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. |
|---|----------|---------------------------------------------------------------------------------------------------------------|
| A | WARNING: | Hazards or unsafe practices which COULD result in severe personal injury or death. |
| A | CAUTION: | Hazards or unsafe practices, which MAY result in, <i>minor</i> personal injury or product or property damage. |

INSTALLATION

| WARNING: | Failure to read, understand, and follow these instructions creates hazards that COULD result in personal injury or death. | | | |
|----------|---------------------------------------------------------------------------------------------------------------------------|--|--|--|
| | Instruct operators in the safe, proper use, and maintenance of the reel. Keep this manual for | | | |

CAUTION: Instruct operators in the safe, proper use, and maintenance of the reel. Keep this manual for future reference. Hazards or unsafe practices MAY result in *minor* personal injury or product or property damage.

MOUNTING

Reel may be mounted in any position that allows main shaft to be horizontal. Reel should be mounted with centerline of drum, in-line with cable run.

WIRING

CAUTION: On all models, the green wire has been grounded to frame of reel and cannot be used as a power conductor. Hazards or unsafe practices MAY result in *minor* personal injury or product or property damage.

All internal wiring has been completed at factory. Models equipped with a handle and bulb guard are completely wired and ready for installation.

AUTOMATIC SWITCH (OPTIONAL)

When cable is retracted into reel, ball stop will trigger switch to shut off power. To install, remove screws from cable guide, place switch over guide, and replace screws. Plug cord from reel into switch then plug cord from switch into power source.

SECONDARY SUPPORT CHAIN

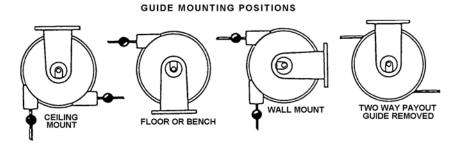
DANGER: A secondary safety cable or chain is to be attached to all reels mounted overhead to prevent reel from falling. Immediate hazards WILL result in severe personal injury or death.

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.

OPERATION

RATCHET LOCK

All models are equipped with a ratchet lock, which works with reel mounted in any position and needs no adjustment. If ratchet is not desired (constant tension), remove ratchet spring, ratchet lever, and lever shaft. This will eliminate locking action.



CABLE GUIDE

The cable guide may be set at any position around cable drum. Guide must be set so cable pays off reel in a straight line without bends. Remove guide from reel for two way cable payout.

SPRING TENSION

| A | CAUTION: | Do not connect working end of cable until the reel is properly pretensioned. Hazards or unsafe practices MAY result in <i>minor</i> personal injury or product or property damage. |
|---|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | CAUTION: | Failure to test for adequate spring revolutions can cause spring damage. Hazards or unsafe practices MAY result in <i>minor</i> personal injury or product or property damage. |

NOTE: Adjust tension before or after installation of reel.

Pull cable out to determine if more or less tension is desired. Place wrench on end of main shaft over flat. While holding wrench firmly, pull pin on housing until it allows shaft to rotate. Turn shaft counter-clockwise to decrease tension and clockwise to increase tension. Re-engage pin when desired tension has been set. Pull cable out completely to insure enough spring revolutions remain for operating. If entire cable assembly cannot be pulled out, decrease spring tension until it can.

SERVICE

WARNING: Unplug power. Failure to disconnect could cause serious injury, death or property damage. Hazards or unsafe practices COULD result in *severe* personal injury or death.

RATCHET & SPRING ASSEMBLY

CAUTION: When reassembling ratchet and spring assembly, be sure arrow on ratchet plate aligns with alignment in drum. Hazards or unsafe practices MAY result in *minor* personal injury or product or property damage.

NOTE: If reel will not develop tension on retract cable, ratchet and spring assembly may need to be replaced.

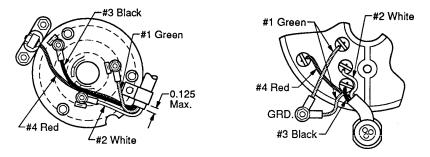
To remove cover, remove bottom screws, retaining ring, and guide. Remove, inspect, and replace ratchet and spring assembly as necessary to removing nuts. Reverse procedure to reassemble.

Remainder of reel may be disassembled with stand tools and parts replaced as required.

WORKING CABLE, INSULATOR/RING ASSEMBLY & BRUSH REPLACEMENT

NOTE: Check continuity before connecting power. When reel is equipped with hand lamp or fluorescent lamp, remove lamp from cable (see hand lamp replacement instructions).

Unplug reel and remove tension as described in Operations: Spring Tension. Remove screws and retaining ring from cover. Remove cover and carefully slide insulator and ring assembly out of drum. Disconnect wire from power cable. Remove working cable wires from brush holder and slide brush holder from hub. Slide working cable out through cable guide from housing. Replace old working cable with new cable and reassemble to brush holder. Be sure to rewire in the same order as removed (See diagram.) Reassemble brushholder to hub and rewire insulator and ring assembly. Be sure to rewire in the same order as removed [See diagram]). Reassemble the slide insulator and ring assembly to hub. See power cord replacement procedure below if a fluorescent lamp is being installed. Replace cover assembly. Reverse above procedure to reassemble.



HAND LAMP REPLACEMENT

Remove guard, bulb and the screws from sides of handle. Remove cable stop assembly, bumper, spring, ball, and cable wiring. Wire up cable to replacement handle: black to gold screw, white to silver screw, and green to green screw. Reverse steps above to reassemble.

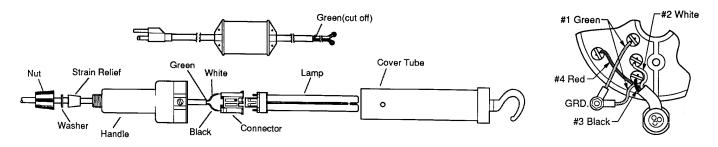
FLUORESCENT HAND LAMP (-13W) REPLACEMENT

WARNING: The power cord/transformer must be installed if the 13W fluorescent hand lamp is to be used. Failure to install this cord will result in hazards or unsafe practices, which COULD result in *severe* personal injury or death.

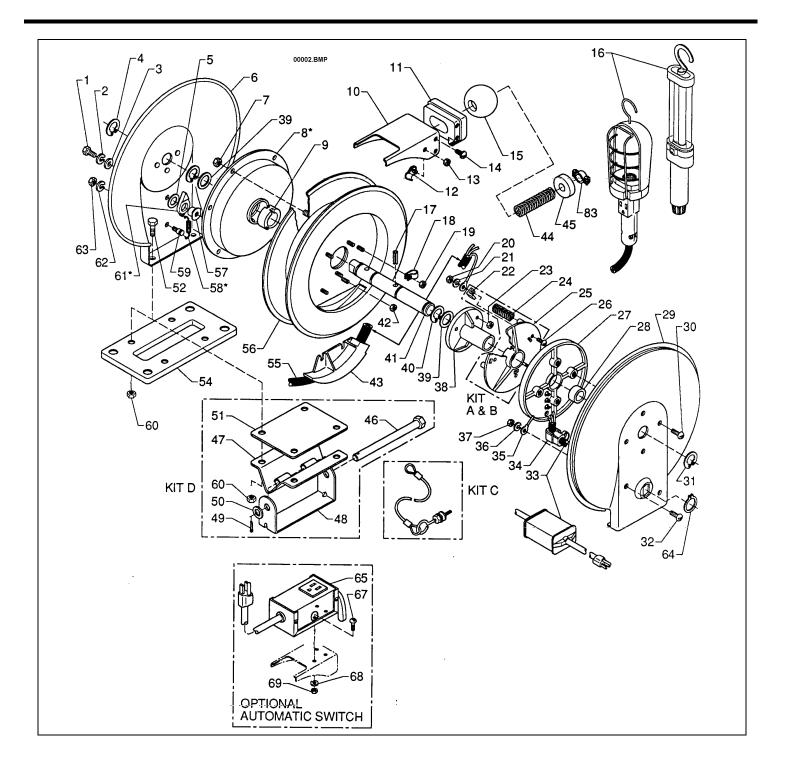
CAUTION: Check continuity before reconnecting power. Hazards or unsafe practices MAY result in *minor* personal injury or product or property damage.

Remove defective hand lamp from reel and cord set. (See illustration below) Remove nut, plastic washer, and rubber strain relief from lamp handle and slide back onto cord. Remove screws from side of handle that secure the tube. Pull tube, lamp and lamp connector from handle. Pull cord wire leads from lamp connector.

To assemble new hand lamp (13 W fluorescent) onto reel and cord set, strip black and white wires from cord to size #18 and tin ends. Remove green wire as close to outer jacket as possible. Press replacement lamp into connector until firmly retained. Push stripped and tinned wire leads into quick-connect wiring holes in bottom of connector. Slide replacement lamp into protective cover tube so end of the lamp is seated in tube end. Slide tube and lamp assembly into handle while pulling cord back through until tube and lamp are seated. Lubricate with soap, if necessary. Secure tube with screws in sides of handle. Replace nut, plastic washer, and rubber strain relief onto lamp handle.



REPLACEMENT PARTS



| Reference | | | |
|-----------|-------------|--------|---------------------------------------------------------------------|
| Number | Part Number | Qty. | Description |
| 1 | 00030P0115 | 1 | Screw (1/4-20 x 1/2) |
| 2 | 00101P0030 | 1 | Lock washer (1/4") |
| 3 | 00126P0050 | 1 | Washer (1/4") |
| 4 | 00580P0045 | 1 | Retaining ring |
| 5 | 4737800000 | 1 | Washer |
| 6 | 57844000YE | 1 | Cover assembly (Includes items 5, 57, 58, 59, 1, 2, 62, 63) |
| 7 | 00160P0077 | 6 | Lock nut (10-24) |
| 8 | 5784600006 | 1 | Ratchet and spring assembly |
| 9 | 1405800002 | 1 | Hub, spring release |
| 10 | 57812000YE | 1 | Guide |
| 11 | 5781400000 | 1 | Nose, guide |
| 12 | 5785500000 | 2 | Clamp assembly |
| 13 | 00160P0077 | 2 | Lock nut (10-24) |
| 14 | 01137P0062 | 4 | Screw (#6 x 3/8 pan phil SF tap) |
| 15 | 0004700001 | 1 | Ball stop (CW53-H) |
| 16 | C89440002 | 1 | Hand lamp with outlet (CW53-H) |
| | C89440005 | 1 | Hand lamp Insulated no outlet (CW53-FE) |
| | H81420038 | 1 | Hand lamp 13W Florescent oval (CW53-13W) Transformer lead-in incl. |
| | C89480118 | 1 | Hand lamp 13W Florescent round (CW53-13G) Transformer lead-in incl. |
| 17 | 00230P0103 | 1 | Self-lock pin |
| 18 | C39810210 | 1 | Clamp 5/16 dia |
| | C39810211 | 1 | Clamp 3/8 dia |
| 19 | 00160P0077 | 1 | Lock nut (10-24) |
| 20 | 00152P0006 | 1/cond | Nut (#8-32 brass) |
| 21 | 00103P0035 | 1/cond | Washer (#8) |
| 22 | 5786700000 | 1/cond | Brush |
| 23 | 00160P0077 | 3 | Lock nut (10-24) |
| 24 | 00600P0010 | 3 | Spring |
| 25 | 5786600000 | 1 | Brush holder |
| 26 | 00002P0901 | 1/cond | Screw (8-32 x 7/16) |
| 27 | 5785900000 | 1 | Insulator and ring assembly (CW43, CW53) |
| | 5786000000 | 1 | Insulator and ring assembly (CW34, CW44) |
| 28 | 5787000000 | 1 | Spacer |
| 29 | 5785600000 | 1 | Cover, stand |
| 30 | 00006P0104 | 4 | Screw (10-24 x 3/8) |
| 31 | 00580P0045 | 1 | Retaining ring |
| 32 | 00002P0901 | 1 | Screw (8-32 x 7/16) |
| 33 | 5937800000 | 1 | Cable, power supply (CW44) |
| | M10720099 | 1 | Cable, power supply 14/3 (CW53, CW43) |
| | 5937700000 | 1 | Cable, power supply (CW34) |
| | See # 16 | 1 | CW53-13S or CW53-13G supply cord comes with item #16 |
| | H80230012 | 1 | CWC53 |
| 24 | H80230013 | 1 | CWC43 |
| 34 | 00916P0004 | 1 | Strain relief |
| 35 | H81310003 | 1 | ground wire, as required |
| 36 | 00103P0035 | 1 | Washer (#8) |
| 37 | 00152P0006 | 1 | Nut (#8-32, brass) |
| 38 | 5786500001 | 1 | Hub, bearing |
| 39 | 5786200000 | 1 | Washer |
| 40 | 00580P0045 | 1 | Retaining ring |
| 41 | 5781500000 | 1 | Main shaft |
| 42 | 00160P0077 | 2 | Lock nut (#10-24) |
| 43 | 5782300000 | 1 | Guide |
| 44 | 0202400001 | 1 | Spring |
| 45 | 0202500001 | 1 | Bumper |

| 46 | 0200600000 | 1 | Pin, mounting bracket (opt) | |
|-------|--------------------|----|-------------------------------------------------------|---|
| 47 | 57808000YE | 1 | Swivel (opt)(use -RE, -YE, -SI) | |
| 48 | 02009000YE | 1 | Mounting bracket (opt) (Use -RE, -YE, -SI) | |
| 49 | 00228P0010 | 1 | Cotter pin (opt) | |
| 50 | 3036500000 | 1 | Washer (opt) | |
| 51 | 57877000YE | 1 | Plate, swivel (opt) (Use -RE, -YE, -SI) | |
| 52 | C11050300 | 4 | Screw, Whizlock 1/4-20x1/2 | |
| 54 | 57807000YE | 1 | Base plate (Use -RE, -YE, -SI) | |
| 55 | 5789000000 | 1 | Cable, working (CW53) | |
| | 5789300000 | 1 | Cable, working (CW44) | |
| | 5789500000 | 1 | Cable, working (CW43) | |
| | 5789800000 | 1 | Cable, working (CW34) | |
| 56 | 5787500000 | 1 | Drum assembly (CW53, CW53-H, CW43, CW44, CW34) | _ |
| 57 | 5784300000 | 1 | Shaft, lever | |
| 58 * | 5772700000 | 1 | Spring, ratchet | |
| 59 | 5785000000 | 1 | Pin | |
| 60 | C22430230 | 4 | Nut, Whizlock 1/4-20 | |
| 61 * | 5784100000 | 1 | Lever, ratchet | _ |
| 62 | 00103P0020 | 1 | Lock washer (#6) | |
| 63 | 00151P0015 | 1 | Nut (#6-32) | |
| 64 | 00576P0041 | 1 | Retaining ring (.750 dia.) | |
| 65 | 01026P0012 | 1 | Automatic switch - optional | |
| 67 | 00002P0105 | 3 | Screw round head 8-32x5/8 - optional | |
| 68 | 00103P0035 | 3 | Washer lock int tooth #8 - optional | |
| 69 | 00151P0085 | 3 | Nut hex #8-32 - optional | |
| 83 | 0009500000 | 1 | Clamp Assy | |
| | OPTIONAL KI | ſS | | |
| А | 6302700000 | AR | Slip ring-3 cond (includes 20, 21, 22,24, 25, 26) | |
| В | 6302900000 | AR | Slip ring kit-4 cond (includes 20, 21, 22 24, 25, 26) | |
| С | 6238800000 | AR | Cable, safety (opt.)(on #6 for CW53-S-H) | |
| Recom | mended spare parts | | | |
| | | | | |

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