Installation instructions for Tonti relay solution

For fitment to 1000 SP models that mount the coils behind the side cover.

1. Route the wiring such that the bank of four relays is positioned behind the battery. The sheathing should be routed toward the front of the motorcycle.
    a. The sheath containing four wires (two green, two brown) should be routed to under the tank near the other Molex connectors.
    b. The sheath containing two wires (one brown, one black) should be routed under the tank near the horn.
    c. The sheath containing two wires (both white) should be routed to the coils.
2. Connect all black wires with ring terminals to ground.
    a. In the rear of the battery tray area, the three black wires should be grounded to one of the bolts that secures the rear fender to the frame.
    b. Near the other Molex connecters under the tank, the single black wire should be grounded to an existing frame grounding point.
    c. Near the horns, the single black wire should be grounded to an existing frame grounding point.
3. Coil
    a. Identify the existing white wire in the main harness that connects to the positive terminal of one of the coils. Disconnect that wire from the coil and plug it into the white wire with the male spade terminal.
    b. Connect the other white wire to the coil positive terminal.
4. Horn
    a. Disconnect the existing wires to the horn.
    b. Identify the black wire amongst the wires disconnected from the horn. Plug it into the black wire with the male spade terminal.
    c. Connect the provided brown and black wiring to the horns.
5. Headlight 4-pin Molex connector
    a. Disconnect the existing 4-pin Molex connecter under the tank.
    b. Identify the mating 4-pin Molex connector in the relay solution. Plug it into the corresponding existing Molex connector.
    c. Note: USA models do not have a “city” light in the headlight. Hence, the yellow wire is excluded from the 4-pin Molex connector in the relay solution.
    d. Note: There is no longer a need for the black wire. Hence, the black wire is excluded from the 4-pin Molex connector in the relay solution.
6. Headlight 2-pin Molex connector
    a. Replace the existing headlight pigtail with the provided pigtail. The 2-pin Molex plug has been left disconnected to ease routing through the headlight shell.

    b. Once the sheathing has been routed through the headlight bucket, the 2-pin Molex plug may be installed. Carefully match the color placement such that it will mate properly with the corresponding 2-pin Molex connector in the relay solution.
    c. Connect the pair of 2-pin Molex connectors under the tank.
7. Connect all red wires with ring terminals to the battery positive terminal.

Notes

1. I chose to use the same colors for the same functions as Moto Guzzi.
    a. Horn = Brown
    b. Coil = White
    c. Headlight high beam = Brown
    d. Headlight low beam = Green
2. From left to right, the bank of relays is organized in the following order.
    a. Horn
    b. Coil
    c. Headlight high beam
    d. Headlight low beam
3. The relays simply plug in to each receptacle. You may remove them to mount the relay or to replace them, should the need ever arise. You may need to wiggle them a bit as you remove them.
4. The relays are standard automotive micro relays. Replacements may be purchased directly from me or from any auto parts store.
    a. I chose to fit 5 pin relays, but I do not use terminal 87a. A 4 pin replacement relay would work just fine.
    b. I chose 20/35 amp relays. The 20 amp circuit covers terminal 87a (which I do not use). Hence, 35 amp is the sizing I chose for all circuits. This is way more than ample for the devices in use.