

7 Rescue, towing, lashing, lifting by crane

7.1 Rescue, towing, lashing

7.1.1 Rescue/towing of the loader if the engine or drive has failed



CAUTION

The swivel loader must not be tow-started. Any attempt to tow-start leads to damage.



DANGER

Secure the rescue location if it is on a public road.



NOTE

- Towing is only permitted to clear the area of use or a street.
- Preparation for towing depends on whether the engine has failed, thus leading to a failure of the entire hydraulics system or if only the drive has failed and the engine can drive the rest of the hydraulics system.

7.1.1.1 Towing the swivel loader when the engine has failed



NOTE

The preparation in points (3), (5), (6) and (11) is only to be carried out if the rescue location is **not** on a public road.

- (1) Press the toggle switch for the hazard flasher (4-8/10).
- (2) Set the drive switch (4-7/13) to the "0" position.

(3) Switch the toggle lever for the steering (4-6/7) of the front axle to the "rear-wheel steering" position; the wheels must be in the straight position.

(4) Set the parking brake (4-7/14).



CAUTION

If the rescue location is on a slope, wheel chocks must be placed on the sloping side of both front axle wheels in addition to applying the parking brake.



(5) Cover the bucket cutting edge and teeth with the bucket protector (5-3/arrow).

(6) Insert the plug of the bucket protector in the socket (5-4/arrow).

(7) Disconnect the hydraulic hoses from the lifting cylinders.

NOTE

- Have a sufficiently large oil pan ready to catch the hydraulic oil that flows out.
- After towing has been completed, fill the lifting cylinders with hydraulic oil and deaerate them by raising and lowering the bucket arm several times.

(8) Using a suitable lifting device, e.g. a second loader with an attached bucket, lift the bucket arm of the loader to be towed until the mechanical bucket arm support can be inserted at the loader to be towed (7-1).

(9) Mechanically prop up bucket arm [e.g. by inserting the bucket arm support (option) (1-1/arrow)] and lower bucket arm until it rests on the bucket arm support.

(10) Close the ball block valve (1-2/arrow) for the working and auxiliary hydraulics.

(11) Block the swivel mechanism by inserting the blocking wedge (1-3/arrow) in the swivel blocking mechanism (1-4/arrow).

(12) Attach the towing rod to the loader to be towed [(7-2/1-towing forwards) or (7-5/1-towing backwards)] and to the towing vehicle.

CAUTION

If the loader does not have a forward ranging and towing coupling, the loader must only be towed backwards.

(13) Switch the hydrostatic drive motor to free flow before towing. For this purpose loosen the hexagon lock nuts. Screw the pins at both high pressure relieve valves (7-3/ arrows-slow loader) or (7-4/arrows-fast loader) of the drive pump until they are level to the hexagon lock nuts. After that fasten the lock nuts again.

NOTE

After towing procedure loosen the hexagon lock nuts. Screw the pins out of both high pressure relieve valves until the pins stop. Fasten the lock nuts.

- (14) If necessary, remove the chocks.
- (15) Release the parking brake (4-7/14).



Figure 7-1



Figure 7-2



Figure 7-3





Figure 7-4

DANGER

- More power is required to steer if the engine has failed.
- Tow the loader at walking speed (2 km/h).
- The towing distance should not exceed 1 km.
- For a longer distance, the defective loader must be loaded onto a truck (for the lashing points, see 7-2/1 and 7-2/2, 7-5/1 and 7-5/2).
- The max. permitted load of the forward ranging and towing coupling (7-2/1) is 3.0 t horizontally in the longitudinal direction.
- The max. permitted load of the rear ranging and towing coupling (7-5/1) is 3.0 t horizontally in the longitudinal direction.
- The max. permitted load of the lashing points/loadbearing points (7-2/2 and 7-5/2) is 2.0 t at an assumed bracing angle of 45°.



Figure 7-5



NOTE

The preparation in points (3), (5), (6) and (9) is only to be carried out if the rescue location is **not** on a public road.

- (1) Press the toggle switch for the hazard flasher (4-8/10).
- (2) Set the drive switch (4-7/13) to the "0" position.

(3) Switch the toggle lever for the steering (4-6/7) of the front axle to the "rear-wheel steering" position; the wheels must be in the straight position.

(4) Set the parking brake (4-7/14).



CAUTION

If the rescue location is on a slope, wheel chocks must be placed on the sloping side of both front axle wheels in addition to applying the parking brake.

(5) Cover the bucket cutting edge and teeth with the bucket protector (5-3/arrow).

(6) Insert the plug of the bucket protector in the socket (5-4/arrow).

(7) Lift and mechanically prop up bucket arm [e.g. by inserting the bucket arm support (option) (1-1/arrow)] and lower bucket arm until it rests on the bucket arm support.

(8) Close the ball block valve (1-2/arrow) for the working and auxiliary hydraulics.

(9) Block the swivel mechanism by inserting the blocking wedge (1-3/arrow) in the swivel blocking mechanism (1-4/ arrow).

Mecalac

(10) Attach the towing rod to the loader to be towed [(7-2/1-towing forwards) or (7-5/1-towing backwards)] and to the towing vehicle.

CAUTION

If the loader does not have a forward ranging and towing coupling, the loader must only be towed backwards.

(11) Switch the hydrostatic drive motor to free flow before towing. For this purpose loosen the hexagon lock nuts. Screw the pins at both high pressure relieve valves (7-3/ arrows-slow loader) or (7-4/arrows-fast loader) of the drive pump until they are level to the hexagon lock nuts. After that fasten the lock nuts again.

ΝΟΤΕ

After towing procedure loosen the hexagon lock nuts. Screw the pins out of both high pressure relieve valves until the pins stop. Fasten the lock nuts.

(12) If necessary, remove the chocks.

(13) Release the parking brake (4-7/14).

DANGER

- Tow the loader at walking speed (2 km/h) with the engine running.
- The towing distance should not exceed 1 km.
- For a longer distance, the defective loader must be loaded onto a truck (for the lashing points, see 7-2/1 and 7-2/2, 7-5/1 and 7-5/2).

NOTE

See page 7-4 for the max. permitted load of the lashing/ load-bearing points.

7.2 Lifting by crane

The loader to be lifted is to be prepared as follows:

- (1) Set the drive switch (4-7/13) to the "0" position.
- (2) Set transmission stage "I" (4-7/11).
- (3) Set the parking brake (4-7/14).
- (4) Remove the cover plate in the swivel unit (7-6/arrow).

(5) Lift or lower the bucket arm until the lowest point of the bucket arm or the bucket is at least 30 cm above the road (5-2).

(6) Close the ball block valve (1-2/arrow) for the working and auxiliary hydraulics.

(7) Block the swivel mechanism by inserting the blocking wedge (1-3/arrow) in the swivel blocking mechanism (1-4/arrow).

(8) Lock the doors.

(9) Fold the outside mirror inwards.



Figure 7-6











Figure 7-7

CAUTION

The following items must be observed when lifting by crane (see Figure 7-7:

- The lifting point (A₁ loader without standard bucket or A₂ - loader with standard bucket) of the lifting device (B) must be located precisely vertically over the center of gravity (C₁ or C₂) of the loader so that the lifting device is located **horizontally** above the longitudinal axis of the loader.
- The lifting gear (D) must lead vertically upwards from the lifting points of the loader (7-5/2, 7-8/arrow and 7-9/ arrow).

DANGER

A permitted payload of at least 3.0 t is required for the lifting gear.



Figure 7-8



Figure 7-9