

XK Heater Valve rebuild

Simon Crispe

Having noticed an annoying pool of anti-freeze green coolant under the XK, I decided to investigate the source of the leak and discovered a weeping heater valve.

The valve was a correct Smiths FHW 1272/22 fitted as original equipment to the XK150 and my early E Type; also my Daimler SP250/Dart.

The challenge always for me is to not throw out the baby with the bath water. By this I mean the original part with its original casing and body is probably fine and all that is probably wrong is a burst rubber diaphragm inside.

So, I purchased a new and no doubt perfectly functional but rather too modern looking gold passivated zinc plated valve from Hawkswood Classics on the Shore. The new valve was a match certainly on the outside in terms of fit and function for the original one, so I hoped that its internals would also be similar. Photos 1 & 2 show the two valves side by side. Differences are finish of the pressed steel casing and the absence of any part number on the replacement valve.



1) Passivated zinc replacement valve; also no part No.



2) Original valve: zinc plated & Part No. FHW 1272/22

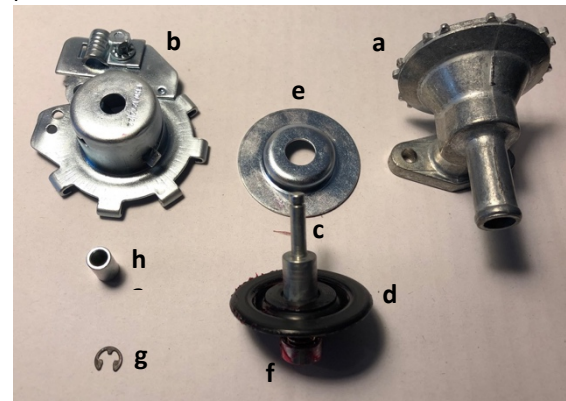
Dismantling the valves

There is a small pop rivet that holds the zinc plated outer housing onto the alloy valve body. Drill out the pop rivet on both the new and original valve. Then, remove the little circlip from the projecting centre spindle on each valve. Once these parts have been removed, you will be able to turn the outer zinc plated casing so as to release the outer casing from the alloy tabs on the alloy valve body.

This will reveal similar internal rubber and metal components in both valves including:

- Alloy valve body
- Outer zinc plated housing
- Centre spindle
- Attached rubber diaphragm located in a groove machined in the spindle
- Zinc plated disc that sits over the spindle and diaphragm
- Rubber cup seal that sits over the inner end of the spindle and engaged in the seat at the bottom of the alloy housing
- Circlip
- zinc plated inner distance tube that sits between the activating lever and the shoulder of the centre spindle.

Care needs to be taken to ensure you take note of exactly how each valve comes apart and reassembly must be the reverse of the dismantling process. See Photo 3.



3) Original & replacement valve components

Restoration & reassembly

I had the original outer pressed steel housing, cable clamp & set screw, internal zinc plated disc, distance tube & activating lever re-zinc plated.

The original valve was leaking because of a tear in the perished diaphragm. The diaphragm in the new valve and the new valve spindle were identical to the old valve, so these were inserted into the new valve body after being liberally coated with rubber grease. The internal zinc plated disc is now installed over the diaphragm. Photos 4 & 5

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4) New rubber diaphragm (d) inserted into new alloy valve body a). Note liberally applied rubber grease.



5) Zinc plated disc e) that sits over the spindle c) and diaphragm d) on valve body a).

The activation lever from the original valve was re-plated and re-used. It needs to be inserted along with the distance tube (h). See Photo 6).



6) Zinc plated activation lever inserted into outer casing

Align the alloy housing tabs with the gaps in the outer casing. Turn the casing until it engages on the alloy housing tabs. Make sure the pop rivet hole in the casing is aligned with two projections (arrowed on photo 7) on the cast alloy housing and install pop rivet.



7) Re-plated outer housing b) installed onto new alloy valve body, with pop rivet holes aligned.



8) pop rivet inserted into aligned hole through outer casing and two small projections on alloy valve body.



9) pop rivet fastening

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10) installed pop rivet

Reinstall valve onto heater, reconnect heater hoses and control cable. See Photo 11)



11) installed reconditioned valve.