

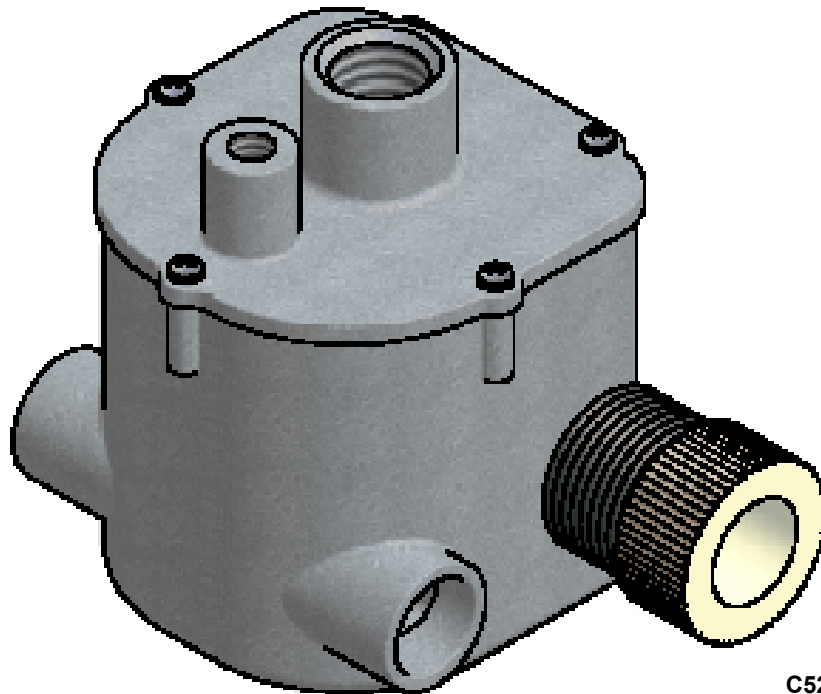
A Gardner Denver Product

RETROFIT KIT

LOW OIL SHUT DOWN CONTROL (LOSC)



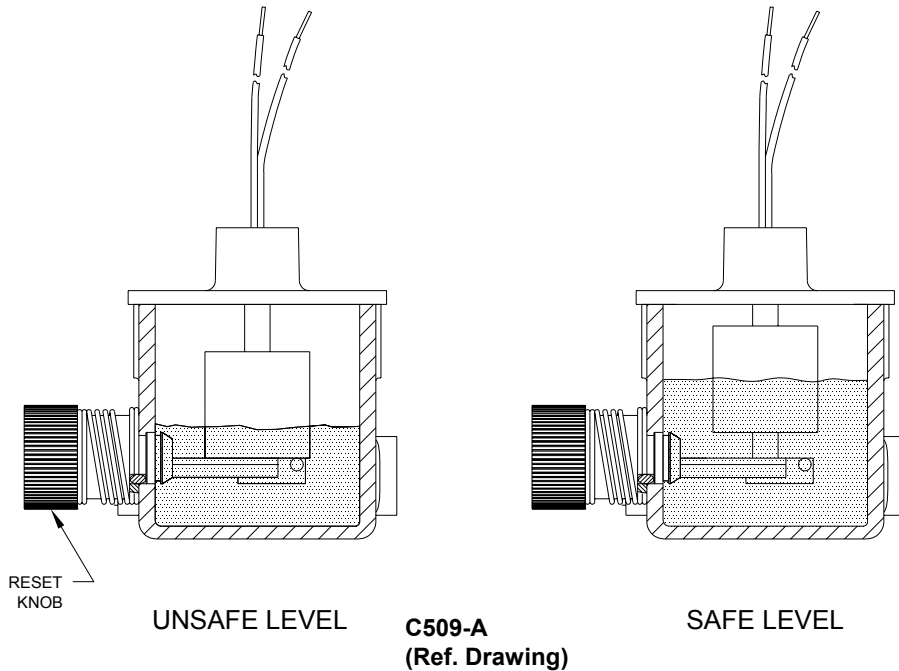
THIS MANUAL CONTAINS IMPORTANT SAFETY INFORMATION AND SHOULD ALWAYS BE AVAILABLE TO THOSE PERSONNEL OPERATING THIS UNIT. READ, UNDERSTAND AND RETAIN ALL INSTRUCTIONS BEFORE OPERATING THIS EQUIPMENT TO PREVENT INJURY OR EQUIPMENT DAMAGE.



**C520-A
(Ref. Drawing)**

OIL MONITOR KITS (For installation on Pumps with Oil Monitor)

PUMP MODEL	KIT #	DIAGRAM
R10, R15, S12, S20	CC1008067	A
R10HU, R15HU, S12HU, S20HU	CC1008098	B
R30, S40	CC1008072	C
R30HU, S40HU	CC1008099	D
R40	CC1008073	E
R40HU	CC1008100	F
R70	CC1007982	G
R70HU	CC1008101	H
RV15	CC1008086	I
RV15, W/ATD	CC1008102	J
R30	CC1008087	K
RV30 W/ATD	CC1008103	L
PL15	CC1008088	M
PL30	CC1008089	N
PL40	CC1008093	O
PL70	CC1008094	P



OPERATION:

The oil monitor must be used in conjunction with a magnetic starter (see wiring diagram for details). The oil monitor is installed on the outside of the air compressor crankcase with a port that allows oil to feed into its float bowl chamber and maintain the same level as in the crankcase. The float moves vertically up or down as the oil level changes. If the oil level is below minimum allowable operating level, the reed switch will open, thus stopping the motor. A magnet holds the float and prevents the compressor from starting. In order to start the compressor the following steps must be taken:

1. Fill crankcase to recommended capacity as indicated when level reaches the middle of the oil sight glass.
2. Turn cam reset knob 90° clockwise.

IMPORTANT NOTE: The Oil Monitor does not eliminate the compressor owner's responsibility for periodically checking oil level. Refer to compressor Owner's Manual for maintenance instructions.

INSTALLATION INSTRUCTIONS

Pages 4 – 19 consist of assembly drawings of Champion air compressors. On each of these pages, the top view represents the previous LOSC assembly and tubing connections. The bottom view on each page represents the new LOSC assembly and revised tubing connections. In the top view, the solid lines represent the items that have to be removed. For clarification, item numbers in boxes denote items to be reused with the new LOSC. All item numbers in the top views reference items listed in the original LOSC manual. The bottom view represents the new LOSC assembly and tubing connections. Prior to removing the old LOSC, disconnect the leads to the starter and drain oil from the crankcase. All LOSC kits include nema 1 conduit fitting to be installed for the conduit connection on the LOSC. Customer to supply nema 4 conduit connector if required.



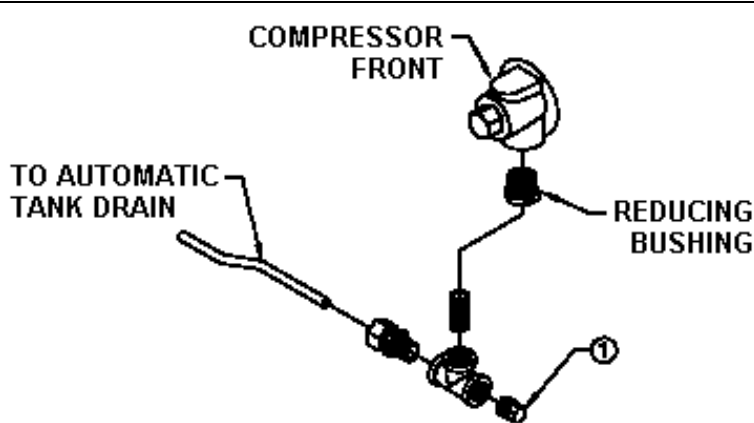
WARNING

Always disconnect unit from power supply and relieve all pressure from air tank before performing any maintenance. “Lock Out” or “Tag Out” all power sources. Failure to do so may result in equipment damage or injury.

NOTICE

Drain oil in air compressor crankcase before installing LOSC switch..

R-LINE PUMPS WITH HEAD UNLOADERS, LOSC & ATD ONLY



<u>ITEM</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
1	M3075	1	PLUG

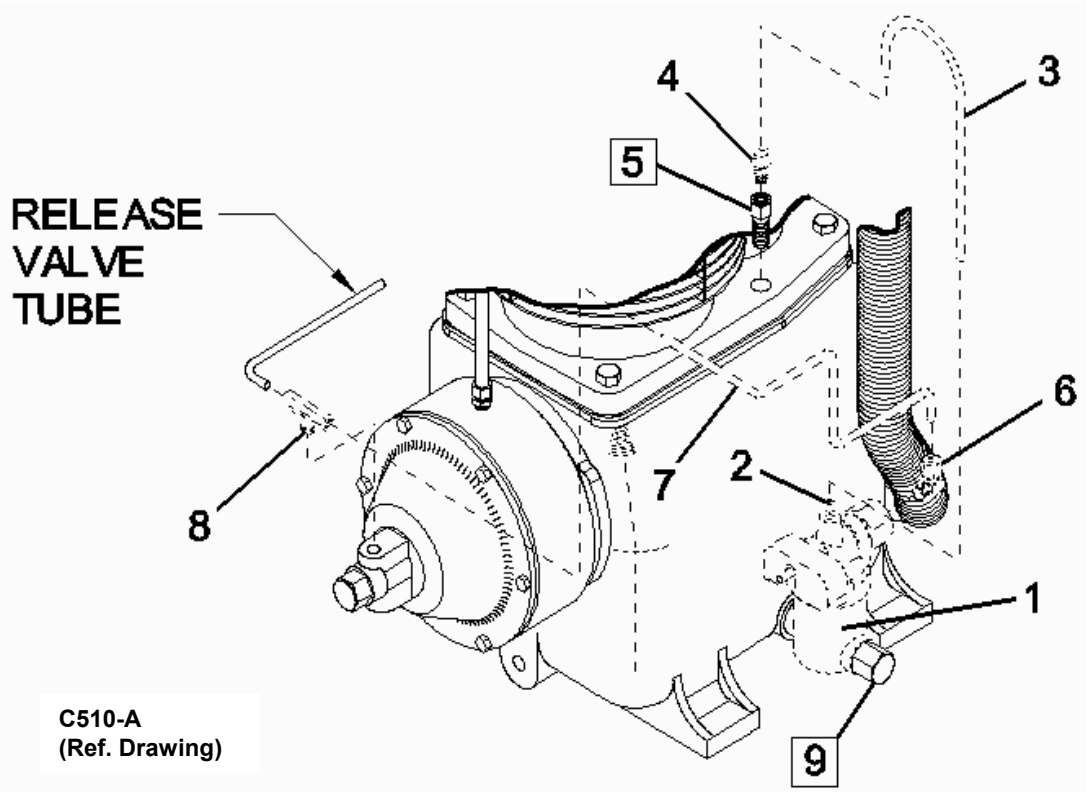
**R10, R15, R30, R40, & R70
WITH HU OR DUAL CONTROL
AND AUTOMATIC TANK DRAIN (ATD)**

**C521-A
(Ref. Drawing)**

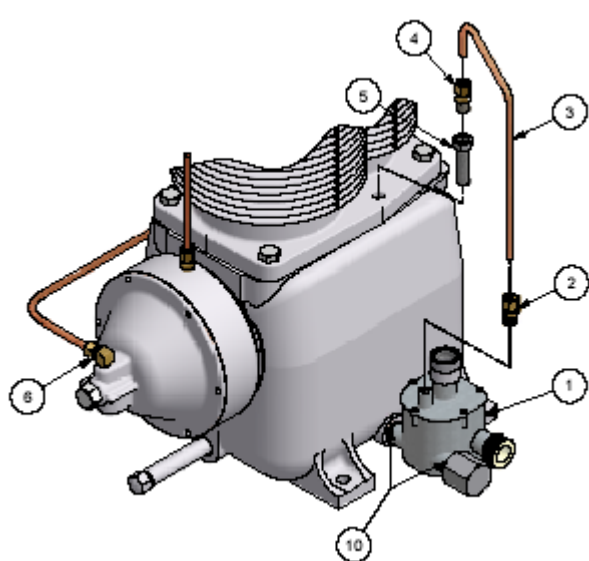
OLD LOSC INSTALLATION

DIAGRAM A

R10, R15, S12, and S20



NEW LOSC INSTALLATION

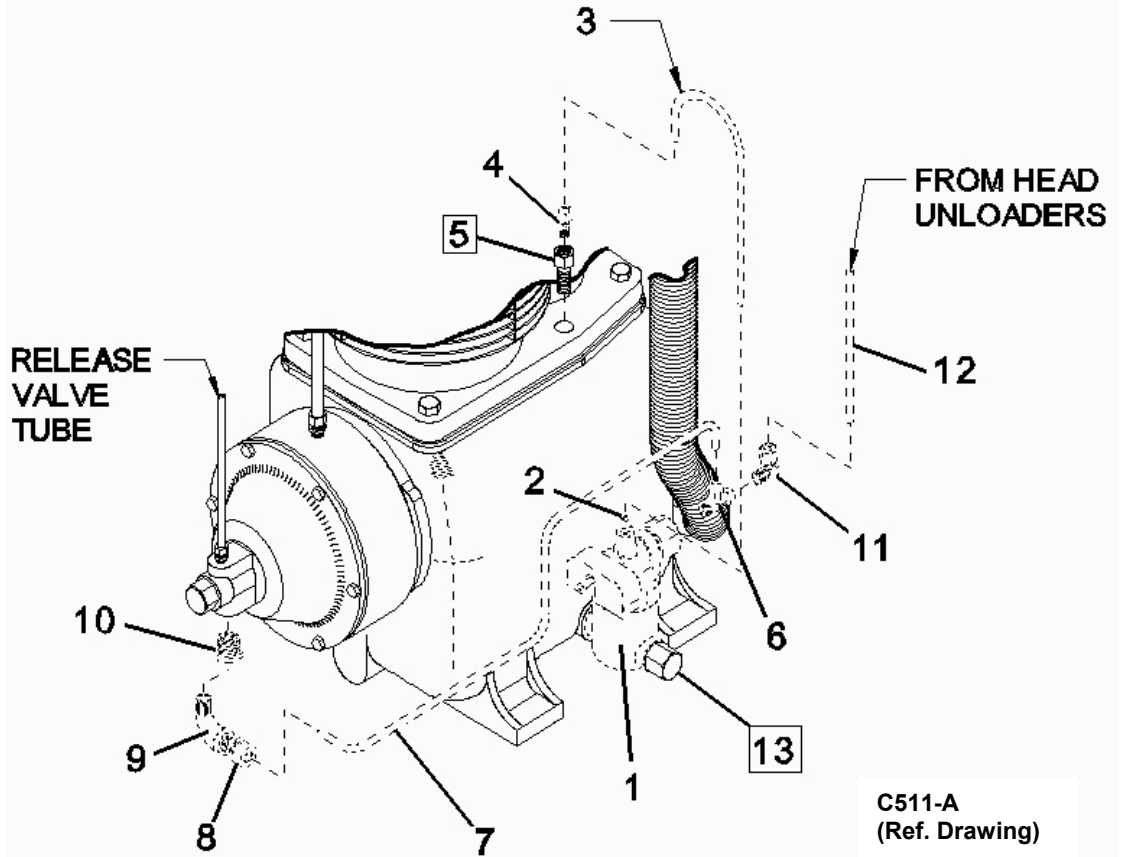


<u>ITEM</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
1	CC1007791	1	LOSC ASSY
3	CC107635	1	TUBE, VENT
4	M2863	1	COMPRESSION FITTING, STRAIGHT
6	M2868	1	COMPRESSION FITTING, 90 DEG
10	P02843A	2	GASKET, COPPER
NS	M1757	1	CONDUIT FITTING

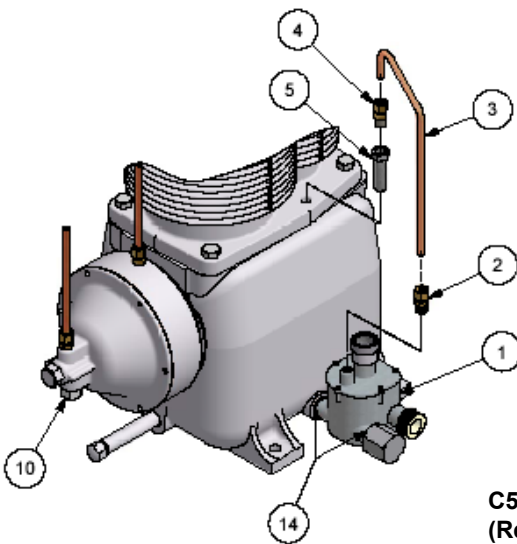
OLD LOSC INSTALLATION

DIAGRAM B

R10HU, R15HU, S12HU, and S20HU



NEW LOSC INSTALLATION



ITEM	PART NO.	QTY.	DESCRIPTION
1	CC1007791	1	LOSC ASSY
3	CC1007635	1	TUBE, VENT
4	M2843	1	COMPRESSION FITTING, STRAIGHT
10	Z4593	1	MUFFLER
14	P02843A	2	GASKET, COOPER
NS	M2868	1	COMPRESSION FITTING, 90 DEG.
NS	M1757	1	CONDUIT FITTING

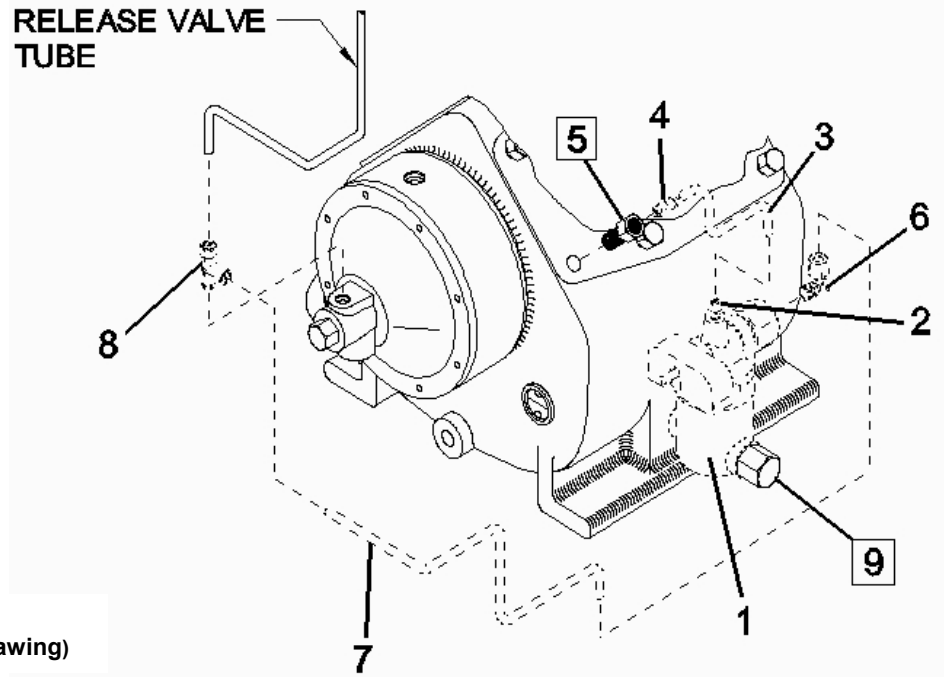
NOTE:
CHANGE HEAD UNLOADER TEE AND
REPLACE WITH 90° COMPRESSION
FITTING (M2868)

NOTE: R15 SHOWN

OLD LOSC INSTALLATION

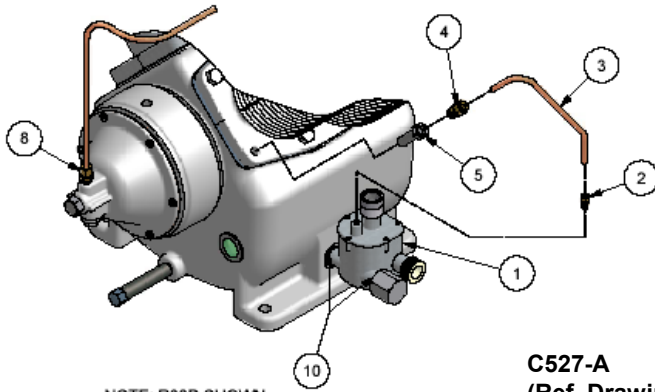
DIAGRAM C

R30 and S40



C512-A
(Ref. Drawing)

NEW LOSC INSTALLATION



NOTE: R30D SHOWN

C527-A
(Ref. Drawing)

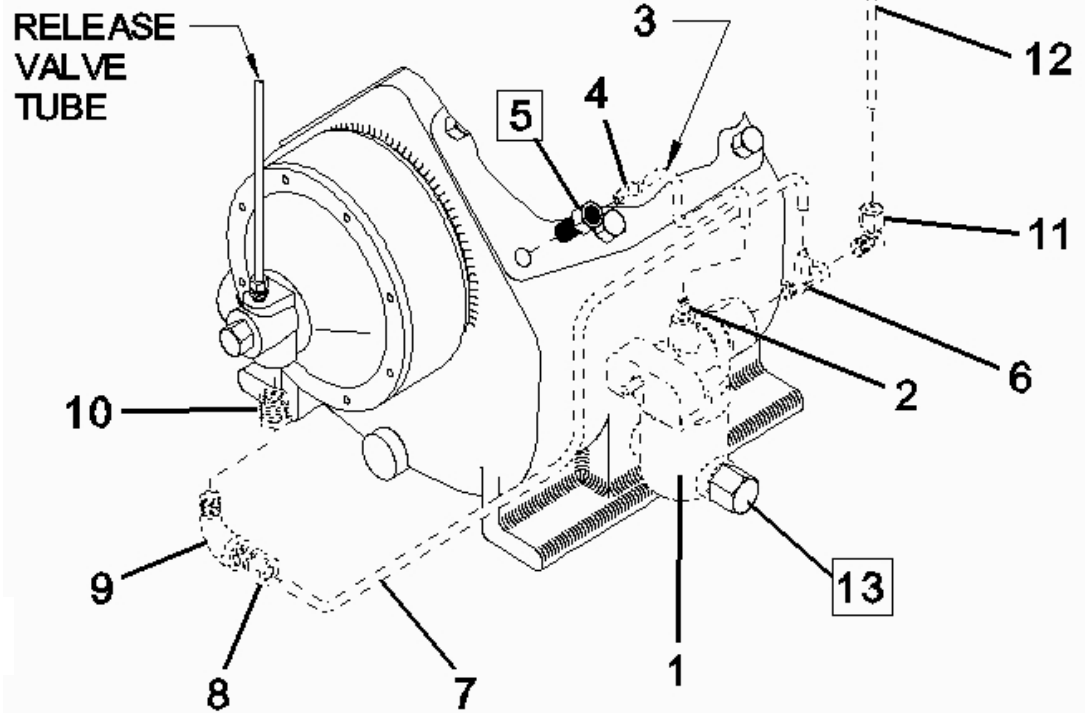
<u>ITEM</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
1	CC1007791	1	LOSC ASSY
3	CC1007636	1	TUBE, VENT
4	M2863	1	COMPRESSION FITTING, STRAIGHT
8	M2863	1	COMPRESSION FITTING, STRAIGHT
10	P02843A	2	GASKET, COPPER
NS	M1757	1	CONDUIT FITTING

OLD LOSC INSTALLATION

DIAGRAM D

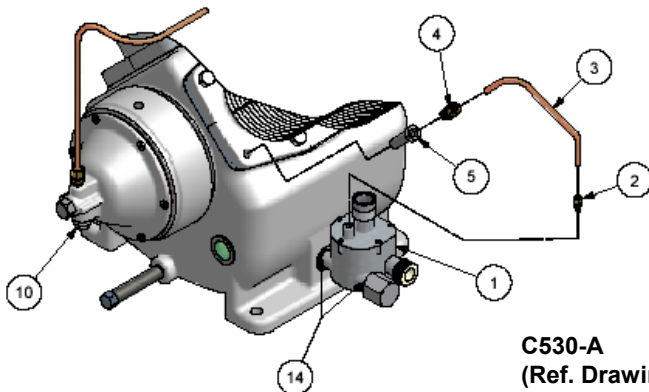
R30HU and S40HU

FROM HEAD UNLOADERS



C513-A
(Ref. Drawing)

NEW LOSC INSTALLATION



C530-A
(Ref. Drawing)

NOTE: R30D SHOWN

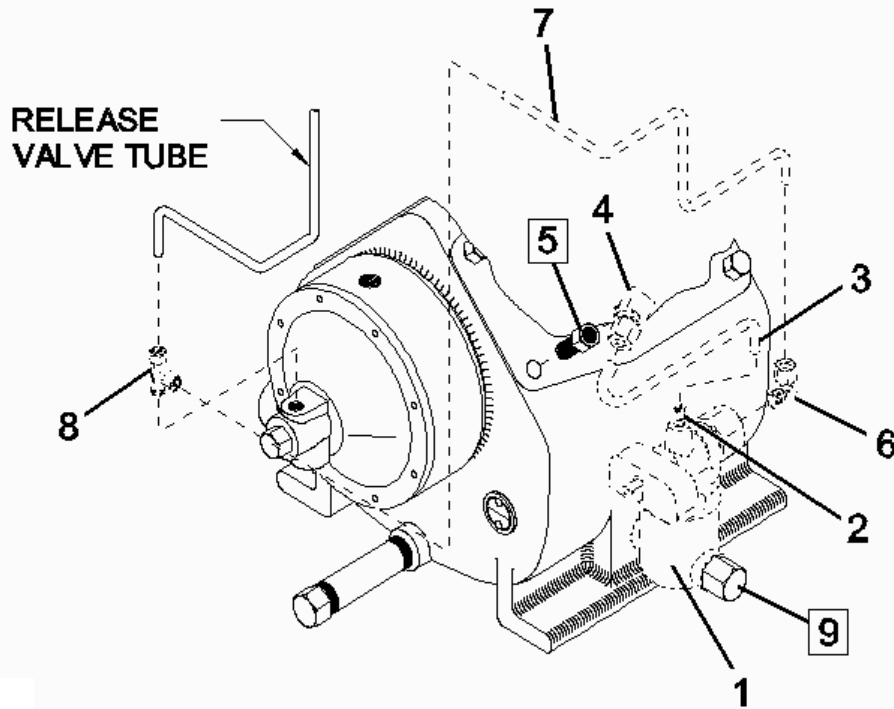
<u>ITEM</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
1	CC1007791	1	LOSC ASSY
3	CC1007636	1	TUBE, VENT
4	M2863	1	COMPRESSION FITTING, STRAIGHT
10	Z4593	1	MUFFLER
14	P02843A	2	GASKET, COPPER
NS	M2868	1	COMPRESSION FITTING, 90 DEG.
NS	M1757	1	CONDUIT FITTING

NOTE:
CHANGE HEAD UNLOADER TEE AND
REPLACE WITH 90° COMPRESSION
FITTING (M2868)

OLD LOSC INSTALLATION

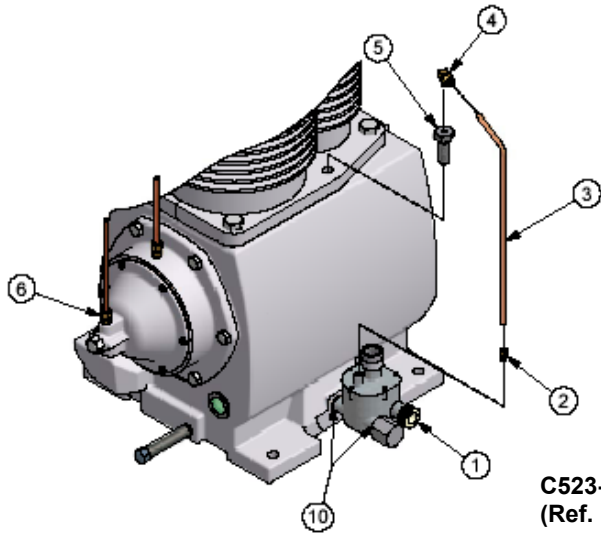
DIAGRAM E

R40



C514-A
(Ref. Drawing)

NEW LOSC INSTALLATION



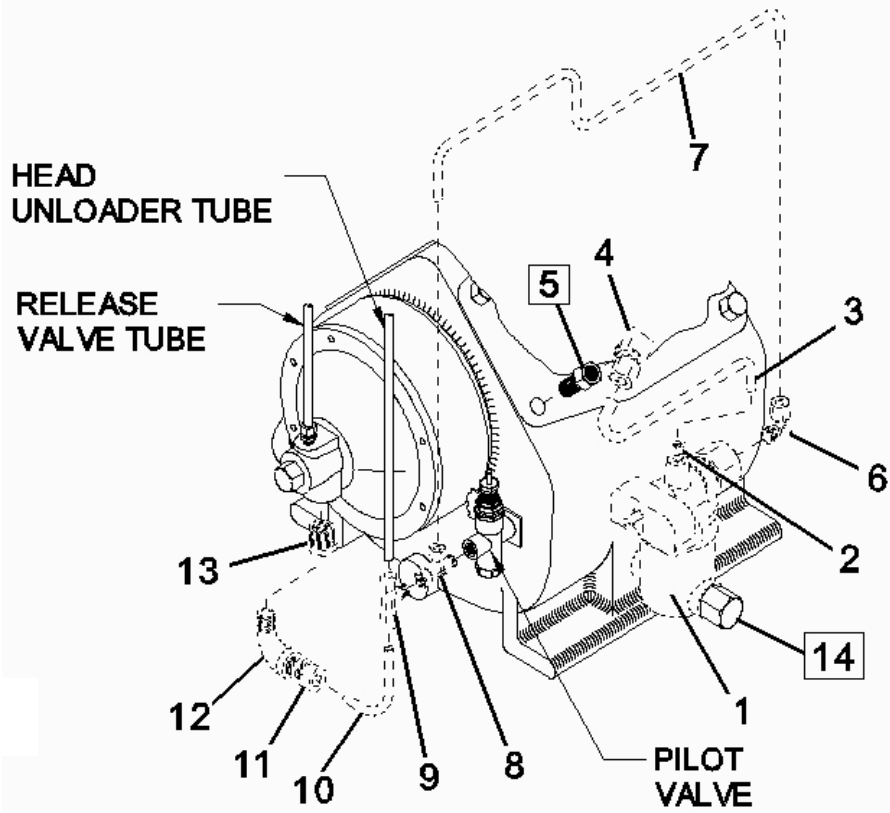
C523-A
(Ref. Drawing)

<u>ITEM</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
1	CC1007791	1	LOSC ASSY
3	CC1007631	1	TUBE, VENT
4	M2868	1	COMPRESSION FITTING 90 DEG.
6	M2863	1	COMPRESSION FITTING, STRAIGHT
10	P02843A	2	GASKET, COPPER
NS	M1757	1	CONDUIT FITTING

OLD LOSC INSTALLATION

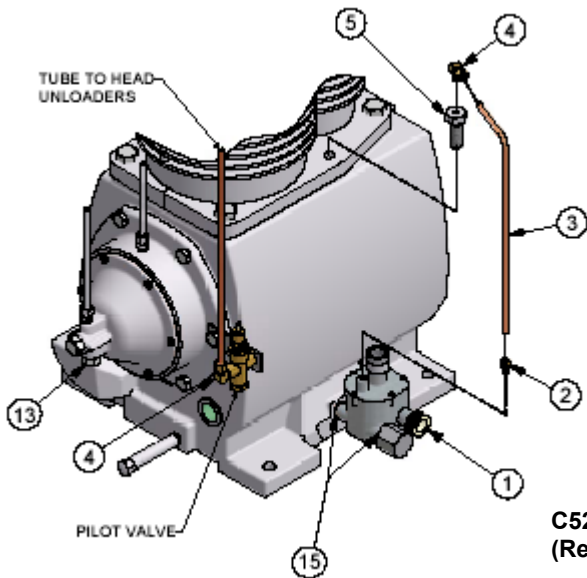
DIAGRAM F

R40HU



C515-A
(Ref. Drawing)

NEW LOSC INSTALLATION



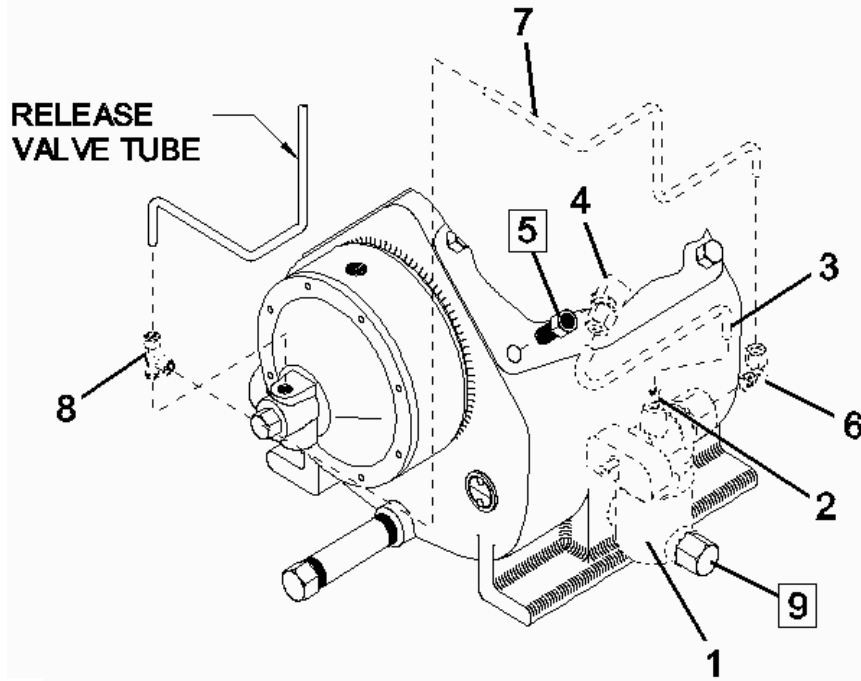
C524-A
(Ref. Drawing)

ITEM	PART NO.	QTY.	DESCRIPTION
1	CC1007791	1	LOSC ASSY
3	CC1007631	1	TUBE, VENT
4	M2868	2	COMPRESSION FITTING, 90 DEG.
13	Z4593	1	MUFFLER
15	P02843A	2	GASKET, COPPER
NS	M1757	1	CONDUIT FITTING

OLD LOSC INSTALLATION

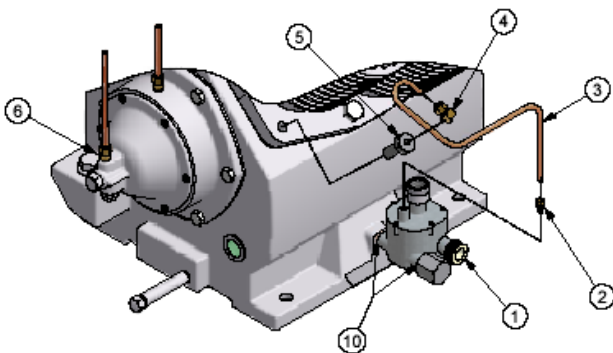
DIAGRAM G

R70



C514-A
(Ref. Drawing)

NEW LOSC INSTALLATION



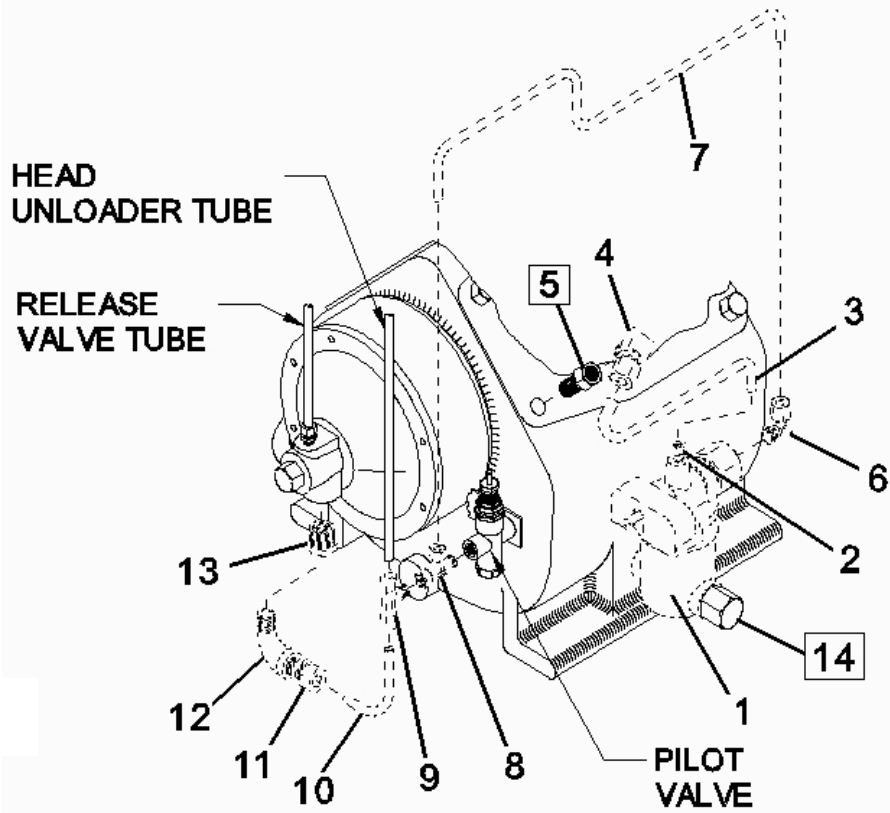
C525-A
(Ref. Drawing)

<u>ITEM</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
1	CC1007791	1	LOSC ASSY
3	CC1007632	1	TUBE, VENT
4	M2868	1	COMPRESSION FITTING, 90 DEG.
6	M2863	1	COMPRESSION FITTING, STRAIGHT
10	P02843A	2	GASKET, COPPER
NS	M1757	1	CONDUIT FITTING

OLD LOSC INSTALLATION

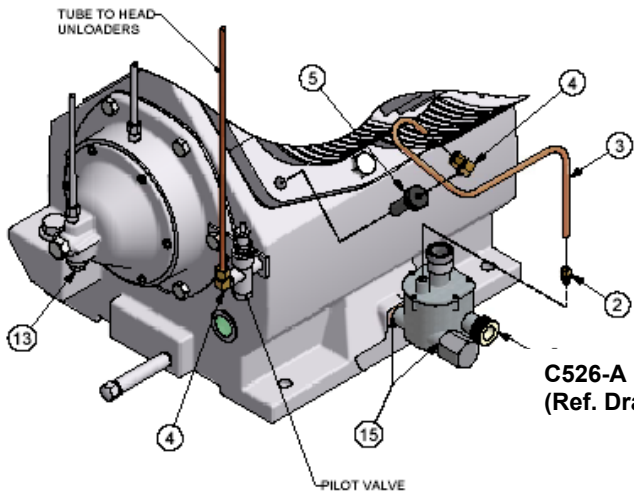
DIAGRAM H

R70HU



C515-A
(Ref. Drawing)

NEW LOSC INSTALLATION



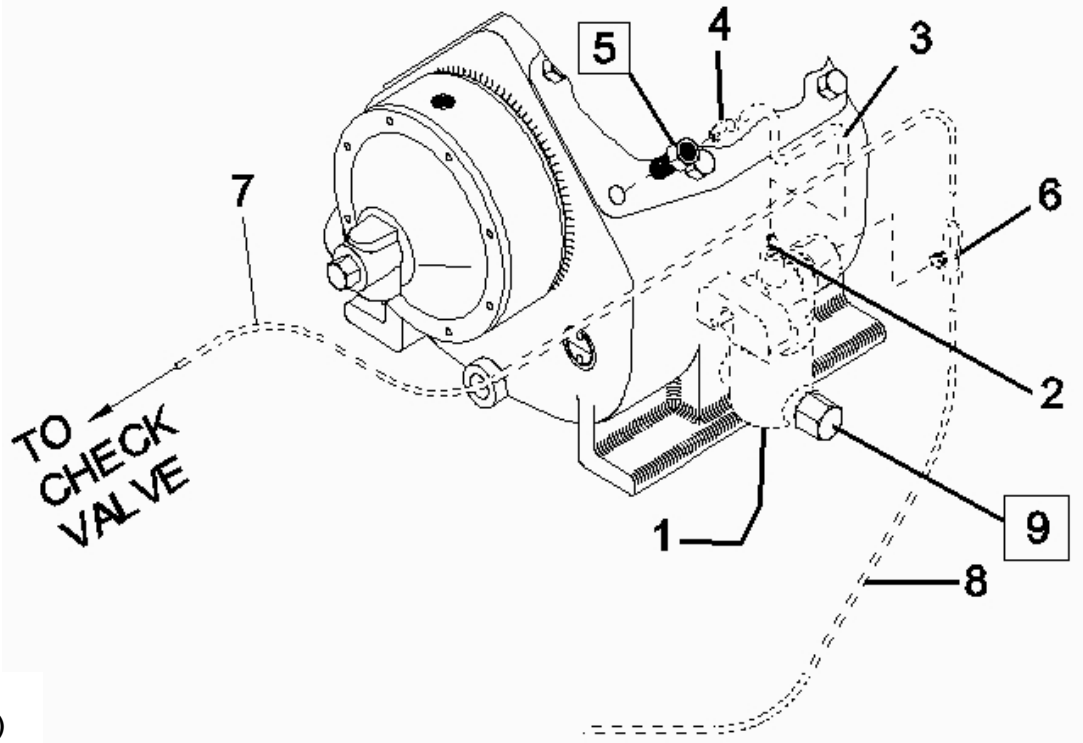
C526-A
(Ref. Drawing)

ITEM	PART NO.	QTY.	DESCRIPTION
1	CC1007791	1	LOSC ASSY
3	CC1007632	1	TUBE, VENT
4	M2868	2	COMPRESSION FITTING, 90 DEG.
13	Z4593	1	MUFFLER
15	P02843A	2	GASKET, COPPER
NS	M1757	1	CONDUIT FITTING

OLD LOSC INSTALLATION

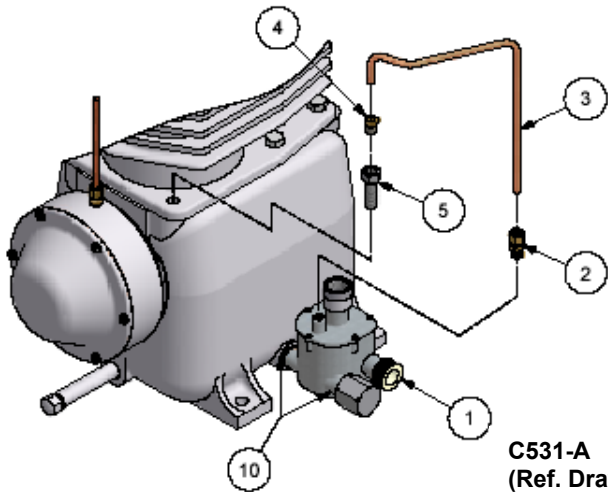
DIAGRAM I

RV15



C517-A
(Ref. Drawing)

NEW LOSC INSTALLATION



C531-A
(Ref. Drawing)

<u>ITEM</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
1	CC1007791	1	LOSC ASSY
3	CC1007634	1	TUBE, VENT
4	M27	1	COMPRESSION NUT
10	P02843A	2	GASKET, COPPER
NS	M1757	1	CONDUIT FITTING

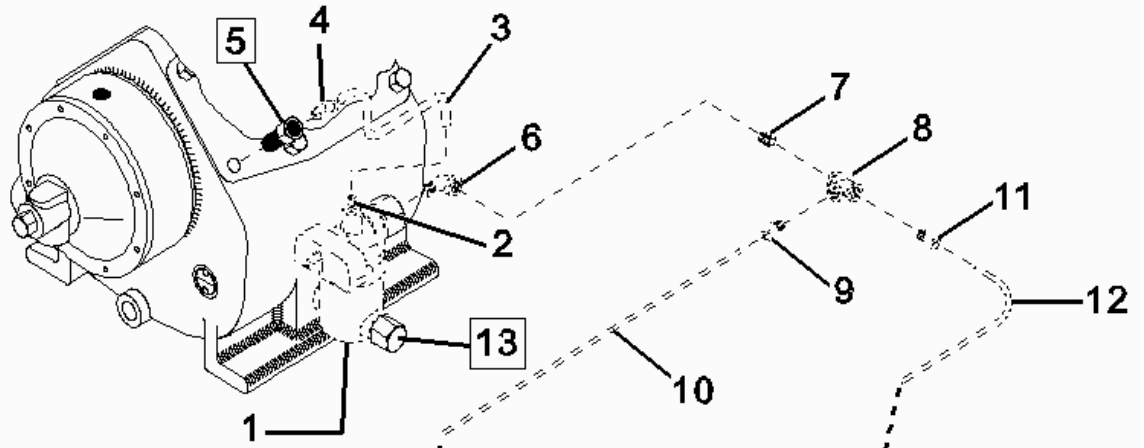
NOTES:

Customer to supply 1/4 " x .03 wall thickness copper tubing from the pressure switch to check valve.

OLD LOSC INSTALLATION

DIAGRAM J

RV15 with ATD

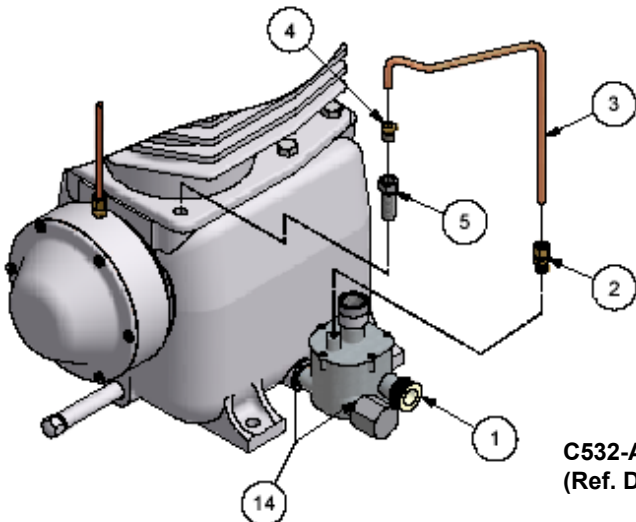


C518-A
(Ref. Drawing)

TO AUTOMATIC
TANK DRAIN.

TO PRESSURE
SWITCH

NEW LOSC INSTALLATION



C532-A
(Ref. Drawing)

<u>ITEM</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
1	CC1007791	1	LOSC ASSY
3	CC1007634	1	TUBE, VENT
4	M27	1	COMPRESSION NUT
14	P02843A	2	GASKET, COPPER
NS	M1757	1	CONDUIT FITTING

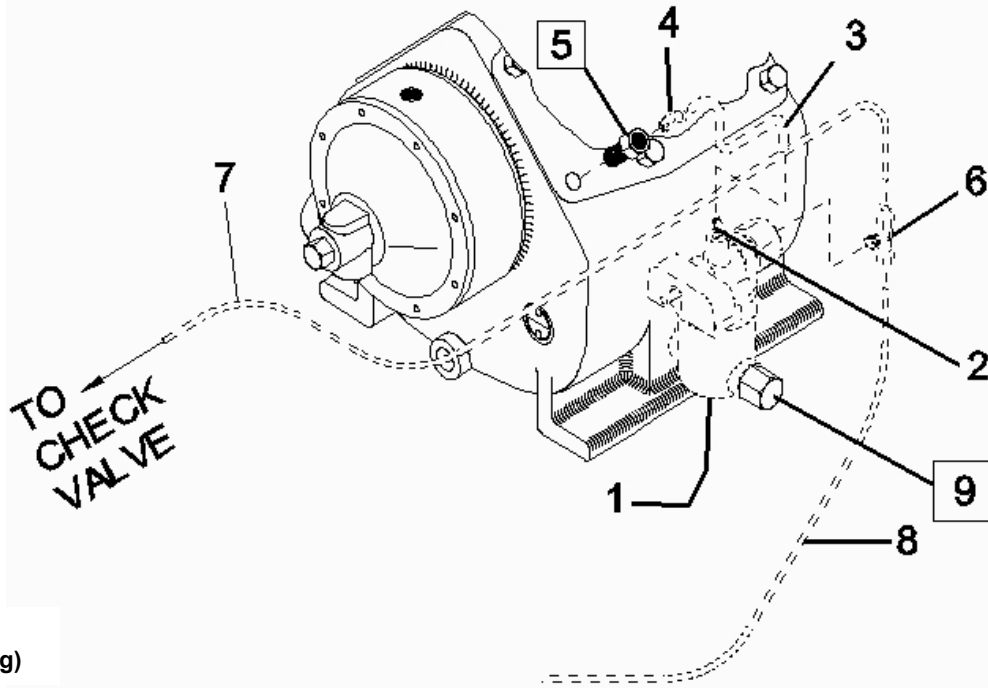
NOTES:

Customer to supply 1/4 " x .03 wall thickness copper tubing from the pressure switch to ATD.

OLD LOSC INSTALLATION

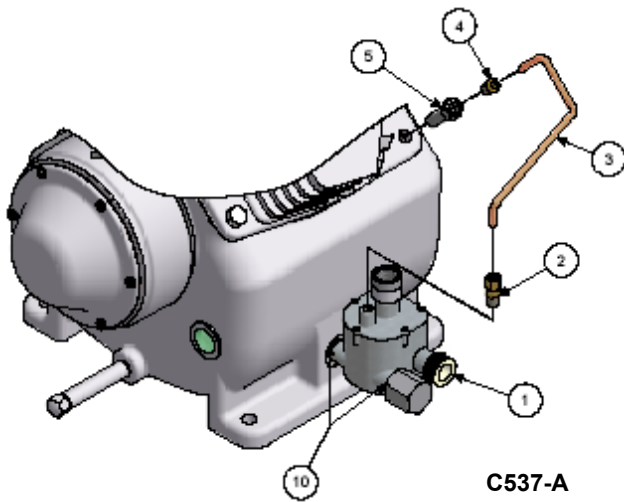
DIAGRAM K

RV30



C517-A
(Ref. Drawing)

NEW LOSC INSTALLATION



C537-A
(Ref. Drawing)

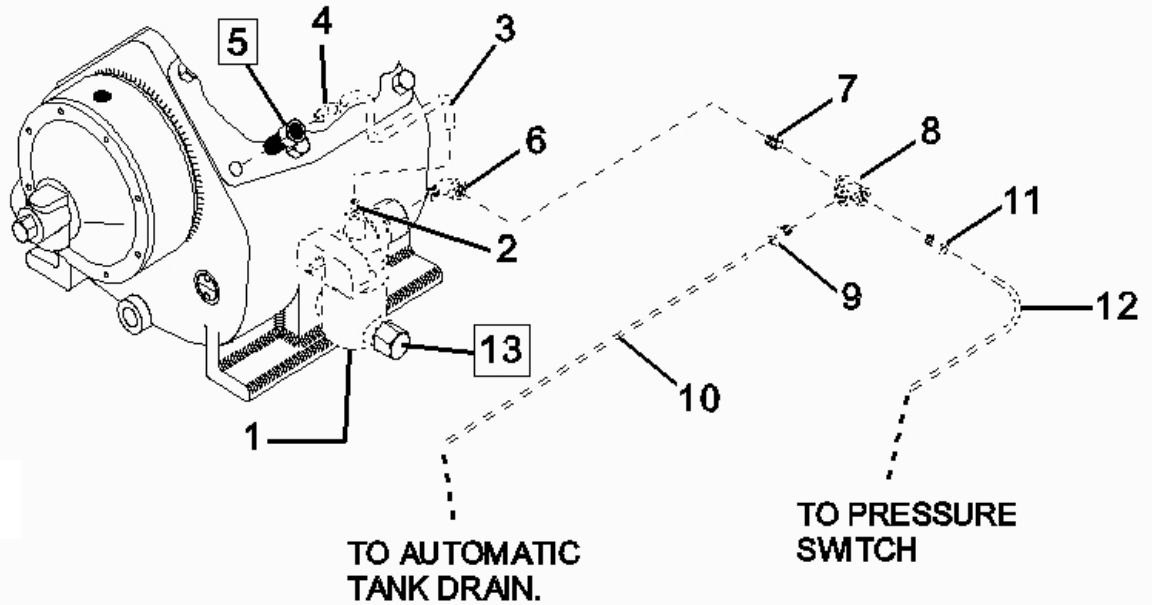
ITEM	PART NO.	QTY.	DESCRIPTION
1	CC1007791	1	LOSC ASSY
3	CC1007630	1	TUBE, VENT
4	M27	1	COMPRESSION NUT
10	P02843A	2	GASKET, COPPER
NS	M1757	1	CONDUIT FITTING

NOTES:
Customer to supply 1/4 " x .03 wall thickness copper tubing from the pressure switch to check valve.

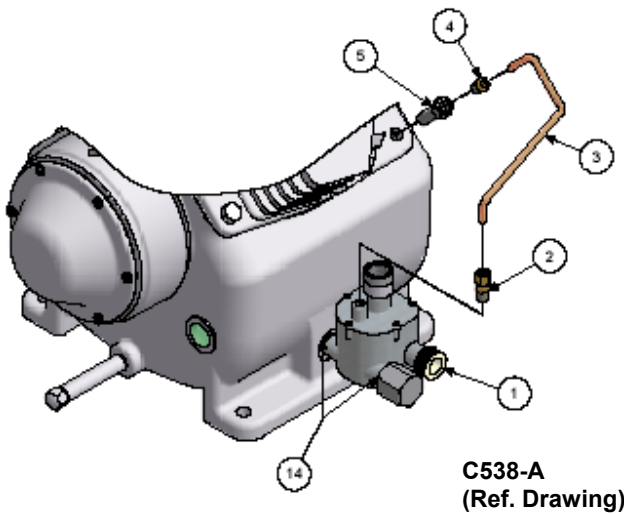
OLD LOSC INSTALLATION

DIAGRAM L

RV30 with ATD



NEW LOSC INSTALLATION



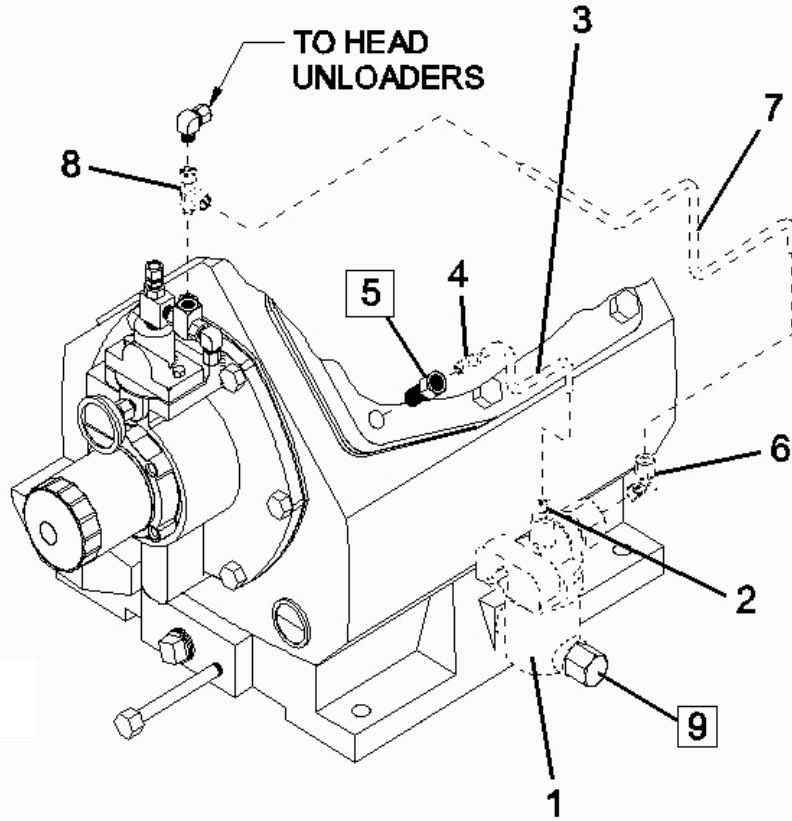
ITEM	PART NO.	QTY.	DESCRIPTION
1	CC1007791	1	LOSC ASSY
3	CC1007630	1	TUBE, VENT
4	M27	1	COMPRESSION NUT
14	P02843A	2	GASKET, COPPER
NS	M1757	1	CONDUIT FITTING

NOTES:
Customer to supply 1/4 " x .03 wall thickness copper tubing from the pressure switch to ATD.

OLD LOSC INSTALLATION

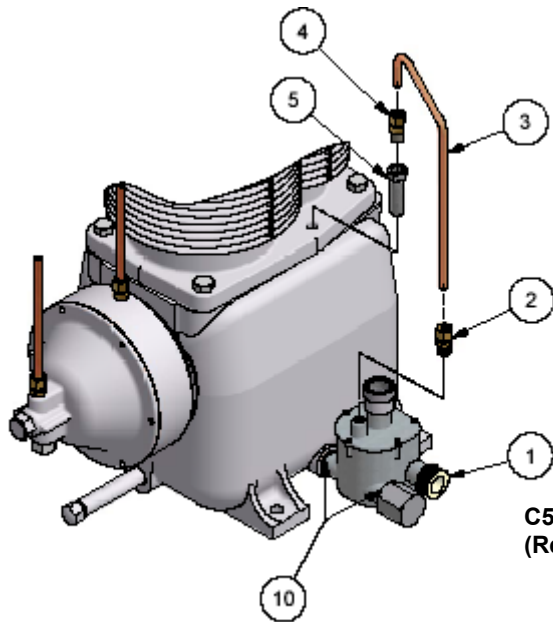
DIAGRAM M

PL15



**C516-A
(Ref. Drawing)**

NEW LOSC INSTALLATION



**C533-A
(Ref. Drawing)**

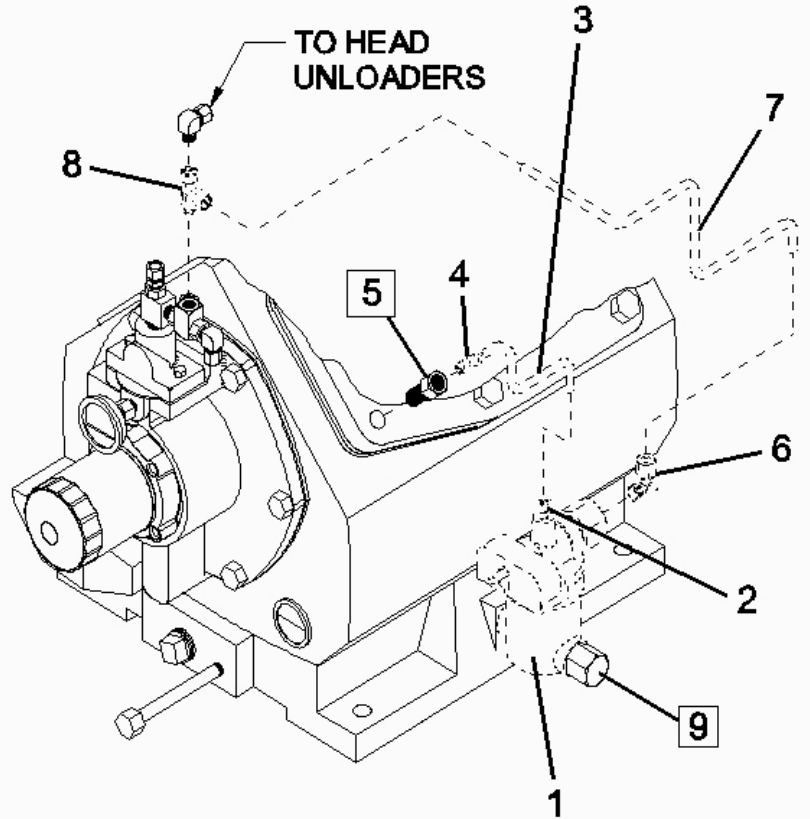
<u>ITEM</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
1	CC1007791	1	LOSC ASSY
3	CC1007635	1	TUBE, VENT
4	M2863	1	COMPRESSION FITTING, STRAIGHT
10	P02843A	2	GASKET, COPPER
NS	M1757	1	CONDUIT FITTING

NOTE: R15 SHOWN

OLD LOSC INSTALLATION

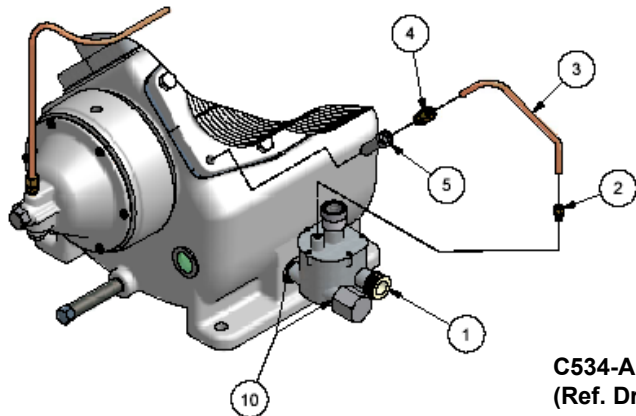
DIAGRAM N

PL30



C516-A
(Ref. Drawing)

NEW LOSC INSTALLATION



C534-A
(Ref. Drawing)

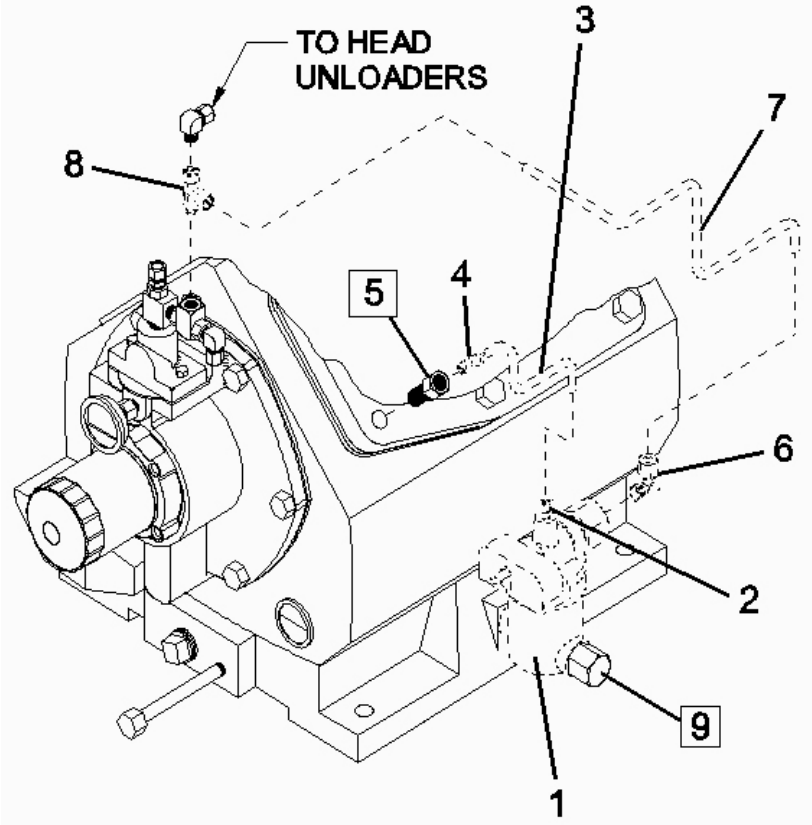
NOTE: R30D SHOWN

<u>ITEM</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
1	CC1007791	1	LOSC ASSY
3	CC1007636	1	TUBE, VENT
4	M2863	1	COMPRESSION FITTING, STRAIGHT
10	P02843A	2	GASKET, COPPER
NS	M1757	1	CONDUIT FITTING

OLD LOSC INSTALLATION

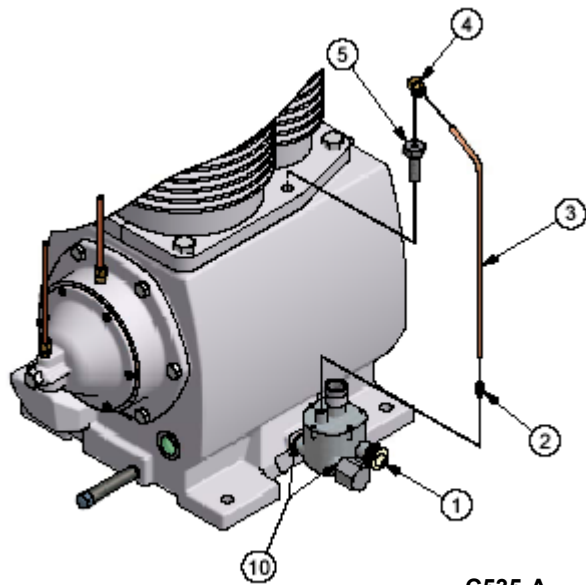
DIAGRAM O

PL40



C516-A
(Ref. Drawing)

NEW LOSC INSTALLATION



NOTE: R40 SHOWN

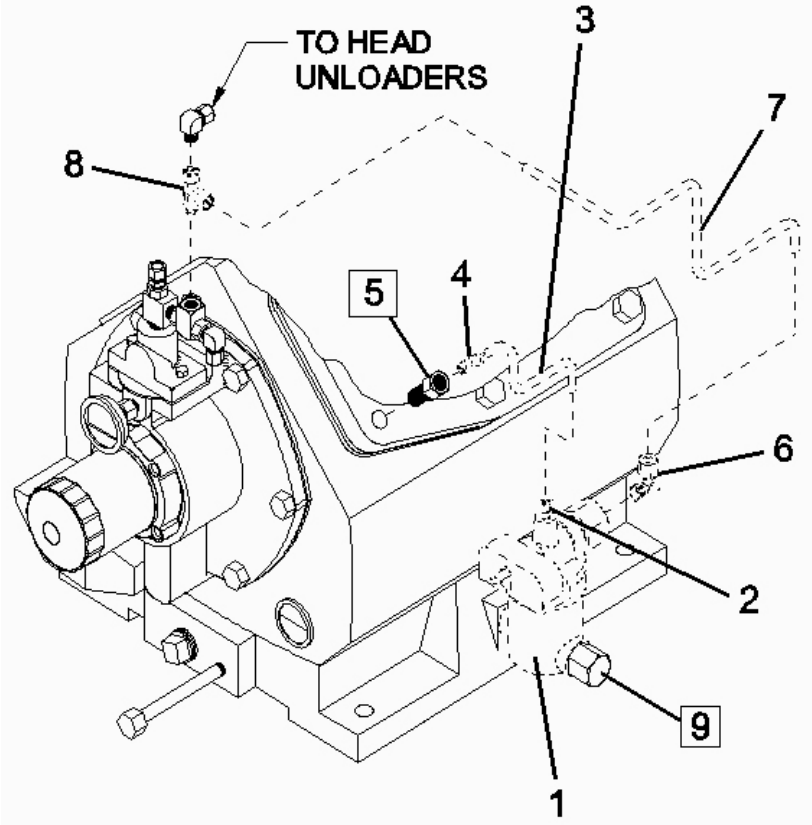
C535-A
(Ref. Drawing)

<u>ITEM</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
1	CC1007791	1	LOSC ASSY
3	CC1007631	1	TUBE, VENT
4	M2868	1	COMPRESSION FITTING, 90 DEG.
10	P02843A	2	GASKET, COPPER
NS	M1757	1	CONDUIT FITTING

OLD LOSC INSTALLATION

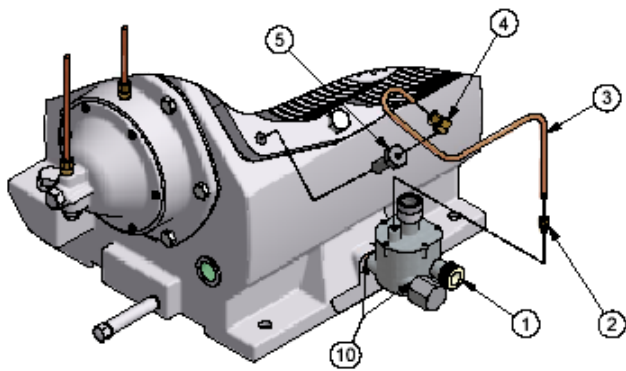
DIAGRAM P

PL70



C516-A
(Ref. Drawing)

NEW LOSC INSTALLATION



<u>ITEM</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
1	CC1007791	1	LOSC ASSY
3	CC1007632	1	TUBE, VENT
4	M2868	1	COMPRESSION FITTING, 90 DEG.
10	P02843A	2	GASKET, COPPER
NS	M1757	1	CONDUIT FITTING

C536-A
(Ref. Drawing)

NOTE: R70 SHOWN

TROUBLESHOOTING & SERVICING



WARNING

Always disconnect unit from power supply and relieve all pressure from air tank before performing any maintenance. "Lock Out" or "Tag Out" all power sources. Failure to do so may result in equipment damage or injury.

NOTICE

Do not disassemble LOSC switch. Disassembly will void warranty.

No adjustments are required for oil monitor.

If the Oil Monitor does not operate properly, check the items listed below to determine the cause.

1) CRANKCASE OIL

Check sight glass to insure proper oil level in crankcase, when compressor is shut off.

Check crankcase oil for proper viscosity. This is particularly important for temperature conditions below 32°F. Oil which is too thick can slow the response of the mechanism, causing float to register a low level.

Change oil regularly. Clean oil insures proper operation of the Oil Monitor, as well as compressor.

2) VENT TUBE

Check vent tube to insure it is not clogged.

Check the gasket between valve body and bowl for leaks. This will cause a pressure rise in the crankcase which will give a false safe oil level indication.

Check the fittings at ends of vent tube (3) for tightness and leaks.

3) RESET

Check that reset return spring is in proper working order.

Verify that reset knob is in fully counterclockwise position.

NOTES

**FOR PARTS: REFER TO PARTS DEPOT LIST
ACCOMPANYING THIS MANUAL.**

CHAMPION[®]
A Gardner Denver Product

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