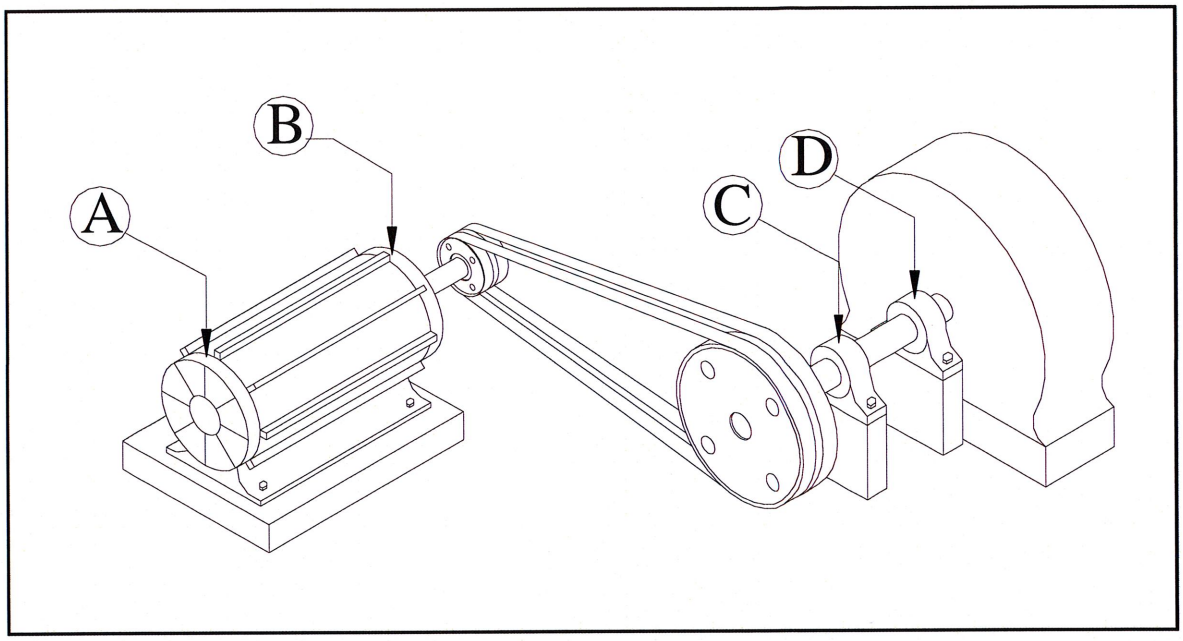
EQUIPMENT DATA SHEET

Unit Designation: Isotope Exhaust Fan 003

Date: March 16, 2020



Driver

Make: U. S. Electrical

S/N: G43078/1

RPM Plate: 1780

RPM Actual: 1790

Bearings: 6313-ZZ/C3 6212-ZZ/C3

Model: 365T

H.P.: 75

Service Factor: 1.15

Motor Sheave Dia.: 10.3"

Driven

Make: Buffalo Forge

S/N: S178500000003

# of Belts: 3

Belt Size: 5V 1500

Model: 805 BL CL3 A1 CW UB

RPM Actual: 1225

Sheave Dia.: 15.0"

Belt RPM: 380

PREDICTIVE MAINTENANCE PROGRAM

Start-up Analysis

Description: Isotope Exhaust Fan 003 Date of Initial Readings: March 16, 2020

Bearing Position	Unit of Measurement	Vibration Level	Alarm Point	Shutdown Point
A-Horizontal	in/sec.	.25	.3	.6
A-Vertical	in/sec.	.14	.3	.6
B-Axial	in/sec.	**.36**	.3	.6
B-Horizontal	in/sec.	**.43**	.3	.6
B-Vertical	in/sec.	.26	.3	.6
C-Axial	in/sec.	.22	.3	.6
C-Horizontal	in/sec.	**.56**	.3	.6
C-Vertical	in/sec.	**.39**	.3	.6
D-Axial	in/sec.	**.33**	.3	.6
D-Horizontal	in/sec.	**.40**	.3	.6
D-Vertical	in/sec.	.29	.3	.6

Comments

The overall vibration levels are excessive due to worn belts, misaligned sheaves, and fan unbalance. Our visual inspection revealed that two of three belts are worn and cracked, the motor sheave is badly worn due to improperly tensioned belts, and the sheaves are misaligned.

Our spectral analysis indicates both motor bearings lack lubrication and show slight to moderate wear. However, they are both sealed and cannot be re-lubricated; further monitoring is required to determine the rate of deterioration and appropriate timing for replacement.

Both fan bearings are in good condition and adequately lubricated.

Our belt drive analysis indicates this unit is under-belted with the use of 5V belts. The situation is easily corrected however, by specifying 5VX belts at the next replacement.

Recommendations

Isotope Exhaust Fan (EU-19-003-1)			1	2	3	4	5		
Unit Description	No Action		Low				High		Don't Run
			PRIORITY						

Driver RPM: 1790 Belt RPM: 380 Driven RPM: 1225

Priority

5 Replace the motor sheave.

5 Replace the belts with 5VX Opti-Belts (or another premium belt). Accurately align the sheaves and set the belt tension to the minimum level required to avoid slippage on start-up.

4 Have the fan balanced following the belt and sheave change (if you need assistance, Vibtech offers on-site balancing).

0 Continue monitoring the motor bearings to determine appropriate timing for replacement.

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