



**REFERENCE DRAWINGS**

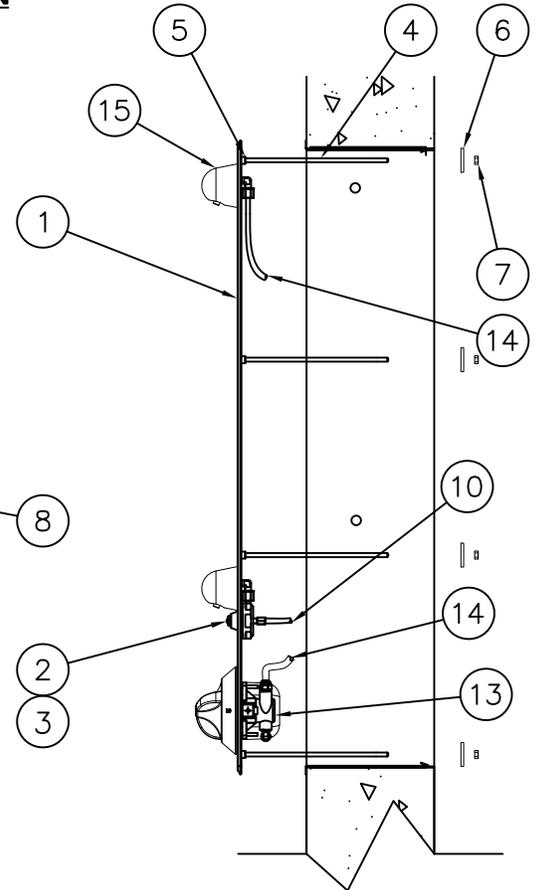
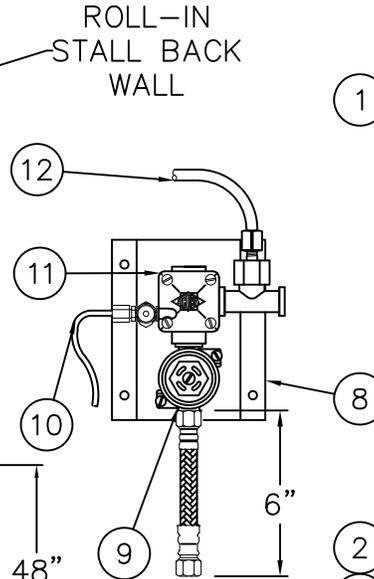
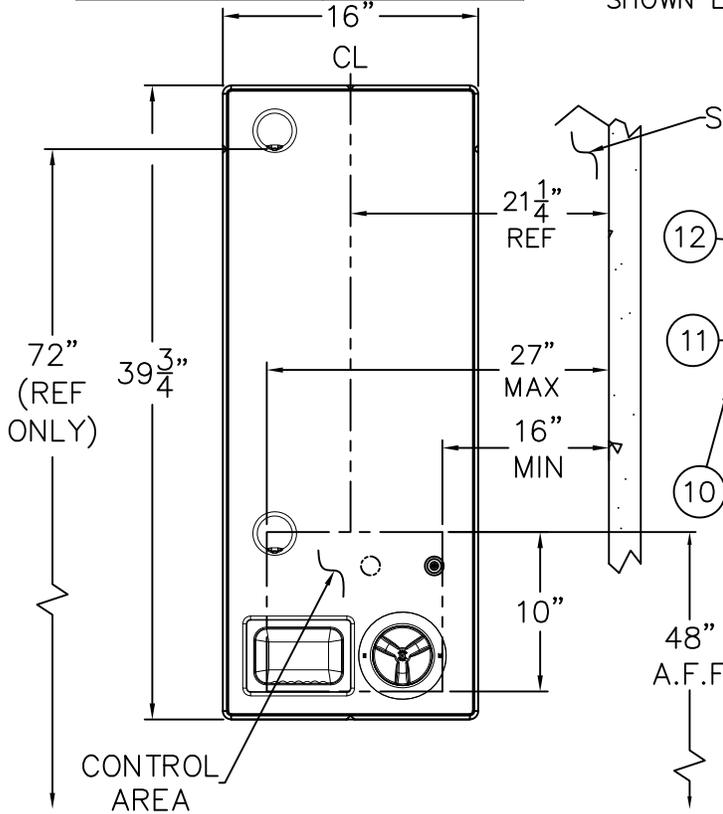
-SW WALL SLEEVE	9925-265-101
VALVE CONNECTION	9900-006-003
-M SERVOMOTOR	9955-000-003
DIVERTER	9975-080-002
T/P VALVE(SHOWN)	9975-005-002
T/P VALVE ADJUST	9900-007-001

**NOTE:**

REFER TO -SW WALL SLEEVE 9925-265-101 FOR BLOCKOUT & WALL OPENING DIMENSIONS

**LR1741CBC-R-03-M SHOWN**

R.H. VALVE ORIENTATION SHOWN L.H. OPPOSITE



**INSTALLATION INSTRUCTIONS:**

- PRIOR TO INSTALLATION OF THE SHOWER PANEL (1) MOUNT PUSHBUTTON (2) & BLANK ESCUTCHEON (3) TO THE PANEL.
- HAND TIGHTEN (10) MOUNTING STUDS (4) INTO NUTS (5) ON BACK OF SHOWER PANEL (1). PLACE SHOWER PANEL AGAINST WALL OPENINGS. FROM THE CHASE SIDE, MOUNT BACK PLATES (6) ONTO STUDS; ATTACH WITH NUTS AND WASHERS (7). (NOTE: DO NOT EXCEED 6.5FT/LBS MAXIMUM TORQUE ON MOUNTING NUTS (7).)
- MOUNT AIR VALVE CONTROL ASSEMBLY (8) AS REQUIRED WITHIN 10 FEET OF CONTROLS. (-03-M SHOWN, -04-M SIMILAR)
- AFTER THOROUGHLY FLUSHING THE SUPPLY LINE, MAKE-UP SUPPLY CONNECTIONS (1/2" NPS FEMALE.) (NOTE: USE THE FOLLOWING STEPS AS REQUIRED TO COMPLETE INSTALL:)
- THREAD FLEX CONNECTOR HOSE FROM METERING VALVE (9) INLET TO SUPPLY STUBOUTS. (METERING VALVE INLET WILL ACCOMMODATE 1/2" NPT MALE ADAPTER.)
- CONNECT 1/8" O.D. AIR TUBING (10) FROM PUSHBUTTON (2) TO AIR CONTROL SERVOMOTOR (11) USING FERRULE NUT PROVIDED.
- INSTALL METERING VALVE RISER (12) TO DIVERTER VALVE (13) INLET USING PUSH IN FITTING PROVIDED.
- CONNECT TUBING (14) FROM DIVERTER VALVE (13) TO SHOWER HEADS (15). (NOTE LOWER SHOWER HEAD SHOULD ACTIVATE WHILE DIVERTER IS SET TO LOW.)
- SEE APPROPRIATE SERVER MOTOR REFERENCE DRAWINGS FOR TIMING AND INSTRUCTIONS.

**NOTE:**

MAXIMUM RECOMMENDED WORKING PRESSURE IS 100PSI; TEMPERATURE IS 130°F INLET TEMPERATURE & 105°F MAXIMUM OUTLET TEMPERATURE.

\*\*INSTALLATION REQUIRES THE USE OF AN APPROPRIATE CERTIFIED THERMOSTATIC MIXING VALVE PROVIDED BY OTHERS, PER APPLICABLE CODE.

**WARNING:**

PRIOR TO MAKING INSTALLATION SUPPLY LINES MUST BE FLUSHED OF ALL FOREIGN MATERIAL SUCH AS PIPE DOPE, CHIPS, ECT. VALVE MUST BE DRAINED PRIOR TO BEING SUBJECTED TO FREEZING TEMPERATURES. MAXIMUM RECOMMENDED OUTLET WATER TEMPERATURE IS 105°F.

ACORN ENGINEERING COMPANY  
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(626) 336-4561 FAX (626) 961-2200

TITLE

**SECURE-CARE LR1741CBC-03-M/-04-M, REAR ACCESS WALL SHOWER**

MANUFACTURE DATE

**JANUARY 2022  
TO PRESENT**

DATE ISSUED

**3/8/24**

DATE REVISED

DRAWING NUMBER

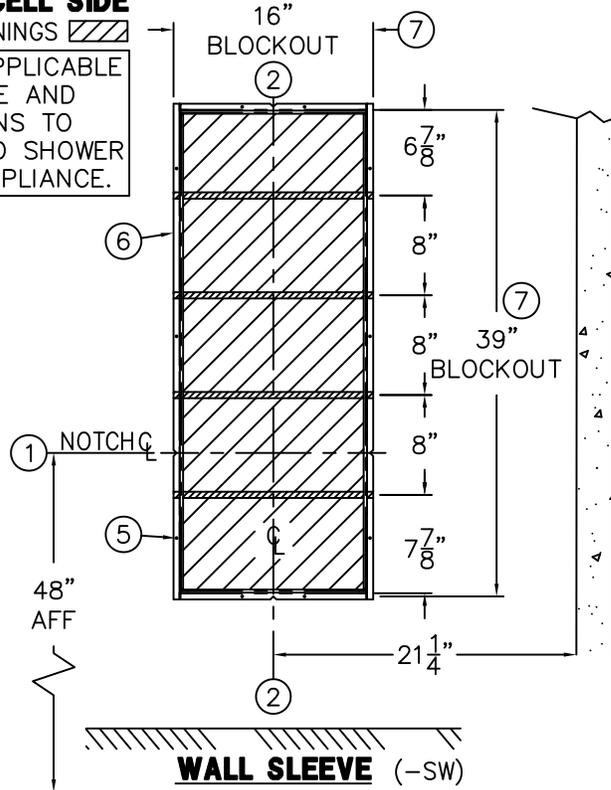
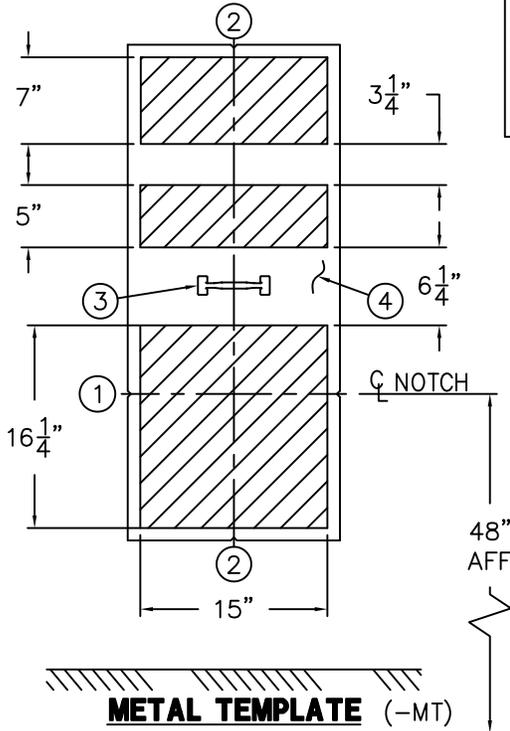
**9925-121-101**



**BOTH VIEWS ARE FROM CELL SIDE**

SHADED AREAS ARE REQUIRED WALL OPENINGS

NOTE: REFER TO APPLICABLE SHOWER STALL TYPE AND REQUIRED DIMENSIONS TO LOCATE SLEEVE AND SHOWER PROPERLY FOR COMPLIANCE.



NOTE: MODEL WITH -R RIGHT HAND VALVE SHOWN. -L LEFT HAND OPPOSITE DIMENSION TO CENTERLINE TO CENTERLINE FOR CBC STANDARD ROLL-IN STALL TYPE SHOWN

**INSTALLATION INSTRUCTIONS:**

**METAL TEMPLATES (-MT)**

TEMPLATES ARE USED TO LAYOUT REQUIRED WALL OPENINGS FOR SUBSEQUENT FLAME CUTTING OR CORE DRILLING.

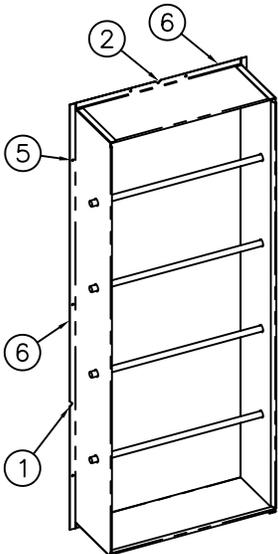
- A- STRIKE A HORIZONTAL CHALKLINE (1) ON THE WALL 48" ABOVE FINISHED FLOOR. THIS WILL LOCATE HORIZONTAL NOTCHES ON TEMPLATE.
- B- STRIKE A VERTICAL CHALKLINE (2) ON THE WALL TO INDICATE CENTERLINE OF FIXTURE. THIS WILL LOCATE VERTICAL NOTCHES ON TEMPLATE.
- C- USING HANDLE (3) ON TEMPLATE (4), PLACE TEMPLATE AGAINST THE WALL, LOCATING NOTCHES AT CHALKLINES. MARK FOR WALL OPENINGS.

**WALL SLEEVES (-SW)**

SLEEVES ARE INSTALLED IN FORMS (USING NAIL HOLES (5) PROVIDED) OR GROUTED INTO BLOCK WALLS, BECOMING A PERMANENT PART OF THE WALL.

**NOTE:** FOR POURED WALL CONSTRUCTION, TEMPORARY BRACING SHOULD BE INSTALLED WITHIN SLEEVE OPENING TO PREVENT DEFORMATION TO SLEEVE WHICH MAY OCCUR DURING POUR. DO NOT POUR CONCRETE DIRECTLY ON TOP OF WALL SLEEVE.

- A- INSTALL SLEEVE WITH FLANGE (6) ON CHASE SIDE OF WALL.
- B- TOP AND BOTTOM NOTCHES TO BE LOCATED AT VERTICAL CENTERLINE (2) OF SLEEVE.
- C- SIDE NOTCHES (1) TO BE LOCATED AT 48" ABOVE THE FINISHED CELL SIDE FLOOR (ADA FIXED SHOWER HEAD DISCHARGE HEIGHT).
- D- WHEN SLEEVES ARE NOT AVAILABLE USE BLOCKOUT DIMENSIONS SHOWN (7).

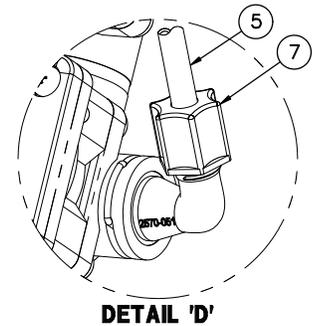
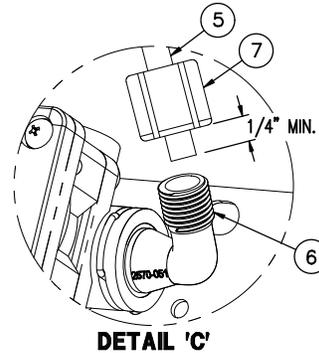
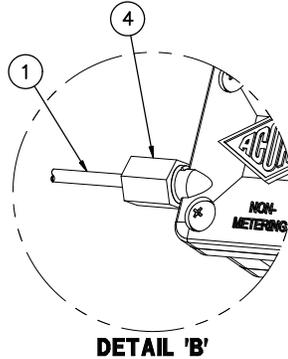
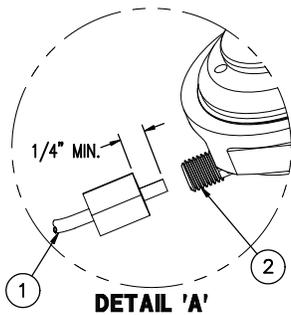


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TITLE <b>WALL SLEEVE AND TEMPLATE, 1741CBC &amp; LR1741CBC SHOWER</b>		
MANUFACTURE DATE <b>JULY 2022</b> <b>TO PRESENT</b>	DATE ISSUED <b>07/12/22</b>	DRAWING NUMBER <b>9925-265-101</b>
	DATE REVISED <b>04/25/24</b>	

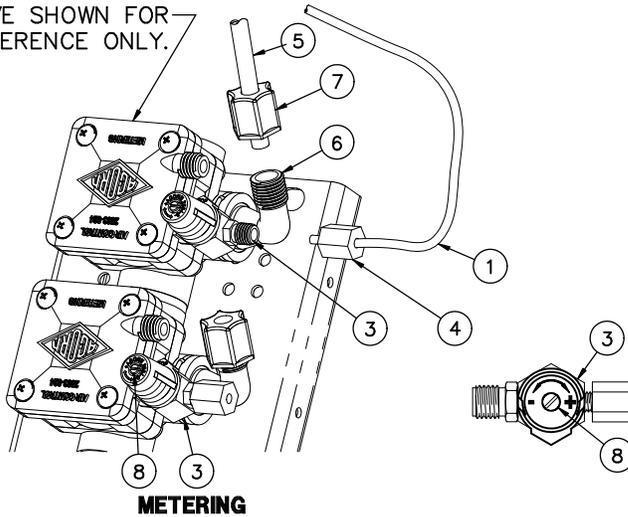


SIDE OUTLET SHOWN



NOTE: PENAL-WARE & ECO-RAIN SHOWER FIXTURES USE 1/4" O.D. RISER TUBING WHILE OTHER SHOWER-WARE FIXTURES USE 3/8" O.D. TUBING.

AIR-CONTROL 03M-MA2 VALVE SHOWN FOR REFERENCE ONLY.



REFERENCE DRAWINGS	
REPAIR PARTS	DRAWING
VALVE BODY	9955-006-003
CHECKSTOP	9956-040-003
PUSHBUTTON/ESCUTCHEON	9957-300-001
METERING SERVOMOTOR	9955-000-003

NOTE:

1. ALL TUBING SHOULD BE CUT SQUARE AND BE FREE OF BURRS OR DEFORMITIES TO ENSURE A WATER TIGHT CONNECTION.
2. EXTEND TUBING AT LEAST 1/4" BEYOND FERRULE NUT AND INSERT TUBING INTO CONNECTION OPENING BEFORE TIGHTENING.
3. TUBING SHOULD BE FREE OF KINKS TO ENSURE PROPER OPERATION.
4. MAXIMUM RECOMMENDED WORKING WATER PRESSURE IS 100 PSI; TEMPERATURE IS 130° F; OUTLET TEMPERATURE IS RECOMMENDED AT A MAXIMUM OF 105° F.

WARNING:

PRIOR TO MAKING INSTALLATION, SUPPLY LINES MUST BE FLUSHED OF ALL FOREIGN MATERIAL SUCH AS PIPE DOPE, CHIPS, SOLDER, ETC. VALVE MUST BE DRAINED PRIOR TO BEING SUBJECTED TO FREEZING TEMPERATURES. MAXIMUM RECOMMENDED OUTLET WATER TEMPERATURE IS 105° F.

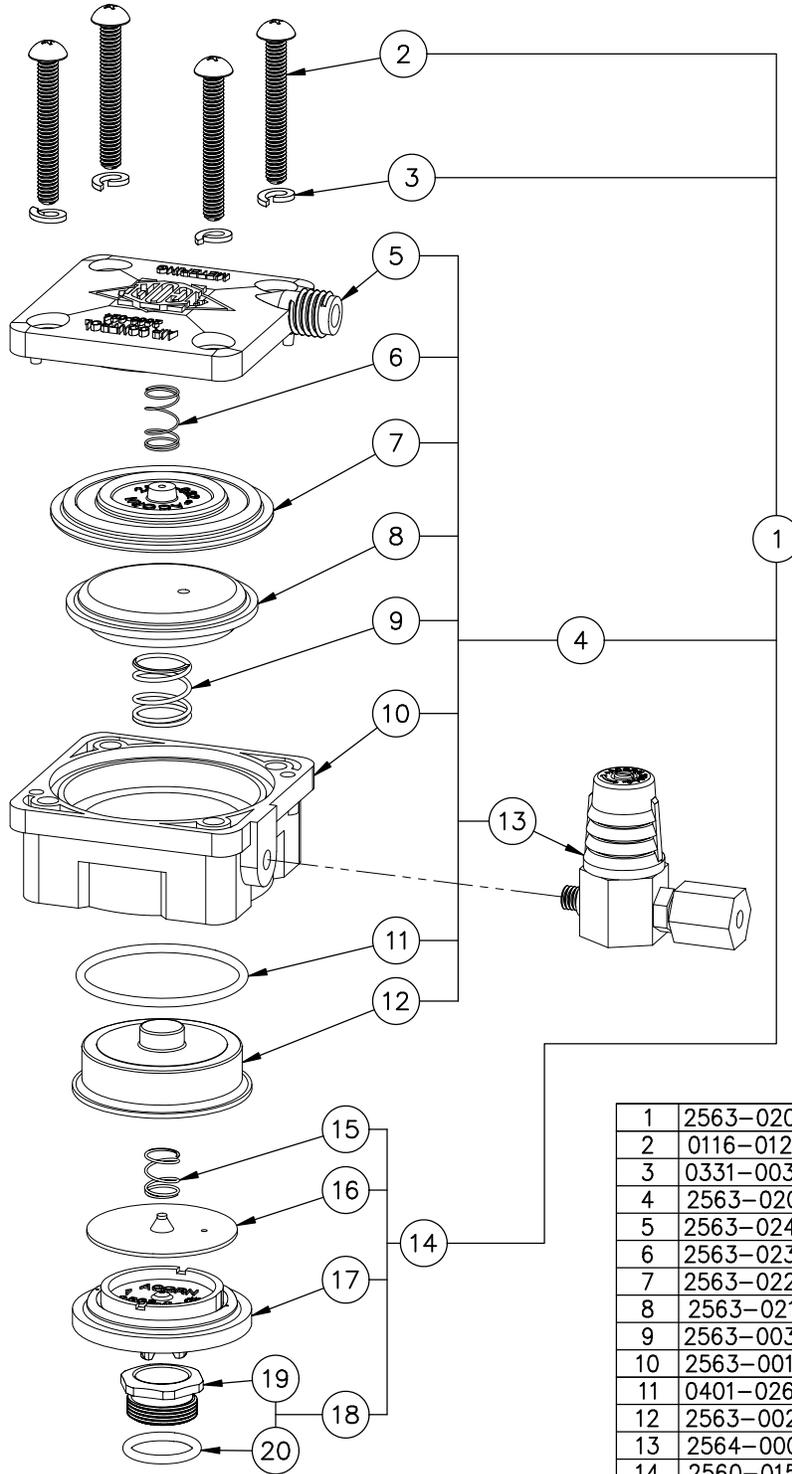
TIMING IS ADJUSTABLE FROM 5 TO 60 SECONDS AND IS ACCOMPLISHED BY ROTATING TIMING SCREW (8). TURNING THE TIMING SCREW CLOCKWISE INCREASES METERING TIME WHILE TURNING THE SCREW COUNTERCLOCKWISE DECREASES METERING TIME.

**INSTALLATION INSTRUCTIONS:**

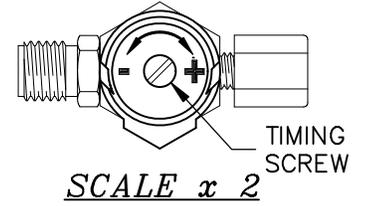
- A- MOUNT FIXTURE IN ACCORDANCE TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- B- ASSEMBLE PUSHBUTTONS AND OR SHOWER NOZZLES TO FIXTURE IF REQUIRED.
- C- CONNECT 1/8" O.D. POLYETHYLENE AIR LINE (1) TO PUSHBUTTON (2) AND VALVE TIMER ASSEMBLY (3). SEE DETAILS 'A' & 'B'. HAND TIGHTEN FERRULE NUT (4) PROVIDED.
- D- CONNECT SHOWER RISER (5) TO VALVE ASSEMBLY ELBOW (6). SEE DETAIL 'C' AND 'D'. HAND TIGHTEN FERRULE NUT (7) PROVIDED.
- E- AFTER THOROUGHLY FLUSHING SUPPLY LINES, MAKE UP CONNECTIONS TO VALVE ASSEMBLY INLET(S) 1/2" NPT OR 1/2" NPS FLEX HOSE AS REQUIRED.

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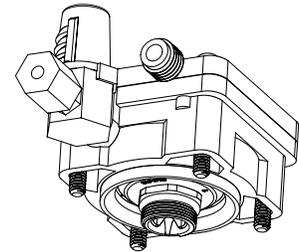
TITLE <b>HAND OPERATED, AIR-CONTROL VALVE SHOWER CONNECTIONS</b>		
MANUFACTURE DATE <b>OCTOBER 2010 TO PRESENT</b>	DATE ISSUED <b>10/28/10</b>	DRAWING NUMBER <b>9900-006-003</b>
	DATE REVISED	



TOP VIEW ITEM # 13



TIMING IS ADJUSTABLE FROM 5 TO 60 SECONDS AND IS ACCOMPLISHED BY ROTATING TIMING SCREW. TURNING THE SCREW CLOCKWISE INCREASES WHILE COUNTERCLOCKWISE DECREASES TIMING.



**NOTE:**  
REMOVE ASSEMBLY (18)  
FOR PLASTIC BODY INSTALL

1	2563-020-002	AIR-CONTROL METERING ASSEMBLY
2	0116-012-000	8-32 x 1-1/4" LG PHILLIPS ROUND HEAD
3	0331-003-000	#8 LOCKWASHER
4	2563-020-001	METERING MOTOR ASSEMBLY
5	2563-024-000	METERING COVER PLATE
6	2563-023-000	METERING AIR DIAPHRAM SPRING
7	2563-022-000	METERING AIR DIAPHRAM
8	2563-021-001	MAGNET CUP ASSEMBLY
9	2563-003-000	ACTUATOR SPRING
10	2563-001-000	MOTOR HOUSING
11	0401-026-000	O-RING
12	2563-002-199	SEPERATOR CUP
13	2564-000-001	TIMER ASSEMBLY
14	2560-015-001	WATER CHAMBER ASSEMBLY
15	2563-008-000	PILOT ORIFACE PLATE SPRING
16	2563-019-001	PILOT ORIFACE PLATE ASSEMBLY
17	2563-010-001	WATER DIAPHRAM ASSEMBLY
18	2580-000-001	SEAT ASSEMBLY
19	2580-000-000	SEAT
20	0401-014-000	SEAT O-RING
ITEM	PART NUMBER	DESCRIPTION

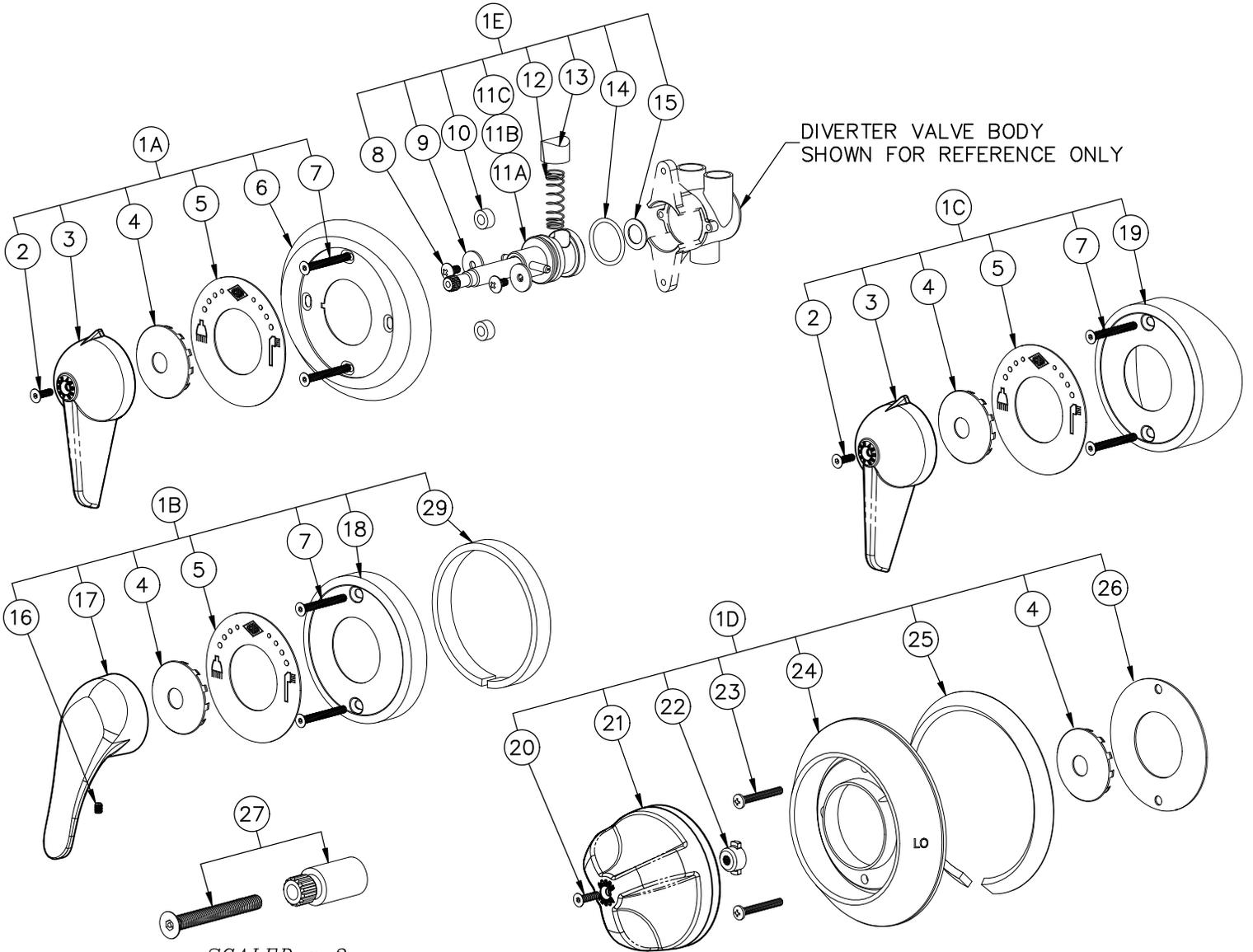
**MORRIS GROUP INTL**  
P.O. BOX 3527 Industry, CA 91744  
15125 Proctor Ave Industry, CA 91746  
MORRIS GROUP INTERNATIONAL (626) 336-4561 FAX (626) 961-2200

TITLE **AIR-CONTROL METERING SERVOMOTOR ASSEMBLY**

MANUFACTURE DATE  
**JANUARY 1984  
TO PRESENT**

DATE ISSUED  
**04/14/09**  
DATE REVISED  
**10/01/13**

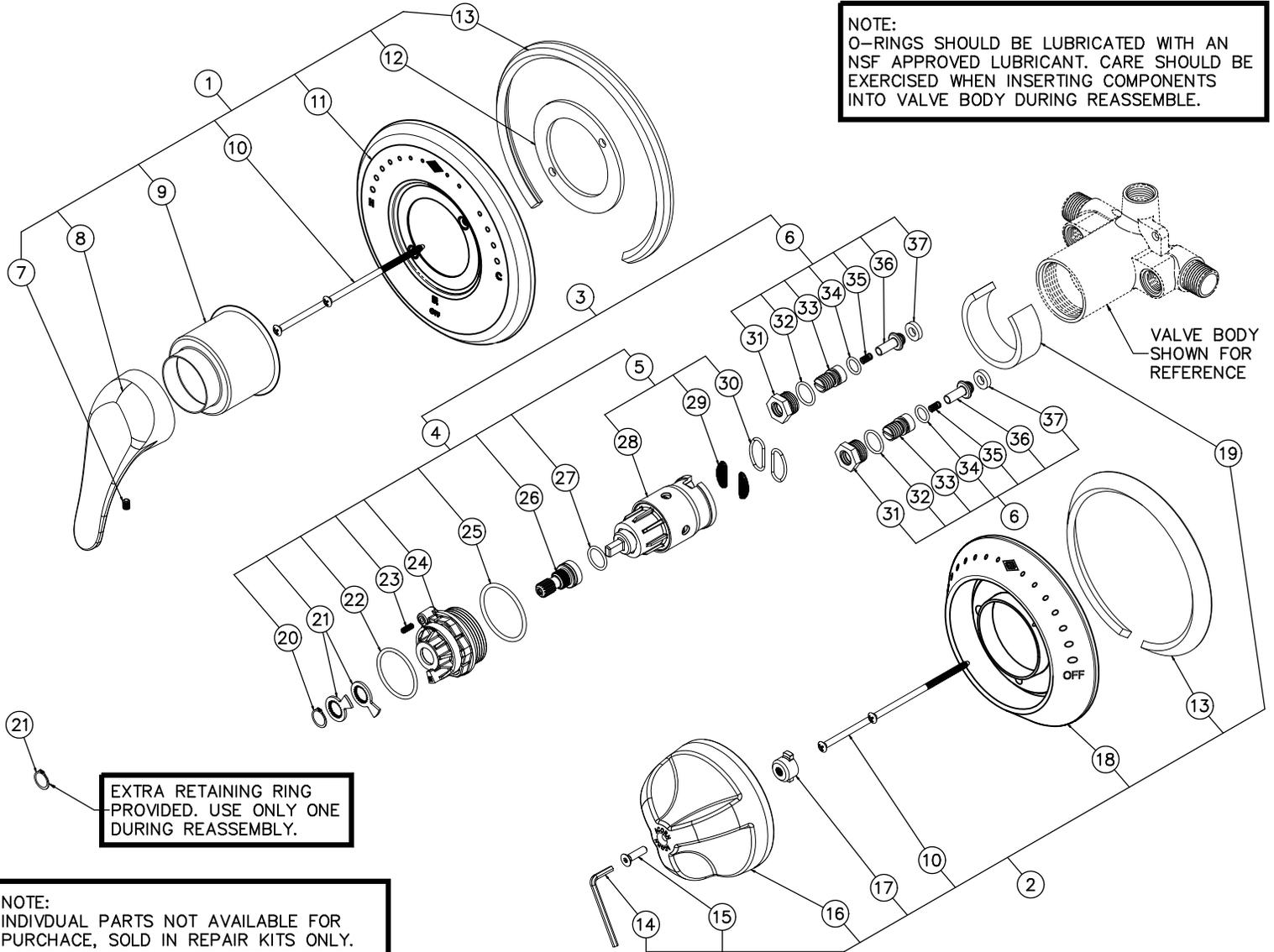
DRAWING NUMBER  
**9955-000-003**



SCALED x 2

1A	2919-020-001	DIVERTER TRIM KIT- TYPE 5 & 6 VALVES	12	1380-004-000	SPRING
1B	2919-065-001	DIVERTER TRIM KIT- TYPE 8 T/P STYLE	13	2919-004-000	PLUNGER
1C	2919-025-001	DIVERTER TRIM KIT- CAPITAL	14	0401-121-000	O-RING
1D	2919-075-001	DIVERTER TRIM KIT- -LRH LIG RESIS -8	15	0334-008-000	PHENOLIC FRICTION WASHER
1E	2919-000-001	DIVERTER VALVE ASSEMBLY -STD	16	0181-017-000	8-32 x 1/4" - ALLEN SET SCREW
2	0152-002-000	#10-32 x 1/2" SS, FHD CTR REJ, SCREW	17	7800-124-000	HANDLE - TYPE 8 VALVE
3	2421-001-199	LEVER HANDLE	18	2715-005-199	ESCUTCHEON - TYPE 8 VALVE
4	2418-001-199	SNAP RING	19	2715-002-199	ESCUTCHEON - CAPITAL
5	2917-010-000	DIVERTER DIAL PLATE	20	0152-006-000	10-32 x 3/4" FLAT HEAD CNTR REJ SCREW
6	2706-002-199	ESCUTCHEON	21	7800-187-000	LIGATURE RESISTANT HANDLE TYPE 8
7	0152-003-000	#10-32 x 1-1/2" SS, FHD CTR REJ, SCREW	22	7800-189-000	LIGATURE RESISTANT HANDLE STEM INSERT
8	0116-016-000	#10-32 x 3/8" SS, RD HD PHIL, SCREW	23	0116-115-000	10-32 x 1-1/2" PHIL PAN HEAD SCREW
9	0331-014-000	#10 FLAT WASHER	24	7800-191-000	LIGATURE RESIST ESCUTCHEON -DIVERTER
10	0365-015-000	SPACER	25	7800-136-000	GASKET, TRIM ESCUTCHEON
11A	2919-001-001	PISTON ASSEMBLY - APEX/ACME/-8 VALVE	26	2917-005-199	DIVERTER COVER PLATE -LRH
11B	2919-001-002	PISTON ASSEMBLY - ZENITH & CAPITAL	27	2408-000-001	1" STEM EXTENSION ASSEMBLY
11C	2919-005-001	PISTON ASSEMBLY - -LRH LIG RESISTANT			
ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION

<b>MORRIS GROUP INTL</b> P.O. BOX 3527 Industry, CA 91744 15125 Proctor Ave Industry, CA 91746 (626) 336-4561 FAX (626) 961-2200	<b>TITLE</b> <b>DIVERTER VALVE</b>		
	<b>MANUFACTURE DATE</b> <b>APRIL 1979</b> <b>TO PRESENT</b>	<b>DATE ISSUED</b> <b>02/01/14</b>	<b>DRAWING NUMBER</b> <b>9975-080-002</b>
		<b>DATE REVISED</b> <b>05/26/2023 D</b>	



**NOTE:**  
O-RINGS SHOULD BE LUBRICATED WITH AN NSF APPROVED LUBRICANT. CARE SHOULD BE EXERCISED WHEN INSERTING COMPONENTS INTO VALVE BODY DURING REASSEMBLY.

EXTRA RETAINING RING PROVIDED. USE ONLY ONE DURING REASSEMBLY.

**NOTE:**  
INDIVIDUAL PARTS NOT AVAILABLE FOR PURCHASE, SOLD IN REPAIR KITS ONLY. PARTS CALLED OUT FOR REFERENCE ONLY.

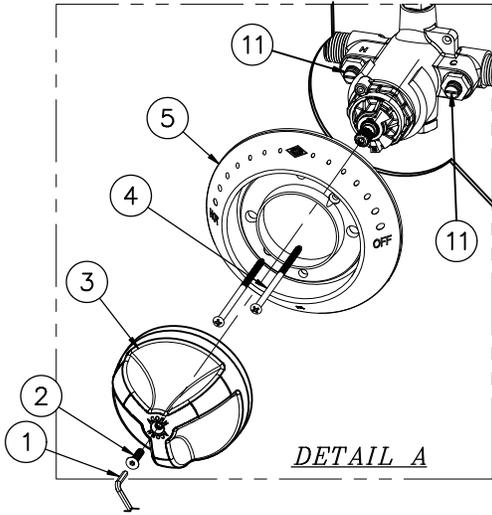
ITEM	KIT NUMBER	DESCRIPTION	ITEM	KIT NUMBER	DESCRIPTION
1	7800-506-001	TRIM REPLACEMENT, LEVER HANDLE	4	7800-502-001	CARTRIDGE & BONNET REPLACEMENT
2	7800-186-001	TRIM REPLACEMENT, LIGATURE RESIS	5	7800-175-001	CARTRIDGE REPLACEMENT
3	7800-500-001	COMPLETE REBUILD KIT	6	7800-504-001	CHECK-STOP REBUILD KIT

ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION
7	CUP POINT SET SCREW	18	LIGATURE RESIS ESCUTCHEON	29	STAINLESS STEEL SCREENS (x2)
8	LEVER HANDLE	19	SLEEVE GASKET (SV16 ONLY)	30	CART SCREEN O-RINGS (x2)
9	VALVE SLEEVE	20	RETAINING RING (x2)	31	CHECK CAP (x2)
10	OVAL HEAD SCREWS (x2)	21	TEMPERATURE STOP RINGS (x2)	32	CHECK CAP O-RING (x2)
11	ESCUTCHEON, LEVER HANDLE	22	EXTERNAL BONNET O-RING	33	CHECK ADJUST SCREW (x2)
12	TRIM PLATE CENTER GASKET	23	SET SCREW	34	CHECK ADJ SCREW O-RING (x2)
13	ESCUTCHEON GASKET	24	VALVE BONNET	35	CHECK SPRING (x2)
14	5/32" CNTR REJECT ALLEN WRNCH	25	BONNET O-RING	36	CHECK PLUNGER (x2)
15	LIGATURE RESIS HANDLE SCREW	26	VALVE STEM	37	CHECK SEAL (x2)
16	LIGATURE RESISTANT HANDLE	27	VALVE STEM O-RING		
17	STEM INSERT	28	CARTRIDGE		

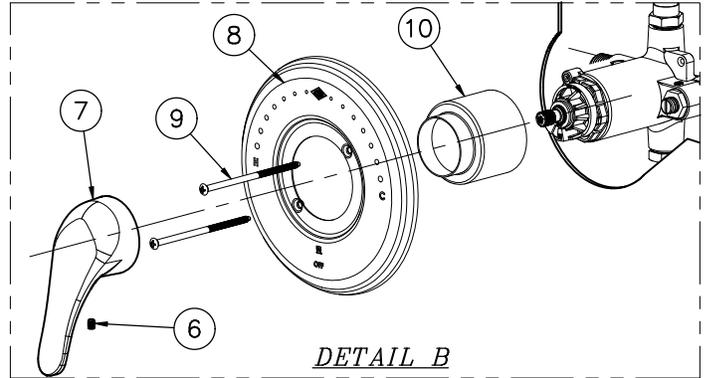
<b>MORRIS GROUP INTL</b> P.O. BOX 3527 Industry, CA 91744 15125 Proctor Ave Industry, CA 91746 (626) 336-4561 FAX (626) 961-2200	<b>T/P TEMP-PRESURE BALANCING MIXING VALVE CARTRIDGE / CHECKSTOPS</b>		
	MANUFACTURE DATE <b>JUNE 2014</b> <b>TO PRESENT</b>	DATE ISSUED <b>06/01/14</b>	DRAWING NUMBER <b>9975-005-002</b>
		DATE REVISED <b>09/01/16 D</b>	



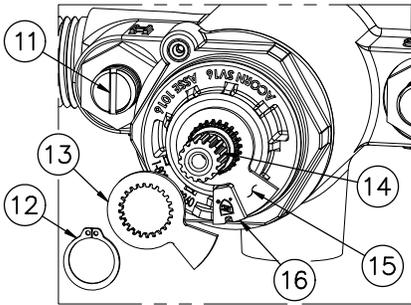
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ASSEMBLIES	NUMBER
T/P VALVE	9975-005-002



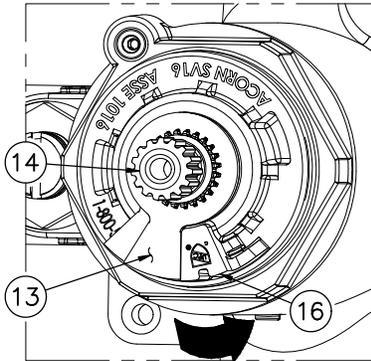
DETAIL A



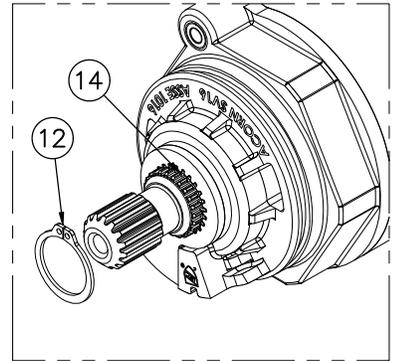
DETAIL B



DETAIL C



DETAIL D



DETAIL E

**INSTRUCTIONS:**

A-REMOVE TRI-LEVER HANDLE TRIM: SEE DETAIL A

- a- USING CENTER REJECT ALLEN WRENCH (1) REMOVE HANDLE SCREW (2) AND REMOVE HANDLE (3).
- b- REMOVE ESCUTCHEON (4) BY REMOVING SCREWS (5).

FOR OPTIONAL -LVR LEVER HANDLE TRIM: SEE DETAIL B

- a- REMOVE SET SCREW (6) AND HANDLE (7).
- b- REMOVE ESCUTCHEON (8) BY REMOVING SCREWS (9).
- c- PULL OFF VALVE SLEEVE (10).

**TEMPERATURE ADJUSTMENT:**

- B- ENSURE MAIN WATER SUPPLY IS ON.
- C- ENSURE CHECK STOPS (11) ARE OPEN.
- D- ENSURE VALVE IS IN THE OFF POSITION.
- E- USING SNAP RING PLIERS REMOVE RETAINING RING (12) AND THE FIRST TEMPERATURE LIMIT WASHER (13) ONLY FROM VALVE STEM (14). SEE DETAIL C.

NOTE: IF SECOND TEMPERATURE LIMIT WASHER (15) COMES OFF, RESETTING OF THE OFF STOP MAY BE REQUIRED, KEY AS CLOSE AS POSSIBLE ON THE COUNTER-CLOCKWISE SIDE OF BONNET STOP (16). USING HANDLE (3) OR (7) SLIGHTLY OPEN AND CLOSE VALVE TO ENSURE WATER WILL SHUT OFF. DETAIL C.

**TEMPERATURE ADJUSTMENT: CONTINUED:**

- F- USING HANDLE (3) OR (7) TURN VALVE STEM (14) COUNTER-CLOCKWISE TO INCREASE HOT, CHECKING OUTLET TEMPERATURE UNTIL DESIRED TEMPERATURE IS REACHED (RECOMMENDED 105° TO 110°). SLIDE FIRST TEMPERATURE LIMIT WASHER (9) OVER VALVE STEM (13) AND ENSURE SIDE OF WASHER RESTS AS CLOSE AS POSSIBLE TO CLOCKWISE SIDE OF BONNET LIMIT STOP (16). DETAIL D.
- G- WITH VALVE IN THE "ON" POSITION AND WATER RUNNING, USING SNAP RING PLIERS INSTALL RETAINING RING (12). ENSURE RETAINING RING (12) IS INSERTED PROPERLY INTO GROOVE ON VALVE STEM (14). DETAIL E.
- H- REINSTALL TRIM IN REVERSE ORDER.



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TITLE **-8 T/P TEMP/PRESS BALANCING MIXING VALVE - TEMPERATURE ADJUSTMENT**

MANUFACTURE DATE	DATE ISSUED	DRAWING NUMBER
<b>APRIL 2014</b>	<b>05/01/14</b>	
<b>PRESENT</b>	DATE REVISED	<b>9900-007-001</b>
	<b>09/01/16 B</b>	