COMMAND
FIRE APPARATUS TESTING
614-398-0120

Certification of Inspection
Aerial Device

Certification Number:	**1297**
Manufacturer:	**Sutphen**
Owner:	**Shelby Twp Fire Deparment**
Address:	**6345 23 Mile Road**
	Shelby Township, MI 48316
Type of Unit:	**SP-70**
Year:	**1997**
Serial Number:	**HS-3208**
Owner's ID Number:	**Quint 3**
VIN:	**1S9A7LBDXV2003071**
Date:	**12/18/23**

The above described device was inspected and tested in accordance with Command specifications, NFPA 1901, and NFPA 1911 standards in effect at the time of manufacturing.

Inspector: **Mike McCallister**

		Accept	See Notes	N/A
1.0	**Drift Test**			
1.1	Place the aerial device at 60 degrees elevation at full extension, marking the cylinder piston on the second section in relation to the base section and allow the ladder to stand for one hour with engine off. Results shall not exceed the manufacturer's specifications for allowable cylinder drift.	☒	☐	☐
2.0	**Visual Testing**			
2.1	Visual testing shall be performed on outriggers, chassis, pedestal, rotation bearing, turntable, lower boom, elbow area, upper boom, platform, ladder, and extension sections, fifth wheel, tiller, waterway, and signs.	☒	☐	☐
3.0	**Bolts**			
3.1	All accessible bolts on the aerial shall be torqued to manufacturers specifications.	☒	☐	☐
4.0	**Functional Test**			
4.1	A functional and operational test is performed to check the operation of controls, bearings, pin bushings, cylinders, holding valves, ladder extension cables, platform leveling mechanisms, outriggers, waterways, etc. This test also finds worn swing bearings/gear boxes, worn pin/bushings and loose bolts critical to the operation of the aerial.	☒	☐	☐
5.0	**Operational Test on Aerial Ladders**			
5.1	A complete cycle of aerial ladder operation will be carried out. The ladder will also be fully elevated out of the bed, rotated 90 degrees and extended to full specified height. The tests will also demonstrate successful operation of all ladder controls.	☐	☐	☒
6.0	**Operational Test on Elevating Platforms**			
6.1	The operation of the elevating platform shall include movement of the platform from ground to maximum elevation and extension as well as rotating platform 30 degrees to the left and to the right while the unit is at its maximum horizontal reach. Booms and telescoping elevating platforms will operate without any improper or unusual motion or sound. From the lower control station, the elevating platform will also be raised out of the bed, extended to full-specified height, and rotated through a 90-degree arc.	☒	☐	☐
7.0	**Water System**			
7.1	The water system will be pressure tested by filling the system to the manufacturers rated working pressure and check for leaks including the turntable swivel. Department must supply operator for these tests.	☒	☐	☐
8.0	**Load Tests**			
8.1	Load tests are performed on each aerial ladder and platform. The aerials are operated to determine they operate smoothly and without any undue vibration. Horizontal load tests are performed on aerial ladders using the manufacturers recommended rating at permissible operating ranges. Full operating range tests are performed on aerial platforms with the manufacturers specified rating to determine stability and acceptable operation under load.	☒	☐	☐

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Data Records

Engine Make:	Cummins	Aerial Hours:	N/A	GVW Front:	18,000	Temperature:	38
Engine Miles:	62379	Engine Hours:	5341	GVW Rear:	48,000	Wind:	2-5
Trans. Make:	Allison	Aerial Material:	Aluminum	Rear Tandem:	N/A	Aerial Height:	70

Rotation Bearing Bolts:	Bolt Grade:	8	Size:	5/8”	Torque: 150 Ft. lbs.
Torque Box to Frame:	Bolt Grade:	8	Size:	3/4”	Torque: 225 Ft. lbs.
Rotation Gear Box:	Bolt Grade:	8	Size:	1/2”	Torque: 75 Ft. lbs.
Stabilizer Bolts:	Bolt Grade:	Welded	Size:	-”	Torque: - Ft. lbs.

Rotation Gear and Bearing:	Backlash:	.185”	Bearing Clearance:	.042”
Elevation Cylinders Drift:	Left:	1/8”	Right:	1/16”
Extension Cylinders Drift:	Left:	1/16”	Right:	1/16”

Stabilizer Cylinders Drift:	LF:	N/A	RF:	N/A	LM:	1/8	RM:	1/8	LR:	N/A	RR:	N/A
Relief Hydraulic Pressure:	Main:	N/A	PSI	Down:	N/A	PSI	Retract:	N/A	PSI	Extend:	N/A	PSI

High Speed:	1000	RPM	NFPA Time Test:	65	Seconds

Up	25	Sec.	N/A	PSI	CC	116	Sec.	N/A	PSI
Out	35	Sec.	N/A	PSI	C	112	Sec.	N/A	PSI
In	32	Sec.	N/A	PSI	Down	49	Sec.	N/A	PSI

Breathing Air Regulator Setting:	N/A	PSI	Bottle: N/A PSI

Ladder Section Twist:	Base:	N/A	2nd:	N/A	3rd:	N/A	4th:	N/A	5th:	N/A	Total:	N/A

Hardness Min/Max:	Base	78/	81	2nd	79/	82	3rd	79/	81	4th	77/	80	5th	N/A/ N/A

Base Rail Thickness:	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”	

Horizontal Load Test:	750	Lbs. Tip Load		
Elevation Load Test:	N/A	Lbs. Tip Load	Waterway Relief Valve Settings: 240	PSI

MT Procedure: MT-001	Equipment S/N:	3977	Batch Number:	21M010	☐ AC ☒ DC	Continuous
PT Procedure: PT-001	Batch Numbers:	21F04K,22A06C,22A01C			Dwell Time:	10 MIN
UT Procedure: UT-001	Equipment S/N:	UTM1	Batch Number:	G-186	Step Wedge:	.1-5"
VT Procedure: VT-001	Temp. Gun S/N:	37501-2132	Cal Due Date:	6/20/24	Couplant:	56006

¾” Torque Wrench S/N:	W220200531	Cal. Due Date:	6/21/24
½” Torque Wrench S/N:	N/A	Cal. Due Date:	N/A
Dial Indicator S/N:	C-6	Cal. Due Date:	6/20/24
Other Equipment:	N/A	Cal. Due Date:	N/A

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Inspection Notes: Certificate only valid if all required items from this report have been repaired.

Item	Category	Comment
#1	C	There is heavy rust/corrosion on the frame to the torque box. Monitor for any further signs of rust
#2	I	The check engine light came on during testing
#3	I	2 missing rivets on platform floor under access door

Categories:

R = **Required Items:** Items that do not meet specifications. Items must be repaired or replaced for certificate to be valid.
C = **Recommend Items:** These are items, which we recommend be repaired, replaced or installed.
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 for general information.