

MAN 4163416
Rev. A 6-2008



MODELS:

544946A
JR. SODCUTTER, HONDA 18"



OPERATOR / PARTS MANUAL

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.

CALIFORNIA

Proposition 65 Warning

Battery posts, terminals, wiring insulation, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
WASH HANDS AFTER HANDLING.

IMPORTANT MESSAGE

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

This machine comes with an Operation and Safety Manual and a separate Parts and Maintenance Manual. The useful life and good service you receive from this machine depends to a large extent on how well you read and understand these manuals. 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 CGC, Inc. 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 CGC, Inc. dealer for any service or parts needed. CGC, Inc. service ensures that you continue to receive the best results possible from CGC, Inc. products. You can trust CGC, Inc. replacement parts because they are manufactured with the same high precision and quality as the original parts.

CGC, Inc. 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.

**Commercial Grounds Care, Inc.
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.

Commercial Grounds Care, Inc. strongly warns against, rejects and disclaims any modifications, add-on accessories or product alterations that are not designed, developed, tested and approved by CGC, Inc.'s Engineering Department. Any CGC, Inc. 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 CGC, Inc.—will result in the CGC, Inc. 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 CGC, Inc. will be considered the responsibility of the individual(s) or company designing and/or making such changes. CGC, Inc. 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 CGC, Inc. 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

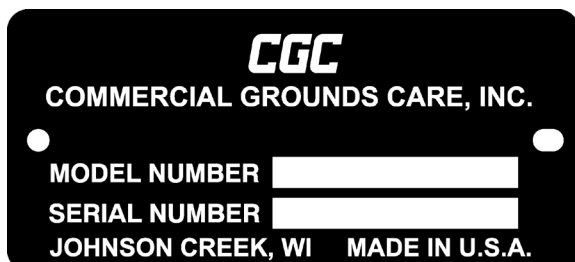
WARNING indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

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.



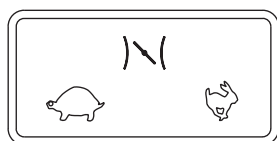
MODEL NUMBER: This number appears on sales literature, technical manuals and price lists.

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.



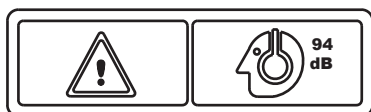
009034910

This decal instructs the operator to read and understand the Operation & Safety manual. To prevent injury, they must be familiar with the operation of this product and be fully aware of safe operating procedures.



524481

The throttle control decal uses the turtle to represent slower engine speeds, the rabbit represents faster engine speeds.



524538

This decal informs the operator that hearing protection should be worn if operating the Jr. Sodcutter for extended periods of time (longer than four hours).

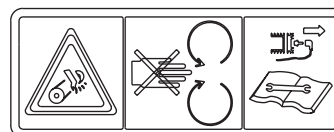


524541

The top symbol shows fingers or hands being cut or severed. **DO NOT** place hands or fingers under Jr. Sodcutter while operating the unit.

The middle symbol shows toes or feet being cut or severed. **DO NOT** place feet or toes under Jr. Sodcutter while operating the unit.

The lower symbol informs the operator and/or bystanders to keep a safe distance away from machinery. If you do not keep hands and feet a safe distance from the machinery, personal injury could occur.

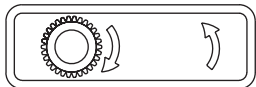


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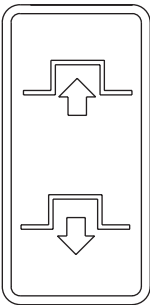
The left symbol shows the possible result of working on the machinery with safety shields removed. Hands and fingers may become entangled in belts. **DO NOT** operate the unit without safety shields in place.

The middle symbol warns the operator and/or bystanders to keep hands out of moving components.

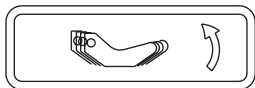
The right symbol instructs the operator to read the service section of the operators manual. Disable the engine (disconnect spark plug wire) before performing any service or maintenance on the unit.



524486
This decal shows the direction of lever movement used to engage the drive wheels of the Jr. Sodcutter. Movement in the opposite direction will stop the drive wheels.



524480
This decal shows the direction of lever movement used to engage the drive belt of the Jr. Sodcutter. Push the lever forward to engage the drive belt. Pull the lever rearward to disengage the drive belt.



524485
This decal shows the direction of lever movement used to engage the cutter blade of the Jr. Sodcutter. Movement in the opposite direction will stop the cutter blade.

OPERATING INSTRUCTIONS

HARD SOIL OPERATION:

1. TIP BLADE FORWARD BY LOOSENING LOCKING LEVER (BLACK HANDLE RIGHT SIDE "H" FRAME). PUSH "H" FRAME FORWARD AS REQUIRED AND LOCK LEVER.

DEPTH OF CUT:

1. LOOSEN UPPER RIGHT HAND LOCKING LEVER. TIP MACHINE FORWARD AND MOVE CENTER DEPTH CONTROL LEVER TO DESIRED DEPTH. LOCK IN POSITION BY ROTATING LOCKING LEVER CLOCKWISE.

2. LOOSEN DEPTH STOP LOCKING LEVER AT CENTER OF "H" FRAME. RAISE DEPTH STOP UNTIL IT CONTACTS DEPTH CONTROL LEVER AND LOCK IN PLACE.

3. ADJUST BLADE TO CUT SOD 3/4 TO 1 INCH THICK.

BLADE ADJUSTMENTS

TO MOVE WITHOUT POWER:

DISENGAGE DRIVE WHEEL SHIFTER LEVER (ON FRONT-RIGHT SIDE OF MACHINE) BY ROTATING DOWNWARD.

TO MOVE MACHINE UNDER POWER:

1. DISENGAGE CUTTING BLADE SHIFTER LEVER (ON FRONT-RIGHT SIDE OF MACHINE) BY ROTATING DOWNWARD.

2. ENGAGE DRIVE WHEEL SHIFTER LEVER (ON FRONT-RIGHT SIDE OF MACHINE) BY ROTATING UPWARD.

3. WITH ENGINE RUNNING, HOLD OPERATOR PRESENT LEVER AGAINST HANDLEBAR AND PUSH CLUTCH LEVER FORWARD TO THE ENGAGED POSITION.

TRANSPORTING MACHINE

STARTING ENGINE

1. FILL FUEL TANK WITH REGULAR GASOLINE.

2. PULL CLUTCH LEVER BACK TO DISENGAGED POSITION.

3. SET THROTTLE TO 1/2 OPEN POSITION AND MOVE STOP SWITCH TO "ON" POSITION.

4. SET CHOKE AND START ENGINE.

SOD CUTTING INSTRUCTIONS

1. MAKE REQUIRED BLADE ADJUSTMENTS AS STATED ABOVE.

2. START ENGINE PER INSTRUCTIONS ABOVE AND SET THROTTLE TO FULL SPEED.

3. ENGAGE DRIVE WHEELS BY ROTATING SHIFTER LEVER ON FRONT RIGHT SIDE OF MACHINE UPWARD.

4. ENGAGE CUTTING BLADE BY ROTATING SHIFTER LEVER ON REAR RIGHT SIDE OF MACHINE UPWARD.

5. WITH MACHINE TIPPED FORWARD ON FRONT BUMPER AND OPERATOR PRESENT LEVER HELD AGAINST HANDLEBAR, PUSH CLUTCH LEVER FORWARD. AT THE SAME TIME LOWER THE MACHINE SO BLADE ENTERS THE GROUND.

6. TO STOP MACHINE, PULL BACK FIRMLY ON CLUTCH LEVER, THIS APPLIES A BRAKE.

7. STOP ENGINE BY MOVING STOP SWITCH TO "OFF" POSITION.

4124337
This decal shows the operating instructions for the Jr. Sodcutter.

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

NEVER disable the operator presence control by altering or modifying it in any way.

The Sodcutter is very heavy, to prevent serious injury, use an adequate lifting device (i.e., hoist, fork lift, etc.) to remove from shipping pallet.

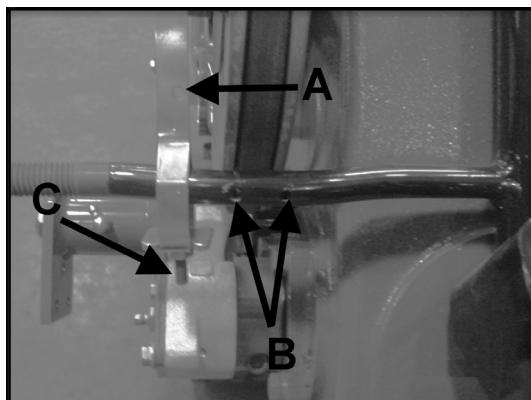
1. Cut the banding securing the aerator to the pallet

WARNING

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

2. Remove and discard reinforced tape securing handlebar and clutch control assembly to pallet.
3. Using an adequate lifting device, remove Jr. Sodcutter from shipping pallet.
4. Remove hardware bag and empty contents onto a surface where they will not be misplaced or lost.
5. Loosen, remove and retain hardware securing large belt cover guard to side of unit, Remove guard to allow access to idler assembly and brake band components.
6. Slide adjustment end of brake band over the guard support rod as shown in Figure 1.

FIGURE 1



- A. Brake Band
- B. Cotter Pin Holes
- C. Adjustment Screw

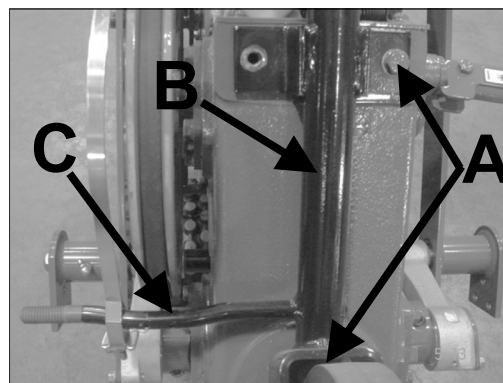
7. Insert one cotter pin on each side of brake band, using the two cotter pin holes shown in Figure 1. BE SURE the heads of the cotter pins are on the pulley side of the support rod to prevent interference between cotter pin and belt.

NOTICE

To prevent loss of gear lube from bottom hole in gear case, tip unit forward until lifting handle on front of unit is resting on the ground.

8. Remove and retain the upper two screws and lockwashers from the rear of the gear case. Loosen the lower screw in the slot behind the wheel far enough to allow the handle bar to slide behind the screw and washer. Figure 2.

FIGURE 2



- A. Crankcase Screws
- B. Handlebar Support
- C. Guard Support Rod

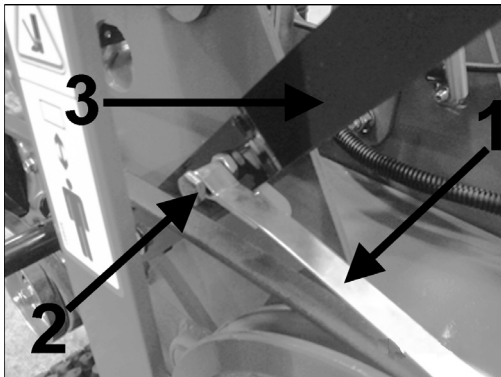
- 9a. Apply Permatex gasket compound or an equivalent to the three screws in step 8.

9b. NOTE: in this step, it is necessary to do three things at one time.

1. The clevis assembly must be positioned just to the right side of the belt, near the belt idler arm.

Figure 3.

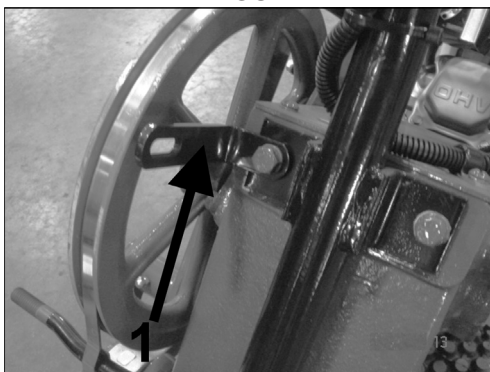
FIGURE 3



1. Brake Band
2. 1/4-20 Screw
3. Clevis

2. The brake band is positioned over the belt in the large pulley groove. Figure 4.

FIGURE 4

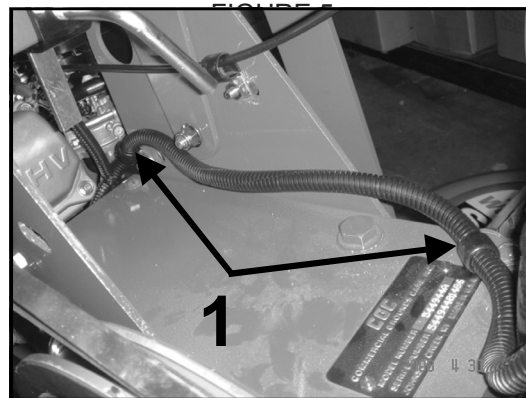


1. "L" Bracket

3. The handle support is positioned, in the bottom slot behind wheel, Figure 2, and then the upper two bolts are attached with the "L" bracket in the left hole. Figure 4. BE SURE the slotted side of the "L" brackets is facing toward the large pulley.

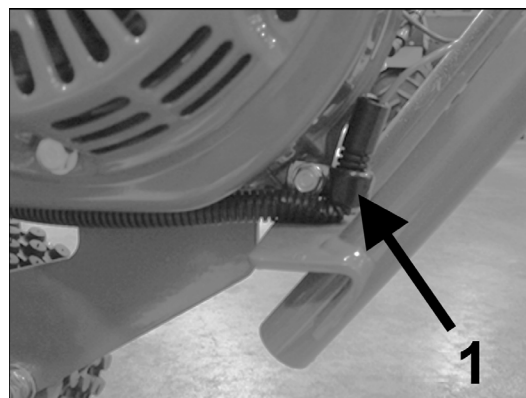
10. Connect the flat end of the clevis assembly to the idler arm as shown in Figure 3. The hardware needed is on the clevis assembly. This should pivot freely after it is tightened.

11. Route convoluted tubing from the control panel to the front of the engine and attach at three points with clips shown in Figure 5 and 6. Route wiring and cable on the inside of the bracket. Route convoluted tubing next to the hour meter wire ty-rap together below the clip on the convoluted tubing. Figure 7.



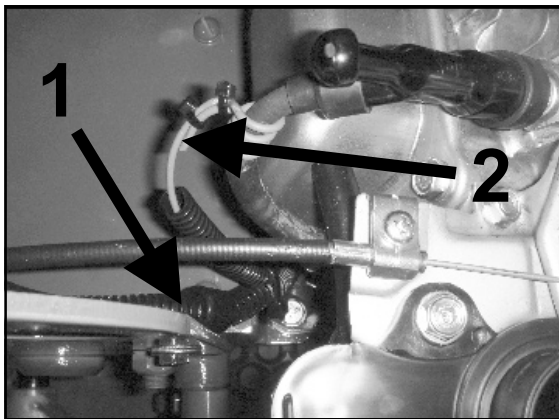
1. Tubing Clips

FIGURE 6



1. Tubing Clip

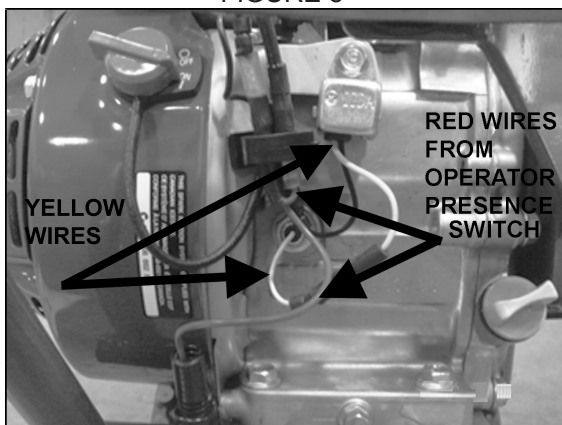
FIGURE 7



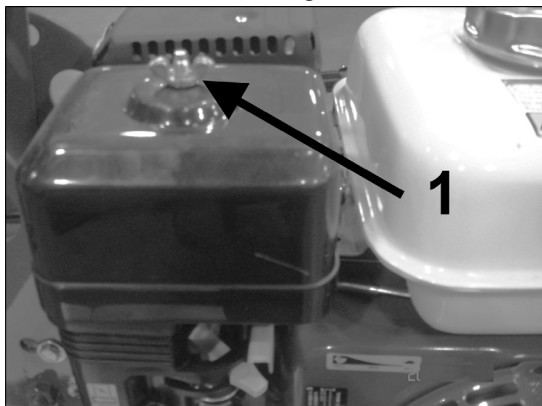
- 1. Convoluted Tubing
- 2. Hour Meter Wire

12. Connect red wire with male connector from convoluted harness to the black female connector on the front of the engine. Figure 8.

FIGURE 8



13. Loosen and remove wing nut securing air cleaner cover. Remove cover and element to allow access to the throttle. Figure 9.

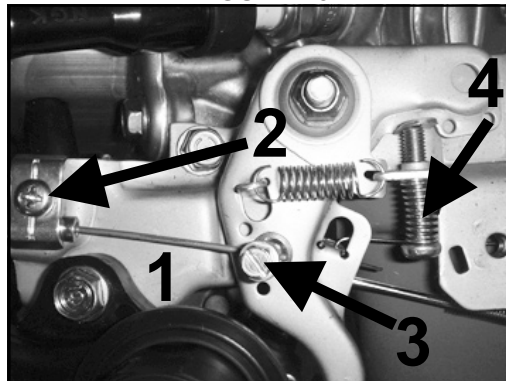


- 1. Wing nut on Engine

14. Route the throttle cable on the inside of the bracket. See Figure 5.

15. Route the throttle cable through the throttle bracket as shown in Figure 10. The cable end shoulder should be positioned as shown against the end of the throttle bracket. Tighten down throttle bracket making sure not to overtighten.

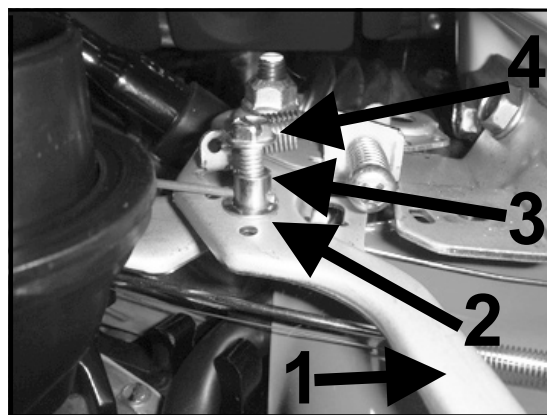
FIGURE 10



- 1. Throttle Cable
- 2. Throttle Bracket
- 3. Swivel
- 4. Throttle Stop Screw

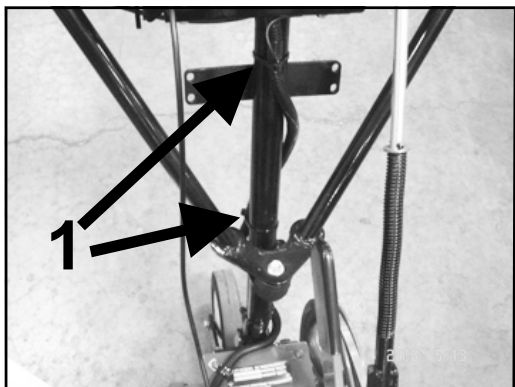
16. The swivel needs to be inserted up through the bottom of the engine throttle lever, the swivel washer goes on and then the swivel screw. Figure 11.

FIGURE 11



- 1. Throttle Lever
- 2. Swivel Washer
- 3. Swivel
- 4. Swivel Screw

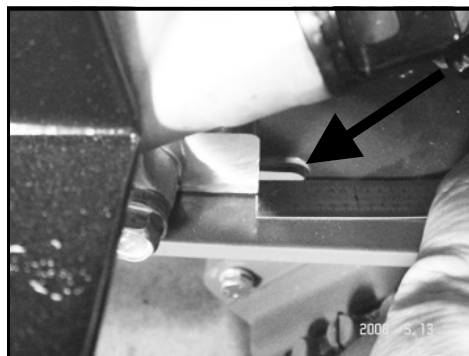
17. Move throttle control on control panel to low idle speed position while inserting cable end through the swivel. See Figure 11.
18. Rotate engine throttle to high idle speed position. Move throttle control to high idle speed. Tighten swivel screw to secure cable.
DO NOT overtighten cable stop.
19. Pull throttle control on panel back to low idle, then push back to high idle.
20. If the engine throttle lever is not contacting the end of the throttle stop screw, the swivel screw must be loosened and the throttle cable wire pulled through the cable stop further. Re-tighten the swivel screw. Recheck to ensure the throttle lever is contacting the end of the throttle screw, if not, repeat.
21. Re-install the air cleaner element and cover. Secure with the original wing nuts.
22. Use wire ties to secure convoluted tubing to handlebar support. Figure 12.



1. Wire Ties

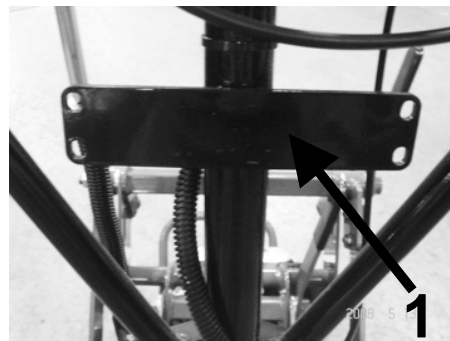
23. Pull the clutch control lever back to the disengaged position. Adjust brake band by turning the adjusting screw at the bottom of the brake band with an allen wrench. Adjustment should be snug enough but not too tight to cause smoking of the drive belt. Install locking nut to hold the brake band adjustment in place.
24. If brake band cannot be adjusted, reposition engine. Slot on engine plate should be showing 7/32" to 1/4". See Figure 13.

FIGURE 13



25. Install one (1) 1/2-13 flangelock nut (flange side towards the outside of the unit) onto the guard support rod before guard is reinstalled. (the guard support rod is shown in Figure 2).
26. Reinstall guard onto side of unit using original hardware. Secure "L" bracket to guard using 5/16-18 X 5/8" flange bolt and flange nut.
27. Insert two (2) 15 1/2" (394mm) cable ties through the holes in the literature mounting plate. Figure 14. Secure literature tube using the large cable ties.

FIGURE 14



1. Literature Mounting Plate

28. Attach the cutting blade using six (6) 5/16-24 X 1" grade 8 screws, lockwashers and nuts.
Torque attaching hardware to 30ft/lbs. (40.7 Nm)
- USE ONLY** the special grade 8 cap screws provided. Screws below grade 8 will not withstand the recommended torque requirements.
29. Install one (1) 1/2" flangelock nut to the guard support rod to complete the guard installation from step 26.

JR SODCUTTER CONTROLS

Clutch Control Lever - A

Engages or releases drive belt and applies brake action to drive belt when pulled FIRMLY to rear.

Throttle Control - B

Speeds up or slows down the engine.

Engine Switch

Turn to "ON" position to start engine. Turn to "OFF" position to stop engine.

Operator Presence Control - C

With clutch control engaged, engine will stop if operator presence lever is not depressed.

Blade Depth Control Lever - D

Raises or lowers cutting blade.

Blade Depth Control Locking Lever - E

Locking lever holds blade depth control in desired position.

Blade Angle Locking Lever - F

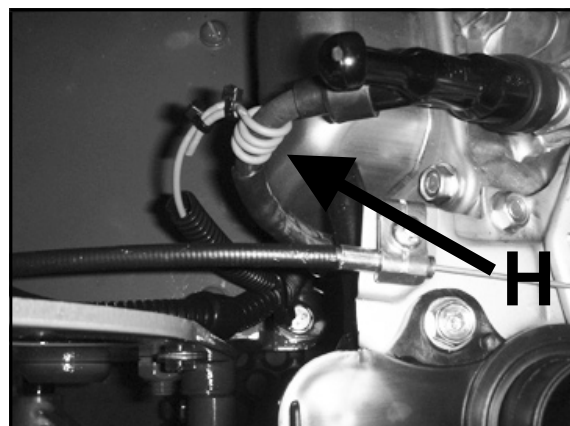
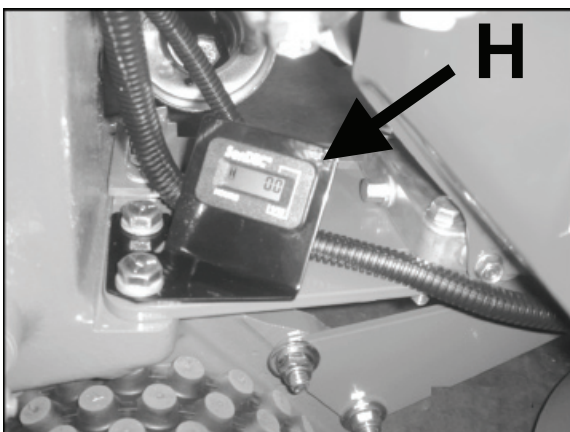
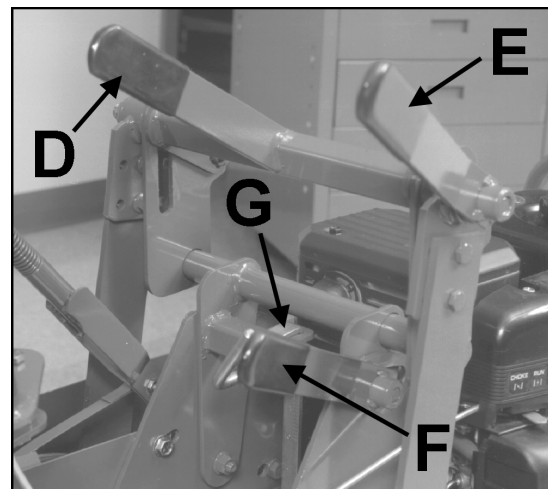
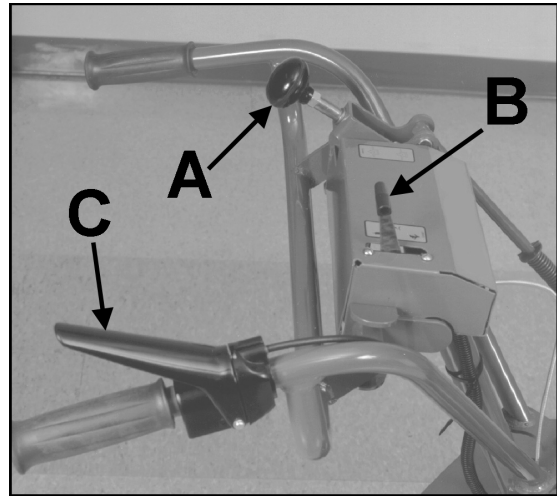
Adjusts cutting angle of blade.

Depth Gauge - G

Allows resetting of blade depth to the previous cutting height.

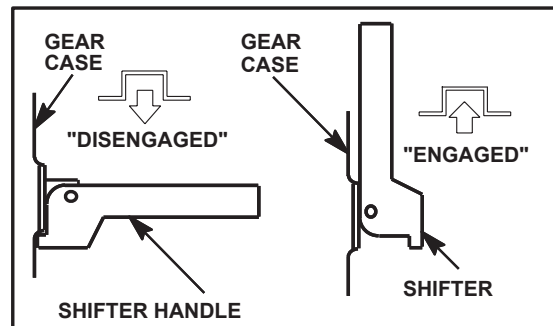
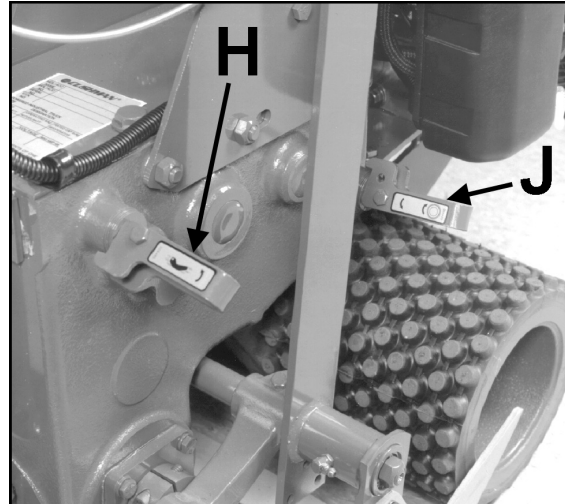
Hour Meter - H Shows how many hours that the engine has run. The far right digit is tenths of an hour (1/10).

- The wire from the hour meter is wrapped around the spark plug wire four (4) turns and secured with Ty-raps.



JR SODCUTTER CONTROLS

Blade (H) and Wheel (J) Shifter Handles : Engage or disengage blade for cutting and gears for driving Sodcutter.



PRE-OPERATION CHECK

1. Visually check all moving parts and all fasteners. If loose or broken, tighten or replace. Check belt for fraying, wear and proper adjustment (see SERVICE section).
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.
4. Check the gear case oil level. Add oil if necessary.
5. Check the air filter. Replace if necessary.
6. Sharpen cutting blade (see SERVICE section).
7. 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.

Do not fill containers in a vehicle or on a truck or trailer bed with a plastic liner. Fill containers on the ground away from the vehicle.

Refuel equipment on the ground. If equipment must be fueled on a truck or trailer, refuel from a portable container rather than a dispenser nozzle.

Keep the dispenser nozzle in contact with the rim of the fuel tank or container opening until fueling is complete. Do not use a nozzle lock-open device.

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.

STARTING ENGINE

1. Be sure gas is turned on. Check Shut-off valve located on the bottom of the fuel tank
2. Place all controls in "Disengaged" position.
3. Put Throttle lever at half speed.
4. Turn engine switch to "ON" position.
5. Pull recoil starter, and choke as required to start engine. Allow engine to warm up.

MOVING THE JR SODCUTTER

To move unit without running blade :

1. Place blade shifter handle **H** in "disengaged" position (handle will point straight out from unit).
2. Set engine speed at slow speed.
3. Engage drive shifter handle.
4. Depress operator presence control.
5. Engage clutch control lever.
6. Adjust throttle to desired walking speed.

To move unit without running engine:

1. Put drive shifter handle and clutch control lever in "Disengaged" position.

To transport the unit:

1. When transporting unit on trailer or truck, shut fuel valve "OFF" beneath fuel tank.

CUTTING SOD

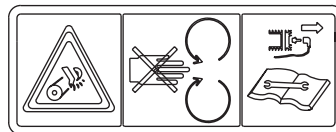
1. Engage drive wheel shifter handle.
2. Engage blade shifter handle.
3. Standing on the right side of the unit, lift handle with left hand, and lower blade to preset depth with right hand. Tighten the locking lever.
4. Adjust throttle to full speed.
5. Push clutch lever forward and lower handle.
6. After cutting a short distance, stop unit and check thickness of sod. Adjust if necessary.
7. At end of each cutting pass, lift up on handle to clear cutting blade from sod, retard throttle and turn Jr. Sodcutter around for return pass.

⚠ WARNING

When replacement parts are required, use genuine **CGC, INC.** 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.

Carbon monoxide present in the exhaust is an odorless and deadly gas. Never start or run the engine inside where exhaust fumes can collect. Provide enough fresh air to keep fumes from getting too strong.

Any warning decal that becomes illegible should be replaced immediately.



STOP engine and disconnect spark plug wire before servicing or making adjustments to unit. The preceding decal shows what could happen if the engine is not stopped or disabled before removing safety covers. Hands may become entangled in moving belts, gears, chains or other parts.

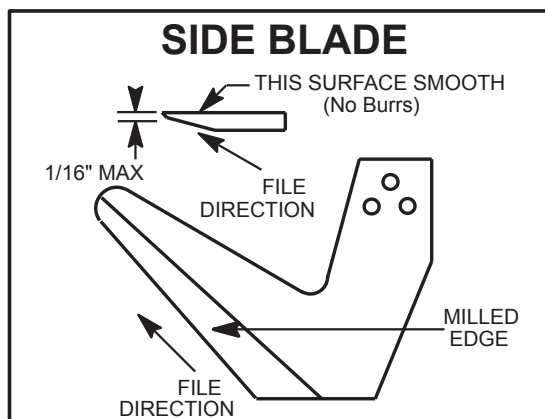
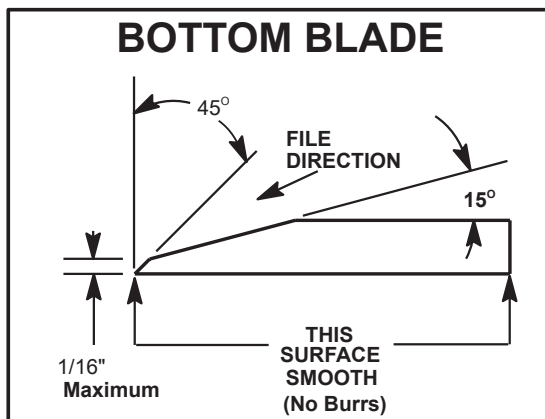
Use adequate lifting device (i.e., hoist, fork lift, etc.) to raise unit.

Use adequate supports when unit is raised for servicing.

Wear protective eye equipment when using hammers, chisels and punches.

BLADE SHARPENING

1. Hand file bottom blade at 45° angle until no flat remains.
2. To keep cutting edge less than 1/16" on 45° angle, grind milled surface back at 15° to less than 1/16".
3. Hand file side blades at 45° until no flat remains.
4. To keep cutting edge less than 1/16" on 45° angle, grind milled surface back at 15° to less than 1/16".

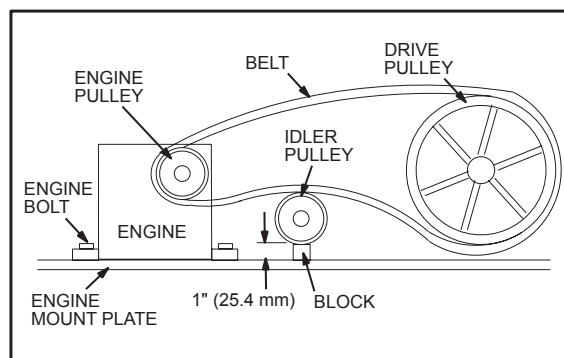


DRIVE BELT ADJUSTMENT

Keep belt free of oil and dirt, and adjusted to proper tension at all times.

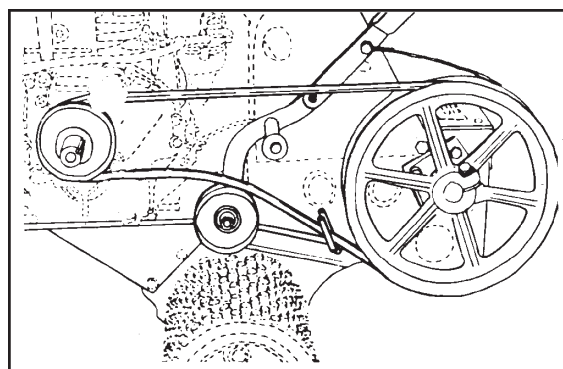
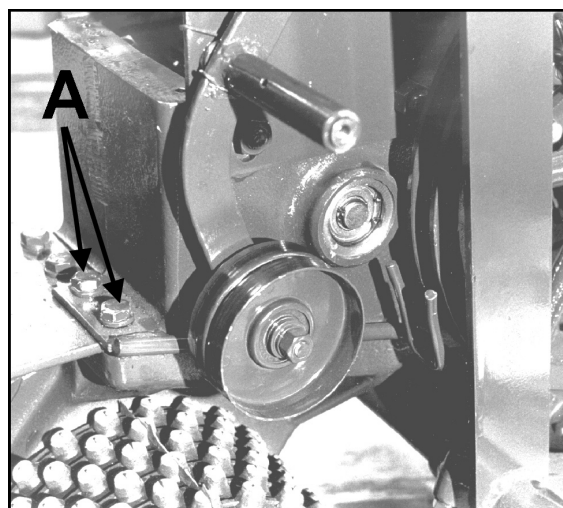
Belt tension is adjusted by loosening four (4) engine mounting bolts and shifting engine on the base.

The belt should be taut when the clutch lever is pushed forward (engaged) and the idler wheel is 1" (25.4 mm) from the engine mount plate.



DRIVE BELT REPLACEMENT

1. Remove shield on left side of unit.
2. Remove nut securing brake band to clutch control rod.
3. Remove cotter pin on outside of guard support rod and move brake band over to nut on rod.
4. Loosen two bolts **A** securing belt guide to provide clearance when removing belt.
5. Install new belt in reverse procedure. Route the belt as shown.



DRIVE CHAIN REMOVAL

1. Raise unit, place on adequate supports and remove belt guard.
2. Remove four (4) screws securing cover.
3. Remove throttle cable from engine and lay behind cam case.
4. Remove dipstick from cover.
5. Remove screw, flat washer, nut and bushing from right lower side of "H" frame.

6. Using a screwdriver, lift cover to break sealant bond and remove cover.
7. Drain oil out of front cavity on case, and turn drive wheels until master link is on top of sprocket.
8. Remove master link and continue rotating drive wheels until chain is off bottom sprocket.
9. Install new chain in reverse procedure. Clean mating surfaces on case and cover. Apply 3M Scotch Grip 847 or an equivalent adhesive to case cover before installation.

BLADE DRIVE CHAIN REPLACEMENT

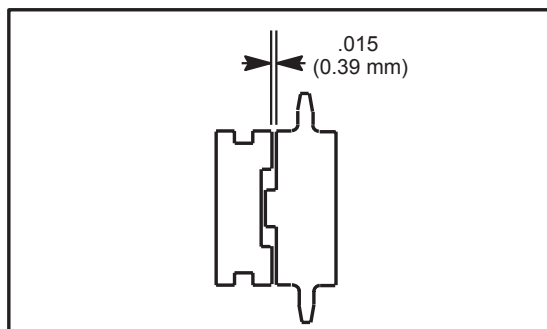
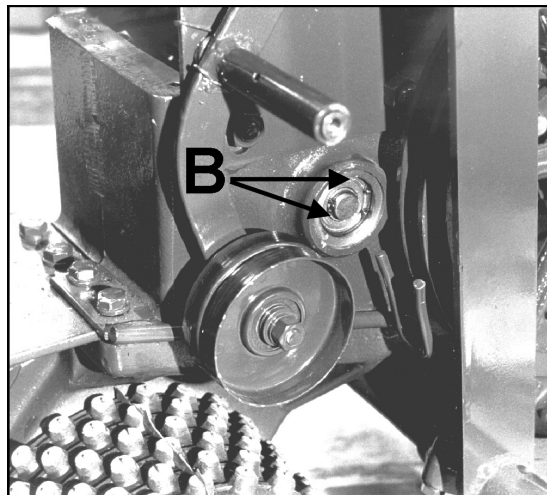
NOTE: To prevent small components from falling down into oil cavities and causing damage to unit, cover opening with clean rags, cardboard, etc.

1. Follow steps 1 thru 6 in drive chain removal.
2. Remove bottom screw on bearing cage to drain oil from rear cavity.

3. Rotate pulley shaft until master link is to front of top sprocket. Remove master link.
4. Rotate blade drive shaft until chain is free.
5. Install new chain in reverse procedure. Use 3M Scotch Grip 847 or an equivalent adhesive on case cover and bearing retainer screw.

UPPER DRIVE SPROCKET & SHAFT

1. Remove drive chain according to steps 1 thru 6 in drive chain removal section.
2. Remove master link from chain. Chain does not need to be removed from lower sprocket.
3. Remove drive shifter assembly from gear case.
4. Remove blade and side arms from pivot brackets for easier access.
5. Remove plugs on both ends of shaft.
6. Remove snap rings **B** from left bearing.
7. Using a punch and soft hammer (lead, leather, etc.), drive shaft out left side of unit and remove large gear.
8. Using a bearing puller or slide hammer, remove bearing. Shaft is now removable through cam case cover opening.
9. Dog clutch half is removable from gear by removing snap ring.
10. Assemble in reverse procedure.
11. After installing blade shifter assembly, adjust dog clutch to provide .015" (0.39 mm) clearance between clutch faces, as shown.
12. Apply 3M Scotch Grip adhesive or an equivalent to gear case cover before installation.

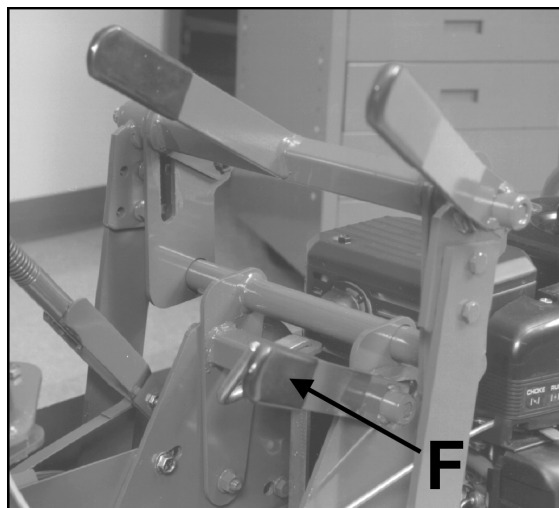


DRIVE WHEEL CHAIN SPROCKET SHAFT

1. Follow steps 1 thru 7 in drive chain removal section.
2. Remove master link and remove chain from top sprocket.
3. Remove both drive wheels and axle keys.
4. Remove seal in case and snap ring retaining bearing in case.
5. Install axle nut on end of shaft, opposite the side of snap ring previously removed.
6. Using a soft hammer (lead, brass, etc.), drive shaft out of case. Sprocket can now be removed by lifting up on chain.
7. Top sprocket and chain should be checked for wear and replaced if necessary.
8. Reassemble in reverse procedure using new seals and gaskets.

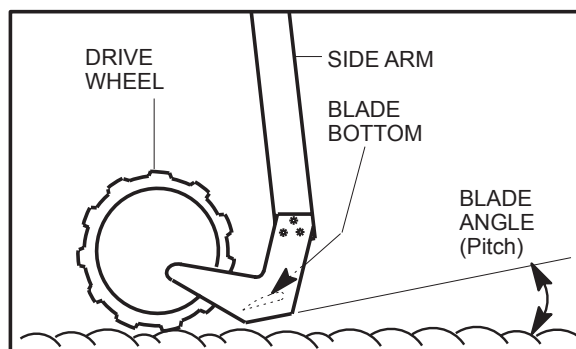
ADJUSTING BLADE ANGLE

1. Loosen blade angle control locking lever **F** and move H-frame forward or backward until blade is at desired angle of pitch.
2. Tighten blade angle control locking lever **F**.



BLADE ANGLE (PITCH)

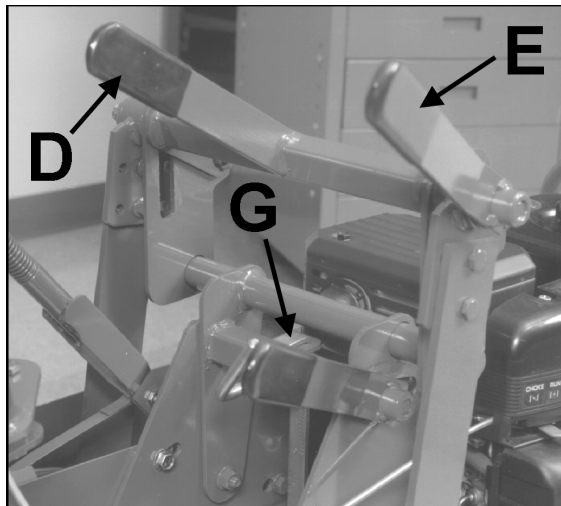
Under normal operating conditions, blade angle is minimal (blade bottom is flat). In extremely hard soil or when cutting with a dull blade, the blade may want to ride out of the ground. It may then help to adjust blade angle downward (see Adjusting Blade Angle above). A short trial run will indicate which is the best blade angle.



ADJUSTING DEPTH OF CUT

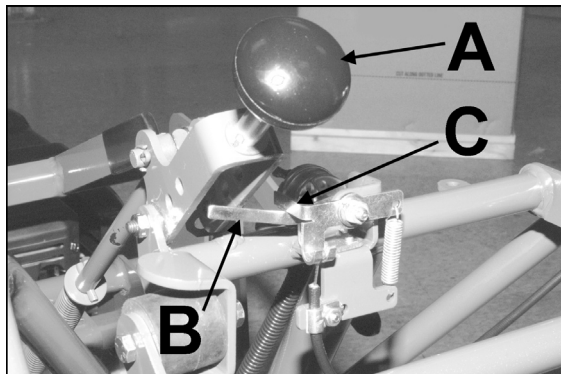
1. Make a trial run in turf. Set depth to cut approximately 3/4" of soil.
2. Loosen depth gauge handle. Adjust depth gauge **G** to contact bottom on depth control lever **D**.
3. Loosen depth control locking lever **E** and lower depth control **D** until it rests on depth gauge **G**.
4. Tighten depth control locking lever **E**.

NOTE: Numbers on depth gauge do not necessarily represent thickness of sod being cut.



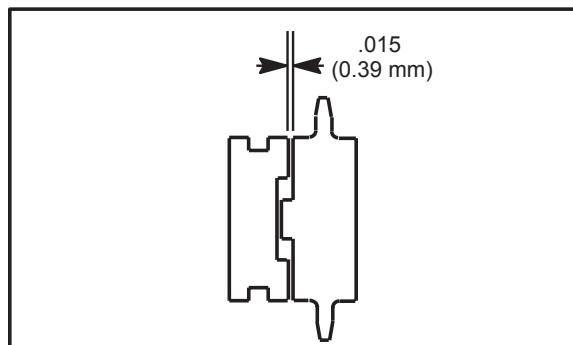
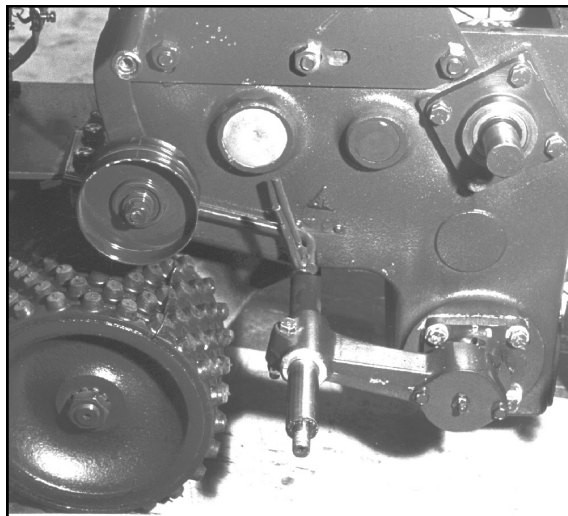
ADJUSTING OPERATOR PRESENCE CONTROL

1. To adjust operator presence cable, pull clutch control handle **A** rearward as far as possible.
2. Press operator presence handle (right handlebar) down as far as possible.
3. Adjust cable until the pivot arm **C** contacts the arm extending from the operator presence switch **B**.
4. Tighten cable clamp to secure cable. Check for proper operation.



PULLEY SHAFT

1. Follow steps 1 thru 4 in belt replacement section and steps 2 thru 6 in drive chain removal section.
2. Remove blade from unit and remove left side arm.
3. Remove blade shifter assembly.
4. Turn pulley until master link is on top of sprocket. Remove chain from top sprocket.
5. Remove belt pulley and key.
6. Remove four (4) bearing cage screws and pull gears out left side of unit. Dog clutch and double sprocket will slide off as shaft is removed.
7. To remove gear and bearing, remove snap ring, slide gear off shaft and remove key. Remove bearing snap ring and remove bearing.
8. Assemble in reverse procedure. After blade shifter assembly is installed, adjust dog clutch to provide .015" (0.39 mm) clearance between clutch faces, as shown.
9. Apply 3M Scotch Grip 847 adhesive or equivalent to gear case cover before installation.

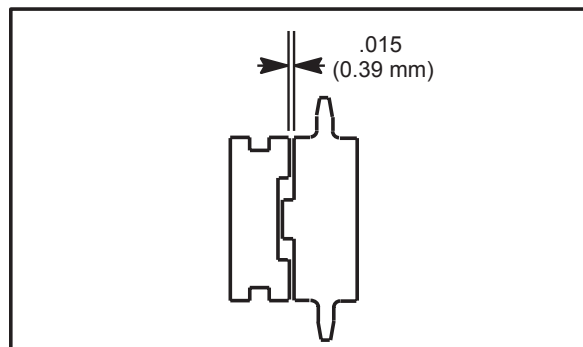
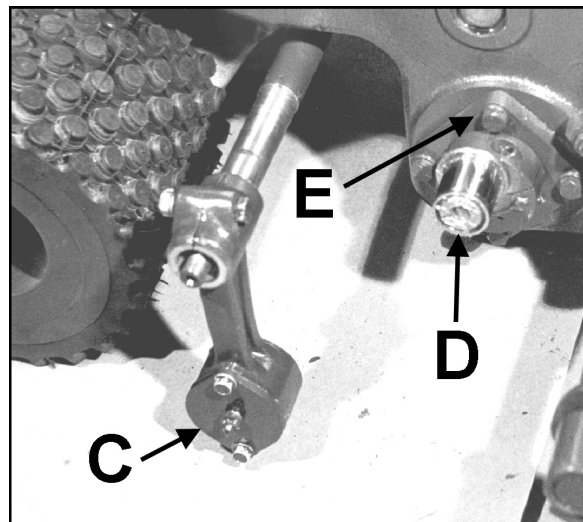


BLADE SPROCKET SHAFT

1. Follow steps 1 thru 6 in pulley shaft section.
2. Loosen clamp screw on left pitman arm **C** and remove from shaft.
3. Loosen clamp screw in eccentric assembly **D** and remove.
4. Remove two (2) top screws securing the other side arm assembly. Side arm, shaft and pitman arm, are now removable by pulling side arm out.
5. Remove eccentric and both bearing cages **E**. Put a pan under rear portion of case to catch oil from case cavity.
6. Push shaft to left of case, lift right end of shaft out of case with bearings and sprocket intact.
7. To remove sprocket, press bearing from shaft, and slide sprocket off.

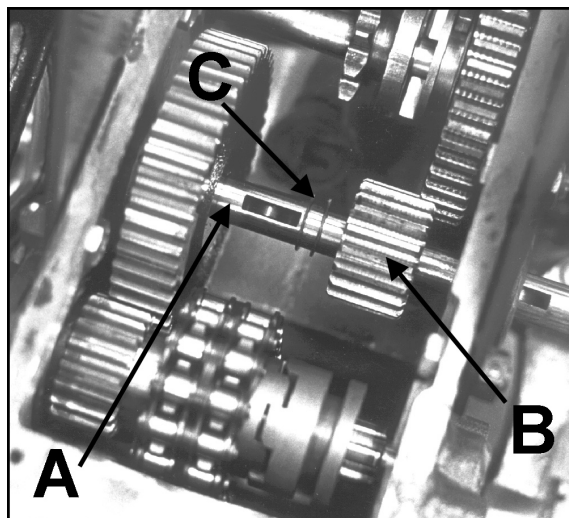
NOTE: End play on shaft must not exceed .005 (.127 mm) clearance and should rotate freely when bearing cages are tightened.

8. Assemble in reverse procedure. After blade shifter assembly is installed, adjust dog clutch to provide .015" (0.39 mm) clearance between clutch faces, as shown.
9. Apply 3M Scotch Grip 847 adhesive or equivalent to gear case cover before installation.



IDLER GEAR SHAFT

1. Remove belt guards.
2. Follow steps 2 thru 6 in drive chain removal section.
3. Remove plug from right side of unit.
4. Remove snap ring **C** from groove by small gear **B** to left end of shaft **A**.
5. Move small gear **B** to left side (from operators position) of case.
6. Move shaft **A** out right side of case until large gear clears shaft for removal.
7. Remove key from shaft and slide snap rings **C** off end of shaft.
8. Small gear **B** will slide off as shaft is removed from gear case.



9. Assemble in reverse procedure. Apply 3M Scotch Grip 847 adhesive or equivalent to gear case cover before installation.

LUBRICATION

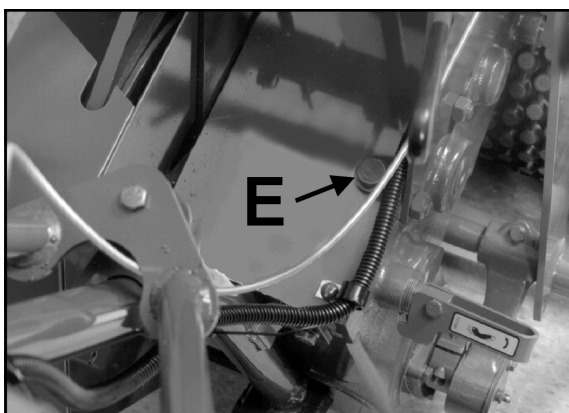
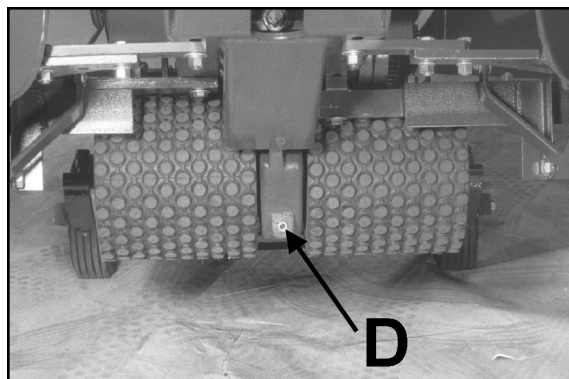
The gear case is initially filled with 3 1/2 pints (1.7 L) of EP 140 Gear Lube. Do not add to this amount unless oil is changed or lost through leakage. Gear case drain plug **D**.

On all pressurized lubrication fittings use a good grade of Lithium Based lubricant.

The Jr. Sodcutter has 6 lubrication fittings. Lubricate pitman arms (1 each side) and side arms (1 each side) after every 4 hours of use.

Lubricate side arm pivots (1 each side - top of unit) after every 8 hours of use.

Check gear case lubricant level using dipstick **E** located on top of gear case. Check lube with dipstick sitting on threads, do not screw in.



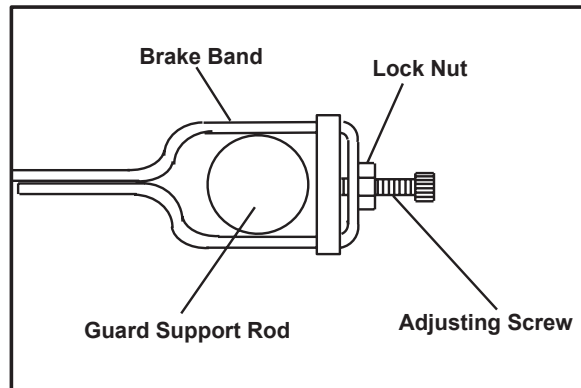
BRAKE BAND REPLACEMENT AND ADJUSTMENT

1. Remove belt guard.
2. Remove old brake band from Jr. Sodcutter. Retain all hardware.
3. Install new brake band with the large loop and hardware at the lower mounting point (on guard support rod).
4. Loosen the lock nut and the adjustment screw on the new brake band. Activate the brake lever and tighten the adjustment screw until the brake band is pulled snug against the belt. Tighten the lock nut on brake adjustment screw. Make a test run. Stop engine and re-adjust brake band if necessary.
5. Re-install belt guard using original hardware.

NOTE: Make sure that cotter pin does not interfere with drive belt.

Routine brake band adjustment is necessary as the band and belt wear.

If brake band is not correctly attached to clutch control link, idler arm will rotate backward away from belt and no drive will occur.



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).

Daily Storage

1. Check engine oil level and air filter element daily.
2. Check oil level in gear case.
3. Close fuel valve at bottom of fuel tank.
4. Clean cutting blade (grass, dirt, etc.).

EXTENDED STORAGE

Before the equipment is put into storage for any period exceeding 30 days, the following steps should be taken:

1. Drain all fuel from fuel tank and lines (use a hose or fuel line, routed from fuel tank shut-off to proper container).

2. Start engine and run until all fuel is used from the carburetor float bowl.
3. While engine is warm, drain the crankcase oil and replace with the proper weight of oil corresponding to the season when the equipment will next be used.
4. Remove the spark plug and squirt a small quantity of engine oil into the cylinder. Turn the engine over a few times to distribute the oil.
5. Lubricate all lubrication fittings.
6. Clean and oil cutting blade to prevent rust.

To put equipment into operation after an extended storage:

1. Fill fuel tank with clean fresh fuel.
2. Check crankcase oil level, and start engine.
3. Check fuel system for fuel leaks.

POSSIBLE PROBLEM	PROBABLE CAUSE	REMEDY
Blade will not stay in ground.	A. Bottom of blade is rounded off. B. Blade angle is not properly set.	A. Blade should be sharpened or replaced. See page 8. B. Adjust blade angle. See page 12.
Root hair pinning on side or bottom of blade.	A. Some types of turf and soil make this a problem.	A. Keep the blade extra sharp and ground back at a low angle.
Belt jumps off.	A. Wrong type of belt construction. B. Too much slack when belt tightener is disengaged.	A. Use only the special Ryan factory belt. B. Slide engine forward and readjust control rod.
Locking levers not tight when pulled to limit of travel.	A. Thread wear on locking nut. B. Locking nut not properly adjusted.	A. Replace locking nut. B. Tighten locking nut on opposite end of tie rod.
Belt grabs in pulleys and unit creeps when clutch is not engaged.	A. Belt is old and frayed, or is not the type sent out with the unit. B. Rust or paint in pulley grooves. C. Engine set too far forward.	A. Belt should be replaced with factory construction belt, designed for belt tightener clutches. B. Clean and polish pulleys. C. Move engine back.
Idler does not engage belt when clutch lever is moved forward.	A. Brake band is not attached to clutch link or is broken.	A. Reattach upper end of brake band to clutch link or replace brake band.

Models: 544946A

Engine

Model..... #GX160-K1QX2, GX160 OHV
 4 cycle 5.5 H.P. Honda 9.9 cu. in. (163 cc)
 Starter..... Recoil
 Governor..... 3600 RPM + 100 RPM, no load
 Clutch..... spring loaded belt tightener type

Noise Level

Sound pressure level.... 92dB(A)(pressure based)
 Sound power level..... 105dB(A)(power based)

Vibration

Handlebar vibration level (in Z-axis)..... 32.4 M/S²

Reduction

Engine to blade..... 2.94:1
 Engine to drive wheels..... 55.8:1

Wheels:

Drive..... 8" (203 mm) Dia. w/knobby
 tread vulcanized to hub
 Rear..... 8 x 1.75 semi-pneumatic tires
 with pre-packed ball bearings

Drive:

Engine to gear case..... "A" section belt
 Gear case..... roller chain

Gear case:

Lubrication..... EP140 Gear lube
 Capacity..... 3 1/2 Pints (1.7L)

Cutting width:

544946A..... 18" (457 mm)

Blade pitch:

Hand lever adjustment..... variable 0° to 9°

Blade speed:1225 oscillations/min @ 3600 RPM

Dimensions:

Width..... 24" (600 mm)
 Length.....49" (1244 mm)
 Height..... 33" (838 mm)
 Wheelbase..... 19" (483 mm)
 Weight (544946A)..... 327 lbs. (148.5 Kg)

Standards:..... Conforms to European Community
 (EC) standard 89/392 and
 amendments 91/368 and 93/44.

CARB, EPA

TOUCH -UP PAINT: 16OZ. (0.5L) Spray can, order
 P/N 383140
 1 Qt. (0.95L) order P/N 838141

PARTS SECTION

DRIVE ASSEMBLY AND SIDE COVER

Jr.
Sodcutter

FIGURE 1

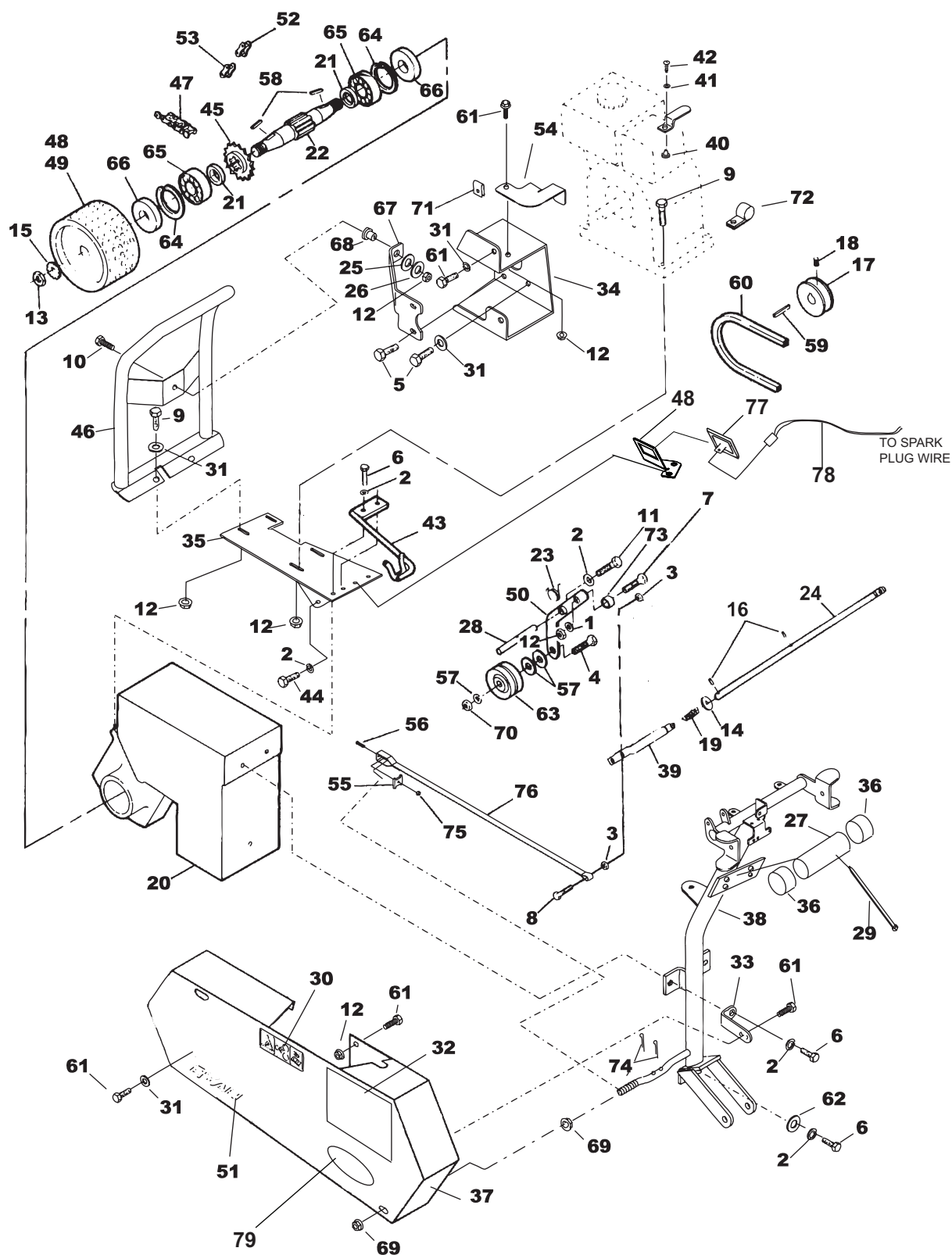


FIGURE 1

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1-1	103867	WSHR,.31.69.06 YS FLT	1	1-46	540244.2	GUARD AY, FRONT	1
1-2	64006-05	LOCKWSHR-HELICAL 1/2	13	1-47	547398	CHAIN AY,#50 RLR	1
1-3	F1002	NUT, JAM 1/4-20 UNC ZP	2	1-48	4163415.7	MOUNT-HOUR METER	1
1-4	64123-67	BLT-HEX 3/8-16X2	1	1-49	547424.7	WHEEL AY 18"	2
1-5	64139-01	BLT-WLF 5/16-24X3/4	4	1-50	547428.7	IDLER ARM AY	1
1-6	64123-50	BOLT-HEX 3/8-16X1	12	1-51	4161125	LABEL-RYAN	1
1-7	64123-68	BOLT-HEX 5/16-18X1	5	1-52	548480	HALF LINK	A/R
1-8	306418	SCRW,.25-20 1.125 YS HX	1	1-53	4117675	LINK AY, #50 CONNECT	A/R
1-9	64139-23	BLT-WLF 5/16-18 X 1-3/4	4	1-54	524610.7	BRACKET,BELT GUIDE	1
1-10	548902	SCRW,.31-18 1.00 YS HSF	1	1-55	524574	NUT, BRAKE BAND	1
1-11	64123-15	BOLT-3/8-16X3/4 HEX	1	1-56	800888	SCRW,#10-32 1.00 BS NE	1
1-12	64141-6	NUT, 5/16-18	4	(ITEMS 55, 56, 75 & 76 ARE AVAILABLE IN BRAKE BAND KIT 540274)			
1-13	307665	NUT,.75-16 YS HX JAM	2				
1-14	64163-67	WASHER-.516X1X12GA	2	1-57	306981	WSHR,.41 .81 .06 YS FLAT	6
1-15	309799	LWSHR,.75 ZS SHKPRF EX	2	1-58	64164-10	1/4X1/4X1-1/4 MACH KEY	2
1-16	316938	PIN,SPIROL.188 1.000 PS	2	1-59	64164-12	KEY-1/4X1/4X1 SQ END	1
1-17	517137	PULLEY,4" DIA "A" SIZE	1	1-60	524582	BELT,V A SECT. 66" LONG	1
1-18	64044-18	SCREW-SET 5/16-18 x 5/16	2	1-61	64139-06	BLT-WLH 5/16-18X5/8	6
1-19	518535.7	SPRING	1	1-62	548164	WSHR,.41.81.07 YS FLT	1
1-20	520671.7	GEARCASE	1	1-63	548942	PULLEY, PLAIN IDLER 3.25"	1
1-21	520722	SPACER	2	1-64	548952	RING, INTRNL RETAINING	2
1-22	520723	SHAFT	1	1-65	548953	BRG,BALL 1.38 2.83.67	2
1-23	520785	SPRING	1	1-66	548954	SEAL,OIL 1.38 SHAFT	2
1-24	521062.7	ROD	1	1-67	524773.2	BRACE, GUARD	1
1-25	838496	WASHER,.25 1.00.125 FLAT	1	1-68	2702464	BUSHING,ISOLATION	1
1-26	64163-29	WASHER-21/64 X 1 X 11GA	1	1-69	64141-13	NUT WLF 1/2-13	2
1-27	38541	TUBE,DOCUMENT 2.75OD	1	1-70	800698	NUT,38-16 HX FLG CRWN	5
1-28	521087	SHAFT	1	1-71	800889	NUT,.31-18 SPD J W/NUT	2
1-29	65286-5A	TIE-CABLE 14 1/2	2	1-72	48228A	CABLE CLIP-INSULATED	3
1-30	840697	DECAL,WARNING HANDS	1	1-73	819337	BUSHING	1
1-31	64163-55	WASHER .328X.75X14 GA	5	1-74	306956	COTTER PIN	2
1-32	4124337	DECAL, INFORMATION	1	1-75	64025-14	NUT-HEX #10-32	1
1-33	520773.7	BRACKET	1	1-76	524573.7	BAND, BRAKE	1
1-34	524436.7	BRACKET, BELT GUARD	1	1-77	4163411	METER-HOUR, INDUCTIVE	1
1-35	524473.2	PLATE,ENGINE MOUNT	1	1-78	4163407	WIRE LEAD-HOUR METER	1
1-36	38061A	CAP, VINYL	2	1-79	4133034	LABEL-JR SOD CUTTER	1
1-37	4163353	S-GUARD ASSY	1	1-80*	524777	FILTER,AIR W/PRE-CLNR	1
1-38	540212.7	HANDLEBAR AY, MOUNT	1	1-81*	540374	SPARK ARESTOR W/SCRW	1
1-39	545247.7	CLEVIS AY	1				
1-40	831888	SWIVEL	1				
1-41	831889	WASHER,SWIVEL	1				
1-42	831890	SCRW,SWIVEL THROTTLE	1				
(ITEMS 40-42 USED ON HONDA ENGINES ONLY)							
1-43	545380.2	GUIDE AY, BELT	1				
1-44	64123-87	BOLT-HEX 3/8-16X1-3/4	2				
1-45	545626	SPROCKET AY	1				

* NOT ILLUSTRATED

GEAR CASE

Jr. Sodcutter

FIGURE 2

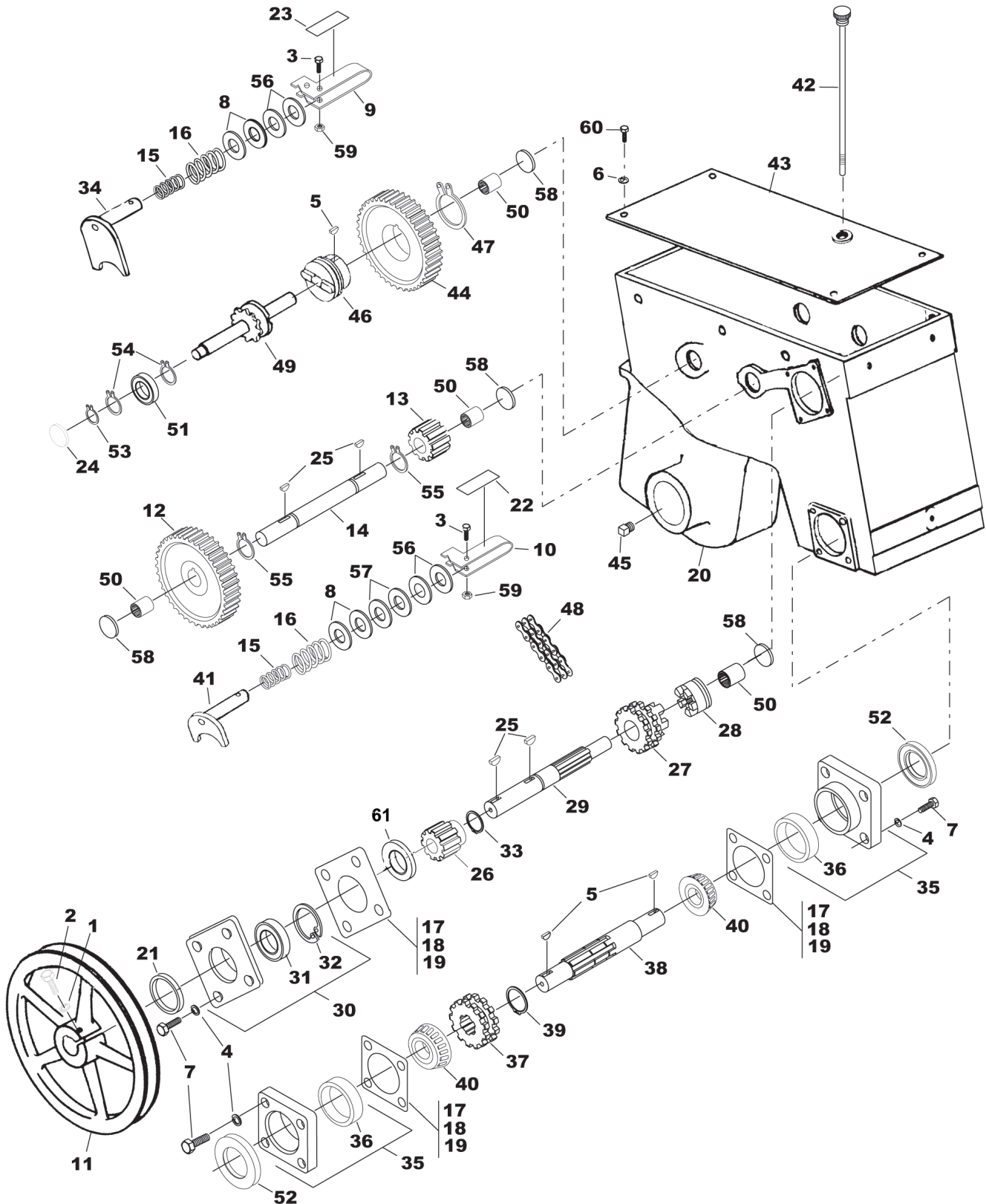


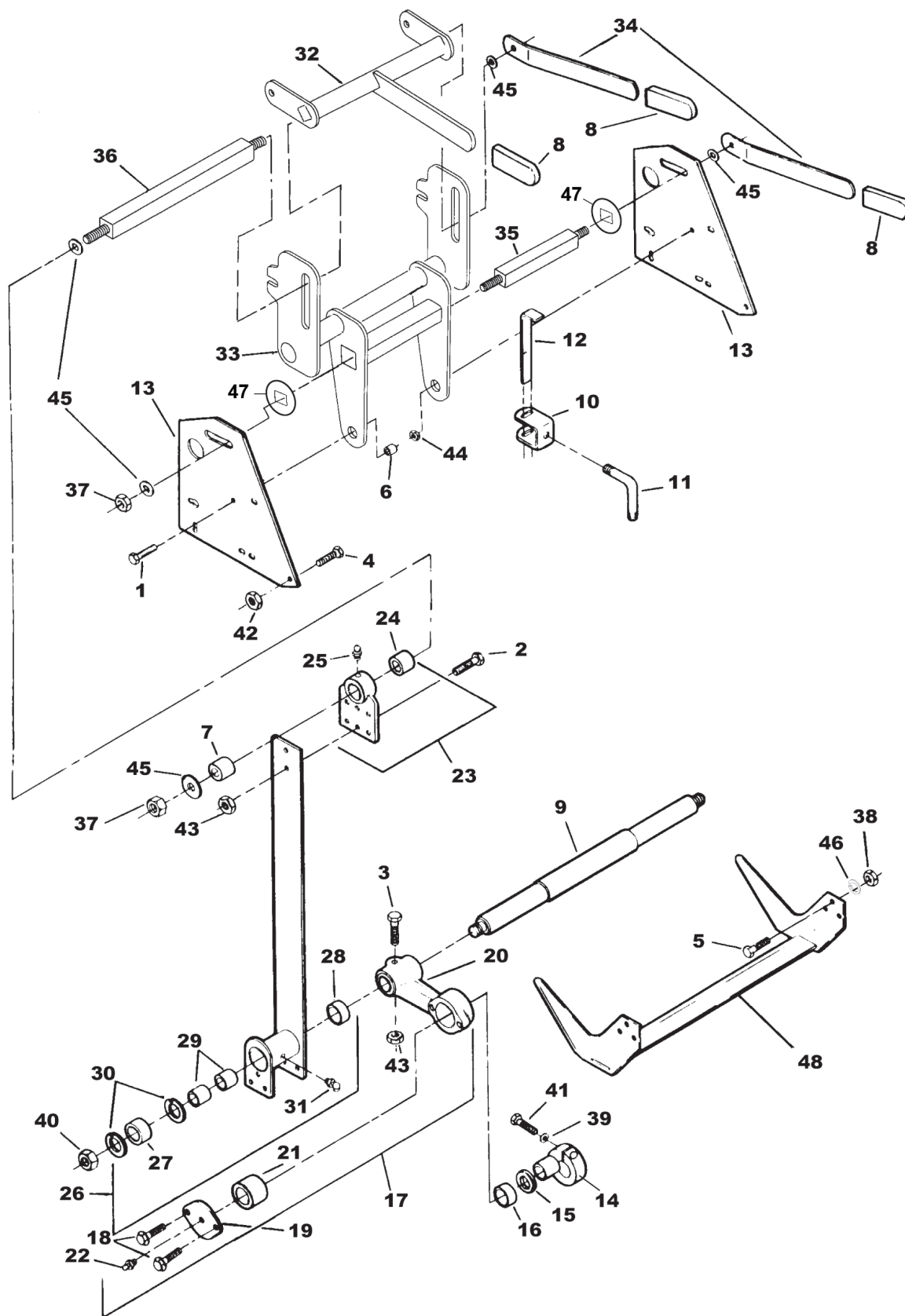
FIGURE 2

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
2-1	64006-03	WSHR, 3/8 HELICAL LOCK	1	2-43	546037.7	COVER AY, GEAR CASE	1
2-2	64123-67	BLT-HEX 3/8-16X2	1	2-44	519404	GEAR,DRIVE	1
2-3	64123-80	BLT-HEX 1/4-20X1-1/4	2			(INCLUDES ITEMS 45-47)	
2-4	64006-02	LCKWSHER-HELICAL 5/16	12	2-45	548775	PLUG.25-18NPTF HS	1
2-5	64164-19	KEY WOODRUFF.19X.75 #9	3	2-46	516222	HUB	1
2-6	64006-01	LOCKWASHER-1/4 HELICAL	4	2-47	548329	RING,EXT LOCK 1.61ID.06T	1
2-7	64123-68	BOLT-HEX 5/16-18X1	12	2-48	546937	CHAIN, #50 DOUBLE	1
2-8	515891	SHIM,.64 1.25.010 YS	4	2-49	547427	SPROCKET & SHAFT AY	1
2-9	515896.7	HANDLE-WHEEL SHIFTER	1	2-50	548080	BRG.NDL.75 1.00.75	4
2-10	515897.7	HANDLE-BLADE SHIFTER	1	2-51	548096	BRG,BALL.59 1.38.43 "SS"	1
2-11	515901.7	PULLEY	1	2-52	548272	SEAL,OIL 1.00 SHAFT	2
2-12	516145	GEAR	1	2-53	548321	RING,EXT RET.56ID.037	1
2-13	516150	GEAR	1	2-54	548323	RING, INTRNL RETAINING	2
2-14	516156	SHAFT	1	2-55	548324	RING,EXT RET.691ID	2
2-15	516194	SPRING	2	2-56	548477	WASHER	4
2-16	516196	SPRING	2	2-57	548478	WSHR,.641 1.188.04 YS FLT	5
2-17	520238	SHIM .005 (.13MM)	A/R	2-58	548482	PLUG,EXPANSION 1.25 YS	4
2-18	520239	SHIM .010 (.25MM)	A/R	2-59	548597	LOCKNUT, UNI-TORQUE	2
2-19	520240	SHIM .020 (.51MM)	A/R	2-60	548726	SCRW,.25-20.75 YS RS	4
2-20	520671.7	GEARCASE	1	2-61	4139759	SPACER-GEAR	1
2-21	521941	SPACER,1.00 1.12.66	1				
2-22	524485	DECAL, BLADE SHIFTER	1				
2-23	524486	DECAL, WHEEL SHIFTER	1				
2-24	548931	PLUG,EXPANSION 1.75 YS	1				
2-25	64164-28	KEY-#808 WOODRUFF	4				
2-26	4139758	GEAR	1				
2-27	516162	SPROCKET, CLUTCH	1				
2-28	516172	CLUTCH	1				
2-29	516173	SHAFT	1				
2-30	544215	CAGE ASSY,BEARING	1				
		(INCLUDES ITEMS 31, 32)					
2-31	548131	BRG,BALL 1.00 2.00.50 "DA"	1				
2-32	548326	RING,INT RET 2.21OD.06	1				
2-33	548327	RING-LOCK	1				
2-34	544217.7	SHIFTER AY	1				
2-35	545050	CAGE AY,BEARING	1				
		(INCLUDES ITEM 36)					
2-36	814474	CUP,TPRD RLR BRG	1				
2-37	516160	SPROCKET	1				
2-38	521253	SHAFT-ECCENTRIC	1				
2-39	548336	LOCK RING (KC)	1				
2-40	814473	CONE,TPRD RLR BRG 1.00	2				
2-41	545710	SHAFT AY	1				
2-42	546033.7	DIPSTICK AY	1				

SIDE ARMS, PITMAN ARMS AND HANDLES

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FIGURE 3



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SIDE ARMS, PITMAN ARMS AND HANDLES

FIGURE 3

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
3-1	64123-50	BOLT-HEX 3/8-16X1	2	3-39	548183	LWSHR,.31.09 HI-COLLAR	2
3-2	64123-68	BOLT-HEX 5/16-18X1	4	3-40	800198	NUT,.5-20 YS HX CRNLCK	2
3-3	64123-61	BLT-HEX 5/16-18X1-3/4	2	3-41	800513	SCRW-SCKT 5/16-18-1-1/4	2
3-4	328018	SCRW,.44-14 1.12 YS HX	6	3-42	548056	NUT,.44-14 YS HX UNITORQ	6
3-5	515011	SCRW,.31-24 1.00 ZS HX	6	3-43	64268-02	NUT-FL NYLN LCK 5/16-18	6
3-6	515729	BUSHING	2	3-44	64268-03	NUT-FL NYLN LCK 3/8-16	5
3-7	516067	BUSH,STL.515X.874X1.015	2	3-45	830287	WSHR,FLAT	6
3-8	4135868	COVER,HANDLE	3	3-46	64006-02	LOCKWSHR-HELICAL 5/16	6
3-9	521435.7	SHAFT, LOWER	1	3-47	4113281	WASHER, SPCL .531 SQ	2
3-10	521469.7	CLAMP, SADDLE	1	3-48	4132717.7	BLADE-SOD CUTTER, 18"	1
3-11	521470	HANDLE,LOCKING	1				
3-12	521471	GAGE,DEPTH (PLATING)	1				
3-13	521472.2	BRACKET, PIVOT	2				
3-14	545436	ECCENTRIC AY	2				
	(INCLUDES ITEMS 15 & 16)						
3-15	521424	RING	1				
3-16	548814	RACE, INNER	1				
3-17	545437	ARM AY	2				
	(INCLUDES ITEMS 18-22)						
3-18	112050	TSCRW,.25-20.62 YS HW	2				
3-19	521425.2	PLATE - COVER	1				
3-20	521427.2	ARM, PITMAN	1				
3-21	521428	BRG,NDL 1.25 1.62 1.06	1				
3-22	548226	FITTING (KC)	1				
3-23	545443.2	BRACKET AY	2				
	(INCLUDES ITEMS 24, 25)						
3-24	521429	BRONZE BEARING	1				
3-25	548224	FITTING,GREASE 1/4 SPCL	1				
3-26	545445.2	ARM AY, SIDE	2				
	(INCLUDES ITEMS 27-31)						
3-27	521436	BALL BEARING	1				
3-28	521438	GREASE SEAL	1				
3-29	548138	BRG,NDL.88 1.12 1.00	2				
3-30	548340	LOCK RING (KC)	2				
3-31	831405	FTG, GREASE 90D.25-28	1				
3-32	540209.2	LEVER AY	1				
3-33	540210.2	FRAME AY, H	1				
3-34	545449.2	HANDLE AY	2				
3-35	524549.2	ROD,TIE LOWER	1				
3-36	524550.2	ROD,TIE UPPER	1				
3-37	64151-7	LOCKNUT, 1/2-13 HEX	2				
3-38	64025-03	NUT-HEX 5/16-24	6				

HANDLEBAR ASSEMBLY

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FIGURE 4

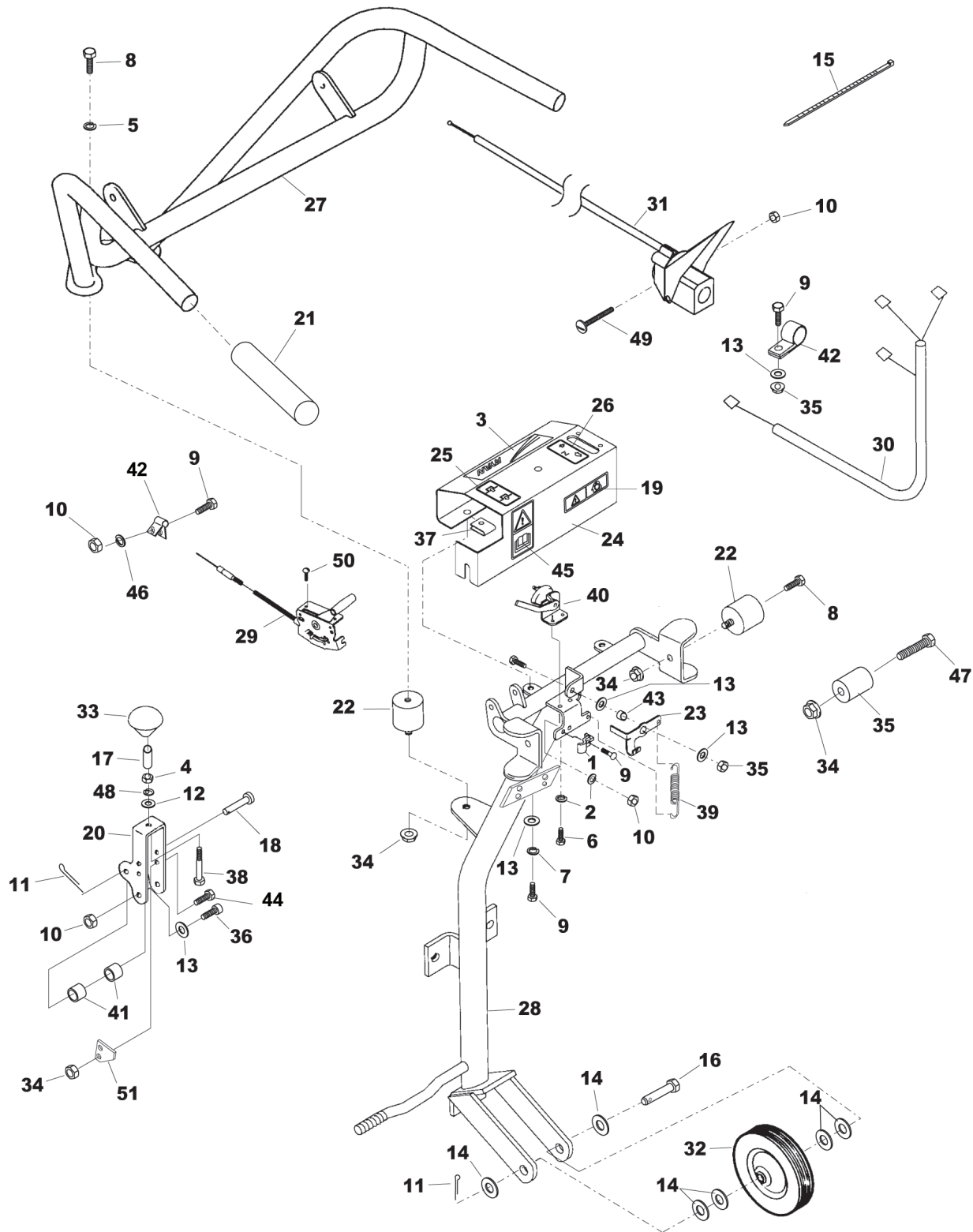


FIGURE 4

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
4-1	111898	CLAMP,CABLE	1	4-45	009034910	DECAL-WARNING	1
4-2	120052	LOCKWASHER	2	4-46	64163-55	WASHER .328X.75X14 GA	1
4-3	4161125	LABEL-RYAN	1	4-47	306464	SCRW,.31-18 2.50 YS HX	3
4-4	64025-04	NUT-3/8-24 HEX	1			(OPTIONAL- USED TO ATTACH ITEM 35)	
4-5	64006-02	LCKWSHER-HELICAL 5/16	2	4-48	64163-61	WSHR .81X.406X16GA	1
4-6	306391	SCRW,#10-32.31	2	4-49	800896	TSCRW,.190-24.75	1
4-7	64006-01	LCKWSHER-1/4 HELICAL	2	4-50	819195	TSCRW,#8-18.50 SLF-DRL	2
4-8	548901	SCRW,.31-18.50 YS HSF G5	3	4-51	4135035.7	FLAT-SWITCH ACTIVATION	1
4-9	64123-89	BOLT-HEX 1/4-20X3/4	8				
4-10	64151-17	LOCKNUT, HEX	4				
4-11	64140-1	COTTER PIN-1/8X1	3				
4-12	64006-03	WSHR, 3/8 HELICAL LOCK	1				
4-13	64163-03	WSHR-.256IDX62ODX18GA.	6				
4-14	64163-67	WASHER-.516X1X12GA	6				
4-15	65286-4A	TIE,CABLE 11-5/8 BLACK	3				
4-16	515726	SHAFT	1				
4-17	516544	BUSHING (PLATING)	1				
4-18	516634	PIN,CLEVIS.38 1.75 YS	1				
4-19	524538	DECAL,WARNING HEARING	1				
4-20	522585.7	HANDLE,CONTROL	1				
4-21	522727	GRIP,HANDLE	2				
4-22	829148	MOUNT,ISOLATION	3				
4-23	524472	ARM, PIVOT (PLATING)	1				
4-24	540347	COVER AY	1				
4-25	524480	DECAL, CLUTCH CONTROL	1				
4-26	524481	DECAL,THROTTLE CNTRL	1				
4-27	540211.7	HANDLEBAR AY	1				
4-28	540212.7	HANDLEBAR AY, MOUNT	1				
4-29	540326	CONTROL AY,THROTTLE	1				
4-30	540229	WIRE AY	1				
4-31	540232	CONTROL AY, KILL SWITCH	1				
4-32	4124195	WHEEL AY, 8X1.25 SOLID	1				
4-33	548171	KNOB	1				
4-34	64141-6	NUT, 5/16-18	5				
4-35	524551	SPACER	3				
		(OPTIONAL - MAY BE USED IN PLACE OF ITEM 22 WITH ITEM 47)					
4-36	800492	CAPSCREW,HEX (KC)	1				
4-37	800495	NUT,.25-20 BS SPD "U"	2				
4-38	800883	SCRW,.38-24 2.25 YS HX	1				
4-39	805421	SPRING,EXTENSION	1				
4-40	806800	SWITCH,STOP LIGHT	1				
4-41	524577	BUSHING, .328X.63X.41	2				
4-42	48228A	CABLE CLIP-INSULATED	4				
4-43	814585	BUSHING	1				
4-44	64139-06	BOLT-WLH 5/16-18X5/8	2				

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