

LITTLE BEAVER[®]

EARTH DRILLS & AUGERS

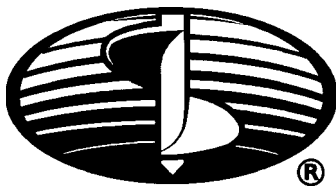
**MECHANICAL
EARTH DRILLS**



**OPERATORS MANUAL
WITH
MAINTENANCE AND
PARTS INFORMATION**

1-800-227-7515

0199



LITTLE BEAVER, INC.

P.O. BOX 840 • LIVINGSTON, TEXAS 77351

PHONE 936/327-3121 • FAX 936/327-4025

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MFG. BY: LITTLE BEAVER, INC. - LIVINGSTON, TEXAS USA

CUSTOMER SERVICE

Ph: 800/227-7515 or 936/327-3121 or Fax 936/327-4025

ORDERS...

Place your orders by telephone, fax, or mail. When calling, please have your parts manual handy for reference. Our hours are 8:00 am - 4:30 pm central time, Monday thru Friday. When ordering by mail or fax, include a description and LITTLE BEAVER part number for the items you are ordering, your return address, and payment or your authorization for COD shipment.

All orders are shipped UPS where possible. Freight charges will be added to your invoice. Some items are oversize, resulting in a higher shipping cost. Power units and larger augers are shipped via motor freight due to their weight.

PAYMENT TERMS...

COD, Cash in Advance, Visa, Mastercard or NET 30 with approved credit. COD limit for new accounts is \$500.00. Personal or company checks on new accounts will be held until they clear the bank. To eliminate this delay, you may pay by wire transfer or send a certified or cashiers check. For a NET 30 open account, please call or write for a credit application.

SERVICE AND REPAIR...

Your LITTLE BEAVER Earth Drill has been designed for user repair with ordinary hand tools. No special tools are required. Consult the appropriate section of the parts manual for instructions.

Service or technical consultation is available, free of charge, from the factory in Livingston, Texas. We will be pleased to help you with any problems or questions. Just write, fax, or call. Our hours are 8:00am - 4:30pm central time, Monday thru Friday.

Factory repair is available. If you return a part to the factory, please include the following information: Your name and return address, a description of the problem and payment or authorization to return the repaired item COD for the repair and shipping charges.

RETURNS...

Please call the factory for a return authorization. This will help to ensure that your parts are handled properly. Include your name and address, customer account #, invoice # under which the returned parts were ordered, and a brief description of the problem with the parts or the reason for returning them. Parts to be considered for warranty must be returned to the factory for inspection within 10 days after receipt of replacement parts. Be sure to prepay the shipping charges, we will not accept collect or COD packages.

Our mailing address...

LITTLE BEAVER, Inc.
2009 South Houston
P. O. Box 840
Livingston, Texas 77351



SAFETY ALERT SYMBOL



The symbol shown above is used to call your attention to instructions concerning your personal safety.

WATCH THIS SYMBOL — It points out important safety precautions.

It means — **ATTENTION! BECOME ALERT! YOUR PERSONAL SAFETY IS INVOLVED!**

Read the message that follows and be alert to the possibility of *Personal Injury or Death!*



WARNING: The Engine Exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

1 YEAR LIMITED WARRANTY

For 1 year from purchase, LITTLE BEAVER, INC. will replace for the original purchaser, free of charge, any part or parts, found upon examination by any factory authorized service center, or by the factory at Livingston, Texas, to be defective in material or workmanship or both. If your equipment cannot be repaired, it will be replaced. All transportation charges on parts submitted for replacement under this warranty must be borne by purchaser.

There is no other express warranty.

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to 1 year from purchase and to the extent permitted by law. Any and all implied warranties are excluded. This is the exclusive remedy and liability for consequential damages under any and all warranties are excluded to the extent exclusion is permitted by law.

*Notice: Engines are warranted by the manufacturer of the engine. See separate engine warranty enclosed.

MACHINE SERIAL NUMBER

The machine serial number for your mechanical Earth Drill is located on the carrier. For your convenience, when requiring service or parts information, refer to this number and your model number. Record the model number, engine make, machine serial number and date of purchase in the space provided below:

MODELNUMBER _____ ENGINEMAKE _____

MACHINE SERIAL NUMBER _____ DATE OF PURCHASE _____



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SAFETY INSTRUCTIONS



DANGER: Failure to observe safety instructions and reasonable safety practices can cause Property Damage, Serious Bodily Injury and/or Death. BE CAREFUL!! WATCH OUT FOR BYSTANDERS!!



DANGER: NEVER drill holes where there is a possibility of underground power cables or other hazards. The exact location of underground services must be determined prior to drilling. Inadvertent severing of telephone, fiber optic or CATV transmission cable, or damage to sewer pipe is costly; RUPTURING OF GAS OR WATER LINES CAN CAUSE SERIOUS BODILY INJURY AND/OR DEATH. COMING INTO CONTACT WITH BURIED POWER LINES CAN CAUSE SERIOUS BODILY INJURY, SEVERE BURNS, AND/OR ELECTROCUTION. Call local utility companies or your local "One-Call" number at least 48 hours before digging and have underground utilities marked.



DANGER: NEVER run engine inside building or enclosed area. Exhaust gases contain carbon monoxide, an odorless and deadly poison.



WARNING: Augers are not to be used as anchoring devices.



CAUTION:

1. READ and understand this operator's manual and the operator's manual for the engine.
2. NEVER Operate drill without correctly installing torque tube.
3. NEVER Remove auger from hole while auger is turning.
4. NEVER Operate auger at less than full throttle.
5. NEVER Operate drill with damaged auger or other damaged or missing parts.
6. KEEP Hands, Feet and Clothing away from moving parts while engine is running.
7. KEEP All safety shields and devices in place.
8. MAKE Certain everyone is clear before operating the machine.
9. KEEP leg pad against leg while drilling to maintain safe control.
10. WEAR SAFETY GLASSES.
11. KEEP Bystanders at least 10 feet away from work area.
12. SHUT OFF Engine to adjust, service or clean the machine.

NOTICE

It is the responsibility of the contractor, owner and user to maintain and operate the Earth Drill in compliance with operating instructions provided. Observe all listed safety instructions and other reasonable safety practices. LITTLE BEAVER, INC. accepts no responsibility for damages to this machine, and other property damage and/or bodily injury due to careless or improper operations.

LITTLE BEAVER, INC. does not recommend or condone use of replacement engines greater than eight (8) horsepower.

LITTLE BEAVER, INC. does not recommend or condone any unauthorized modifications to the earth drill, especially those which would eliminate or reduce the effectiveness of the torque tube.

LITTLE BEAVER, INC. reserves the right to make changes in design and changes for improvements upon its product without imposing any obligation upon itself to install the same upon its products theretofore manufactured.

Your operators manual offers recommendations for prolonged and satisfactory service.



MAINTENANCE AND LUBRICATION

Engines are shipped without oil or gasoline. Refer to MANUFACTURER'S INSTRUCTIONS for proper procedures and recommended fluids.

The TRANSMISSION and FLEXIBLE SHAFT are shipped fully oiled/greased and READY FOR USE. Refer below for proper maintenance and lubrication instructions. Refer to the associated repair parts section for proper disassembly and assembly instructions.



SHUT OFF ENGINE to adjust, service or clean the machine.

All nuts, fasteners and fittings must be kept properly torqued.

TRANSMISSION:

The transmission oil should be checked each day prior to operation, and during the day as conditions warrant.

RECOMMENDED OIL: Amalie Tri-Vis Plus Oil 80/85/140

Available in quart bottles, individually or in case of 12. ORDER PART #10280.

If this oil is not available, it is very important that you use a high quality gear oil.

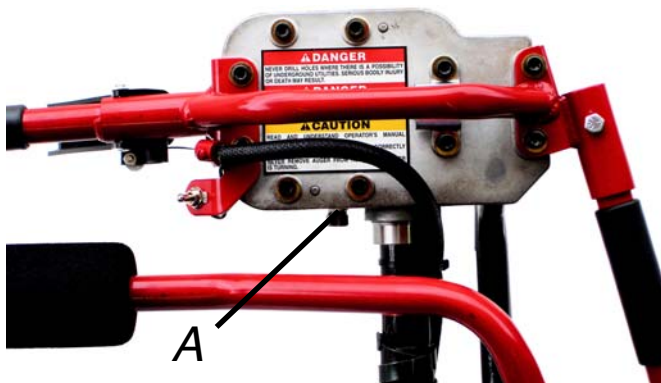


FIGURE 1

LUBRICATING INSTRUCTIONS:

When adding oil to the transmission, hold the transmission so that the top is level, then remove the pipe plug (Item A, see figure 1) and squeeze oil into transmission until oil just comes out of the hole. Replace pipe plug and tighten to 10 ft lbs.

WARNING: Failure to securely replace pipe plug (A) may allow it to back out of the hole during operation. This could result in serious bodily injury to the operator or bystanders.



Maintenance and lubrication...(cont.)

FLEXIBLE SHAFT:

The flexible shaft should be examined every 50 hours of operation and greased if necessary, using the recommended grease.

RECOMMENDED GREASE: Lubriplate Portable Tool Grease - GR-132
Available in 10 ounce Tubes, individually or in case of 12.
ORDER PART # 9070-L.

CLEANING AND GREASING INSTRUCTIONS: Follow the instructions provided for proper flexible shaft dis-assembly (See page P-9 of Parts Manual and follow steps 1, 2, 4 & 5). After the flexible shaft core has been removed, wipe off the old grease with a cloth. Clean the inside of the flexible shaft housing by pulling a clean rag through with a long piece of wire. It may be necessary to make several passes before all grease is removed. Then apply a light coat of recommended grease to the core and re-assemble. **DO NOT** over-lubricate, as this will cause excessive heat to build up in the shaft.

INSPECTION: HOUSING - Check for tears or breaks in the rubber casing. Small tears may be repaired by covering with duct tape or shrink tubing. If deep cuts are found and the wire braid is torn, the housing should be replaced.

CORE - Check for broken wires and kinks. The core should be replaced if a broken wire is found. Small kinks or twists are OK but if a sharp kink is found, the core should be replaced.

IMPORTANT: Excessive amounts of grease inside the flexible shaft assembly will cause the shaft to produce excessive heat and reduce the shaft's life. If the shaft becomes over-heated (too hot to touch), it must be cleaned, inspected (see above) and re-greased. It is also important to follow the proper procedure when greasing the transmission so that excess grease is not forced into the flexible shaft assembly.

DECAL LOCATION:

The decals which are provided with your machine are shown at the rear of this manual. The decals are important and should be maintained in good condition in the locations as described. If any of the decals are missing or illegible, order replacement kit #9020-O and install before operating the machine.



Maintenance and lubrication...(cont.)

CLUTCH: (See pg. P-13)

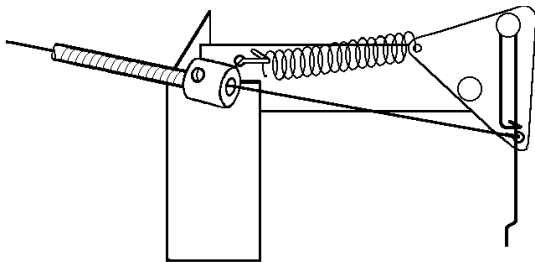
Your **LITTLE BEAVER** Earth Drill utilizes a centrifugal clutch to engage the auger as the engine is accelerated from idle to full speed. The clutch begins to engage at about 2100 to 2200 rpm, so engine idle should be kept below 1900 rpm.

The clutch requires no routine maintenance, but should be inspected when the flexible shaft is lubricated (see above). If excessive slippage occurs, check the shoes and drum and clean or replace if necessary.

If the auger turns when the engine is at idle, first check the engine for proper idle speed (1900 rpm). Also check the throttle linkage as indicated below. If the problem persists, check for stretched, discolored or broken clutch springs and/or broken clutch shoes and replace if necessary.

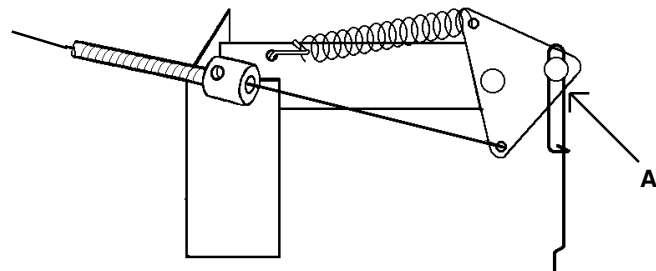
THROTTLE CABLE AND THROTTLE BRACKET ASSEMBLY: (See pg. P-2/3 OR P-4/5)

ADJUST WITH ENGINE OFF. Inspect the throttle cable and throttle bracket assembly before each use or if abnormal operation is noticed while operating the earth drill. The throttle lever should pull smoothly and freely with no binding. The throttle wire should be adjusted so that there is minimal slack at the idle position (no more than 1" movement at the end of the lever). Then check that the throttle bracket is fully engaged before the lever "bottoms out" against the handle bar. Also check that the clip moves smoothly over the rivet head (see "A") when the throttle is fully engaged. If binding does occur, remove the clip and twist it slightly, then re-install and re-check.



IDLE POSITION

Rivet pulls tightly against clip, forcing governor arm to idle.



FULL ENGAGEMENT

Clip slides over rivet as governor arm is moved.

Note: The 5HP Briggs & Stratton models (standard black engine or Industrial/Commercial only) do not use the sliding clip. With these models, check that the moving arm on the bracket pulls away from the governor arm in the full throttle position. In the idle position it should push against the governor arm.



TROUBLESHOOTING

TROUBLE

CAUSE

Engine will not start.

- 1.) Toggle Kill Switch on handle is off.
- 2.) Torque tube is not connected at engine end.
- 3.) "Oil Guard" protected engines must be filled with oil to full mark on dipstick or to point of overflowing.
- 4.) If the light inside the engine on/off switch flashes (Briggs & Stratton only), this is an indication that the oil level is low.
- 5.) Fuel level is too low in gas tank.
- 6.) Spark Plug is fouled.

Cannot Connect or Disconnect Auger.

- 1.) Foreign Matter clogging adaptor.
- 2.) Spring and button in top of auger is bent or broken.
- 3.) Adaptor is bent.

Auger turns too slowly and will not dig.

- 1.) Too much downward pressure or binding on side of hole. Hold back, if necessary, to allow auger to turn at full speed.

Auger turns but will not dig.

- 1.) Foreign matter collected around point.
- 2.) Point or blade is dull.
- 3.) Use carbide blade for hard pan soil.

Auger with extension will not dig.

- 1.) Auger or extensions bent or running out of line.

Transmission over-heats.

- 1.) It is normal for the transmission to run hot to the touch. If it is very hot, check for proper oil and free turning.

Auger turns when engine idles.

- 1.) Engine idle is set too high.
- 2.) Sliding wire clip on throttle bracket stuck. (should move freely when throttle lever is closed.)
- 3.) Clutch Spring broken.



OPERATING INSTRUCTIONS

CONNECT TORQUE TUBE

The torque tube consists of a steel tube approx. 66" long with a 1-1/2" square fitting on one end. Part #2 is 29" long with a pivot hole on one end. To assemble, slide the other end of the tube onto the torque arm rod extending from the transmission as shown in figure 2. Attach the square end of the torque tube to the engine bracket as shown in figure 3. Make sure that the safety kill switch is pushed in and that the snap button is aligned with the mating hole provided so that the snap button securely snaps into place.. Attach the other end to the handle using the nylon bushings, shoulder bolt and lock washer, (included).



FIGURE 2



FIGURE 3



WARNING: NEVER use the Earth Drill unless the torque tube is properly connected.

BEFORE STARTING THE ENGINE, Be sure that:

- 1.) Engine is properly prepared to Manufacturer's specifications. Note: Engines with "Oil Guard" protection must be filled with oil to the **full mark on dipstick** or to point of overflowing to allow the engine to start. If the light inside the engine on/off switch flashes (Briggs & Stratton only), this is an indication that the oil level is low.
- 2.) The torque tube is properly attached.
- 3.) There is no auger connected to the handle.
- 4.) The safety kill switch is in "ON" position on the handle and the Torque Tube has engaged the safety kill switch at the engine bracket.

TO START THE ENGINE: Set the choke lever to the "ON" position and pull the starter rope. The engine should start after 2 or 3 pulls. Set the choke lever to the "OFF" position and allow the engine to warm-up for 2 or 3 minutes. If the engine does not start, re-check all safety kill switches, then refer to the engine manufacturers operator manual.

NOTE: If it is necessary to 'gas' or 'rev up' the engine while starting, push slightly with your thumb against the bell crank on the throttle bracket. (The bell crank is the pivoting triangular plate to which the throttle wire, spring and clip are attached.) This will release spring tension against the governor and allow the carburetor to open slightly.




DO NOT push directly against or try to move the carburetor butterfly or idle screw. Doing so will bend the governor linkage rod.



AFTER THE ENGINE HAS WARMED UP, Insert the auger into the drive adaptor on the bottom of the handle. Make sure the snap button and hole provided in the adaptor are aligned and the button snaps securely into place. Hold the handle so your left index finger can operate the throttle. Grasp the right handle bar with your right hand. Stand so the auger is straight up-and-down and is properly positioned to dig your hole (see figure 4). Note the safety instructions in this manual and on the machine's decals.




FIGURE 4

-  **NEVER** Drill holes where there is a possibility of underground power cables or other hazards.
-  **MAKE** certain everyone is clear before operating the machine.
-  **KEEP** hands, feet and clothing away from moving parts while engine is running.

START THE AUGER TURNING By pulling the throttle lever in completely. Always allow the auger to turn at full speed and let it cut its way into the soil.

IMPORTANT: When digging in soft soil, hold up slightly on auger. In hard pan, apply pressure, but not enough to stall the auger or slow it down significantly. The auger works best when it turns at full speed.

IF THE AUGER STALLS repeatedly or slows down significantly; stop the auger by releasing throttle lever, slightly lift up on auger, start auger by pulling throttle lever, and allow the auger to turn at full speed while slowly lowering it to bottom of hole. When the desired depth is reached, stop the auger by releasing the throttle lever. Then pull the auger completely out of the hole.

-  **NEVER** Remove auger from hole while auger is turning.

IMPORTANT: Keep the back as vertical as possible by bending the legs, as required, during the operation and lifting procedure.

AUGER EXTENSIONS

If greater hole depths are required, extensions may be used with the auger. After the auger has reached its maximum depth, stop the auger and disconnect the drive adaptor from the auger which remains in the hole. Connect the extension to the auger as shown in figure 5. Connect the drive adaptor to the extension and continue to dig the hole.



FIGURE 5

When the desired depth is reached, stop the auger and disconnect the drive adaptor from the extension. Then remove the extension (s) and auger from the hole.



NOTE: If the auger becomes lodged in roots, rocks, or other underground obstructions, and cannot be pulled free; disconnect the handle from the auger and turn the auger counter-clockwise. It may be necessary to use a pipe wrench to turn the auger. If the auger cannot be dislodged by turning counter-clockwise, it may be necessary to manually dig the auger free.

 **WHEN WORKING WITH CUTTING BLADE,** Point and Auger Flighting, be careful not to be cut by sharp edges.

STANDARD CUTTING BLADE & POINT

Check the cutting blade (item A, Figure 6) on the auger frequently. If it becomes dull, it may be reversed to use the other cutting edge. If the outside of the blade wears even with the auger flighting, replace the blade or rebuild it with a hardsurfacing rod. This is very important to reduce auger flighting wear and damage. The point (Item B, Figure 6) should be replaced when it loses its cutting shape.

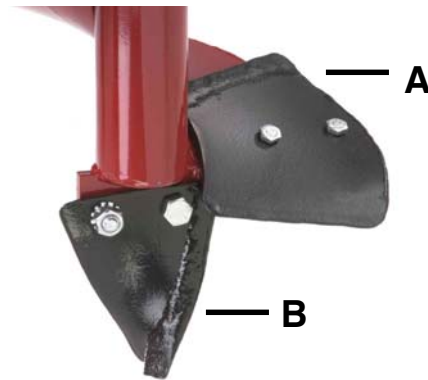


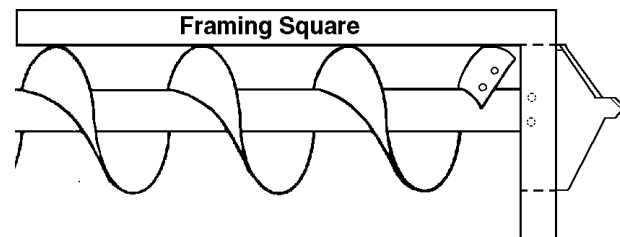
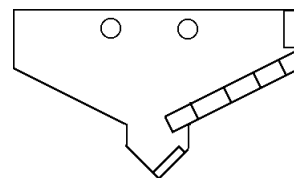
FIGURE 6


OPTIONAL CARBIDE BLADE:

An optional carbide blade is available for auger sizes 1-1/2" thru 12". It is designed for use in smooth hard-pan soils, asphalt or frost. It is not recommended for use in rocky soils. The 4" thru 12" carbide blade bolts on to the auger in place of the standard point. The standard blade is not used.

(4-12")

Mount the blade to the auger using the included 3/8" x 1-1/4" bolts and nylon lock-nuts. Use a framing square to carefully align the blade at 90 degrees to the auger. Tighten the nuts slowly until snug, then re-check alignment and adjust if necessary. Torque the bolts to 45 ft. lbs.



 **CAUTION:** If the blade is not installed properly, mis-alignmant may cause the auger to vibrate and "walk" in use.

ATTACHMENTS:

Several attachments are available for your LITTLE BEAVER Earth Drill; including both wet and dry type horizontal boring kits and a drill chuck adaptor which allows you to use a wood bit. Refer to the specific operating instructions supplied with the attachment. If these become lost or misplaced, replacements may be obtained from the factory.



DECAL LOCATION

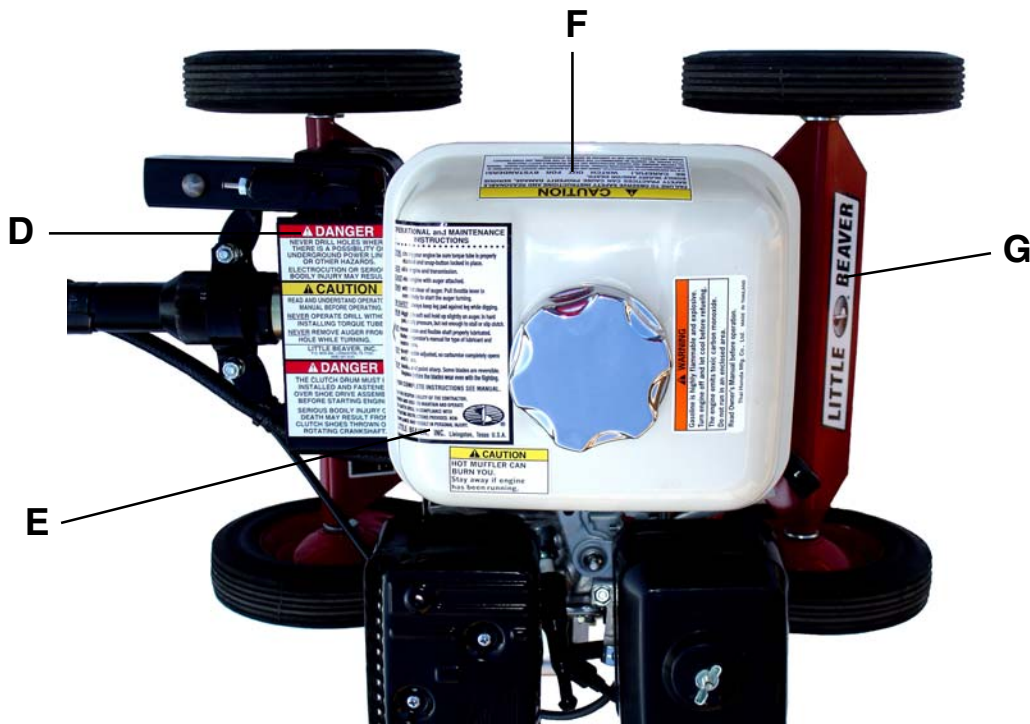
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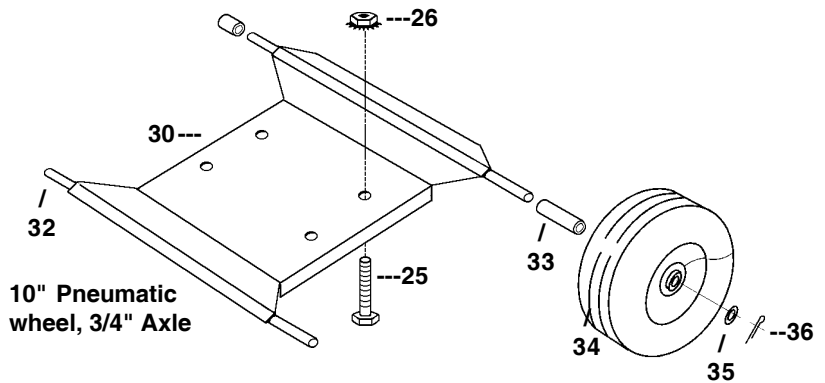
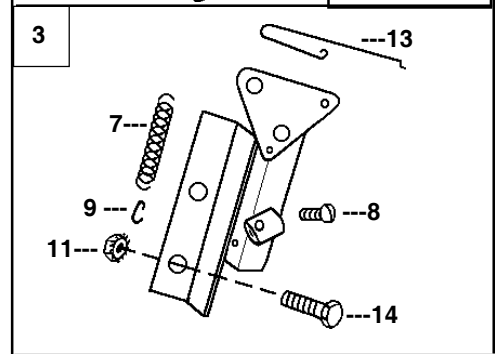
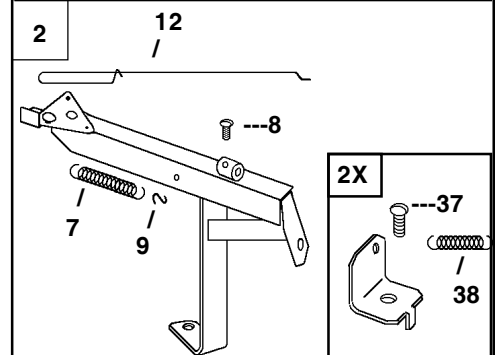
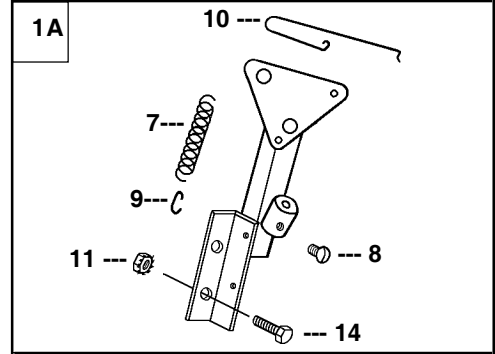
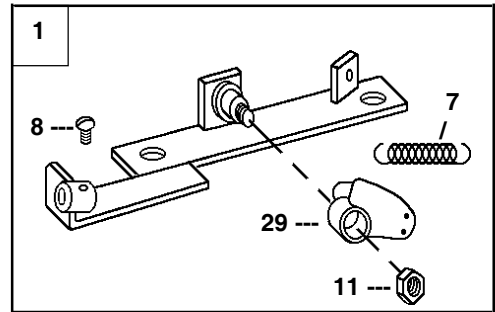
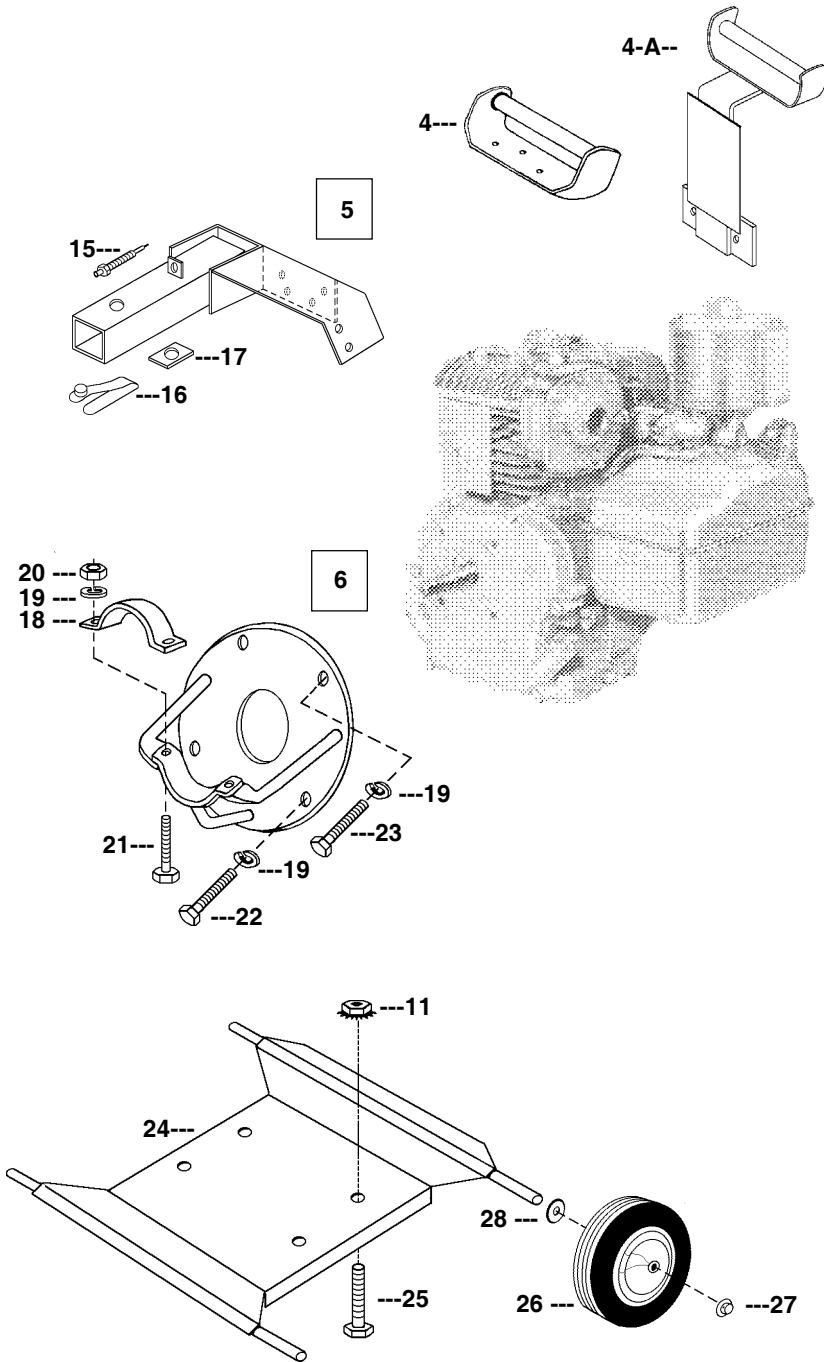


FOR DECAL SET,

ORDER KIT #9020-O for machines with **Oil Bath** Transmission
 ORDER KIT #9020-D for machines with **Grease** lubricated Transmission
 which also includes the Decals for the Handle.



5 HP ENGINE ASSEMBLY

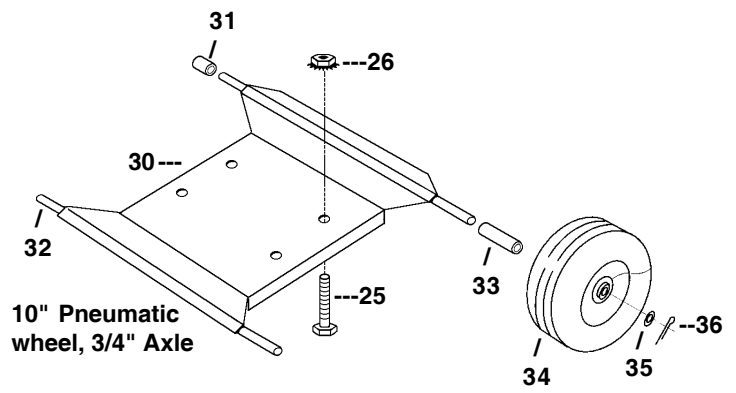
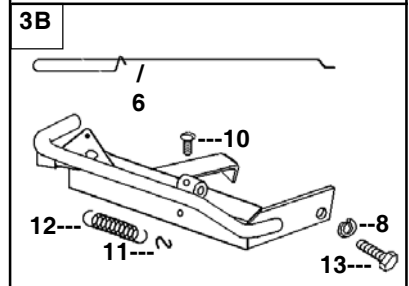
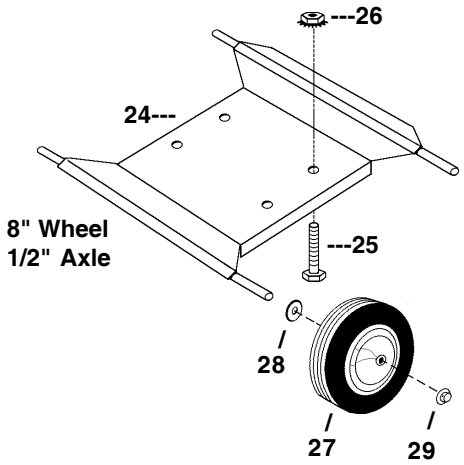
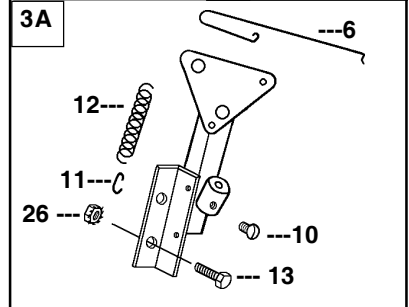
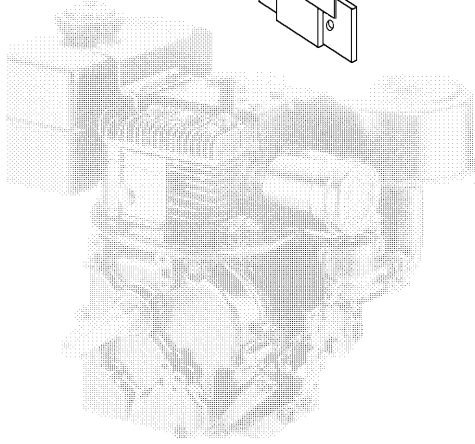
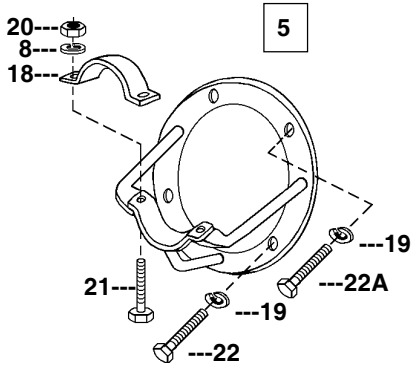
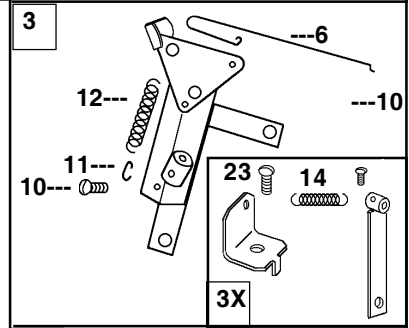
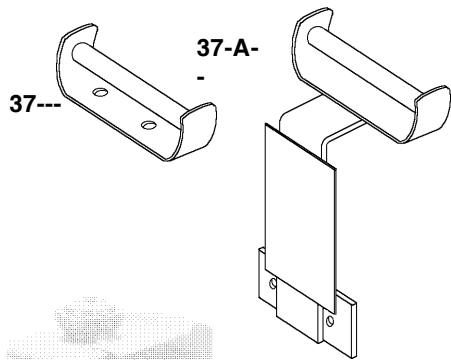
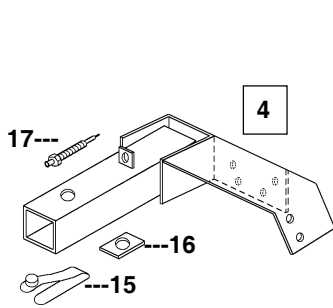
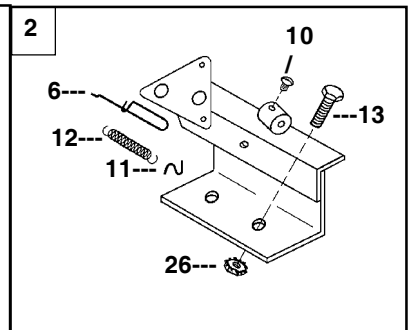
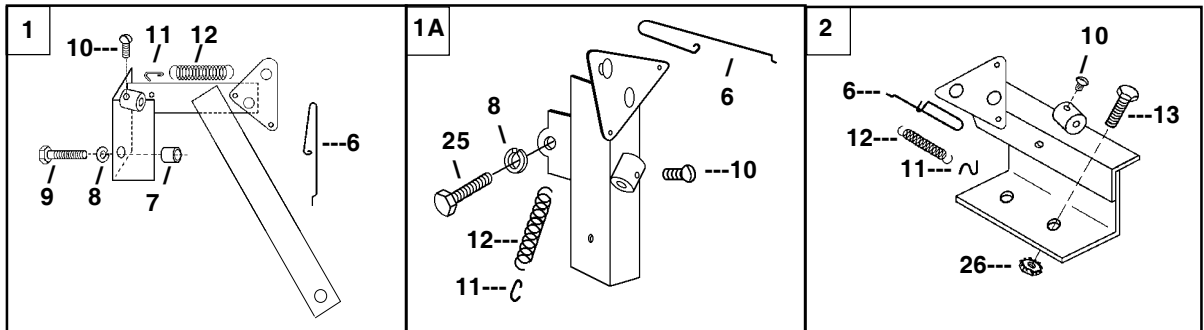


5 HP ENGINE ASSEMBLY

| ITEM | PART # | DESCRIPTION | QTY |
|-------------|---------------|--|------------|
| 1 | 3085-A | Throttle Bracket Assy. 5HP B&S & B&S I/C (Industrial/Commercial) | 1 |
| 1A | 3082-A | Throttle Bracket Assy. 5 HP B&S Industrial Plus | 1 |
| | 3082-V | Throttle Bracket Assy. 5.5 HP B&S Vanguard Engine | 1 |
| | 3084-A | Throttle Bracket Assy. 5.5 HP B&S INTEK Pro Engine | 1 |
| 2 | ----- | Obsolete, order #TCO-5H Throttle Bracket Change-over Kit | |
| | | Includes Spring Anchor Assy.(2X), Throttle Wire, Housing, and Loom | 1 |
| 2X | 3092-A | Spring Anchor Assy. 5HP Honda Direct Throttle Hook-up | 1 |
| 3 | 3050-A | Throttle Bracket Assy. 5 HP Wisconsin W1-185 | 1 |
| 4 | 3000-C | Handle - Motor Carrier, 5HP B&S & B&S I/C ONLY | 1 |
| 4A | 3000-CD | Handle - Motor Carrier, 5 & 8HP B&S Intek Pro ONLY | 1 |
| | 3000-CDH | Handle - Motor Carrier, 5 & 8HP Honda ONLY | 1 |
| 5 | 9084-G | Torque Tube Bracket Assy. - Engine End | 1 |
| 6 | 3011-MA | Clutch Bracket Assy. Model 5 | 1 |
| 7 | 4041-2H | Spring | 1 |
| 8 | 3010-8 | Screw, 10-32 x 1/4" | 1 |
| 9 | 3010-7 | S-Hook | 1 |
| 10 | 3010-5B | Clip, 5HP B&S Industrial Plus Engine | 1 |
| | 3010-2 | Clip, 5.5HP Vanguard | 1 |
| | 3010-5I | Clip, 5HP B&S Intek Pro Engine | 1 |
| 11 | 3002-KEP | Nut 5/16-18 (Nut w/Lockwasher) | 4 |
| 12 | 3010-H | Clip, 5HP Honda GX140/GX160 | 1 |
| 13 | 3010-4 | Clip, 5HP Wisc. W1-185 | 1 |
| 14 | 3012-1T | Screw 5/16" x 3/4" G5, Hex NC | 2 |
| 15 | 3007-9 | Kill Switch, Torque Tube | 1 |
| 16 | 9058 | Spring & Button | 1 |
| 17 | 9084-1 | Spacer | 1 |
| 18 | 4018-2H | Clamp (incl. 2 ea #9027-10, 3002-C & #30318) | 1 |
| 19 | 3002-C | Lock Washer, 5/16" | 6 |
| 20 | 30318 | Nut, 5/16"-18, w/Nylon Insert Lock | 2 |
| 21 | 9027-10 | Screw 5/16"-18 x 1-1/4" | 2 |
| 22 | 3012-1 | Screw 5/16" x 7/8", Hex SAE | 2 |
| 23 | 9084-2 | Screw 5/16" x 1 1/4" GR5, Hex SAE | 2 |
| 24 | 3000-B | Motor Carrier | 1 |
| 25 | 3002 | Screw 5/16" x 1-1/2" NC | 4 |
| 26 | 3004 | Wheel, 8" (incl. #3006-1) | 4 |
| 27 | 3006-1 | Cap-Axle Snap (incl. w/#3004) | 4 |
| 28 | 3004-A | Flat Washer | 4 |
| 29 | 3087 | Governor Control, 5HP B&S | 1 |
| 30 | 3000-EV | Carrier ONLY, Medium Clearance for 5.5HP Vanguard Engine | 1 |
| 31 | 3031-A | Spacer, 1-5/8" | 2 |
| 32 | 3030 | Axle | 2 |
| 33 | 3031-B | Spacer, 3-1/8" | 2 |
| 34 | 30258 | Wheel, 10" Pneumatic | 4 |
| 35 | 30164 | Flat Washer 3/4" | 4 |
| 36 | 30163 | Cotter Key, Wheel, 1/8" x 1" | 4 |
| 37 | 5079 | Screw, 10-32 x 3/8 Machine | 1 |
| 38 | 4041-2 | Spring, Throttle 5Honda Direct Hook-Up and Throttle Lever | 1 |



7 & 8 HP ENGINE ASSEMBLY

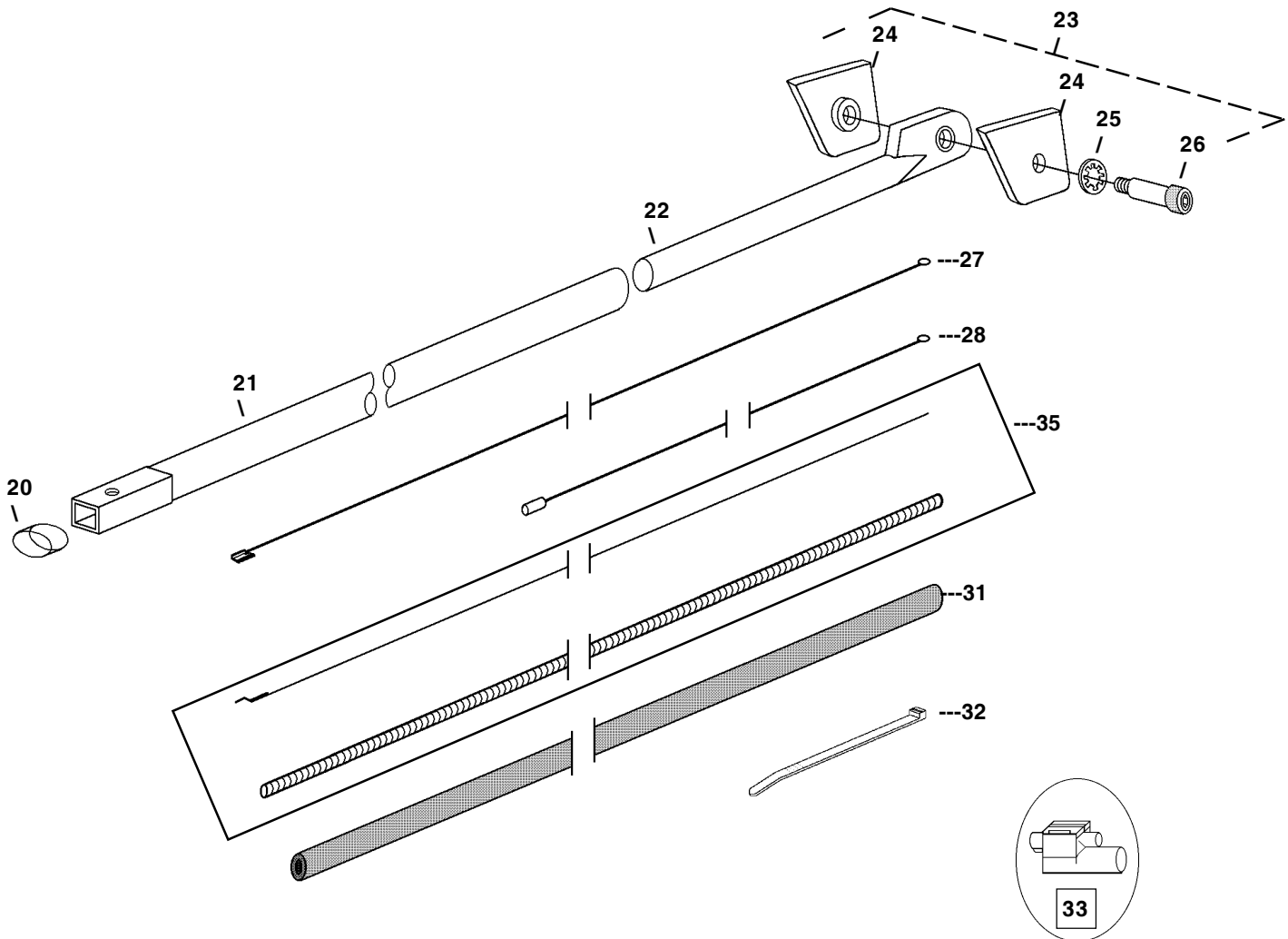
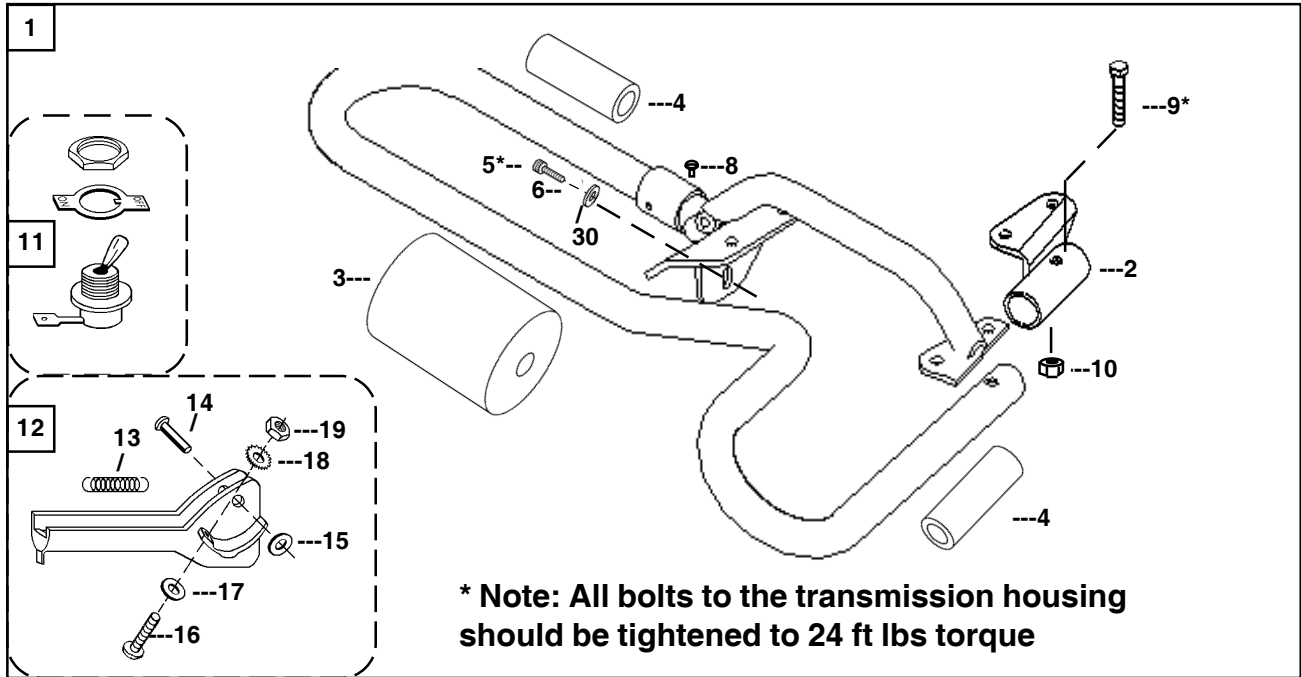


7 & 8 HP ENGINE ASSEMBLY

| ITEM | PART # | DESCRIPTION | QTY |
|------|----------|--|-----|
| 1 | 3010-D | Throttle Bracket Assy. 7 HP B&S Engine | 1 |
| 1A | 3065-A | Throttle Bracket Assy. 8 HP B&S Industrial Plus Engine | 1 |
| 2 | 3095-A | Throttle Bracket Assy. 7 HP Wisconsin Engine | 1 |
| 3 | ----- | Obsolete, order #TCO-8H Throttle Bracket Change-over Kit includes New Guide (3X), Throttle Wire, Housing, Loom and spring | 1 |
| 3A | 3088-A | Throttle Bracket Assy. 7.5 HP B&S Vanguard Engine | 1 |
| 3B | 3055-A | Throttle Bracket Assy. 8 HP B&S INTEK Pro Engine | 1 |
| 3X | 3063-A | Cable Guide Assy. 8HP Honda Direct Throttle Hook-up | 1 |
| 4 | 9084-G | Torque Tube Bracket Assy. - Engine End | 1 |
| 5 | 3011-HMA | Clutch Bracket Assy. Model 7 | 1 |
| 6 | 3010-4 | Clip | 1 |
| | 3010-H | Clip, 8 HP Intek (and 5HP Honda) | 1 |
| | 3010-4H | Clip, 8HP Honda | 1 |
| | 3010-5B | Clip, 8HP B&S Industrial Plus Engine | 1 |
| | 3010-2 | Clip, 7.5 HP B&S Vanguard Engine | 1 |
| 7 | 3010-10 | Spacer | 1 |
| 8 | 3002-C | Lock Washer 5/16" | 4 |
| 9 | 3010-9 | Screw 5/16" x 2" NC Grade 2 | 1 |
| 10 | 3010-8 | Screw, 10-32 x 1/4" | 1 |
| 11 | 3010-7 | S-Hook | 1 |
| 12 | 4041-2H | Spring | 1 |
| | 3096 | Spring, 7.5 Vanguard | 1 |
| 13 | 3012-1T | Screw 5/16" x 3/4" Grade 2 | 2 |
| 14 | 4041-2 | Spring, Throttle 8 HP Honda Direct Hook-Up and Throttle Lever | 1 |
| 15 | 9058 | Spring & Button | 1 |
| 16 | 9084-1 | Spacer | 1 |
| 17 | 3007-9 | Kill Switch, Torque Tube | 1 |
| 18 | 4018-2H | Clamp (incl. 2 ea #9027-10, 3002-C & #30318) | 1 |
| 19 | 3012-3 | Lock Washer, 3/8" | 4 |
| 20 | 30318 | Nut 5/16"-18 Nylon Insert Lock | 2 |
| 21 | 9027-10 | Screw 5/16"-18 x 1-1/4" | 2 |
| 22 | 3012-2 | Screw 3/8" x 1" NC (Bottom) | 2 |
| 22A | 9027-8 | Screw 3/8" x 1 1/4" Hex NC GR5 (Top) | 2 |
| 23 | 5079 | Screw, 10-32 x 3/8 Machine | 1 |
| 24 | 3000-B | Carrier (incl. 4 #3004-A) | 1 |
| 25 | 3002-A | Cap Screw 5/16" x 1-3/4" NC | 4 |
| 26 | 3002-KEP | Nut 5/16-18 (Nutw/Lockwasher) | 6 |
| 27 | 3004 | Wheel, 8" (incl. 3006-1) | 4 |
| 28 | 3004-A | Flat Washer | 4 |
| 29 | 3006-1 | Cap-Axle Snap (incl. w/#3004) | 4 |
| 30 | 3000-E | Carrier ONLY, Medium Clearance | 1 |
| | 3000-G | Carrier ONLY, 8 HP B&S INTEK | 1 |
| 31 | 3031-A | Spacer, 1-5/8" | 2 |
| 32 | 3030 | Axle | 2 |
| 33 | 3031-B | Spacer, 3-1/8" | 2 |
| 34 | 30258 | Wheel, 10" Pneumatic | 4 |
| 35 | 30164 | Flat Washer 3/4" | 4 |
| 36 | 30163 | Cotter Key, Wheel, 1/8" x 1" | 4 |
| 37 | 3000-C7 | Handle, Motor Carrier, 7HP B&S Engine ONLY | 1 |
| 37A | 3000-CD | Handle, Motor Carrier, with Decal, 5 & 8 HP B&S Intek Pro ONLY | 1 |
| | 3000-CDH | Handle, Motor Carrier, with Decal, 5 & 8 HP Honda ONLY | 1 |



HANDLE, TORQUE TUBE AND WIRES



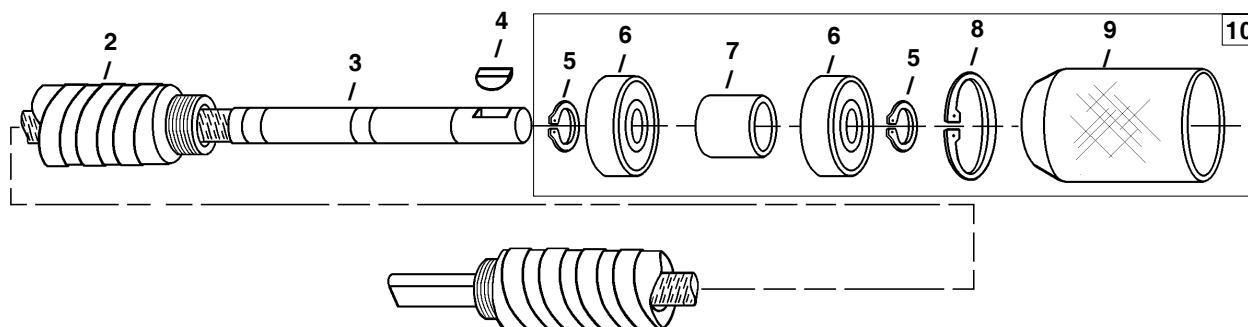
HANDLE, TORQUE TUBE AND WIRES

| ITEM | PART # | DESCRIPTION | QTY |
|---|----------|---|-----|
| 1 | 10428-A | Handle, Loop includes Switch and Throttle Lever | 1 |
| If your machine is not equipped with this handle, but is the Oil Bath Transmission, you can upgrade by ordering part # HCO-M# which would include the handle assembly and the new transmission lid. | | | |
| 2 | 10429 | Clamp, Bushing, Right | 1 |
| 3 | 10460 | Leg Pad | 1 |
| 4 | 10440 | Handle Grip, Left & Right | 2 |
| 5 | 10306 | Socket Head Cap Screw, 5/16 -18 x 3/4 | 1 |
| 6 | 3002-C | Washer, 5/16 Split Lock, Heavy Plated | 4 |
| 7 | 10305 | Washer, 5/16 Flat | 4 |
| 8 | 3010-8 | Screw, 10-32 x 1/4" | 1 |
| 9 | 3002-A | Screw, 5/16 x 1-3/4 Hex Head Cap Screw | 1 |
| 10 | 30318 | Nut, Nylon Lock, 5/16" | 1 |
| 11 | 10470 | Kill Switch Assembly | 1 |
| 12 | 4031-1 | Throttle Lever Assembly | 1 |
| 13 | 4041-2 | Spring, Return, Throttle Lever | 1 |
| 14 | 4033 | Rivet | 1 |
| 15 | 4033-1 | Flat Washer, #10 | 1 |
| 16 | 4034-A | Screw, 10-32 X 5/8" | 1 |
| 17 | 4034-1 | Flat Washer, 3/16", 1/4" Standard | 11 |
| 18 | 4034-2 | Lock Washer, #10, External | 1 |
| 19 | 4034-3 | Nut, 10-32 Hex | 1 |
| 20 | 9058-1 | Button Shield | 1 |
| 21 | 10340 | Torque Tube, Female, 69" long | 1 |
| 22 | 10350 | Torque Arm, Male end | 1 |
| 23 | 10360-R | Bushing Repair Kit (incl. 2 Bushings, Washer & Shoulder Bolt) | 1 |
| 24 | 10360 | Bushing, Torque Arm | 2 |
| 25 | 10380 | Internal Star Washer, 5/8" | 1 |
| 26 | 10370 | Shoulder Bolt, 5/8" x 1 3/4" | 1 |
| 27 | 3007-6 | Kill Switch Wire-Long | 1 |
| | 3007-6B | Kill Switch Wire-Long-5HP B&S ONLY | 1 |
| | 3007-6H* | Kill Switch Wire-Long 5 & 8HP Honda Direct Throttle | 1 |
| | 3007-8W | Kill Switch Wire-Long 5,7&8HP Wisc./Honda/B&S Ind Plus, 8HP Intek & 5.5 Vang. | 1 |
| 28 | 3007-8 | Kill Switch Wire-Short | 1 |
| 30 | 10520 | Washer, Belleville | 1 |
| 31 | 3007-6P | Wire Loom, Briggs & Stratton | 1 |
| | 3007-H* | Wire Loom, Honda and 7.5 Vanguard | 1 |
| 32 | 3007-5 | Plastic Tie | 5 |
| 33 | 9090-W | Wire Splicer, Wisc., Honda & B&S Industrial Plus Only | 1 |
| 34 | 10302 | Screw, 5/16 x 1-1/4 Socket Head | 4 |
| 35 | 3089 | Throttle Control Assembly (inc. 3008 & 3009) 109" OAL | 1 |
| | 3089-5H | Throttle Control Assembly 115" OAL 5HP Honda Direct Throttle | 1 |
| | 3089-8H* | Throttle Control Assembly 119" OAL 8HP Honda Direct Throttle | 1 |

* For 7.5 HP Vanugard Engine (138432-0035-A1)



FLEXIBLE SHAFT



| ITEM | PART # | DESCRIPTION | QTY |
|------|----------|--|-----|
| | 3224 | Flexible Drive Shaft Assembly, Complete | 1 |
| 2 | 3124-1 | Housing, Flexible Drive Shaft | 1 |
| 3 | 3224-2 | Core, Flexible Drive Shaft (inc. #4019, #3024-16 & #3124-19) | 1 |
| | 3224-2EA | Core with End Assembly | |
| 4 | 4019 | Key (inc. w/#3124-2) | 1 |
| 5 | 3024-16 | Lock Ring-Inner, End Assembly (inc. w/#3124-2) | 2 |
| 6 | 3024-13 | Bearing | 2 |
| 7 | 3124-19 | Spacer (inc. w/#3124-2) | 2 |
| 8 | 3024-15 | Lock Ring-Outer, End Assembly | 2 |
| 9 | 3024-17 | Knurled Housing, End Assembly | 1 |
| 10 | 3124-4 | End Assembly Kit | 1 |

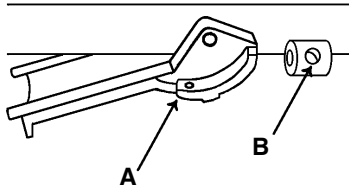
RECOMMENDED GREASE: Lubriplate Portable Tool Grease (GR-132)
 Available in 10 oz. tube form, also in case of 12.
ORDER PART #9070-L

IMPORTANT: Shafts should be examined every 50 to 100 hours of use and greased if necessary, using recommended grease.

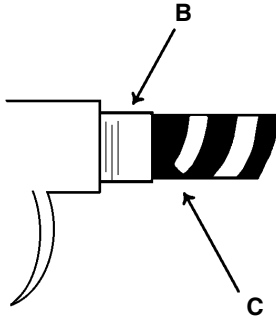
GREASING INSTRUCTIONS: Follow steps 1, 2, 4 & 5 of the Flexible Drive Shaft Dis-Assembly instructions on the following page.



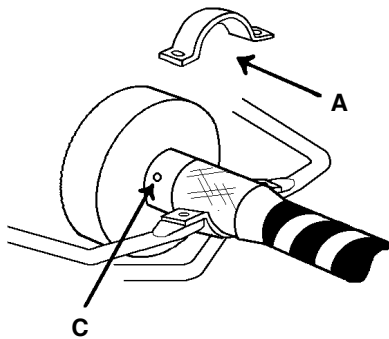
FLEXIBLE SHAFT DIS-ASSEMBLY



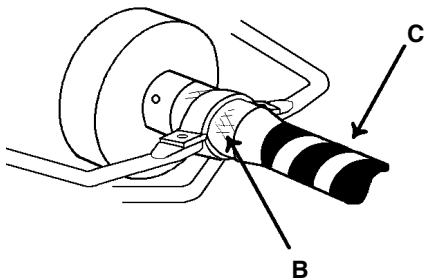
1. REMOVE KILL SWITCH WIRE & THROTTLE WIRE
 - A. Disconnect at throttle lever.
 - B. Loosen anchor bolt on handle.
 - C. Pull kill switch wire from kill switch.
 - D. Un-wrap wires from flexible shaft and lay aside.



2. DETACH SHAFT FROM TRANSMISSION
 - A. Loosen two bolts on clamp #4018-2H (Item A in step 3) so that end assembly can turn.
 - B. Using a pipe wrench, hold #10150 (silver) retainer in place. NOTE: Do not unscrew the 10150 retainer from the transmission housing. If it does unscrew, use caution in re-inserting it. The aluminum threads are easily damaged or cross-threaded.
 - C. With a second pipe wrench, turn the (black) flexible shaft COUNTER-CLOCKWISE to loosen and remove.



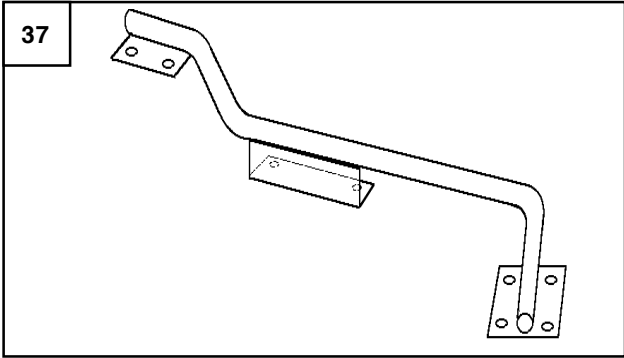
3. TO DISCONNECT COMPLETE SHAFT ASSEMBLY
 - A. Remove clamp #4018-2H from clutch bracket.
 - B. Pry clutch drum loose, freeing clutch drum and complete shaft assembly from power unit.
 - C. To detach clutch drum from shaft, loosen two allen screws on clutch drum and pry loose from shaft.



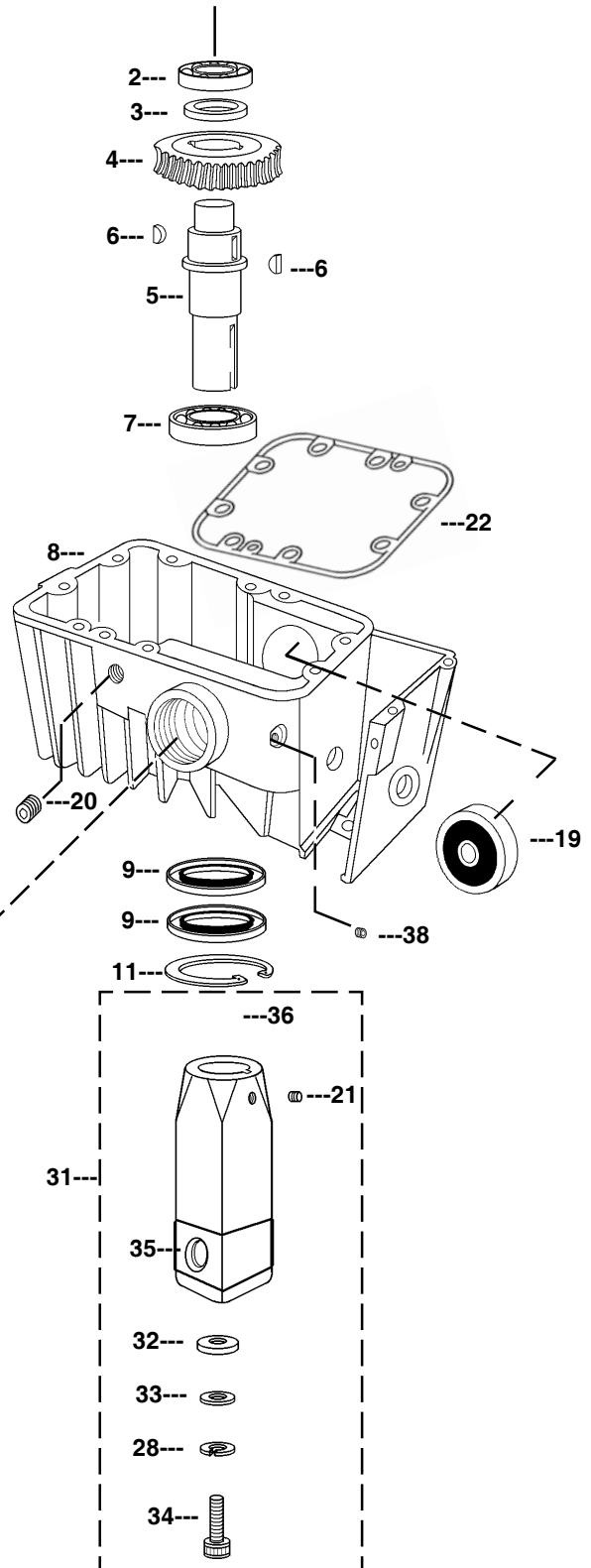
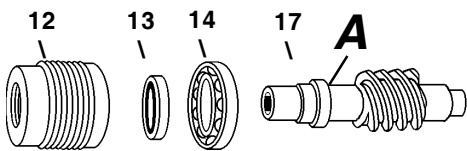
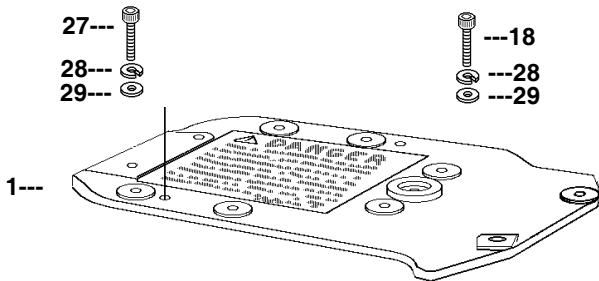
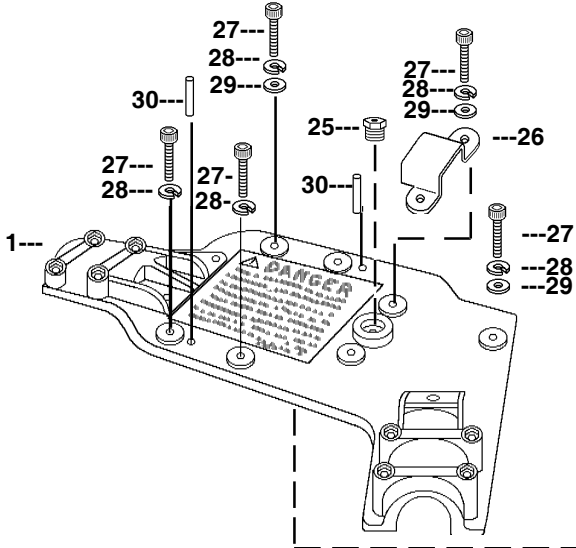
4. TO REMOVE FLEXIBLE SHAFT CORE AND HOUSING ONLY
 - A. Complete steps 1 and 2 above.
 - B. Hold flexible shaft end piece in place with pipe wrench.
 - C. Using a second pipe wrench, turn flexible shaft housing COUNTER-CLOCKWISE freeing it from the end assembly.
 - D. To remove core from end assembly, complete step 3. Remove key and outer snap ring, slide knurled housing down, remove outer bearing and spacer. Remove lock ring bearing and lock ring.

5. RE-ASSEMBLY
 - A. BEFORE re-assembling core and housing of flexible shaft, remove all old grease.
 - B. Re-grease by applying grease to core while inserting into flexible shaft housing. (Recommended grease-Lubriplate Portable Tool Grease - Order Part #9070-L)
 - C. After greasing, re-assemble by reversing dis-assembly procedures.





TRANSMISSION OIL BATH



TRANSMISSION, OIL BATH

| ITEM | PART # | DESCRIPTION | QTY |
|-------------|---|---|------------|
| | 10010 | Transmission Assy.10:1 w/Adaptor, less Handle and Torque Arm | 1 |
| | 10020 | Transmission Assy.20:1 w/Adaptor, less Handle and Torque Arm | 1 |
| | 10030 | Transmission Assy.13.33:1 w/Adaptor, less Handle and Torque Arm | 1 |
| | Transmissions for Loop handle following (see page P-6 of this manual for Loop Handle) | | |
| | 10010-L | Transmission Assy.10:1 w/Adaptor, less Loop Handle and Torque Arm | 1 |
| | 10020-L | Transmission Assy.20:1 w/Adaptor, less Loop Handle and Torque Arm | 1 |
| | 10030-L | Transmission Assy.13.33:1 w/Adaptor, less Loop Handle and Torque Arm | 1 |
| 1 | 10040 | Cover Plate | 1 |
| | 10041 | Cover Plate for Loop Handle | 1 |
| 2 | 10050 | Bearing, Upper Main Shaft, #6205 | 1 |
| 3 | 10060 | Spacer, Main Shaft | 1 |
| 4 | 10070 | Bronze Gear, 10:1 Ratio, 1-1/4" Bore, Double Keyed | 1 |
| | 10072 | Bronze Gear, 20:1 Ratio, 1-1/4" Bore, Double Keyed | 1 |
| | 10075 | Bronze Gear, 13:1 Ratio, 1-1/4" Bore, Double Keyed | 1 |
| 5 | 10080 | Main Shaft, includes 2 #10115 Seals | 1 |
| 6 | 10090 | Key Main Shaft - #806 Woodruff | 2 |
| 7 | 10100 | Bearing, Lower Main Shaft #6206 | 1 |
| 8 | 10130 | Body, Casting | 1 |
| 9 | 10115 | Seal, Main Shaft #471736 (for new style main shaft of 1/95). | 2 |
| 11 | 10140 | Snap Ring, 1-3/4" External Housing Ring | 1 |
| 12 | 10150 | Coupling, Pinion Shaft, includes 10170 seal | 1 |
| 13 | 10170 | Seal, Pinion Shaft inc. w/10150 coupling | 1 |
| 14 | 10180 | Bearing, Front Pinion Shaft, #6905 | 1 |
| 17 | 10191 | Pinion Gear Shaft, 10:1 | 1 |
| | 10193 | Pinion Gear Shaft, 20:1 | 1 |
| | 10196 | Pinion Gear Shaft, 13.33:1 | 1 |
| 18 | KT4-1040 | Screw, Socket Hd. 5/16 x 1-1/2 | 2 |
| 19 | 10210 | Bearing, Rear Pinion Shaft #6302-RSR | 1 |
| 20 | 10260 | Pipe Plug | 1 |
| 21 | 9021 | Allen Screw 1/4"-20 x 1/4" | 1 |
| 22 | 10230 | O-Ring, Cover Seal (All-In-One) | 1 |
| 25 | 10310 | Vent Plug, Oil | 1 |
| 26 | 10320 | Deflector, Vent Plug | 1 |
| 27 | 10300 | Screw, Socket Head, 5/16" x 1" (If for Loop Handle, 2 must be 1-1/4" Long, #10302 and 2 must be 1-1/2" long, #KT4-1040) | 10 |
| 28 | 3002-C | Washer, 5/16" Split Lock | 10 |
| 29 | 10305 | Washer, 5/16" Flat SAE | 7 |
| 30 | 10330 | Dowel Pin, 1/4" x 1" | 2 |
| 31 | 30272 | Adaptor, Keyed Shaft to Auger, mounting hardware incl. | 1 |
| 32 | 10520 | Washer, Williams, 3/8" | 1 |
| 33 | 10305 | Washer, 5/16 Standard Flat | 1 |
| 34 | 10490 | Cap Screw, Socket Head, 5/16"-18 x 1" w/Locking Plug | 1 |
| 35 | 9058-1 | Button Shield, Only | 1 |
| 36 | 4081 | Key, Adaptor | 1 |
| 37 | 10425 | Handle Brace for 2 piece handle | 1 |
| 38 | 30171 | Set Screw, 5/16 x 5/16 | 1 |

WHEN ORDERING TRANSMISSION PARTS BE SURE TO INCLUDE SERIAL NUMBER OF TRANSMISSION, LOCATED ON BOTTOM OF HOUSING

IMPORTANT: LUBRICATING INSTRUCTIONS Can be found on page P-13



OIL BATH TRANSMISSION
INSTRUCTIONS FOR DIS-ASSEMBLING AND ASSEMBLING

(Refer to key #'s on Page P-6 & P-10)

TO DIS-ASSEMBLE:

1. Uncouple throttle wire and throttle wire housing. Remove kill switch wire.
2. Remove shoulder bolt #26, torque arm #22 and torque arm bushing #24 from transmission (see page 6).
Note: You may have to remove right handle clamp screw #5 before torque arm and bushings will come out.
3. Uncouple flexible drive shaft from retainer and coupling #12 by holding retainer with a pipe wrench and unscrewing drive shaft housing with a second pipe wrench. NOTE: the flexible drive shaft housing is black. The retainer is unpainted. Break loose where these items join. (right hand thread)
4. Remove pipe plug #20 and drain oil from transmission.
5. Remove 8 bolts #9 and nuts #10 from handle clamps and cover plate #1. Remove right and left handles.
6. Remove 10 screws #27, flat washers #29 and lock washers #28 from transmission. Note the location and orientation of the vent plug cover #26.
7. Tap the underside of the cover plate to remove it. Note the location of the O-rings for proper reassembly. There are 8 #24 O-rings, 2 #23 O-rings and 1 #22 O-ring. Do not lose the O-Rings.
8. Remove vent plug #25 from the cover plate if it needs to be replaced.
9. Remove set screw #21, holding retainer #12. Unscrew retainer using a pipe wrench. (right hand thread)
10. Remove seal #13 from retainer #12 by pressing out from threaded end.
11. Loosen set screw #36 and remove screw #35, flat washer #33 and lock washer #34 from the adaptor #31. Using a ball joint wrench, remove the adaptor from the main shaft #5 by tapping the wrench between the housing and the adaptor. Try not to burr the housing if possible. Note screw #35 has a nylon insert, replace it with the same type.
12. Using a small punch, tap on pinion gear/shaft #15 at shoulder A to remove it from the housing. Press bearing #14 off of shaft.
13. Remove spacer #3 from main shaft.
14. Turn housing upside down and tap main shaft #5 out of housing.
15. Remove bearing #7 from housing by tapping or pressing out of housing.
16. Remove seal retainer ring #11 from housing, using snap-ring pliers.
17. Turn housing over and tap seals #9 out of housing.
18. Tap bronze gear #4 off of main shaft. Keys #6 will be free.
19. Using pilot bearing puller, remove bearing #19 if it needs to be replaced.

TO ASSEMBLE:

1. Press 2 seals #9 into transmission housing #8 (old style main shaft uses seal #472475 and #471733, new style main shaft effective 1/95 uses 2 #471736 seals). Install seal retainer ring #11 into housing.
2. Press bearing #7 into housing.
3. Turn housing on the side and press bearing #19 into housing. Note: Be sure that Bearing #19 goes in straight, since the housing is cast at an angle.
4. Screw pipe plug #20 into housing.



Transmission Assembly Continued...

5. Press bearing #2 into cover plate #1.
6. Screw vent plug #25 into cover plate. Use teflon thread sealant tape on vent plug.
7. Tap keys #6 into main shaft #5, then press bronze gear #4 on main shaft.
8. Push main shaft, with gear, through bearing #7 and the seals.
9. Place spacer #3 on the main shaft, resting on the top of the bronze gear.
10. Press seal #13 onto coupling #12.
11. Hold housing secure and push pinion gear/shaft into the housing.
12. Place loctite on the threads of the housing and screw retainer #12 into housing and tighten with a pipe wrench. **This retainer is easy to crossthread, so line the threads up carefully.** Replace and tighten set screw #21 to secure retainer
13. Holding housing level, place 2 O-rings #23 over dowel pin holes and 8 O-rings #24 over bolt holes and 1 O-ring #22 in groove around top of housing.
14. Holding housing level, pour recommended oil (see page O-6) in housing. Oil level should come up to the top of spacer #3.
15. Place cover plate #1 on the top of the housing. Tap lightly so bearing will go on main shaft. Be sure that all O-rings stay in their proper places and do not fall into bottom of housing. Be sure they are fitting in their groove.
16. Align dowel pin holes and push dowel pins #30 all the way into the housing.
17. Place vent plug cover #26 over vent plug and screw 2 screws #27 with lock washers #28 and flat washers #29 on top of vent cover. Tighten to 24 ft. lbs.
18. Screw 8 screws #27 with lockwashers #28 and flat washers #29 into remaining holes. Tighten to 24 ft. lbs.
19. Tap key #37 onto main shaft. Then tap adaptor #31 on the main shaft. Insert Screw #35 with nylon insert, lock washer #34 and flat washer #33 through adaptor into bottom of main shaft and tighten to 10 ft. lbs. Tighten set screw #36 to secure key and adaptor.
20. Install torque arm #22 with 2 bushings #24 on both sides of torque arm into housing. Insert shoulder bolt #26 with star washer #25 into housing and through holes in bushings and torque arm. Tighten to 100 ft. lbs.
21. Place left and right handles on cover plate. Using bolts #9 and nylon stop nuts #10 secure clamps and handles to cover plate. Tighten to 10 ft. lbs.
22. Add recommended oil every day or as needed. Check oil level each day before use..

LUBRICATING INSTRUCTIONS: When adding oil to transmission, hold the transmission so that the top is level, then remove the pipe plug (item #20) and squeeze oil into the transmission until oil just comes out of the hole. Replace the pipe plug and tighten to 10ft.lbs. **The transmission oil should be checked each day prior to operation, and during the day as conditions warrant. The oil should be changed after the initial 25 hours of use and every 100 hours thereafter. *OIL CAPACITY: 1 US PINT***

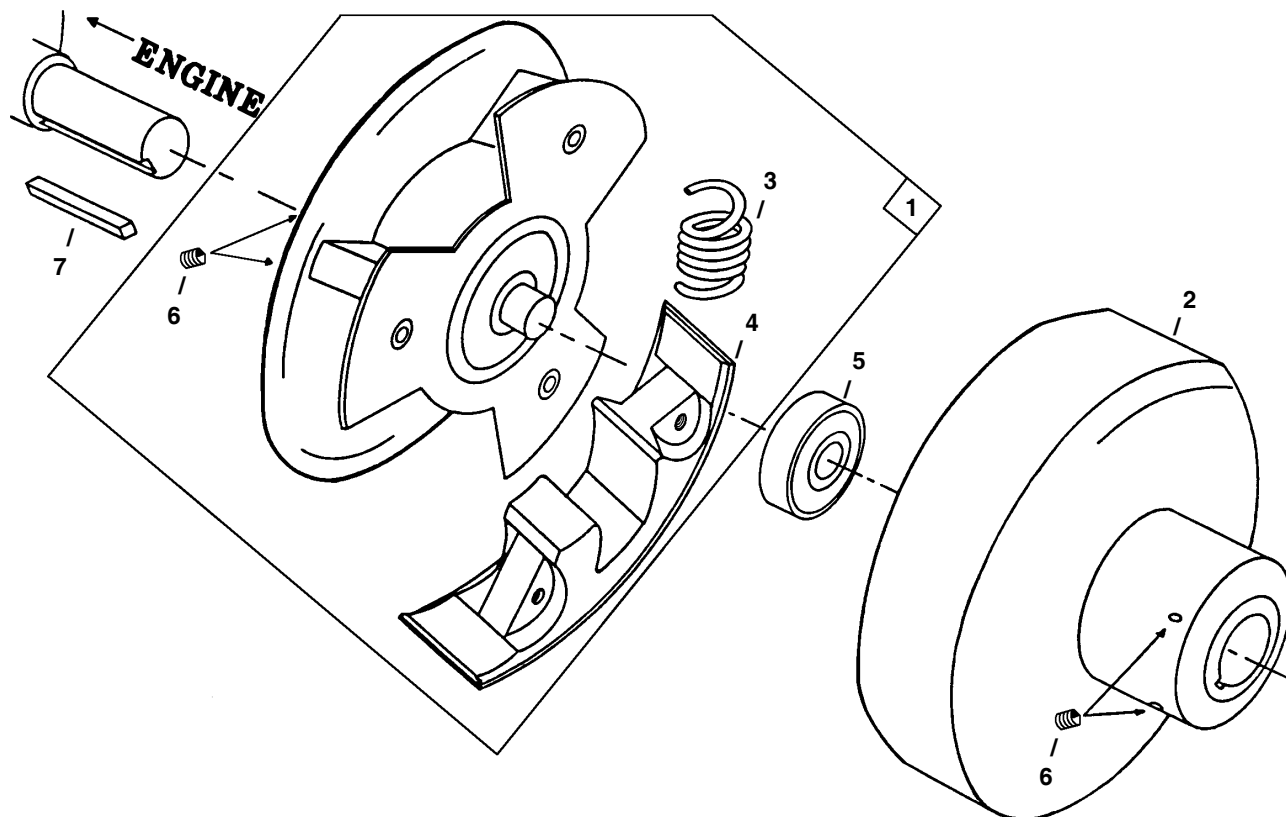
RECOMMENDED OIL Amalie Tri-Vis Plus+ SAE 80W-85W-140 or Penzoil Multi Purpose Gear Oil or equivalent. Available in quart size, also in case of 12.

ORDER PART #10280 OR #10280-A for Case

***NOTICE: DO NOT CROSSTHREAD ITEM #12 COUPLING.
DOING SO WILL CAUSE THE END PIECE OF CORE TO BREAK!***



HEAVY DUTY CLUTCH



| ITEM | PART # | DESCRIPTION | QTY |
|------|---------|--|-----|
| 1 | 4375-F | Rotor Assy. Model 5 - 3/4" Bore (incl. shoes, springs & set screws) | 1 |
| 1 | 4376-F | Rotor Assy. Model 7 or 8 - 1" Bore (incl. shoes, springs set screws) | 1 |
| 2 | 4179-F | Clutch Drum (incl. pilot bearing and set screws) | 1 |
| 3 | 4382 | Clutch Spring | 3 |
| 4 | 4383-F | Clutch Shoe | 3 |
| 5 | 4021-2F | Pilot Bearing | 1 |
| 6 | 4320 | Set Screw (Rotor & Drum) | 4 |
| 7 | 4080 | Key - Rotor Model 5 | 1 |
| 7 | 4081 | Key - Rotor Model 7 or 8 | 1 |
| | 4383-KF | Repair Kit (incl. 3 Shoes and 3 Springs) | 1 |



WARNING: DO NOT START ENGINE unless the clutch drum (Item #2) and flexible shaft have been reassembled and clamped into the clutch bracket (See page 11). Starting the engine without the drum in place will cause the clutch shoes to fly off, damaging the machine and possibly causing severe personal injury.

NOTE: Rotor should be shoved all the way on the crankshaft. Put Loctite on #6 set screws and tighten securely. At full throttle, engine speed should not be less than 3600 RPM. Adjust engine idle to release clutch when throttle lever is released. (Approximately 1900 RPM.)

NOTE: To remove rotor from crankshaft, use a ball joint tool. For 7 or 8 HP Models, use a backing plate between the clutch bracket with the ball joint tool.

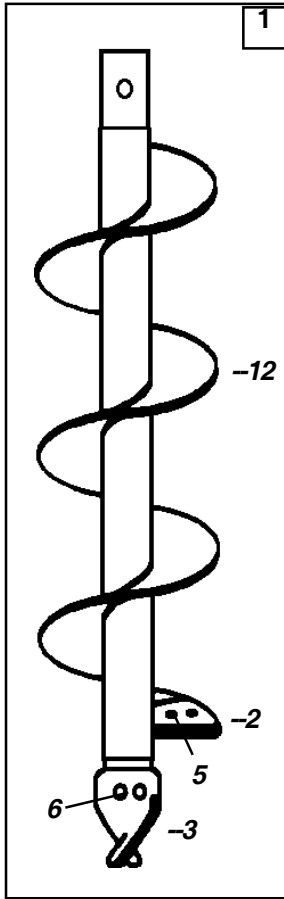
NOTE: When replacing engine, note that 7 & 8HP engine crankshafts are too long. Cut 1-1/4" off of crank shaft.



AUGERS & ACCESSORIES

ITEM PART# DESCRIPTION

STANDARD AUGER

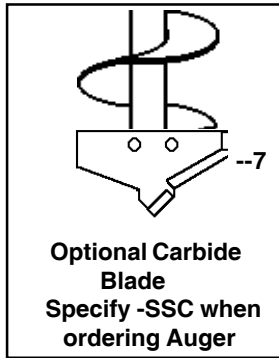


| | | |
|---|--|---|
| 1 | 1.5X42-SSS 2.5X42B 2.5X42SP 2X36-SSS 2X42-SSS 3X36-SSS 3X42-SSS 4X36-SSS 4X42-SSS 5X36-SSS 5X42-SSS 6X36-SSS 6X42-SSS 7X36-SSS 7X42-SSS 8X36-SSS 8X42-SSS 9X36-SSS 9X42-SSS 10X36-SSS 10X42-SSS 12X36-SSS 12X42-SSS 14X36-SSS 14X42-SSS 16X36-SSS 16X36-SSSF 16X42-SSSF | 1-1/2" X 42" Auger, Snap-on with Screw-on Point 2-1/2" X 42" Bucket Auger, Snap-on 2-1/2" x 42" Spiral Barrel Auger (Soil Sampling) 2" X 36" Auger, Snap-on with Screw-on Point 2" X 42" Auger, Snap-on with Screw-on Point 3" X 36" Auger, Snap-on with Screw-on Point 3" X 42" Auger, Snap-on with Screw-on Point 4" X 36" Auger, Snap-on 4" X 42" Auger, Snap-on 5" X 36" Auger, Snap-on 5" X 42" Auger, Snap-on 6" X 36" Auger, Snap-on 6" X 42" Auger, Snap-on 7" X 36" Auger, Snap-on 7" X 42" Auger, Snap-on 8" X 36" Auger, Snap-on 8" X 42" Auger, Snap-on 9" X 36" Auger, Snap-on 9" X 42" Auger, Snap-on 10" X 36" Auger, Snap-on 10" X 42" Auger, Snap-on 12" X 36" Auger, Snap-on 12" X 42" Auger, Snap-on 14" X 36" Auger, Snap-on 14" X 42" Auger, Snap-on 16" X 36" Auger, Snap-on 16" X 36" Auger, Snap-on, Full Flighted 16" X 42" Auger, Snap-on, Full Flighted |
| 2 | 9023-4 9023-6 9023-8 9023-9 9023-10 9023-12 9023-14 9023-16 | Blade for 4" & 5" Augers Blade for 6" & 7" Augers Blade for 8" Augers Blade for 9" Augers Blade for 10" Augers Blade for 12" Augers Blade for 14" Augers Blade for 16" Augers |
| 3 | 9027 9027-16 | Point, Standard, Fits 4" thru 12" Augers Point, Standard, Fits 14" and 16" Augers |
| 4 | 9058 | Spring & Button |
| 5 | 9023-S4 9023-S9 9023-S12 9023-S16 | Cap Screw & Nut w/Lockwasher, 4" - 8" Blades Cap Screw & Nut w/Lockwasher, 9" - 10" Blades Cap Screw & Nut w/Lockwasher, 12" Blades Cap Screw & Nut w/Lockwasher, 14" - 16" Blades |
| 6 | 9027-7 | Cap Screw & Nut w/Lockwasher, Standard Points |



ITEM PART# DESCRIPTION

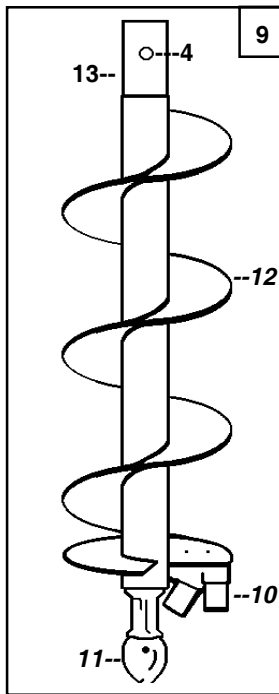
**STANDARD AUGER
WITH CARBIDE POINT**



| | | |
|---|---|---|
| 7 | 9023-C1.5 9023-C2 9023-C3 9023-C4 9023-C5 9023-C6 9023-C7 9023-C8 9023-C9 9023-C10 9023-C12 | Blade, Screw-on, w/Carbide for 1-1/2" Augers Blade, Screw-on, w/Carbide for 2: Augers Blade w/Carbide for 3" Auger, Inc. Mtng. Bolts/Nuts Blade w/Carbide for 4" Auger, " " " Blade w/Carbide for 5" Auger, " " " Blade w/Carbide for 6" Auger, " " " Blade w/Carbide for 7" Auger, " " " Blade w/Carbide for 8" Auger, " " " Blade w/Carbide for 9" Auger, " " " Blade w/Carbide for 10" Auger, " " " Blade w/Carbide for 12" Auger, " " " |
|---|---|---|

| | | |
|---|---------|---|
| 8 | 9027-8S | Cap Screw & Lock Nut for Carbides (2 ea.) |
|---|---------|---|

PENGO AUGERS



| | | |
|----|--|--|
| 9 | 6X36-SSP 6X42-SSP 7X36-SSP 7X42-SSP 8X36-SSP 8X42-SSP 9X36-SSP 9X42-SSP 10X36-SSP 10X42-SSP 12X36-SSP 12X42-SSP | 6" x 36" Snap-on Auger w/Pengo Point & Blade 6" x 42" Snap-on Auger w/Pengo Point & Blade 7" x 36" Snap-on Auger w/Pengo Point & Blade 7" x 42" Snap-on Auger w/Pengo Point & Blade 8" x 36" Snap-on Auger w/Pengo Point & Blade 8" x 42" Snap-on Auger w/Pengo Point & Blade 9" x 36" Snap-on Auger w/Pengo Point & Blade 9" x 42" Snap-on Auger w/Pengo Point & Blade 10" x 36" Snap-on Auger w/Pengo Point & Blade 10" x 42" Snap-on Auger w/Pengo Point & Blade 12" x 36" Snap-on Auger w/Pengo Point & Blade 12" x 42" Snap-on Auger w/Pengo Point & Blade |
| 10 | 9023-P35 9023-P35HS 9023-P1336 9023-P35CT 9023-5T30 9023-5T30C | Blade, Pengo #35 (1 per 6" & 7" Auger, 2 per 8"-12") Blade, Pengo #35HFF Hardsurfaced (Both sides) Blade, Pengo #1336 w/Carbide Blade, Pengo w/Carbide Blade, Pengo, Chisel Point Blade, Pengo, Chisel Carbide Point |

| | | |
|----|-------------------|--|
| 11 | 9027-P 9027-PC | Point, Pengo #SB25 Point, Pengo #SB-25C w/Carbide |
|----|-------------------|--|

**AUGER REPAIR PARTS
Must be welded.**

| | | |
|----|--|---|
| 12 | FS-3 FS-4 FS-5 FS-6 FS-7 FS-8 FS-9 FS-10 FS-12 FS-14 FS-16 | Flighting, replacement 3" x 37" or 60" Section Flighting, 4" x 30" or 37" Section Flighting, 5" x 30" or 37" Section Flighting, 6" x 30" or 37" Section Flighting, 7" x 30" or 37" Section Flighting, 8" x 30" or 37" Section Flighting, 9" x 30" or 37" Section Flighting, 10" x 30" or 37" Section Flighting, 12" x 37" Section Flighting, 14" x 37" Section Flighting, 16" x 19" Section |
|----|--|---|

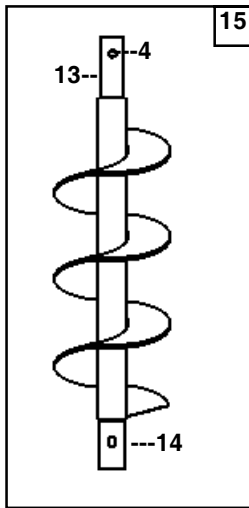
| | | |
|----|----------------|---|
| 13 | 9062 9062-H | Auger Top for 4" thru 10" Augers Auger Top for 12" thru 16" Augers |
|----|----------------|---|

| | | |
|----|------------------|---|
| 14 | 9062-1 9062-2 | Extension Bottom for 4" thru 10" Extensions Extension Bottom for 12" thru 14" Extensions |
|----|------------------|---|



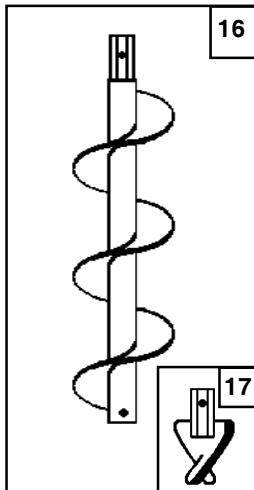
ITEM PART# DESCRIPTION

EXTENSION



| | | |
|----|--------------|--|
| 15 | 9054 | 36" Tube Type Snap-on Extension |
| | 9054-A | 18" Tube Type Snap-on Extension |
| | 9054-S1.5X36 | 1-1/2" x 36" Screw-on Ext. (Must use Screw-on Agr) |
| | 9054-S2X36 | 2" x 36" Screw-on Ext. (Must use Screw-on Auger) |
| | 9054-S3X36 | 3" x 36" Screw-on Ext. (Must use Screw-on Auger) |
| | 9054-3X36 | 3" x 36" Snap-on Extension |
| | 9054-4X36 | 4" x 36" Snap-on Extension |
| | 9054-5X36 | 5" x 36" Snap-on Extension |
| | 9054-6X36 | 6" x 36" Snap-on Extension |
| | 9054-7X36 | 7" x 36" Snap-on Extension |
| | 9054-8X36 | 8" x 36" Snap-on Extension |
| | 9054-9X36 | 9" x 36" Snap-on Extension |
| | 9054-10X36 | 10" x 36" Snap-on Extension |
| | 9054-12X36 | 12" x 36" Snap-on Extension |
| | 9054-14X36 | 14" x 36" Snap-on Extension |

HEX AUGER/EXTENSION



| | | |
|----|------------|--|
| 16 | 1.5X36-HSL | 1-1/2" x 36" Auger/Extension, Hex, Less Point |
| | 1.5X42-HSL | 1-1/2" x 42" Auger/Extension, Hex, Less Point |
| | 2X36-HSL | 2" x 36" Auger/Extension, Hex, Less Point |
| | 2X42-HSL | 2" x 42" Auger/Extension, Hex, Less Point |
| | 3X36-HSL | 3" x 36" Auger/Extension, Hex, Less Point |
| | 3X42-HSL | 3" x 42" Auger/Extension, Hex, Less Point |
| 17 | 9027-H1.5 | Point, Hex, 1-1/2" |
| | 9027-H2 | Point, Hex, 2" |
| | 9027-H3 | Point, Hex, 3" |
| | 9041-2 | Pin, Locking, 1-1/2" & 2" Hex Auger/Extensions |
| | 9041-3 | Pin, Locking, 3" Hex Auger/Extensions |

9040 Spring Ball Plunger, (replace as needed)







**ADAPTORS
Auger to Transmission**

| | |
|-----------|---|
| 30272 | Adaptor, Keyed, Heavy Duty |
| 9051-GHLB | Adaptor, Ground Hog Drill to LB Auger |
| 9051-GHAS | Adaptor, LB Drill to Ground Hog Auger |
| 9051-GEN | Adaptor, 1-1/4" sq to 1" rd, General |
| 9051-GENS | Adaptor, 1-1/4" sq to 1 3/8" hex, General |
| 9061 | Adaptor, Screw-on Auger to Keyed Adaptor |
| 9061-H | Adaptor, 1-1/2" & 2" Hex Auger to Keyed Adaptor |
| 9061-H3 | Adaptor, 3" Hex Auger to Keyed Adaptor |
| 9061-A | Adaptor, Drill Chuck to Keyed Adaptor |



NOTES:

TORQUE INFORMATION

|  TYPE SIZE | HEX HEAD | | | SOCKET | |
|---|---|---|--|---|---|
| |  GRADE 5 ft. lb. |  GRADE 8 ft. lb. |  WRENCH SIZE inch |  ft. lb. |  WRENCH SIZE |
| No. 4 | 6 in lb | 9 in lb | 1/4" | 12 in lb | 3/32" |
| No. 6 | 12 in lb | 17 in lb | 5/16" | 21 in lb | 7/64" |
| No. 8 | 22 in lb | 31 in lb | 11/32" | 42 in lb | 9/64" |
| No.10 | 32 in lb | 45 in lb | 3/8" | 60 in lb | 5/32" |
| 1/4" | 6 ft lb | 9 ft lb | 7/16" | 12 ft lb | 3/16" |
| 5/16" | 13 ft lb | 19 ft lb | 1/2" | 24 ft lb | 1/4" |
| 3/8" | 23 ft lb | 33 ft lb | 9/16" | 43 ft lb | 5/16" |
| 7/16" | 37 ft lb | 52 ft lb | 5/8" | 69 ft lb | 3/8" |
| 1/2" | 56 ft lb | 80 ft lb | 3/4" | 105 ft lb | 3/8" |
| 9/16" | 82 ft lb | 115 ft lb | 13/16" | 158 ft lb | ----- |
| 5/8" | 112 ft lb | 159 ft lb | 15/16" | 195 ft lb | 1/2" |
| 3/4" | 200 ft lb | 282 ft lb | 1-1/8" | 353 ft lb | 5/8" |

ENGLISH TO METRIC CONVERSION CHART

| | | | | | |
|-------------|---|--------------|---------|---|----------------|
| 1 ft lb | = | 1.357 nm | 1 nm | = | .737 ft lb |
| 1 inch | = | 25.4 mm | 1 mm | = | .03937 inch |
| 1 ft | = | 30.48 cm | 1 cm | = | .3937 inch |
| 1 yard | = | .9144 meters | 1 m | = | 39.37 inch |
| | | | 1 m | = | 3.281 feet |
| | | | 1 m | = | 1.094 yard |
| 1 cubic in. | = | 16.39 cc | 1 cc | = | .061 cubic in. |
| 1 pint | = | .4732 liter | 1 liter | = | 2.113 pints |
| 1 quart | = | .9463 liter | 1 liter | = | 1.057 quart |
| 1 gallon | = | 3.785 liter | 1 liter | = | .2642 gallon |
| 1 ounce | = | 28.349 grams | 1 gram | = | .03527 ounces |
| 1 pound | = | 453.59 grams | | | |
| 1 pound | = | .4536 kg | 1 kg | = | 2.2046 lbs |

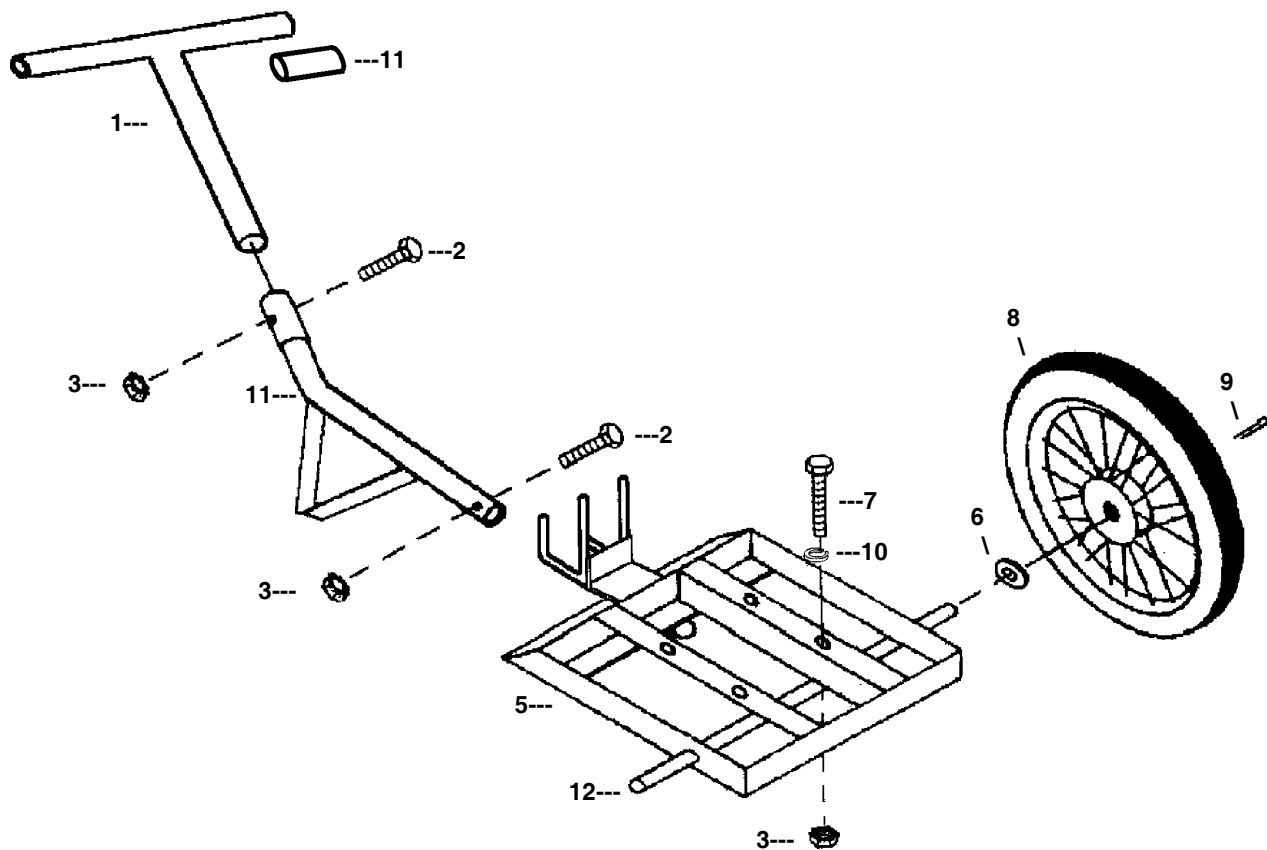


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RICK-SHA HANDLE AND CARRIER

| ITEM | PART # | DESCRIPTION | QTY |
|------|----------|------------------------------------|-----|
| 1 | 6000 | Pull Handle - Upper | 1 |
| 2 | 3010-9 | Screw - 5/16 x 2 Gr 2 | 2 |
| 3 | 3002-KEP | Nut - 5/16 KEP (Nut w/Lock Washer) | 6 |
| 4 | 6001 | Pull Handle - Lower | 1 |
| 5 | 6002 | Carrier - 5 HP | 1 |
| | 6002-7 | Carrier - 7 & 8 HP | 1 |
| 6 | 30164 | Flat Washer - 3/4" | 2 |
| 7 | 3002 | Screw - 5/16 x 1-1/2 Gr 2 | 4 |
| 8 | 6003 | Wheel, 20" | 2 |
| 9 | 30163 | Cotter Key - 1/8" x 1" | 2 |
| 10 | 3002-B | Washer, Flat 5/16" | 4 |
| 11 | 30194 | Grip, Handle | 2 |
| 12 | 9-36005 | Axle, Rick Sha, 26" | 1 |

