

Squid

Combustion Chamber Decarbonizing System

PN 9408

OPERATING INSTRUCTIONS

Combustion Chamber Deposit Interference (CCDI) Cleaning Service



Wear safety goggles to protect your eyes.



Wear Nitrile[®], Neoprene[®] or PVC gloves to protect your hands.



Wear a long-sleeved shirt to protect your arms.

IMPORTANT! Read product Safety Data Sheet before use.

1. Install BG fender covers on both fenders to protect paint. Cloth fender covers will not protect the paint in case of a spill.
2. Run engine until coolant temperature is 190–210°F (88–99°C) and thermostat is open.

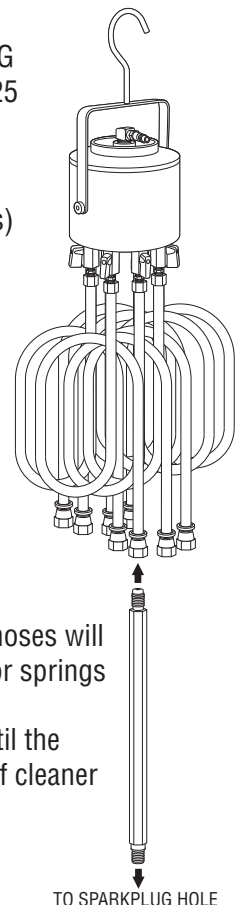
Stage 1: Air Intake Cleaning

1. When engine has reached operating temperature, shut off and perform a BG Air Intake Cleaning Service as follows: Connect BG VIA[®] supply tool, PN 9290-200 or 9290-300, and BG AIS Cleaning Tool Kit, PN 9206, according to instructions. Fill supply tool with two 11 oz. (325 mL) cans of BG Air Intake System Cleaner, PN 206.

Stage 2: BG Combustion Chamber Deposit Interference Cleaning Service

1. If you are not going to use the BG Squid Starter Control Unit, you must disable ignition coil(s) to prevent coil damage from dead end plug wires.
2. Remove spark plugs. Perform compression test on each cylinder if this data is desired.
3. Install appropriate BG Squid spark plug adaptors into spark plug holes. Do not over-tighten.
4. Prepare BG Squid for service.
 - a. Remove cap and check to be sure there is no old fluid present and that inside of the tank is clean.
 - b. Close ALL ball valves on bottom of the tank. (Closed position is 90° from the center line of the valve. Open position is when the valve handle is parallel to the center line of the valve.)
 - c. Check all hoses to be sure none have been kinked or damaged and that ends are tightly secured to the end of the ball valves.
 - d. Suspend the BG Squid tool from a secure point under the hood of the vehicle so that the hoses will reach all the spark plug adaptors. Due to the weight of the BG Squid, hoods with shocks or springs will need to be braced.
 - e. With the lid removed from the tank, pour in BG Fuel Injection System Cleaner, PN 210, until the desired number of inner cavities are filled. Fill one internal cavity with 2 ounces (60 mL) of cleaner for each engine cylinder to be cleaned.

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BG SQUID OPERATING INSTRUCTIONS *(continued)*

Combustion Chamber Deposit Interference (CCDI) Cleaning Service

f. Replace the lid to the tank and secure it tightly. Failure to do so will result in product being sprayed over the engine compartment and beyond.

Caution! BG Fuel Injection System Cleaner is powerful and can damage some plastic, rubber and paint. Clean up spills immediately!

Caution! Do not over fill into the main body of the tank or too much product will be dispensed into the engine cylinders.

Do not connect air line to the Squid tool at this time. The only time air is used is at the end of the 2-hour service.

5. Connect a hose from a filled cavity to each spark plug adaptor. If you are servicing a 6-cylinder vehicle with an 8-cavity tank, you will have two unconnected hoses left over. Tie them out of the way so they do not get tangled with moving engine components.
6. Open and leave open all ball valves that are connected to the spark plug adaptors. BG cleaner will drain into the cylinders. While these valves should remain open, be sure the valves on the unused hoses stay closed. Close the ball valve on the tank cap next to the air chuck to prevent cleaner from spitting.
7. With the ball valves open and the tank cap securely installed, press timer Bypass button long enough to see chemical enter the nylon hoses at least one time per cylinder. Press timer switch to start the service. Timer will bump the engine by activating the starter, every 10 minutes. Be sure to hang the warning placard in a conspicuous place so that everyone will know that this engine will crank unexpectedly on its own.
8. Allow CCDI Cleaning Service to run for 1 hour.
9. After 1 hour has elapsed, turn timer switch to "Off" and reload the BG Squid tool for the final 1-hour segment. Close the open ball valves and remove the top of the tank. Refill the inner cavities as before. Replace top of tank securely.
10. Open the valves and allow the contents of the inner cavities to drain down into the cylinders then close the air chuck ball valve on top.
11. Press timer switch to "On" to begin second 1-hour segment.
12. When the 2-hour bump and soak procedure is complete, turn timer switch to "Off." Attach shop air to the top of the Squid tank and open the ball valve on the air chuck. Use the Bypass button to crank the engine for 15-second intervals with 10-second rest periods. Do this for a couple of minutes or until the hoses show no sign of product being expelled. Crank the engine for 15 seconds after the last sign of product is seen in the hoses.
Important! Purging procedure is absolutely necessary to prevent hydro-locking the engine.
13. When there is no more liquid in the tubes to the cylinders, remove the air supply, close all ball valves, disconnect hoses from spark plug adaptors and remove adaptors.
14. Inspect spark plugs for serviceability and replace or reinstall.
15. Reconnect plug wires and start engine to make sure all systems are operating properly.

Stage 3: Engine Oil and Filter Change

1. Engine oil should be changed immediately after CCDI Cleaning Service. To help remove deposits flushed into the oil, add BG EPR[®] PN 109, to the oil and run for 15 minutes. Drain oil, replace filter and install new oil.
2. Add one 11 oz. (325 mL) can of BG 44K[®] PN 208, to the fuel tank and drive the vehicle for a minimum of 20 miles after the service to purge all cleaner and allow the vehicle to relearn long-term fuel trim.
3. Wash BG Squid immediately after use in the parts washer safety solvent to remove dissolved carbon residue from adaptors, hoses, and tank. The longer you wait to clean it, the more difficult it will be to remove the dried carbon material.

WARNING! Skipping or short cutting these steps can lead to engine damage!



Scan this code or visit
<http://bgfor.me/squidref>
to access instructions
in other languages
and additional information.

Squid

Combustion Chamber Decarbonizing System

PN 9408

OPERATING INSTRUCTIONS

Piston Ring Deposit Removal Service



Wear safety goggles to protect your eyes.



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Wear a long-sleeved shirt to protect your arms.

IMPORTANT! Read product Safety Data Sheet before use.

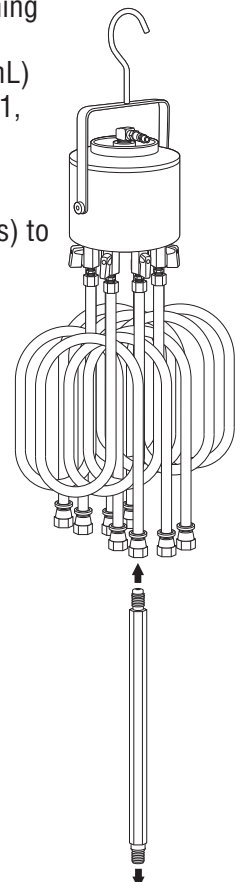
1. Install BG fender covers on both fenders to protect paint. Cloth fender covers will not protect the paint in case of a spill.
2. Run engine until coolant temperature is 190–210°F (88–99°C) and thermostat is open.

Stage 1: Air Intake Cleaning

1. When engine has reached operating temperature, shut off and perform a BG Air Intake Cleaning Service as follows: Connect BG VIA[®] supply tool, PN 9290-200 or 9290-300, and BG AIS Cleaning Tool Kit, PN 9206, according to instructions. Fill supply tool with two 11 oz. (325 mL) cans of BG Air Intake System Cleaner, PN 206, (BG ISC[®] Induction System Cleaner,™ PN 211, should be used on Northstar Cadillac ONLY).

Stage 2: BG Squid Piston Ring Deposit Removal Service

1. If you are not going to use the BG Squid Starter Control Unit, you must disable ignition coil(s) to prevent coil damage from dead end plug wires.
2. Remove spark plugs. Perform compression test on each cylinder if this data is desired.
3. Install appropriate BG Squid spark plug adaptors into spark plug holes. Do not over-tighten.
4. Prepare BG Squid for service.
 - a. Remove cap and check to be sure there is no old fluid present and that inside of the tank is clean.
 - b. Close ALL ball valves on bottom of the tank. (Closed position is 90° from the center line of the valve. Open position is when the valve handle is parallel to the center line of the valve.)
 - c. Check all hoses to be sure none have been kinked or damaged and that ends are tightly secured to the end of the ball valves.
 - d. Suspend the BG Squid tool from a secure point under the hood of the vehicle so that the hoses will reach all the spark plug adaptors. Due to the weight of the BG Squid, hoods with shocks or springs will need to be braced.
 - e. With the lid removed from the tank, pour in appropriate BG cleaner until the desired number of inner cavities are filled. Fill one internal cavity with 2 oz. (60 mL) of cleaner for each engine cylinder to be cleaned.



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BG SQUID OPERATING INSTRUCTIONS *(continued)*

Piston Ring Deposit Removal Service

NOTE: You may use ISC® Induction System Cleaner,™ PN 211, on Northstar Cadillac and other vehicles with aluminum UNPAINTED oil pans. If in doubt about pan, use BG Fuel Injection System Cleaner, PN 210, only.

- f. Replace the lid to the tank and secure it tightly. Failure to do so will result in product being sprayed over the engine compartment and beyond.

Caution! BG cleaners are powerful and can damage some plastic, rubber and paint. Clean up spills immediately!

Caution! Do not over fill into the main body of the tank or too much cleaner will be dispensed into the engine cylinders.

Do not connect air line to the Squid tool at this time. The only time air is used is at the end of the 4-hour service.

5. Connect a hose from a filled cavity to each spark plug adaptor. If you are servicing a 6-cylinder vehicle with an 8-cavity tank, you will have two unconnected hoses left over. Tie them out of the way so they do not get tangled with moving engine components.
6. Open and leave open all ball valves that are connected to the spark plug adaptors. BG cleaner will drain into the cylinders. While these valves should remain open, be sure the valves on the unused hoses stay closed. Close the ball valve on the tank cap next to the air chuck to prevent cleaner from spitting.
7. With the ball valves open and the tank cap securely installed, press timer Bypass button long enough to see cleaner enter the nylon hoses at least one time per cylinder. Press timer switch to start the service. Timer will bump the engine by activating the starter, every 10 minutes. Be sure to hang the warning placard in a conspicuous place so that everyone will know that this engine will crank unexpectedly on its own.
8. Allow Piston Ring Deposit Removal Service to run for 2 hours.
9. After 2 hours have elapsed, turn timer switch to "Off" and reload the BG Squid tool for the final 2-hour segment. Close the open ball valves and remove the top of the tank. Refill the inner cavities as before. Replace top of the tank securely.
10. Open the valves and allow the contents of the inner cavities to drain down into the cylinders then close the air chuck ball valve on top.
11. Press timer switch to "On" to begin second 2-hour segment.
12. When the 4-hour bump and soak procedure is complete, turn timer switch to "Off." Attach shop air to the top of the Squid tank and open the ball valve on the air chuck. Use the Bypass button to crank the engine for 15 second intervals with 10 second rest periods. Do this for a couple of minutes or until the hoses show no sign of product being expelled. Crank the engine for 15 seconds after the last sign of product is seen in the hoses. Important! Purging procedure is absolutely necessary to prevent hydro-locking the engine.
13. When there is no more liquid in the tubes to the cylinders, remove the air supply, close all ball valves, disconnect hoses from spark plug adaptors and remove adaptors.
14. Inspect spark plugs for serviceability and replace or reinstall.
15. Reconnect plug wires and start engine to make sure all systems are operating properly.

Stage 3: Engine Flush

1. Engine oil should be changed immediately after CCDI Cleaning Service. To help remove deposits flushed into the oil, add BG EPR®, PN 109, to the oil and run for 15 minutes. Drain oil, replace filter and install new oil. On Cadillac Northstars, refill crankcase to midway on the dipstick. Do not overfill or the oil will be thrown out through the PCV valve.
2. Add one 11 oz. (325 mL) can of BG 44K®, PN 208, to the fuel tank and drive the vehicle for a minimum of 20 miles after the service to purge all cleaner and allow the vehicle to relearn long-term fuel trim.
3. Wash BG Squid immediately after use in the parts washer safety solvent to remove dissolved carbon residue from adaptors, hoses, and tank. The longer you wait to clean it, the more difficult it will be to remove the dried carbon material.

Warning! Skipping or short cutting these steps can lead to engine damage!



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