



Technical Bulletin / Safety Alert

Unique ID No: DES2015-TBSA-02 **Rev:** 0

(This document supersedes all previous versions of DES2015-TBSA-02)

Subject: DES Control Systems – Safety Critical Components

Date: 1st May 2015

Applicable to: All VLI JUG-A-0, Driftrunner & Brumby Machines and Diesel Engine Systems (DES) MDA DES 13017-2, MDR090376DES, MDR090376DES-10, MDR124827DES, MDR074246DES, MDR074246DES-1, MDR074246DES-2 and MDR114991DES

Details of Revision: 0. Original Issue

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.

Description:

VLI draws attention to the following clause from AS/NZS 3584.3:2012:

3.2.7.3 Engine shutdown systems

All safety critical components that are essential to the operation of the automatic shutdown system or emergency stop system shall be replaced or overhauled at intervals recommended by the manufacturer. Where there is no recommendation from the manufacturer, all such components shall be overhauled or replaced as specified for Code D, unless stated otherwise by a competent person.

In order to provide assistance and guidance to equipment owners and end users of VLI equipment, VLI herein provides recommendations for lifecycle replacement of safety critical components used in the DES control systems of VLI design approved and design registered diesel engine systems (DES).

Recommendations:

The attached tables define the safety critical components that form part of the DES control systems for VLI design approved and design registered diesel engine systems (DES), and provide a recommended maximum frequency for replacement.

The maximum replacement intervals recommended by VLI for the listed safety critical components are based on the requirement for completion of routine maintenance in accordance with OEM recommended maintenance schedules, as a minimum, and taking into consideration additional maintenance requirements based on increased duty cycle and severe environmental conditions.

The recommendations provided by VLI must be reviewed and assessed for each operation and specific end user requirements.

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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MDA DES13017-2, MDR090376DES & MDR090376DES-10

<u>DESCRIPTION</u>	<u>PART No.</u>	<u>MAXIMUM REPLACEMENT INTERVAL</u>
CYLINDER - FUEL SHUT OFF	9-04160114	4,000hrs
VALVE - THERMAL SENSOR	9-04160116	3 Monthly
VALVE - OIL PRESSURE SHUTDOWN	9-04160117	4,000hrs
VALVE - COOLANT LOSS	9-02161118	4,000hrs
VALVE - CHECK	9-04160127	4,000hrs
VALVE - REGULATOR	9-04160131	4,000hrs
VALVE - FLOW CONTROL	9-04160132	4,000hrs
VALVE - LOW WATER SHUTDOWN	5-04100506	4,000hrs
METHANE ENGINE SHUTDOWN SYSTEM	N/A	Subject to statutory electrical inspections
METHANE SENSOR HEAD	N/A	Subject to calibration testing
FLOW RESTRICTOR	5-04160137	4,000hrs
FLOW RESTRICTOR	5-04160141	4,000hrs
ACTUATOR	5-04165202	4,000hrs
VALVE - PILOT	9-04166401	4,000hrs
VALVE - EMERGENCY ENGINE SHUTDOWN	9-02161104	4,000hrs
STRANGLER VALVE	5-04116403	8,000hrs
CYLINDER - PNEUMATIC	5-04165902	4,000hrs
VALVE - THERMAL SENSOR	5-04107301	3 Monthly
VALVE - THERMAL SENSOR	5-04167101	3 Monthly
VALVE - PRESSURE RELIEF	9-04061401	4,000hrs
VALVE - THERMAL SENSOR	5-04167401	3 Monthly
CYLINDER - PNEUMATIC	9-04160114	4,000hrs
VALVE - PRESSURE RELIEF	5-04167501	4,000hrs

MDR124827DES

<u>DESCRIPTION</u>	<u>PART No.</u>	<u>MAXIMUM REPLACEMENT INTERVAL</u>
VALVE - FLOW CONTROL	0601-50027	4,000hrs
VALVE - EMERGENCY SHUTDOWN SYSTEM	9-1416004-001	4,000hrs
VALVE - PILOT	9-04160122	4,000hrs
VALVE - STRANGLER	0102-50025	12,000hrs
REGULATOR	9-04160131	4,000hrs
VALVE - FLOW CONTROL	0601-50027	4,000hrs
METHANE ENGINE SHUTDOWN SYSTEM	N/A	Subject to statutory electrical inspections
METHANE SENSOR HEAD	N/A	Subject to calibration testing
SWITCH - METHANE BYPASS	N/A	4,000hrs
VALVE - FLOW CONTROL	0601-50027	4,000hrs
THERMAL SENSOR	9-04160116	3 Monthly
THERMAL SENSOR	5-04107301	3 Monthly
THERMAL SENSOR	9-1416006-001	3 Monthly
VALVE - SHUTDOWN FLOAT	5-1416007-001	4,000hrs
CYLINDER - ENGINE SHUTDOWN	9-1416008-001	4,000hrs
VALVE - PILOT	9-04160122	4,000hrs
VALVE - ENGINE OIL PRESSURE SHUTDOWN	9-04160117	4,000hrs
VALVE - COOLANT LOSS SHUTDOWN	9-02161118	4,000hrs
VALVE - LOW BOOST SHUTDOWN	9-02161118	4,000hrs
VALVE - CHECK	9-04160127	4,000hrs

MDR074246DES, MDR074246DES-1, MDR074246DES-2 & MDR114991DES

<u>DESCRIPTION</u>	<u>PART No.</u>	<u>MAXIMUM REPLACEMENT INTERVAL</u>
CHECK VALVE	0601-10022	4,000hrs
REGULATOR - SAFETY CIRCUIT	0601-50025	4,000hrs
FLOW RESTRICTOR - SAFETY CIRCUIT	0601-50027	4,000hrs
ELECTRICAL SHUTDOWN SOLENOID	0601-50028	4,000hrs
THERMAL SENSOR	0601-10051	3 Monthly
COOLANT LOSS VALVE	0601-10058	4,000hrs
ENGINE OIL PRESSURE SHUTDOWN VALVE	0601-50041	4,000hrs
HYDRAULIC OIL LEVEL SHUTDOWN VALVE	0302-10037	4,000hrs
START OVERRIDE PILOT VALVE	0601-10064	4,000hrs
ENGINE SHUTDOWN CYLINDER	0601-50047	4,000hrs
START OVERRIDE FLOW CONTROL	0601-50027	4,000hrs
EMERGENCY STRANGLER VALVE	0102-50025	12,000hrs
RTD	0704-50002	4,000hrs
METHANE ENGINE SHUTDOWN SYSTEM	0704-50001	Subject to statutory electrical inspections
METHANE SENSOR HEAD	0704-50004	Subject to calibration testing
EMERGENCY STOP VALVE	9-04160103	4,000hrs
EMERGENCT STOP SYSTEM PILOT VALVE	0601-10064	4,000hrs
SHUTDOWN FLOAT VALVE	0104-60067	4,000hrs
METHANE SENSOR BYPASS SWITCH	0704-50018	4,000hrs