

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-234-1
Relating to Exemptions Under Section 27156
of the Vehicle Code

JONES ELECTRONIC TECHNOLOGIES
J.E.T. PERFORMANCE CHIP

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-45-5;

IT IS ORDERED AND RESOLVED: That the installation of the J.E.T. Performance Chip manufactured by Jones Electronic Technologies has been found not to reduce the effectiveness of required motor vehicle pollution control devices and, therefore, is exempt from the prohibitions of Section 27156 of the Vehicle Code for 1986-92 General Motors (GM) trucks with 5.0 to 7.4 liter engines, 1981-92 GM passenger cars with 2.8 to 5.7 liter engines and 1986-92 GM trucks with 2.8 to 4.3 liter engines as listed in Exhibit A, which is attached hereto and incorporated herein.

This Executive Order is valid provided that installation instructions for the J.E.T. Performance 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 device, as exempted by the ARB, that adversely affect the performance of a vehicle's pollution control system shall invalidate this Executive Order.

Marketing of this device using an identification other than that shown in this Executive Order or marketing of this device for an application other than those listed in this Executive Order shall be prohibited unless prior approval is obtained from the ARB.

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

This Executive Order is granted based on results from emissions tests conducted in accordance with Cold-Start CVS-75 Federal Test Procedure. However, the ARB finds that reasonable grounds exist to believe that use of the J.E.T. Performance Chip may adversely affect emissions of motor vehicles when operating under conditions outside the parameters of the previously prescribed test procedures. 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 J.E.T. Performance Chip adversely affects emissions during off-cycle conditions (defined as those conditions which are beyond the parameters of the Cold-Start CVS-75 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 J.E.T. Performance Chip will affect the durability of the emission control system, Jones Electronic Technologies 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 JONES ELECTRONIC TECHNOLOGIES' J.E.T. PERFORMANCE 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.

Section 17500 of the Business and Professions Code makes untrue or misleading advertising unlawful, and Section 17534 makes violation punishable as a misdemeanor.

Section 43644 of the Health and Safety Code provides as follows:

"43644, (a) No person shall install, sell, offer for sale, or advertise, or, except in an application to the state board for certification of a device, represent, any device as a motor vehicle pollution control device for use on any used motor vehicle unless that device has been certified by the state board. No person shall sell, offer for sale, advertise, or represent any motor vehicle pollution control device as a certified device which, in fact, is not a certified device. Any violation of this subdivision is a misdemeanor."

Any apparent violation of the conditions of this Executive Order may result in its rescission or submission to the Attorney General of California for such action as he deems advisable.

Executive Order D-234 is superseded and of no further force and effect.

The Bureau of Automotive Repair will be notified by copy of this order.

Executed at El Monte, California, this 12th day of March, 1992.

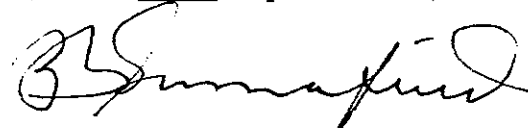

R. B. Summerfield
Assistant Division Chief
Mobile Source Division

Exhibit A

GM TRUCK APPLICATIONS

1987

Part No.	Application
28701	305 TBI Auto 3 spd.
28702	305 TBI Auto w/od
28703	350 TBI Auto 3 spd.
28704	350 TBI Auto w/od
28705	350 TBI Manual
28706	454 TBI Auto 3 spd.
28707	454 TBI Manual

1988

Part No.	Application
28810	305 TBI Auto 3 spd.
28811	305 TBI Auto w/od
28812	305 TBI Manual
28813	350 TBI Auto 3 spd.
28814	350 TBI Auto w/od
28815	350 TBI Manual
28816	454 TBI Auto 3 spd.
28817	454 TBI Manual

1989

Part No.	Application
28909	305 TBI Auto 3 spd.
28910	305 TBI Auto w/od
28911	305 TBI Manual
28912	350 TBI Auto 3 spd.
28913	350 TBI Auto w/od
28914	350 TBI Manual 4 spd.
28915	350 TBI Manual 5 spd.
28916	454 TBI Auto 3 spd.
28917	454 TBI Manual

1990

Part No.	Application
29001	305 TBI Auto 3 spd.
29002	305 TBI Auto w/od
29003	305 TBI Manual 4 spd.
29004	305 TBI Manual 5 spd.
29005	350 TBI Auto 3 spd.
29006	350 TBI Auto w/od
29007	350 TBI Manual 4 spd.
29008	350 TBI Manual 5 spd.
29009	454 TBI Auto 3 spd.
29010	454 TBI Manual
39011C	305 TBI Auto w/od
39012C	454 TBI Auto
39013C	454 TBI Auto

1991

Part No.	Application
29101	305 TBI Auto 3 spd.
29103	305 TBI Manual 4 spd.
29104	305 TBI Manual 5 spd.
29105	350 TBI Auto 3 spd.
29106	350 TBI Auto w/od
29107	350 TBI Manual 4 spd.
29108	350 TBI Manual 5 spd.
29109	454 TBI Auto 3 spd.
29110	454 TBI Auto w/od
29117	454 TBI Auto w/od
29118	454 TBI Auto w/od

1992

Part No.	Application
29201	305 TBI Auto
29202	305 TBI Auto w/od
29203	305 TBI Manual 4 spd.
29204	305 TBI Manual 5 spd.
29205	350 TBI Auto TH700R4
29206	350 TBI Auto 400/w od
29207	350 TBI Manual 4 spd.
29208	350 TBI Manual 4 spd.
29209	454 TBI Auto
29210	454 TBI Auto w/od
29217	454 TBI Auto w/od
29218	454 TBI Auto w/od

PART NUMBERS TO ADD FOR EXEMPTION

CHEVROLET AND GMC TRUCKS

YEAR	PART #	MODEL	ENGINE	TRANS
1986				
	28601	ASTRO/SAFARI VAN	4.3L	AUTO
	28602	S10/S15 PU/BLZR	2.8L	AUTO
	28603	S10/S15 PU/BLZR	2.8L	MANUAL
1987				
	28707	S10/S15 PU/BLZR	2.8L	MANUAL
1989				
	28905	S10/S15 PU/BLZR	2.8L	MANUAL

PART #	YEAR	MODEL	ENGINE	TRANSMISSION
28708	1987	S10/S15	2.8L T.B.I.	AUTO
28709	1987	SAFARI/ASTRO VAN	4.3L T.B.I.	AUTO
28806	1988	S10/S15 PU/BLA/JIM	2.8L T.B.I.	AUTO
28807	1988	S10/S15 PU/BLA/JIM	2.8L T.B.I.	MANUAL
28809	1988	SAFARI/ASTRO VAN	4.3L T.B.I.	AUTO
28906	1989	S10/S15 PU/BLA/JIM	4.3L T.B.I.	AUTO
28908	1989	SAFARI/ASTRO VAN	4.3L T.B.I.	AUTO
28918	1989	PICK UP CK SERIES	4.3L T.B.I.	AUTO W/OD
28919	1989	PICK UP CK SERIES	4.3L T.B.I.	MAN/4SPD
28920	1989	PICK UP CK SERIES	4.3L T.B.I.	MAN/5SPD
29011	1990	S10/S15 PU/BLA/JIM	2.8L T.B.I.	MANUAL
29012	1990	S10/S15 PU/BLA/JIM	4.3L T.B.I.	AUTO
29013	1990	S10/S15 PU/BLA/JIM	4.3L T.B.I.	MANUAL
29017	1990	SAFARI/ASTRO VAN	4.3L T.B.I.	AUTO
29014	1990	PICK UP CK SERIES	4.3L T.B.I.	AUTO
29015	1990	PICK UP CK SERIES	4.3L T.B.I.	AUTO W/OD
29016	1990	PICK UP CK SERIES	4.3L T.B.I.	MANUAL
29111	1991	S10/S15 PU/BLA/JIM	2.8L T.B.I.	MANUAL
29112	1991	S10/S15 PU/BLA/JIM	4.3L T.B.I.	AUTO
29113	1991	S10/S15 PU/BLA/JIM	4.3L T.B.I.	MANUAL
29114	1991	SAFARI/ASTRO VAN	4.3L T.B.I.	AUTO
29115	1991	PICK UP CK SERIES	4.3L T.B.I.	AUTO W/OD
29116	1991	PICK UP CK SERIES	4.3L T.B.I.	MANUAL
29119	1991	CYCLONE	4.3L TURBO	AUTO
29211	1992	S10/S15 PU/BLA/JIM	2.8L T.B.I.	MANUAL
29212	1992	S10/S15 PU/BLA/JIM	4.3L T.B.I.	AUTO
29213	1992	S10/S15 PU/BLA/JIM	4.3L T.B.I.	MANUAL
29214	1992	SAFARI/ASTRO VAN	4.3L T.B.I.	AUTO
29215	1992	PICK UP CK SERIES	4.3L T.B.I.	AUTO W/OD
29216	1992	PICK UP CK SERIES	4.3L T.B.I.	MANUAL
29219	1992	CYCLONE	4.3L TURBO	AUTO

PART NUMBERS TO ADD FOR EXEMPTION

CHEVROLET AND PONTIAC PASSENGER CARS

YEAR	PART#	MODEL	ENGINE	TRANS
1981				
	18101	ALL	305 LC4	AUTO
	18102	ALL	305 4BL	AUTO
	18103	CORVETTE	350 4BL	AUTO
	18104	CORVETTE	350 4BL	MAN
1982				
	18201	ALL W/ECM# 1225500	305 LC4	AUTO
	18202	ALL W/ECM# 1225950	305 LC4	AUTO
	18203	CAMARO, FIREBIRD	2.8L	AUTO
	18204	CAMARO, FIREBIRD	2.8L	MAN
	18205	CAMARO, FIREBIRD	305 X FIRE	AUTO
	18206	CAMARO, FIREBIRD	305 LC4	MAN
	18207	CORVETTE	350 X FIRE	AUTO
1983				
	18301	ALL	305 LC4	AUTO
	18302	CAMARO, FIREBIRD	2.8L	AUTO
	18303	CAMARO, FIREBIRD	305 X FIRE	AUTO
	18304	CAMARO, FIREBIRD	305 HG	AUTO
	18305	CAMARO, FIREBIRD	305 HG	MAN
	18306	CAMARO, FIREBIRD	305 LC4	MAN
	18307	MONTE CARLO	305 HG	AUTO
1984				
	18401	CAMARO, FIREBIRD	2.8L	AUTO
	18402	CAMARO, FIREBIRD	2.8L	MAN
	18417	EL CAMINO	305	AUTO
1985				
	18501	CELEBRITY, 6000	2.8L MFI	AUTO
	18502	FIERO	2.8L MFI	AUTO
	18503	FIERO	2.8L MFI	MAN
1986				
	18601	CAVALIER, SUNBIRD	2.8L MFI	AUTO
	18602	CAVALIER Z24	2.8L MFI	AUTO
	18603	CAVALIER Z24	2.8L MFI	MAN4SPD
	18604	CAVALIER Z24	2.8L MFI	MAN5SPD
	18605	CELEBRITY, 6000	2.8L MFI	AUTO OD
	18606	CELEBRITY, 6000	2.8L MFI	AUTO3SP
	18607	FIERO	2.8L MFI	AUTO
	18608	FIERO	2.8L MFI	MAN4SPD
	18620	FIERO	2.8L MFI	MAN5SPD
1987				
	18711	BONNEVILLE	3.8L SI	AUTO
	18712	FIERO	2.8L MFI	AUTO

	18713	FIERO	2.8L MFI	MAN4SPD
	18714	FIERO	2.8L MFI	MAN5SPD
	18715	GRAND AM	3.0L MFI	AUTO
1988				
	18801	BERETTA	2.8L MFI	AUTO
	18802	CAVALIER Z24	2.8L MFI	AUTO
	18803	CAVALIER Z24	2.8L MFI	MAN5SPD
	18804	FIERO	2.8L MFI	AUTO OD
	18805	FIERO	2.8L MFI	MAN5SPD
1989				
	18909	BERETTA	2.8L MFI	AUTO
	18910	CAVALIER Z24	2.8L MFI	AUTO
	18911	CAVALIER Z24	2.8L MFI	MAN5SPD
1990				
	19001	BERETTA, CORSICA	3.1L MFI	AUTO
	19002	CAVALIER Z24	3.1L MFI	AUTO
	19003	CAVALIER Z24	3.1L MFI	MAN5SPD
	19004	LUMINA	3.1L MFI	AUTO
	19005	LUMINA	3.1L MFI	AUTO NO OD
	19006	BERETTA	2.3L QUAD 4	MAN5SPD
1991				
	19101	BERETTA, CORSICA	3.1L MFI	AUTO
	19102	BERETTA, CORSICA	3.1L MFI	MAN
	19103	CAVALIER Z24	3.1L MFI	AUTO
	19104	CAVALIER Z24	3.1L MFI	MAN
	19105	LUMINA	3.1L MFI	AUTO OD
	19106	LUMINA	3.1L MFI	AUTO
	19107	BERETTA	2.3 QUAD 4	MAN5SPD
1992				
	19201	BERETTA, CORSICA	3.1L MFI	AUTO
	19202	BERETTA, CORSICA	3.1L MFI	MAN
	19203	CAVALIER Z24	3.1L MFI	AUTO
	19204	CAVALIER Z24	3.1L MFI	MAN
	19205	LUMINA	3.1L MFI	AUTO
	19206	BERETTA	2.3L QUAD 4	MAN5SPD

From: Jones Electronic Technologies

Part numbers and applications requested for exemption:

*****2.8 liter and 3.1 liter Engines*****

1985 YEAR MODEL

#18518 CAMARO,FBIRD 2.8L AUTOMATIC
#18519 CAMARO,FBIRD 2.8L MANUAL

1986 YEAR MODEL

#18618 CAMARO,FBIRD 2.8L AUTOMATIC
#18619 CAMARO,FBIRD 2.8L MANUAL

1987 YEAR MODEL

#18708 CAMARO,FBIRD 2.8L AUTOMATIC
#18709 CAMARO,FBIRD 2.8L MANUAL

1988 YEAR MODEL

#18820 CAMARO,FBIRD 2.8L AUTOMATIC
#18821 CAMARO,FBIRD 2.8L MANUAL

1989 YEAR MODEL

#18908 CAMARO,FBIRD 2.8L AUTOMATIC

1990 YEAR MODEL

#19017 CAMARO,FBIRD 3.1L AUTOMATIC

1991 YEAR MODEL

#19117 CAMARO,FBIRD 3.1L AUTOMATIC

1992 YEAR MODEL

#19217 CAMARO,FBIRD 3.1L AUTOMATIC

From: Jones Electronic Technologies

Part numbers and applications requested for exemption:

****305 AND 350 CUBIC INCH ENGINES****

1984 YEAR MODEL

#18415 CORVETTE 350 CI AUTOMATIC
#18416 CORVETTE 350 CI MANUAL
#38414C CORVETTE 350 CI AUTOMATIC (CA. ONLY)
#38415C CORVETTE 350 CI MANUAL (CA. ONLY)

1985 YEAR MODEL

#18515 CAMARO, FBIRD 305 CI AUTOMATIC
#18516 CAMARO, FBIRD 305 CI MANUAL
#18517 CORVETTE 350 CI MANUAL

1986 YEAR MODEL

#18613 CORVETTE 350 CI AUTOMATIC (ALUM.HD.)
#18614 CORVETTE 350 CI AUTOMATIC
#18615 CORVETTE 350 CI MANUAL (ALUM.HD.)
#18616 CORVETTE 350 CI MANUAL
#18617 CAMARO, FBIRD 305 CI AUTOMATIC

1987 YEAR MODEL

#18703 CAMARO, FBIRD 305 CI AUTOMATIC
#18704 CAMARO, FBIRD 305 CI MANUAL
#18705 IROC. GTA 305 CI AUTOMATIC
#18706 CORVETTE 350 CI AUTOMATIC
#18707 CORVETTE 350 CI MANUAL

1988 YEAR MODEL

#18812 CAMARO, FBIRD 305 CI AUTOMATIC
#18813 CAMARO, FBIRD 305 CI MANUAL
#18814 CAMARO, FBIRD 305 CI AUTOMATIC (TH. BODY INJ.)
#18815 CAMARO, FBIRD 305 CI MANUAL (TH. BODY INJ.)
#18816 IROC, GTA 350 CI AUTOMATIC
#18817 CORVETTE 350 CI AUTOMATIC
#18819 CORVETTE 350 CI MANUAL

1989 MODEL YEAR

#18901 CAMARO,FBIRD 305 CI AUTOMATIC (TH.BODY INJ.)
#18902 CAMARO,FBIRD 305 CI MANUAL (TH.BODY INJ.)
#18903 CAMARO,FBIRD 305 CI AUTOMATIC
#18904 CAMARO,FBIRD 305 CI MANUAL
#18905 CAMARO,FBIRD 350 CI AUTOMATIC
#18906 CORVETTE 350 CI AUTOMATIC
#18907 CORVETTE 350 CI MANUAL

1990 MODEL YEAR

#19010 CAMARO,FBIRD 305 CI AUTOMATIC (TH.BODY INJ.)
#19011 CAMARO,FBIRD 305 CI MANUAL (TH.BODY INJ.)
#19012 CAMARO,FBIRD 305 CI AUTOMATIC
#19013 CAMARO,FBIRD 305 CI MANUAL
#19014 CAMARO,FBIRD 350 CI AUTOMATIC
#19015 CORVETTE 350 CI AUTOMATIC
#19016 CORVETTE 350 CI MANUAL

1991 MODEL YEAR

#19110 CAMARO,FBIRD 305 CI AUTOMATIC (TH.BODY INJ.)
#19111 CAMARO,FBIRD 305 CI MANUAL (TH.BODY INJ.)
#19112 CAMARO,FBIRD 305 CI AUTOMATIC
#19113 CAMARO,FBIRD 305 CI MANUAL
#19114 CAMARO,FBIRD 350 CI AUTOMATIC
#19115 CORVETTE 350 CI AUTOMATIC
#19116 CORVETTE 350 CI MANUAL

1992 MODEL YEAR

#19210 CAMARO,FBIRD 305 CI AUTOMATIC (TH.BODY INJ.)
#19211 CAMARO,FBIRD 305 CI MANUAL (TH.BODY INJ.)
#19212 CAMARO,FBIRD 305 CI AUTOMATIC
#19213 CAMARO,FBIRD 305 CI MANUAL
#19214 CAMARO,FBIRD 350 CI AUTOMATIC
#19215 CORVETTE 350 CI AUTOMATIC
#19216 CORVETTE 350 CI MANUAL

PART NUMBERS TO ADD FOR EXEMPTION

BUICK AND OLDSMOBILE

YEAR	PART #	MODEL	ENGINE	TRANS
1983	58301	REGAL, CUTLASS	3.8L	AUTO
	58302	REGAL, CUTLASS	307 4BRL	AUTO
1984	58401	GRAND NATIONAL	3.8L TURBO	AUTO
	58402	REGAL, CUTLASS	3.8L	AUTO
	58403	REGAL, CUTLASS	307 4BRL	AUTO
	58404	HURST OLDS	307 HO	AUTO
1985	58501	GRAND NATIONAL	3.8L TURBO	AUTO
	58502	HURST OLDS/442	307 HO	AUTO
1986	58601	CENT., DELTA88, CIERA	3.8L SFI	AUTO
	58602	RIVIERA, TORANADO	3.8L SFI	AUTO
	58603	REGAL, CUTLASS	307 4BRL	AUTO
	58604	SOMERSET, CALAIS	3.0L SFI	AUTO
	58605	T-TYPE, GRAND NAT.	3.8L TURBO	AUTO
	58606	HURST OLDS/442	307 HO	AUTO
1987	58701	CENT, LESABRE, CIERA	3.8L SFI	AUTO
	58702	GNX	3.8L TURBO	AUTO
	58703	REGAL, CUTLASS, LSAB.	307 4BRL	AUTO
	58704	CALAIS	3.0L SFI	AUTO
	58705	T-TYPE/GRAND NATION.	3.8L TURBO	AUTO
	58706	HURST OLDS/442	307 4BRL	AUTO
1988	58801	CUTLASS/GRAN PRIX	2.8L MPI	AUTO OD
	58802	CUTLASS/GRAN PRIX	2.8L MPI	AUTO
	58803	CUTLASS	307 4BRL	AUTO
1989	58901	CUTLASS/GRAN PRIX	2.8L MPI	AUTO OD
	58902	CUTLASS/GRAN PRIX	2.8L MPI	AUTO
	58903	GRAN PRIX	3.1L MPI	AUTO

BUICK AND OLDSMOBILE CONTINUED

YEAR	PART #	MODEL	ENGINE	TRANS
1990				
	59001	CUTLASS CIERA	2.8L MPI	AUTO
	59002	GRAN PRIX	3.1L MPI	AUTO
	59003	TORANADO/TREFEO	3.8L MPI	AUTO
1991				
	59101	GRAN PRIX	3.1L MPI	AUTO
	59102	ALL	305 TBI	AUTO

State of California
AIR RESOURCES BOARD

EVALUATION OF JONES ELECTRONIC TECHNOLOGIES' J.E.T. PERFORMANCE CHIP
FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE
SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF
THE CALIFORNIA CODE OF REGULATIONS

March 1992

State of California
AIR RESOURCES BOARD

EVALUATION OF JONES ELECTRONIC TECHNOLOGIES' J.E.T. PERFORMANCE CHIP
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THE CALIFORNIA CODE OF REGULATIONS

by

Mobile Source Division
State of California
Air Resources Board
9528 Telstar Avenue
El Monte, CA 91731-2990

(This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does the mention of trade names or commercial products constitute endorsement or recommendation for use.)

SUMMARY

Jones Electronic Technologies (JET) of 7602 Talbert Avenue, Huntington Beach, CA 92648, has requested to update Executive Order D-234, which exempts JET's J.E.T. Performance Chip from the prohibitions of Vehicle Code Section 27156 of the California Vehicle Code. The existing Executive Order D-234 exempts JET's J.E.T. Performance Chip for installation on 1991 and older model-year General Motors (GM) trucks with 5.0 to 7.4 liter engines. The update is requested to include 1992 model year GM trucks with 5.0 to 7.4 liter engines. JET has also requested that 1981-92 GM 2.8 to 5.7 liter passenger cars and 1986-92 GM 2.8 to 4.3 liter trucks be included in the exemption.

Based on emission test results performed on a 1989 4.3 liter Chevrolet Blazer and a previously tested 1991 5.7 liter Chevrolet full size truck, and that the 1992 vehicles for which the exemption update is requested are carry-overs from the model-years for which an exemption has been granted, the staff concludes that JET's J.E.T. Performance Chip will not adversely affect exhaust emissions on the specified vehicles when tested in accordance with Cold Start CVS-75 Federal Test Procedure.

The staff recommends that JET be granted Executive Order D-234-1 allowing the installation of their J.E.T. Performance Chip on applicable 1986-92 GM trucks with 5.0 to 7.4 liter engines, 1981-92 GM passenger cars with 2.8 to 5.7 liter engines and 1986-92 GM trucks with 2.8 to 4.3 liter engines as listed in Appendix A.

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EVALUATION OF JONES ELECTRONIC TECHNOLOGIES' J.E.T. PERFORMANCE CHIP
FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE
SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF
THE CALIFORNIA CODE OF REGULATIONS

I. INTRODUCTION

Jones Electronic Technologies (JET) of 7602 Talbert Avenue, Huntington Beach, CA 92648, has requested to update Executive Order D-234, which exempts JET's J.E.T. Performance Chip from the prohibitions of Vehicle Code Section 27156 of the California Vehicle Code. The existing Executive Order D-234 exempts JET's J.E.T. Performance Chip for installation on 1991 and older model-year General Motors (GM) trucks with 5.0 to 7.4 liter engines. The update is requested to include 1992 model year GM trucks with 5.0 to 7.4 liter engines. JET also requested that 1981-92 GM 2.8 to 5.7 liter passenger cars and 1986-92 GM 2.8 to 4.3 liter trucks be included in the exemption.

JET claims no changes to the installation instructions or tune-up specifications are necessary for use of the J.E.T. Performance Chip on the 1992 updates.

II. CONCLUSION

Based on emission test results performed on a 1989 4.3 liter Chevrolet Blazer and a previously tested 1991 5.7 liter Chevrolet full size truck, and that the 1992 vehicles for which the exemption update is requested are carry-overs from the model-years for which an exemption has been granted, the staff concludes that JET's J.E.T. Performance Chip will not adversely affect exhaust emissions on the specified vehicles when tested in accordance with Cold Start CVS-75 Federal Test Procedure (FTP).

III. RECOMMENDATION

The staff recommends that JET be granted Executive Order D-234-1 allowing the installation of their J.E.T. Performance Chip on applicable 1986-92 GM trucks with 5.0 to 7.4 liter engines, 1981-92 GM passenger cars with 2.8 to 5.7 liter engines and 1986-92 GM trucks with 2.8 to 4.3 liter engines as listed in Appendix A.

IV. DESCRIPTION OF J.E.T. PERFORMANCE CHIP

Many computer controlled vehicles are equipped with an electronic control unit (ECU) which is programmed using a programmable read only memory computer Chips (PROM). Signals detected by the vehicle's sensors are fed directly into the ECU where they are analyzed and compared to the operational data programmed inside the PROM. The PROM sends out appropriate adjustments in the engine's operation in response to changing conditions. For example, a PROM will adjust timing and fuel delivery when a vehicle is subjected to additional load. Thus, by modifying data in the PROM, spark timing and fuel delivery can be adjusted.

JET's J.E.T. Performance Chip modify the ignition timing and fuel curves of the original equipment manufacturer's (OEM) PROM under full throttle operation. Therefore, the performance Chips monitors and modifies the vehicle's operation under open-loop modes. JET claims these modifications translate to an increase in torque and horsepower. No modifications have been conducted on the J.E.T. Performance Chip that would affect throttle response and driveability under normal day-to-day driving. The manufacturer claims that modifications under full-throttle operation offer enhanced performance and acceleration. JET does not recommend the use of any particular fuel to obtain optimum performance or avoid knocking which

may be caused by advanced or retarded timing. Installation instructions, included with the Chips, is shown in Appendix B.

V. DISCUSSION OF THE J.E.T. PERFORMANCE CHIP

JET has requested an update to Executive Order D-234 to allow the use of their J.E.T. Performance Chip on the applicable 1992 model-year vehicles. The J.E.T. Performance Chip for 1992 model year vehicles modifies the engine parameters in a similar manner to those previously approved for the 1991 and older model-year vehicles. The staff compared the engine design of the 1991 and 1992 model-year vehicles. Since the majority of the 1992 model-year General Motors engine families certified for California sales were carried-over from the 1991 model-year, no additional exhaust emission tests were required or performed.

To evaluate the emissions impact of the J.E.T. Performance Chip on 1981-92 GM passenger cars with 2.8 to 5.7 liter engines and 1986-92 GM trucks with 2.8 to 4.3 liter engines, the staff required JET to perform CVS-75 emission testing on the J.E.T. Performance Chip using a 1989 Chevrolet 4.3 liter Blazer. The test program consisted of one CVS-75 FTP on the test vehicle in the modified configuration evaluated against the standards for that vehicle. The results of the exhaust emissions test performed at Automotive Testing & Development Services are shown in Table 1.

Table 1

Exhaust Emissions Test Results from
Automotive Testing & Development Services
On The Chevrolet Blazer
Exhaust Emissions (gm/mi)

<u>Test Mode</u>	<u>HC</u>	<u>CO</u>	<u>NOx</u>
Device	0.277	5.926	0.581
Standards	0.500	9.000	1.000
Deterioration Factors	1.035	1.026	1.000
Difference	-0.223	-3.074	-0.419

Staff also reviewed emission data on a previously tested 1991 5.7 liter V-8 C1500 truck. Based on the emission data from the 1989 4.3 liter V-6 Blazer and the 1991 5.7 liter V-8 C1500 truck, the staff concludes no emissions impact would be observed on the affected vehicles when tested in accordance with Cold Start CVS-75 Federal Test Procedure (FTP).

The staff recommends that JET be granted Executive Order D-234-1 allowing the installation of the J.E.T. Performance Chip on 1986-92 GM trucks with 5.0 to 7.4 liter engines, 1981-92 GM passenger cars with 2.8 to 5.7 liter engines and 1986-92 GM trucks with 2.8 to 4.3 liter engines.

JET submitted all the required information and fulfilled the requirements for an exemption.

APPENDIX A

GM TRUCK APPLICATIONS

1987

Part No.	Application
28701	305 TBI Auto 3 spd.
28702	305 TBI Auto w/od
28703	350 TBI Auto 3 spd.
28704	350 TBI Auto w/od
28705	350 TBI Manual
28706	454 TBI Auto 3 spd.
28707	454 TBI Manual

1988

Part No.	Application
28810	305 TBI Auto 3 spd.
28811	305 TBI Auto w/od
28812	305 TBI Manual
28813	350 TBI Auto 3 spd.
28814	350 TBI Auto w/od
28815	350 TBI Manual
28816	454 TBI Auto 3 spd.
28817	454 TBI Manual

1989

Part No.	Application
28909	305 TBI Auto 3 spd.
28910	305 TBI Auto w/od
28911	305 TBI Manual
28912	350 TBI Auto 3 spd.
28913	350 TBI Auto w/od
28914	350 TBI Manual 4 spd.
28915	350 TBI Manual 5 spd
28916	454 TBI Auto 3 spd.
28917	454 TBI Manual

1990

Part No.	Application
29001	305 TBI Auto 3 spd.
29002	305 TBI Auto w/od
29003	305 TBI Manual 4 spd.
29004	305 TBI Manual 5 spd.
29005	350 TBI Auto 3 spd.
29006	350 TBI Auto w. od
29007	350 TBI Manual 4 spd.
29008	350 TBI Manual 5 spd.
29009	454 TBI Auto 3 spd.
29010	454 TBI Manual
39011C	305 TBI Auto w/od
39012C	454 TBI Auto
39013C	454 TBI Auto

1991

Part No.	Application
29101	305 TBI Auto 3 spd.
29103	305 TBI Manual 4 spd.
29104	305 TBI Manual 5 spd.
29105	350 TBI Auto 3 spd.
29106	350 TBI Auto w/od
29107	350 TBI Manual 4 spd.
29108	350 TBI Manual 5 spd.
29109	454 TBI Auto 3 spd.
29110	454 TBI Auto w/od
29117	454 TBI Auto w/od
29118	454 TBI Auto w/od

1992

Part No.	Application
29201	305 TBI Auto
29202	305 TBI Auto w/od
29203	305 TBI Manual 4 spd.
29204	305 TBI Manual 5 spd.
29205	350 TBI Auto TH700R4
29206	350 TBI Auto 400/w od
29207	350 TBI Manual 4 spd.
29208	350 TBI Manual 4 spd.
29209	454 TBI Auto
29210	454 TBI Auto w/od
29217	454 TBI Auto w/od
29218	454 TBI Auto w/od

PART NUMBERS TO ADD FOR EXEMPTION

CHEVROLET AND GMC TRUCKS

YEAR	PART #	MODEL	ENGINE	TRANS
1986				
	28601	ASTRO/SAFARI VAN	4.3L	AUTO
	28602	S10/S15 PU/BLZR	2.8L	AUTO
	28603	S10/S15 PU/BLZR	2.8L	MANUAL
1987				
	28707	S10/S15 PU/BLZR	2.8L	MANUAL
1989				
	28905	S10/S15 PU/BLZR	2.8L	MANUAL

PART #	YEAR	MODEL	ENGINE	TRANSMISSION
28708	1987	S10/S15	2.8L T.B.I.	AUTO
28709	1987	SAFARI/ASTRO VAN	4.3L T.B.I.	AUTO
28806	1988	S10/S15 PU/BLA/JIM	2.8L T.B.I.	AUTO
28807	1988	S10/S15 PU/BLA/JIM	2.8L T.B.I.	MANUAL
28809	1988	SAFARI/ASTRO VAN	4.3L T.B.I.	AUTO
28906	1989	S10/S15 PU/BLA/JIM	4.3L T.B.I.	AUTO
28908	1989	SAFARI/ASTRO VAN	4.3L T.B.I.	AUTO
28918	1989	PICK UP CK SERIES	4.3L T.B.I.	AUTO W/OD
28919	1989	PICK UP CK SERIES	4.3L T.B.I.	MAN/4SPD
28920	1989	PICK UP CK SERIES	4.3L T.B.I.	MAN/5SPD
29011	1990	S10/S15 PU/BLA/JIM	2.8L T.B.I.	MANUAL
29012	1990	S10/S15 PU/BLA/JIM	4.3L T.B.I.	AUTO
29013	1990	S10/S15 PU/BLA/JIM	4.3L T.B.I.	MANUAL
29017	1990	SAFARI/ASTRO VAN	4.3L T.B.I.	AUTO
29014	1990	PICK UP CK SERIES	4.3L T.B.I.	AUTO
29015	1990	PICK UP CK SERIES	4.3L T.B.I.	AUTO W/OD
29016	1990	PICK UP CK SERIES	4.3L T.B.I.	MANUAL
29111	1991	S10/S15 PU/BLA/JIM	2.8L T.B.I.	MANUAL
29112	1991	S10/S15 PU/BLA/JIM	4.3L T.B.I.	AUTO
29113	1991	S10/S15 PU/BLA/JIM	4.3L T.B.I.	MANUAL
29114	1991	SAFARI/ASTRO VAN	4.3L T.B.I.	AUTO
29115	1991	PICK UP CK SERIES	4.3L T.B.I.	AUTO W/OD
29116	1991	PICK UP CK SERIES	4.3L T.B.I.	MANUAL
29119	1991	CYCLONE	4.3L TURBO	AUTO
29211	1992	S10/S15 PU/BLA/JIM	2.8L T.B.I.	MANUAL
29212	1992	S10/S15 PU/BLA/JIM	4.3L T.B.I.	AUTO
29213	1992	S10/S15 PU/BLA JIM	4.3L T.B.I.	MANUAL
29214	1992	SAFARI/ASTRO VAN	4.3L T.B.I.	AUTO
29215	1992	PICK UP CK SERIES	4.3L T.B.I.	AUTO W/OD
29216	1992	PICK UP CK SERIES	4.3L T.B.I.	MANUAL
29219	1992	CYCLONE	4.3L TURBO	AUTO

PART NUMBERS TO ADD FOR EXEMPTION

CHEVROLET AND PONTIAC PASSENGER CARS

YEAR	PART#	MODEL	ENGINE	TRANS
1981				
	18101	ALL	305 LG4	AUTO
	18102	ALL	305 4BRL	AUTO
	18103	CORVETTE	350 4BRL	AUTO
	18104	CORVETTE	350 4BRL	MAN
1982				
	18201	ALL W/ECM# 1225500	305 LG4	AUTO
	18202	ALL W/ECM# 1225950	305 LG4	AUTO
	18203	CAMARO, FIREBIRD	2.8L	AUTO
	18204	CAMARO, FIREBIRD	2.8L	MAN
	18205	CAMARO, FIREBIRD	305 X FIRE	AUTO
	18206	CAMARO, FIREBIRD	305 LG4	MAN
	18207	CORVETTE	350 X FIRE	AUTO
1983				
	18301	ALL	305 LG4	AUTO
	18302	CAMARO, FIREBIRD	2.8L	AUTO
	18303	CAMARO, FIREBIRD	305 X FIRE	AUTO
	18304	CAMARO, FIREBIRD	305 HO	AUTO
	18305	CAMARO, FIREBIRD	305 HO	MAN
	18306	CAMARO, FIREBIRD	305 LG4	MAN
	18307	MONTE CARLO	305 HO	AUTO
1984				
	18401	CAMARO, FIREBIRD	2.8L	AUTO
	18402	CAMARO, FIREBIRD	2.8L	MAN
	18417	EL CAMINO	305	AUTO
1985				
	18501	CELEBRITY, 6000	2.8L MFI	AUTO
	18502	FIERO	2.8L MFI	AUTO
	18503	FIERO	2.8L MFI	MAN
1986				
	18601	CAVALIER, SUNBIRD	2.8L MFI	AUTO
	18602	CAVALIER Z24	2.8L MFI	AUTO
	18603	CAVALIER Z24	2.8L MFI	MAN4SPD
	18604	CAVALIER Z24	2.8L MFI	MAN5SPD
	18605	CELEBRITY, 6000	2.8L MFI	AUTO OD
	18606	CELEBRITY, 6000	2.8L MFI	AUTO3SP
	18607	FIERO	2.8L MFI	AUTO
	18608	FIERO	2.8L MFI	MAN4SPD
	18620	FIERO	2.8L MFI	MAN5SPD
1987				
	18711	BONNEVILLE	3.8L SFI	AUTO
	18712	FIERO	2.8L MFI	AUTO

	18713	FIERO	2.8L MFI	MAN4SPD
	18714	FIERO	2.8L MFI	MAN5SPD
	18715	GRAND AM	3.0L MFI	AUTO
1988	18801	BERETTA	2.8L MFI	AUTO
	18802	CAVALIER Z24	2.8L MFI	AUTO
	18803	CAVALIER Z24	2.8L MFI	MAN5SPD
	18804	FIERO	2.8L MFI	AUTO OD
	18805	FIERO	2.8L MFI	MAN5SPD
1989	18909	BERETTA	2.8L MFI	AUTO
	18910	CAVALIER Z24	2.8L MFI	AUTO
	18911	CAVALIER Z24	2.8L MFI	MAN5SPD
1990	19001	BERETTA, CORSICA	3.1L MFI	AUTO
	19002	CAVALIER Z24	3.1L MFI	AUTO
	19003	CAVALIER Z24	3.1L MFI	MAN5SPD
	19004	LUMINA	3.1L MFI	AUTO
	19005	LUMINA	3.1L MFI	AUTO NO OD
	19006	BERETTA	2.3L QUAD 4	MAN5SPD
1991	19101	BERETTA, CORSICA	3.1L MFI	AUTO
	19102	BERETTA, CORSICA	3.1L MFI	MAN
	19103	CAVALIER Z24	3.1L MFI	AUTO
	19104	CAVALIER Z24	3.1L MFI	MAN
	19105	LUMINA	3.1L MFI	AUTO OD
	19106	LUMINA	3.1L MFI	AUTO
	19107	BERETTA	2.3 QUAD 4	MAN5SPD
1992	19201	BERETTA, CORSICA	3.1L MFI	AUTO
	19202	BERETTA, CORSICA	3.1L MFI	MAN
	19203	CAVALIER Z24	3.1L MFI	AUTO
	19204	CAVALIER Z24	3.1L MFI	MAN
	19205	LUMINA	3.1L MFI	AUTO
	19206	BERETTA	2.3L QUAD 4	MAN5SPD

From: Jones Electronic Technologies

Part numbers and applications requested for exemption:

*****2.8 liter and 3.1 liter Engines*****

1985 YEAR MODEL

#18518 CAMARO,FBIRD 2.8L AUTOMATIC
#18519 CAMARO,FBIRD 2.8L MANUAL

1986 YEAR MODEL

#18618 CAMARO,FBIRD 2.8L AUTOMATIC
#18619 CAMARO,FBIRD 2.8L MANUAL

1987 YEAR MODEL

#18708 CAMARO,FBIRD 2.8L AUTOMATIC
#18709 CAMARO,FBIRD 2.8L MANUAL

1988 YEAR MODEL

#18820 CAMARO,FBIRD 2.8L AUTOMATIC
#18821 CAMARO,FBIRD 2.8L MANUAL

1989 YEAR MODEL

#18908 CAMARO,FBIRD 2.8L AUTOMATIC

1990 YEAR MODEL

#19017 CAMARO,FBIRD 3.1L AUTOMATIC

1991 YEAR MODEL

#19117 CAMARO,FBIRD 3.1L AUTOMATIC

1992 YEAR MODEL

#19217 CAMARO,FBIRD 3.1L AUTOMATIC

From: Jones Electronic Technologies

Part numbers and applications requested for exemption:

****305 AND 350 CUBIC INCH ENGINES****

1984 YEAR MODEL

#18415 CORVETTE 350 CI AUTOMATIC
#18416 CORVETTE 350 CI MANUAL
#38414C CORVETTE 350 CI AUTOMATIC (CA. ONLY)
#38415C CORVETTE 350 CI MANUAL (CA. ONLY)

1985 YEAR MODEL

#18515 CAMARO,FBIRD 305 CI AUTOMATIC
#18516 CAMARO,FBIRD 305 CI MANAUL
#18517 CORVETTE 350 CI MANUAL

1986 YEAR MODEL

#18613 CORVETTE 350 CI AUTOMATIC (ALUM.HD.)
#18614 CORVETTE 350 CI AUTOMATIC
#18615 CORVETTE 350 CI MANUAL (ALUM.HD.)
#18616 CORVETTE 350 CI MANUAL
#18617 CAMARO,FBIRD 305 CI AUTOMATIC

1987 YEAR MODEL

#18703 CAMARO,FBIRD 305 CI AUTOMATIC
#18704 CAMARO,FBIRD 305 CI MANUAL
#18705 IROC. GTA 305 CI AUTOMATIC
#18706 CORVETTE 350 CI AUTOMATIC
#18707 CORVETTE 350 CI MANUAL

1988 YEAR MODEL

#18812 CAMARO,FBIRD 305 CI AUTOMATIC
#18813 CAMARO,FBIRD 305 CI MANUAL
#18814 CAMARO,FBIRD 305 CI AUTOMATIC (TH. BODY INJ.)
#18815 CAMARO,FBIRD 305 CI MANUAL (TH. BODY INJ.)
#18816 IROC, GTA 350 CI AUTOMATIC
#18817 CORVETTE 350 CI AUTOMATIC
#18819 CORVETTE 350 CI MANAUL

1989 MODEL YEAR

#18901	CAMARO,FBIRD	305	CI	AUTOMATIC	(TH.BODY INJ.)
#18902	CAMARO,FBIRD	305	CI	MANUAL	(TH.BODY INJ.)
#18903	CAMARO,FBIRD	305	CI	AUTOMATIC	
#18904	CAMARO,FBIRD	305	CI	MANUAL	
#18905	CAMARO,FBIRD	350	CI	AUTOMATIC	
#18906	CORVETTE	350	CI	AUTOMATIC	
#18907	CORVETTE	350	CI	MANUAL	

1990 MODEL YEAR

#19010	CAMARO,FBIRD	305	CI	AUTOMATIC	(TH.BODY INJ.)
#19011	CAMARO,FBIRD	305	CI	MANUAL	(TH.BODY INJ.)
#19012	CAMARO,FBIRD	305	CI	AUTOMATIC	
#19013	CAMARO,FBIRD	305	CI	MANUAL	
#19014	CAMARO,FBIRD	350	CI	AUTOMATIC	
#19015	CORVETTE	350	CI	AUTOMATIC	
#19016	CORVETTE	350	CI	MANUAL	

1991 MODEL YEAR

#19110	CAMARO,FBIRD	305	CI	AUTOMATIC	(TH.BODY INJ.)
#19111	CAMARO,FBIRD	305	CI	MANUAL	(TH.BODY INJ.)
#19112	CAMARO,FBIRD	305	CI	AUTOMATIC	
#19113	CAMARO,FBIRD	305	CI	MANUAL	
#19114	CAMARO,FBIRD	350	CI	AUTOMATIC	
#19115	CORVETTE	350	CI	AUTOMATIC	
#19116	CORVETTE	350	CI	MANUAL	

1992 MODEL YEAR

#19210	CAMARO,FBIRD	305	CI	AUTOMATIC	(TH.BODY INJ.)
#19211	CAMARO,FBIRD	305	CI	MANUAL	(TH.BODY INJ.)
#19212	CAMARO,FBIRD	305	CI	AUTOMATIC	
#19213	CAMARO,FBIRD	305	CI	MANUAL	
#19214	CAMARO,FBIRD	350	CI	AUTOMATIC	
#19215	CORVETTE	350	CI	AUTOMATIC	
#19216	CORVETTE	350	CI	MANUAL	

PART NUMBERS TO ADD FOR EXEMPTION

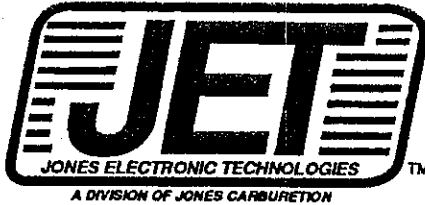
BUICK AND OLDSMOBILE

YEAR	PART #	MODEL	ENGINE	TRANS
1983	58301	REGAL, CUTLASS	3.8L	AUTO
	58302	REGAL, CUTLASS	307 4BRL	AUTO
1984	58401	GRAND NATIONAL	3.8L TURBO	AUTO
	58402	REGAL, CUTLASS	3.8L	AUTO
	58403	REGAL, CUTLASS	307 4BRL	AUTO
	58404	HURST OLDS	307 HO	AUTO
1985	58501	GRAND NATIONAL	3.8L TURBO	AUTO
	58502	HURST OLDS/442	307 HO	AUTO
1986	58601	CENT., DELTA88, CIERA	3.8L SFI	AUTO
	58602	RIVIERA, TORANADO	3.8L SFI	AUTO
	58603	REGAL, CUTLASS	307 4BRL	AUTO
	58604	SOMERSET, CALAIS	3.0L SFI	AUTO
	58605	T-TYPE, GRAND NAT.	3.8L TURBO	AUTO
	58606	HURST OLDS/442	307 HO	AUTO
1987	58701	CENT, LESABRE, CIERA	3.8L SFI	AUTO
	58702	GNX	3.8L TURBO	AUTO
	58703	REGAL, CUTLASS, LSAB.	307 4BRL	AUTO
	58704	CALAIS	3.0L SFI	AUTO
	58705	T-TYPE/GRAND NATION.	3.8L TURBO	AUTO
	58706	HURST OLDS/442	307 4BRL	AUTO
1988	58801	CUTLASS/GRAN PRIX	2.8L MPI	AUTO OD
	58802	CUTLASS/GRAN PRIX	2.8L MPI	AUTO
	58803	CUTLASS	307 4BRL	AUTO
1989	58901	CUTLASS/GRAN PRIX	2.8L MPI	AUTO OD
	58902	CUTLASS/GRAN PRIX	2.8L MPI	AUTO
	58903	GRAN PRIX	3.1L MPI	AUTO

BUICK AND OLDSMOBILE CONTINUED

YEAR	PART #	MODEL	ENGINE	TRANS
1990				
	59001	CUTLASS CIERA	2.8L MPI	AUTO
	59002	GRAN PRIX	3.1L MPI	AUTO
	59003	TORANADO/TREFEO	3.8L MPI	AUTO
1991				
	59101	GRAN PRIX	3.1L MPI	AUTO
	59102	ALL	305 TBI	AUTO

APPENDIX B



INSTRUCTION SHEET COMPUTER CHIP REPLACEMENT

EPROM REPLACEMENT PROCEDURES

1. Locate ECM and Disconnect Leads
2. Remove Access Cover, Remove The Factory Eprom
(Noting The Notch Direction In The Carrier)
3. Plug In Replacement EPROM.
Reverse Removal Procedures And You Are Finished!!!

ECM LOCATIONS

Camaro - Under dash passenger side or in center console

Corvette - Under dash passenger side

Trucks - Behind glove compartment

