



**OPERATOR'S / PARTS
MANUAL**



**Snowblowers
Models**

P-74-IV

P-80-IV

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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 and left sides are identified as shown on Figure 1.

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

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

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

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

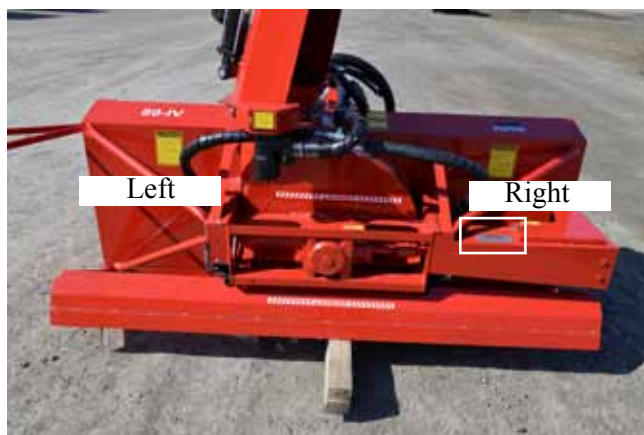


Figure 1

MODEL: _____ 

SERIAL N°: _____ 

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 24.
- 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. The following photos indicate where each one must be installed.

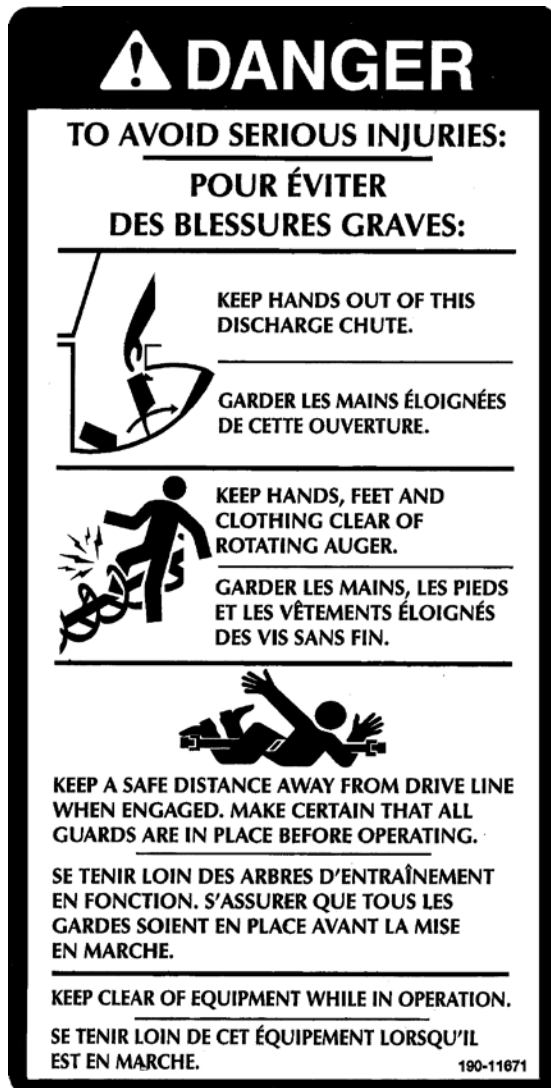


Figure 3
Decal A

Part n°: 190-11671



Figure 4
Decal B

Part n°: 190-07723



Figure 5
Decal C

Part n°: A103



Figure 6

DECALS (cont'd)

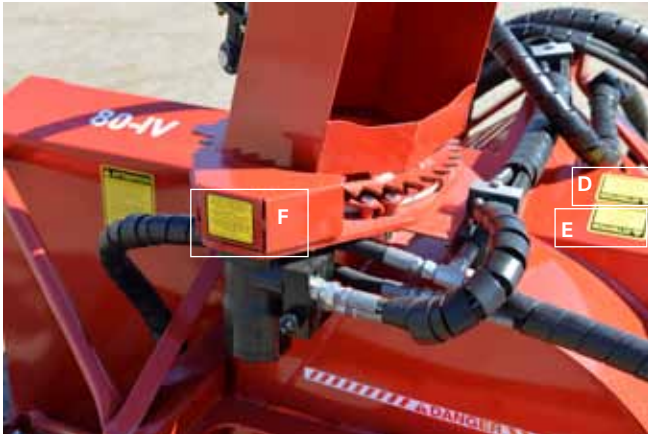


Figure 7



Figure 10
Decal F

Part n°: 190-10991



Figure 8
Decal D

Part n°: 190-11581



Figure 9
Decal E

Part n°: 190-11641

DECALS (cont'd)



Figure 11
Part n°: A108



Figure 12
Part n°: A 109

MAINTENANCE DECALS

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



Figure 13

Part n°: A 106

ASSEMBLY



Figure 14

ASSEMBLY

- 1) The Snowblower is shipped partly assembled.
- 2) Install 3-point system according to the model of your Snowblower. (See pages 16 to 23 for parts numbers) (Fig. 14).
- 3) Install P.T.O. shaft with the shear pin end onto the Snowblower gear box. 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) For the installation of the chute rotation mechanism, please refer to parts section, according to the type used.

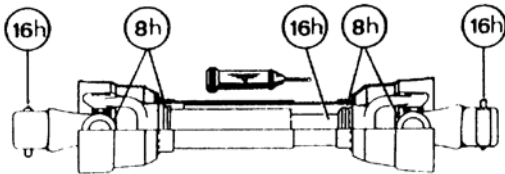
STARTING-UP

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) Verify for adequate tightness of all fastening devices. Refer to torque chart on page 24.
- 4) Make sure of a 540 RPM input to your snowblower.
- 5) In order to avoid damaging your snowblower, adjust the speed of descent of your 3 point hitch to prevent striking the ground too hard.
- 6) Adjust the hydraulic flow in order to have a good control of the rotation speed of the chute.

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 low temperature grease. Drive line tubes must slide easily even in cold weather. Clean off old hardened grease and apply fresh grease as needed.

- 6) Check oil level in gear box once a month. If necessary add 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. Use gear box oil S.A.E. W90 rated API, class GL-5.
- 10) Check all nuts and bolts once a year. If necessary use torque chart on page 24.
- 11) For the PTO shaft, always use a grade 2 shear bolt.
- 12) 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.

CHAIN REPLACEMENT

- 1) When installing a new chain, it is strongly recommended to also change all the sprockets of your drive. The worn sprockets no longer have the proper pitch for your new chain; causes stretching and premature wear of the chain. Always route your chain according to the defined configuration.

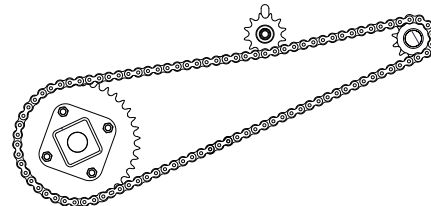


Figure 15

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.

SPECIFICATIONS

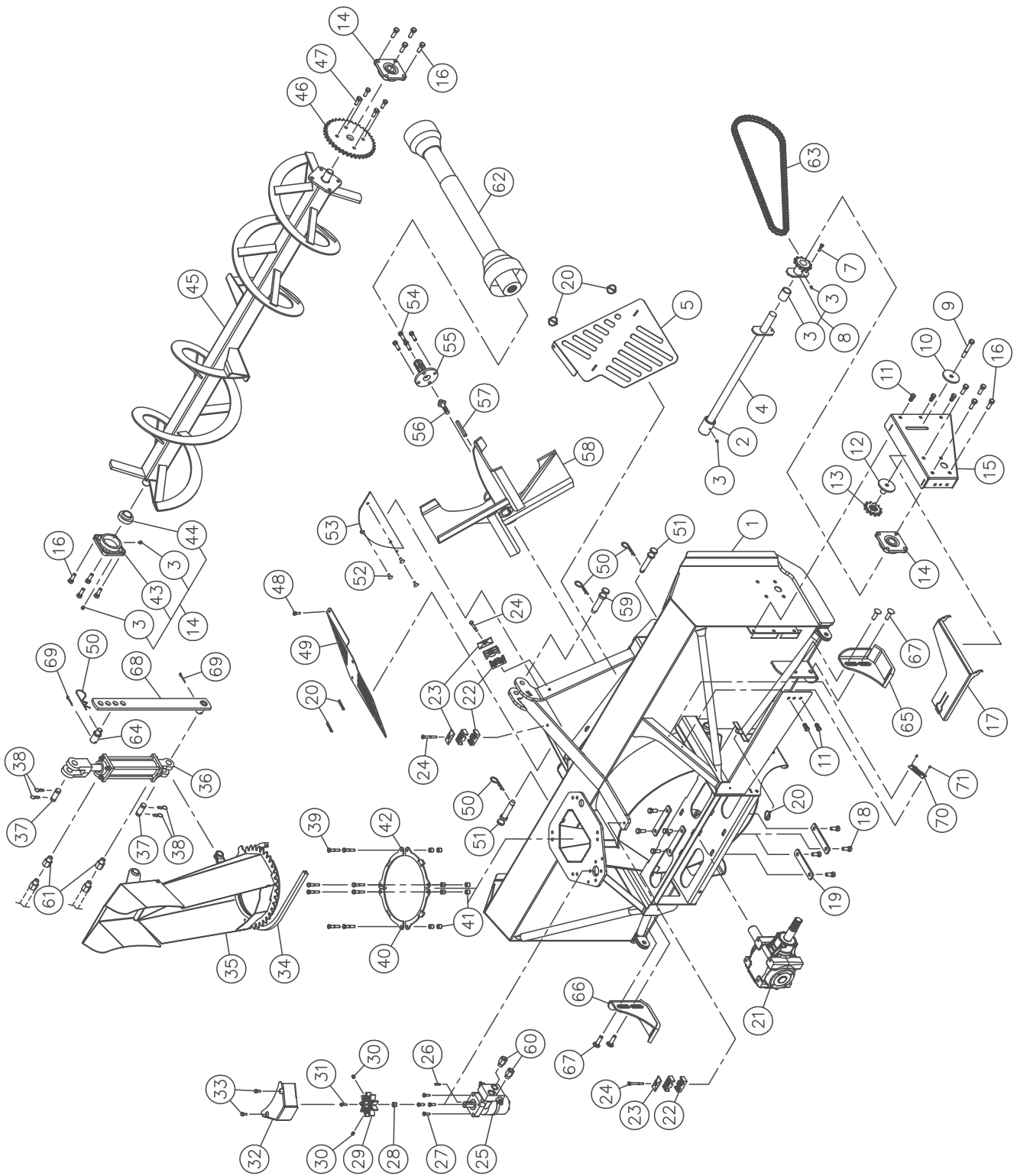
SPECIFICATIONS

MODEL	P-74-IV	P-80-IV
Horse power recommended	35 to 60	35 to 60
Cutting width	74"	80"
Cutting height	31"	31"
Drum diameter	26"	26"
Depth of drum	9"	9"
Impeller blades	4	4
Height - impeller center	16"	16"
Size of impeller shaft	1 ⁹ / ₁₆ "	1 ⁹ / ₁₆ "
Impeller RPM	540	540
Auger diameter	17"	17"
Drive chain	60	60
Chute	Included	Included
Antifriction ring for chute	Included	Included
Chute rotation mechanism	Manual	-
	Hyd. cylinder	-
	Hyd. motor	Included
Deflector adjustment	Manual	-
	Hyd. cylinder	Included
Hitch category	1	1
PTO shaft category	T50	T50
Weight including chute (lbs)	725	740

Design and specifications subject to change without notice.

SNOWBLOWERS P-74-IV P-80-IV

170-07871R3



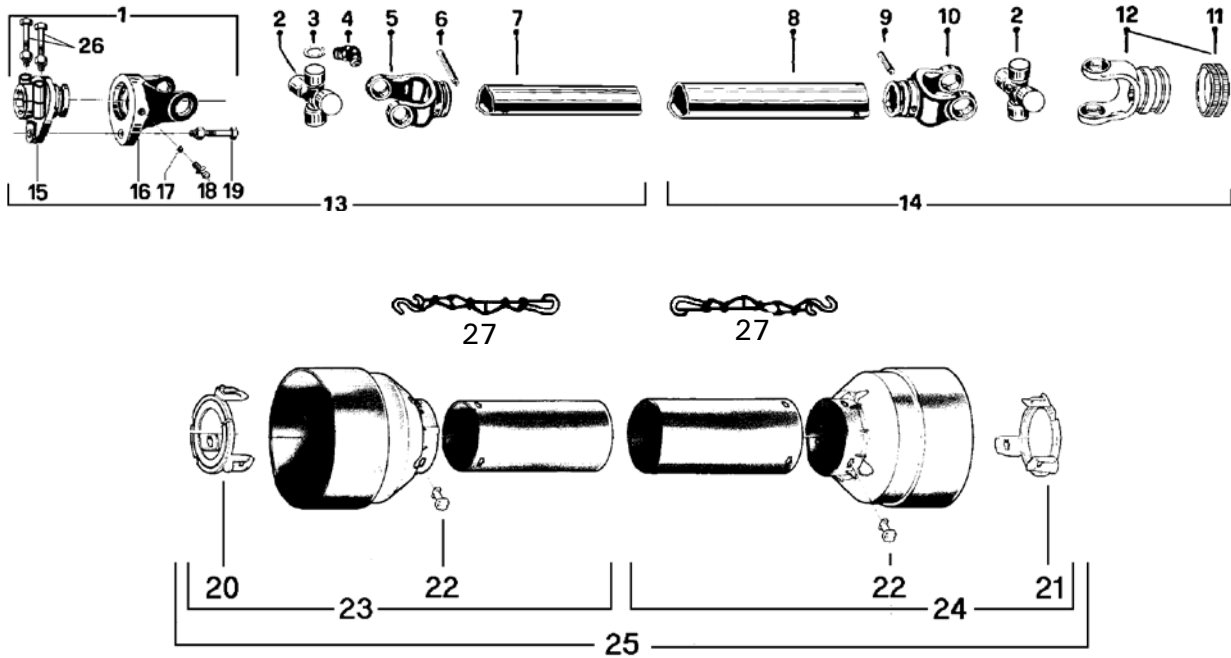
SNOWBLOWERS P-74-IV P-80-IV (cont'd)

REF.	PART #	DESCRIPTION	QTY	
			74	80
1	120-11811	Frame P-74-IV	1	-
1	120-10771	Frame P-80-IV	-	1
2	6466	Ring 1 1/4" - 19 splines (welded)	1	1
3	400-00145	Grease fitting 1/4" - 28 straight	8	8
4	110-45821	Drive shaft 26 1/16" (included #2)	1	-
4	110-62991	Drive shaft 29 1/16" (included #2)	-	1
5	131-35502	Impeller guard, right side	1	1
6	6569	Sprocket #60 + ass. shear plate (included #3 and #8)	1	1
7	312-32250	Bolt 1/4" NC x 1" lg grade 2 + nylon locknut	1	1
8	6568	Bushing 1 1/4" i.d. x 1 7/16" o.d. x 2 1/2" lg.	1	1
9	300-40430	Bolt 1/2" NC x 3 1/2" lg + nylon locknut	1	1
10	130-08461	Idler	1	1
11	300-38250	Bolt 7/16" NC x 1" lg + Nylon locknut.....	5	5
12	110-07781	Idler	1	1
13	8186	Idler sprocket #60.....	1	1
14	UCFD207-20	Gear box 1 1/4" + ductile iron casting flange and 2 grease fitting	3	3
15	131-35131	Side chain guard	1	1
16	300-40310	Bolt 1/2" NC x 1 1/2" lg + nylon locknut	12	12
17	131-35231	Drive shaft guard	1	1
18	300-40280	Bolt 1/2" NC x 1" lg + lock washer	8	8
19	130-05972	Gear box spacer	4	4
20	400-00096	Lynch pin 3/16" x 1 1/4"	5	5
21	190-01491	Gear box	1	1
22	400-00174	Hose support 3/8"	3	3
23	400-00175	Hose support cover	3	3
24	300-34385	Bolt 5/16" NC x 2 3/4" lg + nylon locknut	2	2
25	620-00003	Orbit hydraulic motor MLH-125 + cushion valve	1	1
26	8369	Orbit motor key	1	1
27	300-36250	Bolt 3/8" NC x 1" lg + lock washer	4	4
28	160-21091	Rotation spacer	1	1
29	110-44331	Sprocket 9 teeth	1	1
30	323-36160	Hexagonal socket set screw 3/8" NC x 3/8" lg	2	2
31	300-32250	Bolt 1/4" NC x 1" lg + lock washer	1	1
32	131-35481	Orbit motor guard	1	1
33	300-34220	Bolt 5/16" NC x 3/4" lg + lock washer	2	2
34	190-04091	U-shaped UHMW approx. 11 1/2" i.d.	1	1
35	110-63022	Chute	1	1
36	25TR08	Cylinder	1	1
37	6005-1	Clevis pin 1" x 3 1/8" lg	2	2
38	400-00081	Hairpin cotter 7/8"	4	4
39	300-36340	Bolt 3/8" NC x 2" lg + flat washer	8	8
40	130-31291	Chute hold down plate	3	3
41	160-07371	Bushing	8	8
42	130-31281	Chute hold down plate	1	1
43	FD207	Ductile iron casting flange and 2 grease fittings	3	3
44	UC207-20	Gear box 1 1/4"	3	3
45	110-65221	Auger P-74-IV	1	-
45	110-63051	Auger P-80-IV	-	1
46	8021	Sprocket 60A38 T 1 1/4" ø	1	1
47	300-38280	Bolt 7/16" NC x 1 1/4" lg + two-way locknut	4	4
48	300-34250	Bolt 5/16" NC x 1" lg + nylon locknut	1	1
49	131-35501	Impeller guard, left side	1	1
50	400-00097	Hitch pin clip 5/32"	3	3
51	6253	Pins category 1	2	2
52	321-34220	Carriage bolt 5/16" NC x 3/4" lg + nylon locknut	3	3
53	131-35562	Impeller deflector	1	1
54	300-38310	Bolt 7/16" NC x 1 1/2" lg + nylon locknut	4	4
55	110-39181	Splined shaft adaptor	1	1
56	190-01411	Bolt 5/8" NC x 1 1/2" lg modified	1	1
57	140-29881	Impeller key	1	1
58	110-62981	Impeller 26" ø 4 blades	1	1
59	160-06012	Pin category 1 (3 point top)	1	1
60	RSP-1/16x10ORB	Kit of 2 unidirectional restrictors	1	1

SNOWBLOWERS P-74-IV P-80-IV (cont'd)

REF.	PART #	DESCRIPTION	QTY	
			74	80
60	RSP-1/16x06NPT	Kit of 2 unidirectionnal restrictors 3/8" NPT	opt.	opt.
61	RSP-1/16x08NPT	Kit of 2 unidirectionnal restrictors 1/2" NPT	opt.	opt.
62	400-00418	PTO shaft (T50)	1	1
63	190-19381	Chain # 60 64 1/2" lg	1	1
63	59-60	Offset link n° 60	1	1
64	150-00641	Chute adjusting rod's cotter	1	1
65	110-15393	Right skid shoe	1	1
66	110-15394	Left skid shoe.....	1	1
67	321-40310-AD	Carriage bolt 1/2" NC x 1 1/2" lg + nylon locknut.....	1	1
68	110-02991	Chute adjusting rod	1	1
69	400-00095	Cotter pin 5/32" x 1 1/2"	2	2
70	400-00073	serial number plate	1	1
71	400-00122	Aluminium rivet 1/8"	2	2
NI	DEC-P-74-IV	Decal kit for snowblower P-74-IV	1	-
NI	DEC-P-80-IV	Decal kit for snowblower P-80-IV	-	1

P.T.O. SHAFT # 8114-EG (T50)

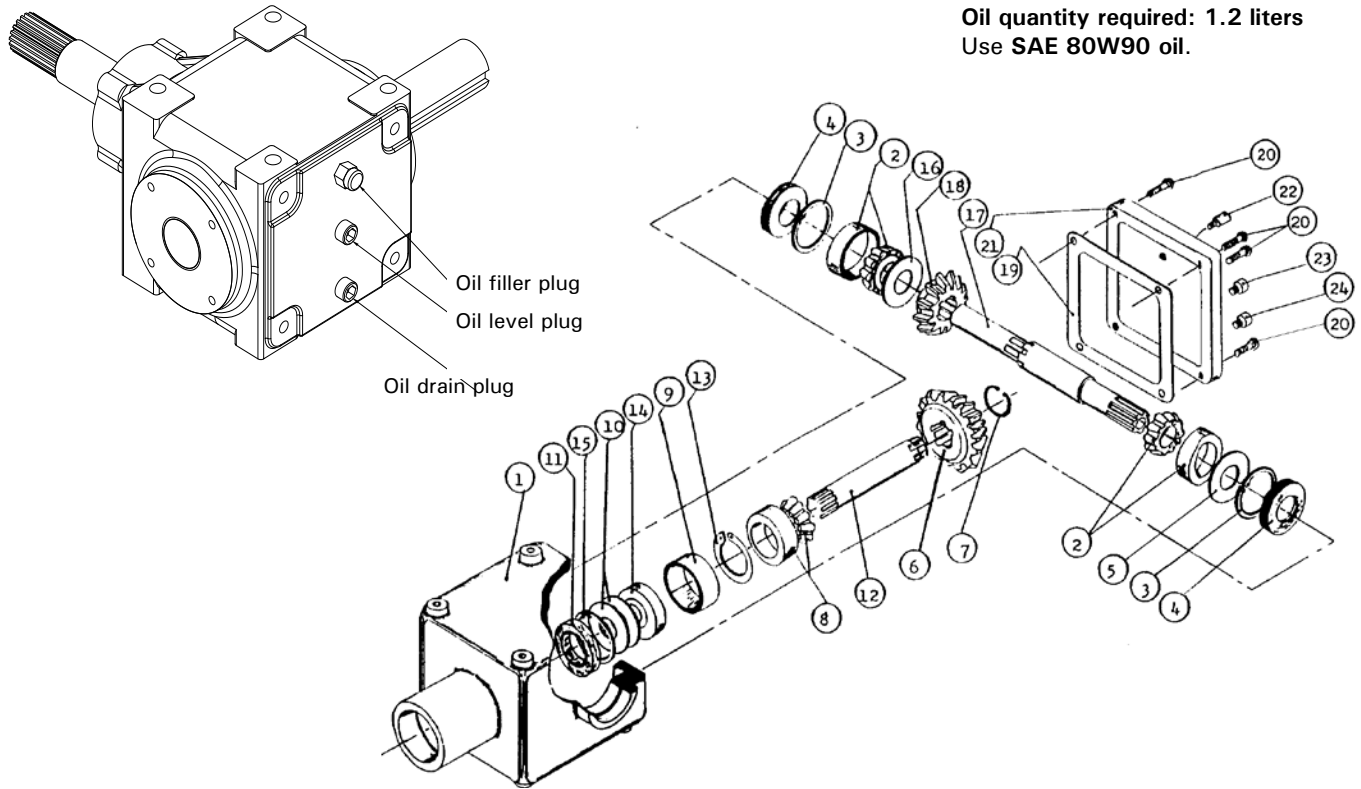


REF.	PART #	DESCRIPTION	QTY
1	8221	Safety shear yoke (2 bolts).....	1
2	8073	U joint + 4 retaining ring + 1 grease fitting	2
3	8061	Retaining ring	8
4	8110	Grease fitting.....	2
5	8079	Yoke for inner tube.....	1
6	6341	Pin spring	1
7	8077	Inner tube	1
8	8076	Outer tube.....	1
9	8142	Pin spring.....	1
10	8074	Yoke for outer tube	1
11	8222	Bolt M12 x 70mm	1
12	8113-85	Yoke with hole 1 3/8" - 6 splines + secant bolt	1
13	8235	P.T.O. section, side with safety shear bolt, inner part, without protector.....	1
14	8236	P.T.O. section, side without safety shear bolt, outer part, without protector.....	1
15	8223	Adaptor with 2 bolts.....	1
16	8069	Yoke and shearplate	1
17	8070	Ball.....	17
18	8071	Grease fitting.....	1
19	8072	Safety shear bolt M10 x 50mm.....	1
20	8083-E	Bearing ring for inner guard tube	1
21	8084-E	Bearing ring for outer guard tube.....	1
22	8109	Stopper.....	6
23	8085	Inner shield.....	1
24	8086	Outer shield.....	1
25	8087	Complete shield	1
26	8222	Bolt M12 x 70mm + lock nut.....	2
27	8308	Safety chain	2

GEAR BOX # 190-01491 (T27D modified)

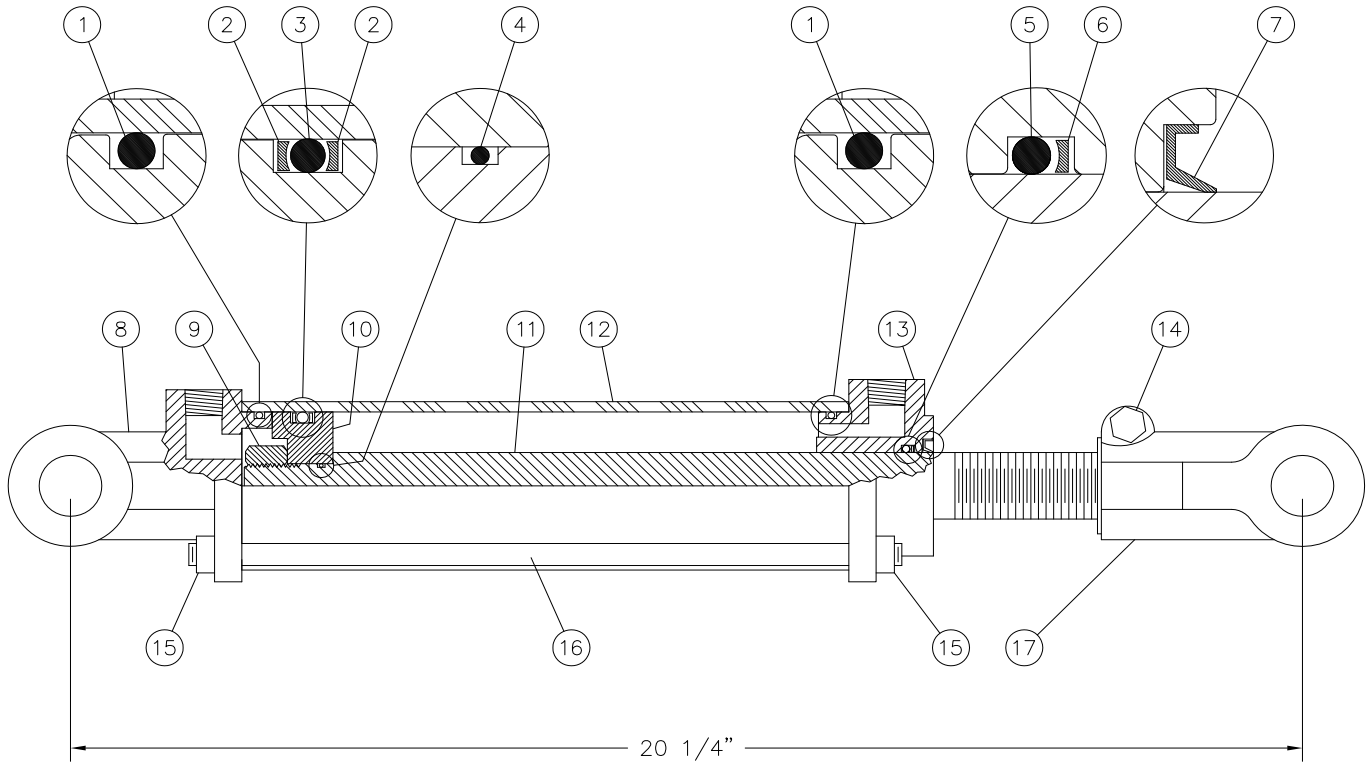
170-01491

Oil quantity required: 1.2 liters
Use SAE 80W90 oil.



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	Outside circlip 35mm.....	1
14	6207-2RS	Ball bearing	1
15	8057	Inside circlip 72mm	1
16	8058	Adjusting washer	1
17	8252	Impeller shaft (40 mm & 1 3/8" - 6 splines)	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 plug)	1
23	8064	Plug (oil level plug)	1
24	8064	Plug (drain plug)	1

CYLINDER 25TR08

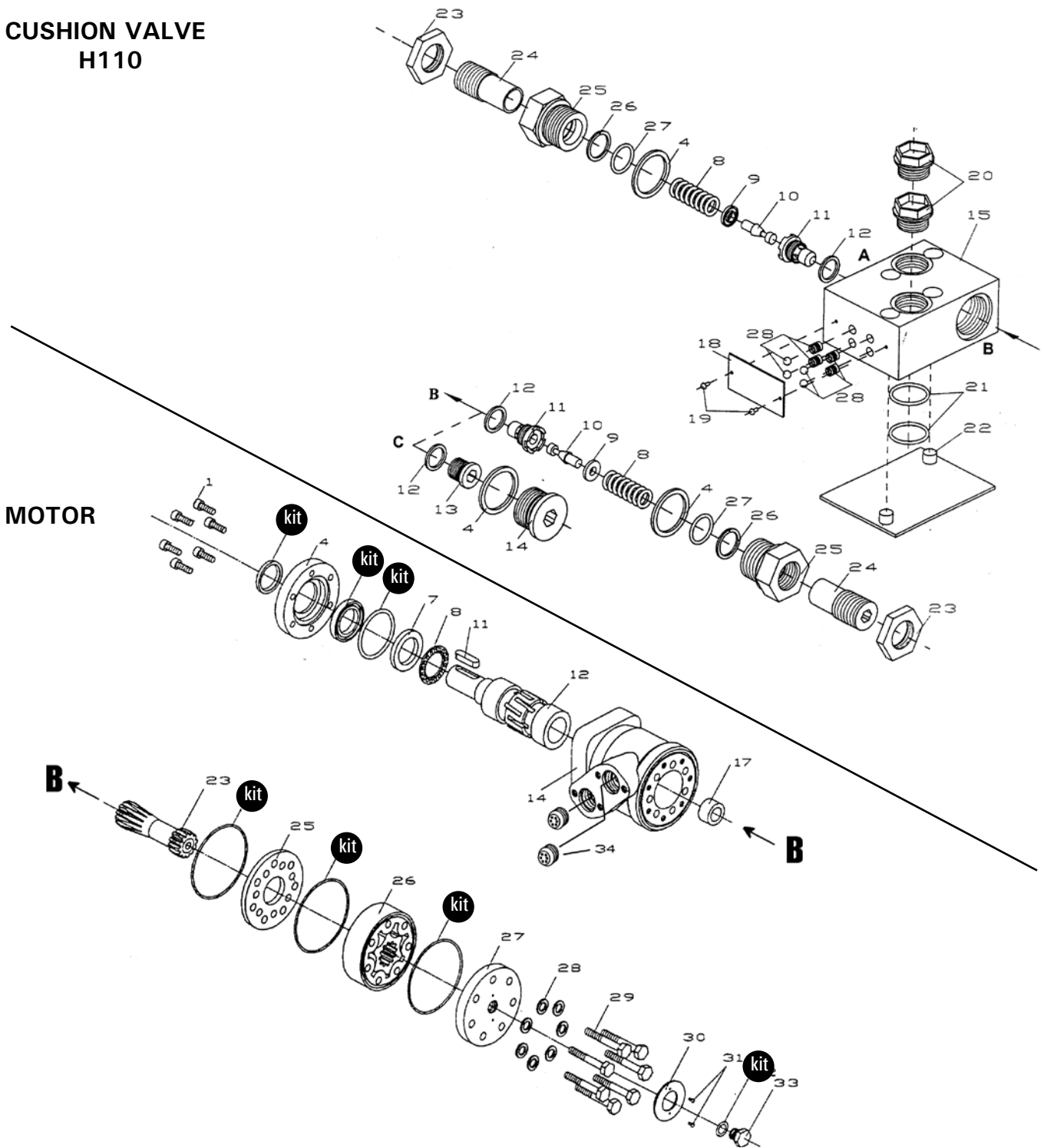


REF.	PART #	DESCRIPTION	QTY
1	See #RK25TR	O-ring 1/8" x 2 1/4" x 2 1/2"	2
2	See #RK25TR	Back-up 2 1/2" o.d. x 3/16 ø	2
3	See #RK25TR	O-ring 3/16" x 2 1/8" x 2 1/2"	1
4	See #RK25TR	O-ring 1/16" x 5/8" x 3/4"	1
5	See #RK25TR	O-ring 1/8" x 1 1/8" x 1 3/8"	1
6	See #RK25TR	Back-up 1 3/8" o.d. x 1/8" ø	1
7	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-125, MLH-250-R & MLH-315-R

CUSHION VALVE H110



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

TORQUE CHART

IMPERIAL CHART

MAXIMUM TORQUE									
Grade 2			Grade 5			Grade 8*			
Bolt size	Thread by inch	Tool size	Dry	Lubricated	Dry	Lubricated	Dry	Lubricated	Lubricated
1/8 #5	NC	3/8	8 lbs/in	6 lbs/in	13 lbs/in	10 lbs/in	18 lbs/in	13 lbs/in	13 lbs/in
1/8 #5	NF	3/8	9 lbs/in	6 lbs/in	13 lbs/in	10 lbs/in	19 lbs/in	14 lbs/in	14 lbs/in
3/16 #10	NC	3/8	28 lbs/in	21 lbs/in	43 lbs/in	32 lbs/in	60 lbs/in	45 lbs/in	45 lbs/in
3/16 #10	NF	3/8	31 lbs/in	24 lbs/in	48 lbs/in	36 lbs/in	68 lbs/in	51 lbs/in	51 lbs/in
1/4	NC	3/8	66 lbs/in	49 lbs/in	96 lbs/in	76 lbs/in	144 lbs/in	108 lbs/in	108 lbs/in
1/4	NF	3/8	75 lbs/in	56 lbs/in	120 lbs/in	87 lbs/in	168 lbs/in	120 lbs/in	120 lbs/in
5/16	NC	3/8	132 lbs/in	96 lbs/in	204 lbs/in	156 lbs/in	300 lbs/in	216 lbs/in	216 lbs/in
5/16	NF	3/8	144 lbs/in	108 lbs/in	228 lbs/in	168 lbs/in	324 lbs/in	240 lbs/in	240 lbs/in
3/8	NC	1/2	20 lbs/ft	15 lbs/ft	31 lbs/ft	23 lbs/ft	44 lbs/ft	33 lbs/ft	33 lbs/ft
3/8	NF	1/2	23 lbs/ft	17 lbs/ft	35 lbs/ft	26 lbs/ft	49 lbs/ft	37 lbs/ft	37 lbs/ft
7/16	NC	1/2	32 lbs/ft	24 lbs/ft	49 lbs/ft	37 lbs/ft	70 lbs/ft	52 lbs/ft	52 lbs/ft
7/16	NF	1/2	36 lbs/ft	27 lbs/ft	55 lbs/ft	41 lbs/ft	78 lbs/ft	58 lbs/ft	58 lbs/ft
1/2	NC	1/2	49 lbs/ft	37 lbs/ft	75 lbs/ft	55 lbs/ft	106 lbs/ft	80 lbs/ft	80 lbs/ft
1/2	NF	1/2	55 lbs/ft	41 lbs/ft	85 lbs/ft	65 lbs/ft	120 lbs/ft	90 lbs/ft	90 lbs/ft
9/16	NC	1/2	70 lbs/ft	53 lbs/ft	110 lbs/ft	80 lbs/ft	154 lbs/ft	115 lbs/ft	115 lbs/ft
9/16	NF	1/2	78 lbs/ft	59 lbs/ft	120 lbs/ft	90 lbs/ft	171 lbs/ft	128 lbs/ft	128 lbs/ft
5/8	NC	1/2	97 lbs/ft	73 lbs/ft	150 lbs/ft	113 lbs/ft	212 lbs/ft	159 lbs/ft	159 lbs/ft
5/8	NF	1/2	110 lbs/ft	82 lbs/ft	170 lbs/ft	130 lbs/ft	240 lbs/ft	180 lbs/ft	180 lbs/ft
3/4	NC	1/2	172 lbs/ft	129 lbs/ft	267 lbs/ft	200 lbs/ft	376 lbs/ft	282 lbs/ft	282 lbs/ft
3/4	NF	1/2	192 lbs/ft	144 lbs/ft	300 lbs/ft	220 lbs/ft	420 lbs/ft	315 lbs/ft	315 lbs/ft
7/8	NC	1/2	167 lbs/ft	125 lbs/ft	230 lbs/ft	170 lbs/ft	320 lbs/ft	240 lbs/ft	240 lbs/ft
7/8	NF	1/2	184 lbs/ft	138 lbs/ft	250 lbs/ft	180 lbs/ft	350 lbs/ft	260 lbs/ft	260 lbs/ft
1	NC	1/2	250 lbs/ft	187 lbs/ft	320 lbs/ft	240 lbs/ft	480 lbs/ft	360 lbs/ft	360 lbs/ft
1	NF	1/2	280 lbs/ft	210 lbs/ft	360 lbs/ft	270 lbs/ft	540 lbs/ft	400 lbs/ft	400 lbs/ft
1 1/8	NC	1/2	354 lbs/ft	266 lbs/ft	450 lbs/ft	340 lbs/ft	680 lbs/ft	510 lbs/ft	510 lbs/ft
1 1/8	NF	1/2	397 lbs/ft	298 lbs/ft	500 lbs/ft	380 lbs/ft	760 lbs/ft	570 lbs/ft	570 lbs/ft
1 1/4	NC	1/2	500 lbs/ft	373 lbs/ft	630 lbs/ft	480 lbs/ft	960 lbs/ft	720 lbs/ft	720 lbs/ft
1 1/4	NF	1/2	553 lbs/ft	417 lbs/ft	680 lbs/ft	520 lbs/ft	1040 lbs/ft	780 lbs/ft	780 lbs/ft
1 3/8	NC	1/2	655 lbs/ft	491 lbs/ft	820 lbs/ft	620 lbs/ft	1240 lbs/ft	930 lbs/ft	930 lbs/ft
1 3/8	NF	1/2	746 lbs/ft	559 lbs/ft	930 lbs/ft	700 lbs/ft	1400 lbs/ft	1050 lbs/ft	1050 lbs/ft
1 1/2	NC	1/2	869 lbs/ft	652 lbs/ft	1080 lbs/ft	810 lbs/ft	1620 lbs/ft	1210 lbs/ft	1210 lbs/ft
1 1/2	NF	1/2	978 lbs/ft	734 lbs/ft	1190 lbs/ft	900 lbs/ft	1780 lbs/ft	1330 lbs/ft	1330 lbs/ft

METRIC CHART

MAXIMUM TORQUE									
8.8			10.9			12.9			
Bolt size	Thread	Pitch (mm)	Tool size	Dry	Lubricated	Dry	Lubricated	Dry	Lubricated
M4	THICK	0.7	3/8	27 lbs/in	20 lbs/in	36 lbs/in	27 lbs/in	43 lbs/in	32 lbs/in
M4	THIN	0.5	3/8	30 lbs/in	22 lbs/in	40 lbs/in	30 lbs/in	48 lbs/in	36 lbs/in
M5	THICK	0.8	3/8	54 lbs/in	40 lbs/in	72 lbs/in	54 lbs/in	86 lbs/in	65 lbs/in
M5	THIN	0.5	3/8	62 lbs/in	46 lbs/in	83 lbs/in	62 lbs/in	99 lbs/in	74 lbs/in
M6	THICK	1.00	3/8	92 lbs/in	69 lbs/in	120 lbs/in	92 lbs/in	144 lbs/in	108 lbs/in
M6	THIN	0.75	3/8	96 lbs/in	76 lbs/in	132 lbs/in	96 lbs/in	156 lbs/in	120 lbs/in
M8	THICK	1.25	3/8	228 lbs/in	168 lbs/in	300 lbs/in	228 lbs/in	360 lbs/in	264 lbs/in
M8	THIN	1.0	3/8	240 lbs/in	180 lbs/in	324 lbs/in	240 lbs/in	384 lbs/in	288 lbs/in
M10	THICK	1.5	1/2	37 lbs/ft	28 lbs/ft	49 lbs/ft	37 lbs/ft	59 lbs/ft	44 lbs/ft
M10	THIN	1.25	1/2	39 lbs/ft	29 lbs/ft	52 lbs/ft	39 lbs/ft	62 lbs/ft	47 lbs/ft
M12	THICK	1.75	1/2	64 lbs/ft	48 lbs/ft	86 lbs/ft	65 lbs/ft	103 lbs/ft	77 lbs/ft
M12	THIN	1.25	1/2	70 lbs/ft	53 lbs/ft	95 lbs/ft	71 lbs/ft	113 lbs/ft	85 lbs/ft
M14	THICK	2.0	1/2	102 lbs/ft	77 lbs/ft	138 lbs/ft	103 lbs/ft	164 lbs/ft	123 lbs/ft
M14	THIN	1.5	1/2	111 lbs/ft	83 lbs/ft	149 lbs/ft	112 lbs/ft	178 lbs/ft	133 lbs/ft
M16	THICK	2.0	1/2	159 lbs/ft	119 lbs/ft	214 lbs/ft	161 lbs/ft	255 lbs/ft	191 lbs/ft
M16	THIN	1.5	1/2	170 lbs/ft	128 lbs/ft	229 lbs/ft	172 lbs/ft	273 lbs/ft	205 lbs/ft
M18	THICK	2.5	1/2	227 lbs/ft	170 lbs/ft	296 lbs/ft	222 lbs/ft	352 lbs/ft	264 lbs/ft
M18	THIN	1.5	1/2	257 lbs/ft	193 lbs/ft	334 lbs/ft	250 lbs/ft	375 lbs/ft	281 lbs/ft
M20	THICK	2.5	1/2	322 lbs/ft	241 lbs/ft	418 lbs/ft	314 lbs/ft	499 lbs/ft	374 lbs/ft
M20	THIN	1.5	1/2	358 lbs/ft	269 lbs/ft	466 lbs/ft	349 lbs/ft	555 lbs/ft	417 lbs/ft
M22	THICK	2.50	1/2	439 lbs/ft	329 lbs/ft	571 lbs/ft	428 lbs/ft	680 lbs/ft	510 lbs/ft
M22	THIN	1.50	1/2	484 lbs/ft	386 lbs/ft	629 lbs/ft	472 lbs/ft	750 lbs/ft	562 lbs/ft
M24	THICK	3.00	1/2	556 lbs/ft	417 lbs/ft	723 lbs/ft	542 lbs/ft	862 lbs/ft	646 lbs/ft
M24	THIN	1.50	1/2	636 lbs/ft	477 lbs/ft	826 lbs/ft	620 lbs/ft	985 lbs/ft	739 lbs/ft

Thick nuts must be used with grade 8 bolts.

Use the above torques when special torque is not given.

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

WARRANTY

Manufacturer 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.

No guarantee is granted on wear parts.

All manufacturer 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. Manufacturer accepts no responsibility for direct or indirect consequential damages of any kind.