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FAQ: Purchasing a 6.5L Diesel

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Green Machine

She Don't Smoke!

Joined Aug 12, 2007
4,685 Posts

Discussion Starter · #1 · Dec 17, 2009 (Edited)

So many have been asking about "should I buy this truck or not?" The answer is, we don't know. We've never seen it. We've never rode in it. We don't know what you wanna do with it.

Here are a few Frequently Asked Questions when it comes to purchasing a 6.5L Diesel:

- What Rear End Gears? *Check your [RPO Codes](#).*
- Is this a Good Price? *You will have to determine that yourself. You can research comparable trucks or do a search [on here](#).*
- Common Problems? *Common 6.5L problems can be found by looking at the [FAQs](#) and the different threads it provides.*

► Check Codes

- It is a good idea to check for codes on the truck. Some codes can give a warning of an expensive replacement in the near future.
- To check codes check out the thread for the truck you are looking at: [OBD I](#) and [OBD II](#).

► Batteries

- Check all battery connections and make sure they are all tight and corrosion free.
- It is a good habit to keep both batteries the same type and the same age.

► Serpentine Belt

- Make sure there are no cracks on the belt and that the belt is not frayed anywhere.
- It is also good to check for any abnormal noises coming from the accessory units when the engine is running
- Also check the belt tensioner and make sure it doesn't say it needs to be replaced

► Check Fluid Levels

- Pull the dipstick and look for any moisture on it, or a white/gray slimy substance. This indicates coolant in the oil, the engine may need replaced or heads or head gaskets replaced.
- If the oil is black, no need to worry... Most of the time after an oil change your oil will turn black rather quickly
- Also check Coolant, Power steering, and Transmission fluid levels.

► Leaks

- It is always a good idea to check for leaks. Climb underneath the truck (I tend to go in from under drivers

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Last post:

[Green Machine](#) Dec 17, 2009

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door).

- Check to make sure there is no oil leak around the filter area as this is an indication that the oil cooler line quick disconnects are leaking and will soon fail. Another common place the oil cooler lines leak are at the crimped fittings where it goes from metal to rubber. If a skid plate is still on the truck you may need to remove it to check the lines. If the lines are leaking you can get a replacement kit that is pretty much leak proof from Leroy Diesel. It is not recommended to replace oil cooler lines with OEM style.
- If any leaks are running down the bell housing, it may be coming from the engine valley and possibly be fuel. Most common fuel leaks are found around the fuel filter manager (FFM).
- Also check for leaks around the transmission and transfer case.

► **Checking Turbo (engine off)**

- With the engine off, take the intake elbow off of the front of the turbo.
- Take the end of the compressor wheel and try to wiggle it side-to-side and in and out. If you hear any clunking or if the fins hit the side of the housing anywhere the turbo is bad and will need to be replaced.
- This would also be a good time to check your air filter condition. A dirty filter will lower fuel economy and cause a loss of power.

► **Engine Cold Start**

- When starting your 6.5L Diesel you will want to turn the key to the ON position and you should have a "Wait to Start (WTS)" light come up on the dash. Wait for this light to go out and go ahead and crank your engine and it should start. After the truck has started it is normal for the WTS light to blink a few times, this is called "After Glow".
- When you cold start (first start of day, truck sitting for over 8 hours) you want to look for excessive white smoke or rough running when first started. If the truck smokes for 10 seconds or longer and is rough running during that time, it has [failing glow plugs](#) (or open wires) and they will need to be replaced.
- After the engine has been started, go in front of truck and squeeze the upper radiator hose. If this is hard it is possible that you have a bad head gasket. This hose should be soft while the engine warms up.

► **Checking Turbo (engine on)**

- While engine is running, open the hood and walk to the side of the turbo. You will see a cylinder object with a vacuum line going into it and a rod coming out of it. This is part of the wastegate system (controls boost pressures)
Note: '92-'93 Trucks will not have a vacuum operated wastegate system.
- Grab the rod and try to move it. This rod should NOT move when the engine is running. If the rod moves easily then there is a problem with the vacuum system (the actuator, solenoid, vacuum pump, or lines).

► **Checking Blowby**

- On a warm running engine, pull off the oil fill cap. If no smoke or a very light haze comes out this is normal.
- If it seems there is excessive smoke coming out, the piston rings or other parts may be becoming very worn.

► **Lift Pump Operation**

- Locate the [water drain valve](#), a brass T-valve located near the oil fill cap.

- With engine running, open the T-valve for about 10 seconds and see if the truck starts to stumble or completely stalls.
- If it runs rough or stalls, there is a problem with fuel supply to the Injection Pump. Please check the [Lift Pump Operation](#) thread for more information on the lift pump before replacing parts.

► **Injection Pump**

- While in Park and the engine running, slowly bring engine RPM up to 2000 and hold for 5 seconds. Then bring back down to idle. The engine should be steady and consistent, if the engine revs wildy up and down or stalls when bringing RPMs back down to idle, it will likely need a new injection pump.

► **Engine Running and you are sitting in cab**

- After the engine is running it is good to check all the gauges.
- The voltage should be above 12v.
- As the truck warms up the coolant temp gauge should go up. You should not reach temps above 210. Above 210°F is considered unsafe for these engines.
- Cold oil pressure can be anywhere from 50-80 psi. But what you want to pay attention is to warm oil pressure. Warm oil pressure should be above 20 psi @ idle an around 40-50 cruising around 2000RPM.
- Check to see if the heat works (after warmed up) and the AC works (if equipped).
- Headlights, brake lights, marker lights, gauge lights, etc..

► **Engine Hot Start**

- After the engine has got to operating temperature (180-195°F) shut down the truck and let it sit for about 20 minutes. After waiting, try and start the truck without waiting for the glow plugs to finish their cycle.
- The engine should start right up with little cranking.

► **Some things to check during the Test Drive**

- Cruise Control (if equipped)
- Truck shifts into all gears and does not slip.
- 4x4 works (if equipped)
- Floor truck from stop and check for black smoke out of the exhaust. It is normal for a truck to smoke a few seconds after initial acceleration but the smoke should clear up. If not this could indicate a [turbo](#) problem.

This list will be updated to as time goes on. If you have anything significant to add to this thread, you may PM me.

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