



S A F E T Y B U L L E T I N

OFF-HIGHWAY MOBILE EARTHMOVING EQUIPMENT – TYRE MAINTENANCE PRACTICES

The trend to replace biased (cross-ply) tyres with radial tyres, on off-highway earthmoving equipment, fitted with multi-piece rims has resulted in a relatively high incidence of rim failures due to fatigue in service.

Attempts to remove a tyre/rim assembly (ie. wheel) whilst the tyre is still inflated can result in a failure of the rim and components being ejected with considerable force. This is particularly so where the integrity of the multi-piece assembly is dependent on the wheel to hub fixing appliances.

To avoid accidents the following minimum requirements must be observed prior to the loosening of wheel nuts.

- (a) Exhaust all pressure from the tyre.
- (b) Remove the valve core and ensure no residual pressure exists in the tyre.
- (c) Deflate both tyres of dual wheel assemblies.

As an additional precaution, all multi-piece rims should be subjected to non-destructive testing (either magnetic particle or ultrasonic methods) at each tyre change, and the rims treated to prevent corrosion. Defective components should not be re-used unless assessed by the rim manufacturer as still serviceable. Complete records detailing the results of all inspections and tests should be maintained.

Failure to observe the above requirements can result in serious or fatal injuries to tyre maintenance personnel and other who may be in the immediate area.

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27 August 1993