



1. WORN GIRTH GEAR

With less than 0.5mm of involute wear.



2. WORN SOFT PINION

With over 5mm of wear.



3. PINION INSTALLATION

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 Lubrication A primer to pinion and gear.
7. Inspect lubrication system and connect running-in lubricant Hofmann Lubrication B
8. Start gear drive slowly increasing the power as the contact improves.
9. Apply repair Force running Lubricant Hofmann Lubrication D to heavy contact areas until good contact is achieved.
10. Monitor and completely document the installation procedure.



5. FINAL GEAR CONTACT



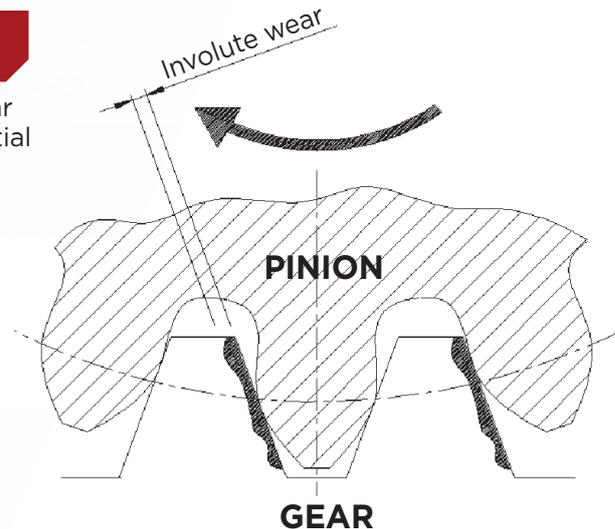
6. FINAL PINION CONTACT



SELECTING OPEN GEAR RECONDITIONING PROCEDURE

GIRTH GEAR

View of open gear showing substantial involute wear.



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

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