



READ MANUAL BEFORE OPERATING  
KEEP MANUAL FOR FUTURE REFERENCE

# MACHINE MANUAL

★ BUILT USA TOUGH ★

DM30



RIGHT IN THERE WITH YOU.



DURACABLE®  
— MANUFACTURING CO —

# DM30 MACHINE MANUAL

## TABLE OF CONTENTS

2	Warranty, Parts and Service
3	Safety Labels
4-7	DM30 Information and Specifications
8-11	DM30 Machine Schematics and Parts List
12-13	DM30 Reel Schematics and Parts List
14-15	DM30 Wheel and Sheave Disc/Guard Mounting Instructions
16-20	PCFR Information, Schematics and Parts List
21-22	DM30 Electrical Schematics and Safety Information
23	How to Splice DuraFlex® Cable and How to Bond End Fittings

### WARRANTY

Duracable Manufacturing Company warrants the DM30 machine to be free from defects in material and workmanship for a period of two years from the date of purchase. Warranty service can be obtained by contacting Duracable Manufacturing Company at the address listed below. If a defect is covered by warranty, Duracable Manufacturing Company will repair or replace the defective machine or component without charge for labor or materials (freight is not included).

Warranty of the machine is limited to the original purchaser. Duracable Manufacturing Company assumes no responsibility for damage or injury from accident, neglect, abuse, misuse or from damage due to repair or alterations by others. This warranty does not cover damage to the machine from use of parts other than genuine Duracable brand parts.

Duracable Manufacturing Company's sole obligation and the original purchaser's sole remedy under this warranty shall be for repair or replacement as described above. All other warranties, expressed or implied, including but not limited to, implied warranties of merchantability and fitness for a particular purpose, are disclaimed. In no event shall Duracable Manufacturing Company be liable for any incidental or consequential damages.

### PARTS AND SERVICE INSTRUCTIONS

Parts can be purchased from Duracable Manufacturing Company. Service work is also available. Service is performed by trained factory personnel. Machines sent to the factory for evaluation and repair can be estimated and quoted prior to service work. When sending a machine, be sure to include the return address and include instructions on how the repair should be handled. Instructions can either be included with the machine, explained to your account manager over the phone (800-247-4081), or faxed (515-223-6109).

### IMPORTANT

Keep this manual in a safe, convenient place for future reference. Important information about this machine, its diagrams and warranty information are included in this manual.

Serial Number:

Date of Purchase:

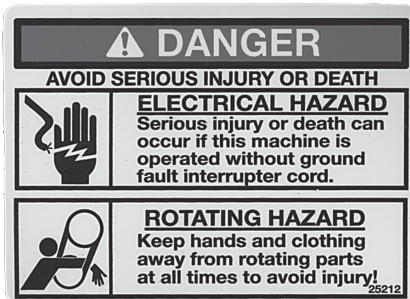
Duracable Manufacturing Company  
300 Ashworth Road • West Des Moines, IA 50265

## SAFETY LABELS

Duracable Manufacturing uses three signal words on its safety labels and instructions. These words have the following definitions:

### ⚠ DANGER

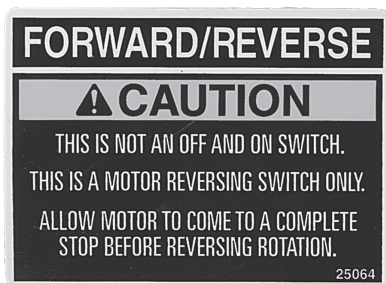
A 'Danger' label indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situation, typically for machine components that, for functional purposes, cannot be guarded. The word 'danger' will be in white letters on a red background.



### ⚠ CAUTION

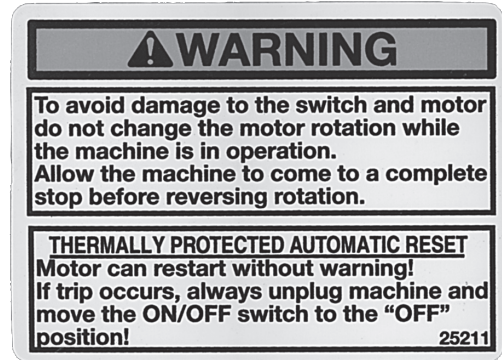
A 'Caution' label indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. The word 'caution' will be in black letters on a yellow background.

The safety label format includes the signal word and symbol, a picture (not required), and the message.



### ⚠ WARNING

A 'Warning' label indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices. The word 'warning' will be in black letters on an orange background.



## INFORMATION AND SPECIFICATIONS

### Safe Machine Operation

Read this machine manual thoroughly before assembling or operating the machine. Become familiar with its controls and proper use before operating. Keep this manual in a handy place for reference and parts replacement referral. This machine is designed specifically for the purpose of opening and cleaning drains. Use it for this purpose - do not use it for other purposes.

Use gloves to protect your hands. Wear them to feed and retrieve cable. Use a material that cannot be easily grabbed by the cable. Most leather gloves and certain rubber gloves work well. Duracable Manufacturing has each type available through the Duracable Product Catalog. Also, avoid the use of loose-fitting clothes or jewelry when operating this machine. Keep guards in place to protect the operator from the electric motor and electrical wiring. These guards are for safety protection and must be in place when running the machine.

Each machine is equipped with an air foot pedal. Use of the air foot pedal to operate the machine is required for safe operation. This allows the machine operator to turn the machine on or off with the foot while keeping both hands on the cable. Select a work area free from obstruction with room to work. Keep the machine within three feet of the pipe opening, allowing only enough room to work. This is required to shorten the length of exposed cable, thus providing maximum control in high-torque situations. Take a position that is comfortable to the left or right side of the machine for feeding or retrieving cable. For high work openings, the machine can be placed on its back as conditions require.

When performing a job, use the smallest blade first. Rinse the pipe after each blade is run through the line in order to clean out loosened debris. Then follow with the increasing sizes of blades until the size used is one that actually scrapes the side of the pipe or sewer. The blades are flexible and can be compressed to enter most cleanout openings. Centrifugal force created by the spinning cable forces the blades to expand to their natural diameter or to the walls of the pipe. It is advisable to maintain a very keen cutting edge on the blades at all times. Place two hands on the cable between the outlet of your machine and the cleanout and keep them there at all times during operation. Your hands placed in the proper position will provide a guide for the cable.

As the blade makes contact with an obstruction in the line, it stops the blade from turning and builds torque in the cable. Do not permit the blade to get hung up in an obstruction for more than three seconds. Torque buildup can be both helpful and dangerous. It is helpful when pulled from the obstruction in a timely manner. When the cable is pulled away, the tension is released and the blade turns at a high speed. When the blade is free, feed it back into the obstruction to make use of the built-up power to clean the line. It is dangerous because excess torque can cause looping over of the cable. Serious injury to fingers and hands is possible unless precautions are observed.

When retrieving cable from the line, feed the cable into the machine until the blade is close to the cleanout opening. Shut off the machine and hand-feed the remaining cable into the machine.

Use of a Power Cable Feed and Return (PCFR) will reduce stress and strain on both the drain cleaning machine and the service technician. Duracable Manufacturing recommends a PCFR unit be used on every DM30 machine. This unit mounts in front of the head casting assembly and with movement of a handle will feed or retrieve cable from a sewer line. Mounting time for the unit is minimal.

### Unpacking Your Machine

The DM30 is shipped to you with the following parts: the base machine, a reel, a revolving arm, a floating ring, and a floating ring attachment. When it arrives, remove the parts immediately and inspect for damage. If any of the contents are damaged, contact your motor freight carrier immediately.

### Moving Your Machine

Break the machine down into lighter-weight components to move it to and from the job site. To do this, wrap the GFCI cord and the air foot pedal cord in a convenient spot on the machine, remove the revolving arm from its assembled position (leave the cable inside it and keep it with the reel), and remove the reel assembly. Various accessories are available from Duracable Manufacturing to assist and protect the operator during the moving process.

### Assembling Your Machine

- Set the base machine in a down position on its rails
- Pick up the reel with the cone shape to the front of the machine (toward the switches), and slide it onto the reel shaft. Be sure the orange drive lugs slide into the openings in the back of the reel and engage fully.
- Place the floating ring inside the reel and mount it to the tail piece or cable using the floating ring attachment. Attach a tail piece (10' of cable) to the floating ring attachment.
- Feed the tail piece through the revolving arm until about 1" of the cable shows.
- Position the revolving arm inside the reel.
- Place the revolving arm with cable extended into the rear side of the head bearing.
- Position the extension shaft on the revolving arm into the center of the reel bearing.
- Slide the tail piece through the head bearing. Attach the full length of cable to the tail piece and feed cable back into the machine.

## INFORMATION AND SPECIFICATIONS

### Lubrication Maintenance

Caution: Do not over oil these points.

- Head Bearing Assembly - The roller bearing, located in the front assembly, requires monthly lubrication. Use a grease gun to lubricate the zerk fitting with multipurpose grease. A lithium-base grease is recommended.
- Reel Shaft and Reel Bearings - The reel shaft requires monthly lubrication. Use a multipurpose grease or heavy oil. Keeping the shaft lubricated means the reel will slide freely and will not 'freeze' to the shaft and need to be repaired. The reel bearings require some light oil monthly.
- Wheels - A light oil on the axle every month keeps the wheels rolling freely instead of 'freezing' to the axle.

### Reel Attachment

The reel you select is set in place and slipped onto the reel shaft. Drive lugs are mounted on the drive plate and slip through the opening in the back of the reel. The reel is held in place by the revolving arm.

### Cable Care Instructions

Take care of your cable for optimum performance. The recommended care procedure is as follows:

- Break in a new cable. To relieve the stress on new cable that has been coiled since its manufacture, put it in a clean line and run it for 10 minutes.
- Oil the cable once a week.
- Rinse the cable immediately after each use with the hottest water available. This is especially important if the cable was in acid or alkali during use.
- When one end of the cable begins to show wear, rewind and use the opposite end. (Tip: order the same kind of end fittings on both ends of the cable.)
- If the cable kinks, cut out the kink and splice the cable ends together.

## DM30

1/2 HP Motor

200 RPM

Belt Drive

21" Reel

5/8" x 100' Cable

Telescoping Handle

PCFR

2-Year Warranty

Continuous Weld  
Frame Construction

### USES:

2" to 6" lines,  
Residential, Roof Vents, Floor  
Drains, Light Commercial



DM30 SP with D1J1, 21" open spoke metal reel  
(standard package)



DM30 SPB with 21PRS, 21" enclosed  
polyethylene reel



# DM30 MACHINE MANUAL

## INFORMATION AND SPECIFICATIONS

### Frame

The DM30 is a powerful machine, constructed of durable materials and engineered with your safety in mind. The basic frame is constructed of aluminum alloy. This alloy is structurally as strong as steel. A double tube frame adds stability, yet the total weight of the machine, including the 21" reel and revolving arms, is only 75 pounds.

### Electrical Wiring

The machine's electrical wiring is ran through the top of the frame so normal wear will not expose the wiring. The Ground Fault Circuit Interrupter (GFCI) is built into the electrical outlet cord for added safety. The air foot switch is standard on the DM30. This switch allows the operator to turn the machine on and off with the foot while the hands stay on the cable.

### RPM/Drive

The Model DM30 features a 1/2 HP, 200 rpm Industrial Fractional Horse Power motor that easily tackles lines up to 6" in diameter with 1/2" or 5/8" cable.

### Front Assembly

The front assembly provides the housing for three switches: the on/off switch, the air foot switch, and the spring loaded on/off/reverse switch. The front control assembly is covered by a molded one-piece, high-impact polycarbonate cover. It is custom-fitted and bolted to the frame.

### Maneuverability

The DM30 has wheels for mobility and ground clearance as well as a telescoping handle. The wide wheels are standard and there are also optional narrow wheels.

### Cable and Reel Selections

The DM30 was designed to handle multiple reel sizes. These provide the operator with flexibility of cable size and length.



DM30 with D1J1, 21" open spoke metal reel.  
(See options on the next page.)

## MACHINE SPECIFICATIONS (APPROXIMATE)

Length of Machine with Wheels	40.25"
Width of Machine with Wheels	23.75"
Height of Machine with Wheels	20"
Weight of Machine	100 lbs
Weight of Narrow Wheels	13 lbs
Weight of Wide Wheels	12 lbs
Weight of PCFR	12 lbs
Line Size	2" to 6"

**RECOMMENDED USE:** residential lines, roof vents, floor drains and light commercial work

# DM30 MACHINE MANUAL

## INFORMATION AND SPECIFICATIONS

REELS			REEL ATTACHMENTS	FLOATING RINGS	FLOATING RING ATTACHMENTS	REVOLVING ARM	CABLES*	
Part #	Dimensions	Description	Part #	Part #	Part #	Part #	Part #	Dimensions
D1S1	19" Diameter	Open Spoke Metal Reel	D3L	D2JM D2JR	D3E D3R (male end) D3RJ (slip joint)	D8SL6	_50-090 _62-080	1/2" up to 90' 5/8" up to 80'
D1J1	21" Diameter	Open Spoke Metal Reel (standard)	D3	D2JM D2JR D2J1	D3E	D8K6S	_50-090 _62-080 _69-080	1/2" up to 90' 5/8" up to 80' 11/16" up to 80'
D1S1E	19" Diameter	Enclosed Metal Reel	D3S	D2JM D2JR	D3E D3R (male end) D3RJ (slip joint)	D8SL6	_50-090 _62-080	1/2" up to 90' 5/8" up to 80'
D1J1E	21" Diameter	Enclosed Metal Reel	D3S	D2JM D2JR D2J1	D3E	D8K6S	_50-090 _62-080 _69-080	1/2" up to 90' 5/8" up to 80' 11/16" up to 80'
19PRS	19" Diameter	Enclosed Polyethylene Reel	N/A	N/A	N/A	D8SL6	_50-090 _62-080	1/2" up to 90' 5/8" up to 80'
21PRS	21" Diameter	Enclosed Polyethylene Reel	N/A	N/A	N/A	61RAS	_50-090 _62-080 _69-080	1/2" up to 90' 5/8" up to 80' 11/16" up to 80'

- \* Add **CH** in front of cable part # for Hollow Core.
- \* Add **CI** in front of cable part # for Inner Core.
- \* Add **CC** in front of cable part # for Cable-in-Cable (11/16" only).
- \* Maximum length of cable is not always the recommended length.
- \* Custom lengths are available.

### MACHINE PACKAGES

Part #	Horse Power	RPM	Reel	Cable
DM10 SP	1/2 HP Motor	200 RPM	D1J1	5/8" x 100'
DM10 SPB	1/2 HP Motor	200 RPM	21PRS	5/8" x 100'

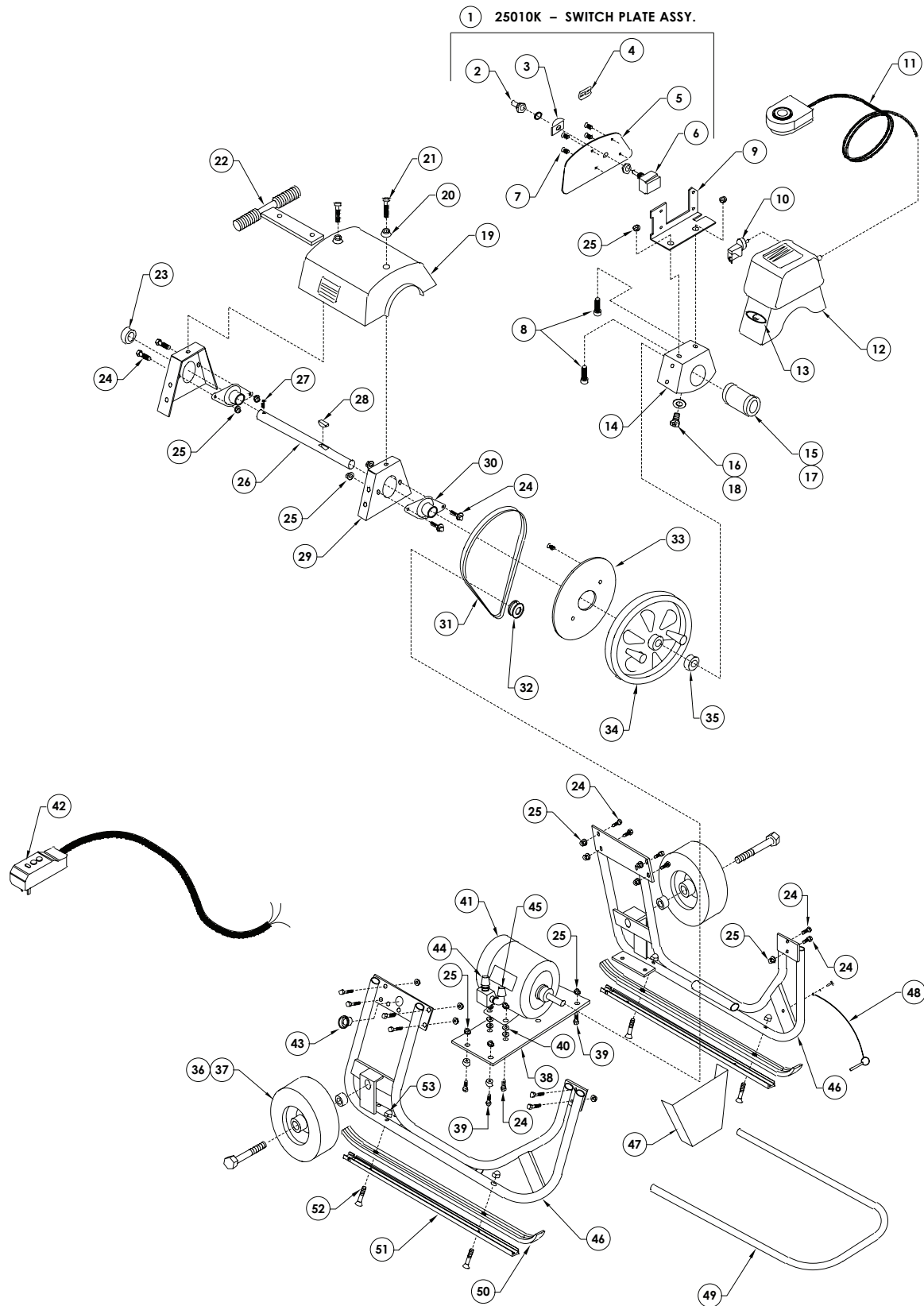


The DM30 SPB with 21PRS, 21" enclosed polyethylene reel

### MACHINE ACCESSORIES / REPLACEMENT PARTS

Part #	Description
61005K	1/2 HP Motor Kit
PCFR	Power Cable Feed and Return
PCFR80K	PCFR Adapter Kit
DRC19	Cover for 19" Open Spoke Reel (D1S1)
DRC21	Cover for 21" Open Spoke Reel (D1J1)
WWK10	Wide Wheels (10" diameter x 3-1/2" wide)
NWK10	Narrow Wheels (10" diameter x 2-1/4" wide)
61052K	Stair Guide Kit
DKIT2	Blade Kit


## DM30 SCHEMATIC

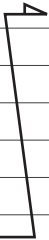
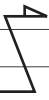



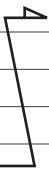





# DM30 MACHINE MANUAL


## DM30 SCHEMATIC

 The entire line item in **bold** identifies the name of an entire assembly. The “Z” shaped arrow identifies all the parts that make up that assembly. You can purchase the entire assembly, or just the individual parts.

ITEM	QTY.	PART#	DESCRIPTION
<b>1</b> 	<b>1</b>	<b>25010K</b>	<b>Switch Plate Assembly</b>
2	1	ECT26	Rubber Switch Boot
3	1	25015	Switch Guard
4	1	25065	Decal, Forward/Off/Reverse
5	1	25010	Switch Plate
6	1	25005	Detent Switch, Wired with Jumpers
7	4	PHSC14	#10-24" x 1/2" Pan Head Machine Screw
8	2	SHCS11	5/16"-18 x 1" Socket Head Cap Screw
9	1	25115	Switch Bracket
10	1	25061	Air Foot On/Off Switch
<b>11</b> 	<b>1</b>	<b>25073K</b>	<b>Foot Pedal Assembly</b>
	1	25073	Foot Pedal with 8' Tubing, Metal Housing
	1	HCL8	Clamp, Constant Tension
<b>12</b> 	<b>1</b>	<b>25020K</b>	<b>Switch Housing Assembly with Decals</b>
	1	25020	Switch Housing
	1	25015	Switch Guard
	1	25067	Decal, Foot Switch Danger
13	2	D25000	Decal, Machine Logo
14	1	25100	Head Casting
15	1	25106	Head Bearing, Nylatron Assembly
<b>16</b> 	<b>1</b>	<b>SHCS15</b>	<b>3/8"-16 x 3/4" Socket Head Cap Screw</b>
	1	WA10	3/8" Split Lock Washer
17	1	25105	Head Bearing, Steel
<b>18</b> 	<b>1</b>	<b>25110</b>	<b>Grease Fitting</b>
	1	CXA	Adapter
	1	ZERK2	1/4"-28 Straight Grease Zerk
	1	WA12	13/32" x 13/16" x 1/16" Zinc Flat Washer
<b>19</b> 	<b>1</b>	<b>25030K</b>	<b>Top Cover with Decals</b>
	1	25030	Top Cover
	1	25063	Decal, Guard Danger
	1	25066	Decal, Step Warning
	1	25068	Decal, Electrical Danger
20	2	25130	Bushing, Top Cover
21	2	SHCS11	5/16"-18 x 1" Socket Head Cap Screw
<b>22</b> 	<b>1</b>	<b>25050</b>	<b>Vertical Support with Grips</b>
	2	PH-1G	Handle Grip, Black
23	2	25125	Collar, Reel Shaft

# DM30 MACHINE MANUAL


## DM30 SCHEMATIC












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ITEM	QTY.	PART#	DESCRIPTION
24	20	FLSC1	5/16"-18 x 3/4" Hex Head Flange Screw
25	24	FLNUT3	5/16"-18 Hex Flange Nut, Locking
26	1	25140	Shaft, Reel
27	1	FILHMS1	#10-24 x 3/8" Fillister Machine Screw
28	1	KEY6	1/4" x 1/37" Square Key
29	2	25095	Mounting Plate, Bearing
30	2	SB5	Bearing, Reel Shaft
31	1	61010C	Belt, 4L x 44
32	1	25085	Sheave, 4L x 1-3/4" outside diameter
33	1	61008	Guard, Sheave
<b>34</b>	<b>1</b>	<b>61010B</b>	<b>Sheave, 4L x 13-1/4" outside diameter Assembly</b>
	2	25090	Drive Lug Assembly
	1	25090A	Drive Lug
	1	MM4	Drive Lug Cap, Red
	1	WA10	3/8" Split Lock Washer
35	1	25120	Bushing, Reel Shaft
<b>36</b>	<b>1</b>	<b>NWK10</b>	<b>Narrow Wheel Kit</b>
	2	JWKN	Wheel, 10" Narrow Solid
	2	HHCS27	3/4"-10 x 5" Hex Head Cap Screw
	2	HXNUT17	3/4"-10 Hex Nut
	2	WA18	Bushing, Narrow Wheel
	2	CPSS3	1/4" - 20 x 1/4" Cup Point Set Screw
<b>37</b>	<b>1</b>	<b>WWK10</b>	<b>Wide Wheel Kit</b>
	2	JWKW	Wheel, 10" Wide Semi-Pneumatic
	2	HHCS28	3/4"-10 x 6" Hex Head Cap Screw
	2	HXNUT17	3/4"-10 Hex Nut
	2	25145	Bushing, Wide Wheel
	2	CPSS3	1/4" - 20 x 1/4" Cup Point Set Screw
38	1	61030	Mounting Plate, Motor
39	4	FLSC9	5/16"-18 x 1" Hex Head Flange Screw

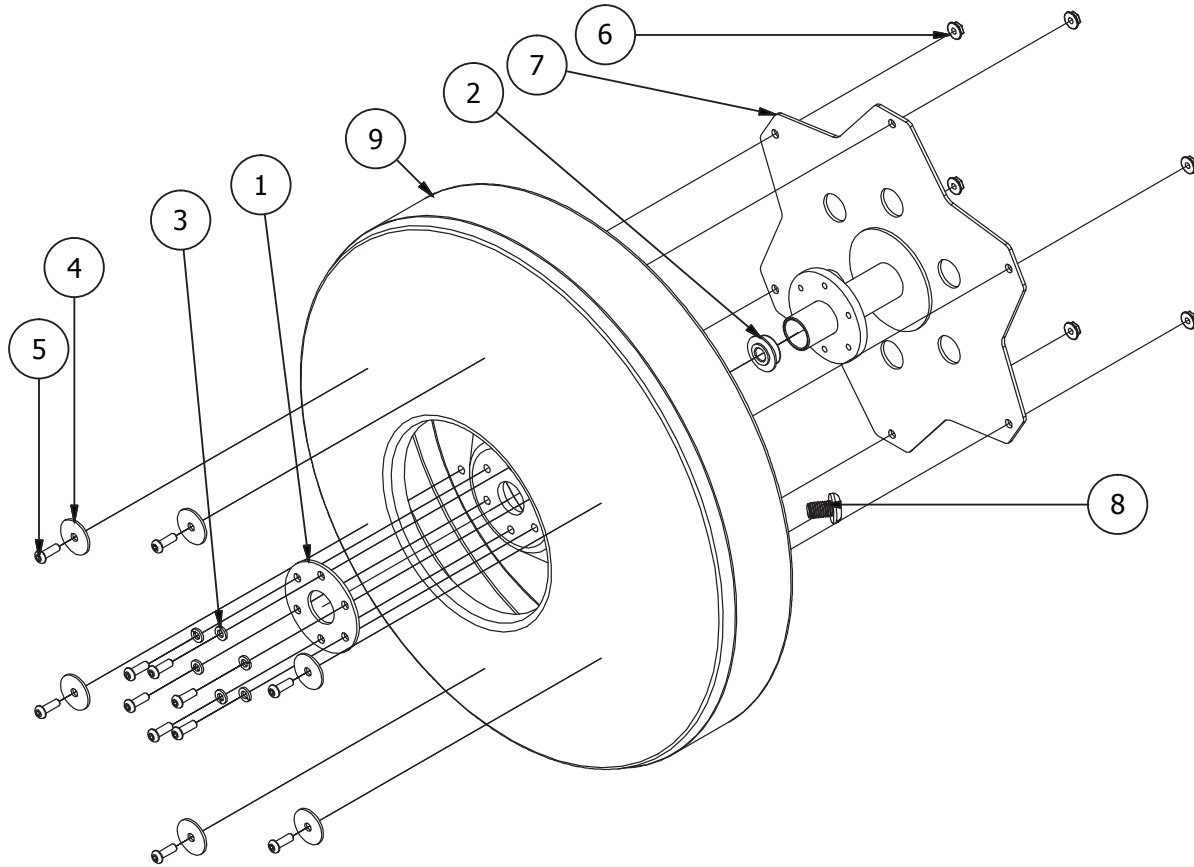
# DM30 MACHINE MANUAL

## DM30 SCHEMATIC

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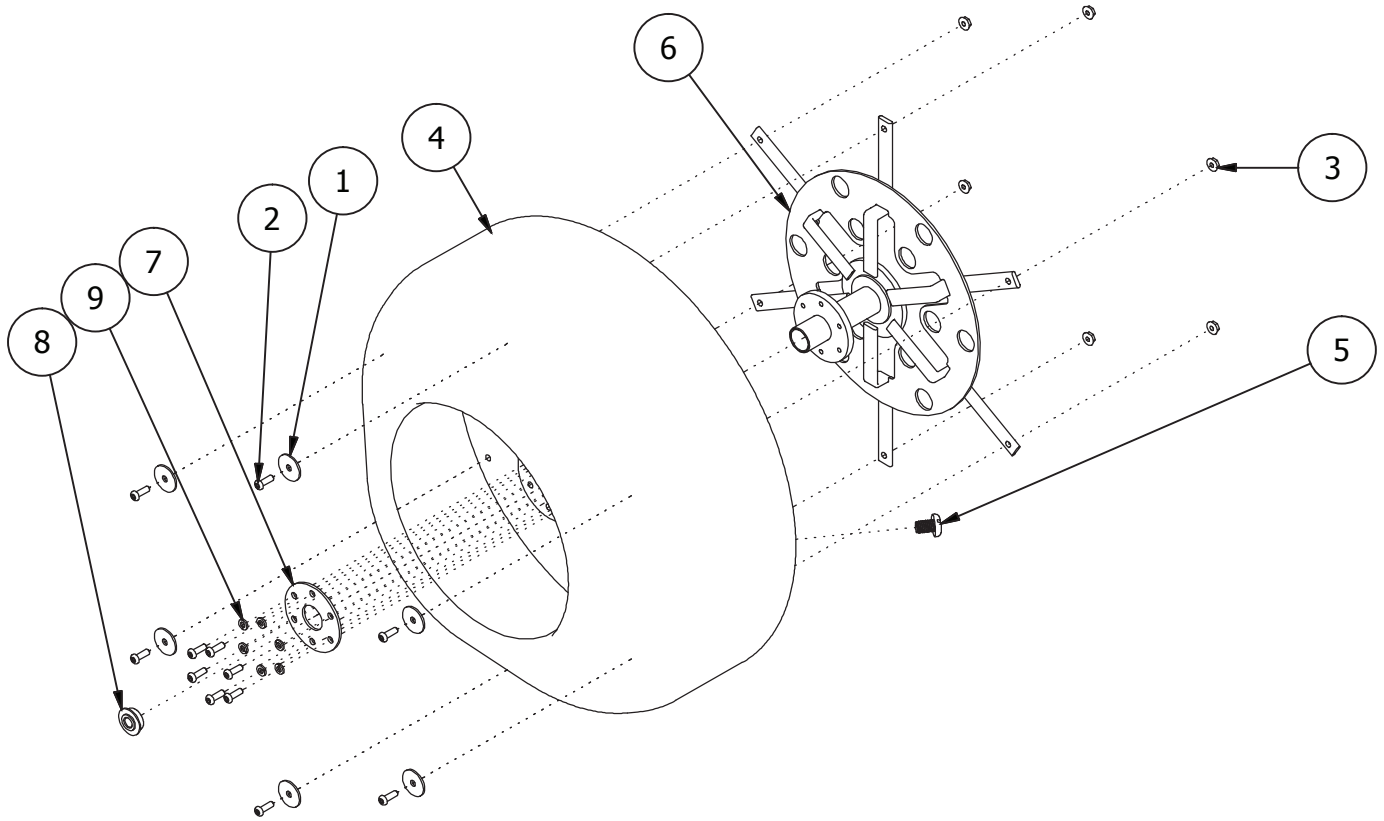
ITEM	QTY.	PART#	DESCRIPTION
40	8	WA15	1/3" x 3/4" x .07" Stainless Steel Flat Washer
41	1	61005	Motor, 1/2 HP
42	1	25165	GFCI Cord
<b>43</b> 	<b>1</b>	<b>ECT34</b>	<b>Strain Relief, 90 degree Snap Elbow</b>
	1	ELN1	1/2"-14 NPT (National Pipe Thread) (National Pipe Thread) Lock Nut
<b>44</b> 	<b>1</b>	<b>ECT30</b>	<b>1/2" Strain Relief, Straight</b>
	1	ELN1	1/2"-14 NPT (National Pipe Thread) (National Pipe Thread) Lock Nut
<b>45</b> 	<b>1</b>	<b>ECT34</b>	<b>1/2" Strain Relief, 90 degree Snap Elbow</b>
	1	ELN1	1/2"-14 NPT (National Pipe Thread) (National Pipe Thread) Lock Nut
46	1	D61015	Frame Set: Right & Left Frame Painted
47	1	61009	Guard, Motor
<b>48</b> 	<b>1</b>	<b>MM14</b>	<b>Detent Ring Pin with Lanyard Attached</b>
	1	WA5	#10 External Tooth Lock Washer
	1	PHSC14	#10-24 x 1/2" Pan Head Machine Screw
<b>49</b> 	<b>1</b>	<b>61025</b>	<b>Handle Assembly</b>
	2	RLPIN12	3/8" diameter x 1-3/8" Roll Pin
50	2	61051	Reinforcement Strips
51	2	61052	Stair Glide
52	4	FHMS11	5/16"-18 x 1-3/4" Flat Head Machine Screw
53	4	HXNUT9	5/16"-18 Hex Acorn Nut

## 19PRS (19" POLYETHYLENE REEL) SCHEMATIC FOR DM30



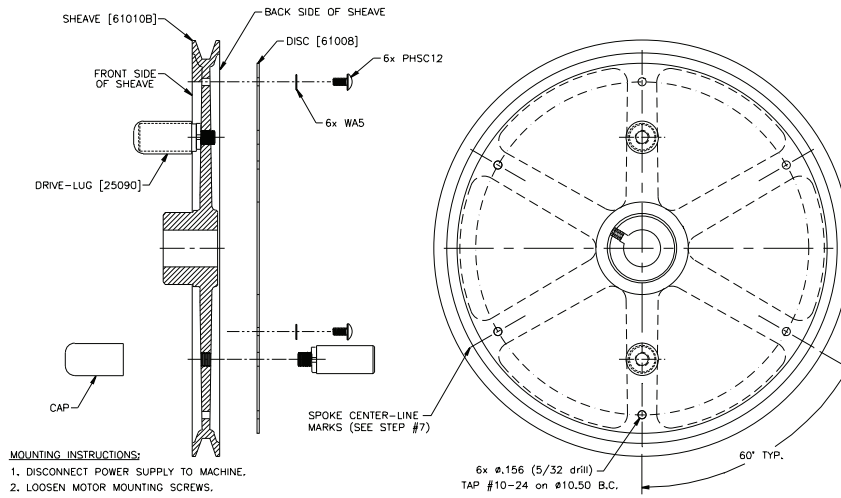
ITEM	QTY.	PART#	DESCRIPTION
1	1	D1HF	Inner Clamp Washer
2	1	D6A	Reel Bearing
3	6	WA22	.25 Lock Washer
4	6	WA47	.25 Body Washer
5	12	SHCS34	1/4-20 x 7/8 SBHS
6	6	FLNUT5	.25-20 Flange Nut
7	1	771409	Sled Plastic Drums Drive Hub Finished
8	1	MM60	.5-13 x .75 Std. Threaded Plug
9	1	771900	19" Sled Machine Plastic Drum

## 21PRS (21" POLYETHYLENE REEL) SCHEMATIC FOR DM30



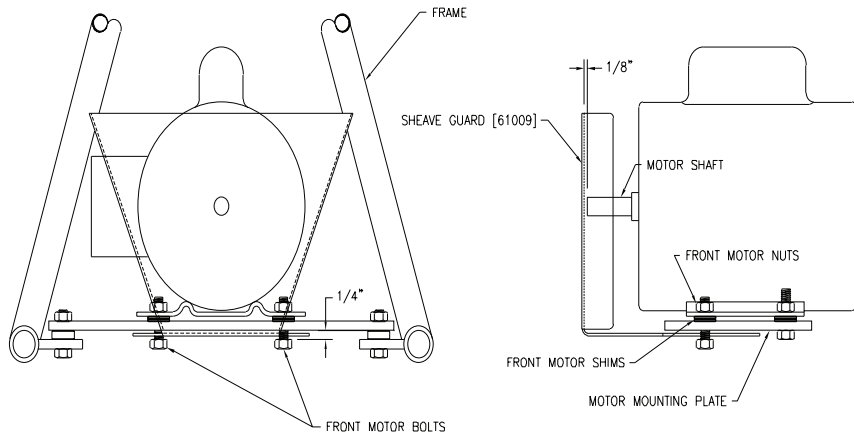
ITEM	QTY.	PART#	DESCRIPTION
1	6	WA47	.25 Body Washer
2	12	SHCS32	1/4-20 x 3/4 SBHS
3	6	FLNUT5	.25-20 Flange Nut
4	1	772100	21PR with Drain Plug
5	1	MM60	.5-13 x .75 Std. Threaded Plug
6	1	772103	21" Spoked Drive Assembly Weldment Finished
7	1	D1HF	Inner Clamp Washer
8	1	D6A	Reel Bearing
9	6	WA22	.25 Lock Washer

## SHEAVE DISC MOUNTING INSTRUCTIONS



- MOUNTING INSTRUCTIONS:**
1. DISCONNECT POWER SUPPLY TO MACHINE.
  2. LOOSEN MOTOR MOUNTING SCREWS.
  3. REMOVE DRIVE BELT AND REEL SHEAVE FROM MACHINE.
  4. UNSCREW AND REMOVE DRIVE-LUGS ON FRONT SIDE OF SHEAVE. REMOVE DRIVE-LUG CAP PRIOR TO UNSCREWING OR TIGHTENING THE DRIVE-LUG.
  5. CENTER DISC ON THE BACK SIDE OF SHEAVE, ALIGN THE DISC MOUNTING HOLES WITH THE TAPPED HOLES ON THE SHEAVE.
  6. USE THE DRIVE-LUGS TO SECURE THE DISC TO THE BACK SIDE OF THE SHEAVE.
  7. USE THE DISC AS A TEMPLATE TO MARK HOLE LOCATIONS ON THE SHEAVE SPOKES.
  8. REMOVE THE DRIVE-LUGS AND THE DISC.
  9. DRILL (ø.156) and TAP (#10-24) THE SIX (6) MOUNTING HOLES AS MARKED.
  10. USE THE SCREWS AND WASHERS PROVIDED TO SECURE THE DISC TO THE SHEAVE.
  11. INSTALL THE DRIVE-LUGS AND CAPS ON FRONT SIDE OF SHEAVE.
  12. INSTALL DRIVE BELT AND SHEAVE IN REVERSE ORDER OF REMOVAL.
  13. ADJUST BELT TENSION AS NEEDED AND REFASTEN MOTOR MOUNTING SCREWS.

## SHEAVE GUARD MOUNTING INSTRUCTIONS



- MOUNTING INSTRUCTIONS:**
1. DISCONNECT POWER SUPPLY TO THE MACHINE.
  2. PLACE THE MACHINE IN THE UPRIGHT POSITION AND REMOVE THE REEL.
  3. LOOSEN THE FRONT TWO (2) MOTOR NUTS, SECURING THE MOTOR BOLTS TO THE MOTOR MOUNTING PLATE, ABOUT 1/4" (AS SHOWN).
  4. SLIDE THE SHEAVE GUARD BETWEEN THE FRONT TWO (2) MOTOR NUTS AND THE MOTOR MOUNTING PLATE, LEAVING A 1/8" GAP BETWEEN THE MOTOR SHAFT AND THE SHEAVE GUARD (REFER TO PRINT).
  5. HOLD SHEAVE GUARD IN POSITION AND TIGHTEN THE FRONT TWO (2) MOTOR NUTS UNTIL SHEAVE GUARD IS SECURE.
  6. REATTACH REEL AND CHECK FOR CLEARANCE, REEL SHOULD ROTATE FREELY.
  7. IF RUBBING OCCURS, ADJUST SHEAVE GUARD AS NECESSARY.
  8. REPEAT STEPS #6 AND #7 UNTIL ALL REELS SPIN FREELY.

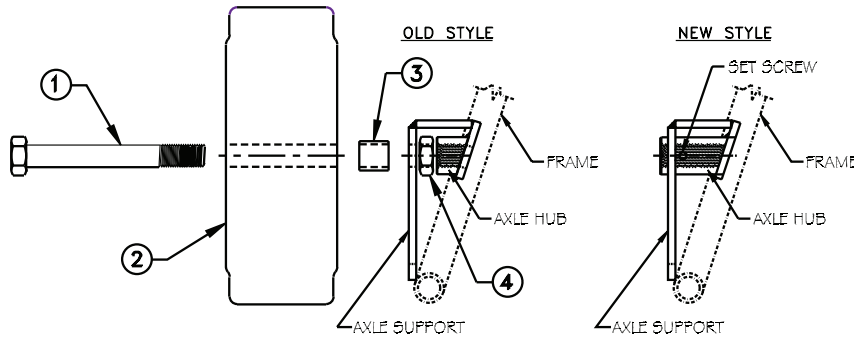
**\*NOTE:**  
THE SHEAVE GUARD CAN BE MOUNTED AS SHOWN OR MOUNTED ON THE BOTTOM SIDE OF THE MOTOR PLATE.

## WIDE WHEEL MOUNTING INSTRUCTIONS

1. INSERT AXLE (1) THROUGH WHEEL (2).
2. PLACE WHEEL BUSHING (3) ONTO AXLE BETWEEN THE WHEEL AND AXLE SUPPORT (As Shown).
3. PASS AXLE ASSEMBLY THROUGH HOLE IN AXLE SUPPORT (Old Style Only).
4. THREAD AXLE NUT (4) TO AXLE AFTER IT HAS PASSED THROUGH AXLE SUPPORT (Old Style Only).
5. THREAD AXLE TO AXLE HUB. TIGHTEN UNTIL WHEEL IS SECURE YET FREE-SPINNING.
6. OVER-TIGHTENING OF THE AXLE WILL DAMAGE THE WHEEL BEARING.
7. AXLE NUT MUST BE BACKED OFF AS THE AXLE IS BEING TIGHTENED (Old Style Only).
8. TIGHTEN AXLE NUT TO THE AXLE HUB TO SECURE AXLE (Old Style Only).
9. TIGHTEN SET SCREW IN AXLE HUB TO SECURE AXLE.
10. REPEAT PROCESS ON OTHER SIDE OF MACHINE.



NWK10  
Narrow Wheels (10" dia. x 2-1/4" w)



**TOOLS:**

AXLE - 1-1/8" SOCKET and OPEN END WRENCH  
SET SCREW - 1/8" HEX KEY or ALLEN WRENCH

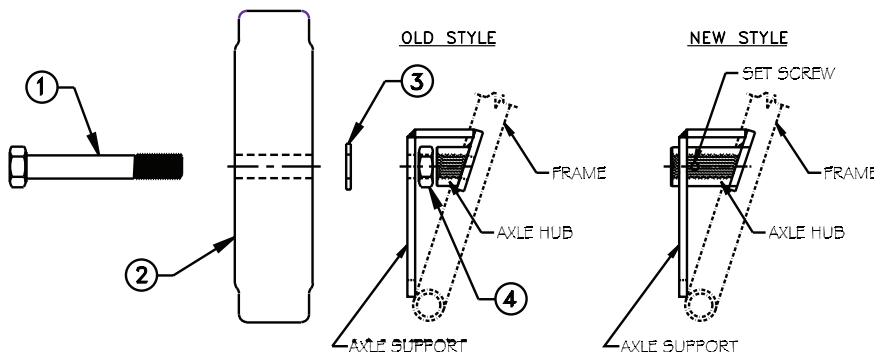
ITEM No.	QTY.	PART No.	DESCRIPTION
SETScrew	2	CPSS3	1/4-20 x .25 SKT HD SET SCREW
4	2	HXNUT17	3/4-10 HEX NUT
3	2	25145	WHEEL BUSHING
2	2	JWKW	WIDE WHEEL - 10" DIA.
1	2	HHCS28	3/4-10 x 6.00 HEX HD CAP SCREW



WWK10 (left) and NWK10 (right)

## NARROW WHEEL MOUNTING INSTRUCTIONS

1. INSERT AXLE (1) THROUGH WHEEL (2).
2. PLACE WHEEL BUSHING (3) ONTO AXLE BETWEEN THE WHEEL AND AXLE SUPPORT (As Shown).
3. PASS AXLE ASSEMBLY THROUGH HOLE IN AXLE SUPPORT (Old Style Only).
4. THREAD AXLE NUT (4) TO AXLE AFTER IT HAS PASSED THROUGH AXLE SUPPORT (Old Style Only).
5. THREAD AXLE TO AXLE HUB. TIGHTEN UNTIL WHEEL IS SECURE YET FREE-SPINNING.
6. OVER-TIGHTENING OF THE AXLE WILL DAMAGE THE WHEEL BEARING.
7. AXLE NUT MUST BE BACKED OFF AS THE AXLE IS BEING TIGHTENED (Old Style Only).
8. TIGHTEN AXLE NUT TO THE AXLE HUB TO SECURE AXLE (Old Style Only).
9. TIGHTEN SET SCREW IN AXLE HUB TO SECURE AXLE.
10. REPEAT PROCESS ON OTHER SIDE OF MACHINE.



**TOOLS:**

AXLE - 1-1/8" SOCKET and OPEN END WRENCH  
SET SCREW - 1/8" HEX KEY or ALLEN WRENCH

ITEM No.	QTY.	PART No.	DESCRIPTION
SETScrew	2	CPSS3	1/4-20 x .25 SKT HD SET SCREW
4	2	HXNUT17	3/4-10 HEX NUT
3	2	WA18	WHEEL BUSHING
2	2	JWKN	NARROW WHEEL - 10" DIA.
1	2	HHCS27	3/4-10 x 5.00 HEX HD CAP SCREW



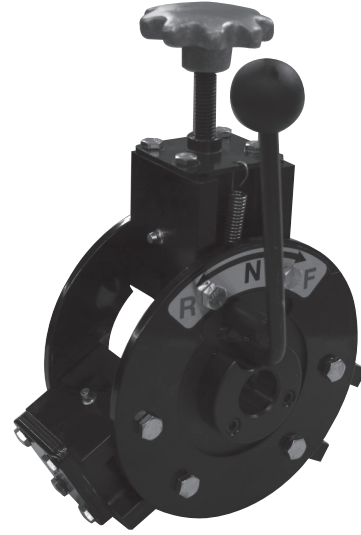
NWK10  
Narrow Wheels (10" dia. x 3-1/2" w)

## POWER CABLE FEED AND RETURN (PCFR)

### Power Cable Feed & Return

The Power Cable Feed & Return (PCFR) is designed to help you run long lengths of cable into and out of lines. It will help you cut through roots or heavy blockages in any drain line. The PCFR's Length is 6"; Width is 9"; Height is 12"; and Weight is 12 pounds.

The PCFR is standard equipment on DM30. Note: The recommended grease for the housing blocks is Lps® Thermaplex 70614 or Lubri-Plate® 630-Aa. Lubricate the rotation pin and bearing surface with Lps® 2 Industrial Lubricant 00216, WD-40® Lubricant or equivalent.



### Adjusting PCFR by Cable Size

3/4" Cable:	6 Sizing Plates per Block
11/16" Cable:	5 Sizing Plates per Block
5/8" Cable:	4 Sizing Plates per Block
1/2" Cable:	2 Sizing Plates per Block
13/32" Cable:	1 Sizing Plate per Block
3/8" Cable:	0 Sizing Plates per Block

### POWER CABLE FEED AND RETURN HITS (OPTIONAL)

Kit Part #	Description	Included Parts	Quantity	Description of Included Parts
PCFR23SER	Power Cable Feed and Return Piston Kit	PCFR14 PCFR25 RRING1 SB1 WA20	1 1 2 1 2	PCFR Piston PCFR Rotation Pin 11/16" x 1/32" x 11/32" External Retaining Ring PCFR Drive Bearing 1/2" x 3/4" x 1/16" Washer
PCFR22SER	Power Cable Feed and Return Bearing Kit	SB1 WA20	1 2	PCFR Drive Bearing 1/2" x 3/4" x 1/16" Washer
PCFR80K	Power Cable Feed and Return Adapter Kit (for the DM55, DM30 and DM10)	HHCS11 PCFR80A PCFR80B	3 1 3	5/16"-18 X 2" Hex Head Cap Screw Adapter Plate Spacer for Adapter Plate



## PCFR BEARING KIT

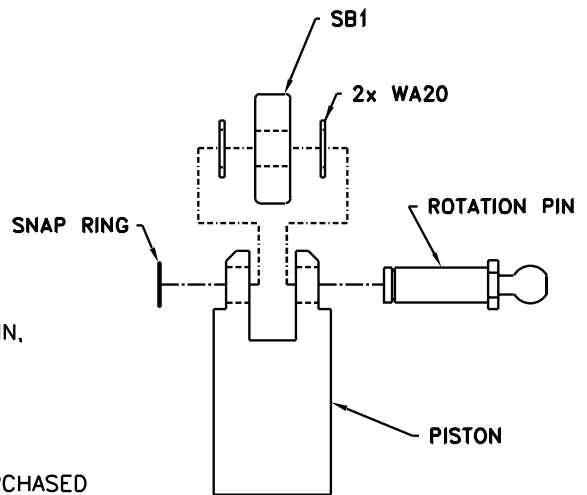
THE PCFR22SER BEARING KIT INCLUDES THE FOLLOWING:

- \* (1) SB1 BEARING
- \* (2) WA20 SPACERS

IF THE PCFR WAS PURCHASED AND/OR MANUFACTURED ON OR PRIOR TO 1995 OR IF ONE OF THE FOLLOWING CONDITIONS OCCUR WHILE INSTALLING THE BEARING KIT:

- 1) THE SB1 BEARING FITS LOOSELY ON THE ROTATION PIN,
- 2) THE SB1 BEARING RUBS OR TOUCHES THE PISTON,
- 3) THE SB1 BEARING WILL NOT ROTATE WHEN INSTALLED,

THEN THE PCFR23SER PISTON KIT WILL NEED TO BE PURCHASED SEPARATELY TO COMPLETE THE REPAIR TO THE PCFR. IT REQUIRES THREE (3) PCFR23SER KITS TO PERFORM A COMPLETE REPAIR.



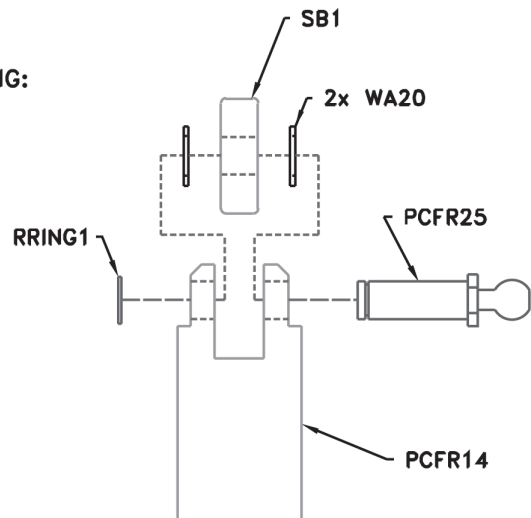
### How to Install the PCFR22SER Bearing Kit

- |   |  |   |
|---|--|---|
| <ol style="list-style-type: none"> <li>1. Remove the six hex flange nuts (FLNUT3).</li> <li>2. Remove the rear disk (PCFR11).</li> <li>3. Slip the upper housing (PCFR13) and/or the lower housings (PCFR18) from the hex bolts.</li> </ol> | <ol style="list-style-type: none"> <li>4. Remove the upper piston (PCFR14) and /or the lower pistons (PCFR19).</li> <li>5. Remove the spring retainer (PCFR23).</li> <li>6. Pull out the rotation pin (PCFR25).</li> <li>7. Remove the spacers (PCFR24) and the drive bearing (PCFR22).</li> </ol> | <ol style="list-style-type: none"> <li>8. Clean all the parts in kerosene or a cleaning solvent.</li> <li>9. Lubricate all moving parts and grease the housings provided with zerk fittings.</li> </ol> |
|---|--|---|

## PCFR PISTON KIT

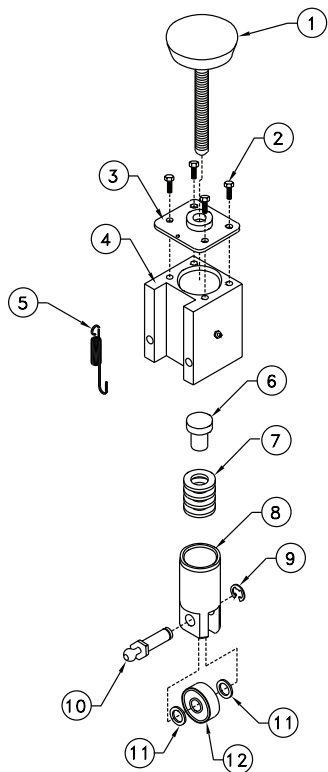
THE PCFR23SER PISTON KIT INCLUDES THE FOLLOWING:

- \* (1) PCFR14 UPPER/LOWER PISTON
- \* (1) RRING1 "E"-RING CLIP
- \* (1) SB1 BEARING
- \* (2) WA20 SPACERS
- \* (1) PCFR25 ROTATION PIN



**\*\* THREE (3) PCFR23SER KITS ARE REQUIRED TO PERFORM A COMPLETE REPAIR OF THE PCFR.**

## PCFR SPRING KIT



No.	Qty.	Part No.	Description
1	1	KNOB3	PRESSURE CONTROL KNOB
2	4	HHCS29	1/4-20 x .75 HEX HD CAP SCRW
3	1	PCFR15	UPPER PRESSURE PLATE
4	1	PCFR13	UPPER HOUSING BLOCK
5	1	MM35	EXTENSION SPRING
6	1	PCFR17	SPRING PAD
7	1	PCFR16	COMPRESSION SPRING
8	1	PCFR14	UPPER/LOWER PISTON
9	1	RRING1	EXTERNAL "E" RING
10	1	PCFR25	ROTATION PIN
11	2	WA20	MACHINE BUSHINGS
12	1	SB1	DRIVE BEARING

PCFR-KIT1 = (3)(5)

PCFR-KIT2 = (3)(4)(5)

PCFR-KIT3 = (2)(3)(4)(5)(6)(7)(8)(9)(10)(11)(12)

PCFR-KIT4 = ALL ITEMS AS SHOWN

## PCFR MOUNTING INSTRUCTIONS

### (A) ATTACH ADAPTER PLATE TO HEAD CASTING:

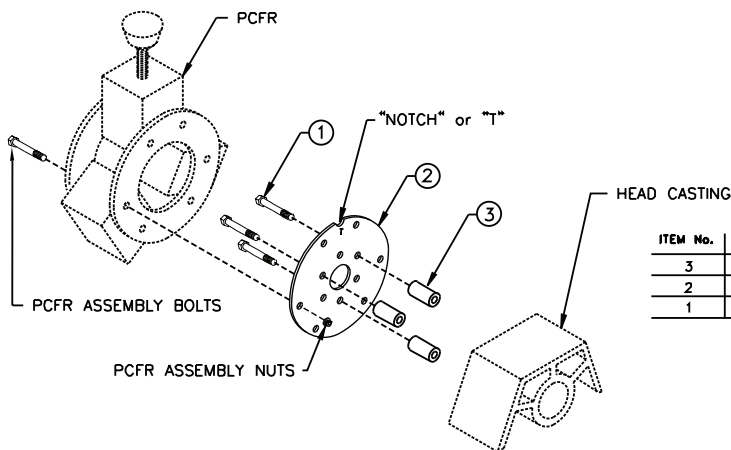
1. PLACE SPACERS [3] BETWEEN HEAD CASTING AND ADAPTER PLATE [2], AS SHOWN.
2. USE 5/16-18 x 2.000 HEX BOLTS [1] TO MOUNT ADAPTER PLATE [2] TO HEAD CASTING.

#### **NOTE:** (REFER TO DETAIL "A")

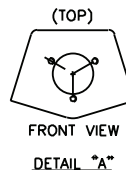
THE ADAPTER PLATE MUST BE IN THE TOP POSITION WHEN MOUNTING TO THE HEAD CASTING. THE "NOTCH" OR "T" STAMPED ON THE ADAPTER PLATE INDICATES THE TOP OF THE PLATE.

### (B) ATTACH PCFR TO ADAPTER PLATE:

1. REMOVE PCFR ASSEMBLY NUTS FROM PCFR ASSEMBLY BOLTS. (DO NOT REMOVE BOLTS OR REAR DISC FROM PCFR.)
2. ALIGN PCFR ASSEMBLY BOLTS W/ CORRESPONDING ADAPTER PLATE HOLES.
3. REPLACE PCFR ASSEMBLY NUTS AND TIGHTEN.

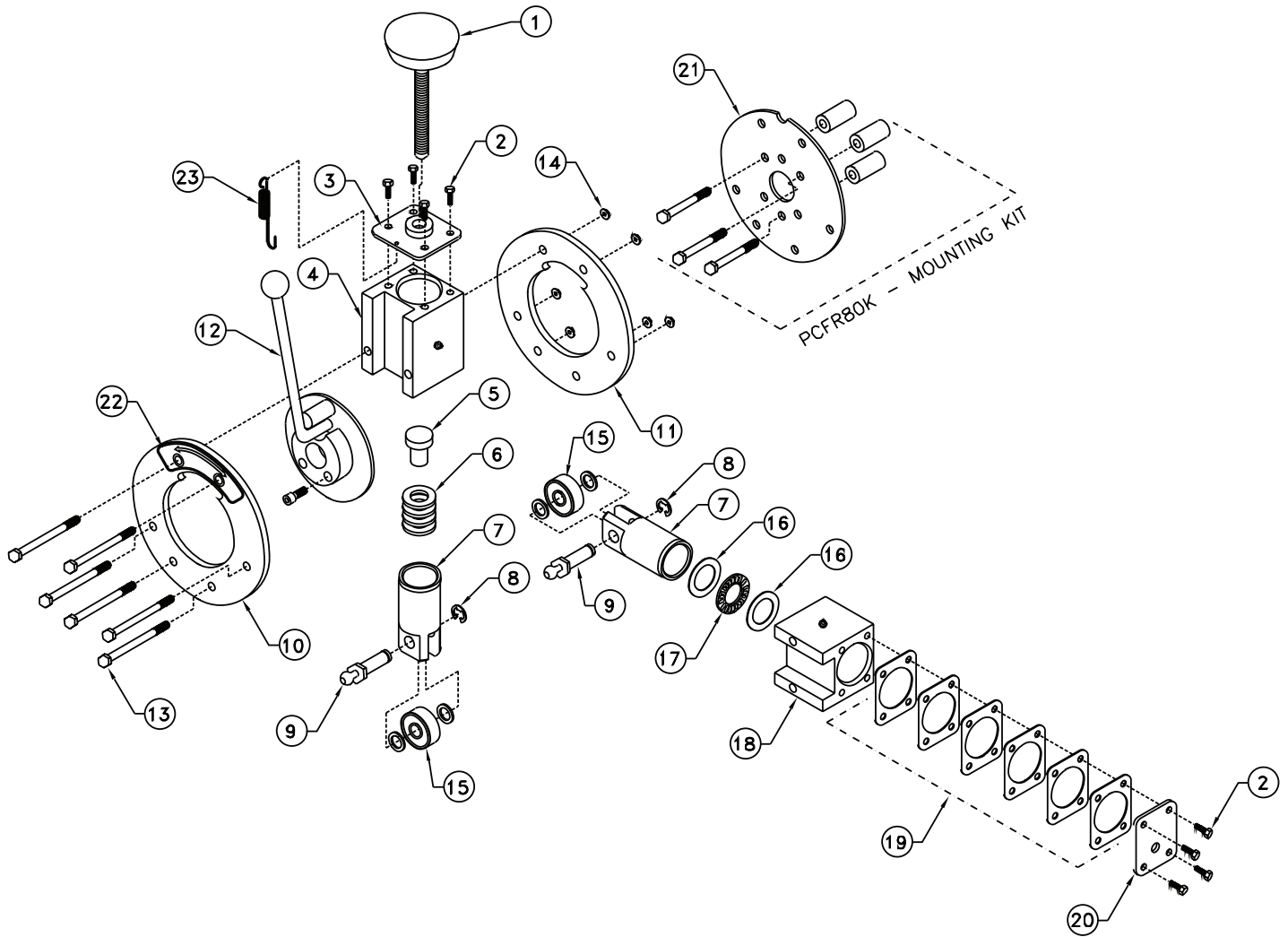


NOTE HOLE LOCATIONS OF HEAD CASTING.




ITEM No.	QTY.	PART No.	DESCRIPTION
3	3	PCFR80B	SPACERS
2	1	PCFR80A	ADAPTER PLATE
1	3	HHCS11	5/16-18 x 2.000 BOLT

POWER CABLE FEED AND RETURN (PCFR) SCHEMATIC



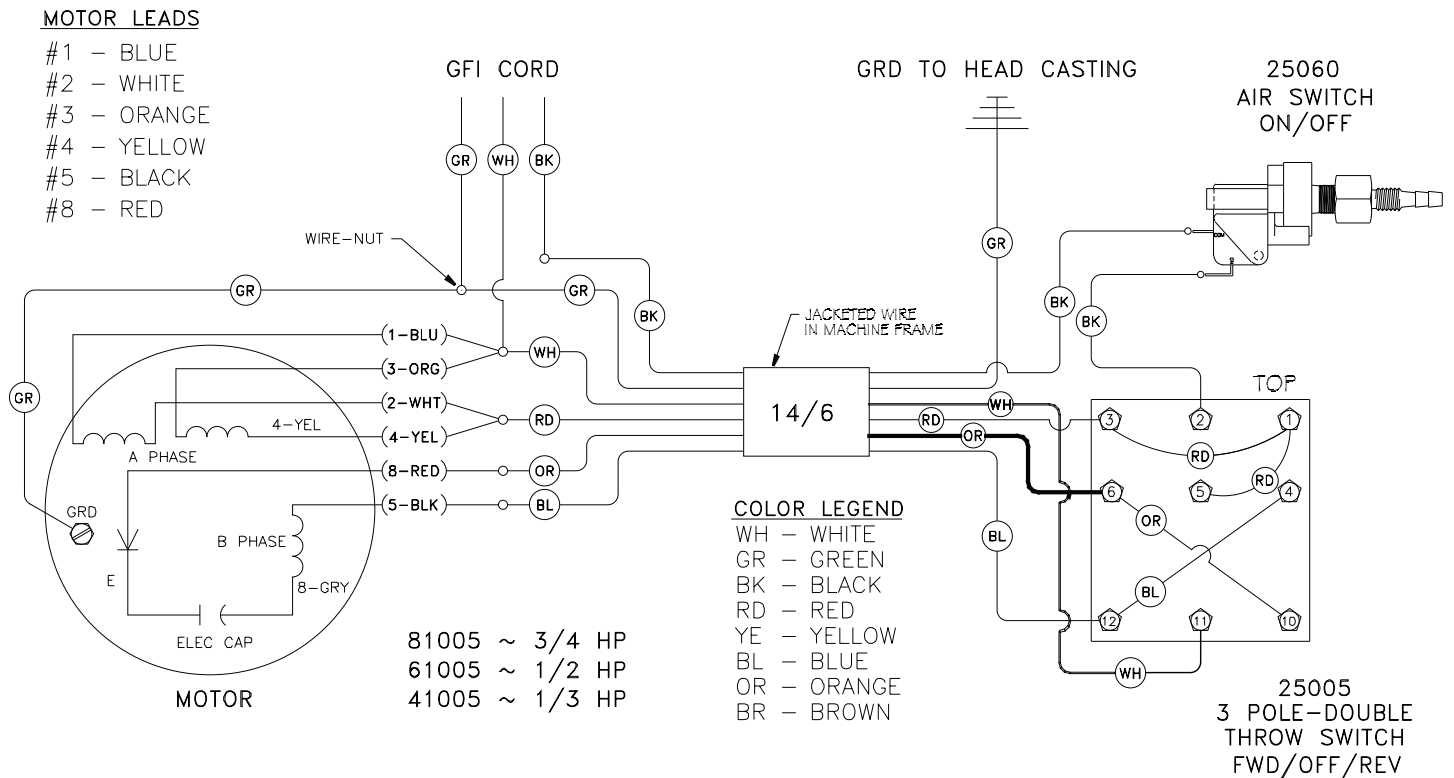
# DM30 MACHINE MANUAL

## PCFR SCHEMATIC

 The entire line item in **bold** identifies the name of an entire assembly. The “Z” shaped arrow identifies all the parts that make up that assembly. You can purchase the entire assembly, or just the individual parts.

ITEM	QTY.	PART#	DESCRIPTION
1	1	KNOB3	Knob, Pressure Control
2	12	HHCS29	1/4”-20 x 3/4” Hex Head Cap Screw
3	1	PCFR15	Pressure Plate, Upper
4	1	PCFR13	Housing Block, Upper
5	1	PCFR17	Spring Pad
6	1	PCFR16	Compression Spring
7	3	PCFR14	Piston, Upper and Lower
8	3	RRING1	External “E” Ring
9	3	PCFR25	Rotation Pin
10	1	PCFR10	Mounting Disc, Front
11	1	PCFR11	Mounting Disc, Rear
<b>12</b>	<b>1</b>	<b>PCFR12</b>	<b>Direction Disc Assembly</b>
	1	PCFR12E	Direction Disc
	1	KNOB2	Knob, Black Plastic
	1	PCFR33	Wear Ring
	2	SHCS6	1/4”-28 x 5/8” Socket Head Cap Screw
13	6	HHCS12	5/16”-18 x 3-1/2” Hex Head Cap Screw
14	6	FLNUT3	5/16”-18 Hex Flange Nut, Locking
<b>15</b>	<b>3</b>	<b>PCFR22SER</b>	<b>PCFR Bearing Kit</b>
	1	SB1	Drive Bearing
	2	WA20	Machine Bushing
16	4	PCFR29	Thrust Washer
17	2	PCFR28	Thrust Bearing
18	2	PCFR18	Housing Block, Lower
19	12	PCFR20	Sizing Plate (lower housing blocks only)
20	2	PCFR21	Pressure Plate, Lower
<b>21</b>	<b>1</b>	<b>PCFR80K</b>	<b>PCFR Adapter Kit</b>
	1	PCFR80A	Adapter Plate
	3	PCFR80B	Spacers
	3	HHCS11	5/16”-18 x 2” Hex Head Cap Screw
22	1	PCFR9	Decal, Reverse/Neutral/Forward
23	1	MM35	Extension Spring
	<b>3</b>	<b>PCFR23SER</b>	<b>PCFR Piston Kit (kit includes items 7, 8, 9, and 15)</b>

## ELECTRICAL SCHEMATIC



**BALDOR MOTOR WIRING DIAGRAM - CD0001C**  
 1/3, 1/2 & 3/4 hp - 60 HZ ~ LOW VOLTAGE  
 W/OUT A.T.O. ~ USING 6 CONDUCTOR SOW CABLE

The wiring diagram for the basic DM30 is shown above. If you experience any electrical difficulties in operating your machine, or you notice any frayed or inadequate wiring, or wiring that does not conform to the diagram, discontinue use of your machine immediately and have a qualified electrician repair it, or return it for repair to Duracable Manufacturing.

## ELECTRICAL SAFETY

### Handle with Care

Most of us take electricity for granted. It has been with us since the day we were born. We use it every day for light, phone, home appliances, tools, and other equipment that helps us maintain our standard of living. Although electricity is one of the safest energy forms, we tend to forget how powerful and dangerous it can be if not used properly.

Every year many people are injured or killed by electricity. Most of these accidents could have been prevented with simple precautions and careful use of electricity. Following are some tips to help avoid electrical accidents. Read through this information. Be sure you understand its importance. If you have questions or feel you may have a potential electrical hazard, tell your supervisor or call a qualified electrician immediately.

### General Electrical Guidelines

Remember, electricity is always trying to make a circuit. It can travel through an electric wire, metal pipe, or even your body. Electrical shock can occur when you come in contact with an energized electrical unit and a good conductor. Shock can range from a slight tingle to a severe burn, or death by electrocution.

Electrical accidents happen in everyday situations. Most electrocutions occur in a wet environment or when an electrical product is being repaired or installed. Think about, and take precautions against, potentially dangerous situations.

When disconnecting electrical cords, pull on the plug rather than the cord to avoid damage. Use rubber gloves and rubber boots or insulated shoes to protect yourself, especially if you are in a wet or damp environment. Before using this machine, make sure a properly grounded, three-prong, 110-volt outlet is available. Where it is not available, use a three-prong adapter and connect the grounding lug to a known ground. Never cut off a grounding prong to fit a two-prong outlet. This eliminates the ground protection.

### Electrical Procedures

Do not leave the machine plugged in when not in use. Even with the switch off, a machine can shock or electrocute its handler. The DM30 machine must be grounded to protect the operator from shock. This is accomplished by using the Ground Fault Circuit Interrupter (GFCI) Cord to ensure proper grounding.

Check electrical cords before each use for signs of damage. Repair or replace cords which are pinched, cracked, frayed, or worn. Remember, the GFCI offers no protection against electric shock for wiring preceding it in the system. Your GFCI is direct-wired to the machine, plug the GFCI into the power source receptacle.

Discontinue use and repair immediately any machine that causes the slightest shock or is damaged in any way. It could lead to a serious electrical shock or electrocution. Inspect the machine daily for wear or damage that might expose live electrical parts.

### Ground Fault Circuit Interrupters (GFCI)

A GFCI works by detecting changes in electrical current flow. It breaks the circuit before serious injury can occur. For your protection, heed the "DANGER" warning on the machine cover and use the GFCI cord. The GFCI must be tested before each use. Use the following procedure:

- Insert the unit into a 110-volt, AC-grounded receptacle;
- Push the "test" button in - the red indicator light should go off;
- Push the "reset" button in - if the red indicator light goes on, the unit is ready for use;
- Do not use the unit if the light does not go on when reset;
- Do not use the unit if the indicator light remains on when the test button is pushed.

### Extension Cords

- Use extension cords only when necessary.
- Position cords in use to prevent tripping hazards. Do not place them in areas where they can be damaged by traffic.
- Avoid coiling extension cords during use to prevent possible overheating of the cord.
- Discard cracked or damaged cords.
- The following cord sizes and lengths should be observed according to the National Electrical Code when using this machine:
  - 12 gauge wire - 75' of cord, including 25' of GFCI cord.
  - 14 gauge wire - 50' of cord, including 25' of GFCI cord.
- Cord sizes smaller than 12 gauge should not be used for 3/4 HP motors. Larger gauge cords can be run greater distances, but are not practical because of their size and weight.
- To protect your motor, observe the guidelines mentioned. If you have a run more than 75', use a generator to reduce your cord length from the power source to a working distance within these guidelines.

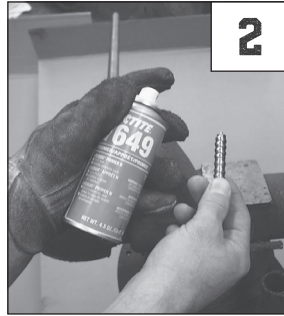
### Overhead Power Lines

- When working outdoors, keep clear from overhead power lines in all directions.
- Check the location of power lines before using a ladder. Use approved ladders made of non-conductive material.
- Never place a ladder where it can slide into a power line.
- When carrying or moving a ladder or equipment, lower it to avoid touching a power line.
- Never assume that a wire is safe to touch.

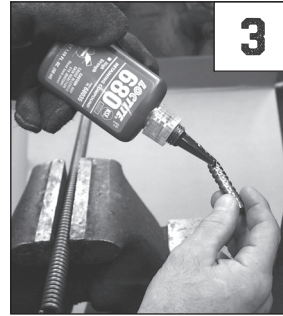
## HOW TO SPLICE DURAFLEX® CABLE



1. Cut a few inches off of each cable end and remove any burrs with a grinding disk or file.



2. Spray Loctite Primer in and around the cable end and splice core to thoroughly remove grease and grime.



3. Apply Loctite Retaining Compound to splice core.



4. Insert splice core into cable one turn.



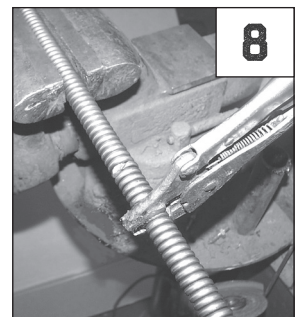
5. Apply Loctite Retaining Compound to other end of splice core.



6. Align other piece of cable onto splice core.



7. Place vise grips on free cable end and turn counterclockwise.

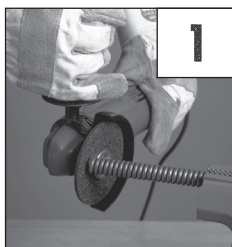


8. Continue turning and the cable ends will meet at the center of the splice core.

## HOW TO BOND END FITTINGS TO DURAFLEX® CABLE

You can attach end fittings and splice cores to DuraFlex cable using a chemical bonding process, which means you can make quick cable repairs on the job—without welding. With Loctite Primer and Loctite Retaining Compound, you can quickly create a dependable bond that is as strong as a conventional weld. Please note that these products are not the same thread-locking compounds available in hardware stores and plumbing-supply houses, they are heavy-duty, permanent-bonding compounds made especially for jobs such as bonding cable fittings.

1. Cut the cable end and remove any burrs with a grinding disk or file.



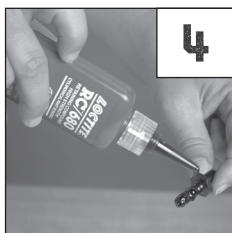
2. Spray Loctite Primer in and around the cable end to thoroughly remove grease and grime.



3. Spray Loctite Primer on the end fitting to thoroughly remove grease and grime.



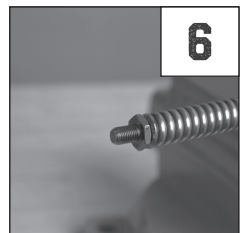
4. Apply Loctite Retaining Compound to the end fitting.



5. Using the wrench (part number EW), screw the fitting into the cable end until fitting is totally sealed.



6. The Retaining Compound will be fully bonded to the cable in just a few minutes.



# DM30 MACHINE MANUAL

★ BUILT **USA** TOUGH ★

## DM30



**DURACABLE**<sup>®</sup>  
— MANUFACTURING CO —

300 ASHWORTH ROAD  
WEST DES MOINES, IOWA 50265

**DURACABLE.COM** ----- **800.247.4081**

ANSWER LINE: 877.257.1781  
FAX: 515.223.6109

DM30MM  
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