Ben Hosking Ben Hosking and Ben Nightingale

HIDDEN AGENDA

This month we start a two-part project that will get rid of those ugly washer and radiator overflow bottles from your strut tower

OE manufacturers inherently have to think about practicality and cost over aesthetics, which is primarily why the aftermarket has so much room for growth and scope in correcting all the design 'faux-pas' that companies like Holden commit.

This month we'll start a two-part DIY series on fitting a VR/VS hidden washer bottle, and next month show you how to fit an aftermarket polished stainless radiator overflow tank, which will also be primarily out of sight. This will allow you to throw away your old bottle combo and leave the strut tower clean and classy. SC

STEP 1
Here are the ugly culprits messing up the engine bay. These are relatively new bottles and already the overflow tank is heavily discoloured. By relocating them, we'll see a big improvement in the tidiness of the engine bay.

STEP 2
This is where the new bottle will pop up. As you can see from the VR engine bay in the inset, all you can see is the spout poking up in front of the air box. Much neater.

STEP 3
This is the assembled mess of parts required for both installations, the shiny overflow tank will wait for next issue. These are the Holden part numbers you'll need: VS21172, 90058691, 92140058, VS20344, 92046017, 11072643 (x2). All up you'll be looking at around $150 for the washer assembly.

STEP 4
First step is to remove the vacuum ball from its current location under the guard to the support brace just in front of it. This is the stock location for the later models and we found that there were already holes in the support brace for the bolts.

STEP 5
Remove the airbox assembly to make room for working. In the VP there is a hole in front of the airbox for the vacuum ball hose. You can simply pull the hose off the ball and re-route the hose through the hole as shown in the inset to pic. The hole may need opening up a little with a round file or drill.

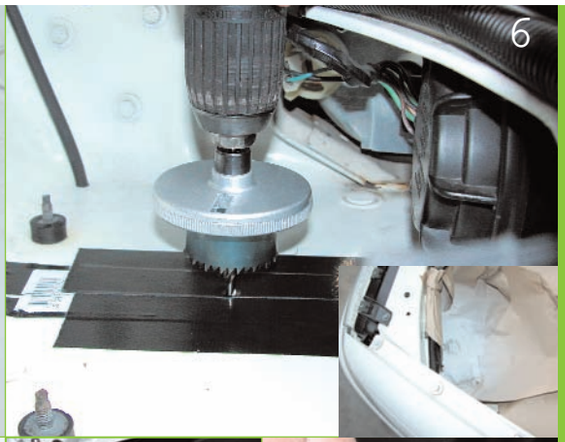
STEP 6
The hole that the hose originally went through actually marks the exact spot where the hole for the reservoir spout needs to come through. Grab a metal-specific hole saw and cut out your hole. File-finish the edges and apply some self-priming paint to the bare metal to prevent rusting.

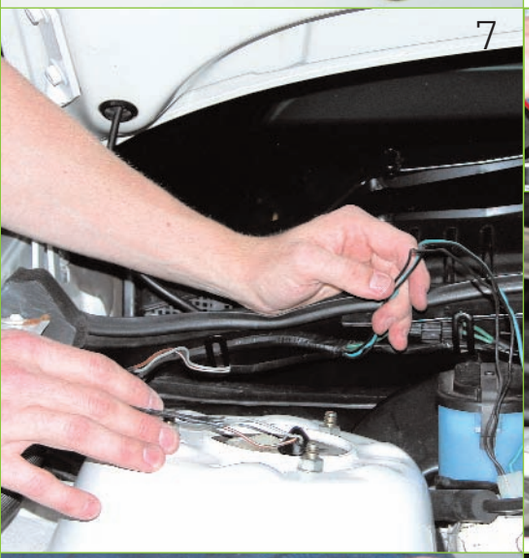
Of course, you can go to town properly painting the area to match your existing paint, but this engine bay will be smoothed and painted soon so we didn't bother.

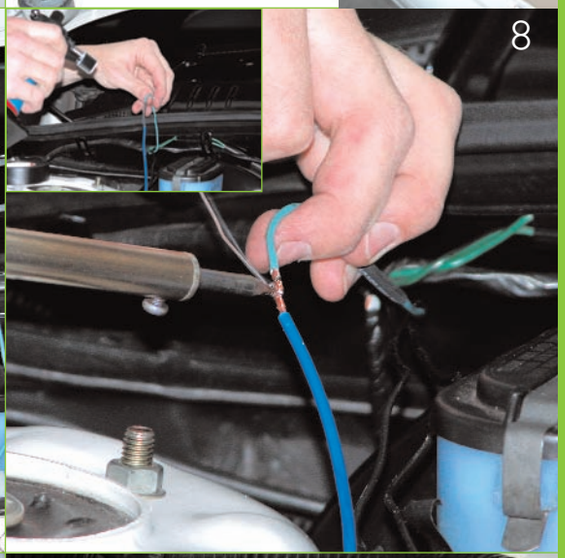
STEP 7
Now it's time to redirect the pump wiring to the new location. You'll need around 5–6m of decent-quality wiring. There are three wires to run around the back of the engine to the under-guard reservoir/pump location.

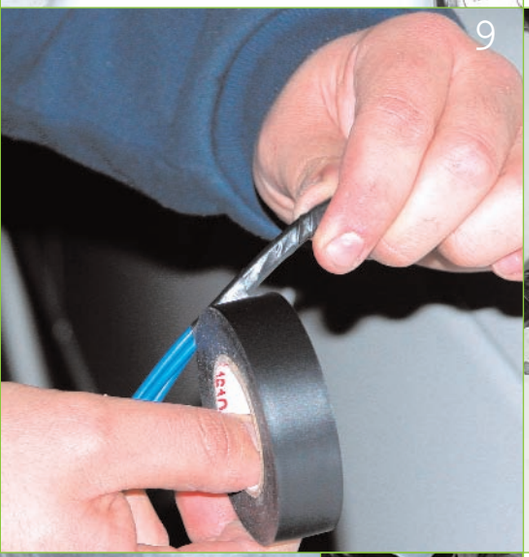
Thankfully the connection on the old and new pumps was the same, so we could snip the connection off and simply extend the wiring.

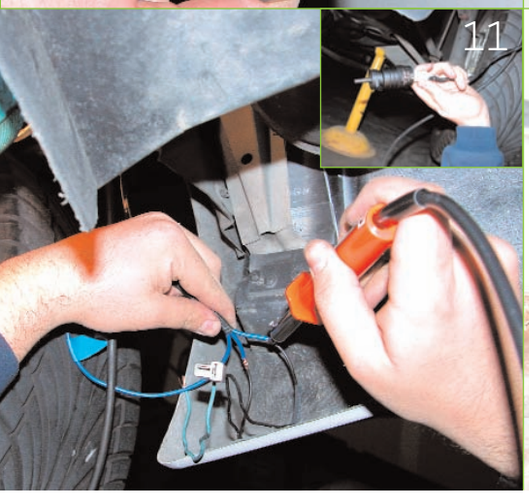
STEP 8
Grab your soldering iron and start soldering. It's an easy task, but benefits from patience to get it spot on. With a solid connection, slide











some heat shrink over each join to protect it further from wearing through.

Don't forget to mark each wire in some-way so you don't forget which is which at the other end. Now's a good time to run your extra washer hose along the same path, just don't forget to install the one-way valve.

STEP 9

Here we are retaping all the wiring. We do this to both protect the wires further, but also keep them together and hide them a little more. We'll cover all the wiring and the extended washer hose with convoluted split tubing later for an even neater look.

STEP 10

Here are the extended washer hose and original vacuum hose running into their respective holes (washer through the big hole and vacuum below). The extended pump wiring will also go through the larger hole above.

STEP 11

Here we are soldering the pump connection to the ends of the new wiring under the car. It's not much fun soldering upside down, but won't take you long.

Don't forget your heat shrink and tape up the remainder of the wiring. The inset shows you the pump connected in its new home. We gave it a test run to see that it was getting power.

STEP 12

Finally, if you haven't already, trial-fit the reservoir under the car and see where you'll drill your pilot holes for the bottle bolts. Two go into the chassis rails and one nut/bolt will be required through the top.

The location of the top bolt should sort itself out once you've plotted the location of the two bottom ones.

STEP 13

All that's left now is to bolt the reservoir in, connect the pump, not forgetting the little rubber filter over the pick-up, and filling it up with water.

You may need to realign the jets to point at the windscreen again as the new pump will probably have far more power than the old one.

Next month, we fit the overflow tank!