

**AERO-MOTIVE COMPANY**



A Woodhead Industries, Inc. Subsidiary

## **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.

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

## **INSTALLATION**



**WARNING:** Failure to read, understand, and follow these instructions may result in hazards or unsafe practices **COULD** result in severe personal injury or death.



**CAUTION:** Operators need to be instructed on the safe, proper use and maintenance of this product. Keep this manual for future references. Hazards or unsafe practices **MAY** result in *minor* personal injury or product or property damage.

### **MOUNTING**

The fixed base of the reel allows mounting in several different positions which the mainshaft remain horizontal. The center line of the spool assembly must be on line with cable run. When mounted overhead in base up position, add a secondary chain, bracket, or other safety device to prevent the reel from falling in case the mounting bolts are removed or become loosened from vibration. See SECONDARY SUPPORT CHAIN below.

### **SECONDARY SUPPORT CHAIN**



**DANGER:** A secondary safety cable or chain is to be attached to all reels mounted overhead to prevent reel from falling. Immediate hazards **WILL** result in severe personal injury or death.

All reels mounted over head should have a secondary support chain to protect personnel in case of structure or mounting component failure. Attach one end of secondary support chain or cable to secondary support point on reel. Attach other end of secondary support chain or cable to a support component other than that which supports the reel. The chain or cable should be as short as possible allowing reel to drop no more than 6 to 12 inches if the primary connection is released. A secondary support is offered as an accessory item.

### **PIVOT BASE**

If optional pivot base is used, reel will be self-aligning to direction of cable run. The four roller cable guide must be used with pivot or swivel mounts.

## WIRING

A convenient 3/4" pipe thread opening has been provided in the junction box cover for connecting standard water tight cable connectors or conduit fitting (fittings not supplied). To connect power supply cable to slip ring assembly remove junction box cover and outer drum half. Strip cable 3/4" to 1" and tin end keeping wires in a tight bundle. Remove slip ring from end of shaft. Insert cable through liquid tight strain relief connector and main shaft. Insert cable into slip ring and secure cable using the setscrew provided. Assure cable is secure, reinstall slip ring on mainshaft and tighten mainshaft set screw. Before reattaching the junction box cover or outer drum half, be sure to check for proper placement of junction box gasket and drum gasket. Reattach junction box cover and outer drum half, then secure power supply cable by tightening strain relief connector.

## OPERATION

### RATCHET LOCK


All models are supplied with a ratchet lock which works in any position. If ratchet lock is not required-- constant tension--, remove spring clip and spring under the adjacent cable guide fastener.


### CABLE GUIDE

The cable guide position is set by rotating the spring pocket assembly. Loosen the three clamps holding the spring pocket assembly in place by unscrewing the three hex head bolts. Unless required, do not completely remove bolts or clamps. Reposition guide as required, making sure clamps straddle ribs on outside diameter of spring pocket assembly and retighten hex head bolts.

### SPRING TENSION

 **CAUTION:** Failure to test for adequate spring revolutions can cause damage. Hazards or unsafe practices MAY result in *minor* personal injury or product or property damage.


 **CAUTION:** Always check for shorts and continuity before turning on electrical power. Hazards or unsafe practices MAY result in *minor* personal injury or product or property damage.

 **WARNING:** Before performing any service, always disconnect and lock out all electrical power. Hazards or unsafe practices COULD result in *severe* personal injury or death.


**NOTE:** Adjust tension before or after installation of reel. **Do not** connect working end of cable until the reel is properly pretensioned.

To pretension reel wrap all cable onto the reel and engage ratchet even if you elect not to use the ratchet. Pull cable out far enough to allow one full wrap of cable to be placed back on reel and re-engage ratchet. Wrap the cable that was pulled out back onto the reel. This sets the tension one turn. Repeat to place a total of two pretension turns on the reel. Pull cable out completely to ensure enough spring revolutions remain for operating. Additional tension may be added, if required, by repeating the above process. After tension is set, connect cable end. Failure to pretension the reel may result in insufficient tension to retract the cable and may shorten the life of the spring.

## SERVICE

 **WARNING:** Always disconnect electrical power before dismantling any part of the reel. Fuse size must not be greater than maximum amperage capacity of cable. Remove all spring tension before attempting any service. Hazards or unsafe practices which COULD result in *severe* personal injury or death.

### MAIN SPRING & POCKET REPLACEMENT


 **WARNING:** Never, under any circumstances, remove the spring from its spring pocket assembly. Replacement springs are assembled in a sealed assembly for safety and there is no need to remove them. Serious injury or death could result from removal of spring from its cartridge.

If reel will not develop tension or retract cable, spring pocket assembly may need to be replaced. To replace, remove junction box cover. Disconnect cable slip ring. Remove screw and shaft retainer. Remove outer drum and main shaft from base. Remove cable guide, spring clip ratchet spring, shoulder bolt and ratchet pawl from spring pocket assembly. Remove spring pocket assembly from base and

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replace with new part. To reassemble, reverse the above procedure making sure the dimple in the shaft retainer is toward the main shaft. See Illustrations below.

### SLIP RING REPLACEMENT

 **WARNING:** Before performing any service, always disconnect and lock out all electrical power. Check all continuity and replace all covers before turning on electrical power. Hazards or unsafe practices **COULD** result in severe personal injury or death.

To replace slip ring assembly, remove outer drum half and loosen setscrew securing power supply cable. Loosen setscrew securing main shaft. The slip ring assembly will note slide off the main shaft. To reassemble reverse the above procedure.

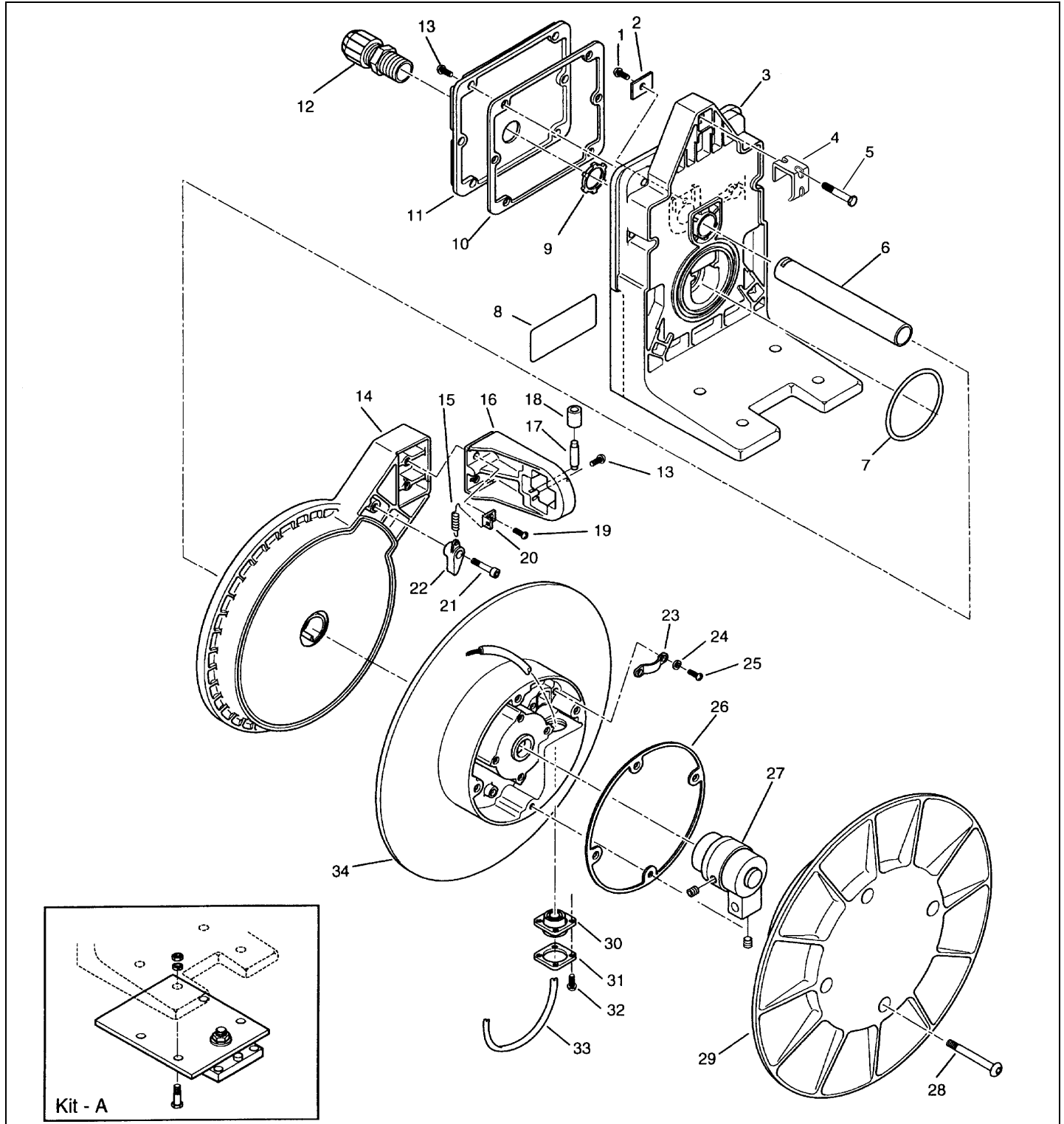
### WORKING CABLE INSTALLATION & REPLACEMENT

 **WARNING:** Before performing any service, always disconnect and lock out all electrical power. Check all continuity before turning on electrical power. Hazards or unsafe practices **COULD** result in severe personal injury or death.

**NOTE:** Cable seal is a bellows type seal designed to fit different size cables. Pull out the bellows in one direction and cut the seal so that the through opening is at least 1/8" diameter smaller than the working cable. Always cut the seal smaller than required. More of the seal may be cut off if necessary.

To install/replace cable, loosen seal cover and cable seal. Remove outer drum half. Loosen or remove cable clamp. Remove conductors of working cable from slip ring assemblies. Pull working cable through opening of inner drum. Remove seal cover and cable seal from old working cable. Place seal cover and cable seal over replacement cable. To reassemble, reverse the above procedure.

# REPLACEMENT PARTS



Reference Number *	Part Number	Qty.	Description
1	C03500231	1	SCREW; PAN HD. M5 X 12MM
2	M41100003	1	SHAFT RETAINER
3	M04160004	1	BASE
4		3	CLAMP-Included in Clamp Kit below.
5		3	SCREW; HEX HD. M6 X 45MM -Included in Clamp Kit below.
6	M34370006	1	MAIN SHAFT, ELECTRICAL WELDING REEL
7	C47040141	1	O-RING
8	M13020079	1	NAMEPLATE
9	C71140112	1	NUT; 3/4" NPT LOCKING
10	M14240007	1	JUNCTION BOX GASKET
11	M04540006	1	JUNCTION BOX COVER
12	C75620115	1	STRAIN RELIEF CONNECTOR, 3/4" NPT .310/.560
	C75620116	1	STRAIN RELIEF CONNECTOR, 3/4" NPT .500/.750
13	C03500253	10	SCREW; PAN HD. M6 X 16MM
14	H41220076	1	SPRING POCKET ASSEMBLY
15	C60610118	1	EXTENSION SPRING
16	M04730007	1	CABLE GUIDE (See kit below)
17	M24060125	4	ROLLER SHAFT
18	M86700006	4	ROLLER
19	C03500255	2	SCREW; PAN HD. M6 X 20MM
20	M53350002	1	SPRING CLIP
21	C15070225	1	SCREW; SHDR M8 X 10 X 16MM
22	M86750002	1	RATCHET PAWL
23	M70780007	1	CABLE CLAMP
24	C01070517	2	FLAT WASHER M5
25	C03500233	2	SCREW PAN HD M5
26		1	DRUM GASKET – INCLUDED IN DRUM KIT BELOW
27	6168300000	1	SLIP RING ASS'Y, ELECTRIC WELDING REEL
28		4	SCREW – INCLUDED IN DRUM KIT BELOW
29		1	OUTER DRUM HALF – INCLUDED IN DRUM KIT BELOW
30	M86550002	1	CABLE SEAL
31	M37810027	1	SEAL COVER
32	C03500201	4	SCREW PAN HD. M4 X 12MM
33	R60270114	50'	#1 CABLE / ERA4150
	R60270115	40'	#1/O CABLE / ERA4040
	R60270116	40'	#2/O CABLE / ERA4940
	R60270113	50'	#2 CABLE / ERA4250
	R60270112	50'	#4 CABLE / ERA4450
34		1	INNER DRUM HALF – INCLUDED IN DRUM KIT BELOW
35		1	SLIP RING BRACKET – INCLUDED IN DRUM KIT BELOW
36		2	SCREW; PAN HD. M8 X 16MM – INCLUDED IN DRUM KIT BELOW
37		2	WASHER; SPRING LOCK M8 -- INCLUDED IN DRUM KIT BELOW
KIT	H05040006	AR	DRUM KIT – INCLUDES REFERENCE #'s 26, 28, 29, 34, 35, 36 & 37
KIT	H26340009	1	Roller Guide Kit Reference Numbers 16,17,18,19,21
KIT	H05040013	1	Clamp Kit-Stainless Steel- Includes set of three Reference Numbers 4 & 5.
KIT	PB2A	AR	PIVOT BASE -- OPTIONAL

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