

AERO-MOTIVE MFG. CO.

P.O. Box 2678 • Kalamazoo, Michigan 49003
Telephone (616) 381-1242 • Telex: 224420

FORM #SM5640-01 EJ
DATED MAY 30, 1979

DUAL HYDRAULIC HOSE REEL, SERIES: D47a

I. INSTALLATION

The reel may be mounted in any position which allows the main shaft to be horizontal, and hose line to be perpendicular to the center of the reel. The reel may be bolted directly to the customer's equipment, or to the optional mounting block (FH-24) which is welded to the customer's equipment.

II. HOSE INSTALLATION AND REPLACEMENT

CAUTION: Before servicing, cut off hydraulic supply and relieve pressure. Remove all spring tension from reel.

1. Supply Input Hoses are attached to the fittings (FH-16) on the mounting block (FH-12).
2. To install Working Hose, be sure to remove all reel tension before disassembling.
3. When installing new Working Hose, remove plastic caps from the pair of fittings on side of swivel, connect new Working Hose to fittings. Check for corresponding connection from input.
4. Check hook-up of old Working Hoses before replacing, for correct connections.
5. Remove old Working Hoses and install new hoses on corresponding fittings on the swivel (FH-6).
6. Wind hose on reel by reverse winding the reel. A click will be heard when the reel is reverse wound. This will not damage the reel, as the spring will automatically reengage the spring hub when hose is pulled out.
7. Follow set-up procedure as outlined in Section III, before attaching free end of Working Hose.

NOTE: Manifold block may be reversed to be used for a reverse rotation application, as shown on parts illustration on Page 5. Refer to Section IV for reverse rotation.

III. SPRING TENSION ADJUSTMENT

CAUTION: Before any adjustments, disconnect the hydraulic supply and remove all tension from reel. Before connecting the free end of the hose, the reel will require approximately three (3) "pretension" or priming turns to establish initial tension. This should be adequate for most applications. If not, due to hose length, more or less tension may be applied.

1. To pretension a reel, pull hose out until spring engages, continue to pull hose rotating the drum one complete turn.
2. Hold drum stationary and loop hose back around the drum of the reel.

III. SPRING TENSION ADJUSTMENT cont.

3. Repeat until adequate "pretension" applied (approximately 3 turns).
4. Pull entire hose length off from the reel and remove all twist and kinks, make sure there are adequate turns left in the spring to allow full payout.

CAUTION: Never apply too many "pretension" turns. Always leave at least one or two turns between the position of the drum when the hose is fully extended, and the point where the spring ends or "bottoms out". Over-tensioning can damage both the hose and the reel. Insufficient pretension may cause sluggish action when retracting and may also shorten spring life.

5. Connect other end of Working Hose being careful not to lose any of the "pretension" turns, and avoiding any twists in the hoses.

IV. MAIN SPRING REPLACEMENT

CAUTION: Remove all tension from reel before disassembling.

1. If main spring is broken there will be no tension to remove. If spring is not broken, disconnect hose at free end and allow reel to retract hose *slowly*.
2. Remove the six (6) nuts (FH-1) from studs on the flange (FH-3), which secure spring container (FH-2).
3. Pull spring container (FH-2) from flange very carefully, then remove spring hub (FH-21) from old spring container.
4. Place spring hub (FH-21) into new spring container (FH-2) making sure hub is engaging the spring.
5. Replace the new spring container (FH-2) on the flange, being sure that the spring hub has engaged the drive pin (FH-18) on the main shaft (FH-17) or shaft extension (FH-19).
6. Replace the six (6) nuts (FH-1) to flange and tighten.
7. Replace "pretension" turns as described in Section III.

NOTE: When converting to reverse rotation main spring and cup assembly must be replaced and spring hub must be reversed to function properly.

V. MAIN SHAFT SEALS

CAUTION: Before servicing remove hydraulic pressure and drain lines to avoid excessive spillage.

Disassemble in a clean environment to avoid damage to shaft and swivel. Remove all contamination from shaft and swivel before replacing.

1. Remove all tension from reel (Ref. IV-1), then disconnect hose at free end and unwind hose from reel.
2. Remove the five (5) nuts (FH-1) from studs on flange (FH-6).

V. MAIN SHAFT SEALS (cont.)

3. Carefully remove the flange and drum assembly (FH-3).
4. On models D47-2, -102, -4, -104, -6, -106, remove the shaft extension (FH-19) by loosening set screw (FH-7).
5. Remove the retaining ring (FH-8) and washer (FH-9) from the main shaft (FH-17).
6. Very carefully pull the main shaft (FH-17) out of the flange and swivel assembly (FH-6).
7. Remove the two (2) bolts (EJ-29) from manifold block (EJ-28), then remove manifold block (EJ-28) exposing O-rings (EJ-27).
8. Replace seals with kit (EJ-25). Install the three (3) new O-rings (FH-5) and the four (4) new back-up rings (FH-4) carefully, in the order shown in the illustration. Remove the two (2) O-rings (EJ-27) on the manifold block.
9. A light coat of hydraulic oil or O-ring lubricant applied to the O-rings and back-up rings will allow easy installation of shaft and insure proper sealing of the O-rings.
10. To reassemble, reverse the above procedure. Pretension reel as described in Section III.

VI. LUBRICATION

The hose reel is lubricated for the life of the reel at the factory. Further lubrication is neither recommended nor required. Only periodic inspection of hoses and fittings may be required.

AERO-MOTIVE

A SUBSIDIARY OF DANIEL WOODHEAD, INC.

AERO-MOTIVE MFG. CO.

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Telephone (616) 381-1242 • Telex: 224420

VII. REPLACEMENT PARTS

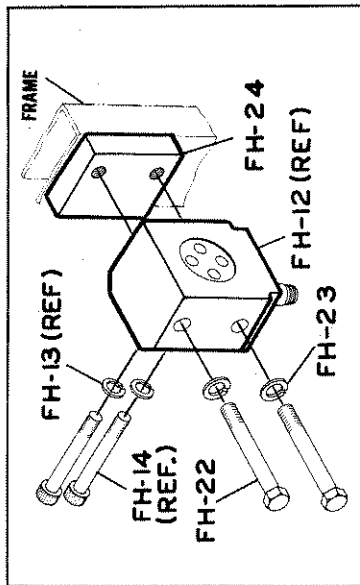
DUAL HYDRAULIC HOSE REEL
PARTS LIST SERIES **D-47a**

<u>ITEM NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
FH-1	11	Locknut (#10-24)
FH-2	1	Main Spring & Cup Assembly
FH-3	1	Drum & Flange
FH-4	4	Back-up Rings
FH-5	3	O-Rings
EJ-6	1	Swivel & Flange
FH-7	1+	Set Screw (1/4-20 x 1/4)
FH-8	1	Retaining Ring
FH-9	1	Retaining Washer
FH-10	1*	Drive Pin
FH-11	2	O-Ring
FH-12	1	Mounting Block
FH-13	4	Lockwasher (3/8")
FH-14	2	Screw, Hex Soc. Hd. (3/8-16 x 2 3/4)
FH-15	2	O-Ring
FH-16	2	Hose Fitting (JIC-37° Flare)
FH-17	1	Main Shaft
FH-18	AR*	Drive Pin
FH-19	1+	Shaft Extension
FH-20	2	Cap Nut
FH-21	1	Spring Hub
EJ-27	2	O-Ring
EJ-28	1	Manifold Assembly
EJ-29	2	Bolt (3/8-16 x 1 3/8)
<u>OPTIONAL</u>		
FH-22	2	Screw, Hex Hd. (1/4-20 x 3 3/4)
FH-23	2	Lockwasher (1/4")
FH-24	1	Reel Mounting Block
EJ-25	1*	Seal Kit (Incl. FH-4,-5,-11,-15,-27)
FH-26	1	Reel Block Assembly (Incl. FH-22,-23,-24)

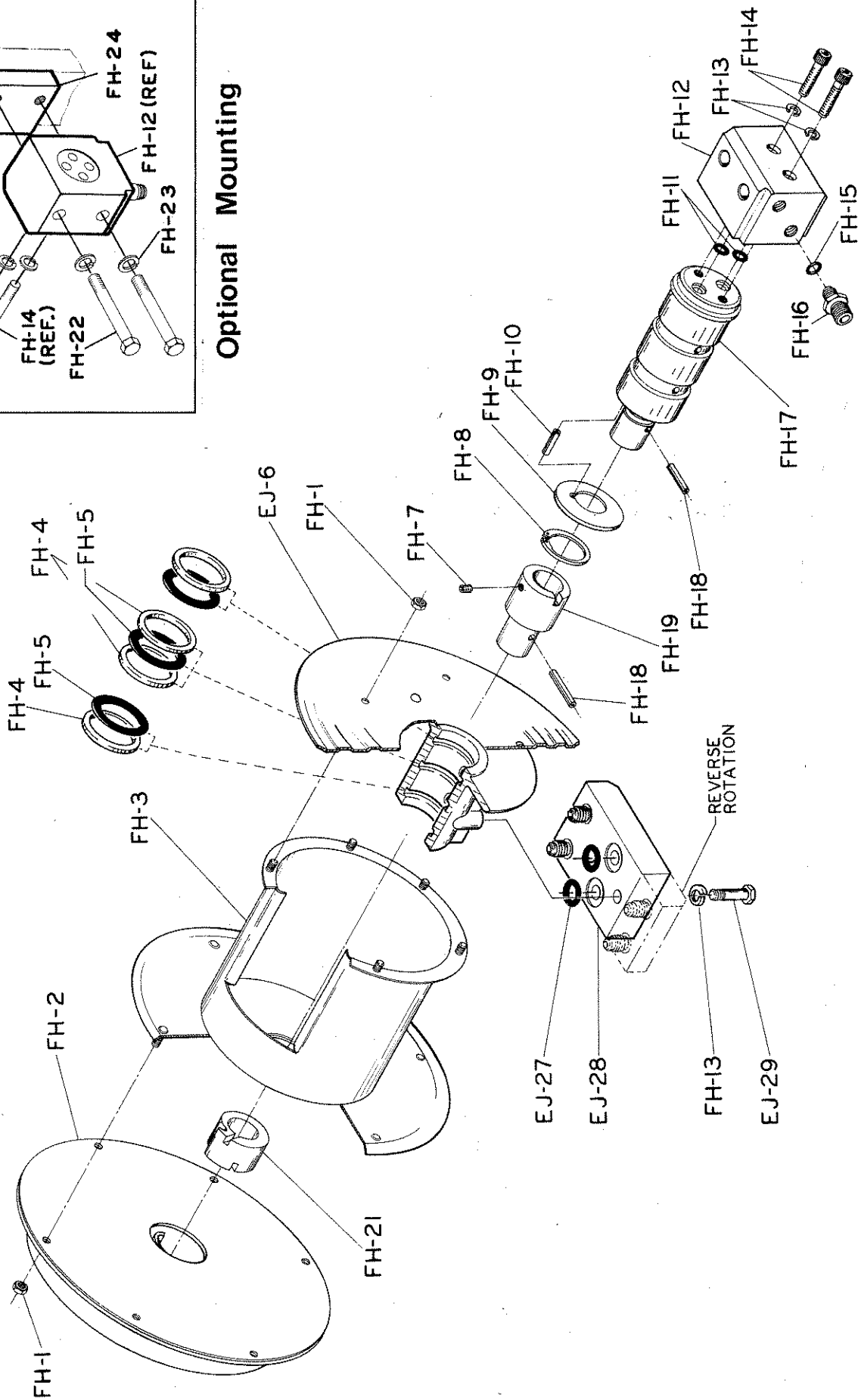
* Recommended Spare Parts

+ Required on D47-2, -102, -4, -104, -6, -106 only

WHEN ORDERING REPLACEMENT PARTS, ALWAYS SPECIFY MODEL NUMBER AND SERIAL NUMBER.



Optional Mounting



D-47a, Dual Hose Reel

AERO-MOTIVE**AERO-MOTIVE MFG. CO.**P.O. Box 2678 • Kalamazoo, Michigan 49003
Telephone (616) 381-1242 • Telex: 224420PARTS PRICE SHEET PP5640-01 HL
EFFECTIVE DATE : AUGUST 1, 1981

DUAL HYDRAULIC NO. D-47a

SUPERSEDES ALL PREVIOUS SHEETS
(Ref. SM5640-01)

NOTE: WHEN ORDERING PARTS, MODEL NUMBER AND SERIAL NUMBER MUST BE SPECIFIED.

<u>REF. NO.</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
FH-1	160-P-77	11	Locknut (#10-24)
FH-2	57566	1	Mainspring Contained (1 thru 6)
	57567	1	" " (101 thru 106)
FH-3	57563	1	Drum & Flange (1,101,3,1-3,5,105)
	57561	1	" " " (2,102,4,104,6,106)
FH-4	1228-P-10	4	Back-up Springs
FH-5	700-P-79	3	O-Ring
EJ-6	57420	1	Swivel & Flange (1 thru 6, 101 thru 106)
FH-7	53-P-200	1	Set Screw (2,102,4,104,6,106)
FH-8	580-P-120	1	Retaining Ring
FH-9	47113	1	Retaining Washer
FH-10*	230-P-138	1	Drive Pin
FH-11	700-P-58	2	O-Ring
FH-12	57542	1	Mounting Block
FH-13	101-P-21	4	Lockwasher (3/8")
FH-14	29-P-120	2	Screw, Hex Soc. Hd.
FH-15	700-P-52	2	O-Ring (3,103,4,104,5,105,6,106)
FH-16	688-P-5	2	Hose Fitting (1,101,2,102)
	B 57551	2	" " (3,103,4,104)
	B 57544	2	" " (5,105,6,106)
FH-17	57586	1	Main Shaft
FH-18	230-P-141	1	Drive Pin (1,101,3,103,5,105)
	230-P-141	2	" " (2,102,4,104,6,106)
FH-19	55110-5	1	Shaft Extension (2,102,4,104,6,106)
FH-20	694-P-2	2	Cap Nut (1,101,2,102,5,105,6,106)
	694-P-1	2	" " (3,103,4,104)
FH-21	40318-3	1	Hub Spring
FH-22	34-P-32	2	Screw, Hex Hd. (1/4-20 x 3 3/4) OPTIONAL
FH-23	101-P-16	2	Lockwasher (1/4") OPTIONAL
FH-24	47145	1	Reel Mounting Block - OPTIONAL
EJ-25*	57604	AR	Seal Kit (#4,5,11,27)
FH-26	47608	AR	Reel Block Ass'y. (FH-22,23,24) OPTIONAL
EJ-27	700-P-31	2	O-Rings
EJ-28	57417	1	Manifold Assy. (3/4-16) 4,104, 3,103
	57419	1	Manifold Assy. (9/16-18) 2,102,5,105,6,106
EJ-29	32-P-109	2	Bolt (3/8-16 x 1 3/8)
AL-30	57573	2	Reducer (9/16-18 to 1/2-20) (Models 5,105, 6,106)
HL-A	57606		Conversion Kit D47 to D47a (3/4-16)
HL-B	57607		Conversion Kit D47 to D47a (9/16-18)