

## INSTALLATION and MAINTENANCE INSTRUCTIONS 14" and 19" SPRING OPERATED WELDING REELS

### ⚠ CAUTION

**Always unspool ALL BUT ONE WRAP of cable from spool when using cable for welding.**

All units are provided with right hand rotation unless otherwise specified. This means that spool rotates counter-clockwise to wind cable **when viewing reel from collector side.**

Clock-type springs provide power for cable take-up. **Spring must be pretensioned at time of installation** to insure that tension is applied to cable at all times.

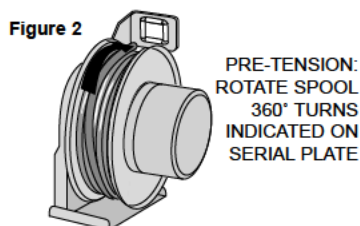
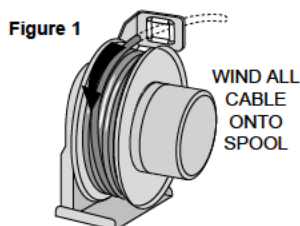
### INSTALLATION

- Securely mount reel in desired position using 3/8"(M10) bolts. Be sure spool centerline is aligned with cable run.

#### NOTE:

**Reel should be mounted maximum of 5' above floor.  
Reel will not "LIFT" cable overhead.**

- Position cable guide. Guide must be oriented so cable pays off reel in a straight line without bends. **Cable should pay-off horizontally.**
- Remove cable stop. Rotate spool counter-clockwise (when viewed from collector side) until all cable is wound on reel...not extending through cable guide. See fig. 1.



- Pre-tension reel by rotating spool in clockwise direction (when viewed from collector side). Full 360° turns required is shown on serial plate. See fig. 2.
- Engage ratchet lock to prevent spool from unwinding.
- Feed cable end out through cable guide and pay-out cable to maximum working length. **At least one turn of cable should remain on spool.** If spool locks up prior to reaching required length, either reel was over-tensioned during step 5 or reel capacity has been exceeded. Failure to correct this condition will result in shortened spring life and possible damage to other reel components.
- Attach and adjust cable stop. Attach electrode handle or grounding clamp to cable end.
- Remove collector cover and connect supply cable to collector slip ring. Replace cover. See Cable Installation Reference Drawing on back page.
- Turn on power to reel.

### RATCHET LOCK

Reel is shipped with ratchet lock "engaged". If constant spring tension is required, lock may be disengaged by locating and removing the selector plate anchor screw on the frame, rotating the selector plate to disengage position, and replacing and tightening the selector plate screw.

### MAINTENANCE

Bearings and springs are prelubricated and require no periodic maintenance.

### SPRING REPLACEMENT

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

- Turn off all electric power.
- Remove four locknuts holding collector cover to spool. Remove collector cover, being careful not to damage gasket.

### ⚠ 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.

#### NOTE:

**If reel is equipped with a junction box, remove junction box cover prior to performing steps 3 and 4.**

- Remove cord grip from supply cable entrance on shaft.
- Using 1/4" Allen wrench, loosen set screw holding supply cable in collector. Pull supply cable out of reel shaft.
- Remove electrode handle or grounding clamp and cord stop from welding cable.
- Wind cable onto reel to relieve all spring tension.
- Using a 3/16" Allen wrench, loosen socket head screw in main shaft clamp nut. Support spool and spin nut off shaft
- Remove entire spool and spring motor assembly from frame.
- Remove V-Ring seal from spring assembly.
- Remove nuts holding spring assembly and slide spring assembly off main shaft.
- Slide new spring assembly onto shaft and reassemble reel by reversing above steps.
- Adjust spring tension. Refer to INSTALLATION, Step 4.

### COLLECTOR REPLACEMENT

- Turn off all electric power.
- Engage ratchet lock to prevent spool from rotating.
- Remove four locknuts holding collector cover to spool. Remove cover. Don't damage gasket.

#### NOTE:

**If reel is equipped with a junction box, remove junction box cover prior to performing steps 4 and 5.**

- Remove cord grip from supply cable entrance on shaft.
- Using 1/4" Allen wrench, loosen set screw holding supply cable in collector. Pull supply cable out of reel shaft.
- Loosen hex nut and internal tooth lock washer holding retainer bracket to collector (nut also acts as locknut for set screw).
- Using 1/4" Allen wrench, loosen set screw holding welding cable in collector. Remove cable.
- Using 5/32" Allen wrench, loosen two set screws holding collector insulator onto main shaft. Pull collector assembly off shaft.
- Remove hex nut and internal tooth lock washer loosened in step 6. Remove retainer bracket.
- Install new collector by reversing above steps.

CONTINUED ON BACK PAGE

## 14" and 19" DIRECT DRIVE WELDING CABLE REEL REPLACEMENT PARTS LIST

ITEM	KIT NO.	DESCRIPTION	QTY.
1	021456	Frame Assembly, 14" Reel	1
1	021646	Frame Assembly, 19" Reel	1
2	021484	Clamp Nut	1
3	025032	'V'-Ring Seal	1
4	604094	Locking Dog Repair Kit (Includes mounting hardware)	1
5	028130	Hex Head Capscrew, M6 x 20L	2
6	028131	Hex Head Capscrew, M10 x 20L	3
7	028138	Lockwasher, M10	3
8	021527	Mount Bracket, 14" Reel	1
8	023417	Mount Bracket, 19" Reel	1
9	024466	Roller Guide Assembly, 14" Reel	1
9	024473	Roller Guide Assembly, 19" Reel	1
10	028144	Lock Nut, M5 x 0.8, 14" Reel	11
10	028144	Lock Nut, M5 x 0.8, 19" Reel	15
11	05059803	Spring Assembly "C", 14" Reel	1
11	05059813	Spring Assembly "K", 19" Reels	1
12	021494	Spring Gasket, 14" Reels	1
12	022734	Spring Gasket, 19" Reel	1
13	038649	Shaft, 14" Welding Reel	1
13	038651	Shaft, 19" Welding Reel	1
14	027412	Spool Assembly, 14" Reel	1
14	027408	Spool Assembly, 19" Reel	1
15	021513	Counter Nut	1
16	104336	O-Ring	1
17	021511	Cable Connector, 0.70-1.00 Cable Dia.	1
18	602065	Cable Gland Kit	1
19	018042	Cover Gasket, 14" Reel	1
19	021494	Cover Gasket, 19" Reel	1
20	035204	Collector Assembly	1
21	02149603	Collector Cover, 14" Reel	1
21	02270501	Collector Cover, 19" Reel	1
22	01555101	Grounding Lug	1

ITEM	KIT NO.	DESCRIPTION	QTY.
23	028139	Lockwasher, Internal Tooth	1
24	028912	Lockwasher, M6	2
25	01647601	Flat Washer	2
26	038670	Adapter Collar	1
27	039999	Cord Grip Kit, .38"--.75" O.D. Cable	1
28	038844	Collector Retainer Bracket	1
29	028501	Lockwasher, Internal Tooth, M12	1
30	034980	Hex Jam Nut	1
31	022450	Cable Stop, .47"-.56" O.D. Cable	1
31	022451	Cable Stop, .57"-.69" O.D. Cable	1
31	022452	Cable Stop, .70"-.88" O.D. Cable	1
32	023739	Ty-Rap	1
33	See Nameplate	Cable, Part Number	1
Example: AWR-14X = 40 Ft. 1/0 AWG Cable (See Chart below.)			
34	019992	Caution Label	1
35	019993	Caution Label	1
<b>OPTIONAL ACCESSORIES</b>			
	022217	Swivel Base, 14" Reel	Option
	022220	Swivel Base, 19" Reel	Option

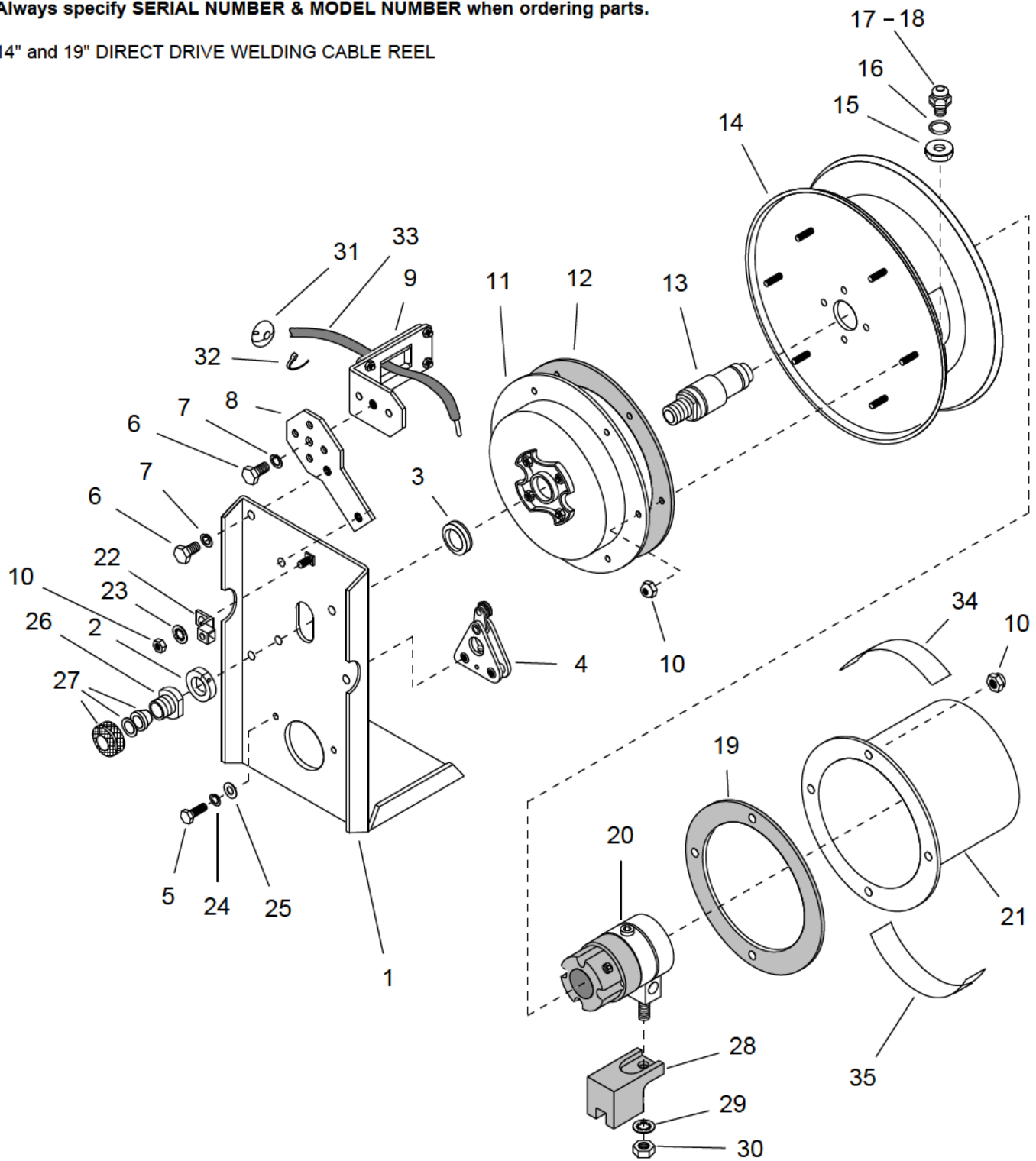
### CABLE CHART

MODEL NO. ON REEL SERIAL PLATE	PART NUMBER- PROVIDE LENGTH*	CABLE AWG	MAX. LENGTH ON REEL ft.	MAXIMUM AMP RATING
AWR-14W	039443	2	43'	200
AWR-14X	039444	1/0	40'	300
AWR-14Y	039445	2/0	40'	400
AWR-14Z	039446	3/0	36'	400
AWR-19W	039443	2	75'	200
AWR-19X	039444	1/0	81'	300
AWR-19Y	039445	2/0	82'	400
AWR-19Z	039446	3/0	85'	400

\* Part number designates size of cable, not length. **When ordering, provide part number and length of cable required.**

Always specify SERIAL NUMBER & MODEL NUMBER when ordering parts.

14" and 19" DIRECT DRIVE WELDING CABLE REEL



### CABLE REMOVAL

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

1. Turn off all electric power.
2. Disconnect electrode holder from cable.
3. Remove cable stop and allow cable to retract onto spool. Ensure all tension is off spring by manually rotating spool (normally counter-clockwise when viewed from collector side).

#### CAUTION

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

4. Remove cable from spool by looping over spool flange and collector cover.
5. Remove four locknuts and remove collector cover
6. Loosen hex nut and internal tooth lock washer which hold retainer bracket to collector (nut also acts as locknut for set screw).
7. Using 1/4" Allen wrench, loosen set screw affixing welding cable to collector. Remove cable.
7. Loosen counternut on cable connector in spool and pull cable out.
8. Install new cable following directions below.

### 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. Remove collector cover, if not previously removed.
  3. Loosen counter nut on cable connector (nut is inside reel spool).
  4. Strip one end of cable 1.5". Tinning is recommended.
  5. Feed one end of the cable through cable connector and

- into the collector side of reel. (See drawing below).
6. Making sure set screw is turned out far enough to allow easy cable insertion, slide stripped end of cable into hole in collector. Tighten set screw using 1/4" Allen wrench.
7. Tighten hex nut and internal tooth lock washer, affixing retainer bracket to collector. Retainer bracket must straddle collector drive bracket on spool.
8. Tighten counter nut on cable connector in spool.
9. Wind one turn of cable onto the reel spool by hand, rotating spool in direction it turns free of spring tension (Normally counter-clockwise, viewed from collector side).
10. Use Ty-Rap to tie two loops of cable together so there will always be one full turn of cable on spool when in use.
11. Wind remaining cable onto spool as in step 8.
12. Replace slip ring cover and gasket.
13. Adjust cable stop. Attach electrode handle to cable.
14. Pretension reel and complete installation as described in INSTALLATION section.

### SPRING ADJUSTMENT

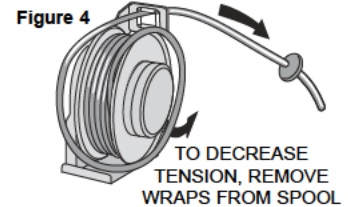
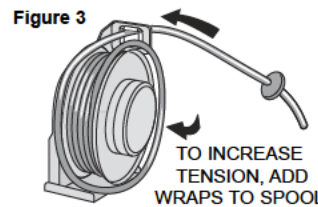
Adjust tension by adding wraps (increasing tension) or removing wraps (decreasing tension) from the spool.

1. Pull about 10' of cable, allowing spool to rotate.

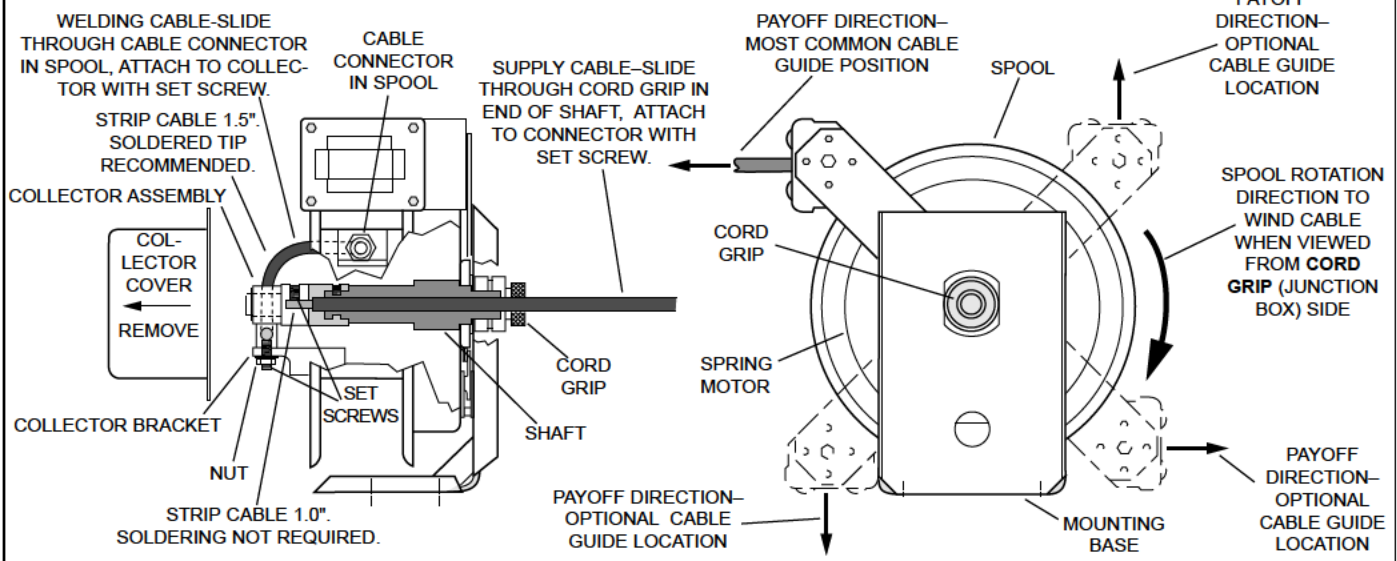
**INCREASE TENSION:** Without allowing spool to rotate, hand feed cable through hose guide until loop is large enough to slip onto spool. Add two or three wraps until desired tension is achieved. See Figure 3.

**DECREASE TENSION:** Without allowing spool to rotate, hand feed cable back through guide to provide slack. Remove one or two wraps from spool. See Figure 4.

2. Test reel operation.



### CABLE INSTALLATION REFERENCE DRAWING



Workplace Solutions

600 South Clark St.  
Mayville, WI 53050  
Phone 920-387-4120  
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