

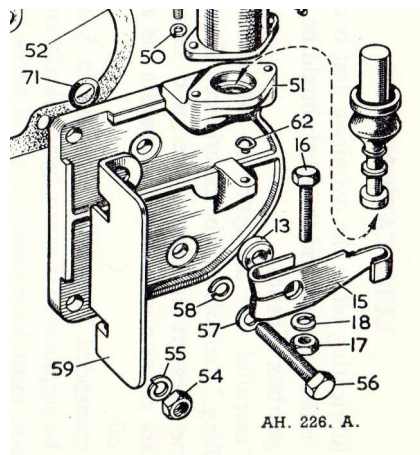
The Two Cent Overdrive Repair

By Jim Werner

My 1957 Austin-Healey 100-6 demonstrated an Overdrive problem that left everyone baffled. When the car had been sitting for a few days, the overdrive would not work until it had been driven for over 30 miles. Sometimes it would not work for no apparent reason after it had just worked.

Now, I am a pretty good mechanic but this one kept eluding me. I refuse to succumb to the replace every part mentality, I need to find the cause first, so I went through all the possible causes for about the tenth time, traced every wire and reset the valve setting lever with the operating valve removed when it happened. The solenoid failed to operate!! Eureka, the problem finally identified but what was the cause? In at least 50 other tries the solenoid had always worked perfectly.

Well somehow in loosening the clamp on the valve operating shaft and the related movements, the solenoid plunger bolt dropped down an extra millimeter. This was enough to keep the magnetic power of the solenoid from engaging correctly!!! This was the cause of my intermittent problem and testing proved it, but why???



Check out item #62 on the repair diagram found in the Workshop Manual. It is a little rubber bumper that keeps the solenoid plunger bolt from hitting the housing. But hey, I don't have one of those. It was nice of the folks at BMC to put that rubber piece in so you don't here any noise when the solenoid releases. **However, that tiny rubber bumper also keeps the solenoid from overextending itself.**

In summation this is what happened. When the car sat at idle the solenoid plunger would drop that millimeter or so that would put it out of magnetic range. Driving the car eventually produced enough vibration to let it pull up again in an erratic manner.

The solution was easy. I used a nylon #8 machine screw in place of the missing rubber bumper. It will never fall out or rot away and it provides the proper amount of bumper to keep the solenoid from overextending itself.

That was three years ago and the overdrive has never failed to operate yet. All that work and frustration over a two-cent part!