

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-145
Relating to Certification of New Motor Vehicles

SANDTANA MINI-MOTORHOMES

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code Sections 43100, 43102, 43103, and 43835; 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 Sandtana Mini-Motorhomes exhaust emission control systems for 1978 model-year light-duty trucks are certified for the vehicles described below:

- Engine Family: 20R (TC)
- Engine: 133.6
- Transmission: 4-Speed Manual
- Exhaust Emission Control Systems: Air Injection, Exhaust Gas Recirculation, Oxidation Catalyst

Models and Engine Codes as listed in attachment.

The following are the recommended values to be listed on the window decal required by California Assembly-Line Test Procedures for 1978 model-year vehicles:

<u>Engine Family</u>	<u>Hydrocarbons Grams per Mile</u>	<u>Carbon Monoxide Grams per Mile</u>	<u>Nitrogen Oxides Grams per Mile</u>
20R (TC)	0.2	9	1.6

BE IT FURTHER RESOLVED: That the above models also comply with the Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" (13 California Administrative Code, Section 2290) for the aforementioned model year, or have been granted a temporary exemption from the aforementioned "Specifications" by Executive Order AA-145 series.

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

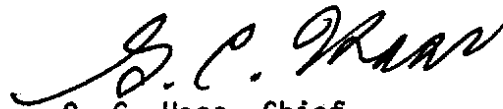
SANDTANA MINI-MOTORHOMES

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

The Department of Motor Vehicles, the California Highway Patrol, and the Bureau of Automotive Repair will be notified by copy of this order and attachment.

Executed at El Monte, California, this 3 day of February, 1978.



G. C. Hass, Chief
Vehicle Emissions Control Division

1978 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer Sandtana Mini-Motor Executive Order No. A-145 Page 1
Homes
 Engine Family 2OR (TC) Engine (CID) 133.6

ABBREVIATIONS

Distributor

C-Centrifugal Advance
 V-Vacuum Advance
 VR-Vacuum Retard
 HEI-High Energy Ignition
 EI-Electronic Ignition
Fuel System
 EFI, FI
 nV-nVenturi Carburetor
 VV-Variable Venturi

Exhaust Emissions Control System

AI-Air Injection
 CAI-Catalyst Air Injection
 CAB-Chamber Air Bleed
 DD-Dual Displacement
 EFI-Electronic Fuel Injection
 EGR-Exhaust Gas Recirculation
 EM-Engine Modification
 EFE-Early Fuel Evaporation
 ESAC-Electronic Spark Advance
 Control
 FI-Fuel Injection

OC-Oxidation Catalyst
 PAI-Pulse Air Injection
 RC-Reduction Catalyst
 TC-Turbo Charged
 TR-Thermal Reactor
 TWC-Three Way Catalyst
 (Feedback Control)
EGR Syst. Service
 I-Inspect, repair/replace
 as needed
 R-Replace

Engine

CM-CT

Model

Sandtana

Transmission

4M

1978 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Passenger Cars Light-Duty Trucks Medium Duty Vehicles

Manufacturer Sandtana Mini-Motor Homes Executive Order No. A-145 Page 2

Engine Family 20R (TC)(Toyota) Engine (CID) 133.6 Engine Code _____

Emission Control System AI, EGR, OC +10%(A/C) Yes No

Eng. Code	Vehicle Models (If Coded see attachment)	Trans	Inertia Weight Class	Distributor Type	Fuel System Type	EGR System	Tune-Up Specification
				Mfgr. Part Number	Mfgr. Part Number	Part No. Service	
CM-CT	Sandtana	4M	4000	19100-38060	21100-38161	25620-38121	(1) Basic Timing (2) Idle Mixture (3) Idle Speed <u>Lean Drop Method</u> Set to the following value at best idle 870M, 920A, RPM turn idle mixture adjusting screw until 800M 850A

Comments: Yes models have special road load HP settings. 24 H.P.
See page 1 for abbreviations and model codes.

Date of Issue 1/23/78 Revisions:

1978 MODEL-YEAR CERTIFICATION APPLICATION CHECK OFF SHEET

INCOMPLETE OR MODIFIED VEHICLES

PASSENGER CARS LIGHT-DUTY TRUCKS MEDIUM-DUTY VEHICLES

Manufacturer Sandton Mini-Motorhomes

Primary Vehicle Manufacturer: Toyota

1. Application Submitted:
 - a. Date Received 16 Jan 78
 - b. Date ARB Response _____
2. Authorized Signature RB
3. Vehicle Description RB
4. California Sales AO
5. Modification to Emission Control System:
 - a. Engine Yes _____ No
 - b. Evaporative Yes _____ No
 - c. Fuel Tanks Yes _____ No
6. Vehicle Parameters:
 - a. Frontal area 41.4 ft.
 - b. Actual R.L. HP 24 HP
 - c. Inertia Weight 4000 lbs.
 - d. Curb Weight 3697 lbs.
7. Test vehicle required Yes _____ No
8. Fill pipe Specification Compliance al
9. Test Vehicle Data. al
10. Confirm Test Lab. al
11. Warranty Statements 50,000 miles or 5 years al
12. Statement that test and production vehicles are identical. _____
13. Evaporative system evaluated:
 - a. Aux. fuel tanks None
 - b. Modifications to O.E.M. NO
14. E.O. number primary vehicle. A-14

Engine Family Toyota 20RTC

Exhaust Emission Control System** AI EBR OC
 Projected Exhaust Emissions at 50,000 Miles (grams/miles)***

Engine Size (CID)	Trans.	Inertia Weight Class	Calibration	Vehicle I.D. Number	HC	CO	NO _x
106.6	4M	4000	CM-ET	107060	0.41(0.9)* 0.2	9.0(17)* 4	1.5(2.0)* 1.7

***Includes a MCCF value of 1.000 and D.F. values of 1.000 1.000 1.000.
 *Numbers in Parenthesis refer to light-duty trucks and medium-duty vehicles except NO_x is 2.3 for medium-duty vehicles.

Executive Order No. A- 145

Application Processed by Al Smythe Jan 30, 78 Date Reviewed by Robert P. Weiss 1/31/78 Date

**Abbreviations

Exhaust Emission Control System

- | | |
|---------------------------------|---|
| AI - Air Injection | ESAC - Electronic Spark Advance Control |
| CAI - Catalyst Air Injection | FI - Fuel Injection |
| CAB - Chamber Air Bleed | OC - Oxidation Catalyst |
| DD - Dual Displacement | PAI - Pulse Air Injection |
| EFE - Early Fuel Evaporation | RC - Reduction Catalyst |
| EFI - Electronic Fuel Injection | TC - Turbocharged |
| EGR - Exhaust Gas Recirculation | TR - Thermal Reactor |
| EM - Engine Modifications | TWC - Three Way Catalyst (Feedback Control) |