State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-14-133-A
Relating to Certification of New Motor Vehicles

TOYOTA MOTOR CORPORATION

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Orders G-45-3 and G-45-4;

IT IS ORDERED AND RESOLVED: That 1989 model-year Toyota Motor Corporation exhaust emission control systems are certified as described below for gasoline-powered passenger cars:

Engine Family	Displacement Liters (Cubic Inches)	Exhaust Emission Control Systems (Special Features)
KTY2.0V5FCC1	2.0 (121.9)	Exhaust Gas Recirculation Three-Way Catalysts (2) Oxygen Sensors (2) (Electronic Port Fuel Injection) (On-Board Diagnostics)

Vehicle models, transmissions, engine codes and evaporative emission control families are listed on attachments.

The following are the emission standards for this engine family:

Hydrocarbons (Grams per Mile)	Carbon Monoxide (Grams per Mile)	Nitrogen Oxides (Grams per Mile)
0.39	7.0	0.4

The following are the certification emission values for this engine family:

Hydrocarbons (Grams per Mile)	Carbon Monoxide (Grams per Mile)	Nitrogen Oxides (Grams per Mile)
0.17	1.6	0.1

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Gasoline-Powered Motor Vehicles".

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" (Title 13, California Administrative Code, Section 2290) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high altitude requirements and highway emission standards as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles".

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "California Motor Vehicle Tune-Up Label Specifications" (Title 13, California Administrative Code, Section 1965) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the vehicle models listed also comply with the "Malfunction and Diagnostic System for 1988 and Subsequent Model Year[s]..." (Title 13, California Administrative Code, Section 1968) for the aforementioned model year.

BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Administrative Code, Section 2035 et seq.).

Vehicles 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 12th day of August, 1988.

K. D. Drachand, Chief
Mobile Source Division

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET E.O. # A-14-133-A

Page 1

Manufacturer Toyota Motor Corporation

Engine Family KTY2.0V5FCC1

Evaporative Family EV-E

Engine Type 4 cyl. in-line

Liters (CID) 2.0 (121.9)

ABBREVIATIONS

Ignition System

CA-Centrifugal Advance
ECU-Electronic Control Unit
EI-Electronic Ignition
ESAC-Electronic Spark Advance Control
VA-Vacuum Advance
VR-Vacuum Retard

Fuel System

CFI, EPFI, MPFI, SFI,
DID, DIP, HOS, OS
nV-nVenturi Carburetor
VV-Variable Venturi Carburetor

Exhaust Emissions Control System

AIP-Air Injection - Pump
AIV-Air Injection - Valve
EGR-Exhaust Gas Recirculation
EIC-Electronic Injection Control (Diesel Only)
EM-Engine Modification
SPL-Smoke Puff Limiter or Throttle Delay
TOC-Trap Oxidizer, Continual
TOP-Trap Oxidizer, Periodical
DBC-Dual Bed Catalyst
OC-Oxidation Catalyst
TWC-Three-Way Catalyst
WUOC-Warm-up Oxidation Catalyst
WUTWC-Warm-up Three-Way Catalyst
OS-Oxygen Sensor
HOS-Heated Oxygen Sensor

Special Features

CFI-Central Fuel Injection or Throttle Body Injection
EPFI-Electronic Port Fuel Injection
MPFI-Mechanical Port Fuel injection
SFI-Sequential Fuel Injection
DID-Diesel Injection-Direct
DIP-Diesel Injection-Prechamber
TC-Turbocharger
SC-Supercharger
IC-Intercooler or Aftercooler
CCV-Combustion Chamber Valve
OBD-On-Board Diagnostics

VEHICLE MODELS :

Camry	Camry wagon	Celica	Celica convertible
SV21L-UEMDKA	SV21LG-UWMDKA	ST162L-BCMSKA	ST162L-BKMVKA
-UEMBKA	-UWPDKA	-BCMVKA	-BKPVKA
-UEPDKA	-UWPNKA	-BCPSKA	
-UEPNKA		-BCPVKA	
-UEPBKA		-BLMVKA	
		-BLPVKA	

Engine: Front x Mid. ____ Rear ____

Drive: FWD x RWD ____ 4WD Full time ____ 4WD Part time ____

E.O. # A-14-133-A

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Passenger Cars x Light-Duty Trucks ___ Medium-Duty Vehicles ___ Gas x Diesel ___

Manufacturer Toyota Motor Corporation Engine family KTY2.0V5FCC1

Liter (CID) 2.0 (121.9) Eng. Type 4 cyl. in-line

Emission Control Sys. (Special Features) EGR + TWC + TWC + OS + OS (EPFI + OBD)

Engine code	Vehicle Models (If Coded see attachment) (Dyno Hp: Refer to 08.13.02.00)	Trans. Type	Equiv. Test Weight	Ign. System ECU,EI,ESAC Part No. [Computer]	Fuel System EPFI, OS Part No. [Computer] [Air flow meter] [Injector]	EGR Valve Part No.	Catalyst Part No.
1 & 2	SV21L-UEMDKA -UEMBKA SV21LG-UWMDKA	M5	3,000 3,125 3,250	89661-32350	89661-32350 22250-74101 23250-74060	25620-74140	Manifold converter : 25508-74070 (S11) *1 Under floor : 18450-74190 (01) *1
3 & 4	SV21L-UEPBKA	A4	3,125	89661-32350	89661-32350 22250-74101 23250-74060	25620-74150	
& 6	SV21L-UEPDKA -UEPNKA SV21LG-UWPDKA -UWPNKA	A4	3,125 3,250	89661-32360	89661-32360 22250-74101 23250-74060		
7 & 8	ST162L-BCMSKA -BCMVKA -BKMVKA -BLMVKA	M5	2,875 3,000 3,125	89661-32350	89661-32350 22250-74120 23250-74060	25620-74140	
9 & 10	ST162L-BCPSKA -BCPVKA -BKPVKA -BLPVKA	A4	2,875 3,000 3,125 3,250	89661-32350	89661-32350 22250-74120 23250-74060	25620-74150	

Note *1 : Parenthetical information represents identifying marks found on production parts.

Comments : See page one for abbreviations and evaporative emission family identification. Please lefer to manafacturers HP list for correct dyno test HP settings based on model and equtpment.

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET E.O. # A-14-133-A

Page 1

Manufacturer Toyota Motor Corporation Engine Family KTY2.0V5FCC1

Evaporative Family EV-E Engine Type 4 cyl. in-line

Liters (CID) 2.0 (121.9)

ABBREVIATIONS

Ignition System

CA-Centrifugal Advance
ECU-Electronic Control Unit
EI-Electronic Ignition
ESAC-Electronic Spark Advance Control
VA-Vacuum Advance
VR-Vacuum Retard

Fuel System

CFI, EPFI, MPFI, SFI,
DID, DIP, HOS, OS
nV-nVenturi Carburetor
VV-Variable Venturi Carburetor

Exhaust Emissions Control System

AIP-Air Injection - Pump
AIV-Air Injection - Valve
EGR-Exhaust Gas Recirculation
EIC-Electronic Injection Control (Diesel Only)
EM-Engine Modification
SPL-Smoke Puff Limiter or Throttle Delay
TOC-Trap Oxidizer, Continual
TOP-Trap Oxidizer, Periodical
DBC-Dual Bed Catalyst
OC-Oxidation Catalyst
TWC-Three-Way Catalyst
WUOC-Warm-up Oxidation Catalyst
WUTWC-Warm-up Three-Way Catalyst
OS-Oxygen Sensor
HOS-Heated Oxygen Sensor

Special Features

CFI-Central Fuel Injection or Throttle Body Injection
EPFI-Electronic Port Fuel Injection
MPFI-Mechanical Port Fuel injection
SFI-Sequential Fuel Injection
DID-Diesel Injection-Direct
DIP-Diesel Injection-Prechamber
TC-Turbocharger
SC-Supercharger
IC-Intercooler or Aftercooler
CCV-Combustion Chamber Valve
OBD-On-Board Diagnostics

VEHICLE MODELS :

Camry	Camry wagon	Celica	Celica convertible
SV21L-UEMDKA	SV21LG-UWMDKA	ST162L-BCMSKA	ST162L-BKMVKA
-UEMBKA	-UWPDKA	-BCMVKA	-BKPVKA
-UEPDKA	-UWPNKA	-BCPSKA	
-UEPNKA		-BCPVKA	
-UEPBKA		-BLMVKA	
		-BLPVKA	

Engine: Front x Mid. ____ Rear ____

Drive: FWD x RWD ____ 4WD Full time ____ 4WD Part time ____

E.O. # A-14-133-A

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Passenger Cars x Light-Duty Trucks ___ Medium-Duty Vehicles ___ Gas x Diesel ___

Manufacturer Toyota Motor Corporation Engine family KTY2.0V5FCC1

Liter (CID) 2.0 (121.9) Eng. Type 4 cyl. in-line

Emission Control Sys. (Special Features) EGR + TWC + TWC + OS + OS (EPFI + OBD)

Engine code	Vehicle Models (If Coded see attachment) ~~(Dyno Hp~~: Refer to 08.13.02.00)	Trans. Type	Equiv. Test Weight	Ign. System ECU,EI,ESAC Part No. [Computer]	Fuel System EPFI, OS Part No. [Computer] [Air flow meter] [Injector]	EGR Valve Part No.	Catalyst Part No.
1 & 2	SV21L-UEMDKA -UEMBKA SV21LG-UWMDKA	M5	3,000 3,125 3,250	89661-32350	89661-32350 22250-74101 23250-74060	25620-74140	Manifold converter : 25508-74070 (S11) *1
3 & 4	SV21L-UEPBKA	A4	3,125	89661-32350	89661-32350 22250-74101 23250-74060	25620-74150	Under floor : 18450-74190 (01) *1
5 & 6	SV21L-UEPDKA -UEPNKA SV21LG-UWPDKA -UWPNKA	A4	3,125 3,250	89661-32360	89661-32360 22250-74101 23250-74060		
7 & 8	ST162L-BCMSKA -BCMVKA -BKMVKA -BLMVKA	M5	2,875 3,000 3,125	89661-32350	89661-32350 22250-74120 23250-74060	25620-74140	
9 & 10	ST162L-BCPSKA -BCPVKA -BKPVKA -BLPVKA	A4	2,875 3,000 3,125 3,250	89661-32350	89661-32350 22250-74120 23250-74060	25620-74150	

Note *1 : Parenthetical information represents identifying marks found on production parts.

E.O. # A-14-133-A

1989 MODEL-YEAR CERTIFICATION REVIEW SHEET
EXHAUST/EVAPORATIVE SYSTEM & FILL SPECIFICATION COMPLIANCE (1/2)

49.1 (.4 NO_x) 1.8 (0.7 NO_x)

Mfr. Toyota Motor Corporation Engine Family KTY2.0V5FCC1

PC x LDT ___ MDV ___ Gas x Diesel ___ LPG ___ Cert. Type - CA x 49S ___ 50S ___

CID 121.9 Liters 2.0 Rated HP 115 @ 5,200 RPM Rated Torque 124 @ 4,400 RPM

Type Cert - 50K x 100K ___ Evaporative Family EV-E Eng. Type 4 cyl. in-line

Exhaust Control Sys. and (Special Features) EGR + TWC + TWC + OS + OS (EPFI + OBD)

	Section/Page	
1 Authorized Representative	01.02.02	
2 Fuel, Test Equipment Procedures & Route	03.00.00, 04.00.00, 05.00.00	
3 Warr. State & Parts List	17.10.00, 19.03.00, 20.02.11	
4 Maint: Cert/Req'd/Recm'd	06.00.00	
5 Tune-Up Lab./Vac. Hose Diag.	07.00.00, 17.06.00	
6 Evap. Control System	19.00.00	
7 Engine Parameters	20.01.00	
8 Fuel/Ignition Systems	08.01.01.01, 08.02.01.00, 02.03.00	
9 Exhaust Control System	20.02.00	
10 Projected Sales	17.13.00	
11 Vehicle Descript.	20.02.08	
12 Test Veh. Information	Dur.	Emis.
C/O MY or C/A EF	88 MY	N/A
Zero Mile Books	88-D5 *1	89-SV2 *2
Vehicle Logs	88-D5 *1	89-SV2 *2
Maint. Logs & Engr. Eval.	88-D5 *1	N/A
13 Evap. Bench Test Procedure	13.02.00	
14 Gen. Std., Increase in Em., Safety, Mtg. All Req'ments.	17.01.01	
15 Prod. Veh. Same as Test Veh.	17.01.01	
16 Label Durability	17.06.00	
17 Driveability	17.01.02	
18 Fill Pipe Specs.	17.04.02	
19 Altitude A/F Req'ment	17.02.00	
20 Tamperproof Req'ment	17.03.00	
21 CK for DF. Outlier, Line Xing	Checked	
22 EPA Certificate		
23 Two yr./24K Warranty	Not Applicable	
24 Alcohol Compatible	See Owner's Manual	
25 Cert. Preview Program	Already submitted	
26 OBD system	17.05.00	
27 OBD Extension	Not Applicable	

E.O. # A-14-133A

(2/2)

PROJECTED EMISSIONS(1)

Veh. ID	Code (Displ)	Trans	Axle Ratio	ETW	RLHP	MPG City/Hwy	Test Loc.	NMHC	CO	NOx	Hwy NOx	Evap	Part
89-SV2 (00)	4	A4	3.53	3,125	8.1	28.1/40.5	MFR	0.17	1.6	0.10	0.074	0.64	-
89-RN11 *3 (00)	8 (2.4L)	A4	4.56	3,875	15.7	- / -	MFR	-	-	-	-	0.43	-
89-RN11 *4 (01)	8 (2.4L)	A4	4.56	3,875	15.7	- / -	MFR	-	-	-	-	0.40	-

(1) The emission data vehicle/s above comply with standards of 0.39 7.0 0.4 0.5 2.0 -
and includes deterioration factors of 1.147 1.000 1.054 1.054 0.004 -

88-D3, 85-D1,
88-D4, 88-D5,
86-D3, 88-D6,
88-D7, 84-DT6,
88-DT1, 87-DT1,

Evaporative DF is the average of Vehicle DF 89-DT3 & 88-DT3 and Bench DF 83-BV-30

(2) Trap Oxidizer :Yes ___ No x ; Continual ___ Periodic ___

Remarks *1 See 17.12.00 in 88 MY application

*2 See 20.03.04 and 20.03.05

*3 Tested on regular unleaded gasoline

*4 Tested on premium unleaded gasoline

Application

Processed by _____ Date _____ Reviewed by _____ Date _____

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET E.O. # A-14-133-B

Page 1

Manufacturer Toyota Motor Corporation Engine Family KTY2.0V5PCC1

Evaporative Family EV-E Engine Type 4 cyl. in-line

Liters (CID) 2.0 (121.9)

ABBREVIATIONS

Ignition System

CA-Centrifugal Advance
ECU-Electronic Control Unit
EI-Electronic Ignition
ESAC-Electronic Spark Advance Control
VA-Vacuum Advance
VR-Vacuum Retard

Fuel System

CFI, EPFI, MPFI, SFI,
DID, DIP, HOS, OS
nV-nVenturi Carburetor
VV-Variable Venturi Carburetor

Exhaust Emissions Control System

AIP-Air Injection - Pump
AIV-Air Injection - Valve
EGR-Exhaust Gas Recirculation
EIC-Electronic Injection Control (Diesel Only)
EM-Engine Modification
SPL-Smoke Puff Limiter or Throttle Delay
TOC-Trap Oxidizer, Continual
TOP-Trap Oxidizer, Periodical
DBC-Dual Bed Catalyst
OC-Oxidation Catalyst
TWC-Three-Way Catalyst
WUOC-Warm-up Oxidation Catalyst
WUTWC-Warm-up Three-Way Catalyst
OS-Oxygen Sensor
HOS-Heated Oxygen Sensor

Special Features

CFI-Central Fuel Injection or Throttle Body Injection
EPFI-Electronic Port Fuel Injection
MPFI-Mechanical Port Fuel injection
SFI-Sequential Fuel Injection
DID-Diesel Injection-Direct
DIP-Diesel Injection-Prechamber
TC-Turbocharger
SC-Supercharger
IC-Intercooler or Aftercooler
CCV-Combustion Chamber Valve
OBD-On-Board Diagnostics

VEHICLE MODELS :

Camry
SV25L-UEPDKA
-UEPNKA

Engine: Front x Mid. ____ Rear ____

Drive: FWD ____ RWD ____ 4WD Full time x 4WD Part time ____

E.O. # A-14-133-B

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Passenger Cars x Light-Duty Trucks ___ Medium-Duty Vehicles ___ Gas x Diesel ___

Manufacturer Toyota Motor Corporation Engine family KTY2.0V5FCC1

Liter (CID) 2.0 (121.9) Eng. Type 4 cyl. in-line

Emission Control Sys. (Special Features) EGR + TWC + TWC + OS (EPFI + OBD)

Engine code	Vehicle Models (If Coded see attachment) (Dyno Hp: Refer to 08.13.02.00)	Trans. Type	Equiv. Test Weight	Ign. System ECU,EI,ESAC Part No. [Computer]	Fuel System EPFI, OS Part No. [Computer] [Air flow meter] [Injector]	EGR Valve Part No.	Catalyst Part No.
11 & 12	SV25L-UEPDKA -UEPNKA	A4	3,500	89661-32360	89661-32360 22250-74140 23250-74060	25620-74150	Manifold converter : 25508-74080 (S10) *1 Under floor : 18450-74220 (12) *1

Comments : See page one for abbreviations and evaporative emission family identification. Please refer to manufacturer's HP list for correct dyno test HP settings based on model and equipment.

Note *1 : Parenthetical information represents identifying marks found on production parts.

E.O. # A-14-133-B

1989 MODEL-YEAR CERTIFICATION REVIEW SHEET
EXHAUST/EVAPORATIVE SYSTEM & FILL SPECIFICATION COMPLIANCE (1/2)

Mfr. Toyota Motor Corporation Engine Family KTY2.0V5FCC1 1.8 (.7NOx)

PC x LDT ___ MDV ___ Gas x Diesel ___ LPG ___ Cert. Type - CA x 49S ___ 50S ___

CID 121.9 Liters 2.0 Rated HP 115 @ 5,200 RPM Rated Torque 124 @ 4,400 RPM

Type Cert - 50K x 100K ___ Evaporative Family EV-E Eng. Type 4 cyl. in-line

Exhaust Control Sys. and (Special Features) EGR + TWC + TWC + OS (EPFI + OBD)

	Section/Page	
1 Authorized Representative	01.02.02	
2 Fuel, Test Equipment Procedures & Route	03.00.00, 04.00.00, 05.00.00	
3 Warr. State & Parts List	17.10.00, 19.03.00, 20.02.11	
4 Maint: Cert/Req'd/Recm'd	06.00.00	
5 Tune-Up Lab./Vac. Hose Diag.	07.00.00, 17.06.00	
6 Evap. Control System	19.00.00	
7 Engine Parameters	20.01.00	
8 Fuel/Ignition Systems	08.01.01.01, 08.02.01.00, 02.03.00	
9 Exhaust Control System	20.02.00	
10 Projected Sales	17.13.00	
11 Vehicle Descript.	20.02.08	
12 Test Veh. Information	Dur.	Emis.
C/O MY or C/A EF	88 MY	N/A 89
Zero Mile Books	88-D5 *1	89-SV4 *2
Vehicle Logs	88-D5 *1	89-SV4 *2
Maint. Logs & Engr. Eval.	88-D5 *1	89-SV4 *3
13 Evap. Bench Test Procedure	13.02.00	
14 Gen. Std., Increase in Em., Safety, Mtg. All Req'ments.	17.01.01	
15 Prod. Veh. Same as Test Veh.	17.01.01	
16 Label Durability	17.06.00	
17 Driveability	17.01.02	
18 Fill Pipe Specs.	17.04.02	
19 Altitude A/F Req'ment	17.02.00	
20 Tamperproof Req'ment	17.03.00	
21 CK for DF. Outlier, Line Xing	Checked	
22 EPA Certificate		
23 Two yr./24K Warranty	Applicable	
24 Alcohol Compatible	See Owner's Manual	
25 Cert. Preview Program	Already submitted	
26 OBD system	17.05.00	
27 OBD Extension	Not Applicable	

PROJECTED EMISSIONS(1)

Veh. ID	Code (Displ)	Trans	Axle Ratio	ETW	RLHP	MPG City/Hwy	Test Loc.	NMHC	CO	NOx	Hwy NOx	Evap	Part
89-SV4 (00)	2	A4	4.40	3,500	9.4	24.9/32.0	MFR	0.22	2.1	0.09	0.012	-	-
89-RN11 *4 (00)	8 (2.4L)	A4	4.56	3,875	15.7	- / -	MFR	-	-	-	-	0.43	-
89-RN11 *5 (01)	8 (2.4L)	A4	4.56	3,875	15.7	- / -	MFR	-	-	-	-	0.40	-

(1) The emission data vehicle/s above comply with standards of 0.39 7.0 0.7 0.9 2.0 -
and includes deterioration factors of 1.147 1.000 1.054 1.054 0.004 -

88-D3, 85-D1,
88-D4, 88-D5,
86-D3, 88-D6,
88-D7, 84-DT6,
88-DT1, 87-DT1,

Evaporative DF is the average of Vehicle DF 89-DT3 & 88-DT3 and Bench DF 83-BV-30

(2) Trap Oxidizer :Yes ___No x ; Continual ___Periodic ___

Remarks *1 See 17.12.00 in 88 MY application

*2 See 20.03.04 and 20.03.05

*3 See 17.12.00

*4 Tested on regular unleaded gasoline

*5 Tested on premium unleaded gasoline

Application

Processed by _____ Date _____ Reviewed by _____ Date _____