

Diesel Induction Service

Operating Instructions for John Deere 4.5L, 6.8L and 9.0L

BG 4.5L, 6.8L and 9.0L John Deere EGR Adaptor, PN 9255-043

Always clean EGR passages before cleaning air intake area. For use with BG Diesel Induction Service Set, PN 9255-550

1. Add one quart (946 mL) of BG 245® PN 24532 to fuel tank.
2. Check computer for diagnostic codes and record them. Clear the codes.
3. Locate and unplug the electrical connection to the EGR valve. Unbolt and remove the valve from the engine. The valve may be stuck in place by carbon build-up around the O-rings, be careful not to damage O-rings during removal.

4. Use BG Throttle Body & Intake Cleaner, PN 406, to clean the EGR valve and to pre-clean the EGR O-ring surfaces. **Do not spray BG Throttle Body & Intake Cleaner into the EGR port.** Spray BG Throttle Body & Intake Cleaner on a towel and wipe O-ring surfaces clean for easier installation of the EGR adaptor. Once again, do not spray BG Throttle Body & Intake Cleaner into the EGR port as there is a risk of ignition, which can blow the aluminum plug out of the adaptor causing damage and/or personal injury.

Install the BG 4.5L, 6.8L and 9.0L John Deere EGR Adaptor, PN 9255-043, using the bolts from the EGR valve. Be careful not to damage the O-rings on the adaptor during installation. Apply a small amount of grease on the O-rings to protect them.

5. Install the BG Injector Atomizer into the top of the BG 4.5L, 6.8L and 9.0L John Deere EGR Adaptor.

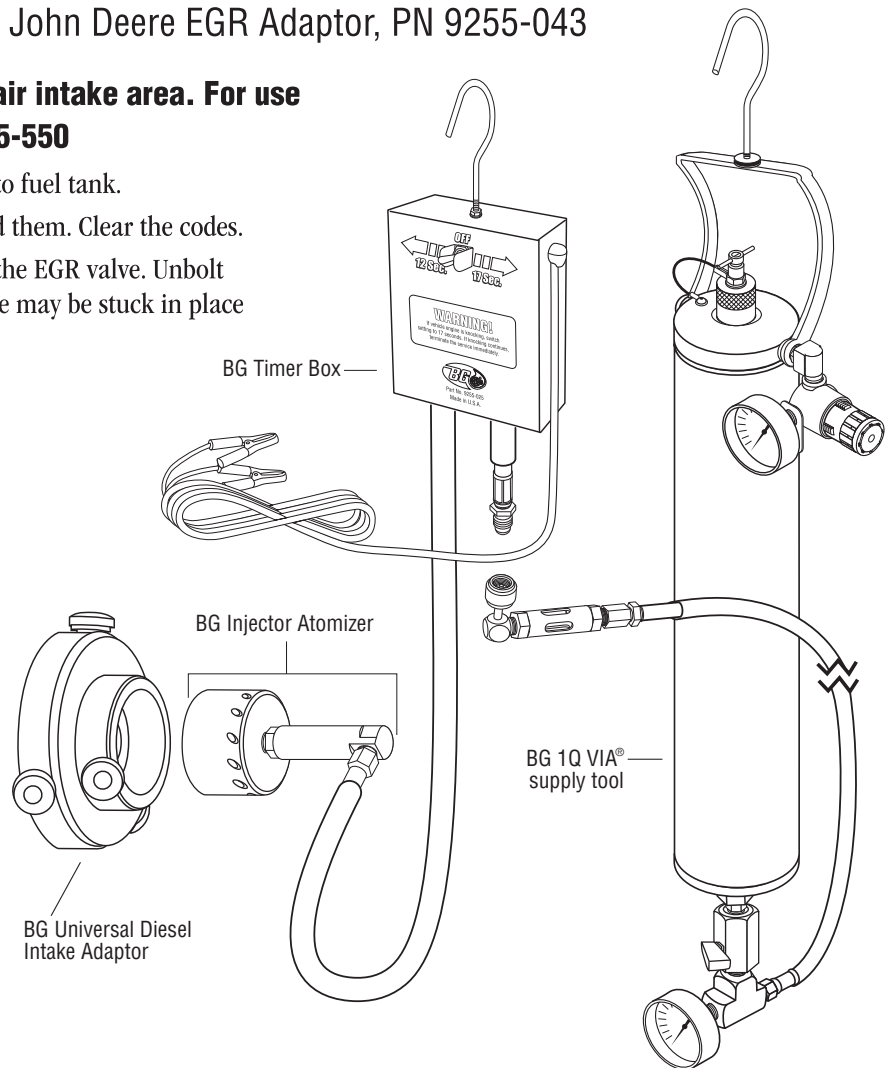
6. Close all valves on BG 1Q VIA® supply tool. Fill the BG 1Q VIA® with one quart (946 mL) of BG Diesel ISC®, PN 25532. Close fill cap securely and connect the supply hose from the tool to the bottom of the BG Timer Box.

Connect BG 1Q VIA® to shop air and set regulator pressure to 90 PSI.

7. Make sure the switch on the BG Timer Box is set to "Off." Connect to 12-volt DC power supply. Many diesels run 24-volt systems; be sure you have a 12-volt source. **WARNING! Ensure that RED cable clamp is connected to positive (+) battery terminal and BLACK cable clamp is connected to negative (-) battery terminal. Improper use will result in engine failure!**

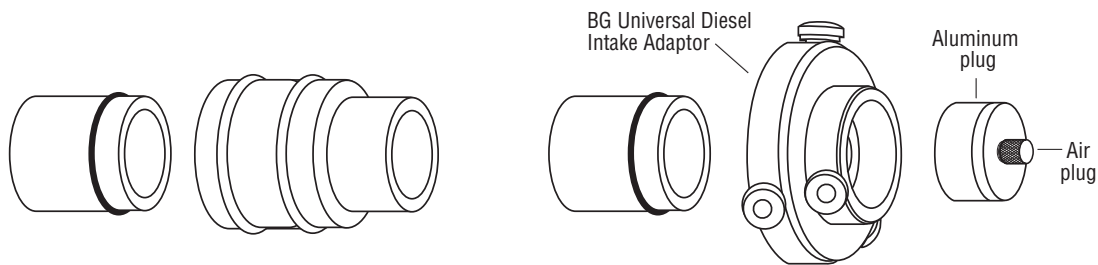
You must install the BG Universal Diesel Intake Adaptor to create a vacuum!

8. Locate the connection in the air tube that runs from the turbo to the plenum. Separate the tube and install the BG Universal Diesel Intake Adaptor over the metal tube on the engine side. Center the adaptor using the thumb screws. Install the aluminum plug into the end of the adaptor and secure with the thumb screw. The engine should run on the air going through the BG 4.5L, 6.8L and 9.0L John Deere EGR Adaptor. If vehicle refuses to start, remove the aluminum plug from the BG Universal Diesel Intake Adaptor. Try reinstalling the plug after some run time has elapsed. **WARNING: if vehicle bellows black smoke, remove air plug from the aluminum plug to allow for more air intake. If vehicle continues to bellow black smoke DO NOT proceed with the service. Vacuum is necessary to carry cleaner through the EGR runners, but too much air restriction can cause catastrophic engine failure!**



Install BG Universal Intake Adaptor and BG Injector Atomizer

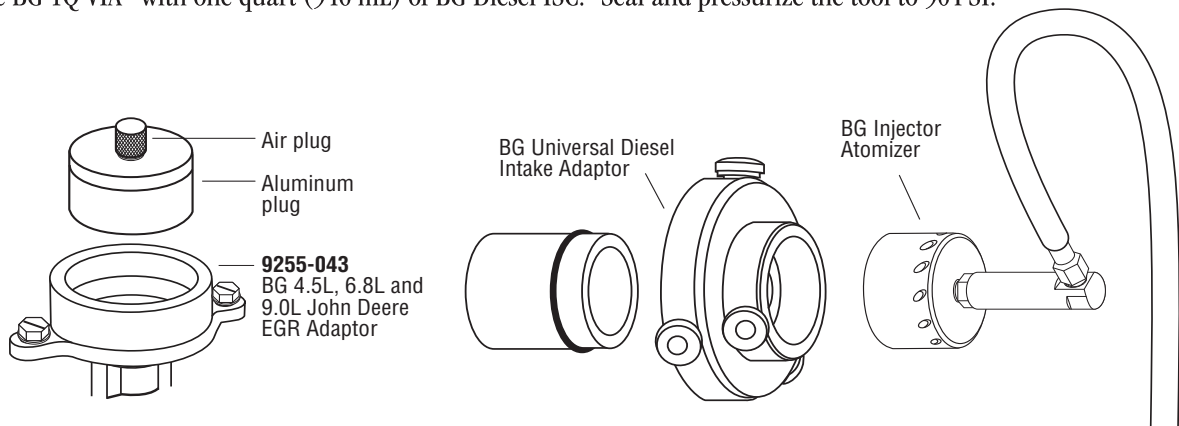
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Separate the air tube

Connect BG Universal Diesel Intake Adaptor

9. Start engine and bring to full operating temperature. Use throttle depressor to set RPM between 900–1000. **NOTE: Service run time is controlled through the BG Timer Box; increasing the vehicle RPM will NOT speed up the service time. DANGER! Increasing the RPM over the recommended 900–1000 could result in extremely rich conditions which cause extreme oil dilution and/or hydro lock the engine.** Open ball valve on BG 1Q VIA[®] and turn BG Timer Box to the highest number which will give the longest time between firings. If the vehicle runs well and does not clatter or knock, switch to the lower number for faster cleaning setting. **If the engine begins to clatter or knock, immediately turn off the BG Timer Box and wait for the engine to run normally. Restart service by setting selector to highest number.**
10. When the EGR cleaning is complete, shut engine off. Be sure to turn the BG Timer Box off and shut off the ball valve on the BG 1Q VIA[®]. Move the BG Injector Atomizer from the BG 4.5L, 6.8L and 9.0L John Deere EGR Adaptor to the BG Universal Diesel Intake Adaptor and the aluminum plug from the BG Universal Diesel Intake Adaptor to the BG 4.5L, 6.8L and 9.0L John Deere EGR Adaptor. The EGR port should now be sealed off and the BG Injector Atomizer installed in the end of the BG Universal Diesel Intake Adaptor.
11. Refill the BG 1Q VIA[®] with one quart (946 mL) of BG Diesel ISC[®] Seal and pressurize the tool to 90 PSI.



Install aluminum plug into BG 4.5L, 6.8L and 9.0L John Deere EGR Adaptor

Install BG Injector Atomizer into BG Universal Diesel Intake Adaptor

12. Start the engine and set RPM between 900–1000 depending on amount of deposit and altitude. Set selector on the BG Timer Box to the highest number and open the ball valve on the BG 1Q VIA[®].
If the vehicle runs well and does not clatter or knock, switch to the lower number for a faster cleaning setting. **If the engine begins to clatter or knock, immediately turn off the BG Timer Box and wait for the engine to run normally. Restart service by setting selector to highest number.**
13. When the BG Diesel ISC[®] has been consumed, shut engine off and remove all apparatus. Reconnect air tube to the intake.
14. Install cleaned or new EGR valve. Be careful not to damage the O-rings.
15. Restart engine, raise RPM between 1500–2000 for 15 minutes to dry out pockets of cleaner that may have accumulated.
Do not skip this step!
16. Install one quart (946 mL) of BG EPR[®] Engine Performance Restoration, PN 10932, in the crankcase of the engine. This step will clean the oil passages and help restore compression.
17. Engine oil and filter will be contaminated with cleaning solution from the services and must be changed at this time. Failure to do so could result in engine damage.
18. Add one quart (946 mL) of BG DOC[®] Diesel Oil Conditioner, PN 11232, to new engine oil.
19. Clear any codes that may have been set.
20. Drive the vehicle for 5–10 miles to remove any loose deposits.