

Amendment to Avanti Service Lift, Model Shark

This amendment will replace chapter 5 in the existing manual of the Avanti service lift, Model Shark.

5. Daily inspection by the supervisor

If a safety device for fence doors is installed (see chapter 4.7 of the User's manual), every platform fence door must be closed to be able to drive the cabin.

5.1 Service lift

a) Before each operation, ensure that the traction hoist, the Fall arrest device and all auxiliary components (stoppers, wire guide wheels, etc.) are mounted in accordance with the specifications and without any noticeable defects.

b) Check whether the drive, and safety wires are fed correctly around the two wire guide wheels.

c) Wire ends (of 3 m or more in length) must be coiled separately at the floor and tied with strips in at least 3 places.

d) Check lifting capacity: (see the rating plate or section 4.5.3) – the extra load (persons and materials!) must not exceed the maximum rated lifting capacity.

5.2 Operating area

a) Ensure that there are no obstacles within the service lift's operating area which may obstruct the travel of the cabin or cause the cabin to hit the ground.

b) Ensure that all relevant and required protection measures below the cabin are in place. Such measures could include pent roofs or barriers to protect the staff from falling objects.

5.3 Control function

a) Close the doors. Press the EMERGENCY STOP button. The lift should remain still when the UP/ DOWN button is pressed. To restart, turn the EMERGENCY STOP button clockwise. If a FIXED EMERGENCY STOP button is installed (Fig. 9) test as above.

b) Test the top limit stop switch: During upward travel, press the switch manually, and the service lift should stop immediately. Pressing the limit stop switch should enable the lift to travel down again.

c) Test the EMERGENCY top limit stop switch: During upward travel, press the switch manually, and the service lift should stop immediately. Neither upward nor downward travel should now be possible.

d) Bottom safety stop. Lower the lift; it should stop before the rubber feet of the cabin reach the tower ground level. When the "bypass switch" is activated, it should be possible to lower the lift all the way to the ground.

e) Door stop switch: Open the door - it should not be possible to move the lift upwards or downwards.

Sliding door service lift: Move the cabin at a height no corresponding to a platform - it should not be possible to open the door. The door will be only able to be opened by pushing the emergency release red button from outside the cabin as well as using a M5 triangular key from inside the cabin.

f) If the optional AUTOMATIC function is installed. Set the HAND/AUTOM. selector to AUTOM. When holding the handle, the lift should remain still when the UP or DOWN buttons are activated.

g) If the Trapped-Key interlock system is installed. Turn the trapped-key switch to OFF - it should be not possible to move the lift upwards or downwards. See the Trapped-Key Interlock System Manual for further information.



Warning!

If any faults occur during work,

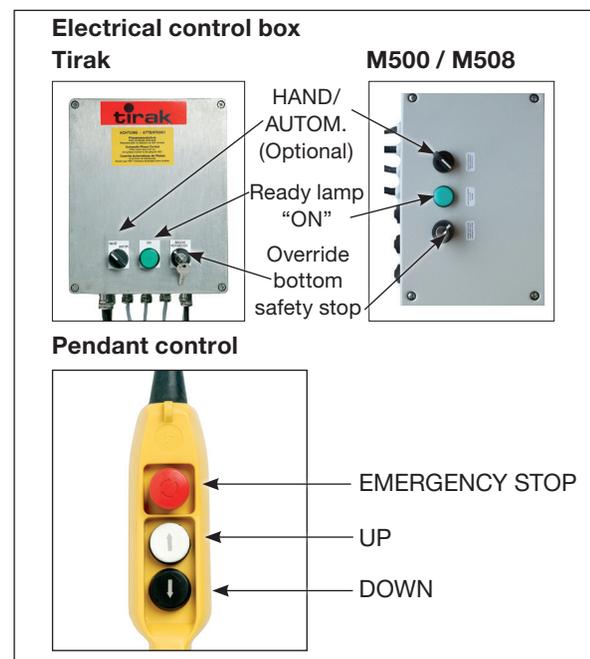
- stop working,
- if required secure the workplace and
- rectify the fault!



DANGER!

Make sure that nobody is exposed to danger below the service lift, for instance from falling parts. Suitable measures: Pent roof or barriers.

Fig. 13



5.4 Automatic operation test

Perform this inspection only if the AUTOMATIC function is installed.

- a) Press EMERGENCY STOP button on the pendant control. Turn the HAND/AUTOM. switch on the electrical control box to the right to activate automatic operation.
- b) Deactivate the EMERGENCY STOP button by turning the button clockwise. (Check the EMERGENCY STOP button fixed is deactivated.) The service lift should stand still.
- c) DO NOT try to activate the “automatic operation” switch.
- d) If the trapped-Key interlock system is installed, turn the trapped-key switch to ON. With the doors closed, press the UP and DOWN buttons. Neither upward nor downward travel should be possible (Switch in pendant control holder blocks the operation).
- e) Press the EMERGENCY STOP button on the pendant control.
- f) Place the pendant control in its holder so it is operational from the outside.
- g) Leave the cabin and close the door.
- h) Deactivate the EMERGENCY STOP button. The service lift should stand still.
- i) Press the UP button. The lift should travel upwards.
- j) Press the EMERGENCY STOP button. The lift stops.
- k) Turn the EMERGENCY STOP button clockwise and press the DOWN button. The service lift should travel downwards until the EMERGENCY STOP button stops the service lift.
- l) Remove the pendant control from holder.
- m) Return the HAND/AUTOM. button to HAND.
- n) Check that the UP and DOWN buttons work again.
- l) Remove the pendant control from holder.
- m) Return the HAND/AUTOM. button to HAND.
- n) Check that the UP and DOWN buttons work again.



Fig. 13b

Emergency stop button

Automatic operation switch

5.5 Remote operation test

Perform this inspection only if the remote control function is installed.

- a) Set the electrical control box switch HAND/AUTOM to AUTOM (fig 7 a).
- b) On top of the remote operation receiver switch the device on (fig 7 b).
- c) Press the up arrow on the remote operation transmitter. The service lift should ascend.
- d) Press the down arrow on the remote operation transmitter. The service lift should descend.
- e) Once the test is complete, switch the remote operation function off.

5.6 Fall arrest device

5.6.1 Service lift installed with Tractel Greifzug fall arrest device BSO

Follow always the most up-to-date procedures and instructions from the manufacturer Tractel Greifzug given in their manuals.

5.6.2 Service lift installed with Avanti fall arrest device OSL500 or ASL508

a) Ascend lift electrically a few centimeters and observe centrifugal weight rotation during this, looking through the window in the fall arrest device. If the centrifugal weight does not turn, leave the lift, tag it out and contact Avanti for assistance.

b) Activate the fall arrest device by turning the lock lever counter-clockwise. Press and hold the DOWN button of the cabin control box. The service lift should not descend.

c) Perform manual descent and observe centrifugal weight rotation during this. The fall arrest device should hold the load hanging from the safety wire rope. If not, leave the lift, tag it out and contact Avanti for assistance.

d) Ascend electrically again to unload the fall arrest device.

e) Unlock the fall arrest device by turning the unlock lever clockwise.

5.7 Wire ropes

a) Follow the 3 steps below to check that the traction and safety wire ropes are not tangled with tower internals.

a.1) Open the top hatch and look upwards in search of any unusual trajectory deviation of the traction and safety wire ropes.

a.2) Close the top hatch and ascend with the service lift to the following platform.

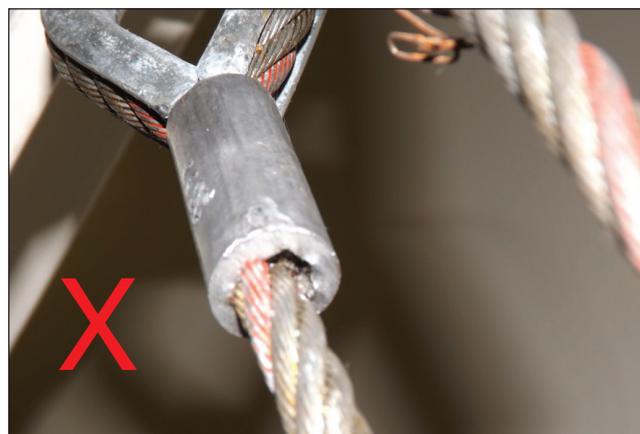
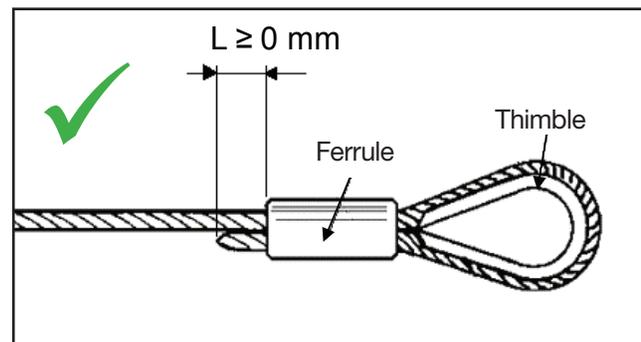
a.3) Repeat steps a.1) and a.2) until the complete length of the wire ropes is inspected.

a.4) If any wire rope is found tangled, climb up the ladder and untangle the wire rope by hand. Then, inform AVANTI.

b) During operation, check that the traction and safety wire ropes pass freely through the traction hoist and the fall arrest device.

c) Once the lift is at the top platform, inspect the top tower beam and the wire rope attachments.

d) Check that the length (L) between the top end of each wire rope and its ferrule is equal to or more than 0 mm.





5.8 Wire ropes after an unusual event



After any unusual event (such as a tower jerk due to the wind turbine going into emergency mode) check that the traction and safety wire ropes have not got tangled with tower internals.

5.8.1 At the bottom platform

If the service lift is placed at the bottom platform when the unusual event occurs, follow the steps below.

- a.1) Open the top hatch and look upwards in search of any unusual trajectory deviation of the traction and safety wire ropes.
- a.2) Close the top hatch and ascend with the service lift to the following platform.
- a.3) Repeat steps a.1) and a.2) until the complete length of the wire ropes is inspected.
- a.4) If any wire rope is found tangled, climb up the ladder and untangle the wire rope by hand. Then, inform AVANTI.

- b) Check that the length (L) between the top end of each wire rope and its ferrule is equal to or more than 0 mm.

5.8.2 At the top platform

If the service lift is at the top platform when the unusual event occurs, follow the steps below.

- a) From the platform look downwards through the platform hole in search of any unusual trajectory deviation of the traction and the safety wire ropes.
- b) Enter the lift and descend to the following platform.
- c) Exit the lift and repeat steps a) and b) until the complete length of the wire ropes is inspected.
- e) If any wire rope is found tangled, climb down the ladder and untangle the wire rope by hand. Then, contact AVANTI.