

Replacing a DCFV

(Dual Coolant Flow Valve Unit)

also known as: "Heater Valve", "Dual Coolant Control Valve (DCCV)"

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Referenced Vehicle	Jaguar S Type "SE" 3.0L 2005MY
Referenced Vehicle VIN	N2022x
Supporting Video	https://www.youtube.com/watch?v=nn2KEe1v9EQ
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Introduction & Overview

This document and associated YouTube Video provides a hands on (DIY) guide to replacing a Dual Coolant Flow Valve Unit on a Jaguar S Type 3.0 2005MY. In this instance although the valve was functioning correctly it was leaking quite badly. If this condition is not attended to the result could be that the valve solenoids can draw excessive current and damage the Air Conditioning Climate Control Module (CCM) circuit board. Earlier models apparently were more tolerant to the higher currents and less likely to be damaged.



The orange coolant fluid can clearly be seen leaking from the valve. An orange pool of water would form on the garage floor after a run.

Part(s) Required / Recommended

Part Code	Item Description	Approx. Cost.
XR840091	Dual Water Valve (Bosch Original) Three pipe (This item suits both 2.5L and 3.0L engines) Jaguar spec (Orange) anti-freeze/inhibitor as required  Recommended UK Supplier - Berkshire Jag Components	£85.00 GB \$106.00 US Variable pricing

Tools / Equipment Required

- Flat blade screwdriver to remove expansion tank bleed valve.
- A small coin to re-tighten the bleed valve. (this will help to avoid over tightening)
- Torx driver for radiator lower splash shield.
- Large Bull Nosed pliers or similar (Corbin Pliers) for constant tension hose clips.
- $\frac{3}{8}$ " drive socket and ratchet wrench for valve retaining bolt.
- Plastic funnel with fine gauze filter for refilling system with coolant.
- Pair of car ramps with extensions.
- Wheel chocks (normally supplied as standard with the S Type jack kit)
- Although optional - a pair of axle stands are a useful addition.
- A suitable clean draining container.
- Suitable hand held light and general lighting.

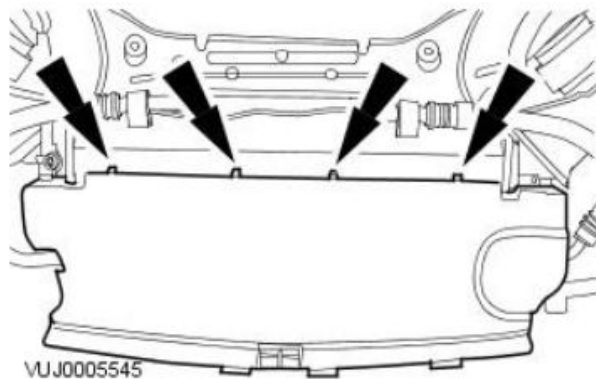
Removal and re-fitting step by step instructions

1.

Raise the front of the car on ramps, apply handbrake and “chock” rear wheels as access will be required both below and above the engine compartment.

2.

Remove the radiator lower splash shield in order to access the coolant drain plug/tap and the coolant flow valve connections.

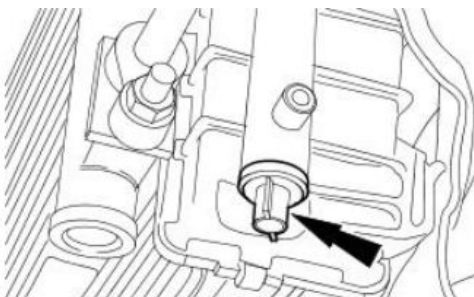


3.

Remove the coolant expansion tank filler cap. (Wait until engine has cooled)

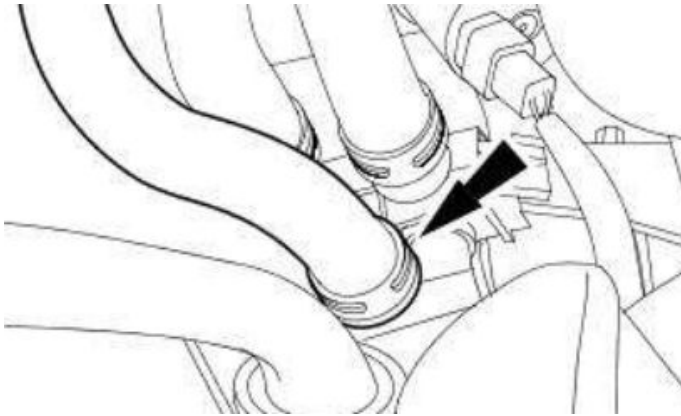
4.

Release the coolant drain tap and drain coolant into a suitable container



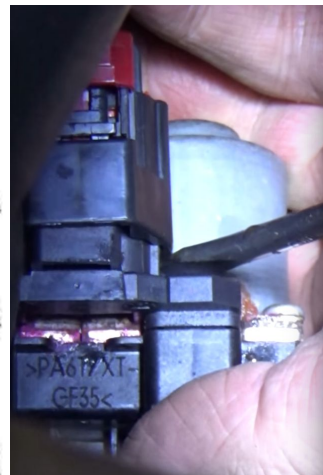
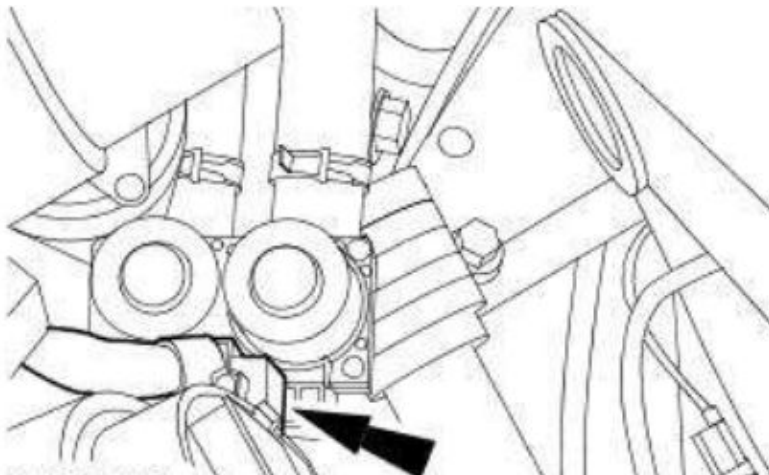
5.

From underneath the car release the lower valve hose (constant tension hose clip) and remove the hose.



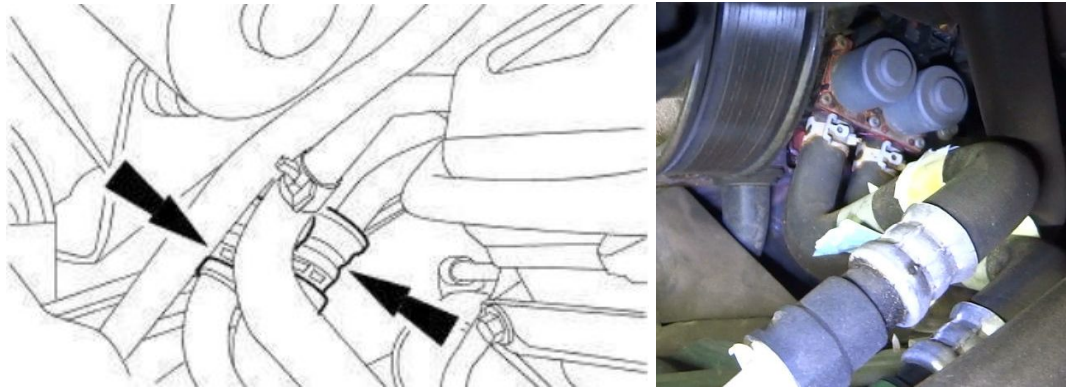
6.

Disconnect the flow valve electrical connector. (Slide back Red lock tab to access connector release tab)



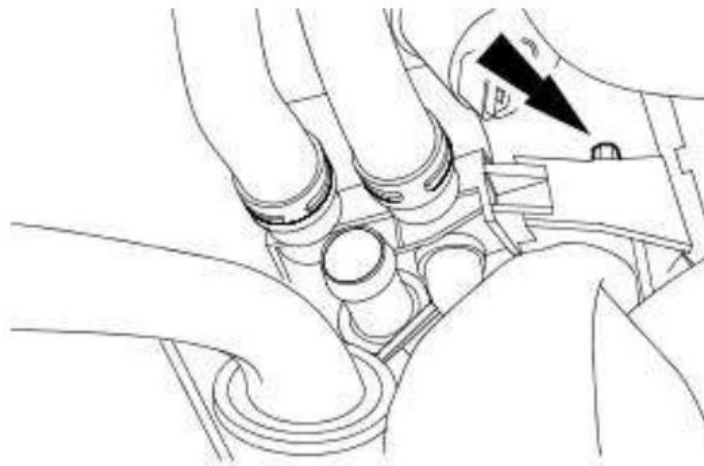
7.

Disconnect the two heater hose “quick connectors”. Optionally the pipe above these two connectors can be repositioned in order to allow better access.



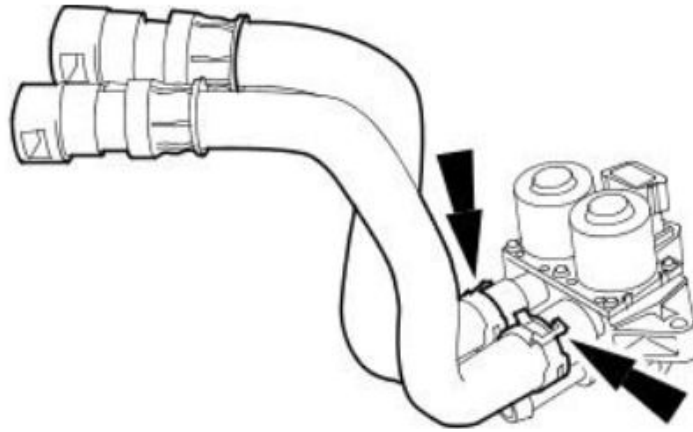
8.

Remove the valve unit retaining bolt.



9.

Withdraw and remove the valve unit and loosen and slide back the two constant tension clips. Remove hoses making a note of which hose goes where. One has green marker tape on it.



10.

Reverse above procedure for fitting the new valve unit.

Additionally and before fitting the new valve unit: -

Thoroughly clean all mating hose connections before refitting.

- Ensure all existing used parts are suitable for re-fitting - e.g.
 - Hoses not split, cracked or shows signs of perishing.
 - Clips not damaged.
 - Fasteners not badly corroded or have damaged heads.
 - Wiring not frayed or damaged.
 - Connectors not split, broken or have damaged or corroded pins.

11.

The recommended Jaguar procedure for refilling the cooling system and testing is as follows.



1. Remove expansion tank “bleed” valve
2. Slowly fill (to avoid air locks) the cooling system up to the “Max” mark in the expansion tank using a 50/50 mixture of Jaguar specification cooling system fluid WSS-M97B44-D and water.
3. Install the “bleed” valve and tighten to 1Nm (using a small coin should achieve this)
4. Refit the expansion tank pressure cap.
5. Start and run the engine.
6. Set both the heating system and blower to “Max” and open all heating vents to “Max”
7. Run engine until hot air is felt from all heating air vents. If during this time the engine overheats then switch off immediately to avoid damage to the engine.
8. If temperature reaches normal and doesn’t overheat then switch engine off.
9. Allow engine to cool down.
10. Release the cooling system pressure by gently removing the expansion tank cap.
11. Top up the coolant to the “Max” marker (if necessary) and refit the expansion tank cap.

Additional Notes

Please note that the guidelines provided in this document and related video apply specifically to the Jaguar S Type SE 3.0L 2005MY - VIN N2022x range. Other models may be similar and some earlier models use a different version of the DCFV Unit.

Always check that replacement parts are suitable/compatible before buying. Using your vehicles VIN reference (Vehicle Identification Number) to correctly identify part suitability. This can normally be found in your vehicle registration document or quite simply by viewing the number on top of your dashboard cowl through the front windscreen .

More detailed S Type Climate Control information can be found at this excellent diagnostics, self help and service support website <http://jaguarclimatecontrol.com/diagnose/>