## Solving loose exhaust manifold bolts or studs on a Rover V8 engine



**John Brown** posted a note on the V8BB saying "just experienced loose exhaust manifold studs on the top two rear left hand side studs. A 14mm A/F socket fits in various combinations to get to at most of the others. Access to the rest would be from underneath. Why aren't these studs fitted with anti-vibration washers? Studs with a flat washer do not seem like a good solution. Maybe we can improve on this with a special washer."

**Geoff King** responded "you could use spring washers, John, but I used plain washers on mine when I fitted the manifolds a few years ago and have not touched them since. They are, or were, 3/8" UNC bolts by the way (9/16" spanner size – just over 14mm) - although some people use Allen headed bolts as it is supposed to make access easier but I don't have a problem with normal hex head on the RV8 style manifolds."

**Jim Gibson** added "I think the original spec has plain washers for the manifold bolts but it's been a while since I looked. I've seen suggestions that spring washers might weaken when heated, but I don't know how true that is. So, might I suggest Rover Part No. **602951**, or Land Rover Part No. **ERC7321**. After refitting the manifolds, you might want to wait until the engine has been run a while before a re-tighten of the bolts and bending up the tabs."

**Geoff King** helpfully provided a link to the LRDirect website where there is a **photo of an ERC7321** at <a href="www.lrdirect.com/ERC7321-Manifold-Locker-Rr/">www.lrdirect.com/ERC7321-Manifold-Locker-Rr/</a> which is available at around 60p. He added "John's car has apparently been fitted with studs so his car may have a history of a problem with the standard exhaust manifold bolts. The Rover SD1 and Range Rover used locking tab washers and if the bolts (or nuts on studs) are becoming slack the locking plates may prevent this."