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

1. Unspool new cable from shipping spool and lay out ordered without cable. Refer to CABLE INSTALLATION.
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 segments. Do not overtighten.
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.
7. Pretension reel and complete installation as previously described.

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.
7. Install new collector by reversing above steps.

SPOOL ROTATION DIRECTION

INSTALLATION and MAINTENANCE INSTRUCTIONS S-18 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 or 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 for 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.

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. Unspool cable from reel, without allowing spool to rotate, so that desired length of cable extends from reel. Do not pull cable directly off reel as this will apply tension to the spring and may cause pretensioning when the reel is put into service. Connect free end of cable to junction box on machine or adjust cable stop.
5. Cover groove on spring side of 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.)

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

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

WARNING
Do not attempt to remove spring from its housing. Clock-type springs can be dangerous to handle. Removal of spring from housing could result in personal injury.

The unique SAFETYCHANGE® spring motor consists of a spring and hub sealed within a housing. A replacement spring is supplied sealed in its housing and the old unit should be discarded completely.

1. Turn off all electric power.
2. Disconnect cable from machine junction box.
3. Wind all cable onto reel to relieve all spring tension.
4. Remove inspection cover from face of spring housing.
5. Rotate spool clockwise and observe inner shaft. Shaft should rotate clockwise and hub (with spring attached) should remain stationary.

NOTE: Do not attempt to remove spring if resistance is met or hub tends to rotate with shaft.

Continue to rotate spool and strike end of shaft with a rubber mallet until shaft rotates freely and hub remains stationary. Remove (4) nuts which secure spring motor(s) to frame.

6. Slide spring motor(s) off shaft and discard.
7. On multi-spring reels, be sure to remove and save dowel pins which connect one spring hub with another. Also remove snap rings on shaft between spring housings.
8. Install replacement spring motor(s), pawls and spring springs.

NOTE: Pawl springs must be located between the pawls and the deepest section of the shaft grooves. Make sure that pawls and spring springs are inserted flush with ends of shaft and hub or they may rub against inspection cover.

NOTE: If reel is equipped with ratcheted adjustment wrench, follow instructions on separate sheet.

NOTE: On reels containing more than one spring, the hubs are connected at the factory. Therefore, by tightening the outer spring, the inside spring(s) will be tightened.

9. Tighten nuts (and extension bolts) securing spring housing to frame to specified.
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 specified at time of installation. Refer to INSTALLATION section.
12. Replace inspection cover.

CONTINUED ON BACK PAGE
ILLUSTRATED PARTS LIST
S-18 DIRECT DRIVE ELECTRIC CABLE REELS

Always specify SERIAL NUMBER & MODEL NUMBER when ordering parts.

ELECTRICAL CONNECTIONS

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NOTE: Applicable mounting hardware included with each kit.

NOTE: Please consult factory for optional accessories: roller guides, ratchet lock, limit switch, hoop guides, spool lock, and swivel base.

NOTE: See bulletin for optional accessories: roller guides, ratchet lock, limit switch, hoop guides, spool lock, and swivel base.

AMPLICITY

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INDICATES REVERSE ROTATION. NO LETTER INDICATES STANDARD ROTATION.
CABLE REMOVAL

Use the following procedure to replace cable or if reel was ordered without cable. Refer to CABLE INSTALLATION 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.)
   NOTE: This may require that jacket of cable be stripped to allow conductors to pass through shaft.
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 segments. Do not overtighten.
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.
7. Pretension reel and complete installation as previously described.

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.
7. Install new collector by reversing above steps.

CABLE INSTALLATION

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

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 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 tie. Slowly unwind remaining tension.
6. Again lock or tie spool to prevent rotation.
7. Remove cable from reel. 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

INSTALLATION and MAINTENANCE INSTRUCTIONS

S-18 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 or bottom right (spool rotates clockwise to wind cable) when viewing spool end of reel. See diagram on parts page.

Clock-type springs provide power for automatic cable take-up. Spring must be prestretched at time of installation to insure that tension is applied to cable at all times. A tension adjustment spanner wrench is provided for 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 ratched wrench, on reels so equipped, could result in serious personal injury.

NOTE:

- If reel is equipped with ratcheted adjustment wrench, follow instructions on separate sheet.
- DO NOT attempted to remove spring tension using spanner wrench. Doing so may result in 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”x(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. Unspool cable from reel, without allowing spool to rotate, so that desired length of cable extends from reel. Do not pull cable directly off reel as this will apply tension to the spring and may cause overtensioning when the reel is put into service. Connect free end of cable to junction box on machine or adjust cable stop.
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.)

CAUTION

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

NOTE: If reel is equipped with ratcheted adjustment wrench, follow instructions on separate sheet.
NOTE: On reels containing more than one spring, the hubs are connected at the factory. Therefore, by tightening the outer spring, the inside spring(s) will be tightened.
7. Remove collector cover and connect individual supply conductors to collector terminals. See ELECTRICAL CONNECTIONS diagram, on parts page.
8. Install replacement spring motor(s), pawls and pawl springs.
9. Tighten nuts (and extension bolts) securing spring housing(s) to reel 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 spring using spanner wrench. Refer to INSTALLATION section.
12. Replace inspection cover.

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