

GEAR OIL PUMP OVERHAUL & BEARING UPGRADE

Re-engineering obsolete components to improve future repair turnaround

AVTPUMP received a purchase order to collect and overhaul a critical gear oil pump from a manufacturing site.

The pump supplies lubrication oil to the main rollers within the production process. Although this unit was being repaired as a spare, its availability remained critical. Should the installed pump fail, having a fully operational spare ready for service would be essential to avoid unexpected downtime.



THE CHALLENGE

AVTPUMP initially attended site following a breakdown, removing the failed pump and installing a previously refurbished unit in its place.

The replacement pump was then precision laser aligned and commissioned before the failed asset was returned to our workshop.

Inspection revealed significant wear across several critical components. Both pump shafts were worn at the lip seal and coupling locations, while the bearings and bearing housing locations had deteriorated beyond acceptable tolerances.

A further challenge was the use of obsolete imperial bearings, which had become increasingly difficult to source and posed a risk to future repair lead times.

OUR APPROACH

Rather than carrying out a direct like-for-like repair, AVTPUMP reviewed the design of the pump and identified an opportunity to improve its long-term maintainability.

By upgrading the bearing arrangement to utilise readily available metric components, the pump could be repaired more efficiently in the future without compromising performance or reliability.



“By upgrading obsolete components during the overhaul, we were able to improve not only the reliability of the pump today, but also the speed and efficiency of future repairs.”

- AVTPUMP Engineer

OUR SOLUTION

The original imperial roller bearings were replaced with modern metric cylindrical roller bearings. To accommodate the upgrade, all bearing housing locations were precision machined and re-bushed to suit the new bearing arrangement.

Both shafts were also machined to the new bearing diameters, while the lip seal arrangement was updated to suit modern metric seals. Following completion of the machining work, the pump was fully rebuilt, tested, and prepared for return to service.

THE RESULT

The pump was successfully overhauled and returned as a reliable standby asset for the customer.

By converting the pump from obsolete imperial bearings to widely available metric equivalents, AVTPUMP has significantly improved future serviceability and reduced the risk of extended repair times caused by difficult-to-source components.

The customer was extremely satisfied with both the quality of the overhaul and the turnaround time. The success of the project has since led to further repairs on similar pumps using the same engineering approach.



AT A GLANCE

Industry: Manufacturing

Application: Gear oil supply to production rollers

Services provided:

- » Site pump removal and installation
- » Laser alignment and commissioning
- » Pump overhaul
- » Precision machining and re-engineering

Products Used:

- » Metric cylindrical roller bearings
- » Metric lip seals
- » Re-engineered bearing housings

Key Issue: Obsolete bearing arrangement and excessive wear to shafts and bearing housings.

Outcome: Pump restored to service, future repairs simplified through component standardisation, and standby asset availability maintained to support production continuity.

Need help?

Contact our experts