



NEWPORT BEACH, CALIFORNIA

CATALOG NO.
50-48/650-48

DRAWING NO.
25421

REV
A

TYPE OF VALVE AND MAIN FEATURES

BACK PRESSURE AND CHECK VALVE
(EQUIPPED WITH X44A)

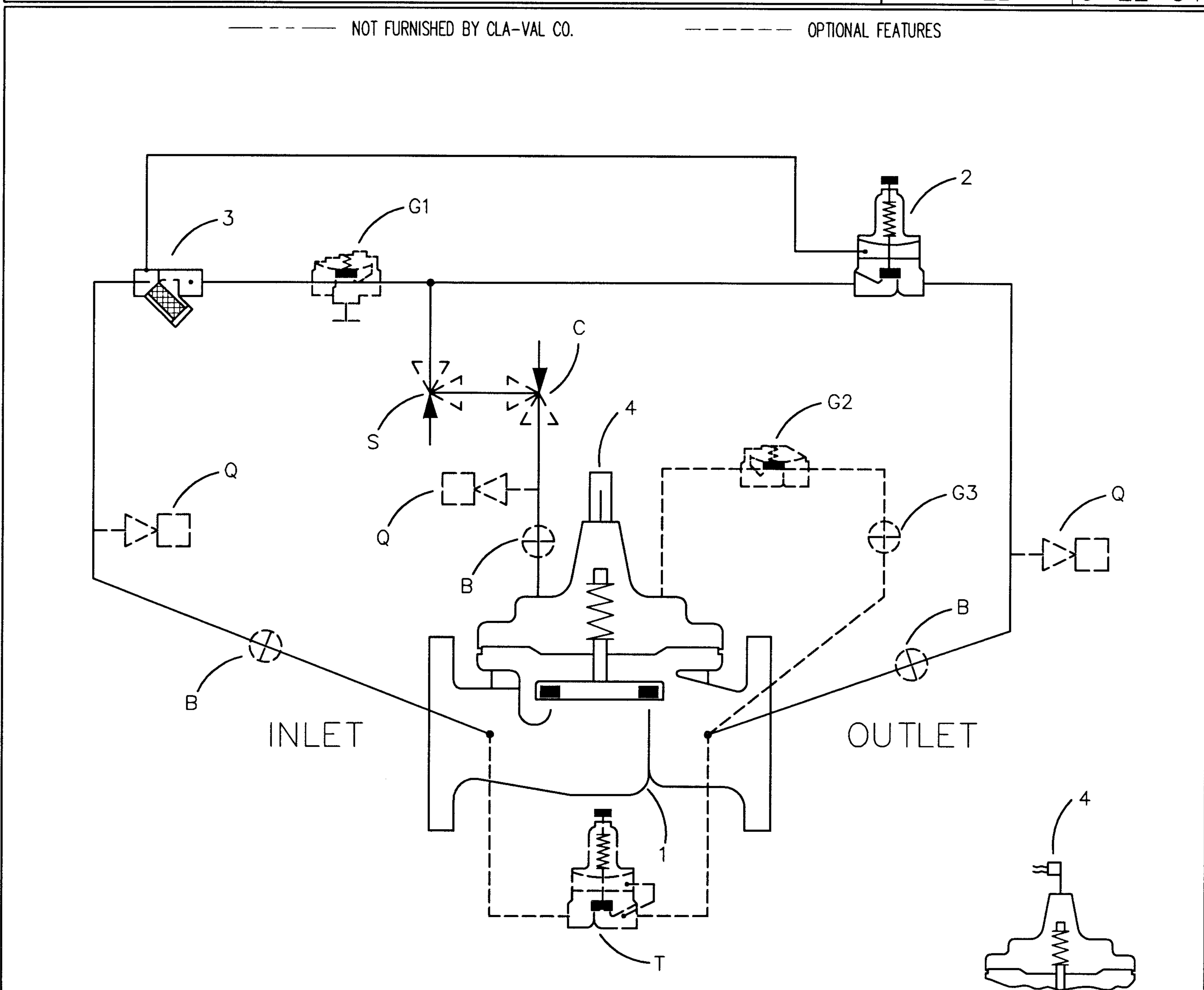
AVIATION FUELING

DRAWN	TLC	9-21-94
CHK'D	IC	9-22-94
APV'D	EB	9-22-94

9-05-02
AK

FEATURE; ITEM 4 WAS ITEM 5 (ECO 19045); ADDED "B" AND "T"
FEATURES (ECO 19136)

CAD REVISION RECORD - DO NOT REVISE MANUALLY
DESCRIPTION
BY DATE
TLC 9-21-94
RELEASED FOR PRODUCTION (NED 39569)
A ADDED 600 SERIES (NED 45524); CHANGED ITEM 4 TO "G"



*MAIN VALVE OPTIONS = 9HS999

X105L OPTIONAL

ITEM NO.	BASIC COMPONENTS	QTY
1	*100-34 HYTROL (50-48) MAIN VALVE	1
	*100-37 HYTROL (650-48) MAIN VALVE	
2	CRL PRESSURE RELIEF CONTROL	1
3	X44A STRAINER & ORIFICE	1
4	X101 VALVE POSITION INDICATOR	1
	X105L SWITCH ASSEMBLY (OPTIONAL)	

OPTIONAL FEATURE SUFFIX	ADDED TO CATALOG NUMBER	QTY
B	CK2 COCK (ISOLATION VALVE)	3
C	CV FLOW CONTROL (CLOSING)	1
G	81-01 CHECK VALVE WITH COCK	1
Q	QUICK CONNECT ASSEMBLY	3
S	CV FLOW CONTROL (OPENING)	1
T	55F THERMAL RELIEF CONTROL	1

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OPERATING DATA

I. BACK PRESSURE CONTROL FEATURE:

PRESSURE RELIEF CONTROL (2) IS NORMALLY CLOSED AND RESPONDS TO INLET PRESSURE CHANGES. AN INCREASE IN INLET PRESSURE TENDS TO OPEN CONTROL (2) AND A DECREASE IN INLET PRESSURE TENDS TO CLOSE CONTROL (2). THIS CAUSES MAIN VALVE COVER PRESSURE TO VARY AND THE MAIN VALVE MODULATES (OPENS AND CLOSES), MAINTAINING A RELATIVELY CONSTANT INLET PRESSURE. WHEN INLET PRESSURE IS LOWER THAN THE SET POINT OF CONTROL (2), CONTROL (2) CLOSES. THIS PRESSURIZES THE COVER OF THE MAIN VALVE AND THE MAIN VALVE CLOSES, MAINTAINING THE DESIRED BACK PRESSURE. PRESSURE RELIEF CONTROL (2) ADJUSTMENT: TURN THE ADJUSTING SCREW CLOCKWISE TO INCREASE THE SETTING.

II. BASIC COMPONENTS OPTIONAL FEATURE OPERATING DATA:

SWITCH ASSEMBLY FEATURE:

SWITCH ASSEMBLY (4) IS ACTUATED BY A STEM EXTENSION ATTACHED TO THE MAIN VALVE STEM. THE SWITCH ASSEMBLY IS FACTORY ADJUSTED TO ACTUATE A SINGLE-POLE DOUBLE-THROW SWITCH WHEN THE MAIN VALVE IS ALMOST OPEN/CLOSED. WHEN THE MAIN VALVE STARTS TO CLOSE/OPEN, THE SPRING LOADED SWITCH ACTUATING LEVER IS RELEASED AND RETURNS THE SWITCH TO ITS NORMAL POSITION.

III. OPTIONAL FEATURE OPERATING DATA:

SUFFIX B (ISOLATION VALVES)

CK2 COCKS (B) ARE USED TO ISOLATE THE PILOT SYSTEM FROM MAIN LINE PRESSURE. THESE VALVES MUST BE OPEN DURING NORMAL OPERATION.

SUFFIX C (CLOSING SPEED CONTROL)

FLOW CONTROL (C) CONTROLS THE CLOSING SPEED OF THE MAIN VALVE. TURN THE ADJUSTING STEM CLOCKWISE TO MAKE THE MAIN VALVE CLOSE SLOWER.

SUFFIX G (CHECK FEATURE WITH COCK)

WHEN OUTLET PRESSURE IS HIGHER THAN INLET PRESSURE, CHECK VALVE (G2) OPENS AND (G1) CLOSES. THIS DIRECTS THE HIGHER OUTLET PRESSURE INTO THE MAIN VALVE COVER AND THE MAIN VALVE CLOSES.

SUFFIX Q (QUICK CONNECT ASSEMBLY)

QUICK CONNECT ASSEMBLIES (Q) ALLOW PRESSURE GAGES TO BE EASILY CONNECTED OR DISCONNECTED TO THE VALVE PILOT SYSTEM.

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DESCRIPTION

SEE SHEET 1

LIR



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OPERATING DATA - CONTINUED

SUFFIX S (OPENING SPEED CONTROL)

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

SUFFIX T (THERMAL RELIEF CONTROL)

THE THERMAL RELIEF FEATURE IS USED ONLY WITH A CHECK FEATURE (SUFFIX G). WHEN MAIN VALVE OUTLET PRESSURE EXCEEDS THE SET POINT OF CONTROL (T), IT OPENS. THIS RELIEVES THE HIGHER MAIN VALVE OUTLET PRESSURE TO THE MAIN VALVE INLET.

IV. 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 CONTROLS (C) & (S) OPEN AT LEAST 1/4 TURNS (OPTIONAL FEATURE).
- () PERIODIC CLEANING OF STRAINER (3) IS RECOMMENDED.
- () CK2 COCKS (B) OPEN (OPTIONAL FEATURE).

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LTR