

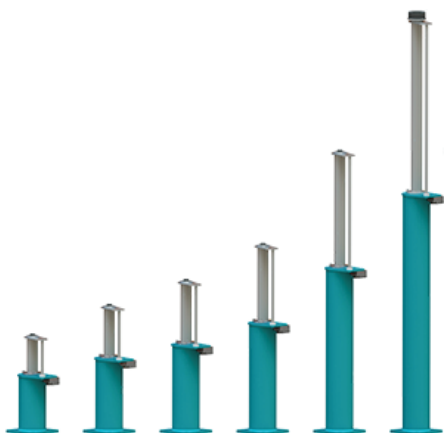


MLB SERIES INSTALLATION GUIDE



ELEVATOR BUFFERS

MLB 13-32



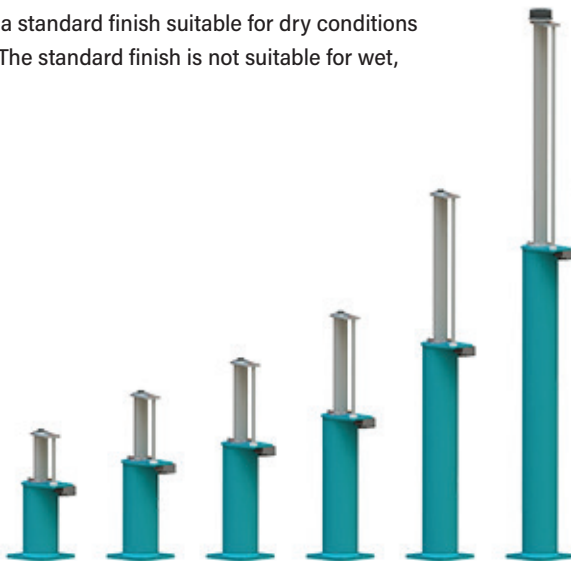
INSTALLATION GUIDE



ENGLISH

1 SCOPE OF DELIVERY

Oleo buffers are supplied with a standard finish suitable for dry conditions (finished Oleo Green primer). The standard finish is not suitable for wet, corrosive conditions.



Oleo MLB buffers can be supplied pre-filled with oil, or without oil.

Check the buffer to confirm it is pre-filled or without oil.

Should there be any discrepancies contact Oleo International before proceeding.

2 INDICATION OF USE

Environmental temperature acceptable conditions -15°C to 70°C.

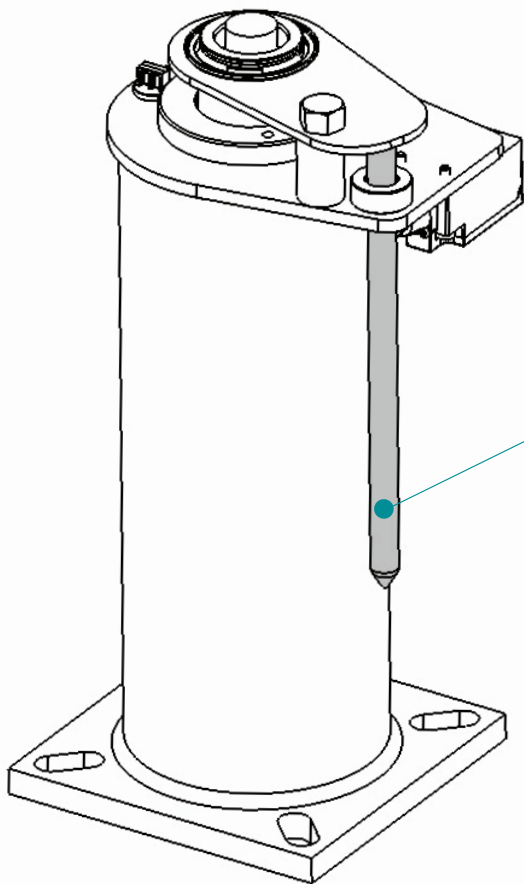
! WARNING

The Oleo MLB elevator buffer is supplied containing compressed gas; the plunger is held in the fully compressed condition during transportation by means of a bolt, this should not be removed until the buffer is in its final installed position.

3 HANDLING

When handling MLB buffers ensure your regional health and safety laws are adhered to.

Figure 1



⚠ WARNING

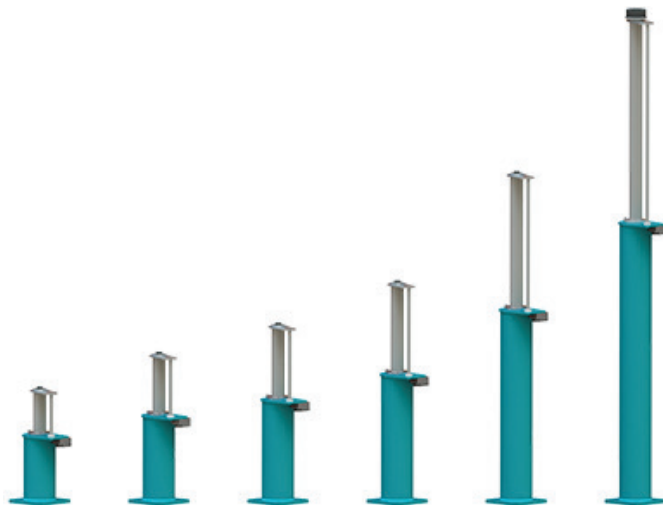
DO NOT lift buffer with the striker shown in *Figure 1*. Avoid contact as this may cause damage.

Always confirm the weight of the buffer to be lifted and ensure that a suitable lifting method is used.



4 BUFFER WEIGHTS

MLB 13-32 Range



Buffer Model	MLB 13	MLB 16	MLB 18	MLB 20	MLB 25	MLB 32
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Without Oil

Kg	9.810	11.15	12.67	15.02	21.05	29.72
Lbs	21.63	24.58	27.93	33.11	46.41	65.52

When Filled with Oil

Kg	10.10	12.39	14.01	16.94	23.97	34.29
Lbs	23.61	27.32	30.89	37.34	52.85	75.59

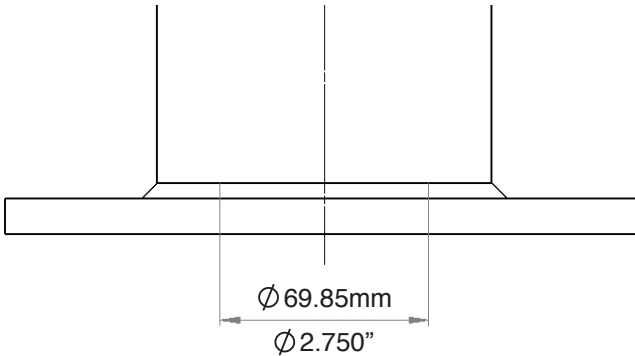
5 BUFFER INSTALLATION PROCEDURE

Ensure the buffer has been secured into its installation position.

Oleo recommends a bolt size M12 for fixing and all four fixing positions are used.

Ensure this area at the base of the buffer, shown in [Figure 2](#) is supported.

Figure 2



At this point the buffer is still compressed in its transportation state, now the buffer can be released by removing the transportation bolt. The following is the recommended removal procedure.

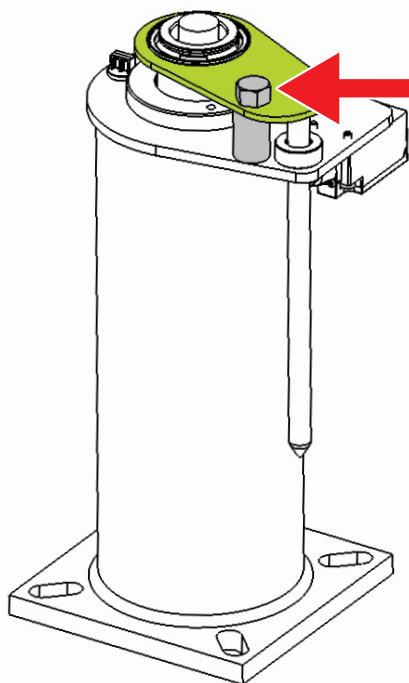
For a controlled release, lower the elevator car (or equivalent) onto the buffer. This mass must be at least equivalent to the minimum mass of the specified buffer.

Minimum mass of the buffer show in the table below:

Buffer Model	MLB 13	MLB 16	MLB 18	MLB 20	MLB 25	MLB 32
Min. Mass						
Kg	450	450	450	450	450	450
Lbs	992	992	992	992	992	992

5 BUFFER INSTALLATION PROCEDURE (Continued)

Figure 3



! DANGER

Now to release the plunger.
DO NOT stand over the plunger when releasing.

To release the plunger, undo the transportation bolt. (GREY in [Figure 3](#)).

Discard the transportation bolt and spacer (GREY in [Figure 3](#)).

If used, remove the elevator car (or equivalent) and this will control the recoil of the buffer.

After periods of being held in the compressed state during transportation and storage, the plunger may require assistance to initially extend. This should be done using rubber dead blow mallet to tap the underside of the buffer top plate (GREEN in [Figure 3](#)) at 90 degree intervals until the plunger extends.

Once fully extended and stroked the buffer will perform as designed.

Buffers are to be fitted vertically parallel to guide rail +/- 5mm.

Do you have a pre-filled buffer?

No - Please continue to [Section 6](#).

Yes - Go to OIL FILLING OPTIONS [Section 8](#).

6 OIL SPECIFICATION

The oil must confirm to the specification on the buffer data plate –

ISOVG68: SG.88/90 at 15°C : hydraulic.

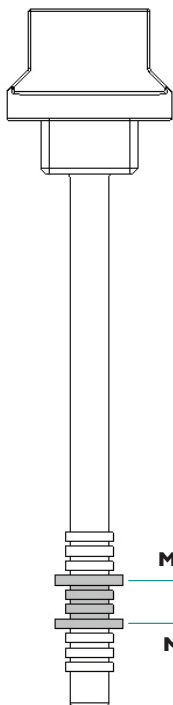
Pour Point: 18°C or lower. Viscosity index: 75 or higher

! CAUTION

Take care when handling the oils.

Observe the oil manufacturers recommendations.

Figure 4



The oil volume guide can be found in table below:

Buffer Model	MLB 13	MLB 16	MLB 18	MLB 20	MLB 25	MLB 32
Approximate Oil Volume						
Kg	1.02	1.41	1.74	2.18	3.32	5.19
Lbs	0.27	0.37	0.46	0.58	0.88	1.37

MINIMUM & MAXIMUM

The oil level needs to be between the Minimum and Maximum marks indicated on the dipstick as shown in [Figure 4](#).

7 OIL FILLING PROCEDURE

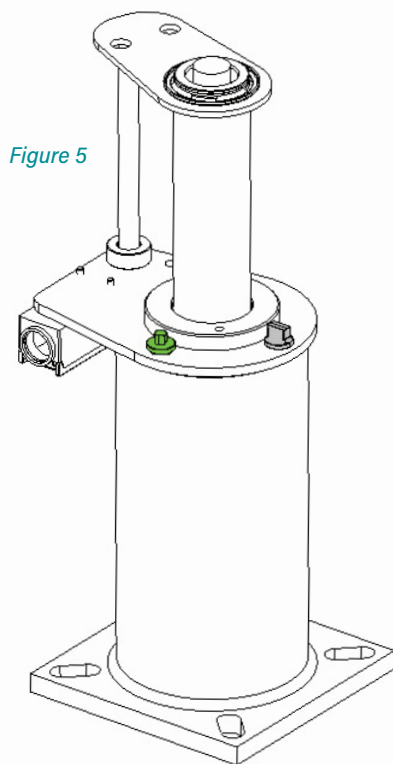
! NOTICE

The buffer must be vertical and fully extended before filling with oil.

! CAUTION

Take care when handling the oils. Observe the oil manufacturers recommendations.

- 1 Unscrew the aircscrew, remove from the buffer and keep safe. (GREEN in *Figure 5*).
- 2 Unscrew the dipstick, remove from the buffer and keep safe. (GREY in *Figure 5*).
- 3 Gradually fill the buffer with oil until the oil level is visible between the minimum and maximum levels on the dipstick (indicated on *Figure 4*).
- 4 Allow the buffer to stand for a minimum of 30 minutes.
- 5 Re-insert the dipstick **DO NOT** screw down.
- 6 Remove dipstick and inspect level. The oil level needs to be between the minimum and maximum marks indicated on the dipstick as shown in *Figure 4*.
- 7 Once oil level is correct replace aircscrew and securely fasten.
- 8 Once oil level is correct replace dipstick and securely fasten.



The oil must be within the correct operating range for the buffer to perform correctly. If further oil is required after checking repeat steps 1-8.

! WARNING

DO NOT overfill past the maximum dipstick mark.
If this occurs, then oil must be removed from the buffer.

8 OIL FILLED OPTIONS

Now fully extended the buffer needs to stand for at least 30 minutes. This allows the oil to settle.

9 OIL CHECKING PROCEDURE

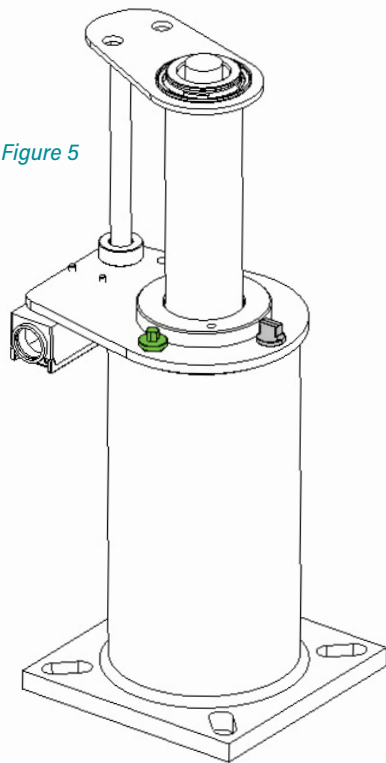
The oil level must be correct and needs to be checked using the following procedure:

- 1 Unscrew the dipstick and remove from the buffer (GREY on [Figure 5](#)).
- 2 Wipe dipstick clean.
- 3 Re-insert the dipstick **DO NOT** screw down.
- 4 Remove dipstick and inspect level. The oil level needs to be between the maximum and minimum marks indicated on the dipstick as shown in [Figure 4](#).
- 5 Once oil level is correct replace dipstick and securely fasten.

The oil must be within the correct operating range for the buffer to perform correctly.

If further oil is required after checking refer to Oil Filling Procedure [Section 7](#).

[Figure 5](#)



⚠ WARNING

DO NOT overfill past the maximum dipstick mark.
If this occurs, then oil must be removed from the buffer.



10 FINAL COMMISSIONING

Oleo recommends the final 7 step process is followed prior to commissioning:

- 1 Ensure oil level is correct.
- 2 Ensure striker is vertically aligned to +0.5 mm.
- 3 Complete electrical connections to the limit switch.

! WARNING

As a safety critical component, buffers should not be installed without a switch.

- 4 Compress the buffer at slow speed across the full working stroke then allow to recoil.
- 5 Allow the oil to settle for 30 minutes then recheck oil level – see [Section 9](#).
- 6 Finally, impact the buffer at the full rated speed of the elevator.
- 7 Complete final checks of oil level and the buffer is at correct working height.

! NOTICE

CHECK: The maximum overall height against table below MLB 13-25 +0/-8.8mm and MLB 32 +0/-8.2mm of the figure stated.

Buffer Model	MLB 13	MLB 16	MLB 18	MLB 20	MLB 25	MLB 32
Extended Height						
m	0.4103	0.5323	0.6343	0.7823	1.1643	1.7305
in	16.154	20.957	24.972	30.799	45.839	68.130

! NOTICE

If the buffer has not returned to the fully extended position (determined by measuring overall height) contact Oleo International.

11 MAINTENANCE

Oleo recommends the following be carried out every 12 months from installation:

- 1 Clean away debris and dirt from around the plunger and switch.
- 2 Check the oil level is correct.
- 3 Compress the buffer across its full working stroke.
- 4 After the compression, ensure the buffer has returned to its correct working height and visually check for any damage. See correct working height in table in [Section 10](#).

Ensure regional jurisdictions and laws for maintenance are adhered to.

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ALTERNATIVE LANGUAGE INSTALLATION INSTRUCTIONS ►



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Please visit:

<https://www.oleo.co.uk/downloads/elevator-installation-booklets>