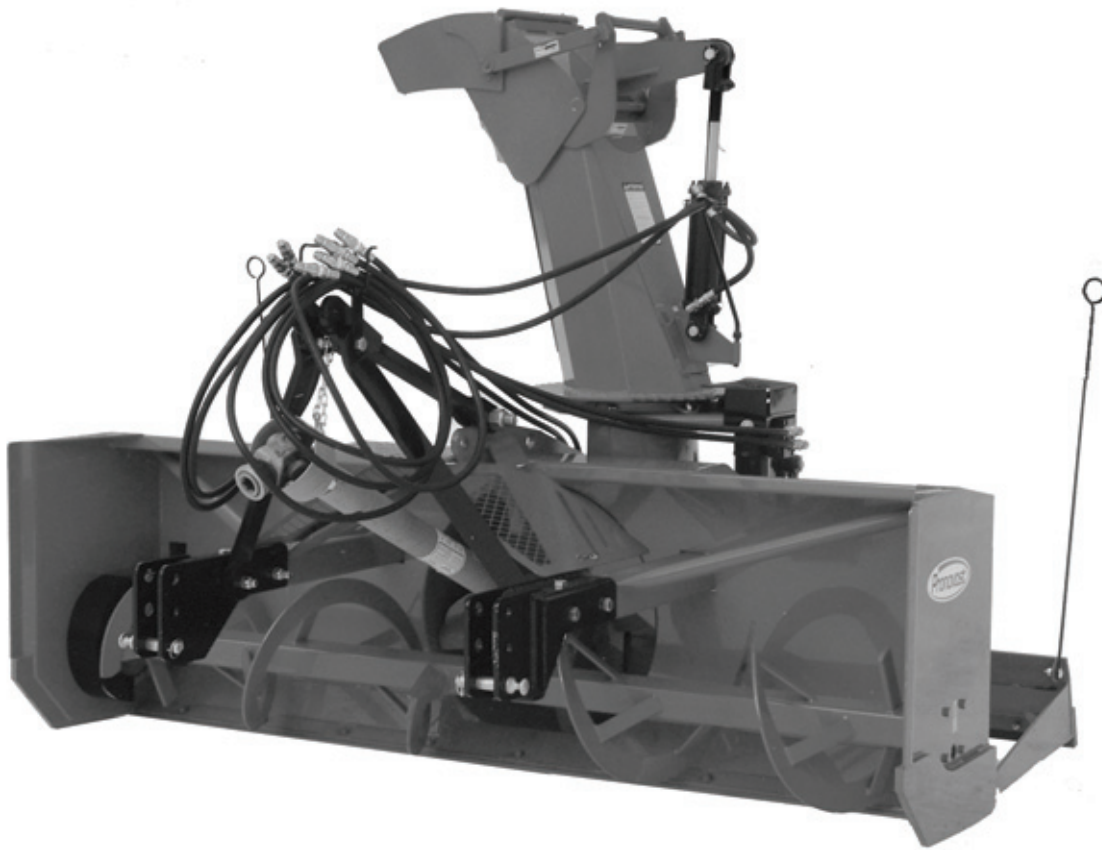




**OPERATOR'S / PARTS
MANUAL**



Inverted snowblower

Models

P-860IV

&

P-920IV



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INTRODUCTION

Your Snowblower was carefully designed and we are confident it will meet your requirements in terms of quality, performance and reliability.

This manual was prepared to assist you in the safe operation of your new Snowblower. It contains important information which will help you achieve excellent returns with your Snowblower.

Please read this manual completely before operating your Snowblower and keep it for future reference.

Before starting the machine, you or any other person who will be operating the Snowblower must familiarize yourself with the safety recommendations and the operating instructions. Please read carefully and be sure to understand and follow all recommendations and procedures.

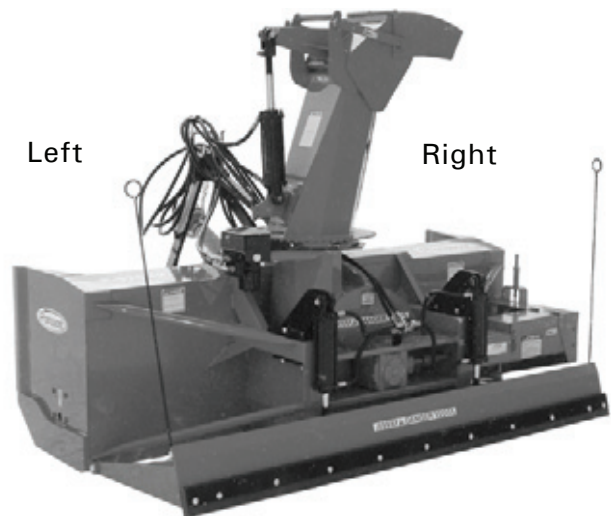
In this manual, the right side of the Snowblower is the drive chain side.

If you require additional information on your Snowblower, please contact your PRONOVOST Dealer.

When ordering parts from your Dealer, please refer to these numbers for a fast and efficient service. Use PRONOVOST parts for replacement. When ordering parts from your Dealer, please refer to these numbers for a fast and efficient service. Use PRONOVOST parts for replacement.

NOW take a moment to enter the model, serial number and the date of purchase of your Snowblower in the space provided.

The model and serial numbers are on the name plate shown on Fig. 1.



| | |
|---|---|
| | |
| LES MACHINERIES PRONOVOST INC. ST-TITE | |
| MODÈLE | SÉRIE |
| <input style="width: 100%;" type="text"/> | <input style="width: 100%;" type="text"/> |
| FAIT AU CANADA | MADE IN CANADA |

Figure 1

MODEL: _____ ✍

SERIAL NO.: _____ ✍

DATE OF PURCHASE: _____ ✍

SAFETY

GENERAL SAFETY

WHEN YOU SEE THIS SYMBOL



ATTENTION!

**BE ALERT
YOUR SAFETY IS INVOLVED**

This symbol «SAFETY ALERT» is used in this manual and on the safety decals on the Snowblower. It warns you of the possibility of danger. Carefully read, understand and follow all safety recommendations before operating the Snowblower.

- 1) Careful operation is the best assurance against accidents. Carefully read this manual and follow all recommendations before operating your Snowblower. It is the owner's responsibility to make sure that anyone who will operate the Snowblower will read this manual before operating the equipment.
- 2) Familiarize yourself with all controls and always be ready to stop the Snowblower quickly in case of emergency.
- 3) Never let a child operate the Snowblower.
- 4) Do not modify the Snowblower. Any non authorized modification may affect the efficiency and/or safety of the equipment.
- 5) Never operate the Snowblower with defective parts or if damaged in any way. Have it repaired before operating.
- 6) Make sure all fasteners are in place and properly secured or tightened. Refer to torque chart on page 28.
- 7) Avoid wearing loose fitting clothing when working with the Snowblower. These could get entangled in moving parts of the equipment and cause accidents.
- 8) Prolonged exposure to noise may hamper hearing. Protect yourself by wearing adequate protection devices.
- 9) Hydraulic fluids under pressure can damage your skin. Do not use your hands to locate a leak.
- 10) Before the beginning of the snow season, inspect all areas where the Snowblower will be used and remove any object which may cause an accident and/or damage the equipment.
- 11) Never operate your Snowblower in poor visibility or without proper lighting conditions.

SAFETY IN OPERATION

- 1) Be sure there are no obstructions around the equipment and that no one stands near the equipment when in operation.
- 2) Do not operate an engine in a confined or non ventilated area.
- 3) Do not perform any adjustments, cleaning, maintenance or repairs with the engine running. The engine must be stopped and the P.T.O. disengaged. Preferably remove the key from the ignition.
- 4) Wear adequate clothing when working in cold or windy conditions.
- 5) Before operating, make sure the P.T.O. is properly installed and secured.
- 6) Before starting-up the Snowblower, make sure the auger and drum areas are free of ice.
- 7) Put P.T.O. control in neutral position before starting engine.
- 8) Keep hands, feet and clothing away from moving parts of the Snowblower. Stay away from the discharge chute.
- 9) Before unplugging the chute, always disengage the P.T.O., stop the engine and relieve all hydraulic pressures.

SAFETY (cont'd)

- 10) Do not operate in excessive inclined conditions. Be careful when turning in slopes.
- 11) Never operate your Snowblower with missing guards or without protective devices in place.
- 12) Do not operate your Snowblower near buildings, windows or other vehicles without prior and proper adjustment of the chute deflector.
- 13) Never aim discharge chute towards people or animals. This may cause serious injuries.
- 14) Always reduce operating speed in slippery conditions.
- 15) Be careful when backing-up, make sure you have good visibility.
- 16) Always be on the lookout for objects which may enter the Snowblower.
- 17) If undue vibrations are felt, disengage the P.T.O., stop the motor and look for the cause of the vibration. Vibration is usually the indication of a problem.
- 18) At the end of the operation, disengage the P.T.O., lower the Snowblower, put transmission in neutral, apply parking brake, stop engine and remove the key from the ignition.

SAFETY WITH MAINTENANCE

- 1) Perform the Snowblower maintenance according to recommendations contained in this manual.
- 2) Stop engine and relieve all hydraulic pressures before doing inspection, maintenance or repairs.
- 3) Never perform any work under the Snowblower while it is supported only by the tractor's hydraulic system. It must be completely supported by wooden blocks or other safe means.

SAFETY IN TRANSPORT

- 1) On public roads, use proper safety lights and check local regulations.
- 2) Be alert while driving on the road. Never carry passengers.
- 3) Always disengage P.T.O. while moving from one area of work to another.
- 4) The recommended road speed should be such as to maintain full control over steering and braking.
- 5) Be careful while backing up, make sure you have good visibility.

SAFETY IN STORAGE

- 1) Provide adequate supports to prevent any accidental overturning of the Snowblower.
- 2) Do not let children play in the area where the Snowblower is stored.

DECALS

SAFETY DECALS

The safety decals are affixed wherever special safety precautions are indicated. Locate them on the machine and read them carefully. If a decal is damaged, lost or illegible, install a new one. Each decal is shown and identified with a part number.

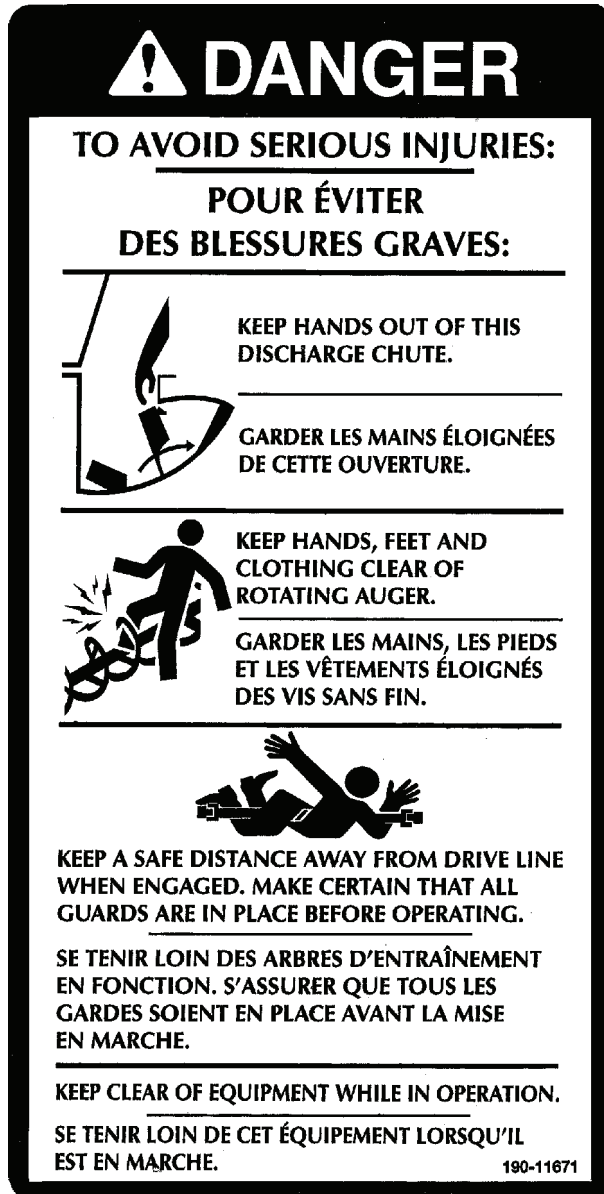


Figure 2
Decal A

Part no.: 190-11671

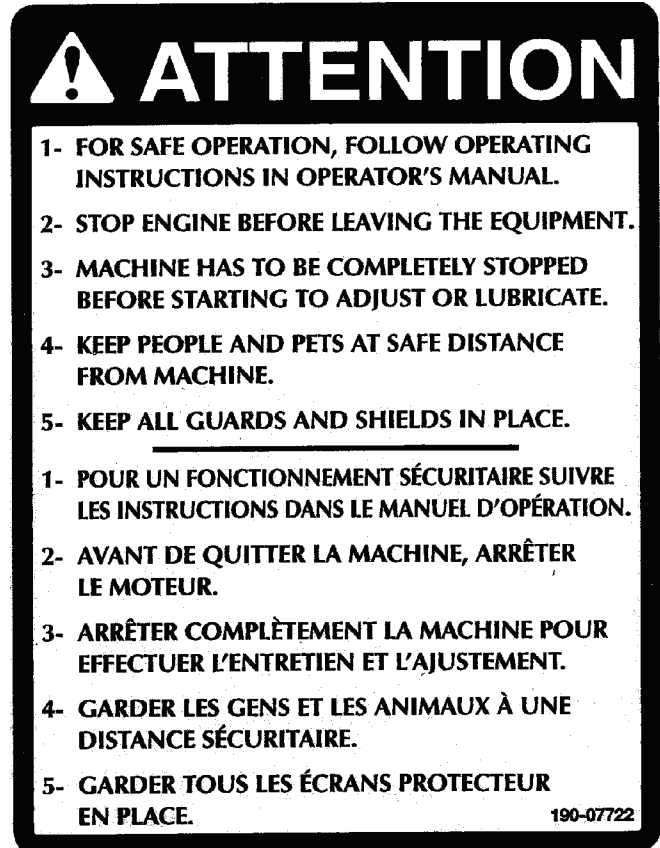


Figure 3
Decal B

Part no.: 190-07722



Figure 4
Decal C

Part no.: 190-11641

DECALS (cont'd)

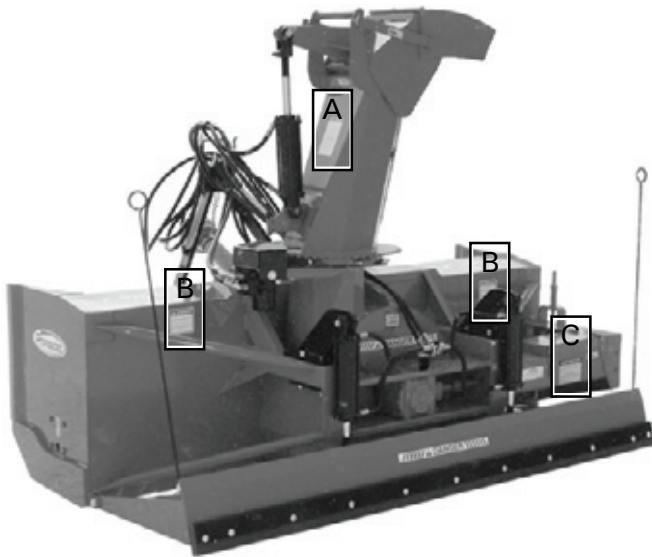


Figure 5



Figure 7

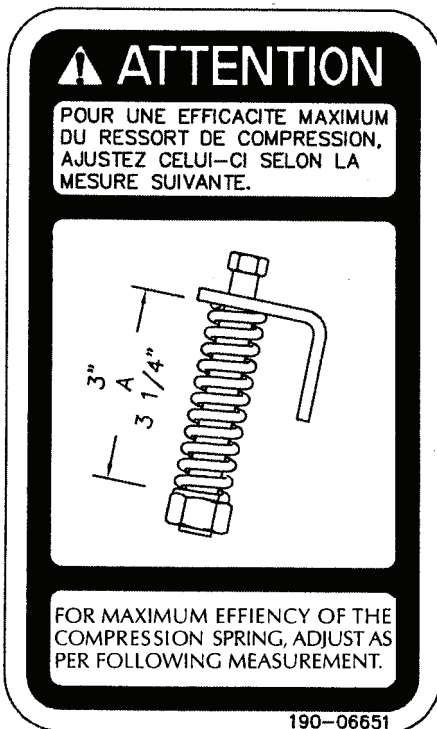


Figure 6
Decal D

Part no.: 190-06651

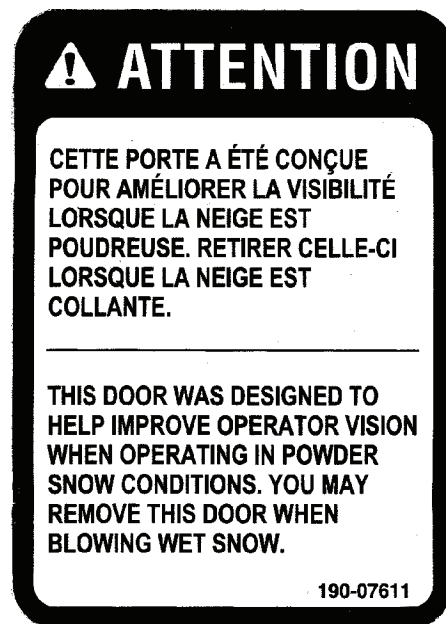


Figure 8
Decal E

Part no.: 190-07611

DECALS (cont'd)



Figure 9

! DANGER !

| | |
|---|---|
| <p>ROTATING DRIVELINE CONTACT CAN CAUSE DEATH KEEP AWAY!</p> <p>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</p> | <p>ARBRE DE TRANSMISSION TOUT CONTACT PEUT ETRE MORTEL. RESTEZ ELOIGNE : PEUT AGRIPPER VETEMENTS NE PAS ACTIONNER SANS : LES ENVELOPPES PROTECTRICES DE L'ARBRE DE TRANSMISSION, DU TRACTEUR ET DE LA MACHINE. FIXER SECURITAIREMENT LES DEUX EXTREMITES DE L'ARBRE DE TRANSMISSION. S'ASSURER QUE LES ENVELOPPES PROTECTRICES TOURNENT LIBRE- MENT SUR L'ARBRE DE TRAN- SMISSION</p> |
|---|---|

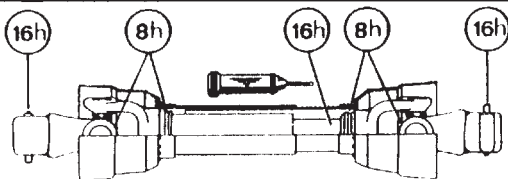


Figure 10
Part no.: A 109

! DANGER

**SHIELD MISSING
DO NOT OPERATE**

! DANGER

**ENVELOPPE PROTECTRICE
MANQUANTE
NE PAS UTILISER**

! DANGER

Figure 11
Part no.: A108

DECALS (cont'd)



Figure 12
Decal G

Part no.: 190-10991

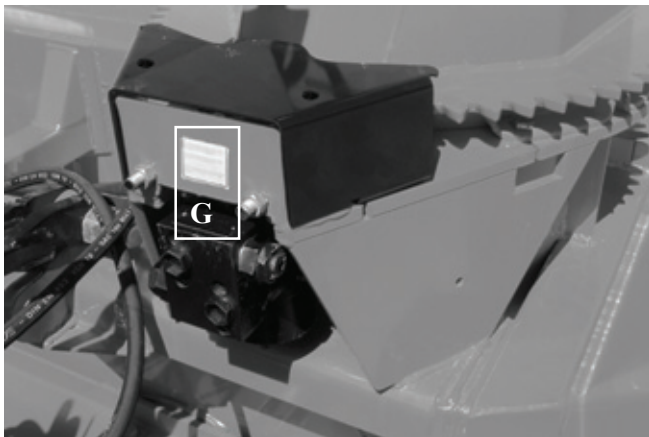


Figure 13

MAINTENANCE DECALS

The maintenance decals indicate the points requiring lubrication. Refer to maintenance section for more details.



Figure 14

Part no.: 190-11581



Figure 15

Part no.: A 106

ASSEMBLY

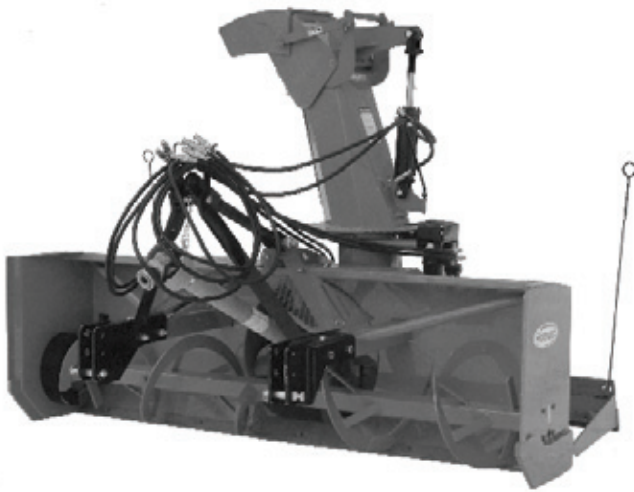


Figure 16

ASSEMBLY

- 1) The Snowblower is shipped partly assembled.
- 2) Install 3-point system according to the model of your Snowblower. (See section 10 for parts numbers). Use the holes most convenient to the type of tractor used (Fig. 16).
- 3) Install P.T.O. shaft onto the snowblower rotor. You must put the shear pin end to the tractor PTO output shaft and the other end on the snowblower rotor shaft. Then attach safety shield support chain as shown. **WARNING:** The telescoping tubes of the drive shaft must never be allowed to bottom out while maintaining a minimum overlap of 6 inches.
- 4) If you install a hydraulic cylinder on the chute deflector, use model 25TR08 cylinder.
- 5) When installing chute, grease the groove of the UHMW slide in order to prevent the corrosion of the rim of the chute.
- 6) Install the chute rotation mechanism.

STARTING-UP



Figure 17

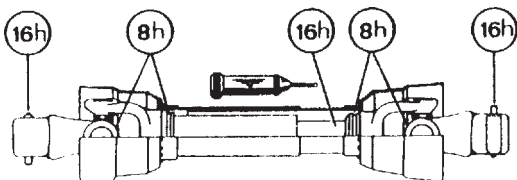
START-UP PROCEDURES

- 1) Check oil level in gearbox. Adjust to required oil level as per drawing in Parts List section. Use SAE 80W90 oil.
- 2) Lubricate all points with a good quality multipurpose grease.
- 3) Check chain take-up adjustment. The spring maintaining the tension must be compressed to a length between 3" and 3 1/4" (Fig. 17).
- 4) Verify for adequate tightness of all fastening devices. Refer to torque chart on page 28.
- 5) Make sure of a 540 RPM input to your snowblower.
- 6) Check impeller adjustment. The tip of the blades should be approximately 1/8" to 3/16" from the discharge wall of the drum. If necessary, adjust with the take-up screws provided.
- 7) In order to avoid damaging your snowblower, adjust the speed of descent of your 3 point hitch to prevent striking the ground too hard.
- 8) Adjust the hydraulic flow in order to have a good control of the rotation speed of the chute.

5

MAINTENANCE

- 1) Wipe off all grease fittings with a clean cloth before adding grease in order to avoid injecting dirt and sand.
- 2) Repair or replace damaged grease fittings.
- 3) Lubricate all grease fittings every 8 hours of operation.
- 4) Oil drive chain every 8 hours of operation.
- 5) Lubricate P.T.O. shaft as indicated below:



Pull out the P.T.O. and lubricate between the two tubes with high quality low temperature grease.

- 6) Check oil level in gear box once a month. Adjust to required oil level as per drawing in Parts List section. Use SAE 80W90 oil.
- 7) Check tension of drive chain every 24 hours of operation and adjust if necessary.

- 8) Check for tightness of bearing collars every 48 hours of operation.
- 9) Change gearbox oil once a year. Adjust to required oil level as per drawing in Parts List section. Use SAE 80W90 oil.
- 10) Check all nuts and bolts once a year. If necessary use torque chart on page 28.
- 11) Standard scraper blades are reversible. Reverse when one edge is worn out.
- 12) Always use recommended shear bolts.
- 13) UHMW slides do not require lubrication except at the end of the season in order to prevent corrosion of steel components that are in contact with the UHMW material.

STORAGE

- 1) Store the Snowblower in a cool, dry place.
- 2) Support the Snowblower with wooden blocks.
- 3) Keep all piston rods in the retracted position. This will assure better protection against the elements.
- 4) Clean your Snowblower.
- 5) Thoroughly inspect all parts of the Snowblower. Replace or repair worn or defective parts.
- 6) Touch-up or repaint if necessary.
- 7) Lubricate all points before storage.

TROUBLESHOOTING

P.T.O. SHAFT

| PROBLEM | POSSIBLE CAUSE | CORRECTION |
|---|---|--|
| - Premature wear of U-joints and/or bluish color of cross journals. | - Insufficient lubrication. - Excessive working angle. | - Follow lubrication recommendations. - Replace defective U-joints. - Make sure the snowblower inlet face is perpendicular to the ground and if possible readjust 3-point hitch in order to position the snowblower further away from tractor. |
| - Gripping or premature wear of telescoping members. | - Too much sliding under load. - Tube overlap too-short: minimum recommended is 6". - Insufficient lubrication. - Contaminants (sand, etc.). | - Avoid raising snowblower while in operation. - Readjust 3-point hitch in order to position the snowblower closer to the tractor. - Follow lubrication recommendations. - Replace defective telescopic members. |
| - Damaged or jammed locking pin or bolt. | - Pin or orifice contaminated by sand, ice, etc. - Telescoping members too long, exerting pressure on locking device. | - Clean and grease. - Readjust 3-point hitch in order to position the snowblower further away from tractor. |
| - Premature wear of guard tube bearing ring. | - Lack of lubrication. - Wrong installation of guard chain. - Part of the guard in contact with the equipment. | - Follow lubrication instructions. - Adjust chain to prevent interference between guard & equipment. - Replace worn or damaged bearing rings. |
| - Cut or deformed safety guard tubes. | - Tubes in contact with the equipment. | - Eliminate any interference between tubes and equipment or tractor. - Replace damaged tubes. |

TROUBLESHOOTING (cont'd)

SNOWBLOWER

| PROBLEM | POSSIBLE CAUSE | CORRECTION |
|--|--|--|
| - The snow is not being thrown as far as usual. | - Tractor RPM too low. - Gap too wide between impeller blade tip and drum outlet wall. - Insufficient tractor HP. | - Raise P.T.O. speed to a minimum of 540 RPM. - Adjust impeller blades closer to drum outlet (1/8" to 3/16"). - Reduce travel speed. |
| - Frequent plugging of discharge chute. | - Tractor RPM too low. - Tractor RPM reduced too early with snow still in the Snowblower. - Slippage of PTO clutch mechanism. - Wet snow condition. | - Raise P.T.O. speed to a minimum of 540 RPM. - Make sure the Snowblower is completely empty before reducing RPM, especially on tractors with foot controlled RPM. - Repair clutch. - Reduce travel speed. - Remove the access door. |
| - The impeller will not turn. | - Shear bolt broken on drive shaft. | - Replace shear bolt. |
| - The auger will not turn. | - Shear bolt broken on drive shaft. - Shear bolt broken on auger drive shaft. - Broken drive chain. | - Replace shear bolt. - Replace shear bolt. - Fix or replace chain. |
| - The rotating drum will not turn. | - Ice accumulation. - Wrong hydraulic connections. | - Remove ice. - Check hydraulic connections. |
| - The rotating drum will not hold it's position when blowing via the spout | - Cushion valve setting too low - Tension of the spring in drum locking mechanism insufficient | - Reset cushion valve up to 1800 psi (max) - Increase tension of spring by adding shim(s) |
| - The chute will not turn. | - Ice accumulation. - Wrong hydraulic connections. | - Remove ice. - Check hydraulic connections. |

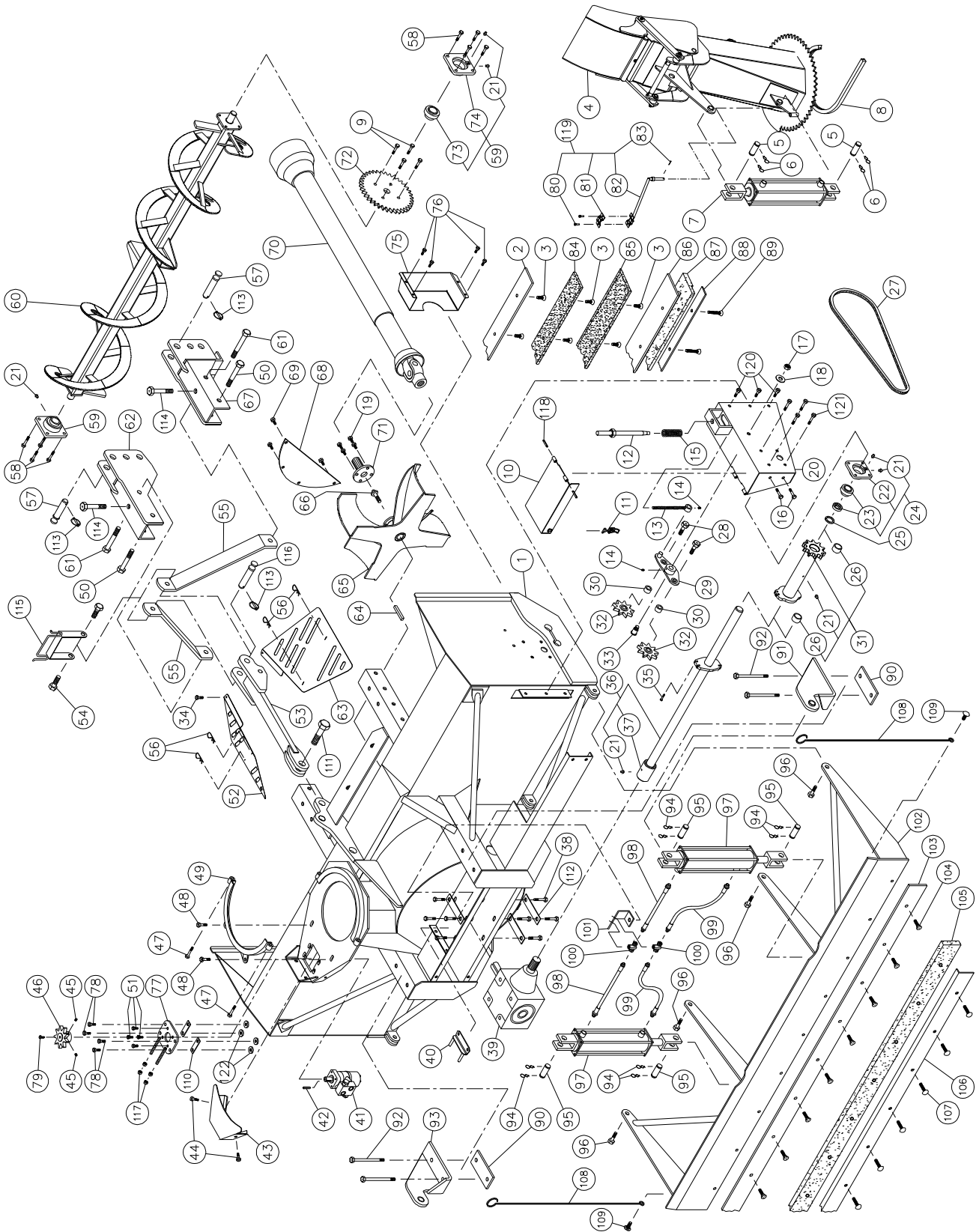
SPECIFICATIONS

| | P-860IV | P-920IV |
|---|--|----------------|
| Horse power recommended | 50 to 75 HP | |
| Working width | 86" | 92" |
| Cutting height | 31" | |
| Impeller diameter | 28" | |
| Depth of drum | 12" | |
| Impeller blades | 4 curved blades | |
| Number of shear bolts | 1 for impeller, 1 on auger drive | |
| Size of impeller shaft | 1.575" (40 mm) | |
| Impeller RPM | 540 RPM | |
| Number of augers | 1 | |
| Drive chain | No. 80 | |
| Scraper blade for snowblower | Std. • Standard steel (1/2" x 4") | |
| | Opt. • CHT-360 steel (1/2" x 4") | |
| | Opt. • CHT-360 steel (1/2" x 6") sharpened | |
| | Opt. • TIVAR 88™ (1" x 5¼") | |
| | Opt. • Stainless Steel (1/2" x 4") | |
| Rear mount scraper blade | Option | |
| Plow blade for rear mount scraper blade | Opt. • Standard steel | |
| | Opt. • TIVAR | |
| | Opt. • Stainless steel | |
| Chute | Semi-industrial chute with cylinder on the deflector | |
| Chute rotation mechanism | Hydraulic with motor included UHMW slide included | |
| P.T.O. | No. 6 | |
| Auger bearing | 1 1/2" | |
| Hose support | Included | |
| Hitch category | Category 2 | |
| Weight (approx.) | 1200 lbs | 1600 lbs |

Design and specifications subject to change without notice.

SNOWBLOWERS P-860IV P-920IV

170-04473



SNOWBLOWERS P-860IV & P-920IV

| REF. | PART # | DESCRIPTION | QTY | |
|------|---------------|---|---------|---------|
| | | | P-860IV | P-920IV |
| 1 | 120-06701 | Frame for P-860IV | 1 | - |
| 1 | 120-06311 | Frame for P-920IV | - | 1 |
| 2 | 140-00812 | Standard steel reversible scraper blade 1/2" x 4" x 84 1/2" lg | 1 | - |
| 2 | 140-00832 | Standard steel reversible scraper blade 1/2" x 4" x 90 1/2" lg | - | 1 |
| 2 | 140-15041 | Stainless steel reversible scraper blade 1/2" x 4" x 84 1/2" lg | opt. | - |
| 2 | 140-15051 | Stainless steel reversible scraper blade 1/2" x 4" x 90 1/2" lg | - | opt. |
| 3 | 319-38280 | Plow bolt 7/16" NC x 1 1/4" lg + nut & lockwasher | 9 | 9 |
| 4 | 120-03954 | Semi-industrial chute | 1 | 1 |
| 5 | D-600-51 | Pin 1" x 3" | 2 | 2 |
| 6 | 51472 | Hitch pin clip (CP132H) | 4 | 4 |
| 7 | 25TR08 | Cylinder 2.5" x 8" standard | 1 | 1 |
| 8 | 8149 | U-shaped UHMW ± 14" i.d. | 1 | 1 |
| 9 | 300-38310 | Bolt 7/16" NC x 1 1/2" lg + two-way locknut | 4 | 4 |
| 10 | 110-21091 | Chain guard cover | 1 | - |
| 10 | 110-21081 | Chain guard cover | - | 1 |
| 11 | 8374 | Adjustable clamp fastener (welded) | 1 | 1 |
| 12 | 110-10271 | Threaded tube for idler adjustment | 1 | 1 |
| 13 | 110-02402 | Threaded rod for idler adjustment + nut 7/16" NC | 1 | 1 |
| 14 | Std. | Grease fitting 1/4"-28 90° | 2 | 2 |
| 15 | 9688 | Compression spring | 1 | 1 |
| 16 | 300-38250 | Bolt 7/16" NC x 1" lg + nylon locknut | 2 | 2 |
| 17 | 346-45000 | Nylon locknut 5/8" NC thin | 1 | 1 |
| 18 | 376-44000 | Flat washer 5/8" | 1 | 1 |
| 19 | 300-38310 | Bolt 7/16" NC x 1 1/2" lg + nylon locknut | 4 | 4 |
| 20 | 110-16481 | Chain guard | 1 | 1 |
| 21 | Std. | Grease fitting 1/4"-28 straight | 8 | 8 |
| 22 | FD207 | Flange (for 2 grease fitting) | 1 | 1 |
| 23 | SAG207-20 | Bearing 1 1/4" with eccentric collar | 1 | 1 |
| 24 | SAGFD207-20-C | Bearing 1 1/4" + flange & 2 grease fitting (straight) + eccentric collar | 1 | 1 |
| 25 | 160-03942 | Spacer 1 1/4" i.d. x 1 5/8" o.d. x 5/32" thick | 1 | 1 |
| 26 | 160-26511 | Brass bushing 1" i.d. x 1 1/2" o.d. x 13/32" lg | 2 | 2 |
| 27 | 190-01401 | Chain no. 80 x 71" lg (71 links) + offset link & connecting link | 1 | 1 |
| 28 | 300-46400 | Bolt 3/4" NC x 3" lg (soudé) + nylon locknut | 2 | 2 |
| 29 | 110-01052 | Idler | 1 | 1 |
| 30 | 160-06511 | Spacer 3/4 i.d. x 1 1/4" o.d. x 3/4" lg | 2 | 2 |
| 31 | 110-07272 | Sprocket 80A10 + shearplate (incl. #21 & 26) (up to serial #35730) | 1 | 1 |
| 31 | 110-07273 | Sprocket 80A10 + shearplate (incl. #21 & 26) (from serial #35731 and up) | 1 | 1 |
| 32 | 9287 | Idler sprocket #80 | 2 | 2 |
| 33 | 150-00332 | Idler clevis pin | 1 | 1 |
| 34 | 300-32220 | Bolt 1/4" NC x 3/4" lg + nylon locknut + 2 flat washers | 1 | 1 |
| 35 | 300-32310 | Bolt 1/4" NC x 1 1/2" lg + nylon locknut (up to serial #35730) | 1 | 1 |
| 35 | 300-32340 | Bolt 1/4" NC x 2" lg + nylon locknut (from serial #35731 and up) | 1 | 1 |
| 36 | 110-18822 | Auger drive shaft 32 13/16" lg overall (incl. #21 & 37) (up to serial #35730) | 1 | - |
| 36 | 110-18823 | Auger drive shaft 32 13/16" lg overall (incl. #21 & 37) (from serial #35731 and up) | 1 | - |
| 36 | 110-05972 | Auger drive shaft 35 13/16" lg overall (incl. #21 & 37) (up to serial #35730) | - | 1 |
| 36 | 110-05973 | Auger drive shaft 35 13/16" lg overall (incl. #21 & 37) (from serial #35731 and up) | - | 1 |
| 37 | 6466 | Splined adaptor 1 1/4" - 19 splines (welded) | 1 | 1 |
| 38 | 300-40280 | Bolt 1/2" NC x 1 1/4" lg + lock washer | 8 | 8 |
| 39 | 190-01491 | Gear box T27D modified | 1 | 1 |
| 40 | 8199 | Adjustment plate for gear box + 4 nuts 1/2" NC | 1 | 1 |
| 41 | MLH-315 | Hydraulic Orbit motor with cushion valve | 1 | 1 |
| 42 | 8369 | Key for hydraulic motor | 1 | 1 |
| 43 | 130-08162 | Guard | 1 | 1 |
| 44 | 300-36280 | Bolt 3/8" NC x 1 1/4" lg + square weld nut 3/8" NC + lock washer | 2 | 2 |
| 45 | 323-36160 | Hexagonal socket set screw 3/8" NC x 3/8" lg | 2 | 2 |
| 46 | 110-44331 | Sprocket 9 tooth | 1 | 1 |
| 47 | 300-38400 | Bolt 7/16" NC x 3" lg + nylon locknut | 2 | 2 |

SNOWBLOWERS P-860IV & P-920IV

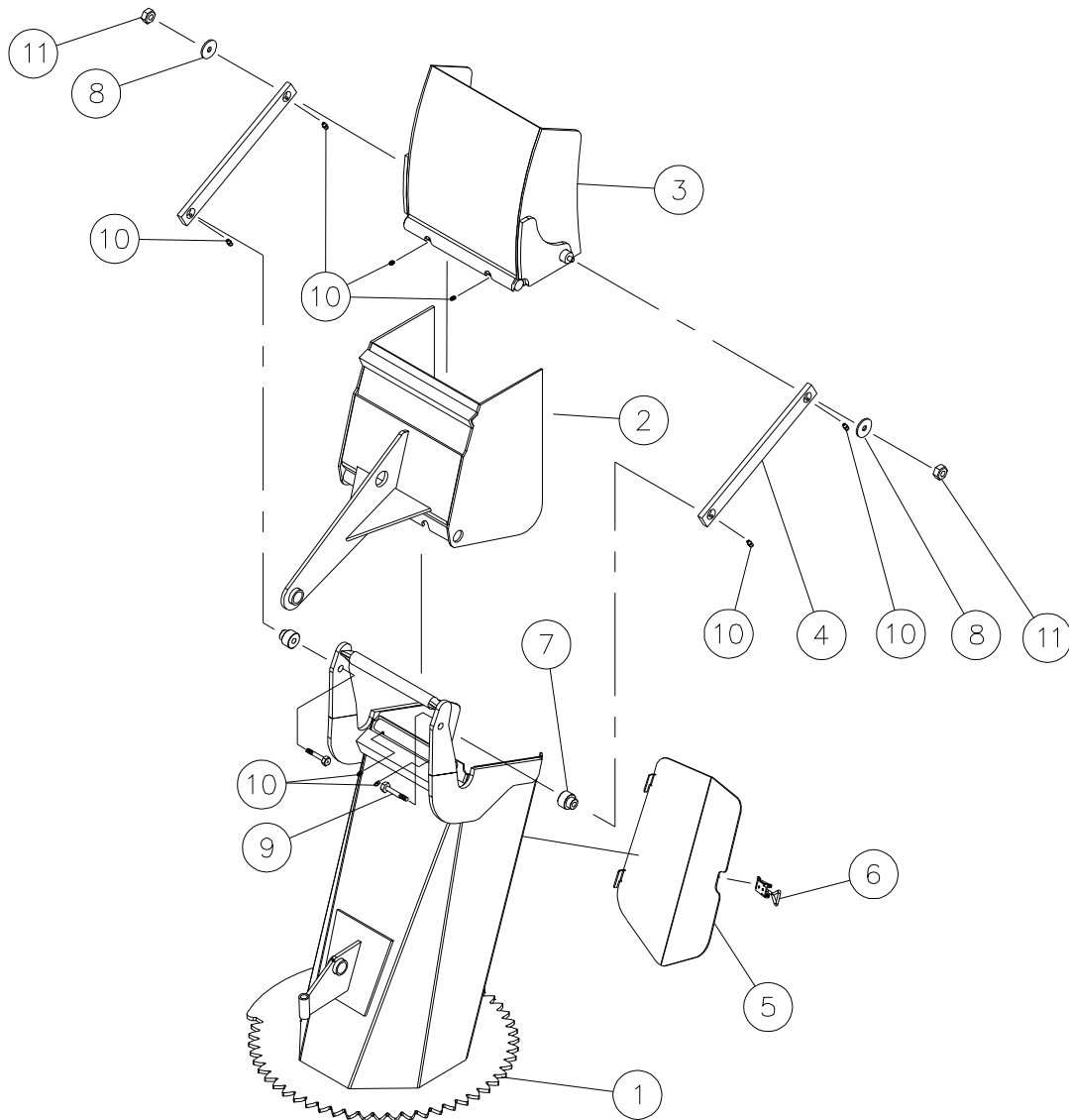
| REF. | PART # | DESCRIPTION | QTY | |
|------|------------|--|---------|---------|
| | | | P-860IV | P-920IV |
| 48 | 300-40310 | Bolt 1/2" NC x 1 1/2" lg + nylon locknut + flat washer | 2 | 2 |
| 49 | 110-01341 | Retaining bracket | 1 | 1 |
| 50 | 302-46580 | Bolt 3/4" NF x 6" lg + nylon locknut | 2 | 2 |
| 51 | 300-36250 | Bolt 3/8" NC x 1" lg + lock washer | 4 | 4 |
| 52 | 130-33354 | Left guard | 1 | 1 |
| 53 | 110-15691 | Upper hitch | 1 | 1 |
| 54 | 300-46400 | Bolt 3/4" NC x 3" lg + nylon locknut | 2 | 2 |
| 55 | 140-11142 | 3-points side bar | 2 | 2 |
| 56 | Std. | Hitch pin clip 1/8" x 2 9/16" | 7 | 7 |
| 57 | 9269 | Pin category 2 | 2 | 2 |
| 58 | 300-40325 | Bolt 1/2" NC x 1 3/4" lg + nylon locknut + flat washer 7/16" | 8 | 8 |
| 59 | UCFD208-24 | Bearing 1 1/2" + flange & 2 grease fitting (straight) | 2 | 2 |
| 60 | 110-18831 | Auger | 1 | - |
| 60 | 110-02451 | Auger | - | 1 |
| 61 | 302-46610 | Bolt 3/4" NF x 6 1/2" lg + nylon locknut | 2 | 2 |
| 62 | 110-15681 | Left lower hitch | 1 | 1 |
| 63 | 130-33353 | Right guard | 1 | 1 |
| 64 | 9685 | Key 3/8" x 3/8" x 3 11/16" lg | 1 | 1 |
| 65 | 110-34401 | Impeller 28" ø - 4 blades | 1 | 1 |
| 66 | 190-01411 | Bolt 5/8" NC x 1 1/2" lg + lock washer (ass'd with locktite 242) | 1 | 1 |
| 67 | 110-15682 | Right lower hitch | 1 | 1 |
| 68 | 130-58731 | Deflector | 1 | 1 |
| 69 | 300-38250 | Bolt 7/16" NC x 1" lg + nylon locknut | 4 | 4 |
| 70 | 190-00471 | P.T.O. shaft | 1 | 1 |
| 71 | 110-39181 | Splined adaptor 1 3/8" - 6 splines | 1 | 1 |
| 72 | 9281 | Sprocket 80A30 T 1 1/2" ø | 1 | 1 |
| 73 | UC208-24 | Bearing 1 1/2" | 2 | 2 |
| 74 | FD208 | Flange for 2 grease fitting | 2 | 2 |
| 75 | 130-38702 | Interior chain guard | 1 | 1 |
| 76 | 300-36250 | Bolt 3/8" NC x 1" lg + nylon locknut | 4 | 4 |
| 77 | 110-20811 | Orbit motor support | 1 | 1 |
| 78 | 300-38310 | Bolt 7/16" NC x 1 1/2" lg + nylon locknut | 4 | 4 |
| 79 | 300-32220 | Bolt 1/4" NC x 3/4" lg + lock washer | 1 | 1 |
| 80 | 300-32250 | Bolt 1/4" NC x 1" lg + nylon locknut | 2 | 2 |
| 81 | 140-13071 | Hoses mounting plate | 1 | 1 |
| 82 | 110-01112 | Mounting support plate | 1 | 1 |
| 83 | Std. | Cotter pin 1/8" x 1" | 1 | 1 |
| 84 | 140-04081 | Scraper blade (hardened steel, not sharpened, reversible) 1/2" x 4" x 84 1/2" lg | opt. | - |
| 84 | 140-04091 | Scraper blade (hardened steel, not sharpened, reversible) 1/2" x 4" x 90 1/2" lg | - | opt. |
| 85 | 140-04141 | Scraper blade (hardened steel, sharpened, not reversible) 1/2" x 6" x 84 1/2" lg | opt. | - |
| 85 | 140-04151 | Scraper blade (hardened steel, sharpened, not reversible) 1/2" x 6" x 90 1/2" lg | - | opt. |
| 86 | 110-10391 | TIVAR scraper blade holder 3/8" x 5 1/2" x 84 1/2" lg | opt. | - |
| 86 | 110-10381 | TIVAR scraper blade holder 3/8" x 5 1/2" x 90 1/2" lg | - | opt. |
| 87 | 190-01331 | TIVAR scraper blade 1" x 84 1/2" lg | opt. | - |
| 87 | 190-01321 | TIVAR scraper blade 1" x 90 1/2" lg | - | opt. |
| 88 | 140-03991 | TIVAR scraper blade support 1/4" x 2" x 84 1/2" lg | opt. | - |
| 88 | 140-03981 | TIVAR scraper blade support 1/4" x 2" x 90 1/2" lg | - | opt. |
| 89 | 319-38370 | Plow bolt 7/16" NC x 2 1/2" lg + nut & lock washer (9) | opt. | opt. |
| 90 | 140-07881 | Support plate (2) | opt. | opt. |
| 91 | 110-10244 | Cylinder fastener (right side) | opt. | opt. |
| 92 | 300-44550 | Bolt 5/8" NC x 5 1/2" lg + nylon locknut (4) | opt. | opt. |
| 93 | 110-10243 | Cylinder mounting attachment (left side) | opt. | opt. |
| 94 | 51472 | Hairpin cotter (CP132H) (8) | opt. | opt. |
| 95 | D-600-51 | Pin 1" x 3" lg (4) | opt. | opt. |
| 96 | 300-46370 | Bolt 3/4" NC x 2 1/2" lg + nylon locknut (4) | opt. | opt. |
| 97 | 25TR08 | Cylinder 2 1/2" x 8" standard (2) | opt. | opt. |
| 98 | 190-02591 | Hose 3/8" x 16 1/2" lg + 2 fittings 6U106 (2) | opt. | opt. |

SNOWBLOWERS P-860IV & P-920IV

| REF. | PART # | DESCRIPTION | QTY | |
|------|-----------|---|---------|---------|
| | | | P-860IV | P-920IV |
| 99 | 190-02581 | Hose 3/8" x 19" lg + 2 fittings 6U106 (2) | opt. | opt. |
| 100 | 5856x6x6 | «T» 3/8" NPT (2) | opt. | opt. |
| 101 | 130-30421 | Hose support | opt. | opt. |
| 102 | 110-18811 | Rear mount scraper blade frame | opt. | - |
| 102 | 110-08341 | Rear mount scraper blade frame | - | opt. |
| 103 | 140-12021 | Plow blade (standard steel, reversible) 3/8" x 4" x 85" lg | opt. | - |
| 103 | 140-11171 | Plow blade (standard steel, reversible) 3/8" x 4" x 91" lg | - | opt. |
| 103 | 140-15271 | Plow blade (stainless steel, reversible) 3/8" x 4" x 85" lg | opt. | - |
| 103 | 140-15281 | Plow blade (stainless steel, reversible) 3/8" x 4" x 91" lg | - | opt. |
| 104 | 319-38310 | Plow bolt 7/16" NC x 1 1/2" lg + nut & lock washer (9/860) (11/920) | opt. | opt. |
| 105 | 190-04721 | TIVAR plow blade 1" x 4" x 85" lg | opt. | - |
| 105 | 190-02172 | TIVAR plow blade 1" x 4" x 91" lg | - | opt. |
| 106 | 130-24501 | TIVAR plow blade support 84 1/4" lg | opt. | - |
| 106 | 130-09072 | TIVAR plow blade support 90 1/4" lg | - | opt. |
| 107 | 321-38355 | Carriage bolt 7/16" NC x 2 1/4" lg + nut & lock washer (9/860) (11/920) | opt. | opt. |
| 108 | 190-02193 | Proximity indicator (2) | opt. | opt. |
| 109 | 321-40310 | Carriage bolt 1/2" NC x 1 1/2" lg + lock washer & nut | opt. | opt. |
| 110 | 140-09571 | Spacer 1/8" x 1" x 4 1/2" lg + nylon locknut | 2 | 2 |
| 111 | 300-54460 | Bolt 1 1/4" NC x 4" lg + nylon locknut | 1 | 1 |
| 112 | 140-10571 | Back plate | 3 | 3 |
| 113 | Std. | Lynch pin 1/4" x 1 3/4" | 3 | 3 |
| 114 | 302-46520 | Bolt 3/4" NF x 5" lg + nylon locknut | 2 | 2 |
| 115 | 110-15201 | Hoses support | 1 | 1 |
| 116 | 150-05961 | Pin category 2 (1" diameter) (top link) | 1 | 1 |
| 117 | 336-38000 | Nut 7/16" NC | 4 | 4 |
| 118 | Std. | Roll pin 5/16" x 2" | 2 | 2 |
| 119 | TSB-74104 | Hoses support for deflector cylinder | opt. | opt. |
| 120 | 300-38250 | Bolt 7/16" NC x 1" lg + nylon locknut & flat washer 3/8" | 3 | 3 |
| 121 | 300-38310 | Bolt 7/16" NC x 1 1/2" lg + nylon locknut + flat washer 3/8" | 4 | 4 |
| 122 | 150-12741 | Flat washer 7/16" heavy duty | 4 | 4 |

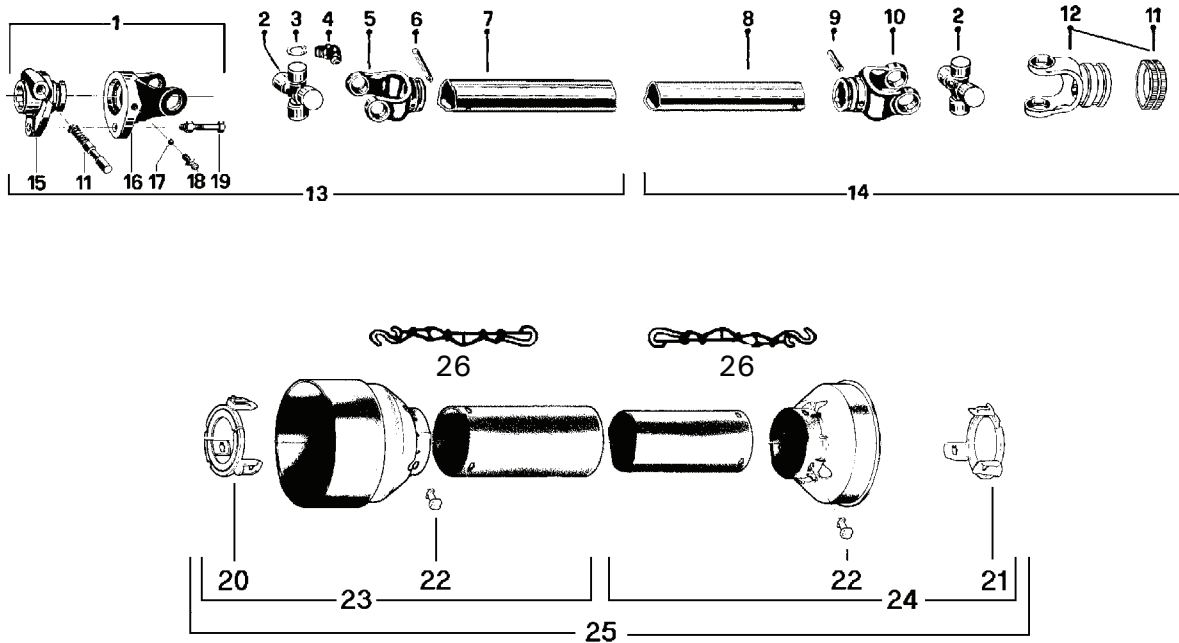
SEMI-INDUSTRIAL CHUTE PSIG-7486IV

170-03525



| REF. | PART # | DESCRIPTION | QTY |
|------|-----------|---|-----|
| 1 | 110-22854 | Chute base | 1 |
| 2 | 110-22521 | Lower chute deflector | 1 |
| 3 | 110-22511 | Upper chute deflector | 1 |
| 4 | 140-14041 | Connecting rod | 2 |
| 5 | 110-45611 | Access panel | 1 |
| 6 | 8376 | Adjustable clamp fastener (welded) | 1 |
| 7 | 150-05311 | Spacer for connecting rod | 2 |
| 8 | 378-36500 | Washer | 2 |
| 9 | 300-40400 | Bolt 1/2" NC x 3" lg + nylon locknut & washer | 2 |
| 10 | Std. | Grease fitting 1/4"-28 straight | 8 |
| 11 | 346-37000 | Écrou à blocage de nylon 3/8" NC | 2 |

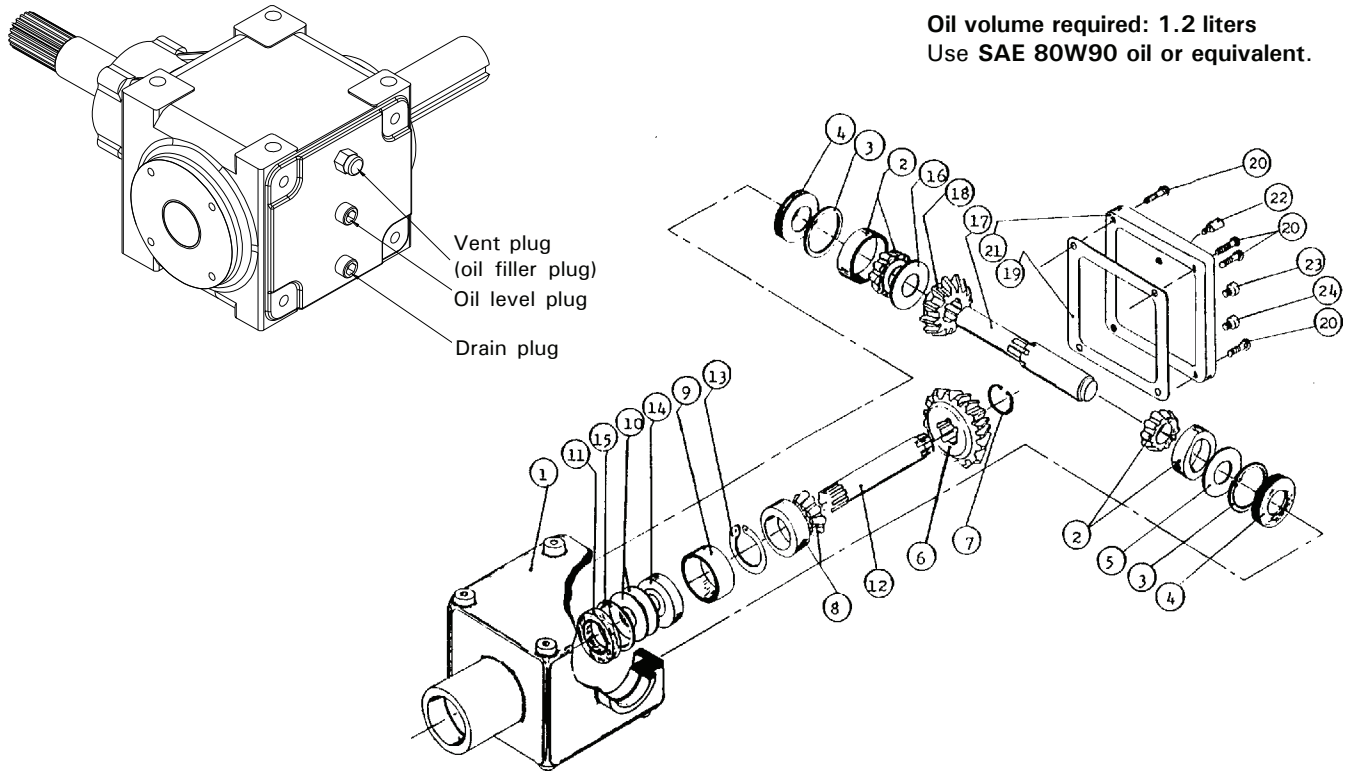
P.T.O. SHAFT # 190-00471 (T60)



| REF. | PART # | DESCRIPTION | QTY |
|------|------------|--|-----|
| 1 | 8237-1 | Safety shear yoke | 1 |
| 2 | 8238 | U joint + 4 retaining rings + 1 grease fitting | 2 |
| 3 | 8061 | Retaining ring | 8 |
| 4 | 8110 | Grease fitting | 2 |
| 5 | 8240 | Yoke for outer tube | 1 |
| 6 | 9210-E | Stopper for outer tube | 1 |
| 7 | 9212-121 | Outer tube | 1 |
| 8 | 8077-121 | Inner tube | 1 |
| 9 | 8075 | Stopper for inner tube | 1 |
| 10 | 8239 | Yoke for inner tube | 1 |
| 11 | 8363 | Collar kit | 2 |
| 12 | 8250 | Yoke with hole 1 3/8"-6 splines + yoke stopper (#11 included) | 1 |
| 13 | 8241-1-121 | P.T.O. section, side with safety shear bolt, outer part, with protector | 1 |
| 14 | 8242-121 | P.T.O. section, side without safety shear bolt, inner part, with protector | 1 |
| 15 | 8243-1 | Adaptor with yoke stopper | 1 |
| 16 | 8244 | Yoke and shearplate | 1 |
| 17 | 9205 | Ball | 17 |
| 18 | 8071 | Grease fitting | 1 |
| 19 | 8218 | Safety shear bolt M10 x 60mm | 1 |
| 20 | 8246 | Bearing ring for outer guard tube | 1 |
| 21 | 8245 | Bearing ring for inner guard tube | 1 |
| 22 | 8109 | Stopper | 6 |
| 23 | 8248-121 | Outer shield | 1 |
| 24 | 8247-121 | Inner shield | 1 |
| 25 | 8249-121 | Complete shield | 1 |
| 26 | 8303 | Safety chain | 2 |

GEAR BOX # 190-01491 (T27D modified)

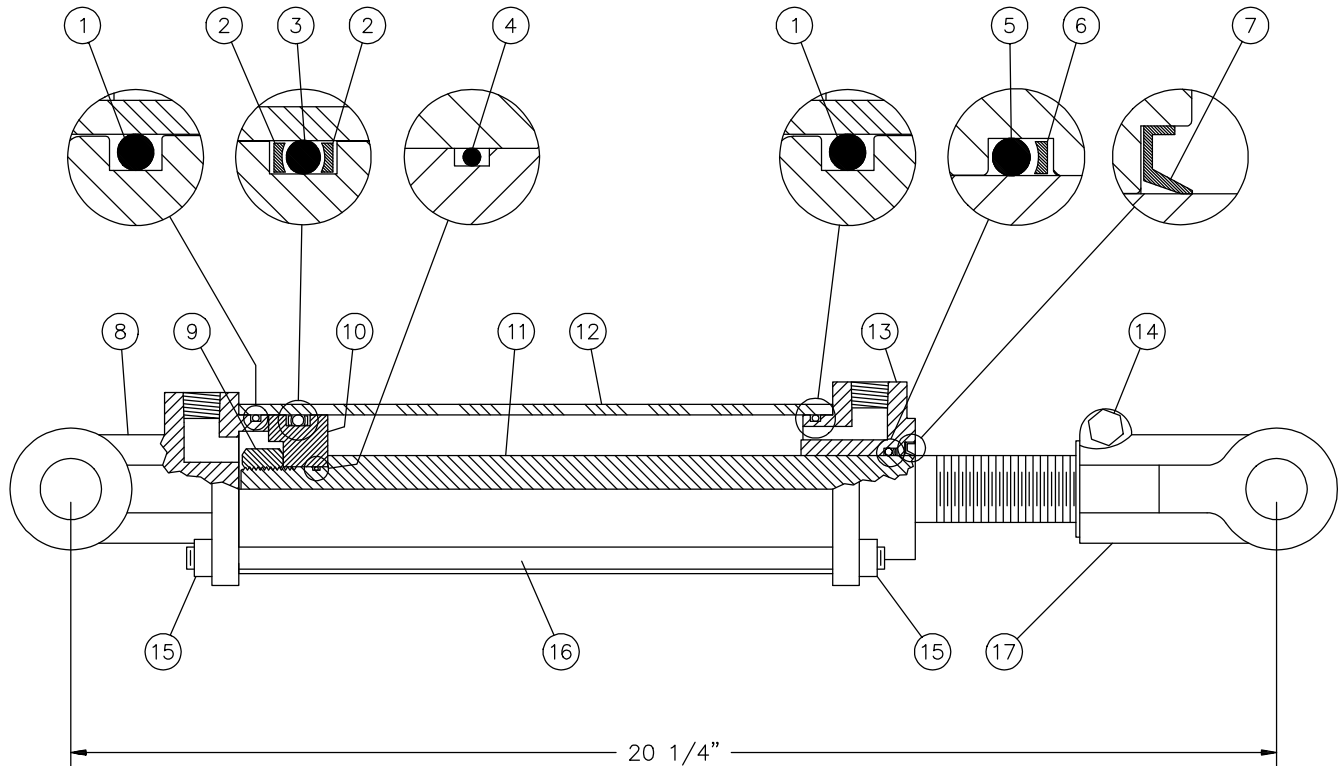
190-01491



| REF. | PART # | DESCRIPTION | QTY |
|------|-----------|--|-----|
| 1 | 8043 | Casing | 1 |
| 2 | 30208-A | Roller bearing | 2 |
| 3 | 8045 | Inside circlip 80mm | 2 |
| 4 | 8046 | Oil seal 40 x 80 x 12mm | 2 |
| 5 | 8047 | Adjusting washer | 1 |
| 6 | 8048 | Gear Z18 | 1 |
| 7 | 8049 | Outside circlip 40mm | 1 |
| 8 | 30207-A | Roller bearing | 1 |
| 9 | 8051 | Spacer ring | 1 |
| 10 | 8052 | Adjusting washer | 2 |
| 11 | 8053 | Oil seal 35 x 72 x 12mm | 1 |
| 12 | 8054 | Side shaft (1 1/4" - 19 splines) | 1 |
| 13 | 8055 | Inside circlip 72mm | 1 |
| 14 | 6207-2RS | Ball bearing | 1 |
| 15 | 8057 | Outside circlip 35mm | 1 |
| 16 | 8058 | Adjusting washer | 1 |
| 17 | 190-01492 | Impeller shaft 1.575" | 1 |
| 18 | 8060 | Gear Z-18 | 1 |
| 19 | - - - | Use silicone caulking | - |
| 20 | 8062 | Bolt M10 x 14mm | 4 |
| 21 | 8063 | Cover | 1 |
| 22 | 8065 | Vent plug (oil filler) | 1 |
| 23 | 8064 | Plug (oil level) | 1 |
| 24 | 8064 | Plug (drain) | 1 |

CYLINDER 25TR08

15050

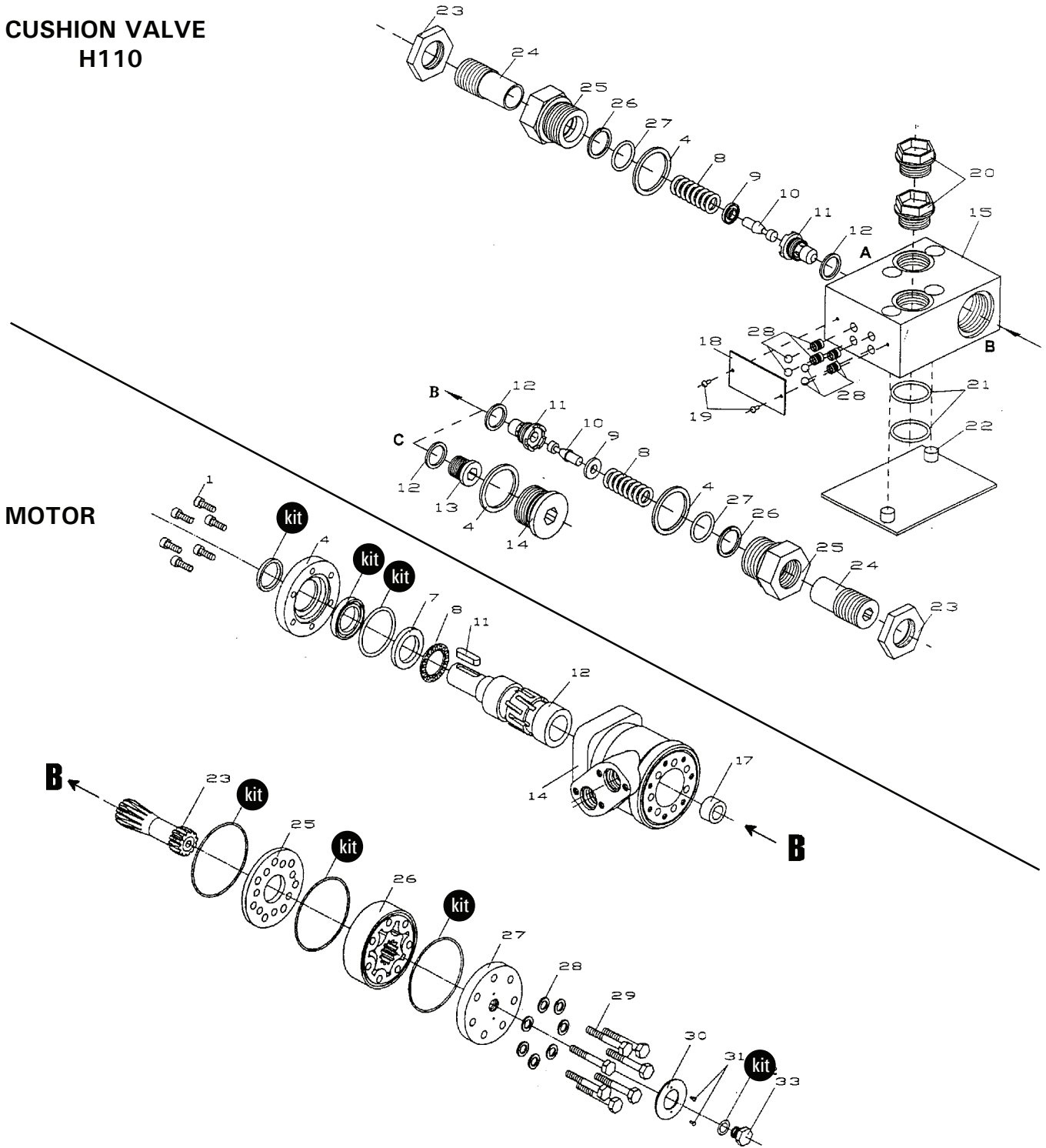


| REF. | PART # | DESCRIPTION | QTY |
|------|-------------|---|-----|
| 1 | See #RK25TR | O-ring 1/8" x 2 1/4" x 2 1/2" | 2 |
| 2 | See #RK25TR | Back-up 2 1/2" o.d. x 3/16 ø | 2 |
| 3 | See #RK25TR | O-ring 3/16" x 2 1/8" x 2 1/2" | 1 |
| 4 | See #RK25TR | O-ring 1/16" x 5/8" x 3/4" | 1 |
| 5 | See #RK25TR | O-ring 1/8" x 1 1/8" x 1 3/8" | 1 |
| 6 | See #RK25TR | Back-up 1 3/8" o.d. x 1/8" ø | 1 |
| 7 | See #RK25TR | Wiper 1 1/8" i.d. x 1 5/8" o.d. | 1 |
| 8 | 492401 | Yoke (for 2 1/2" tube) | 1 |
| 9 | 338-46000 | Nut 3/4" NF | 1 |
| 10 | 4924-31 | Piston 2 1/2" ø | 1 |
| 11 | 491980 | Piston rod 1 1/8" | 1 |
| 12 | 491668 | Cylinder body 2 1/2" ø | 1 |
| 13 | 492421 | Head (for 2 1/2" tube) | 1 |
| 14 | 300-36355 | Bolt 3/8" NC x 2 1/4" + nut | 1 |
| 15 | 336-36000 | Nut 3/8" NC | 8 |
| 16 | Std. | Threaded rod 3/8" NC x 12" lg | 4 |
| 17 | 458599 | Yoke (for 1 1/8" rod) | 1 |
| NI* | 8183 | Pin 1" ø + cotter pin | 2 |
| NI* | RK25TR | Repair kit for cylinder 2 1/2" (includes # 1, 2, 3, 4, 5, 6, & 7) | 1 |

*NI = NOT ILLUSTRATED

HYDRAULIC MOTOR MLH-315








CUSHION VALVE H110








| REF. | PART # | DESCRIPTION | QTY |
|------|--------|----------------------------|-----|
| kit | 8368 | Set of seals..... | 1 |
| 11 | 8369 | Key for "Orbit" motor..... | 1 |

TORQUE CHART

TORQUE SPECIFICATION TABLE

| Thread UNC and UNF | | Grade 2  | | | | Grade 5    | | | | Grade 8*    | | | |
|--------------------|-------|---|------|-----------------------|-------|--|------|-----------------------|--------|--|------|-----------------------|--------|
| Bolt size | | Torque | | | | Torque | | | | Torque | | | |
| Inches | mm | Pound feet min. | max. | Newton meters min. | max. | Pound feet min. | max. | Newton meters min. | max. | Pound feet min. | max. | Newton meters min. | max. |
| 1/4 | 6.35 | 5 | 6 | 6.8 | 8.13 | 9 | 11 | 12.2 | 14.9 | 12 | 15 | 16.3 | 30.3 |
| 5/16 | 7.94 | 10 | 12 | 13.6 | 16.3 | 17 | 20.5 | 23.1 | 27.8 | 24 | 29 | 32.5 | 39.3 |
| 3/8 | 9.53 | 20 | 23 | 27.1 | 31.2 | 35 | 42 | 47.5 | 57.0 | 45 | 54 | 61.0 | 73.2 |
| 7/16 | 11.11 | 30 | 35 | 40.7 | 47.4 | 54 | 64 | 73.2 | 86.8 | 70 | 84 | 94.9 | 113.9 |
| 1/2 | 12.70 | 45 | 52 | 61.0 | 70.5 | 80 | 96 | 108.5 | 130.2 | 110 | 132 | 149.2 | 179.0 |
| 9/16 | 14.29 | 65 | 75 | 88.1 | 101.6 | 110 | 132 | 149.2 | 179.0 | 160 | 192 | 217.0 | 260.4 |
| 5/8 | 15.88 | 95 | 105 | 128.7 | 142.3 | 150 | 180 | 203.4 | 244.1 | 220 | 264 | 298.3 | 358.0 |
| 3/4 | 19.05 | 150 | 185 | 203.3 | 250.7 | 270 | 324 | 366.1 | 439.3 | 380 | 456 | 515.3 | 618.3 |
| 7/8 | 22.23 | 160 | 200 | 216.8 | 271.0 | 400 | 480 | 542.4 | 650.9 | 600 | 720 | 813.6 | 976.3 |
| 1 | 25.40 | 250 | 300 | 338.8 | 406.5 | 580 | 696 | 786.5 | 943.8 | 900 | 1080 | 1220.4 | 1464.5 |
| 1 1/8 | 25.58 | - | - | - | - | 800 | 880 | 1084.8 | 1193.3 | 1280 | 1440 | 1735.7 | 1952.6 |
| 1 1/4 | 31.75 | - | - | - | - | 1120 | 1240 | 1518.7 | 1681.4 | 1820 | 2000 | 2467.9 | 2712.0 |
| 1 3/8 | 34.93 | - | - | - | - | 1460 | 1680 | 1979.8 | 2278.1 | 2380 | 2720 | 3227.3 | 3688.3 |
| 1 1/2 | 38.10 | - | - | - | - | 1940 | 2200 | 2630.6 | 2983.2 | 3160 | 3560 | 4285.0 | 4827.4 |

* Thick nuts must be used with grade 8 bolts.

| Size of screw | Thread | Pitch (mm) | Grade 4T   | | | | Grade 7T  | | | | Grade 8T   | | | |
|---------------|--------|------------|--|------|-----------------------|-------|---|------|-----------------------|-------|--|------|-----------------------|-------|
| | | | Torque | | | | Torque | | | | Torque | | | |
| | | | Pound feet min. | max. | Newton meters min. | max. | Pound feet min. | max. | Newton meters min. | max. | Pound feet min. | max. | Newton meters min. | max. |
| M6 | UNC | 1.00 | 3.6 | 5.8 | 4.9 | 7.9 | 5.8 | 9.4 | 7.9 | 12.7 | 7.2 | 10 | 9.8 | 13.6 |
| M8 | UNC | 1.25 | 7.2 | 14 | 9.8 | 19 | 17 | 22 | 23 | 29.8 | 20 | 26 | 27.1 | 35.2 |
| M10 | UNC | 1.5 | 20 | 25 | 27.1 | 33.9 | 34 | 40 | 46.1 | 54.2 | 38 | 46 | 51.5 | 62.3 |
| M12 | UNC | 1.75 | 28 | 34 | 37.9 | 46.1 | 51 | 59 | 69.1 | 79.9 | 57 | 66 | 77.2 | 89.4 |
| M14 | UNC | 2.0 | 49 | 56 | 66.4 | 75.9 | 81 | 93 | 109.8 | 126 | 96 | 109 | 130.1 | 147.7 |
| M16 | UNC | 2.0 | 67 | 77 | 90.8 | 104.3 | 116 | 130 | 157.2 | 176.2 | 129 | 145 | 174.8 | 196.5 |
| M18 | UNC | 2.0 | 88 | 100 | 119.2 | 136 | 150 | 168 | 203.3 | 227.6 | 175 | 194 | 237.1 | 262.9 |
| M20 | UNC | 2.5 | 108 | 130 | 146.3 | 176.2 | 186 | 205 | 252 | 277.8 | 213 | 249 | 288.6 | 337.4 |
| M8 | UNF | 1.0 | 12 | 17 | 16.3 | 23 | 19 | 27 | 25.7 | 36.6 | 22 | 31 | 29.8 | 42 |
| M10 | UNF | 1.25 | 20 | 29 | 27.1 | 39.3 | 35 | 47 | 47.4 | 63.7 | 40 | 52 | 54.2 | 70.5 |
| M12 | UNF | 1.25 | 31 | 41 | 42 | 55.6 | 56 | 68 | 75.9 | 92.1 | 62 | 75 | 84 | 101.6 |
| M14 | UNF | 1.5 | 52 | 64 | 70.5 | 86.7 | 90 | 106 | 122 | 143.6 | 107 | 124 | 145 | 168 |
| M16 | UNF | 1.5 | 69 | 83 | 93.5 | 112.5 | 120 | 138 | 162.6 | 187 | 140 | 158 | 189.7 | 214.1 |
| M18 | UNF | 1.5 | 100 | 117 | 136 | 158.5 | 177 | 199 | 239.8 | 269.6 | 202 | 231 | 273.7 | 313 |
| M20 | UNF | 1.5 | 132 | 150 | 178.9 | 203.3 | 206 | 242 | 279.1 | 327.9 | 246 | 289 | 333.3 | 391.6 |

Use the above torques when special torque is not given.

NOTE: These values apply to fasteners as received from supplier, dry, or when lubricated with normal engine oil. They do not apply if extreme pressure lubricants are used.

WARRANTY

PRONOVOST warrants this product to the initial purchaser for the period of one year from the date of purchase against defects in materials and workmanship.

We will replace or repair defective parts free of charge if they are returned to our plant in St-Tite, Quebec, Canada.

Transportation charges are the responsibility of the customer. This warranty is not transferable.

Hydraulic cylinders are covered by the manufacturer of these items.

The PTO shafts are warranted by the manufacturer and cover **only** defects in material and workmanship, and is conditional to recommended use and installation only.

All PRONOVOST spare parts purchased are covered by a three (3) month warranty.

This warranty becomes void and nul if the equipment is modified, breaks down as the result of an accident, is not operated according to manufacturer's recommendations, damaged by negligence or if maintenance has not been carried out as specified.

Our obligation is limited to the replacement or repair of the defective part. PRONOVOST accepts no responsibility for direct or indirect consequential damages of any kind.

Ce manuel est aussi disponible en français.
Veuillez téléphoner.



INNOVATION - EXCELLENCE

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