# INSTALLATION and MAINTENANCE INSTRUCTIONS UE28 UNIVERSAL CABLE REEL-DIRECT DRIVE

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 with each reel.

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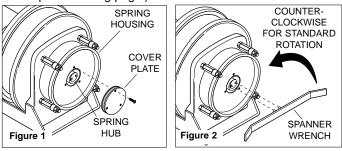
Some reels with large or multiple springs are equipped with a ratcheted adjustment wrench. Follow separate instructions for its use. Failure to use ratcheted wrench, on reels so equipped, could result in serious personal injury.

## WARNING

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

#### INSTALLATION

- 1. Insure that machinery to be serviced by reel is at position closest to reel.
- Securely mount reel in desired position using 1/2"(M12) bolts. Be sure spool is aligned with cable run.
- 3. Position optional cable guide, if reel is so equipped. See COMPONENT REFERENCE DRAWING.
- Connect free end of cable to junction box on machine or adjust cable stop 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 "TO DETERMINE ROTATION OF REEL" on parts drawing page.)



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

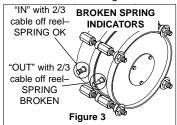
NOTE: If reel is equipped with ratcheted adjustment wrench, follow instructions on separate sheet. NOTE: On reels containing more than one spring, the hubs

- 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 back page.

#### MAINTENANCE

**Periodically:** A. Use compressed air to clean collector assembly and inside of collector housing. Inspect collector assembly for brush wear and pitted slip rings.

B. Inspect cable for wear and check mounting bolts and other hardware for tightness.



C. Check for broken springs by pulling about 2/3 cable off reel and observing "Broken Spring Indicators" on sides of spring canisters. See Fig. 3.

**NOTE:** Bearings and springs are prelubricated and require no periodic maintenance.

#### SPRING REPLACEMENT

### WARNING

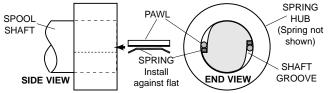
Do not attempt to remove spring from its housing. Clocktype springs can be dangerous to handle. Removal of spring from housing could result in personal injury.

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.
- 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

- several sharp blows with a lead hammer or rubber mallet until shaft rotates freely and hub remains stationary.
- 6. Remove (4) nuts which secure spring motor(s) to frame.
- 7. Slide spring motor(s) off shaft and discard.
- **NOTE:** 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 reel housings.
- Install replacement spring motor(s), pawls and pawl springs.
  NOTE: Pawl springs must be located between the pawls and the deepest section of the shaft grooves. Make sure that pawls and pawl springs are inserted flush with ends of shaft and hub or they may rub against inspection cover.



- 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 with spanner wrench. Refer to **INSTALLATION** section.
- 12. Replace inspection cover.

CONTINUED ON BACK PAGE

# DIRECT DRIVE UE-28 UNIVERSAL CABLE REEL REPLACEMENT PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY.	ITEM	PART NO.	DESCRIPTION	QTY.
1	042018	Vertical Frame Assy., Swivel Side	1	26	012425	Pawl Kit (35 Spring)	AR
2	012140	Housing, 2" Bore Bearing	2	26	012426	<i>les 2 pawls &amp; springs)</i> Pawl Kit (62, 75 & 80 Springs)	AR
3	103837	Ball Bearing, 2" Bore	1	26	012427	Pawl Kit (100 Spring)	AR
4	038424	Flat Washer, M8	9	27	031484	Hex Hd. Cap Screw, M12–1.75 x 35L	4
5	028268	ESNA Lock Nut, M8–1.25	8	28	025942	Lockwasher, M12	4
6	042008	Vertical Frame Assy., Drive Side	1	29	025941	Hex Nut, M12–1.75	4
7	119114	Housing, 1.75" Bore Bearing	2	30	042555	Stand-off, 35 Springs	AR
	103823		1	30	042333	Stand-off, 62, 75 & 80 Springs	AR
8		Ball Bearing, 1.75" Bore	-	30	042182	\Stand-off, 100 Spring\	∖AR
9	042030	Spool Support Hub, Drive Side	1	31	029159	\Flat Washer, M12	4
10	012137	Stub Shaft Drive Pin	1	32	028502	ESNA Nut, M12–1.75	4
11	118322	Retaining Ring	1	33	042727	Spring Motor Kit, 35, Standard Rotation	AR
12	042028	Spool Disk, U28	2			s items 20, 27, 28, 29, & 30)	
13	04271001	Wrapper Assy. Kit, 6"w, 10"-12"dia. core	1	33	042725	Spring Motor Kit, 62, Standard Rotation	AR
10		segments & hardware)		33	042726	Spring Motor Kit, 75, Standard Rotation	AR
13	04271002 04271003	Wrapper Assy. Kit, 8"w, 10"–12"dia. core Wrapper Assy. Kit, 10"w, 10"–12"dia. core	1 1	33 33	042724 042723	Spring Motor Kit, 80, Standard Rotation Spring Motor Kit, 100, Standard Rotation	AR AR
13	04271003	Wrapper Assy. Kit, 12"w, 10"-12"dia. core	1	33	042732	Spring Motor Kit, 35, Reverse Rotation	AR
13	04271005	Wrapper Assy. Kit, 14"w, 10"-12"dia. core	1	33	042730	Spring Motor Kit, 62, Reverse Rotation	AR
13	04271006	Wrapper Assy. Kit, 6"w, 14"-18"dia. core	1	33	042731	Spring Motor Kit, 75, Reverse Rotation	AR
13	04271007	Wrapper Assy. Kit, 8"w, 14"–18"dia. core	1	33	042729	Spring Motor Kit, 80, Reverse Rotation	AR
13	04271008 04271009	Wrapper Assy. Kit, 10"w, 14"-18"dia. core Wrapper Assy. Kit, 12"w, 14"-18"dia. core	1 1	33	042728	Spring Motor Kit, 100, Reverse Rotation	AR
13	04271009	Wrapper Assy. Kit, 12 w, 14 –18 dia. core Wrapper Assy. Kit, 14"w, 14"–18"dia. core	1	34	G51–23	Gasket, Hub Cover	1
13	04271011	Wrapper Assy. Kit, 6"w, 20"–26"dia. core	1	35	G27–42	Hub Cover, Springs	1
13	04271012	Wrapper Assy. Kit, 8"w, 20"-26"dia. core	1	36	101220	Screw, #8–32 x 0.25" Lg	3
13	04271013	Wrapper Assy. Kit, 10"w, 20"–26"dia. core	1	37	021762	Hub Lock Pin Kit (100 Springs)	1
13	04271014 04271015	Wrapper Assy. Kit, 12"w, 20"–26"dia. core Wrapper Assy. Kit, 14"w, 20"–26"dia. core	1 1			s two pins)	
				37	021761	Hub Lock Pin Kit (All Other Springs)	1
14	042068	Spool Hub, Collector Side	1	38	012285	Collector Assembly, 2 Pole, 35 Amp	1
15	Consult	Cable Clamp/Connector Kit	1	38	012286	Collector Assembly, 3 Pole, 35 Amp	1
	Factory	(Includes Cable Clamp, Cable Connector & Reducer, if required, sized for cable diameter	-)	38 38	012287 012288	Collector Assembly, 4 Pole, 35 Amp Collector Assembly, 6 Pole, 35 Amp	1 1
16	040784	Collector Entrance	/ 1	38	012289	Collector Assembly, 8 Pole, 35 Amp	1
				38	012290	Collector Assembly, 10 Pole, 35 Amp	1
17	101652	Pipe Plug	1	38	012291	Collector Assembly, 12 Pole, 35 Amp	1
18	118220	Gasket, Collector Entrance	1	38 38	012292 012293	Collector Assembly, 14 Pole, 35 Amp Collector Assembly, 16 Pole, 35 Amp	1 1
19	012409	Collector Cover Kit (8" long)	1	38	012293	Collector Assembly, 20 Pole, 35 Amp	1
19	012410	<i>(Includes seal ring)</i> Collector Cover Kit (10.5" long)	1	38	012295	Collector Assembly, 24 Pole, 35 Amp	1
19	012410	Collector Cover Kit (13" long)	1	38	012296	Collector Assembly, 30 Pole, 35 Amp	1
19	012412	Collector Cover Kit (15.5" long)	1	38	012297	Collector Assembly, 36 Pole, 35 Amp	1
19	012413	Collector Cover Kit (20.5" long)	1	38 38	012298 012299	Collector Assembly, 2 Pole, 75 Amp Collector Assembly, 3 Pole, 75 Amp	1 1
19	012414	Collector Cover Kit (28.5" long)	1	38	012300	Collector Assembly, 4 Pole, 75 Amp	1
20	012458	Seal Ring Only	1	38	012376	Collector Assembly, 6 Pole, 75 Amp	1
21	042067	Collector Drive Stop	1	38	037194	Collector Assembly, 2 Pole, 125 Amp	1
22	028138	Lockwasher, M10	4	38 38	012377 037294	Collector Assembly, 8 Pole, 75 Amp Collector Assembly, 3 Pole, 125 Amp	1 1
				38	037295	Collector Assembly, 4 Pole, 125 Amp	1
23	028131	Hex Hd. Cap Screw, M10–1.5 x 20L	4	38	012304	Collector Assembly, 2 Pole, 200 Amp	1
24	04272201	Bottom Base Kit, 6" wide Wrapper	1	38	012381	Collector Assembly, 3 Pole, 200 Amp	1
24	04272202	(Includes mounting hardware) Bottom Base Kit, 8" wide Wrapper	1	38	012382	Collector Assembly, 4 Pole, 200 Amp	1
24	04272202	Bottom Base Kit, 10" wide Wrapper	1	38 38	012383 012384	Collector Assembly, 6 Pole, 200 Amp Collector Assembly, 8 Pole, 200 Amp	1 1
24	04272204	Bottom Base Kit, 12" wide Wrapper	1			· · · · · · · · · · · · · · · · · · ·	
24	04272205	Bottom Base Kit, 14" wide Wrapper	1	39	012440 (Each kit includ	Brush Kit (35 Amp) es 4 brushes and 4 fingers)	ar
25	042152	Stub Shaft, 1002, Direct, Standard Rotation	1	39	012441	Brush Kit (75 Amp)	ar
25	042153	Stub Shaft, 1001, Direct, Standard Rotation	1	39	012443	Brush Kit (125 Amp/200 Amp)	ar
25 25	042156 042157	Stub Shaft, 802/622/752, Direct, Std. Rot. Stub Shaft, 801/621/751, Direct, Std. Rot.	1 1	40	042733	Spanner Wrench (35–80 Springs)	1
25 25	042554	Stub Shaft, 351, Direct, Standard Rotation	1			es mounting hardware)	
25	042160	Stub Shaft, 1002, Direct, Reverse Rotation	1	40	042734	Spanner Wrench (100 Springs)	1
25	042160	Stub Shaft, 1002, Direct, Reverse Rotation	1	41	042735	Ratchet Wrench Kit (35–80 Springs)	1
25	042164	Stub Shaft, 802/622/752, Direct, Rev. Rot.	1		(Include	es mounting hardware)	
25	042165	Stub Shaft, 801/621/751, Direct, Rev. Rot.	1	41	042736	Ratchet Wrench Kit (100 Springs)	1
25	042566	Stub Shaft, 351, Direct, Reverse Rotation	1				

#### MODEL NUMBER STRUCTURE

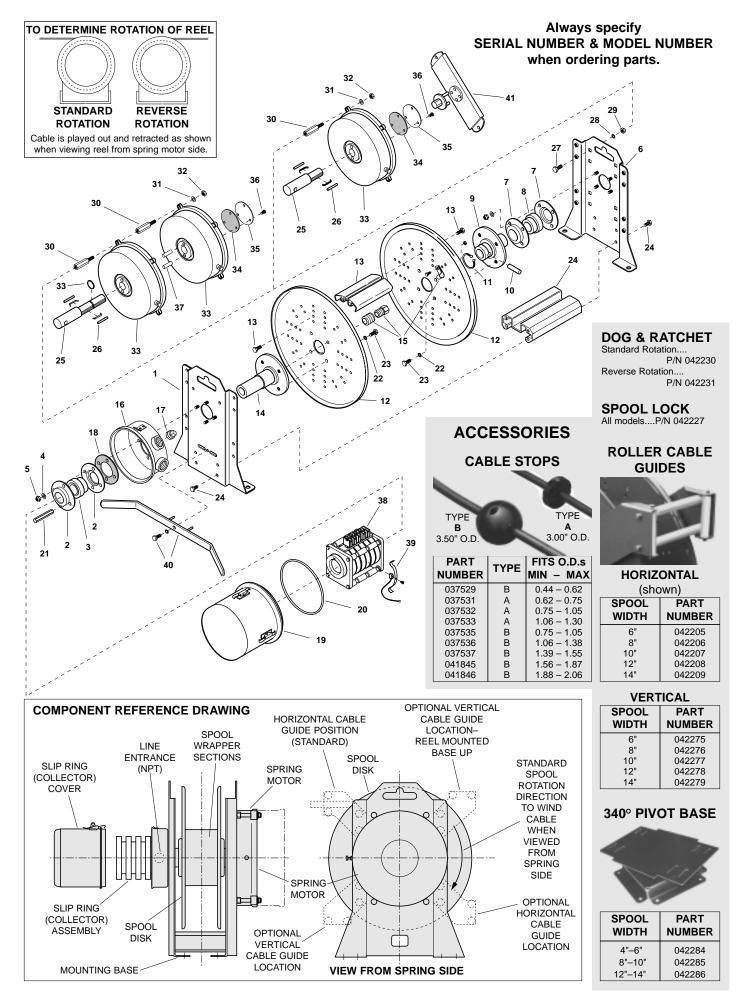
UE 28 80 1 - 8	33-1	0 06 - 1 - HSD
REEL TYPE SPOOL DIAMETER SPRING MODEL QUANTITY SPRINGS NUMBER POLES	AMP CODE	ACCESSORIES PRETENSION TURNS SPOOL WIDTH CORE DIAMETER

#### AMPACITY CODE

CODE	AMPS			
3	35			
7	75			
12	125			
20	200			

#### ACCESSORY CODE

(See sext page for accessories) 340° Pivot Base = P Dog & Ratchet (ratchet lock) = D Limit Switch = L Horizontal Roller Guide = H Vertical Roller Guide = V Spool Lock = S



#### CABLE REMOVAL

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

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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 tie. Slowly unwind remaining tension.
- 6. Again lock or tie spool to prevent rotation.
- 7. Remove cable from spool. Loosen cable clamp and water-tight connector. Disconnect conductors from slip ring and remove cable.
- 8. 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 ELECTRICAL CONNECTIONS 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.

#### **ELECTRICAL CONNECTIONS**

- 2. Feed one end of the cable through water-tight connector on the spool hub inside the spool and into the slip ring. (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. Place cable clamp on cable and securely fasten to spool disk.
- 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 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 ...
- 5 Slide collector off shaft.
- Install new collector by reversing above steps.

NOTE:

Wire size, wire connectors, connection sequence,

National Electrical code and Local Electrical ordi-

nances. If in doubt, contact a local electrical con-

COLOR SEQUENCE FOR TYPE SO CABLE

FOUR THRU TWELVE CONDUCTOR CABLE

and connection methods must comply with

tractor or electrical inspector.

THREE CONDUCTOR CABLE

#3-GREEN (ground)

# 4 - GREEN (ground) # 5 - ORANGE

# 7 – WHITE W/ BLACK TRACER # 8 - RED W/ BLACK TRACER # 9 - GREEN W/ BLACK TRACER

#10 - ORANGE W/ BLACK TRACER

#11 - BLUE W/ BLACK TRACER

#12 - BLACK W/ WHITE TRACER

# 1 - BLACK

# 2 – WHITE

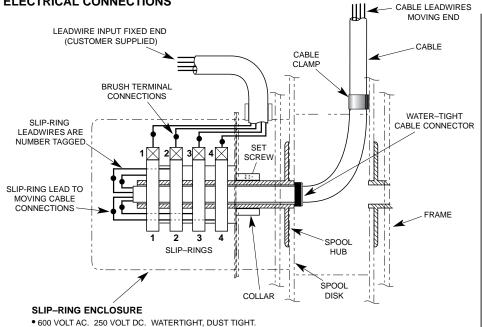
# 1 - BLACK

# 2 – WHITE

# 3 - RED

# 6 – BLUE

**GLEASON REEL CORP.** P.O. Box 26 • 600 South Clark St. Mayville, WI 53050-0026 Phone 920-387-4120 • Fax 920-387-4189



• DO NOT EXCEED AMPERAGE RATING OF CABLE OR SLIP RING.

• NUMBER OF CIRCUITS MAY VARY FROM TWO (MINIMUM) TO 36 (MAXIMUM). FOUR CIRCUITS SHOWN.



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