

### **ALH SYSTEMS LTD**

#### 2½"-6" NON-TAP PLUG OPERATING MANUAL & PARTS LIST

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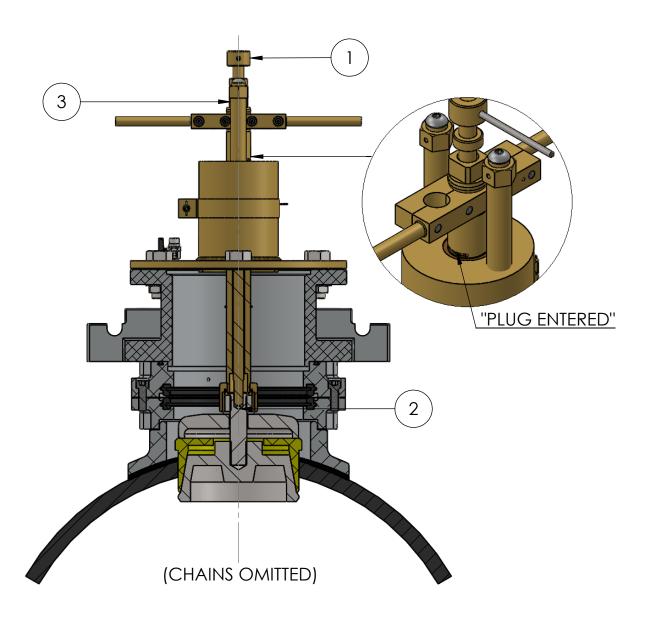


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#### **INSERTION - STEP 1**



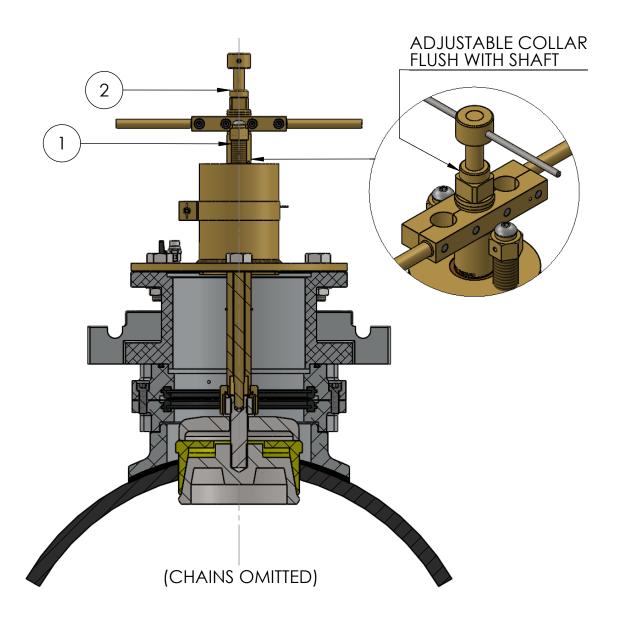
- 1. SCREW RETAINING SCREW (1) INTO STUD (2)
- 2. WITH JACKING SCREW (3) IN CENTRELINE OF PIPE AXIS, BOLT PLUG CARRIER ASSEMBLY ONTO VALVE.
- 3. OPEN VALVE GATE AND LOWER PLUG INTO PIPE, UNTIL "PLUG ENTERED" MARK FLUSH WITH TOP FACE OF CARRIER BODY.



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#### STEP 2



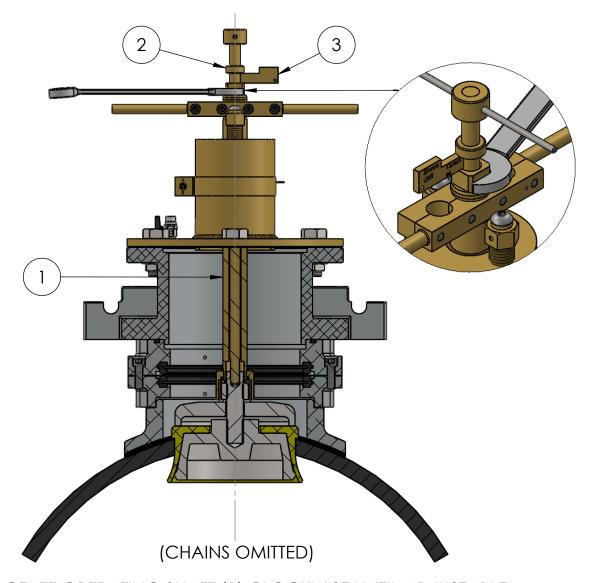
- 1. SCREW DOWN JACKING SCREWS (1) SO THEY ARE TIGHT
- 2. SET ADJUSTABLE COLLAR (2) FLUSH WITH TOP FACE OF OPERATING SHAFT



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#### STEP 3



- 1. ROTATE OPERATING SHAFT (1) CLOCKWISE UNTIL ADJUSTABLE COLLAR (2) ALLOWS "IN" SETTING GAUGE (3) TO FIT.

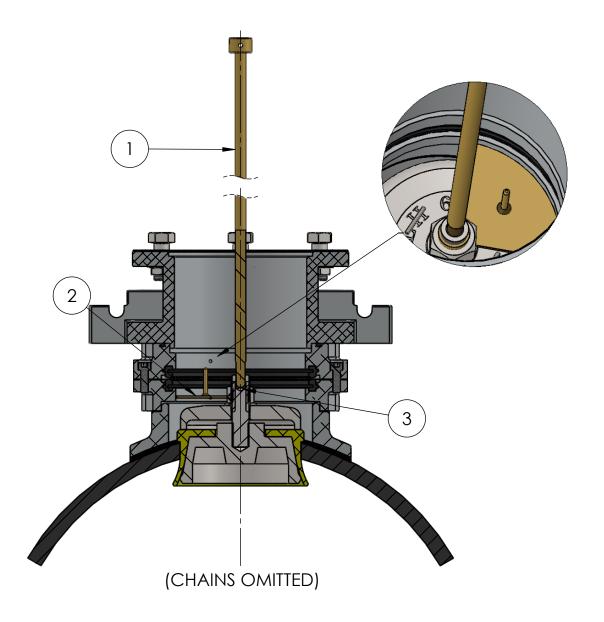
  NOTE TAKE CARE NOT TO DISTURB ADJUSTABLE COLLAR WITH SPANNER
- 2. CHECK SEAL BY OPERATING PRESSURE RELEASE VALVE
- 3. UNSCREW RETAINING SCREW, UNBOLT AND REMOVE PLUG CARRIER
- 4. IF NO FURTHER WORK IS REQUIRED ON MAIN, REMOVE VALVE AND SADDLE.
- 5. CHECK AROUND PLUG WITH LEAK DETECTING FLUID
- 6. WRAP PLUG STUD AND CAP WITH ANTI CORROSION TAPE IF NEEDED



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#### **REMOVAL - STEP 1**



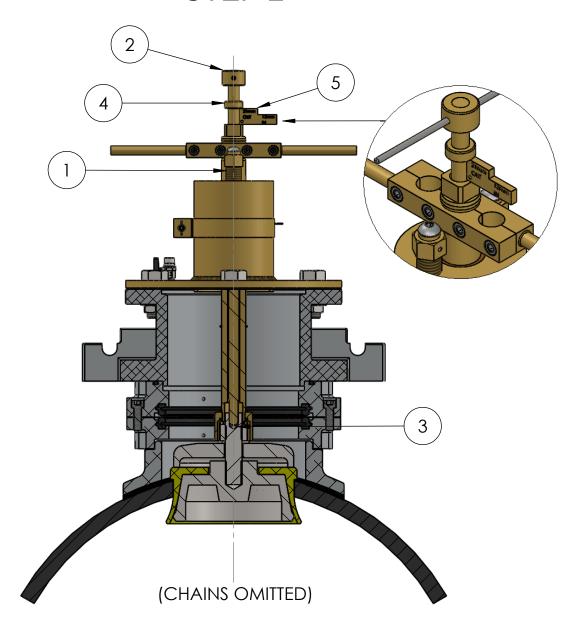
- 1. WITHDRAW RETAINING SCREW (1) FROM TOOL AND SLIDE ON CENTRING GAUGE (2)
- 2. SCREW RETAINING SCREW (1) INTO PLUG STUD (3)
- 3. ALIGN VALVE SO GAUGE IS CENTRAL TO VALVE BORE WHEN ROTATED AT TOP AND BOTTOM OF SPINDLE
- 4. SECURE WITH CHAINS ONCE CENTRAL WITH PLUG THEN REMOVE RETAINING SPINDLE AND CENTRING GAUGE.



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#### STEP 2

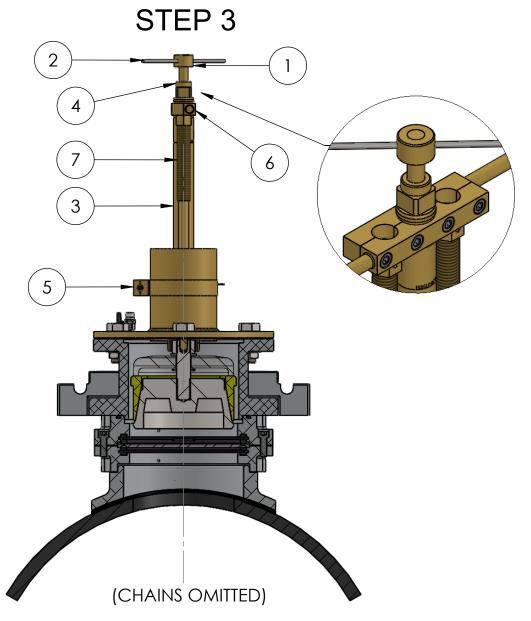


- WITH JACKING SCREW (1) IN CENTRE LINE OF PIPE AXIS, SCREW RETAINING SCREW (2) INTO PLUG STUD (3) AND BOLT PLUG CARRIER ASSEMBLY ON TO VALVE
- 2. SCREW DOWN JACKING SCREWS (1) FULLY
- 3. SET ADJUSTABLE COLLAR (4) TO "OUT" POSITION USING SETTING GAUGE (5)



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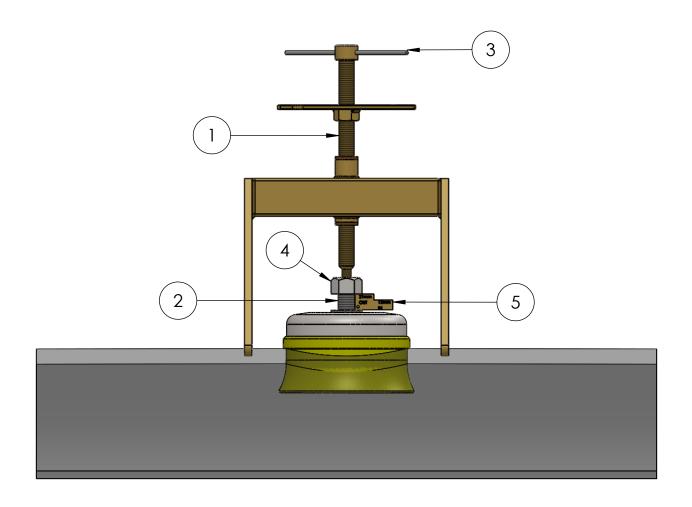
- 1. HOLD RETAINING SCREW (1) STEADY WITH TOMMY BAR (2), ROTATE OPERATING SHAFT (3) ANTI-CLOCKWISE UNTIL IT MEETS ADJUSTABLE COLLAR (4). (NOTE IF RETAINING SCREW HAS NOT MOVED DOWNWARDS AFTER 2-3 TURNS OF OPERATING SHAFT, TAP RETAINING SCREW WITH HAMMER TO BREAK SEAL)
- 2. ALIGN TRAILING EDGE OF ROTATION GUIDE (5) WITH RETAINING SCREW TOMMY BAR (2). ROTATE RETAINING SCREW (1) **CLOCKWISE** THROUGH 90° I.E. TOMMY BAR IN LINE WITH LEADING EDGE OF ROTATION GUIDE.
- 3. LIFT ROTATING HANDLE (6) AND LOCATE ON TOP OF JACKING SCREWS (7).
- 4. SCREW UP JACKING SCREWS (7) TO EXTRACT PLUG. WHEN THEY ARE FULLY UNSCREWED, LIFT PLUG VIA HANDLE (6) AND CLOSE VALVE GATE.
- 5. DO NOT RE-USE PLUG GASKET.



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# REMOVING USING STRONGBACK -STEP 1



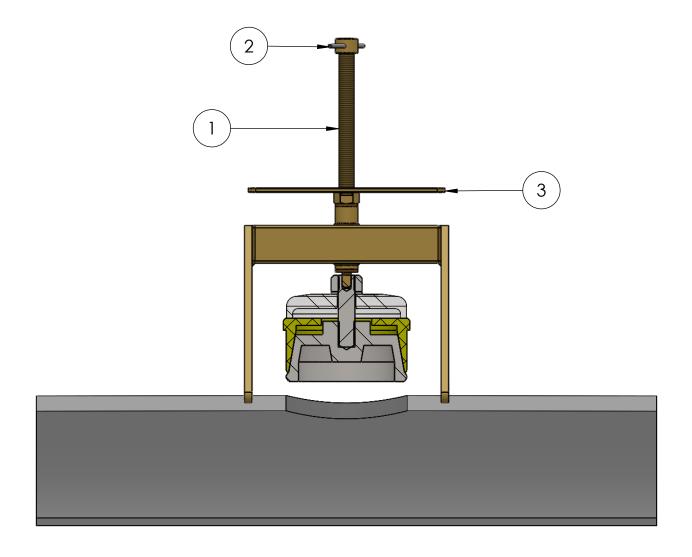
- 1. SCREW RETAINING SCREW (1) INTO PLUG STUD (2) USING TOMMY BAR (3)
- 2. USING A SPANNER UNSCREW PLUG NUT (4) TO "OUT" POSITION USING SETTING GAUGE (5).



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# REMOVAL USING STRONGBACK -STEP 2



- 1. IF RETAINING SCREW (1) HAS NOT MOVED DOWNWARDS TAP WITH HAMMER TO BREAK SEAL
- 2. ROTATE RETAINING SCREW TOMMY BAR (2) 90° CLOCKWISE
- 3. HOLD RETAINING SCREW STEADY WITH TOMMY BAR AND ROTATE WRENCH (3) DOWNWARDS TO BUSH THEN CONTINUE TO ROTATE WRENCH (3) TO EXTRACT PLUG
- 4. DO NOT RE-USE PLUG GASKET



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### NON-TAP PLUG TOOLING PARTS LIST ALH SYSTEMS LIMITED



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#### NON-TAP PLUG TOOLING PARTS LIST

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	238-0001	COVER	1
2	238-0003	RETAINING SCREW	1
3	238-0004	JACKING SCREW	2
4	238-0005	JACKING SCREW NUT	2
5	238-0006	ROTATION HANDLE	1
6	238-0007	ADJUSTABLE COLLAR	1
7	238-0008	BUSH	2
8	238-0009	JACKING SCREW BUSH	2
9	238-0010	CENTRING GUIDE	1
10	238-0011	ROTATION GUIDE	1
11	238-0013	TOMMY BAR	1
12	238-0014	SETTING GAUGE	1
13	238-9001	OPERATING SHAFT	1
14	M1130	SELOC PIN	2
15	M1041	O RING	2
16	M1042	O RING	2
17	M1062RM	O RING	2
18	S0042	CAP HEAD BOLT	4
19	S0122	WING NUT	1
20	S0285	FLAT WASHER	1
21	S0009	BUTTON HEAD SCREW	2
22	M4810	SELOC PIN	2
23	M3098	BALL VALVE	1
24	M2291	SPANNER	1

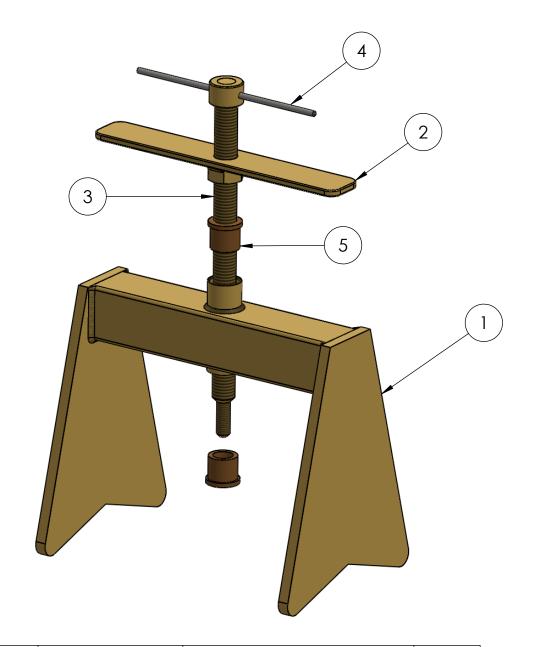
PART NUMBER	DESCRIPTION
002-9002	21/2" NTP
002-9003	3" NTP
002-9004	4" NTP
002-9005	5" NTP
002-9006	6" NTP



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#### NON-TAP PLUG STRONGBACK PARTS LIST



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	238-0015	STRONGBACK	1
2	238-0016	WRENCH	1
3	238-0012	EXTRACTION SCREW	1
4	238-0013	TOMMY BAR	1
5	M2165	BUSH	2



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