

**BLUEWATER  
20 PT STEM EXTENSION KIT A  
FOR HANDLES: 503 & 505  
NOTE: CAN BE USED ON ALL SHUT OFFS, 2-WAY & 3-WAY VALVES  
08-21-08**

**EXPLODED VIEW**

LONG 1-1/2"  
STEM EXTENSION (A)  
PART # 77.01.307

THREADED SHORT 1-1/8"  
STEM EXTENSION (B)  
PART # 77.03.609

ALL THREAD  
EXTENSION 1-1/2"  
PART # 88.30.042

LOCKING JOINT NUT  
PART # 88.30.043

9/16" X 3"  
ALL THREAD TUBE  
PART # 88.30.047

LOCKING WASHER  
PART # 88.30.033

METAL WASHER  
PART # 88.30.165

STANDARD 20 PT  
IN WALL STEM EXTENSION  
PART # 88.30.048.20

← LOCTITE 680



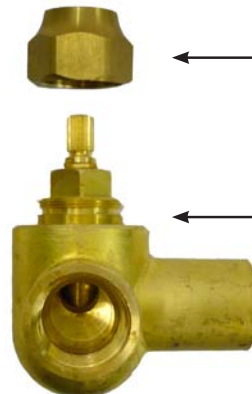
NOTE: EXTENSION  
KIT USES EITHER THE  
LONG (A)  
OR SHORT (B)  
STEM EXTENSION  
NOT BOTH

**ASSEMBLED VIEW**



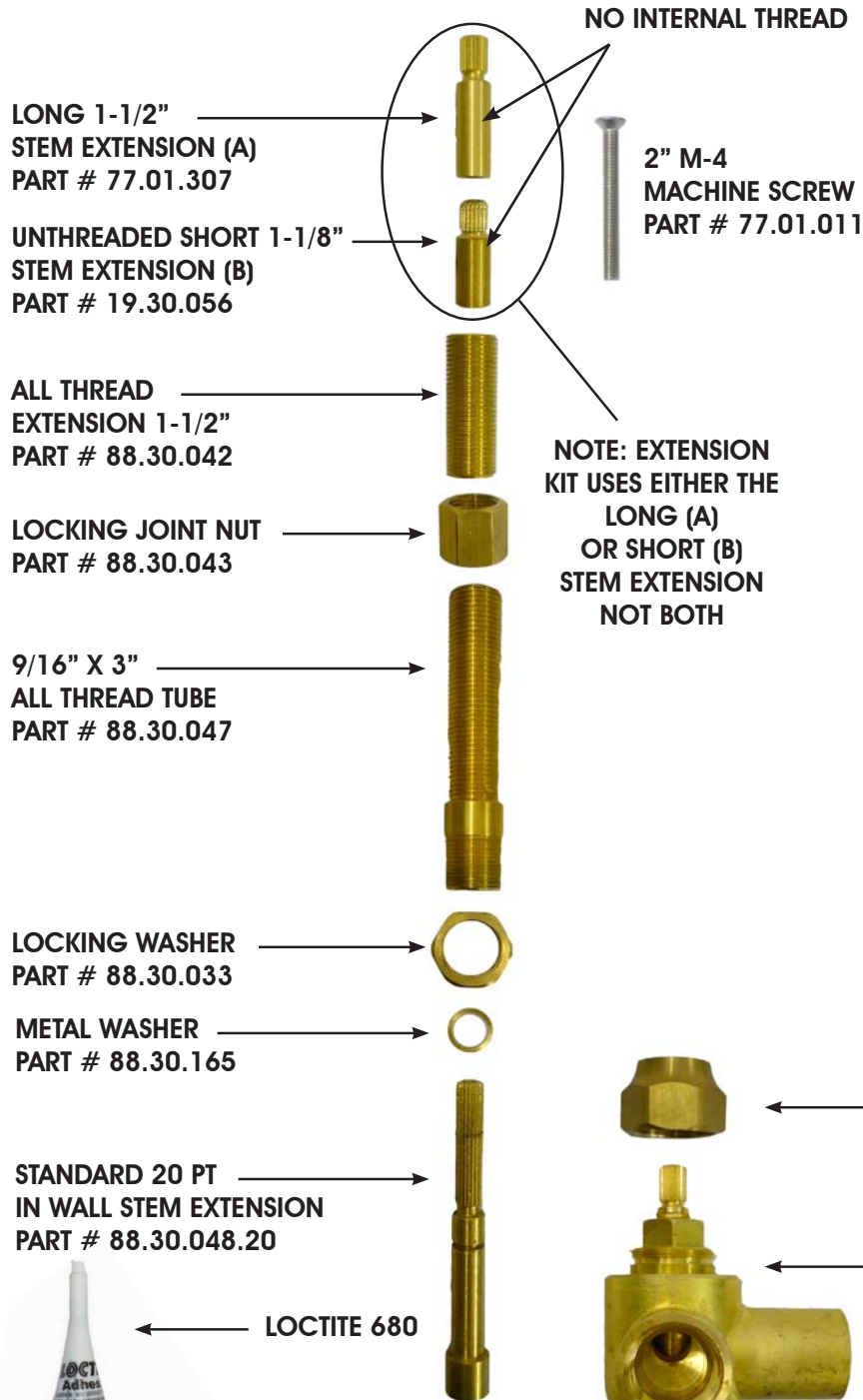
← M-24 CAP NUT  
PART # 88.30.053

← VALVE BODY

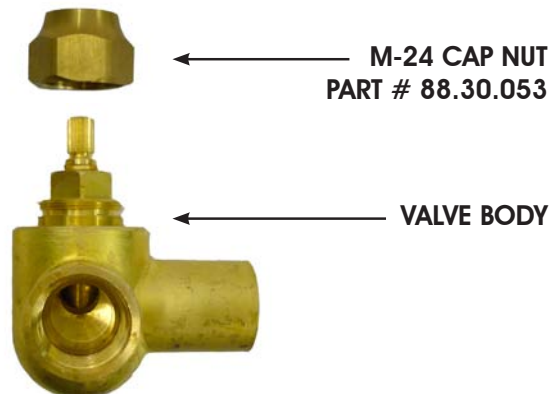


**BLUEWATER  
20 PT STEM EXTENSION KIT B  
FOR HANDLES: 500, 501, 503, 504, 508, 509, 510, 511, 512, & 516  
NOTE: CAN BE USED ON ALL SHUT OFFS, 2-WAY & 3-WAY VALVES  
08-21-08**

**EXPLODED VIEW**



**ASSEMBLED VIEW**



**BLUEWATER  
20 PT STEM EXTENSION KIT C  
FOR HANDLES: 502, 505,515  
NOTE: CAN BE USED ON ALL SHUT OFFS, 2-WAY & 3-WAY VALVES  
08-21-08**

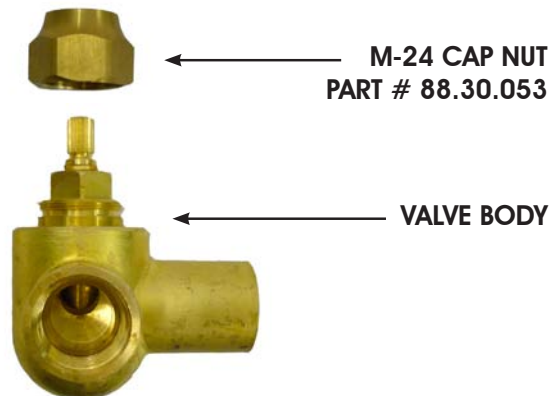
**EXPLODED VIEW**

- UNTHREADED SHORT 1-1/8" STEM EXTENSION (B)  
PART # 19.30.056
  - ALL THREAD EXTENSION 1-1/2"  
PART # 88.30.042
  - LOCKING JOINT NUT  
PART # 88.30.043
  - 9/16" X 3" ALL THREAD TUBE  
PART # 88.30.047
  - LOCKING WASHER  
PART # 88.30.033
  - METAL WASHER  
PART # 88.30.165
  - STANDARD 20 PT IN WALL STEM EXTENSION  
PART # 88.30.048.20
- ← COMES WITH M-4 INTERNAL THREAD

**ASSEMBLED VIEW**



← LOCTITE 680



## TYPE 1 HANDLE SECURING: SET SCREW FROM THE SIDE

(See accompanied figures on drawing no. ST02i-015)

### SCENARIO 1:

STEM-EXTENSION MOUNTED TOO HIGH (figure 2)

1. Find out the correct installed height for the stem extension.
2. Mark a line on all-thread  $\frac{1}{2}$ " below specified installed height and remove all-thread. Cut off at this line (figure 3).
3. Cut stem extension to specified installed height (figure 4).
4. Replace all-thread (figure 5).
5. Mount escutcheon and handle.
6. Secure handle with #8-32 set screw on the side (figure 6).

### SCENARIO 2:

STEM-EXTENSION MOUNTED TOO LOW (figure 8)

1. Determine the extra length of stem extension needed to meet the specified installed height.
2. Calculate the number of short stem extensions needed to glue on the stem extension to achieve the correct install height.
  - a) If this needed length happens to be  $\frac{1}{2}$ " increments, then stack and glue the short stem extensions (each will increase the height by  $\frac{1}{2}$ " ), as many as needed, onto the stem extension to obtain the specified installed height.

**For example:** If the extra height needed is 1", then stack two stem extension adapters to make up for this height deficit (figure 9).

- b) If the make-up length is somewhere between  $\frac{1}{2}$ " increments, then round this length up to the next  $\frac{1}{2}$ ", and cut the difference in length (between the rounded up number and the measured number) off from the stem extension.

**For example:** The measured extra height needed is  $\frac{5}{8}$ " (figure 10). Round this number up to the nearest  $\frac{1}{2}$ "

Stack and glue 2 stem extension adapters to make up for the 1" needed.

3. If the valve is installed too deep in the wall that the escutcheon is unable to screw onto the all-thread, then use the 2" long all-thread extender to increase the all-thread length (figure 13). Cut off, if necessary, either the all-thread and/or the all-thread extender so that when combined, the height is about 1/2" below the specified installed height (figure 14).
4. Mount escutcheon and handle.
5. Secure handle with M4 X 0.7mm screw(figure 15).

# ST. THOMAS CREATIONS

Figure 1

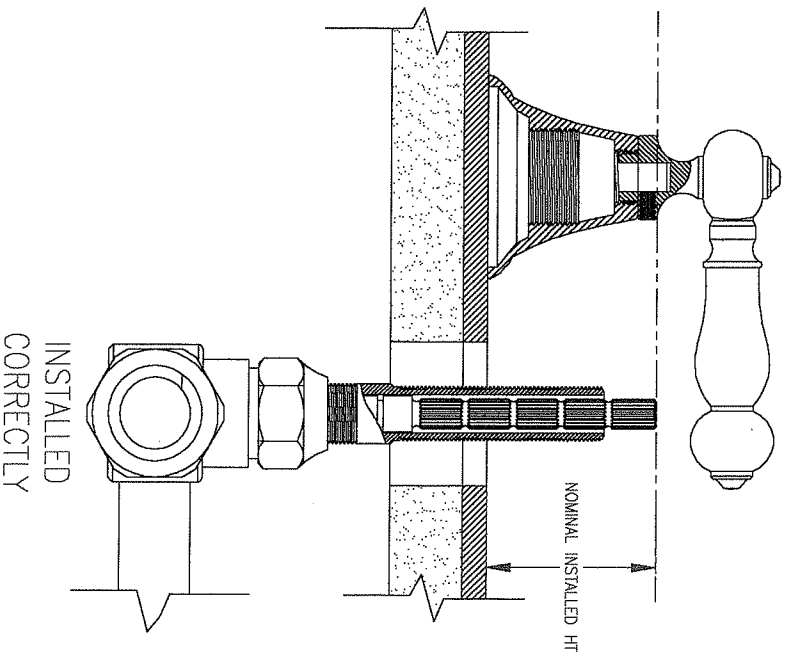


Figure 2

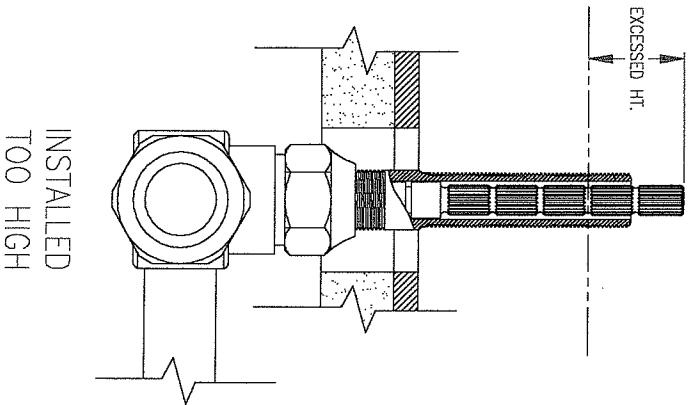
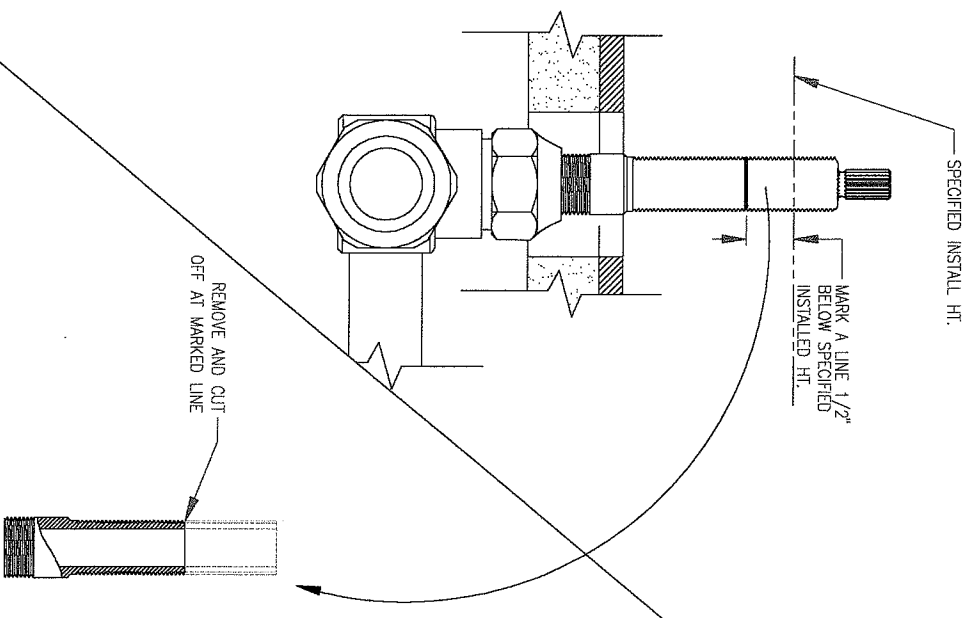


Figure 3



SCENARIO 1: STEM EXTENSION INSTALLED TOO HIGH

DWG NO.  
ST02i-015

DRAWN DATE:  
02/07/97

TYPE 1 HANDLE: SECURING HANDLE BY SET SCREW FROM SIDE

SHEET:  
1 OF 5

ST. THOMAS CREATIONS

Figure 4

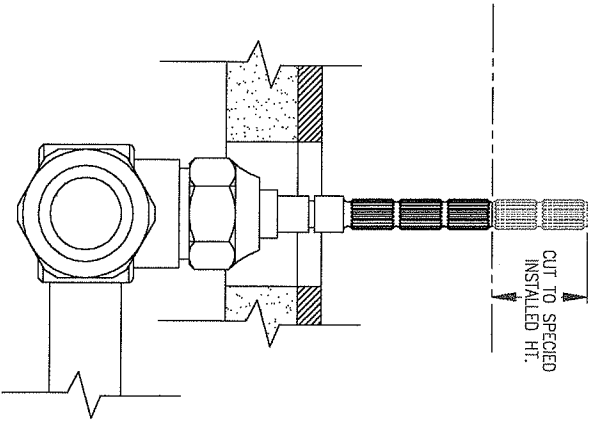


Figure 5

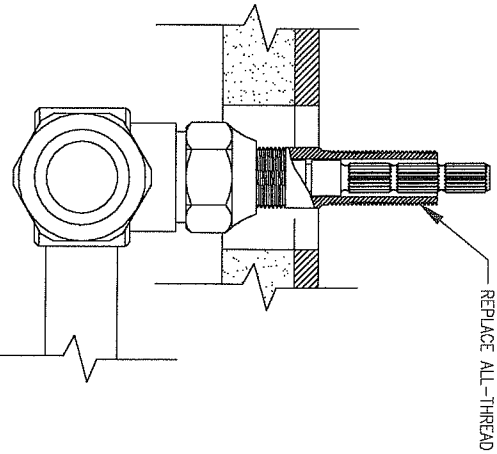
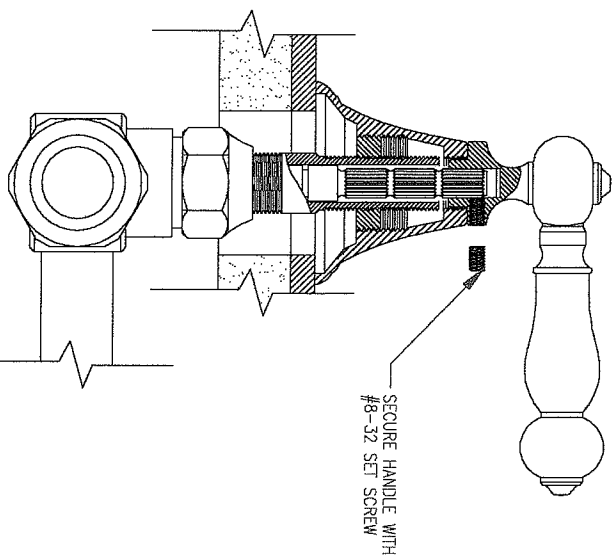


Figure 6



SCENARIO 1: STEM EXTENSION INSTALLED TOO HIGH

DWG NO.  
ST02i-015

DRAWN DATE:  
02/07/97

TYPE 1 HANDLE: SECURING HANDLE BY SET SCREW FROM SIDE

SHEET:  
2 OF 5

ST. THOMAS CREATIONS

Figure 7

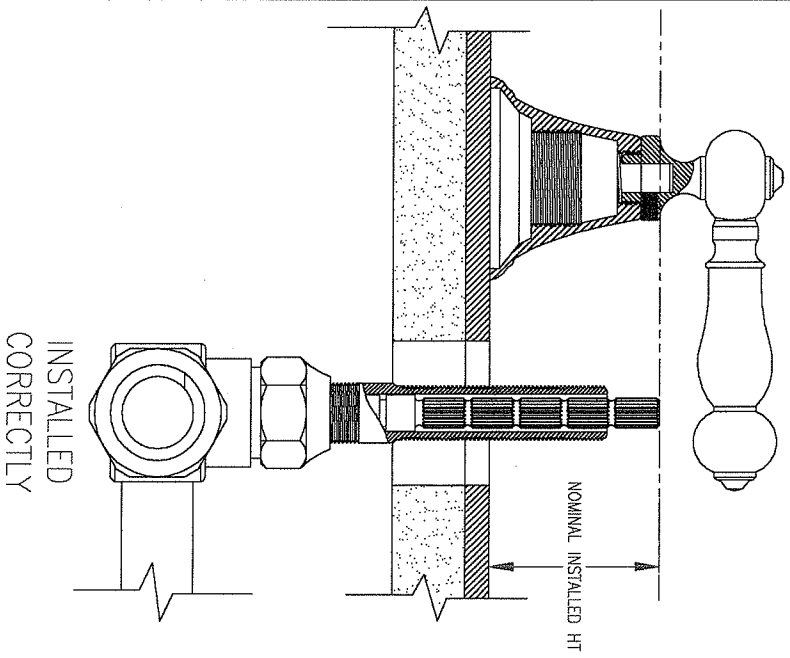


Figure 8

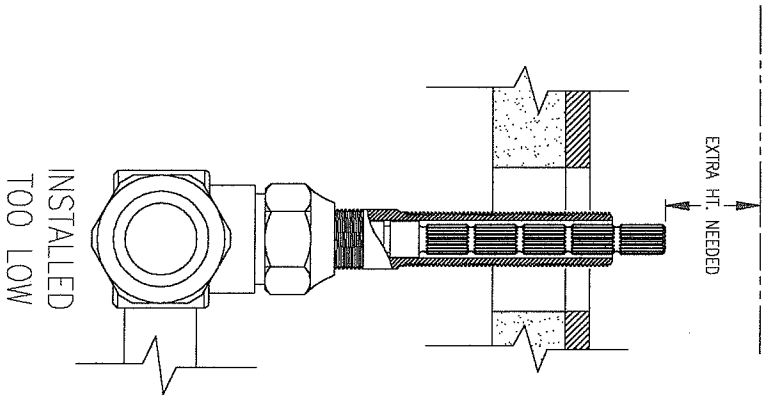
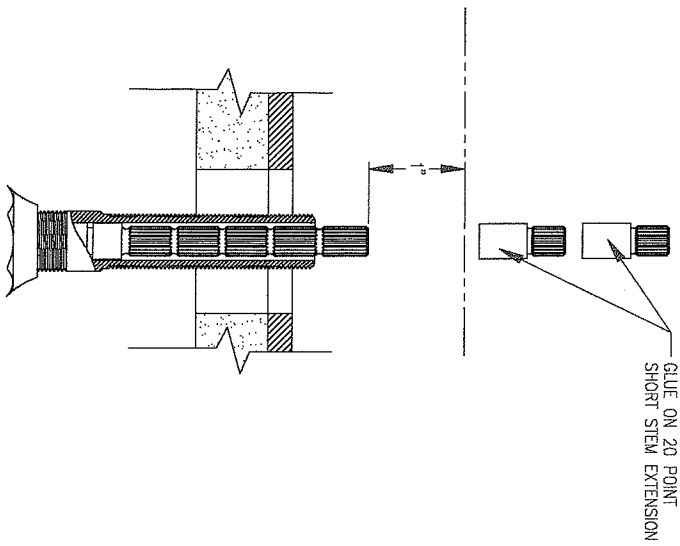


Figure 9 (See note 2a.)



SCENARIO 2: STEM EXTENSION INSTALLED TOO LOW

DWG. NO.  
ST02i-015

DRAWN DATE:  
02/06/97

TYPE 1 HANDLE: SECURING HANDLE BY SET SCREW FROM SIDE

SHEET:  
3 OF 5

ST. THOMAS CREATIONS

Figure 10 (See note 2b)

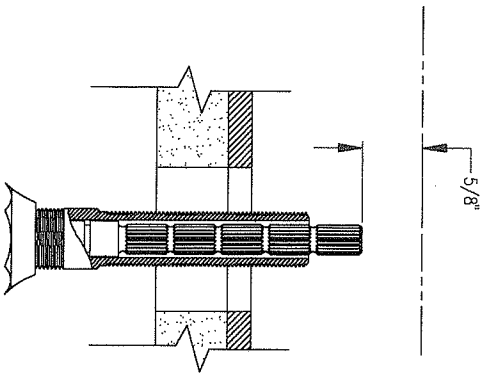


Figure 11 (See note 2b)

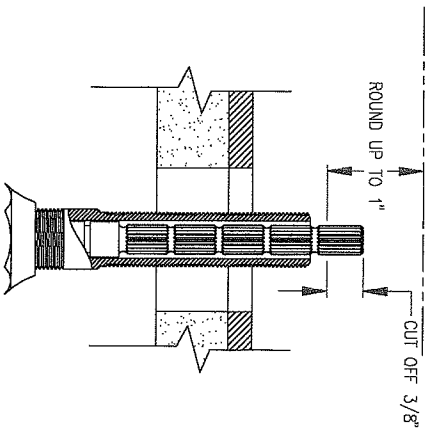
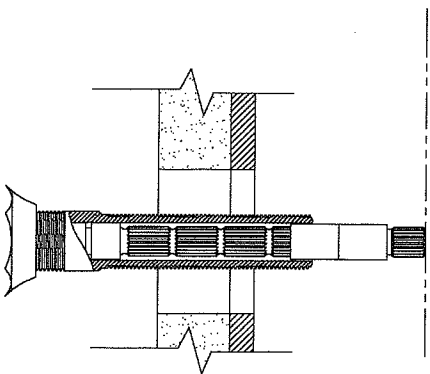


Figure 12



SCENARIO 2: STEM EXTENSION INSTALLED TOO LOW

DWG NO.

ST02i-015

DRAWN DATE:

02/06/97

TYPE 1 HANDLE: SECURING HANDLE BY SET SCREW FROM SIDE

SHEET:

4 OF 5

ST. THOMAS CREATIONS

Figure 13

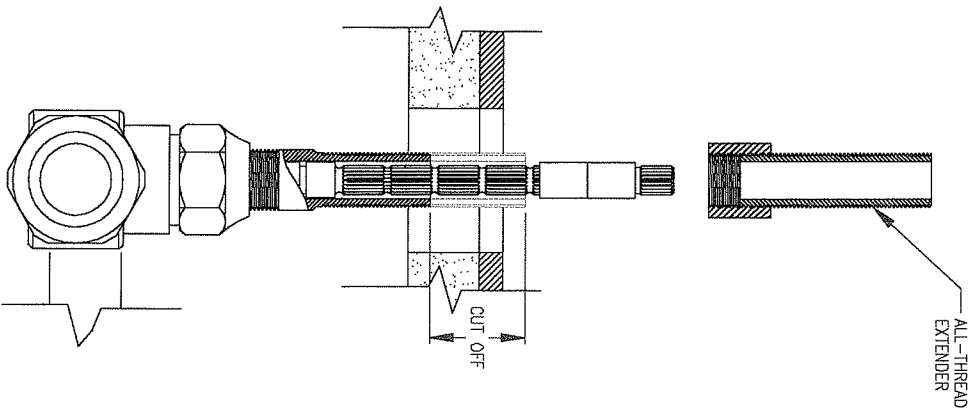


Figure 14

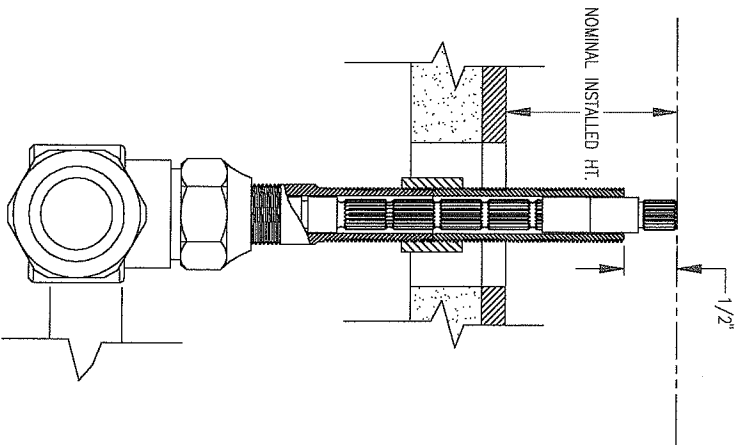
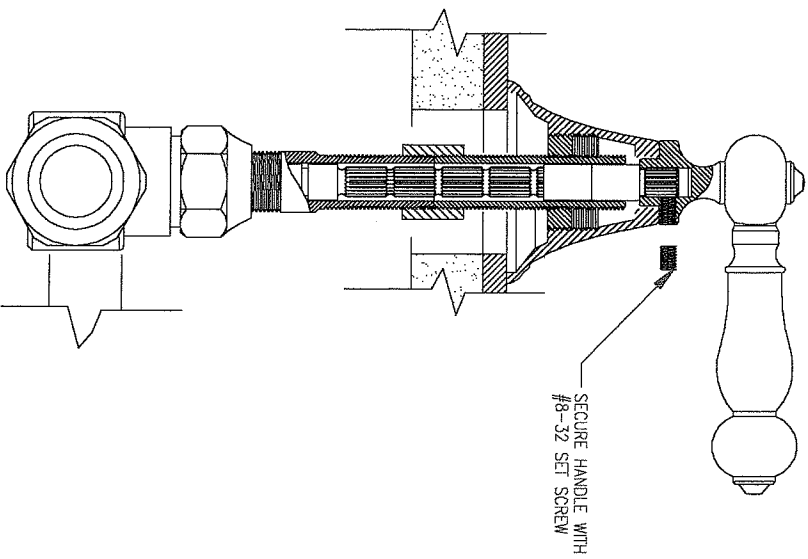


Figure 15



SCENARIO 2: STEM EXTENSION INSTALLED TOO LOW

DWG NO.  
ST02i-015

DRAWN DATE:  
02/06/97

TYPE 1 HANDLE: SECURING HANDLE BY SET SCREW FROM SIDE

SHEET:  
5 OF 5

## **TYPE 2 HANDLE: SECURING HANDLE BY SCREW FROM TOP**

**(See accompanied figures on drawing no. ST02i-016)**

### **SCENARIO 1:**

STEM-EXTENSION MOUNTED TOO HIGH (figure 2)

1. Find out the correct installed height for the stem extension.
2. Cut both stem extension and all-thread  $\frac{1}{2}$ " lower than the specified installed height (figures 3 & 4).
3. Glue 20 point stem extension adapter to the stem extension of valve (figure 5).
4. Mount escutcheon and handle.
5. Secure handle with M4 X 0.7 mm screw (figure 6).

### **SCENARIO 2:**

STEM-EXTENSION MOUNTED TOO LOW (figure 8)

1. Determine the extra length of stem extension needed to meet the specified installed height.
2. Calculate the number of short stem extensions needed to glue on the stem extension to achieve the correct install height.
  - a) If this needed length happens to be  $\frac{1}{2}$ " increments, then stack and glue the short stem extensions (each will increase the height by  $\frac{1}{2}$ " ), as many as needed, onto the stem extension to obtain the specified installed height.

**For example:** If the extra height needed is 1", then stack two stem extension adapters to make up for this height deficit (figure 9).

- b) If the make-up length is somewhere between  $\frac{1}{2}$ " increments, then round this length up to the next  $\frac{1}{2}$ ", and cut the difference in length (between the rounded up number and the measured number) off from the stem extension.

**For example:** The measured extra height needed is  $\frac{5}{8}$ " (figure 10). Round this number up to the nearest  $\frac{1}{2}$ " becomes 1". Cut off  $\frac{3}{8}$ " of stem extension (figure 11).

Stack and glue 2 stem extension adapters to make up for the 1" needed.

3. If the valve is installed too deep in the wall that the escutcheon is unable to screw onto the all-thread, then use the 2" long all-thread extender to increase the all-thread length (figure 13). Cut off, if necessary, either the all-thread and/or the all-thread extender so that when combined, the height is about 1/2" below the specified installed height (figure 14).
4. Mount escutcheon and handle.
5. Secure handle with M4 X 0.7mm screw(figure 15).

# ST. THOMAS CREATIONS

Figure 1

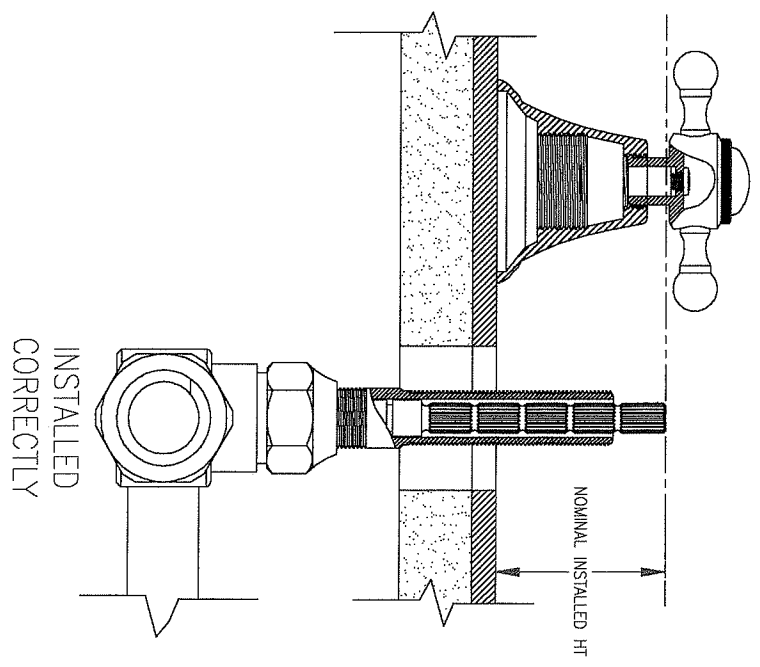


Figure 2

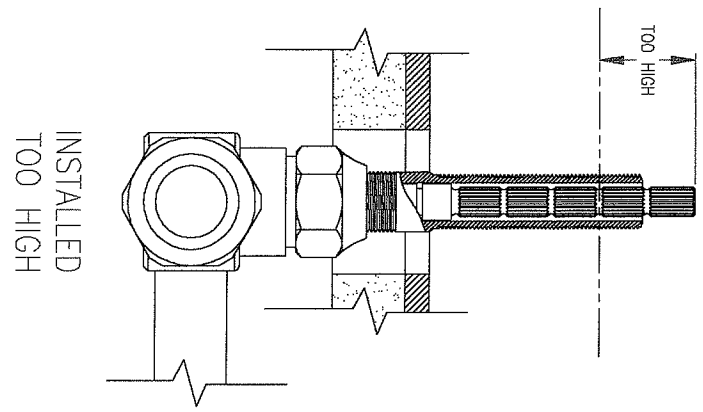
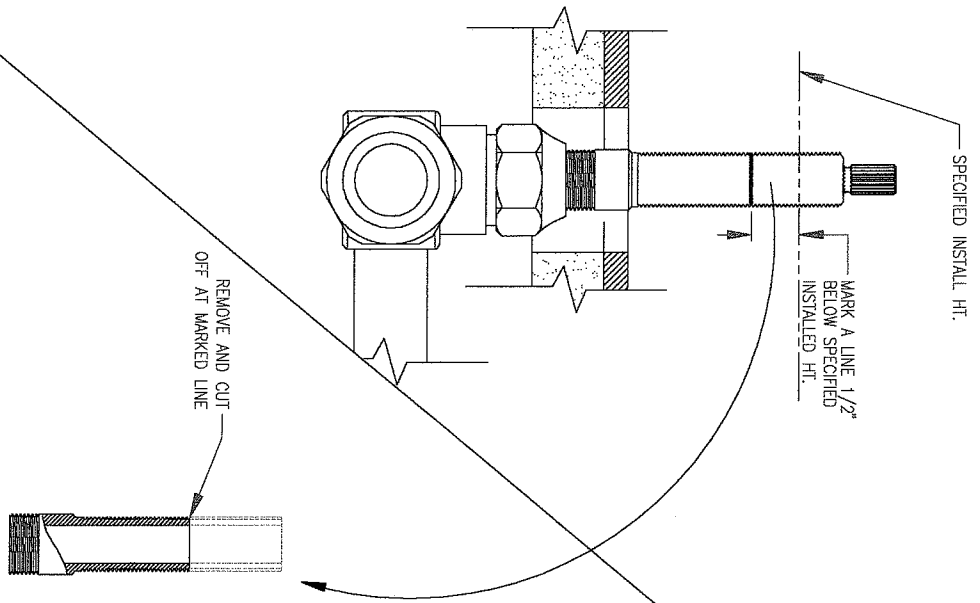


Figure 3



SCENARIO 1: STEM EXTENSION INSTALLED TOO HIGH

DWG. NO.  
ST02i-016

DRAWN DATE:  
02/07/97

TYPE 2 HANDLE: SECURING HANDLE BY SET SCREW FROM TOP

SHEET:  
1 OF 5

# ST. THOMAS CREATIONS

Figure 4

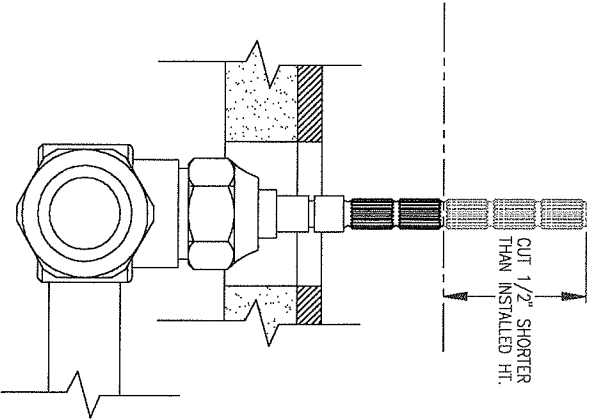


Figure 5

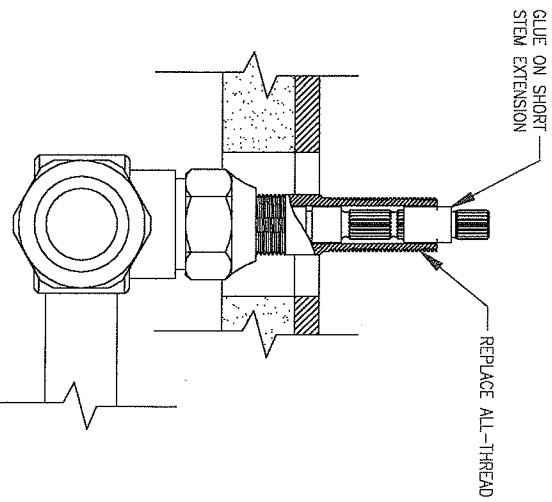
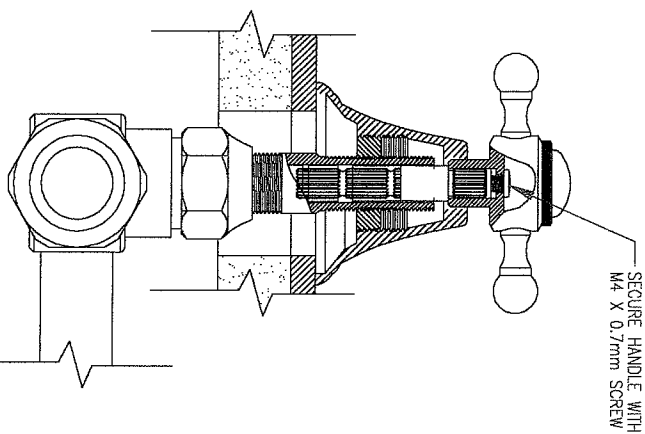


Figure 6



SCENARIO 1: STEM EXTENSION INSTALLED TOO HIGH

DWG. NO.  
ST02t-016

DRAWN DATE:  
02/07/97

TYPE 2 HANDLE: SECURING HANDLE BY SET SCREW FROM TOP

SHEET:  
2 OF 5

ST. THOMAS CREATIONS

Figure 7

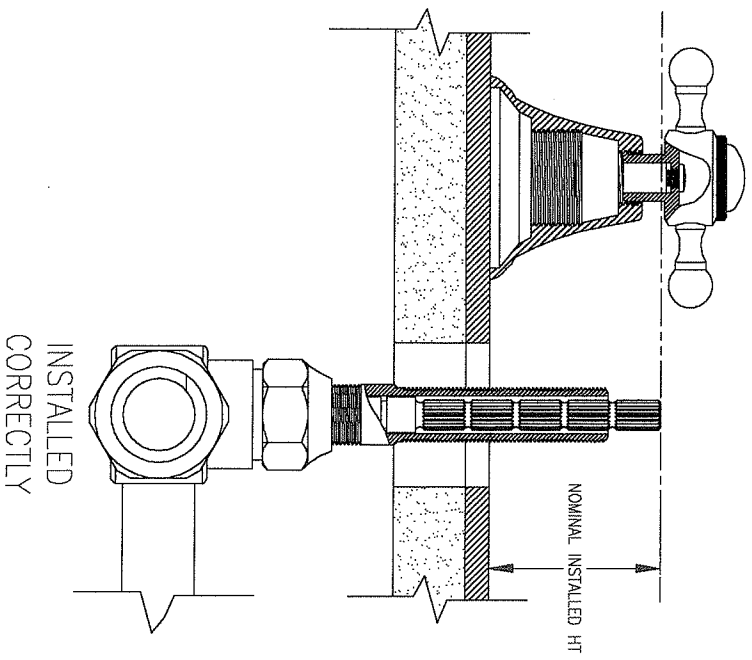


Figure 8

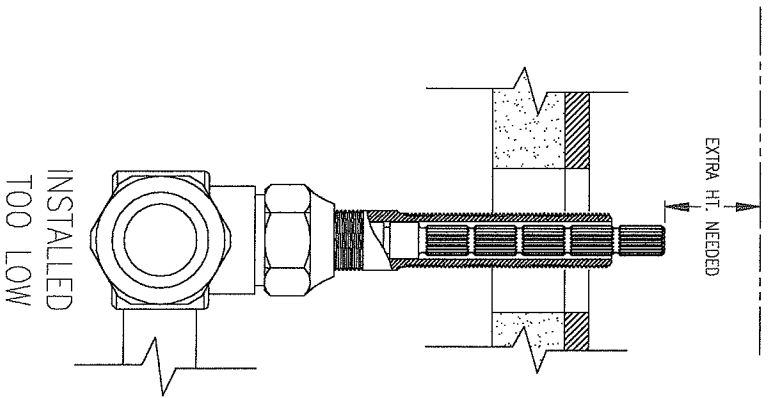
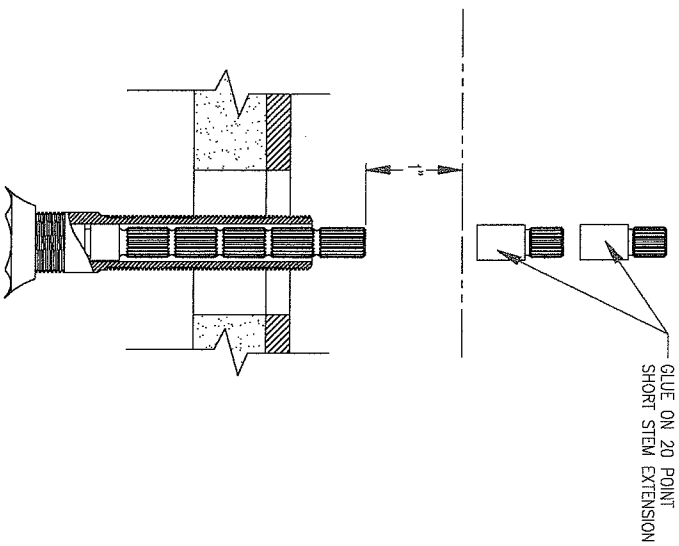


Figure 9 (See note 2a.)



SCENARIO 2: STEM EXTENSION INSTALLED TOO LOW

DWG. NO.  
ST02t-016

DRAWN DATE:  
02/06/97

TYPE 2 HANDLE: SECURING HANDLE BY SET SCREW FROM TOP

SHEET:  
3 OF 5

ST. THOMAS CREATIONS

Figure 10 (See note 2b)

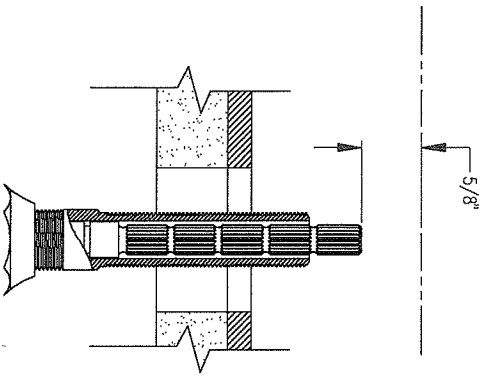


Figure 11 (See note 2b)

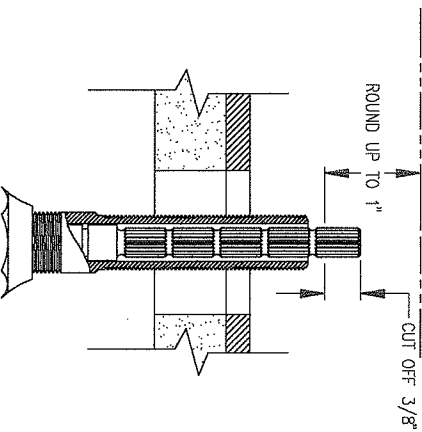
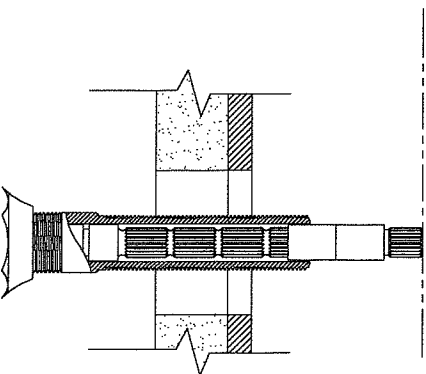


Figure 12



SCENARIO 2: STEM EXTENSION INSTALLED TOO LOW

DWG. NO.  
ST02a-016

DRAWN DATE:  
02/06/97

TYPE 2 HANDLE: SECURING HANDLE BY SET SCREW FROM TOP

SHEET:  
4 OF 5

ST. THOMAS CREATIONS

Figure 13

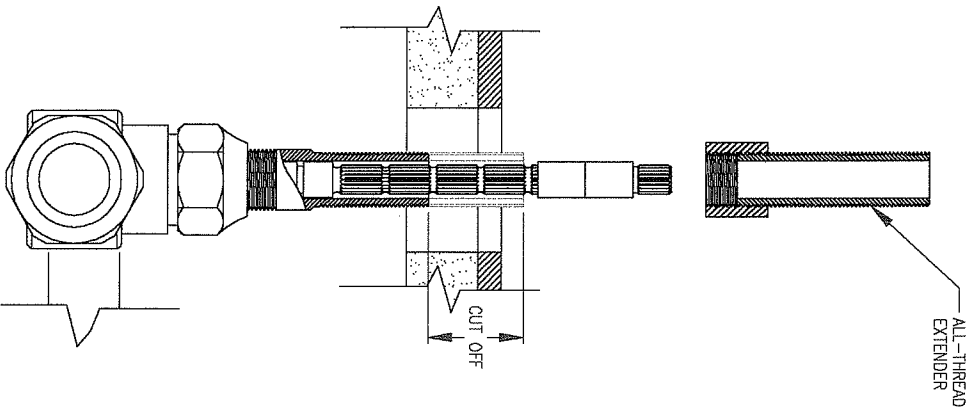


Figure 14

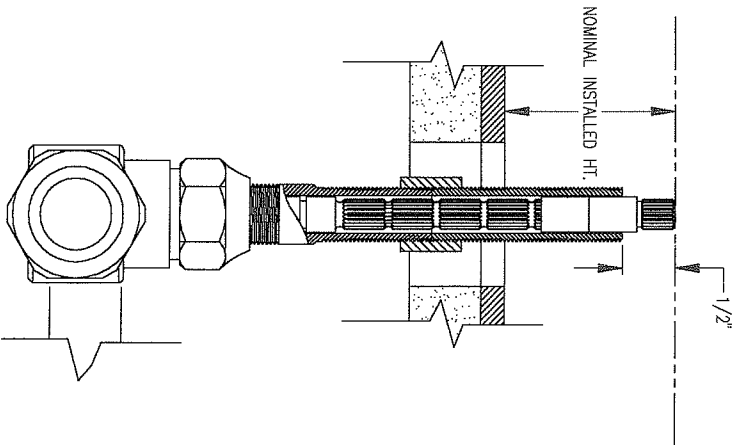
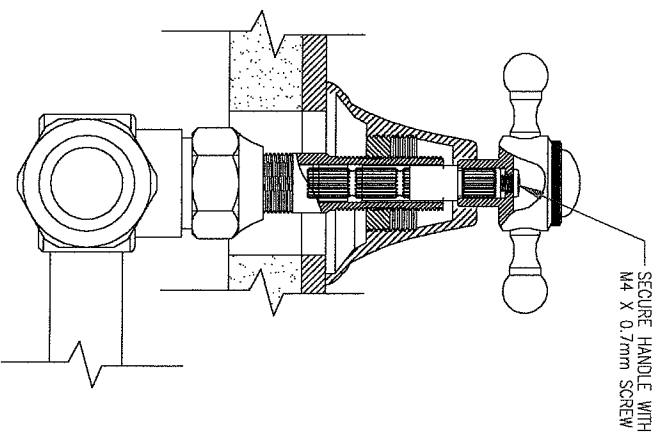


Figure 15



SCENARIO 2: STEM EXTENSION INSTALLED TOO LOW

DWG NO.  
ST02i-016

DRAWN DATE:  
02/06/97

TYPE 2 HANDLE: SECURING HANDLE BY SET SCREW FROM TOP

SHEET:  
5 OF 5

## **TYPE 3 HANDLE SECURING: PLASTIC GROMMET**

**(See accompanied figures on drawing no. ST02i-017)**

### **SCENARIO 1:**

STEM-EXTENSION MOUNTED TOO HIGH (figure 2)

1. Find out the correct installed height for the stem extension.
2. Mark a line on all-thread  $7/16''$  below specified installed height and remove all-thread. Cut off at this line (figure 3).
3. Cut stem extension to  $1/2''$  below specified installed height (figure 4).
4. Glue on short stem extension (figure 5).
5. Replace all-thread (figure 5).
6. Mount escutcheon and snap on handle (figure 6).

### **SCENARIO 2:**

STEM-EXTENSION MOUNTED TOO LOW (figure 8)

1. Determine the extra length of stem extension needed to meet the specified installed height.
2. Calculate the number of short stem extensions needed to glue on the stem extension to achieve the correct install height.
  - a) If this needed length happens to be  $1/2''$  increments, then stack and glue the short stem extensions (each will increase the height by  $1/2''$ ), as many as needed, onto the stem extension to obtain the specified installed height.

**For example:** If the extra height needed is  $1''$ , then stack two stem extension adapters to make up for this height deficit (figure 9).

- b) If the make-up length is somewhere between  $1/2''$  increments, then round this length up to the next  $1/2''$ , and cut the difference in length (between the rounded up number and the measured number) off from the stem extension.

**For example:** The measured extra height needed is  $5/8''$  (figure 10). Round this number up to the nearest  $1/2''$

Stack and glue 2 stem extension adapters to make up for the 1" needed.

3. If the valve is installed too deep in the wall that the escutcheon is unable to screw onto the all-thread, then use the 2" long all-thread extender to increase the all-thread length (figure 13). Cut off, if necessary, either the all-thread and/or the all-thread extender so that when combined, the height is about 1/2" below the specified installed height (figure 14).
4. Mount escutcheon and snap on handle (figure 15).

ST. THOMAS CREATIONS

Figure 1

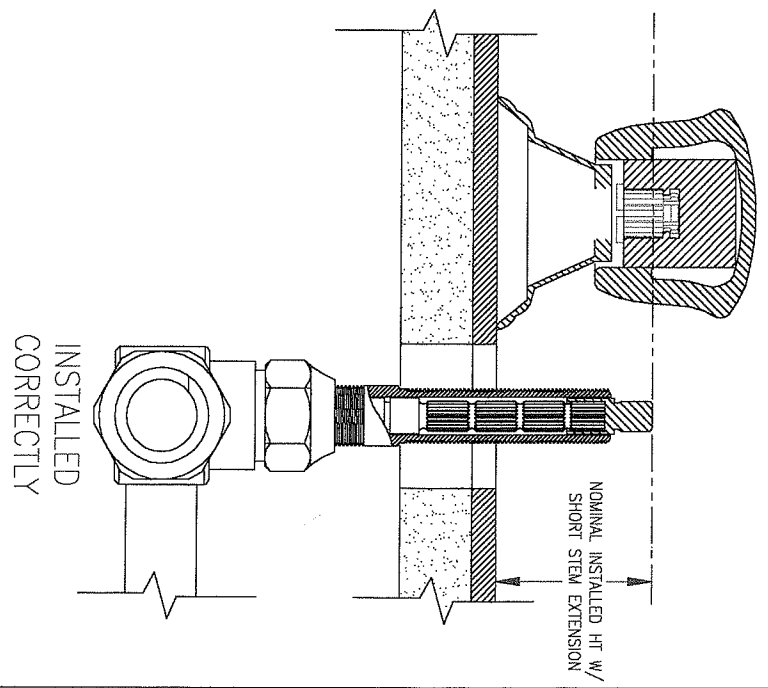


Figure 2

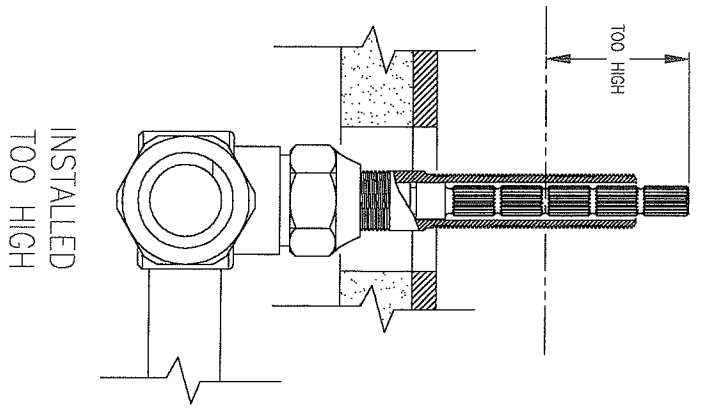
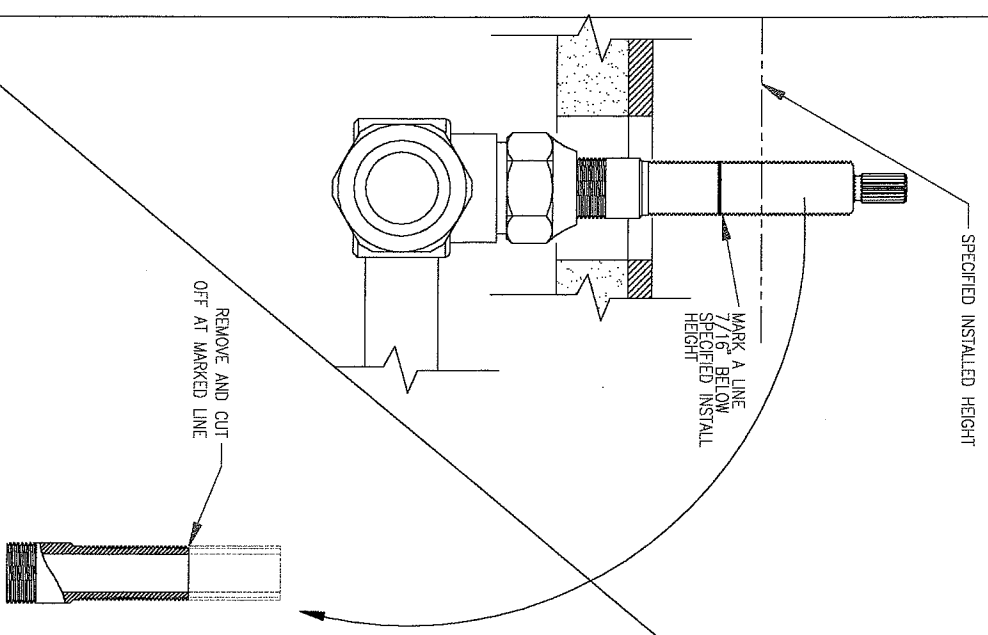


Figure 3



SCENARIO 1: STEM EXTENSION INSTALLED TOO HIGH

DWG. NO.  
ST02i-017

DRAWN DATE:  
02/10/97

TYPE 3 HANDLE: SECURING HANDLE BY PLASTIC GROMMET

SHEET:  
1 OF 5

ST. THOMAS CREATIONS

Figure 4

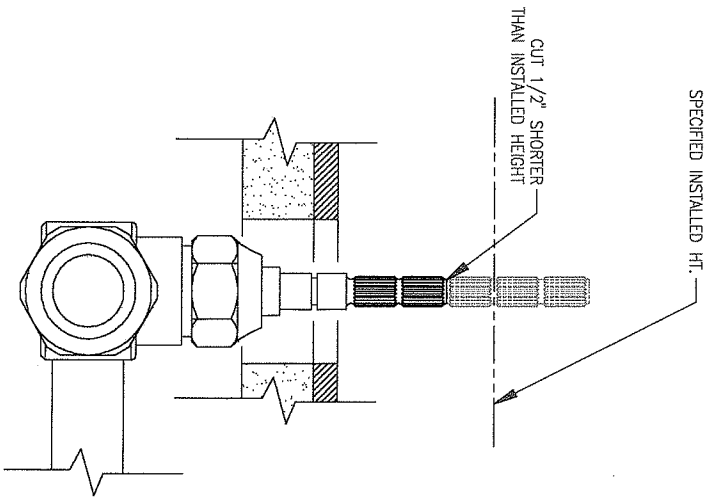


Figure 5

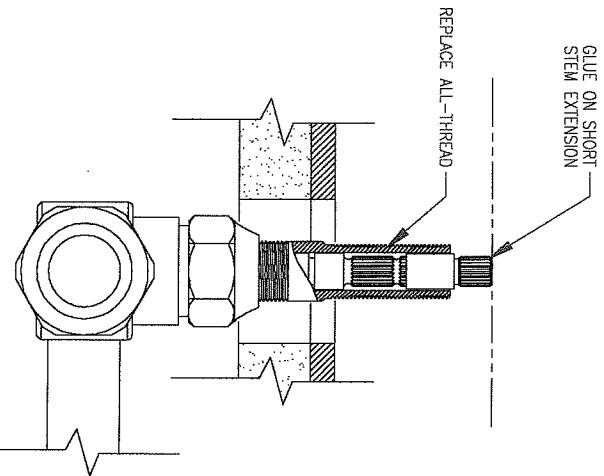
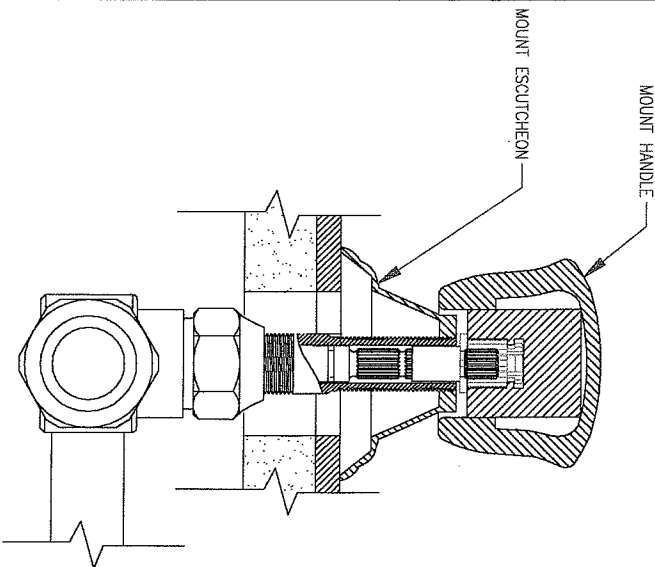


Figure 6



SCENARIO 1: STEM EXTENSION INSTALLED TOO HIGH

DWG. NO.

ST02t-017

DRAWN DATE:

02/10/97

TYPE 3 HANDLE: SECURING HANDLE BY PLASTIC GROMMET

SHEET:

2 OF 5

# ST. THOMAS CREATIONS

Figure 7

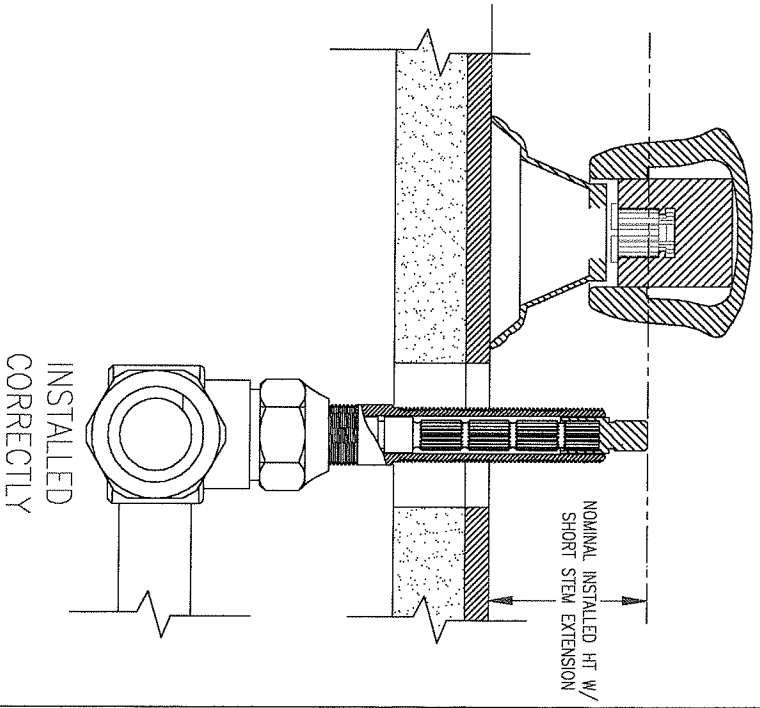


Figure 8

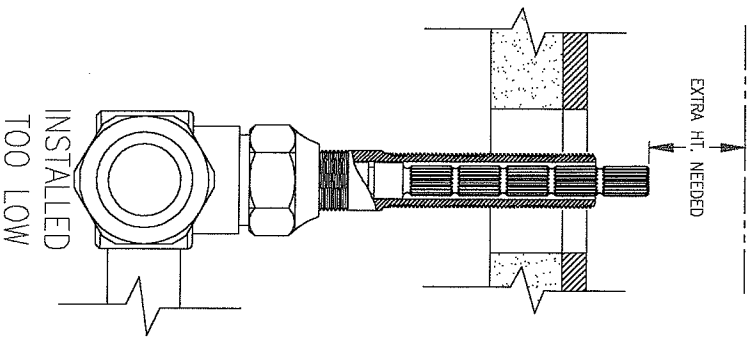
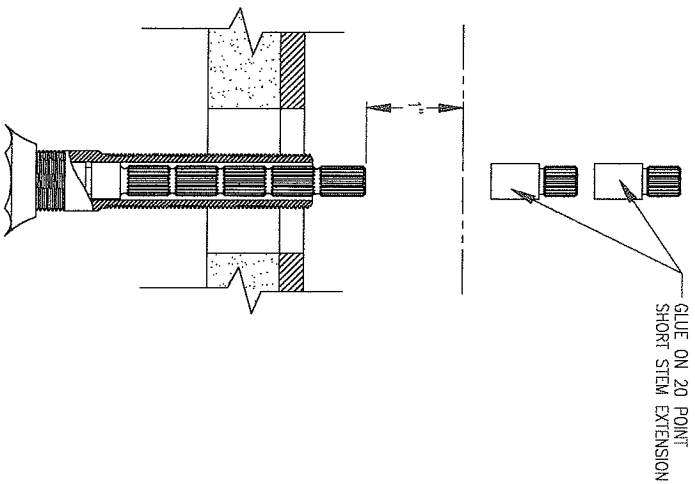


Figure 9 (See note 2a)



SCENARIO 2: STEM EXTENSION INSTALLED TOO LOW

DWG NO.

ST02i-017

DRAWN DATE:

02/10/97

TYPE 3 HANDLE: SECURING HANDLE BY PLASTIC GROMMET

SHEET:

3 OF 5

# ST. THOMAS CREATIONS

Figure 10 (See note 2b)

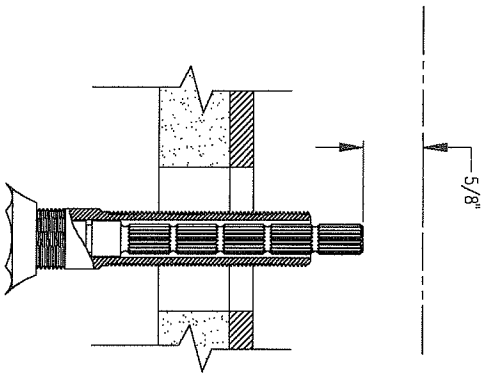


Figure 11 (See note 2b)

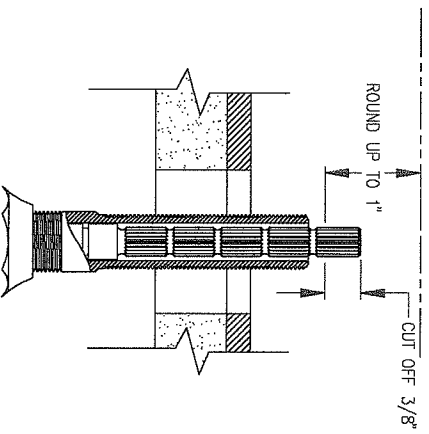
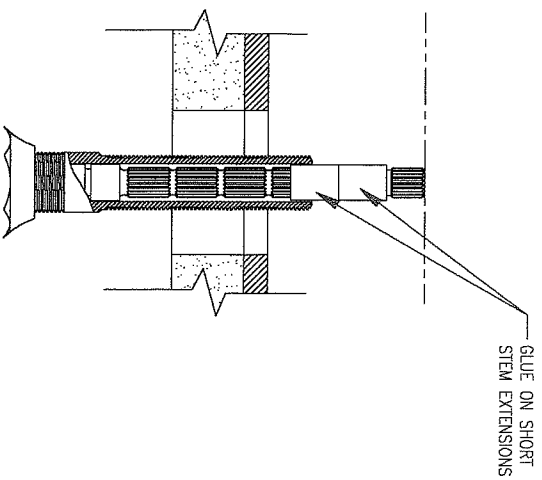


Figure 12



SCENARIO 2: STEM EXTENSION INSTALLED TOO LOW

DWG NO.  
ST02i-017

DRAWN DATE:  
02/06/97

TYPE 3 HANDLE: SECURING HANDLE BY PLASTIC GROMMET

SHEET:  
4 OF 5

ST. THOMAS CREATIONS

Figure 13

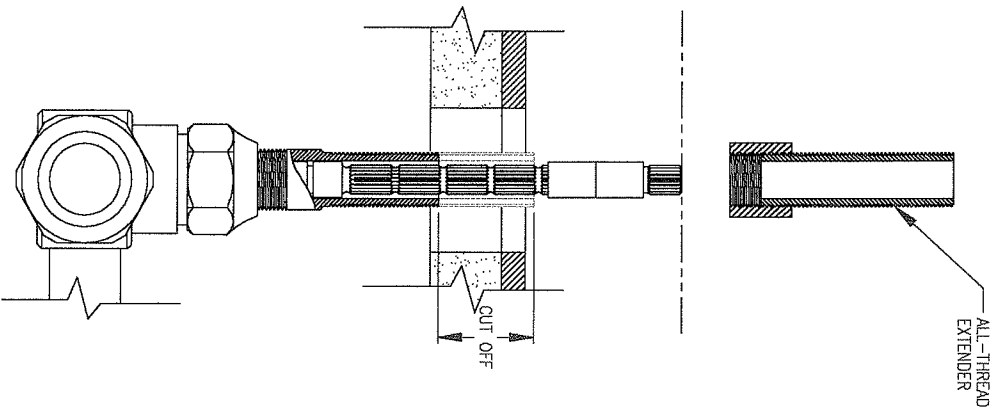


Figure 14

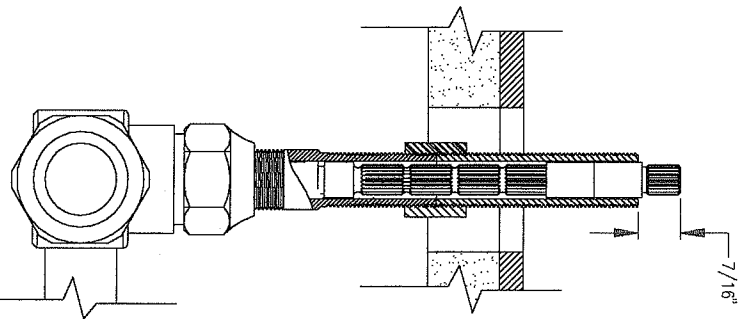
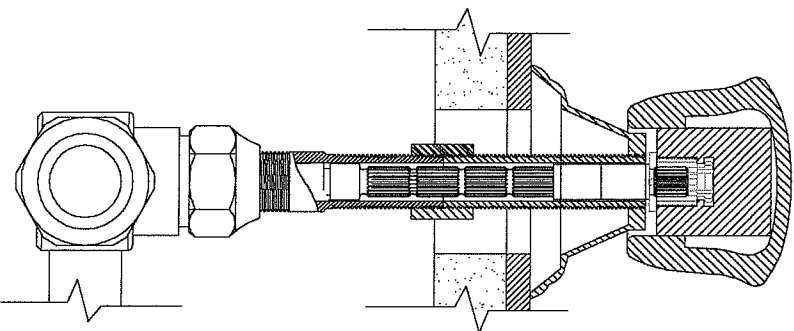


Figure 15



SCENARIO 2: STEM EXTENSION INSTALLED TOO LOW

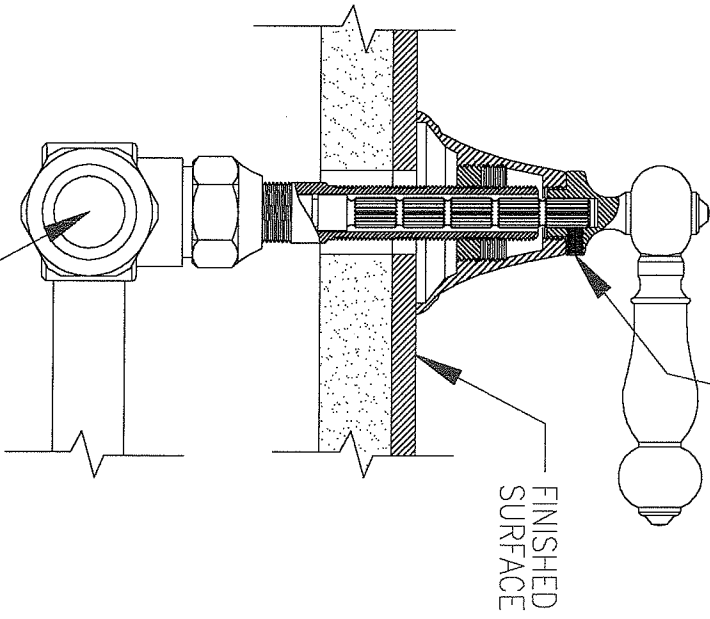
DWG. NO.  
ST02t-017

DRAWN DATE:  
02/06/97

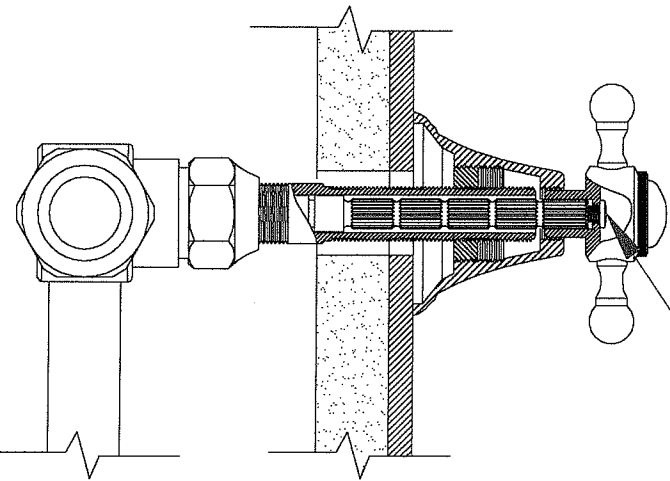
TYPE 3 HANDLE: SECURING HANDLE BY PLASTIC GROMMET

SHEET:  
5 OF 5

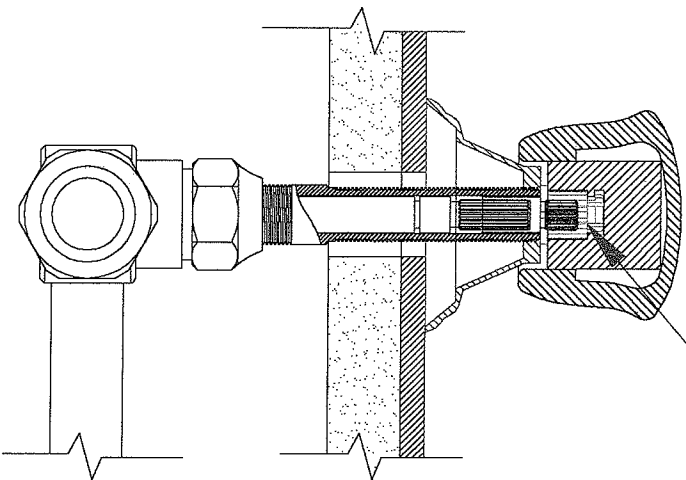
TYPE 1:  
HANDLE SECURED BY  
SET SCREW FROM SIDE



TYPE 2:  
HANDLE SECURED BY  
SCREW FROM TOP



TYPE 3:  
HANDLE SECURED BY  
PLASTIC GROMMET



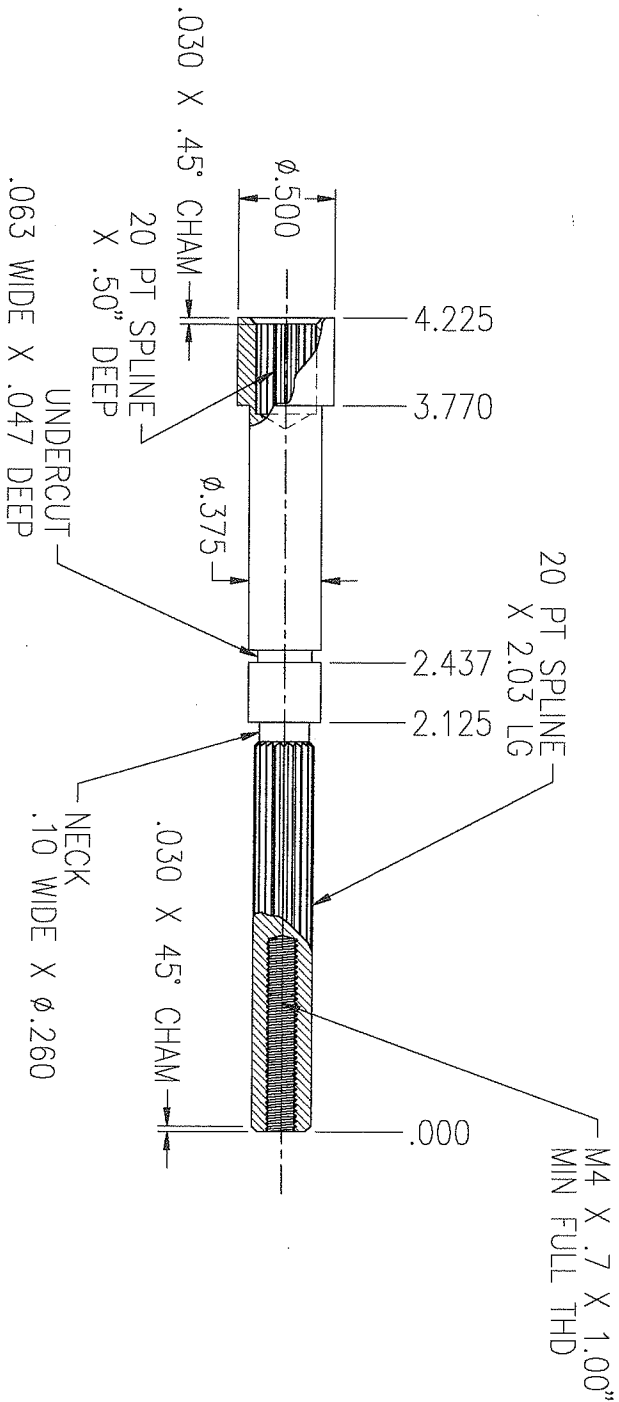
3-VALVE IN-WALL



NOTES:

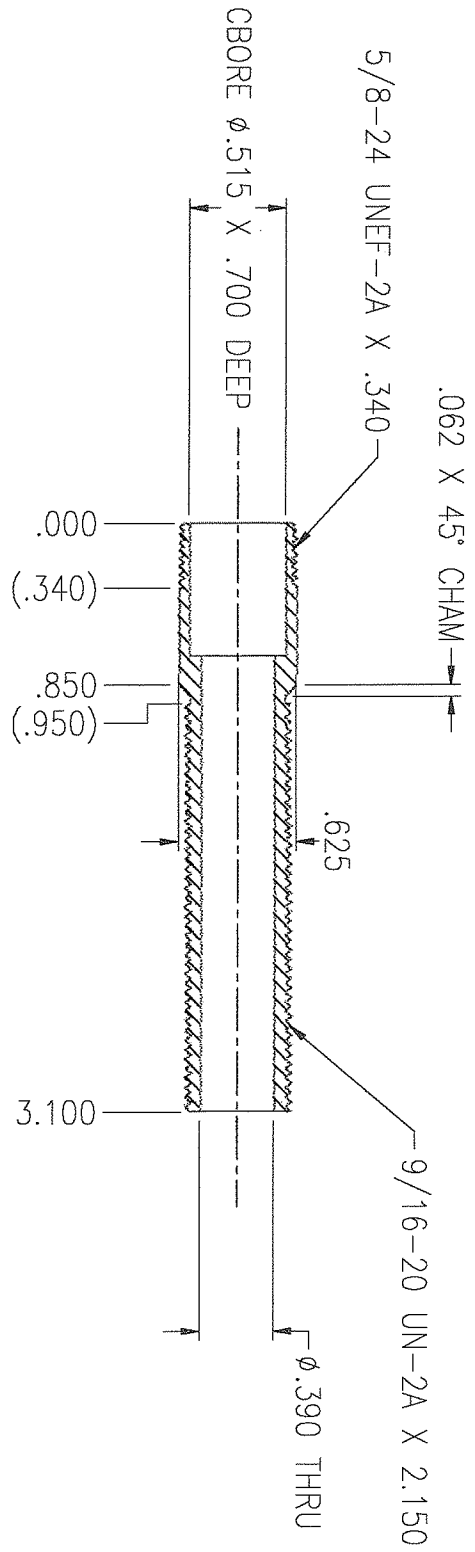
1. BREAK EDGES R.005-.015

REVISIONS			
REV.	DESCRIPTION	DATE	BY
A	REDRAW TO MATCH SAMPLE DIMENSIONS	09/17/96	MCN
B	ADDED .625" TO SPLINE LENGTH	09/20/96	MCN



ITEM NO.	PART NO.	APPROVALS	DESCRIPTION	QTY.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:				
FRACTIONS	DECIMALS	ANGLES		
$\pm 1/64$	.XX $\pm .01$ .XXX $\pm .005$	$\pm 30'$		
MATERIAL	DESIGN & DRAFTING SERVICES BY		FOR	
BRASS	<i>D.U. Products, Inc.</i> Coronado, CA		<i>ST. THOMAS</i>	
FINISH	APPROVALS	DATE	20 POINT SPLINE 2V/3V STEM	
1. POLISHED	DRAWN	04/10/96		
2. POWDER COAT	CHECKED			
APPLICATION	ISSUED			
USED ON				
DO NOT SCALE DRAWING				
SIZE	PART NO.	DWG. NO.	REV.	
A	ST01-031	ST10-002	B	
SCALE	1 : 1	SHEET	1 OF 1	

NOTES:  
 1. BREAK EDGES R.005-.015

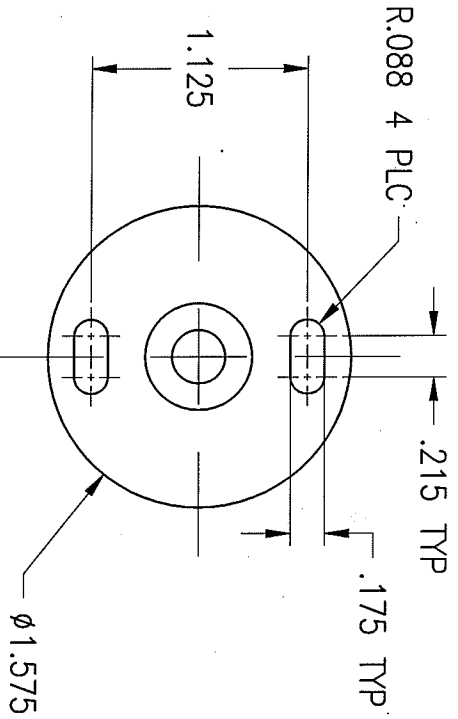
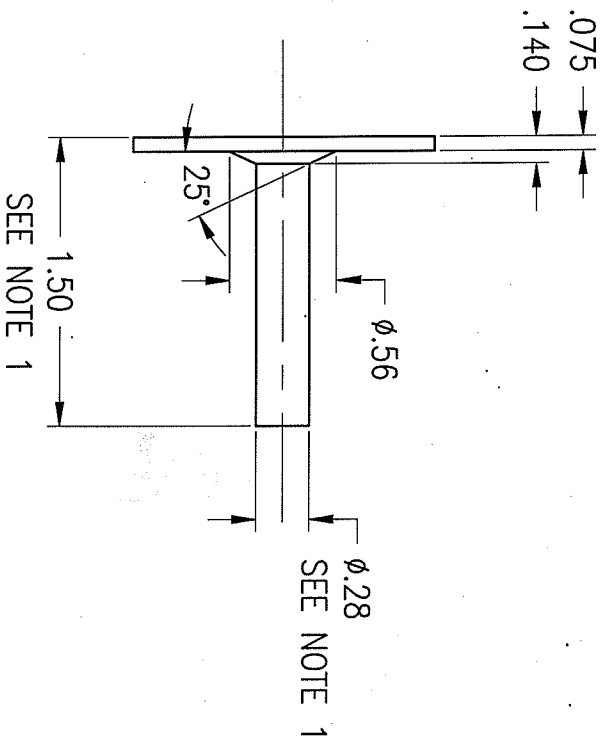


REVISIONS			
REV	DESCRIPTION	DATE	BY
-	-	-	-

ITEM NO.	PART NO.	APPROVALS	DESCRIPTION	QTY.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:				
FRACTIONS	DECIMALS	ANGLES		
± 1/64	.XX ±.01 .XXX ±.005	± 30°		
MATERIAL	FINISH		DESIGN & DRAFTING SERVICES BY	
BRASS	1. POLISHED 2. POWDER COAT		<b>D.U. Products, Inc.</b> Carlsbad, CA	
APPLICATION	USED ON	DO NOT SCALE DRAWING	APPROVALS	DATE
			DRAWN	04/10/96
			CHECKED	
			ISSUED	
			MINH NGUYEN	
			FAK(619)930-0140	
			DATE	
			FOR	
			<b>ST. THOMAS</b>	
			VALVE EXTENSION	
SIZE	PART NO.	ENG. NO.	NOT ISSUED	REV
A	ST01-032			
SCALE	1 : 1	SHEET	1 OF 1	

NOTES:  
1. MODIFIED DIMENSIONS

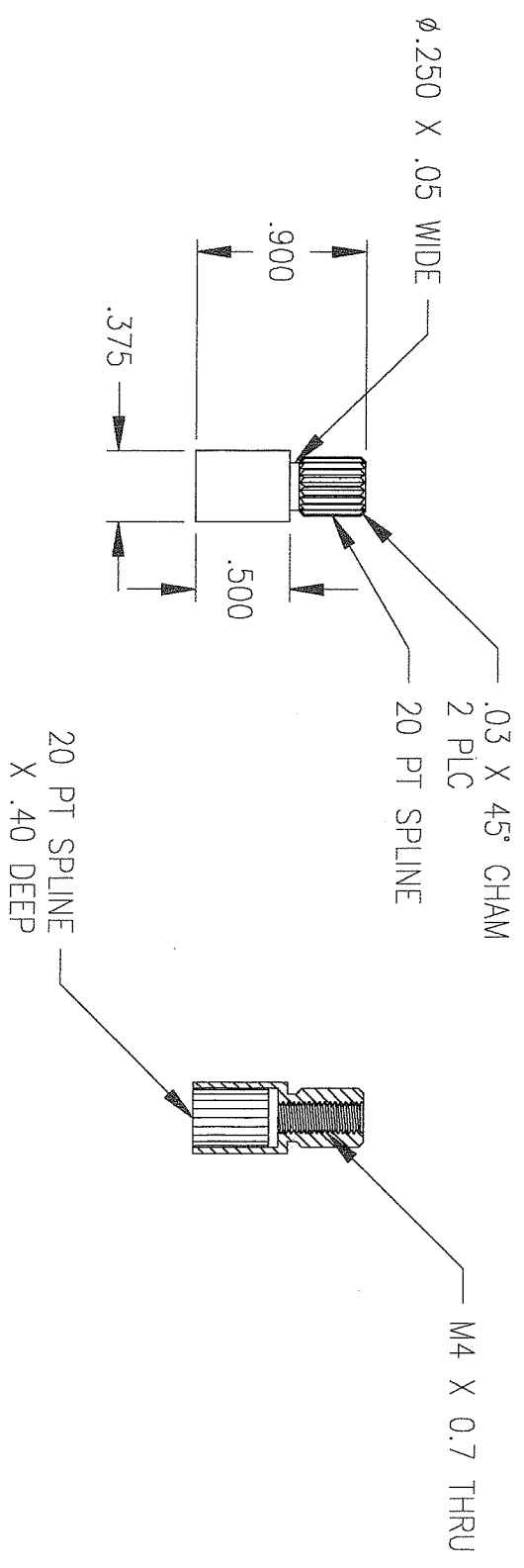
REVISIONS			
REV.	DESCRIPTION	DATE	BY
A	USE DIFFERENT TEE	08/11/98	MCN



ALL DIMENSIONS ARE MEASURED FROM STOCK PART, UNLESS OTHERWISE INDICATED

ITEM NO.	PART NO.	APPROVALS	DESCRIPTION	QTY.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:				
FRACTIONS $\pm 1/64$	DECIMALS $.XX \pm .01$ .XXX $\pm .005$	ANGLES $\pm 30'$	DESIGN & DRAFTING SERVICES BY <b>D.U. Products, Inc.</b> Carlsbad, CA (760)434-6248 FAX(760)930-1278	
MATERIAL ZINC PLATED STEEL	FINISH	APPROVALS	DATE	
		DRAWN MINH NGUYEN	08/11/98	
		CHECKED <i>[Signature]</i>		
		ISSUED <i>[Signature]</i>		
NEXT ASSY	USED ON	SIZE	PART NO.	REV.
		A	ST01-070	A
APPLICATION	DO NOT SCALE DRAWING	SCALE	DWG. NO.	SHEET
		1 : 1	ST12-008	1 OF 1
<b>FOR ST. THOMAS CREATIONS</b> MODIFIED ACCESSORY POST FOR CERAMIC				

REVISIONS			
REV.	DESCRIPTION	DATE	BY



ITEM NO.	PART NO.	APPROVALS	DESCRIPTION	QTY.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:				
FRACTIONS	DECIMALS	ANGLES	DESIGN & DRAFTING SERVICES BY	
± 1/64	.XX ± .01 .XXX ± .005	± 30°	D.U. Products, Inc. Cerritos, CA	
MATERIAL	APPROVALS		(619)930-4028 FAX(619)930-0140	
BRASS	DATE		FOR	
FINISH	DRAWN	MINH NGUYEN	ST. THOMAS	
32 RMS (UNLESS OTHERWISE SPEC'D)	CHECKED	02/11/97	1/2" STEM EXTENSION	
DO NOT SCALE DRAWING	ISSUED	2/13/97	SIZE	PART NO.
			A	ST01-064
			SCALE	DWG. NO.
			1 : 1	ST10-005
			SHEET	REV.
			1	1
			OF	1

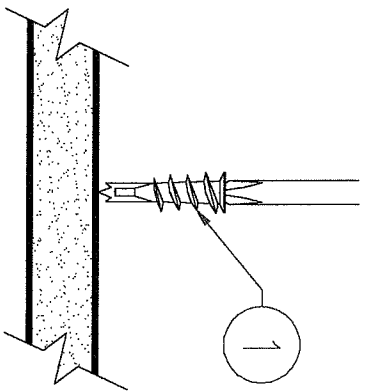


figure 1

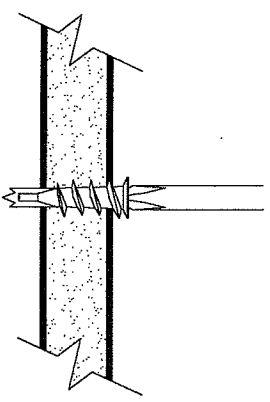


figure 2

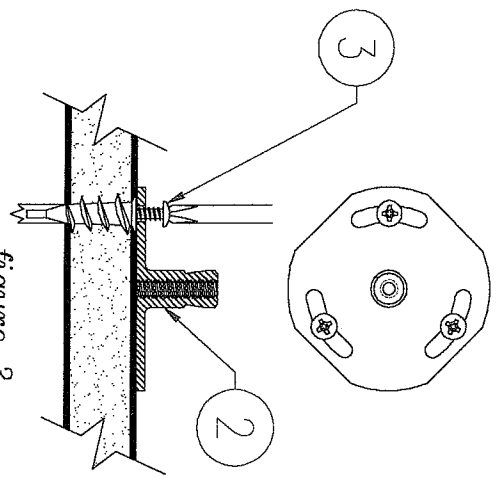


figure 3

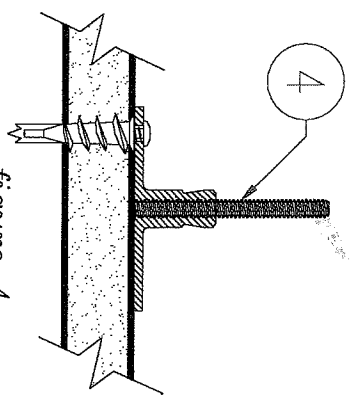


figure 4

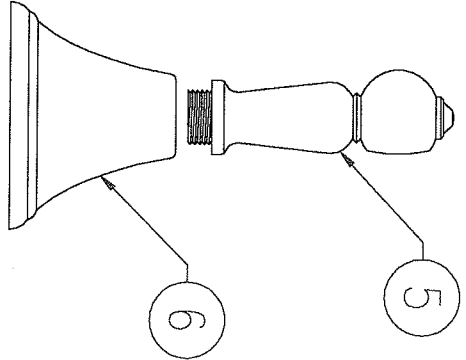


figure 5

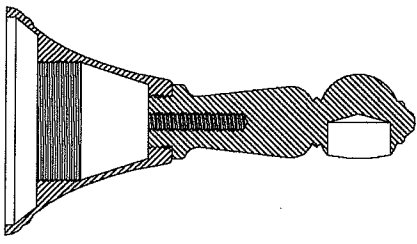


figure 6

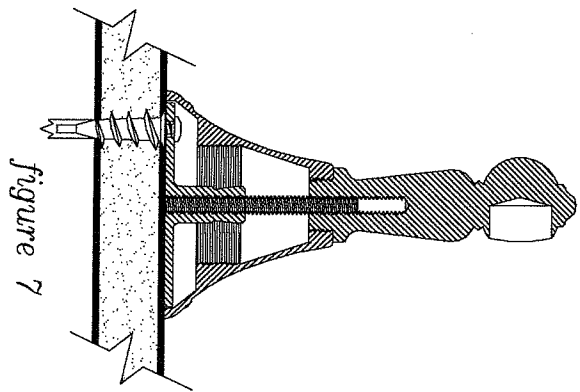


figure 7

ST. THOMAS CREATIONS

DWG NO.

ST02i-012

DRAWN DATE:

02/11/97

SCALE:

1 : 2

APPD BY:

APPD DATE:

SECURING ACCESSORY POST TO DRY WALL

