

OPERATION AND PARTS MANUAL



MULTIQUIP®

**MAYCO SERIES
MODEL C-30HDNI
CONCRETE PUMP
(PRECISION FUEL INJECTION)**

UP TO S/N: 240601

Revision #7 (04/03/12)

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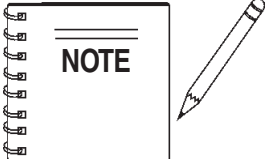
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Specification and part number are subject to change without notice.

APPENDIX — RECOMMENDED SHOTCRETE SYSTEM

RECOMMENDED SHOTCRETE SYSTEM

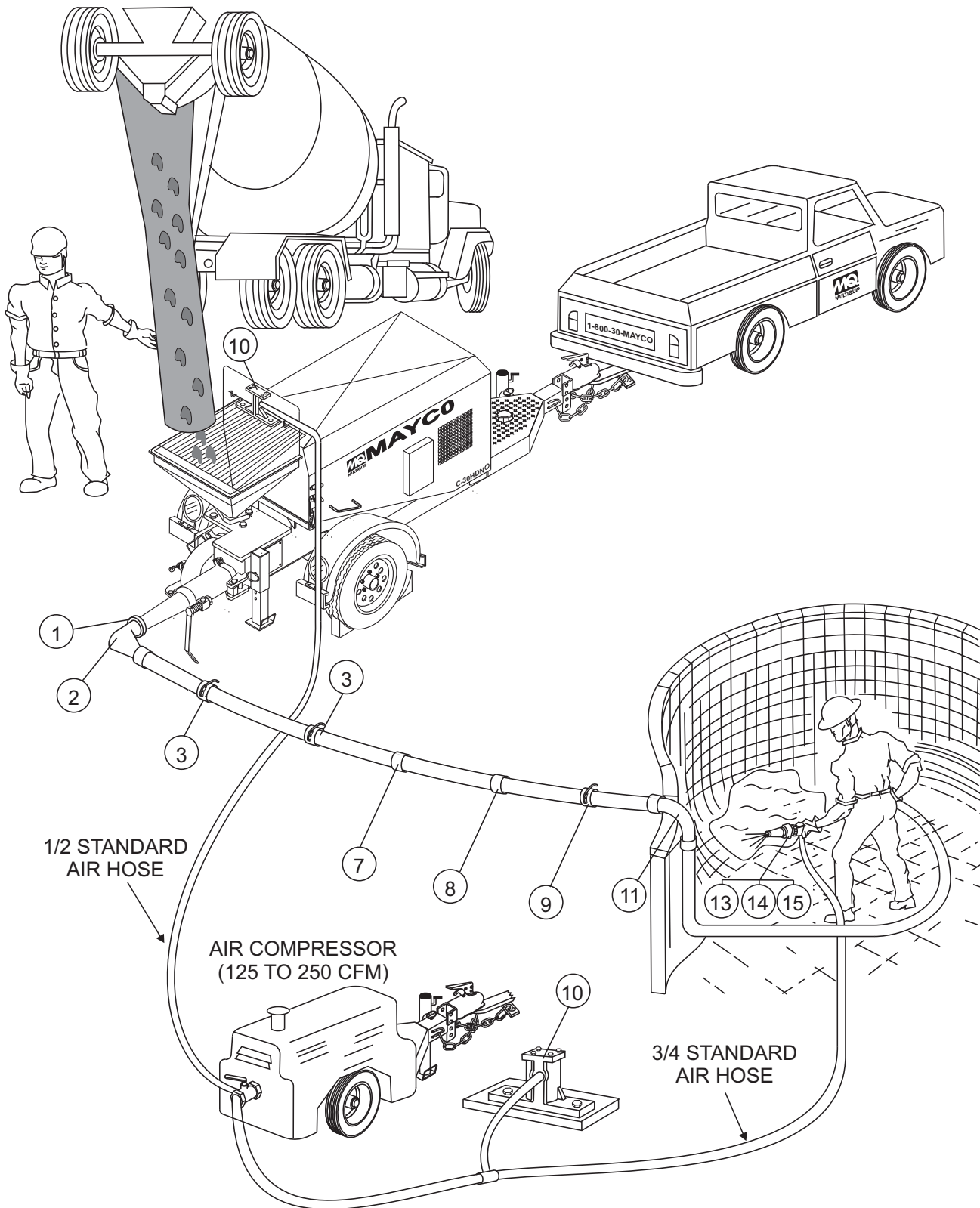


Figure 36. Shotcrete System

APPENDIX — RECOMMENDED SHOTCRETE SYSTEM

RECOMMENDED SHOTCRETE SYSTEM

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM28904	3" "B" COUPLING		
2	EM23946	3"-90° ELBOW		
3	EM28903	2 1/2" S/J COUPLING		
4	EM28005DD	3"X 2 1/2 REDUCER		
5	EM28061	2 1/2"X 10FT. PIPE		
6	EM24849	2 1/2"X 50FT. HOSE		
7	EM28001DD	2 1/2"X 2" REDUCER		
8	EM23815D	2 1/2"X 2" REDUCER W/AIR VIBRATOR		
9	EM28902	2" S/J COUPLING		
10	EM23101	AIR VIBRATOR		
11	EM28131	2"X 2 ELBOW		
12	EM24841	2"X 25 FT. HOSE		
13	EM23808D	NOZZLE ASSEMBLY		
14	EM23806	1 3/8" NOZZLE TIP		
15	EM23807	1 1/4" NOZZLE TIP		

APPENDIX — RECOMMENDED SHOTCRETE ACCESSORIES

RECOMMENDED SHOTCRETE ACCESSORIES

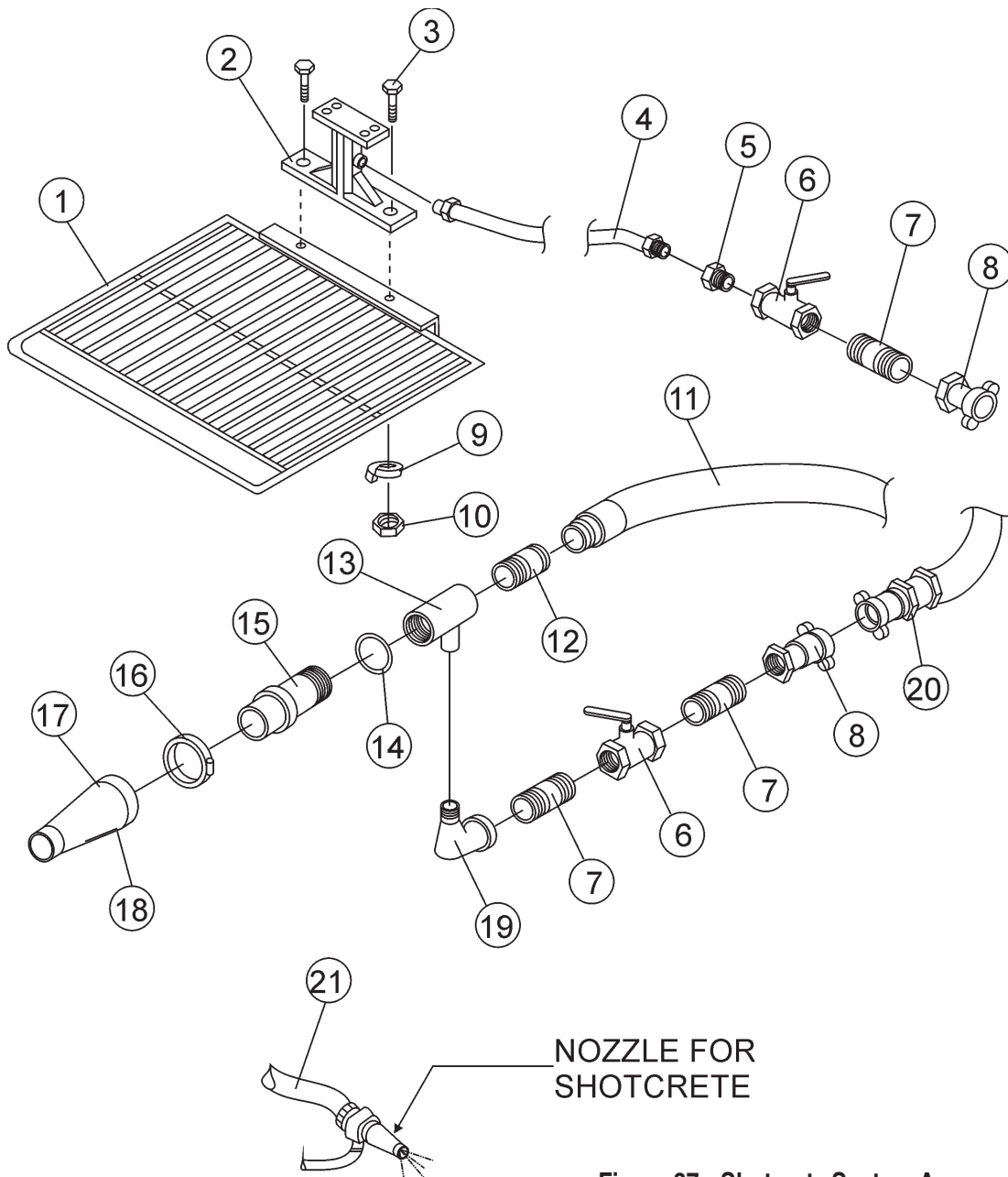
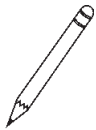
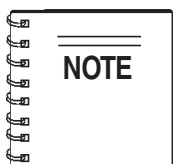


Figure 37. Shotcrete System Accessories



Use a 1-3/8" rubber nozzle tip for a wide spray pattern. Use a 1-1/4" rubber nozzle tip for a narrow spray pattern. **DO NOT INSTALL THE NOZZLE AT THE END OF THE HOSE UNTIL THE FIRST MATERIAL HAS PASSED THROUGH THE ENTIRE HOSE LENGTH.**

Disassemble and clean the nozzle assembly thoroughly after each job. Grease all threads before re-assembly. **DO NOT** close the air valve when pumping is stopped as a continued air flow keeps the air passages clean.

APPENDIX — RECOMMENDED SHOTCRETE ACCESSORIES

RECOMMENDED SHOTCRETE ACCESSORIES

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM26107	HOPPER SCREEN	1	
2	EM231011	AIR VIBRATOR	1	
3	EM132	BOLT, 1/2-13X2	2	
4	EM23407	AIR HOSE	1	
5	EM23408	BUSHING	1	
6	EM23411	VALVE	1	
7	EM912073	NIPPLE	2	
8	EM23409	COUPLING	1	
9	EM923346	WASHER, 1/2 LOCK	2	
10	EM406	NUT, HEX 1/2-13	2	
11	EM23818	2"X25' GROOVED HOSE		
	EM24841	2"X25' RAISED HOSE		
	EM23845	2"X50' GROOVED HOSE		
12*	EM23802	ADAPTER	1	
13*	EM23803	GUN BODY	1	
14*	EM20816	"O" RING	1	
15*	EM23804	AIR INSERT	1	
16*	EM23805	NOZZLE CLAMP	1	
17*	EM23806	NOZZLE TIP, 1-3/8"	1	
18*	EM23807	NOZZLE TIP, 1-1/4"	1	
19*	EM911076	STREET ELBOW	1	
20		AIR HOSE		NOT SUPPLIED BY MAYCO
21	EM23808	NOZZLE ASSEMBLY	1	INCLUDES. ITEMS W/*

C-30HDNI PUMP — EXPLANATION OF CODE IN REMARKS COLUMN

The following section explains the different symbols and remarks used in the Parts section of this manual. Use the help numbers found on the back page of the manual if there are any questions.

NOTICE

The contents and part numbers listed in the parts section are subject to change **without notice**. Multiquip does not guarantee the availability of the parts listed.

SAMPLE PARTS LIST

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	12345	BOLT.....	1	INCLUDES ITEMS W/%
2%		WASHER, 1/4 IN.....		NOT SOLD SEPARATELY
2%	12347	WASHER, 3/8 IN....	1	MQ-45T ONLY
3	12348	HOSE	A/R	MAKE LOCALLY
4	12349	BEARING	1	S/N 2345B AND ABOVE

NO. Column

Unique Symbols — All items with same unique symbol

(@, #, +, %, or >) in the number column belong to the same assembly or kit, which is indicated by a note in the “Remarks” column.

Duplicate Item Numbers — Duplicate numbers indicate multiple part numbers, which are in effect for the same general item, such as different size saw blade guards in use or a part that has been updated on newer versions of the same machine.

NOTICE

When ordering a part that has more than one item number listed, check the remarks column for help in determining the proper part to order.

PART NO. Column

Numbers Used — Part numbers can be indicated by a number, a blank entry, or TBD.

TBD (To Be Determined) is generally used to show a part that has not been assigned a formal part number at the time of publication.

A blank entry generally indicates that the item is not sold separately or is not sold by Multiquip. Other entries will be clarified in the “Remarks” Column.

QTY. Column

Numbers Used — Item quantity can be indicated by a number, a blank entry, or A/R.

A/R (As Required) is generally used for hoses or other parts that are sold in bulk and cut to length.

A blank entry generally indicates that the item is not sold separately. Other entries will be clarified in the “Remarks” Column.

REMARKS Column

Some of the most common notes found in the “Remarks” Column are listed below. Other additional notes needed to describe the item can also be shown.

Assembly/Kit — All items on the parts list with the same unique symbol will be included when this item is purchased.

Indicated by:

“INCLUDES ITEMS W/(unique symbol)”

Serial Number Break — Used to list an effective serial number range where a particular part is used.

Indicated by:

“S/N XXXXX AND BELOW”

“S/N XXXX AND ABOVE”

“S/N XXXX TO S/N XXX”

Specific Model Number Use — Indicates that the part is used only with the specific model number or model number variant listed. It can also be used to show a part is NOT used on a specific model or model number variant.

Indicated by:

“XXXXX ONLY”

“NOT USED ON XXXX”

“Make/Obtain Locally” — Indicates that the part can be purchased at any hardware shop or made out of available items. Examples include battery cables, shims, and certain washers and nuts.

“Not Sold Separately” — Indicates that an item cannot be purchased as a separate item and is either part of an assembly/kit that can be purchased, or is not available for sale through Multiquip.

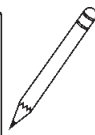
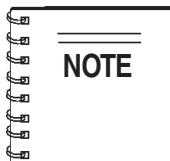
C-30HDNI PUMP — SUGGESTED SPARE PARTS

C-30HDNI CONCRETE PUMP W/ PRECISION FUEL INJECTION SYSTEM 1 Units

QTY.	P/N	DESCRIPTION
6	EM14904	PISTON CUP KITS
4	EM18804	4 1/2" STEEL BALL
4	EM14818	4" STEEL BALL
6	EM14903	BALL STOP PIN KIT
10	EM18801	O-RING MANIFOLD
1	EM14308	CHAIN
2	EM26313	HALF LINK
2	EM26314	MASTER LINK
1	EM14334	COMPENSATOR SPRING
2	EM14408	BRONZE RING
2	EM903092	CAM ROLLER BEARING
2	EM14315	V-BELT
2	EM14842	LOWER SEAT
2	EM14843	UPPER SEAT
2	EM26310	CLUTCH LINING
10	EM18409	O-RING
2	EM20763	FUEL FILTER
2	EM20328TKIT	BEARING KIT
1	EM28004DD	REDUCER 3" X 2"
1	EM23946	3" ELBOW
2	EM28904	3" CLAMP
4	EM289041	3" GASKETS
1	EM14159	HOPPER SCREEN
8	22401M7714	SPARK PLUG
4	1520855400	ELEMENT, OIL
1	11920H9915	V-BELT, GOVERNOR
1	2215723G15	ROTOR ASSY, ENGINE
1	2211577A11	SIGNAL ROTOR SET
1	22020G5111	TRANSISTOR-IGN UNIT
1	22023G5110	SEAT-SYNK
1	2216278A10	CAP ASSY, DIST. W/POINT ASSY
1	1172077702	V-BELT, FAN

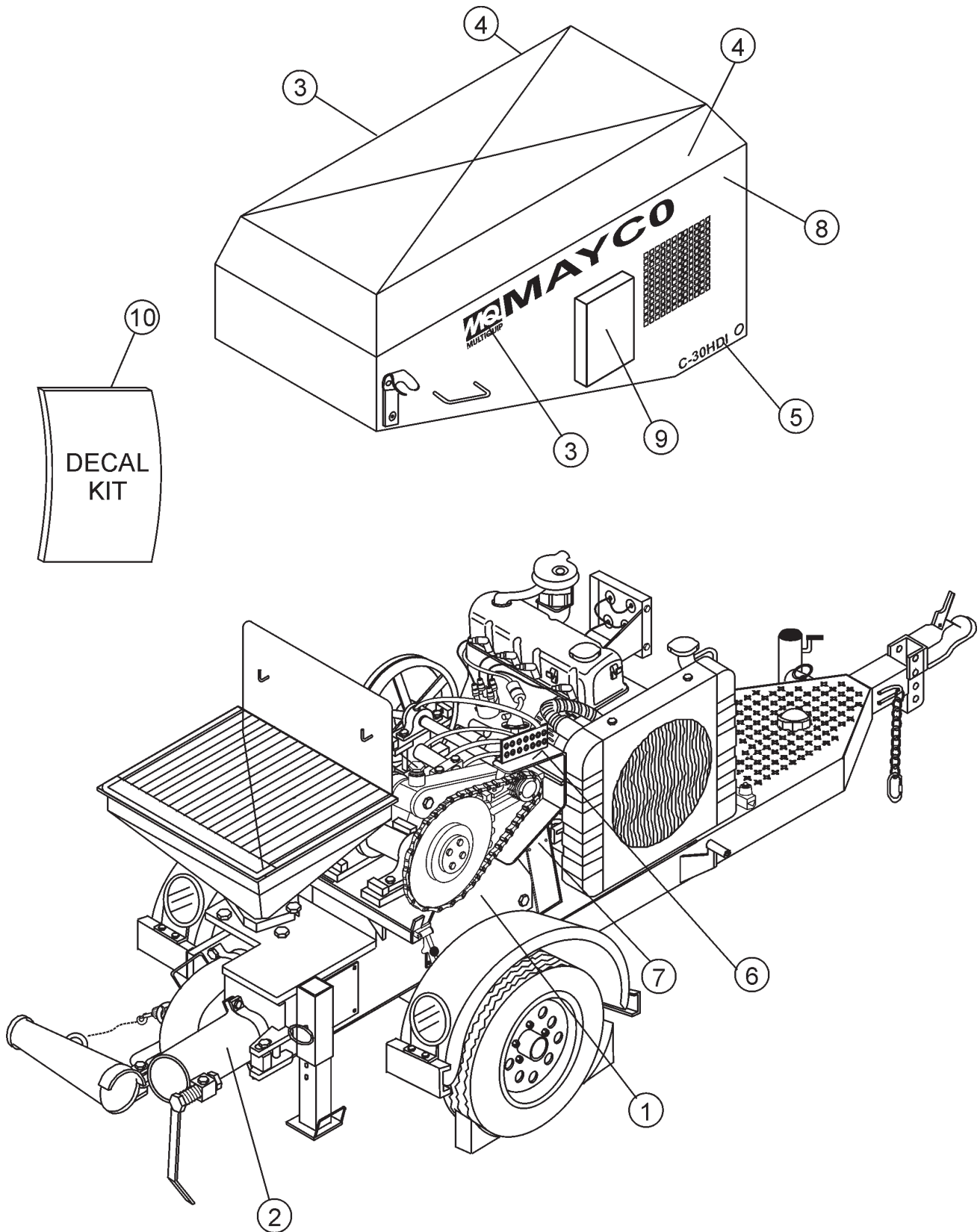
C-30HDNI CONCRETE PUMP W/ PRECISION FUEL INJECTION SYSTEM 3 Units

QTY.	P/N	DESCRIPTION
10	EM14904	PISTON CUP KITS
10	EM18804	4 1/2" STEEL
10	EM14818	4" STEEL BALL
12	EM14903	BALL STOP PIN KITS
25	EM18801	MANIFOLD O-RINGS
3	EM14308	CHAINS
10	EM26313	HALF LINK
10	EM26314	MASTER LINK
2	EM14334	COMPENSATOR SPRING
4	EM14408	BRONZE RING
2	EM903092	CAM ROLLER BEARING
6	EM14315	V-BELT
6	EM14842	LOWER SEAT
6	EM14843	UPPER SEAT
3	EM26310	CLUTCH LINING
20	EM18409	O-RING
6	EM20763	FUEL FILTER
2	EM20328TKIT	BEARING KIT
2	EM28004DD	REDUCER 3" x 2"
2	EM23946	3" ELBOW
4	EM28904	3" CLAMP
10	EM289041	3" GASKET
2	EM14159	HOPPER SCREEN
1	EM14300	CAM
1	EM14801	T-MANIFOLD
1	EM14819	Y-MANIFOLD
2	EM14335	PISTON ROD
1	EM26788	REMOTE SWITCH
1	EM903176	CONN. ROD BEARING
1	EM14305	CRANKSHAFT
2	EM14807	PUMP CYLINDER
2	EM18800	COMPENSATOR CYLINDER
1	EM14320	CLUTCH
24	22401M7714	SPARK PLUG
12	1520855400	ELEMENT, OIL
3	11920H9915	V-BELT, GOVERNOR
3	2215723G15	ROTOR ASSY, ENGINE
3	2211577A11	SIGNAL ROTOR SET
3	22020G5111	TRANSISTOR-IGN UNIT
3	22023G5110	SEAT-SYNK
3	2216278A10	CAP ASSY, DIST. W/POINT ASSY
3	1172077702	V-BELT, FAN



Part number on this Suggested Spare Parts List may super cede/replace the P/N shown in the text pages of this book.

C-30HDNI (PRECISION) PUMP — NAMEPLATE AND DECALS



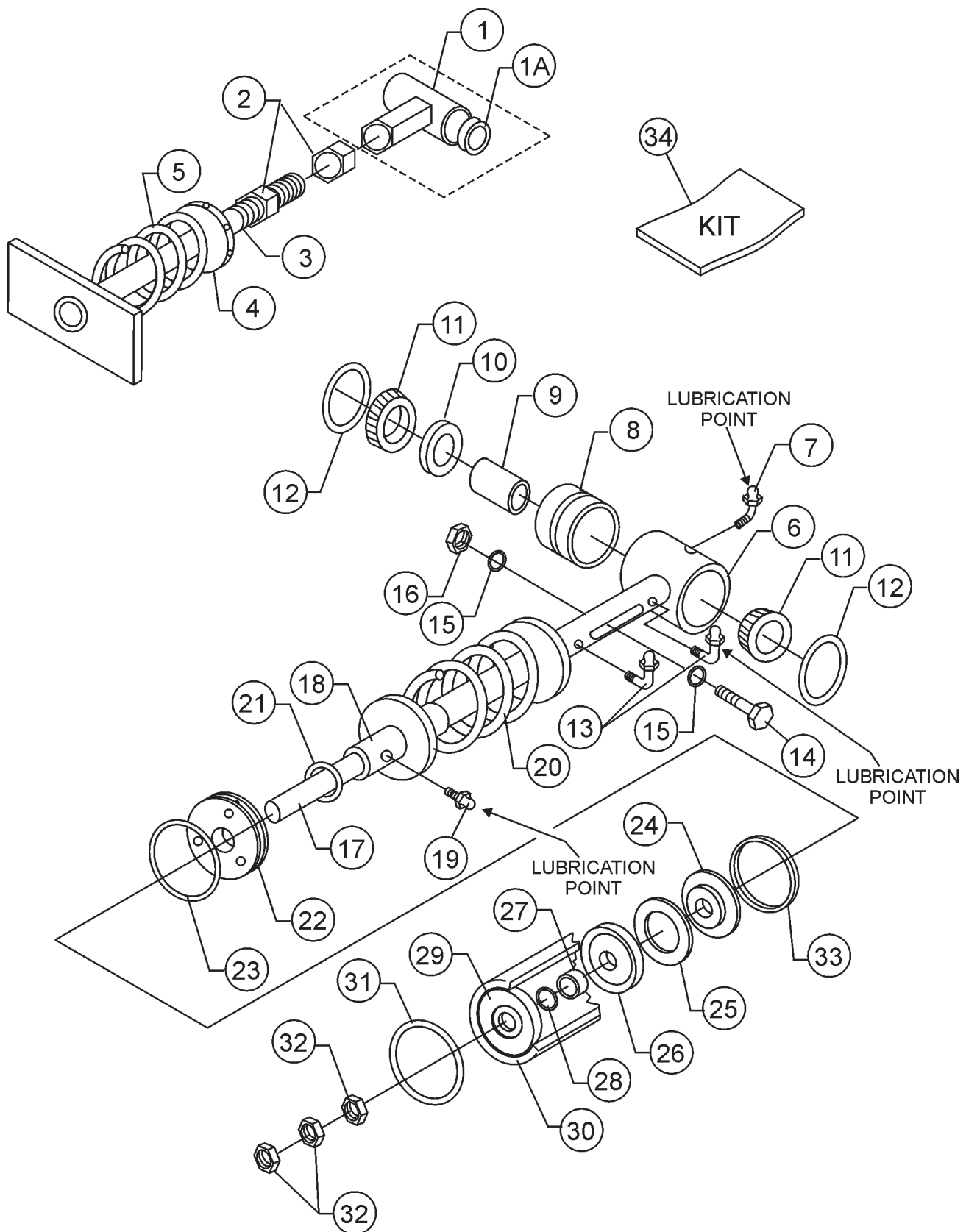
C-30HDNI (PRECISION) PUMP — NAMEPLATE AND DECALS

NAME PLATE AND DECALS

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	DCL152	DECAL, CAUTION OIL LEVEL	1	
2*	EM932	DECAL, CAUTION, MANIFOLD	1	
3*	EM1028	DECAL, MULTIQUIP MAYCO	2	
4*	508594	DECAL, CAUTION READ MANUAL	2	
5*	TBD	DECAL, C-30HDNI	2	
6*	EM513165	DECAL, MAINTENANCE	1	
7		DECAL, NAME PLATE	1 CONTACT PARTS DEPT.
8*	98022	DECAL, WARNING	1	
9*	34536	DECAL, OWNER'S MANUAL	1	
10	DCLC30HDNIKIT	KIT, DECAL	1 INCLUDES ITEMS W/ *

C-30HDNI PUMP — COMPENSATOR PISTON ROD ASSY.

COMPENSATOR PISTON ROD ASSY.



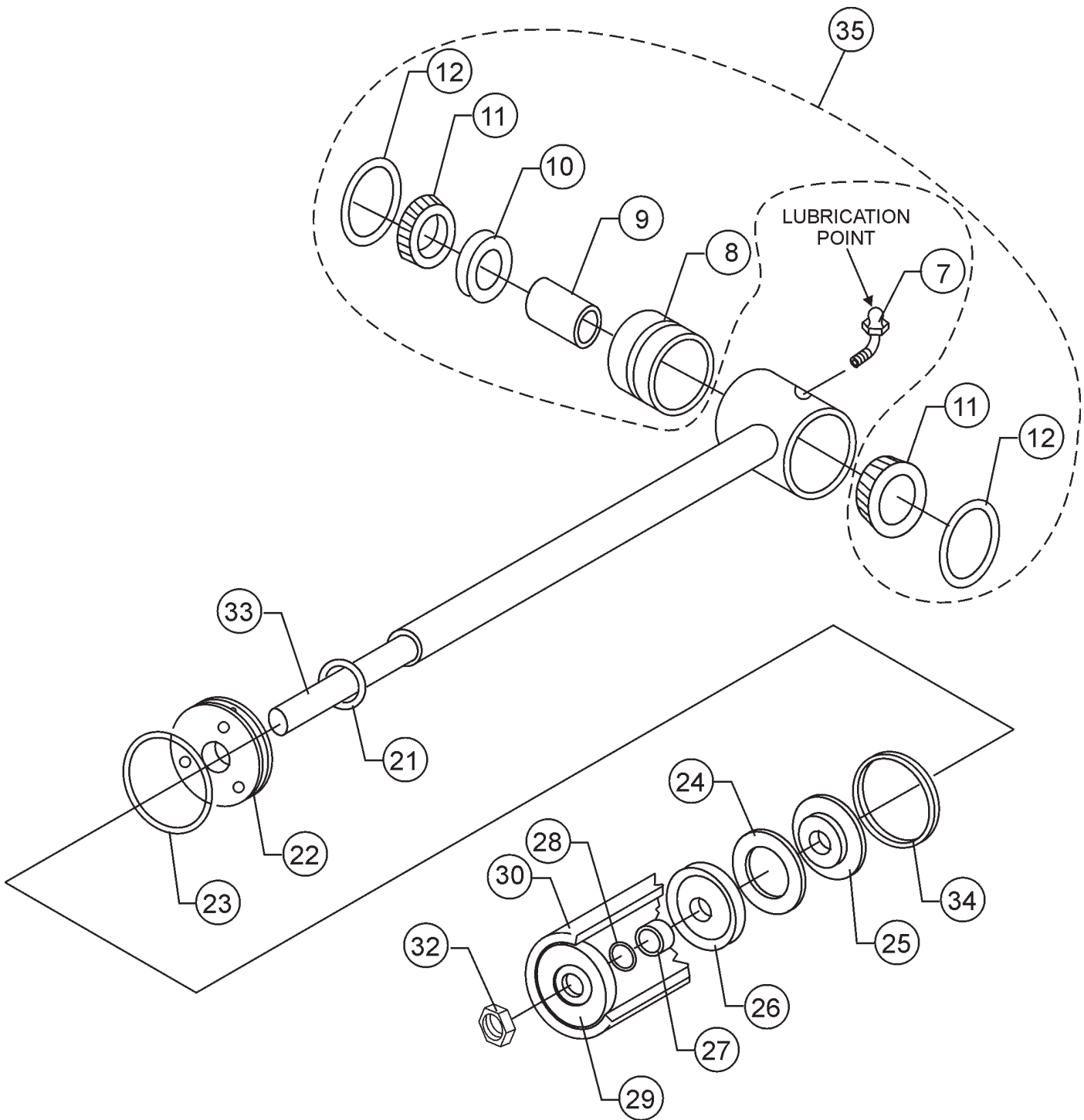
C-30HDNI PUMP — COMPENSATOR PISTON ROD ASSY.

COMPENSATOR PISTON ROD ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM14805	ROD END	1	INCLUDES ITEMS W/+
1A+	EM148053	BUSHING	1	
2	EM968446	NUT HEX, 3/4"-10 GR5	2	
3	EM14332	ROD SPRING GUIDE 3/4"	1	
4	EM14331	SPRING BACKING PLATE	1	
5	EM14333	SPRING RETURN	1	
6	EM14806	PISTON GUIDE ASSY.	1	
7	EM505490	FITTING	1	
8*	EM903163	BEARING CUP	1	
9*	EM20814	BEARING BUSHING	1	
10*	EM20813	SPACER	1	
11*	EM903162	BEARING CONE	2	
12*	EM20816	O-RING	2	
13	EM916001	FITTING	2	
14	EM510266	SCREW, HHC 1/2-13X3	1	
15	EM621	WASHER	2	
16	492584	NUT LOCK 1/2" DIA.	1	
17	EM14335	PISTON ROD	1	
18	EM14336	PISTON GUIDE	1	
19	EM505489	FITTING	1	
20	EM14334	COMPENSATOR SPRING	1	
21	EM18409	O-RING	1	
22	EM98032	PLATE, OILER	1	
23	EM14407	O-RING, OILER PLATE	1	
24	EM14410	RING & FELT HOLDER	1	
25	EM14408	BRONZE RING	1	
26	EM14411	PISTON CUP-BLACK	1	
26	EM98051	PISTON CUP-ORANGE	1	
27	EM14412	BUSHING 1 1/4 CRS	1	
28	EM18409	O-RING 1"	2	
29	EM14413	FACE PLATE	1	
30	EM18800HD	PUMPING CYLINDER	1	2-1/2" LIP SLEEVE
31	EM26525	O-RING, CYLINDER BOX	1	
32	EM968446	NUT HEX, 3/4-10	3	
33	EM16493	FELT RING	1	
34	EM148053	BUSHING	1	
35	EM20328TKIT	BEARING KIT	1	INCLUDES ITEMS W/*

C-30HDN PUMP — CONNECTING ROD - DRIVE SIDE ASSY.

CONNECTING ROD - DRIVE SIDE ASSY.



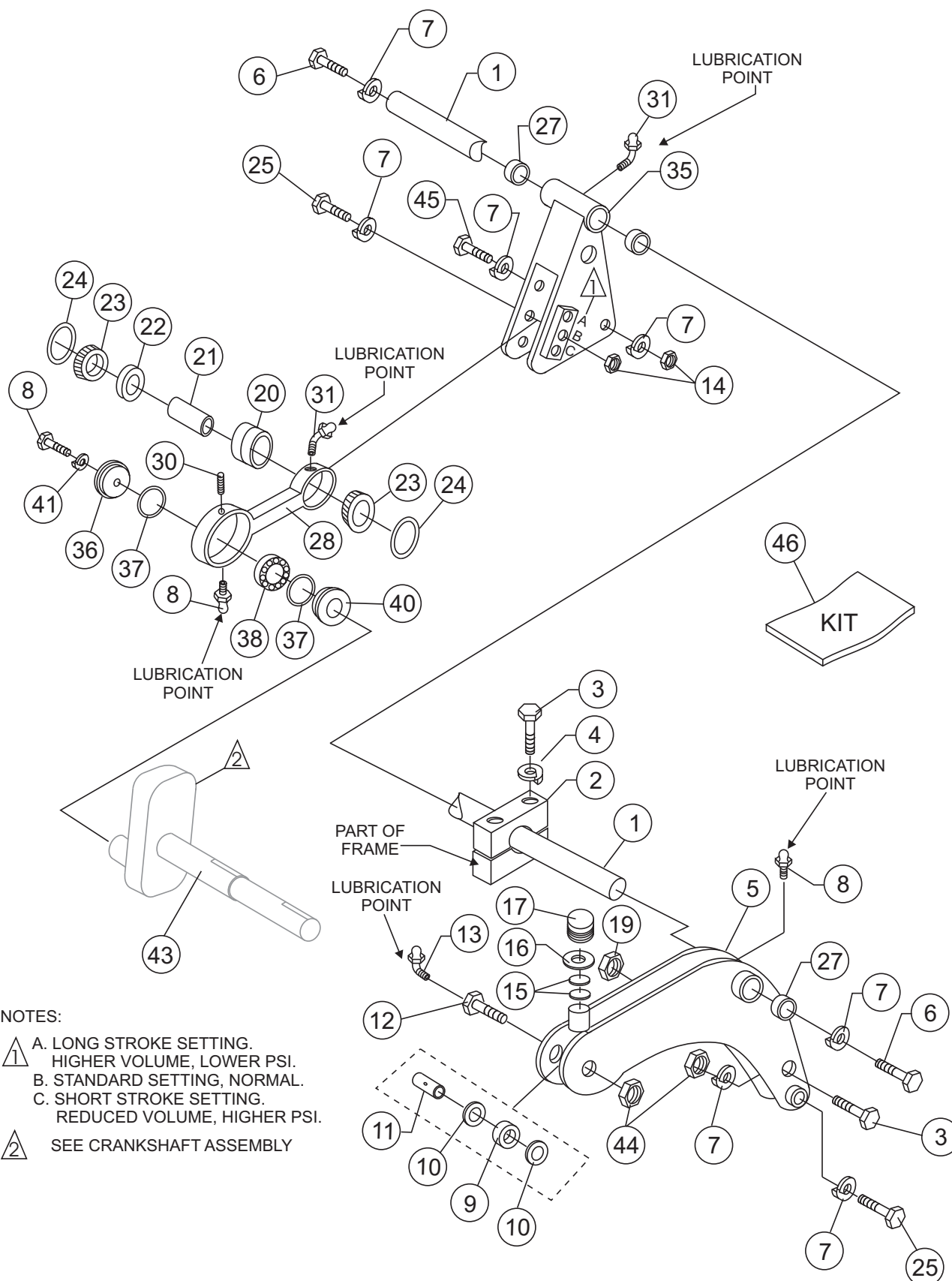
C-30HDN PUMP — CONNECTING ROD - DRIVE SIDE ASSY.

CONNECTING ROD - DRIVE SIDE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
7	EM505490	FITTING	1	
8*	EM903163	BEARING CUP	1	
9*	EM20814	BEARING BUSHING	1	
10*	EM20813	SPACER	1	
11*	EM903162	BEARING CONE	2	
12*	EM20816	O-RING	2	
21	EM18409	O-RING	1	
22	EM98032	PLATE, OILER	1	
23	EM14407	O-RING, OILER PLATE	1	
24	EM14408	BRONZE RING	1	
25	EM14410	RING AND FELT HOLDER	1	
26	EM14411	PISTON CUP-BLACK	1	
26	EM98051	PISTON CUP-ORANGE	1	
27	EM14412	BUSHING 1 1/4 CRS	1	
28	EM18409	O-RING 1"	2	
29	EM14413	FACE PLATE	1	
30	EM14807HD	CONCRETE CYLINDER	1 3-3/4 IN. LIP SLEEVE
32	EM968446	NUT HEX, 3/4-10	3	
33	EM14808	PISTON ROD ASSY.	1	
34	EM16493	FELT RING	1	
35	EM20328TKIT	BEARING KIT	1 INCLUDES ITEMS W/*

C-30HDNI (PRECISION) PUMP — ROCKER ASSY.

ROCKER ASSY.



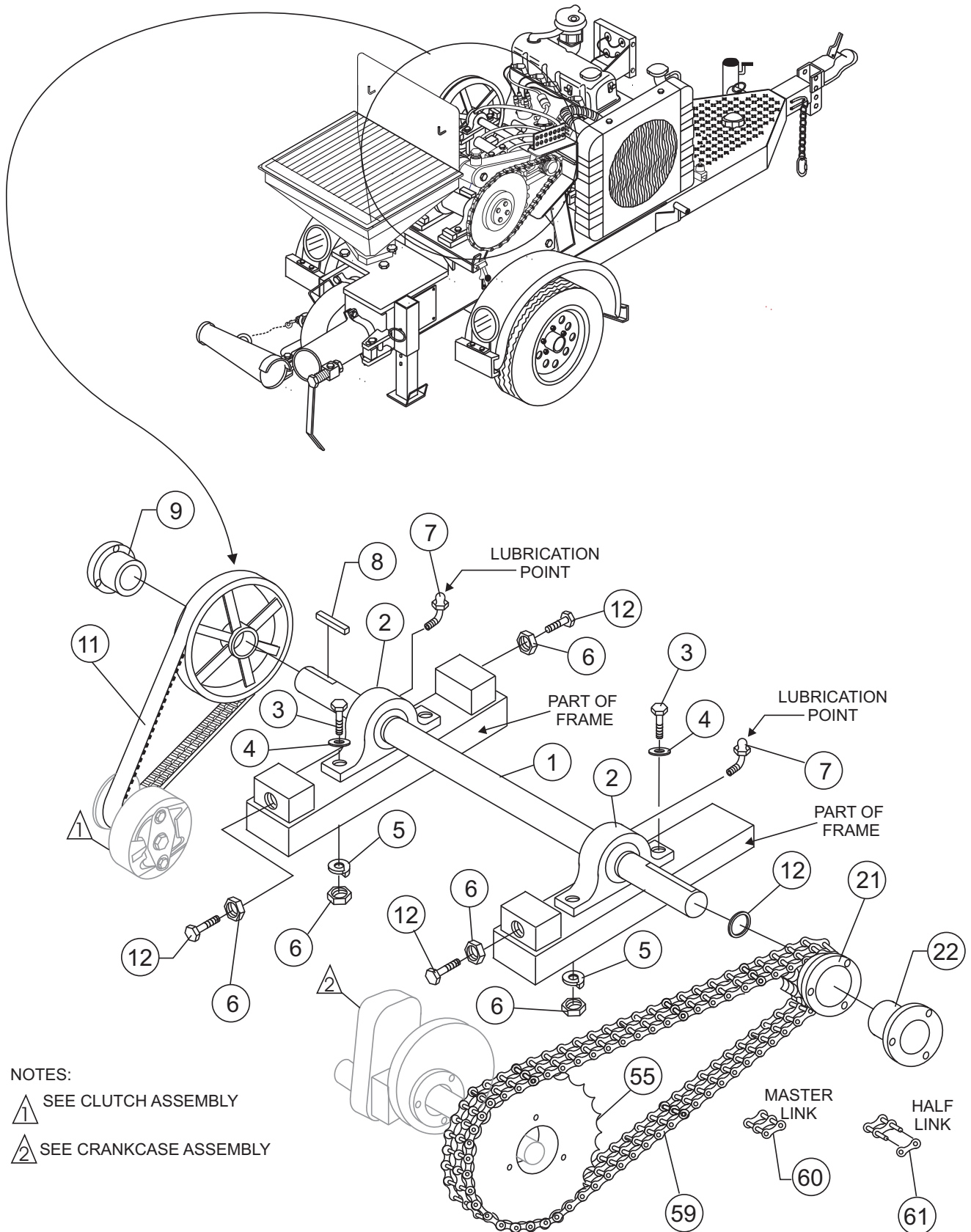
C-30HDNI (PRECISION) PUMP — ROCKER ASSY.

ROCKER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM14329	SHAFT ROCKER ARM	1	
2	EM14116	JOURNAL BLOCK	1	
3	EM963180	SCREW, HHC 3/4"-10X5	2	
4	EM923350	WASHER LOCK 3/4" SPRING STEEL	2	
5	EM14846	CAM ROCKER ARM	1	INCLUDES ITEMS W/+
6	EM133	BOLT 1"-14X2" HEX HEAD	1	
7	EM603	WASHER 1" LOCK	1	
8	EM916001	ZERK FITTING	1	
9	EM903092	BEARING ASSY.	1	
10	EM20347	BEARING SPACER	2	
11	EM402434	BEARING BUSHING	1	
12	EM20344	SPECIAL BOLT	1	
13	EM916001	ZERK FITTING	1	
14	EM417	NUT FLEX LOCK	1	
15	EM402456	OILER FELT	2	
16	EM607	WASHER, FLAT 5/8"	1	
17	EM20349	OILER PLUG, PLASTIC	1	
19	EM969038	NUT STOP REG. 3/4"-10	1	
20%	EM903163	BEARING CUP	1	
21%	EM20814	BEARING BUSHING	1	
22%	EM20813	SPACER	1	
23%	EM903162	BEARING CONE	2	
24%	EM20816	O-RING	2	
25	EM105	BOLT 1"-14X6" HEX HEAD	1	
27#+	EM203262	BRONZE BUSHING	4	
28	EM20364	CONNECTING ROD	1	
30	EM702	SCREW ALLEN HEAD 3/8"-16X3/4"	1	
31	EM505490	ZERK FITTING	1	
35	EM14328	ROCKER ARM ASSY.	1	INCLUDES ITEM W/#
36	EM402996	SEAL PLATE	1	
37	EM20336	O-RING	1	
38	EM903176	BEARING	1	
40	EM20338	SPACER	1	
41	EM923348	WASHER LOCK 5/8	1	
42	EM503982	BOLT 1/2-13X5	1	
43	EM98043	FORGED CRANKSHAFT	1	INCLUDES ITEM W/*
44	EM405	NUT, LOCK 3/4"-10	2	
45	EM202	BOLT, HEX 1-8 X 6 LG.	1	
46	EM20328TKIT	BEARING KIT	1	INCLUDES ITEMS W/%

C-30HDNI (PRECISION) PUMP — COUNTER-SHAFT ASSY.

COUNTERSHAFT ASSY.



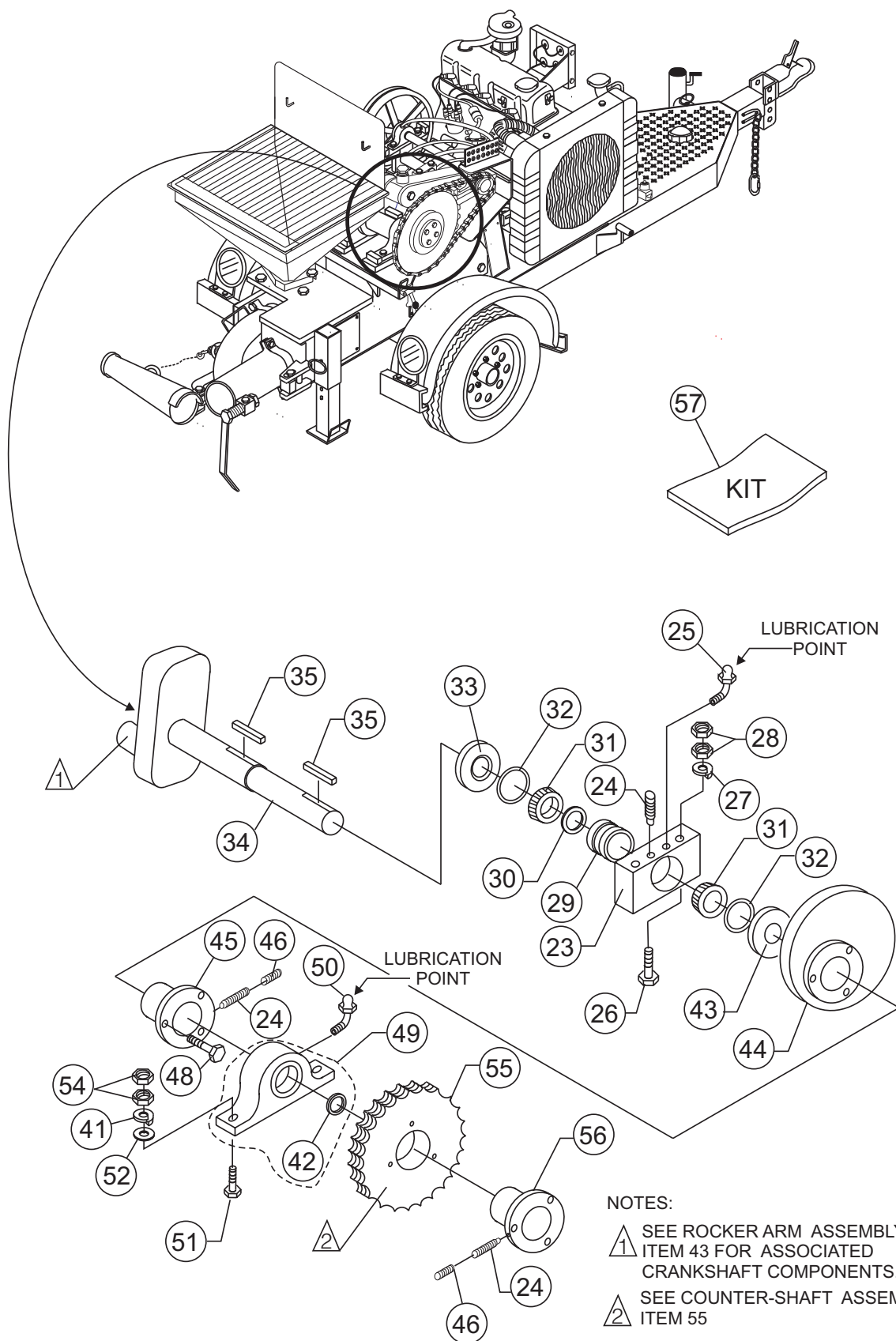
C-30HDNI (PRECISION) PUMP — COUNTER-SHAFT ASSY.

COUNTER-SHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM513073	COUNTER SHAFT	1	
2	EM14311	CAM BEARING	2	
3	EM124	BOLT HEX 1/2 X 1-3/4	2	
4	EM1621	WASHER 5"	2	
5	EM923346	WASHER, LOCK1/2"	2	
6	EM968011	NUT HEX, 1/2-13	2	
7	EM916001	FITTING	1	
8	EM14316	KEY WAY 3/8"X2.5"	1	
9	EM14314	BUSHING, PULLEY	1	
10	EM14313	PULLEY	1	
11	EM98089	BELT, DOUBLE 83 INCHES	1	
12	EM143111	SET COLLAR	1	
21	EM14318	SPROCKET, 13 TOOTH	1	
22	EM14319	BUSHING	1	
55	EM14307	SPROCKET 60 TEETH	1	
57	EM1702	SCREW ALLEN HEAD 3/8"-16X3/4"	1	
58	EM703	SET SCREW 3/8"-16X3/8"	1	
59	EM14308	CHAIN W/MASTER LINK	1	
60	EM26314	LINK MASTER	1	
61	EM26313	HALF LINK	1	

C-30HDNI (PRECISION) PUMP — CRANKSHAFT ASSY.

CRANKSHAFT ASSY.



NOTES:

- 1 SEE ROCKER ARM ASSEMBLY ITEM 43 FOR ASSOCIATED CRANKSHAFT COMPONENTS.
- 2 SEE COUNTER-SHAFT ASSEMBLY, ITEM 55

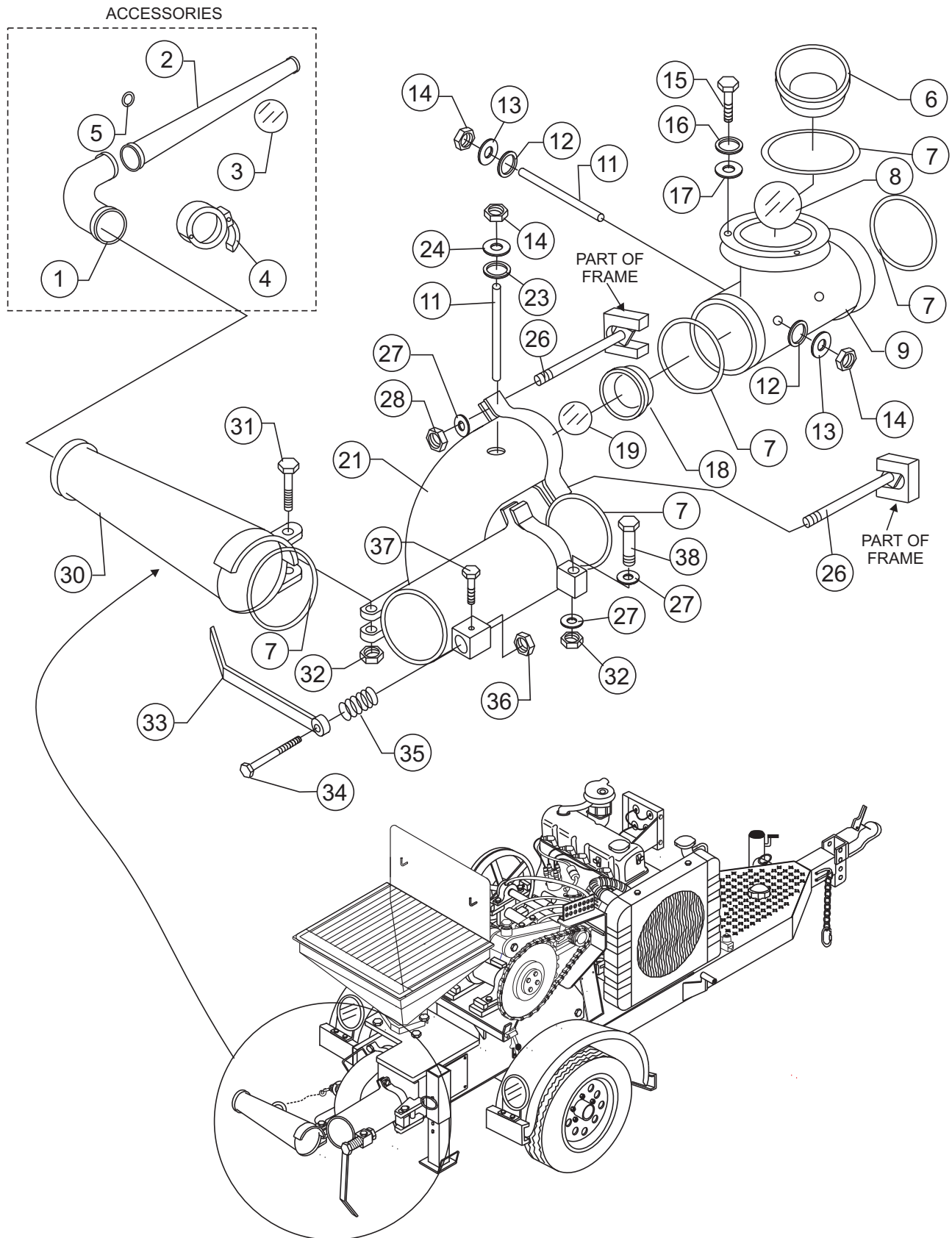
C-30HDNI (PRECISION) PUMP — CRANKSHAFT ASSY.

CRANKSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
23*	EM14303	BEARING BLOCK	1	
24*	EM702	SCREW, ALLEN HEAD 3/8-16X3/4	6	
25	EM505490	ZERK FITTING	1	
26	EM129	SCREW, HHC 3/4-10X8-1/2	2	
27	EM492628	LOCK WASHER 3/4	2	
28	EM968446	NUT HEX, 3/4-10 GR5	4	
29*	EM14324	CUP BEARING	1	
30*	EM14323	SPACER BEARING CONE	1	
31*	EM14325	CONE BEARING	2	
32*	EM14326	O-RING	2	
33*	EM14322	SPACER	1	
34*	EM98043	CRANKSHAFT, FORGED	1	
35*	EM14306	KEY CRANKSHAFT	2	
38	EM903176	BEARING	1	
40	EM402996	SEAL PLATE	1	
41	EM923348	WASHER, LOCK 5/8"	2	
42#	EM30139	SET COLLAR	1	
43*	EM14302	SPACER, CAM BUSHING	1	
44*	EM14300	CAM ASSY.	1	
45*	EM14301	BUSHING, CAM	1	
46*	EM703	SCREW ALLEN HEAD 3/8-16X3/8	6	
48*	EM175	BOLT 3/8-16X1-1/4	6	
49*	EM14304	BEARING-CAM COMPLETE	1	INCLUDES ITEM W/ #
50*	EM916001	ZERK FITTING	1	
51	EM128	BOLT 5/8-11X4" HEX HEAD	2	
52	EM620	WASHER, SPECIAL 5/8"	2	
54	EM968013	NUT HEX 5/8-11	4	
55*	EM14307	SPROCKET 60 TEETH	1	
56*	EM14309	BUSHING	1	
57	EM98043K	CRANKSHAFT FORGE ASSEMBLY	1	INCLUDES ITEM W/*

C-30HDNI (PRECISION) PUMP — MANIFOLD ASSY.

MANIFOLD ASSY.



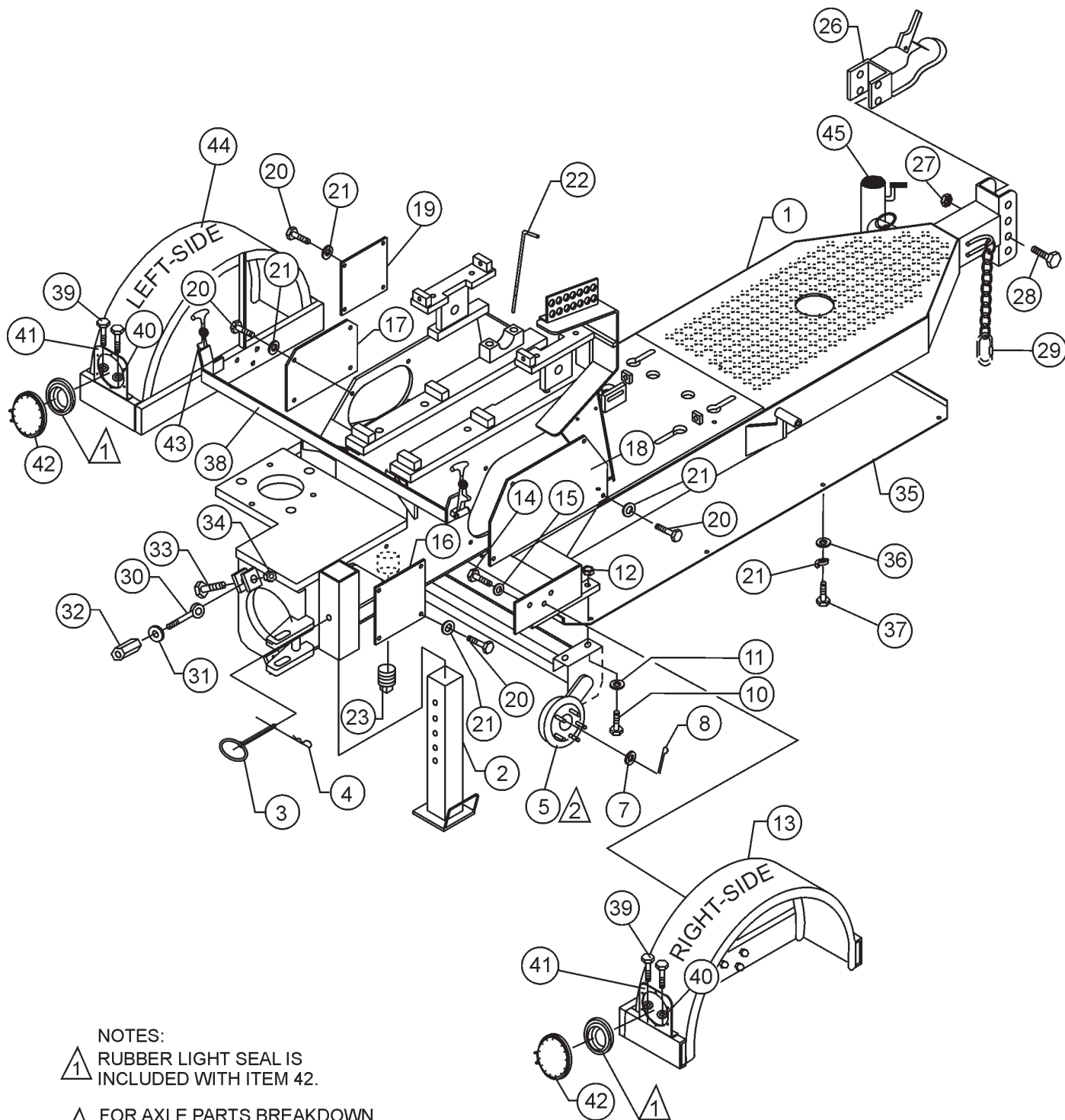
C-30HDNI (PRECISION) PUMP — MANIFOLD ASSY.

MANIFOLD ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM23946	ELBOW 3"X90 DEG.HD	1	
2	EM28004DD	REDUCER 3X2X36 HD	1	
3	EM2C0B	BALL 2" SPONGE	2	
4	EM28904	COUPLING 3" HD *CF*	2	
5	EM18409	O-RING 1"	4	
6	EM14843	UPPER DURASEAT	1	
7	EM18801	O-RING	6	
8	EM18804	BALL 4-1/2"	1	
9	EM14801	MANIFOLD T ASSY.	1	
11	EM136	PIN BALL STOP 3/4-16 x 8	3	
12	EM18409	O-RING	4	
13	EM618	WASHER SPECIAL	4	
14	EM968266	NUT JAM HEX 3/4-16	4	
15	EM104	BOLT 5/8-11X2" HEX HEAD	3	
16	EM923348	WASHER LOCK 5/8 SPRING	3	
17	EM505882	WASHER, 5/8	3	
18	EM14842	SEAT DURA LOWER	1	
19	EM14818	BALL 4"	1	
21	EM14819A	MANIFOLD ASSY. EASY OPEN	1	
23	EM18409	O-RING	2	
24	EM618	WASHER SPECIAL	2	
26	EM137	TEE-BOLT 3/4-10X14"	2	
27	EM619	WASHER 3/4"	2	
28	EM968446	NUT HEX 3/4"-10 GR5	2	
30	EM14850	EXHAUST GATE "H/D"	1	
31	EM963180	CAPSCREW 3/4-10X5 HEX HD G8	1	
32	EM969038	NUT STOP REG.3/4-10	2	
33	EM14845	ARM CLAMP	1	
34	EM135	BOLT 1-1/4" -12X7" HEX HD.	1	
35	EM14810	SPRING	1	
36	EM451	NUT 1-1/4" -12 LOCK	1	
37	EM160	BOLT 3/8-16X3/4"	1	
38	EM509329	SCREW HHC 3/4-10X6	1	

C-30HDNI (PRECISION) PUMP — FRAME ASSY.

FRAME ASSY.



NOTES:

- 1 RUBBER LIGHT SEAL IS INCLUDED WITH ITEM 42.
- 2 FOR AXLE PARTS BREAKDOWN SEE AXLE ASSEMBLY

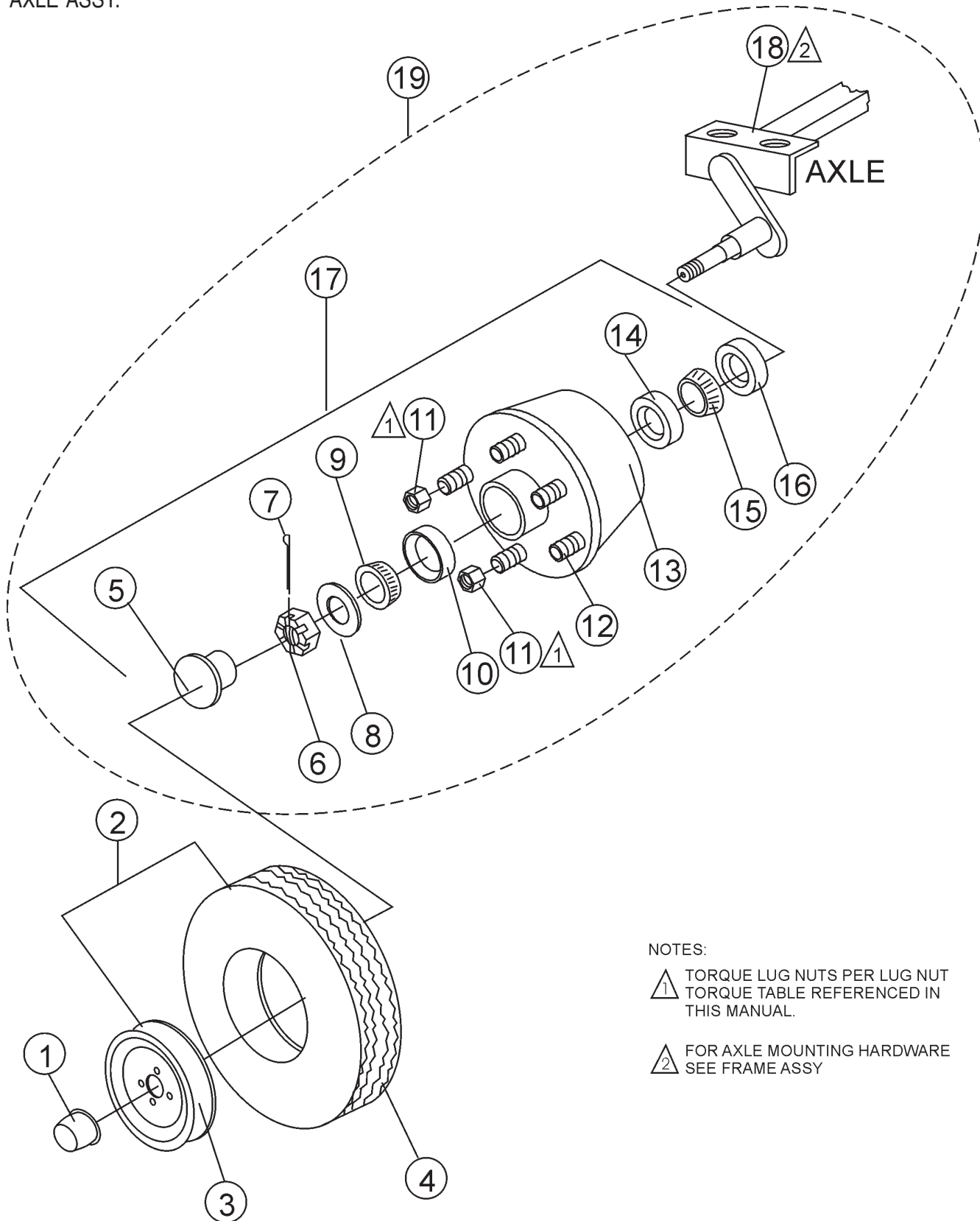
C-30HDNI (PRECISION) PUMP — FRAME ASSY.

FRAME ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM513085	FRAME ASSEMBLY	1	
2	EM70186	JACK STAND, REAR	1	
3	EM744	CLEVIS PIN 1/2" X 4"	1	
4	EM745	HAIR PIN C 5/8- 3/4"	1	
5	EM14600A	AXLE, ASSEMBLY	1	
7	501299	WASHER THICK 1"	2	
8	491689	KEY COTTER 1/8 X 2	2	
10	EM492396	SCREW HHC 1/2- 13 X 2	4	
11	EM621	WASHER .5"	4	
12	EM406	NUT LOCK 1/2" DIA.	4	
13	EM511418	FENDER RIGHT-SIDE	1	
14	981635	BOLT, HHC 1/2- 13 X 3/4	6	
15	6109180	WASHER LOCK 1/2"	6	
16	EM512251	COVER	1	
17	EM512252	COVER	1	
18	EM512253	COVER	1	
19	EM512250	COVER	1	
20	EM492309	SCREW, HHC	16	
21	0166 A	WASHER, LOCK 3/8"	24	
22	EM512263	ROD	1	
23	EM507895	PLUG, 2 1/2 NPT	2	
26	29228	HITCH, TONGUE 2"	1	
27	EM969023	NUT, HEX 5/8" NC	2	
28	EM507658	SCREW, HHC 5/8" NC 4-1/2 G5	2	
29	EM509947	LINK, QUICK	2	
30	EM14165	BOLT EYE	2	
31	EM619	WASHER 3/4" WILLIAM	2	
32	EM968002	NUT COUPLING 3/4- 10	2	
33	EM505121	SCREW 3/4"- 10 X 3 GR.5	2	
34	EM969038	NUT STOP REG. 3/4- 10	2	
35	EM513078	COVER, CHASSIS BOTTOM	1	
36	10136	WASHER, FLAT 3/8	8	
37	EM492264	HHCS. 3/8" NC X 1"	8	
38	EM929028	HOOD REST, STEEL	2	
39	492363	SCREW HHC 5/16- 18 X 3/4"	4	
40	EM923343	WASHER LOCK 5/16"	4	
41	EM265361	BRACKET LIGHT	2	
42	EM26536	TAIL LIGHT	2	
43	491010	HOOD FASTENER, RUBBER	2	
44	EM513087	FENDER LEFT-SIDE	1	
45	25610	JACK STAND, FRONT	1	

C-30HDNI (PRECISION) PUMP — AXLE ASSY.

AXLE ASSY.



NOTES:

△ 1 TORQUE LUG NUTS PER LUG NUT TORQUE TABLE REFERENCED IN THIS MANUAL.

△ 2 FOR AXLE MOUNTING HARDWARE SEE FRAME ASSY

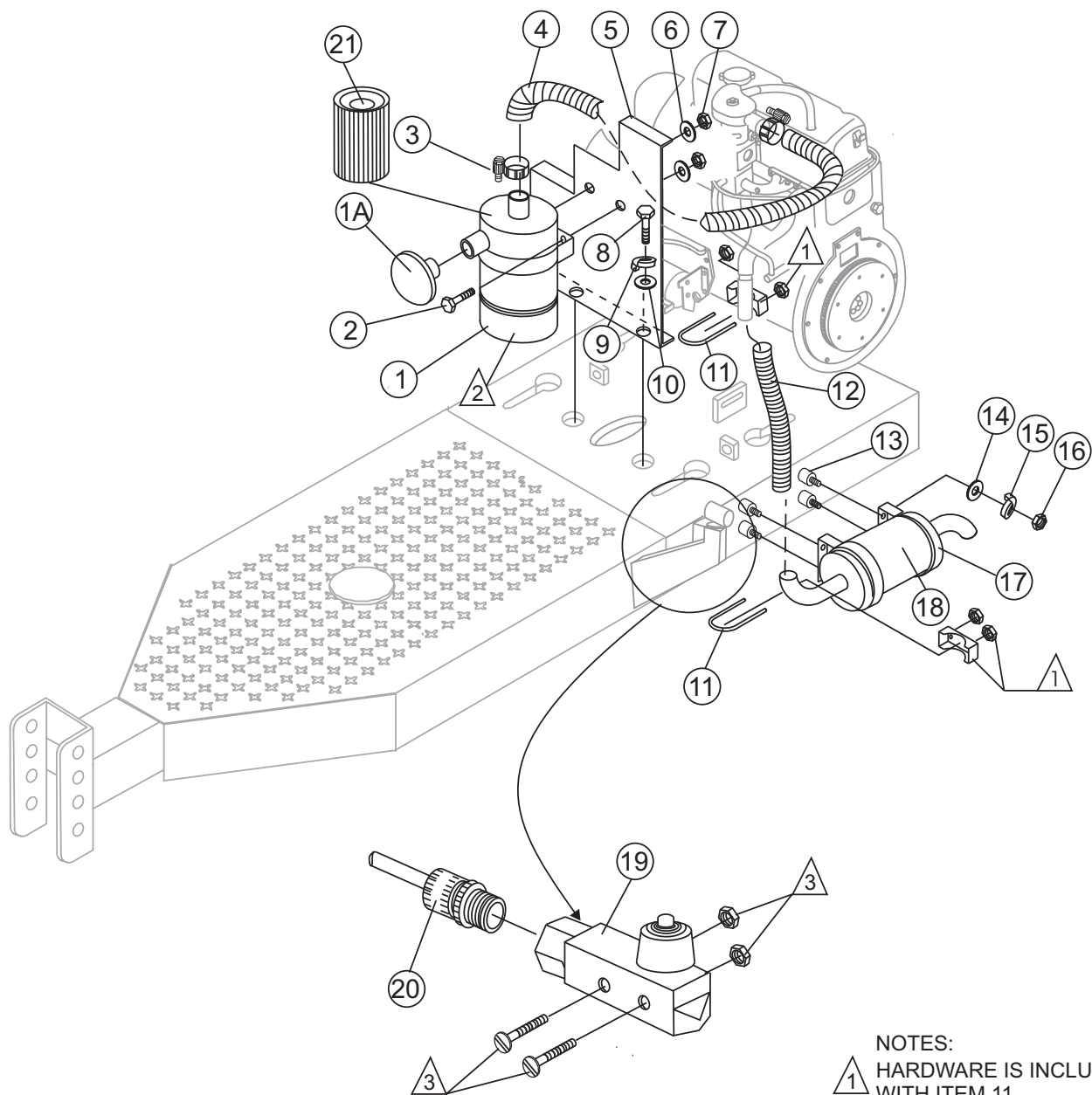
C-30HDNI (PRECISION) PUMP — AXLE ASSY.

AXLE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM26518	CAP 14" CHROME	2	
2	EM26615A	TIRE ASSY.....	2	INCLUDES ITEMS W/*
3*		WHEEL	2	CANNOT BE PURCHASED SEPARATELY
4*		TIRE 14"	2	CANNOT BE PURCHASED SEPARATELY
5#	EM26306	DUST COVER	2	
6#	EM968481	CASTLE NUT	2	
7	EM705	PIN, COTTER 3/16X1 1/2	2	
8#	EM26329	WASHER	2	
9#	EM903113	OUTER BEARING	2	
10#	EM903012	OUTER CUP	2	
11#	EM26519	NUT	12	
12#	EM20612	STUD	12	
13#	EM26300	HUB	2	
14#	EM903169	INNER CUP	2	
15#	EM903168	INNER BEARING	2	
16#	EM26305	GREASE SEAL	2	
17%	EM20601	HUB ASSEMBLY	2	INCLUDES ITEMS W/#
18%	EM14600	AXLE	1	
19	EM14600A	AXLE WITH HUBS INSTALLED	1	INCLUDES ITEMS W/%

C-30HDNI PUMP — MUFFLER, AIR FILTER, AND STOP SWITCH ASSY.

MUFFLER, AIR FILTER AND STOP SWITCH ASSY.



NOTES:

- ① HARDWARE IS INCLUDED WITH ITEM 11.
- ② AIR FILTER SUPPORT BRACKET IS INCLUDED WITH ITEM 1.
- ③ STOP SWITCH MOUNTING HARDWARE IS INCLUDED WITH ITEM 19.

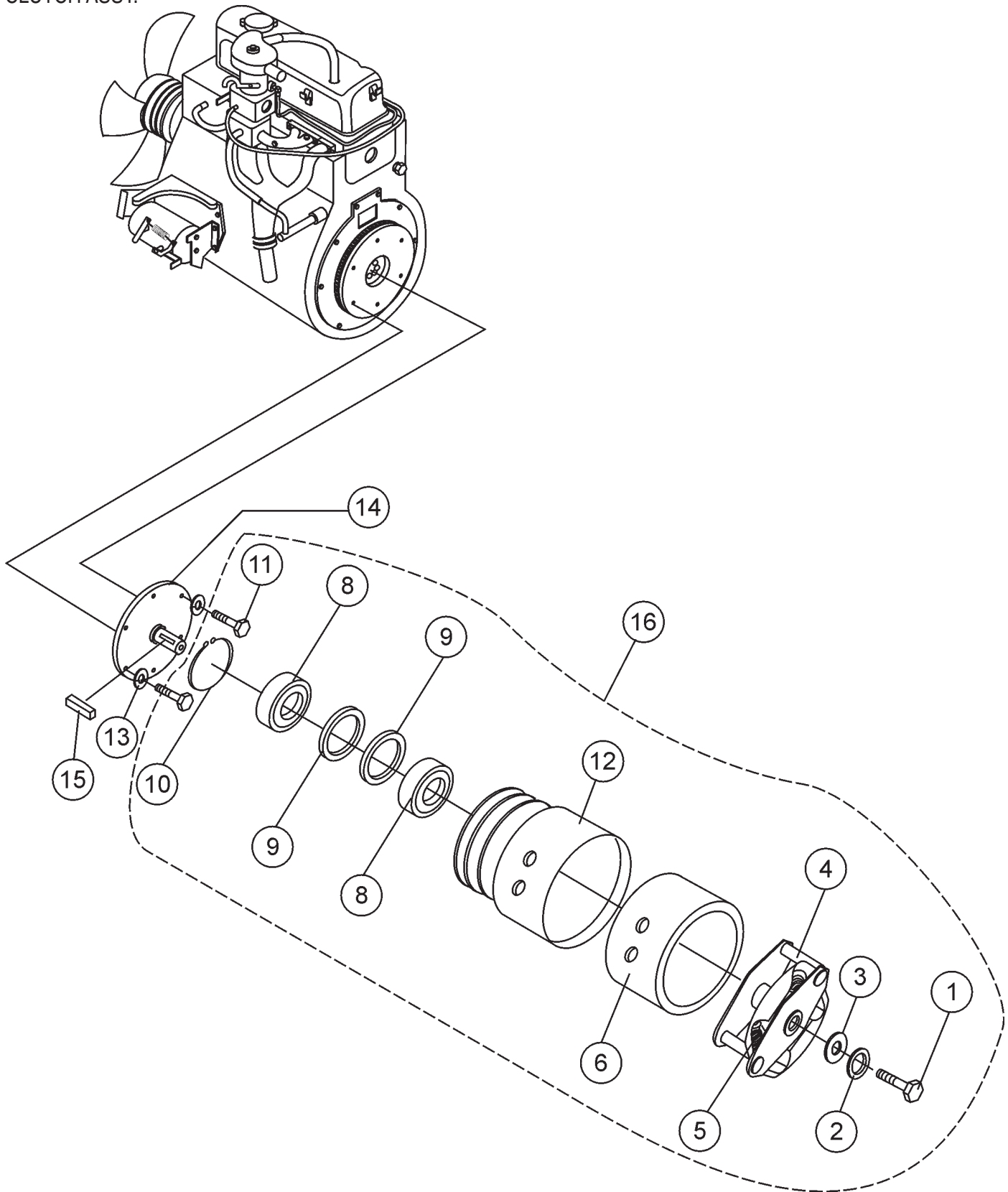
C-30HDNI PUMP — MUFFLER, AIR FILTER, AND STOP SWITCH ASSY.

MUFFLER, AIR FILTER AND STOP SWITCH ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM98076	FILTER, AIR	1	
1A	EM98168	PRECLEANER, AIR FILTER	1	
2	492364	SCREW, HHC 5/16- 18 X 1	2	
3	EM513126	CLAMP, AIR INTAKE	2	
4	EM513102	FLEX HOSE, AIR CLEANER	1	17.5" LENGTH 1-3/4 DIA.
5	EM513106	PANEL, FILTER SUPPORT	1	
6	EM492897	WASHER, FLAT 5/16	2	
7	492582	NUT, NYLOC 5/16- 18	2	
8	EM963610	HHCS 3/8 X1 G5	2	
9	0166A	WASHER, LOCK	2	
10	3019092	WASHER, FLAT	2	
11	506257	U-BOLT	2	
12	EM513111	FLEX TUBING, MUFFLER	1	10" LENGTH 1-1/2 DIA.
13	EM513110	BUSHING, 1/4- 20 RUBBER MUFFLER	4	
14	EM923057	WASHER, FLAT 1/4"	2	
15	2101402	WASHER, LOCK 1/4"	2	
16	TBD	NUT	4	
17	EM98078	CLAMP, 6" MUFFLER	2	
18	EM515598	MUFFLER	1	
19	EM14217	STOP SWITCH, ENGINE COVER	1	
20	EM491873	GLAND CONNECTOR	1	
21	ZE1	ELEMENT, AIR FILTER	1	

C-30HDNI (PRECISION) PUMP — CLUTCH ASSY.

CLUTCH ASSY.



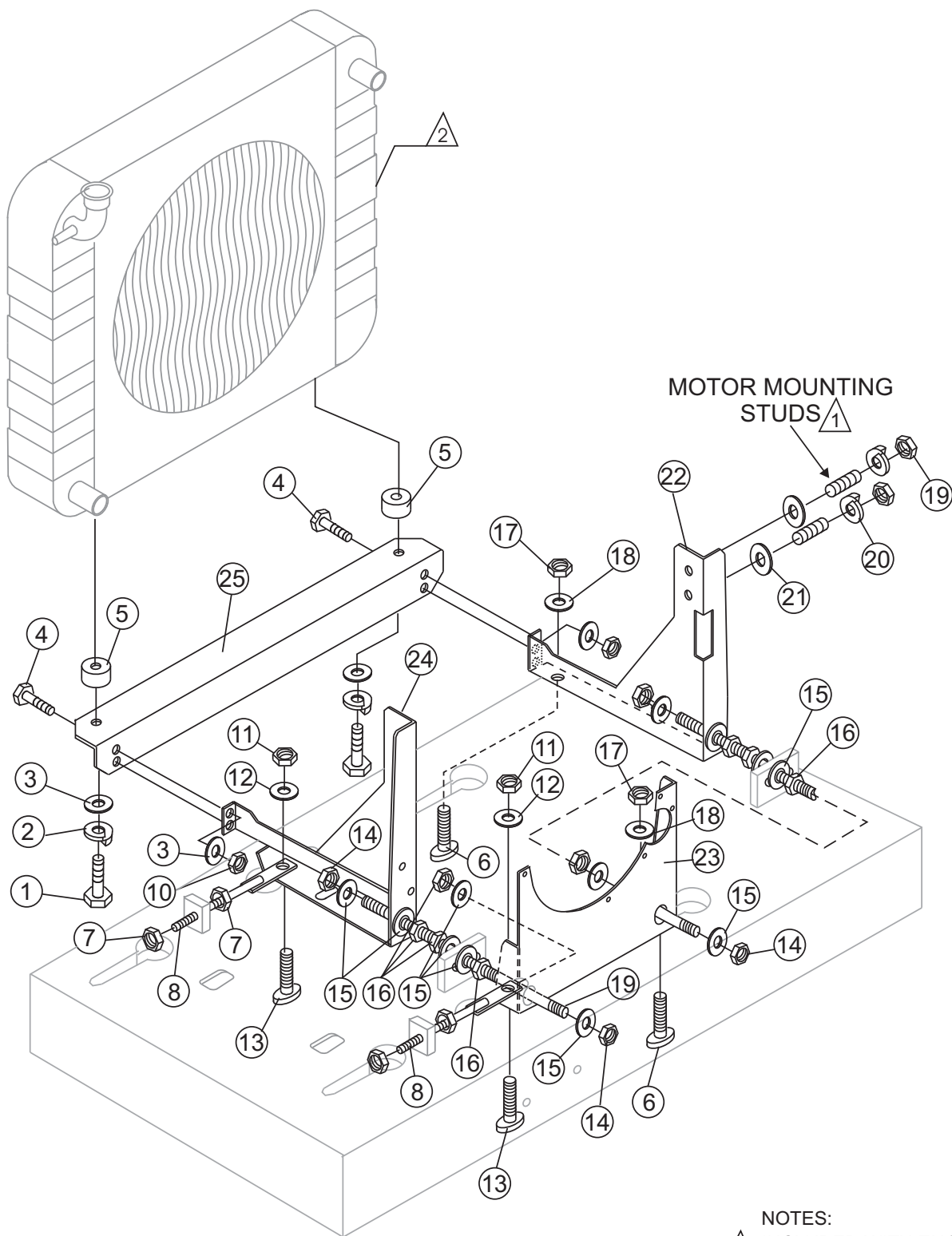
C-30HDNI (PRECISION) PUMP — CLUTCH ASSY.

CLUTCH ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	492395	SCREW, HHC 1/2- 13X1-3/4"	1	
2*	EM923346	WASHER, LOCK 1/2"	1	
3*	EM621	WASHER, FLAT 1/2" SPECIAL	1	
4*	EM26321	ROTOR ASSEMBLY	1	
5*	EM918050	CLUTCH SPRING	2	
6*	EM26310	CLUTCH LINING	1	
8*	EM902204	CLUTCH BEARING	2	
9*	EM926066	RETAINING RING	2	
10*	EM926053	RETAINING RING	1	
11*	EM508342	SCREW, HHC M8X25 PI.25	6	
12*	EM26322	CLUTCH HOUSING W/LINING	1	
13	0166A	WASHER, LOCK 3/8"	6	
14	EM98071	SHAFT STUB (FLANGE), ENGINE	1	
15	EM26348	KEY	1	
16	EM14320	CLUTCH COMPLETE ASSEMBLY	1 INCLUDES ITEMS W/*

C-30HDNI PUMP — RADIATOR AND ENGINE MOUNTING BRACKET ASSY.

RADIATOR AND ENGINE MOUNTING BRACKET ASSY.



NOTES:
1 INCLUDED WITH ENGINE.



2 SEE RADIATOR ASSEMBLY



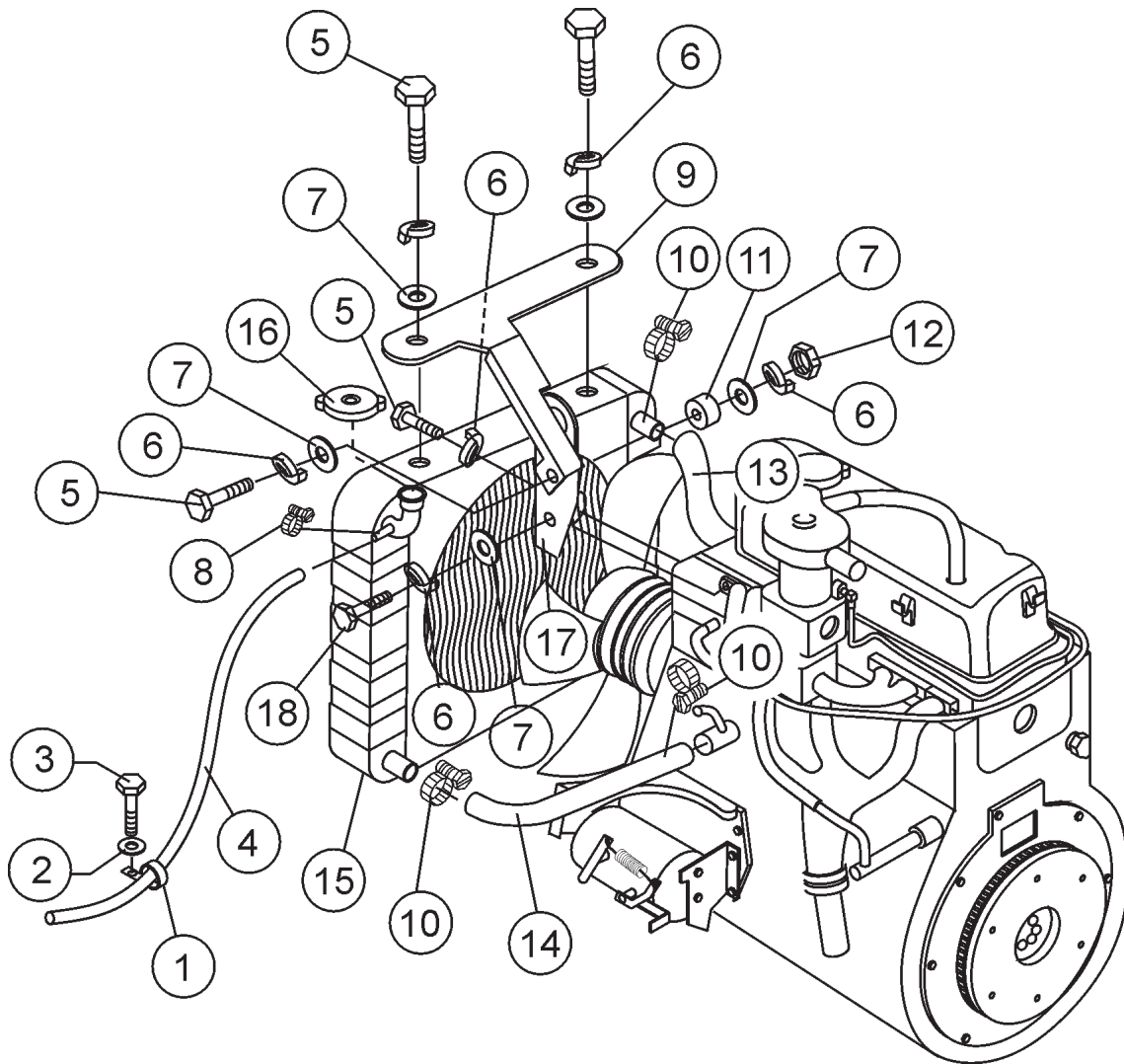
C-30HDNI PUMP — RADIATOR AND ENGINE MOUNTING BRACKET ASSY.

RADIATOR AND ENGINE MOUNTING BRACKET ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM64900014	SCREW, HHCS 3/8 - 16 x 7/8"	2	
2	EM64700071	WASHER, LOCK 3/8	2	
3	EM64700070	WASHER, FLAT .375 x .0734 x .065	6	
4	EM64900156	BOLT, HEX 5/16 - 16 x 1	4	
5	EM65500003	ISOLATOR 38 x 25, 3/8-16	2	
6	EM513094	SCREW, SQUARE 1/2- 13 x 1-3/4"	2	
7	6109160	NUT, HEX 1/2- 13	4	
8	EM513040	TENSIONER, ADJUSTMENT	2	
10	EM64800145	NUT, HEX 5/16 - 18`	4	
11	6109160	NUT, HEX 1/2- 13	2	
12	6109180	WASHER, LOCK 1/2"	2	
13	513095	SCREW, SQUARE 1/2- 13X2	2	
14	492584	NUT, NYLOC 1/2- 13	4	
15	492600	WASHER, FLAT 1/2"	12	
16	6109160	NUT, HEX 1/2- 13	8	
17	6109160	NUT, HEX 1/2- 13	2	
18	6109180	WASHER, LOCK 1/2"	2	
19	EM64800124	NUT, HEX M8-1.25	2	
20	EM94700080	WASHER, LOCK 8 MM	2	
21	EM94700079	WASHER, FLAT 8MM NARROW	2	
22	EM20200043	LEFT FRONT SUPPORT	1	
23	EM20100042	LEFT REAR SUPPORT	1	
24	EM20200042	LEFT RIGHT SUPPORT	1	
25	EM20500034	BRACKET, CROSS	1	

C-30HDNI PUMP — RADIATOR, MOUNTING BRACKET AND HOSES ASSY.

RADIATOR, BRACKET AND HOSES ASSY.



C-30HDNI PUMP — RADIATOR, MOUNTING BRACKET AND HOSES ASSY.

RADIATOR, BRACKET AND HOSES ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM513116	CLAMP, 1/2" HOSE	1	
2	2101402	WASHER, FLAT 1/4"	1	
3	492268	HHCS 1/4" x 3/4"	1	
4	EM20427	HOSE, OVERFLOW	1	
5	EM64900014	HHCS, 3/8 -16 x 7/8"	1	
6	EM94700071	WASHER, LOCK 3/8"	1	
7	EM64700070	WASHER, FLAT .375 x .0734 x .065"	1	
8	506208	CLAMP, HOSE	1	
9	EM21000092	BRACKET, UPPER RADIATOR	1	
10	EM68800003	CLAMP, HOSE WORM DRIVE	4	
11	EM65508003	ISOLATOR	1	
12	EM64800155	NUT, HEX 3/8-16	1	
13	EM98079	RADIATOR HOSE, UPPER	1	
14	EM98080	RADIATOR HOSE, LOWER	1	
15	EM98072	RADIATOR	1	
16	EM69300001	CAP, RADIATOR 13 PS1	1	
17	EM21000091	BRACKET, UPPER RADIATOR	1 ISOLATOR MOUNT
18	EM64900101	HHCS, M8-1.25 X 20	1	

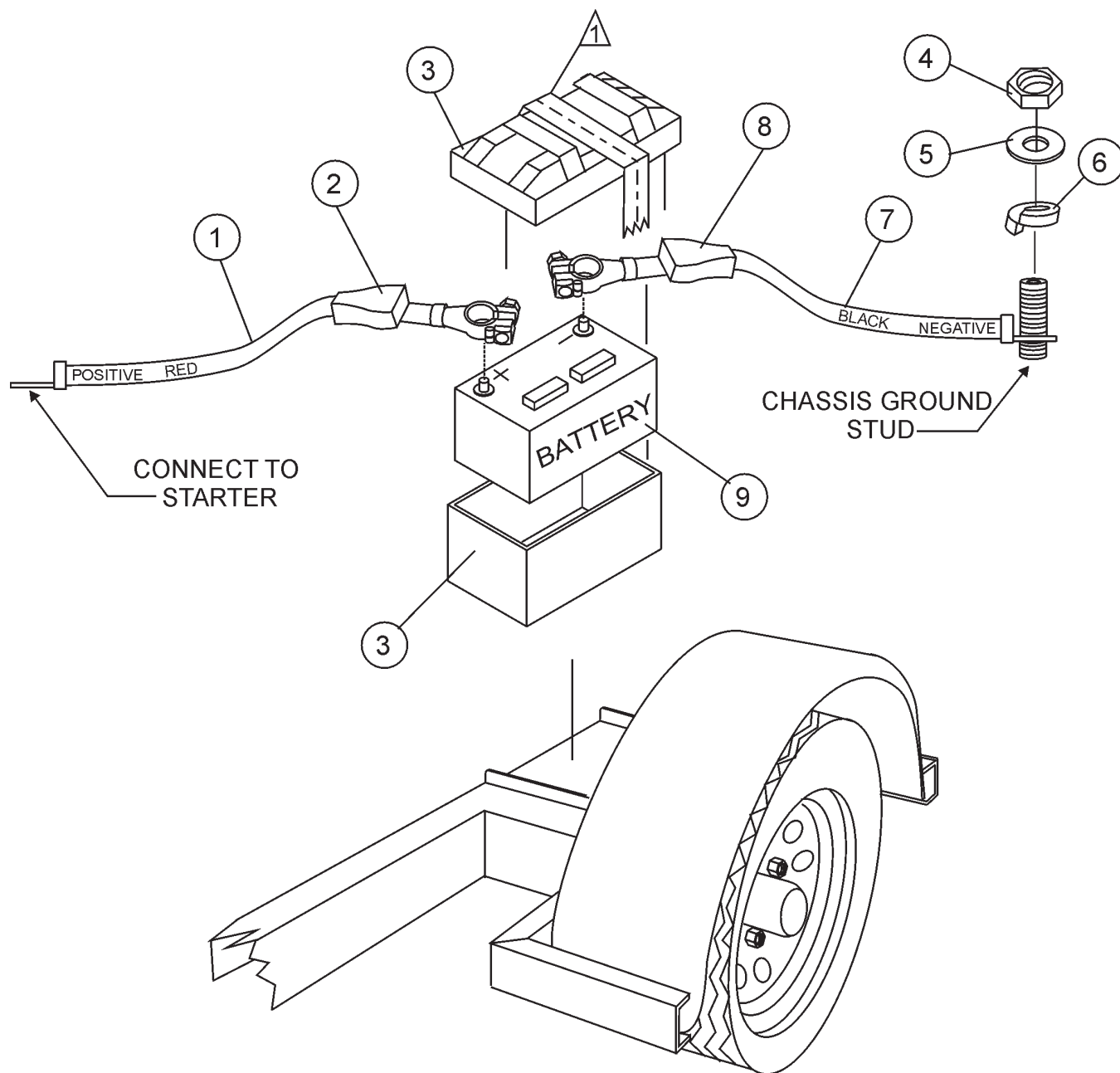
C-30HDNI (PRECISION) PUMP — CONTROL BOX ASSY.

CONTROL BOX ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM513130	FRONT PANEL OVERLAY	1	
2	P2554	KNOB, THROTTLE CONTROL	1	
3	P2204	POTENTIOMETER, THROTTLE CONTROL	1	
4	P2300	LED, MALFUNCTION INDICATOR LED	1	
5	P7655	LABEL, MALFUNCTION INDICATOR	1	
6	12305	RED PILOT LENS DIA 5/8"	3	
7	51908	12 VDC BULB	3	
8	10958	IGNITION SWITCH	1	
8A	508239	CONNECTOR, PLASTIC	1	
9	11078	IGNITION SWITCH KEY	1	
10	EM40711	SWITCH, PUMPING CONTROL	1	
11	EM513076	CONTROL BOX	1	
12	EM26789	RECEPTACLE (REMOTE)	1	
13	506222	HOURMETER	1	

C-30HDNI (PRECISION) PUMP — BATTERY ASSY.

BATTERY ASSY.



NOTES:

- ⚠ BATTERY HOLD-DOWN STRAP IS INCLUDED WITH ITEM 3, P/N 34506

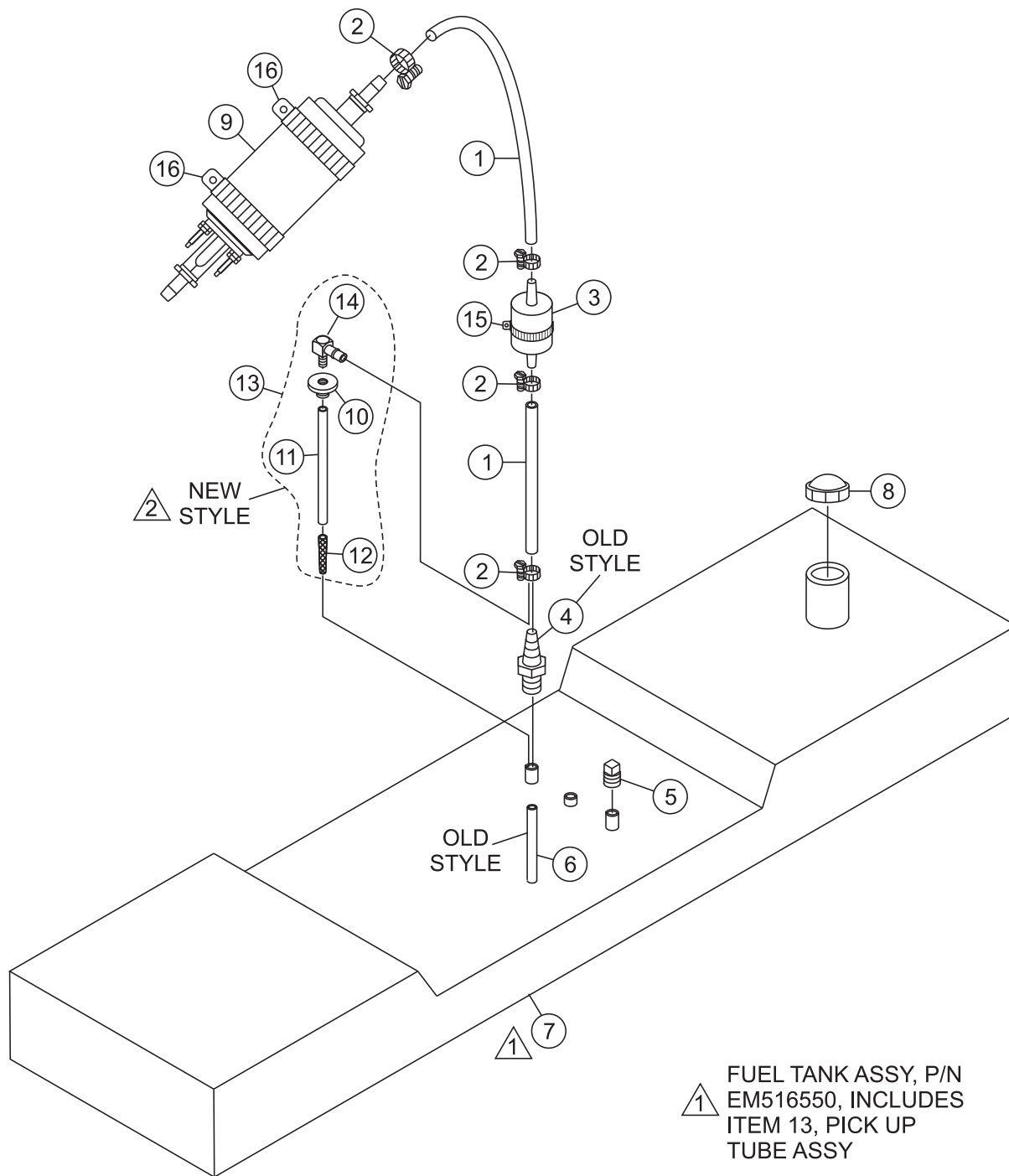
C-30HDNI (PRECISION) PUMP — BATTERY ASSY.

BATTERY ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM14705	CABLE, POSITIVE BATTERY	1	
2	EM506266	COVER, POSITIVE TERMINAL	1	
3	10318	BOX, BATTERY	1	
4	EM492541	NUT, HEX 5/16- 18	1	
5	EM923023	WASHER, FLAT 5/16	1	
6	EM923343	WASHER, LOCK 5/16	1	
7	EM20720	CABLE, NEGATIVE BATTERY	1	
8	EM505624	COVER, NEGATIVE TERMINAL	1	
9	EM491344	BATTERY, 12 VOLT	1	

C-30HDNI (PRECISION) PUMP — FUEL TANK ASSY.

FUEL TANK ASSY.



① FUEL TANK ASSY, P/N EM516550, INCLUDES ITEM 13, PICK UP TUBE ASSY

② ITEM 13, PICK UP TUBE ASSY, REPLACED ITEM 6, PIPE, AND ITEM 4, ADAPTER AFTER JULY 2005.

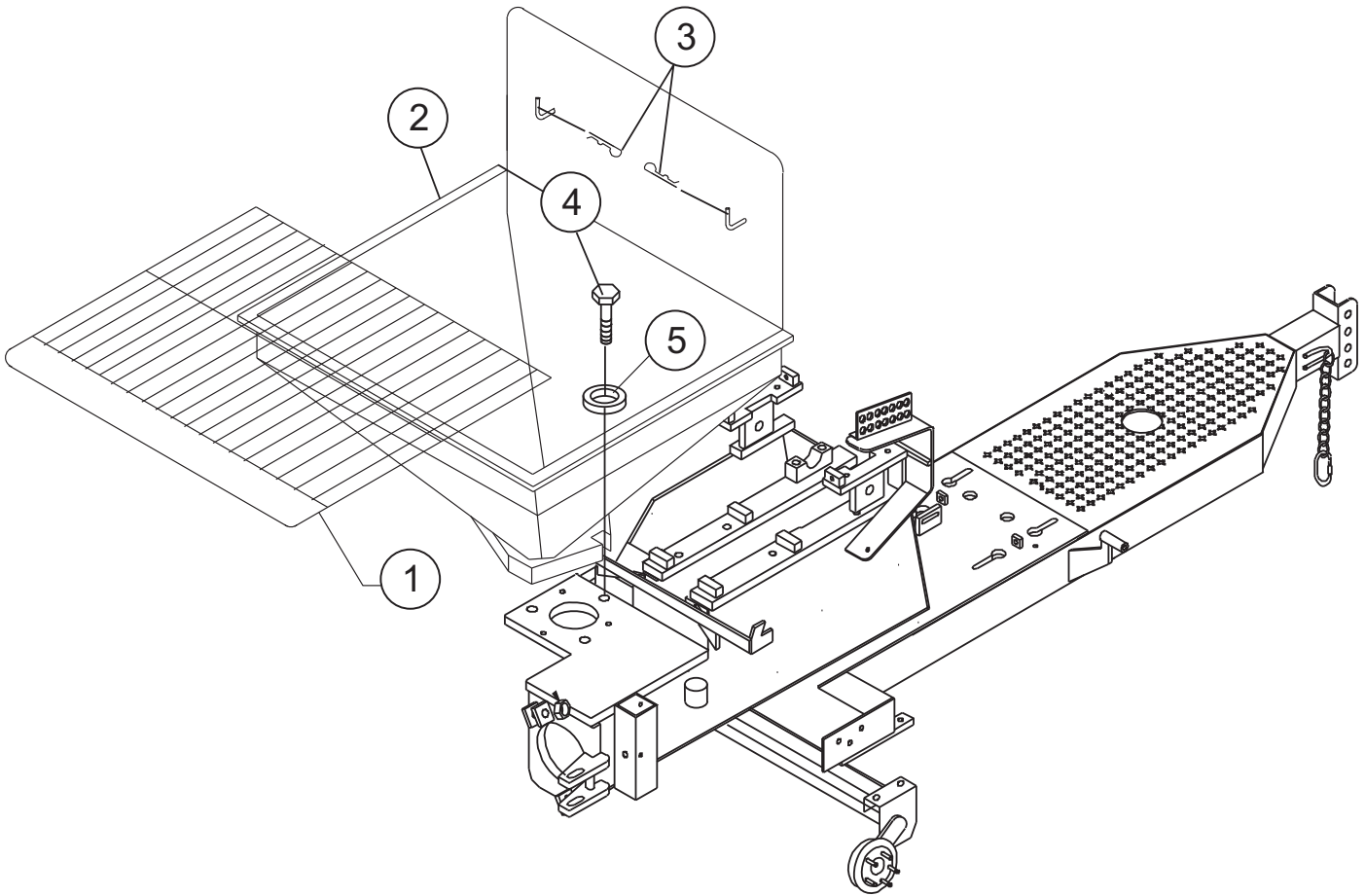
C-30HDNI (PRECISION) PUMP — FUEL TANK ASSY.

FUEL TANK ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	TBD	HOSE, FUEL 3/8 IN.	1	
2	EM506208	CLAMP, HOSE	1	
3	C282224	FILTER, FUEL	1	
4	TBD	ADAPTER.....	1	BEFORE JULY 2005
5	EM491210	PLUG, 1/4 IN.	1	
6	EM505594	PIPE, 5/16 COPPER.....	1	BEFORE JULY 2005
7	514722	FUEL TANK	1	BEFORE JULY 2005
7	EM516550	FUEL TANK ASSY	1	INCLUDES ITEM 13 AFTER JULY 2005
8	2108	FUEL CAP	1	
9	C282-238	PUMP, FUEL	1	
10#	19633	BUSHING	1	AFTER JULY 2005
11#	60058	HOSE, 4-1/2"	1	AFTER JULY 2005
12#	12009	SCREEN	1	AFTER JULY 2005
13	EM516533	PICK UP TUBE ASSY	1	INCLUDES ITEMS W/# AFTER JULY 2005
14#	12008	FITTING	1	AFTER JULY 2005
15	C282314	CLAMP, FUEL FILTER, #34 2-1/8" ID	1	
16	C282315	CLAMP, FUEL PUMP, #26 1-5/8" ID	2	

C-30HDNI (PRECISION) PUMP — HOPPER ASSY.

HOPPER ASSY.



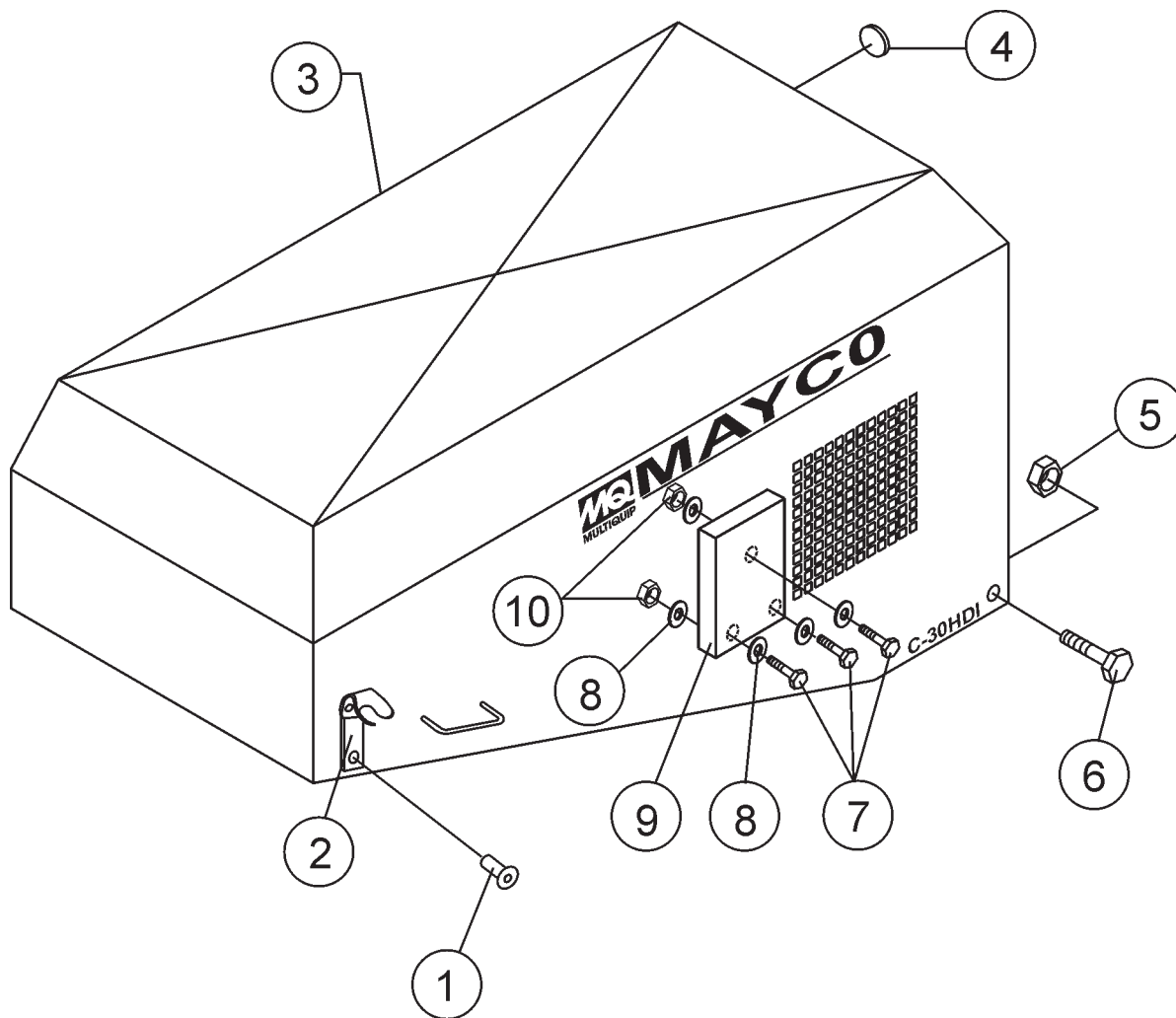
C-30HDNI (PRECISION) PUMP — HOPPER ASSY.

HOPPER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM14159	HOPPER SCREEN	1	
2	EM14141	HOPPER	1	
3	EM925191	PIN, HAIR	2	
4	EM104	BOLT, 5/8"-11X2" HEX HEAD	3	
5	EM507599	WASHER 5/8" FLAT	3	

C-30HDNI (PRECISION) PUMP — HOOD ASSY.

HOOD ASSY.



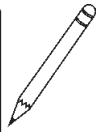
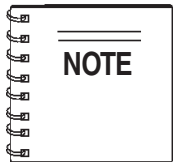
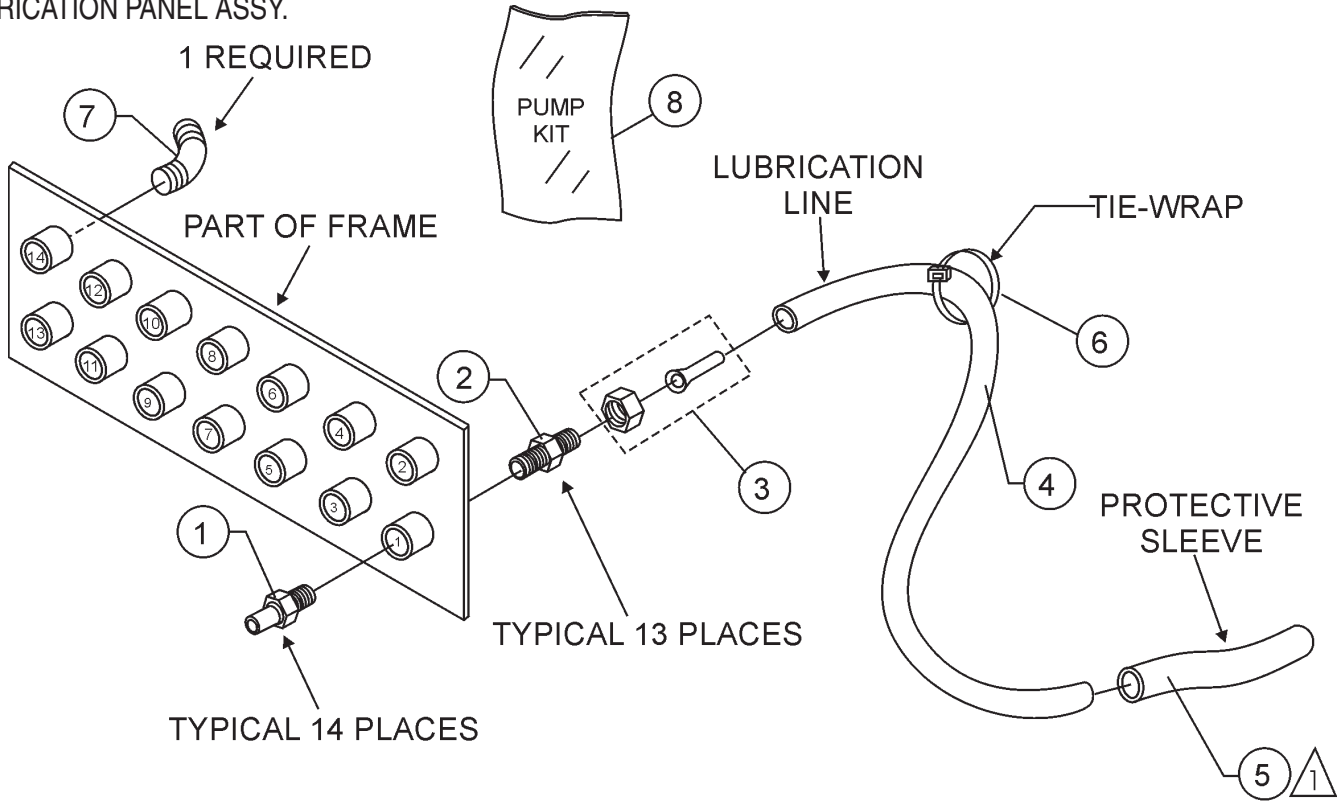
C-30HDNI (PRECISION) PUMP — HOOD ASSY.

HOOD ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	503723	RIVET	4	
2	491010	LATCH KIT	2	
3	EM513120	HOOD ASSY.	1	
4	490937	BUMPER, RUBBER	2	
5	EM406	NUT 1/2"-13 HEAVY HEX	2	
6	EM124	BOLT 1/2" DIA-NC X4" G5	2	
7	EM963003	SCREW, HHC 1/4-20 X 3/4	3	
8	EM923057	WASHER	3	
9	29057	MANUAL HOLDER	1	
10	EM969079	NUT LOC NYLON 1/4	3	
11	RAL1003S	PAINT, SPRAY CAN 12 OZ. (YELLOW)	AR	
12	RAL1003G	PAINT, GALLON (YELLOW)	AR	

C-30HDNI (PRECISION) PUMP — LUBRICATION PANEL ASSY.

LUBRICATION PANEL ASSY.



Grease **daily**, two to three shots of #2 multi-purpose automotive grease. Over-greasing any bearing will not damage the machine.

NOTES:

⚠ PLACE PROTECTIVE SLEEVE OVER LUBRICATION LINES 1 THROUGH 6.

<u>POSITION</u>	<u>LOCATION</u>	<u>LENGTH OF LINES</u>
1	COMPENSATOR ROD	28"
2	COMPENSATOR ROD	31"
3	COMPENSATOR ROD	28"
4	LOWER ROCKER ARM COMPENSATOR ROD	34"
5	LOWER CONNECTING ROD- DRIVE SIDE	10"
6	LOWER ROCKER ARM - DRIVE SIDE	15"
7	UPPER ROCKER ARM - COMPENSATOR SIDE	28"
8	UPPER ROCKER ARM - DRIVE SIDE	26"
9	COUNTER SHAFT BEARING - SPROCKET SIDE	20"
10	COUNTER SHAFT - PULLEY SIDE	20"
11	UPPER CONNECTING ROD - DRIVE SIDE	40"
12	CRANKSHAFT BEARING BLOCK	42"
13	CAM BEARING	42"
14	CRANKSHAFT BEARING FLANGE	20"
	TOTAL LENGTH OF LINES REQUIRED	384"

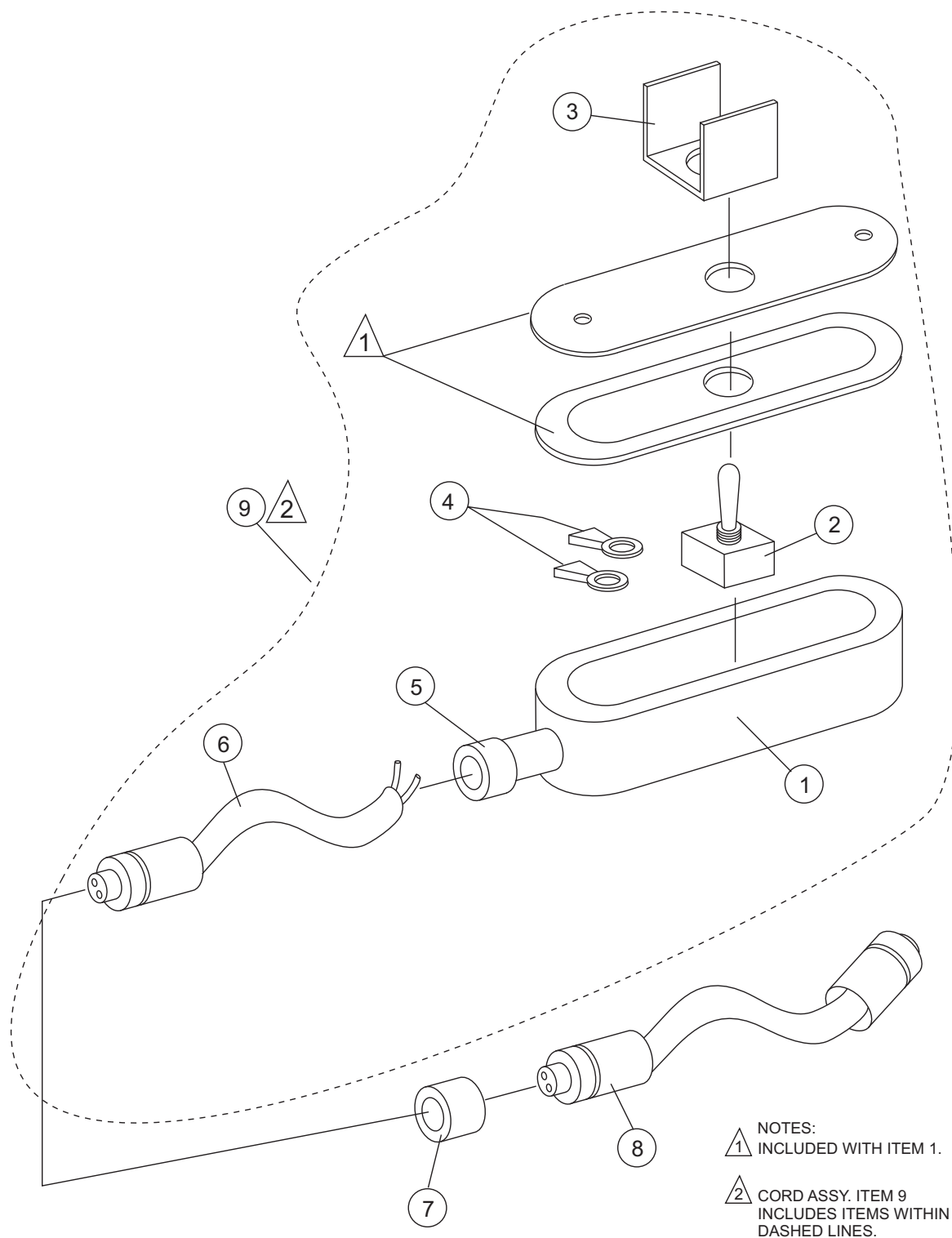
C-30HDNI (PRECISION) PUMP — LUBRICATION PANEL ASSY.

LUBRICATION PANEL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	EM916001	FITTING, GREASE 1/8" NPT	14	
2*	EM505489	STRAIGHT FITTING 1/8" NPT	13	
3*	505534	COUPLING W/NUT 1/8" NPT	14	
4*	EM505516	PLASTIC HOSE LINE 1/4" DIA. AR.....		1FT=1PC
5*	EM490531	PROTECTIVE SLEEVE 3/8" (HOSE) AR.....		1FT=1PC
6*	EM491028	TIE-WRAP 2.5 x 95 MM	AR	
7*	EM505490	ADAPTER, 90 DEGREE ELBOW	1	
8	EM512659	KIT, LUBRICATION	1	INCLUDES ITEMS W/*

C-30HDNI (PRECISION) PUMP — REMOTE CONTROL CABLE ASSY.

REMOTE CONTROL CABLE ASSY.



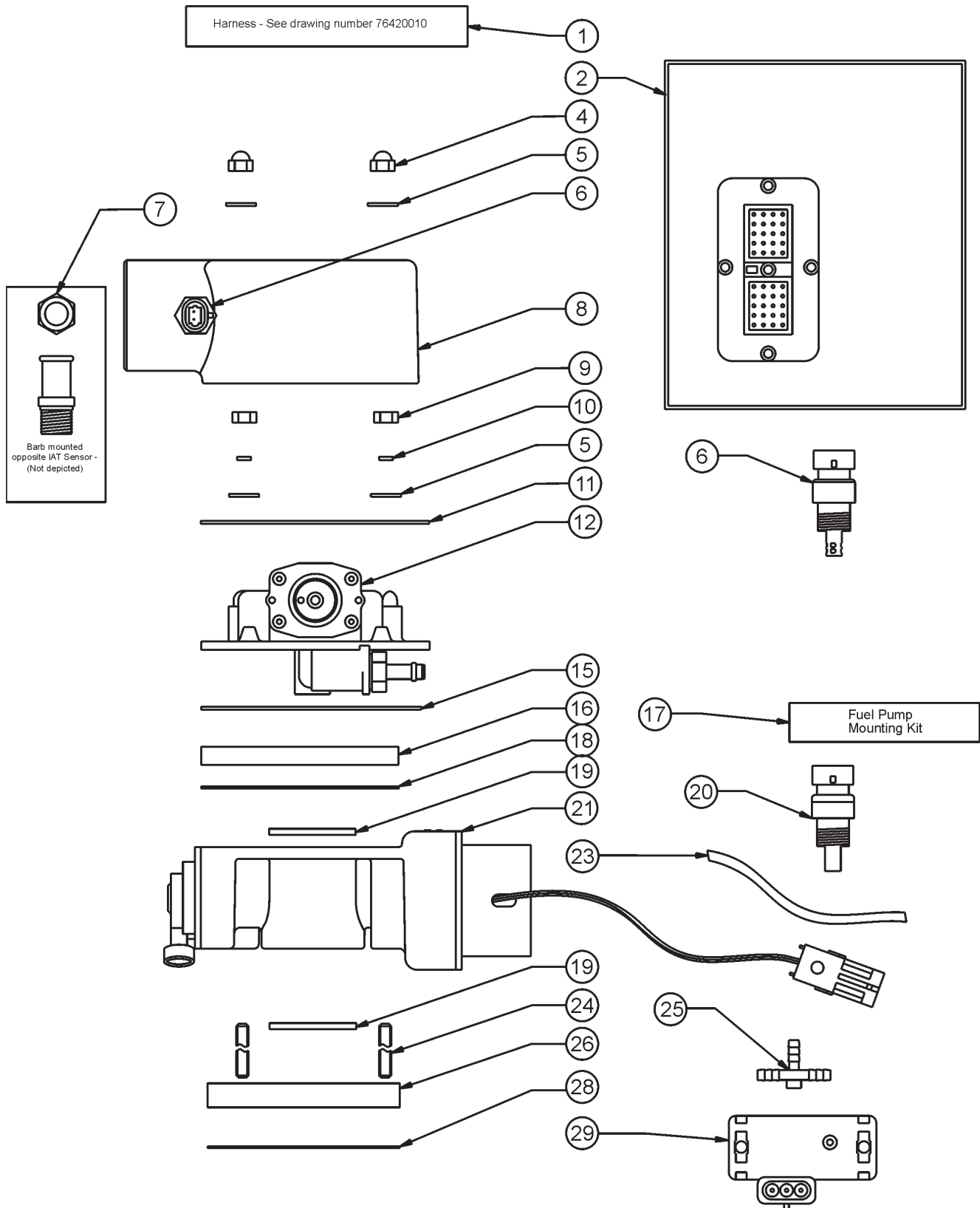
C-30HDNI (PRECISION) PUMP — REMOTE CONTROL CABLE ASSY.

REMOTE CONTROL CABLE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	EM16753	JUNCTION BOX	1	
2*	EM16754	SWITCH, MICRO	1	
3*	EM16756	GUARD SWITCH - ALUMINUM	1	
4*	EM491897	CONNECTOR, 3/16 RING	2	
5*	EM26791	GRIP CORD SEAL	1	
6*	EM26790	CORD 25' MX P/E	1	
7	EM26793	ADAPTER CORD GRIP 1/2"	1	
8	EM26792	ADAPTER CORD 100 FT.	1	
9	EM26788	REMOTE W/ 25' CORD ONLY	1	INCLUDES ITEMS W/*

C-30HDNI (PRECISION) PUMP — EFI GASOLINE FUEL SYSTEM ASSY.

EFI GASOLINE FUEL SYSTEM ASSY.



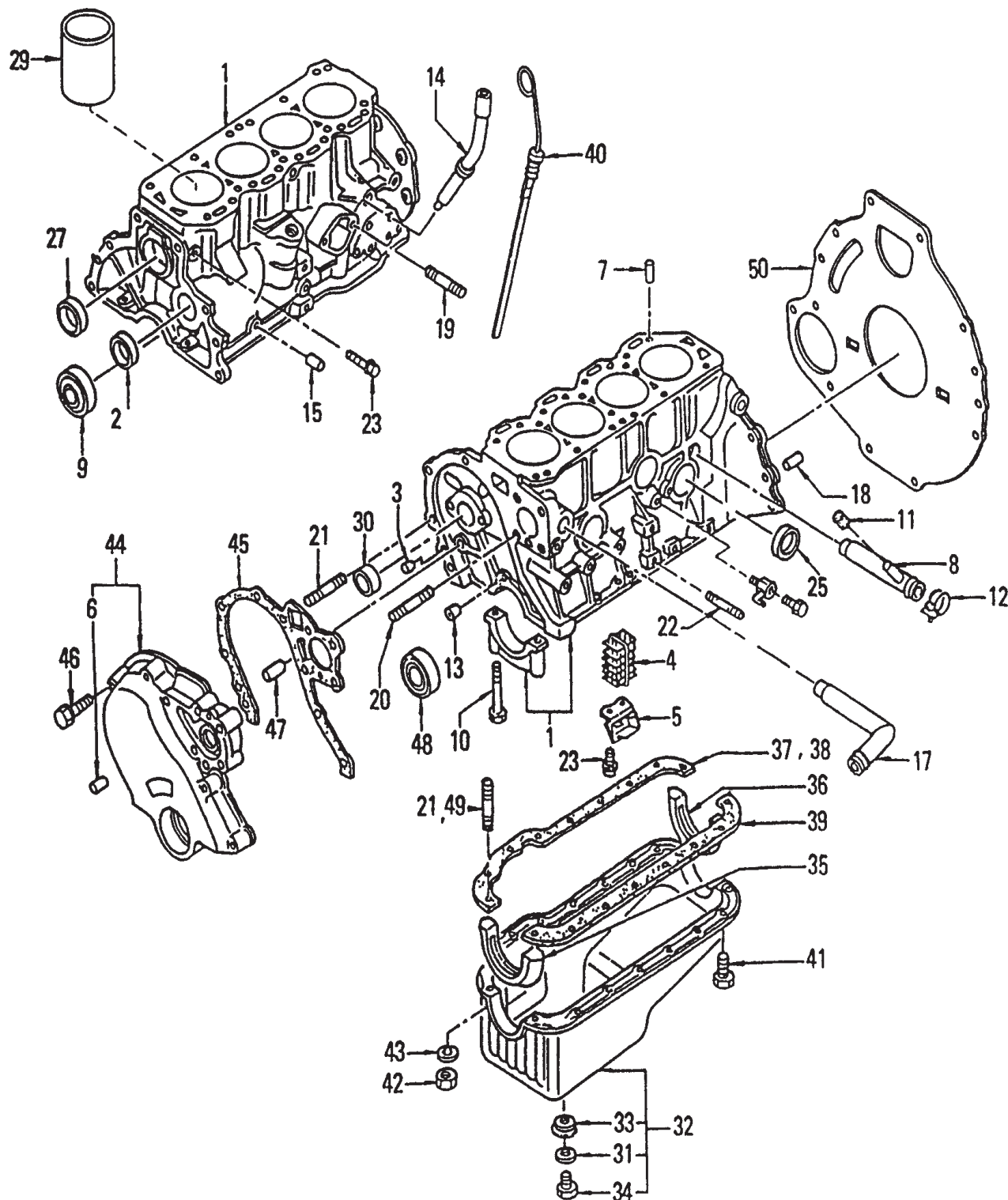
C-30HDNI (PRECISION) PUMP — EFI GASOLINE FUEL SYSTEM ASSY.

EFI GASOLINE FUEL SYSTEM ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	P7642010	A15 GAS ONLY WIRING HARNESS	1	
2	P9397	EFI CONTROLLER SOFTWARE	1	USER SPECIFIC
			CONTACT PRECISION GOVERNORS
4	P3395	1/4 - 20 ACORN NUT (NICKEL)	2	
5	P3241	1/4" WASHER	4	
6	P2559	AIR TEMP SENSOR	1	
7	P3363	3/8 NPT - 5/8 BARB	1	
8	P7625	AIR HORN	1	
9	P3004	1/4-20 UNC NUT	2	
10	P3005	1/4" LOCK WASHER	2	
11	P7619	AIR HORN GASKET	1	
12	P5184	DELPHI FUEL RING	1	
15	P7618	DELPHI FUEL RING GASKET	1	
16	P7623	TOP PLATE FUEL RING ADAPTER	1	
17	P2571	FUEL PUMP MOUNTING KIT	1	
19	P2562	THROTTLE BODY O-RING	1	
20	P3206	ENGINE COOLANT TPP. SENSOR	1	
21	P7600	THROTTLE BODY ASSY	1	
23	P3389	3/16" VACUUM HOSE 24" LONG	1	
24	P3348	1/4-20 UNC X 6" LONG THREADED ROD	2	
25	P3366	3/16" T-FITTING FOR VACUUM HOSE	1	
26	P7635	ENGINE MANIFOLD ADAPTER PLATE	1	
28	P7668	INTAKE MANIFOLD GASKET	1	
29	P2560	MAP SENSOR	1	
30	P2561	OXYGEN SENSOR	1	
31	4RD93141008	FUEL RELAY	1	NOT ILLUSTRATED

A15 NISSAN ENGINE — CYLINDER BLOCK & OIL PAN ASSY.

CYLINDER BLOCK & OIL PAN ASSY.



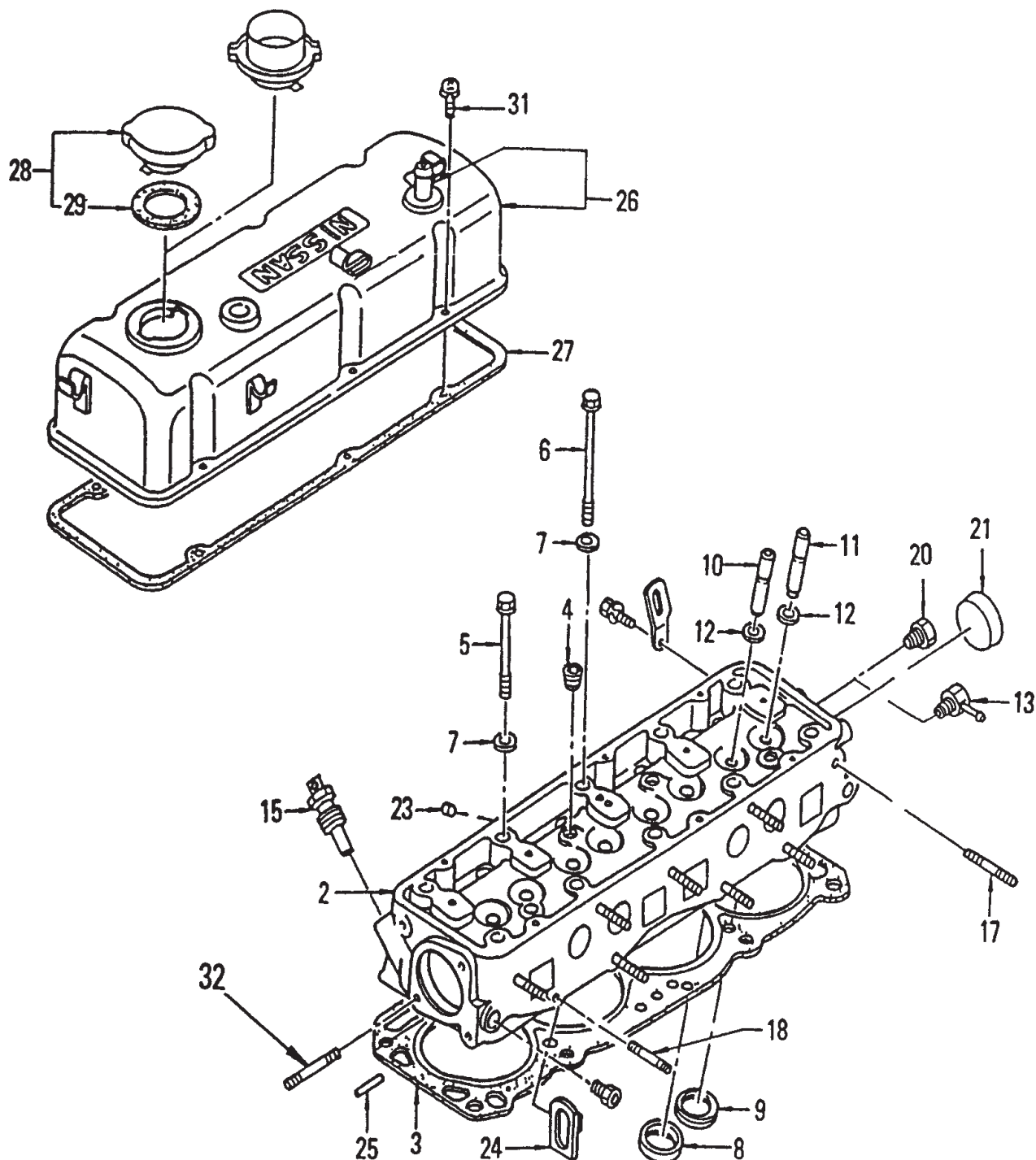
A15 NISSAN ENGINE — CYLINDER BLOCK & OIL PAN ASSY.

CYLINDER BLOCK & OIL PAN ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	11010K4970	BLOCK ASSY.- CYL	1	
2	1101932200	PLUG- WELCH (44 425)	1	
3	11024K0100	PLUG- TAPER (12.7)	2	
4	11037H1000	NET- STEEL CRANK CASE	1	
5	11038H9700	PLATE- BAFFLE	1	
6#	1104673402	DOWEL- 5	2	
7	1105373400	DOWEL BLOCK TO HEAD	2	
8	11830G3600	PIPE ASSY.- CONN	1	
9	12279H2301	SEAL- OIL CRANK RR	1	
10	1229301M00	BOLT MAIN BRG. CAP	10	
13	1512718000	ORIFICE- OIL GAL	1	
14	15146H5002	GUIDE- OIL GAUGE	1	
15	0164700011	PLUG- TAPER (6)	7	
17	21045K4920	PIPE- SUCT, WATER	1	
18	30412H1001	DOWEL- 9.5	2	
19	0821383510	STUD	2	
20	0821385510	STUD	3	
21	0821661610	STUD	2	
22	0822382010	STUD	4	
23	0831061214	SCREW	2	
25	009331355A	PLUG- WELCH	3	
27	0093315010	PLUG- WELCH	1	
29	11012H7200	LINER- CYL,400	AR	
29	11013H7200	LINER- CYL,450	AR	
30	13002H1020	BUSH SET- CAM (STD.)	1	
30	13003H1020	BUSH SET- CAM (US=0.25)	1	
30	13004H1020	BUSH SET- CAM (US=0.50)	1	
30	13005H1020	BUSH SET- CAM (US=0.75)	1	
31*	1102661000	WASHER	1	
32	11110K4920	OIL PAN	1	INCLUDES ITEMS W/*
33*	1111961000	SEAT- DRAIN PLUG	1	
34*	1112869200	PLUG- DRAIN	1	
35	1113018002	SEAL- OIL PAN FR	1	
36	1113118002	SEAL- OIL PAN FR	1	
37	11132H5025	GASKET- OIL PAN RH	1	
39	11132H5025	GASKET- OIL PAN LH	1	
40	11140H7200	DIPSTICK	1	
41	081106161B	BOLT	12	
42	0891110610	NUT	4	
43	089151361A	WASHER	4	
44	13035H1000	COVER TIMING CHAIN	1	INCLUDES ITEMS W/#
45	13044H1001	GASKET COVER TIMING	1	
46	081208161B	BOLT	1	
47	1104673402	DOWEL	1	
48	13510H1010	OIL SEAL CRANK FR	1	
49	0821666100	STUD- COARSE THD.	2	
50	30411H5001	PLATE- ENG. RR	1	

A15 NISSAN ENGINE — CYLINDER HEAD & VALVE COVER ASSY.

CYLINDER HEAD & VALVE COVER ASSY.



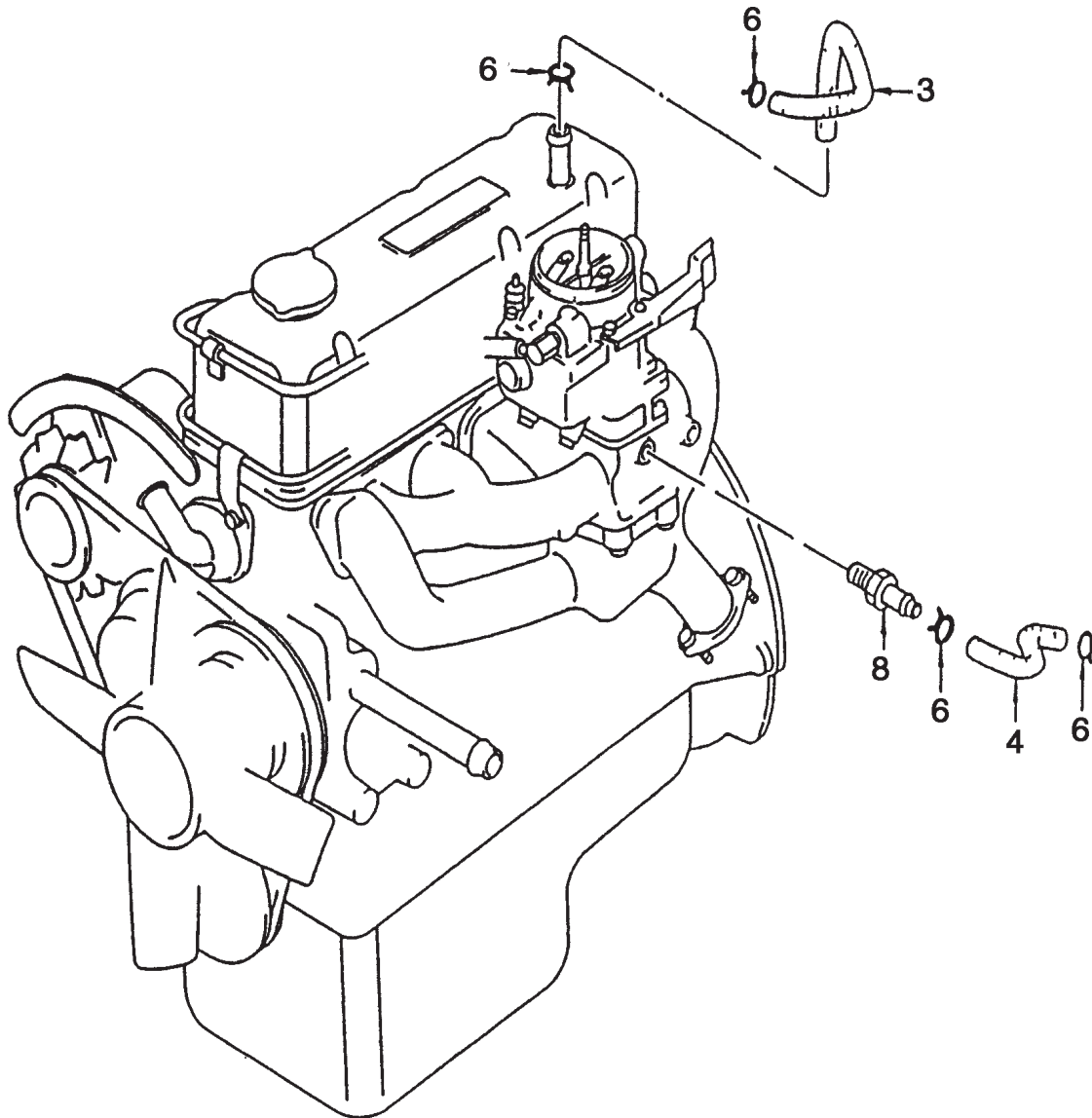
A15 NISSAN ENGINE — CYLINDER HEAD & VALVE COVER ASSY.

CYLINDER HEAD & VALVE COVER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	11041K4970	HEAD ASSEMBLY- CYLINDER	1	
3	11044H9822	GASKET- CYLINDER HEAD	1	
4	1105173403	PLUG- BLIND CYLINDER HEAD	4	
5	11056H1000	BOLT- CYLINDER HEAD	9	
6	11057H5000	BOLT- CYLINDER HEAD	1	
7	1105821002	WASHER- BOLT HEAD	10	
8	11098H7512	INSERT- VALVE, INT.	4	
9	11099H8910	INSERT- VALVE, EXH.	4	
10	13212H8500	GUIDE- VALVE, INT.	4	
11	13213H2312	GUIDE- VALVE, EXH.	4	
12	1321473400	RING- SNAP VALVE GUIDE	8	
15	2508089912	TEMP. ENG. UNIT	1	
17	0822382810	STUD	7	
18	0822383510	STUD	2	
20	0093130610	PLUG- TAPER	1	
21	009331401A	PLUG- WELCH	1	
23	0093320670	TEMP. ENG. UNIT	1	
24	10005M1000	SLINGER- ENG. FR	2	
25	1002332200	DOWEL	1	
26	13264G1361	VALVE COVER	1	
27	13270H1000	PACKING- VALVE COVER	1	
28*	1525585030	CAP ASSEMBLY- OIL FILL	1	INCLUDES ITEMS W/*
29	15270B3400	PACKING- OIL FILLER CAP	1	
31	0831061614	SCREW	6	
32	14065W1300	STUD	2	
	1010105H25	GASKET SET, OVERHAUL	1	

A15 NISSAN ENGINE — CRANKCASE VENTILATION ASSY.

CRANKCASE VENTILATION ASSY.



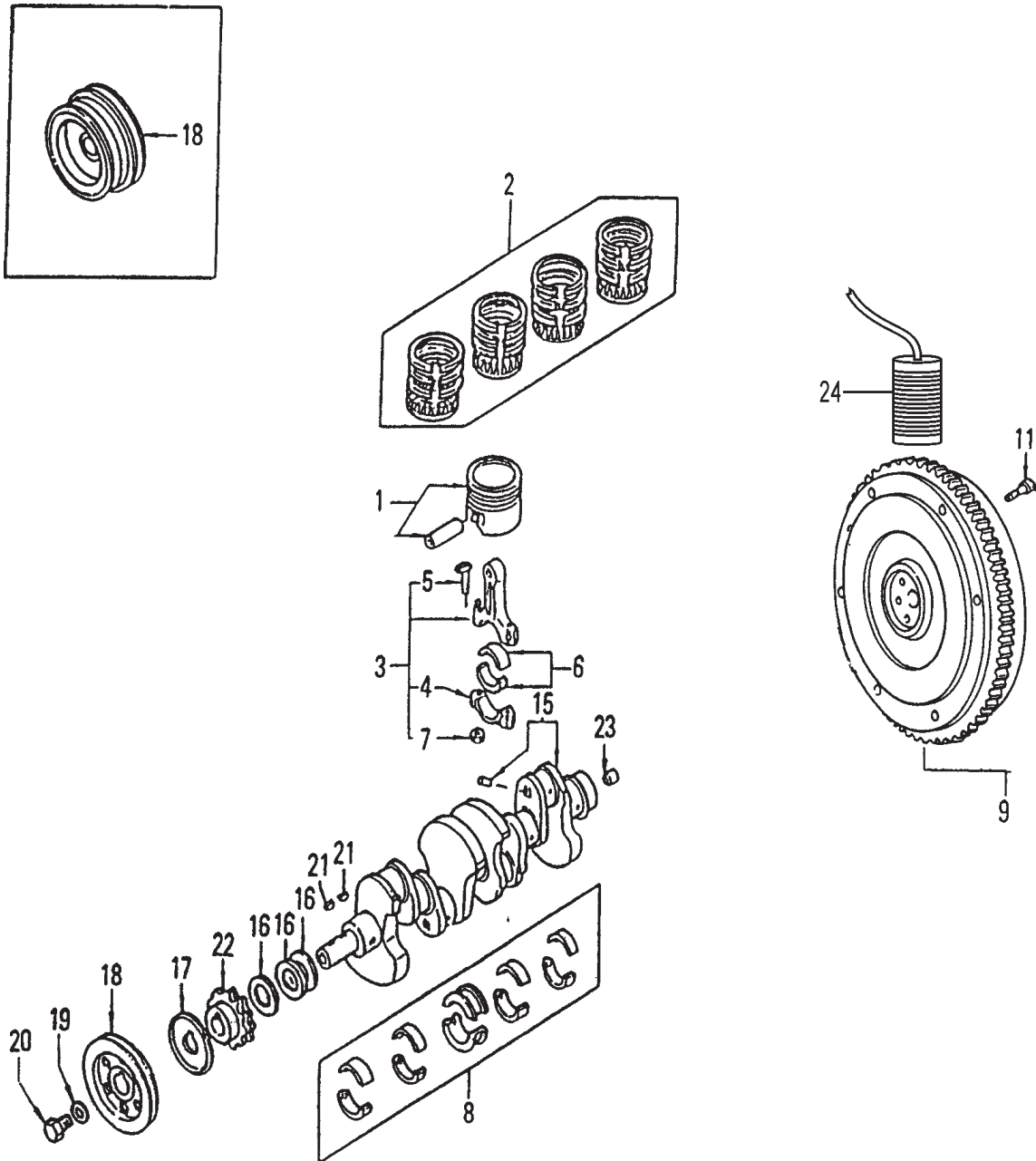
A15 NISSAN ENGINE — CRANKCASE VENTILATION ASSY.

CRANKCASE VENTILATION ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
3	11823K4901	HOSE BLOWBY	1	
4	11828G2561	HOSE- PIPE CONNECTION	1	
6	1643910B00	CLAMP- HOSE	2	
8	11810A3501	PCV VALVE	1	

A15 NISSAN ENGINE — PISTON, CRANKSHAFT AND FLYWHEEL ASSY.

PISTON, CRANKSHAFT AND FLYWHEEL ASSY.



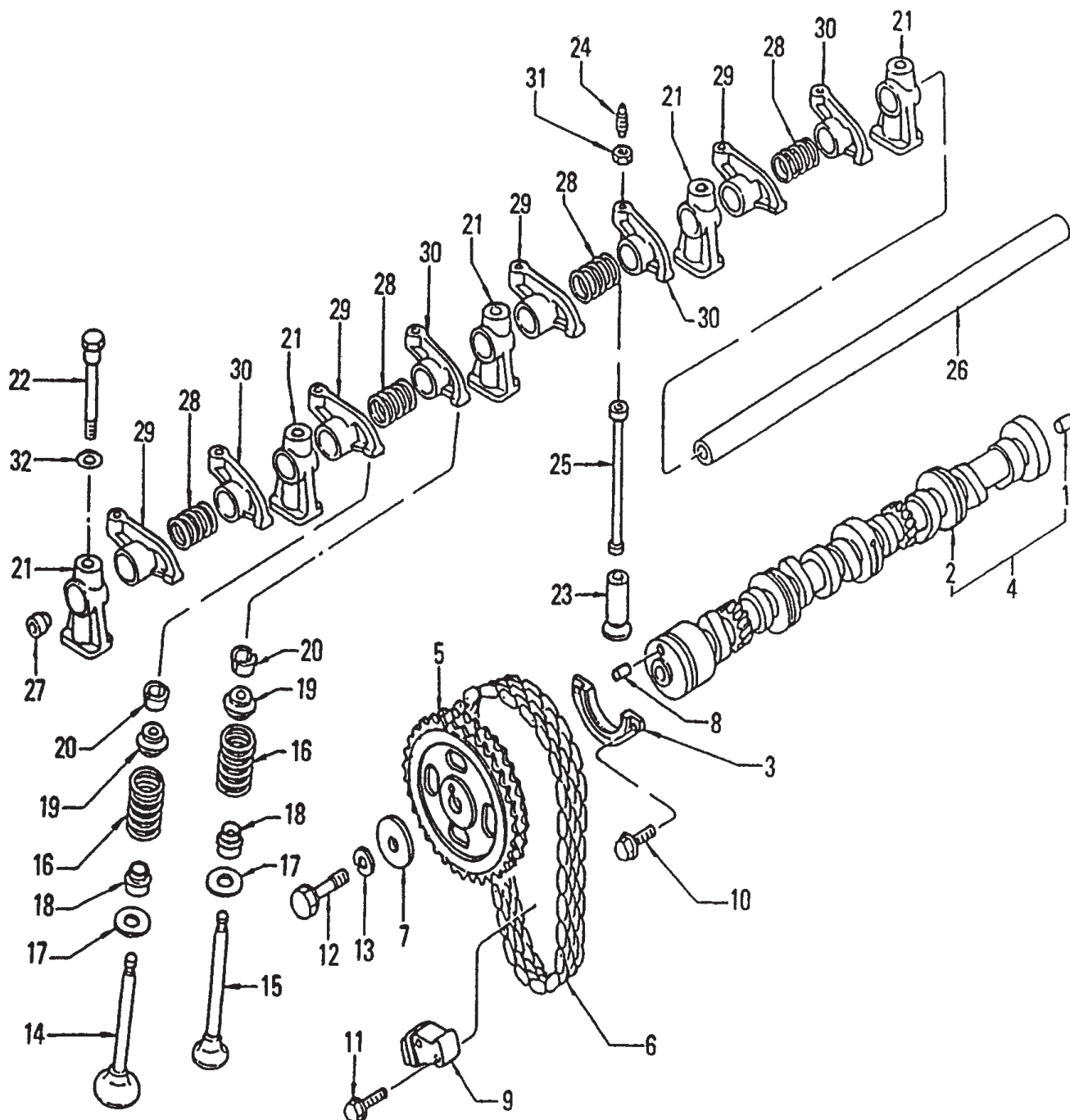
A15 NISSAN ENGINE — PISTON, CRANKSHAFT AND FLYWHEEL ASSY.

PISTON, CRANKSHAFT AND FLYWHEEL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	12010G3462	PISTON SET- W PIN, STANDARD	4	
1	12010G3465	PISTON SET- W PIN, OS=0.50	4	
1	12010G3467	PISTON SET- W PIN, OS=1.00	4	
2	12033H9820	RING SET- PISTON, STANDARD	1	
2	12035H9820	RING SET- PISTON, OS=0.50	1	
2	12037H9820	RING SET- PISTON, OS=1.00	1	
3	12100H7200	ROD ASSEMBLY- CONN.	4	INCLUDES ITEMS W/*
4*	12106H1000	CAP- CONN. ROD	4	
5*	12109H1012	BOLT- CONN. ROD	8	
6	1211120910	BUSH- CONN. ROD, STANDARD	8	
6	1211120901	BUSH- CONN. ROD, US=0.08	8	
6	1211120902	BUSH- CONN. ROD, US=0.12	8	
6	1211120903	BUSH- CONN. ROD, US=0.25	8	
6	1211120904	BUSH- CONN. ROD, US=0.50	8	
6	1211120905	BUSH- CONN. ROD, US=0.75	8	
6	1211120906	BUSH- CONN. ROD, US=1.00	8	
7*	12112H1000	NUT- HEX CONN. ROD	8	
8	12207M7201	BEARING SET, STANDARD	1	
8	12208M7200	BEARING SET, OS= 0.20	1	
8	12209M7201	BEARING SET, OS=0.25	1	
8	12210M7201	BEARING SET, OS= 0.50	1	
8	12211M7201	BEARING SET, OS= 0.75	1	
8	12212H1000	BEARING SET, OS=1.00	1	
9	12310K4970	FLYWHEEL ASSEMBLY	1	
11	12315H6200	FLYWHEEL BOLT	6	
15	12200G3400	CRANKSHAFT ASSEMBLY	1	
16	1230130000	WASHER	AR	
17	1230218000	OIL- THROWER, CRANK	1	
18	12303G2512	CRANK PULLEY	1	
19	12308H1000	WASH PULLEY BOLT	1	
20	1230978200	BOLT- CRANK PULLEY	1	
21	1231630000	KEY- WDF, 5 X 16	2	
22	13021H8900	SPROCKET- CRANK	1	
23	3220218010	BUSH- PILOT	1	
24	P9410	SENSOR, EFI PROXIMITY	1	

A15 NISSAN ENGINE — CAMSHAFT AND VALVE MECHANISM ASSY.

CAMSHAFT AND VALVE MECHANISM ASSY.



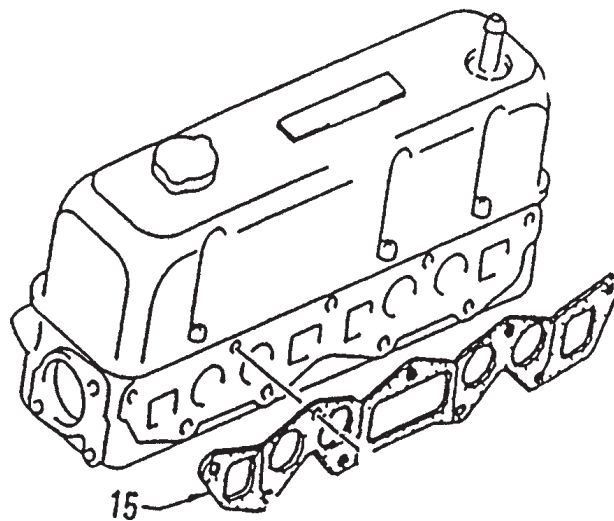
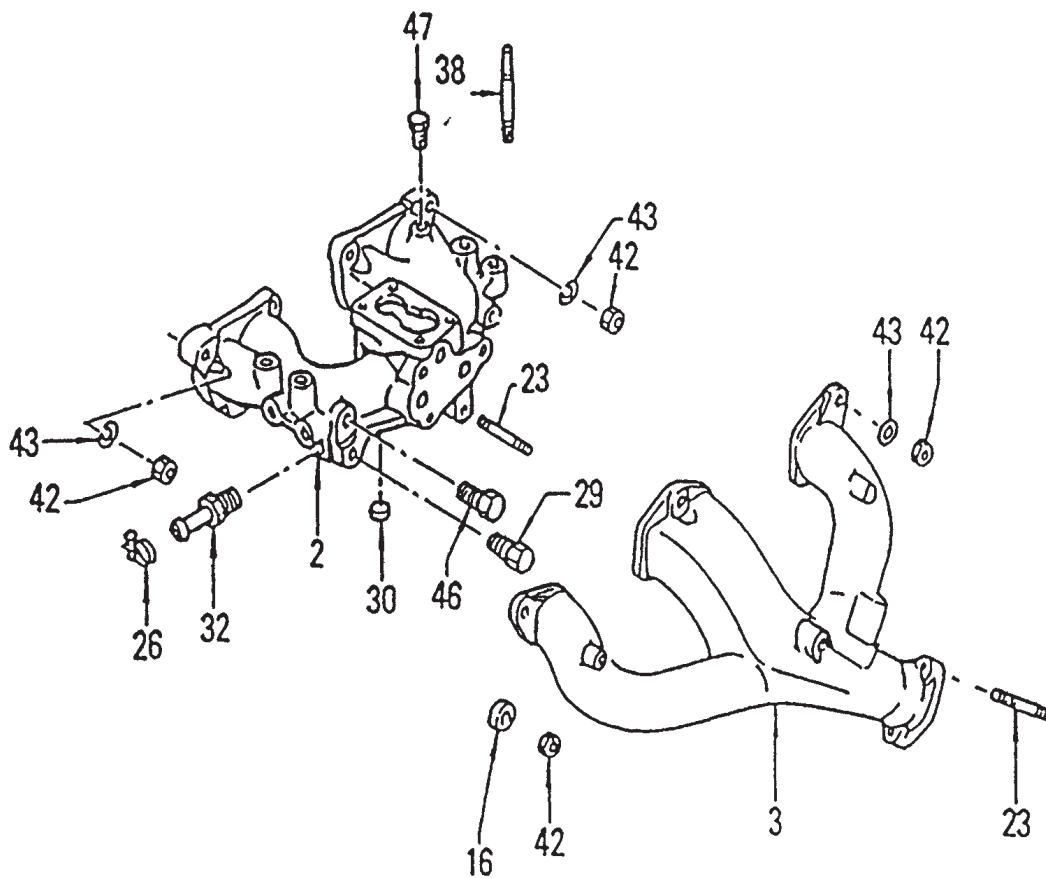
A15 NISSAN ENGINE — CAMSHAFT AND VALVE MECHANISM ASSY.

CAMSHAFT AND VALVE MECHANISM ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	1102378200	PLUG- TAPER	1	
2*	13001H9800	CAMSHAFT	1	
3	1301018001	PLATE- LOCAT. CAM	1	
4	13020H9800	CAMSHAFT ASSEMBLY	1	INCLUDES ITEMS W/*
5	13024H8660	SPROCKET- CAM	1	
6	1302818001	CHAIN- CAMSHAFT	1	
7	1303018000	WASHER PLAIN	1	
8	1303218000	DOWEL- CAM	1	
9	1307018001	TENSIONOR ASSEMBLY	1	
10	081106161B	BOLT	2	
11	0812063562	BOLT	2	
12	081310401A	BOLT	1	
13	089152402A	WASHER	1	
14	13201H6200	VALVE- INTAKE	4	
15	13202H6200	VALVE- EXHAUST	4	
16	13203H1000	SPRING- VALVE	8	
17	1320518000	SEAT- VALVE SPRING	8	
18	13207H7210	SEAL- VALVE OIL	8	
19	13209H2302	RETAINER- SPRING	8	
20	13210U0100	COLLECT- VALVE	16	
21	1322218001	BRACKET- ROCKER SHAFT	5	
22	1322418000	BOLT- HEX ROCKER SHAFT	5	
23	13231H1001	VALVE LIFTER	8	
24	1323418000	SCREW- ADJUST	8	
25	13238H6201	PUSH ROD	8	
26	1325218000	SHAFT ASSEMBLY ROCKER	1	
27	1325458000	PLUG	2	
28	1325618000	SPRING- INSIDE ROCKER	4	
29	1325718003	ROCKER VALVE 1	4	
30	1325818003	ROCKER VALVE 2	4	
31	13288H5000	NUT- ADJUST SCREW	8	
32	0891543800	WASHER, FLAT M8	5	

A15 NISSAN ENGINE — MANIFOLD ASSY.

MANIFOLD ASSY.



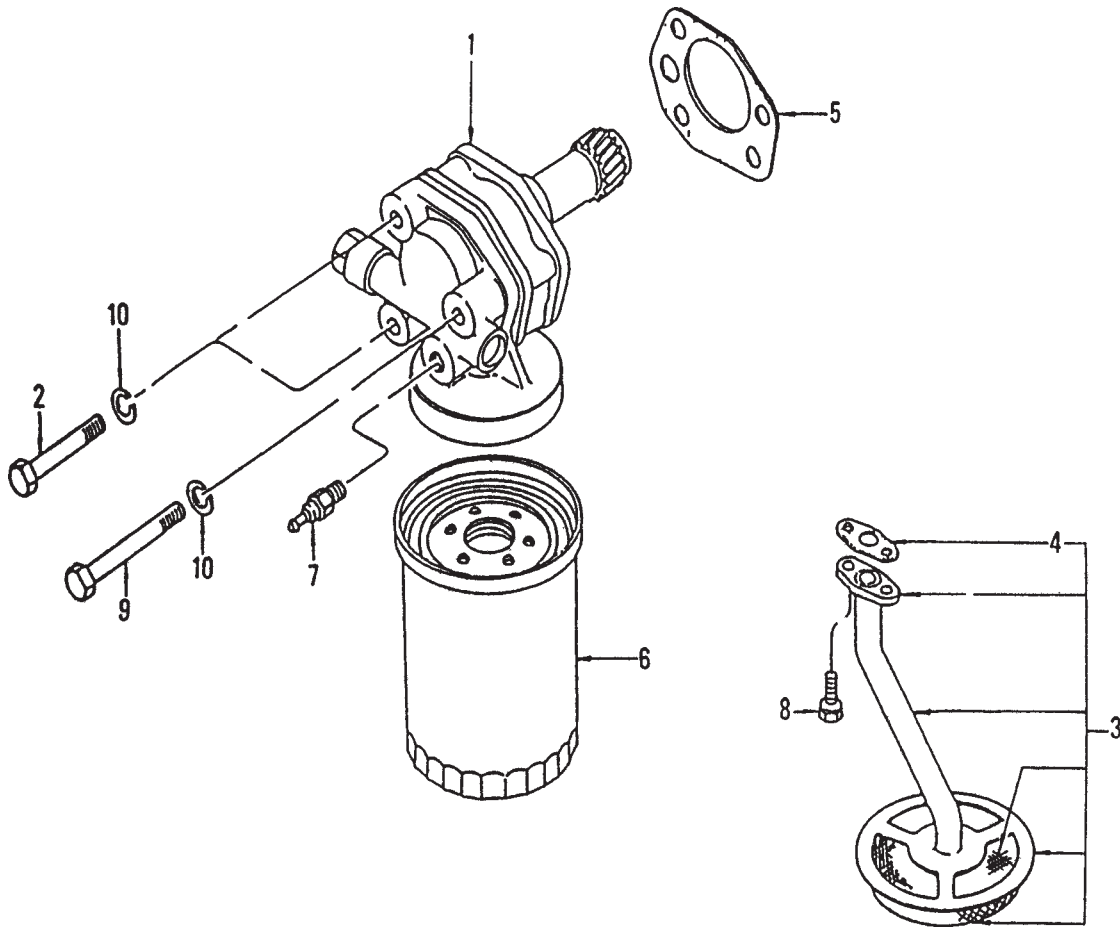
A15 NISSAN ENGINE — MANIFOLD ASSY.

MANIFOLD ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	14001K4970	INTAKE MANIFOLD	1	
3	14004G5200	EXHAUST MANIFOLD	1	
15	1403505H01	GASKET- MANIFOLD	1	
16	14037N3600	YOKE- MANIFOLD	4	
23	1406411M00	STUD- EXHAUST	3	
29	0164200012	PLUG- TAPER	2	
30	0164800181	PLUG- WELCH	1	
32	2707633300	CONN.- WATER	1	
38	0821662210	STUD-	4	
42	089112081A	NUT	9	
43	089151381A	WASHER	5	
46	089313021A	PLUG- TAPER	2	
47	0893130410	PLUG- TAPER	1	

A15 NISSAN ENGINE — OIL PUMP ASSY.

OIL PUMP ASSY.



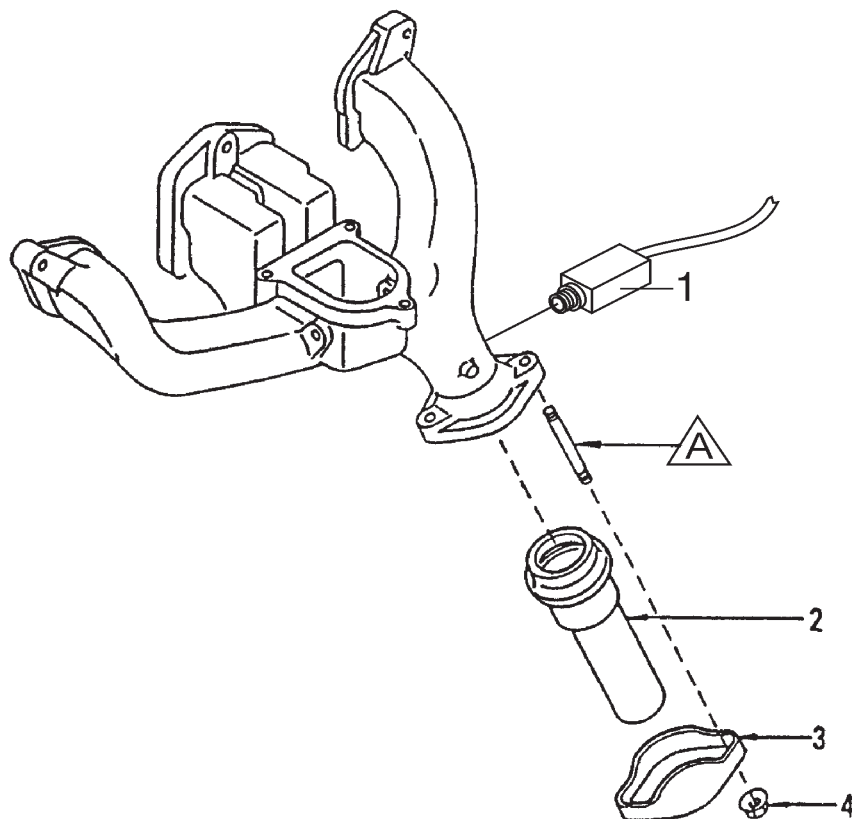
A15 NISSAN ENGINE — OIL PUMP ASSY.

OIL PUMP ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	15010M3001	PUMP ASSEMBLY OIL	1	
2	1503618000	BOLT- OIL PUMP	2	
3	1505005H00	STRAINER ASSEMBLY- OIL	1	INCLUDES ITEM W/*
4*	1505318000	GASKET- OIL STRAINER	1	
5	15066H1001	GASKET- OIL PUMP	1	
6	1520855Y00	ELEMENT ASSEMBLY- OIL	1	
7	2524089910	SWITCH- OIL PRESSURE	1	
8	081108201B	BOLT	2	
9	081108551A	BOLT	1	
10	089151381A	WASHER	3	

A15 NISSAN ENGINE — EXHAUST TUBE AND MUFFLER ASSY.

EXHAUST TUBE AND MUFFLER ASSY.



NOTE:
SEE ITEM 23
PAGE 114

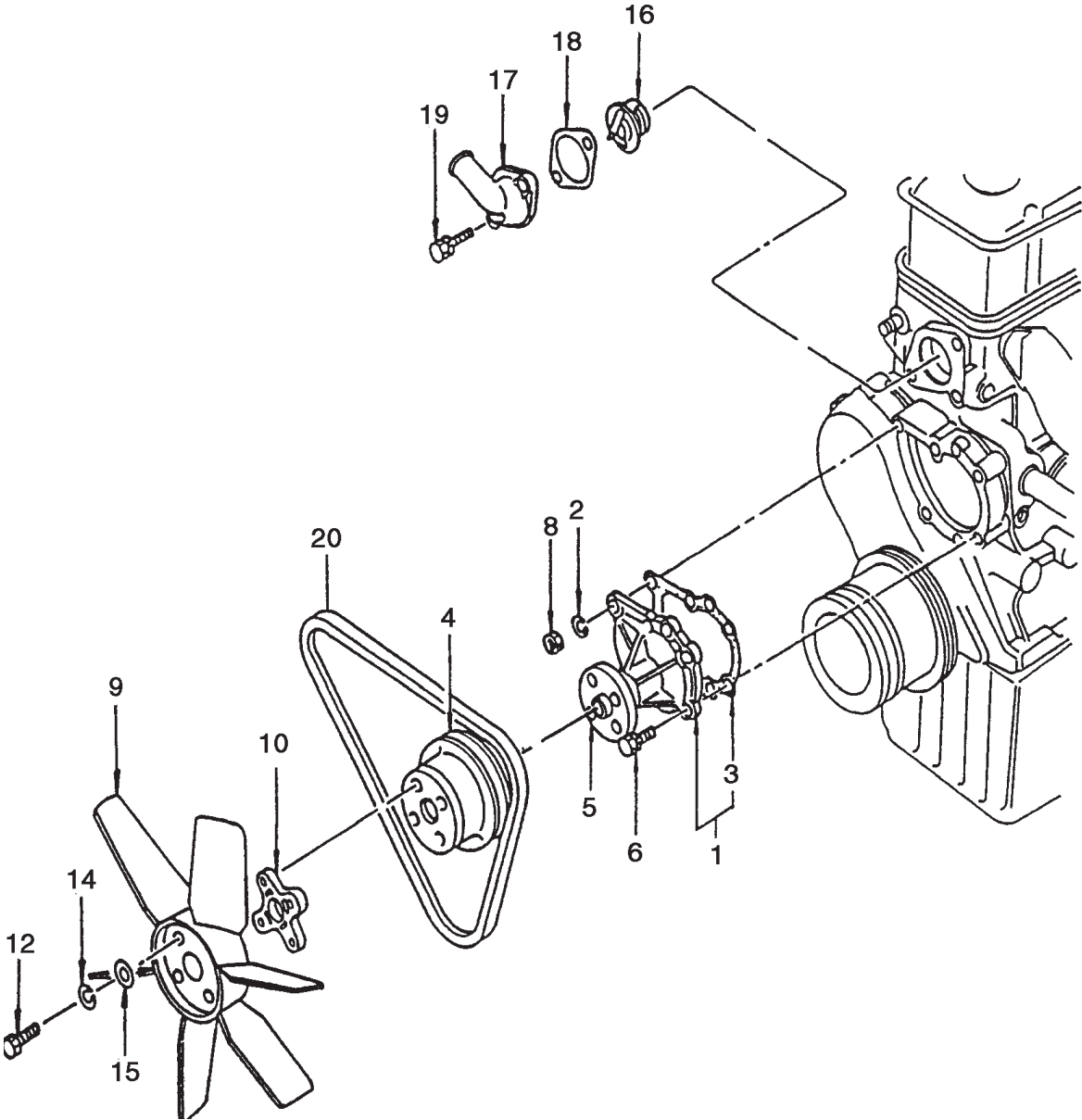
A15 NISSAN ENGINE — EXHAUST TUBE AND MUFFLER ASSY.

EXHAUST TUBE AND MUFFLER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	C282-355	SENSOR, EFI OXYGEN	1	
2	20011K4915	TUBE ASSEMBLY EXHAUST	1	
3	20601H7210	PLATE- FIXING	1	
4	20602S0600	NUT- FIXING TUBE END	3	

A15 NISSAN ENGINE — WATER PUMP ASSY.

WATER PUMP ASSY.



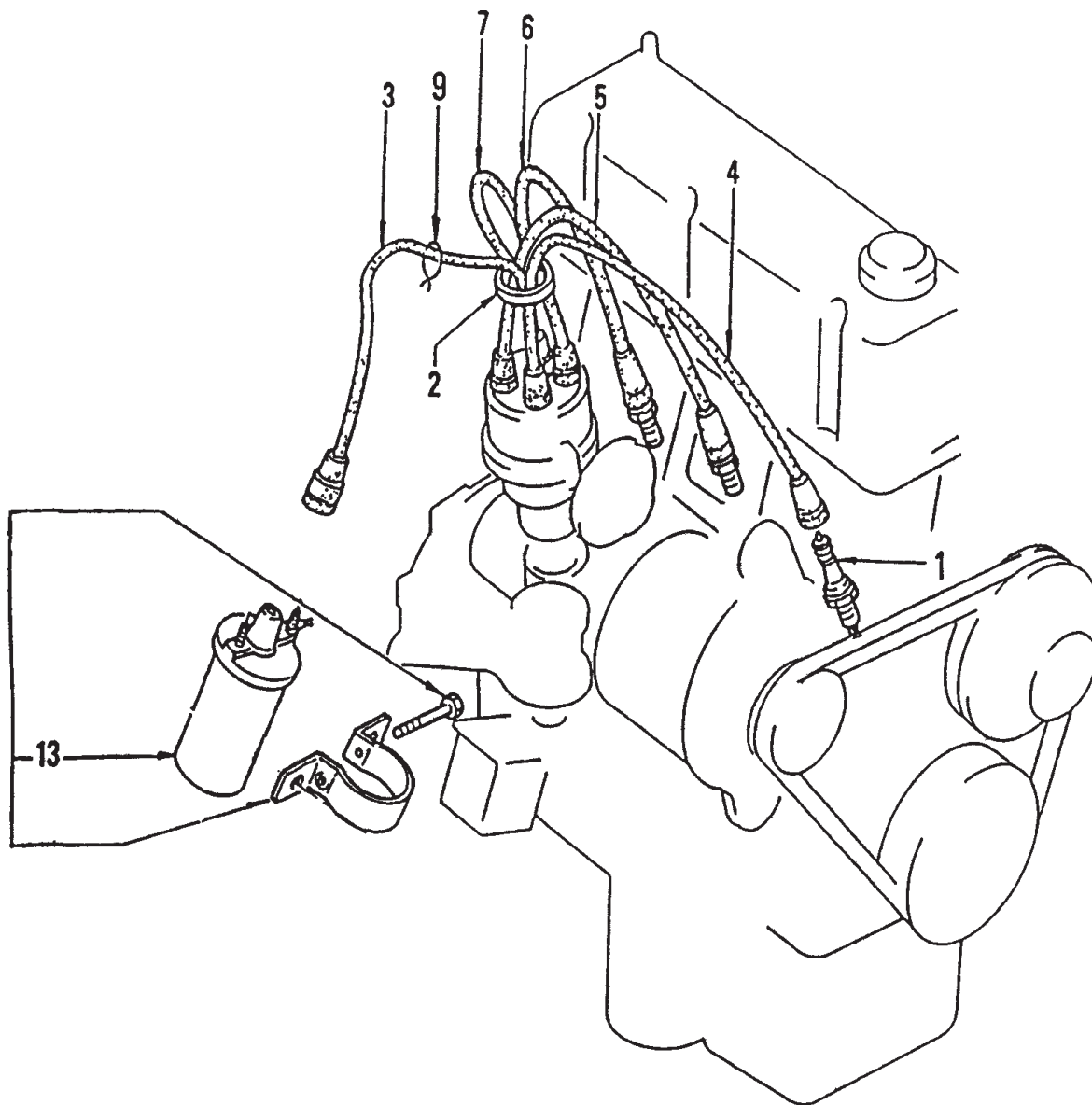
A15 NISSAN ENGINE — WATER PUMP ASSY.

WATER PUMP ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	21010K7700	WATER PUMP ASSY	1	INCLUDES ITEMS W/*
2	093400010P	WASHER	3	
3*	21014H1001	GASKET- WATER PUMP	1	
4	2105120500	PULLEY- FAN & PUMP	1	
5	21054K7700	HUB- PULLEY & PUMP	1	
6	081108501B	BOLT	2	
8	089111081A	NUT	3	
9	2106003W00	FAN- COOLING	1	
10	2106403W00	SPACER- FAN	1	
12	0812064062	BOLT	4	
16	21200G3100	THERMOSTAT STD. 180 DEGREES	1	
17	11060H5000	OUTLET- WATER	1	
18	1106218001	WASHER- JOINT	1	
19	0812083063	BOLT	2	
20	1172077702	V-BELT, FAN	1	

A15 NISSAN ENGINE — IGNITION SYSTEM ASSY.

IGNITION SYSTEM ASSY.



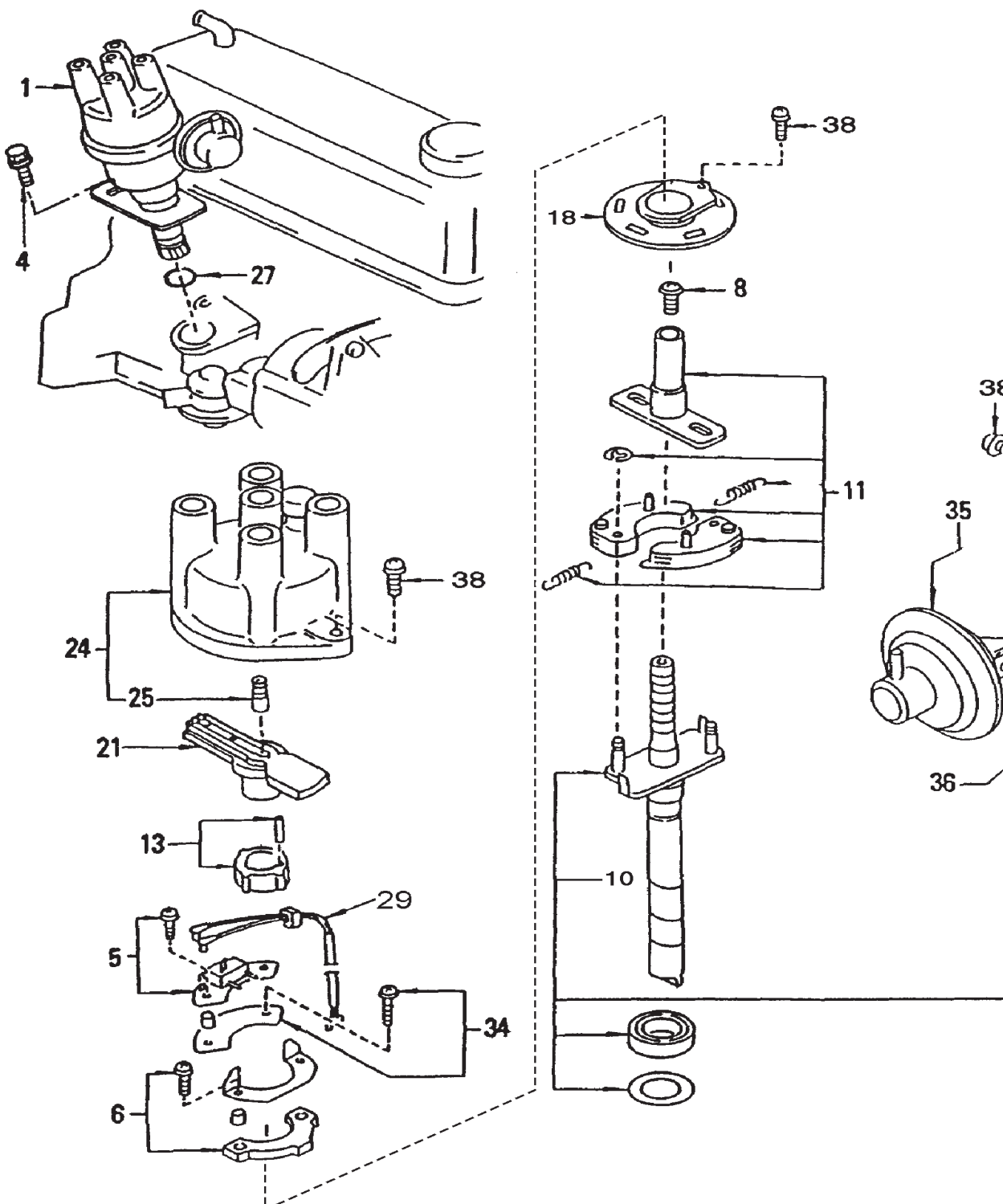
A15 NISSAN ENGINE — IGNITION SYSTEM ASSY.

IGNITION SYSTEM ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	22401M7714	PLUG- SPARK STD.	4	
2	2243110560	RING- HT. CABLE	1	
3	22450Y4000	CABLE ASSEMBLY COIL TO DIST.	1	
4	22451H5000	CABLE ASSEMBLY #1	1	
5	22452H5000	CABLE ASSEMBLY #2	1	
6	22453H5000	CABLE ASSEMBLY #3	1	
7	22454H5000	CABLE ASSEMBLY #4	1	
9	2401790004	CONNWIRE	1	
13	2246252A60	COIL IGNITION	1	

A15 NISSAN ENGINE — DISTRIBUTOR ASSY.

DISTRIBUTOR ASSY.



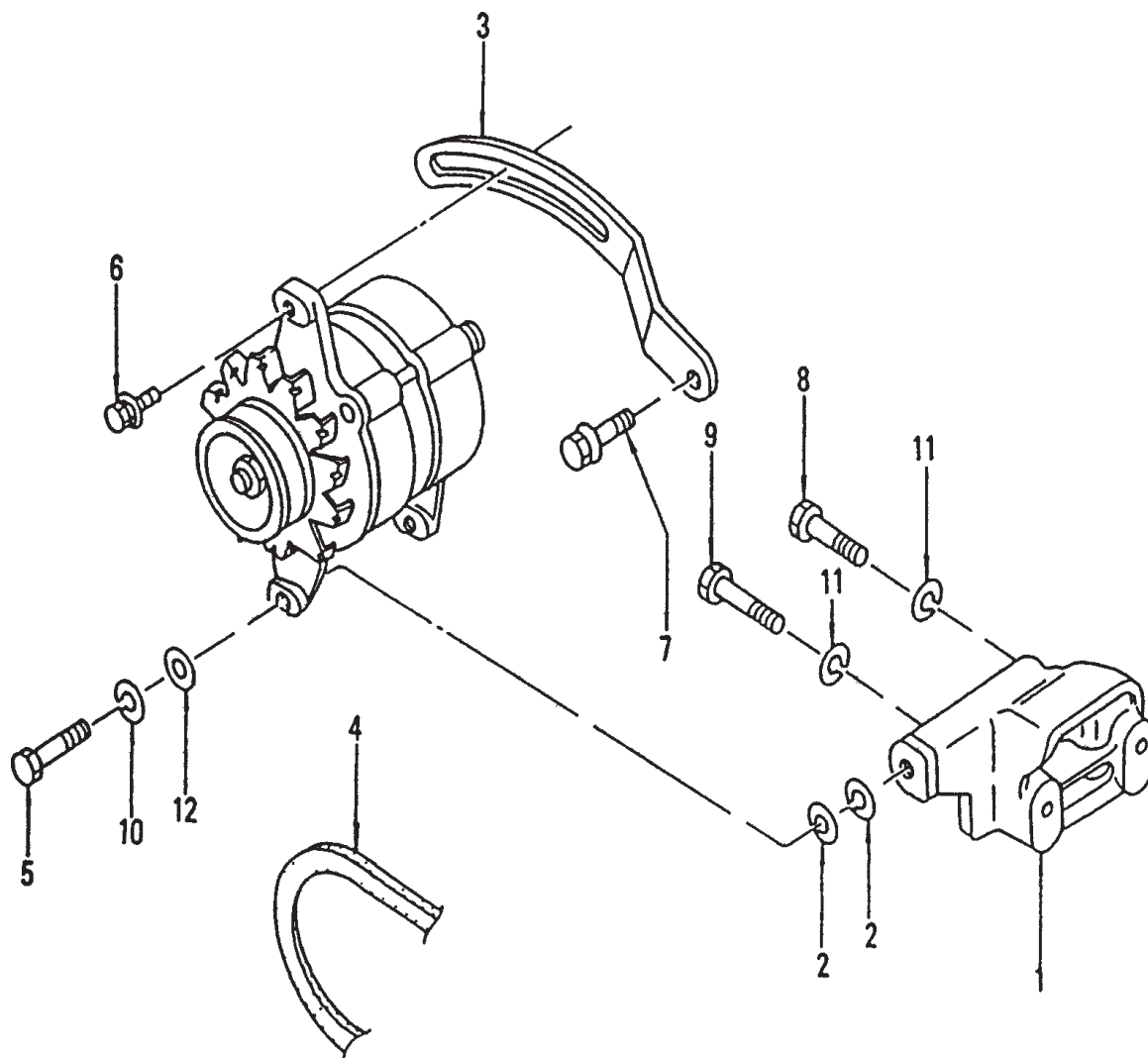
A15 NISSAN ENGINE — DISTRIBUTOR ASSY.

DISTRIBUTOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	22100G5110	DISTRIBUTOR ASSEMBLY	1	INCLUDES ITEMS W/%
2	0143600191	SCREW	1	
4	0143600221	SCREW	1	
5%	22020G5111	TRANSISTER- IGNITION UNIT	1	
6%	22023G5110	SEAT- SYNK.	1	
8%	2210414615	SCREW (4 X 8)	1	
10%	22108G5110	SHAFT ASSEMBLY	1	
11%	22109G5110	WEIGHT- GOVERNOR	1	INCLUDES ITEMS W/#
13%	2211577A11	SIGNAL ROTOR SET	1	
14%	22119M5610	COUPLING SET	1	
18%	2213677A11	PLATE ASSEMBLY BREAKER	1	
21%	2215723G15	ROTOR ASSEMBLY	1	
24%	2216278A10	CAP ASSEMBLY	1	INCLUDES ITEMS W/*
25%*	22165M5610	POINT ASSEMBLY- CARBON	1	
27	2218071200	O/RING	1	
29	22183G5111	LEAD WIRE	1	
30%	2218523G15	PACKING	1	
33%	2220122010	BOLT	1	
34%	2222977A11	PICK UP KIT	1	
35%	22301G5110	CONTROL ASSEMBLY- VAC.	1	
36%	22309H5010	TERMINAL ASSEMBLY	1	
38%	22750M0110	SCREW KIT	1	

A15 NISSAN ENGINE — ALTERNATOR ASSY.

ALTERNATOR ASSY.



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ALTERNATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	11710H7201	BRACKET- ALTERNATOR	1	
2	1171321001	SHIM- ALTERNATOR	AR	
3	11715H7201	BAR ADJ- ALTERNATOR	1	
4	1172077702	BELT- FAN	1	
6	081810301A	BOLT	2	
4	0812082062	BOLT	1	
8	081710351A	BOLT	1	
9	081310421A	BOLT	1	
10	089151381A	WASHER	2	
11	089151401A	WASHER	2	
12	089154381A	WASHER PLAIN	2	
*	23300G5110	ALTERNATOR	1	