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#### State of California AIR RESOURCES BOARD

### EXECUTIVE ORDER D-186-8 Relating to Exemptions Under Section 27156 of the Vehicle Code

#### HKS U. S. A., INC. HKS ELECTRONIC VALVE CONTROLLER -- EVC AND EVC II

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 HKS Electronic Valve Controller (EVC & EVC II), manufactured by HKS USA, Inc. of 20312 Gramercy Place, Torrance, California 90501, 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 1993 and older model-year OEM turbocharger equipped passenger cars.

This Executive Order is valid provided that installation instructions for this kit will not recommend tuning the vehicle to specifications different from those submitted by HKS USA, Inc.

Changes made to the design or operating conditions of the Electronic Valve Controller (EVC & EVC II), as exempt by the ARB, which adversely affect the performance of a vehicle's pollution control system shall invalidate this Executive Order.

Marketing of this Electronic Valve Controller (EVC & EVC II) using any identification other than that shown in this Executive Order or marketing of this Electronic Valve Controller (EVC & EVC II) 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 Electronic Valve Controller (EVC & EVC II) 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 this Electronic Valve Controller (EVC & EVC II) 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 Electronic Valve Controller (EVC & EVC II) 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 Electronic HKS USA, INC. ELECTRONIC VALVE CONTROLLER (EVC & EVC II) EXECUTIVE ORDER D-186-8 (Page 2 of 3)

Valve Controller (EVC & EVC II) adversely affect 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 Electronic Valve Controller (EVC & EVC II) will affect the durability of the emission control system, HKS USA, 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 CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF THE HKS USA, INC.'S ELECTRONIC VALVE CONTROLLER (EVC & EVC II).

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."

HKS USA, INC. ELECTRONIC VALVE CONTROLLER (EVC & EVC II). EXECUTIVE ORDER D-186-8 (Page 3 of 3)

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.

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

87L Executed at El Monte, California, this day of March, 1993

R. B. Summerfield

Assistant Division Chief Mobile Source Division

## State of California AIR RESOURCES BOARD

EVALUATION OF HKS USA, INC.'S HKS ELECTRONIC VALVE CONTROLLER (EVC & EVC II) FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF THE CALIFORNIA CODE OF REGULATIONS

March 1993

#### State of California AIR RESOURCES BOARD

EVALUATION OF HKS USA, INC.'S HKS ELECTRONIC VALVE CONTROLLER (EVC & EVC II) FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF 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 mention of trade names or commercial products constitute endorsement or recommendation for use.)

#### SUMMARY

HKS USA, Inc., of 20312 Gramercy Place, Torrance, California 90501 has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code (VC) for the HKS Electronic Valve Controller (EVC & EVC II). The HKS Electronic Valve Controller (EVC & EVC II) is designed for installation on 1993 and older model-year OEM turbocharger equipped passenger cars.

Based on the results from comparative exhaust emission tests performed at an independent laboratory on a 1985 Ford Mustang SVO equipped with an 2.3 liter turbocharged engine, the staff concludes that HKS USA, Inc.'s HKS Electronic Valve Controller (EVC & EVC II) will not adversely affect exhaust emission from vehicles for which an exemption is requested.

The staff recommends that HKS USA, Inc. be granted an exemption as requested and that Executive Order D-186-8 be issued.

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EVALUATION OF HKS USA, INC.'S HKS ELECTRONIC VALVE CONTROLLER (EVC & EVC II) FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF THE CALIFORNIA CODE OF REGULATIONS

#### I. <u>INTRODUCTION</u>

HKS USA, Inc. of 20312 Gramercy Place, Torrance, California 90501 has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code for the HKS Electronic Valve Controller (EVC & EVC II). The HKS Electronic Valve Controller (EVC & EVC II) is designed for installation on 1993 and older model-year OEM turbocharger equipped passenger cars.

HKS USA, Inc. has submitted data from comparative emission tests conducted on a 1985 Ford Mustang SVO equipped with an 2.3 liter turbocharged engine at Automobile Club of Southern California, Los Angeles, California.

#### II. <u>CONCLUSIONS</u>

Based on the results from comparative exhaust emission tests performed at Automobile Club of Southern California on a 1985 Ford Mustang SVO equipped with an 2.3 liter turbocharged engine, the staff concludes that HKS USA, Inc.'s HKS Electronic Valve Controller (EVC & EVC II) will not adversely affect exhaust emissions from vehicles for which an exemption is requested.

#### III. <u>RECOMMENDATION</u>

The staff recommends that HKS USA, Inc. be granted an exemption for their HKS Electronic Valve Controller (EVC & EVC II) for installation on 1993 and older model-year OEM turbocharger equipped passenger cars. The staff also recommends that Executive Order D-186-8 be issued.

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#### IV. <u>DEVICE DESCRIPTION</u>

The HKS Electronic Valve Controller (EVC & EVC II) is designed for installation on 1993 and older model-year OEM turbocharger equipped passenger The HKS EVC consists of two main components: the under hood control cars. valve and the cockpit mounted control module linked by a wiring harness. The control valve houses a multi-step solenoid valve and pressure sensor. The cockpit mounted control module houses a microprocessor which, utilizing the control valve pressure sensor (port #1 - see Appendix A), samples the intake manifold pressure. Using this data, the microprocessor operates the control valve's solenoid valve. The solenoid regulates the pressurized air drawn (via port #2) from the discharge plumbing of the turbocharger. This regulated air is discharged from port #3 to the wastegate actuator controlling the wastegate action. According to the manufacturer, by closely controlling the wastegate action, the maximum boost pressure and boost response curve is optimized to increase power for a given application within the constraints of the OEM fuel injection system.

The EVC & EVC II are identical with one exception: the EVC II does not incorporate the manual boost control and "volume" knob. Both units have Off, Low and High settings which, according to the manufacturer, allow a range of boost levels permitting safe operation of the vehicle in less than ideal weather as well as increased performance.

#### V. ELECTRONIC VALVE CONTROLLER (EVC & EVC II) EVALUATION AND DISCUSSION

A 1985 Ford Mustang SVO equipped with an 2.3 liter turbocharged fuelinjected gasoline engine was used for the evaluation of the HKS Electronic Valve Controller (EVC & EVC II). The dynamometer inertia weight and loading used were 3500-lbs and 8.9-hp respectively.

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Comparative emissions tests conducted by Automobile Club of Southern California for HKS USA, Inc. consisted of one Cold-Start CVS-75 emission test in the unmodified (baseline) configuration, followed by one Cold-Start CVS-75 emission test in the modified (Electronic Valve Controller (EVC model) installed) configuration in the manual mode with the volume set to maximum. The Air Resources Board did not perform tests to confirm the test results submitted by the applicant. A summary of the test results is shown below:

#### Exhaust Emissions Test Results On A 1985 Ford Mustang SVO

Test	Exhaust Emiss	ions (gm/mi)	
Mode	<u>HC</u>	CO	<u>NOx</u>
Baseline	3.01	18.32	2.80
Device	2.61	18.22	2.89
Difference	40	10	+.09
<pre>% Difference</pre>	-13.25%	53%	+3.25%

The differences between the device emission test results and baseline emission test results submitted by the applicant were within the allowed limits of .1 gm/mile HC, 1.0 gm/mile CO and .1 gm/mile NOx as specified in the "Procedures for Exemption of Add-On and Modified Parts." Therefore, the installation of the HKS Electronic Valve Controller (EVC model) did not have an adverse effect on exhaust emissions on the test vehicle.

Due to the ability to manually control the maximum boost pressure, HKS USA, Inc. supplies a recommended maximum boost pressure for each application. These recommended boost pressures exceed the OEM maximum boost pressures. According to the HKS USA, Inc., they tested various vehicles at these increased pressure levels and found no decrease in engine durability. The ARB did not perform any durability testing at this time and reserves the right, in the future, to request further documentation of the durability effects of

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application of this device.

HKS USA, Inc. submitted all the required information and fulfilled the requirements for exemption.

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Appendix

# Appendix A

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## CONTROL VALVE DIAGRAM



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Appendix B

# ELECTRONIC VALVE CONTROLLER



Performance/Competition Products

Product: EVC System

Application: Most turbocharged vehicles

Part number: 3050XX-90000X (actuator type) 3052XX-90000X (external wastegate type)

#### NOTICE:

This manual assumes that you have and know how to use the tools and equipment which are necessary to safely and efficiently perform service and installation operations on your vehicle. This manual also assumes that you are familiar with typical automotive systems and terminology and basic service and repair procedures. DO NOT attempt to carry out the operations described herein unless these assumptions are

Frect.

A ways have access to a factory service manual as many of the procedures and specification required for the proper installation of this product will be referenced to the shop manual.

To avoid the risk of personal injury to yourself and to others, and to avoid the possibility of damaging your vehicle and rendering it unsafe, follow the safety precautions contained in the factory shop manual for the vehicle you are working on.

#### INTRODUCTION:

The HKS EVC (electronic value controller) provides immediate selection of up to four preset manifold boost pressure selections or variable manifold boost pressure control from within the vehicle cockpit.

The HKS EVC incorporates two main components, the control module and the control valve, which are linked only by electrical connections. No hoses are routed through the firewall and into the cockpit.

#### USER NOTES:

Before increasing the boost pressure on your vehicle, read through the entire manual and familiarize yourself with the terms used herein. Pay special attention to the following precautions.

1. The HKS EVC System is available in two styles for the following applications: Be certain to choose the right unit for your application.

Swing Valve Type: For integral wastegates (most OEM style wastegates) with single pressure port actuators.

Popet Valve Type: For remote, dual pressure port wastegates (racing type) and for integeral wastegates with dual pressure port actuators (HKS turbo system).

The purpose of the HKS EVC is to increase the boost pressure accurately and reliably, but most factory turbocharged vehicles also have a secondary boost limiting system to control the boost pressure in case of wastegate or wastegate actuator failure. Due to this secondary boost control system, the HKS EVC will not be able to raise the boost pressure above the point at which the secondary boost control is activated. 3. When using the HKS EVC, know the limits of your vehicle and engine. Pay special attention to the following.

\* Increasing the boost pressure may cause detonation (knocking, pinging). Detonation can cause severe engine damage.

4. Increasing the boost pressure (intake air volume) may require additional fuel volume to the engine. Make sure the engine has the correct air/fuel ratio and the correct ignition timing to prevent detonation.

5. The HKS EVC unit will not lower the boost pressure below the original setting.

6. The HKS EVC is a very precise electronic component. The unit should be handled with extreme care to avoid possible damage. The HKS EVC components must not be exposed to extreme heat, water or dust. Make sure the unit is wired properly before operation. TEMPERATURE RANGE: CONTROL UNIT -25 Deg. C to 77 Deg. C (-13 Deg. F to 170 Deg. F)

VALVE UNIT -25 Deg. C to 100 Deg. C (-13 Deg. F to 212 Deg. F)

7. The HKS EVC cannot control boost pressure above the maximum efficiency point of the turbocharger. Additionaly the HKS EVC will not be able to compensate boost pressure loss due to turbocharger size.

8. Increasing the boost pressure will also increase the intake air temperature. If the intake air temperature is above 210 F (100 C), performance increases may be minimal and detonation may occur.

. Increasing the boost pressure will shorten the combustion process. Due to a hortened combustion process, the ignition timing may require retarding.

10. Use **92 or higher** octane fuel. The use of 92 or higher octane fuel may reduce the possibility of detonation.

11. DO NOT rely on the factory boost gauge or the bar graph boost gauge on the HKS EVC when adjusting the maximum boost pressure. Install an accurate auxillary boost gauge to moniter manifold boost pressure levels.

4. Mount the EVC control valve inside the engine compartment away from excreme near and water. The EVC control valve must be mounted with the fittings pointed straight up.

5. Connect the control module wire harness to the control valve wire harness.

6. The red wire must be connected to source that has 12 volts with the ignition key on. A suggested source is the positive terminal on the ignition coil. For vehicles quipped with the HKS Twin Power ignition system, connect the EVC red wire to the win Power red wire.

7. Attach the black wire to chassis ground. Failure to ground the EVC properly will result in improper EVC operation or possible damage to the unit.

#### EVC HOSE CONNECTIONS

Refer to the diagram below for the correct hose layout and connections.

Use the 4mm silicone hose for port 1. Use the 4mm rupper hose for ports 2 and 3 requiring 4mm hose. Use the 6mm silicone hose for ports 2 and 3 requiring 6mm hose. Use the 8mm silicone hose for ports 2 and 3 requiring 8mm hose.

SWING VALVE TYPE:

- Port 1. Connect to an uninterupted intake manifold pressure source, after the throttle valve, using a piece of 4mm nose. The hose should be as short as possible and not exceed 1 meter. DO NOT connect to the line that operates the fuel pressure regulator.
- Port 2. Connect to a source of pressurized air (turbocharger compressor or intake air pipe) before the throttle valve. This line should be as short as possible and must not exceed 1 meter.
- Port 3. Connect to the port on the wastegate actuator. This line should be as short as possible and not exceed 1 meter.





INSTALL FILTER WITHIN 10 cm OF PORT 1 POPET VALVE TYPE:

- Port 1. Connect to an uninterupted intake manifold pressure source after the throttle valve. This line should be as short as possible and not exceed 1 meter in length. DO NOT connect to the line that operates the fuel pressure regulator.
- Port 2. Connect to a source of pressurized air (turbocharger compressor or intake air pipe) before the throttle valve. Use a provided tee fitting to connect a pressure line to the secondary port on the wastegate actuator. This line should be as short as possible and not exceed 1 meter.
- Port 3. Connect to the primary port on the wastegate actuator. This line should be as short as possible and not exceed 1 meter.



#### EVC OPERATION

1. Reconnect the battery. Reprogram the clock and the radio.

2. With the ignition switch off, the EVC should not light up.

3. Recheck the hose layout.

4. Start the engine and allow it to reach operating temperature. Check for smooth engine idling. If the vehicle does not idle smoothly, check for vacuum leaks.

5. With the engine on, the EVC should display red light with the power button "on" and green light with the power button "off".

6. Turn the power button "off". Test drive the vehicle under full load in 3rd gear and monitor the boost pressure. The boost pressure should be at the level it was before the EVC was installed. If the boost pressure is above the original level, refer to trouble shooting section.

7. Activate the manual button. Increase the boost pressure, without detonation, up to the final level by adjusting the volume knob. Test drive the vehicle under full load in 3rd gear making sure the EVC is functioning properly. If the boost pressure is not above the original level refer to the trouble shooting section.

The boost pressure levels for the "low" and "high" modes are adjusted on the back hel. Select the "low" button and using a small jewlers screwdriver, adjust the low" boost level to the desired position. Test drive the vehicle after every adjustment while noting the maximum boost pressure reached. All test driving must be done under full load and in 3rd gear. Perform the same adjustment procedure for the "high" button. Always adjust the boost pressure below the detonation occurrence point.

9. Affix the octane warning sticker to a visible location.

engine conditions. A severe lean condition will result in a very high temperature and an over rich condition will result in a very low temperature.

13. Mount the control unit and harness away from high power two way radios, mobile ones and their respective antenna cables. Malfunction of EVC unit may result.

#### EVC CONTROL MODULE FEATURES:



#### 1. POWER SWITCH

OFF position: The control valve will allow maximum pressure to reach the wastegate resulting in original pressure levels. ON position: Boost pressure will be modified according to the high, low or manual switch selected on the control module.

2. LOW MODE SWITCH

Selection of the low mode switch will adjust the maximum boost pressure according to the position of the adjustable low mode tuning switch on the back of the control module. Low mode selection will permit an increase of maximum boost pressure up to approximately 50% over the original boost pressure level.

3. HIGH MODE SWITCH

Selection of the high mode switch will adjust the maximum boost pressure according to the position of the adjustable high mode tuning switch on the back of the control module. High mode selection will permit an increase in boost pressure up to approximately 100% over the original boost pressure level.

•. MANUAL MODE SWITCH Selection of the manual mode switch will adjust the maximum boost pressure

according to the position of the adjacent adjustable manual mode control knob (5).

5. MANUAL MODE CONTROL KNOB

Use of the manual mode offers maximum boost pressure adjustablility up to approximately 150% over the original boost pressure level. When the manual mode switch (4) is selected, the manual mode control knob can be adjusted to increase the maximum boost pressure level as desired. Once set, the knob can be easily recessed to be flush with the face of the control module until it is needed again. NOTE: The EVC can only increase the boost pressure within the turbochargers capacity

- 6. BOOST LEVEL BAR GRAPH The EVC control module face also incorporates a small LED bar graph to indicate boost pressure between 7 psi and 21.5 psi.
- 7. WIRE HARNESS CONNECTION TO EVC CONTROL VALVE
- 8. ACCESORY HARNESS PLUG (NOT USED)
- 9. LOW MODE ADJUSTMENT Used to adjust the LOW MODE boost pressure that is activated by the LOW MODE button on the front of the EVC.
- 10. HIGH MODE ADJUSTMENT Used to adjust the HIGH MODE boost pressure that is activated by the HIGH MODE button on the front of the EVC.

#### EVC CONTROL VALVE FEATURES





#### 1. MANIFOLD PRESSURE SENSOR PORT

The manifold pressure sensor port is attached to an **uninterrupted intake manifold** pressure source. This manifold pressure signal is utilized by the EVC control module to make corrections in wastgate valve opening lift and duration to maintain accurate manifold pressure levels according to the selections on the control module.

#### ONTROL VALVE PRESSURE INLET PORT

Pressurized air, drawn from the compressor housing or the intake air pipe, is routed through the control valve pressure inlet port prior to being modified (by the solenoid valve housed within this chamber) according to the selected control module setting.

#### 3. CONTROL VALVE PRESSURE OUTLET PORT

From the control valve pressure outlet port, constantly modified pressurized air recieved by the control valve pressure inlet part is routed to the **wastegate actuator**. This accurate, even pressure maintains accurate wastegate action resulting in stable maximum boost levels in any gear and almost any elevation or atmospheric condition.

#### 4. BLEED OFF PORT

Control value pressure inlet port #2 will recieve the pressurized air from the turbocharger or intake air pipe. The pressurized air is modified and excess air is bleed off through the hole. When mounting the value unit, make sure the hole is not plugged and that it is pointing down.

#### INSTALLATION PROCEDURES

Before installing this product on your vehicle, read through the entire manual and familiarize yourself with the terms and procedures used herein. If the installation procedures are not clear to the installer or the installer has questions, please call HKS USA for assistance, but please have a thorough knowledge of the vehicle you are working on.

1. Remove the negative (-) terminal from the battery. Memory loss on the clock and the radio will result.



2. Install the EVC control module inside the vehicle. Mount the unit using either 2 sided tape or the mounting bracket included in the kit. Make sure the control module is mounted away from direct sunlight and heater ducts.

3. Check the inside hose diameter of the wastegate actuator line. If the inside hose diameter does not match fittings 2 and 3, replace them with the correct fittings supplied in the kit.



SYMPTOM: BOOST PRESSURE WILL NOT INCREASE

#### CHECK :

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- 1. All selections on the EVC are adjusted properly.
- Make sure all hose connections are performed correctly.
- 3. Make sure the serial numbers match on the EVC control module and the EVC control valve.

SYMPTOM: EVC CONTROL MODULE WILL NOT ILLUMINATE

#### CHECK =

- 1. Make sure the black wire is properly grounded.
- 2. Make sure the red wire has 12 volts with the ignition key on.
- 3. Make sure the harness connectors are securely locked, and that the wires are not pinched.

SYMPTOM: NO CONTROL OF MAXIMUM BOOST PRESSURE

#### CHECK:

- 1. Make sure the proper EVC unit for the application is being used.
- 2. Possible misadjustment of the volume knob.
- 3. Hose connections are not leaking and hose layout is correct.
- 4. Make sure the serial numbers match on the EVC control module
- and the EVC control valve.

#### HKS PERFORMANCE PARTS NOTICE

This part has been designed and is intended for OFF-HIGHWAY APPLICATION ONLY. "Teral and many State laws prohibit the removal, modification or rendering \_perable of any device or element of design affecting the vehicle emission or safety in a vehicle used on public highways. Violation of such laws may subject the ner or user to a fine or penalty. Installation of this product may void the rranty coverage, if any, on your vehicle. Vehicles modified by the use of performance products may no longer be lawfully used on public highways.

#### HKS USA, INC. LIMITED WARRANTY

Inspect the contents of this package prior to installation. HKS USA, Inc. warrants this product prior to the point of installation, against defects in materials and workmanship. NO WARRANTY WILL BE HONORED AFTER THE PRODUCT HAS BEEN INSTALLED ON THE VEHICLE. HKS's sole obligation under this warranty shall be limited to repair, replacement or credit, at HKS's option, provided, however, that this warranty shall apply only if HKS's examination of the returned product discloses a manufacturing defect. This warranty extends only to the original retail purchaser of the product. IN NO EVENT SHALL HKS USA, INC. OR ANY HKS DEALER OR DISTRIBUTOR. BE LIABLE FOR ANY LOSS, INCONVENIENCE OR DAMAGE, WHETHER DIRECT, INCIDENTAL, CONSEQUENTIAL OR OTHERWISE, RESULTING FROM BREACH OF ANY EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE, WITH RESPECT TO ANY HKS PRODUCT, EXCEPT AS EXPRESSLY SET FORTH HEREIN. NO ACTION FOR BREACH OF IMPLIED WARRANTY OR MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE. MAY BE COMMENCED AFTER THE END OF THE PERIOD OF THE EXPRESS WARRANTY SET FORTH ABOVE. Some States do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

When making a claim under this warranty, attach to the product your name, address, telephone number, a description of the problem, and proof of date of retail purchase (invoice copy).

urn the product, freight charges prepaid, to the HKS dealer from whom the product was purchased, or in the event the product was purchased directly from HKS, to HKS SA, Inc. at the address shown below. This warranty does not include the cost of emoval or reinstallation of the product, and does not apply if the product has been damaged by accident, abuse, misuse or misapplication, or as a result of service or modification by a party other than HKS USA, Inc. No person or representative is authorized to extend any warranties, on behalf of HKS, other than the warranty expressed herein. This warranty gives you specific legal rights and you may also have other rights which vary from State to State.



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