



## FINAL REPAIR SPECIFICATION

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Customer order: EKPC-0000157406  
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Specification no. : 56912-RS1  
Specification date : 10/17/22  
Ref. EPS report : 56912-CR1

### C) REPAIRS

- 1) 1st Stage Impeller and Series Impellers (6)
  - a) Excavate and weld repair cavitation damage and all indications per NDE report. Hand grind to hydraulic contour all repairs on non machined surfaces.
  - b) Machine existing wear ring turns to new design diameters and re-establish proper running clearances to the final case ring diameters.
  - c) Individually mount each impeller on a mandrel and dynamic balance to ISO 1.0 standard.
- 2) Suction Bell
  - a) Remove existing wear ring and bearing then install new ones.
  - b) Machine new case ring and new bearing bores to re-establish concentricity and design running clearances to the rotating components.
  - c) Minimum skim cut the axial mounting faces to restore perpendicularity.
- 3) Bottom Case
  - a) Remove existing wear ring and bearing then install new ones.
  - b) Machine new case ring and new bearing bores to re-establish concentricity and design running clearances to the rotating components.
  - c) Minimum skim cut the axial mounting faces to restore perpendicularity.
- 4) Series Case (6)
  - a) Remove existing wear ring and bearing then install new ones.
  - b) Machine new case ring and new bearing bores to re-establish concentricity and design running clearances to the rotating components.
  - c) Minimum skim cut the axial mounting faces to restore perpendicularity.
- 5) Spider
  - a) Remove existing bearing then install new one.
  - b) Machine new bearing bore to re-establish concentricity and design running clearances to the upper shaft.
  - c) Minimum skim cut the axial mounting faces to restore perpendicularity.
- 6) Stuffing Box
  - a) Remove existing bearing then install new one.
  - b) Machine new bearing bore to re-establish concentricity and design running clearances to the upper shaft.
  - c) Minimum skim cut the axial mounting faces to restore perpendicularity.

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### C) REPAIRS (PER PUMP, CONTINUED)

- 7) Stuffing Box
  - a) Remove existing bearing then install new one.
  - b) Machine new bearing bore to re-establish concentricity and design running clearances to the upper shaft.
  - c) Minimum skim cut the axial mounting faces to restore perpendicularity.
- 8) Discharge Head
  - a) Coat with red oxide primer followed by grey enamel.
- 9) Mechanical Seal
  - a) The mechanical seal will be refurbished and rebuilt to OEM specifications by a third party repair facility.
- 10) Assembly
  - a) Locate 1st stage impeller in same location on pump shaft as was documented during the disassembly process.
  - b) Set rotor vertically in suction bell then assemble the bottom and intermediate cases. Position 2nd stage impeller so that it makes contact with the hydraulic profile of the intermediate case. Position rotor to best operating position for the 1st stage impeller. Secure the 2nd stage impeller in this location by drilling the shaft and securing with set screws.
  - c) Install series case followed by 3rd stage impeller. With 3rd stage impeller in contact with hydraulic profile on case, secure with same method as the 2nd stage. Repeat this procedure for all remaining impellers and cases.
  - d) When all impellers are secure and lower element built, complete assembly by installing the upper shaft, column, spider, discharge head, and stuffing box.
  - e) Block the element in the "full down" position and prep for return shipment to Cooper Power Plant.