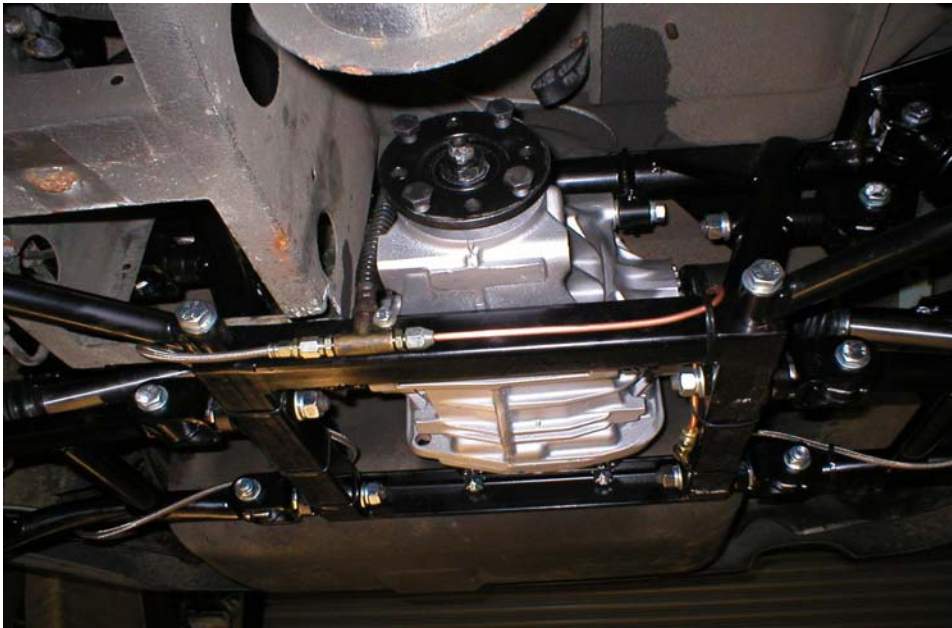


RV8 Workshop Notes



Fitting a Hoyle independent rear suspension upgrade on an RV8

Steve Newton at Clive Wheatley mgv8parts has fitted a number of Hoyle rear suspension upgrade kits and provides an outline of what is involved.

The key feature of the ingenious Hoyle independent rear suspension upgrade, designed and supplied by John Hoyle, is it bolts directly on to existing mounting points on an RV8 or MGB bodyshell. Hoyle supplies the subframe assembly, special short half shafts and drive flanges with the MG stud pattern. He can also supply the Sierra differential, hubs, CV joints and disc brakes with new alloy callipers. As the Factory specification for the RV8 included a Quaife differential most enthusiasts go for a Ford Sierra limited slip differential. Most of the Ford parts are supplied new and the differentials are re-built to "as new" condition. Clive Wheatley says "if you decide to find your own differential then do doublecheck the diff ratio before buying a Sierra unit although it is safer if John Hoyle supplies it." The subsequent sale of the original RV8 back axle as a complete unit can generate a useful sum which can partly offset the cost of the Hoyle upgrade.

The first stage of the installation is the removal of the exhaust system and then the existing back axle, springs, shock absorbers and their mounts to the chassis. This involves disconnecting the two flexible brake hoses connecting to the brass T union over the back axle. The handbrake linkage is removed right back to the connection at the bottom of the handbrake lever. The flow and return fuel lines have to be cut at a point above the axle.

The next stage sees the Hoyle subframe offered up and bolted on to the existing damper and leaf spring eye fixing points. With an RV8 installation Steve Newton notes you have to "ding" the battery box in a couple of places, or make some small cut-outs, as the box interferes with the heads of some of the bolts fixing the Hoyle suspension frame. At this stage the subframe will need to be centralised and may need shims to do that. Hoyle supply shims with their kit. The fuel pipes have to be reconnected below the top tube of the subframe assembly.

Also included in the Hoyle kit are new flexible brake lines with metric connectors, new handbrake cables and linkages to the callipers and new Gaz shock absorbers. Steve makes up copper brake lines with the necessary compatible connectors. The handbrake linkage is refixed using the new cable provided in the Hoyle kit and Steve notes you will have to make a small hole in the transmission tunnel for a bolt fixing a brake cable clip.

The original RV8 propshaft needs to be modified – first carefully measure from the flange on the new differential in the Hoyle subframe to the flange at the back of the gearbox – some 30 inches or so. Then the existing propshaft has to be cut and a new UJ flange welded on, following which the whole unit has to be balanced. It is then refitted with the universal joint attached to the flange. Refitting the exhaust system needs a slight modification to the pipework to provide sufficient clearance from part of the Hoyle subframe.

John Taylor notes that as one of the first RV8 enthusiasts to fit a Hoyle upgrade he

recalls the installation, which he carried out himself, involves many small adjustments for which particular equipment and skills are needed. He adds "the nuts on the hubs also need a high torque and many enthusiasts may find their equipment does not enable them to measure and check such high values". Guessing the nuts are torqued up enough is not good enough.

Steve likes the Hoyle upgrade and says the beauty of the set up is you have both camber and ride height adjustment. Removing the back axle and changing to the Hoyle upgrade does remove a great deal of unsprung weight. Geoff King noted in a V8 bulletin board posting in November 2008 that "the total weight of the MGB axle assembly, springs and dampers is approximately 100 kgs, the unsprung weight is 85 kgs. The total weight of the Hoyle is 105 kgs and unsprung is 45.5 kgs." Steve likes the improvement in both ride and handling provided by the Hoyle rear suspension upgrade and thinks it gives the RV8 a feel more like a modern car. You can put the power down and the rear dips down and grips rather than squirming or hopping like an RV8 with a live rear axle. The Hoyle upgrade also absorbs the road bumps better and with the IRS one bump from a pothole or manhole cover on say the offside rear wheel does not transfer through the live axle to the other side.

Deciding on whether to go for a Hoyle upgrade on an RV8 needs careful consideration as it is quite an investment – including the kit, new Ford parts and just over two days labour it is probably just under £5,000 but offsetting the proceeds of selling the original RV8 axle as a complete item could reduce the investment to just under £4,000. So it likely to appeal to RV8



enthusiasts who tour with the car in the UK and in Mainland Europe. With a reasonable annual mileage and the pleasure derived from the improved comfort with the installation, it is this type of enthusiast who will seriously consider taking the plunge and "going for a Hoyle".