



**OPERATOR'S / PARTS
MANUAL**



Multi-Mixer
Model
P-110



Copyright © Les Machineries Pronovost Inc., 2011

All rights reserved.
Printed in Canada.

TABLE OF CONTENTS

Section	Item	Page
1	Introduction	5
2	Safety	6
	General Safety	6
	Safety in Operation	6
	Safety with Maintenance	6
	Safety in Transport	6
3	Decals	7
	Safety Decals	7
	Maintenance Decals	7
4	Start-up	8
5	Maintenance	8
6	Storage	8
7	Specifications	9
8	Parts List	10
	Mixer P-110	10
	Hydraulic motor MLH-250	12
9	Torque Chart	13
10	Warranty	14

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

Please read this manual before operating your Mixer 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 as shown on Figure 1.

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

NOW take a moment to enter the model, serial number and the date of purchase of your Mixer 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

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 Mixer. 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 Mixer 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 13.
- 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 mixer, do not exceed the load capacity indicated in the specifications on page 9.
- 2) Do not operate an engine in a confined or non ventilated area.
- 3) Do not perform any adjustments, maintenance or repairs with the engine running on the carrying vehicle. Preferably remove the key from the ignition.
- 4) Apply parking brake while filling the mixer.
- 5) It is recommended to stop the rotation of drum when filling in order to avoid injuries.
- 6) Be careful when backing-up, make sure you have good visibility.
- 7) Always travel at a safe operating speed following regulations and common sense. The road speed should be such as to maintain full control over steering and braking.

SAFETY WITH MAINTENANCE

- 1) Perform maintenance according to recommendations contained in this manual.
- 2) If the mixer 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) Be alert while driving on the road. Never carry passengers.

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.

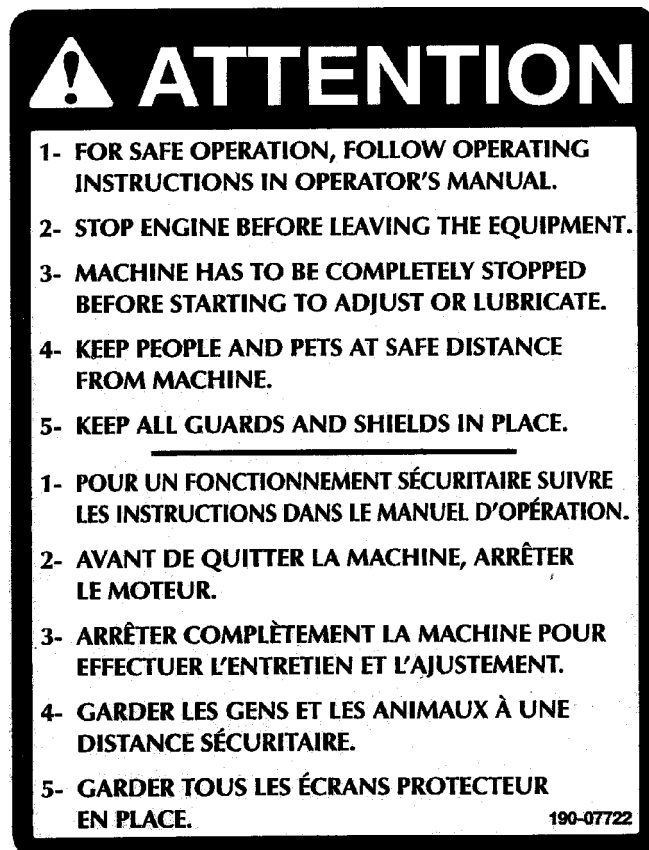


Figure 2
Decal A

Part no.: 190-07722

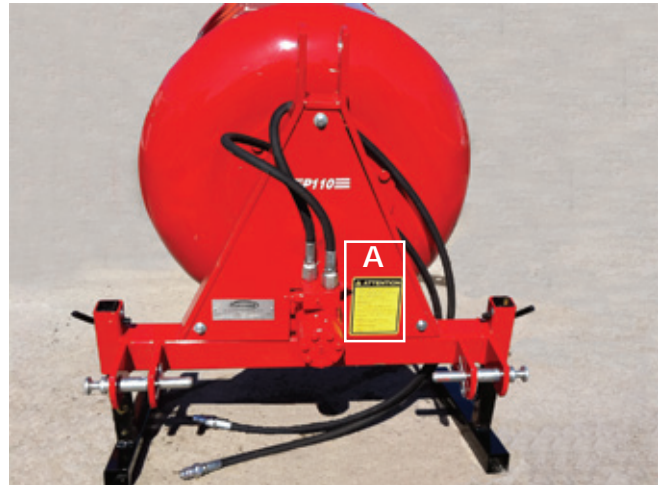


Figure 3

MAINTENANCE DECALS

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

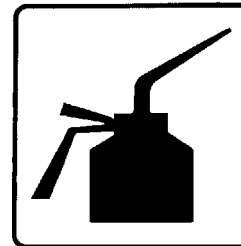


Figure 4

Part no.: A 105

3

START-UP - MAINTENANCE - STORAGE

START-UP PROCEDURES

- 1) Adjust chain by adding or removing shims under hydraulic motor.
- 2) Lubricate chain.
- 3) Install all hydraulic hoses and fittings compatible with your equipment.
- 4) Verify for adequate tightness of all fastening devices. Refer to torque chart on page 13.
- 5) This mixer has the capacity to mix from 1 to 1.5 bags of cement.
- 6) To empty the mixer, just reverse rotation of drum.

4

5

6

MAINTENANCE

- 1) Lubricate chain every 40 hours of operation.
- 2) Check chain tension every 40 hours of operation, and adjust if necessary.
- 3) Check hydraulic motor mounting every 40 hours of operation.
- 4) Wash mixer after every use.
- 5) Check all nuts and bolts once a year. If necessary use torque chart on page 13.

STORAGE

- 1) Store in a cool, dry place.
- 2) Clean your mixer.
- 3) Thoroughly inspect all parts of the mixer. Replace or repair worn or defective parts.
- 4) Touch-up or repaint if necessary.
- 5) Lubricate chain before storage.

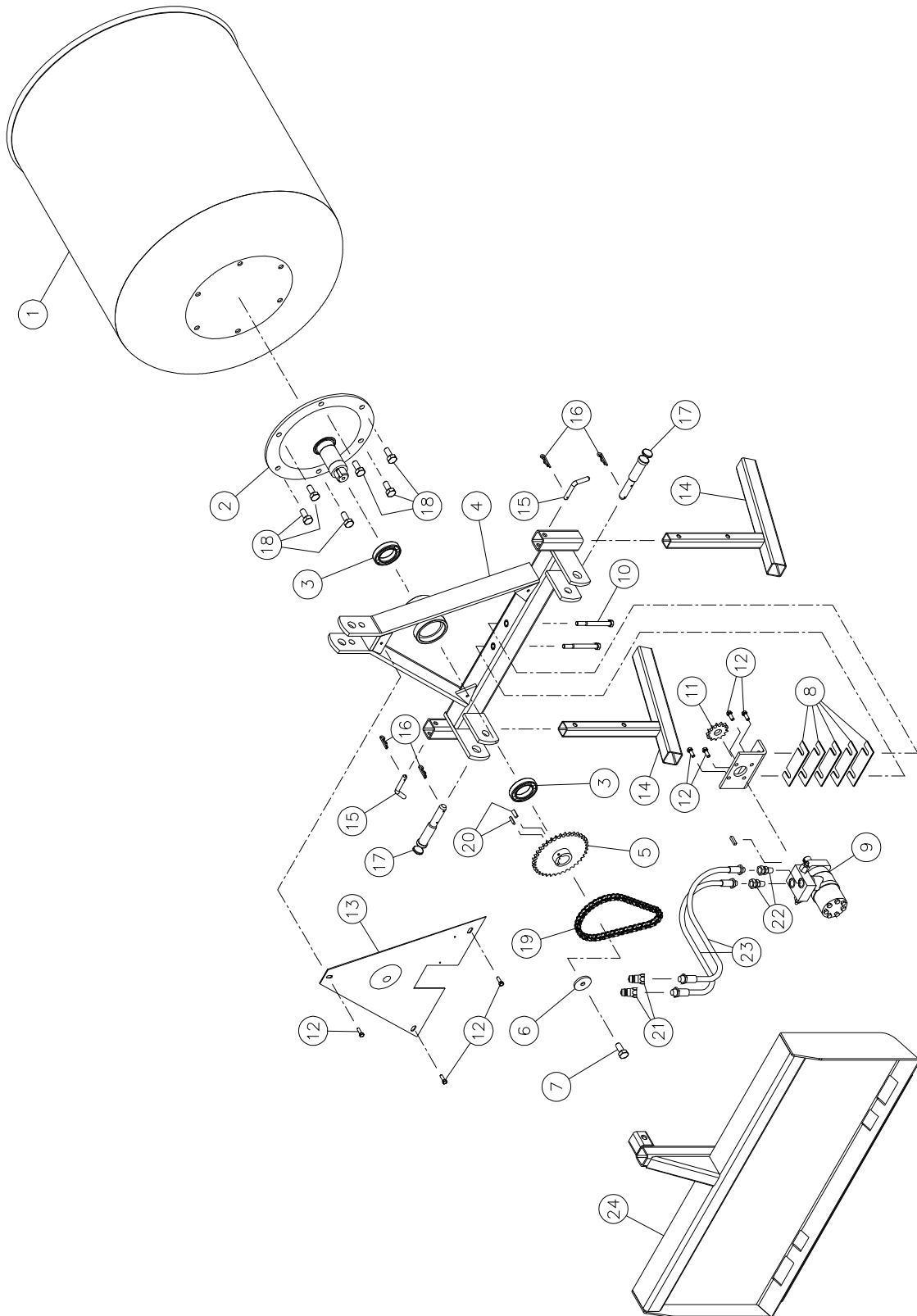
SPECIFICATIONS

MODEL	P-110
Tub dimension	31" diam. x 36" long
Tub support	2 1/8" diam. shaft with 2 ball bearings, can be greased
Hitch category	1 & 2
Tub speed (rotation)	Between 24 and 30 RPM
Loading height	Approx. 24"
Total tub capacity	14.8 cu. ft.
Cement mixture capacity	1 to 1.5 bags
Cushion valve	Standard
Weight	355 lbs

Design and specifications subject to change without notice.

MIXER

170-03501R1

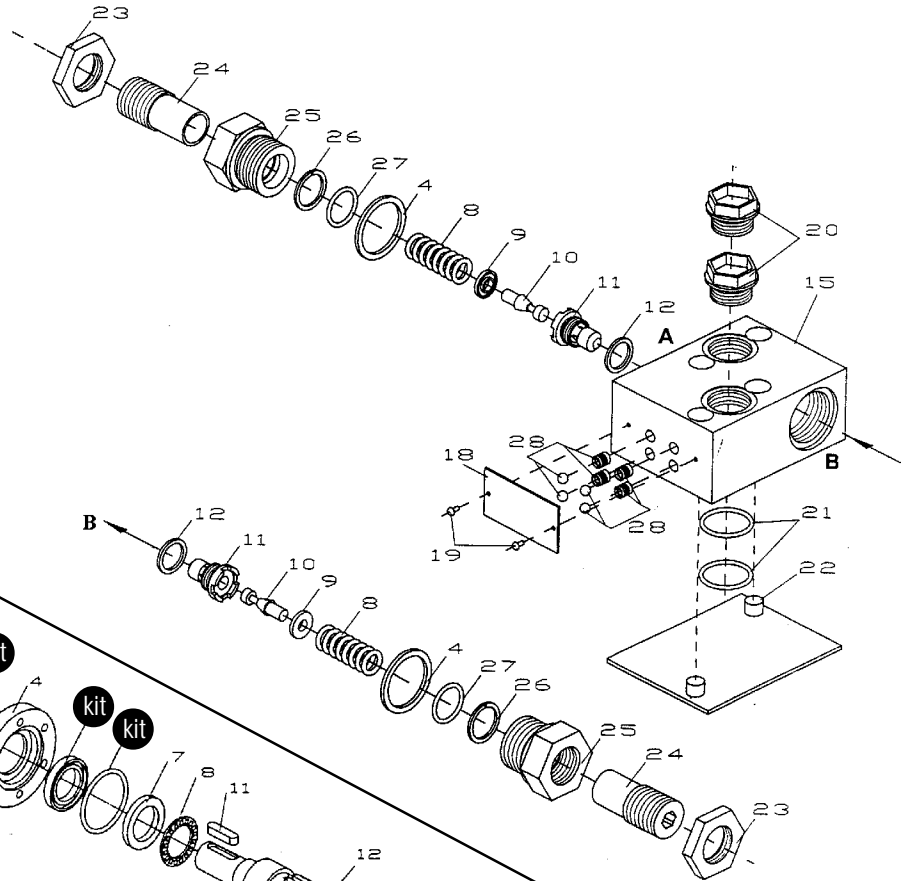


MIXER

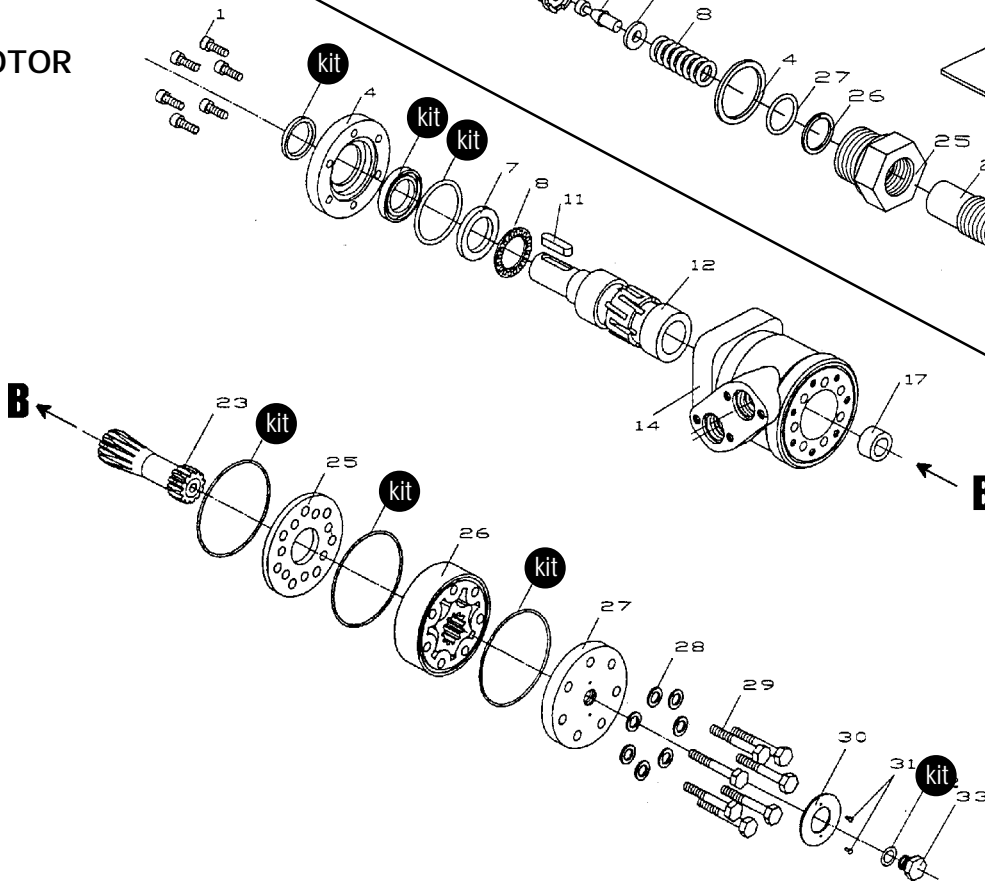
REF.	PART #	DESCRIPTION	QTY
1	1050	Tub.....	1
2	1069	Tub support	1
3	6011-2RS	Ball bearing 55mm	2
4	1071	Frame	1
5	1065	Driven sprocket 50B36 x 1T 1 1/2"	1
6	1066	Flat washer	1
7	300-40310	Bolt 1/2" NC x 1 1/2" lg + lock washer	1
8	1057	Shim	5
9	MLH-250	Hydraulic motor + key	1
10	300-40490	Bolt 1/2" NC x 4 1/2" lg + nylon locknut	2
11	8106	Driven sprocket 50B13 x 1T 1"	1
12	300-36250	Bolt 3/8" NC x 1" lg + lock washer	7
13	1060	Protector	1
14	1052	Adjustable support	2
15	1062	Pin 1/2" x 2 3/4"	2
16	Std.	Hitch pin clip 5/32" x 2 15/16"	4
17	8004	Pin category no 1 & 2	2
18	300-44310	Bolt 5/8"NC x 1 1/2" lg + flat washer + nylon locknut	6
19	1061	Chain #50 x 30" lg	2
19	26A50-HC	Connecting link #50	1
20	1067	Square key 3/8" x 7/8"	2
21	Std.	Quick coupler 1/2" male	2
22	9315x10x8	Adapter straight swivel.....	2
23	190-10911	Hose 3/8" R1 x 72" lg + 2 fittings 6U-108	2
24	120-03421	P-113SSL Quick attach for skid steer loader	opt.

HYDRAULIC MOTOR # MLH-250

CUSHION VALVE H110



MOTOR










8






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

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.



INNOVATION - EXCELLENCE

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