ELECTRIC MOTOR EFFICIENCY TEST REPORT
Form 102
(Revision 3.5)

Filename:	AL3766AA	**Date of Test:**	9-Feb-21
		Date of Report:	11-Feb-21

Motor Nameplate Information

Sample Number:	3766	Serial No.:	I00056ADV
Manufacturer:	Adventech	Phases:	3
Model:	IE-200L2-2	Hz.	60
Rated Voltage:	480	RPM	3588
Rated Horsepower:	40	Sync. RPM	3600
Rated Current:	40.2	Type:	B3
Frame:	200L2	Encl.	TEFC
NEMA Design:	B	Ins. Class:	H
Nameplate Eff.(Nom):	95.1%	SF:	1.2
Nameplate Eff.(Min):		Code:	
Power Factor	0.99	CC No.:	

Condition (New/Used): NEW Date Received: 13-Jan-21

Test Conditions:

Tested Horsepower:	40	RPM:	3588
Tested Voltage:	480	Synchronous RPM:	3600
Tested Current:	40.2	Hz:	60

Notes: *Current not decreasing during no-load voltage points

*Extrapolation method used for heat run resistance due to capacitor disconnection

Tested by:_____ Approved by:_____

(signature) (signature)

Customer Information:

Name:	Ron Ballman
Address:	4021 Parkway Dr
	Florence, AL 35630
Contact:	rballman@adventechinc.com

-The results of this report relate only to the specific motor tested.
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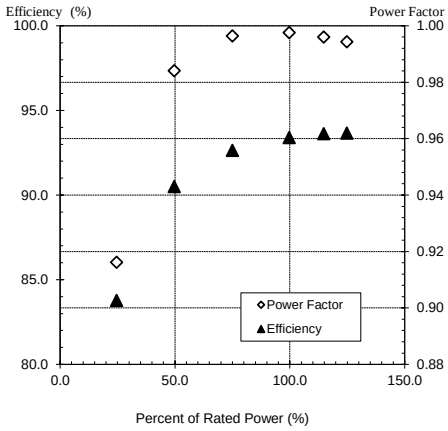
Electric Motor Efficiency Test Report

Test Method
Conforms to: CSA C390-10 and IEEE 112-2017 as required by Title 10 CFR Part 431, Subpart B, Appendix A. (with the exception of notes captured on Page 1)

Test Date: 9-Feb-21
Report Date: 11-Feb-21



Motor Description: Sample# 3766

Manufacturer:	Adventech		
Model:	IE-200L2-2		
Serial:	I00056ADV		
Rated Power:	40.0 Hp	(29.8 kW)	3 ϕ
Tested Voltage:	480 V	unbalance=	0.01%
Tested Current:	40.2 A	unbalance=	0.45%
NEMA Design:	B	PF=	0.99
Frame:	200L2		
Speed:	3588	rpm/60 Hz	
Nameplate Efficiency:	95.1%		
NEMA Encl.:	TEFC		
Ins. class:	H		
File Number:	AL3766AA		

Resistance & Temperature Measurements

	T_{Stator}	Ohms	$T_{Ambient}$
Initial	20.6 °C	0.136	21.8 °C
No Load (Uncoupled)	56.5 °C	0.153	22.9 °C
No Load (Coupled)	64.9 °C	0.157	22.8 °C
Heat Run	81.3 °C	0.169	22.8 °C

Temperature Rise

Temp. rise (Thermocouple)	58.5 °C
Temp. rise (by Resistance)	58.3 °C

Load Measurements

% of Rated Power	**124.8**	**114.7**	**99.7**	**75.0**	**49.6**	**24.6**
Torque output (Nm)	100.3	92.3	80.2	60.2	40.3	20.2
Power input (kW)	39.73	36.56	31.85	24.14	16.36	8.77
Line Current (A)	48.1	44.1	38.4	29.1	20.0	11.5
Speed (rpm)	3570	3573	3576	3584	3590	3596
Winding Temperature (°C)	81.7	82.2	82.1	80.9	79.3	77.6
Ambient Temperature (°C)	22.8	22.8	22.9	22.9	22.8	22.7
Line Voltage (V)	480.1	480.0	480.0	480.0	479.9	479.9
Power Factor	**0.99**	**1.00**	**1.00**	**1.00**	**0.98**	**0.92**

No-Load Measurements

% of Line Voltage	105.0	100.0	95.0	45.0	40.0	35.0
Line Voltage (V)	504.0	480.1	456.0	216.1	192.0	168.0
Line Current (A)	4.9	5.4	5.6	3.9	3.8	3.8
Power Input (kW)	1.51	1.38	1.31	0.86	0.83	0.81
Winding Temperature (°C)	55.2	56.4	55.0	50.7	50.2	49.7

Calculation

Stray Load Correlation Coefficient: 0.9427
B-factor: -0.2854
Point Deleted: None

Core Loss	0.647 kW
Windage - Friction Loss	0.723 kW
Dynamometer Correction	0.586 Nm

% of Rated Power	**124.8**	**114.7**	**99.7**	**75.0**	**49.6**	**24.6**
Stray Load Loss (kW)	0.23	0.20	0.15	0.08	0.04	0.01
Stator Loss (kW) Temp. corrected	0.59	0.50	0.38	0.22	0.10	0.03
Rotor Loss (kW) Temp. corrected	0.33	0.27	0.21	0.10	0.04	0.01
Power Output (kW) Temp. corrected	37.22	34.23	29.75	22.37	14.80	7.35
Efficiency (%)	**93.66**	**93.63**	**93.41**	**92.65**	**90.51**	**83.78**

Efficiency at Rated Load: 93.4 % **Efficiency at 75% Load: 92.7 %**

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