

Certification of Hi-Railed Excavators

These notes supplement OM94001 Issue 1, "*Hi-Rail Vehicles for use on the Controlled Network*" pending updating of that code and apply to Vehicle Type Approval¹ of hi-railed excavators.

It is required that hi-railed excavators must have a certificate from a Chartered Professional Engineer (CPEng) (or other engineer acceptable to ONTRACK) stating that the design meets the requirements of OM94001 and is fit to operate on rail, and clearly stating the amount of work the machine can do while running on its hi-rail gear. The latter must take into account both the static and fatigue loads. The certificate must be included in the operator's manual and any limits or restrictions must be listed with any other safety instructions in the manual.

The work a machine can be rated to while running on its hi-rail gear will be somewhere between "none" and "unlimited" (i.e. hi-rail equipment designed to withstand the machine working as an excavator to the point of instability). If the hi-rail equipment is fit only for a limited range of machine activities it is preferred that load/radius limits be related to key activities that may be undertaken on track e.g.:

- Hi-rail gear fit only for travel with machine unladen.
- Carry and spread buckets of ballast.
- Carry a specified number of concrete sleepers weighing 220kg each.
- Carry a 12.8m length of rail, weight 640kg.
- Clear scrub.
- Use a thumb to insert or remove a sleeper.
- Lift a mini tamper weighing 360kg.
- Unlimited work to the point of instability (the hi-rail gear can withstand any work that is safe in the operator's judgement for the life of the machine).

If the engineer rates the machine for a particular limited load then it needs to be noted whether that is for in-line travel or 360 degrees of slew.

Manufacturers and operators of hi-railed equipment that will require type approval are advised to discuss requirements with KiwiRail Network (ONTRACK) before commencing manufacture.

Andrew Hunt
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¹ See OM94001 Issue 1, "*Hi-Rail Vehicles for use on the Controlled Network*" section 2.1.