

# **PRONOVOST**

**OWNER'S  
MANUAL**

# **SILATUBE**

**Models  
P-6200 & P-6300**



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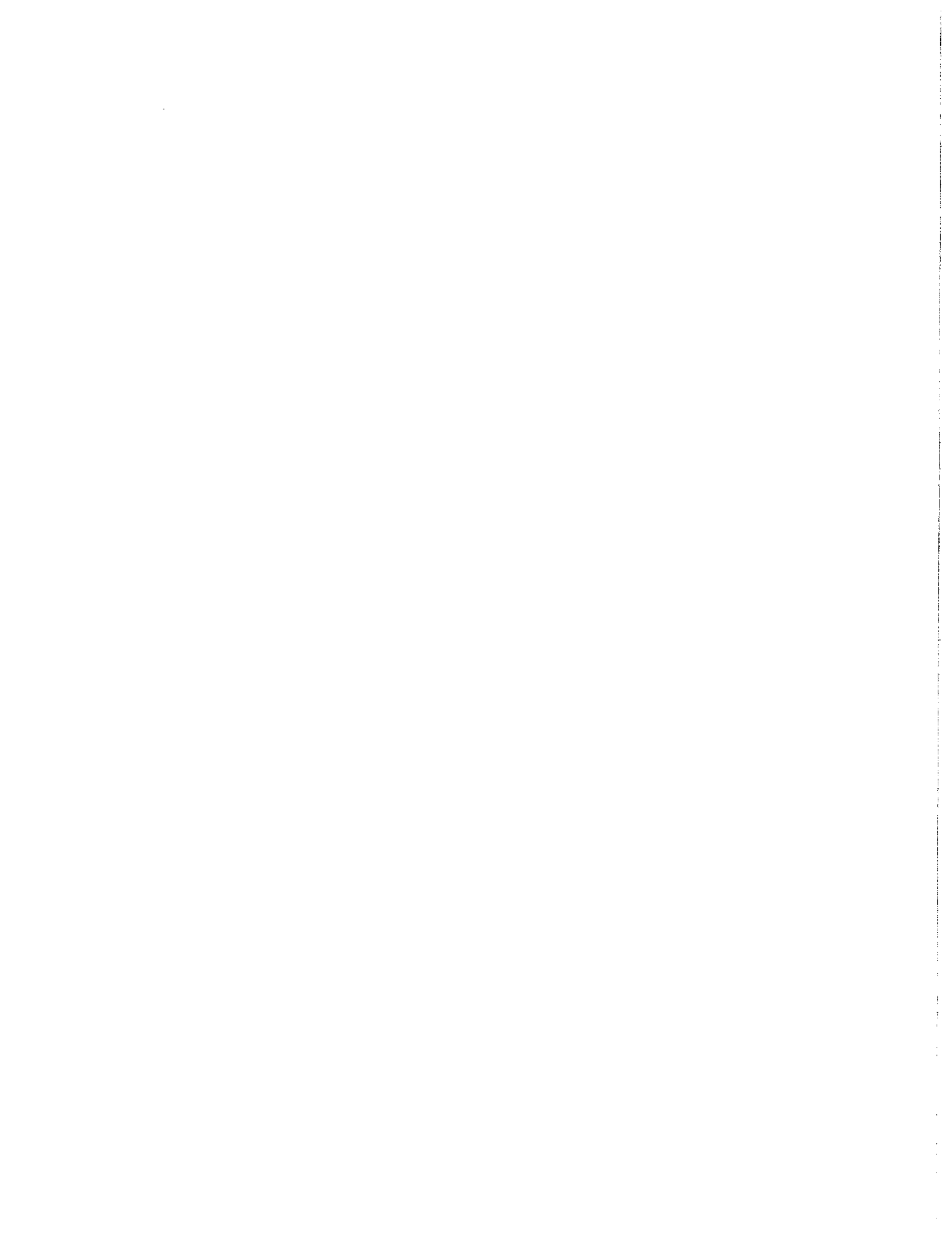


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# INTRODUCTION

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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 name plate shown on Fig. 1.



Figure 1

MODEL: \_\_\_\_\_ 

SERIAL NO.: \_\_\_\_\_ 

DATE OF PURCHASE: \_\_\_\_\_ 

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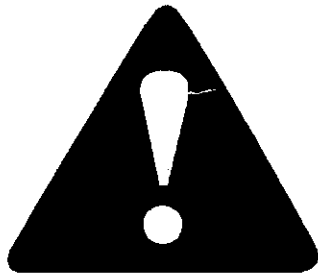
# **SAFETY**

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## **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 is 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 36.

- 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.

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## ***SAFETY (cont'd)***

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- 5) Keep hands, feet, hair and clothing away from moving parts.
- 6) Before stepping on the SilaTube to install the last bale pusher extension **ALWAYS** disengage the pusher valve trigger mechanism since there is **RISK OF CRUSHING** if not disengaged.
- 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) Check local regulations for the transport of your SilaTube on the road.
- 2) Be alert when pulling the SilaTube on the road. Do not allow anyone to stand on it while in motion.
- 3) Maximum recommended towing speed on the road is 25 MPH or 40 KMH.
- 4) 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 ProTube 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.**

**2**

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

3

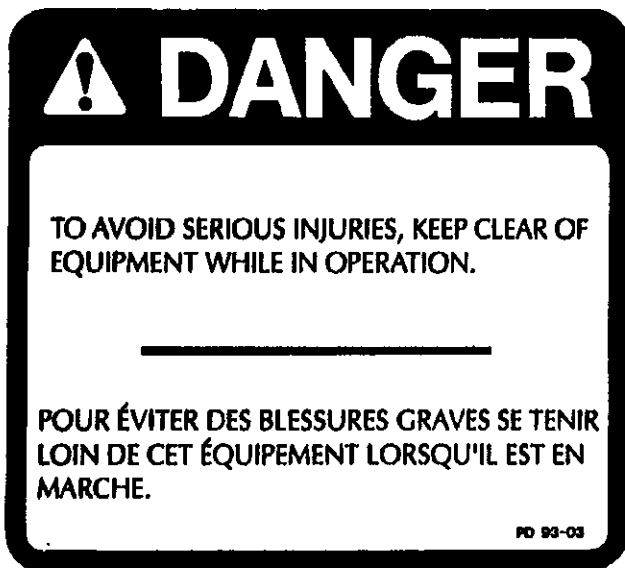


Figure 2  
Decal A

Part no.: A101

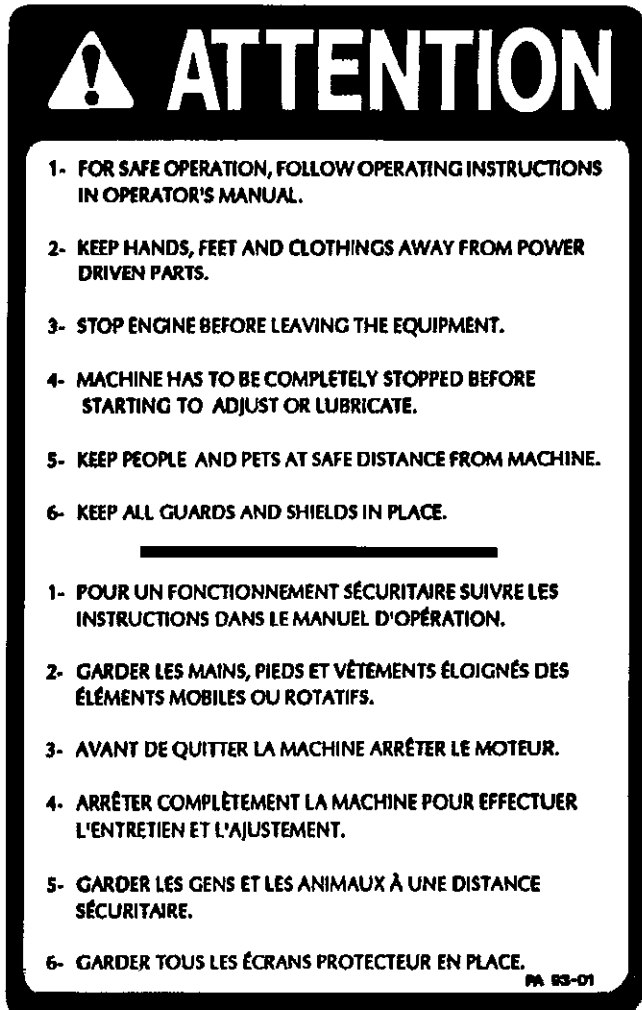


Figure 4  
Decal B

Part no.: A102

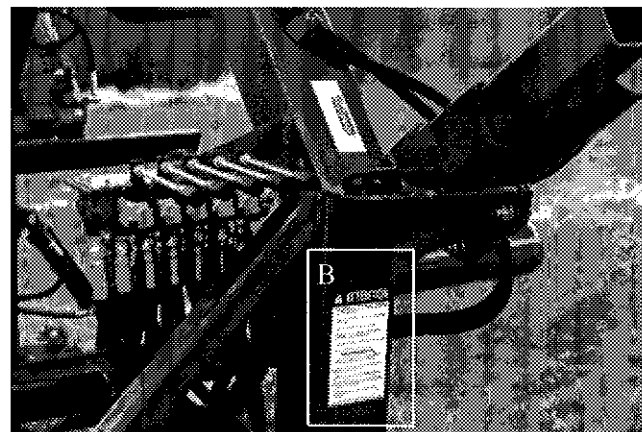
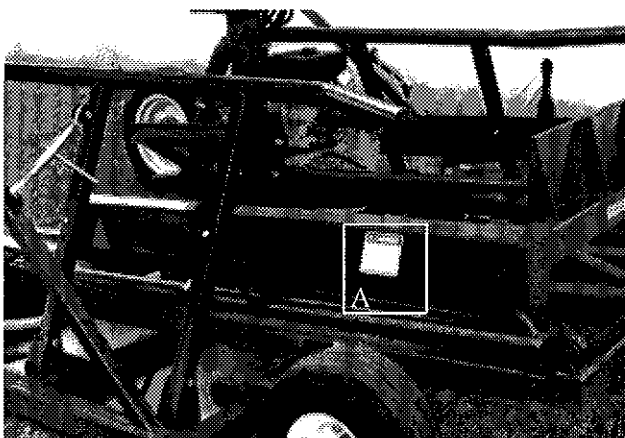


Figure 5



## DECALS (cont'd)



Figure 6  
Decal C

Part no.: A103

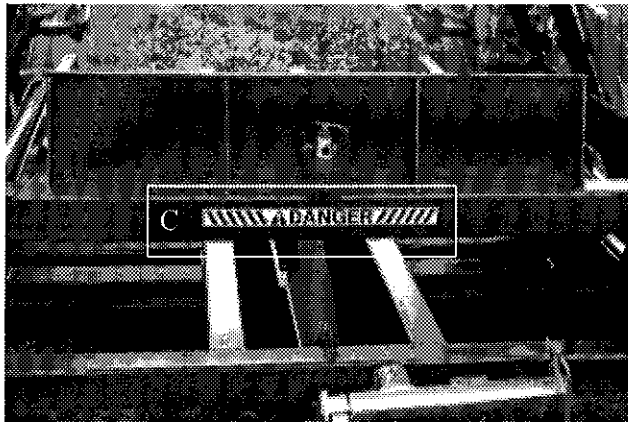


Figure 7

### MAINTENANCE DECALS

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



Figure 8  
Decal D

Part no.: A104

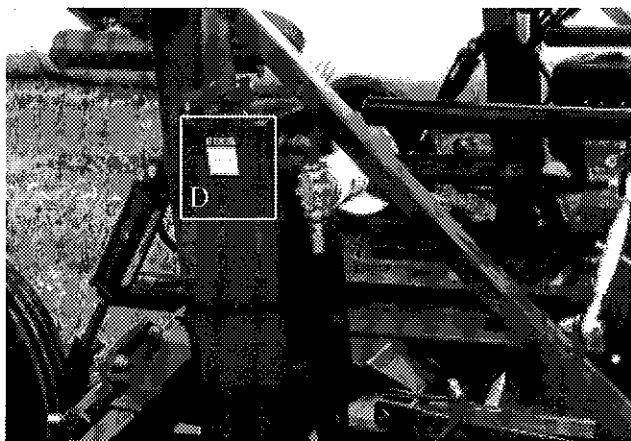


Figure 9

3

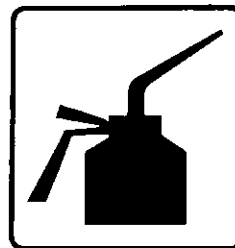


Figure 10  
Decal E

Part no.: A 105



Figure 11  
Decal F

Part no.: A 106

# STARTING-UP

4

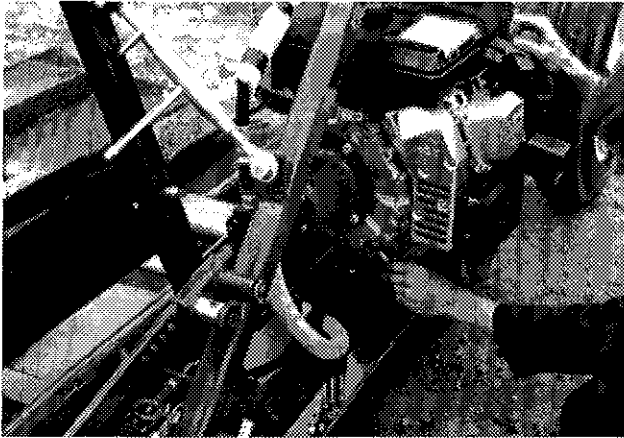


Figure 12

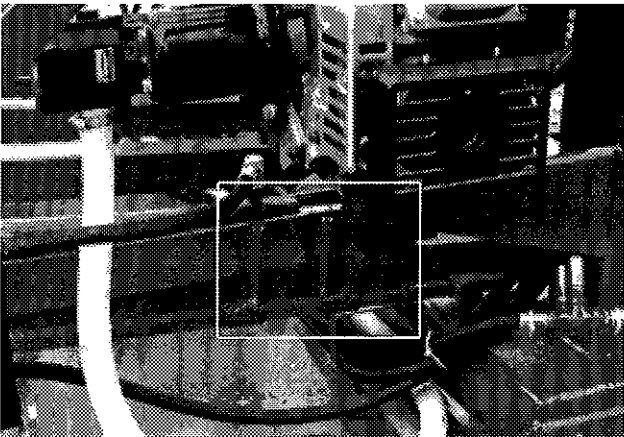


Figure 13

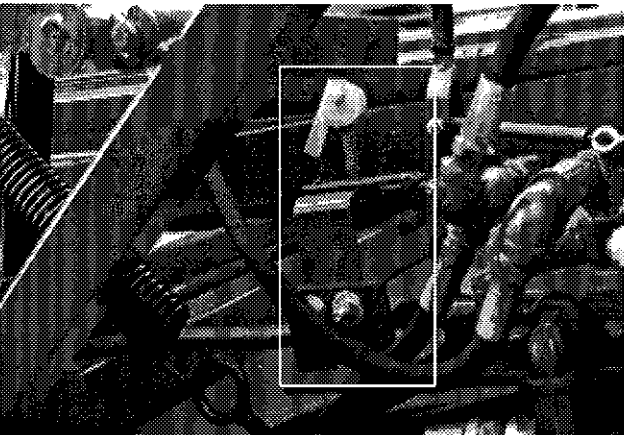


Figure 14

## BASIC START-UP PROCEDURES

### STEP 1 APPLIES ONLY TO THE P-6300.

- 1) Please note, for shipment, the engine is temporarily mounted in the transport position in order not to exceed the legal width allowed on the road. Consequently, it must be re-positioned properly before starting.(Fig.12)
- 2) Lubricate all points and guide mechanisms requiring grease, with a high quality lithium base grease containing molybdenum disulfide ( $\text{MoS}_2$ ) such as «Esso Unirex EP1 Moly», «DARINA XL-Multi Season Moly, Grade #1» from Shell or equivalent.
- 3) 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.
- 4) Check tire pressure and adjust according to recommendation indicated on the tires.
- 5) Check engine oil level.
- 6) Check the operation of all hydraulic cylinders.
- 7) Check the operation of the bale pusher mechanism. It must operate freely and return to its starting position automatically. If necessary, adjust the end of stroke lug (Fig.13), the trigger mechanism (Fig.14) or the length of the actuator rod (Fig.15).
- 8) Check the surface of the stretcher arms for smoothness. Any mark or protrusion could cause tears to the ProTube.

## STARTING-UP (cont'd)



Figure 15



Figure 16

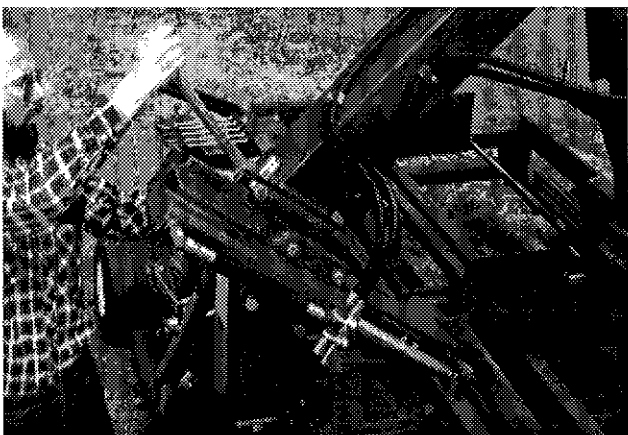


Figure 17

### 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.

### ADJUSTMENT OF SILATUBE

4

#### STEP 1 APPLIES ONLY TO THE P-6300

- 1) Position the six (6) stretcher hydraulic cylinder assemblies according to the size of ProTube used. Use the outside holes for 4 ft. tubes, 48" to 56" (1.22 to 1.42 m) (Fig.16). Use the inside holes for 5 ft. tubes, 56" to 66" (1.42 to 1.68 m) (Fig.17).
- 2) Locate 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 for the slippage of the first couple of bales until there is enough ground friction to push the SilaTube forward.
- 3) Adjust guides (A Fig.18) according to the width of the bales. Use turnbuckles provided (B Fig.18).

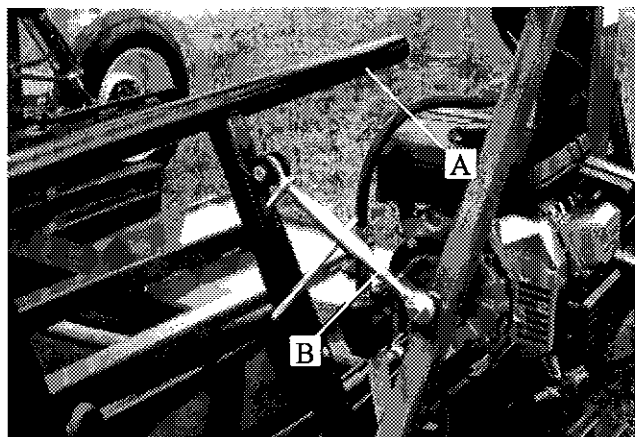


Figure 18

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## STARTING-UP (cont'd)

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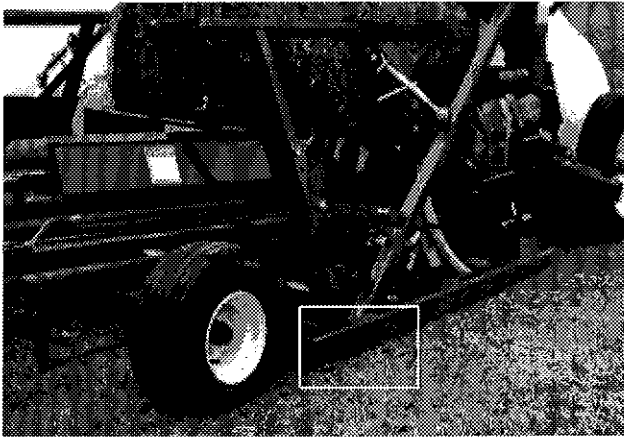


Figure 19

4

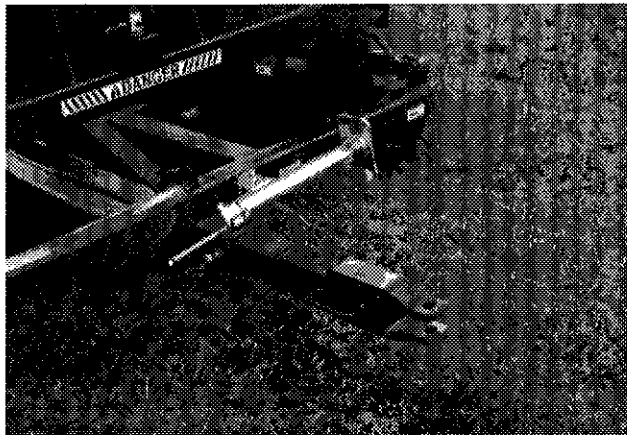


Figure 20

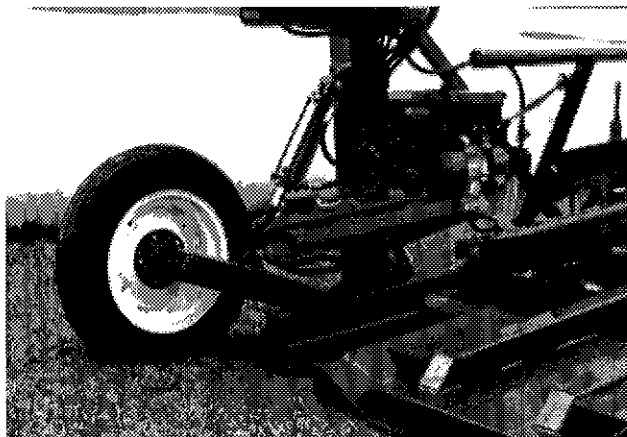


Figure 21

- 4) Adjust front wheels elevation in order to maintain a front ground clearance of approximately 3" (7.6 cm). (Fig. 19)
- 5) Adjust tongue to it's most inward position. If there is a risk of interference with the front of the tractor, it is recommended to remove it. (Fig. 20)
- 6) Lower rear wheels in order to remove ground friction while keeping it close to the ground. (Fig. 21) This adjustment may vary according to ground conditions and topography.
- 7) The stopping pins are used to set the maximum stretching of the ProTube according to bale size. (Fig. 22)

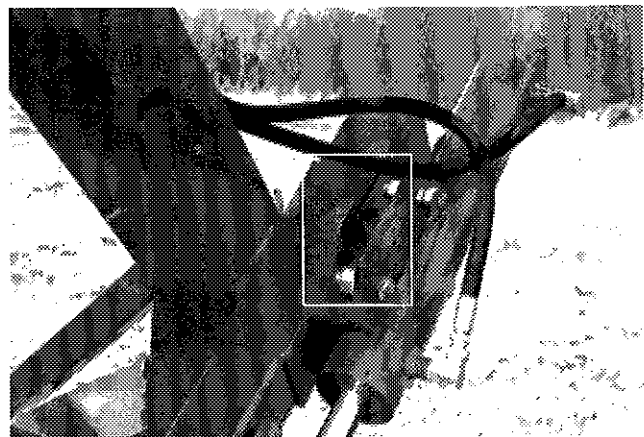


Figure 22

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## STARTING-UP (cont'd)

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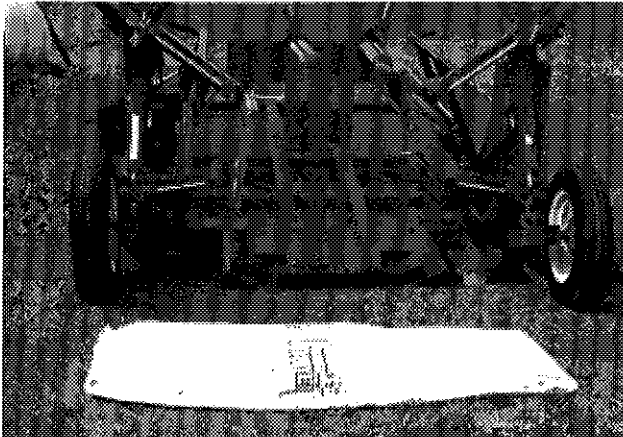


Figure 23



Figure 24



Figure 25

- 8) Adjust the stopping pins according to the size and general shape of the bales. This adjustment is done with the first bale. It is preferable not to stretch the tube more than necessary. (See step one of operation, page 15.)
- 9) For maximum speed of operation set 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.

### INSTALLATION OF TUBE

4

In order to avoid complications, adhere to the following sequence:

- 1) Start engine.
- 2) Close stretcher arms to smallest diameter. (Fig. 23)
- 3) Install tube on stretcher arms. Place it so that the name ProTube is facing outside when it unfolds. Slide it to the bottom of the arms, being careful to remove all wrinkles, since they could cause some tearing of the tube. (Fig. 24)
- 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 guide tube. (Fig. 25 and Fig. 26)

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## STARTING-UP (cont'd)

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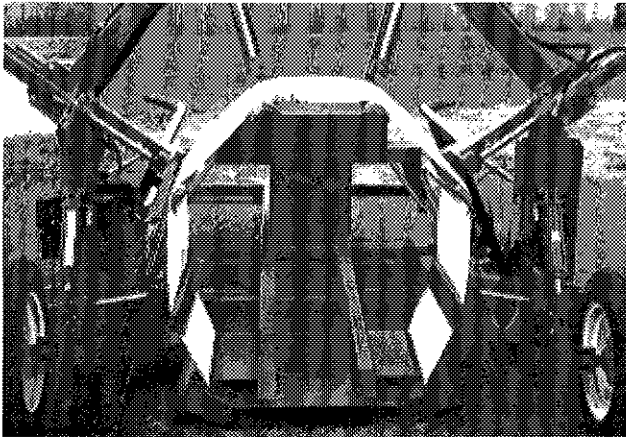


Figure 26

- 5) Again check the tube position (Fig. 27) and eliminate any wrinkles. Next, cut off all ties. (Fig 28)
- 6) 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 29 and Fig 30)

4

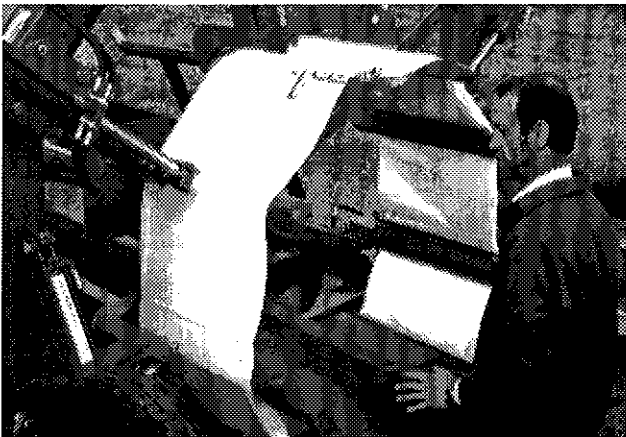


Figure 27



Figure 29



Figure 28



Figure 30

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## STARTING-UP (cont'd)

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Figure 31



Figure 32

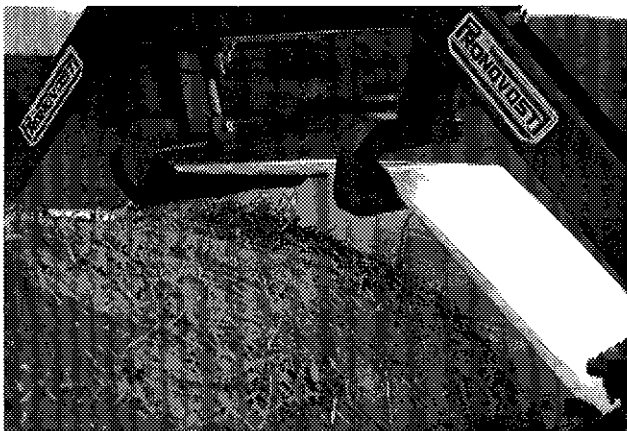


Figure 33

- 7) The tube is now ready to be stretched. Actuate all three valves **SIMULTANEOUSLY** (Fig. 31). Hold them until all stretcher arms are set against the stopping pins which were pre-adjusted according to the bales diameter and shape. (Step 1 of operation, below.)
- 8) **STRETCH THE TUBE ONLY WHEN READY TO OPERATE.** It may lose some of its memory if kept stretched for too long a period of time. If you must stop loading bales for a while, **BRING THE TUBE DOWN TO A MODERATE TENSION.**

4

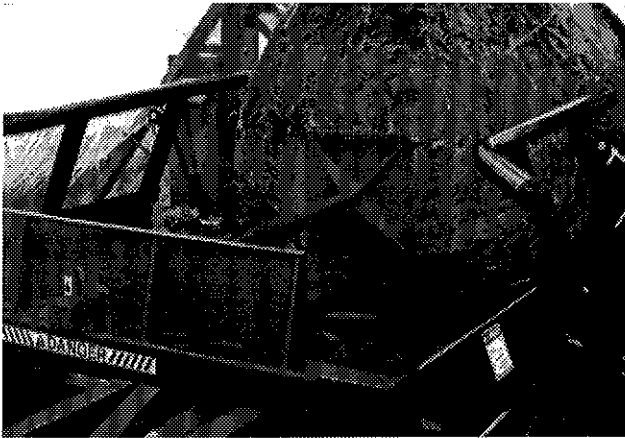
### OPERATION

- 1) Before loading the first bale, disengage the pusher trigger mechanism by raising the safety lever. (Fig. 32) This way, the first bale will move forward just enough to verify the pre-setting of the stretcher arms opening. (Step 8 of SilaTube adjustment.) **THERE SHOULD BE APPROXIMATELY 3" (7.6 CM) OF CLEARANCE** between the bale and the inside of the stretcher arms (Fig 33). Re-adjust stopping pins if necessary. (Fig. 22)
- 2) Reset the trigger mechanism by lowering the safety lever. Engage the valve manually to complete the cycle automatically.
- 3) It is recommended to use a spear (single or double) on your loader to drop the bales onto the SilaTube.
- 4) Once the bale is dropped, back up immediately to make room for the SilaTube's forward movement.
- 5) With the first two or three bales, it is possible that the tube may have a tendency to slip depending on the ground conditions. In order to minimize this condition, the rear wheels can be lowered slightly to reduce the amount of ground friction from the machine. But be careful, the machine must remain on the ground.

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## STARTING-UP (cont'd)

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4  
Figure 34

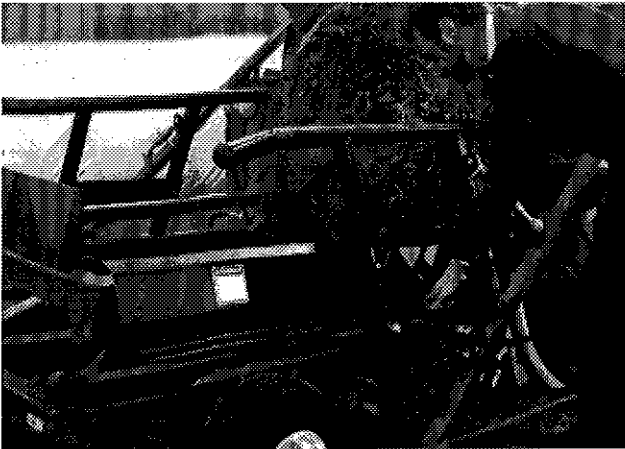


Figure 35

- 6) After the first 4 or 5 bales, lower the rear of the SilaTube in order to increase ground friction. This will ensure that the bales are real tight against each other in the tube.
- 7) Towards the end of the tube, try to keep at least 36" (91 cm) of plastic, in order to close the tube properly.
- 8) Disengage the pusher trigger mechanism (Fig. 32), since there is risk of accidental crushing.
- 9) Install the pusher extension supplied with the SilaTube (Fig. 34) to push the last bale into the tube. **AVOID** pressing on the control mechanism plate.
- 10) Manually operate the pusher valve (Fig. 35) until the bale is fully out of the SilaTube and return the pusher to its starting position.
- 11) Remove the pusher extension and re-engage the pusher trigger mechanism.
- 12) Close up end of ProTube as previously described.
- 13) Regularly inspect the ProTubes. If torn or punctured, repair openings with proper adhesive tape.



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# *MAINTENANCE*

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- 1) Refer to the manufacturer's instructions for the engine.
- 2) Use a high quality lithium base grease containing molybdenum disulfide ( $\text{MoS}_2$ ) such as «Esso Unirex EPI 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 tractor transmission oil and hydraulic system 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 36.
- 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.

**5**

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## ***STORAGE***

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- 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) Lubricate all points before storage.
- 7) Drain all fuel from tank.

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## ***SPECIFICATIONS***

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### ***P-6200***

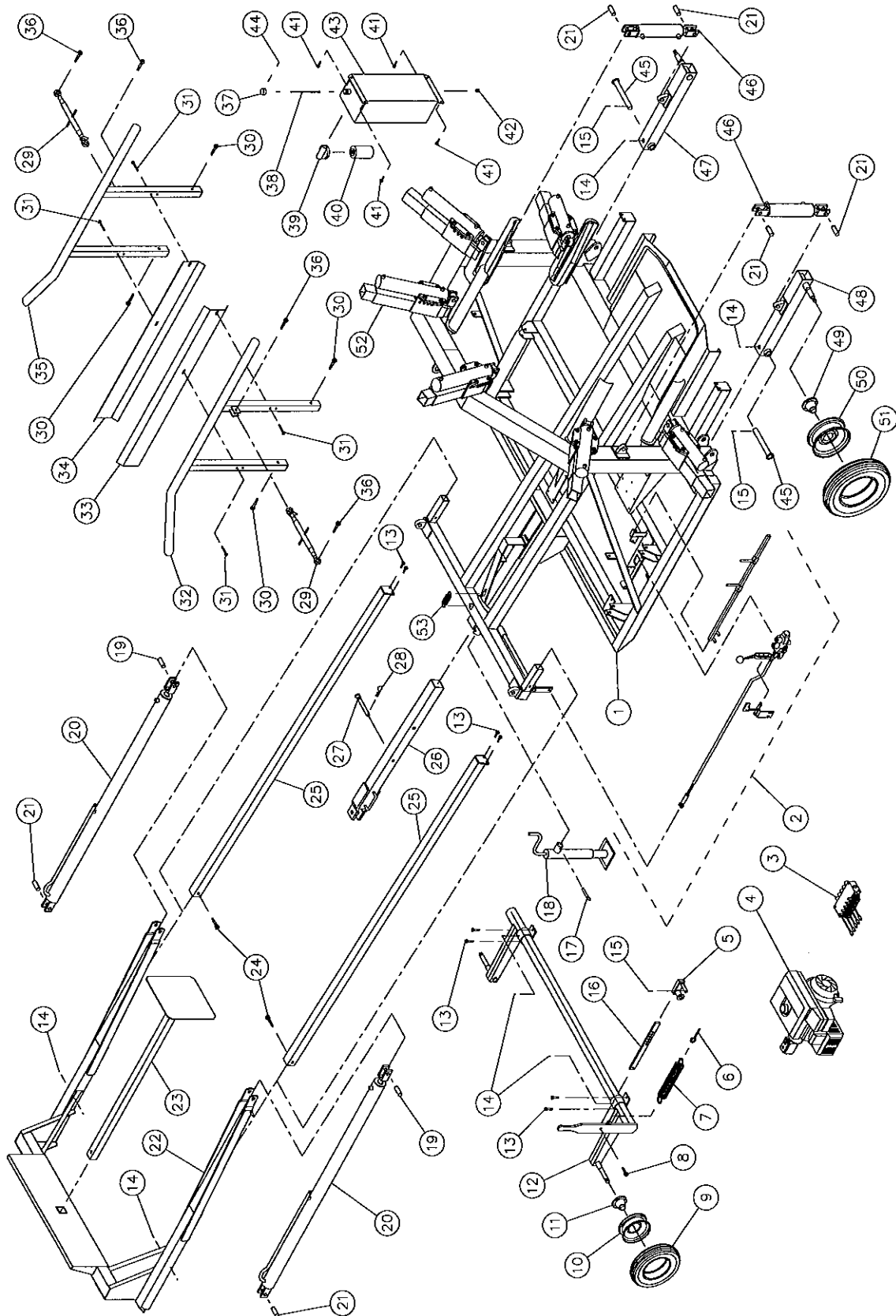
Overall length: 143" (3.63m) (without the 40" (102 cm) tongue)  
Overall width: 100" (2.54m)  
Height: 90" (2.29m) (transport position)  
Bales diameter: 48" to 56" (1.22 à 1.42 m) diameter  
Engine: B/S 9 HP  
Starting: Manual  
Two stages hydraulic pump: 3 gal at 2500 psi / 11 gal at 1100 psi  
Front hub: cap. 1000 pounds (450 kg) 4 bolts  
Rear hub: cap. 1800 pounds (810 kg) 5 bolts  
Front rim: 8.5" x 8" - 4 bolts  
Rear rim: 15" x 6" - 5 bolts  
Front tires: 18" x 8.5" x 8"  
Rear tires: 5.9L15  
Capacity: 100 bales per hour (Best conditions and experimented operator)  
Oil tank capacity: 5.75 gal US (4.75 gal imp.) (21.75 liters)  
Plastic tubes used: | ProTube 0.004 mil., 150' (47.72 m) length  
| No. P-62204 for bale 48" to 56" (1.22 à 1.42 m) diameter  
Weight on tongue: 1100 pounds (495 kg) app.  
Total weight: 3200 pounds (1440 kg) app.

### ***P-6300***

Overall length: 143" (3.63 m) (without the 40" (102 cm) tongue)  
Overall width: 112" (2.85 m)  
Height: 96" (2.45 m) (transport position)  
Bales diameter: 48" to 66" (1.22 à 1.68 m) diameter  
Engine: B/S 9 HP  
Starting: Manual  
Two stages hydraulic pump: 3 gal at 2500 psi / 11 gal at 1100 psi  
Front hub: cap. 1000 pounds (450 kg) 4 bolts  
Rear hub: cap. 1800 pounds (810 kg) 5 bolts  
Front rim: 8.5" x 8" - 4 bolts  
Rear rim: 15" x 6" - 5 bolts  
Front tires: 18" x 8.5" x 8"  
Rear tires: 5.9L15  
Capacity: 100 bales per hour (Best conditions and experimented operator)  
Oil tank capacity: 5.75 gal US (4.75 gal imp.) (21.75 liters)  
Plastic tubes used: | ProTube 0.004 mil., 150' (47.72 m) length  
| No. P-62204 for bales 48" to 56" (1.22 à 1.42 m) diameter  
| No. P-62205 for bales 56" to 66" (1.42 à 1.68 m) diameter  
Weight on tongue: 1200 pounds (540 kg) app.  
Total weight: 3650 pounds (1642 kg) app.

**7**

# SILATUBE P-6200 ASSEMBLY (cont'd)



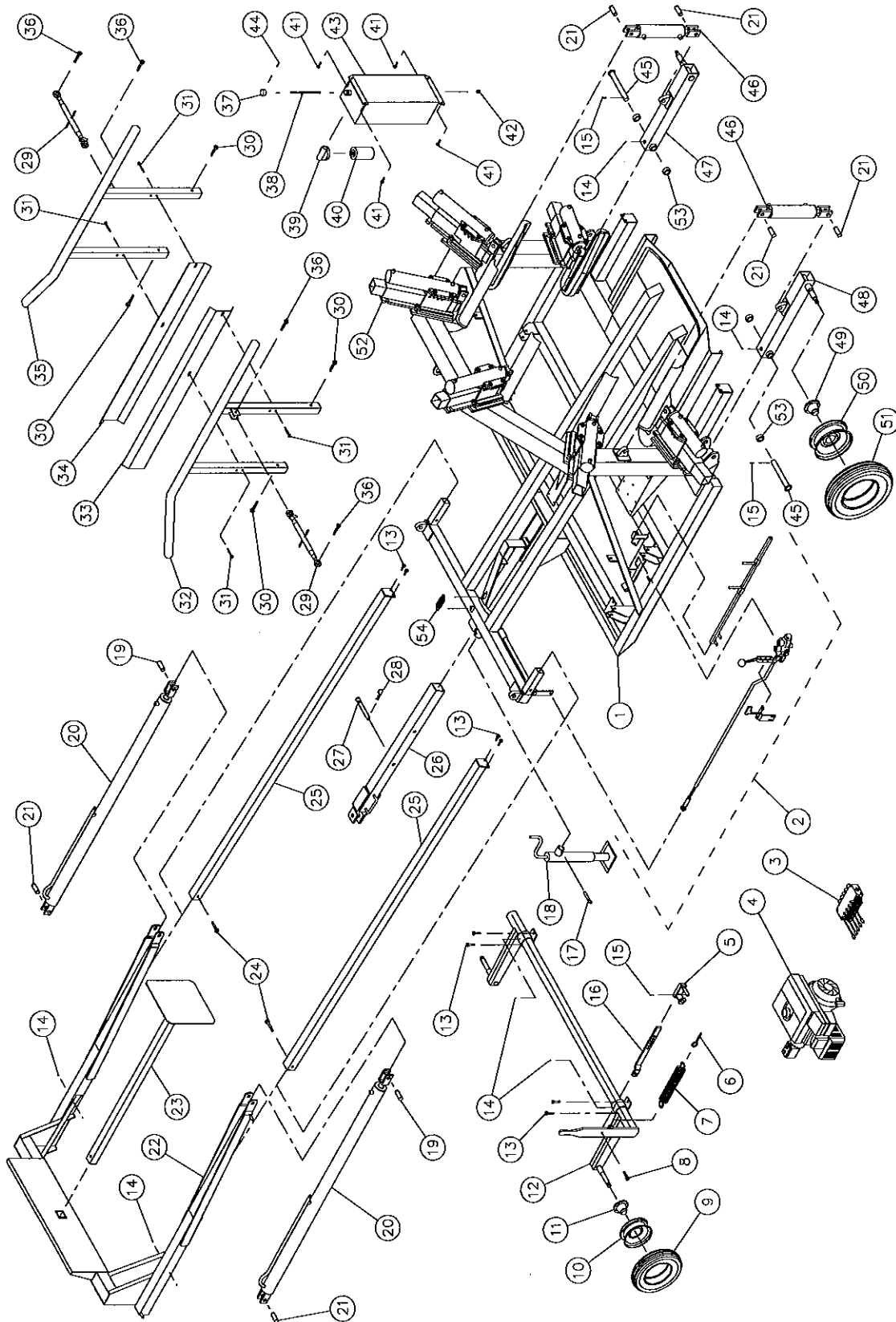
8

# SILATUBE P-6200 ASSEMBLY (cont'd)

REF.	PART #	DESCRIPTION	QTY
1	32015	Main frame .....	1
2	32003	1 spool control valve adjusted to 1500 psi (see details p. 30) .....	1
3	32000	5 spool control valve SD5/5-P adjusted to 2500 psi (see details p. 29) .....	1
4		B&S 9HP engine assembled with pump (see details p. 31) .....	1
5	32016	Locking mechanism, frt. wheels adjustment .....	1
6	32017	Tightener 1/2" .....	1
7	1201	Spring .....	1
8	Std.	Bolt 5/8" NC x 2" lg + nylon locknut .....	1
9	PN-18858	Tire 18" x 8.5" x 8 - 4 ply .....	2
10	R-874	Rim 8" x 7" - 4 hole .....	2
11	53015	Hub H-1000 (see details p. 32) .....	2
12	32018	Front axel ass'y. ....	1
13	Std.	Bolt 1/2" NC x 1 1/2" lg + nut & lock washer .....	4
14	Std.	Grease fitting 1/4" - 28 straight .....	2
15	Std.	Cotter pin 5/32" x 1 1/2" lg .....	1
16	32019	Adjustment rod .....	1
17	51408	Pin .....	1
18	51407	Jack 2000 pounds capacity .....	1
19	32019	Pin 1" .....	2
20	20E72	Cylinder 2" x 72" lg (see details sp. 28) .....	20
21	D-60051	Pin 1" x 3" lg .....	2
22	32020	Pusher frame .....	1
23	32021	Pusher extension .....	1
24	Std.	Bolt 5/8" NC x 3 1/2" lg + nut & lock washer .....	2
25	32022	Pusher guide .....	2
26	32023	Tongue .....	1
27	32024	Tongue pin .....	1
28	DA3070-56	Hair pin 5/32" .....	1
29	32014	Turnbuckles 10" .....	2
30	Std.	Bolt 5/8" NC x 3 1/2" lg + nylon locknut .....	4
31	Std.	Bolt 7/16" NC x 3" lg + nut + lock washer & flat washer .....	4
32	32025	Left bale guide .....	1
33	32026	Left protector .....	1
34	32027	Right protector .....	1
35	32028	Right bale guide .....	1
36	Std.	Bolt 5/8" NC x 2 1/2" lg + nylon locknut .....	4
37	32029	Tank cap .....	1
38	32030	Dip stick .....	1
39	32031	Hydraulic oil filter adapter FSP107-1E DNN .....	1
40	32007	Paper filter K-22001 .....	1
41	Std.	Bolt 7/16" NC x 1" + nut & lock washer .....	4
42	32032	Drain plug 1/2" .....	1
43	32033	Oil tank .....	1
44	Std.	Roll pin 5/32" x 1 3/4" .....	1
45	32034	Pin .....	2
46	25TR08	Cylinder 2.5" x 8" std. ....	2
47	32035	Right rear axel .....	1
48	32036	Left rear axel .....	1
49	32037	Hub H-511 (see details p. 33) .....	2
50	R-1555	Rim 15" x 5" - 5 holes .....	2
51	PN-5.90-15	Tire 5.9" x 15" - 4 ply .....	2
52		Arch cylinder (see details p. 27) .....	6
53	32008	Tension spring 1 1/4" x 3 1/2" lg .....	1

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# SILATUBE P-6300 ASSEMBLY (cont'd)



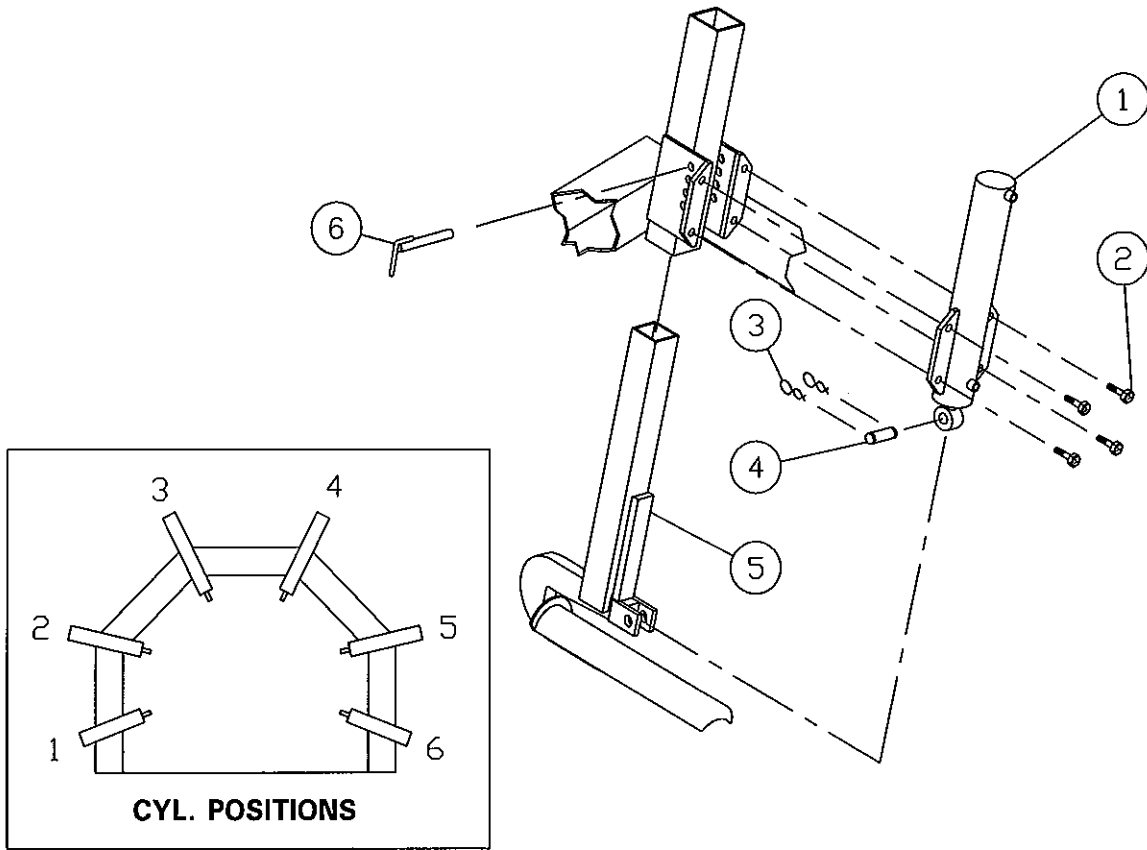
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# SILATUBE P-6300 ASSEMBLY (cont'd)

REF.	PART #	DESCRIPTION	QTY
1	32089	Main frame .....	1
2	32003	1 spool control valve adjusted to 1500 psi (see details p. 30) .....	1
3	32000	5 spool control valve SD5/5-P adjusted to 2500 psi (see details p. 29) .....	1
4		B&S 9HP engine assembled with pump (see details p. 31) .....	1
5	32016	Locking mechanism, frt. wheels adjustment .....	1
6	32017	Tightener 1/2" .....	1
7	1201	Spring .....	1
8	Std.	Bolt 5/8" NC x 2" lg + nylon locknut .....	1
9	PN-18858	Tire 18" x 8.5" x 8 - 4 ply .....	2
10	R-874	Rim 8" x 7" - 4 hole .....	2
11	53015	Hub H-1000 (see details p. 32) .....	2
12	32090	Front axel ass'y. ....	1
13	Std.	Bolt 1/2" NC x 1 1/2" lg + nut & lock washer .....	4
14	Std.	Grease fitting 1/4" - 28 straight .....	2
15	Std.	Cotter pin 5/32" x 1 1/2" lg .....	1
16	32091	Adjustment rod .....	1
17	51408	Pin .....	1
18	51407	Jack 2000 pounds capacity .....	1
19	32019	Pin 1" .....	2
20	20E72	Cylinder 2" x 72" lg (see details p. 28) .....	20
21	D-60051	Pin 1" x 3" lg .....	2
22	32092	Pusher frame .....	1
23	32021	Pusher extension .....	1
24	Std.	Bolt 5/8" NC x 3 1/2" lg + nut & lockwasher .....	2
25	32022	Pusher guide .....	2
26	32023	Tongue .....	1
27	32024	Tongue pin .....	1
28	DA3070-56	Hair pin 5/32" .....	1
29	32014	Turnbuckles 10" .....	2
30	Std.	Bolt 5/8" NC x 3 1/2" lg + nylon locknut .....	4
31	Std.	Bolt 7/16" NC x 3" lg + nut + lock washer & flatwasher .....	4
32	32025	Left bale guide .....	1
33	32026	Left protector .....	1
34	32027	Right protector .....	1
35	32028	Right bale guide .....	1
36	Std.	Bolt 5/8" NC x 2 1/2" lg + nylon locknut .....	4
37	32029	Tank cap .....	1
38	32030	Dip stick .....	1
39	32031	Hydraulic oil filter adapter FSP107-1E DNN .....	1
40	32007	Paper filter K-22001 .....	1
41	Std.	Bolt 7/16" NC x 1" + nut & lock washer .....	4
42	32032	Drain plug 1/2" .....	1
43	32033	Oil tank .....	1
44	Std.	Roll pin 5/32" x 1 3/4" .....	1
45	32093	Pin .....	2
46	25TR08	Cylinder 2.5" x 8" std. ....	2
47	32035	Right rear axel .....	1
48	32036	Left rear axel .....	1
49	32037	Hub H-511 (see details p. 33) .....	2
50	R-1555	Rim 15" x 5" - 5 holes .....	2
51	PN-5.90-15	Tire 5.9" x 15" - 4 ply .....	2
52		Arch cylinder (see details p. 27) .....	6
53	32094	Spacer 1 1/4" x 1/2" lg .....	4
54	32008	Tension spring 1 1/4" x 3 1/2" lg .....	1

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# DETAIL OF ARCH MODEL P-6200

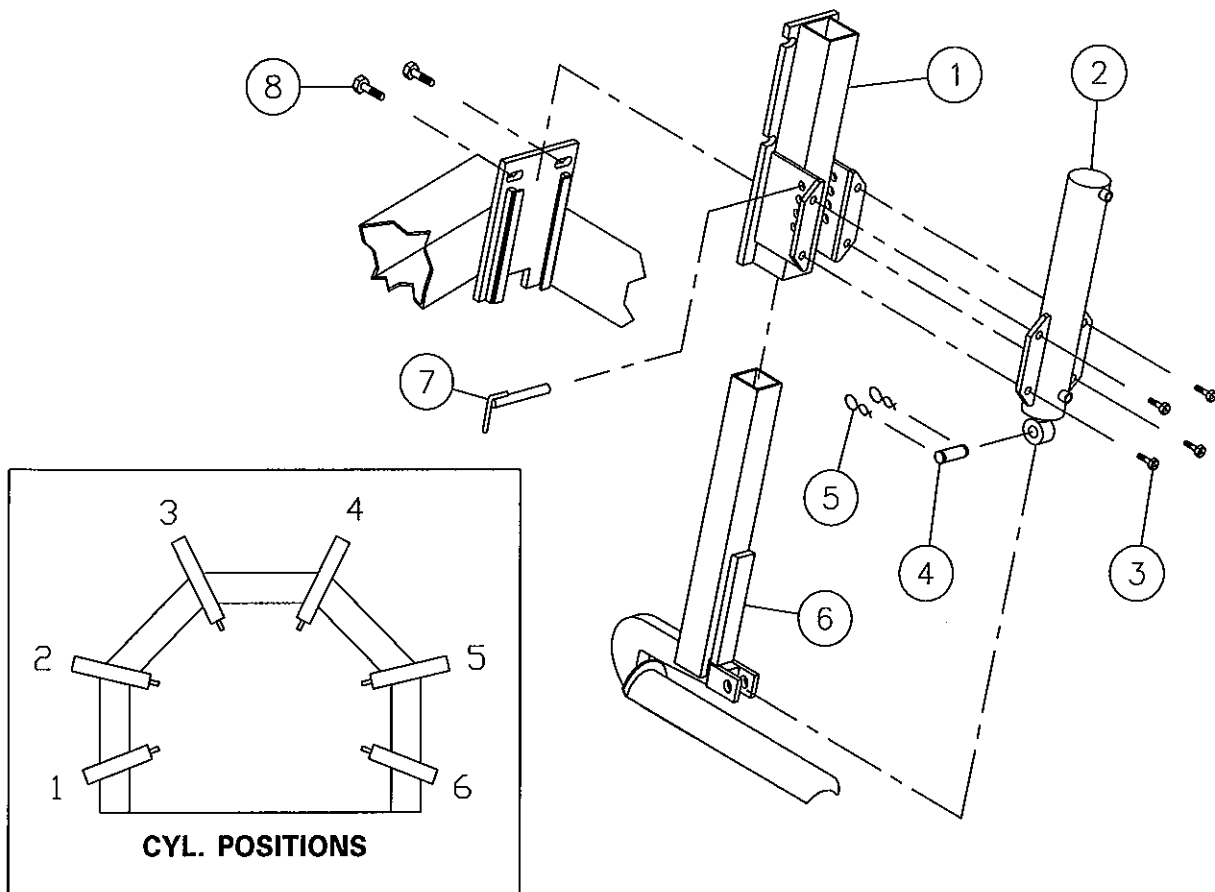


REF.	PART #	DESCRIPTION	QTY CYL. POSITION #					
			1	2	3	4	5	6
1	30Z10	Cylinder .....	1	-	-	-	-	1
1	30Z15	Cylinder .....	-	1	-	-	1	-
1	30Z17	Cylinder .....	-	-	1	1	-	-
2	Std.	Bolt 5/8" NC x 2" lg + nut & lock washer .....	4	4	4	4	4	4
3	Std.	Hair pin cotter 1/8" .....	2	2	2	2	2	2
4	Std.	Pin 1" .....	1	1	1	1	1	1
5	32038	Stretcher arm .....	1	-	-	-	-	1
5	32039	Stretcher arm .....	-	1	-	-	1	-
5	32040	Stretcher arm .....	-	-	1	1	-	-
6	32095	Stretcher pin .....	1	1	1	1	1	1

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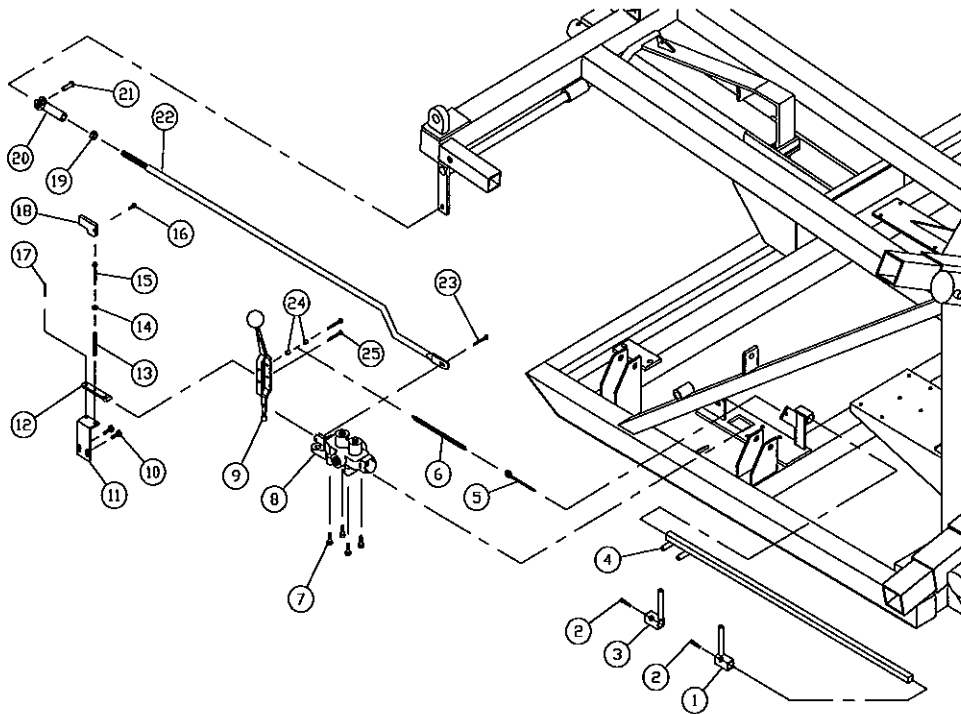
# DETAIL OF ARCH MODEL P-6300



REF.	PART #	DESCRIPTION	QTY CYL. POSITION #					
			1	2	3	4	5	6
1	32096	Stretcher support .....	1	-	-	-	-	1
1	32097	Stretcher support .....	-	1	-	-	-	-
1	32098	Stretcher support .....	-	-	-	-	1	-
1	32099	Stretcher support .....	-	-	1	1	-	-
2	30Z10	Cylinder .....	1	-	-	-	-	1
2	30Z15	Cylinder .....	-	1	-	-	-	1
2	30Z17	Cylinder .....	-	-	1	1	-	-
3	Std.	Bolt 5/8" NC x 2" lg + nut & lockwasher .....	4	4	4	4	4	4
4	Std.	Pin 1" .....	1	1	1	1	1	1
5	Std.	Hair pin cotter 1/8" .....	2	2	2	2	2	2
6	32038	Stretcher arm .....	1	-	-	-	-	1
6	32039	Stretcher arm .....	-	1	-	-	-	1
6	32040	Stretcher arm .....	-	-	1	1	-	-
7	32095	Stretcher pin .....	1	1	1	1	1	1
8	Std.	Bolt 3/4" NC x 2 1/2" lg + nut + lock washer & flat washer .....	2	2	2	2	2	2

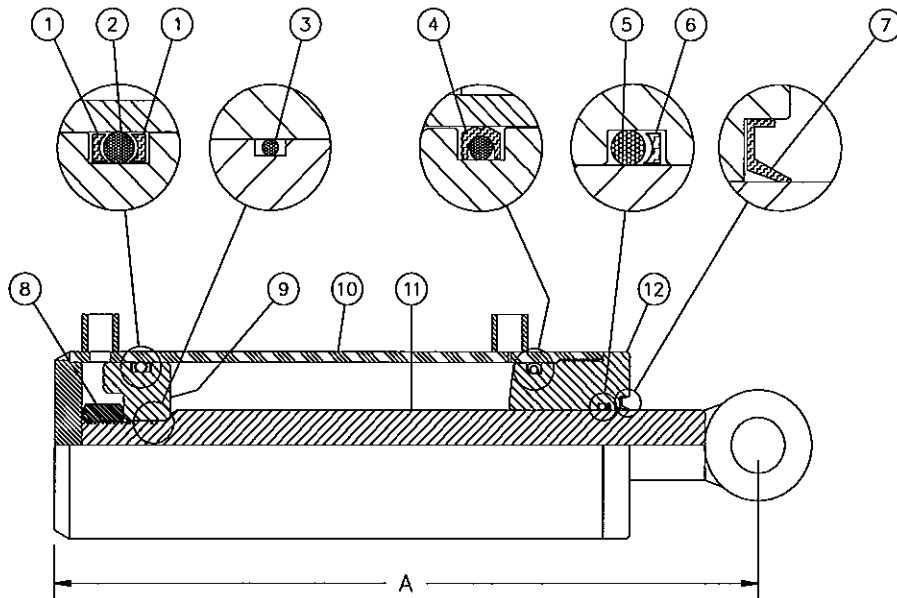
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# AUTOMATIC SYSTEM DETAIL

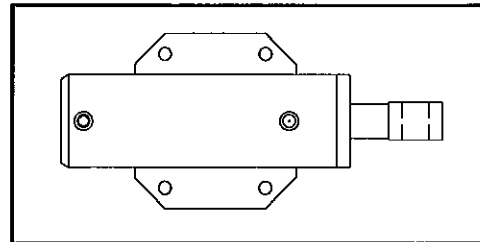


REF.	PART #	DESCRIPTION	QTY
1	32041	Rear stopper .....	1
2	Std.	Square head set screw 5/16" NC x 3/4" lg .....	2
3	32042	Front stopper .....	1
4	32043	Rod .....	1
5	32012	Eye bolt 1/4" NC x 4" + nut .....	1
6	32010	Tension spring 7/16" NC x 4 3/4" lg .....	1
7	Std.	Bolt 3/8" NC x 1" + lock washer .....	4
8	32003	1 spool control valve (see details p. 30) .....	1
9	32046	Spool handle .....	1
10	Std.	Bolt 3/8" NC x 1 1/2" lg + nut + lock washer & flat washer .....	2
11	32044	Trigger support .....	1
12	32045	Trigger .....	1
13	32009	Compression spring 7/16" x 2" lg .....	1
14	Std.	Flat washer 1/4" .....	1
15	32047	Eye bolt 1/4" NC x 2 1/2" lg .....	1
16	Std.	Bolt 1/4" NC x 3/4" lg + nylon locknut .....	1
17	Std.	Roll pin 1/4" x 3/4" .....	1
18	32048	Lever .....	1
19	Std.	Nut 1/2" NF .....	1
20	51435	Clevis yoke 1/2"-NF .....	1
21	51436	Pin 1/2" x 1 3/4" lg .....	1
22	32049	Rod .....	1
23	Std.	Bolt 1/4" NC x 1 3/4" + nylon locknut .....	1
24	32050	Spacer .....	2
25	Std.	Bolt 1/4" NC x 2" lg + nylon locknut .....	2

# ARCH CYLINDER



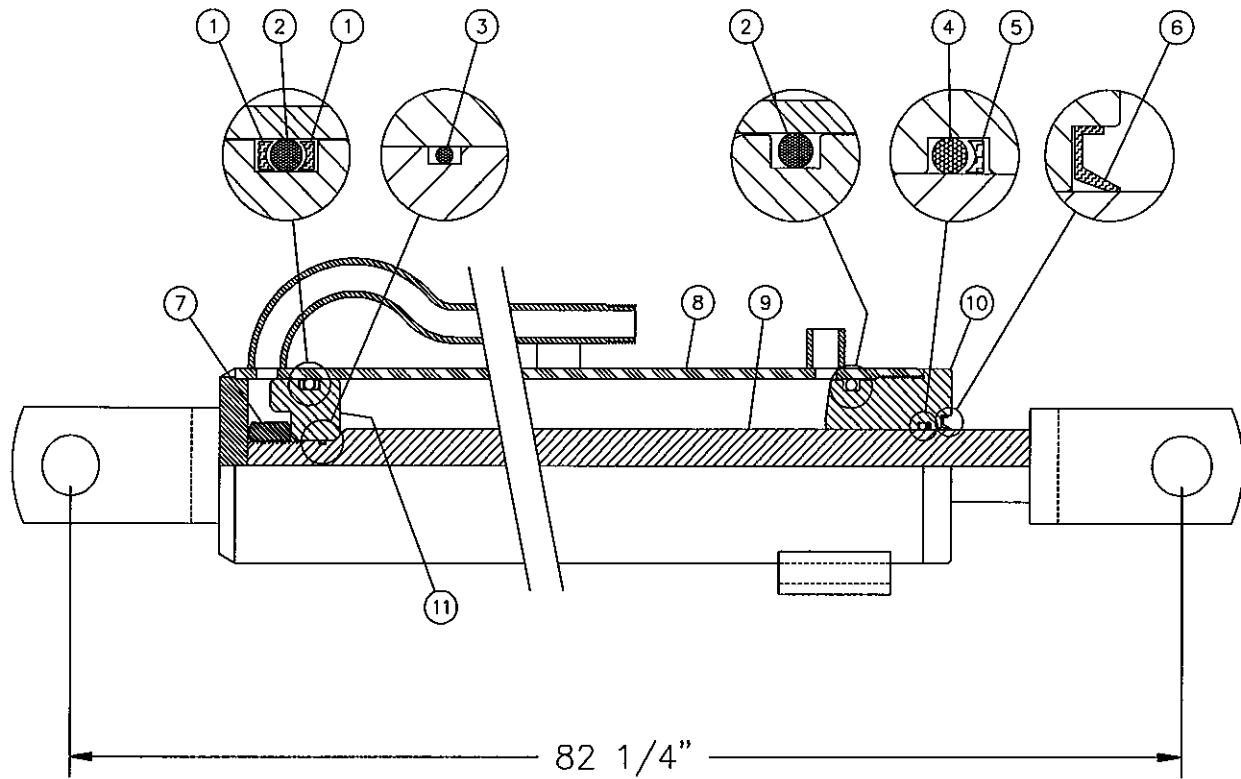
MODEL	LENGTH A
30Z10	16"
30Z15	21"
30Z17	23"



REF.	PART #	DESCRIPTION	QTY CYLINDER #		
			30Z10	30Z15	30Z17
1	BU-334	Back-up 3/16" x 2 5/8" x 3" .....	3	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 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 .....	1	-	-
11	D-6100	Piston rod 1 1/4" for 30Z15 .....	-	1	-
11	D-6101	Piston rod 1 1/4" for 30Z17 .....	-	-	1
12	D-6093	Head 3" dia. ....	1	1	1

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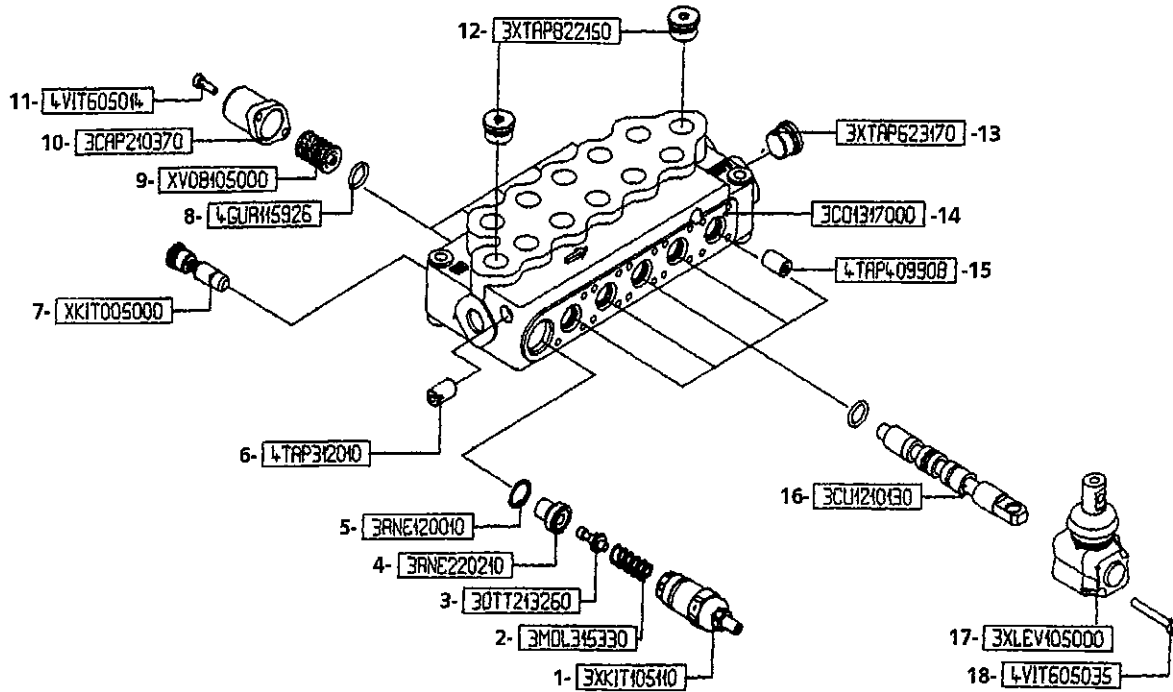
# PUSHER CYLINDER # 20E72



REF.	PART #	DESCRIPTION	QTY
1	BU-326	Back-up 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	D-6102	Cylinder body 2" dia. for 20E72 .....	1
9	D-6103	Piston rod 1 1/4" dia. for 20E72 .....	1
10	D-6032	Head 2" dia. ....	1
11	D-6020	Piston 2" dia. ....	1

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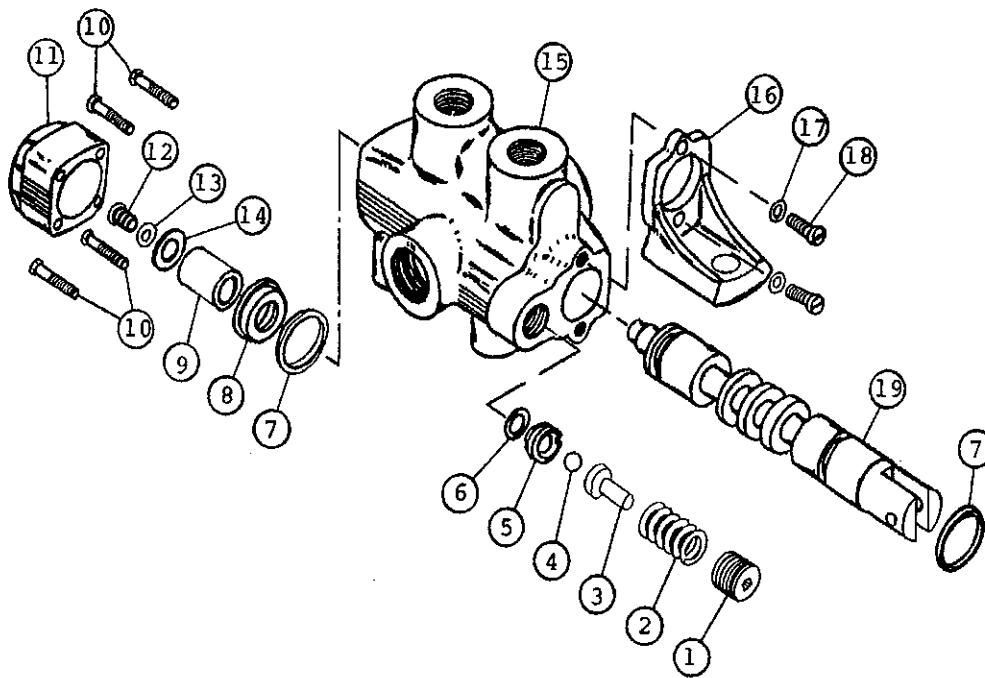
# 5 SPOOL CONTROL VALVE # 32000



REF.	PART #	DESCRIPTION	QTY
1	32070	Relief valve (adjusted to 2500 psi) .....	1
2	32071	Spring .....	1
3	32072	Spring seat pusher .....	1
4	32073	Ring .....	1
5	32074	Seal .....	1
6	32075	Plug M12 x 1.5 .....	1
7	32076	Kit VR5 .....	1
8	32077	O-ring .....	10
9	32078	Spring .....	5
10	32079	Endcap .....	5
11	32080	Bolt M5 x 14 .....	10
12	32081	Plug SAE8 .....	2
13	32082	Plug .....	1
14	32083	Valve housing .....	1
15	32084	Plug BSP 1/8" .....	1
16	32085	Valve spool .....	5
17	32086	Lever .....	5
18	32087	Bolt M5 x 35 .....	10

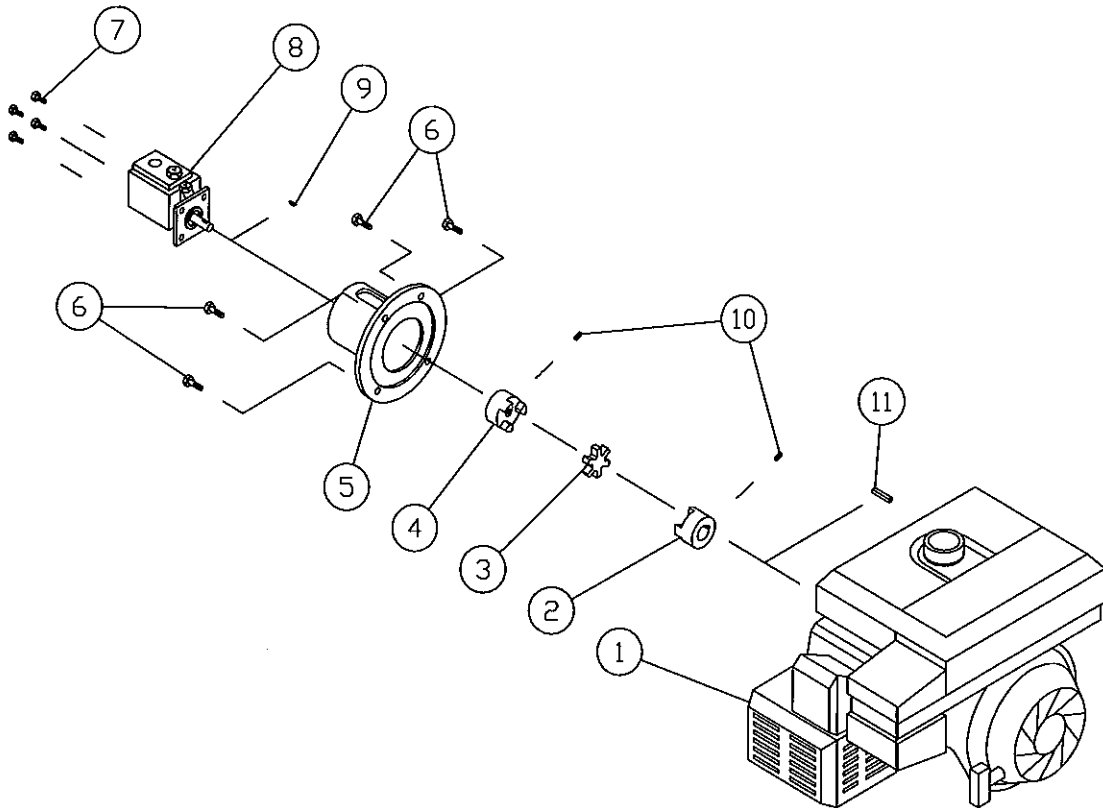
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# 1 SPOOL CONTROL VALVE # 32003



REF.	PART #	DESCRIPTION	QTY
1	32051	Relief plug 3/8" .....	1
2	32052	Relief spring (adjusted to 1500psi) .....	1
3	32053	Spring support .....	1
4	32054	Relief ball 3/8" .....	1
5	32055	Relief seat .....	1
6	32056	Relief O-ring .....	1
7	32057	U-cup seal .....	2
8	32058	Spool collar .....	1
9	32059	Bushing 0.430" lg .....	1
10	32060	Bolt .....	4
11	32061	Cap .....	1
12	32062	Bolt .....	1
13	32063	Lock washer .....	1
14	32064	Spring washer .....	1
15	32065	Valve housing .....	1
16	32066	Handle bracket .....	1
17	32067	Lock washer .....	2
18	32068	Bolt .....	2
19	32069	Valve spool .....	1

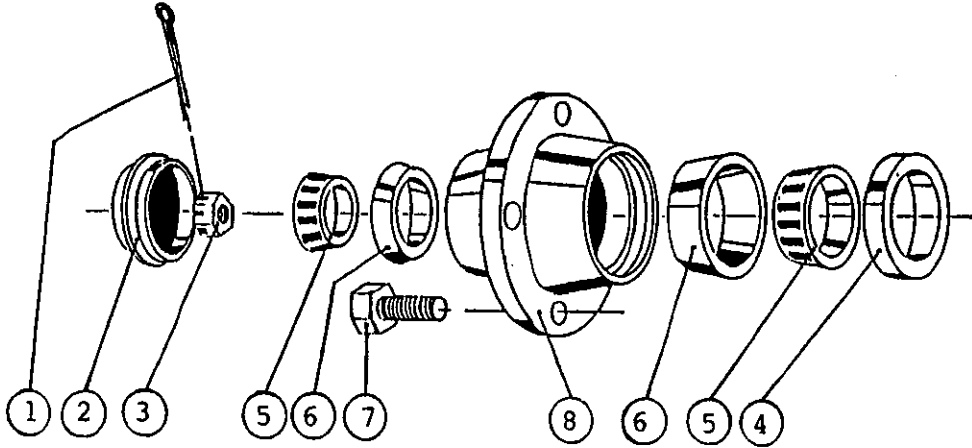
# ENGINE ASSEMBLY WITH PUMP



REF.	PART #	DESCRIPTION	QTY
1	32011	Engine B&S 9HP .....	1
2	32006	Flexible coupling (11091 L095 1") 1" dia. ....	1
3	32005	Flexible coupling (11070 insert) .....	1
4	32004	Flexible coupling (26088 L095 ½") ½" dia. ....	1
5	32088	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	Low pressure pump adjusted to 1100 psi .....	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

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# FRONT HUB H1000

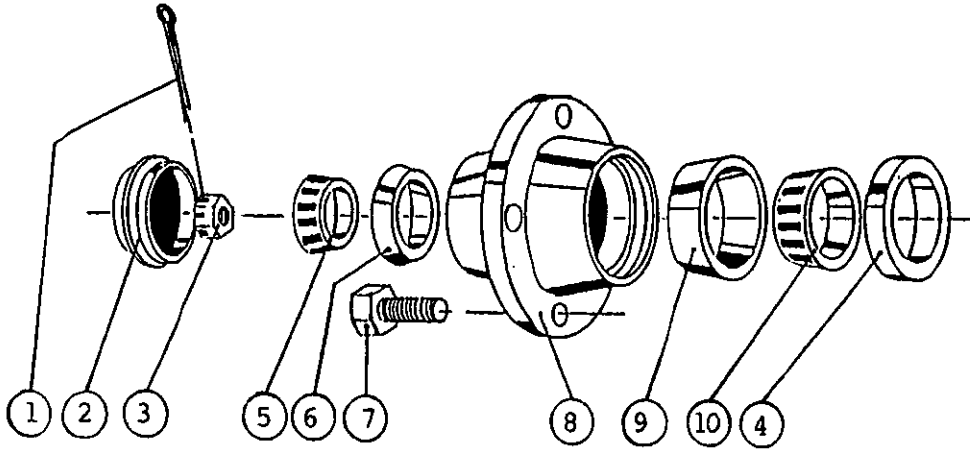


REF.	PART #	DESCRIPTION	QTY
1	Std.	Cotter pin 3/16" x 1 1/2" .....	1
2	53019	Dust cap 1.973 dia. ....	1
3	53020	Castel nut 1" NF .....	1
4	53021	Oil seal no. CR523696 .....	1
5	53022	Roller bearing Timken: cone no. L44643 .....	2
6	53023	Roller bearing Timken: cup no. L44610 .....	2
7	53024	Rim screw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

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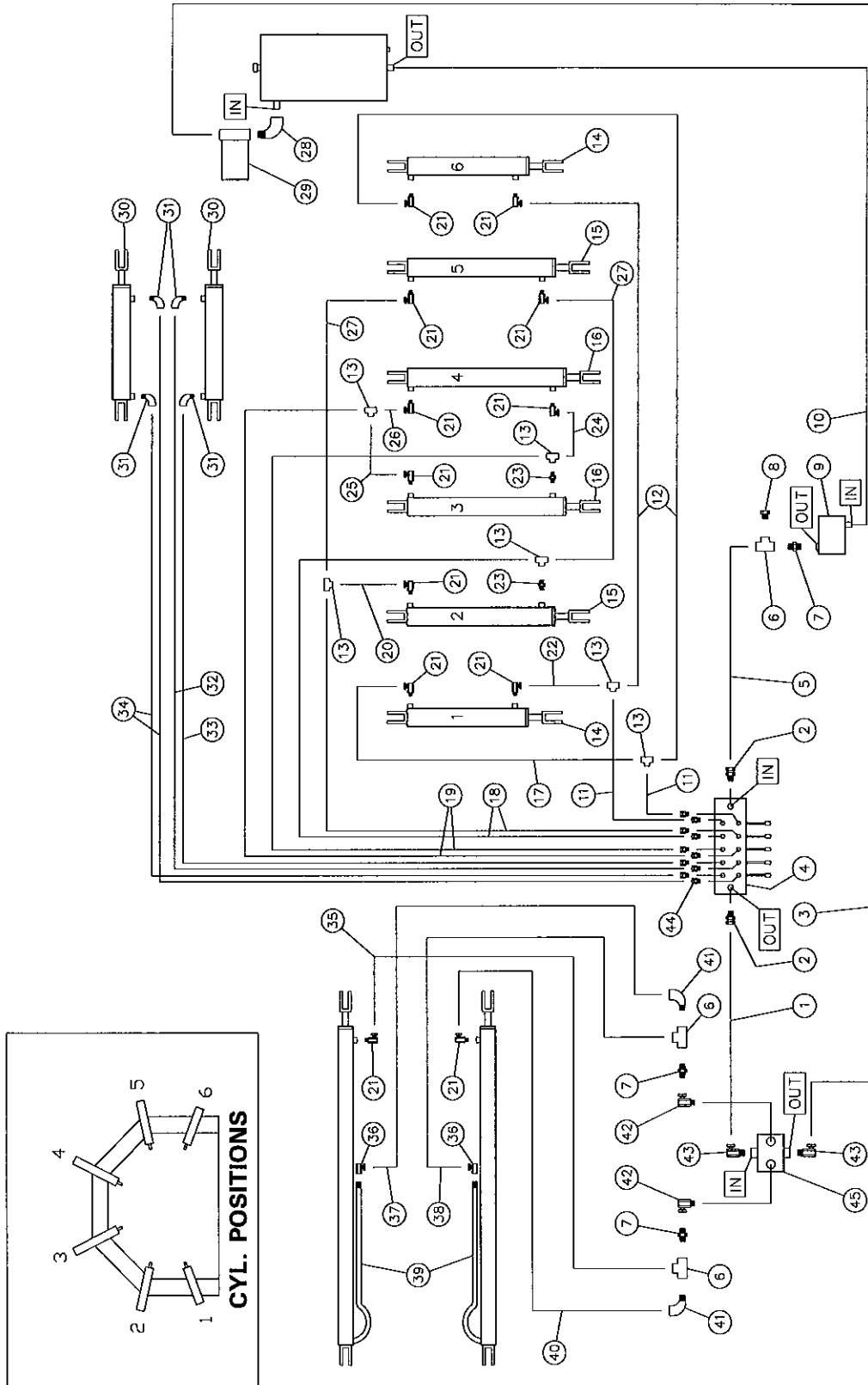
# REAR HUB H511



REF.	PART #	DESCRIPTION	QTY
1	Std.	Cotter pin 3/16" x 1 1/2" .....	1
2	32100	Dust cap (DC12) .....	1
3	32101	Castel nut 3/4" NF .....	1
4	32102	Oil seal SE11 .....	1
5	32103	Roller bearing Timken: cone no. LM11949 .....	1
6	32104	Roller bearing Timken: cup no. LM11910 .....	1
7	32105	Rim screw WB10 .....	5
8	32106	Hub only H511 .....	1
9	51531	Roller bearing Timken: cup no. LM67010 .....	1
10	51530	Roller bearing Timken: cone no. LM67048 .....	1

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# HYDRAULIC SYSTEM










# HYDRAULIC SYSTEM (cont'd)

REF.	PART #	DESCRIPTION	QTY	
			P-6200	P-6300
1	D-8667	Hose ½" x 74" lg + 2 fittings 8U108	1	-
1	D-8754	Hose ½" x 79" lg + 2 fittings 8U108	-	1
2	Std.	Fitting 9315 8x8	2	2
3	D-8663	Hose ½" x 130" lg + 1 fitting 8U108 & 1 fitting 8U112	1	-
3	D-8750	Hose ½" x 147" lg + 1 fitting 8U108 & 1 fitting 8U112	-	1
4	32000	5 spool control valve adjusted to 2500 psi (see details p. 29)	1	1
5	D-8668	Hose ½" x 38" lg + 2 fittings 8U108	1	-
5	D-8755	Hose ½" x 40" lg + 2 fittings 8U108	-	1
6	Std.	"T" ½"	3	3
7	Std.	Straight female pipe to male pipe ½" C3069x8	3	3
8	Std.	Plug ½"	1	1
9	32002	Two stages 4/11 low pressure hydraulic pump adjusted to 1100 psi	1	1
10	D-8727	Low pressure hose 1" x 116 ½" lg	1	-
10	D-8768	Low pressure hose 1" x 128" lg	-	1
11	D-8725	Hose 3/8" x 37" lg + 2 fittings 6U106	2	-
11	D-8765	Hose 3/8" x 42" lg + 2 fittings 6U106	-	2
12	D-8678	Hose 3/8" x 117" lg + 2 fittings 6U106	2	-
12	D-8762	Hose 3/8" x 118" lg + 2 fittings 6U106	-	2
13	Std.	"T" 3/8"	6	6
14	30Z10	Cylinder 3" x 10" stroke	2	2
15	30Z15	Cylinder 3" x 15" stroke	2	2
16	30Z17	Cylinder 3" x 17" stroke	2	2
17	D-8723	Hose 3/8" x 19 ½" lg + 2 fittings 6U106	1	-
17	D-8763	Hose 3/8" x 25" lg + 2 fittings 6U106	-	1
18	D-8675	Hose 3/8" x 31" lg + 2 fittings 6U106	2	2
19	D-8676	Hose 3/8" x 58" lg + 2 fittings 6U106	2	-
19	D-8760	Hose 3/8" x 64" lg + 2 fittings 6U106	-	2
20	D-8680	Hose 3/8" x 11 ½" lg + 2 fittings 6U106	1	1
21	Std.	Fitting 9405 6x6	12	12
22	D-8724	Hose 3/8" x 22" lg + 2 fittings 6U106	1	-
22	D-8764	Hose 3/8" x 27" lg + 2 fittings 6U106	-	1
23	Std.	Close nipple 3/8"	2	2
24	D-8673	Hose 3/8" x 43 ½" lg + 2 fittings 6U106	1	1
25	D-8679	Hose 3/8" x 13 ½" lg + 2 fittings 6U106	1	1
26	D-8677	Hose 3/8" x 50 ½" lg + 2 fittings 6U106	1	-
26	D-8761	Hose 3/8" x 48" lg + 2 fittings 6U106	-	1
27	D-8674	Hose 3/8" x 123" lg + 2 fittings 6U106	2	-
27	D-8758	Hose 6U106	-	2
28	Std.	Street elbow 3/4" 90°	1	1
29		Paper filter 32007 + hydraulic oil filter adapter 32031	1	1
30	25TR08	Cylinder 2 ½" x 8"	2	2
31	Std.	Street elbow 3/8" 90°	4	4
32	D-8666	Hose 3/8" x 40 ½" lg + 2 fittings 6U106	1	-
32	D-8753	Hose 3/8" x 46" lg + 2 fittings 6U106	-	1
33	D-8665	Hose 3/8" x 38" lg + 2 fittings 6U106	1	1
34	D-8664	Hose 3/8" x 159" lg + 2 fittings 6U106	2	-
34	D-8751	Hose 3/8" x 166" lg + 2 fittings 6U106	-	2
35	D-8672	Hose 3/8" x 118" lg + 1 fitting 6U106 & 1 fitting 6U108	1	1
36	Std.	Fitting 9455 6x6	2	2
37	D-8671	Hose 3/8" x 125" lg + 1 fitting 6U106 & 1 fitting 6U108	1	-
37	D-8757	Hose 3/8" x 130" lg + 1 fitting 6U106 & 1 fitting 6U108	-	1
38	D-8670	Hose 3/8" x 20" lg + 1 fitting 6U106 & 1 fitting 6U108	1	1
39	20E72	Cylinder 2" x 72" stroke	2	2
40	D-8669	Hose 3/8" x 23 ½" lg + 1 fitting 6U106 & 1 fitting 6U108	2	-
40	D-8756	Hose 3/8" x 25" lg + 1 fitting 6U106 & 1 fitting 6U108	-	2
41	Std.	Street elbow ½" 90°	2	2
42	Std.	Fitting 9405 8x8	2	2
43	Std.	Fitting 9405 8x12	2	2
44	Std.	Fitting 9315 6x6	10	10
45	32003	1 spool control valve adjusted to 1500 psi (see details p. 30)	1	1






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# TORQUE CHART

## TORQUE SPECIFICATION TABLE

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

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## ***WARRANTY***

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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.

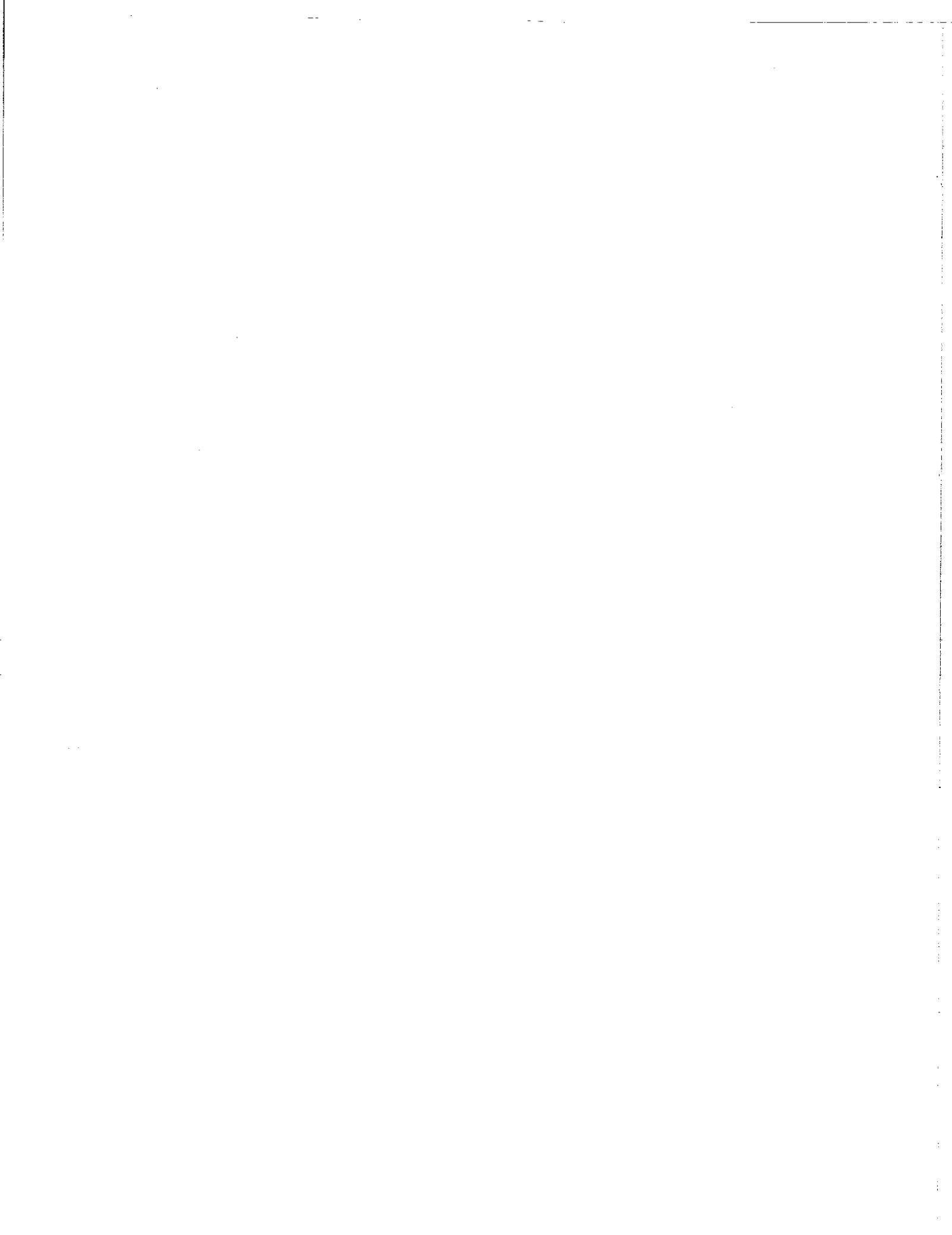
Transportation charges are born by the customer. This warranty is not transferable.

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.



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