

**OPERATOR'S / PARTS
MANUAL**



Dump Trailer
Model
PUMA-347M

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INTRODUCTION

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: _____ ✍

SAFETY

GENERAL SAFETY

WHEN YOU SEE THIS SYMBOL

2



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 19.
- 5) Hydraulic fluids under pressure can damage your skin. Do not use your hands to locate a leak.

SAFETY IN OPERATION

- 1) **WARNING!** Do not overload your trailer, do not exceed the load capacity indicated in the specifications on page 12.
- 2) Be sure there are no obstructions around the equipment and that no one stands near the equipment when in use.
- 3) Do not operate an engine in a confined or non ventilated area.
- 4) Do not perform any adjustments, cleaning, maintenance or repairs with the engine running on the towing vehicle. Preferably remove the key from the ignition.
- 5) Be careful when backing-up, make sure you have good visibility.
- 6) Check if coupler is well attached to the towing ball. Make sure they are the same size.
- 7) Check if the safety chains are crossed under the pole and are attached to the vehicle.
- 8) Make sure the suspension, brakes and lights are all functioning properly.
- 9) Do not forget to unlock the proper panel lock before dumping.
- 10) Always travel at a safe operating speed following regulations and common sense.

SAFETY (cont'd)

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 prop provided.**
- 3) If the trailer is hooked up to the vehicle while performing maintenance work, make sure the engine is not running and preferably remove the ignition key.

SAFETY IN TRANSPORT

- 1) Be alert while driving on the road. Never carry passengers in the trailer.

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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.

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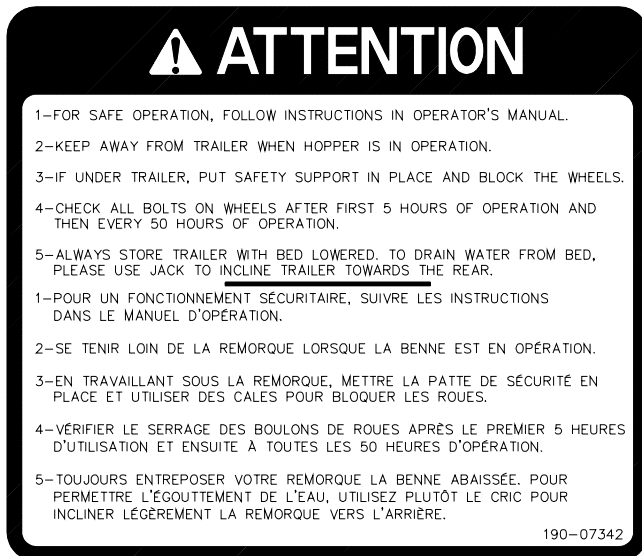


Figure 2
Decal A

Part no.: 190-07342



Figure 3

MAINTENANCE DECALS

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

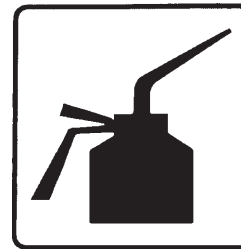


Figure 4

Part no.: A 105



Figure 5

Part no.: A 106

START-UP

BASIC START-UP PROCEDURES

- 1) Lubricate all grease fittings with a good quality multi-purpose grease.
- 2) Lubricate panel release mechanism with good quality oil.
- 3) Adjust tire pressure to manufacturer's specifications.
- 4) Install wheels on hubs.
- 5) Verify for adequate tightness of all fastening devices. Refer to torque chart on page 19.
- 6) Install panels.
- 7) Check oil level in hydraulic reservoir. Use DEXTRON III or equivalent.
- 8) Do not forget to unlock the proper panel lock before dumping.

MAINTENANCE

Before performing any work under the raised platform, always install the safety prop 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 if the hub caps are always in place.
- 5) Check all bolts on wheels after first 5 hours of operation and then every 50 hours of operation.
- 6) Lubricate panel release mechanism every 20 hours of operation.
- 7) Check tire pressure every 50 hours of operation, adjust according to recommendation indicated on the tires.
- 8) Check brakes once a year and adjust or repair if necessary.
- 9) Open, clean and lubricate wheel bearings once a year.
- 10) Check all nuts and bolts once a year. If necessary use torque chart on page 19.
- 11) Check oil level in hydraulic reservoir. Use DEXTRON III or equivalent.

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STORAGE

- 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

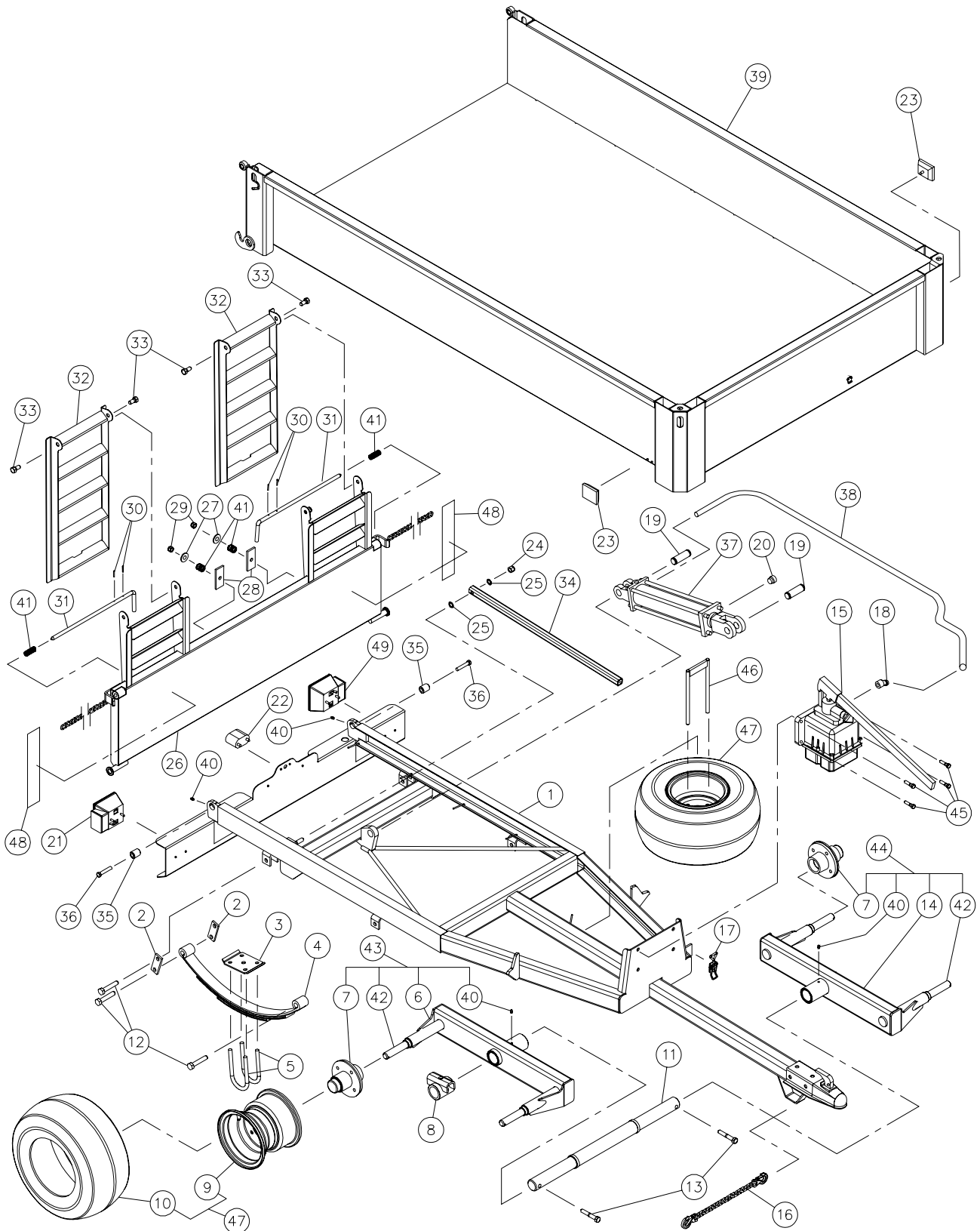
MODEL	PUMA-347M
Gross vehicle weight rating	2 860 lbs
Box (interior dimensions)	51" x 86"
Side and front panel	18" x 14G (welded)
Back panel (removable)	12" x 14G with integrated ramps
opening from top or bottom	Yes
Free height (maximum lift)	13"
Platform height	24"
Overall length	130"
Overall width	56"
Overall height (box down)	48"
Overall height (max. lift)	86"
Thread width c/c	41"
Dumping angle	47 degrees
Suspension	Leaf springs
Wheels	4
Wheel dimensions	8.5" x 8" (4 bolts)
Tires (standard)	18.5 x 8.5 x 8
Hitch	Ball 2"
Light system (12V)	Standard
Oil volume required	.7 gal US / 2.5 l
Cylinder	1 x 3" simple action
Standard hydraulic pump	Manual
Spare wheel	Option
Stake pockets	4 x (2" x 3")
Safety chains	Standard
Total weight approximate	740 lbs

Design and specifications subject to change without notice.

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TRAILER PUMA-347M

170-04061



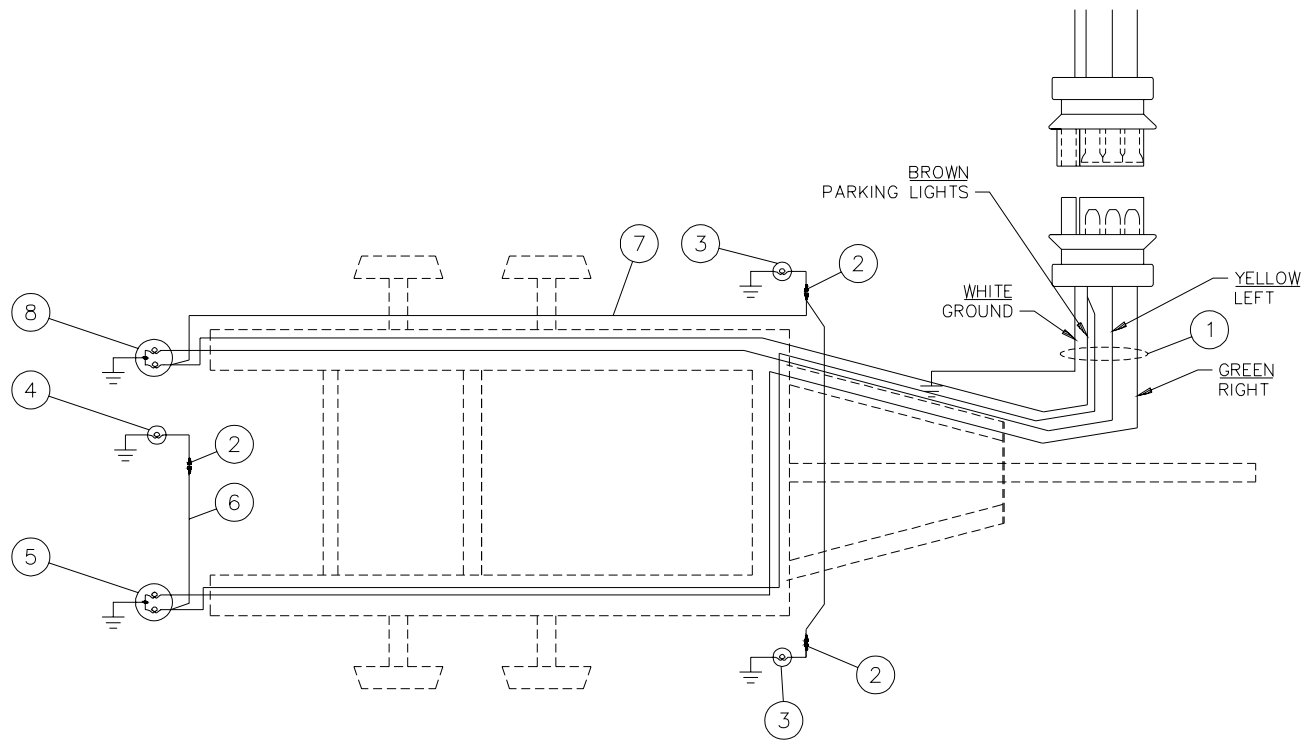
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TRAILER PUMA-347M (cont'd)

REF.	PART #	DESCRIPTION	QTY
1	120-05601	Frame	1
2	51601	Pivot plates	4
3	51599	Spring backplates	2
4	54010	Springs	2
5	54151	U Bolt 1/2 NF x 2 1/2" x 5 3/4" round + 2 nylon locknut	4
6	110-30212	Right tandem frame	1
7	53015	Complete hub assembly # H-1000	4
8	110-30241	Leaf spring support assembly	2
9	R874	Rim 8" x 7" - 4 holes	4
10	PN-185858	Road tire 18.5" x 8.5" x 8" 4 ply	4
11	150-09091	Axle 2" x 29"	1
12	51437	Bolt 9/16" NC x 3" lg. + nylon locknut	6
13	300-40415	Bolt 1/2" NC x 3 1/4" lg. + nylon locknut	2
14	110-30211	Left tandem assembly	1
15	53056	Manual hydraulic pump	1
16	53067	Chain 1/4" + 2 hooks	1
17	8376	Adjustable clamp fastener (welded)	1
18	9385-06-06	Elbow 45 deg. 3/8" female - 3/8" female swivel	1
19	150-01841	Clevis pin 1" x 3 1/8"	2
20	54002	Vent plug 1/2" NPT	1
21	54101	Red signal light	1
22	52070	Light for license plate	1
23	52077	Yellow parking light	2
24	346-40000	Nylon locknut 1/2" NC	1
25	373-46500	Wave washer	2
26	110-29681	Rear panel assembly	1
27	376-38000	Compression spring 3/4" x 1"	2
28	140-18661	Ramp lock	2
29	346-38000	Nylon locknut 7/16" NC	2
30	Std.	Roll pin 1/8" x 1"	4
31	150-08451	Rear panel lock (up)	2
32	110-30111	Ramp	2
33	300-40250	Bolt 1/2" NC x 1" lg + nylon locknut	2
34	160-18671	Safety support	1
35	160-16561	Bushing	2
36	300-38355	Bolt 7/16" NC x 2 1/4" + 2 washer + nylon locknut	2
37	30TR12	Cylinder 30TR12	1
38	190-08111	Hose 3/8" x 78" lg + 1 x 6U106 + 1 x 6U108	1
39	120-05611	Platform assembly	1
40	Std.	Grease fitting 1/4"-28 straight	4
41	54143	Compression spring 7/8" x 2"	4
42	150-08491	Spindle 1 1/2"	4
43	110-30214	Right tandem assembly	1
44	110-30213	Left tandem assembly	1
45	300-36310	Bolt 3/8" NC x 1 1/2" lg. + nylon locknut	4
46	110-30981	Spare tire (mounting bracket)	opt.
47	PNA-185858	Road tire assembly 18.5" x 8.5" x 8" 4 ply (spare tire optional)	4
48	78091	Anti-slip strip	2
49	54102	Red signal light with license plate light	1

ELECTRIC CIRCUIT PUMA-347M

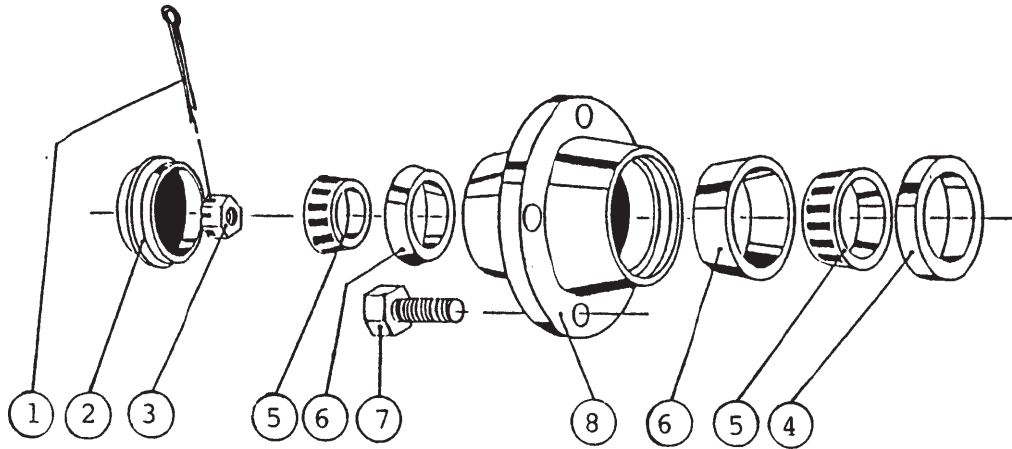
170-04151



REF.	PART #	DESCRIPTION	QTY
1	54104	Harness	1
2	54144	Male connector (16-14GA)	3
3	52077	Yellow parking light	2
4	52070	License plate light	1
5	54101	Red parking and signal light	1
6	190-08521	Conductor for license plate light	1
7	190-08531	Conductor for yellow parking light	1
8	54102	Red signal and parking light with license plate light	1

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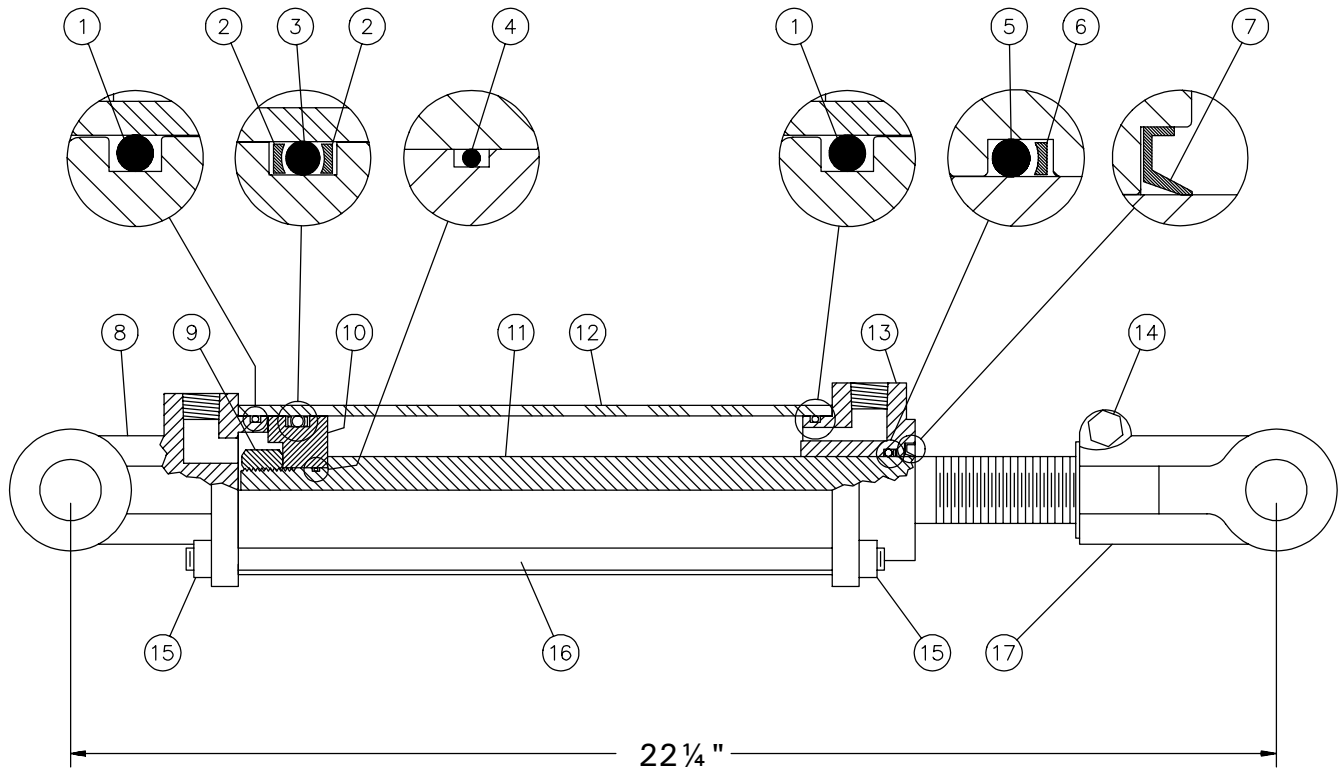
HUB H1000



REF.	PART #	DESCRIPTION	QTY
1	Std.	Cotter pin 3/16" x 1 1/2"	1
2	53019	Dust cap 1.973 dia.	1
3	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

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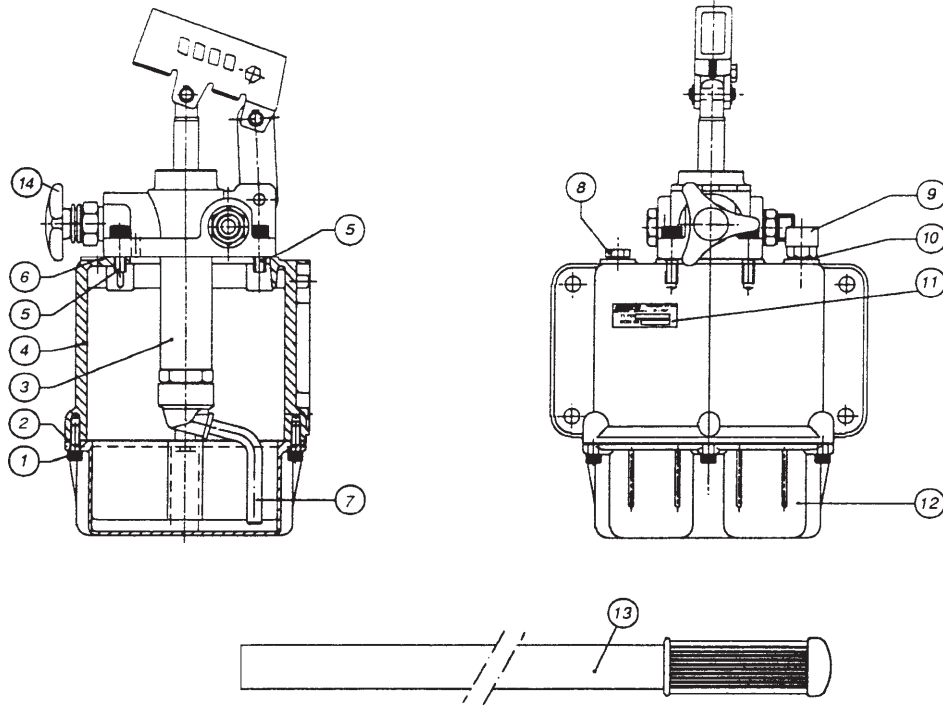
CYLINDER 30TR12



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	---	Yoke (for 3" tube).....	1
9	338-46000	Nut 3/4" NF.....	1
10	---	Piston 3" ø.....	1
11	---	Piston rod 1 1/4".....	1
12	---	Cylinder body 3" ø.....	1
13	---	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	---	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

MANUAL PUMP #53056 (106.3.20)










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






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

* Thick nuts must be used with grade 8 bolts.

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

Use the above torques when special torque is not given.

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

WARRANTY

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

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

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

Hydraulic cylinders are covered by the manufacturer of these items.

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.



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