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Termination Procedure for Power Contacts D-610-09, D-610-10

1. Scope

This engineering standard contains the termination procedures, inspection requirements, and rework procedures for the SolderTacts® power contacts D-610-09 and D-610-10.

2. References

2.1 Raychem Specification Control Drawings.
D-610-09: Contact, Male, Size 16
D-610-10: Contact, Female, Size 16

2.2 Raychem Instructions
AA-400 Super Heater Instructions
AD-1319 Holding Fixture Instructions
IR-550 Two-Station Heater Instructions

2.3 Other Specifications
Federal Standard QQ-S-571

3. Application Equipment And Tools.

Heating Tool.	Reflector	Holding Fixture
AA-400 Superheater (Portable, Compressed Air)	#979663 Mini SolderSleeve Reflector	AD-1319 Holding Fixture with AT-1319-15 Adapter or AD-1571 Repair Holding Fixture
Steinel Hot Air Gun HL1920E / HL2020E (includes nozzle) △1	EH0600-000 HL-Solder-Sleeve® Reflector	

△1 HL1920E/HL2020E Hot Air Gun replaces CV-5X00 heaters. But they still can be used

4. Wire/Connector Accommodation

4.1 The D-610-09/10 contacts will accommodate single wire with the following dimensions:

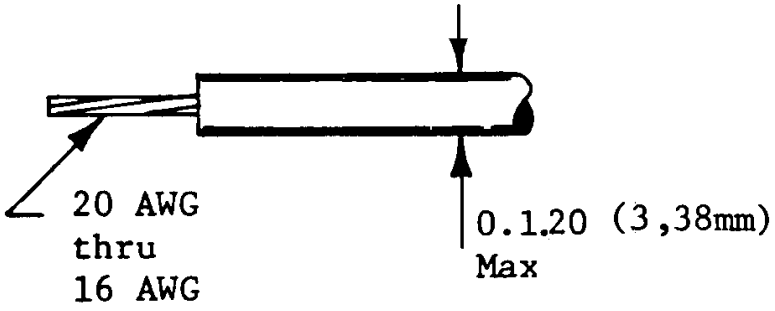

Figure1

4.1.1 Single wire shall be stripped. See Figure 2.

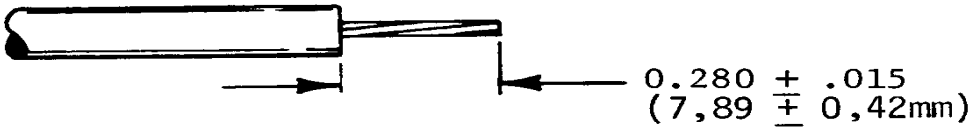

FIGURE 2

Pretin conductors using Sn63 solder and RMA flux per QQ-S-571.
Clean after pretinning.

4.2 Termination of Single Wire to D-610-09/-10 Power Contact

4.2.1 Insert conductor into D-610-09/-10 contact until it bottoms. See Figure 3.

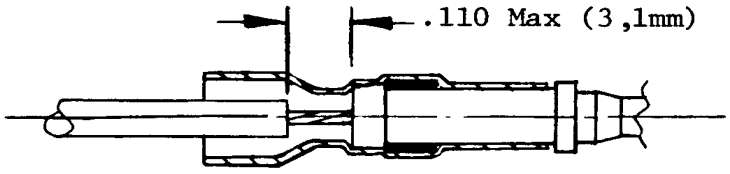

FIGURE 3

4 .2 .2 If cable can not be inserted as required, remove the contact from the cable and verify cable strip dimension, and inspect for bent conductor.

4.2.3 Heat contact and wire with specified heating tool (see paragraph 3.) until solder flows into conductor and strain relief tubing recovers on wire insulation.

5. Heating Procedure

5.1 Manually Operated Heating Tools

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5.1.1 If the AD-1319 holding fixture is to be used, install the AT-1319-15 adapter, insert a contact, and set up the dimensions shown.

Make sure that the contact is inserted in the appropriate end of the adapter--outer pin contact into the "P" end and outer socket contact into the "S" end.

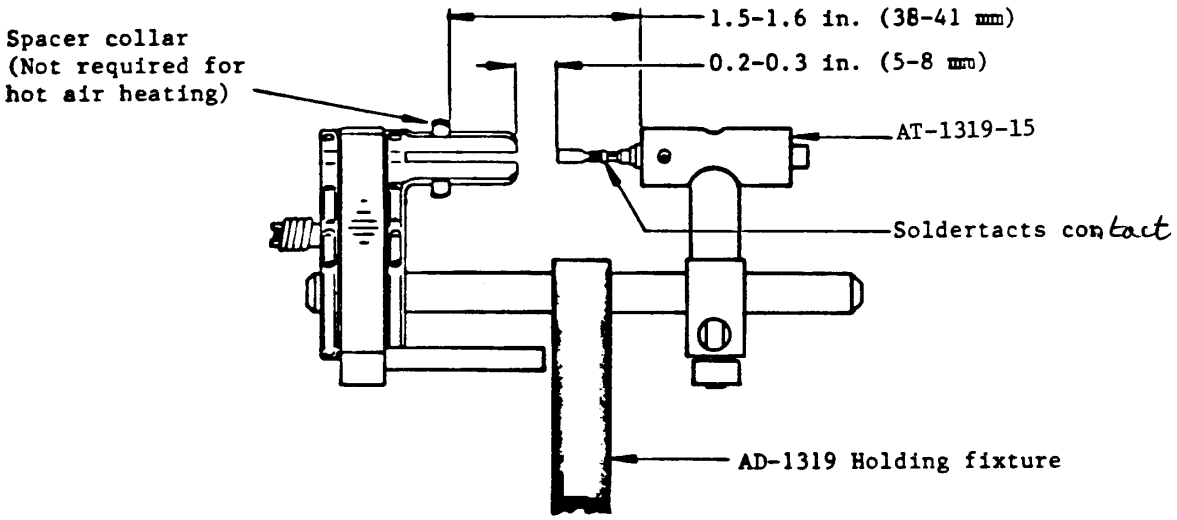


Figure 4:
Set-Up Dimension for AD-1319 Holding Fixture

5.1.2 Insert the contact/cable assembly into the appropriate end of the AT-1319-15 adapter as shown in Figure 5.

D-610-09 contacts (Inner socket/Outer pin): "P" end.

D-610-10 contacts (Inner pin/Outer socket): "S" end.

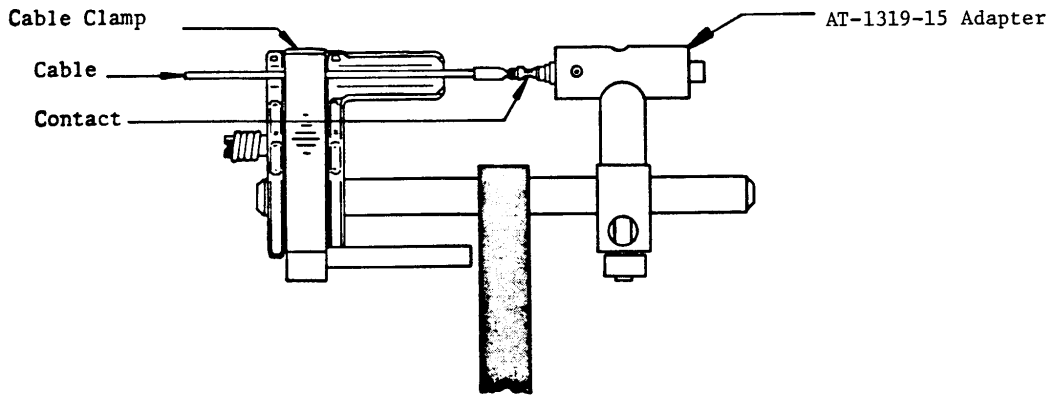


Figure 5

AD-1319 Holding Fixture and AT-1319-15 Adapter with Contact/Cable Assembly

5.1.3 Clamp the coaxial cable in the AD-1319 holding fixture (if used).

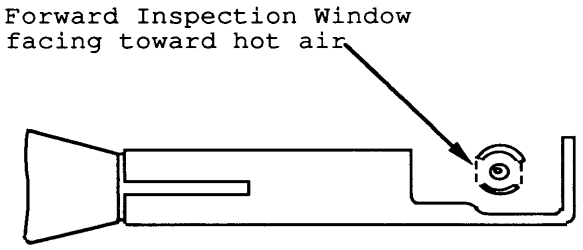
> **NOTE**
> The cable must be fully inserted in the contact The contact must be fully inserted in the adapter.
>
> The cable must be straight between the contact and the cable clamp

5.1.4 Applying heat with hot air heating tool.
Attach the appropriate reflector to the heating tool (see Section 3 for reflector selection)

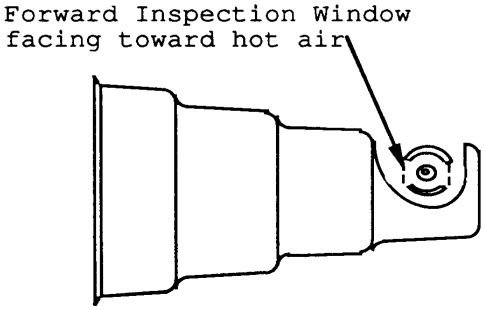
Turn the heating tool on and allow to warm up.(see instructions for tool used)
Steinel settings: 700°F ± 50°F, setting Air Flow Stage II, Duration-20 to 30 Secs

Using one of the required holding fixtures, position the contact in the hot air stream within the reflector.

For optimum heating, position the contact as shown in Figure 6 or 7. Center the forward inspection window in the reflector. Position the forward inspection window toward the hot air stream such that the inner solder perform is still visible during termination.



Mini solder Sleeve Reflector
for SuperHeater
FIGURE 6



Steinel Nozzle
FIGURE 7

5.1.5 After the termination has cooled at least 15 seconds, remove it from the holding fixture.

5.1.6 (J) Inspect the completed termination according to Section -6 of this standard.

6. Inspection

6.1 Assembly Inspection. Inspect the completed termination for correct assembly according to the following criteria:

The distance from the rear and of the contact body to the cable jacket insulation must not exceed 0.11 inch (3,1 mm).

6.2 (C) Heating Inspection. Visually inspect the completed termination for proper heating according to the following criteria:

6.2.1 Ⓒ The solder perform must be melted and flowed so that:

Perform shows no trace of its original form (underheated condition). A "band" of solder trace, such as such as solder which is "wetted" to the substrate, is acceptable.

Solder fillet is visible between conductor and body soldering surface.

NOTE
Insufficient visible solder indicates overheated condition.

The insulating sleeve must be shrunk over the cable jacket and the contact.

The insulating sleeve must not be darkened so as to obscure the solder joints or hinder inspection (overheated condition).

The cable insulation must not show signs of damage or overheating outside of the insulating sleeve.

7. Repair and Rework

7.1 Underheated Termination's. Reheat as directed in Section 4.2.3 and reinspect per Section 6.

7.2 Overheated or Improperly Assembled Termination's

Remove the contact from the cable as directed in Section 7.3.

Check the cable for damage and incorrect stripping.

NOTE
If the cable is damaged, cut off the damaged portion and restrip per Section 4.1.1. If stripping is incorrect, restrip as required (Section 4.1.1).

Install a new contact (Section 4.2)

7.3 Removing Contacts From Cable

1. Use a sharp knife or razor blade to score the insulating sleeve full length on opposite sides of the contact.

2. Manually Operated Heating Tools. Holding the contact with pliers, heat the contact until the solder melts, and quickly pull the heated contact off the cable.

(J)

NOTE
If necessary, hold the contact with pliers while pulling the cable.