



Technical Bulletin / Safety Alert

Unique ID No: GEN2012-TBSA-01

Rev: 0

Subject: VLI Driftrunner & Brumby Start Circuit Modifications – Low Viscosity Fuel

Date: 18th June 2013

Applicable to: All VLI Driftrunner & Brumby Vehicles

Note: Minimum PPE required to carry out any inspections contained in this TBSA shall be protective clothing & footwear, safety glasses, hearing protection & any site specific requirements. A JSA or equivalent should be carried out prior to performing these tasks.

Introduction:

Due to the prevalence and widespread use of low viscosity diesel fuel in the industry, VLI has developed a starter circuit modification for the Driftrunner and Brumby vehicles, to accommodate starting issues associated with these fuels.

Investigation & Cause:

The VLI Driftrunner and Brumby design registered diesel engine systems were designed and tested in accordance with the diesel fuel specification requirements defined in AS3584.2:2008.

There are various brands of alternate low viscosity diesel fuels available in the market, which might not meet the specific gravity requirements for diesel fuel defined in AS3584.2:2008. As a result of the low and variable viscosity levels of these fuels, some fuel batches will generate hard starting issues in Driftrunner and Brumby vehicles, particularly when the vehicle is at normal operating temperatures.

Investigation and testing by VLI has identified the hard starting issues are related to fuel head pressure at start up. The lower viscosity fuel requires increased pressure to deliver enough fuel for engine start. As the fuel temperature increases, the viscosity of the fuel decreases, which accentuates the starting problem when the engine is warm.

In order to accommodate the use of low viscosity diesel fuels, increased fuel pressure is required at start up. This can be achieved by changing the start circuit from an 'in series' to 'parallel' design, and installing a starter motor with a 12 tooth pinion.

These starter circuit modifications are shown schematically in the attached drawings (5-04168601 & 5-04168701) and in the photos below as installed to a Driftrunner vehicle.

The following parts are required to complete the starter circuit modification:

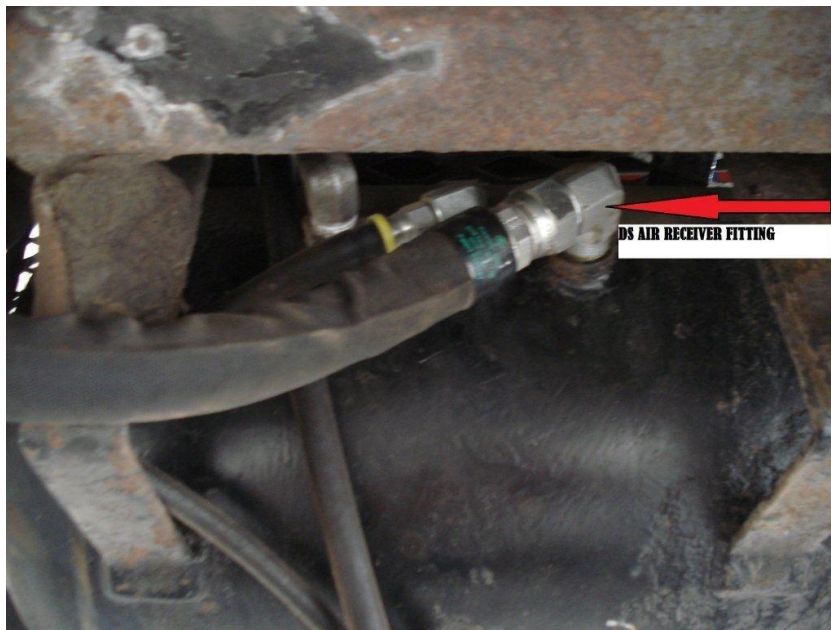
9-13010061 Starter Motor Assembly – 12 Tooth Pinion

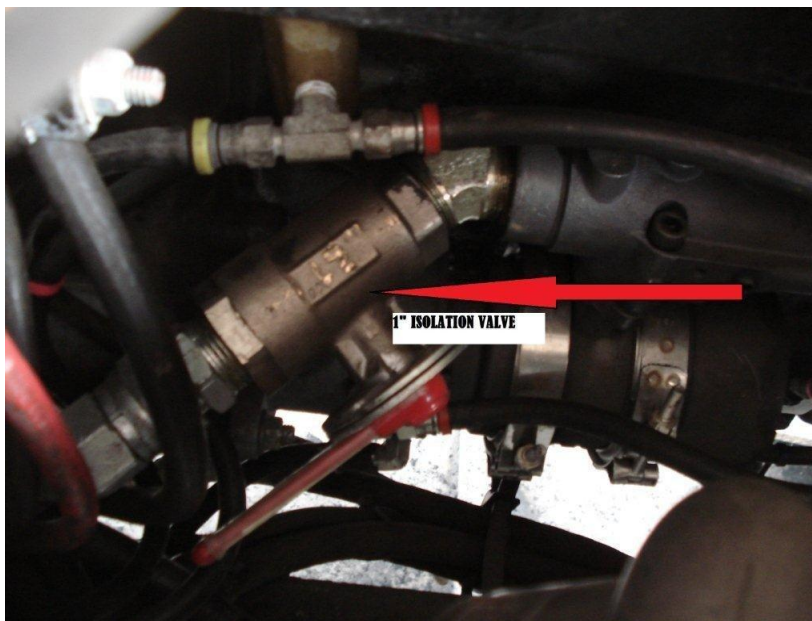
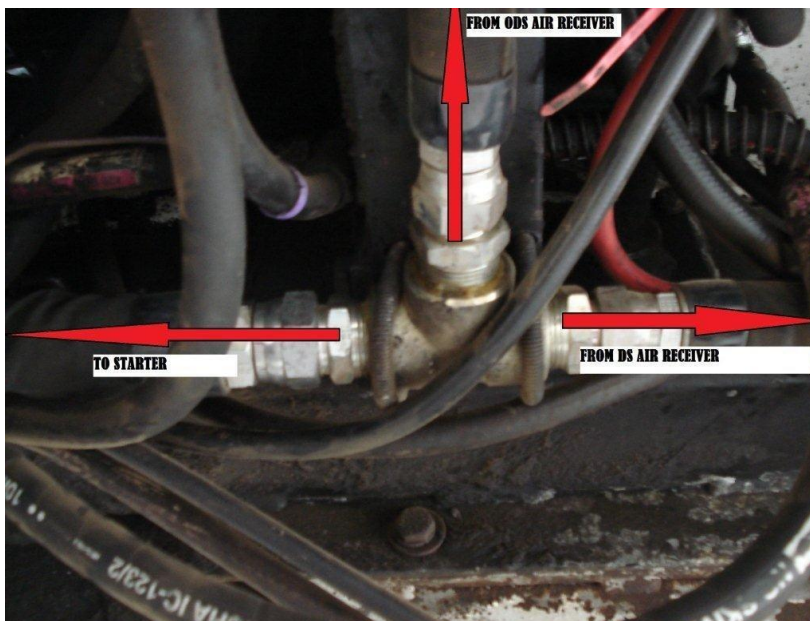
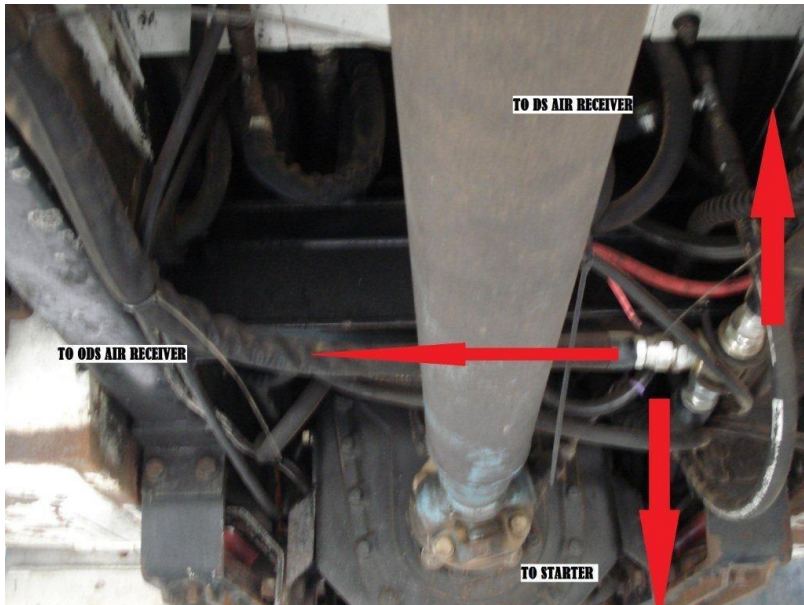
0601-10011 Isolation Valve

9-13010047 50mm, M10, U-BOLTS (2 off required)

And 9-13010046 Hose & Fittings Kit – Starter Motor (Personnel Vehicles)

Or 9-13010100 Hose & Fittings Kit – Starter Motor (Trayback Vehicles)





Recommendations:

It is recommended that equipment owners and end users experiencing Driftrunner and Brumby vehicle starting issues due to the use of low viscosity diesel fuels implement the described starter circuit modification.

VLI Driftrunner and Brumby new vehicle production has include the starter circuit modification as standard fitment since June 2012.

VLI recommends end users and equipment owners continue to inspect and maintain their vehicles in accordance with the existing recommendations of the original equipment manufacturer.

Supporting Documentation:

5-04168601 1006-6 DES Pneumatic / Hydraulic Schematic (ESS Type 1)

5-04168701 1006-6 DES Pneumatic / Hydraulic Schematic (ESS Type 2)

Please ensure this document is circulated to all relevant personnel within your organisation.

Should you have any further queries please contact your VLI Representative.

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