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**YAMAHA IT495
HONDA XR350**

**JULY 1993, ISSUE 166
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 * **Recommended and maximum price.** It's as cheap as, considering the number of bikes we run around here.

Contents page written by the wives and girlfriends. Didn't you spot the spiteful references to our first loves ... dirt bikes?



THIS PAGE

MAIN PHOTO – THREE'S COMPANY: It's good to have a couple of mates along when you're chasing down some big wide road out the back of nowhere.
TOP – WA SPECIAL: Test that is. Get the full story on this year's Four Day on page 34.
BOTTOM – TIME OUT: Greg Scott has found that Jet Ski crashes are softer those on bikes.

COVER

MAIN PICS –
DOG GONE – Riding the NSW/Qld dingo fence as the sun sets in the west. No dingos, but a tannery full of roos.
HELPING HAND: The infamous Darwin Kamfari mud run – ADB was in the thick of it.
DEAD RED: Honda killed off the XR350 in '86, but it still makes a good buy for those on a budget. Same goes for the much-loved IT490.
TECH TALK: Can't understand what people are saying? Use Minirider's guide to Tech talk.

Test Of Time

HONDA XR 350

Did Honda let a good thing slip away?

With rumours rife of a new 400cc four-stroke being developed by Honda, we thought it was a great time to see how their last middle capacity thumper – the XR350 – has faced the years. If we had a buck for each time we'd been asked why Honda dropped its mid-weight cruiser we wouldn't be sitting in front of no computer, let us tell ya.

The XR350 first appeared back in 1983, when two-strokes ruled the race world and four-strokes were eyed with suspicion by anyone half interested in crossing the line first. Add to this the fact that 350cc machines have historically been slow sellers in both Australia and internationally and the reason for the XR350's short run – it finished in '86 – becomes clear.

The thing is, the XR350 wasn't a half bad bike and the '85-'86 model still makes a reasonable alternative for the trail rider/casual racer on a tight budget, so we're here to tell you what to look out for and how to get a second-hand one up to par.

WHICH XR350 IS WHICH?

In real terms the XR350 can be broken down into only two models; the '83 RD and '84 RE, and the '85RF and '86 RG. In America there is no such thing as an RG – the bike had been dropped from their model range at the end of '85.

For fast identification, just look at the carb. If it has two carbs, side by side, it's an RD or an RE. If there's only one, it's an RF or an RG.

WHICH XR350 IS WHICH?

The earlier model XR350 – the '83/'84 – had problems. Like the earlier XR250s, they had a small capacity wet sump and suffered from engine overheating and therefore poor lubrication. Classic hassles like the hard-facing being worn from gearbox cogs quickly surfaced.

Honda's flirtation with twin carbs was around this time as well and the 350's set-up was as troublesome as

the one on the first XR600s. They were tricky to jet and a real mongrel to service simply because it was a big-time job to get the carbs clear of the frame. First remove the airbox, then remove the ...

On the up side, the twin carbs did deliver better top-end performance than the later single carb model and if the carbs were synchronised properly – see later – it was possible to get rid of the dreaded flat spot which plagued the bike.

The '83 model was the only one with a drum front brake – it was swapped to a disc in '84 – but the rear remained a drum through to the end of the model run.

The forks were never quite right on any of the models. They were harsh on small to medium hits with too much compression damping – tuners quickly discovered that altering the damping rod holes didn't work and that the rod itself was too small to cope with the job.

The shock was, however, much more on the pace and had the startling – for its time – option of 12 compression and four rebound settings.

Overall, the first two XR350s handled reasonably well, gave a broad power spread and were hailed as a big step forward for four-stroke dirt bikes.

WHAT THEY DID TO UPGRADE IT IN '85

The XR350 underwent a big change in '85. The wet sump engine was dumped, replaced by a dry sump version which stored its oil in the frame, just like the XR600. In



'83 XR350-RD
'84 XR350-RE



'85 XR350-RF
'86 XR350-RG



ABOVE
BEAT THAT DRUM: The quick way to spot the RD is the drum front brake, which was dropped in '84. The first two models had reliability problems thanks to a small wet sump.

RIGHT
WORTH CHASING: If you're after a good XR350 go for the '85 and '86 models; the much improved engine proved more robust in the long haul.

fact, the frame was the same as that used on the '85 to '87 XR600. The steel swingarm became alloy and stretched further back, controlled by a new Showa shock with 14 compression and four rebound settings. Up front, the steering rake was extended to slow the nervous front end.

The engine had its stroke lengthened, upping the capacity from 339cc to 353cc, but it didn't rev as well as the earlier models. The twin carbs were dropped in favour of a single throat 35mm Keihin.

The plastics also received an

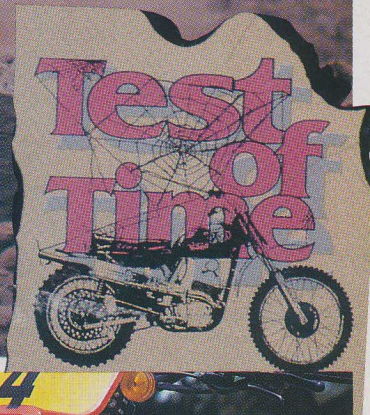


update. The 12 litre fuel tank shrank to 9.5 litres (which brought howls of protest from trailriders needing extra range), new quick-release side-covers appeared and the now-famous digital speedo, one of the best enduro/rally computers ever made, became standard equipment.

Then in '87 the bike was given the chop. In Geoff Ballard's words, "They got the thing right and then dropped it."

WHY WAS IT DROPPED?

We figure the biggest hurdle facing any 350 in Australia is rego



costs. In nearly all the states 250cc marks the point before a big hike in rego price and buyers tend to think that if they have to pay the bigger insurance cost, they may as well opt for the bigger capacity 600s.

Australia is, however, a small pebble in the rock pile of world bike sales and our reaction to the bike is unlikely to have had much effect on Honda's global planning. The enduro world certainly caters for the 350cc class four-stroke, with the ISDE thumpers split into under 350cc and open classes.

Was the global market reaction

poor because the bike was as big as the XR600 but lacked the power? Or because it wasn't a huge step up from the XR250? Is Honda then, taking a gamble if it does in fact release a 400cc four-stroke?

In the light of the above, it's

Continued over

RIGHT FORKED TONGUE: *Although the Showa rear end works fine, especially on the RF and RG models, the forks need help in the form of a Ballard's XR-Only damper rod and an oil fiddle.*



XR350

interesting to note that the design department of XRs-Only is currently slipping an XR350 engine into a late model XR600 frame for Ballard to race. He claims the combination will give an excellent power-to-weight ratio which won't tire him in cross country events.

And that's what makes the later model XR350s such a good deal on the secondhand market.

GETTING THE MOST

So how do you get the best from your XR350? Well you can forget about slapping a big bore kit in because no-one makes one. The reason for this is simple - there's not enough meat in the cylinder to allow it to be bored out. A 1mm oversize is as big as they go.

GOOD POINTS

- ✓ Lighter than an XR600.
- ✓ Great power-to-weight.
- ✓ Good styling.
- ✓ Honda build quality.
- ✓ Spares availability: 7 out of 10.
- ✓ Good rear suspension.
- ✓ Rugged dirt-oriented construction.
- ✓ Can still be raced with success.
- ✓ Street registerable in all states.
- ✓ Single carb on RF-RG ('85-'86).
- ✓ Good brakes.
- ✓ Good electrics.
- ✓ Good ergonomics and lever design.
- ✓ Plenty are available secondhand.
- ✓ Good stock muffler.
- ✓ Great airbox access in '85-'86.
- ✓ Rear linkages have grease nipples.

BAD POINTS

- ✗ Engine oil capacity too small.
- ✗ Cylinder head cracks.
- ✗ Heavier than an XR250
- ✗ Short wheelbase - twitchy at speed.
- ✗ Forks need help.
- ✗ Gearbox loses hard facing.
- ✗ Twin carbs on RD-RE ('83-'84).
- ✗ Smaller 9.5 litre tank on RF-RG.



NICE CHOICE: Honda's XR350 may have had its share of problems but it still makes a fine dirt bike for trail use or even club enduros. It's a cheap, practical way to enjoy your dirt riding as long as you look after the engine oil, because they're good to ride.

OTHER 350s

Honda's XR350 is not the only fish in the 350cc four-stroke sea. Here are your alternatives.



YAMAHA TT350

There are a number of oversize pistons available when things do get sloppy, though. Honda has a 0.25 and 0.5 mm oversize, while Ballard's stocks 1mm oversize Arias.

This is the only real alternative to a secondhand XR350. The TT350 has been around almost unchanged since '85 so there are plenty on the secondhand market. Like the later XRs, it has a disc front and drum rear, but the engine has a reputation for reliability. The forks are a tad harsh but can be dialed in with some careful oil weight and height juggling, and it doesn't steer as well as the XR when the going gets tight.

HOW MUCH SHOULD YOU SPEND FIXING ONE?

We tend to think that it's actually pretty stupid to throw a lot of money at a bike of this vintage; the money would be much better spent on a later model machine which performs better standard. The smart move is to make the most of what's available, which simply means getting the bike properly dialed.

There are a couple of quick tricks which help the twin carb models hugely. Start with the jetting below:

	LEFT CARB		RIGHT CARB	
	Main	Pilot	Main	Pilot
'83	112	45	105	
'84	115	42	112	

If there's a flat spot in the power delivery - we're betting there will be - then try this simple mod: use a pair of needle-nose pliers to squeeze the carb synchronisation fork prongs together to delay the initial opening of the secondary carb - the right hand side one. If you squeeze the prongs too far the throttles won't open fully; check this with the airbox boot removed.

If the bike is hard to start when hot try lowering the float levels from 18 to 20mm and raising the needles one notch.

The hot tip with the forks is to dump the stock damper rod. Ballard's has a replacement rod which gets rid of the stocker's poor initial damping response and at \$158 a pair, they aren't expensive. Silicon-chrome wire progressive wound springs also make a big difference - they're \$99 a pair.

Use 7wt fork oil set at 160mm from the top of the fork leg with the spring removed and everything compressed if running the stock damping rod, or 5wt at 150mm if using the Ballard's damper rod.

The shock is fine but benefits from a re-valve and service. The stock spring is OK unless it has sagged or you're a faster or heavier than average rider. If the shock bottoms all the time there is a range of springs available to fit the XR350.

Thanks to Geoff Ballard for his help in compiling this story. We'll buy you a beer mate, just as soon as you can bend your elbow again.

PROBLEM AREAS



XR350RD-RE

'83-'84 MODEL: Think long and hard about buying an '83 or '84 model. Unless they have been very well looked after the engine will have suffered from its small sump oil capacity, so listen for rattles which could indicate things have gotten hot and sloppy. Cracked heads can be a problem with these models too - there simply isn't enough metal between the valve holes and if the engine gets too hot something has to give.

Check by riding that the gearbox shifts cleanly and there are no strange noises, particularly in third gear, which could be the beginnings of the gearbox's death rattle. Once the hard-facing on the cogs starts to go, it disappears pretty quickly and, take it from us, you don't want to pay for a new gearbox.

The hot tip here is to use a magnetic sump plug which picks up any loose bits of metal floating around the sump. At least you then get a warning when the hard-facing starts to go.

Quiz the owner on how often the oil has been changed; it should be on a regular basis - after every two or three rides, at least.

Apart from that look for all the normal things; inspect the rear suspension linkages, wheel bearings, brakes, sprockets, tyres, and cables, and check that the lights and electrics in general are up to scratch (or that the price is low enough to compensate if they aren't working).



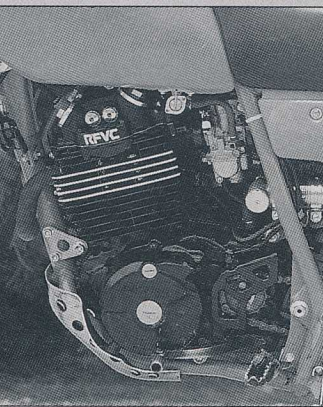
XR350RF-RG

'85-'86 MODEL: The same problems can occur with the '85 and '86 models but are much less likely, mainly because of the increased engine oil capacity. In fact, the '86 model was very reliable and is well worth paying a few extra bucks for if you can find a good 'un.

Speaking of which, the average price of a good condition XR350 is around \$2500. That's for a good one though; don't be fooled.

The RF plastic update saw the 12 litre fuel tank shrink to 9.5 litres - not much good if you're into long rides.

BELOW THE GOOD OIL: Most of the long-term hassles with the XR350 centre around the engine and its overheating problem - the sump just doesn't carry enough oil. The RD and RE models were worst.



SUZUKI DR350

There are actually two models of the DR; a street version and an enduro. The trailbike is reasonably heavy but gets along nicely in the bush as well as on the road. The enduro version is no lightweight either, but is capable of strong performances in race conditions although it has no street rego. Both are heavier than an XR350.

The DR is, of course, a more modern bike than the XR350, first released in 1990, and therefore has more up-to-date features - disc brakes at both ends, better suspension stock and, of course, a higher price tag. The best thing about the DR350 is its bulletproof engine. No oil hassles, head cracking or gearbox worries with these babies.



HUSQVARNA 350TE

The Husky only qualifies here because it's a 350cc thumper. In the real world it is streets ahead of all others in the class, with huge gobs more power, rego, race tuned suspension and a long list of high quality running gear. What kills it for most secondhand buyers is the price - expect to pay twice or three times as much for a good TE than an XR350 (the TE was first released in '90). Spares are A-1.