

OPEN GEAR RECONDITIONING PROCEDURE

Since 1969 Hofmann Engineering has provided specialist engineering services to Australia's industry leaders.

Quality Assurance accreditation by Bureau Veritas complements our total quality culture.

Our commitment to continuous quality-improvement touches every aspect of our products, services and customer support.

HOFMANN ENGINEERING PTY LTD

A.B.N 74 380 411 420
A.C.N 008 802 211
3 ALICE STREET,
BASSENDEAN, PERTH,
WESTERN AUSTRALIA 6054

Telephone: +61 8 9279 5522
Facsimile: +61 8 9279 9386
Internet: www.hofmann.net.au
Email: mail@hofmann.net.au



1) WORN GIRTH GEAR

With less than 0.5mm of involute wear.



2) WORN SOFT PINION

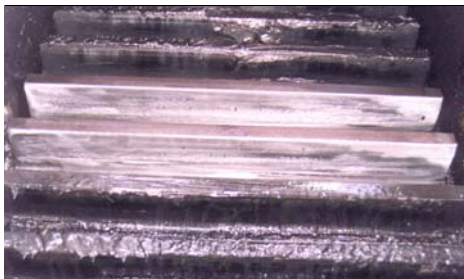
With over 5mm of wear.



3) INSTALL HOFMANN CASE HARDENED PINION

4) APPLY HOFMANN PROCEDURE.

- 1) Measure involute Wear on Gear.
- 2) Clean and Crack detect gear using magnetic particle method.
- 3) Install Hofmann case hardened Pinion. Case Hardness must exceed 55HRC.
- 4) Laser align Drive Train.
- 5) Accurately in-situ grind girth gear using the case hardened pinion as a master.
- 6) Apply Hofmann Grafloscon A-C1 Ultra primer to pinion and gear.
- 7) Inspect lubrication system and connect running-in lubricant Hofmann Grafloscon B-SG00 Ultra.
- 8) Start gear drive slowly increasing the power as the contact improves.
- 9) Apply repair Chemical Etch Hofmann Grafloscon D-SG00 Ultra to heavy contact areas until good contact is achieved.
- 10) Monitor and completely document the installation procedure.

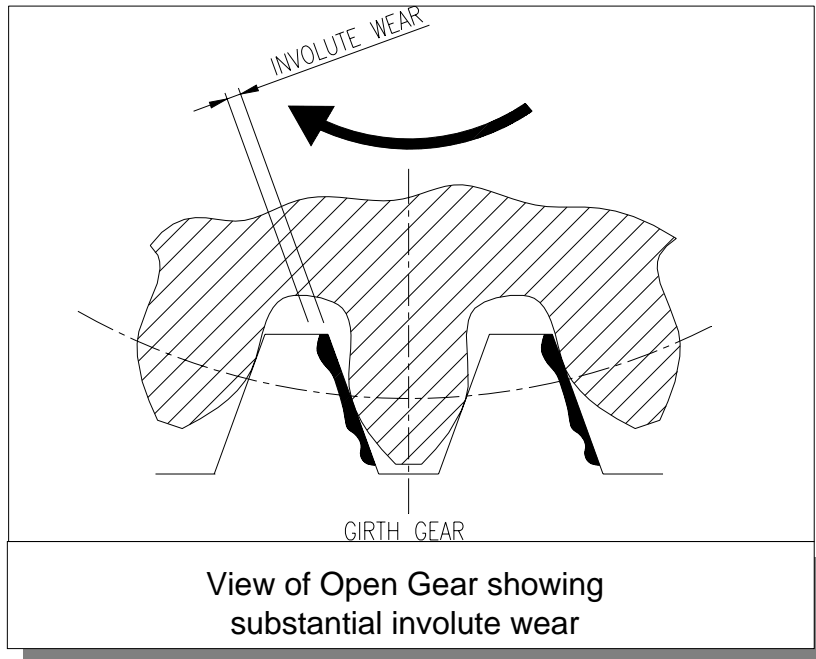


5) FINAL GEAR CONTACT



6) FINAL PINION CONTACT

SELECTING OPEN GEAR RECONDITIONING PROCEDURE



SELECTING GEAR RECONDITIONING PROCEDURE

Measure involute wear on gear then select reconditioning procedure.

Procedure 1: If involute wear is less than or equal to 0.5mm => In-situ grind and chemical etch utilising a Hofmann case hardened pinion.

Procedure 2: If involute wear is greater than 0.5mm => Reverse open gear.

Procedure 3: If both flanks of the gear are worn => Re-cut the open gear.

Procedure 4: If insufficient material is left to re-cut the gear => Replace the open gear.

WARNING!!

Do not install a new pinion against a worn open gear unless one of the above procedures (from 1 to 4) has been performed. The new involute form on the pinion would only contact the high points of the worn open gear and this can lead to:-

- Extreme vibration and noise.
- Severe wear and pitting on both pinion and gear.
- High possibility of tooth breakout and destruction of both the pinion and gear.