

DAKAR

DUAL SPORT KITS



WR250 WR450 DUAL SPORT KIT INSTALLATION

ElectroSport
INDUSTRIES

KIT CONTENTS

Inspect Your Kit

Your kit will include the following items listed below. Most of the kit is already assembled which makes the installation quick and simple.

A. WR250/450 Installation Instructions

Read through the entire instruction manual before starting.

B. Dakar Headlight Assembly

C. Handlebar Turn Switch

D. Horn

E. Tail Light and Mounting Screws

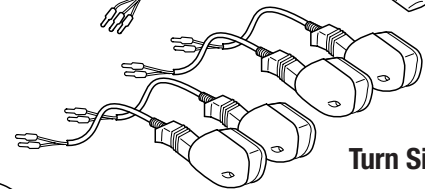
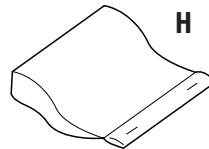
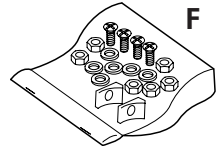
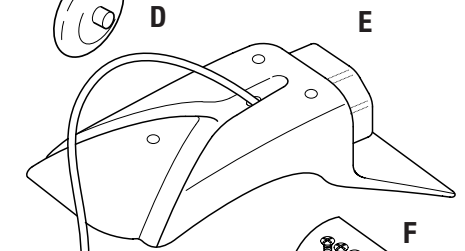
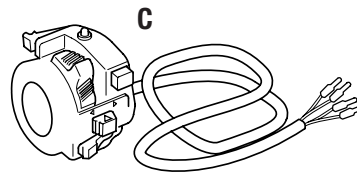
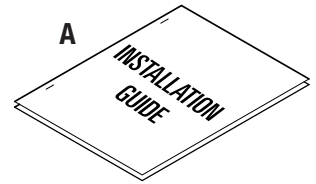
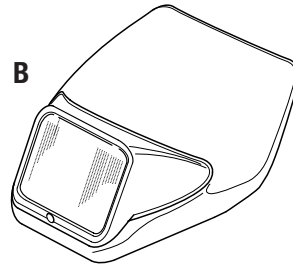
F. Universal Hardware Bag (Contents)

- Turn Signals (2)
- Brake Light Switches (2)
- Cable Ties
- Wiring Diagram Label
- Plastic Signal Alignment Wedges

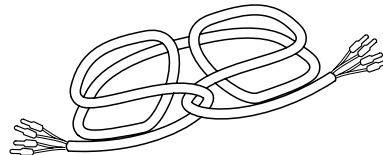
G. Main Wiring Harness

H. Mounting Kit Hardware Bag

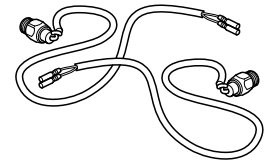
- Triple Clamp Mounting Bracket
- Kit Specific Pieces



Turn Signals



G

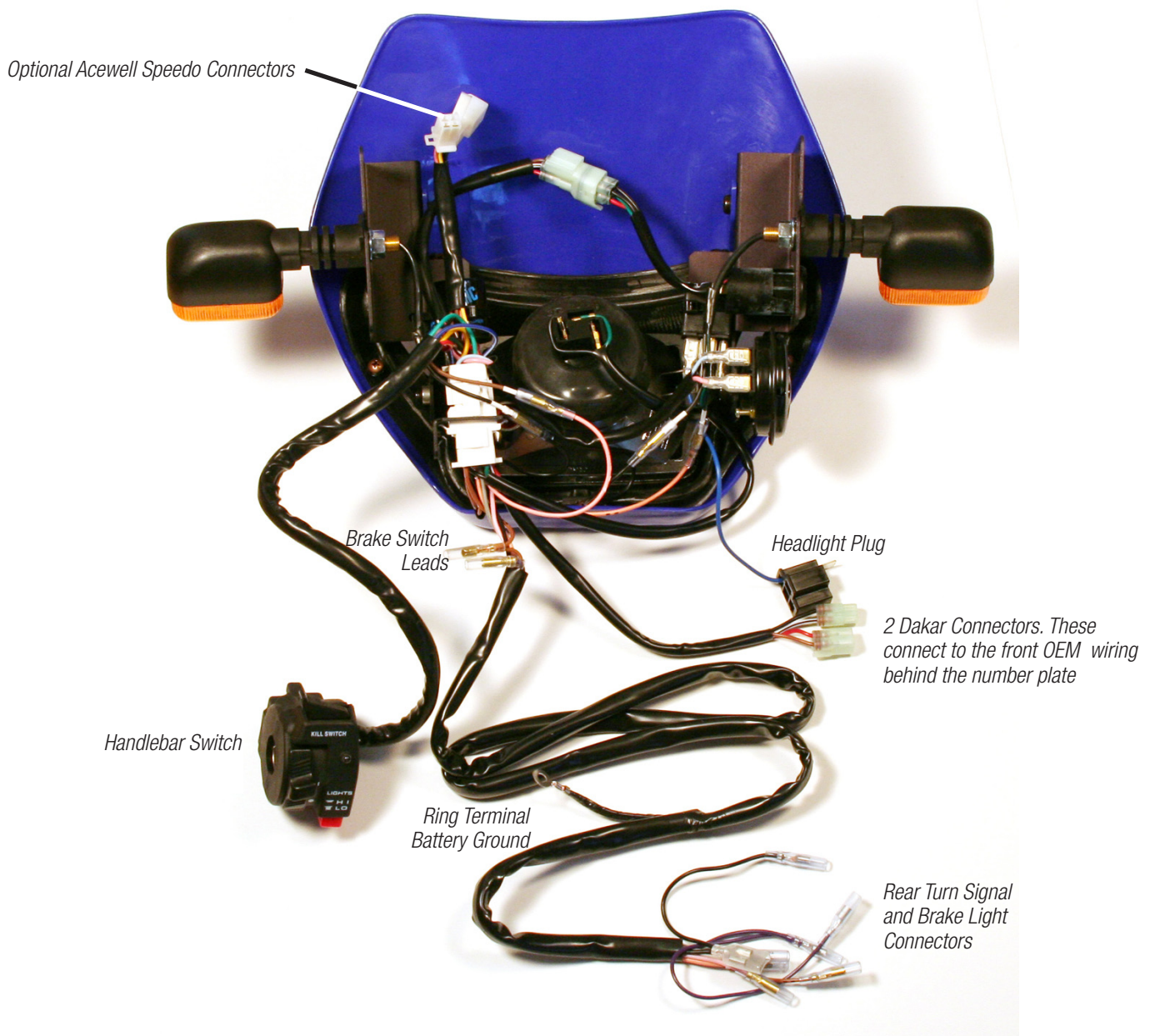


Brake Light Switches

Note: Please take a moment to become familiar with the contents of the kit. Due to slight variances between motorcycle models, there may be differences in the instruction manual drawings and the actual parts. The basic installation procedure remains the same.

Unpacking your kit and review the wiring harness, connectors and handlebar switch

This Dakar kit is very simple to install. we have pre-assembled most components and all you have to do is some basic connection to make your kit fully functional and dual sport ready! After you unpack your kit, lay out the harness, turn switch and fron connectors to get a feel of how the kit looks and which parts are included.



REMOVE OEM HEADLIGHT AND START BUTTON

Getting Started

Remove and retain all hardware holding the seat, fuel tank and side panels from the bike to allow access from installing your Dakar kit.

Disconnect and Remove OEM Headlight

Remove the 3 bolts holding the number plate into position Fig 1. The headlight is connected by a headlight plug. Go ahead and carefully disconnect this plug from the headlight as shown in Fig 2.

Disconnect and Remove OEM Start Button

Remove and retain the 2 bolts which hold the OEM start button in place on the top triple clamp as shown in fig 3. Then follow the wiring for this and unplug it from the main connector block in the front. Make a note of the location you unplugged it from. Once the bolts are removed and the wiring is disconnected, the start button will pull free from the bike as shown in figure 4.

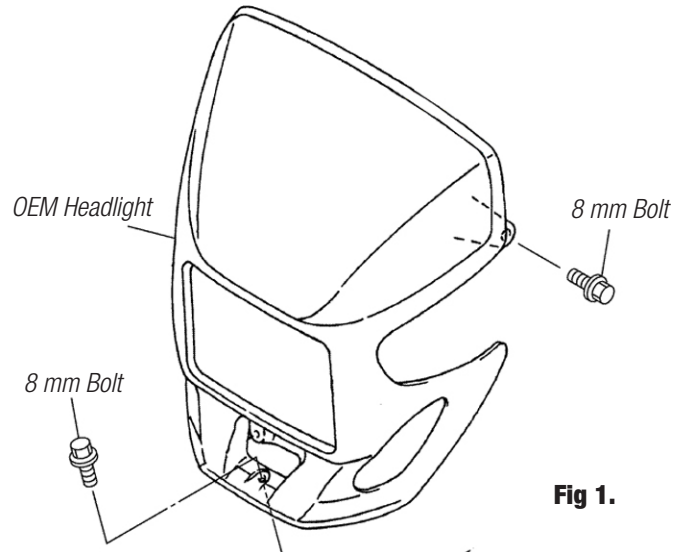


Fig 1.

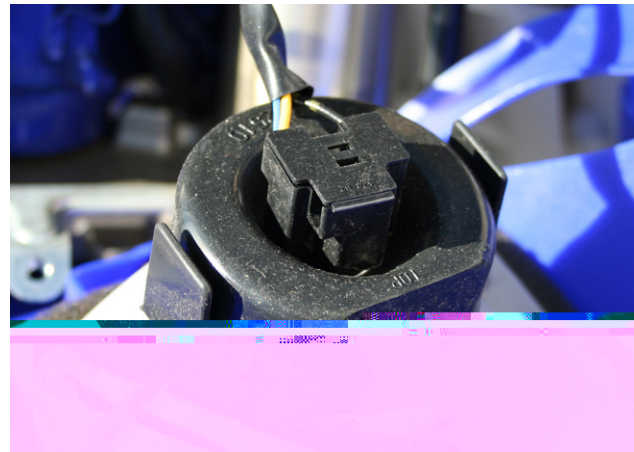


Fig 2.

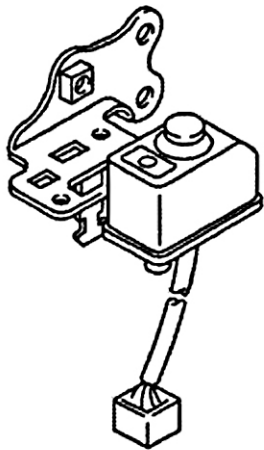


Fig 4.

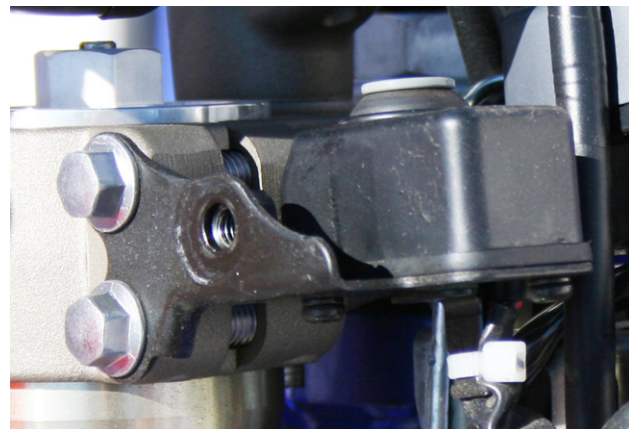


Fig 3.

FRONT WIRING

Connect the Dakar Wiring

Connect Power and Kill switch connectors

As shown in Fig 2, the Dakar harness has 2 primary connectors in the front. as shown. One connects the power. This is the Dakar connector with the BROWN / RED wires coming from it. Looking at the right side of the connector block mounted on the front of the bike, disconnect the forward OEM connector and plug in the Dakar BROWN / RED.

Connect the Dakar Kill switch connector

Disconnect the rear (gray colored) connector and plug in the BLACK/ WHITE Dakar kill connector. Its that simple, just connect those two plugs and the front wiring is almost complete!

Route the Dakar wiring to the rear of the bike

As shown on page 2, there are a group of female connection plugs which connect the rear signals and brake light switch. Take the Dakar harness and carefully feed the wiring through the triple clamps and follow the main frame towards the battery.

Dakar headlight connection

As shown on Fig 2, there is a headlight connector with a BLUE wire and single spade coming out from it. Take the OEM headlight wire and connector previously used to feed the OEM headlight as shown in Fig 3, and push the Dakar headlight wire into it. Complete the headlight wiring by plugging this "stacked" connector into the Dakar headlight.

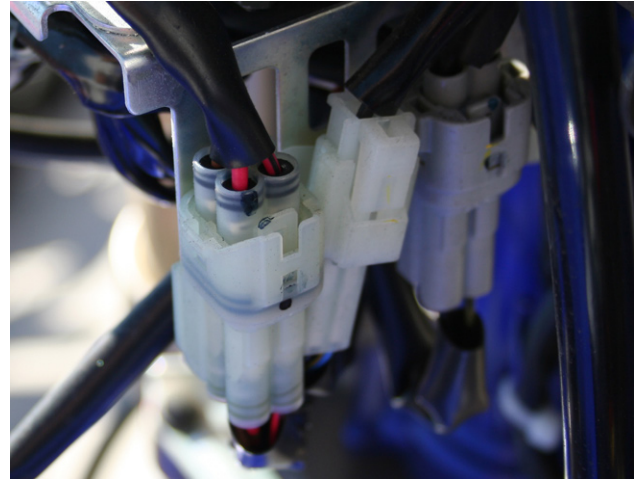


Fig 1.

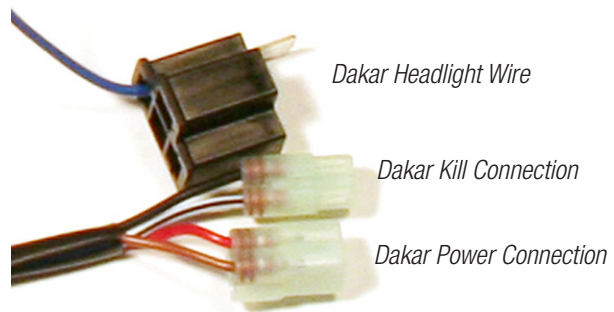


Fig 2.

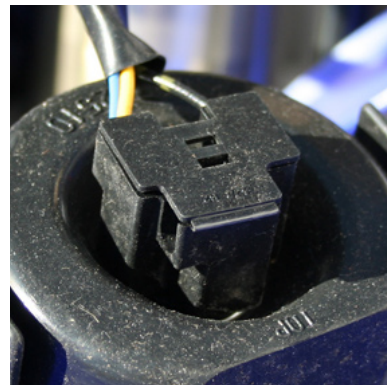
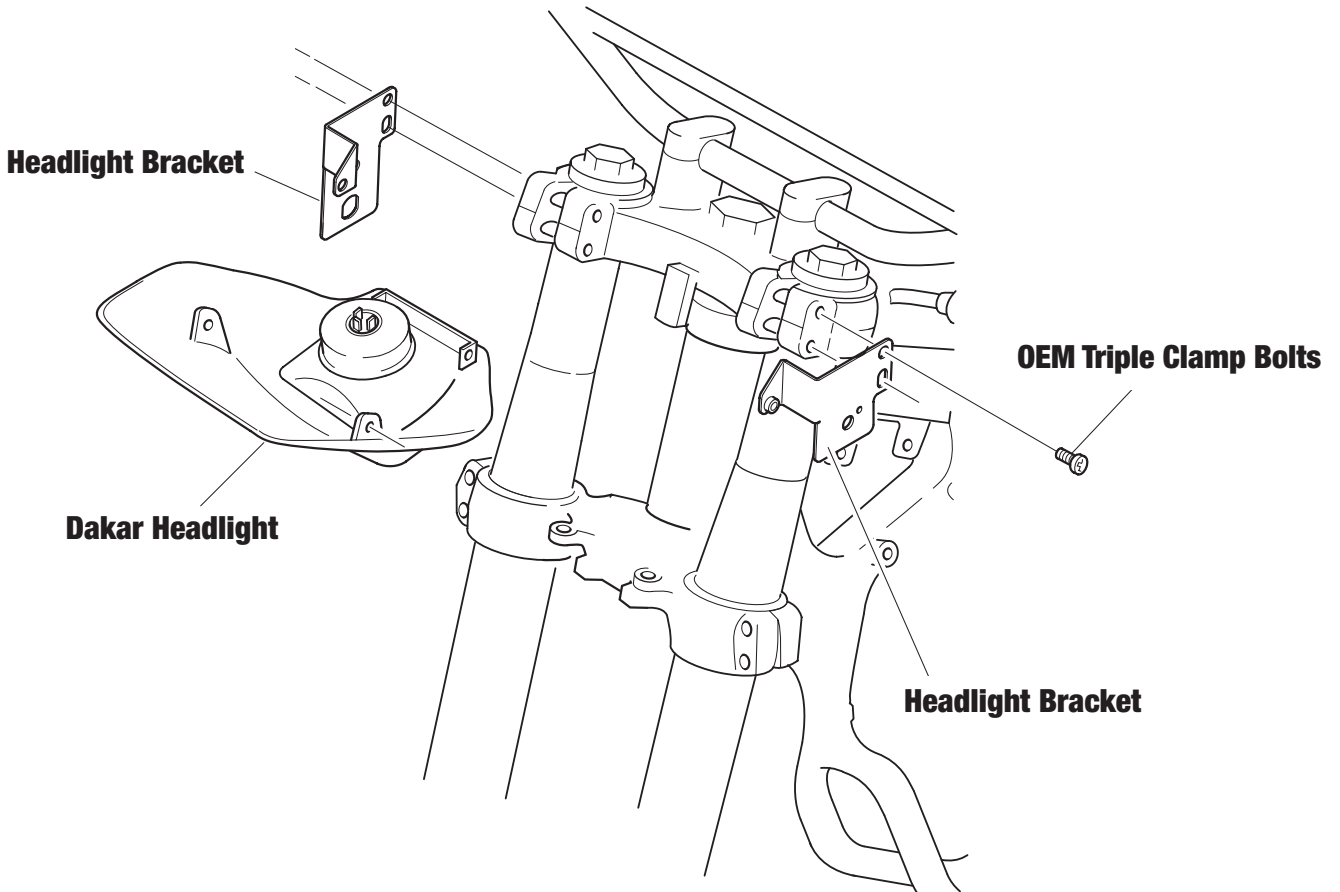


Fig 3.

HEADLIGHT UNIT SUB-ASSEMBLY



NOTE:

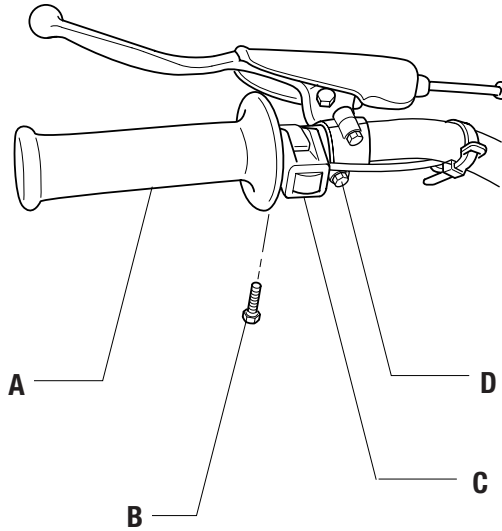
Most of the Dakar kit is already assembled into the headlight unit including the horn, ignition key, front turn signals, and the signal relays. This illustration is used to help you locate the front mounting brackets only. The illustration wiring and other parts have been removed for clarity in the illustration.

Attach the Dakar headlight unit to the top triple clamp brackets.

Now that you have the front wiring complete, remove and retain the remaining top two triple clamp bolts. Carefully position the Dakar headlight unit and brackets to the triple clamp and secure with previously removed bolts.

WARNING: Be sure to torque the triple clamp bolts to the factory specified setting as noted in the service manual.

TURN SWITCH INSTALLATION



Remove OEM Kill button

Step 1

Using a small phillips screwdriver, loosen the locking screw (B) on the kill button (C). Remove all cable ties and unplug kill switch from existing wiring.

Step 2

Loosen clutch cable perch (D) and move inboard about 1/2 inch.

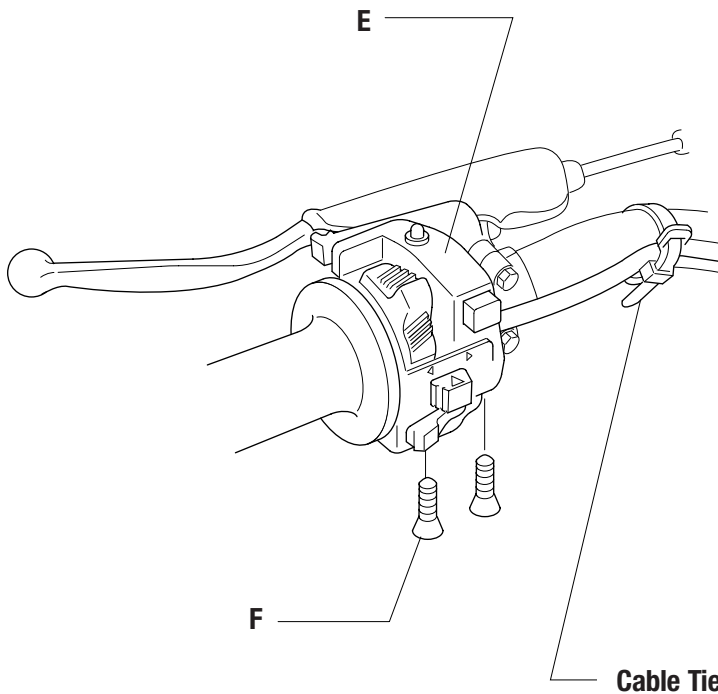
Install Turn Switch

Step 3

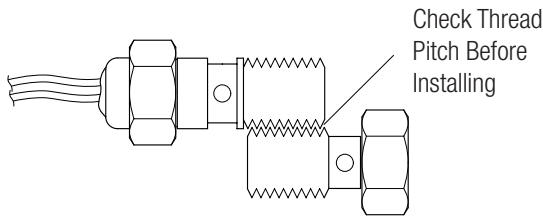
Open and wrap the new turn switch (E) around handlebar and securely fasten with two screws (F) as shown.

Step 4

Route turn switch wiring down and along handle bar behind Dakar headlight unit and in through frame cable guide. Secure switch wiring to handlebars with one cable tie. For more information, please refer to the Cable Routing Diagram.

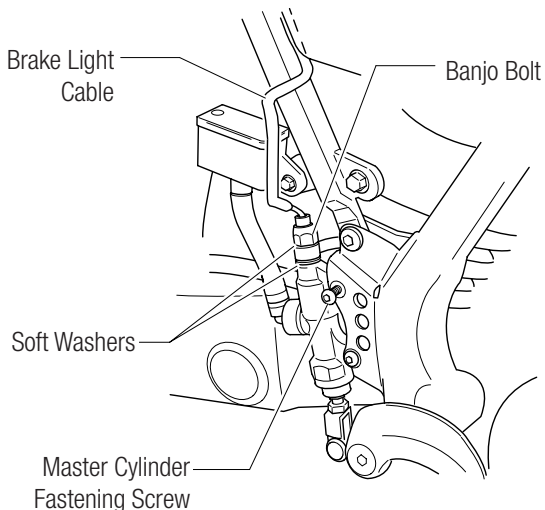
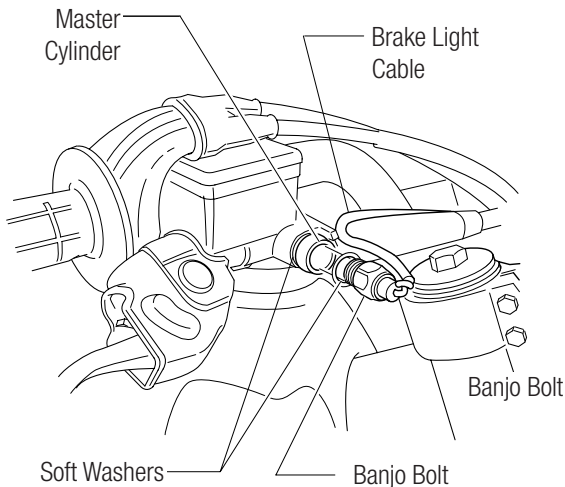


BRAKE LIGHT SWITCHES



WARNING: Check the thread pitch on your banjo bolts

Make sure the thread pitch on your stock banjo bolts match the replacement versions provided in the kit. More than likely they will match. Some manufactures have changed the stock design requirement which is why it necessary to check. If your parts do not match up, stop the installation and give us a call. We'll send replacement parts to you!



Front Brake Light

WARNING

Bleed front and rear brakes according to instructions provided in your owners or service manual. This must be performed in order for proper brake operation. Failure to do so may result in brake failure

Step 1

Place a drop cloth or rag under the front brake and bike to catch any fluids. Loosen and retain banjo bolt on master cylinder.

Step 2

Insert brake light switch into position and fasten with banjo bolt on top of soft washer, hydraulic line and second soft washer. Securely fasten banjo bolt without stripping.

Step 3

Route the front brake light switch wiring along the lower portion of the handlebar towards the center of the triple clamps. Fasten wiring to the handlebar with a cable tie.

Brake Pedal Light

Step 1

Place a drop cloth or rag under the rear brake and bike to catch any brake fluid. Remove the screws and guard providing access to the rear brake master cylinder.

You must temporarily reinstall the screws that attach the master cylinder to the frame to prevent damage to the master cylinder or Banjo bolt threads. After the master cylinder is secure, carefully remove the existing banjo bolt. Remove and retain the mounting screws.

Note: Some bikes allow access to the master cylinder without removing a cover or guard.

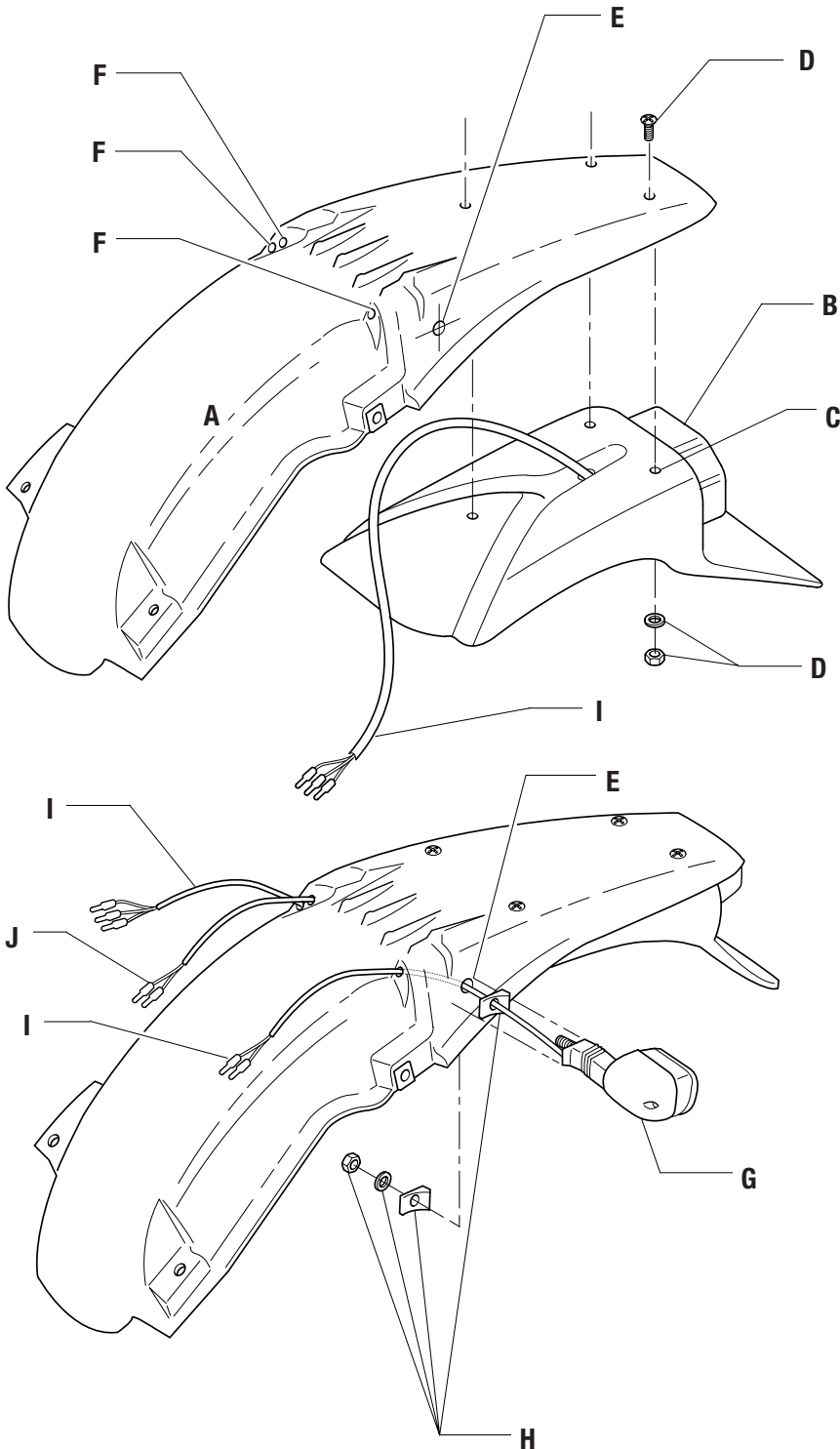
Step 2

Insert brake light switch into position and fasten with banjo bolt on top of soft washer, hydraulic line and second soft washer. Securely fasten banjo bolt without stripping. Reinstall guard with screws

Step 3

Route the rear brake light switch wiring up the sub-frame spar and following behind the airbox up towards the back of the frame. The wiring should meet up next to the main wiring harness tail light and turn signal connection point.

TAILLIGHT AND TURN SIGNALS



Note: When installing the WR450 we recommend using a YZ style rear fender.

Remove Existing Parts

Remove your existing seat, front number plate, radiator covers, fuel tank, side number plates and rear fender. Please refer to your owners manual for detailed dis-assembly instructions for each item.

Taillight Assembly

Place the rear fender (A) upside down on a clean work surface and position the rear tail light (B) on the inside of the fender. The tail light should rest slightly under the rear edge of the fender.

Note: WR's may require enlarging the center opening by about 1/2 inch on each side using an electric jig saw. This is for clearance to the existing top brake light. Then, using the taillight's four mounting holes (C) as guides, trace around each hole with a felt tip marker on the underside of the fender creating drill hole locations. Remove the taillight and drill 1/4 inch holes. Reposition the taillight, and fasten with supplied screws, washers and nuts (D) as shown.

Turn Signal Mounting

Step 1

Position the rear turn signals by visually lining up the signals (G) behind the rear seat, when its attached to the sub-frame. Care should be observed to insure signals do not interfere with the rear silencer. The signals must mount free and clear of exhaust heat in order to prevent damage to the signal.

Once you have found a suitable location for the signal mounting hole (E), mark and drill one 3/8 inch hole through each side.

Step 2

Drill a second hole (F) on each fender side, allowing the signal wiring to pass through underneath the rear seat.

Step 3

Feed the tail light wiring (I) through the right side hole and then the turn signal wiring (J). Secure turn signal with supplied alignment wedges, washer and nut (H). Attach second turn signal following same procedure and complete by reinstalling rear fender on bike.

WR Installation Important Note:
Taillight on WR omitted for clarity

TAILLIGHT AND TURN SIGNAL CONNECTIONS

Taillight Connection

Step 1

From the existing taillight wiring, disconnect the YELLOW and BLUE wiring connector. Leave the original ground (BLACK) connected.

Step 2

Connect the existing BLUE (OEM) or WHITE taillight male to the Dakar GRAY female connector and connect the existing male WHITE/GREEN (OEM) or YELLOW brake light connector to the first Dakar VIOLET connector. Note: the VIOLET has two leads, connect into the one that has two wires coming from out from it. (Please see the diagram for more detail)

Turn Signal Connections

Connect both BLACK tail turn signal grounds into the dual BLACK female ground connector. Connect the ORANGE female into the BLACK male (right turn signal) connector, and the PINK female, into the BLACK male, (left turn signal) connector.

Brake Switch Connection

Connect one of the BLACK brake switch male into the BROWN female connector and the second BLACK brake switch male into the second VIOLET connector.

Dakar Ground

As shown on page 2, the new Dakar harness includes a ring terminal ground. Take this ring terminal and attach it to the top battery bolt.

Note:

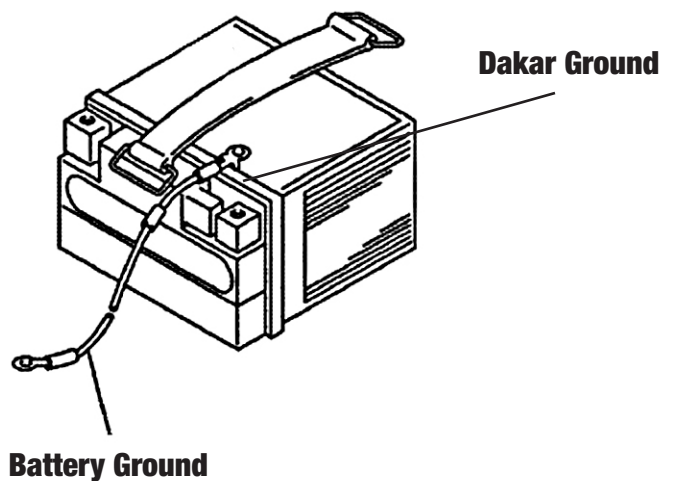
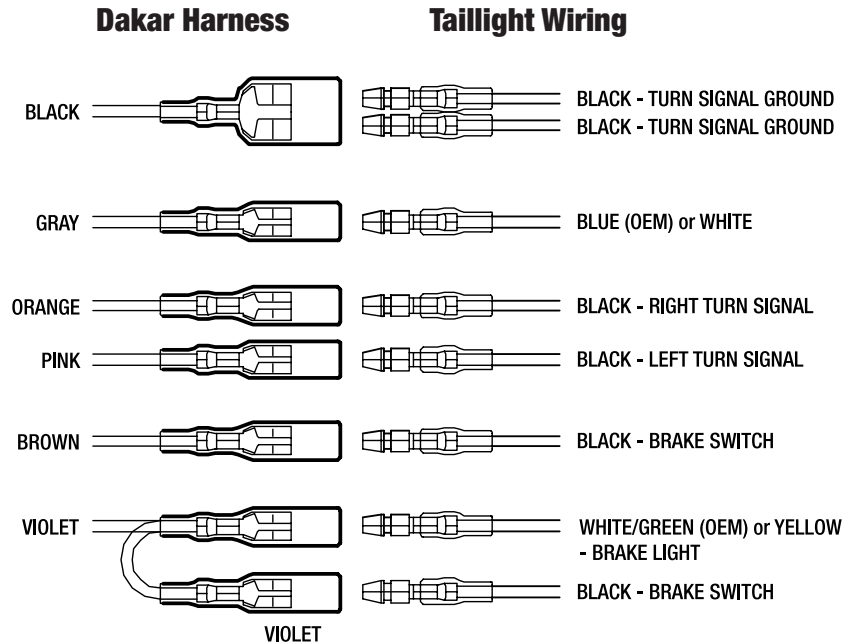
Be sure to carefully and fully seat the connectors into position. Double check the connections!

Secure Cable Ties

Use a few cable ties along the sub frame to hold the harness into position. Make sure that you secure the harness to frame areas that will not bind or crimp the harness.

Note:

You can use the stock OEM taillight, just remember that this version is not designed to be DOT approved. However, it usually does not give any problems in the inspection process.



IGNITION KEY SWITCH

BEFORE RIDING YOUR BIKE

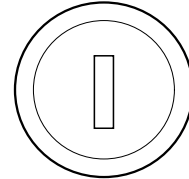
Ignition Key

The Dakar Dual Sport Kit features a security key designed for theft prevention and unauthorized operation of the motorcycle. To start the motorcycle, rotate the key to the ON position as shown and remove the key from the switch.

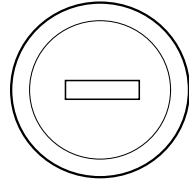
IMPORTANT: Do not leave the headlight on without the engine running. It could cause damage to the battery. We also suggest turning up the idle speed slightly to increase system voltage while the engine is at idle.

The key is designed only as a means to disable operation of the motorcycle. Use the turn signal kill switch to shut the motorcycle off. Leaving the key in the ON position will drain the battery, so be sure to turn the switch to the OFF position while leaving the bike unattended. Now start your bike up and go show your friends!

Key OFF Position



Key ON Position





Overview

Vehicle registration policies in most states typically allow conversion of an off-road only title into a street title or in some states a designated "Dual Registration." To register a dirt bike for street use, it must be equipped with the necessary lighting and other equipment required by your state's vehicle code.

Every state requires what is called "The Federal Minimum Requirement" which consists of:

- Headlight with a high and low beam
- Headlight indicator light visible to the operator to show when the high beam is operating
- Horn - Some states mandate an electric horn
- Battery powered taillight and brake light which must operate for 20 minutes on battery power alone
- Rear view mirror
- Turn signals for motorcycles manufactured after 1/1/73 (Most States)
- Some states require speedometers and odometer's
- Tires should be DOT approved
- Lights should be DOT approved
- Fuel tank should be DOT approved*

* Even though the Federal Motor Vehicle Safety Standard specifies steel gas tanks for street motorcycles, most states will not enforce this for converted dirt bikes

Registration procedures vary from state to state but typically involve:

- Signing two "Statement of facts" certifying that your bike meets state/federal standards.
- Bringing the bike to the DMV or (AAA Insurance Office) for an inspection for proper lighting
- Once the paper work and inspection are complete the final step is to exchange your off-road title for a street title

Exchanging your title

Most states have a "Dual Registration Form" You should be able to download this form from your states DMV over the internet or filling it out at your DMV office. Then pay the transfer fee and obtain your registration, put the plate on your bike and go show your friends!



Nothing Happens When You Turn the Power Switch On

Possible Causes

- Fuse is blown. Check for bare wire or terminal shorting against the frame or another wire.
- Multi-pin connector not properly connected to the circuit board.
- Poor battery connection. Make sure the connectors are fully seated.
- Battery is flat. Measure voltage with voltmeter, or connect a 12 volt light across it. A fully charged battery will measure between 12.9 and 13.2 volts.
- Poor connection at the blue wire junction above the shock.

Headlight does not work on high beam or low beam:

Possible Causes

- Check the bulb. Usually one of the bulb filaments is bad, so replacing it will fix the problem. Make sure you replace the bulb with the exact same wattage.
- The handlebar switch is dirty inside. Clean it out with some WD40.

Headlight is dim at idle:

Possible Causes

- Increase the idle speed a little. Dual sport setups work a lot better if the idle speed is a bit "on the high side". This is due to the design of most of the lighting /charging coils, which really start putting out power at around 1200 rpm.
- Battery is not charged. Charge battery using a standard battery charger. Connect the black (negative) lead from the charger to a good frame ground, and connect the red (positive) lead from the charger to the blue lead that connects to the horn. (just slide the blue connector sleeve back, and connect the charger up to the exposed terminal) You do not need to disconnect the horn. Turn key switch to "ON" Position.
- Check bulb wattage. Certain kits come with a lower wattage bulb than a standard H4 bulb. ElectroSport has all bulbs in stock.

Taillight does not work:

Possible Causes

- Check the bulb. Due to vibration the bulb could have gone out. Check the connections in the bulb holder as well, water could oxidize the contacts, preventing the bulb from coming on.
- Check the connections, especially the ground under the seat. You'll find a gray wire (taillight positive), a black wire (taillight and brakelight ground) and a violet wire (=purple, brake light positive). Check these connections carefully.



Brake light stays on:

Possible Causes

- unplug the brake light switches one by one. If one of the switches is bad, it will close its contacts and leave the brake light on. The brake light switch that makes the brake light turn off as soon as you unplug it, is bad.

Brake light does not work:

Possible Causes

- Check the bulb. Due to vibration the bulb could have gone out. Check the connections in the bulb holder as well, water could oxidize the contacts, preventing the bulb from coming on.
- Check the connections, especially the ground under the seat. You'll find a gray wire (taillight positive), a black wire (taillight and brakelight ground) and a violet wire (=purple, brake light positive). Check these connections carefully.

Blinkers don't work:

Possible Causes

- Battery is not charged. Charge battery using a standard battery charger. Connect the black (negative) lead from the charger to a good frame ground, and connect the red (positive) lead from the charger to the blue lead that connects to the horn. (just slide the blue connector sleeve back, and connect the charger up to the exposed terminal) You do not need to disconnect the horn. Turn key switch to "ON" Position.
- flasher relay is bad. Replace with new one.

Blinkers don't work at idle, or flash intermittently:

Possible Causes

- Battery is not charged. Charge battery using a standard battery charger. Connect the black (negative) lead from the charger to a good frame ground, and connect the red (positive) lead from the charger to the blue lead that connects to the horn. (just slide the blue connector sleeve back, and connect the charger up to the exposed terminal) You do not need to disconnect the horn. Turn key switch to "ON" Position.
- increase the idle speed a little. Dual sport setups work a lot better is the idle speed is a bit "on the high side". This is due to the design of most of the lighting /charging coils, which really start putting out power at around 1200 rpm.



Horn doesn't work:

Possible Causes

- Battery is not charged. Charge battery using a standard battery charger. Connect the black (negative) lead from the charger to a good frame ground, and connect the red (positive) lead from the charger to the blue lead that connects to the horn. (just slide the blue connector sleeve back, and connect the charger up to the exposed terminal) You do not need to disconnect the horn. Turn key switch to "ON" Position.
- Adjust small set screw on the back side of the horn. Turn it both ways until you get a nice loud "honk"

Lost key while riding:

Possible Causes

- The Dakar setup will perform fine, but you'll have to top up the battery regularly (weekly) to prevent it from going flat. Call ElectroSport for a replacement.

Kill button does not work:

Possible Causes

- Ensure that the black/white wire of the wiring harness is plugged in correctly.
- If the kill button does not work, but turning the key switch does kill the engine, you have a dirty handlebar switch. Spray inside it with WD40.

Technical Support Contact Information

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OPTIONAL ACEWELL SPEEDOMETER INSTALLATION

Please Read Carefully

There are three (3) extra white connector blocks coming off your Dakar handlebar switch wiring as shown in Fig 1. These are only used if you are hooking up an Acewell 3700/3900 speedometer (Fig 2). If you're not using an Acewell speedometer, the 3 pin connector with the BLACK/RED and BROWN, wires can be used to connect various accessories such as a GPS, heated grips etc.

On the extra connector the RED is "key switched" in other words, with the key in the on-position this wire becomes live with power. The BROWN is constantly hot and BLACK is ground.

If you did not purchase an Acewell Speedometer for your Dakar Kit, we highly recommend it because Acewell Speedometers are packed full of great ride enhancing features! To see the entire Acewell product line or to order, please visit the ElectroSport website at www.electrosport.com

Thank you and happy trails!

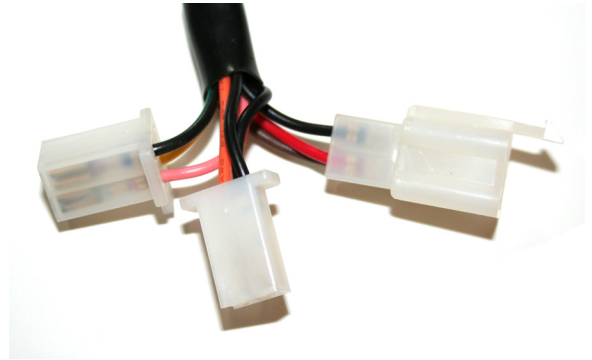


Fig 1.



Fig 2.