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| Technical Bulletin | | |  <p>Tesco Corporation 5616 – 80th Avenue SE Calgary, Alberta, Canada T2C 4N5 Tel: 1-877-TESCO-77 (North America) Tel: 1 (713) 359-7195 (AMSS 24-hour support) Tel: 1 (713) 359-7295 (International) Email: bulletins@tescocorp.com www.tescocorp.com www.tescoparts.com</p> |
| No: TB085 | Rev: 0 | Date: 29 July 2011 | |
| Improper Build Procedures Found on 37C “A” Cables | | | |

BACKGROUND INFORMATION:

TESCO recently encountered two issues with the 37C “A” cable, predicated by improper build procedures by the primary cable vendor.

1. Issue 1: Incorrect Pinning

The supplied cables were pinned incorrectly. The insert that is supplied with the cables has a ground strap attached to Pin 3 as standard vendor issue. The insert requires that the ground strap be removed (Figure 1). However, during the most recent cable assemblies completed at the vendor, the ground strap was not removed from the insert. The result is a short to ground when the circuit involving Pin 3 is energized. It is believed that a number of these improperly built cables made it through TESCO supply chain, and may have been included with your top drive.

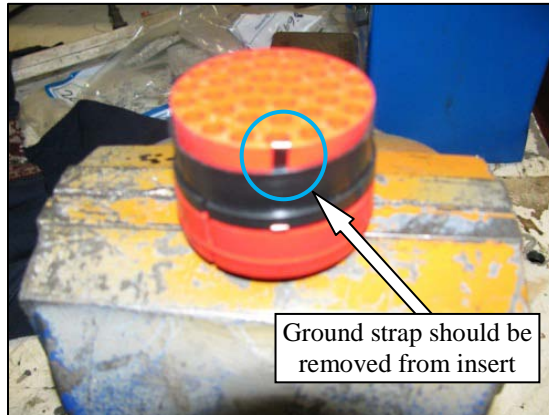


Figure 1: Ground strap shown on the insert

2. Issue 2: Use of Wrong Potting Material

Permanent epoxy was used in the back end of the 37C cable end (Figure 2). Using this permanent epoxy essentially makes the cable end irreparable, and upon any issues, the end will need to be cut off and replaced. TESCO's standard assembly for the 37C “A” cable uses a silicon based gel that supplements water-proofing, but does not harden. This allows repairs and pin replacements when required.

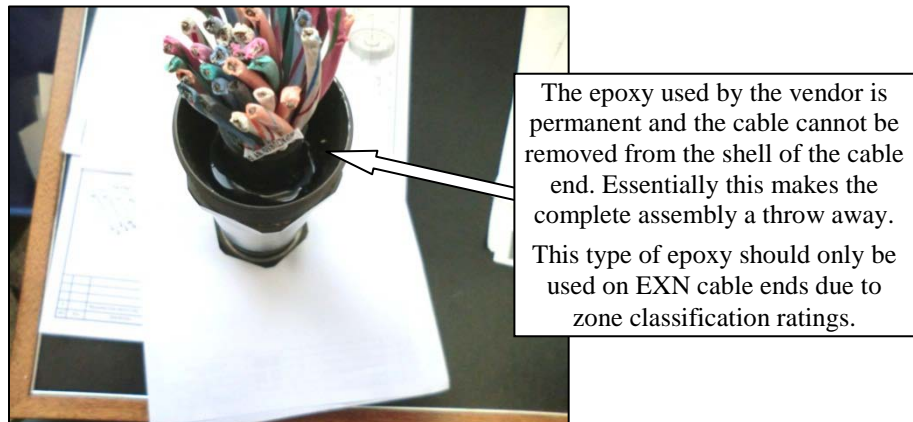


Figure 2: Incorrect use of permanent epoxy

AFFECTED PRODUCT:

All TESCO 37C "A" cables with the following TESCO part numbers:

| Part Number | Description |
|-------------|---|
| 4108 | Cord,Ext,Robotics"A",#14,37C,69M |
| 4109 | Cord,Pgtl,Female,Robotics,D2P/D6P,#14,37C,49M |
| 730841 | Cord,Ext,Robotics"A",EMI 400,#14,37C,69M |

ACTION REQUIRED:

To date, 38 cable assemblies have been repaired or replaced. It is estimated that an additional 30 cable assemblies require corrective action. All TESCO Business Units should inspect their inventory and report back to whether they have these cables and if they are affected, and notify customers regarding this issue.

TESCO recommends the following procedures to resolve the above two 37C "A" cable issues:

1. Test cables for proper pinning to determine if ground strap has been removed

- a. On a 37C "A" cable, file the outer case of the Pyle National sheet to ensure good contact (Figure 3).
- b. Ensure the finish on the filed end of the cable is removed (Figure 4).
- c. Use a digital voltmeter and set it to "Continuity". Place the leads across Pin 3 and the filed end of the Pyle National outer case (Figure 5). If there is no ringing while the voltmeter is set to "Continuity", this means the grounding strap is removed and the cable is good. If there is continuity (indicating low resistance), then the ground strap is still in the assembly.



Figure 3: Filing the outer case of the Pyle National sheet

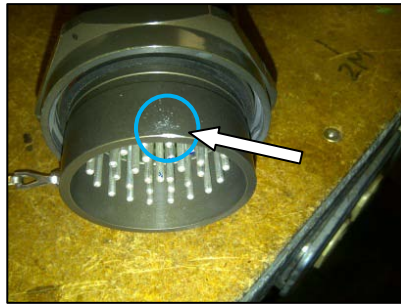


Figure 4: Filed end of 37C cable with finish removed



Figure 5: Place a DVM leads across Pin 3 and filed end of cable

2. Replace Cables Using Wrong Potting Material

Check all new 37C "A" cables sent to TESCO Business Units in the last year that have not yet been used. Once informed of the quantity required TESCO will arrange for replacement cables to be sent in exchange for the non-conforming cables, which will be sent back to the vendor for repair. If this arrangement does not prove to be cost effective, alternative arrangements will be made where the local service facility will complete the repair and replacement parts will be sent to accomplish the job.

| Version | Date (D/M/Y) | ECN | Description of Bulletin Changes |
|---------|--------------|-----|---------------------------------|
| Rev 0 | 29/07/2011 | | Initial release of document |

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