



TECHNICAL MANUAL

Safety, Operation, Parts, Maintenance, Service

Model:
544874D LAWN Aire 28



WARNING: If incorrectly used this machine can cause severe injury. Those who use and maintain this machine should be trained in its proper use, warned of its dangers and should read the entire manual before attempting to set up, operate, adjust or service the machine.

TEXTRON
GOLF, TURF & SPECIALTY PRODUCTS

524805 REV C

CALIFORNIA
Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.



WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Californie Proposition 65
Avertissement

Les échappements des moteurs diesel et certains de leurs composés sont reconnus par l'Etat de Californie pour être cancérigènes, provoquer des défauts congénitaux et d'autres dangers en matière de reproduction.



AVERTISSEMENT

L'émission du moteur de ce matériel contient des produits chimiques que l'Etat de Californie considère être cancérigènes, provoquer des défauts congénitaux et d'autres dangers en matière de reproduction.

California Advertencia
de la Proposicion 65

El estado de California hace saber que los gases de escape de los motores diesel y algunos de sus componentes producen cáncer, defectos de nacimiento y otros daños en el proceso de reproducción humana.



ADVERTENCIA

El estado de California hace saber que los gases de escape de este producto contienen productos químicos que producen cáncer, defectos de nacimiento y otros daños en el proceso de reproducción humana.

IMPORTANT MESSAGE

Thank you for purchasing this Ryan product. You have purchased a world class product, one of the best designed and built anywhere.

This machine comes with a Technical Manual containing safety, operation, parts, maintenance and service information. The useful life and good service you receive from this machine depends to a large extent on how well you read and understand this manual. Treat your machine properly, lubricate and adjust it as instructed, and it will give you many years of reliable service.

Your safe use of this Ryan product is one of our prime design objectives. Many safety features are built in, but we also rely on your good sense and care to achieve accident-free operation. For best protection, study the manual thoroughly. Learn the proper operation of all controls. Observe all safety precautions. Follow all instructions and warnings completely. Do not remove or defeat any safety features. Make sure those who operate this machine are as well informed and careful in its use as you are.

See a Ryan dealer for any service or parts needed. Ryan service ensures that you continue to receive the best results possible from Ryan's products. You can trust Ryan replacement parts because they are manufactured with the same high precision and quality as the original parts.

Ryan designs and builds its equipment to serve many years in a safe and productive manner. For longest life, use this machine only as directed in the manual, keep it in good repair and follow safety warnings and instructions. You'll always be glad you did.

Textron Golf, Turf & Specialty Products
One Bob Cat Lane
Johnson Creek, WI 53038-0469

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NOTICE !!!

Unauthorized modifications may present **extreme** safety hazards to operators and bystanders and could also result in product damage.

Textron Golf, Turf & Specialty Products strongly warns against, rejects and disclaims any modifications, add-on accessories or product alterations that are not designed, developed, tested and approved by Textron Golf, Turf & Specialty Products Engineering Department. Any Textron Golf, Turf & Specialty Products product that is altered, modified or changed in any manner not specifically authorized after original manufacture—including the addition of “after-market” accessories or component parts not specifically approved by Textron Golf, Turf & Specialty Products—will result in the Textron Golf, Turf & Specialty Products Warranty being voided.

Any and all liability for personal injury and/or property damage caused by any unauthorized modifications, add-on accessories or products not approved by Textron Golf, Turf & Specialty Products will be considered the responsibility of the individual(s) or company designing and/or making such changes. Textron Golf, Turf & Specialty Products will vigorously pursue full indemnification and costs from any party responsible for such unauthorized post-manufacture modifications and/or accessories should personal injury and/or property damage result.



This symbol means:
ATTENTION!
BECOME ALERT!

Your safety and the safety of others is involved.

Signal word definitions:

The signal words below are used to identify levels of hazard seriousness. These words appear in this manual and on the safety labels attached to Textron Golf, Turf & Specialty Products machines. For your safety and the safety of others, read and follow the information given with these signal words and/or the symbol shown above.

⚠ DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

⚠ WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

⚠ CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices or property damage.

CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, **MAY** result in property damage.



MODEL NUMBER: This number appears on sales literature, technical manuals and price lists.

SERIAL NUMBER: This number appears only on your mower. It contains the model number followed consecutively by the serial number. Use this number when ordering parts or seeking warranty information.

GENERAL NOTE: FRONT, REAR, RIGHT HAND AND LEFT HAND REFERENCES BELOW ARE WITH RESPECT TO AN OPERATOR AT THE CONTROLS.

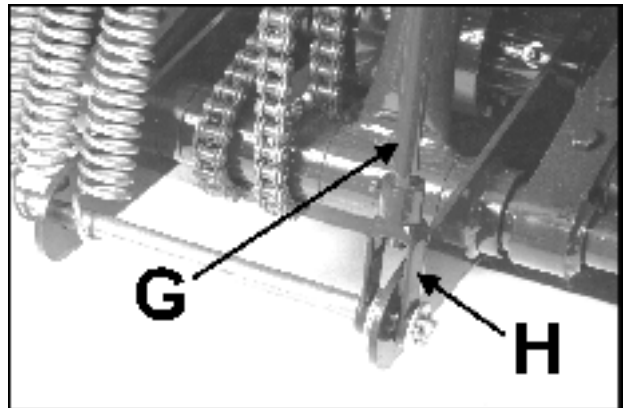
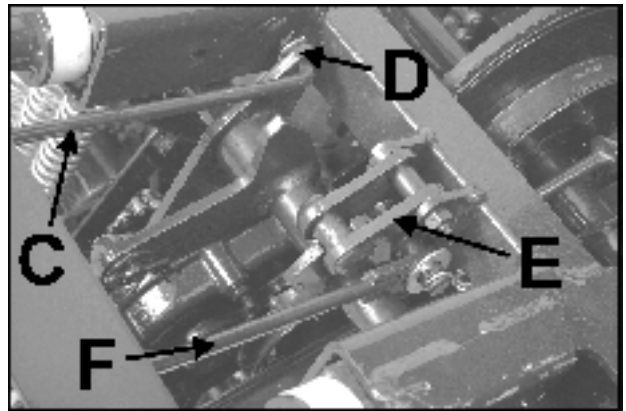
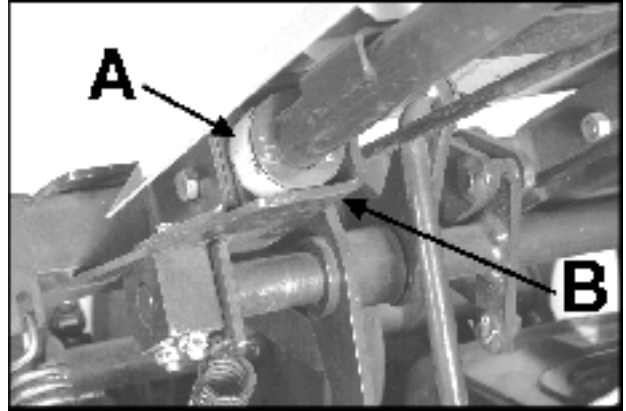
UNPACKING - Unpacking the aerator entails securing the handle and rolling the unit off the shipping pallet.

1. Cut the banding securing the aerator to the pallet

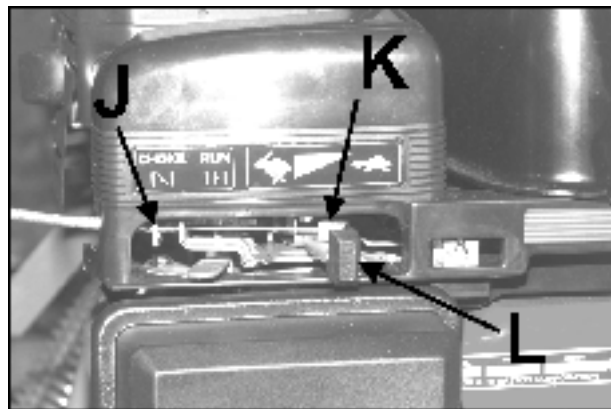
⚠ WARNING

Banding is under tension and may snap back when cut. Wear eye protection and stay clear when cutting the band.

2. Unhook the two side latches. Pivot the hood forward to remove it from the aerator.
3. Remove the two loose parts bags tied to the unit. These bags contain the hardware required for set-up and an extra set of tines.
4. Apply a solution of soap and water to the rubber isolators **A** on the handle and, while holding the clutch and latch rods up in their approximate position, slide the handle into the handle mounts **B**. The outside flange of the handle mount may be loosened if required to allow the handle to be inserted to the proper position.
5. Secure the handle with two (2) 3/8-16 x 2 1/2" screws with locknuts (from hardware bag).
6. Cut the plastic tie from the clutch lever on top of the handle. Connect the clutch lever rod **C** to the linkage bellcrank **D** and secure it with the 5/16" washer and cotter pin from the hardware bag.
7. Unhook the spring from the latch **E**. Slide the hole in the end of the latch rod **F** over the pin on the latch and secure with the 1/2" washer and cotter pin. Reconnect the spring to the latch. Cut the safety tie from the latch after the rod and spring have been attached.
8. Push the latch lever (on the handle) to raise and lower the unit. Adjust the clevis **H** at the bottom of the vertical adjustment rod **G** if necessary so that the latch drops into the notch easily when the unit is lowered.



9. Operate the clutch lever to check for positive belt engagement. If belt needs adjustment, refer to Drive Belt Adjustment.
10. Set throttle control lever on the handle to second detent near idle position. Start the engine and set throttle lever **L** on the engine at idle speed. Route the cable through the cable stop **J**, throttle arm hole and insert the inner cable into the block clamp **K** on the throttle arm of the engine. Tighten set screw in block clamp.
11. Move the throttle control lever to "FAST" while watching the throttle lever **L**. The throttle lever should move to the fast position, engine speed should be 3700 RPM. If not, loosen the cable housing clamp and adjust the cable in or out as required. When the throttle handle is pulled fully toward the rear, the engine will go to idle speed. To shut-off the engine, push the engine switch **M** to the off position.



ENGINE CONTROLS

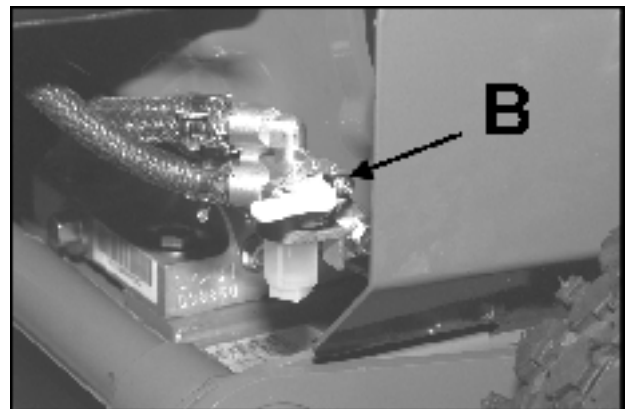
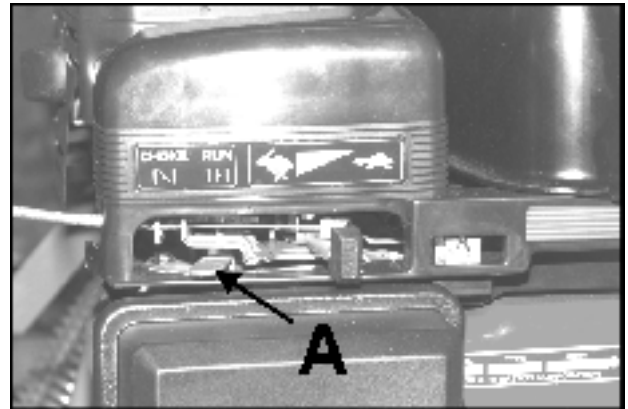
The engine is equipped with a choke control **A**, oil sensor, fuel shut-off valve **B** and engine shut-off switch **M**.

Choke: Choke as required to start the engine (slide control).

Fuel Shut-Off Valve: Turn the valve lever to "ON" (horizontal position) to allow fuel to flow from the tank to the engine.

Fuel Gauge: The engine is equipped with a fuel level indicator on the gas tank.

Engine Shut-Off Switch: This switch is located under the hood, on the right side of the engine toward the front of the unit. This switch needs to be in the "ON" position to start the engine. To stop the engine, push the switch to the "OFF" position.



AERATOR CONTROLS

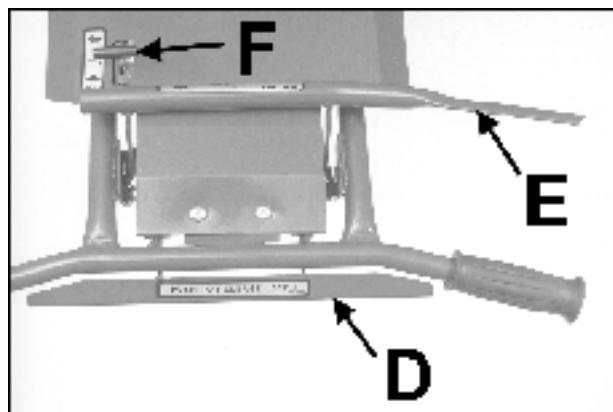
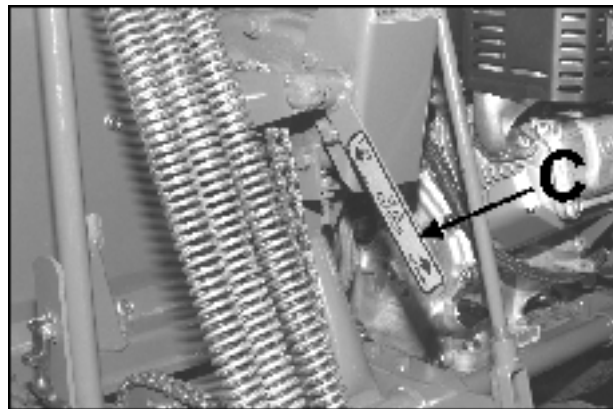
The aerator is equipped with a Dog Clutch Lever **C**, Latch Lock Lever **D**, Clutch Lever **E** and Throttle Control **F**.

Dog Clutch Lever: Controls the drive mechanism. Push the lever down to engage the dog clutch, pull up to disengage. The aerator drive will not operate unless the dog clutch is engaged.

Latch Lock Lever: Locks the aerator in the up or down position. To lower the unit and engage the aerator, push the Latch Lock Lever and push down on the handlebar. To raise the unit and disengage the aerator, push the Latch Lock Lever and pull up on the handlebar.

Clutch Lever: Engages the unit drive. Pull back on the Clutch Lever with the unit raised to transport the unit without operating the aeration mechanism. Pull back on the Clutch Lever with the unit lowered to move the unit forward and begin aerating.

Throttle Control: Adjusts the engine speed. Pushing the control forward increases the speed; pulling the control back reduces the speed.



PRE-OPERATION CHECK

1. Visually check all moving parts and all fasteners. If loose or broken, tighten or replace. Check for broken or bent tines; replace if necessary.
2. Lubricate all lubrication fittings before each days use or after every eight hours of operation (see SERVICE section).
3. Check the engine crankcase oil level with the engine resting in a level position. Add oil if necessary (see SERVICE section).
4. Follow the engine manufacturer's recommendations for the correct type and amount of oil. Fill the fuel tank according to the engine manufacturer's specifications.

WARNING

Gasoline is extremely flammable and highly explosive under certain conditions. Always stop the engine and do not smoke or allow open flames or sparks when refueling. **BE SURE** to install fuel cap after refueling.

NEVER start or run the engine inside where exhaust fumes can collect. Carbon monoxide present in the exhaust is an odorless and deadly gas.

DO NOT operate equipment without shields in place. **DO NOT** make adjustments or perform any maintenance while the engine is running.

Before operating, check the area and remove any object which may present a safety hazard or damage the equipment.

This unit is not designed to be used on steep slopes. To prevent injury and/or damage to equipment, use extreme caution when operating near terraces or hilly terrain. Travel up and down slopes at a 45 degree angle rather than across, to prevent unit from tipping over, **DO NOT** release clutch handle on a slope; this will cause freewheeling, allowing the unit to roll down the slope.

AERATING

NOTE: For best performance and maximum tine penetration, the lawn should be thoroughly watered the day before aeration. Compacted soil conditions will cause the unit to bounce, resulting in possible damage to the tines and undue stress to the unit.

Before operating, check the area to be aerated and remove any objects that may be a safety hazard or cause damage to the unit.

DO NOT place hands or feet beneath the unit at any time.

WARNING

DO NOT operate unit unless all shields are in place.

DO NOT make any adjustments or perform any maintenance while the engine is running.

NOTE: Never cross hard objects or surfaces (such as sidewalks, driveways, stepping stones, etc.) with aerator in the lowered position.

OPERATION TIP

NOTE: Walk through the area to be aerated and mark with flags immovable objects, such as sprinkler heads and water mains.

Be sure the unit is raised, and the fuel shut-off valve on the bottom of the fuel tank is open.

1. Set the throttle control lever to a "middle" position. Place engine switch in the "ON" position. Pull recoil starter and choke if necessary to start engine.
2. Slowly pull back on the clutch lever and adjust the throttle for a comfortable transport speed. Transport the unit to the work area.
3. Upon reaching the work area, release the clutch lever. Lower the aerator, push the throttle lever all the way forward to "FAST" and pull the clutch lever back to start aerating.

Aerate across slopes or on steeper grades at a 45° angle up and down the slope.

The unit is designed to make turns while aerating. If the tines damage the turf while making turns, push down on the handlebars while turning to help eliminate the problem.

4. Release the clutch lever and raise the aerator when aerating is completed.

WARNING

When replacement parts are required, use genuine **RYAN** parts or parts with equivalent characteristics, including type, strength and material. Failure to do so may result in product malfunction and possible injury to the operator and/or bystanders.

Any warning decal that becomes illegible should be replaced immediately.

Do not operate equipment without shields in place.

Do not make any adjustments or perform any maintenance while the engine is running.

CLEANING

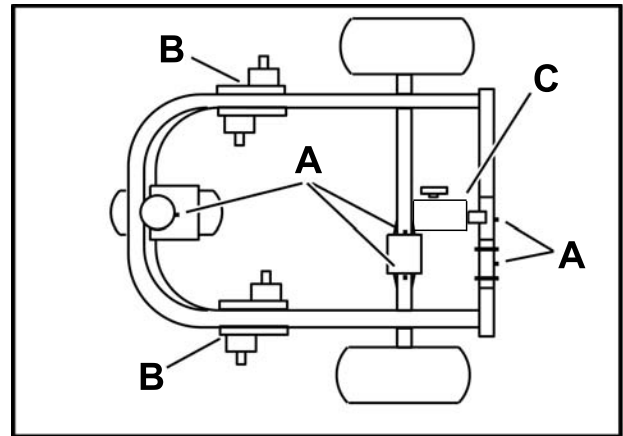
After each day's aerating, remove and thoroughly clean the tines. Apply a light coating of oil to the tines to prevent rust. Replace bent, broken or worn tines and reinstall the tines on the unit. After the engine has cooled, clean the unit with water. Keep the belts free of oil and dirt.

LUBRICATION

Lubrication Fittings - A: The Lawnaire 28 has eight lubrication fittings. (1) Front wheel pivot, (5) Pivot axle, (2) Differential. Use a pressure lubrication gun with a standard lithium based lubricant to lubricate all eight fittings after every eight hours of operation. Wipe each fitting before and after lubricating.

Reversing Gear Boxes - B: Lubrication filled gear boxes should require no additional lubrication, add lithium based gun lubricant if required.

Transmission - C: Remove plug, fill to bottom of plug opening with 80-90W gear lube.



TRANSPORTING

Close the fuel shut-off valve before transporting.

Loading; When using ramps to load the unit for transporting, be sure all three wheels are supported by ramps.

Unloading; When using ramps to unload the unit, engage the dog clutch (lever down) to keep the unit from rolling down the ramp too quickly.

TIRE PRESSURE

NOTE: Improper inflation will shorten tire life considerably.

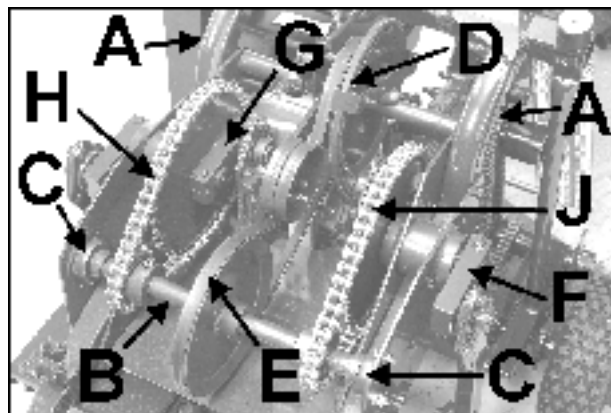
Check tire pressure before each days operation. Keep all three tires inflated to 14-16 PSI (97-110 kPa).

⚠ WARNING

Use caution when inflating a tire, or bringing a low tire up to recommended pressure. Use a pressure gauge to check the pressure in a partially inflated tire before connecting an air hose. Due to the low air volume requirements of small tires, over-inflation may be reached in a matter of two or three seconds, which may cause the tire to explode.

BELT REMOVAL AND INSTALLATION

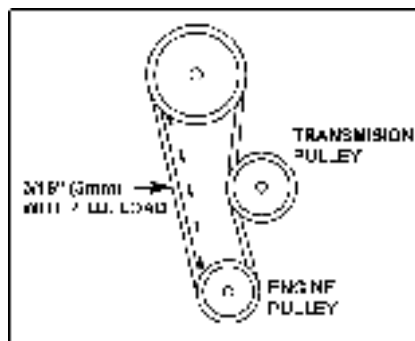
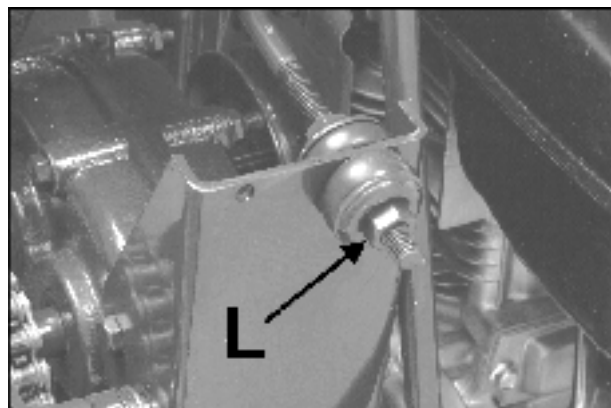
1. Remove the shield covering the aerator mechanism.
2. Remove the two screws **A** securing the ends of the pulley shaft.
3. Remove the hardware from the idler shaft pillow blocks **C**. Move the idler shaft **B** back (toward the rear of the unit) to release the tension on the idler drive belt **E** and aerator chains **H** and **J**.
4. Remove the LEFT aerator chain **J**.
5. Remove both the Idler Drive Belt **E** and the Drive Belt **D**.
6. Put on new belts and reinstall the two screws **A** securing the ends of the pulley shaft.
7. Make sure the RIGHT aerator chain **H** is properly meshed with the sprocket on the idler shaft and reinstall the pillow block on the RIGHT side of the idler shaft. **DO NOT** tighten the pillow block hardware.



8. Time the aerator by positioning the inner two crank arms **G** level and to the back of the unit (the outer two crank arms **F** will be level and to the front).
9. Install the LEFT aerator chain **J** and the pillow block at the LEFT side of the idler shaft (a pry bar may be necessary to align the holes in the pillow block flange and the frame).
10. Tighten the hardware on both pillow blocks.

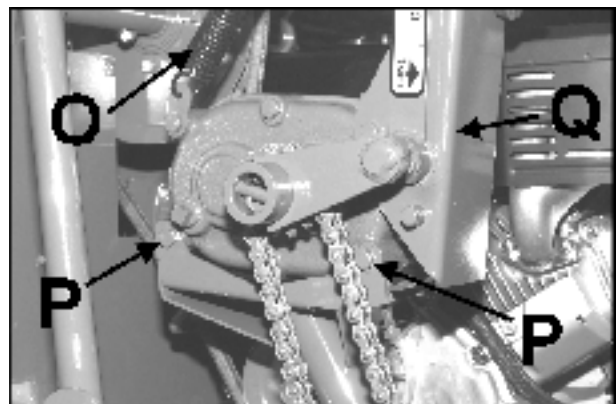
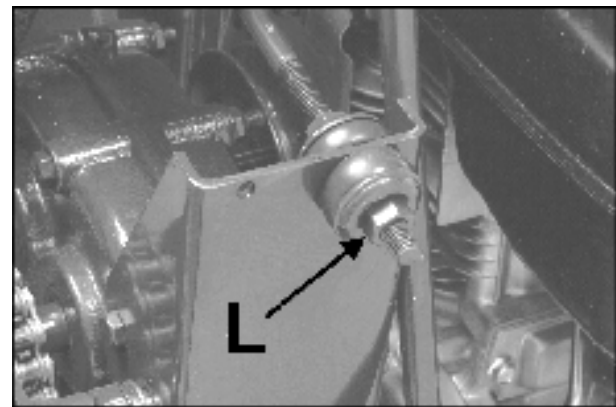
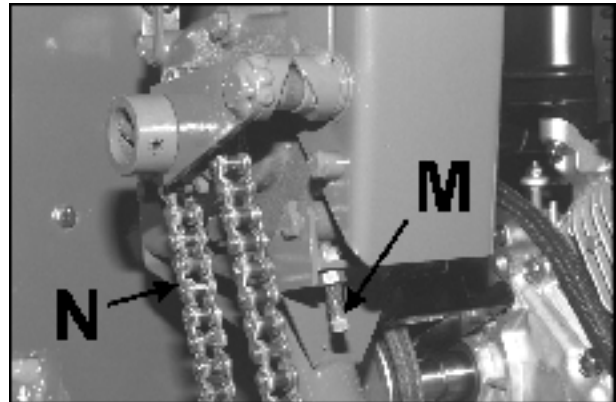
DRIVE BELT ADJUSTMENT

11. Pull back on the clutch lever to engage the drive belt. Adjust the nut **L** on the Drive Belt Adjustment Screw (until there is a 3/16" (5mm) deflection by four pounds of force on the side of the drive belt opposite the transmission).
12. Reinstall shields before operating the unit.



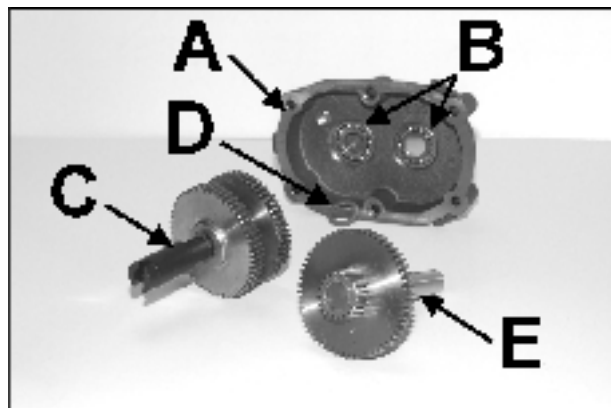
TRANSMISSION REMOVAL

1. Remove the shield covering the aerator mechanism.
2. Loosen primary drive chain adjustment screw **M**.
3. Open the connector link of the primary drive chain **N** and remove the chain from the unit.
4. Disconnect the drive belt adjustment screw **L** from the bellcrank and detach the tension spring **O** from the top of the transmission.
5. Take out the two transmission mounting screws **P** and remove the transmission with the clutch mounting bracket **R**.
6. Remove the clutch mounting bracket **R** from the transmission.
7. Remove the screw securing the dog clutch sprocket to the output shaft and pull the sprocket from the shaft.



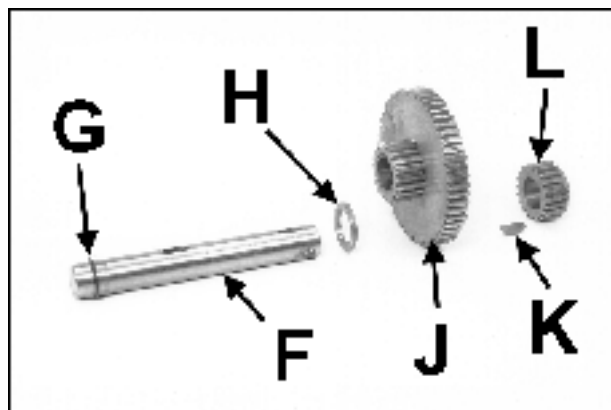
TRANSMISSION SERVICE

1. With the transmission taken out of the unit, Remove the belt pulley and key from the input shaft.
2. Remove one of the drain plugs and drain the oil from the transmission case.
3. Remove the hardware holding the two case halves together, and tap the tabs on the case with a soft hammer (lead, leather, plastic etc.) to break the seal and separate the case halves.
4. Remove both the input **E** and output shafts **C** (with gears) from the case halves. Note the position of the spacer **D** at the end of the output shaft for reassembly.
5. Remove the ball bearings **B** and oil seal from each case half **A**. Install new ball bearings in both case halves but **DO NOT** install new oil seals at this time.



INPUT SHAFT

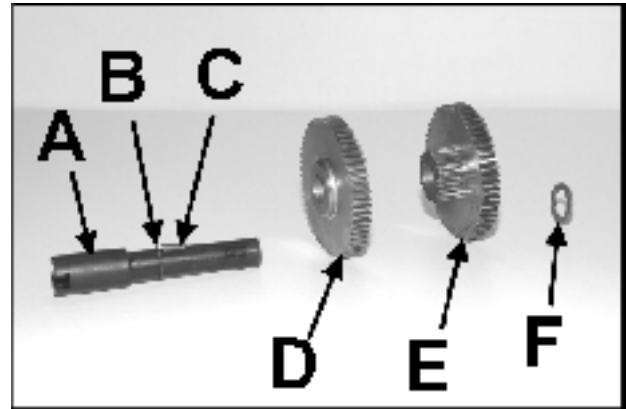
6. Remove gears, key and spacer from the input shaft **F**.
7. Check shaft **F** for wear and replace if necessary. If replacing shaft, install existing snap ring **G** on new shaft. Check for, and remove any burrs on key ways in the shaft.
8. Replace the press-in bushings in the large double gear **J** (be sure the oil holes in the bushings align properly), or, replace the gear if necessary.
9. Reinstall the spacer **H** on the shaft **F** next to the snap ring **G**, then the large double gear **J** with the smaller end next to the spacer, followed by the key **K** and small gear **L** with the flat end of the small gear facing the large gear.



TRANSMISSION SERVICE

OUTPUT SHAFT

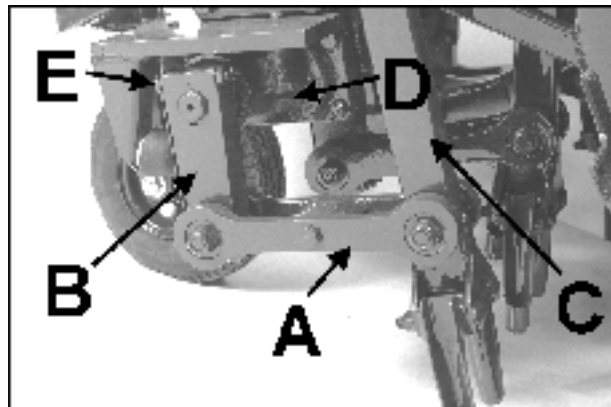
10. Remove both of the gears and key from the shaft **A**.
11. Check the shaft **A** for wear and replace if necessary. If replacing shaft, install existing snap ring **B** on new shaft. Check for, and remove any burrs on key ways in the shaft.
12. Replace the press-in bushings in the double gear **E** (be sure the oil holes in the bushings align properly), or, replace the gear if necessary.
13. Reinstall the key **C** and single gear **D** on the output shaft **A**. The end of the gear with the higher step should face the snap ring **B**.
14. Install the double gear on the shaft with the small end facing the single gear.
15. Install the spacer **F** on the shaft next to the double gear. Be sure the spacer at the end of the output shaft stays in position while installing gears in case halves.
16. Install both shafts with gears into one of the case halves. Rotate one shaft to make sure the other turns and keys are in proper location.
17. Apply Loctite 515, or equivalent, to the mating edges of the case halves. Be sure the case alignment spacers are in place in the upper and lower middle holes and put the two halves of the case together.
18. Install the clutch bracket and hardware (with screw heads on the input shaft side). Torque the hardware to 16 ft. lbs. (22 N·m).
19. Apply some 30W oil to the lips of the oil seals and install one on each side of the transmission.



20. Reinstall pulley and sprocket.
 21. Position the transmission in its mounting location. Remove one of the filler plugs and fill the case to the bottom of the filler hole with 80-90W gear lube. Reinstall the filler plug.
 22. Mount the transmission back on the unit and reconnect the drive belt adjustment screw and tension spring.
 23. Align the belt pulley by loosening the set screw and moving the pulley on its shaft until it aligns with the drive belt. Tighten the set screw.
 24. Check the drive belt tension and adjust if necessary (See drive belt adjustment).
 25. Reinstall the primary drive chain and chain adjustment screw. Adjust screw to obtain 1/8" - 1/4", (3 - 6mm) deflection in the chain at the center point of the chain's span between the two sprockets.
- NOTE:** Excessive roller chain tension will shorten bearing life.
26. Reinstall shields before operating the unit.

REVERSING GEAR BOX REMOVAL

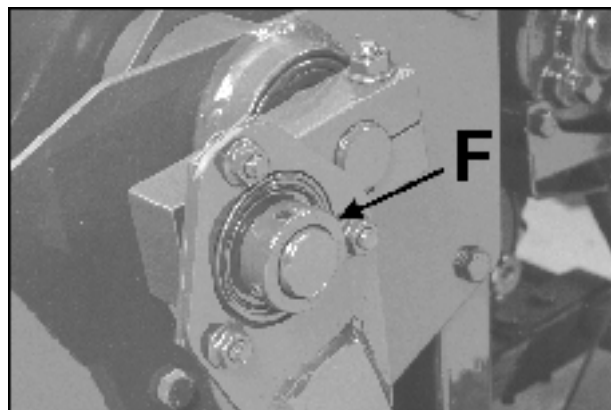
1. Remove the shield covering the aerator mechanism.
2. Remove the return links **A** connecting the tine arms **C** to the vertical links **B** by unscrewing the hardware and separating the two halves. Note the position of the washers for reinstallation.
3. Remove the four (4) screws **D** holding the reversing gear box to the mounting plate and remove the reversing gear box with the vertical links still attached.
4. Loosen the two (2) screws **E** securing the vertical link to the reversing gear box shaft. Remove the vertical link by sliding it off of the shaft



REVERSING GEAR BOX INSTALLATION

5. When work on the reversing gear box is complete, reinstall by reversing the preceding procedure.

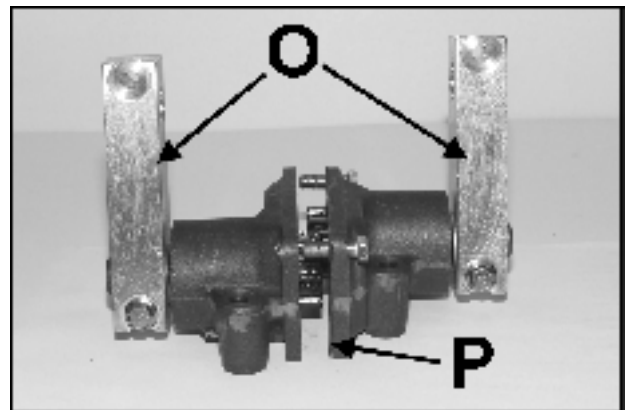
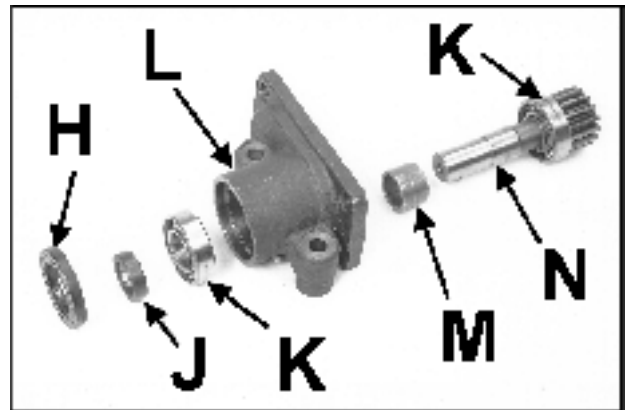
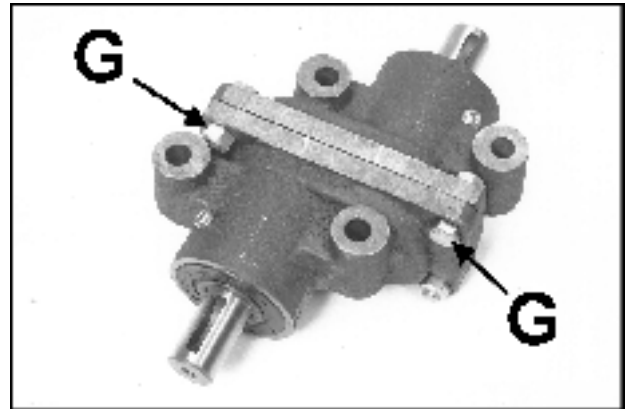
When reassembled, the tine arms should be vertical side-to-side. If they are not, loosen the set screws in the crankshaft bearing lock collar **F** and slide the bearing in or out on the shaft until the tine arm is vertical.
6. Rotate the crankshaft by hand to make sure the tine arms do not bind.



REVERSING GEAR BOX SERVICE

1. Remove the gear box from the unit.
2. Remove the hardware **G** holding the two case halves together.
3. Remove the oil seals **H** from each end of the gear box and separate the two halves **L**.
4. Use a soft hammer (lead, plastic, leather, etc.) to remove the shaft **N** from each case half.
5. Separate all of the components (press the bearings **K** off of the shaft **N** and out of the case half **L** if they need to be replaced). Clean the components and check for wear, replace parts as required.
6. Press new bearings **K** onto shafts if required, install inner spacers **M** and insert shafts into case halves.
7. Install outer bearing and spacer **J**. Apply 30W oil to the lips of the oil seals **H** and install one on each half of the gear case.
8. Reinstall the vertical links **O** on the gear box shafts. Be sure that the link is oriented so that the wear strip will face forward when the gear box is remounted.
9. Insert two screws through one of the case halves and install a new gasket **P** over the screws.
10. Place the two halves on a flat surface with the gears facing each other and the flat (mounting) side down. Turn the vertical links so that they are both pointing straight up. Be sure the gear teeth mesh and put the two case halves together. Install all of the hardware but **DO NOT** tighten.
11. Slide the case halves against each other to eliminate backlash (play between the shafts) and tighten the hardware. Torque hardware to 30 ft. lbs. (41 N-m).

NOTE: Shafts must rotate 180° from original position shown without binding.



12. Pump lithium based gun lubricant in one plug hole until it starts to come out of the other. Apply thread sealant to the threads of the plugs and reinstall the plugs.
13. Reinstall gear box.

STORAGE INSTRUCTIONS

WARNING

To prevent possible explosion or ignition of vaporized fuel, do not store equipment with fuel in tank or carburetor in enclosure with open flame (for example, a furnace or water heater pilot light).

Before the equipment is put in to storage for any period exceeding 30 days, the following steps should be taken.

1. Drain all fuel from the fuel tank and fuel lines.
2. Start the engine and run until all the fuel is used from the carburetor float bowl.
3. While the engine is still warm, drain the crankcase oil and replace with the proper weight oil corresponding to the season the equipment will next be used.
4. Remove the spark plug and squirt a small amount of engine oil into the cylinder. Turn the engine over a few times to distribute the oil.

5. Lubricate all lubrication fittings.

To put the equipment into service after an extended period of storage:

1. Check for loose parts and tighten if necessary.
2. Check for cracked or broken tines and replace as necessary.
3. Fill the fuel tank.
4. Check the engine and gear reduction case oil levels with the engine in a level position.
5. Start the engine.
6. Check for fuel leaks.
7. Check clutch control operation to make sure the unit stops when the clutch control is released.

Features:

Tricycle front wheel for easy maneuverability.

Rubber isolated handlebars and spring assist lift for easy, comfortable operation.

Sealed precision ball bearings in tine arms and linkage.

Engine:

Model..... Model 138432
Type 0035, Trim E1
4 cycle 7.5 H.P. Briggs & Stratton Vanguard
13.1 cu. in. (215 cc)
Starter..... Recoil, on/off switch
Governor..... 3600 RPM, no load

Drive:

Primary..... V Belt / Roller chain
beveled gear differential

Tires:

Front..... 2.80 / 2.50 - 4
Rear..... 4.10 / 3.50 - 4

Dimensions:

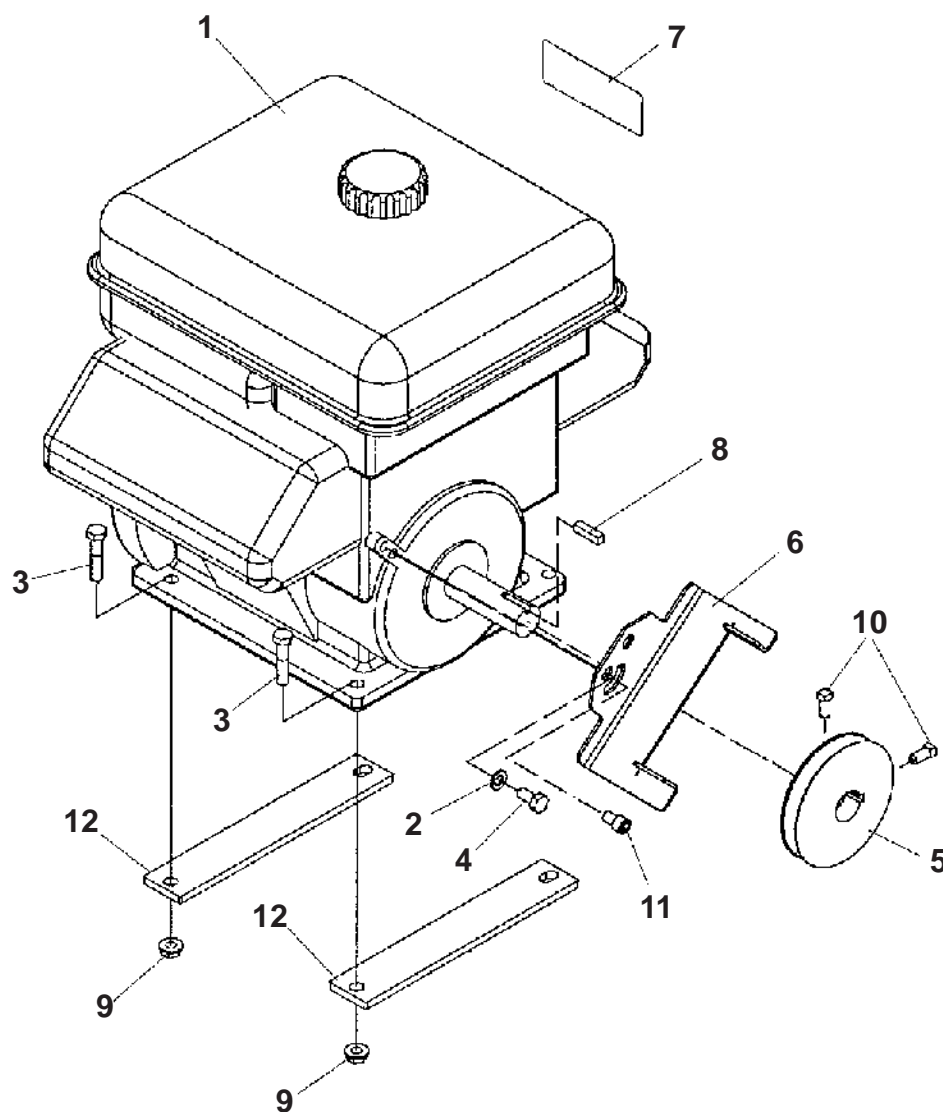
Width..... 41" (1041 mm)
Length..... 57" (1448 mm)
Width..... 34" (864 mm)
Weight..... 400 lbs. (183 Kg)

Aeration:

Aerating Width..... 28" (711 mm)
Tines.... Eight (8) 3/4" (19 mm) heat treated tines
on four (4) tine arms
Coring Depth..... 2 1/2" (64 mm) max.
Coring Diameter..... 3/4" (19 mm) max.
Coring Pattern.. 3 1/2" x 5" (89 x127mm)
Production..... up to 24,00 sq. ft./ hr (2230 M²/ hr)

PARTS SECTION

FIGURE 1

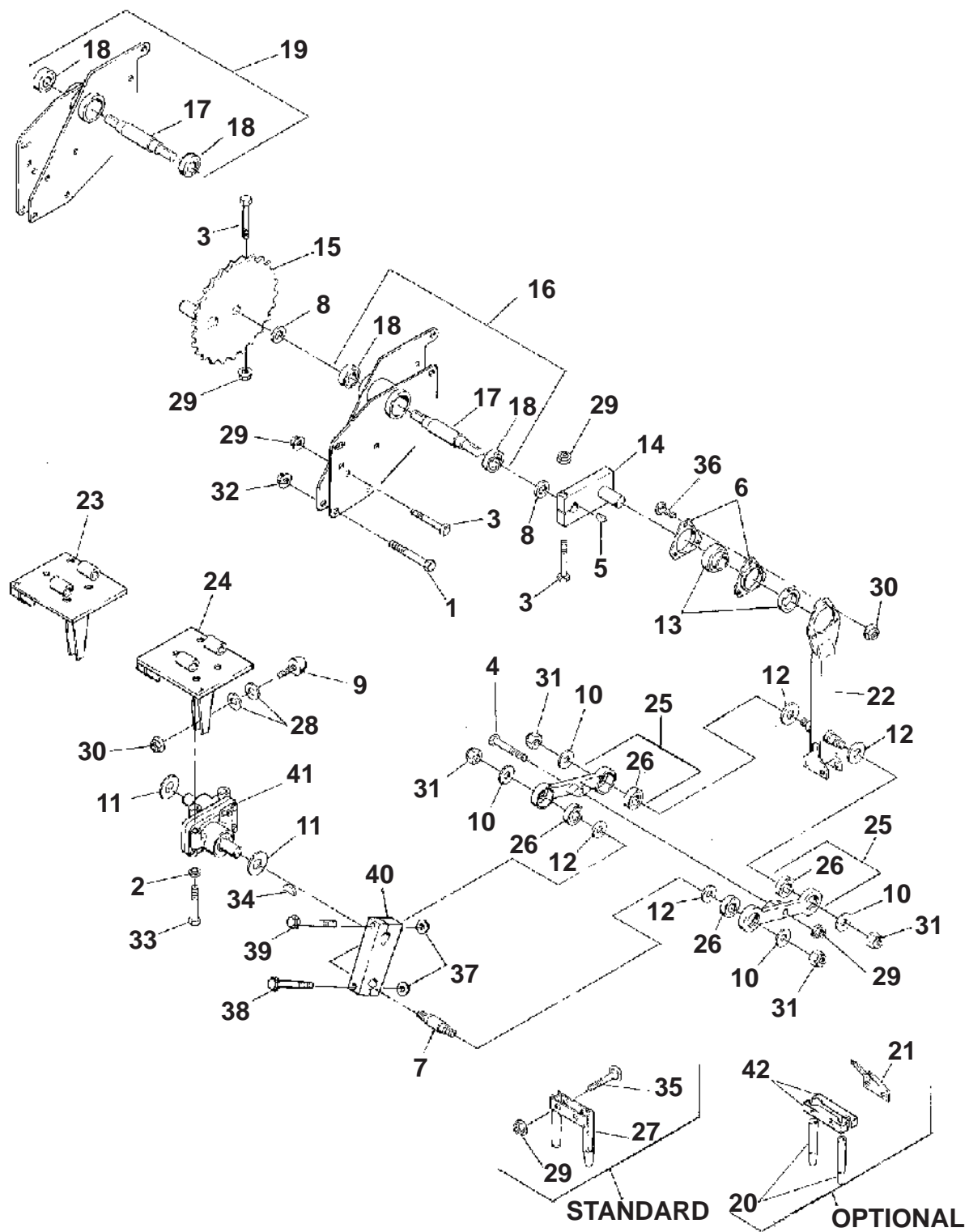


524805-01

FIGURE 1

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1-1	540378	ENGINE,7.5 HP B&S	1				
1-2	64006-02	LOCKWSHR-HELICAL 5/16	1				
1-3	64139-23	BLT-WLF 5-16-18 X 1-3/4	4				
1-4	306861	SCRW,,31-24.625	1				
1-5	517100	PULLEY,4 IN. DIA	1				
1-6	524621.7	GUIDE, BELT	1				
1-7	524759	DECAL,NOTICE OIL	1				
1-8	64164-12	KEY-1/4X1/4X1 SQ END	1				
1-9	64141-6	NUT, 5/16-18	4				
1-10	800555	SSCRW,,31-18.62 BS	2				
1-11	800960	SCRW,,31-24.50 BS	1				
1-12	844229.7	PLATE,SPACER	2				

FIGURE 2



Lawnaire 28

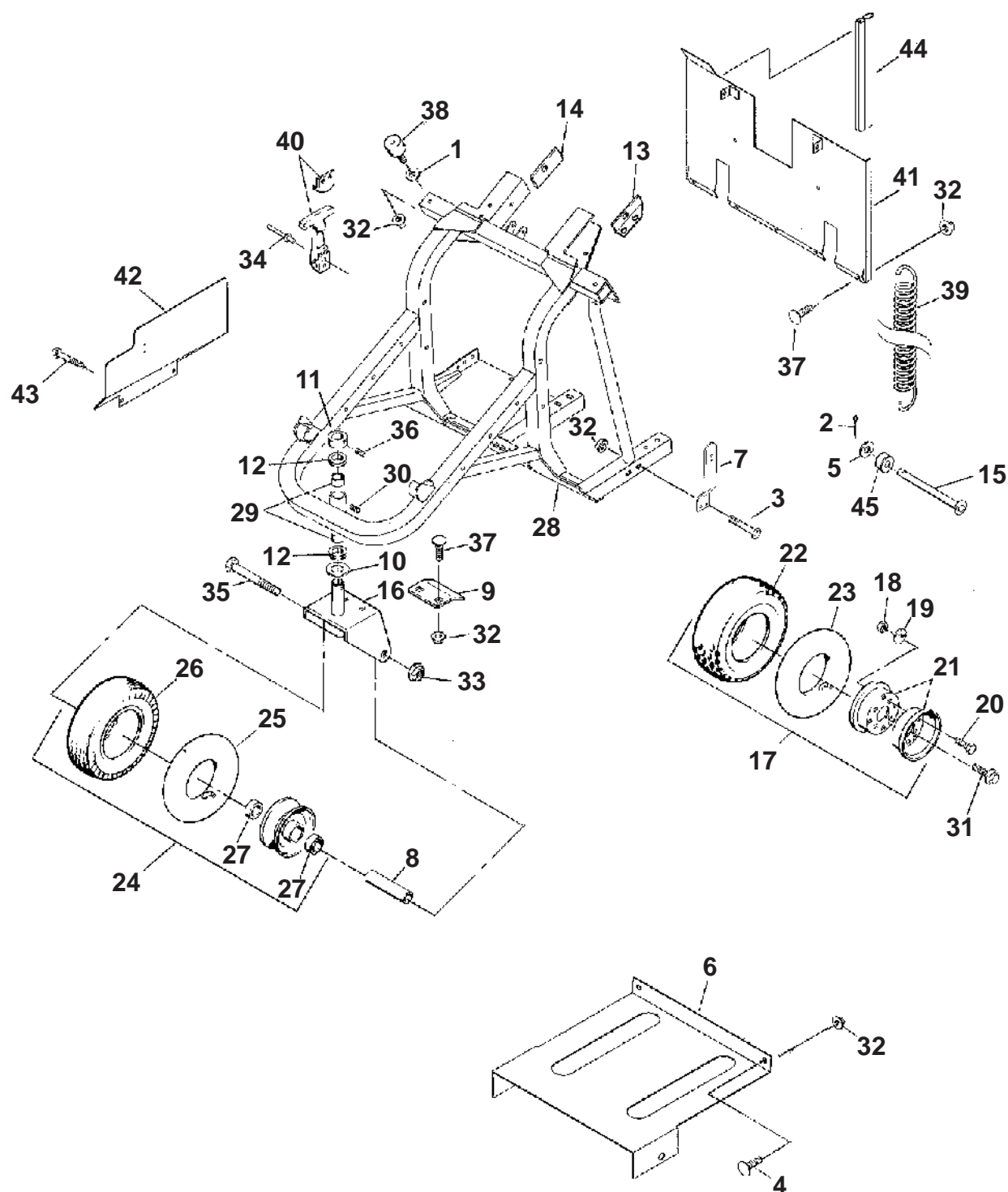
524805-02

AERATOR HEAD

FIGURE 2

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
2-1	2702243	SCRW,.5-13 x 2.50	4				
2-2	64006-06	LOCKWSHR-HELICAL 7/16	8				
2-3	64123-100	BOLT-3/8-16X2-1/4 HEX	14				
2-4	306837	SCRW,.38-16 3.25	4				
2-5	64164-28	KEY-#808 WOODRUFF	4				
2-6	522723	FLANGE, BEARING	8				
2-7	522724	PIN	4				
2-8	522740	SPACER (PLATED)	4				
2-9	523126	BUMPER-RUBBER	4				
2-10	523222	WASHER,THRUST (PLTD)	16				
2-11	523240	WASHER, THRUST	4				
2-12	523249	WASHER, DUST (PLATED)	16				
2-13	545786	BEARING ASSEMBLY	4				
2-14	545992.7	CRANK ARM	2				
2-15	545993.7	SPROCKET, CRANK	2				
2-16	547504.7	HOUSING, BEARING LEFT	1				
		(INCLUDES ITEMS 17 & 18)					
2-17	522735	CRANKSHAFT	2				
2-18	523127	BEARING, BALL	4				
2-19	547505.7	HOUSING, BEARING RIGHT	1				
		(INCLUDES ITEMS 17 & 18)					
2-20	523326	TINE, 3/4" (19mm)	8				
2-21	522971	DEFLECTOR, CORE	4				
2-22	547509.7	ARM, TINE	4				
2-23	547587.7	MOUNT, GEARBOX, RIGHT	1				
2-24	547629.7	MOUNT, GEARBOX, LEFT	1				
2-25	547655	LINK AY,RETURN	8				
		(INCLUDES ITEM 26)					
2-26	832498	BEARING, .67 1.57.47	16				
2-27	547709	TINE, AERATING	4				
2-28	548159	WASHER, PLAIN	8				
2-29	64141-4	NUT-WLF 3/8-16	26				
2-30	64141-6	NUT, 5/16-18	32				
2-31	800198	NUT,.5-20 YS HX CRNLCK	16				
2-32	64141-13	NUT WLF 1/2-13	4				
2-33	319773	SCRW,.44-14 2.50	8				
2-34	800519	KEY,WDRUF.25 X 1.25 PS	4				
2-35	800530	BOLT, CARRIAGE (KC)	8				
2-36	64018-9	BLT-CRG 5/16-18X3/4 G5	12				
2-37	64268-03	NUT-FL NYLN LOCK 3/8-16	8				
2-38	64262-014	BLT-FLG HD 3/8-16 X 2	4				
2-39	800713	SCRW,.38-16 2.25 ZS	4				
2-40	869067	LINK, VERTICAL	4				
2-41	889469	GEARBOX, REVERSING	2				
2-42	522757	HOLDER, 3/4" TINE	8				

FIGURE 3

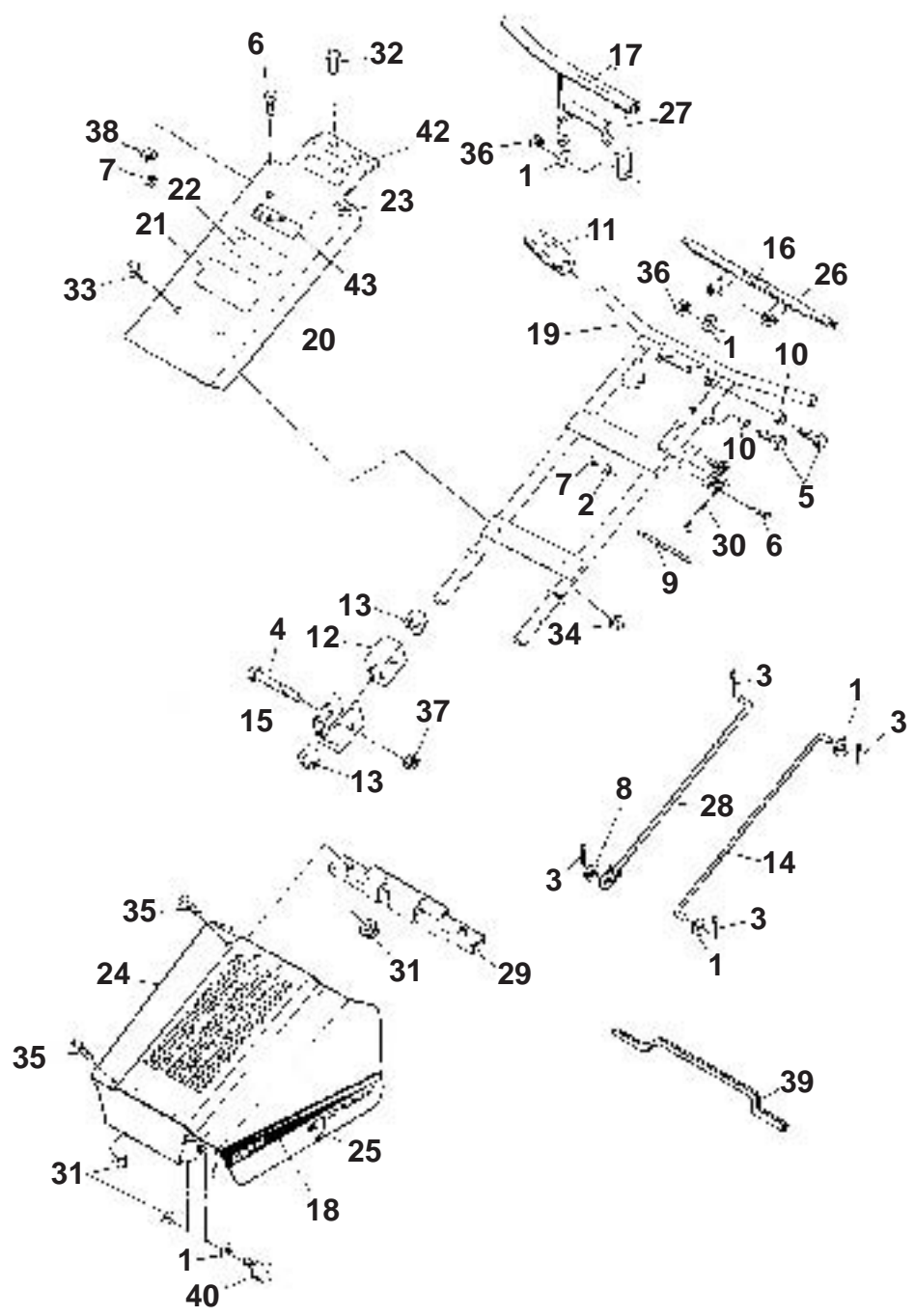


524805-03

FIGURE 3

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
3-1	64163-29	WASHER-21/64 X 1 X 11GA	1				
3-2	64140-1	COTTER PIN-1/8X1	1				
3-3	306424	SCREW, HEX HEAD CAP	4				
3-4	306450	SCRW, .31-18.75	2				
3-5	64163-67	WASHER-.516X1X12GA	1				
3-6	524431.7	SHIELD, DIRT	1				
3-7	522967.7	BRACKET-HOOD LATCH	1				
3-8	523053	SPACER,.51 .75 3.28 ZS	1				
3-9	523094.7	SCRAPER-FRONT WHEEL	1				
3-10	523240	WASHER, THRUST	1				
3-11	523325	COLLAR, LOCKING	1				
3-12	523815	SEAL,V-RING	2				
3-13	524001.7	ANGLE-HNDLE MOUNT LH	1				
3-14	524002.7	ANGLE-HNDLE MOUNT RH	1				
3-15	547499	ROD AY (PLATED)	1				
3-16	547507.7	YOKE-FRONT AXLE	1				
3-17	4124196	WHEEL AY	2				
	(INCLUDES ITEMS 18-23)						
3-18	64025-03	NUT-HEX 5/16-24	4				
3-19	64006-02	LOCKWSHR-HELICAL 5/16	4				
3-20	306861	SCRW,.31-24.625 YS HX	4				
3-21	517332	WHEEL HALF	2				
3-22	523264	TIRE-4.10/3.50-4 2 PLY	1				
3-23	548546	TUBE-4.10/3.50-4	1				
3-24	4124197	WHEEL AY	1				
	(INCLUDES ITEMS 25-27)						
3-25	523261	TUBE-2.80/2.50-4	1				
3-26	523262	TIRE-2.80/2.50-4 4 PLY	1				
3-27	523263	BEARING-BALL	2				
3-28	540220.2	FRAME-MAIN	1				
	(INCLUDES ITEMS 29 & 30)						
3-29	523430	BEARING,BRONZE	2				
3-30	807442	FITTING-LUBRICATION	1				
3-31	64139-08	BOLT-5/16-18X3/4 WLF	8				
3-32	64141-6	NUT, 5/16-18	16				
3-33	64141-13	NUT WLF 1/2-13	1				
3-34	64215-02	RIVET-POP IFI# 44	4				
3-35	800537	SCRW,.5-13 4.25 YS HX	1				
3-36	800554	SSCRW,.25-20.68 BS	2				
3-37	64018-9	BLT-CRG 5/16-18X3/4 G5	5				
3-38	829148	MOUNT,ISOLATION	2				
3-39	832525	SPRING,EXTENSION	3				
3-40	888102	LATCH AY	2				
3-41	540217.2	SHIELD AY	1				
3-42	524432.7	PANEL, SIDE RGN	1				
3-43	548013	TSCRW,.25-20.50 YS HW	2				
3-44	830918	SEAL, PUSH ON 25'	A/R				
3-45	517162	SPACER	1				

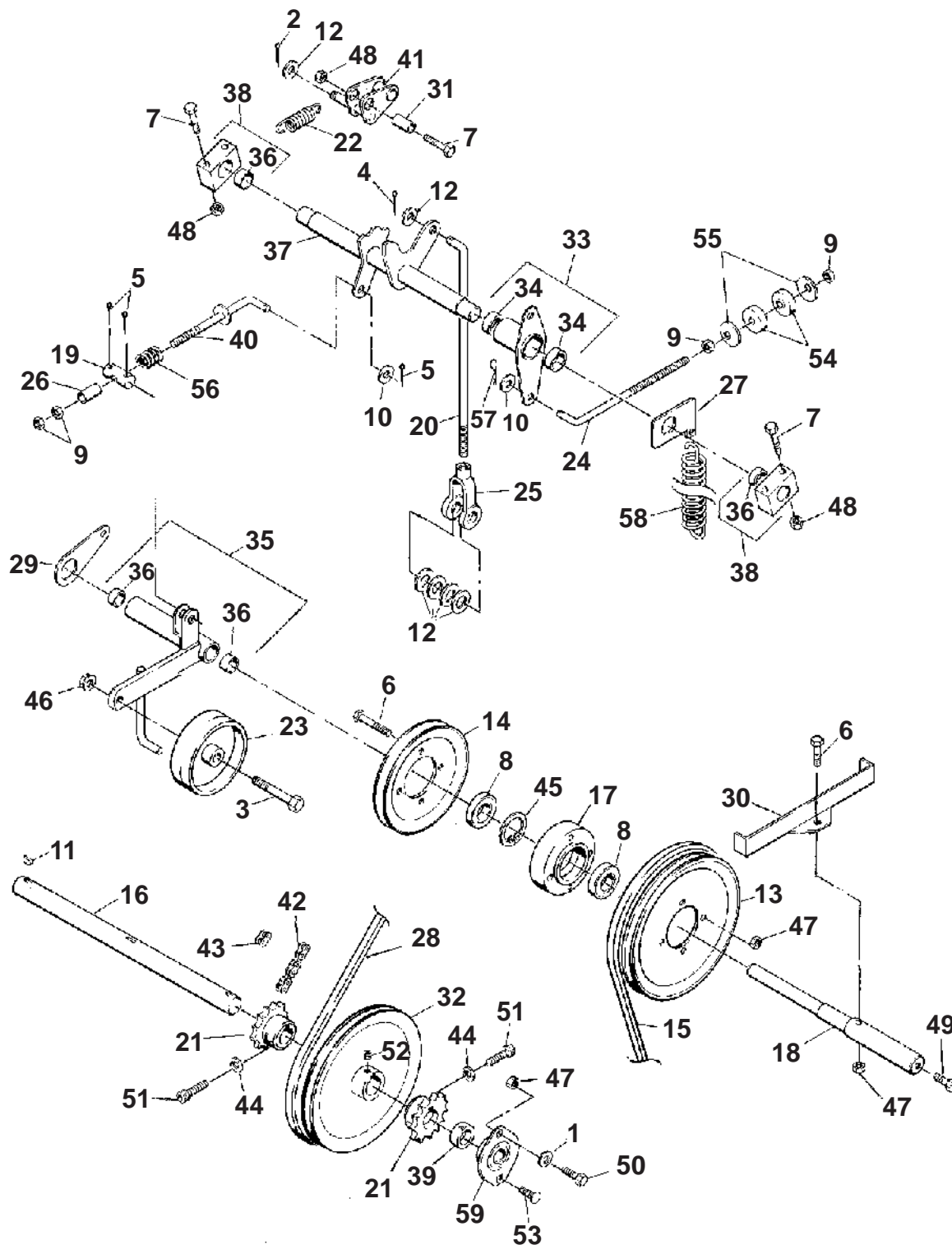
FIGURE 4



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
4-1	64163-55	WASHER .328X.75X14 GA	7				
4-2	120052	LOCKWASHER	3				
4-3	64140-3	COTTER PIN-3/32X3/4	2				
4-4	64123-82	BOLT-HEX 3/8-16X2-1/2	2				
4-5	306450	SCRW,.31-18.75 YS HX G5	4				
4-6	64152-06	10-24X1/2 MACH SCREW	3				
4-7	306531	NUT, 10-24 YS HEX	3				
4-8	64163-67	WASHER-.516X1X12GA	1				
4-9	320107	TIE, CABLE 7.5" KC	1				
4-10	515268	BUSHING	4				
4-11	522727	GRIP,HANDLE	2				
4-12	522730	CUSHION, RUBBER	2				
4-13	523158	SLEEVE, HANDLE MOUNT	4				
4-14	524482.7	ROD, ENGAGEMENT	1				
4-15	523267.7	CHANNEL	2				
4-16	523306	DECAL-LIFT	1				
4-17	523309	DECAL, CLUTCH	1				
4-18	4124283	LABEL-HOOD LA28, LH	1				
4-19	547503.7	HANDLEBAR AY	1				
4-20	547520	COVER-HANLEBAR	1				
	(INCLUDES ITEMS 21-23)						
4-21	523307	DECAL, OPER INSTRNS	1				
4-22	523308	DECAL,WARNING	1				
4-23	523310	DECAL, THROTTLE	1				
4-24	540222	HOOD	1				
	(INCLUDES ITEM 25)						
4-25	835892	DECAL,DANGER HND/FT	2				
4-26	547567.7	LOCKOUT BAR AY	1				
4-27	547583.7	HANDLE AY	1				
4-28	547620.7	ROD AY	1				
4-29	547621.7	SUPPORT AY,SHIELD	1				
4-30	540395	CONTROL AY,THROTTLE	1				
4-31	64141-6	NUT, 5/16-18	10				
4-32	800019	SCRW,.25-20 .50 YS PR	2				
4-33	800024	SCRW,.25-20 1.50 YS PR	4				
4-34	64151-17	LOCKNUT, HEX	6				
4-35	800177	SCRW,.31-18.75 YS PR G2	8				
4-36	800290	NUT,.31-18 YS HX CNTRLK	4				
4-37	800292	NUT,.38-16 YS HX CNTRLK	2				
4-38	814924	CLAMP, TUBE .50 ID YS	1				
4-39	821893	TRIM- PUSH ON 12'	A/R				
4-40	829148	MOUNT,ISOLATION	2				
4-41*	4124284	LABEL-HOOD LA28 RH	1				
4-42	524798	DECAL,CAUTION-OP/MNL	1				
4-43	4124274	LABEL-RYAN	1				

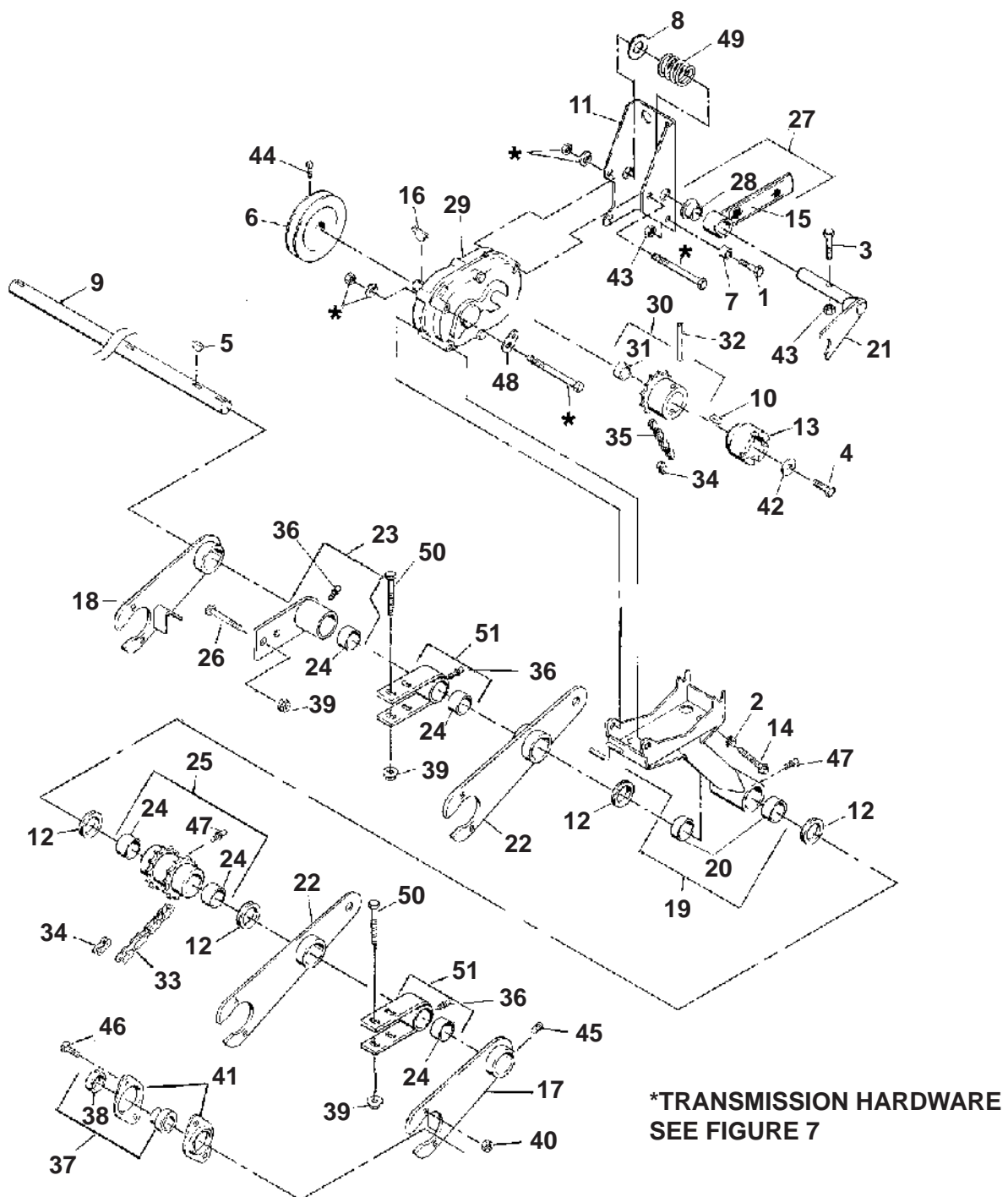
* NOT ILLUSTRATED

FIGURE 5



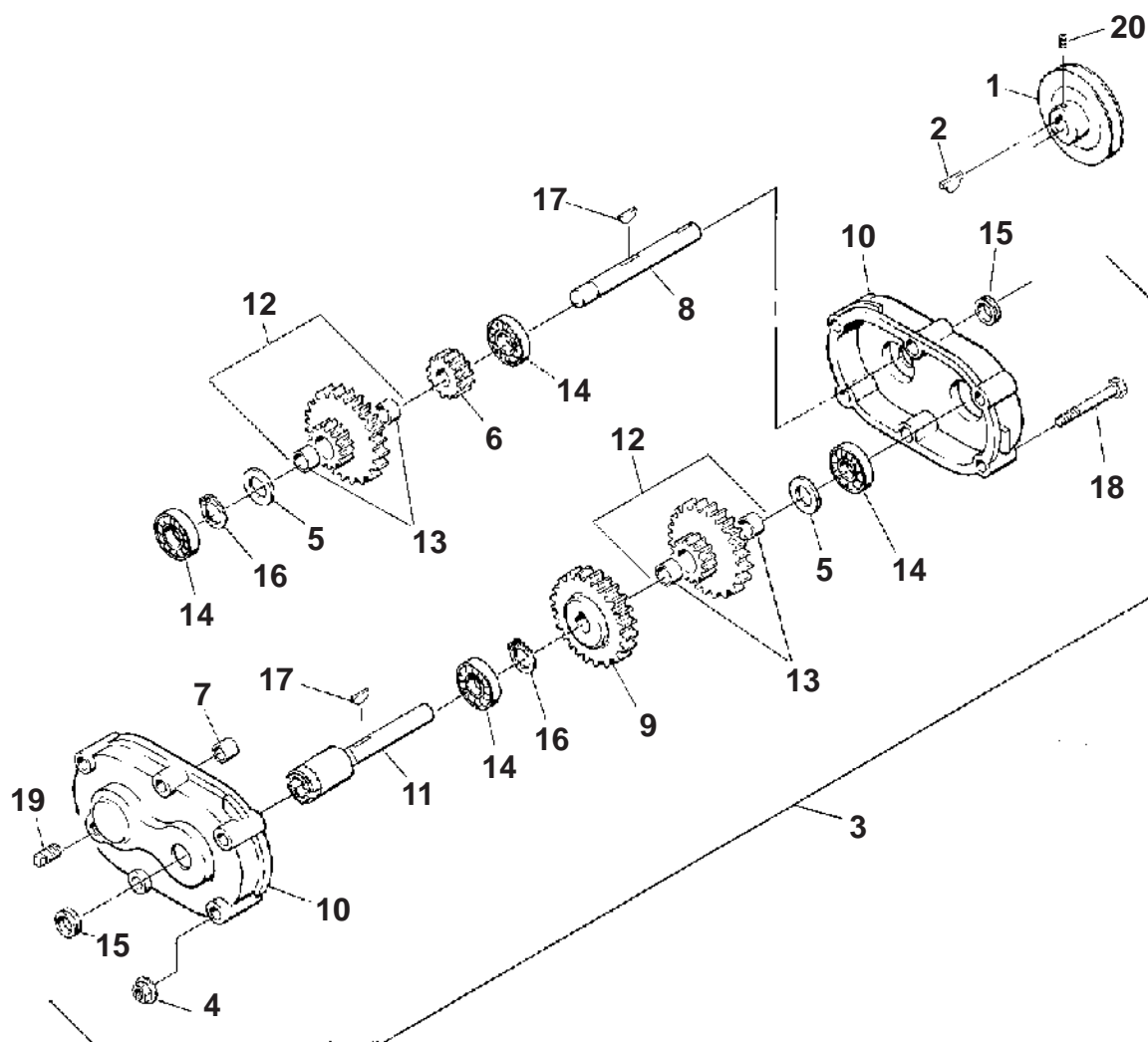
ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
5-1	64163-55	WASHER .328X.75X14 GA	2	5-44	548183	LWSHR,.31.09 HI-COLLAR	2
5-2	120219	PIN,COTTER.09 1.00 YS	1	5-45	548326	RING,INT RET 2.21OD.06	1
5-3	131794	SCREW-3/8-16 X 2	1	5-46	64141-4	NUT-WLF 3/8-16	7
5-4	304636	COTTER PIN, 12 x 1.12 YS	4	5-47	64141-6	NUT, 5/16-18	8
5-5	64140-3	COTTER PIN-3/32X3/4	3	5-48	800290	NUT,.31-18 HX CNTERLCK	5
5-6	64123-61	BLT-HEX 5/16-18X1-3/4	5	5-49	64139-21	BLT-WLF 3/8-16X3/4	2
5-7	130167	SCREW-5/16-18 X 2	5	5-50	800453	SCRW,.31-18.875 YS HX	2
5-8	832499	BEARING, BALL	2	5-51	800513	SCREW-HEX 5/16-18-1-1/4	2
5-9	64025-05	NUT-3/8-16 HEX	4	5-52	800556	SSCRW,.38-16.38	2
5-10	64163-61	WSHR .81X.406X16GA	2	5-53	306450	SCRW,.31-18.75 YS HX	2
5-11	64164-28	KEY-#808 WOODRUFF	3	5-54	810157	BUSHING, SHOCK MNTNG	2
5-12	64163-67	WASHER-.516X1X12GA	6	5-55	810758	RETAINER,BUSHING SHK	2
5-13	522717	PULLEY, 8" (203mm)	1	5-56	814499.7	SPRING,COMPRESSION	1
5-14	522720	PULLEY, 6" (152mm)	1	5-57	822529	PIN,HAIR.44 2.00.13	1
5-15	522729	V-BELT	1	5-58	830389	SPRING	1
5-16	522746	JACKSHAFT	1	5-59	832405	BEARING, BALL	2
5-17	522760.7	HUB-PULLEY	1				
5-18	522771	SHAFT	1				
5-19	522793.7	PIN-BELT TIGHTENER	1				
5-20	522827	ROD, LINKAGE	1				
5-21	522889	SPROCKET,15T 5/8P	2				
5-22	522943	SPRING,EXTENSION	1				
5-23	522973.7	PULLEY, IDLER 4.00 DIA.	1				
5-24	523011	ROD,ADJUSTMENT PLTD	1				
5-25	523154	YOKE END	1				
5-26	523221	SPACER (PLATED)	1				
5-27	523226.7	PLATE-SPRING MOUNT	1				
5-28	523268	V-BELT	1				
5-29	523280.7	BRACKET-SPRING LATCH	1				
5-30	523405.7	GUIDE	1				
5-31	523485	BUSHING	1				
5-32	545991	PULLEY, FRONT	1				
5-33	547501.7	BELLCRANK-LINKAGE	1				
	(INCLUDES ITEM 34)						
5-34	515376	BUSHING	2				
5-35	547516.7	ARM-IDLER	1				
	(INCLUDES ITEM 36)						
5-36	523160	BUSHING	4				
5-37	547582.7	SHAFT-PIVOT	1				
5-38	547608.7	BLOCK-PIVOT	2				
	(INCLUDES ITEM 36)						
5-39	832440	COLLAR,LOCKING	2				
5-40	547619	ROD AY (PLATED)	1				
5-41	547739.7	LATCH, LOCKOUT	1				
5-42	547877	CHAIN-#50 SEALED	2				
	(INCLUDES ITEM 43)						
5-43	522123	LINK,#50 CONNECTOR	2				

FIGURE 6



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
6-1	64123-89	BOLT-HEX 1/4-20X3/4	1	6-36	548224	FITTING,GREASE 1/4 SP	3
6-2	64025-03	NUT-HEX 5/16-24	1	6-37	548101	BEARING ASSEMBLY	4
6-3	306810	SCREW-1/4-20 X 1 1/2	1			(INCLUDES ITEM 38)	
6-4	306861	SCRW,.31-24.625 YS HX	1	6-38	521857	COLLAR,BRG LOCKING	4
6-5	64164-28	KEY-#808 WOODRUFF	4	6-39	64141-4	NUT-WLF 3/8-16	6
6-6	517137.7	PULLEY,4" DIA	1	6-40	64141-6	NUT, 5/16-18	8
6-7	518438	BUSHING,.391IDX.500OD	1	6-41	548962	HOUSING,BEARING	8
6-8	522226	WSHR,.78 1.11.07 YS FLAT	2	6-42	603620	WSHR,.38 1.00.12 YS FLAT	1
6-9	522828	SHAFT,AXLE PIVOT	1	6-43	64151-17	LOCKNUT, HEX	2
6-10	522881	KEY-3/16 X 3/16 X 1/2	1	6-44	800555	SSCRW,.31-18.62 BS	2
6-11	523153.7	BRACKET, CLUTCH	1	6-45	800556	SSCRW,.38-16.38 BS	2
6-12	523241	SEAL,V-RING	4	6-46	64018-9	BLT-CRG 5/16-18X3/4 G5	8
6-13	523250	HUB-DOG CLUTCH	1	6-47	807439	FITTING, LUBRICATION	3
6-14	523265	SCREW-5/16-24 X 2 1/2	1	6-48	811677	BRACKET, RETURN SPRNG	1
6-15	523311	DECAL, DOG CLUTCH	1	6-49	813011.7	SPRING	1
6-16	523941	KEY, HI-PRO.19 X.62	1	6-50	64123-100	BOLT-3/8-16X2-1/4 HEX	4
6-17	545995.7	ARM-WHEEL LEFT	1	6-51	547544.7	CLAMP-PIVOT	2
6-18	545996.7	ARM-WHEEL RIGHT	1			(INCLUDES ITEMS 24 & 36)	
6-19	545997.7	MOUNT-TRANSMISSION	1				
		(INCLUDES ITEM 20)					
6-20	523484	BEARING,BRONZE	2				
6-21	545998.7	FORK-DOG CLUTCH	1				
6-22	545999.7	ARM-DIFFERENTIAL	2				
6-23	540216.7	CLAMP-PIVOT	2				
		(INCLUDES ITEM 24)					
6-24	522722	BUSHING	6				
6-25	547545.7	SPROCKET-DOUBLE	1				
		(INCLUDES ITEM 24)					
6-26	64123-50	BOLT-HEX 3/8-16X1	2				
6-27	547635.7	HANDLE-DOG CLUTCH	1				
		(INCLUDES ITEM 28)					
6-28	523260	BEARING-3/4 FLANGE	1				
6-29	540402	TRANSMISSION	1				
6-30	540287.7	SPROCKET-DOG CLUTCH	1				
		(INCLUDES ITEMS 31 & 32)					
6-31	841332	BEARING	1				
6-32	800902	PIN,SPIROL 5/16 X 1-1/2	1				
6-33	547878	CHAIN-#40, 50 LNKS	1				
		(INCLUDES ITEM 34)					
6-34	522122	LINK, #40 CONNECTOR	2				
6-35	547879	CHAIN-#40, 60 LNKS	1				
		(INCLUDES ITEM 34)					

FIGURE 7



Lawnaire 28

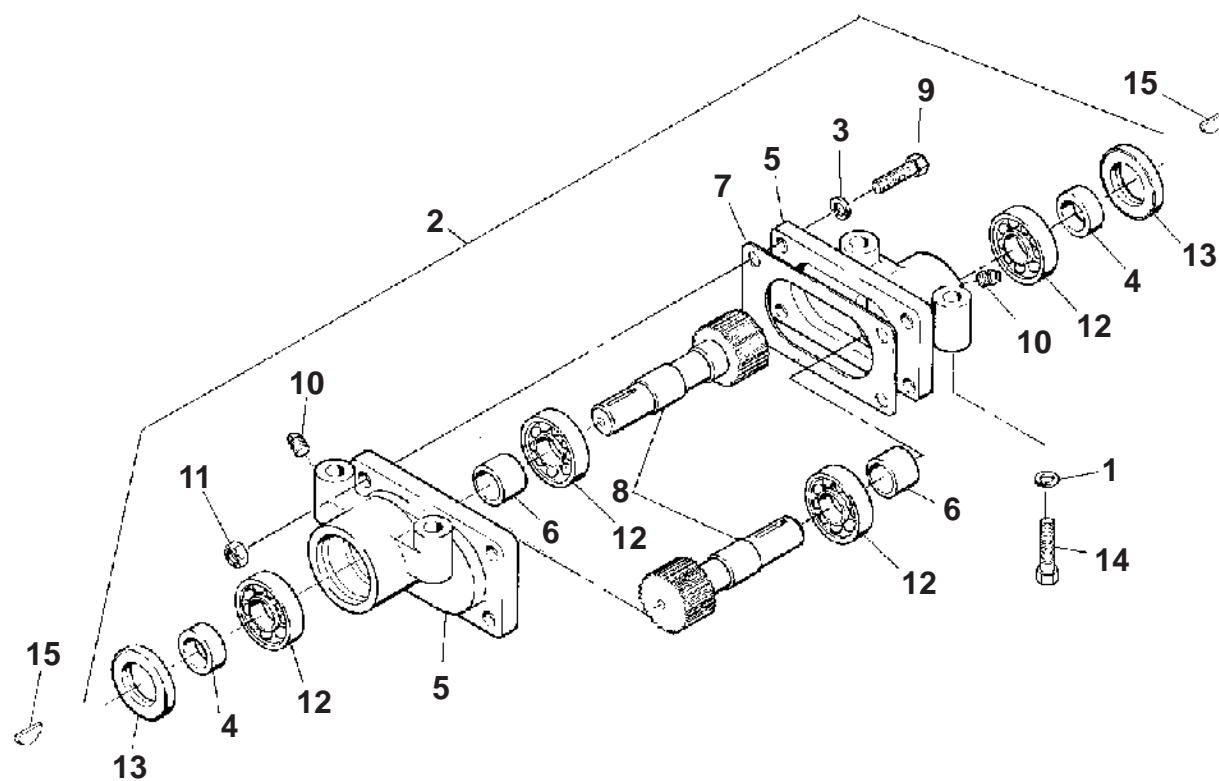
TRANSMISSION

524805-07

FIGURE 7

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
7-1	517137	PULLEY,4" DIA	1				
7-2	523941	KEY, HI-PRO.19 X.62 PS	1				
7-3	540402	TRANSMISSION	1				
		(INCLUDES ITEMS 4-20)					
7-4	64141-6	NUT, 5/16-18	6				
7-5	516700	SPACER	2				
7-6	516724	GEAR	1				
7-7	517226	BRG,SLV .33 .50 .20	2				
7-8	518826	SHAFT	1				
7-9	518827	GEAR	1				
7-10	522638	GEAR CASE HALF	2				
7-11	524620	SHAFT,GEARBOX	1				
7-12	2702142	GEAR AY,IDLER 56T/20T	2				
7-13	515511	BUSHING	4				
7-14	548119	BRG,BALL.75 1.62.31 "OP"	4				
7-15	548274	OIL SEAL	2				
7-16	548324	RING,EXT RET.691ID.042T	2				
7-17	548369	KEY, WDRUF.19 X.62 PS	2				
7-18	548958	SCREW, .31-18 3.50 YS HX	6				
7-19	800120	PLUG,.38-18NPT PS SQ HD	2				
7-20	800555	SSCRW,.31-18.62 BS	2				

FIGURE 8



Lawnaire 28

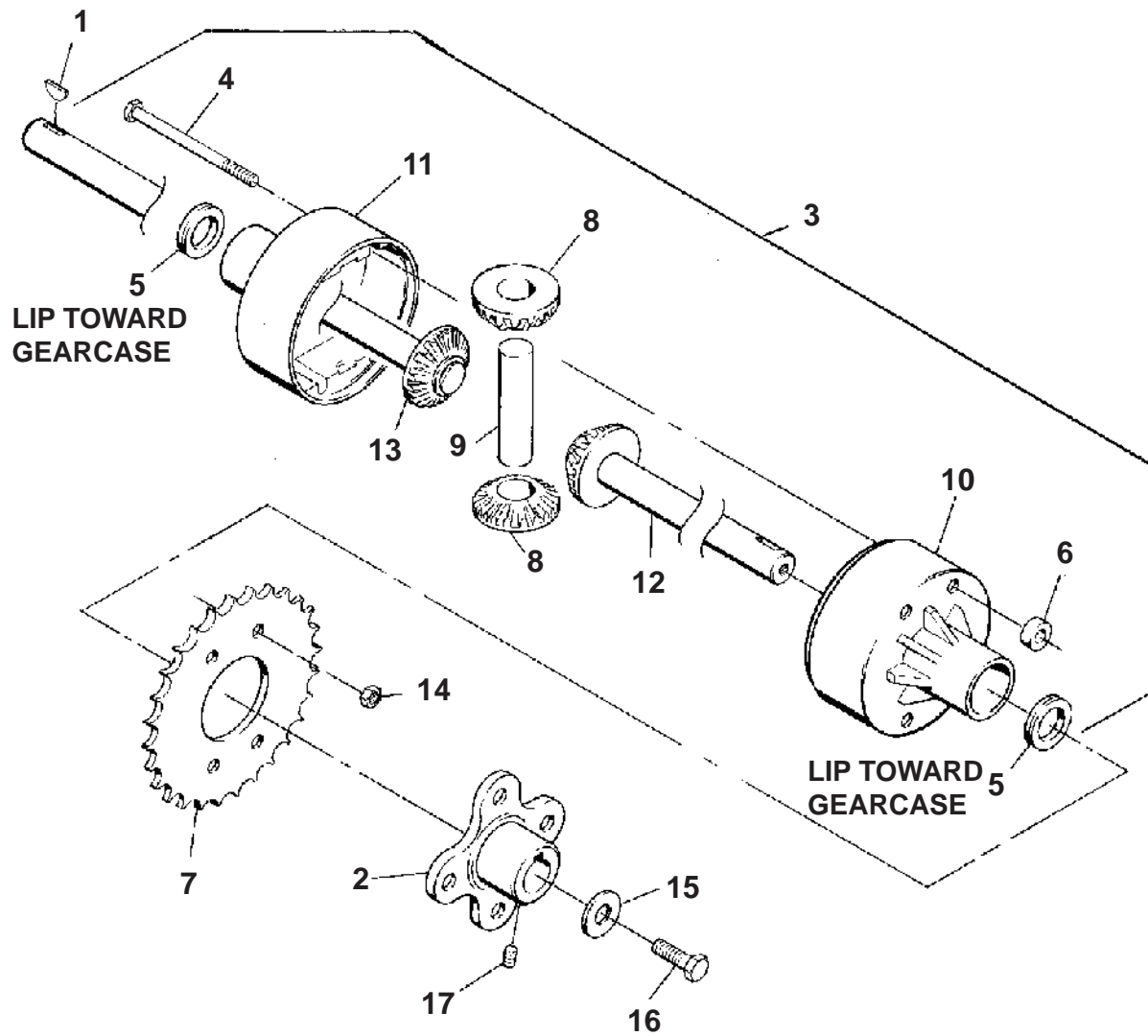
REVERSING GEAR BOX

524805-08

FIGURE 8

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
8-1	64006-06	LOCKWSHR-HELICAL 7/16	8				
8-2	889469	GEARBOX, REVERSING	2				
		(INCLUDES ITEMS 3-13)					
8-3	64006-03	WSHR, 3/8 HELICAL LOCK	4				
8-4	522747	SPACER,.98 1.37 .40 BS	2				
8-5	522807	CASE, REVERSING GEAR	2				
8-6	522991	SPACER	2				
8-7	522992	GASKET, RVRSNG GRBX	1				
8-8	523104	SHAFT,ROCKER	2				
8-9	548798	SCRW,.38-24 1.25 ZS HX	4				
8-10	800227	PLUG,.12-27NPTF ZS HS	2				
8-11	800531	NUT,.38-24 HX CRWNLCK	4				
8-12	815093	BEARING, BALL .998 2.05.	4				
8-13	887272	SEAL-OIL	2				
8-14	800444	SCREW-7/16-14 X 2 1/2	8				
8-15	800519	KEY,WDRUF.25 X 1.25 PS	2				

FIGURE 9



Lawnaire 28

DIFFERENTIAL

524805-09

FIGURE 9

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
9-1	64164-19	KEY WOODRUFF.19X.75 #9	2				
9-2	516944	HUB-AXLE	2				
9-3	547658	DIFFERENTIAL	1				
	(INCLUDES ITEMS 3-14)						
9-4	316909	SCRW, .31-18 4.50 YS HX	4				
9-5	523242	SEAL, V-RING	2				
9-6	523258	SPACER	4				
9-7	523259	SPROCKET	1				
9-8	523512	TRANSFER GEAR	2				
9-9	523513	CROSS AXLE	1				
9-10	547748	HOUSING BEARING AY	1				
9-11	547749	HOUSING BEARING AY	1				
9-12	547750	AXLE GEAR AY	1				
9-13	547751	AXLE GEAR AY	1				
9-14	800290	NUT, .31-18 HX CNTRLCK	4				
9-15	603620	WSHR, .38 1.00.12 YS FLAT	2				
9-16	64139-21	BLT-WLF 3/8-16X3/4	2				
9-17	800555	SSCRW, .31-18.62 BS	4				

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Equipment from Textron Golf, Turf & Specialty Products is built to exacting standards ensured by ISO 9001 registration at all our manufacturing locations.

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