

## Suspension by rjudgey

Trav you are so lazy!!

You ought to learn more about your car if your performing all these mods on it you're going to be spending a lot of time on her in the future so you might as well do everything now and learn how everything comes apart and goes back together!!

With our front suspension:

The bushes seem to last a very long time, I changed mine because like an idiot I blamed the bushes instead of a 5 year old Monroe shock so went at it like a bull in a china shop destroying everything that was in my path!! Until I tested the shock and found the pistons was stuck!!!! Dohh that will be why it wouldn't stop in a straight line!!

Now after taking it apart found out a couple of things, the Fork bolt gets seized and is virtually impossible to get out unless you live in a water and salt free zone or some other poor smuck had already taken it out years before and either replaced and greased properly or just got lucky and re-greased it putting it back!!

Also found that the Stabilizer ends that sit into the wishbones rust really badly which will need a whole new stabilizer or at least some new bushes and nuts and an end cover.

The rest seemed pretty good but I thought well started the job might as well stick all new bushes in the arms and the tie rods as well as replacing all the ball joints except the lower ones as their a SOB and I'd already done one a little while ago.

I would do things systematically in this order:

1. Check shocks if they are more than a few years old replace if they feel dodgy.
2. Change the upper ball joints they take 30 minutes both sides' tops to do all you need are some new split pins. Take Wheels off. Two 17mm nuts hold them onto the upper wishbone and the ball joint screw end pushes into the top of the upright which has a cover on it held on by two 10mm bolts. You will need a ball joint splinter quite a small one too. But once you get it off piece of cake that the hardest bit. When putting the 17mm nuts back on just push the ball joints all the way in on the upper wishbone this adjusts your negative camber all the way in is a dead on -2 degree negative camber which works really well and doesn't give you really bad inside tyre wear saves you having to have it all realigned. When done undo the nuts that hold the bottom ball joints onto the lower arm on the upright, re-torque them and then put the split pins back in.
3. If theirs play into he steering try changing the tie rod ends these are just as easy if not easier than the upper ball joints and they don't cost much either all the ball joints and tie rod ends I bought were proper Patent Honda replacements made in same factory and were £25 each per ball joint upper lower and tie rod. The tie rod needs the split pin to be removed, and then the nut comes off again use a small ball joint splitter or a big Hammer and give it an almighty whack!! Then all you got to do is mark the thread on the Steering rod and then undo the tightening nut that screws up against the tie rod when loose just unscrew the tie rod and put on new one and re-assemble job done on both sides another 30mins. Piece of cake again!!
4. If your steering wheel is pissed or car not going in straight line just adjust the tie rods till straight. Take car out see if it's any better if it's still all over the shop and feels like mush were going to have to get a bit nastier!!
5. Check Stabilizer see if the bushes and the end nuts and bushes are solid and not worn or corroded if not leave alone and go onto next stage, if they are remove the stabilizer and replace everything if badly rotten including the bushes and the nuts and washers that go into the arms. A little trickier as it's under the car and the rusted nuts can be a SOB if they've got loads of corrosion but generally shouldn't be that bad a job. Just might cost a bit if you need a new Stabilizer bar.
6. Tie Rod bushes are a piece of cake, undo the front covers on the under tray, undo the nuts, then undo the 14mm bolts that hold them onto the lower arms, pull out and check condition, now the

suspension forks might be in the way if this is the case just wiggle it about till it's free you should be able to move it to and fro quite easily so that it clears the forks. The bushes are located in the front crossmember they are sandwiched in-between two metal circular plates and a shaft that runs in-between them through the middle of the rubber bushes and the front crossmember you can remove them by just getting a flat blade screw driver and prising them out from the sides of the cross member, the front will be more difficult as the undertray is in the way so you will have to take this off, mine went years ago as it got in the way a lot and was less weight to haul about!! When you have popped them out just put the new ones in, put the metal plates back in and slide the tie rods back though the whole lot and put the nut on the end to stop it from falling off do not do up tight yet though!! And also do not have moved the adjusting nut on the tie rod if you do your Caster and Toe will have changed and will need re-aligning. With the tie rods back in wriggle them back into their original locations and do back up again. This is the hardest bit as getting them off and on is just about doable but the driveshaft gets in the sodding way and if you get pissed off with it either remove it or you can drop the lower ball joint on the upright to give yourself more clearance to work on getting the bolts in and out. To be honest judging by the state that mine were in after 20 years they didn't seem to be bad but they are pretty cheap to buy and are worth doing if you're not sure not that hard apart from getting the rods off the arms. Try the car and see if it's any better if you find you have better stability under braking and pulling away then we have a winner. If not were into Real Pain in the arse territory.

7. Replacing the Wishbone arm bushes, now if you're really lucky try ordering a whole new pair of arms but last time I tried they were out and not being made anymore but may have some in U.S. depot maybe. If not the hard way it's going to have to be, as well as expensive. Having done the whole thing myself it wasn't pleasant what I would do is this. Undo the fork pinch bolt that holds on the shock, then undo the lower ball joints, then the tie rods, then pull out the inner bush bolt hopefully this will come out normally okay, then just drop the whole thing with fork attached. Then give it to a machine shop and say you need this fork off in one piece and the bushes removed and new ones pressed in. Go back and collect next day and then re-assemble with new bolts, nuts etc. Don't use any old ones unless perfect maybe the inner bush bolts might be okay. Job done see how it goes and then have the whole lot re-aligned on lasers.

8. Improving the existing setup, I've done some re-research into this couple of things that can be done to improve, would be to replace the tie rod bushes with poly ones that are same diameter but using ally metal spacers to reduce the thickness of the bushes this will give less, the other option was to replace the tie rods with rose joints and have them welded to the front cross member no give in them at all but better as they will move more freely up and down.

9. Adding little rubber washers to the sides of the bushes on the fork and the inner crossmember bushes, the Honda bushes have a gap and under severe braking and accelerating I would imagine the bushes move backwards and forwards a little, to help reduce this by packing them out with poly washers this will reduce that movement but still provide some impact as they won't be metal, for best performance metal washers would be better but this would make the whole thing very hard if you hit bumps and pot holes etc!! But could be worth investigating if after having all this done if it still feels a little nervous under hard braking (this is the issue I'm having at the moment with the Blue lude especially with the new Red Konis).

10. Replacing the back bushes is easier as the whole arms can still be bought at reasonable cost with the bushes fitted works out cheaper as no labour to remove and fit new ones. Trouble is the rear nuts, bolts and anything fitted to the arms are all rusted solid so again best thing to do is to undo the tie rod onto chassis, then the inner bush bolt, then the pinch bolt on shock or the three nuts that hold the shock on as the pinch bolt could be seized, then undo the rear callipers if possible, then drop the whole lot and give to a machine shop to take apart, either that or buy two new rear hubs and axle stubs and fit the old callipers onto those. Job done.

11. Modifying the rears for better accuracy, the rear tie rods and bushes are amazingly overpriced but easily replaced by new Rose joints and rods, do this instead as it will provide greater stability

under braking and accelerating as there are no rubber bushes used, you can retain the conventional Honda way of adjusting the rear toe or you can make it solid fixing and adjust the length of the rod instead to adjust the Toe up to you. The bushes are not worth replacing for aftermarket ones and would be difficult to anyway odd sizes.

12. Worth dropping all four suspensions while at machine shop you can inspect clean up and fix any rust or loose paint and re-sprat the inner arches with new stone chip paint or that rubberised stuff to keep away stone chips and rust.

Job done car should handle better but be dead straight under braking and accelerating as well as go round corners solidly.

Also if you're not sure about the shocks change them, I found the Monroe ones were half descent but cater for a softer ride so you get a bit of bounce if you use Aftermarket springs on the back. I've given KYB a try they seem stiffer and seem well made get a set of those or the Tokico's which is what Honda originally used. Koni reds are cool as they can be adjusted and seem very good when left on factory default I altered mine and wish I hadn't as the car hasn't handled the same since!! And you might as well replace the springs too that way you know everything is new and it will all bed in together.