

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-175-16
Relating to Exemptions Under Section 27156
of the Vehicle Code

HYPERMAX ENGINEERING, INC.
AIR TO AIR INTERCOOLER KIT

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

Pursuant to the authority vested in the undersigned by Section 39515 and Section 39516 of the
Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the installation of the Air to Air Intercooler Kit marketed by
Hypermax Engineering, Inc., 255 E Route 72, Gilberts, Illinois 60136 has been found not to reduce
the effectiveness of the applicable vehicle pollution control system and, therefore, is exempt from the
prohibitions of Section 27156 of the Vehicle Code for 1983 through 2000 model year trucks equipped
with a turbocharged Navistar 6.9/7.3L diesel engine.

The Air to Air Intercooler Kit is designed to either replace the existing intercooler system on those
vehicles that are already equipped with an Intercooler or add to vehicles not originally equipped with
an intercooler system. No changes are made to the vehicle's fuel delivery system or any emissions
related sensors.

This Executive Order is valid provided that the installation instructions for the Air to Air Intercooler Kit
will not recommend tuning the vehicle to specifications different from those of the vehicle
manufacturer.

This Executive Order shall not apply to any Hypermax Engineering, Inc. Air to Air Intercooler Kit
advertised, offered for sale, sold with, or installed on, a motor vehicle prior to or concurrent with
transfer to an ultimate purchaser.

Changes made to the design or operating conditions of the Air to Air Intercooler Kit, as exempt by the
Air Resources Board, which adversely affect the performance of the vehicle's pollution control system
shall invalidate this Executive Order.

Marketing of the Air to Air Intercooler Kit using any identification other than that shown in this
Executive Order or marketing of the system for an application other than those listed in this Executive
Order shall be prohibited unless prior approval is obtained from the Air Resources Board. Exemption
of the system shall not be construed as exemption to sell, offer for sale, or advertise any component
of the kit as an individual device.

This Executive Order does not constitute any opinion as to the effect the use of the Air to Air
Intercooler Kit may have on any warranty either expressed or implied by the vehicle manufacturer.

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 HYPERMAX ENGINEERING, INC.'S AIR TO AIR INTERCOOLER KIT.

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.

Violation of any of the above conditions shall be grounds for revocation of this order. The order may be revoked only after a ten-day written notice of intention to revoke the order, in which period the holder of the 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 order may not be revoked until a determination after hearing that grounds for revocation exist.

Executive Order D-175-14 dated September 1998, is superseded and of no further force and effect.

Executed at El Monte, California, this 21st day of March 2000.



R. B. Summerfield, Chief
Mobile Source Operations Division

AFTERMARKET PARTS SECTION
VC Sections 27156 and 38391 Exemption Update Check-Out List

For each exemption update request, the project engineer is to complete this "check-out" list to make sure that there are no changes in the applicable vehicles and device design.

GENERAL INFORMATION:

1. Date application received: Varied
2. Name of Applicant: Hypermax
3. Address of Applicant: 255 E Route 72, Gilberts, Illinois 60136
4. Applicant Phone: 847-428-5655
5. Name of Manufacturer: Same
6. Manufacturer's Phone: Same
7. Address of Manufacturer: Same
8. Name of Device: Air to Air Intercooler & Diesel Controller
9. Latest EO and Date: D-175-14 8/98 & D-175-15 8/98
10. Device Testing: Manufacturer
11. Vehicle application covered by existing EO's:
 - Intercooler**
1983-99 trucks equipped with a turbocharged Navistar 6.9/7.3L diesel engine
 - Diesel Controller**
1993-99 trucks equipped with a turbocharged Navistar 7.3L diesel engine
12. Vehicle application now requested:
 - Intercooler**
1983-00 trucks equipped with a turbocharged Navistar 6.9/7.3L diesel engine
 - Diesel Controller**
1993-00 trucks equipped with a turbocharged Navistar 7.3L diesel engine
13. Pollution Control systems on previous vehicle(s): OEM
14. Pollution control systems on present vehicle(s): OEM
15. Is present vehicle/engine a carryover from previous vehicle/engine? N/A
16. List design changes in device: None
17. Will changes affect emissions? No change
18. Special reason to update besides inclusion of newer vehicle model: None
19. Are legal issues involved? If so, has ARB legal been consulted? No
20. EO number issued: D-175-16 & D-175-17

Bases for issuance of an EO:

Diesel Controller

Submitted emissions test data on a 2000 Ford Excursion with a 7.3L diesel engine. The testing data generated was used for the evaluation of the Diesel Controller. Testing consisted of comparative Cold Start 505 Federal Test Procedures.

	HC	CO	NOX	PARTICULATES
Stock	0.59	2.5	5.5	0.23
Diesel Controller	0.56	2.7	5.7	0.18
% Difference	-5.0	8.0	3.6	-21.7

Results from the emission tests conducted at Roush Industries show the vehicle emissions with the Diesel Controller installed did not cause exhaust emissions to exceed the baseline emissions by more than the allowed limits of 10 percent or 0.1 grams per mile on hydrocarbon (HC), oxides of nitrogen (NOx) and Particulates, and 15 percent or 1.0 grams per mile carbon monoxide (CO) as specified in the "Procedures for Exemption of Add-On and Modified Parts".

This Executive Order is also based on On Board Diagnostic II (OBD II) testing and opacity testing on the same test vehicle. Opacity test results are listed below. Test data showed that the Diesel Controller when installed on the vehicles did not significantly affect the vehicle's smoke opacity or the ability to perform its OBD II monitoring.

	OPACITY (Percent)
Stock	4.9, 5.7, 4.3
Diesel Controller	5.0, 6.1, 4.5

Intercooler

The Intercooler is designed as a direct replacement, and has met the compliance criteria requirements