

Safety Alert: Slew Bearing Failure on Forestry Excavator

Rayonier Matariki Forests has shared this Learning Review.

Slewing Ring Bearings, also known as Swing Bearings, Rotec Bearing or Turntable Bearings, are critical components used in a wide range of forestry equipment. These bearings can support axial, radial, and moment loads, making them suitable for applications like excavators and yarders.

However, like any other mechanical component, slewing ring bearings are also prone to failure, which can lead to costly downtime, equipment damage, and safety hazards.

These bearings are the crucial link and connection point that fixes the upper structure (cab) to the undercarriage on standard excavators. On a levelling machine the slewing bearing in combination with the tilt platform keeps the cab secured to the undercarriage.

With the advancement of steep slope mechanization systems in forestry, excavators are operating on steeper slopes than ever before.

Although purpose-built equipment take in consideration modern systems and applications, critical components must be properly maintained to ensure serviceability and safe use.

Standard earthmoving equipment used in a steep slope harvesting application have not been specifically designed for this application. When using a standard earthmoving excavators modified for forestry use, in steep slope harvesting systems, consideration must be given to the increased forces on the slew bearing.

The key concern with slew bearing failure in steep slope operations is full separation of the boom and cab from the undercarriage.

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A broken slew ring prompted the review