



NEWPORT BEACH, CALIFORNIA

CATALOG NO.  
90AF-4A-3

DRAWING NO.  
91536

REV.  
D

TYPE OF VALVE AND MAIN FEATURES

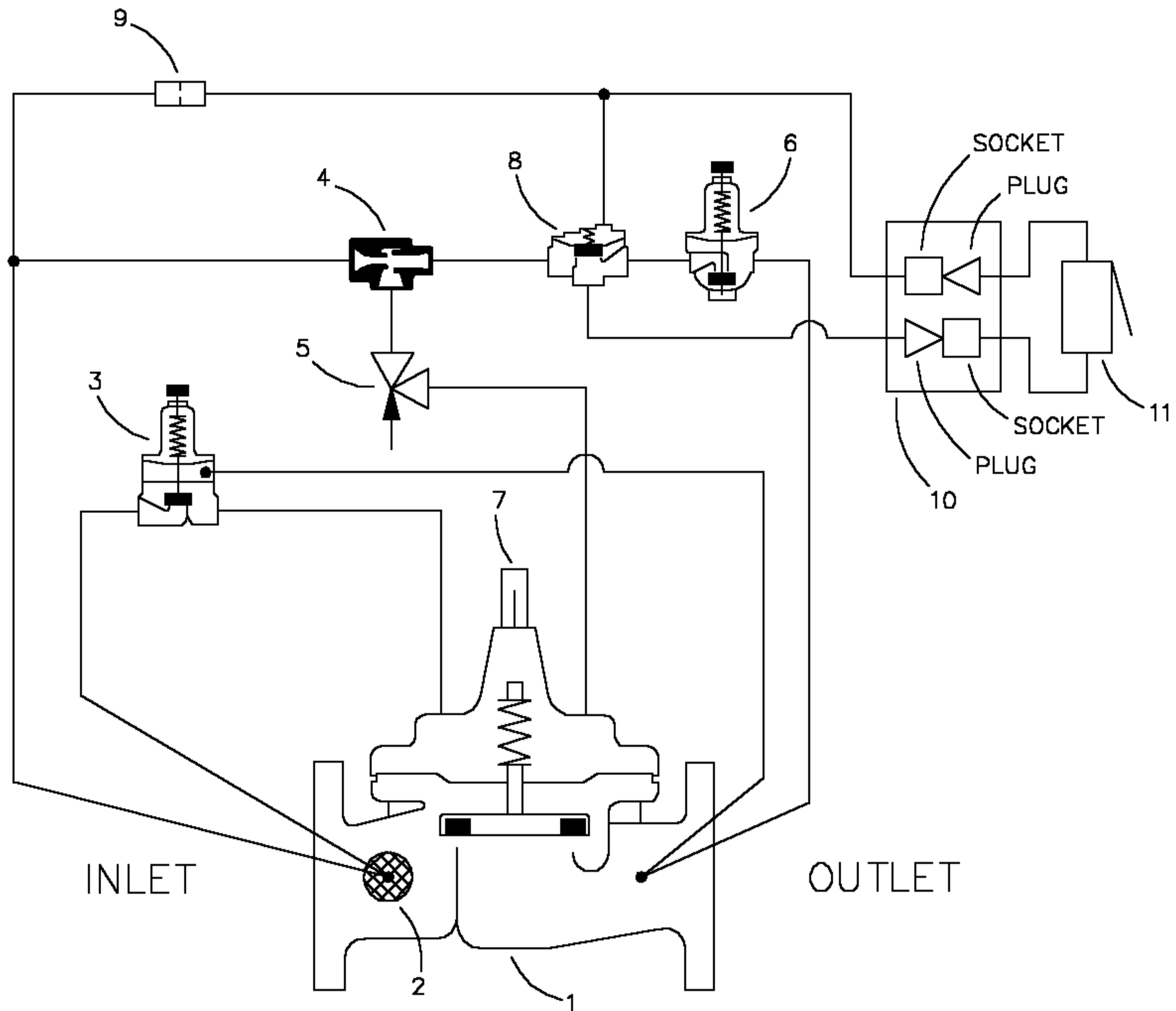
COMBINATION PRESSURE REDUCING, SURGE AND  
DEADMAN SHUTOFF VALVE

**AVIATION FUELING**

DRAW	MWR	7-21-80
CHK'D	KD	8-13-80
APVD	CH	8-19-80

----- NOT FURNISHED BY CLA-VAL CO.

----- OPTIONAL FEATURES



\* MAIN VALVE OPTIONS = 9HS99R  
\*\* ON 4" & LARGER VALVES USE 3/4" SIZE CRL.

ITEM NO.	BASIC COMPONENTS	QTY	ITEM NO.	OPTIONAL FEATURES	QTY
1	*100-34 HYTROL (REVERSE FLOW)	1	9	X58C RESTRICTION ASSEMBLY	1
2	X46A FLOW CLEAN STRAINER	1	10	QUICK DISCONNECT ASSEMBLY	1
3	**CRL PRESSURE RELIEF CONTROL	1	11	X135H DEADMAN AND HOSE ASSEMBLY	1
4	X47A EJECTOR	1			
5	CV FLOW CONTROL (OPENING)	1			
6	CRD PRESSURE REDUCING CONTROL	1			
7	X101 VALVE POSITION INDICATOR	1			
8	100-01 HYTROL (REVERSE FLOW)	1			

OPTIONAL FEATURE SUFFIX      ADDED TO CATALOG NUMBER

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DATE	12-21-95
BY	CN
DESCRIPTION	100-34 WAS 100-01; REDRAWN ON CAD (ECO 15861)
LTR	D
A-C	SEE REVISION FILE

UAD REVISION REQUIRED - DU NUI REVISE MANUALLY

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OPERATING DATA

I. DEADMAN SHUTOFF FEATURE:

OPENING: WHEN THE LEVER ON DEADMAN CONTROL (11) IS DEPRESSED, PRESSURE IS RELIEVED FROM THE COVER CHAMBER OF AUXILIARY HYTROL (8), OPENING AUXILIARY HYTROL (8). THIS RELIEVES MAIN VALVE COVER PRESSURE TO OUTLET AND THE MAIN VALVE (1) OPENS UNDER COMMAND OF THE PILOT SYSTEM.

CLOSING: WHEN THE LEVER ON DEADMAN CONTROL (11) IS RELEASED, PRESSURE IS APPLIED TO THE COVER CHAMBER OF AUXILIARY HYTROL (8), CLOSING AUXILIARY HYTROL (8). THIS DIRECTS MAIN VALVE INLET PRESSURE INTO THE COVER CHAMBER OF THE MAIN VALVE, AND THE MAIN VALVE (1) CLOSES.

II. PRESSURE REDUCING FEATURE:

PRESSURE REDUCING CONTROL (6) IS A NORMALLY OPEN CONTROL THAT SENSES MAIN VALVE OUTLET PRESSURE CHANGES. AN INCREASE IN OUTLET PRESSURE TENDS TO CLOSE CONTROL (6) AND A DECREASE IN OUTLET PRESSURE TENDS TO OPEN CONTROL (6). THIS CAUSES MAIN VALVE COVER PRESSURE TO VARY AND THE MAIN VALVE MODULATES (OPENS AND CLOSES) MAINTAINING A RELATIVELY CONSTANT OUTLET PRESSURE.

PRESSURE REDUCING CONTROL (6) ADJUSTMENT: TURN THE ADJUSTING SCREW CLOCKWISE TO INCREASE THE SETTING.

III. SURGE SHUTOFF FEATURE:

PRESSURE RELIEF CONTROL (3) IS A NORMALLY CLOSED CONTROL THAT RESPONDS TO PRESSURE CHANGES SENSED DOWNSTREAM. WHEN DOWNSTREAM PRESSURE INCREASES TO THE SET POINT OF CONTROL (3), CONTROL (3) OPENS. THIS DIRECTS INLET PRESSURE INTO THE MAIN VALVE COVER AND THE MAIN VALVE CLOSES UNTIL NORMAL DOWNSTREAM PRESSURE IS RESTORED AND PRESSURE RELIEF CONTROL (3) CLOSES. PRESSURE RELIEF CONTROL (3) ADJUSTMENT: TURN THE ADJUSTING SCREW CLOCKWISE TO INCREASE THE SETTING.

NOTE: PRESSURE RELIEF CONTROL (3) MUST BE SET 2 TO 3 PSI HIGHER THAN PRESSURE REDUCING CONTROL (6).

IV. OPENING SPEED CONTROL:

CV FLOW CONTROL (5) CONTROLS THE OPENING SPEED OF THE MAIN VALVE. TURN THE ADJUSTING STEM CLOCKWISE TO MAKE THE MAIN VALVE OPEN SLOWER.

V. CHECK LIST FOR PROPER OPERATION:

- ( ) SYSTEM VALVES OPEN UPSTREAM AND DOWNSTREAM.
- ( ) AIR REMOVED FROM THE MAIN VALVE COVER AND PILOT SYSTEM AT ALL HIGH POINTS.
- ( ) CV FLOW CONTROL (5) OPEN AT LEAST 1/4 TURN.
- ( ) DEADMAN CONTROL PROPERLY CONNECTED.

CAD REVISION RECORD - DO NOT REVISE MANUALLY

DATE

BY

DESCRIPTION

SEE SHEET 1

LTR