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SF-1 Valve History

The purpose of this history is to give you a chronological reference to the changes that have occurred to the valve. Almost every change that has occurred is the result of requests by you, the customer.

Please take the time to read this so you will be aware of the changes that have been made to the SF-1 valve. MAKE SURE your valves are up-to-date.

Valve Introduction —

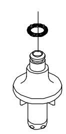
The original valve was an amber color. Other than the color of the valve, the valve appears now as it did then – but many changes have occurred.

1981

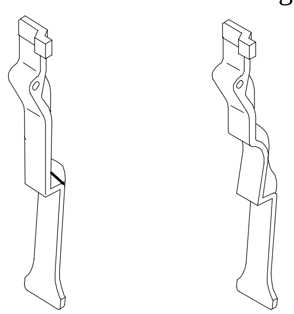
SF-1 Valve Introduced

1983

1. Baffle with o-ring replaced the baffle with the bump. This provided a positive seal and allowed easier removal.

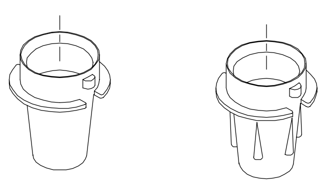


2. Lever reformed and reinforced to minimize breakage.



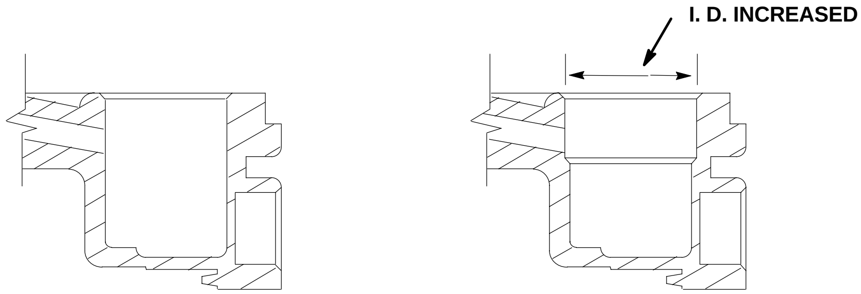
3. Flow control top retainers changed from two piece to one piece to allow easier assembly.

4. Nozzle changed from non-ribbed to ribbed to provide a better gripping surface.



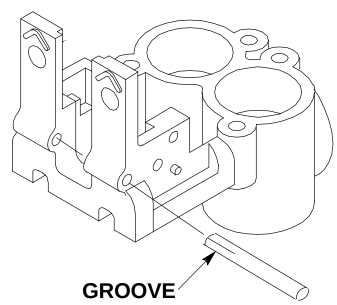
1984

1. X– Body Valves – For additional strength, the valve body and flow control tops were modified. The I.D. of the bore at the top of the compartment was increased in the body and the flow control top O.D. was increased. Bodies and flow control tops X and non–X valves are not interchangeable.



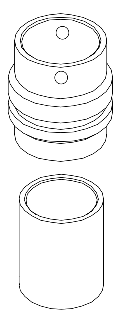
1986

1. The pin for the valve actuating arm was redesigned to incorporate grooves in the pin to cause it to fit tight in the valve body and not become dislocated.

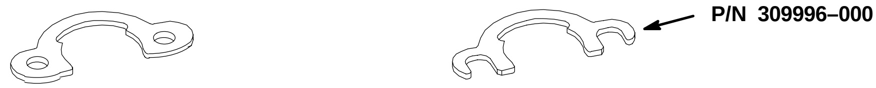


1987

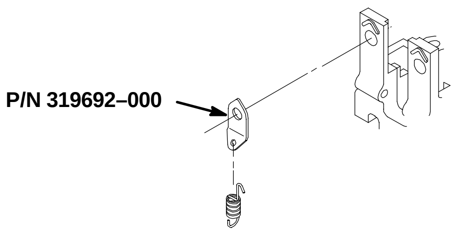
1. The Piston and Sleeve for the flow controls was changed from Stainless Steel to Ceramic.



2. X–1 Valve – With the X–1 Valve the flow control top retainer is changed to enable flow control tops to be removed without removing the retainer screws. The screw holes in the retainer were changed to a slot. The screw hole locations in the body which hold the retainer are widened to provide clearance for the removal of the regulator parts.

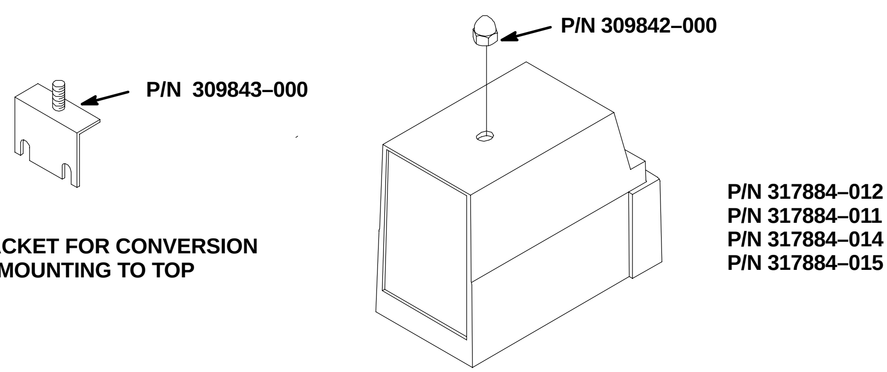


3. X–11 Valve – A metal retaining clip is added for valve return spring. Finger adjustment for syrup flow rather than screwdriver adjustment. This body does not have the angled hole that was the old spring retainer.



1987

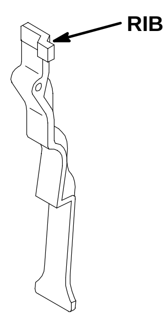
1. Modification to a Top Mount Cover. The front mounting screw was removed and the cover was secured to a stud on the top of the valve solenoid via an acorn nut.



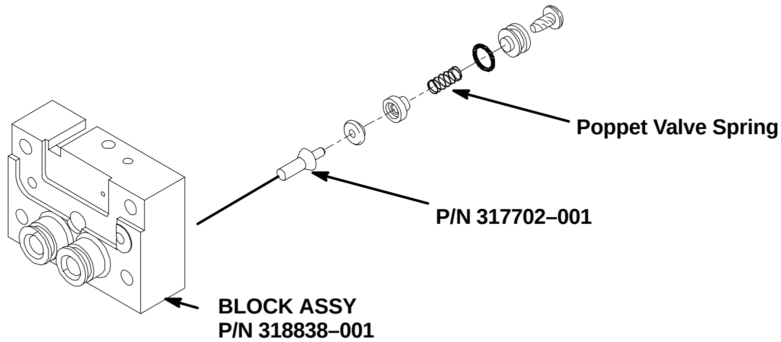
RETROFIT BRACKET FOR CONVERSION FROM SCREW MOUNTING TO TOP MOUNT STUD.

1989

1. LEVER ARM strengthen with a rib molded into upper end 90–degree bend.

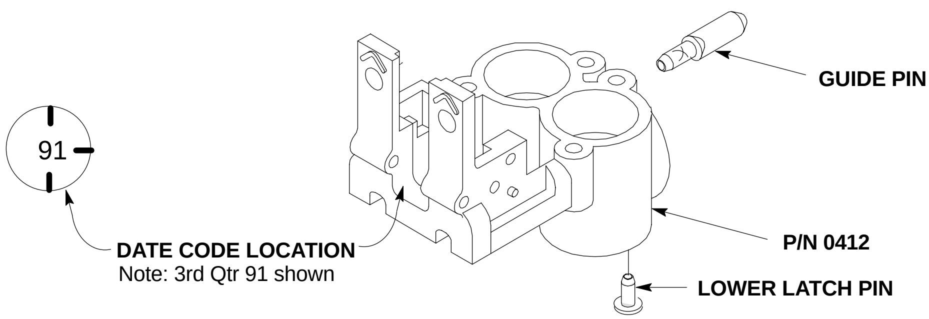


2. The Poppet Stem in mounting block changed from metal to plastic. At the same time the Poppet valve Spring tension was reduced.

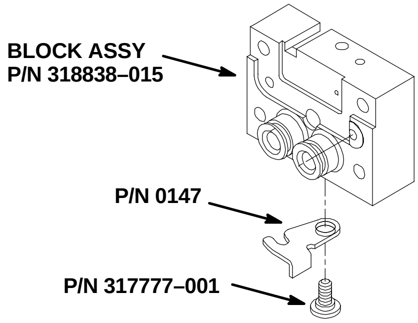


1991

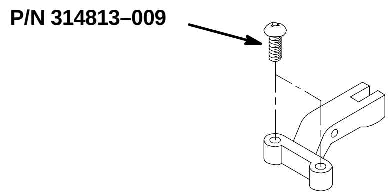
1. The threaded Guide Pin had Lock-Tite applied to the threads to prevent loosening of the pin in the valve body.
2. Valve Body P/N 0412 replaced valve body P/N 317966–027. New body has additional LOWER LATCH PIN which is ultra–sonically welded into place. The Guide Pin (previously cemented with Lock-Tite) is now ultrasonically welded into the valve body. The New Valve Body is INTERCHANGEABLE with all X–Series valves. (Cannot be used on ice–drink dispensers with shrouded valves).
3. A date code is stamped on the VALVE BODY between solenoid attachment points. Code gives year and quarter of valve body manufacture. Valve bodies date–coded after the First-Quarter 91 are **ANNEALED,** a process which relieves material stress, making the bodies less susceptible to stress–cracking and more resistant to chemical attack.



4. The Mounting Block was modified to include a lower latch.
–The NEW BLOCK ASSY is P/N 318838–015.
–The new block is interchangeable with all X–series valves.

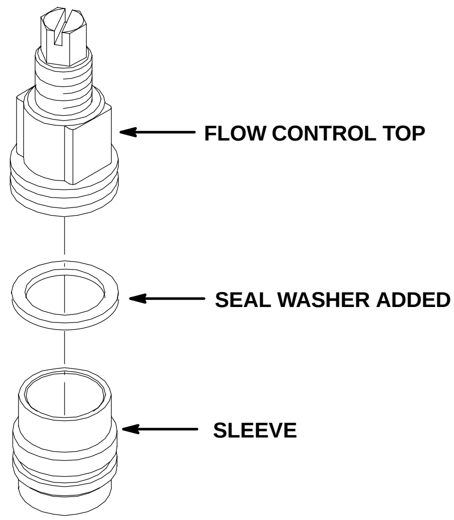


5. ALLEN–HEAD SETSCREWS in electric lever arm and manual lever replaced with round–head phillips
setscrews.



Sept. 1991

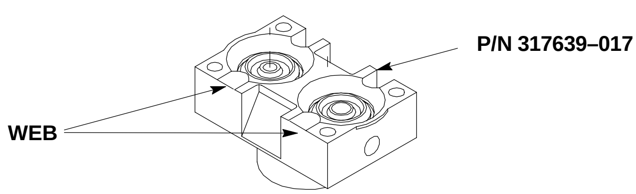
1. A Seal Washer was added below flow control top to improve the seal between the Flow Control Top and the Sleeve. (Refer to Service Bulletin #91104 for full details).



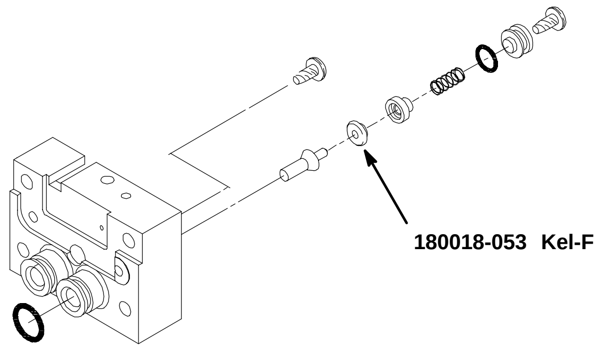
Jan. 1992

1. New AUTO-SET Portion Control programming and memory was introduced. The new Portion Control has a permanent memory and will not be lost if the power is turned off. Full instructions are in Service Bulletin #92104

2. OUTLET BLOCK REDESIGN we have modified the block so it can only be installed with the carbonated water flow on the left and the syrup on the right. Service Bulletin #92114

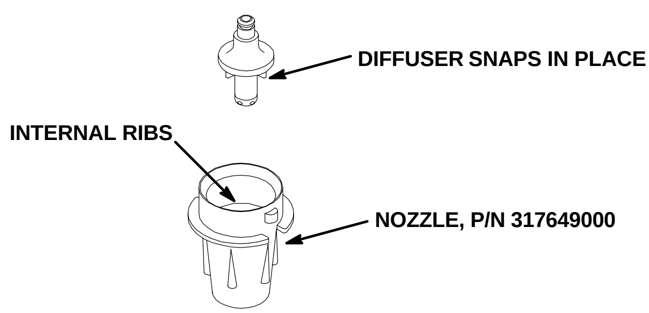


3. POPPET WASHER, DISCONNECT BLOCK – The rubber poppet washer P/N 180018-013 is no longer being used in the SF-1 disconnect block. We are now using a Kel-F poppet washer, P/N 180018-053. See Service Bulletin # 92118

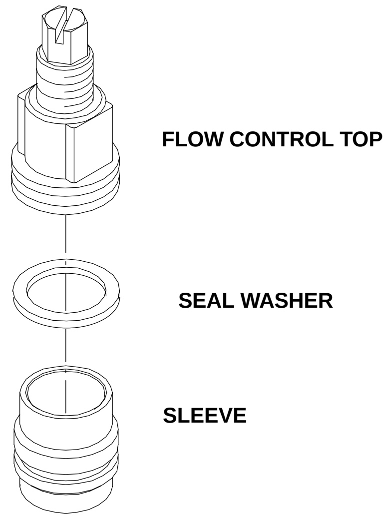


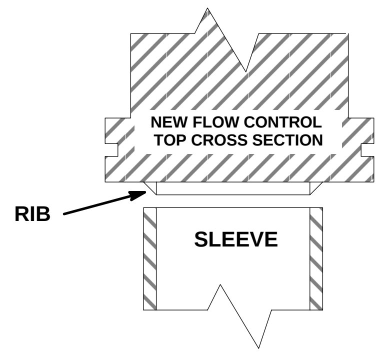
Nov. 1993

1. MOUNTING BLOCK color changes are made for easier identification. See Service Bulletin #94108 for details.
2. SF-1 VALVE NOZZLE P/N 317649-000, has been redesigned with a ribbed inner surface to allow the diffuser to snap into place inside the nozzle. The redesigned nozzle should prevent the diffuser from getting lost or misplaced. The new nozzle design is completely compatible with all existing SF-1 valves. See Service Bulletin #93113



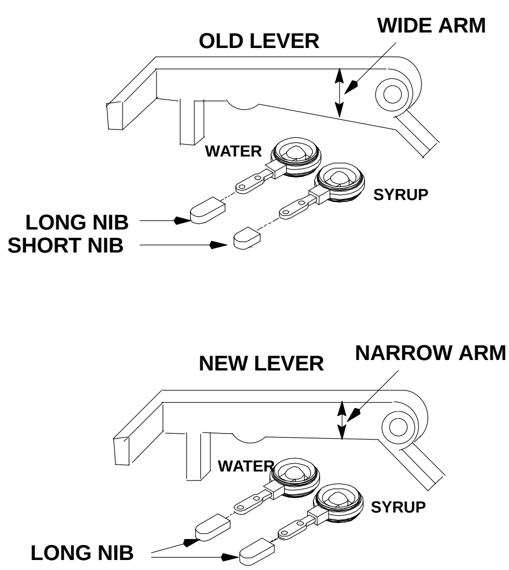
3. SEAL WASHER ELIMINATION – The Flow Control Top has been redesigned to eliminate the need for the rubber seal washer, P/N 0450, that was put into use in 1991. The new Flow Control Top can be identified by the new material color which is white. The bottom of the Flow Control Top has a circular rib (see drawing below right) which will mate with the sleeve and create the required seal. See Service Bulletin #93111 for details.

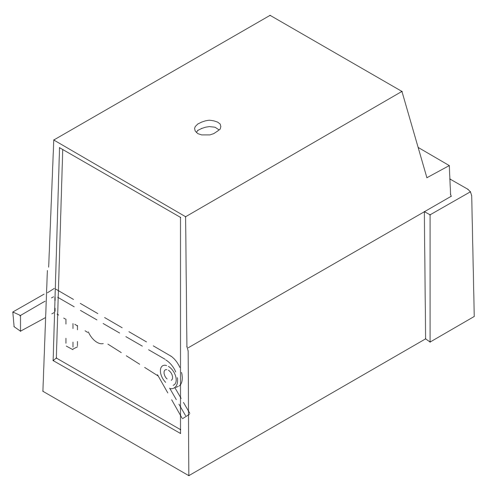




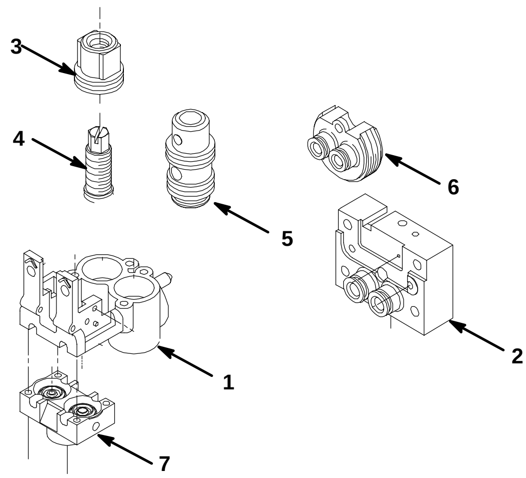
1994

1. REDESIGNED COVER & LEVER FOR WATER ONLY – The new lever has a narrower actuation arm so it will not contact the syrup inlet valves when the lever is depressed. This permits the elimination of the shorter syrup nib. It is important to remember that old covers with the old lever will not function properly on new valves with the long nibs on both the water and syrup inlet valves. The short nib, P/N 310788-000, will have to be installed on the syrup inlet valve or the new style cover will have to be used. See Service Bulletin #94103 for details.



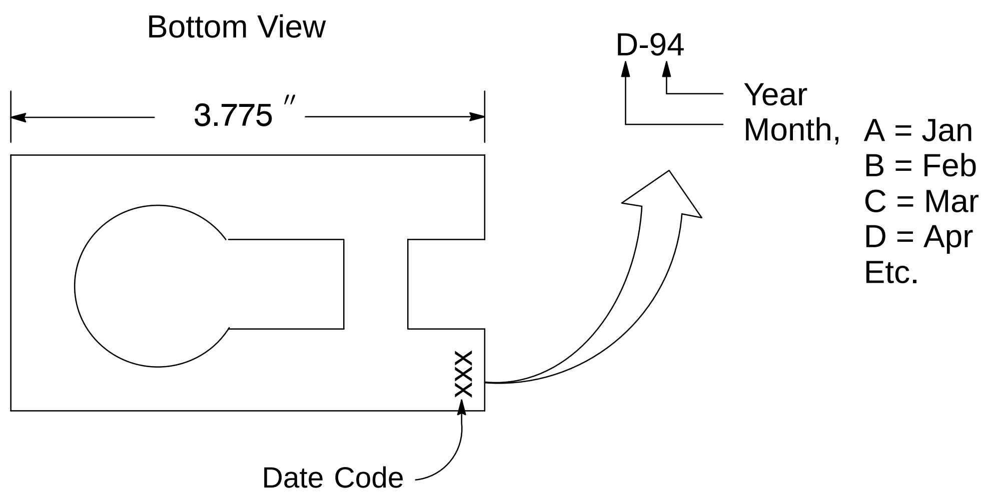


2. NEW VALVE MATERIAL The valve components is now being molded of a new material and will be white in color, also is more resistant to a wider variety of sanitizing solutions. Valve components made of the new material will be easy to recognize—They are all white in color. Components of the old material were translucent. However there are new part numbers on the components of the new material. All parts are interchangeable and can be mixed. Service Bulletin #94105



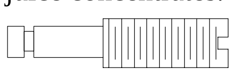
Item #	Old Material Part Number	Description	New Material Part Number
1	0412	Valve Body	3074
	0413	Valve Body Retrofit Kit	3073
2	0407	Mounting Block	3077
3	319133-007	Top Flow Control	319133-051
4	310632-000	Adjusting Screw	310632-051
5	319545-011	Housing Flow Washer	319545-051
6	317645-007	Threaded Block	317645-051
7	317639-017	Valve Block	317639-051

3. The length of the support, bottom cover has been increased from 3.75″ to 3.775″. The additional length allows the support, bottom cover to rest against the mounting block. This will reduce any side to side movement. This change starts with bottom cover date coded D-94 (April 1994). The location and explanation of the date code, as well as the new length, is shown below.

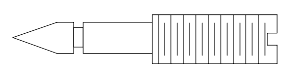


1995

1. A new style concentrate flow control is available for the non-carb SF-1 juice valves. The new gate valve has a square end which is less prone to plugging with heavier juice concentrates.

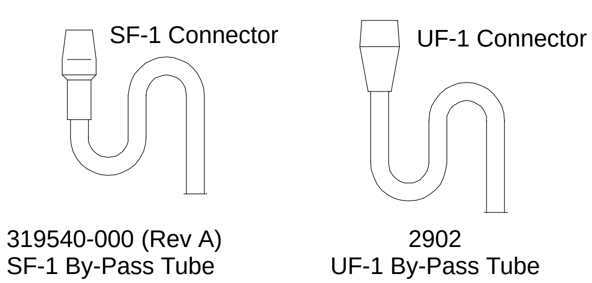


New Style P/N 3996

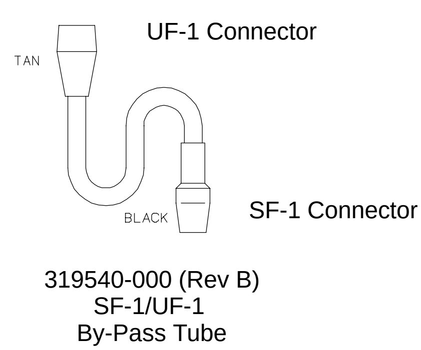


Old Style

2. The syrup by-pass tubes have undergone some changes to allow one by-pass tube to be used for both the SF-1 and the UF-1 valves. The two old by-pass tube designs are shown below on the left. The new “universal” by-pass tube is shown on the right.

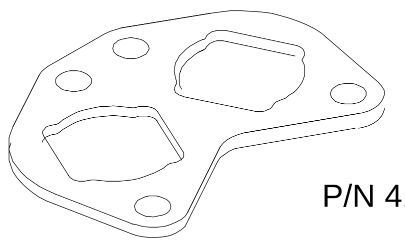


O L D



N E W

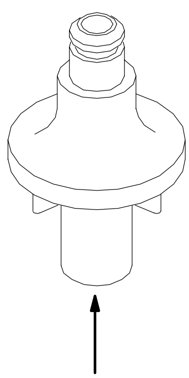
3. The design of the flow control retainer changed to provide a more positive and even pressure on the water and syrup sides of the valve. The new design applies to both the water and syrup flow control housings at the same time. It is necessary to remove all four screws when removing the retainer to gain access to either or both flow controls. The new design, P/N 4147, will be a direct replacement for all old styles.



P/N 4147

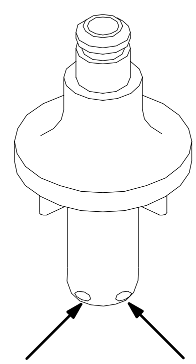
4. A special syrup baffle is available for valves pouring diet drinks to minimize foaming. This syrup baffle is easy to confuse with the standard baffle for sugar based syrups. As an aid to identification of these two baffles, they are shown below. When cleaning the nozzle and syrup baffle, be sure to replace the diet syrup baffle into the diet valve.

Diet Syrup Baffle
P/N 318754-011



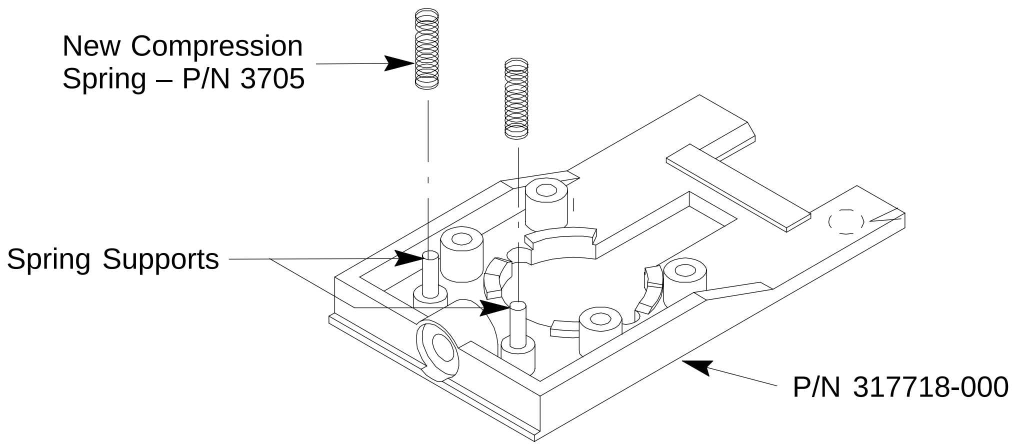
Flat end, one single hole at the base of the syrup baffle

Standard Baffle for Sugar Based Syrups
P/N 318523-027



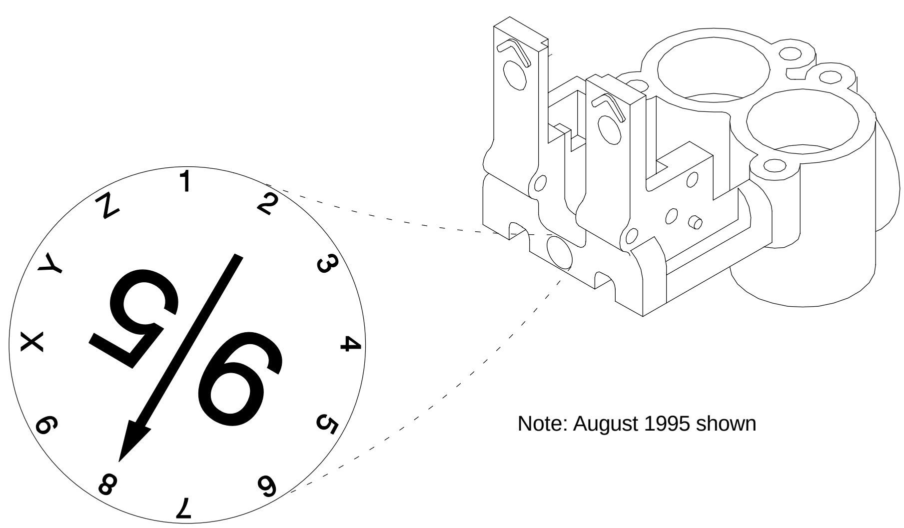
Round end, four holes at 45°, spaced evenly around the base of the syrup baffle.

5. Support, Cover, P/N 317718-000 – This part was redesigned to move the springs below the valve arms of the Valve, Inlet . The springs are secured on two pins that project from the Support, Cover. See drawing.



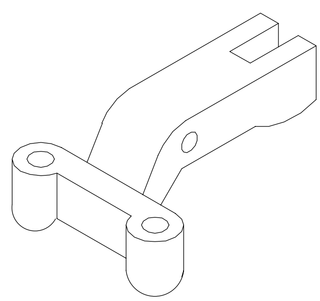
This new design will retrofit to any SF-1 Valve. When used on older valves, the old spring (extension) can still be used. If desired the new spring (compression) can be adapted to an older valve. The springs can be ordered under P/N 3705. Two springs are required.

6. The date code location has been moved. The new date code gives the year and month of valve body manufacture. Valve bodies date–coded after the First-Quarter 91 are **ANNEALED,** a process which relieves material stress, making the bodies less susceptible to stress–cracking and more resistant to chemical attack. See item 3, 1991 for the lod date code location.



Note: August 1995 shown

This arm has not been put into
production as of 1/9/96



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