

PROJECT XL250S

Take a tired old trail bike – like the Honda XL250S – refurbish it and you have an all-round enduro racer and socially acceptable road-trail bike. Well, that's the plan, says DAVE CALDERWOOD.



On the trail near Ambleside in the Lake District on the XL250S – bog standard. For easy RUPPs like this the XL is fine but it gets a mite cumbersome through trees and mud.

Taking The 'S' ...

PROJECT XL250S really began several years ago; shortly after the Honda had been hammered into the ground – literally – yet again. The trouble with this bike, we thought, is that it's a deathtrap.

Why bother then? Well, taking an ordinary trail bike like Honda's XL250S and modifying it into a reasonable enduro machine is a bit like the rationale mountaineers give: Because it's there.

But there's more: When the XL250S was launched in late 1978 it was by far the most competent four-stroke trail machine around. Developed from the old Motorsport 250, the S had a revitalised motor with rotating counterbalance weights which cut vibration and allowed Honda to equip it with a frame slightly less heavy than a spar of the Forth Bridge – which is how the majority of 250cc trail bikes were constructed.

Also, the suspension was excellent (almost five years ago, remember) and its general standard of equipment on a par with Japanese road bikes. Quickly, the S found many friends among the trail riding fraternity.

This particular bike has a more chequered history than most. It started life as Honda UK press demonstrator in spring '79 but didn't get further than the mitts of occasional contributor Martin

Christie, he of the Bristol Dirt Bike Show. Mart wrote for several magazines back then and decided to make Honda UK an offer they didn't really have the opportunity to refuse and bought it from them. His idea was to slowly but surely develop various areas of the bike to curb some of its unnatural habits at high speed on the dirt.

So far, I've mostly criticised the bike but what made Mart – and now me – persevere with the S is its totally forgiving nature on the dirt. The motor must have one of the flattest power curves, the basic handling is adequate to good and it's one of the few possible machines which could double as a dirt racer and a trail bike. True motocrossers, even made street legal, or two-stroke enduro machines are just too anti-social to be let out in the genteel English (or Welsh) countryside.

Mart's first moves were to junk the odd 23-inch front wheel and lengthen the swing arm by an inch. The first move was not so much that the steering would be improved as to make a wider selection of tyres possible. The second experiment was to settle down the front end at speed. It sort of worked.

He lowered the gearing and found a more powerful front brake from another Honda which went straight in; unfortunately I'm still trying to find out which model so I can replace the brake shoes!

With these and a few other mods, Mart then proceeded to race the S in various enduros and the trail bike class of his local club's motocross events – and, one

year, in the Welsh Two-Day Trial – with fair success. I bought the bike from him two years ago as a ride-to-work hack and occasional trail bike.

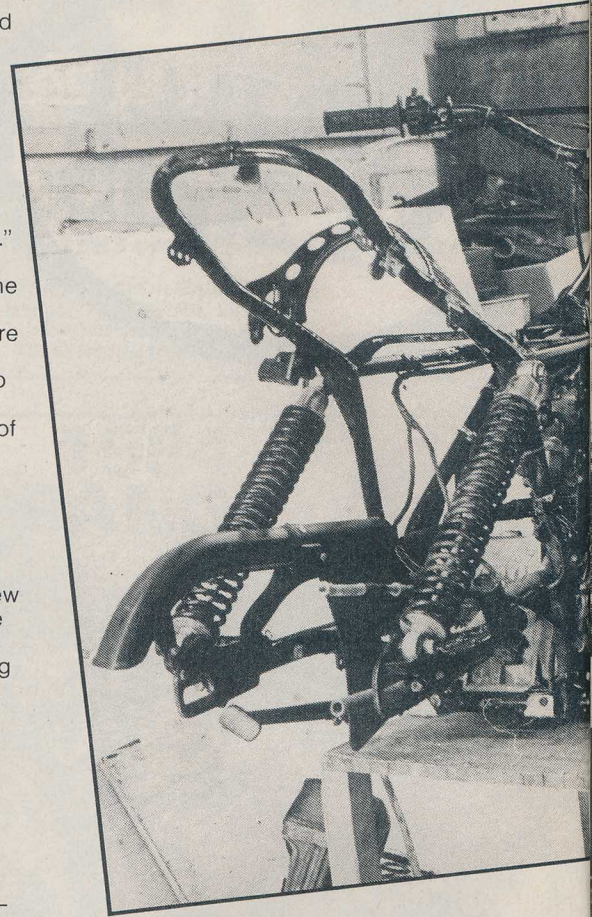
It came off the road and into the garage when a terrible clattering noise suddenly developed from the top end of the motor. It was the cam chain splattering lumps of alloy off the insides of its compartment in the cylinder block. Its slackness was caused by the camshaft flailing around in its "bearings." In fact, there are no cam bearings or even bushes. The cam runs directly in the alloy casting of the cylinder head and, needless to say, both cam and head were u/s.

The next bit's a shade embarrassing to admit. Since that sunny autumn day in 1982, the S has been in various stages of repair and completion. It was February this year before A Decision Was Made. Clear the garage, or build the bike!

A cylinder head was found at a breaker's yard for £35, hardly used and with all bearing surfaces perfect. That even included all the valves in situ. A new cam cost just over £30 and the requisite gaskets added another tenner. Rebuild, kickstart, first stroke start, still a knocking noise. The big end?

Two hours later with the motor scattered everywhere, I could say with authority that the big end was okay. The trouble was either the small end or the piston slapping – both were worn well beyond service limits.

The rebore was easy to solve but the small-end threatens to need a complete crank rebuild since – you've guessed it –



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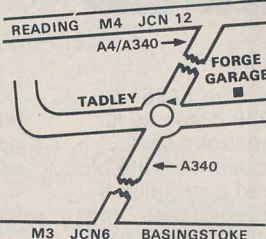
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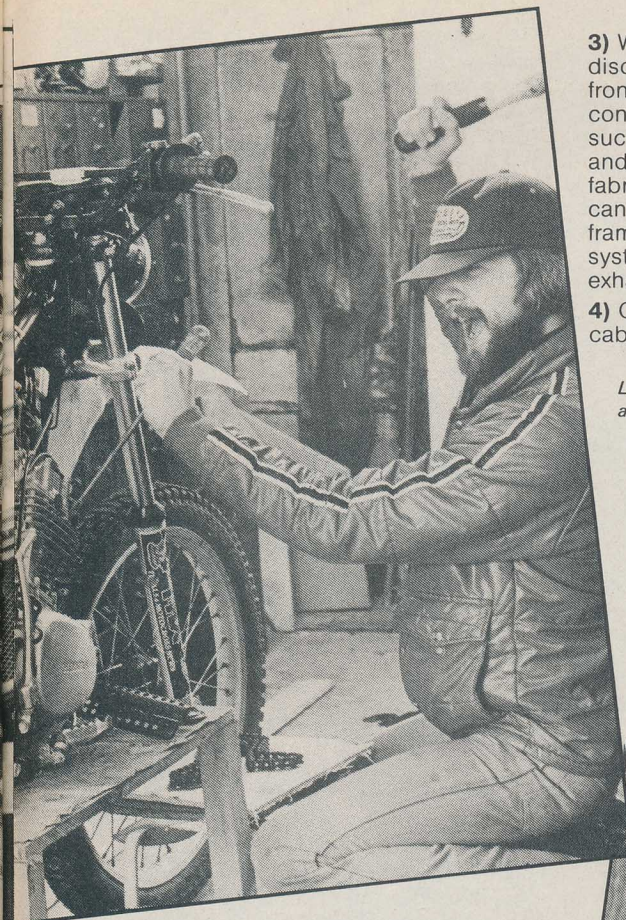
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- 3) While stripping frame of airbox, discover that rubber hose twist carb and front of filter performs some weird contortions. Wonder why Honda design such a high tech four-valve cylinder head and then strangle the air flow. Decide to fabricate an airbox from alloy sheet which can be positioned more central in the frame because the old two-box silencing system will be replaced by an aftermarket exhaust taking less than half the space.
- 4) Check wheels, brakes, sprockets and cables. Discover all, roughly speaking,

LEFT: One of the Project XL's many rebuilds by ace wrench Martin Christie.

BELOW: Well-used but still street legal – there's a lot of weight that can be easily lopped off starting with the battery and bulky two-box silencer.

BOTTOM: That 23-inch front wheel has been changed for a 21-er. By the end of this rebuild, Project XL will be a different machine.

are knackered. Send wheels for truing, brakes for relining – more next month – buy genuine Honda sprockets on special offer, and send cables off to Venhill Engineering of Dorking for remake.

Venhill perform wonders with cables, an especially useful service when you've a Heinz 57 variety bitsa like this one. Send 'em your old cables for length, nipples etc and they'll turn new ones around in less than a week. They use nylon lined inners which mean you can tie knots in the cable run and they'll still slip sensually easily. Not only that but they're much cheaper than genuine Honda parts.

● **Project XL250S will be serialised in DBR over the next few months (you said it'd be finished by June, Calderwood – Ed) and tasks to be covered include not only the above but also sorting the suspension, front and rear, testing Pirelli's enduro tyres, fabricating a one-off wiring loom to minimise fuss and generally making the beast race-ready. Got a trail bike? Not necessarily an XL250S? Then you can learn the easy way. Stick with this slot.**



Honda don't use small end bushes. The gudgeon pin rotates directly in the conrod eye.

Well... at this point I sat back and calculated how much it'd cost already and how much more was required to get my hack back on the road. Too much, yet I didn't want to junk it. Thus Project XL250S was reborn; do the whole job, as Mart intended back in 1979.

First task was to get blagging, sorry, informing letters out to all the trade who might be interested in supporting such a project which would grace the pages of **DBR**, the world's most wonderful dirt bike publication. Surprisingly, many agreed. Either they couldn't bear to see someone so handsome and dynamic as myself become mutilated racing a stock trail bike in enduros, or they had overwhelming confidence in their products and welcomed the chance to display them in **DBR**. I'll leave you to decide which.

Next month, I'll go over the intricate details of 1) how the engine was repaired and the tale of tracing the missing cam chain tensioner screw and 2) fitting the snazzy, ultra-trick bodywork bits. In the meantime, an inventory of essential work had to be made:

1) Strip motor unit and measure wear on all vital components. Discover the motor is, basically, knackered. Send off crank, cylinder and clutch for rebuild/rebore/reline.

2) Strip all ancillaries off frame, check for cracks and examine all bearings. Discover no cracks but swing arm pivot and steering head races are, not to put too fine a point on it, knackered. Send off frame and bits for shotblasting and stove-enamelling, cast around for replacement bushes/taper rollers.

