

INSTALLATION and MAINTENANCE INSTRUCTIONS

TMR SERIES ELECTRIC CABLE REELS

DESCRIPTION

The TMR series reel is designed to automatically lift and retrieve electric cable. The reel incorporates a rotating hollow shaft with spool mounted outboard on one end and collector assembly on the opposite end. The main shaft, rotating on two flange block bearings, is driven by an electric torque motor through a chain drive. The torque motor has an electronically released break holding the spool stationary when the reel is not in use.

INSTALLATION

1. Thoroughly inspect reel upon receipt for damage that may have been caused in shipping.
2. Mount reel with the main shaft horizontal and level and with the spool centerline in line with the cable tray. Mount at recommended height so that proper distance from the center of the spool to the cable tray is maintained.

⚠ CAUTION

Exceeding designed lift distance may lead to poor cable spooling and erratic operation because the electric motor will have insufficient torque.

3. Remove collector cover. Connect conduit to line entrance of collector housing and connect wires to brushes of collector assembly. Brush terminals are number coded. Be careful that incoming wires do not put strain on brush terminals and cause brush misalignment. Replace collector cover.
4. Connect motor to electric line of proper specification as stamped on motor nameplate. Refer to wiring diagram (below, in terminal box or on name plates. 3-lead polyphase and 2-lead single phase do not require diagram). Provide suitable overload protection based on full load ampere rating shown on nameplate as recommended by control manufacturer. Protect wiring circuit with proper fuses selected according to local codes.

OPERATION

The reel is activated when power is supplied to the torque motor through the main starting control of the equipment. Care should be taken to see that all electrical connections are made before power is turned on to the collector ring and torque motor. All nuts and bolts should be checked to see that they are tight. Check to make sure collector ring brushes are aligned on rings.

MAINTENANCE

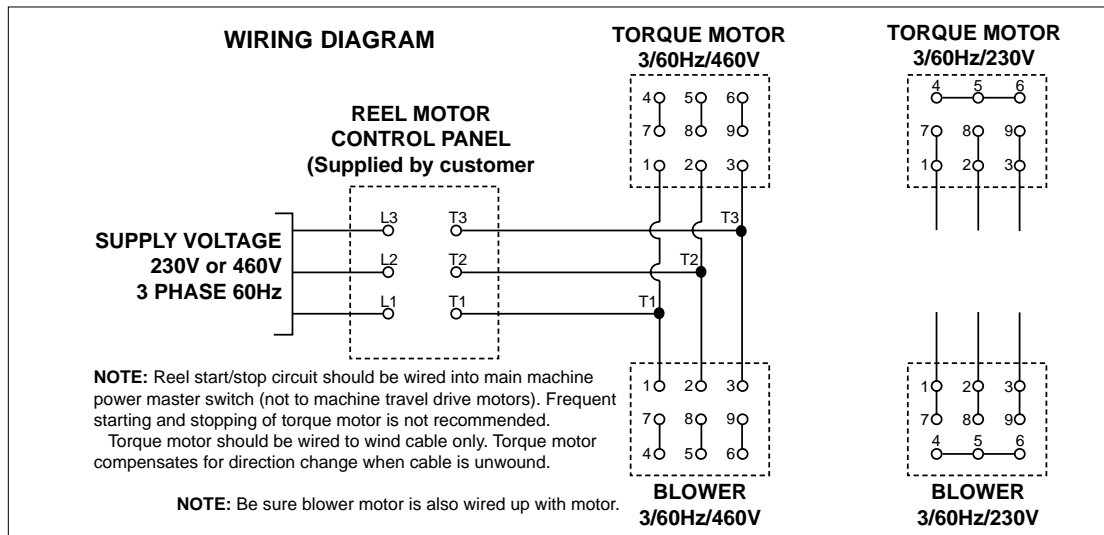
GENERAL LUBRICATION: All bearings provided with grease fittings are lubricated at the factory before shipment. They should be regreased periodically depending on the running time of the reel, more often if used in dusty conditions. Parts with bearing assemblies not provided with grease fittings are equipped with sealed bearings and do not require lubrication.

CHAIN CASE: Every three months, remove cover from chain case, check chain tension, and lubricate chain using a lithium based heavy duty chain lubricant.

TORQUE MOTOR GEAR REDUCER: See section 5.2.2 of the enclosed brake motor operation instructions for grease lubrication. This gear reducer is filled with grease when used with 600 RPM torque motor.

TORQUE MOTOR: Reel is equipped with a Demag torque motor. See enclosed brake motor operation instructions.

INSPECTION: Every six months inspect entire reel to see that all nuts, bolt, screws, and set screws are in place and tight and that no parts show undue wear. Yearly (more often depending on duty cycle), check brushes on collector rings. Replace brushes when worn to the shunt

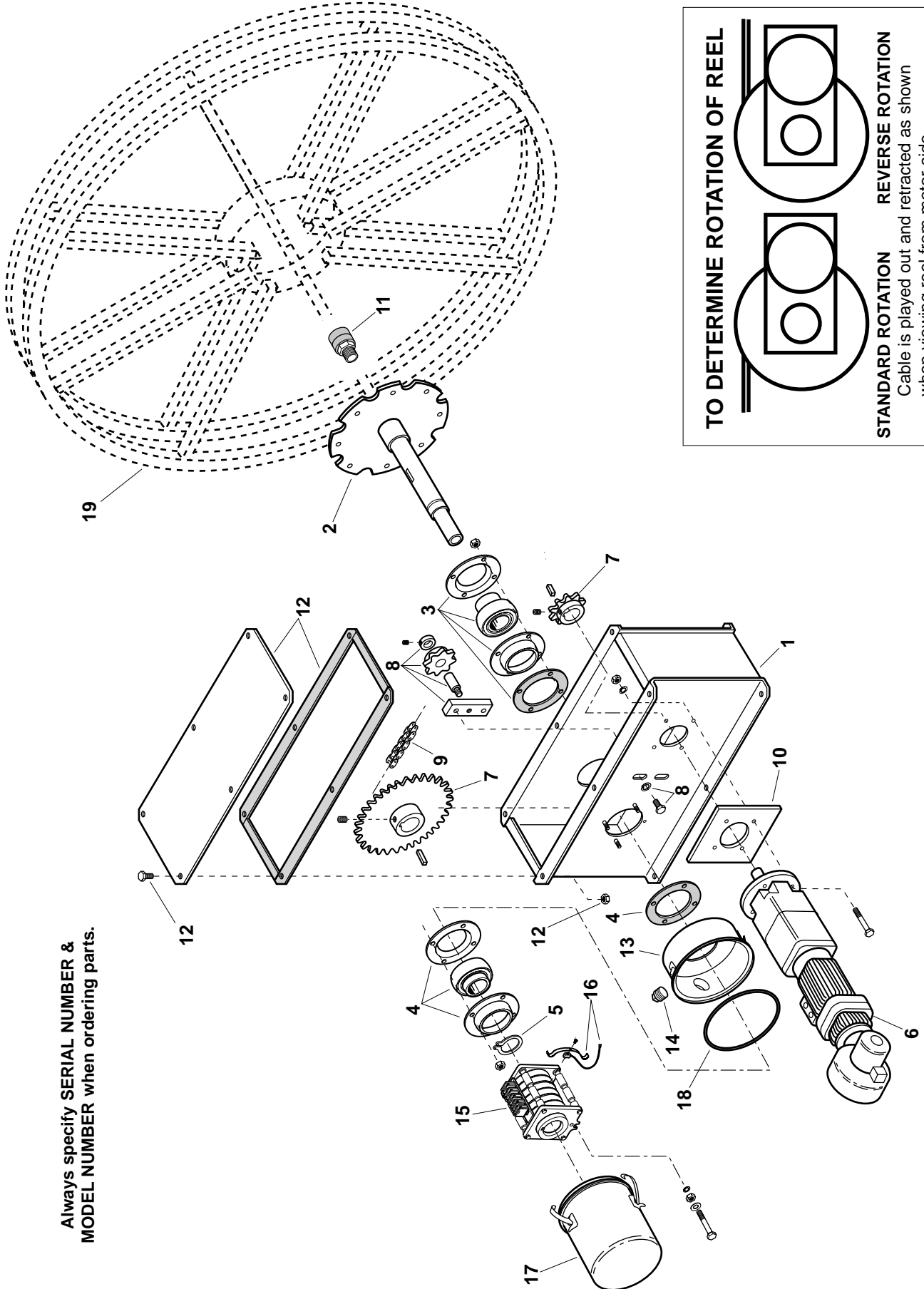


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ILLUSTRATED PARTS LIST

TMR SERIES ELECTRIC CABLE REELS

Always specify **SERIAL NUMBER & MODEL NUMBER** when ordering parts.



TMR SERIES ELECTRIC CABLE REEL REPLACEMENT PARTS LIST

NOTE: Applicable mounting hardware included with each kit.

| ITEM | KIT NO. | DESCRIPTION | QTY. |
|------|---------|---|------|
| 1 | 021372 | Frame Assembly-TMR | 1 |
| 2 | 020784 | Collector Shaft | 1 |
| 3 | 021752 | Bearing Kit-2" bore (Includes housing and gasket) | 1 |
| 4 | 012402 | Bearing Kit-2" Bore (Includes housing and gasket) | 1 |
| 5 | 105060 | Retaining Ring | 1 |
| 6 | 021407 | Torque Motor-2 | 1 |
| 6 | 021408 | Torque Motor-3 | 1 |
| 6 | 021409 | Torque Motor-5 | 1 |
| 6 | 021410 | Torque Motor-7 | 1 |
| 6 | 021411 | Torque Motor-10 | 1 |
| 6 | 021412 | Torque Motor-14 | 1 |
| 7 | 021771 | Sprocket Kit, Ratio AA (Includes two sprockets and keys) | 1 |
| 7 | 021772 | Sprocket Kit, Ratio AB | 1 |
| 7 | 021773 | Sprocket Kit, Ratio AC | 1 |
| 7 | 021774 | Sprocket Kit, Ratio AD | 1 |
| 7 | 021775 | Sprocket Kit, Ratio AE | 1 |
| 8 | 021759 | Idler Kit (Includes sprocket, shaft, tensioner bar, locking collar and mounting hardware) | 1 |
| 9 | 021760 | Roller Chain Kit (Includes connecting link) | 1 |
| 10 | 021006 | Reinforcing Plate | 1 |
| 11 | 012459 | Cable Connector-.38 to .50 Dia. Cable | 1 |
| 11 | 012460 | Cable Connector-.50 to .62 Dia. Cable | 1 |
| 11 | 012461 | Cable Connector-.62 to .75 Dia. Cable | 1 |
| 11 | 012462 | Cable Connector-.75 to .88 Dia. Cable | 1 |
| 11 | 012463 | Cable Connector-.88 to 1.00 Dia. Cable | 1 |
| 11 | 012464 | Cable Connector-1.00 to 1.12 Dia. Cable | 1 |
| 11 | 012465 | Cable Connector-1.12 to 1.25 Dia. Cable | 1 |
| 11 | 012466 | Cable Connector-1.25 to 1.38 Dia. Cable | 1 |
| 11 | 012467 | Cable Connector-1.38 to 1.50 Dia. Cable | 1 |
| 11 | 021764 | Cable Connector-1.50 to 1.62 Dia. Cable | 1 |
| 11 | 021765 | Cable Connector-1.62 to 1.75 Dia. Cable | 1 |
| 12 | 021763 | Chain Cover Kit (Includes cover, gasket and hardware) | 1 |
| 13 | 016337 | Collector Entrance Assembly | 1 |

| ITEM | KIT NO. | DESCRIPTION | QTY. |
|------|---------|---|------|
| 14 | 101652 | Pipe Plug | 1 |
| 15 | 012285 | Collector Assembly, 2 Pole, 35 Amp | 1 |
| 15 | 012286 | Collector Assembly, 3 Pole, 35 Amp | 1 |
| 15 | 012287 | Collector Assembly, 4 Pole, 35 Amp | 1 |
| 15 | 012288 | Collector Assembly, 6 Pole, 35 Amp | 1 |
| 15 | 012289 | Collector Assembly, 8 Pole, 35 Amp | 1 |
| 15 | 012290 | Collector Assembly, 10 Pole, 35 Amp | 1 |
| 15 | 012291 | Collector Assembly, 12 Pole, 35 Amp | 1 |
| 15 | 012292 | Collector Assembly, 14 Pole, 35 Amp | 1 |
| 15 | 012293 | Collector Assembly, 16 Pole, 35 Amp | 1 |
| 15 | 012294 | Collector Assembly, 20 Pole, 35 Amp | 1 |
| 15 | 012295 | Collector Assembly, 24 Pole, 35 Amp | 1 |
| 15 | 012296 | Collector Assembly, 30 Pole, 35 Amp | 1 |
| 15 | 012297 | Collector Assembly, 36 Pole, 35 Amp | 1 |
| 15 | 012298 | Collector Assembly, 2 Pole, 75 Amp | 1 |
| 15 | 012299 | Collector Assembly, 3 Pole, 75 Amp | 1 |
| 15 | 012300 | Collector Assembly, 4 Pole, 75 Amp | 1 |
| 15 | 012376 | Collector Assembly, 6 Pole, 75 Amp | 1 |
| 15 | 012377 | Collector Assembly, 8 Pole, 75 Amp | 1 |
| 15 | 037194 | Collector Assembly, 2 Pole, 125 Amp | 1 |
| 15 | 037294 | Collector Assembly, 3 Pole, 125 Amp | 1 |
| 15 | 037295 | Collector Assembly, 4 Pole, 125 Amp | 1 |
| 15 | 012304 | Collector Assembly, 2 Pole, 200 Amp | 1 |
| 15 | 012381 | Collector Assembly, 3 Pole, 200 Amp | 1 |
| 15 | 012382 | Collector Assembly, 4 Pole, 200 Amp | 1 |
| 15 | 012383 | Collector Assembly, 6 Pole, 200 Amp | 1 |
| 15 | 012384 | Collector Assembly, 8 Pole, 200 Amp | 1 |
| 16 | 012440 | Brush Kit (35 Amp) (Each kit includes 4 brushes and 4 fingers) | ar |
| 16 | 012441 | Brush Kit (75 Amp) | ar |
| 16 | 012443 | Brush Kit (125 Amp/200 Amp) | ar |
| 17 | 012409 | Collector Cover Kit (8" long) (Includes seal ring) | 1 |
| 17 | 012410 | Collector Cover Kit (10.5" long) | 1 |
| 17 | 012411 | Collector Cover Kit (13" long) | 1 |
| 17 | 012412 | Collector Cover Kit (15.5" long) | 1 |
| 17 | 012413 | Collector Cover Kit (20.5" long) | 1 |
| 17 | 012414 | Collector Cover Kit (28.5" long) | 1 |
| 18 | 012458 | Seal Ring (only) | 1 |
| 19 | * | Spool Assembly | 1 |

* Consult factory for part number of Spool Assembly and related hardware.
Please give model number and serial number to obtain correct Spool Assembly.

MODEL NUMBER EXPLANATION

(Typical model number)

TMR - 4 12 - XX XX XX - AE - 3

REEL TYPE NUMBER POLES AMPACITY CODE* SPOOL DIMENSIONS and TYPE CHAIN RATIO CODE** MOTOR SIZE

| *SLIP RING AMPACITY CODE | | **CHAIN RATIO CODE | |
|--------------------------|----------|--------------------|-------------|
| CODE | MAX AMPS | CODE | CHAIN RATIO |
| 3 | 35 | AE | 1.0:1 |
| 7 | 75 | AD | 1.5:1 |
| 12 | 125 | AC | 2.0:1 |
| 20 | 200 | AB | 2.5:1 |
| | | AA | 3.0:1 |

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.
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. Remove cable from spool. Loosen cable connector (Item 11 on parts list) and disconnect conductors from slip ring.
6. Install new cable following instruction 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. Feed one end of the cable through cable 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 cable connector and U-bolt provided on drum wrapper segments. **Do not over-tighten.**
5. Wind the cable onto the reel spool by hand rotating spool.
6. Connect free end of cable to machine junction box.

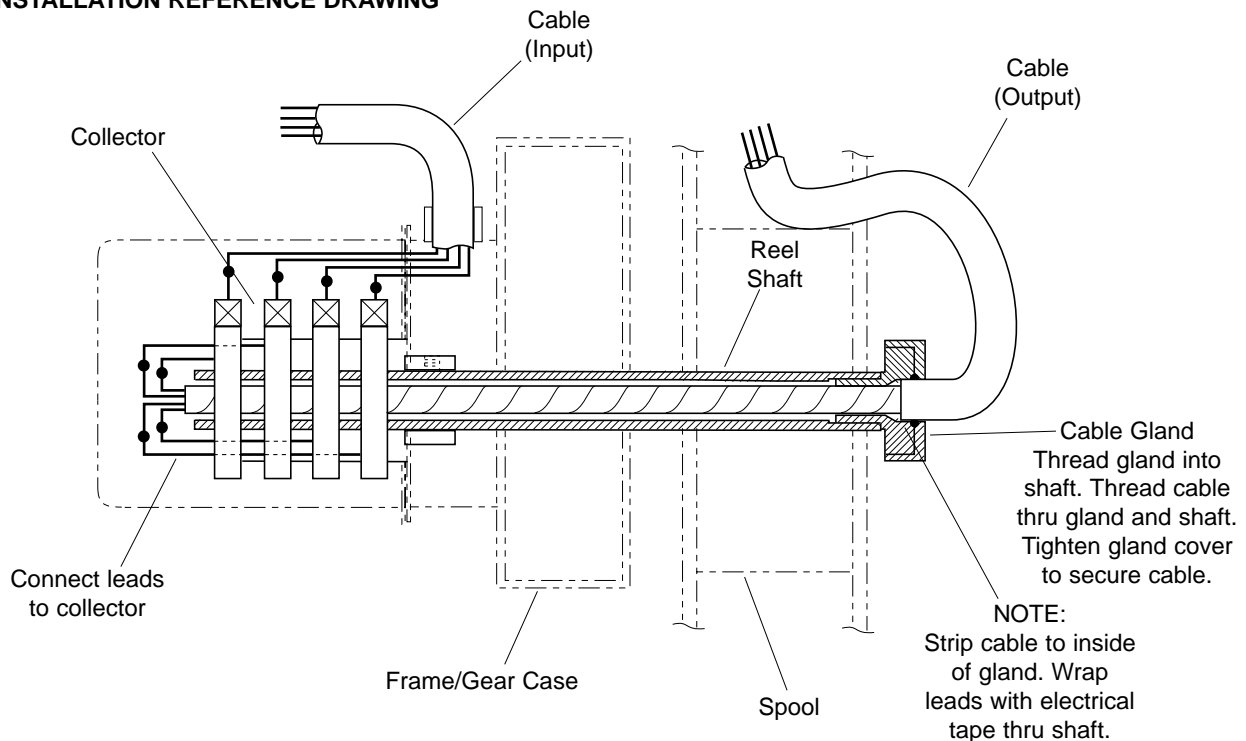
COLLECTOR REPLACEMENT

1. Turn off all power to reel.
2. Remove collector cover and gasket.
3. Disconnect electric leads to and from collector.
4. Remove drive stud bolt from bearing housing.
5. Remove plug 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.

6. Slide collector off shaft.
7. Install new collector by reversing above steps.

CABLE INSTALLATION REFERENCE DRAWING



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