



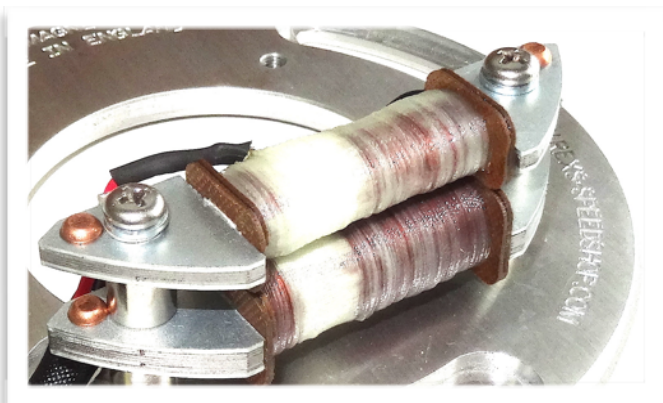
OFF ROAD ELECTRONICS DIVISION

TY175 Electronic Ignition RMK-1 Fitting Guide

Applicable to Clubman & Pro kits

Thank you for purchasing from Rex's, we have created the most powerful self generating electronic ignition available for the TY through the use of our "Dual Power" stator and trials specific timing curves. It has been carefully designed so it is simple to fit and gives a dynamic timing curve specific for Trials riding. We take away all the guess work from the set up, just bolt on and enjoy outstanding performance.

Our 'Clubman' & 'Pro' electronic ignitions both feature our unique "Dual Power" source coil stator. It gives significantly more electrical energy than ignitions with only a single source winding plus delivering a significantly hotter and stronger spark - right from kick starting to full throttle.

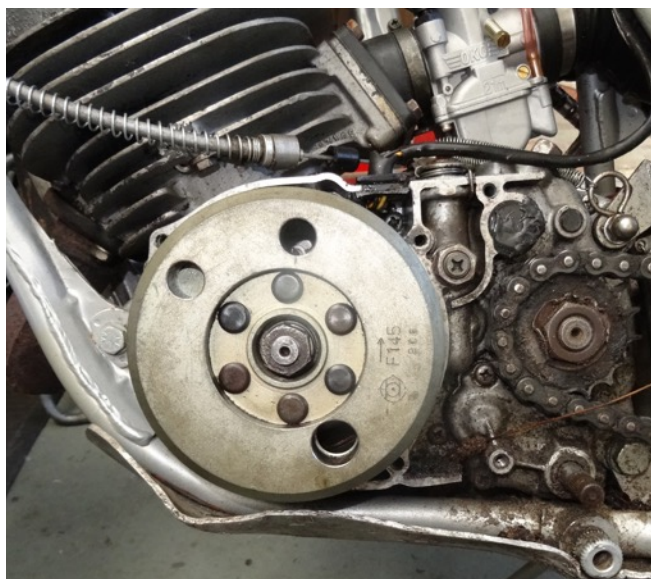


'Clubman' kits have a single advance curve for "all round" Trials riding.

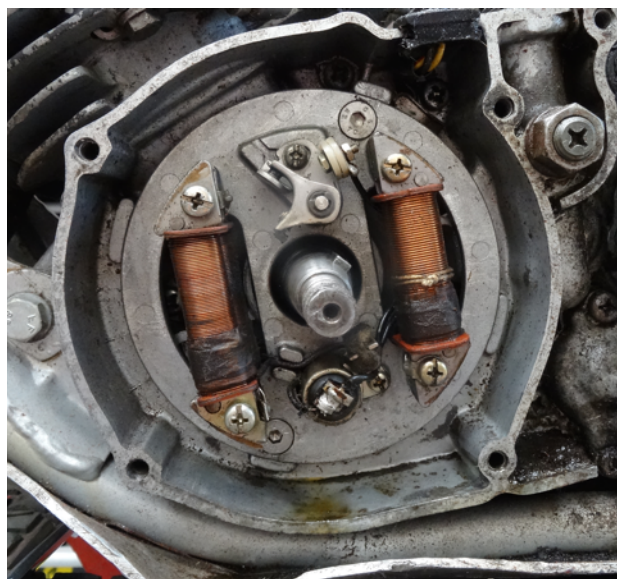
'Pro' versions have a boosted "Hill Climb" timing curve (the "advance" setting) selectable via a handlebar switch in addition to the "all round" setting

Dual power system gives more power than ignitions with only a single source coil.

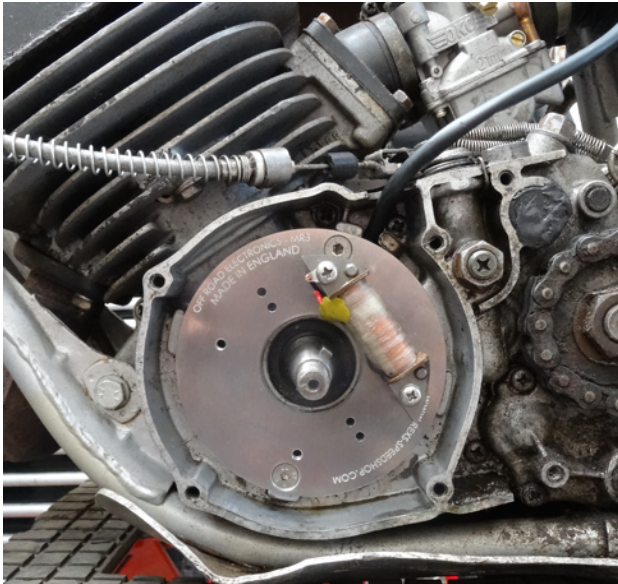
Fitting Guide



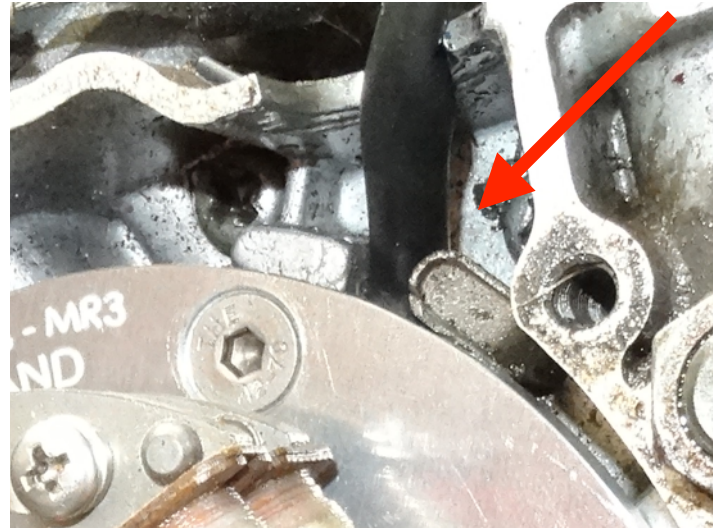
1. Start by removing the flywheel. You will need a flywheel puller (p/n: FWP-1). A pneumatic or electric impact driver makes this job much easier. The flywheel can be virtually impossible to remove without the correct tools.



2. Undo the stator retaining bolts and remove the stator along with the wiring.



3. Fit the electronic ignition stator with windings in the 2 O'clock position as shown.



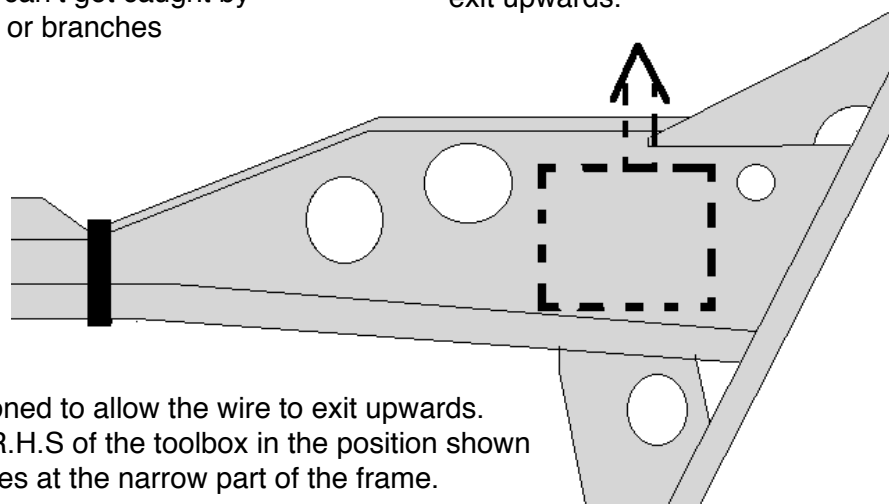
4. Ensure the wire is behind the retaining clip. Refit the fly-wheel and ensure the wire is not rubbing on the flywheel. Torque tighten to the Yamaha specification.



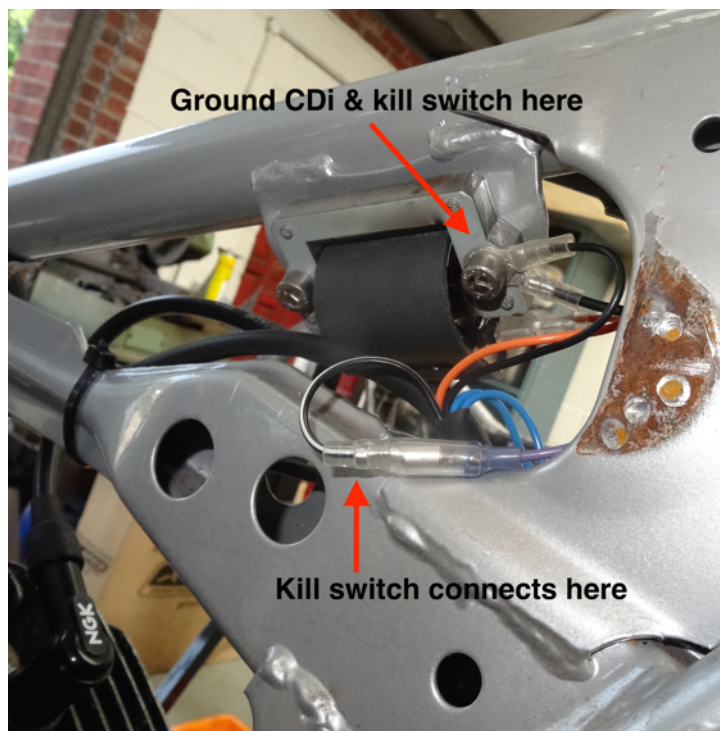
5. Route the stator wire up along the frame as shown. Cable tie it so it can't get caught by objects such as bushes or branches



6. The CDI is adhered to the inside of the tool kit via the adhesive pad. Peel off the protective cover and stick to the inner RHS of the housing, with the wires positioned best to allow them to exit upwards.



7. The CDI should be positioned to allow the wire to exit upwards.
 - Stick the CDI to the inner R.H.S of the toolbox in the position shown
 - Cable tie the generator wires at the narrow part of the frame.



Correct HT coil mounting



8. Mount the new HT coil with the HT lead pointing towards the rear wheel, as shown above.
9. Fit the new waterproof NGK HT cap supplied in the kit. CDI ignition gives a better spark with a resistor cap.
10. Ground the CDI unit black wire via the HT coil mount bolt. This is also the best place to ground one wire of the kill switch.
11. Connect the black/white wire from the CDI to the other kill switch wire.
12. Plug in the orange “hot” wire to the HT coil.
13. Connect the generator wires to the CDI unit.
14. If you have a “Pro” kit connect the two blue wires. It does not matter which way these go.





Final Actions - all types

Double check you have made all the connections correctly.

Check that all wires are secured with cable ties and don't interfere with other controls.

Refit the seat and fuel tank.

Start the engine. Confirm that the engine kill switch is working.

			
<p>Flywheel puller P/N: FWP-1</p>	<p>Tether type kill switch P/N: KS-1</p>	<p>Replacement selector P/N: LS-1</p>	<p>Iridium Spark Plug P/N: BR7EiX</p>

'Pro' versions only



Run wires on the rear of the handle bars and down through the hole in the frame to the CDI unit.



Fit the switch to the handle bar, it is designed for traditional 7/8" bars. You should loop the wires under the brake lever and then along the back of the handle bars so that branches or bushes on the course don't catch in the wire.

Some riders prefer to fit this in between the handle bar clamps, rather than next to the hand grip (as shown). The switch is less likely to be inadvertently operated or get flooded with water if mounted in the centre of the handle bars. The switch will not fit to "fatbars" in the mid position.

Route the wires down and pass them through the hole in the LHS of the headstock gusset. Secure the wire to the bars with cable ties.

Ensure the steering is free to move and that the wire does not interfere with or impede other controls.

Maintenance of the Dual Timing Curve Switch

The switch should be removed from the handle bars, any dirt, green sludge or corrosion removed using brake or contact cleaner at least once a year, ideally at the end of the season. The internal parts must be treated with petroleum jelly, which must be pressed in to the contacts from inside the switch housing. This will ensure trouble free operation of the ignition curve selector.

If the switch is repeatedly submerged in water the switch may need more frequent servicing. Dirty, wet or corroded contacts may cause the timing to change randomly. If a fault develops, stop riding the machine immediately and replace or repair any faulty parts before riding it again.

WARNING: Only start the engine in the "normal" position.

Warning: The throttle MUST be closed when switching between timing curves.

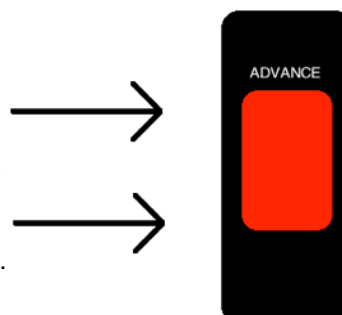
Danger: Operating the selector switch with the throttle open may cause the engine to have a power surge or falter, this may lead to loss of control and/or personal injury.

Carry out low speed practise runs on solid, level ground and learn how the engine feels when the different curves are selected.

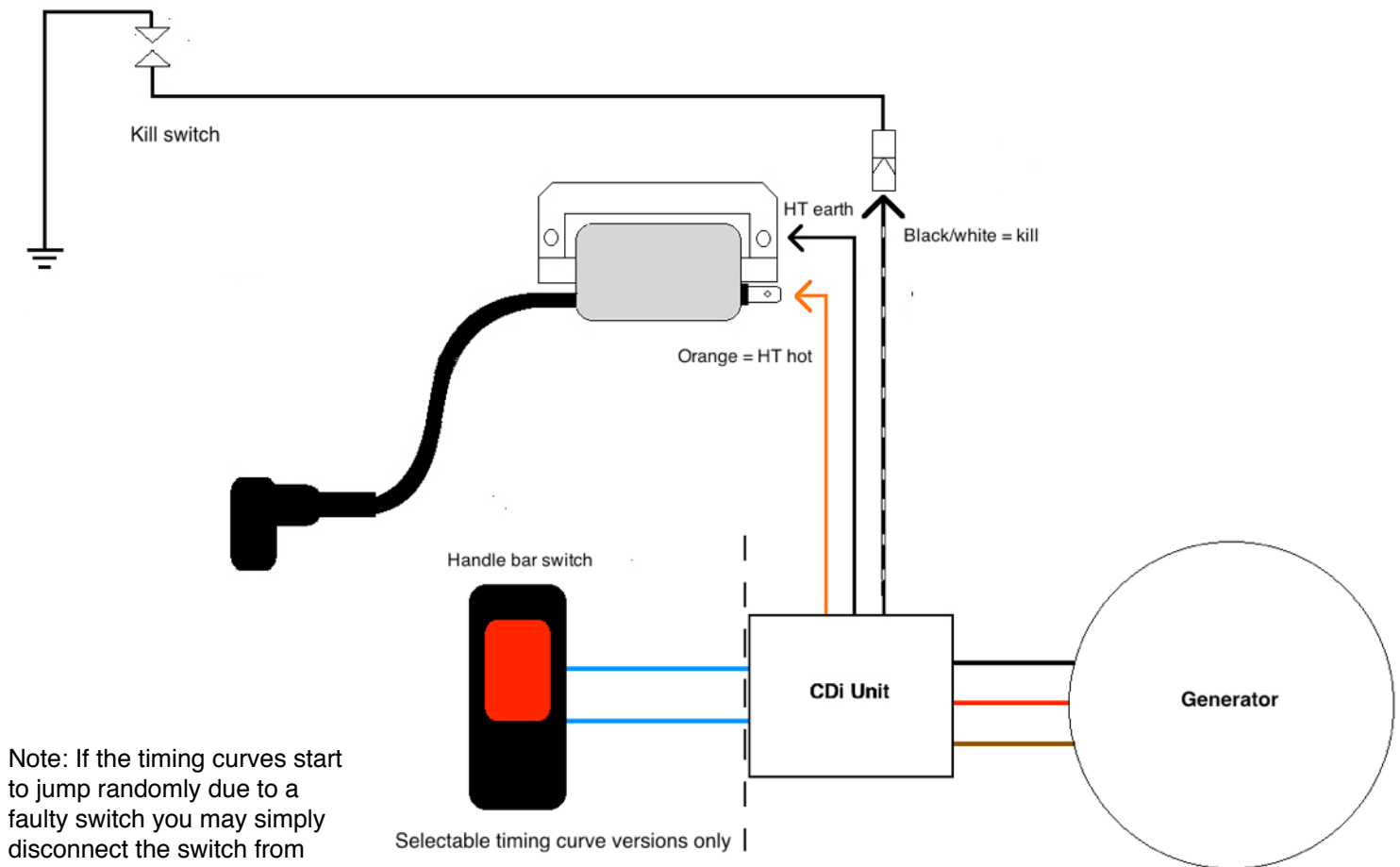
Hill Climbing or when more power is needed. Push the front of the switch down, towards the 'advance' for boosted engine power. Close the throttle while operating the switch!

Normal Trials terrain. Press the rear of the switch down, towards the rider. This position should also be used for starting the engine.

The switch is shown in the standard position in the pictures above.



Wiring Diagram



‘Clubman’ kits can be upgraded to ‘Pro’ level by replacing the CDi with one from a ‘Pro’ kit. Junior kits cannot be up graded although different timing curves can be chosen.

Warnings & Cautions:

Only use strobe lamps with an inductive clamp that fits around the HT lead. The type of strobe lamp that is connected between the spark plug and HT lead, interrupting the HT supply must **NEVER** be used as this type can cause the system HT voltage to rise to dangerous levels that can result in severe electric shocks which may be lethal or could cause serious injury.

People with heart conditions or those fitted with a pacemaker must not work on or adjust our ignition systems, nor work on the machine whilst the engine is running in case of electric shock from the ignition.

Working on motor vehicles requires specialist tools, knowledge and training. Serious injuries or accidents may result if parts are not correctly fitted or adjusted. Rex's Speed Shop Ltd takes no liability in the event of accident, injury or misadventure where parts supplied have been modified or incorrectly fitted or adjusted, where the fitting guide or shop manual were not followed or industry standard procedures or conventions are not followed or ignored.

This guide is intended to be used in conjunction with the Yamaha shop manual for your bike. You must refer to the latest revision of Yamaha manual for torque figures, assembly procedures and safety precautions. This guide does not over-ride any safety warnings or cautions.

Rex's RMK-1 Ignition TY175 Specifications	
Recommended spark plug	NGK BR7EiX
Spark plug gap	0.7 - 0.8 mm (0.028-0.032")
Plug cap	LB05F, LB05EMH
Timing	Clubman: 26 degrees BTDC @3,000RPM (TC2A) Pro: 26/30 degrees BTDC @3,000RPM (TC2A/B)
RPM Range	Sparks from 150 - 10,000 RPM
HT Coil	P/N: HTC8 Primary 1.0 - 1.5 Ohms. Sec 5 to 8 K Ohms.
Ignition Source winding	P/N: SC-9
Source winding resistance	Black to brown 82 Ohms. Brown to red 30 ohms at 20 degrees C. Engine not run for several hours.
Charging	None fitted. Lighting sets can be built to order.