

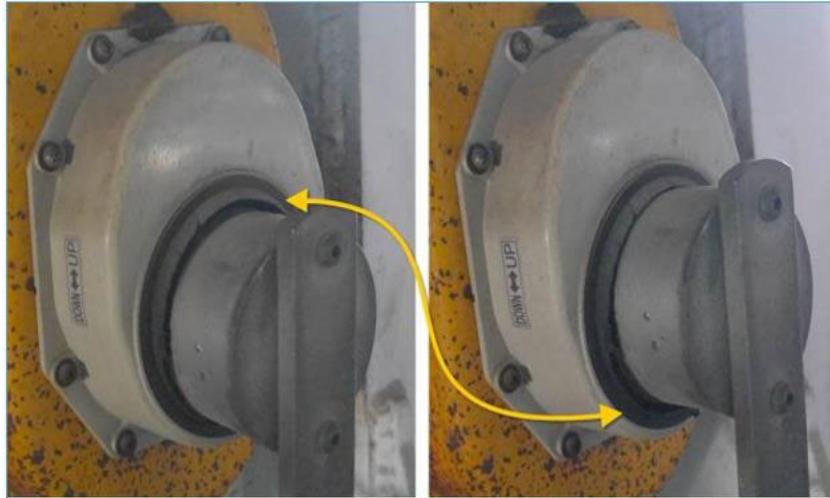
## Auto Max Multi-Levels

a. Charges for Inspection and Repair of Deck Lifting Mechanisms and Doors on Auto-Max Multi-Levels are prohibited.

### Inspection and Repair of Deck Lifting Mechanisms (Auto-max)

#### a. Winches

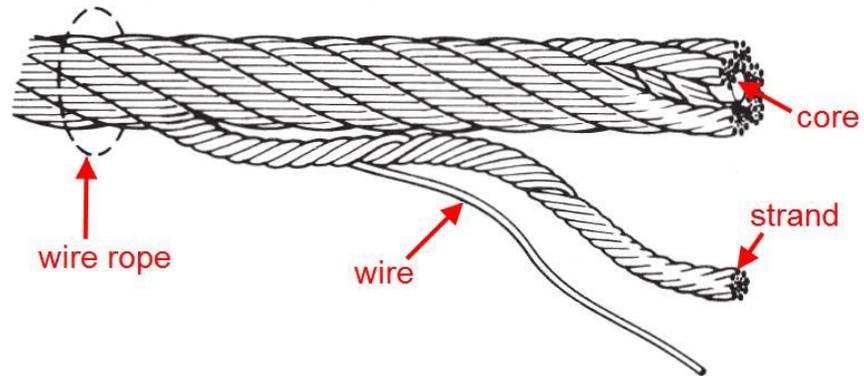
- i. Winches are to be inspected for proper operation. Any winch with an excessively loose handle or other significant wear is to be repaired or replaced. The Figures below show examples of loose handles.



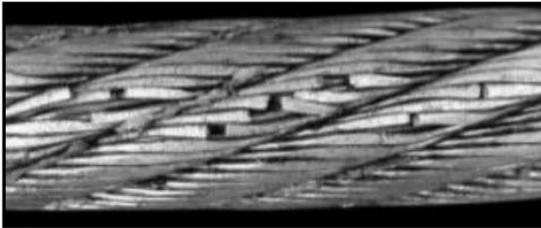
#### b. Lift Cables

- i. Lift Cables are to be inspected for broken wires, corrosion, and significant distortion of the wire rope, and replaced as necessary. A broken cable is defined as six or more broken wires within 2 inches of length, or three or more broken wires in one strand within 2 inches of length. Significant distortion includes kinking, crushing, and bird-caging. The figures below show examples of defective cables that must be replaced.
- ii. Lift cables are made from Wire Rope, which consists of strands of wires. See image and definitions below.
- iii. **Wire Rope:** A plurality of strands laid helically around an axis or core.
- iv. **Strand:** An arrangement of wires helically laid about an axis, or another wire or fiber center to produce a symmetrical section.

v. **Wire:** A single, continuous length of metal.



**Broken Wire Defect 2:** Six or more broken wires within 2 inches of length.



**Broken Wire Defect 1:** Three or more broken wires in one strand within 2 inches of length.



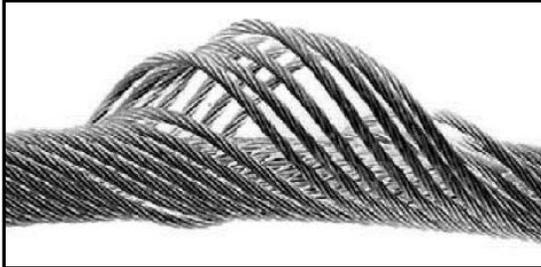
**Kinking**



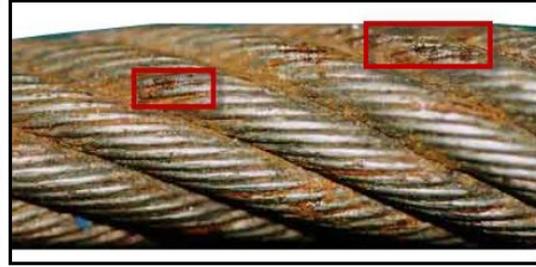
**Crushing**



**Bird-Caging**



**Heavy Corrosion**



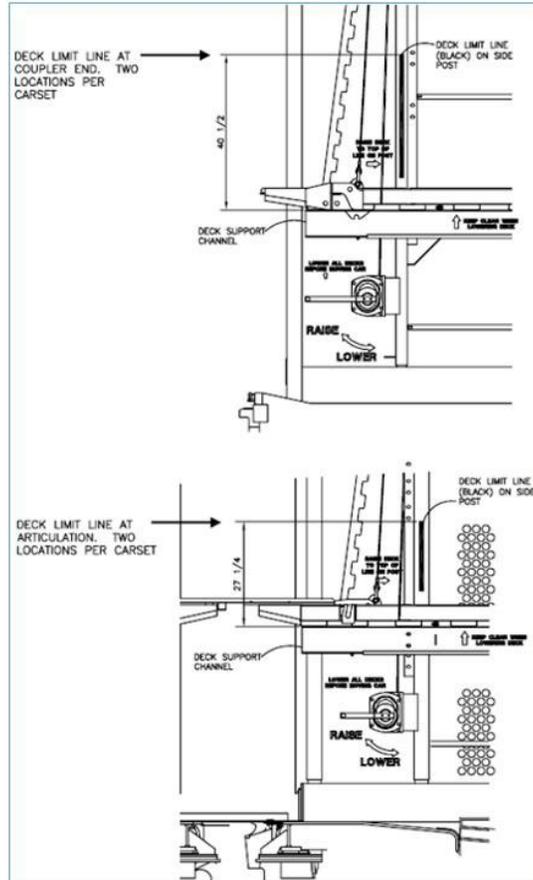
c. **Lock Bars**

i. Lock bars are to be inspected for straightness. A lock bar with an inward bow beyond  $\frac{3}{4}$ " is to be straightened to within  $\frac{1}{4}$ ".



d. Limit Line

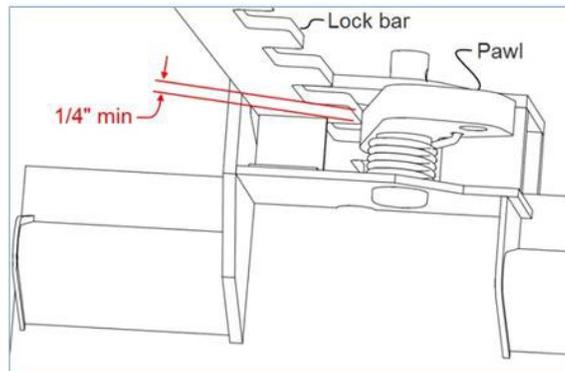
- i. The black raise-to limit line on the side posts shall be inspected for correct height, and corrected if necessary. The height should be nominal  $27 \frac{1}{4}$  inches above support channel at articulation decks, and nominal  $40 \frac{1}{2}$  inches above the support channel at end decks.



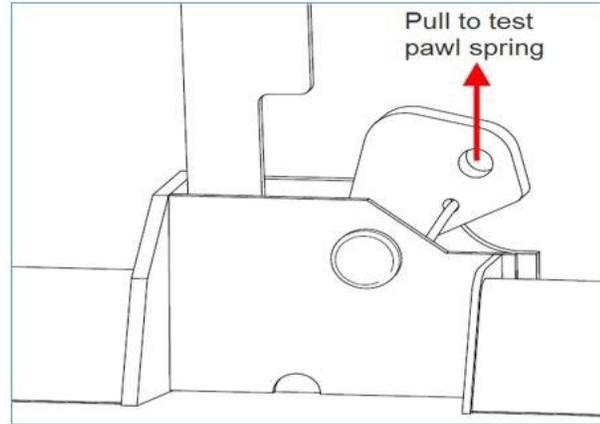
e. Pawl Alignment and Function

i. With the deck in the lowered position, and the winch cable slack:

1. The lock bar should be aligned with the pawl. There must be  $\frac{1}{4}$  inch minimum engagement in the car lateral direction. If there is less than  $\frac{1}{4}$  inch minimum engagement, the bar must be straightened.



2. The pawl should press against the lock bar when there is slack in the cable. Pull the winch cable where it connects to the pawl. The pawl should pull away from the lock bar. When the cable is released, the pawl should rotate back against the lock bar. If the pawl does not function appropriately, it should be repaired or replaced if necessary.



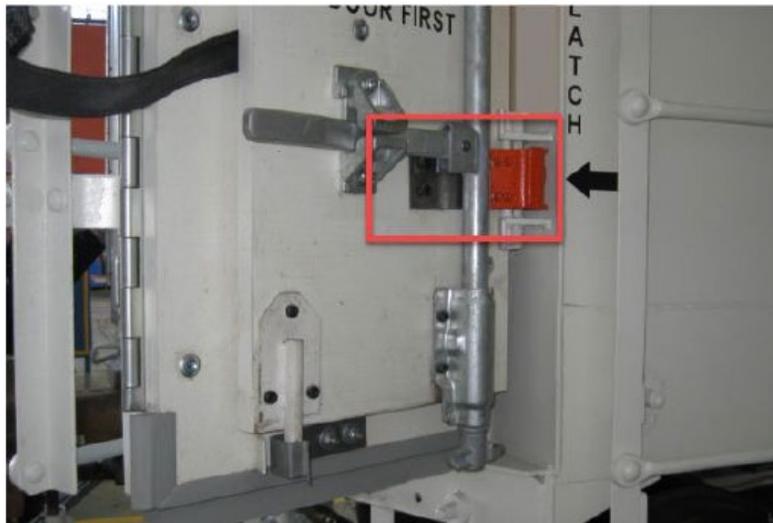
#### G. Auto-Max Door Inspection Procedure

##### a. Inspect, repair or replace door components as follows:

- i. Lockrods: All panels and rods must be straight and doors must be adjusted, as necessary, to allow easy operation in the opening/closing process.
- ii. Keepers: Replace upper/lower lockrod keepers if broken or excessively worn.
- iii. Door Panels: Punctures, tears and other similar defects in door panels must be repaired using door manufacturer's recommended procedures.
  1. Note: Door panels are made of a fiberglass/balsa composite material. Repairs must be made by a knowledgeable technician, using fiberglass resin, fiberglass matting and balsa or other wood inserts as necessary.
- iv. Hinges: Door hinges must be firmly secured (replace missing or loose bolts) and hinge pins must be straight, so as not to impede free movement of doors. Replace any cracked hinge components. Lubrication of hinges/pins may be necessary to improve functionality, (see section b).

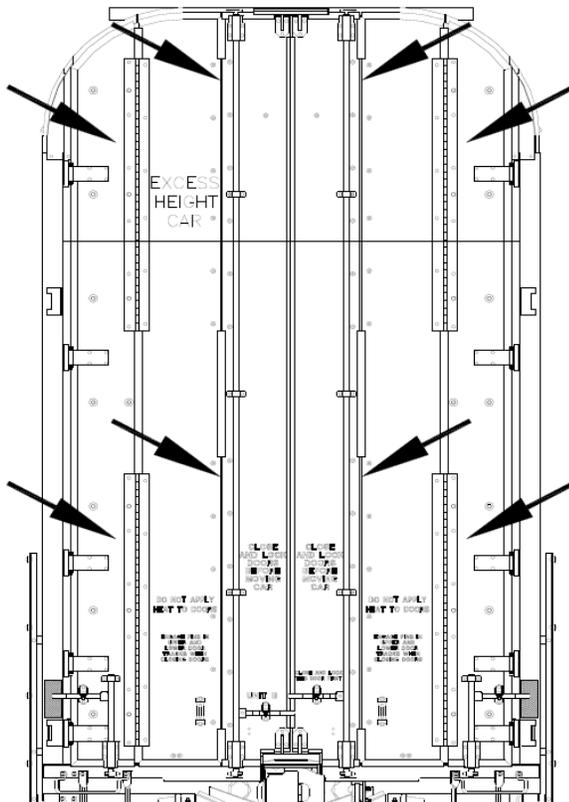


- v. Latches: The latches used to hold doors open must be fully functional. Replace missing or loose fasteners, repair or replace component if required.



- vi. Closing Springs and Limit Straps: Inspect door closing springs (1 per door) and interior door limit straps (two per door) for wear and other defects; replace as necessary.
- vii. Ladders: Inspect ladder rungs. Repair or replace if bent/broken. Ensure that all securement bolts are tight; replace those found loose or defective.

- b. Lubricate door hinges.
- i. This is not a necessary part of door inspection, but is included here as a convenience. When so directed, the long leaf door hinges may be lubricated as follows: The long leaf hinges on the end doors are indicated in the figure below.
  - ii. There are eight hinges on the end of each car that interconnect the trifold door panels. These hinges may become stiff due to infiltration of dust and other contaminants, making operation difficult. Hinges may be restored to proper operating condition with the following procedure.
    1. Spray a liquid penetrating lubricant (see Section b.ii.5) into the hinge at the leaf joints. Apply a liberal amount at every joint.
    2. Work each door panel through its entire rotation until they work easily.
    3. Wipe excess lubricant from the hinge and door to prevent additional dust accumulation.
    4. The outer hinges that connect the door to the corner post (5 hinges per corner post, or 10 per end) typically do not need lubrication. If it is determined that the outer hinges do need lubrication, the same lubricant and procedure as above may be used.



5. Approved M-971 lubricants

- a. Molybond
- b. Zircon
- c. Dag 68

