

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.

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

INSTALLATION



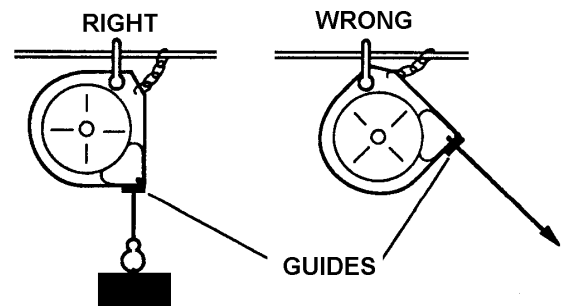
WARNING: Failure to read, understand or follow these instructions could lead to hazards or unsafe practices **COULD** result in severe personal injury or death.



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

MOUNTING

Hang balancer in desired location by clevis provided at the top. Balancer should be suspended directly over work area using an eyebolt or similar device with a break strength exceeding 6 times combined weight of balancer and load it is supporting. Balancer should be mounted in such a manner as to minimize cable contact with cable guide. For proper alignment, utilize three mounting holes at top of balancer. If shackle is removed to make connections, be sure that nut and cotter pin are properly replaced on shackle pin.



SECONDARY SUPPORT CHAIN




WARNING: A secondary safety cable or chain must be attached to all balancers mounted overhead to prevent balancer from falling. Immediate hazards which **WILL** result in severe personal injury or death.

A hole has been provided at side of housing to permit installation of a secondary support chain. All balancers 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 (shackle) on balancer. Attach the other end of secondary support chain or cable to a support component other than that which supports the balancer. Chain or cable should be as short as possible allowing balancer to drop no more than 6 to 12 inches if primary connection is released.

OPERATION

TOOL ATTACHMENT

 **WARNING:** Never pull cable to device to be retracted. Always lift object to hook. If the hook is accidentally released when it is extended, it will snap back. Hazards or unsafe practices which COULD result in severe personal injury or death.

Balancer is furnished with a tool clip. Attach tool complete with hose or cable along fittings. To adjust length of overhang, remove all tension. Pull cable down and position hook at desired height. Loosen cable stop, slide cable stop upward to roller guide, and tighten. Move cable stop upward and lengthen overhang of cable will reduce active travel distance. For every foot more of overhang, the active travel will be reduced by a foot.

Overhang can be adjusted by moving cable stop. If it is determined that the overhang is not sufficient, an optional overhang extension cable can be used to increase overhang without reducing active travel.

SPRING TENSIONING

NOTE: Attach full load including all attachments before adjusting tension.

If weight of tool exceeds amount of existing tension of balancer mainspring, cable will descend. Increase tension of mainspring by applying a wrench to flats on mainspring shaft and rotate counter-clockwise until proper tension is reached and load begins to retract. Tool will move upward if tension exceeds the load.

Decrease tension by applying a wrench to the flats on mainspring shaft and **HOLD**. Release tension of mainshaft by squeezing together spring lever slowly on opposite side of reel. Rotate wrench clock wise until proper tension is reached and load descends properly.

After adjusting tension, pull cable to fullest extension to ensure proper travel is achieved. If cable does not reach full extension, some tension must be released. If proper tension and extension cannot be achieved, consult the factory.

RATCHET LOCK (FOR 10FLR & 15FLR ONLY)

The ratchet lock works in two positions in one complete rotation. Pull cable to desired location and let cable retract slightly until lock engages, much like a window shade. To release lock, pull cable out slightly.

For constant tension, ratchet lock may be disengaged. Turn lock release knob counter-clock wise while pulling cable in and out slightly to engage lock release lever.


CABLE STOP ADJUSTMENT

NOTE: Moving the cable stop will reduce the active travel distance. If additional cable extension is required, extension cable assemblies are offered as an accessory.

Cable stop can be moved up along the cable to attain the most desirable working height.

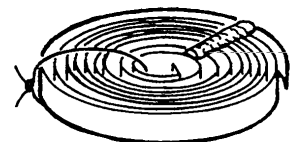
SERVICE

MAINSRING REPLACEMENT

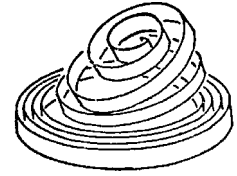
 **WARNING:** Spring is dangerous. Before removing broken spring, weld coils together at four (4) locations or wrap securely with wire. Failure to secure spring leads hazards or unsafe practices which COULD result in severe personal injury or death.

 **CAUTION:** Remove all tension before servicing. Hazards or unsafe practices MAY result in *minor* personal injury or product or property damage.

Remove all tension by applying a wrench to flats on mainspring shaft and **HOLD**. Release tension of mainshaft by squeezing together spring lever slowly on opposite side of reel. Then rotate wrench clock- wise until proper tension is reached and load will descend properly. Remove clevis by removing the cotter pin and clevis pin. Remove retaining ring, the three screws, and plates with screws.



Then remove housing, drum nuts, and cover.
Remove next retaining ring and washer. Remove mainspring cover.
Carefully remove mainspring from drum. Hub may come off with shaft with spring. If so, replace hub into new spring. Be sure hub engages spring coil. Replace spring in drum making sure spring engages lip on drum. To reassemble, reverse procedure. Hub must engage the pin on the main shaft when reassembling.



CABLE REPLACEMENT

NOTE: Whenever cable shows signs of deterioration, it should be replaced with new cable.

Remove all tension by applying a wrench to flats on mainspring shaft and **HOLD**. Release tension of mainshaft by squeezing together spring lever slowly on opposite side of reel. Then rotate wrench clockwise until proper tension is reached and load will descend properly. Remove clevis by removing the cotter pin and clevis pin. Remove retaining ring, three screws, and plates with screws. Then housing, nut and cable. Replace old cable with new cable. Be sure to thread new cable through guide first when reassembling.

RATCHET LOCK REPLACEMENT

Remove all tension by applying a wrench to flats on mainspring shaft and **HOLD**. Release tension of mainshaft by squeezing together spring lever slowly on opposite side of reel. Then rotate wrench clockwise until proper tension is reached and load will descend properly. Remove clevis by removing the cotter pin and clevis pin. Remove retaining ring, three screws, and plates with screws. Remove retaining ring, washer, spring lock, and another retaining ring. Remove housing. Remove retaining ring and unclip spring. Remove ratchet lock from inside housing and spring. To reassemble, reverse above procedure.

LUBRICATION

All bearings, springs, etc., are permanently lubricated for a lifetime at the factory, and no additional lubrication is necessary.

PARTS REPLACEMENT

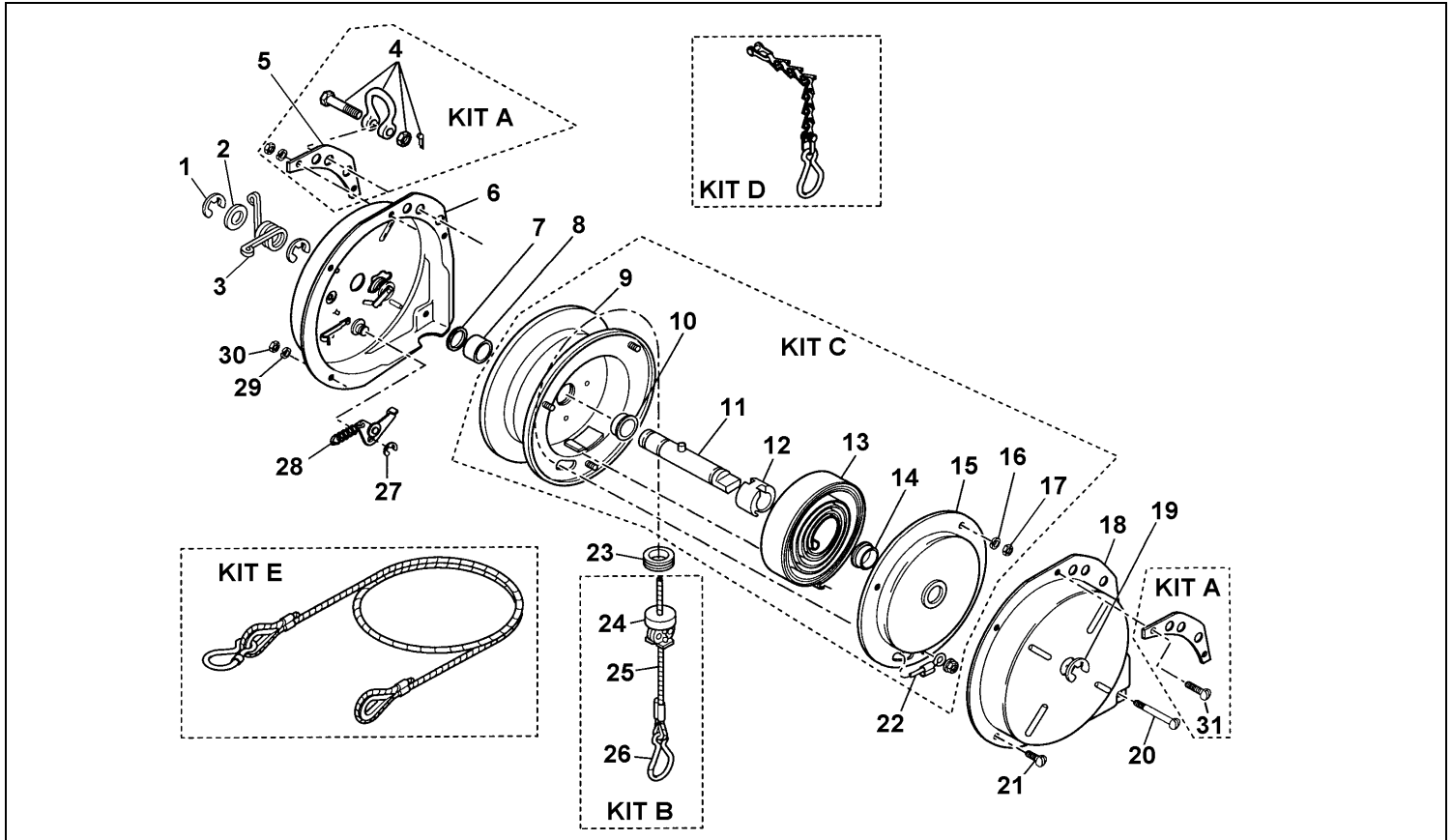
 **CAUTION:** Remove all tension before servicing. Always remove balancer from service. Hazards or unsafe practices MAY result in *minor* personal injury or product or property damage.

All parts are replaceable in the field without special tools.

MAINTENANCE AND INSPECTION

Due to the design, this reel will require little maintenance other than a periodic check of the cable and hanger for wear. All worn parts should be removed from service and/or replaced at once.

REPLACEMENT PARTS



Reference Number	Part Number	Qty.	Description
1	00580P0045	2	Ring; Retaining (.625)
2	0981300000	1	Washer
3 *	0961600000	1	Lock; spring Tension
4	01240P0010	1	Assembly; Clevis (included in Kit A)
5	M62710002	2	Plate; Hanger Mounting (included in Kit A)
6	0988600000	1	Assembly; Housing (10 & 15FLR with 27, 28, & 33 ratchet parts)
	0968100001	1	Housing: Standard (10F & 15F)
7	1409900000	AR	Spacer (used for shim only)
8	0961100000	1	Spacer
9	0967900000	1	Assembly; Cable Drum (10F & 15F)(included in Kit C)
	0967200000	1	Assembly; Cable Drum (10 & 15FLR) included in Kit C)
10	1361000002	1	Bearing; Main Shaft (included in Kit C)
11	0967300000	1	Shaft; Main (included in Kit C)
12	1405800002	1	Hub; Spring (included in Kit C)
13 *	0961800203	1	Spring (10F & 10FLR)(included in Kit C)
	0961800245	1	Spring (15F & 15FLR)(included in Kit C)
14	1361000001	1	Bearing; Main Shaft (included in Kit C)
15	0967100000	1	Cover (included in Kit C)
16	00103P0035	2	Washer; Lock (#8, internal tooth) (included in Kit C)
17	00151P0085	2	Nut; (#8 - 32) (included in Kit C)
18	0962100000	1	Housing
19	C01700131	1	Ring; Retaining
20	00002P0114	1	Screw; (#8 - 32 x 1 3/4)
21	00002P0101	2	Screw; (#8 - 32 x 5/16)
22	00160P0078	1	Nut; Lock (#8 - 32) (included in Kit C)
23	1361300000	1	Guide; Cable

24	0983300000	1	Adjustable Cable Stop (included in Kit B)
25 *	0963900008	1	Cable (8 ft.) (included in Kit B)
26	01146P0015	1	Hook (included in Kit B)
27	00580P0030	1	Ring; (.375) Retaining
28	H05040010	1	Kit; Springs & Lever (see item 33)
29	00103P0035	5	Washer; Lock (#8 internal tooth)
30	00151P0085	5	Nut (#8 - 32)
31	00002P0105	2	Screw (#8 – 32 x 5/8) (included in Kit A)
32	1003100000	1	Bumper; Rubber
33	0962200000	1	Ratchet lever (without spring)

OPTIONAL KITS

Kit A	H16510007	Clevis Kit (includes items 4, 5, 31)
Kit B	0967800008	Assembly; Cable (includes items 24, 25, 26, 32)
Kit C	0969900203	Assembly; Mainspring, Drum & Shaft (10F; includes items 9-17 &22)
	0969900245	Assembly; Mainspring, Drum & Shaft (15F; includes items 9-17 &22)
	0988700203	Assembly; Mainspring, Drum & Shaft (10FLR; includes items 9-17 &22)
	0988700245	Assembly; Mainspring, Drum & Shaft (15FLR; includes items 9-17 &22)
Kit D	4963800000	Chain; Safety
Kit E	4965000001	Cable Overhang (3 ft.)
	4965000002	Cable Overhang (5 ft.)
	4965000003	Cable Overhang (10 ft.)
	4965000004	Cable Overhang (15 ft.)
	4965000005	Cable Overhang (20 ft.)
	4965000006	Cable Overhang (25 ft.)
	4965000007	Cable Overhang (30 ft.)
	4965000008	Cable Overhang (35 ft.)

*** Recommended Spare Parts**

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