

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



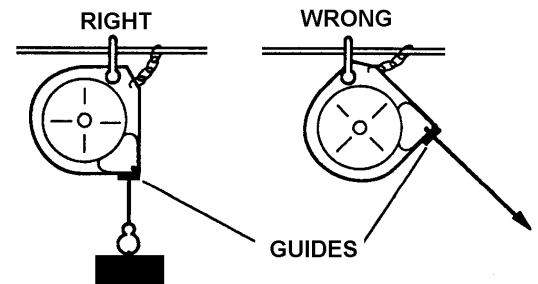
WARNING: Failure to read, understand or follow these instructions could lead to hazards or unsafe practices **COULD** result in severe personal injury or death.



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 retractor in desired location by clevis provided at top. The reel should be suspended directly over work area using an eyebolt or similar device with break strength exceeding 6 times the combined weight of retractor and load it is supporting. Reel should be mounted in such a manner as to minimize cable contact with cable guide.

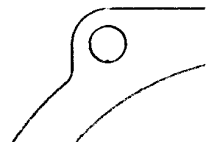


SECONDARY SUPPORT CHAIN



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

A hole is provided at top of housing to permit installation of a secondary support chain. All retractors mounted over head must 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 retractor. Attach other end of secondary support chain or cable to a support component other than that which supports the retractor. The chain or cable should be as short as possible allowing it to drop no more than 6 to 12 inches if primary connection is lost (See Illustration above). A secondary support is offered as an accessory item.



OPERATION

TOOL ATTACHMENT

WARNING: Never pull cable to device to be retracted. Always lift object to hook. If 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.

If, after installation, it is determined that the reel overhang for the active travel required is not sufficient, an overhang extension cable can be used to extend overhang without reducing active travel. This is available as an optional item. Reel is furnished with a tool clip. Attach tool complete with hose or cable and fittings. To adjust length of overhang, remove all tension, then pull down and position hook at desired height. Loosen cable stop, then slide cable stop upward to roller guide and tighten. Move cable stop upward and lengthen overhang of cable to reduce active travel distance. For each additional foot of overhang, active travel is reduced a foot.

SPRING TENSIONING

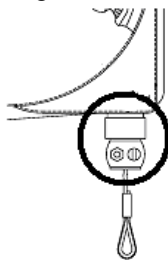
WARNING: Attach full load including all attachments before adjusting tension. Hazards or unsafe practices COULD result in severe personal injury or death.

CAUTION: When releasing tension, always do so slowly, and with wrench held firmly on shaft flats. Hazards or unsafe practices which MAY result in *minor* personal injury or product or property damage.

Tool including all attachments and connections must be in place before adjusting spring tension.

- If load exceeds spring tension, tool will drop, and tension must be increased.
- If tool is fully retracted but spring tension, seems excessive (rapid retraction), decrease tension.

Tension should always be enough to retract tool and to keep cable stop against guide.



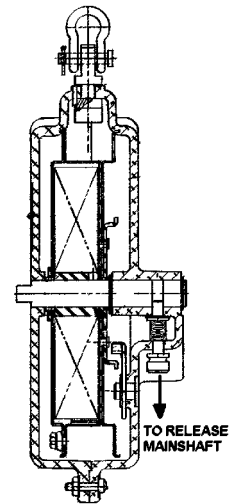
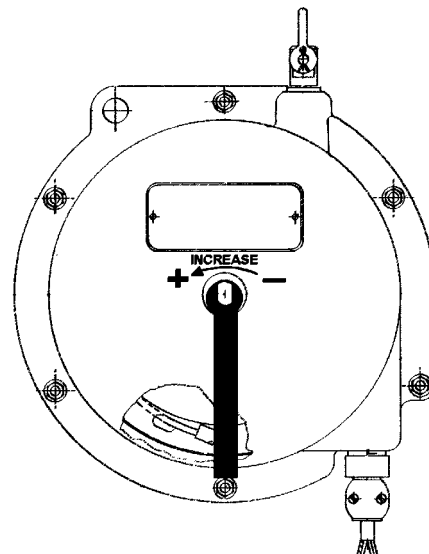
To Increase Tension

Firmly engage a wrench on flats on mainspring shaft, pull down on shaft release pin by using a screw driver between head and housing, and turn in "+" direction (as shown in diagram).

To Decrease Tension

Firmly engage a wrench on flats on mainspring shaft, pull down on shaft release pin by using a screw driver between head and housing, and slowly allow to turn in "-" direction (as shown in diagram). pushed, Control unwinding with firmly held wrench.

After adjusting tension, pull cable to fullest extension to ensure full cable travel. If cable does not reach full extension, some tension must be released. If proper tension and extension cannot be achieved, another unit may be required. Please consult factory.



RATCHET LOCK

The ratchet lock can engage about every 9" of cable travel. Pull cable to desired location and let cable retract slightly until lock engages, If it doesn't engage, pullout a further, and then allow to retract. To

release lock, pull cable out at least 6 ". For constant tension, ratchet lock may be disengaged. Turn lock release plate with screws driver 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.

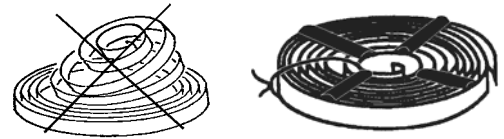
SERVICE

MAIN SPRING REPLACEMENT

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

 **WARNING:** Spring is dangerous. Always wear gloves. Before removing broken spring, weld coils together at four (4) locations or wrap securely with wire. Hazards or unsafe practices **COULD** result in *severe* personal injury or death.

Remove **All** tension from main spring (See Spring Tension Adjustment). Remove retaining ring and six (6) screws around reel. Remove housing. Remove drum-cover nuts and cover. Carefully remove mainspring from drum. Hub may come off shaft with spring.



If so, replace hub into new spring while making sure hub engages spring coils. Replace spring in drum while making sure the spring hook engages with drum outer hook. To reassemble, reverse the above procedure. Be sure the hub engages the pin on the main shaft when reassembling.


CABLE REPLACEMENT

Whenever a cable shows signs of deterioration, it should be replaced with a new cable. Remove **All** tension from main spring (See Spring Tension Adjustment). Remove retaining ring and six (6) screws around reel. Remove housing. Remove nut and cable. Replace with new cable while threading it through guide first when reassembling.

RATCHET LOCK REPLACEMENT

Remove **All** tension from main spring (See Spring Tension Adjustment). Remove retaining ring and six (6) screws around reel. Remove both housings. Remove retaining ring and unclip spring, then remove ratchet lock. To reassemble, reverse the above procedure.

PARTS REPLACEMENT

 **CAUTION:** Always remove all spring tension (see "Spring Tension Adjustment") before attempting to disassemble internal parts. Always remove retractor reel from service. Hazards or unsafe practices **MAY** result in *minor* personal injury or product or property damage.

NOTE: When ordering replacement parts, always include retractor reel model number and serial number.

All parts are replaceable in the field without special tools.

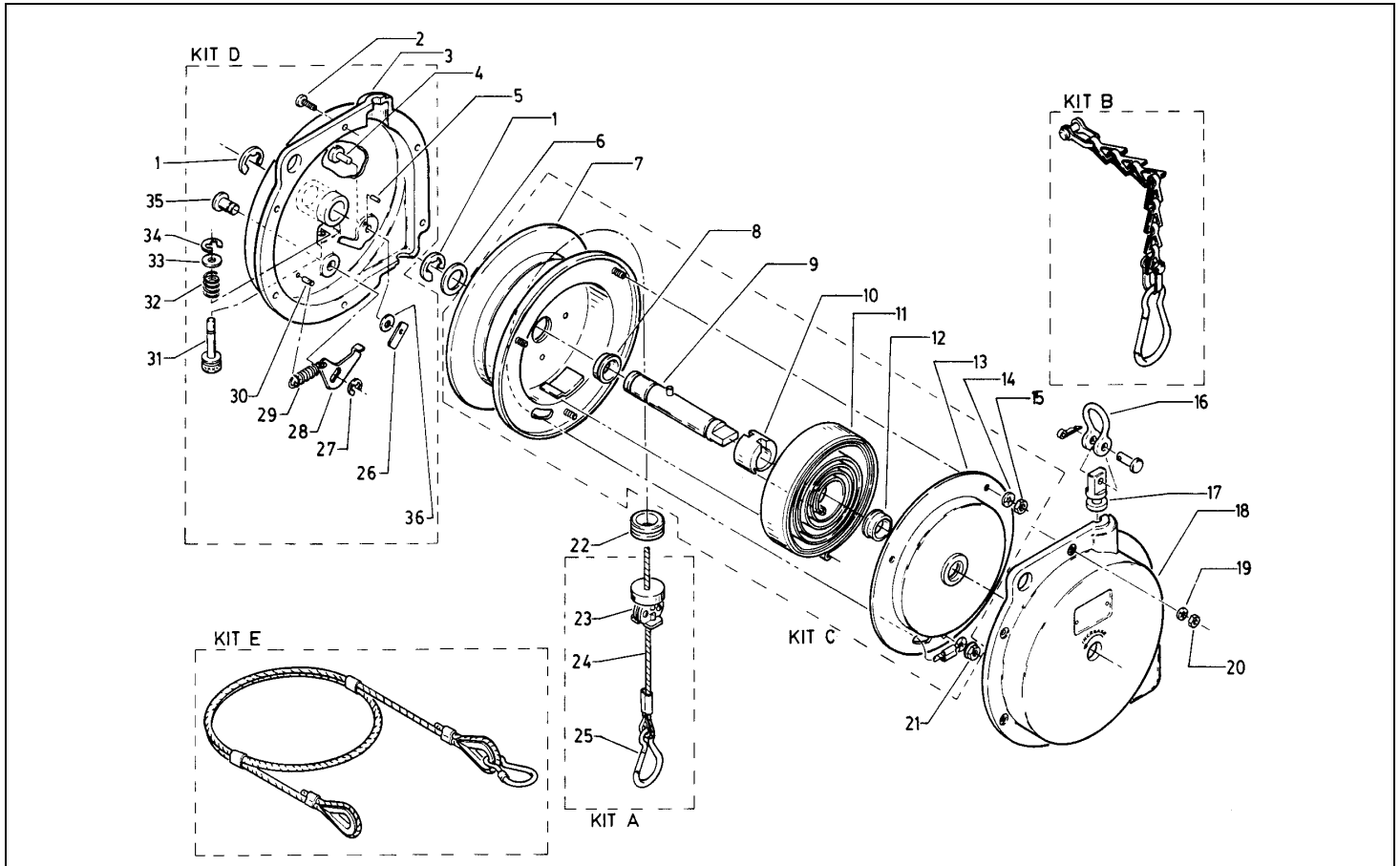
LUBRICATION

All bearings, springs, etc. are permanently lubricated at factory and should require no further lubrication.

MAINTENANCE & INSPECTION

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

REPLACEMENT PARTS



Reference #	Part Number	Qty.	Description
1	00576P0010	2	Retaining Ring (.625)
2	C07930001	6	Screw; phil. (#10-24 x 3/4 LG.)
3	M64150074	1	Housing; lock side
4	M23560029	1	Lock out shaft
5	00230P0109	1	Drive; pin
6	1409900000	1	Washer
7	0967200000	1	Cable; drum assy.
8	1361000002	1	Main shaft bearing
9	H51110001	1	Main shaft
10	1405800002	1	Hub-spring release
11*	0961800030	1	Main spring (5FLRC or FLRCF)
	0961800203		Main spring (10FLRC or FLRCF)
	0961800245		Main spring (15FLRC or FLRCF)
	0961800239		Main spring (22FLRC or FLRCF)
12	1361000001	1	Main shaft bearing
13	0967100000	1	Drum cover assy.
14	00103P0035	2	Lock washer (#8 int. tooth)
15	00151P0085	2	Nut (#8-32)
16	01240P0010	1	Shackle (1/4" dia.)
17	H16510011	1	Hanger swivel
18	M64150075	1	Housing-spring side
19	00103P0025	6	Washer; lock (#10 int. tooth)
20	00151P0025	6	Nut (#10-24)
21	00160P0078	1	Nut; lock (#8-32)
22	M31020013	1	Cable guide

23	0983300000	1	Adjustable cable stop
24*	0963900008 See Kit A	1	Cable ass'y (8') xxFLRC models Cable ass'y (8') xxFLRCF models
25	01146P0015	1	Tool clip
26	0981600002	1	Scroll lock release cam
27	00580P0030	1	Retaining Ring
28	0962200000	1	Scroll lock lever arm
29	H05040010	1	Spring; kit
30	M24460089	1	Pin; lever arm spring
31	5783200000	1	Shaft; tension lock
32	00600P0009	1	Spring; tension lock shaft
33	5784200000	1	Washer; tension lock shaft
34	00580P0095	1	Retaining ring, tension lock shaft
35	M23530005	1	Shaft; lever arm
36	0973300000	1	Nylon washer
Kit A	0967800008 H13150008 H13150007	1	Complete cable ass'y. (Incl. 23, 24, 25) xxFLRC Complete cable ass'y Nylon Coated, (incl. items 23, 24, 25) Complete cable ass'y. (Incl. 23, 24, 25) xxFLRCF
Kit B	4963800000	1	Safety chain
Kit C	H42110004 H42110005 H42110008 H42110010	1	Spring, drum & shaft ass'y (10FLRCx-incl. Items 7-15) Spring, drum & shaft ass'y (15FLRCx-incl. Items 7-15) Spring, drum & shaft ass'y (5FLRCx-incl. Items 7-15) Spring, drum & shaft ass'y (22FLRCx-incl. Items 7-15)
Kit D	H22520002	1	Housing & lock ass'y. (Items 3-5 & 26-36)

* **Recommended Spare Parts**

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