

## **On-Site Machinery Service**

152 Frenchtown Rd. Milford, NJ 08848 732.693.8312

## **CUSTOMER INFORMATION**

John A. Doe ABC Machinery Inc.

31 Maple Av.

Toledo, OH 43608

## **ENGINE INFORMATION**

1992 Deere 4.5L Installed in 5420 tractor Functional exhaust system Idle RPM setting ~750

| PARAMETER  | VALUE                  |
|--|------------------------|
| Knock Frequency- Highest amplitude                 | 0-15,000Hz             |
| Knock Frequency- 2 <sup>nd</sup> Highest Amplitude | 700-1,200Hz            |
| Knock Frequency- 3rd Highest Amplitude             | 4,000-5,100Hz          |
| Mechanical problem present?                        | Yes                    |
| Cylinders affected?                                | 2                      |
| Most likely rotating assy. OR valvetrain           | Rotating assy.         |
| Mass of component causing problem knock            | 1,734g (3.82#) +/- 25% |

## Notes

Data is consistent with an excessive clearance in the connecting rod bearings. Time order indicates 2 cylinders affected. Amplitude rise of event in question is consistent with need for new crank or undersize bearings- replacement of bearing shells alone is generally not sufficient to repair the problem once the noise is as pronounced as in this recording