H150F MANUAL TRANSMISSION / TRANSAXLE MANUAL TRANSMISSION ASSEMBLY(for 1GR-FE) INSTALLATION

PROCEDURE

1.INSTALL RELEASE FORK SUPPORT 31236B

Click hereDrivetrain>CLUTCH>CLUTCH UNIT(for 1GR-FE)>INSTALLATION

2.INSTALL CLUTCH RELEASE FORK SUPPORT BOOT 31237

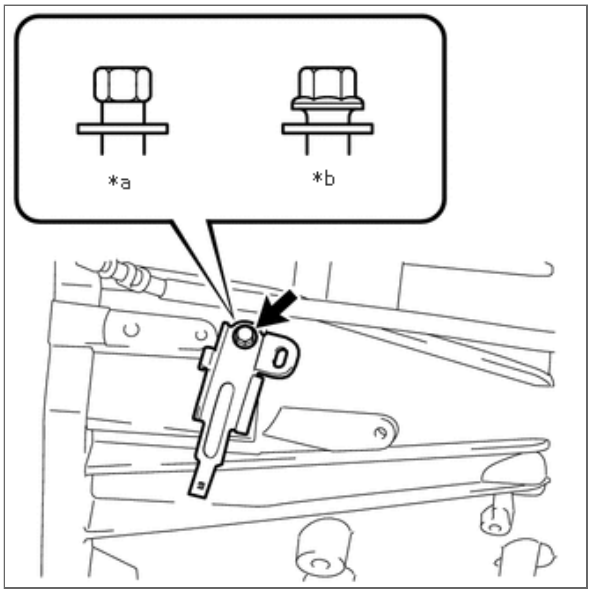
Click hereDrivetrain>CLUTCH>CLUTCH UNIT(for 1GR-FE)>INSTALLATION

3.INSTALL CLUTCH RELEASE FORK SUB-ASSEMBLY 31204

Click hereDrivetrain>CLUTCH>CLUTCH UNIT(for 1GR-FE)>INSTALLATION

4.INSTALL WIRE HARNESS CLAMP BRACKET

a.

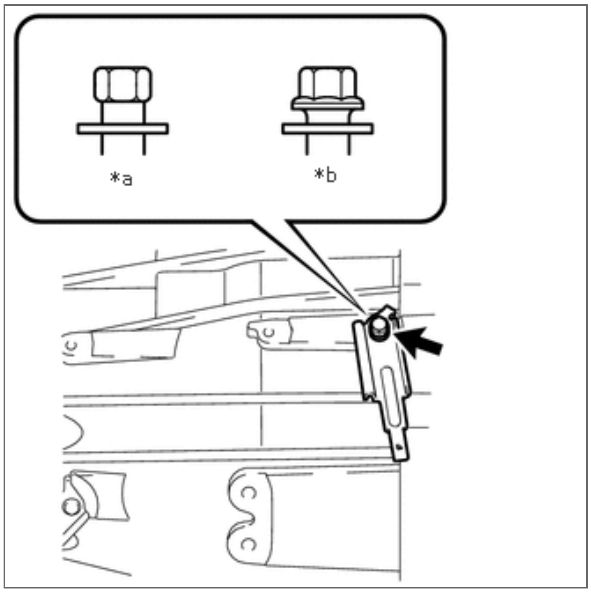


*a	for Type A
*b	for Type B

Install the air fuel ratio sensor bracket LH with the bolt.

Torque:
for Type A : 7.5 N*m (76 kgf*cm, 66 in.*lbf)
for Type B : 12 N*m (122 kgf*cm, 9 ft.*lbf)

b.

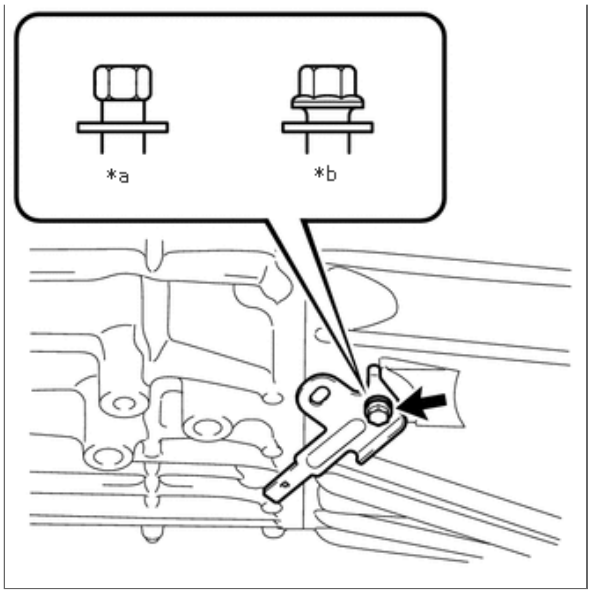


*a	for Type A
*b	for Type B

Install the air fuel ratio sensor bracket RH with the bolt.

Torque:
for Type A : 7.5 N*m (76 kgf*cm, 66 in.*lbf)
for Type B : 12 N*m (122 kgf*cm, 9 ft.*lbf)

c.

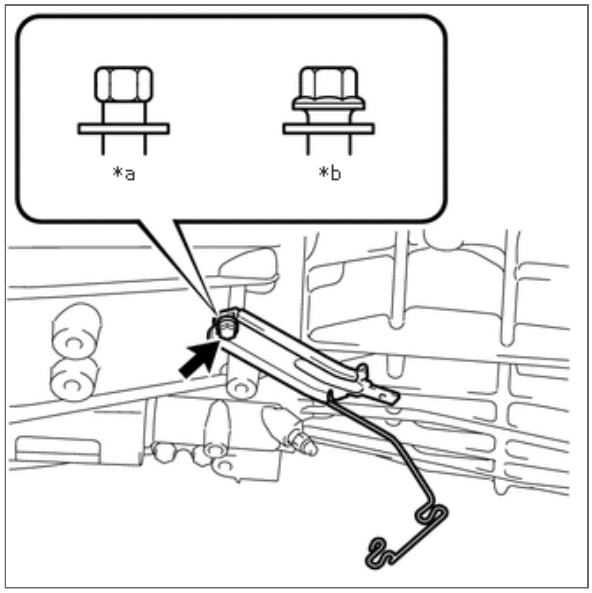


*a	for Type A
*b	for Type B

Install the heated oxygen sensor bracket RH with the bolt.

Torque:
for Type A : 7.5 N*m (76 kgf*cm, 66 in.*lbf)
for Type B : 12 N*m (122 kgf*cm, 9 ft.*lbf)

d.

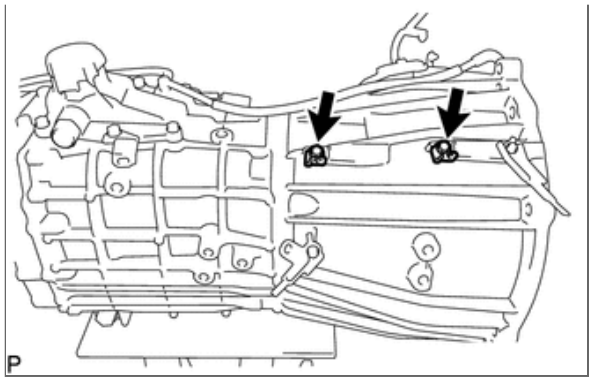


*a	for Type A
*b	for Type B

Install the heated oxygen sensor bracket LH with the bolt.

Torque:
for Type A : 7.5 N*m (76 kgf*cm, 66 in.*lbf)
for Type B : 12 N*m (122 kgf*cm, 9 ft.*lbf)

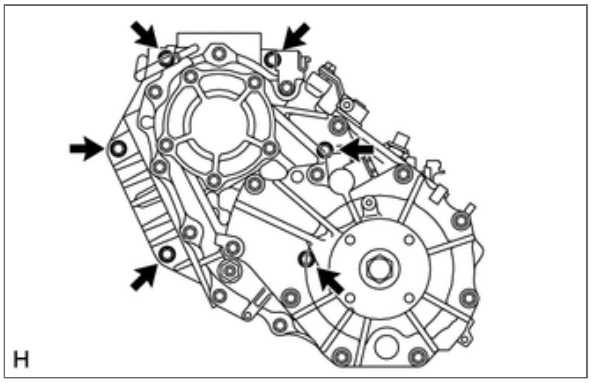
e.



Install the 2 wire harness clamp brackets with the 2 bolts.

Torque:
8.0 N*m (82 kgf*cm, 71 in.*lbf)

5.INSTALL TRANSFER ASSEMBLY



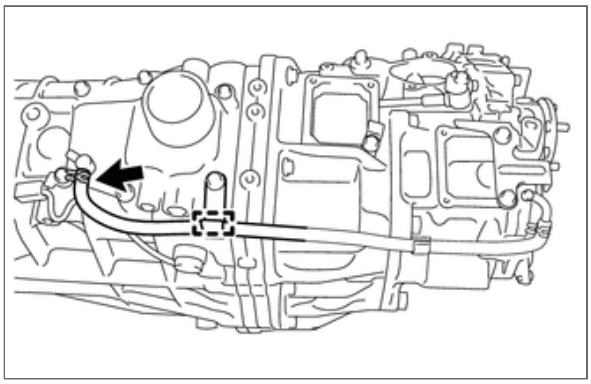
a. Install the transfer assembly to the manual transmission with the 6 bolts.

Torque:

68.6 N*m (700 kgf*cm, 51 ft.*lbf)

6.CONNECT REAR NO. 1 TRANSFER CASE HOSE 36112B

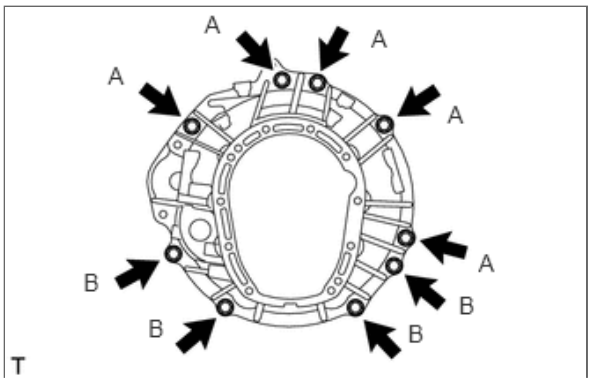
a.



Connect the rear No. 1 transfer case hose to the manual transmission and slide the clip to secure it.

b. Connect the clamp.

7.INSTALL MANUAL TRANSMISSION WITH TRANSFER



a. Install the manual transmission with transfer with the 9 bolts.

Torque:
for Bolt A : 71.6 N*m (730 kgf*cm, 53 ft.*lbf)
for Bolt B : 37.3 N*m (380 kgf*cm, 28 ft.*lbf)

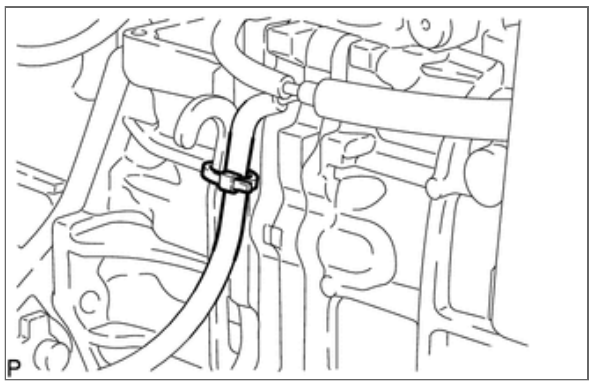
NOTICE:
Make sure that the knock pins are not loose, bent, damaged or scratched, and that the contact surfaces of the engine and manual transmission are flush when installing the manual transmission to the engine.

8.CONNECT WIRE HARNESS

a. Connect the connectors and clamps, and then connect the wire harness to the manual transmission.

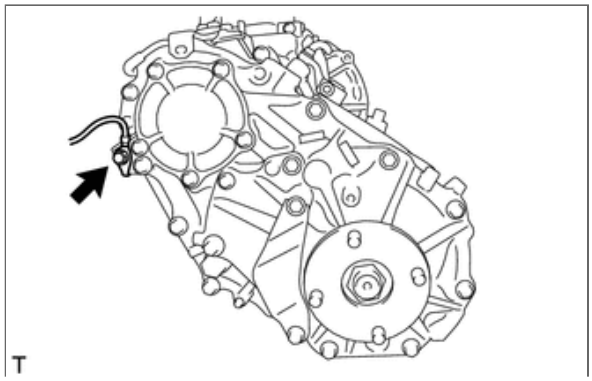
b. Tilt up the manual transmission with transfer.

c.



Install the clamp and connect the wire harness to the manual transmission with transfer.

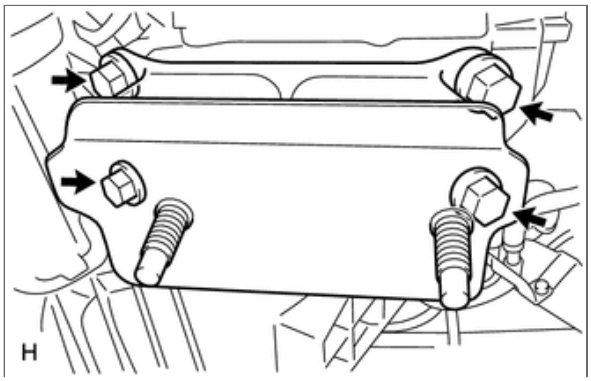
d.



Connect the No. 2 cable bond with the bolt.

Torque:
12 N*m (122 kgf*cm, 9 ft.*lbf)

9.INSTALL REAR ENGINE MOUNTING INSULATOR 12371

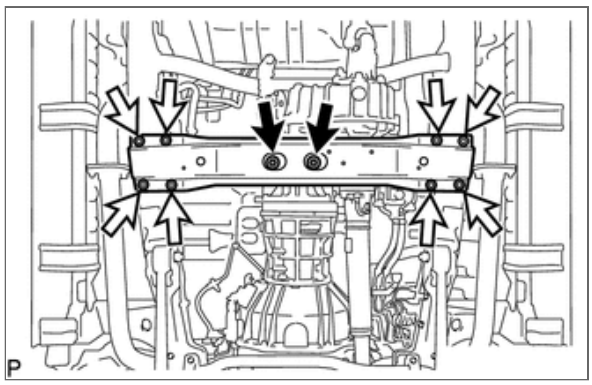


a. Install the rear engine mounting insulator to the manual transmission with transfer with the 4 bolts.

Torque:
59 N*m (602 kgf*cm, 44 ft.*lbf)

10.INSTALL NO. 2 FRAME CROSSMEMBER SUB-ASSEMBLY 51203

a.



➡	Nut
⇨	Bolt

Install the No. 2 frame crossmember sub-assembly with the 2 nuts and 8 bolts.

Torque:
for Nut : 74 N*m (755 kgf*cm, 55 ft.*lbf)
for Bolt : 46 N*m (469 kgf*cm, 34 ft.*lbf)

11.INSTALL FRONT STABILIZER BRACKET LH

a. Install the front stabilizer bracket LH with the 2 bolts.

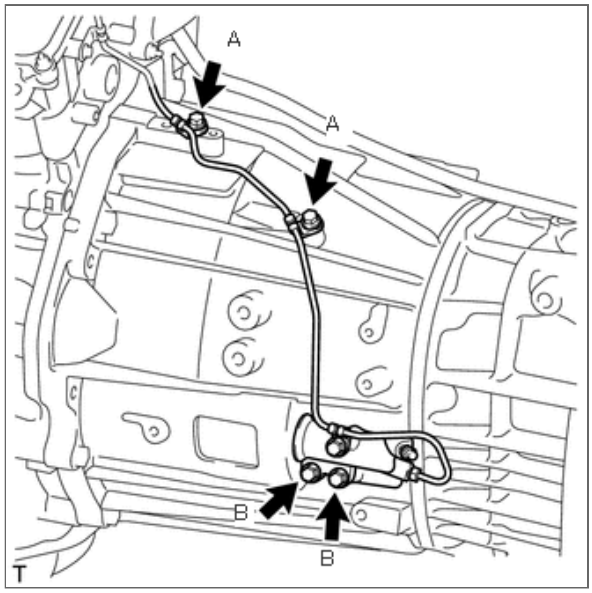
Torque:
29.7 N*m (303 kgf*cm, 22 ft.*lbf)

12.INSTALL FRONT STABILIZER BRACKET RH

HINT:
Use the same procedure described for the LH side.

13.CONNECT CLUTCH RELEASE CYLINDER ASSEMBLY 31470

a.



Connect the clutch release cylinder assembly with the 4 bolts.

Torque:
for Bolt A : 20 N*m (204 kgf*cm, 15 ft.*lbf)
for Bolt B : 11.8 N*m (120 kgf*cm, 9 ft.*lbf)

14.INSTALL NO. 1 CLUTCH HOUSING COVER **31121**

Click hereDrivetrain>CLUTCH>CLUTCH RELEASE CYLINDER(for 1GR-FE)>INSTALLATION

15.INSTALL STARTER ASSEMBLY **28100**

Click hereEngine / Hybrid System>1GR-FE STARTING>STARTER>INSTALLATION

16.INSTALL REAR PROPELLER SHAFT ASSEMBLY **37110**

Click hereDrivetrain>DRIVE SHAFT / PROPELLER SHAFT>PROPELLER SHAFT ASSEMBLY>INSTALLATION

17.INSTALL FRONT PROPELLER SHAFT ASSEMBLY **37140**

Click hereDrivetrain>DRIVE SHAFT / PROPELLER SHAFT>FRONT PROPELLER SHAFT ASSEMBLY>INSTALLATION

18.INSTALL NO. 1 EXHAUST MANIFOLD STAY **17118**

Click hereEngine / Hybrid System>1GR-FE INTAKE / EXHAUST>EXHAUST MANIFOLD>INSTALLATION

19.INSTALL NO. 2 MANIFOLD STAY **17119**

Click hereEngine / Hybrid System>1GR-FE INTAKE / EXHAUST>EXHAUST MANIFOLD>INSTALLATION

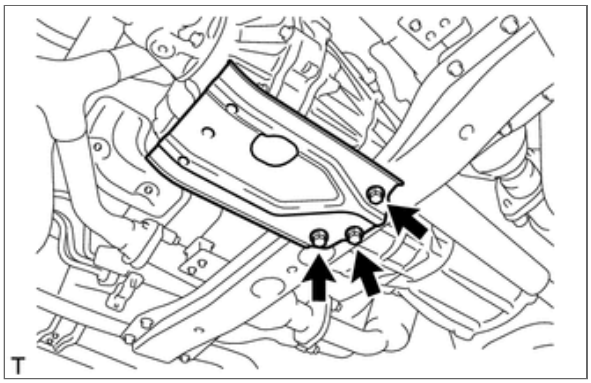
20.INSTALL FRONT EXHAUST PIPE ASSEMBLY (for Model Code #J78, #J79 Series) **17410**

Click hereEngine / Hybrid System>1GR-FE INTAKE / EXHAUST>EXHAUST PIPE(for Model Code #J78, #J79 Series)>INSTALLATION

21.INSTALL FRONT EXHAUST PIPE ASSEMBLY (for Model Code #J71, #J76 Series) **17410**

Click hereEngine / Hybrid System>1GR-FE INTAKE / EXHAUST>EXHAUST PIPE(for Model Code #J71, #J76 Series)>INSTALLATION

22.INSTALL TRANSFER CASE PROTECTOR **51447C**



a. Install the transfer case protector to the No. 2 frame crossmember sub-assembly with the 3 bolts.

Torque:
18 N*m (184 kgf*cm, 13 ft.*lbf)

23.ADD MANUAL TRANSMISSION OIL

Click hereDrivetrain>H150F MANUAL TRANSMISSION / TRANSAXLE>MANUAL TRANSMISSION OIL>REPLACEMENT

24.INSTALL AIR CLEANER CAP SUB-ASSEMBLY WITH NO. 1 AIR CLEANER HOSE 17705

Click hereEngine / Hybrid System>1GR-FE INTAKE / EXHAUST>INTAKE MANIFOLD>INSTALLATION

25.INSTALL FAN SHROUD 16711

Click hereEngine / Hybrid System>1GR-FE COOLING>RADIATOR>INSTALLATION

26.INSTALL NO. 1 RADIATOR HOSE 16571C

click hereEngine / Hybrid System>1GR-FE COOLING>RADIATOR>INSTALLATION

27.CONNECT HIGH AND LOW SHIFT ROD SUB-ASSEMBLY 36308

a. Connect the high and low shift rod sub-assembly with the washer and nut.

Torque:
11.76 N*m (120 kgf*cm, 9 ft.*lbf)

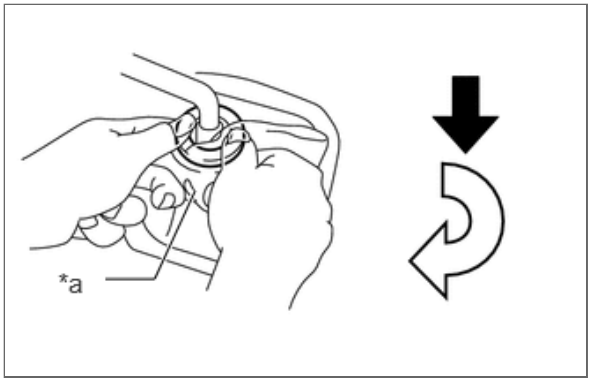
28.INSTALL TRANSFER SHIFT LEVER ASSEMBLY

Click hereDrivetrain>HF1A TRANSFER / 4WD / AWD>TRANSFER SHIFT LEVER ASSEMBLY>INSTALLATION

29.INSPECT AND ADJUST TRANSFER SHIFT LEVER ASSEMBLY

Click hereDrivetrain>HF1A TRANSFER / 4WD / AWD>TRANSFER SHIFT LEVER ASSEMBLY>INSTALLATION

30.INSTALL TRANSMISSION SHIFT LEVER ASSEMBLY 33530F



*a	Cloth or Equivalent
➡	Down
⇨	Clockwise

a. Cover the transmission shift lever cap with a cloth or equivalent.

b. While pressing down on the transmission shift lever cap, turn it clockwise to install the transmission shift lever.

31.INSTALL NO. 1 SHIFT AND SELECT LEVER BOOT 58286

Click hereDrivetrain>HF1A TRANSFER / 4WD / AWD>TRANSFER SHIFT LEVER ASSEMBLY>INSTALLATION

32.INSTALL SHIFT LEVER KNOB SUB-ASSEMBLY 36303

Click hereDrivetrain>HF1A TRANSFER / 4WD / AWD>TRANSFER SHIFT LEVER ASSEMBLY>INSTALLATION

33.INSTALL DECELERATION SENSOR (w/ ABS) 89441A

Click hereBrake>BRAKE CONTROL / DYNAMIC CONTROL SYSTEMS>DECELERATION SENSOR(w/ ABS)>INSTALLATION

34.INSTALL AIRBAG SENSOR ASSEMBLY WITH AIRBAG SENSOR BRACKET (w/ Airbag System) 89170

Click hereVehicle Interior>SUPPLEMENTAL RESTRAINT SYSTEMS>CENTER AIRBAG SENSOR ASSEMBLY>INSTALLATION

35.INSTALL AIRBAG SENSOR COVER 89179A

Click hereVehicle Interior>SUPPLEMENTAL RESTRAINT SYSTEMS>CENTER AIRBAG SENSOR ASSEMBLY>INSTALLATION

36.INSTALL CONSOLE BOX 58811B

Click hereVehicle Interior>INTERIOR PANELS / TRIM>INSTRUMENT PANEL SAFETY PAD>INSTALLATION

37.INSTALL FRONT FLOOR FOOTREST 58191

for LHD: (Click hereVehicle Interior>INTERIOR PANELS / TRIM>FRONT FLOOR FOOTREST(for LHD)>INSTALLATION)
for RHD: (Click hereVehicle Interior>INTERIOR PANELS / TRIM>FRONT FLOOR FOOTREST(for RHD)>INSTALLATION)

38.INSTALL COWL SIDE TRIM SUB-ASSEMBLY LH 62112A

for 2 door: (Click hereVehicle Interior>INTERIOR PANELS / TRIM>ROOF HEADLINING(for Single Cab)>INSTALLATION)
for 4 door: (Click hereVehicle Interior>INTERIOR PANELS / TRIM>ROOF HEADLINING(for Double Cab)>INSTALLATION)

39.INSTALL COWL SIDE TRIM SUB-ASSEMBLY RH 62111A

HINT:
Use the same procedure described for the LH side.

40.INSTALL FRONT DOOR SCUFF PLATE LH 67914

for 2 door: (Click hereVehicle Interior>INTERIOR PANELS / TRIM>ROOF HEADLINING(for Single Cab)>INSTALLATION)
for 4 door: (Click hereVehicle Interior>INTERIOR PANELS / TRIM>ROOF HEADLINING(for Double Cab)>INSTALLATION)

41.INSTALL FRONT DOOR SCUFF PLATE RH 67913

HINT:
Use the same procedure described for the LH side.

42.ADD ENGINE COOLANT

Click hereEngine / Hybrid System>1VD-FTV COOLING>COOLANT>REPLACEMENT

43.CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

44.PERFORM DIAGNOSTIC SYSTEM CHECK

Click hereVehicle Interior>SUPPLEMENTAL RESTRAINT SYSTEMS>AIRBAG SYSTEM>DTC CHECK / CLEAR

45.CHECK SRS WARNING LIGHT

Click hereVehicle Interior>SUPPLEMENTAL RESTRAINT SYSTEMS>AIRBAG SYSTEM>DIAGNOSIS SYSTEM

46.INSPECT FOR ENGINE COOLANT LEAK

Click hereEngine / Hybrid System>1VD-FTV COOLING>COOLING SYSTEM>ON-VEHICLE INSPECTION

47.INSPECT FOR EXHAUST GAS LEAK

Click hereEngine / Hybrid System>1GR-FE INTAKE / EXHAUST>EXHAUST MANIFOLD>INSTALLATION

48.INSTALL NO. 2 ENGINE UNDER COVER 51442

Click hereEngine / Hybrid System>1GR-FE COOLING>RADIATOR>INSTALLATION

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