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WYNN'S DIESEL EXHAUST GAS RECIRCULATION 4 Aerosol - (EGR 4)

Product Number: 23478 12 x 150g

<u>Warning:</u> Follow directions attached. Spray in short bursts to avoid uncontrolled rise of rpm, diesel knocking and product pooling.

WYNN'S DIESEL EGR 4 is an aerosol product developed for cleaning the air intake system of all diesel engines.

WYNN'S EGR 4 Aerosol is recommended to be used at each service interval to maintain cleanliness of the air intake manifold, inlet valves and EGR valves of diesel engines.

Introduction:

Modern diesel engines are equipped with exhaust gas recirculation (EGR) systems to reduce nitrogen oxide pollution from the exhaust. Unfortunately, EGR can lead to significant deposits of carbonaceous particulates and other by-products of combustion accumulating in the induction system (intake manifold, EGR control valves and EGR cooler). Until now, the only solution to this problem was an expensive and time consuming tear-down of the affected parts for cleaning and sometimes component replacement.

Wynn's EGR 4 aerosol has been developed to clean the intake air manifold, inlet valves and EGR valve.

Wynn's EGR 4 is recommended to be used at each service interval or as required. It cleans the "dry part" of the diesel fuel system without dismantling.

Wynn's EGR 4 can be used to clean dismantled parts thoroughly such as EGR valve and turbo-charger.

PREVENTATIVE AND CURATIVE USE

Advantages:

- > Provides immediate through cleaning of air intake system and inlet valves.
- > Cleans the EGR valve & connecting tube between EGR valve & air intake manifold.
- > Dissolves gum, lacquer and carbon deposits.
- Reduces black exhaust emissions.
- > Restores optimal air flow towards the combustion chamber.
- Improves fuel economy.
- > Eliminates & avoids irregular idle & hard starting.
- Improves acceleration.
- > Safe to use with Oxygen sensors, DPF & other emission controls.

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The data concerning properties and applications of the indicated products are offered in good faith and are based on our research and practical experiences. Due to the versatility of the application possibilities, it is impossible to mention all details and we do not assume any obligations or responsibilities resulting from this. When a new edition appears due to technical development, the preceding data is no longer valid



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Applications:

For the air intake manifold, inlet valves and EGR valve of all diesel engines.

Recommended to be used at each service interval to maintain cleanliness.

Note: Some larger or vehicles that have large amounts of carbon may require two treatments initially (2 x Cans) then one treatment (1 x Can) at each service after that.

It is recommended to use the extension spray tube # WQ4700

DIRECTIONS:

<u>NOTE:</u> Ensure the vehicle is at normal operating temperature before carrying out an EGR Service to ensure the most effective service and cleaning result.

A. Cleaning of Throttle Plate, Air Intake Manifold and Inlet Valves

- 1. Start the engine and let it warm up.
- 2. Remove flexible hose in the air intake system, situated closest to the throttle plate and the air intake manifold.
- 3. Increase RPM to between 1800 & 2000 RPM to ensure movement of the throttle plate and that the EGR valve is open.
- 4. **Do not spray directly through the intercooler.** Spray in short bursts of < 1 second each to avoid engine race. After each pulverization wait until the original rpm is regained and the engine runs evenly.
- 5. During the pulverization, the RPM can go up or down, this is normal and ensures the product is being applied properly. This rise in RPM is due to the addition of liquid and the change in the air/fuel ratio.
- 6. In case the RPM drops, accelerate a little to avoid stalling of the engine (up to approximately 2000 rpm).
- 7. In case of increased rpm or diesel knocking, leave it running at idle. Do not accelerate and wait for the RPM to return to normal.
- 8. Continue until the can is exhausted of product.
- Once the can is exhausted reconnect the rubber intake hose and perform 10 short sharp rev's on the vehicle then let the engine idle for 10 – 15 minutes to allow any pooled product to evaporate then drive the vehicle for 5 minutes.





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- B. Preventive cleaning of EGR valve
- i. If the valve is close to the injection point of the product, Follow directions above in method A.



ii. If the valve is at remote distance to the injection point of the product, use the extension tube # WQ4700 to get closer to the valve, then act the same way as in method A.

C. Cleaning EGR valve / Throttle Plate when excessively dirty

- 1. Dismantle the EGR valve (housing).
- 2. Spray the product directly on the valve, housing and other components, until these parts are very wet.
- 3. Let the product act a few minutes.
- 4. Spray again on the parts, until all the dirt has been removed.
- 5. It can help to remove the dirt with a piece of cloth or paper tissue.
- 6. Dry the parts with compressed air, cloth or paper tissue.

<u>Usage</u>

Method A and B

• Recommended to be carried out at every scheduled service interval or (10,000 – 15,000 km)

Method C

• At initial first treatment on car with high mileage or excessive carbon build up.

Warning

Do not spray on painted surfaces. In such case, immediately clean with water to prevent damage.



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Clean up test VW Bora 1.9 TDI at Technology Institute De Nayer (method A)

| | before | after | Change |
|---------------------|--------|-------|--------|
| engine power in HP | 115,4 | 118,7 | 3,3 |
| engine torque in Nm | 271,9 | 276,6 | 4,7 |

Clean up test Citroën C5 HDI at Wynn's (method A)

| | before | after | Change in % | one week after treatme nt | Change in % |
|-------------|--------|-------|----------------|---------------------------------------|----------------|
| soot in m-1 | 2,89 | 0,88 | -69,6 | 0,92 | -68,2 |

Clean up test Opel Zafira 2.0 Turbo DI 16V (method A) in Italy

| | before | after | Change in % after C |
|-------------|--------|-------|------------------------|
| soot in m-1 | 3,46 | 1,13 | -67,34 |

Clean up test VW Vento 1.9 TD at Technology Institute De Nayer (method A)



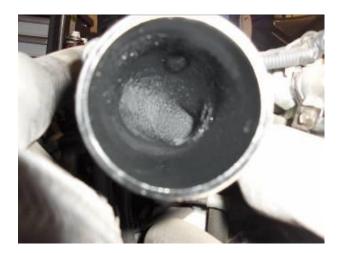
After treatment

Before treatment



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Clean up test Hyundai Elantra at Hyundai Belgium (method A)



Before treatment

After treatment

| | before | after | Change in % |
|-------------|--------|-------|-------------|
| soot in m-1 | 4,15 | 2,30 | -44,6 |

Clean up test Mitsubishi Pajero 3.2 TDI (method D) at Wynn's





After treatment

Before treatment



Clean up test Nissan Micra 1.5 dCi – 68 HP (method C) at Nissan workshop

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Before treatment



After treatment

Clean up test Nissan Patrol 3.0 TD (method D) at Nissan workshop





Before treatment

After treatment



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Conclusion:

1. Wynn's EGR 4 can be used to clean the air intake system of common diesel engines in passenger cars and small diesel trucks, which may be equipped with the following systems or components,

- Indirect injection
- Direct injection
- > In-line injection pumps
- Rotary injection pumps
- Mechanical or electronic steering
- Common rail
- Pump injectors
- Particulate filters
- Catalytic converters
- Turbochargers and after coolers
- 2. It cleans and keeps clean the "dry part" of the diesel fuel system without dismantling.

3. It can be used to clean dismantled parts thoroughly such as EGR valve and turbo-charger.

4. The treatment preserves a good operation of the fuel system with

- Stable idle
- Good accelerations
- High power and torque
- Low fuel consumption
- Low exhaust emissions

5. An additional spray nozzle Part Number WQ4700 helps to reach parts to be cleaned.