



Read all instructions before using

SAFETY PRECAUTIONS

Caution: Keep clear of rotating shaft.
Use safety glasses. Also use face or dust mask if operation is dusty.

Speed Screed 580 (Heavy Duty)

Serial # _____

Engine # _____

**SPEED[®]
SCREED HEAVY-DUTY**

Contents

| | |
|--|------------|
| Part 1: Introduction | 1-1 |
| Assembly Before Operation 1-1 | |
| Assembly Drawings 1-2 | |
| Pump & Winch Installation 1-3 | |
| Attaching the Screed Extenders 1-4 | |
| Attaching Offset Plates & Guide Plates 1-5 | |

| | |
|--|------------|
| Part 2: Operating and Servicing | 2-1 |
| Operating the Screed 2-1 | |
| Maintenance 2-2 | |
| Troubleshooting Hydraulics 2-3 | |
| Testing Hydraulics 2-4 | |
| Notes 2-8 | |
| Belt Maintenance & Replacement 2-10 | |
| Motor Mount Components 2-12 | |

| | |
|--|------------|
| Part 3: Specifications - Standard Items | 3-1 |
| Specifications & Recommendations 3-1 | |
| End Frames, Hand Winching 3-2 | |
| Extension Section 3-4 | |
| Finishing Tubes 3-6 | |
| Power Section Assembly 3-7 | |
| Warranty 3-9 | |

| | |
|---|------------|
| Part 4: Specifications - Accessory Items | 4-1 |
| Options & Accessories 4-1 | |
| End Frames, Hydraulic Winching 4-2 | |
| Dolly 4-4 | |
| Finegrading Attachment 4-5 | |
| Hydraulic Winching 4-6 | |
| Hydraulic Components 4-7 | |
| Hydraulic Flow Diagram 4-8 | |
| General Information 4-9 | |
| Pump 4-10 | |
| Relief Valve 4-12 | |
| Volume Control Valve 4-14 | |
| Winch 4-16 | |
| Spare Parts Kit 4-18 | |
| Offset Plates & Guide Plates 4-19 | |
| Transportation Unit 4-21 | |
| Tongue Assembly 4-22 | |
| Winching from One End 4-23 | |
| Hand Winch 4-23 | |
| Hydraulic Winch 4-24 | |

| | |
|---|------------|
| Part 5: Supplements | 5-1 |
| Extra Safety Link 5-1 | |
| Warranty Card Instructions 5-2 | |
| Additional Field Instructions Available 5-3 | |
| Most Common Replacement Parts for Engines 5-4 | |
| Engine Manual | |
| Hand Winch Manual | |
| Hydraulic Components Manuals | |

INTRODUCTION

Assembly Before Operation: Adding a “screed extension” or non-engine-end “end-frame”.

1. Read the owner’s manual before starting or using your Screed unit.
2. Perform all assembly work on a level surface.
3. Referring to sketches on the following page, remove coupler half and key on machines equipped with hydraulic winches.
4. Remove bolts (A) and saddles (B). Loosen set screws “C” on shaft coupler.
5. Loosen turnbuckle nut. Turn turnbuckle until only 1-2 threads are engaged.
6. Move joining sections together. Line up turnbuckle (D) w/ opposing backbone.
7. Thread turnbuckle into adjoining section. As the turnbuckle draws the sections together, align shaft coupler and lap plates for assembly. A drift pin may be helpful for final line-up of bolt holes.
8. When sections are drawn together, install the saddles (B) with bolts (A) and tighten coupler set screws (C) on flat portion of adjoining shaft (E).
9. Follow the above procedure when adding or removing other screed extensions.

Important: *Be sure coupler headless set screws "C" engage on flat portion of the adjoining shaft (E). This provides proper alignment of eccentric weights, thus assuring even vibration over the entire length of the machine.*

Small gaps between screed bottoms are permissible and will not affect surface finish.

Check for Flatness:

1. Elevate screed on forms or blocks to check or adjust flatness or crown.
2. Loosen turnbuckle lock nuts and shaft coupler set screws.
3. Turn turnbuckles counter-clockwise to pull in crown, or clockwise to flatten.
4. Pull a string tight under the screed bottom of the rear finishing tube (finish grade is obtained from the rear finishing tube).
5. Measure for flatness or crown at each joint.
6. When desired crown or flatness is obtained, lock turnbuckle lock nuts, and tighten shaft coupler set screws. (Note: tighten all eight (8) lock nuts at each finishing tube joint.)

Optional: Wrap a good grade of tape over the shaft coupler’s headless set screws. This will keep concrete out of the headless set screw holes.

THE SCREED IS NOW READY FOR OPERATION

INTRODUCTION

Figure 1: Assembly of Section-to-Section

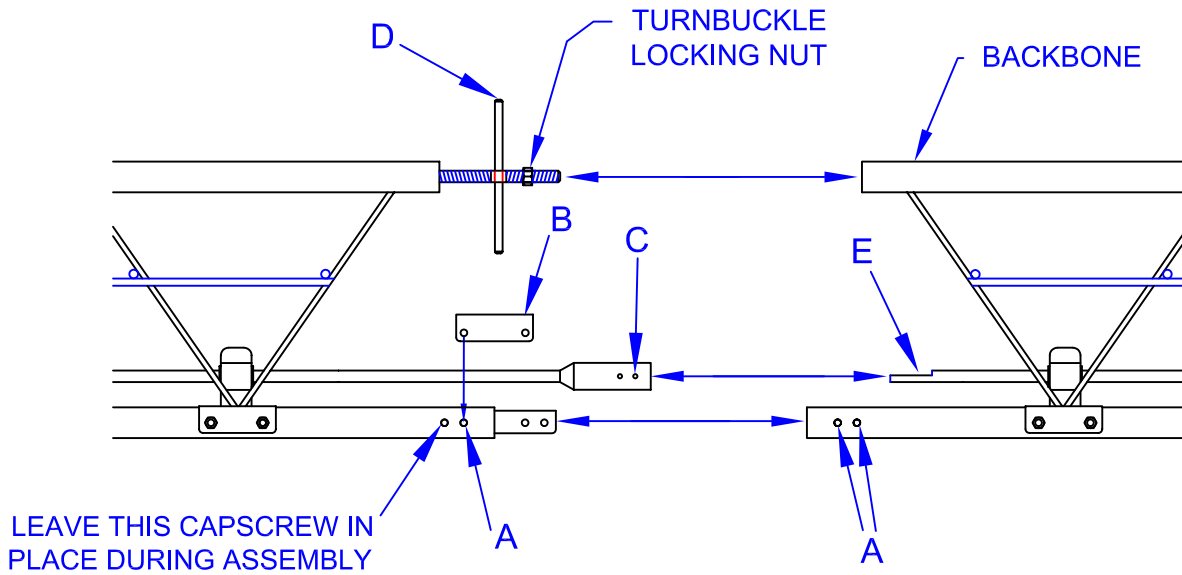
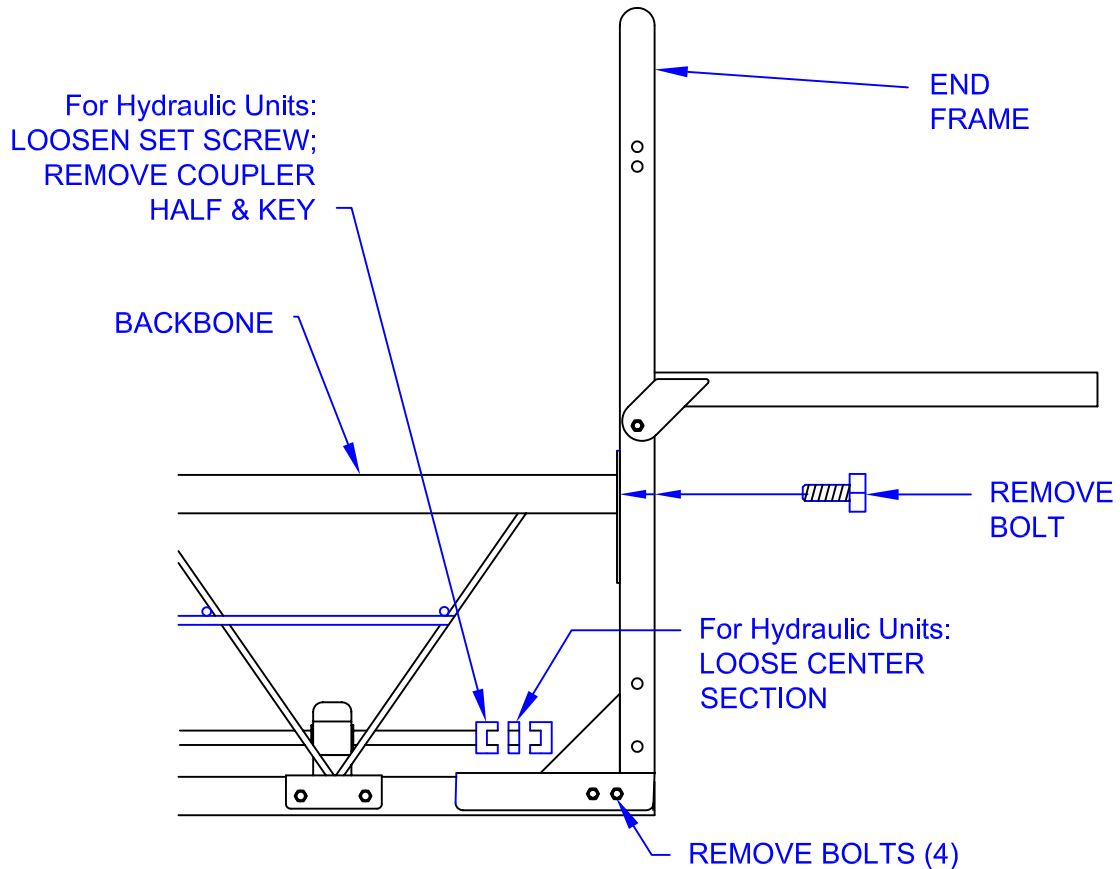


Figure 2: Assembly of End frame to Section)



INTRODUCTION

Pump & Winch Installation: for addition of hydraulic winches

Mount and Align Pump:

| | |
|------------------------------|----------------------------|
| pump # D05AA-1A...engine end | # D05AA-2A...extension end |
|------------------------------|----------------------------|

- Loosen end bearing.
- Install “love-joy” coupler and pump
- Tighten pump
- Tighten end bearing
- rotate shaft to check for alignment

Snatch Block Ring (tab):

- machines assembled after date 1-1-87 should be equipped with the snatch block ring.
- if end frame doesn't already have a “tab ring”, one will have to be welded onto each end frame.
- Location: against the pump mount, and centered over end frame bearing mount, on the front (forward) side of screed. The ring should be standing up, with the ring holes facing the opposite end of the screed.
- Welds: weld to pump mount and bottom of bearing mount

Install the winch:

- center the winch spool over the snatch block ring.
- on the engine side, bolt the winch to the engine mount plate, using the existing u-bolts.
- fill the hydraulic tanks to within 1-1/2” of top, using DTE-26 hydraulic oil.

**IF THE HYDRAULICS FAIL TO WORK PROPERLY,
REFER TO THE TROUBLESHOOTING PROCEDURES.**

INTRODUCTION

Attaching the Screed Extenders:

Screed Extenders attach to outside of End Frame Assembly using reinforcement angles, cap screws, and lock nuts.

Figure 1: View from operator's position.

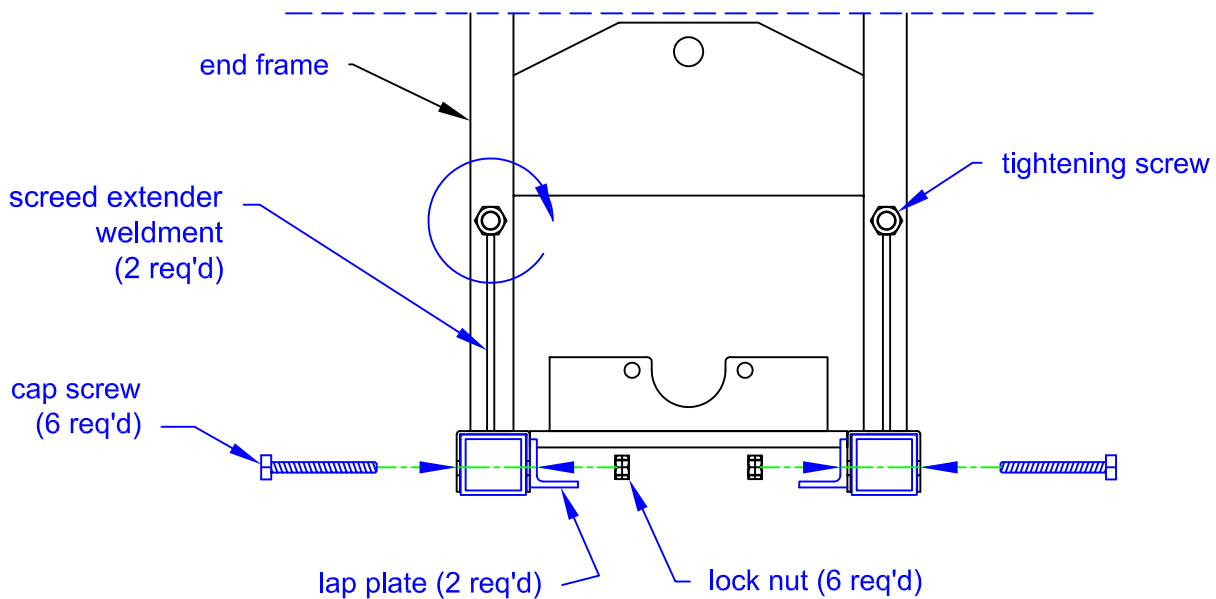
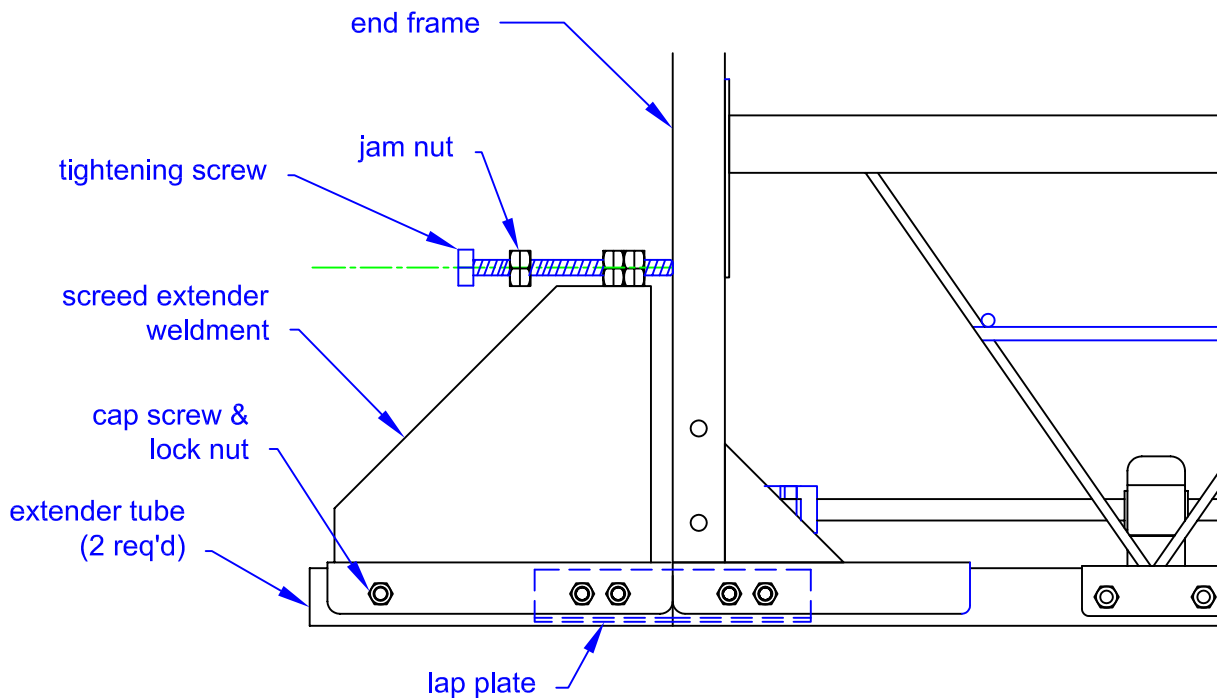


Figure 2: View from in-front of machine



OPERATING and SERVICING

Operating the Screed:

Caution: Keep Clear of Rotating Shaft!

Slump & Roll: Concrete slump should be high enough for good workability, but stiff enough to hold crown. Normally this would require a slump of approximately 3" or less. As the screed moves forward, a minimum 1" roll of concrete should be maintained ahead of the front screed tube. A ½" roll of concrete should be kept in front of the rear finishing tube. Travel speed should be adjusted (see instruction below) according to concrete supply and finish.

Vibration: Vibration frequency and amplitude is preset at the factory. Winching speed should be used to control the duration of vibration seen by the concrete.

Hand Winch Operation:

1. Before the pour begins, extend the cables out by disengaging the winch ratchet lever. However, always keep three (3) wraps of cable around the spool drum.
2. Hook the cable to any stationary member strong enough to support the load. Make sure the cable is in-line with the winch.
3. Roll excess cable back on the winch by turning the winch handle, eliminating any "slack".
4. Review the engine operating and maintenance instructions.
5. Start engine, run at maximum throttle position. Operating the engine below maximum throttle position can result in malfunctioning clutch.
6. Crank speed forward with winches

Hydraulic winch operation:

1. Before the pour begins, extend the cables out by removing the detent pin from spool. However, always keep three (3) wraps of cable around the spool drum.
2. Hook the cable to any stationary member strong enough to support the load. Make sure the cable is in-line with the winch.
3. Roll the excess cable back on the spool, eliminating any "slack".
4. Align the hole in spool with the hole in winch shaft, and insert detent pin.
5. Review the engine operating and maintenance instructions.
6. Make sure speed control knob on hydraulic flow control valve (p/n 580-78-P) is turned all the way open (counter clockwise).
7. Start engine, run at maximum throttle position. Operating the engine below maximum throttle position can result in malfunctioning clutch.
8. With clutch engaged, travel speed may be varied by rotating each controller knob clockwise, to increase rate of travel, or counter-clockwise, to decrease the rate of travel.

Engine: Most engines will not operate properly when operated at angles of more than 20 degrees to the horizon. Always run the engine at 100% throttle position when not idling.

Clutch: The clutch is designed to provide load free idle of the engine and slippage under excessive overloading of the driven application. Failure will occur of clutch drum is overheated by not enough torque from engine – increase engine operating speed. Clutch is bolted to crank shaft with 5/16"-24 UNF threads (14-19 ft.lbs).

OPERATING and SERVICING

Maintenance:

Before each use: Spray form-release agent over entire machine.

After each use: Clean off entire machine using brush and water. Cleaning agents may be used, such as "CleanOff" liquid concrete remover.

After every 20 hours of operation: Grease main shaft bearings.

On a Yearly Basis: Drain hydraulic oil reservoirs; remove and clean (or replace) suction strainer located in bottom of reservoir.

Remove main bearing from clutch assembly.
Soak in crankcase oil for 24 hours.

(Further maintenance information is available on specification sheets covering engine, winches, pumps, and motors.)

OPERATING and SERVICING

Troubleshooting Hydraulics:

In most cases, hydraulic problems arise when a conversion from hand winches to hydraulic winches has been done in the field, and the components are not hooked up correctly.

If a field conversion has taken place, and the hydraulics do not function properly, double check the set-up with the *Hydraulic Flow Diagram* (located in Section 4) to determine if the direction of oil flow is correct.

If the above procedure has been performed and the hydraulics still do not function, check the part numbers of the hydraulic pumps. It is possible to have the pumps on the wrong end frames. Hydraulic pumps are listed on the *Pump & Winch Installation* page.

OPERATING and SERVICING

Testing Hydraulics:

In the event that a hydraulic breakdown occurs during operation, allow equipment to cool before any adjustments are made.

When the screed hydraulics are not performing properly, and the engine is running at a throttle setting of 85% or more, it can be concluded that one or more of the hydraulic components have malfunctioned, and need to be repaired or replaced. Field service repair kits are available for the hydraulic pump and the hydraulic motor.

For a positive determination of which component has failed, refer to the following tests (A, B, and C) for a detailed setup and procedure. When running tests it is necessary to test only the end frame's hydraulics that has malfunctioned.

Equipment needed to set-up and run tests are two (2) 5/8" open end wrenches, one (1) hydraulic pressure gauge with a range up to a minimum of 2,000 psi, and to fit 1/4" tube fitting, and one (1) 1/4" tube plug fitting.

Refer to *Hydraulic Flow Diagram* (located in Section 4) for hole numbers and item numbers. It is also recommended to run tests in sequence to a positive determination.

OPERATING and SERVICING

Testing Hydraulics: Test A

This is a positive check for the hydraulic pump & relief valve.

Refer to *Hydraulic Flow Diagram* (located in Section 4) for hydraulic diagram & item numbers.

Step 1 Remove hollow hex plug (item 9) and install pressure gauge.

Step 2 Disconnect hose #3 at item #1

Step 3 Disconnect hose #14 at item #4

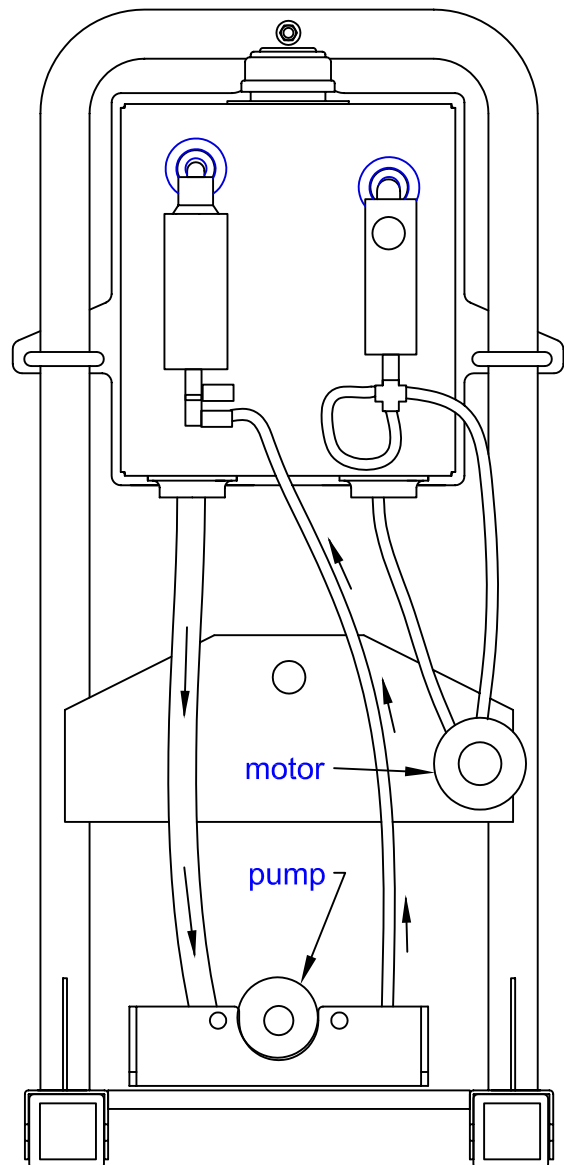
Step 4 Switch hoses to match the diagram on the right (Test A). This setup bypasses the flow control valve and hydraulic motors.

Step 5 Start engine at low throttle.

Step 6 Gradually increase throttle, while watching pressure gauge.

If pump and valve are working properly, the pressure should increase rapidly to 1500 psi, at which time the relief valve will open. The relief valve has an internal spring that resets itself after the pressure has subsided. At low throttle, this action will make a clicking sound. At high throttle, the clicking increases to a loud whine. If this occurs, it can be concluded that the pump and relief valve are working properly.

If the pressure does not reach 1500 psi, and the relief valve does not make a clicking sound, it can be concluded that the hydraulic pump has malfunctioned.



Test A diagram

OPERATING and SERVICING

Testing Hydraulics: Test B

This is a positive check for the hydraulic motor.

Refer to *Hydraulic Flow Diagram* (located in Section 4) for hydraulic diagram & item numbers.

Step 1 Disconnect hose #14 at item #1

Step 2 Disconnect hose #3A from item #4

Step 3 Attach hose #3A to match *Hydraulic Flow Diagram*.

Step 4 Disconnect hose #3B at item #2 and attach to item #4

Step 5 Attach hose #14 to exposed item #2. This setup should match the Test "B" diagram above. This setup bypasses the relief and flow control valves

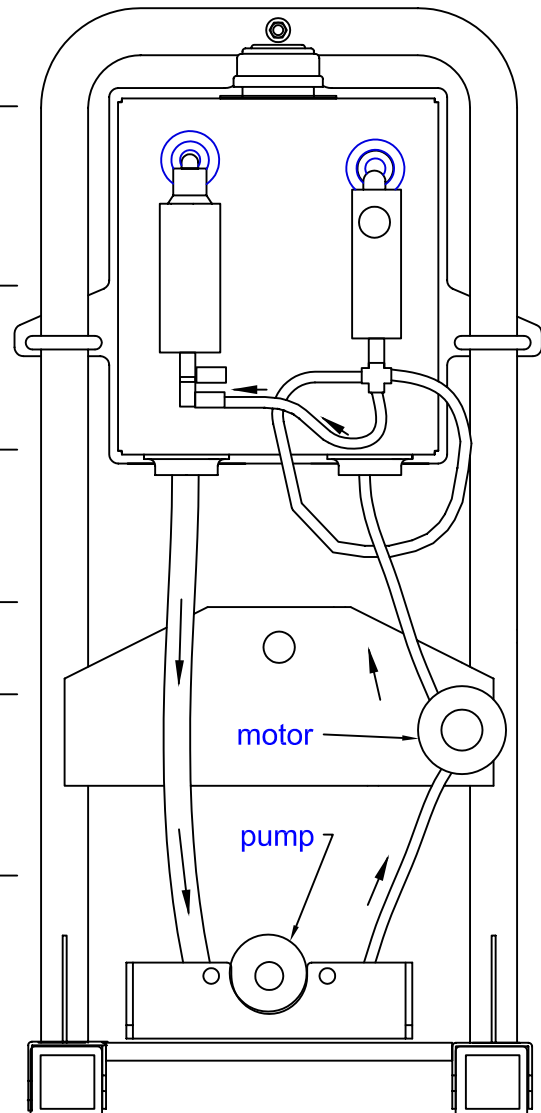
Step 6 Start engine at low throttle. The hydraulic motor will turn as soon as the clutch is engaged, and the shaft starts turning.

Step 7 Increase the throttle. The more the throttle is increased, the faster the hydraulic motor will turn.

Step 8 Decrease throttle until the shaft stops.

Step 9 Brace screed, and have a second person pull on cable to supply load to the motor. **CAUTION: Person pulling on cable should not get their hands near the winch spool.**

Step 10 If the motor does not turn with tension on cable, it can be concluded that the hydraulic motor needs repair or replacement.



Test B diagram

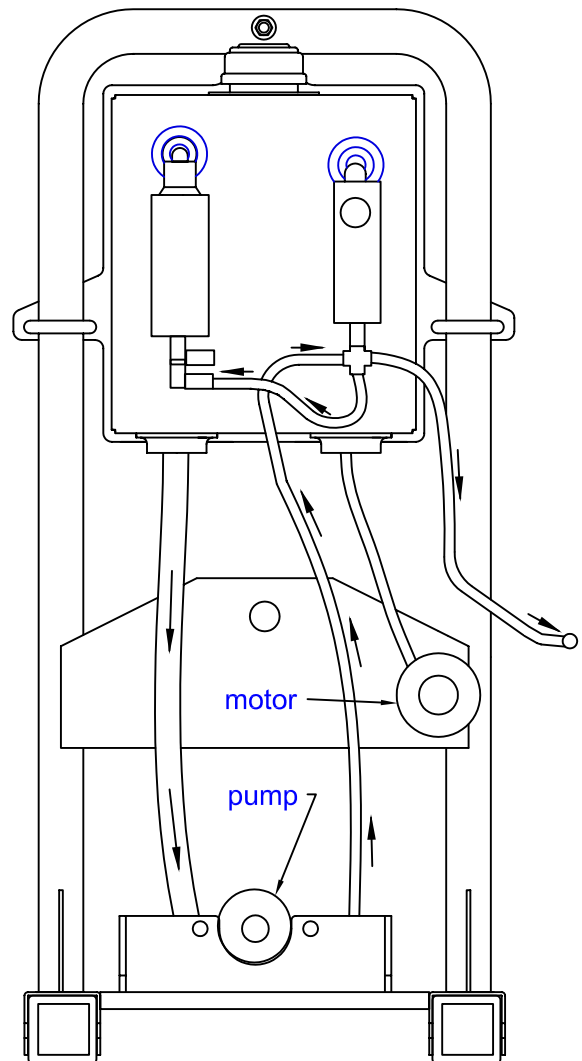
OPERATING and SERVICING

Testing Hydraulics: Test C

This is a positive check for the flow control valve.

Refer to *Hydraulic Flow Diagram* (located in Section 4) for hydraulic diagram & item numbers.

- Step 1** Disconnect hose #14 at item #2
-
- Step 2** Disconnect hose #3B from item #4
-
- Step 3** Attach hose #14 to item #4.
-
- Step 4** Insert 1/4" tube plug at open end of hose #3B as shown in diagram (right). This setup bypasses the hydraulic motor.
-
- Step 5** Open flow control valve fully (counter-clockwise).
-
- Step 6** Start engine.
-
- Step 7** Increase to full throttle.
-
- Step 8** Gradually close the flow control valve (clockwise). The pressure on the pressure gauge will increase to 1500 psi at which time the relief valve will open. By gradually opening the flow control valve, the pressure will decrease. If there is no adjustment in pressure, it can be concluded that the flow control valve needs replacement.



Test C diagram

OPERATING and SERVICING

Notes:

OPERATING and SERVICING

Notes:

OPERATING and SERVICING

Belt Maintenance and Replacement:

1. Replacement Procedure for hand winch assembly:

Caution: *If belt(s) break while in operation, take extra care around motor. It will be HOT*

1. Loosen engine mount bolts, and slide motor toward backbone to relieve belt tensions.
2. Remove bolts from bearing blocks. (see drawing – item “A”)
3. While lifting shaft assembly, pull belt(s) out.
4. Reverse procedure for assembling screed. See detail for proper belt tension.

2. Replacement Procedure for hydraulic winch assembly:

Caution: *If belt(s) break while in operation, take extra care around motor. It will be HOT*

1. Loosen engine mount bolts, and slide motor toward backbone to relieve belt tensions.
2. Remove bolts from bearing blocks. (see drawing – item “A”)
3. Remove the hydraulic pump, but *do not* disconnect the hydraulic hoses. Remove pump bolts, then slide pump back.
4. While lifting shaft assembly, pull belt(s) out.
5. Reverse procedure for assembling screed. See detail for proper belt tension.

Note: Alignment of coupler to spider is ***extremely important***. It must be within 1/16”.

OPERATING and SERVICING

Figure 2: Belt Tension

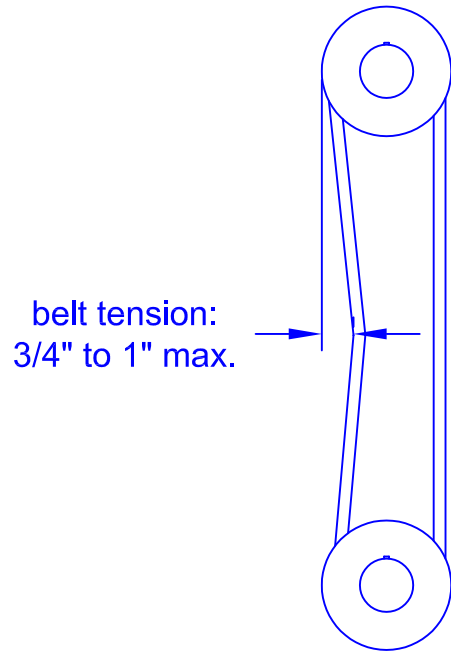
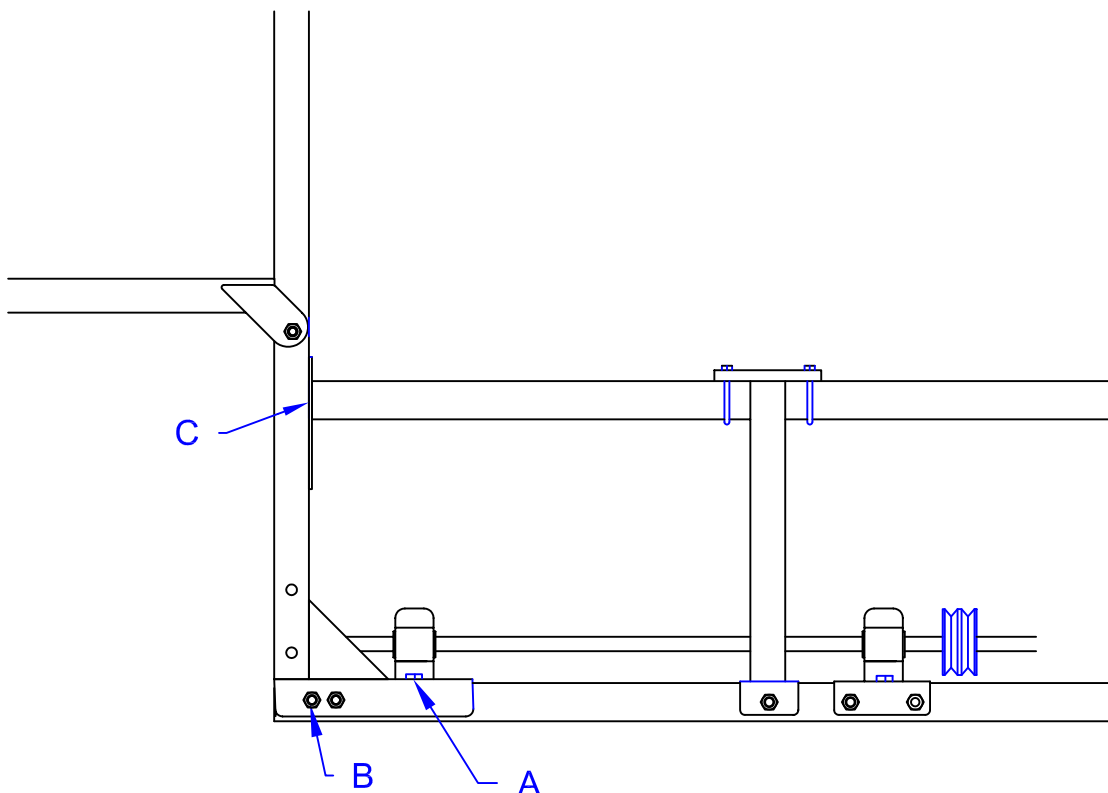


Figure 2: Belt Replacement



OPERATING and SERVICING

Motor Mount Components:

Table 1: Bill of Materials

| ITEM | PART NO | DESCRIPTION | QTY |
|------|---------|-------------------|-----|
| 1 | 580-98 | ENGINE MOUNT | 1 |
| 2 | 580-64 | CLUTCH ASSEMBLY | 1 |
| 3 | 580-66 | SHEAVE | 1 |
| 4 | 580-106 | V BELT B-59 | 2 |
| 5 | 046-850 | 3/16" x 2" KEY | 1 |
| 6 | 580-174 | BELT GUARD | 1 |
| 7 | 044-105 | U-BOLT | 2 |
| 8 | 044-138 | U-BOLT | 3 |
| 9 | 046-852 | 1/4" x 2-3/8" KEY | 1 |
| 10 | 040-438 | 3/8" LOCKNUT | 6 |
| 11 | 040-425 | 1/4" LOCKNUT | 6 |

NOTE: FOR PROPER BELT TENSION, SEE REPLACEMENT PROCEDURE.

NOTE: SCREEDS EQUIPPED WITH ENGINES OF 8 H.P. OR MORE WILL HAVE DUAL BELT DRIVE CLUTCH AND SHEAVE ASSEMBLIES.

Figure 1: engine mount assy.

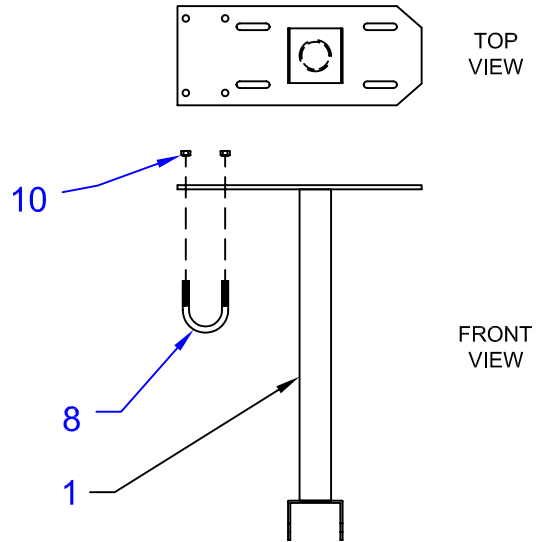
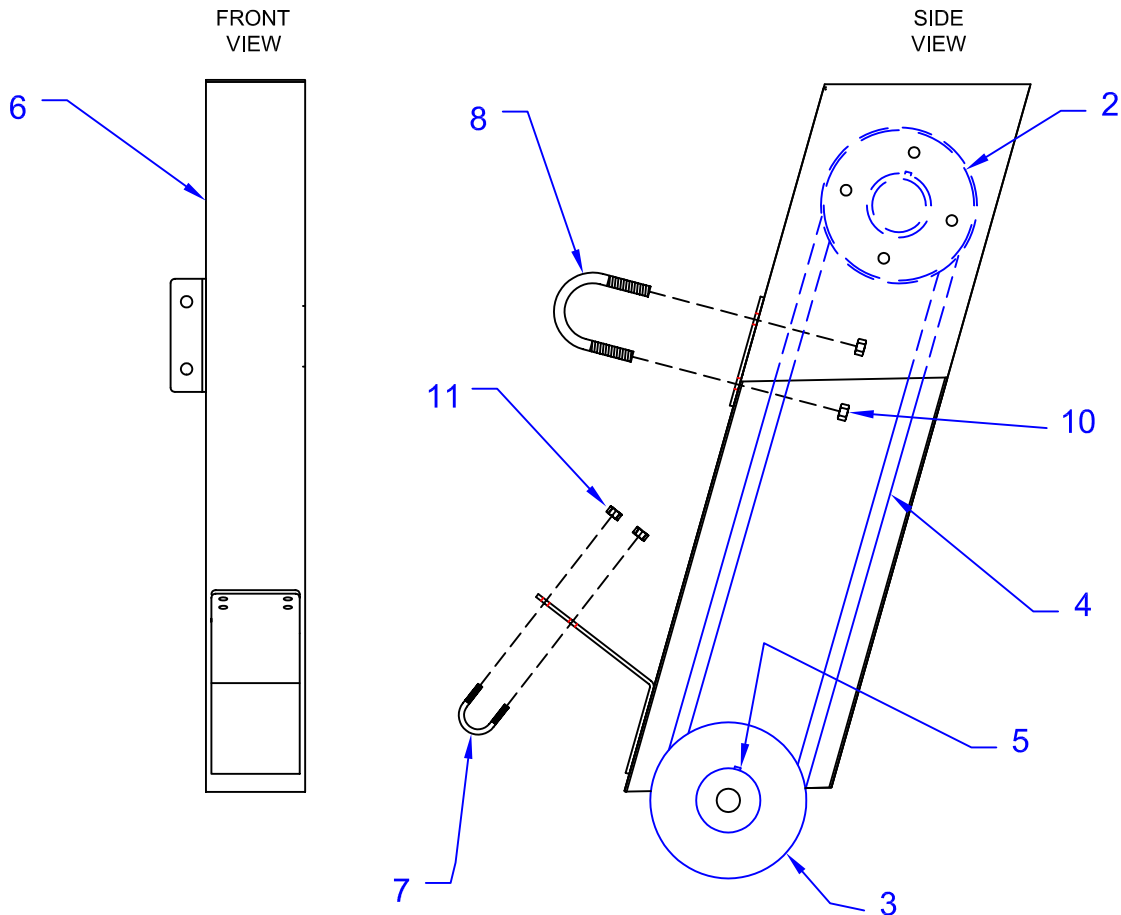


Figure 2: belt drive arrangement



SPECIFICATIONS - STANDARD ITEMS

Specifications and Recommendations:

Bearing: Pillow block, self-aligning, grease type.

Clutch: Centrifugal, continuous-type.

End Frames: Steel rod, sheet, and tube.

Engine:

| INDUSTRIAL COMMERCIAL SERIES | FUEL TANK QTS-GALS/LITERS | OIL CAPACITY PTS-QTS/ LITERS | OVERHEAD VALVE SERIES | FUEL TANK QTS-GALS/LITERS | OIL CAPACITY PTS-QTS/LITERS |
|------------------------------------|------------------------------|---------------------------------|-----------------------------|------------------------------|--------------------------------|
| 5 H.P. | 3 QT. / 2.8 LTR. | 1.25 PT./ .6 LTR. | 5.5 H.P. | .95 GAL/3.6 LTR. | .63 QT./ 0.6 LTR. |
| 8 H.P. | 1.5 GAL./5.7 LTR. | 2.75 PT./1.3 LTR. | 8 H.P. | 1.6 GAL./6 LTR. | 1.16 QT./ 1.1 LTR. |
| 11 H.P. | 1.5 GAL./5.7 LTR | 3PT./1.4 LTR. | 9 H.P. | 5 QT./ 4.75 LTR. | 2.5 PT./ 1.2 LTR. |
| | | | 11 H.P. | 1.7 GAL./ 6.5 LTR. | 1.16 QT./ 1.1 LTR. |

Finishing Tubes: Special analysis aluminum extrusion.

Frame Weldment: Steel pipe, rod, sheet, and tube.

Lift Handles: Steel sheet and tube.

Winch cable: Aircraft specification steel cable.

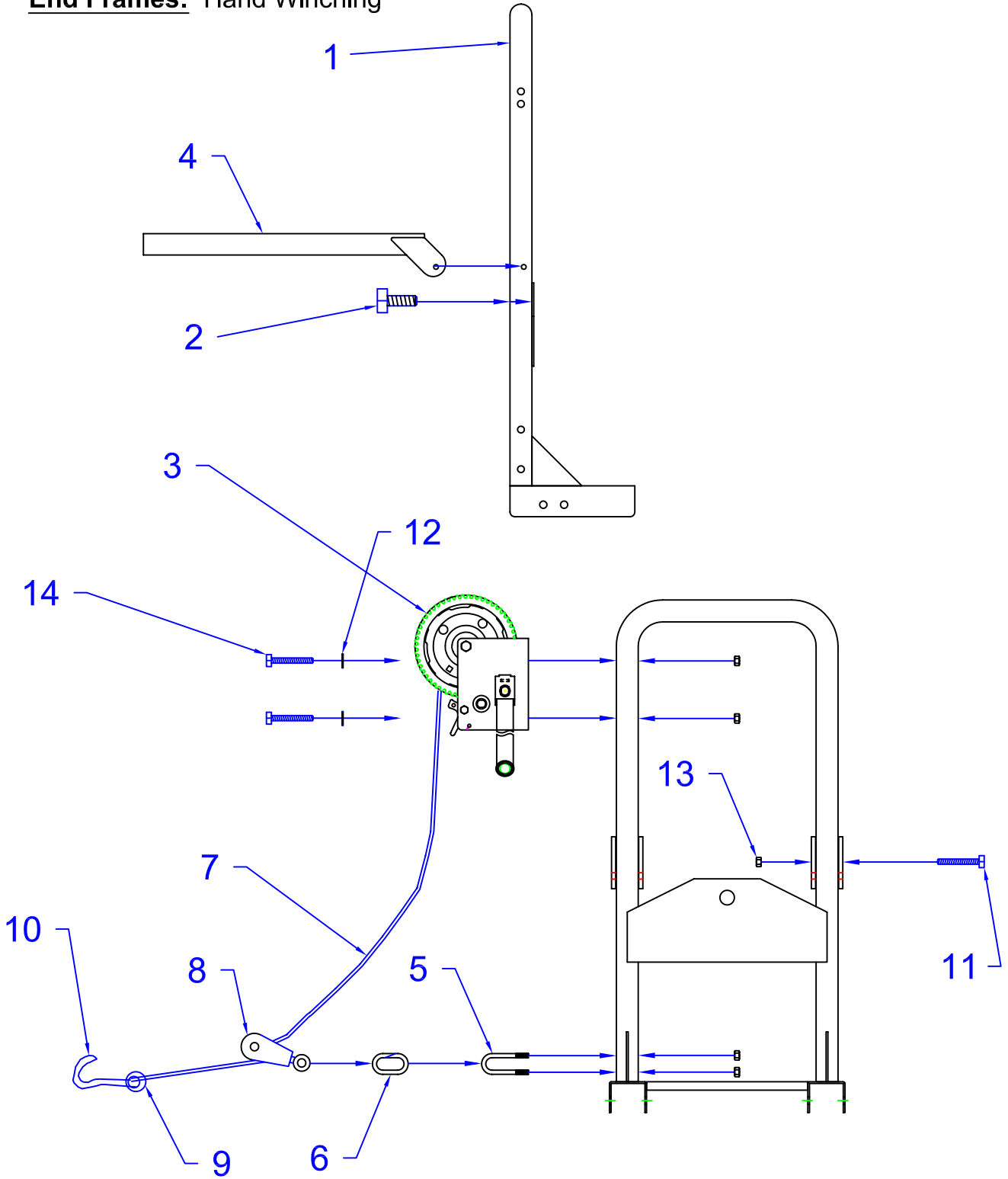
SPECIFICATIONS - STANDARD ITEMS

End Frames: Hand Winching

| ITEM | PART NO | DESCRIPTION | QUANTITY |
|------|---------|----------------------------------|----------|
| 1 | 580-80 | END FRAME (ENGINE END) | 1 |
| | 580-81 | END FRAME (EXTENSION END) | 1 |
| 2 | 020-880 | CAP SCREW | 1 |
| 3 | 580-67 | HAND WINCH | 1 |
| 4 | 580-240 | LIFT HANDLE | 1 |
| 5 | 044-138 | U-BOLT (3/8"-16 FOR 1-1/2" PIPE) | 1 |
| 6 | 580-179 | SAFETY LINK | 1 |
| 7 | 580-180 | 1/8" DIA. AIRCRAFT CABLE | 75' |
| 8 | 580-48 | SNATCH BLOCK | 1 |
| 9 | 580-178 | 1/8" CABLE CLAMP | 1 |
| 10 | 580-50 | CABLE HOOK | 1 |
| 11 | 020-430 | 3/8" x 3" HEX HEAD CAP SCREW | 2 |
| 12 | 041-138 | 3/8" FLAT WASHER | 2 |
| 13 | 040-438 | 3/8" SELF LOCKING NUT | 6 |
| 14 | 020-427 | 3/8" x 2-3/4" HEX HEAD CAP SCREW | 2 |

SPECIFICATIONS - STANDARD ITEMS

End Frames: Hand Winching



SPECIFICATIONS - STANDARD ITEMS

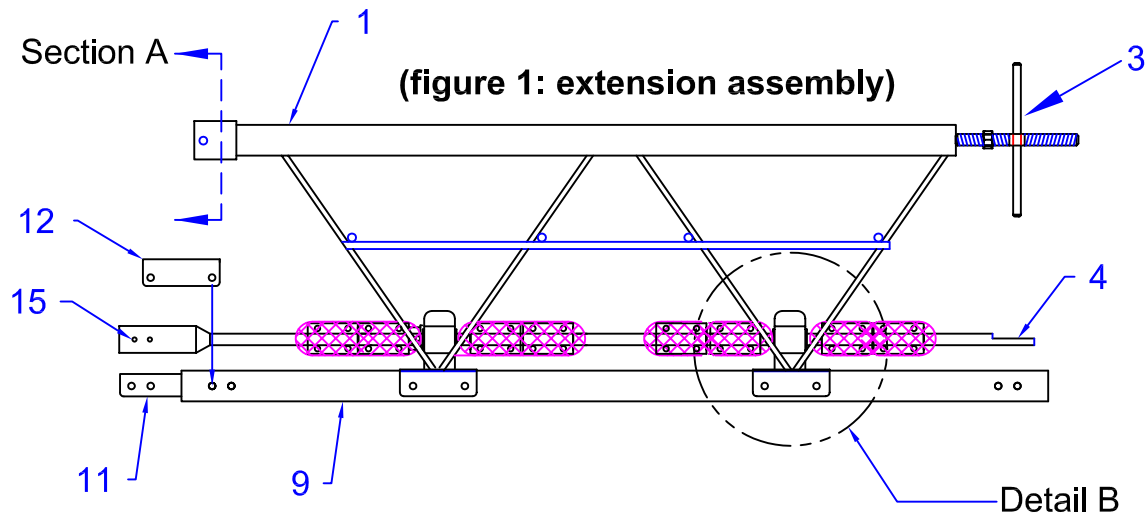
EXTENSION SECTION:

| ITEM | PART NO | DESCRIPTION | QTY. PER END FRAME |
|------|----------|----------------------------------|--------------------|
| 1 | 580-85 | FRAME ASSEMBLY, 2 FT. 6 IN. | AS REQUIRED |
| | 580-92 | FRAME ASSEMBLY, 5 FT. | AS REQUIRED |
| | 580-93 | FRAME ASSEMBLY, 10 FT. | AS REQUIRED |
| 2 | 580-304 | SHRINK TUBE | AS REQUIRED |
| 3 | 580-27 | TURNBUCKLE W/ NUT | 1 |
| 4 | 580-88 | MAIN SHAFT ASSEMBLY, 2 FT. 6 IN. | 1 |
| | 580-87 | MAIN SHAFT ASSEMBLY, 5 FT. | 1 |
| | 580-86 | MAIN SHAFT ASSEMBLY, 10 FT. | 1 |
| 5 | 580-75 | BEARING SPACER | AS REQUIRED |
| 6 | 580-44 | BEARING | AS REQUIRED |
| 7 | 020-594 | 1/2" X 1-1/4" HEX HEAD CAP SCREW | AS REQUIRED |
| 8 | 020-539 | 1/2" X 3-3/4" HEX HEAD CAP SCREW | AS REQUIRED |
| 9 | 580-32 | FINISHING TUBE, 2 FT. 6 IN. | 2 |
| | 580-31 | FINISHING TUBE, 5 FT. | 2 |
| | 580-29 | FINISHING TUBE, 10 FT. | 2 |
| 10 | 040-450 | 1/2" SELF LOCKING NUT | AS REQUIRED |
| 11 | 580-28 | LAP PLATE | 2 |
| 12 | 580-016 | SADDLE | 2 |
| 13 | 028-226 | 1/4"-28 X 1/4" SET SCREW | AS REQUIRED |
| 14 | 028-239 | 1/4"-28 X 3/8" SET SCREW | AS REQUIRED |
| 15 | 028-450 | 3/8"-16 X 1/2 SET SCREW | 1 |
| 16 | 580-74* | ECCENTRIC WEIGHT | AS REQUIRED |
| 17 | 044-109* | U-BOLT | AS REQUIRED |
| 18 | 040-425* | 1/4"-20 SELF LOCK NUT | AS REQUIRED |
| 19 | 580-14 | LEFT HAND NUT | 1 |
| 20 | 045-438 | PIN | 2 |

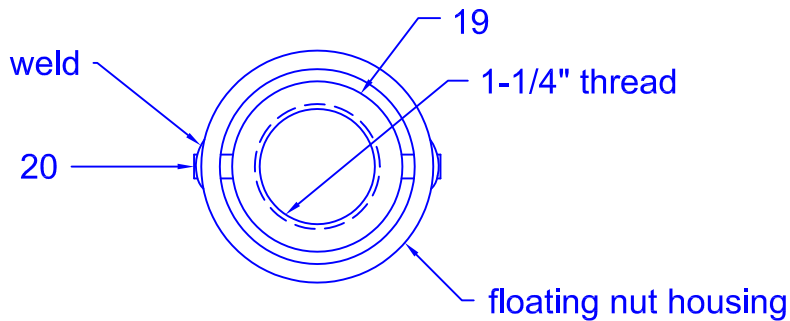
*Encase weight, u-bolts, and nuts with shrink tube (item 2) BEFORE operating machine. Each weight requires 1 shrink tube, 2 u-bolts, and 4 1/4" lock nuts.

SPECIFICATIONS - STANDARD ITEMS

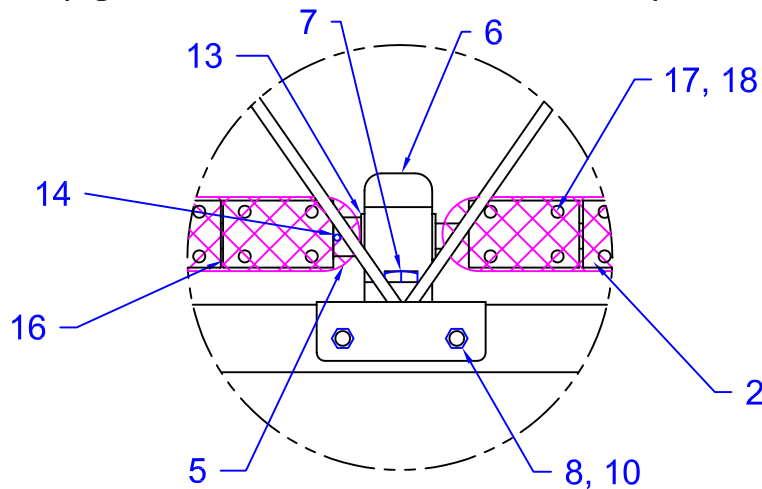
EXTENSION SECTION:



(figure 2: zoomed in view of Section A)



(figure 3: zoomed in view of Detail B)



SPECIFICATIONS - STANDARD ITEMS

POWER SECTION:

| ITEM | PART NO | DESCRIPTION | COMMENT |
|------|---------|-----------------------------------|----------------------|
| 1 | 580-95 | FRAME ASSEMBLY-10ft.-6in. | |
| | 580-82 | FRAME ASSEMBLY-5ft.-6in. | |
| 2 | 580-46 | FINISHING TUBE 10ft.-6in. | 2 REQ'D |
| | 580-30 | FINISHING TUBE 5ft.-6in. | 2 REQ'D |
| 3 | 580-23 | MAIN SHAFT 10ft.-6in. | 1 REQ'D |
| | 580-24 | MAIN SHAFT 5ft.-6in. | 1 REQ'D |
| 4 | 580-75 | BEARING SPACER | |
| 5 | 580-44 | BEARING | |
| 6 | 020-594 | HEX HEAD CAP SCREW 1/2"-13x1-1/4" | 2 REQ'D / BEARING |
| | 041-150 | FLAT WASHER 1/2" | 2 REQ'D / BEARING |
| | 040-450 | LOCKNUT 1/2" | 2 REQ'D / BEARING |
| 7 | 028-226 | SETSCREW 1/4"-28x1/4" | 1 REQ'D / BEARING |
| 8 | 028-239 | SETSCREW 1/4"-28x3/8 | 1 REQ'D / BEARING |
| 9 | 020-539 | HEX HEAD CAP SCREW 1/2"-13x3-3/4" | |
| 10 | 040-450 | LOCKNUT 1/2" | |
| 11 | 580-74* | ECCENTRIC WEIGHT | |
| 12 | 044-109 | U-BOLT | 2 REQ'D PER ECC. WT. |
| 13 | 040-425 | LOCKNUT 1/4"-20 | 2 REQ'D PER U-BOLT |
| 14 | 580-13 | RIGH HAND NUT | 2 REQ'D |
| 15 | 580-304 | SHRINK TUBE | 1 REQ'D PER ECC. WT. |

*ENCASE WEIGHT, U-BOLTS & NUTS WITH SHRINK TUBE (ITEM#15) BEFORE OPERATING MACHINE.

SPECIFICATIONS - STANDARD ITEMS

POWER SECTION:

figure 1: power section assembly

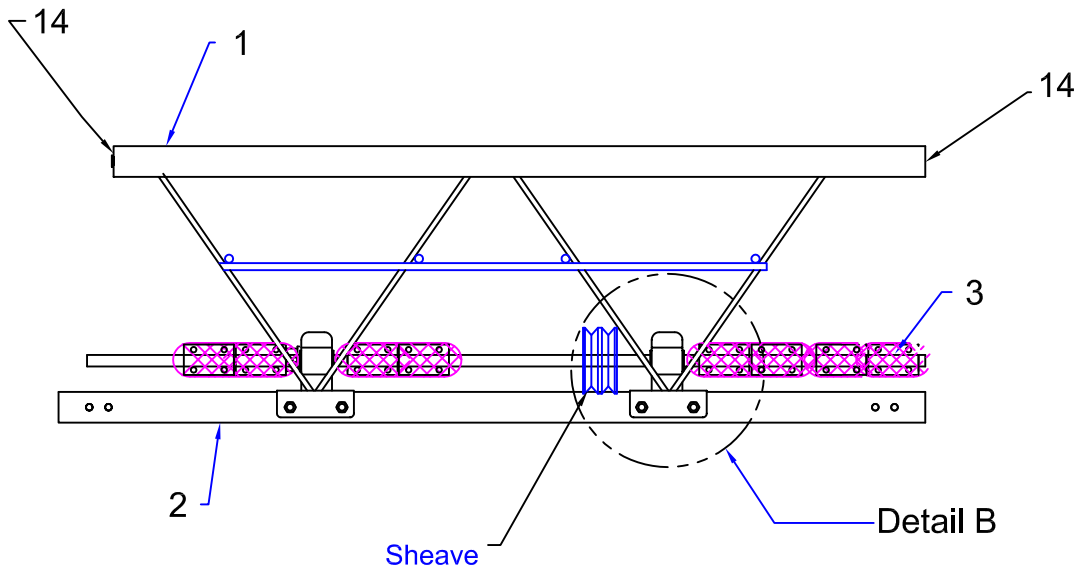
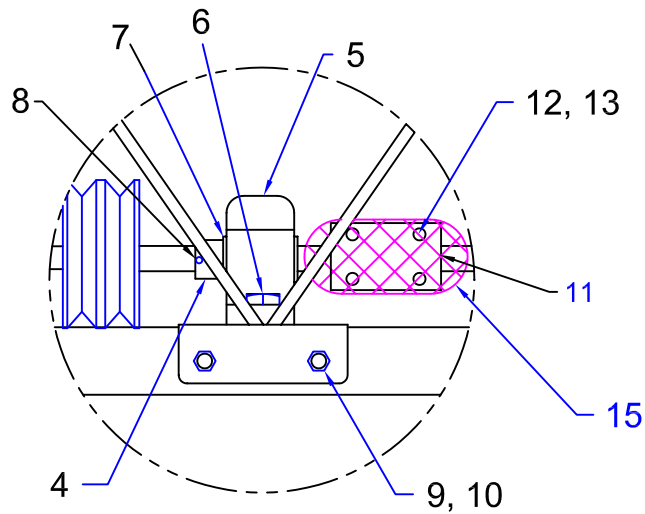


figure 2: zoomed in view of Detail B

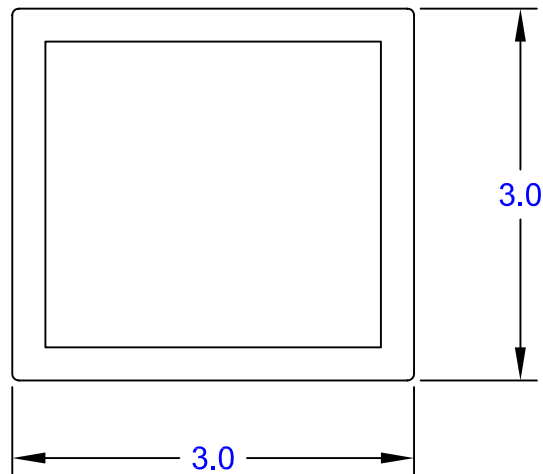


SPECIFICATIONS - STANDARD ITEMS

FINISHING TUBES:

| PART NUMBER | DESCRIPTION | QUANTITY |
|-------------|----------------------|----------|
| 580-46 | 10'-6" POWER SECTION | 2 |
| 580-30 | 5'-6" POWER SECTION | 2 |
| 580-29 | 10'-0" EXTENSION | 2 |
| 580-31 | 5'-0" EXTENSION | 2 |
| 580-32 | 2'-6" EXTENSION | 2 |

Figure 1: cross-section of tube



SPECIFICATIONS - STANDARD ITEMS

WARRANTY:

Metal Forms Corporation warrants, solely to the original purchaser, its products to be free on the date of delivery from defects in material and workmanship. Metal Forms Corporation's obligation under this warranty is conditioned upon Metal Forms Corporation receiving notice of the defect within ten (10) days of discovery, and shall be limited to repairing or replacing, at its option, at its factory, any part or parts, which shall be returned to it with transportation charges prepaid, and which its examination shall disclose, to its satisfaction, to have been thus defective: PROVIDED that this limited warranty shall be effective only if such part or parts shall be so returned to Metal Forms Corporation not later than ninety (90) days after initial delivery of the products to the original purchaser. Metal Forms Corporation neither assumes or authorizes any other person or entity to assume for Metal Forms Corporation any other liability in connection with the sale of the products. No waiver, alteration, or modification of the foregoing conditions shall be valid unless made in writing, and signed by an executive officer of Metal Forms Corporation.

This warranty shall not apply in the event the products shall have been repaired or altered outside of Metal Forms Corporation, or if the products have been subject to abuse, misuse, negligence, or accident.

THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESSED, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE AND ALL OTHER OBLIGATIONS OR LIABILITIES ON OUR PART. BUYER ACKNOWLEDGES THAT THERE ARE NO WARRANTIES THAT WILL EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF, UNLESS IN WRITING AND SIGNED BY BOTH SELLER AND PURCHASER.

The Buyer acknowledges that (s)he is not relying on Metal Forms Corporation's skill or judgment to select or furnish machines or equipment suitable for any particular purpose.

METAL FORMS CORPORATION MAKES NO WARRANTIES OR REPRESENTATIONS AND ASSUMES NO RESPONSIBILITIES IN RESPECT TO PARTS OR COMPONENTS NOT MANUFACTURED BY METAL FORMS CORPORATION.

NOTWITHSTANDING THE PROVISIONS OF ANY APPLICABLE STATUTE, THE REMEDIES AVAILABLE TO THE BUYER AS SET FORTH IN THIS AGREEMENT, ARE EXCLUSIVE REMEDIES, AND ALL OTHER REMEDIES, STATUTORY OR OTHERWISE, ARE HEREBY EXPRESSLY WAIVED BY THE BUYER. METAL FORMS CORPORATION SHALL NOT BE RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THIS WARRANTY OR BREACH THEREOF.

SPECIFICATIONS - ACCESSORY ITEMS

Options and Accessories:

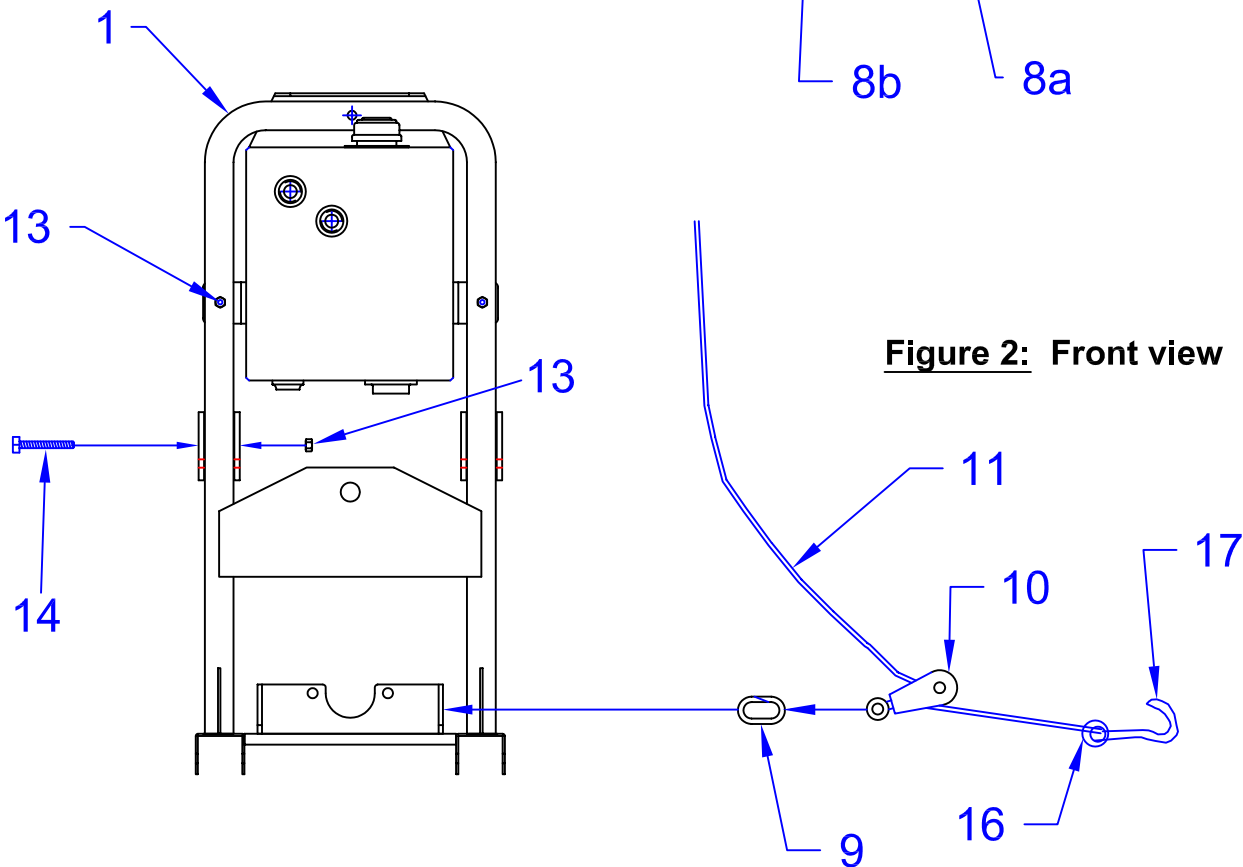
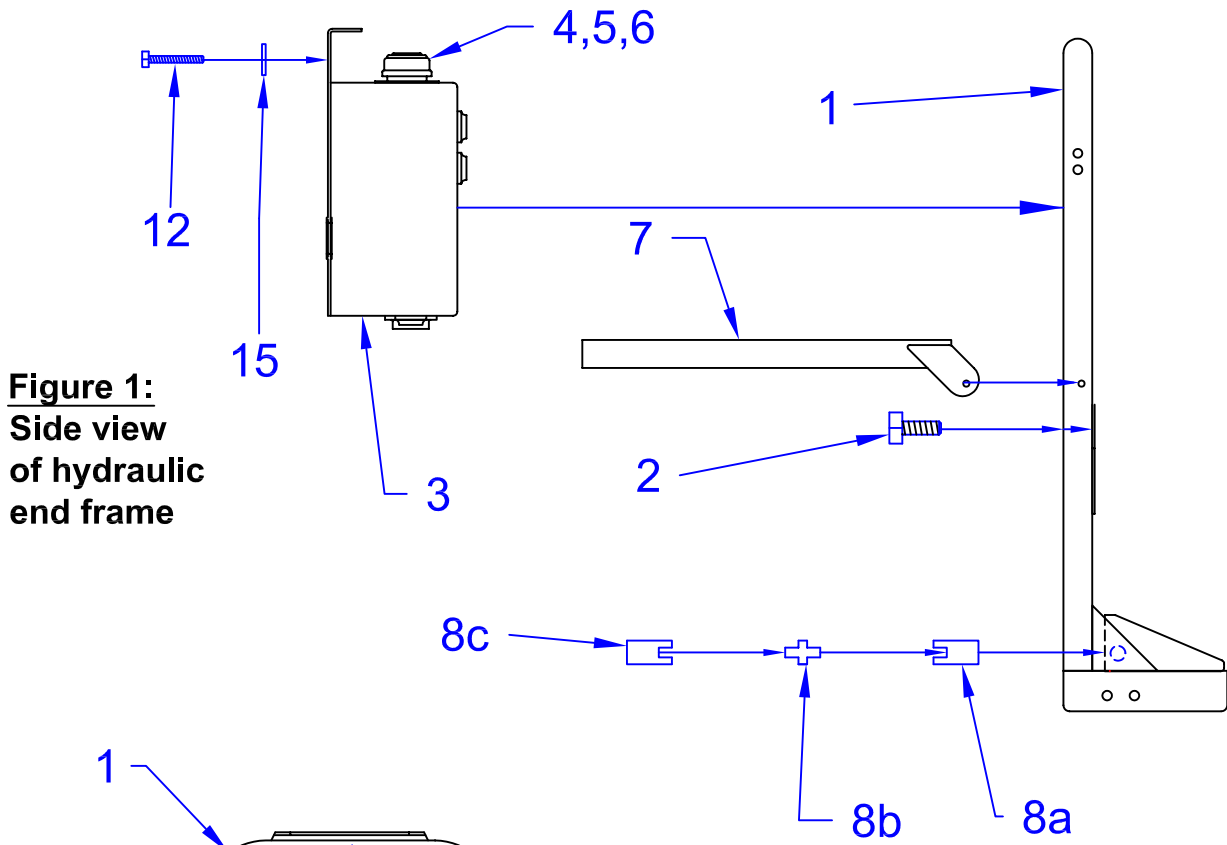
- DOLLY:** UNIT USED IN CONJUNCTION WITH TRANSPORT TONGUE FOR MANEUVERING SCREED ON JOB SITE.
- FINEGRADING ATTACHMENT:** A VERTICALLY ADJUSTABLE BLADE DESIGNED FOR FINEGRADING LOOSE MATERIAL. FINEGRADING BLADES ARE AVAILABLE IN INCREMENTS OF 5 FOOT, 2 FOOT AND 1 FOOT LENGTHS.
- HYDRAULIC WINCHING:** END FRAMES CONTAIN HYDRAULIC OIL TANKS, MOTORS, PUMPS, HOSES, FLOW CONTROL VALVES, AND RELIEF VALVES. ALLOWS MACHINE TO BE WINCHED THROUGH USE OF THE SAME MOTOR ALREADY RUNNING THE VIBRATING SHAFT.
- INSIDE & OUTSIDE GUIDE PLATES:** AVAILABLE FOR SPECIAL APPLICATIONS SUCH AS PAVING ON SUPER ELEVATIONS AND PAVING CURB TO CURB OR SLAB TO SLAB.
- OFFSET PLATE:** ADJUSTABLE ADAPTOR PLATE MOUNTS ON END FRAME(S) FOR RECESS PAVING OR POURING AGAINST WALLS.
- SCREED EXTENDERS:** AN 8" EXTENSION, MADE OUT OF FINISHING TUBE MATERIAL, EXTENDING FROM BACK SIDE OF THE END FRAME ASSEMBLY. WITH THE USE OF FOUR (4) EXTENDERS THE OVERALL SCREEDLENGTH WILL INCREASE BY 16 INCHES.
- TRANSPORT TONGUE:** VERTICALLY ADJUSTABLE TRAILER COUPLING USED TO ATTACH SCREED TO DOLLY OR PICK-UP TRUCK WITH 2" STANDARD BALL, FOR MANEUVERING AROUND JOBSITE.
- TRANSPORT WHEEL ASSEMBLY:** TRANSPORTATION UNIT FOR MANEUVERING SCREED ON JOBSITE.
- WINCHING FROM ONE END:** FOR SITUATIONS THAT REQUIRE A ONE-MAN OPERATION, THIS IS SET-UP WITH BOTH HAND WINCHES ADAPTED TO ONE END FRAME.

SPECIFICATIONS - ACCESSORY ITEMS

End Frames, Hydraulic Winching:

| ITEM | PART NO | DESCRIPTION | QUANTITY |
|------|-----------|-----------------------------------|----------|
| 1 | 580-80 | END FRAME (ENGINE END) | 1 |
| | 580-81 | END FRAME (EXTENSION END) | 1 |
| 2 | 020-880 | CAP SCREW 1-1/4"-7 | 1 |
| 3 | 580-96 | HYDRAULIC OIL TANK (ENGINE END) | 1 |
| | 580-97 | HYDRAULIC OIL TANK (EXT. END) | 1 |
| 4 | 580-76-1 | OIL FILL CAP | 1 |
| 5 | 580-76-2 | OIL FILL HOUSING | 1 |
| 6 | 580-76-3 | OIL FILL GASKET | 1 |
| 7 | 580-240 | LIFT HANDLE | 1 |
| 8a | 580-101-1 | PUMP DRV CPLG (SHAFT) 3/4" BORE | 1 |
| 8b | 580-101-2 | PUMP DRV CPLG (PUMP) 1/2" BORE | 1 |
| 8c | 580-101-3 | PUMP DRIVE SPIDER | 1 |
| 9 | 580-179 | SAFETY LINK | 1 |
| 10 | 580-48 | SNATCH BLOCK | 1 |
| 11 | 580-180 | 1/8" DIA. AIRCRAFT CABLE | 75' |
| 12 | 020-499 | 3/8"-16 x 2-1/2" HEX HD CAP SCREW | 3 |
| 13 | 040-438 | 3/8"-16 SELF LOCKING NUT | 5 |
| 14 | 020-430 | 3/8"-16 x 3" HEX HEAD CAP SCREW | 2 |
| 15 | 041-138 | 3/8" FLAT WASHER | 3 |
| 16 | 580-178 | CABLE CLAMP | 1 |
| 17 | 580-50 | HOOK | 1 |

SPECIFICATIONS - ACCESSORY ITEMS



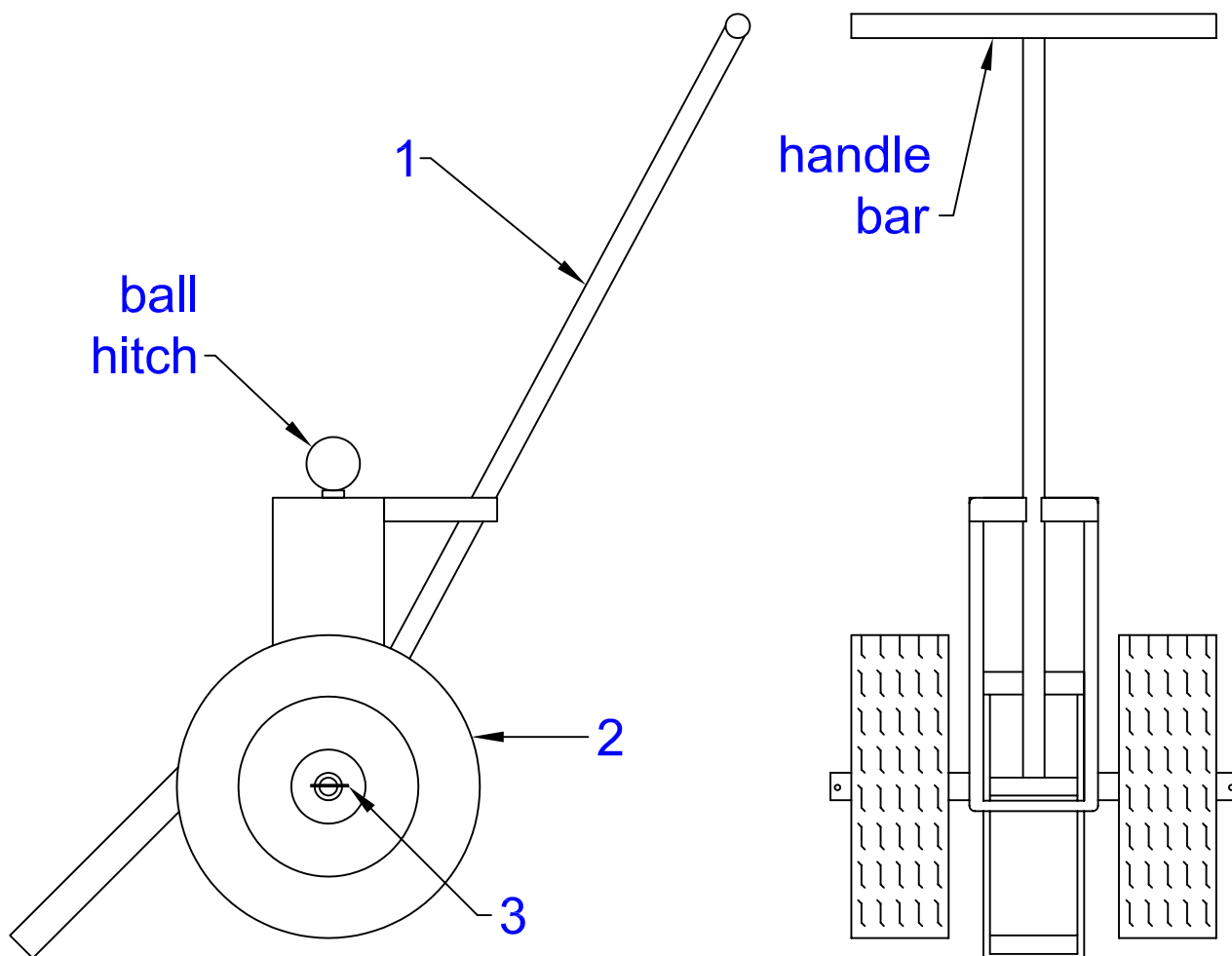
SPECIFICATIONS - ACCESSORY ITEMS

Dolly: To be used in conjunction with Tongue Assembly.

| ITEM | PART NO | DESCRIPTION | QUANTITY |
|------|---------|-------------------|----------|
| 1 | 580-183 | DOLLY SUBASSEMBLY | 1 |
| 2 | 580-184 | RIM & TIRE | 2 |
| 3 | 046-230 | COTTER PIN | 2 |

side view

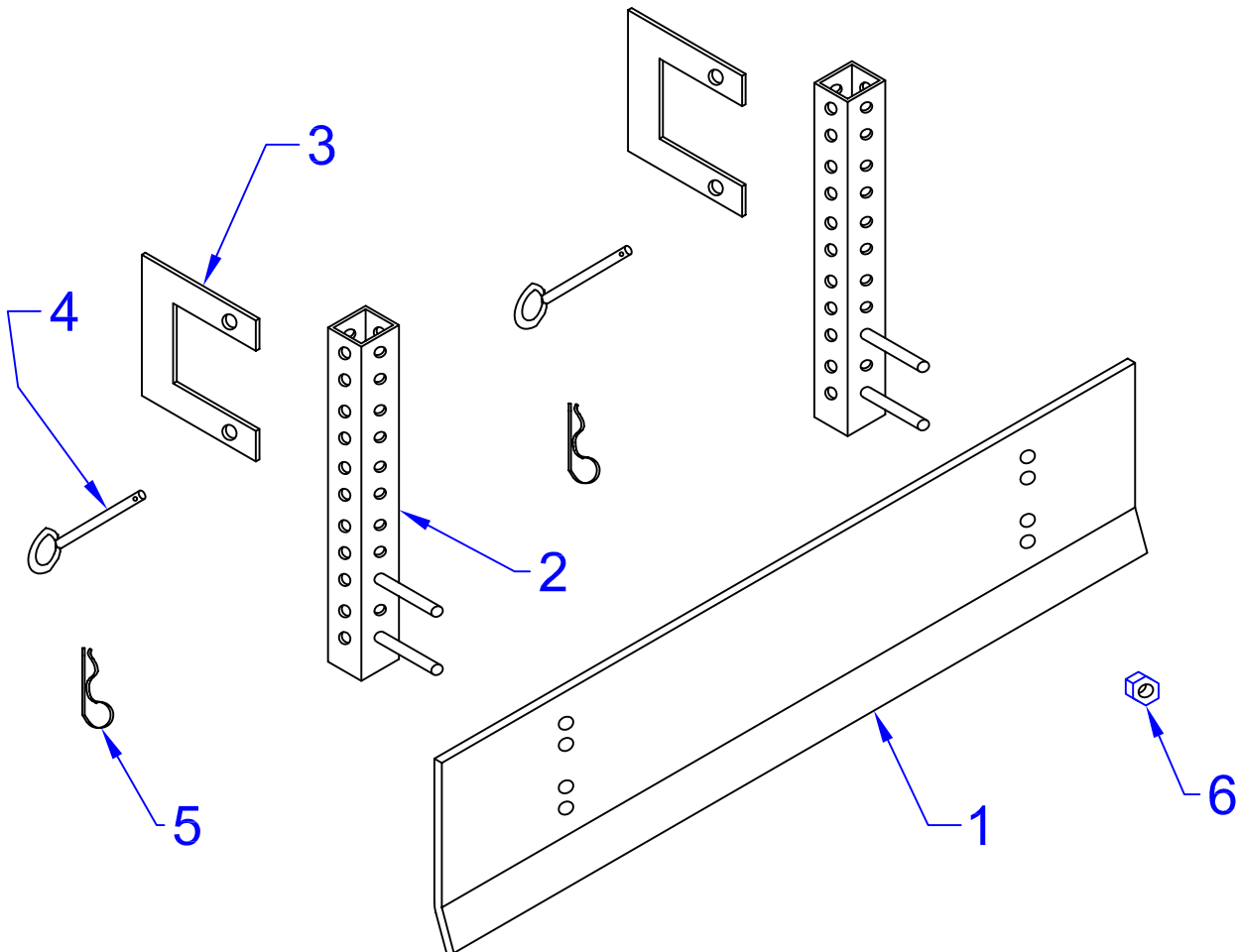
rear view



SPECIFICATIONS - ACCESSORY ITEMS

Finegrading Attachment:

| ITEM | PART NO | DESCRIPTION | QUANTITY |
|------|---------|-----------------------|-------------|
| 1 | 580-143 | BLADE (SPEC. LENGTH) | AS REQUIRED |
| 2 | 580-144 | MOUNT TUBE | AS REQUIRED |
| 3 | 280-145 | MOUNT CLIP | AS REQUIRED |
| 4 | 580-146 | CLIP PIN | AS REQUIRED |
| 5 | 580-147 | CLINCH PIN | AS REQUIRED |
| 6 | 040-438 | 3/8" SELF LOCKING NUT | AS REQUIRED |



SPECIFICATIONS - ACCESSORY ITEMS

Hydraulic Winching:

HYDRAULIC TANK CAPACITY:

SPEED SCREED-APPROXIMATELY 5 U.S. GALLONS/18LITERS

SPEED SCREED LIGHT-APPROXIMATELY 2 U.S. GALLONS/7.2 LITERS

HYDRAULIC FLUID RECOMMENDATIONS:

MOBILE DTE 26 OR GOOD QUALITY HYDRAULIC OIL WITH A VISCOSITY RANGE BETWEEN 150-250 SSU (32-54 CST) AT 100° F (38° C)

HYDRAULIC FILTERS:

IN-TANK TYPE, 100 MESH, WASHABLE STAINLESS STEEL SCREEN. PART 580-79

HYDRAULIC PUMP:

GEAR TYPE, FIELD SERVICE KIT AVAILABLE. PART NUMBER ENGINE SIDE (DO5AA-1A R.H.); EXTENSION SIDE (DO5AA-2A L.H.)

HYDRAULIC DRIVE MOTORS:

OVERSIZE HIGH TORQUE, LOW SPEED CONTINUOUS DUTY, NUMBER 580-77P

HYDRAULIC FLOW CONTROL VALVES:

FULL RANGE ACHIEVED (0-12 F.P.M.) WITHIN ONE REVOLUTION OF CONTROL KNOB.

HYDRAULIC PRESSURE RELIEF VALVE:

SET AT 1,500 P.S.I.

HYDRAULIC PUMP DRIVE COUPLING:

OVERSIZE HIGH-SPEED WITH REPLACEABLE FLEXING CENTER ELEMENT.

SPECIFICATIONS - ACCESSORY ITEMS

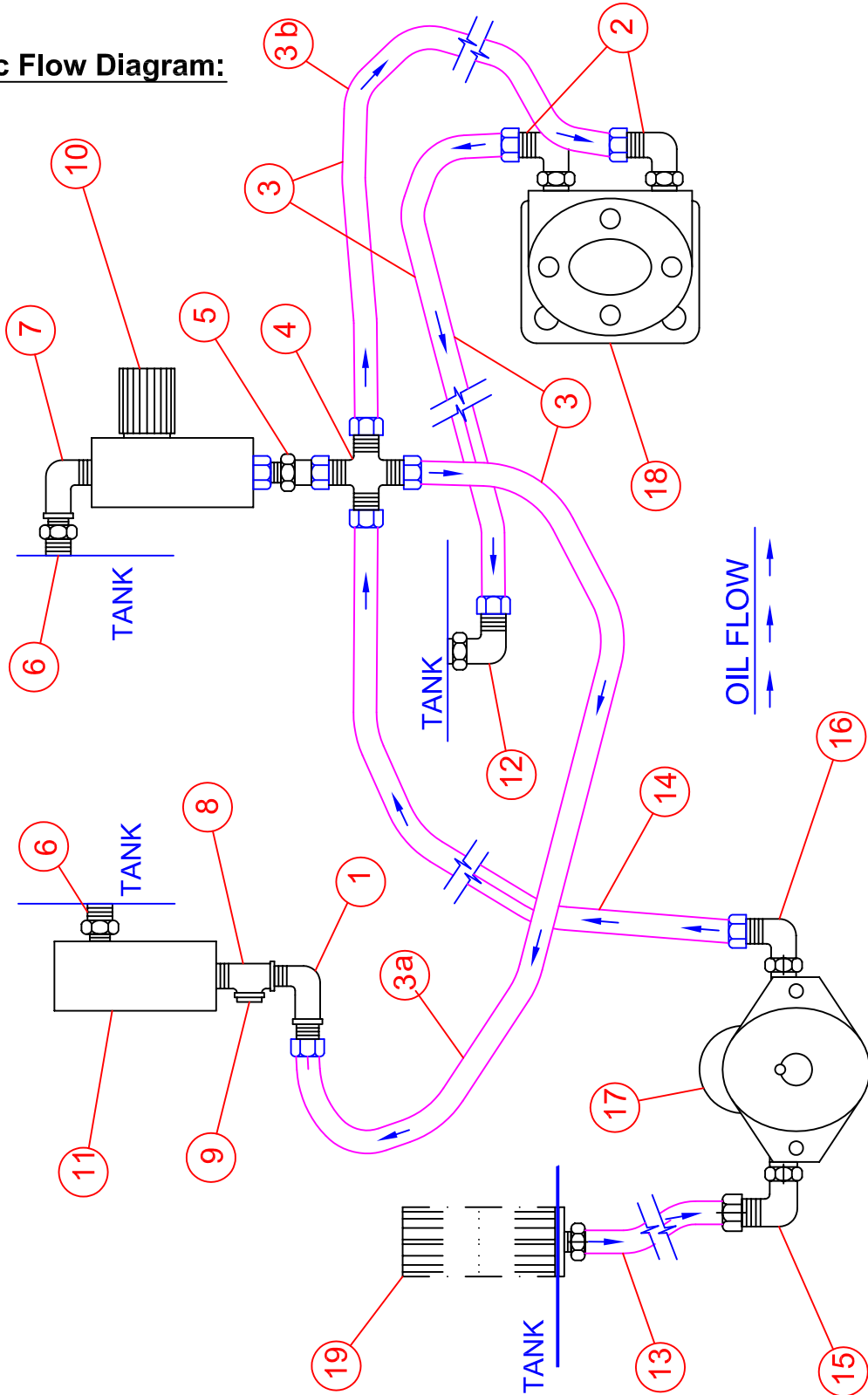
Hydraulic Components: Bill of Materials

| ITEM | PART NO | DESCRIPTION | QTY. PER END FRAME |
|------|------------|--|--------------------|
| 1 | 580-397 | 1/4" PIPE TO 1/4" TUBE 90 DEG. (MALE ELBOW) | 1 |
| 2 | 580-319 | 1/2" PIPE TO 1/4" TUBE 90 DEG. (MALE ELBOW) | 2 |
| 3 | 580-321 | 1/4" HYDRAULIC HOSE 1/4" tube ENDS - 18" LONG | 3 |
| 4 | 580-393 | 1/4" UNION CROSS TUBE FIT | 1 |
| 5 | 580-391 | 1/4" PIPE TO 1/4" TUBE SWIVEL | 1 |
| 6 | 580-389 | 1/4" PIPE TO 3/8" PIPE NIPPLE | 2 |
| 7 | 580-390 | 1/4" STREET ELBOW 90 DEG. | 1 |
| 8 | 580-394 | 1/4" TUBE STREET TEE | 1 |
| 9 | 580-395 | 1/4" HOLLOW HEX PLUG | 1 |
| 10 | 580-78-P | FLOW CONTROL VALVE | 1 |
| 11 | 580-396-P | RELIEF VALVE | 1 |
| 12 | 580-323 | 3/8" PIPE TO 1/4" TUBE 90 DEG. | 1 |
| 13 | 580-315 | 1/2" HYDRAULIC HOSE - 19" LONG | 1 |
| 14 | 580-318 | 1/4" HYDRAULIC HOSE - 34" LONG | 1 |
| 15 | 580-316 | 1/2" TUBE TO 7/8"-14 PIPE 90 DEG. (MALE ELBOW) | 1 |
| 16 | 580-317 | 3/8" TUBE TO 3/4"-16 PIPE 90 DEG. (MALE ELBOW) | 1 |
| 17 | 580-102-1A | HYDRAULIC PUMP #D05AA-1A R.H. (ENGINE SIDE) | 1 |
| | 580-102-2A | HYDRAULIC PUMP #D05AA-2A L.H. (EXT. SIDE) | 1 |
| 18 | 580-77-P | HYDRAULIC MOTOR | 1 |
| 19 | 580-79 | SUCTION STRAINER | 1 |
| | | | |

NOTE: Reference drawing is for engine-side end bail. The only difference between the engine-side and the extension-side is the hydraulic motor being turned 180 deg.

SPECIFICATIONS - ACCESSORY ITEMS

Hydraulic Flow Diagram:



SPECIFICATIONS - ACCESSORY ITEMS

General Information on Hydraulic Components:

1. Recommended operation conditions: refer to current product catalogs for detailed operating limitations and performance data.

2. Fluid: To insure maximum motor performance and component life, use premium quality hydraulic oils. Fluids with effective quantities of anti-wear agents or additives are highly recommended. If using synthetic based fluids consult factory for alternative seal materials.

- Maximum oil viscosity: 50 SUS LSHT Motors
70 SUS High Speed Motors
- Maximum permitted oil temperature: 180 deg. F
- Minimum recommended oil filtration: 25 Micron, B-2

3. Installation recommendations

- To avoid contamination do not remove plastic port plugs until fittings are to be installed.
- Motor mounting flange must make full contact with equipment mount; do not use the mounting bolts to force the motor pilot into the pilot hole or align the motor.
- Pulleys, sprockets, wheels, or couplings should be properly aligned on the shaft to avoid excessive radial or thrust loads. To avoid damaging the thrust system, do not hammer on motor or shaft to install or remove them.
- 1" key and 7/8" spline shafts are not recommended for output torques exceeding 3000 lbs. in.

4. Motor Caution: hydraulic motors are not designed to suspend or lock loads. If application requires a fail safe locked position, a mechanical holding device (i.e. brake) must be used.

5. Run-In: For optimum performance and life, a 15 minute run-in period at no load and mid-flow conditions is recommended. Do not subject system to full load until air has been bled from the hydraulic system and all contamination particles have been filtered out.

6. Other Operating Conditions: For conditions exceeding either these recommended or current catalog ratings consult the factory.



WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety, and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

WARNING: THIS PRODUCT MAY CONTAIN CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR OTHER REPRODUCTIVE HARM.

This warning is given in compliance with California Proposition 65, as detectable amounts of chemicals subject to Proposition 65 may be contained in this product.

SPECIFICATIONS - ACCESSORY ITEMS

Pump: Fixed Displacement Gear Pump- Series D

Technical Information

Performance Data

Series D Fixed Displacement, Pressure Loaded Gear Pump

Features

- Pressure Loaded Design
- Efficient, Simple Design - Few Moving Parts
- Efficient At High Pressure Operation
- Resistant to Cavitation Effects
- High Tolerance to System Contamination
- Reliable Under Cold Weather Operation
- Sleeve Bearing Construction
- Multi-Fluid COmpatibility

Controls

- Optional Built In Relief Valve
- Consult Factory for Special Controls

Specifications

Flow Ratings: .5 GPM (1.9LPM) to 2.7 GPM (10.2 LPM)
(At 1000 RPM) See next page for
additional flow data)

Pressure Ratings: D05 thru D22 - 2500 PSI (172 Bar)
Continuous
D27 - 2000 PSI (138 Bar)
Continuous

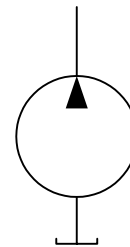
Speed Ratings: D05 thru D22 - 500 to 4000 RPM
D27 - 3000 RPM

Mounting: SAE-AA - 2 Bolt Flange
4 Bolt Flange

Housing Material: Die Cast Aluminum

Schematic Symbol

(Basic Pump)



Installation Data

Inlet Conditions: 10 In. Hg. Max. Vacuum Condition
(At 1800 RPM)

5 In. Hg. Max. Vacuum Condition
(At Max. RPM)

20 PSI (1.4 Bar) Max.
Positive Pressure

Operating Temperature Range: -40 deg.F to 185 deg.F
(-40 deg.C to 85 deg.C)

Filtration: Maintain SAE Class 4

Installation Note:

See "General Information" section on hydraulic components for specific recommendations pertaining to system cleanliness, fluids, start-up, inlet conditions, shaft alignment, and other important factors relative to the proper installation and use of these pumps.

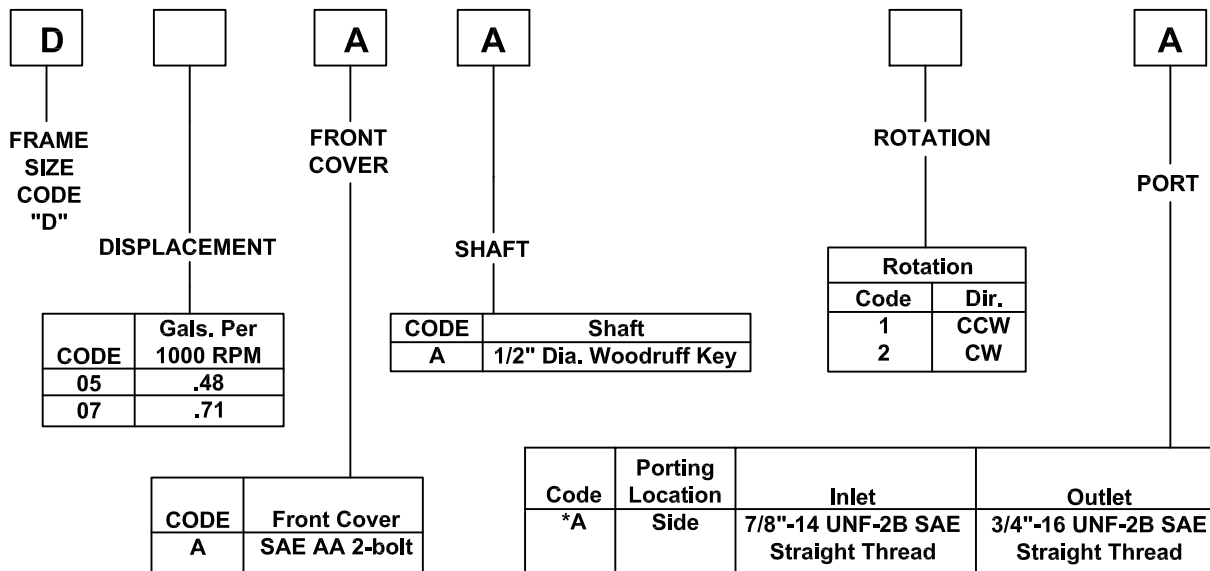
For additional information - call your
Parker Sales Office

SPECIFICATIONS - ACCESSORY ITEMS

Pump: Fixed Displacement Gear Pump - Series D

Ordering Information:

Parker Fluidpower - Fluidpower Pump Division - Otsego, MI 49078



*Relief Valve is preset at factory.
Specify setting.

SPECIFICATIONS - ACCESSORY ITEMS

RELIEF VALVE: Series RD102

Direct Acting, Poppet-Style Relief Valve (set at 1500 PSI)

Application

The RD 102 Series Relief Valves are suited for intermittent duty applications and offer stable performance and fast response in an economical package.

Operation

The valve poppet is held against the seat by spring force. Inlet pressure on the poppet acts against the spring force unseating the poppet when valve setting is reached, permitting relief flow to tank.

Features

- Fast Response
- Dirt tolerant
- Low leakage poppet design
- Cartridge design

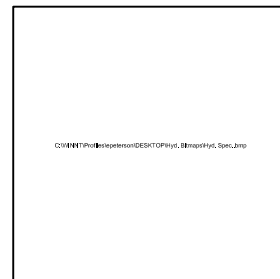
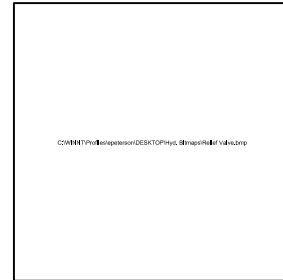
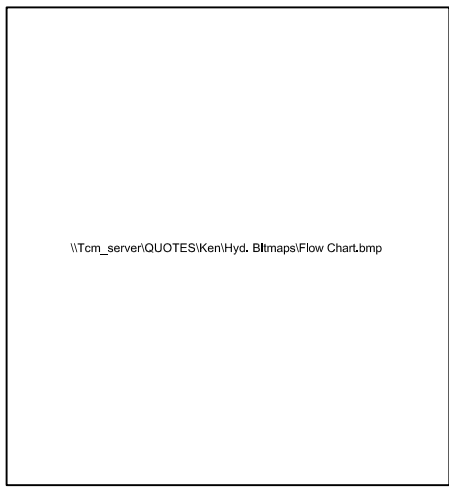
Installation Data

See the installation information section of this catalog for specific recommendations pertaining to system cleanliness, fluids, seals and other important factors relative to the proper installation and use of these products.

Performance Curve

Flow vs. Inlet Pressure

(Pressure Override Curve)
 (Through cartridge only. For performance of bodies, see section MV).

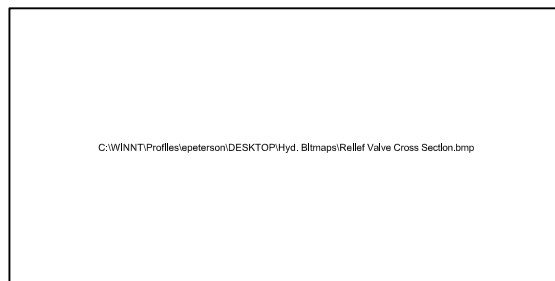


Cartridge Valve Specifications

| | |
|---|--|
| Rated Flow | 10 GPM (37.5 L/M) |
| Max. Inlet Pressure | 3500 PSI (245 Bar) |
| Max. Setting Press. | 3000 PSI (210 Bar) |
| Reseat Pressure (Valve returns to non-relieving mode) | 80% of set pressure |
| Operating Temp. | -40°F to +200°F (Nitrile) |
| Range (Ambient) | -25°F to +250°F (Viton) |
| Leakage | 10 drops/min. (.78 cc/min.) at 25% of set pressure |
| Cartridge Material | All parts steel. All operating parts hardened steel |
| Body Material | Steel |
| Filtration | ISO Code 16/13. SAE Class 4 or better |
| Mounting | No Restrictions |
| Cavity | Common Cavity No. C10-3 (See Cavity Details section) |

Construction

- 1 - Inlet
- 2 - Outlet

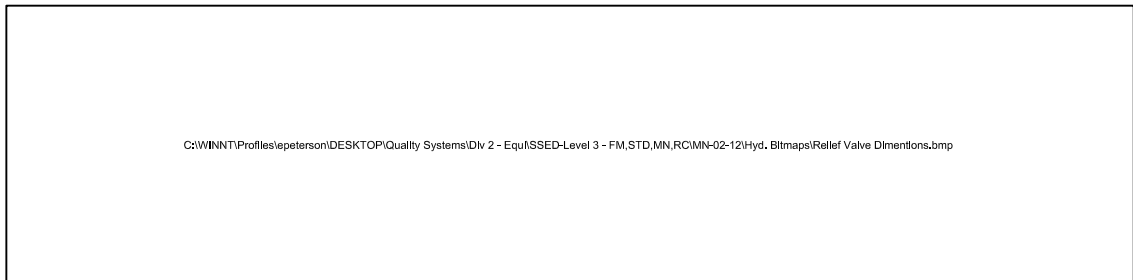
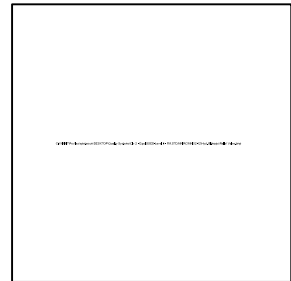
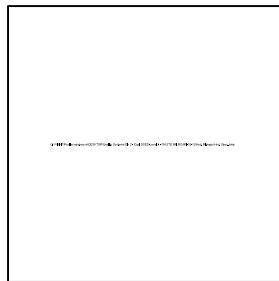
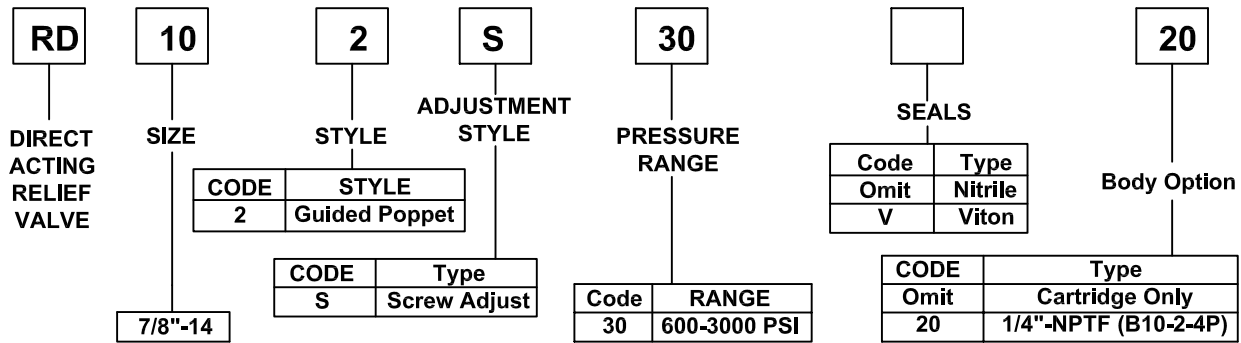


SPECIFICATIONS - ACCESSORY ITEMS

RELIEF VALVE: Series RD102

Ordering Information:

Parker Fluidpower - Fluidpower Pump Division - Otsego, MI 49078



Shipping Weight
 Cartridge Only 0.5 lbs. (.23 kg)
 Cartridge in Body 1.5 lbs. (.68 kg)

- SERVICE PARTS**
Knob Kit - 840208K (To convert screw adjust to knob adjust)
Nitrile Seal Kit - SK10-2
Viton Seal Kit - SK10-2V
Panel Mount Kit - PMK101

SPECIFICATIONS - ACCESSORY ITEMS

Volume Control Valves: Series PC

Parker Fluidpower - Otsego, MI 49078

Maximum operating pressure:
3000 PSI (210 Bar).

Manatrol Series PC Pressure-Compensated Flow Control Valves

Typical applications:
Meter-in/meter-out and
bleedoff circuits

These valves are designed to regulate flow at a selected rate, then maintain this flow constant within +/- 5% as inlet and outlet pressures vary. However, changes in fluid temperature will prevent flow from holding constant.

The PCM type of Series PC valve can be adjusted for required flows after being installed.

The required minimum pressure differential between valve inlet and outlet ports is 100 psi (7Bar) for valve sizes 1/4" and 3/8", and 150 psi (11 Bar) for sizes 1/2" through 1". They can be supplied with an optional reverse-flow check valve.

Quick Reference Data Chart

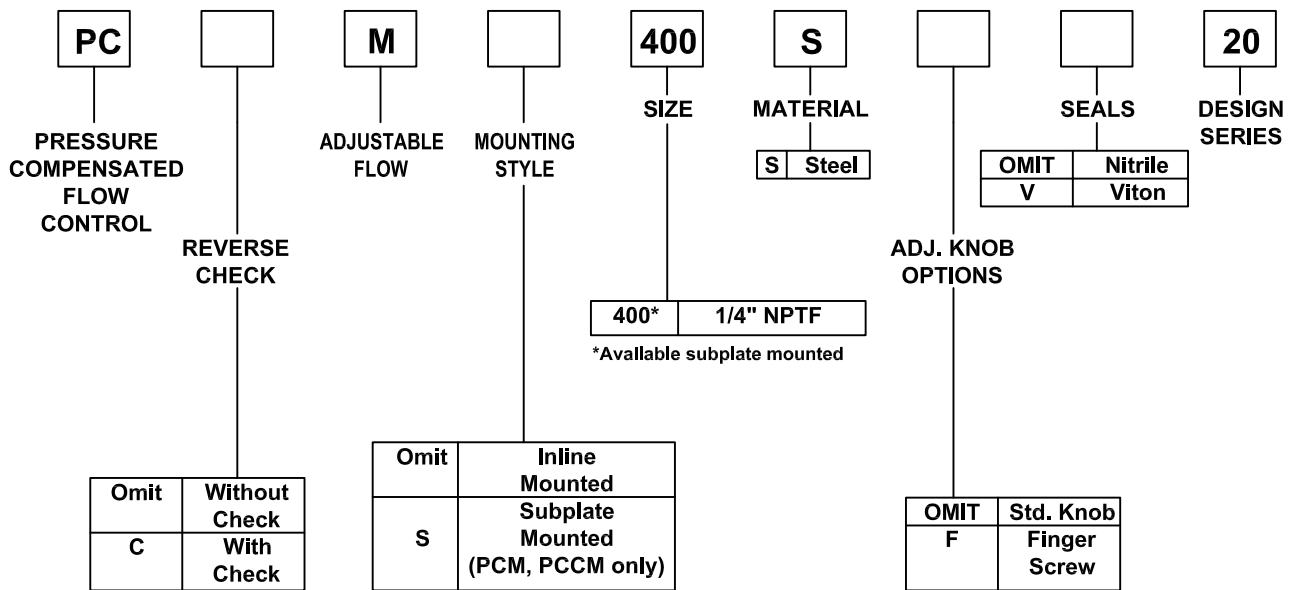
| Valve Model | Flow | | Reverse Flow, max. thru. check, GPM (L/M) | Pressure Drop P at max. Reverse Flow thru. check, PSI (Bar) | Mounting | Port Size, In. |
|-------------|-------------------|-------------------|---|---|----------|----------------|
| | Minimum GPM (L/M) | Maximum GPM (L/M) | | | | |
| PC-M400S | 0.3 (1) | 3.0 (11) | 5 (19) | 40 (3) | Inline | 1/4 NPTF |

SPECIFICATIONS - ACCESSORY ITEMS

Volume Control Valves: Series PC

Ordering Information

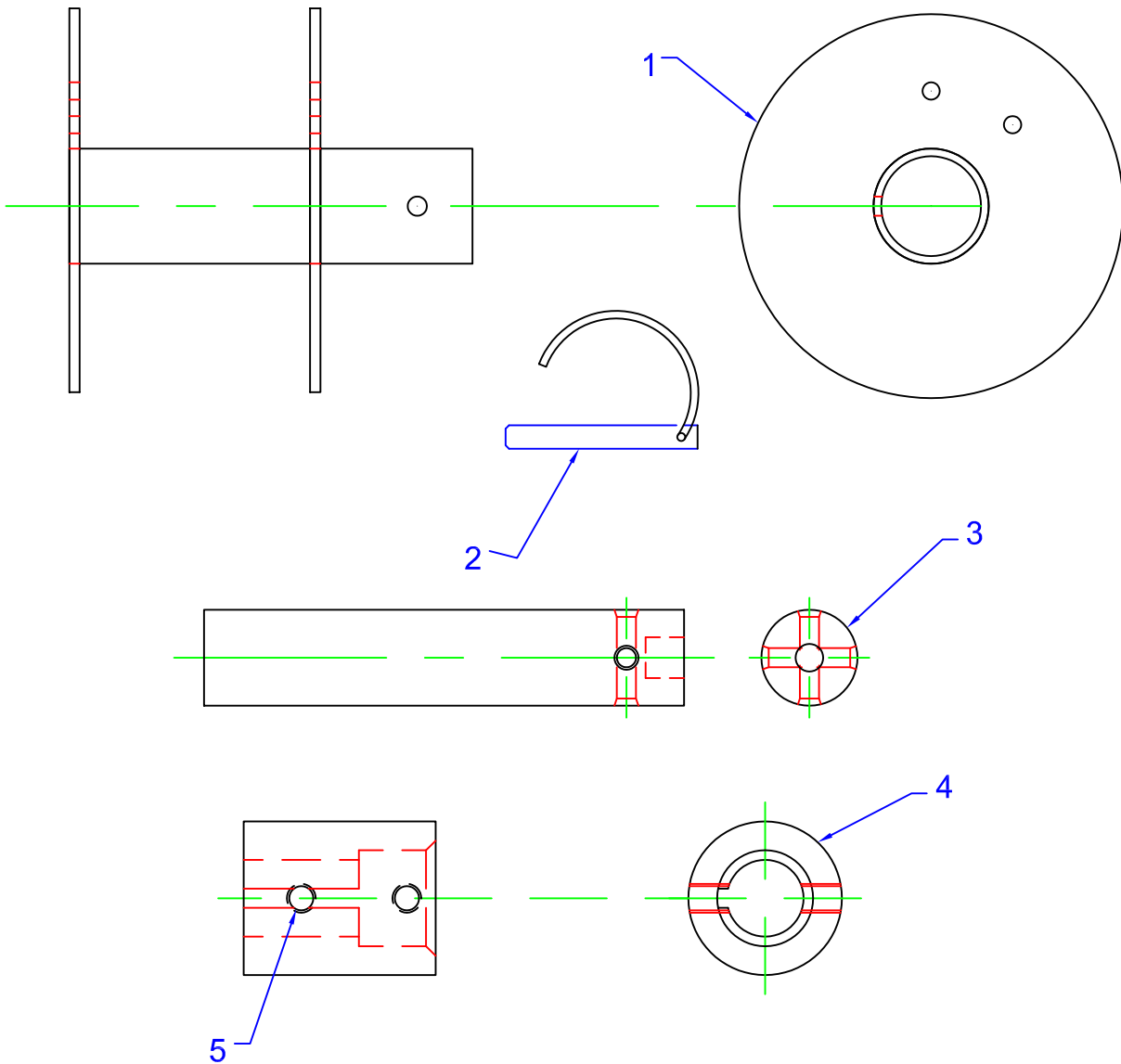
Parker Brand Pressure-Compensated Flow Control Valves



SPECIFICATIONS - ACCESSORY ITEMS

Winch: Hydraulic Winch

| ITEM | PART NO | DESCRIPTION | QUANTITY PER END FRAME |
|------|---------|----------------|------------------------|
| 1 | 580-300 | WINCH SPOOL | 1 |
| 2 | 046-820 | DETENT PIN | 1 |
| 3 | 580-302 | WINCH SHAFT | 1 |
| 4 | 580-70 | MOTOR COUPLING | 1 |
| 5 | 028-450 | SET SCREWS | 4 |



SPECIFICATIONS – ACCESSORY ITEMS

Hydraulic Winch Assembly

WARNING

Failure to observe these instructions could lead to severe injury.

General Safety:

- Take time to fully read and understand all instructions regarding the hydraulic winch.
- Always use factory-approved switches, controls, accessories, and installation components.
- Always keep loose clothing away from operating winch.
- Never modify the cable hook by welding or attaching to it.
- Never obscure warning or instruction label.
- Never use cable as a ground for welding.
- Always turn off engine before performing any maintenance or repair, or before working around winch spool.
- Never work on or around winch spool when winch is under load.
- Always refer repairs to qualified technicians.
- Never machine or weld any part of winch.
- Never use winch to hold loads.
- Never use as a hoist for lifting, supporting, or transporting people, or over areas where people are present.
- Always use Grade 5 or better hardware.
- Never weld bolts and never use longer bolts than those supplied from factory.

Installation Safety:

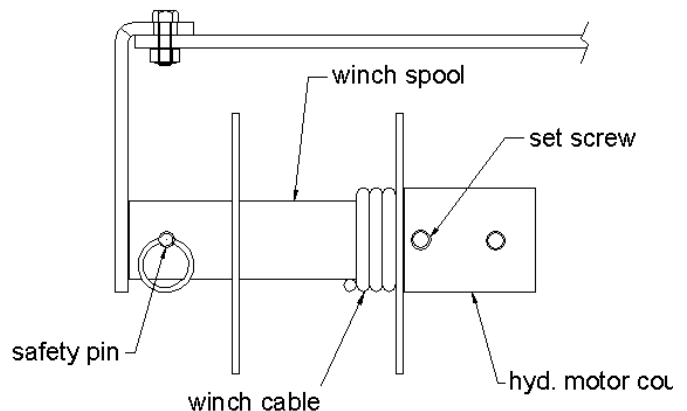
- Always take your time when rigging for a winch pull.
- Always wear heavy gloves when handling cable. Do not allow cable to slide through hands.
- Never put finger through hook. If fingers should become trapped in hook, they can be lost.
- Always choose a stationary object as an anchor.
- Always choose an anchor that is sufficiently strong to withstand the maximum pulling capacity of your winch.
- Never winch with less than 3 wraps of cable around the spool. The cable could come loose from the spool.
- Always hook the cable as low as possible.
- Always be certain the hook will not slip.
- Always lay a heavy blanket or tarp over cable near hook end, when operating winch under heavy loads. If cable or hook failure should occur, cloth will help prevent rope whipping.
- Always, prior to using winch, remove any obstacle that may interfere with safe operation.
- Always pre-stretch cable and re-spool under load before use.
- Never step over cable or allow anyone else to do so.

Winch Safety:

- Always require operator and bystanders to be aware of cable during winch operation.
- Always inspect winch installation and cable condition before operating winch. If cable has a fray, kink, or other damage, it must be replaced immediately. Loose or damaged winch installation must be corrected immediately.
- Never hook cable back onto itself. This damages the cable.
- Never exceed winch, cable, or accessory's rated capacity.
- Always keep the cable in close alignment with the spool.
- Always keep others away from cable, hook, and spool while winch is in operation.
- Never operate with wet or oily hands.
- Never guide wire rope onto drum with hands.
- Never allow shock loads to be applied to winch or cable.
- Never leave the winch controls unattended while in operation.
- Never touch the cable or hook while in tension or under load.
- Always stand clear of cable and spool during winch operation.
- Never operate this winch when under the influence of drugs, alcohol, or medication.

Step by Step Procedure: To Prepare Winch for Operation:

- 1) Remove safety pin.
- 2) Pull cable out to desired length
- 3) Keep five (5) wraps of cable around spool
- 4) Install cable hook to an object secure enough to withstand winch forces.
- 5) Turn spool by hand to remove slack in cable.
- 6) Align holes in spool; install safety pin.
- 7) Ensure cable is free of debris and obstacles.
- 8) Check cable. The cable should be neatly wound around the spool.
- 9) Check that control valves are in the off position before starting engine.



SPECIFICATIONS – ACCESSORY ITEMS

Spare parts kit # 580-900 (for hand winch units)

| Parts Included: | <u>p/n</u> | <u>qty.</u> |
|----------------------|------------|-------------|
| turnbuckle w/locknut | 580-27 | 1 |
| lap plate | 580-28 | 2 |
| saddle | 580-016 | 2 |
| safety link | 580-179 | 2 |
| hex head cap screw | 020-593 | 8 |
| set screw | 028-450 | 4 |
| lock nut, 1/2" | 040-450 | 8 |

Spare parts kit # 580-901 (for hydraulic winch units)

| Parts Included: | <u>p/n</u> | <u>qty.</u> |
|--------------------------------|------------|-------------|
| turnbuckle w/locknut | 580-27 | 1 |
| lap plate | 580-28 | 2 |
| saddle | 580-016 | 2 |
| safety link | 580-179 | 2 |
| hex head cap screw | 020-593 | 8 |
| set screw | 028-450 | 4 |
| lock nut, 1/2" | 040-450 | 8 |
| pump drive coupling, 3/4" bore | 580-101-1 | 1 |
| pump drive coupling 1/2" bore | 580-101-2 | 1 |
| pump drive spider | 580-101-3 | 1 |
| safety snap pin | 046-820 | 2 |

NOTE: PARTS MAY BE ORDERED SEPERATELY

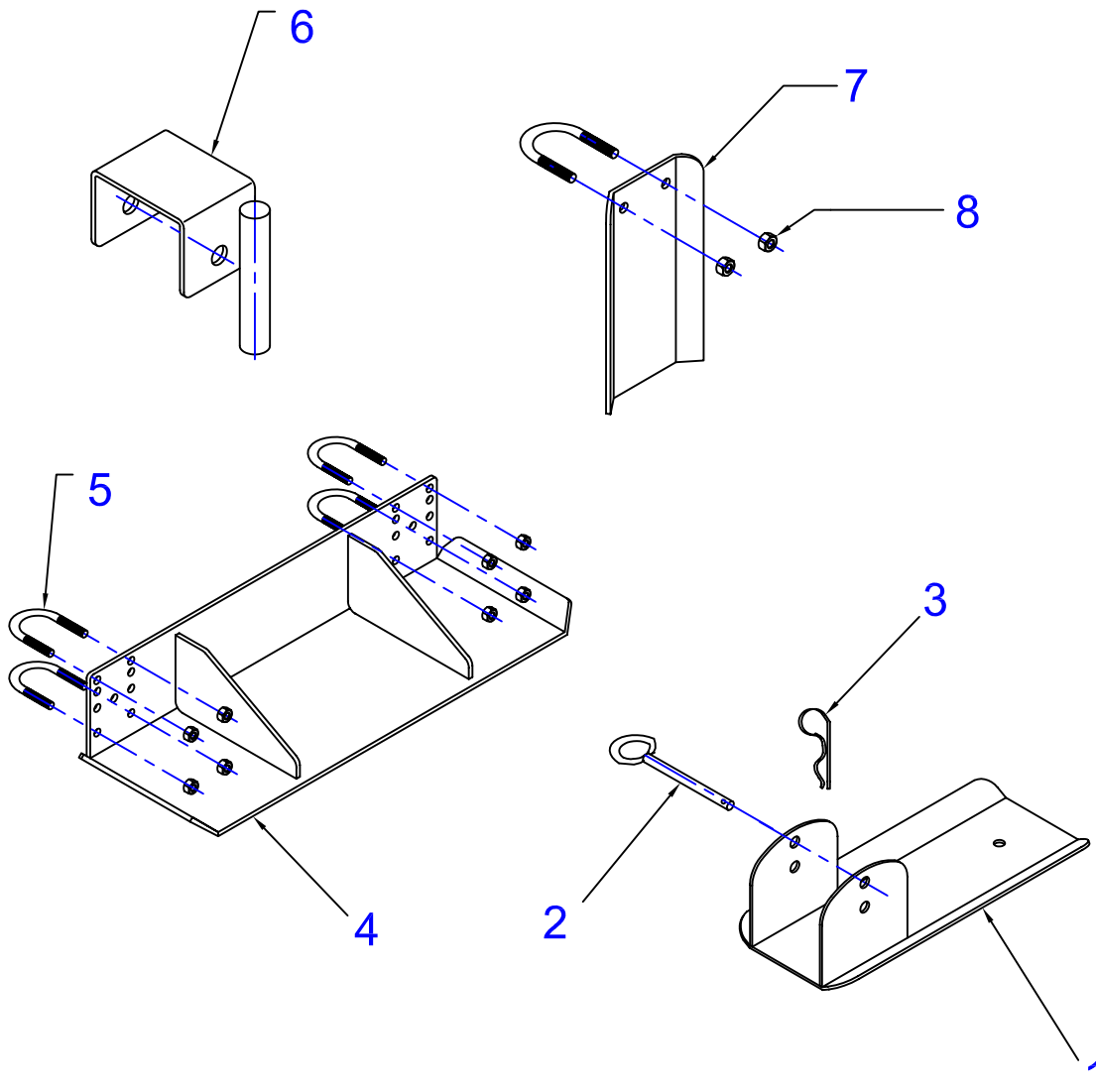
SPECIFICATIONS - ACCESSORY ITEMS

Offset Plates & Guide Plates:

| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
|------|-------------|---------------------|-------------|
| 1 | 580-99 | SKI | 2 |
| 2 | 046-655 | CLEVIS PIN | 2 |
| 3 | 580-147 | HAIR PIN | 2 |
| | 046-238 | COTTER PIN | 2 |
| 4 | 580-62 | OFFSET PLATE | AS REQUIRED |
| 5 | 044-138 | U-BOLT | AS REQUIRED |
| | 040-438 | SELF LOCK NUT | AS REQUIRED |
| 6 | 580-148 | INSIDE GUIDE PLATE | AS REQUIRED |
| 7 | 580-122 | OUTSIDE GUIDE PLATE | AS REQUIRED |

SPECIFICATIONS - ACCESSORY ITEMS

Offset Plates & Guide Plates:



SPECIFICATIONS - ACCESSORY ITEMS

Transportation Unit:

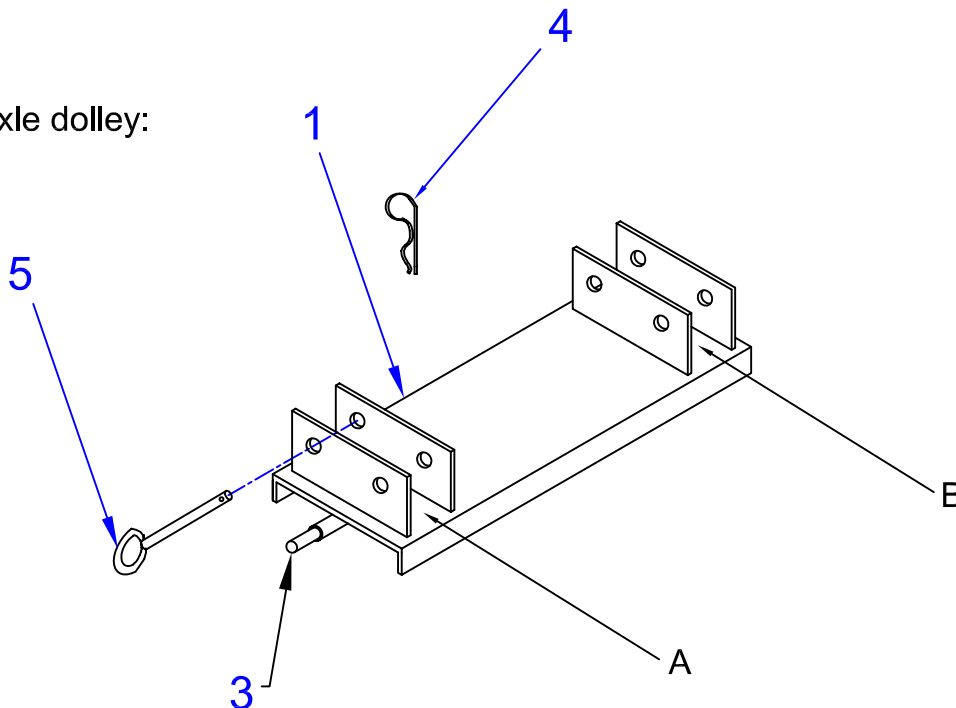
| ITEM | PART NO | DESCRIPTION | QUANTITY |
|------|---------|----------------------|----------|
| 1 | 580-105 | TRANSPORT MOUNT | 1 |
| 2 | 580-184 | TIRE & RIM* | 2 |
| 3 | 580-398 | HUB ASSEMBLY | 2 |
| | | HUB | 2 |
| | | SEAL | 2 |
| | | INNER BEARING | 2 |
| | | OUTER BEARING | 2 |
| | | SPINDLE NUT & WASHER | 2 |
| | | CAP | 2 |
| 4 | 580-147 | CLIP (hairpin) | 4 |
| 5 | 046-655 | CLINCH PIN | 4 |
| | | | |

*not shown in drawing

Installation:

Transportation Unit attaches to any screed section with four clinch pins. Place finishing tubes through locations A and B, then insert clinch pins through holes. Secure clinch pins with hairpins.

Single axle dolley:



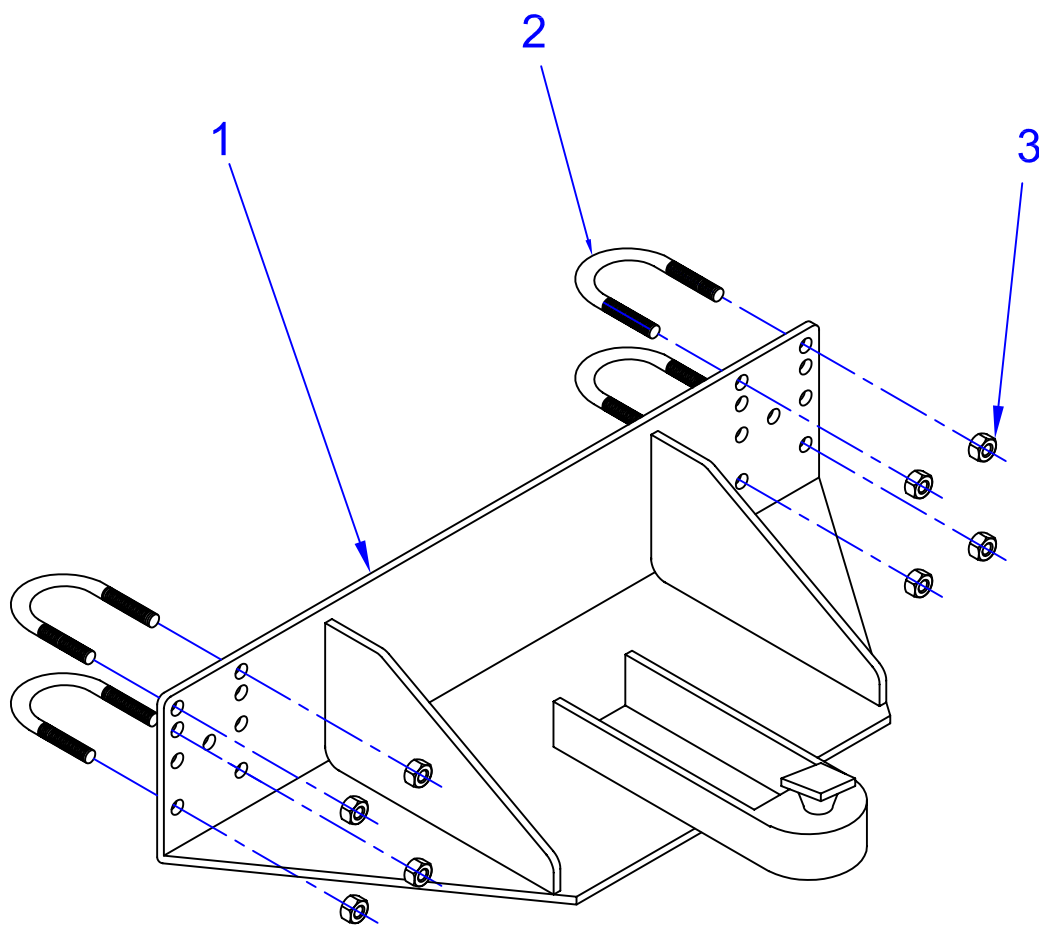
SPECIFICATIONS - ACCESSORY ITEMS

Transportation Unit: Tongue Assembly

| ITEM | PART NO | DESCRIPTION | QUANTITY |
|------|---------|--------------------|----------|
| 1 | 580-190 | TONGUE SUBASSEMBLY | 1 |
| 2 | 044-138 | U-BOLTS | 4 |
| 3 | 040-438 | 3/8" SELF LOCKNUT | 8 |

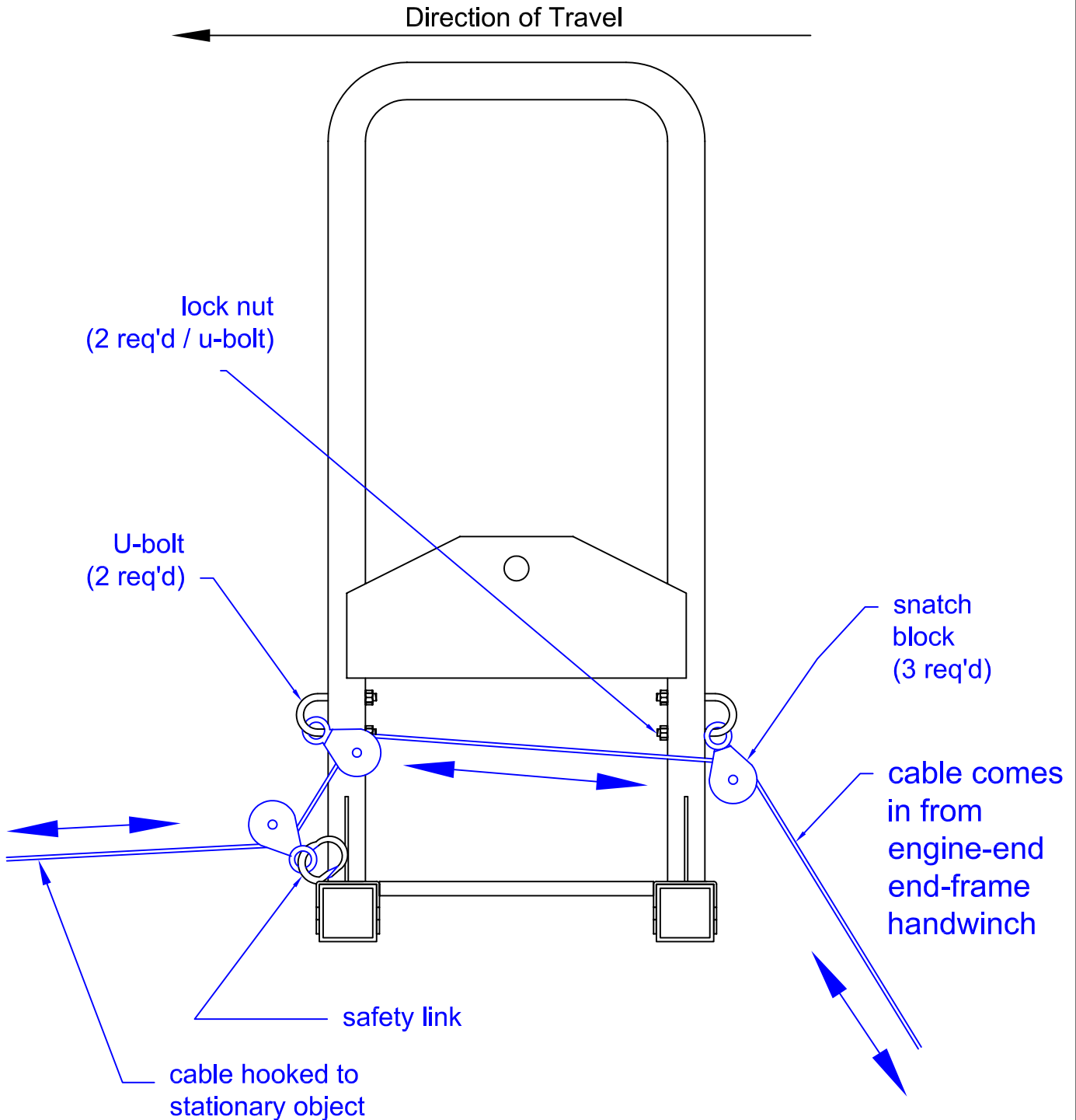
Installation:

Tongue assembly attaches to End Frame with four U-bolts.



SPECIFICATIONS - ACCESSORY ITEMS

Winching from One End: hand winches

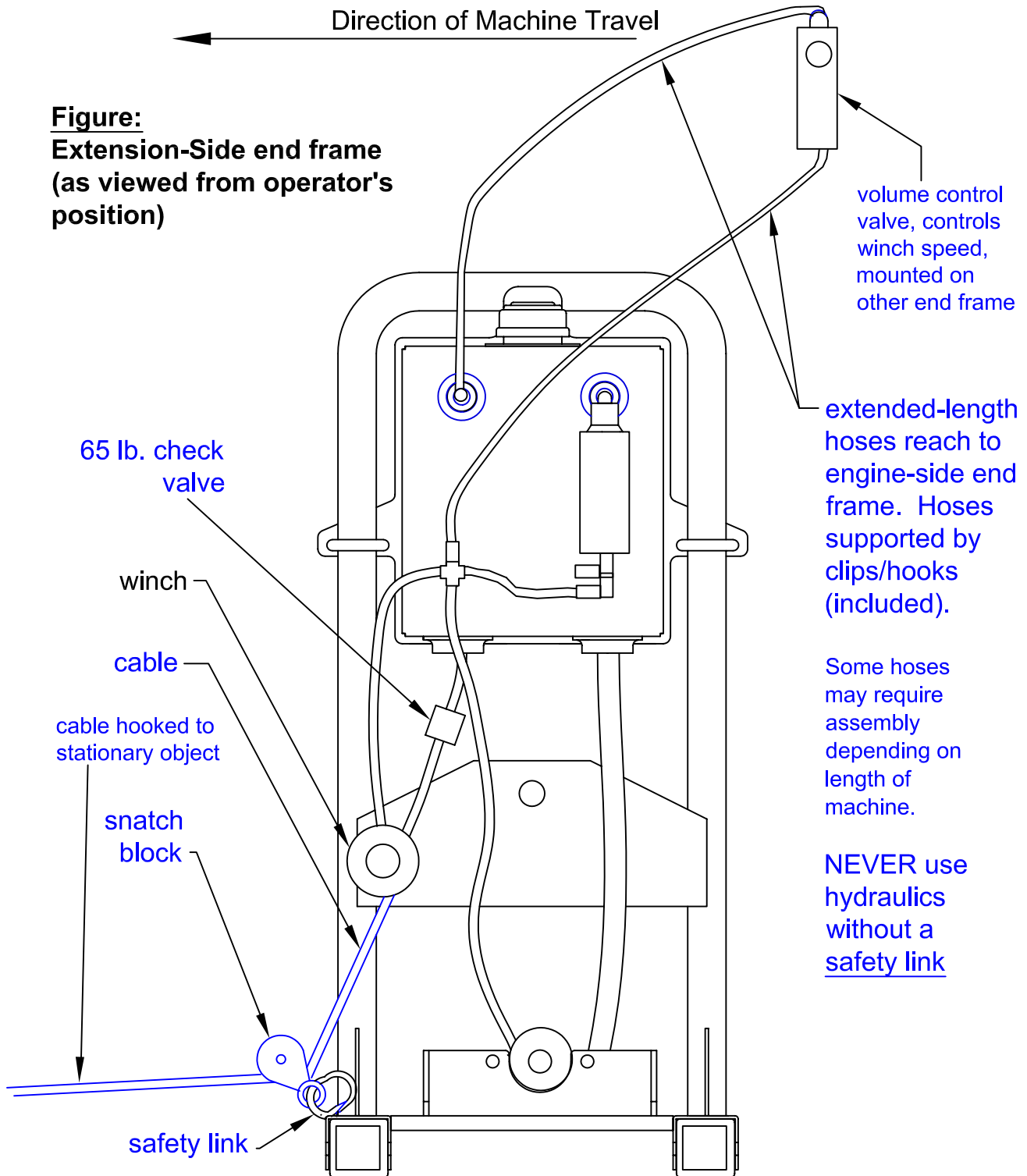


SPECIFICATIONS - ACCESSORY ITEMS

Winching from One End: hydraulic winches

← Direction of Machine Travel

Figure:
Extension-Side end frame
(as viewed from operator's position)



SUPPLEMENTS

Extra Safety Link:

We have included an extra safety link, in order to emphasize its importance in protecting the machine and its operators from damage and injury.

If the machine becomes caught, stuck, or held in place, and the winches continue to turn, the safety link is designed to uncoil itself, momentarily releasing the machine from the tension implied by the winch. **The winch operation must cease immediately after the safety link uncoils.** Some examples of catch points include 1) forms not lining up correctly, 2) stakes sticking up too high, 3) manhole covers, 4) plumbing stacks, and 5) protruding re-bar.

WARNING: The absence of a safety link can result in serious injury to workers, and significant damage to the machine. Do not remove the Safety Link. Do not modify the Safety Link (for example, do not weld the link closed).

If the machine becomes caught, and there is no safety link, the cable tension may become so great that the cable or cable-keeper may fail. This could result in a violent whip of the stainless steel cable, exerted by hundreds of pounds (or more) of force.

To avoid injury, follow these operating guidelines:

- 1) Always inspect the cable and hook before each use to make sure they are not damaged. Replace the cable if it has one or more frays or kinks. If the cable or hook breaks, the cable can act like a whip, and can inflict serious injury to anyone in the cable's path.
- 2) Never stand alongside the winch cable.
- 3) Never guide the winch cable with your hands.
- 4) Never operate with wet or oily hands.
- 5) Never leave winch unattended, as unauthorized persons may attempt to operate the winch, thereby creating an unsafe condition.
- 6) Always keep loose clothing away from operating winch.
- 7) Always keep at least three (3) wraps of cable around spool.
- 8) Do not modify the cable hook by welding or attaching anything to it.

NOTE: IF A SAFETY LINK UNCOILS FOR ANY REASON, WE RECOMMEND REPLACEMENT.

- ✓ ALWAYS HAVE A SPARE WITH YOU.
- ✓ USE NO SUBSTITUTES.
- ✓ NEVER USE A THREADED CHAIN LINK, SPRING-LOADED CLIP, OR ANY OTHER DEVICE.
- ✓ ORDER ADDITIONAL SAFETY LINKS AT (414)964-4550

SUPPLEMENTS

Warranty Card Instructions :

We have included a Warranty Activation Card with your Speed Screed Unit. It should be attached to the engine. In order to activate your warranty, you must submit the requested purchaser information to Metal Forms Corporation. If you are missing your Warranty Activation Card, use the one at the bottom of this page. You may fax it in, call it in, or mail it in.

FAX: 414-964-4550

PHONE: 414-964-4550

MAIL: 3334 North Booth Street, Milwaukee, WI 53212

- ✓ WE MAY NOT BE ABLE TO GRANT WARRANTY CLAIMS IF THE ACTIVATION IS NOT ON FILE.

Warranty Activation Card

Company Name: _____

Company Address: _____

Date of Purchase: _____

Name of Dealer: _____

Serial #: _____

SUPPLEMENTS

Additional Field Instructions Available :

The following instructions are available for immediate faxing to your location. Call us at (PHONE) 414-964-4550 or FAX: 414-964-4550.

| Instruction # | Title | Abstract |
|---------------|---|--|
| MN-02-15 | How to move an End Frame from one section to another. | End frames can be moved from the non-engine-end of a <i>section</i> , to the end of any other <i>section</i> . |



SUPPLEMENTS

Most Common Replacement Parts for Engines :

The following parts are available for shipping to your location. Call us at 414-964-4550 or FAX: 414-964-4550.

FOR 5.5 H.P. HONDA GX160

| | Part # | Description |
|---|---------|--|
| √ | 195-690 | Fuel Tank #17510-ZE1-020ZB |
| | 195-132 | Spark Plug #98079-55846 |
| | 195-185 | Dip Stick #15600-ZE1-000 |
| | 195-176 | Oil Fill Cap #15600-ZG4-003 |
| | 195-180 | Oil Fill Cap Gasket #15621-896-010 |
| | 195-675 | Gas Cap #17620-ZH7-013 |
| | 195-332 | Recoil Assy. (starter assy.) #28400-ZH8-0132ZA |
| | 195-543 | Air Filter Assy. #17210-ZE1-505 |
| | 280-52 | Clutch |

FOR 8 H.P. HONDA GX240

| | Part # | Description |
|---|---------|------------------------------------|
| √ | 195-681 | Fuel Tank #17510-ZE2-010ZA |
| | 195-132 | Spark Plug #98079-55846 |
| | 195-176 | Dip Stick #15600-ZG4-003 |
| | 195-177 | Oil Fill Cap #15600-735-003 |
| | 195-182 | Oil Fill Cap Gasket #15625-ZE1-003 |
| | 195-675 | Gas Cap #17620-ZH7-013 |
| | 195-318 | Recoil Assy. #28400-ZE2-W01ZA |
| | 195-523 | Air Filter Assy. #17210-ZE2-822 |
| | 580-64 | Clutch |

FOR 11 H.P. HONDA GX340

| | Part # | Description |
|---|---------|------------------------------------|
| √ | 195-673 | Fuel Tank #17510-ZE3-010ZA |
| | 195-132 | Spark Plug #98079-55846 |
| | 195-176 | Dip Stick #15600-ZG4-003 |
| | 195-177 | Oil Fill Cap #15600-735-003 |
| | 195-182 | Oil Fill Cap Gasket #15625-ZE1-003 |
| | 195-675 | Gas Cap #17620-ZH7-013 |
| | 195-340 | Recoil Assy. #28400-ZE3-W01ZA |
| | 195-535 | Air Filter Assy. #17210-ZE3-010 |
| | 580-64 | Clutch |

FOR 13 H.P. HONDA GX390

| | Part # | Description |
|---|--------|---------------------|
| √ | call | Fuel Tank |
| | call | Spark Plug |
| | call | Dip Stick |
| | call | Oil Fill Cap |
| | call | Oil Fill Cap Gasket |
| | call | Gas Cap |
| | call | Recoil Assy. |
| | call | Air Filter Assy. |
| | 580-64 | Clutch |