

## **Technical Bulletin TB – 0120 : Issue 2**

**To :** Machine owners as listed

**From:** Malcolm North

**Date:** 6<sup>th</sup> May 2017

**Our Ref** TB- 0120\_002

**Re:** Drive Gearbox Issues.

### **Mandatory Safety Check. - HR12 4x4 models**

We have been made aware of a number of gearbox failures on HR12 4x4 machines. Following extensive testing into the possible root cause, a mode of failure has been identified which is linked to internal mechanical damage of the wheel drive unit. This physical damage can be caused by inappropriate use of the machine which includes excessive kerbing and drop offs or the landing forces of a poorly controlled crane lift. In cases where damage is present in the wheel drive assembly, continued misuse during operation in high drive mode could lead to an internal failure of the wheel drive shaft seal, pressurising the gear box unit. This failure coupled with further improper use could in extreme cases, lead to the separation of the gearbox from the machine. In order to mitigate the above serious failure mode, we are providing a modification that will protect the drive circuit in the event of internal wheel drive shaft seal damage. The machine can then still suffer a damaged drive motor but the drain line will curtail the possibility of the internal pressure build up which leads to the critical failure when subjected to other external forces.

The instance of gearbox failure has been proven to occur shortly after the loss of the drive motor seal effectiveness, so any machine that is not displaying any evidence of oil leaks or loss of drive efficiency is still safe to use. Any machine that does have a characteristic of oil leaks from one of other of the drive motors must be taken out of service until it can be inspected and repaired. Under no circumstances should a machine be left in service with a damaged gearbox or drive motor.

The severity and risk associated with this potential issue has escalated this retro-fit to 'Immediate Action'. Any machines that have yet to be fitted should be modified within the next four weeks from the date of this revision, after which they should be taken out of service until such time that the modification can be carried out.

Malcolm North



Engineering Manager.

This Technical Bulletin TB- 0120 has been actioned by: -

Name.....Signature.....Date.....

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with a short lanyard  
in boom type platforms**

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