

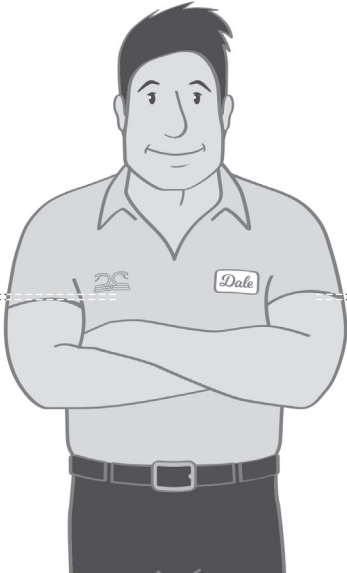
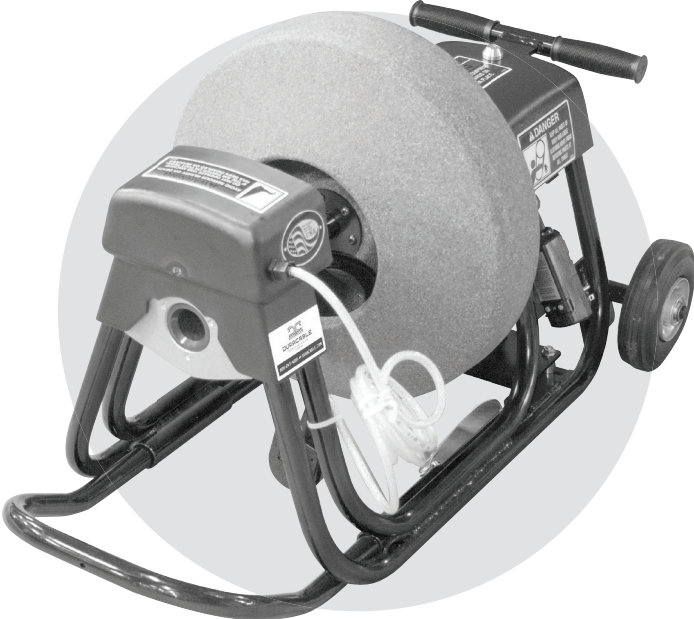


READ MANUAL BEFORE OPERATING
KEEP MANUAL FOR FUTURE REFERENCE

MACHINE MANUAL

★ BUILT **USA** TOUGH ★

DM10



RIGHT IN THERE WITH YOU.



DURACABLE[®]
— MANUFACTURING CO —

DM10 MACHINE MANUAL

TABLE OF CONTENTS

2	Warranty, Parts and Service
3	Safety Labels
4-7	DM10 Information and Specifications
8-10	DM10 Machine Schematics and Parts List
11	DM10 Reel Schematics and Parts List
12	DM10 Axle Assembly and PCFR Mounting Instructions
13-16	Power Cable Feed and Return Information, Schematics and Parts List
17-18	Model Electrical Schematics and Safety Information
19	How to Splice DuraFlex® Cable and How to Bond End Fittings

WARRANTY

Duracable Manufacturing Company warrants the DM10 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

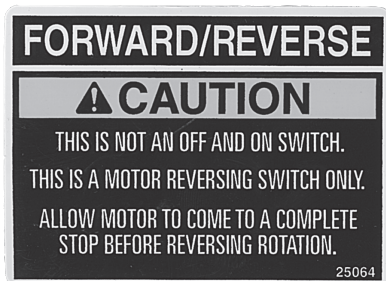
A 'Danger' label indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situation, typically for machine components that, for functional purposes, cannot be guarded. The word 'danger' will be in white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



⚠ CAUTION

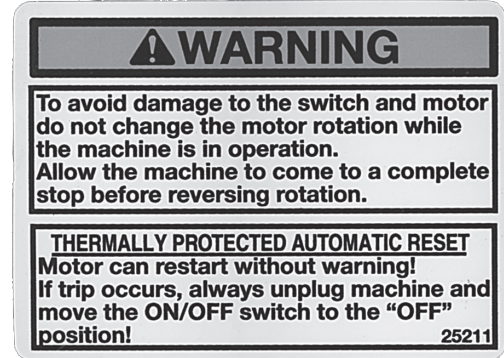
A 'Caution' label indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. The word 'caution' will be in black letters on a yellow background.

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 can not be easily grabbed by the cable. Most leather gloves and certain rubber gloves work well. Duracable Manufacturing Company 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 switch. Use of the air foot switch 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 cutting 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 Company recommends a PCFR unit be used on every Model DM10 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 Model DM10 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.

Assembling Your Machine

- Attach the D3L Reel Attachment to the male end on one end of the cable. Position the cable end with attachment inside the cable and snap into place. Feed the cable into the reel.
- Set the base machine in a down position on its rails.
- Pick up the reel, loaded with cable, 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.
- Feed the cable through the revolving arm until it is flush with the end of the arm.
- Position the revolving arm inside the reel.
- Position the extension shaft on the revolving arm into the center of the reel bearing.
- Place the revolving arm with cable extended into the rear side of the head bearing.
- Slide the collar forward using an Allen Wrench to loosen and tighten the collar.
- Slide the cable through the head bearing.
- To disassemble the DM10, reverse the assembly process.

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 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 Company to assist and protect the operator during the moving process.

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-based 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.

DM10

1/3 HP Motor

195 RPM

Belt Drive

16" Reel

3/8" x 75' Cable

Telescoping Handle

PCFR (optional)

2-Year Warranty

Continuous Weld
Uni-body Frame

USES:

1-1/4" to 4" lines,
Residential, Sinks, Bathtubs,
Shower Drains, Roof Vents,
Floor Drains, Laundry Drains



DM10 with D1S, 16" open spoke metal reel (standard)



DM10 with 19PRS, 19" enclosed polyethylene reel



DM10 MACHINE MANUAL

INFORMATION AND SPECIFICATIONS

Frame

The DM10 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, while still keeping the machine lightweight.

Electrical Wiring

The DM10's electrical wiring is run through the top of the frame. The Ground Fault Circuit Interrupter (GFCI) is built into the electrical cord for added safety. The GFCI protects the operator against electrical shock or electrocution. The air foot pedal is standard equipment on the DM10. This switch allows operators to turn the machine on and off with their foot while their hands stay on the cable.

RPM/Drive

The DM10 has a 1/3 HP motor which operates at 195 rpm.

Maneuverability

The DM10 comes standard with 6" wheels and a telescoping handle.

Cable and Reel Selections

The DM10 was designed to handle four different reel sizes. The reel selected is set in place and slipped onto the reel shaft. Drive lugs, mounted on the reel shaft pulley, slip through the openings in the back of the reel. The reel is held in place by the revolving arm.

The DM10 has a large-diameter front bearing which provides more flexibility since it can be used with cables from 1/4" to 11/16". (The 11/16" cable requires a special revolving arm.)

Standard Package

The DM10's standard package (part number DM10 SP) comes with the following items: revolving arm, 1/3 HP motor at 195 rpm, 16" open metal spoke reel, 3/8" x 75' cable, reel attachment, choice of cable end fittings, wheels, and handle. See the machine packages and accessories chart on the next page for additional options.



DM10 with 16PRS, 16" enclosed polyethylene reel.
(See options on the next page.)

MACHINE SPECIFICATIONS (APPROXIMATE)

Length of Machine with Handle Retracted	34-1/2"
Length of Machine with Handle Extended	41"
Width of Machine without Wheels	15"
Width of Machine with Narrow Wheels	20"
Height of Standard Machine	18"
Weight of Machine	71 lbs
Weight of 6" Solid Wheels	5.5 lbs
Weight of D1S, 16" Open Spoke Metal Reel	9.5 lbs
Weight of 16PRS, 16" Polyethylene Reel	10.9 lbs
Weight of D1S1, 19" Open Spoke Metal Reel	10.5 lbs
Weight of 19PRS, 19" Polyethylene Reel	12.4 lbs
Line Size	1-1/4"-4"

RECOMMENDED USE: residential, sinks, bathtubs, shower drains, roof vents, floor drains and laundry drains

INFORMATION AND SPECIFICATIONS

REELS			REEL ATTACHMENTS	FLOATING RINGS	FLOATING RING ATTACHMENTS	REVOLVING ARM	CABLES*	
Part #	Dimensions	Description	Part #	Part #	Part #	Part #	Part #	Dimensions
D1S	16" Diameter	Open Spoke Metal Reel	D3L	D2JS	D3E	D8SL2	_38-090 _50-075	3/8" up to 90' 1/2" up to 75'
D1S1	19" Diameter	Open Spoke Metal Reel (standard)	D3L	D2JM D2JR	D3E D3R (male end) D3RJ (slip joint)	D8SL9	_50-090 _62-080	1/2" up to 90' 5/8" up to 80'
D1SE	16" Diameter	Enclosed Metal Reel	D3S	D2JS	D3E	D8SL2	_38-090 _50-075	3/8" up to 90' 1/2" up to 75'
D1S1E	19" Diameter	Enclosed Metal Reel	D3S	D2JM D2JR	D3E D3R (male end) D3RJ (slip joint)	D8SL9	_50-090 _62-080	1/2" up to 90' 5/8" up to 80'
16PRS	16" Diameter	Enclosed Polyethylene Reel	N/A	N/A	N/A	D8SL2	_38-090 _50-075	3/8" up to 90' 1/2" up to 75'
19PRS	19" Diameter	Enclosed Polyethylene Reel	N/A	N/A	N/A	D8SL9	_50-090 _62-080	1/2" up to 90' 5/8" up to 80'

- * Add **CH** in front of cable part # for Hollow Core.
- * Add **CI** in front of cable part # for Inner Core.
- * Maximum length of cable is not always the recommended length.
- * Custom lengths are available.

MACHINE PACKAGES

Part #	Horse Power	RPM	Reel	Cable
DM10 SP	1/3 HP Motor	195 RPM	D1S	3/8" x 75'
DM10 SPA	1/3 HP Motor	195 RPM	D1S1	1/2" x 75'
DM10 SPB	1/3 HP Motor	195 RPM	16PRS	3/8" x 75'
DM10 SPC	1/3 HP Motor	195 RPM	19PRS	1/2" x 75'

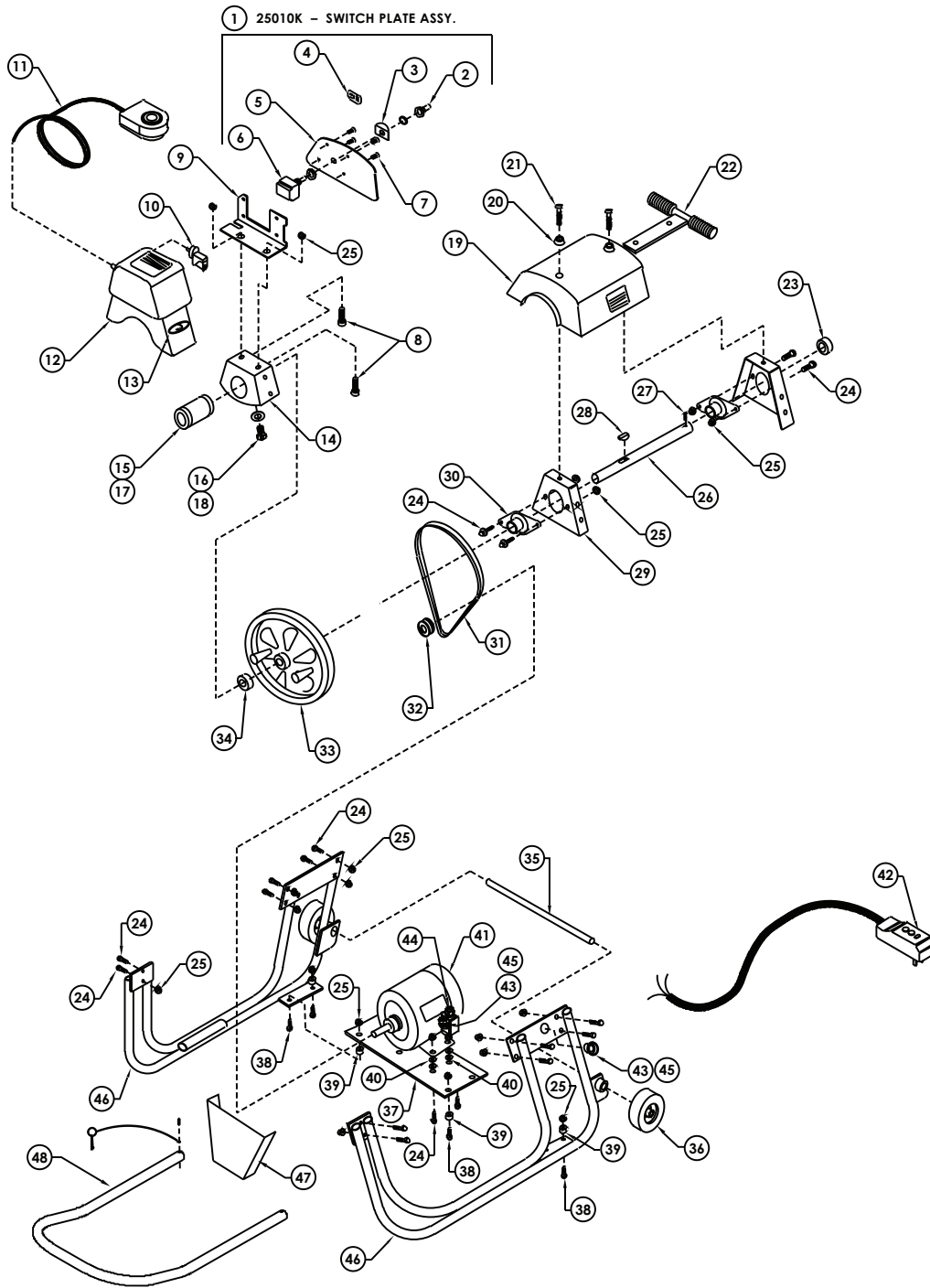


The DM10 SP, with a 16" open spoke metal reel, is the standard package for this machine.

MACHINE ACCESSORIES / REPLACEMENT PARTS


Part #	Description
41005	1/3 HP Motor
PCFR	Power Cable Feed and Return
PCFR80K	PCFR Adapter Kit
25074	Air Foot Pedal (<i>rubber</i>) with 10' Tubing
25061	Air Switch with Strain Relief Nut
DRC16	Cover for 16" Open Spoke Reel (D1S)
DRC19	Cover for 19" Open Spoke Reel (D1S1)
41060	6" Solid Wheels
DKIT1	Blade Kit





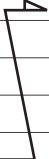

DM10 SCHEMATIC



DM10 MACHINE MANUAL


DM10 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	25010K	Switch Plate Assembly
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
11	1	25073	Foot Pedal Assembly with Clamp
12 	1	25020K	Switch Housing Assembly with Decals
	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
16 	1	SHCS15	3/8”-16 x 3/4” Socket Head Cap Screw
	1	WA10	3/8 Split Lock Washer
17	1	25105	Head Bearing, Steel
18 	1	25110	Grease Fitting
	1	CXA	Adapter
	1	ZERK2	1/4”-28 Straight Grease Zerk
	1	WA12	13/32” x 13/16” x 1/16” Zinc Flat Washer
19 	1	25030K	Top Cover with Decals
	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	SHCS11A	5/16”-18 x 1-1/4” Socket Cap Head Screw
22 	1	25050	Vertical Support with Grips
	2	PH-1G	Handle Grip, Black
23	1	25125	Collar, Reel Shaft
24	20	FLSC1	5/16”-18 x 3/4” Hex Head Flange Screw

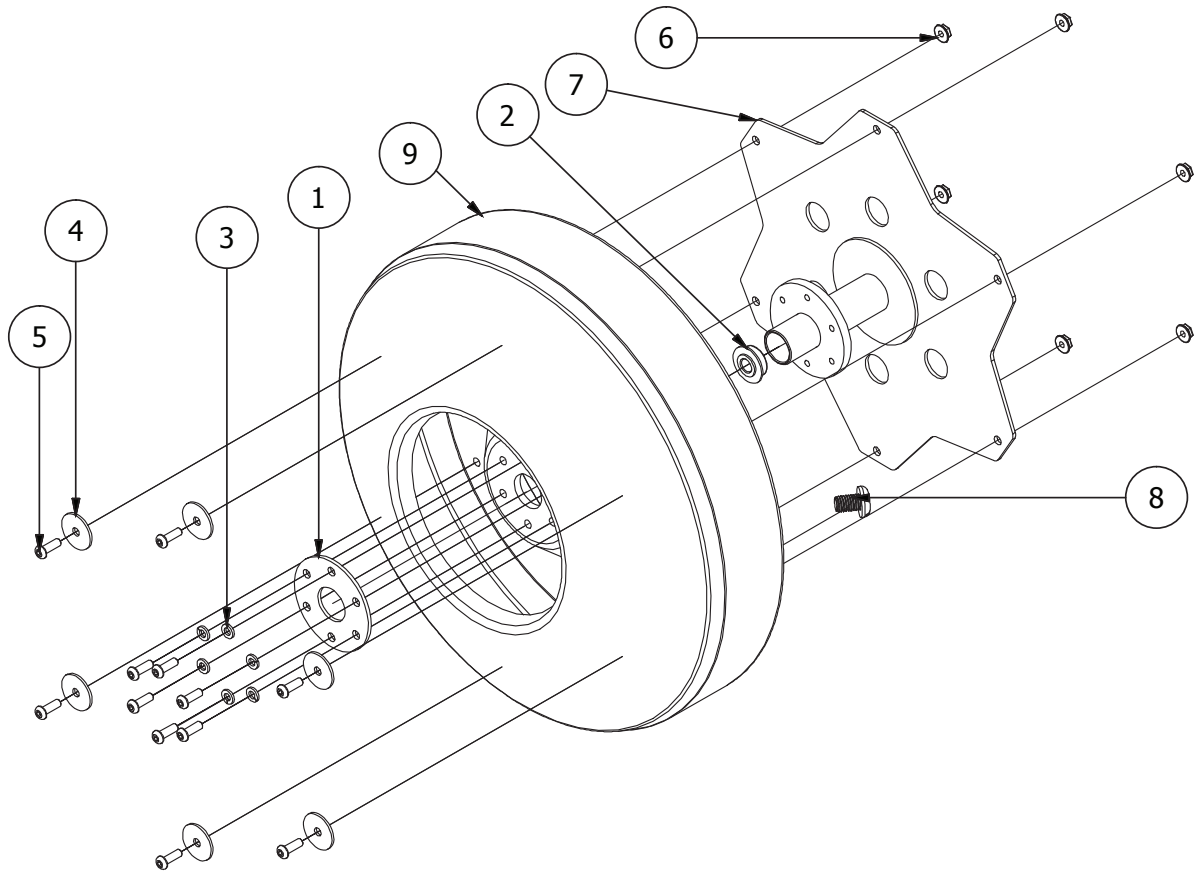
DM10 MACHINE MANUAL

DM10 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.

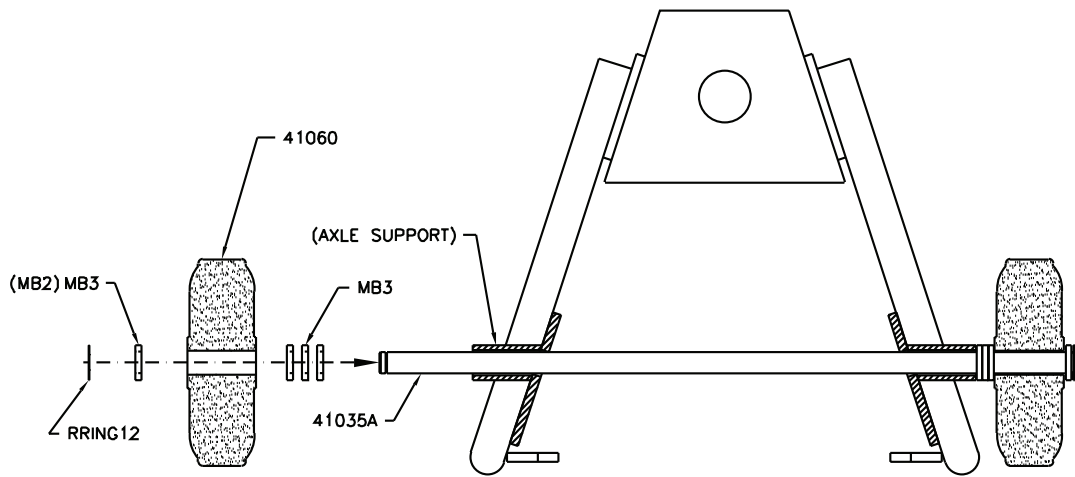
ITEM	QTY.	PART#	DESCRIPTION
25	24	FLNUT3	5/16"-18 Hex Flange Nut, Locking
26	1	25140	Shaft, Reel
27	1	FILHMS1	#10-24 x 3/8" Fillister Machine Screw
28 	1	KEY6	1/4" x 1/37" Square Key
	1	KEY2	1/4" x 3/4" Woodruff Key (Old Style)
29	2	25095	Mounting Plate, Bearing
30	2	SB5	Bearing, Reel Shaft
31	1	41010C	Belt, 4L x 37"
32	1	41010A	Sheave, 4L x 1-1/2" outside diameter
33 	1	41010B	Sheave, 4L x 11-1/4" outside diameter Assembly
	2	25090	Drive Lug Assembly
	1	25090A	Drive Lug
	1	MM4	Drive Lug Cap, Red
	1	WA10	3/8" Split Lock Washer
34	1	25120	Bushing, Reel Shaft
35 	1	41035	Axle Assembly
	1	41035A	Axle, Finished
	2	RRING12	External Retaining Ring
	4	MB3	Machine Bushing
36	2	41060	Wheel, 6" Solid
37	1	41030	Mounting Plate, Motor
38	4	FLSC9	5/16"-18 x 1" Hex Head Flange Screw
39	4	41044	Stand-Off, Motor Plate
40	12	WA15	1/3" x 3/4" x 0.7" Stainless Steel Flat Washer
41	1	41005	Motor, 1/3 HP
42	1	25165	GFCI Cord
43 	1	ECT34	Strain Relief, 90 degree Snap Elbow
	1	ELN1	1/2"-14 NPT (National Pipe Thread) Lock Nut
44 	1	ECT30	1/2" Strain Relief, Straight
	1	ELN1	1/2"-14 NPT (National Pipe Thread) Lock Nut
45 	1	ECT34	Strain Relief, 90 degree Snap Elbow
	1	ELN1	1/2" - 14 NPT (National Pipe Thread) Lock Nut
46	1	D41015	Frame Set: Right & Left Frame Painted
47	1	41009	Guard, Motor
48 	1	41025	Handle Assembly
	1	41025-1	Handle, Finished
	2	RLPIN12	3/8" diameter x 1-3/8" Roll Pin
	1	MM14	Detent Ring Pin with Lanyard Attached

16PRS (16" POLYETHYLENE REEL) SCHEMATIC FOR DM10



ITEM	QTY.	PART#	DESCRIPTION
1	1	D1HF	Inner Clamp Washer
2	1	D6A	Reel Bearing
2	6	WA22	.25 Lock Washer
3	6	WA47	.25 Body Washer
4	12	SHCS34	1/4-20 x 7/8 SBHS
5	6	FLNUT5	.25-20 Flange Nut
6	1	771409	Sled Plastic Drums Drive Hub Finished
8	1	MM60	.5-13 x .75 Std. Threaded Plug
9	1	771600	16" Sled Machine Plastic Drum

MOUNTING INSTRUCTIONS FOR DM10 AXLE ASSEMBLY



MOUNTING INSTRUCTIONS:

1. PROPERLY SUPPORT AND RAISE THE REAR OF THE MACHINE APPROXIMATELY 1" IN HEIGHT TO AID IN THE ASSEMBLY OF THE WHEELS.
2. SLIDE AXLE (41035A) THROUGH FRAME AXLE SUPPORTS.
3. PLACE THREE MACHINE BUSHINGS (MB3) ON BOTH ENDS OF THE AXLE, SLIDE THE MACHINE BUSHINGS UNTIL FLUSH WITH THE AXLE SUPPORTS.
4. PLACE ONE WHEEL (41060) OVER EACH END OF THE AXLE, SLIDE THE WHEELS UNTIL THEY ARE FLUSH WITH THE MACHINE BUSHINGS AND AXLE SUPPORTS.
5. CENTERING THE AXLE, PLACE THE REMAINING MACHINE BUSHINGS OVER BOTH ENDS OF THE AXLE UNTIL FLUSH WITH THE WHEELS (SEE *NOTE).
6. ATTACH "E" RING CLIPS (RRING12) INTO THE AXLE GROOVES AS SHOWN.

***NOTE:**

EARLIER MODELS MAY REQUIRE THE USE OF MB2 MACHINE BUSHINGS AND MB3 MACHINE BUSHINGS (MB2 ARE THINNER THAN MB3 BUSHINGS).

QTY.	PART No.	DESCRIPTION
1	41035A	AXLE, FINISHED
2	41060	WHEEL, SOLID 6" Dia.
2	RRING12	"E" RING CLIP
8	MB3	BUSHINGS, MACHINE
6	MB2	BUSHINGS, MACHINE

MOUNTING INSTRUCTIONS FOR PCFR

(A) ATTACH ADAPTER PLATE TO HEAD CASTING:

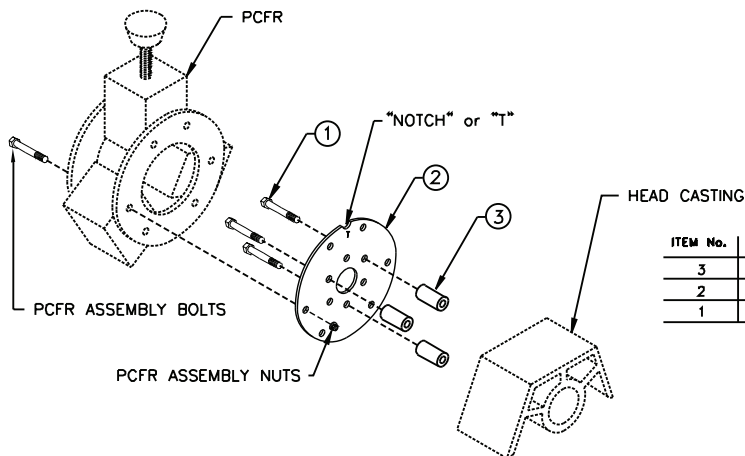
1. PLACE SPACERS [3] BETWEEN HEAD CASTING AND ADAPTER PLATE [2], AS SHOWN.
2. USE 5/16-18 x 2.000 HEX BOLTS [1] TO MOUNT ADAPTER PLATE [2] TO HEAD CASTING.

NOTE: (REFER TO DETAIL "A")

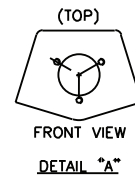
THE ADAPTER PLATE MUST BE IN THE TOP POSITION WHEN MOUNTING TO THE HEAD CASTING. THE "NOTCH" OR "T" STAMPED ON THE ADAPTER PLATE INDICATES THE TOP OF THE PLATE.

(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)

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.

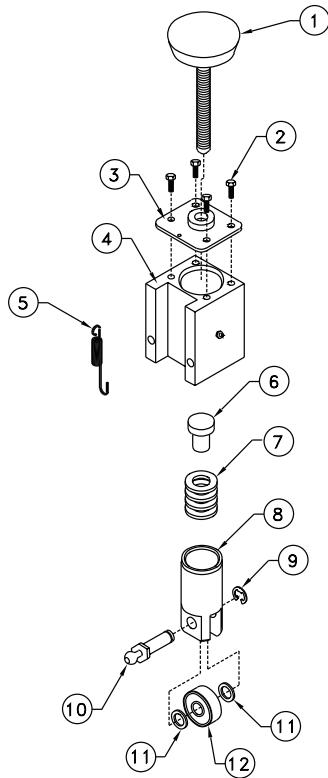
The PCFR is standard equipment on DM10. Note: The recommended grease for the housing blocks is Lps® Thermaplex 70614 or Lubri-Plate® 630-Aa. Lubricate the rotation pin and bearing surface with Lps® 2 Industrial Lubricant 00216, WD-40® Lubricant or equivalent.

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



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 BEARING KIT

THE PCFR22SER BEARING KIT INCLUDES THE FOLLOWING:

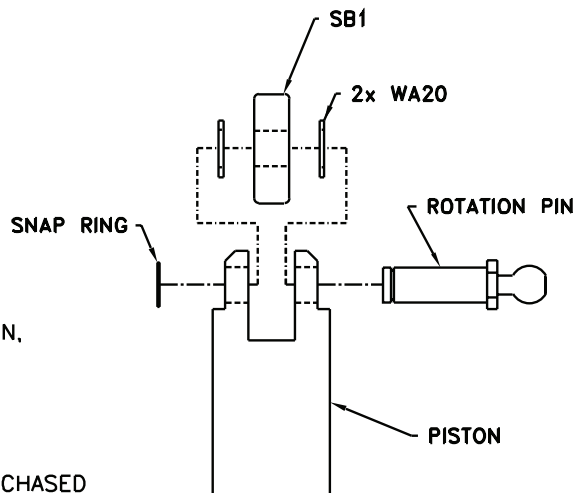
- * (1) SB1 BEARING
- * (2) WA20 SPACERS

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.



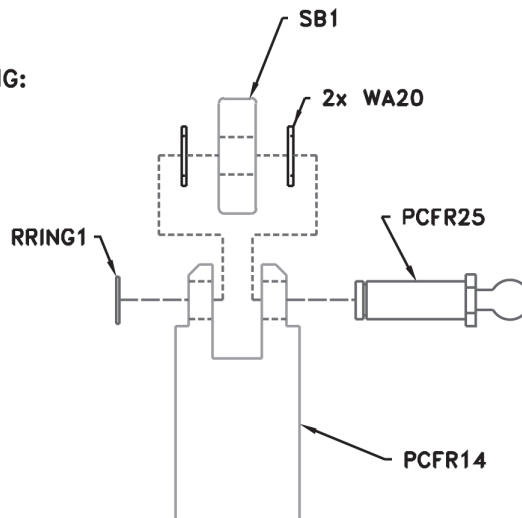
How to Install the PCFR22SER Bearing Kit

1. Remove the six hex flange nuts (FLNUT3).
2. Remove the rear disk (PCFR11).
3. Slip the upper housing (PCFR13) and/or the lower housings (PCFR18) from the hex bolts.
4. Remove the upper piston (PCFR14) and /or the lower pistons (PCFR19).
5. Remove the spring retainer (PCFR23).
6. Pull out the rotation pin (PCFR25).
7. Remove the spacers (PCFR24) and the drive bearing (PCFR22).
8. Clean all the parts in kerosene or a cleaning solvent.
9. Lubricate all moving parts and grease the housings provided with zerk fittings.

PCFR PISTON KIT

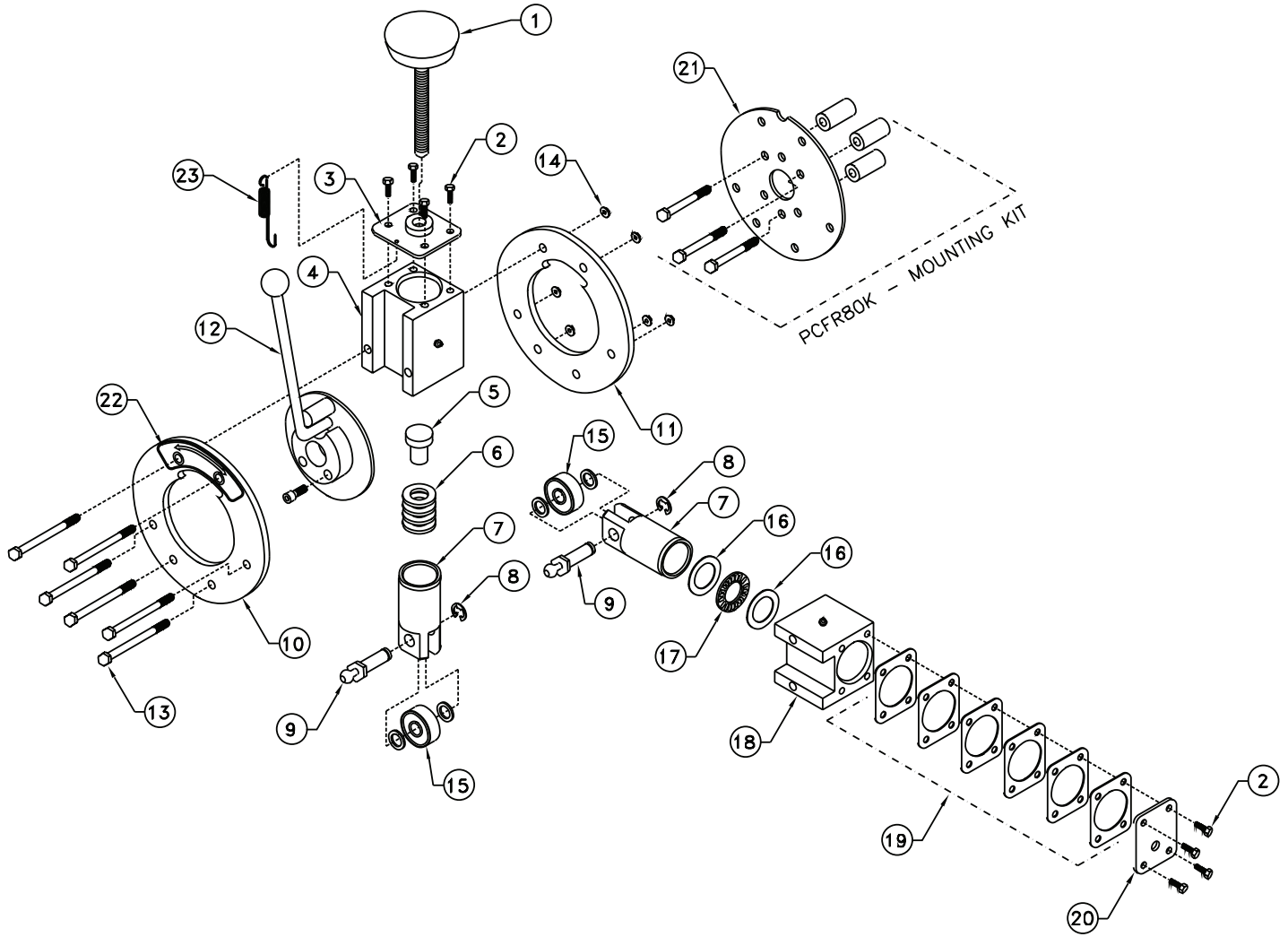
THE PCFR23SER PISTON KIT INCLUDES THE FOLLOWING:

- * (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.

POWER CABLE FEED AND RETURN (PCFR) SCHEMATIC



DM10 MACHINE MANUAL

PCFR SCHEMATIC

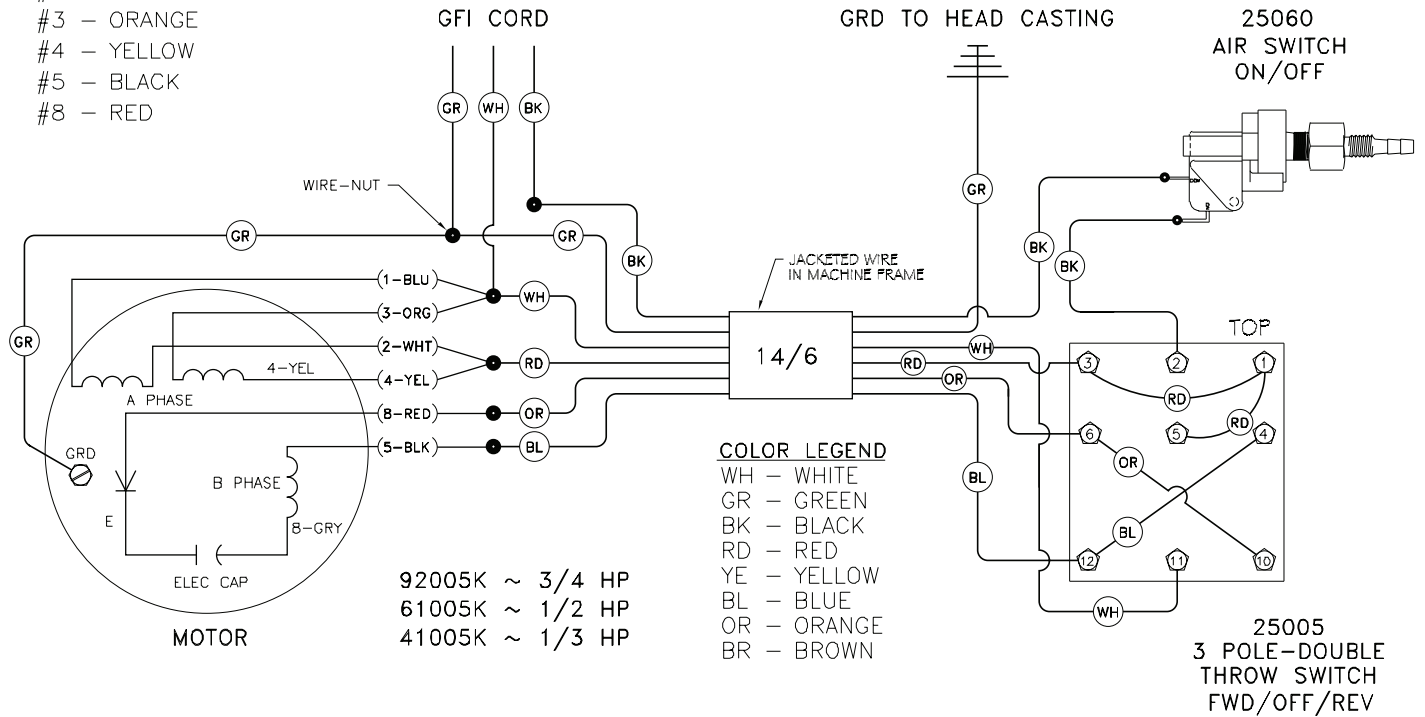
 The entire line item in **bold** identifies the name of an entire assembly. The “Z” shaped arrow identifies all the parts that make up that assembly. You can purchase the entire assembly, or just the individual parts.

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
12	1	PCFR12	Direction Disc Assembly
	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
15	3	PCFR22SER	PCFR Bearing Kit
	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
21	1	PCFR80K	PCFR Adapter Kit
	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
	3	PCFR23SER	PCFR Piston Kit (kit includes items 7, 8, 9, and 15)

ELECTRICAL SCHEMATIC

MOTOR LEADS

- #1 - BLUE
- #2 - WHITE
- #3 - ORANGE
- #4 - YELLOW
- #5 - BLACK
- #8 - RED



EMERSON & BALDOR MOTOR WIRING DIAGRAM - CD0001D
1/3, 1/2 & 3/4 hp - 60 HZ ~ LOW VOLTAGE
W/OUT A.T.O. ~ USING 6 CONDUCTOR SOW CABLE
MODELS w/ BONFIGLIOLI VF49-P 10:1 GEAR REDUCER

The wiring diagram for the basic DM10 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 DM10 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.

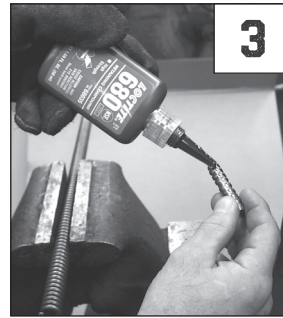
HOW TO SPLICE DURAFLEX® CABLE



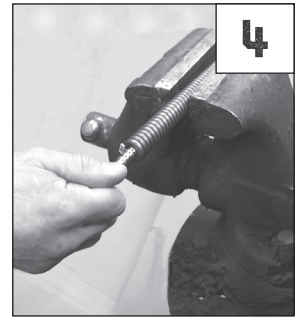
1. Cut a few inches off of each cable end and remove any burrs with a grinding disk or file.



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.



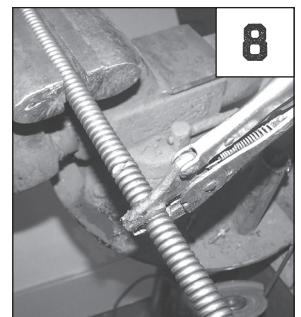
5. Apply Loctite Retaining Compound to other end of splice core.



6. Align other piece of cable onto splice core.



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

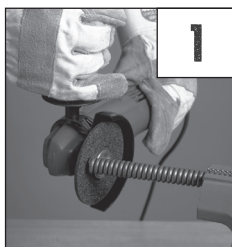


8. Continue turning and the cable ends will meet at the center of the splice core.

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.



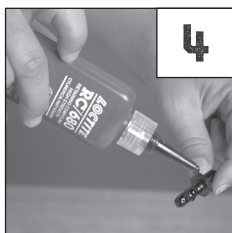
2. Spray Loctite Primer in and around the cable end to thoroughly remove grease and grime.



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



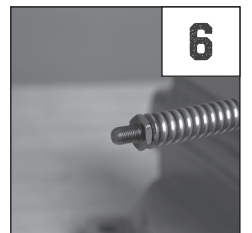
4. Apply Loctite Retaining Compound to the end fitting.



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



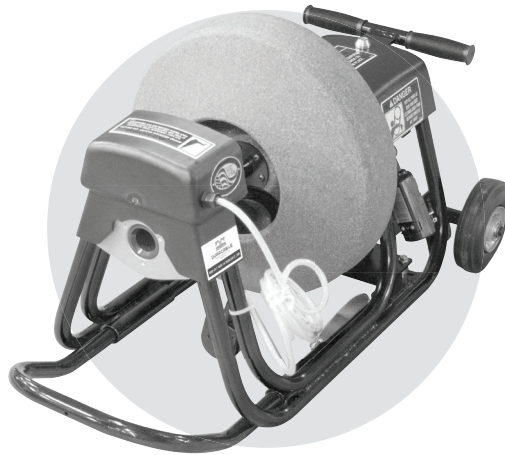
6. The Retaining Compound will be fully bonded to the cable in just a few minutes.



DM10 MACHINE MANUAL

★ BUILT **USA** TOUGH ★

DM10



DURACABLE[®]
— MANUFACTURING CO —

300 ASHWORTH ROAD
WEST DES MOINES, IOWA 50265

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

ANSWER LINE: 877.257.1781
FAX: 515.223.6109

DM10MM
UPDATED JUNE 2017