

OVERALL CONDITION



**INDUSTRIAL™**  
INSPECTION & ANALYSIS

**IIA Lifting Services**

**PO Box 5609 • Peoria, AZ 85382**

**Telephone: (800) 992-1111**

**Inspection and Testing  
of  
Digger Derricks**

in accordance to  
**ANSI 10.31 & OSHA 1926**

# INSPECTION REPORT

**Project No.**

017

**Customer**

Nebraska City Utilities

**Unit No.**

OLD 29

Kyler Taylor

Inspector

*Kyler Taylor*

Signature

January 24, 2024

Date

## DISCLAIMER

The information provided in this report is the result of the specific testing and inspection procedures conducted by Industrial Inspections & Analysis (IIA) and its subsidiaries, on the equipment and identified herein, as limited by the scope of work authorized by the customer. The Test Results reflect only the conditions of the components tested or inspected within the scope of work authorized. We have reviewed neither the maintenance records nor the actual use of the equipment before or after the date of the testing or inspection. No attempt has been made and no information is rendered with respect to any conditions of the equipment or any component other than as expressly stated in the written Test Results. Specifically, but without limitations, no information, testing or inspection services are rendered concerning equipment design, suitability of the equipment for any particular purpose of the future serviceability of the equipment. The Test Results should not be construed as statement that the equipment is safe or serviceable.

The information provided in this report is not a substitute for proper use, maintenance, modification, inspection and repair of the equipment, who shall assure safe operation of the equipment within its intended limitation. Furthermore, nothing in the Test Results should be construed as a recommendation for corrective action and IIA has not and will not supervise corrective action of any condition found to exist, as such in the sole responsibility of the owner/operator and it is hereby expressly excluded from the scope of the work performed by IIA. The Test Results are intended solely for informational purposes of the customer and should not be utilized or relied upon by any other person.

Diversified Inspections/ITL has checked only accessible bolts for reasonable tightness with the use of an ordinary crescent wrench or open end wrench, but not with a torque wrench nor measuring device of any kind. At no time was a measuring tool or torque wrench utilized for determining the torque of bolts.

It is the customer's responsibility to torque and maintain all bearing bolts in accordance with the equipment manufacturer's specifications to ensure that all bolts are properly torqued. Customer should remove any and all equipment obstructing access to bearing bolts, and torque bolts in accordance with equipment manufacturer's specification found in equipment manufacturer's service manual.

Maintaining proper torque of all bolts is the sole responsibility of the equipment owner/user and is not the responsibility of Diversified Inspections/ITL.

Any inspection item unspecified on this report will be addressed and notated on the Defects Summary Page.



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### Unit Information

<b>Project No.:</b>	017	<b>Work Order No.:</b>	175509
<b>Date:</b>	January 24, 2024	<b>Unit Type:</b>	Digger Derrick
<b>Customer:</b>	Nebraska City Utilities	<b>Unit No.:</b>	OLD 29
<b>Inspector:</b>	Kyler Taylor	<b>Location ( City,ST ):</b>	Nebraska City   NE
<b>Supervisor / Contact:</b>	Sharon Smulling	<b>Division:</b>	Utilities

Device
Altec
2001
D2050TR
0301-Y0684
41 ft
7,228
4,563

**Manufacturer**  
**Year**  
**Model No.**  
**Serial No. / VIN No.**  
**Device Length / Device Capacity**  
**Engine Hours / Vehicle Mileage**  
**PTO Hours / Plate No. ( Number,ST )**

Chassis
Freightliner
2001
FL80
1FVHBXAK71HJ26482
14,600 lbs
102,598
11-164B   NE

# Digger Derrick Visual Inspection

in accordance to ANSI A10.31

<b>Project No.:</b>	017	<b>Work Order No.:</b>	175509
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<b>Inspector:</b>	Kyler Taylor	<b>Location ( City,ST ):</b>	Nebraska City NE

X = Acceptable R = Repair or Replace (See Defect Summary) N = Not Applicable

Inspection Detail	ID	Inspection Detail	ID
<b>General</b>		<b>Pedestal (continued)</b>	
1 Condition Of Body / Doors / Latches	R	39 Hoses, Fittings And Wiring	R
2 Safety Devices And Correct Visual Aids	R	40 Center Post	X
3 Sub-Frame And Mounting	X	41 Hydraulic Component In Pedestal	R
4 Springs, Shackles, Walking Beams And U-Bolts	X	42 Emer. Power, 2 Speed, Start/Stop	N
5 Protection Of Hoses/Wiring - Under	X	43 Accumulator System	N
6 PTO, Pump And Drive Line	R	44 Other	N
7 PTO, Shift Or Cable	X	<b>Turret</b>	
8 Park Brake And Micro Brake	X	45 All Turret Welds And Plates	X
9 Pintle Hook Or Tow Hitch	R	46 All Turret Pin Bosses	X
10 Truck Mounted Winch Or Capstan	X	47 Rotation Gear Box & Mounting Bolts	X
11 Spotlight Or Work Lights	X	48 Rotation Gearbox Oil Level	X
12 Beacon Or Strobes	X	49 Rotation Pinion And Brake	X
13 Lights - Head, Tail, Turn, Etc.	R	50 Rotation Backlash	X
14 Reflectors	R	51 Rotation Bearing Deflection*	X
15 Tool Circuits, Hoses, And Reels	X	52 Hoses And Wiring In Turret	R
16 Cab Guard / Boom Rest Weldments	R	53 Rotation Gearbox Motor & Hoses	X
17 Bumper Throttles / Start/Stop	X	54 Rotation Stops Or Limit Switches	N
18 Level Ride / Torsion Bars	R	55 Other	N
19 Tires	X	<b>Lower Controls</b>	
20 Engine Oil Level	R	56 Condition Control Handles & Linkage	X
21 Aux. Engines/Generators/Inverters	N	57 Condition Of Control Valve & Switch	X
22 3 Point Ground System	X	58 Control Valve Hoses And Fittings	X
23 Other	N	59 Throttle Systems, Start / Stop	X
<b>Outriggers</b>		60 Control Interlocks And Wiring	X
24 Cylinders, Leaks Or Drifts	X	61 Pressure Gauges	R
25 Attachment Pins And Retainers	X	62 Control Functions	X
26 Weldments	X	63 Other	N
27 Feet, Pins And Retainers	X	<b>Main Boom</b>	
28 Cross Members And Attachments	X	64 Main Hinge Pins And Bushings	X
29 Control Valve(s)	X	65 Boom Weldment Condition	X
30 Hoses And Fittings	X	66 Lift Cylinders, Leaks Or Drifts	R
31 Warning And Interlock Systems	X	67 Lift Cyl. Hinge Pin / Bushing / Retainer	X
32 Decals, Warning And Control	X	68 Boom Rest And Overstow	R
33 Unit To Outrigger Selector Valve	X	69 Boom Wear Pads Or Rollers	X
34 Other	N	70 Turret Winch Condition & Load Line	R
<b>Pedestal</b>		71 Auger Stow Area And Stow Rope	X
35 All Welds And Plates	X	72 Auger Transfer Latch And Index Pins	X
36 Check Corner Area For Cracks	X	73 Auger Gear Box And Motor	R
37 Check Rotation Bearing Mount Bolts	X	74 Portings, Tubes And Hoses	X
38 Pedestal To Truck Mounting	X	75 Other	N



# Rope & Block Inspection

in accordance to ASME B30.10 & OSHA 1926 Subpart CC

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<b>Inspector:</b>	Kyler Taylor	<b>Location ( City,ST ):</b>	Nebraska City   NE

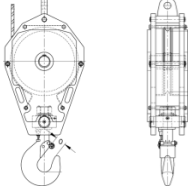
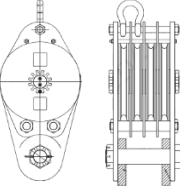
X = Acceptable R = Repair or Replace (See Defect Summary) N = Not Applicable

## Wire Rope Inspection

Item	Type	Size	Construct.	Core	Rope Damage	Broken Wires	Measure Wear	End Connect.	Lube	Result
Hoist	FC	1.00"	X	Fiber	R	N	1.072"	X	N	FAIL
Pendant										
Aux										

### Load Block & Hook

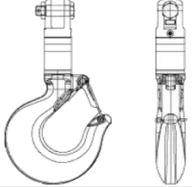
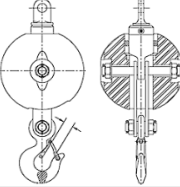
### Tackle Block

Manufacturer:		Manufacturer:	
Serial No.:		Serial No.:	
Rated Capacity:		Rated Capacity:	
Block Weight:		Block Weight:	
Hook Tram Measurement:		Other:	

Inspection Detail	ID	Inspection Detail	ID
123 Capacity Marking		145 Capacity Marking	
124 Weight Marking		146 Weight Marking	
125 Sheave(s)		147 Sheave(s)	
126 Safety Latches		148 Bearing	
127 0° Hook Bend or Twist		149 Wedge Socket / End Fitting	
128 5% Hook Opening or 1/4" Max		150 Reeving	
129 10% Hook Wear Max		151 NDT Results	
130 Bearing		152 Other	
131 Wedge Socket / End Fitting		153 Other	
132 Reeving		154 Other	
133 NDT Results		155 Other	
134 Other		156 Other	

### Swivel Hook

### Block & Tackle Pulley

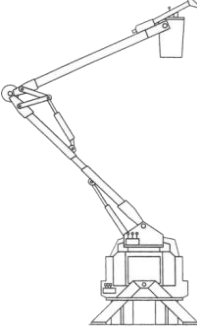

Manufacturer:	CROSBY		Manufacturer:	
Serial No.:	N/A		Serial No.:	
Rated Capacity:	8.5 TON		Rated Capacity:	
Block Weight:	N/A		Block Weight:	
Hook Tram Measurement:	2.330"		Hook Tram Measurement:	

Inspection Detail	ID	Inspection Detail	ID
135 Capacity Marking	X	157 Capacity Marking	
136 Weight Marking	X	158 Weight Marking	
137 Safety Latches	X	159 Safety Latches	
138 0° Hook Bend or Twist	X	160 0° Hook Bend or Twist	
139 5% Hook Opening or 1/4" Max	X	161 5% Hook Opening or 1/4" Max	
140 10% Hook Wear Max	X	162 10% Hook Wear Max	
141 Swivel / Bearing	X	163 Swivel / Bearing	
142 Wedge Socket / End Fitting	X	164 Wedge Socket / End Fitting	
143 NDT Results	X	165 NDT Results	
144 Other	N	166 Other	

# Dielectric Test Results

<b>Project No.:</b>	017	<b>Work Order No.:</b>	175509
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<b>Inspector:</b>	Kyler Taylor	<b>Location ( City,ST ):</b>	Nebraska City   NE

## Periodic Aerial Lift Dielectric Test

	<table border="1" style="margin: auto;"> <tr><th style="background-color: #cccccc;">Usage Category</th></tr> <tr><td>Category C</td></tr> </table> <p>Upper Boom Angle <input style="width: 80%;" type="text"/></p> <p>Lower Boom Angle <input style="width: 80%;" type="text"/></p>	Usage Category	Category C	<table border="1" style="margin: auto;"> <tr><th style="background-color: #cccccc;">Test Voltage</th></tr> <tr><td>DC</td></tr> </table> <p>Boom Angle <input style="width: 80%; text-align: center;" type="text" value="40°"/></p>	Test Voltage	DC	
Usage Category							
Category C							
Test Voltage							
DC							
* Platform height recorded for consistency or duplication of test results *							

Upper Boom/Extension	Weather Conditions	Chassis Insulating System
Test Voltage: <input style="width: 80%;" type="text" value="56"/> kV	Temperature: <input style="width: 80%;" type="text" value="30°"/>	Test Voltage: <input style="width: 80%;" type="text"/> kV
Duration: <input style="width: 80%;" type="text" value="N/A"/> min	<input style="width: 80%;" type="text" value="Wet"/>	Duration: <input style="width: 80%;" type="text"/> min
Leakage Current: <input style="width: 80%;" type="text" value="N/A"/> uA	<input style="width: 80%;" type="text" value="Overcast"/>	Leakage Current: <input style="width: 80%;" type="text"/> uA
Results: <input style="width: 80%; color: red;" type="text" value="FAIL"/>	<input style="width: 80%;" type="text" value="Calm"/>	Results: <input style="width: 80%;" type="text"/>

## Bucket Liner (s) Dielectric Test

Liner 1	Testing Parameters	Liner 2									
Serial No.: <input style="width: 80%;" type="text"/>	<table style="font-size: small; border-collapse: collapse;"> <tr> <th style="border: none;">Current</th> <th style="border: none;">Voltage</th> <th style="border: none;">Duration</th> </tr> <tr> <td style="border: none;">AC</td> <td style="border: none;">40 kV</td> <td style="border: none;">1 min</td> </tr> <tr> <td style="border: none;">DC</td> <td style="border: none;">56 kV</td> <td style="border: none;">3 min</td> </tr> </table>	Current	Voltage	Duration	AC	40 kV	1 min	DC	56 kV	3 min	Serial No.: <input style="width: 80%;" type="text"/>
Current	Voltage	Duration									
AC	40 kV	1 min									
DC	56 kV	3 min									
Results: <input style="width: 80%;" type="text"/>		Results: <input style="width: 80%;" type="text"/>									

## Confirmation Test of Upper Control Components

Curb Side Handle	Testing Parameters	Street Side Handle												
Test Voltage: <input style="width: 80%;" type="text"/> kV	<table style="border-collapse: collapse;"> <tr> <th style="border: none;">Current</th> <th style="border: none;">Voltage</th> <th style="border: none;">Leakage</th> <th style="border: none;">Duration</th> </tr> <tr> <td style="border: none;">AC</td> <td style="border: none;">40 kV</td> <td style="border: none;">400uA</td> <td style="border: none;">1 min</td> </tr> <tr> <td style="border: none;">DC</td> <td style="border: none;">56 kV</td> <td style="border: none;">56 uA</td> <td style="border: none;">3 min</td> </tr> </table>	Current	Voltage	Leakage	Duration	AC	40 kV	400uA	1 min	DC	56 kV	56 uA	3 min	Test Voltage: <input style="width: 80%;" type="text"/> kV
Current		Voltage	Leakage	Duration										
AC		40 kV	400uA	1 min										
DC		56 kV	56 uA	3 min										
Duration: <input style="width: 80%;" type="text"/> min	Duration: <input style="width: 80%;" type="text"/> min													
Leakage Current: <input style="width: 80%;" type="text"/> uA	Leakage Current: <input style="width: 80%;" type="text"/> uA													
Results: <input style="width: 80%;" type="text"/>		Results: <input style="width: 80%;" type="text"/>												

## Jib Dielectric Test

Jib No. 1	Testing Parameters	Jib No. 2
Manuf. Rated? <input style="width: 80%;" type="text"/>	<p><b>Note:</b> Boom tip jibs used in material handling on aerial devices shall be considered non-insulating unless the jib has been rated by the manufacturer, tested and maintained for the appropriate line voltage.</p>	Manuf. Rated? <input style="width: 80%;" type="text"/>
Rated Voltage: <input style="width: 80%;" type="text"/> kV		Rated Voltage: <input style="width: 80%;" type="text"/> kV
Test Voltage: <input style="width: 80%;" type="text"/> kV		Test Voltage: <input style="width: 80%;" type="text"/> kV
Duration: <input style="width: 80%;" type="text"/> min		Duration: <input style="width: 80%;" type="text"/> min
Leakage Current: <input style="width: 80%;" type="text"/> uA		Leakage Current: <input style="width: 80%;" type="text"/> uA

This is to certify that the above test procedures, where applicable, comply with the requirements of the American National Standard for vehicle-mounted elevating and rotating work platforms, ANSI A92.2. The above tests do not guarantee the continuing insulation of the tested areas. It shall be the user's responsibility to maintain the insulating qualities of the aerial device through proper maintenance and periodic testing.





# Defect Summary



<b>Project No.:</b>	017	<b>Work Order No.:</b>	175509	
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<b>Customer:</b>	Nebraska City Utilities	<b>Unit No.:</b>	OLD 29	
<b>Inspector:</b>	Kyler Taylor	<b>Location ( City,ST ):</b>	Nebraska City	NE
<b>Supervisor / Contact:</b>	Sharon Smulling	<b>Division:</b>	Utilities	
<b>Device Manufacture:</b>	Altec	<b>Chassis Manufacture:</b>	Freightliner	
<b>Serial No.:</b>	0301-Y0684	<b>VIN No.:</b>	1FVHBXAK71HJ26482	
<b>Device Model No.</b>	D2050TR	<b>Chassis Model No.</b>	FL80	
<b>Length / Capacity:</b>	41 ft	14,600 lbs	<b>Eng. Hours / Mileage:</b>	7,228      102,598
<b>Plate No. ( Number,ST ):</b>	11-164B	NE	<b>Year / PTO Hours</b>	2001      4563

- Category I**    Those defects that are designated most serious. Defects in this category could cause a free-fall, free-rotation type incident or electrocution and are directly related to the operational safety of the device. We have recommended that the unit be removed from service until these items are repaired.
- Category II**    Those defects that could lead to downtime or a more costly repair.
- Category III**    Those defects that can be scheduled into a maintenance program and repaired at a later date: Not an operational or safety-related item.
- Category IV**    There were no defects found at the time of the inspection.

Item	Cat.	Description of Defect	Repair Date	Repaired By
1	III	light on beacon switch in cab inop		
2	III	hole in floor liner in front of driver seat		
3	III	both arm rests for door broken		
4	III	clutch pedal pad missing		
5	III	holes in driver seat		
6	III	dents in driver door below handle		
7	III	A/C condenser damaged		
8	III	missing plastic marker on curbside of bumper		
9	III	curbside mirror loose in housing		
10	II	several rusted holes throughout body		
11	III	damage to curbside electrocution hazard decal		
12	III	missing danger decal from front of curbside bin		
13	III	rear 2" red reflectors broken on both sides		
14	III	anti skid peeling off rear steps and tail shelf		
15	III	rear bumper pads damaged		
16	III	rear curbside bumper pad bracket is bent		
17	III	license plate light inop		
18	III	warning decals on rear are peeling		
19	III	electrocution hazard decal on rear is worn		
20	III	pintle hitch rotation seized		
21	III	pintle hitch missing securement pin		
22	III	2" streetside rear red reflector is missing		
23	III	wheel chocks missing		
24	III	exposed wires coming out of back of cab		
25	III	street side parking light on steer axle fender is inop		
26	III	street side turn signal light inop on dash		
27	III	grill is broken		
28	III	street side mirror loose in housing		
29	III	headlight bezel on street side is broken		
30	III	curbside headlight bezel broken		
31	III	evidence of leak at air compressor		

## Defect Summary

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Item	Cat.	Description of Defect	Repair Date	Initials
32	III	evidence of leak at injection pump		
33	II	serpentine belt loose on engine		
34	III	oil pan gasket leaking		
35	III	PTO pump leaking		
36	III	both hoses to PTO leaking		
37	III	leak from curbside air tank		
38	III	bushings on traction bars dry rotted		
39	II	significant grooves worn in to front drive axle brake drums		
40	II	stress cracks in front drive axle brake drums		
41	III	hydraulic leak from hoses in pedestal		
42	II	rear drive axle brake drums have severe grooves/need replaced		
43	III	dust caps on pole pullers missing		
44	II	boom rest weldment cracked at the base on both sides		
45	II	exposed non terminated wires in pedestal		
46	III	excessive puddled hydraulic oil in bottom of pedestal		
47	III	hydraulic leak at valve body on street side of turret		
48	III	street side anti skid peeling off top of bins		
49	III	street side turret cover cracked		
50	III	evidence of leak at winch motor		
51	III	fire extinguisher missing from operator station		
52	I	several large frays throughout winch line		
53	III	carbide teeth missing from auger		
54	III	boom rest pad missing		
55	III	auger flighting bent		
56	III	tip of exhaust stack is bent		
57	III	tool circuit dust caps missing from upper controls		
58	III	evidence of leak at auger motor seal		
59	III	retainer bolt for auger needs double nutted/grade 8 bolt installed		
60	III	operator station decals worn/peeling		
61	III	material handling chart peeling off at operator station		
62	III	pressure gauge worn/cracked at operator station		
63	III	boots torn on control handles at operator station		
64	III	safety decals peeling off side of turret at operator station		
65	III	PTO light in cab inop		
66	III	tool reel hoses on tail shelf are cracked/weathered		
67	III	hydraulic couplers leaking from hose reel hoses on tail shelf		
68	III	leak at intermediate boom extension cylinder wiper seal		
69	III	cat track retaining pin missing at boom tip		
70	III	warning decals at boom tip damaged		
71	III	damage to sheave head fiberglass		
72	III	knicks and gouges in sheaves		
73	II	wire for pole claw interlock is disconnected		