

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-10-559
Relating to Certification of New Heavy-Duty Motor Vehicle Engines

FORD MOTOR COMPANY

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 Ford Motor Company 1994 model-year Otto-cycle engine is certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Fuel Type: Gasoline

<u>Engine Family</u>	<u>Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems and Special Features</u>
RFM7.5C8GARA	7.5 (460)	Secondary Air Injection Exhaust Gas Recirculation Heated Oxygen Sensor Sequential Multiport Fuel Injection

Engine models and codes are listed on attachments.

The following are the certification emission standards for this engine family in grams per brake horsepower-hour:

<u>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>
1.9	37.1	5.0

The following are the certification emission values for this engine family in grams per brake horsepower-hour:

<u>Engine Family</u>	<u>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>
RFM7.5C8GARA	0.6	24.7	4.4

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et. seq.).

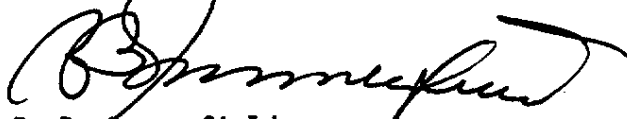
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Engines certified under this Executive Order must conform to all applicable California emission regulations.

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

Executed at El Monte, California, this 15th day of July, 1993.



R. B. Summerfield
Assistant Division Chief
Mobile Source Division

1994 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer: Ford Motor Company Engine Family: RFM7.5C8GARA (R7.5C)Evaporative Family: RFM1190AYC0A (HN) Engine Type: V-8Liters (CID): 7.5L (460)

ABBREVIATIONS:

Ignition System

DLI-Distributorless
Ignition
EI-Electronic Ignition
PCM-Powertrain Control
Module

Special Features

MIL-Malfunction
Indicator Light
OBD-On Board
Diagnostics

Exhaust Emissions Control System

AIR-Secondary Air Injection
ECTS-Engine Coolant Temp Sensor
EGR-Exhaust Gas Recirculation
EM-Engine Modification
HO2S-Heated Oxygen Sensor
KS-Knock Sensor
MAP-Manifold Absolute
Pressure Sensor
OC-Oxidation Catalyst
O2S-Oxygen Sensor
SABV-Secondary Air Bypass Valve
SASV-Secondary Air Switching Valve
SPL-Smoke Puff Limiter
TOC-Trap Oxidizer: Continuous
TOP-Trap Oxidizer: Periodic
TPS-Throttle Position Sensor
TWC-Three Way Catalyst
TWC+OC-Three Way Catalyst
Plus Oxidation Catalyst
WUOC-Warm Up Oxidation Catalyst
WUTWC-Warm Up Three Way Catalyst
Injection
CARB- Carburetted

Fuel System

DI-Direct Injection
(Diesel)
EIC-Electronic Injection
Control (Diesel)
IC-Intercooler or
Aftercooler
IDI-Indirect Diesel
Injection
MPI-Multipoint Electronic
Fuel Injection
SC-Supercharged
SMPI-Sequential
Multipoint
Electronic Fuel
Injection
TAA-Turbocharged,
Air to Air (Diesel)
TAW-Turbocharged, Air to
Air to Water (Diesel)
TBI-Throttle Body
Electronic Fuel

VEHICLE MODELS: F-Super Duty

Engine: Front XXX Mid Rear
Drive: FWD RWD XXX 4WD Full Time 4WD Part Time

Engine Family: R7.5C

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Issue Date: 6-23-93

Revised:

1994 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY DUTY OTTO-CYCLE ENGINES

Manufacturer Ford Motor Company Engine Family RFM7.5C8GARA (R7.5C)

Liters (CID): 7.5L (460) Fuel Type: Gasoline Engine Type: V-8

Exhaust ECS & Special Features (ECM/PCM, CARB, MPI, etc.) AIR/EGR/HO2S/ SFI
(Use abbreviations per SAE J1930 JUN88)

Engine Model (Engine Code)	Rated HP @ RPM	Ign. System or PCM Part No. -12A650-	Fuel System Injtr Part No. -9F593-	EGR Valve Part No. -9F483-	Catalyst Part No. -5E212-
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4-97B-R00	255 @ 4200	F4TF-ALA	F1TE-DA	F3TE-GA	N/A
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4-98B-R00	255 @ 4200	F4TF-AMA	.	.	N/A
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Comments: See 20.17.02.00-1 for abbreviations and 20.17.02.00-4 for evaporative emission family identification.

Engine Family: R7.5C

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Issue Date: 6-23-93

Revised:

**1994 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY DUTY OTTO-CYCLE ENGINES**

Manufacturer Ford Motor Company Engine Family RFM7.5B8GACA (R7.5A)

Liters (CID): 7.5L (429) Fuel Type: Gasoline Engine Type: V-8

Exhaust ECS & Special Features (ECM/PCM, CARB, MPI, etc.) AIR/EGR/HO2S/SFI/CAT
(Use abbreviations per SAE J1930 JUN88)

Engine Model (Engine Code)	Rated HP @ RPM	Ign. System or PCM	Fuel System Injtr	EGR Valve	Catalyst
		Part No. -12A650-	Part No. -9F593-	Part No. -9F483-	Part No. -5E212-
4-97A-R00	245 @ 4200	F4TF-AKA	F1TE-DA	E3TE-GA	F3TA-FD alt: F3TA-FE F3TA-FF F3TA-FG F3TA-FH F4TA-BB
4-98A-R00	•	F4TF-ZA	•	•	•
4-98E-R00	•	F4TF-YA	•	•	•
4-98F-R00	•	F4TF-ANA	•	•	•
4-98D-R10 *	•	F4TF-CLA	•	•	•

Comments: See 20.17.02.00-1 for abbreviations and 20.17.02.00-4 for evaporative emission family identification.

* R/C 7.5 - 4

Engine Family: R7.5A

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Issue Date: 6-23-93
Revised: 6-08-94

1994 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY DUTY OTTO-CYCLE ENGINES

Manufacturer Ford Motor Company Engine Family RFM7.5C8GARA (R7.5C)

Liters (CID): 7.5L (429) Fuel Type: Gasoline Engine Type: V-8

Exhaust ECS & Special Features (ECM/PCM, CARB, MPI, etc.) AIR/EGR/HO2S/MPI
(Use abbreviations per SAE J1930 JUN88)

Engine Model (Engine Code)	Rated HP @ RPM	Ign. System or PCM	Fuel System Injtr	EGR Valve	Catalyst
		Part No. -12A650-	Part No. -9F593-	Part No. -9F483-	Part No. -5E212-

4-97B-R00	255 @ 4200	F4TF-ALA	F1TE-DA	F3TE-GA	N/A
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4-98B-R00	255 @ 4200	F4TF-AMA	'	'	N/A
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R/C 7.5-1

4-97B-R10	255 @ 4200	F4TF-ALA	F1TE-DA	F3TE-GA	N/A
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4-98B-R10	255 @ 4200	F4TF-AMA	'	'	N/A
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R/C 7.5-3

4-97B-R11	255 @ 4200	F4TF-ALB	F1TE-DA	F3TE-GA	N/A
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4-98B-R11	255 @ 4200	F4TF-AMB	'	'	N/A
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Comments: See 20.17.02.00-1 for abbreviations and 20.17.02.00-4 for evaporative emission family identification.

Engine Family: R7.5C

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Issue Date: 6-23-93

Revised: 4-08-94