

Our File

K32286rev.1

## TECHNICAL FIELD REPORT

Inspection Date

2023-08-08

Re: Inspection and Damage Assessment of Genie Scissor Lift Following Unloading Incident, Provide General Repair and Further Disassembly Direction  
Model GS-3246, S/N GS4616P-139390, Unit 104088



As requested, visual examinations and magnetic particle inspections were performed on the above-described equipment following an unloading incident. We were informed by Finning personnel that the scissor lift drove off the back end of the truck, fell approximately 3'-4' where it likely impacted the rear wheels first, then eventually tipped over on the rear side. The specific items examined and our inspection findings were as follows:

1. Wheel Rims (4x) - **one crack on side wall on rear tire, two locations on back tire indicating impact, rear wheel rims have negative camber.**
2. Steering Assembly - **steering cylinder mount lug is attached to bent front mount plate.**
3. Carrier Frame - **bent rear end, bent front end, ladder appears to be bent.**
4. First Scissor Stage - **bent lower mounting bracket to carrier.**
5. Second Scissor Stage - no defects noted.
6. Third Scissor Stage - no defects noted.
7. Fourth Scissor Stage - no defects noted.
8. Fifth Scissor Stage - **bent upper mounting bracket to platform.**
9. 700 lb SWL Platform with Extension - **multiple bent railing members, bent access gate, rear end bottom skirt is bent, front end "front skirt" mount location is bent, front end "platform floor" mount location is bent and mounting holes appear to be stretched/torn.**

**Repair Recommendations:****General Repair Direction, Comments and Disassembly for Further Inspections:**

**Rear Wheel Assemblies:** Have qualified mechanical personnel disassemble and inspect both rear wheel rims, associated hubs and spindles. If there are damages and/or if these components are not within manufacturer's tolerances, replace with new OEM components. All hub and wheel mounting fasteners are to be replaced with new OEM components. Kova South to inspect the mounting areas on carrier frame once these components have been removed.

**Steering Assembly:** The steering hydraulic cylinder is directly connected to the bent front carrier plate. There is a possibility that the steering components could have been impacted at the time of the incident. Have qualified mechanical personnel inspect the front steering assembly and steering cylinder to ensure components are within manufacturer's tolerances. Replace with new OEM components as required.

**Pins for Disassembly and Further Inspection:** The two lower lift stage pins (marked with white paint pen) and all lift cylinder pins are to be pulled and inspected by Kova South. If damages are noted on these pins, further inspection of other pins maybe required. Qualified mecahnical personnel to inspect the hydraulic cylinders and components to ensure they are in good condition and operating in accordance with manufacturer's specifications.

**Upper and Lower Lift Stage Mounting Brackets:** These mounting brackets and their associated pins, mounting hardware are to be replaced with new OEM components.

**Carrier Front Plate:** In our opinion the bent carrier front plate will be difficult to straighten to within +/-1/16" tolerance as there is permanent yielding in the plate. Straightness in this plate is critical as the scissor stage mounting bracket and steering assembly connects to this bracket. Replacement of the front plate will likely be required. Plating replacement will likely need to be performed by a fabrication shop as the manufacturer won't provide just the replacement front plating. The replacement plate will need to be fabricated to match the original plate in the undamaged condition. Prior to providing replacement direction, we will need to perform hardness testing to confirm material specs. Disassembly of the scissor stage and steering assembly will be required to facilitate these repairs.

**Carrier Rear Plates:** Attempt to cold-straighten bent rear plates to +/-1/16" tolerance. if unsuccessful, replacement of the plates will be required. Refer to above for description of replacement. The ladder must stand vertical following cold-straightening repairs.

**Front Platform Skirt and Mounting Area:** These areas are locally deformed and stretched, the damaged sections will need to be cut out and replaced with new sheeting. Sheeting replacement will likely need to be performed by a fabrication shop as the manufacturer won't provide just the replacement sheeting. The replacement sheeting sections will need to be fabricated to match the original sections in the undamaged condition. Prior to providing replacement direction, we will need to send a coupon sample to a materials lab for them to perform hardness testing to confirm material specs. Disassembly of the platform will be required to facilitate these repairs.

**Rear Platform Bottom Skirt:** Attempt to cold-straighten bent skirt tow within +/- 1/8" tolerance.

**Access Ladder:** Straightness of access ladder to be checked by Kova South personnel following removal off rear end. Cold-straightening or mounting plate replacement maybe required.

## • • FURTHER INSPECTION REQUIRED • •

Inspector:



Stanley Giang, P.Eng.

Additional Inspector(s):

Grayson Martens

Appendix

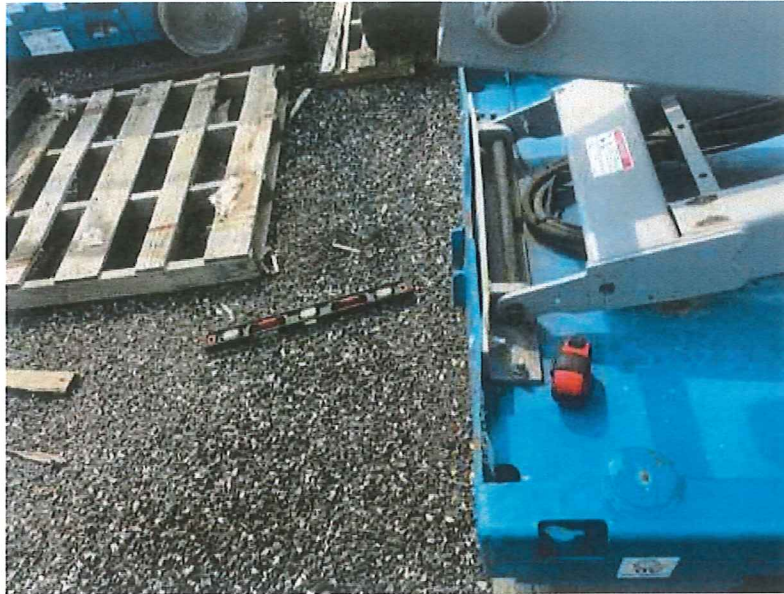


Figure 1: Location of Front Lower Damage



Figure 2: Bent Lower Lift Stage Mounting Bracket.

Appendix (cont'd)



Figure 3: Bent Front Plate on Carrier Frame



Figure 4: Bent Rear Plates on Lower Carrier Frame

Appendix (cont'd)



Figure 5: Bent Rear Lower Plate on Lower Carrier Frame



Figure 6: Bent Location.

Appendix (cont'd)



Figure 7: Bent Location.



Figure 8: Bent Upper Lift Stage Mounting Bracket.

**Appendix (cont'd)**

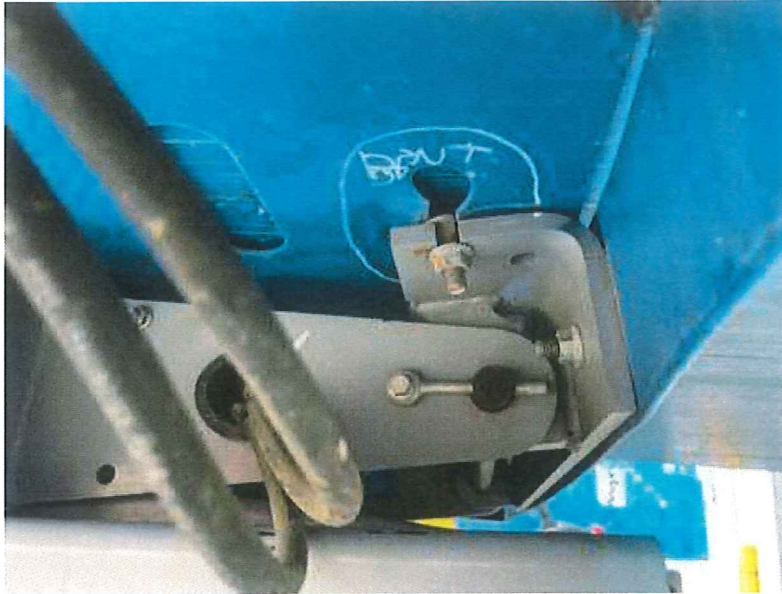


Figure 9: Bent and Torn Location, Upper Mounting Bracket to Platform.



Figure 10: Bent and Torn Location, Upper Mounting Bracket to Platform.

Appendix (cont'd)



Figure 11: Bent Platform Member.



Figure 12: Bent Platform Member.



Appendix (cont'd)



Figure 13: Bent Access Gate.



Figure 14: Dented Location on Platform.

**Appendix (cont'd)**



Figure 15: Crack/Impact Location on Rear Drive Wheel.