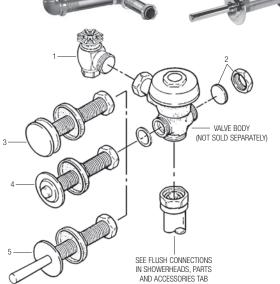


Concealed Flushometer (Royal®)



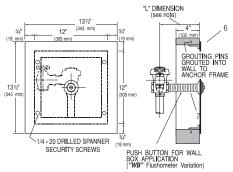


TAILPIECES, CONTROL STOPS, FLUSH CONNECTIONS AND HANDLE ASSEMBLIES

For additional information on tailpieces, control stops, flush connections, and handle assemblies see Showerheads, Parts and Accessories Tab.

PARTS LIST

Item					
No.	Code No.	Part No.	Description		
1. 0388010 H-730-A 1" RB Wheel Handle Bak-Chek® Co		1" RB Wheel Handle Bak-Chek® Control Stop			
	0388011	H-730-A	3/4" RB Wheel Handle Bak-Chek® Control Stop		
2.	3301093	A-1013-A	Concealed Valve Handle Cap Kit		
FOR SPECIFYING PROPER LENGTHS FOR ITEMS 3, 4 AND 5, SEE CHART BELO					
3.	_	C-43-A	3" (76 mm) Push Button Actuator Assembly		
4.	_	C-9-A	Blind Nut Push Button Actuator Assembly		
5.	_	B-12-A	Lever Actuator Assembly		
6.	_	C-43-AWB	Wall Box Push Button Assembly		
7.	_	C-9-A WB	Wall Button Push Button Actuator Assembly		
8.	_	B-12-AWB	Wall Box Lever Actuator Assembly (Not Shown)		





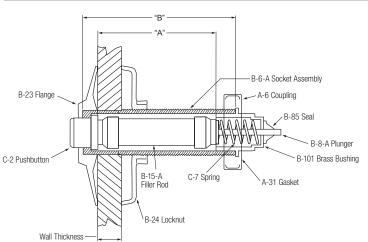




Specify the "L" dimension for the proper length of the push button assembly

"L" Dimension PUSH BUTTON ID CHART (All dimensions in inches)

Wall Thickness	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
"L" Dimension	3 3/4	4 3/4	5 3/4	6 3/4	7 3/4	8 3/4	9 3/4	10 3/4	11 3/4	12 3/4	13 3/4	14 3/4	15 3/4	16 3/4	17 3/4
"A" (B-15-A) Filler Rod	1 5/8	2 5/8	3 5/8	4 5/8	5 5/8	6 5/8	7 5/8	8 5/8	9 5/8	10 5/8	11 5/8	12 5/8	13 5/8	14 5/8	15 5/8
"B" (B-6-A) Socket Assembly	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2	14 1/2	15 1/2	16 1/2



- Notes: 1. "L" Dimension = Wall thickness (to nearest whole inch) + 2 3/4"
 - 2. 1 1/2" Diameter Hole Opening Required Through Wall



Concealed Flushometer (Royal®)

TROUBLESHOOTING GUIDE

ATTENTION INSTALLERS: With the exception of the control stop inlet, **DO NOT USE** pipe sealant or plumbing grease on any valve component or coupling! To protect the chrome or special finish of Sloan flushometers, **DO NOT USE** toothed tools to install or service these valves. Use our A-50 Super Wrench or other smooth-jawed wrench to secure couplings. Regulations for low consumption fixtures (1.6 gpf/6.0 Lpf closets and 1.0 gpf/3.8 Lpf urinals) prohibit use of higher flush volumes.

1. Flushometer DOES NOT function.

- A. Control stop or main valve is closed. Open control stop or main valve.
- B. Handle or push button assembly is worn. Install Sloan handle repair kit (C-70-A) or replace handle or push button.
- C. Relief valve is worn. Replace inside parts kit.

2. Insufficient volume of water to adequately siphon fixture.

- A. Control stop not open enough. Adjust control stop for desired delivery of water.
- B. Urinal flushometer parts inside a closet flushometer. Replace inside urinal parts with proper closet flushometer Parts.
- C. Low consumption flushometer installed on a non-low consumption fixture. Replace A-41-A inside parts kit with A-38-A water saver kit.
- D. Water saver kit installed in old, non-water saver bowl. Position refill head A-170 so that SIDE 1 is in the UP position.
- E. Inadequate volume or pressure at supply.
 - If no gauges are available to properly measure supply pressure or volume of water at the flushometer, then remove the relief valve from the inside parts kit, reassemble the flushometer and open the control stop. If the fixture siphons, more water volume is required. If a 3.5 gpf inside parts kit is installed in the flushometer, then first flip the refill head (under the diaphragm) to obtain a 4.5 gpf volume. If this volume is still inadequate, remove the flow ring from the guide to obtain a 6.5 gpf kit. If additional flow is still required, try a low pressure guide kit A-175-A (#0301104).

IMPORTANT: Laws and regulation prohibit the use of higher flushing volumes than listed on fixture or flushometer.

 If fixture DOES NOT siphon or if a low consumption fixture is installed, or if the above steps do not prove satisfactory, steps must be taken to increase the pressure and/or supply.

3. Flushometer closes off immediately.

- A. Ruptured or damaged diaphragm. Install inside parts kit to correct problem and update flushometer.
- B. Enlarged bypass orifice from corrosion or damage. Install inside parts kit to correct problem and update flushometer.

4. Length of flush is too short (short flushing).

- A. Diaphragm assembly and guide assembly are not hand-tight. Screw the two assemblies hand-tight.
- B. Enlarged bypass orifice from corrosion or damage. Install NEW inside parts kit to correct problem and update flushometer.
- C. A-19-AU (Black) urinal relief valve in closet flushometer. Replace relief valve with A-19-AC (White) closet relief valve.
- D. A-41-A low consumption kit installed in non-low consumption fixture. Replace with proper Inside Parts Kit.
- E. Handle assembly is worn. Install handle repair kit (C-70-A) or replace the handle.

5. Length of flush is too long (Long Flushing) or fails to close off.

- A. Relief valve is not seating properly or bypass orifice is clogged because of foreign material, or bypass orifice is closed by an invisible gelatinous film from "over-treated" water. Disassemble the working parts and wash thoroughly. NOTE: SIZE OF ORIFICE IN THE BYPASS IS EXTREMELY IMPORTANT FOR PROPER METERING OF WATER INTO THE UPPER CHAMBER OF THE FLUSHOMETER. DO NOT ENLARGE OR DAMAGE THIS ORIFICE. REPLACE INSIDE KIT IF CLEANING DOES NOT CORRECT PROBLEM.
- B. Line pressure has dropped and is not sufficient to force relief valve to seat. Shut off all control stops until pressure has been restored, then open them again.
- C. A-19-AC (White) closet relief valve has been used in a 1.0 or 1.5 gpf urinal. Replace with A-19-AU (Black) relief valve.
- D. Inside cover is cracked or damaged. Replace the inside cover (A-71).

6. Chattering noise in flushometer.

- A. The A-156-A segment diaphragm has been installed upside-down. Replace the segment diaphragm to the proper position as instructed by markings on the diaphragm.
- B. The inside cover has become distorted from wear, freezing or abuse. Replace inside cover.

7. Leaking at handle or push button assembly.

- A. The B-39 Seal is worn or deteriorated. Install new B-39 seal. NOTE: The B-39 Seal will easily slide onto the B-40 Bushing if it is wet.
- B. Handle gasket has been omitted. Install A-31 handle gasket or Sloan handle repair kit (C-70-A).
- C. Valve handle bushing is worn. Install Sloan handle repair kit (C-70-A).

CARE AND CLEANING INSTRUCTIONS

DO NOT USE abrasive or chemical cleaners (including chlorine bleach) to clean flushometers that may dull the luster and attack the chrome or special decorative finishes. Use **ONLY** mild soap and water, then wipe dry with a clean towel or cloth.

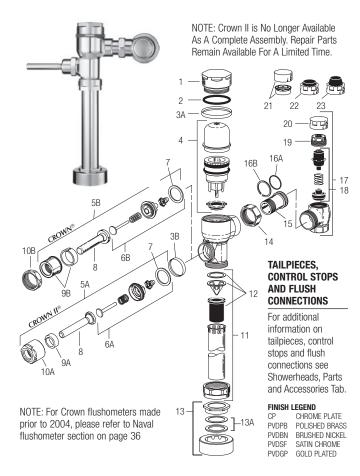
While cleaning the bathroom tile, protect the flushometer from any splattering of cleaner. Acids and cleaning fluids will discolor or remove chrome plating.

When assistance is required, please contact Sloan Technical Support at: 1-888-SLOAN-14 (1-888-756-2614).



Crown® Flushometer

Crown® II (Obsolete)



PARTS LIST

	O LIOI		
Item No.	Code No.	Part No.	Description
1.	0332006	CR-116	CP Cover
2.	0332030	CR-133	Cover O-ring
3.	0332045	CR-132-A	CP Handle and Cover Trim Ring Kit (Includes items 3A & 3B) (CROWN® II ONLY)
	0332046	CR-132-A	PVDPB Handle and Cover Trim Ring Kit (Includes items 3A & 3B) (CROWN® II ONLY)
	0332048	CR-132-A	PVDBN Handle and Cover Trim Ring Kit (Includes items 3A & 3B) (CROWN® II ONLY)
	0332049	CR-132-A	PVDSF Handle and Cover Trim Ring Kit (Includes items 3A & 3B) (CROWN® II ONLY)
3A.	0332035	CR-134	Cover Trim Ring (CROWN® ONLY)
	0332009	CR-120	PVDPB Cover Trim Ring (CROWN® II ONLY)
	0332032	CR-120	PVDGP Cover Trim Ring (CROWN® II ONLY)
	0332033	CR-120	PVDBN Cover Trim Ring (CROWN® II ONLY)
	0332034	CR-120	PVDSF Cover Trim Ring (CROWN® II ONLY)
3B.	0332005	CR-113	PVDPB Handle Trim Ring (CROWN® II ONLY)
	0332028	CR-113	PVDBN Handle Trim Ring (CROWN® II ONLY)
	0332029	CR-113	PVDSF Handle Trim Ring (CROWN® II ONLY)
4.	3332003	CR-1004-A	Piston Kit – 1.6 gpf (6.0 Lpf) Water Closet
	3332013	CR-1011-A	Piston Kit – 1.28 gpf (4.8 Lpf) Water Closet
	3332004	CR-1005-A	Piston Kit – 1.0 gpf (3.8 Lpf Urinal
	3332005	CR-1006-A	Piston Kit – 0.5 gpf (1.9 Lpf) Urinal
	3332017	CR-1015-A	Piston Kit – 0.25 gpf (1.0 Lpf) Urinal
	3332016	CR-1014-A	Piston Kit – 0.125 gpf (0.5 Lpf) Urinal

ALL PISTON KITS INCLUDE MAIN SEAT (see item 4 table to right) AND CR-124-A INSIDE COVER ASSEMBLY AS SHOWN IN ITEM 4. PISTON KIT COMPONENTS TABLE TO THE

Item						
No.	Code No.	Part No.	Description			
5A.	0302353	B-30-A	ADA-Compliant Handle Assembly CP			
5B.	0302390	B-73-A	ADA-Compliant Handle Assembly CP			
6A.	3332006	CR-1007	Handle Repair Kit			
6B.	3302306	B-51-A	Handle Repair Kit			
7.	5301139	A-31	Handle Gasket – 48/pkg			
8.	0302389	B-74-A	Handle Grip Sub-Assembly ADA			
9A.	0302309	B-56	Sleeve			
9B.	0302109	B-7-A	CP Socket Assembly			
10A.	0302354	B-53	Handle Socket			
10B.	0301082	A-6	CP Handle Coupling			
11.	3393004	V-600-AA	3/4" x 9" (19 x 229 mm) Vacuum Breaker - 6/pkg			
	3393006	V-600-AA	1-1/4" x 9" (32 x 229 mm) Vacuum Breaker - 6/pkg			
	3393007	V-600-AA	1-1/2" x 9" (38 x 229 mm) Vacuum Breaker - 6/pkg			
12.	3323182	V-651-A	High Back Pressure Vacuum Breaker Repair Kit			
13.	3332000	CR-1008-A	3/4" (19 mm) Spud Coupling Assembly			
	3332001	CR-1009-A	1-1/4" (32 mm) Spud Coupling Assembly			
	3332002	CR-1010-A	1-1/2" (38 mm) Spud Coupling Assembly			
13A.	SEE SLIP	JOINT GASKI	ETS AND RINGS TABLE ON BOTTOM, PAGE 25			
14.	0308676	H-550	Stop Coupling			
15.	0308801	H-551-A	Adjustable Tailpiece (2-1/16" (52 mm) long)			
16A.	5308696	H-553	0-ring — 24/pkg			
16B.	5308381	H-552	Locking Ring – 12/pkg			
17.	0388000	H-700-A	1" Screwdriver Bak-Chek® Stop CP			
	0388001	H-700-A	3/4" Screwdriver Bak-Chek® Stop CP			
18.	3308853	H-541-ASD	Control Stop Repair Kit [†]			
	3308856	H-543-ASD	Control Stop Repair Kit [‡] for 3/4" Stops H-600, H-640			
19.	0308612	H-622	CP Bonnet †			
	0308843	H-577	CP Bonnet ‡ – OBSOLETE			
20.	3308840	H-573-A	Locking Vandal Resistant Control Stop Cap includes H-573 Stop Cap CP and H-648 Friction Ring [†]			
	0308848	H-582	Locking Vandal Resistant Control Stop Cap CP [‡]			
21.	3308651	H-651	Vandal Resistant Control Stop Cap Assembly †			
22.	3308866	H-574	Control Stop Cap w/Bumper (-YO Variation) †			
23.	3308867	H-576	Control Stop Cap w/Extended Bumper (-YG Variation) [†]			
24	3388017	H-1017	Flow Control (HEU Only) (Not Shown)			
	0305190	EL-190-A	Handle Adapter (manual only) for Optima® version			

‡ For use w/H-600-A 3/4" Screwdriver Bak-Chek® Control Stops

ITEM 4. PISTON KIT COMPONENTS

I I LIVI	LIN 4.1 ISTON KIT OOMI ONENTS						
Item	Code No.	Part No.	Description				
Α.	***	CR-124-A	Inside Cover Sub-Assembly				
В.	***	***	Piston Cover				
C.	5332095	CR-68-A	Molded Cup – 12/pkg				
D.	5328019	SH-406	Spring – 12/pkg				
E.	***	***	Relief Valve				
F.	0307116	G-95	Relief Valve Seat				
G.	***	***	Piston Body				
Н.	***	CR-125-A	Main Seat – 6/pkg (1.0 gpf)				
	***	CR-170-A	Main Seat – 6/pkg				
		(0.12	25 gpf, 0.25 gpf and 0.5 gpf)				
l.	0307210	G-85	Filter O-ring	_/			
J.	0332124	CR-169	O-ring (for use with CR-125-A main seat ONLY)*				
	5308958	H-589	O-ring* 6/pkg				



^{*} Components are NOT interchangeable
**** Indicates component is NOT available separately



Crown® Flushometer

Crown® II (Obsolete)

TROUBLESHOOTING GUIDE

IMPORTANT: The CROWN® flushometer is engineered for quiet operation. Excessive water flow creates noise, while too little water flow may not satisfy the needs of the fixture. Proper adjustment is made when plumbing fixture is cleansed after each flush without splashing water out from the lip AND a quiet flushing cycle is achieved.

Never open control stop to where the flow from the valve exceeds the flow capability of the fixture. In the event of a valve failure, the fixture must be able to accommodate a continuous flow from the valve.

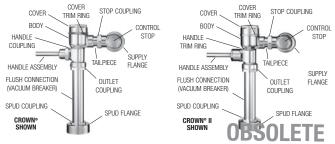
ATTENTION INSTALLERS: With the exception of the control stop inlet, **DO NOT USE** pipe sealant or plumbing grease on any valve component or coupling! To protect the chrome or special finish of Sloan flushometers, **DO NOT USE** toothed tools to install or service these valves. Use our A-50 Super Wrench or other smooth-jawed wrench to secure couplings. Regulations for low consumption fixtures (1.6 gpf/6.0 Lpf closets and 1.0 gpf/3.8 Lpf urinals) prohibit use of higher flush volumes.

1. Valve DOES NOT function.

- A. Control stop or main valve is closed. Open control stop or main valve.
- B. Handle assembly is worn. Install Sloan handle repair kit, or replace handle.
- C. Relief valve is worn and sticking in UP position. Replace piston.

2. Insufficient volume of water to adequately siphon fixture.

- A. Control stop not open enough. Adjust control stop for desired delivery of water.
- B. Urinal piston parts inside a closet valve. Replace piston parts with proper closet piston.
- C. Low consumption valve installed on a non-low consumption fixture. Replace with proper flushometer. Crown® flushometers are not available with flush volume higher than 1.6 gpf/6.0 Lpf.
- D. Inadequate volume or pressure at supply. Increase water pressure or supply (flow) to valve. Consult factory for assistance.



Length of flush too short (short flushing) or valve closes off immediately.

- A. Piston assembly is not hand-tight. Screw the assembly hand-tight.
- B. Enlarged bypass orifice from corrosion or damage. Install NEW inside parts kit to correct problem and update flushometer.
- C. Urinal piston in closet flushometer. Replace piston with proper closet piston.
- D. Low consumption piston installed in non-low consumption fixture. Replace with proper flushometer. Crown® flushometers are not available with flush volume higher than 1.6 gpf (6.0 Lpf).
- E. Handle assembly worn. Install Sloan handle repair kit.

4. Length of flush too long (long flushing) or fails to close off.

- A. Piston is not seating properly or bypass orifice is clogged because of foreign material, or bypass orifice is clogged by an invisible gelatinous film from "over-treated" water. Disassemble the working parts and wash thoroughly. NOTE: Size of the orifice in the bypass is of utmost importance for the proper metering of water into the upper chamber of the valve. DO NOT enlarge or damage this orifice. Replace piston if cleaning does not correct problem.
- B. Line pressure has dropped and is not sufficient to force relief valve to seat. Shut off all control stops until pressure has been restored, then open them again.
- C. Main seat is fouled with debris or is worn. Clean or replace main seat.

5. Leaking at handle assembly.

- A. The B-85 seal may have deteriorated. Install new B-85 seal.

 NOTE: The B-85 seal will easily slide onto the bushing if it is wet.
- B. Handle gasket has been omitted. Install A-31 handle gasket or Sloan handle repair kit.
- C. Valve handle bushing is worn. Install Sloan handle repair kit.

CARE AND CLEANING

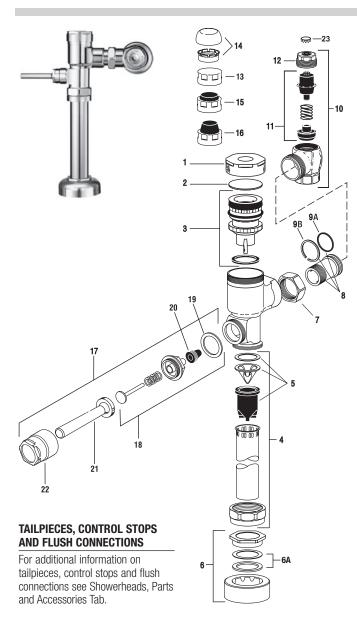
DO NOT USE abrasive or chemical cleaners (including chlorine bleach) to clean flushometers that may dull the luster and attack the chrome or special decorative finishes. Use **ONLY** mild soap and water, then wipe dry with clean cloth or towel.

While cleaning the bathroom tile, the flushometer should be protected from any splattering of cleaner. Acids and cleaning fluids will discolor or remove chrome plating.

Piston	Water	Closet		U	Irinal	
Identification Chart	CR-1004-A	CR-1011-A	CR-1005-A	CR-1006-A	CR-1015-A	CR-1014-A
Piston Color Cap Color	3332003	3332013	3332004	3332004	3332017	3332016
Color sup solor	1.6 gpf (6.0 Lpf)	1.28 gpf (4.8 Lpf)	1.0 gpf (3.8 Lpf)	0.5 gpf (1.9 Lpf)	0.25 gpf (1.0 Lpf)	0.125 gpf (0.5 Lpf)
Stem Grooves Barrel (Large Ribs or Small Ribs)						
Cap Color	Green	Deep Purple	Yellow	Red	Burgundy	Pink
Piston Color	Green	Green	Clear	Burgundy	Burgundy	Burgundy
Barrel	Large Ribs	Large Ribs	Small Ribs	-	-	-
Seat Color	Green	Green	Black	Burgundy	Burgundy	Burgundy
Grooves	2	0	1	2	1	3

When assistance is required, please contact Sloan Technical Support at: 1-888-SLOAN-14 (1-888-756-2614).





ITEM 6A. SLIP JOINT GASKETS AND RINGS

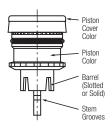
Size	Code No.	Part No.	Description
1-1/2"	5306058	F-3	Red Friction Ring
	5322001	VBF-5	Black Slip Joint Gasket
	0319086/5319086	S-30	Flexible Seat
	0319079	S-21	Rigid Seat (rubber over brass)
1-1/2" x 1-1/4"	0396062	F-105	Slip Joint Gasket – Rigid
1-1/4"	5306057	F-3	Red Friction Ring
	5322176	VBF-5	Black Slip Joint Gasket
	0307052/5307052	G-21	Rigid Seat (rubber over brass)
1"	5306056	F-3	Red Friction Ring
	5306115	F-5	Black Slip Joint Gasket
3/4"	5306055	F-3	Red Friction Ring
	5306113	F-5	Black Slip Joint Gasket

PARTS LIST

Item			
No.	Code No.	Part No.	Description
1.	0307142	G-105	CP Cover
2.	0307139	G-106	Slip Disc
3.	3307135	G-1022-A	Piston Kit – 1.28 gpf/4.8 Lpf Water Closet
	0307193	G-1007-A	Piston Kit – 3.5 gpf/13.2 Lpf Water Closet
	0307195	G-1016-A	Piston Kit – 1.6 gpf/6 Lpf Water Closet
	0307192	G-1009-A	Piston Kit – 1.5 gpf/5.7 Lpf Urinal
	0307185	G-1017-A	Piston Kit – 1.0 gpf/3.8 Lpf Urinal
	3307133	G-1018-A	Piston Kit – 0.5 gpf/1.9 Lpf Urinal
	3307134	G-1019-A	Piston Kit – 2.4 gpf/9.0 Lpf Water Closet
	3307136	G-1023-A	Piston Kit – 0.125 gpf/0.5 Lpf Urinal
	3307137	G-1024-A	Piston Kit – 0.25 gpf/1.0 Lpf Urinal
PIST	ON KITS FOR	R OLD STYLE	ADJUSTABLE GEM FLUSHOMETERS
	0307043	G-1003-A	Piston Kit – Water Closet
	0307044	G-1002-A	Piston Kit – Urinal
ALL	PISTON KITS	INCLUDE G	-21 MAIN SEAT (See next page)
4.	5323005	V-500-AA	3/4" x 9" Vacuum Breaker – 6 per package
	5323006	V-500-AA	1-1/4" x 9" Vacuum Breaker – 6 per package
	5323007	V-500-AA	1-1/2" x 9" Vacuum Breaker – 6 per package
5.	3323192	V-551-A	Vacuum Breaker Repair Kit
6.	3332002		1-1/2" (38 mm) Spud Coupling
	3332001	CR-1009-A	1-1/4" (32 mm) Spud Coupling
	3332000		3/4" (19 mm) Spud Coupling
6A.	SEE SLIP .		ETS AND RINGS TABLE BELOW LEFT
7.	0308676	H-550	Stop Coupling
8.	0308801	H-551-A	Adjustable Tailpiece 2-1/16" (Standard Length)
9A.	5308696	H-553	O-ring – 24 per package
9B.	5308381	H-552	Locking ring – 12 per package
10.	3308876	H-790-A	1" Screwdriver Bak-Chek® Stop CP – complete
	3308875	H-790-A	3/4" Screwdriver Bak-Chek® Stop CP – complete
11.	3308853	H-541-A	Control Stop Repair Kit*
	3308856	H-543-A	Control Stop Repair Kit**
12.	0308612	H-622	CP Bonnet*
	0308843	H-577	CP Bonnet** – OBSOLETE
13.	3308840	H-573-A	Control Stop Cap**
14.	3388017	H-1017	Flow Control (HEU Only) (Not Shown)
15.	3308866	H-574	Control Stop w/Bumper (-YO Variation)*
16.	3308867	H-576	Control Stop w/Extended Bumper (-YG Variation)*
	DLE REPAIR		The state of the s
17.	0307100	G-143	Handle Assembly
18.	5307074	G-50-A	Handle Repair Kit – 6 per package
19.	5307065	G-35	Handle Gasket – 48 per package
20.	5302297	B-39	Handle Seal – 12 per package
21.	0307024	G-145	Handle Grip
22.	0307024	G-144	Handle Socket
<u>22.</u> 23.	3308840	H-528	Control Stop Plug CP* Standard on XL
۷۵.	JJU004U	11-020	OUTILION STOP FING OF STATINGTO OF AL

*For use with 1" and 3/4" H-700-A and 1" H-600-A Bak-Chek® screwdriver control stop
**For use with 3/4" H-600-A Bak-Chek® screwdriver control stop

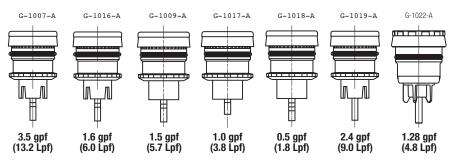




Gem•2 Pistons can be identified by the color, shape and marking of the above components.

ITEM 3. PISTON KITS

Code No.	Part No.	Description	Cover Color	Piston Color	Barrel	Grooves
0307193	G-1007-A	3.5 gpf (13.2 Lpf) - Water Closet	White	Gray	Slotted	2
0307195	G-1016-A	1.6 gpf (6.0 Lpf) – Water Closet	Green	Black	Slotted	2*
0307192	G-1009-A	1.5 gpf (5.7 Lpf) – Urinal	Black	Black	Solid	2
0307185	G-1017-A	1.0 gpf (3.8 Lpf) – Urinal	Yellow	Black	Solid	1
3307133	G-1018-A	0.5 gpf (1.8 Lpf) – Urinal	Red	Black	Solid	3
3307134	G-1019-A	2.4 gpf (9.0 Lpf) - Water Closet	Blue	Gray	Slotted	0
3307135	G-1022-A	1.28 gpf (4.8 Lpf) - Water Closet	Deep Purple	Black	Slotted	0



*Prior to February 2006-1 Groove

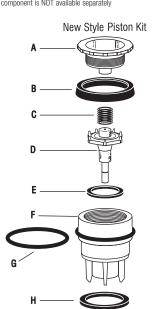
ITEM 3. PISTON COMPONENTS

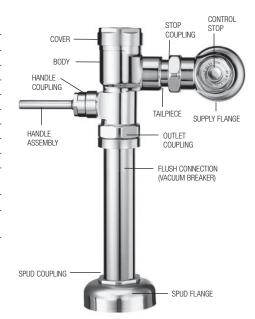
Item	Code No.	Part No.	Description
Α.	***	***	Piston Cover
B.	5307106	G-78	Molded Cup – 12 per package
C.	0307130	G-102	Spring
D.	***	***	Relief Valve
E.	0307116	G-95	Relief Valve Seat
F.	***	***	Piston Body
G.	0307210	G-85	Filter O-ring
Н.	5307052	G-21	Main Seat – 6 per package

REPAIR KIT

Code No.	Part No.	Description
3307128	G-1011-A	Repair Kit includes Items: 2, B, C, E, G & H

For old style adjustable GEM flushometers use kit: G-1005-A
*** Indicates component is NOT available separately

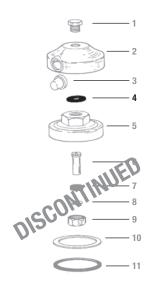






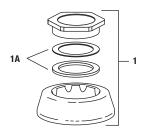
REPAIR PARTS FOR OLD STYLE GEM FLUSHOMETERS (PRE-1985) Adjustable Cover

Item No.	Code No.	Part No.	Description
1.	—	G-24	CP Cover Screw — OBSOLETE
2.	_	G-23	CP Cover — OBSOLETE
	_	G-26	CP Cover for Bumper — OBSOLETE
3.	_	G-27	Bumper (12 per package) – OBSOLETE
4.	0307058	G-25	Cover Gasket (12 per package)
5.	_	G-4	RB Inside Cover — OBSOLETE
6.	_	G-6	RB Regular Screw – OBSOLETE
7.	_	S-26	Packing
8.	_	S-24	Packing Disc
9.	_	G-10	RB Packing Nut – OBSOLETE
10.	_	G-65	Gasket – OBSOLETE
11.	_	G-5	Gasket



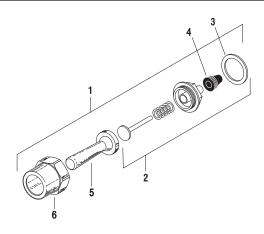
SPUD COUPLING FOR OLD STYLE GEM FLUSHOMETERS (PRE-MAY, 2003)

<u>, </u>	,	-,	
Item			
No.	Code No.	Part No.	Description
1.	0306125	F-5-A	3/4" Spud Coupling
	0305140	F-5-A	1-1/4" Spud Coupling
	0306146	F-5-A	1-1/2" Spud Coupling
1A.	SEE SLIP .	JOINT GASK	KETS AND RINGS TABLE ON BOTTOM, PAGE 30



HANDLE ASSEMBLY FOR OLD STYLE GEM FLUSHOMETERS (PRE-MAY, 2003)

Item No.	Code No.	Part No.	Description
1.	0307100	G-143-A	Handle Assembly – 6 per package
2.	5307074	G-50-A	Handle Repair Kit – 6 per package
3.	5307065	G-35	Handle Gasket – 48 per package
4.	5302297	B-39	Handle Seal – (12 per package)
5.	_	G-36	Handle Grip
6.	_	G-28	Handle Socket



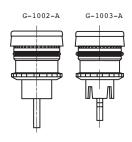
REPAIR PARTS FOR OLD STYLE PISTON

Item			
No.	Code No.	Part No.	Description
12.	0307105	G-77	Piston Cover
13.	0307106	G-78	Molded Cup
14.	0307113	G-84	Spring
15.	0307110	B-81-A	Relief Valve
16.	0307112	G-83	Relief Valve Seat
17.	_	G-75	Closet Piston Body
	_	G-76	Urinal Piston Body
18.	0307052	G-21	Main Seat



PISTON KITS FOR OLD STYLE ADJUSTABLE GEM VALVES

Code No.	Part No.	Description	Piston Color	Barrel	Grooves
0307044	G-1002-A	Urinal	Black	Solid	0
0307043	G-1003-A	Water Closet	Black	Slotted	0





TROUBLESHOOTING GUIDE

IMPORTANT: The GEM flushometer is engineered for quiet operation. Excessive water flow creates noise, while too little water flow may not satisfy the needs of the fixture. Proper adjustment is made when plumbing fixture is cleansed after each flush without splashing water out from the lip AND a quiet flushing cycle is achieved.

Never open Control Stop to where the flow from the valve exceeds the flow capability of the fixture. In the event of a valve failure, the fixture must be able to accommodate a continuous flow from the valve.

ATTENTION INSTALLERS: With the exception of the control stop inlet, **DO NOT USE** pipe sealant or plumbing grease on any valve component or coupling! To protect the chrome or special finish of Sloan flushometers, **DO NOT USE** toothed tools to install or service these valves. Use our A-50 Super Wrench or other smooth-jawed wrench to secure couplings. Regulations for low consumption fixtures (1.6 gpf/6.0 Lpf closets and 1.0 gpf/3.8 Lpf urinals) prohibit use of higher flush volumes.

1. Valve DOES NOT function.

- A. Control stop or main valve is closed. Open control stop or main valve.
- B. Handle assembly is worn. Install handle repair kit G-50-A or replace handle.
- C. Relief valve is worn and sticking in UP position. Replace piston.

2. Insufficient volume of water to adequately siphon fixture.

- A. Control stop not open enough. Adjust control stop for desired delivery of water.
- B. Urinal piston parts inside a closet valve. Replace piston parts with proper closet piston.
- C. Low consumption valve installed on a non-low consumption fixture. Replace with proper piston kit.
- D. Inadequate volume or pressure at supply. Increase water pressure or supply (flow) to valve. Consult factory for assistance.

Length of flush too short (short flushing) or valve closes off immediately.

- A. Piston assembly is not hand-tight. Screw the assembly hand-tight.
- B. Enlarged bypass orifice from corrosion or damage. Install NEW inside parts kit to correct problem and update flushometer.
- C. Urinal piston in closet flushometer. Replace piston with proper closet piston.
- D. Low consumption piston installed in non-low consumption fixture. Replace with proper piston kit.
- E. Handle assembly worn. Install handle repair kit G-50-A.

4. Length of flush too long (long flushing) or fails to close off.

- A. Piston is not seating properly or bypass orifice is clogged because of foreign material, or bypass orifice is clogged by an invisible gelatinous film from "over-treated" water. Disassemble the working parts and wash thoroughly. **NOTE:** Size of the orifice in the bypass is of utmost importance for the proper metering of water into the upper chamber of the valve. **DO NOT** enlarge or damage this orifice. Replace piston if cleaning does not correct problem.
- B. Line pressure has dropped and is not sufficient to force relief valve to seat. Shut off all control stops until pressure has been restored, then open them again.
- C. 3.5 gpf closet piston has been used in a 1.0 or 1.5 gpf urinal or on a 1.6 gpf toilet. Replace with proper piston.
- D. G-21 main seat is fouled with debris or is worn. Clean or replace main seat.

5. Leaking at handle assembly.

- A. The B-39 seal may have deteriorated. Install new B-39 seal. NOTE: The seal will easily slide right onto the bushing if it is wet.
- B. Handle gasket has been omitted. Install G-35 handle gasket or Sloan handle repair kit G-50-A.
- C. Valve handle bushing is worn. Install Sloan handle repair kit G-50-A.

CARE AND CLEANING

DO NOT USE abrasive or chemical cleaners to clean flushometers as they may dull the luster and attack the chrome or special decorative finishes. Use **ONLY** mild soap and water, then wipe dry with clean cloth or towel.

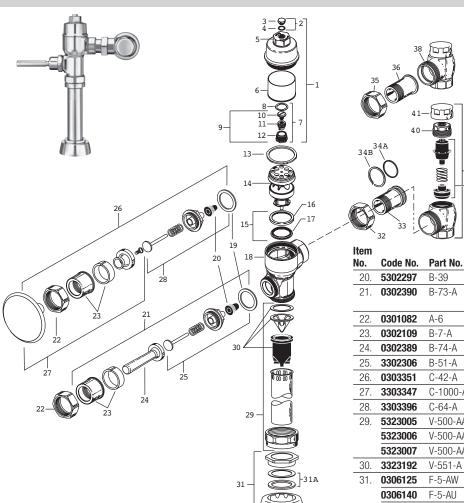
While cleaning the bathroom tile, the flushometer should be protected from any splattering of cleaner. Acids and cleaning fluids can discolor or remove chrome plating.

When assistance is required, please contact Sloan Technical Support at: 1-888-SLOAN-14 (1-888-756-2614).



Naval® Flushometer

Also for use with Crown® (Old style), Star and Marine



PARTS LIST

Item			
No.	Code No.	Part No.	Description
1.	0314229	CN-86-A	Cover Assembly CP
	0314310	CN-89-A	Cover Assembly CP One Pint*
			1.6 gpf/6.0 Lpf, 1.0 gpf/3.8 Lpf
2.	5314010	CN-1007-A	Cap Screw Repair Kit – 6 per package
3.	0314208	CN-36	Cover Screw CP
4.	0314209	CN-30	Cover Screw Gasket
5.	0314304	CN-84	Cover
6.	0214019	CN-55	Cover Liner
7.	3314015	CN-1008-A	Regulating Screw Repair Kit**
8.	0314303	CN-81	Volume Adjustment Gasket
9.	0314315	CN-88-A	Low Consumption Volume Adjustment Sleeve
			Sub-Assembly 1.6 gpf/6.0 Lpf, 1.0 gpf/3.8 Lpf
10.	0314302	CN-80	Volume Adjustment Screw
11.	0314300	CN-78	Volume Adjustment Sleeve
	0314307	CN-87	Volume Adjustment Sleeve One Pint***
12.	0314301	CN-79	Volume Adjustment Housing
13.	5314243	CN-76	Cover Gasket – 12 per package
14.	0314016	CN-1002-A	Piston - Closet
	0314017	CN-1003-A	Piston – Urinal
15.	0314234	CN-21-A	Main Seat Assembly
16.	0314224	CN-111-A	Main Seat
17.	0314220	CN-113	Main Seat Ring
18.	0314020	CN-3	Body CP (Not sold separately)
19.	5301139	A-31	Handle Gasket – 48 per package

TAILPIECES, CONTROL STOPS AND FLUSH CONNECTIONS

For additional information on tailpieces, control stops and flush connections see Showerheads, Parts and Accessories Tab.

			2000
20.	5302297	B-39	Handle Seal – 12 per package
21.	0302390	B-73-A	Triple Seal Handicap Handle Assembly (ADA
			Compliant)
22.	0301082	A-6	Handle Coupling CP
23.	0302109	B-7-A	Socket Assembly CP
24.	0302389	B-74-A	Handicap Handle Grip CP (ADA Compliant)
25.	3302306	B-51-A	Triple Seal Handle Repair Kit – 1 per package
26.	0303351	C-42-A	3" Push Button Assembly CP
27.	3303347	C-1000-A	3" Push Button Replacement Kit
28.	3303396	C-64-A	3" Push Button Repair Kit
29.	5323005	V-500-AA	3/4" x 9" Vacuum Breaker
	5323006	V-500-AA	1-1/4" x 9" Vacuum Breaker
	5323007	V-500-AA	1-1/2" x 9" Vacuum Breaker
30.	3323192	V-551-A	Vacuum Breaker Repair Kit
31.	0306125	F-5-AW	3/4" Spud Coupling CP
	0306140	F-5-AU	1-1/4" Spud Coupling CP
	0306146	F-5-AT	1-1/2" Spud Coupling CP
31A.	SEE SLIP	JOINT GASK	ETS AND RINGS TABLE ON BOTTOM, PAGE 30
32.	0308676	H-550	Stop Coupling CP
33.	0314289	NH-551-A	Adjustable Tailpiece 2-1/16" CP
34A.	5308696	H-553	0-ring – 24 per package
34B.	5308381	H-552	Locking ring – 12 per package
35.	0308063	H-6	Ground Joint Stop Coupling CP
36.	0314028	NH-5	Ground Joint Tailpiece 1-5/8"
37.	0388022	H-710-A	1" Adjustable Tailpiece SD Bak-Chek® Control Stop CP
	0388025	H-710-A	3/4" Adjustable Tailpiece SD Bak-Chek® Control Stop CP
38.	0388024	H-710-AG	1" Ground Joint Screwdriver Bak-Chek® Control Stop CP
	0388026	H-710-AG	3/4" Ground Joint Screwdriver Bak-Chek® Control Stop CP
39.	3308853	H-541-A	Control Stop Repair Kit †
	3308856	H-543-A	Control Stop Repair Kit ‡

Description

Bonnet CP †

Bonnet CP ‡ - OBSOLETE

Vandal Resistant Stop Cap Assembly †

Vandal Resistant Stop Cap Assembly ‡

Control Stop Cap with Extended Bumper[†]

Control Stop Cap with Bumper †

Control Stop Cap CP †

Control Stop Cap CP [‡]

40.

42.

43.

0308612

0308843

0308840

0308848

3308772

3308790

3308866

3308867

H-622

H-577

H-573

H-582

H-574

H-576

H-1010-A

H-1009-A

Use CN-89-A Cover Assembly One-Pint for reduced flush volumes 1.6 gpf/6.0 Lpf, 1.0 gpf/3.8 Lpf

^{**} CN-1008-A Regulating Screw Repair Kit contains the parts shown plus the parts for old style adjusting screw as currently shown on the repair guide (CN-24, CN-25, CN-26, CN-61)

^{***} Use CN-87 Volume Adjustment Sleeve One-Pint for reduced flush volumes

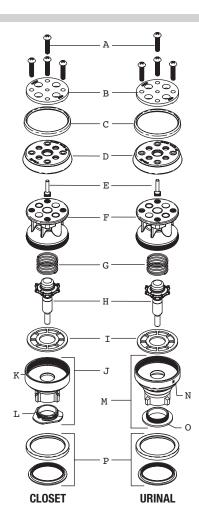
[†] For use with 1" and 3/4" H-740-A-CP (less cap) and 1" H-540-A-CP (w/H-37 cap) Bak-Chek® screwdriver control stops

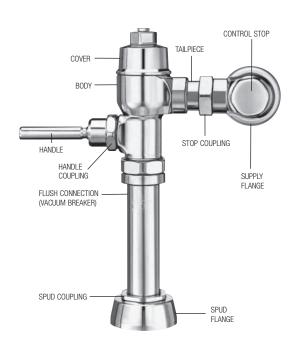
[‡] For use with 3/4" H-740-A-CP Bak-Chek® screwdriver control stops



Naval® Flushometer

Also for use with Crown® (Old style), Star and Marine





NAVAL PISTON COMPONENTS (Items 14 thru 17 on previous page) Code No. Part No. Description 0314200 CN-17 Top Plate Screws – 24 per package A. В. 0314082 CN-15 Top Plate 0314179 CN-15-A Top Plate - Shower Valve only 0314314 CN-92 Support Cup Lip Seal C. D. 5314188 CN-68-A Single Lip Cup - 12 per package E. 0314204 CN-57 Xpelor F. 0314228 CN-160 Piston Body 5328019 SH-406 Spring – 12 per package (Replaces S/CN-58 G. Safety Bar) Н. 0314078 CN-18-A Relief Valve 5314226 CN-120 Relief Valve Seat – 12 per package 0314240 CN-123-AC Guide Assembly - Closet J. K. 0314231 CN-23 Guide - Closet L. 0314237 CN-144 Restriction Ring - Closet M. 0314242 CN-123-AU Guide Assembly - Urinal N. 0314189 CN-43 RC Guide - Urinal 0. CN-45 NK Restriction Ring - Urinal Р. 0314234 CN-21-A Main Seat 0314223 CN-121-A Main Seat - Shower Valve only

NOTE: Naval® pistons can be used to replace pistons in older Crown® and Star flushometers.

REPAIR KITS

110		
Part No.	Description	
CN-1002-A	Piston with Main Seat – Closet	
CN-1003-A	Piston with Main Seat – Urinal	
CN-1004-A	Piston Rebuild Kit – Closet & Urinal – 6 per package includes: 13, A, B, C, D, E, I, K, Cap Screw Gasket & Regulating Screw Packing	
CN-1006-A	Piston Rebuild Kit – Shower – 6 per package includes: 13, A, B, C, D, E, I, K, Cap Screw Gasket & Regulating Screw Packing	
CN-1008-A	Regulating Screw Repair Kit – includes: 2, 8, 9, CN-24 Packing Disc, CN-25 Packing Gland, CN-26 Packing Regulating Screw, CN-61 Screw Regulating Stable Piston	
CN-1009-A	Piston with Main Seat – Shower	
CN-1010-A		
S-14-AA	Double Cup Repair Kit (Old style Crown, Star and Marine)	
S-14-A	Double Cup Lip Seal only (Old style Crown, Star and Marine)	
	Part No. CN-1002-A CN-1003-A CN-1004-A CN-1006-A CN-1008-A CN-1009-A CN-1010-A	

ITEM 31A. SLIP JOINT GASKETS AND RINGS

Size	Code No.	Part No.	Description
1-1/2"	5306058	F-3	Red Friction Ring
	5322001	VBF-5	Black Slip Joint Gasket
	0319086/5319086	S-30	Flexible Seat
	0319079	S-21	Rigid Seat (rubber over brass)
1-1/2" x 1-1/4"	0396062	F-105	Slip Joint Gasket – Rigid
1-1/4"	5306057	F-3	Red Friction Ring
	5322176	VBF-5	Black Slip Joint Gasket
	0307052/5307052	G-21	Rigid Seat (rubber over brass)
1"	5306056	F-3	Red Friction Ring
	5306115	F-5	Black Slip Joint Gasket
3/4"	5306055	F-3	Red Friction Ring
	5306113	F-5	Black Slip Joint Gasket



Naval® Flushometer

Also for use with Crown® (Old style), Star and Marine

TROUBLESHOOTING GUIDE

IMPORTANT: The NAVAL® flushometer is engineered for quiet operation. Excessive water flow creates noise, while too little water flow may not satisfy the needs of the fixture. Proper adjustment is made when plumbing fixture is cleansed after each flush without splashing water out from the lip AND a quiet flushing cycle is achieved.

Never open Control Stop to where the flow from the valve exceeds the flow capability of the fixture. In the event of a valve failure, the fixture must be able to accommodate a continuous flow from the valve.

ATTENTION INSTALLERS: With the exception of the control stop inlet, DO NOT USE pipe sealant or plumbing grease on any valve component or coupling! To protect the chrome or special finish of Sloan flushometers, DO NOT USE toothed tools to install or service these valves. Use our A-50 Super-Wrench™ or other smooth-jawed wrench to secure couplings. Regulations for low consumption fixtures (1.6 gpf/6.0 Lpf closets and 1.0 gpf/3.8 Lpf urinals) prohibit use of higher flush volumes.

NOTE: In all piston variations the SH-406 spring has replaced the "U" bar. In all piston variations the CN-68-A single lip cup has replaced the S-14-A double lip cup. When rebuilding a piston, install the CN-68-A single lip cup with the cup facing down.

1. Valve DOES NOT function.

- A. Control stop or main valve closed. Open control stop or main valve.
- B. Handle assembly is worn. Install handle repair kit B-51-A or replace handle.

2. Insufficient volume of water to adequately siphon fixture.

- A. Control stop not open enough. Adjust control stop for desired delivery of water.
- B. Urinal or shower piston installed in a closet valve or older blow out urinal. Replace piston with proper closet piston (see item 4).
- C. Regulating screw (on top of valve) not at proper setting. Turn regulating screw counterclockwise to increase flush. Adjustment range: urinal 0.5 to 3 gpf (1.9 to 11.4 Lpf); closet 1.5 to 7 gpf (5.7 to 26.5 Lpf).
- D. Piston worn out. Repair or replace piston.
- E. Inadequate volume or pressure at supply. If no gauges are available to properly measure supply pressure or volume of water at the valve, then completely remove the entire piston from the valve, reassemble cover and open control stop to allow water to pass through empty valve. If the supply is adequate to siphon the fixture, remove the flow ring from the bottom of the piston to provide additional flow. If the supply is not adequate to siphon the fixture, steps should be taken to increase the pressure and/or supply.

Length of flush too short (short flushing) or valve closes off immediately.

- A. Regulating screw not at a proper setting. Turn regulating screw counterclockwise to lengthen flush.
- B. Water passing by damaged or worn piston cup. Repair or replace piston.
- C. Loose piston assembly or loose top plate screw. Tighten top plate screws. Screw piston body and guide together (hand tighten ONLY – rubber relief valve seat will distort if screwed too tight).
- D. Damaged or worn piston top plate or expelor. Repair or replace piston.
- E. Urinal or shower piston installed in a closet valve or older blow out urinal. Replace piston with closet piston CN-1002-A.

4. Length of flush too long (long flushing) or fails to close off.

- A. Regulating screw not at proper setting. Turn regulating screw clockwise to shorten flush.
- B. Relief valve in piston is not seating properly due to wear or debris. Disassemble piston assembly and wash under running water. Repair or replace piston if necessary.
- C. Bypass holes in piston or top plate clogged or fouled with debris. Disassemble piston assembly and wash under running water. Repair or replace piston if necessary.
- D. Closet piston installed in urinal valve. Replace piston with urinal piston CN-1003-A.
- E. Line water pressure has dropped and is not sufficient to force relief valve to seat. Shut off control stop until pressure has been restored, then reopen stop.

5. Water splashes from fixture.

- A. Supply volume is more than necessary. Adjust control stop to meet flow rate required for proper cleansing of fixture.
- B. Lime or mineral accumulation on fixture vortex or spreader holes. Remove lime or mineral build-up in fixture.

6. Flush is not considered "quiet" or makes noise at close off.

- A. Control stop not properly adjusted. Adjust control stop to meet flow rate required for proper cleansing of the fixture.
- B. Worn, damaged or loose main seat. Replace main seat.
- C. Worn piston. Repair or replace piston.

7. Leaking at handle assembly.

- A. The B-39 handle seal may be deteriorated. Install new B-39 handle seal. NOTE: The B-39 seal will easily slide right onto the bushing if it is wet.
- B. Handle gasket has been omitted. Install A-31 handle gasket or handle repair kit B-51-A.
- C. Valve handle bushing is worn. Install handle repair kit B-51-A.

CARE AND CLEANING INSTRUCTIONS

DO NOT USE abrasive or chemical cleaners to clean flushometers that may dull the luster and attack the chrome or special decorative finishes. Use **ONLY** mild soap and water, then wipe dry with clean cloth or towel.

While cleaning the bathroom tile, protect the flushometer from any splattering of cleaner. Acids and cleaning fluids can discolor or remove chrome plating.

When assistance is required, please contact Sloan Technical Support at: 1-888-SLOAN-14 (1-888-756-2614).



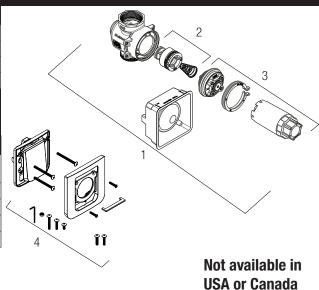
TruFlush Flushometer

PARTS LIST				
Item No.	Part No.	Description		
1	See Table	Valve Assembly Less Plate		
2	See Table	Piston Assembly		
3	3 See Table Activation Assembly			
4	GBL-200-A	Wall Plate Assembly*		

VALVE ASSEMBLY LESS PLATE SELECTION GUIDE

Code No.	Part No.	Description
3400010IN	TRF 156-1.6 LP (WASH DOWN)	Manual Valve Assembly 1.6 gpf/6.0 Lpf (wash down)
3400005	TRF 156-1.6 LP	Manual Valve Assembly 1.6 gpf/6.0 Lpf
3400006	TRF 156-1.28 LP	Manual Valve Assembly 1.28 gpf/4.8 Lpf
3400007	TRF 196-0.5 LP	Manual Valve Assembly 0.5 gpf/1.9 Lpf
3400008	TRF 196-0.25 LP	Manual Valve Assembly 0.25 gpf/1.0 Lpf

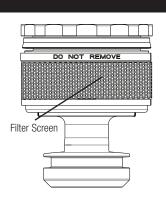
^{*}Consult factory for special finishes.



PISTON PARTS LIST SELECTION GUIDE

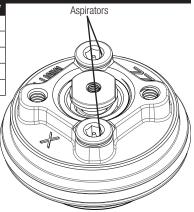
Code No.	Part No.	Description	Piston Color*
3340024IN	GBL-1024-A	1.6 gpf/6.0 Lpf (wash down)TruFlush closet piston assembly	Orange
3340005	GBL-1005-A	1.6 gpf/6.0 Lpf TruFlush closet piston assembly	Green
3340006	GBL-1006-A	1.28 gpf/4.8 Lpf TruFlush closet piston assembly	Purple
3340007	GBL-1007-A	0.5 gpf/1.9 Lpf TruFlush urinal piston assembly	Red
3340008	GBL-1008-A	0.25 gpf/1.0 Lpf TruFlush urinal piston assembly	Burgundy

 $[\]ensuremath{^{\star}}$ Colors may differ. Consult factory to confirm you have the correct piston assembly.



ACTIVATION ASSEMBLY SELECTION GUIDE					
Code No.	Part No.	Description	Aspirator Retainer Color*		
3340026IN	GBL-1026-A	1.6 gpf/6.0 Lpf (wash down) closet activation assembly	Orange		
3340000	GBL-1000-A	1.6 gpf/6.0 Lpf closet activation assembly	Green		
3340001	GBL-1001-A	1.28 gpf/4.8 Lpf closet activation assembly	Purple		
3340002	GBL-1002-A	0.5 gpf/1.9 Lpf urinal activation assembly	Red		
3340003	GBL-1003-A	0.25 gpf/1.0 Lpf urinal activation assembly	Burgundy		

^{*} Colors may differ. Consult factory to confirm you have the correct piston assembly.



ASPIRATOR ASSEMBLY SELECTION GUIDE

Code No.	Part No.	Description	Aspirator Retainer Color*
3340032IN	GBL-1032-A	1.6 gpf/6.0 Lpf (wash down) closet aspirator assembly (6PK)	Orange
3340028	GBL-1028-A	1.6 gpf/6.0 Lpf closet aspirator assembly (6PK)	Green
3340030	GBL-1030-A	1.28 gpf/4.8 Lpf closet aspirator assembly (6PK)	Purple
3340031	GBL-1031-A	0.5 gpf/1.9 Lpf urinal aspirator assembly (6PK)	Red
3340029	GBL-1029-A	0.25 gpf/1.0 Lpf urinal aspirator assembly (6PK)	Burgundy

^{*} Colors may differ. Consult factory to confirm you have the correct piston assembly.