



**OPERATOR'S / PARTS  
MANUAL**



***Dump Trailers***  
**Models**

**P-503**



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# INTRODUCTION

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## 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 Dump Trailer. It contains important information which will help you achieve excellent returns with your PRONOVOST Dump Trailer for years to come.

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

Before using this equipment, you or any other person who will be using it must familiarize yourself with the safety recommendations, the operating and safety 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 while standing at the rear end of the equipment and facing it.

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

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

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

- 1) Careful operation is the best assurance against accidents. Carefully read this manual and follow all recommendations before operating this equipment. It is the owner's responsibility to make sure that anyone who will operate the Trailer will read this manual before operating the equipment.
- 2) Do not modify the equipment. Any non authorized modification may affect the efficiency and/or safety of the equipment.
- 3) Never operate the equipment with defective parts or if damaged in any way. Have it repaired before using it.
- 4) Make sure all fasteners are in place and properly secured or tightened. Refer to torque chart on page 23.

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

## ***SAFETY IN OPERATION***

- 1) Be alert while driving on the road. Never carry passengers.
- 2) **WARNING!** Do not overload your trailer, do not exceed the load capacity indicated in the specifications on page 13.
- 3) Be sure there are no obstructions around the equipment and that no one stands near the equipment when in use.
- 4) Do not operate an engine in a confined or non ventilated area.
- 5) Do not perform any adjustments, cleaning, maintenance or repairs with the engine running on the towing vehicle. Preferably remove the key from the ignition.
- 6) Be careful when backing-up, make sure you have good visibility.
- 7) In the case of a Highway Service Trailer, make sure the suspension and lights are all functioning properly.
- 8) Do not forget to unlock the proper panel before dumping.
- 9) Always travel at a safe operating speed following regulations and common sense. In the case of agricultural service tires, follow the manufacturer's specified safe speed. Never exceed the speed that permits full steering and braking control at all times.

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

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### ***SAFETY WITH MAINTENANCE***

- 1) Perform maintenance according to recommendations contained in this manual.
- 2) **Before performing any work under the raised platform, always install the safety support provided.**
- 3) If the trailer is hooked up to the tractor while performing maintenance work, make sure the engine is not running and preferably remove the ignition key.

### ***SAFETY IN TRANSPORT***

- 1) On public roads, use proper safety lights, make sure they work properly and check local regulations.
- 2) Make sure coupler is the same size as the ball hitch and well secured.
- 3) Make sure safety chains cross under the coupling mechanism and properly attached to towing vehicle.
- 4) Be alert while driving on the road. Never carry passengers.

**2**

# DECALS

## SAFETY DECALS

The safety decals are affixed wherever special safety precautions are indicated. Locate them on the equipment 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.

3

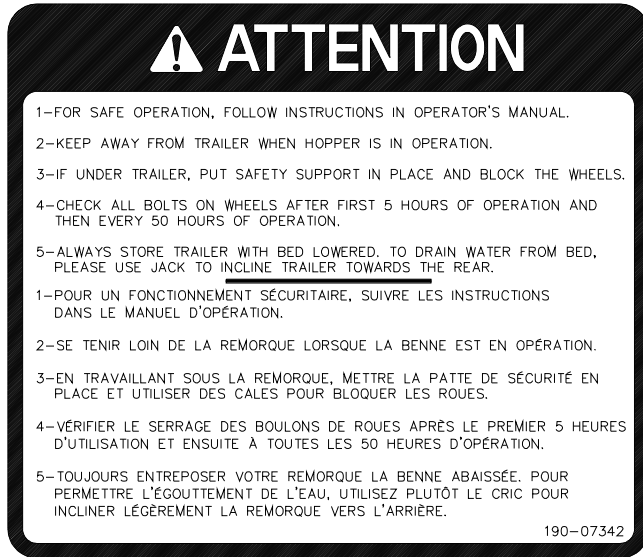


Figure 2  
Decal A Part no.: 190-07342

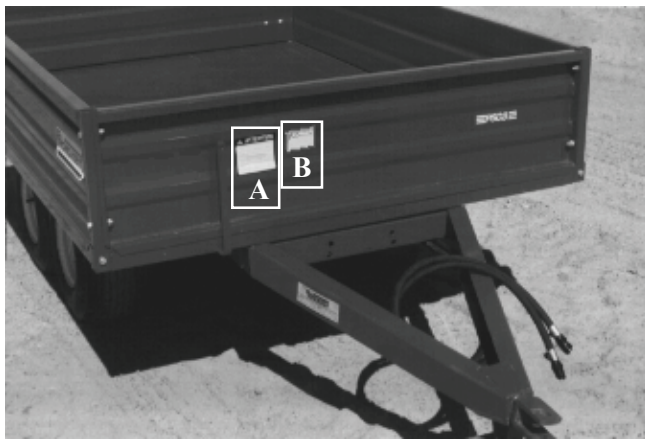


Figure 3



Figure 4  
Decal B Part no.: 190-13671

## MAINTENANCE DECALS

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

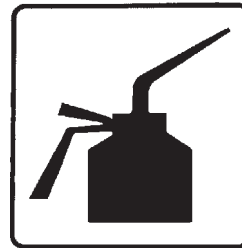


Figure 5 Part no.: A 105



Figure 6 Part no.: A 106



# START-UP

## BASIC START-UP PROCEDURES

- 1) Lubricate all grease fittings with a good quality multiuse grease.
- 2) Lubricate panel release mechanism, front and rear with good quality oil.
- 3) Adjust tire pressure to manufacturer's specifications.
- 4) Install wheels on hubs.



**WARNING:** Wheel lug nuts must be applied and maintained at the proper torque levels to prevent loose wheels, broken studs, and possible separation of the wheel(s) from your trailer. The lug nuts on the wheels of your trailer must be maintained according to the torque values listed in the chart contained in this section. Over torquing and under torquing wheels are both dangerous.



**WARNING:** Towing, especially during the break-in period, can cause wheel lug nuts to loosen. Failure to maintain proper torque of the wheel lug nuts could lead to separation of the tire and wheel while driving, possibly resulting in property damage or personal injury.

Be sure to use only lug nuts matched to the cone angle of your wheel, usually 60° or 90°.

**The proper procedure and sequence for attaching the wheels and torquing lug nuts** is as follows.

- a- Start all nuts by hand to avoid cross threading.
- b- Tighten the nuts slightly.
- c- Using the proper sequence shown in figure 7, tighten the lug nuts to the 1st stage torque as

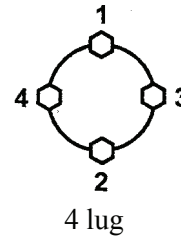


Figure 7

indicated in the chart. Using the proper sequence for the second time, tighten the lug nuts to the 2nd stage torque as indicated in the chart. Using the proper sequence for the third time, tighten the lug nuts to the 3rd stage torque as indicated in the chart.

**4**

Wheel Torque Requirements			
Nut Ø	1 st Stage	2 nd Stage	3 rd Stage
1/2"	20 - 25 ft-lbs	35 - 40 ft-lbs	50 - 75 ft-lbs
9/16"	20 - 25 ft-lbs	50 - 60 ft-lbs	90 - 120 ft-lbs
5/8"	20 - 25 ft-lbs	90 - 100 ft-lbs	140 - 170 ft-lbs

**d-** Torque the wheel lug nuts before the first road use and after each wheel removal. Check and re-torque after the first 16, 40 and 80 kilometers (10, 25 and 50 miles) and adjust if required. Check periodically thereafter without exceeding 50 hours of use between the verifications.

Check the wheel lugs after winter storage, before starting a trip or following extensive braking. Perform maintenance periodically as indicated above.

- 5) Install panels.
- 6) Install all hydraulic hoses and fittings compatible with your equipment.

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## ***START-UP***

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- 7) Verify for adequate tightness of all fastening devices. Refer to torque chart on page 23.
- 8) Operate the hydraulic system a few times, raising and lowering the platform in order to remove any trapped air in the system. Then check the oil level in the tractor's hydraulic oil reservoir.
- 9) Do not forget to unlock the proper panel before dumping.

**4**

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# *MAINTENANCE*

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**Before performing any work under the raised platform, always install the safety support provided.**

- 1) Wipe off all grease fittings with a clean cloth before adding grease in order to avoid injecting dirt or sand.
- 2) Repair or replace damaged grease fittings.
- 3) Lubricate all grease fittings every 20 hours of operation.
- 4) Check all bolts on wheels as indicated in the start-up section.
- 5) Lubricate panel release mechanism, front and rear, every 20 hours of operation.
- 6) Check tire pressure every 50 hours of operation, adjust according to manufacturer's recommendation indicated on the tires.

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

Adjust the bearings as follows:

- a-**Lubricate spindle threads.
- b-**Screw the adjusting nut on the spindle thread.
- c-**Set a bearing preloading by torquing the adjusting nut to 200 ft-lbs to make up for any play between parts. **N.B.: This step must be carried out while rotating the wheel.**
- d-**Loosen the adjusting nut one complete turn.
- e-**Now tighten it again to a 50 ft-lbs torque.
- f-**Loosen the nut 1/4 turn; while doing so, determine the right position for the locking device.
- g-**Install the locking device.

- 8) Check all nuts and bolts once a year. If necessary use torque chart on page 23.

**5**

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## ***STORAGE***

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- 1) Store in a cool, dry place.
- 2) Install wooden blocks under the axles to keep the tires off the ground and cover them if left exposed to the sun.
- 3) Keep all piston rods in the retracted position. This will assure better protection against the elements.
- 4) Clean your trailer.
- 5) Thoroughly inspect all parts of the trailer. Replace or repair worn or defective parts.
- 6) Touch-up or repaint if necessary.
- 7) Lubricate all points before storage.

# ***SPECIFICATIONS***

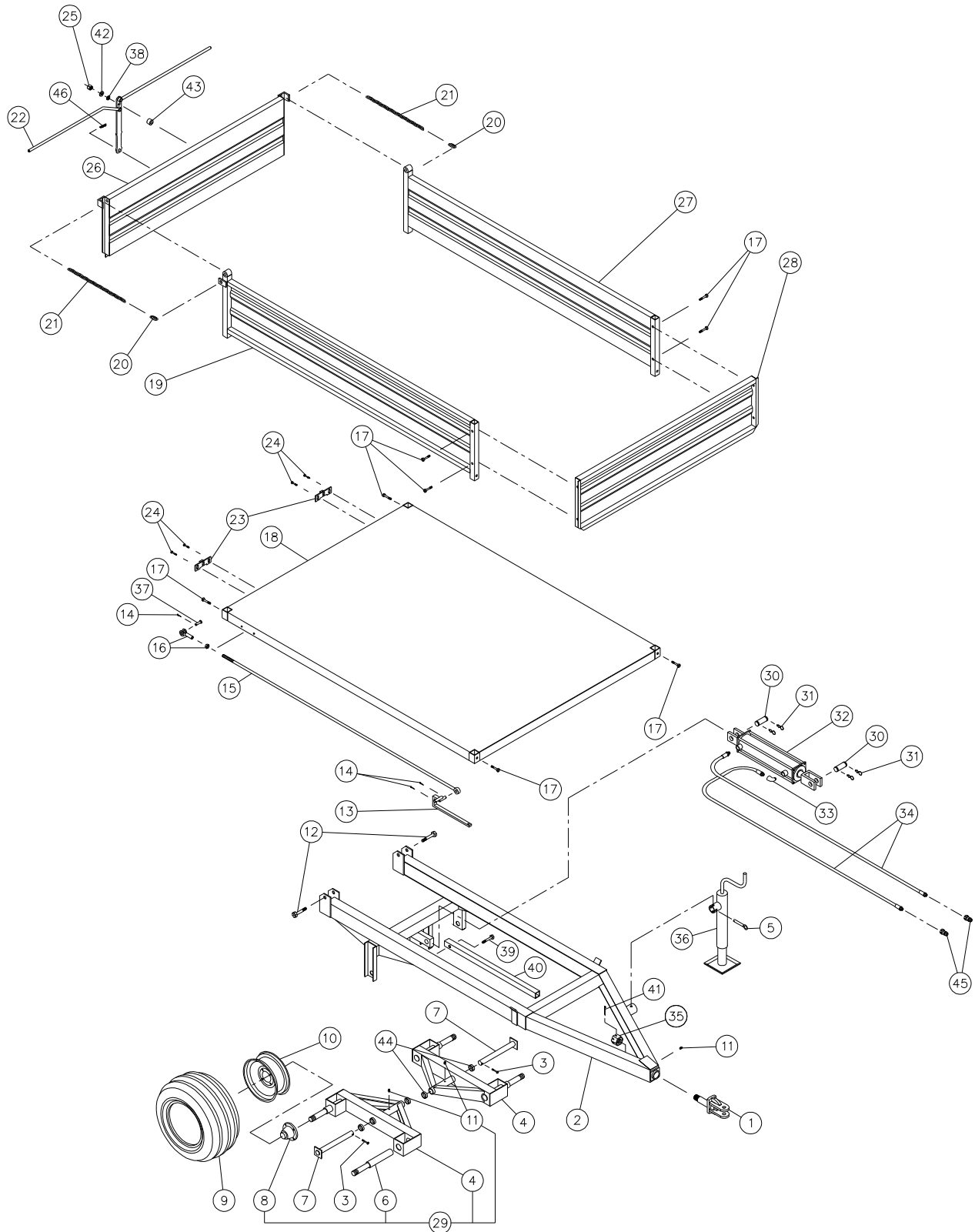
<b>SERVICE</b>	<b>AGRICULTURAL</b>
<b>MODEL</b>	<b>P-503</b>
Gross weight	3000 lbs / 1362 kg
Interior dimension on box	50" x 70" / 1270 x 1778 mm
Thickness of floor	12G / 2.67 mm
Side panel 12G (removable)	12" / 305 mm
Front/back panel 12G (removable)	12"/14" / 305mm/356 mm
Platform height	22" / 559 mm
Overall length	104" / 2642 mm
Overall width	54" / 1372 mm
Overall height	36" / 914 mm
Free height / maximum lift	10" / 254 mm
Thread width	36 1/4" / 921 mm
Dumping angle (back)	47°
Dumping angle (2 sides)	--
Central unloading hatch	--
Axle	Tandem
Suspension	--
Hubs	4 bolts
Hub capacity	1000 lbs / 454 kg
Spindles	1 1/4" / 32 mm
Wheels	4
Wheel dimensions	8.5 x 8 x 4
Tires (standard)	18 x 8.5 x 8 4 ply
Hitch: clevis/swivel	standard
Hitch: ball coupler 2" dia.	--
Electric brakes	--
Safety chain	--
Hydraulic electric pump	option
Battery holder	option
Light system (12 V)	--
Oil volume required	--
Cylinder	1 double acting
Hitch weight (empty)	50 lbs / 23 kg
Total weight	565 lbs / 257 kg

Design and specifications subject to change without notice.

\*Removable panel.

# DUMP TRAILER P-503

170-02265R1

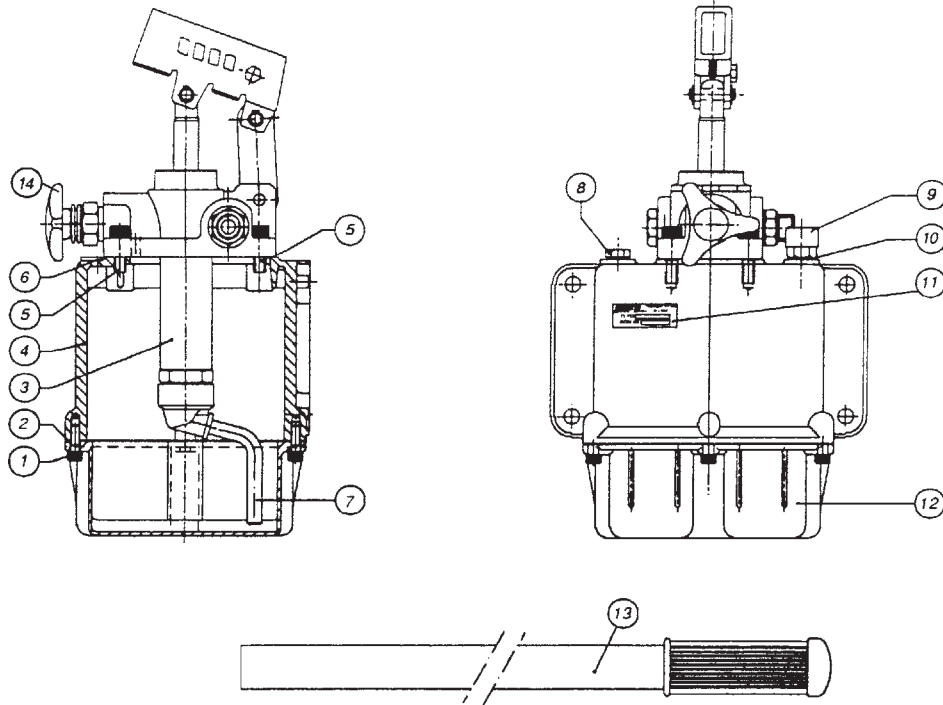


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## DUMP TRAILER P-503 (cont'd)

REF.	PART #	DESCRIPTION	QTY
1	110-25841	Swivel hitch .....	1
2	120-02301	Frame .....	1
3	Std.	Cotter pin 3/16" x 2" lg .....	2
4	110-12093	Tandem frame .....	2
5	51408	Pin for jack .....	1
6	150-02361	Spindle 1 1/4" .....	4
7	110-12101	Clevis pin 1" ø .....	2
8	53015	Hub # H-1000 complete .....	4
9	PN-18858	Tire 18 x 8.5 x 8 4 ply .....	4
9	PN-185858	Road tire 18.5 x 8.5 x 8 4 ply .....	-
10	R874	Rim 8" x 7" - 4 holes .....	4
11	Std.	Grease fitting 1/4"-28 straight .....	3
12	300-44430	Bolt 5/8" NC x 3 1/2" lg + nylon locknut .....	2
13	110-12141	Lever for rear panel locking mechanism .....	1
14	Std.	Cotter pin 1/8" x 1" lg .....	2
15	110-12111	Rod 1/2" for lock .....	1
16	51435	Clevis 1/2" NF + nut 1/2" NF .....	1
17	300-36340	Bolt 3/8" NC x 2" lg + nut & nylon locknut .....	8
18	120-02311	Platform .....	1
19	110-12121	Right panel .....	1
20	53050	Quick link 1/4" x 1 3/4" lg .....	2
21	190-03301	Chain 7/32" x 18" lg .....	2
22	110-16761	Rear panel lock assembly .....	1
23	110-16731	Lower tailgate hinge (adjustable) .....	2
24	300-36280	Bolt 3/8" NC x 1 1/4" lg + flat washer + nylon locknut .....	4
25	346-41000	Thin nylon locknut 1/2" NC .....	1
26	110-02832	Rear panel .....	1
27	110-12122	Left panel .....	1
28	110-12131	Front panel .....	1
29	110-12094	Tandem assembly .....	2
30	53016	Clevis pin 1" ø .....	2
31	Std.	Hitch pin clip 3/16" .....	4
32	30TR12	Hydraulic cylinder 3" ø x 12" .....	1
33	Std.	Elbow 1/2" 90° 9405x8x8 .....	1
34	190-03291	Hose 3/8" x 120" lg + 1 fitting 6U-108 + 1 fitting 6U-106 .....	2
35	357-54000	Castle nut 1 1/4" NF .....	1
36	51407	Jack 2000 lbs (includes no. 5) .....	1
37	51436	Clevis pin 1/2" x 1 3/4"lg .....	1
38	373-46500	Spring tension washer 1/2" .....	1
39	300-40370	Bolt 1/2" NC x 2 1/2" lg + nylon locknut .....	1
40	160-06051	Safety support .....	1
41	Std.	Cotter pin 3/32" x 2" lg .....	1
42	376-40000	Flat washer 1/2" .....	1
43	160-07941	Spacer .....	1
44	160-11241	Bushing .....	4
45	Std.	Quick coupler 3/8" mâla .....	2
46	Std.	Hitch pin clip 1/8" x 2 9/16" lg .....	1

# MANUAL PUMP #53056 (106.3.20)



**8**

REF.	PART #	CODE #	DESCRIPTION	QTY
1	53032	502.2.441	Screw for reservoir mounting .....	8
2	53033	507.3.182	Reservoir gasket .....	1
3	53034	106.4.29	PMSS 45 Hand-Pump only (no body) .....	1
4	53035	514.3.89	Pump main body .....	1
5	53036	502.3.566	Screw M8 x 25 .....	4
6	53037	507.3.208	Pump gasket .....	1
7	53038	541.4.36	Suction pipe for 3 lt. reservoir .....	1
8	53039	540.2.49	Oil filler plug .....	1
9	53040	118.10.106	Breather cap .....	1
10	53041	116.9.158	Aluminum washer .....	1
11	53042	513.13.963	Name plate .....	1
12	53043	514.5.78	Reservoir (3 lt.) .....	1
13	53044	106.0.78	Lever PM 45 .....	1
14	53057	500.1.99	Relief valve knob .....	1
NI*	53045	106.900.51	Gasket kit .....	1
NI*	PHM 3003		Pump #53056 with installation hardware .....	1

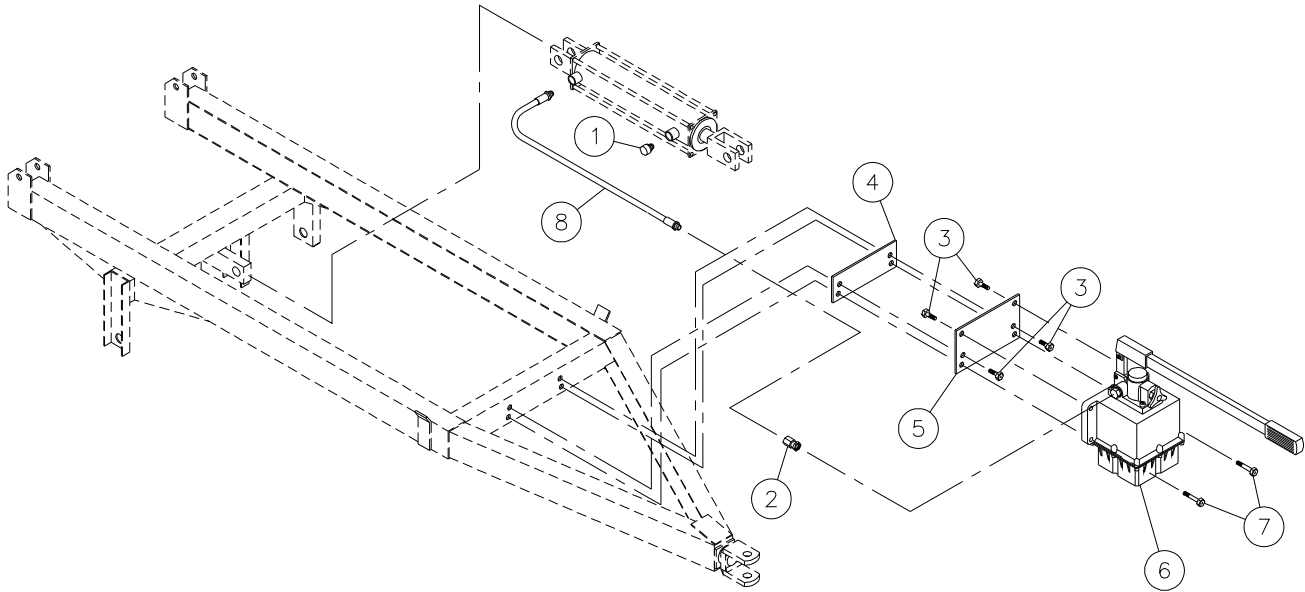
\*NI = Not illustrated

N.B.: Some parts might not be available



# INSTALLATION OF THE MANUAL PUMP #53056 (106.3.20)

110-07001

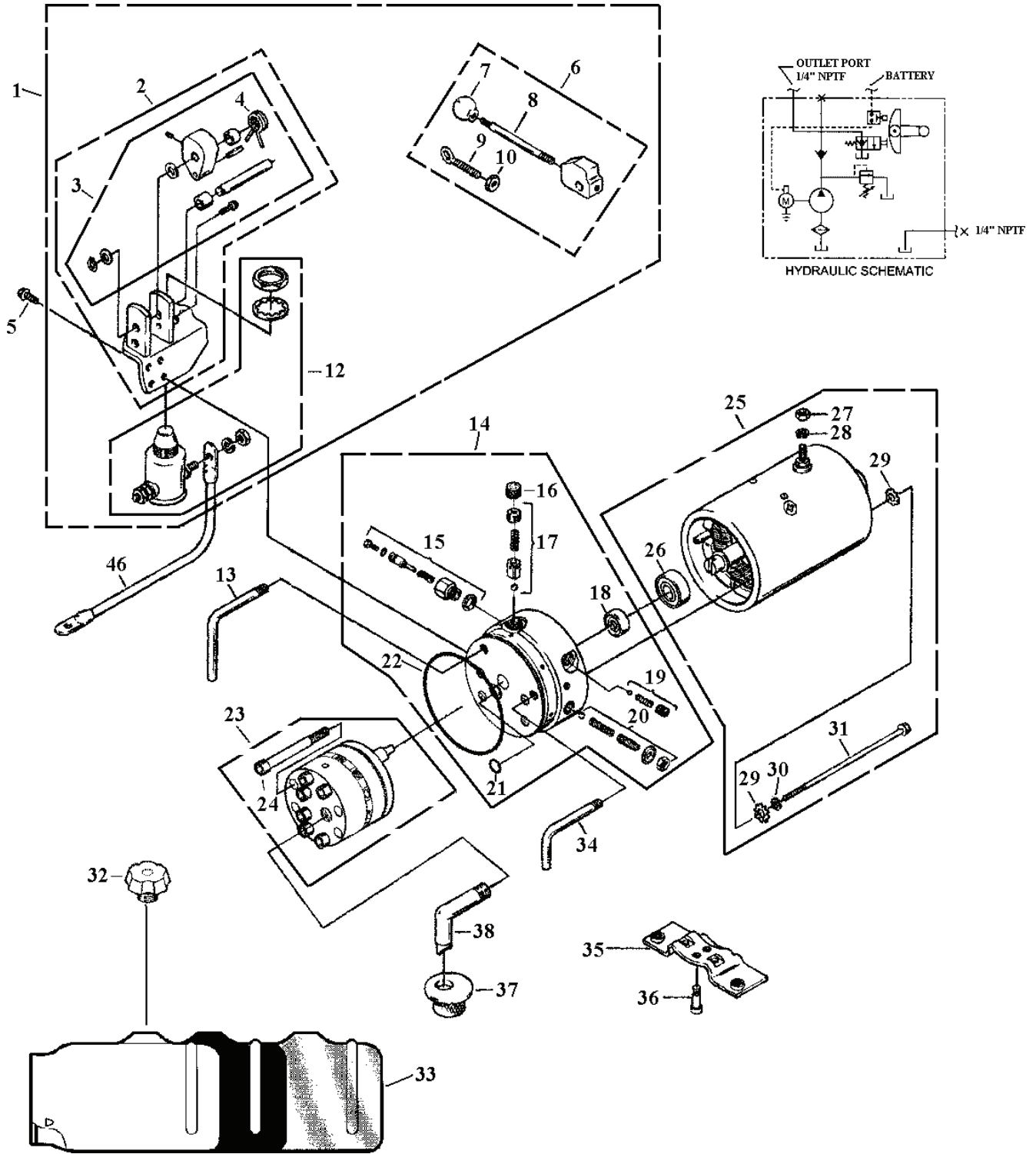


REF.	PART #	DESCRIPTION	QTY
1	669-02501	Vent plug 1/2" NPT .....	1
2	664-21515	Fitting straight 3/8" NPT fem. x 3/8" NPT fem. swivel .....	1
3	300-38310	Bolt 7/16" NC x 1 1/2" lg + nylon locknut .....	4
4	140-05091	Spacer 1/2" x 3" x 8 1/2" .....	1
5	130-07851	Mounting plate 3/16" x 5" x 8 1/2" .....	1
6	53056	Manual hydraulic pump .....	1
7	300-38370	Bolt 7/16" NC x 2 1/2" lg + nylon locknut .....	2
8	190-06291	Hose 3/8" x 60" lg + 1 fitting 6U-108 & 1 fitting 6U-106 .....	1



# ELECTRIC HYDRAULIC PUMP M301 # 51625

170-04261.TIF



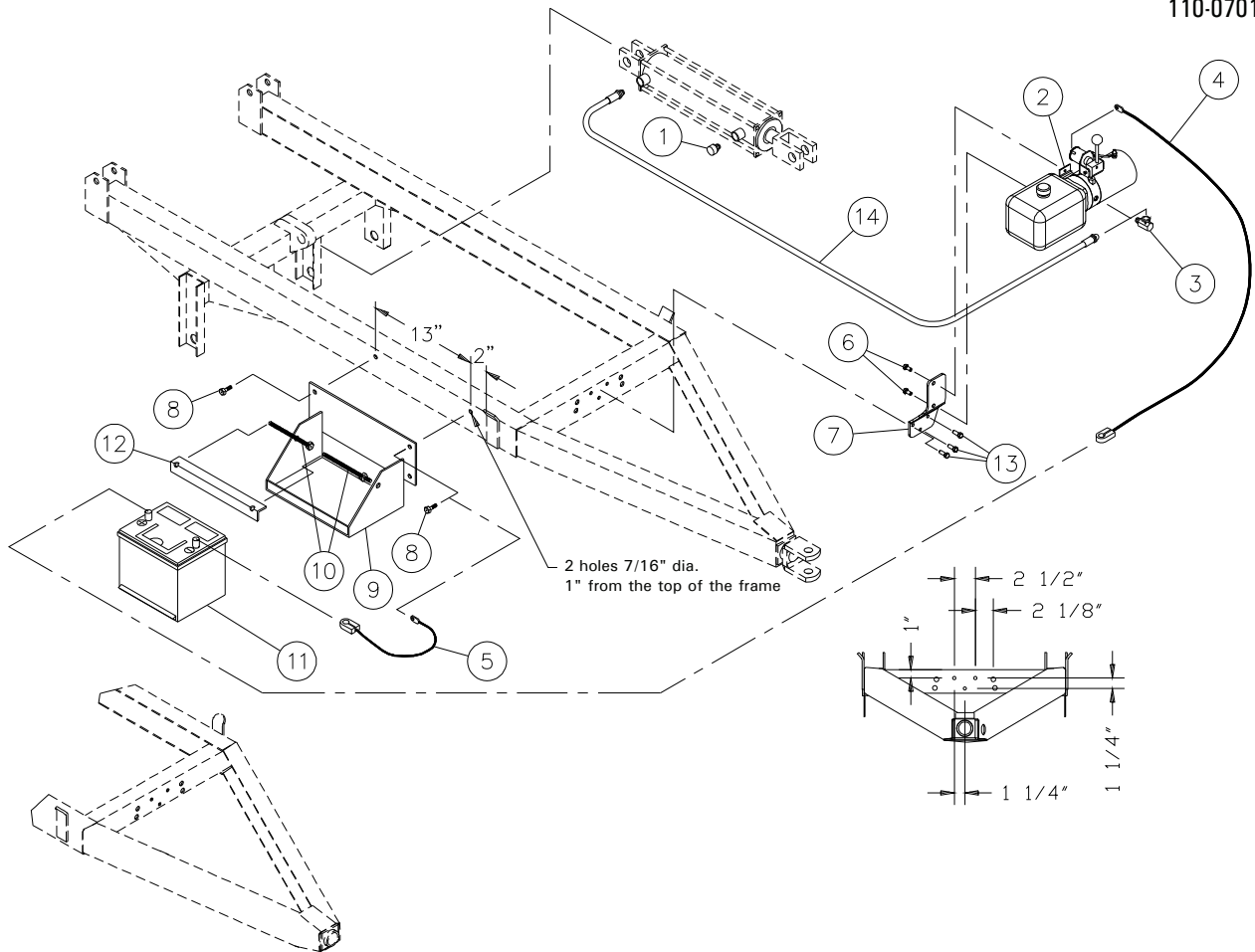
# ***ELECTRIC HYDRAULIC PUMP M301 # 51625 (cont'd)***

REF.	PART #	DESCRIPTION	QTY		
			51624	51625	51627
1	03412	Bracket assembly (incdingt #6 & 12) .....	1	1	1
2	03440	Bracket assembly including #6 .....	1	1	1
3	03660	Parts Kit, Bracket assembly .....	1	1	1
4	00018	Spring torsion .....	1	1	1
5	07815	Screw, hex washer head, tap tite 1/4" NC x 5/8" .....	4	4	4
6	00175	Parts kit, Handle assembly .....	1	1	1
7	01157	Ball, plastic .....	1	1	1
8	01326	Rod, Handle 4" .....	1	1	1
9	01327	Eye bolt 5/16" NC x 1 7/8" .....	1	1	1
10	07790	Nut 5/16" NC .....	1	1	1
11	01373	Cable, insulated, with lugs 9" 6 GA .....	1	1	1
12	03322	Switch on/off (canister type) .....	1	1	1
13	13058	Tube return 1/8" NPT .....	1	1	1
14	12421	Base assembly .....	1	1	1
15	00235	Parts kit, Plunger .....	1	1	1
16	02349	Plug 3/8" NPT .....	1	1	1
17	07526	Parts kit, Check valve .....	1	1	1
18	02159	Seal .....	1	1	1
19	00078	Parts kit, Check valve .....	1	1	1
20	03766	Parts kit, Relief valve .....	1	1	1
21	00120	O-ring 1/2" i.d. x 5/8" o.d. x 1/16" .....	1	1	1
22	02352	O-ring 3 5/8" i.d. x 3 7/8" o.d. x 1/8" .....	1	1	1
23	K12171-250	Pump assembly .....	1	1	1
24	07818	Socket head cap screw 1/4"NC x 3" .....	4	4	4
25	08111	Electric motor 12V DC .....	1	1	1
26	02318	Bearing base motor .....	1	1	1
27	07625	Nut 5/16" NF .....	1	1	1
28	07781	Lock washer 5/16" .....	1	1	1
29	07737	Star washer 1/4" .....	4	4	4
30	07795	Lock washer 1/4" .....	2	2	2
31	07738	Socket head cap screw 1/4"NC x 6 1/2" .....	2	2	2
32	01143	Plug .....	1	1	1
33	14157	Reservoir 6" x 6 1/2" x 10" (199 po3) .....	-	1	-
33	14159	Reservoir 6" x 6 1/2" x 19" (432 po3) .....	1	-	-
33	14170	Reservoir 6 1/2" x 7 1/4" x 26" (715 po3) .....	-	-	1
34	13059	Tube return 1/8" NPT .....	1	1	1
35	04560	Bracket, Plate mount 3 1/4" c/c .....	1	1	1
36	07592	Socket head cap screw 3/8"NC x 1" .....	2	2	2
37	01134	Screen filter .....	1	1	1
38	01209	Tube, Filter suction 3/8" NPT 90 deg .....	1	1	1

\* Some parts might not be available apart.

# ASSEMBLY: HYD. ÉLECTRIQUE PUMP P-503-PHEP

110-07012



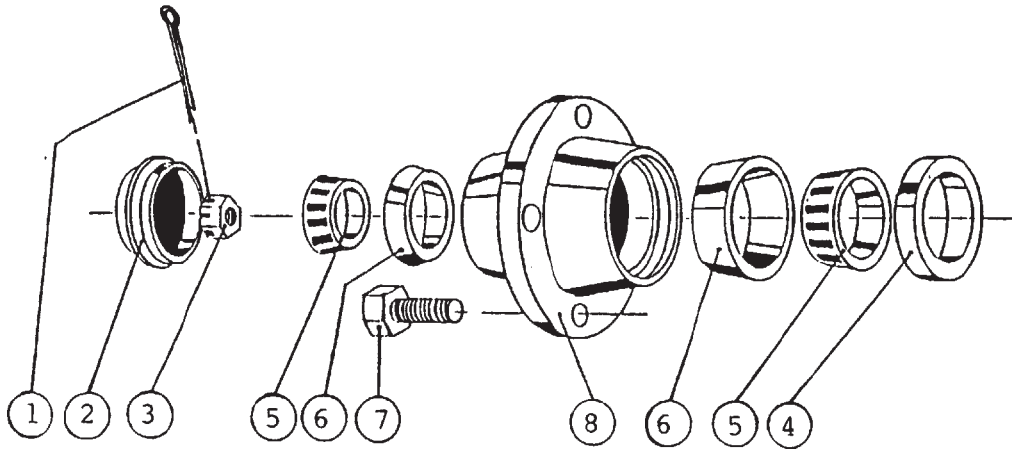
REF.	PART #	DESCRIPTION	QTY
1	669-02501	Vent plug 1/2" NPT .....	1
2	51625	Electric hydraulic pump .....	1
3	9405x6x6	Fitting .....	1
4	51617	Battery cable 4G x 36" lg .....	1
5	51631	Battery cable 4G x 16" lg .....	1
6	300-36220	Bolt 3/8" NC x 3/4" lg + nylon locknut & flat washer .....	2
7	130-45501	Support plate .....	1
8	300-36280	Bolt 3/8" NC x 1 1/4" lg + nylon locknut .....	2
9	110-06771	Battery holder .....	opt.
10	110-04841	Threaded rod 3/8" NC + 1 nylon locknut 3/8" & 1 nylon locknut 7/16" .....	2
11	Std.	Battery 540 amp. minimum (not included) .....	na
12	130-05751	Angle .....	1
13	300-34250	Bolt 5/16" NC x 1" lg + nylon locknut .....	3
14	190-06301	Hose 3/8" x 70" lg + 1 fitting 6U-108 & 1 fitting 6U-106 .....	1

nd = not available

opt. = optional

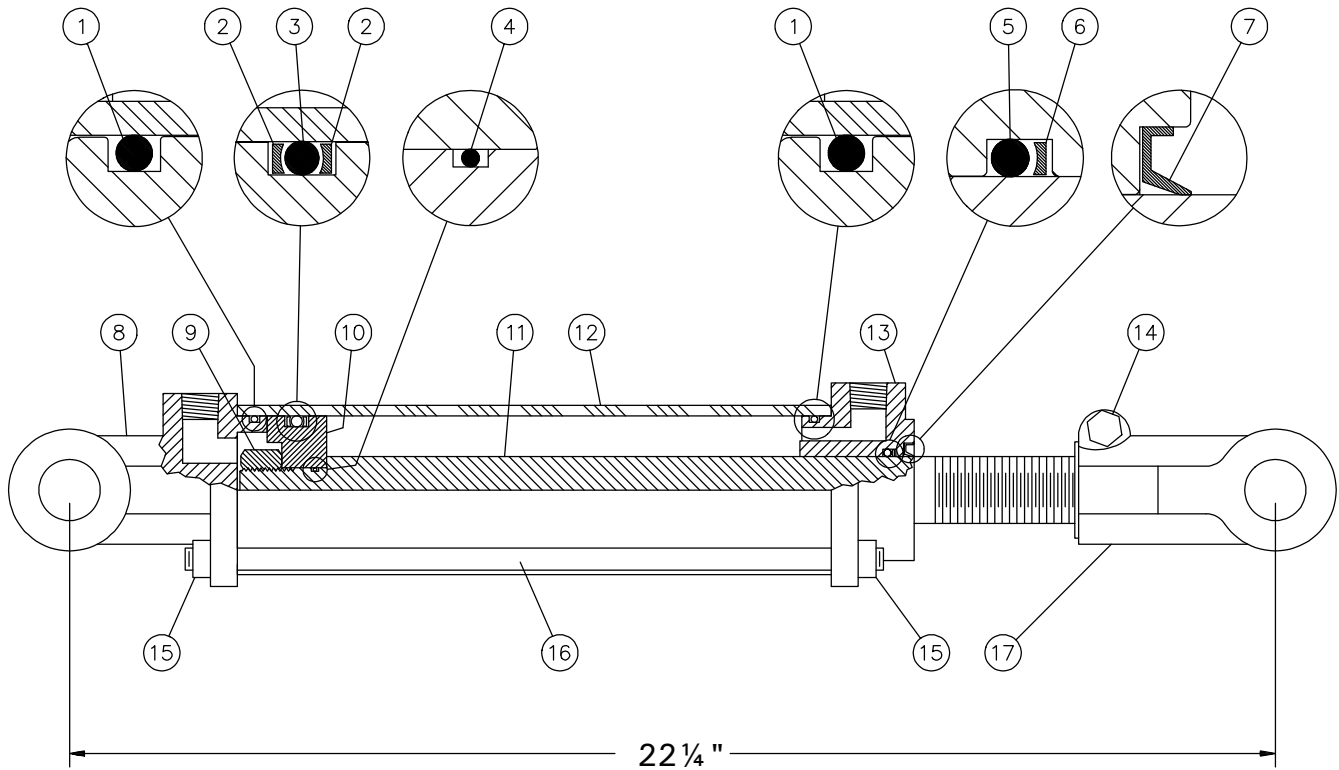
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# HUB H1000 #53015



REF.	PART #	DESCRIPTION	QTY
1	Std.	Cotter pin 3/16" x 1 1/2" .....	1
2	53019	Dust cap 1.973 dia. ....	1
3	51529	Castle nut 1" NF noir .....	1
4	53021	Oil seal no. CR523696 .....	1
5	53022	Roller bearing: cone no. L44643 .....	2
6	53023	Roller bearing: cup no. L44610 .....	2
7	53024	Rim screw 1/2" .....	4
8	53025	Hub only H1000 .....	1

# CYLINDER 30TR12










REF.	PART #	DESCRIPTION	QTY
1	See RK30TR	O-ring .....	2
2	See RK30TR	Back-up ring .....	2
3	See RK30TR	O-ring .....	1
4	See RK30TR	O-ring .....	1
5	See RK30TR	O-ring .....	1
6	See RK30TR	Back-up ring .....	1
7	See RK30TR	Wiper .....	1
8	492402	Yoke (for 3" tube) .....	1
9	338-46000	Nut 3/4" NF .....	1
10	492432	Piston 3" ø .....	1
11	492042	Piston rod 1 1/4" .....	1
12	491742	Cylinder body 3" ø .....	1
13	492440	Cylinder head (for 3" 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 .....	4
17	458600	Yoke (for 1 1/4" rod) .....	1
NI*	8183	Pin 1" ø + cotter pin .....	2
NI*	RK30TR	Repair kit for cylinder 3" (includes # 1, 2, 3, 4, 5, 6, & 7) .....	1






\*NI = Not illustrated

# 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.	
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 the responsibility of the customer. This warranty is not transferable.

Hydraulic cylinders are covered by the manufacturer 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 the result of an accident, is not operated according to manufacturer's recommendations, damaged by negligence or if maintenance has not been carried out as specified.

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









Ce manuel est aussi disponible en français.  
Veuillez téléphoner.



**LES MACHINERIES PRONOVOST INC.**  
260, Haut du Lac Sud (route 159),  
Saint-Tite, Quebec, Canada, G0X 3H0  
Tel.: (418) 365-7551, Fax: (418) 365-7954  
[www.pronovost.qc.ca](http://www.pronovost.qc.ca)