ML3/ML5 Asset Tracker
Instructions for Installing the Telematics Module

For use with a ML3/ML5 controller only

Tools Required:

1) Phillips/Flat screwdriver
2) Wire tie cutter
3) Silicone Caulk
4) Surface Cleaner (Isopropyl Alcohol)

This instruction should be read through completely before proceeding.

WARNING

Power the unit on and update the ML3/ML5 controller software to the currently released ML3/ML5 software (TBD+) for the PrimeLINE models. Set the controller date and time in GMT. You may refer to the operations and service manual for detailed explanation.

Before proceeding with installation, set ON/OFF switch and circuit breaker to OFF position. Disconnect power plug from the unit.

Follow local lockout tagout procedures for working on the equipment.

Parts required per assembly:

ITEM	PART NUMBER	PART NAME	QTY
1	12-00930-02	TELEMATICS MODULE AND HARNESS	1
2	58-01441-01	STA-STRAP	1
3	02-00311-02	LUBRICANT	1
4	66-U---1—3882	WIRE TIE	12
5	62-12305-00	LABEL	1
6	62-11270-32	LABEL,WARNING	1
7	62-11114-00	TAG	1
8	98-02739-00	INSTALL INSTRUCTIONS	1

Installation Procedure:

1. Ensure The ML3/ML5's software is updated to TBD+ prior to install.
2. Record the information shown in Table 1. If installed in the field, please report the following data to container.lynxfleetsupport@carrier.com.

Lynxfleet Device Serial Number	Unit S/N Prefix	Unit S/N	Container Prefix	Container No.	Comm. Date (mm/dd/yyy)	Controller S/N	Software Version	Install Location	Customer

Table 1: LynxFleet Device Warranty Information

3. Open the control box door. See Figure 1.

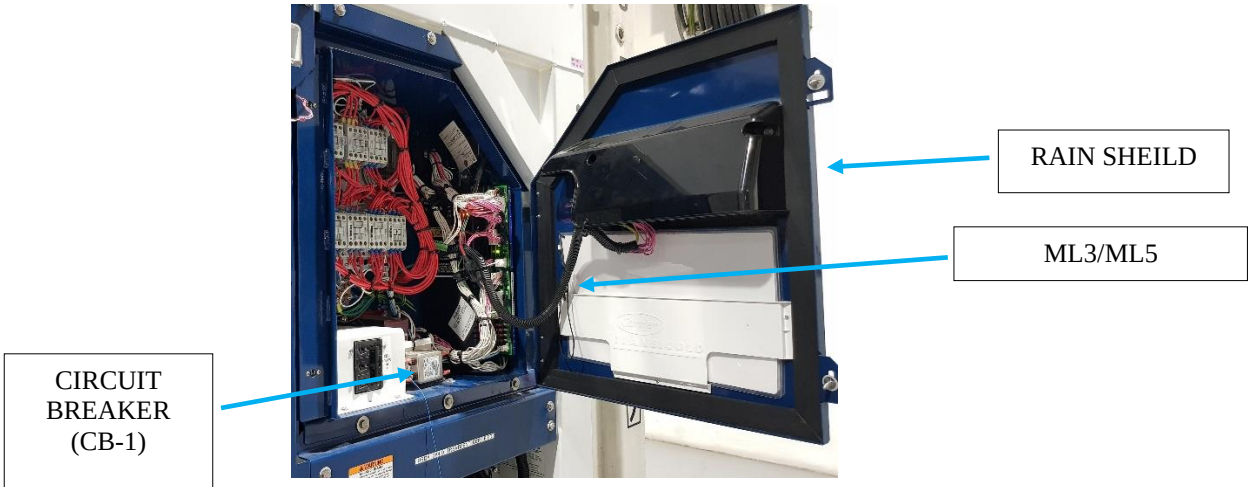


Figure 1: Control Box with Door Open

4. Remove the rain shield by removing the screws using a flat head screwdriver. Temporarily reinstall the two screws to hold display in place for the next step. See Figure 2a and 2b.

5. Clean area of any residue caulk on either the rain shield or the control box door.

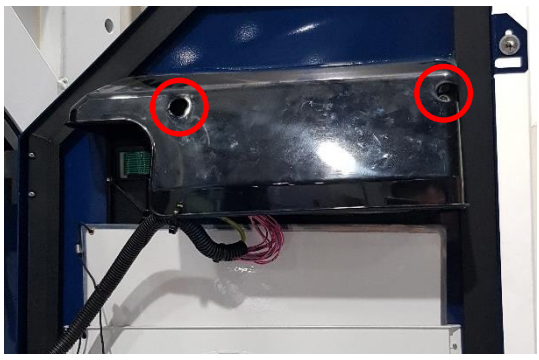


Figure 2a: Removal of Rain Shield

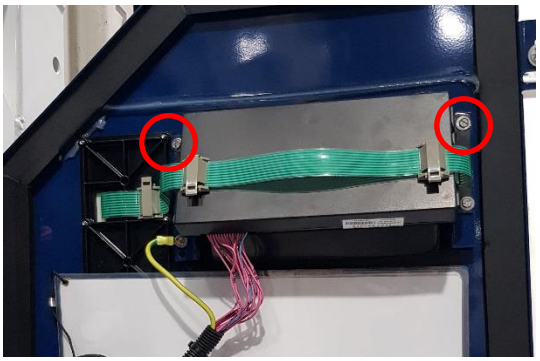


Figure 2b: Screws reinstalled

6. Remove the two lower screws on the display.
7. Position the Telematics module with the flat side of the module facing towards the door and reinstall the two screws on the display to secure / mount the module in place. See Figure 3.

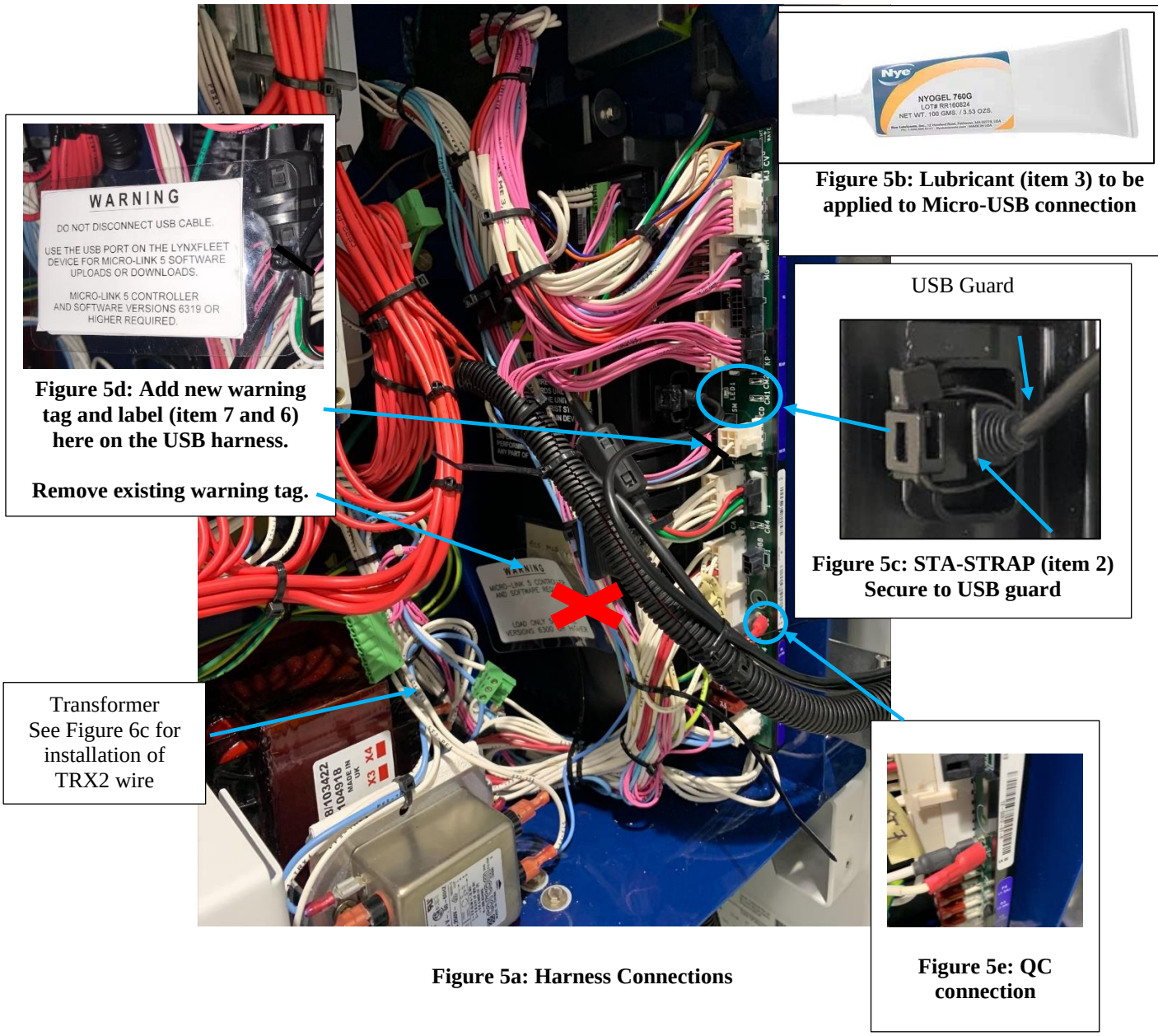
Figure 3: Module Installation

8. Note the ground screw location and wire orientation. See Figure 4a. The module may need to be pushed up when tightening it down to clear the ground screw.

Figure 4a: Module Installation

Figure 4b: Module Installed under rain shield

9. Apply electrical contact dielectric grease to the micro-USB connector on the ML3/ML5 and the micro-USB plug. See figure 5b.
10. Plug the micro-USB (item 1) to the ML3/ML5 controller connector and secure with the STA-Strap (item 3) to the USB guard and pull tie wrap to secure USB cable. See Figure 5c and 5d.
11. Locate the existing software tag and remove it from the unit. See figure 5d.
12. Take the clear plastic tag (item 7) and apply new label (item 6). See figure 5d.
13. Secure tag to the USB cable near the controller using wire tie. See figure 5d.
14. The power cable splits into QC and TRX2. Connect the wire marked QC to the QC connector on ML3 controller. See Figure 5e.



15. Loosen the mounting screws of the filter in front of the transformer using a flathead screwdriver so it can be rotated out of the way. See fig. 6a and 6b.

Figure 6a: Filter location

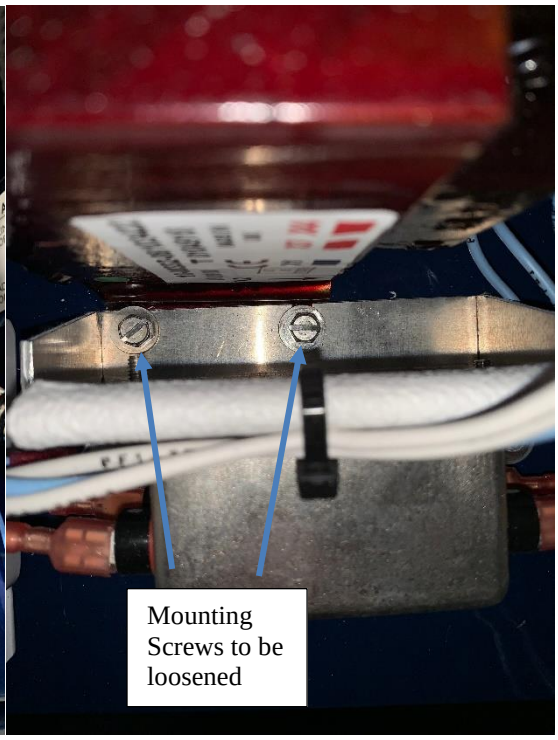


Figure 6b: Filter mounting screw

16. Connect the wire marked TRX2 to the low voltage side of transformer at an open X2 connector. See Figure 6c.

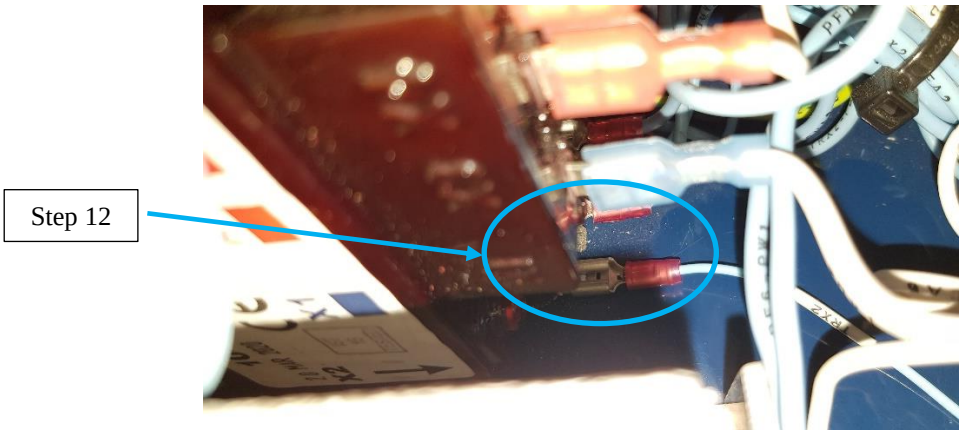


Figure 6c: TRX2 connection to Transformer

17. Move the filter back to its original place and secure it with the mounting screw.
18. With the door fully open, neatly secure the wire harness using the wire ties and securing to existing display cable conduit. See Figure 7a.

Figure 7a: Securing wire harness

19. Remove the top screws on the display. Reinstall rain shield using these screws.
20. Caulk along the top of the rain shield to prevent water ingression. See figure 7b.

Figure 7b: Caulking of Rain Shield

21. Secure the wire harnesses to the rain shield via the hole as shown below in figure 7c. If there is no hole, drill a hole with a ¼" or 6mm drill bit.
22. Clean the rain shield with an appropriate cleaner and add the USB label (item 5) to the rain shield to the right of the harness mounting hole. Location shown in figure 7c.

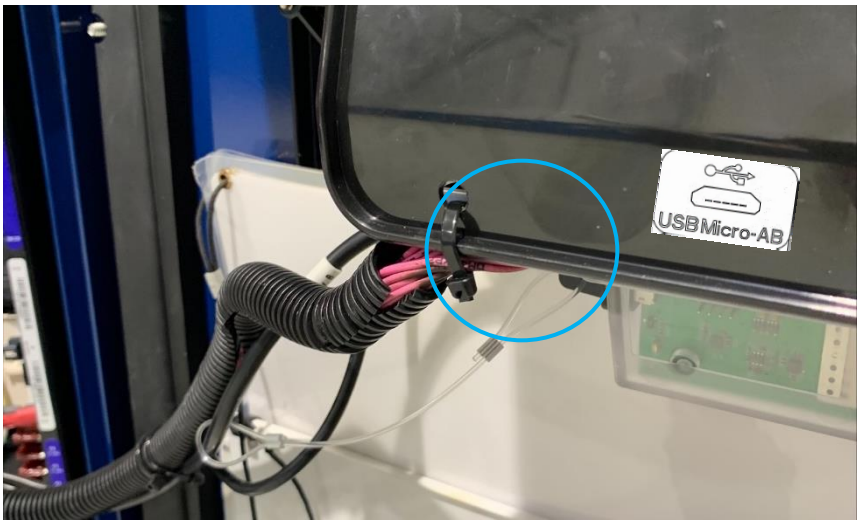


Figure 7c: Routing wire harness and label location

23. Power on the reefer unit.

24. Check the operation of the Telematics Module using the LED display. The LED on the module will display accordingly.

    NOTE: Ensure there is good cellular coverage for a successful telematics device connection.

Standard Startup

KEY
A= Amber G= Green R= Red
A/G/R -> LED ON ~250MS
\- -> LED OFF ~250MS
… -> Pattern repeats

		Startup	Gateway Connection Check	Telemetry Ready/Sending
On power	LED	no LED	GAGG ----…	G-G- G--- ----…
Battery	LED	no LED	AGAA ----…	A-A- A--- ----…
	Time	< 30 seconds	< 30 seconds	With Good Cell signal

Warning/Error patterns

LED patern		Error/Warning description	Recommended Action
R-R- R-R- R--- ----…		SIM Detection ERROR	IoT device replacement
R-R- R-R- ----…		SIM CELL Network Reg ERROR	IoT device replacement**
R-R- R-R- ----…		SIM DATA Network Reg ERROR	IoT device replacement**
R-R- R--- ----…		SIM APN ERROR	IoT device replacement**
R-R- ----…		Controller serial number incorrect on ML3	ML3 replacement**
AAAA --- -…	GGGG --- -…	Connection to internet but not to Lynx Fleet	Ok; no action required.

No LED for more 2 minutes	Communication between ML3 controller and Telematics device defective.	Step 1: Check Power Supply to ML3 and Telematics Device. Step 2: Check ML3 Connection Step 3:Check ML3 USB port with a flash drive (data download) if flash drive is detected ML3 is probably fine Return the IoT Gateway If flash drive is not detected, ML3 USB port may have an issue. Try the device on another ML3.

Other warning patterns:

		Cell signal Marginal	NO Cell Signal	Action
On power	LED	G-G- ----…	G--- ----…	
Battery	LED	A-A- ----…	A--- ----…	
		Cell signal low or inconsistent: Data will be stored on device and will be sent when cell coverage is recovered.	No cell signal detected - Data will be stored on device and will be sent when cell coverage is recovered.	Move reefer unit to area with better cellular coverage.

** Contact your assigned Carrier Field Service Manager or Lynx Fleet Support prior to any replacement.

FCC/CE/ISED Compliance

FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC / ISED RF exposure statement:

The equipment complies with FCC & ISED Radiation exposure limit set forth for uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

ISED

This device complies with Part 15 of the FCC Rules and contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS standard 247.

Operation is subject to the following two conditions:

this device may not cause harmful interference, and

this device must accept any interference received, including interference that may cause undesired operation.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement

CE Warning

This equipment should be installed and operated with minimum distance 20cm between the radiator and your body

Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et votre corps.

This device in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. All essential radio test suites have been carried out.

CAUTION : RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

1. Adapter shall be installed near the equipment and shall be easily accessible.
2. The plug considered as disconnect device of adapter.
3. The device complies with RF specifications when the device used at 20mm form your body.

Contains FCC ID: XMR201903EG25G and IC: 10224A-201903EG25G

SYM	REVISION RECORD	DATE	BY	ENGR	ECN NO
A	INITIAL RELEASE				ECN1146067
B	Combonation Model				ECN1146662