

DAKAR

DUAL SPORT KITS



KTM EXC / MXC DUAL SPORT KIT INSTALLATION



KIT CONTENTS

Inspect Your Kit

Your kit will include the following items

A. KTM Instructions and Wiring Diagrams

Read through the entire instruction manual before starting.

B. Dakar Headlight Assembly

C. Handlebar Turn Switch

D. Horn

E. Universal Hardware Bag (Contents)

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

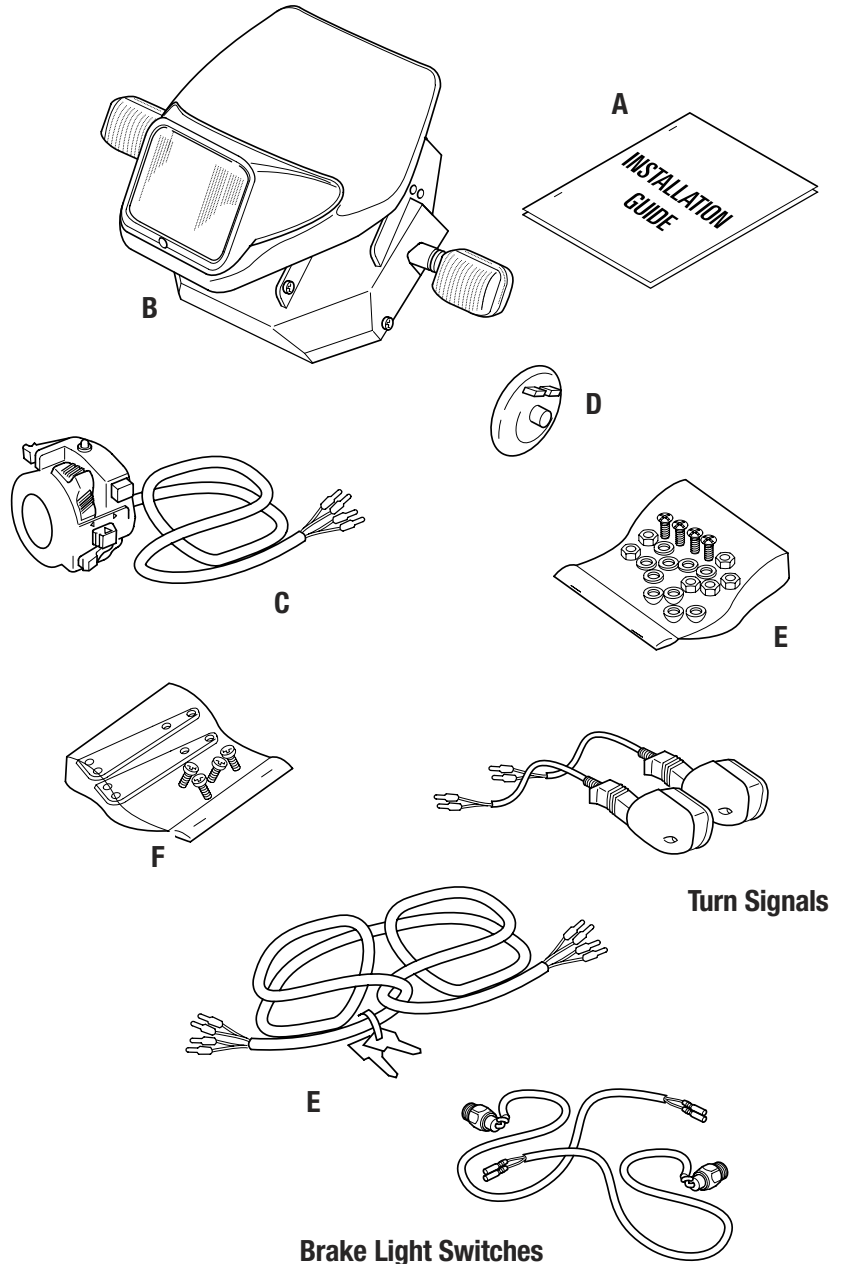
F. Main Wiring Harness

-Note: Ignition Keys Zip Tied to Harness

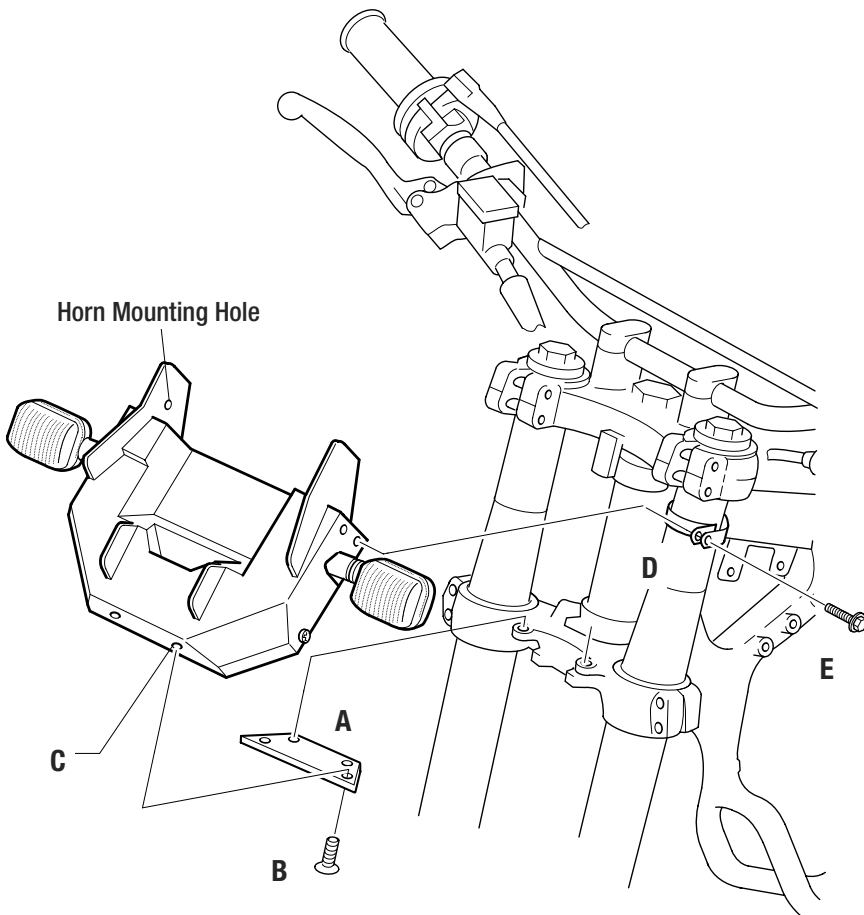
G. Mounting Kit Hardware Bag

- 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



Note: Headlight assembly omitted for clarity.

Getting Started

Remove and retain four (4) retaining screws, holding the headlight numberplate to the Dakar unit. Then, unplug the main wiring harness, turn switch wiring harness, headlight and horn wiring connectors from the Dakar unit.

Attach The Horn

The horn may already be installed on your kit, if not, the horn has a nut with a washer screwed on the back. Remove and retain the nut and washer. Locate the horn's threaded stud on the outside of the Dakar unit and into the horn mounting hole in the Dakar unit. Fasten with previously removed washer and nut. (Be sure to tighten securely without stripping)

Headlight Unit

Step 1

Fasten lower headlight mounting plate (A) with two screws (B) on each side. Tighten screws securely into the Dakar headlight unit (C) without stripping.

Step 2

Wrap two fork tube clamps around fork, seating below the top triple clamp (D). Note: The clamps must face with the mounting tab on the outside of the fork tube.

Step 3

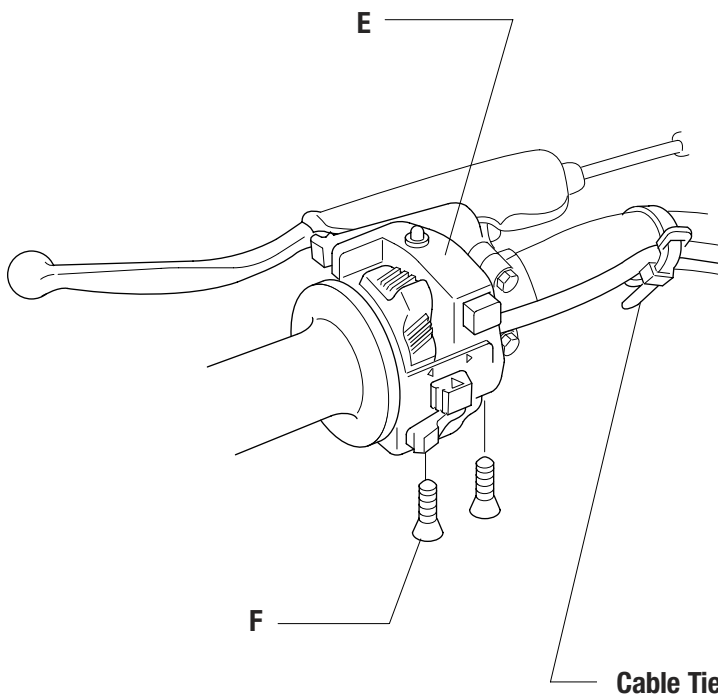
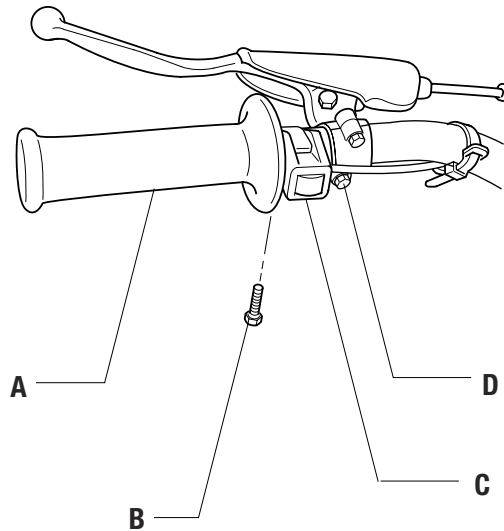
Insert Dakar headlight unit with attached lower mounting plate pin receptacles into the triple clamp tab holes. Then rotate the Dakar unit forward into position in the top fork tube clamps.

Step 4

Securely fasten one screw (E) through fork tube clamp and into rear screw hole in the Dakar unit

WARNING: Torque triple clamp bolts as specified in your service manual.

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.

Important Note Regarding Magura Brakes

The KTM uses the Magura hydraulic brake, which may cause potential interference between the turn switch and the lever adjuster. Make sure you have enough clearance between the parts. You can either move the grip out slightly, or take a file and sand away a small notch in the turn switch where it may rub.

Install Turn Switch

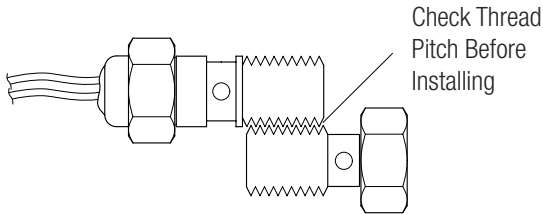
Step 1

Open and wrap the new turn switch (E) around handlebar and securely fasten with two screws (F) as shown. Make sure you have clearance between the grip, the switch and the lever!

Step 2

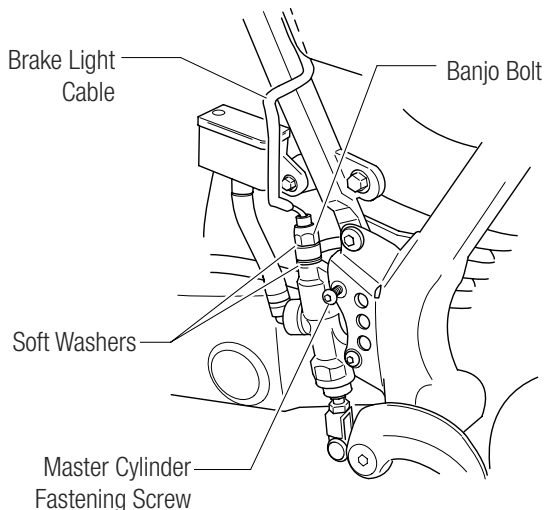
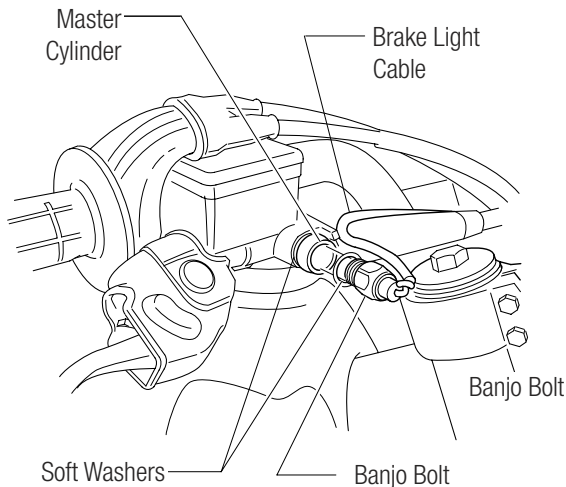
Route turn switch wiring down and along handle bar behind Dakar headlight unit and in through frame cable guide. Secure switch wiring to handlebars with one cable tie. For more information, please refer to the Cable Routing Diagram.

BRAKE LIGHT SWITCH INSTALLATION



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.

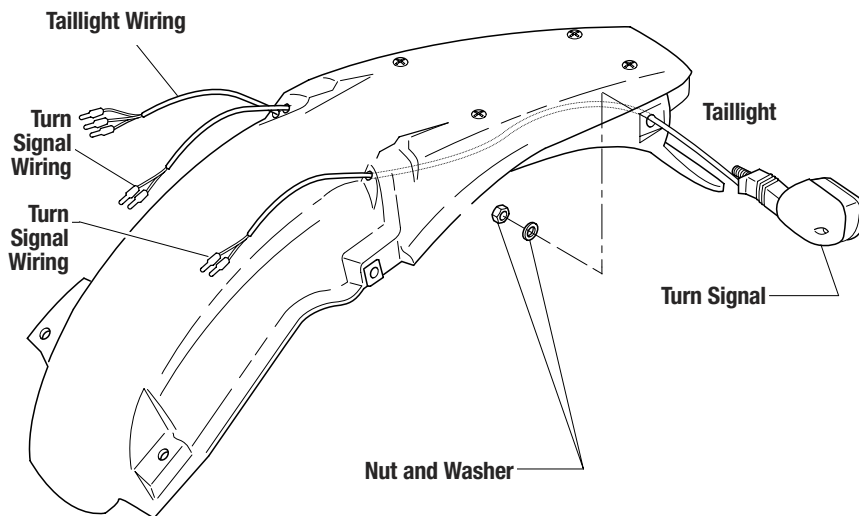
Step 2

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



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

Note: KTM (MXC) kits do not include a taillight. You must use the OEM version offered by KTM. If you have an EXC model, you will use the stock taillight.

If the bike does not have a taillight installed, then you will need to use a stock KTM taillight, such as the unit that comes with the EXC model.

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

Using the the tail light's mounting holes as guides, trace around each hole with a felt tip marker on the underside of the fender creating drill hole locations. Remove the tail light and drill four 1/4 inch holes. Reposition the tail light, and fasten with a screw, washers and nuts at each location.

Turn Signal Mounting

Step 1

Position the rear turn signals by visually lining up the signals within the molded signal notches. 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.

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

Step 2

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

TAILLIGHT AND TURN SIGNAL CONNECTIONS

Wiring Diagram Decal

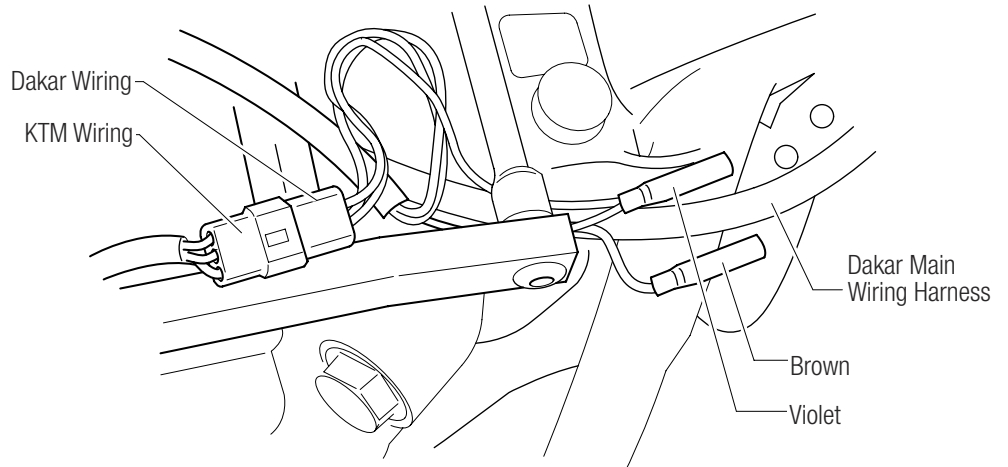
Stick the wiring connection decal on the rear fender, below where the seat will cover it up.

Taillight Connection

Plug-in the female KTM rear tail light connector into the male Dakar tail light connector. The Dakar KTM wiring harness features an end connector that fits perfectly with the existing component.

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. Be sure to route the wiring under the frame supports as shown.



Brake Switch Connection

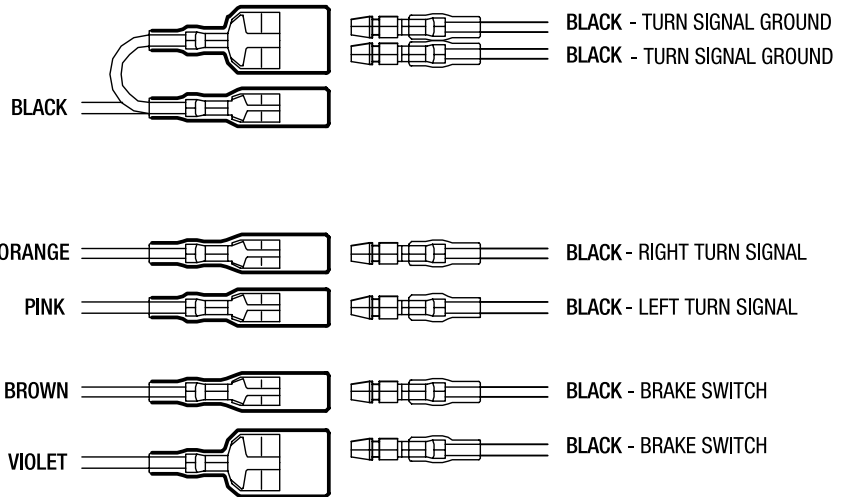
Connect one of the BLACK brake switch male leads into the BROWN female connector and the second BLACK brake switch male into the dual VIOLET connector. Route the wiring down along the front of the sub-frame towards the brake pedal. Zip tie the wiring to keep it clear from the exhaust header.

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.



BATTERY CONNECTION

IMPORTANT

You must modify your stator. Power demands within the electrical system require more output than the stock stator provides.

Note: You can send in your stator for modification by ElectroSport USA or perform the modification yourself as instructed on the next page. If you do not perform this stator modification, your charging system will not function properly.

Routing The Dakar Wiring

Step 1

Feed the Dakar wiring through the throttle side of the triple clamps along the top part of the frame. (Be sure to keep the large WHITE block connector facing forward). Once you get to the sub-frame, you need to route the harness underneath the sub-frame then along the top back area of the airbox and battery. The wiring then needs to route under the battery, on top of the rear fender. (See Side View Illustration)

Step 2

From the airbox side of the bike, disconnect the existing wiring harness connector from the bottom side of the battery.

Step 3

Plug-in the Dakar wiring harness into the connector at the bottom side of the battery (Connection - A) and then connect the other end of the Dakar's RED / BLACK / and WHITE wire connector into the connection that was previously plugged into the battery (Connection - B)

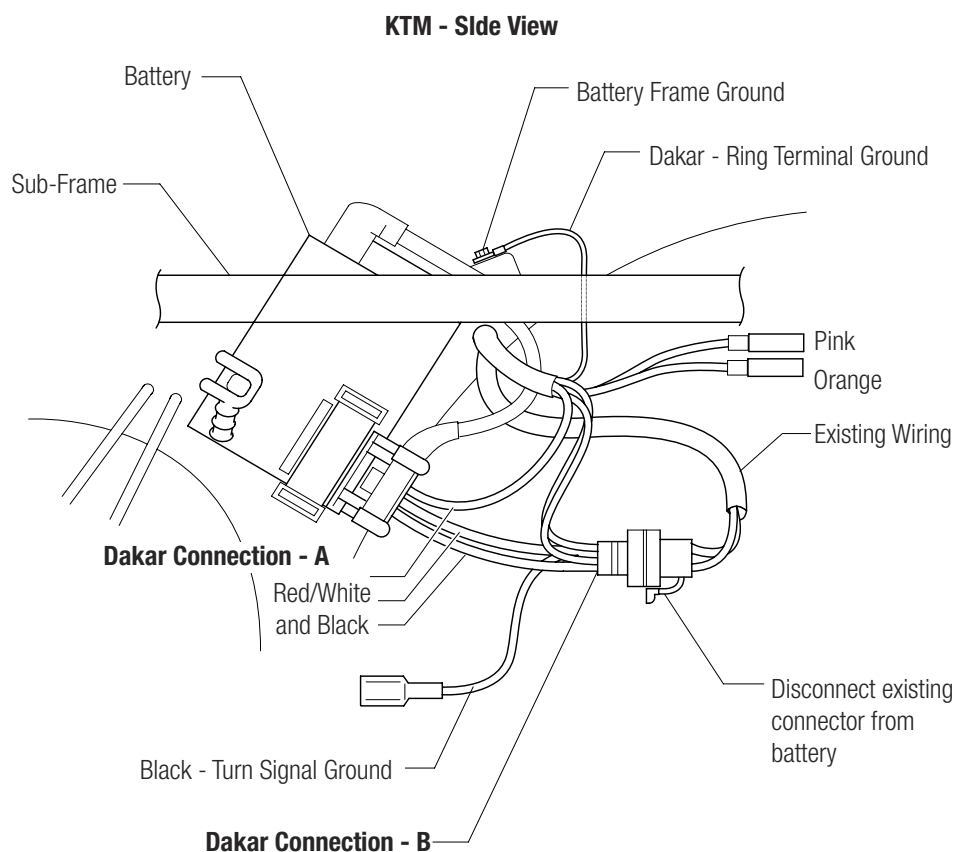
Note: Ensure all connections are fully and completely seated together. Double check each connection.

Step 4

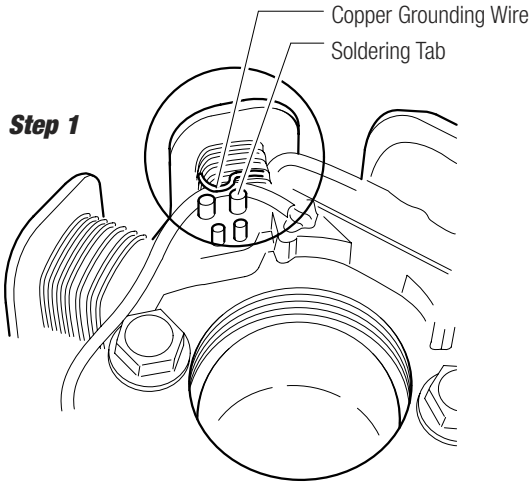
Connect the BLACK ground ring terminal wire to the battery frame ground.

Step 5

Carefully slide the PINK, ORANGE and dual BLACK wire up through the center of the rear fender.



STATOR MODIFICATION



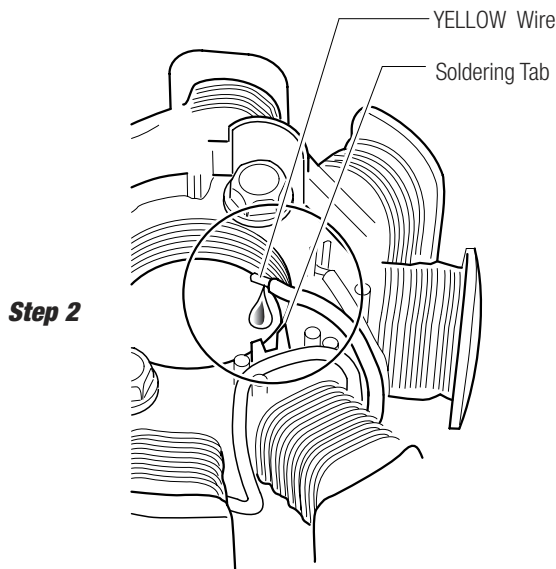
Remove the stator from the engine following the procedures in the KTM service manual.

Step 1

The grounding wire of the lighting coil must be un-soldered from the ground. This is easily done by placing a screw driver gently underneath the copper ground of the lighting coil (doing so gives some leverage to this wire so that a soldering iron can easily free up this soldered original wire). While applying a heated soldering gun, carefully lift this copper grounding wire out of the soldering tab.

Step 2

Repeat the procedure in step 1 for the end of the yellow wire on the opposite side of the stator. Once the yellow wire is free, trim back the plastic protective sleeve by about 1/4" inch exposing bare wire.



Step 3

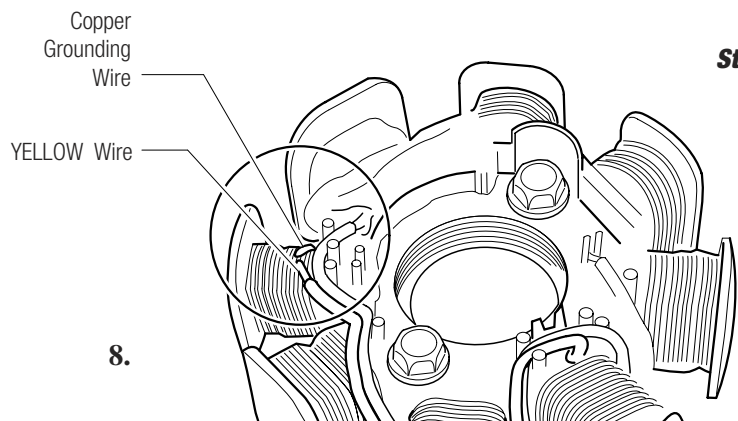
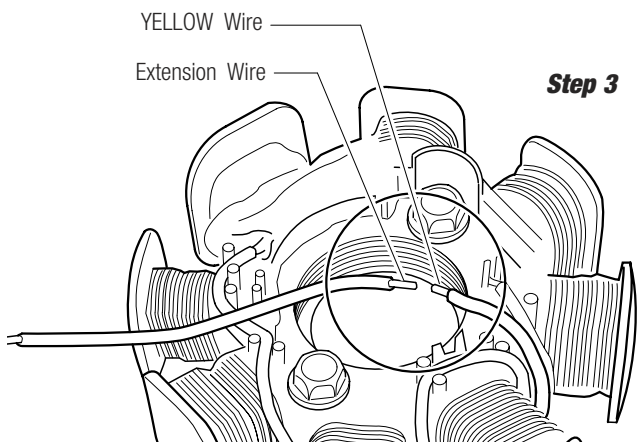
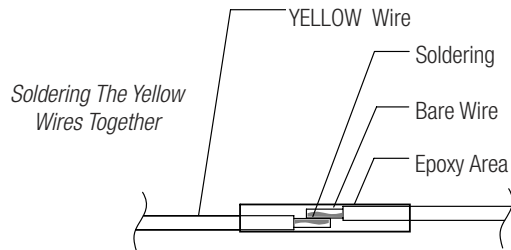
Solder together an 3.0" inch length of wire to the existing YELLOW wire, and add a dab of epoxy to the soldered ends.

Step 4

Wrap the extended YELLOW wire around the stator, following the path of the RED wire and then solder together the end to the grounding wire freed up in step 1.

Step 5

Complete by adding a dab of epoxy to the soldered grounding wire and YELLOW wire junction.



KILL SWITCH AND STATOR WIRING CONNECTION

Disconnect Existing Kill Switch

Step 1

From the KTM existing kill switch, pull apart the YELLOW/BLACK wire connection.

Step 2

From the DAKAR wiring harness, plug-in the WHITE/BLACK male into the existing YELLOW/BLACK (previously disconnected).

Step 3

From the DAKAR wiring harness, plug-in the WHITE/BLACK female into the existing YELLOW/BLACK (previously disconnected).

Stator Modification

IMPORTANT

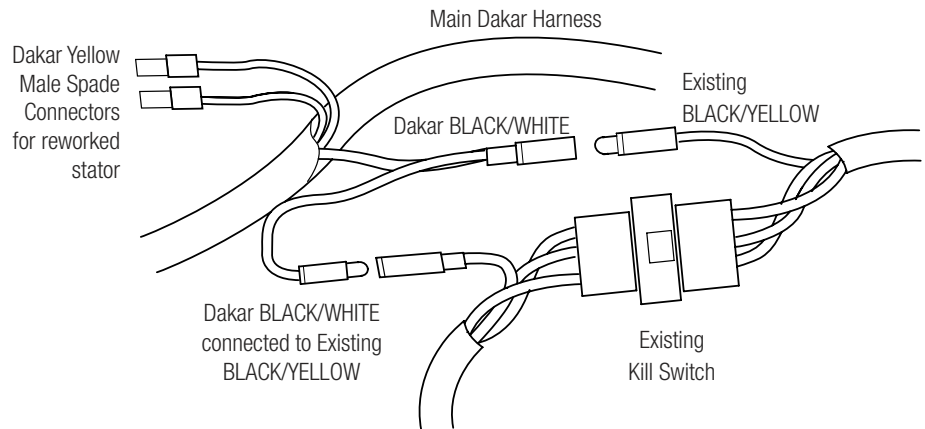
As previously instructed, The stock stator must be modified. If you have not done this, STOP the installation and perform the modification!

Why? The stock stator on the KTM will not output enough power to operate the dual sport features such as turn signals, horn, and circuit board functions correctly.

You can send in your stock stator for modification by ElectroSport USA. For information and stator rework turn around please call 1-888-369-8359

If you do not modify the stator:

It may result in damage to the Dakar kit or other charging system failures. ElectroSport cannot be responsible for damage to motorcycles or systems resulting from failure to installing the kit properly.



HEADLIGHT WIRING

Main Wiring Harness Connection

Access the Dakar wiring located behind the headlight, by loosening two lower screws and remove two top inboard screws. This is required in order to provide enough freeplay to tilt the headlight forward for harness connections. Please refer to headlight adjustment for more information.

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

Plug-in main wiring harness connector. Be sure to fully seat the connection. You will hear the connector "click" into position on both the top and bottom.

Horn Connection

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

Turn Switch Wiring Connection

Plug-in main turn switch wiring harness connector into the right side block connector on the Dakar unit. Be sure to fully seat the connection. You will hear the connector click into position on both the top and bottom.

Main Wiring Harness Connection

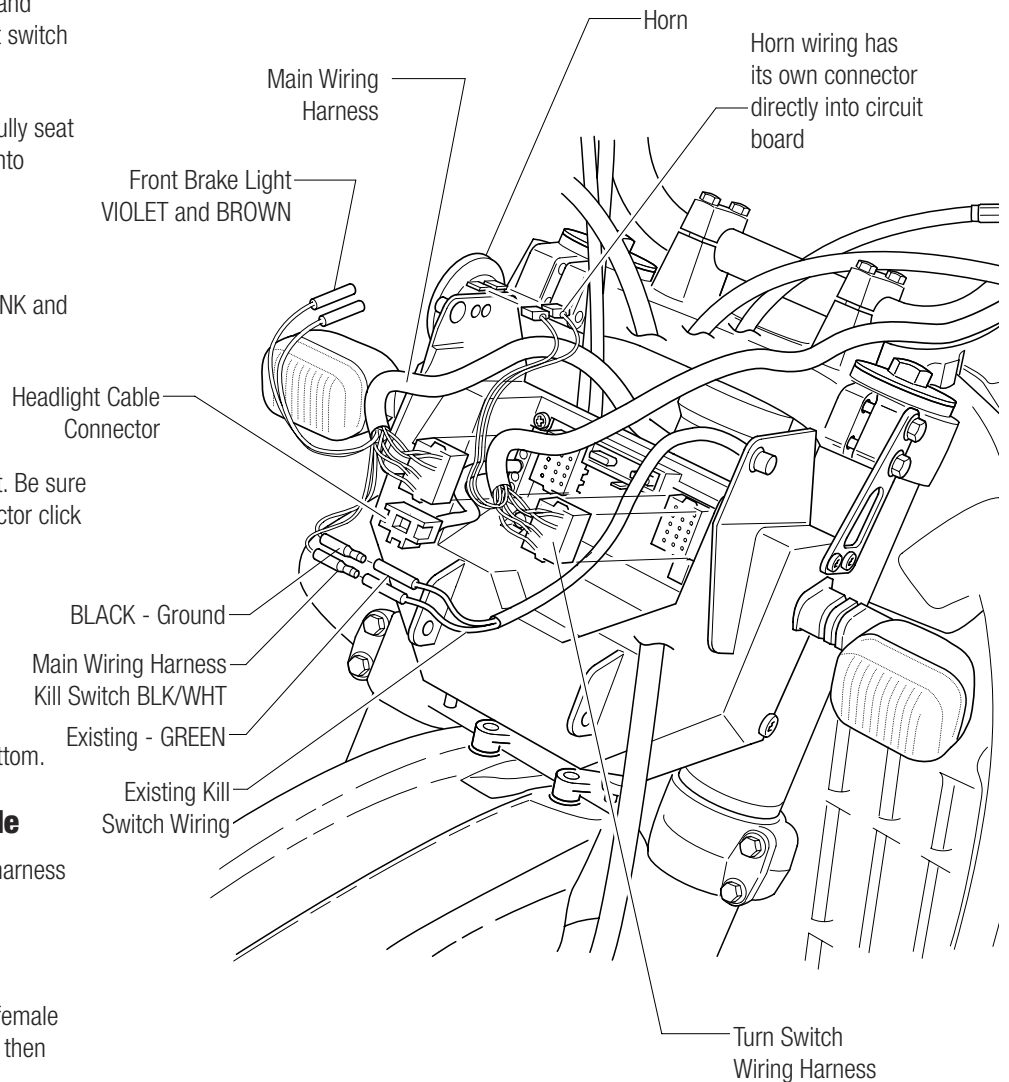
Plug-in main Main wiring harness connector into the left side block connector on the Dakar unit. Be sure to fully seat the connection. You will hear the connector click into position on both the top and bottom.

Connect The Front Brake Switch Cable

Plug-in the two female leads from the main wiring harness previously installed.

Connect the kill switch cables

From the main wiring harness, connect the BLACK female lead, into the existing kill switch GREEN ground and then connect the BLACK/WHITE male/female leads



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 two inboard screws (A) as shown. Complete the assembly by tightening the lower two screws (B).

Accessing the wiring behind the headlight

When accessing the Dakar wiring located behind the headlight, you must loosen the two lower screws (B) and remove the two top screws (A). This is required in order to provide enough clearance while tilting the headlight forward.

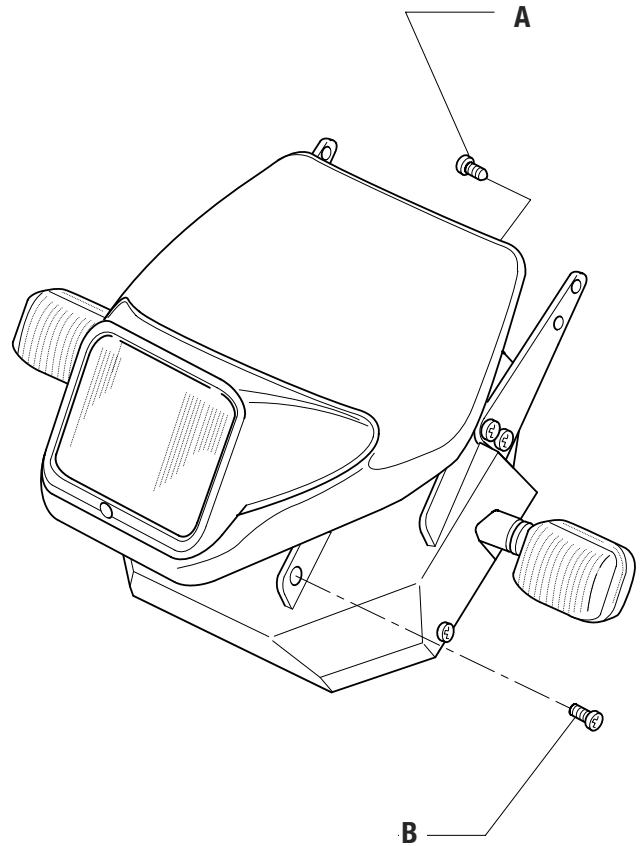
BEFORE RIDING YOUR BIKE

Ignition Key

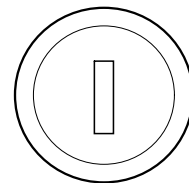
The Dakar Dual Sport Kit features a security key designed for theft prevention and unauthorized operation of the motorcycle. To start the motorcycle, rotate the key to the ON position as shown.

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.

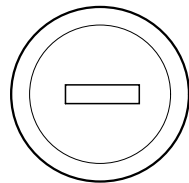
The key is designed only as a means to disable operation of the motorcycle. Use the turn signal kill switch to shut the motorcycle off. Leaving the key in the ON position will drain the battery, so be sure to turn the switch to the OFF position while leaving the bike unattended. Now start your bike up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

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