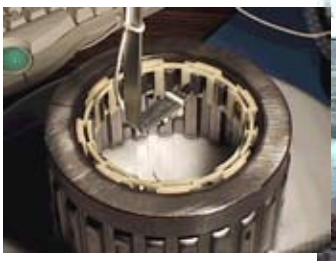
Roller Bearing Detection: Detection of Missing Roller Bearings in Clutch "Cage"

Highlights:

- Detect missing "rollers"
- Direct operator display
- Self diagnostics
- Low cost "eddy" probe
- Data storage capable for "traceability"
- Multi-level password protection
- PLC data highway capable
- Bar code capable
- InspeXion® configurable operating system



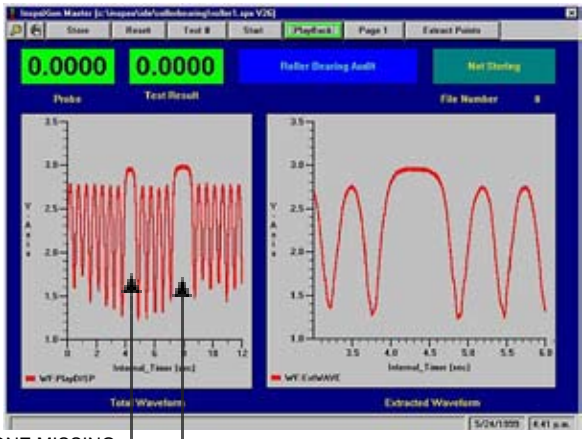
Clutch cages that have been previously assembled with undetected missing bearings are an excellent example of a defective part that can continue on undetected as part of a greater assembly process. This defective part often becomes apparent later at the manufacturers expense as a customer warranty condition. Sciemetric's Test and Analysis System with InspeXion® operating software provides an ideal advanced defect detection platform which can be used to detect missing bearings in clutch cages prior to further assembly, thus eliminating root cause defects.

Using a low cost eddy current non-contact sensing probe, the assembly under test is rotated and the captured "signature" of this part is immediately compared to a 3s "learned" signature profile of good parts for immediate PASS/FAIL acceptance or rejection.

In addition to identifying that one or more rollers are in fact missing, the system can also transmit this knowledge to both the plant network server and the host PLC (if present) to provide a statistical foundation for subsequent production analysis (available from Sciemetric via the optional QualityWorX® data base program).

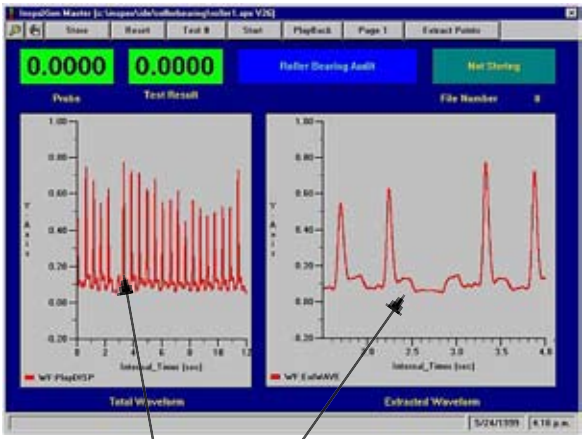
Straightforward operator and maintenance screens ensure a meaningful production environment without the added complexity of learning complex or proprietary programming languages.

InspeXion® Screens showing Signature Waveforms for Defective Parts



ONE MISSING ROLLER BEARING

TWO CONSECUTIVE MISSING ROLLERS



MISSING BEARING AND SPRING AT SAME LOCATION

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www.sciemetric.com
email: inquiries@sciemetric.com
Tel: 1-877-931-9200 in North America;
Visit or website for International contact info

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