Oteco Inc. Houston, Texas	Manual: **OS-130363 Rev.B**
3" Reset Relief Valve Maintenance	Revision Date: 5/27/15
Issued: B.H. Date: 4/10/08	Approved: WU Date: 4/10/08

OTECO INC.
3" RESET RELIEF VALVE
3" FIG.1502 FEMALE INLET &
3" FIG.1502 FEMALE OUTLET
INSTALLATION & MAINTENANCE MANUAL
PART NO. 130363

TABLE OF CONTENTS

1. PERIODIC MAINTENANCE

2. SPARE PARTS LIST

3 PROCEDURES FOR REPLACEMENT OF SEALS

4. PROCEDURES FOR MAINTENANCE AND REPAIR OF BONNET ASSEMBLY

5. PARTS LIST

6. EXPLODED DRAWING

7. INSTALLATION DRAWING

1.0 PERIODIC MAINTENANCE

WEEKLY

1. Unseat valve by striking release button at rear of valve. Release pressure in system to 0 PSI and reset valve with reset lever.

6 MONTHS

1. Lubrication-Remove 1/8 plastic pipe plug located behind right load spring on bottom of bonnet. Pump grease through grease fitting until new grease comes out of 7/16 hole. Replace 1/8 plastic pipe plug.

2. Replace seals as required.

12 MONTHS

1. Lubrication-Clean bonnet assembly and repack with new grease.

2. Replace parts and seals as required

2.0 SPARE PARTS LIST

SEALS FOR 6 MONTHS NORMAL OPERATION

QUANTITY	DESCRIPTION	PART NO.
1	Cushion Ring	143130
1	Outer Seal	302686
1	"O" Ring	143150
1	Inner Seal	302687
	(4 above parts, Oteco repair kit 143215)	
1	Stem Bushing O-ring, outside	302750
1	Stem Bushing O-ring, inside	302752
2	Seal Union Ring	301862

REPAIR PARTS FOR 12 MONTHS NORMAL OPERATION

QUANTITY	DESCRIPTION	PART NO.
2	Cushion Ring	143130
2	Outer Seal	302686
2	"O" Ring	143150
2	Inner Seal	302687
	(4 above parts, Oteco repair kit 143215, qty.2)	
2	Stem Bushing O-ring, outside	302750
2	Stem Bushing O-ring, inside	302752
1	Top Crank Pin	142200
2	Link Pins	142403
2	Bearing f/Upper Link and Piston	142423
2	Bearing f/Bonnet	142424
2	Bearing f/Crank	142422
1	Bearing f/Bonnet Cover	142425
5	Spiral Pin 1/8 X 5/8	142432
1	Spiral Pin 1/4 X 1-1/2	142435
1	Spiral Pin 5/16 X 1-3/8	142434
4	Seal Union Ring	301862

2.0 SPARE PARTS LIST (continued)

REPAIR PARTS FOR MAJOR REBUILD

QUANTITY	DESCRIPTION	PART NO.
1	Cushion Ring	143130
1	Outer Seal	302686
1	"O" Ring	143150
1	Inner Seal	302687
1	Piston/Bearing assy.	143110
1	Stem Bushing	143140
1	Inner Retainer	143160
1	Outer Retainer	143170
	(8 above parts, Oteco major repair kit 143216)	
1	Top Crank Pin	142200
2	Link Pins	142403
2	Bearing f/Bonnet	142424
2	Bearing f/Crank	142422
1	Bearing f/Bonnet Cover	142425
5	Spiral Pin 1/8 X 5/8	142432
1	Spiral Pin 1/4 X 1-1/2	142435
1	Spiral Pin 5/16 X 1-3/8	142434
2	Seal Union Ring	301862

3.0 REPLACEMENT OF SEALS: Ref. Drawings 20826 and 20827

DISASSEMBLY

1. Remove pressure from relief valve.

2. Remove valve from piping system and grip in vice.

3. Remove (4) cap screws (item 7). Lift piston and bonnet assembly away from body (item 37).

4. Unscrew sub (item 48) from body (item 37). Remove seal retainer (item 43), inner seal (item 44), "O" ring (Item 46), outer seal (item 45) and union seal (item 49) from body. Remove union seal (item 49) from sub.

5. Thoroughly clean body, sub and parts. CAUTION: If grit blast is used, protect threads and seal surfaces from erosion.

6. Inspect all parts for wear or damage. Replace with new parts as needed.

3.0 REPLACEMENT OF SEALS: (continued)

ASSEMBLY

1. Apply a light coat of grease to items 43, 44, 45, 46 and 47.

2. Install piston inner seal (item 44) onto sub (item 48). Secure seal with inner retainer (item 43), tighten inner retainer to 55 ft-lbs torque. Install union seal (item 49) into sub (item 48).

3. Install outer retainer (item 45), outer seal (item 47), "O" ring (item 46) and union seal (item 49) into body (item 37).

4. Install body sub (item 48) into body (item 37). Tighten body sub to 600 ft-lbs. torque.

5. Apply a light coat of grease to small diameter of piston (item 42) extending from bonnet assembly. Install cushion ring (item 41) onto piston (item 42). Beveled end of cushion should be facing toward large diameter of piston.

6. Install bonnet assembly onto body assembly. Use screw driver to start entry of cushion ring into body.

7. Install (4) socket head screws (item 7). Tighten to 50 ft.-lbs. torque.

8. Pressure test valve for correct operation before installing into system. Precautions should be taken to protect personnel while testing.

4.0 REPAIR OF BONNET ASSEMBLY: Ref. Drawings 20826 and 20827

DISASSEMBLY

1. Remove pressure from relief valve.
2. Remove valve from piping system and grip in vise.
3. Remove adjusting nut (item 1) and upper spring retainer (item 4).
4. Remove load springs (item 31).
5. Remove (4) socket head cap screws (item 7) from bonnet (item 34).
6. Remove bonnet cover assembly (item 9).
7. Remove (4) socket head cap screws (item 7) from body (item 37) and lift bonnet assembly from body.
8. Remove old grease from bonnet assembly and bonnet cover assembly. Clean with solvent.
9. Inspect and replace worn parts as needed.

4.0 REPAIR OF BONNET ASSEMBLY (Continued)

ASSEMBLY:

1. Apply a light coat of grease to small diameter of piston (item 42) extending from bonnet assembly. Install cushion ring (item 41) onto piston (item 42). Beveled end of cushion should be facing toward large diameter of piston.

2. Install bonnet assembly onto body assembly. Use screwdriver to start entry of cushion ring into body.

3. Install (4) socket head screws (item 7). Tighten to 50 ft-lbs. torque.

4. Repack upper part of bonnet assembly (item 34) with Lubriplate Lo – Temp grease, or equivalent. Approximately 16 oz. is required.

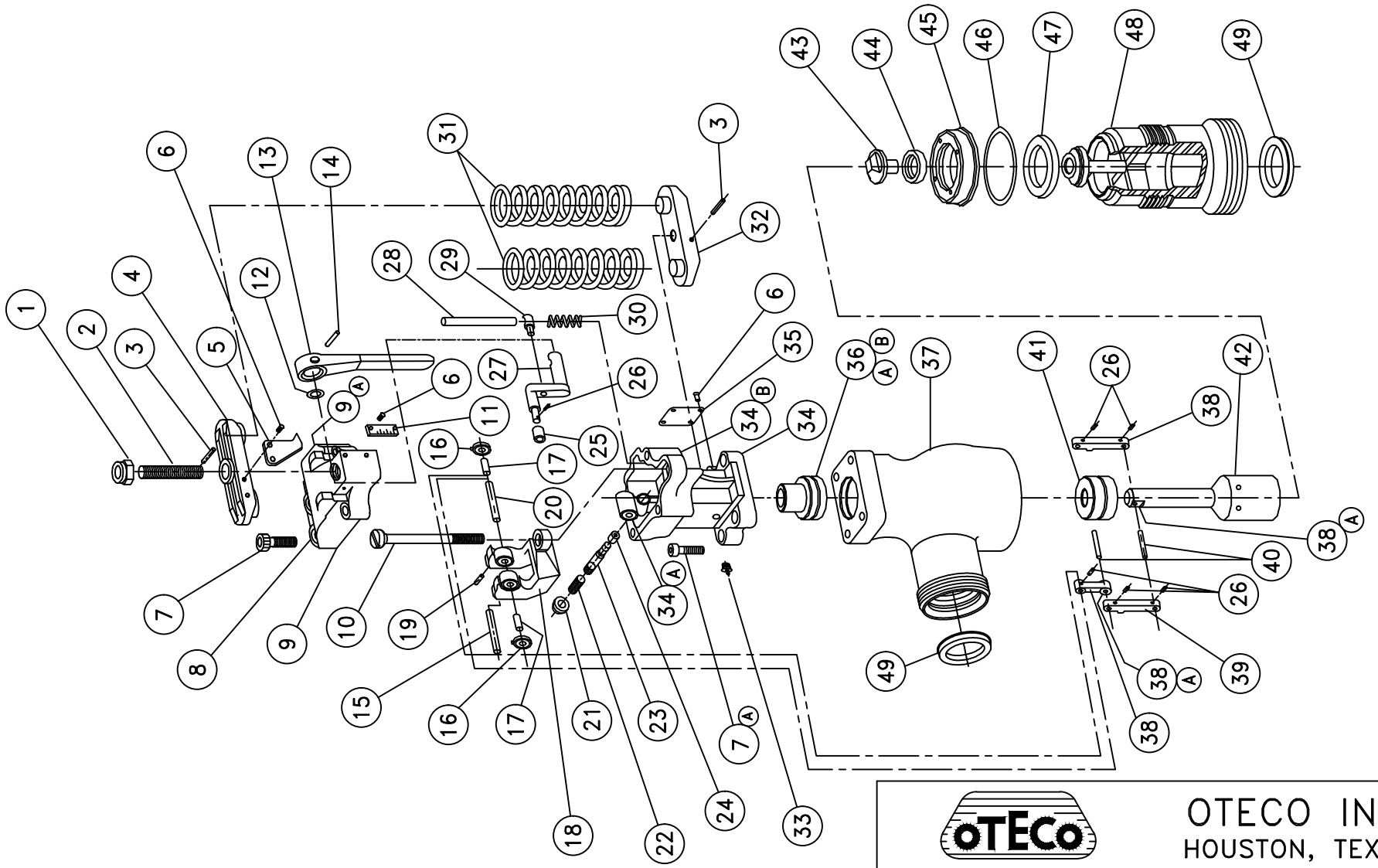
5. Install bonnet cover assembly (item 9) onto bonnet assembly (item 34) using (4) socket head cap screws. Tighten to 50 ft-lbs. torque.

6. Install (2) load springs (item 31).

7. Install upper spring retainer (item 4).

8. Install adjusting nut (item 1). Tighten nut to obtain desired relief pressure as indicated by pressure relief scale.

9. Pressure test valve for correct operation before installing into system. Precautions should be taken to protect personnel while testing.



NOTES:
1) SEE DRAWING 20827 FOR ITEM PART NUMBERS.

REV	ECN NO.	DATE
B	2132	5/27/15

THIS DRAWING IS THE PROPERTY OF OTECO INC. AND MAY NOT BE REPRODUCED FOR ANY PURPOSE WITHOUT EXPRESS PERMISSION

OTECO INC.
HOUSTON, TEXAS

3" 5,000 PSI OTECO RESET RELIEF VALVE, 3" FIG.1502 FEMALE INLET & OUTLET

DATE: 4/10/08	PART NO. 130363		
SCALE: NTS			
DRAWN: B.H.	DRAWING NO. A-20826	REV. B	
CHK'D: WU			

ITEM	QTY	PART #	DESCRIPTION
1	1	301786	ADJUSTING NUT
2	1	142414	STUD, ADJUSTING
3	1	142435	PIN, SPIRAL
4	1	142426	RETAINER, UPPER SPRING
5	1	142418	INDICATOR, RELIEF PRESSURE
6	4	301729	SELF TAP SCREW
7	4	143310	SOCKET HEAD CAP SCREW
7-A	4	143310	SOCKET HEAD CAP SCREW
8	1	142420	NAMEPLATE
9	1	142419	COVER, BEARING ASSEMBLY
9-A	1	142425	BEARING, BONNET COVER
10	1	143220	SCREW, LOAD
11	1	142430	RELIEF PRESSURE SCALE
12	1	142439	"O" RING, RESET LEVER
13	1	143186	HANDLE, RESET
14	1	142437	PIN, SPIRAL
15	1	142405	PIN, CRANK PIVOT
16	2	142406	SPRING, SPIRAL
17	2	142422	BEARING, CRANK
18	1	143210	CRANK/BEARING ASSEMBLY
19	1	142433	PIN, SPIRAL
20	1	142200	PIN, TOP CRANK
21	1	143320	BUTTON, RELEASE
22	1	142407	SPRING, RELEASE BUTTON
23	1	143330	SHAFT, RELEASE BUTTON
24	1	142408	BUSHING, RELEASE BUTTON
25	1	142440	ROLLER, RESET CRANK
26	5	142432	PIN, SPIRAL
27	1	142442	CRANK, RESET
28	1	142340	ROD, SPRING GUIDE
29	1	142412	KEEPER, SPRING
30	1	142413	SPRING, RESET CRANK
31	2	142417	LOAD SPRING
32	1	142427	RETAINER, LOWER SPRING
33	1	301616	FITTING, GREASE
34	1	142401	BONNET/BEARING ASSEMBLY
34-A	2	142424	BEARING, BONNET
34-B	1	142431	PLUG
35	1	142421	INSTRUCTION PLATE
36	1	143140	STEM BUSHING
36-A	1	302750	STEM BUSHING O-RING, OUTSIDE
36-B	1	302752	STEM BUSHING O-RING, INSIDE
37	1	143191	3" FIG.1502 FEMALE BODY UNION
38	1	142404	UPPER LINK/BEARING ASSEMBLY
38-A	2	142423	BEARIG, F/UPPER LINK, PISTON
39	2	142402	LINK, LOWER
40	2	142403	PIN, LINK
41	1	143130	CUSHION RING
42	1	143110	PISTON/BEARING ASSEMBLY
43	1	143160	RETAINER, INNER
44	1	302687	SEAL, PISTON INNER
45	1	143170	RETAINER, OUTER
46	1	143150	"O" RING
47	1	302686	SEAL, OUTER
48	1	142038	3" FIG.1502 FEMALE UNION SUB
49	2	301862	SEAL RING UNION

NOTE:

1) SEE DRAWING 20826 FOR EXPLODED VIEW OF VALVE ASSEMBLY & NUMBERS.

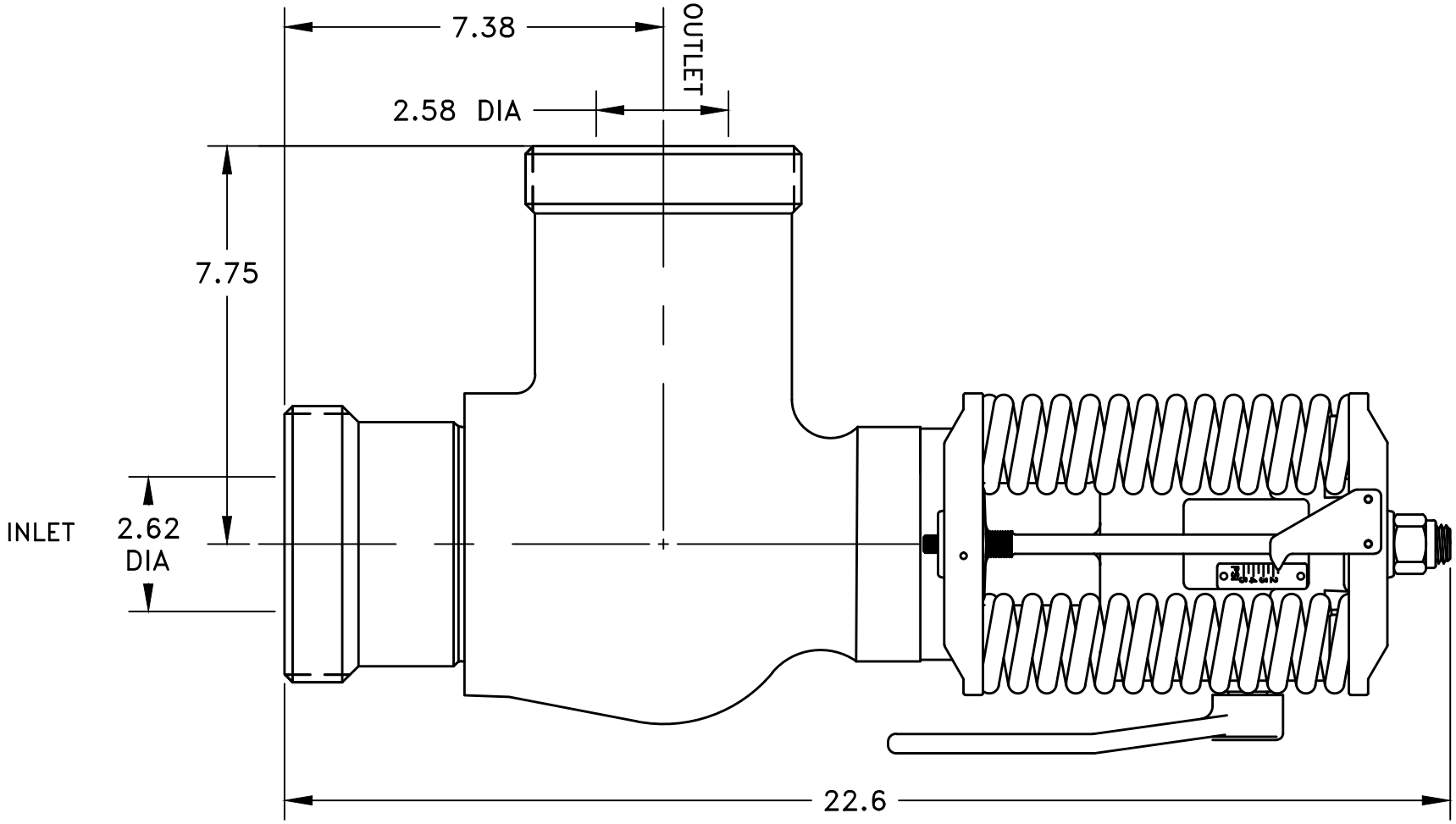
REV	ECN NO.	DATE
C	2132	5/27/15
B	2068	7/25/11

THIS DRAWING IS THE PROPERTY OF OTECO INC. AND MAY NOT BE REPRODUCED FOR ANY PURPOSE WITHOUT EXPRESS PERMISSION

OTECO INC.
HOUSTON, TEXAS

3"–5,000 PSI OTECO RESET RELIEF VALVE PARTS LIST FOR 3"FIG.1502 FEMALE INLET & OUTLET

DATE: 4/10/08		PART NO. 130363	
SCALE: NTS			
DRAWN: B.H.		DRAWING NO. A–20827	REV. C
CHK'D: WU			



OTECO INC.
HOUSTON, TEXAS

3" RRV ASSY, 5000 PSI,
3" FIG 1502 FEMALE UNION INLET
AND OUTLET

DATE: 7/5/00	PART NO. 130363
SCALE: NONE	
DRAWN: HK	DRAWING NO. A-18456
CHK'D: HK	REV. B

REV	ECN	DATE
B	1877	4/27/05

THIS DRAWING IS THE PROPERTY OF OTECO INC. AND MAY NOT BE REPRODUCED FOR ANY PURPOSE WITHOUT EXPRESS PERMISSION