DT175

12 Volt Conversion

Skill Rating: 

Rex's 12 volt conversion for the Yamaha DT175 is 'plug and play' with no changes to the generator. Fitting is extremely simple, just remove the 6 volt rectifier and regulator and then plug in a new combined 12 volt regulator rectifier unit. Our kit assumes your wiring loom is standard, as Yamaha made it. We do include a selection of replacement crimp terminals just in case some original connectors have been replaced. There is nothing changed in the generator, no wires to cut, no need to even take the engine cover off. The modified 12 volt system starts charging at 1,200 RPM and supplies up to 45 watts of AC power to the headlamp bulb as well as sufficient 12 volts DC to charge the battery and power the rest of the lights.

We also stock "Accessory Packs" with a suitable indicator relay, horn and 12 volt bulbs, one version has a 12 volt Motobatt MB3U battery and one for export without the battery. This pack is priced lower then buying the parts separately.

Important - you will need to select a headlamp bulb in addition to the accessory pack, bikes from different markets often use different bulbs from UK machines. With older machines its always best to look at the bulb fitted to your bike. Often we find the specified bulb has been changed to something else. Note that we are not able to look up the bulb for you, however our website has good clear pictures of the different types.

Technical support is via e-mail only. If you have read this guide and are still unsure about the wiring you should get the work carried out by an experienced mechanic. This modification is given a simple rating.

There are NO changes needed to the ignition, the original HT coil is still used.

Warning: Serious injury and/or damage to your motorcycle can result if you apply 12 volts to a 6 volt battery. Batteries can explode or leak acid if the wrong voltage is applied to them. Battery acid is highly corrosive and toxic. We recommend only AGM or sealed lead/acid batteries, to reduce the possibility of injury and/or damage to equipment.

Recommendations

-Use the same fuse as specified in the manual, this does not need to be changed to a different value.
-Use only the correct Japanese motorcycle crimp terminals as supplied with the kit. Avoid using other types.
-All crimp connections must be made using the correct crimping tools.
-The earth is as important as the feed wires.

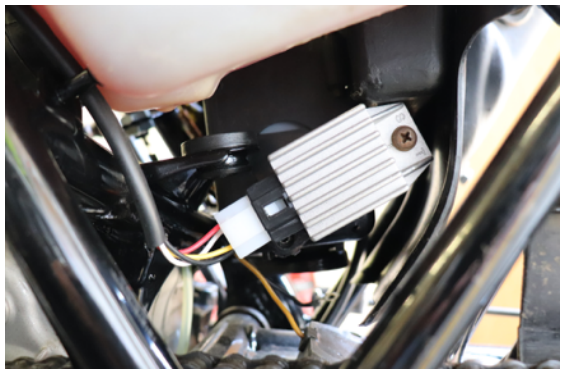
If our equipment is mixed with non-recommended parts and the kit does not work as expected, you will be required to fit the correct specified parts BEFORE our technicians can commence trouble shooting.

You must not use:
LED bulbs (LEDS are OK for the indicators)
HID 'projector' bulbs.
Any different voltage regulator than the specified part - RR12V-1.
Lithium batteries. Any battery you use must be compatible with a lead acid battery charging system with 14.7 volt nominal output. Note adding LED lights may cause the system to charge at a slightly higher level.

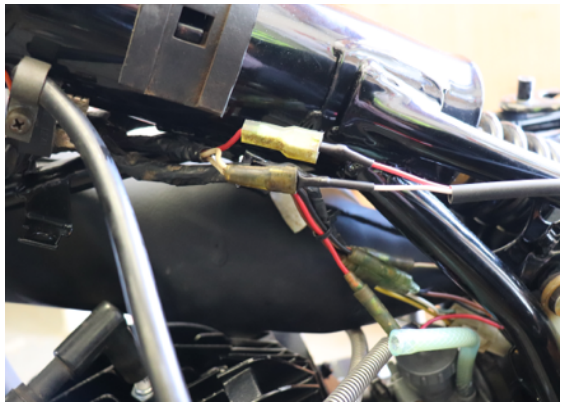
It should be noted that LED headlamps or bulbs must not be used unless they can run on AC power

It is a condition of sale that the installer assumes all responsibility and liability in ensuring that the system complies with local vehicle lighting laws and safety regulations.

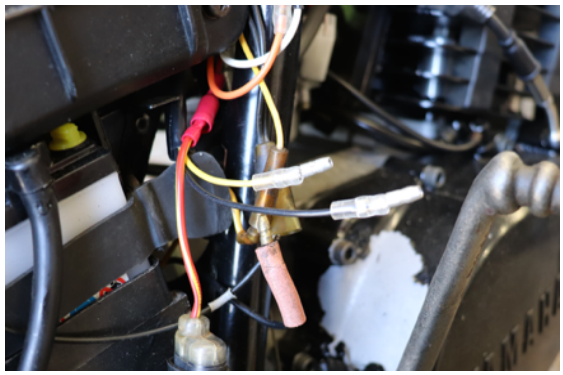
Fitting Guide



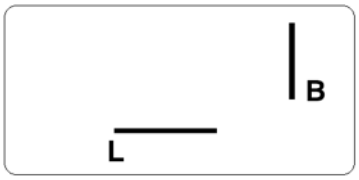
1. To carry out this conversion you will need to remove the set and tank. Follow the shop manual for details on how to do this.
2. The 6V regulator is located below the oil tank/air filter. Remove it and fit the new 12V unit here.



3. Run the new wiring loom up towards the 6V rectifier. Disconnect the Yamaha wires (white & red) at the rectifier and connect them to the new white & red wires. Remove the 6V rectifier.
4. Adjacent to the battery the new black & yellow wires from the new regulator connects to the black and yellow wires that were connected to the OEM regulator.
5. Replace the battery, indicator relay, horn and bulbs with 12 volt items.
6. Start the engine and check that the voltage at the battery (DC) is between 13.8 - 14.9 volts at 2,500 RPM.



Indicator relay connections (Rex parts only, others may differ):



L= 'Lamps'
B='Battery' IE live

Troubleshooting

- **General:** Because the wiring system has not been changed, for all trouble shooting regarding issues such as lighting not working the shop manual must be followed.
- **Charging voltage slightly high:** Voltages that are slightly higher than the given levels are never usually traced to a faulty regulator. The fault is normally a number of bad earths in the standard wiring system. In older systems this is common, the fix involves remaking the earth connections and ensuring that the wiring loom has not been badly repaired in the past by removing the external covering and inspecting the condition of the wires beneath.
- **Charging voltage slightly low:** Rear brake light stuck on, headlamp bulb too high wattage (recommended 45 watt max). Battery too large. Accessories fitted, heated grips etc taking too much power.
- **Voltage over 20 volts:** Check regulator connectors. Regulators returned will be given full diagnostic testing on our charging system analysis equipment, those returned with damaged rectifiers due to incorrect connection to the battery will not be replaced under warranty.
- Never use a HiD “projector” or LED headlamps most are not able to run on AC power and will fail immediately.
- Never attempt to use only the DC output to power all electrical loads.
- This conversion is NOT suitable for use with heated grips or clothing.
- To reverse this conversion remove the 12 volt unit and replace with 6 volt regulator and rectifier.

For technical support e-mail: tech@rexs-speedshop.com. Please note our electronics technicians are not able to trouble shoot indicators or lights not working - use the shop manual for this type of fault.