

CLA-VAL CO. NEWPORT BEACH, CALIFORNIA

CATALOG NO.
40-30/640-30

DRAWING NO.
25415

REV
E

TYPE OF VALVE AND MAIN FEATURES

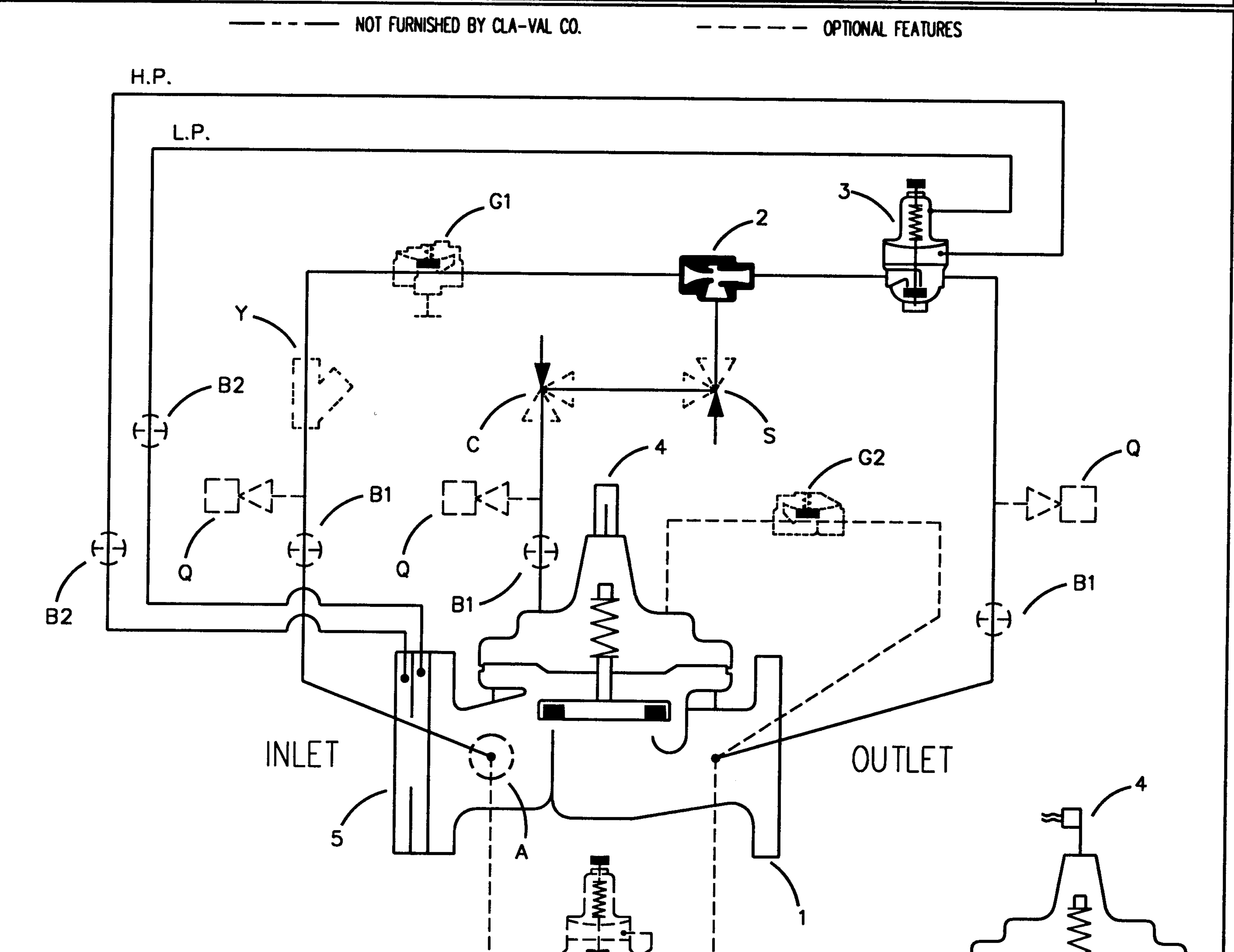
RATE OF FLOW CONTROLLER

AVIATION FUELING

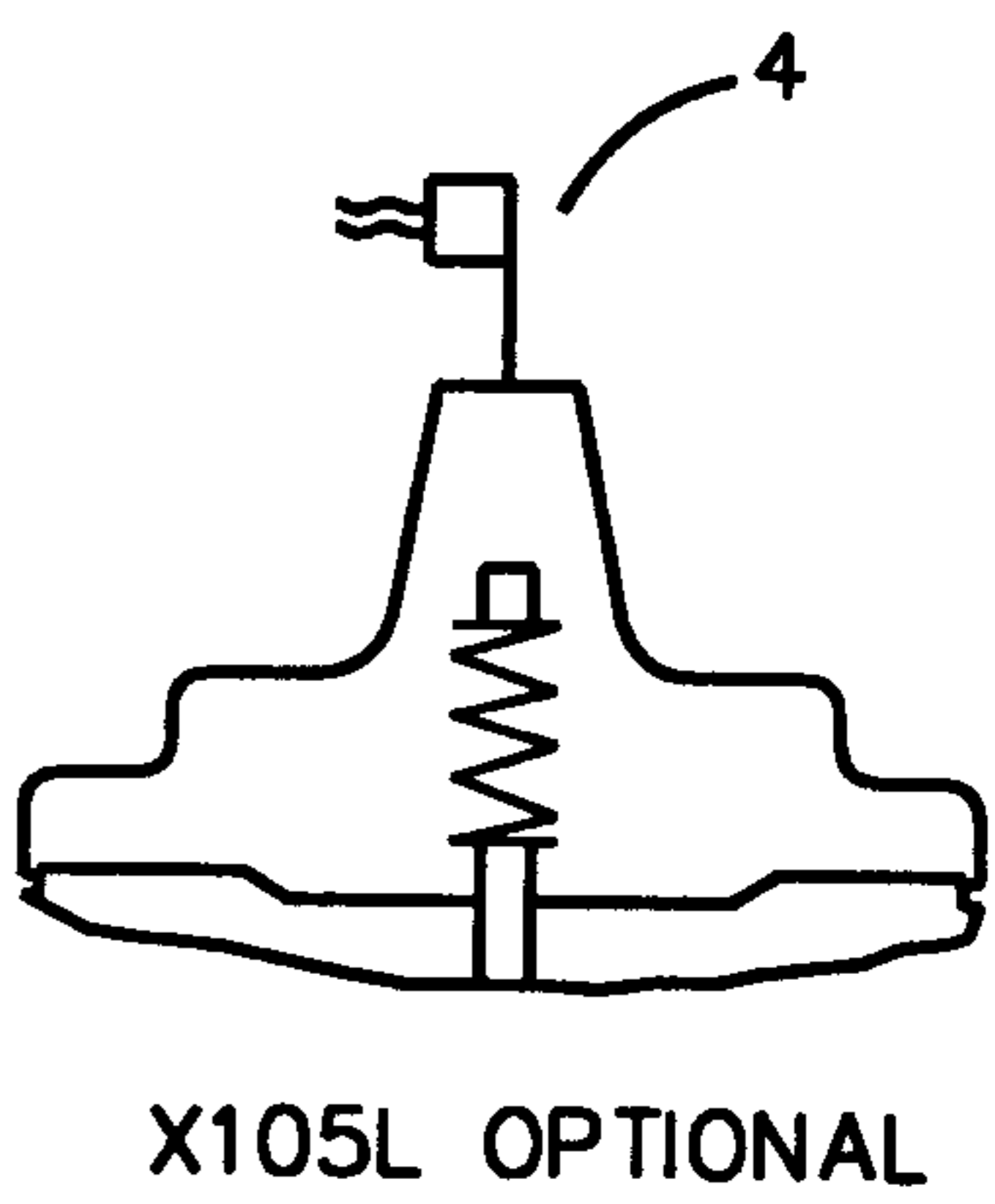
DRAWN	EK	8-31-94
CHK'D	IC	8-31-94
APVD	ED	8-31-94

PLF	12-10-98
AK	08-23-01
AK	09-22-04
R	8-11-2005

B	ADDED OPTIONAL FEATURE B. (NED 43841)
C	MAIN VALVE OPTIONS 9HS999 WAS 99S999 (ECO 18478)
D	REVISED; ADDED 600 SERIES (NED 49104)
E	REMOVED "G3" (ECO 20242)




*MAIN VALVE OPTIONS = 9HS999
 **THE 55F THERMAL RELIEF FEATURE IS USED ONLY WITH CHECK FEATURE (G)



ITEM NO.	BASIC COMPONENTS	QTY
1	*100-34 HYTROL (40-30) MAIN VALVE (REVERSE FLOW) *100-37 HYTROL (640-30) MAIN VALVE (REVERSE FLOW)	1
2	X47A EJECTOR	1
3	CDHS2B PRESSURE DIFFERENTIAL CONTROL	1
4	X101 VALVE POSITION INDICATOR X105L SWITCH ASSEMBLY (OPTIONAL)	1
5	X52B ORIFICE PLATE ASSEMBLY	1

OPTIONAL FEATURE SUFFIX		ADDED TO CATALOG NUMBER	
A	X46A FLOW CLEAN STRAINER	1	
B	CK2 COCKS (ISOLATION VALVES)	5	
C	CV FLOW CONTROL (CLOSING)	1	
G	81-01 CHECK VALVE	2	
Q	QUICK CONNECT ASSEMBLY	3	
S	CV FLOW CONTROL (OPENING)	1	
T	**55F THERMAL RELIEF CONTROL		1
Y	X43 "Y" STRAINER		1

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 CLA-VAL CO. NEWPORT BEACH, CALIFORNIA	CATALOG NO. 40-30/640-30	DRAWING NO. 25415	REV E
	TYPE OF VALVE AND MAIN FEATURES <p style="text-align: center;">RATE OF FLOW CONTROLLER</p>		AVIATION FUELING DRAWN EK 8-31-94 CHK'D IC 8-31-94 APVD ED 8-31-94

OPERATING DATA

I. RATE OF FLOW FEATURE:

PRESSURE DIFFERENTIAL CONTROL (3) IS NORMALLY OPEN AND RESPONDS TO DIFFERENTIAL PRESSURE CHANGES SENSED ACROSS ORIFICE PLATE ASSEMBLY (5). AN INCREASE IN DIFFERENTIAL PRESSURE TENDS TO CLOSE CONTROL (3) AND A DECREASE IN DIFFERENTIAL PRESSURE TENDS TO OPEN CONTROL (3). THIS CAUSES MAIN VALVE COVER PRESSURE TO VARY AND THE MAIN VALVE MODULATES (OPENS AND CLOSES) MAINTAINING A RELATIVELY CONSTANT RATE OF FLOW. PRESSURE DIFFERENTIAL CONTROL (3) ADJUSTMENT: TURN THE ADJUSTING SCREW CLOCKWISE TO INCREASE THE RATE OF FLOW.

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 A (FLOW CLEAN STRAINER)

A SELF-CLEANING STRAINER IS INSTALLED IN THE MAIN VALVE INLET BODY BOSS WHICH PROTECTS THE PILOT SYSTEM FROM FOREIGN PARTICLES.

SUFFIX B (ISOLATION VALVES)

CK2 COCKS (B1) AND (B2) USED TO ISOLATE THE PILOT SYSTEM FROM MAIN LINE PRESSURE. THESE VALVES MUST BE OPEN DURING NORMAL OPERATION.

SUFFIX C (CLOSING SPEED CONTROL)

CV 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)

WHEN OUTLET PRESSURE IS GREATER THAN INLET PRESSURE, CHECK VALVE (G2) OPENS AND PERMITS THE HIGHER OUTLET PRESSURE TO CLOSE THE MAIN VALVE, WHILE CHECK VALVE (G1) CLOSES AND PREVENTS FLOW OUT OF THE MAIN VALVE COVER TO THE INLET.

SUFFIX Q (QUICK CONNECT ASSEMBLY)

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

CAD REVISION RECORD - DO NOT REVERSE MANUALLY


DATE

BY

DESCRIPTION

SEE SHEET 1

LTR

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OPERATING DATA - CONTINUED

SUFFIX S (OPENING SPEED CONTROL)

CV 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 (55F THERMAL RELIEF CONTROL)

THE 55F THERMAL RELIEF FEATURE IS USED ONLY WITH A CHECK FEATURE (SUFFIX G). WHEN OUTLET PRESSURE EXCEEDS INLET PRESSURE AND THE PRESSURE DIFFERENTIAL REACHES THE SET POINT OF CONTROL (T), IT OPENS. THIS RELIEVES THE HIGHER OUTLET PRESSURE TO THE NORMAL INLET.

SUFFIX Y (Y-STRAINER)

A Y-PATTERN STRAINER IS INSTALLED IN THE PILOT SUPPLY LINE TO PROTECT THE PILOT SYSTEM FROM FOREIGN PARTICLES. THE STRAINER SCREEN MUST BE CLEANED PERIODICALLY.

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.
- PERIODIC CLEANING OF STRAINER (Y) IS RECOMMENDED (OPTIONAL FEATURE).
- CV FLOW CONTROLS (C) & (S) OPEN AT LEAST 4 TURNS (OPTIONAL FEATURE).
- CK2 COCKS (B1) AND (B2) OPEN (OPTIONAL FEATURE).

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