

# PRONOVOST

## OWNER'S MANUAL



### *Double Rolling Harrows Spiral blades - Wire drums*

#### Models

P-20233  
P-2080131

P-20242  
P-2080132

P-20251  
P-2080133

P-20260  
P-2080134

P-20269  
P-2080135

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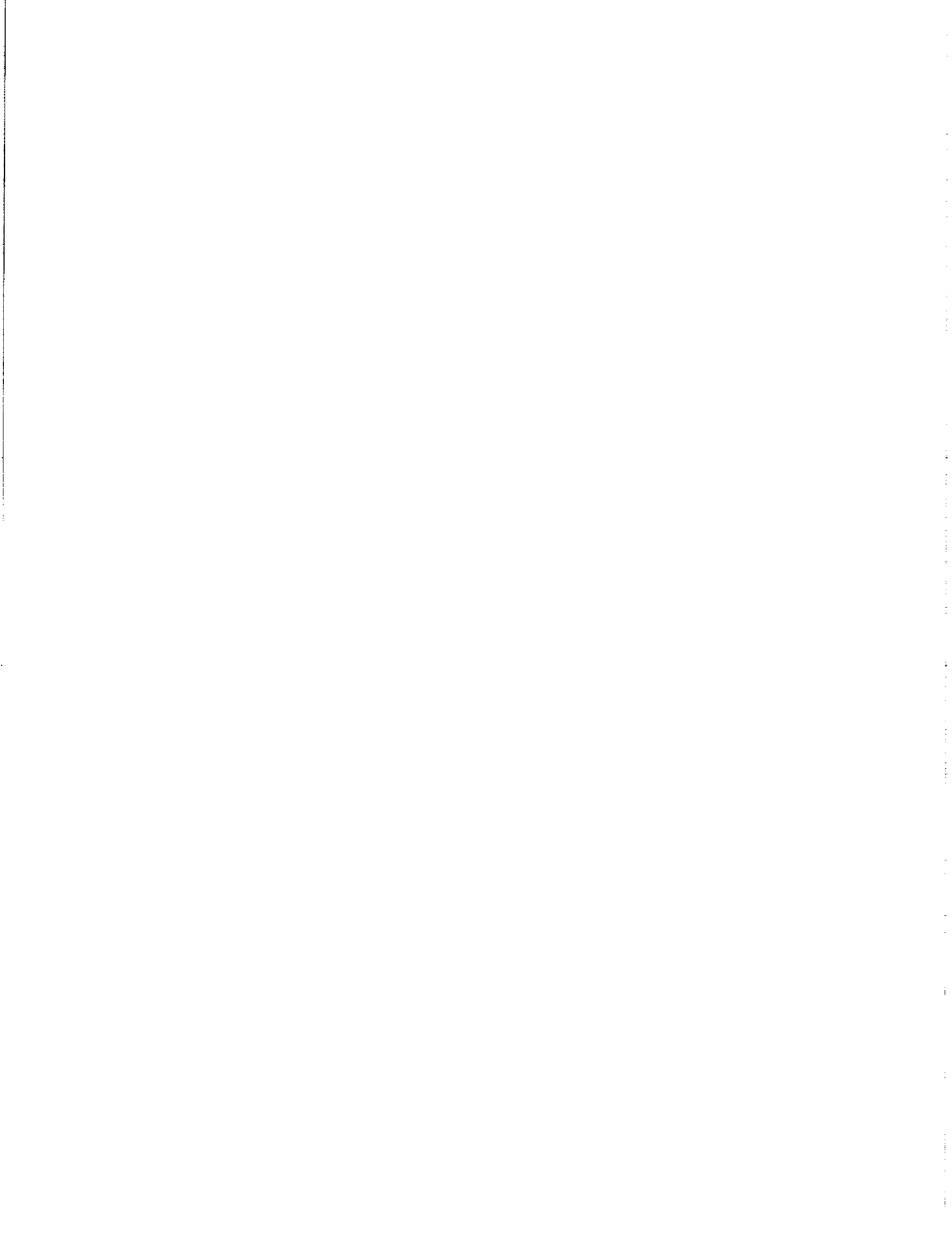
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# INTRODUCTION

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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 Double Rolling Harrow. It contains important information which will help you achieve excellent returns with your PRONOVOST equipment for years to come.

Please read this manual before operating your Rolling Harrow 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 Double Rolling Harrow, please contact your PRONOVOST Dealer.

**NOW** take a moment to enter the model and the date of purchase of your Double Rolling Harrow in the space provided below.

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

Your Rolling Harrows model number is indicated on your invoice.

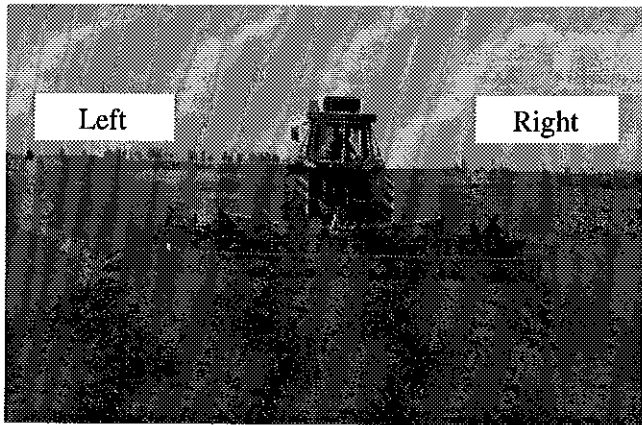


Figure 1

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

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

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# ***SAFETY***

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## ***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 Harrows. 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 Rolling Harrows 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 24.

## ***SAFETY IN OPERATION***

- 1) Be sure there are no obstructions around the equipment and that no one stands near the equipment when in use.
- 2) Do not operate an engine in a confined or non ventilated area.
- 3) Do not perform any adjustments, cleaning, maintenance or repairs with the engine running on the towing vehicle. Preferably remove the key from the ignition.

- 4) Be careful when backing-up, make sure you have good visibility.

## ***SAFETY WITH MAINTENANCE***

- 1) Perform maintenance according to recommendations contained in this manual.
- 2) If the rolling harrows are hooked up to the towing equipment and 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 and check local regulations.
- 2) Be alert while driving on the road. Never carry passengers.
- 3) 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 IN STORAGE***

- 1) Provide adequate supports to prevent any accidental overturning of the Rolling Harrows.

# START-UP

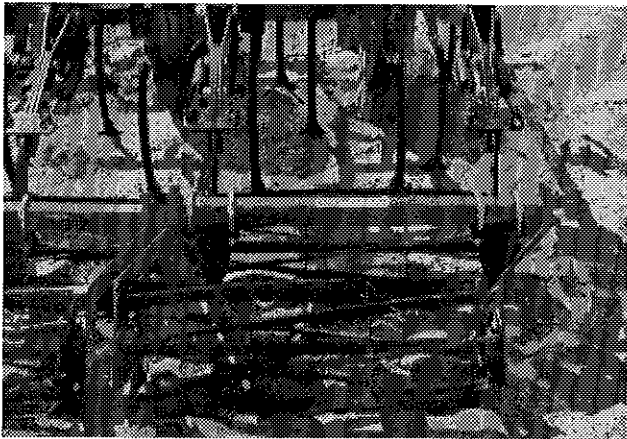


Figure 2



Figure 3

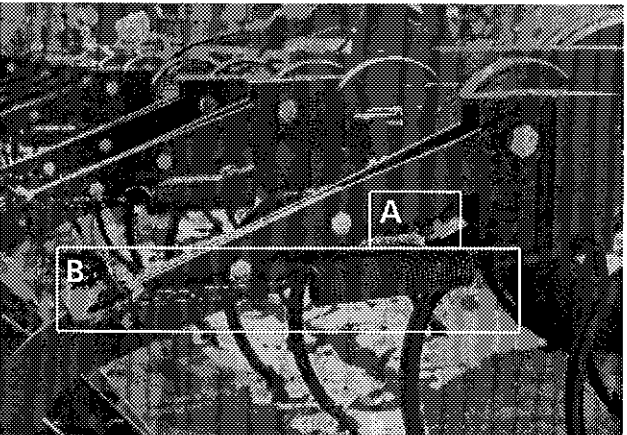


Figure 4

- 1) Lubricate all points with a good quality multi purpose grease.  
**Warning:** Sealed ball bearings are used on these harrows. Use a manual grease gun and stop as soon as some resistance is felt. A pneumatic type grease gun can damage the seals. If you detect a damaged seal, immediately replace the bearing.
- 2) Install the adjustable arms on the harrows cross member. Refer to specifications on page 9 for the number of arms required for each model. Orient the harrows with the straight legs of the frame facing forward. Do not fully tighten the "U" bolts at this point for further positioning of the arms. (Fig. 2)
- 3) Attach the rolling harrows to your equipment. Adjust the position of the arms. Leave one inch (1") between each set of harrows. Tighten all "U" bolts as required.
- 4) The rollers should be positioned as close as possible behind the last row of tines. This may vary according to the soil condition and your average speed of travel. (Fig. 3)
- 5) Adjust the height of the rollers using the bolt to restrict the lowering of the rollers. The bottom of the rollers should be at the same elevation as the end of the tines. (A Fig. 4)
- 6) Make sure that all fasteners are in place and properly secured or tightened. Refer to torque chart on page 14.
- 7) Make sure all rollers are turning freely.
- 8) Hook up the tension springs. (B Fig. 4)

3

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## ***MAINTENANCE***

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- 1) Wipe off all grease fittings with a clean cloth before adding grease in order to avoid injecting dirt and sand.
- 2) Repair or replace damaged grease fittings.
- 3) Lubricate all grease fittings every 8 hours of operation with a good quality multi purpose grease.

**Warning:** Sealed ball bearings are used on these harrows. Use a manual grease gun and stop as soon as some resistance is felt. A pneumatic type grease gun can damage the seals. If you detect a damaged seal, immediately replace the bearing.

- 4) Check for tightness of bearing collars every 50 hours of operation.
- 5) Check all nuts and bolts once a year. If necessary use torque chart on page 14.

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## ***STORAGE***

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- 1) Store the rolling harrows in a cool, dry place..
- 2) Support the rolling harrows with wooden blocks.
- 4) Clean your rolling harrows.
- 5) Thoroughly inspect all parts of the rolling harrows. Replace or repair worn or defective parts.
- 6) Touch-up or repaint if necessary.
- 7) Lubricate all points before storage.
- 8) Unhook the tension springs.



# SPECIFICATIONS

## DOUBLE ROLLING HARROWS: *Spiral blades*

MODEL		P-20233	P-20242	P-20251	P-20260	P-20269
Total width	(inches)	38"	47"	56"	65"	74"
	(centimeters)	96.5	119.4	142.2	165.1	188.0
Working width	(inches)	33"	42"	51"	60"	69"
	(centimeters)	83.8	106.7	129.5	152.4	175.3
Number of adjustable arms		2	2	2	3	3
Number of rollers		2	2	2	2	2
Number of tension springs		4	4	4	6	6
Adapt to frame size	<small>2.5 x 2.5, 3 x 3 3 x 4, 4 x 6</small>	standard	standard	standard	standard	standard
Greasable sealed bearing	1 ¼"	4	4	4	4	4
Quick attach		option	option	option	option	option
Carbon steel spiral blades	¼"x1 ¼"	standard	standard	standard	standard	standard
Weight	(lbs)	200	225	250	275	300
	(kg)	90.0	101.3	112.5	123.8	135.0

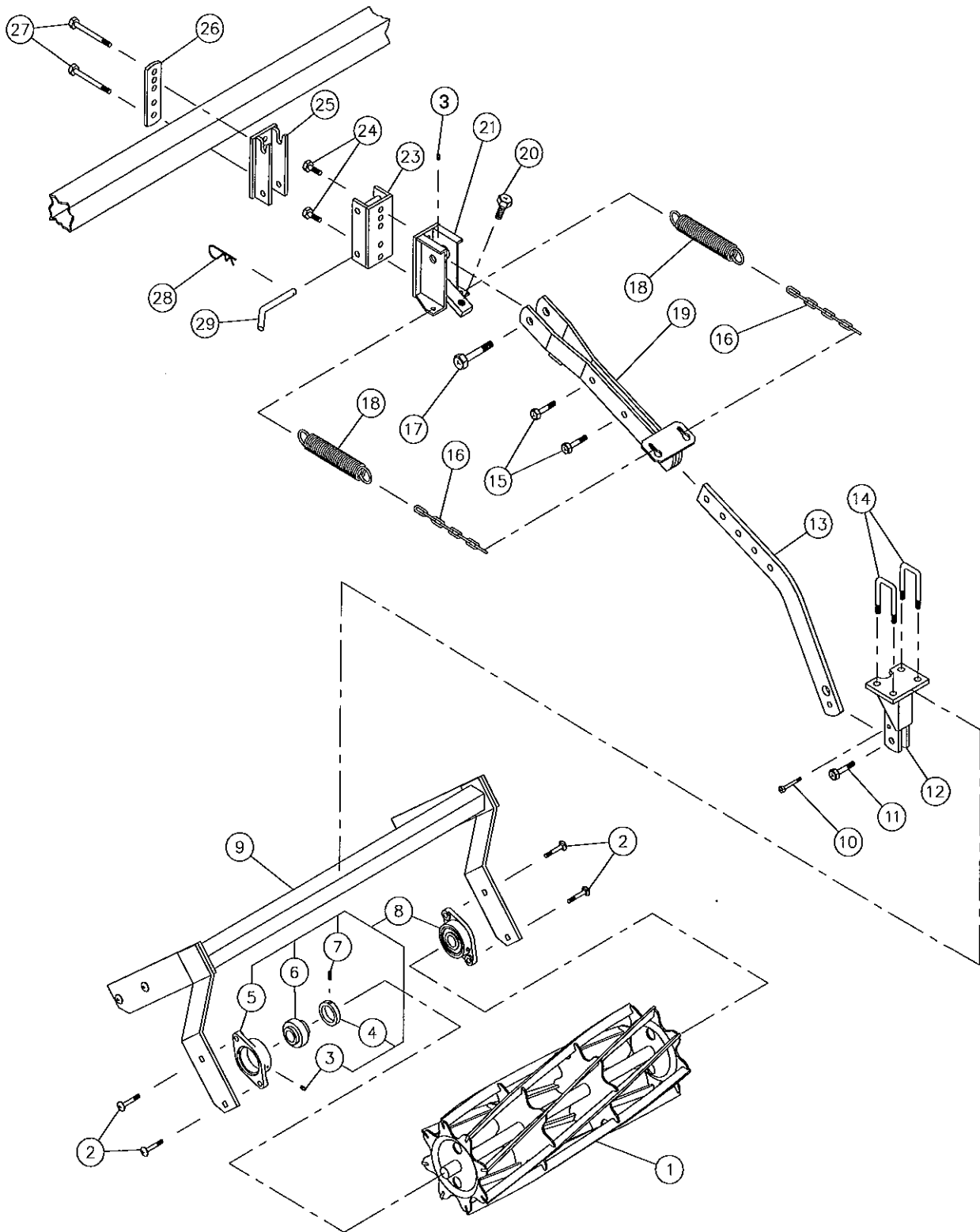
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## DOUBLE ROLLING HARROWS: *Wire drums*

MODEL		P-2080131	P-2080132	P-2080133	P-2080134	P-2080135
Total width	(inches)	38"	47"	56"	65"	74"
	(centimeters)	96.5	119.4	142.2	165.1	188.0
Working width	(inches)	33"	42"	51"	60"	69"
	(centimeters)	83.8	106.7	129.5	152.4	175.3
Number of adjustable arms		2	2	2	2	2
Number of rollers		2	2	2	2	2
Number of tension springs		2	2	2	2	2
Adapt to frame size	<small>2.5 x 2.5, 3 x 3 3 x 4, 4 x 6</small>	standard	standard	standard	standard	standard
Greasable sealed bearing	1 ¼"	4	4	4	4	4
Quick attach		option	option	option	option	option
Weight	(lbs)	200	225	250	275	300
	(kg)	90.0	101.3	112.5	123.8	135.0

Design and specifications subject to change without notice.

# DOUBLE ROLLING HARROWS: SPIRAL BLADES



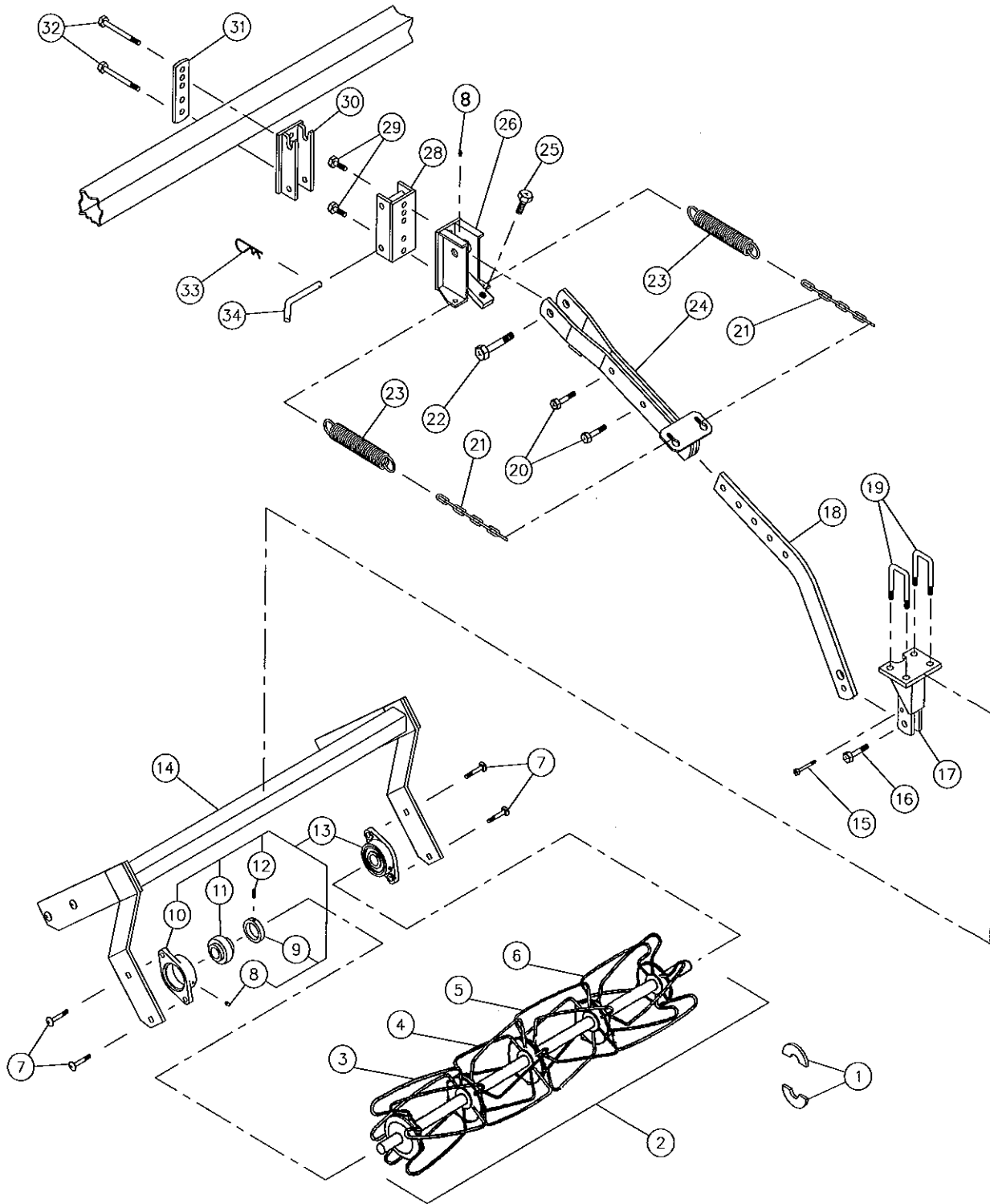
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# DOUBLE ROLLING HARROWS: SPIRAL BLADES (cont'd)

REF.	PART #	DESCRIPTION	QTY				
			P-20233	P-20242	P-20251	P-20260	P-20269
1	1258	Roller (spiral blades) 33" wide .....	2	-	-	-	-
1	1259	Roller (spiral blades) 42" wide .....	-	2	-	-	-
1	1260	Roller (spiral blades) 51" wide .....	-	-	2	-	-
1	1261	Roller (spiral blades) 60" wide .....	-	-	-	2	-
1	1262	Roller (spiral blades) 69" wide .....	-	-	-	-	2
2	245-0817	Carriage bolt 1/2" NC x 1 3/4" lg + nut & lock washer .....	8	8	8	8	8
3	Std.	Grease fitting 1/4"-28 straight .....	5	5	5	5	5
4	1263	Eccentric lock collar .....	4	4	4	4	4
5	1264	Flange only .....	4	4	4	4	4
6	1265	Insert bearing 1 1/4" with lock collar .....	4	4	4	4	4
7	Std.	Hexagonal socket set screw 5/16" .....	4	4	4	4	4
8	1266	Bearing 1 1/4" assembly .....	4	4	4	4	4
9	1267	Double frame 33" wide .....	1	-	-	-	-
9	1268	Double frame 42" wide .....	-	1	-	-	-
9	1269	Double frame 51" wide .....	-	-	1	-	-
9	1270	Double frame 60" wide .....	-	-	-	1	-
9	1271	Double frame 69" wide .....	-	-	-	-	1
10	Std.	Bolt 3/8" NC x 2" lg + nylon locknut .....	2	2	2	3	3
11	Std.	Bolt 5/8" NC x 2 1/2" lg + nylon locknut .....	2	2	2	3	3
12	1229	Frame pivot .....	2	2	2	3	3
13	1251	Arm (roller side) .....	2	2	2	3	3
14	1247	«U» bolt 5/8" NF x 2" x 3 1/2" lg + nut & lock washer .....	4	4	4	6	6
15	Std.	Bolt 5/8" NC x 2" lg + nut & lock washer .....	4	4	4	6	6
16	1272	Chain 7/32" x 9 1/2" lg .....	4	4	4	6	6
17	Std.	Bolt 7/8" NC x 4" lg + nylon locknut .....	2	2	2	3	3
18	1201	Spring .....	4	4	4	6	6
19	1250	Arm .....	2	2	2	3	3
20	215-1220	Bolt 3/4" NF x 2" lg + locknut .....	2	2	2	3	3
21	1245	Arm support .....	2	2	2	3	3
26	1219	Retaining plate .....	2	2	2	3	3
27	Std.	Bolt 5/8" NC x 5" lg + nylon locknut .....	4	4	4	6	6
<b>QUICK ATTACH OPTION</b>							
23	1249	Quick attach (female side) .....	2	2	2	3	3
24	Std.	Bolt 5/8" NC x 1 1/2" lg + nut & locknut .....	4	4	4	6	6
25	1246	Quick attach (male side) .....	2	2	2	3	3
28	Std.	Hitch pin clip 5/32" .....	2	2	2	3	3
29	1252	Hitch pin 5/8" .....	2	2	2	3	3

**7**

# DOUBLE ROLLING HARROWS: WIRE DRUMS



7








# DOUBLE ROLLING HARROWS: WIRE DRUMS (cont'd)

REF.	PART #	DESCRIPTION	P-2080131	P-2080132	P-2080133	P-2080134	P-2080135	QTY
1	1273	Collar (sold separately for repairs) .....	12	16	20	24	28	
2	1274	Roller (wire type) 3 drums 33" wide .....	2	-	-	-	-	
2	1275	Roller (wire type) 4 drums 42" wide .....	-	2	-	-	-	
2	1276	Roller (wire type) 5 drums 51" wide .....	-	-	2	-	-	
2	1277	Roller (wire type) 6 drums 60" wide .....	-	-	-	2	-	
2	1278	Roller (wire type) 7 drums 69" wide .....	-	-	-	-	2	
3	1279	End wire: right hand .....	12	6	12	6	12	
4	1280	Center wire: left hand .....	6	6	12	12	18	
5	1281	Center wire: right hand .....	-	6	6	12	12	
6	1282	End wire: left hand .....	-	6	-	6	-	
7	245-0817	Carriage bolt ½" NC x 1¾" lg + nut & lock washer .....	8	8	8	8	8	
8	Std.	Grease fitting ¼"-28 straight .....	5	5	5	5	5	
9	1263	Eccentric lock collar .....	4	4	4	4	4	
10	1264	Flange only .....	4	4	4	4	4	
11	1265	Insert bearing 1¼" with lock collar .....	4	4	4	4	4	
12	Std.	Hexagonal socket set screw 5/16" x 3/8" .....	4	4	4	4	4	
13	1266	Bearing 1¼" assembly .....	4	4	4	4	4	
14	1267	Double frame 33" wide .....	1	-	-	-	-	
14	1268	Double frame 42" wide .....	-	1	-	-	-	
14	1269	Double frame 51" wide .....	-	-	1	-	-	
14	1270	Double frame 60" wide .....	-	-	-	1	-	
14	1271	Double frame 69" wide .....	-	-	-	-	1	
15	Std.	Bolt 3/8" NC x 2" lg + nylon locknut .....	2	2	2	3	3	
16	Std.	Bolt 5/8" NC x 2½" lg + nylon locknut .....	2	2	2	3	3	
17	1229	Frame pivot .....	2	2	2	3	3	
18	1251	Arm (roller side) .....	2	2	2	3	3	
19	1247	«U» bolt 5/8" NF x 2" x 3½" lg + nut & locknut .....	4	4	4	6	6	
20	Std.	Bolt 5/8" NC x 2" lg + nut & locknut .....	4	4	4	4	4	
21	1272	Chain 7/32" x 9½" lg .....	4	4	4	4	4	
22	Std.	Bolt 7/8" NC x 4" lg + nylon locknut .....	2	2	2	2	2	
23	1201	Spring .....	4	4	4	4	4	
24	1250	Arm .....	2	2	2	2	2	
25	215-1220	Bolt ¾" NF x 2" lg + locknut .....	2	2	2	2	2	
26	1245	Arm support .....	2	2	2	2	2	
31	1219	Retaining plate .....	2	2	2	3	3	
32	Std.	Bolt 5/8" NC x 5" lg + nylon locknut .....	4	4	4	6	6	
<b>QUICK ATTACH OPTION</b>								
28	1249	Quick attach (female side) .....	2	2	2	2	2	
29	Std.	Bolt 5/8" NC x 1½" lg + nut & lock washer .....	4	4	4	4	4	
30	1246	Quick attach (male side) .....	2	2	2	2	2	
33	Std.	Hitch pin clip 5/32" .....	2	2	2	3	3	
34	1252	Hitch pin 5/8" .....	2	2	2	3	3	






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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.

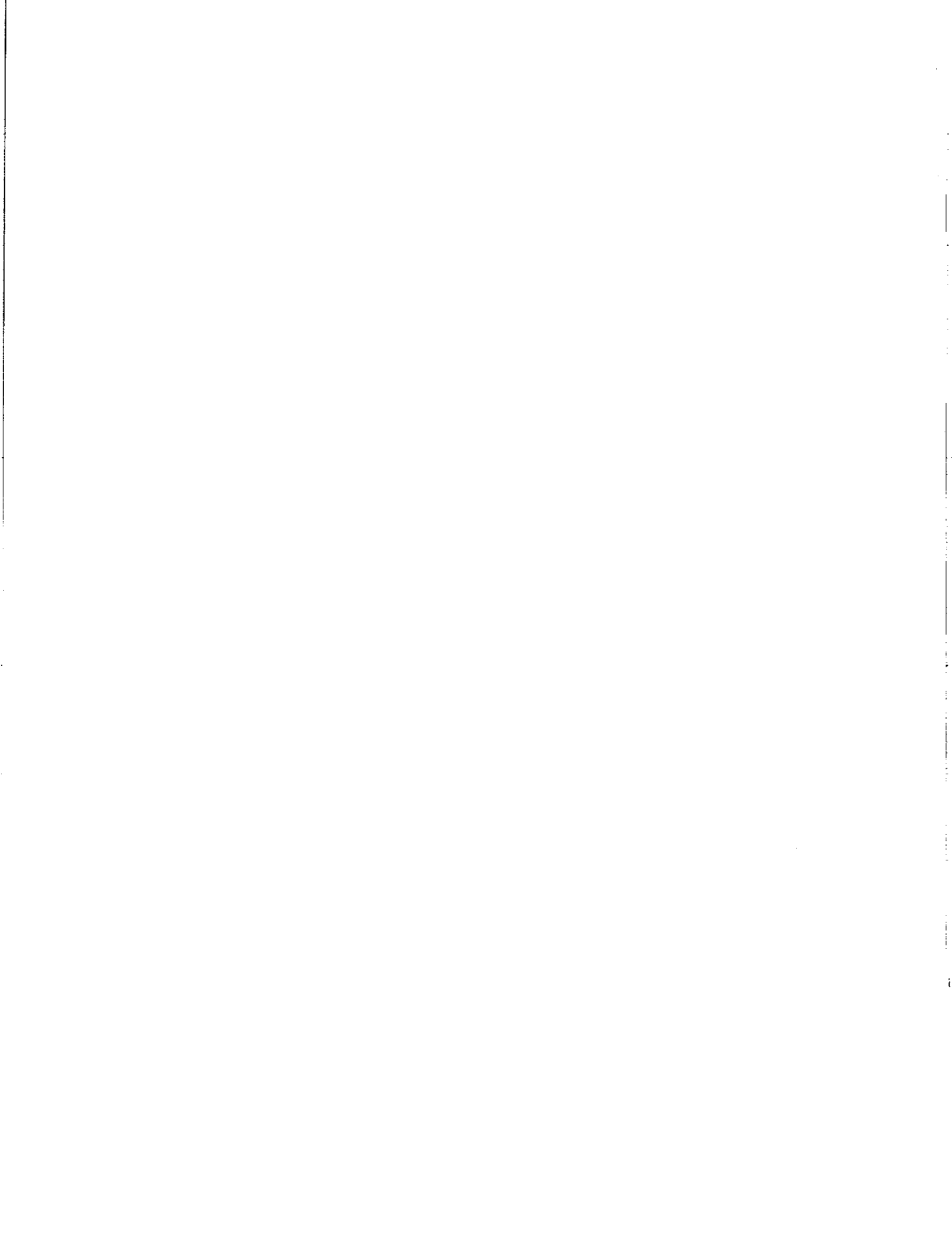
Transportation charges are the responsibility of the customer. This warranty is not transferable.

Hydraulic cylinders are covered by the manufacturer of these items.

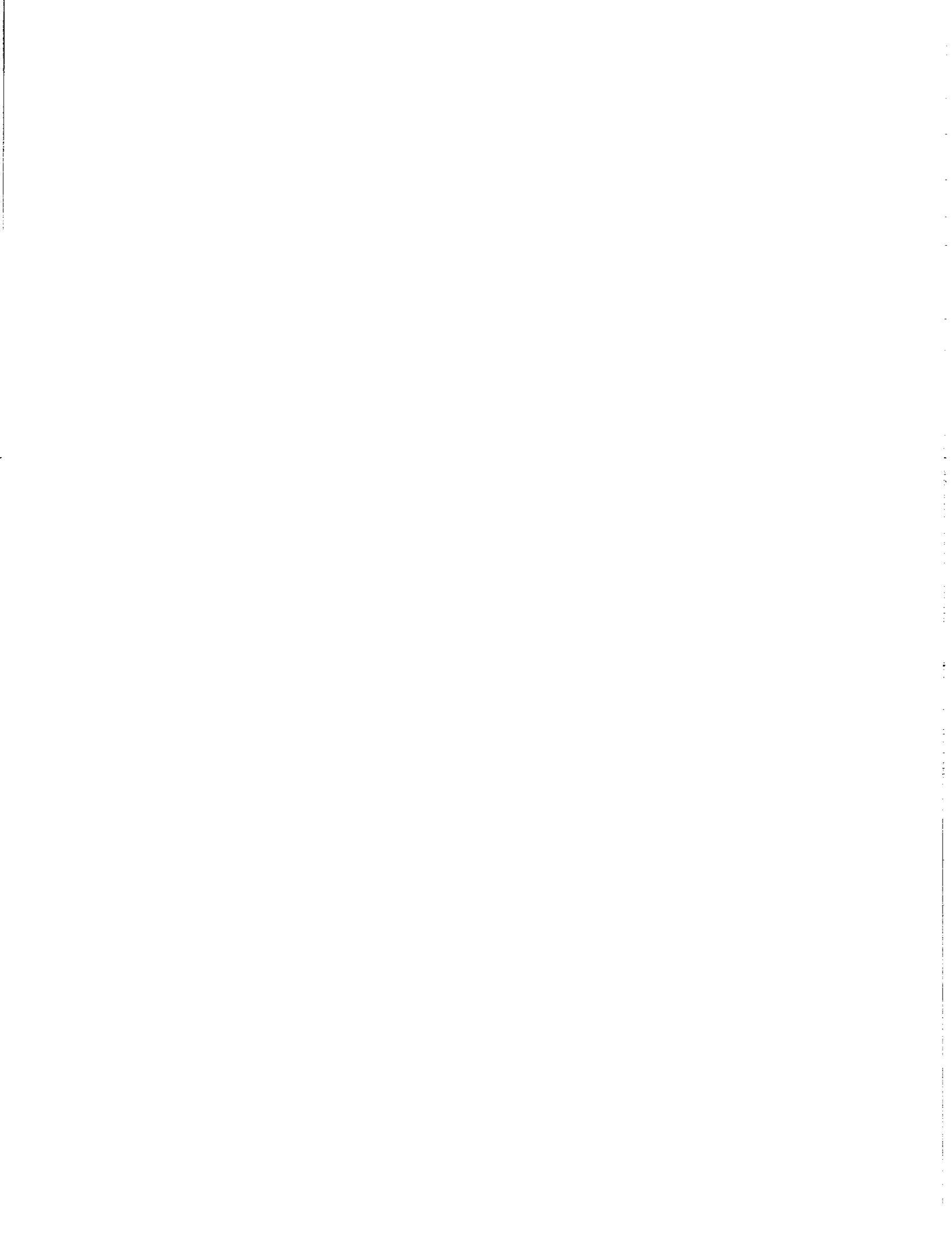
All PRONOVOST spare parts purchased are covered by a three (3) month warranty.

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, route 159,  
Saint-Tite, Quebec, Canada, G0X 3H0  
Tel.: (418) 365-7551, Fax: (418) 365-7954