



MAKING IDEAS WORK

AN ISO 9002 REGISTERED COMPANY

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SPINDLE WEAR

THE IMT SPINDLE IS INDUCTION HEAT TREATED AND STRESS RELIEVED IN THE BEARING SHOULDER AND JOURNAL AREA. THE HARDNESS PATTERN HAS A GRADIENT TOWARDS THE SPINDLE CORE, THAT RETAINS THE INNER TOUGHNESS WHILE PROVIDING HARD WEARING CONTACT AREAS.

CONDITIONS THAT WOULD PRODUCE HIGH WEAR ON THE JOURNALS ARE EXCESSIVE TURNING OF THE BEARINGS AND IMPROPER LUBRICATION.

THE FACTORS THAT CAN CREATE THOSE CONDITIONS ARE:

- INCORRECT BEARING ADJUSTMENT (TOO TIGHT / TOO LOOSE). SHOULD USE RECOMMENDED PRACTICE AND A TORQUE WRENCH.
- WRONG LUBRICANT (TOO HEAVY / TOO LIGHT)
- MIXED INCOMPATIBLE LUBRICANTS (DIFFERENT BASE)
- CONTAMINATED LUBRICANT
- LUBRICANT UNDER-FILL
- EXCESSIVE LOADS
- EXCESSIVE SPEEDS
- A COMBINATION OF TWO OR MORE OF THE ABOVE FACTORS
- EXTREMELY HIGH MILAGE. SPINDLES DO HAVE A FINITE LIFE.

WEAR LIMITS

THE SEAL AND BEARING MANUFACTURERS RECOMMEND TO CHANGE THE AXLE WHEN SPINDLE WEAR EXCEEDS 0.010 INCH ON EITHER JOURNAL TO AVOID SEAL AND BEARING FAILURES.

WEAR BEYOND 0.010 INCHES WILL SHORTEN THE SEAL LIFE BECAUSE OF EXCESSIVE FLEXING OF THE SEAL LIP. THIS LEVEL OF WEAR WILL ALSO MAKE IT DIFFICULT TO DO A CORRECT BEARING ADJUSTMENT SINCE THE END PLAY READING IS AFFECTED BY THE LOOSENESS OF THE BEARING ON THE SPINDLE.

NORMAL USE OF AN AXLE BEYOND 0.010 INCH OF WEAR ON THE SPINDLE IS NOT RECOMMENDED.