

**POLICE POWER/SIGNAL FEEDS  
(WITHOUT OPTIONAL POLICE POWER DISTRIBUTION BOX)**

KIT - TBD		
Part Number	Description	Quantity
4W7T-14A032-CA	Wiring Pigtail Harness	1
SK 4W7T-14C194-AA	Instruction Sheet	1

**SERVICE PROCEDURE:**

**NOTE:** Refer to applicable model year wiring diagrams for circuit information.

**TWISTED WIRE CIRCUIT**

1. For "Twisted Wire" circuit repair (refer to Figure 2), the twisting must not be disrupted for more than 2". Twist the repaired wires in the same direction and with the same general twist rate as the original wiring. Re-apply the shielding on shielded circuits.
2. Stagger the repairs to minimize harness diameter and maintain harness length (refer to Figure 3) "stagger".
3. Any leads that are not going to be used shall be sealed with dual wall heat shrink and stowed (refer to Figure 3) "seal". Silicone must not be used.
4. Excess wire from the harness can be folded back on itself to maintain harness length.
5. Re-apply any convolute and tape that was removed to make the repair.

**FOR 16 AGW AND SMALLER DIAMETER WIRE**

1. Strip 1-1/2" of insulation from wire #1 and 3/4" of insulation from wire #2 taking care not to nick or cut wire strands (refer to Figure 4). Pull wire straight from stripper. If wire is pulled at an angle, wire strands may be cut off. If more than one (1) strand is cut off during stripping, cut off the end and re-strip.
2. Install heat shrink tubing at least 1" away from one of the stripped ends being spliced. Twist wires together. Solder wires together (refer to Figure 5).

**NOTE:** Use rosin core mildly activated (RMA) solder. Do not use acid core solder for wire repair.

3. Bend wire #1 back in a straight line for sealing (refer to Figure 5). Inspect solder joint bond.

**NOTE:** Wait for solder to cool before moving wires.

4. Evenly position heat shrink tubing over wire repair (refer to Figure 6).

**NOTE:** Overlap tubing on both wires.

5. Use a shielded heat gun to heat the entire length of the heat shrink tubing until the hot melt appears from both ends of the tubing. Durability of a heat shrink tubing splice is dependent on the hot melt that will appear from both ends of the tube. The hot melt forms an adhesive seal between the wire insulation and the heat shrink tubing, which prevents air and moisture from entering the solder point (refer to Figure 6).



## **FOR 14 AGW AND LARGER DIAMETER WIRE**

1. Strip 1/4" (6.35mm) of insulation from pigtail wire end once the wire lengths are sized so repairs can be staggered. Take care not to nick or cut wire strands. Pull wire straight from stripper. If wire is pulled at an angle, wire strands may be cut off. If more than one (1) strand is cut off during stripping, cut off the end and re-strip.

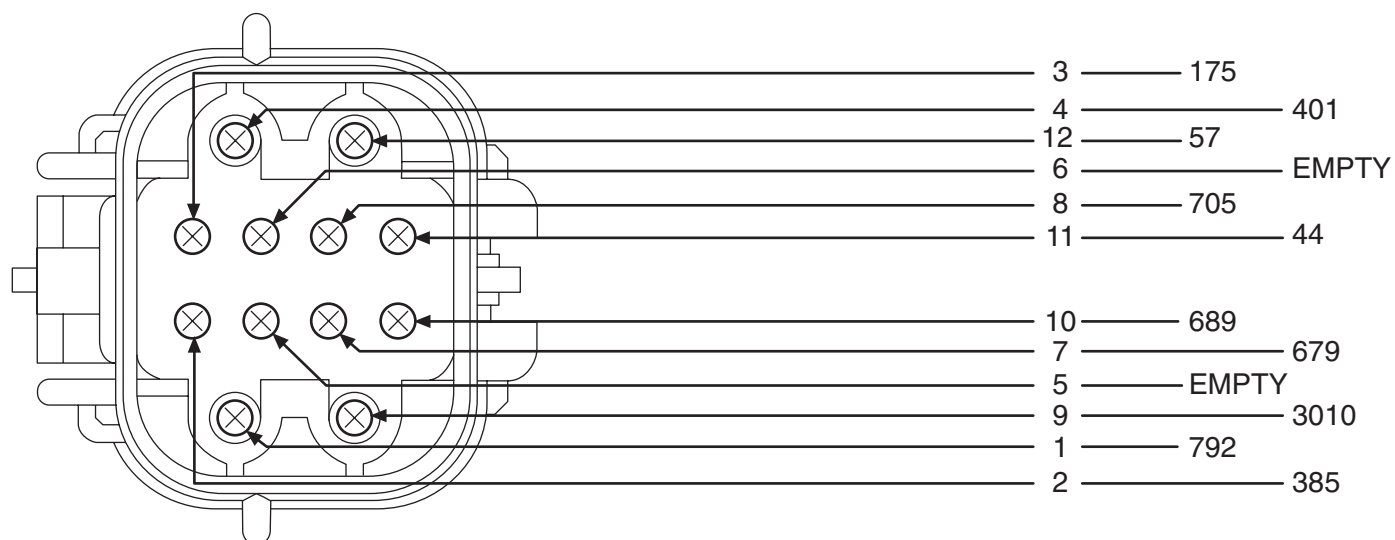
**NOTE: The strip length will vary depending on the butt splice and wire in harness. Longer strip lengths are required when the wire needs to be folded to mate with the butt splice. (Refer to Figure 7) chart for strip lengths and folding techniques.**

2. Slide heat shrink tubing onto one (1) of the wire ends to be crimped, must be at least 1" away from stripped end (refer to Figure 8).
3. Identify the appropriate crimping chamber of the Rotunda 164-R5901 Pro-Crimper (or equivalent) by matching the wire size on the dies with the wire size stamped on the butt splice (refer to Figure 9). Hold the crimping tool so the identified wire sizes are facing you. Squeeze tool handles together until the ratchet releases, then allow the jaws of the tool to open fully.
4. Center one (1) end of the butt splice on the appropriate crimping chamber. If visible, be sure to place the brazed seam of the butt splice toward the indenter (refer to Figure 10).
5. Hold the butt splice in place and squeeze the tool handles together until ratchet engages sufficiently to hold the butt splice in position (typically one (1) or two (2) clicks). **Do not** deform the butt splice.
6. Insert stripped wire into the butt splice, making sure the insulation on wire does not enter the butt splice (refer to Figure 10).
7. Holding the wire in place, squeeze tool handles together until ratchet releases. Allow tool handles to open, then remove crimped butt splice.
8. To crimp the other half of the splice, reposition the uncrimped wire barrel in the same crimping chamber, and repeat steps 3 - 8. If the splice cannot be turned for crimping the other half, turn the tool around.
9. Check for acceptable crimp.
  - a. Crimp should be centered on each end of the butt splice. It is acceptable for crimp to be slightly off center, but not off the end of the butt splice (refer to Figure 11-A).
  - b. Wire insulation does not enter butt splice. Wire is flush with or extends slightly beyond end of butt splice (refer to Figure 11-B).
  - c. Wire is visible through inspection hole of splices (refer to Figure 11-C).
10. Evenly position heat shrink tubing over wire repair (refer to Figure 6).

**NOTE: Overlap tubing on both wires.**

11. Use a shielded heat gun to heat the entire length of the heat shrink tubing until the hot melt appears from both ends of the tubing. Durability of a heat shrink tubing splice is dependent on the hot melt that will appear from both ends of the tube. The hot melt forms and adhesive seal between the wire insulation and the heat shrink tubing, which prevents air and moisture from entering the solder point (refer to Figure 6).





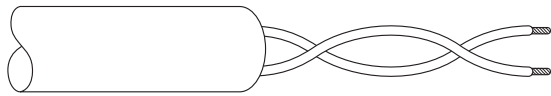
**CONNECTOR PART NUMBER: F75B-14A624-BA**

<u>Cavity #</u>	<u>Circuit #</u>	<u>Gauge</u>	<u>Color</u>	<u>Function</u>
Cavity 1:	792	10	T-Y	Battery feed from power distribution box #110 50A J-case fuse.
Cavity 2:	385	16	W-R	Hazard In Signal.
Cavity 3:	175	18	BK-Y	Blunt cut to engine compartment.
Cavity 4:	401	10	PK	Run/Accuracy Feed. Fed from PDB #111 30A J-case fuse.
Cavity 5:	Empty	—	—	Empty
Cavity 6:	Empty	—	—	Empty
Cavity 7:	679	18	GY-BK	Vehicle Speed Signal.
Cavity 8:	705	16	LG-O	Battery Save Signal.
Cavity 9:	3010	10	T	Battery feed from power distribution box #117 50A J-case fuse.
Cavity 10:	689	18	DB	Start Signal.
Cavity 11:	44	16	LB	Hazard Out Signal.
Cavity 12:	57	10	BK	Ground.

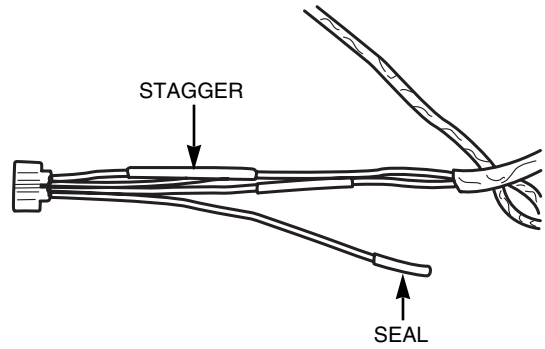
**NOTE: Looking into face of connector, wires exiting away from the page/reader.**

**FIGURE 1**

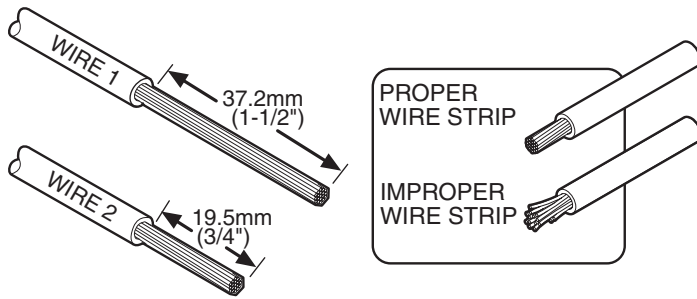




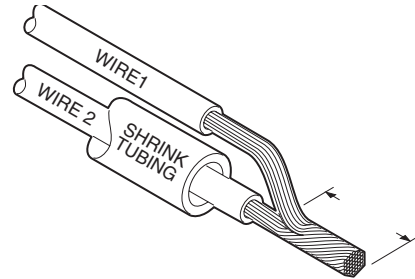
**FIGURE 2**



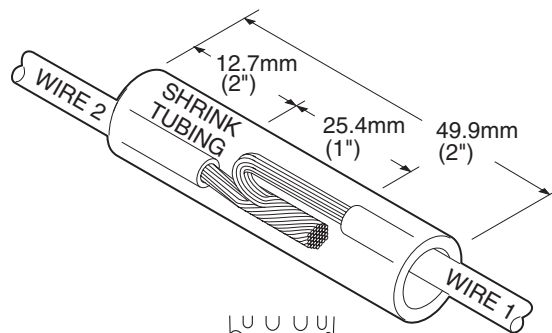
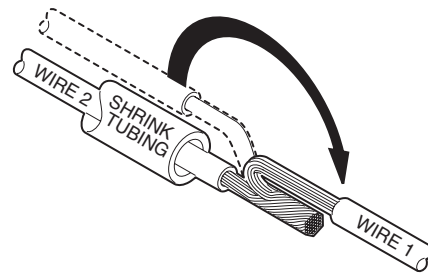
**FIGURE 3**



**FIGURE 4**



**FIGURE 5**



CENTER OVER  
SOLDER OR BUTT  
SPlice REPAIR

**FIGURE 6**



Wire Gauge Size		10	12	14	16	18	20	22	24
Butt Splice as stamped	22-18		1/4" strip, cut 9 strands	1/4" strip, cut 2 strands	1/4" strip, no fold	1/4" strip, no fold	1/4" strip, no fold	5/8" strip, fold 2x dia.	1" strip, fold 3x dia.
	16-14	1/4" strip, cut 7 strands	1/4" strip, no fold	1/4" strip, no fold	1/4" strip, no fold	5/8" strip, fold 2x dia.	1" strip, fold 3x dia.	1 1/4" strip, fold 4x dia.	
	12-10	1/4" strip, no fold	1/4" strip, no fold	5/8" strip, fold 2x dia.	1" strip, fold 3x dia.	1 1/4" strip, fold 4x dia.			

☐ Pigtail Only  
☐ Both Pigtail and Wire Harness  
☐ Wire Harness Only

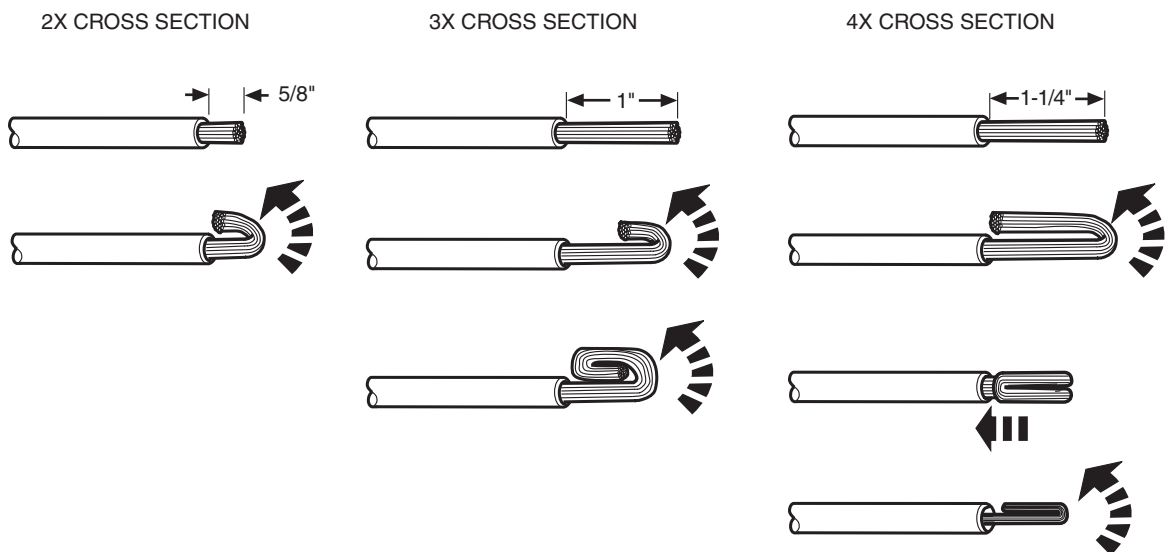
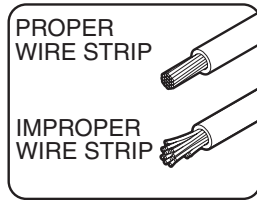
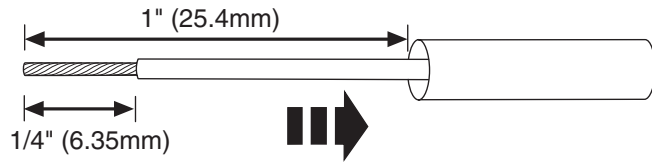
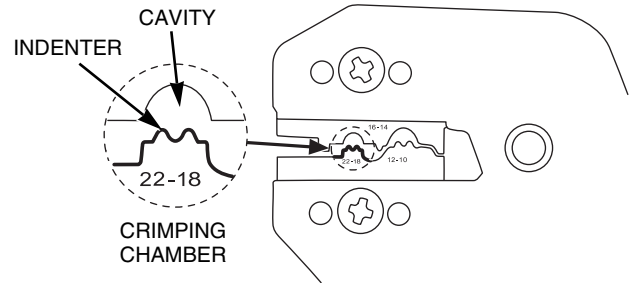


FIGURE 7

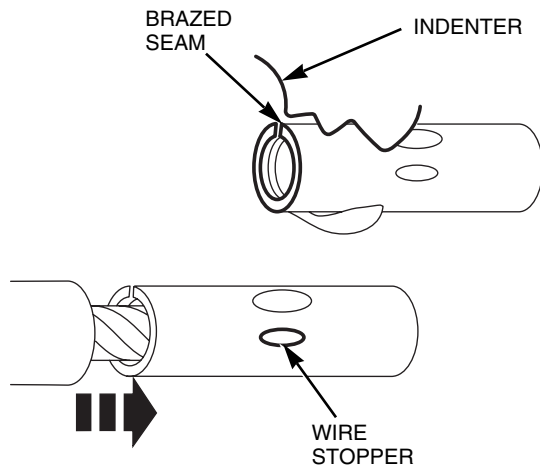




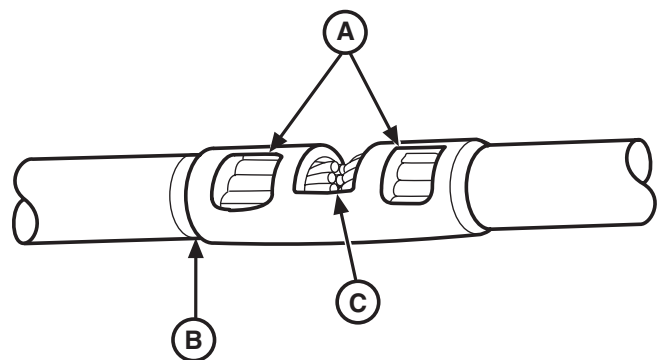
**FIGURE 8**



**FIGURE 9**



**FIGURE 10**



**FIGURE 11**

