CABLE REMOVAL
Use the following procedure to remove worn or damaged cable from reel prior to installation of new cable.

Failure to relieve all spring tension prior to removing cable could result in damage to equipment or personal injury. Follow instructions carefully.

1. Move machine serviced by reel to a position closest to reel. Springs will still be under pre-tension at this point.
2. Disconnect cable from machine junction box.
3. Position optional cable guide, if reel is so equipped.
4. Tighten water-tight connector and U-bolt provided on drum wrapper segment. Do not over-tighten.
5. Wind the cable onto the reel spool by hand rotating spool in direction it turns free of spring tension.
6. Grip spool by hand and carefully release spool lock or mechanism or by tying off.
7. Loosen U-bolt and water-tight connector and disconnect conductors from slip ring.
8. Remove cable from spool. Do not attempt to relieve spring tension using a spanner wrench. Do not exceed number of turns indicated on serial plate. Do not over-tighten. Do not attempt to remove spring if resistance is met or hub tends to rotate with shaft.

CAUTION
Failure to relieve all spring tension prior to removing cable may result in serious personal injury. Follow instructions carefully.

CABLE INSTALLATION
Use the following procedure to replace cable or if reel was ordered without cable. Refer to CABLE INSTALLATION REFERENCE DRAWING, below.

1. Unspool new cable from shipping spool and lay out to eliminate twist. NOTE: This step is not essential, but will aid in winding operation of the reel and prolong cable life.
2. Feed one end of the cable through water-tight connector on the main shaft inside the spool and into the slip ring side. (See drawing below.)
3. Connect individual conductors to appropriate rings on collector using crimp fitting or similar connection method.
4. Tighten water-tight connector and U-bolt provided on drum wrapper segment. Do not over-tighten.
5. Wind the cable onto the reel spool by hand rotating spool in direction it turns free of spring tension.
6. Connect free end of cable to machine junction box.

COLLECTOR REPLACEMENT

1. Turn off all power to reel.
2. Remove collector cover and gasket.
3. Disconnect electric leads to and from collector.
4. Remove drive stub bolt from bearing housing.
5. Remove button plug from hole in side of housing. Insert long 1/8” Allen wrench through hole and loosen two set screws in collector locking collar. Set screws are at 90° to one another. NOTE: Older reels may have lock screws which must be removed to reach set screws holding collector to shaft.
7. Install new collector by reversing above steps.

INSTALLATION and MAINTENANCE INSTRUCTIONS
MMD28 DIRECT DRIVE ELECTRIC CABLE REELS

All units are provided with right hand rotation unless otherwise specified. This means that cable is pulled off spool top left and bottom right (spool rotates clockwise to wind cable) when viewing spring end of reel. See diagram on parts page.

Clock-type springs provide power for automatic cable take-up. Spring must be pretensioned at time of installation to insure that tension is applied to cable at all times. A tension adjustment spanner wrench is provided with each reel.

WARNING

Some reels with large or multiple springs are equipped with a ratcheted adjustment wrench. Follow separate instructions for its use. Failure to use ratcheted wrench, on reels so equipped, could result in serious personal injury.

WARNING

Do not attempt to relieve spring tension using spanner wrench. Doing so may result in serious personal injury.

INSTALLATION

1. Insure that machinery to be serviced by reel is at position closest to reel.
2. Securely mount reel in desired position using 3/8”(M10) bolts. Be sure spool is aligned with cable run.
3. Position optional cable guide, if reel is so equipped. See CABLE INSTALLATION DRAWING.
4. Connect free end of cable to junction box on machine or adjust cable stops so that desired length of cable extends from reel.
5. Remove cover plate on spring housing to expose shaft and spring hub. (See Figure 1).
6. Insert spanner wrench into holes in spring hub (Fig 2). Rotate wrench counterclockwise (for standard rotation). Number of 360° turns should match last digit in model number on serial plate. If model number includes an “R”, reel is reverse rotation and wrench must be rotated clockwise. (See EXPLANATION on parts list page.)
7. Tighten nuts (and extension bolts) securing spring housing to faces cable pay-off direction.
8. Install replacement spring motor(s) onto frame.
9. Tighten nuts (and extension bolts) securing spring motor(s) to frame.
10. Connect free end of cable to junction box on machine or adjust cord stop so that desired length of cord extends from reel.
11. Tension adjustment spanner wrench. Refer to INSTALLATION section.
12. Replace inspection cover.
**ILLUSTRATED PARTS LIST**

**MMD28 DIRECT DRIVE ELECTRIC CABLE REELS**

Always specify SERIAL NUMBER & MODEL NUMBER when ordering parts.

**ELECTRICAL CONNECTIONS**

- **Cable Leadwires**: For connections, sequence, and connection methods must comply with National Electrical Code and Local Electrical ordinances. If in doubt, contact a local electrical contractor or electrical inspector.

- **Slip-Ring Leadwires are Number Tagged**

**MODEL NUMBER EXPLANATION**

- **MILL DUTY REEL**: 28
- **FRAME SERIES**: 100
- **SPRING SERIES**: 2
- **NO. OF POLAR**: 12
- **AMPERAGE**: 3
- **CORE DIAMETER**: 10
- **PRETENSION TURNS**: 1

**INDICATES REVERSE ROTATION. NO LETTER INDICATES STANDARD ROTATION.**

**APMACITY**

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**NOTE:** Applicable mounting hardware included with each kit.

**ITEM**

- **KNO.**: 012385
- **DESCRIPTION**: Frame Assembly
- **QTY**: 1

**NOTE:** Applicable mounting hardware included with each kit.
ILLUSTRATED PARTS LIST
MMD28 DIRECT DRIVE ELECTRIC CABLE REELS

Always specify SERIAL NUMBER & MODEL NUMBER when ordering parts.

ELECTRICAL CONNECTIONS
Always specify SERIAL NUMBER & SLIP–RING LEAD TO

SLIP–RING ENCLOSURE
460 VOLT AC. 250 VOLT DC. WATER–TIGHT DUST–TIGHT
DO NOT EXCEED AMPERAGE RATING OF CABLE OR SLIP–RING
NUMBER OF CIRCUITS MAY VARY FROM TWO (MINIMUM) TO 36 (MAXIMUM). FOUR CIRCUITS SHOWN.

MODEL NUMBER EXPLANATION
MILL DUTY REEL FRAME SERIES SPRING SERIES NO. OF SPRINGS NO. OF POLES AMPACITY CORE DIAMETER PRETENSION TURNS
MMD 28 100 2 R – 12 3 10 – 1
INDICATES REVERSE ROTATION.
NO LETTER INDICATES STANDARD ROTATION.

NOTE: Applicable mounting hardware included with each kit.

COLOR SEQUENCE FOR TYPE SO CABLE
#1 – BLACK
#2 – WHITE
#3 – RED
#4 – GREEN
#5 – ORANGE
#6 – YELLOW
#7 – WHITE W/ BLACK TRACER
#8 – WHITE W/ BLACK TRACER
#9 – GREEN W/ BLACK TRACER
#10 – ORANGE W/ BLACK TRACER
#11 – BLUE W/ BLACK TRACER
#12 – BLACK W/ WHITE TRACER

CALCULATING NO. OF POLES

AMPERITY
CODE Amps
3 35
7 75
12 125
20 200

NOTE: Please consult factor for optional accessories: roller guides, ratchet look, limit switch, and twist base.
CABLE REMOVAL

Use the following procedure to remove worn or damaged cable from reel prior to installation of new cable.

1. Move machine serviced by reel to a position closest to reel. Springs will still be under pre-tension at this point. Turn off all electric power.
2. Loosen U-bolt and water-tight connector and disconnect conductors from slip ring.
3. Install new cable following instruction at right.

CABLE INSTALLATION

Use the following procedure to replace cable or if reel was ordered without cable. Refer to CABLE INSTALLATION and MAINTENANCE INSTRUCTIONS for its use.

1. Move machine serviced by reel to a position closest to reel.
2. Turn off all electric power.
3. Remove button plug from hole in side of housing. Insert long 1/8" Allen wrench through hole and loosen two set screws in collector locking collar. Set screws are at 90° to one another.
4. Slide collector off shaft.
5. Install new collector by reversing above steps.

COLLECTOR REPLACEMENT

1. Turn off all power to reel.
2. Remove collector cover and gasket.
3. Disconnect electric leads to and from collector.
4. Remove drive stud bolt from bearing housing.
5. Remove button plug from hole in side of housing. Insert long 1/8" Allen wrench through hole and loosen two set screws in collector locking collar. Set screws are at 90° to one another.

NOTE: Older reels may have lock screws which must be removed to reach set screws holding collector to shaft.

INSTALL CABLE

1. Unspool new cable from shipping spool and lay out ordered without cable. Refer to CABLE INSTALLATION.
2. Disconnect cable from machine junction box.
3. Tighten water-tight connector and U-bolt provided on main shaft inside the spool and into the slip ring side.
4. Turn viewing spring end of reel. See diagram on parts page.

WARNING

Some reels with large or multiple springs are equipped with a ratcheted adjustment wrench. Follow separate instructions for its use. Failure to use ratcheted wrench, on reels so equipped, could result in serious personal injury.

WARNING

Do not attempt to relieve spring tension using spanner wrench. Do not do so at position ree closest to reel. Securely mount reel in desired position using 3/8"(M10) bolts. Be sure spool is aligned with cable run.

CAUTION

Do not exceed number of turns indicated on serial plate. Over-tensioning can cause a broken spring, sheared shaft or other damage.

CAUTION

Failure to relieve all spring tension prior to removing cable could result in damage to equipment or personal injury. Follow instructions carefully.

1. Move machine serviced by reel to a position closest to reel. Springs will still be under pre-tension at this point.
2. Turn off all electric power.
3. Lock spool to prevent turning using either a spool lock mechanism or by tying off.
4. Disconnect cable from machine junction box.
5. Grip spool by hand and carefully release spool lock or release spool lock by hand. Slowly unwind remaining tension.
6. Again lock or tie spool to prevent rotation.
7. Remove cable from spool. Loosen U-bolt and water-tight connector and disconnect conductors from slip ring.
8. Install new cable following instruction at right.

CABLE INSTALLATION REFERENCE DRAWING

INSTALL CABLE THIS DIRECTION

CONTINUE ON BACK PAGE