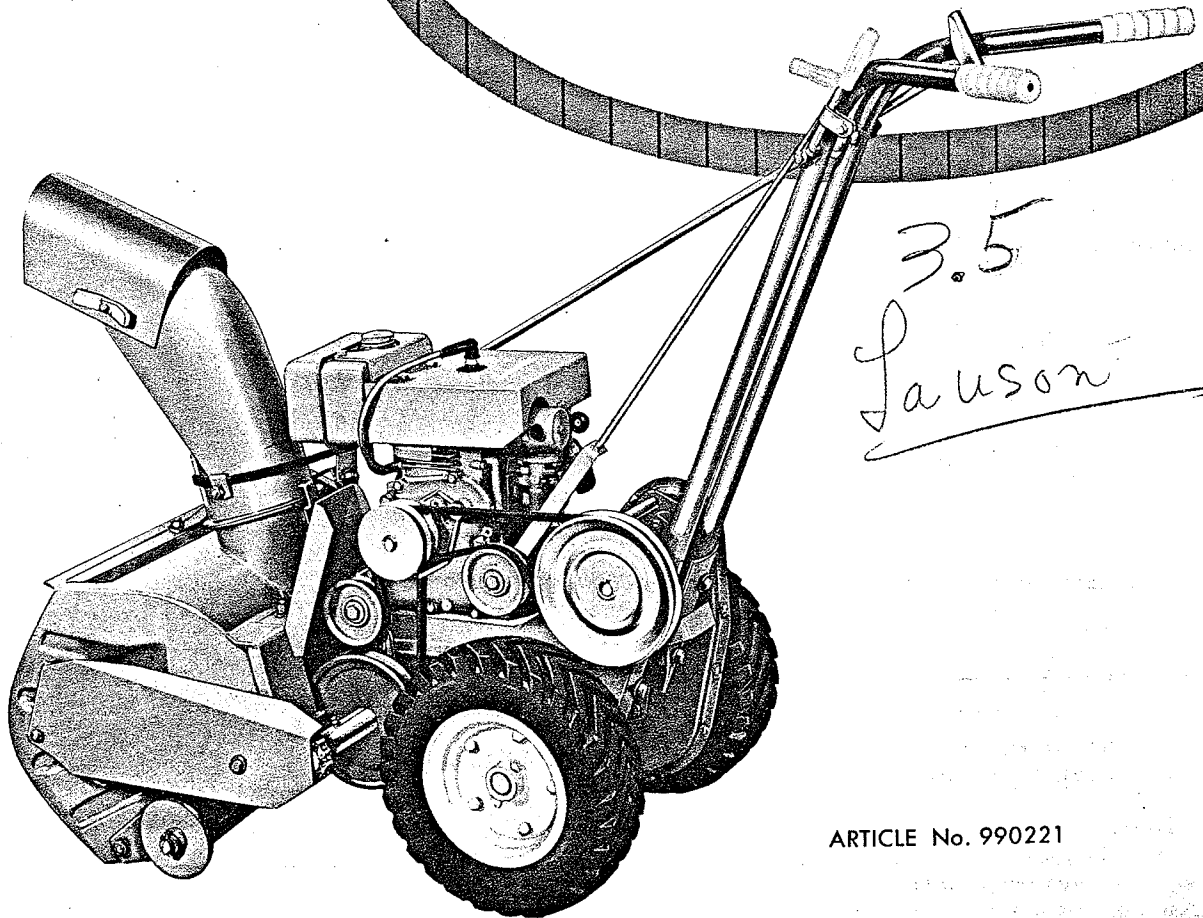


Simplicity
REG. U.S. PAT. OFF.

**INSTRUCTIONS
AND PARTS LIST**

**SNO-AWAY
23" Self Propelled
Rotary Snow Thrower**



ARTICLE No. 990221

The 23" Rotary Snow Plow is shipped in one carton, with the handles and discharge spout removed.

Assembly

To assemble the Snow Plow, follow the sequence of steps as outlined below:

1. Fasten the right and left handles to the mounting brackets as shown in Figure 1. Use hex capscrews, flat washers, lockwashers, and hex nuts and tighten securely in place.

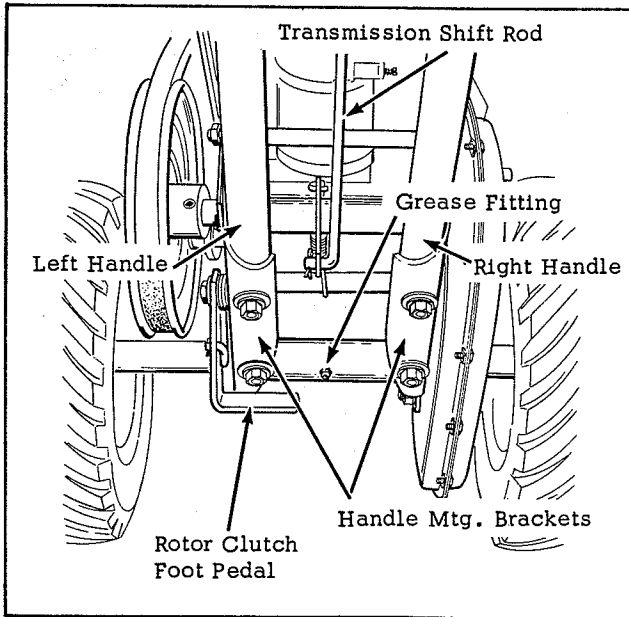


Fig. 1

2. Attach the spout adjusting handle, shift rod, and clutch rod to the upper end of the handles as shown in Figure 2.

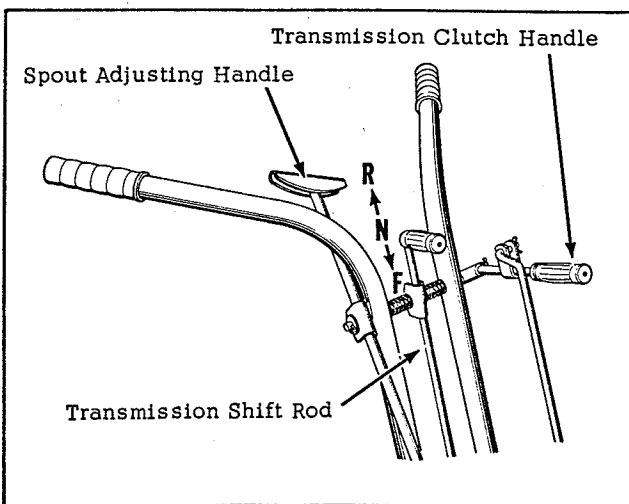


Fig. 2

3. Connect the lower end of the shift rod to lever "A" shown in Figure 3. Secure with a cotter pin.
4. Connect the lower end of the clutch rod to the idler pulley using hex lock nut as shown in Figure 3. The lock nut should be tight enough to remove side play but loose enough to allow the bracket to pivot freely.

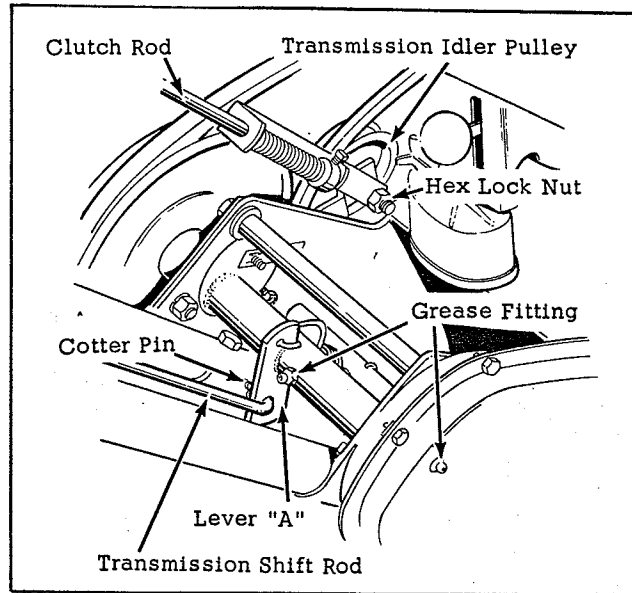


Fig. 3

5. Apply a coating of light oil to the neck of the discharge spout mounting collar, and install the spout in place on the rotor housing as shown in Figure 4. The application of oil is necessary to prevent rust and to allow the spout to rotate freely.

Clamp the "V" belt around the spout as shown in Figure 4, and loop the belt around the adjusting pulley. Connect the lower end of the spout adjusting handle to the adjusting pulley as shown in Figure 4, using a hex capscrew and lock nut. Adjust the tension of the "V" belt by turning the hex nut at point "A" in Figure 4. Avoid excessive tension.

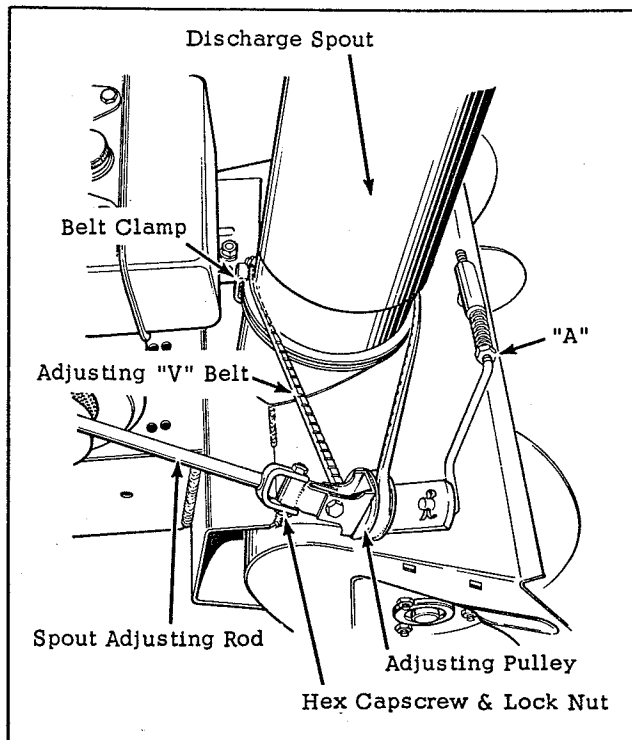


Fig. 4

Belt Tension

Belt tension for the rotor drive is regulated by the position of the set collar on the rotor clutch rod. Normally a clearance of 1/2" between the set collar and clutch rod clip will properly tension this belt. Check this adjustment when the rotor clutch is disengaged. Refer to Figure 5.

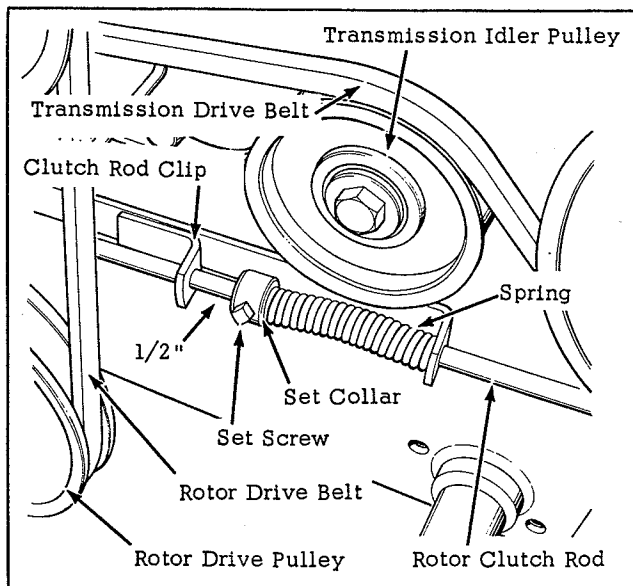


Fig. 5

To increase tension on the rotor drive belt, loosen the set screw in the collar and slide the collar toward the spring on the rotor clutch rod. Retighten the set screw to lock collar in place. Avoid excessive tension to prevent premature belt failure.

Belt tension for transmission drive belt is regulated by position of the set collar on the transmission clutch rod. Normally a clearance of 1/4" between the set collar and the clutch rod clip will properly tension the belt. Check this adjustment when the clutch is engaged. Refer to Figure 6.

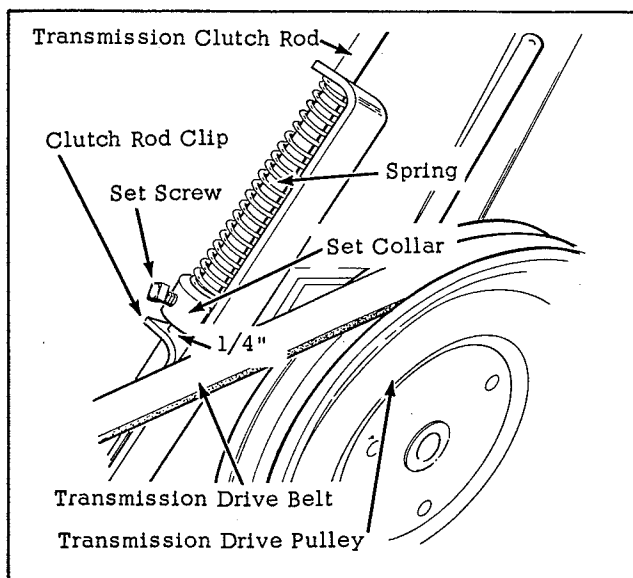


Fig. 6

To increase tension on the transmission drive belt, loosen the set screw in the collar and slide the collar toward the spring on the clutch rod. Retighten the set screw to lock the collar in place. Avoid excessive tension to prevent premature belt failure.

Chain Tension

The tension on the rotor drive chain may be increased by loosening the 2 lock nuts "A" and turning the adjusting nuts "B" to the desired position. Be sure to retighten the lock nuts "A" after adjusting tension. Refer to Figure 7.

Belt Stops

On the drive pulley side of the engine, 3 belt stops are mounted as shown in Figure 7. Engage the Rotor Clutch and Transmission Clutch and check clearance between belts and belt stops. The belt stops will be properly adjusted when 1/16" clearance is visible between the stops and the belts. To adjust, loosen the hex capscrews and reposition the stops to proper clearance. Retighten hex capscrews to hold stops in proper position. Refer to Figure 7.

Lubrication

The 23" Rotary Snow Plow is equipped with 4 grease fittings that require occasional lubrication with a general purpose automotive grease. The location of these fittings is shown in Figures 1, 3, & 7.

The bearings on the rotor shaft are a sealed type and do not require further lubrication. An occasional application of light motor oil to the ends of the rotor shaft will aid in prolonging the life of the bearing seals.

Operation

Before attempting to start the engine or to operate the snow plow, refer to the engine manufacturers owners manual for the proper fuel, oil, and procedure for starting the engine.

The operation of the rotor is controlled by the rotor clutch. To engage the rotor clutch, raise the foot pedal shown in Figure 7. To disengage the clutch, depress the foot pedal. Bear in mind that the rotor will operate independently of the forward travel of the snow plow as long as the engine is running and the clutch is engaged. Exercise caution at all times, and never attempt to remove snow or ice from the rotor housing or discharge spout unless the engine is stopped and rotor clutch is disengaged. To stop the engine, move the throttle control knob all the way up to the shut-off position.

The direction of travel of the snow plow is controlled by the position of the transmission shift lever. Refer to Figure 2. When shifting the transmission, always put the transmission clutch in disengaged position. To disengage the clutch, push the clutch lever forward. Refer to Figure 2. With the clutch disengaged, push forward on the transmission shift lever and the transmission will shift into forward position and snow plow will travel forward when the clutch is engaged. To reverse the snow plow, disengage the clutch and pull back on shift lever and transmission will shift into the reverse position. Neutral position of the shift lever is half way between forward and reverse and the lever will be held in this position by a detent lever on left side of the snow plow frame.

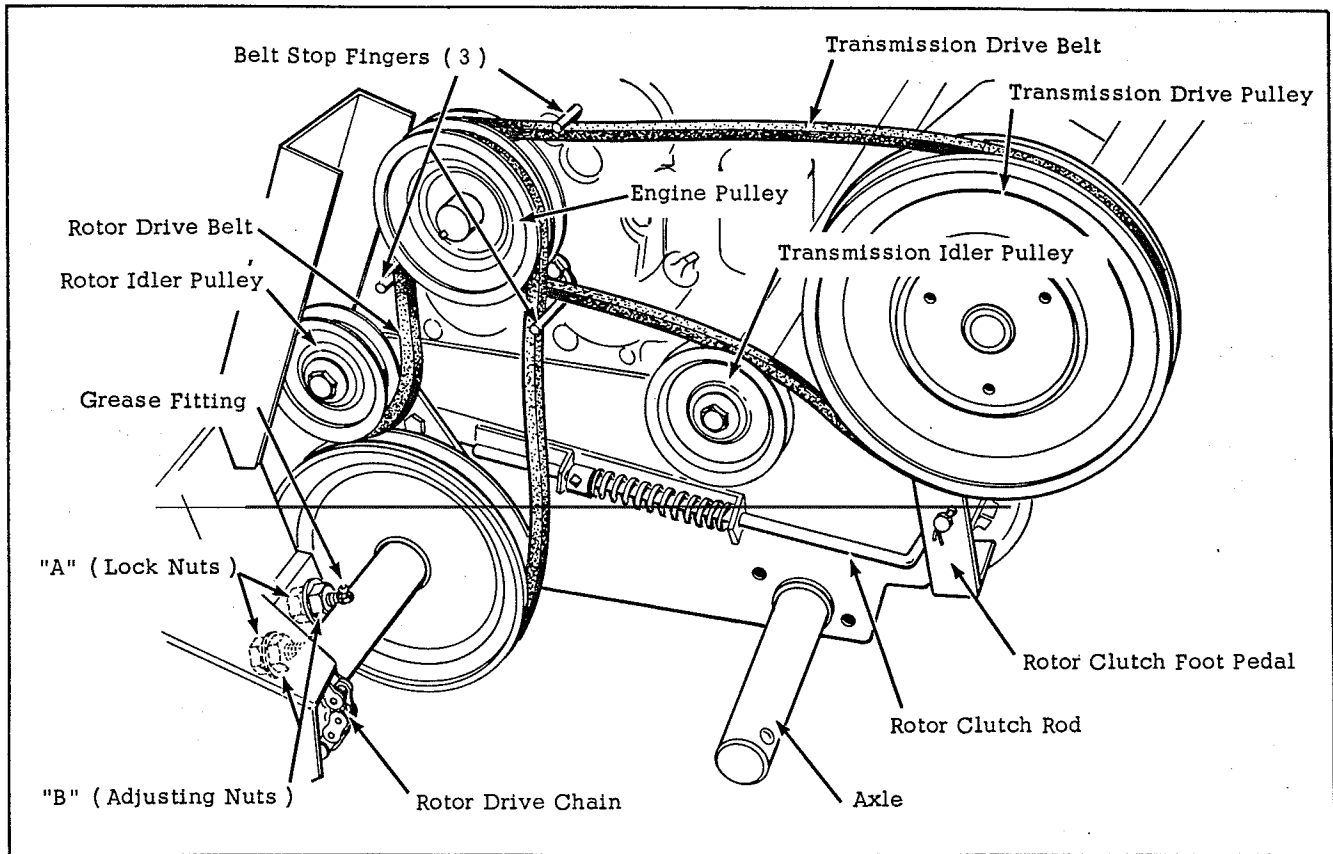


Fig. 7

The roller wheels on each side of the rotor housing are adjustable either up or down to suit the surface over which the plow is to be operated. For a smooth surface, loosen the nuts and set the shoes so that the lower edge of the rotor housing rides near the surface. For use over an uneven or rough surface, adjust the shoes for maximum lift.

When using the plow, adjust the discharge spout so that the snow will be thrown with the wind and never into the wind. Throwing snow into the wind is apt to be a source of discomfort to the operator. To alter the direction of discharge, rotate the spout by means of the spout adjusting handle. The angle of discharge may be adjusted by loosening the 2 wing nuts on the discharge spout extension and raising or lowering the extension to give the desired angle. Retighten the nuts to hold extension in desired position.

Steel Lug wheels are available as an accessory for use under conditions where the standard wheels do not provide required traction. Order these Steel Lug wheels by Product Number 990222.

When operating the plow through heavy drifts of snow, depress the handles and raise the rotor housing while taking the first pass through the drift. Then back off and lower the rotor housing and go through again. After the first path through the drift has been opened, it may be convenient to use only a portion of the width of the plow on successive passes. Naturally, efficient plowing methods will vary from one snowfall to another and from location to location. The operator will soon learn to judge which methods produce the best results.

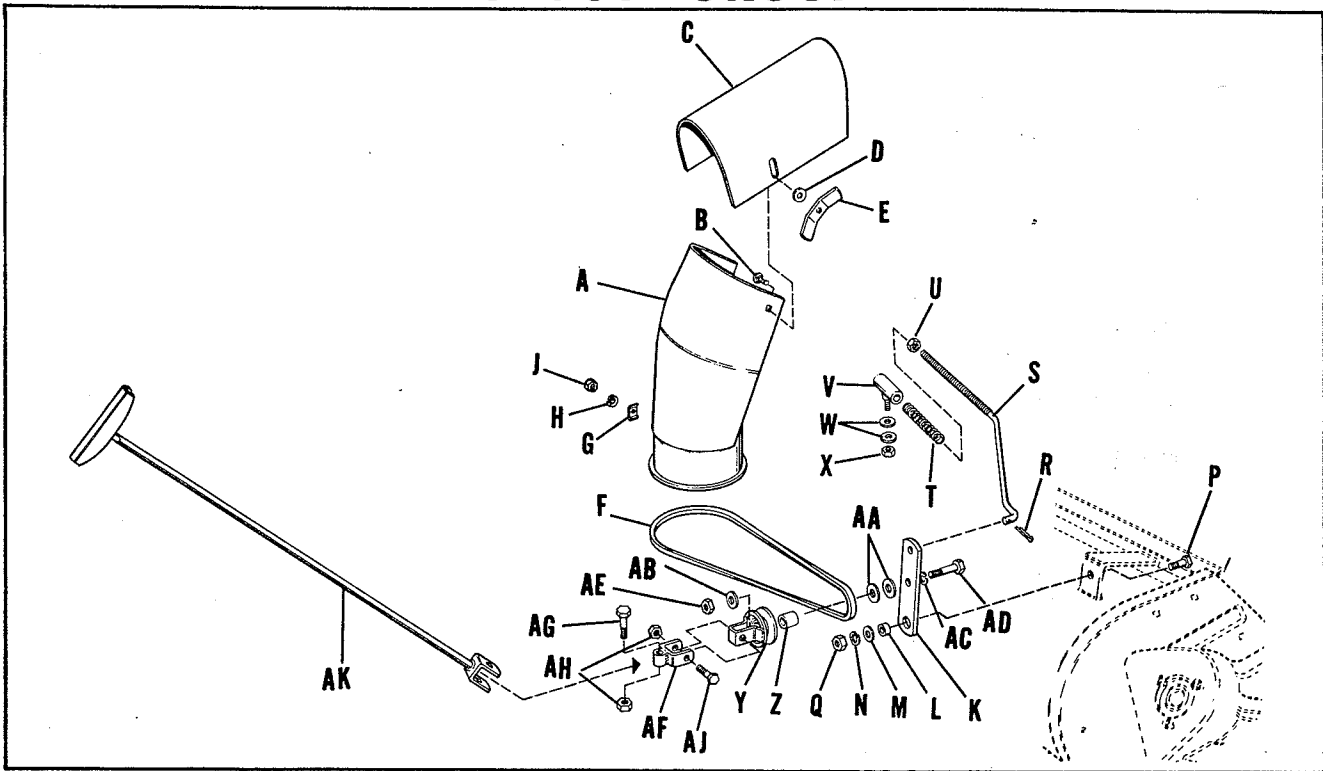
When transporting the plow from one location to another, disengage the rotor clutch for safety.

After completion of the plowing operation, allow the rotor to operate for about 5 minutes to dry itself and prevent the formation of ice. When possible, store the snow plow in a cold area so that clinging snow will not melt and refreeze into ice.

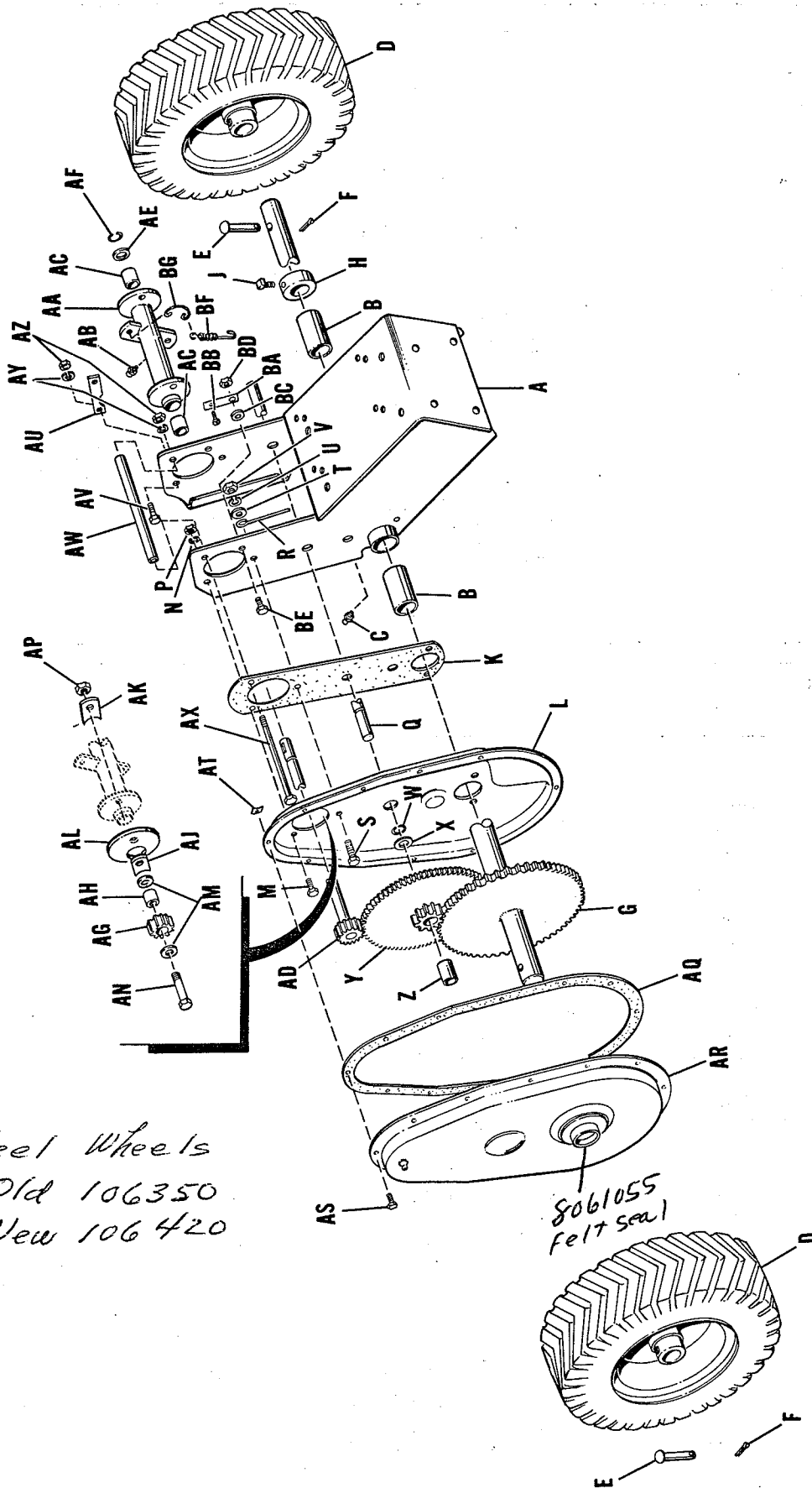
Caution

CAUTION: It is the operators obligation to avoid any foreign material or obstructions in the snow. Bear in mind that pieces of pipe, rocks, lumber, wire, rags, etc., may jam the rotor and damage it or the drive belts. Be prepared to disengage the rotor clutch quickly if that should happen. If rotor should jam on alien material, be sure to shut off the engine before attempting to remove the obstruction.

SPOUT GROUP



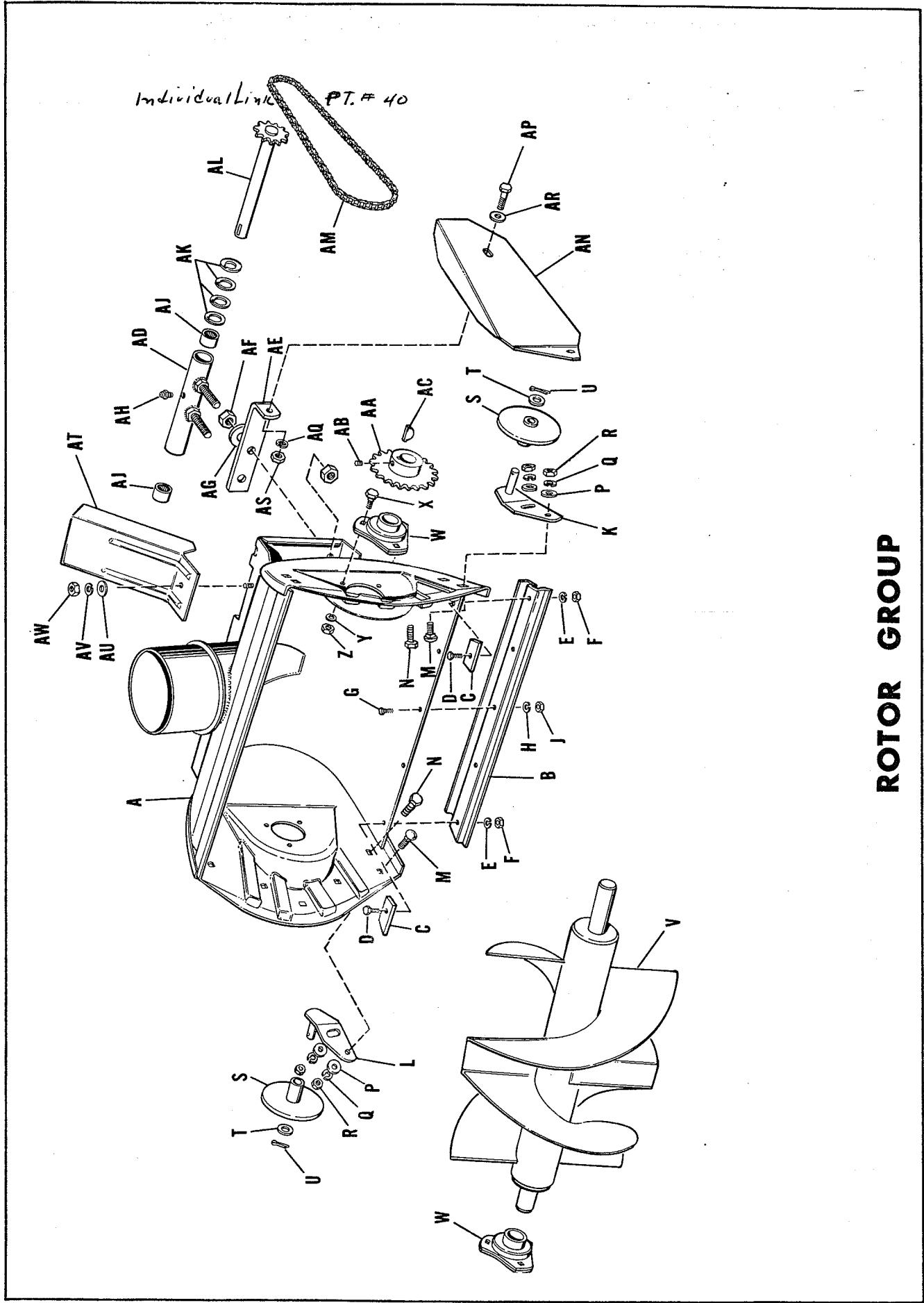
| Reference Letter | Part No. | Description |
|------------------|-----------------------------|--|
| A | 106338 | Spout Assembly |
| B | 703005 | Carriage Bolt, 5/16"-18 NC x 3/4" lg. |
| C | 106331 | Extension, Spout |
| D | 719001 | Washer, Plain, 3/8" |
| E | 106229 | Nut, Wing |
| F | 106359 | Belt, "V" (Spout) |
| G | 121042 | Plate |
| H | 720001 | Washer, Lock, 5/16" |
| J | 717001 | Nut, Hex, Full, 5/16"-18 NC |
| K | 106128 | Lever, Idler Pulley |
| L | 153081 | Spacer |
| M | 719001 | Washer, Plain, 3/8" |
| N | 720002 | Washer, Lock, 3/8" |
| P | 705005 | Capscrew, Hex, 3/8"-16 NC x 1" lg. |
| Q | 717003 | Nut, Hex, Full, 3/8"-16 NC |
| R | 106358 | Rod, Belt Tightener |
| S | 722001 | Pin, Cotter, 3/32" x 3/4" lg. |
| T | S2-A45 | Spring |
| U | 717003 | Nut, Hex, Full, 3/8"-16 NC |
| V | 106357 | Socket Assembly, Rod |
| W | 719002 | Washer, Plain, 5/16" |
| X | 717511 | Nut, Lock, Full, Hex, 5/16"-18 NC |
| Y | 106343 | Pulley Assembly |
| Z | S2-A20 | Spacer |
| AA | 121210 | Washer |
| AB | 719002 | Washer, Plain |
| AC | 720002 | Washer, Lock |
| AD | 705010 | Capscrew, Hex, 3/8"-16 NC x 1 3/4" lg. |
| AE | 717003 | Nut, Hex, Full, 3/8"-16 NC |
| AF | 106131 | Fork Assembly |
| AG | 705018 | Capscrew, Hex., 5/16"-18 NC x 1 1/2" lg. |
| AH | 717511 | Nut, Hex, Full, Lock, 5/16"-18 NC |
| AJ | 705023 | Capscrew, Hex, 5/16"-18 NC x 1 3/4" lg. |
| AK | 106133 106160 | Handle Assembly, Adjusting |



TRANSMISSION, WHEELS, FRAME

TRANSMISSION, WHEELS, FRAME

| Reference Letter | Part No. | Description |
|------------------|----------|--|
| A | 106180 | Frame Assembly |
| B | 153089 | Bearing, Axle |
| C | 727002 | Fitting, Grease |
| D | 106332 | Wheel & Tire Assembly (separate tire or wheel-not available) |
| E | 118053 | Pins |
| F | 722006 | Pin, Cotter, 1/8" x 1" lg. |
| G | 106356 | Axle & Gear Assembly |
| H | G-A46 | Collar, Set |
| J | 713006 | Screw, Set, Square Hd., 5/16"-18 NC x 1/2" lg. |
| K | 153114 | Gasket, Bearing Housing |
| L | 153105 | Gear Case |
| M | 715012 | Capscrew, Hex, 5/16" -18 NC x 5/8" lg. |
| N | 720001 | Washer, Lock, 5/16" |
| P | 717001 | Nut, Hex, Full, 5/16"-18 NC |
| Q | 106193 | Shaft, Intermediate |
| R | 121044 | Pin, Lock |
| S | 705005 | Capscrew, Hex., 3/8"-16 NC x 1" lg. |
| T | 719001 | Washer, Plain, 3/8" |
| U | 720002 | Washer, Lock, 3/8" |
| V | 717003 | Nut, Hex, Full, 3/8"-16 NC |
| W | 153124 | Ring, Retaining |
| X | 153079 | Washer |
| Y | 121306 | Gear Assembly, Intermediate |
| Z | 153078 | Bearing, Intermediate Pinion |
| AA | 106199 | Housing Assembly, Bearing |
| AB | 727002 | Fitting, Grease |
| AC | F-A38 | Bearing |
| AD | 121115 | Shaft Assembly, Pulley |
| AE | 153079 | Washer |
| AF | 153124 | Ring, Retaining |
| AG | 121118 | Pinion, Reverse |
| AH | 121163 | Spacer, Pinion |
| AJ | 121107 | Spacer, Reverse Pinion |
| AK | 121139 | Plate, Lock |
| AL | 153094 | Shield |
| AM | 719002 | Washer, Plain, 5/16" |
| AN | 715033 | Bolt, Hex Head, L.H. |
| AP | 153090 | Nut, Hex, Full, L.H. |
| AQ | 153115 | Gasket, Gear Case |
| AR | 153106 | Cover Assembly, Gear Case |
| AS | 714004 | Screw, Self Tapping, #10 x 3/8" lg. |
| AT | 718008 | Nut, Speed |
| AU | 106215 | Plate, Friction Stop |
| AV | 705017 | Screw, Cap, Hex., 5/16"-18 NC x 3/4" lg. |
| AW | 106217 | Spacer, Frame |
| AX | 106216 | Bolt, Frame |
| AY | 720001 | Washer, Lock, 5/16" |
| AZ | 717001 | Nut, Hex, Full, 5/16"-18 NC |
| BA | 718021 | Detent, Neutral |
| BB | 714014 | Screw, Self Tapping, #10 x 3/8" lg. Round Head. |
| BC | 719006 | Washer, Plain, 1/4" |
| BD | 717005 | Nut, Hex, Full, 1/4"-20 NC |
| BE | 715018 | Capscrew, Hex, 1/4"-20 NC x 5/8"lg. |
| BF | 153121 | Spring, Reverse Lever |
| BG | 153011 | Extension, Spring |

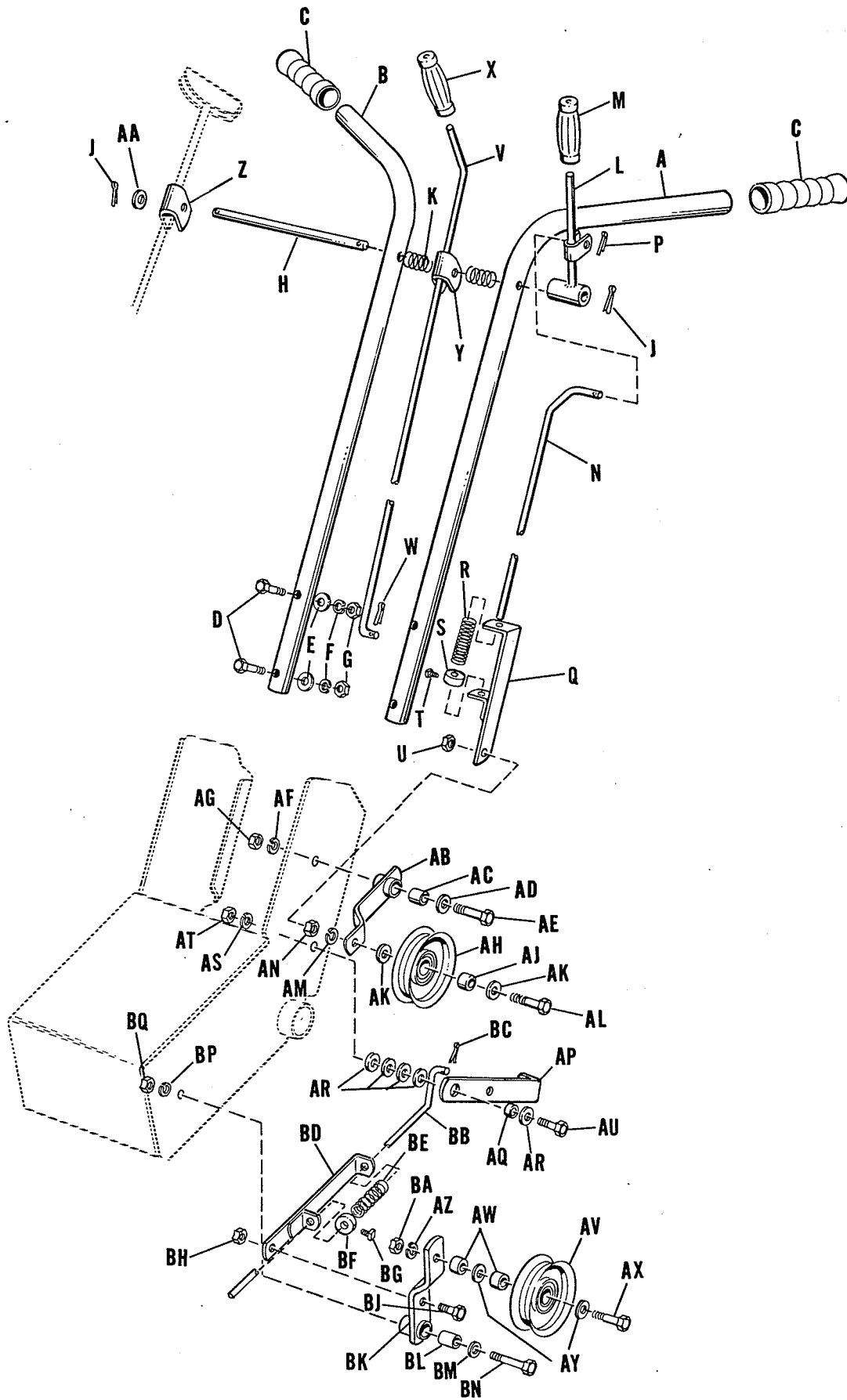


ROTOR GROUP

ROTOR GROUP

| Reference Letter | Part No. | Description |
|------------------|-------------------|--|
| A | 106188 | Body Assembly |
| B | 106205 | Scraper, Body <i>106428</i> |
| C | 106137 | Clamp, Scraper |
| D | 715020 | Capscrew, Hex, 5/16"-18 NC x ^{7/8} 3/4" lg. <i>715073</i> |
| E | 720001 | Washer, Lock, 5/16" |
| F | 717001 | Nut, Hex, Full, 5/16"-18 NC |
| G | 715031 | Capscrew, Hex, 1/4"-20 NC x 1/2" lg. |
| H | 720003 | Washer, Lock, 1/4" |
| J | 717005 | Nut, Hex, Full, 1/4"-20 NC |
| K | 106209 | Bracket Assembly, Roller, Left Hand |
| L | 106211 | Bracket Assembly, Roller, Right Hand |
| M | 703004 | Bolt, Carriage, 3/8"-16 NC x 3/4" lg. |
| N | 705031 | Capscrew, Hex, 3/8"-16 NC x 7/8" lg. |
| P | 719001 | Washer, Plain, 3/8" |
| Q | 720002 | Washer, Lock, 3/8" |
| R | 717003 | Nut, Hex, Full, 3/8"-16 NC |
| S | 106206 | Roller Assembly 106296 <i>106396</i> |
| T | 121210 | Washer |
| U | 722010 | Pin, Cotter, 1/8" x 1 1/4" lg. |
| V | 106333 | Rotor Assembly |
| W | 106051 | Sprocket, Rotor <i>106532 Bearing Assy</i> |
| X | 705017 | Capscrew, Hex, 5/16"-18 NC x 3/4" lg. |
| Y | 720001 | Washer, Lock, 5/16" |
| Z | 717001 | Nut, Hex, Full, 5/16"-18 NC |
| AA | 106052 | Sprocket, Rotor |
| AB | 713503 | Set Screw, Socket Head, 5/16"-18 NC x 5/16" lg. |
| AC | 151040 | Key, Hi-Pro |
| AD | 106197 | Housing Assembly, Bearing |
| AE | 106213 | Bracket, Chain Guard |
| AF | 717006 | Nut, Hex, Full |
| AG | 719004 | Washer, Plain |
| AH | 727006 | Fitting, Grease |
| AJ | 154258 | Bearing, Needle |
| AK | G-A12 | Washer |
| AL | 106195 | Shaft Assembly |
| AM | 106058 | Chain, Rotor |
| AN | 106103 | Guard, Chain <i>#40</i> |
| AP | 705017 | Capscrew, Hex, 5/16"-18 NC x 3/4" lg. |
| AQ | 720001 | Washer, Lock, 5/16" |
| AR | 719002 | Washer, Plain, 5/16" |
| AS | 717001 | Nut, Hex, Full, 5/16"-18 NC |
| AT | 106225 | Guard, Belt |
| AU | 719001 | Washer, Plain, 3/8" |
| AV | 720002 | Washer, Lock, 3/8" |
| AW | 717003 | Nut, Hex, Full, 3/8"-16 NC |

HANDLES & CONTROLS

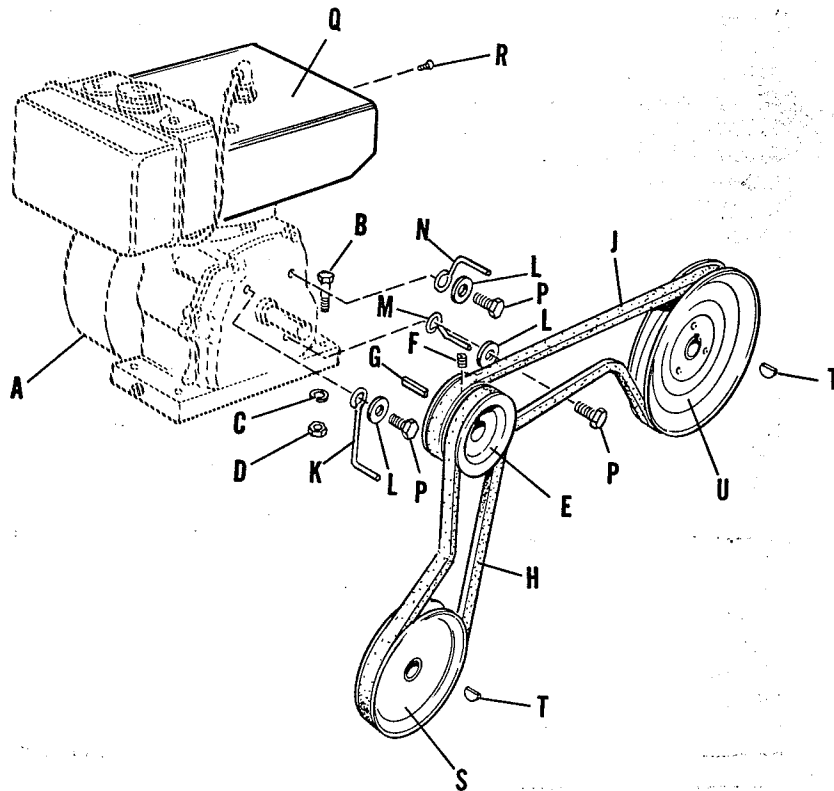


HANDLES & CONTROLS

| Reference Letter | Part No. | Description |
|------------------|--------------------|--|
| A | 106186 | Handle, Left Hand |
| B | 106187 | Handle, Right Hand |
| C | 155038 | Grip, Handle |
| D | 705010 | Capscrew, Hex, 3/8"-16 NC x 1 3/4" lg. |
| E | 719001 | Washer, Plain, 3/8" |
| F | 720002 | Washer, Lock, 3/8" |
| G | 717003 | Hex Nut, Full, 3/8"-16 NC |
| H | 106222 | Pin, Lever |
| J | 722001 | Pin, Cotter, 3/32" x 3/4" lg. |
| K | 152006 | Spring |
| L | 155006 | Lever Assembly, Left Hand |
| M | 153017 | Grip |
| N | 106220 | Rod, Clutch Transmission |
| P | 722001 | Pin, Cotter, 3/32" x 3/4" lg. |
| Q | GS-AX3 | Guide Assembly, Rod |
| R | S2-A45 | Spring |
| S | S2-A22A | Collar, Set |
| T | 713001 | Set Screw, Square Hd., 1/4"-20 NC x 3/8" lg. |
| U | 717510 | Hex Nut, Full, Lock, 3/8"-16 NC |
| V | 106218 | Rod, Reverse |
| W | 722001 | Pin, Cotter, 3/32" x 3/4" lg. |
| X | 153017 | Grip |
| Y | 153074 | Guide, Reverse Rod |
| Z | 106221 | Guide, Rod |
| AA | 719002 | Washer, Plain, 5/16" |
| AB | 106204 | Lever Assembly, Idler, (Transmission Clutch) |
| AC | S1L-A73 | Race, Inner Bearing |
| AD | 719001 | Washer, Plain, 3/8" |
| AE | 705010 | Capscrew, Hex, 3/8"-16 NC x 1 3/4" lg. |
| AF | 720002 | Washer, Lock, 3/8" |
| AG | 717003 | Hex Nut, Full, 3/8"-16 NC |
| AH | 154310 | Pulley, Idler, (Transmission Drive) 154534 |
| AJ | S1L-A45 | Bushing |
| AK | 719001 | Washer, Plain, 3/8" |
| AL | 705006 | Capscrew, Hex, 3/8"-16 NC x 2" lg. |
| AM | 720002 | Washer, Lock, 3/8" |
| AN | 717003 | Nut, Hex, Full, 3/8"-16 NC |
| AP | 106223 | Pedal, Clutch, Foot |
| AQ | S1-A215 | Bushing |
| AR | 719001 | Washer, Plain, 3/8" |
| AS | 720002 | Washer, Lock, 3/8" |
| AT | 717003 | Nut, Hex, Full, 3/8"-16 NC |
| AU | 705009 | Capscrew, Hex, 3/8"-16 NC x 1 1/2" lg. |
| AV | 154310 | Pulley, Idler, (Rotor Drive) 154534 |
| AW | S1L-A45 | Bushing |
| AX | 705010 | Capscrew, Hex, 3/8"-16 NC x 1 3/4" lg. |
| AY | 719001 | Washer, Plain, 3/8" |
| AZ | 720002 | Washer, Lock, 3/8" |
| BA | 717003 | Nut, Hex, Full, 3/8"-16 NC |
| BB | 106224 | Rod, Clutch, Rotor |
| BC | 722001 | Pin, Cotter, 3/32" x 3/4" lg. |
| BD | GS-AX3 | Guide Assembly, Clutch Rod |
| BE | S2-A45 | Spring |
| BF | S2-A22A | Collar, Set |
| BG | 713001 | Set Screw, Square Hd., 1/4"-20 NC x 3/8" lg. |
| BH | 717510 | Hex Nut, Full, Lock, 3/8"-16 NC |
| BJ | 705004 | Capscrew, Hex, 3/8"-16 NC x 3/4" lg. |
| BK | 106201 | Lever Assembly, Idler |
| BL | S1L-A73 | Race, Inner Bearing |
| BM | 719001 | Washer, Plain, 3/8" |
| BN | 705010 | Capscrew, Hex, 3/8"-16 NC x 1 3/4" lg. |
| BP | 720002 | Washer, Lock, 3/8" |
| BQ | 717003 | Nut, Hex, Full, 3/8"-16 NC |

ENGINE & DRIVE PULLEYS

Lauson Eng. H-35P-2404



Order by Part Number

| Reference Letter | Part No. | Description |
|------------------|------------------------|--|
| A | 106219 | Engine |
| B | 705018 | Capscrew, Hex, 5/16"-18 NC x 1 1/2" lg. |
| C | 720001 | Washer, Lock, 5/16" |
| D | 717001 | Hex Nut, Full, 5/16"-18 NC |
| E | 106227 | Pulley, Engine |
| F | 713504 | Set Screw, Socket Hd., 5/16"-18 NC x 3/8" lg. |
| G | S3-A42 | Key, Square |
| H | 34" 118068 | Belt, "V" (Rotor Drive) |
| J | 38 81-A244 3/16 2 1/4" | Belt, "V" (Transmission Drive) |
| K | G-A89 | Stop, Belt |
| L | 719002 | Washer, Plain, 5/16" |
| M | 106346 | Stop, Belt |
| N | 106347 | Stop, Belt |
| P | 706016 | Capscrew, Hex, 5/16"-24 NF x 5/8" lg. |
| Q | 106228 | Deflector, Hot Air |
| R | 710002 | Machine Screw, Round Hd., #10-32 NF x 1/2" lg. |
| S | 154273 2 | Pulley |
| T | 725003 | Key, Woodruff |
| U | 106214 | Pulley, Transmission Drive |