2 Isuzu CXH450 chassis repairs and expectation for chassis repairs and certification

Isuzu CXH450 chassis failures

The premature failures of Isuzu CXH450 chassis rails have been analysed and the findings (with recommended permitted stress levels) have been summarised in two reports, prepared for Isuzu NZ by Transport Engineering Research New Zealand Ltd. (TERNZ).

The Transport Agency has been advised by Isuzu NZ that in their opinion a chassis that has been repaired and reinforced so that the stress levels are not exceeding those recommended in the two TERNZ reports, the chassis would have an acceptable service life.

Steps to be taken by HVSCs for Isuzu CXH450 chassis failures

1. Before starting to design the repair and reinforcement specification, the HVSC must obtain copies of both reports by TERNZ through Isuzu NZ.

2. The grade of steel of the chassis rails must be obtained in writing from Isuzu NZ (unless the HVSC has already received confirmed data of the chassis rail material).

3. The HVSC may need to check the Body Builders' Manual issued by Isuzu, covering CXH450 type vehicles. **Note:** The two TERNZ reports, the *Body Builders' Manual* and the information on the chassis rail material can be obtained from the Isuzu Product Engineer (phone +64 9 978 3624).

4. When the chassis repair and reinforcement is designed, the recommended maximum stress levels (included in the TRNZ reports) must be taken into account.

Expectation when a chassis repair is certified

1. If a chassis has been damaged due to a crash or the incorrect use of the equipment (equipment abuse), the repair must reinstate the chassis within safe tolerance of its state when manufactured (or last certified subsequent to its modification). A correct repair would not significantly affect the longevity of the chassis.

2. If a premature chassis failure occurs due to fatigue, it may indicate that the chassis rating of the vehicle might be inappropriate or the vehicle might be inappropriate for the type of service it is used in. In such a case, a repair that reinstates the vehicle within safe tolerance of its condition when manufactured is not sufficient; therefore the chassis must be repaired and reinforced.

3. Transport law is silent on the issue of longevity of a vehicle or its equipment or component, and there is no specific requirement for the minimum distance or time during which a vehicle or its equipment or component must not fail. However, it is expected that if the chassis of a vehicle is repaired and reinforced correctly, it will not fail in service significantly earlier than vehicles of other makes and models, which have similar payload capacities, intended for similar usage, and operated in a similar manner and conditions.

This technical bulletin replaces memo 37.

Page amended **9 April 2018** (see **amendment details**)