

IMPORTANT SAFETY INSTRUCTIONS

Please read this manual carefully and follow its instructions. Improper use or failure to follow these instructions could result in serious injury, death or property damage. Operators should be instructed in the safe and proper use and maintenance of this product. Keep this manual for future reference.

The following safety precautions call attention to potentially dangerous conditions.

 **DANGER:** Immediate hazards which **WILL** result in severe personal injury or death.

 **WARNING:** Hazards or unsafe practices which **COULD** result in severe personal injury or death.

 **CAUTION:** Hazards or unsafe practices which **MAY** result in *minor* personal injury or product or property damage.


NOTE: Instruct operators in the safe, proper use and maintenance. Keep this manual for future reference.


GR800 Series Ground Fault Cable Retractor:


Carefully read all safety, installation, and operational instructions in this manual. Also, read ALL labels located on the reel. If you do not understand any part of the manual or need assistance call Aero-Motive Co.

Model GR800 retracts up to 75 feet of #2/0 AWG grounding cable intended to protect equipment and personnel in case of a ground fault. The collector rings' electrical path through the reel has a current carrying capacity greater than that of the largest cable (#2/0 AWG) to be installed on the reel.


INSTALLATION

 **DANGER:** Failure to lock the cable drum in position with the cable fully extended as instructed will create an explosion hazard in the even of fault condition. Failure to install, operate and maintain the retractor in accordance with these instructions may also result in electrical shock. Immediate hazards **WILL** result in severe property damage, personal injury or death.

 **WARNING:** The internal electrical path is not insulated from the reel frame; therefore, this reel is unsuitable for other uses other than retracting ground cables. Hazards or unsafe practices **COULD** result in severe personal injury or death.

 **WARNING:** Use for other applications will create an electrical shock hazard. If ground fault has occurred, return the reel to Aero-Motive Company for inspection and possible repair before placing back in service. Failure to do so could result in electrical shock as well. Hazards or unsafe practices **COULD** result in severe personal injury or death.

MOUNTING

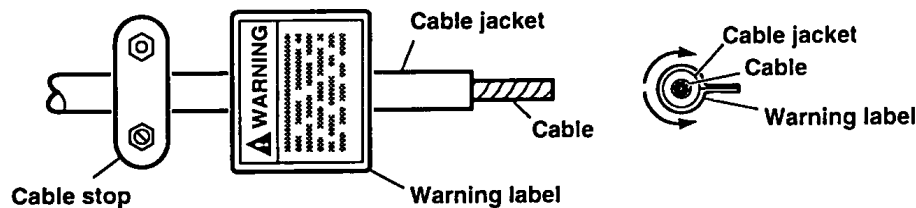
 **CAUTION:** The reel should be bolted securely to a flat metal surface of sufficient strength and rigidity to support it under all conditions to which it will be subjected. Mounting holes will accommodate 7/16" or 3/8" bolts. Nothing smaller than 3/8" or 10mm bolts should be used. Hazards or unsafe practices **MAY** result in *minor* personal injury or product or property damage.

Reel may be mounted in any position that maintains the main shaft in a horizontal position. Reels should be mounted with the drum in line with direction of cable travel.

CABLE INSTALLATION

CAUTION: All steps related to termination of the cable must be followed carefully. Hazards or unsafe practices MAY result in *minor* personal injury or product or property damage.

Select proper cable size (up to #2/0 AWG) to fit the application. The cable should have fine stranding for flexibility and a jacket suitable for rough handling. Finish the end of the cable by either stripping jacket and tinning or applying a suitable pin connector. Remove the flange after removing the three acorn nuts. Guide the end of the cable, through "U"-bolt, into the opening in the drum, then insert the cable end or pin connector through hole into rotating part of the collector ring. Lock cable end securely in hole by tightening the set screw and jam nut. Access to socket head set screw is facilitated by aligning setscrew with one of the two drum drain holes. While allowing some slack in cable between the "U"-bolt and the cable termination in the slip ring assembly, clamp cable to drum by tightening the two nuts on the "U"-bolt. Re-install flange with three acorn nuts. The cable can now be wound onto cable drum. A warning label is provided with retractor and must be attached to free end of cable near where cable jacket is stripped away. To attach label, remove adhesive cover from back and place the center of the label on the center of the cable. Wrap the label both ways around cable from the center so that both sides adhere to each other, back to back. (SEE ILLUSTRATION BELOW). If cable is replaced at a later date, contact Aero-Motive Company.



GROUND CONNECTION

WARNING: Failure to make mechanically and electrically sound connection at both ends of the cable will create an electrical shock hazard. Hazards or unsafe practices COULD result in severe personal injury or death.

The ground connection cable should be as large or larger than the cable installed on the drum. It is attached to the reel by connecting to the 1/2" diameter copper rod protruding beyond the junction box cover, on the base. Connection should be made with a commercial fitting specifically intended for attaching this size cable to 1/2" diameter copper rod.

REEL OPERATION

DRUM LOCK

GR800 is equipped with a lock to hold drum in position. To release lock, pull lock handle away from stand then rotate handle 90 degrees in either direction. The drum can now be rotated to either unwind or rewind cable.

GROUND FAULT CONNECTION

DANGER: Failure to unwind the full length of cable or padlock spool to prevent its inadvertent rewinding in case of a ground fault, it will create an explosion hazard. Personnel should be kept at a safe distance from the Ground Fault Reel and Cable. In case of a ground fault, the sudden surge of power will cause the cable to move violently. Immediate hazards WILL result in severe property damage, personal injury or death.

WARNING: This reel is intended for use in a grounding circuit only. The electrical path is not insulated from the reel frame. If retractor is not used in accordance with this manual, hazards or unsafe practices COULD result in severe personal injury or death.

GROUND FAULT CONNECTION Continued...

WARNING: Check all electrical connections on retractor and ground cable terminations before use. Hazards or unsafe practices **COULD** result in severe personal injury or death.

When cable is pulled out and connected to provide ground fault protection, all of the cable should be fully extended to provide maximum current capacity. Engage lock on reel through hole provided in flange of the spool. This lock prevents drum rotation and assures that the cable remains unwound.

MAINTENANCE & SERVICE

WARNING: If ground fault condition has occurred, remove the reel from service immediately and return it to Aero-Motive Company for inspection and, if necessary, repair. Hazards or unsafe practices **COULD** result in severe personal injury or death.

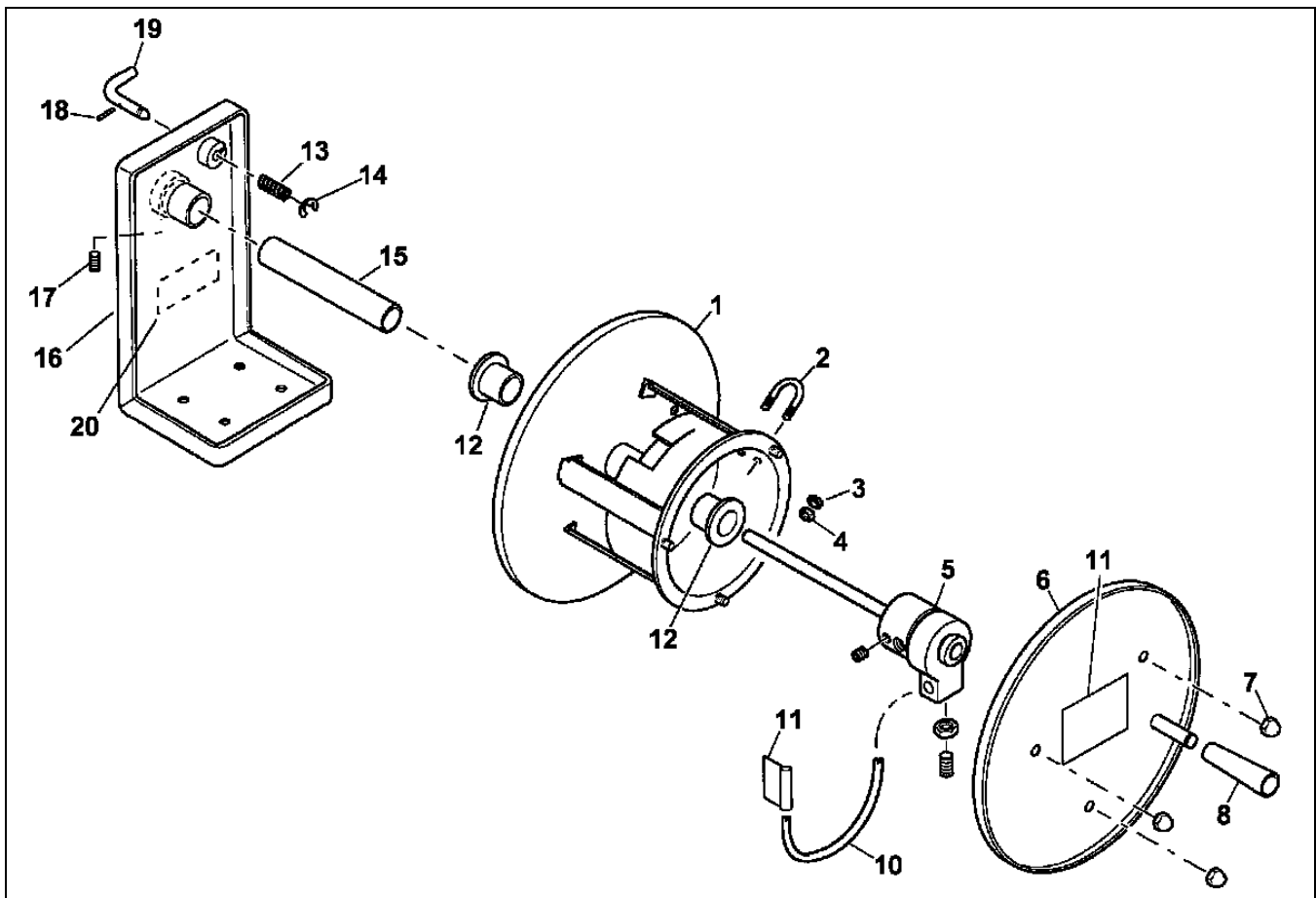
ELECTRICAL

WARNING: **CAREFULLY** inspect all wire connections after any service work is conducted. Hazards or unsafe practices **COULD** result in severe personal injury or death.

NOTE: The collector ring assembly has been designed in such a manner that it can not be disassembled.

Inspect all cable connections at least once a month. Resistance through the reel collector ring should **never exceed 0.001 ohms**. If so contact Aero-Motive company for inspection or repair.

REPLACEMENT PARTS



Reference Number	Part Number	Qty.	Description
1	H42220016	1	Assembly; Spool
2	C17320250	1	Bolt; "U" M6, 36 x 23
3	C01190116	2	Washer; Lock M6
4	C22180116	2	Nut; M6
5	H96610001	1	Ground Collector Ring
6	M55440001	1	Flange
7	C22630052	3	Nut; Acorn, M5
8	H05040011	1	Kit; Handle Replacement
9	M58200002	1	Bracket; Collector Ring
10	CUSTOMER FURNISHED	1	Cable; Ground Fault
11	M13630010	2	Label; Warning
12	4003200000	2	Bearing
13	C60400314	1	Spring
14	00580P0030	1	Ring; Retaining
15	M31020015	1	Shaft; Main
16	H22110402	1	Weldment; Stand
17	C04170785	1	Screw; Set M8 x 8
18	C00510146	1	Pin; Spring
19	M50400001	1	Handle; Lock
20	M13630008	1	Label; Warning
21	C11080603	2	Screw; M8 x 1.25 HHC (NOT SHOWN)
22	C22180118	2	Nut; M8 x 1.25 (NOT SHOWN)
23	C01190118	2	Washer; Lock M8 (NOT SHOWN)

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