



CRF250/450X DUAL SPORT KIT INSTALLATION



EXPORT KITS ONLY



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. CRF250/450X Installation Instructions

Read through the <u>entire</u> 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 Brackets
 - -Kit Specific Pieces

Note: CRF250/450X Kit has main wiring harness connected to the headlight mounting brackets.

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.



Brake Light Switches



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.





MAIN WIRING HARNESS INSTALLATION

Main Wiring Harness Routing

Remove seat, side panels, fuel tank and tank shrouds. Working from the front of the bike, route the harness from the clutch side of the head tube, underneath the radiator connection hose, then up and over the the frame supports by the head. Please see the picture for routing correctly.

Once you have the harness at the center of the frame, route it back up near the airbox, and along the airbox edge. Use a few cable ties to loose fit th harness into position. You can tighten the tie wraps down once everything has been installed.

Route the harness along the frame as shown highlighted in the photo



IMPORTANT NOTE

For certain newer CRF-X models, you will need to route the Dakar wiring along the RIGHT side of the frame. You need to follow the existing wiring on the right and make sure to leave enough clearance so the wiring does not bind. Be sure to test the routing before you tie everything off.



TAILLIGHT MODIFICATION

Making a slot in the taillight

The CRF-X has an existing taillight (figure 1) which drops down into the underside of the rear fender. You will need to make a slot opening in the new black taillight piece to provide clearance for the new taillight.

Position the black taillight part under the fender and you will see the area which needs to be removed. We have created a template which you can use (See Page 3) Just cut out and tape the template in place on the new taillight and use a scribe to make the cut line. Using a jig saw, carefully cut out the opening. Remember, the taillight is going to be mounted underneath the rear fender, so if your slot is a little off a little nobody will be able to see it. Just make sure you have cut away enough material so that the taillight fits flush into the fender.

Locating the taillight

Position the taillight underneath the rear fender and with the taillight flush to the rear edge of the fender. Use a piece of tape to hold the taillight into position against the fender and to make sure it is aligned correctly. Once you are satisfied with the mounting location, use a fine point marker and trace around the mounting hole locations in the taillight onto the underside of the rear fender. Drill 1/4" holes in fender as shown in figure 1.

Attach the taillight to the rear fender

Position the taillight under the rear fender with the taillight mounting holes lined up with the holes you just drilled. At this point, only install the front screw. From the top side, install screw through fender and taillight and fasten with washer and nut.

Position and install the turn signals

Now that you have the taillight held in place with one screw, you can hold it in place and visually see where the turn signals can mount. The signals have a mounting screw and washer on a threaded shaft which the wiring comes through. Remove and retain the nut and washer.

Once you have found a suitable location for the signals (See Figure 2) mark and drill one 13/32 inch hole through each side. Important: Each signal has a small plastic post which prevents the signal from rotating when it is installed. In order for this post to install correctly into the taillight, you can level the signal position and locate a second drill hole (3/16") about 1/8" forward from the first 13/32 hole as shown in Figure 3. Make sure the signals are level to the eye before drilling the second post mounting hole. (Measure twice, drill once)

Insert the signal wiring on each side through the 3/8" holes, through the slot you made in the taillight and along the channel in the taillight as shown in figure 2. Complete signal installation by fastening with washer and nut previously removed. Make sure no wires are pinched off, and fasten taillight with remaining screws, washers and nuts.



Figure 1 - Existing taillight shown with taillight mounting holes drilled in three locations.



Figure 2 - Dakar Dual Sport Kit taillight shown with slot cut.



Figure 3 - Turn signal mounting holes which need to be drilled in the taillight. See figure 2 for location.



Taillight Slot Template

Use this temple to create a slot in your taillight.



Note:

Remember, this is just a template and the final opening you cut out will not be seen. The tailight is installed under the fender.



REMOVING OEM KILL BUTTON AND DAKAR TURN SWITCH INSTALLATION



Lift Tab and pull OEM wires out from behind



Remove Existing Kill Button

Using a small phillips head screwdriver, loosen the locking screw (B) on the kill switch (C). Remove any cable ties holding OEM kill switch. Then, loosen clutch cable perch (D) and move inboard about 1/2"

The OEM kill button has two small connectors which need to be un-plugged. These plug into the existing starter clutch switch. Then follow the kill button wiring towards the speedo and you will find a 3-prong connector. Go ahead and disconnect this and a single bullet connector. You should now be able to remove the OEM kill button from the bike.

OEM Kill Button Connector Modification

With the OEM kill button off the bike, you will be re-using the 3-prong BLACK connector from Honda. You need to back-out the 3 wires, so you can replace the wires with ones from the new harness.

If you hold the 3-prong connector with the square locking piece facing down and looking into it, you will see small tabs on the inside, which need to be lifted up with a very small flathead screwdriver. When you push the tabs up, the existing wires will pull out easy to the rear of the connector.

Add New Wiring to the Connector

From the new Dakar turn switch, find the same small connectors you just removed. There will be a BROWN, GREEN, and WHITE replacement, which needs to be inserted into the connector. You should be able to push these into place, but make sure they are fully seated and held in place with the tabs on the inside of the connector as shown.

Plug in your modified OEM Connector

From the Dakar turn switch, plug the modified connector into the connector male, located directly underneath the speedo. This is this connection point you un-plugged. This connection will allow the kill button to operate from the new Dakar turn switch.

Install Turn Switch

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

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 likley 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

7.

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.



FRONT HARNESS CONNECTIONS

Headlight Wiring Connection - Connection 1

From the Dakar wiring harness which is already connected from the factory, plug-in the headlight connector into the rear of the headlight assembly. You will see the connector inside the plastic boot behind the headlight.

Horn Wiring Connection - Connection 2

From the handlebar turn switch wiring harness, connect the PINK and BLUE leads, into either of the horn spade connectors. (Not shown in illustration)

Handlebar Switch Wiring Connection -Connection 3

Plug handlebar switch wiring harness block connector into the

main wiring harness block connector. The receiving connector is already installed on the triple clamp headlight mounting bracket. Be sure to fully seat the connection. You will hear the connector click into position when it is installed correctly.

Turn Signal Wiring Connection - Connection 4, 5

Connect both BLACK taillight turn signal grounds (Connection 4) into the dual BLACK female ground connector. From the wiring harness, connect the ORANGE female into the BLACK male (right turn signal) connector, and the PINK female into the BLACK male (left turn signal) connector. (Connection 5)

Brake Light Switch Wiring - Connection 6

From the main wiring harness connect the VIOLET and BROWN female connectors into the front brake light switch male connectors.





OEM BLACK AND RED CONNECTION

Wiring Connections

See the locator view on the right and make note of the Male (Red) and the Female (Brown) connectors coming from the Dakar harness. as shown in the circle in the locator view below.

Start by disconnecting the OEM Black / RED male and female wires as shown. This connection is located under the fuel tank. To make the Dakar wiring connection, simply plug the following wires together.

- 1. Connect the Dakar female BROWN into the OEM male BLACK / RED.
- 2. Connect the Dakar male RED into the OEM female RED / BLACK

Important: Make sure that all connections are completed seated

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Locator View



Connecting the Dakar wiring



TAILLIGHT AND TURN SIGNAL CONNECTIONS

Drilling the access hole in the fender

In order to route the taillight wiring, you will need to drill a 1/2" hole into the right front edge of the rear fender about 2 inches back and 1.25 inches down from the seat mounting bolt, as shown in the image. Pull the taillight and turn signal wiring thru the hole you just finished drilling.

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 males into the BROWN female connector and the second BLACK brake switch male into the second VIOLET connector.

Connect the WHITE / GREEN or BROWN male coming from the brake light into the VIOLET female.

Connect the GRAY into the taillight RED.

Connect the taillight ground GREEN into the the BLACK ground as shown.

NOTE:

Be sure to carefully and fully seat the connectors into position and 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.



Dakar Harness

Taillight Wiring





IGNITION KEY

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



DMV DUAL SPORT REGISTRATION OVERVIEW

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!



CRF250/450X TROUBLESHOOTING

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 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.
- 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.



CRF250/450X TROUBLESHOOTING

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.



CRF250/450X TROUBLESHOOTING

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

ElectroSport Industries 3803 Oceanic Dr. Ste 201 Oceanside CA 92056 PH: 760-842-8300 (9-5 M-F PST) WEB: www.electrosport.com email: Info@electrosport.com



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 a an 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.

