

SNOW  
BLOWER

B-51 / B-63

OPERATOR'S SERVICE MANUAL

SERIAL NUMBERS 806550 AND UP

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# INTRODUCTION

## TO THE PURCHASER

This new snowblower was carefully designed to give years of dependable service.

This manual has been provided to assist in the safe operation and service of your snowblower.

**NOTE:** All photographs and illustrations in the manual may not necessarily depict the actual models or equipment, but are intended for reference only and are based on the latest product information available at the time of publication.

Familiarize yourself fully with the safety recommendations and operating procedures before putting the machine to use. Carefully read, understand and follow these recommendations and insist that they be followed by those who work with you.



**THIS SAFETY ALERT SYMBOL IDENTIFIES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE IT, BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY AND CAREFULLY READ THE MESSAGE THAT FOLLOWS.**

Record your snowblower serial number and size. Your dealer requires this information to give you prompt, efficient service when ordering parts or attachments. Service with genuine **BER-VAC** parts when replacement parts are required.


Right hand and left hand are determined by sitting in the tractor seat facing forward.

MODEL .....

SERIAL NUMBER .....

DATE PURCHASED .....

### SERIAL NO. PLATE

N <sup>o</sup> de modèle Model number	<input type="text"/>
	
Fabrique au Canada/Made in Canada	
N <sup>o</sup> de série Serial number	<input type="text"/>

THE SERIAL NUMBER PLATE IS LOCATED ON THE REAR RIGHT SIDE OF THE IMPELLER HOUSING. IT IS RIVETED ON AND SHOULD NOT BE REMOVED.



# SAFETY PRECAUTIONS



A CAREFUL OPERATOR IS THE BEST OPERATOR. MOST ACCIDENTS CAN BE AVOIDED BY OBSERVING CERTAIN PRECAUTIONS. READ AND TAKE THE FOLLOWING PRECAUTIONS BEFORE OPERATING THIS SNOWBLOWER TO HELP PREVENT ACCIDENTS. EQUIPMENT SHOULD BE OPERATED ONLY BY THOSE WHO ARE RESPONSIBLE AND INSTRUCTED TO DO SO.

## THE SNOWBLOWER

1. Read this manual carefully to acquaint yourself with the snowblower. Working with unfamiliar equipment can lead to accidents. Be thoroughly familiar with the controls and proper use of the equipment. Know how to stop the unit and disengage the controls quickly.
2. Keep all shields in place and properly tighten all mounting hardware.
3. Periodically inspect all moving parts for wear and replace with authorized service parts if an excessive amount of wear is present.
4. Replace all missing, illegible, or damaged safety and warning decals. See List of Decals.
5. Do not modify or alter this equipment or any of its components, or any equipment function without first consulting a Ber-Vac dealer.
6. Keep safety decals clean of dirt and grime.

## OPERATING THE SNOWBLOWER

1. Never allow anyone to ride on the snowblower.
2. Clear the area of people and debris before commencing blowing operation.
3. Never allow children to operate equipment. Never allow adults to operate equipment without proper instruction.
4. Always keep the discharge chute of the blower directed away from people and objects which could be struck by debris thrown from the snowblower.
5. Never allow anyone in front of unit.
6. Never leave snowblower in raised position.
7. Never operate the snowblower without good visibility and lighting.
8. Never clean or adjust PTO-driven equipment with the tractor engine running.
9. When operating PTO-driven equipment, always shut off the engine and wait for the PTO to stop turning before getting off the tractor, before unplugging the collector/impeller housing or discharge guide, and before making any repairs, adjustments or inspections.

10. Take all possible precautions when leaving the vehicle unattended. Disengage the PTO, lower the snowblower, shift into neutral, set the parking brake, stop the engine and remove the key.
11. Disengage power to collector/impeller when transporting or when not in use.
12. The operator should never get off the tractor while it is in motion.
13. Exercise extreme caution when operating on, or crossing gravel drives, walks or roads. Stay alert for the hidden hazards of traffic.
14. Do not put hands or feet near rotating parts. Keep clear of discharge opening at all times.
15. Do not use hands or feet to unplug spout.
16. Keep a careful watch for debris that could enter the blower while operating.
17. Never operate the snowblower without guards, plates and other safety protective devices in place.
18. Never operate machine at high transport speeds on a slippery surface.
19. Use care when backing up.
20. After striking a foreign object, stop the engine, wait for the PTO to stop turning, thoroughly inspect the snowblower for damage, and repair the damage before restarting and operating the snowblower.
21. If the snowblower should start to vibrate abnormally, stop the engine immediately and check for the cause. Vibration is generally a warning of trouble.
22. Do not clear snow across the face of slopes. Exercise extreme caution when changing direction on slopes. Do not attempt to clear steep slopes.

## PREPARATION

1. Before starting, remove any ice that has accumulated in the collector and impeller.
2. Be sure the PTO is in OFF position before starting the engine.
3. Adjust collector housing height to clear gravel or crushed rock surface.
4. Before the snow season thoroughly inspect the area where the equipment is to be used, and remove all door mats, sleds, boards, wires and other foreign objects.

**SAFETY****PRECAUTIONS**

5. Clothing worn by the operator should be fairly tight and belted. Loose clothing should not be permitted because of the danger of getting into moving parts.
6. Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable noises.
7. Never make any adjustments while the engine is running.

**THE TRACTOR**

1. Read the Operator's Manual carefully before using tractor. Lack of operating knowledge can lead to accidents.
2. Use an approved Rollbar and Seat Belt for safe operation. Overturning a tractor without a rollbar can result in death or injury. If your tractor is not equipped with a rollbar and seat belt, see your tractor dealer.
3. Always use the seat belt when the rollbar is installed. Do not use the seat belt if the rollbar is removed from the tractor.
4. Use the handholds and step plates when getting on and off the tractor to prevent falls. Keep steps and platform cleared of mud and debris.
5. Do not permit anyone but the operator to ride on the tractor. There is no safe place for extra riders.

**OPERATING THE TRACTOR**

1. Never start the engine while standing beside the tractor. Always sit in the tractor seat while starting the engine or operating controls.
2. Never run the tractor engine in a closed building without adequate ventilation as the exhaust fumes are very dangerous.
3. Always set the hydraulic selector lever in Position Control when attaching equipment, transporting equipment and when no equipment is attached.
4. Never allow an open flame near the fuel tank or battery.
5. Use the flasher warning lamp when traveling on public roads, day or night, unless prohibited by law in your state.

6. Make sure the PTO shield is installed when using PTO-driven equipment, and always replace the PTO shield if damaged.
7. Always bring the tractor to a complete stop, and shut off the engine before getting off the tractor.
8. Never park the tractor on a steep incline.
9. Use care when operating on steep grades to maintain proper stability.
10. Keep the tractor in gear when going downhill.
11. Use of tire chains and wheel weights for better traction and stability is recommended. See Tractor Manual for recommended weighting.
12. Always drive the tractor at speeds compatible with safety, especially when operating over rough ground, crossing ditches, or when turning.
13. Handle fuel with care as it is highly flammable.
  - a) Use approved fuel container.
  - b) Never add fuel to a running engine or a hot engine.
  - c) Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors.
  - d) Replace fuel cap securely and wipe up spilled fuel.

**MAINTENANCE AND STORAGE**

1. Provide adequate blocking before working under the snowblower when in raised position.
2. Hydraulic fluid escaping from a small hole can be almost invisible and can penetrate the skin. Use a piece of cardboard or wood rather than the hands to search for suspected leaks.
3. Make certain collector/impeller and all moving parts have stopped before cleaning, repairing or inspecting.
4. Do not run engine indoors.
5. Do not attempt to repair or tighten hydraulic hoses when under pressure, when the tractor engine is running, or when the snowblower is raised.

WHENEVER YOU SEE THIS SYMBOL



IT MEANS:

**ATTENTION! BECOME ALERT!****YOUR SAFETY IS INVOLVED!**

## PREPARING FOR SNOW REMOVAL



### WARNING!

1. Read the Operator's Manual carefully before using the tractor and snowblower. Be thoroughly familiar with the controls and proper use of the equipment. Know how to stop the unit and disengage the controls quickly.
2. Never allow children to operate equipment. Never allow adults to operate equipment without proper instruction.
3. Do not allow anyone other than the operator on the tractor.
4. Keep the area of operation clear of all persons.
5. Clothing worn by the operator should be fairly tight and belted. Loose clothing should not be permitted because of the danger of getting into moving parts.
6. Never operate the snowblower without guards, plates and other safety protective devices in place.

## OPERATING THE SNOWBLOWER

1. Make sure that the blower is clear of snow before engaging the P.T.O.
2. Make sure that the auger and fan operate freely.
3. Check the oil level in the worm gear box, and if necessary, add AGMA 5EP extreme pressure oil.
4. Check the three shear bolts, one on each auger section, and one between the fan and the gearbox for proper tightness.
5. Adjust so that the snowblower skid shoes run level.
6. Start the tractor engine.
7. Before engaging the P.T.O., always have the engine running at idle, the transmission in neutral and the clutch depressed.
8. Operate the blower at maximum R.P.M. and at maximum P.T.O. speed.
9. Wear adequate winter outer garments while operating equipment.

## OPERATING CONTROLS

1. **MANUAL CHUTE ROTATION:** Turning the rotation handle in a clockwise direction turns the chute in a clockwise direction.
2. **HYDRAULIC CHUTE ROTATION:** Moving the valve handle rearward turns the chute towards the left in a clockwise direction. Moving the valve handle forward turns the chute towards the right in a counterclockwise direction.
3. **HYDRAULIC DEFLECTOR:** Moving the valve handle rearward extends the cylinder and lowers the deflector. Moving the valve handle forward retracts the cylinder and raises the deflector.
4. **RAISING AND LOWERING THE SNOWBLOWER:** The blower is raised and lowered by operating the hydraulic control lever on the right hand side of the tractor seat. Moving the lever forward lowers the snowblower and moving the lever rearward raises the snowblower.
5. **P.T.O. OPERATION:** The rear P.T.O. which drives the snowblower is normally activated by operating the P.T.O. control lever. Consult your tractor Operator's Manual before using. If the tractor engine is running, with the transmission in neutral, depress the clutch pedal fully before moving the lever. Move the lever rearward or up to engage the P.T.O. and forward or down to disengage the P.T.O.

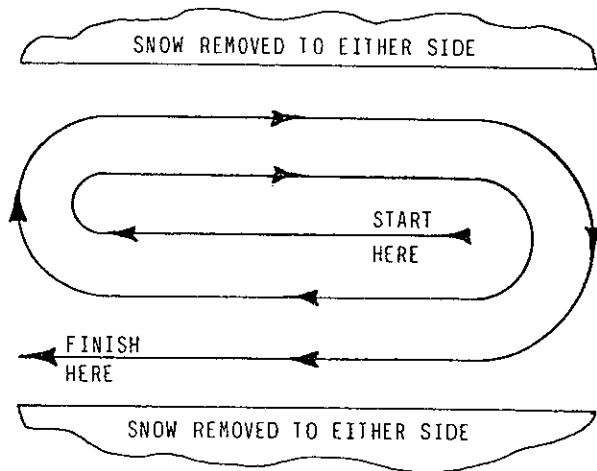
# OPERATION

## SNOW REMOVAL METHODS

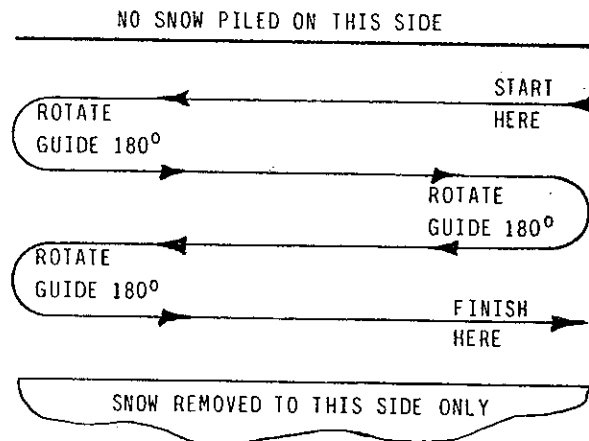


**WARNING:** DO NOT USE HANDS OR FEET TO UNPLUG CHUTE. USE A SHORT STICK OR BOARD. DO NOT ATTEMPT TO CLEAR PLUGGED CHUTE OF SNOW WHILE TRACTOR ENGINE IS RUNNING. IF THE CHUTE PLUGS, DISENGAGE THE P.T.O., SHUT OFF THE TRACTOR ENGINE, REMOVE THE IGNITION KEY, WAIT FOR ALL MOVEMENT TO STOP, AND THEN CLEAR THE SNOW FROM THE CHUTE.

A definite pattern of operation is required to thoroughly clean the snow area. These patterns will avoid throwing snow in unwanted places as well as eliminating a second removal of snow.



Where it is possible to throw the snow to the left and right (above), as on a long driveway, it is advantageous to start in the middle. Plow from one end to the other, throwing snow to both sides without changing the direction of the discharge guide.



If the snow can only be thrown to one side of the driveway or sidewalk (above), start on the opposite side. At the end of the first pass, rotate the discharge guide  $180^\circ$  for the return pass. At the end of each succeeding pass, rotate the discharge guide  $180^\circ$  to maintain direction of throw in the same area.

# MAINTENANCE

## MAINTENANCE SERVICE AND STORAGE

1. Always use special grade 8,  $\frac{1}{4}$ " x 1" shear bolts on fan, and special grooved shear bolts on auger sections as shown on the decal below.
2. Check shear bolts at frequent intervals for proper tightness to be sure blower is in safe working condition.
3. Never store tractor with fuel in the fuel tank inside a building where open flame or sparks are present. Allow the engine to cool before storing in any enclosure.
4. Run the snowblower a few minutes after blowing snow to prevent freeze up of auger and fan.
5. Provide adequate blocking before working under the snowblower when in the raised position.

## LUBRICATION

1. **GEARBOX:** Check the oil level in the worm gear drive every month. If necessary, add AGMA 5EP extreme pressure oil.
2. **AUGER SECTIONS:** Grease the fitting on each auger section every 24 hours of operation or once a year.
3. **CASTING CHUTE:** Lubricate the welded lip on the chute base and rotate the chute several times to insure and even application of grease. Lubricate as often as necessary to keep the rotation working smoothly and freely.
4. **CHUTE ROTATOR:** Oil rotator shaft when necessary to keep it working smoothly.
5. **P.T.O. DRIVE SHAFT:** Grease each U-joint fitting every 8 hours of operation. Slide drive shaft apart and coat sliding surfaces with grease every 8 hours of operation.

## END OF SEASON STORAGE

1. Clean the snowblower thoroughly.
2. Repaint all parts from which paint has worn.
3. When the blower is dry, oil all moving parts. Apply oil liberally to all surfaces to protect against rust.
4. Lubricate the snowblower as instructed above.
5. List the replacement parts that will be needed before the next season.
6. Store the snowblower in a dry place.

# SPECIFICATIONS

	<u>B51</u>	<u>B63</u>
CUTTING WIDTH .....	51"	63"
CUTTING HEIGHT .....	22½"	22½"
FAN HOUSING DIAMETER .....	18"	18"
FAN WIDTH .....	6½"	6½"
FAN SHAFT DIAMETER .....	1¼"	1¼"
NUMBER OF FAN BLADES .....	3	3
AUGER DIAMETER .....	14"	14"
AUGER DRIVE SHAFT DIAMETER .....	1¼"	1¼"
CHUTE DIAMETER .....	10½"	10½"
CHUTE ROTATION - DEGREES .....	200°	200°
NUMBER OF SHEAR BOLTS .....	3	3
RATIO - FAN SPEED : AUGER SPEED .....	5:1	5:1
CUTTING EDGE AND SKID SHOE MATERIAL .....	C1045	C1045
APPROXIMATE SHIPPING WEIGHT WITH 9162 .....	390lbs.	424lbs.

# ASSEMBLY

9.

## 9165 - REAR MOUNTING KIT

### STEP 1: PTO DRIVE SHAFT ASSEMBLY

- a) Remove the paint from the blower fan shaft and from the yokes on the PTO drive shaft.
- b) Grease the drive shaft sliding surfaces so that they slide easily, and grease the inside of the quick attach yoke.
- c) Install the  $\frac{1}{4}$ " x  $\frac{1}{4}$ " x  $\frac{1}{2}$ " key in the blower fan shaft keyway and slide the drive shaft yoke over the fan shaft. Do not use a hammer to pound the yoke over the shaft, but use the sliding action of the drive shaft to install the yoke on the blower shaft.
- d) Secure the drive shaft yoke to the blower fan shaft with a  $\frac{5}{16}$ " x  $2 \frac{3}{4}$ " bolt and self locking nut. Securely tighten the  $\frac{3}{8}$ " x  $\frac{1}{2}$ " Allen set screw over the key in the yoke.
- e) Install the PTO guard (fig. 1, item 1) on the blower using two  $\frac{5}{16}$ " x  $2 \frac{3}{4}$ " carriage bolts, lockwashers and nuts, with the nuts on the tractor side (fig. 1, item 2). Tighten securely.

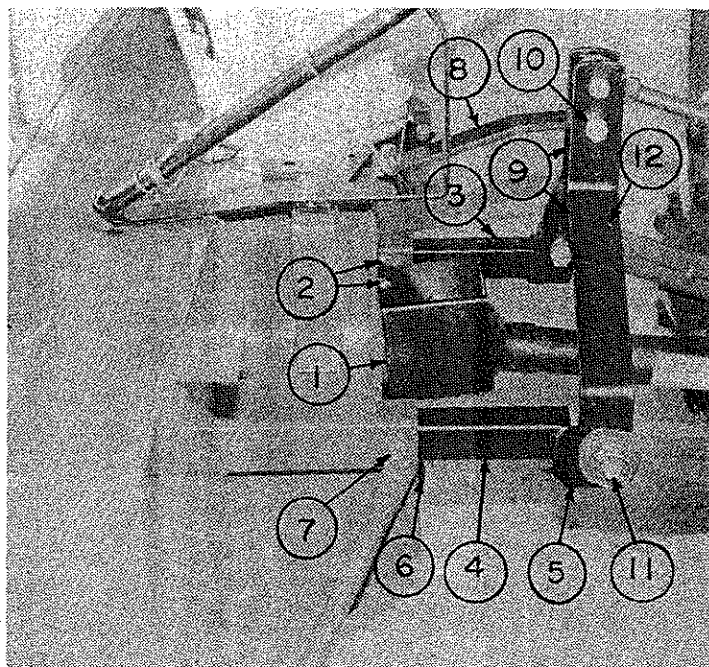


FIGURE 1

### STEP 2: THREE POINT HITCH ASSEMBLY (Figure 1)

- a) Install the lower hitch tubes (3 & 4) in the square tubes on the blower, placing the flat plates that are welded to the square tubes towards the inside (5). Two angle shims have been provided to insure a precise fit between the tubes where required (6).
- b) Bolt the tubes in the innermost position, using two  $\frac{5}{8}$ " x  $3 \frac{1}{2}$ " bolts, lockwashers and nuts (7). On larger tractors where the drive shaft angle is greater than  $30^{\circ}$ , bolt the tubes in the most extended position. Tighten securely.
- c) Remove the bolt that is installed on top of the blower to the right of the chute opening. This bolt only functions as a plug on front mounted snowblowers.
- d) Install the upper hitch (8) on top of the blower housing in the innermost position using the hole closest to the tractor. Place the rotation bracket (fig. 3, item 1) on top of the upper hitch and secure with a  $\frac{5}{8}$ " x  $1 \frac{3}{4}$ " bolt, lockwasher and nut, with the nut on top (fig. 3, item 2). Tighten securely. (NOTE: If the lower hitch tubes are bolted in the extended position, the upper hitch must also be bolted in the extended position).
- e) Attach the two hitch brackets (9) to the upper hitch through the middle holes using a  $\frac{5}{8}$ " x 4" bolt, lockwasher and nut (10). Secure loosely. Fasten the hitch brackets inside the flat plates that are welded to the lower hitch tubes, with the Category I pins (11) facing outwards. Be sure that the linch pin holes are at  $90^{\circ}$  to the ground. Tighten securely the upper hitch bolt (10) and the Category I pins.
- f) Attach the PTO storage chain to the small hole in each hitch bracket (12) using the two S-hooks provided.

### STEP 3: CHUTE ASSEMBLY

- a) Grease the chute base and install the chute over the chute base.
- b) Install the three retaining plates (fig. 3, item 10) using six  $\frac{1}{2}$ " x 1" bolts, lockwashers and nuts.  
NOTE: Keep the retaining plates as far away as possible from the chute. If for any reason a plate binds tightly against the chute base, shim with small washers.

# ASSEMBLY

## STEP 4: DEFLECTOR ASSEMBLY (Figure 2)

- a) Attach the adjustment rod (1) to the deflector with a  $1/2"$  X  $9"$  bolt and self locking nut (2).
- b) Attach the lower pipe (3) to the hole at the bottom of the chute opening with a  $3/4"$  X  $1 1/2"$  bolt and self locking nut (4).
- c) Attach rod (1) to pipe (3) with a hairpin clip (5).

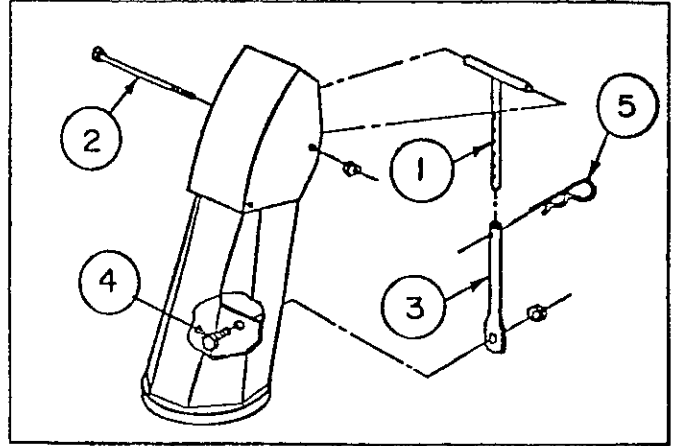


FIGURE 2

## STEP 5: CHUTE ROTATION ASSEMBLY (Figure 3)

- a) Install a  $5/8"$  X  $2"$  bolt and self locking nut (3) in the remaining hole in the rotation bracket, bolting it to the  $90^\circ$  bracket weldment.
- b) Place one end of the rotation tube (4) over the welded pin on the rotation bracket (1).
- c) Insert the rotation handle in the other end of the tube (4) and adjust the length as required. Raise the blower on the three point hitch to the maximum to be sure the handle does not interfere with the roll bar or the operator. If it does, the handle must be cut so that it clears the operator and the roll bar.
- d) Bolt the handle and tube together with a  $1/4"$  X  $1 1/2"$  bolt and self locking nut (5). Tighten securely.
- e) Turn the chute opening to the right so that the two holes in the chute base are in line with the tractor PTO. (Turn counterclockwise). (Remember that left and right are determined by sitting in the tractor seat facing forward).
- f) Wrap the ends of the rotation cable with electrical tape to prevent them from fraying.
- g) Thread the two ends of the cable through the two small holes in the base of the chute from the inside to the outside and tie a single knot in the cable (6), leaving  $61"$  of cable on the right side. Turn this end of the cable around the base of the chute clockwise and pass the end of the cable through the pulley on the rotation bracket (7) and through the upper hole in the rotation tube with at least  $5"$  of cable extending beyond the tube. Attach temporarily with the cable clamp so that it does not slip back.
- h) Wrap the other end of the cable a half turn around the chute counterclockwise and turn the rotation handle clockwise, holding this end of the cable with your free hand as you do so, so that the cable remains tight as the handle is turned. Wrap the cable above the upper hole on the rotation tube.
- i) Turn handle until  $5-6"$  extends beyond the lower part of the tube (4) and the lower hole is horizontal.
- j) Pass the cable through the hole on the lower end of the rotation tube (8) and attach the two ends of the cable together securely using the cable clamp (9).

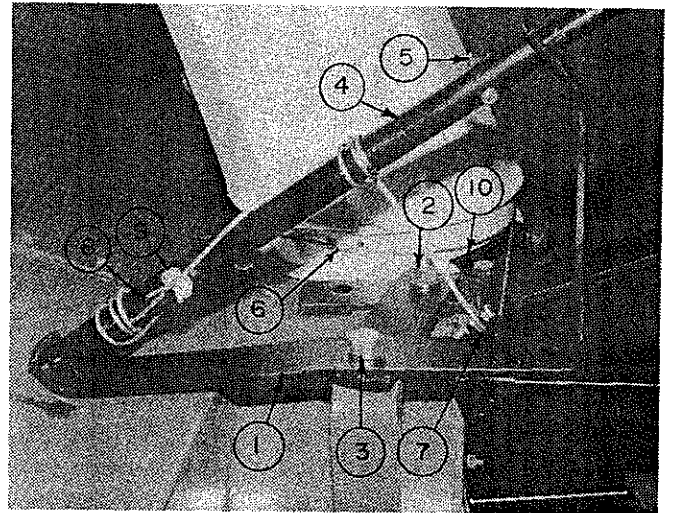


FIGURE 3

# ASSEMBLY



**WARNING:** Escaping hydraulic/diesel fluid under pressure can penetrate the skin causing serious injury.

- . DO NOT use your hand to check for leaks. Use a piece of cardboard or paper to search for leaks.
- . Stop engine and relieve pressure before connecting or disconnecting lines.
- . Tighten all connections before starting engine or pressurizing lines.

If any fluid is injected into the skin, obtain medical attention immediately or gangrene may result.

## OPTIONAL HYDRAULIC CHUTE ROTATION (FIGURE 4)

- a) Bolt hydraulic rotation arm assembly (1) to 90° bracket weldment on left hand side of chute, using a 5/8" x 2" capscrew (2), placing one flat washer on top of rotation arm and one in between rotation arm and 90° bracket weldment. Leave bolt loose enough to allow arm to move freely.
- b) Lock capscrew with nylon lock nut.
- c) Position chute to blow directly in front of auger.
- d) Wrap ends of cable with electrical tape to prevent cable from fraying.
- e) Pass cable through two small holes in base of chute (3) from inside to outside, with equal lengths on both ends.
- f) Wind ends of cable in opposite directions around chute, the left hand or forward end clockwise, and the right hand or rear end counterclockwise.
- g) Pass the two ends around pulleys (4) from inside to outside.
- h) Run cable ends through holes in special 1/2" x 2" bolts (5 & 6). Do not tighten yet.
- i) Place rotation arm parallel to end of blower, tighten cable on both ends and lock in place with special bolts and bushings. Torque all retaining plate bolts to 45-52 lbs. ft.
- j) Install one 90°-3/8" male x 1/4" female swivel in each cylinder port.
- k) Install cylinder using two 3/4" x 2 1/2" pins (fig. 4, item 9) and secure with cotter pins. Cylinder ports should be on underside.
- l) Connect one hose to cylinder rod end port (fig. 4, item 7) and connect one hose to cylinder base end port and connect the other ends of the hoses to the appropriate valve ports.

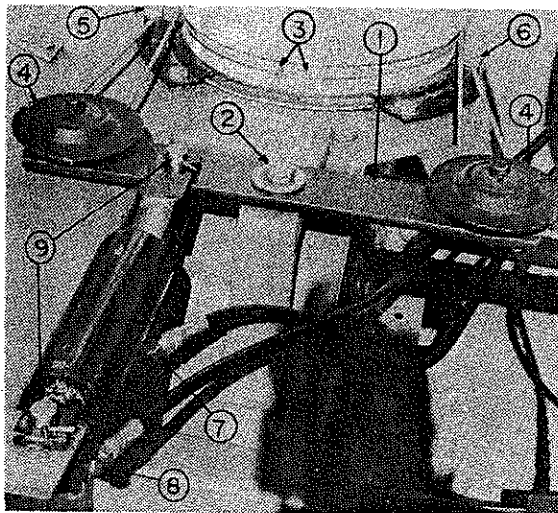


FIGURE 4

# ELECTRIC CHUTE ROTATION ASSEMBLY

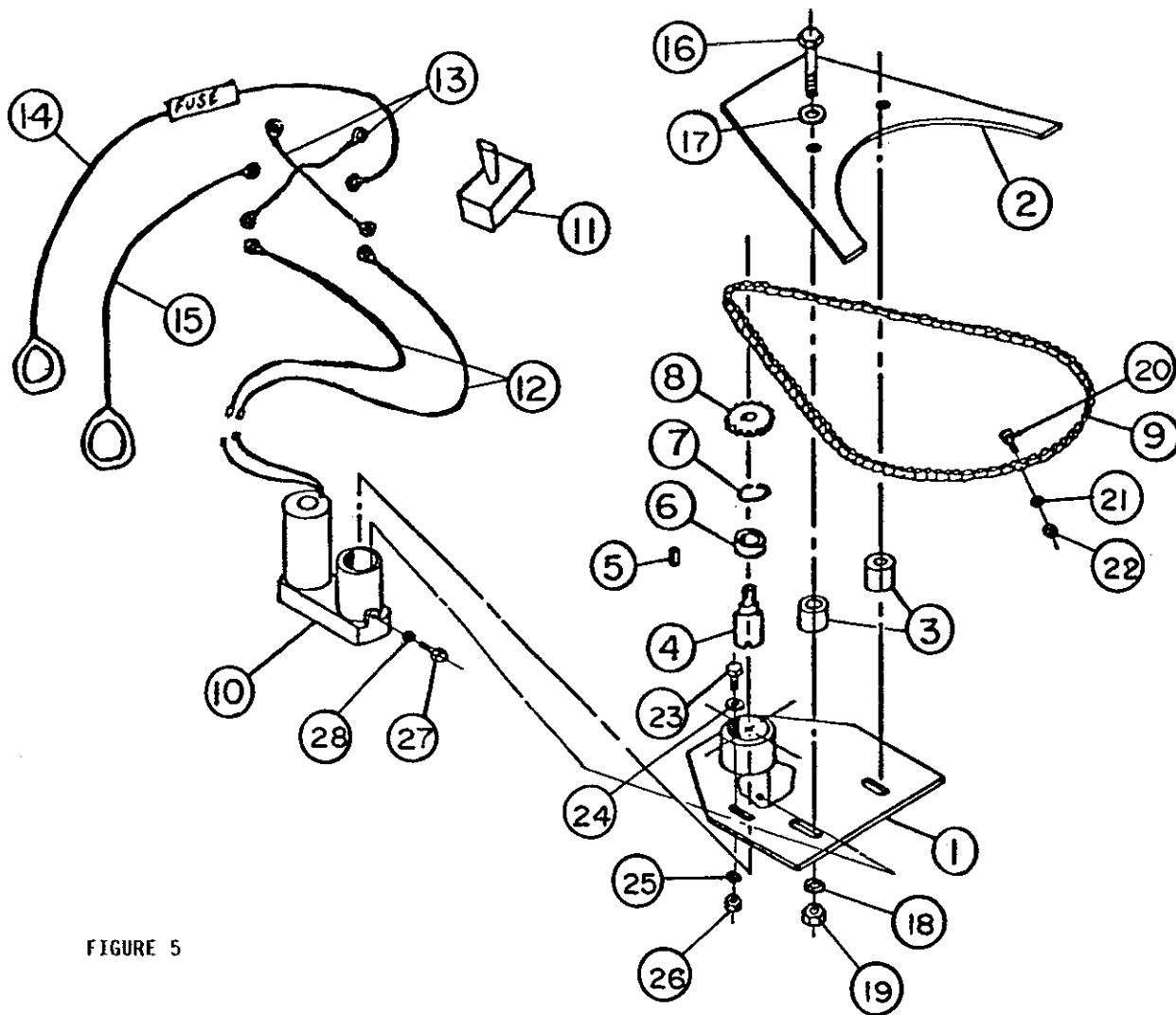


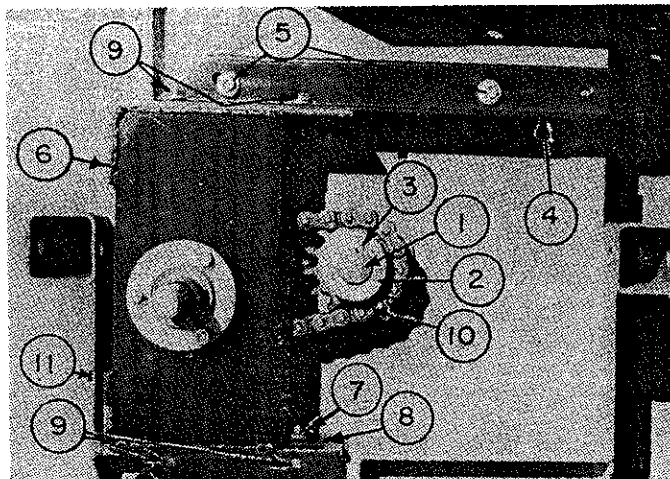
FIGURE 5

## ELECTRIC MOTOR CHUTE ROTATION INSTALLATION: (Figure 5)

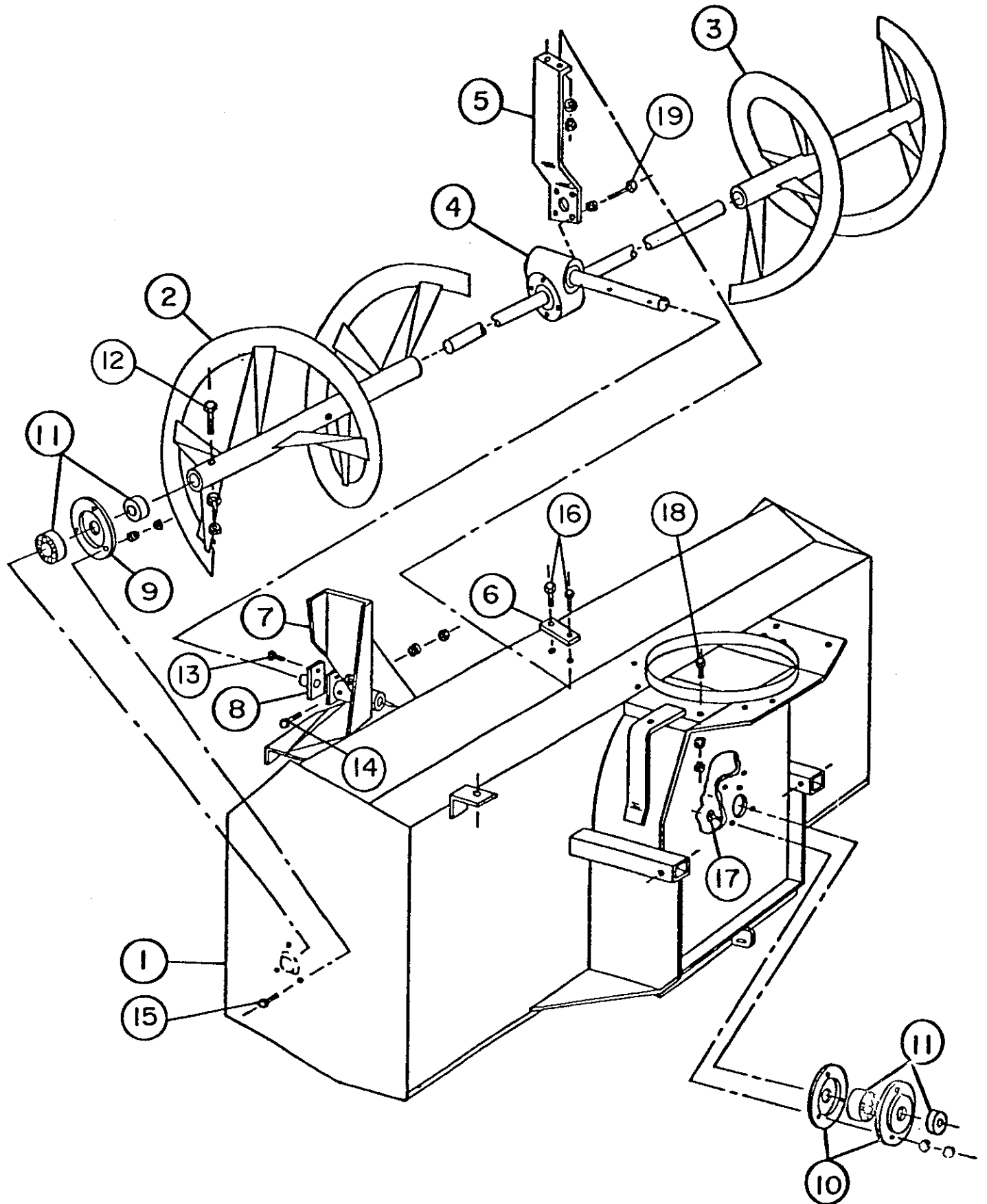
1. Install mounting plate (1) on the left hand side of the chute under the blower plate. (Right and left are determined by the direction the blower will travel when in use).
2. Place the chute retaining plate (fig. 3, item 10) on top of the blower plate, with 2 bushings (3) on top of the retaining plates.
3. Place chain cover (2) on top of bushings (3) and attach the assembly with two  $\frac{1}{2}$ " x  $3\frac{1}{2}$ " bolts, lockwashers and nuts (16), and one  $\frac{3}{8}$ " x  $1\frac{1}{4}$ " bolt, lockwasher and nut (23). Do not tighten.
4. Install chain (9) and attach with one connecting link.
5. Attach chain to chute through the 2 holes in the chute ring at the base of the chute with 2 socket head cap screws, flat washers and jam nuts (20).
6. Adjust the chain by sliding the motor support (1) leaving approximately  $\frac{3}{8}$ " deflection in the chain.
7. Tighten all bolts.
8. Install the motor (10) under the motor support (1) and secure with a  $\frac{5}{16}$ " x 1" bolt and lockwasher (14).
9. Install the switch (11) in an appropriate place, as close as possible to the ignition switch.
10. Connect the wires according to the wiring diagram enclosed with the rotation kit.

**OPTIONAL SPEED UP KIT (Figure 6)**

- a) Remove paint from blower fan shaft (1) and from inside small 14 tooth sprocket hub (2). Remove any oil or grease from fan shaft and from inside sprocket hub with a non-flammable cleaning fluid.
- b) Apply Loctite to the inside of the 14 tooth sprocket hub and install the sprocket on blower fan shaft with a  $\frac{1}{4}$ " x  $\frac{1}{4}$ " x  $1\frac{1}{4}$ " key (3).
- c) Install two  $5/16$ " x  $\frac{1}{2}$ " set screws in sprocket hub but do not tighten.
- d) Install support angle (4) on blower with two  $5/16$ " x 1" plow bolts, flatwashers, lockwashers and locknuts (5). Do not tighten.
- e) Install reduction box assembly (6) on blower between the two angles.
- f) Clip two anchor nuts (7) on each retaining plate (8).
- g) Slide the two retaining plates inside reduction box assembly, top and bottom, and secure with four  $3/8$ " x  $1\frac{1}{4}$ " bolts and lockwashers (9). Tighten securely. (This is to establish sprocket alignment).
- h) Tighten securely two plow bolts that attach support angle to blower.
- i) With a straight edge, adjust small sprocket so that it is in line with large sprocket. Tighten securely the two set screws on small sprocket, and retighten after first eight hours of operation.
- j) Loosen four bolts securing reduction box.  
**NOTE:** The chain is a special Long Life Chain pre-lubricated and sealed with o-rings. When handling, it is very important not to remove the permanent lubricant from the pin with the fingers or a cloth. Handle the side plates, but not the pin.
- k) Install roller chain (10), making sure connecting link is installed from rear to front to insure clearance between retaining clip and small sprocket hub. (Retaining clip should be on blower side of chain).
- l) Install two o-rings on each pin of connecting link.
- m) Place open end of retaining clip opposite to direction of travel. Install with flat side against connecting link, and chamfer towards the outside. The clip cannot be properly installed if reversed.
- n) Install  $5/16$ " x  $1\frac{1}{4}$ " tightener bolt, lockwasher and nut (11), with the nut on the outside. As this bolt is tightened, the box slides and tightens the chain. Leave approximately  $\frac{1}{4}$ " deflection in the bottom span of chain.
- o) Retighten four bolts securing reduction box, torquing to 35-42 lbs. ft.
- p) Install chain cover (page 34, item 7), using two  $3/8$ " x 1" bolts, lockwashers and anchor nuts, with nuts on the inside. Torque to 35-42 lbs. ft.

**FIGURE 6**

# SERVICE



# SERVICE

ITEM	DESCRIPTION	QTY
1	FRAME	1
2	AUGER L.H.	1
3	AUGER R.H.	1
4	WORM GEAR	1
5	WORM GEAR SUPPORT	1
6	RETENTION PLATE	1
7	FAN ASSEMBLY	1
8	FAN ADAPTER WITH SHEAR PLATE	1
9	BEARING FLANGE	2
10	BEARING FLANGE	2
11	BEARING w/1 $\frac{1}{4}$ " COLLAR	3
12	SHEARBOLT (5/16" x 2 $\frac{1}{2}$ ", GRADE 5, SPECIAL w/GROOVE)	2
13	SHEARBOLT ( $\frac{1}{4}$ " x 1 $\frac{1}{4}$ ", GRADE 8)	1
14	BOLT (5/16" x 2 $\frac{1}{2}$ ", HEX) w/LOCKWASHER & NUT	1
15	BOLT (3/8" x 1", HEX) w/LOCKWASHER & NUT	6
16	BOLT (3/8" x 1 $\frac{1}{4}$ ", HEX) w/LOCKWASHER & NUT	2
17	BOLT (3/8" x 1", HEX) w/LOCKWASHER & NUT	3
18	BOLT (5/8" x 1", HEX) w/LOCKWASHER & NUT	1
19	BOLT (1/2" x 1", HEX) w/LOCKWASHER	4

## REMOVAL OF FAN AND AUGER ASSEMBLY

1. Remove the P.I.O. drive shaft.
2. Loosen the set screw on the fan shaft bearing collar (11)
3. To remove the eccentric collar, turn it with a punch in the opposite direction to which it was installed.
4. Remove the bearing and flanges (10 & 11).
5. Loosen the eccentric collars on the two auger bearings (11).
6. Remove the flangettes (9).
7. Remove the two bolts on the center top of the blower that secure the gearbox brace (5).
8. Remove the fan, auger and gearbox assembly.
9. Reinstall by reversing this procedure.



# SERVICE

17.

## WORM GEAR CASE

### REPAIR

After considerable use, there may be some space between the bearing cups (7) and the internal retaining rings (9). If this occurs, install shims (17) between the internal retaining rings (9) and the bearing cups (7).

### DISASSEMBLY

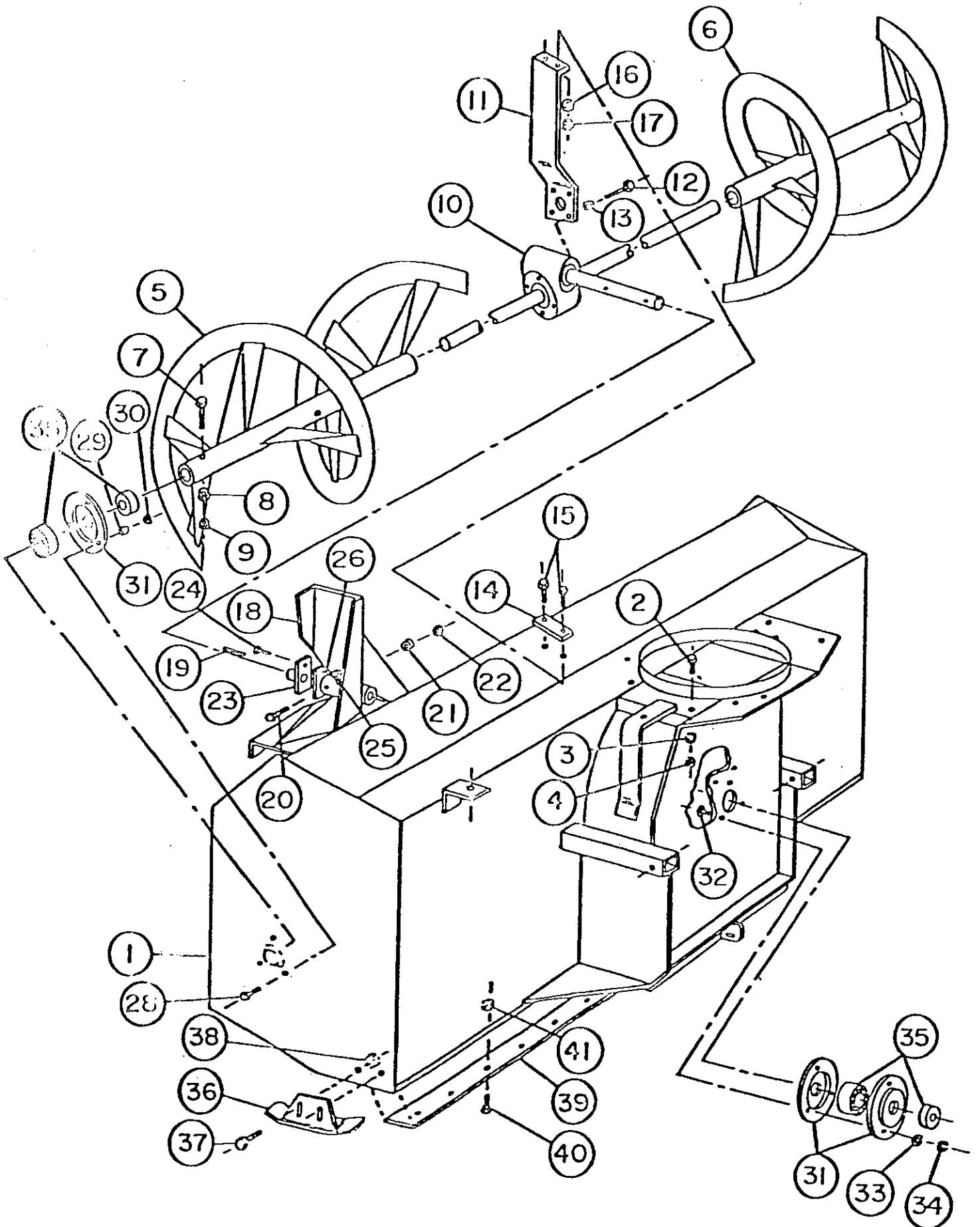
1. Remove all shear bolts.
2. Pull auger flighting off drive shaft.
3. Remove 4 cap screws (11). Drain gear lube into a pan.
4. Slide cover assembly (2) off shaft.
5. Turn input shaft (12) to free gear from worm and pull output shaft (13) and gear out of case.
6. Remove the 2 bearings (5) from shaft.
7. Remove set screw (10).
8. Slide gear off shaft.
9. Remove oil seal (16) from cover (2) with a punch and hammer.
10. Remove snap ring (9) from cover with snap ring pliers.
11. Press bearing cup (7) out of cover.
12. Remove input cap (9) from housing (1) with a sharp punch and hammer. Punch a hole in cap and pry cap out of housing.
13. Relieve pressure on snap ring (9) under cap by tapping it lightly on bearing cup (7) with a small flat punch and hammer. Be careful not to hit bearing or it will be ruined.
14. Remove snap ring (9) with snap ring pliers.
15. Press worm gear shaft assembly (12) out of housing.
16. Remove both bearings (6) from shaft (12).
17. Remove retaining ring (8) with retaining ring pliers.
18. Press worm off input shaft (12). Remove key from shaft.
19. Pry oil seal (16) out of case.
20. Tap lightly on bearing cup (7) with a flat punch and hammer to relieve pressure against snap ring (9).
21. Remove snap ring from case with snap ring pliers.
22. Press bearing cup (7) out of case.
23. Wash all parts in a safe solvent and inspect for wear or damage.

**IMPORTANT:** Always replace oil seals, cap and gasket and put locking sealant on set screw (10) whenever case is disassembled.

### REASSEMBLY

Reverse the above process and fill up with A.M.G.A. 5EP extreme pressure oil.

# SNOWBLOWER FRAME ASSEMBLY



# SNOWBLOWER FRAME ASSEMBLY

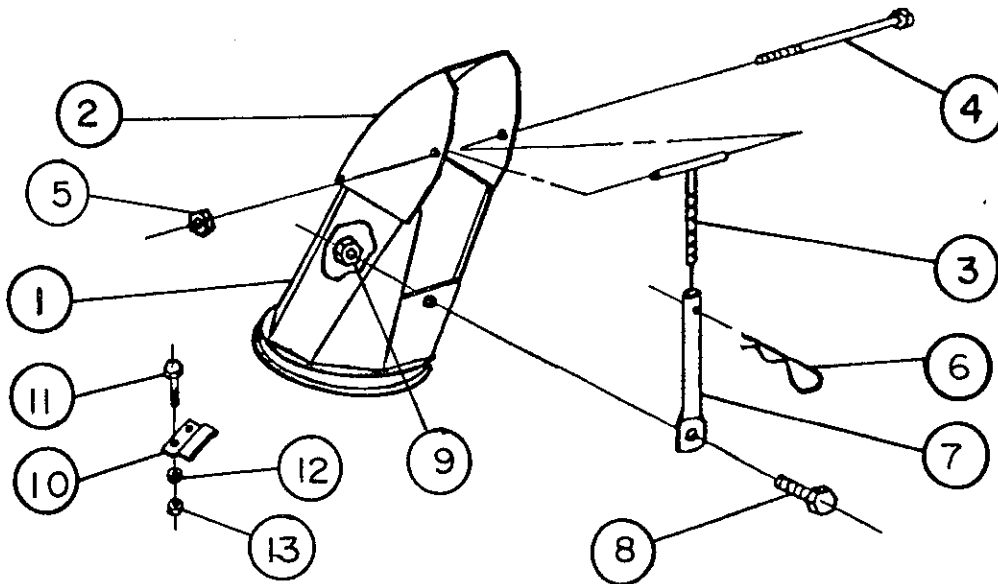
ITEM	PART NO.	DESCRIPTION	QUANTITY	
			B51	B63
1	655291	Frame	1	-
	655292	Frame	-	1
2		Bolt (5/8" NC x 1", Hex)	1	1
3		Washer (5/8", Lock)	1	1
4		Nut (5/8" NC, Hex)	1	1
5	654450	Auger assembly L.H.	1	-
	654451	Auger assembly L.H.	-	1
6	654454	Auger assembly R.H.	1	-
	654455	Auger assembly R.H.	-	1
7	654601	Shear bolt (5/16" NC x 2 1/2", Gr. 5, Special)	2	2
8		Washer (5/16", Lock)	2	2
9		Nut (5/16" NC, Hex)	2	2
10	655649	Worm gear assembly w/brass gear	1	-
	655650	Worm gear assembly w/brass gear	-	1
11	654467	Worm gear support	1	1
12		Bolt (1/2" NC x 1", Hex)	4	4
13		Washer (1/2", Lock)	4	4
14	654468	Retaining plate	1	1
15		Bolt (3/8" NC x 1 1/4", Hex)	2	2
16		Washer (3/8", Lock)	2	2
17		Nut (3/8" NC, Hex)	2	2
18	654731	Rotor assembly	1	1
19	654643	Key (1/4" x 1/4" x 1 1/4")	1	1
20		Bolt (5/16" NC x 2 1/2", Gr. 5, Hex)	1	1
21		Washer (5/16" NC, Lock)	1	1
22		Nut (5/16" NC, Hex)	1	1
23	654616	Rotator adaptor with shear plate	1	1
24	656048	Bolt (1/4" NC x 1", Hex, Gr. 8)	1	1
25		Washer (1/4", Lock)	1	1
26		Nut (1/4" NC, Hex)	1	1
27	655282	Bearing flange	2	2
28		Bolt (3/8" NC x 1", Hex)	6	6
29		Washer (3/8", Lock)	6	6
30		Nut (3/8" NC, Hex)	6	6
31	654171	Bearing flange	2	2
32		Bolt (3/8" NC x 1", Hex)	3	3
33		Washer (3/8", Lock)	3	3
34		Nut (3/8" NC, Hex)	3	3
35	654170	Bearing w/locking collar	3	3
36	654471	Skid shoe	2	2
37		Bolt (3/8" NC x 1", Carriage)	4	4
38		Nut (3/8" NC, Lock)	4	4
39	655034	Replaceable cutting edge	1	-
	655035	Replaceable cutting edge	-	1
40		Bolt (3/8" NC x 1", Plow)	8	10
41		Nut (3/8" NC, Lock)	8	10



## WORM GEAR

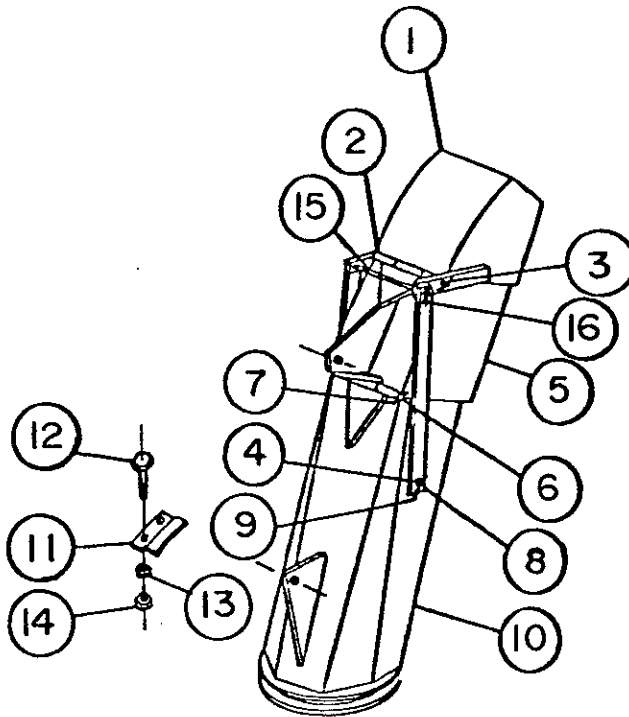
ITEM	PART NO.	DESCRIPTION	QUANTITY	
			B51	B63
	655936	Worm gear assembly w/brass gear	1	-
	655937	Worm gear assembly w/brass gear	-	1
1	655934	Housing	1	1
2	655935	Cover	1	1
3	655662	Worm and brass gear set	1	1
4	654511	Plug (3/8", 18 NPT, Vent)	1	1
5	654496	Bearing cone (#15126)	2	2
6	654497	Bearing cone (#15101)	2	2
7	654498	Bearing cup (#15245)	4	4
8	654499	External retaining ring	1	1
9	654500	Internal retaining ring	4	4
10	654501	Set screw (1/4" NF x 3/8")	1	1
11	654502	Cap screw (3/8" NC x 3/4")	4	4
12	654718	Input shaft	1	1
13	654504	Output shaft	1	-
	654505	Output shaft	-	1
14	654506	Key (no. 18, 809, Hard, Woodruff)	1	1
15	654507	Key ("A", 807, Hard, Woodruff)	1	1
16	654508	Seals	3	3
17	654513	Shim (Use as required)	-	-
18	65468	Plug (3/8" - 18 NPT, Level)	1	1
19	654512	Input cap	1	1
20	654510	Gasket	1	1

# STANDARD CHUTE WITH DEFLECTOR



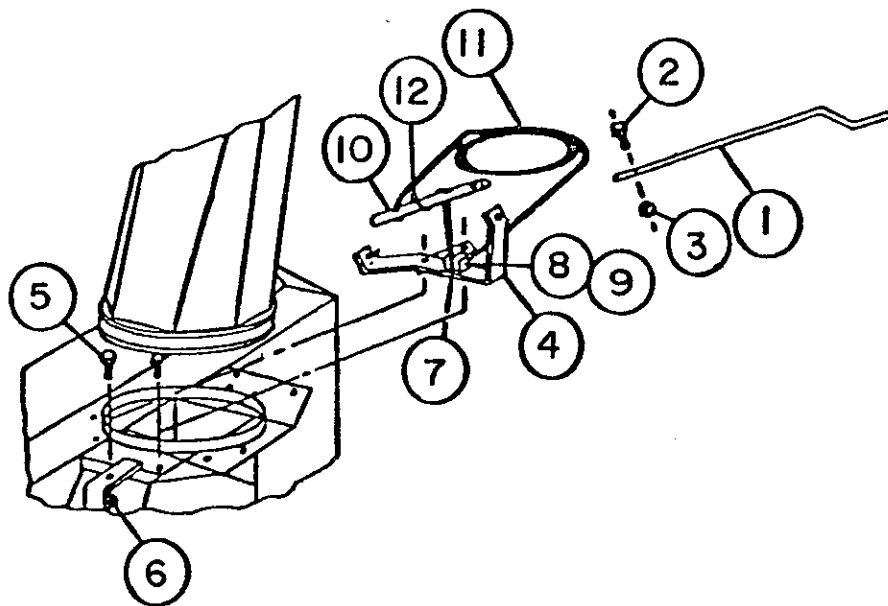
ITEM	PART NO.	DESCRIPTION	QTY
	655597	CHUTE ASSEMBLY	1
1	655598	Chute base	1
2	655599	Deflector	1
3	655601	Adjustment rod	1
4		Bolt (1/2" NC x 9", Hex)	1
5		Nut (1/2" NC, Lock)	1
6		Hair pin (S-13)	1
7	655600	Adjustment pipe	1
8		Bolt (3/4" NC x 1 1/2", Hex)	1
9		Nut (3/4" NC, Lock)	1
10	654461	Retaining plate	3
11		Bolt (1/2" NC x 1", Hex)	6
12		Washer (1/2", Lock)	6
13		Nut (1/2" NC, Hex)	6

# HEAVY DUTY CHUTE WITH DEFLECTOR



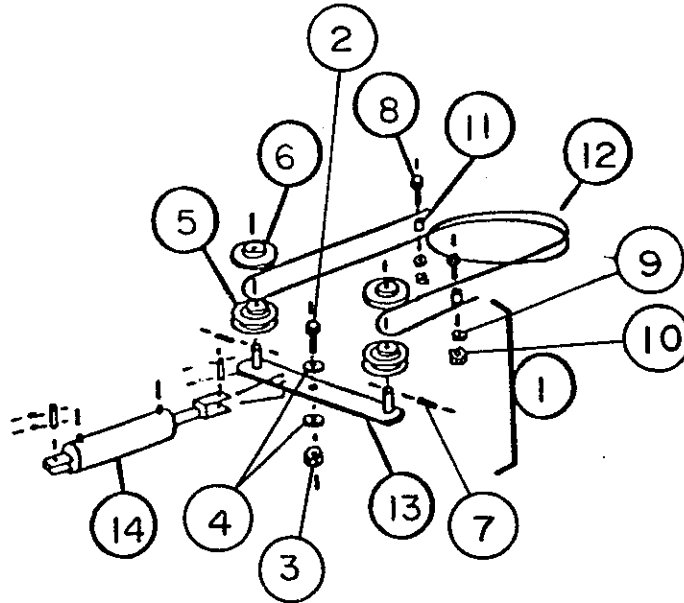
ITEM	PART NO.	DESCRIPTION	QTY
	654622	HEAVY DUTY CHUTE ASSEMBLY	1
1	654621	Deflector	1
2	655125	Upper hinge	1
3		Cotter pin (3/32" x 1")	2
4	654987	Spacer	2
5	654620	Chute center	1
6	655127	Lower hinge	1
7		Cotter pin (3/32" x 1")	1
8	655126	Strap	2
9		Cotter pin (3/32" x 1 1/2")	2
10	654619	Chute base	1
11	654461	Retaining plate	3
12		Bolt (1/2" NC x 1", Hex)	6
13		Washer (1/2", Lock)	6
14		Nut (1/2" NC, Hex)	6
15	655124	Chute rod	1
16		Cotter pin (3/32" x 1")	4

# MANUAL CHUTE ROTATION ASSEMBLY



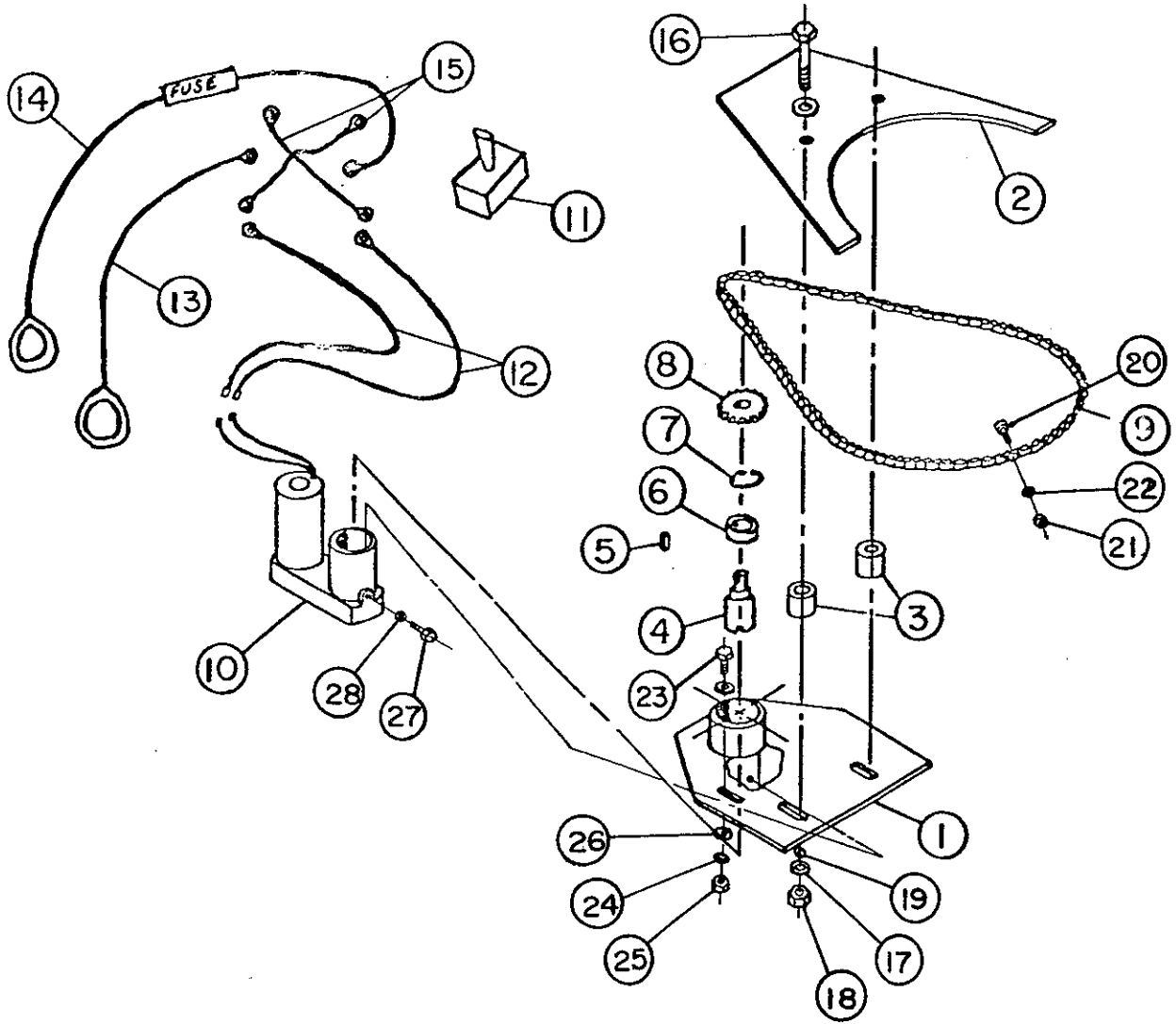
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
	9203	MANUAL ROTATION ASSEMBLY - REAR MOUNT	1
1	654487	Handle	1
2		Bolt (1/4" NC x 1 1/2", Hex)	1
3		Nut (1/4" NC, Nylon Lock)	1
4	654486	Rotation bracket	1
5		Bolt (5/8" NC x 2", Hex)	1
6		Nut (5/8" NC, Nylon Lock)	1
7	654189	Bearing (Kilian)	1
8		Bolt (1/4" NC x 1 1/4", Hex)	1
9		Nut (1/4" NC, Nylon Lock)	1
10	654485	Rotation tube	1
11	654712	Cable (1/8" x 120")	1
12	654561	Cable clamp (1/8" dia.)	1

# HYDRAULIC CHUTE ROTATION ASSEMBLY



ITEM	PART NO.	DESCRIPTION	QUANTITY	
			B51	B63
1	654547	HYDRAULIC ROTATION ARM ASSEMBLY	1	1
2		Bolt (5/8" NC x 2", Hex)	1	1
3		Nut (5/8" NC, Nylon lock)	1	1
4		Washer (11/16" Hole, Flat)	1	1
5	654191	Pulley kit	2	2
6	654193	Pulley guard	2	2
7		Pin (3/16" x 1, Roll)	2	2
8	654199	Bolt (1/2" NC x 2", Special)	2	2
9		Washer (1/2", Lock)	2	2
10		Nut (1/2" NC, Hex)	2	2
11	654198	Bushing (1/2" x 1")	2	2
12	654470	Cable (3/16" x 115")	1	1
13	654469	Rotation arm	1	1
14	656557	Cylinder (2" x 5" w/pins)	1	1

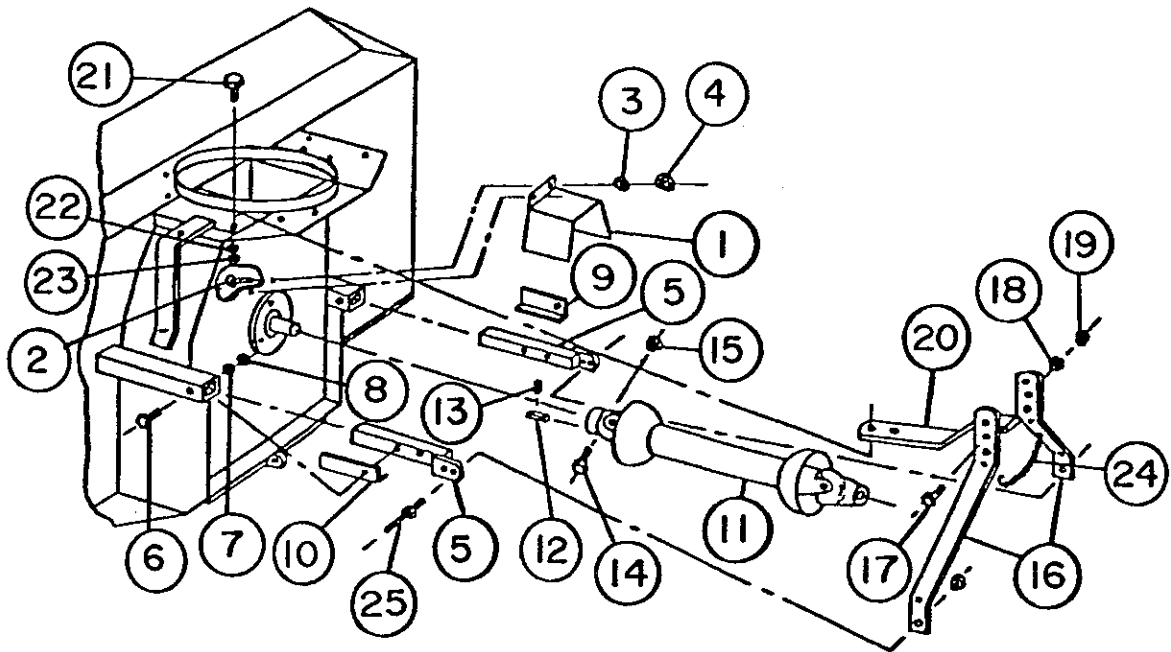
# ELECTRIC CHUTE ROTATION ASSEMBLY



# ELECTRIC CHUTE ROTATION ASSEMBLY

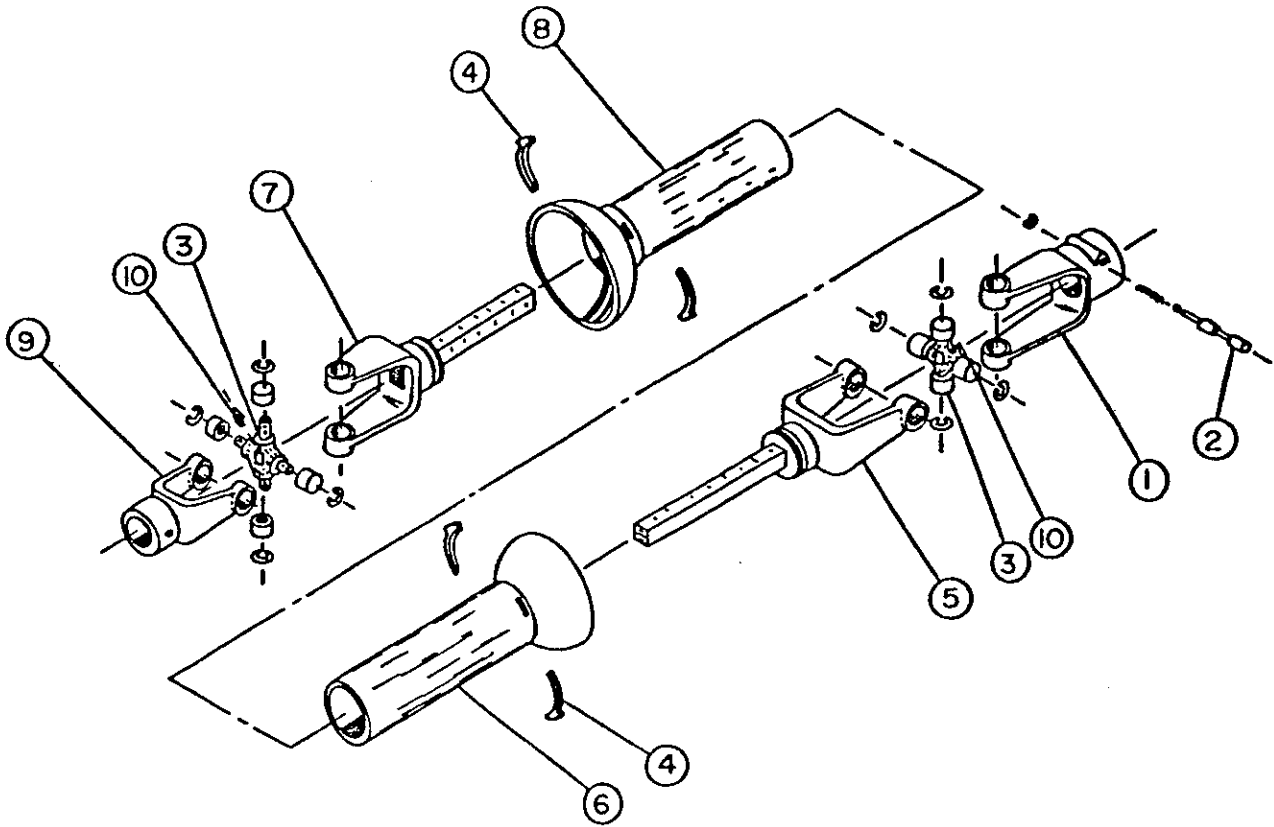
ITEM	PART NO.	DESCRIPTION	QTY
	9205	ELECTRIC CHUTE ROTATION ASSY - FRONT OR REAR MOUNT	1
1	666459	Motor support	1
2	655460	Chain cover	1
3	655463	Spacer (1 1/2" lg.)	2
4	655448	Shaft (Special)	1
5	655446	Key (3/16" x 3/16" x 1")	1
6	655449	Bearing	1
7	655450	Snap ring	1
8	655451	Sprocket (40B10)	1
9	655444	Chain (#40, 87 links)	1
10	655447	Motor	1
11	655445	Motor switch	1
12	655440	Wire (72")	2
13	655442	Wire (17")	1
14	655439	Fuse line (20 amp)	1
15	655441	Wire (5")	2
16		Bolt (1/2" NC x 3 1/2", Hex)	2
17		Washer (1/2", Lock)	2
18		Nut (1/2" NC, Hex)	2
19		Washer (1/2", Flat)	4
20		Cap screw (#10 x 1", Socket head)	2
21		Nut (#10, Lock)	2
22		Washer (#10, Flat)	2
23		Bolt (3/8" NC x 1 1/4", Hex)	1
24		Washer 3/8" NC, Lock)	1
25		Nut (3/8" NC, Hex)	1
26		Washer (3/8", Flat)	2
27		Bolt (5/16" NC x 1", Hex)	1
28		Washer (5/16", Lock)	1

# REAR MOUNT DRIVE ASSEMBLY



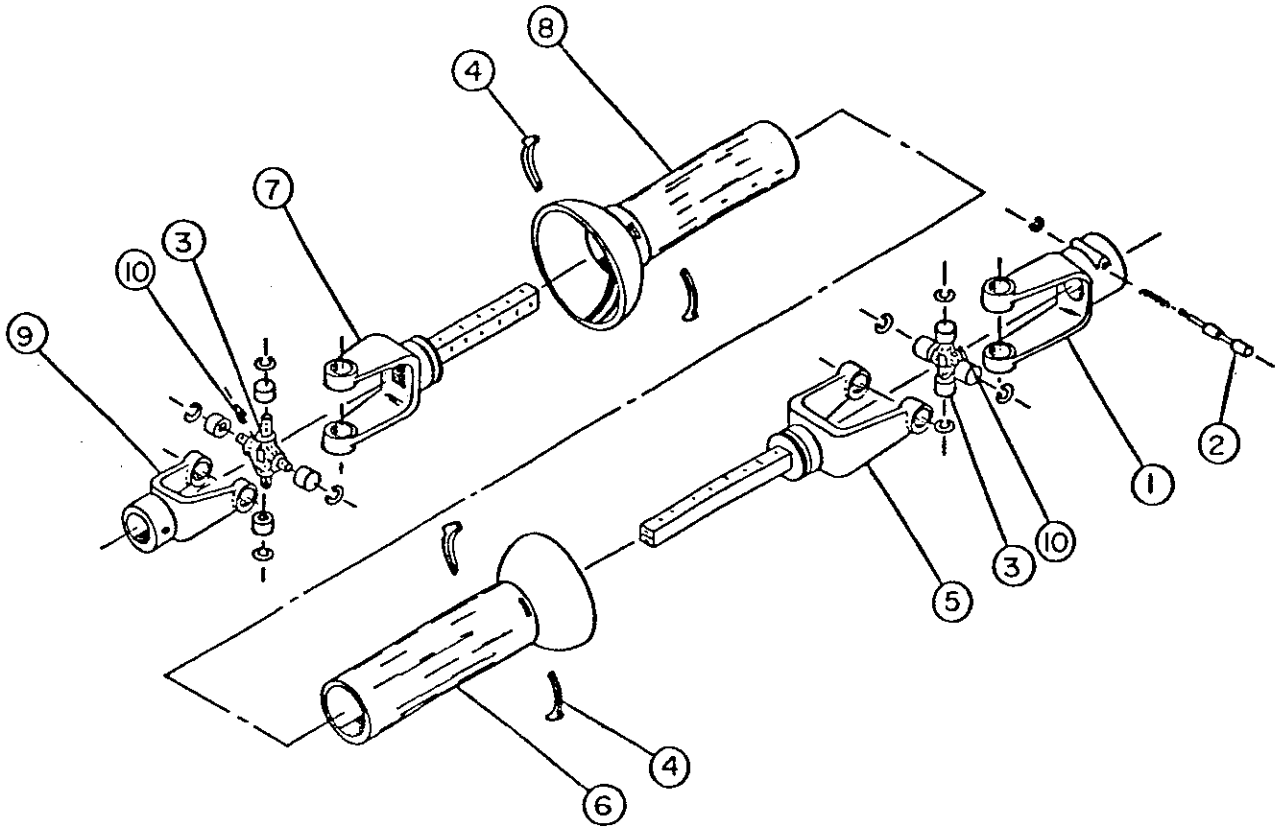
ITEM	PART NO.	DESCRIPTION	QTY
	9211	THREE POINT HITCH ASSEMBLY w/P.T.O. SHAFT	1
1	655028	P.T.O. guard	1
2		Bolt (5/16" NC x 3/4", Carriage)	2
3		Washer (5/16", Lock)	2
4		Nut (5/16" NC, Hex)	2
5	654446	Lower hitch tube	2
6		Bolt (5/8" NC x 3 1/2", Hex)	2
7		Washer (5/8", Lock)	2
8		Nut (5/8" NC, Hex)	2
9	655675	Adjustment plate L.H.	1
10	655733	Adjustment plate R.H.	1
11	656565	P.T.O. shaft (28" lg., G & G N12 Series)	1
		P.T.O. shaft (28" lg., Hayes-Dana 1140 Series)	1
12	654732	Key (1/4" x 1/4" x 1 1/2")	1
13		Set screw (3/8" NC x 1/2", Allen)	1
14		Bolt (5/16" NC x 2 1/2", Hex)	1
15		Nut (5/16" NC, Lock)	1
16	654475	Hitch arm	2
17		Bolt (5/8" NC x 4", Hex)	1
18		Washer (5/8", Lock)	1
19		Nut (5/8" NC, Hex)	1
20	654474	Upper hitch	1
21		Bolt (5/8" NC x 1 3/4", hex)	1
22		Washer (5/8", Lock)	1
23		Nut (5/8" NC, Hex)	1
24	654200	Chain (R-1024 x 12", w/s-hooks)	1
25	654196	Pin (Cat. 1, Hitch)	2

# P.T.O DRIVE SHAFT ASSEMBLY (REAR MOUNT)



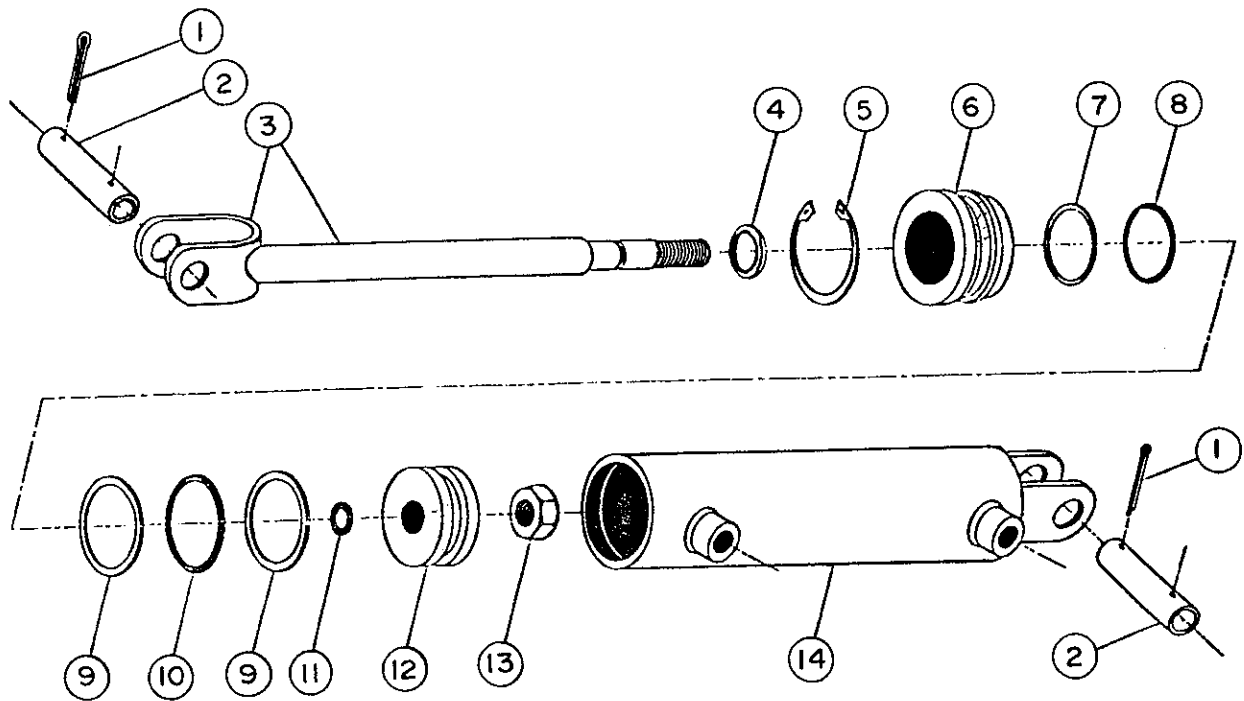
ITEM	PART NO.	DESCRIPTION	QTY
	656565	P.T.O. SHAFT (HAYES-DANA 1140 SERIES, 28" L.G.)	1
1	656764	Quick disconnect yoke (1 3/8", 6 spline)	1
2	656798	Lock pin assembly	1
3	654720	Cross and bearing assembly	2
4	654209	Nylon bearing	2
5	654722	Yoke and male shaft assembly	1
6	654725	Outer shield	1
7	654721	Yoke and female shaft assembly	1
8	654724	Inner shield	1
9	654719	Yoke (1 1/4", round)	1
10	654106	Grease fitting	2

# P.T.O DRIVE SHAFT ASSEMBLY (REAR MOUNT)



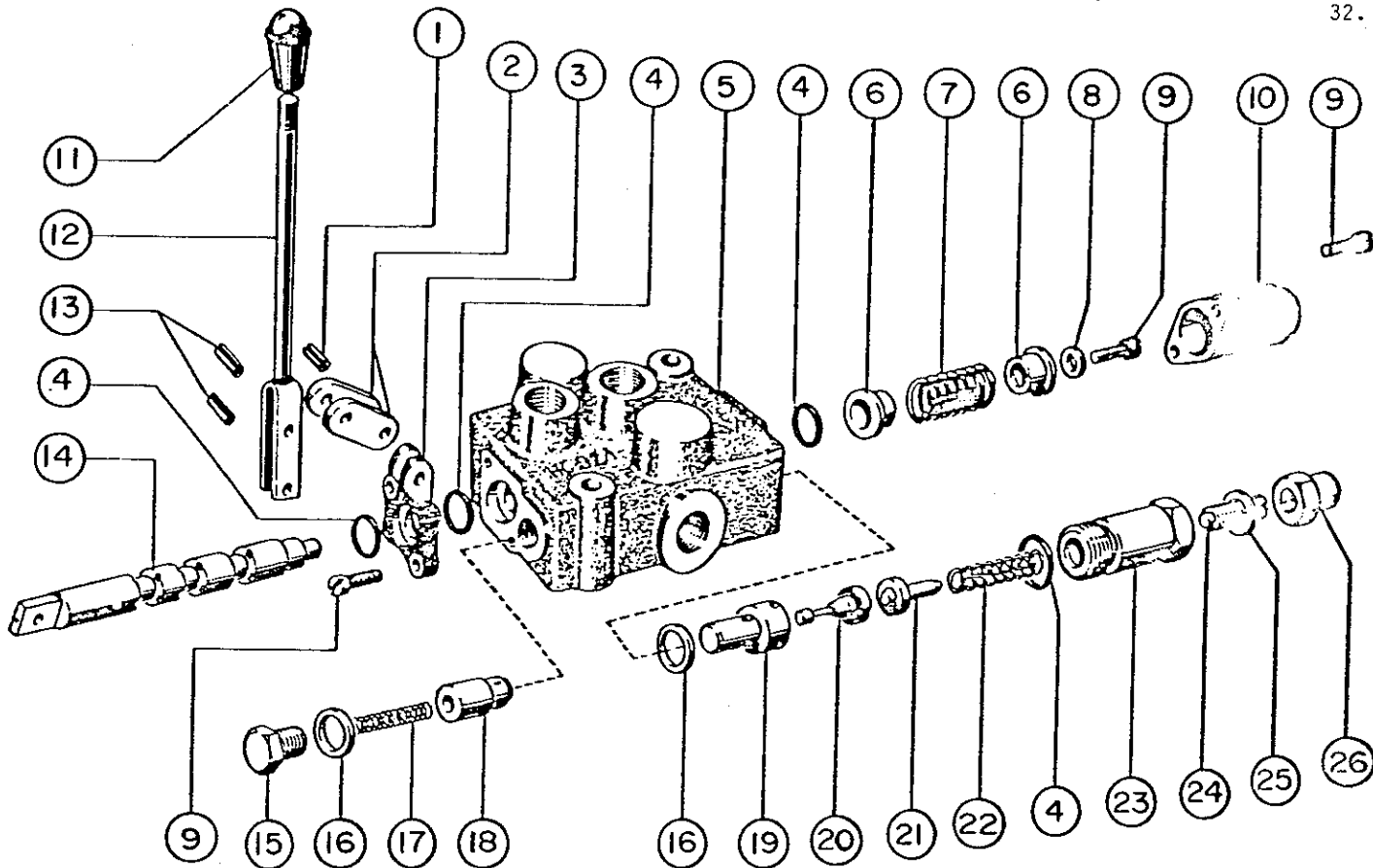
ITEM	PART NO.	DESCRIPTION	QTY
	655198	P.T.O. Shaft Assembly (G & G 12N Seires, 28" lg)	1
1	655009	Quick disconnect yoke (1 3/8", 6 spline)	1
2	655204	Lock pin kit	1
3	654720	Cross and bearing assembly	2
4	655203	Shield bearing assembly	2
5	655200	Yoke and male shaft assembly	1
6	655202	Outer shield	1
7	655199	Yoke and female shaft assembly	1
8	655201	Inner shield	1
9	654719	Yoke (1 1/4" round)	1
10	654106	Grease fitting	2

# HYDRAULIC CYLINDER



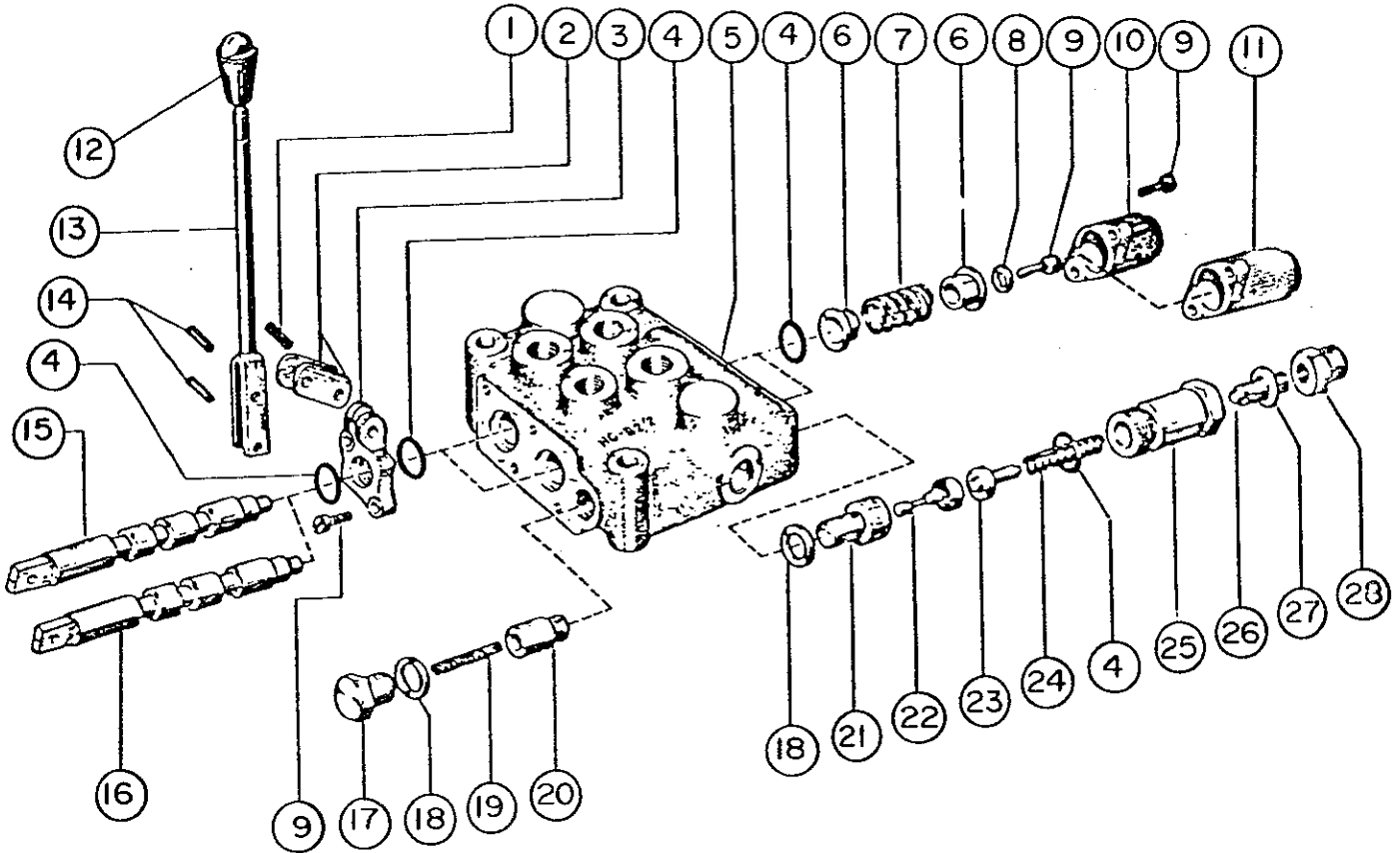
ITEM	PART NO.	DESCRIPTION	QTY
	656557	Hydraulic Cylinder "Assembly"	1
1	656682	Cotter Pin 1/8 x 1 1/4	4
2	656683	Clevis Pin 3/4 x 2 1/2	2
3	656684	Rod B 5-100 R	1
4	656685	Rod Wiper 2816-9	1
5	656686	Snap Ring 1300-206	1
6	656687	Cap B 2-100 T	1
7	656688	Back up Ring BU 214	1
8	656689	O Ring OR 214	1
9	656690	Back up Ring BU 326	2
10	656691	O Ring OR 326	1
11	656692	O Ring OR 318	1
12	656693	Piston B 2-075 P	1
13	656694	Nut 875-500 C	1
14	656695	Cylinder tube B-2-5 T	1

# SINGLE SPOOL VALVE ASSEMBLY



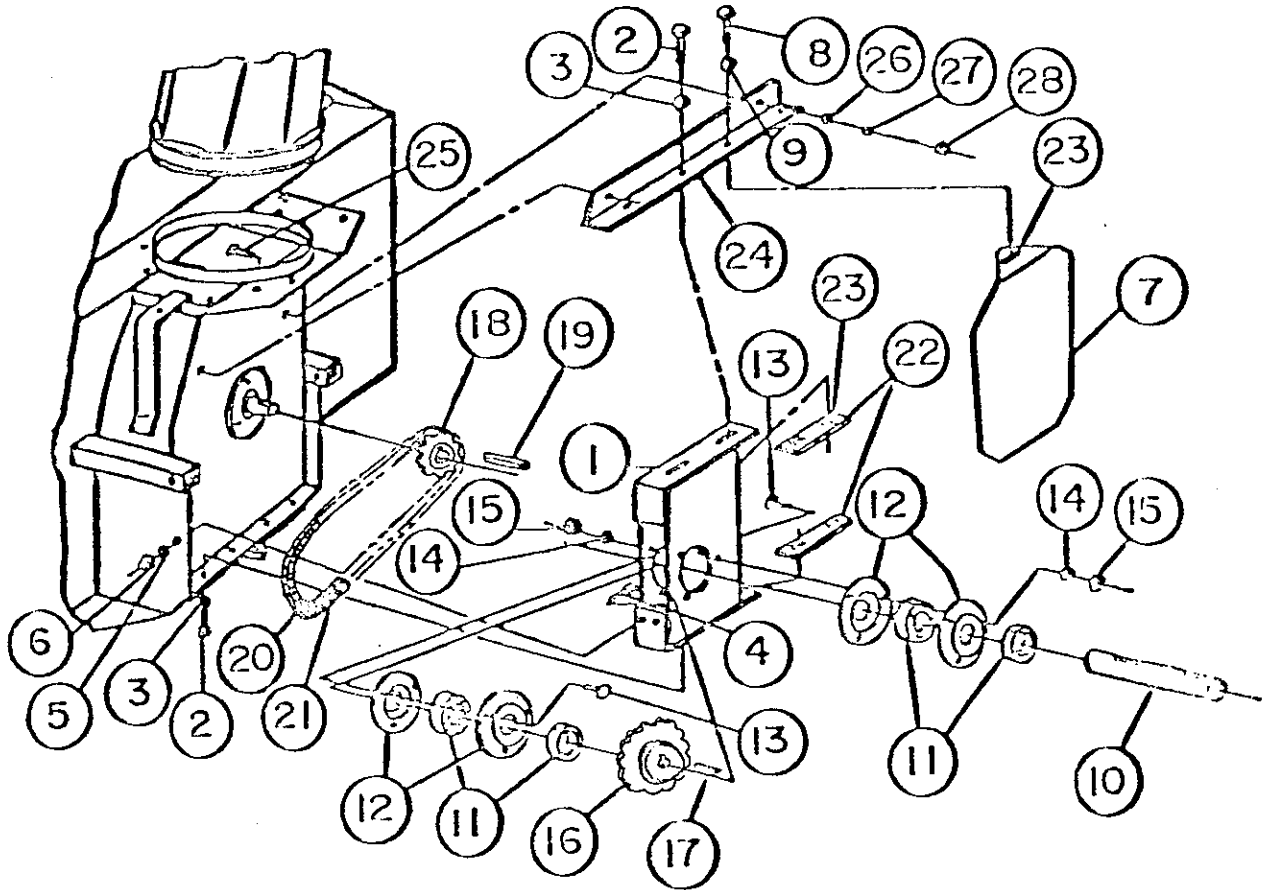
ITEM	PART NO.	DESCRIPTION	QTY
1	656388	Spring pin 6 x 20 DIN 1481	1
2	655707	Plate	2
3	655708	Bearing	1
4	655709	"O" Ring gasket	4
5	656394	Valve body (This part is not supplied separately)	1
6	655711	Spacer seat	2
7	655712	Return spring	1
8	655713	Washer	1
9	656389	Screw	5
10	656390	Cap	1
11	655715	Plastic knob	1
12	655716	Lever with rod	1
13	656391	Spring pin 6 x 16 DIN 1481	2
14	656392	Spool for float position (This part is not supplied separately)	1
15	655718	Check valve plug	1
16	655719	Copper gasket	2
17	655720	Check valve spring	1
18	655721	Check valve	1
19	655722	Relief valve body	1
20	655723	Small piston	1
21	655724	Relief valve spring seat	1
22	655725	Relief valve spring	1
23	655726	Relief valve adjusting valve plug	1
24	655727	Relief valve register	1
25	655728	Aluminium gasket	1
26	655729	Relief valve register plug	1

# TWO SPOOL VALVE ASSEMBLY




ITEM	PART NO.	DESCRIPTION	QTY
1	656388	Spring pin 6 x 20 DIN 1481	2
2	655707	Plate	4
3	655708	Bearing	2
4	655709	"O" Ring gasket	7
5	656393	Valve body (This part is not supplied separately)	1
6	655711	Spacer seat	4
7	655712	Return spring	2
8	655713	Washer	2
9	656389	Screw	10
10	655714	Cap	1
11	656390	Cap	1
12	655715	Plastic knob	2
13	655716	Lever with rod	2
14	656391	Spring pin 6 x 16 DIN 1481	4
15	655717	Spool (This part is not supplied separately)	1
16	656392	Spool for float position (This part is not supplied separately)	1
17	655718	Check valve plug	1
18	655719	Copper gasket	2
19	655720	Check valve spring	1
20	655721	Check valve	1
21	655722	Relief valve body	1
22	655723	Small piston	1
23	655724	Relief valve spring seat	1
24	655725	Relief valve spring	1
25	655726	Relief valve adjusting valve plug	1
26	655727	Relief valve register	1
27	655728	Aluminium gasket	1
28	655729	Relief valve register plug	1

# SPEED UP KIT



<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
	9269	SPEED UP KIT	1
1	656162	Reduction box housing	1
2		Bolt (3/8" NC x 1 1/4", Hex)	4
3		Washer (3/8", Lock)	4
4		Bolt (5/16" NC x 1 1/2", Hex)	1
5		Washer (5/16", Lock)	1
6		Nut (5/16" NC, Hex)	1
7	655606	Cover	1
8		Bolt (3/8" NC x 1", Hex)	2
9		Washer (3/8", Lock)	2
10	655593	Driven shaft	1
11	654532	Bearing w/locking collar	2
12	654533	Bearing flange	4
13		Bolt (5/16" NC x 3/4", carriage)	6
14		Washer (5/16", Lock)	6
15		Nut (5/16" NC, Hex)	6
16	654781	Sprocket (60B18)	1
17	655379	Key (1/4" x 1/4" x 1")	1
18	656282	Sprocket (60B14)	1
19	654643	Key (1/4" x 1/4" x 1 1/4")	1
20	656288	Chain #60 x 31 links	1
21		Connecting link only	1
22	655696	Retaining plate	2
23	655580	Anchor nut	6
24	655702	Angle bar support	1
25		Bolt (5/16" NC x 1", Plow)	2
26		Washer (3/8 ID, Flat)	2
27		Washer (5/16", Lock)	2
28		Nut (5/16" NC, Hex)	2

**! DANGER**



**ROTATING DRIVELINE**  
CONTACT CAN CAUSE DEATH  
KEEP PEOPLE AND CLOTHING  
WELL CLEAR

**DO NOT OPERATE WITHOUT—**

- ALL DRIVELINE, TRACTOR AND EQUIPMENT SHIELDS IN PLACE
- DRIVELINES SECURELY ATTACHED AT BOTH ENDS
- DRIVELINE SHIELDS THAT TURN FREELY ON DRIVELINE

**TRANSMISSION ROTATIVE À CARDAN**  
TOUT CONTACT PEUT CAUSER LA MORT  
TENIR VÊTEMENTS ET PERSONNES À L'ÉCART

**NE PAS OPÉRER SANS—**

- QUE TOUS LES PROTECTEURS DU TRACTEUR, DE L'ÉQUIPEMENT ET DE L'ARBRE À CARDAN SOIENT EN PLACE
- L'ARBRE À CARDAN FIXÉ SOLIDEMENT À CHAQUE BOUT
- QUE LES PROTECTEURS TOURNENT LIBREMENT SUR L'ARBRE À CARDAN

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Located on P10 Guard

**! WARNING**

1. FOR SAFE OPERATION FOLLOW ALL OPERATING INSTRUCTIONS AND SAFETY PRECAUTIONS IN OPERATOR'S MANUAL.
2. KEEP HANDS, FEET AND CLOTHING AWAY FROM POWER DRIVEN PARTS.
3. STOP ENGINE BEFORE LEAVING OPERATOR POSITION.
4. WAIT FOR ALL MOVEMENT TO STOP BEFORE STARTING TO ADJUST, LUBRICATE, CLEAN OR UNCLOG THE MACHINE.
5. KEEP PEOPLE AND PETS A SAFE DISTANCE FROM MACHINE.
6. KEEP ALL GUARDS AND SHIELDS IN PLACE

FAILURE TO FOLLOW SAFE OPERATING PROCEDURES MAY RESULT IN INJURY.

**! ATTENTION**

1. POUR UN FONCTIONNEMENT SÉCURITAIRE SUIVRE INSTRUCTIONS D'OPÉRATEUR ET DE SÉCURITÉ DANS MANUEL D'OPÉRATEUR.
2. GARDER LES MAINS, PIEDS ET VÊTEMENTS ÉLOIGNÉS DES ÉLÉMENTS MOBILES OU ROTATIFS.
3. AVANT DE QUITTER LA MACHINE, DÉSENGAGER TOUTES LES COMMANDES ET ARRÊTER LE MOTEUR.
4. ARRÊTER COMPLÈTEMENT LA MACHINE POUR EFFECTUER L'ENTRETIEN, L'AJUSTEMENT OU DÉGAGER CELLE-CI.
5. GARDER LES GENS ET ANIMAUX À UNE DISTANCE SÉCURITAIRE.
6. GARDER TOUS LES ÉCRANS PROTECTEURS EN PLACE.

MÉGLIGER CECI PEUT ENTRAÎNER DES BLESSURES GRAVES.

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Located on Chute

**! DANGER**



AVOID INJURY FROM ROTATING AUGER  
KEEP HANDS, FEET AND CLOTHING AWAY

POUR ÉVITER DES BLESSURES GRAVES:  
GARDER LES MAINS, LES PIEDS ET LES VÊTEMENTS ÉLOIGNÉS DES VIS SANS FIN

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Located on rear of Collector Housing, both ends

**! DANGER**



TO AVOID SERIOUS INJURY:  
KEEP HANDS OUT OF THIS DISCHARGE CHUTE WHILE ENGINE IS RUNNING

POUR ÉVITER DES BLESSURES GRAVES:  
GARDER LES MAINS ÉLOIGNÉES DE CETTE GOULOTTE LORSQUE LE MOTEUR EST EN MARCHÉ

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Located on Deflector

## GARANTIE

Ber-Vac Inc. certifie à l'acheteur d'origine que l'équipement est exempt de tout défaut de matériel et de fabrication. Selon cette garantie, la responsabilité de Ber-Vac Inc. se limite à la réparation ou au remplacement (F.O.B. notre usine) de toute partie ou pièce jugée défectueuse et ce, dans l'année suivant la date d'achat (sauf indication contraire).

En aucun cas, la Compagnie Ber-Vac ne sera tenue responsable des dommages directs ou indirects, causés ou subis par l'acheteur/usager.

Cette garantie annule toute autre garantie écrite ou tacite et la Compagnie Ber-Vac n'assume aucun engagement ou responsabilité pris en son nom par qui que ce soit lors de la vente des dits produits ou pièces.

Cette garantie ne s'applique pas à un produit (ou des parties) modifié, maltraité, mal utilisé ou endommagé par négligence. Toutes les réclamations pour les pièces ou parties de rechange doivent être déposées chez le distributeur autorisé ou au bureau de la Compagnie.

Toutes les parties non fabriquées par Ber-Vac (telles que moteurs, pneus, etc.) portent la garantie du fabricant d'origine.

Toutes les réclamations doivent être produites en dedans de 30 jours du bris mécanique. La Compagnie se réserve le droit d'exiger les pièces et ce, F.O.B. notre usine ou distributeur.

## WARRANTY

Ber-Vac Inc. warrants to the original buyer that the equipment is free from defects in material and workmanship. Ber-Vac's obligation, under this warranty, will be limited to the repair or to the replacement (F.O.B. factory) of any part or component which Ber-Vac shall disclose to be defective within one year from date of original purchase (unless otherwise specified).

In no event shall Ber-Vac be liable for consequential or special damages, direct or indirect, arisen by the buyer/user.

This warranty replaces all other written or implied warranties and Ber-Vac Company neither assumes nor authorizes any other person to assume on its behalf any other obligation nor responsibility in connection with the sale of the said product or components.

This warranty will not apply to the product (or components) which will have been the object of an accident, alteration, abuse or misuse. Any claim for parts or replacement of equipment must be taken up with the authorized dealer or with the office of the Company.

All components not manufactured by Ber-Vac (such as motors, tires, etc.) are covered by the original manufacturer's warranty.

All claims must be taken up within 30 days from date of mechanical breakage. The Company reserves the right to require the said parts and this F.O.B. our factory or distributor.