

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-393-5

Relating to Exemptions under
Section 27156 of the Vehicle Code

Johnson Matthey
EGRT Diesel Emission Reduction System

Pursuant to the authority vested in the Air Resources Board (ARB) by Section 27156 of the Vehicle Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That installation of the EGRT Diesel Emission Reduction System, manufactured by STT Emtec AB of Kontorsvägen 9, SE 852 29 Sundsvall, Sweden and Johnson Matthey of 380 Lapp Road, Malvern, Pennsylvania 19355, has been found not to reduce the effectiveness of the applicable vehicle pollution control system, and therefore, the EGRT Diesel Emission Reduction System is exempt from the prohibitions in Section 27156 of the Vehicle Code for installation on on-road heavy-duty vehicles equipped with the following 4-stroke electronic diesel engines:

| Engine MY | Engine Make | Engine Model |
|-----------|---------------|---|
| 1994-2002 | Cummins | L10, M11, N14, ISB, ISC, ISL, ISM, ISN, ISX, Signature, B-series, C-series (all horsepower) |
| 1994-2002 | International | T444, DT466, 530, 7.3 DIT (all horsepower) |

This exemption excludes all engines originally certified with an aftertreatment emission control system such as an oxidation catalyst that would require removal before the EGRT Diesel Emission Reduction System can be installed.

The EGRT Diesel Emission Reduction System consists of: (1) a low-pressure exhaust gas recirculation (EGR) system and (2) the Continuously Regenerating Technology (CRT) Particulate Filter. The major components of the EGR system are the dynamic pickup, EGR cooler, EGR valve, and an EGR control module. The CRT filter is a two-stage modular system that incorporates a precious metal oxidation catalyst upstream of a wall-flow filter. The major system components are identified in Attachment A.

This exemption is only valid provided the engines meet the following operating conditions: (1) the engine exhaust temperature is greater than or equal to 260° C for 40 percent of the typical duty cycle, (2) the NOx to PM ratio is at least 20, and (3) the engine is operated using diesel fuel with a maximum sulfur content of 50 parts per million by weight.

This exemption is based on emission tests conducted by Johnson Matthey with the EGRT Diesel Emission Reduction System. Johnson Matthey submitted the following FTP emission results:

| Test Engine | | | Percent Change in Emissions | | | |
|-------------|---------------|-------|-----------------------------|-----|-----|-----|
| MY | Make | Model | THC | CO | NOx | PM |
| 2000 | Cummins | ISM | -95 | -95 | -47 | -90 |
| 2000 | International | DT466 | -87 | -94 | -58 | -91 |

The test data show that the EGRT Diesel Emission Reduction System does not adversely affect the exhaust emissions of the test engines. The same emission impact is expected when the system is installed on heavy-duty vehicles equipped with any of the engines listed above.

This Executive Order is valid provided that installation instructions for the EGRT Diesel Emission Reduction System do not recommend tuning the vehicle to specifications different from those of the vehicle manufacturer.

Changes made to the design or operating conditions of the EGRT Diesel Emission Reduction System, as exempt by the ARB, which adversely affect the performance of the vehicle's pollution control system, shall invalidate this Executive Order.

Marketing of the EGRT Diesel Emission Reduction System using identification other than that shown in this Executive Order or for an application other than that listed in this Executive Order shall be prohibited unless prior approval is obtained from the ARB.

This Executive Order shall not apply to any EGRT Diesel Emission Reduction System advertised, offered for sale, sold with, or installed on a motor vehicle prior to or concurrent with transfer to an ultimate purchaser.

This Executive Order does not constitute any opinion as to the effect the use of the EGRT Diesel Emission Reduction System may have on any warranty either expressed or implied by the vehicle manufacturer.

No claim of any kind, such as "Approved by the Air Resources Board," may be made with respect to the action taken herein in any advertising or other oral or written communication.

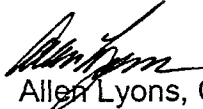
In addition to the foregoing, the ARB reserves the right in the future to review this Executive Order and the exemption provided herein to assure that the exempted add-on or modified part continues to meet the standards and procedures of California Code of Regulations, Title 13, Section 2222, et seq.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF ANY CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF JOHNSON MATTHEY'S EGRT DIESEL EMISSION REDUCTION SYSTEM.

Violation of any of the above conditions shall be grounds for revocation of this Executive Order. The Executive Order may be revoked only after a ten-day written notice of intention to revoke the Executive Order, in which period the holder of the Executive Order may request in writing a hearing to contest the proposed revocation. If a hearing is requested, it

shall be held within ten days of receipt of the request, and the Executive Order may not be revoked until a determination is made after a hearing that grounds for revocation exist.

Executed at El Monte, California, this 10TH day of December 2002.



Allen Lyons, Chief
Mobile Source Operations Division

Attachment A

| EXHAUST GAS RECIRCULATION SYSTEM | | | |
|----------------------------------|-----------------|----------|--------------|
| Description | STT Part Number | Quantity | Manufacturer |
| Dynamic Pickup | 100569 | 1 | STT |
| Heat Exchanger | 100787 | 1 | STT |
| EGR Filter | 100650 | 1 | STT |
| EGR Filter Housing Assembly | 100935 | 1 | STT |
| EGR Valve | 310-00-1001.2 | 1 | STT |
| EGR Valve Screen | -- | 1 | STT |
| Control Module | 100752 | 1 | STT |
| Wiring Harness | -- | 1 | STT |
| Flexible Hose | 5526-100 | 1 | Flexfab |
| CRT System | KCRT3011LS | 1 | JM/FGN |
| CRTdm | 9161W | 1 | JM/FGN |

| CONTINUOUSLY REGENERATING TECHNOLOGY PARTICULATE FILTER | |
|---|-----------------|
| Engine HP | CRT Part Number |
| 150-230 | CRT 1234 DW |
| 230-330 | CRT 1234 DW |
| 330-425 | CRT 1234 JT |
| 425-600 | CRT 1234 IT |

Note: The CRT Particulate Filter part numbers identify the specific exhaust inlet/outlet configurations based on engine/vehicle combinations and the specific catalyst and filter elements. The catalyst and filter substrate volume/density combinations specified above are the minimum catalyst and filter sizes Johnson Matthey will use on a given engine/vehicle combination. Johnson Matthey may use a larger catalyst and/or filter for a given engine/vehicle combination.