

FOREWORD

This manual has been prepared to familiarize you with the new features of the 1990 model year vehicles, with the exception of the new Celica.

MR2 and Van are not contained in this manual because 1990 models of these vehicles will not be produced.

For new features of the Celica and for detailed service specifications and repair procedures of each 1990 model year vehicle, refer to the following manuals:

Manual Name	Pub. No.
1990 Celica New Car Features	NCF056U
1990 model Repair Manuals	{ Refer to the respective located Pub. No.
1990 model Electrical Wiring Diagram Manuals	

This information is the most up-to-date at the time of publication. However, Toyota reserves the right to make changes without prior notice.

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General 1990 Features

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GENERAL 1990 FEATURES

DESCRIPTION

The following changes are made simultaneously in some models for the 1990 model year.

- (1) : Door-mounted automatic belts with manual lap belts are made standard equipment for front seat belts for the U.S.
- (2) : For Canada, a daytime running light system, which lights the headlights and taillights during daylight hours, is used to improve vehicle visibility from the outside during the daytime.
- (3) : In vehicles which were previously equipped with the electronically controlled door lock control system, in which all the doors were unlocked by operating the key in the lock of the driver's door, the system is changed to the 2-operation type system used in the Cressida. In this system, operating the driver's door lock one time unlocks only the driver's door, while operating the driver's door lock twice in succession unlocks the other doors.

Models in which the above changes have been made are shown in the following table.

Model	Tercel	Corolla	Camry	Cressida	Toyota Supra	Truck/4Runner	Land Cruiser
Item							
(1)	○	○	○	—	—	—	—
(2)	○	○	○	○	○	○	—
(3)	—	○	○	○*	○	—	—

*: Use of the 2-operation type unlock system was begun in the Cressida for the 1990 model year.

►Information of Type and Application of Passive Restraint System (Only for U.S.A.)

Model	Tercel	Corolla	Camry	Cressida	Toyota Supra	Truck/4Runner	Land Cruiser
'90 Model	M	M	E* ¹	E* ²	A	—	—
'89 Model	—	—	E	E	—	—	—

M: Mechanical Type (Driver and Passenger)

E*¹: Vehicle speed signal from August '89

E: Electronic Type (Driver and Passenger)

E*²: Vehicle speed signal from January '90

A: SRS Airbag (Driver)

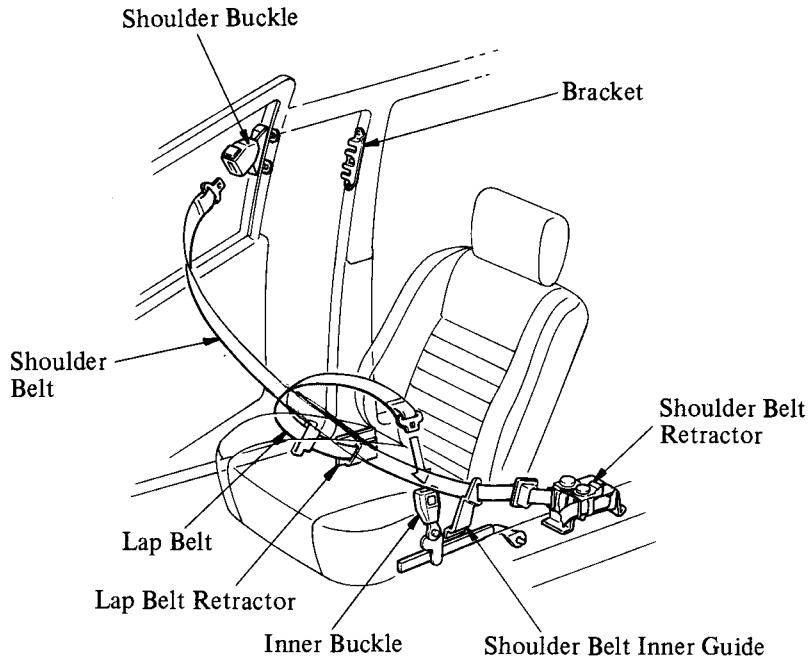
FRONT SEAT BELT

Door mounted automatic belts with manual lap belt are standard equipment in all Tercel and Corolla models for the U.S.

The shoulder belts are two-point ELR (Emergency Locking Retractor) belts. The shoulder belt retractors are mounted in the bottom of the rear console box. The shoulder belt anchorages are mounted on the door frames and the shoulder belts can be connected or disconnected using the buckles. A bracket is provided in each of the center pillars which assures the rigidity of the shoulder belt anchorages.

The manual lap belts are two-point ALR (Automatic Locking Retractor) belts. The belt retractors are located at the bottom of the center pillars in the rocker inner panel. The lap belt buckles slide fore and aft with the seats.

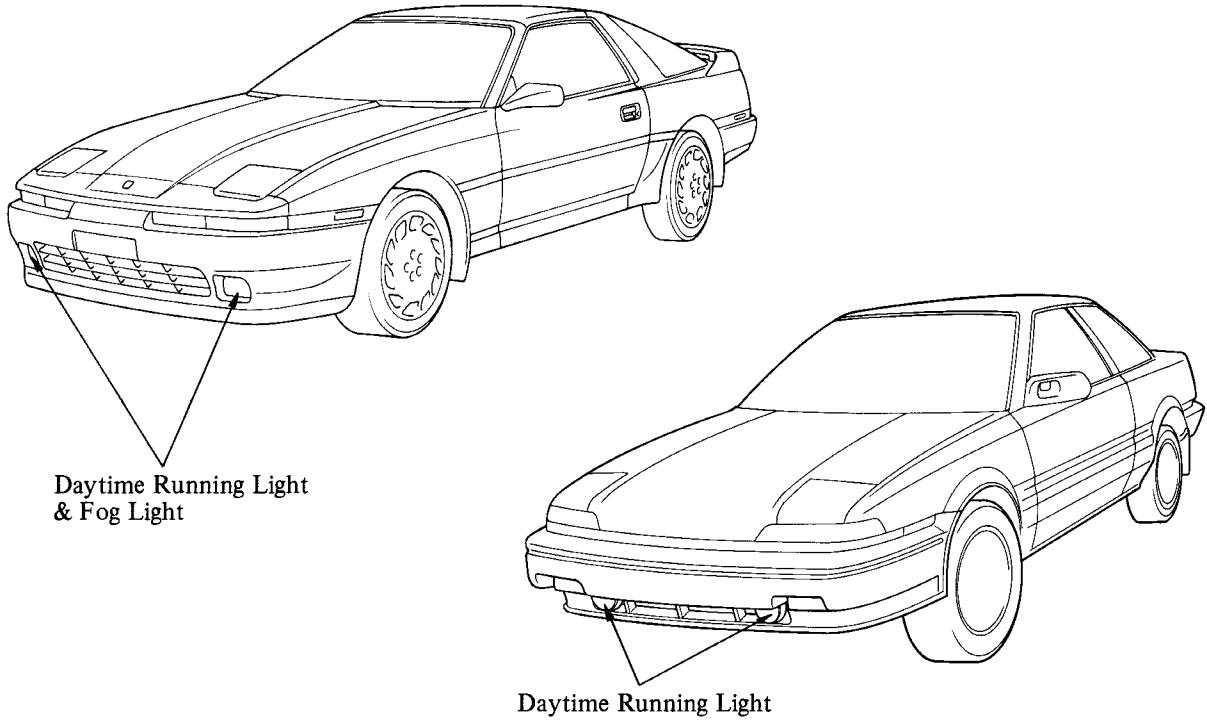
►Construction



DAYTIME RUNNING LIGHT SYSTEM (Only for Canada)

■ GENERAL

The daytime running light system, in which the headlights and taillights are turned on automatically when the engine is started, is standard in all models for Canada. However, in the Toyota Supra, the front fog lights light up instead of the headlights and in the Corolla 2-door coupe, exclusive daytime lights light up.



■ FUNCTION

The daytime running light system operates when the ignition switch is turned to the ON position and the engine is started, with the operation of each switch turning the lights on and off as shown in the table below. (The lights do not go on when the ignition switch is in the ON position only. The lights also stay on in the event that the engine stalls after the engine is started.)

● : Light on as daytime running light, ○ : Lighted up, X : Off

Ignition Switch	Light Control Switch	Dimmer Switch	Fog Light* ¹ Switch	Taillight	Headlight		Fog Light* ¹	Daytime* ² Running Light
					Low	High		
ON	OFF, HOLD	LOW, HIGH	ON	●	●, X* ³	X	●	●
		HF* ⁴	ON	●	X	○	●	●
	TAIL	LOW, HIGH	ON	○	●, X* ³	X	●	●
		HF* ⁴	ON	○	X	○	●	●
	HEAD	LOW	ON	○	○	X	X	X
			ON	○	○	X	○	X
		HIGH, HF* ⁴	ON	○	X	○	X	X

*¹: Toyota Supra only

*²: Corolla 2-Door Coupe only

*³: Toyota Supra and Corolla 2-Door Coupe only

*⁴: High Flash

■ OPERATION

NOTE: Operation of the system is described using the Toyota Supra as an example.

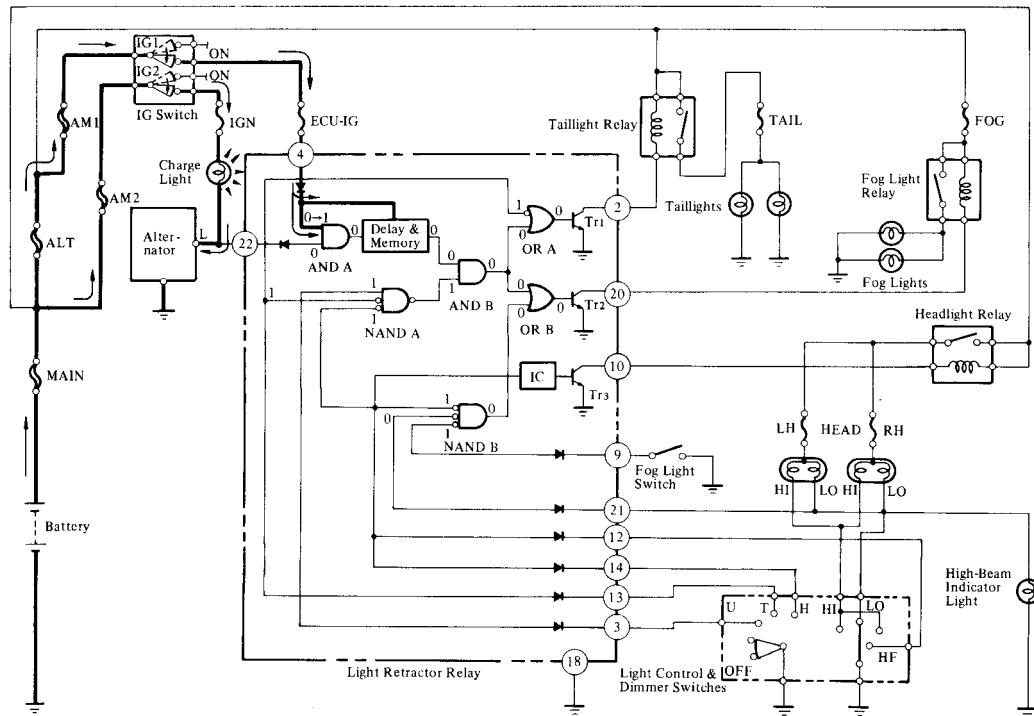
1. Ignition Switch Turned ON (Before Starting Engine)

When the ignition switch is turned off, input and output signals at gates are in the condition shown on the next page.

If the ignition switch is turned on in this condition, the voltage at terminal (4) goes high and the input to AND gate A changes from "0" to "1".

The electric current passing the charge light is grounded via the alternator and the voltage at terminal (22) is held low. Therefore, the output from the AND gate A remains unchanged and the system remains inoperative.

If engine stalls after starting, lights stay on until ignition key is turned off.

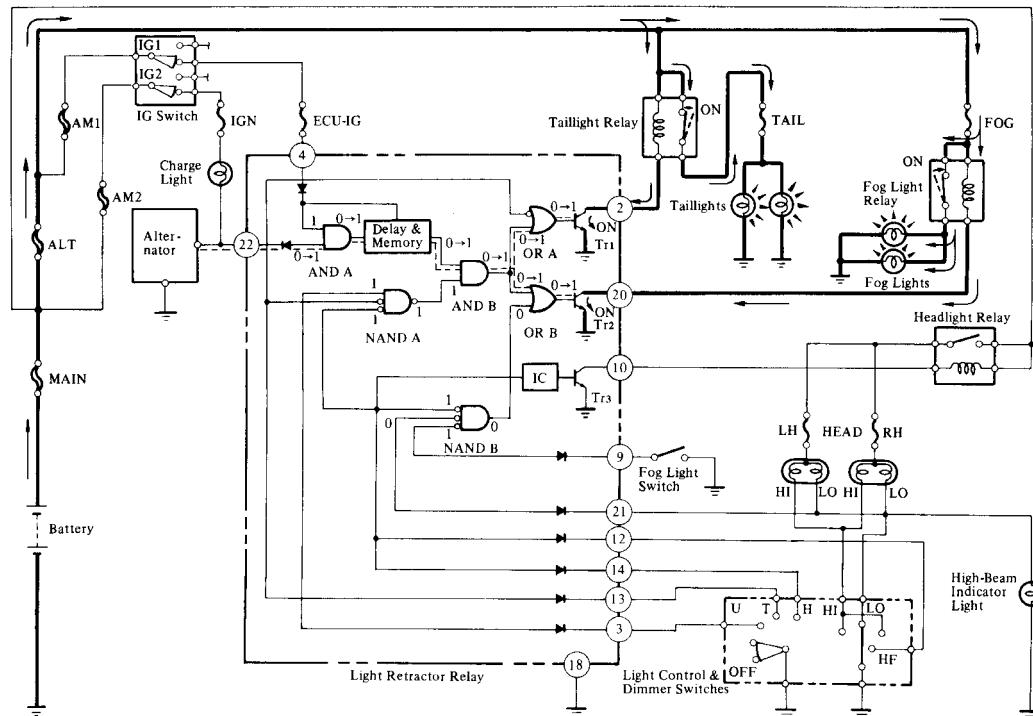


2. After Engine Starting

When the engine is started, the alternator begins charging and the voltage at terminal (22) goes high and the input to AND gate A changes from "0" to "1". Therefore, the output also changes from "0" to "1".

When the "1" signal from AND gate A continues for 0.5 seconds or longer, the delay and memory circuit judges that the engine has started and sends "1" to AND gate B.

Since the output from AND gate B changes from "0" to "1", the output from OR gates A and B also changes from "0" to "1" and causes Tr₁ and Tr₂ to go on respectively. Therefore, the taillight relay and fog light relay are turned on and the daytime running lights are turned on as a result.



3. Headlight (Low Beam) Turned ON

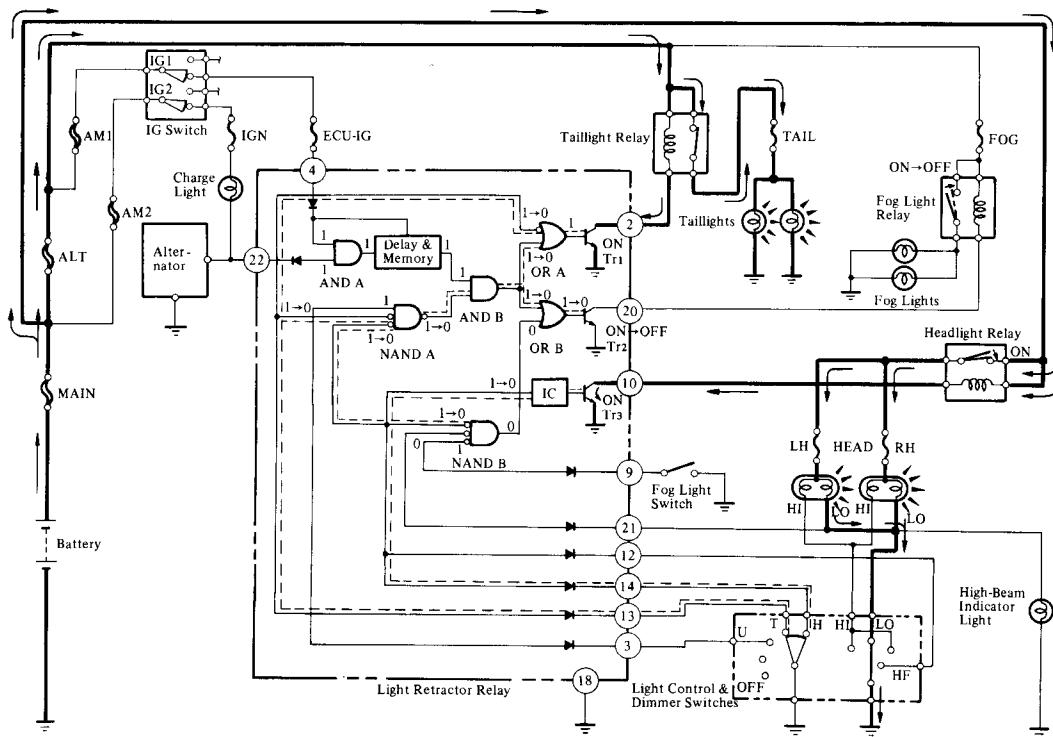
When the light control switch is put in the head position and the dimmer switch is put in low position while the daytime running lights are turned on, the input to NAND gate A from light control switch terminals T and H changes from "1" to "0".

At the same time, the input signal to IC (Integrated Circuit) changes from "1" to "0", so the IC then turns Tr₃ on. As a result, the headlight relay is turned on and the headlights (low beam) are turned on.

When the input to NAND gate A changes to "0", output changes from "1" to "0" and the output of AND gate B also changes from "1" to "0".

Since the output from OR gate B changes from "1" to "0" and causes Tr₂ to go off, the fog light relay goes off and the fog lights (daytime running lights) go off automatically.

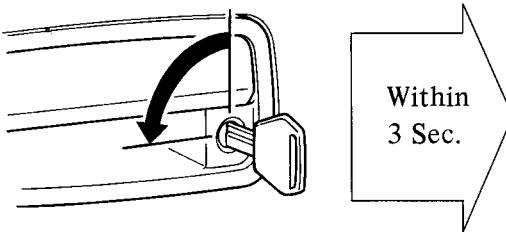
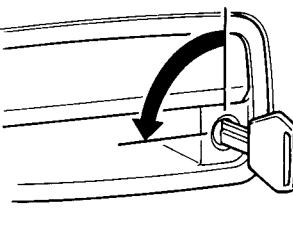
The "0" signal from AND gate B is also supplied to OR gate A. Since the "0" signal from the light control switch (terminal T) is supplied to the other terminal, OR gate A maintains the output "1" and the taillights remain on as a result.



NOTE: Fog lights can be turned on by turning the fog light switch on in this condition.

DOOR LOCK CONTROL SYSTEM

The method of unlocking all the doors when the driver's door lock is operated by the key in models with the electronically controlled door lock control system is changed. Previously, one operation of the driver's door lock with the key unlocked all the doors together with the driver's door, but this has been changed to the method used in the current Cressida, in which the only driver's door is unlocked mechanically when the driver's door lock is operated once. Operating driver's door lock twice in succession unlocks the other doors electronically. Operating the door lock on the passenger side once unlocks all the doors as before. This change is made through changes in the operation of the door lock control relay.

Unlock Operation	1st Time	2nd Time
Item		
Key Cylinder		
Unlock Door	Driver's Door Only	Other Doors
Control	Mechanically	Electrically

- MEMO -

CAMRY

OUTLINE OF NEW FEATURES

The Toyota Camry is a compact class passenger car with a wealth of model variations which is evaluated highly by customers. The following improvements are made for the 1990 model year to raise the Camry's product appeal.

1. 3S-FE Engine

Plastic region tightening is used for the cylinder head bolts for good axial tension. Refer to the 1990 Camry Repair Manual (Pub. No. RM151U) for the plastic region tightening method.

2. 2VZ-FE Engine

- ▶ A knock prevention correction function, which controls the ignition timing according to engine knocking conditions, is added to the ESA (Electronic Spark Advance) system to improve engine output and torque.
- ▶ A fuel pressure control system, which raises the fuel pressure when the engine is restarted while hot, helps to maintain restartability.

3. Drive Shaft

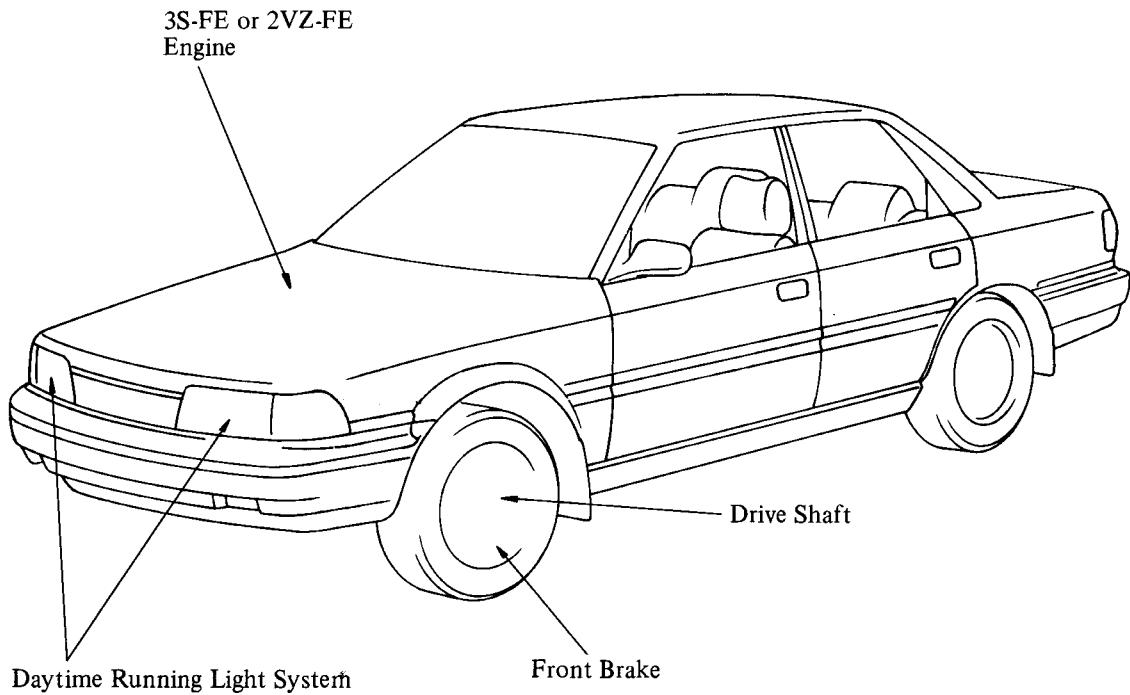
The inboard joint tulip of the drive shafts and the differential side gear shaft are integrated in models equipped with the S51 manual transaxle in order to reduce the number of parts and weight.

4. Brake

The front disc brake rotor diameter in models equipped with the 2VZ-FE engine with A.B.S. (Anti-Lock Brake System) is changed from 10.04 in. (255 mm) to 10.91 in. (277 mm) to improve the braking performance of the front brakes.

5. Others (see GENERAL 1990 FEATURES for details)

- ▶ For Canada, a daytime running light system, which lights up the headlights and taillights during daylight hours, is used to improve a vehicle's visibility from the outside during the daytime.
- ▶ In models with power windows, the door unlock control system is changed from a system where a single key operation of the driver's door lock opened all the doors to the system used in the Cressida where the driver's door is unlocked with one operation of the driver's door lock, and all the doors are unlocked if the driver's door lock is operated two times in succession.



MODEL CODE

VZV21 L G – U W P N K A

BASIC MODEL CODE	
(1)	SV21 : FWD with 3S-FE Engine
	SV25 : All-Trac/4WD with 3S-FE Engine
	VZV21 : FWD with 2VZ-FE Engine

(2)	STEERING WHEEL POSITION L : Left-Hand Drive
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BODY TYPE	
(3)	Blank : Sedan
	G : Wagon

(4) MODEL NAME
U : Camry

BODY TYPE	
(5)	E : Sedan
	W : Wagon

GEARSHIFT TYPE	
(6)	M : 5-Speed Manual P : 4-Speed Automatic

GRADE	
(7)	B : STD
	D : DLX
	N : LE

(8)	ENGINE SPECIFICATION
	K : EFI and DOHC

(9)	DESTINATION
	A : U.S.A. K : Canada

MODEL LINE-UP

DESTINATION		DRIVE TYPE		BODY TYPE		GRADE		5-Speed Manual		4-Speed Automatic		
								\$51	E52	E56F5	A140L	A140E
U.S.A.	FWD	Sedan	STD	SV21L-UEMBKA		SV21L-UEPBKA		SV21L-UEPDKA		SV21L-UEPNKA		
			DLX	SV21L-UEMDKA		SV21L-UEPDKA		SV21L-UEPNKA		SV21L-UEPDKA		
			LE							SV21L-UEPNKA		
		DLX	VZV21L-UEMDKA		VZV21L-UEPDKA		VZV21L-UEPNKA		VZV21L-UEPDKA		VZV21L-UEPNKA	
		LE									VZV21L-UEPNKA	
	All-Trac	Wagon	DLX	SV21LG-UWMDKA		SV21LG-UWPDKA		SV21LG-UWPNKA		SV21LG-UWPDKA		
			3S-FE							SV21LG-UWPNKA		
			DLX	2VZ-FE						SV21LG-UWPNKA		
		Sedan	LE							SV21LG-UWPNKA		
			DLX	3S-FE		SV25L-UEMDKA		SV25L-UEPDKA		SV25L-UEPDKA		
Canada	FWD	Sedan	STD	SV21L-UEMBKK		SV21L-UEPBKK		SV21L-UEPDKK		SV21L-UEPNKK		
			DLX	SV21L-UEMDKK								
			LE	VZV21L-UEMNKK		SV21L-UEPNKK		SV21L-UEPNKK		SV21L-UEPNKK		
		Wagon	DLX	SV21LG-UWMDKK				SV21LG-UWPNKK		SV21LG-UWPNKK		
			LE	2VZ-FE				SV25L-UEMDKK		SV25L-UEPDKK		
4WD		Sedan	DLX	3S-FE								
		LE									SV25L-UEPNKK	

 : Discontinued

NEW FEATURES

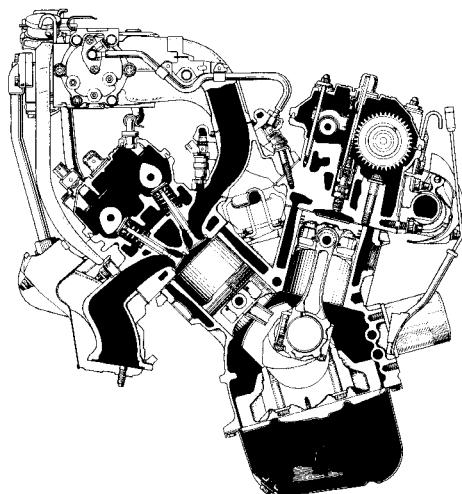
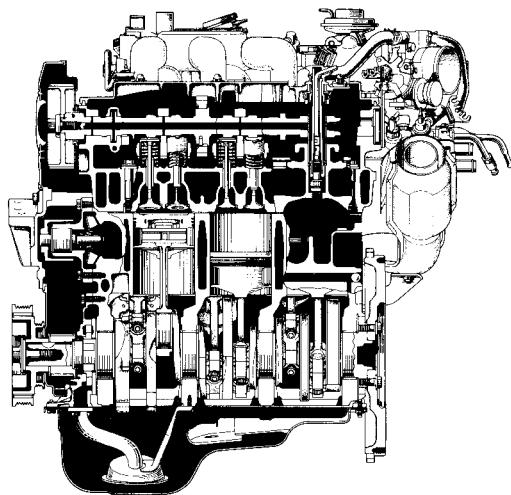
■ 2VZ-FE ENGINE

1. Description

The 2.5 liter, V-6, 24-valve, DOHC 2VZ-FE engine is liked by customers because of its quietness and good performance.

The following improvements are made in the engine for the 1990 model year.

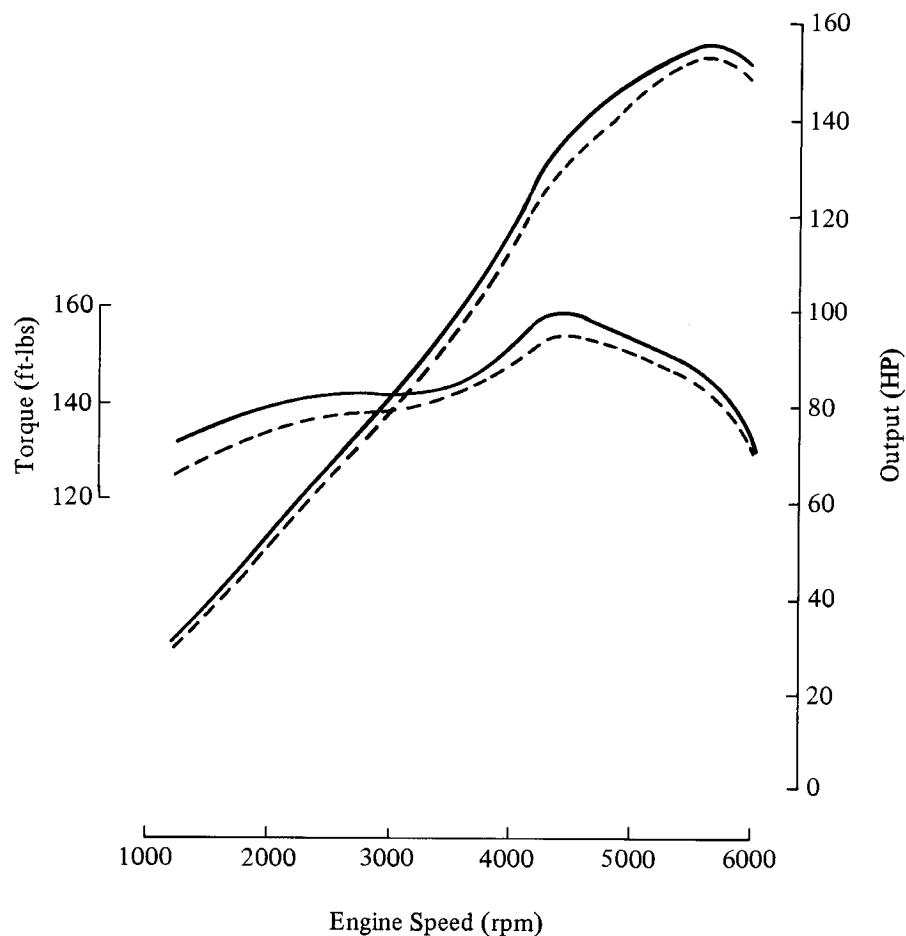
Modification Purpose	Contents
Improve Performance	A knock prevention correction function is added to the ESA to control the ignition timing according to engine knocking conditions.
Maintain Restartability	A fuel pressure control system is used to raise the fuel pressure when the engine is restarted while hot.



2. Engine Specifications and Performance Curve

Engine Item	New	Previous
No. of Cyls. & Arrangement	6-Cylinder, V Type	←
Valve Mechanism	4 Valves, DOHC, Belt & Gear Drive	←
Combustion Chamber	Pentroof Type	←
Manifold	Cross-flow	←
Displacement cu. in. (cc)	153.0 (2508)	←
Bore x Stroke in. (mm)	3.44 x 2.74 (87.5 x 69.5)	←
Compression Ratio	9.0 : 1	←
Max. Output (SAE-NET)	156 HP @ 5600 rpm	153 HP @ 5600 rpm
Max. Torque (SAE-NET)	160 ft-lbs @ 4400 rpm	155 ft-lbs @ 4400 rpm
Fuel Octane Number (RON)	96	91

— New
- - - Previous



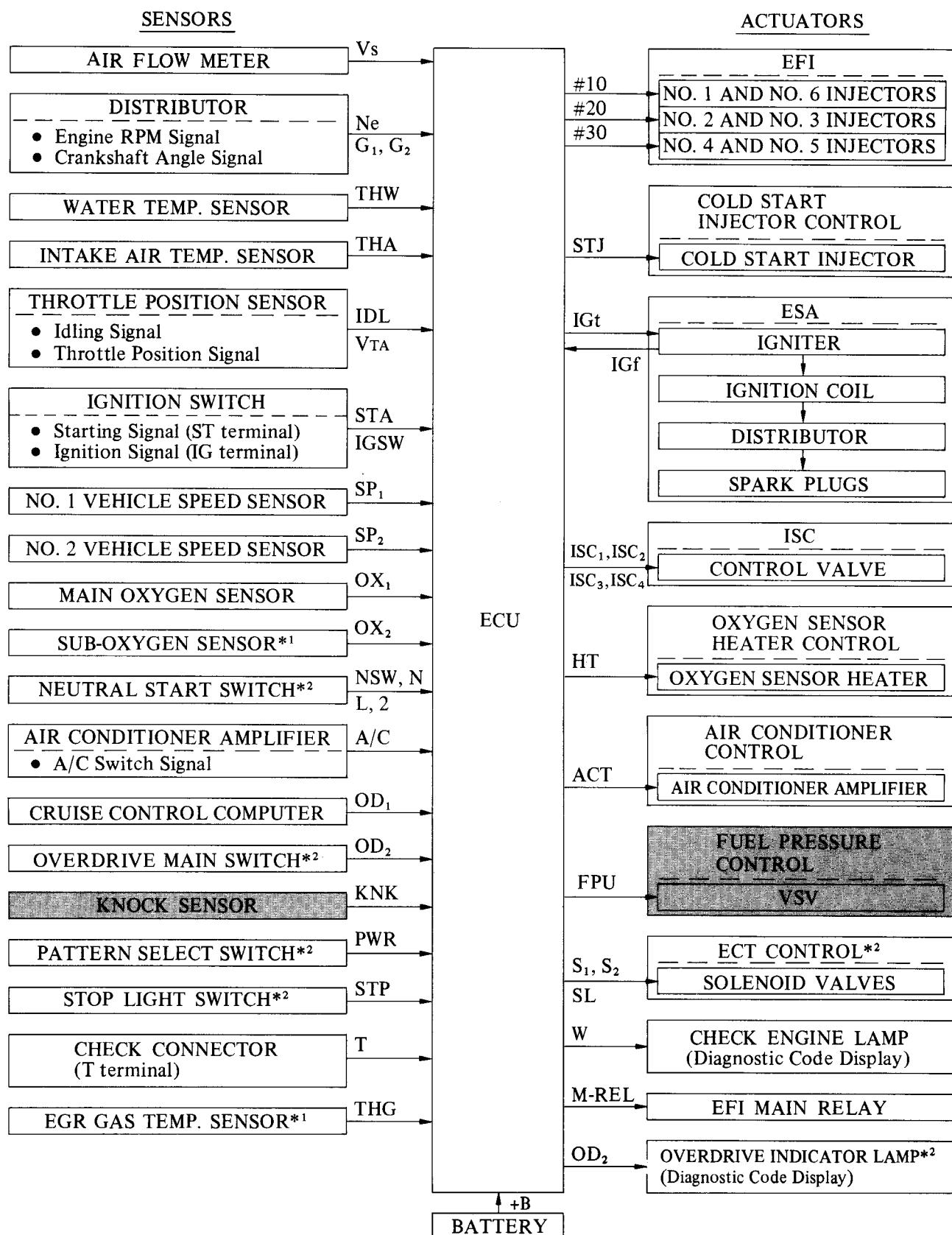
3. TCCS (TOYOTA Computer-Controlled System)

The following table is a comparison of the TCCS engine control systems between the new 2VZ-FE engine and previous 2VZ-FE engine.

Engine System	New	Previous
EFI (Electronic Fuel Injection)	An L-type EFI system is used, which directly detects the intake air volume with a vane type air flow meter. The fuel injection system is a 3-group type.	←
Cold Start Injector Control	When the coolant temperature is between 71.6°F and 95°F (22°C and 35°C), the injection duration of the cold start injector is controlled by the ECU. At 71.6°F (22°C) or lower, it is controlled by the start injector time switch and the ECU.	←
ESA (Electronic Spark Advance)	Ignition timing is determined by the ECU based on signals from various sensors. In vehicles equipped with automatic transaxle, the torque control compensation during gear shifting is used to provide smooth engagement of brakes and clutches. Corrects ignition timing in response to engine knocking. (☞ Page 72)	← ← ← N.A.
ISC (Idle Speed Control)	A step motor type ISC is used, which controls the fast idle and idle speeds.	←
Oxygen Sensor Heater Control	Maintains the temperature of the oxygen sensor at an appropriate level to increase accuracy of detection of the oxygen concentration in the exhaust gas.	←
Air Conditioner Control	By controlling the air conditioner compressor in accordance with the throttle valve opening angle and the vehicle speed, drivability is maintained.	←
Fuel Pressure Control	Maintains restartability by controlling the fuel pressure. (☞ Page 72)	N.A.
Diagnosis	When a malfunction occurs, the ECU diagnoses and stores code in memory. 17 diagnostic items (19 for California) are monitored by the ECU. (☞ Page 73)	15 diagnostic items (17 for California) are monitored by the ECU.
Fail-Safe	When a malfunction occurs, the ECU stops or controls the engine according to the data stored in memory.	←

System Construction

The TCCS is the same as in the previous model with the exception of the items indicated.



*¹: Applicable only to California specification vehicles.

*²: Applicable only to automatic transaxle models.

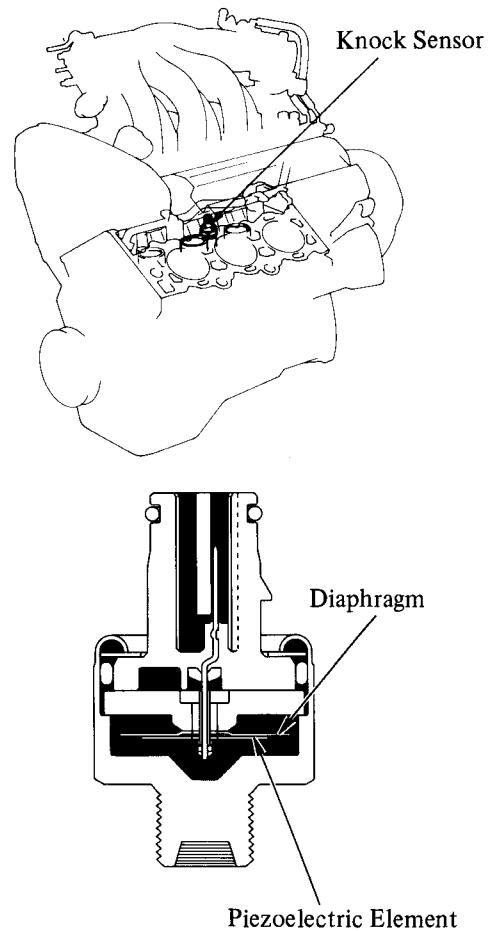
ESA (Electronic Spark Advance)

A knock sensor is mounted between the right and left banks of the cylinder block in the new 2VZ-FE engine.

This sensor detects if the engine is knocking or not and also detects the strength of the knocking from the vibrations of the cylinder block.

This ESA includes a knock prevention correction function which corrects the ignition timing according to the engine knocking conditions. This correction prevents excessive knocking while at the same time improving engine performance and providing good fuel economy.

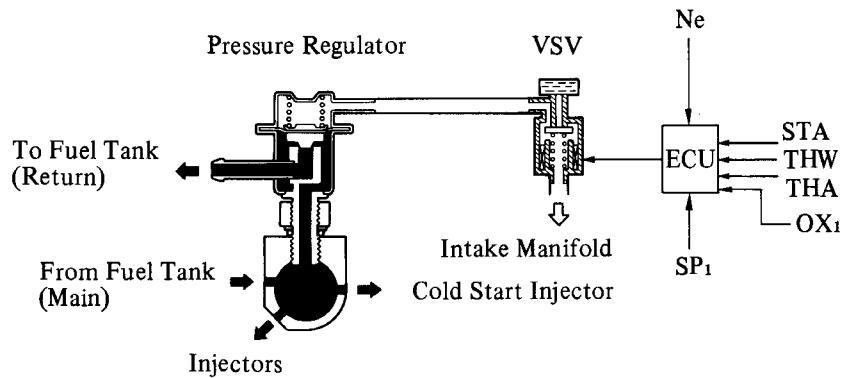
The construction and operation of the knock sensor as well as the contents of knock prevention correction control are the same as for the 3S-GTE engine. However, fuel judgment is not included. For details, see the Celica All-Trac/4WD New Car Features (Pub. No. NCF033U).



Fuel Pressure Control

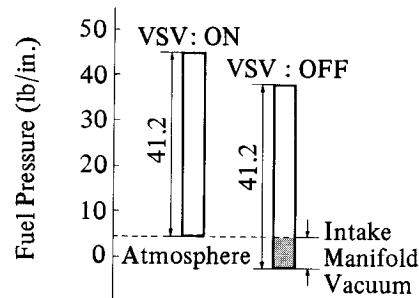
1) General

This system is the same as that used in the 4A-GE engine for the Corolla. It includes a VSV in the vacuum line from the intake manifold to the pressure regulator to control the fuel pressure in accordance with whether or not intake manifold vacuum or atmospheric pressure is acting on the diaphragm chamber of the pressure regulator. When the coolant temperature and intake air temperature are higher than predetermined levels during starting, the ECU turns on the VSV and increases the fuel pressure to prevent the fuel percolation, which maintains engine restartability and idling stability.



2) General

When the coolant temperature is 203°F (95°C) or higher and the intake air temperature is 140°F (60°C) or higher and the engine is cranked, the ECU turns on the VSV. When the VSV goes on, atmospheric air is introduced into the diaphragm chamber of the pressure regulator and the fuel pressure becomes higher by the amount of the intake manifold vacuum than the fuel pressure under normal engine operating conditions.



The VSV is turned off when the air-fuel ratio becomes too thin and when the vehicle speed reaches 12.4 mph (20 km/h) or more.

Self-Diagnosis

Due to the use of the knock sensor, diagnostic codes No. 52 and No. 53 have been added. Code No. 11 is also deleted.

Diagnostic codes in the new 2VZ-FE engine are as shown in the table below.

Code No.	Item	Diagnosis	Trouble Area	"CHECK ENGINE" Lamp
12	RPM Signal	No "Ne" or "G" signal to ECU within 2 seconds after the engine has been cranked.	Distributor circuit Distributor Starter signal circuit ECU	ON
13	RPM Signal	No "Ne" signal to ECU when the engine speed is above 1000 rpm.	Distributor circuit Distributor ECU	ON
14	Ignition Signal	No "IGf" signal to ECU 6-8 times in succession.	Igniter and ignition coil circuit Igniter and ignition coil ECU	ON
16	ECT Control Signal in ECU	ECT control in ECU faulty.	ECU	OFF
21	Oxygen Sensor Signal	Deterioration of the main oxygen sensor.	Main oxygen sensor circuit Main oxygen sensor	ON
	Oxygen Sensor Heater Signal	Open or short circuit in main oxygen sensor heater signal (HT).	Main oxygen sensor heater circuit Main oxygen sensor heater ECU	
22	Water Temp. Sensor Signal	Open or short circuit in water temp. sensor signal (THW).	Water temp. sensor circuit Water temp. sensor ECU	ON
24	Intake Air Temp. Sensor Signal	Open or short circuit in intake air temp. sensor signal (THA).	Intake air temp. sensor circuit Intake air temp. sensor ECU	ON (Calif. Only)
25* ¹	Air-Fuel Ratio Lean Malfunction	(1) When feedback frequency of air-fuel ratio feedback correction or adaptive control is abnormally high during feedback condition. (2) When air-fuel ratio feedback correction value or adaptive control value continues at the upper (lean) or lower (rich) limit for a certain period of time or adaptive control value is not renewed for a certain period of time. (3) Open or short circuit in oxygen sensor signal.	Injector circuit Injector Fuel line pressure Ignition system Oxygen sensor circuit Oxygen sensor Air flow meter Water temp. sensor ECU	ON (Calif. Only)
			Injector circuit Injector Fuel line pressure Cold start injector Air flow meter Water temp. sensor ECU	
			Injector circuit Injector Fuel line pressure Cold start injector Air flow meter Water temp. sensor ECU	
26* ²	Air-Fuel Ratio Rich Malfunction		ON (Calif. Only)	

Code No.	Item	Diagnosis	Trouble Area	“CHECK ENGINE” Lamp
27*2	Sub-oxygen Sensor Signal	Open or short circuit in sub-oxygen sensor signal (O ₂).	Sub-oxygen sensor circuit Sub-oxygen sensor ECU	ON
31	Air Flow Meter Signal	Open circuit in V _c signal or short circuit between V _s and E ₂ when idle contacts are closed.	Air flow meter circuit Air flow meter ECU	ON
32	Air Flow Meter Signal	Open circuit in E ₂ or short circuit between V _c and V _s .	Air flow meter circuit Air flow meter ECU	ON
41	Throttle Position Sensor Signal	Open or short circuit in throttle position sensor signal (V _{TA}).	Throttle position sensor circuit Throttle position sensor ECU	ON (Calif. Only)
42	Vehicle Speed Sensor Signal	No “SP ₁ ” signal to ECU for 8 seconds when engine speed is between 2550 rpm and 4500 rpm and coolant temp. is above 158°F (70°C) except when racing the engine.	No. 1 vehicle speed sensor circuit No. 1 vehicle speed sensor ECU	OFF
43	Starter Signal	No “STA” signal to ECU until engine speed reaches 800 rpm with vehicle not moving.	Ignition switch circuit Ignition switch ECU	OFF
52	Knock Sensor Signal	Open or short circuit in knock sensor signal (KNK).	Knock sensor circuit Knock sensor ECU	ON
53	Knock Control Signal in ECU	Knock control in ECU faulty.	ECU	OFF
71*2	EGR System Malfunction	EGR gas temp. below predetermined level during EGR operation. Open circuit in EGR gas temp. sensor signal (THG).	EGR system EGR gas temp. sensor circuit EGR gas temp. sensor ECU	ON
51	Switch Condition Signal	No “IDL” signal or No “NSW” or “A/C” signal to ECU, with the check terminals E ₁ and T shorted.	A/C amplifier A/C switch circuit Neutral start switch circuit Neutral start switch Throttle position sensor circuit Throttle position sensor Accelerator pedal and cable ECU	OFF

*1: No. (1) and (2) in the diagnostic contents of codes No. 25 and 26 apply to California specification vehicles only, while (3) applies to all models.

*2: Applicable only to California specification vehicles.

Fail-Safe

The following two items are added to the previous items.

1) ECT Control System Malfunction

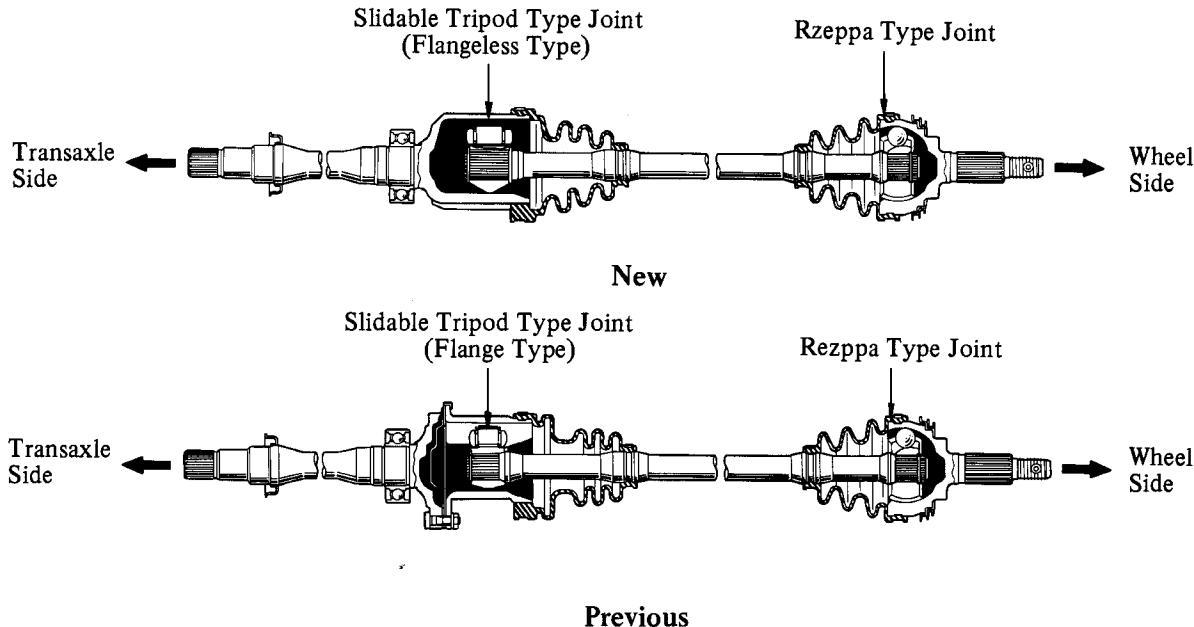
If trouble develops in the ECT control system in the ECU, the transmission will not operate properly. At this time, the ECU prevents engine torque control correction by the ESA.

2) Knock Sensor or Knock Control System Malfunction

If the knock sensor circuit becomes open or shorted, or if trouble develops in the knock control system in the ECU, the ECU corrects ignition timing to the maximum retard condition of the knock prevention correction to prevent knocking.

■ DRIVE SHAFT

The inboard joint in models equipped with the S51 manual transaxle is changed from the flange type, with separate joint tulip and differential side gear shaft to the flangeless type, in which these parts are integrated. This design helps to simplify the parts and reduce weight. Furthermore, the combination of the slidable tripod type inboard joint and rzeppa type outboard joint is not changed.



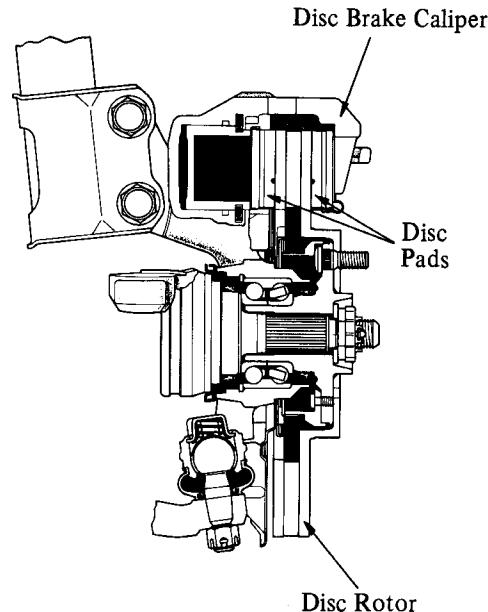
■ BRAKE

The front brake disc rotor in models equipped with the 2VZ-FE engine with A.B.S. (Anti-Lock Brake System) is made larger.

The sizes of the disc brake caliper and disc pad are unchanged from the previous model.

►Disc Rotor Specifications●

Item	Outer Diameter
Model	
New	10.91 in. (277 mm)
Previous	10.01 in. (255 mm)



► CAMRY

Item		Area	U.S.A.		
Body Type			Sedan		
Vehicle Grade		STD	DLX		
Model Code		SV21L-UEMBKA	SV21L-UEPBKA	SV21L-UEMDKA	SV21L-UEPDKA
Engine	Engine Type	3S-FE	←	←	←
	Valve Mechanism	4 Valves, DOHC	←	←	←
	Bore x Stroke	in. (mm)	3.39 x 3.39 (86 x 86)	←	←
	Displacement	cu.in (cc)	121.9 (1,998)	←	←
	Compression Ratio		9.3	←	←
	Carburetor Type		EFI	←	←
	Research Octane No.	RON	91	←	←
	Max. Output (SAE-NET)	HP @ rpm (kW / rpm)	115 @ 5,200 (86/5,200)	←	←
Engine Electrical	Max. Torque (SAE-NET)	ft-lbs @ rpm (Nm / rpm)	124 @ 4,400 (168/4,400)	←	←
	Battery Capacity (5HR)	Voltage & Amp. hr.	12-40, 12-48* ¹	←	12-48, 12-40* ²
	Alternator Output	Watts	840	←	←
	Starter Output	kW	1.0, 1.4* ¹	←	1.4, 1.0* ²
Performance	Max. Speed	mph (km/h)	112 (180)	←	112 (180)
	Max. Cruising Speed	mph (km/h)	96 (155)	90 (145)	96 (155)
	Acceleration	0 to 100 km/h	11.0	13.0	11.0
		sec.	17.5	18.0	17.5
	Max. Permissible Speed	1st Gear	mph (km/h)	39 (49)	40 (65)
		2nd Gear	mph (km/h)	55 (89)	74 (119)
		3rd Gear	mph (km/h)	86 (139)	86 (139)
		4th Gear	mph (km/h)	—	—
Chassis	Turning Diameter	Wall to Wall	ft. (m)	—	—
	(Outside Front)	Curb to Curb	ft. (m)	34.8 (10.6)	←
	Fuel Tank Capacity	U.S. gal (L, Imp.gal.)	15.9 (60, 13.2)	←	←
	Clutch Type		DST	—	DST
Transmission	Transmission Type		S51	A140L	S51
	Transmission Gear Ratio	In First	3.538	2.810	3.538
		In Second	1.960	1.549	1.960
		In Third	1.250	1.000	1.250
		In Fourth	0.945	0.706	0.945
		In Fifth	0.731	—	0.731
		In Reverse	3.153	2.296	3.153
	Counter Gear Ratio		—	0.945	—
	Differential Gear Ratio (FWD)		3.736	←	←
	Center Differential Gear Ratio (4WD)		—	—	—
Major Dimensions & Vehicle Weights	Transfer and REar Differential Gear Ratio (4WD)		—	—	—
	Rear Differential Gear Size (4WD)	in.	—	—	—
	Suspension Type	Front	Mac Pherson Strut	←	←
		Rear	Mac Pherson Strut	←	←
	Stabilizer Bar	Front	STD	←	←
		Rear	—	—	STD
	Brake Type	Front	Ventilated Disc	←	←
		Rear	L.T. Drum	←	←
	Parking Brake Type		L.T. Drum	←	←
	Brake Booster Type and Size	in.	Tandem, 8" + 9"	←	←
Overall	Steering Gear Type		Rack & Pinion	←	←
	Steering Gear Ratio (Overall)		17.4	←	←
	Power Steering Type		Integral Valve	←	←
	Wheel Base	Length	in. (mm)	182.1 (4,625)	←
		Width	in. (mm)	66.5 (1,690)	←
		Height	in. (mm)	54.1 (1,375)	←
	Tread	Front	in. (mm)	58.1 (1,475)	←
		Rear	in. (mm)	56.9 (1,445)	←
		Front	in. (mm)	38.2 (970), 36.9 (937)* ³	←
Curb Weight	Effective Head Room	Rear	in. (mm)	37.0 (939), 35.9 (911)* ³	←
	Effective Leg Room	Front	in. (mm)	42.9 (1,090)	←
		Rear	in. (mm)	34.1 (866.1)	←
	Shoulder Room	Front	in. (mm)	54.3 (1,378)	←
		Rear	in. (mm)	53.7 (1,363)	←
	Overhang	Front	in. (mm)	36.4 (925)	←
		Rear	in. (mm)	43.3 (1,100)	←
	Min. Running Ground Clearance		in. (mm)	5.3 (135)	←
	Angle of Approach	degree		21°00'	←
	Angle of Departure	degree		14°30'	←
Gross Vehicle Weight	Front	lb (kg)	1,642 (745)	1,698 (770)	1,665 (755)
		Rear	lb (kg)	1,047 (475)	—
		Total	lb (kg)	2,689 (1,220)	2,745 (1,245)
	Rear	lb (kg)	—	—	1,069 (485)
		lb (kg)	—	—	—
		Total	lb (kg)	3,880 (1,760)	2,734 (1,240)
Luggage Compartment Capacity	cu. ft. (m ³)	—	—	—	2,789 (1,265)
		—	—	—	—

*¹: Set Option with Cold Area Spec., *²: Set Option without Cold Area Spec., *³: With Moon Roof (Option)

U.S.A.					
Sedan					
DLX				LE	
VZV21L-UEMDKA	VAV21L-UEPDKA	SV25L-UEMDKA	SV25L-UEPDKA	SV21L-UEPNKA	VAV21L-UEPNKA
2VZ-FE	←	3S-FE	←	←	2VZ-FE
←	←	←	←	←	←
3.44 x 2.74 (87.5 x 69.5)	←	3.39 x 3.39 (86 x 86)	←	←	3.44 x 2.74 (87.5 x 69.5)
153.0 (2,508)	←	121.9 (1,998)	←	←	153.0 (2,508)
9.0	←	9.3	←	←	9.0
←	←	←	←	←	←
96	←	91	←	←	96
156 @ 5,600 (116/5,600)	←	115 @ 5,200 (86/5,200)	←	←	156 @ 5,600 (116/5,600)
160 @ 4,400 (217/4,400)	←	124 @ 4,400 (168/4,400)	←	←	160 @ 4,400 (217/4,400)
12-48	←	12-48, 12-40 ^{1/2}	←	←	12-48
←	←	←	←	←	←
←	←	←	←	←	←
127 (205)	121 (195)	112 (180)	109 (175)	112 (180)	121 (195)
109 (175)	103 (165)	96 (155)	90 (145)	←	103 (165)
9.2	10.2	12.6	13.9	13.0	10.2
17.0	17.5	18.1	19.9	18.0	17.5
33 (52)	40 (64)	28 (45)	32 (52)	40 (65)	40 (64)
52 (83)	72 (116)	48 (78)	60 (96)	74 (119)	72 (116)
79 (127)	111 (179)	75 (120)	93 (149)	—	111 (179)
109 (175)	←	—	—	—	—
—	←	—	—	—	—
35.4 (10.8)	←	34.8 (10.6)	—	←	35.4 (10.8)
←	←	←	←	←	←
DST	—	DST	—	—	—
E52	A540E	E56F5	A540H	A140E	A540E
3.230	2.810	3.538	2.810	←	←
2.045	1.549	2.045	1.549	←	←
1.333	1.000	1.333	1.000	←	←
0.972	0.734	1.028	0.734	0.706	0.734
0.820	—	0.820	—	—	—
3.583	2.296	3.583	2.296	←	←
—	1.027	—	1.027	0.945	1.027
3.933	3.625	—	—	3.736	3.625
—	—	4.235	4.285	—	—
—	←	2.928	←	—	—
—	←	6.7	←	←	—
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
Solid Disc	←	←	←	L.T. Drum	Solid Disc
Duo Servo	←	←	←	L.T. Drum	Duo Servo
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
57.9 (1,470)	←	58.1 (1,475)	←	←	57.9 (1,470)
56.7 (1,440)	←	←	←	56.9 (1,445)	56.7 (1,440)
←	←	←	←	←	←
←	←	←	←	—	←
←	←	←	←	←	←
←	←	←	←	—	—
←	←	←	←	—	—
←	←	←	←	—	—
←	←	←	←	—	—
←	←	←	←	—	—
←	←	←	←	—	—
←	←	←	←	—	—
←	←	5.4 (136)	←	5.3 (135)	←
←	←	←	←	←	←
←	←	←	←	←	←
1,863 (845)	1,896 (860)	1,775 (805)	1,841 (835)	1,720 (780)	1,951 (885)
1,102 (500)	1,124 (510)	1,312 (595)	←	1,091 (495)	1,136 (515)
2,965 (1,345)	3,020 (1,370)	3,087 (1,400)	3,153 (1,430)	2,811 (1,275)	3,087 (1,400)
—	—	—	—	—	—
—	—	—	—	—	—
4,123 (1,870)	←	4,266 (1,935)	←	3,880 (1,760)	4,123 (1,870)
—	—	—	—	—	—

Item		Area	U.S.A.			
Body Type		Sedan	Wagon			
Vehicle Grade		LE	DLX		LE	
Model Code		SV25L-UEPNKA	SV21LG-UWPDKA	VZV21LG-UWPDKA	VAV2LG-UWPNA	
Engine	Engine Type	3S-FE	←	2VZ-FE	←	←
	Valve Mechanism	4 Valves, DOHC	←	←	←	←
	Bore x Stroke	in. (mm)	3.39 x 3.39 (86 x 86)	←	3.44 x 2.74 (87.5 x 69.5)	←
	Displacement	cu.in. (cc)	121.9 (1,998)	←	153.0 (2508)	←
	Compression Ratio		9.3	←	9.0	←
	Carburetor Type		EFI	←	←	←
	Research Octane No.	RON	91	←	96	←
	Max. Output (SAE-NET)	HP @ rpm (kW / rpm)	115 @ 5,200 (86/5,200)	←	156 @ 5,600 (116/5,600)	←
	Max. Torque (SAE-NET)	ft-lbs @ rpm (N·m / rpm)	124 @ 4,400 (168/4,400)	←	160 @ 4,400 (217/4,400)	←
	Battery Capacity (5HR)	Voltage & Amp. hr.	12-48, 12-40 ^{*1}	←	←	←
Engine Electrical	Alternator Output	Watts	840	←	←	←
	Starter Output	kW	1.4, 1.0 ^{*1}	←	←	←
	Max. Speed	mph (km/h)	109 (175)	112 (180)	124 (200)	118 (190)
Performance	Max. Cruising Speed	mph (km/h)	90 (145)	87 (140)	106 (170)	99 (160)
	Acceleration	0 to 100 km/h sec.	13.9	13.5	9.5	10.5
		0 to 400 m sec.	19.9	18.7	17.2	17.7
	Max. Permissible Speed	1st Gear mph (km/h)	32 (52)	40 (65)	40 (64)	←
		2nd Gear mph (km/h)	60 (96)	74 (119)	72 (116)	←
		3rd Gear mph (km/h)	93 (149)	—	111 (179)	←
		4th Gear mph (km/h)	—	—	—	—
	Turning Diameter	Wall to Wall ft. (m)	—	—	—	—
		Curb to Curb ft. (m)	34.8 (10.6)	←	35.4 (10.8)	←
	Fuel Tank Capacity	U.S. gal (L, Imp.gal)	15.9 (60, 13.2)	←	←	←
Chassis	Clutch Type		—	—	—	—
	Transmission Type		A540H	A140E	A540E	←
		In First	2.810	←	←	←
		In Second	1.549	←	←	←
	Transmission Gear Ratio	In Third	1.000	←	←	←
		In Fourth	0.734	0.706	0.734	←
		In Fifth	—	—	—	—
		In Reverse	2.296	2.296	←	←
	Counter Gear Ratio		1.027	0.945	1.027	←
	Differential Gear Ratio (FWD)		—	3.736	3.625	←
Dimensions & Vehicle Weights	Center Differential Gear Ratio (4WD)		4.285	—	—	—
	Transfer and Rear Differential Gear Ratio (4WD)		2.928	—	—	—
	Rear Differential Gear Size (4WD)	in.	6.7	—	—	—
	Suspension Type	Front	Mac Pherson Strut	←	←	←
		Rear	Mac Pherson Strut	←	←	←
	Stabilizer Bar	Front	STD	←	←	←
		Rear	STD	←	←	←
	Brake Type	Front	Ventilated Disc	←	←	←
		Rear	Solid Disc	L.T. Drum	Solid Disc	←
	Parking Brake Type		Duo Servo	L.T. Drum	Duo Servo	←
Major Dimensions & Vehicle Weights	Brake Booster Type and Size	in.	Tandem, 8" + 9"	←	←	←
	Steering Gear Type		Rack & Pinion	←	←	←
	Steering Gear Ratio (Overall)		17.4	←	←	←
	Power Steering Type		Integral Valve	←	←	←
	Overall	Length in. (mm)	182.1 (4,625)	183.1 (4,650)	←	←
		Width in. (mm)	67.3 (1,710)	←	←	←
		Height in. (mm)	54.1 (1,375)	54.5 (1,385)	←	←
	Wheel Base	in. (mm)	102.4 (2,600)	←	←	←
	Tread	Front in. (mm)	58.1 (1,475)	←	57.9 (1,470)	←
		Rear in. (mm)	56.7 (1,440)	56.9 (1,445)	56.7 (1,440)	←
Effective Head Room	Front	in. (mm)	38.2 (970), 36.9 (937) ^{*2}	38.3 (972), 37.1 (943) ^{*2}	←	←
	Rear	in. (mm)	37.0 (939), 35.9 (911) ^{*2}	37.7 (958), 36.1 (917) ^{*2}	←	←
	Effective Leg Room	Front in. (mm)	42.9 (1,090)	←	←	←
		Rear in. (mm)	34.1 (866.1)	34.4 (873)	←	←
Shoulder Room	Front	in. (mm)	54.3 (1,378)	←	←	←
		Rear in. (mm)	53.7 (1,363)	←	←	←
Overhang	Front	in. (mm)	36.4 (925)	←	←	←
		Rear in. (mm)	43.3 (1,100)	44.3 (1,125)	←	←
Min. Running Ground Clearance		in. (mm)	5.4 (136)	5.3 (135)	←	←
Angle of Approach		degree	21°00'	←	←	←
Angle of Departure		degree	14°30'	12°30'	←	←
Curb Weight	Front	lb (kg)	1,841 (835)	1,686 (765)	1,874 (850)	1,929 (875)
	Rear	lb (kg)	1,334 (605)	1,224 (555)	1,257 (570)	1,268 (575)
	Total	lb (kg)	3,175 (1,440)	2,910 (1,835)	3,131 (1,420)	3,197 (1,450)
Gross Vehicle Weight	Front	lb (kg)	—	—	—	—
	Rear	lb (kg)	—	—	—	—
	Total	lb (kg)	4,266 (1,935)	4,045 (1,835)	4,288 (1,945)	←
Luggage Compartment Capacity		cu. ft. (m ³)	—	—	—	—

*1 Set Option without Cold Area Spec., *2 With Moon Roof.

Canada					
Sedan					
DLX			LE		
SV21L-UEMDKK	SV21L-UEPDKK	SV25L-UEMDKK	SV25L-UEPDKK	SV21-UEMNKK	SV21L-UEPNKK
3S-FE	←	←	←	←	←
←	←	←	←	←	←
3.39 x 3.39 (86 x 86)	←	←	←	←	←
121.9 (1,998)	←	←	←	←	←
9.3	←	←	←	←	←
←	←	←	←	←	←
91	←	←	←	←	←
115 @ 5,200 (86/5,200)	←	←	←	←	←
124 @ 4,400 (168/4,400)	←	←	←	←	←
12-48	←	←	←	←	←
←	←	←	←	←	←
1.4	←	←	←	←	←
112 (180)	←	←	109 (175)	112 (180)	←
109 (155)	←	←	90 (145)	96 (155)	90 (145)
11.0	13.0	12.6	13.9	11.0	13.0
17.5	18.0	18.1	19.9	17.5	18.0
30.5 (49)	40.4 (65)	28 (45)	32 (52)	30 (49)	40 (65)
55.1 (89)	74.0 (119)	48 (78)	60 (96)	55 (89)	74 (119)
86.4 (139)	←	75 (120)	93 (149)	86 (139)	—
—	—	—	—	—	—
—	—	—	—	—	—
34.8 (10.6)	←	←	←	←	←
←	←	←	←	←	←
DST	—	DST	—	DST	—
S51	A140E	E56F5	A540H	S51	A140E
3.538	2.810	3.538	2.810	3.538	2.810
1.960	1.549	2.045	1.549	1.960	1.549
1.250	1.000	1.333	1.000	1.250	1.000
0.945	0.706	1.028	0.734	0.945	0.706
0.731	—	0.820	—	0.731	—
3.153	2.296	3.583	2.296	3.153	2.296
—	0.945	—	1.027	—	0.945
3.736	←	—	—	3.736	←
—	—	4.235	4.285	—	—
—	—	2.928	←	—	—
—	—	6.7	←	—	—
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
←	←	Ventilated Disc	←	←	←
L.T. Drum	←	Solid Disk	←	L.T. Drum	←
L.T. Drum	←	Duo Servo	←	L.T. Drum	←
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
182.1 (4,625)	←	←	←	←	←
←	←	←	←	←	←
54.1 (1,375)	←	←	←	←	←
←	←	←	←	←	←
58.1 (1,475)	←	←	←	←	←
56.9 (1,445)	←	56.7 (1,440)	←	56.9 (1,445)	←
3.82 (970), 36.9 (937) ³	←	←	←	←	←
37.0 (939), 35.9 (911) ³	←	←	←	←	←
←	←	←	←	←	←
34.1 (866.1)	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
←	←	←	←	←	←
43.4 (1,100)	←	←	←	←	←
←	←	5.4 (136)	←	5.3 (135)	←
←	←	←	←	←	←
14°30'	←	←	←	←	←
1,642 (745)	1,698 (770)	1,753 (795)	1,819 (825)	1,642 (745)	1,698 (770)
1,069 (485)	←	1,301 (590)	←	1,080 (490)	←
2,712 (1,230)	2,767 (1,255)	3,035 (1,385)	3,120 (1,415)	2,722 (1,235)	2,778 (1,260)
—	—	—	—	—	—
—	—	—	—	—	—
3,880 (1,760)	←	4,266 (1,935)	←	3,880 (1,760)	←
—	—	—	—	—	—

Item	Area	Canada			
Body Type		Sedan		Wagon	
Vehicle Grade		LE		DLX	
Model Code	VZV21L-UEMNKK	VZV21L-UEPNKK	XV25L-UEPNKK	SV21LG-UEMDKK	
Engine	Engine Type	2VZ-FE	←	3S-FE	←
	Valve Mechanism	4 Valves, DOHC	←	←	←
	Bore x Stroke	in. (mm)	3.44 x 2.74 (87.5 x 69.5)	←	3.39 x 3.39 (86 x 86)
	Displacement	cu.in (cc)	153.0 (2,508)	←	121.9 (1,993)
	Compression Ratio		9.0	←	9.3
	Carburetor Type		EFI	←	←
	Research Octane No.	RON	96	←	91
	Max. Output (SAE-NET)	HP @ rpm (kW / rpm)	156 @ 5,600 (116/5,600)	←	115 @ 5,200 (86 x 86)
	Max. Torque (SAE-NET)	ft-lbs @ rpm (N·m / rpm)	160 @ 4,400 (217/4,400)	←	124 @ 4,400 (168/4,400)
Engine Electrical	Battery Capacity (5HR)	Voltage & Amp. hr.	12-48	←	←
	Alternator Output	Watts	840	←	←
	Starter Output	kW	1.4	←	←
Performance	Max. Speed	mph (km/h)	127 (205)	121 (195)	109 (175)
	Max. Cruising Speed	mph (km/h)	109 (175)	103 (165)	90 (145)
	Acceleration	0 to 100 km/h	9.2	10.2	13.9
		sec.	17.0	17.5	19.9
	Max. Permissible Speed	1st Gear	mph (km/h)	32 (52)	32 (52)
		2nd Gear	mph (km/h)	52 (83)	60 (96)
		3rd Gear	mph (km/h)	79 (127)	93 (149)
		4th Gear	mph (km/h)	109 (175)	—
	Turning Diameter	Wall to Wall	ft. (m)	—	—
	(Outside Front)	Curb to Curb	ft. (m)	35.4 (10.8)	34.8 (10.6)
	Fuel Tank Capacity	U.S. gal (L, Imp.gal.)	15.9 (60, 13.2)	←	←
Chassis	Clutch Type		DST	—	←
	Transmission Type		E52	A540E	A540H
	Transmission Gear Ratio	In First	3.230	2.810	←
		In Second	2.045	1.549	←
		In Third	1.333	1.000	←
		In Fourth	0.972	0.734	←
		In Fifth	0.820	—	←
		In Reverse	3.583	2.296	←
	Counter Gear Ratio		—	1.027	←
	Differential Gear Ratio (FWD)		3.933	3.625	—
	Center Differential Gear Ratio (4WD)		—	—	4.285
	Transfer and REar DriFFerential Gear Ratio (4WD)		—	—	2.928
	Rear Differential Gear Size (4WD)	in.	—	—	6.7
	Suspension Type	Front	Mac Pherson Strut	←	←
		Rear	Mac Pherson Strut	←	←
	Stabilizer Bar	Front	STD	←	←
		Rear	STD	←	←
	Brake Type	Front	Ventilated Disc	←	←
		Rear	Solid Disc	←	←
	Parking Brake Type		Duo Servo	←	←
	Brake Booster Type and Size	in.	Tandem, 8" + 9"	←	←
	Steering Gear Type		Rack & Pinion	←	←
	Steering Gear Ratio (Overall)		17.4	←	←
	Power Steering Type		Integral Valve	←	←
Major Dimensions & Vehicle Weights	Overall	Length	in. (mm)	182.1 (4,625)	←
		Width	in. (mm)	67.3 (1,710)	←
		Height	in. (mm)	54.1 (1,375)	←
	Wheel Base	in. (mm)	102.4 (2,600)	←	←
		Front	in. (mm)	57.9 (1,470)	←
	Tread	Rear	in. (mm)	56.7 (1,440)	←
		Front	in. (mm)	38.2 (970), 36.9 (937)* ¹	←
	Effective Head Room	Rear	in. (mm)	37.0 (939), 35.9 (911)* ¹	←
		Front	in. (mm)	42.9 (1,090)	←
	Effective Leg Room	Rear	in. (mm)	34.1 (866.1)	←
		Front	in. (mm)	54.3 (1,378)	←
	Shoulder Room	Rear	in. (mm)	53.7 (1,378)	←
		Front	in. (mm)	36.4 (925)	←
	Overhang	Rear	in. (mm)	43.3 (1,100)	←
		Front	in. (mm)	—	44.3 (1,125)
	Min. Running Ground Clearance	in. (mm)	5.3 (135)	←	5.4 (136)
	Angle of Approach	degree	21°00'	←	←
	Angle of Departure	degree	14°30'	←	12°30'
Curb Weight	Front	lb (kg)	1,896 (860)	1,929 (875)	1,819 (825)
	Rear	lb (kg)	1,102 (500)	1,124 (510)	1,323 (600)
	Total	lb (kg)	2,998 (1,360)	3,053 (1,385)	3,142 (1,425)
Gross Vehicle Weight	Front	lb (kg)	—	—	—
	Rear	lb (kg)	—	—	—
	Total	lb (kg)	4,090 (1,855)	←	4,266 (1,935)
	Luggage Compartment Capacity	cu. ft. (m ³)	—	—	—

*1: With Moon Roof

