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State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-180-25

Relating to Exemptions Under Section 27156  
of the Vehicle Code

TTS, Inc.  
Power System Chip

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-02-003;

IT IS ORDERED AND RESOLVED: That the installation of the Power System Chip, manufactured and marketed by TTS, Inc., 1280 Kona Drive, Compton, California 90220 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 applicable 1994 through 2002 model-year Ford trucks equipped with the 7.3L turbo-diesel engine.

<u>Part No.</u>	<u>Model-Year</u>
CARB-94XX	1994 trucks with a manual trans.
CARB-95XX	1995 trucks, auto and manual trans.
CARB-96XX	1996 trucks, auto and manual trans.
CARB-97XX	1997 trucks, auto and manual trans.
CARB-98XX	1998 trucks, auto and manual trans.
CARB-99XX	1999 trucks, auto and manual trans.
CARB-00XX	2000 trucks, auto and manual trans.
CARB-01XX	2001 trucks, auto and manual trans.
CARB-02XX	2002 trucks, auto and manual trans.

The Power System Chip is a module that plugs into the service port of the Ford ECM and modifies engine and transmission parameters during driving conditions at high load or wide open throttle. The XX series in the part no. is the vehicle's stock ECM code.

This Executive Order shall not apply to any TTS, Inc. 's Power System Chip advertised, offered for sale, sold with, or installed on a new motor vehicle prior to or concurrent with transfer to an ultimate purchaser.

This Executive Order is valid provided that the installation instructions for the Power System Chip will not recommend tuning the vehicle to specifications different from those submitted by the device manufacturer.

Changes made to the design or operating conditions of the Power System Chip, 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 Power System Chip using any identification other than that shown in this Executive Order or marketing of the Power System Chip 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 Power System Chip 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 Power System Chip may have on any warranty either expressed or implied by the vehicle manufacturer.

This Executive Order is granted based on submitted emissions test data which showed that the Power System Chip did not adversely affect tailpipe emissions during comparative Cold Start 505 Federal Test Procedures. A 2001 Ford F-350 with a 7.3L diesel engine, and certified to the low emission vehicle (LEV) emission standards was used as the test vehicle. Results showing baseline and modified emission levels are listed below.

	HC	CO	NOx	PM	Opacity
Baseline	0.53	1.3	6.4	0.252	11.2%
Modified	0.43	1.3	6.8	0.261	7.1%
Difference	-0.1	0.0	0.4	0.009	
% Difference	-18.9	0.0	6.3	3.6	

Test results showed that the Power System Chip 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) and oxides of nitrogen (NOx), 15 percent or 1.0 grams per mile on carbon monoxide (CO), and 15 percent or 0.03 grams per mile on particulate matter (PM) as specified in the "Procedures for Exemption of Add-On and Modified Parts." Opacity test results which were generated using the highest reading on the Smoke Opacity Test were below the 40 percent standard.

This Executive Order is also based on an On-Board Diagnostic II (OBD II) testing conducted on the same vehicle. Test data showed that the Power System Chip when installed on the vehicle did not affect the vehicle's ability to perform its OBD II monitoring.

The ARB finds that reasonable grounds exist to believe that use of the Power System Chip may adversely affect emissions of motor vehicles when operating under conditions outside the parameters of the Cold Start 505 Federal Test Procedure. Accordingly, the ARB reserves the right to conduct additional emission tests, in the future, as such tests are developed, that will more adequately measure emissions from all cycle phases. If such test results demonstrate that the Power System Chip adversely affects emissions during off-cycle conditions (defined as those conditions which are beyond the parameters of the Cold Start 505 Federal Test Procedure), this Executive Order shall be effectively rescinded as of the date the test results

are validated. Further, if such test results or other evidence provides the ARB with reason to suspect that the Power System Chip will affect the durability of the emission control system, TTS, Inc. shall be required to submit durability data to show that the durability of the vehicle emission control system is not, in fact, affected and/or that the add-on or modified part demonstrates adequate durability.

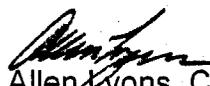
In addition to the foregoing, the ARB reserves the right in the future to review this Executive Order and the exemption provided herein to assure that the exempted add-on or modified part continues to meet the standards and procedures of Title 13, California Code of Regulations, Section 2222, et seq.

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 TTS, INC.'S POWER SYSTEM CHIP.

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 is made after the hearing that grounds for revocation exist.

Executed at El Monte, California, this 27<sup>th</sup> day of June 2002.



Allen Lyons, Chief  
Mobile Source Operations Division