



## INSPECTION REPORT

### Stiff Boom Crane (Under 45 ton)

DATE: March 3, 2023  
FILE: **EDS-123080**  
UNIT: **244**

EQUIPMENT OWNER	Macro Industries		
EQUIPMENT INFORMATION			
EQUIPMENT TYPE			
MANUFACTURER	Manitex		
MODEL	45110T		
SERIAL	203628		
HRS/KM			

General			
#	DESCRIPTION	REF	STATUS
1.1	Equipment Information Tag	17-3	Acceptable
1.2	Labels	17-4	Acceptable
1.3	Daily Inspection Log	17-5	Acceptable
1.4	OEM Manuals	17-6	Acceptable
1.5	Guards	17-7	Acceptable
1.6	Load Chart	17-8	Acceptable
1.7	Level Indicators	17-9	Acceptable
1.8	Level Indicators	17-9	
1.9	Hand Signal Chart	17-10	Acceptable
Block			
#	DESCRIPTION	REF	STATUS
2.1	Cross Pin	27-13	Acceptable
2.2	Sheave	27-14	Acceptable
2.3	Sheave Pin		Acceptable
2.4	Sheave Pin Nut	27-15	Acceptable
2.5	Sheave Spacer Washer		Acceptable
2.6	Pins		Acceptable
2.7	Bolts		Acceptable
2.8	Bolt Tubes		Acceptable
2.9	Side Plate		Acceptable
2.10	Weight Plate	27-16	Acceptable
2.11	Handling Lug		Acceptable

Hook			
#	DESCRIPTION	REF	STATUS
3.1	Location	28-17	Lower
3.2	Hardware Loose	28-18	Acceptable
3.3	MPI Inspection	28-19	Acceptable
3.4	Wear	28-20	Acceptable
3.5	Straightness	28-21	Acceptable
3.6	Spread	28-22	Acceptable
3.7	Freely Rotating	28-23	Acceptable
3.8	Freely Rotating	28-23	
3.9	Nut	28-24	Acceptable
3.10	Hook	28-25	Acceptable
3.11	Latch	28-26	Acceptable
3.12	Shank	28-27	Acceptable
3.13	Axial Bearing	28-28	Acceptable
3.14	Latch Condition	28-29	Acceptable
Turret			
#	DESCRIPTION	REF	STATUS
4.1	Weld-Metal Structure	9-44	Acceptable
4.2	Rotation Bearing and Fasteners	9-45	
4.3	Rotation Gearbox and Motor	9-46	
4.4	Lift Cylinder Pin Boss Area	9-47	Acceptable
4.5	Tie Down	9-48	Acceptable
Pedestal			
#	DESCRIPTION	REF	STATUS
5.1	Weld-Metal Structure	33-44	Acceptable
5.2	Collector Block - Mounting Bolts	33-49	Acceptable
5.3	Hoses / Fittings	33-50	
5.4	Rotation Bearing and Fasteners	33-45	
Winch/Hoist			

General	NAME	COMPANY	DESCRIPTION	REF	STATUS
Regulatory	David Lario	Enigma Design Solutions	March 3, 2023		<i>David Lario</i>
Structural	David Lario	Enigma Design Solutions	March 3, 2023		<i>David Lario</i>
Mechanical	North West Crane Enterprises Ltd (Clairmont)				
Operational	North West Crane Enterprises Ltd (Clairmont)				



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**Winch/Hoist**

#	DESCRIPTION	REF	STATUS
6.1	Mounting	36-61	Acceptable
6.2	Load Line	36-62	Acceptable
6.3	Hooks, Safety Latch	36-63	Acceptable
6.4	Motor	36-64	
6.5	Hoses, Fittings	36-65	
6.6	Brake - Operation	36-66	
6.7	Drum		
6.8	Break		
6.9	Cable		

**Operator Cab/Station**

#	DESCRIPTION	REF	STATUS
7.1	Control Panel		
7.2	Frame	13-67	Acceptable

**Outrigger**

#	DESCRIPTION	REF	LOCATION					
8.1	Location	2-17	DS - Front	DS - Rear	PS - Front	PS - Rear	Center Front	
8.2	Structure	2-76	Acceptable	Acceptable	Acceptable	Acceptable		
8.3	Wear Pads	2-77	Acceptable	Acceptable	Acceptable	Acceptable		
8.4	Welds	2-78	Acceptable	Acceptable	Acceptable	Acceptable		
8.5	Extension Frame	2-79	Acceptable	Acceptable	Acceptable	Acceptable		
8.6	Extension Frame	2-79						
8.7	Leg Frame	2-80	Acceptable	Acceptable	Acceptable	Acceptable		
8.8	Leg Frame	2-80						
8.9	Pads	2-81	Acceptable	Acceptable	Acceptable	Acceptable		
8.10	Hoses	2-82						
8.11	Cylinder Pins and Keepers	2-83						
8.12	Mount	2-53	Acceptable	Acceptable	Acceptable	Acceptable		
8.13	Foot Assembly	2-84	Acceptable	Acceptable	Acceptable	Acceptable		

General	NAME	COMPANY	DATE	SIGNATURE
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Structural	David Lario	Enigma Design Solutions	March 3, 2023	<i>David Lario</i>
Mechanical	North West Crane Enterprises Ltd (Clairmont)			
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### Boom Sections

#	DESCRIPTION	REF	LOCATION					
			Base	Mid 1	Mid 2	Mid 3	Mid 4	Tip
9.1	Location	37-17						
9.2	Design	37-85						
9.3	Structure	37-76	Acceptable	Acceptable	Acceptable			Acceptable
9.4	Welds	37-78	Acceptable	Acceptable	Acceptable			Acceptable
9.5	Wear Pads	37-77	Acceptable	Acceptable	Acceptable			Acceptable
9.6	Lift/Extension Cylinders	37-87	Acceptable	Acceptable	Acceptable			Acceptable
9.7	Rollers/ Wear Pads	37-88						
9.8	Hoses, Hose Carrier, Slide Tubes	37-89						
9.9	Cables	37-90	Acceptable	Acceptable	Acceptable			Acceptable
9.10	Guides (Cable, Boom Length)	37-91	Acceptable	Acceptable	Acceptable			Acceptable
9.11	Sheave, Pins, Bushing	37-92	Acceptable	Acceptable	Acceptable			Acceptable
9.12	Function	37-93						
9.13	Hardware (Cable Bolts/ Springs)	37-94	Acceptable	Acceptable	Acceptable			Acceptable
9.14	Camber	37-95	Acceptable	Acceptable	Acceptable			Acceptable
9.15	Sweep	37-96	Acceptable	Acceptable	Acceptable			Acceptable
9.16	Twist	37-97	Acceptable	Acceptable	Acceptable			Acceptable

### Chassis / Frame

#	DESCRIPTION	REF	STATUS
10.1	Hydraulic Hoses and Fittings	39-111	
10.2	Mechanical Guarding	39-113	Acceptable
10.3	Welds	39-78	Acceptable
10.4	Tie Down	39-48	Acceptable
10.5	Spacers	39-114	Acceptable
10.6	Front Bumper	39-115	Acceptable
10.7	Rear Bumper	39-116	Acceptable
10.8	Tow Lug	39-117	Acceptable
10.9	Recovery Lugs	39-118	Acceptable

### Miscellaneous

#	DESCRIPTION	REF	STATUS
11.1	Boom Rest	40-122	Acceptable
11.2	Rooster Sheave	40-123	Major Deficiency
11.3	Chain Rack	40-124	Minor Deficiency

### Miscellaneous

#	DESCRIPTION	REF	STATUS
General			
NAME			
Regulatory			
David Lario			
Structural			
David Lario			
Mechanical			
North West Crane Enterprises Ltd (Clairmont)			
Operational			
North West Crane Enterprises Ltd (Clairmont)			

COMPANY	DATE	SIGNATURE
Enigma Design Solutions	March 3, 2023	<i>David Lario</i>
Enigma Design Solutions	March 3, 2023	<i>David Lario</i>



# Enigma Design Solutions

Grande Prairie, Alberta  
[www.enigma-design.ca](http://www.enigma-design.ca)



## INSPECTION RESULTS

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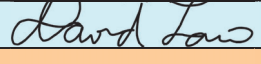
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## DEFICIENCY SUMMARY

#	ITM #	ITEM	DEFICIENCY	CORRECTIVE ACTION	FIGURES
1	11.2	Rooster Sheave	Keeper Pin Missing, Weld cracked	Replace Keeper pin and Reweld	2
2	11.2	Chain Rack	Welds cracked	Reweld	3
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

## COMMENTS

Recommended to be reviewed and

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**Enigma Design  
Solutions**

Grande Prairie, Alberta  
Abbotsford, British Columbia

[www.arsenal-eng.ca](http://www.arsenal-eng.ca)

## IMAGES

Stiff Boom Crane (Under 45 ton)

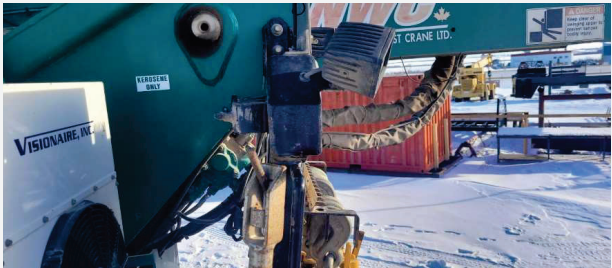
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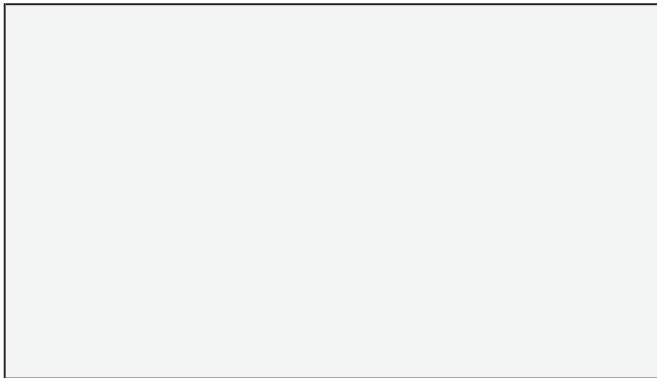
1	OVERALL			
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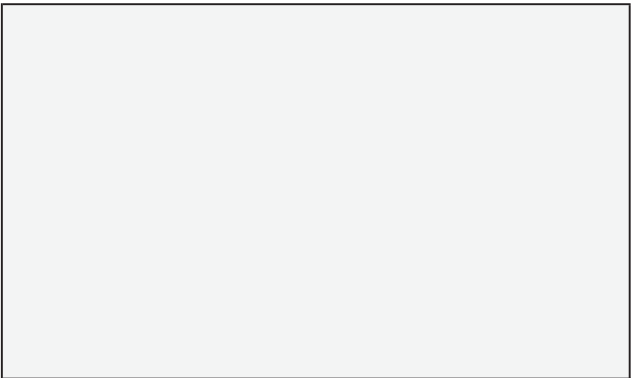
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	DEFICIENCY		



3	ITEM		
	DESCRIPTION		
	DEFICIENCY		



4	ITEM		
	DESCRIPTION		
	DEFICIENCY		



5	ITEM		
	DESCRIPTION		
	DEFICIENCY		