Before you replace that gearbox...

A quick guide to gearbox **repair, remanufacture and replacement**

Hardman Group.

Building on a legacy.
Accelerating for the future.

HARDMAN BROS

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Your gearbox has failed.
Now what?

When a critical gearbox fails, getting equipment running again takes priority.

How soon can a replacement arrive? What will it cost? What happens to production while you wait?

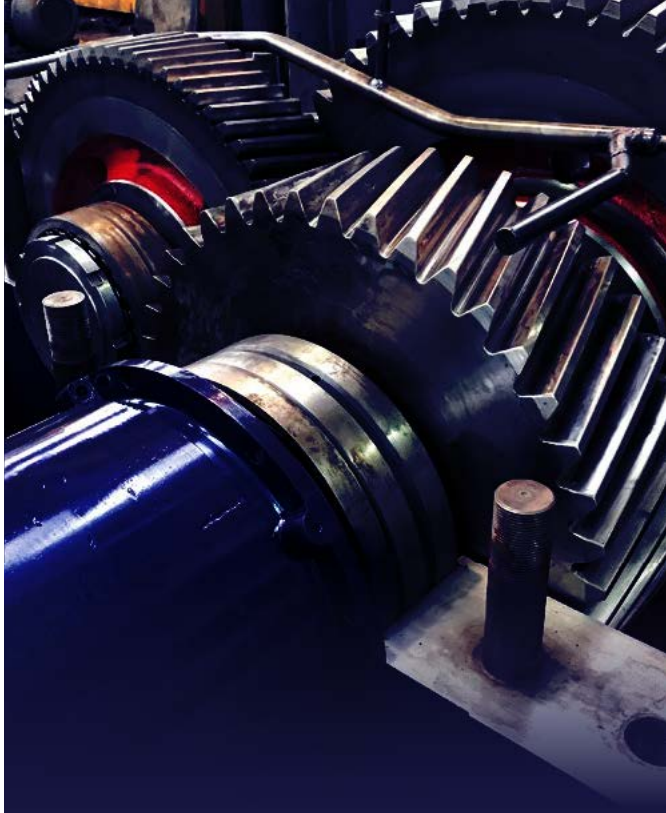
Before committing to a new unit, consider how much of the existing gearbox could still be put back to work.

Australian manufacturers face growing pressure to make every investment count. The sector's total expenses rose 7.8% in 2024–25, outpacing income growth of 6.7% (Australian Bureau of Statistics). Assessing the remaining value in existing assets can help inform smarter spending decisions.

Wayne Hardman, General manager of Hardman Bros, says failure should always prompt a closer look. "An industrial gearbox is a significant asset. In many cases, a failure doesn't mean you need to replace the whole thing," he says.

"Where housings and major components remain serviceable, inspection can establish which gears, shafts, bearings and seals need repairing or replacing. For older equipment, reverse engineering and local manufacturing may provide replacement components when OEM parts are unavailable."

The right approach depends on condition, scope, cost and lead time. A thorough assessment gives operators a clearer basis for deciding.



In this guide

- **What a gearbox overhaul should involve**
- **How to compare cost, lead time and downtime**
- **Five questions to ask before approving work**

What should a proper gearbox overhaul involve?

An overhaul's scope shapes what operators can expect when equipment returns to service. Start by asking how the gearbox will be assessed and the failure investigated.

Hardman says remanufacturing can involve a much broader examination than repairing the failed component.

"You need to understand why the gearbox failed and deal with the underlying issues. That's how you work towards getting it back into reliable service," he says.

Depending on scope, work can include strip-down, cleaning, dimensional inspection and non-destructive testing. Assessment of gears, shafts, bearings and housings determines what can be retained, restored or replaced.

Reassembly should meet the required tolerances, supported by appropriate inspection, testing and documentation.

What to establish with your repair partner

Condition

How will critical components be inspected?

Cause

How will underlying failure issues be investigated and addressed?

Scope

What will be retained, repaired or replaced?

Verification

What testing and documentation will support return to service?

How much extra service life can you expect?

Hardman says there is no universal figure for the additional service life a rebuild can provide.

"Every gearbox is different," he says. "Expected performance depends on the rebuild scope, the gearbox's initial condition, operating demands, lubrication, alignment, contamination and maintenance."

Where appropriate, remanufacturing may also address known failure modes or improve component reliability.

Compare the full cost before you decide

Repair and replacement prices are only the starting point. Equipment downtime also carries a cost.

“For critical equipment, the downtime involved in waiting for an OEM replacement can cost significantly more than the gearbox itself,” Hardman says.

Retaining serviceable components may reduce costs and lead times, depending on damage, parts availability and manufacturing requirements. Replacement may prove more suitable after assessment. Compare both options over the asset’s operating life.

Explore what’s possible with your existing equipment

Hardman Bros combines gearbox refurbishment, gear manufacturing, machining, reverse engineering and inspection, supported by qualified specialist subcontractors where required.

This capability offers another pathway for assessing worn, damaged or obsolete components before committing to replacement.

Explore Hardman’s capabilities on the following pages.

5 questions to ask before making the call

1. What is still serviceable?

Which components can be retained, repaired or replaced, and what inspection findings support that assessment?

2. Why did the gearbox fail?

Do operating conditions, lubrication, alignment or contamination need attention alongside component work?

3. What does each option include?

Compare components, tolerances, inspections, testing and documentation. Check exclusions.

4. When can equipment return to service?

Compare turnaround times, parts availability and specialist processes. What could delay completion?

5. What is the full commercial impact?

Weigh quoted costs against downtime, expected performance and ongoing maintenance.

Need a large gear or gearbox?

Talk to us before you replace it.

Gearbox MRO, reverse engineering and gears up to **1.5 metres diameter,** backed by Australian manufacturing capability.

Large Gear Manufacturing

Gears up to **1.5 metres diameter,** manufactured in-house.

Industrial Gearbox MRO

Inspection, overhaul, repair and complete remanufacture of industrial gearboxes.

Reverse Engineering

Obsolete drawing? Component unavailable? We can measure, design and manufacture.

Obsolescence Support

When critical parts are no longer available, we can reverse engineer and manufacture replacements.

Quality You Can Rely On

Australian owned and operated, with proven manufacturing capability and ISO 9001-certified quality systems.

Our Capabilities

Hardman Bros combines gearbox refurbishment, reverse engineering, gear manufacturing and precision CNC machining to support critical industrial equipment across its operating life.

When parts are worn, obsolete or unavailable, our Australian manufacturing capability provides another pathway to repair, recover and return equipment to service.

Gear Manufacturing

- Gear cutting Ø3mm to 1500mm
- Hobbing & shaping
- Gear grinding up to Ø800mm x 600mm (expanding to 1000mm face width)

Machining

- 4-Axis CNC Milling up to 3000 x 800 x 1200mm
- 5-Axis CNC Milling up to 800 x 800 x 550mm
- 5-Axis Mill-Turn up to Ø650mm x 1000mm
- Pallet loading 500 x 400 x 450mm

Turning

- CNC lathes up to Ø650mm x 1000mm
- CNC lathes barfeed to Ø65/Ø80 x 1000mm
- Sliding head lathes barfeed to Ø32mm

Additional

- Broaching
- Keywaying
- Honing
- Fabrications
- Lights out automation

Have a gear or gearbox requirement?

Send us the details.

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