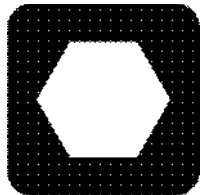


FM13

Parts Manual



Ditch Witch®


FM13

ISSUE NO. 02PL-06/11

For Replacement Copy Order **P/N 053-2252**

This manual contains information concerning the following models:
FM13

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ID0258803

FOREWORD

This manual contains illustrated parts lists to help you select quality ProTech[®] Replacement parts for your Ditch Witch[®] equipment. Using other replacement parts will lessen the productivity of your equipment.

- ◆ Part numbers enclosed in a box are no longer available from The Charles Machine Works, Inc. Your local Ditch Witch dealer may be able to locate the part for you.
- ◆ Footnotes provide more information to help you identify parts shown in the manual.
- ◆ Assembly instructions and Tech Bits articles referenced in footnotes are available through your local Ditch Witch dealer.
- ◆ Description and specifications in this book were current at publication. However, The Charles Machine Works, Inc. reserves the right to improve equipment, so this manual might not reflect the most current improvements.
- ◆ Instructions on recommended equipment use and maintenance are in the Operator's Manual that was shipped with your equipment.

Keep the following in mind when ordering ProTech replacement parts:

- ◆ Specify parts you need by part number and description, not by illustration reference numbers.
- ◆ Have equipment model and serial number on hand to help ensure you get the right parts for your machine whether it's old or new.

Thank you for buying and using Ditch Witch equipment and ProTech replacement parts.

WARRANTY

DW WARRANTY Policy
July, 2005

POLICY 1: DITCH WITCH® EQUIPMENT AND REPLACEMENT PARTS LIMITED WARRANTY POLICY

Subject to the limitation and exclusions herein, free replacement parts will be provided at any authorized Ditch Witch dealership for any Ditch Witch equipment or parts manufactured by The Charles Machine Works, Inc. (CMW) that fail due to a defect in material or workmanship within one (1) year of first commercial use (Exception: 2 years for all SK500 Attachments). Free labor will be provided at any authorized Ditch Witch dealership for installation of parts under this warranty during the first year following "initial commercial" use of the serial numbered Ditch Witch equipment on which it is installed. The customer is responsible for transporting their equipment to an authorized Ditch Witch dealership for all warranty work.

EXCLUSIONS FROM PRODUCT WARRANTY

- All incidental or consequential damages.
- All defects, damages, or injuries caused by misuse, abuse, improper installation, alteration, neglect, or uses other than those for which products were intended.
- All defects, damages, or injuries caused by improper training, operation, or servicing of products in a manner inconsistent with manufacturer's recommendations.
- All engines and engine accessories (these are covered by original manufacturer's warranty).
- Tires, belts, and other parts which are subject to another manufacturer's warranty. (Such warranty will be available to purchaser.)
- ALL IMPLIED WARRANTIES NOT EXPRESSLY STATED HEREIN, INCLUDING ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY.

IF THE PRODUCTS ARE PURCHASED FOR COMMERCIAL PURPOSES, AS DEFINED BY THE UNIFORM COMMERCIAL CODE, THEN THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE FACE HEREOF AND THERE ARE NO IMPLIED WARRANTIES OF ANY KIND WHICH EXTEND TO A COMMERCIAL BUYER. ALL OTHER PROVISIONS OF THIS LIMITED WARRANTY APPLY INCLUDING THE DUTIES IMPOSED.

Ditch Witch products have been tested to deliver acceptable performance in most conditions. This does not imply they will deliver acceptable performance in all conditions. Therefore, to assure suitability, products should be operated under anticipated working conditions prior to purchase.

Defects will be determined by an inspection within thirty (30) days of the date of failure of the product or part by CMW or its authorized dealer. CMW will provide the location of its inspection facilities or its nearest authorized dealer upon inquiry. CMW reserves the right to supply remanufactured replacement parts under this warranty as it deems appropriate.

Extended warranties are available upon request from your local Ditch Witch dealer or CMW.

Some states do not allow exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply. Further, some states do not allow exclusion of or limitation of how long an implied warranty lasts, so the above limitation may not apply. This limited warranty gives product owner specific legal rights and the product owner may also have other rights which vary from state to state.

For information regarding this limited warranty, contact CMW's Product Support Department, P.O. Box 66, Perry, OK 73077-0066, or contact your local Ditch Witch dealer.

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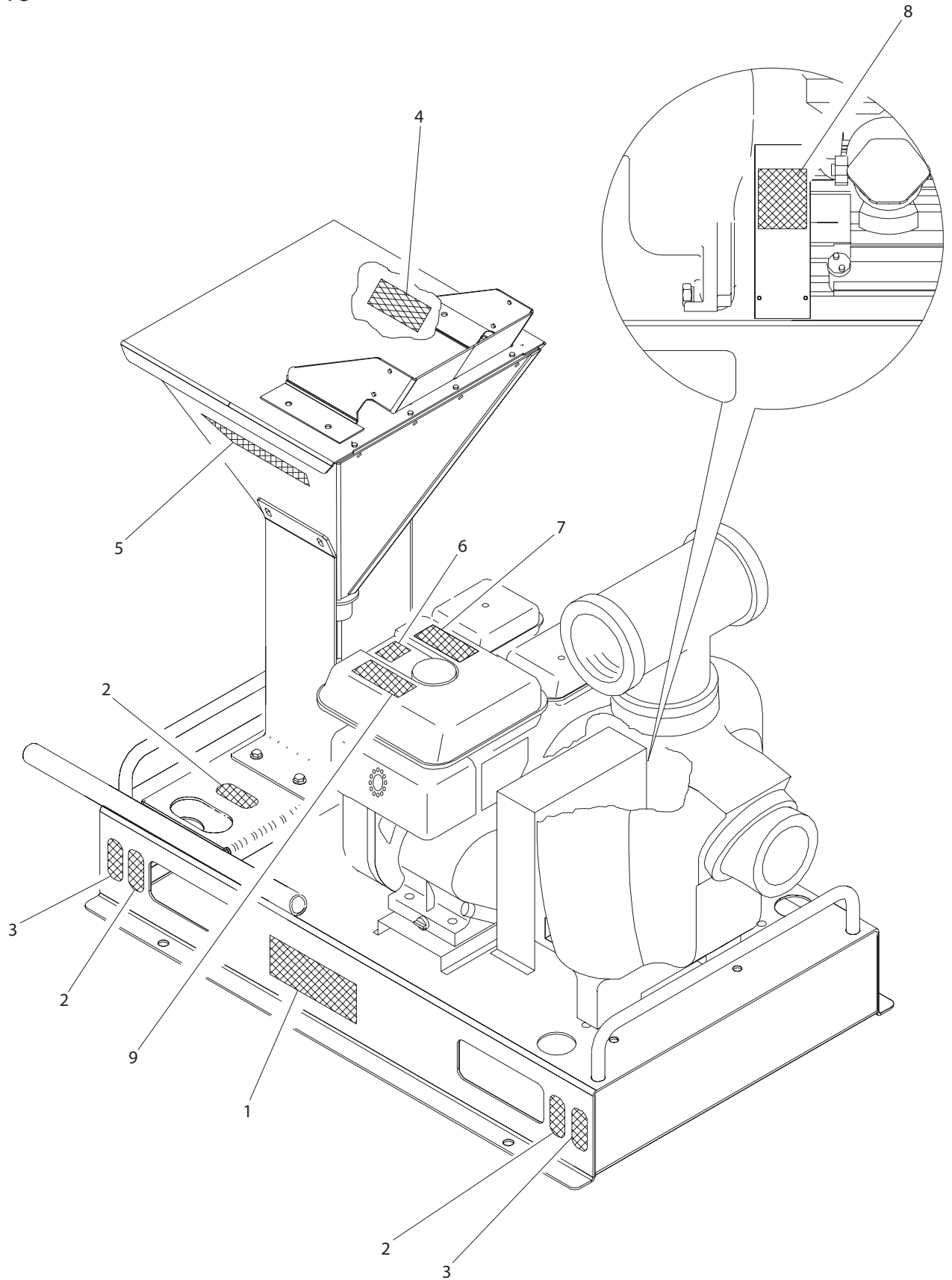
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FM13

FLUID MIXER

DECAL LOCATION FM13



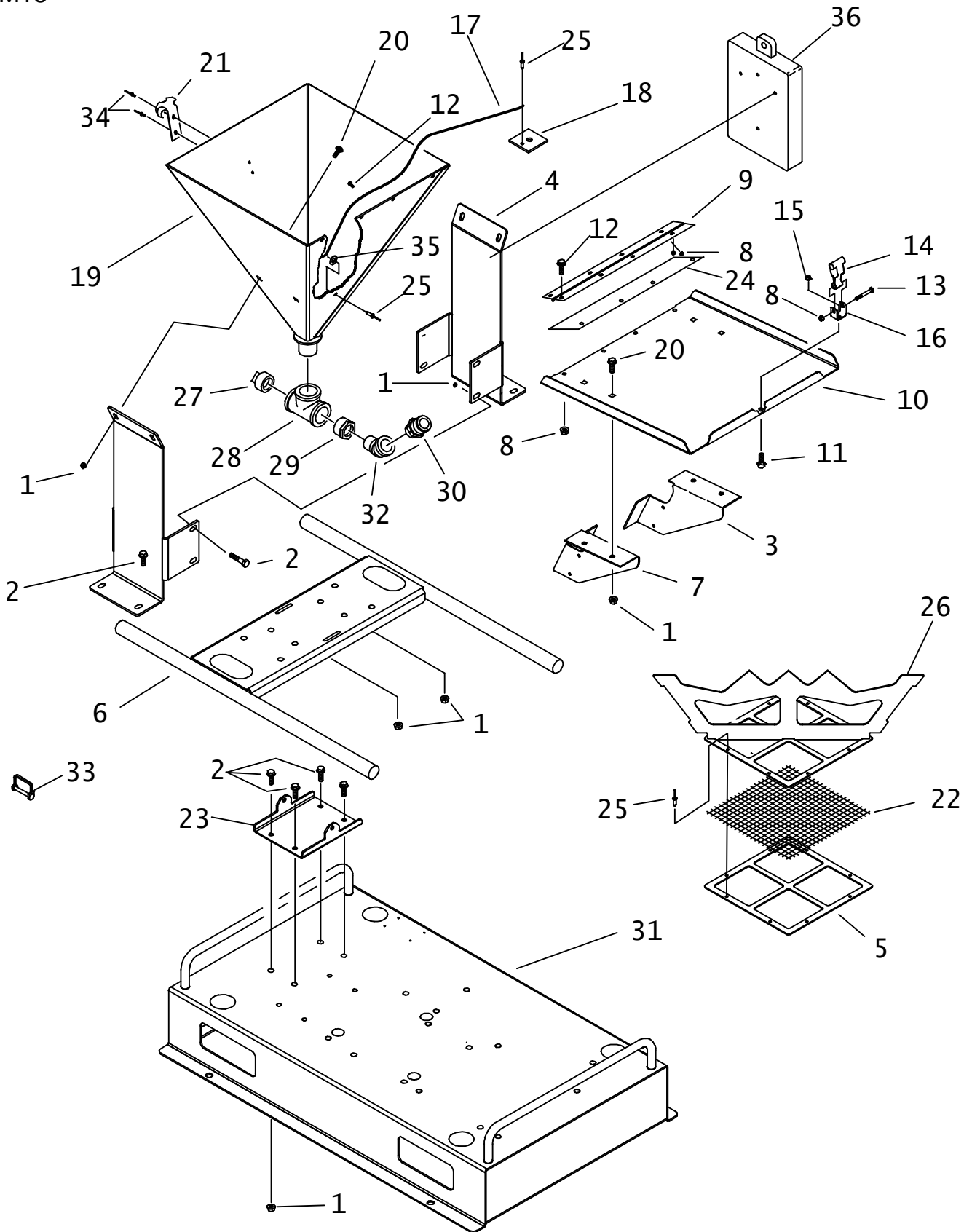
DECAL LOCATION

FM13

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	275-870		DECAL KIT - FMI3	
1	274-049	2	DANGER ELECTROCUTION	
2	274-318	6	TIE DOWN LOCATION	
3	274-442	4	LIFT LOCATION	
4	274-813	1	IMPORTANT METERING PLATE	
5	273-191	2	FMI3 MODEL IDENTIFIER	
6	273-173	1	FUEL TANK GASOLINE	
7	275-355	1	CAUTION HOT PARTS	
8	273-232	1	NOTICE LUBE FITTING	
9	275-419	1	WARNING NO FLAME	

FOOTNOTES

HOPPER MOUNT FM13



HOPPER MOUNT

FM13

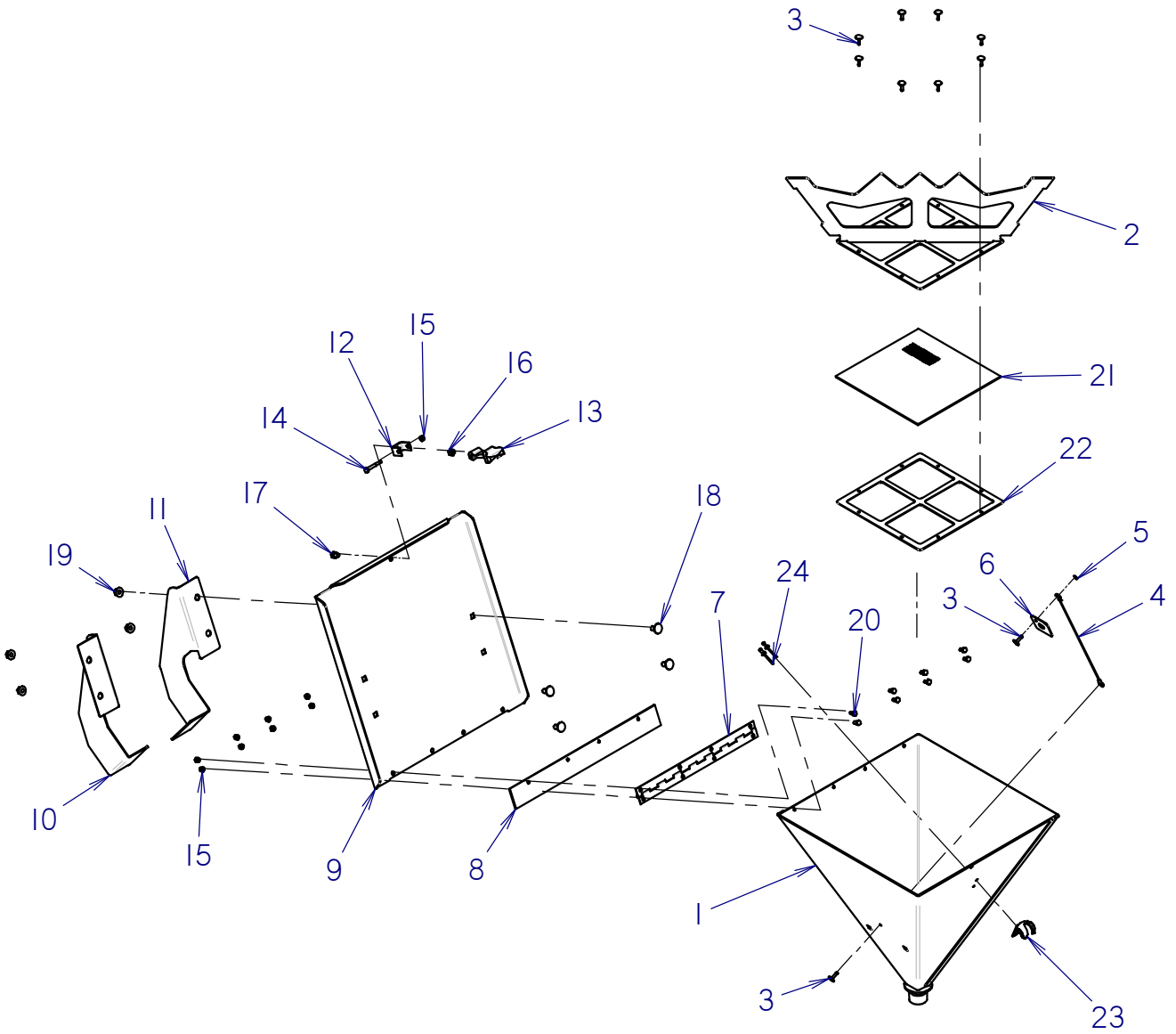
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	106-387	16	FLG LOCKNUT (M10-1.50)	
2.	106-382	12	FLG LK SCREW (M10-1.50 X 20mm)	
3.	310-567	1	LEFT BRACKET	
4.	309-973	2	HOPPER SUPPORT BRACKET	
5.	309-355	2	SCREEN FRAME	
6.	346-620	1	HOPPER STAND	
7.	310-566	1	RIGHT BRACKET	
8.	106-538	9	LOCKNUT (M6-1.00, PRV TRQ, 10.9)	
9.	110-430	1	HINGE (14-5/8")	
10.	309-090	1	COVER	
11.	107-519	1	SCREW (M8-1.25 X 12mm)	
12.	106-234	8	SCREW (M6-1.00 X 12mm)	
13.	106-093	1	SCREW (M6-1.00 X 45 mm)	
14.	110-222	1	HOOD LATCH	
15.	106-561	1	LOCKNUT (M8-1.25, PRV TRQ, 10.9)	
16.	110-224	1	ANCHOR BRACKET	
17.	110-239	1	LANYARD CABLE (13.5")	
18.	309-914	1	METER PLATE	
19.	309-293	1	HOPPER	
20.	107-700	8	CARRIAGE BOLT (M10-1.50X20mm)	
21.	110-223	1	LATCH BRACKET	
22.	305-621	1	SCREEN	
23.	346-618	1	BASE	
24.	117-597	1	WEATHER FLAP	
25.	110-348	6	POP RIVET (3/16" X .664")	
26.	310-210	1	BAG CUTTER	
27.	153-326	1	PLUG (20N, PLAS, .250 ORIFICE)	
28.	115-264	1	PIPE TEE	
29.	115-236	1	REDUCER (20N-16NF)	
30.	155-232	1	FHC ADAPTER (16-16N)	
31.	313-744	1	BASE ASSEMBLY	
32.	114-007	1	STREET ELBOW (16N-16NF45)	
33.	110-368	2	SNAPPER PIN (3/8" X 1 1/2")	
34.	110-253	2	POP RIVET (3/16" X 1/2")	
35.	106-205	1	WASHER (.191")	
36.	250-622	1	MANUAL COMPARTMENT	

FOOTNOTES

NOTE:

HOPPER

FM5, FM13, FM13V, & FM25



HOPPER

FM5, FM13, FM13V, & FM25

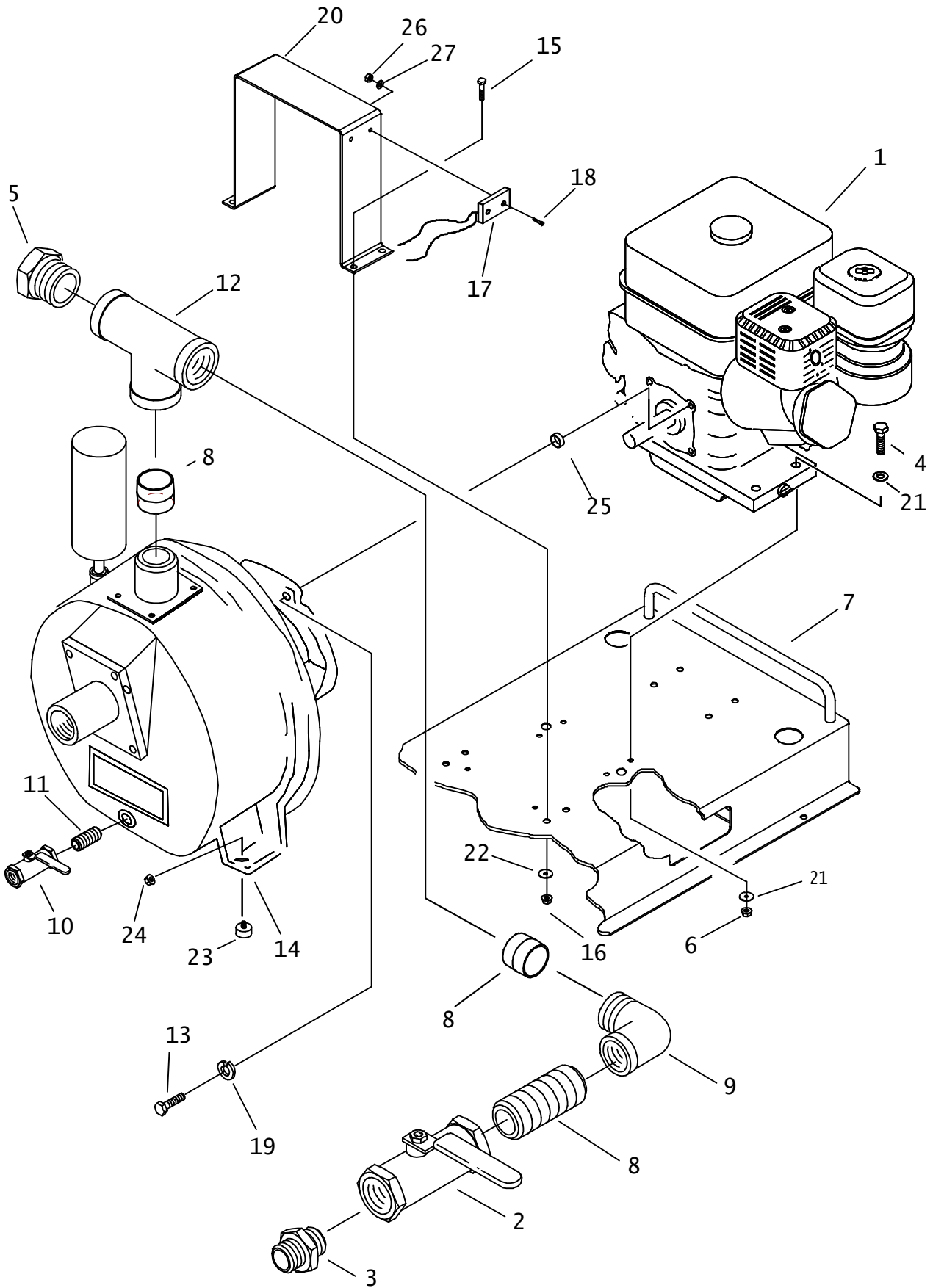
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	309-293	1	HOPPER WELDMENT	
2	310-210	1	BAG CUTTER	
3	110-348	10	POP RIVET (3/16" X .664")	
4	110-239	1	LANYARD CABLE (13.5")	
5	106-205	1	WASHER (1.91")	
6	309-914	1	METER PLATE	
7	110-430	1	HINGE (1.4-5/8")	
8	117-597	1	WEATHER FLAP	
9	309-090	1	COVER	
10	310-567	1	LEFT BRACKET	
11	310-566	1	RIGHT BRACKET	
12	110-224	1	ANCHOR BRACKET	
13	110-222	1	HOOD LATCH	
14	106-093	1	SCREW (M6-1.00 X 45MM)	
15	106-538	9	LOCKNUT (M6-1.00,PRV TRQ,10.9)	
16	106-561	1	LOCKNUT (M8-1.25,PRV TRQ,10.9)	
17	107-519	1	SCREW (M8-1.25 X 12MM)	
18	107-700	4	CARRIAGE BOLT (M10-1.50X20MM)	
19	106-387	4	FLG LOCKNUT (M10-1.50)	
20	106-234	8	SCREW (M6-1.00 X 12MM)	
21	305-621	1	SCREEN	
22	309-355	1	SCREEN FRAME	
23	110-223	1	LATCH BRACKET	
24	110-253	2	POP RIVET (3/16" X 1/2")	

NOT SHOWN:

FOOTNOTES:

NOTE:

ENGINE & PUMP MOUNT FM13



ENGINE & PUMP MOUNT FM13

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	195-278	1	ENGINE (13.0 HP HONDA ROPE)	
	195-159	1	AIR FILTER ELEMENT ASSEMBLY	
	195-190	1	STARTER, RECOIL	
	195-162	1	MUFFLER	
	165-756	1	MUFFLER GASKET (GX340QA)	
	195-160	1	FUEL TANK	
	217-758	1	LOW OIL PRESSURE SWITCH	
	195-161	1	FUEL TANK CAP	
	195-186	1	CARBURETOR (GX340QA)	
	195-283	1	HEAT SHIELD (GX340KIQAP) & (DW9)	
2.	120-060	1	SHUT-OFF (48NF-48NF)	
3.	155-263	1	FHC ADAPTER (56-48N)	
4.	105-996	4	SCREW (M10-1.50 X 45MM)	
5.	156-939	1	PLUG (48N)	
6.	105-894	4	LOCKNUT (M10-1.50, PRV TRQ, 10.9)	
7.	313-744	1	BASE ASSEMBLY	
8.	115-299	3	NIPPLE (48N-3")	
9.	154-487	1	ELBOW (48NF-48NF90)	
10.	120-018	1	SHUT OFF (12NF)	
11.	115-104	1	NIPPLE (12N-1-1/2")	
12.	154-485	1	TEE (48NF-48NF-48NF)	
13.	105-156	4	BOLT (3/8-NC X 1-1/2")	
14.	149-979	1	CENTRIFUGAL PUMP	
15.	106-083	4	SCREW (M8-1.25 X 20MM)	
16.	106-561	4	LOCKNUT (M8-1.25, PRV TRQ, 10.9)	
17.	214-519	1	TACHOMETER	
18.	106-273	2	SCREW (#6-32 X 5/8" FLT BRASS)	
19.	105-072	4	LOCK WASHER (3/8")	
20.	309-919	1	COUPLER COVER	
21.	106-390	8	WASHER (M10)	
22.	106-389	4	WASHER (M8)	
23.	116-525	2	BUMPER	
24.	105-003	2	FLG LOCKNUT (5/16-NC)	
25.	178-800	4	MACHINERY BUSHING (3/8")	SEE NOTE 1
26.	105-215	2	NUT (#6-32)	
27.	195-418	2	LOCKWASHER (#10)	

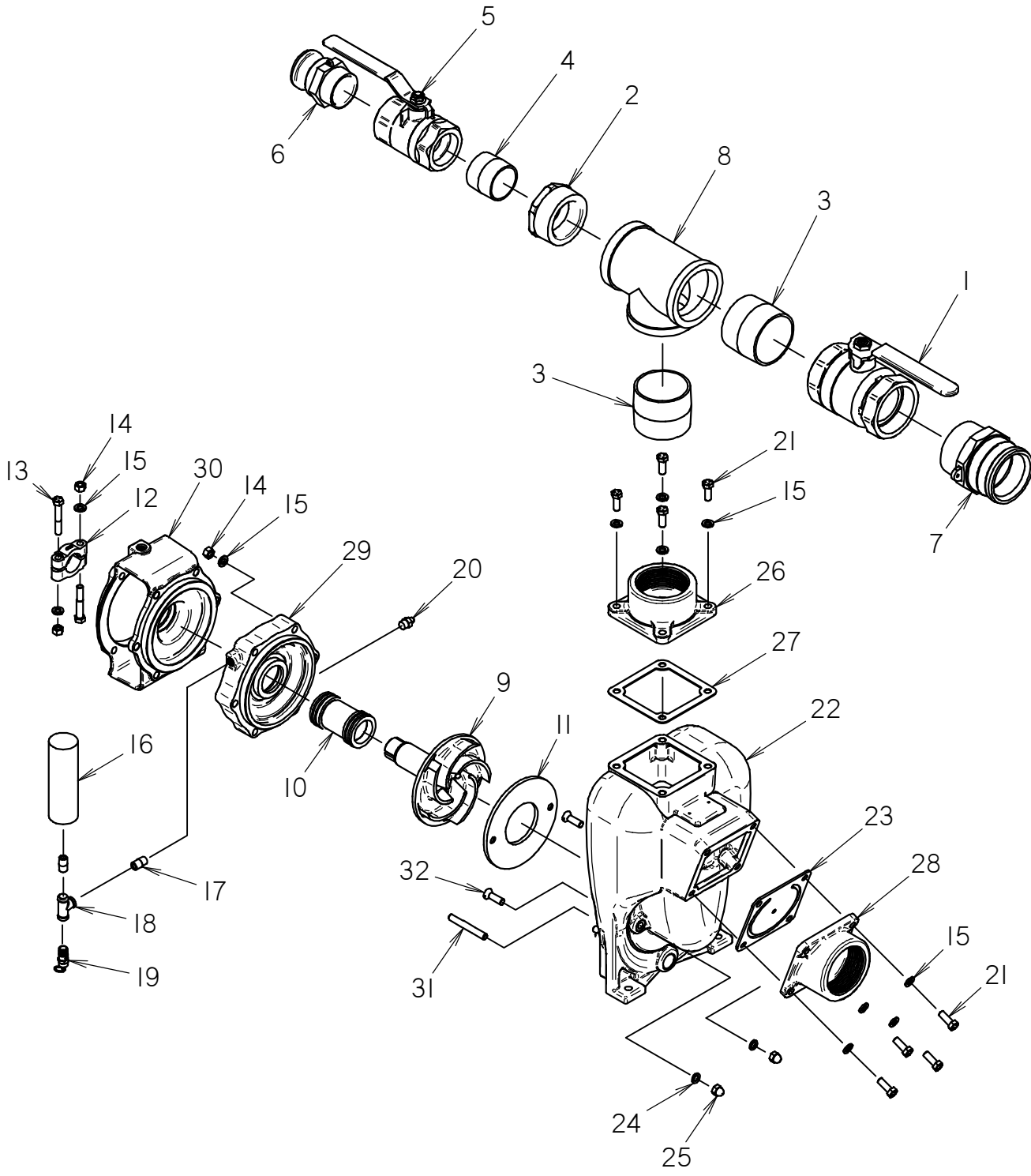
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FOOTNOTES:

NOTE:

- STARTS WITH S/N 2V0259, ENDS WITH S/N 2V0537

CENTRIFUGAL PUMP FM13



CENTRIFGAL PUMP FM13

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	149-979		CENTRIFGAL PUMP	INCLUDES REF NO:S 9-32
1	120-060	1	SHUT-OFF (48NF-48NF)	SEE FOOTNOTE 2
2	155-265	1	REDUCER (48N-32NF)	SEE FOOTNOTE 1
3	115-299	2	NIPPLE (48N-3")	SEE FOOTNOTE 2
4	115-295	1	ALL THREAD (32N-2")	SEE FOOTNOTE 1
5	120-059	1	SHUT-OFF (32NF-32NF)	SEE FOOTNOTE 1
6	159-181	1	FHC ADAPTER (40-32N)	SEE FOOTNOTE 1
7	155-263	1	FHC ADAPTER (56-48N)	SEE FOOTNOTE 2
8	154-485	1	TEE (48NF-48NF-48NF)	
9	310-746	1	IMPELLER (5.5")	
10	191-110	1	SEAL KIT	INCLUDES SEAL, HOUSING GASKETS, AND SHIM
11	310-745	1	WEAR PLATE	
12	310-742	2	SHAFT CLAMP	INCLUDES REF #S 13-15
13	105-162	2	BOLT (3/8-NC X 2-1/4")	TORQUE TO 25 FT/LB ALTERNATING
14	105-053	8	NUT (3/8 NC) HEX	TORQUE TO 25 FT/LB ALTERNATING
15	105-072	16	LOCK WASHER (3/8")	
16	364-555	1	GREASE RESERVOIR	
17	115-129	2	ALL THREAD (04N) SCH 80	
18	115-130	1	TEE (04NF-04NF-04NF)	
19	153-423	1	RELIEF VALVE	125 PSI
20	115-012	1	ZERK (04N)	
21	106-136	8	BOLT (3/8-NC X 1")	
22	164-022	1	PUMP CASE	
23	117-506	1	FLAPPER	
24	153-558	2	ANNULAR GASKET	
25	107-730	2	ACORN NUT (3/8-NC)	
26	499-396	1	DISCHARGE FLANGE	
27	153-802	1	GASKET	
28	499-395	1	INLET FLANGE	
29	164-024	1	IMPELLER HOUSING	
30	500-2010	1	ENGINE ADAPTER	
31	107-749	6	3/8-16 THREADED STUD	
32	107-750	2	BOLT (3/8-NC x 1.25", CSK SLT)	

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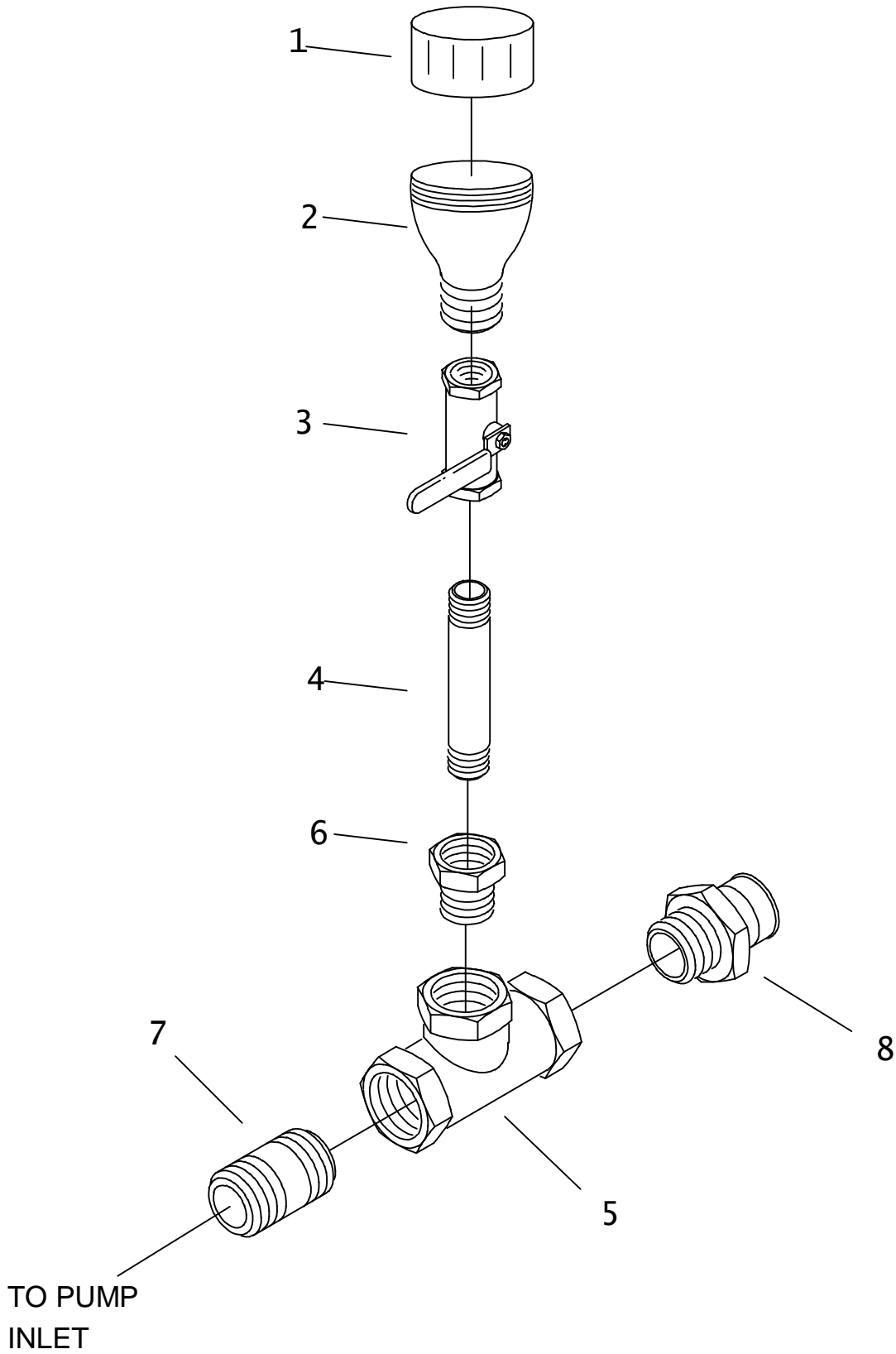
255-1018 AR PUMP SEAL GREASE

FOOTNOTES:

- PARTS INCLUDED IN 100-068 (2" HOSE ADAPTER KIT)
- QTY OF ONE EACH ALSO INCLUDED IN 100-067, (3" HOSE ADAPTER KIT)

NOTE:

POLYMER INDUCTION SYSTEM



POLYMER INDUCTION SYSTEM

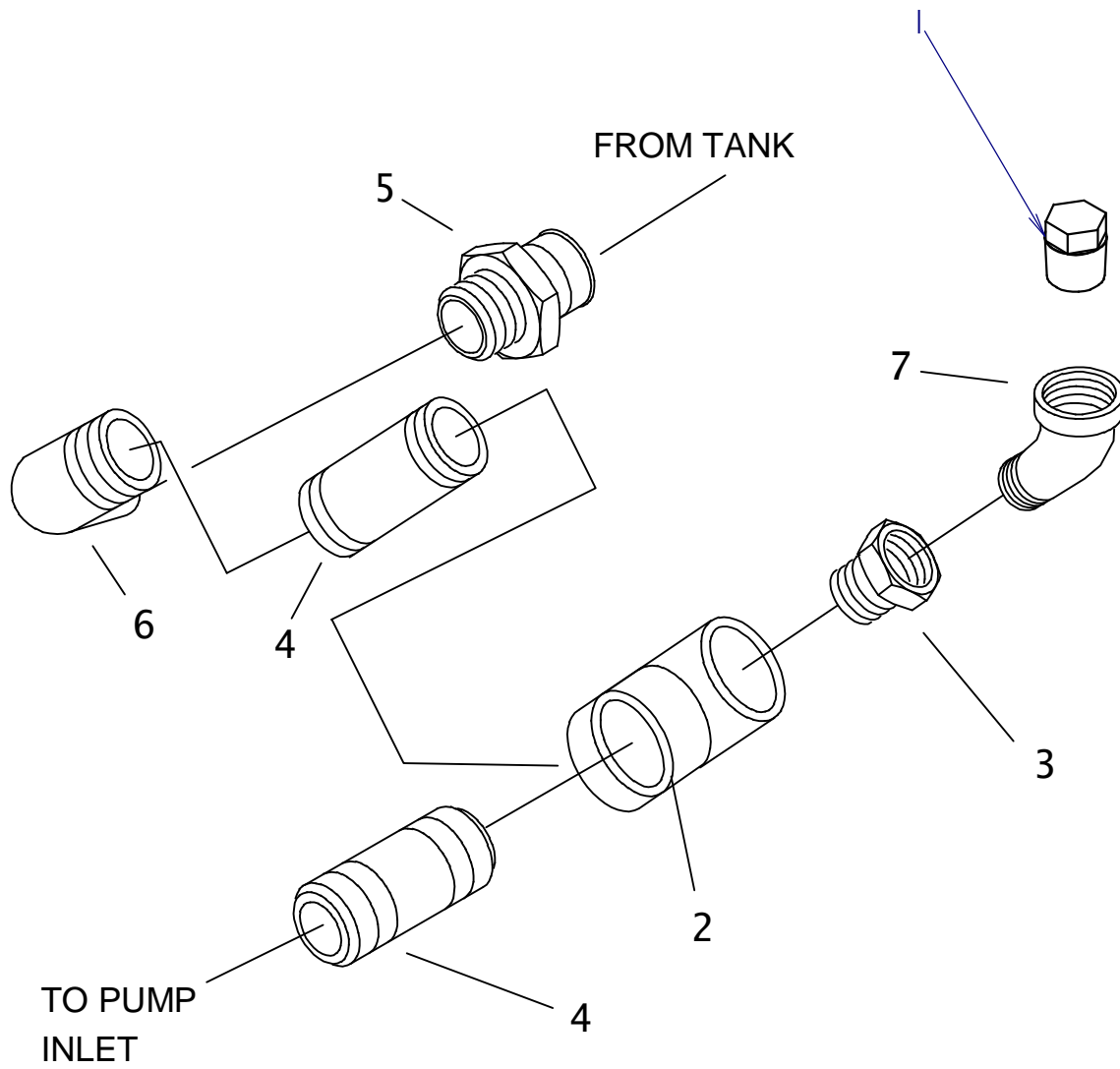
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	105-768	1	PLASTIC CAP (64N)	
2.	153-646	1	SWAGE NIPPLE (64N-16N)	
3.	120-067	1	SHUT-OFF (16NF-16NF)	
4.	115-206	1	NIPPLE (16N-2.5")	
5.	154-485	1	TEE (48NF-48NF-48NF)	
6.	153-335	1	REDUCER BUSHING (48N-16NF)	
7.	115-299	1	NIPPLE (48N-3")	
8.	155-263	1	FHC ADAPTER (56-48N)	

NOT SHOWN:

FOOTNOTES:

NOTE:

POLYMER INDUCTION SYSTEM



POLYMER INDUCTION SYSTEM

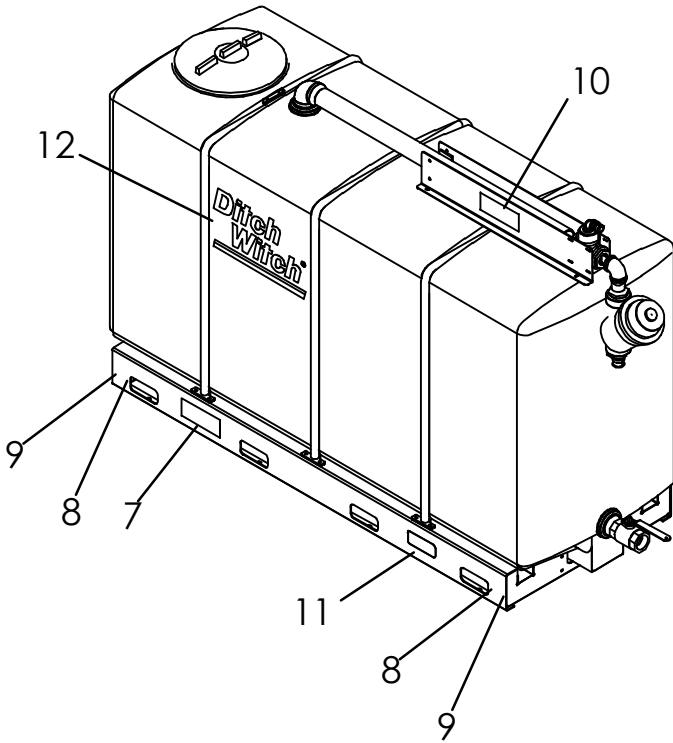
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	115-110	1	PLUG (16N, SQ)	
2.	154-485	1	TEE (48NF-48NF-48NF)	
3.	153-335	1	REDUCER BUSHING (48N-16NF)	
4.	115-299	2	NIPPLE (48N-3")	
5.	155-263	1	FHC ADAPTER (56-48N)	
6.	154-487	1	ELBOW (48NF-48NF90)	
7.	114-007	1	ST ELBOW (16N-16NF45)	

FOOTNOTES

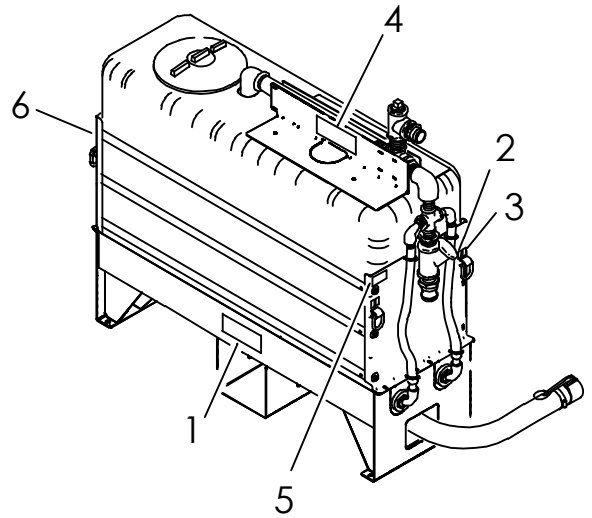
NOTE:

DECAL LOCATION (TANKS) FM13

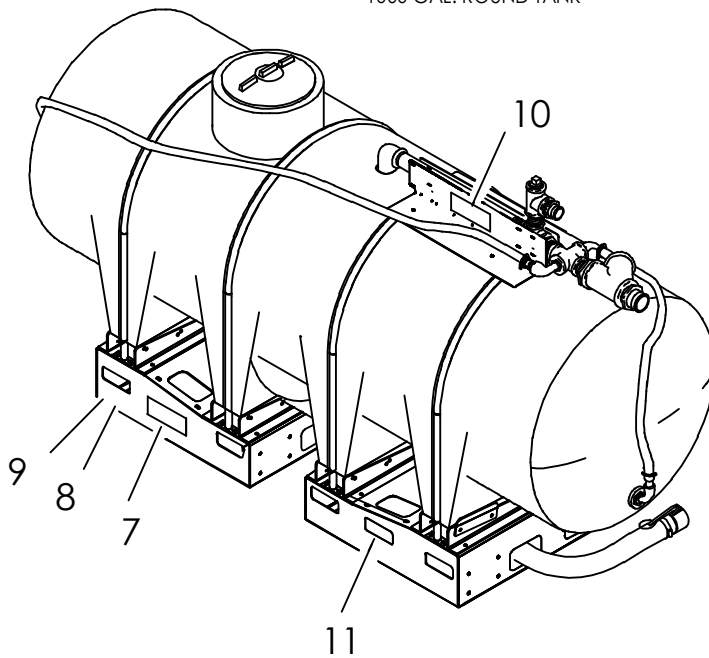
1000 GAL. RECT. TANK



500 GAL TANK



1000 GAL. ROUND TANK



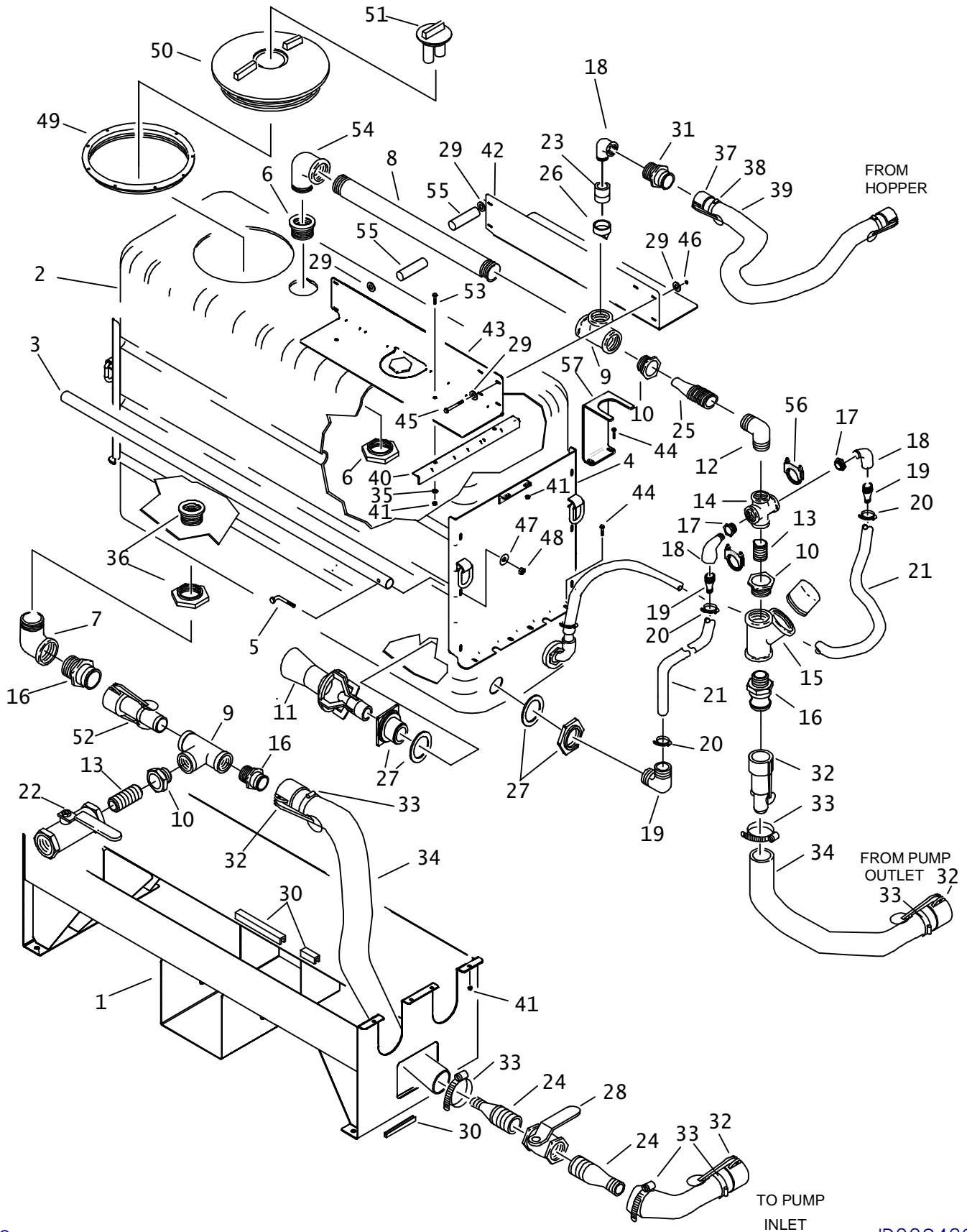
DECAL LOCATION (TANKS) FM13

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	275-856	1	DECAL KIT- FM13 500 G. TANK	
1.	274-049	2	DANGER ELECTROCUTION	
2.	274-318	4	TIE DOWN LOCATION	
3.	274-442	4	LIFT LOCATION	
4.	273-043	2	FM13 TANK DECAL	
5.	274-817	2	NOTICE, DO NOT LIFT	
6.	275-307	1	DITCH WITCH EMBLEM	
	275-857	1	DECAL KIT- FM13 1000 GAL. TANK	
7.	274-049	2	DANGER ELECTROCUTION	
8.	274-318	4	TIE DOWN LOCATION	
9.	274-442	4	LIFT LOCATION	
10.	273-043	2	FM13 TANK DECAL	
11.	274-817	2	NOTICE, DO NOT LIFT	
12.	700-230	2	18" STACKED DITCH WITCH	

FOOTNOTES

NOTE:

500 GALLON TANK PLUMBING FM13



500 GALLON TANK PLUMBING FM13

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	346-536	1	TANK SADDLE (500 GAL)	
2.	356-923	1	STORAGE TANK (500.0 GAL)	INCL REF NO.'S 36, 49 THRU 51
	190-053		POLY-PATCH TANK REPAIR KIT	
3.	357-156	6	ROD	
4.	346-540	2	UPPER END PLATE	
5.	106-807	12	SCREW (M10-1.50 X 57.9MM, BENT)	
6.	155-262	1	CONNECTOR (48NF, NYL)	OBSOLETE
	153-549	1	BK CONNECTOR (48NF-48NF, NYL)	SEE FOOTNOTE 3
	357-271	1	O-RING (346 D70)	
7.	114-017	1	STREET ELBOW (48N-48NF90)	
8.	346-544	1	NIPPLE (48N- 36")	SEE FOOTNOTE 2
	318-517	1	DIFFUSER PIPE (SHORT)	SEE FOOTNOTE 2
9.	154-485	2	TEE (48NF-48NF-48NF)	
10.	155-265	3	REDUCER (48N-32NF)	
11.	369-810	2	MIXING JET (16N, ORF. 500", NY)	
12.	114-004	1	STREET ELBOW (32N-32NF90)	
13.	115-295	1	ALL THREAD (32N-2")	
14.	114-003	1	CROSS (32NF-32NF-32NF-32NF)	
15.	159-439	1	Y-STRAINER (48NF)	
	159-490		STRAINER (4" X 9")	
	165-895		O-RING (END CAP)	
16.	155-263	3	FHC ADAPTER (56-48N)	
17.	115-085	2	REDUCER (32N-16NF)	
18.	115-440	1	STREET ELBOW (16N-16NF90)	
19.	514-215	1	S/O COUPLER (16N-16H90)	
20.	110-353	4	WORM CLAMP (3/4" TO 1-1/2")	
21.	116-094	AR	BULK HOSE (1", SOLD PER 1")	USE 2 @ 46" EA
22.	514-308	1	SHUT OFF (32NF-32NF)	
23.	153-257	1	3" SPECIAL PIPE ADAPTER	
24.	514-168	2	S/O COUPLER (48N-48H)	
25.	346-021	1	VENTURI JET	SEE FOOTNOTE 2
	153-870	1	VENTURI JET	SEE FOOTNOTE 2
26.	194-761	1	DISCHARGE VALVE	
27.	149-562	2	BK CONNECTOR (16NF-16NFBK, NYL)	OBSOLETE
	157-490	2	BK CONNECTOR (16NF, POLY)	SEE FOOTNOTE 3
28.	120-060	1	SHUT-OFF (48NF-48NF)	SEE FOOTNOTE 1
29.	106-390	16	WASHER (M10)	
30.	115-704	AR	BULK EDGE 1/4", SOLD PER 1")	USE 1 @ 57"

NOT SHOWN:

FOOTNOTES:

- PARTS ARE INCLUDED IN SHIP KIT
- 346-544 & 346-021 MUST BE USED TOGETHER, AND 318-517 MUST BE USED WITH 153-870.
- HOLES MAY REQUIRE MODIFICATION FOR NEW FITTINGS.

NOTE:

500 GALLON TANK PLUMBING FM13

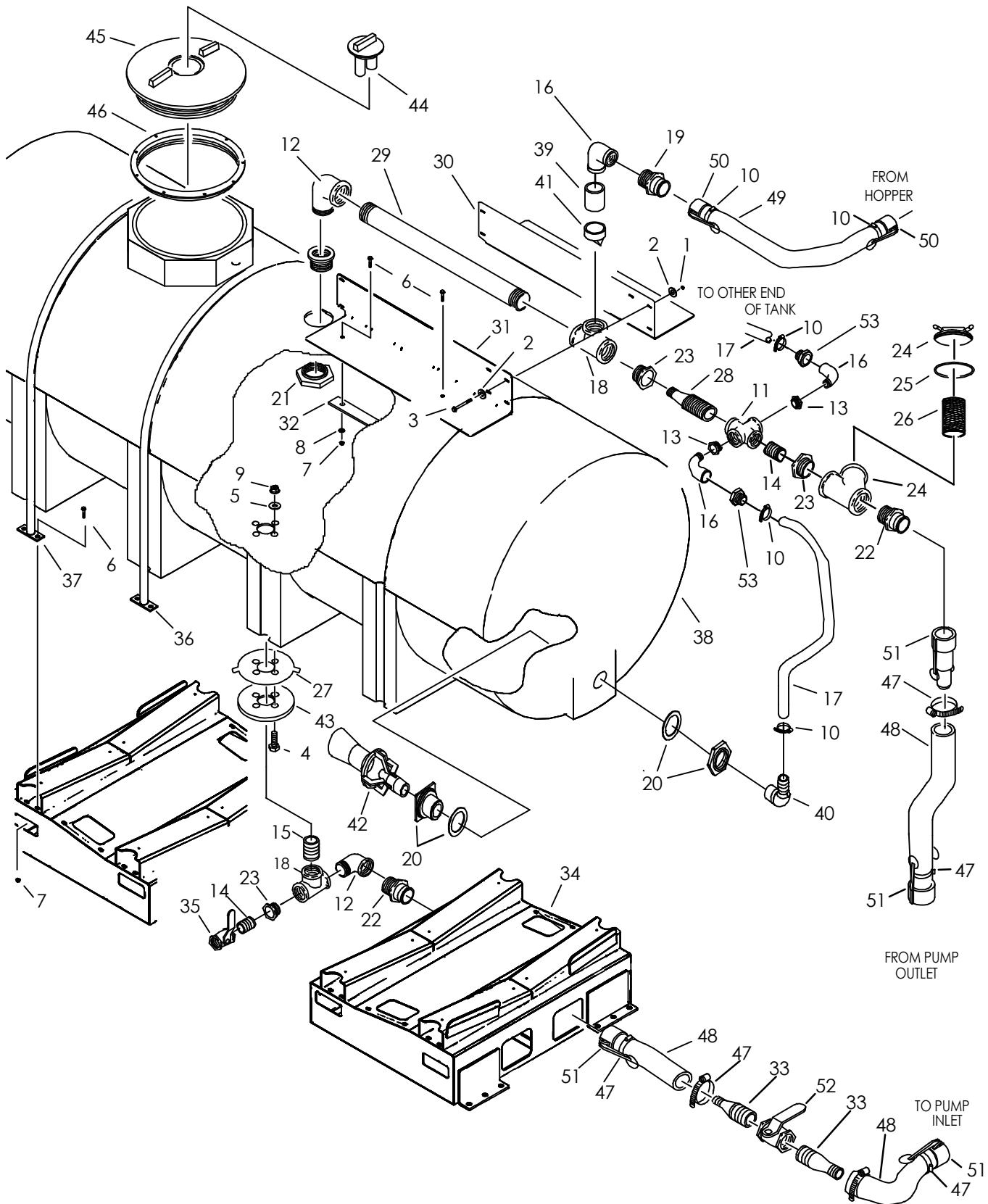
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
31.	155-232	1	FHC ADAPTER (16-16N)	
32.	155-264	4	FHC BODY (56-48H)	SEE FOOTNOTE 1
	116-736		SQUARE RING GASKET (48)	
33.	110-367	6	WORM CLAMP (3-1/4" TO 4-1/8")	SEE FOOTNOTE 1
34.	116-506	AR	BULK HOSE (3", SOLD PER FT)	USE 2@ 80" SEE FOOTNOTE 1
35.	105-884	4	WASHER (.531")	
36.	357-264	1	CONNECTOR (48NF-64H, NYL)	
37.	155-233	2	FHC BODY (16-16H)	SEE FOOTNOTE 1
	116-490		SQUARE RING (___ D70)	
38.	110-353	2	WORM CLAMP (3/4" TO 1-1/2")	SEE FOOTNOTE 1
39.	117-451	AR	1" SUCTION HOSE (SOLD PER FT.)	USE 1 @ 150"; SEE FOOTNOTE 1
40.	346-542	2	SUPPORT	
41.	106-685	14	LOCKNUT(M12-1.75,PRV TRQ,10.9)	
42.	346-534	1	VENTURI MOUNT (LH)	
43.	346-535	1	VENTURI MOUNT (RH)	
44.	106-806	12	FLG LK SCREW (M12-1.75 X 25MM)	
45.	107-420	6	SCREW (M10-1.5 X 140MM)	
46.	106-758	6	LOCKNUT (M10-1.5)	
47.	106-396	12	WASHER (M10, HARDENED)	
48.	105-894	12	LOCKNUT(M10-1.50,PRV TRQ,10.9)	
49.	357-261	1	FILLWELL (16")	
50.	364-434	1	TANK CAP (16", VENTED)	
51.	357-263	1	TANK CAP (4")	
52.	514-386	1	FHC BODY (3-1/2" FHC X 3"NPT)	
53.	106-632	4	FLG LK SCR (M12-1.75 X 35MM, SER)	
54.	514-210	1	ST ELBOW, POLY (48NM-48NF90)	
55.	178-858	2	3/8" SPACER BUSHING	
56.	196-010	2	U-BOLT CLAMP (3")	
57.	300-2878	1	Y-STRAINER MOUNT	

NOT SHOWN:

FOOTNOTES:

NOTE:

1000 GALLON TANK PLUMBING FM13



1000 GALLON TANK PLUMBING FM13

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	105-047	6	LOCKNUT (3/8-NC)	
2.	105-118	12	WASHER (3/8")	
3.	105-288	6	BOLT (3/8-NC X 5-1/2")	
4.	105-321	4	BOLT (3/4-NC X 3")	SEE FOOTNOTE 2
5.	105-384	8	WASHER (3/4")	SEE FOOTNOTE 2
6.	105-831	20	FLG LK BOLT (1/2-NC X 1-1/2")	
7.	105-833	16	FLG LOCKNUT (1/2-NC)	
8.	105-884	4	WASHER (.531")	
9.	105-953	4	LOCKNUT (3/4-NC)	SEE FOOTNOTE 2
10.	110-353		WORM CLAMP (3/4" TO 1-1/2")	QTY. OF 2 IN SHIP KIT
11.	114-003	1	CROSS (32NF-32NF-32NF-32NF)	
12.	114-017	2	STREET ELBOW (48N-48NF90)	
13.	115-085	2	REDUCER (32N-16NF)	
14.	115-295	2	ALL THREAD (32N-2")	
15.	115-300	1	NIPPLE (48N-4")	
16.	115-440	3	STREET ELBOW (16N-16NF90)	
17.	116-094	AR	BULK HOSE (1", SOLD PER 1")	USE 1@ 60" & 1@ 154"
18.	154-485	2	TEE (48NF-48NF-48NF)	
19.	155-232	1	FHC ADAPTER (16-16N)	
20.	149-562	2	BK CONN (16NF-16NFBK, NYL)	OBSOLETE
	157-490	2	BK CONNECTOR (16NF, POLY)	SEE FOOTNOTE 4
21.	155-262	1	CONN (48NF NYL)	OBSOLETE
	153-549	1	BK CONNECTOR (48NF-48NF, NYL)	SEE FOOTNOTE 4
	357-271	-	O-RING (346 D70)	
22.	155-263	2	FHC ADAPTER (56-48N)	
23.	155-265	3	REDUCER (48N-32NF)	
24.	159-439	1	Y-STRAINER (48NF)	INCL REF NO.'S 29 & 30
25.	165-895	1	O-RING (END CAP)	
26.	159-490	1	STRAINER (4" X 9")	
27.	165-878	1	GASKET	SEE FOOTNOTE 2

NOT SHOWN:

153-357	1	2" X 50' TRANSFER HOSE ASSY.
153-358	1	3" X 50' TRANSFER HOSE ASSY.
155-264	1	FHC BODY (56-48H)
153-341	1	FHC ADAPTER (56-48H)
110-367	2	WORM CLAMP (3.250" TO 4.125")

FOOTNOTES

- PARTS ARE IN SHIP KIT
- USE 3M BLACK WEATHERSTRIP ADHESIVE TO SEAL.
- HOLES MAY REQUIRE MODIFICATION FOR NEW FITTINGS.

NOTE:

1000 GALLON TANK PLUMBING FM13

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
28.	346-021	1	VENTURI JET	SEE FOOTNOTE 3
	153-870	1	VENTURI JET	SEE FOOTNOTE 3
29.	346-544	1	NIPPLE (48N-36")	SEE FOOTNOTE 3
	318-517	1	DIFFUSER PIPE (SHORT)	SEE FOOTNOTE 3
30.	346-566	1	VENTURI MOUNT (RH)	
31.	346-567	1	VENTURI MOUNT (LH)	
32.	346-570	2	MOUNT PLATE	
33.	514-168	2	S/O ADAPTER (48N-48H)	
34.	346-581	2	TANK BASE	
35.	514-308	1	SHUT OFF (32NF-32NF)	
36.	346-610	2	TANK STRAP (LONG)	
37.	346-611	2	TANK STRAP (SHORT)	
38.	364-497	1	STORAGE TANK (1000 GAL)	INCL REF NO.'S 52 - 54
39.	153-257	1	3" SPECIAL PIPE ADPT.	
40.	514-215	2	S/O COUPLER (16H-16H90)	
41.	194-761	1	DISCHARGE VALVE	
42.	369-810	2	MIXING JET (16N, ORF .500", NY)	
43.	514-384	1	FLANGE (48N) BANJO	SEE FOOTNOTE 2
44.	357-263	1	TANK CAP (4")	
45.	364-434	1	TANK CAP (16", VENTED)	
46.	357-261	1	FILLWELL (16")	
47.	110-367	6	WORM CLAMP (3-1/4" TO 4-1/8")	SEE FOOTNOTE 1
48.	116-506	AR	BULK HOSE (3", SOLD PER 1')	USE 1@ 80", 1@ 60", & 1@ 20" SEE FOOTNOTE 1
49.	117-451	AR	BULK HOSE (1", SUCTION)	USE 1@ 150" , SEE FOOTNOTE 1
50.	155-233	2	FHC BODY (16-16H)	SEE FOOTNOTE 1
	116-490		SQUARE RING (___ D70)	
51.	155-264	4	FHC BODY (56-48H)	SEE FOOTNOTE 1
	116-736		SQUARE RING GASKET (48)	
52.	120-060	1	SHUT-OFF (48NF-48NF)	SEE FOOTNOTE 1
53.	514-311	2	S/O COUPLER (16N-16H)	

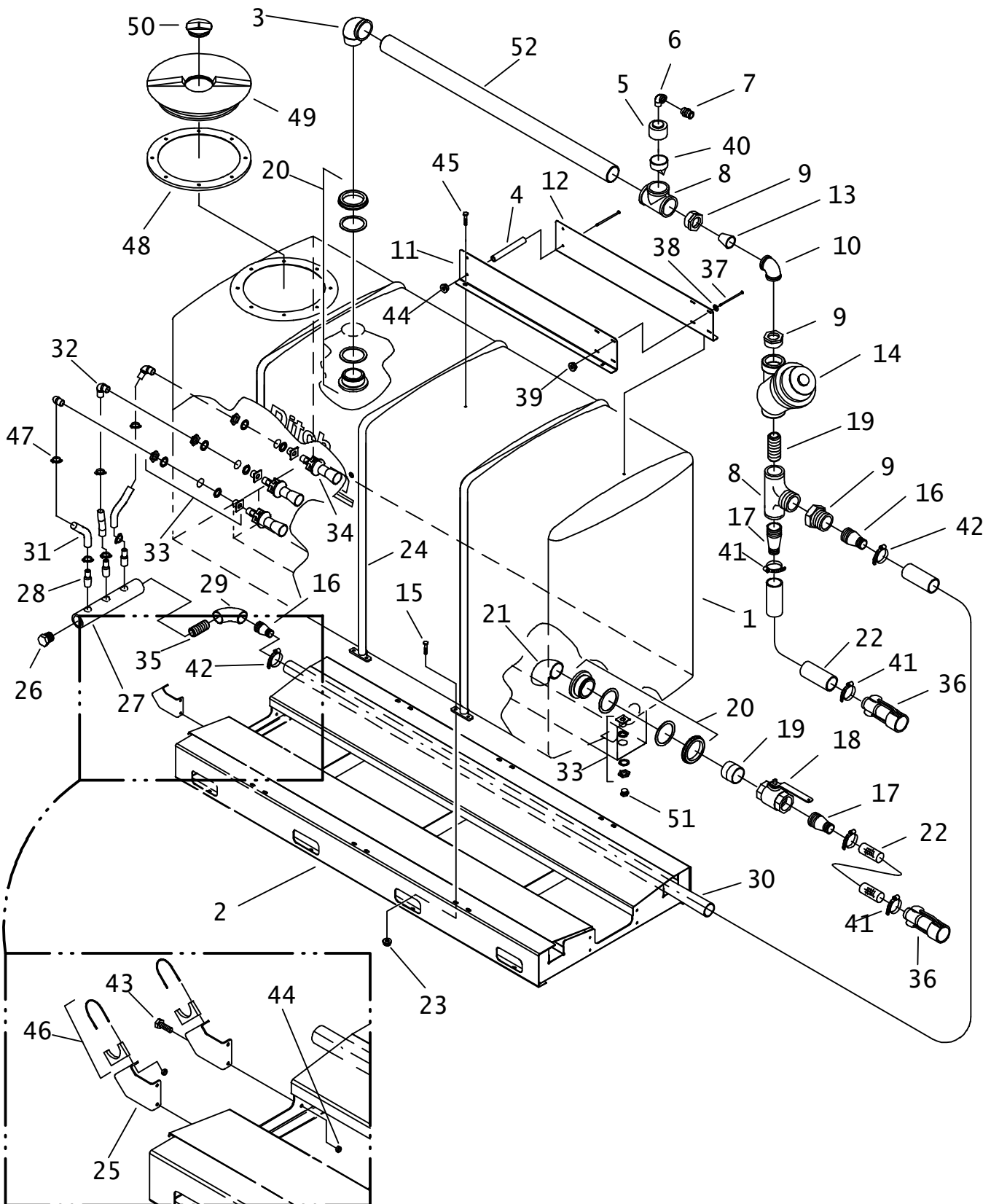
FOOTNOTES

- PARTS ARE IN SHIP KIT
- USE 3M BLACK WEATHERSTRIP ADHESIVE TO SEAL.
- 346-544 & 346-021 MUST BE USED TOGETHER, AND 318-517 MUST BE USED WITH 153-870

NOTE:

1000 GALLON TANK PLUMBING

FM13



1000 GALLON TANK PLUMBING

FM13

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	101-094		1000 GAL. RECT TANK-FM13	
1.	305-805	1	TANK (POLYTHYLENE, 990 GAL)	
2.	305-875	1	TANK BASE	
3.	514-210	1	ST ELBOW (48NM-48NF90)	
4.	178-858	2	SPACER TUBE	
5.	153-257	1	PIPE ADAPTER (3")	
6.	115-440	1	ST ELBOW (16N-16NF90)	
7.	155-232	1	FHC ADAPTER (16-16N)	
8.	154-485	2	TEE (48NF-48NF-48NF)	
9.	155-265	3	REDUCER (48N-32NF)	
10.	114-004	1	ST ELBOW (32N-32NF90)	
11.	313-262	1	VENTURI MOUNT, LH	
12.	313-265	1	VENTURI MOUNT, RH	
13.	153-870	1	VENTURI JET	
14.	159-439	1	Y STRAINER (48NF)	
15.	106-333	12	SCREW (M12-1.75 X 40MM)	
16.	514-089	2	S/O COUPLER (32N-32H)	
17.	514-168	2	S/O ADAPTER (48N-48H)	SEE FOOTNOTE 1
18.	120-060	1	SHUT OFF (48NF-48NF)	SEE FOOTNOTE 1
19.	115-299	2	NIPPLE (48N-3")	SEE FOOTNOTE 1
20.	153-549	2	CONNECTOR (48NF-48NF,BK,NYL)	
21.	313-259	1	SUCTION ELBOW	
22.	117-313	AR	BULK HOSE (3" SUCTION)	SEE FOOTNOTE 1
23.	106-709	12	FLG LK NUT (M12-1.75)	
24.	305-868	3	TANK STRAP	
25.	308-751	2	MOUNTING BRACKET	
26.	114-008	1	PLUG (32N,SQ,GALV)	
27.	149-971	1	MANIFOLD	
28.	514-311	3	S/O COUPLER (16N-16H)	
29.	115-293	1	ELBOW (32NF-32NF90)	
30.	116-505	AR	BULK HOSE (2", SOLD PER 1')	USE 1 @ 168"
31.	116-094	AR	BULK HOSE (1" , SOLD PER 1")	USE 2 @ 9", 1 @ 7"
32.	514-215	3	S/O COUPLER (16N-16H90)	
33.	149-562	4	BK CONNECTOR (16NF-16NFBK NYL)	
	157-490	4	BK CONNECTOR (16NF-16NF,POLY)	SEE FOOTNOTE 3
34.	369-810	3	MIXING JET (16N,ORF, .500",NY)	
35.	115-050	1	NIPPLE (32N-6")	
36.	155-264	2	CAMLOCK (3" FEMALE)	SEE FOOTNOTE 1
37.	107-420	6	SCREW (M10-1.50 X 140MM)	
38.	106-390	8	WASHER (M10)	
39.	106-758	4	LOCKNUT (M10-1.50)	
40.	194-761	1	DISCHARGE VALVE	
41.	110-367	4	WORM CLAMP (3.250" TO 4.125")	SEE FOOTNOTE 1
42.	110-134	2	WORM CLAMP (2.062" TO 2.750")	
43.	105-274	4	SCREW M10-1.50 X 20MM)	
44.	106-387	6	FLG LOCKNUT (M10-1.50)	
45.	106-654	4	FLG LOCKSCREW (M10-1.50 X 16MM)	
46.	196-010	2	U-BOLT CLAMP (3")	SEE FOOTNOTE 2
47.	110-353	6	WORM CLAMP (.750" TO 1.500")	
48.	357-261	1	FILLWELL (16")	
49.	364-434	1	TANK CAP (16", VENTED)	
50.	357-263	1	TANK CAP (4")	
51.	153-721	1	PLUG (16N POLY)	
52.	316-175	1	DIFFUSER PIPE	

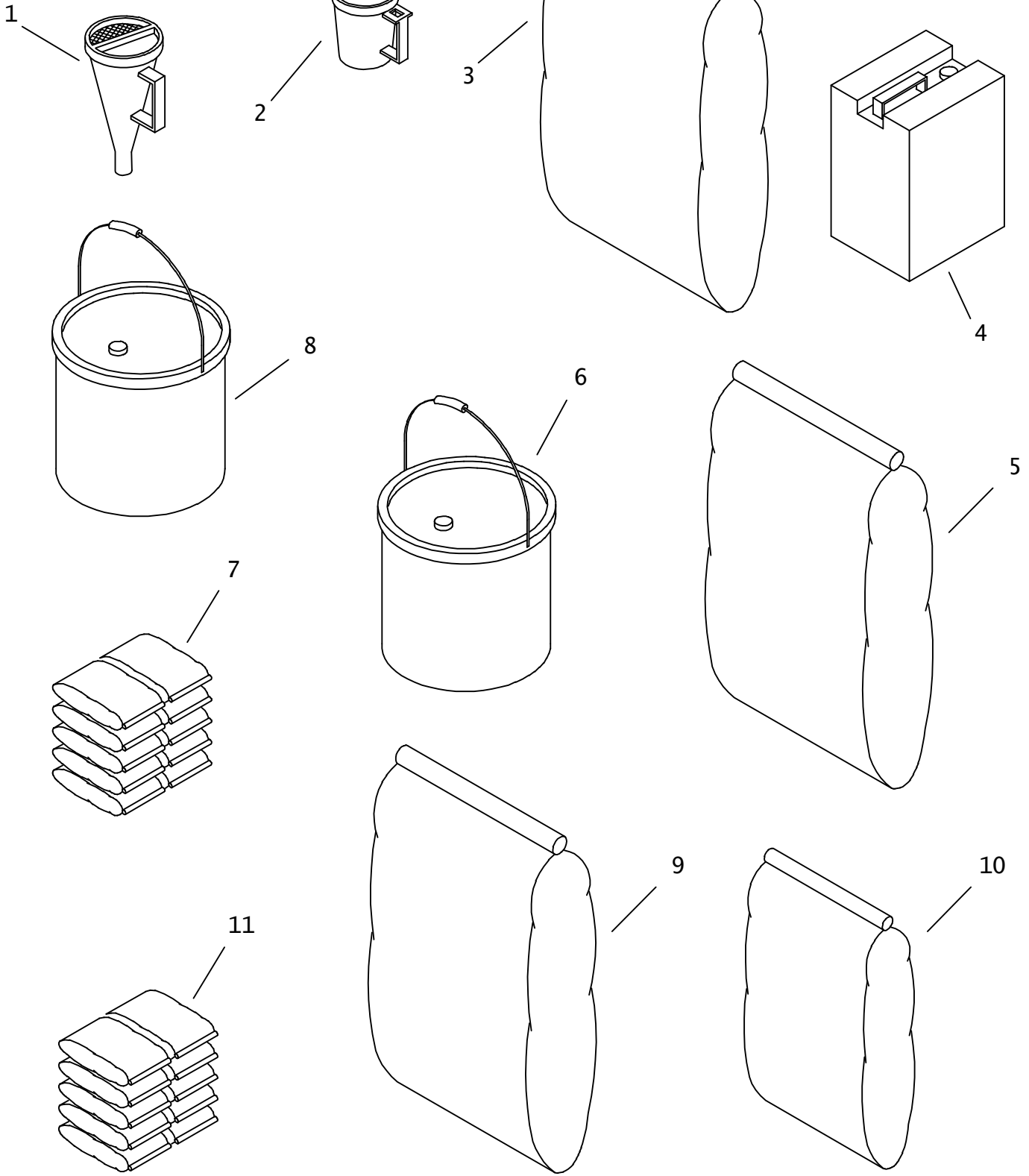
FOOTNOTES:

1. ITEMS INCLUDED IN SHIP KIT
2. INCLUDES U-BOLT, CLAMP, AND NUT
3. HOLE MAY REQUIRE MODIFICATION FOR NEW FITTINGS.

NOTE:

ACCESSORIES

FLUID MIXING ACCESSORIES



FLUID MIXING ACCESSORIES

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	259-195	1	VISCOSITY FUNNEL	
2.	259-196	1	VISCOSITY CUP	
3.	259-804	AR	BENTONITE, QUIK-GEL (50 LB)	
4.	259-805	AR	LIQUID POLYMER, EZ-MUD (5 GAL)	
5.	259-807	AR	BENTONITE, BORE-GEL (50 LB)	
6.	259-808	AR	VISCOSIFIER, LIQUI-TROL (5 GAL)	
7.	259-809	AR	POWDER POLYMER, QUIK-TROL (20 LB)	
8.	259-810	AR	WET AGENT, CON-DET (5 GAL)	
9.	259-821	AR	'PAC-R' FILTRATION CONTROL	
10.	259-822	AR	'BARAZAN D+' VISCOSIFIER	
11.	259-832	AR	'NO SAG' (20# BOX/10-2#BAGS)	

NOT SHOWN:

191-158	1	DRILLING FLUID TEST KIT
259-487	1	SHEAROMETER

FOOTNOTES:

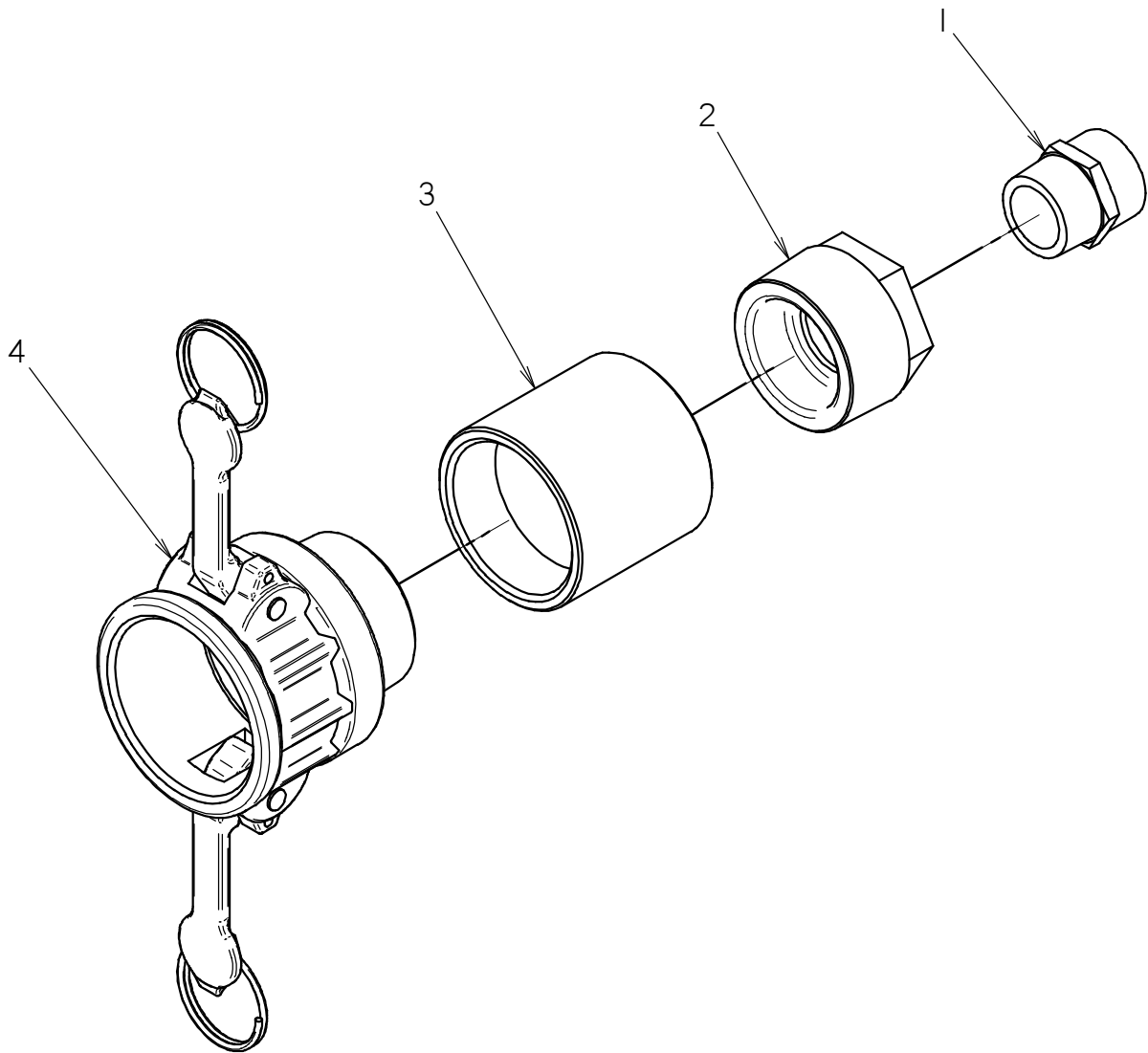
NOTE:

WATER TRANSFER SYSTEM

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	100-956		WATER TRANSFER SYSTEM	
1.	364-314	1	STORAGE TANK (325 GAL)	
	190-053		POLY-PATCH TANK REPAIR KIT	
2.	115-437	1	SWEDGE NIPPLE (32N-24N-6.5")	
3.	120-023	1	SHUT-OFF (24NF-24NF)	
4.	155-204	2	FHC ADAPTER (20-24N)	
5.	155-188	1	SLIP-ON COUPLER (24N-24H)	
6.	110-250	2	WORM CLAMP (1-1/4" TO 2-1/8")	
7.	116-782	AR	BULK HOSE (1-1/2", SOLD PER 1')	USE 1 @ 18"
8.	149-929	1	CENTRIFUGAL PUMP	INCL REF NO.'S 22 - 26
9.	105-065	4	LOCKNUT (1/2-NC)	
10.	105-071	4	WASHER (1/2")	
11.	155-205	1	FHC BODY (20-24H)	
	116-491		SQUARE RING (___ D70)	
12.	195-028	1	ENGINE-HONDA	
13.	115-044	2	STREET ELBOW (24N-24NF90)	
14.	154-440	1	HOSE (20FHC-300"-44)	
15.	365-374	2	TANK STRAP	
16.	105-130	4	BOLT (5/16-NC X 2-1/4")	
17.	105-089	4	LOCKNUT (5/16-NC)	
18.	105-117	4	WASHER (5/16")	
19.	115-087	2	REDUCER (32N-24NF)	
20.	344-901	2	BASE PLATE	
21.	105-067	2	BOLT (1/2-NC X 2-3/4")	
22.	500-860	1	SLINGER	
23.	500-248	1	O-RING (246 D70)	
24.	180-817	1	SLEEVE	
25.	191-017	1	PUMP SEAL KIT	
26.	165-834	1	SHIM (.015", IMPELLER)	
27.	364-434	1	TANK CAP (16", VENTED)	
28.	194-044	1	ENGINE ADAPTER	FOR HONDA & LOMBARDINI 5.5 HP ENGINES
29.	346-350	-	ENGINE MOUNT PLATE	NOT INCLUDED WITH SYSTEM

FOOTNOTES

GARDEN HOSE ADAPTER



GARDEN HOSE ADAPTER

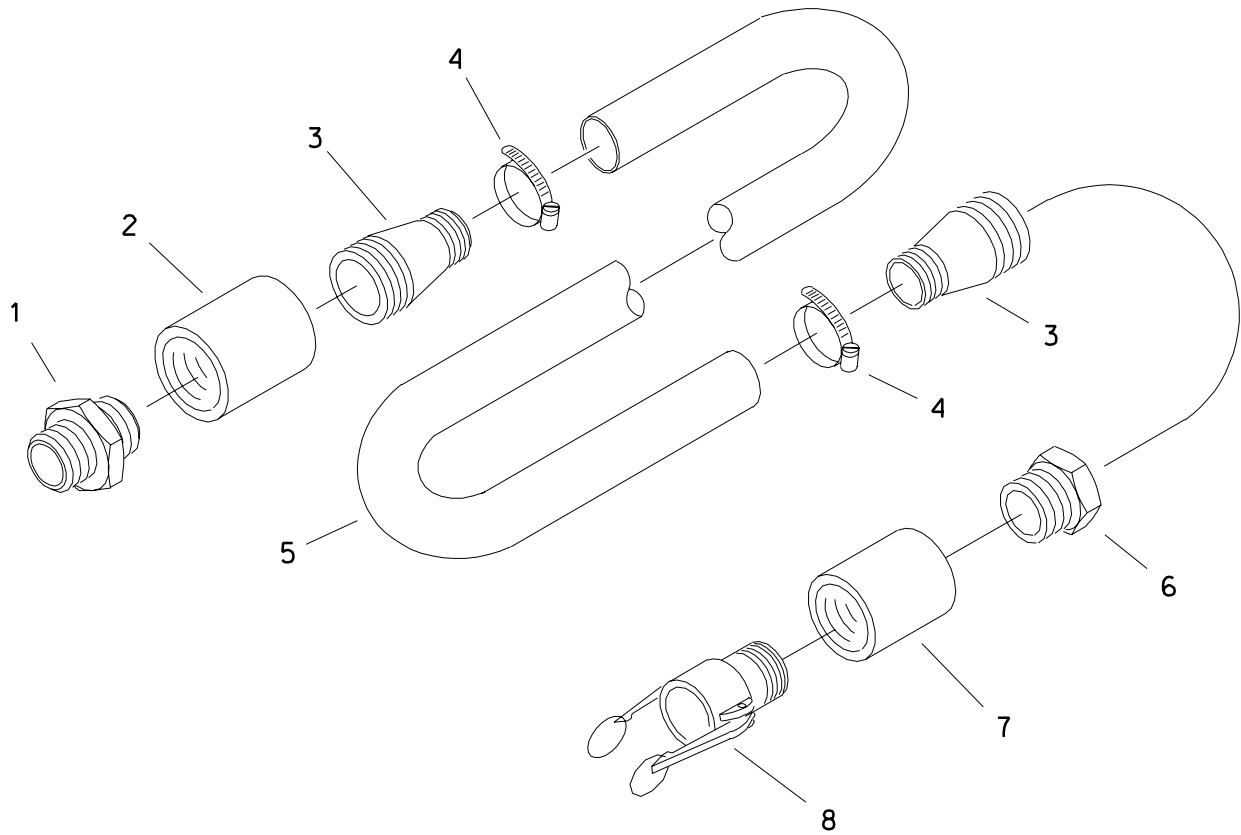
REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	159-891		GARDEN HOSE ADAPTER	INCL. REF No's 1 - 4
1	114-038	1	NIPPLE (12N-12NH)	
2	115-271	1	REDUCER (24N-12NF)	
3	115-134	1	COLLAR (24NF)	
4	159-500	1	FHC BODY (24-24N)	

NOT SHOWN:

FOOTNOTES:

NOTE:

DRILLING FLUID TRANSFER

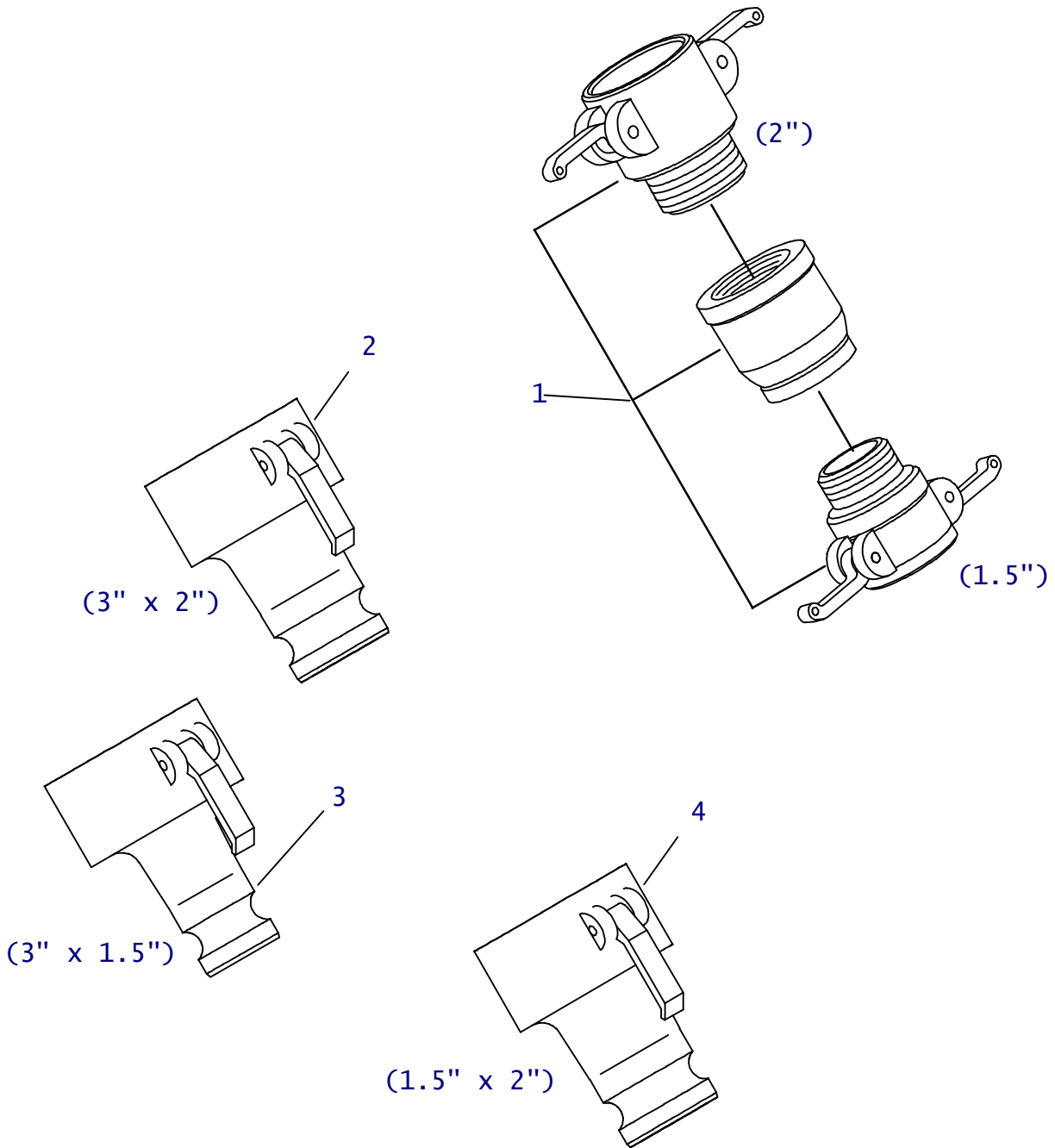


DRILLING FLUID TRANSFER

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
	159-890	-	TRANSFER HOSE ASSEMBLY	
1.	155-232	1	FHC ADAPTER (16-16N)	
2.	115-175	1	COLLAR (16NF)	
3.	514-311	2	S/O COUPLER (16N-16H)	
4.	110-353	2	WORM CLAMP (3/4" TO 1-1/2")	
5.	117-451	-	1" SUCTION HOSE (SOLD PER FT)	1 @ 50'
6.	514-314	1	REDUCER (24N-16NF)	
7.	115-134	1	COLLAR (24NF)	
8.	159-500	1	FHC BODY (24-24N)	

FOOTNOTES

FLUID COUPLER ADAPTERS



FLUID COUPLER ADAPTERS

REF NO.	PART NUMBER	QTY	DESCRIPTION	REMARKS
1.	191-226	1	FLUID COUPLER KIT	
	159-485	1	FHC BODY (32-32N)	
	157-300	1	FITTING	
	159-500	1	FHC BODY (24-24N)	
2.	157-792	1	FHC CPLR X ADPTR (48-32)	
	116-736	-	SQUARE RING GASKET (48)	
3.	157-793	1	FHC CPLR X ADPTR (48-24)	
	116-736	-	SQUARE RING GASKET (48)	
4.	150-1520	1	FHC CPLR X ADPTR (32-24)	
	116-735	-	GASKET (32)	

NOT SHOWN:

FOOTNOTES:

NOTE:

MISCELLANEOUS

SAE Bolt and Nut Torque Value Chart

Grade 5: UNC or UNF Thread

Size	Hex nut, or bolt tapped into hex nut, or d&t hole		Hex top deformed locknut		Flange nut, locknut, or bolt tapped into flange nut or d&t* hole	
	ft•lb	N•m	ft•lb	N•m	ft•lb	N•m
1/4	12	16	8	11	20	27
5/16	25	34	15	20	45	60
3/8	40	54	25	34	75	100
7/16	65	90	40	55	125	170
1/2	100	135	60	80	190	260
9/16	150	200	90	125	270	370
5/8	200	270	120	165	370	500
3/4	350	475	210	285	650	880
7/8	560	760	340	460	1250	1425
1	840	1140	500	680	1580	2145
1-1/8	1030	1400	320	840	1950	3645
1-1/4	1460	1980	880	1195	2760	3475

Grade 8: UNC or UNF Thread

Size	Hex nut, or bolt tapped into hex nut, or d&t hole		Hex top deformed locknut		Flange nut, locknut, or bolt tapped into flange nut or d&t* hole	
	ft•lb	N•m	ft•lb	N•m	ft•lb	N•m
1/4	14	19	10	14	24	33
5/16	30	40	18	25	50	70
3/8	55	73	35	50	90	125
7/16	85	115	50	70	140	190
1/2	130	175	80	110	220	300
9/16	190	260	110	150	310	420
5/8	260	355	160	245	430	585
3/4	450	610	270	365	750	1015
7/8	730	990	440	600	1210	1640
1	1090	1480	650	880	1320	2465
1-1/8	1550	2100	930	1260	2580	3500
1-1/4	2180	2955	1310	1780	3640	4935

*drilled and tapped

Metric Bolt and Cap Screw Torque Values

Size	Class 4.8				Class 8.8 and 9.8				Class 10.9				Class 12.9			
	Lubricated		Dry		Lubricated		Dry		Lubricated		Dry		Lubricated		Dry	
	N•m	ft•lb	N•m	ft•lb	N•m	ft•lb	N•m	ft•lb	N•m	ft•lb	N•m	ft•lb	N•m	ft•lb	N•m	ft•lb
M6	4.8	3.5	6	4.5	9	6.5	11	8.5	13	9.5	17	12	15	11.5	19	14.5
M8	12	8.5	15	11	22	16	28	20	32	24	40	30	37	28	47	35
M10	23	17	29	21	43	32	55	40	63	47	80	60	75	55	95	70
M12	40	29	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	47	80	60	120	88	150	110	175	130	225	165	205	150	260	190
M16	100	73	125	92	190	140	240	175	275	200	350	225	320	240	400	300
M18	135	100	175	125	260	195	330	250	375	275	475	350	440	325	560	410
M20	190	140	240	180	375	275	475	350	530	400	675	500	625	460	800	580
M22	260	190	330	250	510	375	650	475	725	540	925	675	850	625	1075	800
M24	330	250	425	310	650	475	825	600	925	675	1150	850	1075	800	1350	1000
M27	490	360	625	450	950	700	1200	875	1350	1000	1700	1250	1600	1150	2000	1500
M30	675	490	850	625	1600	950	1650	1200	1850	1350	2300	1700	2150	1600	2700	2000
M33	900	675	1150	850	1750	1300	2200	1650	2500	1850	3150	2350	2900	2150	3700	2750
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2750	4750	3500

Do not use these values if a different torque value or tightening procedure is given for specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class fasteners.

Fasteners should be replaced with the same or higher property class. If higher property class fasteners are used, these should only be tightened to strength of original.

Make sure fastener threads are clean and that the threads are properly started. This will prevent them from cross threading or galling when tightened.

Tighten plastic insert or crimped type steel locknuts to approximately 50% of dry torque indicated on chart. Apply torque to the nut - not the bolt head. Tighten toothed or serrated type locknuts to full torque value.

LUBRICATED means coated with lubricant. DRY means plain or zinc plated without any type of lubricant.

Hydraulic Cylinder Bolt Torque Chart

Bolt Size (inch)	Bolt Part No.	Cylinder Repair Kit Part No.	Torque (ft•lb)	Torque (N•m)
1/2	106-096	190-165	90-100	120-135
5/8	106-097	190-166 & 190-169	180-200	245-270
3/4	106-098	190-167 & 190-170	290-325	395-440
7/8	106-122	190-172 & 190-174	410-640	550-625
1	106-145	190-175 & 190-189	630-700	855-950
1-1/8	106-146	190-177	770-850	1045-1170

As a general rule:

- 1/2-inch bolts are used in cylinders with 1-inch rods
- 5/8-inch bolts are used in cylinders with 1 1/4-inch rods
- 3/4-inch bolts are used in cylinders with 1 1/2-inch rods
- 7/8-inch bolts are used in cylinders with 1 3/4-inch rods
- 1-inch bolts are used in cylinders with 2-inch rods (one with 1 3/4-inch)
- 1-1/8-inch bolts are used in cylinders with 2-1/4-inch rods

IMPORTANT: Do not reuse cylinder piston bolts when rebuilding a hydraulic cylinder. Each cylinder repair kit contains a new bolt. Use it. Lubricate lightly and torque to value shown on chart.

SAE & ORS Hydraulic Fitting Replacement O-Ring Chart

Fraction Size	Dash Size	SAE (Port Seal O-Ring)		ORS (Face Seal O-Ring)	
		Thread Size	O-Ring P/N	Thread Size	O-Ring P/N
1/16	1	NA	NA	NA	NA
1/8	2	5/16 - 24	NA	NA	NA
3/16	3	3/8 - 24	NA	NA	NA
1/4	4	7/16 - 20	155-760	9/16 - 18	157-037
5/16	5	1/2 - 20	NA	NA	NA
3/8	6	9/16 - 18	155-705	11/16 - 16	157-038
1/2	8	3/4 - 16	155-706	13/16 - 16	157-039
5/8	10	7/8 - 14	155-707	1 - 14	157-040
3/4	12	1-1/16 - 12	155-709	1-3/16 - 12	157-017
7/8	14	1-3/16 - 12	155-747	NA	NA
1	16	1-5/16 - 12	155-748	1-7/16 - 12	155-714
1-1/4	20	1-5/8 - 12	155-702	1-11/16 - 12	NA
1-1/2	24	1-7/8 - 12	157-001	2 - 12	NA
2	32	2-1/2 - 12	NA	NA	NA
2-1/2	40	3 - 12	NA	NA	NA
3	48	3-1/2 - 12	NA	NA	NA

Thread size indicates the diameter of the threaded area in fractions of an inch and number of threads per inch.

NA = not a current CMW part numbered o-ring, or dash size does not occur in current CMW applications

SAE = straight thread fitting that seals by sandwiching a hard o-ring between a shoulder on the male part and an angular surface at the mouth of the female port.

ORS = o-ring face seal; a type of fitting that seals by compressing a hard, captive o-ring between two flat parallel faces, one grooved for the o-ring and the other plain to act as the sealing surface

FM Series

Related Publications

Component	Ass'y	P/N
Model:		
Fluid Mixers Parts Manual		053-478
Fluid Mixers Operators Manual		054-513
Fluid Mixers Repair Guide (Service Manual)		N/A
Fluid Mixers Supplementary Maint. Guide - Trenchless		055-485
Fluid Mixers Special Tools Guide		052-901
Engine:		
MM5		
Honda 5.5hp Parts Manual - GX160K1TX	195-028	053-042
Honda 5.5hp Operators Manual - GX160K1TX		N/A
Honda 5.5hp Service (Shop) Manual - GX160K1TX		N/A
Lombardini 5.5hp ... Parts Manual - 15LD315K	195-196	N/A
Lombardini 5.5hp ... Operators Manual - 15LD315K		N/A
Lombardini 5.5hp ... Service (Shop) Manual - 15LD315K		N/A
MM9		
Honda 9hp Parts Manual - GX270PA2	195-194	N/A
Honda 9hp Operators Manual - GX270PA2		N/A
Honda 9hp Service (Shop) Manual - GX270PA2		N/A
Lombardini 10hp ... Parts Manual - 6LD435	195-197	N/A
Lombardini 10hp ... Operators Manual - 6LD435		N/A
Lombardini 10hp ... Service (Shop) Manual - 6LD435		N/A
FM5		
Honda 5.5hp Parts Manual - GX160K1TX	195-028	053-042
Honda 5.5hp Parts Manual - GX160K1QX	194-598	053-042
Honda 5.5hp Operators Manual - GX160K1TX & GX160K1TX		N/A
Honda 5.5hp Service (Shop) Manual - GX160K1TX & GX160K1TX		N/A
FM13		
Honda 13hp Parts Manual - GX390K1QXC	195-278	053-047
Honda 13hp Operators Manual - GX390K1QXC		N/A
Honda 13hp Service (Shop) Manual - GX390K1QXC		055-047
FM50		
Kubota Parts Manual – V3300EBG	499-348	N/A
Kubota Operators Manual – V3300EBG		054-076
Kubota Service (Shop) Manual – V3300EBG		N/A

Continued

FM Series

Filters

Engine:

MM5

Air Filter Parts Ass'y - Honda 5.5hp (GX160K1TX)	194-001
Element Set (primary, paper) - Honda (GX160K1TX)	N/A
(secondary, foam) - Honda (GX160K1TX)	N/A
Fuel Filter (04H-04H, in-line) - Honda 5.5hp (GX160K1TX)	194-002
Air Filter Parts Ass'y - Lombardini 5.5hp (15LD315K)	N/A
Element Set (primary, paper) - Lombardini (15LD315K)	N/A
(secondary, foam) - Lombardini (15LD315K)	N/A
Oil Filter Element (spin-on) - Lombardini 5.5hp (15LD315K)	N/A
Fuel Filter (0_H-0_H, in-line) - Lombardini 5.5hp (15LD315K)	N/A

MM9

Air Filter Parts Ass'y - Honda 9hp (GX270PA2)	194-104
Element Set (primary, paper) - Honda (GX270PA2)	N/A
(secondary, foam) - Honda (GX270PA2)	N/A
Fuel Filter (0_H-0_H, in-line) - Honda 9hp (GX270PA2)	194-107
Air Filter Parts Ass'y - Lombardini 10hp (6LD435)	194-109
Element Set (primary, paper) - Lombardini (6LD435)	N/A
(secondary, foam) - Lombardini (6LD435)	N/A
OIL Filter Element (spin-on) - Lombardini 10hp (6LD435)	194-108
Fuel Filter (0_H-0_H, in-line) - Lombardini 10hp (6LD435)	194-110

FM5

Air Filter Parts Ass'y - Honda 5.5hp (GX160K1QX & GX160K1TX)	194-001
Element Set (primary, paper) - Honda (GX160K1QX & GX160K1TX)	N/A
(secondary, foam) - Honda GX160K1QX & (GX160K1TX)	N/A
Fuel Filter (04H-04H, in-line) - Honda 5.5hp (GX160K1QX & GX160K1TX)	194-002

FM13

Air Filter Parts Ass'y - Honda (GX390K1QXC)	195-159
Element Set (primary, paper) - Honda (GX390K1QXC)	N/A
(secondary, foam) - Honda (GX390K1QXC)	N/A

FM50

Air Filter Parts Ass'y - Kubota - (V3300EBG)	499-360
Element Set (primary) - Kubota - (V3300EBG)	499-361
(secondary) - Kubota - (V3300EBG)	499-362
Oil Filter Element - Kubota - (V3300EBG)	194-268
Fuel Filter - Kubota - (V3300EBG)	153-829

Water {H2O}:

Water Strainer (2.250" x 7.0") - Y-Strainer, MM5, MM5D, MM5H	159-239
Strainer (4.000" x 9.0") - Y-Strainer, MM9, MM9D, MM9H, FM13	159-490

FM Series

Optional Kits

O-ring Repair Kit - FLG, ORS & SAE (15 different O-rings)	190-051
O-ring Repair Kit - Field Service (46 different O-rings)	190-052



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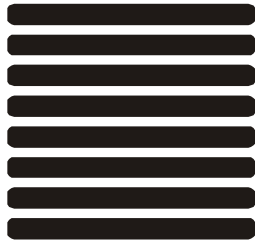
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