

VRK157B REPAIR KIT INSTALLATION INSTRUCTIONS*

1. NOTE: IF THE SUPPLY PIPING HAS BEEN SAFELY RELIEVED OF PRESSURE, DRAINED, AND LOCKED CLOSED, THIS VALVE MAY BE REPAIRED IN PLACE IF NECESSARY.
2. THREAD VALVE COVER OFF CCW (9/16" FLATS). NOTE: COVER HAS MODEST SPRING LOAD.
3. REMOVE AND CAREFULLY SET ASIDE THE VALVE COVER, OVERLOAD SPRING, OVERLOAD PLATE, AND PLUNGER SPRING.
4. EXTRACT THE REMAINING PARTS OUT OF THE VALVE BODY BY USING AN APPROPRIATELY SIZED WOODEN DOWEL OR SIMILAR OBJECT PLACED IN THE DRAIN PORT TO PRESS THE PARTS UP AND OUT OF THE VALVE COVER OPENING.
5. INSPECT THE MACHINED BORE IN THE VALVE BODY WHERE THE SLEEVE O-RING WILL SIT AND CLEAN BORE GENTLY WITH VERY MILD ABRASIVE IF NECESSARY.
6. WITH THE EXCEPTION OF THE SEPARATE VALVE COVER O-RING, ALL THE NEW PARTS IN THE KIT MAY BE INSTALLED INTO THE VALVE BODY AS A UNIT. IF NECESSARY, THE NEW SLEEVE O-RING MAY BE ADDITIONALLY LUBRICATED WITH DOW-111 OR EQUAL TO FACILITATE INSTALLATION.
7. INSERT PARTS AND PRESS FIRMLY INTO BORE WITH A THUMB ON TOP OF THE THERMOSTAT. SLEEVE WILL SNAP INTO PLACE AND THE TOP EDGE OF THE SLEEVE WILL BE BELOW THE COVER THREADS WHEN THE SLEEVE IS FULLY SEATED. IT SHOULD BE POSSIBLE TO SEE THE INSIDE OF THE CASTING BETWEEN THE TOP OF THE SLEEVE AND THE BOTTOM OF THE MACHINED VALVE COVER THREADS. NOTE:NO SPECIAL ORIENTATION IS REQUIRED.
8. SLIDE PLUNGER SPRING OVER THERMOSTAT.
9. CENTER AND SET OVERLOAD PLATE ON TOP OF PLUNGER RETURN SPRING WITH END OF SPRING IN PLATE CAVITY.
10. CAREFULLY CENTER THE OVERLOAD SPRING ON THE OVERLOAD PLATE.
11. CAREFULLY PLACE THE CAVITY IN THE VALVE COVER OVER THE OVERLOAD SPRING.
12. IF NECESSARY OR DESIRED, REPLACE THE O-RING ON THE VALVE COVER WITH THE NEW O-RING (ITEM 12) SUPPLIED IN THE REPAIR KIT.
13. MANUALLY PRESS THE VALVE COVER DOWN (COMPRESSING THE SPRINGS) WHILE TURNING CLOCKWISE TO ENGAGE THE THREADS OF THE VALVE COVER WITH THE THREADS IN THE VALVE BODY.
14. TIGHTEN THE VALVE COVER UNTIL THE FLANGE ON THE COVER MEETS THE BODY, THEN GENTLY SNUG WITH A WRENCH.
15. IF PREVIOUSLY REMOVED, SAFELY RE-INSTALL THE VALVE AND RETURN IT TO SERVICE.
16. CONFIRM WATER DOES NOT EXIT THE DRAIN PORT.
17. IF WATER CONFIRMED WITH A THERMOMETER TO BE BELOW 90°F CONTINUES TO EXIT THE DRAIN PORT, SEE THE CLEANING AND TEMPERATURE CYCLING INSTRUCTIONS ON THIS PAGE.

* REFER TO EXPLODED VALVE DIAGRAM ON SHEET 2.

WARNING! VALVES MUST ALWAYS BE SAFELY REMOVED FROM SERVICE AND DRAINED PRIOR TO MAINTENANCE OR REPAIRS!

GENERAL SP157B VALVE MAINTENANCE INSTRUCTIONS*

Cleaning:


1. Unthread and Remove Valve Cover from valve.
2. Remove and set aside overload spring, overload plate, and plunger spring.
3. Use a 1/2" dia. wooden dowel or similar object inserted in the drain port (labeled DRAIN) to push the remaining parts up and out of the valve.
4. Remove the plunger (Item 6) from the sleeve (Item 2) by gently pulling up on the thermostat (Item 8), which is threaded into the plunger. Take care not to damage the soft copper thermostat well.
5. Clean the outer diameter of the plunger of any debris and clean and inspect the bottom diameter of the plunger, which is one sealing surface.
6. Inspect and clean the inner diameter of the sleeve (Item 2).
7. Inspect and clean the soft EPDM seat washer (Item 4) at the bottom of the sleeve (Item 2). The seat washer cannot be removed, so a flat instrument screwdriver or similar implement may be necessary to effectively clean the soft washer surface in the bottom of the sleeve. Take care not to damage the washer! If this surface is damaged, the valve may need repair or replacement.
8. Replace the plunger into the sleeve and observe where the end of the plunger should meet the mating soft surface of the EPDM seat washer inside the sleeve. If a gap is observed here, which is likely, the cleaned valve will need to be temperature cycled (see below) in order for the thermostat to allow the two sealing surfaces to properly mate and seal again.
9. Insert the sleeve/plunger and press it into the valve body with a thumb on the end of the thermostat. The sleeve will snap into place and the top edge of the sleeve will be below the cover threads when the sleeve is fully seated. No special orientation is required.
10. Replace the plunger spring, overload plate, and overload spring. Place the cavity in the valve cover over the overload spring.
11. Press the valve cover down, compressing the springs, while turning clockwise to engage the threads of the valve cover with the threads in the valve body. Tighten the valve cover until the flange on the valve cover meets the body, and then snug with a wrench.

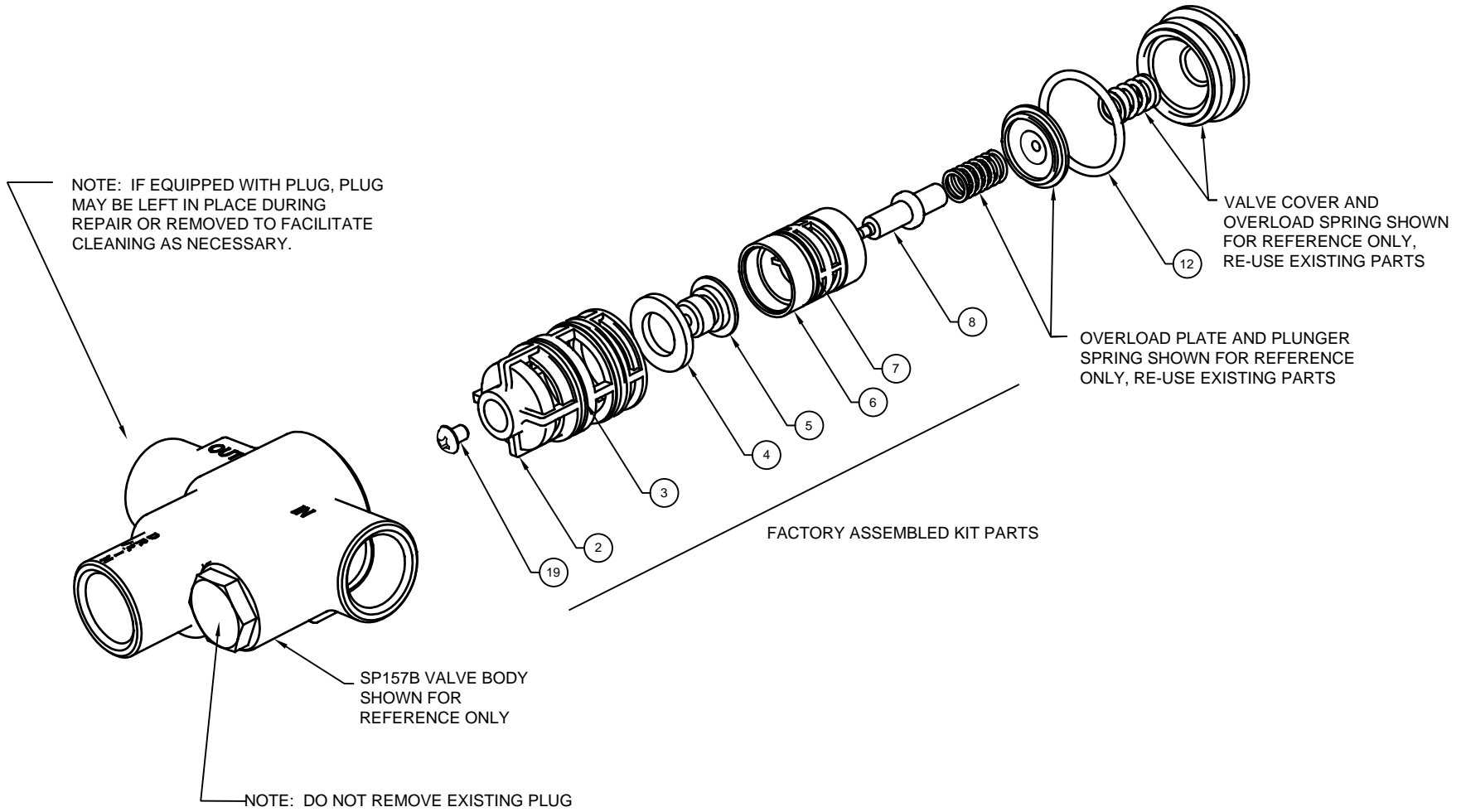
Temperature Cycling:

1. After cleaning as described above, take the assembled valve to a faucet with hot water (max 140°F) available.
2. Using a pair of adjustable pliers or other suitable tool, hold the entire valve under the hot water flow, evenly heating the valve and occasionally directing the flow into the valve inlet.
3. After a minute or two, hot water directed to the inlet port should flow freely from the inlet port and out the drain port. (If the outlet port is not plugged, water will also pass directly through the valve to the outlet port.)
4. A relatively free flow of hot water from the drain indicates that the wax in the thermostat has turned to liquid and expanded.
5. Cool the valve by directing cold water over and through the valve.
6. Within another minute or two, the wax in the valve will contract, allowing the plunger spring to close the valve before the wax solidifies.
7. Confirm that the flow from drain port stops. Cycling can be repeated if necessary.
8. When a temperature cycle results in no flow from the drain port when cold water is directed to the inlet port, the valve may be reinstalled to service.


NOTES:

1. Temperature cycling becomes necessary if the valve actuates and the plunger spring is unable to properly seat the valve as the wax in the thermostat solidifies. If the wax cools and solidifies when the plunger is not fully seated due to fouling/debris, the valve can be held open by the thermostat even if the original cause of the fouling is cleaned or removed.
2. It MAY be possible to temperature cycle the valve in place with an electric heat gun providing the heat is applied evenly about the body of the valve and that the valve body temperature is not allowed to exceed 140°F. Occasionally, an offending piece of debris may be flushed out with a simple "in place" temperature/flow cycling of the valve, but more commonly, the valve will need to be cleaned as described above and THEN temperature cycled as described above.

		Haws [®]		1455 KLEPPE LANE	
				SPARKS, NEVADA 89431	
ECN NO. 5476		REVISED PER BY:	MODEL(S)	PART NUMBER	
DP	DATE: 09/17/19	DP	VRK157B	0510000971	
DP	DATE: 09/17/19	CHKD.: FV		REVISION	
APPROVED: NE	DATE: 09/23/19	SCALE: --	DRAWING TYPE: INSTALLATION	SIZE: A	SHEET 1 OF 2



VRK157B REPAIR KIT		
ITEM #	QTY	DESCRIPTION
19	1	SCREW, 8-32UNC X 3/16" SST
2	1	SLEEVE
3	1	O-RING DASH# 022 (.989 ID X .070 W)
4	1	SEAT WASHER, EPDM
5	1	THREADED SEAT RETAINER
6	1	PLUNGER
7	1	O-RING DASH# 018 (.739 ID X .070 W)
8	1	THERMOSTAT
12	1	O-RING DASH# 122(1.112 ID X .103 W)

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		ECN NO. 5476 DRAWN: DP APPROVED: NE	REVISED PER: ECN: 5476 DATE: 09/17/19 DATE: 09/23/19
PART NUMBER 0510000971			REVISION 1
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