LINCOLN SERVICE CENTERS

SERVICE REPORT

Customer:	LINCOLN SERVICE	Brass Tag #:	45824
Job #:	163945	P/O #:	TBD
Date:	8/24/2023	Box Size:	FREIGHT
Weight:	700 lbs	Location:	CUSTOMER

Motor Nameplate Information:

Mfg:	FRANZ KESSLER	KW:	40	RPM:	8000
Type:	AC SERVO	Serial:		179023	
Model #:	DMR132AM4FGS/F			Volts:	400

Feedback nameplate information:

Mfg:	LENORD + BAUR
Part #	GEL2442-256
Type	SIN/COS
IdNr:	1Vpp 265 p/rev

Nameplate:

STATOR WINDING TESTS:

Insulation to frame check:		∞		MegOhms @ 1000v	
Hipot Test:	1500v		Surge Test:		2500v
Winding resistance:	0.060 Ω	U-V	0.060 Ω	V-W	0.060 Ω	W-U
Back EMF	N/A	U-V	N/A	V-W	N/A	W-U
Rated BEMF	N/A				

BRAKE INFORMATION:

BRAKE INFORMATION:		Tested torque:	N/A	Replaced:	
Manufacturer:	N/A	Model #:	N/A	Release voltage:	
Rated Torque:	N/A	Rated Voltage:	N/A		
Initial Torque:	N/A	Coil Resistance:	N/A		

FAN MOTOR TESTS:

Insulation to frame check:		N/A		MegOhms @ 1000v	
Hipot Test:	1500v		Surge Test:		2500v
Winding resistance:	N/A	U-V	N/A	V-W	N/A	W-U

ENCODER TESTS:

ENCODER TESTS:		Initial test:	GOOD	Replaced:	NO
Count per turn:	256	Continuous count errors:		NONE	
Phase offset:	GOOD	Symmetry A-B		GOOD	
Oscilloscope Check:	GOOD				

RESOLVER TESTS:

Resistances:		Excitation:	N/A	Cosine:	N/A	Sine:	N/A
Outputs checked with oscilloscope at:				KHz Excitation Freq.			
Insulation to frame check:			MegOhms @ 250v				
Vector Volts							

Rotor Vibration test:	.0019/.0021	mils/ disp.

MOTOR CONNECTION PINOUTS AND WIRING:

Motor Power Connection Diagram		
Connector direction:		

<table>
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Connector Number:	

Pin	Function	Color
U1		
V1		
W1		
	U2,V2,V3 ARE Y	

Brake Connection:		

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Pin	Function	Color

Motor fwd direction DE	*CW*
Resolver Fwd direction DE	
Encoder A/B rotation DE	*CW*
Commutation Signal	*SIN/COS*
Motor number of poles	*4*
Resolver number of speeds:	*N/A*

Encoder/Resolver Connection diagram:

Connector direction:	**OPE**
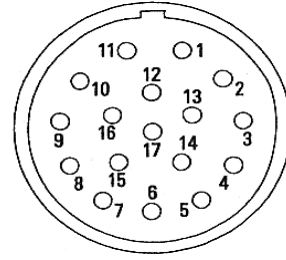
Connector Number:	*M23 - 17 pin*
Test Cable:	*ERN*

Pin	Function	Color
1	A	Yellow
2	A*	Green
3	R	Grey
4	N/C	
5	N/C	
6	N/C	
7	M encoder (0v)	Blue
8	(KTY 84) +1R1	Brown
9	(KTY 84) +1R2	White
10	P encoder (5v)	Red
11	B	Brown
12	B*	White
13	R*	Pink
14	N/C	
15	0v Sense	Blue
16	5v Sense	Red
E	N/C	

Static lock-up position

Encoder alignments:					
Polarity of DC voltage applied to leads:					
Phase U		Phase V		Phase W	
H1	H2	H3	H4	H5	H6
+U,-V	*N/A*	+U,-W	*N/A*	*0 °*	*N/A*

Dynamic commutation alignment check using an oscilloscope:

With motor being driven in FORWARD direction

Input 1	Channel A - Motor stator leads		
Scope probe to:		Reference lead to	
Input 2	Channel B - Connected to feed back signals		
Scope probe to:		Reference lead to	

Heidenhain PWM20 test results:
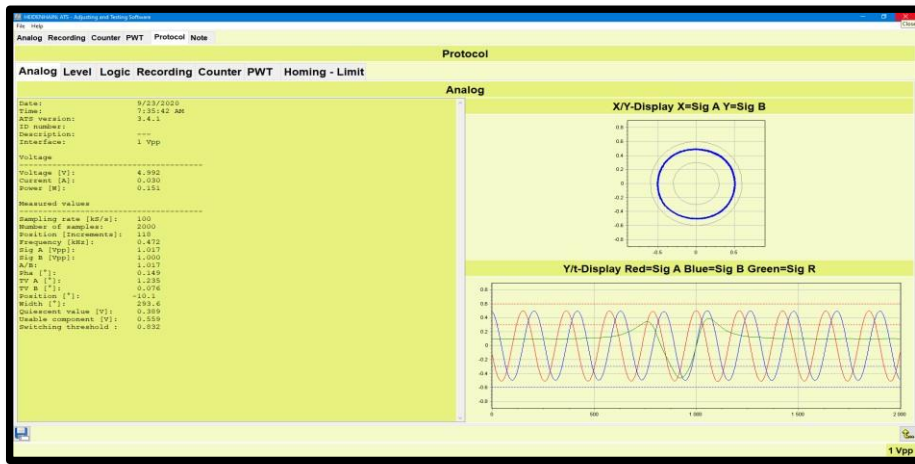
YASKAWA A1000	*Franz Kessler custom parameters*	Coupling size	*42 MM*
Notes:	*Complete rebuild*		
Replace bearings			
Align encoder and verify outputs			
Run test and verified alignment			
Precision trim balance with vibration analysis			

Bearings:	Pulley End	*B7013-E-T-P4S-UL*	Opposite Pulley End	*B7013-E-T-P4S-UL*
Seals:	*N/A*		Technician:	*BN*

Motor