August 2011

Changing the Power Steering Belt

Brett Dukes (Maverick) from the BigJimny Forum has contributed this article to the Website. Many thanks.

Whilst off-roading on Sunday, my alternator Fan Belt snapped - getting a new Fan Belt fitted is relatively easy, by undoing the two bolts on the cross-bar between alternator and the engine and move alternator upwards (cupping hands underneath it) ... sadly on my 54'plate Jimny you have to remove the Power Steering (P/.S) Belt FIRST!!

Getting the P/S Belt of was bad enough - undoing the centre bolt-head on the tension pulley, and using a crow-bar we nudged the tensioner enough to get the P/S Belt removed to allow the new Fan Belt to go back on!

Now we had loads of hassle (don't forget we're off-road here) getting the P/S Belt back on... we did but it wasn't on properly and I needed to get it back correctly so here's what I've done this morning!

Note I started this at 8am and I'd finished at 9am (even after working out how the tensioner works, cleaning parts up, and even taking a few photo's) ...

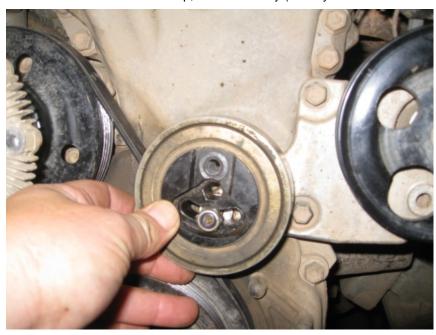
- 1. The Haynes Manual always says take of the Battery leads but I don't, especially you'll be needing the battery later see step (m)
- On Sunday we didn't want to remove the radiator, but believe me it SO MUCH easier to remove it, so remove radiator
- 3. Drain Radiator, my plug is seen from the top to be at the bottom right. When all water out, start to remove radiator by removing the Simon (the Radiator Cowl), then remove the 4 or 5 (I only have 4 lost one?) little 10mm bolts, then remove the top two 10mm bolts from Radiator Stays (straight bars from bottom to top left and right of radiator) no need to remove the bottom ones!! Release the Top and Bottom Hoses Clips (releasing the bottom one can be an arse aka skin loss)... Take out radiator.
- 4. I started working on things but quickly realised that things will be so much easier without the viscous fan there so undo the 4 10mm bolts and remove the plastic fan.
- 5. The tensioner sits on the engine block between the pulleys, its removed (I wanted to clean mine up as it should move on the top right bolt I undone. Mine was stuck tight (I'll explain later why!)
- 6. Using a crow-bar to release tension (would have been nice to have an assistant here, but she was still at work ... Lynne is a Nursing Sister still on Nights) so with a tough of luck ad a strong bicep I managed to release the tensioner enough to get the P/S belt removed.
- 7. Now I took my tensioner off (undoing the Nyloc nut), gave it a good clean



August 2011



- 8. I had a couple of failed attempt in putting the belt on and then putting the tensioner on... it just wasn't right, until I realised how clever Mr. Suzuki was...
- 9. Remove the P/S Belt and put the Tensioner on FIRST put on the Nyloc nut and ensure its tight enough to stay on (it's a Nyloc) but still allows the tensioner to move move under pressure, not sloppy
- 10. Now put the Tensioner BOLT on do it up, but all that way (so maybe 3 -4 before locked up)





August 2011



11. Now put the P/S belt on....you'll notice that no-way-Jose is this belt going on...



- 12. BIG NOTE here ... the pulleys rotate CLOCK-WISE
- 13. Get the P/S Belt onto the top right pulley as far as you can, I got mine on to about 2 o'clock..... then go and click start the engine, don't start the engine, just turn it over once or twice -- go back to pulley, and MAGIC has happened the belt is on!!



August 2011



- 14. Now do up that Tensioner Bolt, and start engine and watch carefully to ensure that belt is staying on!
- 15. Stop engine and re-assemble everything.



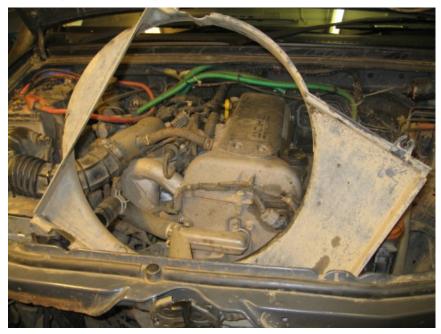
16. Put on Viscous Fan - be careful tightening up the little 10mm bolts



August 2011



17. Align the Simon (the radiator cowl)



18. Slide in radiator, slide on the top and bottom hoses - don't put on Hose clips yet as getting the radiator onto the bottom LUGS can be an arse ... be good to have an assistant here (she's still at work - probably doing some retail therapy) to shove down as you're underneath aligning the lugs on the radiator bottom .. I lost a bit more skin and a few words doing it alone.



August 2011



- 19. Put in the two top 10mm bolts into the radiator stays
- 20. Put the 4 or 5 10mm bolts into the Simon
- 21. When you're happy that Radiator sits correct, using strong pliers slide on the top and bottom hose clips again doing the lower hose can be an arse!





August 2011







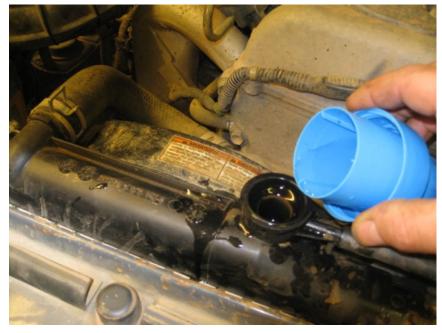
August 2011



22. Now the slow progress of filling up the radiator ... personally I add some Anti-Freeze first (as I used to forget about it afterwards ... so a little at first) then maybe half fill radiator and start engine, then using a small cup/container slowly drip feed water into radiator ... whilst the engine is running ... be careful as fast and moving parts (that viscous fan) will hurt you!



August 2011



- 23. I fill up radiator slowly leaving the radiator cap OFF ... when no more water goes in, put on radiator cap and let engine get hot (if you're in the garage, like I am, open garage door we don't you killing yourself with exhaust fumes do we) ...
- 24. When engine hot, testing by hot air coming out of heater --- leave engine running for a good 5-10mins .. Carefully pressing top and bottom hoses to get circulation going.
- 25. Now stop engine, let it cool, remove radiator cap, and if more water needed add it ... and repeating the above steps until no more goes in ...
- 26. Go and have breakfast and welcome home the Nurse with her shopping bags!!
- 27. Go and get new belts and keep in Jimny when off-roading



28. I hope all this helps!!



August 2011

29. Oh, the reason we had so much problem putting the P/S belt on when we were off-road was that someone had tightened-up the Nyloc nut on the tensioner, so it wouldn't move/slide ... now when I undo the bolt on the tensioner it moves ... it won't drop off as the Nyloc nut is keeping it on!!