

4-STK KTM ELECTRICAL SYSTEMS

STEP 1: INSTALL STATOR AND/OR FLYWHEEL:

INSTALL STATOR (AND/OR FLYWHEEL)

STATOR INSIDE SIDE CASE



FLYWHEEL INSIDE ENGINE CASE

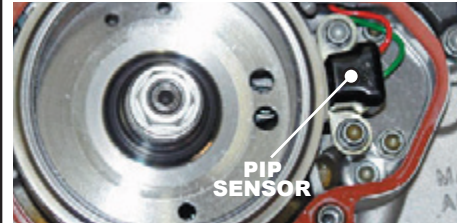


FOR MOST KTM, SIMPLY REPLACE THE STOCK STATOR AND/OR FLYWHEEL.

1. Turn off gas, remove seat and fuel tank.
3. Disconnect fuse (e-start models only.) (Check fuse if bike won't start at the end.)
4. Drain oil from engine case; then lay bike on its side.
5. Remove shifter to allow for easy removal of side case.
6. Remove side case, exposing the stator and flywheel.
7. Uninstall stock stator. (4-stk 2000-09 stators are mounted to the side case.)
8. Clean side case and bolts thoroughly, remove any dirt or pieces of gasket.
9. Install Trail Tech stator, opposite of the removal process. Use factory torque specifications and bolts. (Use Loctite at your own risk, it may make future stator removal difficult or impossible.)
10. If installing a flywheel, a model-specific flywheel puller is required. An air-ratchet is recommended for flywheel removal (1/2" impact wrench.) Tighten to manufacturer specification (do not use an impact wrench to tighten, damage may occur to flywheel or crankshaft. Trail Tech is not liable for damage due to incorrect installation.)
11. Reinstall side case and tighten bolts to factory torque specification. Use a new gasket if the original one has torn or become damaged.
12. Reinstall shifter and stand the bike up.
13. If you have drained the oil make sure to refill the bike to manufacturer specified level before operation.
14. Next, move on to step DC1 for DC systems, or step AC1 for AC systems.



MODEL-SPECIFIC NOTES



4-STROKE SXF / SMR

These KTM's come stock with a small sized stator and flywheel. For these models, the PIP sensor must be moved to the rear mounting holes to allow space for the Trail Tech flywheel. Also, the Trail Tech provided KTM side case must be used, instead of the stock side case.

4-STK 450/505 SX-F 2007-2009

4-STK 450/505 XC-F 2008-2009

These KTM's using "8360 series" parts do not require a regulator/rectifier for proper installation. Simply install the stator in place of the stock stator (a Trail Tech flywheel can optionally be added, to more than double power output.)

TIP: ADD OIL TO 'DRY SYSTEM'

4-STK 250 SX-F 2005-2009

For models that have a "dry system" that do not use oil, oil can be added to prevent rust, water or dirt in the system.

1. With the bike on it's side, add 1/2 cup of low-viscosity 5W30 motorcycle motor oil to the engine case.
2. Using a liquid silicone gasket product, seal the weep hole, gasket, and engine case so that no oil can escape. Make sure everything is clean before application. Use a thin bead of silicone on both sides of the gasket for the best seal.

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AC INSTRUCTIONS:

AC

AFTER INSTALLING A TRAIL TECH STATOR AND REGULATOR, ADD LIGHTS TO AC CIRCUIT.

- SEE NEXT PAGE FOR DC INSTALLS -

AC SYSTEMS STEP AC1 - REGULATOR:

AC circuits can use a regulator (regulator/rectifier not required.)



AC Regulator

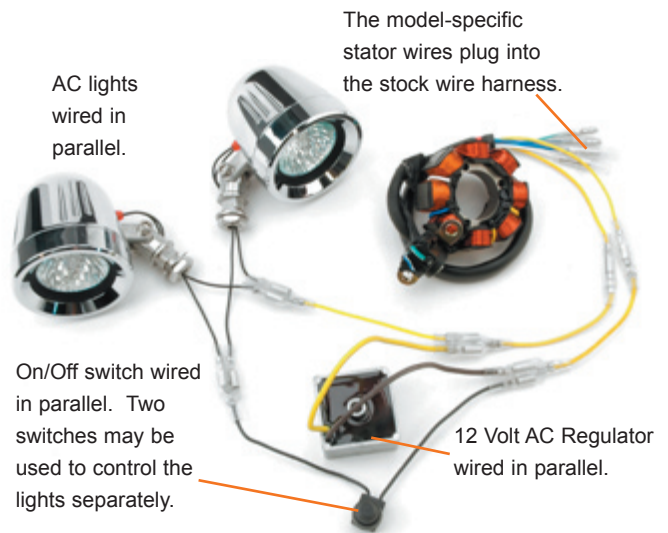
Yellow Regulator Wire: Power lead. Should intersect circuit between the stator and lights.

Black Regulator Wire: Ground lead. Intersects circuit between switch and stator.

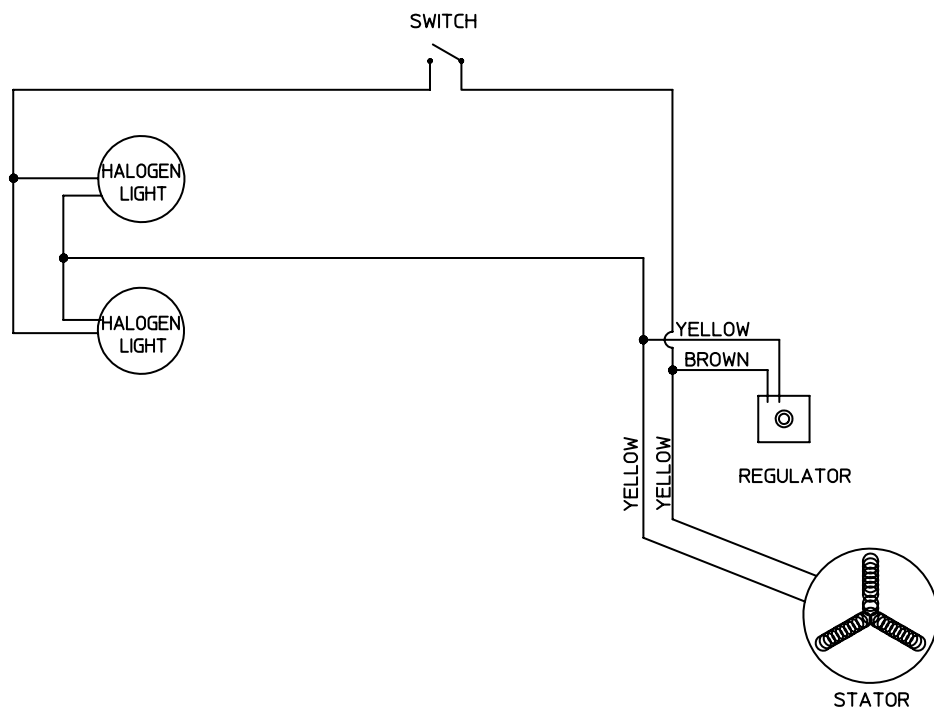
Regulator Ground: The regulator creates a frame-ground when bolted to the motorcycle frame.

AC SYSTEMS STEP AC2 - WIRING:

If installing an AC system, the circuit should be set up as below.



AC CIRCUIT CONCEPT DIAGRAM (GENERIC):



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DC INSTRUCTIONS:

DC

AFTER INSTALLING A TRAIL TECH STATOR AND REGULATOR/RECTIFIER, MOVE OR ADD LIGHTS TO DC CIRCUIT.

- SEE REVERSE SIDE OF PAGE FOR MODEL-SPECIFIC DC NOTES - - SEE NEXT PAGE FOR AC INSTALLS -

DC SYSTEMS STEP DC1 - REGULATOR/RECTIFIER:



1. Remove stock regulator.
2. Mount and plug in Trail Tech reg/rec.
3. Plug stator wires into the bike-side stock stator connectors.
4. Move on to step DC2, wiring for DC lights.

REG/REC MODEL-SPECIFIC NOTES

MODELS WITHOUT A STOCK BATTERY

For models without a stock battery, mount the reg/rec and plug the stub connector into it. Run the red and black wires directly to the (aftermarket) battery, and the yellow wires to the stator. SEE DC CIRCUIT DIAGRAM ON REVERSE SIDE OF PAGE.

PRE-2005 KTM

If the stock regulator looks like below (the stock connector will not plug into the Trail Tech regulator/rectifier) then the provided stub connector must be soldered into the bike's wire harness.

Cut



Stock regulator

1. Cut stock regulator wires as shown to left.
2. Solder provided stub connector's wires to bike, as shown below.



STUB CONNECTOR



BIKE WIRES

- YELLOW (stator) →
- WHITE (stator) →
- BROWN (-) →
- RED/YELLOW (+) →

TRAIL TECH WIRES

- YELLOW
- YELLOW
- BLACK
- RED

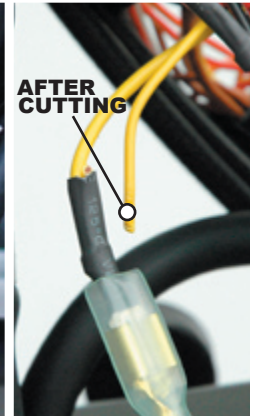
DC SYSTEMS STEP DC2 - WIRING:

NOTE: 4-STK 450/530 EXC-R 2007-2009 REQUIRES ALTERNATE WIRING. SKIP THESE STEPS AND MOVE ON TO STEP DC3.

1. **Move stock light to the DC circuit:** divert lighting wire from AC circuit to DC circuit. In stock form, the lights are powered by the AC half of the electrical system. In order to continue to use the stock light, find the yellow wire (runs to stock headlight) shown below (wire bundles are found underneath gas tank) and cut the smaller gauge yellow wire.

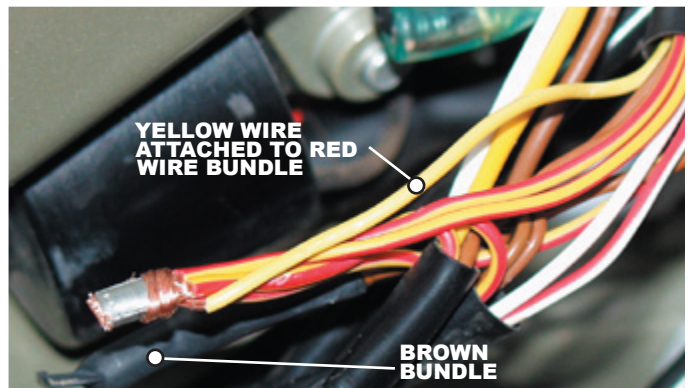


SMALLER GAUGE YELLOW WIRE (CUT AT OTHER END OF THE WIRE.)



AFTER CUTTING

2. **Re-connect stock light wire cut in step 1.** Solder the stock-light-yellow-wire cut in step 1 into the red/yellow wire bundle shown below.



YELLOW WIRE ATTACHED TO RED WIRE BUNDLE

BROWN BUNDLE

3. **Connect aftermarket light:** Wire the light's red(+) light lead to the positive(+) battery terminal, and the black(-) light lead to the negative(-) battery terminal. Trail Tech lights should use a 10-20 amp fuse as close to the positive(+) battery terminal as possible.

4-STK KTM ELECTRICAL SYSTEMS

DC INSTRUCTIONS CONTD.:

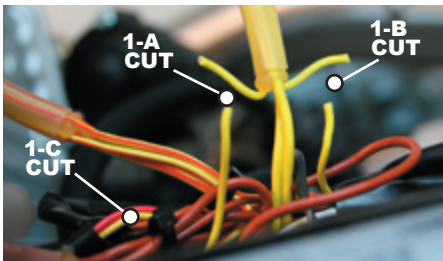
DC

- SEE REVERSE SIDE OF PAGE FOR DC INSTALLS - - SEE NEXT PAGE FOR AC INSTALLS -

STEP DC3 - MODEL-SPECIFIC DC NOTES:

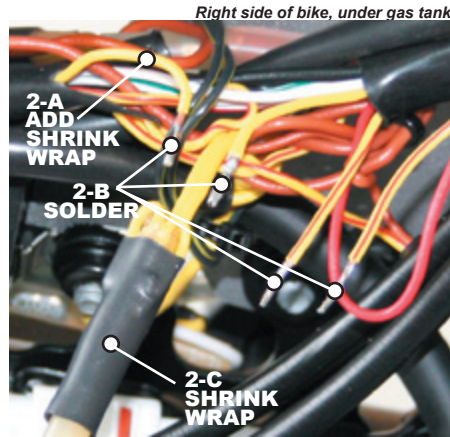
4-STK 450/530 EXC-R 2007-2009

CONVERT FROM AC TO DC WIRING.

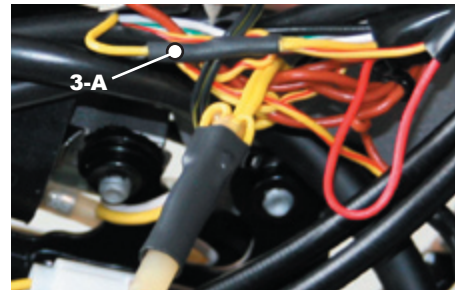


- 1-A. Cut AC power to headlight/ front brake light switch.**
- 1-B. Cut AC power to rear brake light switch.**
- 1-C. Cut Switched DC power to horn (yellow wire with red stripe.)

**These wires can be identified as the two SMALLER GAUGE wires in the 4-WIRE YELLOW BUNDLE.



- 2-A. Slip a piece of shrink wrap over this wire (don't heat yet.)
- 2-B. Solder the four wire ends from step 1.
- 2-C. Shrink wrap the cut wire bundle from 1-A/1-B to prevent an electrical short.



- 3-A. Apply heat to the shrink wrap from 2-A, covering the four-wire connection created in step 2-B.

NOTE: Completion of these steps will convert tail light to switched DC power. Headlight, brake light, and tail light will only function when key is on.

DC CIRCUIT CONCEPT DIAGRAM (GENERIC):

