

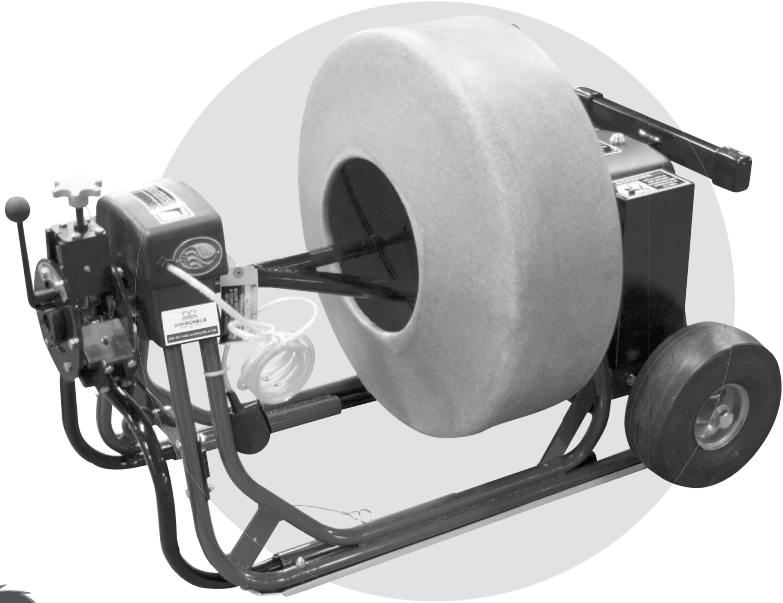


READ MANUAL BEFORE OPERATING
KEEP MANUAL FOR FUTURE REFERENCE

MACHINE MANUAL

★ BUILT **USA** TOUGH ★

DM55



RIGHT IN THERE WITH YOU.



DURACABLE[®]
— MANUFACTURING CO —

DM55 MACHINE MANUAL

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WARRANTY

Duracable Manufacturing Company warrants the DM55 machine to be free from defects in material and workmanship for a period of three 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: _____

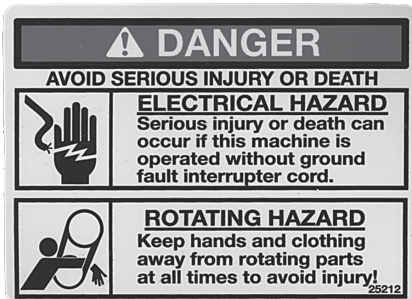
Duracable Manufacturing Company
300 Ashworth Road • West Des Moines, IA 50265

SAFETY LABELS

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

⚠ DANGER

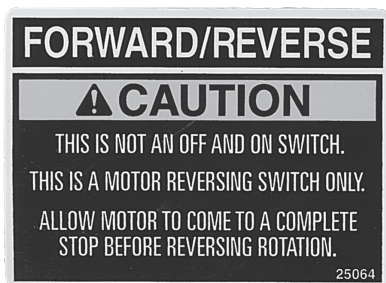
A 'Danger' label indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situation, typically for machine components that, for functional purposes, cannot be guarded. The word 'danger' will be in white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



⚠ CAUTION

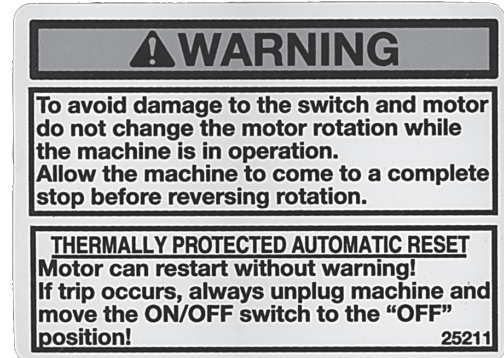
A 'Caution' label indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. The word 'caution' will be in black letters on a yellow background.

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 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 DM55 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 DM55 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

- 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.

Disassembling Your Machine

To disassemble the Model DM55 machine, 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 switch 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-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.

DM55

3/4 HP Motor

175 RPM

10:1 Gear Box

26" Reel

11/16" x 150' Cable

Telescoping Handle

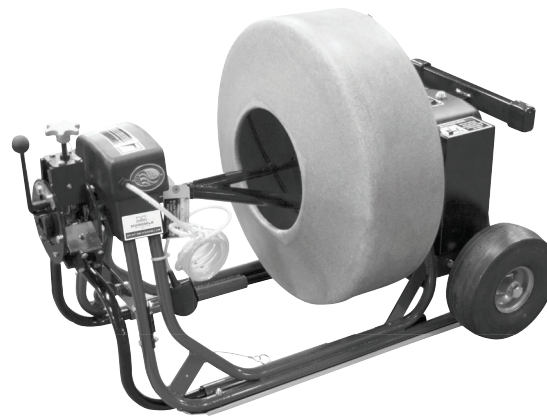
PCFR

3-Year Warranty

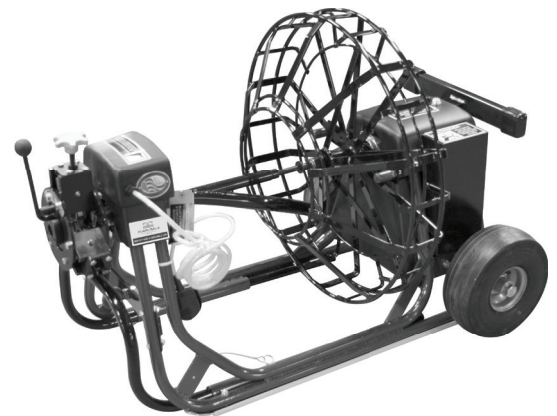
Continuous Weld
Frame Construction

USES:

2" to 10" lines,
Mainlines, Commercial,
Industrial, Residential,
Grease, Roots



DM55 SPO (standard)
with 26PRO, 26" Enclosed Polyethylene Jumbo Reel



DM55 SP
with D1K, 26" Open Spoke Metal Reel



INFORMATION AND SPECIFICATIONS

Frame

The new and improved frame is constructed of an aluminum alloy that is structurally as strong as steel. The side rail design has support brackets that allow the motor, gear and head casting assemblies to be bolted directly to the frame. In addition, these parts are enclosed by impact-resistant cover panels for safety and appearance.

Electrical Wiring

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

RPM/Drive

The standard DM55 machine has a 3/4 HP industrial motor and can be ordered in one of three different speeds: 145 rpm, 175 rpm or 215 rpm. The gearbox has a 10:1 gear ratio for more torque and power than any other machine on the market. This added power means you can easily add reels of cable to clean lines longer than 300 feet. The gearbox cantilever weight capacity is 900 pounds. Another feature is the 3/4" thick axle for unsurpassed durability.

Front Assembly

The front assembly provides the housing for two switches: the forward/off/reverse switch and the air foot switch. The front assembly is covered by a molded, one-piece, high-impact cover. The assembly is custom-fitted and bolted to the frame.

Maneuverability

The DM55's wheels provide greater mobility and ground clearance, while still fitting through a standard 30" door. A narrower wheel is available. A telescoping handle is standard.

Cable and Reel Selections

The DM55 was designed to handle several reel sizes. These provide the operator with flexibility of cable size and length. Additionally, a hoist hook, which allows for easier loading and unloading, comes standard.

Standard Package

The DM55's standard package (part number DM55 SPO) comes with the following items: revolving arm, floating ring, 3/4 HP motor at 175 rpm, power cable feed & return, 26" enclosed polyethylene reel, oversized, 11/16" x 110' cable, 10' cable tail piece, choice of cable end fittings, and choice of wide or narrow wheels. See the machine packages and accessories chart on the next page for additional options.



DM55 SPJ with D1KJ, 26" oversized open spoke metal reel.
(See options on the next page.)

MACHINE SPECIFICATIONS (APPROXIMATE)

Length of Machine with Handle Retracted	45"
Length of Machine with Handle Extended	53"
Width of Machine with Narrow Wheels	24.25"
Width of Machine with Wide Wheels	26.5"
Height of Machine	23.25"
Weight of Machine	104 lbs
Weight of Narrow Wheels	13 lbs
Weight of Wide Wheels	12 lbs
Weight of PCFR	12 lbs
Weight of D1K, 26" Open Spoke Reel	27.5 lbs
Weight of D1KJ, 26" Jumbo Open Spoke Reel	28 lbs
Weight of 26PR, 26" Polyethylene Reel	24.7 lbs
Weight of 26PRO, 26" Jumbo Poly Reel	26.5 lbs
Line Size	2" to 10"

RECOMMENDED USE: mainlines, commercial, industrial, residential, grease, roots

DM55 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
D1K	26"	Open Metal Spoke	D3	D2J	D3R (male end) D3RJ (slip joint)	82RAS D8K5S	__69-130 __75-120	11/16" up to 130' 3/4" up to 120'
D1KJ	26"	Oversized Open Metal Spoke	D3	D2J	D3R (male end) D3RJ (slip joint)	82RAS D8K5S	__69-150 __75-150	11/16" up to 150' 3/4" up to 150'
26PR	26"	Enclosed Polyethylene	TS55-010	26FR (included)	D3R (male end) D3RJ (slip joint)	82RAS	__69-130 __75-120	11/16" up to 130' 3/4" up to 120'
26PRO	26"	Oversized Enclosed Polyethylene (standard)	TS55-010	26FR (included)	D3R (male end) D3RJ (slip joint)	82RAS	__69-150 __75-150	11/16" up to 150' 3/4" up to 150'

- * 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" and 3/4" only).
- * Add **LW** after part # for Loose Wound (3/4" Hollow Core and Inner Core only).
- * Maximum length of cable is not always the recommended length.
- * Custom lengths are available.

MACHINE PACKAGES

Part #	Horse Power	RPM	Reel	Cable
DM55 SP	3/4 HP Motor	175 RPM	D1K	11/16" x 110'
DM55 SPJ	3/4 HP Motor	175 RPM	D1KJ	11/16" x 150'
DM55 SPP	3/4 HP Motor	175 RPM	26PR	11/16" x 110'
DM55 SPO	3/4 HP Motor	175 RPM	26PRO	11/16" x 150'



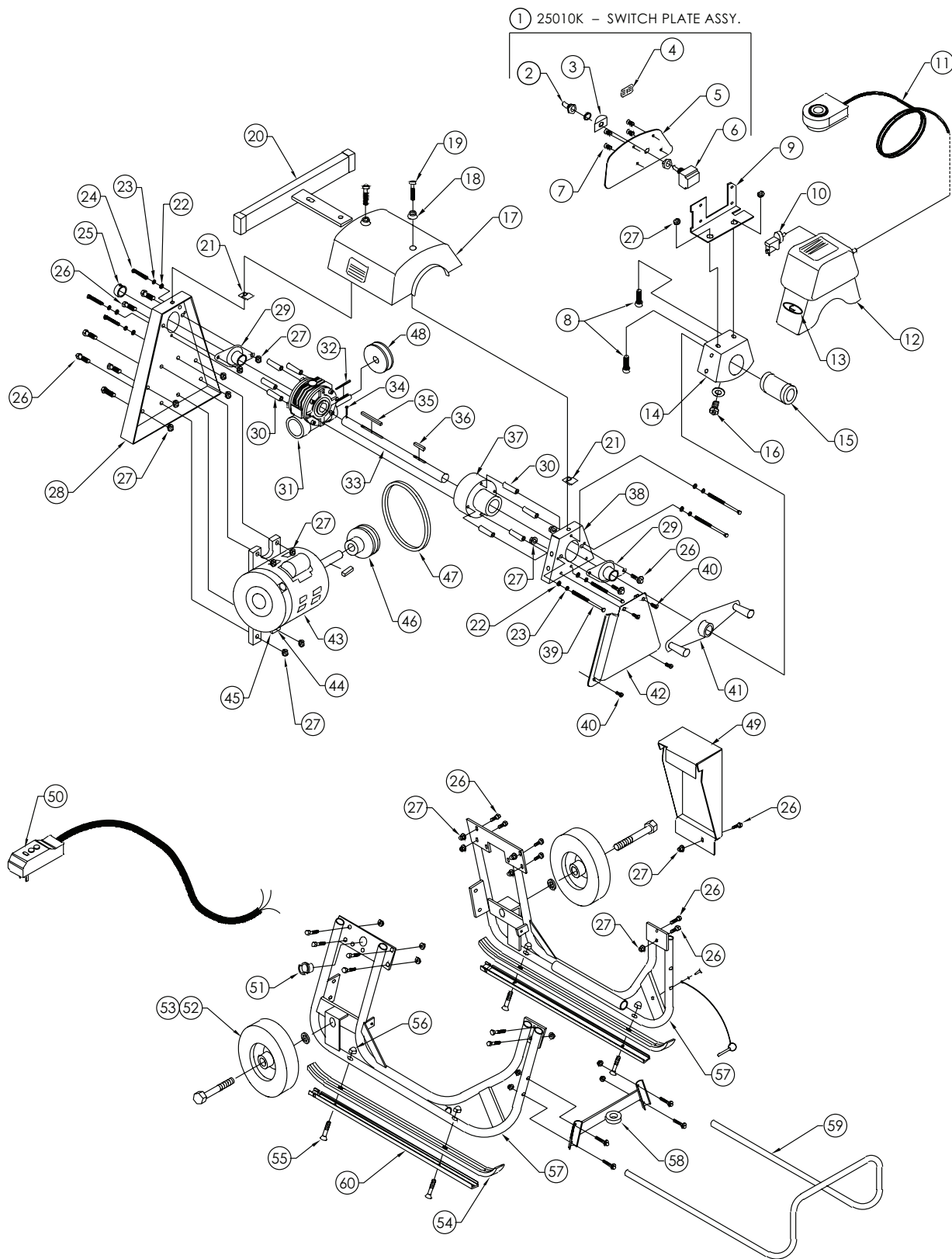
The DM55 SP with 26PR, 26" enclosed polyethylene reel

MACHINE ACCESSORIES / REPLACEMENT PARTS

Part #	Description
81005K	3/4 HP Motor Kit
8255 XX-A**	3/4 HP Motor Changed to 145 RPM
8255 XX-B**	3/4 HP Motor Changed to 215 RPM
PCFR	Power Cable Feed and Return
PCFR80K	PCFR Adapter Kit
DRC26	Cover for 26" Open Spoke Reel (D1K)
DRCJ	Cover for 26" Oversized Open Spoke Reel (D1KJ)
WWK10	Wide Wheels (10" diameter x 3-1/2" wide)
NWK10	Narrow Wheels (10" diameter x 2-1/4" wide)
81052K	Stair Guide Kit
DKIT2	Blade Kit


** When ordering the DM55 with 145 RPM or 215 RPM, insert the package number that includes your desired reel and PCFR where the 'XX' are located. For example, to order the DM55 SPJ with 215 rpm, you would use part number DM55 SPJ-B.







DM55 SCHEMATIC



DM55 MACHINE MANUAL


DM55 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	9	PHSC14	#10-24" x 1/2" Pan Head Machine Screw
8	4	SHCS11	5/16"-18 x 1" Socket Head Cap Screw
9	1	25115	Switch Bracket
10	1	25061	Air Switch with Strain Relief Nut
11 	1	25073K	Foot Pedal Assembly
	1	25073	Foot Pedal with 8' Tubing, Metal Housing
	1	HCL8	Clamp, Constant Tension
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	25105	Steel Head Bearing
16 	1	25110	Grease Fitting Assembly
	1	CXA	Adapter
	1	ZERK2	1/4"-28 Straight Grease Zerk
	1	WA12	7/16" x 3/4" x 0.072" Zinc Floor Washer
17 	1	25031K	Top Cover with Decals
	1	25031	Top Cover
	1	25066	Decal, Step Warning
	1	25068	Decal, Electrical Danger
18	2	25130	Bushing, Top Cover
19	2	SHCS11	5/16"-18 x 1" Socket Head Cap Screw
20 	1	25051	Heavy Duty Vertical Support with End Caps
	1	25051-1	Vertical Support without End Caps
	2	MM16	End Cap, Black
21	4	WA3	1/4" x .042 THK Flat Washer
22	8	WA17	1/4" Flat Washer
23	8	WA22	1/4" Split Lock Washer
24	4	HHCS48	M6 x 1.0 x 60mm Metric Hex Head Cap Screw
25	1	25125	Collar, Shaft
26	25	FLSC1	5/16"-18 x 3/4" Hex Head Flange Screw

DM55 MACHINE MANUAL


DM55 SCHEMATIC


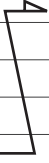
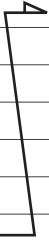

 The entire line item in **bold** identifies the name of an entire assembly. The “Z” shaped arrow identifies all the parts that make up that assembly. You can purchase the entire assembly, or just the individual parts.

ITEM	QTY.	PART#	DESCRIPTION
27	25	FLNUT3	5/16”-18 Hex Flange Nut, Locking
28	1	81030	Mounting Plate, Motor
29	2	SB5	Bearing, Reel Shaft
30	8	82063	Spacer Tube
31	1	82060	Gear Reducer, 10:1
32	1	KEY12	3/16” x 2” Square Key
33	1	82061	Shaft, Reel
34	1	FILHMS1	#10-24 x 3/8” Fillister Head Machine Screw
35	1	KEY9	1/4” x 2-3/4” Square Key
36	1	KEY7	1/4” x 1” Square Key
37	1	82062	Mounting Block, Front
38	1	25095	Mounting Plate, Bearing
39	4	HHCS49	M6 x 1 x 100 mm Metric Hex Head Cap Screw
40	4	PHSC14	#10-24 x 1/2” Pan Head Machine Screw
41	1	81040	Drive Plate Assembly
	1	81040-1	Drive Plate Weldment, Finished
	1	CPSS4	5/16”-18 x 1/4” Cup Point Set Screw
	2	25090	Drive Lug Assembly
	1	25090A	Drive Lug
	1	MM4	Drive Lug Cap, Red
	1	WA10	3/8” Split Lock Washer
	1	HXNUT11	3/8”-24 Hex Nut
42	1	25025	Motor Cover
43	1	81005K	Motor, 3/4 HP
44	1	ECT34	1/2” Strain Relief, 90 degree Snap Elbow
	1	ELN1	1/2”-14 NPT (National Pipe Thread) Lock Nut
45	1	ECT30	1/2” Strain Relief, Straight
	1	ELN1	1/2”-14 NPT (National Pipe Thread) Lock Nut
	1	82010*	175 rpm Drive System
46	1	25087	Sheave, 4L x 2-1/2” outside diameter (Motor Shaft AKA pulley)
47	1	25082	Belt, 4L180
48	1	25087	Sheave, 4L x 2-1/2” outside diameter (Motor Shaft AKA pulley)
49	1	81035K	Pulley Cover with Decals
	1	81035	Cover, Pulley
	1	25063	Decal, Rotating Danger
50	1	25165	Right Angle GFCI with 26” 12/3 Heavy-Duty, Vinyl Jacket, 300V, weather approved, portable (SJTW) Cord
51	1	ECT34	1/2” Strain Relief, 90 degree Snap Elbow
	1	ELN1	1/2”-14 NPT (National Pipe Thread) Lock Nut



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DM55 SCHEMATIC

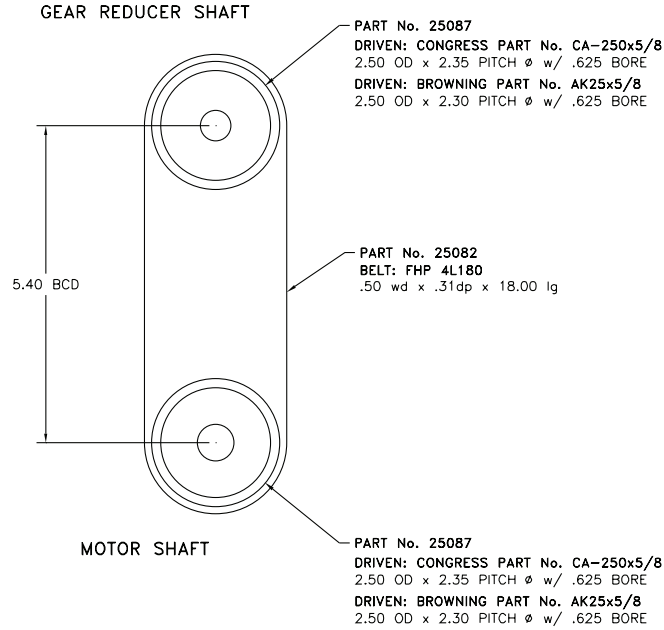
 The entire line item in **bold** identifies the name of an entire assembly. The “Z” shaped arrow identifies all the parts that make up that assembly. You can purchase the entire assembly, or just the individual parts.

ITEM	QTY.	PART #	DESCRIPTION
52 	1	NWK10	Narrow Wheel Kit
	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
53 	1	WWK10	Wide Wheel Kit
	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
54	2	D81050	Reinforcement Strip
55	4	FHMS11	5/16”-18 x 1-3/4” Flat Head Machine Screw
56	4	HXNUT9	5/16”-18 Hex Acorn Nut
57	1	D81015	Frame Set, Right Frame & Left Frame Painted
58 	1	25210	Winch Hook Assembly
	1	EB1	Forged Eye Bolt
	4	FLNUT5	1/4”-20 Hex Flange Nut, Locking
	4	HHCS5	1/4”-20 x 1-1/2” Hex Head Cap Screw
	1	HXNUT16	1/2”-13 Hex Nut
	2	WA16	1/2” Split Lock Washer
	1	25210-1	Winch Hook Finished
59 	1	82025K	Handle Assembly with Ring Pin and Lanyard
	2	RLPIN12	3/8” diameter x 1-3/8” Roll Pin
	1	MM14	Detent Ring Pin with Lanyard Attached
	1	WA5	#10 External Tooth Lock Washer
	1	PHSC14	#10-24 x 1/2” Pan Head Thread Counting Machine Screw
60	2	81052	Stair Glide

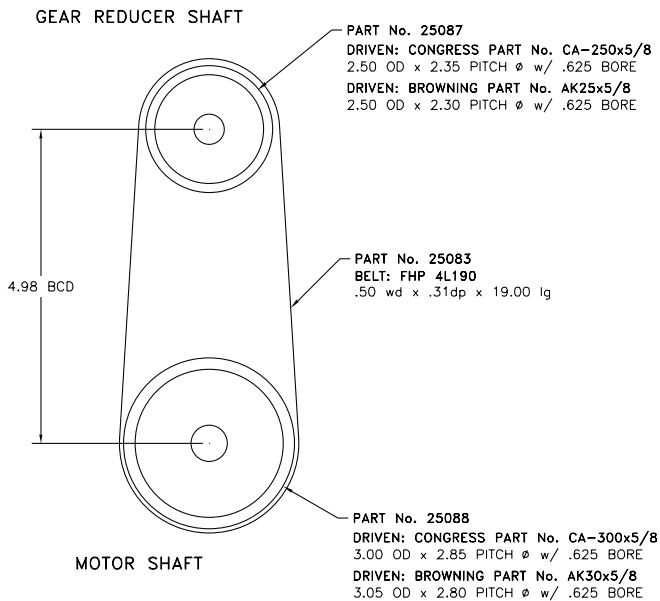
*PARTS FOR ALTERNATE MOTOR DRIVE SYSTEM SPEEDS

ITEM	QTY.	PART #	DESCRIPTION
	1	82011	145 rpm Drive System
46	1	25087	Sheave, 4L x 2-1/2” outside diameter (Motor Shaft AKA pulley)
47	1	25083	Belt, 4L190
48	1	25088	Sheave, 4L x 3.05” outside diameter (Gear Shaft AKA pulley)
	1	82012	215 rpm Drive System
46	1	25088	Sheave, 4L x 3.05” outside diameter (Gear Shaft AKA pulley)
47	1	25083	Belt, 4L190
48	1	25087	Sheave, 4L x 2-1/2” outside diameter (Motor Shaft AKA pulley)

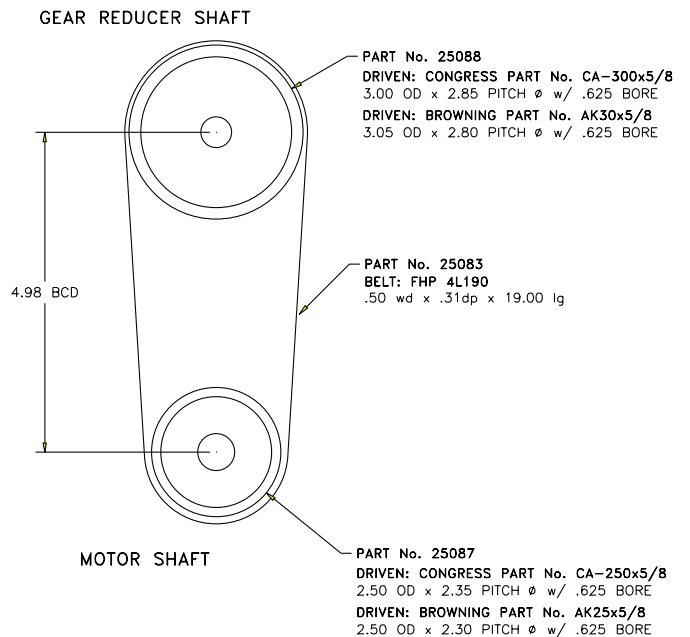
175 RPM DRIVE SYSTEM



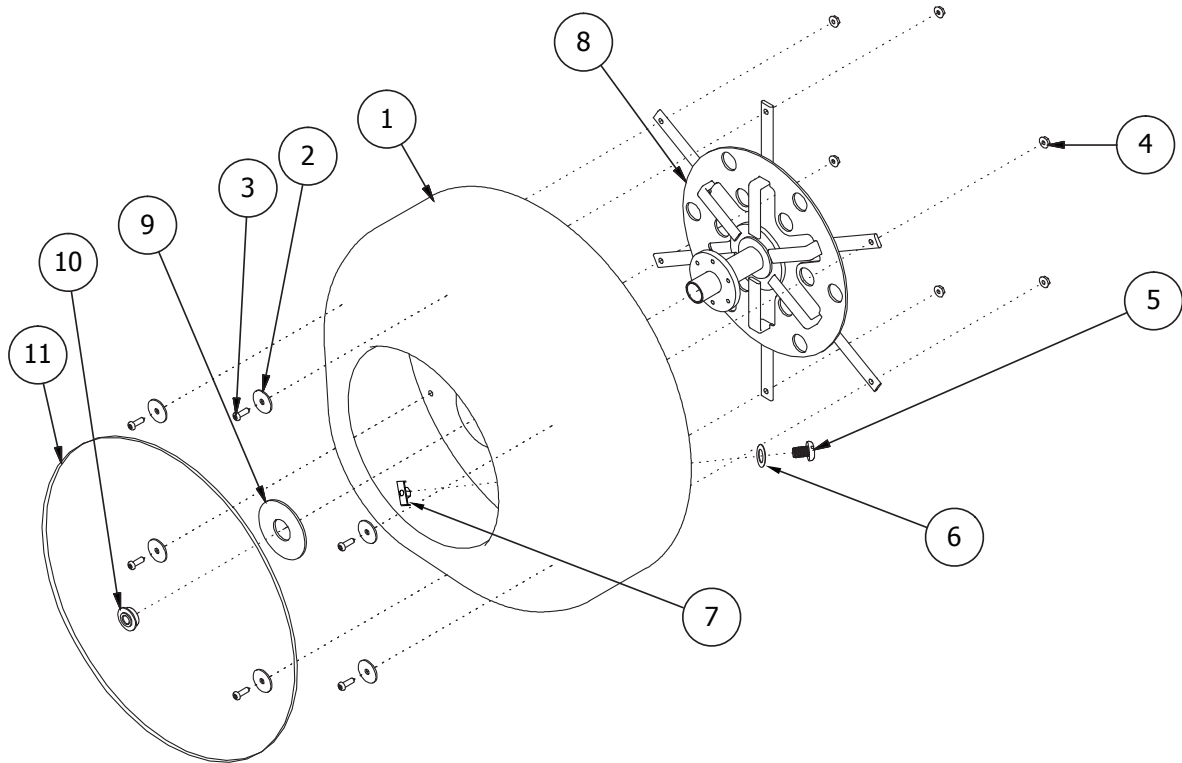
215 RPM DRIVE SYSTEM



145 RPM DRIVE SYSTEM



26PRO (26" OVERSIZED POLYETHYLENE REEL) SCHEMATIC FOR DM55



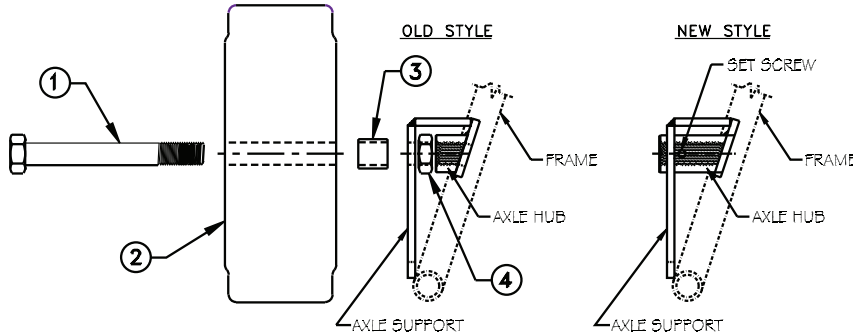
ITEM	QTY.	PART#	DESCRIPTION
1	1	772601	26" Plastic Reel Oversized
2	6	WA37	1/4 ID x 3/4 OD Bonded Washer
3	6	FLNUT5	1/4-20 Hex Flange Nut
4	6	SHCS31	1/4-20 x .75 Button Head Cap Screw
5	12	MM46	1/2-13 Std. Threaded Plug/Ppr
6	6	WA39	9/16 SAE Flat Washer
7	1	TNUT1	1/2-13 T-Nut 4 Prong Znc
8	1	772603	26" Plastic Reel Basket
9	1	772602	Lock Collar with Set Screw
10	1	D6A	Reel Bearing
11	1	26FR	26" Ring for 26PR and 26PRO

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

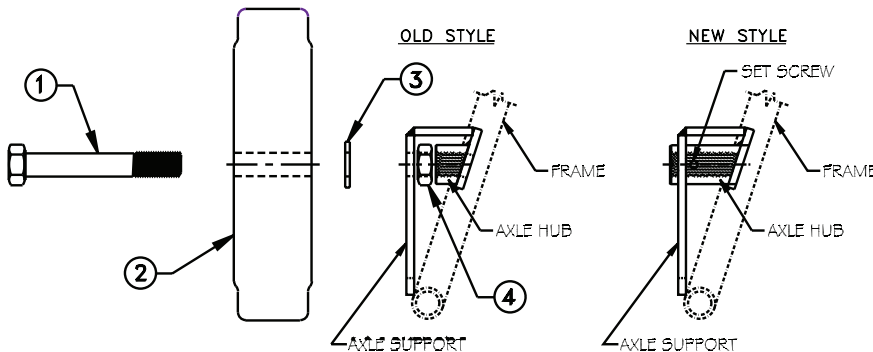
ITEM No.	QTY.	PART No.	DESCRIPTION
SETSOREM	2	CPSS3	1/4-20 x .25 SKT HD SET SCREW
4	2	HXNUT17	3/4-10 HEX NUT
3	2	25145	WHEEL BUSHING
2	2	JWKW	WIDE WHEEL - 10" DIA.
1	2	HHCS28	3/4-10 x 6.00 HEX HD CAP SCREW



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
SETSOREM	2	CPSS3	1/4-20 x .25 SKT HD SET SCREW
4	2	HXNUT17	3/4-10 HEX NUT
3	2	WA1B	WHEEL BUSHING
2	2	JWKN	NARROW WHEEL - 10" DIA.
1	2	HHCS27	3/4-10 x 5.00 HEX HD CAP SCREW



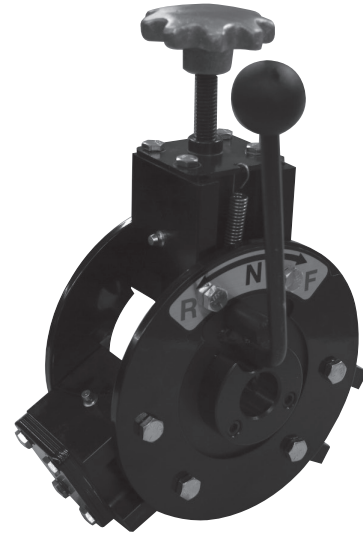
NWK10
Narrow Wheels (10" dia. x 3-1/2" w)

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 DM55. 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 KITS (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:

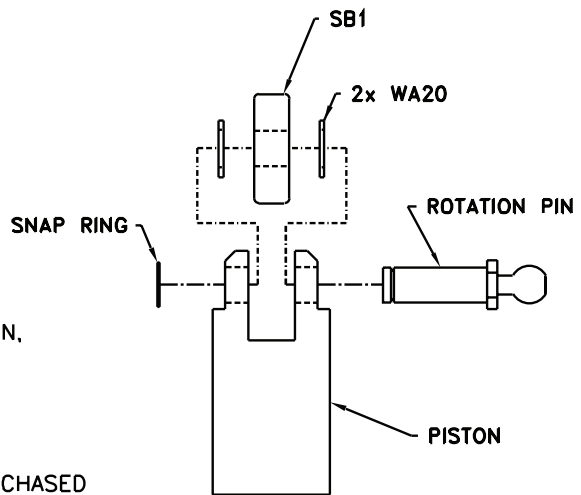
- * (1) SB1 BEARING
- * (2) WA20 SPACERS

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.



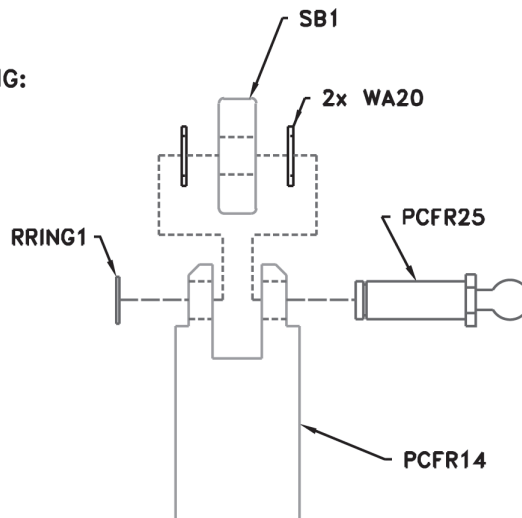
How to Install the PCFR22SER Bearing Kit

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

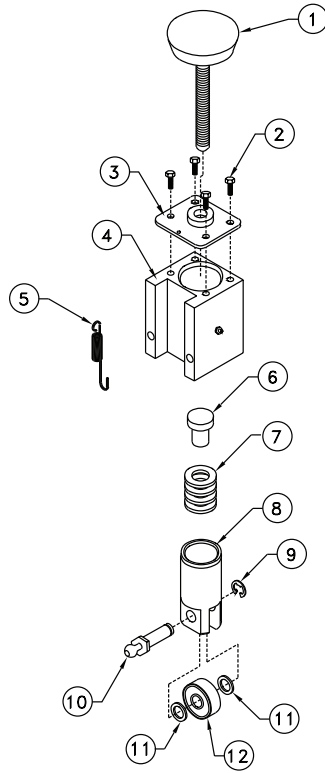
THE PCFR23SER PISTON KIT INCLUDES THE FOLLOWING:

- * (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.

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:

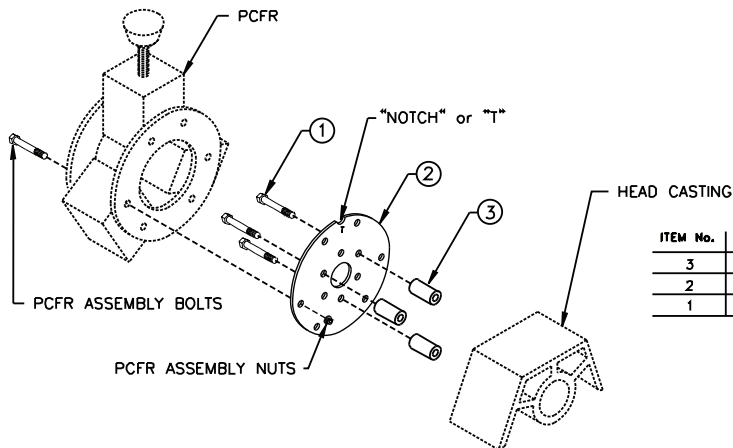
1. PLACE SPACERS [3] BETWEEN HEAD CASTING AND ADAPTER PLATE [2], AS SHOWN.
2. USE 5/16-18 x 2.000 HEX BOLTS [1] TO MOUNT ADAPTER PLATE [2] TO HEAD CASTING.

NOTE: (REFER TO DETAIL "A")

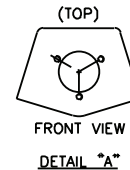
THE ADAPTER PLATE MUST BE IN THE TOP POSITION WHEN MOUNTING TO THE HEAD CASTING. THE "NOTCH" OR "T" STAMPED ON THE ADAPTER PLATE INDICATES THE TOP OF THE PLATE.

(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.

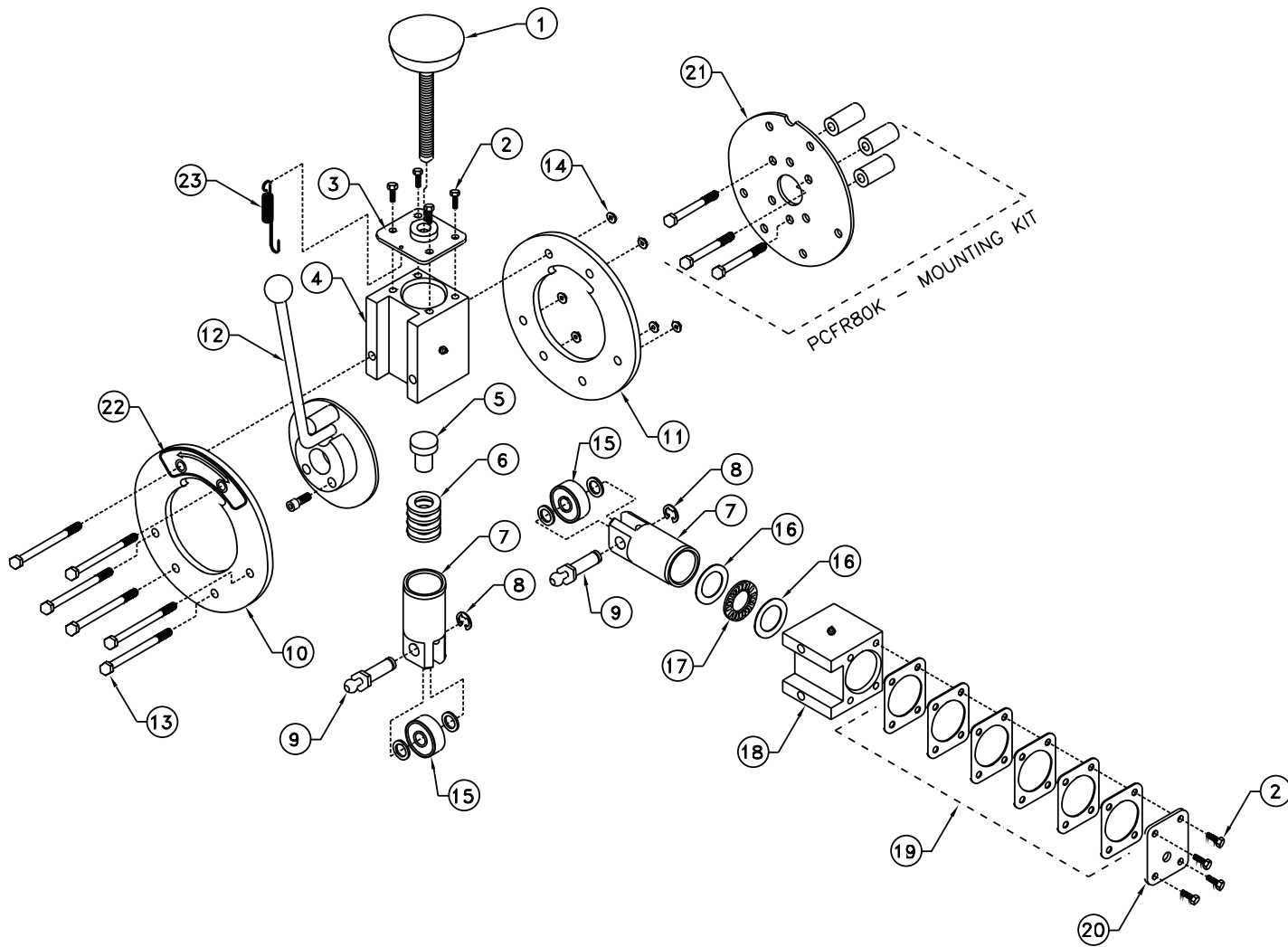


NOTE HOLE LOCATIONS OF HEAD CASTING.




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

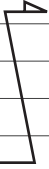


POWER CABLE FEED AND RETURN (PCFR) SCHEMATIC



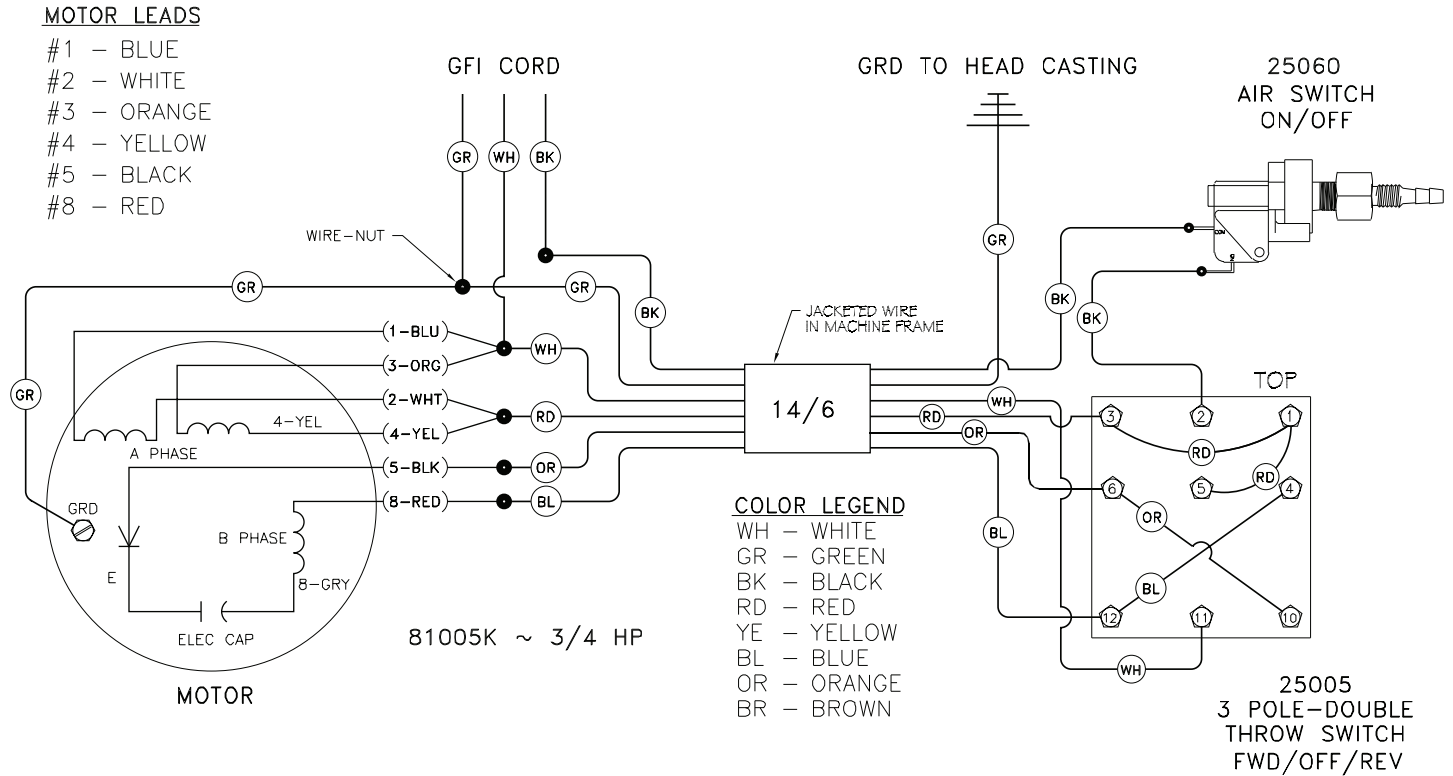
DM55 MACHINE MANUAL

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 FOR DM55



EMERSON & BALDOR MOTOR WIRING DIAGRAM - CD0001C
 1/3 & 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 DM55 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 DM55 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.

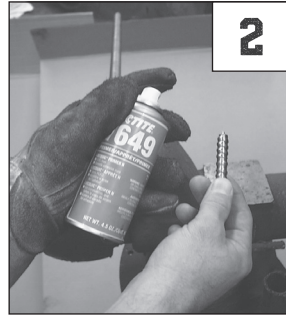
Overhead Power Lines

- 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.

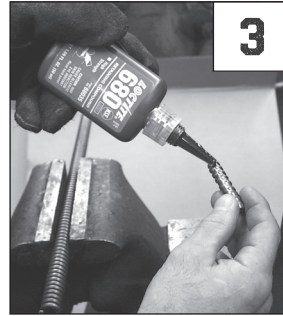
HOW TO SPLICE DURAFLEX® CABLE



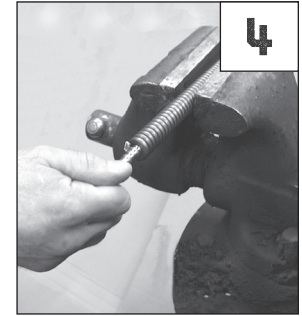
1. Cut a few inches off of each cable end and remove any burrs with a grinding disk or file.



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 end one turn.



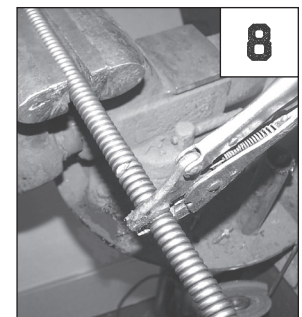
5. Apply Loctite Retaining Compound to other end of splice core.



6. Align other piece of cable onto splice core.



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

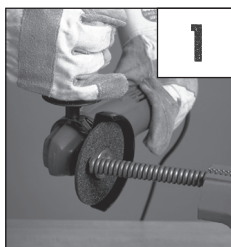


8. Continue turning and the cable ends will meet at the center of the splice core.

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.



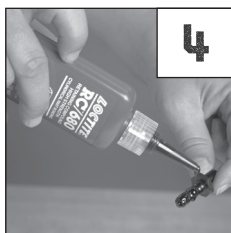
2. Spray Loctite Primer in and around the cable end to thoroughly remove grease and grime.



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



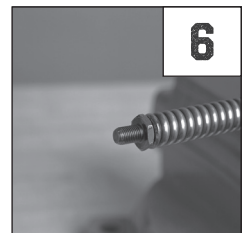
4. Apply Loctite Retaining Compound to the end fitting.



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.



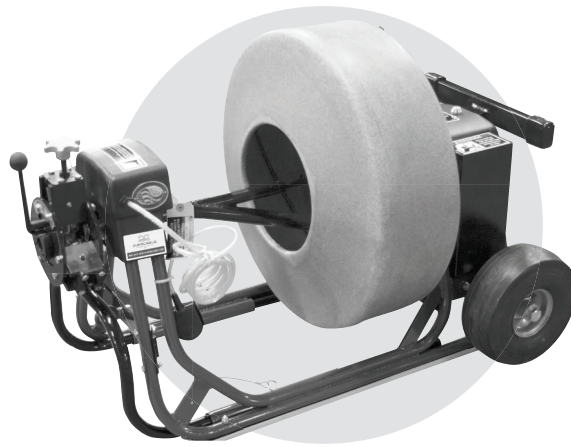
DM55 MACHINE MANUAL

Notes

DM55 MACHINE MANUAL

★ BUILT **USA** TOUGH ★

DM55



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

DM55MM
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