

# Flameproof Rubber Tyred Vehicles Technical Bulletin

Bulletin Number: TB0910

Date: 30/07/2009

Subject: Checking of DES Inlet Flametraps

## **Purpose**

To inform the industry of a procedure for checking the installation of Diesel Engine System (DES) inlet flametraps.

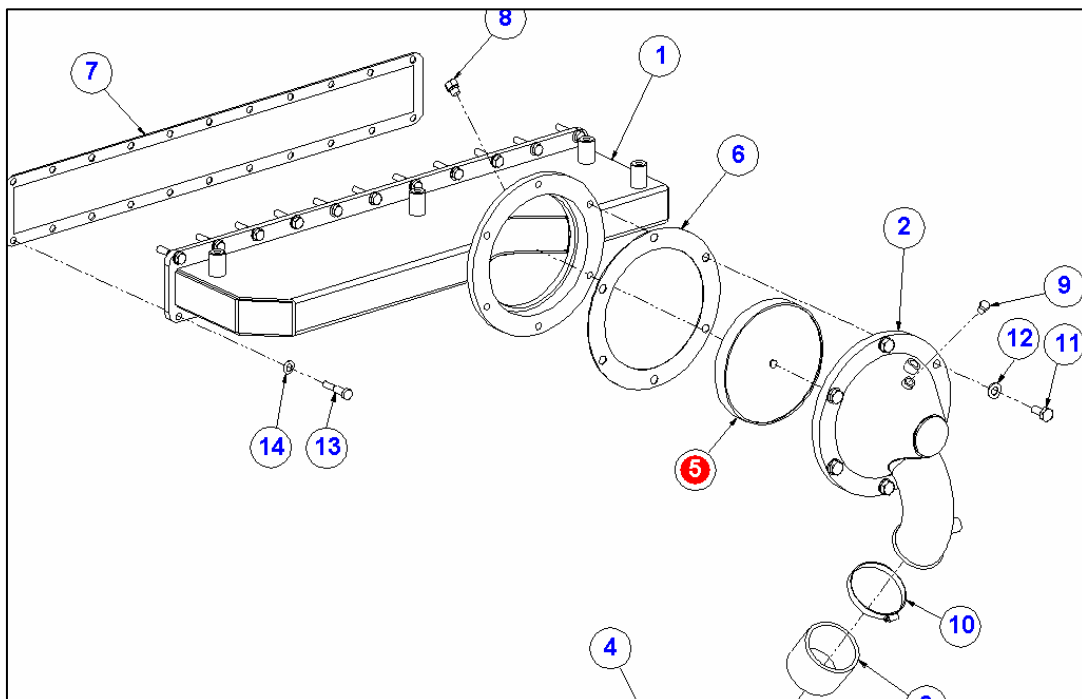
## **Applicable to**

Sandvik 3304, 3306, and 3126 Diesel Engine Systems.

## **Description**

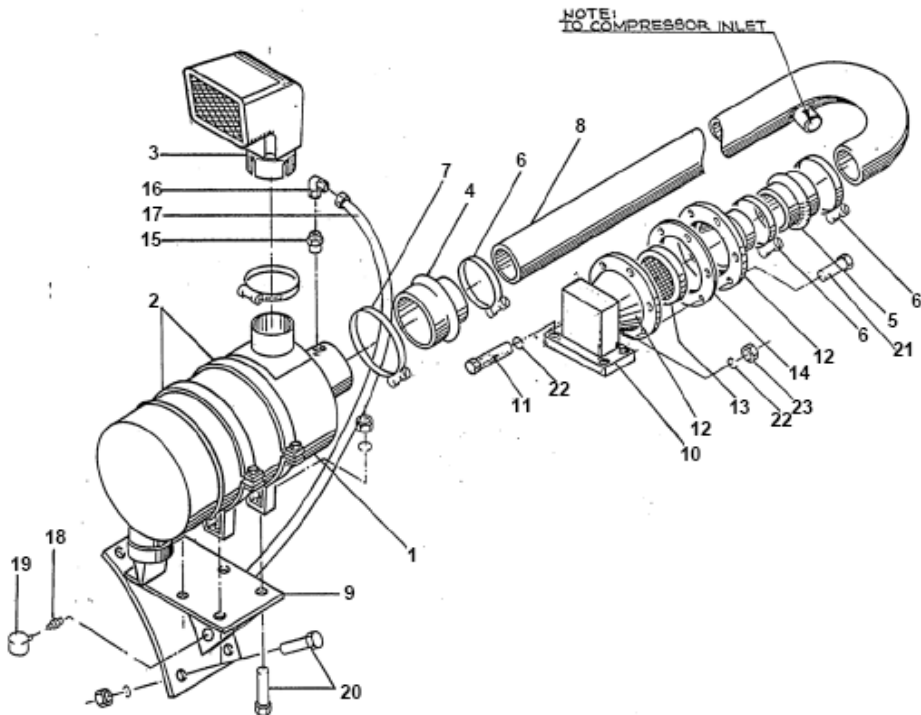
Sandvik have been advised that an explosion protected DES was inspected and it was found that the clearance between the flametrap and the inlet manifold housing exceeded allowable limits. Sandvik understand that the flametrap element inspected was similar to that used in the Sandvik 3304, 3306 and 3126 DES.

The Sandvik 3304, 3306 and 3126 DES have been explosion tested in accordance with the version of AS/NZS 3584 current at the time of their design. In New South Wales, these engine systems are approved or registered and the associated approval/registration drawing specifies the allowable tolerances on the inlet housing and the minimum dimension for the flametrap.

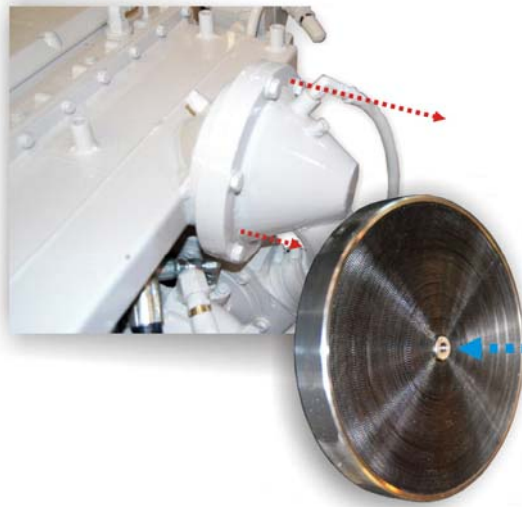


**Figure A – Cat3126 air intake assembly showing flametrap (item 5) and housing (item 1).**

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**Figure B** – Cat3304 and 3306 indicative air intake assembly showing flametrap (item 13) and housing (item 10).



**Figure C** – Photograph of Cat3126 flametrap element and housing.

### **Recommendations**

Continue to perform Code C maintenance examinations on each DES as per AS/NZS 3584.3:2005 and Sandvik maintenance schedules.

When checking or replacing the inlet flametrap element, the radial clearance must not exceed 0.20mm as per the procedure below. The Sandvik part number for the flametrap element is A2U900-241033.

Note that the flametrap elements can be out of round, and the clearances may vary around the circumference of the element.

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## **Contact**

Contact your Sandvik representative for further information or any questions you may have.

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## INSPECTION PROCEDURE:

### Special Tools –

- Calibrated bore micrometer or internal/external vernier calliper suitable for 157 NB.
- 0.20mm feeler gauge.

### Procedure –

1. Ensure the vehicle has been set up for service (refer respective JSEA 1.01 for Sandvik vehicles).
2. Check the diameter of the inlet housing bore using the bore micrometers. The diameter must be between 157.63 and 157.73 mm. If the housing is outside this range, mark the item as “Out of Service” and replace with a compliant housing. Check the diameter at 45 degree spacings, and wherever marking or scuffing in the machined surface can be seen.
3. If the housing is correctly sized, reinstall the flametrap after replacement or cleaning.
4. When installed, the flametrap should not be loose.
5. Use the 0.20mm feeler gauge to check the clearance between the flametrap and housing around the perimeter of the flametrap element. As the flametraps can be slightly out of round, the entire perimeter must be checked. The areas at, and adjacent, the flametrap element cross-braces must be included in the check.
6. If the gap at any point around the flametrap exceeds 0.20mm the flametrap element must be removed and replaced.

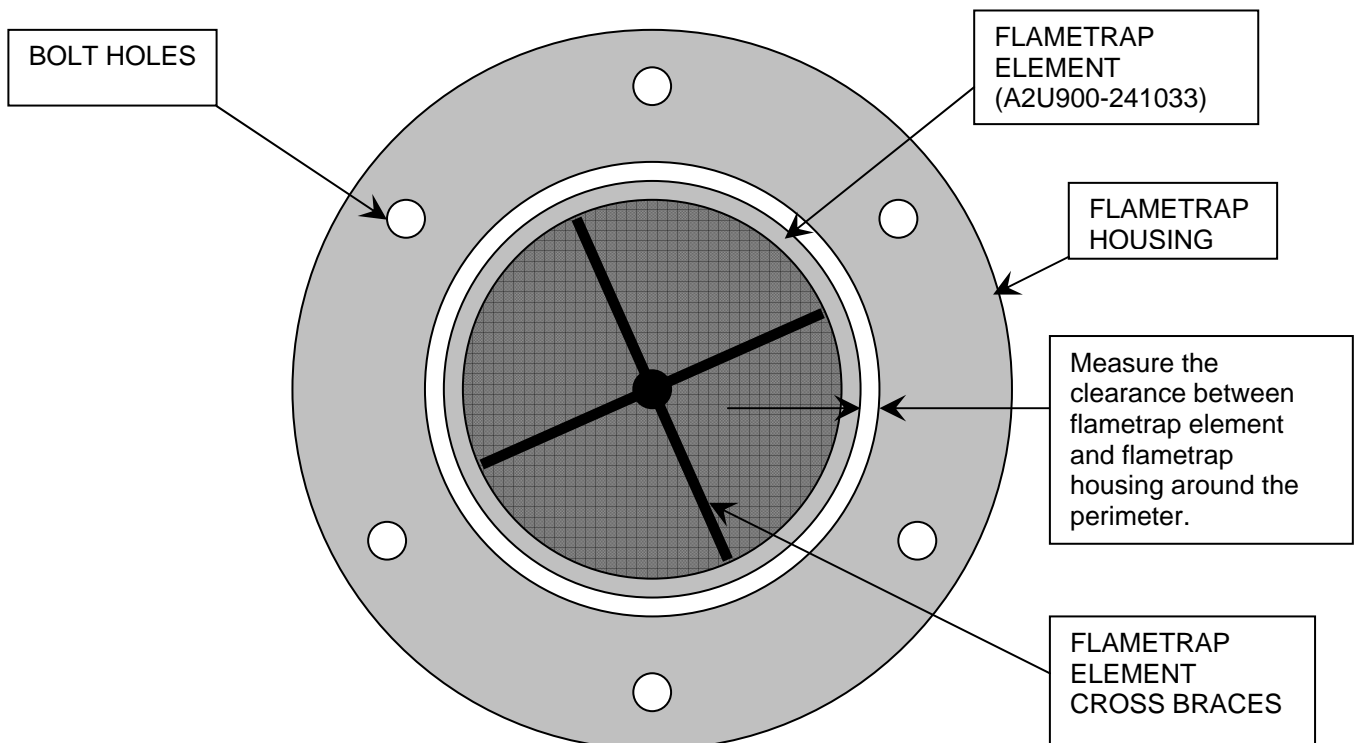


Figure 1 – Sketch of flametrap element inside housing.