



OWNER'S MANUAL

FleetPlow™ FOR Buses



Model 880B Portable



Model 770B Base-Mount

Basic Up & Down Pendant Control Operation

For your records, please record this serial number, found on the side of the main control panel:

Control System Serial Number:

WARNING: This machinery should not be operated or maintained by any person who has not read and understood all the contents of this manual. Installation and service should be performed by an authorized dealer. Failure to read and comply with the contents of this manual can result in serious bodily injury or death, and/or property damage.

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North American Warranty

Scraper Systems FleetPlows™ are warranted, from the date of shipment, to be free from defects in material and workmanship for a period of two (2) years on all mechanical and electrical parts and one (1) year for labor, based on approved travel and labor repair times. The FleetPlow must be used in accordance with manufacturer's recommendations and must not have been subject to abuse, lack of maintenance, misuse, negligence, or unauthorized repairs or alterations. The FleetPlow must have been installed by certified dealer installers or by factory installers, with training on the safe and proper operation provided by same.

NOTICE: FleetPlows are designed for safe and effective snow clearing in controlled commercial applications. Like with all large machines, care must be taken by all personnel in the vicinity to uphold common sense safety practices and operate the machine only as it is intended. Failure to do so may result in damage to this or other equipment and/or personal injury or death.

Key Tips for Optimal FleetPlow™ Performance * *see note below for special applications.*

1. **CENTER THE VEHICLE** by aligning vehicle with the V-point of the plow.
2. **POSITION THE VEHICLE** that shorter brushes are over the leading edge of the roof and longer brushes are off the leading edge of the roof.
3. **LOWER PLOW** so the shorter brushes are lightly contacting the vehicles roof. Minimize chain slack.
4. **DRIVE FORWARD** at a steady speed.
5. **REMOVE GROUND SNOW** as necessary. Avoid snow build-up beneath the FleetPlow.

** If your FleetPlow warranted a single length of brush to be supplied due to a special application, position vehicle with approximately 12" of brushes over the roof and lower plow until brushes are lightly contacting the vehicle's roof. Minimize chain slack.*

Important Information

Electrical Service Required: 120 volt, single phase, 15 amps.

Electric Sources: Suitable extension cord; small portable generator, minimum 1400 Watt continuous run; or hard wiring for stationary applications.

Snow Depth Capacity: Up to 24" of snow; deeper or heavier wet snow may require a second pass.

Storage of Plow Assembly When Not In Use: Store the plow in the full up position with the front bottom plow assembly guide wheels above the reflective tape strips.

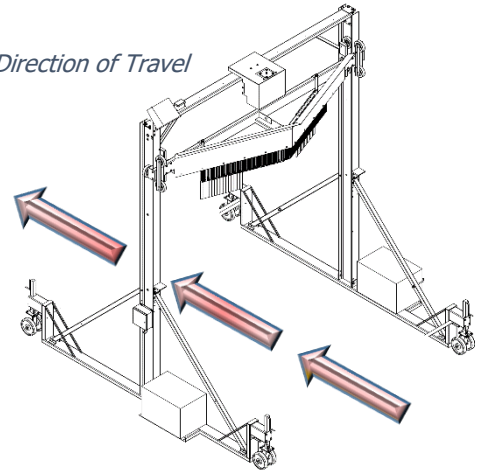
Off Season Storage: The plow assembly should be bolted to the columns in the full up position using the provided summer storage bolts. Once secured, relieve tension in the hoist's load chain by leaving approximately 2 links of slack in the chain. (see figure 2, pg. 14)

Pre-Season Maintenance: We recommend that prior to the first snow event the FleetPlow is powered up and tested for proper operation as well as inspecting and replacing any worn components.

Accu-Track System: Our Patented Accu-Track System is designed to self-level the plow on top of your vehicle's roof allowing for a complete clearing of snow and ice across the entire width and length of your vehicle's roof even with variable ground conditions.

Snow Clearing Direction of Travel: All Models (880 shown) Figure 1

Figure 1– Direction of Travel



Basic Operating Requirements (All Models)

- Refer to the provided hoist Owner's Manual for maintenance and safe operation of the hoist.
- Safety Stops on columns must remain in place at all times.
- **⚠ WARNING** Always ensure no people are underneath the plow, or anywhere in the drive-thru area. People must stay clear of discharging snow and ice.
- **CAUTION** Plow assembly must always be in the maximum up position with bottom plow assembly guide wheels above the reflective tape strips located on the columns, before entering the scraper area.
- Always enter the FleetPlow at a slow, safe speed – 5 MPH maximum.
- Only clear snow while driving the direction as shown in [Figure 1](#)
- Always align the vehicle center with the V-point of the plow and stop the vehicle once the point of plow and the shorter brushes are extending over the leading edge of the vehicle. * See note under key tips for special applications, pg. 2
- **CAUTION** Before driving forward, always ensure that the plow assembly is higher than the vehicle and not hanging in front of the leading edge of the roof. Only the longer brushes should be allowed below the roof line. * See note under key tips for special applications, pg. 2
- Once plow assembly has been lowered, as specified in the Operating Procedures above, always remove any excessive slack in the chain before driving forward.
- **CAUTION** Never back the vehicle through the FleetPlow while the plow assembly is on the trailer.

Basic Operating Requirements (All Models) (continued from pg. 3)

- Never allow a mound of snow to build up in the drive-thru. Remove built up snow as necessary, only when the plow assembly is in the full up position.
- **⚠ WARNING** Do not use the FleetPlow for anything other than removing snow and ice from vehicle roof tops. The machine is not designed for and must not be used for lifting, supporting, transporting people or for lifting or supporting loads over people.
- Do not operate a damaged or malfunctioning FleetPlow. Call Scraper Systems for service.

Conversion Between Operating and Rolling Modes (Portable FleetPlows™ Only)

- 1) **To prepare for rolling,** fasten the provided tow bar angles (P/N 41580) to the front and back of the unit in the holes provided at each wheel set frame.
 - 2) Remove concrete ballasts with forklift.
 - 3) Using the screw jacks, lower each wheel set so the FleetPlow frame is raised approximately 2 inches off the ground.
 - 4) Attach suitable towing chain or strap to the hole provided on the front tow angle at the swivel wheel front end.
 - 5) Tow slowly to the desired location on your lot and position.
 - 6) **To prepare for operation,** use jacks to raise each wheel set so the frame is lowered onto the ground.
 - 7) Place the concrete ballasts on the integrated steel pads on each side.
 - 8) Remove the tow bar angles and store on the provided storage hooks.
- **Scraper Systems recommends that wheel sets are retracted sufficiently off the ground during operation to prevent damaging the jacks due to incidental bumping of the unit.**

Operating Procedures *for Manual Operation: (using 2-Button NEMA4 Pendant Control)*

The Up and Down push buttons on the Pendant Control must be released to stop the hoist from retracting or paying out the load chain.

- 1) Driver should always check that the bottom wheels of the plow assembly are above the reflective tape strips located on the columns before entering the FleetPlow.
- 2) Driver enters FleetPlow area, centering on the v-point of the plow assembly and stops the vehicle so that plow assembly extends over the top of the vehicle's roof.
- 3) Using the pendant control down button. Lower the plow assembly to the surface of the roof top with the shorter brushes lightly touching the vehicle's roof. ** See note under key tips for special applications*
- 4) Direct vehicle operator to move forward or back to align the vehicle properly, longer brushes should be lower than and in front of the leading edge of the vehicle's roof while the shorter brushes should be in contact with the top of the vehicle's roof lightly. ** See note under key tips for special applications*
- 5) Once lowered, retract any extra slack that has developed in the load chain.



Operating Procedures for Manual Operation (continued from pg. 4)

- 6) Driver drives forward to clear the snow off the roof. **CAUTION: Before leaving the FleetPlow area, the driver or operator must raise the plow assembly to full up position for the next driver.**
- 7) Using the pendant control up button, raise the plow assembly until the bottom, front plow guide wheels are above the reflective tape strips. Release UP button.
- 8) The next driver may now enter the FleetPlow.

Maintenance

All Models	Criteria	Action
Test the Operation of the Unit	Verify electrical system is functioning properly.	Test run unit several times in the fall before the first snow.
8" Plow Guide Wheels and Bearings	Guide wheels should be free of cracks or breaks and rubber tires should not have excessive wear or flat spots. Wheels should turn freely on axle.	Clean and grease once a year or replace as necessary.
8" Plow Guide Wheel Axles and Pins	Axles to be visually straight.	Replace pins, shafts or brackets if bent.
Brushes and Neoprene Wipers	Visually check for worn or deformed bristles, worn or torn wipers.	Replace as necessary.
Electrical Components	Visually inspect electrical boxes, cordsets, cables and connectors for loose connections or damage.	Tighten or replace as necessary.
Bolts, nuts, and other fasteners	Bolts, nuts, and other fasteners should not be loose.	Tighten or replace as necessary.
Lifting hook and eye	Visually check that hoist's lifting hook is securely hooked to the plow's lifting eye.	Secure if necessary.
2-Button Pendant Control-Housing	Pendant housing should be free of cracks and mating surfaces of parts should seal without gaps.	Replace.
2-Button Pendant Control-Wiring	Wire connections to contacts in pendant should not be loose or damaged.	Tighen or repair.

Portable Model (Only)	Criteria	Action
12" Base Wheels and Bearings	Base wheels should be free of cracks and breaks. Wheel should turn freely on axles.	Grease once a year or replace as necessary.
Swivel Casters	Swivel casters should turn freely w/no weight	Grease or replace as necessary
Jacks	Jacks should crank up and down easily. <i>Only operate jacks when concrete ballasts are removed.</i>	Grease once a year or replace as necessary.

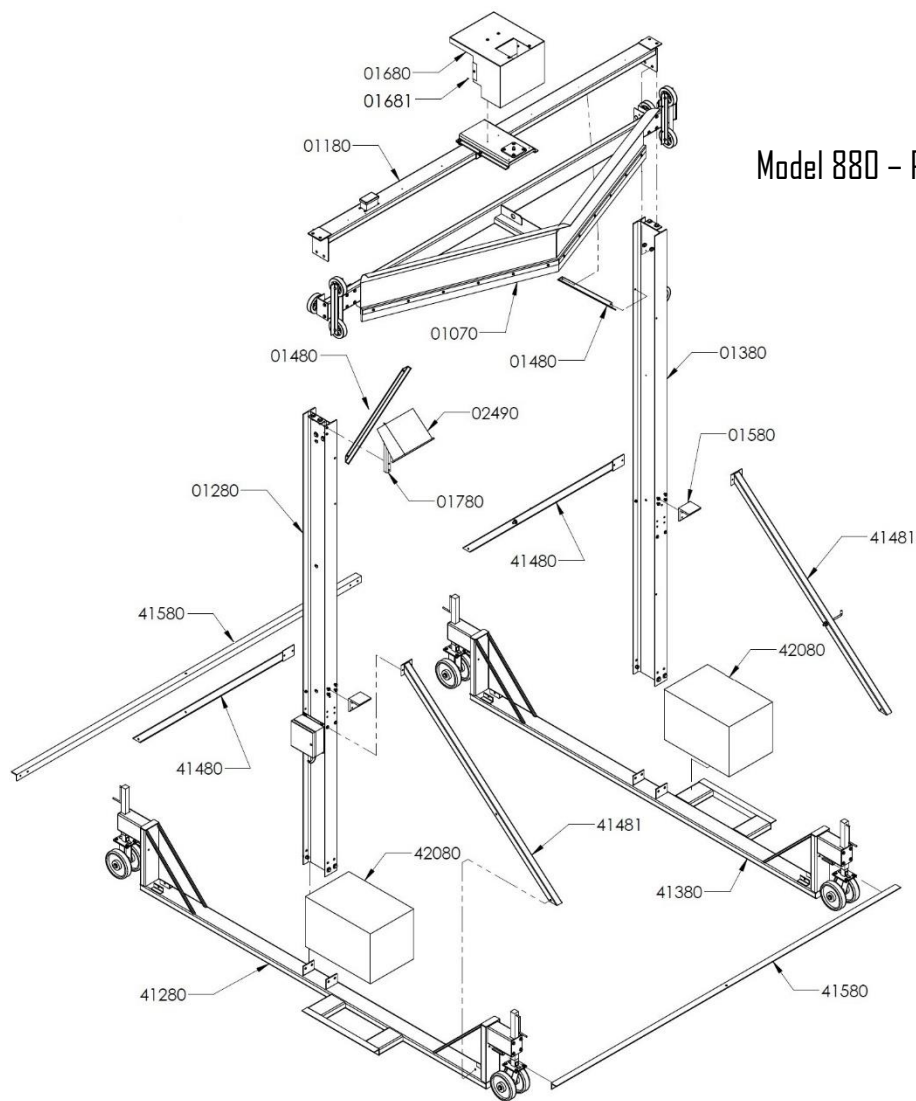
*** Criteria and Actions listed below are brief excerpts from the hoist manual. Always refer to the full hoist Owners Manual (provided) for full explanation and requirements of hoist inspection procedures, frequency, criteria, and action. ***

Electric Chain Hoist	Criteria	Action
Hoist Load Chain Lubrication	Entire surface of each chain link should be coated with lubricant and should be free of dirt and grime. <i>An auditory indication that lubrication is necessary is when chain emits a cracking noise when hoisting a load.</i>	Clean and Lubricate. (see Section 6.0 in Hoist Manual) (see Figure 6.2 in Hoist Manual)
Load Chain Surface Conditions	Should be free of rust, nicks, gouges, dent and weld splatter. Links should not be deformed and show no sign of significant wear. Surfaces where links bear against one another should show no sign of significant wear.	Replace.
Hook – Hook Latches	Latch should not be deformed. Attachment of latch to hook should not be loose and Latch spring should not be missing or weak. Latch, when depressed and released should snap smartly into closed position.	Replace
Hook – Swivel Bearing	Hooks swivel bearing should rotate freely with no roughness. Bearing parts and surface should show no signs of significant wear.	Clean/lubricate or replace as required.
Contactors (see hoist manual)	Visually check if contacts have burnt marks which may cause intermittent movement.	Good - Spray with Corrosion X. Intermittent - Replace contacts. (requires removal of hoist cover)
Gear Box Oil Level (see hoist manual)	Oil level can be checked using the check hole on the side of the hoist body.	Refer to hoist manual for warnings and criteria for checking hoist gear oil levels. (requires removal of hoist cover)

Troubleshooting

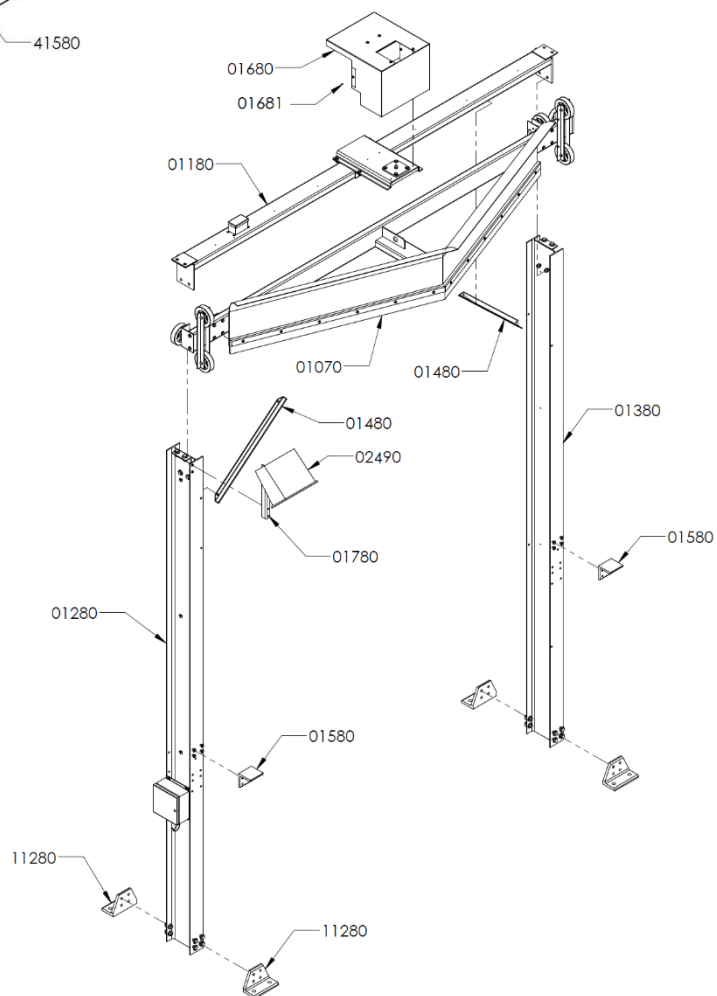
Always check that cable and cordset connectors are properly connected and tightened at junction and control boxes. Connectors should only be hand tight for a proper seal. Over tightening using pliers or vise grips may damage seals.

Situation – All Models	Action(s)
No power	Ensure disconnect switch on. Check that circuit breakers are not turned off or tripped. Check for required electrical service at main control enclosure is 120V. If using an extension cord, check that the cord is plugged into the receptacle and that cord is good.
Pushing pendant buttons does not raise or lower plow.	Check that pendant connection is properly plugged/tightened to receptacle. Check that ice has not formed around buttons. With pendant removed from all power sources, remove back cover of pendant and check that wires are tightened properly, not loose, broken or corroded. Check for loose wire(s) in main enclosure and junction box. Check connections in plug. Refer to Hoist Manual for trouble shooting hoist.
Flood light doesn't come on	Check that connection is properly plugged and/or tightened into the receptacle on the junction box. Check for loose wire connection in light, plug and/or junction box.

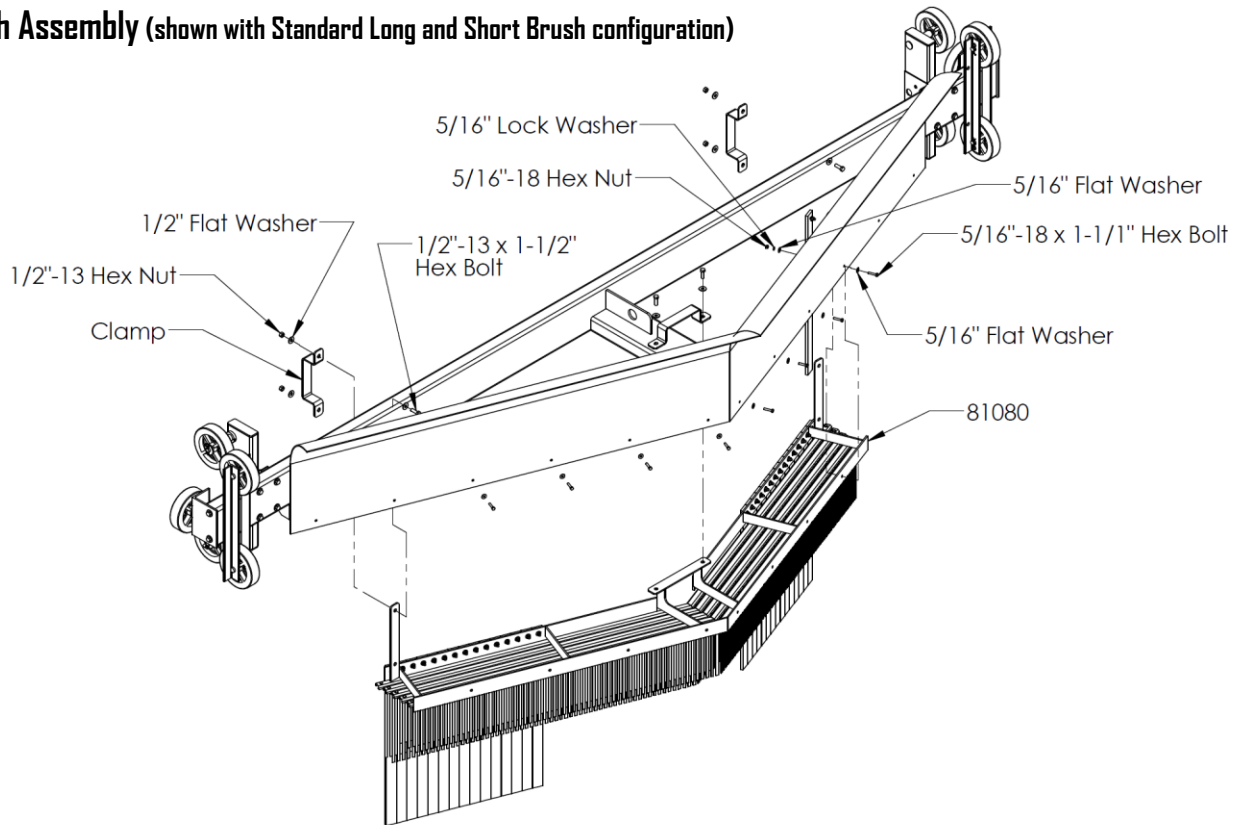


Model 880 - Portable (Brushes Not Shown)

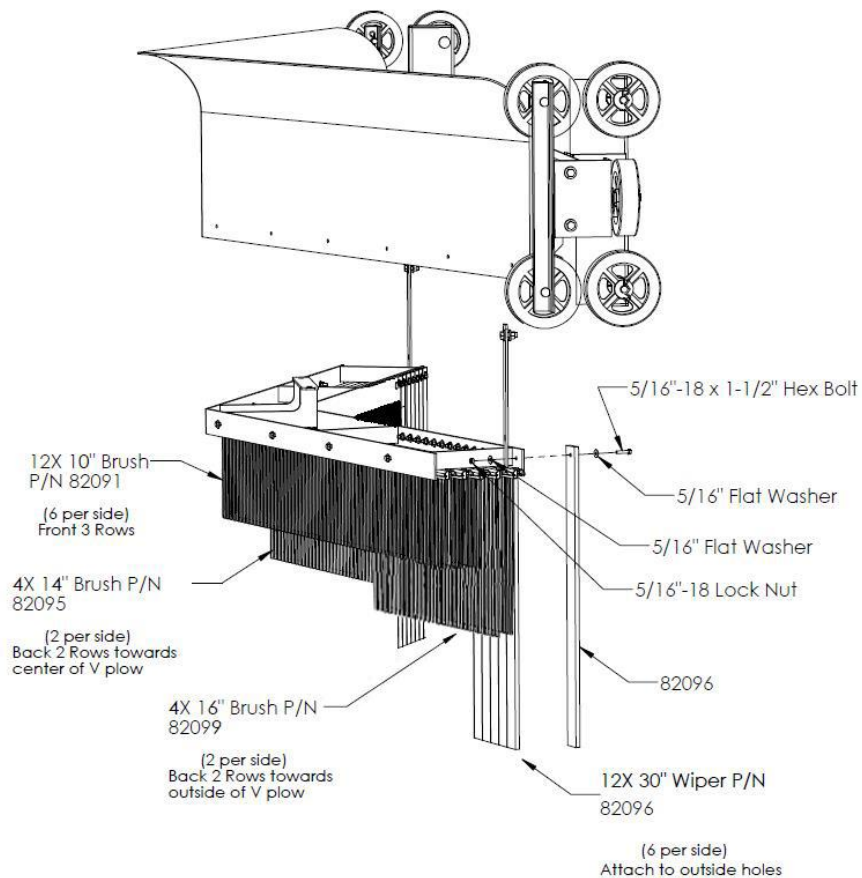
**Model 770 - Base Mount
(Brushes not Shown)**



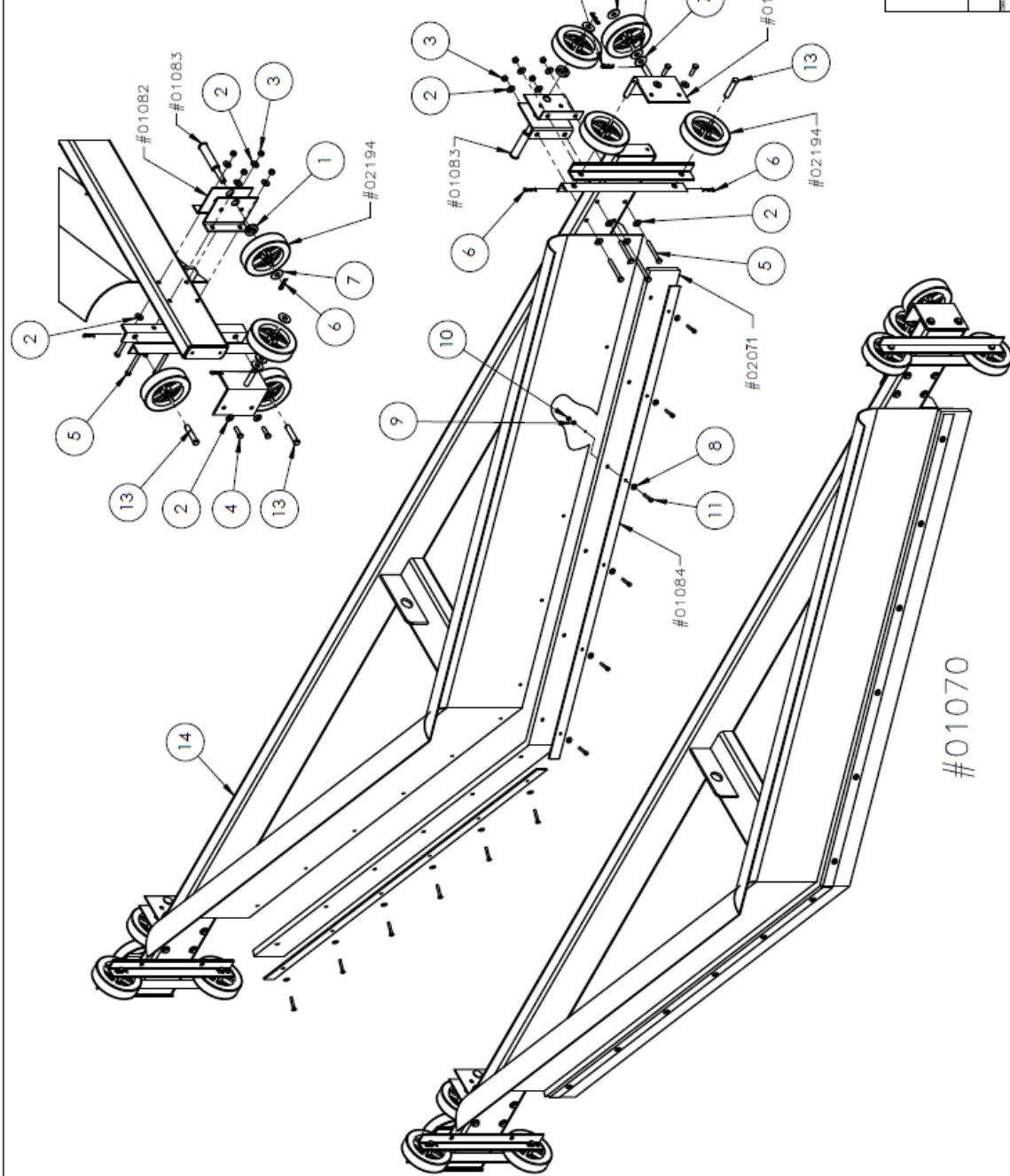
Brush Assembly (shown with Standard Long and Short Brush configuration)




The standard FleetPlow brush lengths are 10", 14" and 16". There may be special applications that warrant Scraper Systems to provide one length or different lengths of brush to suit an application.



Item #	Qty.	Scraper P/N	Description
1	2		1-1/4" Shaft Collar
2	20		1/2" FW
3	8		1/2"-13 HN
4	4		1/2"-13 x 1-3/4" Lg. 28 HHCS
5	8		1/2"-13 x 4-1/4" Gr. 8 HHCS
6	8		3/4" Hairpin Clip
7	8		3/4" FW
8	12		5/16" FW
9	12		5/16" LW
10	12		5/16"-18 Gr. 8 HN
11	12		5/16"-18 x 2" Gr. 5 HHCS
12	2	01084	Squeegee Clamping Strap
13	4		Clevis Pin 3/4" x 3-1/4"
14	1		Steel Frame and Plow Blade
15	2	01081	Outside Wheel Bracket
16	4	01082	Inside Wheel Bracket
17	2	01083	STD 3/4" Wheel Shaft
18	1	02071	Rubber Squeegee
19	8	02194	2" x 8" Wheel






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Quintin Machinery, LLC.
Main Plow Assembly

PROJECT # QUANTIN #01070 QUANTIN #01070	QUANTIN #01070 QUANTIN #01070	QUANTIN #01070 QUANTIN #01070	QUANTIN #01070 QUANTIN #01070	QUANTIN #01070 QUANTIN #01070
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Item #	Qty.	Quintin P/N	Description
1	16		1/2" FW
2	8		1/2"-13 HN
3	8		1/2"-13 x 1-3/4" Lg. Z8 HHCS
4	1		5/8" LW
5	1		5/8"-11 Gr. 8 HN
6	1		Eyebolt, 5/8" x 1-3/4"
7	1	01180	Top Tube
8	1	01181	STD Hoist Plate
9	1	01182	STD Eye Bolt Plate



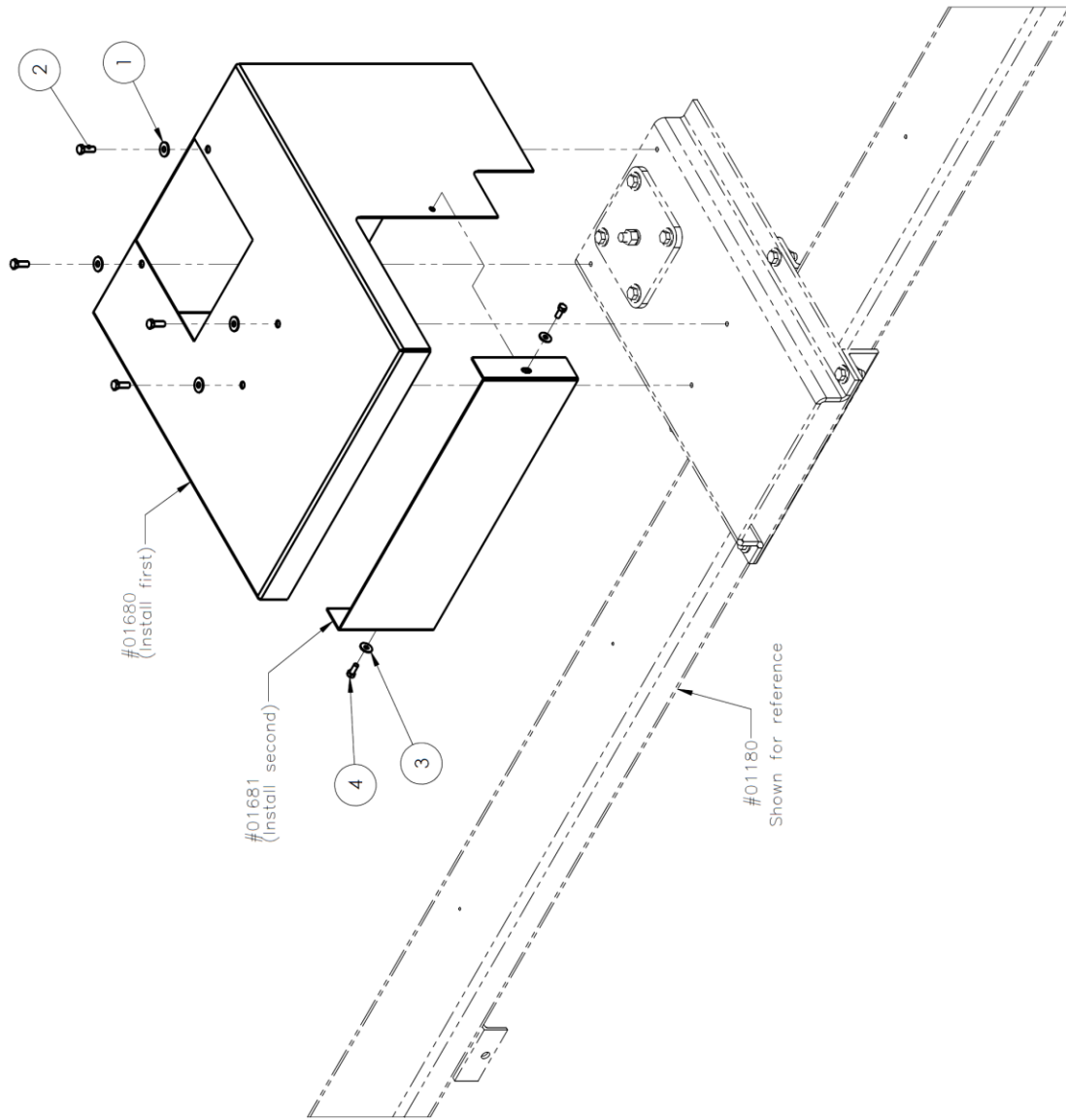
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Lancaster, PA USA

Quintin Machinery, LLC.

Top Tube Assembly

QUINTIN P/N	QUANTITY	UNIT	DATE	REV
01180	1	KEG	1:12	0112 Assy
4/28/2015				01180

Item #	Qty.	Quintin P/N	Description
1	4		3/8" FW
2	4		3/8"-16 x 1" Gr. 8 HHCS
3	2		5/16" FW
4	2		5/16"-18 x 3/4" Gr. 8 HHCS
5	1	01681	Hoist Cover - Bottom
6	1	01680	Hoist Cover Weldment
7	1	01180	Top Tube Assembly



Note:
Hardware shown is for field installation

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Quintin Machinery, LLC.

STD Hoist Cover

APPROVED BY	DATE	REV	DESCRIPTION
KEG	N/A	0116-Assy	01680
DESIGNED BY	DATE	REV	DESCRIPTION
2/19/2016			

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		Item #	Qty.	Quintin P/N	Description
		1	24		1/2" FW
		2	16		1/2" LW
		3	8		1/2"-13 HN
		4	1		PRT Base
		5	16		1/2"-13 x 1-3/4" Lg. Z8 HHCS
		6	2	41683	Jack w/ Mounting Plate
		7	1	42790	Caster, Swivel
		8	1	42890	Caster, Rigid
		9	2	42990	12" Phenolic Wheel

		Part Name	Part Number
		RH PRT Base Ass'y	#41380
		LH PRT Base Ass'y	#41280

		Part Name	Part Number
		PRT Base LH	

		www.scrapersystems.com 888-340-4344 Lancaster, PA USA	
Quintin Machinery, LLC.		PRT Base LH	
APPROVED BY:	DATE:	REVISION:	
KEG	N/A	Q-0130-1	Noted B
DATE: 2/22/2016			

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For Parts. Please contact dealer for pricing.

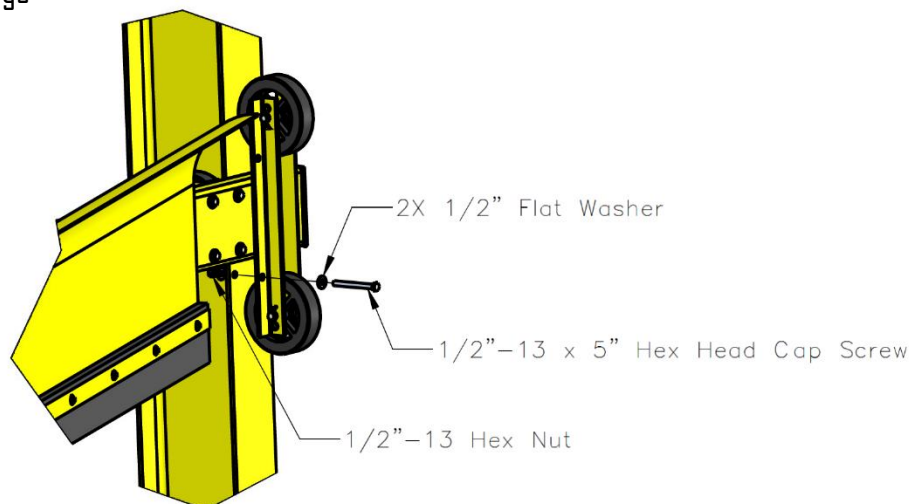
X = Comes with Unit at Installation

Part Number	Description	Quantity	Model 880		Model 770		Series 700 Spanner	
All Models								
01070	Replacement Plow Assembly <i>(includes P/N 01080, 01081, 01082, 01083, 02190 and all necessary hardware)</i>							
01080	Plow Assembly	1	X		X		X	
81081	Dual Wheel Brackets	2	X		X		X	
01081	Outside Wheel Bracket w/ 3/4" Axle	2	X		X		X	
01082	Inside Wheel Brackets	4	X		X		X	
01083	3/4" Inside Wheel Shafts	4	X		X		X	
01084	Squeegee Clamping Strap	0						
01180	Top Tube Beam Assembly	1	X		X		X	
01181	Hoist Plate	1	X		X		X	
01182	Eye Bolt Plate	1	X		X		X	
01280	Column LH	1	X		X		X	
01380	Column RH	1	X		X		X	
01480	Corner Braces	2	X		X		X	
01580	Safety Stop	2	X		X		X	
01680	Hoist Cover	1	X		X		X	
01681	Hoist Cover Back Plate	1	X		X		X	
01780	Light Mounting Bracket	1	X		X		X	
02194	8" Plow Guide Wheels	10	X		X		X	
02191	Spanner Bushing, 8" Wheel <i>(units prior to Oct. 2015)</i>							
02290	1/2 Ton Hoist w/QD, (includes P/N 02297)	1	X		X			
02291	1/2 Ton Hoist w/ Chain Bag (Only)							
02299	Harrington Manual 1/2 Ton	1	X		X			
81080	BUS Brush Assy'	1	X		X		X	
82091	All-Pro Strip-D/L-10" BLK LVL-29 in. length Ea.	12	X		X		X	
82095	All-Pro Strip-D/L-14" BLK LVL-29 in. length Ea.	4	X		X		X	
82099	All-Pro Strip-D/L-16" BLK LVL-29 in. length Ea.	4	X		X		X	
82096	1/2" x 2" x 34" BLK Neoprene Wiper w/ Hole	12	X		X		X	
02590	1 Ton Hoist w/QD, (includes P/N 02297) (must specify unit width)	1					X	
02390	Flood Light, Halide w/ Photo Cell & QD							
02392	Flood Light, Halide, (Only)							
02391	Photo Cell Control, (Only)							
02393	Halide Replacement Bulb <i>(for P/N 02390)</i>							
02490	LED Light w/QD	1	X		X		X	
02491	LED Light, (Only)							
02691	Serial # Label	1	X		X		X	
02697	1-800 Label	1	X		X		X	
02696	Scraper System Logo Label	1	X		X		X	
05780	Summer Storage Hardware Bag	1	X		X		X	
02790	1/2 Ton Kito Hoist w/QD, Pendant w/8' Drop & QD <i>(for use in Canada, Includes P/N 02297)</i>	1	X		X			
02791	1/2 Ton Kito Hoist w/ Chain Bag (only) <i>(for use in Canada)</i>							
02799	1/2 Ton Kito Manual <i>(for use in Canada)</i>	1	X		X			

Part Number	Description	Quantity	Model 880		Model 770		Series 700 Spanner	
Portable 880 Models								
41280	PRT Base LH (includes 2 - P/N 41690, 1 each - P/N 42790 and 42890 and 2 ea. - 42990)	1	X					
41380	PRT Base RH (includes 2 - P/N 41690, 1 each - P/N 42790 and 42890 and 2 ea. - 42990)	1	X					
41480	PRT Long Knee Brace	2	X					
41481	PRT Short Knee Braces	2	X					
41580	PRT Tow Angles	2	X					
41680	Jack w/ Mounting Plate	4						
42080	Concrete Ballast 1800 lbs. ea. 2'x2'x3'	2	X					
42790	Caster, Swivel	2						
42890	Caster, Rigid	2						
42992	12" Phenolic Wheel	4						
42991	Spanner Bushing, 12" Wheel	4						
Base Mount Machine Model 770, 700 series units								
11280	BMT Mount Angles	4			X		X	
All Bus Models								
02297	2 Button NEMA 4 Pendant w/8' Drop & QD							
02294	Flood Light Field Wireable QD Connector							
02295	Hoist Control & Pendant Field Wireable QD Connector							
02296	Hoist Power Field Wireable QD Connector							

Part Number	Description	Quantity	Basic			Basic Spanner	
Electrical Control Systems and Components							
92390	Basic Controls System (for buses)	1	X				
92890	1 Ton Basic Controls System Bus (extra-wide spanner units only)	1				X	

Figure 2: Summer Storage





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Patent numbers 5,802,654; 8,584,295; 9,168,898; 9,321,432, 10,351,108 and other patents pending.

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P/N 82999 REV1

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