

MAKING YOUR DREAMS A REALITY Guide to Building an RC30 Tribute using an RC36-2 VFR750F



Congratulations on your decision to build an RC30 tribute bike using a VFR750F and for finding TYGA Performance to help make this task easier. We get so many questions about what is required and how TYGA Performance products can help with these projects, that we thought it would be useful to make a guide to help you select the correct products and avoid any misunderstandings. There is a lot to consider and it can get complicated.

Although we can't cover every permutation and combination, we hope the information below helps you fulfil your objectives and allows you to consider all available options so you can make an informed purchase decision.

It can be very confusing and bewildering and you have probably read so many different and often conflicting opinions on what to choose to make this type of build. Remember though, everybody will have a different idea based on what is important for them, what is available to them, their resources and their budget. Talking of the latter, if you order as many parts in one order, the shipping costs will overall be less than if you order in two or more shipments so we urge you to make sure your order is complete before checking out. That said, if you do need to add some parts and your order has not shipped, just go ahead and make another order and we will combine the orders in one box if possible and refund you any extra shipping costs.

The first thing we need to consider is what is it exactly that you are trying to build. Hopefully, most people who are reading this will answer that they want to build an RC30 tribute. Quite a lot of others have contacted us who want an RC45 tribute and even a few want to have a go at an NR750 endurance racer. There are yet other builders who want to make something unique, whether that is a naked street fighter or something else.

At the moment, TYGA Performance only offer these products for an RC30 build in mind. Now, that is not to say that our subframe or meter stay will not work on an RC45 build or similar but right now we don't have time to investigate in detail the compatibility of our products with other tribute build ideas. Hopefully with time, we can add details of compatibility to the product description or make new categories for other types of builds but for now, we are focusing on the RC30 style tribute builder so that is what we will discuss here.

It is important to note that there are differences between RC30 models depending on the market it was destined for. These were for regulatory or marketing reasons. For example some had km/h speedometers and others mph ones. The visual differences are mostly with headlights, mirrors, turn signal indicators and some graphics. The Japanese domestic market (JDM) model was one of the most numerous and consistent. Export models varied somewhat with different graphics and even headlights when it came to the Swiss model. Because we have a JDM model RC30 to use for reference, it was this model that we chose to make our RC36-2 resemble. Of course, our customers are welcome to change details to make our kit look more like an export model and they can even request suitable graphic changes if they order our painted sets. See below for comparison photos of the JDM and a typical export model. Note that both these photos are Honda promotional photos and are slightly different to production motorcycles. The keen observers among you might be able to see the differences not only between these two photos but between them and the actual ones sold but we are now going a bit off topic!

Photos of the original RC30 both the JDM (Japanese Domestic Market) and the Export model. Note the main differences: Headlights, Mirrors, Turn Signals and Decals.





The second thing which is perhaps even more important, is what model motorcycle will you be using for your RC30 tribute. The VFR750F RC36-2 is the most suitable model for this conversion and we strongly recommend that you source this model. Not only is it relatively plentiful and inexpensive, it is the model which most strongly resembles the



Some people use the earlier RC36-1 and we have seen some nice RC30 lookalikes using this model but the frame is not really the correct design and frankly, even with one model to contend with, there are a lot of parts to design, manufacture, document and stock so we need to focus on one model only.





So, in short, we are talking about an RC30 build using an RC36-2 bike as a starting point and if you want to use an RC36-1 then we can't unfortunately give you any detailed advice. We are not sure how much our products will need to be modified though we can assure you, there will be some modification required.

The attraction of ordering the TYGA Performance RC30 build parts is that they are plug and play but only for the RC36-2, so with that in mind, we strongly recommend you source an RC36-2 to make your life easier and your life happier!



Whenever we design our products, we assume that you have sourced a complete motorcycle and have all parts available for the build. Much of the cosmetic parts you will not need. The same goes for a considerable amount of other components depending on how much you want to spend and how many parts you want to change to make your VFR resemble the RC30. A crashed bike would be fine but bear in mind that you will need the radiator and a straight front end unless you intend to swap that out for another model. In general, you will not need any of the plastic, seat, the mirrors, light units, subframe, exhaust, instrument cluster and mounting hardware for all of the above. You will need the wiring harness. The rear fender/light bulbs and taillight harness, any cable ties, instrument light bulbs and the fuse box holder and electrical connector stay from the front meter stay. If in doubt, hang on to parts until your build is complete and sell them on afterwards. Do note there is a fairly good market for selling good condition bodywork panels due to no aftermarket parts available for this model at the time of writing and this can be a source for funding your build.

The next point to consider is are you building a street or a track bike. If you are building a track only bike, you will not need any of the lighting, the frame infills, and associated parts such as lighting harness but you might want to consider some braking and suspension upgrades which are perhaps lower down the priority list for anyone building a street bike. TYGA make a range of products for track day bikes such as fairing sets, rear sets, exhausts and handlebars. We plan to offer some braking and wheel solutions too and there is a lot more to come so we will add products to our website as these parts become available.

Parts to consider when building an RC30 tribute

Before you complete your purchase on our website, we want you to make sure you understand exactly what you have ordered and what you need to make your build become reality. We have spent the last year developing many products and we have a lot more lined up to be added to our product range in the future.

What is included in the bodywork kits:

We include subframe, seat cowling, seat, bum stop, fairings, meter and upper stays, tank in-fills and all the hardware to mount the painted parts to an RC36 to make it look like an RC30.

If you look at the bottom of the products which are:

Part numbers BPFS-0238, BPFS-0239, BPFS-0240 and BPFS-0241









you can see all the parts which are included in a particular kit. You will see that the race kit differs slightly to the street kit.

Our goal is to provide a 'basic' bodywork set and then for you to decide what other parts you would like to order from our website to help your build and which parts you can either source elsewhere or prefer to modify or make yourself.

After carefully checking through the list, ensure that you have selected any relevant attributes such as the mirror hole pitch.

What is not included in the bodywork kits:

We do not include in the bodywork kits BPFS-0238, BPFS-0239, BPFS-0240 and BPFS-0241 any of the following:

1) Instrument cluster



This is not possible for us to economically supply and there is a ready supply of suitable instruments that can be used for your build. There are some factors to consider, authenticity, ease of installation and cost. Each model cluster has pros and cons. Let's look at a few to see what we mean:

Early SC28. This look similar to the RC30 cluster and is not too difficult or expensive to find in most places due to so many of this model being sold. The speedometer is either in km/h or mph and both the speedometer and the rev counter provide a suitable range of values for the power and redline of the VFR750F.







The speedometer is cable operated from the gearbox sprocket like the RC30 and the warning lights are clustered in a similar way to the RC30. TYGA Performance provide a wiring harness and a mount plate for plug and play operation with the TYGA Performance kit. The downside is that the speedometer is probably not going to read very accurately so this may or may not be an issue for you. TYGA Performance supply a speedo cable and drive though we will be the first to admit, they are not the best quality being aftermarket and sourced from China. If you can source genuine Honda, then we would recommend that.

Late SC28 instruments. All the same applies as to **a)** above except, now the speedometer is electrically connected making it easier. However, we found an issue with accuracy of the SC28 electronic speedometer and needed to fit the speedometer module from the RC36-2 into the EC28 housing.

Please see Meters Guide manual for more information

On the downside the warning lights are in a strip which while attractive and an improvement over the early model, they are perhaps less 'in-keeping'. TYGA Performance make a harness and mount plate for plug and play installation.







NC30 instruments. The NC30 instruments look a lot more like the RC30 instruments and can be sourced fairly easily. The downside is the speedo only goes to 180 and the rev counter red line is too high. The latter can be fixed possibly by changing out to an MC18 rev counter and JDM RC30s had a 180 km/h speedo as standard in any case.

TYGA made the meter stay so the NC30 instruments fit directly to it.

The NC30 tachometer is not compatible with the R36-2 tachometer signal, so fitting our TYWH-0006 extension harness is required, as we developed a pulse converter module internal to the harness which converts the RC36-2 signal to be compatible with the NC30 tachometer. See TYWH-0006 for details.



RC30 instruments. Yes, well good luck finding affordable ones.

Would be nice and probably work the same way as the NC30 ones but we haven't tried them yet. We figure, not too many builds will use them.



Other instruments. Well, there are lots of others to choose from, NC23, NC29, NC35, MC22, MC21 etc. all look similar to the RC30 but have various issues when it comes to installation or operation. If you have any information, let us know so we can pass the data on. Basically, anything with the same case as the early SC28 cluster will fit our SC28 mount plate so that includes MC21, MC22, NC29, NC35. The same does not apply to earlier models being the same mounting as the NC30. So for example, visually, NC23, MC18 and RC30 are almost identical to the NC30 but they all have different mounting positions. Note the SC28 type instruments have one plastic case with individual mechanisms inside. The NC30 type has sealed instrument cases which then are installed in a metal frame which is then bolted to the meter stay. MC19 instruments look similar but are different again so much care is needed when choosing instruments. It goes without saying that cable instruments will not measure the road speed accurately as gearing is different on each model. However, when we tested them on a drill, most were remarkably similar in reading for a given speed on the drill.

The other thing to note is that the way the rev counter reads the pulses varies from model to model and there are at least 3 different types so these are some more things to consider before choosing the instrument cluster.

In conclusion, when it comes to instruments, we recommend SC28 or NC30 ones for ease of installation using TYGA Performance mount plates, wiring harnesses and speedo cables.



2) Mirrors



The RC30 was supplied with two different types of mirrors depending on the market.

For the Japanese domestic market (JDM), they had streamlined black mirrors similar to the 250s and 400s at the time.



The main difference is that they have a 40 mm. mounting hole pitch. For export models, including Australia, the RC30 had white rectangular mirrors, also with a 40 mm. pitch.



This means that the mirrors are completely interchangeable and either type is ok. What you want to fit will depend on availability and preference. As neither are readily available, and prices of used genuine ones, north of 200 dollars each, mostly builders will be looking for a suitable alternative.

If you don't mind a smaller design, you can install the JDM mirrors fitted to the 250s and 400s at the time.



2) Mirrors



'For the Japanese domestic market (JDM), they had streamlined black mirrors which looked similar to the Honda 250cc and 400cc sports bikes at the time. Being larger, the JDM RC30 mirrors had 40 mm. mounting hole pitch compared to 30 mm. for the 250 and 400 cc models.



For export models, including Australia, the RC30 had white rectangular mirrors, also with a 40 mm. pitch. This means that the mirrors are completely interchangeable between RC30 models and either type can be installed on any RC30.

What you want to fit will depend on availability and preference. As neither type of genuine RC30 mirrors are readily available, and prices of used genuine ones are often north of 200 dollars each, most builders will be looking for a suitable alternative.



If you don't mind a smaller design, you can install the JDM mirrors fitted to the 250s and 400s at the time.



Being Honda, each model had its unique design, but any of the following will not look out of place, MC21, MC28, NC30, NC35 or MC22. Note that early MC18 and NC23 type has a different style of fork but would also fit. Nowadays, there are a lot of aftermarket ones sold on auction sites saying they are for all these models. From what we can tell, they are closest to the MC22 type with a scallop in the arm. We bought a pair and were not that impressed but others have said they are ok so maybe there are different versions and qualities.

Anyway, they have a 30 mm. mounting hole pitch and because TYGA Performance have thought of everything, you can select the fairing with a 30 mm. hole pitch to allow easy fitment of these mirrors. We also do the 40 mm. hole pitch for genuine RC30 mirrors and also for any aftermarket RC30 style mirrors.

There is one promising supplier in the UK. More of that as we hear of it.

Anyway, the important thing to note is:

TYGA don't supply mirrors so you need to source themyourself

We do offer a choice of 30mm. or 40mm. hole pitch so make sure you select the correct upper stay and fairing when ordering.

3) Headlights



This is another one of those areas where there are different choices and you will need to decide on where you stand on cost/availability/authenticity.

First thing to note is our existing RC30 body kit uses the smaller JDM headlights.



This was for a number of reasons. We think the smaller headlights are subtler, and don't dominate the upper and we are sure Honda preferred them or they would not have put them on the launch model.

So, to us they are the purest type. Secondly, we can source and it is easier for others to source JDM headlights.

We have managed to source a limited supply of OEM Honda JDM headlights and refurbished them. This means cleaning, recoating parts and sourcing new springs. They are a good choice because they are almost identical or identical to the genuine RC30 headlights. I can't tell the difference!

Link to Used JDM Headlight category on the TYGA website







Now, to install them you will need bulbs, running lights and rubber boots. We have limited supply of rubber boots used and will source new ones so we should be ok there. You can also at a pinch use the boots off the VFR750F headlights. However, they are a bit too big and may not seal that well.

Talking of the original bulbs, the VFR came with H4 bulbs of either 45/45W or 55/60W and these will not directly fit in the JDM housing but can be persuaded to do so using this method

Performance

H4 bulb to H4R Conversion

H45 bulb to H4R Conversion

H45 bulb to H4R Conversion

H45 bulb to H48 down the second of the second

Click on Image for Full Size

If you prefer, you need to source the JDM headlight bulbs which are H4R type and part number 34901-KY2-701

Model	Region	Part Number	Wat Hi/Lo	Туре
NC35	Japan	34901-KY2-701	60/35	H4R
NC30	Japan	34901-KY2-701	60/35	H4R
NC29	Japan	34901-KY2-701	60/35	H4R
NC23	Japan	34901-KY2-701	60/35	H4R
MC28	Japan	34901-KY2-701	60/35	H4R
MC22	Japan	34901-KY2-701	60/35	H4R
MC19	Japan	34901-KY2-701	60/35	H4R

TYGA have sourced some running light bulb holders and harnesses and these will fit the headlight unit but are a little tight. You can use the instrument lights from the VFR750 for the running lights to save buying new ones. The running lights can then be connected to the TYGA lighting harness but more on that later.

Another alternative for headlights is auctions sites. Beware though because some are not supplied with the black mounting block and the ones which are, are lacking the headlight adjustment hardware. You could use our springs and make affixed mount and source nuts and bolts to go with the springs. We might do this later when our supply of OEM headlights is exhausted. Note that in our tests, sitting on a bench in 35 degrees' Celsius heat, when on full beam for 30 minutes (at 60W), the bulb started to get so hot it melted the aftermarket housing which it did not do with the Honda casing.

This is a pretty extreme test so we are not sure if it would be an issue in a real life situation when the bike would be moving and cooling the bulb and housing.

4) Turn Signals



We have designed our fairing to use the JDM turn signals as installed on the RC30 and the early 1989 NC30. Alternatively, the mounting and bullet connectors are identical to other later JDM models that were launched in the 1990s and these bigger ones are easier to source either used or new reproduction so this type is an attractive choice though they are strictly speaking not the correct shape.

TYGA Performance supply a wiring adapter so you can plug these into the 2 pin connectors on the stock RC36-2 harness and we also provide a mounting kit for both types of JDM turn signals to mount on the stock RC36 rear fender.



The plastic body of the turn signals would normally be light blue to match the paintwork on the front and black on the rear.

Note, if you would like to use the correct JDM turn signals, you will need to source them by yourself.

To help you replicate the look of the RC30 JDM turn signals.

We are offering a TYGA/Honda OEM kit which is a very accurate copy of the original RC30 one. There are some differences such as the rubbers are 3D printed and the Honda turn signals use M4 and not M5 bolts but on the plus side the bulbs are 15W and the quality of the turn signals is top-notch being genuine Honda.



TYGA Performance have also sourced some cheap Chinese aftermarket turn signals which do not look out of place, even if they are not completely accurate. So please do consider them even if it is just for a temporary installation until you source the more authentic JDM style. Note that the rubbers they come with are very poor quality and they will need the correct M5 bolts and collars to install them.

We will be adding these turn signals to the website shortly.



5) Tail Light



Honda again raided the part bin for the taillight so we are in luck in that the NC30 taillight is the same shape and almost identical to the RC30 one.





The only difference that we can see is that the mounts are using M5 bolts whereas the RC30 uses M6 bolts. We have the hardware in our seat cowling for the M6 bolts and we also supply a bush and bolt kit in case you have sourced an NC30 tail light.

Nowadays, prices for the NC30 tail light are going up so we at TYGA are working on our own design. It will be cheaper and fits the same way as the NC30 and RC30 unit and will look the same on the outside so this may be of interest to some builders.

Note that the RC36-2 tail light harness and bulbs is plug and play for the RC30 and NC30 units and the TYGA one will be supplied with bulbs and harness installed.

As far as we know, apart from the TYGA solution, there are no other aftermarket taillights but you can source the lens and some people have installed Cagiva Mito or even VTR1000 SP1/SP2 tail lights and even the original stock RC36 tail light but don't ask us how.

We only know details of installation using the three solutions above, NC30, RC30 and the TYGA version.

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We gave the wiring harness a great deal of thought and what we think our customers will want to do.

The main issue is that the harness has a lot of components at the front on the stock bike which will get in the way or look ugly on a more open RC30 tribute fairing.

Our conclusion was that some people who are confident with wiring will be happy to cut and splice the wiring harness to fit the new bodywork and for them good luck; we saygo for it!

Other people are going to be reticent to cut the harness for fear of making mistakes or perhaps making irrevocable changes. For those people, we have a solution. We were able to come up with a repackaging of the harness so that it looks neat and tidy but requires no cutting. What it does require is some extra harnesses for the instruments and lighting and rerouting of the other various switchgear and main harness.

We supply all the necessary mounting hardware, cable ties and electrical boots to make the wiring neat and tidy. It does require a bit of work and patience connecting up all the wires from the big blue and green connectors which normally plug into the VFR750F dash board. However, they are all numbered to make the job easier and when connected and wrapped up, it makes for a neat job.









In the long term, we have plans to make a specific wiring harness that will replace the stock one and have all the correct connectors for instruments, switch gear (either RC30 or VFR type) and lighting. This may or may not happen, so for now, we recommend either modifying your existing harness or using our lighting and instrument harnesses and retain the stock VFR one.

However, you look at it, wiring is not a problem and we have a solution for you.



More Parts Required with the bodywork kit

The above concludes the parts you will need to source or may choose to source when installing the RC30 style TYGA Performance bodywork kit. However, there are still a lot of components that will need to be changed to facilitate the body kit. Let's take a look starting with the essentials



TYGA offer a number of HRC Styled exhausts, so we recommend you take a look at our product range and choose one. Our bodywork is designed to be compatible withthe TYGA exhaust system and is not designed to be compatible with any other exhaust and this may or may not be an issue. Even the stock exhaust, we have not tried fitting because it exits on the right and the RC30 need a left exiting exhaust so why bother?











2) Handlebar Position and Type



This will depend on the front forks you use but you will need to find a solution to fit any RC30 bodywork, and the TYGA kit is no exception.

We were able to move the standard handlebars under the triples and put shorter front brake lines and tidy up the cables for a cheap and fairly easy solution.

Other people may decide to change to 43mm or even 45mm forks. At this point you will need to change the handlebars and consider getting some which give adequate clearance with the instruments.

Note that the stock RC36 master cylinders will not fit on many other designs of handlebars due to clearance issues with the handlebar clamps so bear that in mind.

3) Bar end Weights



We offer <u>RC30 style bar end weights</u> to fit to the stock RC36 handlebars if you intend to retain them









4) Fork Options



As with handlebars, there are many choices. Some people install a complete SC28 front end and just swap out for the 17-inch RC36 wheel.

This is attractive because the stem is the correct height and dimensions so the triples go straight in the frame. In addition, they allow for fitment of an RC30 stock shape front fender. For the stock RC36 forks, we offer a suitable fender.

We also offer fenders for other models so be sure to look at our website in case there is something that suits your build. Whatever you decide, not that at the very least the stock RC36 forks will need to be made shorter

As standard, the fork legs will hit the mirror stay and look way too long. Even shortened, they will protrude through the top triple clamp but not to the extent of having any clearance issues.





Other TYGA Performance products and options

TYGA Performance offer many other products which you may wish to add to your cart so be sure to go through this list before checking out.

a) Rear Sets: TYGA Performance offer rear sets so you might want to freshen up your bike while installing the RC30 kit. See Here for more details



b) Fuel tank breather <u>See here</u> for more details



c) Fuel tank filler cap See here for more details



d) Luggage compartment. <u>See here</u> for more details.



e) PAIRS smog device delete kit. <u>See here</u> for more details.



f) Steering stopper Included with bodywork kit, but <u>see here</u> for more details.





g) Oil cooler delete. See here for more details



h) Handlebars. See here for more details and note that these cannot be used with the stock RC36-2 master cylinders because the master cylinders do not clear the handlebar clamps. This is true for many aftermarket and other Honda handlebars but if you select RC30 or other type master cylinders, the handlebar issue goes away



i) Braking and Master Cylinders These are of course connected, as are the front forks and the permutations and combinations are numerous.

Please review the posts on the relevant social media pages to see what works and what is the way to go for you. The caliper has to be matched to the brake master and the caliper has to not only fit on the fork leg but be in the correct place for the brake rotors so there is a lot to consider.

TYGA Performance have sourced some Nissin brake master cylinders identical in appearance to the RC30 ones but with the correct piston size (1/2") for the stock RC36 brakes. RC30s use 5/8" and many other Honda use 14mm. It is sometimes possible to go up or down a size depending on the rider's preference but in our opinion, best to stick to the correct matching size. We also have sourced some Nissin clutch master cylinders which are identical looking to the RC30 ones

TPER-0114 Master Cylinder (Assy) Brake, 1/2 inch, Nissin, RC30 Style



TPER-0115 Master Cylinder (Assy) Clutch, Nissin, RC30 Style



j) Paintwork We offer this painting service because we know how hard it is in many places to get paintwork done locally.

Please note that there is a wait of 1 to two months due to high demand and we only have one painter who we will trust with your bodywork

k) Rear Hub, braking and wheel options We are currently in the process of making an underslung rear caliper mount which will use an NC30 rear caliper.

There will be two versions. One for an otherwise stock rear wheel and hub and one for an RC30 style single bolt mount wheel. For the latter, we will be offering a few options to install an NC30 rear wheel hub which removes the heavy cushdrive as well as facilitates the use of the NC30/RC30 type rear wheel. We will put links here as and when these products become available.

TYLY-0326 Pro-Arm Hub Conversion Assy, Pro-Arm Underslung Caliper, NC30
Hub, Single Nut Wheel, RC36-2



I) Other Products We recommend that you check through as much of our website as possible to see if there are any other products we offer that may be useful to your build, whether it is a dust cover, carbon workshop trays, chain adjusting tool, a racing filler cap, tyre warmers or any number of other products we offer.



Conclusion

We will of course be adding more products to this document as well as updating any information as and when we receive it. We expect to have a wider product range for these VFR builds and look forward to you shopping with us. Finally, if you have any questions, please do not hesitate to ask us.

We will do our best to help you build your project and make your dream become reality.



Useful Links

Main RC36-2 > RC30 Tribute products category

Fitting Manuals

Other Useful Information



www.tyga-performance.com