

Parts in Kit:

- 1 - positive cable (red) w/2 accessory leads
- 1 - negative cable (black) w/2 accessory/companion leads
- 4 - male bullet connectors 21" - foam tape
- 1 - laminate battery cover

Optional:

- 1 - Battery Tender (SAE) harness
- 1 - Odyssey Battery PC545

Suggested tools:

- #2 Phillips screwdriver
- #2 flat head screwdriver
- 8 mm socket 10 mm deep socket
- 12 mm socket wire cutter/stripper
- 3/8" ratchet driver 6" extension for ratchet
- 5 mm hex wrench 4 mm hex wrench
- 1/4" ratchet driver

Overview: the Happy Trails Odyssey Battery Kit makes it possible to replace the OEM or equivalent battery with the superior Odyssey PC545 battery. In order to accomplish the install, both OEM positive and negative cables will be removed and replaced by the custom cables included in the kit. In addition to removing the side covers and seat, the exhaust header will need to be loosened and rotated out of the way to allow access to the negative cable attachment at the starter.

I. Remove OEM Battery and Cables:

A. Begin on right/brake side of bike:

1. Remove right side panel (2-8 mm bolts) and seat bolt (10 mm) and set panel safely aside where it will not be scratched.
2. Remove rear master cylinder reservoir cover (2 #2 Phillips).
3. Loosen muffler to exhaust header pipe clamp. (6 mm hex)
4. Remove bolt (12mm) securing exhaust header pipe to frame (located just behind rear brake light switch).
5. Remove the two acorn nuts on the header flange holding the header to the engine. Pull the pipe free of the engine to access the negative battery cable end secured to the starter.
6. Remove the nut (10 mm) holding the negative cable to starter. A 10 mm deep socket 1/4 drive with ratchet is ideal.
7. Ensure negative cable is free to be removed.

B. Move to the left/clutch side of the bike:

1. Remove left side panel (2-8 mm bolts) and seat (10 mm bolt) and set both safely aside where panels will not be scratched.
2. Loosen and remove battery cover holder (#2 Phillips).
3. Carefully remove rubber hose venting battery (caution: this tube may contain acid residue); Remove battery cover.
4. Disconnect the negative then the positive cables from the battery (slide the battery part way out to get at the positive cable).
5. Disconnect the auxiliary lead from the negative cable to the wiring harness via the white plastic connector (you may need to remove the bolt holding the harness under the seat (10mm)).
6. Remove the OEM or OEM-type battery and set safely aside.
7. Remove starter relay cover (#2 Phillips).
8. Lift the boot on the positive cable connected to the starter relay and remove the #2 Phillips screw attaching the cable to the relay. You may wish to slide the relay off of the retaining bracket.
9. Cut or loosen any zip ties holding the positive and negative cables. Taking note of their routing, remove the OEM cables.

II. Prepare for Installation:

1. Clip the auxiliary wire on the OEM negative cable 2" from the white connector end. Crimp a male bullet connector to the newly cut end and join it with the female bullet connector on one of the 16 Ga. black leads on the kit negative cable.
2. Remove the boot on the relay end of the positive cable and slide it on the kit positive cable end (90 degree bend). The boot will slide easier with soapy water or WD40. Remove the rubber cap from the battery end of the OEM cable and slide it on the kit positive cable battery (flat) end.
3. Cut two 11" pieces of foam. Lay the battery on its side. Using the ridges as guides, wrap the sides and rear of the battery. Start 1" from the top at the orange/black border and wrap completely around the rear and other side. Repeat with the other strip beginning 1" from the bottom.

III. Installation of Odyssey Battery and Cables:

A. Left side install:

1. Place the battery with foam cushion in the box. Orient it vertically with the positive terminal in the top right.
2. Route one end of the black kit cable behind the battery cover box bracket. Route the other end following the "V" of the frame behind the starter relay up and over the cross member toward its connection with the starter.

3. Route the red cable from the starter relay (it helps to place an immediate bend in the cable) back to the battery box running alongside the frame. At the battery end the cable should route behind the battery cover bracket and alongside the vertical edge of the battery.
4. Attach red cable to starter relay; slide boot in place (#2 Phillips).
5. Attach the positive cable to the red terminal on the top right using the hex bolt and washer included with the battery (4 mm). Fit the boot into position. Route the two 16 Ga. red leads between the battery box and the air box up and out above the top of the battery underneath the seat area.
6. Attach the negative cable to the lower right black terminal using the hex head bolt and washer included with the battery (4 mm).
7. Route the two black 16 Ga. leads between the air and battery box up into the seat area.
8. Optional: Using the supplied male bullet connectors attach a Battery Tender (SAE) harness to a positive and negative 16 Ga. lead in the seat area.
9. Join the white plastic connector on the 16 Ga. black lead to the white connector on the bike's wiring harness (see B.5.)

B. Right side install:

1. Move to the right side of the bike and secure the negative cable to the starter. The terminal end is bent so it will attach without contacting the header pipe. The bend should be pointing upward like this: 
2. Start the bolt carefully to avoid cross threading. A 10 mm socket with a 1/4" drive ratchet is ideal. Remove the header pipe if necessary to complete the attachment.
3. Visually check the exhaust pipe holder gasket/doughnut (copper) is in place. Insert the header. Attach the two acorn nuts with the 12mm socket and 6" extension. Start the nuts but leave the header loose.
4. Start the center support bolt in back of the rear stoplight switch.
5. Return to the header clamp and jiggle the header ensuring it is correctly seated and tighten the two acorn nuts uniformly.
6. Tighten the center strap support (12mm).
7. Tighten the clamp between the muffler and pipe (5 mm hex).
8. Reinstall the rear master cylinder reservoir cover (2 #2 Phillips).

IV. Final Steps:

1. Using the flat screwdriver (be careful not to cut the cable cover), make sure the 16 Ga. positive and negative leads are wedged between the air box and battery box and the positive cable is wedged between the battery and the air box adding additional cushion to the installation.
2. Zip tie or secure all cables to the frame. If you have installed a Battery Tender harness make sure it is positioned correctly.
3. Replace the starter relay cover (#2 Phillips).
4. Insert the kit non-conductive clear laminate cover. You will notice a pre-installed foam strip on the top and on the bottom to ensure a snug chatter-free fit. The top inserts between the frame and the battery.
5. Install the battery cover holder (#2 Phillips). Make sure the cables routed vertically between the battery and air box are not crimped by the battery cover holder before tightening into position.
6. Reinstall seat and side covers.