TOYOTA SERVICE BULLETIN

Group: 03 No.: 07 Date: Aug, 14

Rav4

Corrections to Repair Manual RM01N3E

Please ensure these pages are distributed to all relevant staff for their information; and a copy made available for future reference, with the above repair manual.

Section	Title	Paragraph
2GR-FE ENGINE CONTROL SYSTEM	THROTTLE BODY	REMOVAL
		INSTALLATION
2GR-FE ENGINE MECHANICAL	ENGINE ASSEMBLY	REMOVAL
		INSTALLATION

The revised pages listed above are attached.
(The corrected parts are indicated by arrows.)

This Bulletin does not cause the Flat Rate Manual to be changed.

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ON-VEHICLE INSPECTION

1. CHECK THROTTLE BODY

(a) Check the throttle control motor operating sounds.
  (1) Turn the ignition switch to the ON position.
  (2) When depressing the accelerator pedal, check the operating sound of the running motor. Make sure that no friction noise emits from the motor. If friction noise exists, replace the throttle body.

(b) Check the throttle position sensor.
  (1) Connect the intelligent tester to the DLC3.
  (2) Turn the ignition switch to the ON position.
  (3) Turn the intelligent tester main switch on.
  (4) Enter the following menus: Powertrain / Engine and ECT / Data List / Throttle Sensor Position.
  (5) Depress the accelerator pedal. When the throttle valve is fully open, check that the value of "Throttle Sensor Position" is within the specification.

Standard throttle valve opening percentage:
60% or more

NOTICE:

When checking the standard throttle valve opening percentage, the shift lever should be in the N position.

If the percentage is less than 60%, replace the throttle body.

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REMOVAL

1. REMOVE NO. 1 ENGINE UNDER COVER (See page)

2. DRAIN ENGINE COOLANT (See page)

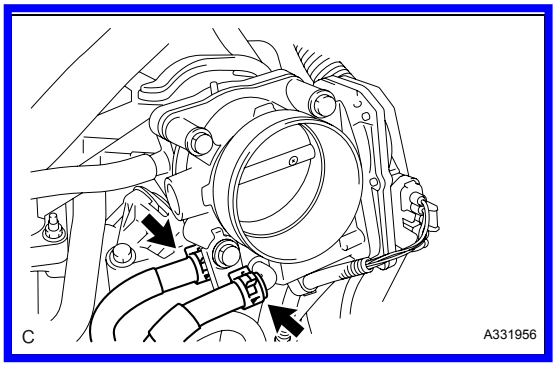
3. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

4. REMOVE V-BANK COVER SUB-ASSEMBLY (See page)

5. REMOVE AIR CLEANER CAP SUB-ASSEMBLY (See page)

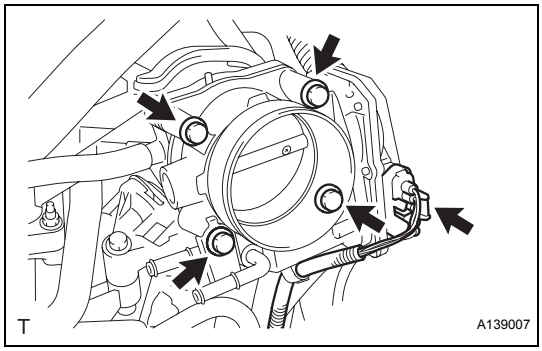
6. REMOVE THROTTLE BODY

(a) Disconnect the 2 water by-pass hoses from the throttle body.



[Corrected]

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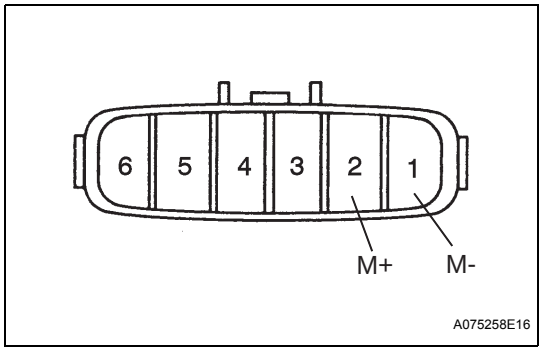


(b) Disconnect the control motor connector.
(c) Remove the 4 bolts, throttle body and wire harness clamp stay.
(d) Remove the gasket from the intake air surge tank.

INSPECTION

1. INSPECT THROTTLE BODY

(a) Measure the resistance of the throttle control motor.
Standard resistance



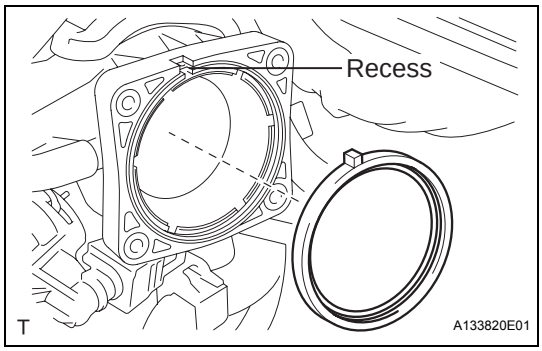
Tester Connection	Condition	Specified Condition
1 (M-) - 2 (M+)	20°C (68°F)	0.3 to 100 Ω

If the result is not as specified, replace the throttle body.

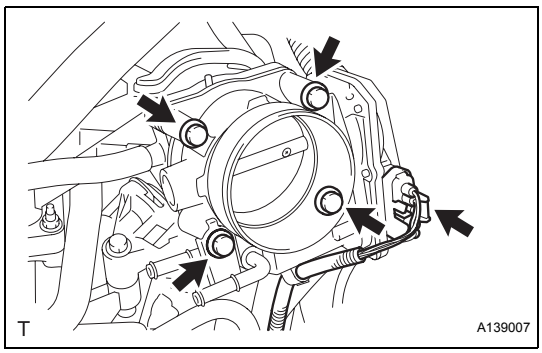
INSTALLATION

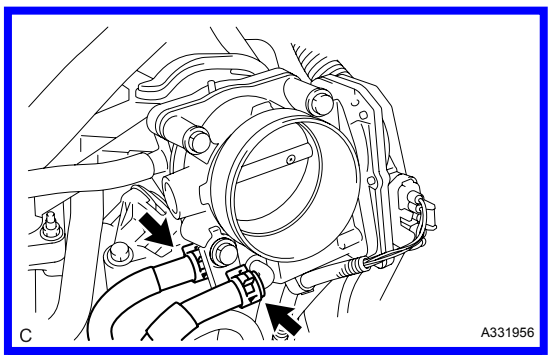
1. INSTALL THROTTLE BODY

(a) Install a new gasket to the intake air surge tank.



(b) Install the throttle body and wire harness clamp stay to the intake air surge tank with the 4 bolts.
Torque: 10 N*m (102 kgf*cm, 7 ft.*lbf)
(c) Connect the control motor connector.





(d) Connect the 2 water by-pass hoses to the throttle body.

2. INSTALL AIR CLEANER CAP SUB-ASSEMBLY (See page)

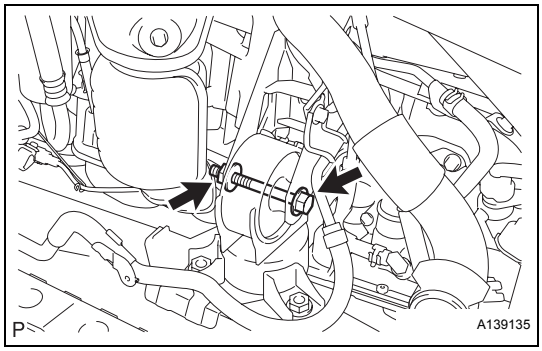
3. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

4. ADD ENGINE COOLANT (See page)

5. INSPECT FOR COOLANT LEAK (See page)

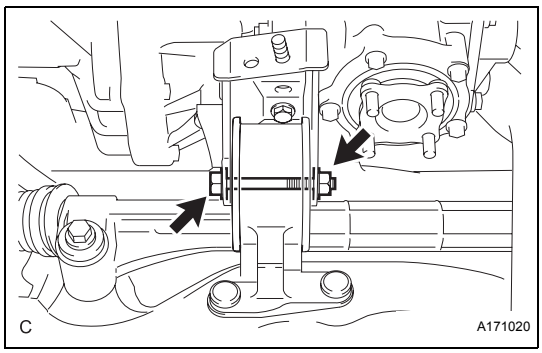
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51. REMOVE FRONT CROSS MEMBER SUB-ASSEMBLY

(a) Remove the bolt, nut and crossmember.



52. REMOVE FRONT SUSPENSION CROSSMEMBER SUB-ASSEMBLY

(a) Remove the bolt and suspension crossmember.

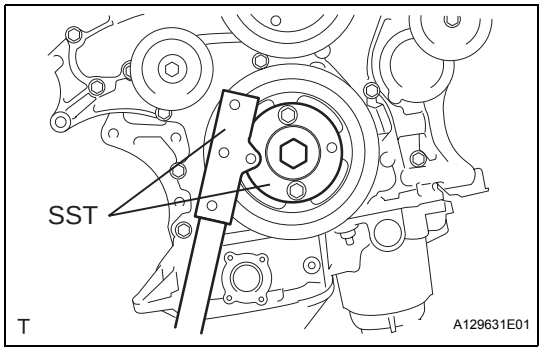
53. REMOVE ENGINE WIRE

(a) Remove the engine wire from the engine.

54. REMOVE STARTER ASSEMBLY (See page)

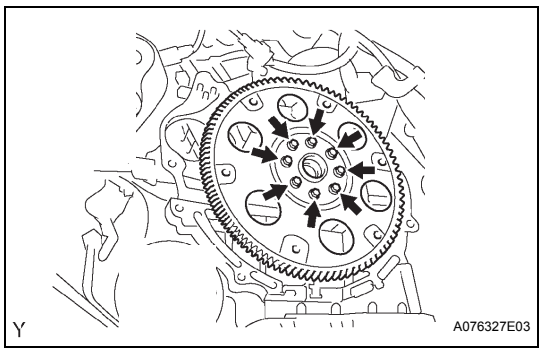
55. REMOVE AUTOMATIC TRANSAXLE ASSEMBLY (See page)

56. REMOVE TRANSFER ASSEMBLY (See page)



57. REMOVE DRIVE PLATE AND RING GEAR SUB-ASSEMBLY

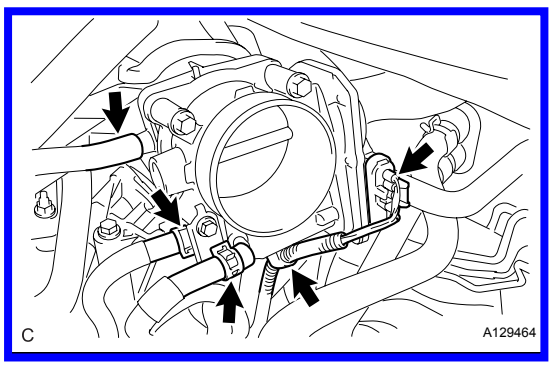
(a) Using SST, hold the crankshaft.
SST 09213-70011 (09213-70020), 09330-00021



(b) Remove the 8 bolts, front spacer, drive plate and rear spacer.
NOTICE:
Do not reuse the bolts.

58. INSTALL ENGINE TO ENGINE STAND

(a) Install the engine to an engine stand. Remove the sling device and chain block from the engine.

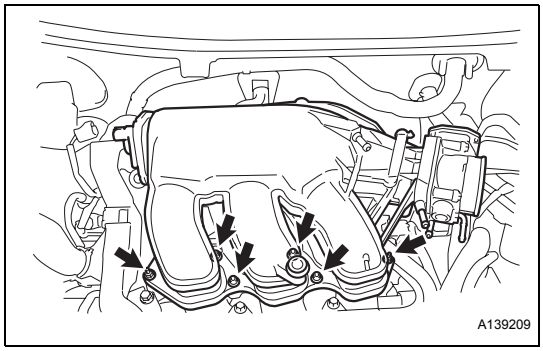


59. REMOVE INTAKE AIR SURGE TANK ASSEMBLY

(a) Disconnect the 2 water by-pass hoses from the throttle body.
(b) Disconnect the vapor feed hose.
(c) Disconnect the throttle body connector and clamp.

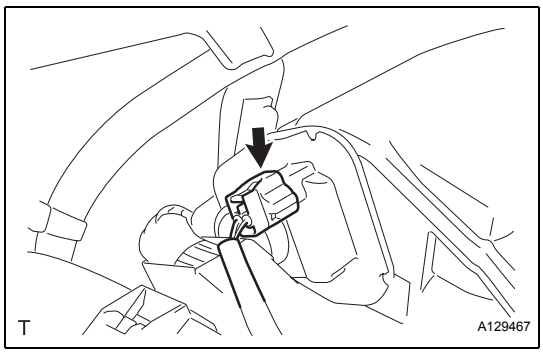
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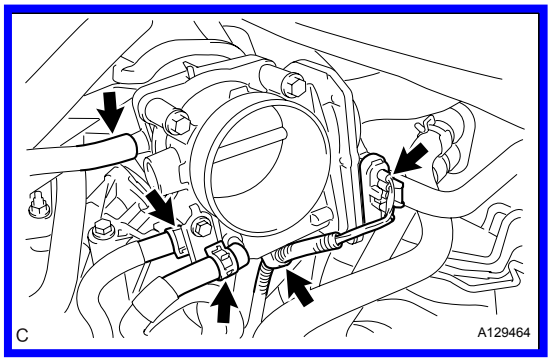


(b) Using a 5 mm hexagon socket wrench, install the 4 bolts and 2 nuts.
Torque: Bolt
18 N*m (184 kgf*cm, 13 ft.*lbf)
Nut
16 N*m (163 kgf*cm, 12 ft.*lbf)

(c) Install the throttle body bracket and No. 1 surge tank stay with the 4 bolts.
Torque: 21 N*m (214 kgf*cm, 15 ft.*lbf)



(d) Connect the connector.
(e) Connect the No. 1 ventilation hose and vacuum hose.

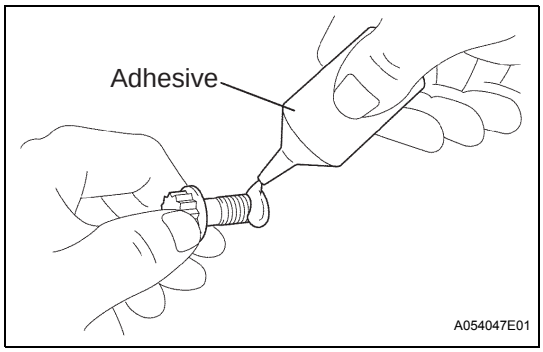


(f) Install the clamp and connect the throttle body connector.
(g) Connect the vapor feed hose.
(h) Connect the 2 water by-pass hoses to the throttle body.

24. REMOVE ENGINE FROM ENGINE STAND

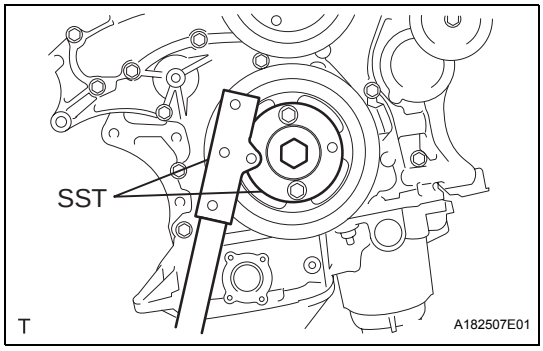
(a) Install a sling device and chain block to the engine.
(b) Remove the engine from the engine stand.

[Corrected]



25. INSTALL DRIVE PLATE AND RING GEAR SUB-ASSEMBLY

(a) Clean the bolt and its hole.
(b) Apply adhesive to 2 or 3 threads of the bolt end.
Adhesive:
Toyota Genuine Adhesive 1324, Three Bond 1324 or equivalent



(c) Using SST, hold the crankshaft.
SST 09213-70011 (09213-70020), 09330-00021
(d) Install the flywheel, drive plate and drive plate spacer on the crankshaft.

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