


LMS2, Installation, Cable Reel

This section covers the installation of the cable reel. The cable reel not only measures boom length, but also boom angle, boom angle rate of change and boom stow.

Further Information

Please visit <http://www.sil3.com.au/lms2/> for more information regarding this product.

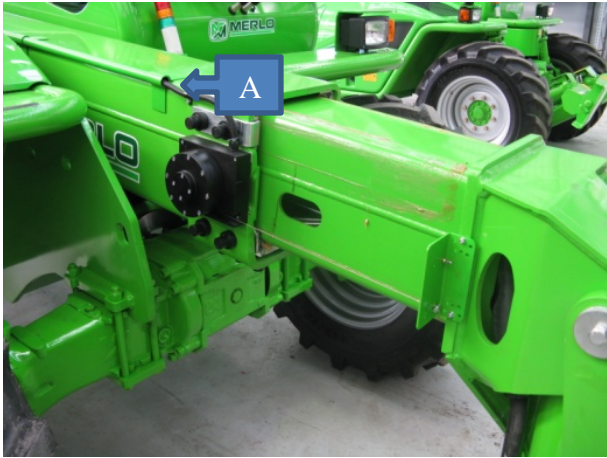

	CAUTION
	<p>Procedures within this document can modify the calibration and performance of the LMS system.</p> <p>Always ensure these tasks are carried out by trained personnel.</p>

Boom Tube Installation

The boom tube is a lightweight aluminium tube that is fitted to the top of the boom. It carries the network data cable to connect the cable reel into the network backbone. The tube is supported by up to 5 plastic clips. It is designed for easy installation, and eliminates the need to connect to “spare” wires within the boom.

The following procedure is recommended for installing the boom tube. Typically the boom tube is one of the first items installed as it requires the silicone adhesive to set before other tasks may be completed.


Step	Details
1	<p>Measure the length of the boom and ensure the boom tube will fit. There should be 100mm between each end of the boom tube and the nearest boom structure plates. This distance is required to ensure smooth routing of the network cable.</p> <p>Note: Use 1 full length (3000mm) of boom tube at the front of the boom, and cut a second length of tube to size to use at the rear of the boom.</p>
2	<p>Clean the surfaces of the boom and mark out the distances of each boom clip. One clip should be installed exactly at each end of the boom tube (A). Use the remaining two clips as</p>

	<p>appropriate, with one clip covering the join between the boom tubes.</p> 
3	<p>Use magnets (not provided) or masking tape to hold the boom clips in place whilst the silicon cures.</p> 

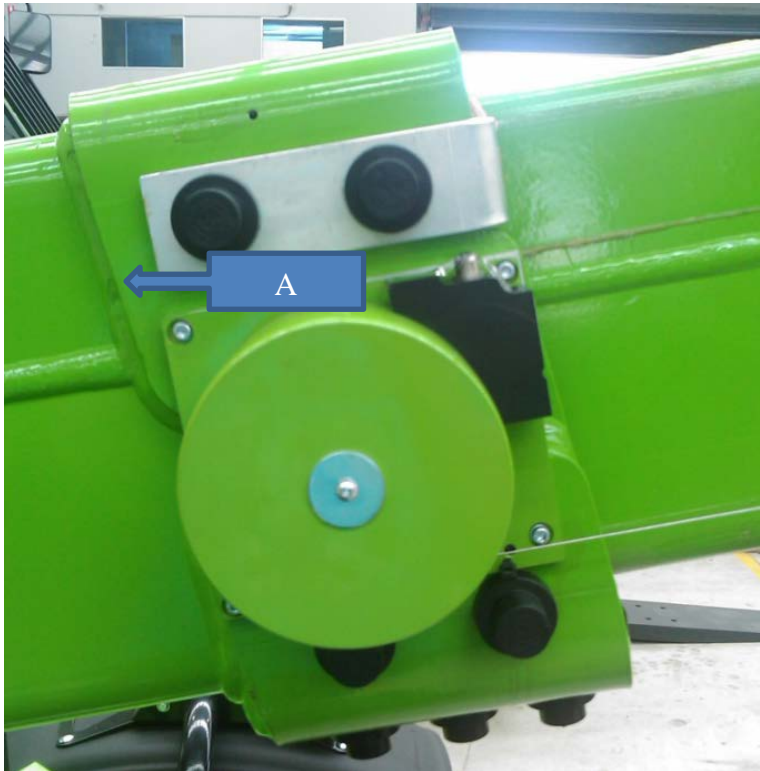
Cable Reel Mounting



The cable reel is mounted on the end of the base boom segment and is fitted to the strengthening plates using socket head cap screws. The cable reel is installed in the same location on each machine.

Cautions

	<p style="text-align: center;">CAUTION</p> <p>NEVER tighten the cable reel against uneven strengthening plates. This will cause the cable reel to distort and may cause damage to the mechanics of the cable reel.</p>
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Procedure


Step	Details
1	<p>Locate the position of the boom for the cable reel. The cable reel must be mounted on the right hand side of the base boom section. Typically the strengthening plates (A) are used as these can be easily and safely drilled into. Ensure that there is sufficient clearance between the boom pad retainers and the top of the cable reel.</p> 

2	<p>It is recommended that the boom angle be set and checked at 0.0 using a digital spirit level. If the cable reel is also secured to the boom at 0.0 then the boom angle system will not need to be calibrated.</p>
3	<p>On some machine models it is necessary to use the spacer plate provided in the installation kit to space the top of the cable reel. This is due to the strengthening plates at the end of the boom section being of a different thickness. Typically these models are anything other than a P60.10 or P72.10.</p> 
4	<p>Route the network data cable and secure with a P-clip. Use a M5 x 12mm socket head cap screw, M5 washer and P-Clip as demonstrated in the image (F) below:</p> 

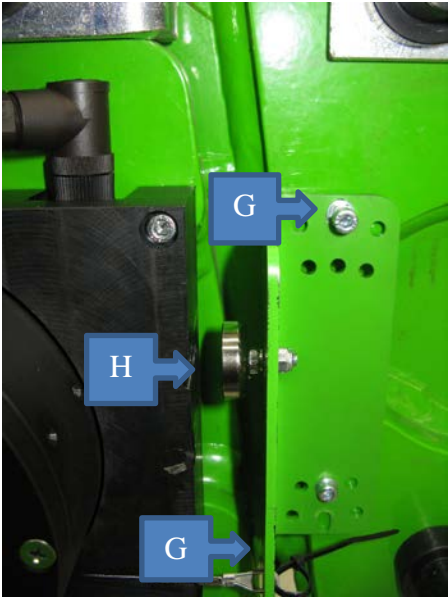
Install Boom Bracket

The boom end bracket is designed to mount on the extendible section of the boom. It supports the boom stow detection magnet and also connects to the cable reel string.

Cautions

	CAUTION Failing to fully retract the boom before checking the clearance between the magnet and the cable reel will result in damage to the cable reel.
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Procedure

Step	Details
5	<p>Mount the boom end bracket using 2 x M5 x 12mm socket head cap screws and washers (G). Ensure that the magnet is secured with a M5 x 25 socket head cap screw and a lock nut. If necessary, space the magnet forward towards the cable reel so there is about 5mm-10mm clearance to the cable reel (H).</p> 

- 6** Connect the cable reel trace wire to the boom end bracket using a M5 x 12 socket head cap screw, washers and a lock nut (I).



Post Installation Checks

The following checks should be performed post installation

- Check that with the boom fully retracted the space between the cable reel and magnet is within tolerance.
- Check that the cable reel magnet does not come into contact with the cable reel.
- Check that the cable reel is free to operate when the boom is extended and retracted and there is no binding of the cable reel string.
- Check that the boom tube does not foul on any part of the machine (example the air filter on P25.6)