Power steering on an RV8 in 1994

Could the RV8 have had PAS originally?

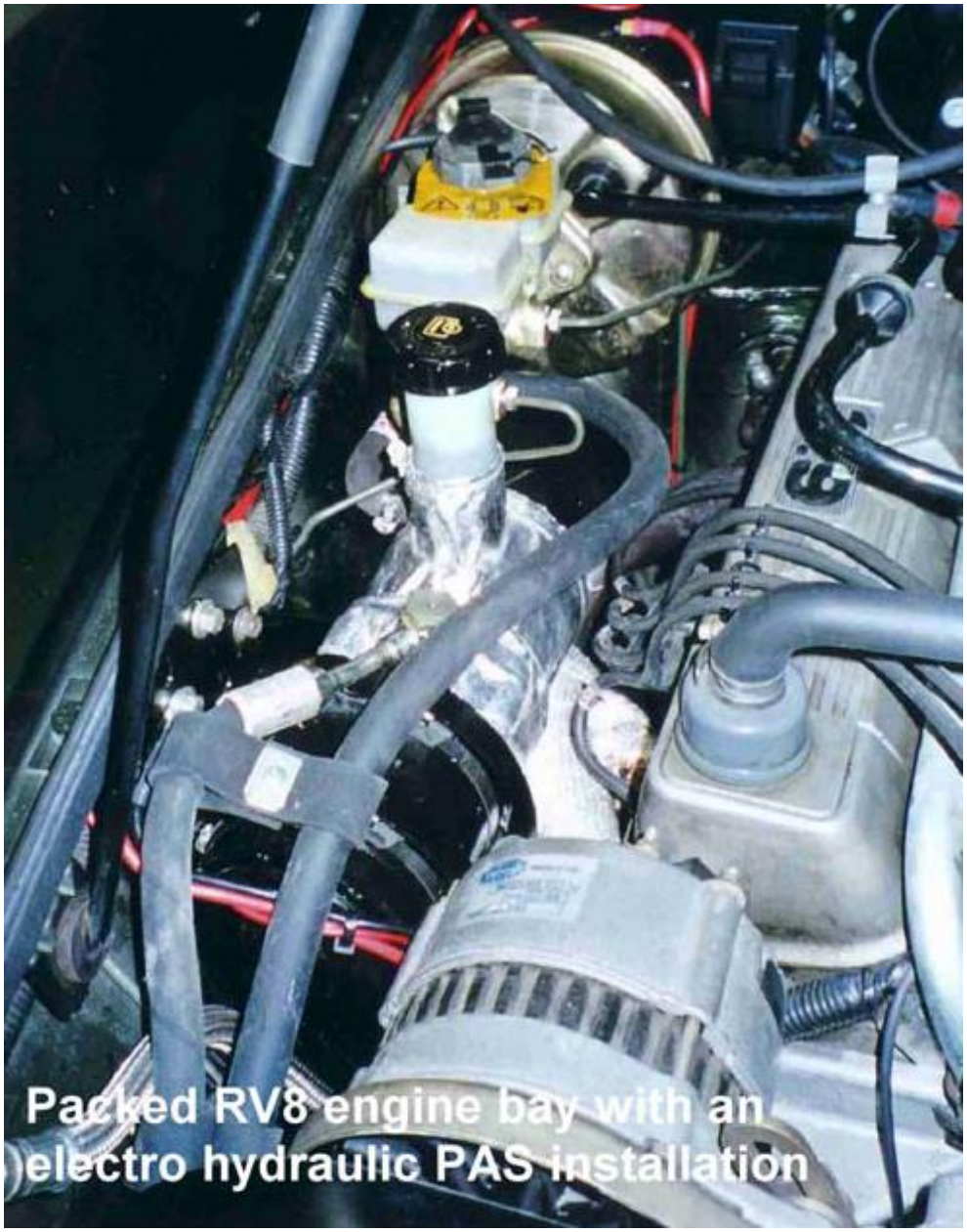
- In early 1990s the market for a £25,000 MG with V8 power and Connolly leather and Elm burr trim was the more attractive for mature MG enthusiast with deep pockets. Also PAS was becoming a popular upgrade on “daily driver” cars.
- In 2009 Victor Smith uncovered Cowley reports and correspondence on the test PAS installation carried out for MG Rover in 1994 by Steering Developments at Hemel Hempstead.

Cowley recognised PAS might be welcome

- **Power steering might be a welcome option for RV8 buyers –** MG Rover recognised this so in 1994 approached a specialist company, Steering Developments to undertake a test PAS conversion on an RV8.
- **Oxford Blue 900025** registered as K 17 MGR – a demonstration RV8 - was made available for the exercise.
- **Hydraulic PAS** system was installed.

Problems for PAS in an RV8

- By early October 1994 the installation was completed and the RV8 returned to Maelin Evans at the Cowley MGR sales office with a report highlighting the **major problem posed by the RV8**.
- **Lack of space** available to accommodate the more bulky power steering rack and the additional fluid pump and mounting bracketry.
- Report added that it was “not possible to offer PAS on an RV8 already equipped with air conditioning as the **lack of space was greater**”.


Packed RV8 engine bay with an
electro hydraulic PAS installation

Lack of space problems

- That difficulty was particularly pronounced in the routing of the lower steering column which passes through the offside engine mounting. Also because of the position of the column is fixed where it passes through the bulkhead, it was necessary to find a power steering rack which had an identical pinion angle to the manual one fitted to production RV8s.
- Great deal of effort was made to find a steering rack which would reproduce the original steering geometry as near to the original specification as possible.

Finding a steering rack

- A comprehensive search of available steering racks was made from which four units were shortlisted from a BMW 325, Volvo 360, Ford Escort and a Ford Fiesta.
- Many hours of development work were undertaken and the Fiesta unit was eventually chosen, primarily for simplicity of mounting and optimum orientation of the hydraulic porting.
- It was necessary to use a left hand drive unit which was turned over to achieve the correct relationship of pinion to rack.

Saginaw TC type power steering pump

- A Saginaw TC type power steering oil pump was mounted to the nearside of the engine. It was driven from the crankshaft using the same pulley and spacer ring arrangement used on the air conditioning installation.
- Oil temperature was controlled by a “trombone” type cooler located in the return (low pressure) line and in front of the radiator.
- The oil reservoir was located at bonnet height and secured to the inner wing on the front offside of the engine bay.

Four key modifications were noted

- Removal of the rack mounting feet on the subframe to permit the fixing of the PAS rack mounting bracket.
- Re-routing of the lower radiator hose via a new steel tube to clear the PAS rack pinion housing plus shortening & re-flaring the lower inlet tube.
- Removal of the lower steering column and pinion extension from the manual rack for use in the new column assembly.
- Removal of part of the plastic cowling on top of the radiator to provide clearance with the reservoir and low pressure pipe.

Satisfactory PAS available for demonstration

- Hope was that the PAS option could be offered as a retrofit through MG Rover distributors with a supporting advertising campaign to encourage take up of the PAS installation.
- Plan was the vehicles would be fitted with the PAS system at the Power Steering factory in Hemel Hempstead which would obviate the need for crash testing and
- Power Steering would also provide cover for the product liability of the modified steering system.

Demo RV8 to promote retrofit sales

- But as some 80% of RV8 production went to Japan fitted with air conditioning, the potential market for this PAS option was relatively small with **only 399** RV8s supplied to the UK and European non air conditioned specification.
- So potential PAS retrofit demand was low.

MGF EPAS unit fitted in Japan

- In Japan an EPAS option using the MGF EPAS unit was developed and fitted to a significant number of RV8s in Japan.
- Many RV8s found their way as exports to Australia, New Zealand, Europe and UK.
- Decade later an hydraulic (later electro hydraulic) PAS system was developed and marketed by a commercial workshops in Cambridgeshire.


EPAS installation fitted
to an RV8

Growing demand for PAS retrofit

- Over recent years the demand for RV8 PAS retrofits has grown, no doubt because so many drivers have become progressively conditioned to the low steering effort and convenience of PAS fitted to other more modern cars they drive on a regular basis.
- EZ EPAS product has become the leading retrofit kit but the MGF PAS kit is also used. EZ is easier to install, reversible & much less space is needed in the engine bay for the kit.
- EPAS fails, can still drive. Hydraulic PAS fails, cannot drive.