Job Number: BL4173-41207264 Inspection Date: July 18, 2023

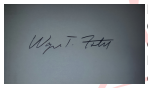
Fire Department: Cocoa Fire Department / Cocoa Fleet Services
Address: 301 Shearer Blvd., Cocoa, Fl.

Persons Contacted: Tony Jones
Chief:
Operator: Wayne & Jeremiah

Manufacturer: Sutphen Corporation
Year of Manufacture: 2015
Chassis:
Manufacturer: Sutphen Corporation
Chassis S/N: 1S9A3JNE7E1003119
Aerial S/N: HS-5478
Engine:
Manufacturer: Cummins
Model Number: ISX
GVW:
Front: 23,000
Rear: 26,000
Rear Tandem: 26,000
Weather Conditions:
Temperature: 89 Degrees
Wind: 5 MPH

Model Number: SPH-100' Platform
Unit:
Number: Tower 32
Mileage: 49,103
Hour Meter Reading: Eng: 12,196.5 Aerial: 677.5
Transmission:
Manufacturer: Allison
Model Number: EVS4000
Platform:
Type: 100 ft. Mid Mount Platform
Material: Aluminum

Inspector: Wayne T. Fister, NDT Level II



Digitally signed by Wayne T. Fister
DN: cn=Wayne T. Fister, o=Mistras Group, ou=Transportation Department, email=wayne.fister@mistrasgroup.com, c=US
Date: 2023.07.18 19:24:46 -04'00'

			Accept	See Notes	N/A
1.0	**Service Records**				
	1.1	The telescopic platform's service records shall be checked for any reports that may indicate defective conditions.	☐	☐	☒
2.0	**Rotation Bearing Mounting Bolts**				
	2.1	Inspect all accessible bolts for proper grade and installation as specified by the apparatus manufacturer.	☒	☐	☐
	2.2	Using a properly calibrated torque wrench, verify that the bolt torque on all accessible bolts meets the apparatus manufacturer's specifications.	☒	☐	☐
NDT	2.3	Inspect all accessible bolts for internal flaws.	☐	☐	☒
3.0	**Torque Box Mounting To Frame**				
	3.1	If the torque box is bolted to the frame, inspect all accessible bolts for proper grade and installation as specified by the apparatus manufacturer.	☒	☐	☐
	3.2	Using a properly calibrated torque wrench, verify that the torque on all accessible bolts meets the apparatus manufacturer's specification, if the torque box is bolted to the frame.	☒	☐	☐
	3.3	If the torque box is welded to the frame, visually inspect all accessible attaching welds for fractures.	☐	☐	☒
NDT	3.4	If the torque box is bolted to the frame, inspect all bolts for internal flaws. If the torque box is welded to the frame, inspect all accessible attaching welds.	☐	☐	☒
4.0	**Tractor-Drawn Components Mounted to Frame**				
	4.1	If tractor-drawn components are bolted to the frame, the mounting of the tractor-drawn components to the frame shall be inspected as follows:			
		4.1.1 Inspect all accessible bolts for proper grade and installation as specified by the apparatus manufacturer.	☐	☐	☒
		4.1.2 Using a properly calibrated torque wrench, verify that the torque on all accessible bolts meets the apparatus manufacturer's specifications.	☐	☐	☒
NDT		4.1.3 Inspect all bolts for internal flaws.	☐	☐	☒
	4.2	If tractor-drawn components are welded to the frame, the mounting of the tractor-drawn components to the frame shall be inspected as follows:			
		4.2.1 Visually inspect all accessible attaching welds for fractures.	☐	☐	☒
NDT		4.2.2 Inspect all accessible attaching welds.	☐	☐	☒
5.0	**Suspension System.**				
	5.1	If the suspension system components are bolted to the frame, the mounting of the suspension system components to the frame shall be inspected as follows:			
		5.1.1 Inspect all accessible bolts for proper grade and installation as specified by the apparatus manufacturer.	☒	☐	☐
		5.1.2 Using a properly calibrated torque wrench, verify that the torque on all accessible bolts meets the apparatus manufacturer's specifications.	☐	☐	☒
		5.1.3 Inspect all bolts for internal flaws.	☐	☐	☒

			Accept	See Notes	N/A
	5.2	If the suspension system components are welded to the frame the mounting of the suspension system components to the frame shall be inspected as follows:			
		5.2.1 Visually inspect all accessible attaching welds for fractures	☒	☐	☐
		5.2.2 Inspect all accessible attaching welds.	☒	☐	☐
6.0	**Rotation Gear And Bearing**				
	6.1	Inspect the rotation gear for missing or damaged teeth, pinion-to-gear alignment, proper lubrication and backlash.	☒	☐	☐
	6.2	Record the inner-bearing race to outer bearing race clearance, if accessible, in accordance with the bearing manufacturer's procedures, and compare the clearance to the bearing manufacturer's specifications.	☒	☐	☐
7.0	**Rotation Gear Reduction Box Mounting**				
	7.1	If the reduction box 'is bolted to the turntable inspect all bolts for the proper grade and installation as specified by the apparatus manufacturer.	☒	☐	☐
	7.2	If the reduction is bolted to the turntable, Using a calibrated torque wrench, verify that the torque on all bolts meets the apparatus manufacturer's specification.	☒	☐	☐
	7.3	Visually inspect all accessible weldments for defects and welds for fractures.	☐	☐	☒
NDT	7.4	If the reduction box is bolted to the turntable, inspect all accessible bolts for internal flaws.	☐	☐	☒
NDT	7.5	If the reduction box is welded to the turntable, inspect all accessible reduction box attaching welds.	☐	☐	☒
8.0	**Turntable Structural Components**				
	8.1	Visually inspect all accessible turntable structural weldments for defects and welds for fractures.	☒	☐	☐
NDT	8.2	Inspect all accessible turntable structural component welds.	☒	☐	☐
9.0	**Rotation Hydraulic Swivel**				
	9.1	Inspect the swivel for external hydraulic fluid leakage.	☒	☐	☐
	9.2	If applicable, check for indications of moisture in the electronic chamber by visually inspecting the desiccant moisture indicators.			
10.0	**Hydraulic Lines and Hoses in Turntable**				
	10.1	Inspect all hydraulic lines and hoses for kinks, cuts and abrasions, and hydraulic fluid leakage at connectors and fittings.	☒	☐	☐
11.0	**Elevation, Extension and Rotation**				
	11.1	Inspect the manual valve on the elevation, extension and rotation locks for external hydraulic fluid leakage.	☐	☐	☒
	11.2	Test the manual valve elevation lock for proper operation by engaging the lock and then attempting to raise and lower the ladder with the main hydraulic system operating. No detectable movement shall occur as determined by visual inspection.	☐	☐	☒
	11.3	Test the manual valve extension lock for proper operation by engaging the lock and then attempting to extend or retract the ladder with the main hydraulic system operating. No detectable movement shall occur as determined by visual inspection.	☐	☐	☒

			Accept	See Notes	N/A
	11.4	Test the manual valve rotation lock for proper operation by engaging the lock and attempting to rotate the turntable clockwise and counterclockwise with the main hydraulic system. The movement shall not exceed the manufacturer's specifications.	☐	☐	☒
12.0	**Signs**				
	12.1	Ensure that all signs are in place and legible.	☒	☐	☐
13.0	**Power Takeoff (PTO)**				
	13.1	Inspect the power takeoff for external hydraulic fluid leakage, proper operation (engagement and disengagement) and warning light inside the cab.	☒	☐	☐
14.0	**Hydraulic Pump**				
	14.1	Inspect the hydraulic pump for external hydraulic fluid leakage.	☒	☐	☐
15.0	**Collector Rings**				
	15.1	Inspect the collector rings for foreign material buildup on rings, if accessible.	☐	☐	☒
	15.2	If accessible, inspect the collector ring terminals for damage.	☐	☐	☒
	15.3	Conduct tests to ensure the proper operation of the collector rings by rotating the aerial device while electric-powered devices are in operation.	☒	☐	☐
16.0	**Elevation Cylinder Anchor Ears and Plates**				
	16.1	Visually inspect the elevation cylinder anchor ears and plates for defects and attaching welds for fractures.	☒	☐	☐
NDT	16.2	Inspect the elevation cylinder anchor ears and plate attaching welds.	☒	☐	☐
17.0	**Elevation Cylinder Pins**				
	17.1	Inspect the cylinder pins for alignment, proper installation, lubrication, operation and retention.	☒	☐	☐
NDT	17.1	Inspect cylinder pins for internal flaws.	☐	☐	☒
18.0	**Elevation Cylinders**				
	18.1	Inspect the cylinder rods for pitting, scoring and other defects.	☒	☐	☐
	18.2	Inspect the cylinder rod to barrel seal and the end gland seal for excessive external fluid leakage.	☒	☐	☐
	18.3	With the hydraulic oil at ambient temperature, subject the cylinders to a drift test by placing the aerial device at a 60 degree elevation, full extension, marking the cylinder position, closing manually operated locking valves, and allowing the device to stand for one (1) hour with the engine off. The results of such a test shall not exceed the manufacturer's specifications for allowable cylinder drift.	☒	☐	☐
19.0	**Holding Valves on Elevation Cylinders**				
	19.1	Inspect the holding valves for external hydraulic fluid leakage.	☒	☐	☐

			Accept	See Notes	N/A
20.0	**Operating Controls**				
	20.1	Inspect the operating controls for missing or damaged control handles, proper identification and hydraulic fluid leakage.	☒	☐	☐
	20.2	Verify that the controls operate smoothly, return to neutral position when released and do not bind during operation.	☒	☐	☐
	20.3	If interlocks have been provided or are required to prevent unintentional operation of the aerial device, verify that the interlocks or locking devices are operating properly.	☒	☐	☐
21.0	**Load Limit Indicators**				
	21.1	Inspect the load limit indicators for proper operation and legibility.	☐	☐	☒
22.0	**Emergency Hand Crank Controls**				
	22.1	Inspect the hand crank control for proper operation.	☐	☐	☒
23.0	**Auxiliary Hydraulic Power**				
	23.1	Inspect the auxiliary hydraulic power for proper operation.	☒	☐	☐
24.0	**Turntable Alignment Indicator**				
	24.1	Verify the presence of a turntable alignment indicator.	☒	☐	☐
25.0	**Throttle Control**				
	25.1	Verify that the throttle control is operable and record the operating RPM using a tachometer or a revolution counter (if so equipped) and a stopwatch.	☒	☐	☐
26.0	**Communications System**				
	26.1	Inspect the communication system for proper installation and proper operation.	☒	☐	☐
27.0	**Relief Hydraulic Pressure**				
	27.1	Verify that the main pump relief hydraulic pressure does not exceed the manufacturer's specifications.	☒	☐	☐
28.0	**Unit Main Frame**				
	28.1	Visually inspect the main frame for any cracks, bends, dents, twists or other weldment defects and any welds for fractures.	☒	☐	☐
NDT	28.2	Inspect all accessible main frame welds.	☒	☐	☐
29.0	**Transmission/Aerial Device Interlocks**				
	29.1	If interlocks are provided that prevent operation of the aerial device until the chassis spring brakes have been set and the transmission is properly disengaged, verify that the interlocks are operating properly.	☒	☐	☐
30.0	**Engine Speed Interlocks**				
	30.1	If interlocks are provided that allow operation of the engine speed control only after the spring brakes have been set and the transmission is properly positioned, verify that the interlocks are operating properly.	☒	☐	☐

			Accept	See Notes	N/A
31.0		**Breathing Air Systems**			
	31.1	Verify that the breathing air system is properly installed including the integrity of the air cylinder mounting, the regulator and the air lines from the air cylinder(s) to the top of the aerial device.	☒	☐	☐
	31.2	Verify that all the component parts of the system are present and in serviceable condition.	☒	☐	☐
	31.3	Visually inspect the air cylinder mounting brackets for defects and weld for fractures.	☒	☐	☐
NDT	31.4	Inspect all accessible welds on air cylinder mounting brackets.	☒	☐	☐
	31.5	Check that the air pressure regulator is set at the apparatus manufacturer's recommended pressure.	☒	☐	☐
32.0		**Stabilizer Structural Components**			
	32.1	Visually inspect all stabilizer components for defects and weld for fractures.	☒	☐	☐
NDT	32.2	Inspect all stabilizer structural component welds.	☒	☐	☐
33.0		**Stabilizer Pads**			
	33.1	Verify that the stabilizer pads are present, of proper construction and in serviceable condition.	☒	☐	☐
34.0		**Stabilizer Mounting to Frame or Torque Box**			
	34.1	Visually inspect the stabilizer to frame or torque box attachment for defects such as weld cracks, dents and bends.	☐	☐	☒
NDT	34.2	If welded, inspect the stabilizer to frame or torque box mounting welds.	☐	☐	☒
	34.3	If bolted, inspect all bolts for proper fastener grade and installation as specified by the apparatus manufacturer.	☒	☐	☐
	34.4	Verify that the torque on all bolts meets the apparatus manufacturer's specification using a properly calibrated torque wrench.	☒	☐	☐
NDT	34.5	Inspect all bolts for internal flaws.	☐	☐	☒
35.0		**Hydraulic Lines And Hoses In Stabilizer System**			
	35.1	Inspect the hydraulic hose lines for kinks, cuts and abrasions and leakage at connector and fittings.	☒	☐	☐
36.0		**Stabilizer Interlock and Warning Device**			
	36.1	Verify that the interlock system is operating properly.	☒	☐	☐
37.0		**Stabilizer Extension Cylinder Pins and Hinge Pins**			
	37.1	Inspect all stabilizer cylinder pins and hinge pins for proper installation, lubrication, operation and retention.	☒	☐	☐
NDT	37.2	Inspect all stabilizer pins and hinge pins for internal flaws.	☒	☐	☐

		Accept	See Notes	N/A
38.0	**Stabilizer Extension Cylinder**			
38.1	Inspect the stabilizer extension cylinder rods for pitting and scoring and other defects.	☒	☐	☐
38.2	Inspect the cylinder rod to barrel seal and the end gland seal for excessive external fluid leakage.	☒	☐	☐
38.3	With the hydraulic oil at ambient temperature, and with the stabilizer's cylinders properly set, measurements shall be taken to determine the amount of drift present in one (1) hour with the engine off. The results shall not exceed the manufacturer's specifications for allowable stabilizer cylinder drift.	☒	☐	☐
39.0	**Holding Valves On Extension Cylinders**			
39.1	Inspect the holding valves for external leakage.	☒	☐	☐
40.0	**Operating Controls**			
40.1	Verify that the controls operate smoothly, return to the neutral position (if designed to do so) when released, do not bind during operations and are free of hydraulic fluid leakage.	☒	☐	☐
40.2	If interlocks have been provided or are required to prevent unintentional operation of the aerial device, verify that the interlocks or locking devices are operating properly.	☒	☐	☐
41.0	**Diverter Valve**			
41.1	Inspect the diverter valve for external hydraulic fluid leakage.	☒	☐	☐
42.0	**Positive Stops And Alignment**			
42.1	Inspect the mechanical stabilizers for proper operation of the positive stops to prevent over extension	☐	☐	☒
43.0	**Stabilizer Deployment**			
43.1	If the stabilizer system is hydraulically operated, verify that the system can be deployed within the 90 seconds.	☒	☐	☐
44.0	**Manual Spring Locks**			
44.1	Inspect the condition and operation of stabilizer manual spring locks for stowed power.	☐	☐	☒
45.0	**Tractor Spring Lockout Device**			
45.1	Inspect the spring lockout device for any discontinuities and for proper operation.	☐	☐	☒
46.0	**Aerial Ladder Weldments**			
46.1	Visually inspect all accessible aerial ladder weldments for defects and welds for fractures.	☒	☐	☐
46.2	Inspect all accessible welds on the ladder.	☒	☐	☐
47.0	**Aerial Ladder Fasteners**			
47.1	All aerial ladder structural fasteners and fastened connections shall be visually inspected for cracked fasteners and material cracks around the fasteners.	☒	☐	☐

			Accept	See Notes	N/A
48.0	**Ladder Section Alignment**				
	48.1	Measurements shall be taken to determine the amount of ladder section twist or bow in the aerial ladder. Results shall not exceed manufacturer's specification for allowable ladder section twist, bow or side play.	☒	☐	☐
49.0	**Hydraulic, Pneumatic and Electrical Lines In Ladder Sections**				
	49.1	Inspect all lines for proper mounting, wear, cracking, kinks and abrasions. Frame designated by the aerial device manufacturer.	☒	☐	☐
50.0	**Modifications or Unauthorized Repairs**				
	50.1	Inspect the aerial ladder for modifications or repairs unauthorized by the manufacturer.	☒	☐	☐
51.0	**Top Rails**				
	51.1	Inspect the top rails for straightness or any signs of misalignment.	☒	☐	☐
NDT	51.2	Hardness reading shall be taken intervals of 28" (710mm) or less along the entire length of both top rails of aluminum ladders. Results of this test shall be compared with the manufacturer's specifications for the hardness of the material used for construction of the top rail.	☐	☐	☒
52.0	**Base Rails**				
	52.1	Inspect the base rail for straightness and any signs of wear, ironing, dents and corrosion.	☒	☐	☐
	52.2	Inspect the bottom of all hollow I-beam base rails to determine the thickness of the rail. Results shall be not less than the manufacturer's minimum specifications.	☐	☐	☒
	52.3	Hardness reading shall be taken intervals of 28" (710mm) or less along the entire length of both base rails of aluminum ladders. Results of this test shall be compared with the manufacturer's specifications for the hardness of the material used for construction of the base rail.	☐	☐	☒
53.0	**Rungs**				
	53.1	Inspect all rungs of the aerial ladder for straightness, damaged or loose rung covers and rung cap castings, and signs of cracks or missing rivets, if applicable.	☒	☐	☐
54.0	**Rollers**				
	54.1	Inspect all rollers for proper lubrications, operation and any signs of wear.	☐	☐	☒
55.0	**Guides, Wear Strips, Pads And Slide Blocks**				
	55.1	Visually inspect the guides for cracked welds; lose rivets alignment and any irregularities. Inspect wear strips, pads and slide blocks for wear, gouging and proper mounting.	☒	☐	☐
56.0	**Extension Sheaves**				
	56.1	Inspect all sheaves for signs of wear, free movement during operation, proper retainers and lubrication.	☒	☐	☐
	56.2	Visually inspect all extension sheave mounting brackets for defects and welds for fractures.	☒	☐	☐
	56.3	Inspect all welds of extension sheave mounting brackets.	☒	☐	☐

		Accept	See Notes	N/A
57.0	**Extension Cables**			
57.1	Inspect extension/retraction cables to assure proper tension in accordance with manufacturers recommendations.	☒	☐	☐
58.0	**Extension/Retraction Motor**			
58.1	Inspect the extension/retraction motor for signs of external hydraulic fluid leakage and, where applicable, brake wear, and brake alignment with the shaft.	☐	☐	☒
59.0	**Cable Separation Guide**			
59.1	During operation of the aerial ladder, visually inspect the cable separation guide for free travel and any signs of misalignment.	☐	☐	☒
60.0	**Winch Holding Capacity**			
60.1	Inspect the winch for holding capacity by fully elevating the aerial ladder and extending it 10 feet (3 m). Winch slippage shall be measured for a five-minute period. Slippage shall not exceed manufacturer's specification.	☐	☐	☒
61.0	**Brake Holding Capacity**			
61.1	Inspect the brake holding capacity of the extension motor by fully elevating the aerial ladder and extending it 10 feet (3m). Brake slippage shall be measured for a five-minute period. Slippage shall not exceed manufacturer's specification.	☐	☐	☒
62.0	**Extension And Elevation Indicators**			
62.1	Inspect the elevation and extension indicators for legibility, clarity and accuracy.	☒	☐	☐
63.0	**Ladder Cradle**			
63.1	Inspect the aerial ladder cradle for wear and proper alignment.	☒	☐	☐
64.0	**Ladder Bed Lock**			
64.1	Inspect the ladder bed lock mechanism and hydraulic lines for proper mounting, signs of wear and hydraulic fluid leakage at fittings.	☐	☐	☒
65.0	**Stop Mechanism**			
65.1	Inspect stop mechanisms to ensure that they prevent over extension or over retraction of the aerial ladder.	☒	☐	☐
66.0	**Maximum Extension Warning Device**			
66.1	During operation of the aerial ladder, verify the proper operation of the audible device to warn of the approach to maximum extension.	☐	☐	☒
67.0	**Ladder Illumination**			
67.1	Inspect the operation of the lights that are used to illuminate the aerial device.	☒	☐	☐
68.0	**Extension Cylinder Anchor Ears and Plates**			
68.1	Visually inspect the extension cylinder anchor ears and plates for defects and the attaching welds for fractures.	☒	☐	☐
68.2	Inspect the attaching welds of the extension cylinder anchor ears and plates.	☒	☐	☐

			Accept	See Notes	N/A
69.0	**Extension Cylinder Pins**				
	69.1	Inspect the cylinder pins for proper installation and retention.	☒	☐	☐
	69.2	Inspect the cylinder pins for internal flaws.	☐	☐	☒
70.0	**Extension Cylinder(s)**				
	70.1	Inspect the cylinder rods for pitting, scoring and other defects.	☒	☐	☐
	70.2	Inspect the cylinder rod to barrel seal and the end gland seal for excessive external fluid leakage.	☒	☐	☐
	70.3	With the hydraulic oil at ambient temperature, subject the cylinder(s) to drift by placing the aerial device at a 60 degree elevation, full extension, marking the cylinder piston or the second section in relation to the base section, and allowing the ladder to stand for one hour with the engine off. The results shall not exceed the manufacturer's specifications for allowable cylinder drift.	☒	☐	☐
71.0	**Holding Valves on Extension Cylinder**				
	71.1	Inspect the holding valves for external and internal hydraulic fluid leakage.	☒	☐	☐
72.0	**Platform Mounting Brackets**				
	72.1	Visually inspect all platform mounting brackets for defects such as weld cracks, dents or bends.	☒	☐	☐
NDT	72.2	Inspect all welds in the platform mounting brackets.	☒	☐	☐
NDT	72.3	Inspect all bolts and pins structurally involved with the platform mounting to the ladder or boom for internal flaws.	☐	☐	☒
73.0	**Platform**				
	73.1	Visually inspect platform for defects, such as weld cracks, dents, or bends.	☒	☐	☐
NDT	73.2	Inspect all welds on platforms.	☒	☐	☐
74.0	**Hydraulic, Pneumatic, and Electrical Lines in Platform**				
	74.1	Inspect all lines for proper mounting, wear, cracking, kinks, and abrasions.	☒	☐	☐
75.0	**Auxiliary Winch Mounting**				
	75.1	Inspect all mounting bolts for proper grade and installation as specified by the apparatus manufacturer.	☐	☐	☒
	75.2	Using a calibrated torque wrench, verify that the torque on all winch mounting-bolts meets the apparatus manufacturer's specifications.	☐	☐	☒
	75.3	If welded, visually inspect the winch mounting for weld fractures.	☐	☐	☒
NDT	75.4	Inspect the mounting bolts for internal flaws.	☐	☐	☒
NDT	75.5	If brackets are welded, inspect all welds on mounting brackets.	☐	☐	☒
76.0	**Winch Control**				
	76.1	Inspect controls for proper identification as to function and operation.	☐	☐	☒
	76.2	Verify smooth operations of the winch controls.	☐	☐	☒
77.0	**Platform Load Capacity Identification**				
	77.1	Verify that the proper platform capacity identification plate exists and is legible.	☒	☐	☐

			Accept	See Notes	N/A
78.0	**Platform Gate Latches And Hinge Points**				
	78.1	Inspect the platform gate latches for proper alignment and the latch and hinges for smooth operation.	☒	☐	☐
79.0	**Platform Hinge Pins**				
	79.1	Inspect platform hinge pins for proper installation, lubrication, and any irregularities.	☒	☐	☐
NDT	79.2	Inspect the platform's hinge pins for internal flaws.	☐	☐	☒
80.0	**Platform Controls**				
	81.1	Inspect the platform operating controls for identification of functions, posted operating instructions, and warnings.	☒	☐	☐
	81.2	Verify that the controls operate smoothly, return to neutral when released, and do not bind during operation.	☒	☐	☐
	81.3	Verify that the turntable or lower controls will over-ride the platform controls.	☒	☐	☐
82.0	**Unauthorized Modifications And Added Weight**				
	82.1	Verify that no unauthorized modifications or extra equipment have been added to the platform without subtracting the weight of such from the platform net operation capacity.	☒	☐	☐
83.0	**Platform Monitor And Nozzle**				
	83.1	Inspect the complete operation of the platform monitor and nozzle.	☒	☐	☐
	83.2	Inspect the monitor's mounting brackets for any defects and welds for fractures.	☒	☐	☐
84.0	**Platform Leveling Cylinders**				
	84.1	Inspect the cylinder rod(s) for pitting, scoring, and other defects.	☒	☐	☐
	84.2	Inspect the cylinder rod to barrel seal and the end gland seal for excessive external hydraulic fluid leakage.	☒	☐	☐
	84.3	Visually inspect the leveling system for proper installation.	☒	☐	☐
	84.4	Visually inspect the mounting of the leveling system for defects and welds for fractures.	☒	☐	☐
	84.5	Inspect all welds for mounting of the leveling system.	☒	☐	☐
	84.6	Inspect all leveling cylinder pins for any internal flaws.	☐	☐	☒
	84.2	Inspect the cylinder pins for internal flaws.	☐	☐	☒
85.0	**Operational Tests From Lower Controls**				
	85.1	With engine speed set to allow maximum speed as permitted by the manufacturer, the elevating platform shall be operated in all positions, as ground controls. The operation of the elevating platform shall include, but not be limited to , movement of the platform basket from ground to maximum elevation as well as revolving the platform basket 360 degrees to the left and to the right while the unit is at its maximum horizontal reach.	☒	☐	☐
	85.2	The boom should operate without any improper or unusual motion or sound.	☒	☐	☐
	85.3	All safety devices shall operate properly.	☒	☐	☐

		Accept	See Notes	N/A
85.4	All controls shall operate smoothly, return to the neutral position when released, and not bind during operation.	☒	☐	☐
85.5	If equipped with a spirit level, check the level for accuracy and legibility.	☒	☐	☐
85.6	For telescoping elevation platforms, rollers, slides, and sheave wheels shall demonstrate proper alignment, function, and free operation.	☒	☐	☐
85.7	A complete cycle of elevating platform operation shall be carried out after starting the engine, setting the stabilizers, and transmitting power to the platform booms or sections.	☒	☐	☐
85.8	Operating the machine from the lower control station, the elevating platform shall be raised out of the bed, extended to full specified height, and rotated through a 90-degree turn. This shall be completed smoothly and without undue vibration within the manufacturer's recommended time.	☒	☐	☐
85.9	The elevating platform shall be retracted, and the turntable rotation completed through 360 degrees. The elevating platform shall be lowered to its bed and a thorough inspection made of all moving parts. Special attention shall be given to the platform leveling system.	☒	☐	☐
85.10	The test shall, demonstrate successful operation of all elevating platform controls.	☒	☐	☐
86.0	**Operational Tests From Platform Controls**			
86.1	With engine speed set to allow maximum speed as permitted by the manufacturer, the elevating platform shall be operated in all positions, as allowed by the manufacturer, with only one operator in the platform basket operating from the platform control station. The operation of the elevating platform shall include, but not be limited to, moving the platform from ground to maximum elevation, as well as rotating the platform a minimum of 30 degrees and returning to the starting point in the opposite direction while the aerial device is at its maximum horizontal extension.	☒	☐	☐
86.2	All safety devices shall operate properly.	☒	☐	☐
86.3	The platform basket deactivation control, from the ground or lower controls shall be demonstrated to operate properly.	☒	☐	☐
86.4	The platform basket shall level properly as the booms are moved through all allowable positions.	☒	☐	☐
86.5	The mechanical override on a hydraulically leveled elevation platform basket shall operate properly during emergency lowering of the boom without hydraulic power.	☒	☐	☐
87.0	**Load Test**			
87.1	With the unit located on a hard level surface and allowing sufficient room for unrestricted boom movements, a stability and structural test shall be performed. This shall determine the elevating platform's ability to perform properly while carrying rated capacity loads in the platform basket.	☒	☐	☐
87.2	The unit shall be properly stabilized according to the manufacturer's recommendation.	☒	☐	☐

		Accept	See Notes	N/A
87.3	The platform basket shall be placed near the ground and loaded to the manufacturer's rated payload capacity. Care shall be exercised to assure that the weight of equipment added to the platform basket after delivery is subtracted from the weight of the test load being added. The platform basket load shall be properly secured.	☒	☐	☐
87.4	This unit shall be operated from the lower controls through all allowable phases of operation. The manufacturer's operational limits shall not be exceeded.	☒	☐	☐
87.5	The stabilizers shall show no evidence of any instability. If instability is observed, testing shall cease and the apparatus shall be repositioned or the manufacturer notified.	☒	☐	☐
87.6	All boom movements shall exhibit no abnormal noise, vibration, or deflection.	☒	☐	☐
87.7	The platform basket shall level properly as the booms are moved through all allowable positions.	☒	☐	☐
87.8	At the conclusion of the load test, weld joints at stabilizer structure, stabilizers, frame, main frame, frame reinforcements, turntable, cylinder anchors, boom joints, leveling system, platform basket, and pivot pin bosses shall be inspected and shall show no signs of deterioration.	☒	☐	☐

88.0 Waterway System Test

NOTE: The following examination and test shall apply only to permanently piped aerial platform pipes.

88.1	The waterway system shall be inspected for proper operation of all components. It shall be free of rust, corrosion, other defects, or blockage.	☒	☐	☐
88.2	The waterway attaching brackets shall be inspected for loose bolts, weld fractures or other defects.	☒	☐	☐
88.3	Inspect all attaching welds.	☒	☐	☐
88.4	Pressure Test (Turntable Swivel) The aerial platform shall be positioned between 0 and 10 degrees elevation and fully retracted. The water system shall be filled with water and the valve at the discharge end closed. If there is not a valve at the discharge end, a valve shall be attached for the purpose of this test. NOTE: For safety reasons, all air must be removed from the system. The pressure on the system shall be raised to the water system manufacturer's maximum rated working pressure and maintained for the duration of the test. The aerial platform shall be raised to full elevation and rotated 360 degrees. The water system, including the turntable swivel, shall be checked for leaks. Care shall be taken not to overheat the water pump.	☒	☐	☐

		Accept	See Notes	N/A
88.5	Pressure Test (Waterway Seals) The aerial platform shall be positioned between 0 and 10 degrees elevation and extended to its maximum permissible limit. The water system shall be filled with water and the valve at the discharge end closed. If there is not a valve at the discharge end, a valve shall be attached for the purpose of this test. NOTE: For safety reasons, all air must be removed from the system. The pressure on the system shall be raised to the water system manufacturer's maximum rated working pressure and maintained for the duration of the test. The entire length of the water system shall be checked for leaks. Care shall be taken to not overheat the water pump. The water system shall operate properly and with an absence of leaks during these tests.	☒	☐	☐
88.6	Pressure Gauge If the waterway system is equipped with a water pressure gauge(s), each water pressure gauge shall be checked for accuracy. Pressure gauges shall be checked at least 3 points, including 100 psi, 150 psi, and 200 psi. Any gauge that reads off by more than 10 psi shall be repaired or replaced.	☒	☐	☐
88.7	Relief Valve If the waterway system is equipped with a relief valve, this relief valve shall be checked to verify that it is operational at the waterway manufacturer's recommended pressure setting.	☒	☐	☐

Data Records

1. Rotation Bearing Mounting Bolts: Bolt Grade: 8 Size: 3/4“ Torque: 225 Ft. lbs.
2. Torque Box Mounting to Frame: Bolt Grade: Huck Bolts Size: Riveted“ Torque: n/a Ft. lbs.
3. Rotation Gear and Bearing: Backlash: .100" - .120" Bearing Race Clearance: .020" - .025"
4. Pinion to Bullgear Horizontal Alignment:
5. Rotation Gear Reduction Box: Bolt Grade: 8 Size: 1/2“ Torque: 85 Ft. lbs.
6. Elevation Cylinders Drift: Left: 1/16“ Right: 1/16“
7. Relief Hydraulic Pressure: 2300 PSI Down: 1000 PSI Retract: 2300 PSI Extension: 1950 PSI
8. Breathing Air Pressure Regulator Setting: 0 PSI Air Bottle(s): 4000 PSI
9. Stabilizer Mounting Bolts: Bolt Grade: 8 Size: 1“ Torque: 550 Ft. lbs.
10. Stabilizer Cylinders Drift: LF: 0” RF: 0” LM:n/a” RM: n/a” LR: 0“ RR: 0“
11. Ladder Section Twist: Base: n/a 2nd: n/a 3rd: n/a 4th: n/a 5th:n/a Total: n/a
12. Ultrasonics Test: All Pins: Accept: ☐ See Notes: ☐ N/A: ☒ All Bolts: Accept ☐ See Notes ☐ N/A ☒
13. Welds Inspected - NDT: Stabilizers: accepted Turntable: accepted Aerial Sections: accepted
14. Top Rail Hardness Min/Max: Base n/a 2nd n/a 3rd n/a 4th n/a 5th n/a
15. Base Rail Hardness Min/Max: Base n/a 2nd n/a 3rd n/a 4th n/a 5th n/a
16. Extension Winch Drift: n/a Extension Winch Motor Brake Drift: n/a
17. Extension Cylinder Drift: Left: 1/8“ Right: 1/8“
18. NFPA Time Test: 112 Seconds
19. Waterway Relief Valve Settings: 150 & 230 PSI
20. Base Rail Thickness Readings: Min: Base n/a “ 2nd n/a “ 3rd n/a “ 4th n/a “ 5th n/a “
    Max: Base n/a “ 2nd n/a “ 3rd n/a “ 4th n/a “ 5th n/a “
21. Platform Rated Capacity: 1000 Lbs.
22. High Speed: 1400 RPM
23. Up 55 Sec. 1700 PSI CC 99 Sec. 1300 PSI
    Out 64 Sec. 1700 PSI C 85 Sec. 1400 PSI
    In 64 Sec. 1900 PSI Down 56 Sec. 1500 PSI

NDT Equipment

Magnetic Particle		
Code/Specification ASTM-E709	Procedure 100-MT-002 Rev. 8	Acceptance Criteria AWS D1.1

Material & Thickness: Steel/Various	**Medium**	**Technique**
Magnetizing	☒ Visible ☒ Dry	☐ AC ☒ DC
Manufacturer: Parker	Color: Yellow	☒ Yoke [Spacing: 2"-6"]
Model: B100	Type: 2	☒ Continuous ☐ Residual
Serial No: 9924	Batch 15A001	White Light Source: Flashlight
Cal. Due Date: 8-29-23	Pre/Post Clean Method: SKC-S	Other Equipment:

Liquid Penetrant		
Code/Specification ASTM E165	Procedure 100 PT-004 Rev. 8.1	Acceptance Criteria AWS D1.2

	Manufacturer	**Type**	**Batch Number(s)**	**Application Method**	**Process Time (minutes)**	
					Pre-clean Dry Time:	10
Cleaner:	Magnaflux	SKC-S	18L05K	Sprayed	Penetrant Dwell Time:	10
Penetrant:	Magnaflux	SKL-SP2	18F09K	Brushed	Developer Time:	10
Developer:	Magnaflux	SKD-S2	18K06K	Sprayed	Post Clean Method:	10

Developer Form: ☐ a. Dry Powder ☐ b. Water Soluble ☐ c. Water Suspended ☒ d. Nonaqueous Wet

Ultrasonic		
Code/Specification ASTM E797	Procedure 100-UT-003 Rev. 10	Acceptance Criteria Customer

Instrument			**Setup Data**			
Model	Serial No.	Cal. Due Date	Cal. Standard:	Step Wedge	Serial No.	011798
Pocket U2	8620150957	Daily	Scan Equipment:	☐ Automatic	☒ Manual	
Transducer			Couplant:	Sonotest	Batch No.	14A026
Frequency	Size	Serial No.	Cable Type:	Coaxial		
5 MHZ	3/8"	628	Cable Length:	5'		

Visual			
Code/Specification AWS D1.1 / AWS D1.2	NDT Procedure 100-VT-004 Rev. 4 / 100-VT-005 Rev. 0		Acceptance Criteria AWS D1.1 / AWS D1.2
Material Steel / Aluminum	Weld Process Various	Temp. Gun Serial No. 170975352	Temperature 68-84
Technique ☒ Direct Visual ☐ Remote Visual	Surface Condition As Welded / Smooth	Visual Aids ☐ Yes ☒ No	Supplemental Lighting ☒ Yes ☐ No
Access within 24" & 30° ☒ Yes ☐ No	1/32" Line/Simulated Imperfections Used ☒ Yes ☐ No	Dimensional Aids ☐ Yes ☒ No	Light Meter Serial No. 170975606

½" Torque Wrench S/N & Cal. Due Date	¾" Torque Wrench S/N & Cal. Due Date	Dial Indicator S/N & Cal. Due Date
DMD20433 4-3-24	DLG79482 4-3-24	TSM329 4-3-24

Technician Name & Level	Customer (if applicable):	Reviewed By (if applicable):
Wayne T. Fister, Level II		

Inspection Notes: Page #1

Item	Category	Comment
#1	C	The turntable rotation gear teeth are dry / rusting and should be lubricated.
#2	C	When lowering the aerial, the platform's leveling system does not keep the platform level. This problem should be determined and repaired.
#3	I	The cab's left tilt cylinder is leaking.
#4	C	The cab's right cylinder to the leaf springs is leaking oil and should be repaired.
#5	C	The aerial's extension hydraulic relief valve is set too high at 1950 psi and should be set to 1700 psi.
#6	C	The breathing air pressure regulator is set too low at 0 psi and should be set at 100 psi.
#7		

Categories:

R = **Required Items:** Items that do not meet Mistras specifications, manufacturer's specifications and applicable NFPA standards are items which Mistras mandates be repaired or replaced before issuance of an Inspection certificate.
The location of these items may be found by the general description below. Weld discontinuities, if any, are marked with felt pen at their specific location by our inspectors. Left and right, as listed, are viewed standing on the turntable looking up at the ladder.
The ladder sections are numbered from the bottom up, base assembly being 1st section, 2nd section, 3rd Section and 4th section. Rungs, vertical and diagonal support members (truss-members) on each section are numbered starting at the base of each ladder section with number one and increasing in number to the top of each ladder section.
Left and right on the vehicle chassis are viewed as left being the driver's side, and the right being the Officer's side.
Mistras will allow a maximum of sixty (60) calendar days from the date of this report for items listed under this category to be repaired or replaced. If this cannot be completed within this 60-day time frame, it is necessary that you notify our office prior to the lapse of this period at 1-800-333-8629.

C = **Recommended Items:** These are items, which we recommend be repaired, replaced or installed, or preventive maintenance procedures initiated and implemented.

I = **Informational Items:** These are items which we have found to be in noncompliance with today's standards, or items which should be checked periodically, or items listed solely for your general information.

Inspection Notes: Page #2

Item	Category	Comment

Categories:

R = **Required Items:** Items that do not meet Mistras specifications, manufacturer's specifications and applicable NFPA standards are items which Mistras mandates be repaired or replaced before issuance of an Inspection certificate.
The location of these items may be found by the general description below. Weld discontinuities, if any, are marked with felt pen at their specific location by our inspectors. Left and right, as listed, are viewed standing on the turntable looking up at the ladder.
The ladder sections are numbered from the bottom up, base assembly being 1st section, 2nd section, 3rd Section and 4th section. Rungs, vertical and diagonal support members (truss-members) on each section are numbered starting at the base of each ladder section with number one and increasing in number to the top of each ladder section.
Left and right on the vehicle chassis are viewed as left being the driver's side, and the right being the Officer's side.
Mistras will allow a maximum of sixty (60) calendar days from the date of this report for items listed under this category to be repaired or replaced. If this cannot be completed within this 60-day time frame, it is necessary that you notify our office prior to the lapse of this period at 1-800-333-8629.

C = **Recommended Items:** These are items, which we recommend be repaired, replaced or installed, or preventive maintenance procedures initiated and implemented.

I = **Informational Items:** These are items which we have found to be in noncompliance with today's standards, or items which should be checked periodically, or items listed solely for your general information.

Customer: _____
Address: _____
Mfg., Year: _____
Serial #: _____
Job Number: _____
Person Contacted: _____
Unit Type: _____
Inspector: Wayne T. Fister, NDT Level II
Inspection Date: _____

Dear Mr. Kelker:

This is to certify that all items listed under "REQUIRED ITEMS" on your inspection report have been completed.

These items have been completed in accordance with the manufacturer's recommendations and the best business practices available to our department.

Signed: _____

Title: _____

IMPORTANT NOTES

1. *Enclose with the above letter, copies of all work records and invoices regarding the repair, which was conducted on the apparatus in accordance with our report.*
2. *This letter and associated documents may be sent by fax or mailed to the address located at the bottom of this page, or by email at certifyapparatus@mistrasgroup.com.*
3. *Mistras Group-Services Division will allow a maximum of sixty (60) calendar days from the date of the report for the required repairs to be made. If repairs cannot be completed within this time frame, please notify Mistras Group-Services Division at 1-800-333-8629 prior to the lapse of this period.*
4. *A Certificate of Inspection will be issued upon receipt of this signed letter and supporting documents that the corrections required by this report have been completed.*

If you have any questions, or require any additional information, please do not hesitate to contact me.

James Kelker

Operations Manager

Mistras Group-Services Division

Transportation Department