



**Machine Diagnostics Incorporated**  
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## Dynamic Balancing Report

Customer : XYZ Corp  
 Contact Name : John B Good  
 Machine Name : PV2 Fan  
 Job Date : 1-16-16  
 Job Performed By : Andy Dortch

### Balancing Before and After Data

Data point and position showing highest amplitude ODE bearing, horizontal

Before .86 ips/rms      After .081 ips/rms

081 ips/rms, noted on ISO chart below with arrow.

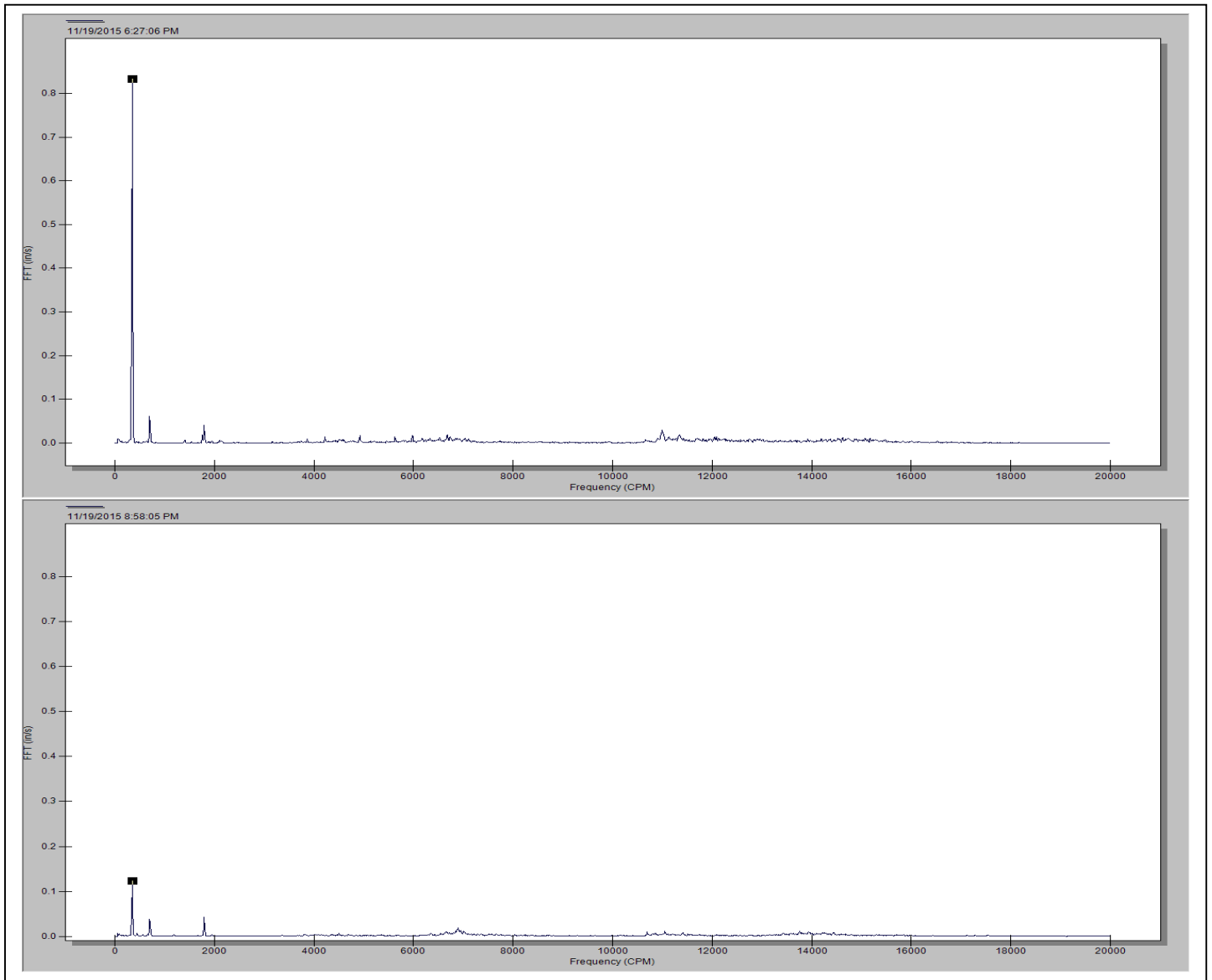
ISO 10816 Vibration Severity Chart Reference										
			D					18	0.71	Velocity
			C					11	0.43	
								7.1	0.28	
			B					4.5	0.18	
								3.5	0.14	
								2.8	0.11	
								2.3	0.09	
			A					1.4	0.06	
								0.71	0.03	
<b>Rigid</b>	<b>Flexible</b>	<b>Rigid</b>	<b>Flexible</b>	<b>Rigid</b>	<b>Flexible</b>	<b>Rigid</b>	<b>Flexible</b>	mm/s rms	inch/s rms	
Pumps > 20 hp Radial, Axial, Mixed Flow Types				Medium Sized Machines 20 hp < P ≤ 400 hp		Large Machines 400 hp < P < 50 MW				
Shaft Mounted/Flanged MTR.		Motor Coupled to Shaft		Motors With Shaft Height 6.25 in. ≤ H < 12.5 in.		Motors With Shaft Height 12.5 in. < H				
<b>Group 4</b>		<b>Group 3</b>		<b>Group 2</b>		<b>Group 1</b>				

<b>A</b>	<b>New Machine Condition</b>	<b>C</b>	<b>Short-term Operation Allowable</b>
<b>B</b>	<b>Unlimited Long-term Operation Allowable</b>	<b>D</b>	<b>Vibration Causes Damage</b>

**Rigid** = High Support Stiffness, Vibration Measured on Housing or Pedestal, No Springs or Dampers, Typical for Rolling Element Bearings  
**Flexible** = Means Low Support Stiffness, Typically Vibration Measured on Shaft, Flexible Pedestal Mounting, Typical for Fluid Film Bearings

Spectral data attached on next page.

## Documenting before and after spectra



### Job Notes:

Two anchor bolts securing fan base are broken and should be replaced. Machine has a resonant frequency that is slightly above fan running speed, and should never be run faster than the current 1025 rpm. Correction weights were welded to fan rotor.