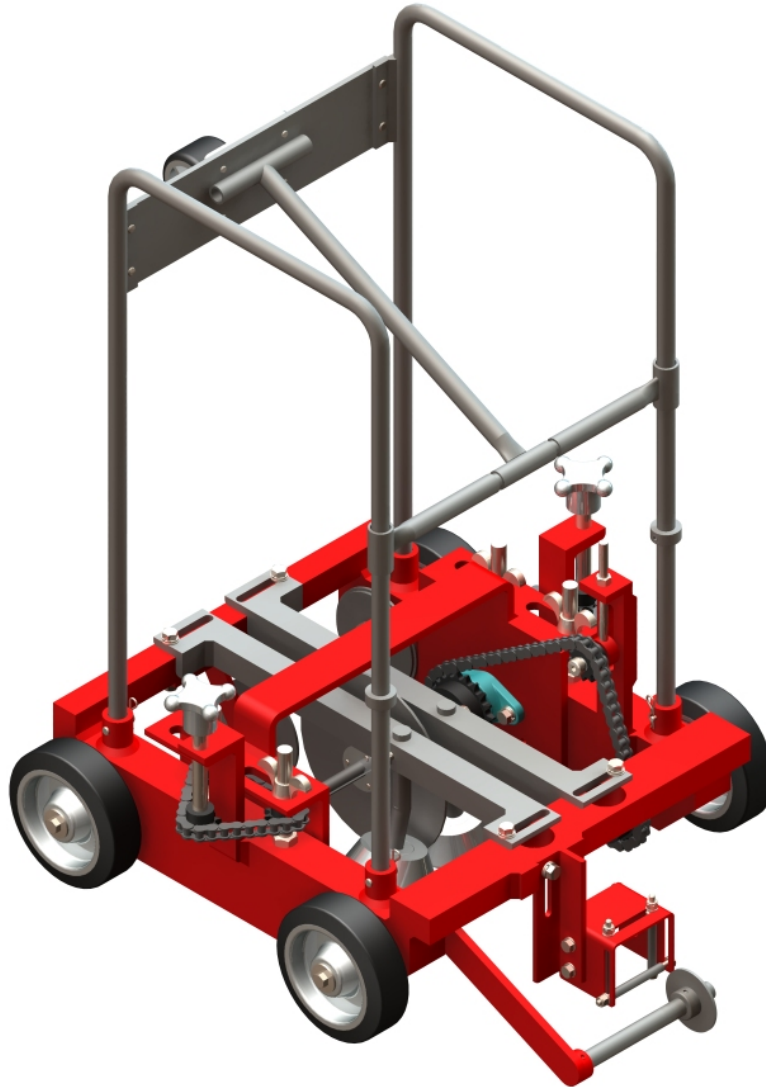


# Owner's Manual

Push-Pro® Manual Installer  
Model: Universal



Manufactured by THE D. S. BROWN COMPANY, North Baltimore, Ohio 45872

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# Introduction

Before using the Push-Pro, it is important to be aware of some basic facts about this machine and how it is used:

- The Push-Pro is a manual machine. You push it – it does not have an engine.
- The Push-Pro does not apply lubricant adhesive.
- The Push-Pro is for use with paving seals – typically up to 1 ¼” compression seal width.
- The Push-Pro has a mechanism that minimizes stretch of the seal when installed.
- The Push-Pro is easy to adjust by following the manual provided.

Many field variables can affect the success of an installation. Five of these variables are discussed below:

1. The shape and configuration of the compression seal has a significant effect on the installation of the seal. Some compression seals are more compatible with the Push-Pro and some compression seals are more compatible with automatic installation equipment. The compression seal manufacturer should be aware if their shape and configuration are more compatible with the Push-Pro or with conventional automatic installers. Field trials will also demonstrate compatibility. Typically, incompatibility will result in the installed compression seal being incorrectly positioned in the joint. The failure to properly install will be evident in one of two ways: the seal will roll or twist in the joint as it is installed, or one side of the seal will not properly seat, or position itself in the joint. The upper seal edges (visible from the slab) should seal tightly against the joint face in a properly installed seal.
2. When compression seal is compressed only the cells are closed. The neoprene webs and walls themselves cannot be compressed. To obtain a proper installation the seal must compress to a width that is less than the joint width at time of installation.
3. Saw cuts must be properly sized to accept the selected paving seal. An easy method of precisely monitoring joint widths and tolerances is by using drill bits or key stocks to check sizing.
4. Concrete surface irregularities can hinder a proper paving seal installation. Irregularities tend to grab the paving seal and cause it to roll to one side or stretch. Seal selection, equipment setup, and operator technique can overcome these issues.

5. If the previously discussed variables are recognized and taken into consideration, the most significant remaining variable is proper adjustment of the Push-Pro Compression Seal Installer. A step-by-step adjustment procedure is provided in this owner's manual.

## List of Tools Needed To Adjust the Push-Pro

- 6" Crescent Wrench
- 1/8" Allen Wrench

### Adjusting the Push-Pro

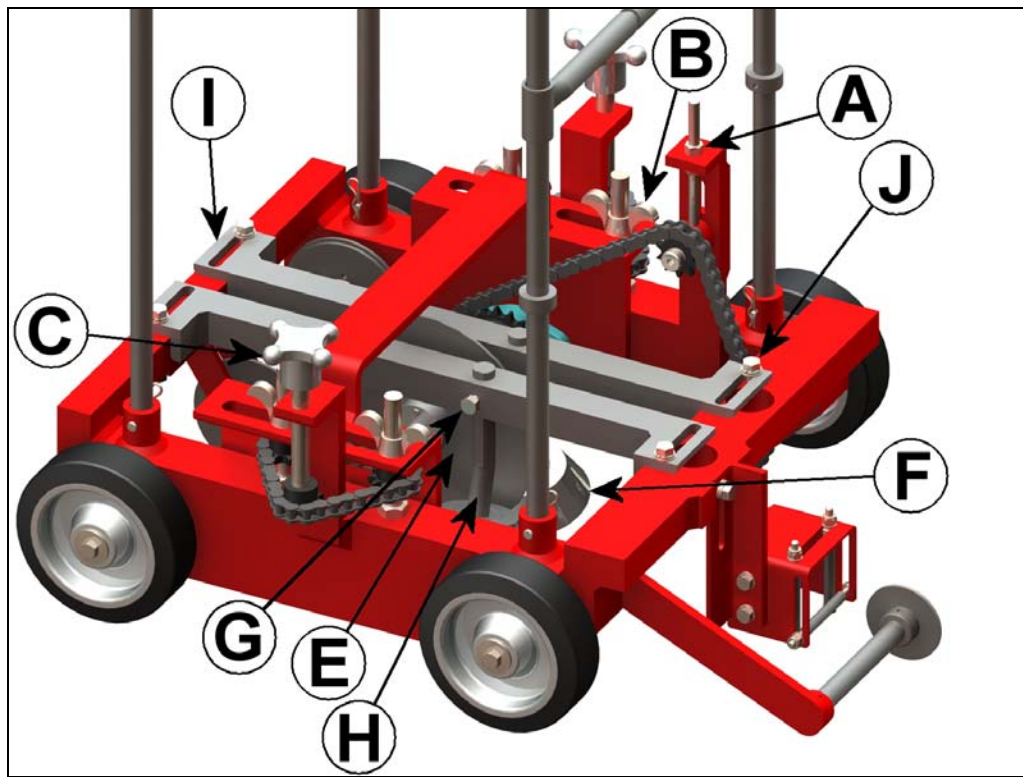


Figure 1 Push-Pro Adjustment Locations

### Setting Discharge Blade Depth

1. Rotate the Push-Pro into the operating position over the joint.
2. Loosen the idler sprocket-securing nut (A).
3. Loosen the discharge blade carriage wing nuts (B).
4. Set the depth of the discharge blade by rotating the chain mechanism hand wheel (C) on each side of the machine until the desired depth is obtained. Measure the distance between the frame and the discharge blade carriage angles. The distance must be the same from one side

to the other to ensure the discharge blade is parallel to the frame and in turn, to the joint walls.

5. Lay a straight edge (K) underneath the compression blades (F) with the rear edge touching the leading edge of the discharge blade (E) as shown in Figure 2. Slide the discharge blade carriage forward until the rear edge of the straight edge (K) is slightly behind the center of the compression blades. Minor deviations from the setup shown in Figure 2 may be necessary depending on seal size and field conditions.

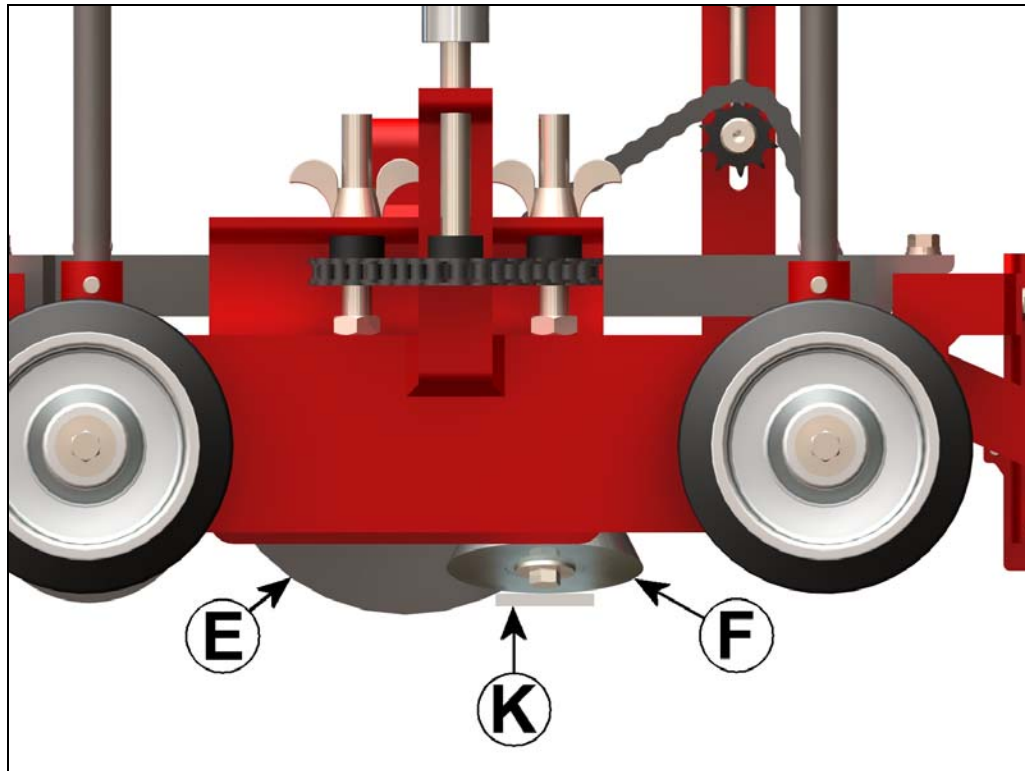


Figure 2 Discharge Blade Setup

#### NOTE

Adjustment 5 must be made each time adjustment 4 is made because moving the discharge blade changes the relationship between the discharge blade and the compression blades.

6. Verify the discharge blade carriage is square with the frame by measuring the distance between the front of the frame to the front of both sides of the carriage. The measurements should be equal.
7. Adjust the idler sprocket to take the slack out of the chain. Secure the idler sprocket nut (A).

## Adjusting Compression Blades

1. Loosen the compression blade adjustment arm securing bolts (G).
2. Lower the compression blade adjustment arms (H) until the compression blades (F) are 1/32" to 1/16" off the slab.
3. Loosen the compression blade bracket securing bolts (J) and adjust the compression blades (F) until distance X is approximately 1/32" less than the measured width of the joint (Figure 3). Tighten the securing bolts (J) and verify distance X. Table 1 gives a guide to compression wheel gap settings for nominal seal sizes.
4. If necessary, the discharge blade (E) may be adjusted from side to side. Center the discharge blade (E) between the compression blades by loosening the discharge blade setscrews and sliding the discharge blade on the shaft until it is centered. Tighten the setscrews and check the adjustment.
5. An optional secondary discharge blade has been provided with this unit. This blade is designed to set the seal to a final depth. Three discharge blades have been provided that set the seal to 1/4", 3/8", and 1/2" below the slab surface.

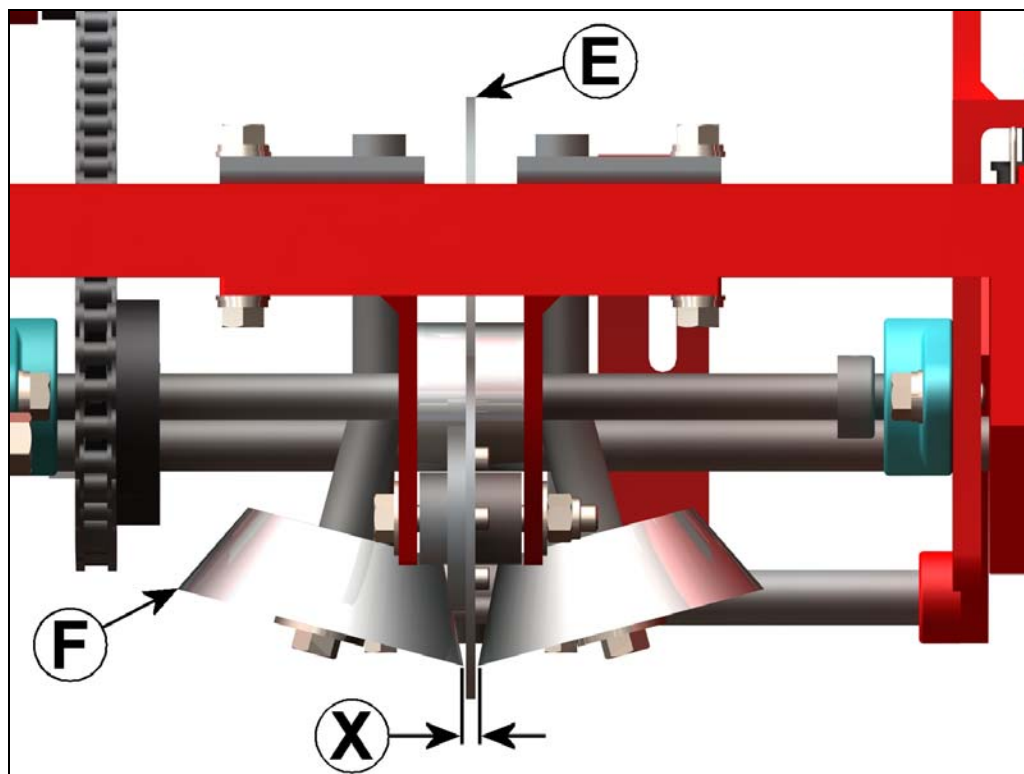


Figure 3 Setting Compression Blade Gap

Table 1 Compression Blade Gap Settings For Normal Seals

Nominal Seal Size	Typical Joint Width	Compression Wheel Gap Setting
7/16"	1/4"	3/16"
9/16"	5/16"	1/4"
11/16"	3/8"	5/16"
13/16"	1/2"	7/16"
1"	9/16"	1/2"
1-1/4"	5/8"	9/16"
1-5/8"	7/8"	3/4"

## Operating Instructions

1. Apply glue to the joint using the Pump-Pro®.
2. Start the seal by hand for approximately six to eight inches.
3. Make sure the seal does not roll over in the joint or bind.
4. Center the Push-Pro over the joint and tilt the machine forward into the operating position.
5. Push the machine with your foot. Use the handles for guiding and steering.
6. Verify that the discharge blade is not skewed in the joint.
7. Move the machine in a slow, steady motion with small steps. Do not force the machine.
8. Clean the Push-Pro after every use using toluene or another solvent. After all the glue has been removed, spray the bearing shafts and compression blades with WD-40. This will keep the bearings clean and free turning to ensure proper installation and prolong the life of the machine. **IT IS NECESSARY TO CLEAN THE PUSH-PRO AFTER EVERY USE.**

## Trouble Shooting

Problem	Possible Cause	Solution
Seal is not installing deep enough	Discharge blade is set too high.	Lower discharge blade.
Seal is installing too deep	Discharge blade is set too low.	Raise discharge blade.
Seal is rolling in joint	Discharge blade isn't centered on seal. Seal is getting hooked on joint as a result of surface irregularities.	Center discharge blade over joint. Adjust the compression blades in and down into the joint.
Inconsistent installation	Wide variation in speed. Variation in surface conditions.	Install at a consistent speed.
Seal won't go in	Not enough lubricant. Compression wheels aren't adjusted tight enough. Wrong seal for the joint.	Place more lubricant in joint prior to attempting to install seal. Adjust compression wheels to compress the seal more.



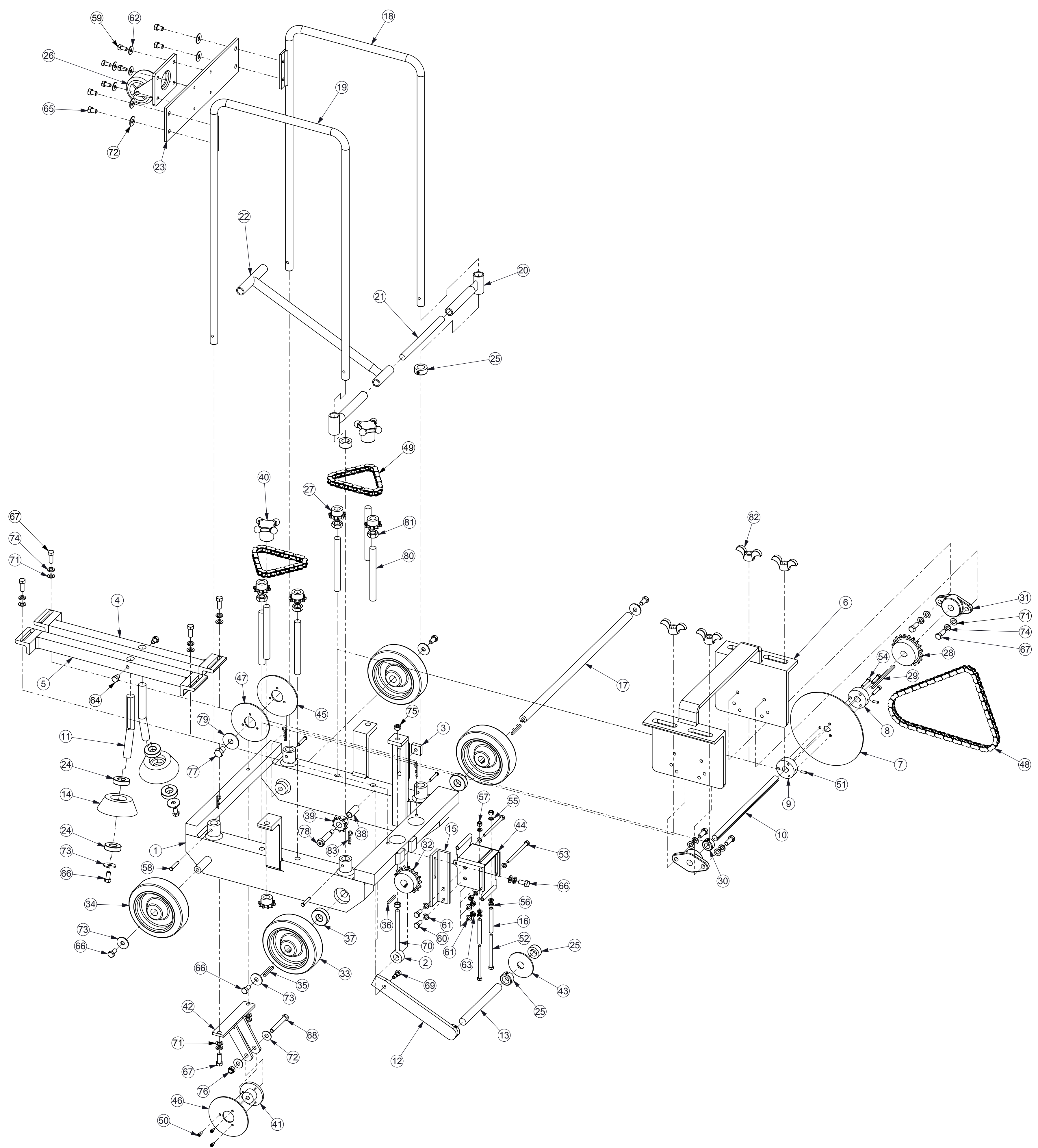
## Part's List

When ordering parts, please have the model and serial number available.

Model: Push-Pro Universal

Serial Number: \_\_\_\_\_

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	59-900	PUSH PRO FRAME	1
2	59-901	HEIGHT ADJUSTMENT ROD CONNECTOR TUBE	1
3	59-902	HEIGHT ADJUSTMENT SLIDE BAR	1
4	59-903-L	LEFT COMPRESSION BLADE BRACKET	1
5	59-903-R	RIGHT COMPRESSION BLADE BRACKET	1
6	59-904	BLADE MOUNTING BRACKET	1
7	59-905	DISCHARGE BLADE	1
8	59-906	DISCHARGE BLADE SET COLLAR CLEAR	1
9	59-907	DISCHARGE BLADE SET COLLAR THREADED	1
10	59-908	DISCHARGE BLADE DRIVE SHAFT	1
11	59-909	COMPRESSION BLADE ADJUSTMENT ARM	2
12	59-911	GUIDE ARM	1
13	59-912	GUIDE ARM SHAFT	1
14	59-913	COMPRESSION BLADE	2
15	59-914	SEAL GUIDE MOUNTING ANGLE	1
16	59-915-04	SEAL GUIDE BOX ROLLER	4
17	59-916	DRIVE SHAFT	1
18	59-917-L	HANDLE FRAME LEFT WELDMENT	1
19	59-917-R	HANDLE FRAME RIGHT	1
20	59-918	HANDLE SLIDER WELDMENT	2
21	59-919	HANDLE SLIDER CONNECTOR ROD	1
22	59-920	HANDLE WELDMENT	1
23	59-921	WHEEL MOUNTING PLATE	1
24	59-930	COMPRESSION BLADE BEARING	4
25	59-931	GUIDE ARM SHAFT BRACKET SET SCREW COLLAR	4
26	59-934	SWIVEL CASTER	1
27	59-936	HEIGHT ADJUSTMENT SPROCKET	6
28	59-937	DRIVE SPROCKET	1
29	59-938	DRIVE SHAFT KEY	1
30	59-939	DRIVE SHAFT SET SCREW COLLAR	1
31	59-940	DRIVE SHAFT FLANGE BEARING	2
32	59-941	DRIVE SHAFT SPROCKET	1
33	59-942	DRIVE WHEEL	2
34	59-943	FRONT CASTER	2
35	59-944	DRIVE WHEEL KEY	2
36	59-945	DRIVE SPROCKET KEY	1
37	59-946	DRIVE SHAFT BEARING	2
38	59-947	IDLER SPROCKET BUSHING	1
39	59-948	IDLER SPROCKET	1
40	59-949	HAND KNOB	2
41	59-950	REAR DISCHARGE BLADE HUB	1
42	59-951	REAR DISCHARGE BLADE BRACKET	1
43	59-952	FRONT GUIDE WASHER	1
44	59-953	SEAL GUIDE BOX	1
45	59-954	4 1/2" DISCHARGE BLADE	1
46	59-955	4 3/8" DISCHARGE BLADE	1
47	59-956	4 1/4" DISCHARGE BLADE	1
48	59-957	DRIVE CHAIN	1
49	59-957	HEIGHT ADJUSTMENT CHAIN	2
50	X	10-32 SHCS X 3/8" LG.	3
51	X	10-24 CUP POINT SET SCREW X 5/8" LG.	2
52	X	1/4-20 HHCS X 3 3/4" LG.	3
53	X	1/4-20 HHCS X 4" LG.	1
54	X	1/4-20 SHCS X 1 1/4" LG.	3
55	X	1/4" FLAT WASHER - NARROW	7
56	X	1/4-20 HEX JAM NUT	2
57	X	1/4-20 STOP NUT	3
58	X	1/4" CLEVIS PIN X 1 1/2" LG.	4
59	X	5/16-18 HHCS X 5/8" LG.	4
60	X	5/16-18 HHCS X 3/4" LG.	2
61	X	5/16" FLAT WASHER - NARROW	4
62	X	5/16" FLAT WASHER	4
63	X	5/16-18 HEX JAM NUT	2
64	X	3/8-16 HHCS X 1/2" LG.	2
65	X	3/8-16 HHCS X 5/8" LG.	4
66	X	3/8-16 HHCS X 3/4" LG.	7
67	X	3/8-16 HHCS X 1" LG.	10
68	X	3/8-16 HHCS X 2 3/4" LG.	1
69	X	3/8" SHOULDER BOLT X 3/8" LG.	1
70	X	3/8-16 ALL THREAD X 5" LG.	1
71	X	3/8" FLAT WASHER - NARROW	11
72	X	3/8" FLAT WASHER	6
73	X	3/8" FLAT WASHER - WIDE	6
74	X	3/8" LOCKWASHER	11
75	X	3/8-16 HEX NUT	2
76	X	3/8-16 STOP NUT	1
77	X	1/2-13 HHCS X 3/4" LG.	1
78	X	1/2" SHOULDER BOLT X 1 3/4" LG.	1
79	X	1/2" FLAT WASHER - WIDE	1
80	X	5/8-11 ALL THREAD X 6" LG.	6
81	X	5/8-11 HEX JAM NUT	4
82	X	5/8-11 WING NUT	4
83	45-600-35	HAIR PIN	4



UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN INCHES  
TOLERANCES:  
FRACTIONAL: ±1/16"  
ANGULAR: MACH ±0.5° BEND ±1°  
THREE PLACE DECIMAL: ±0.001"  
TWO PLACE DECIMAL: ±0.005"  
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**PUSH-PRO PARTS LIST**


DRAWN BY: JSM SCALE: 1:5.5 SHEET: 6 OF 6  
REV: X DATE: 11-27-07 DRAWING NO:  
JOB: XXXX SIZE: D DE-07-205-06

# Pump-Pro®

## Operating Instructions

Adjust the air regulator to apply glue at a rate of 1 gallon per 150 linear feet of compression seal. Verify the dip tube is in the glue. Pressurize the glue pot. Insert the nozzle of the wand into the saw cut and apply glue.

## Parts List

 <p>Cart Part Number: 60-07</p>	 <p>Air Compressor Part Number: 60-08</p>
 <p>Glue Pot Part Number: 60-09</p>	 <p>Wand Part Number: 60-10</p>
 <p>Air Compressor to Glue Pot Hose Part Number: 60-11</p>	 <p>Glue Pot to Wand Hose Part Number: 60-12</p>