

Well as most of you know when tuning the CDT/CDTi engine the problem is getting enough air into the engine as the fuel pump has more than enough capacity to supply fuel for well over 180 BHP. There are various intake modifications that can be done for little or no money to improve the breathing of this engine. This is essential with any type of tuning be it a remap or a Rover Ron tuning box. The standard air intake was designed for 116BHP and to keep the car as quiet as possible. As can be seen below there isn't much of a "hole" for the engine to breath through - it's very restrictive.

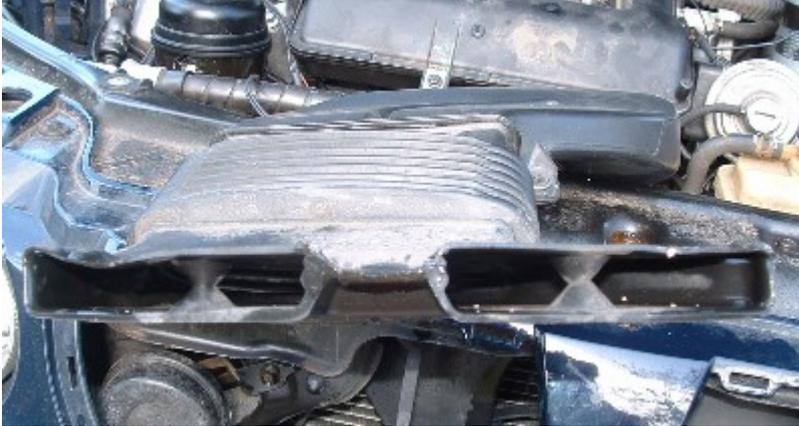


Figure 1 - The standard air intake (Taken from Rover Rons Website)

The first modification was to open up this mouth but to reuse the original 3 fixings to keep it looking as standard as possible. It's important to inset a bolt into the middle of the opening - if you don't then the intake can suck it's self shut when accelerating!



Figure 2 - the basic intake mod

This significantly improves breathing but can be improved upon further if you are willing to not look standard. This involves removing the flexi section which does appear to restrict flow a little.



Figure 3 - The cut back intake mod
Another idea was to fabricate a intake as seen below



Figure 4 - The Fabricated Intake

This did improve airflow but did not work as the rocking motion of the engine will, over time, crush and distort the intake. It also transmitted a lot of vibration from the engine to the that car body. Therefore this idea was abandoned.

So using the standard air intake, as shown in figure 3, this is as far as you can go - but there is another, and in my opinion, better route to take. This involves getting rid of the standard intake tube and using a piece of 76mm flexi ducting. This is available off Ebay for about £16.99 + P+P

http://cgi.ebay.co.uk/3-76mm-PIPERCROSS-K-N-AIR-INDUCTION-DUCTING-HOSE-1M_W0QQitemZ290166830016QQihZ019QQcategoryZ72205QQtcZphotoQQcmdZViewItem

I have been using this intake for a few weeks now and am very pleased with the results.

The ZT has an opening in the front of bumper that looks idea for a cold air feed.



Figure 5 - ZT bumper showing location of cold air feed

This is an ideal place to pick up lots of cold air. Of course if you run through a river or stream that is more than a 1ft deep you could pick up water and this would ruin the engine - some think to think about, you have been warned!!!



Figure 6 - Close-up of ZT bumper showing location of cold air feed

A 1m section of 76mm ducting is sufficient and will fix directly onto the air filter housing as can be seen in figure 7 below. A large jubilee clip will keep the hose fixed to the housing.

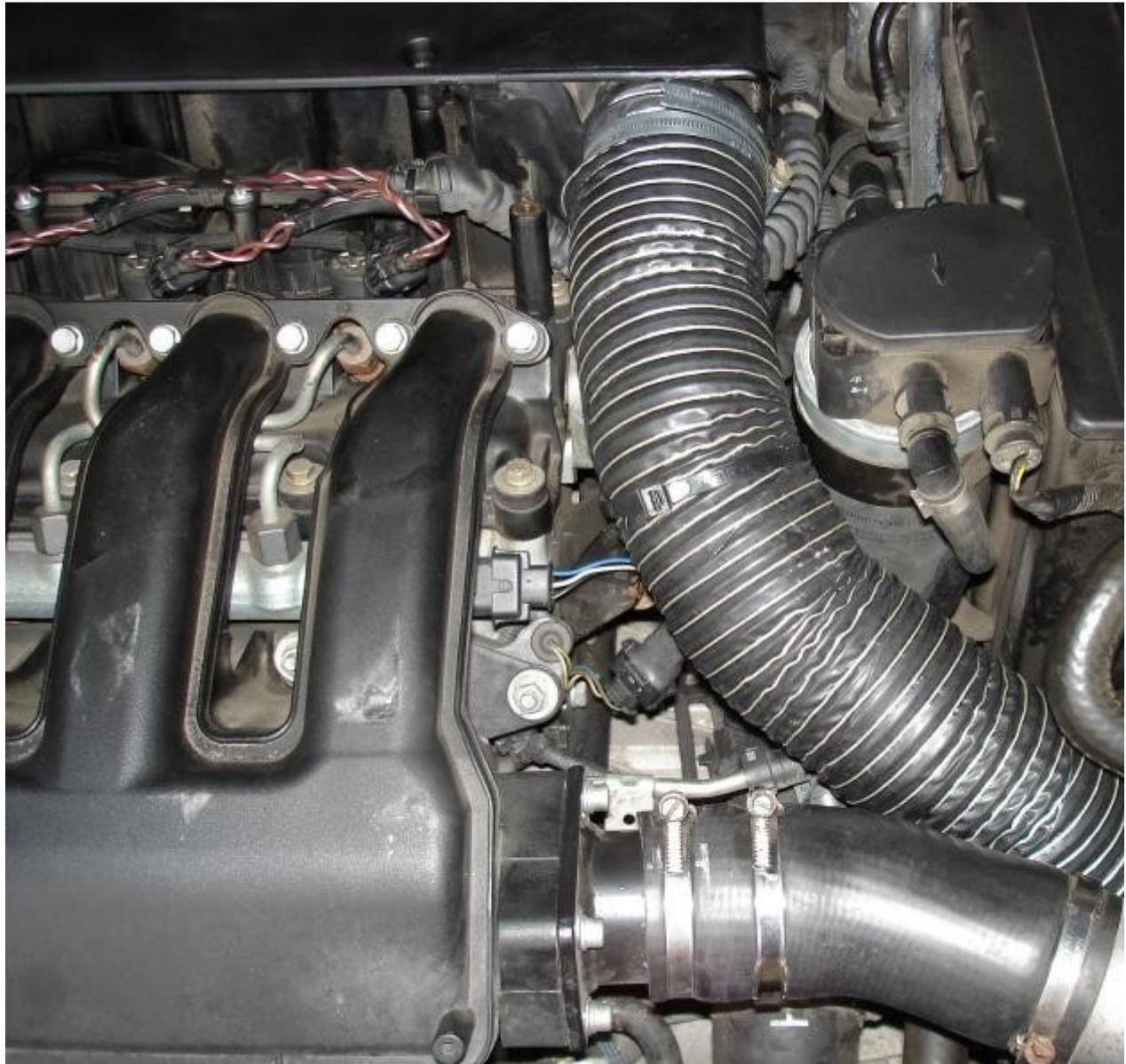


Figure 7 - Intake hose onto the Air filter Housing

Two cable ties are used to position the hose away from other hoses. This is essential as you don't want this to rub against a water hose and break it over time! I did try larger hose (90mm) but this is too large as there is simply not enough room in the engine bay.

The engine cover will re-fit but does require a little cutting in the area of the hose. This is a simple 5 min job.

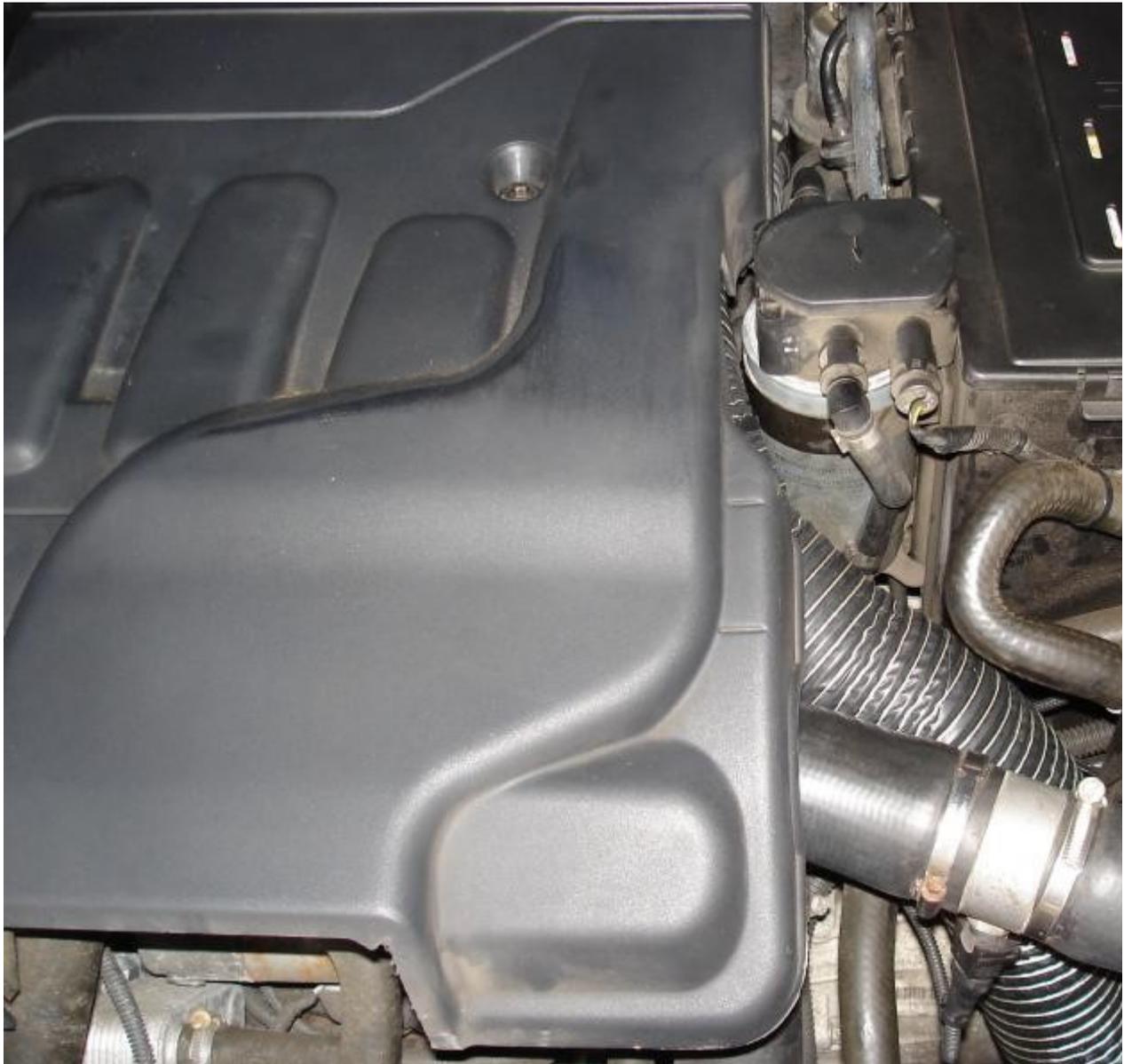


Figure 8 - Intake hose with engine cover

So there you have it, this is, in my opinion the best air intake to date. It appears to give more benefit in the mid range where recent testing has shown over 300lbft at 2500rpm. On the motorway at speed it's very noticeable. Quicker pick up and almost no smoke - despite over 170 BHP. In the hot weather you could feel the benefit when standing in stational traffic - there was no heat sink effect.

I must state again that if you drive through water over 1 ft deep you will run the risk of damaging you engine so don't do it!!

All above is the work of „Ti Rich“ from www.rovertech.net, taken from his thread „The ZT/75 CDTi Intake Mods- All you ever wanted to know“.