Pronovost

OPERATOR'S / PARTS MANUAL

Model P-6200AS

No. C1354

04/00

TABLE OF CONTENTS

INTRODUCTION

1

CONGRATULATIONS!

Thank you for choosing PRONOVOST. We are confident this equipment 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 SilaTube. It contains important information which will help you achieve excellent returns with your tubing-machine for years to come.

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

Before starting the machine, you or any other person who will be operating the SilaTube 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 of the SilaTube are identified while standing at the discharge end of the machine and facing it.

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

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

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

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

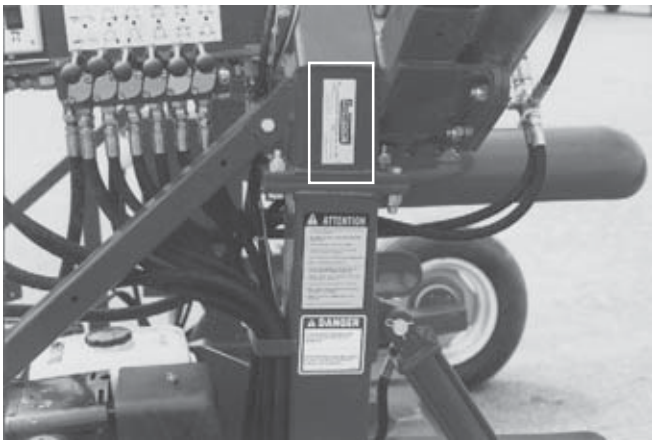


Figure 1

MODEL:_____

SERIAL NO.:_____

DATE OF PURCHASE:_____

SAFETY

GENERAL SAFETY

2

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 SilaTube. It warns you of the possibility of danger. Carefully read, understand and follow all safety recommendations before operating the SilaTube.

1) Careful operation is the best assurance against accidents. Carefully read this manual and the motor manual and follow all recommendations before operating your SilaTube. It is the owner's responsibility to make sure that anyone who will operate the SilaTube will read these manuals before operating the equipment.

2) Never let a child operate the SilaTube.

3) Do not modify the SilaTube. Any non authorized modification may affect the efficiency and/or safety of the equipment.

4) Never operate the SilaTube with defective parts or if damaged in any way. Have it repaired before operating.

5) Make sure all fasteners are in place and properly secured or tightened. Refer to torque chart on page 38.

6) Avoid wearing loose fitting clothing when working with the SilaTube. These could get entangled in moving parts of the equipment and cause accidents.

7) Keep motor clean and exempt of dust and debris.

8) Before using the SilaTube, inspect the area where it is to be used and remove any object which could hamper normal operation or damage the plastic tube.

9) Hydraulic fluids under pressure can damage your skin. Do not use your hands to locate a leak.

10) Plastic bags are impervious to air. Keep them away from children to avoid suffocation.

11) When using a tractor equipped with a spear, be extremely careful. Always lower the spear to the ground before leaving your tractor.

12) Do not store, spill or use fuel near a flame, a hot engine or stove.

SAFETY IN OPERATION

1) Be sure there are no obstructions around the equipment and that no one stands near the SilaTube when in operation.

2) Always refuel equipment when outside and away from flames or sparks.

3) Never run the engine inside. Do not operate the engine in a confined or non ventilated area. Carbon monoxide is a colorless, odorless and deadly gas.

4) Be careful when adjusting equipment with engine running.

SAFETY (cont'd)

5) Keep hands, feet, hair and clothing away from moving parts.

6) Should you need to step onto the SilaTube for whatever reasons**, ALWAYS** stop the motor since there is **RISK OF SERIOUS INJURY** if not stopped.

7) Do not refill fuel tank with engine running. Always let the engine cool off for a couple of minutes before refilling. Always use approved fuel containers.

8) Do not operate the engine if fuel is spilled. Move equipment away from the spill and avoid any spark until the complete evaporation of the fuel.

9) Do not smoke while refueling.

10) Do not operate engine with any accumulation of hay, leaves, dirt or any other combustible material near the exhaust muffler.

11) Avoid touching the hot muffler and cooling fins since they could cause burns to your skin.

SAFETY WITH MAINTENANCE

1) Perform the SilaTube maintenance according to the recommendations contained in this manual.

2) Stop engine and relieve all hydraulic pressures before doing inspection, maintenance or repairs.

3) Do not check spark with spark plug or wire removed. Use the appropriate testing equipment.

4) Regularly check fuel lines and fittings for leaks. Replace if necessary.

SAFETY IN TRANSPORT

1) Be sure to engage the two safety locks (A Figure 2) provided for the rear wheels hydraulic cylinders (B Figure 2).

2) Check local regulations for the transport of your SilaTube on the road.

3) Be alert when pulling the SilaTube on the road. Do not allow anyone to stand on it while in motion.

4) The road speed should be such as to maintain full control over steering and braking.

5) Be careful while backing up.

SAFETY IN STORAGE

1) Let engine cool and drain fuel from tank.

2) Do not let children play in the area where the SilaTube is stored.

3) Do not leave a tube installed on the SilaTube.

4) Do not let the SilaTube stand on the tires. Lower it to the ground or on wooden blocks. **THIS WILL AVOID ANY ACCIDENTAL CRUSHING OF ANIMALS OR ANYONE WHO COULD CRAWL UNDER THE EQUIPMENT.**

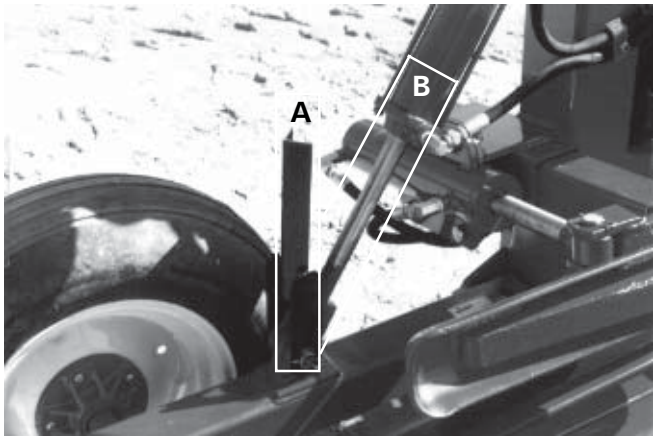


Figure 2

DECALS

SAFETY DECALS

3

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 identified with a letter and part number. The following photos indicate where each one must be installed.

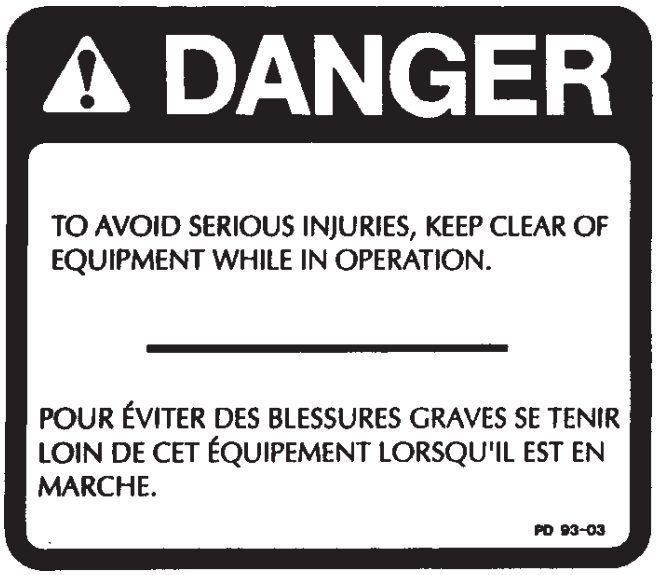


Figure 3
Decal A Part no.: A101

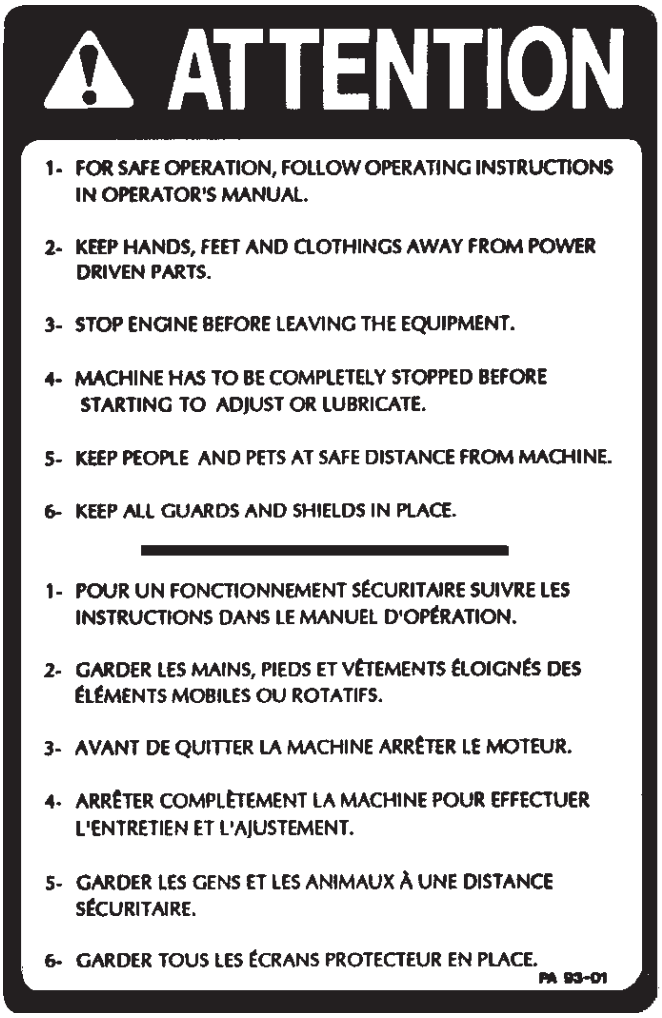


Figure 5
Decal B Part no.: A102

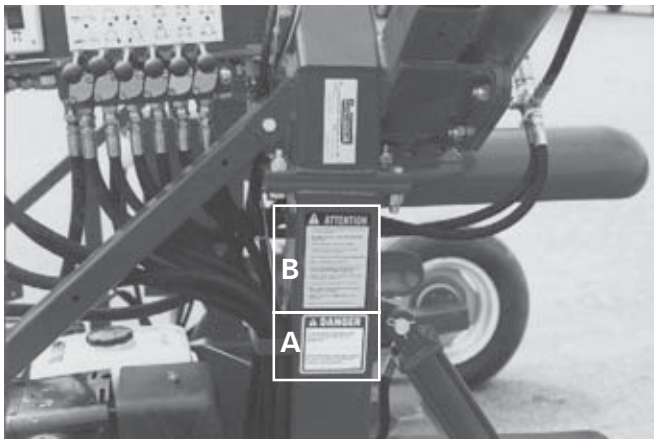


Figure 4

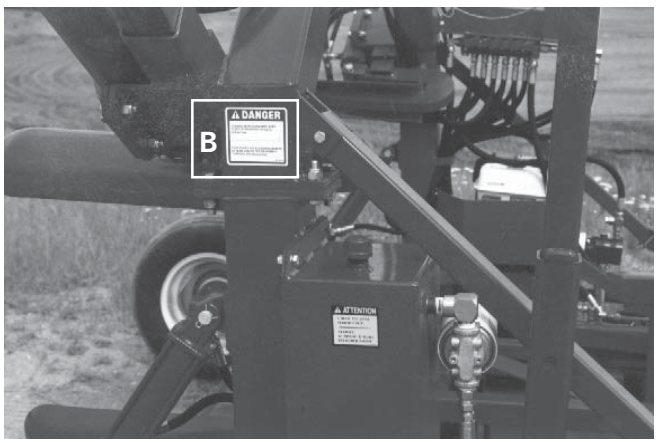


Figure 6

DECALS (cont'd)

Figure 7
Decal C Part no.: A103

Figure 8

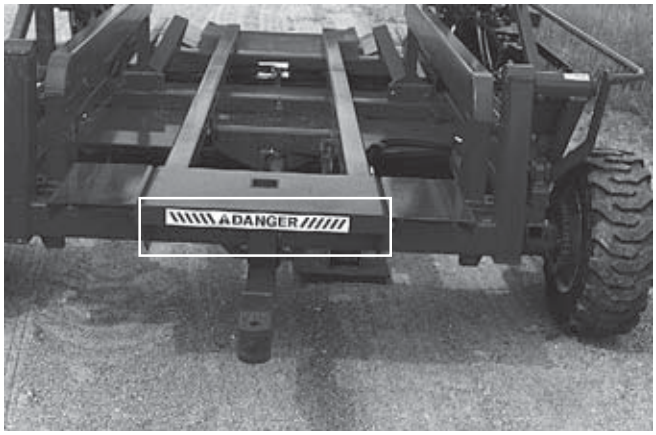


Figure 9

Figure 10

MAINTENANCE DECALS

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

Figure 11
Decal D Part no.: A104

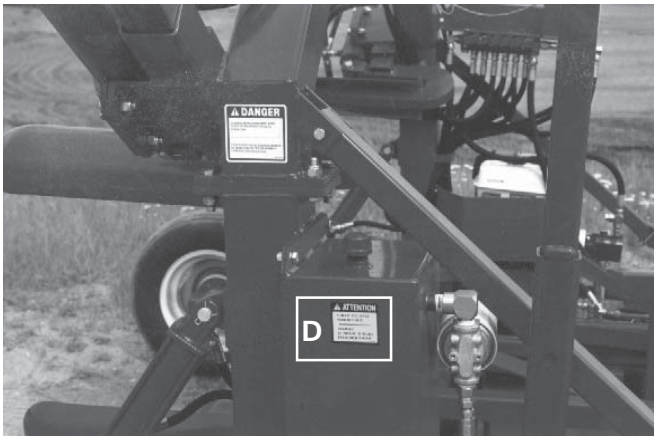


Figure 12

Figure 13 Part no.: A 106

STARTING-UP

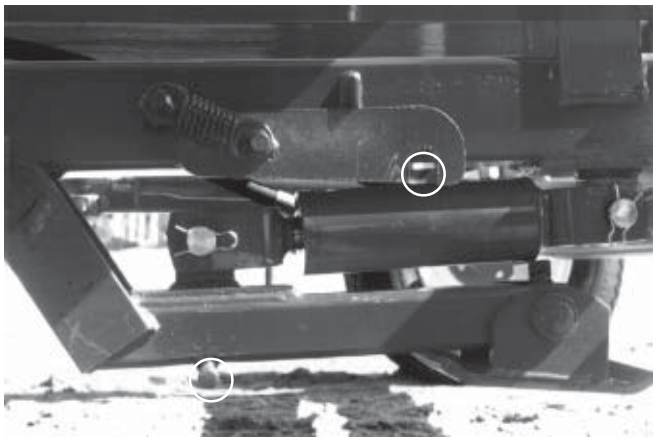


Figure 14

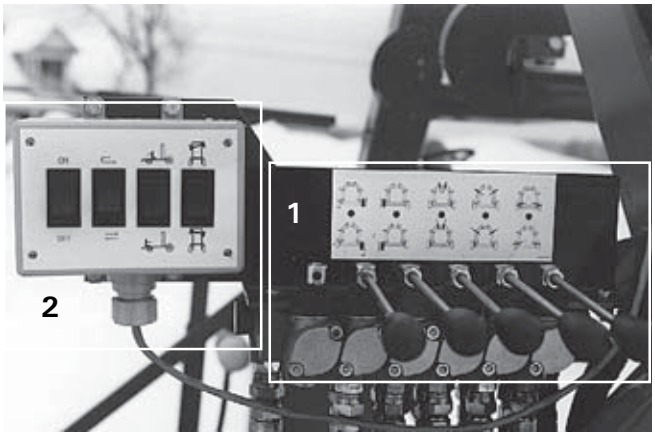


Figure 15

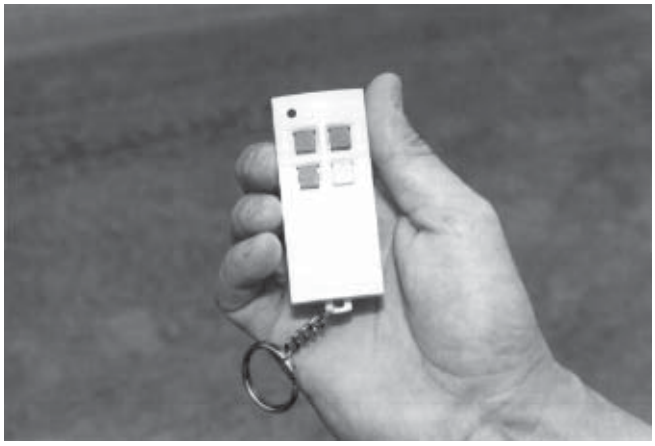


Figure 16

BASIC START-UP PROCEDURES

1) Do not forget to unlock the hydraulic jack before lowering and always lock it when in the retracted position. (Fig. 13)

2) Verify for adequate tightness of all fastening devices. Refer to torque chart on page 38.

3) Lubricate all points and guide mechanisms requiring grease, with a high quality lithium base grease containing molybdenum disulfide (MoS_2) such as «Esso Unirex EP1 Moly», «DARINA XL-Multi Season Moly, Grade #1» from Shell or equivalent.

4) Check oil level in hydraulic reservoir. Use good quality tractor transmission and hydraulic system oil such as «Trans Hydraulic Duratran» from Petro Canada, «DONAX TD» from Shell or equivalent.

5) Check tire pressure and adjust according to recommendation indicated on the tires.

6) Check engine oil level.

7) Check the operation of all hydraulic cylinders.

8) Check the surface of the stretcher arms for smoothness. Any mark or protrusion could cause tears to the tube.

9) Your SilaTube has manual hydraulic controls (1 Fig. 15), and electrohydraulic controls for some functions (2 Fig. 15)

10) It has also a remote control (Fig. 16) from which you can control the main functions. The **grey** button **makes the pusher move forward**. The **red** button **stops the pusher and returns it to its starting position**. The **yellow** button makes the SilaTube **turn to the left side** and the **green** button **to the right side**.

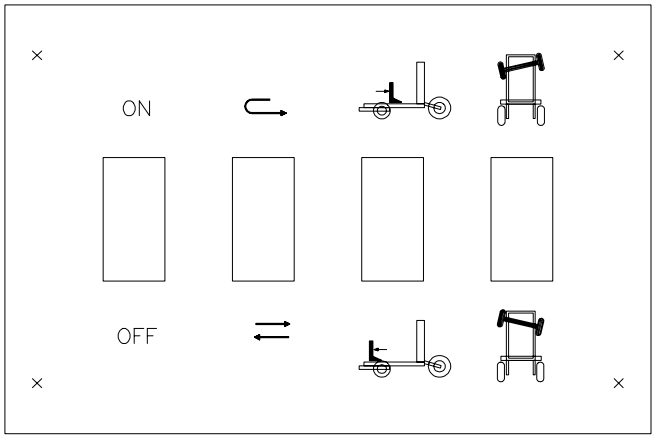


Figure 17

Figure 18

11) The control box on the SilaTube (Fig. 17) controls the following functions. From left to right, the **first** button **turns on the hydraulic system**. The **second** button **selects the pusher operation mode, "manual" or "automatic"** (when the pusher moves forward and returns to its starting position automatically). The **third** button **moves the pusher forward or backward**. The **fourth** button **turns the SilaTube to the left or to the right.**

12) There are two limit switches (Fig. 18), they are used to adjust the length of travel of the pusher in automatic mode.

4

GROUND PREPARATION

1) Choose a dry and well drained area.

2) Level and clean up site where the tubes will be used.

3) If possible, provide a sand bed of 2" to 3" (5-8 cm.) thick. This will help reduce damage from rodents.

STARTING-UP (cont'd)

Figure 19

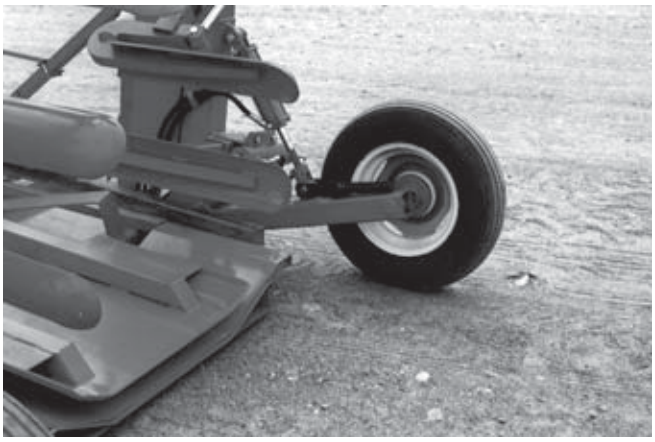


Figure 20

SETTING UP

1) Position the rear end of the SilaTube approximately 5' (1.5m) away from the point where you want to position the end of the tube. This will compensate if there is some slippage of the first couple of bales until there is enough ground friction to push the SilaTube forward.

2) Adjust hitch to its most inward position. If there is a risk of interference with the front of the tractor or with uneven ground, it is recommended to remove it. (Fig. 19)

3) Adjust rear wheels in order to have a minimum amount of ground friction with the rear end of the SilaTube (Fig. 20) while keeping it in contact with the ground.

4) For maximum operating speed, you may set the engine to full throttle, although it is preferable to run it a speed closer to your rate of bale supply to machine. This will result in a more economical operation.

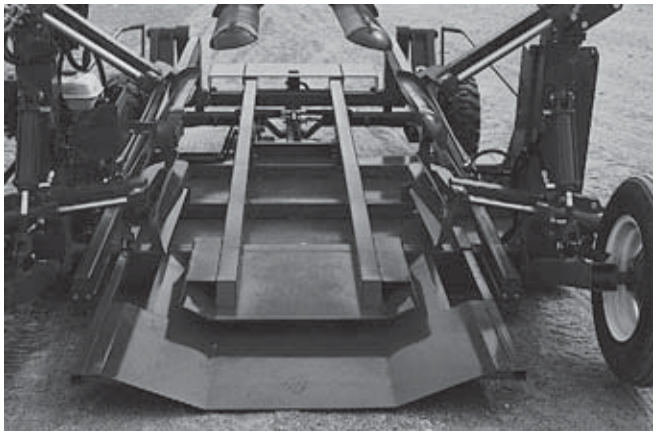


Figure 21

Figure 22

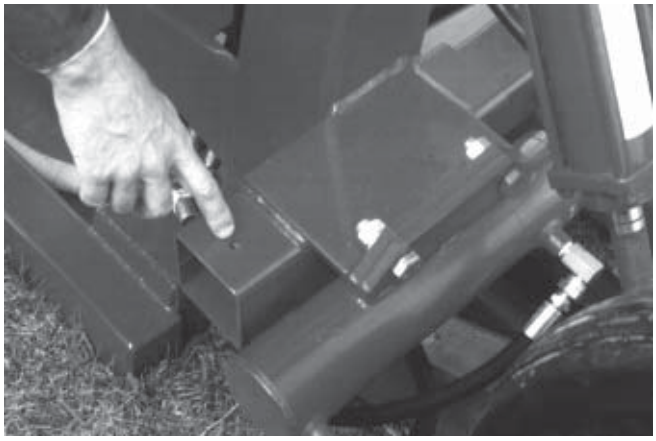


Figure 23

INSTALLATION OF THE TUBE

To facilitate this procedure, adhere to the following sequence:

1) Start engine.

2) Close the stretcher arms to the most inward position and pull out the tube support plate. (Fig. 21)

3) Install tube on the stretcher arms. Place it so that the tube name is facing outside when it unfolds. Slide it carefully **to the bottom** of the stretcher arms and between the two bottom plates, being careful to remove all wrinkles, since they could cause some tearing of the tube. (Fig. 22)

4) At this stage, apply a **SLIGHT AMOUNT OF TENSION** to the tube. Open each pair of stretcher arms until the end of the internal square tubing reaches the pilot hole of the outer tube. (Fig. 23)

5) Do not forget to fully retract the tube support plate until it is locked in place. (Fig. 24)

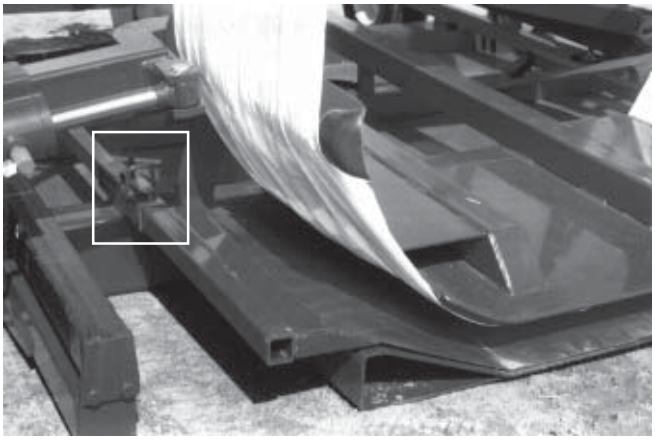


Figure 24

STARTING-UP (cont'd)

Figure 25

6) Again check the tube position (Fig. 25) and eliminate any wrinkles. Next, remove all ties (Fig 26).

7) Now it's time to close the end of the tube. Pull out the outer ply for approximately 36" (91 cm) and tie properly. (Fig. 27 and Fig. 28)

8) **STRETCH THE TUBE ONLY WHEN READY TO OPERATE.** It may lose some of its memory if kept stretched for a too long period of time. If you must stop loading bales for a while, **BRING THE TUBE DOWN TO A MODERATE TENSION.**

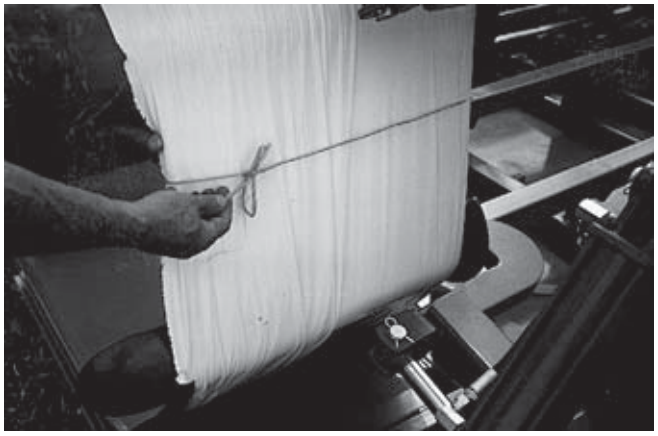


Figure 26

Figure 27

Figure 28

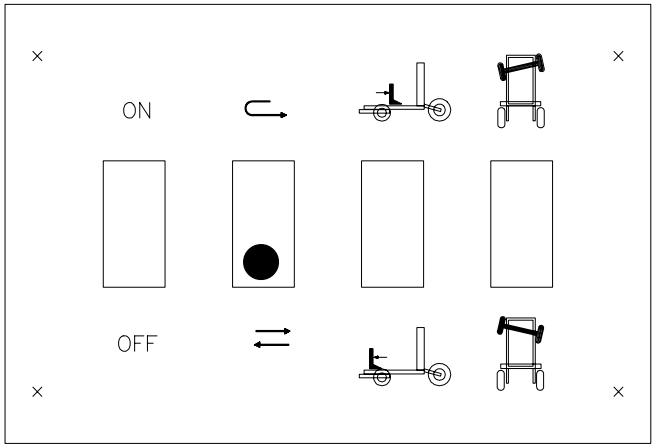


Figure 29

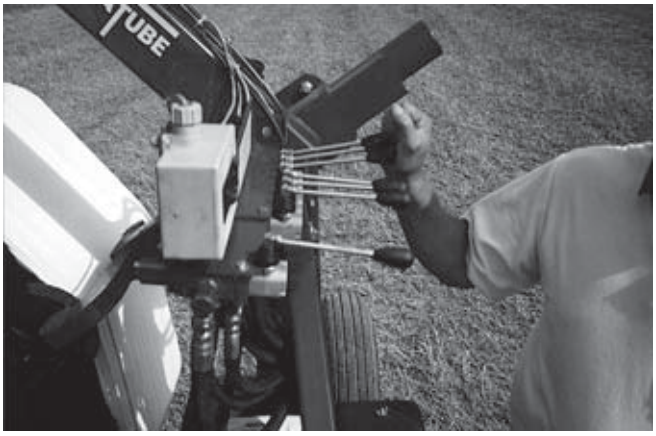


Figure 30

Figure 31

OPERATION

1) Before introducing the first bales, place the switch for the pusher on manual mode (Fig. 29).

2) Load the first bale on the machine, operate the control valve manually until the bale approaches the arms and stop it there.

3) Stretch the tube by operating the three valves **SIMULTANEOUSLY** (Fig. 30) to obtain a CLEARANCE OF APPROXIMATELY 2" to 3" between the bale and the tube (Fig. 31). Readjust stretcher arms individually if necessary.

4) At this point, check again the rear wheels adjustment for **minimum** ground friction (step 3, page 12) before engaging the bale pusher valve.

5) Place the switch for the pusher on automatic mode.

6) It is recommended to use a spear (single or double) on your loader to drop the bales onto the SilaTube.

7) Before engaging the pusher control valve, back away tractor to make room for the SilaTube's forward movement.

8) After the first 4 or 5 bales, lower the rear of the SilaTube to increase ground friction.This will ensure that the bales will be real tight against each other in the tube.

9) Use the remote control to do turn the SilaTube or push the button manually on the SilaTube's control box.

10) Towards the end of the tube, keep at least 36" (91 cm) of plastic, in order to allow for proper closure of the tube.

STARTING-UP (cont'd)

Figure 32

Figure 33

11) To push the last bale into the tube, install the pusher extension supplied with the SilaTube. (Fig. 32)

12) Use the pusher adjusted to the shortest length, place it as shown. (Fig. 33)

13) Initiate a full pusher cycle.

14) Adjust the pusher to the longest length and put it in place. Initiate another full pusher cycle in order to push the last bale completely out of the SilaTube. (Fig. 34)

15) Remove the pusher extension and store it in it's receptacle on the right hand side of the SilaTube. (Fig. 35)

16) Close up end of tube as previously described. (Fig. 27 & Fig. 28)

17) Regularly inspect the tubes. If torn or punctured, repair openings with proper means.

Figure 34

Figure 35

MAINTENANCE

1) Refer to the manufacturer's instructions for the engine.

2) Use a high quality lithium base grease containing molybdenum disulfide (MoS_2) such as «Esso Unirex EP1 Moly», «DARINA XL-Multi Season Moly, Grade #1» from Shell or equivalent.

3) Wipe off all grease fittings with a clean cloth before adding grease in order to avoid injecting dirt or sand.

4) Repair or replace damaged grease fittings.

5) Lubricate long pusher guides every 8 hours of operation.

6) Lubricate stretcher arms guides every 20 hours of operation.

7) Lubricate all grease fittings every 20 hours of operation.

8) Open, clean and lubricate wheel bearings once a year.

9) Check oil level in hydraulic reservoir every 20 hours of operation. If necessary add good quality trans hydraulic oil such as «Trans Hydraulic Duratran» from Petro-Canada, «DONAX TD» from Shell or equivalent.

10) Change oil filter after the first 50 hours of operation and then every 250 hours. Use replacement filter no. K-22001, PRONOVOST part No. 32007.

11) Check all nuts and bolts once a year. If necessary use torque chart on page 38.

12) Check all bolts on wheels after first 5 hours of operation and then every 50 hours.

13) Check tire pressure every 50 hours. Adjust according to manufacturer's recommendation indicated on the tires.

STORAGE

1) Store the SilaTube in a cool, dry place.

2) Lower the SilaTube frame on wooden blocks.

3) Keep tires off the ground and cover them if left exposed to the sun.

4) Keep all piston rods in the retracted position. This will assure better protection against the elements.

5) Clean your SilaTube.

6) Touch-up or repaint if necessary.

7) Lubricate all points before storage.

8) Drain all fuel from tank and follow engine manufacturer's storage recommendations.

SPECIFICATIONS

SilaTube model	P-6200AS
Overall length at work	175" (4.45 m)
Overall length in transport	184" (4.67 m)
Overall width at work	102" (2.59 m)
Overall width in transport	102" (2.59 m)
Overall height in transport	92" (2.34 m)
Bales diameter	48" to 56" (1.22 à 1.42 m) diameter
Adaptor for stretchers for	44" to 52" (1.12 à 1.32 m) diameter
bales of smaller diameter	Option (P-6210)
Engine	HONDA 9 HP
Electric starting	Standard
Two stages hydraulic pump	4 gal / 11 gal - Engages at 1100 psi
Front hub (cap. - bolts)	cap. 1000 lbs (450 kg) 4 bolts
Rear hub (cap. - bolts)	cap. 2500 lbs (1136 kg) 5 bolts
Front rim (cap. - bolts)	10" x 6" - 4 bolts
Rear rim (cap. - bolts)	15" x 5" - 5 bolts
Front tires (with tube)	20.5" x 8" x 10" - 4 plys
Rear tires (with tube)	6.7" x 15" - 6 plys
Performance	70 to 100 bales per hour
Oil tank capacity	5.75 gal US (4.75 gal imp) (21.75 litres)
Steering adjustment	Hydraulic
Working lights	Option P-6245
Road lights	Option P-6240
Hitch weight (app.)	1360 lbs (612 kg) app.
Total weight (app.)	3900 lbs (1755 kg) app.

Design and specifications subject to change without notice.

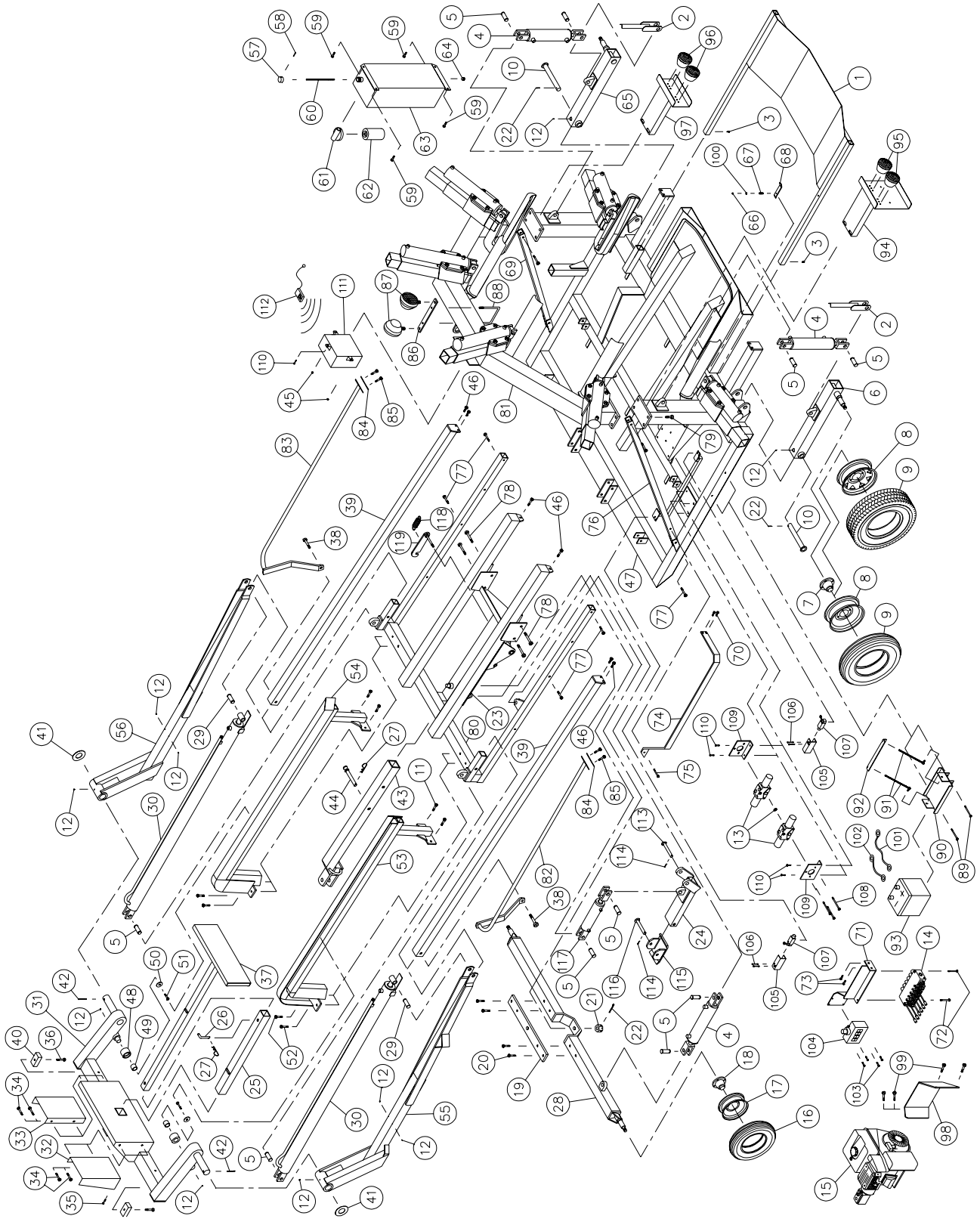
7

PLASTIC TUBES TO USE ACCORDING TO BALES DIAMETER

P-6200AS	For bales 44" to 52" (1.12 à 1.32m) diameter	Lay flat 69" (1.75 m) (Use with adaptor for stretcher arms)
	For bales 48" to 56" (1.22 à 1.42 m) diameter	Lay flat 73½" (1.87 m)

SILATUBE P-6200AS ASSEMBLY

170-02191



SILATUBE P-6200AS ASSEMBLY (cont'd)

REF.	PART #	DESCRIPTION	QTY
1	32107	Tube support plate	1
2	32108	Safety locking mechanism for rear wheels	2
3	Std.	Bolt ¼" NC x ¾" lg + nylon locknut	2
4	25TR08	Cylinder 2.5" x 8" standard	3
5	D-60051	Pin 1" x 3" lg + 2 hairpin	10
6	110-03442	Left rear axle	1
7	32218	Hub H-2500 (see details p. 31)	2
8	R-1565	Rim 15 x 6 x 5	2
8	R-1575RT	Rim 15 x 7 x 5 (2)	opt.
9	PN-7.6015	Tire 7.6 x 15 - 6 plis + tube 7.6 x 15 TR-15	2
9	PN-7.0015RT	Tire 7.00 x 15 (2)	opt.
10	32093	Pin for rear axle P-6300	2
11	Std.	Bolt 7/16" NC x 1 1/2" lg + nylon locknut	4
12	Std.	Grease fitting ¼"-28 straight	6
13	18019	Solenoïd valve with seal	2
14	32111	6 spool control valve (see details p. 28)	1
15	- - -	Engine HONDA 9HP with electric starter assembed with pump (see details p. 29)	opt.
16	PN-20.58	Tire 20.5 x 8 x 10 - 4 plys	2
17	R-1065	Rim 10 x 6 x 5	2
18	32218	Hub H-2500 (see details p. 31)	2
19	140-07521	Re-inforcement - front axle	2
20	Std.	Bolt 1/2" NC x 5" lg + nylon locknut	4
21	32114	Castle nut 1" - 8	1
22	Std.	Cotter pin 5/32" x 2"	3
23	110-14241	Jack support	1
24	32116	Body, hydraulic jack	1
25	110-08701	Pusher extension	1
26	150-01771	Pusher extension lock pin	1
27	Std.	Hitch pin clip	2
28	110-09681	Front axle assembly for P-6200AS	1
29	32019	Pin 1"	2
30	20S72	Cylinder 2" x 72" lg (see details p. 26)	2
31	110-08731	Pusher for P-6200AS	1
32	110-09751	Left hand extension for pusher	1
33	110-09741	Rigt hand extension for pusher	1
34	Std.	Bolt 7/16" NC x 1¼" lg + nylon locknut	4
35	Std.	Bolt 7/16" NC x 5" lg + nylon locknut	2
36	Std.	Carriage bolt 7/16" NC x 1½" lg + nut & lock washer	2
37	110-08691	Pusher	1
38	Std.	Bolt 5/8" NC x 4" lg + nylon locknut	2
39	32022	Ram guide	2
40	190-02231	UHMW slide pad	2
41	130-09831	Flat washer	2
42	32264	Roll pin 1/2" x 3" lg	2
43	110-09692	Drawbar	1
44	32024	Drawbar pin	1
45	Std.	Nylon locknut 1/4" NC	1
46	Std.	Bolt ½" NC x 1½" lg + nylon locknut	6
47	120-01751	Frame P-6200AS	1
48	160-04661	Roller - blade pusher carriage	2

SILATUBE P-6200AS ASSEMBLY (cont'd)

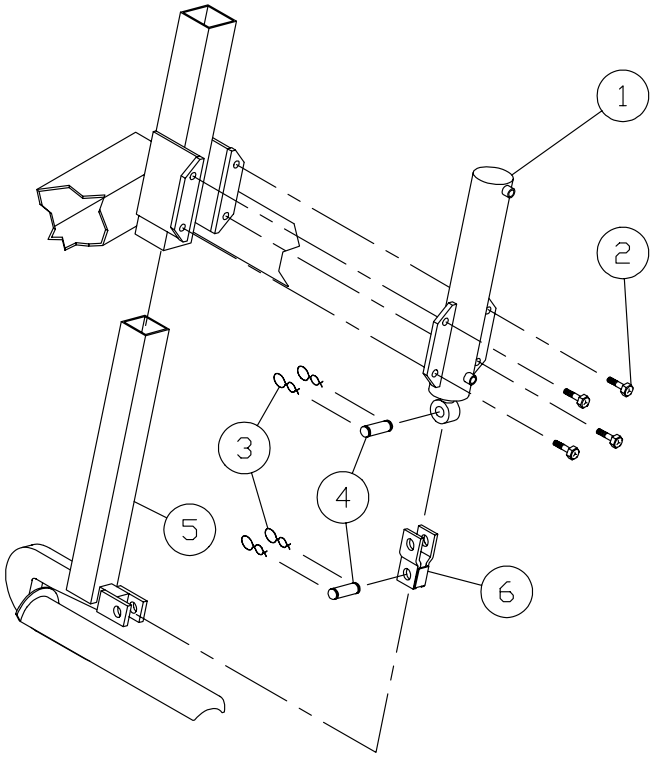
REF.	PART #	DESCRIPTION	QTY
49	160-04671	Bearing for roller 160-04661	2
50	130-09901	Flat washer	2
51	Std.	Bolt 7/16" NC x 3/4" NC + lock washer	2
52	Std.	Bolt 7/16" NC x 4½" lg + nylon locknut	4
53	110-08761	Track - bale pusher left	1
54	110-09141	Track - bale pusher right	1
55	110-08721	Support - bale pusher left	1
56	110-08781	Support - bale pusher right	1
57	32029	Oil reservoir cap	1
58	Std.	Roll pin 5/32" x 1¾"	1
59	Std.	Bolt 7/16" NC x 1" + nylon locknut	4
60	32030	Dip stick	1
61	32031	Hydraulic oil filter adaptor FSP107-1E DNN	1
62	32007	Paper filter K-22001	1
63	32033	Oil reservoir	1
64	32032	Drain plug ½"	1
65	110-03452	Right rear axle	1
66	Std.	Nylon locknut ¼" NC	1
67	32130	Compression spring 13/32" x 1½" lg	1
68	32131	Locking device for support plate	1
69	160-02081	Brace - right side - arch	4
70	Std.	Nylon locknut 5/16" NC	2
71	110-09661	Support - valve mounting	1
72	Std.	Bolt 5/16" NC x 2 1/2" lg + nylon locknut	2
73	Std.	Bolt 7/16" NC x 3/4" lg + lock washer & flat washer	2
74	32208	Guard	1
75	Std.	Bolt 5/8" NC x 3" lg +nylon locknut	2
76	160-00271	Brace - left side - arch	1
77	Std.	Bolt 1/2" NC x 3 1/2" lg + nylon locknut	8
78	Std.	Bolt 5/8" NC x 4 1/2" lg + nylon locknut	4
79	Std.	Bolt 5/8" NC x 2 1/2" lg + nylon locknut	8
80	110-10331	Frame - bale guide support	1
81	120-01741	Arch	1
82	110-08771	Left guard	1
83	110-08681	Right guard	1
84	140-06211	Retaining plate	2
85	Std.	Bolt 5/16" NC x 3 1/2" lg + nylon locknut	4
86	140-02901	Working lights retaining plate	opt.
87	110-04771	2 Working lights	opt.
88	150-00971	"U" bolt 3/8" NC + 2 nylon locknut	opt.
89	Std.	2 Bolts 5/16" NC x 4" lg + nylon locknut	opt.
90	110-04831	Battery support	1
91	110-04841	2 Threaded rods for battery hold down + nylon locknut 3/8" NC & 7/16" NC	2
92	130-05751	Battery hold down	1
93	32283	Battery 12V-540A	1
94	110-03511	Left support for flasher	opt.
95	32228	2 Left flashers with license light	opt.
96	32229	2 Right flashers	opt.
97	110-03501	Left support for flasher	opt.
98	110-08661	Guard - engine	1
99	Std.	Bolt 5/16" NC x 1" lg + nylon locknut	4

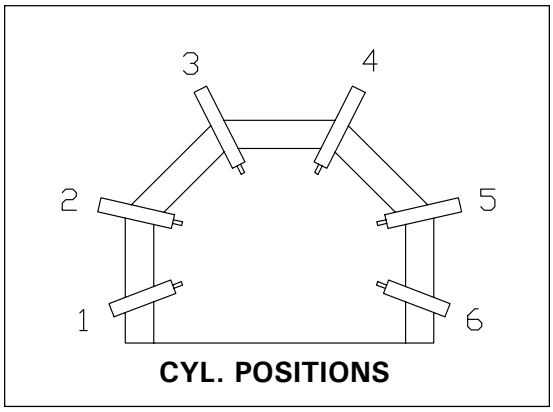
SILATUBE P-6200AS ASSEMBLY (cont'd)

REF.	PART #	DESCRIPTION	QTY
100	376-32200	Flat washer 5/16"	1
101	A30-4	Battery cable 4G 30" de lg	1
102	A10-4	Battery cable 4G 10" de lg	1
103	Std.	Bolt 5/16" NC x 3/4" lg + nylon locknut	4
104	32245	Manual control sealed box	1
105	130-10931	Guard - Stroke end switch	2
106	Std.	Bolt 10-24 NC x 1 3/4" lg + nylon locknut	4
107	32254	Stroke end switch	2
108	Std.	Bolts 3/8" NC x 6" lg + nylon locknut	3
109	130-00731	Holder - Solenoïd valve	2
110	Std.	Bolt 1/4" NC x 1" + nylon locknut	5
111	32253	Sealed box	1
112	32255	Transmitter 4 channel	1
113	32118	Pin for hydraulic jack body	1
114	Std.	Cotter pin 5/32" x 1 1/2" lg	2
115	32115	Base, hydraulic jack	1
116	32117	Pin for hydraulic jack base	1
117	25TR04	Cylinder 2.5 x 4" standard	1
118	32008	Tension spring 1 1/4" x 3 1/2" lg	1
119	32128	Locking mechanism for jack	1

DETAIL OF ARCH P-6200AS

170-00751





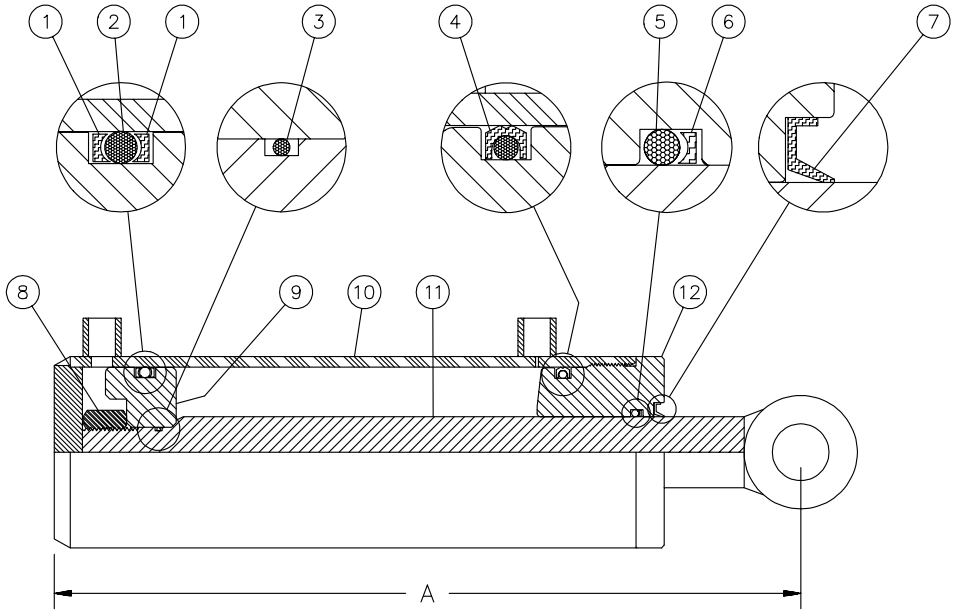
CYL. POSITIONS

8

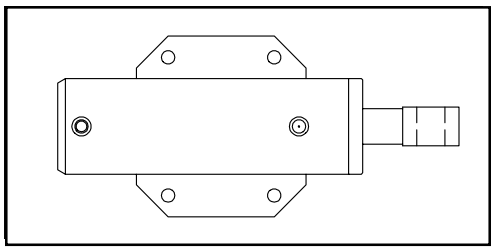
REF.	PART #	DESCRIPTION	QTY POSTE # 1	2	3	4	5	6
1	30Z10	Cylinder	1	-	-	-	-	1
1	30Z15	Cylinder	-	1	-	-	1	-
1	30Z17	Cylinder	-	-	1	1	-	-
2	Std.	Bolt 5/8" NC x 2" lg + nylon locknut	4	4	4	4	4	4
3	Std.	Hair pin 1/8"	2	2	4	4	2	2
4	Std.	Pin 1"	1	1	2	2	1	1
5	110-12171	Stretcher arm	1	-	-	-	-	1
5	110-12181	Stretcher arm	-	1	1	1	1	-
6	110-06171	Adaptor for bales 44" to 50" (optionnal)	-	-	1	1	-	-

ARCH CYLINDER P-6200AS

15022



MODEL	LENGTH A
30Z10	16"
30Z15	21"
30Z17	23"

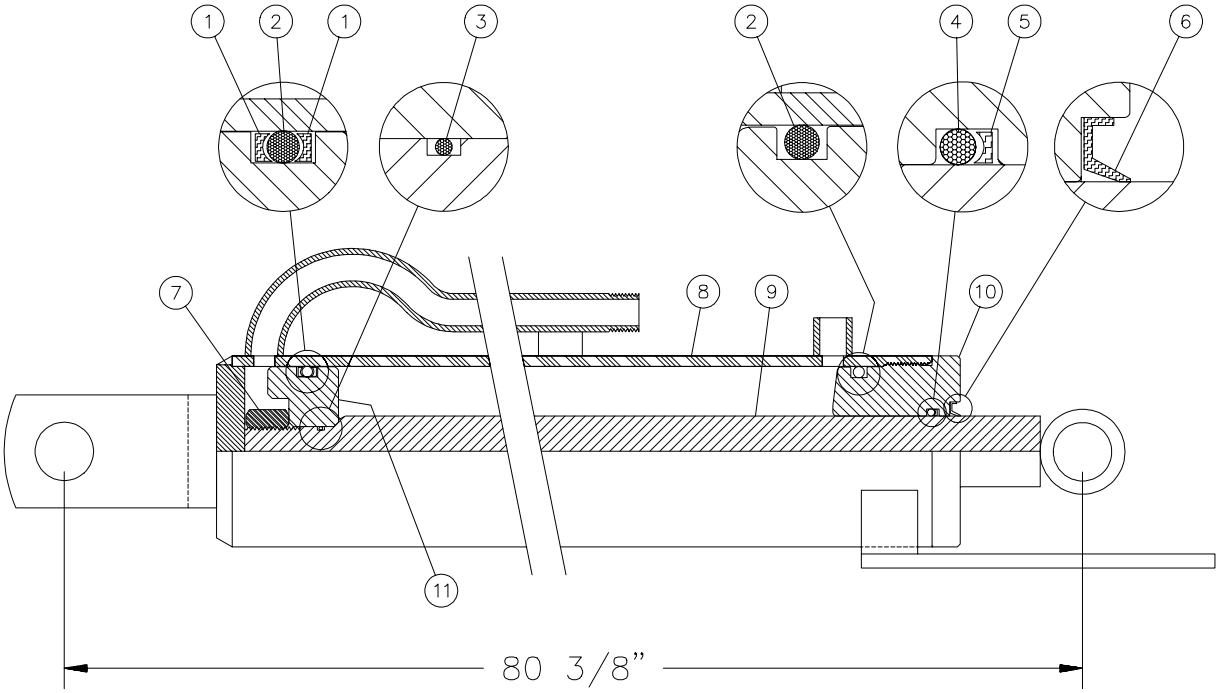


REF.	PART #	DESCRIPTION	QTY CYLINDER #		
			30Z10	30Z15	30Z17
1	BU-334	Back-up ring 3/16" x 2 5/8" x 3"	2	2	2
2	OR-334	O-ring 3/16" x 2 5/8" x 3"	2	2	2
3	OR-018	O-ring 1/16" x 3/4" x 7/8"	1	1	1
4	PSP-334	O-ring "heavy duty" 3/16" x 2 5/8" x 3"	1	1	1
5	OR-218	O-ring 1/8" x 1 1/4" x 1 1/2"	1	1	1
6	BU-218	Back-up ring 1/8" x 1 1/4" x 1 1/2"	1	1	1
7	CR12330	Wiper 1/8" x 1 1/4" x 1 1/2"	1	1	1
8	Std.	Nut 7/8" NF	1	1	1
9	D-6000	Piston 3" dia.	1	1	1
10	D-6096	Cylinder body 3" for 30Z10	1	-	-
10	D-6097	Cylinder body 3" for 30Z15	-	1	-
10	D-6098	Cylinder body 3" for 30Z17	-	-	1
11	D-6099	Piston rod 1 1/4" for 30Z10 and 30H10	1	-	-
11	D-6100	Piston rod 1 1/4" for 30Z15 and 30H15	-	1	-
11	D-6101	Piston rod 1 1/4" for 30Z17 and 30H17	-	-	1
12	D-6093	Head 3" dia.	1	1	1
NI	32204	Repair kit for cylinder 3" (includes # 1 à 7)	1	1	1

NI = Not illustrated

PUSHER CYLINDER # 20S72

15094

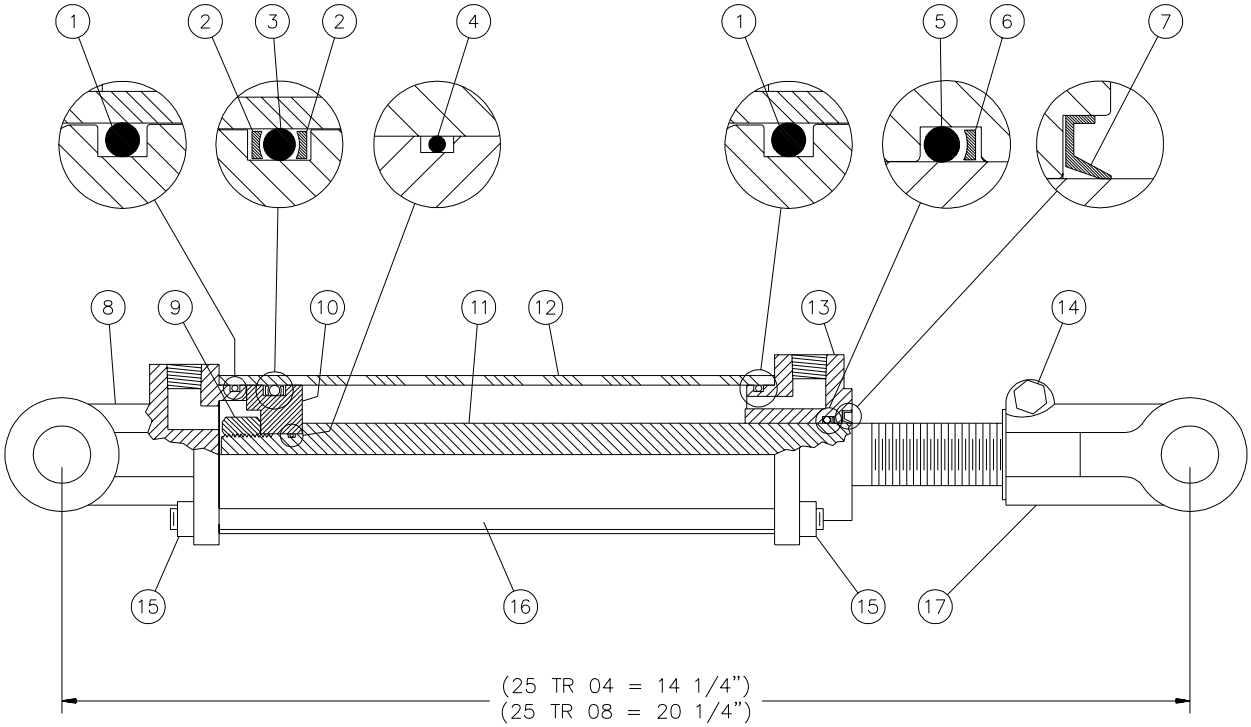


REF.	PART #	DESCRIPTION	QTY
1	BU-326	Back-up ring 3/16" x 1 5/8" x 2"	2
2	OR-326	O-ring 3/16" x 1 5/8" x 2"	2
3	OR-016	O-ring 1/16" x 5/8" x 3/4"	1
4	OR-218	O-ring 1/8" x 1 1/4" x 1 1/2"	1
5	BU-218	Back-up 1/8" x 1 1/4" x 1 1/2"	1
6	CR12330	Wiper 1/8" x 1 1/4" x 1 1/2"	1
7	Std.	Nut 3/4" NF	1
8	110-09151	Cylinder body 2" dia.	1
9	D-6172	Piston rod 1 1/4" dia.	1
10	D-6032	Head 2" dia.	1
11	D-6020	Piston 2" dia.	1
NI	32203	Repair kit for cylinder (includes # 1 à 6)	1

NI = Not illustrated.

CYLINDER 25TR04 & 25TR08

170-01811

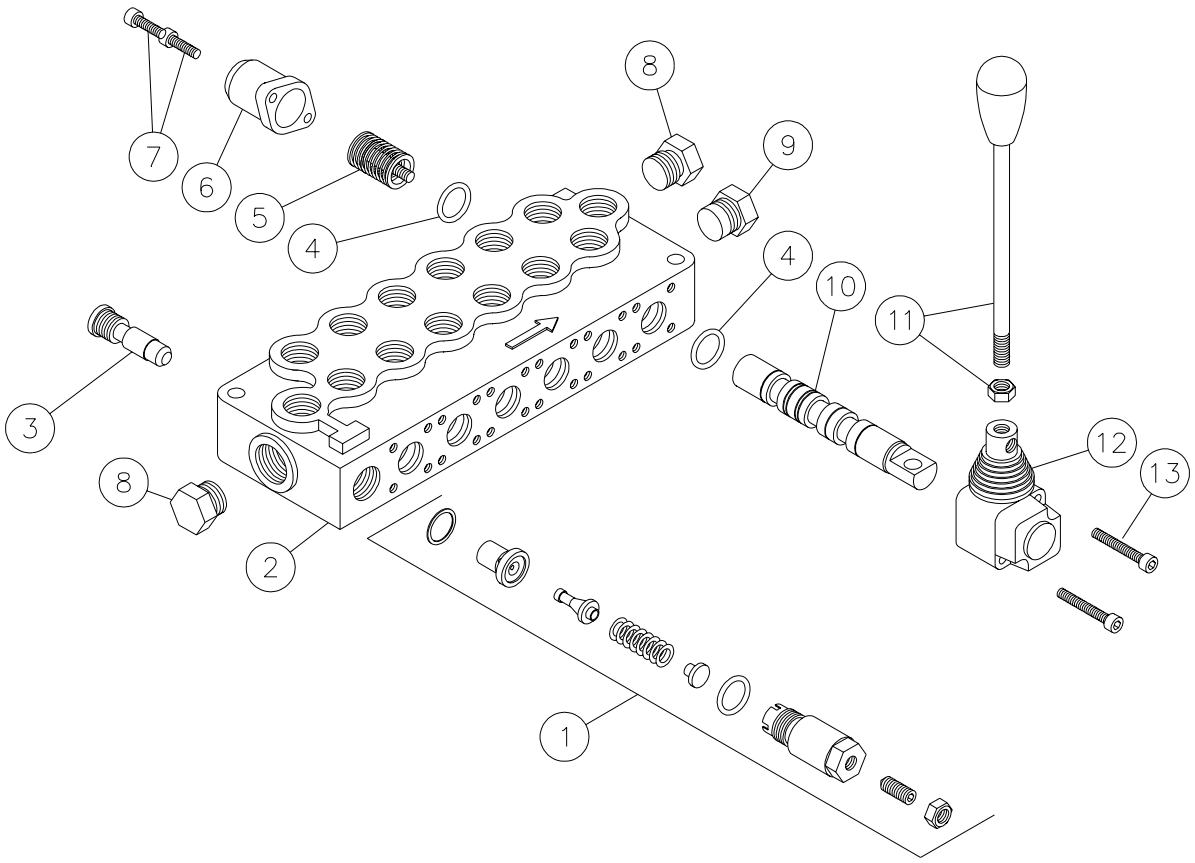


REF.	PART #	DESCRIPTION	QTY 25TR04	QTY 25TR08
1	Voir RK25TR	O-ring 1/8" x 2¼" x 2½"	2	2
2	Voir RK25TR	Back-up 2½" o.d. x 1/8" ø	2	2
3	Voir RK25TR	O-ring 3/16" x 2 1/8" x 2½"	1	1
4	Voir RK25TR	O-ring 1/16" x 5/8" x 3/4"	1	1
5	Voir RK25TR	O-ring 1/8" x 1 1/8" x 1 3/8"	1	1
6	Voir RK25TR	Back-up 1 3/8" o.d. x 1/8" ø	1	1
7	Voir RK25TR	Wiper 1 1/8" i.d. x 1 5/8" o.d.	1	1
8	492401	Yoke (for 2½" tube)	1	1
9	Std.	Nut ¾" NF	1	1
10	4924-31	Piston 2½" ø	1	1
11	491980-04	Piston rod 1 1/8"	1	-
11	492028	Piston rod 1 1/8"	-	1
12	491668-04	Cylinder body 2½" ø	1	-
12	491668	Cylinder body 2½" ø	-	1
13	492421	Head (for 2½" tube)	1	1
14	Std.	Bolt 3/8" NC x 2¼" + nut	1	1
15	Std.	Nut 3/8" NC	8	8
16	Std.	Threaded rod 3/8" NC 8 3/8" lg	4	-
16	Std.	Threaded rod 3/8" NC 12 3/8" lg	-	4
17	458599	Yoke (for 1 1/8" rod)	1	1
NI*	8183	Pin 1" ø + cotter pin	2	2
NI*	RK25TR	Repair kit for cylinder 2½" (includes # 1, 2, 3, 4, 5, 6, & 7)	1	1

*NI = NOT ILLUSTRATED

6 SPOOL CONTROL VALVE # 32111

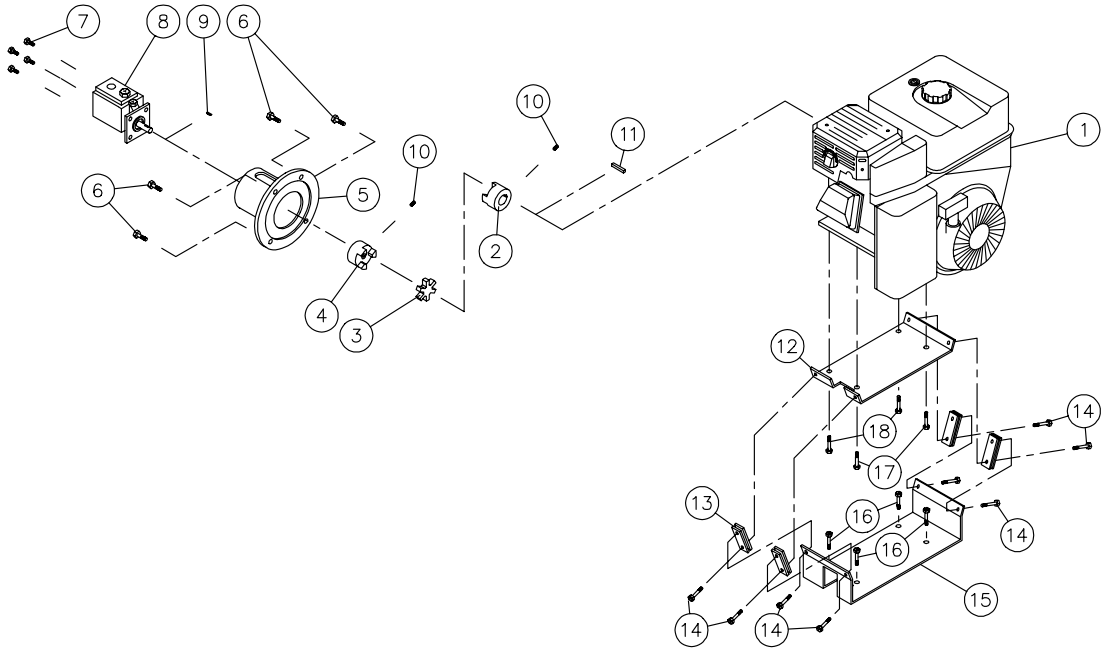
170-01841



REF.	PART #	CODE #	DESCRIPTION	QTY
1	32275	5KIT105413	Relief valve	1
2	32168	3CO1357000	Valve housing	1
3	32076	XKIT005000	Kit VR5	1
4	32077	4GUA115926	O-ring	12
5	32078	XV08105000	Spring	6
6	32079	3CAP210370	Endcap	6
7	32080	4VIT605014	Screw M5 x 14	12
8	32081	3XTAP822150	Plug SAE8	2
9	32082	3XTAP623170	Plug (open center)	1
10	32085	3CU1210130	Valve spool	6
11	32274	- - - - - -	Lever	6
12	32086	3XLEV105000	Lever endcap	6
13	32087	4VIT605035	Screw M5 x 35	12

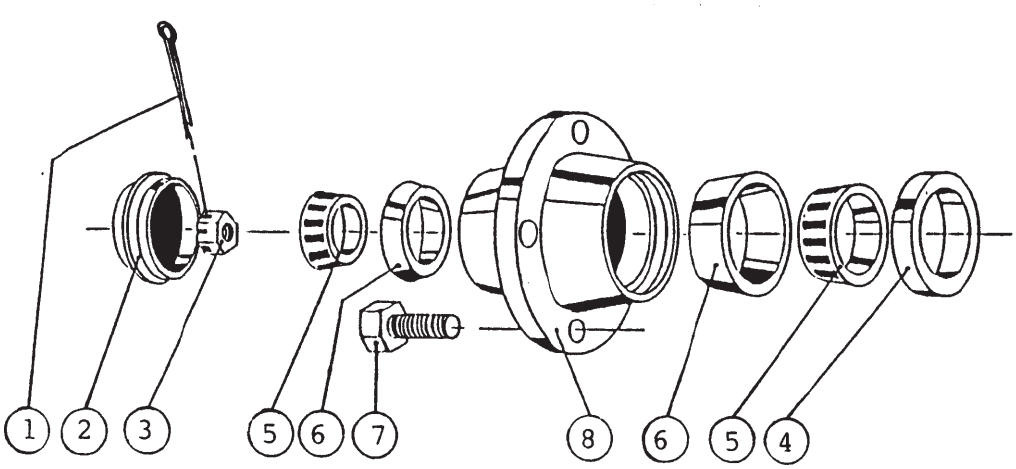
ENGINE ASSEMBLY WITH PUMP

170-00321



REF.	PART #	DESCRIPTION	QTY
1	32257	Engine HONDA 9HP with electric starter	1
2	32133	Flexible coupling 1" dia.	1
3	32134	Flexible coupling	1
4	32135	Flexible coupling ½" dia.	1
5	32136	Mounting flange	1
6	Std.	Bolt 3/8" NC x 1" lg + lock washer	4
7	Std.	Bolt 5/16" NC x 3/4" lg + lock washer	4
8	32002	Pump	1
9	Std.	Woodruff key 1/8"	1
10	Std.	Socket set screw 5/16" NC x 1/2"	2
11	Std.	Square key 1/4" x 1 1/2" lg	1
12	32194	Upper motor mounting plate	1
13	190-03311	Anti-vibration supports	4
14	Std.	Bolt 5/16" NC x 1" lg + nylon locknut & flat washer	8
15	32196	Lower motor mounting plate	1
16	Std.	Bolt 3/8" NC x 1" lg + nylon locknut	4
17	Std.	Bolt 3/8" NC x 1¾" lg + nylon locknut	2
18	Std.	Bolt 3/8" NC x 1¾" lg + nylon locknut & flat washer	2

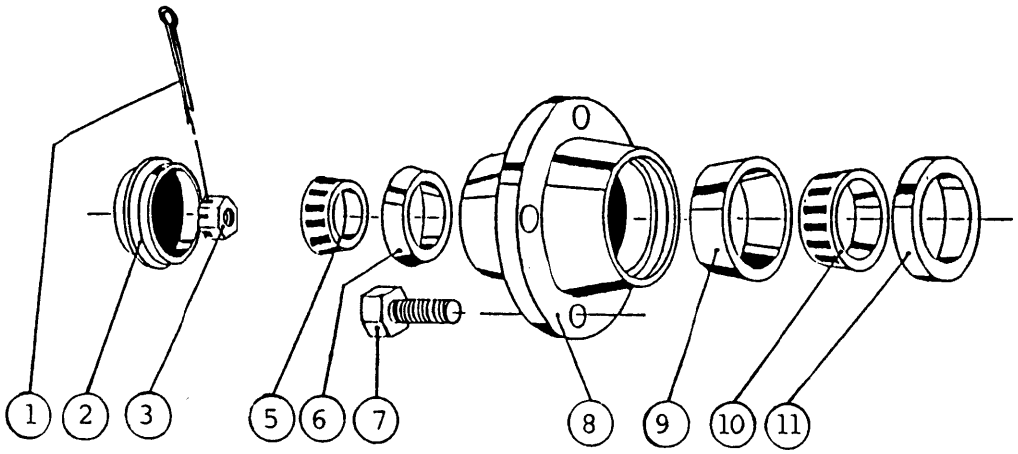
HUB H1000



FRONT HUB

REF.	PART #	DESCRIPTION	QTY
1	Std.	Cotter pin 3/16" x 1 1/2"	1
2	53019	Dust cap 1.973 dia.	1
3	53020	Castle nut 1" NF	1
4	53021	Oil seal no. CR523696	1
5	53022	Roller bearing Timken: cone no. L44643	2
6	53023	Roller bearing Timken: cup no. L44610	2
7	53024	Rim screw 1/2"	4
8	53025	HUB only H1000	1

HUB H2500

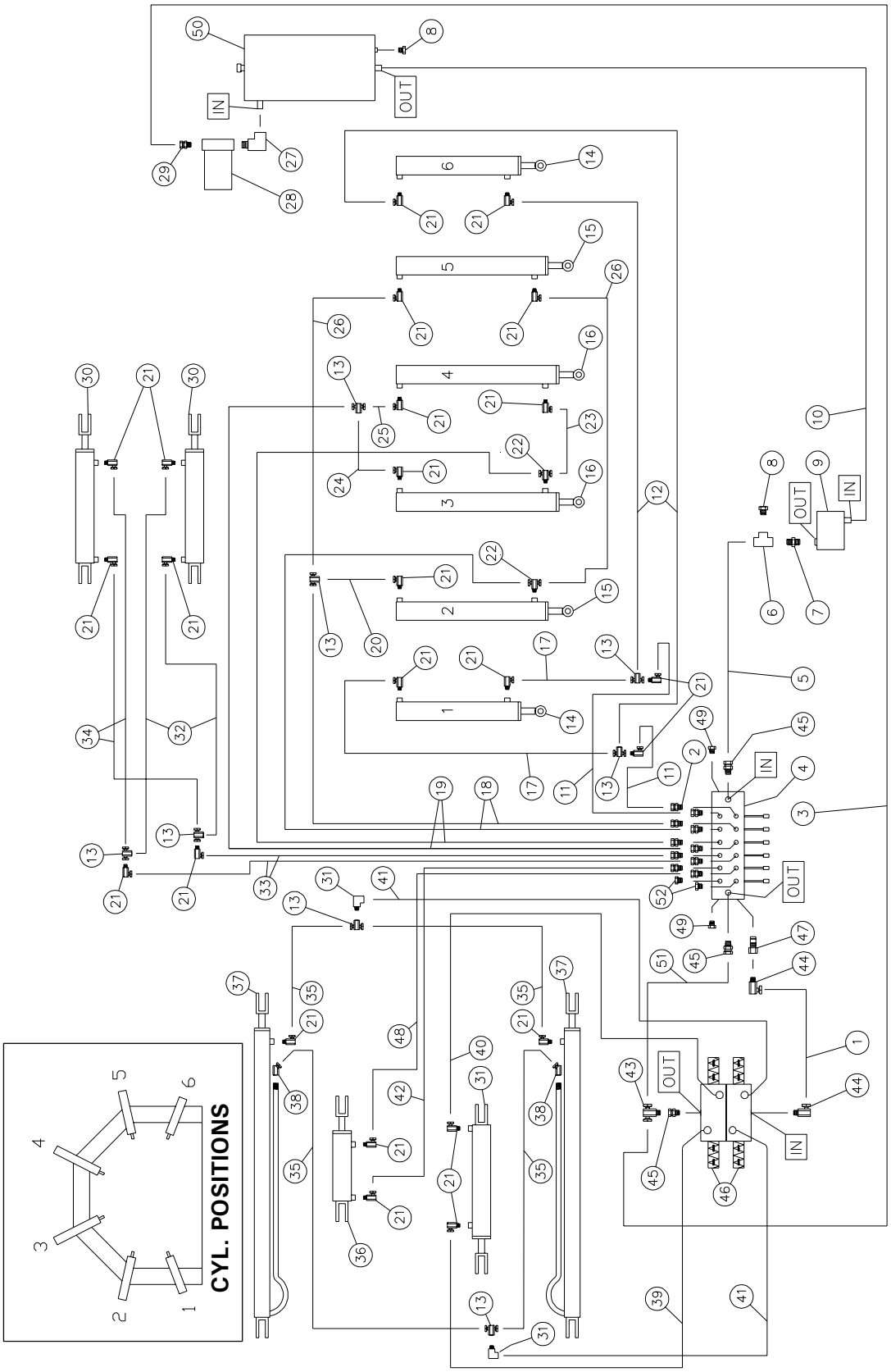


REAR HUB

REF.	PART #	DESCRIPTION	QTY
1	Std.	Cotter pin 5/32" x 1 3/4"	1
2	53019	Dust cap D-1000 1.973" ø	1
3	51529	Castle nut 1" NF x 9/16" thick	1
5	53058	Roller bearing Timken: cone no. L44649	1
6	53023	Roller bearing Timken: cup no. L44610	1
7	53024	Rim screw 1/2"	5
8	53059	Hub only H2500	1
9	51415	Roller bearing Timken: cup no. LM48510	1
10	51416	Roller bearing Timken: cone no. LM48548	1
11	51535	Oil seal no. CR17415	1

HYDRAULIC SYSTEM P-6200AS

170-01515

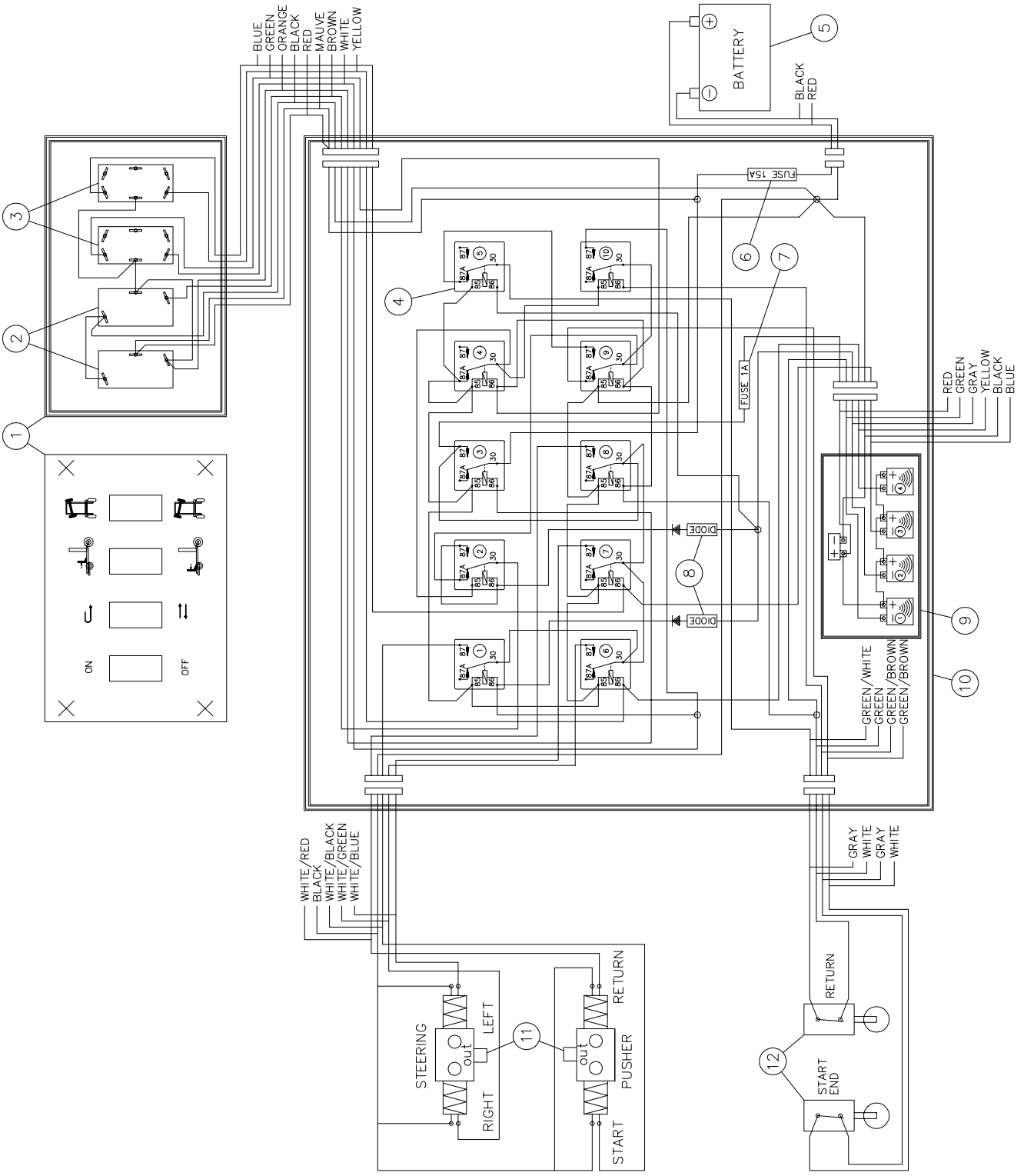


8

HYDRAULIC SYSTEM P-6200AS

REF.	PART #	DESCRIPTION	QTY
1	190-02531	Hose ½" x 75" lg + 2 fittings 8U108	1
2	Std.	Fitting 9315 8 x 6	10
3	D-18089	Hose ½" x 140" lg + 2 fitting 8U108	1
4	32111	6 Spool control valve	1
5	D-8668	Hose ½" x 38" lg + 2 fittings 8U108	1
6	Std.	"T" ½" C3709 x 8	1
7	Std.	Straight female pipe to male pipe ½" C3069x8	1
8	Std.	Endcap ½" C3159 x 8	2
9	32002	Two stages 4/11 hydraulic pump	1
10	D-8727	Low pressure hose 1" x 116½" lg	1
11	D-18091	Hose 3/8" x 48" lg + 2 fittings 6U106	2
12	D-8678	Hose 3/8" x 94" lg + 2 fittings 6U106	2
13	Std.	"T" 3/8" swivel 15856x6x6	8
14	30Z10	Cylinder 3" x 10" stroke	2
15	30Z15	Cylinder 3" x 15" stroke	2
16	30Z17	Cylinder 3" x 17" stroke	2
17	D-8723	Hose 3/8" x 29" lg + 2 fittings 6U106	2
18	D-8675	Hose 3/8" x 31" lg + 2 fittings 6U106	2
19	D-8676	Hose 3/8" x 58" lg + 2 fittings 6U106	2
20	D-18096	Hose 3/8" x 11" lg + 2 fittings 6U106	1
21	Std.	Fitting 9405 6x6	24
22	Std.	"T" 3/8" swivel 15855x6x6	2
23	D-8673	Hose 3/8" x 43 ½" lg + 2 fittings 6U106	1
24	D-18099	Hose 3/8" x 12 ¾" lg + 2 fittings 6U106	1
25	D-18100	Hose 3/8" x 52" lg + 2 fittings 6U106	1
26	D-8674	Hose 3/8" x 122 3/4" lg + 2 fittings 6U106	2
27	Std.	Street elbow 3/4" 90° C3409 x 12	1
28		Paper filter 32007 + hydraulic oil filter adaptor 32031	1
29	Std.	Fitting 9205 x 8 x 12	1
30	25TR08	Cylinder 2 ½" x 8"	3
31	Std.	Street elbow 3/8" 90° C3409 x 6	2
32	190-03071	Hose 3/8" x 34" lg + 2 fittings 6U106	2
33	190-03061	Hose 3/8" x 54" lg + 2 fittings 6U106	2
34	190-03081	Hose 3/8" x 107" lg + 2 fittings 6U106	2
35	D-18107	Hose 3/8" x 63" lg + 2 fittings 6U106	4
36	25TR04	Cylinder 2 ½" x 4"	1
37	20S72	Cylinder 2" x 72" stroke (see details p. 26)	2
38	Std.	Fitting droit 9255 6x6	2
39	190-03651	Hose 3/8" x 52" lg + 1 fittings 6U106 + 1 fitting 6UR68	1
40	190-02481	Hose 3/8" x 40" lg + 1 fittings 6U106 + 1 fitting 6UR68	1
41	190-03661	Hose 1/2" x 53" lg +1 fittings 8U106 + 1 fitting 8UR68	2
42	190-03331	Hose 3/8" x 152" lg + 2 fittings 6U106	1
43	Std.	«T» 5855 x 8	1
44	Std.	Fitting 9515 8x8	1
45	Std.	Fitting 9315 8x8	3
46		Solenoïd valve + o-ring	2
47		Fitting «Power beyong»	1
48	190-03341	Hose 3/8" x 146" lg + 2 fittings 6U106	1
49	Std.	Endcap 7238x8	2
50	A8771	Oil tank	1
51	190-02531	Hose 1/2" x 70" lg + 2 fittings 8U108	1
52	Std.	Endcap 7238x6	2

ELECTRIC SYSTEM P-6200AS

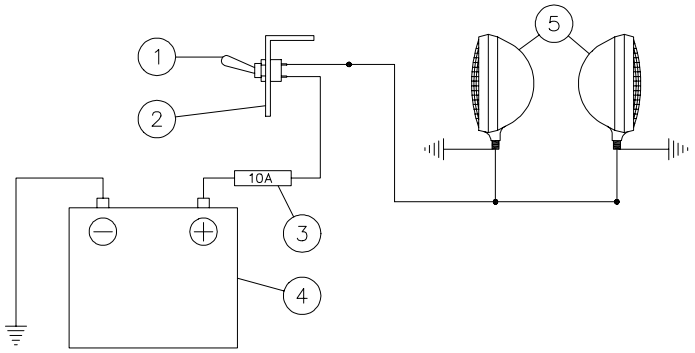


ELECTRIC SYSTEM P-6200AS (cont'd)

REF.	PART #	DESCRIPTION	QTY
1	32245	Manual control sealed box	1
2	32246	Switch on - off	2
3	32247	Switch (on) - off - (on)	2
4	18015	Relay	10
5	32283	Battery 12V - 540A	1
6	32248	Fuse holder	1
6	32249	Fuse 15A	1
7	32248	Fuse holder	1
7	32250	Fuse 1A	1
8	32251	Diode	2
9	32252	Receiver 4 channel	1
10	32253	Sealed box	1
11	18019	Solenoïd valve	1
12	32254	Limit switch	2
*NI	32255	Transmitter 4 channel	1
*NI	Std.	Battery for transmitter (Alkaline 12V no. A23)	1

ELECTRIC CIRCUIT P-6200AS

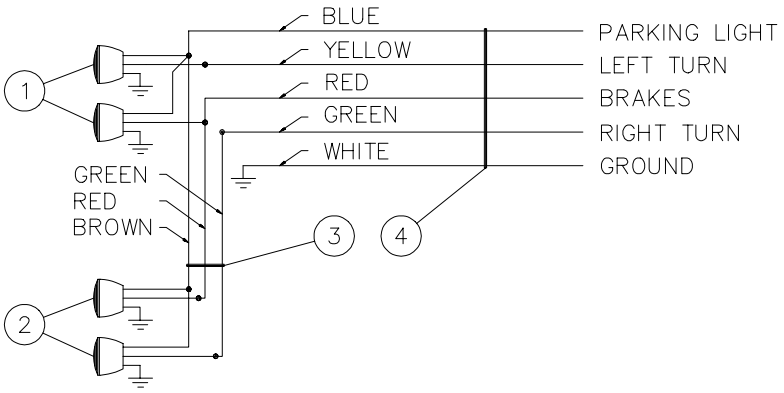
WORKING LIGHTS



170-00381

REF.	PART #	DESCRIPTION	QTY
1	32237	Switch ON-OFF	1
2	130-04481	Switch support	1
3	Std.	Fuse 10A	1
4	32283	Battery 12V-540A	1
5	110-04771	Working lights	2

ROAD LIGHTS

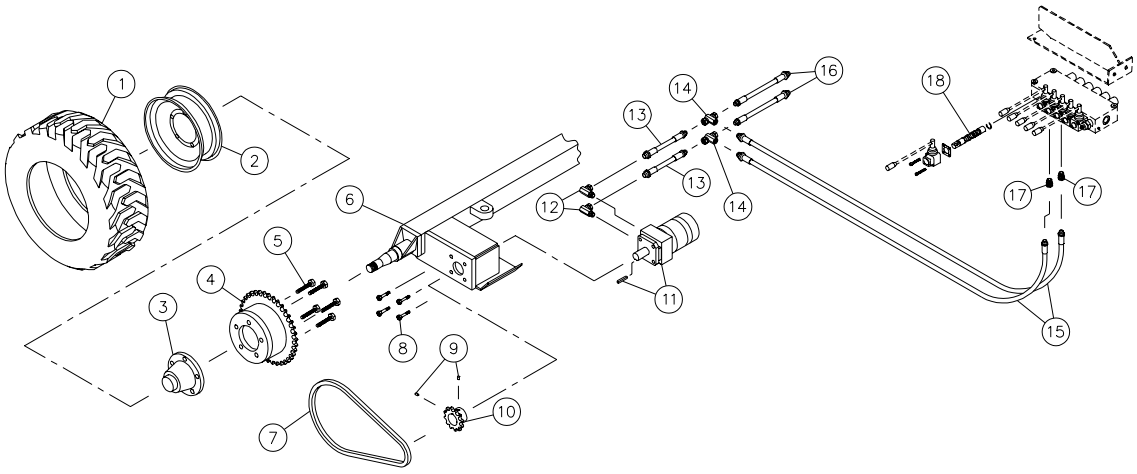


170-00381

REF.	PART #	DESCRIPTION	QTY
1	32228	Left red flashers with license light	2
2	32229	Right red flashers	2
3	110-03601	3 conductor cable with terminal 204" lg	1
4	110-03591	5 conductor cable with terminal 288" lg	1

TRACTION MECHANISM

170-02411



REF.	PART #	DESCRIPTION	QTY
1	PNA238512	Traction tire	2
2	R-1275	Rim 12 x 7 - 5 bolts	2
3	190-01281	Hub H-2500 modified	2
4	110-08841	Sprocket 60A38	2
5	110-10991	Bolt 1/2" NF x 2 3/4" lg +nut	10
6	110-09681	Front axle for P-6200AS	1
7	190-02881	Chain #60 x 36" lg	2
8	Std.	Bolt 3/8" NC x 1" lg + lockwasher	8
9	Std.	Hexagonal socket set screw 5/16" NC x 1/2" lg	4
10	110-10981	Sprocket 60B14	1
11	DH315	Hydraulic motor DH315 + key (see details p. 44)	2
12	9405x6x8	Fitting 90 deg. (swivel)	2
13	Std.	Hose 3/8" + 2 fittings 6U-106	2
14	5856x6x6x6	"T" (swivel)	2
15	Std.	Hose 3/8" + 2 fittings 6U-106	2
16	Std.	Hose 3/8" + 2 fittings 6U-106	2
17	9315x8x6	Straight fitting (swivel)	2
18	32279	Valve spool (open center)	1

TORQUE CHART

TORQUE SPECIFICATION TABLE

Thread UNC and UNF		Grade 2				Grade 5				Grade 8*			
Bolt size		Torque				Torque				Torque			
		Pound feet		Newton meters		Pound feet		Newton meters		Pound feet		Newton meters	
Inches	mm	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	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		Newton meters		Pound feet		Newton meters		Pound feet		Newton meters	
			min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	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.

Tires and gasoline engine are covered by the manufacturers of these items.

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 result of an accident, if 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

LES MACHINERIES PRONOVOST INC.
260, route 159,
Saint-Tite, Quebec, Canada, G0X 3H0
Tel.: (418) 365-7551, Fax: (418) 365-7954
www.pronovost.qc.ca