CORY CTZ623-6CH MODULAR JACK ASSEMBLY

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CORY CTZ623-6CH MODULAR JACK ASSEMBLY

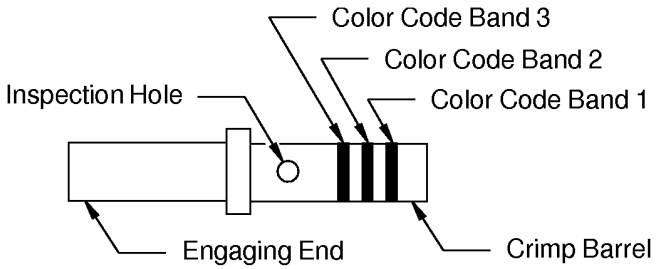
1. PART NUMBERS AND DESCRIPTION

A. Connector Part Numbers

Table 1
CONNECTOR PART NUMBERS

Part Number	Supplier
CTZ623-6CH	Cory

B. Contact Part Numbers



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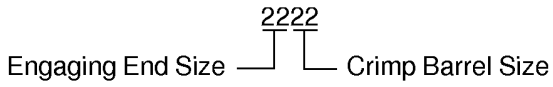
SOCKET CONTACT
Figure 1



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EXAMPLE OF A CONTACT SIZE
Figure 2

Table 2
CONTACT PART NUMBERS

Contact Type	Engaging End Size	Crimp Barrel Size	Part Number	Color Code		Supplier
				Band	Color	
Socket	22	22	M39029/22-191	1	Brown	QPL
				2	White	
				3	Brown	

C. Necessary Materials

Table 3
NECESSARY MATERIALS

Description	Part Number	Supplier
Grommet	8507	Component Products
Tape	70	Scotch
Tie Strap, Plastic	BACS38K-4	Boeing

2. CONNECTOR DISASSEMBLY

A. Strain Relief Removal

CAUTION: DO NOT CAUSE ANY DAMAGE TO THE WIRES. DAMAGE TO THE WIRE INSULATION CAN CAUSE UNSATISFACTORY PERFORMANCE AND RELIABILITY OF THE WIRE.

(1) Disconnect the plug from the receptacle.

(2) If necessary, remove the modular jack assembly from the structure or panel.
Make sure to keep the installation hardware.

(3) Remove the two plastic tie straps. Refer to Figure 3.

(4) Remove the grommet or layers of tape.

B. Contact Removal

Table 4
CONTACT REMOVAL TOOLS

Part Number	Color	Supplier
M81969/14-01	White	QPL

(1) Make a selection of a removal tool from Table 4.

(2) Remove each contact from the modular jack.

3. CONNECTOR ASSEMBLY

A. Contact Assembly

Table 5
CONTACT CRIMP TOOLS

Wire Size (AWG)	Crimp Tool				
	Basic Unit			Locator	
	Part Number	Setting	Supplier	Part Number	Supplier
24	M22520/7-01	3	QPL	M22520/7-11	QPL
22	M22520/7-01	4	QPL	M22520/7-11	QPL

(1) Make a selection of a crimp tool from Table 5.

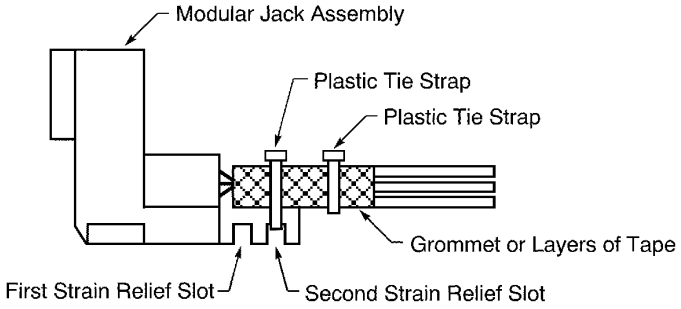
(2) Remove 0.17 inch ±0.03 inch of insulation from the end of the wire.

(3) Crimp the contact.

B. Connector Assembly

Table 6
CONTACT INSERTION TOOLS

Part Number	Color	Supplier
M81969/14-01	Green	QPL



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MODULAR JACK ASSEMBLY
Figure 3

Refer to Figure 3.

(1) Make a selection of an insertion tool from Table 6.

(2) Make a selection of a plastic strap from Table 3.

NOTE: Two straps are necessary for each modular jack assembly.

(3) Make a selection of one of these wire protection materials from Table 3:

- A grommet
- A tape.

(4) If the wire protection is a grommet:

(a) Put the grommet on the wires.

(b) Insert each contact into the correct contact cavity.

(c) Align the forward end of the grommet with the first slot.

(d) Install a tie strap around the grommet and in the second slot of the strain relief arm.

(e) Install the other tie strap around the grommet near the rear end of the grommet.

(5) If the wire protection is tape:

(a) Insert each contact into the correct contact cavity.

(b) Put 2 layers of tape on the wires.

Make sure to align the forward end of the tape with the first slot of the strain relief arm.

(c) Install a tie strap around the tape and in the second slot of the strain relief arm.

(d) Install the other tie strap around the tape near the rear end of the tape.

ITT CANNON XLR-() AND AXR-()CONNECTORS

TABLE OF CONTENTS

ITT CANNON XLR-() AND AXR-()CONNECTORS

This subject gives these procedures to:

- Assemble and disassemble the XLR-() and AXR-() connectors
- Connect and disconnect the XLR-() and AXR-() connectors
- Install the XLR-() and AXR-() connectors.

1. PART NUMBERS AND DESCRIPTION

A. Connector Part Numbers

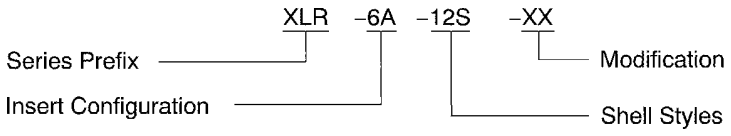
NOTE: The AXR-() connector is no longer manufactured. Refer to Table 2 for alternative connectors.

Table 1
AUDIO CONNECTOR PART NUMBERS

Part Number	Supplier
AXR-()	ITT Cannon
XLR-()	ITT Cannon

Table 2
ALTERNATIVE CONNECTOR PART NUMBERS

Specified Connector		Alternative Connector	
Part Number	**Supplier**	**Part Number**	**Supplier**
AXR-()	ITT Cannon	XLR-()	ITT Cannon
XLR-()	ITT Cannon	AXR-()	ITT Cannon



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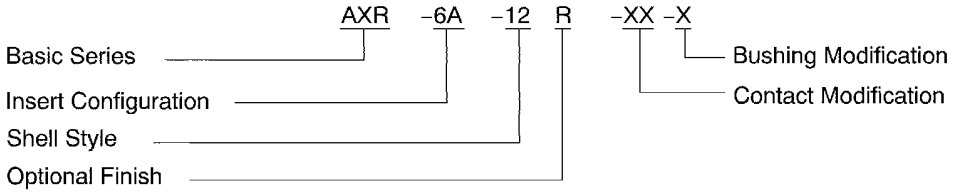
ITT CANNON XLR-() CONNECTOR PART NUMBER STRUCTURE
Figure 1

ITT CANNON XLR-() AND AXR-()CONNECTORS



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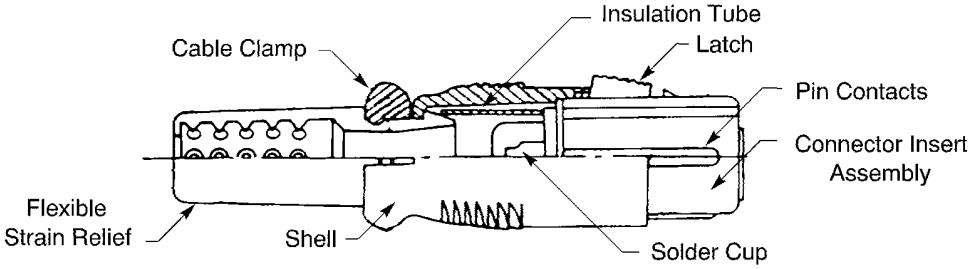
ITT CANNON AXR-() CONNECTOR PART NUMBER STRUCTURE
Figure 2

B. Connector Configurations



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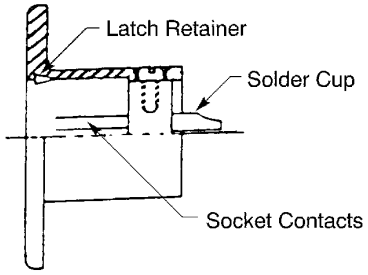
ITT CANNON XLR-() CONNECTOR PLUG
Figure 3



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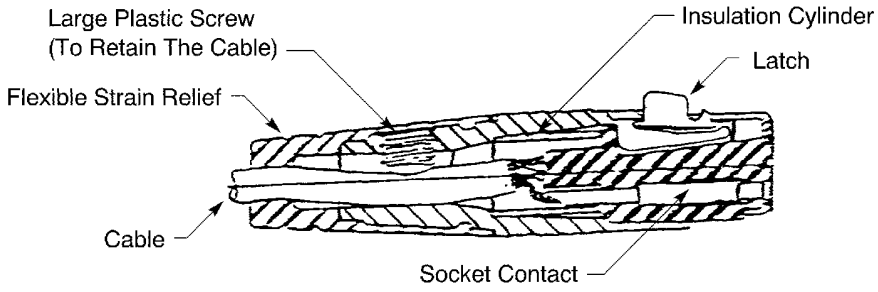
ITT CANNON XLR-() CONNECTOR RECEPTACLE
Figure 4



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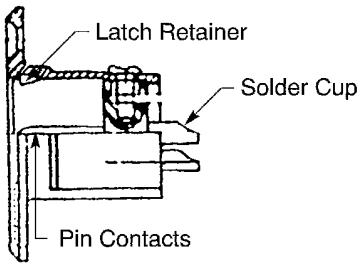
ITT CANNON AXR-() CONNECTOR PLUG
Figure 5

ITT CANNON XLR-() AND AXR-()CONNECTORS



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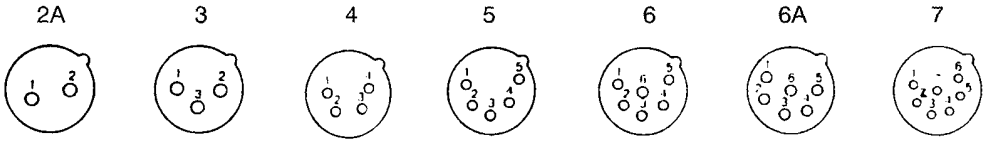
ITT CANNON AXR-() CONNECTOR RECEPTACLE
Figure 6

C. Connector Insert Configurations



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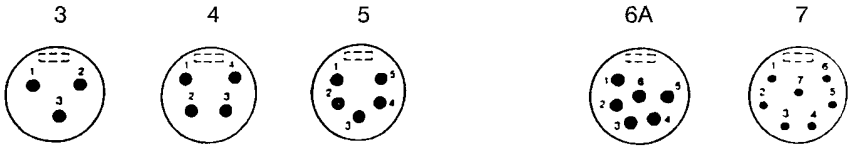
XLR-() CONNECTOR INSERT CONFIGURATIONS
Figure 7



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AXR-() CONNECTOR INSERT CONFIGURATIONS
Figure 8

D. Alternative Connectors

Table 3
ALTERNATIVE CONNECTORS

Insert Configuration	Specified Part Number	Alternative Part Number
3	AXR-3-12R	XLR-3-12C
	AXR-3-13	XLR-3-13
	AXR-3-14	XLR-3-14
	AXR-3-31	XLR-3-31
	AXR-3-31-F77	XLR-3-31-F77
	AXR-3-32	XLR-3-32
	AXR-3-32-F77	XLR-3-32-F77
	AXR-3-32AU	XLR-3-32-A176
	AXR-II-3-11R	XLR-3-11C
	AXR-II-3-12R	XLR-3-12C
4	AXR-4-11	XLR-4-11C
	AXR-4-11R	XLR-4-11C
	AXR-4-12	XLR-4-12C
	AXR-4-12R	XLR-4-12C
	AXR-4-12R	XLR-4-12C
	AXR-4-13	XLR-4-13
	AXR-4-14	XLR-4-14
	AXR-4-31	XLR-4-31
	AXR-4-32	XLR-4-32
5	AXR-5-11	XLR-5-11C
	AXR-5-11R	XLR-5-11C
	AXR-5-12R	XLR-5-12C
	AXR-5-13	XLR-5-13
	AXR-5-14R	XLR-5-14
	AXR-5-31	XLR-5-31
	AXR-5-32	XLR-5-32
6A	AXR-6A-11	XLR-6A-11C
	AXR-6A-31	XLR-6A-31
	AXR-6A-31AU	XLR-6A-31-A176
	AXR-6A-32	XLR-6A-32

Table 3 ALTERNATIVE CONNECTORS (Continued)

Insert Configuration	Specified Part Number	Alternative Part Number
7	AXR-7-11	XLR-7-11C
	AXR-7-12R	XLR-7-12C
	AXR-7-14B	XLR-7-12C
	AXR-7-31	XLR-7-31
	AXR-7-32	XLR-7-32
	AXR-7-32B	XLR-7-32

2. CONNECTOR DISASSEMBLY

A. Connector Separation

(1) If the plug has a latch:

(a) Push down on the latch until it disengages from the latch retainer of the receptacle.

(b) Continue to push on the latch, hold the plug by the shell, and pull the plug away from the receptacle in a direction perpendicular to the receptacle.

CAUTION: DO NOT HOLD THE PLUG AT THE FLEXIBLE STRAIN RELIEF OR HOLD THE CABLE WHEN THE CONNECTOR IS PULLED AWAY FROM THE RECEPTACLE. THE CONNECTION BETWEEN THE CABLE AND THE CONTACTS IN THE PLUG WILL BE DAMAGED.

(2) If the receptacle has a latch:

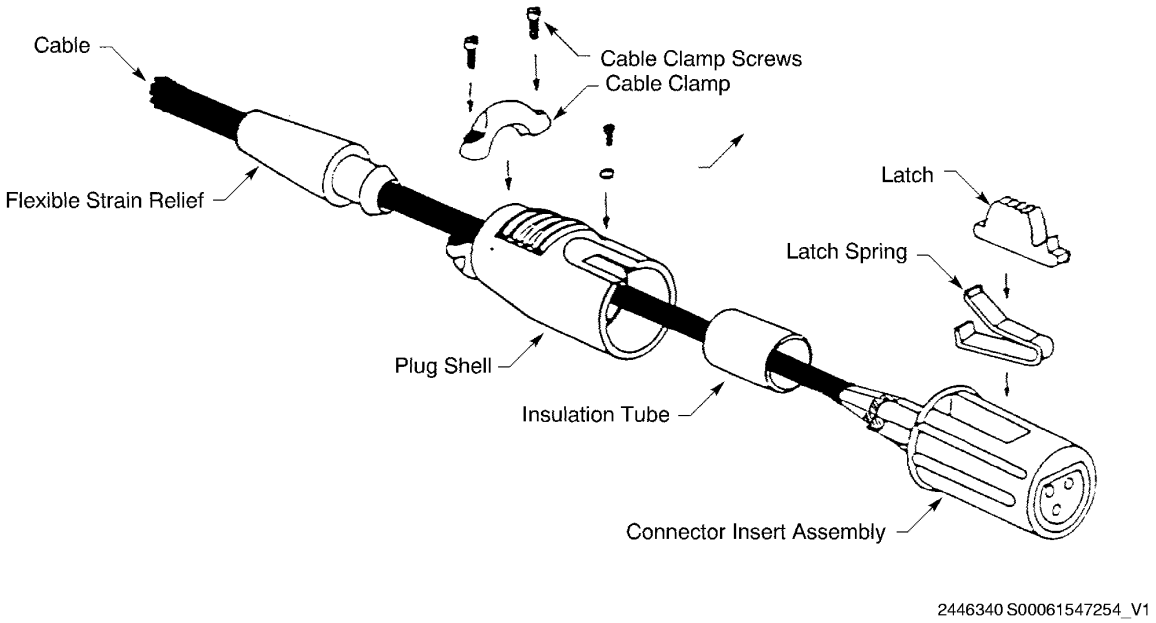
(a) Push the latch in the direction of the receptacle.

Make sure to push the latch until it disengages from the latch retainer on the plug.

(b) While you continue to push on the latch, hold the plug by the shell and pull the plug away from the receptacle, perpendicular to the receptacle.

CAUTION: DO NOT HOLD THE PLUG AT THE FLEXIBLE STRAIN RELIEF OR HOLD THE CABLE WHEN THE CONNECTOR IS PULLED AWAY FROM THE RECEPTACLE. THE CONNECTION BETWEEN THE CABLE AND THE CONTACTS IN THE PLUG WILL BE DAMAGED.

B. XLR-() Connector Plug Disassembly



DISASSEMBLY OF THE XLR-() PLUG
Figure 9

(1) Loosen the cable clamp screws.

(2) Push the flexible strain relief along the cable away from the plug. Refer to Figure 9.

(3) Loosen the insert retainer screw in the plug shell until the plug shell is free from the connector insert assembly.

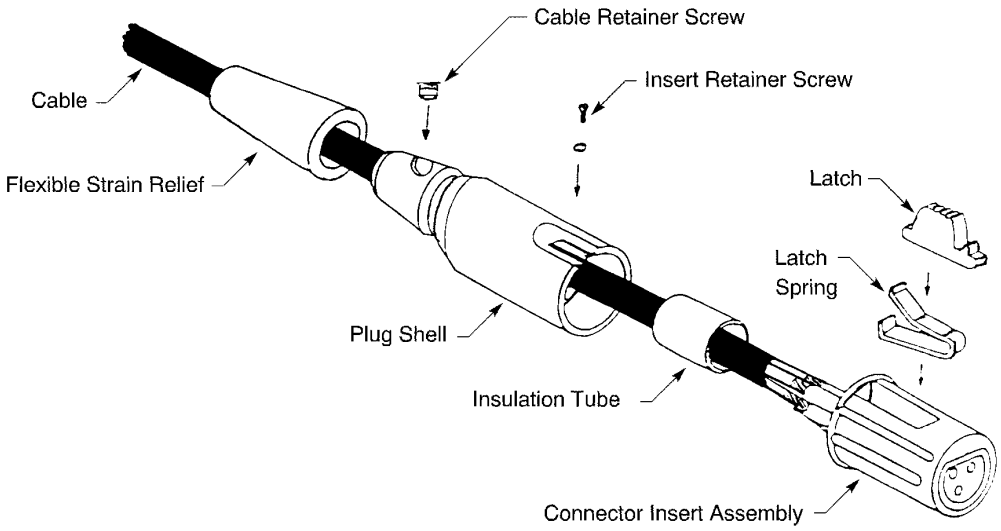
(4) Push the plug shell along the cable away from the connector insert assembly. Refer to Figure 9.

(5) Push the insulation tube along the cable away from the connector insert assembly. Refer to Figure 9.

(6) Use a soldering iron to remove the conductors from the contacts.

(7) Pull the cable away from the connector insert assembly and through the insulation tube, the plug shell, and the flexible strain relief.

C. AXR-() Connector Plug Disassembly



DISASSEMBLY OF THE ITT CANNON AXR-() PLUG
Figure 10

(1) Push the flexible strain relief off the AXR-() plug shell along the cable away from the plug. Refer to Figure 10.

(2) Loosen the large plastic cable retainer screw at the back of the plug.

(3) Loosen the insert retainer screw in the plug shell until the plug shell is free from the connector insert assembly.

(4) Push the AXR-() plug shell along the cable away from the connector insert assembly. Refer to Figure 10.

(5) Push the insulation tube along the cable away from the connector insert assembly. Refer to Figure 10.

(6) Use a soldering iron to remove the conductors from the contacts.

(7) Pull the cable away from the connector insert assembly and through the insulation tube, the plug shell, and the flexible strain relief.

D. Receptacle Disassembly

(1) Remove the receptacle from the panel:

(a) Loosen the two nuts that attach the receptacle to the panel.

(b) Continue to loosen the nuts until the nuts are free from the screws.

(c) Remove the two screws from the holes in the panel.

(d) From the back of the panel, push the receptacle through the hole in the panel.

(2) Use a soldering iron to remove the conductors from the contacts in the receptacle.

3. CONNECTOR ASSEMBLY

A. Cable Preparation

Table 4
INSULATION REMOVAL LENGTH

Insert Configuration	Removal Length (inch)	
	Target	Tolerance
2A	0.25	0.03
3	0.25	0.03
4	0.22	0.03
5	0.20	0.03
6	0.20	0.03
6A	0.20	0.03
7	0.13	0.03

(1) Remove the flexible strain relief from the body of the connector.

(2) Remove the connector shell from the connector insert assembly.

(3) Put the flexible strain relief on the cable.

(4) Push the flexible strain relief approximately 6 inches along the cable.

(5) Put the connector shell on the cable.

(6) Push the connector shell approximately 6 inches along the cable.

(7) Put the insulation tube on the cable.

(8) Push the insulation tube approximately 6 inches along the cable.

(9) If the cable does not have a shield, remove 1.0 inch ±0.1 inch of the cable jacket. Refer to Subject 20-00-15.

(10) If the cable has a shield:

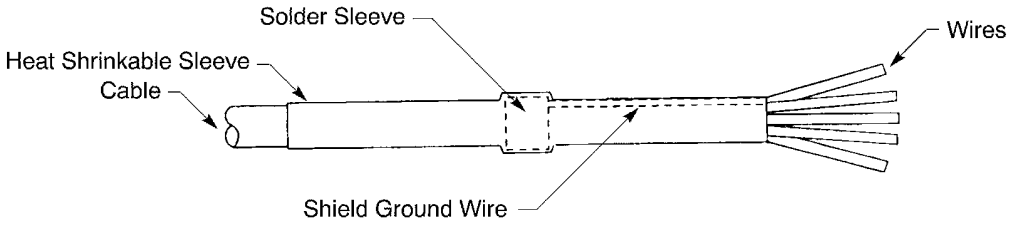
(a) Put a 2.4 inch ±0.2 inch length of the heat shrinkable sleeve on the end of the cable.

(b) Push the sleeve along the cable in the direction of the connector shell.

(c) Remove 1.8 inches ±0.1 inch of the shield jacket. Refer to Subject 20-00-15.

(d) Install a solder sleeve and a shield ground wire on the shield. Refer to Subject 20-10-15.

(e) Move the sleeve so that the middle of the sleeve is directly over the middle of the solder sleeve. Refer to Figure 11.



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POSITION OF THE SLEEVE ON THE CABLE
Figure 11

(f) Shrink the sleeve in position. Refer to Subject 20-10-14.

(g) Cut the shield ground wire so that it is the same length as the other wires in the cable.

(11) Remove the insulation from the end of each wire.

Refer to Table 4 and Subject 20-00-15.

(12) Put a thin layer of solder on the conductors. Refer to Subject 20-40-00.

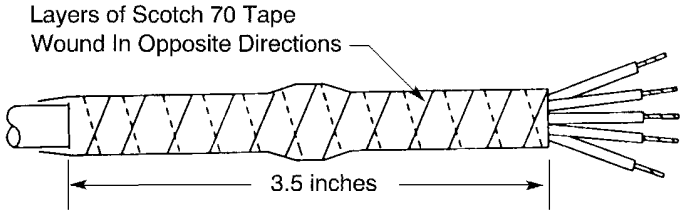
(13) If the outer diameter of the cable and the heat shrinkable sleeve is less than 0.22 inches, increase the outer diameter of the cable so that it is 0.25 inch to 0.30 inch.

Refer to Figure 12.

(a) Wind one or more layers of Scotch 70 insulation tape around the end of the cable.

(b) Wind each layer in the opposite direction.

(c) Make the distance from one end of the insulation tape layer and the other end of the insulation tape layer approximately 3.5 inches.



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CABLE DIAMETER BUILDUP
Figure 12

B. Contact Assembly

(1) Solder the conductors to the contacts in the connector insert. Refer to Subject 20-40-00.

Make sure that:

- The conductors are attached to the correct contacts
- The solder joints are satisfactory.

C. Connector Plug Assembly

(1) Push the insulation tube until the end of the tube touches the connector insert assembly.

(2) Align the screw hole in the plug shell with the screw hole in the connector insert assembly.

(3) Align the slot in the plug shell with the latch in the connector insert assembly.

(4) Push the plug shell along the cable until the end of the connector insert assembly touches the flange in the plug shell.

(5) Align the screw hole in the plug shell with the screw hole in the connector insert assembly.

(6) Put the insert lock screw in the hole and tighten the screw so that the connector insert assembly locks in the plug shell.

(7) For the XLR-() plug:

(a) Push the flexible strain relief along the cable and under the cable clamp until it touches the flange in the plug shell.

(b) Tighten the cable screws so that the cable clamp satisfactorily holds the cable in position.

(8) For the AXR-() plug:

(a) Put the cable retainer screw in position in the plug shell.

(b) Tighten the cable retainer screw until it holds the cable in position in the shell.

(c) Push the flexible strain relief along the cable so that it engages the back of the plug shell.

D. Connection of a Plug To a Receptcle

(1) Align the plug with the receptacle so that these conditions occur:

- The alternate position key in the plug aligns with the alternate position groove in the receptacle
- The longitudinal axis of the plug aligns with the longitudinal axis of the receptacle.

(2) Put the plug in the receptacle.

(3) Push the plug into the receptacle until the latch engages the latch retainer and locks in position.

Make sure that the plug locks in the receptacle.

E. Installation of a Receptacle in a Panel

(1) If it is necessary, remove the two 4-40 screws screws and the 4-40 nuts from the flanges on the connector

(2) From the front of the panel, align the connector with the hole in the panel.

Make sure that the position of the top of the connector is correct in relation to the top of the hole.

(3) If the connector has wires and cables attached, put the wires and cables through the hole from the front of the panel.

(4) Push the connector through the hole until the back surface of the flange touches the front surface of the panel.

(5) Align the two holes on the flange of the with the connector holes in the panel.

(6) Align the screws with the holes in the front of the connector flange.

(7) From the front of the panel, push the screws through the holes until the shoulder on the screws touches the front of the connector flange.

(8) At the back of the panel, put the nuts on the screws.

(9) Tighten the nuts.

Make sure that the receptacle will not move on the panel.

ASSEMBLY OF MIL-J-641/8 TELEPHONE JACK CONNECTORS

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ASSEMBLY OF MIL-J-641/8 TELEPHONE JACK CONNECTORS

1. CONNECTOR PART NUMBERS AND DESCRIPTION

A. Connector Part Numbers

Table 1
TELEPHONE JACK CONNECTOR PART NUMBERS

Military Specification	Telephone Jack Connector	
	Part Number	Supplier
MIL-J-641/8-1	JJ-055	Kings Electronics

2. CONNECTOR ASSEMBLY

A. Contact Assembly

(1) Remove 2-1/8 inches ±1/8 inch of the outer jacket from the cable.

(2) Install a shield ground wire. Refer to Subject 20-10-15.

(a) Use a length of BMS 13-48 Type VIII Class 1 AWG 22 wire for the shield ground wire.

(b) Cut the shield ground wire so that it is the same length as the wires.

(3) Put a 2 inch ±1/8 inch length of heat shrinkable sleeve over the cable.
Make sure to use a sleeve with the smallest diameter that will fit over the cable.

(4) Remove 9/32 inch ±1/32 inch of insulation from each wire.

(5) Solder a contact to each conductor. Refer to Subject 20-40-00.
Make sure the solder does not flow onto the upper surface of the contact.

B. Telephone Jack Assembly

(1) Insert the two contacts into the jack recession.
Make sure the slots are exposed and face upwards.

(2) Move the sleeve forward over wires.

(3) Align the sleeve with the inner, leading edge of strain relief ribs on the body of the jack.

(4) Shrink the sleeve into position.

(5) If necessary, build the cable diameter up with filler tape in the strain relief area.

J.S.T. SMP-()-BC, SMR-()-B, AND XHP-() CONNECTORS

TABLE OF CONTENTS

J.S.T. SMP-()-BC, SMR-()-B, AND XHP-() CONNECTORS

1. CONNECTOR PART NUMBERS AND DESCRIPTION

A. Connector Part Numbers

Table 1
CONNECTOR PART NUMBERS

Part Number	Supplier
SMP-()-BC	J.S.T.
SMR-()-B	J.S.T.
XHP-()	J.S.T.

B. Contact Part Numbers

Table 2
CONTACT PART NUMBERS

Connector	Contact	
	Part Number	Supplier
SMP-()-BC	SHF-001T-0.8SS	J.S.T.
SMR-()-B	SYM-001T-P0.6	J.S.T.
XHP-()	SXH-001()-P0.6	J.S.T.

C. Backshell Part Numbers

Table 3
BACKSHELL PART NUMBERS FOR XHP-() CONNECTORS

Connector	Backshell	
	Part Number	Supplier
XHP-()	CBJ-14	Cory Components
	CBJ-14	Tri-Star

Table 4
ALTERNATIVE BACKSHELL PART NUMBERS

Specified Backshell		Alternative Backshell	
Part Number	Supplier	Part Number	Supplier
CBJ-14	Cory Components	CBJ-14	Tri-Star

2. SMP-()-BC CONNECTORS

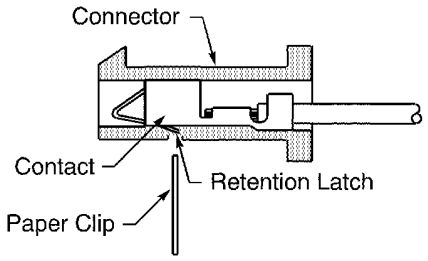
A. Removal of Contacts from SMP-()-BC Connectors

Table 5
CONTACT REMOVAL TOOLS

Tool	Supplier
Paper Clip	An available source

(1) Make a selection of a contact removal tool from Table 5.

(2) Push the contact retention latch with the paper clip, and at the same time, pull the contact out of the connector. Refer to Figure 1.



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CONTACT REMOVAL
Figure 1

B. Contact Assembly for SMP-()-BC Connectors

Table 6
CONTACT CRIMP TOOLS

Contact	Crimp Tool		
	Part Number	Die Cavity	Supplier
SHF-001T-0.8SS	YC-122R	B	J.S.T.

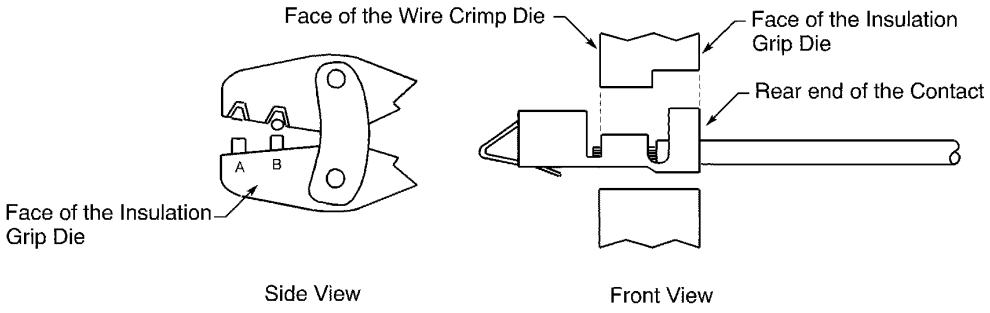
(1) Make a selection of a crimp tool from Table 6.

(2) Remove 0.10 inch ±0.05 inch of the insulation from the end of the wire.

(3) Put the end of the wire in the contact. Refer to Figure 2.

(4) Put the contact and the end of the wire in the die cavity.

Make sure that the face of the insulation grip die is aligned with the rear end of the contact. Refer to Figure 2.



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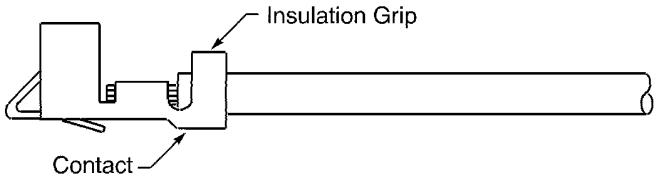
POSITION OF THE CONTACT IN THE CRIMP TOOL
Figure 2

(5) Crimp the contact. Refer to Figure 3.

NOTE: It is not necessary for the insulation grip to touch the wire insulation around the full outer surface of the wire.

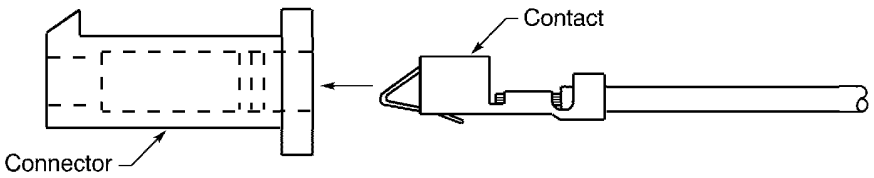


2447904 S00061547262_V1

CONTACT ASSEMBLY
Figure 3

C. Insertion of Contacts in SMP-()-BC Connectors

(1) Push the contact into the connector. Refer to Figure 4.



2447905 S00061547263_V1

CONTACT INSERTION
Figure 4

(2) Lightly pull the wire to make sure that the contact is locked in the contact cavity.

CAUTION: DO NOT PULL THE WIRE WITH A STRONG OR A SUDDEN FORCE. THE FORCE CAN CAUSE DAMAGE TO THE CONTACT.

CAUTION: DO NOT MAKE A DENT IN THE WIRE INSULATION WITH THE FINGERNAILS. DAMAGE TO THE WIRE INSULATION CAN CAUSE UNSATISFACTORY PERFORMANCE OF THE WIRE.

3. SMR-()-B CONNECTORS

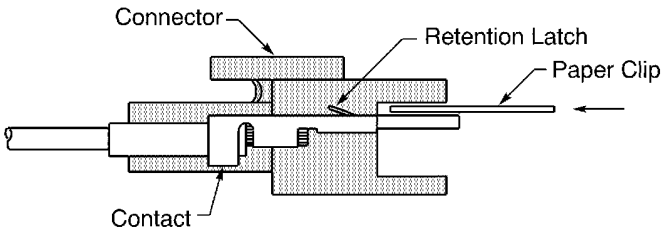
A. Removal of Contacts from SMR-()-B Connectors

Table 7
CONTACT REMOVAL TOOLS

Tool	Supplier
Paper Clip	An available source

(1) Make a selection of a contact removal tool from Table 7.

(2) Push the contact retention latch with the paper clip, and at the same time, pull the contact out of the connector. Refer to Figure 5.



2447906 S00061547264_V1

CONTACT REMOVAL
Figure 5

B. Contact Assembly for SMR-()-B Connectors

Table 8
NECESSARY MATERIALS

Material	Specification	Diameter (inch)	Supplier
Sleeve, Heat Shrinkable	AMS-DTL-23053/5 Class 1	1/16	An available source

Table 9
CONTACT CRIMP TOOLS

Contact	Crimp Tool		
	Part Number	Die Cavity	Supplier
SYM-001T-P0.6	YC-121R	B	J.S.T.

(1) Make a selection of a crimp tool from Table 9.

(2) Make a selection of a heat shrinkable sleeve from Table 8.
An equivalent heat shrinkable sleeve is a satisfactory alternative. Refer to Subject 20-00-11.

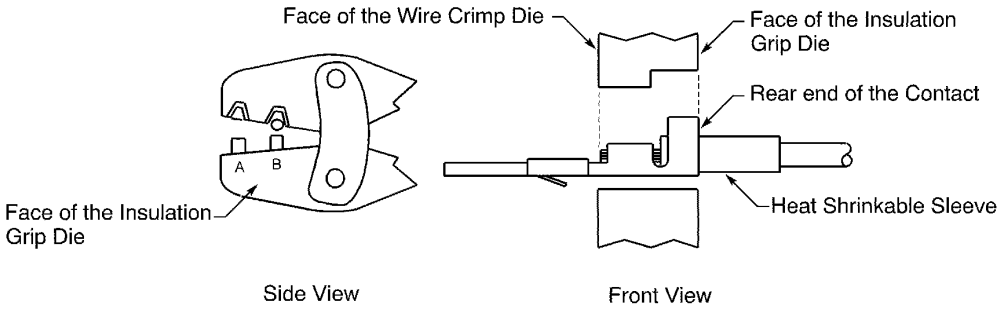
(3) Remove 0.10 inch ± 0.05 inch of the insulation from the end of the wire.

(4) Put a 0.5 inch minimum length of the heat shrinkable sleeve on the wire.
Make sure that the end of the sleeve is aligned with the end of the wire insulation.

(5) Shrink the heat shrinkable sleeve in its position on the wire. Refer to Subject 20-10-14.

(6) Put the end of the wire in the contact. Refer to Figure 6.

(7) Put the contact and the end of the wire in the die cavity. Refer to Figure 6.

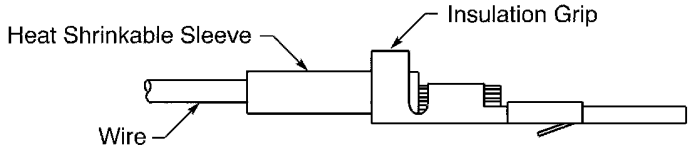


2447911 S00061547265_V1

POSITION OF THE CONTACT IN THE CRIMP TOOL
Figure 6

(8) Crimp the contact. Refer to Figure 7.

NOTE: It is not necessary for the insulation grip to touch the heat shrinkable sleeve around the full outer surface of the wire.

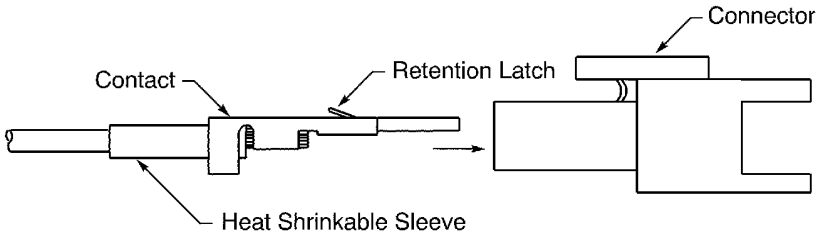


2447907 S00061547266_V1

CONTACT ASSEMBLY
Figure 7

C. Insertion of Contacts in SMR-()-B Connectors

(1) Put the contact into the connector. Refer to Figure 8.



2447908 S00061547267_V1

CONTACT INSTALLATION IN SMR-()-B CONNECTORS
Figure 8

(2) Lightly pull the wire to make sure that the contact is locked in the contact cavity.

CAUTION: DO NOT PULL THE WIRE WITH A STRONG OR A SUDDEN FORCE. THE FORCE CAN CAUSE DAMAGE TO THE CONTACT.

CAUTION: DO NOT MAKE A DENT IN THE WIRE INSULATION WITH THE FINGERNAILS. DAMAGE TO THE WIRE INSULATION CAN CAUSE UNSATISFACTORY PERFORMANCE OF THE WIRE.

4. XHP-() CONNECTORS

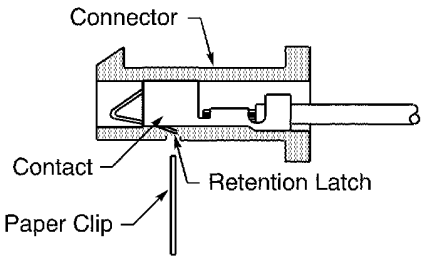
A. Removal of Contacts from XHP-() Connectors

Table 10
CONTACT REMOVAL TOOLS

Tool	Supplier
Paper Clip	An available source

(1) Make a selection of a contact removal tool from Table 10.

(2) Push the contact retention latch with the paper clip, and at the same time, pull the contact out of the connector. Refer to Figure 9.



2447902 S00061547260_V1

CONTACT REMOVAL FROM XHP-() CONNECTORS
Figure 9

B. Contact Assembly for XHP-() Connectors

Table 11
NECESSARY MATERIALS

Material	Specification	Supplier
Sleeve, Heat Shrinkable	AMS-DTL-23053/5 Class 1	An available source

Table 12
CONTACT CRIMP TOOLS

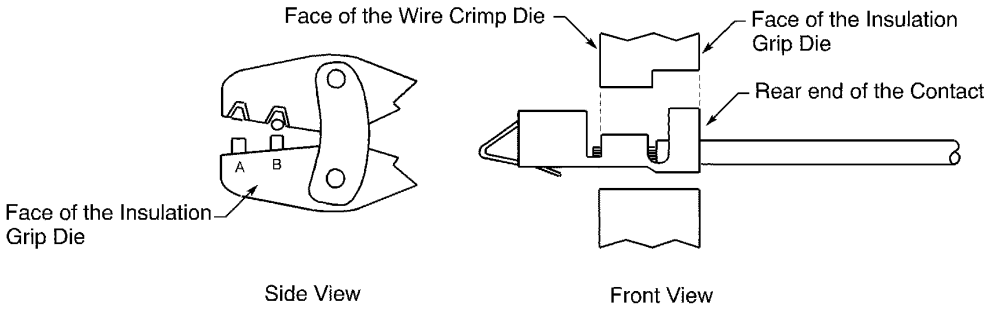
Contact	Crimp Tool		
	Part Number	Die Cavity	Supplier
SHX-001()-P0.6	YC-119R	B	J.S.T.

(1) Make a selection of a crimp tool from Table 12.

(2) Remove 0.10 inch ± 0.05 inch of the insulation from the end of the wire.

(3) Put the end of the wire in the contact. Refer to Figure 10.

(4) Put the contact and the end of the wire in the die cavity. Refer to Figure 10.

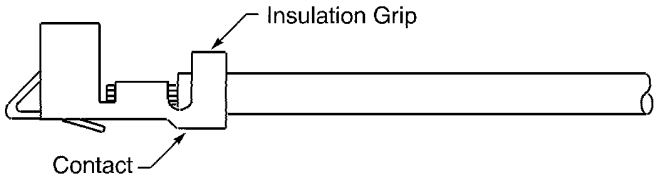


2447903 S00061547261_V1

POSITION OF THE CONTACT IN THE CRIMP TOOL
Figure 10

(5) Crimp the contact. Refer to Figure 11.

NOTE: It is not necessary for the insulation grip to touch the wire insulation around the full outer surface of the wire.



2447904 S00061547262_V1

CONTACT ASSEMBLY
Figure 11

C. Contact Insertion and Backshell Assembly for XHP-() Connectors

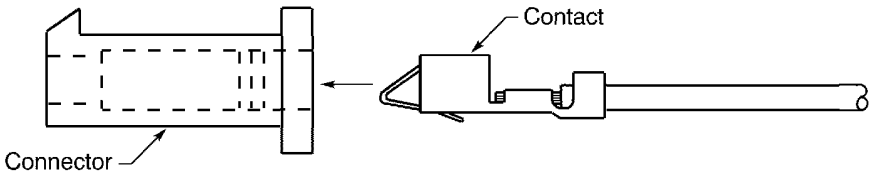
(1) Make a selection of a heat shrinkable sleeve from Table 11.

An equivalent heat shrinkable sleeve is a satisfactory alternative. Refer to Subject 20-00-11.

Make sure that the sleeve has the smallest diameter that can be moved freely on the wire harness.

(2) Put a 0.5 inch minimum length of the heat shrinkable sleeve on the wire harness.

(3) Put a contact into the connector. Refer to Figure 12.



2447905 S00061547263_V1

CONTACT INSERTION
Figure 12

(4) Lightly pull the wire to make sure that the contact is locked in the contact cavity.

CAUTION: DO NOT PULL THE WIRE WITH A STRONG OR A SUDDEN FORCE. THE FORCE CAN CAUSE DAMAGE TO THE CONTACT.

CAUTION: DO NOT MAKE A DENT IN THE WIRE INSULATION WITH THE FINGERNAILS. DAMAGE OT THE WIRE INSULATION CAN CAUSE UNSATISFACTORY PERFORMANCE OF THE WIRE.

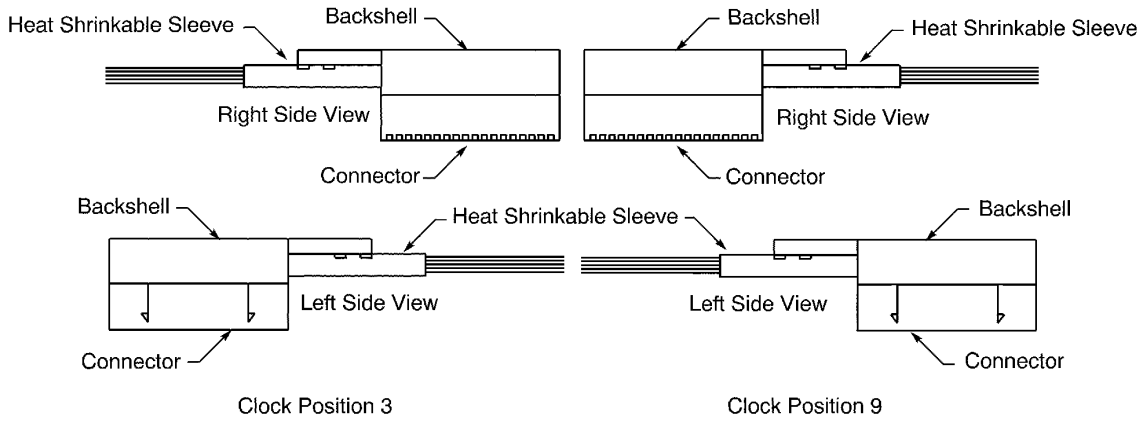
(5) Do Step 4.C.(3) and Step 4.C.(4) again for each contact in the connector.

(6) Push the heat shrinkable sleeve forward until the forward end of the sleeve is against the rear end of the connector.

(7) Shrink the sleeve in its position on the wire harness. Refer to Subject 20-10-14.

(8) Put the backshell on the connector.

Make sure that the backshell is in the correct clock position. Refer to Figure 13.



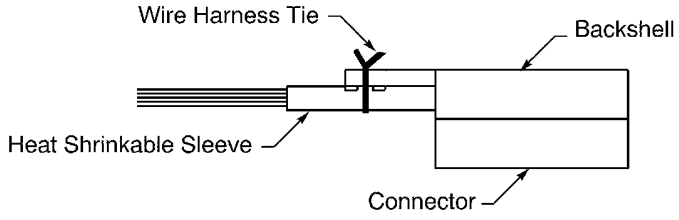
2447909 S00061547269_V1

CLOCK POSITIONS OF THE BACKSHELL
Figure 13

(9) Assemble a wire harness tie on the strain relief leg of the backshell and the heat shrinkable sleeve.

Refer to:

- Figure 14
- Subject 20-10-11 for the procedure assemble a wire harness tie.



2447910 S00061547270_V1

POSITION OF THE WIRE HARNESS TIE
Figure 14

ASSEMBLY OF ROSEMOUNT CERAMIC CONNECTORS

TABLE OF CONTENTS

ASSEMBLY OF ROSEMOUNT CERAMIC CONNECTORS

1. PART NUMBERS AND DESCRIPTION

A. Connector Part Numbers

Table 1
CONNECTOR PART NUMBERS

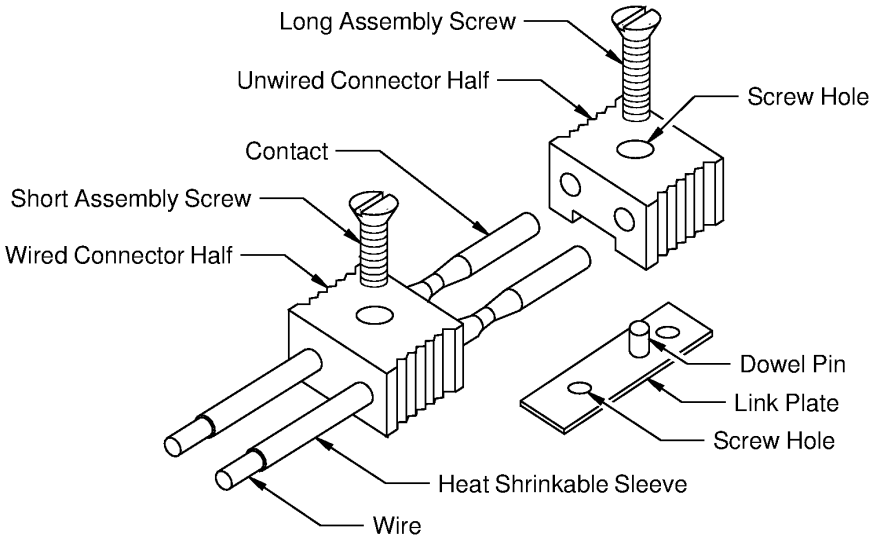
Part Number	Contact Type	Supplier
00855-0488-0003	Crimp	Rosemount
00855-1727-0001	Crimp	Rosemount
00850-0027-0004	Solder	Rosemount
850-27-4	Solder	Rosemount

B. Contact Part Numbers

Table 2
CONTACT PART NUMBERS

Part Number	Contact Type	Supplier
00855-0478-0001	Socket	Rosemount

C. Connector Description



2446344 S00061547272_V1

CONNECTOR
Figure 1

ASSEMBLY OF ROSEMOUNT CERAMIC CONNECTORS

2. CONNECTOR DISASSEMBLY

A. Connector Disassembly

Refer to Figure 1.

(1) Loosen the long assembly screw on the unwired connector half.

(2) Remove the connector from the probe.

(3) Remove the small assembly screw on the wired connector half.

(4) Move the connector halves apart.

(5) Push the wired connector half back away from the contacts.

3. CONNECTOR ASSEMBLY

A. Assembly of Crimp Type Contacts

Table 3
INSULATION REMOVAL LENGTH

Wire Size (AWG)	Removal Length L (inch)	
	Target	Tolerance
22	0.25	±0.03
20	0.25	±0.03

Table 4
CONTACT CRIMP TOOLS

Wire Size (AWG)	Crimp Tool				
	Basic Unit			Locator	
	Part Number	Setting	Supplier	Part Number	Supplier
22	M22520/1-01	4	QPL	M22520/1-05	QPL
				TP960	Daniels
20	M22520/1-01	5	QPL	M22520/1-05	QPL
				TP960	Daniels

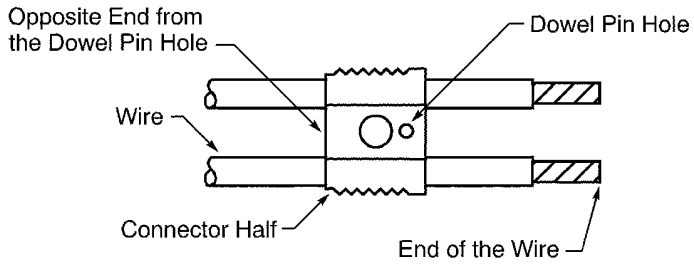
Refer to Figure 1.

(1) Disassemble the ceramic connector.

(2) Put one connector half on the two wires:

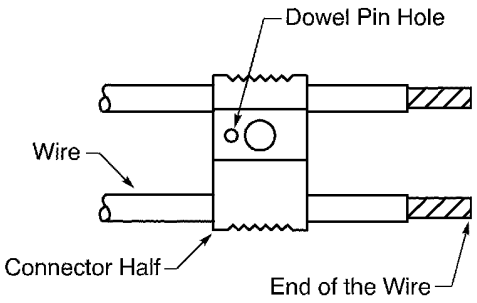
- For the 00855-0488-0003 connector, the end of the connector half opposite the dowel pin must be put on the wire first; refer to Figure 2
- For the 00855-1727-0001 connector, the end of the connector half with the dowel pin must be put on the wire first; refer to Figure 3.

ASSEMBLY OF ROSEMOUNT CERAMIC CONNECTORS



2446971 S00061547273_V1

POSITION OF THE 00855-0488-0003 CONNECTOR HALF
Figure 2



2446972 S00061547274_V1

POSITION OF THE 00855-1727-0001 CONNECTOR HALF
Figure 3

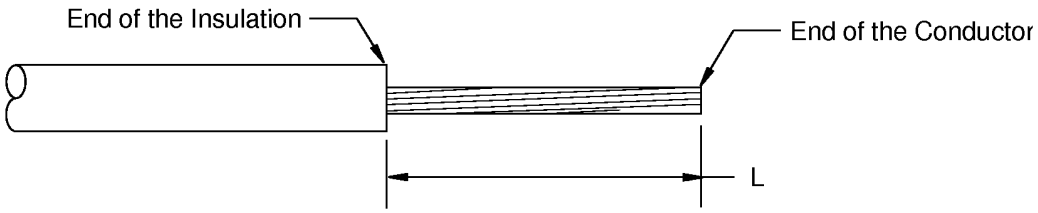
(3) Make a selection of a heat shrinkable sleeve. Refer to Subject 20-00-11. The sleeve must have:

- A maximum wall thickness of 0.006 inch
- The smallest diameter that can be put on the wire
- The applicable temperature grade for the wire harness.

(4) Put a 0.9 inch ±0.1 inch length of the sleeve on each wire.

(5) Remove the necessary length of insulation from the end of each wire. Refer to:

- Figure 4
- Table 3 for the insulation removal length
- Subject 20-00-15 for the insulation removal procedures.



2446140 S00061544325_V1

INSULATION REMOVAL LENGTH
Figure 4

(6) Make a selection of a crimp tool from Table 4.

(7) Put the end of the wire in the crimp barrel of the contact.
Make sure that:
- All of the strands of the conductor are in the crimp barrel
- The conductor can be seen in the inspection hole
- The distance from the end of the insulation to the crimp barrel is not more than 0.03 inch.

(8) Crimp each contact.

B. Assembly of Solder Type Contacts

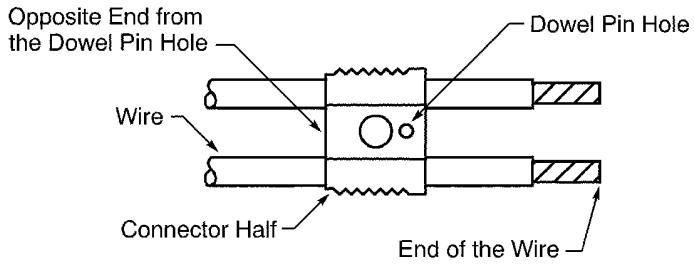
Table 5
INSULATION REMOVAL LENGTH

Wire Size (AWG)	Removal Length L (inch)	
	Target	Tolerance
22	0.19	±0.03
20	0.19	±0.03

Refer to Figure 1.

(1) Disassemble the ceramic connector.

(2) Put one connector half on the two wires. Refer to Figure 5.
Make sure that the end of the connector half with the dowel pin goes on the wires first.



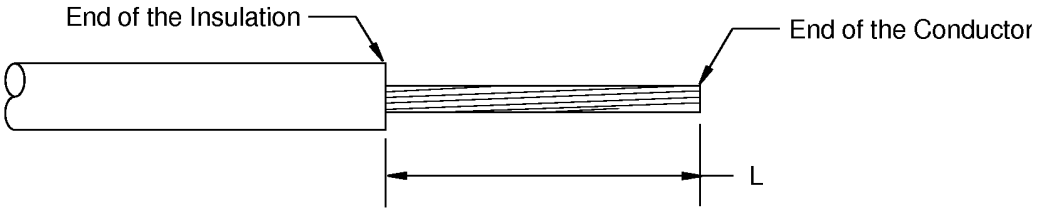
2446971 S00061547273_V1

POSITION OF THE CONNECTOR HALF
Figure 5

(3) Make a selection of a heat shrinkable sleeve. Refer to Subject 20-00-11.
The sleeve must have:
- A maximum wall thickness of 0.006 inch
- The smallest diameter that can be put on the wire
- The applicable temperature grade for the wire harness.

(4) Put a 0.9 inch ±0.1 inch length of the sleeve on each wire.

(5) Remove the necessary length of insulation from the end of each wire.
Refer to:
- Figure 6
- Table 5 for the insulation removal length
- Subject 20-00-15 for the insulation removal procedures.



2446140 S00061544325_V1

INSULATION REMOVAL LENGTH
Figure 6

(6) Clean the solder cup of each contact.

(7) Tin each solder cup.

(8) Tin each wire.

(9) Solder each wire in the applicable contact.

ASSEMBLY OF ROSEMOUNT CERAMIC CONNECTORS

C. Connector Body Assembly

Refer to Figure 1.

(1) Align the forward end of each sleeve with the rear edge of the inspection hole on each contact crimp barrel.

(2) Shrink each sleeve in postion. Refer to Subject 20-10-14.

(3) Push the wired connector half forward until it stops.

Make sure that the shoulder of each contact is against the body of the connector.

(4) Put the link plate on the unwired connector half.

Make sure that the dowel pin on the link plate is in the dowel pin hole of the unwired connector half.

(5) Put the long assembly screw in the screw hole in the unwired connector half.

(6) Engage the threads of the long assembly screw with the threads of the screw hole in the link plate.

(7) Tighten the screw with a screwdriver.

CAUTION: DO NOT TIGHTEN THE SCREW TOO MUCH. THE SCREW MUST BE REMOVED AND INSTALLED AGAIN WHEN THE PITOT PROBE IS ATTACHED TO THE CONNECTOR.

(8) Put the connector halves together.

Make sure that the screw hole in the link plate is aligned with the screw hole in the wired connector.

(9) Put the short assembly screw in the screw hole in the wired connector half.

(10) Engage the threads of the short assembly screw with the threads of the screw hole in the link plate.

(11) Tighten the screw with a screwdriver.

ASSEMBLY OF TRI-STAR CWC(), CORY CWC(), AND WALLACE-BLACK WB() CONNECTORS

TABLE OF CONTENTS

ASSEMBLY OF TRI-STAR CWC(), CORY CWC(), AND WALLACE-BLACK WB() CONNECTORS

1. PART NUMBERS AND DESCRIPTION

A. Connector Part Numbers

Table 1
CONNECTOR PART NUMBERS

Part Number	Configuration	Supplier
CWC01-1206	Single	Cory Components
		Tri-Star
CWC01-1210	Single	Cory Components
		Tri-Star
CWC01-1210-1	Single	Tri-Star
CWC01-2006	Single	Cory Components
		Tri-Star
CWC01-2010	Single	Cory Components
		Tri-Star
CWC01-2010-1	Single	Tri-Star
CWC02-1206	Dual	Cory Components
		Tri-Star
CWC02-2006	Dual	Cory Components
		Tri-Star
CWC02-2010	Dual	Cory Components
		Tri-Star
CWC02-2010-1	Dual	Tri-Star
WB0710	Single	Wallace-Black
WB0720	Single	Wallace-Black
WB0730	Single	Wallace-Black
WB1220	Dual	Wallace-Black
WB1230	Dual	Wallace-Black
WB1240	Single	Wallace-Black

Table 2
ALTERNATIVE CONNECTOR PART NUMBERS

Specified Connector		Alternative Connector	
Part Number	**Supplier**	**Part Number**	**Supplier**
CWC01-1206	Cory Components	CWC01-1206	Tri-Star
CWC01-1210	Cory Components	CWC01-1210	Tri-Star
CWC01-2006	Cory Components	CWC01-2006	Tri-Star
CWC01-2010	Cory Components	CWC01-2010	Tri-Star

ASSEMBLY OF TRI-STAR CWC(), CORY CWC(), AND WALLACE-BLACK WB() CONNECTORS

Table 2 ALTERNATIVE CONNECTOR PART NUMBERS (Continued)

Specified Connector		Alternative Connector	
Part Number	**Supplier**	**Part Number**	**Supplier**
CWC02-1206	Cory Components	CWC02-1206	Tri-Star
CWC02-2006	Cory Components	CWC02-2006	Tri-Star
CWC02-2010	Cory Components	CWC02-2010	Tri-Star
WB0710	Wallace-Black	CWC01-1210-1	Tri-Star
WB0720	Wallace-Black	CWC01-1210-1	Tri-Star
WB0730	Wallace-Black	CWC01-2006	Cory Components
			Tri-Star
WB1220	Wallace-Black	CWC02-2010-1	Tri-Star
WB1230	Wallace-Black	CWC02-2006	Cory Components
			Tri-Star
WB1240	Wallace-Black	CWC01-2010-1	Tri-Star

B. Connector Component Part Numbers

Table 3
WB() CONNECTOR HARDWARE COMPONENT PART NUMBERS

Connector	Hardware Component	Quantity	Part Number	Supplier
WB0710	Cover	1	0711	Wallace-Black
			0712	Wallace-Black
	Lockwasher	1	MS35338-43	An available source
	Screw	1	NAS1802-3-9	An available source
			BACS12HN3U9	Boeing
WB0720	Cover	1	0711	Wallace-Black
			0712	Wallace-Black
	Lockwasher	1	MS35338-138	An available source
	Screw	1	NAS1802-3-10	An available source
			BACS12HN3U10	Boeing
WB0730	Cover	1	0711	Wallace-Black
			0712	Wallace-Black
	Lockwasher	1	MS35338-136	An available source
	Screw	1	NAS1802-06-9	An available source
			BACS12HN06U9	Boeing

ASSEMBLY OF TRI-STAR CWC(), CORY CWC(), AND WALLACE-BLACK WB() CONNECTORS

Table 3 WB() CONNECTOR HARDWARE COMPONENT PART NUMBERS (Continued)

Connector	Hardware Component	Quantity	Part Number	Supplier
WB1220	Cover	1	1225	Wallace-Black
	Lockwasher	2	MS35338-138	An available source
	Screw	2	NAS1802-3-10	An available source
			BACS12HN3U10	Boeing
WB1230	Cover	1	1235	Wallace-Black
	Lockwasher	2	MS35338-136	An available source
	Screw	2	NAS1802-06-10	An available source
			BACS12HN06U10	Boeing
WB1240	Cover	1	0711	Wallace-Black
			0712	Wallace-Black
	Lockwasher	1	MS35338-43	An available source
	Screw	1	NAS1802-3-9	An available source
			BACS12HN3U9	Boeing

NOTE: BACS12HN()U() is a satisfactory alternative to NAS1802-()-().

Table 4
ALTERNATIVE COMPONENT PART NUMBERS

Specified Component		Alternative Component	
Part Number	Supplier	Part Number	Supplier
0711	Wallace-Black	0712	Wallace-Black
0712	Wallace-Black	0711	Wallace-Black

Table 5
CWC() CONNECTOR HARDWARE KIT PART NUMBERS

Connector	Hardware Kit	
	Part Number	Supplier
CWC01-1206	KIT01-1206	Cory Components
		Tri-Star
CWC01-1210	KIT01-1210	Tri-Star
CWC01-1210-1	KIT01-1210-1	Tri-Star
CWC01-2006	KIT01-2006	Cory Components
		Tri-Star
CWC01-2010	KIT01-2010	Cory Components
		Tri-Star
CWC01-2010	KIT01-2010-1	Tri-Star

ASSEMBLY OF TRI-STAR CWC(), CORY CWC(), AND WALLACE-BLACK WB() CONNECTORS

Table 5 CWC() CONNECTOR HARDWARE KIT PART NUMBERS (Continued)

Connector	Hardware Kit	
	Part Number	Supplier
CWC01-2010-1	KIT01-2010-1	Tri-Star
CWC02-1206	KIT02-1206	Cory Components
		Tri-Star
CWC02-2006	KIT02-2006	Cory Components
		Tri-Star
CWC02-2010	KIT02-2010	Cory Components
		Tri-Star
CW02-2010-1	KIT02-2010-1	Tri-Star

Table 6
CWC() CONNECTOR HARDWARE KIT CONTENTS

Kit Part Number	Hardware Component	Quantity	Part Number	Supplier
KIT01-1206	Cover	1	CWCC-06	Cory Components
				Tri-Star
	Lockwasher	1	AN936A6C-316	An available source
			MS35338-136	An available source
	O-Ring	1	K1606-0001-0600	Cory Components
				Tri-Star
	Screw	1	NAS1802-06-11	An available source
			BACS12HN06U11	Boeing
KIT01-1210	Cover	1	CWCC-10	Cory Components
				Tri-Star
	Lockwasher	1	AN936A6C-316	An available source
			MS35338-138	An available source
	O-Ring	1	K1606-0001-1000	Cory Components
				Tri-Star
	Screw	1	NAS1802-3-11	An available source
			BACS12HN3U11	Boeing
KIT01-1210-1	Cover	1	CWCC-10	Cory Components
				Tri-Star
	Lockwasher	1	MS35338-138	An available source
	O-Ring	1	K1606-0001-1000	Tri-Star
	Screw	1	NAS1802-3-11	An Available source
			BACS12HN3U11	Boeing

ASSEMBLY OF TRI-STAR CWC(), CORY CWC(), AND WALLACE-BLACK WB() CONNECTORS

Table 6 CWC() CONNECTOR HARDWARE KIT CONTENTS (Continued)

Kit Part Number	Hardware Component	Quantity	Part Number	Supplier
KIT01-2006	Cover	1	CWCC-06	Cory Components
				Tri-Star
	Lockwasher	1	AN936A6C-316	An available source
			MS35338-136	An available source
	O-Ring	1	K1606-0001-0600	Cory Components
				Tri-Star
	Screw	1	NAS1802-06-10	An available source
			BACS12HN06U10	Boeing
KIT01-2010	Cover	1	CWCC-10	Cory Components
				Tri-Star
	Lockwasher	2	AN936A10C-316	An available source
			MS35338-138	An available source
	O-Ring	1	K1606-0001-1000	Cory Components
				Tri-Star
	Screw	1	NAS1802-3-10	An available source
			BACS12HN3U10	Boeing
KIT01-2010-1	Cover	1	CWCC-10	Tri-Star
	Lockwasher	1	MS35338-138	Please S/P to “available”
	O-Ring	1	K1606-0001-1000	Tri-Star
	Screw	1	NAS1802-3-10	An available source
			BACS12HN3U10	Boeing
KIT02-1206	Cover	2	CWCC-06	Cory Components
				Tri-Star
	Lockwasher	1	AN936A6C-316	An available source
			MS35338-136	An available source
	O-Ring	2	K1606-0001-0600	Cory Components
				Tri-Star
	Screw	2	NAS1802-06-11	An available source
			BACS12HN06U11	Boeing

Table 6 CWC() CONNECTOR HARDWARE KIT CONTENTS (Continued)

Kit Part Number	Hardware Component	Quantity	Part Number	Supplier
KIT02-2006	Cover	2	CWCC-06	Cory Components
				Tri-Star
	Lockwasher	2	AN936A6C-316	An available source
			MS35338-136	An available source
	O-Ring	2	K1606-0001-0600	Cory Components
				Tri-Star
	Screw	2	NAS1802-06-10	An available source
			BACS12HN06U10	Boeing
KIT02-2010	Cover	2	CWCC-10	Cory Components
				Tri-Star
	Lockwasher	2	AN936A10C-316	An available source
			MS35338-138	An available source
	O-Ring	2	K1606-0001-1000	Cory Components
				Tri-Star
	Screw	2	NAS1802-3-10	An available source
			BACS12HN3U10	Boeing
KIT02-2010-1	Cover	2	CWCC-10	Tri-Star
	Lockwasher	2	MS35338-138	An available source
	O-Ring	2	K1606-0001-1000	Tri-Star
	Screw	2	NAS1802-3-10	An available source
			BACS12HN3U10	Boeing

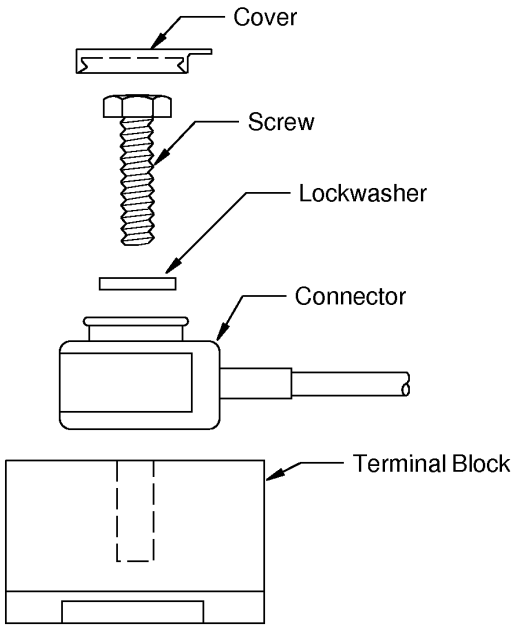
NOTE: BACS12HN()U() is a satisfactory alternative to NAS1802-()-().

2. CONNECTOR DISASSEMBLY

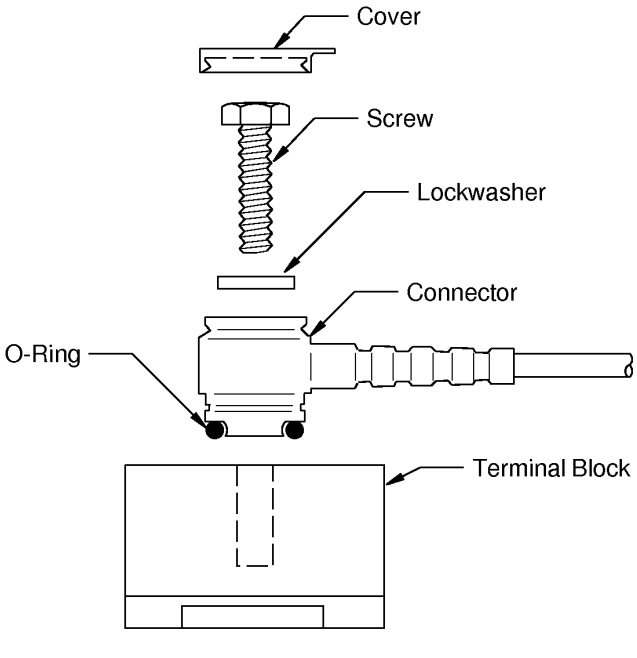
A. Separation of the Connector and the Terminal Block

Table 7
NECESSARY TOOLS

Tool	Description	Supplier
Screwdriver	Phillips	An available source



CONNECTOR SEPARATION - WB() CONNECTORS
Figure 1



CONNECTOR SEPARATION - CWC() CONNECTORS
Figure 2

Refer to Figure 1 or Figure 2.

ASSEMBLY OF TRI-STAR CWC(), CORY CWC(), AND WALLACE-BLACK WB() CONNECTORS

(1) Make a selection of a screwdriver from Table 7.

(2) Remove each cover from the connector.

(3) Hold the terminal block and at the same time, remove each screw.

CAUTION: THE TERMINAL BLOCK MUST BE HELD IN ITS POSITION WHEN THE SCREW IS REMOVED. IF THE TERMINAL BLOCK MOVES, DAMAGE TO THE TERMINAL BLOCK CAN OCCUR.

(4) Remove the connector.

3. CONNECTOR ASSEMBLY

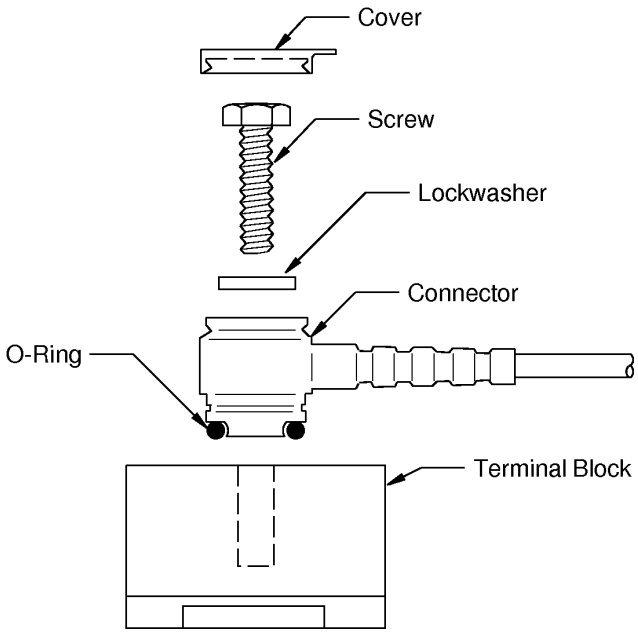
A. Connection of the Connector and the Terminal Block - CWC() Connectors

Table 8
NECESSARY TOOLS

Tool	Description	Supplier
Screwdriver	Phillips	An available source
Torque	Wrench	An available source

Table 9
SCREW TORQUE VALUES

Connector	Torque (inch-pounds)	
	Minimum	Maximum
CWC01-1206	12	15
CWC01-1210	25	30
CWC01-2006	12	15
CWC01-2010	25	30
CWC02-1206	12	15
CWC02-2006	12	15
CWC02-2010	25	30
CWC01-1210-1	25	30
CWC01-2010-1	25	30
CWC02-2010-1	25	30



CONNECTION OF THE CONNECTOR AND THE TERMINAL BLOCK
Figure 3

Refer to Figure 3.

(1) If the screw, lockwasher, and 0-ring were used before:

  (a) Examine the screw for corrosion or damage. If the screw has corrosion or damage, replace it with a new screw. Refer to Table 5 and Table 6.

  (b) Examine the lockwasher for corrosion or damage. If the lockwasher has corrosion or damage, replace it with a new lockwasher. Refer to Table 5 and Table 6.

  (c) Examine the o-ring for damage. If the o-ring has damage, replace it with a new o-ring. Refer to Table 5 and Table 6.

(2) Make a selection of a screwdriver from Table 8.

(3) Make a selection of a torque tool from Table 8.

(4) Put a lockwasher on each screw.

(5) Put the connector on the terminal block.

(6) Engage the threads of each screw with the threads in the terminal block.

  Make sure that the O-ring is installed between the connector and the terminal block.

(7) Hold the terminal block with the hand and at the same time, tighten each screw to the specified torque. Refer to Table 9.

CAUTION: THE TERMINAL BLOCK MUST BE HELD IN ITS POSITION WHEN THE SCREW IS TIGHTENED. IF THE TERMINAL BLOCK MOVES, DAMAGE TO THE TERMINAL BLOCK CAN OCCUR.

(8) Install each cover on the connector.

CAUTION: THE COVER MUST BE INSTALLED BEFORE POWER IS APPLIED TO THE CONNECTOR. IF THE COVER IS NOT INSTALLED WHEN POWER IS APPLIED, ELECTRICAL SHOCK OR DAMAGE TO EQUIPMENT CAN OCCUR.

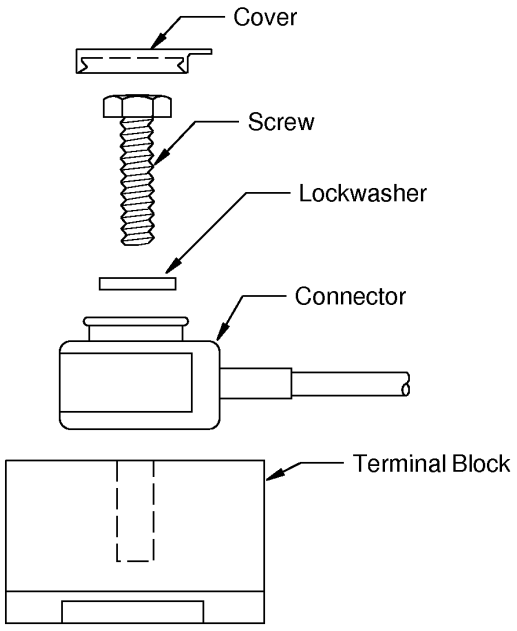
B. Connection of the Connector and the Terminal Block - WB() Connectors

Table 10
NECESSARY TOOLS

Tool	Description	Supplier
Screwdriver	Phillips	An available source
Torque	Wrench	An available source

Table 11
SCREW TORQUE VALUES

Connector	Torque (inch-pounds)	
	Minimum	Maximum
WB0710	25	30
WB0720	25	30
WB0730	12	15
WB1220	25	30
WB1230	12	15
WB1240	25	30



CONNECTION OF THE CONNECTOR AND THE TERMINAL BLOCK
Figure 4

Refer to Figure 4.

(1) If the connector has not been installed before:

  (a) Discard the screw or screws that are supplied with the connector.

  (b) Make a selection of a screw from Table 3.

  (c) Make a selection of a lockwasher from Table 3.

(2) If the screw and lockwasher have been used before:

  (a) Examine the screw threads for damage and corrosion. If the screw threads have damage or corrosion, use a new screw. Refer to Table 5 and Table 6.

  (b) Examine the lockwasher for damage and corrosion. If the lockwasher has damage or corrosion, use a lockwasher. Refer to Table 5 and Table 6.

(3) Make a selection of a screwdriver from Table 10.

(4) Make a selection of a torque tool from Table 10.

(5) Put a lockwasher on each screw.

(6) Put the connector on the terminal block.

(7) Engage the threads of each screw with the threads in the terminal block.

(8) Hold the terminal block with the hand and at the same time, tighten each screw to the specified torque. Refer to Table 11.

ASSEMBLY OF TRI-STAR CWC(), CORY CWC(), AND WALLACE-BLACK WB() CONNECTORS

CAUTION: THE TERMINAL BLOCK MUST BE HELD IN ITS POSITION WHEN THE SCREW IS TIGHTENED. IF THE TERMINAL BLOCK MOVES, DAMAGE TO THE TERMINAL BLOCK CAN OCCUR.

(9) Install each cover on the connector.

CAUTION: THE COVER MUST BE INSTALLED BEFORE POWER IS APPLIED TO THE CONNECTOR. IF THE COVER IS NOT INSTALLED WHEN POWER IS APPLIED, ELECTRICAL SHOCK OR DAMAGE TO EQUIPMENT CAN OCCUR.

MOLEX 03-06-(), 1625-(), AND AIRFONE AFP30-005()-AA CONNECTORS

TABLE OF CONTENTS

MOLEX 03-06-(), 1625-(), AND AIRFONE AFP30-005()-AA CONNECTORS

1. CONNECTOR PART NUMBERS AND DESCRIPTION

A. Connector Part Numbers

Table 1
CONNECTOR PART NUMBERS

Part Number	Description	Contact Quantity	Supplier
03-06-1022	Receptacle	2	Molex
03-06-1121	Receptacle	12	Molex
03-06-1122	Receptacle without mounting ears	12	Molex
03-06-2022	Plug	2	Molex
03-06-2024	Plug	2	Molex
03-06-2121	Plug	12	Molex
03-06-2122	Plug without mounting ears	12	Molex
1625-02P	Plug	2	Molex
1625-12P	Plug	12	Molex
1625-12P1	Plug without mounting ears	12	Molex
1625-12R	Receptacle	12	Molex
1625-12R1	Receptacle without mounting ears	12	Molex
1625-2P2	Plug	2	Molex
1625-2R2	Receptacle	2	Molex
AFP30-0052-AA	Receptacle	2	Airfone
AFP30-0054-AA	Plug	2	Airfone

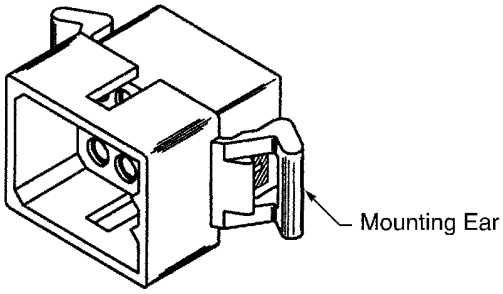
Table 2
ALTERNATIVE CONNECTOR PART NUMBERS

Specified Connector		Alternative Connector	
Part Number	**Supplier**	**Part Number**	**Supplier**
03-06-1022	Molex	AFP30-0052-AA	Airfone
03-06-2024	Molex	AFP30-0054-AA	Airfone
1625-02P	Molex	03-06-2022	Molex
1625-12P	Molex	03-06-2121	Molex
1625-12P1	Molex	03-06-2122	Molex
1625-12R	Molex	03-06-1121	Molex
1625-2P2	Molex	03-06-2024	Molex
		AFP30-0054-AA	Airfone
1625-2R2	Molex	03-06-1022	Molex
		AFP30-0052-AA	Airfone
1625-12R1	Molex	03-06-1122	Molex

Table 2 ALTERNATIVE CONNECTOR PART NUMBERS (Continued)

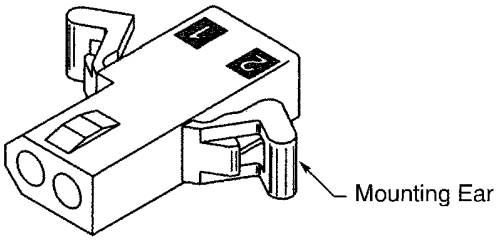
Specified Connector		Alternative Connector	
Part Number	**Supplier**	**Part Number**	**Supplier**
AFP30-0052-AA	Airfone	03-06-1022	Molex
AFP30-0054-AA	Airfone	03-06-2024	Molex

B. Connector Configurations



2447932 S00061547283_V1

PLUG CONNECTOR - 12 CONTACTS
Figure 1



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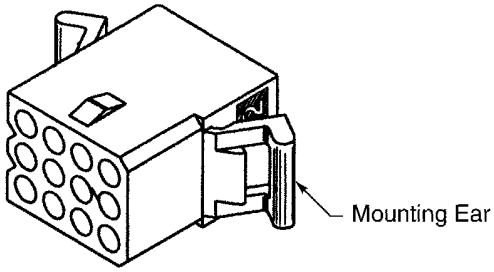
RECEPTACLE CONNECTOR - 2 CONTACTS
Figure 2



2447931 S00061547285_V1

RECEPTACLE CONNECTOR - 12 CONTACTS
Figure 3

MOLEX 03-06-(), 1625-(), AND AIRFONE AFP30-005()-AA CONNECTORS

C. Contact Part Numbers

Table 3
CONTACT PART NUMBERS

Part Number	Type	Finish	Supplier
02-06-1103	Socket	Tin	Molex
02-06-2103	Pin	Tin	Molex
02-06-5102	Socket	Gold	Molex
02-06-6102	Pin	Gold	Molex
1560	Pin	-	Molex
1561	Socket	-	Molex
AFP30-0053-AA	Socket	-	Airfone
AFP30-0241-AA	Pin	-	Airfone

Table 4
ALTERNATIVE CONTACT PART NUMBERS

Specified Contact		Alternative Contact	
Part Number	**Supplier**	**Part Number**	**Supplier**
1560	Molex	02-06-6102	Molex
		AFP30-0241-AA	Airfone
1561	Molex	02-06-5102	Molex
		AFP30-0053-AA	Airfone
AFP30-0053-AA	Airfone	02-06-5102	Molex
AFP30-0241-AA	Airfone	02-06-6102	Molex

2. CONNECTOR DISASSEMBLY

A. Contact Removal

Table 5
CONTACT REMOVAL TOOLS

Part Number	Supplier
11-03-0002	Molex
HT-2285	Molex

Table 6
ALTERNATIVE CONTACT REMOVAL TOOLS

Specified Removal Tool		Alternative Removal Tool	
Part Number	**Supplier**	**Part Number**	**Supplier**
HT-2285	Molex	11-03-0002	Molex

(1) Make a selection of a contact removal tool from Table 5.

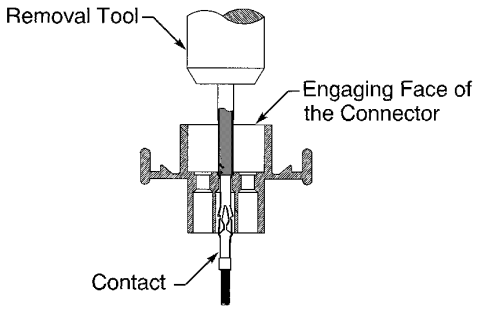
(2) At the rear of the connector, push the wire of the contact assembly forward into the connector.

(3) Hold the contact assembly forward in the contact cavity.

(4) Axially align the removal tool with the contact cavity at the engaging face of the connector.

(5) At the engaging face of the connector, push the tool into the contact cavity until the contact moves out from the rear of the connector. Refer to Figure 4.

NOTE: The retractable spring-loaded tube of the removal tool must compress the retention clips on the sides of the contact before the solid center pin of the tool can push the contact from the connector.



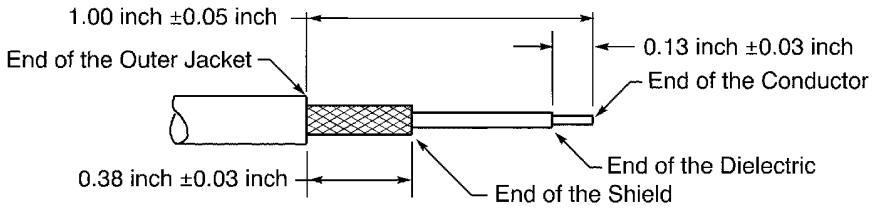
2447934 S00061547286_V1

CONTACT REMOVAL
Figure 4

(6) Carefully remove the tool from the contact cavity.

3. WIRE PREPARATION

A. Preparation of GTE Airfone Coaxial Cable



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PREPARATION OF GTE AIRFONE COAXIAL CABLE
Figure 5

Refer to Figure 5.

(1) Remove 1.00 inch ± 0.05 inch of the jacket from the end of the cable.

(2) Remove the necessary length of the shield to make the distance from the end of the shield to the end of the jacket equal to 0.38 inch ± 0.03 inch.

(3) Remove 0.13 inch ± 0.03 inch of the dielectric from the end of the cable.

(4) Make a selection of an AWG 20 wire for a shield ground wire. Refer to Subject 20-10-15 for the type of wire.

(5) Cut a 3.0 inch ± 0.1 inch length of the shield ground wire.

(6) Assemble the shield ground wire on the shield of the coax cable with a solder sleeve. Refer to Subject 20-10-15.

Make sure that the shield ground wire makes an exit from the solder sleeve away from the end of the coax cable.

(7) Assemble a contact on the end of the shield ground wire. Refer to Paragraph 4.A.

(8) Assemble a contact on the conductor of the coax cable. Refer to Paragraph 4.A.

4. CONNECTOR ASSEMBLY

A. Contact Assembly

Table 7
NECESSARY MATERIALS

Material	Specification	Suppler
Sleeve, Heat Shrinkable	AMS-DTL-23053/5 Class 1	An available source

MOLEX 03-06-(), 1625-(), AND AIRFONE AFP30-005()-AA CONNECTORS

Table 8
CONTACT CRIMP TOOLS

Wire Size (AWG)	Contact Crimp Tool	
	Part Number	Die Cavity
24	11-01-0008	A
	11-26-0007	
	63811-3300	
	HTR1719C	
	JHTR1719C	
22	11-01-0008	A
	11-26-0007	
	63811-3300	
	HTR1719C	
	JHTR1719C	
20	11-01-0008	A
	11-26-0007	
	63811-3300	
	HTR1719C	
	JHTR1719C	
18	11-01-0008	B
	11-26-0007	
	63811-3300	
	HTR1719C	
	JHTR1719C	

Table 9
ALTERNATIVE CONTACT CRIMP TOOLS

Specified Contact Crimp Tool		Alternative Contact Crimp Tool	
Part Number	Supplier	Part Number	Supplier
11-01-0008	Molex	63811-3300	Molex
11-26-0007	Molex	63811-3300	Molex
HTR1719C	Molex	63811-3300	Molex
JHTR1719C	Molex	63811-3300	Molex

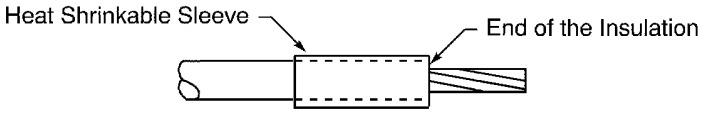
(1) Make a selection of a crimp tool from Table 8.

(2) For AWG 20, 22 and 24 wire, make a selection of a heat shrinkable sleeve from Table 7.

NOTE: An equivalent heat shrinkable sleeve is a satisfactory alternative. Refer to Subject 20-00-11.

Make sure that the sleeve has the smallest diameter that can be moved freely on the wire.

(3) Align the forward end of the sleeve with the end of the wire insulation. Refer to Figure 6.



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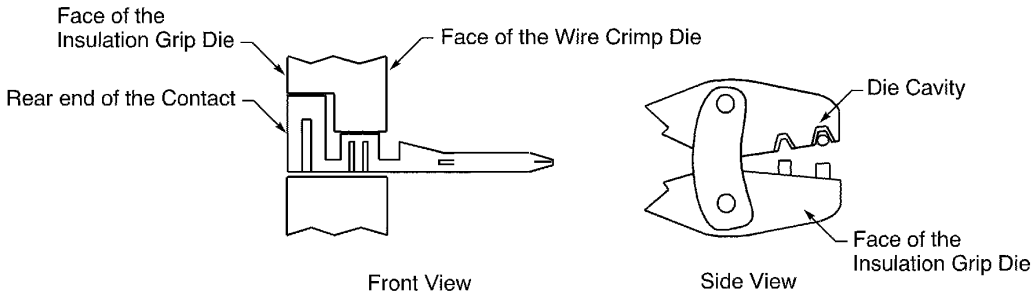
POSITION OF THE HEAT SHRINKABLE SLEEVE
Figure 6

(4) Remove 0.15 inch ± 0.01 inch of the insulation from the end of the wire.

(5) Shrink the sleeve in its position on the wire. Refer to Subject 20-10-14.

(6) Put the contact into the correct die cavity of the tool.
Refer to:

- Table 8 for the correct die cavity
- Figure 7 for the position of the contact in the tool.



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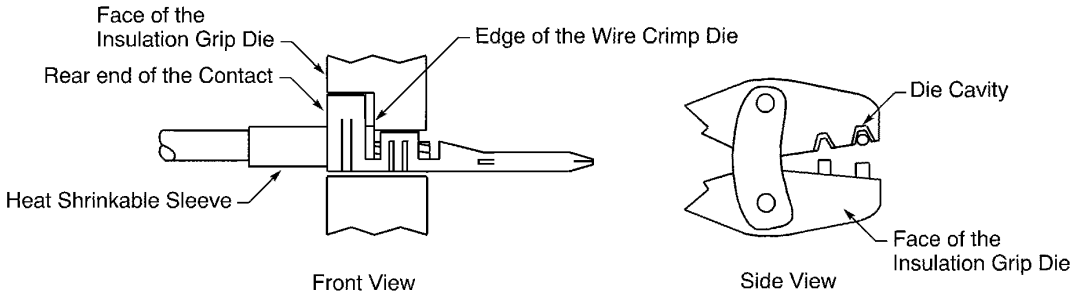
POSITION OF THE CONTACT IN THE DIE OF THE CRIMP TOOL
Figure 7

(7) Close the jaws of the tool until the pressure on the contact is only sufficient to hold the contact in its position in the tool.

(8) Put the end of the wire in the contact. Refer to Figure 8.

Make sure that:

- The conductor is between the conductor tabs
- The insulation is between the insulation grip tabs
- The forward end of the insulation is against the edge of the wire crimp die.



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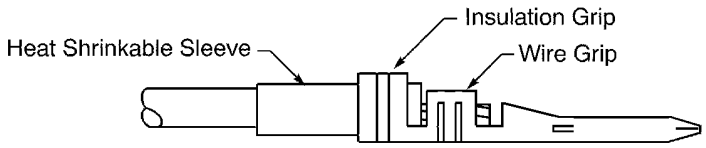
POSITION OF THE END OF THE WIRE IN THE CONTACT
Figure 8

(9) Crimp the contact.

(10) If it is necessary, while the contact assembly is in the crimp tool, and after the crimp operation is completed, make the terminal straight.

(11) Remove the contact from the tool.

(12) Examine the contact. Refer to Figure 9.



2447929 S00061547291_V1

COMPLETED CONTACT ASSEMBLY
Figure 9

NOTE: Cuts of the wire insulation in the insulation grip area of the contact assembly are permitted.

5. APPROVED TOOL SUPPLIERS

A. Contact Crimp Tools

Table 10
CONTACT CRIMP TOOL SUPPLIERS

Part Number	Supplier
11-01-0008	Molex
11-26-0007	Molex
63811-3300	Molex
HTR1719C	Molex
JHTR1719C	Molex

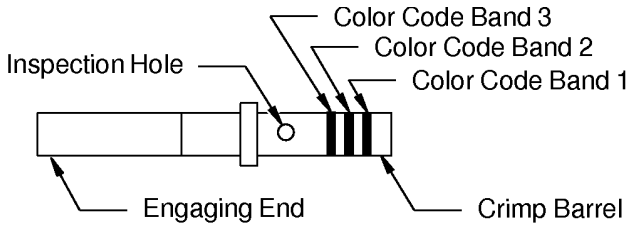
ASSEMBLY OF M39029/57-() SOCKET CONTACTS FOR WINDOW HEAT CONNECTORS

TABLE OF CONTENTS

ASSEMBLY OF M39029/57-() SOCKET CONTACTS FOR WINDOW HEAT CONNECTORS

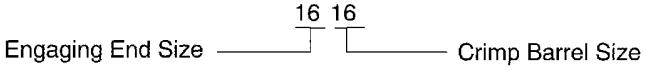
1. PART NUMBERS AND DESCRIPTION

A. Contact Part Numbers



2449045 S00061547234_V1

LOCATION OF CONTACT COLOR CODES
Figure 1



2446183 S00061544383_V1

EXAMPLE OF A CONTACT SIZE
Figure 2

Table 1
CONTACT PART NUMBERS

Contact Size		Type	Part Number	Color Code		Supplier
Engaging End	Crimp Barrel			Band	Color	
16	16	Socket	M39029/57-358	1	Orange	QPL
				2	Green	QPL
				3	Gray	QPL
12	12	Socket	M39029/57-359	1	Orange	QPL
				2	Green	QPL
				3	White	QPL

ASSEMBLY OF M39029/57-() SOCKET CONTACTS FOR WINDOW HEAT CONNECTORS

2. CONNECTOR DISASSEMBLY

A. Contact Removal

Table 2
RECOMMENDED CONTACT REMOVAL TOOLS

Contact Size	Material	Part Number
16	Metal	RRX-16RA
12	Metal	RRX-12RA

Table 3
ALTERNATIVE CONTACT REMOVAL TOOLS

Contact Size	Material	Part Number	Color
16	Metal	11-8675-16	-
		11-8795-16	-
		M81969/8-08	-
		MS27495R16	-
		RX16-9	-
	Plastic	M81969/14-03	White
		MS27534-16	White
12	Metal	11-8675-12	-
		11-8795-12	-
		M81969/8-10	-
		MS27495R12	-
		RX12-9	-
	Plastic	M81969/14-04	White
		MS27534-12	White

NOTE: For the plastic tools given in Table 3, one end of the tool is used for contact insertion and the other end of the tool is used for contact removal. The color given in Table 3 is the color of the end of the tool used for the removal of contacts.

(1) Make a selection of a contact removal tool from Table 2.

CAUTION: DO NOT USE A REMOVAL TOOL THAT HAS A DEFECT. A REMOVAL TOOL THAT HAS A DEFECT CAN CAUSE DAMAGE TO THE GROMMET OR THE RETENTION CLIP.

NOTE: The tools specified in Table 3 are satisfactory alternative.

(2) Lubricate the rear grommet of the connector with isopropyl alcohol.

CAUTION: DO NOT PUT THE CONNECTOR GROMMET OR CONTACT ASSEMBLY FULLY INTO THE ALCOHOL. TOO MUCH LUBRICANT CAN CAUSE DAMAGE TO THE CONNECTOR.

ASSEMBLY OF M39029/57-() SOCKET CONTACTS FOR WINDOW HEAT CONNECTORS

(3) At the rear of the connector, put the removal tool on the wire.

(4) Axially align the removal tool and the contact cavity.

(5) Carefully push the removal tool into the rear of the contact cavity until it stops.

CAUTION: DO NOT ROTATE THE TOOL OR SPREAD THE TOOL TIPS WHILE THE TOOL IS STILL IN THE GROMMET.

(6) Carefully pull the wire and the removal tool from the contact cavity at the same time. Make sure that the removal tool and the contact cavity stay axially aligned.

(7) If the contact does not release:

(a) Pull the removal tool out of the contact cavity.

(b) Turn the removal tool approximately 90 degrees.

(c) Do Step 2.A.(3) through Step 2.A.(6) again.

3. CONNECTOR ASSEMBLY

A. Contact Assembly

Table 4
INSULATION REMOVAL LENGTH

Wire Size (AWG)	Contact Size	Removal Length L (inch)		
		Maximum	Target	Minimum
16	16	0.22	0.19	0.19
12	12	0.22	0.19	0.19

Table 5
CONTACT CRIMP TOOLS

Wire Size (AWG)	Contact Size	Crimp Tool				
		Basic Unit		Locator		Special Instructions
		Part Number	Setting	Part Number	Color	
16	16	11148	-	-	Red	Locator block is Blue
		614019	-	-	Red	Locator block is Blue
		M22520/1-01	6	M22520/1-04	-	-
		MS3191-1	-	11-7771-29	-	-
		ST2220-1-Y	-	ST2220-1-2	-	-
12	12	11148	-	-	Red	Locator block is Yellow
		614019	-	-	Red	Locator block is Yellow
		M22520/1-01	8	M22520/1-04	-	-
		MS3191-1	-	11-7771-43	-	-
		ST2220-1-Y	-	ST2220-1-3	-	-

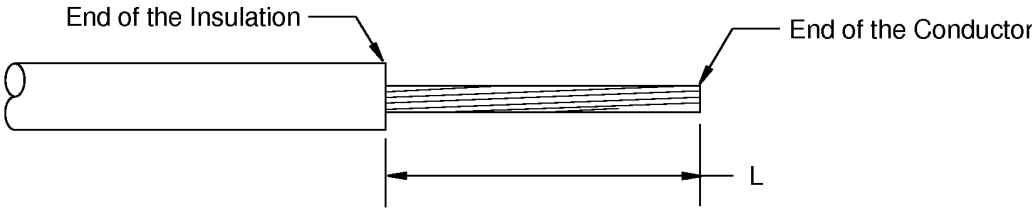
ASSEMBLY OF M39029/57-() SOCKET CONTACTS FOR WINDOW HEAT CONNECTORS

(1) Make a selection of a crimp tool from Table 5.

(2) Remove the necessary length of insulation from the end of the wire.

Refer to:

- Figure 3
- Table 4 for the insulation removal length
- Subject 20-00-15 for the insulation removal procedures.



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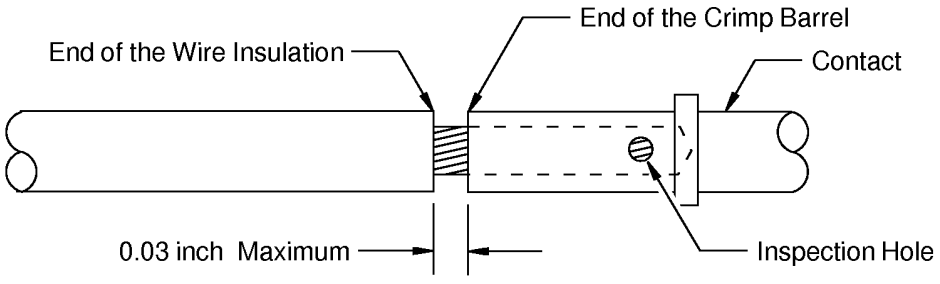
INSULATION REMOVAL LENGTH
Figure 3

(3) Put the end of the conductor in the crimp barrel of the contact. Refer to Figure 4.

Make sure that:

- All the conductor strands are in the crimp barrel
- The conductor strands are visible in the inspection hole of the contact
- The distance from the end of the insulation to the crimp barrel is not more than 0.03 inch.



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POSITION OF THE CONDUCTOR IN THE CRIMP BARREL OF THE CONTACT
Figure 4

(4) Crimp the contact.

Make sure that:

- All the conductor strands are in the crimp barrel
- The conductor strands are visible in the inspection hole of the contact
- The distance from the end of the insulation to the crimp barrel is not more than 0.03 inch.

ASSEMBLY OF M39029/57-() SOCKET CONTACTS FOR WINDOW HEAT CONNECTORS

B. Contact Insertion

Table 6
RECOMMENDED CONTACT INSERTION TOOLS

Contact Size	Insertion Tool	
	Material	Part Number
16	Metal	RIT-16RA
12	Metal	RIT-12RA

Table 7
ALTERNATIVE CONTACT INSERTION TOOLS

Contact Size	Insertion Tool		
	Material	Part Number	Color
16	Metal	11-8674-16	Blue
		11-8794-16	Blue
		M81969/8-07	Blue
		MS27495A16	Blue
		RX16-4	Blue
	Plastic	M81969/14-03	Blue
		MS27534-16	Blue
12	Metal	11-8674-12	Yellow
		11-8794-12	Yellow
		M81969/8-09	Yellow
		MS27495A12	Yellow
		RX12-8	Yellow
	Plastic	M81969/14-04	Yellow
		MS27534-12	Yellow

NOTE: For metal tools, the color given in Table 7 is the color code on the handle of the tool.

NOTE: For the plastic tools given in Table 7,one end of the tool is used for contact insertion and the other end of the tool is used for contact removal. The color given in Table 7 is the color of the end of the tool used for the insertion of contacts.

(1) Make a selection of an insertion tool from Table 6.

CAUTION: DO NOT USE DAMAGED TOOLS.

NOTE: The tools specified in Table 7 are satisfactory alternative.

(2) Lubricate the rear grommet of the connector with isopropyl alcohol.

CAUTION: DO NOT PUT THE CONNECTOR GROMMET OR CONTACT ASSEMBLY FULLY INTO THE ALCOHOL. TOO MUCH LUBRICANT CAN CAUSE DAMAGE TO THE CONNECTOR.

(3) Put the contact assembly in the insertion tool.

(4) Axially align the insertion tool and the contact cavity at the rear of the connector.

(5) Carefully push the contact assembly into the contact cavity until it stops.

Make sure that the insertion tool stays axially aligned with the contact cavity.

CAUTION: DO NOT USE MORE THAN THE NECESSARY AMOUNT OF FORCE TO PUSH THE TOOL INTO THE CONTACT CAVITY. DAMAGE TO THE CONTACT RETENTION CLIPS CAN OCCUR.

CAUTION: DO NOT TURN THE TOOL CLOCKWISE OR COUNTERCLOCKWISE WHEN IT IS IN THE CONTACT CAVITY. DAMAGE TO THE CONTACT RETENTION CLIPS CAN OCCUR.

(6) Carefully pull the tool out of the contact cavity.

Make sure that the tool and the contact cavity stay axially aligned.

(7) Lightly pull the wire to make sure that the contact is locked in the connector.

CAUTION: DO NOT PULL THE WIRE WITH A STRONG OR SUDDEN FORCE. THE FORCE CAN CAUSE DAMAGE TO THE CONNECTOR OR THE CONTACT.

CAUTION: DO NOT MAKE A DENT IN THE WIRE INSULATION WITH THE FINGERNAILS. DAMAGE TO THE WIRE INSULATION CAN CAUSE UNSATISFACTORY PERFORMANCE OF THE WIRE.

(8) If the contact is not locked in the contact cavity:

(a) Pull the contact assembly out of the contact cavity.

(b) Do Step 3.B.(3) through Step 3.B.(7) again.

4. APPROVED TOOL SUPPLIERS

A. Crimp Tools

Table 8
CRIMP TOOL SUPPLIERS

Tool	Supplier
11148	Astro
11-7771-29	Amphenol
11-7771-43	Amphenol
614019	Astro
M22520/1-01	QPL
M22520/1-04	QPL
MS3191-1	QPL
ST2220-1-2	Boeing
ST2220-1-3	Boeing

Table 8 CRIMP TOOL SUPPLIERS (Continued)

Tool	Supplier
ST2220-1-Y	Boeing

B. Insertion and Removal Tools

Table 9
INSERTION AND REMOVAL TOOL SUPPLIERS

Tool	Supplier
11-8674-12	Amphenol
11-8674-16	Amphenol
11-8675-12	Amphenol
11-8675-16	Amphenol
11-8794-12	Amphenol
11-8794-16	Amphenol
11-8795-12	Amphenol
11-8795-16	Amphenol
M81969/14-03	QPL
M81969/14-04	QPL
M81969/8-07	QPL
M81969/8-08	QPL
M81969/8-09	QPL
M81969/8-10	QPL
MS27495A12	QPL
MS27495A16	QPL
MS27495R12	QPL
MS27495R16	QPL
MS27534-12	QPL
MS27534-16	QPL
RIT-12RA	Russtech
RIT-16RA	Russtech
RRX-12RA	Russtech
RRX-16RA	Russtech
RX12-8	Burndy
RX12-9	Burndy
RX16-4	Burndy
RX16-9	Burndy