TAYLOR 80 SUPREME Installation and Operation

Congratulations, and thank you for purchasing your new TAYLOR engine.

This is a high performance, two stroke engine which produces over six times the power of a standard largescale, RC car/buggy engine. Please be prepared for the transformation of your RC!!
Drive with care while you are getting used to this.

We strongly recommend fitting Micron 1T remote kill switc to your engine, as should be the practice with all largescale cars. Most normal 1/5 scale kill switches, plug straight in place of the stock button provided.

Important Safety Note:

Because of the performance potential of this engine in a vehicle, such as the HPI Baja, it is necessary to operate the vehicle in a suitable, controlled environment. It should not be operated in a public space where people are engaged in other activities, such as a public park. Do not operate in an area where there are children playing, near pets or other animals. Do not operate on a public. highway.
Loss of control of such a vehicle could result in serious injury to another person, family pet or other animal.
Be aware that the engine silencing is minimal so do not run the engine in an area where this could cause a nuisance. You and those around you should always use ear protection during operation.
Please note: All of the manufacturers safety instructions for the operation of the vehicle in which the engine is fitted, must be followed.

Fuel Safety Guidelines

Fuel is highly flammable. Never operate the vehicle near open flames. Do not smoke while handling fuel. Always operate the vehicle in a well ventilated area. Model car engines produce carbon monoxide fumes.

Installation in Kraken Vekta

Installation in the Vekta is pretty much the same as a standard engine with the exception of the expansion chamber. This is supplied with new brackets to attach to the car securely. It is connected to the engine using a gasket and header piece, then the main pipe attaches via a slip joint and retaining springs. A small length of tubing is supplied to fit to the end of the outlet and ensure no oil residue from the smoke is left inside the car.

Body Cage/panel Modification

As shown on the picture below, there are small mods required to the cage and panels which are in the way of the TAYLOR WJ71 V stack. Simply trim the cross bar and circle section from the cage, then cut a circle hole in the side panel for the V stack to poke through.
Also with the new SUPREME Cylinder head, it is required to remove the front right cage bar which hits the head.

Throttle/Carb/Intake

A Walbro WJ71 Big Bore carb is fitted as standard on the TAYLOR 80.
The carb is supplied with throttle arm prepared to take the supplied quick release fitting, we also supply a new link rod which is bent to fit the large crankcase.
With the 80 Supreme, the engine needs so much CFM that we ask you to cut your body and run the Filter Outside the panels with an outwerwear, see pic below for cutting recommendation.
NOTE: See further sheet for more information on the carb and settings

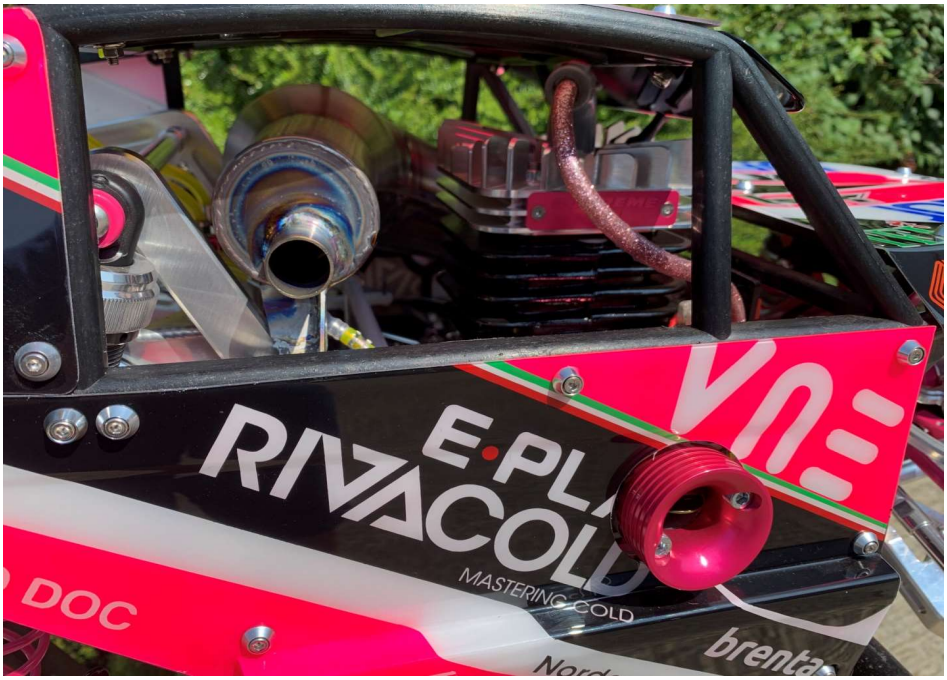
Gearing

A higher ratio is required for the main drive gears. A 24 tooth pinion and 17 tooth step gear should provide a good starting point. Suitable gears for the Vekta are made by Vertigo and we offer their system.
This ratio should give the car good acceleration and a reasonable top speed so it can be used in a reasonably sized space. Lots of other gear combinations are available too.
Please bare in mind tyre size, if you run Trepadors then stage 2 gears (21/20) will be plenty.

Drivetrain

Because of the considerable extra performance of the engine it will be necessary to upgrade the drivetrain with heavy duty parts. We would recommend using the TAYLOR kraken front billet diff housing.

We also advise to use 1M diff oil in the rear and 300k oil in the front diff. In this way you will always have a good spread of the power and the engine should not be able to overcome the oil too easily.



Installation in a Primal Raminator or Mega Truck

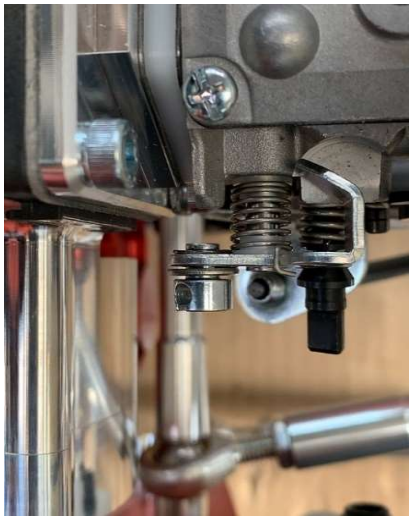
Fitment into the primal raminator is fairly straightforward. Once you have removed the stock engine and pipe, also remove the centre top cross over link bar between the two side chassis plates.

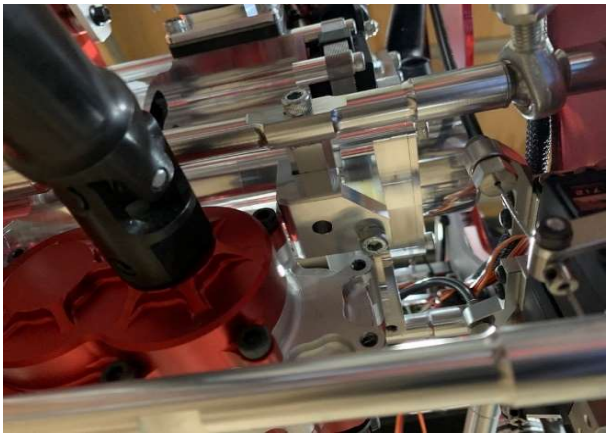
While the stock engine is out, we highly recommend cutting out a section of the side chassis plate next to the pull starter so that you can fit the engine (or even the stock engine) Without having to remove the pull starter or remove the side chassis plate itself. (see photo above with section cut out around the pull starter).

Next you can begin to fit your new taylor billet transmissing housing in the place of the stock one (direct swap) Now swap the gears and chain over onto the 110mm clutch bell also. Then the engine itself can drop in and bolt up with the supplied engine brackets (fitment shown in pics).

As mentioned above, if you cut your chassis it will drop in, if not, remove the pull start side chassis plate and then there is room to fit. Fit all the engine mounting bolts supplied. Next you can hook up the throttle linkage cable onto the big bore WJ carb. Simply remove the linkage cable hole from the stock carb by popping the bracket off and removing the E clip. Then put this piece onto the Hole cut out in the WJ Carb arm as shown in photos.

Finally you can fit the cable to the supplied holder bracket and adjust to suit. (again see photos) The last step is to fit the exhaust mounting bracket to the car ready to support the pipe. (the main belly section of the pipe fits to the car AFTER the body has been fitted - slide in through the gap at back of the roll over bar and into place). Then its as simple as two retaining springs and the one nut on the rubber mount!





Walbro WJ146 and WJ71 Carburettor Setting

Make sure you complete the run in of the engine on a rich setting before considering leaning it out for optimal performance. Please remember your climate and altitude could result in the requirement for different settings, so as with any two stroke, start with caution and care.

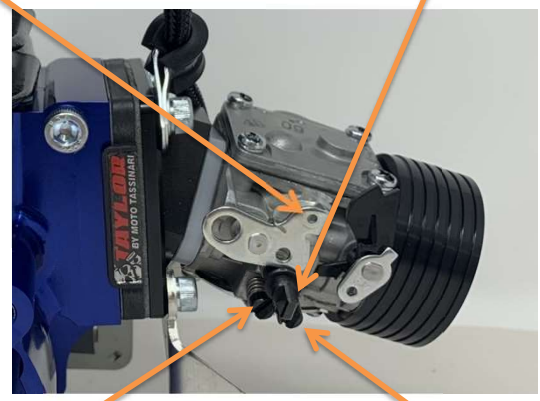
We fit the Walbro WJ146 carb as standard which does not come with a priming bowl.
Priming the engine is simple. Pull the engine over with the choke on a few times in order for the fuel pump within the carb to pull the fuel up the line into the carb itself. Its ideal to use a clear fuel line so you can watch this process and see when the fuel reaches the c Then you can expect the engine to fire up, sometimes with the aid of a small amount of throttle and choke.

NB: CHECK OUR YOUTUBE CHANNEL FOR A WJ CARB STARTING TUTORIAL VIDEO

Location of carburettor controls

Throttle lever

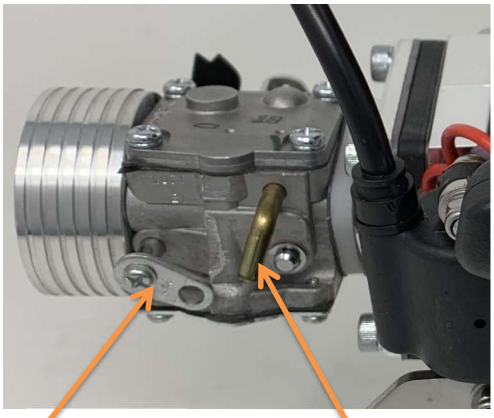
Idle Speed adjustment screw



Low Speed mixture adjustment screw
Base setting:- 1 1/2 turns out

High Speed mixture adjustment screw
Base setting:- 1 3/8 turns out

The base settings of the mixture screws may need some adjustment to suit your local atmospheric conditions e.g. temperature, humidity. If so adjustments should be made 1/16 of a turn at a time, with a test run after each adjustment. Do not exceed 1/3 turn in from the factory setting or it may result in engine damage.



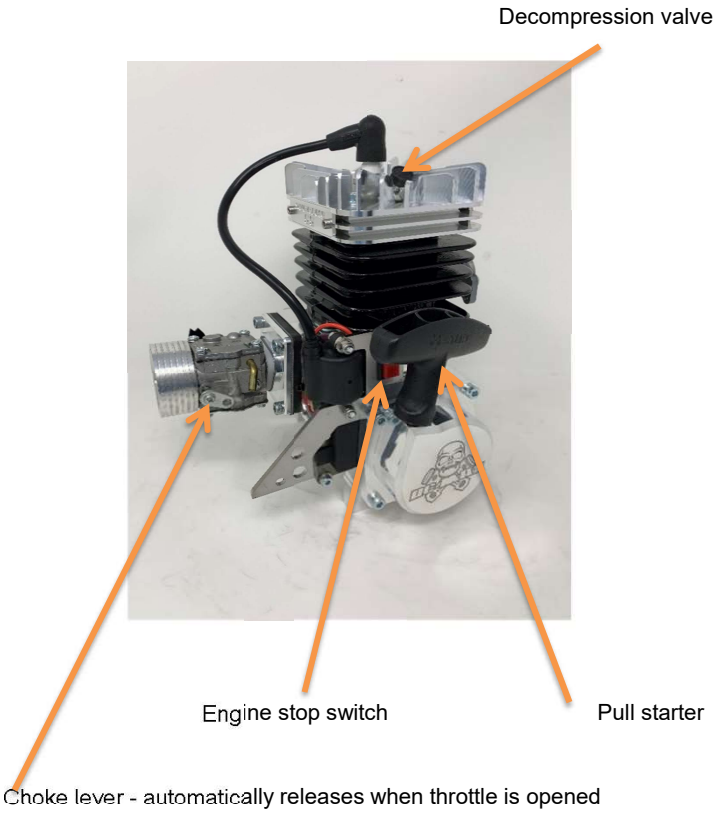
Choke lever
Shown in 'OFF' position

Fuel feed connection

Note: This carburettor has only one connection to the fuel tank. This is the fuel feed tube which must have an in tank filter fitted.
There is no fuel return tube required so this should be removed and the hole blanked off using a suitable sealing plug as long as your tank has a breather, if. not then fit a MX style non return breather valve in the second unused line.

Engine Starting Procedure

NOTE: Your Air Filter requires oiling before use - We are cautious with the fumes from the oil causing issues during shipment.



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First Time Engine Starting.
When starting for the first time following engine installation it will be necessary to draw the fuel from the tank up to the carburettor. Push the choke lever down into the 'ON' position. Press the decompressor valve down and pull the starter cord about 3-4 times a little slower than for engine starting. If you have a clear fuel tube you will see the fuel being drawn into the carburettor. Once this procedure is complete you can start the engine.

Engine Starting.
With the choke on, first engage the starter carefully and then pull the starter cord fully and strongly to start the engine. **Please note that it is necessary to reset the decompressor valve after each pull of the starter.** After two to three pulls of the starter the engine should fire once. At this point release the choke lever, press the decompressor and pull the starter cord to start the engine. Two or three **STRONG, HARD** pulls should be sufficient. **DO NOT SNATCH** at the starter, engage first and then pull through with a strong meaningful stroke.

Engine Break-In.
After starting the engine make sure it is fully up to operating temperature before driving the vehicle. For initial break in during the first 5mins, allow the engine to idle with intermittant blips of the throttle then cool. For the 2nd/3rd/4th start operate the vehicle in a large open space at medium car speeds with a nice rich crackley tune so that there is lots of fuel going through the motor and lots of air rushing over the fins! The cruelist thing to do to a new big bore engine is driving it around slowly in a small space.

Safety Note: Because of space limitations within the vehicle, the silencing of the exhaust system is limited. Always wear ear protection when running the engine.

The TAYLOR 110mm clutch system

This fully adjustable clutch requires minimal maintaince but lots of tunability. To increase the engagement rpm. Simply add pre-tension onto the 3x adjuster nuts to compress the springs. To decrease, reverse.

Stock settings for fibre shoes on Raminator/GOPED = 21.80mm compressed spring length (blue springs)

Always adjust the 3x nuts evenly and check the spring lengths after clutch adjustment to make sure they are all the same length (with proper Vernier calipers)

Clutch Removal/Replacement

Your engine will be supplied with a custom 110mm clutch pulling and service tool. See our youtube tutorial video on the TAYLOR Official channel for detailed advice on how to use it.

Maintenance

To ensure that you get the maximum enjoyment from this product and a good service life, TAYLOR recommends that you take a little time to clean the engine and vehicle after use.
It is easy to spot a little problem such as a loose bolt on an engine mount before it becomes a much bigger problem.

It is absolutely essential that only the best quality fully synthetic two-stroke oil is used. We recommend Putoline RS959 or Motual 800 oil but there are lots of great products on the market.

This must be mixed at a fuel/oil ratio of 25:1. Only good quality **99+ Octane** must be used to prevent the possibility of detonation or seizure. (ideally a two-stroke friendly leaded race fuel such as VP C12.)

The best type of air filter to use with the engine is the quality dual stage RAM-AIR filter and should be kept oiled at all times. The filter is very effective at keeping the engine clean internally even when run in dusty conditions. Regular cleaning and re-oiling is required to keep air filtration at its best. The use of an water resistant Outerwears protective element is recommended for filtering out large debris.

Paper element filters can be used but should be of the highest spec, such as that supplied in the billet, air filter system and should be run dry and kept clean with regular checks.

Please ensure that your fuel equipment, and fuel system of the vehicle is kept in a clean condition. Dirt can play havoc with carburettors leading to much frustration and little fun. Please make sure your vehicle in-tank fuel filter is in good working order.

Due to the size of these engines, they tend to offer a longer service life from the piston and ring than you may be used to with traditional tuned RC engines. This will depend on how you use it and look after it but its not unusual for a well maintained TAYLOR to go years between rebuilds.

If you are unsure about carrying out a rebuild, we are more than happy to do it for you for a small charge plus parts.

Please contact TAYLOR RC for advice, or service, if you are in any doubt.
Contact details are as follows:

Main Contact: Mike Taylor
Contact E-mail: sales@taylorrc.co.uk

Limited Warranty

What this Warranty Covers

TAYLOR RC warrants that the product purchased will be free from defects in materials and workmanship at the date of purchase by the Purchaser.

What is Not Covered

This warranty is not transferable and does not cover (i) cosmetic damage, (ii) damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or due to improper use, installation, operation or maintenance, (iii) modification of or to any part of the product, (iv) attempted service by anyone other than TAYLOR RC or their appointed agent, or (v) products not purchased from TAYLOR RC or their appointed agent. (vi) the product if aftermarket components, which are not specifically aproved by TAYLOR RC are used with the product, e.g. exhaust system.

OTHER THAN THE EXPRESS WARRANTY ABOVE, TAYLOR RC MAKES NO OTHER WARRANTY OR REPRESENTATION, AND HEREBY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE

Purchasers Remedy

TAYLOR RC's sole obligation and purchasers sole and exclusive remedy shall be that TAYLOR RC. will, at its option, either (i) service, or (ii) replace, any product determined by TAYLOR RC to be defective. TAYLOR RC Reserves the right to inspect any and all Product(s) involved in a warranty claim. Service or replacement decisions are at the sole discretion of TAYLOR RC. Proof of purchase is required for all warranty claims.
SERVICE OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE PURCHASERS SOLE AND EXCLUSIVE REMEDY.

Limitation of Liability

TAYLOR RC SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY, REGARDLESS OF WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORY OF LIABILITY, EVEN IF TAYLOR RC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Further in no event shall the liability of TAYLOR RC exceed the individual price of the Product on which the liability is asserted. As TAYLOR RC has no control over use, set-up, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, set-up or assembly, the user accepts all resulting liability. If you as the purchaser or user are not prepared to accept the liability associated with the use of the Product, purchaser is advised to return the Product immediately in new and unused condition to the place of purchase.

Law

These terms are governed by the laws of England (without regard to conflict of law principals). This warranty gives you specific legal rights. TAYLOR RC reserves the right to change or modify this warranty at any time without notice.