



MOTARDING THE WRF AND YZF CBR250RR CAST ALLOY OPTION INFO PACK

WR450F, WR250F, YZ450F, YZ250F

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We welcome your feedback on this information pack to improve it for other motarders. Please email any feedback to: motard.drz400@gmail.com. This pack is sold cheaply to cover the costs of putting together, so we'd appreciate if you simply referred other DRZ owners to our site and not break copyright by posting this information pack on the Internet.

Ken Campbell ken.campbell62@gmail.com



ITS EASY

Don't be daunted by the length and detail of this info pack. Your motard conversion is actually very easy to do, we've just provided a lot of detail as there are two options available. You'll definitely be using a Honda CBR250RR rear wheel. Your first decision is:

- a 3 inch wide CBR250RR or 3.5 inch wide CBR900RR front wheel.

The CBR250RR wheel takes a 110 width tyre and frankly that is all you need unless you are an extremely hard rider planning on racing, then you may prefer the 120 width tyre of the CBR900RR front.

Then choose your front brake option: a standard Yamaha 250mm front disc, a GSXR750 310mm floating front disc (cheap on Ebay).

Essentially all you need to do is:

- buy the wheels along with the rear axle
- buy the specified bolts, nuts, sprocket and discss
- get your spacers machined
- buy our laser-cut disc adapter & caliper adapter plate (or get your own done)
- choose a speedo option.

WHY CBR250 WHEELS ARE BEST

The CBR250 wheels are a far easier adaptation than most cast wheels. Why? The big benefit compared to other cast wheels is the narrow rear hub fits within the swingarm, so no expensive machining of the hub is required compared to any other cast wheels used.

A cheap readily available Honda 240mm rear disc is available.

The front axle is 20mm so the Yamaha front axle slides straight in.

Unfortunately the front hub is too wide to allow using the offset Honda front disc, but our laser-cut disc adapter that gives you plenty of options.

Compared to other commonly used wheels like the Suzuki RGV250 or GS500 wheels, all these factors make the Honda 250 wheels are much easier and cheaper adaptation.



BUYING YOUR CBR CAST WHEELS

The CBR250RR was a very popular model in Japan. Honda did not officially export this model to many countries, but they were imported privately in large batches around the world. Previous users of this info pack in the USA have occasionally said they needed to source one or both wheels from other countries due to a scarcity of wheels, but that the cost was only US\$50 for postage on average. Apologies for USA customers, but any costs in this area are more than offset by the costs you would incur with other types of wheels in terms of trying to get hubs machined to fit, axle sizes to work and discs to fit properly.

Obviously the cheaper your wheels are, the better. As a rough rule of thumb, expect to pay somewhere around AUD\$400 to \$600 for your wheels, depending on whether you get the discs and whether it's a private sale or through the wreckers.

But CBR wheels are very common at larger wreckers and they often do good prices to get rid of surplus pairs in countries where large batches were imported.

Remember to check wheels for any signs of damage. Insist that they are spun on a fixed axle so you can check for wobbles or flat spots. Spin the bearings to see if they need replacing or not. Get a caliper measurement on the rear disc, it can look fine but actually be unroadworthy with little apparent wear (5mm when new, 4mm is the limit).

Make sure the central hub spacer that sits between the wheel bearings is in both hubs; this reduces lateral stress on your bearings.

Wheels are interchangeable between some Honda models. Here are the details of the models you should be chasing.

Make sure they are CBR250RR wheels! The wrecker might confuse them with another model (e.g. the five spoked ones from other models) and the NSR250 wheels look the same but the rear hub is too wide.

CBR250RR (MC22) AND OTHER WHEELS THAT FIT

The wheels from these models are perfect:

- Honda CBR250RR (MC19) 1990-1999 models.

The specifications we've seen on some sites suggest that the NSR250RR front wheel is identical but without checking for ourselves we can't state this for sure. As mentioned, the NSR rear hub is too wide.

ADAPTING CBR250RR WHEELS

SPEEDO OPTIONS

Unfortunately the CBR250RR speedo drive won't fit as the front hub is too wide. We recommend swapping to a Trailtech digital speedo. You can adjust these to get an accurate speedo reading by simply pressing a few buttons. Both the Endurance and Vapor are great speedos; we recommend going the whole hog and getting the Vapor, complete with tacho, water temperature gauge and dozens of other features. You can easily sell off your standard speedo on Ebay for \$200 plus which will more than pay for the Trailtech (currently AUD\$145 on Ebay).

WHAT YOU NEED

ITEMS FROM THE WRECKERS OR BIKE SHOP

So this is what you need to get from the wreckers or a bike shop:

- front and rear wheel (no discs or sprocket)
- the rear axle and axle nut
- a 240mm rear disc.





HIGH TENSILE NUTS AND BOLTS

- 2 X 45mm bolts, 8mm diameter, with matching nuts
- 4 x spring washers to suit the above
- 2 x 25mm bolts, 8mm diameter.

These need to be a minimum tensile grade of 8.8. grade which is the OEM standard, so go to a specialist fastener for these, not the hardware store!

REAR DISC

As mentioned, the standard CBR disc is too small. But the following Honda rear discs fit straight on and are 240mm diameter: Honda NSS 250, CB400, CB500, CB750, CB900, XL600 and Hornet 919. To be absolutely sure you've got the right disc from the right year model; check the specifications at www.metalgear.com.au. They should be:

- outer diameter 240mm
- inner diameter 105mm
- centre of one bolt hole to the centre of the opposite bolt hole: 125mm
- number of bolt holes: 4.

These discs are regularly available on Ebay for as little as AUD\$50 to \$70 posted. *Remember to double check the dimensions!* A lot of Ebay resellers will sell you the 220mm outer diameter version for other models by mistake, you definitely need the 240mm one so don't buy it till you confirm the correct dimensions.

FRONT DISC

The Honda front disc is offset so can only be used if the front wheel is offset; some motarders do this using the 310mm CBR250R (MC19) front disc and they say it doesn't affect the handling but we don't recommend this so we don't supply measurements for this. As a result, there are several options for your front disc setup that are covered in detail in a later section:

- have a custom disc laser cut and ground from files we can supply
- buy our disc adapter and fit a 310mm Suzuki GSXR750 front disc
- buy our disc adapter and use your existing 250mm front disc
- buy a custom disc from Metal Gear in Queensland, Australia.

REAR AXLE & AXLE NUT

If you can't get a CBR250R or CBR250RR rear axle, buy a 17mm diameter axle from the wreckers. The measurement from the outside of one chain tensioner block to the opposite one is around 242mm so use this figure to buy the right axle. If it is longer than this, you can use spacers on either end although it will start to look odd if the axle sticks out too much, and you'll need a thick washer or two to take up the slack.

These are the other things you'll need:

- Pair of tensile bolts 45mm long, 8mm diameter (for caliper adapter)
- Pair of high tensile nuts and lock nuts to suit above
- Pair of tensile bolts 30mm long, 8mm diameter, for the caliper (*if using the disc adapter & GSXR disc, otherwise 25mm long!*)
- Caliper adapter machined or laser cut from the supplied templates
- All spacers and sleeves machined to the dimensions supplied
- Loctite to apply to all nuts
- Rear sprocket from other Honda models (info supplied)
- Front disc laser cut (see template supplied).

REAR SPROCKET

The CBR250RR rear sprockets are for 428 chains, and you need sprockets that can take the 520 chain of the Yamahas. Amazingly



enough, your WR sprocket will probably fit! The site at www.wemoto.com indicates that various WR400, 426 and 450 models have the right sprocket specifications to fit the CBR250R wheels:

- Yamaha WR400 FL 1999 model
- Yamaha WR400 FM 2000 model
- Yamaha WR400 FN 2001 model
- Yamaha WR426 all year models
- Yamaha WR450 up to at least 2005 model.

However, sprockets are cheap, and you will probably want to get a smaller one to get some sensible road gearing. Get yourself a smaller sprocket based on the above models, or from early Honda XR250s. These fit straight on the CBR250 sprocket drive, and have a wide range of teeth. You'll probably find you want a sprocket around 42 teeth or less. These early 1981 to 1987 XR250 model sprockets fit straight on:

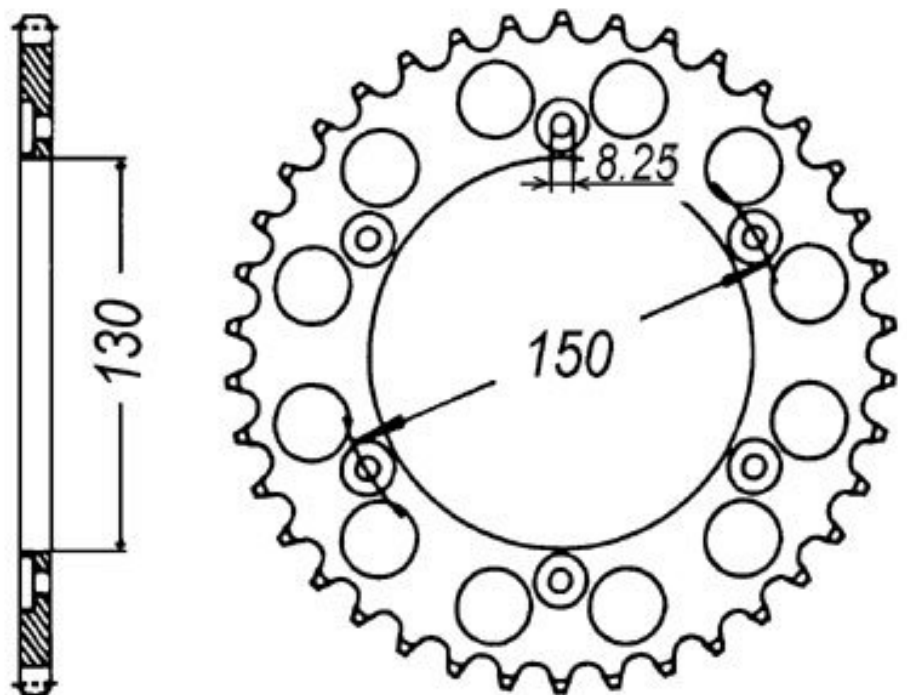
- RB 81
- RC/RD 82-83
- RE 84
- RF 85
- RG/HG 86-87.

If any of these are unavailable for some reason, the following can be used too, but the range of teeth may be limited:

- Honda CBR 250 RH (MC17) (import) 87
- NSR250 import 94 (MC28).

We are relying on the information provided on the Wemoto site, so feel free to double check all these specifications yourself:

Double check your chosen sprocket against these measurements below from a standard CBR250R sprocket. You should find the bolt holes on the above models are a tiny fraction of a mm wider which makes no difference as the shaped heads of the sprocket bolts are what holds the sprocket in place:



SPACERS

As mentioned in the intro, there is a small chance of some variation between your bike and the 06 WR450F we developed this kit on,

despite advice from Yamaha dealers and WR forums. If you want to check the specified measurements before machining, buy a pile of 2mm and 3mm thick washers from the hardware store that will fit on your axles. You can use combinations of these to act as wheel spacers and make sure the specs in this kit will fit your bike before paying the machinist! You can do the same with a pile of washers with a 20mm internal diameter to check the caliper spacers as well.

Ensure a competent machinist accurately creates your spacers and axle sleeves from the supplied measurements. Again, if you use alloy obtain professional advice on the type to use, and the desired measurements to ensure safety and comply with any road safety and vehicle standards and regulations.

POSSIBLY OFFSETTING YOUR REAR DISC

On our 2006 WR450F the rear disc lined up perfectly with the spacers mentioned in the following pages. Please note though that we did have a WR owner report that his 04 model worked with all the supplied measurements, but his rear disc needed to be offset as otherwise it didn't fit his rear caliper. He used 1mm thick washers to effectively move the disc 3mm outward from the rear hub then it worked perfectly.

Perhaps the 2004 model was different? Maybe a previous owner fitted a rear caliper from another bike? Or the swingarm even? We don't know but mention this just in case you find the same problem. Your feedback on this much appreciated for future users of this info pack!

PREPARING YOUR BIKE

There are metal tabs on your fork leg that hold the speedo drive in place. Grind or file a few mm off so that the wider hub of the CBR250RR front wheel won't hit these, or alternatively file a few mm of the edge of the front hub.

Also, the disc side of the front hub will hit the fork leg when the wheel is centred properly within the forks, so you need to file or grind about 2mm of the edge of the hub here. This won't affect the structural integrity of your wheel at all.

Also, the road discs are thicker than the DRZ discs, so there's less tolerance inside the calipers. We haven't had any issues with our Yamahas although there is very little tolerance, but if there's any rubbing of the front or rear discs just file or grind away 1mm from the inside sections of the caliper near your disc. This won't affect the structural integrity of your caliper at all.

You will probably find the fork protectors are just rubbing against the motard front wheel. You can either remove them, or just file away or cut enough of the plastic to not hit the tyre.



CBR250RR: 17 inch wheels, 3 inch front rim, 4 inch rear rim.



CBR900RR: the 16 inch front wheel can be used with this kit as other than the 16 diameter and 3.5 inch rim width the specs are the same as the CBR250RR wheel.



VTR250 (MC33): Rear wheel is the same as above except for five spokes, it should be easier to access in the USA as it is an official import. It also has a smaller diameter front axle so would need different bearings and a central hub spacer machined.

FRONT WHEEL OPTIONS

The standard CBR250RR front wheel is 17 inches diameter and a three inch wide rim. This takes a 110/70-17 as standard which is fine for everything but extremely hard riding or track days. If you have trouble locating one of these, the front wheel from the Honda NSR250RR is identical, so look for one of these as well (note the NSR rear wheel won't work on your bike though!).

- HONDA NSR 250RR (MC28) 1994 and on.

You can also opt for the CBR600RR or CBR900RR front wheel which is 16 inches diameter, 3.5 inches wide and takes a 130/70-16 tyre as standard. These are extremely cheap and easy to access as many Fireblade riders swap these to the 17 inch wheel for high speed stability.

The 16 inch Fireblade front rim has a smaller diameter and will steer a bit too quickly as a result. If you fit a 120/80-16 tyre the higher profile brings the diameter to roughly that of the normal setup and will provide good handling.

You can experiment to some extent with moving the forks in your triple clamps and/or a different suspension linkage to lower your rear as well.

The Fireblade wheels are an excellent option in the USA as the CBR250RR wheels are harder to find there, whereas the Fireblade wheels are extremely cheap and popular on Ebay and at the wreckers.

Honda have made it very easy for us as the other than the diameter and rim width the hub is identical to the CBR250RR. This means the disc adapter (or custom disc) bolts right on, and the specified spacers and caliper adapter will work the same with either wheel.

Here are the wheels needed if you opt for the Fireblade front wheel:

- CBR 900 RR 1994-1995 Year Code:R,S Type Code:SC28/G034
- CBR 900 RR 1996-1997 Year Code:T,V Type Code:SC33/H294.

Please note that fitting is a little trickier with the 16 inch wheel. Because there is less room for the caliper you need to loosen your disc to allow fitting (for more info see the fitting section). This will add a few minutes to your changeover time as you will need to loosen the disc every time you want to fit or remove the caliper, and may be an issue if you change your wheels over very regularly. However, this won't be needed if running your standard 250mm front disc with the disc adapter.

If you have a lot of trouble accessing either of these wheels but can get a Honda VTR250 five-spoked front wheel, you can use this if you fit different wheel bearings and either machine the central hub spacer for the larger axle size, or get a new one machined. Contact us for details if you need to do this.

REAR WHEEL OPTIONS

If you find it hard to locate a CBR250RR rear wheel, it might pay to consider the Honda VTR250 (MC33) rear wheel. This is pretty much identical except that it only has five 'spokes' instead of the six, something that won't be noticed unless you are looking for the difference. This is a big plus in the USA as the VTR250 has been officially imported there for the past few years, whereas the CBR250RR was on a 'grey' import so harder to find at the bike wreckers.

Here are the details if you opt for the five-spoked rear wheel:

- Honda VTR 250 (MC33) 1998-2007 Year Code:W,Y,1-7.

The specified spacers will work with the VTR wheel. Be careful not to confuse this model with the much earlier VTR250 models in the 1980s that were three spoked and had a drum rear brake!

IDENTIFYING YOUR WHEELS



CBR250RR (MC22) FRONT WHEEL

or NSR 250RR (MC28) 1994 and on
Stamped on wheel: "J 17xMT3.00 DOT
MT3.00x17 Enkai"

20mm front axle

Takes a 110/70-17 front tyre as standard

DISC BOLT PATTERN

Internal diameter of disc: 58mm

Centre of one bolt hole to opposite one:
74mm

Number of bolts: 6

Diameter of actual bolts for disc: 6mm

FIREBLADE FRONT WHEELS **CBR900RR 1994-1997**

Stamped on wheel: "J16 x MT3.50
DOT Enkai"

20mm front axle

Takes a 130/70-16 front tyre as
standard (we recommend 120/80-16
for motard use)

DISC BOLT PATTERN

Internal diameter of disc: 58mm

Centre of one bolt hole to opposite
one: 74mm

Number of bolts: 6

Diameter of actual bolts for disc: 6mm

CBR900RR 1995-1998 &

CBR400RR 1988 -1994

Haven't tested these wheels yet but
have the right bolt pattern, and also 17
inch. Very good chance they'll work.





CBR250RR (MC22) REAR WHEEL

Stamped on wheel: J17xMT4.00 DOT Enkai
17mm rear axle
140/70-17 or 150/60-17 tyre as standard

DISC BOLT PATTERN

Internal diameter of disc: 105mm
Centre of one bolt hole to opposite one: 125mm
Number of bolts: 4
Diameter of bolt holes for disc: 10.5mm



VTR250 1998-2007 (MC33) REAR WHEEL

Stamped on wheel: J17MXMT 4.00 DOT
17mm rear axle
Takes a 140/70-17 tyre as standard

DISC BOLT PATTERN

Internal diameter of disc: 105mm
Centre of one bolt hole to opposite one: 125mm
Number of bolts: 4
Diameter of bolt holes for disc: 10.5mm

Remember this wheel has the same specs except for having five 'spokes'.

NOTE: Don't confuse this with the VTR250 models from the 1980s (only three 'spokes' and rear drum brake).

All the above information is based on models imported to Australia. We can't guarantee that all models worldwide have the same specifications, but no indication of any changes could be found.

This is not an exhaustive list, only wheels tested to date. If you find other Honda wheels that have the same bolt hole pattern there is a very good chance they will work with this motard adaptation.

Usually there is more information stamped on the wheels, only the relevant wheel size has been mentioned.

FRONT DISC OPTIONS

As mentioned, the wide front hub means you can't use the standard Honda discs. You have several options to choose from:

- have a custom disc laser cut and ground from files we can supply
- buy our disc adapter and fit a 310mm Suzuki GSXR750 front disc
- buy our disc adapter and use your existing 250mm front disc
- buy a custom disc from Metal Gear in Queensland, Australia.

MAKE YOUR OWN CUSTOM DISC

A flat (e.g. no offset) front 310mm front disc can be laser cut to suit the supplied caliper adapter plate. A dxf file can be supplied which you can then take to a laser cutter. Typically you would get this cut from 420 stainless steel plate at around 7 to 9mm thickness, then have this machined down to 4mm thickness. Ideally a 5mm width means less chance of your disc warping under extreme conditions, but you may need to slightly trim the inside of your front caliper to take the wider disc. Most road bikes have 5mm widths to minimise the chances of warping, but remember most supermoto front discs are still only 3 to 4mm to fit the narrow dirt bike calipers, so we'll leave the decision up to you. Personally we'd recommend the other options to get a floating front disc.

BUY OUR DISC ADAPTER & USE A SUZUKI GSXR DISC

The disc adapter is laser cut from 6mm billet steel, and is attached to the Suzuki disc using high tensile bolts, spring washers, Nyloc locknuts and plenty of Loctite for safety.

The best disc to use is from these models:

- Suzuki GSX-R 600 2008-2009 (K8 and K9 models)
- Suzuki GSX-R 750 2008-2009 (K8 and K9 models).

To be sure you have the right disc, here are the specifications:

- external diameter: 310mm
- internal diameter: 102mm
- centre of one bolt hole to centre of opposite bolt hole: 120mm
- Number of bolt holes: 6
- Diameter of bolt holes: 8.5mm
- Disc thickness: 5mm.

These discs are available brand new on Ebay at very good prices. You will normally pay around AUD\$160 for one disc, or AUD\$210 for two discs so it gets a lot cheaper if you have a mate doing the same conversion and you get two discs. *Double check all the measurements with the seller before ordering* as there are a few types of GSXR disc out there!

As a second choice, the adapter plate also has the bolt pattern to accept the front disc from these models too

- Suzuki GSX-R 1000 2007-2009 (K7, K8 & K9 models)
- Suzuki GSX-R 600 2006-2007 (K6 & K7 models)

To be sure you have the right disc, here are the specifications:

- external diameter: 310mm
- internal diameter: 100mm
- centre of one bolt hole to centre of opposite bolt hole: 120mm
- Number of bolt holes: 5
- Diameter of bolt holes: 10.5mm
- Disc thickness: 5.5mm.

However, it's suggested you aim for the former GSX-R 600 or 750 (2008-2009) discs, simply because the disc is slightly thinner so you'll have better tolerance inside your front caliper.

Is the disc adapter safe to use? The disc adapter is laser cut from 4mm thick billet steel. This is far stronger than the alloy inner ring of any floating front



A typical custom made (non-floating) front disc, laser cut from 420 stainless steel



Laser cut disc adapter for use with Suzuki front disc

disc, so is over-engineered for your safety. However, as with all our info and parts, you would use the disc adapter at your own risk, and you would need to undertake any inspections and approvals to guarantee it's safe use and legality.

It is recommended that only the highest tensile strength bolts (12.9 grade) are used, along with spring washers, Nyloc nutlocks and Loctite for added security. Ideally these should be checked before every ride, as you should do with all critical components on your bike.

An advantage of using the Suzuki disc, compared to laser cutting your own disc, is that the floating front disc will not transfer heat to the inner alloy ring, so there is more even distribution of heat through the metal; this means much less chance of your disc warping. An interesting point to note is that sometimes your front disc will warp if it is suddenly hit with water (e.g. rain puddles or washing your bike) soon after heavy braking! A floating front disc reduces your chance of this happening.

USE YOUR STANDARD DIRT BIKE 250MM DISC

We also have a disc adapter that not only can use the Suzuki disc above, but has the bolt holes to use a standard sized 250mm front disc as well. Of course, this means you won't need the caliper adapter and your front brakes won't be very strong, but the trade off is it takes less time to change your wheels over and can save you money if aiming for a budget setup. The WR450F front disc is identical to that of the Suzuki DRZ400, RM250 99-09, DRZ250 01-07 and Kawasaki KLX400 so check these on Ebay as you should be able to get a front disc for around AUD\$80. Remember to double check measurements with the seller first: outer diameter 250mm, inside diameter 18mm, BHC to BHC 134mm, number of bolt holes 6, bolt hole diameter 6.5mm.

Please note: there is a problem if you use your standard front disc. It is a floating disc, and the "buttons" holding the disc to the inner alloy ring will hit the disc adapter plate. This is easily resolved by buying a non-floating disc from the models above. One user of the info pack sent the pics below in. He used washers under the disc adapter plate so he could use the standard disc. We don't necessarily recommend or endorse this, but provide this for your information.



The GSXR front disc bolts on to the inside of the disc adapter plate

Six high tensile bolts, 20mm long and 8mm diameter (BHCS M8x20) and six nyloc nuts and spring washers

The GSXR front disc needs to face outward or course, if you get it the wrong way around the disc won't line up

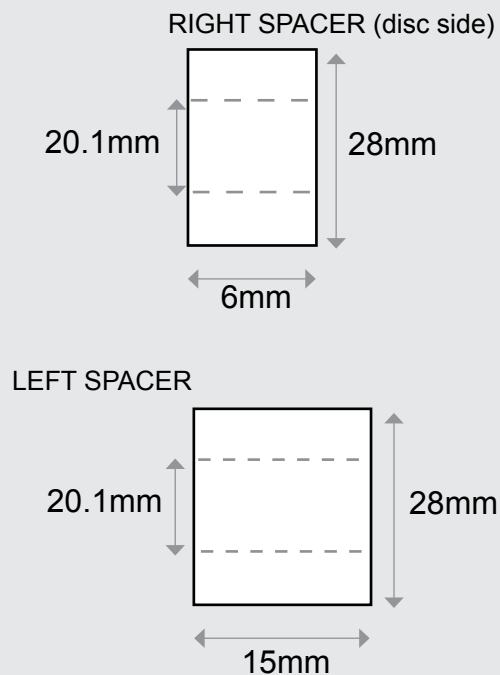


LASER CUT DISC ADAPTER WITH SUZUKI GSXR FRONT DISC



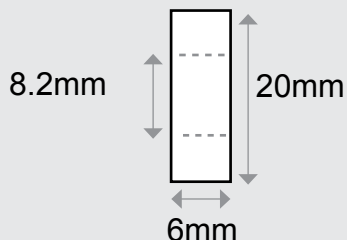
YAMAHA WR450F, WR250F, YZ450F, YZ250F

FRONT WHEEL



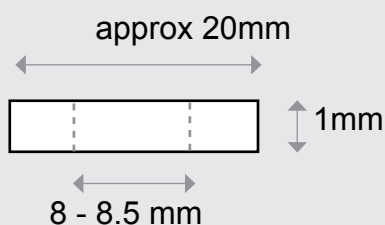
2 x CALIPER SPACERS

These should only be needed *if* you use the disc adapter for the GSXR disc or your standard Yamaha disc.



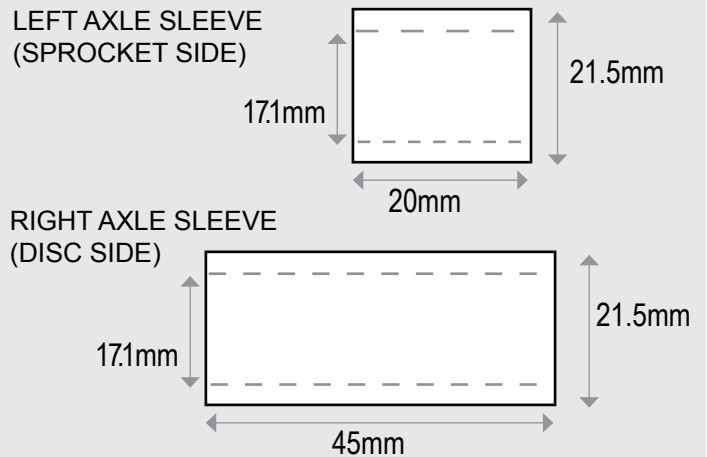
4 to 12 WASHERS (to offset rear disc)

You may not need these. Check to see if the rear disc lines up in your rear caliper first. This size washer is very common and easily available at the hardware store.



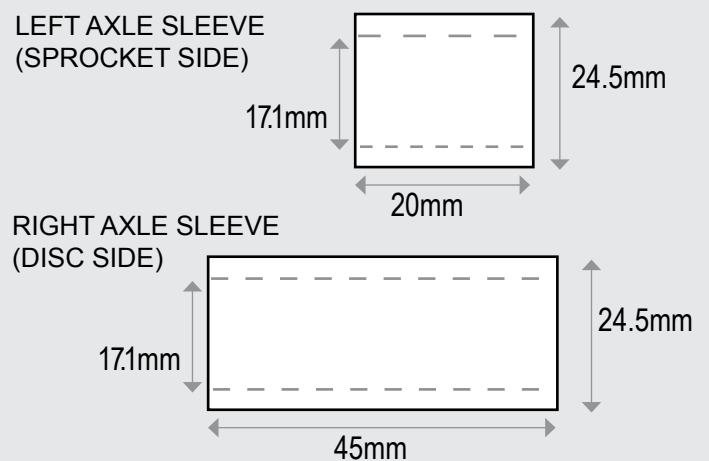
REAR AXLE SLEEVES or 22mm axle

(up to and including the 2008 models)



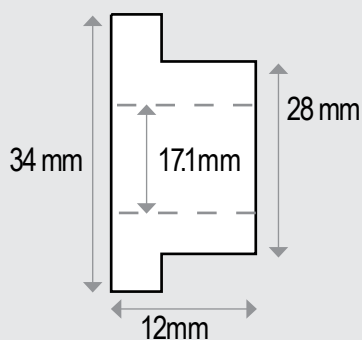
REAR AXLE SLEEVES for 25mm axle

(2009 model)

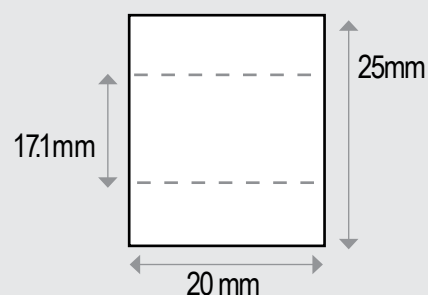


REAR WHEEL SPACERS

LEFT REAR WHEEL SPACER (sprocket side)



RIGHT REAR WHEEL SPACER (disc side)



FITTING INSTRUCTIONS STEP BY STEP

Please note this is only a guide to fitting your wheels, and no responsibility is taken. If you aren't very mechanically-minded, get someone who is to supervise you on your first few wheel changes — better safe than sorry... It may pay to write the name of each spacer in fine indelible ink to make it even easier.

FRONT WHEEL

It can help to have a brick or old oil container to balance your front wheel on while fitting, the same with the rear. Make sure the bike is securely placed on the bikestand, they can easily move around without you noticing then next thing the bike is on its side, sometimes with you underneath it.



Secure the bike on your bikestand, remove the front axle and the front wheel.

Remove the front caliper bolts. Check your brake pads for wear.

Insert the new 45mm long high tensile bolts from the inside of the forks, place the adapter plate *on the inside of the fork mount*, then screw the high tensile nuts and locknuts on using Loctite (you *must* put these bolts in before the motard wheel).

Place the motard front wheel and spacers within the forks, insert the standard WR axle and bolt it on. Never force the axle in as you may ruin your thread; just keep jiggling the fork legs around till it slides in smoothly.

Pry the brake pads apart on the caliper, then place on the disc.

Insert the 25mm long high tensile bolts and screw into the WR caliper if you have a custom disc fitted. If you have the disc adapter and are using the GSXR disc or your standard dirt disc, insert 30mm long high tensile bolts and your 6mm caliper spacers.

NOTE: See if your caliper bolts touch the disc when fully tightened, in case these vary in length slightly on some year models. If so, you may need a washer or two applied, or simply buy high tensile bolts of the length that suits your bike best.

Apply Loctite to caliper bolts and tighten.

Tighten your pinch bolts on the fork legs; don't overtighten as you don't want to strip your thread. Apply Loctite for safety. Remember to tighten each bolt again as one will loosen as the other is tightened further.

Remove your speedo cable if you were using your WR speedo.

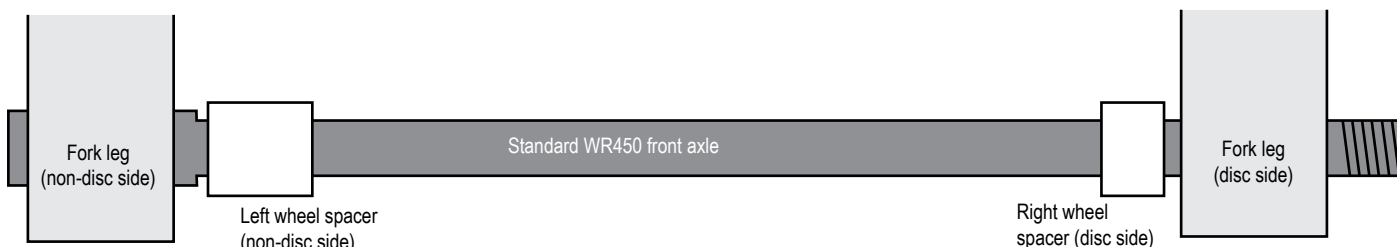
IMPORTANT: pump your front brakes until the pads are against the disc!

Spin the wheel, and double check all bolts and parts for safety issues.

Reset your Trailtech speedo for the circumference of the motard wheel. Double check everything before you head off, and always ride carefully the first few kilometres, listening and feeling for any issues if you haven't fitted the wheel correctly.

USING THE 16 INCH FIREBLADE FRONT WHEEL?

If using this wheel with the 310mm disc, you will need to loosen your disc bolts so that you can create more room to slip your front caliper on the disc. It can help have your caliper adapter plate loosely bolted on too. You won't have any issues if using the standard 260mm front disc.



REAR WHEEL

It can help to have a brick or old oil container to balance your rear wheel on while fitting. Make sure the bike is sitting securely on your bikestand.

Remove the rear axle, push the wheel forward, then remove the chain from the sprocket and drape it along the swingarm out of the way.

Remove the rear wheel.

Put the standard chain tensioner block on your motard 17mm axle.

Put the shorter axle sleeve (shim) on the axle next.

Prise your rear caliper brake pads apart for easier fitting.

Slide your rear caliper bracket toward you as far as possible. Slide the motard rear wheel in. You will probably need to tilt the wheel over to the left while fitting to ease it in.

Before the wheel is all the way in, put your spacers on either side. This can be a tricky balancing act with one person, and why it's useful to balance your wheel on a suitable brick or oil container while you fiddle with everything!

Tap the 17mm axle in gently; don't burr the thread by forcing it.

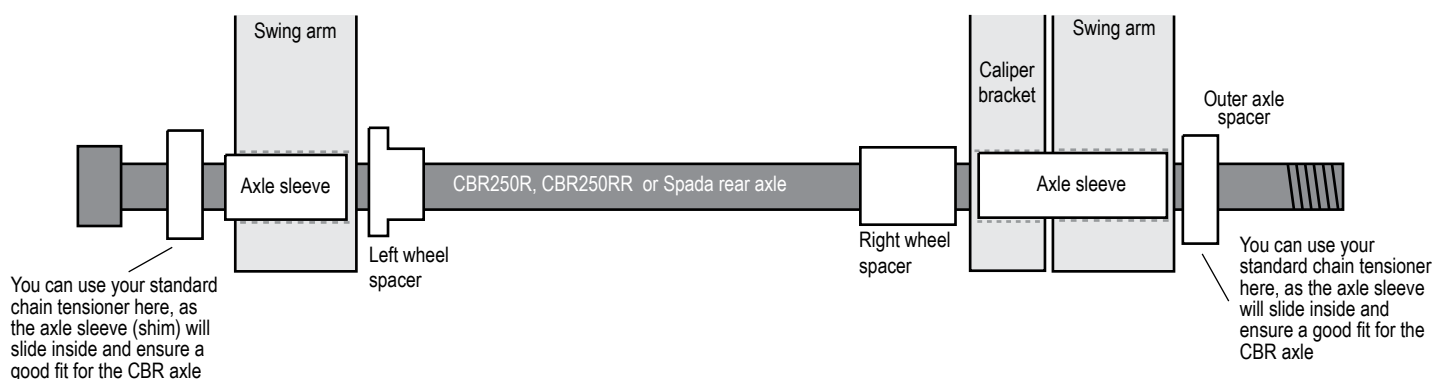
Gently slide the longer axle sleeve onto the axle, until it is through the swingarm and the rear caliper bracket.

Tighten the rear axle bolt on.

IMPORTANT: pump your rear brake until the pads are against the disc!

Spin the wheel, and double check all bolts and parts for safety issues.

Double check everything before you head off, and always ride carefully the first few kilometres, listening and feeling for any issues if you haven't fitted the wheel correctly.



CRITICAL SAFETY ISSUES

PUMP YOUR BRAKES BEFORE RIDING

Because the pads are prised apart to take the wider discs, you will need to apply the brakes up to six times before your brakes work again. It is crucial to do this before riding, otherwise you'll sail into your first corner without brakes!

APPLY LOCTITE TO ALL BOLTS

Again, it is crucial to apply Loctite or another bolt adhesive to your front and rear disc/rotor bolts, caliper adapter bolts, sprocket bolts and axle bolts. Recheck everything before you ride, you can never be too cautious.

CHECK THE CAST WHEELS REGULARLY

Honda make great wheels. The CBR250s have been used by many riders in road racing, and on older models some of these wheels have seen years of racing with no problems. Generally you should have no troubles unless you jump the bike, hit a curb hard, or crash the bike. If damaged, cast wheels typically show stress fractures that gradually increase in size, so it pays to regularly check your wheels for these, especially during tyre changes when you can check the inside of the rims. The moment these show it is time to replace the wheel.

CHECK, DOUBLE CHECK AND TRIPLE CHECK EVERYTHING WHEN FITTING

Whether you are changing to motard wheels, your standard wheels, or just taking a wheel off to replace a tyre, get in the habit of double and triple checking all your bolts, nuts, brake lines, the wheels and so on. Here are the only two issues we've heard of from guys using motard wheels.

The first situation, a guy got interrupted by a phone call and forgot to tighten his front axle when swapping to the cast wheels. Thirty minutes later the front wheel wobbled uncontrollably and he went for a slide along the bitumen. Thankfully just a bit of grazing and some new plastics needed.

Second, another guy had the little bolt work loose that holds the front brake line to the fork. When off-roading, the disc was gradually wearing through the brake line on full suspension compression, and he completely lost his front brake down a steep mountain road into a tight left hander. He says he just managed to get around the corner by half locking up the rear wheel and sliding the bike through the corner, so it all ended well. The conclusion? Become a safety freak.

POSSIBLE ISSUES WITH FITTING

THE OUTER EDGE OF THE FRONT DISC IS JUST TOUCHING THE CALIPER

The bolt holes in the caliper adapter plate are slightly larger than the actual bolts to allow a small amount of adjustment. There is a small chance you may find the very outside edge of your disc just brushes the pin that locks your brake pads into place. If so, all you need to do is loosen the caliper adapter plate, then retighten the bolts while pushing the caliper adapter plate away from the fork leg. This small amount of free play is there so that the caliper adapter plate can be used on both the DRZ400 and WR450F!

PRISING YOUR BRAKE PADS APART FOR AN EASIER FIT

Your brake pad pistons are used to the much narrower DRZ400 discs. You will need to prise these apart to slip the CBR discs in.

Also, there will be some disc rub until the brake pistons adapt to the wider discs; this is normal so just give your calipers time to adjust. If your brake pads have worn unevenly, the CBR discs may not centre perfectly within the calipers. Give the caliper pistons time to adjust and reposition themselves for the new wider disc.

The standard WR discs are very thin to save weight; this is fine for dirt riding but you want discs with better thickness for serious road braking. The CBR discs are wider and there is a chance they may just rub against parts of your front and/or rear caliper. You might notice this only on hard cornering, as the wheel will slightly flex and just bring the disc into contact with the caliper. All you need to do is file the offending part of your caliper back slightly.

Chances are you won't need to do this unless your spacers aren't quite to the right measurement; but any slight bit of rubbing and this was fixed with five minutes use of a metal file.

If you want to head off any problems, simply file back half a millimeter on each side of the calipers that will be close to the disc. It doesn't affect the structural integrity of your caliper at all.

The rivets on the front disc are very close to your front caliper. If your spacers are not perfectly accurate, these rivets may rub on your caliper. If so, simply grind one or two mm off the small lip on your caliper.

CBR wheels are often repainted in a basic enamel and many motard riders prefer to customise the colour of their motard wheels. This enamel finish is easily chipped during fitting if care is not taken. It is not a durable finish like 'two pack' or powder coating, so basic touch ups can be done with satin black enamel spray paint; ideally the wheels should be resprayed in a durable paint and colour of the rider's choice.

GEARING AND SPROCKETS

One way to minimise your changeover time is to use the same chain if possible. If you've got the six speed gearbox this is much easier as you've got a wide spread of gearing to make a road/dirt compromise easier.

If you run this way, it is advisable to run the largest countershaft sprocket possible and match this to a smaller rear sprocket, say around 45 teeth. If you want lower gearing for trail, you can then put on a smaller countershaft sprocket, and with care, you can use the same chain and just adjust your snail cams accordingly.

However, if you aren't happy with compromising your gearing and uneven wear, it's better to simply have a chain and set of sprockets for each setup, and simply add 10 minutes to your changeover time.

FEEDBACK

These info packs are continually refined as we get feedback on them, so please let us know what worked and what didn't, or if there wasn't enough information on any sections.

