



AUGUST, 1976

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# Two wheels

THE MAGAZINE OF MOTOR CYCLING

STAY  
WARM & DRY

**CYCLE  
SUITS**

YOUR BIG  
GUIDE

**SCOOP TEST!**

**HONDA'S MR250 ENDURO**

**PLUS YAMAHA IT400 ...**

THE NEW-BREED JAPANESE TRAILSTERS  
OUT TO BLAST THE EUROPEANS!

PHOTOGRAPH BY ...





# TWO WHEELS

THE MAGAZINE OF MOTOR CYCLING

Editor: Mac Douglas

Tech Editor: Mike McCarthy

**OUR COVER:** That's right — a scoop test of Honda's enduro 250 two-stroke — and it's the best Japanese off-road bike we've ridden! Match that up with our workout of Yamaha's not-so-secret IT400C (against our own Yamaha enduro project) and inside it's a damn good coverage of the Japanese bikes settin' up to challenge in European territory! You'll be surprised how good they are! Gone cold on riding? Check out page 37. Our special accessories feature this issue covers all the oversuits we could find in Australia! On page 46 there's the good oil on motorcycling's pollution-free four-stroke future, but part of tomorrow might be automatic. See page 16.



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**SCOOP TEST!**



A neat package with all the basics to meet specialist reliability trials demands — but without the quirks and orneryness you thought was in-built in competition machinery!

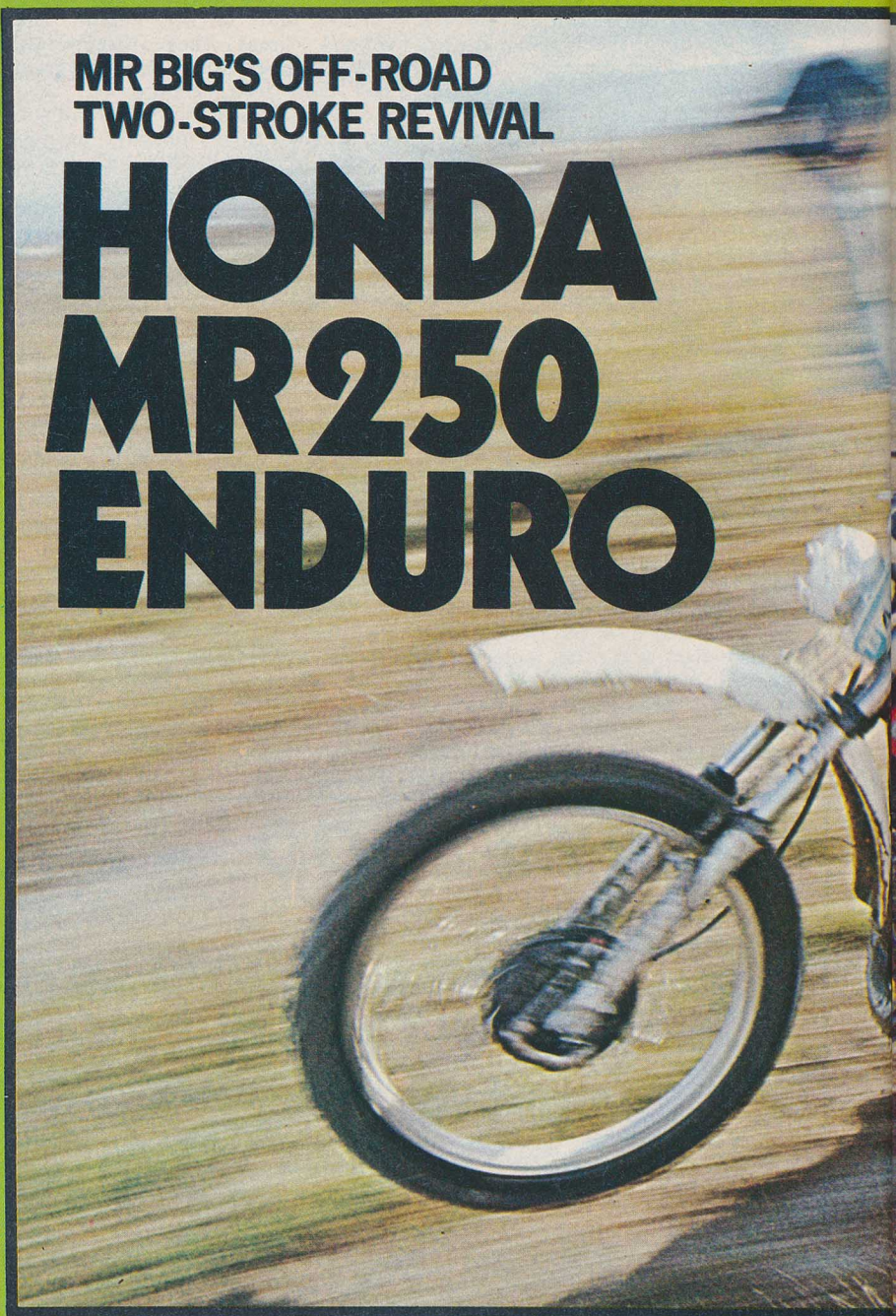
In all respects, the MR250 is the most sensible and desirable Japanese off-road bike we've ridden!

VOLUME has always been the name of the game for the Japanese manufacturers — that's why they've concentrated on middle-of-the-road machinery rather than build specialised models suitable only to real enthusiasts.

But times change and buyers' demands change also. More specialised models are becoming the norm — a shift in emphasis which resulted in Yamaha building the IT400C (Check page 22 for full test!).

**MR BIG'S OFF-ROAD  
TWO-STROKE REVIVAL**

# HONDA MR250 ENDURO



And when the Big Daddy of them all, Honda-san, comes out with a pure enduro model you can be sure the company has done its homework and created a machine which will sell in volume. The MR250 Enduro is only the second Japanese real enduro machine to reach these shores (although Honda has been making the MR175 enduro for the USA market for 12 months now) and it is exactly what the glossy brochures claim — a serious trail/enduro/two-day reliability trail machine — but with certain "soft" features which will make it easier for newcomers and less serious riders to live with. The

MR may well be the kind of bike that many general trail riders have been looking for all along!

TWO WHEELS was fortunate to get the first local test on one of the MR250s brought into the country. The first crate was imported by Max Conley who owns the Honda shop at Orange. Max is one of the prime movers in the growth of the national Two-Day Reliability trials scene in Australia and main organiser of the largest two-day event here, the Qantastic Two-Day Reliability Trial (which attracted 56 three-man club teams and 21 three-man trade teams this year).

The new MRs arrived a few days





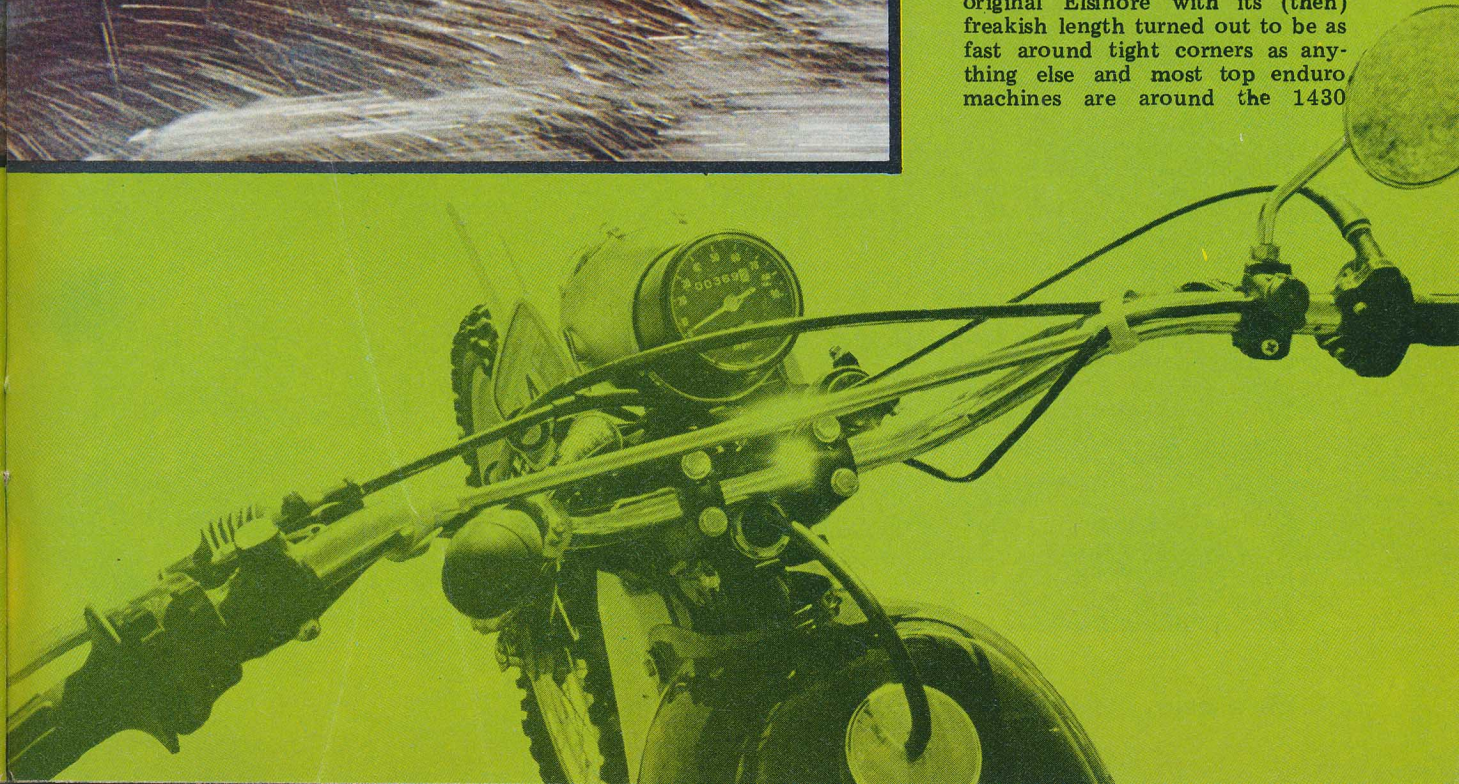
before the trial and two of them were ridden in the event — one by Jim Airey (four times Australian speedway champion) and by one of the Max Conley mechanics.

After the Qantastic event, when Max invited us to check out the bike, we stayed over the next day and in steady rain re-ran parts of the trial, including the second day special test, part of the hardest section which took points off every rider on the last day (the only section to do so) and two of the creek crossings plus some road work and forest trails.

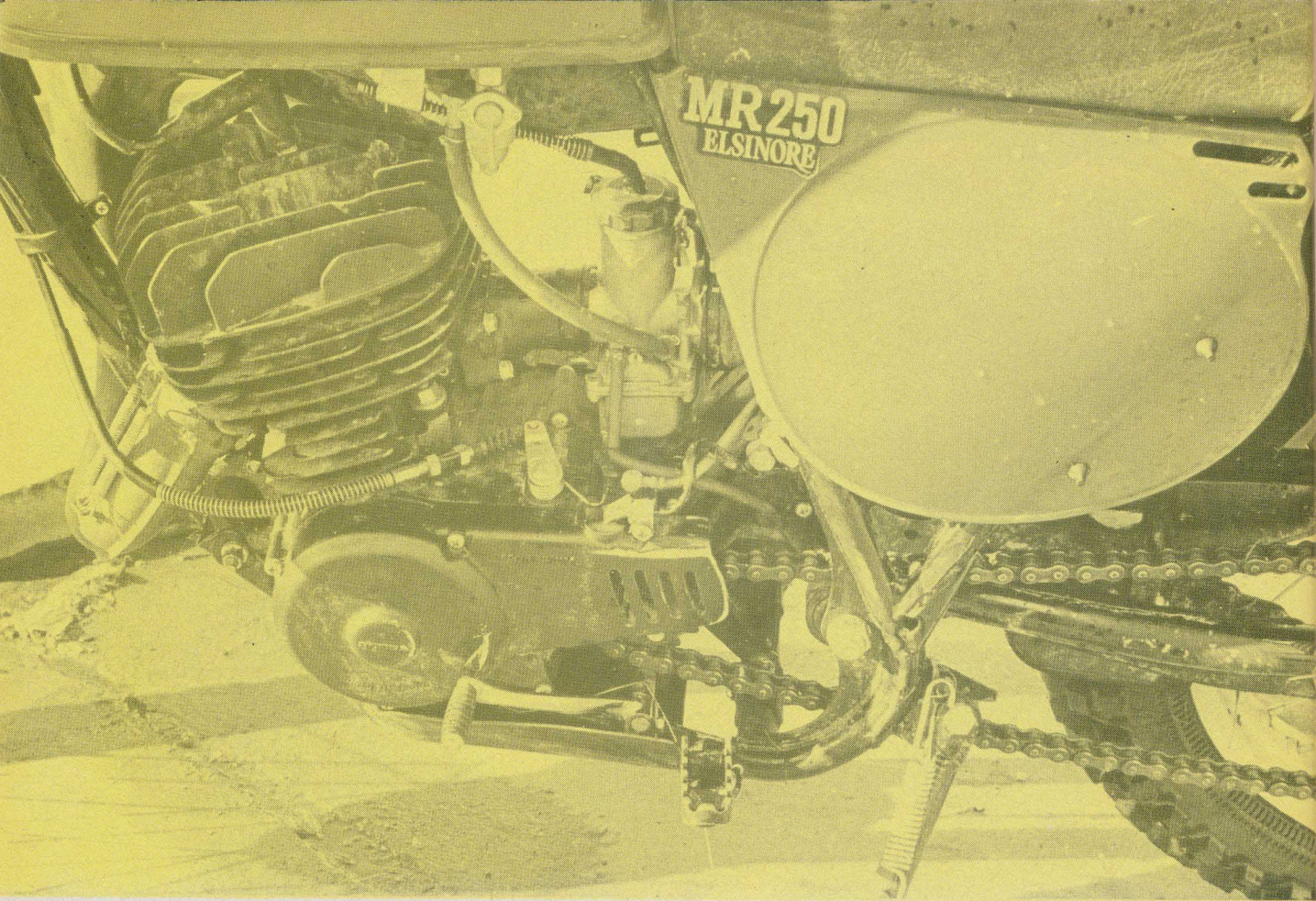
After two days' fudging through the bush in competition with 270 other riders we did not fancy a test in cold wet and muddy gear left over from the weekend, but it ended up that we rode the bike continuously in the mud, creeks and rocks and enjoyed it throughout, forgetting about the weather. In real riding pleasure and fun the MR rates very well. It will appeal to lots of riders who take it easy on trails and who are not mechanically minded to the point of enjoying the maintenance associated with fine-bred European enduro machines.

The bike is a mixture of motocross machine and the easy-to-forget MT250 trail model. Fortunately the MX aspect wins out. The frame is of virtually identical design, but in mild steel, not chromemoly. The latest Elsinore 250 "Red Devil" motocrosser and the MR share the wheelbase dimensions at 1435 mm (at the shortest rear wheel setting), overall length at 2122 mm, and the steering geometry of 32 degrees rake and 148 mm trail.

That longish wheelbase is common to the current 'crossers and top enduro machines — that original Elsinore with its (then) freakish length turned out to be as fast around tight corners as anything else and most top enduro machines are around the 1430







## HONDA MR 250 ENDURO

-1450 mm. The Honda differs from most others though in its front end rake. The top-handling enduros like the Fronteras are 30 degrees, the Yamaha cantilever is 30.5 degrees, even the prototype Hodaka sits at 30 degrees. Trail for most is between 135 mm and 150 mm, so the Honda is near the upper edges of the scale. Thus steering is light, slow and very accurate.

The frame's feel is stable, and not excessively heavy. It's single backbone, single downtube design and well gusseted with welds as good as any from the Honda factory.

The front end uses the CR forks with the axle mounted directly at the bottom of the forks, not forward of the sliders as is the fashion with Maico and Marzocchi units. The forks offer very soft reaction to minor bumps and continue to cope with heavy jolts up to around the 70 km/h mark when it tells! But the softness is a necessary part of enduro machines, a characteristic shared with the

*Bike handles all scrub situation competently, and bashplate offers sensible coverage — it's just as well tough use is anticipated!*

Betors on the Bultacos and the Yamaha forks.

The rear end uses Showa units, vertically mounted, but forward on the swinging arm (the same position as on the MX Elsinore model). They're not gas-filled, and have the finned aluminium and oil-damping similar to Konis. They're comparatively short travel, but forward mounting allows the swinging arm and the rear wheel some 152 mm movement. The units have five pre-load adjustments for the springs, none of which we thought were perfect for the rocky terrain we covered.

*Motor is responsive without being super-punchy and even after two straight days of competition ours pulled well down low. Elsinore frame has footpegs mounted too far forward for anything other than medium-size riders. Long travel rear suspension badly needs chain tensioner backup, but there's a hard teflon strap around the swinging arm to stop the chain wearing into the metal! Gearlever is right in the way for fairly tough battering from bush and rocks.*





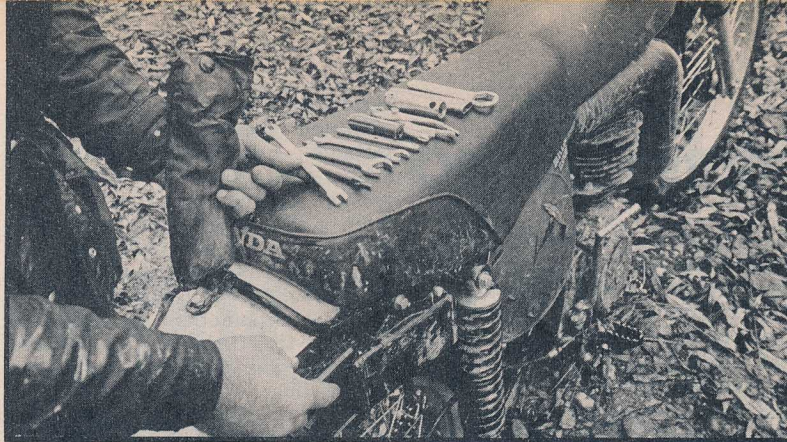
The bike uses the Japanese DID rims. These are fairly light and the front was fairly well bent from the two-day trial. But that was not an uncommon feature among all the machines which took part! The tyres are the full knobby gripster Bridgestones which work better than expected. The rear is the ISDT type with the extra sidewall strength similar to the Barum which we rate as the best tyre available for trial and enduro work.

The front brake is the same as the XL/MT drum. One of our favorites; heavier than many but reliable and water resistant. Coupled with the rear cable-operated brake, slowing is safe, sure and predictable. The day was spent in and out of water and mud and the MR's stopping power hardly altered. A high score there.

But one question remains. How long will the cable-operated rear brake remain smooth and friction free? We'd watch it carefully, even though it did not play up at all during our test. Heavy pedal pressure is needed to lock up the rear wheel, another handy feature. The front needs only two-finger operation to maintain full control.

Honda spokes have always been strong and they should not be different with this model — the rims fracture before the spokes break — believe it!

Basically, the engine is a detuned Elsinore. Compression is 6.9 compared with the Elsinore's 7.2:1. The port design is one large,



bridged intake, four transfer and one bridged exhaust. Reasonably similar to the Elsinore which has one extra transfer but you will not feel any different in response when riding.

A two-ring piston is used and the heavy flywheel operates a breaker points system magneto — the major enduro machines have returned to easy-to-service points systems rather than CDI. The magneto also powers the small trials-type headlight and tail light with direct AC current. A single sparkplug is used, with no provision for another plug or a compression release.

The engine gets its fuel and oil mix (20:1) from the carb shared with the latest Elsinore — a trick 34 mm Keihin with an innovative pumper jet which adds extra fuel to the venturi beyond 5000 revs. The standard jetting is simple to change and the slide is heavy and hopefully free of rapid wear.

*Toolkit has tight squeeze into steel case on rear frame section. It includes handy little spoke spanner. We keep saying how nice some of these bikes would be (the TY Yamahas included) if there was room for spare chain links, plugs, rag, chain lube and other handies. Oh well. Note near-upright shocks mounted well forward.*

The MR has an all-metal airbox similar to the Elsinore. It is fully sealed except one side which is closed by a plate held by three Phillips head screws (what else?). The plate is drilled for air entry but instead of feeding direct the air travels down a wide lip to the bottom of the box. A small rubber one-way valve lets any water that does get in to the box drain out. The entry is one of the most restricted we have seen. The box itself is large and the oiled foam element is the largest we have found on a dirt machine, *huge* is the word. It fits snugly into the box and is held by a male/female fitting on one side and a 10 mm bolt on the other.

The box is covered by neat, plastic sidecovers-come-number

*Airbox ducting is tricky double-wall arrangement which destroys induction noise and sucks air through holes then down internal walls into base of box. Plastic sidecovers are held in place by rubber strap which seemed unnecessarily frail. Removal of the inner cover reveals huge oiled foam filter. Note protruding kickstart — by far the nastiest piece of equipment on the Honda.*





# HONDA MR 250 ENDURO

plates held on by rubber straps. They're annoying to fit and remove but they look okay once on, and they match the bright red tank. There is one point with the carb that may justify owner attention. The rubber inlet manifold is fairly long, and bolted to the cylinder barrel in similar fashion to the XIs. But watching the movement in the rubber at idle has us wondering how long it will last.

The exhaust system is the upswept one used on the Elsinore. Tucked in tight, it runs under the tank and above the air cleaner on the right side and exits on the left in a massive machinegun-like muffler/spark arrestor on the rear of the frame. It is simple to remove to de-carbon at regular intervals. As if to balance the scales on the other side, there's a black metal tool box. The toolkit is fair — for once the Japanese have realised the importance of a spoke spanner and included one in the kit.

Other equipment of merit includes a metal bashplate, wide white plastic front and rear mudguards, a glass guard on the small headlight, a small, rubber-mounted tail light high on the rear guard, soft rubber grips, a semi-quick

action throttle and a small central mounted speedometer with a re-settable odometer. Levers are rubber-enclosed for dust protection. Switches are so-so — apart from a silly toggle-type kill button which can be set "off" by tree branches. And last but not least a fat, frumpy but durable and bloody-well practical 13 litre fuel tank — the first time a Japanese company has accepted practicality over styling.

While not instantly good-looking the MR250 Enduro is certainly functional, easy to clean (we know) and relatively easy to work on for common trailside maintenance.

Weight is down for a Japanese machine but the MR is heavier than comparable European bikes. The scales show 117 kg (257 lb), 16 kg more than the Elsinore MX so the engineers have still done a fairly good job all round. And you appreciate this more with the realisation that although the MR is slightly heavier than other enduro 250s and some of the top big-bores, the weight is not noticed. The low centre of gravity and the good steering and balance help account for the comfortable feeling when riding the bike, even over tight trials-type rocks and gullies.

And how well does it perform in enduro situations?

The bike felt the closest to an Ossa — although the steering is better but the bike is not as nimble

in tight, twisty going. But the engine had run the two day competition without any alterations to the carb and was running rich, it would be a lot more responsive with a tune.

The riders all commented that it started first kick. And it did — whether cold, hot or warm the MR250 is the easiest-starting bike we have found. It would need to be because the kicklever is a bitch! It's in-gear starting of course.

The gearing on the MR is the same primary and final drive as the Elsinore, (14/47T), but the internal ratios are different. The overall five speeds are wider apart and lower all round (apart from third which is exactly the same as the Elsinore). We thought the gearing slightly high for general trail and enduro riding. Dropping the countershaft one tooth to 13 would make the bike more responsive, and easier to control in the slow, tight stuff.

The engine pulls well in the mid range and adequately in the low end. But it feels choked up, and the air cleaner, carb jetting (way on the rich side at the time but easy to alter) and the massive exhaust system contribute to this lack of instant response. There is a lag between throttle use and the engine reaction. It's easy to get used to but stops the MR from being absolutely predictable. The noise problem has obviously been taken into serious

(Continued on page 78)

## SPECIFICATIONS

**MAKE** . . . . . HONDA  
**MODEL** . . . . . MR 250 Enduro  
**PRICE** . . . . . Approximately \$1100  
**ENGINE:** Single-cylinder, air-cooled, piston port, two stroke, alloy head and barrel, steel cylinder liner. Six cylinder ports altogether, one inlet, four transfer, one exhaust. Two-ring piston, caged roller small end, needle roller big end bearing. Pressed and pinned crankshaft supported by ball bearings.  
 Bore x stroke . . . . . 70 x 64.4 mm  
 Capacity . . . . . 247 cm<sup>3</sup>  
 Compression Ratio . . . . . 6.9:1  
 Lubrication . . . . . Petroil mix (20:1)  
 Carburetion . . . . . 1 x 34 Keihin  
 Air filter . . . . . Oiled foam element  
 Ignition . . . . . Flywheel magneto — contact breaker points  
 Starting system . . . . . Kick — in-gear starting

**TRANSMISSION:** Spur gear primary drive to clutch with seven fibre drive plates and six steel driven plates, operating through a five speed gearbox, left side change, one down and four up. Final drive by No. 520 roller chain.

### RATIOS (Overall:1):

1st . . . . .	28.05
2nd . . . . .	19.80
3rd . . . . .	13.85
4th . . . . .	10.21
5th . . . . .	7.95
Primary reduction . . . . .	3.3:1
Secondary reduction . . . . .	3.35:1

**FRAME:** Mild steel, tubular, welded, single backbone and downtube, twin lower cradle.

### SUSPENSION:

Front: Telescopic forks, internal coil springs, two way oil damped, 175 mm travel. 32 deg rake. 147 mm trail.

### SUSPENSION:

Rear: Swinging arm (reinforced). LTR — Showa gas/oil and spring damping units, five adjustments for pre-load. 152 mm travel.

### WHEELS, TYRES AND BRAKES:

Front: DID shoulderless alloy rim, 3.00 x 21 Bridgestone gripster tyre, cable operated drum brake SLS.

Rear: DID shoulderless alloy rim, 4.00 x 18 Bridgestone gripster tyre, cable operated drum brake. SLS.

### ELECTRICS:

Source . . . . . Crankshaft mounted magneto/alternator 6V  
 Lighting . . . . . 35/25 W headlight, 10 W tail light

### CAPACITIES:

Fuel tank . . . . . 13 litres (2.8 gal)

### DIMENSIONS:

Dry weight . . . . .	118 kg (260 lb)
Wheelbase . . . . .	1435-1468 mm (56.3-57.6 in.)
Overall length . . . . .	2122 mm (83.3 in.)
Handlebar width . . . . .	838 mm (33 in.)
Overall height . . . . .	1095 mm (43 in.)
Seat height . . . . .	858 mm (33.7 in.)
Footpeg height . . . . .	330 mm (13 in.)
Ground clearance . . . . .	233 mm (9.1 in.)

### HOW DO THE FINER POINTS SCORE (Out of 10)

Instrumentation . . . . .	8
Comfort . . . . .	7
Tool kit . . . . .	7
Quality of finish . . . . .	7
Vibration . . . . .	8
Lighting . . . . .	6
Positioning of controls . . . . .	6
TEST BIKE SUPPLIED BY: Max Conley Honda, 235 Lords Place, Orange, NSW.	



## THE H.R.D.

Continued from page 55

follow fame. A general strike brought industrial Britain almost to a standstill, and many small firms were unable to find the finance to cover the bad patch. The HRD was a luxury machine, with a price in the upper class bracket, and this was unduly emphasised when a price war developed between other manufacturers. Inevitably sales fell, and at about the same time there was a vehement newspaper

campaign about the dangers of motorcycles — just as Australia suffered a similar anti-motorcycling period in the '50s, so did Britain in the late '20s. When a rider died after an accident, and especially if it happened in a race, editorials would be vitriolic for days after.

In late 1927 Howard Davies went into voluntary liquidation, and Ernie Humphries bought the HRD concern. Ernie then made the OK Supreme, and obviously intended to manufacture a high quality machine, but the depression, though still a year away, was

having its effect, so late in 1928 Ernie sold the name HRD to a young undergraduate who had his own ideas on the proper way to build motorcycles. His name was Philip Vincent, who of course later went on to considerable fame with his own remarkable magnificent machines. But that is another story.

Howard Raymond Davies never again entered the business of motorcycle manufacture. On the 25th anniversary of the founding of the Vincent Owners' Club in January, 1973, he died, aged 77. \*

## HONDA MR 250 ENDURO

Continued from page 66

consideration by Honda. The exhaust is double-skinned for less amplification in the chamber, but while the engine is very quiet the front does resonate and it seems about the same as many other enduro bikes that are not so heavily restricted.

We removed the rear box muffler from one MR and ran the two together for comparison. Both were exactly the same until the upper levels of the rev range where the one without the muffler ran out a little better — not really enough to justify leaving the rear section off though.

Honda has a strong 13-plate clutch in the Elsinore and MR and the single possible point of criticism has been symptomatic of Hondas for as long as we can remember. The take-up point is far too short and it is difficult to slip the clutch when riding over harsh, slow rock ledges or fallen trees and logs. The clutch either jerks into full operation or frees entirely. But with a lower overall gearing and the bikes sound low end (not the best, but certainly good value) one should not have to work the clutch very often.

Front end performance impressed us — the rear end was not quite the same. It varied a lot. In the wet greasy clay where nothing works well the MR did okay. In the rough chattery washerboard type trails it was so-so. And over tough rocks and really bad stuff the action was twitchy and hard to control. The frame should not be at fault. We tend to blame the units or

even just the springs, which we considered too soft.

We would also qualify this criticism by pointing out that the sections ridden were among the most demanding rocky going from a competitive two-day reliability trials course.

The MR is quite easy to ride up to medium pace. The power is fine and the bike gets traction fairly well in all but the worst type of terrain. It can be stopped on steep inclines and started again without problems and is easy to steer through downhill rocks and logs and washouts. The seat is soft and comfortable — possibly too soft — and we felt the handlebars were too high for a comfortable seated riding position. The footpegs are too high also and create a cramped sit down position for medium-height riders. The standing position felt the best and was certainly the easiest way to ride the MR. Standing up for most of the day was not at all tiring, the only bike apart from the Ossa which we can say that about.

But the stand-up style limits flat out riding through wooded terrain and with the limited top end one would be unlikely to rate as the fastest rider in the "special" test sections of the two-day trials.

In more general riding and on the average trail the MR is stable and predictable to ride fast, and if the going is smooth the bike is a fine feet up slider! The low centre of gravity helps but the ground clearance suffers. You can't have everything. The MX frame leaves only 233 mm between skid plate and the log you have to cross. It also means the seat height differs from the Elsinore at 858 mm to 865 mm.


The MR is similar to the Ossa in low-down power and accurate steering and this extends to absolute power. The MR would not be entirely suited to fast desert riding, but enduro bikes do not have to be fast and peaky and powerful; just look at the results and the type of models which win trials and enduros.

The red tank MR drew a lot of interest at the Qantastic Two Day event at Orange — remember that the price will be approximately \$1100 and that is a lot better than the real top shelf stuff. And the Honda uses parts from the MT and Elsinore models so there should not be a shortage. Add the excellent waterproofing (we know having spent the day in deep water and mud) instant starting, good traction, light feel (although it is slightly heavier than the opposition) good brakes and forks and you have a fine all round trail/play enduro/two-day machine. Also the lack of vibration is a good point, meaning less wear on a rider's hands and arms and legs.

The MR 250 is the ideal replacement for the DT250 rider or XL3250 owner who nearly expires trying to ride enduros. Or the Sunday trail rider who wants something better than the dual purpose machines offered.

It is unlikely to attract top-liners off their Fronteras, modified Huskies and European marques. But it could, like the big enduro Yamaha (the only other real enduro machine from Japan, but a lot more expensive) bring a new era of safer and more enjoyable form of trail and occasional enduro rides to many riders who want to stick with Japanese machinery. \*

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