

LASER[®]

Diesel Bleeding | Primer Kit Low Pressure Circuit

Instructions



Guarantee

If this product fails through faulty materials or workmanship, contact our service department direct on: **+44 (0) 1926 818186**. Normal wear and tear are excluded as are consumable items and abuse.



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- For bleeding or priming diesel systems.
- For connection in-line with the vehicles low pressure delivery system.
- The clear pipes allow any air bubbles in the system to be seen.
- Time saver.
- Universal use.

Diesel Bleeding | Primer Kit - Low Pressure Circuit

Warning: do not attempt to use this kit on high pressure circuits.

The Tool Connection Limited cannot be held responsible for any damage caused to vehicle or personnel whilst using this kit.

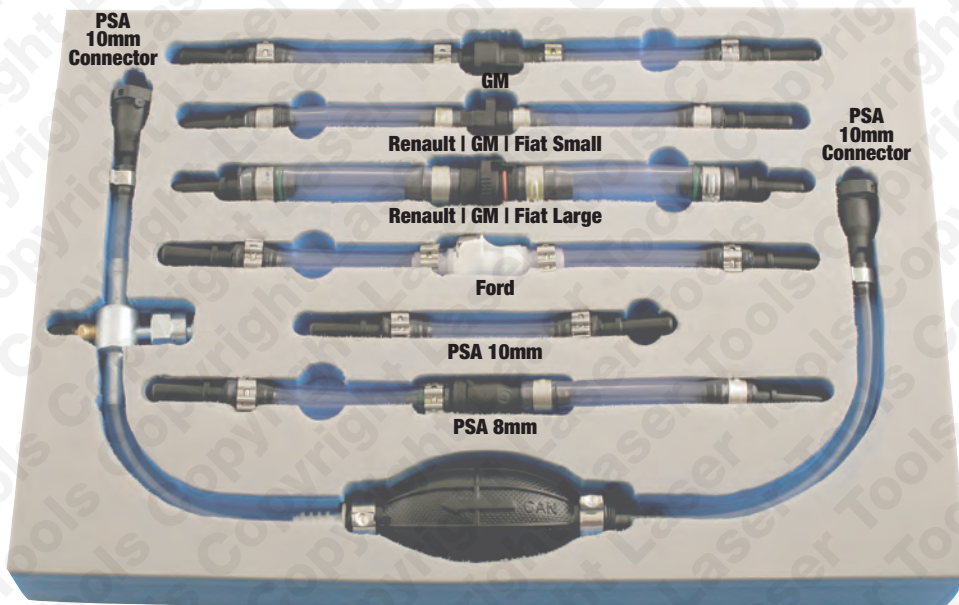
Modern diesel engines need to generate up to 2000+ bar of fuel pressure to run efficiently. Any air in the fuel delivery system will affect the running of the engine.

When the fuel system is being serviced and a new fuel filter is fitted air will be introduced into the system. Most modern systems are either self bleeding or have a hand pump permanently fitted to the vehicle, however many can still take some time to purge the system of any air.

There are two basic types of fuel delivery used on modern diesel engines:

- Pressure fed – using an electric fuel pump mounted in the tank to push the fuel up to the high pressure pump.
- Vacuum fed – using an engine driven lift pump to generate a vacuum that pulls the fuel up to the high pressure pump.

This kit has been developed to allow the user to connect into as many diesel fuel systems as possible using the correct style connector coupling.



Applications

The kit has connections that allow fitment to most of the connection types found on today's diesel vehicles. There are a total of six different connection types included in the kit covering Ford | PSA | GM | Fiat | Rover | Land Rover | Renault | Mercedes-Benz.

Instructions For Use

1. Identify the best place to break into the vehicles low pressure fuel circuit. For Bleeding/Purging the system after a filter change Laser recommend connecting in to the system before the fuel filter housing.
2. Select the appropriate pair of pipes to connect into the system.
3. For PSA (Citroen/Peugeot) systems that use 10mm connections only the double ended 10mm male pipe is required to convert one connection to male.
4. All the pipe pairs are equipped with one male 10mm PSA end to allow connections to the pump unit.
5. Ensure the direction of flow on the vehicle matches that for the pump unit
6. Loosen the 19mm hex nut on the Bleed Valve enough to allow the button in the valve to move up and down by about 2mm.
7. Compress the pump bulb with one hand and hold.
8. Push the button on the bleed valve in so the bleed valve shuts and now release the pump bulb
9. Repeat the above process till the fuel fills the bulb*.
10. Once fuel is seen exiting the pump close the bleed valve completely by tightening the 19mm hex (ensure the button sits square in the valve).
11. Ensuring that the vehicles filter bleed screw** is open or air return pipes** are disconnected continue pumping till fuel is seen exiting the bleed screw or air return system.
12. Continue pumping fuel until clear solid fuel is seen in the fuel filter exit pipes.
13. If difficulty is experienced in getting fuel up to the pump or fuel leakage is experienced at the pump*** please see "Top Tips" below.

Top Tips:

* Due to the "spring effect" of any air in the diesel system before the bleed pump it is vital that as the pump is pressed the bleed valve is open (button loose) and when the pump is released the bleed valve is closed (button pressed) until the bleed pump is fully primed with fuel and any air removed from the feed side of the pump then the valve can be shut. If priming of the pump is still not possible try poring a small amount of diesel into the pump to lubricate the internal valves and improve sealing.

** Some diesel fuel systems have a bleed screw fitted to the top of the fuel filter this must be opened to ease the bleeding process. Other diesel fuel filters may be fitted with air/fuel return pipes with no bleed screw fitted these pipes should be disconnected to ease the filter bleeding process.

*** Leakage from pump bulb –this can be caused by one of the following issues

- Excessive pressure forming in the system due to the bleed valve or air/fuel return pipes not being removed. Remove the bleed screw/air bleed return pipes.
- The bulb of the pump is cold and therefore is has hardened, hold the bulb in the palm of an un-gloved hand for a few minutes to warm it up so it regains its full flexibility.
- Cracked or split pump bulb, replace the pump. Available from your Laser supplier part number 3813

NB – Any holes in the suction/feed side of the system will result in air being sucked in. This is particularly true of diesel fuel systems due to the weight and heavy viscosity of diesel fuel when compared to other fuels like petrol.

Care Note:

To preserve the seal integrity within the connections smear a small amount of washing up liquid on the connecting parts



Assemble pipes according to vehicle connection type.