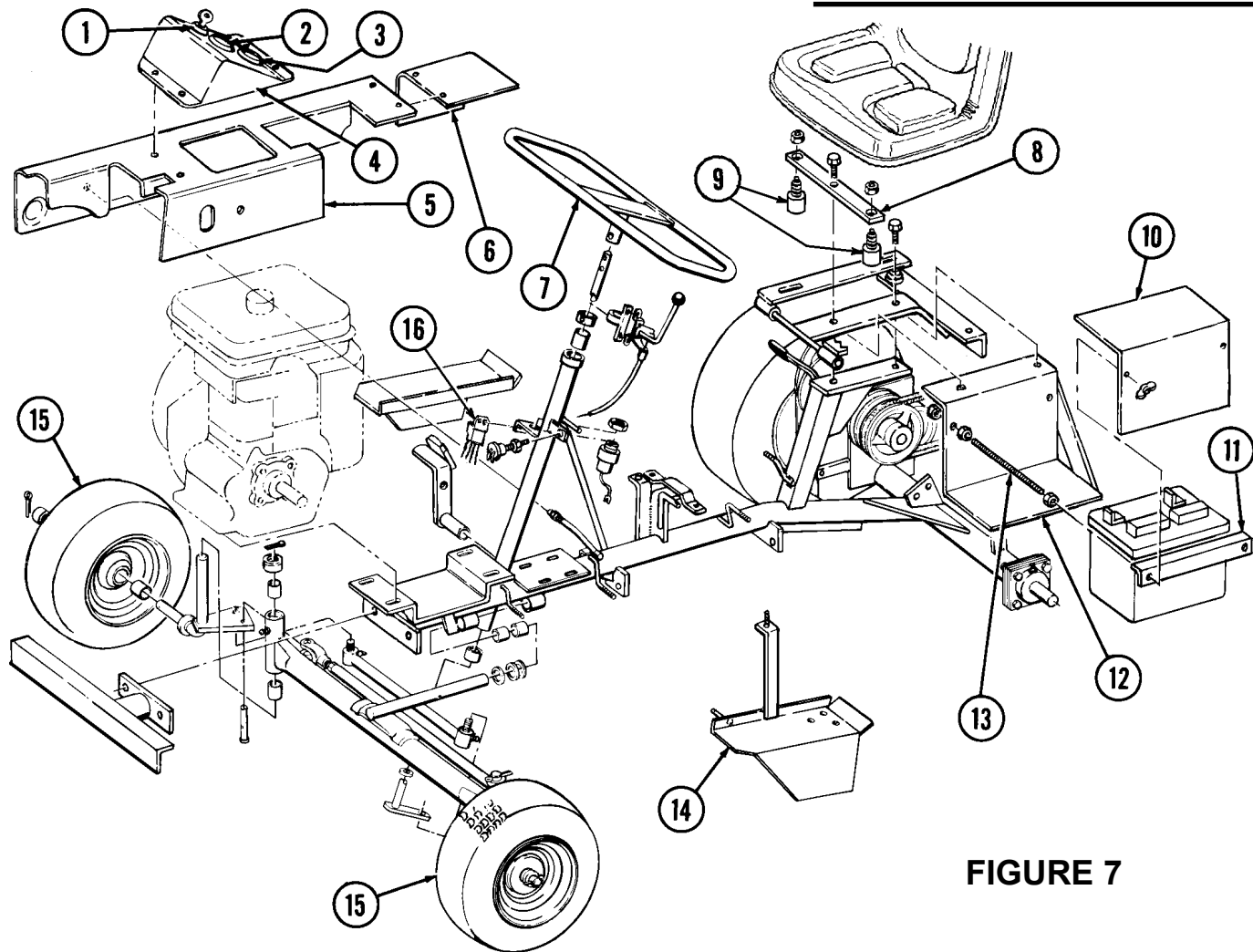
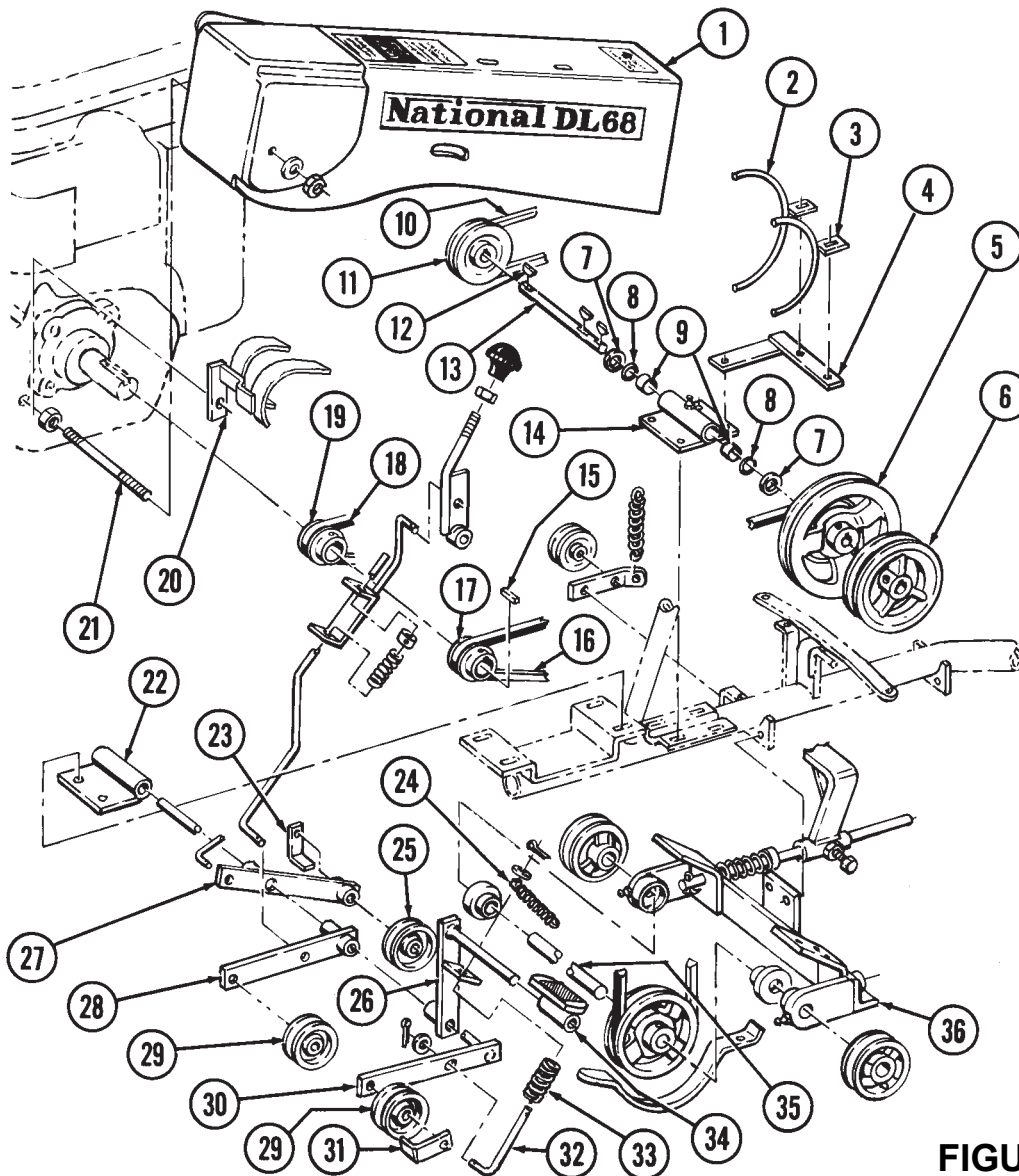


FIGURE 7

FIGURE 7 — DL 68" RUNNING GEAR & MISC. PARTS

Item	Part No.	Description	Qty.
1	07065	KEY SWITCH	1
2	07064	AMPMETER	1
3	07063	HOURMETER	1
4	09098	DASHBOARD	1
5	09099	GUARD, Main Belt	1
6	201994	EXTENSION, Main Belt Shield	1
7	201996	STEERING WHEEL, DL68	1
8	204987	BRACKET, Seat Switch	1
9	07035	SAFETY SWITCH, Seat	2
10	09101	COVER, Battery	1
11	201754	HOLDOWN, Battery	1
12	201582	BATTERY BOX	1
13	08057	ROD, Side Post Battery	2
14	201925	FOOT REST, Left	1
15	07237	TIRE, Deluxe Wide	2
16	07572	INTERLOCK	1



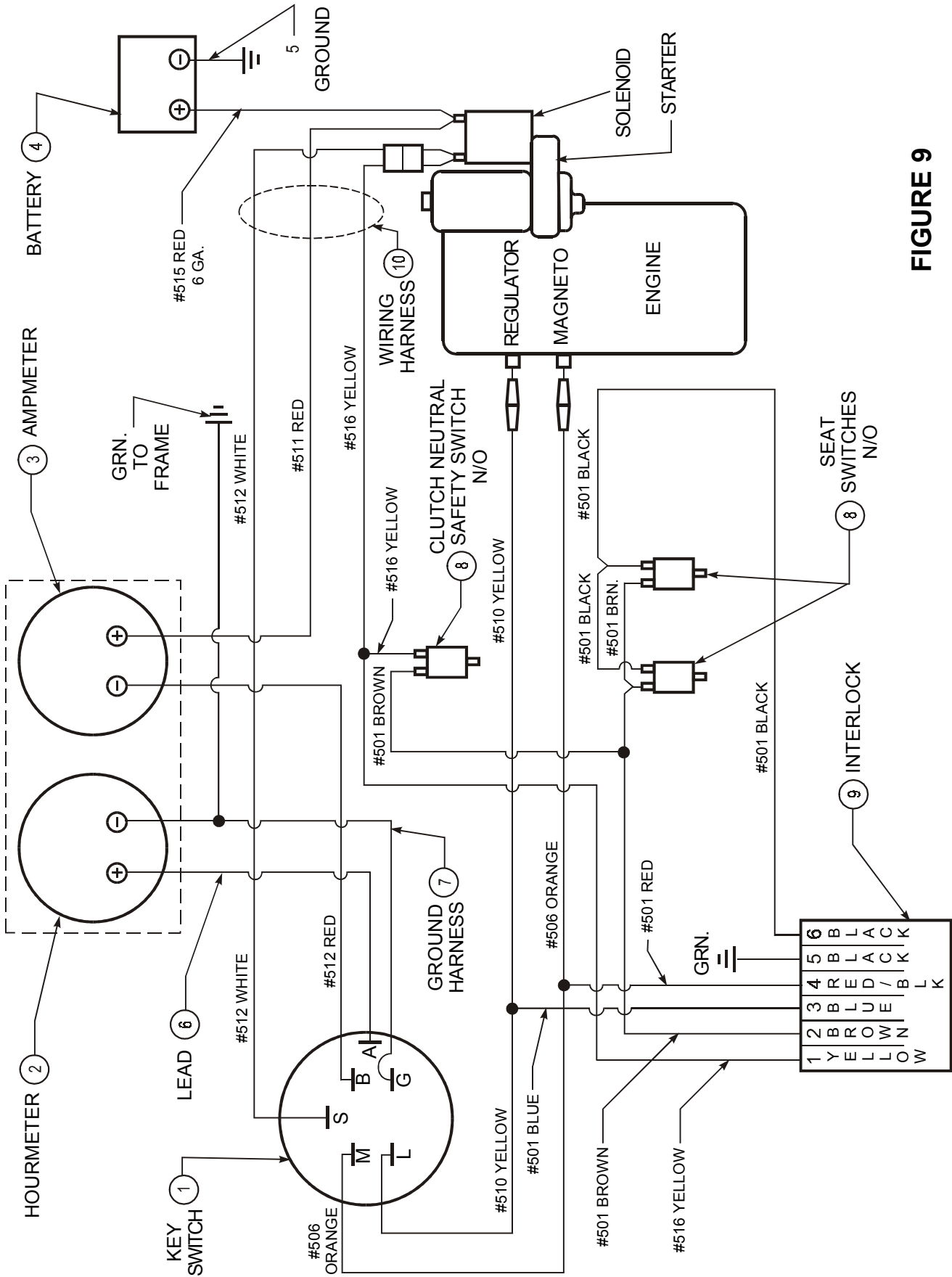
**FIGURE 8**

**FIGURE 8 — DL 68" DRIVE PARTS**

Item	Part No.	Description	Qty.
1	09100	GUARD, Engine Clutch	1
2	201881	RETAINER, Mowing Belt	1
3	201884	RETAINER, Transport Belt	1
4	201890	MOUNT, Belt Guides	1
5	201872	STEP PULLEY, Main Countershaft	1
6	03603	PULLEY, Transport, Main Countershaft	1
7	02507	Washer, 10 GA.	2
8	03502	O-RING, 7/8" Dia.	2
9	06101	NEEDLE BEARING	2
10	03902	BELT, Drive, B66	1
11	03655	PULLEY, Main Countershaft	1
12	04013	KEY, Woodruff, #11	3
13	201871	COUNTERSHAFT, Main	1



<b>Item</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
14	201740	HOUSING, Main Countershaft	1
15	200208	KEY, Square, Engine	2
16	03926	BELT, Engine, Transport, 6841 Gates Power Rated	1
17	202071	PULLEY, Engine, Transport Belt	1
18	03903	BELT, Engine, Mowing, 6844 Gates Power Rated	1
19	03609	PULLEY, Engine, Mower Belt	1
20	202780	BELT GUIDE WELDMENT, Engine	1
21	202446	STUD, Belt Guide	1
22	201946	BRACKET, Idler Pivot with Bushings	1
23	200530	GUIDE, Belt	1
24	202441	SPRING, Transport Pedal Return	1
25	03608	PULLEY, Idler	1
26	201721	FOOT LEVER	1
27	201728	ARM, Idler, Lower Countershaft	1
28	201730	ARM., Idler, Mowing Belt	1
29	03607	PULLEY, Clutch Lever	1
30	201718	PULLEY LEVER, Transport	1
31	201889	GUIDE, Belt	1
32	201919	ROD, Transport Clutch	1
33	202440	SPRING, Transport	1
34	201966	PEDAL, Transport	1
35	200135	COUNTERSHAFT, Lower	1
36	201926	CARRIER, Lower Countershaft	1



**FIGURE 9**

FIGURE 9 — DL 68" ELECTRICAL DIAGRAM

Item	Part No.	Description	Qty.
1	07065	KEY SWITCH	1
2	07063	HOURMETER	1
3	07064	AMPMETER	1
4	N.A.	BATTERY	1
5	07104	GROUND, Battery	1
6	07217	LEAD	1
7	07216	HARNES ASSEMBLY	1
8	07035	SWITCH, Clutch Safety	3
9	07572	INTERLOCK M585	1
10	07571	WIRING HARNESS	1

