

COMPONENT REMOVAL AND REPLACEMENT - The following steps are required in the removal and replacement of major components, assemblies, or piece parts necessary for corrective action.



DRIVE MOTOR REMOVAL -

- After turning the circuit breaker off, remove cover on drive motor junction box and disconnect motor leads.
- Remove conduit from motor junction box.
- Remove drive guard (1) from head assembly (30) by removing 4 screws (2, 3, & 4).
- Remove drive belts (5).
- The drive motor (25) can be removed from the head assembly by removing 4 screws (27, 28, & 29).

SPEED REDUCER & UPPER BEARING REMOVAL -

- Remove driven sheave (6) from shaft of speed reducer (10).
- To remove speed reducer from head assembly first remove hex nut (13 & 14), from end of torque arm (12).
- Remove Torque arm.
- Reducer can now be removed from shaft mounting by loosening set screws in reducer sleeve exposing upper bearing (21).
- The upper bearing can be lifted off the screw assembly by removing two set screws in the locking collar and 4 screws (22, 23, & 24).

SCREEN AND SCREW REMOVAL -

- After removing 4 screws (31, 32, & 33), from head assembly (30), lift head assembly, with screen (34) and screw assembly (41) attached, from the Hydra-Extractor[®] shell weldment (61).
- Remove the screw assembly from the screen assembly by pulling the screw assembly through the bottom opening of the screen, while turning bottom of screw counter-clockwise with a pipe wrench.
- After removing the screw assembly, remove two screws (38, 39, & 40) from the screen and slip the screen from the head assembly.

BOTTOM PIN REMOVAL -

- Remove eight hex head screws (50, 51, & 52).
- The bottom pin plate (47) with bottom pin (45) attached can now be removed.
- Remove screw (48, & 49). The bottom pin can now be separated from the bottom pin plate.

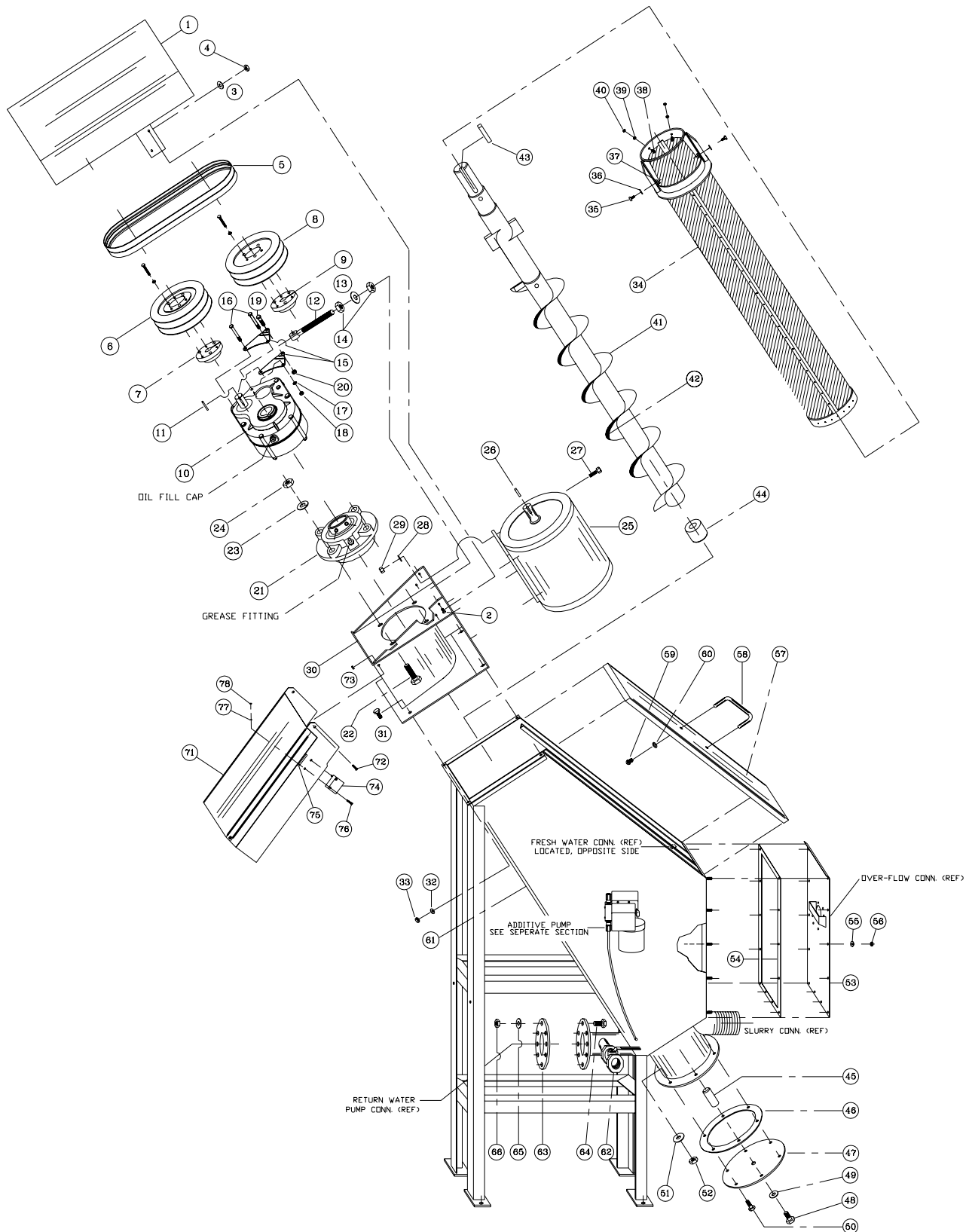


FIGURE 2. HYDRA-EXTRACTOR® MODEL HE-9S, EXPLODED VIEW

**FIG. &
INDEX NO.
REQ.**

DESCRIPTION

2-	<i>HYDRA-EXTRACTOR®</i>, MODEL HE-9S
-1	Guard, Drive (83037) 1
	(ATTACHING PARTS)
-2	Screw, Hex Head, 5/16-18 X 1" Lg., Cad Pl. 4
-3	Washer, Lock, 5/16" Split Type, Cad Pl. 4
-4	Nut, Hex, 5/16-18, Cad Pl. 4
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-5	Drive Belt (14060) 2*
-6	Sheave, Driven (55980) 1
-7	Bushing, Driven (18050) 1
-8	Sheave, Drive (55985) 1
-9	Bushing, Drive (18050) 1
-10	Speed Reducer (51700-1) 1
-11	Key, Woodruff, 1/4" X 1/4" X 1-5/16" Lg. 1
-12	Torque Arm 1
-13	Washer, Flat, 5/8", Cad Pl. 1
-14	Nut, Hex, 5/8-11, Cad Pl. 2
-15	Torque Arm Mounting Plate 2
	(ATTACHING PARTS)
-16	Bolt, Hex Head, 3/8"-16 X 4-1/4" Lg. 2
-17	Washer, Locking, Split Type, 3/8" ID, Cad Pl. 2
-18	Nut, Hex Head, 3/8"-16, Cad Pl. 2
-19	Bolt, Hex Head, 3/8"-16 X 2" Lg. 1

- 20 Nut, Hex Head, Lock, 3/8"-16, Cad Pl.
1
 ---*---
- 21 Bearing, Flex Block, Flanged Type (13650)
1
 (ATTACHING PARTS)
- 22 Screw, Machine, Hex Head, 1/2-13 X 1-1/2" Lg.
4
- 23 Washer, Flat, 3/8" ID, Split Type
4
- 24 Nut, Hex Head, 1/2-13
4
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- 25 Drive Motor (41688)
1
 (ATTACHING PARTS)
- 26 Key, Woodruff, 1/2" X 3/8" X 2-1/2" Lg.
1
- 27 Screw, Hex Head, 3/8-16 X 1-1/4" Lg., Cad Pl.
4
- 28 Washer, Lock, 3/8" ID, Split Type, Cad Pl.
4
- 29 Nut, Hex, 3/8-16, Cad Pl.
4
 ---*---
- 30 Head Assembly (89350)
1
 (ATTACHING PARTS)
- 31 Screw, Hex Head, 3/8-16 X 1" Lg.
4
- 32 Washer, Flat, 3/8" ID
4
- 33 Nut, Hex, 3/8-16
4
 ---*---

**FIG. &
INDEX NO.**

**DESCRIPTION
REQ.**

-34	Screen Assembly (86570) 1*
	(ATTACHING PARTS)
-35	Screw, Hex Head, 1/2-13 X 1-1/4" Lg. 2
-36	Washer, Lock, 1/2" ID, Split Type, Cad Pl. 2
-37	Nut, Hex, 1/2-13 2
-38	Screw, Button Head, 3/8-16 X 1" Lg. 2
-39	Washer, Lock, 3/8" ID 2
-40	Nut, Hex, 3/8-16 2
	---*---
-41	Screw Assembly (86720) 1*
-42	Brush, Helicoid Flight, 4-1/2 Rev (16010-0) 1
-43	Key, Woodruff, 1/2" X 1/4" X 4-1/2" Lg. 1
-44	Bushing, Screw Shaft (81400) 1*
-45	Pin, Bottom (81050) 1
-46	Gasket, Bottom Plate (82790) 1
-47	Plate, Bottom (81045) 1
	(ATTACHING PARTS)
-48	Screw, Hex Head, Machine, 1/2-13 X 1" Lg., Cad Pl. 1
-49	Washer, Flat, 1/2" ID, Cad Pl. 1
-50	Screw, Hex Head, 3/8-16 X 1-1/4" Lg., Cad Pl. 8
-51	Washer, Lock, 3/8" ID, Split Type, Cad Pl. 8
-52	Nut, Hex, 3/8-16, Cad Pl. 8

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- 53 Over-Flow Box Mounting Assembly Plate
1
(ATTACHING PARTS)
- 54 Tape, Sealing, Prestite #155, 1/16" X 1" X 63" Lg.
1
- 55 Washer, Lock, 3/8" ID, Split, Cad Pl.
12
- 56 Nut, Hex, 3/8"-16, Cad Pl.
12
---*---
- 57 Cover, Access (84750)
1
- 58 Handle, Aluminum (35220)
1
(ATTACHING PARTS)
- 59 Screw, Round Head, #10-32 X 1/2" Lg., S/S
2
- 60 Washer, Lock, #10 Split Type, S/S
2
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- 61 Shell Weldment (89350)
1
- 62 Drive Valve, 2" NPT, Manual (64840)
1
- 63 Gasket, Rubber, Flange
1
(ATTACHING PARTS)
- 64 Screw, Hex Head, 5/8-13 X 1-1/4 Lg., Cad Pl.
8
- 65 Washer, Lock, Split Type, 5/8" ID
8
- 66 Nut, Hex, 5/8-13, Cad Pl.
8
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FIG. & INDEX NO.	DESCRIPTION REQ.
-71	Discharge Chute, S/S 1 (ATTACHING PARTS)
-72	Screw, Round Head, 10-32 X 3/4" Lg., S/S 2
-73	Nut, Hex Head, 10-32, S/S, Elastic Stop 2 ---*---
-74	Magnetic Switch (54999-1) 1*
-75	High Energy Magnet (55007) 1* (ATTACHING PARTS)
-76	Screw, Round Head, 6-32 X 2-1/4" Lg., Cad Pl. 2
-77	Washer, Flat #6, S/S 2
-78	Nut, Hex Head, 6-32, S/S, Elastic Stop 2
	* Recommended Spare Parts. S/S - Stainless Steel

& ITEM NO'S.	DESCRIPTION REQ.
3-	<i>PIPING COMPONENTS FOR HE-9S HYDRA-EXTRACTOR</i>
	<i>HE-9S HOT FRESH WATER ASSEMBLY</i>
-1	Gate Valve, 3/4" (64804) 1
-2	Backflow Preventor 3/4" (11311) 1*
-3	Shock Arrestor, 3/4" (11300) 1
-4	Solenoid Valve, 3/4" (64715-2) 1*
	<i>HE-9S RETURN WATER ASSEMBLY</i>
-5	Check Valve, 3" (64890) 1

- 6 Flex Connector, 3" (22238)
1
- 7 Motor Operated Valve, 1-1/2" (64735-4)
1
- 8 Gate Valve, 1-1/2 (64825)
1