

How To: Side Mirror repair - is yours floppy?

Is yours floppy? Is there no stiffness left in it anymore?

Well don't despair, your mirror can be fixed - try this "Mechanical Viagra" treatment before buying a replacement?

The cost of repair is small - just a few hours of your time!

So let's get started

Undeneath the (floppy)mirror, is a plastic panel that I eased out using a blade.

This exposes the wires running through what I will call a "pivot tube".



The appropriate tension to the mirror is applied by a sequence of 6 washers that when compressed by a 7th star lug nut (washer), provides the mirror with the capability to hinge when subjected to slight impact (ouch!)yet not flop about when driving on uneven roads. (see later photo showing the shape and sequence of the seven washers on the pivot tube).

The 7th washer? - It's not a circlip (C profile) but a star lug that has a shoulder preassed into the perimeter of it. (O profile)

First I took my mirror body off the car. I'm not going to explain this process

i.e. taking the door card off,which you need to do to get access to the **3 M6 screws** securing the mirror to the door etc etc ... there's plenty of info out there on how to do that.

This tip will save you loads of time and effort.

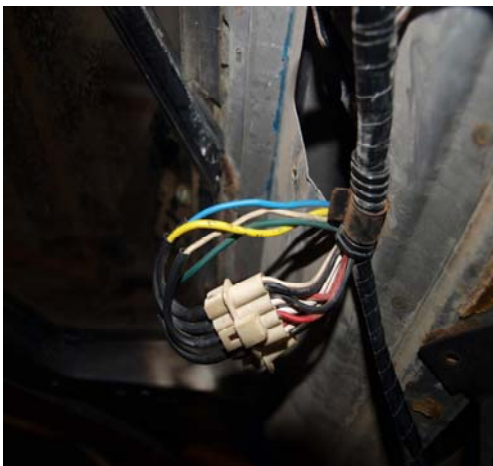
On removing the mirror body, tie some string around the wires going from the harness inside the door to the mirror motor contained in the mirror body. This will enable the wires to be easily pulled **back** through the door when the mirror body is re attached to the door after the repair. (See next picture.)



As you can see from the picture below, my mirror body was full of Dubai Sand !!!



The loom o the mirror (the wires that run through the pivot tube) is uncoupled within the recesses of the



door. Via a male/female multisocket – used in many applications on the DeLorean.

As you can see from the above, quite clearly mine did not have the Male connector, the pins were just pushed into the female socket!!!!

Next step in the repair process so that the glass can be removed from the motor mounting plate, heat the mirror glass gently with a heat gun. The heat will help break down the adhesive holding the mirror in place to the backing.

Another Tip

I used plastic coffee stirrers to ease the sticky pad that attaches the mirror glass to the backing plate. The stirrers will snap first if you apply too much force, they are meant to, so you have a fighting chance of removing the glass in one piece. So get a load of them when you have a coffee ? (The wooden ones are good too for mixing resins, glues, etc

Once the glass is loosened, I followed up using a sharp bladed knife blade the type that you can snap off pieces of the blade as the edge losses it's sharpness - you can use the long length of blade to get it between



the mirror and the plate to ease it off. - see below picture)

Below is a picture of the glass removed alongside the backing plate.



The Mirror backing plate is attached to the motor via a central screw that screws into the white flange shown in my earlier "Dubai Sand" photo

Although not part of the "floppy repair" I would add the motor can be removed from the plastic mirror body, by unscrewing the 3 phillips screws. Interesting enough there are 5 plastic fixing lugs on the motor.

The DeLorean only uses 3 of them ! - So I'm guessing that it's a proprietary part used by other manufacturers?

The motor has the following numbers stamped on it 102060 in one place, and 102063-2 in another location of the motor.

The following pictures show more detail



Because my loom didn't have the conventional plug on the end, that meant that I could remove the wires that run through the centre of the pivot tube - the tube that locates the swiveling mirror to the mirror housing.

... I could withdraw the wires from the the pivot tube, which would help in the next stage of the repair - when I press fitted the new star lug.

There's 3 things to mention in the picture below ...

1) Why was my mirror so floppy?

The bottom of the picture shows the culprit !!!... the star lug shown to the left had snapped.



2) There are 7 washers in total that all compress together on the mirror pivot post and they have to go on the pivot post in a particular order.

6 of the washers are shown on the wiring loom that pass through the centre of the mirror pivot tube. The 7th will be the new star lug washer compressing them all together

3) **I've (crudely) show the shape of the washers** in my diagram on the above picture, and their order/orientation which, when compressed, provides the appropriate tension to enable the mirror to move.

I sourced a replacement Star lug (a pack of 10) from a teddy bear materials supplier as shown above.

The internal diameter was 10 mm but I couldn't source one with the correct outside diameter which is 20 mm I think! I even contacted the manufacturers - no dice!

Initially I got a socket that fitted over the star lug and tried tapping on the socket using it as a drift - but no joy.

That washer sequence has some tension in them!!!!



So I came up with the idea of using a G clamp as a press. The above shows "Old Faithfull" - I'd bought this to clamp down the roof box while I bolted it down. The wide mouth of the clamp enabled me to hold the clamp between my knees when I pressed on the Star Lug - otherwise a second pair of hands would probably be required.

So using a socket on the star lugI also used a washer in the mirror plastic body housing to protect it from the forces of the clamp & spread the pressure when using the clamp.

Butstill no joy as I couldn't centre the star lug on the pivot post. It kept wandering on the post

Sooooooooo I cut the top off a biro pen top - slightly conical in shape, inserted that in the pivot post and placed the star lug over that. Shown below is the pen top, that kept the Star lug centred to enable me to



press it on with the "Old Faithfull" clamp.

Compressing the G clamp, on the socket, that sat on the star lug, whilst being centred using a sawn off "blue" pen top, I heard a click!!

S4it I thought something has snapped! - It had ..it was the sound of the star lug snapping into place -
and job's a good un.

Since writing this I've had feedback saying that the repair works great and has saved lots of money.