

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-236  
Relating to Certification of New Motor Vehicle Engines

AVCO INDUSTRIAL ENGINE OPERATION

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102, and 43103 of the Health and Safety 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-45-3;

IT IS ORDERED AND RESOLVED: That the following Avco Industrial Engine Operation 1981 model-year diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating greater than 8500 pounds:

<u>Engine Family</u>	<u>Displacement Cubic Inches (Liters)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
HR-H	219 (3.6)	(Smoke Puff Limiter) (Turbocharger)

Engine Models and Codes as listed on attachments.

Section 43200, Part 5, Division 26 of the California Health and Safety Code requires that the engine manufacturer furnish a decal with each engine sold or delivered to a vehicle manufacturer. The decal shall display the applicable model year heavy-duty engine exhaust emission standards and the following certification emission values:

<u>Engine Family</u>	<u>Hydrocarbons gm/bhp-hr</u>	<u>Carbon Monoxide gm/bhp-hr</u>	<u>Hydrocarbons + Nitrogen Oxides gm/bhp-hr</u>
HR-H	0.30	1.25	5.1

BE IT FURTHER RESOLVED: That Avco Industrial Engine Operation has provided to the Executive Officer all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Administrative Code, Section 2036).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

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

Executed at El Monte, California this 8<sup>th</sup> day of June, 1981.

*K. D. Drachand*  
K. D. Drachand, Chief  
Mobile Source Control Division

1981 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer Avco Ind. Engine Executive Order No. A-236 Page 1  
Operation  
 Engine Family - Evaporative Family -

ABBREVIATIONS Engine CID (Liters) 219 (3.6)

- |                                       |   |                               |
|---------------------------------------|---|-------------------------------|
| <u>Ignition System</u>                | <u>Exhaust Emissions Control System</u> | <u>Special Features</u>       |
| CA-Centrifugal Advance                | AIP-Air Injection-Pump                  | CCV-Combustion Chamber Valve  |
| EEC-Electronic Engine Control         | AIV-Air Injection-Valve                 | CFI-Central Fuel Injection    |
| EI-Electronic Ignition                | CL-Closed Loop                          | DI-Diesel Injection           |
| ESAC-Electronic Spark Advance Control | EGR-Exhaust Gas Recirculation           | EFI-Electronic Fuel Injection |
| VA-Vacuum Advance                     | EM-Engine Modification                  | MFI-Mechanical Fuel Injection |
| VR-Vacuum Retard                      | OC-Oxidation Catalyst System            | TC-Turbocharged               |
|                                       | TR-Thermal Reactor                      |                               |
|                                       | TWC-Three Way Catalyst System           |                               |

- Fuel System  
 CFI, DI, EFI, MFI  
 nV-nVenturi Carburetor  
 VV-Variable Venturi

<u>Engine Family</u>	<u>Model</u>
HR-H	HR692HTA

1981 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
HEAVY-DUTY DIESEL ENGINES

Manufacturer Avco Industrial Engine Operation

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Engine Family HR-H CID(Liter)-Type 219 (3.6) L-6


ECS(Special Features) (Smoke Puff Limiter, Turbocharged)

Engine Model	Fuel Injection Pump Mfr. Bosh Type VE6 Part Number	Injector Mfr. Bosh Part Number	Maximum Rated HP and RPM	Fuel Rate at Maximum <sup>3</sup> HP mm <sup>3</sup> /stroke	Label Ident.
HR692 HTA	046-04106014	KBE5854-4	130 @ 4000	44.5	See pg. 3

Date of Issue -

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ENGINE EXHAUST		
EMISSION CONTROL INFORMATION		
AVCO INDUSTRIAL ENGINE OPERATION		
ENG FAMILY		
<input type="text"/>	SERIAL NO:	MODEL
<input type="text"/>	<input type="text"/>	MFG DATE
<input type="text"/>	<input type="text"/>	<input type="text"/>
HP	RPM	FUEL RATE (MM <sup>3</sup> /STROKE)
<input type="text"/>	<input type="text"/>	<input type="text"/>
STATIC PUMP TIMING — 4° BTDC		
COLD INLET VALVE _____ INCH		
COLD EXHAUST VALVE _____ INCH		
THIS ENGINE CONFORMS TO _____		
0.19 <input type="checkbox"/> EPA EMISSION STANDARDS		

*Lable per Calif. Requirements  
to follow. Requested 5/22/81*