

WESFARMERS CSBP LTD

SCOPE OF WORK

KWINANA WORKS

| EQUIPMENT NUMBER & DESCRIPTION | REVISION | DATE |
|--------------------------------|----------|------|
| | | |

| SHORT SCOPE DESCRIPTION | WORK ORDER NUMBER | PRINCIPAL'S REPRESENTATIVE |
|--|-------------------|----------------------------|
| GEARBOX OVERHAUL (MINIMUM REQUIREMENT) | | DAVID SANDON |

1. INTRODUCTION

Gearbox performance has a significant impact on Plant Reliability at CSBP, the standard of overhaul of CSBP gearboxes is therefore paramount. As an absolute minimum gearboxes shall be overhauled to manufacturers specification, however overhaul standards and specifications better than manufacturers is preferable.

The following documents shall be applied to gearbox overhauls, they are listed in order of precedence.

1. ITP
2. SOW
3. CSBP Drawings, Specifications and Engineering Standards
4. Manufacturers Specification.
5. Australian Standards.

Gearbox Condition Reporting is just as important as the overhaul, on the basis that we need to understand failure modes and root causes of failure. Please note the investigative nature of the disassembly process.

Unless otherwise noted herein the work involves the supply of labour (including supervision) and materials required to complete the work and shall include, but not necessarily be limited to, the work described in Section 2.

2. WORK INCLUDED (use in conjunction with Inspection and Test Plan)

Disassembly, Condition Report and Quoting

- 2.1 Investigate Gearbox condition, Failure Mode/s and Root Causes of Failure during disassembly of gearbox. Provision of digital photographs is desirable.
- 2.2 Survey gearbox (dimensionally) and record results.
- 2.3 Inspect and record condition of all significant faulty components, provide photos if possible.
- 2.4 If not included in section 2.3, provide detailed condition report of gears, oil condition, bearings etc.
- 2.5 Compile Condition Report and Evaluate Repair Requirements.
- 2.6 Submit Recommendations for repair, condition report and Quotation (as per Purchase Order Requirements) to CSBP.

Repair and Assembly

- 2.7 Repair gearbox as authorised by CSBP.
- 2.8 Assemble gearbox.
- 2.9 Ensure backlash, endfloat within spec.
- 2.10 Record findings.
- 2.11 Check gearmesh mark-up and record.
 - 2.11.1 Prepare for long term storage.

- 2.12 Paint, coating system D, colour Blue Grey (N53)
- 2.13 Prepare and protect all exposed shafts from oxidisation.
- 2.14 Deliver to CSBP Kwinana Store.

3. WORK EXCLUDED

- 3.1 Delivery to the Contractor's premises

4. LIMITS OF WORK

- 4.1 Long Lead time Parts are often held in CSBP Stores, refer to Section 5 Free Issue of Materials.
- 4.2 All other general parts and materials required to complete the overhaul shall be supplied by the contractor.

5. FREE ISSUE OF MATERIAL

- 5.1 CSBP may provide Parts which are applicable to the equipment, these will generally be long lead time items and can be booked out from CSBP Stores using a Work Order. Refer to CSBP Responsible Officer.

6. TESTING AND COMMISSIONING

- 6.1 Testing shall be as per Scope of Work and ITP.
- 6.2 Commissioning will be performed by CSBP.

7. PRODUCTION ACCESS/PRECAUTIONS

Not Applicable.

8. STANDARDS / DRAWINGS

8.2 CSBP Engineering Standards

- 8.2.1 ES 14-102-12 Protective Coatings

8.3 CSBP Drawings

9. CONSTRUCTION SCHEDULE

Not Applicable

10. DOCUMENTATION

Ideally, all documentation shall be sent via Electronic Media, Email is preferable.

- 10.1 As Found Condition Report including Photos
- 10.1.1 CSBP specified Equipment Condition Report (supplied in Word Format)
- 10.2 Repair Recommendations
- 10.3 Itemised Quotation; Detailing Labour, Parts and Contractor Services.
- 10.4 Backlash results
- 10.5 Gear mesh mark-up results
- 10.6 Closing report, to include details pertaining to as found (unless already supplied) and as left gears, bearings, temp readings if test run etc.
- 10.7 ITP; Completed Original Document.

11. SITE INSPECTION

Not Applicable

12. TENDERS

Not Applicable

13. PRICING SCHEDULE

- 13.1 Quotation to be submitted to CSBP Responsible Officer, preferably via Email.
- 13.2 Prices shall be ex GST. GST can be displayed as a separate item.
- 13.3 Quotation shall be itemised as per Scope of Works sections 2-10 (including subsections) as applicable or as a minimum include separate costs for;
 - 13.3.1 Labour strip, repair and assembly
 - 13.3.2 Individual Parts/Materials > \$500
 - 13.3.3 Other parts and Materials
 - 13.3.4 3rd Party Contractor Costs (please specify)