**Standard Work Instruction: 795313 Assembly Rev: C**

**PPE Needed:**

Gloves

**Material Needed:**

630567- Potentiometer Plate Dual **Location: BT1431** Qty: 1

928530- 10K Potentiometer **Location: Work Table** Qty: 2 Includes black lock washer and silver nut

941728- Cable Shielded Wire **Location: Work Station** Qty: 3: **2 @-Length: 12 inches** & 1 @-Length: 5 inches

941731- Receptacle Molex **Location: Work Table** Qty: 1

941729- Pin Male Molex **Location: Work Table** Qty: 3

941736- Heat Shrink **Location: Work Table** Qty: 5: 4 @-Length: 1 inch & 1 @-Length: 1.6 inches

928526- Heat Shrink **Location: Work Table** Qty: 6 Length: 0.6 inches

941734- Knob MPKES 90B **Location: Work Table** Qty: 2

928215- Label Dual ECM **Location: BT1431** Qty: 1

991254- Handy Box **Location: BT1433** Qty: 1

991313- Handy Box Connector **Location: BT1433** Qty: 1

941091- Screw #6-32 X 1/2 Oval **Location: Work Table** Qty: 2

928523- Terminal Butt Splice **Location: BT1431** Qty: 1

928924- TERM RD 14-16M FISO **Location: Work Table** Qty: 3

**Tools needed:**

Molex contact crimper

Heat gun

Wire stripper

Solder station

Needle nose pliers

Side cutters

Ruler

Permanent/Paint marker

1/2 box end wrench

Hex wrench

STA-KON ERG-2003 Crimper

**NOTE:** Item numbers reference the DWG bill of materials.

**Assembly Steps:**

**1.)** Get Potentiometer Plate (630567 Item: 10) and clean the surface. It will assist the label with adhering properly. Make certain to wear gloves during this process. The edges are sharp and present a cutting hazard.

**2.)** Apply the Label Dual ECM (928215 Item: 90) to the front surface. Align the holes in the label with the holes on the plate.

**3.)** From the rear of the plate, install a potentiometer (928530 Item: 20) and insert the black lock washer and then the silver nut over the potentiometer on the front of the plate. Use a 1/2 inch wrench to tighten.

**4.)** Install Knob MPKES (941734 Item: 80) to potentiometer plate. Make certain the potentiometer is turned off completely. Use the Hex wrench to loosen the screw from the knob. Place the knob on the potentiometer and tighten the screw. Make certain the knob turns fully to each direction. Repeat for the second potentiometer.

**5.) Measure and strip 1.25 inches of the jacket from one end of both 12-inch pieces of cable-shielded wire (941728 Item: 30)**

**6.)** Remove the foil and fillers using side cutters.

**7.)** Strip the three conductor wires of both to .25 inches.

**8.)** Take the 5-inch piece of cable shielded wire and pull the black and white conductors from the jacket. Discard the rest of the material. Measure and strip .25 inches from both ends of each wire. These will be used as jumper wires.

**9.)** Take the assembled potentiometer plate, stripped cables and jumpers, Qty: 2 and the 1.6 inch piece of (941736 Item: 60) heat shrink, Qty: 6 of (928526) heat shrink, Qty: 1 of (928523 Item: 120) Terminal Butt Splice, and DWG NO. 795313 to the solder station. Solder the wires to the potentiometer according to drawing (DWG NO. 795313). Make certain to install heat shrink (928526) to each conductor before soldering to the potentiometer.

**10.)** Apply heat to (928526) heat shrink.

**11.)** Place the 1.6 inch piece of (941736 Item: 60) heat shrink over one of the red conductors. Install and crimp the terminal butt splice onto the red conductors. Pull firmly on the conductor wires after crimping to ensure an adequate crimp. Move the heat shrink to cover the splice completely and apply heat. Heat until adhesive is slightly protruding from the heat shrink.

**12.)** Place the remaining two pieces of heat shrink onto the cable wires to overlap the cable jacket strip and conductor wires. Apply heat until adhesive is slightly protruding from the heat shrink.

**13.)** Using a marker/paint pen mark the end of the cable that has been soldered to Switch "A".

**14.)** Mount handy box connector (991313 Item: 110) on the side of the handy box (991254 Item: 100). Locate the connector opposite of the mounting hole in the bottom of the handy box, identifiable by a screw hole. Use needle nose pliers to loosen the tab covering the hole as well as to tighten the connector.

**15.)** Install the assembled potentiometer plate on the handy box by running the cable wires through the inside of the handy box connector to the outside. Make certain switch “A” is opposite of the handy box connector. Use screws (941091) to attach the plate to the handy box.

**16.)** While pulling slightly on the cables to remove any slack from the inside of the handy box, tighten the screws on the handy box connector.

**17.)** Place heat shrink (941736 Item: 60) onto each cable. (Do not apply heat)

**18.)** Ensure the three conductor wires are of equal length. Trim with side cutters if needed.

**19.)** Measure and strip 1.5 inches of the jacket from the end of the marked cable-shielded wire (941728 Item: 30). Remove the foil and filler using side cutters.

**20.)** Strip the conductor wires to .25 inches.

**21.)** Use STA-KON ERG-2003 Crimper to crimp (928924 Item: 70) TERM RD 14-16M FISO to each conductor wire.

**22.)** Measure and strip 1.25 inches of the jacket from the end of the unmarked cable-shielded wire (941728 Item: 30). Remove the foil and filler using side cutters.

**23.)** Strip the conductor wires to .25 inches.

**24.)** Use the contact crimper to attach a Molex Pin (941729 Item: 50) to each of the conductor wires on the unmarked cable.

**25.)** Install crimped contacts into the Molex receptacle (941731 Item: 40) according to DWG NO. 795313. After installing contacts, pull firmly to ensure each is fully seated.

**26.)** Move the heat shrinks to overlap the cable jacket strip and conductor wires. Apply heat until adhesive is slightly protruding from the heat shrink.

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**Revision Record**

Rev: -

Date First Issued: 03-MAY-2018

Rev: A

Date of revision: 10-MAY-2018

Change log: Added Item numbers to all listed part numbers to help when referencing the drawing.

Added note to the title page.

Rev: B

Date of revision: 12-JUN-2018

Change log: Revised Tools Needed to show ½ box end wrench instead of 9/16 box end wrench.

Additional information added to Steps 5, 8, and 15.

**Rev: C**

**Date of Revision: 2018-AUG-08**

**Change log: Added location to all items in the Material Needed list.**

**Modified the length of 941728- Cable Shielded Wire from 10 inches to 12 inches in the Material Needed list.**

**Modified Step 5 to show 941728- Cable Shielded Wire at 12 inches.**