



TSB Number:	01-002-18D
Product:	Solera® Awning Smart Arm
Date:	August 29, 2018

NOTE: This document is applicable to all Solera Smart Arm awnings built prior to 3/1/2018.

NOTE: This bulletin supersedes service bulletin 01-002-18B, dated May 3, 2018, which should be removed from your files.

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Subject

Sealant correction to mitigate moisture in the Solera® Awning Smart Arm wiring harness splice lines.

Overview

This bulletin involves adding liquid tape sealer around the shrink tubing to block leak paths.

Models

All Solera Smart Arms with date of manufacture earlier than 3/1/18.

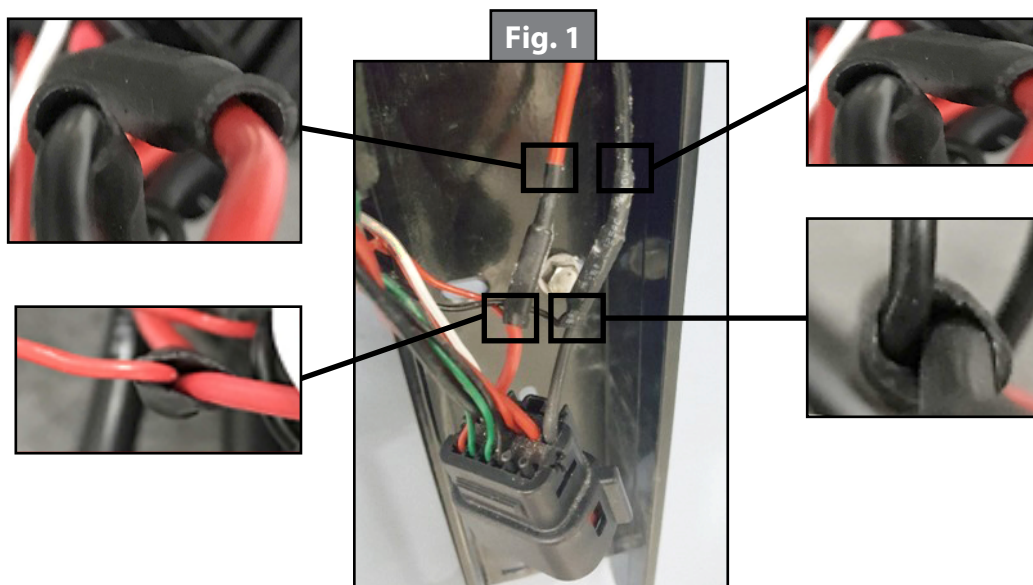
Symptom/Condition

The power and ground 16 AWG electrical wires of the connector harness are split to provide signals for multiple Solera Smart Arm functions. In some cases there may be a leak path that allows moisture past the shrink tubing (Fig. 1), which may cause a short circuit in the Smart Arm touchpad (touchpad is also known as Smart Arm controller.)

NOTE: The four areas (Fig. 1) of the electrical harness represent potential moisture leak paths. All shrink-fit tubed electrical wires must be sealed individually against moisture penetration.

Labor Time Allowed:

0.8 hours



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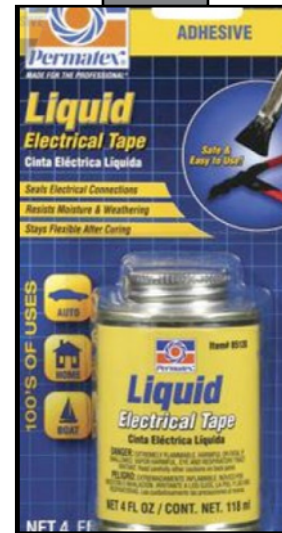
Resources Required

- Scissors or utility knife—electrical tape removal
- Blunt-edged tool—RTV silicone removal
- A quick-curing liquid tape sealer intended for outdoor use that is not silicone or gel/paste material. LCI recommends using one of the sealants shown below (Figs. 2 and 3).

Fig. 2



Fig. 3



NOTE: LCI recommends transferring the liquid tape sealant in a squeeze bottle or syringe to allow for greater application control.

Instructions

NOTE: A video of this procedure is available at:

<https://www.lci1.com/awnings-/support-solerareg-smart-arm>

1. Open the awning arm to access the Solera Smart Arm touchpad (Fig. 4).
2. Slide the wire cover up (Fig. 5A), then pull outward to remove.
3. Remove the connector small wire cover (Fig. 5B).

Fig. 4

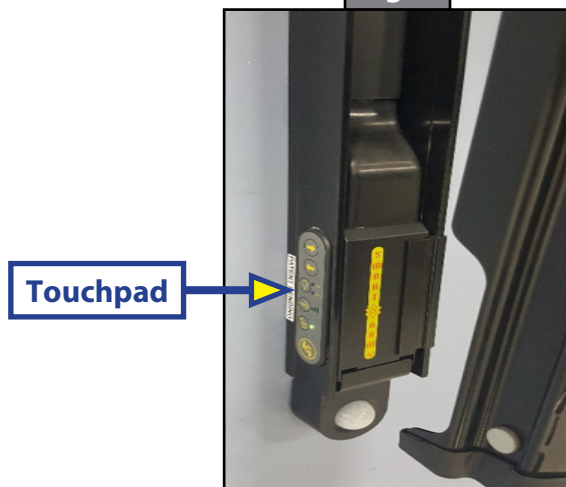
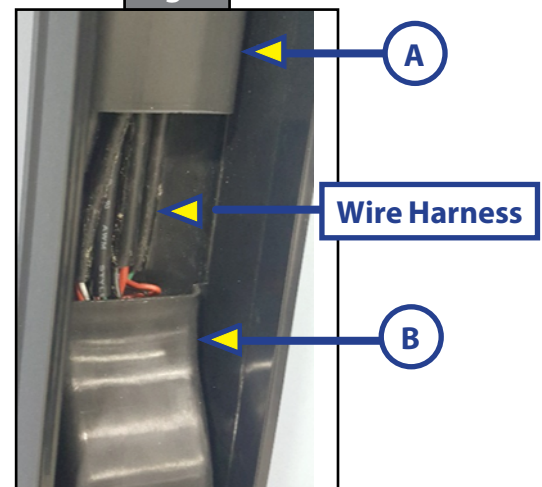


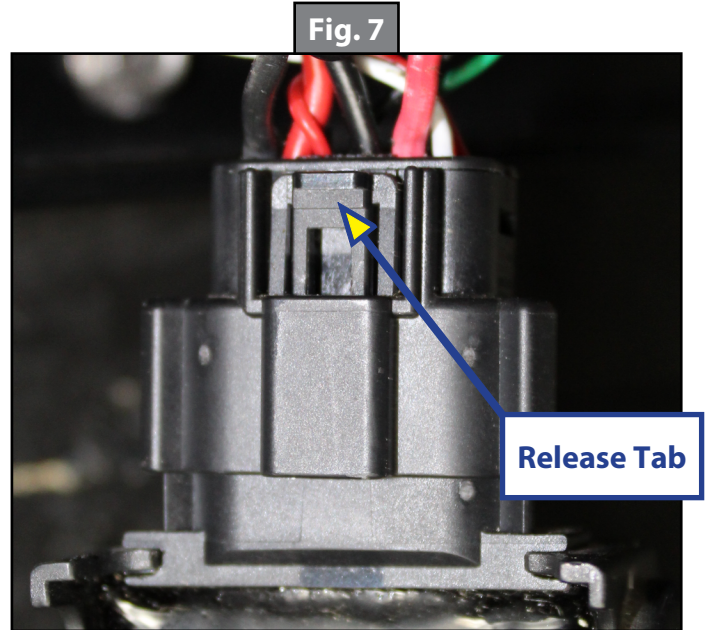
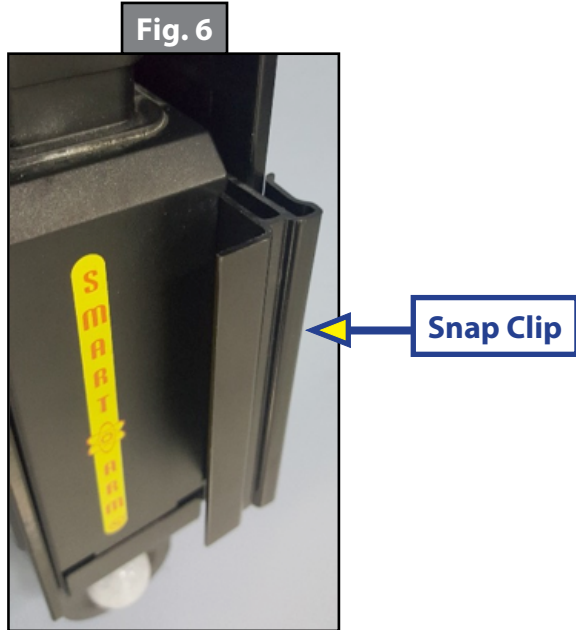
Fig. 5





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- Pull the snap clip (Fig. 6) outward to free the touchpad.
- NOTE:** Retain the wire cover, connector small wire cover and snap clip for reassembly.
- Detach the touchpad from the connector harness by pressing the release tab (Fig. 7) on the harness.



- Complete a full inspection of the touchpad (Fig. 4) and the wire harness (Fig. 5) before starting the sealing process. If no corrosion or damage is noted, go to step 10.

⚠ CAUTION

If there is corrosion or damage to the touchpad and/or harness, BOTH the touchpad and harness will need to be replaced.

- If corrosion or damage is found, take note of the current harness installation and electrical connections then replace with a new harness and new touchpad.

NOTE: The moisture mitigation procedure does not need to be performed on the new harness.

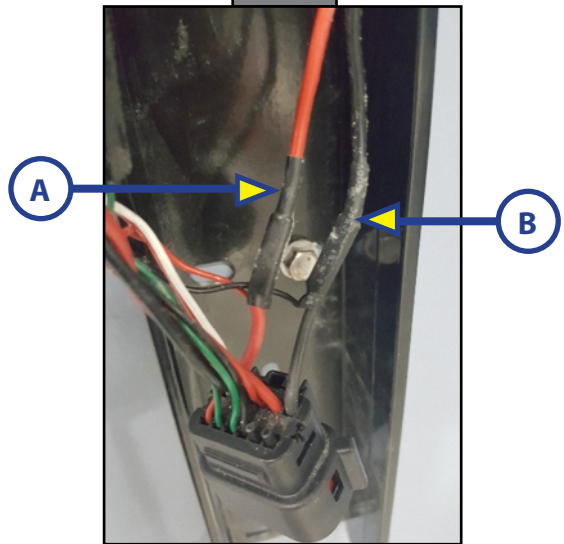
- Install the new touchpad, then connect the harness to the touchpad.
- Reinstall the snap clip, connector small wire cover and wire cover in this order.



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- If there is no corrosion or damage, identify the power (red) (Fig. 8A) and ground (black) (Fig. 8B) spliced lines that require sealing.

Fig. 8



⚠ CAUTION

Make sure designated areas are clean and dry. Dirty and wet areas will create unsealed conditions which can expose electrical components to potential corrosion, resulting in component failure.

- Remove any material from the topside of the connector that would prevent access to the splice lines requiring sealing. Depending on manufacture date, the topside of the connector may have RTV silicone (Fig. 9) or electrical tape (Fig. 10).

Fig. 9



Fig. 10





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- A. For RTV silicone sealed connectors, use a blunt-edged tool (Fig. 11) to carefully scrape the RTV silicone from the wires so it does not interfere with the application of the liquid tape sealer.
- B. For electrical tape sealed connectors and wire harnesses, use scissors or a utility knife (Fig. 12) to carefully remove electrical tape from the connector and wire harness. To avoid cutting through the wind sensor wires:
 - I. Feel for a bump (the wind sensor wires) through the tape.
 - II. Start cutting the tape from the bottom of the harness on the opposite side of the bump.
 - III. Cut up to the bump, then start peeling away the tape from the harness.

⚠ CAUTION

Use care not to nick or cut any electrical wire casing or damage any electrical connections. Such damage could expose bare wiring, resulting in a potential path for corrosion to occur. Replace harness if electrical wires become nicked, cut or electrical connections damaged.

Fig. 11

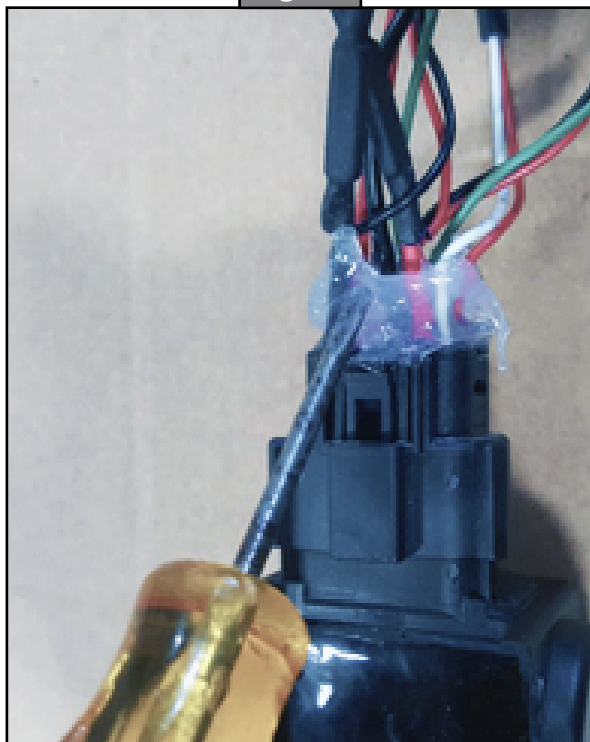


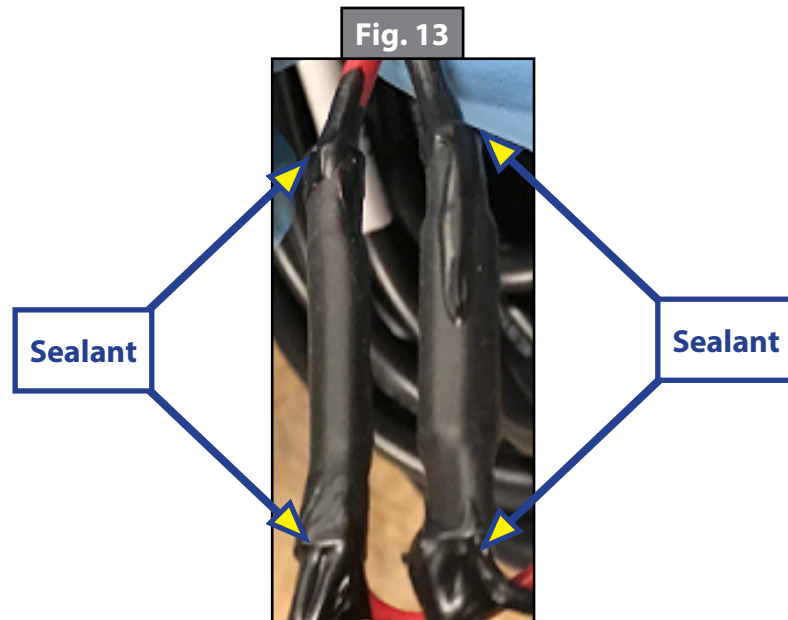
Fig. 12





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12. Inspect open ends of shrink fit tubing for cleanliness and dryness.
 - A. Apply liquid tape sealer at the top end of the shrink fit tubing for each of the spliced lines (Fig. 13).
 - B. Allow gravity to draw the liquid tape sealer into the shrink fit tube cavities and fill all the gaps.



- C. Allow the liquid tape sealer to dry to a tacky substance before flipping the harness to seal the other end.

NOTE: The liquid tape sealer **MUST** cure for at least 10 minutes.

NOTE: Do not allow the other wires to come in contact with the liquid tape sealer until it dries. This may create a void for moisture to enter.

- D. Once the liquid tape sealer has cured, flip the harness upwards and apply the liquid tape sealer to those ends of the shrink fit tubing. (Fig. 13).
 - E. Allow gravity to draw the liquid tape sealer into the shrink fit tube cavities and fill all the gaps.
 - F. Hold or clamp the harness in that position and allow it to cure for at least 10 minutes, making sure the other wires do not come in contact with the liquid tape sealer.

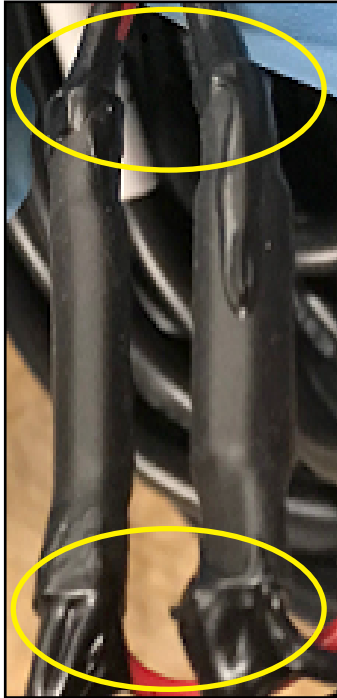
NOTE: Examples of correct and incorrect liquid tape sealer applications are on the next page.

13. Allow the liquid tape sealer to cure an additional 10-20 minutes before connecting the harness to the touchpad.
14. Reconnect the connector harness to the touchpad.
15. Reinstall the touchpad, snap clip, the connector small wire cover and the wire cover in this order.



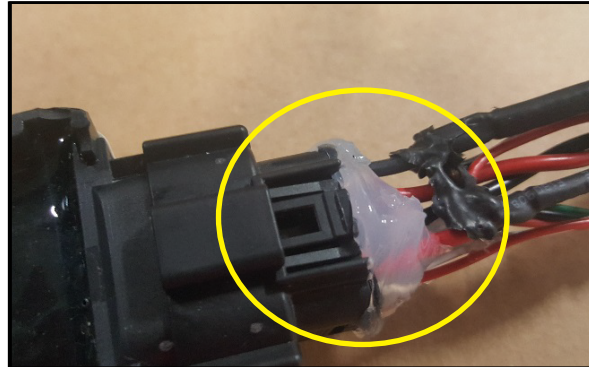
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Correct Liquid Tape Sealer Application

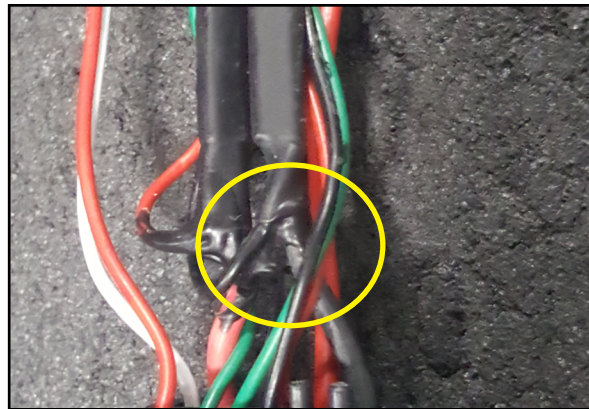


The liquid tape sealer is completely covering the wires as they extend from the shrink tubing. There are no gaps or holes in the coverage.

Incorrect Liquid Tape Sealer Application



The silicone sealant is interfering with the application of the liquid tape sealer.



The liquid tape sealer is not completely covering the opening of the splice line.



Adjacent wires came into contact with the ground wire application before curing, making the seal ineffective.