

## SHIELDED SPARK PLUG WIRE CONVERSION

### Parts needed:

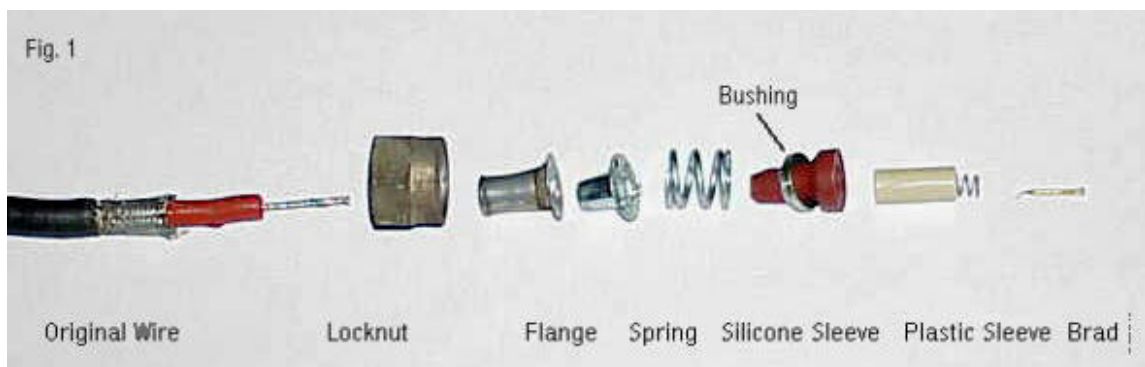
- 12' NAPA 7mm bulk spark plug wire
- 6 NAPA 7mm silicone plug boots, straight
- 6 NAPA 7mm spark plug connectors, crimp on
- 24 inches of 3/8" heat shrink tubing

see picture below:



### Disassemble the old wires:

- examine Fig. 1 to familiarize yourself with the pieces you'll be working with.



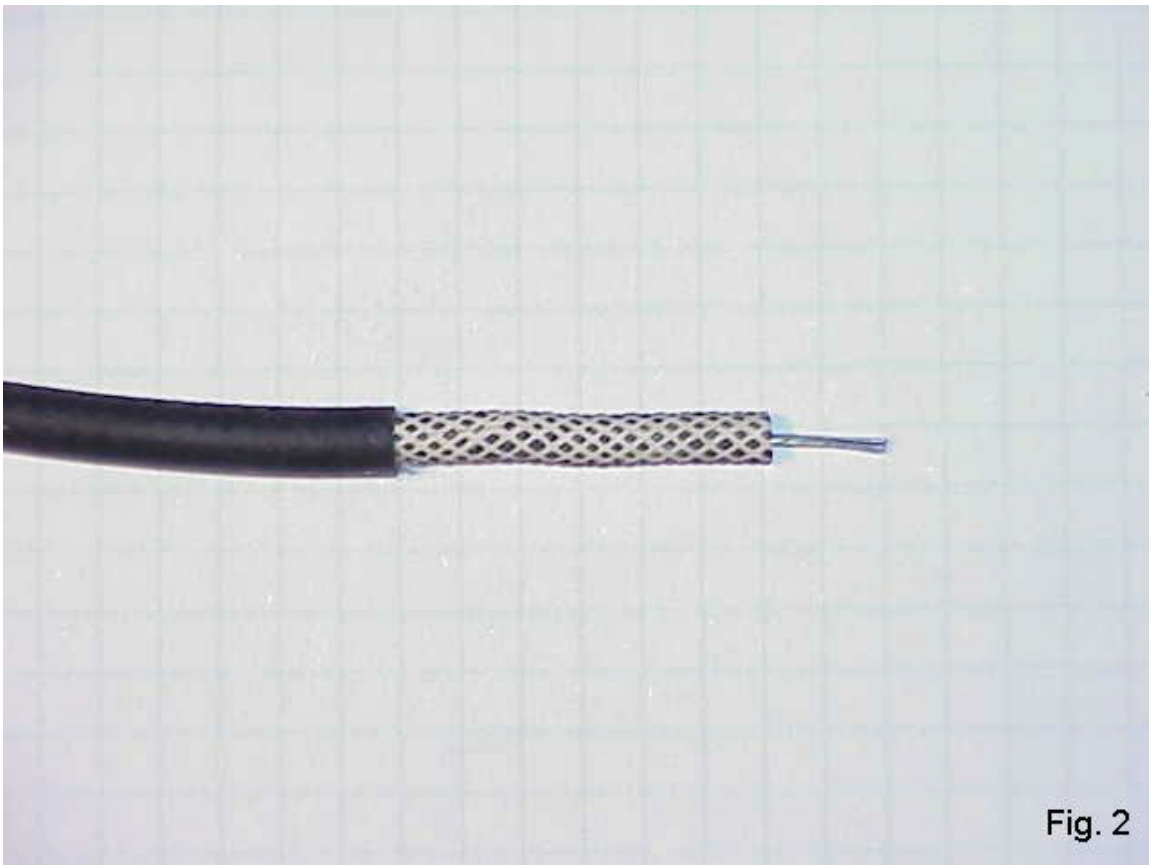
- using an Exacto or utility knife, cut the old heat shrink tubing from the old assembly where the wire enters the connector.

- using tiny needle-nosed pliers, remove the brass brad from the very tip of the connector. It's down inside the visible spring. It's there to hold the center conductor in place.
- grab the white plastic sleeve with your fingers and twist and pull lightly to remove it.
- the next assembly to come off is the main spring assembly. It's made up of a spring, a small bushing, and a silicone-rubber sleeve. This can be tough to get off in one piece, as the silicone sleeve tends to freeze itself to the center conductor insulator. Carefully twist and rock and pry to free up the silicone sleeve, then slide it off of the old wire.
- CAUTION!!! This next step can be a real finger biter. The only remaining parts to be removed are the two pieces which make up last metal flange. They are pressed together in a fashion which crimps the shield (braid) of the spark plug wire. The fit is tight and to remove it you need to slide the blade of a knife in and separate the two halves. Try a little bit on one side, then the other, working back and forth until the piece pops apart. KEEP YOUR FINGERS CLEAR!

That covers the connector disassembly. Save all of the parts, as you'll need them for the new wires.

**Prepare the new 7mm wire:**

- carefully strip 2 inches (~51mm) of outer (black) insulation from the new 7mm spark plug wire. Do not allow the inner insulation (white) to be damaged.
- strip ½ inch (~13mm) of inner insulation from the center conductor.



**Assemble old components onto new wire:**

- assemble the two piece metal flange and slide it onto the new wire. The black insulation will stop the flange from sliding down the wire.
  - install the main spring, flange, and silicone sleeve.
  - install the plastic sleeve onto the remaining inner insulation and center conductor. You may need to twist the wires which make up the center conductor to allow them to pass through the plastic sleeve.
  - pull the entire assembly back against the black outer insulation. It will only move if you allowed any components to slide back off of the wire. The object is to keep the components together and tight where the two-piece flange is resting against the outer insulation.
  - you will now have about ¼" of center conductor protruding from the plastic sleeve. Using a small pair of diagonal cutters, clip the center conductor flush with the end of the sleeve (NOT the spring.) Be CAREFUL to not clip the tiny spring at the end of the plastic sleeve!
  - install the brass brad into the plastic sleeve, as it was installed in the original wire. This will hold the assembly together, but it is somewhat fragile until installed in the distributor cap.
- OPTIONAL:** If you wish to "glue" the plastic sleeve onto the inner conductor (before sliding the brass brad into place) you may do so with clear 100% silicone. This will keep the center conductor in place when handling the wires alone. Apply a small amount to the inner insulator. Do NOT get any on the center conductor. If you choose this option, allow at least 24 hours for the silicone to cure. Do NOT disturb the wire while silicone cures.
- cut two pieces of 3/8" heat shrink tubing for each end you are assembling. Cut one piece 1-1/2" (~38mm) long and another piece 1" (~25mm) long.
  - refer to Fig. 3 to see the new wire with assembled components and the heat shrink tubing – ready to be installed.



- slide the 1" piece of heat shrink tubing onto the wire and locate it tight with the flange. Apply heat from a heat gun (preferred,) lighter, or hair dryer to shrink the tubing into place. Repeat this step for the 1-1/2" piece of tubing. This piece will cover the first piece you installed.

- slide the lock nut (which screws to the distributor cap) onto the wire. The distributor end is now complete! (See Fig. 4)

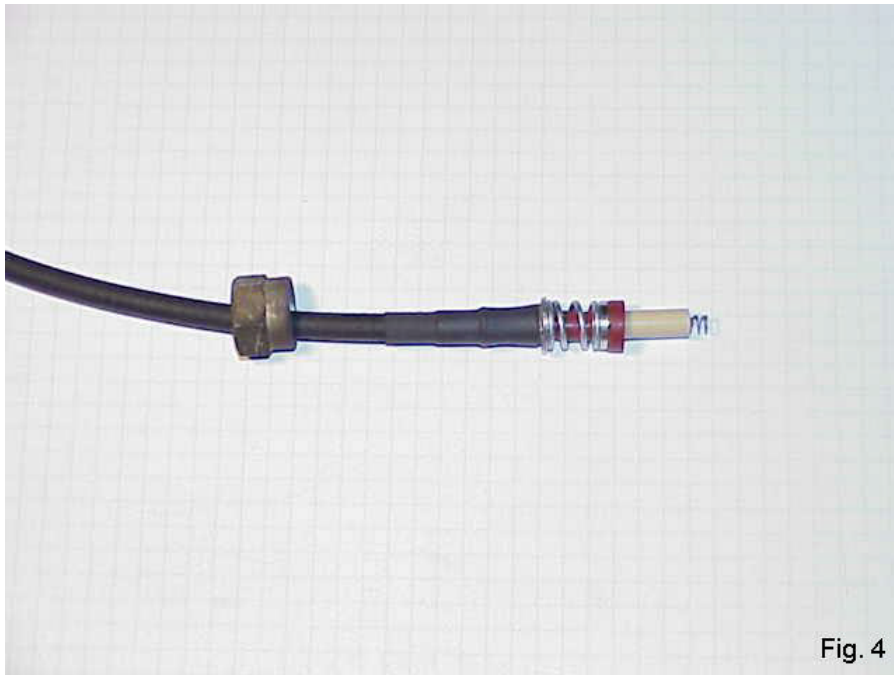


Fig. 4

**Complete the spark plug wire assembly:**

- cut the wire to proper length and install the NAPA components as per their instructions.
- see the completed assembly below:



Fig. 5

- to fabricate a new coil wire, simply assemble the original pieces on both ends of the new wire.

Here is a photo of the new wire installed in the cap:



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