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APPLICATION: Trike conversion kit for 2004-2008 Harley-Davidson Sportster XL1200/XL883  
PRODUCT: HDSS  
VERSION: 5  
GENERAL NOTES: Please don't attempt any shortcuts

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**DRIVE BELT CAUTION!**

- DO NOT TWIST, KINK, OR OTHERWISE DAMAGE THE BELT DURING INSTALLATION
- DAMAGING THE BELT DURING INSTALLATION WILL DRASTICALLY SHORTEN ITS SERVICE LIFE!

These instructions refer to diagrams and pictures which are located in the latter pages.

These instructions assume you are installing a body painted from the factory. If not, you are required to install the tail lights, wiring, weather-strip, carpeting etc. onto the conversion body. The hardware kits accommodate either a painted or unpainted body. Please call if any questions.

For torque specifications not listed, please follow SAE standards.  
Unless otherwise noted, use medium strength Locktite on all bolts.

1. REMOVE THE SEAT AND SIDE COVERS
  - a. Save
2. REMOVE THE MUFFLERS- (PIC #1)
  - a. Save the two clamps
  - b. Discard the mufflers
  - c. Leave the header pipes connected to the motor
3. REMOVE THE FRONT SPROCKET COVER FASTENERS
  - a. Save all hardware
4. REMOVE THE EXHAUST CROSSOVER/HANGER
  - a. Discard it and the mounting hardware (PIC #2)
    - i. Note: temporarily remove the brake actuator rod to remove the exhaust crossover
    - ii. Note: remove the exhaust crossover/hanger from under the sprocket cover
    - iii. Note: replace the brake actuator rod (loc-tite)
5. REMOVE THE FRONT SPROCKET COVER
  - a. Save it
6. REMOVE THE PASSENGER FOOTPEGS
  - a. Save just the pegs
7. REMOVE THE PASSENGER FOOTPEG BRACKETS (PIC #3)
  - a. Discard them and the hardware (including the brake hose clamp)
8. DISCONNECT THE REAR BRAKE HOSE FROM THE CALIPER & SWINGARM
  - a. Discard the banjo bolt and washers and clamp assembly (PIC #4)
9. REMOVE THE REAR WHEEL/SWINGARM/BELT ASSEMBLY (PIC #5)
  - a. Remove the two upper shock bolts & covers- discard
  - b. Remove the two swingarm pivot bolts – save them (PIC #6)

- c. Remove the assembly from the bike
  - d. Remove the wheel from the swingarm
    - i. Remove the sprocket, save it
    - ii. Discard the rest (including the sprocket fastening bolts and washers)
10. REMOVE THE REAR BRAKE MASTER CYLINDER
- a. Save the banjo bolt and two sealing washers, save the pivot pin and clip
  - b. Discard the rest
11. INSTALL THE PROVIDED MASTER CYLINDER ASSEMBLY (PIC #7)  
(hardware bag #6)
- a. Use the stock banjo bolt and sealing washers, use the stock pin and clip
12. REMOVE THE TAILLIGHT AND LICENSE PLATE BRACKET
- a. Discard them and the rear fender brace
13. REMOVE THE REAR TURN SIGNALS
- a. Remove the bezels to aid in removing the turn signals
  - b. Save the bezels and related hardware for re-installation (PIC #8)
  - c. Discard the rest (PIC #9)
14. MARK AND CUT THE REAR FENDER (PIC #10)  
(hardware bag #11)
- a. Install the push on trim to the edge of the fender (PIC #11)
15. REMOVE THE CONVERSION BODY FROM THE CHASSIS:
- a. Discard the hardware
  - b. If the kit was ordered with the reverse option
    - i. Raise the reverse lever
    - ii. Un-snap and open the Velcro seam on the reverse boot
    - iii. Lift the body forward and up to clear the reverse lever
16. See PIC #12: HDSS CHASSIS WITH REVERSE OPTION SHOWN (with body removed)
17. DIS-ASSEMBLE THE TRIKE CHASSIS
18. REMOVE THE PARTS SHOWN (PIC #13) from the trike chassis
- a. Note the location of all hardware for re-assembly
  - b. If the kit was ordered with the reverse option, remove the reverse lever/bracket assembly from the frame and swing arm and set it aside for re-installation later.
    - i. Save the reverse lever mounting bracket bolts and lock nuts and spacers
    - ii. Remove the reverse cable assembly from the swing arm by removing the "L" shaped rear cable anchor from the swing arm (Allen head screw (save) (keep track of (save) the alignment pin located between the rear cable anchor and the swing arm for re-installation later)

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The reverse cable assembly is already adjusted when you receive it. Only minor adjustment may be necessary after final assembly. Minor adjustments can be made by turning the knob on the end of the reverse lever.

19. REMOVE THE SWING ARM ASSEMBLY FROM THE TRIKE CHASSIS
  - Discard the shipping hardware that held the front of the swing arm to the chassis (threaded rod, nuts, and rubber hose) (PIC #14)
  - a. Leave the two upper support arms attached to the swing arm rails
  
20. REMOVE THE DIFFERENTIAL ASSEMBLY
  - a. The swing arm rails and bearing clamp blocks are match numbered (to identify mating parts)
  - b. If the kit was ordered with the reverse option
    - i. Remove the front return spring anchor from the adjuster block (leave the spring on the reverse motor bracket)
    - ii. Remove the left side reverse motor pivot block from the swing arm rail to separate the reverse motor assembly from the swing arm
    - iii. Remove the reverse motor assembly from the swing-arm
    - iv. Keep track of the wave washers (one on each end of the pivot shaft) (PIC. #15)
  
21. SEPARATE THE FRONT AND REAR SWING ARM SECTION AS SHOWN (PIC #16)
  
22. INSTALL THE FRONT HALF OF THE TRIKE SHOP SWINGARM (PIC #17)  
(For spacer orientation, see diagram #A-100-661)
  - a. Use the stock swingarm pivot bolts
  
23. REMOVE THE RIGHT SIDE SWAY BAR FASTENERS
  - a. Save them
  
24. INSTALL THE BELT ON TO THE TRIKE CHASSIS (PIC # 18)
  
- DRIVE BELT CAUTION!**
  - DO NOT TWIST, KINK, OR OTHERWISE DAMAGE THE BELT DURING INSTALLATION
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25. REPLACE THE SWAY BAR FASTENERS - Do not tighten them yet.
  
26. INSTALL THE CHASSIS (PICS #19 & 20)  
(Use hardware from bag #1)
  - a. Start the lower front bolts first - (3/8" x 1")
    - i. Then the upper-rear-bolts - ( 1/2" x 1 1/4")
    - ii. Then the upper-front-bolts - (3/8" x 1")
    - iii. After they are all started, tighten them.
  
27. REPLACE THE FENDER STRUT BEZELS (PIC #8)

- a. Use the stock torx bolts and nuts
28. INSTALL THE STOCK BRAKE HOSE ON TO THE TRIKE CHASSIS BRAKE FITTING  
(hardware bag #6)
- a. See PIC #21
  - b. Use the banjo bolt and washers from the kit
29. BLEED THE BRAKES
- a. Use the top bleeders only
30. INSTALL THE REAR SWINGARM SECTION (PIC #22)
- a. Push the rear swing arm all the way forward.
  - b. For now, only snug the nuts and cam bolt nuts enough so that there is no slop, yet the swing arm can still be adjusted. We will tighten everything later.
31. FOR TRIKES WITH REVERSE (PIC # 23)
- a. Replace the motor assembly, but NOT the cable
  - b. Make sure that the two wave washers are in place on the reverse pivot shaft
32. INSTALL THE REAR SPROCKET ON TO THE DIFFERENTIAL (PIC #s 24 & 25)  
(All parts and hardware for this step are located in the differential shipping box)
- a. Use the five 7/16" x 1-1/4" grade 8 bolts and heavy flat washers provided (red loc-tite)
  - b. **DO NOT USE THE STOCK FASTENERS!**
  - c. After installing the sprocket, press the bearing on to the differential
    - i. **PRESS AGAINST THE INNER RACE ONLY- DO NOT DAMAGE THE SEAL OR THE BEARING**
    - ii. Press the bearing all the way to the shoulder
  - d. Install the 6 bolt drive flange
    - i. The wave washer
      1. Then the snap ring.
33. INSTALL THE DIFFERENTIAL ASSEMBLY AND GUIDE THE BELT ON TO THE SPROCKET (PIC #26)
- a. The swing arm rails and bearing clamp blocks are match numbered (to identify mating parts)
  - b. Insure that the bearings are flush with the shoulders on the swingarm rails
34. INSTALL THE CROSSBAR (PIC #27)
- a. Start the (4) 3/8" x 1" bolts and locknuts
35. INSTALL LEFT AND RIGHT SWING-ARM SUPPORT RODS (PIC #27)
- a. Raise the swing-arm to install the support rods on to the crossbar brackets
  - b. The top of the support rods go to the inside of the crossbar brackets
  - c. Tighten the crossbar bolts and all swing arm support rod bolts
  - d. Tighten the sway bar fasteners
    - i. Tighten the end link(s) first
      1. Then the bushing clamps

### 36. TIGHTEN THE BELT

- a. Using a 1" wrench on the hex crossbar, rotate the crossbar to the desired belt tension (*10 lbs force with 1/4" - 3/8" deflection*)
- b. While holding tension on the hex crossbar
  - i. Tighten the (4) nuts on the rear swing-arm
  - ii. Tighten the bolts on the cams
  - iii. Tighten the left side swing-arm rail-to-hex crossbar center bolt
- c. Rotate the sprocket a few times to check the belt tracking
  - i. Make sure the belt is not rubbing anything

### 37. INSTALL THE DRIVE AXLE ASSEMBLIES (PIC #28)

- a. Both axles and ends are the same (no inside, outside, etc.)
- b. Using a cross pattern, tighten to 28+ ft-lb.

#### FOR TRIKES WITH REVERSE

- c. Install the reverse lever/cable assembly onto the trike frame (See Pic. #29)
- d. Replace the rear cable anchor (with the cable still attached) on to the swingarm bearing cap
- e. Be sure to replace the locating pin between the rear cable anchor and the swing arm bearing cap
- f. Install the clevis onto the reverse motor assembly. (See Pic #30)
- g. Gently raise the reverse lever to engage the gear into the sprocket
  - i. Ensure the gears mesh
  - ii. Adjust the knob on the end of the lever so that just before the lever is fully extended, slight resistance is felt
- h. When the adjustment procedure is complete
  - i. Install the cotter pin
- i. Install the reverse wiring
- j. (Remove the fuel tank to route wiring)
  - i. Refer to Diagrams #A-100-577-C and Diagram #A-100-577-D
- k. Replace the fuel tank

### 38. PLUG THE STOCK TAIL LIGHT EXTENSION HARNESS IN TO THE TAIL LIGHT CONVERTER - (PIC #31)

### 39. INSTALL THE BODY MOUNT/TRAILER HITCH ASSEMBLY (PIC #32)

- a. Install the front of the body-mount / trailer-hitch assembly first.
- b. Install the rear mounting bolts through the support arms, to the body-mount / trailer-hitch as shown and tighten all related bolts.

### 40. REPLACE THE STOCK BELT GUARD (PIC #33)

- a. Install the 1/8" spacer (from bag #3) on the bottom bolt between the between the belt guard and the transmission (this compensates for the discarded exhaust crossover bracket)

### 41. INSTALL THE TRIKE SHOP BELT GUARD AND LEFT SIDE COVER PLATE

- a. (PIC # 34 & 35)
  - b. Install the two stand-off blocks on to the frame first, (using two 3/8" x 1 1/4" chrome button-head bolts and nyloc nuts) (from bag #8)
  - c. Then install the belt guard (right side) and the cover plate (left side) (using four 1/4" x 1/2" chrome button-head bolts and chrome washers) (from bag #8)
  - d. Make sure there is adequate space between the two belt guards to allow for engine movement
42. INSTALL THE EXHAUST SYSTEM (PIC #s 36-37-38) (hardware bag #4 & 2)
- a. Use the three new clamps and the two clamps from the stock mufflers
  - b. Use the provided rubber isolators and hanger brackets
    - i. The raised portion of the rubber isolators belong in the up and forward position (PIC #39)
  - c. Make sure that the mufflers stay centered and parallel when tightening the clamps.
43. INSTALL THE EXHAUST HEAT SHIELD (PIC#40)
- a. Use the three hose clamps (hardware bag #2)
44. INSTALL THE TAIL LIGHTS (hardware bag #7 & 9)
- a. Install the provided 5mm studs a few turns in to the tail lights
    - i. Use loc-tite (PIC #41)
    - ii. Install the lights – 5mm nuts and flat washers
    - iii. Attach the wiring to the trunk walls (PIC #42)&(diagram #A-100-769)
      1. Use 10-24 screws, nuts, and plastic "P" clamps,
  - b. Note the plugs for the license plate light (PIC #43)
  - c. Plug in the left and right tail light harnesses to the flat four plug as directed in diagram #A-100-769
    - i. Be sure to pull the insulating caps over the connectors
    - ii. Fold the wires over and zip tie them to prevent them from coming unplugged (PIC #44)
45. IF ORDERED WITH THE REVERSE OPTION
- a. Install the reverse boot (PIC #45)
    - i. Use the four 1/4" x 1" bolts, washers, and nyloc nuts
      1. Tighten the top middle bolt first to draw down the boot
46. INSTALL THE EDGE TRIM (PIC #46)
- a. Be sure to clean the edge before installing the trim
  - b. The edge trim has a bead of glue in it- after installing it, lightly tap on it to adhere it to the edge. (A hammer handle works well for this)
47. INSTALL THE BODY (hardware bag #10)
- a. If equipped with the reverse option, raise the reverse lever first, then guide the reverse lever through the hole in the body
    - i. Tip the rear of the body up, then set it down on the chassis
    - ii. Before bolting the body down on the chassis, plug in the tail-light harness and check all tail light functions

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- b. Zip tie the tail light harness to non moving frame parts
    - i. Make certain that the harness does not contact any hot/moving parts
  - c. Install the front body mount bolts (5/16"x 1 1/4")
    - i. Install the bolts up through the body mount bracket and the body's pre-drilled holes with the washers and nuts on top. Do not tighten them yet
    - ii. Check the body alignment, then drill the rear body mount holes (21/64")
    - iii. Install the rear bolts (5/16"x 1 1/2") with washers down through the trunk floor (PIC #47)
    - iv. Install the remaining 5/16" x 1 1/4" body mount bolt in the outboard side of the parking brake lever mounting bracket (drill 21/64")
    - v. Tighten all body mount bolts
48. INSTALL THE PASSENGER FOOTPEG MOUNTING BRACKETS (PIC #48)  
(hardware bag #5)
- a. Install the stock footpegs onto the mounting brackets using the provided pivot brackets
49. INSTALL THE SIDE COVERS
50. INSTALL THE SEAT
51. TORQUE REAR WHEELS
52. TEST DRIVE



# A-100-577-C

## DISCONNECT BATTERY

< JUMPER WIRE ASSY \_\_\_\_\_ TAN  
FROM REVERSE KIT BAG >

LOCATE TAN (NEUTRAL LIGHT) WIRE PLUG (BULLET STYLE CONNECTOR ON RIGHT SIDE LOWER FRAME TUBE), INSTALL PROVIDED TAN JUMPER WIRE ASSEMBLY BETWEEN PLUGS, ROUTE WIRE ALONG OIL LINES TO AREA UNDER SEAT

BROWN

PLUG IN TO PREVIOUSLY INSTALLED TAN NEUTRAL LIGHT JUMPER WIRE UNDER SEAT

ORANGE

PLUG IN ORANGE WIRE FROM REVERSE LEVER TO ORANGE/WHITE (INSTALL 'T' TAP) IN THE STOCK TAIL LIGHT EXTENSION HARNESS

GREEN

ROUTE GREEN & YELLOW WIRES (FOLLOWING WIRING UNDER FUEL TANK) TO HORN, UNPLUG STOCK HORN +WIRE (YELLOW) FROM HORN, PLUG IN GREEN WIRE TO EXPOSED +TERMINAL ON HORN.

YELLOW

PLUG IN YELLOW WIRE TO PREVIOUSLY UNPLUGGED STOCK HORN +WIRE (YELLOW)

12gα BLACK

CONNECT 12gα BLACK WIRE TO GROUND

10gα RED

CONNECT TO BATT+ TERMINAL ON STARTER- ROUTE WIRE VERY CAREFULLY-(UNPROTECTED BATT+)  
(NOTE: 10gα RED WIRE IS ENCLOSED IN BLACK PLASTIC WIRE LOOM)

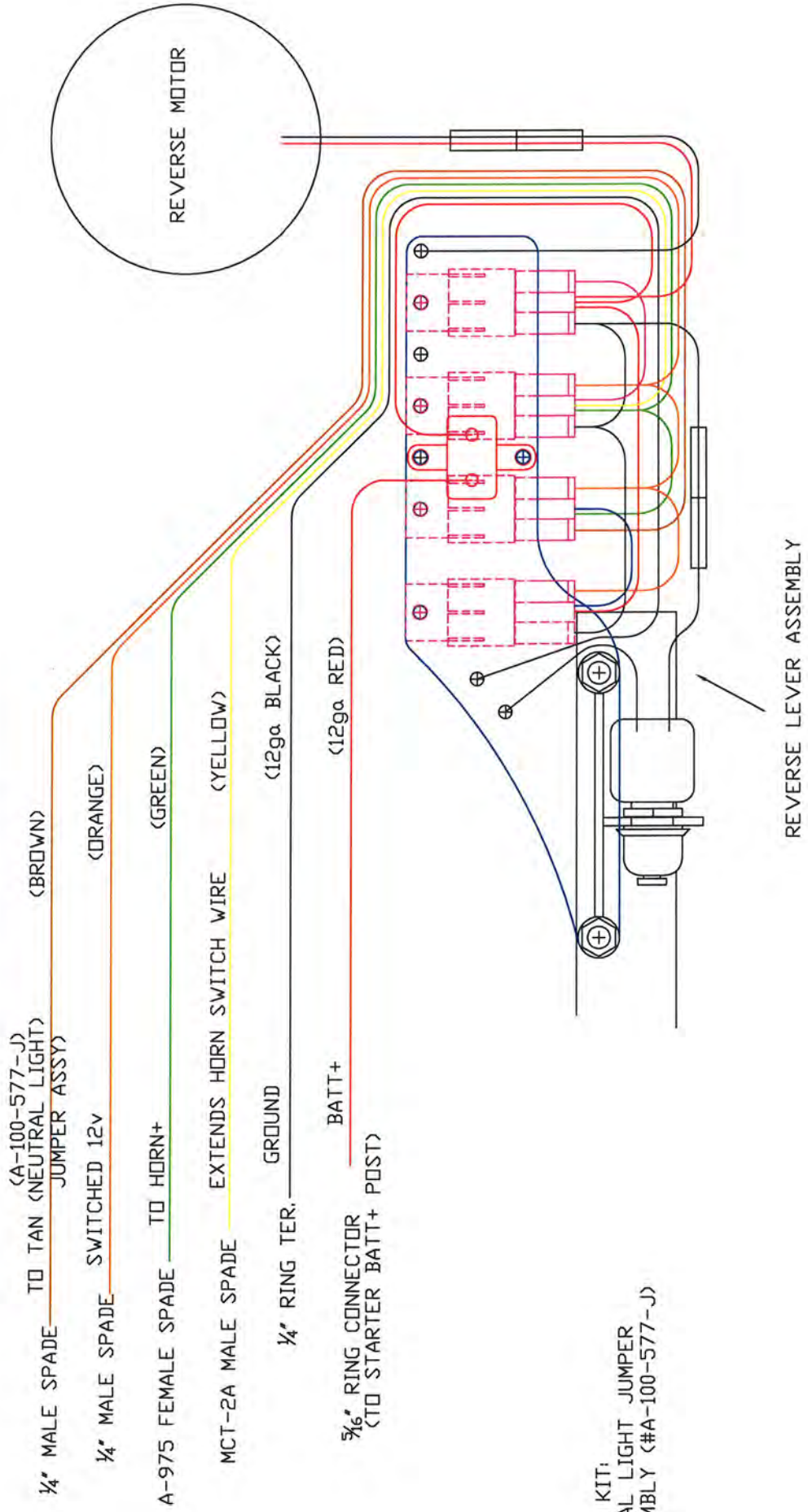
REVERSE  
MOTOR

ZIP TIE WIRES TO THE CROSS BAR, CONTINUE TO ROUTE ALONG FRAME, OUTSIDE OF FENDER (ZIP TIE), PLUG IN TO MATING PLUG ON REVERSE LEVER.  
NOTE: BE SURE TO LEAVE ENOUGH SLACK IN WIRE TO ALLOW REVERSE MOTOR TRAVEL.

ROUTE 10gα RED ALONG LEFT SIDE WIRING  
(UNDER SIDE COVER) TO STARTER BATT+  
TERMINAL- ROUTE CAREFULLY AND FASTEN  
SECURELY.

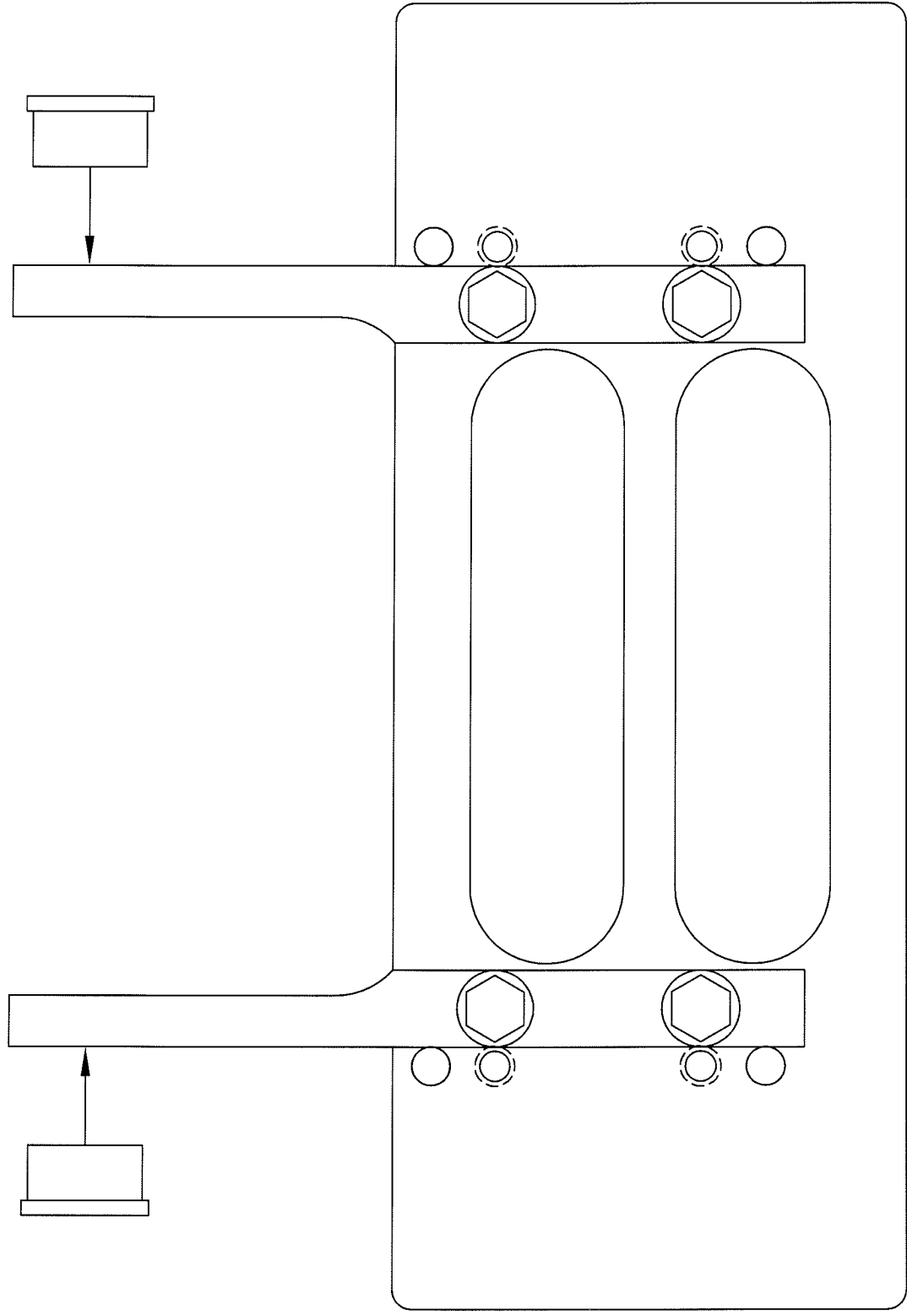
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## DISCONNECT BATTERY

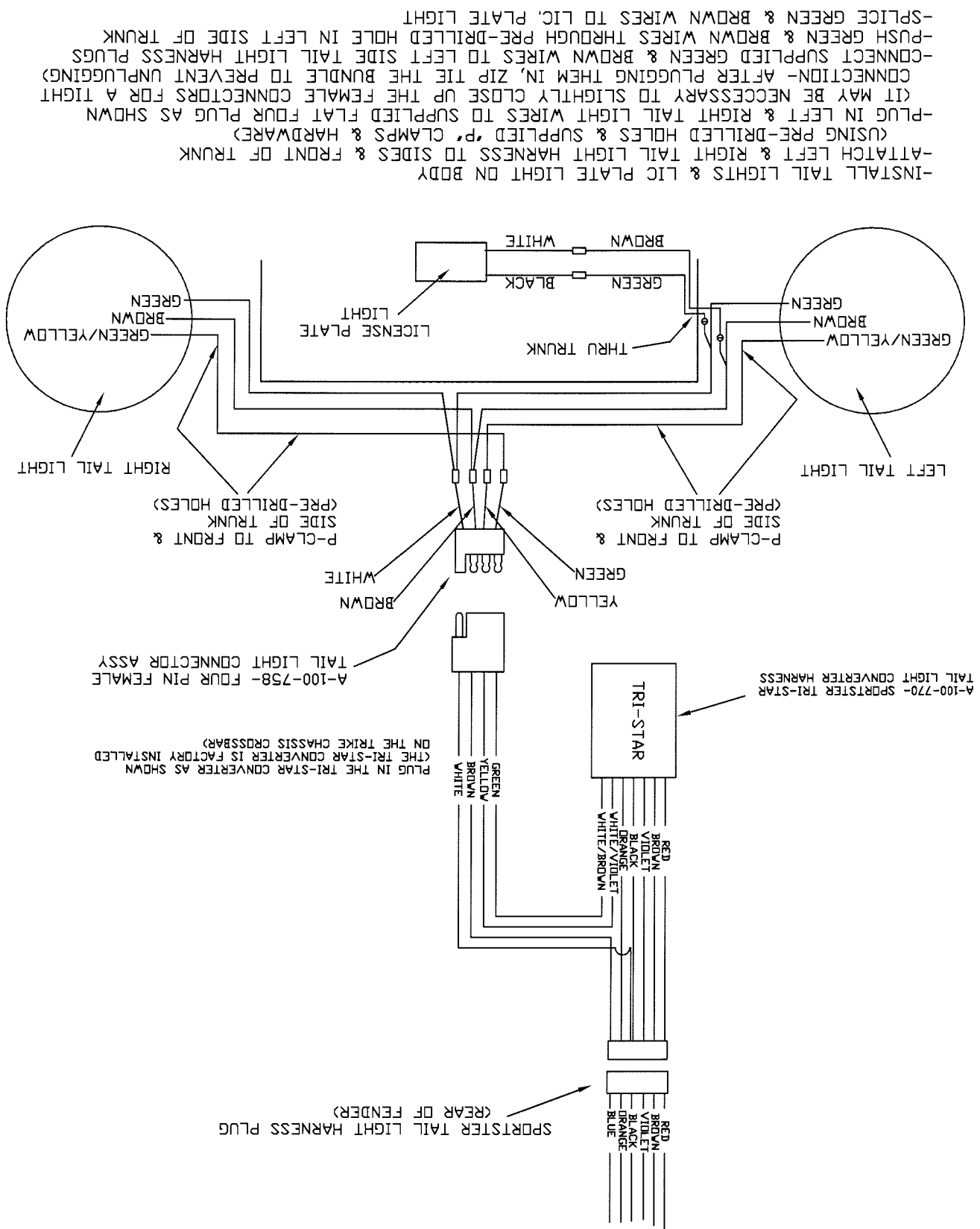


INCLUDED IN KIT:  
 TAN NEUTRAL LIGHT JUMPER  
 WIRE ASSEMBLY (#A-100-577-J)

A-100-661 - SPORTSTER FRONT SWINGARM SPACER  
ORIENTATION DIAGRAM



# A-100-769 SPORTSTER V-BODY TAIL LIGHT WIRING DIAGRAM



-INSTALL TAIL LIGHTS & LIC PLATE LIGHT ON BODY  
 -ATTACH LEFT & RIGHT TAIL LIGHT HARNESS TO SIDES & FRONT OF TRUNK  
 (USING PRE-DRILLED HOLES & SUPPLIED 'P' CLAMPS & HARDWARE)  
 -PLUG IN LEFT & RIGHT TAIL LIGHT WIRES TO SUPPLIED FLAT FOUR PLUG AS SHOWN  
 (IT MAY BE NECESSARY TO SLIGHTLY CLOSE UP THE FEMALE CONNECTORS FOR A TIGHT  
 CONNECTION - AFTER PLUGGING THEM IN, ZIP TIE THE BUNDLE TO PREVENT UNPLUGGING)  
 -CONNECT SUPPLIED GREEN & BROWN WIRES TO LEFT SIDE TAIL LIGHT HARNESS PLUGS  
 -PUSH GREEN & BROWN WIRES THROUGH PRE-DRILLED HOLE IN LEFT SIDE OF TRUNK  
 -SPlice GREEN & BROWN WIRES TO LIC. PLATE LIGHT