

# DAKAR

DUAL SPORT KITS



***CRF230 DUAL SPORT KIT INSTALLATION INSTRUCTIONS***



## KIT CONTENTS

### Inspect Your Kit

Your kit will include the following items

#### A. CRF230 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)

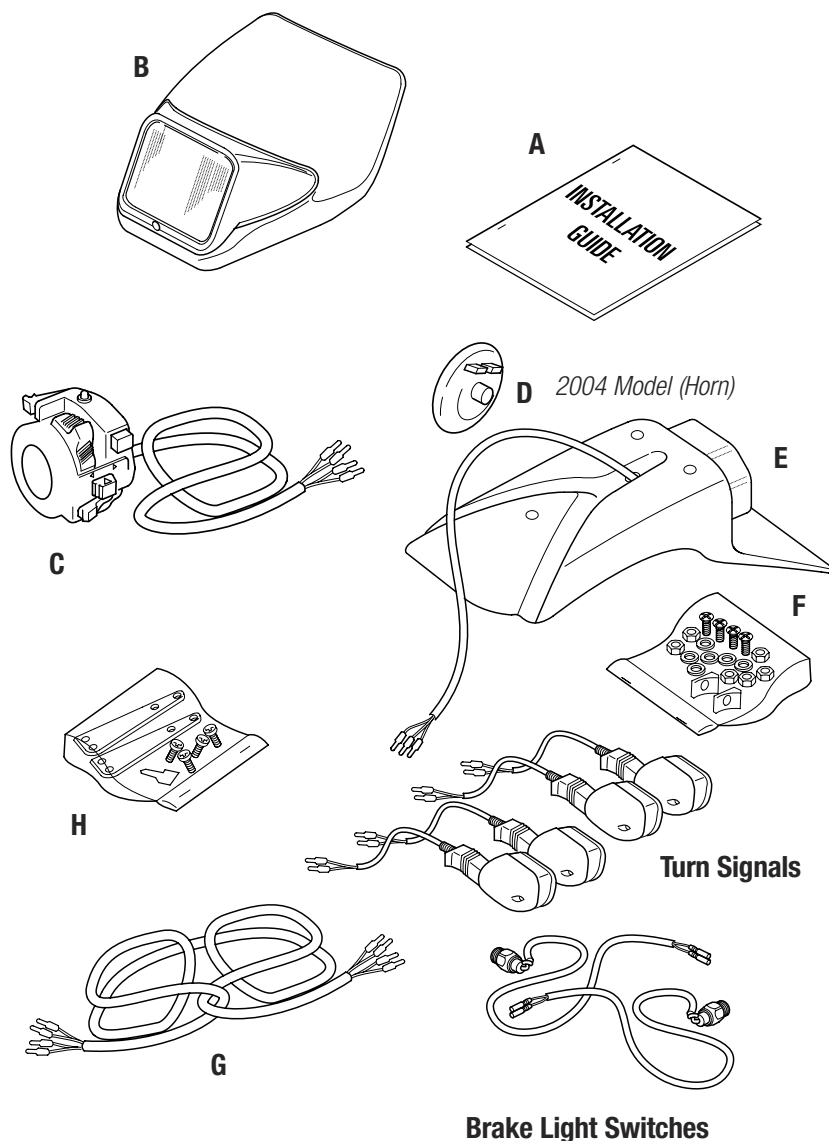
- Turn Signals (4)
- Brake Light Switches (2)
- Cable Ties
- Wiring Diagram Label
- Round Plastic Signal Alignment Wedges

#### G. Main Wiring Harness

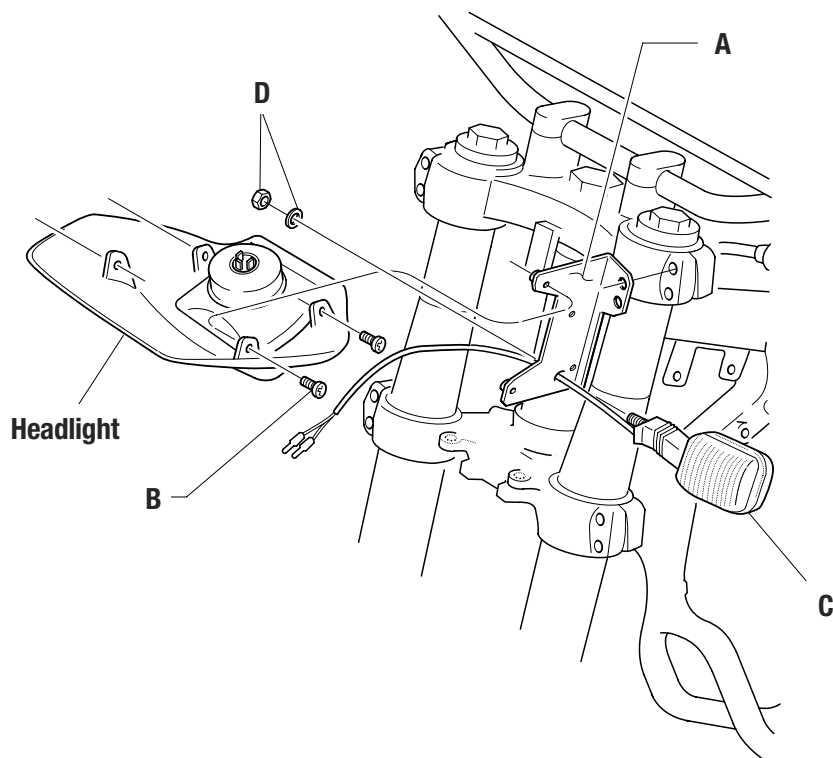
#### H. Mounting Kit Hardware Bag

- Triple Clamp Mounting Brackets
- Kit Specific Pieces

*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.*



## HEADLIGHT UNIT SUB-ASSEMBLY



### Mounting Brackets To Headlight

Position top headlight mounting brackets ( A ) with one screw fastened ( B ) on the top mount of the headlight on each side. Be sure to mount the bracket inboard to the headlight plastic tabs. Follow the same procedure for the two lower headlight tabs and brackets. Tighten each screw securely without stripping.

### Attach Turn Signals

Insert turn signal wiring and threads ( C ) through lower hole in bracket ( A ). Fasten each signal with washer and nut ( D ).

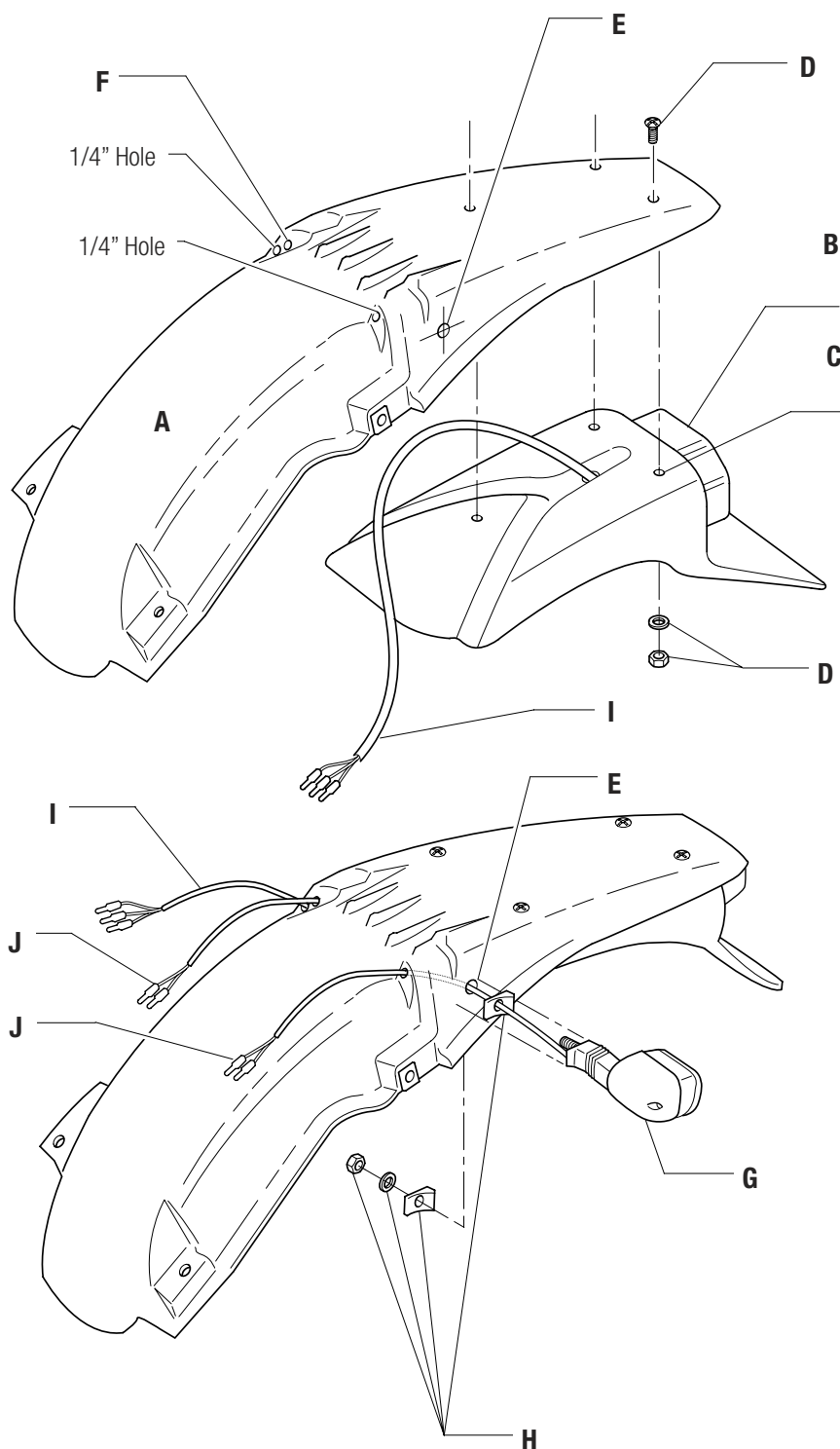
### Triple Clamp Mounting Bracket

Remove and retain the two existing top bolts which secure the fork leg into the triple clamp. Position the headlight with installed brackets into position and fasten with two bolts previously removed.

### Attach Horn

Position the horn on the inside of the (throttle side) mounting bracket, into the small top hole located in the center of the RH mounting bracket. Fasten with supplied nut and washer.

### TAILLIGHT AND TURN SIGNALS



It is suggested that you read through these instructions completely prior to starting the installation.

#### 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 taillight (B) on the inside of the fender. The taillight should rest slightly under the rear edge of the fender.

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.

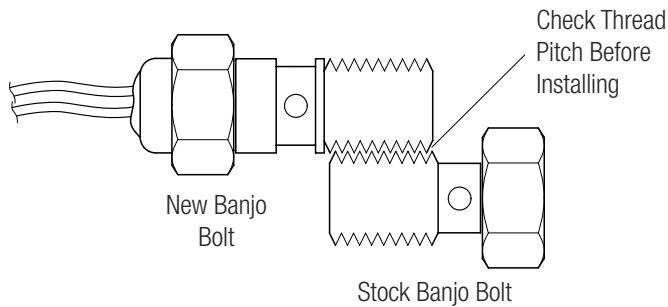
Once you have found a suitable location for the signal mounting hole (E), mark and drill one 3/8 inch hole through each side.

##### Step 2

Feed the taillight wiring (I) through the existing grommet 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.

*Note: Some parts may be visually different from what is shown in the illustration.*

## FRONT BRAKE LIGHT SWITCH



### Check the thread pitch on the banjo bolt

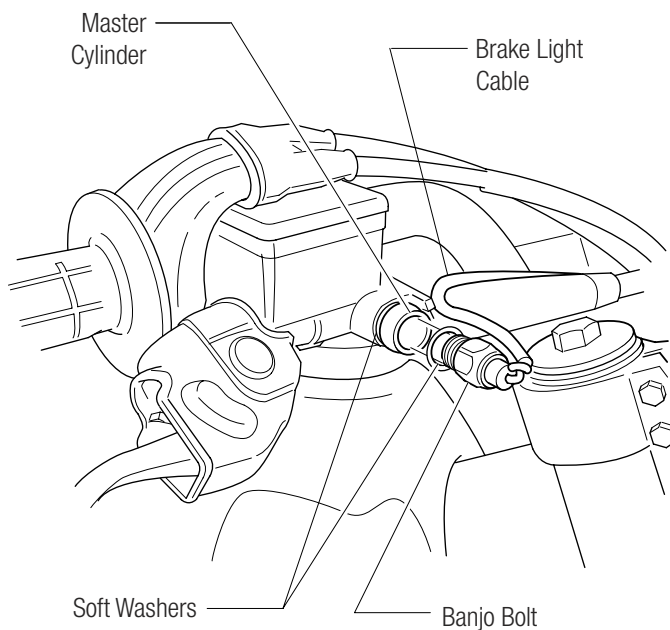
#### WARNING

*Make sure the thread pitch on your stock banjo bolt matches the replacement version provided in the kit. More than likely it will match. Some manufactures have changed the stock design requirement which is why it necessary to check. If your part does not match up, stop the installation and give us a call. We'll send a replacement part out!*

### Brake Light Switch

#### WARNING

*Bleed front brake 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.

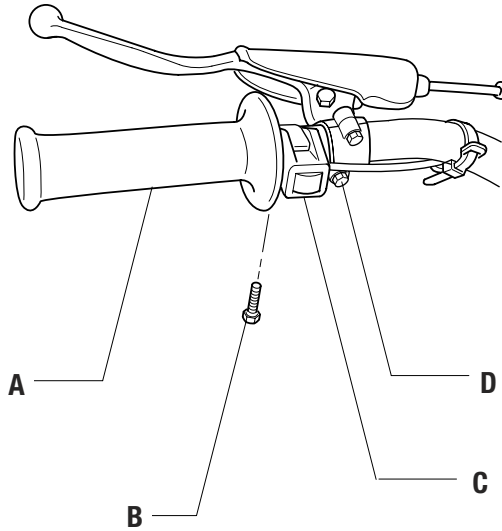
#### Step 2

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.

## TURN SWITCH INSTALLATION



### Remove Existing Kill Switch

#### Step 1

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

#### Step 2

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

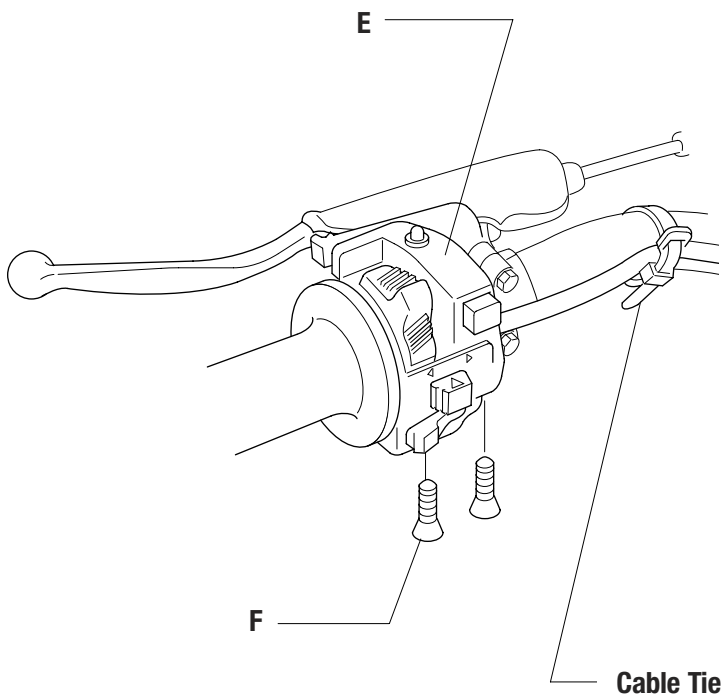
### Install Turn Switch

#### Step 1

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

#### Step 2

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.



## TAILLIGHT AND TURN SIGNAL CONNECTIONS

### Route the harness

Carefully position the wiring harness along the top of the frame. The large white connector should face towards the front of the bike.

### Taillight Connection

Connect the WHITE tail light male to the Dakar GRAY female connector and connect the BROWN male ground to the Dakar female BLACK ground connector as shown in lower illustration.

### Turn Signal Connections

Connect both BLACK tail turn signal grounds into the dual BLACK female 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.

### Note

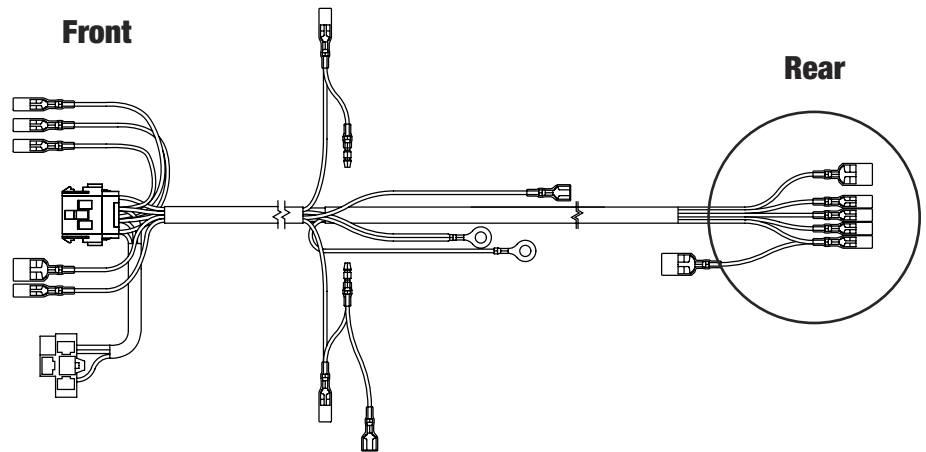
Be sure to carefully and fully seat the connectors into position.

### 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.

### Wiring Decal

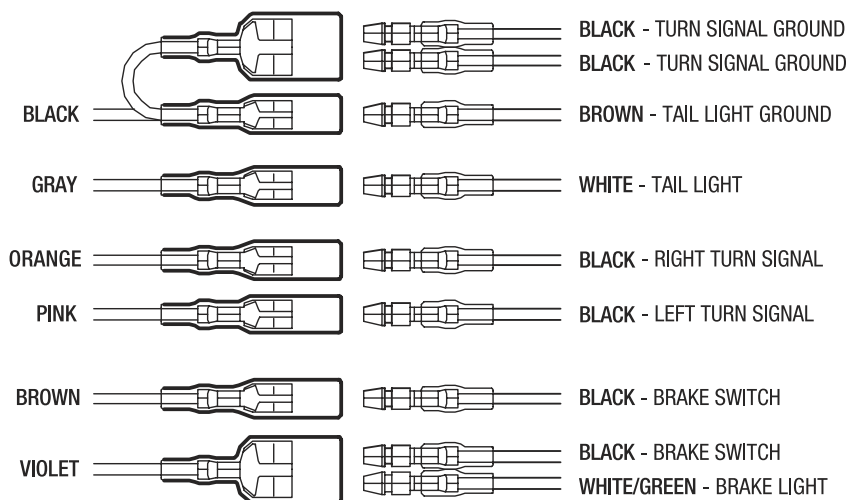
For reference, stick the wiring connection decal on the rear fender, below where the seat will cover it up.



CRF230 Wiring Harness

### Dakar Harness

### Tail Light Wiring



View in circle

## BLINKER RELAY AND GROUNDS

### Connect the grounds

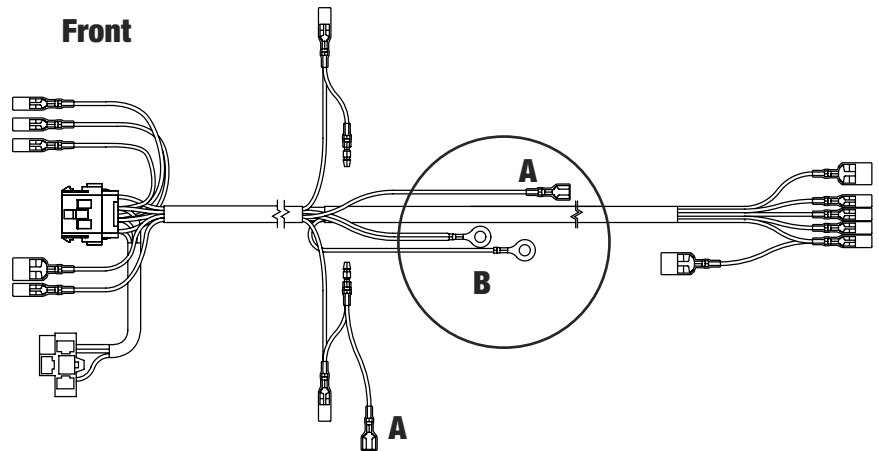
At the center area of the wiring harness as shown in the circle, there are two black wires with ring terminal (grounds) item B, shown in illustration. Position both ring terminal grounds on top of each other, which is then fastened onto the ignition coils (ground) using the existing screw. Note: The ignition coil can be found directly under the gas tank.

### Blinker relay wiring connection

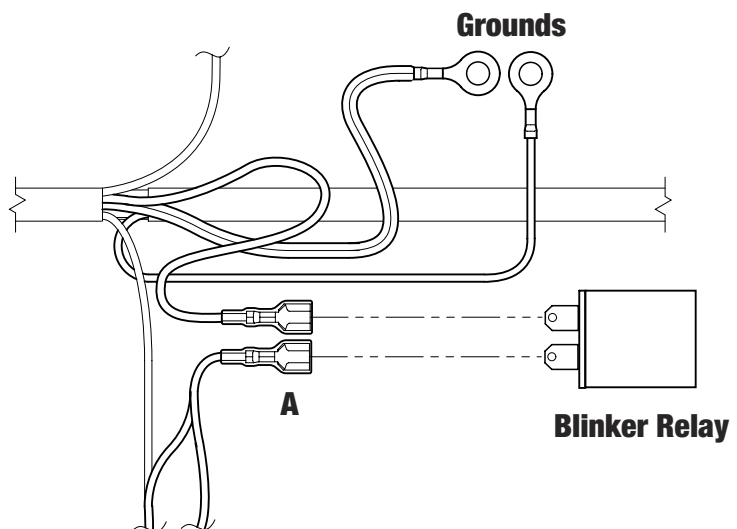
Attach the blinker relay to the frame using a few cable ties around the metal frame. (Not shown)

Note: Make sure that the spades on the relay are facing towards the back of the bike.

Once the relay has been secured, connect the BROWN and WHITE female spade connectors (A) from the Dakar wiring harness into the blinker relay.



CRF230 Wiring Harness





### IGNITION AND KEY SWITCH WIRING

#### Existing ignition switch

Locate the existing ignition switch wire connection (BLACK with WHITE tracer). Unplug the male and female connection shown as item A and B.

#### Add the Dakar ignition switch wiring connection

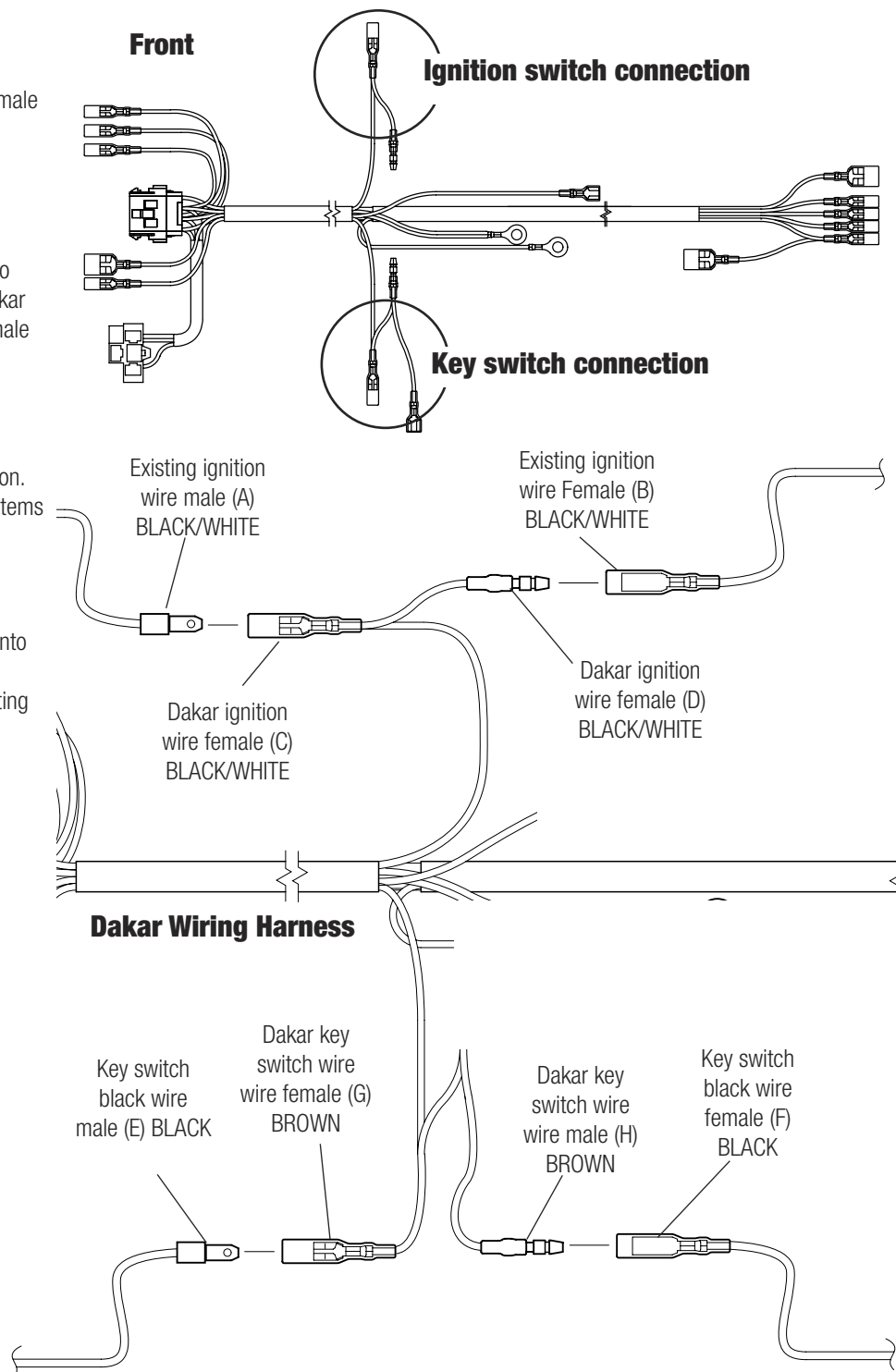
Plug the Dakar ignition female BLACK/WHITE (C) into the existing male (A) ignition wire. Then plug the Dakar ignition male BLACK/WHITE (D) into the existing female (B) ignition wire

#### Existing key switch

Locate the existing key switch BLACK wire connection. Unplug the male and female connection, shown as items E and F.

#### Add the Dakar key switch wiring

Plug the Dakar key switch female BROWN wire (G) into the existing male BLACK (E) ignition wire. Then plug the Dakar key switch male BROWN (H) into the existing female BLACK (F) ignition wire.



## HEADLIGHT WIRING

### Headlight Wiring Connection

From the main Dakar wiring harness, plug-in the H4 headlight connector into the new headlight assembly.

### Turn Switch Wiring

Plug-in turn switch wiring harness connector block into the main wiring harness white block connector. Be sure to fully seat the connection. You will hear the connector click into position on both the top and bottom sides. (Not shown in illustration) This harness also contains PINK and BLUE male spade connectors which are used with the horn.

### Horn Wiring Connection (2004)

From the turn switch wiring harness, connect the PINK and BLUE leads, into either of the horn spade connectors.

### Turn Signal Wiring Connection

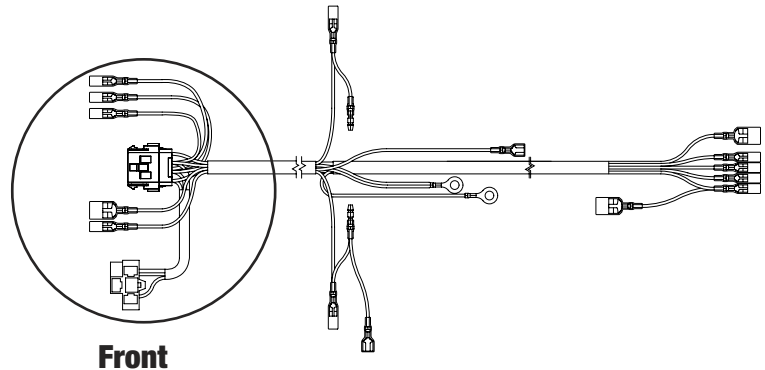
Connect both BLACK tail turn signal grounds into the dual BLACK female ground connector. From the Dakar wiring harness connect the ORANGE female into the BLACK male (right turn signal) connector, and the PINK female, into the BLACK male, (left turn signal) connector.

### Brake Light Switch Wiring

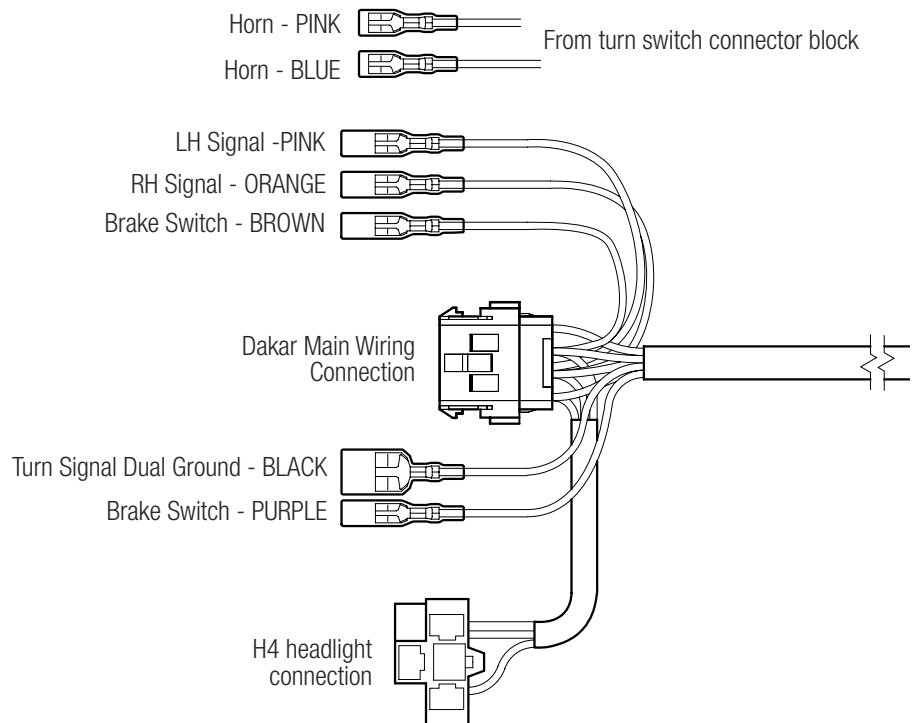
From the main wiring harness, connect the VIOLET and BROWN female connectors into the front brake light switch male connectors. (Not shown in illustration)

### Note

Be sure to carefully and fully seat all connectors.



CRF230 Wiring Harness



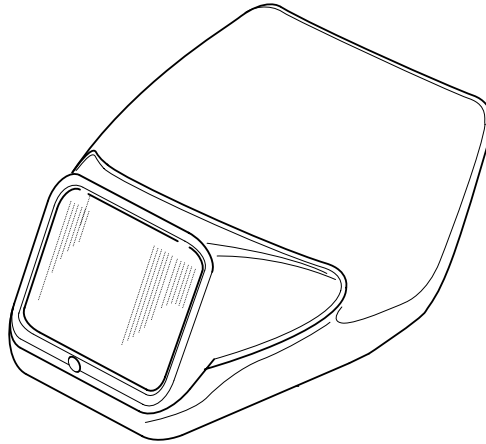
## **HEADLIGHT BEAM ANGLE ADJUSTMENT**

### **Attaching The Headlight**

After the wiring harness has been securely fastened and the complete system has been tested, you can now tilt the top of the headlight into the riding position and fasten the top headlight bracket to each side of the triple clamp.

### **IMPORTANT**

Now start your bike up and go show your friends!





## 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!

## **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. Electrex 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 Electrex USA 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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