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Service Bulletin: Ethernet Cable Assembly

Revision History

Revision	Release Date	Author	Description of Change
0	August 2024	Lexa Bauer	Release

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1. Overview

The purpose of this document is to show how to terminate the ethernet cable [115-0050-01] and its connector [125-0422-01] for Pivot 5G GA2.

2. Requirements

2.1 PPE

The following are required during assembly:

- a. Nitrile or latex gloves
- b. Safety glasses

2.2 Tools

- a. Tape Measurer or Calipers
- b. Wire strippers (for 24-gauge wire)
- c. Wire cutters
- d. Flat head screwdriver
- e. Pliers
- f. 5/8-inch crescent wrench

2.3 Parts

Bill of Materials (refer to Arena for the latest BOM)

PN	Description	Qty
125-0422-01	Connector, Universal, 4-position, Plug straight M12	2
115-0050-01	Cable, Ethernet ,Cat5e, 4 Conductor,2 Pair, 24AWG,Shielded, Black	Desired length

3. Assembly Instructions

- [1] Obtain the required length of 115-0050-01 ethernet cable and two 125-0422-01 ethernet connectors (Figure 1). Do not slide these onto the cable until step 7, which shows the order in which they should be put on the cable.

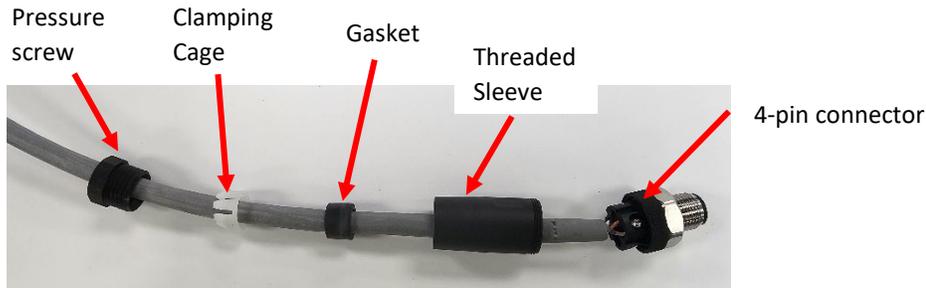


Figure 1

- [2] Using wire cutters, carefully remove .5" of the outer jacket of 115-0050-01. Take care not to cut inner conductors or shield wire. (Figure 2)



Figure 2

- [3] Cut away shielding wrapped around wire bundle and thread (Figure 3). Cut away plastic beneath the shielding (Figure 4).

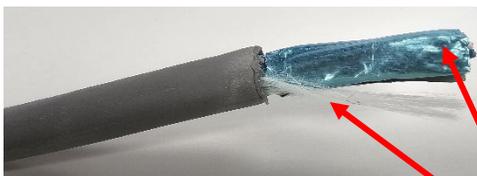


Figure 3



Figure 4

Cut away

- [4] Cut away two blue filler tubes (Figure 5).

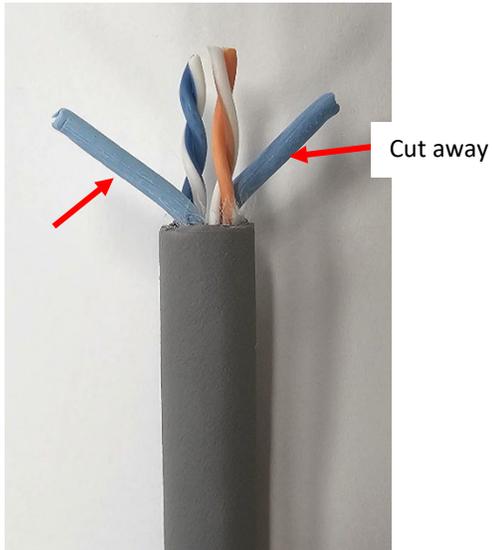


Figure 5

- [5] Separate twisted pairs in wire bundle (Figure 6).

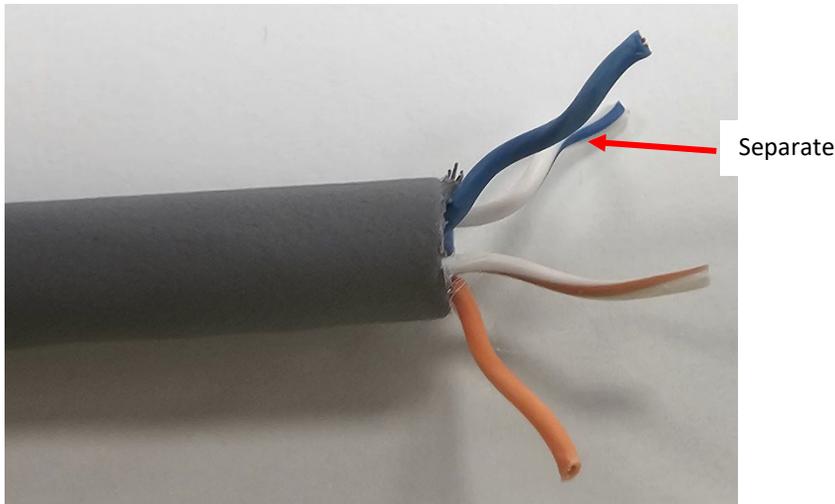


Figure 6

- [6] Use wire strippers to strip outer insulation of conductors to 0.20" ($\frac{1}{5}$ ") as shown in Figure 7.



Figure 7

- [7] Slide connector parts over the cable in this sequence: pressure screw (1), clamping cage (2), Gasket (3), threaded sleeve (4). Orientation of each part as shown in Figure 8 is important.

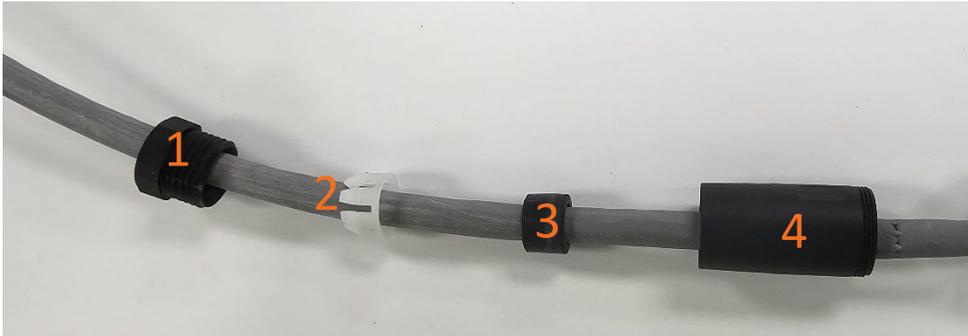


Figure 8

- [8] Use a flathead screwdriver to loosen screws at the 4 numbered locations of the connector (Figure 9) and insert the stripped ends of the conductors into positions as follows:



Figure 9

- Orange----Position 1
- Orange/White---Position 2
- Blue/White-----Position 3
- Blue-----Position 4

- [9] When tight, screw will recess into plastic housing of connector as shown in Figure 10. There should be NO conductive material visible outside the ferrule. Perform a pull test to ensure the wire is secured.

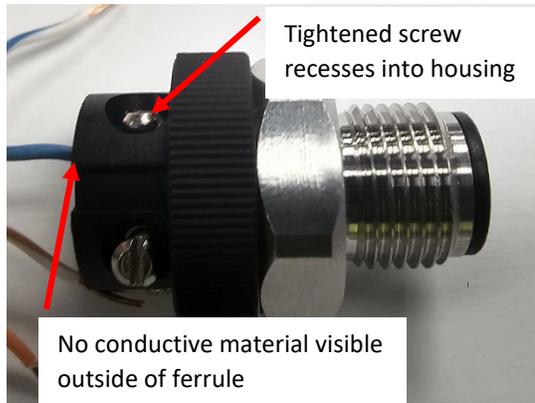


Figure 10

- [10] Repeat for all four wires. (Figure 11)

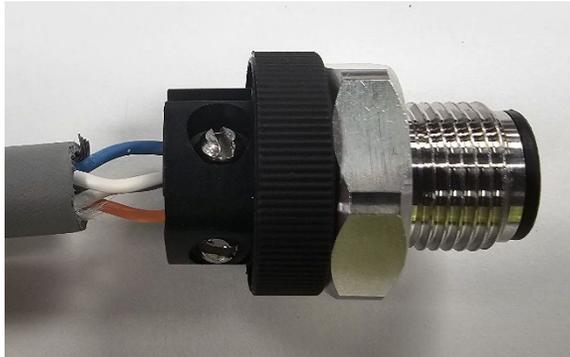


Figure 11

- [11] Slide housing up and screw it into connector until tight as shown in Figure 12.



Figure 12

- [12] Slide gasket and clamping cage into housing. Gasket and housing should sit on insulated wires as shown in Figure 13. They **SHOULD NOT** sit on the smaller wires on the stripped portion of the cable.

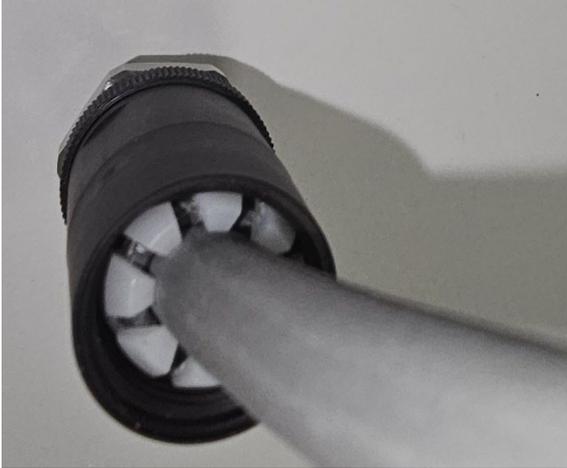


Figure 13

- [13] Use a 5/8-inch crescent wrench to tighten pressure screw until tight as shown in Figure 14. There should be **NO GAP** between the pressure screw and the housing. Figure 15 shows an incorrectly tightened pressure screw.



Figure 14



Figure 15

- [14] Repeat [step 2](#) through step 14 for the opposite end of the cable.

4. Reference Images

4.1 Full Assembly

4.2 Ethernet Connector Kit