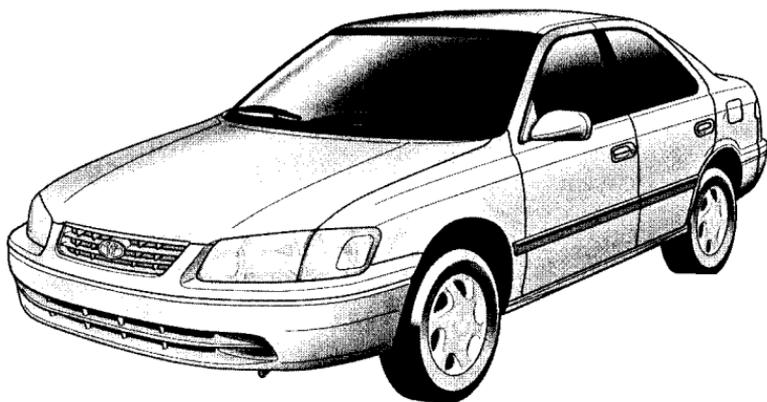




TOYOTA CAMRY CNG



**EMERGENCY
RESPONSE GUIDE**

CNG

FOREWORD

Unlike the conventional gasoline model, the *CAMRY CNG* operates on compressed natural gas.

Natural gas is a colorless, transparent gas that is lighter than air.

This model requires special procedures that must be followed not only when performing ordinary service on the vehicle but also for rescuing people or handling the vehicle in the event that the vehicle is damaged in an accident or a disaster.

Read the contents of this manual carefully to prevent injuries and secondary disasters.

TOYOTA MOTOR CORPORATION

© 1999 **TOYOTA MOTOR CORPORATION**

All rights reserved. This book may not be reproduced or copied, in whole or in part, without the written permission of Toyota Motor Corporation.

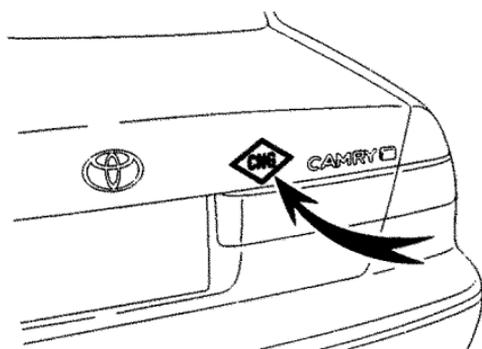
TABLE OF CONTENTS

CHARACTERISTICS OF THE <i>CAMRY CNG</i>	2
FUEL SYSTEM AND PARTS LAYOUT DIAGRAM	4
COMPRESSED NATURAL GAS (CNG)	6
EMERGENCY HANDLING	6
PRECAUTIONS TO BE OBSERVED WHEN SERVICING THE VEHICLE	8

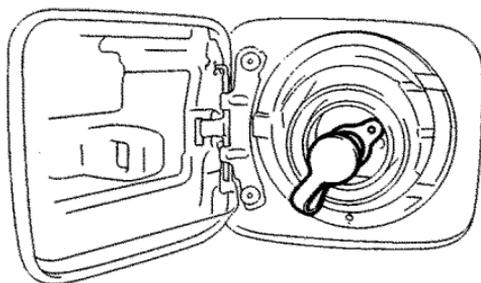
CHARACTERISTICS OF THE *CAMRY CNG*

Exterior differences (that distinguish this model) from the gasoline engine model Camry:

A diamond-shaped "CNG" mark is affixed to the right side of the luggage compartment door.



The fuel inlet consists of a fuel receptacle (with a rubber cap) for refueling.



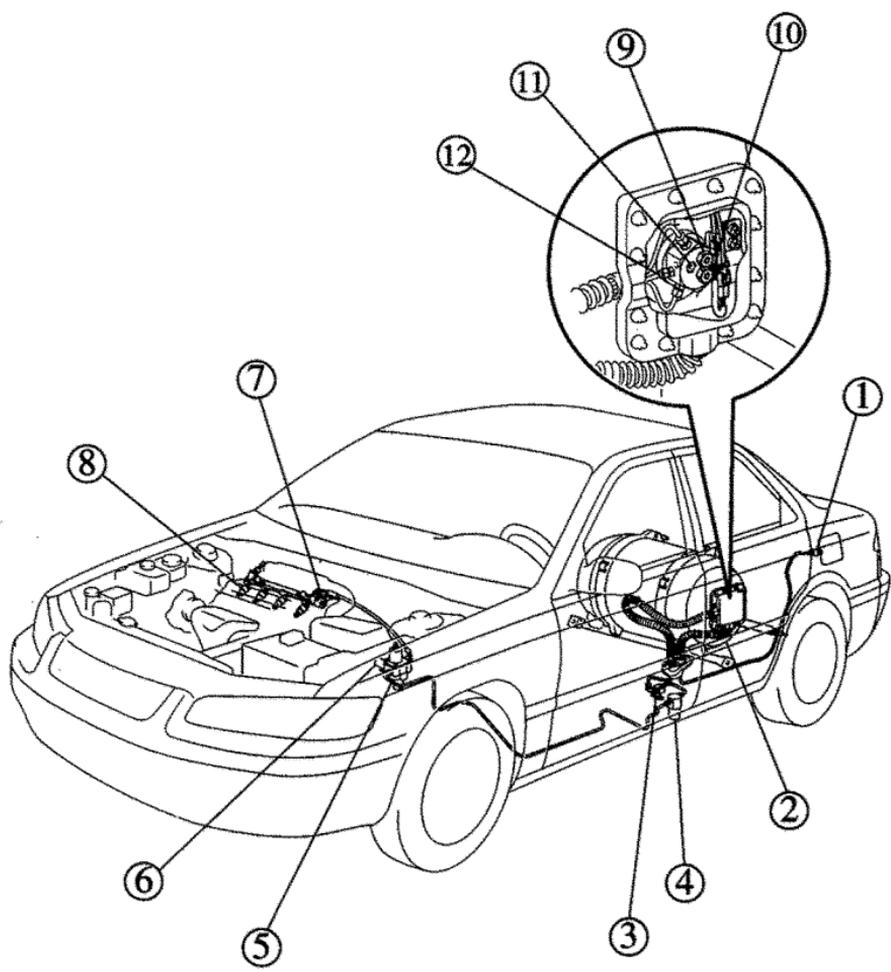
Fuel Tank

When the fuel tank is full, the pressure of the natural gas is approximately 24,800 kPa (3,600 psi).

The fuel tank capacity is equivalent to 135 liters (35.7 gallons, 29.7 Imperial gallons) of water.

The highly compressed gas from the fuel tank undergoes pressure reduction at the regulator. Then, the proper amount of this gas is injected through the injectors into the engine.

FUEL SYSTEM AND PARTS LAYOUT DIAGRAM



- ① Fuel Receptacle
- ② Fuel Tank
- ③ Manual Shutoff Valve
- ④ Fuel Filter
- ⑤ Fuel Pressure Regulator
- ⑥ Fuel Shutoff Valve
- ⑦ Fuel Shutoff Valve
- ⑧ Injector
- ⑨ Inlet Check Valve
- ⑩ Fuel Shutoff Valve
- ⑪ Pressure Relief Valve
- ⑫ Vent Pipe

COMPRESSED NATURAL GAS (CNG)

Natural gas is a colorless, transparent gas with methane as its main component. No matter how much it is compressed at room temperature, it remains in the gaseous state. Because it is lighter than air, it will dissipate upward when released without remaining on the ground.

EMERGENCY HANDLING

In case the vehicle has sustained damage:

- (1) Beware of any fire, sparks, or electrostatic charges before approaching the vehicle.
- (2) Close the manual shutoff valve and check the fuel system near the damaged area for any gas leaks. (If the vehicle is located indoors, close the manual shutoff valve and open the windows and doors to introduce fresh air. Do not carelessly turn on the lights or electric fans because natural gas, which is lighter than air, tends to settle upward.)
- (3) Open all the doors of the vehicle to introduce fresh air, and turn the ignition switch OFF.
- (4) Beware that the gas remaining in the pipes could leak out, depending on the area of the damage, even after the ignition switch has been turned OFF or the manual shutoff valve has been closed.
- (5) Check the fuel system again for any gas leaks. After verifying the absence of any leaks, proceed to the next operation.

In case of a fire in the vehicle:

The method for extinguishing a fire is basically the same as for gasoline-engine vehicles. However, beware that the fuel tank of the *CAMRY CNG* is provided with a pressure relief valve to prevent the fuel tank from bursting. This valve melts at approximately 100°C (212°F) to release the gas into the atmosphere before the tank could burst. (The gas is discharged downward and out of the vehicle through a vent pipe in the floor located ahead of the fuel tank.)

For this reason, if there is a fire behind the vehicle or in the back of the vehicle's cabin, the gas in the tank will be discharged upon the melting of the pressure relief valve. If this gas is ignited, the fire could become even more extensive. Take this factor into consideration if the fire-fighting operation takes longer time than anticipated, and take appropriate measures such as fighting the fire from a distance.

PRECAUTIONS TO BE OBSERVED WHEN SERVICING THE VEHICLE

Ordinary service:

To disassemble and reassemble any components in the fuel system, work in an area that is well-ventilated and pay particular attention to any fire, sparks, lights, and power switches. (Provide proper ventilation to prevent the natural gas, which is lighter than air, from settling in the upper indoor areas.)

To eliminate the gas remaining in the fuel pipes, close the manual shutoff valve, start the engine, and allow the engine to stop on its own after the gas pressure is depleted. Then, proceed with the disassembly work.

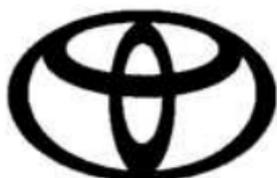
After reassembling any components in the fuel system, gradually open the manual shutoff valve, and check the system for any gas leaks following the procedure given in the repair manual.

Servicing a damaged vehicle:

Just as with ordinary service, work in an area that is well-ventilated and pay particular attention to any fire, sparks, lights, and power switches.

Carefully check the fuel system for any gas leaks, and after verifying the absence of any leaks, proceed to the operation.

The discharge of natural gas into the atmosphere could lead to ignition or explosion, which is harmful to the environment. Therefore, to minimize the amount of discharge, do so only to the extent that is absolutely necessary for performing an inspection or repair.



TOYOTA

**OVERSEAS SERVICE DIVISION
TOYOTA MOTOR CORPORATION**

Printed in Japan

CAMRY CNG