

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".

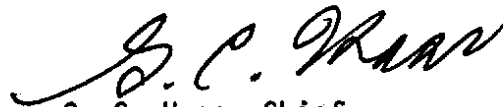
SANDTANA MINI-MOTORHOMES

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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 Sandstone Mini-Motorhomes

Primary Vehicle Manufacturer: Toyota

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

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 <sub>x</sub>
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<sub>x</sub> 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. Weis 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) |