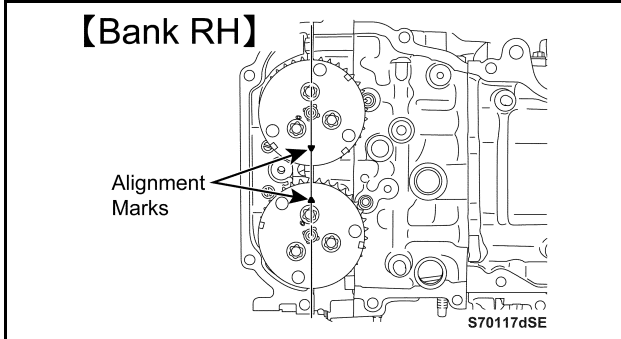


## 5. REINSATLL CHAIN SUB-ASSEMBLY (for RH Bank)

a) Reinstall the chain sub-assembly in the following order.

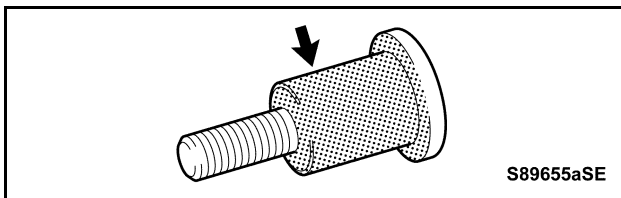
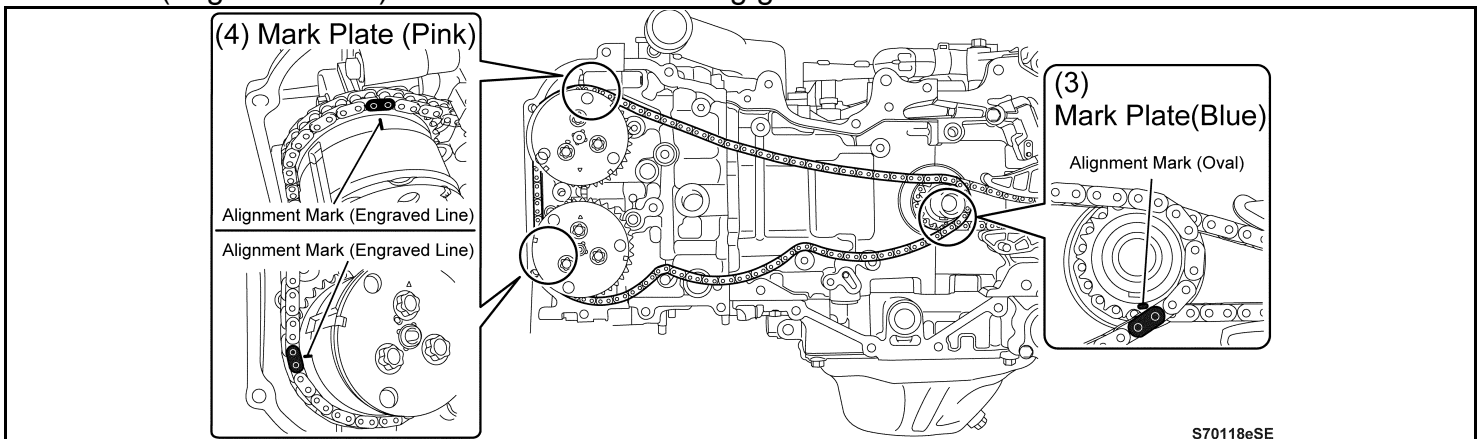


**DO NOT allow any foreign material to adhere or enter into the components during reinstallation.**

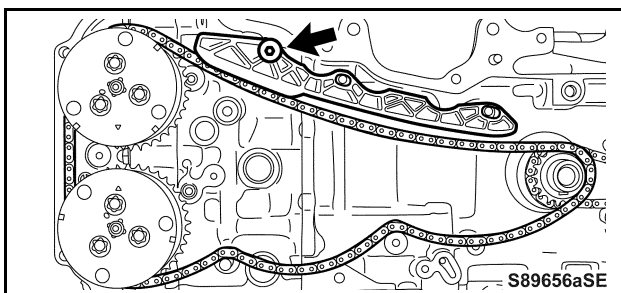


1) Align the alignment marks on the 2 camshaft gears as shown in the illustration.

- 2) Apply engine oil to all component parts of the chain sub-assembly.
- 3) Align the mark plate (blue) on the chain sub-assembly with the alignment mark (oval) on the crankshaft timing gear.
- 4) Align the mark plates (pink) on the chain sub-assembly with the alignment marks (engraved lines) on the 2 camshaft timing gears.



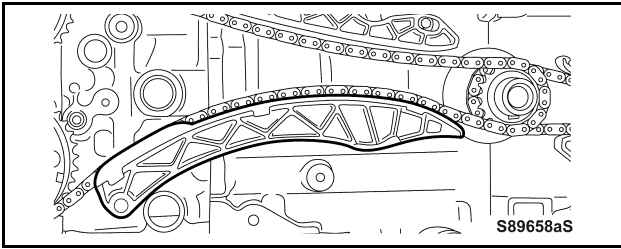
b) Apply engine oil to the sliding portion of the vibration damper bolt.



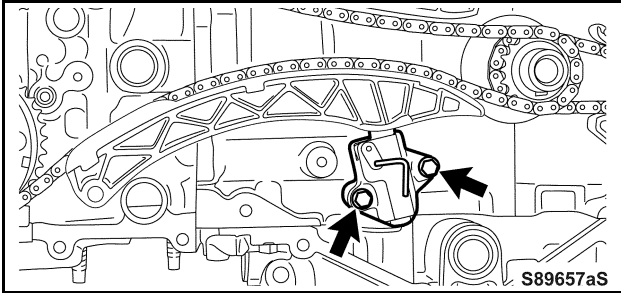
c) Using a 5 mm (0.2 in.) hexagon socket, reinstall the chain vibration damper with bolt.

**Specified torque:**

**57 in.\*lbf (6.4 N\*m, 65 kgf\*cm)**

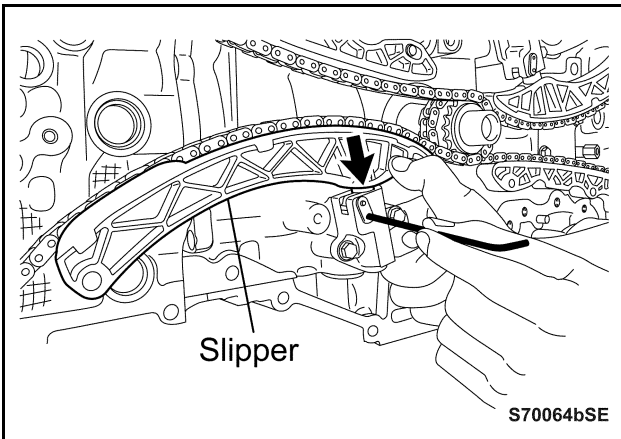
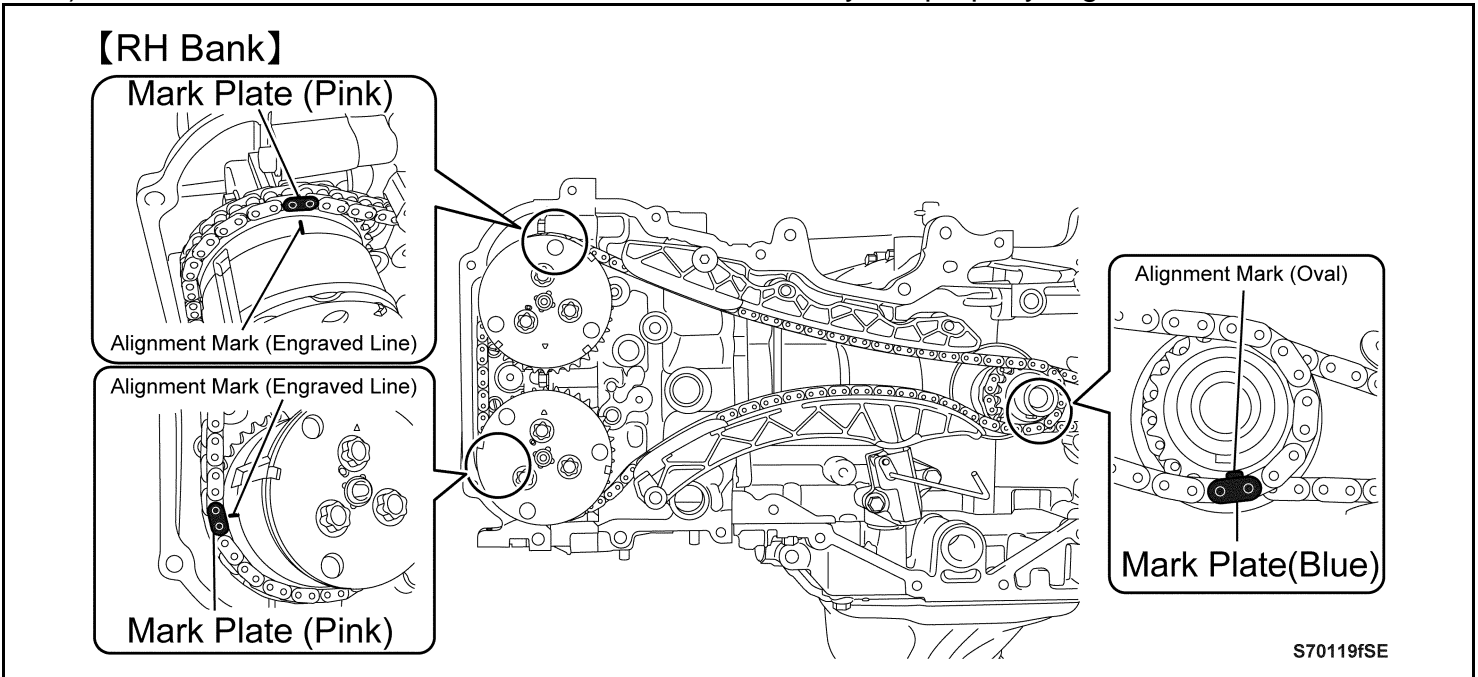


d) Reinstall the chain tensioner slipper.

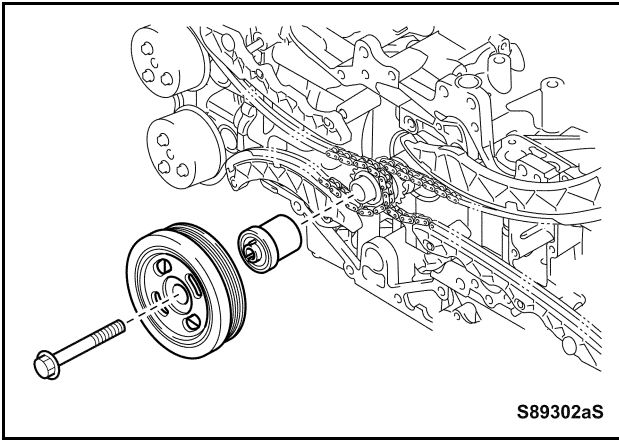


e) Reinstall the No. 1 chain tensioner assembly with the 2 bolts. (w/o O-ring)  
**Specified torque:**  
**57 in.\*lbf (6.4 N\*m, 65 kgf\*cm)**

f) Confirm that the 3 marks on the chain sub-assembly are properly aligned.



g) Push the No. 1 chain tensioner assembly upward by hand, to make it easier to pull out the hexagon wrench.  
h) Pull out the hexagon wrench from the No. 1 chain tensioner assembly.



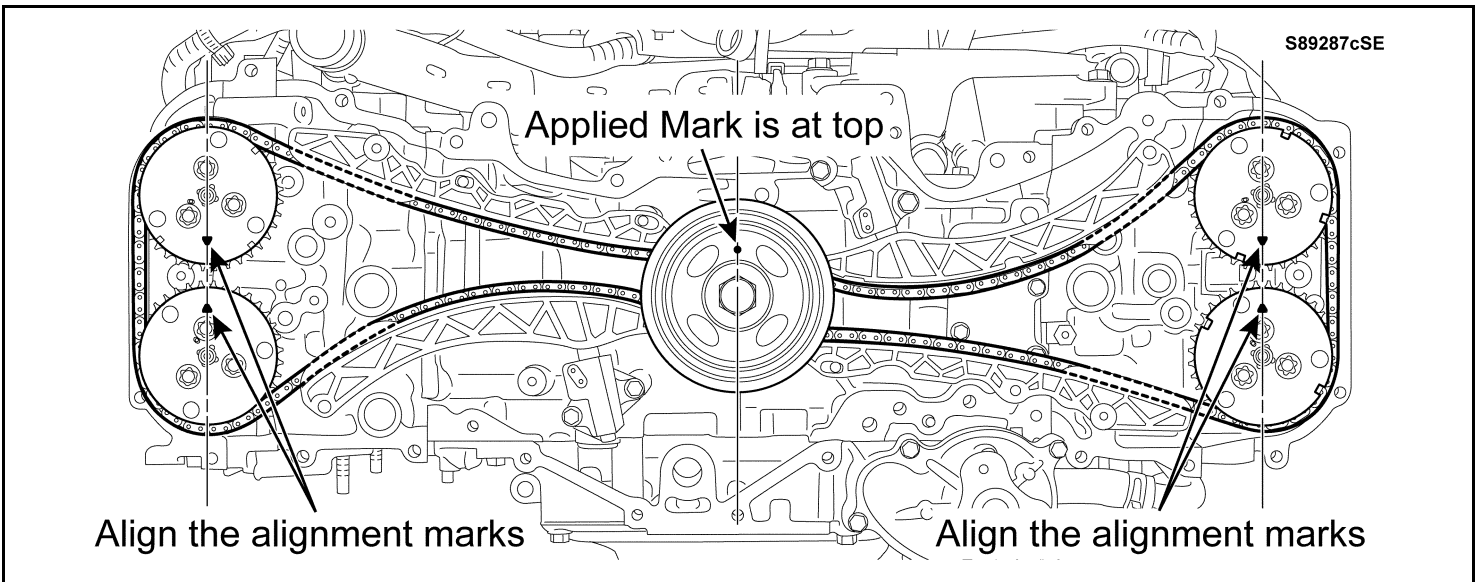
- i) Temporarily install the spacer, the crankshaft pulley and the bolt.

- j) Using SST turn the crankshaft pulley clockwise 2 complete turns to confirm that it rotates smoothly and make sure that the applied mark on the crankshaft and the alignment marks on the RH and LH banks are set in the positions shown in the illustration below.



If the marks **DO NOT** align, remove the chain sub-assembly and start over the reinstallation procedure.

**SST : 09960-10010 (09962-01000, 09963-01000)**



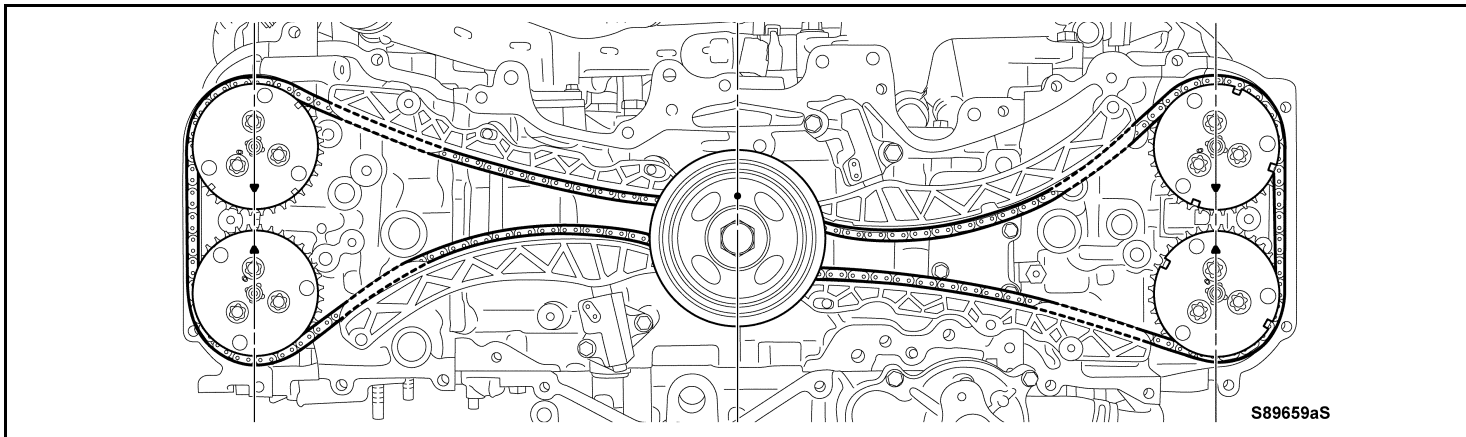
## INTERMEDIATE INSPECTION 2

### 6. CONDUCT INTERMEDIATE INSPECTION 2

- a) Confirm that the chain sub-assembly is properly installed.

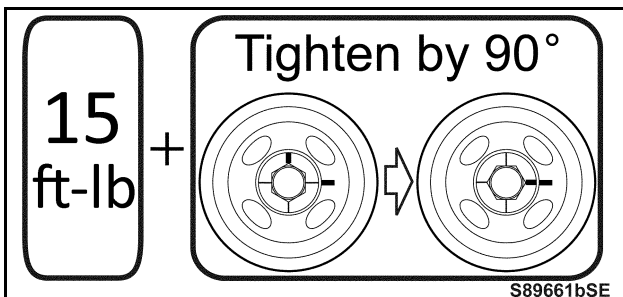
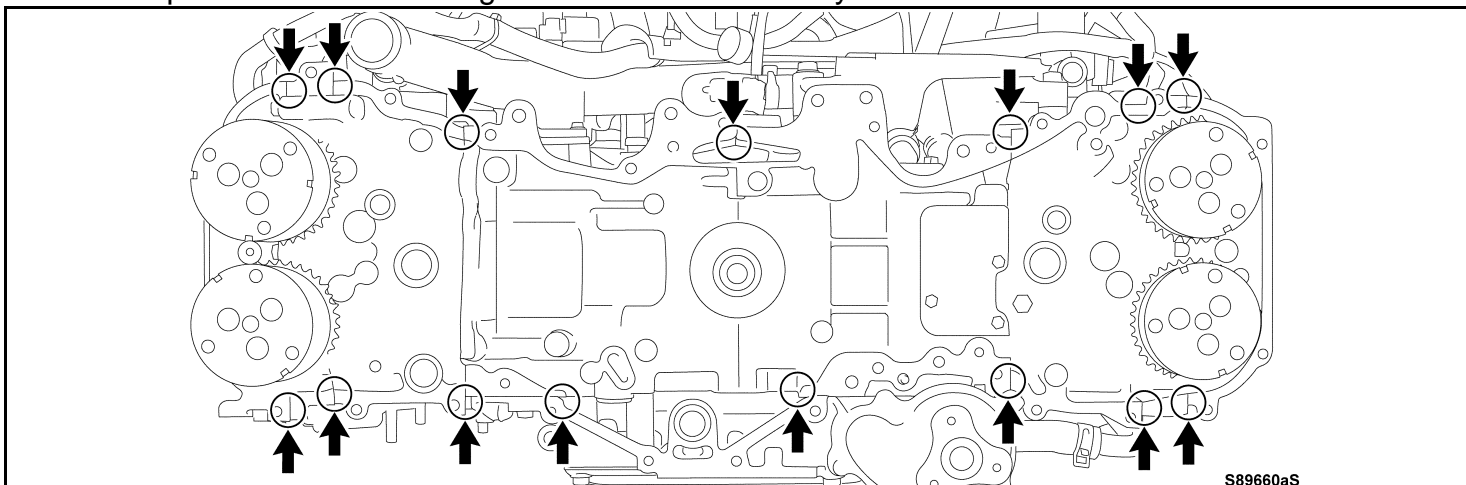
**Standard: The engine rotates smoothly and each mark is set as shown in the illustration.**

**(If the alignment marks on the camshafts are not aligned, rotate the crankshaft pulley another full turn.)**

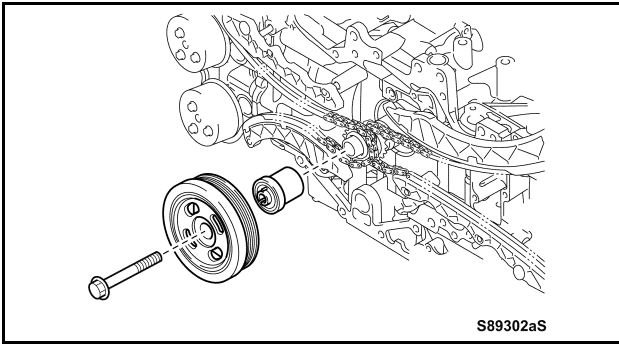


### 7. TIPS FOR WORKERS REGARDING LATER STEPS

- a) Seal packing must be applied to the timing chain or belt cover assembly as instructed in this manual. Especially, seal packing must be filled into the gaps between the components at the 15 points where the timing chain or cover assembly is to be installed.



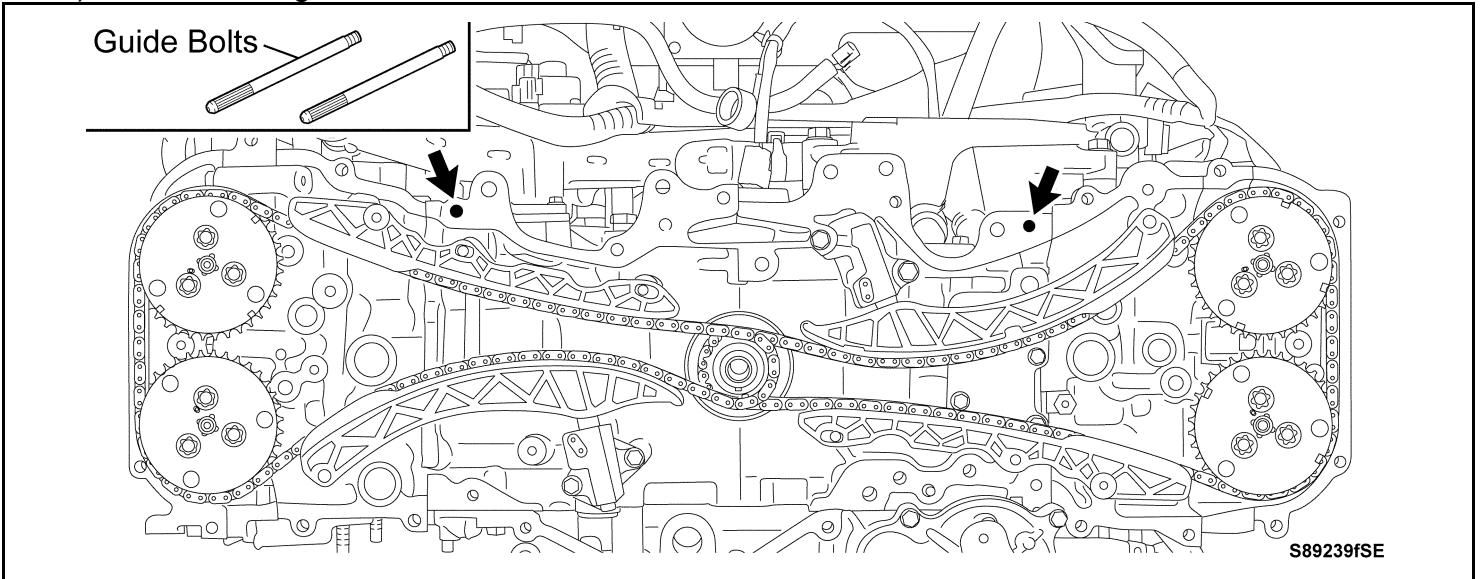
- b) The crankshaft pulley must be tightened properly.  
**Standard: 20 N\*m + 90 degrees (torque and angle controlled tightening)**



- c) Remove the bolt, the crankshaft pulley and the spacer.

## 8. PREPARE FOR INSTALLATION OF TIMING CHAIN OR BELT COVER SUB-ASSEMBLY

- a) Install the 2 guide bolts to the locations shown in the illustration.

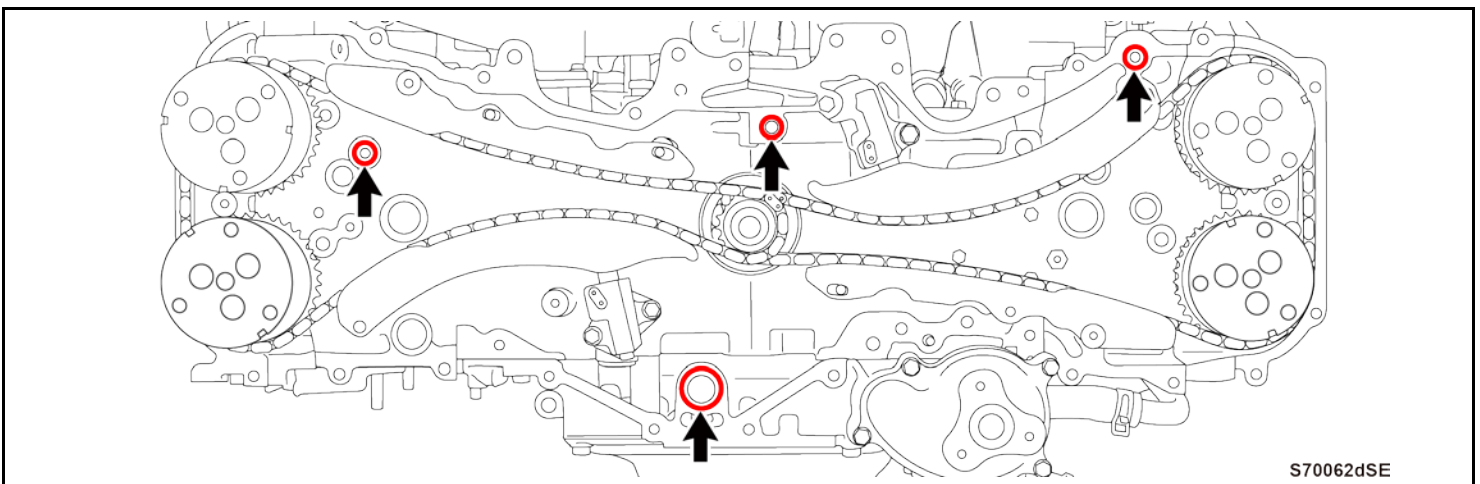


- b) Apply engine oil to 4 **NEW** O-rings and then install the 4 O-rings to the engine.

### NOTE:

Part No. : SU003-02183 (8069121909R), Qty: 3,  $\phi$  12.5 mm (0.49 in.) inner diameter,  
 $\phi$  17.3 mm (0.68 in.) outer diameter

SU003-02186 (8069241209R), Qty: 1,  $\phi$  23.8 mm (0.94 in.) inner diameter,  
 $\phi$  29.4 mm (1.16 in.) outer diameter



**9. PRACTICE APPLICATION OF SEAL PACKING HEADING TIPS FOR QUICK AND ACCURATE APPLICATION**

**[IMPORTANT] 6 TIPS TO PREVENT WORK ERRORS**

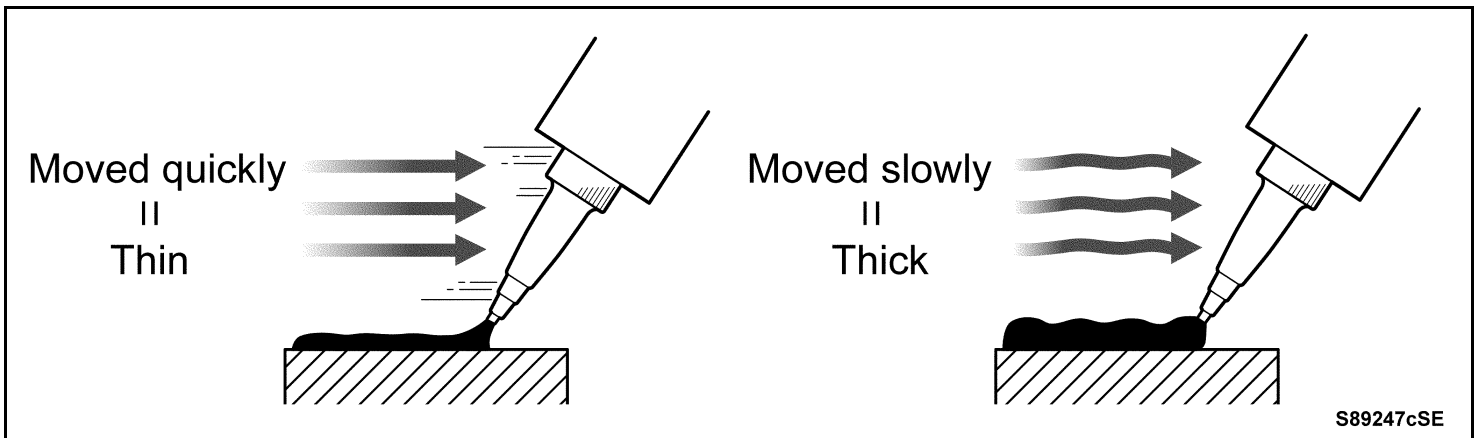
a) Using a Practice Sheet (supplied in actual size, and a small copy of the sheet is on the next page), practice until you are able to apply seal packing quickly and precisely as instructed.



- Each component must be attached within 5 minutes of seal packing application, and all bolts must be tightened to the specified torque within 15 minutes of the application.
- **DO NOT** erroneously apply seal packing to the L-shaped grooves.

Judgment	Locations to apply seal packing (Note: Conceptual cross-section drawings for seal packing application area are shown below.)	
<p style="font-size: 2em; color: green; text-align: center;">OK</p>	<p>Apply to the inner edge of the level surface</p>	
<p style="font-size: 2em; color: red; text-align: center;">NG</p>	<p>Apply to the "L" shape groove</p>	

**NOTE:**  
Control the seal packing widths by adjusting the speed of sealer gun movement and operation of the sealer gun lever.



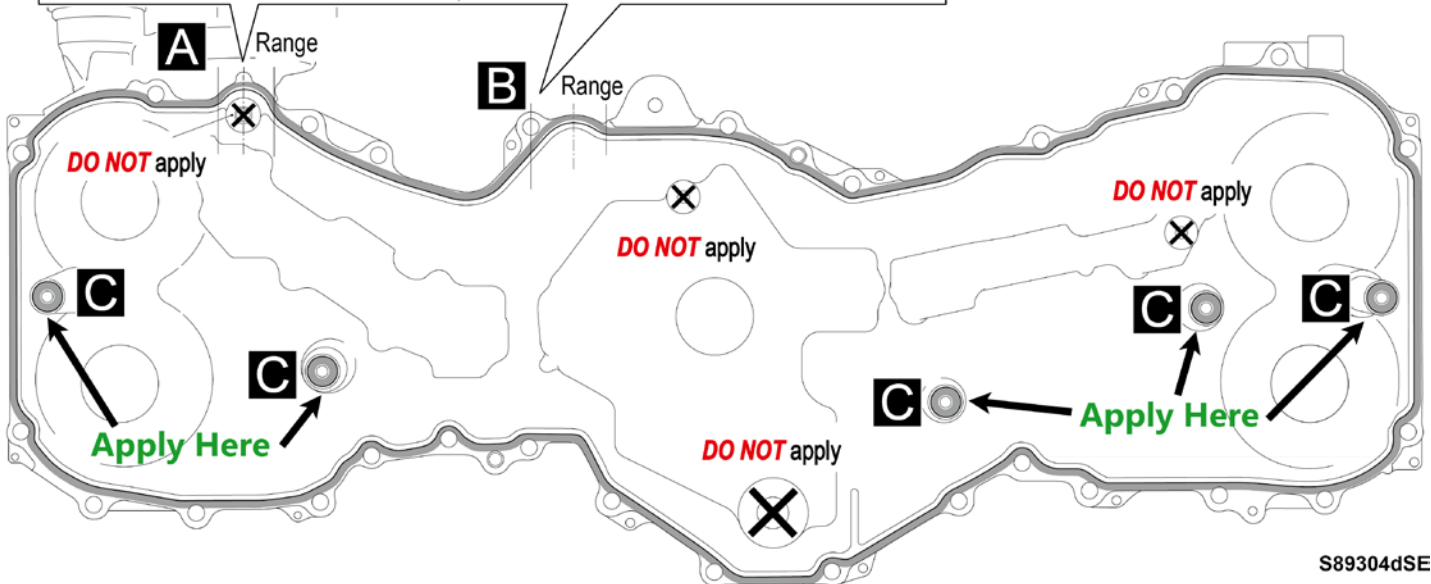
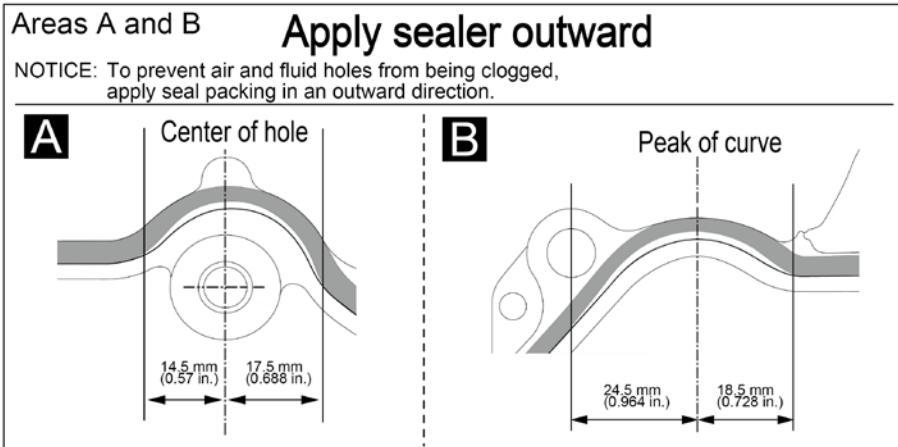
## 10. REINSTALL TIMING CHAIN OR BELT COVER SUB-ASSEMBLY

- Remove the seal packing, which has got hard, from the tip of the sealer gun.
- Using the sealer gun, apply seal packing to the chain cover.



- DO NOT** allow gaps between the ends of applied seal packing.
- Each component must be attached within 5 minutes of seal packing application, and all bolts must be tightened to the specified torque within 15 minutes of the application.**

**DO NOT** allow gaps between seal packing ends



S89304dSE

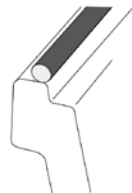
Bolt hole C at 5 locations  
**Apply sealer outward**

NOTICE: Apply seal packing only to the 5 specified areas.

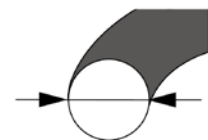
**C**



Perimeter areas other than areas A and B  
**Apply sealer inward**



All areas  
**Maintain uniform width**



3.5 to 4.5 mm  
(0.137 to 0.177 in.)

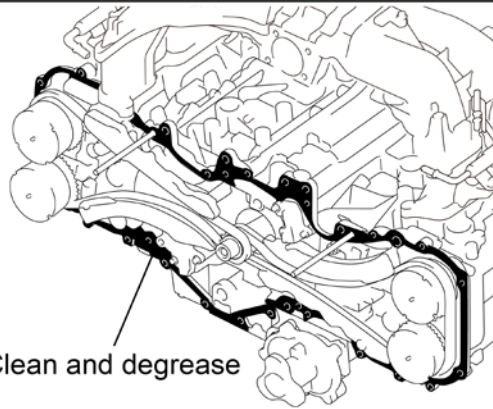
[CLICK HERE TO WATCH A VIDEO ON TIMING COVER INSTALLATION](#)

Clean and degrease contact surfaces

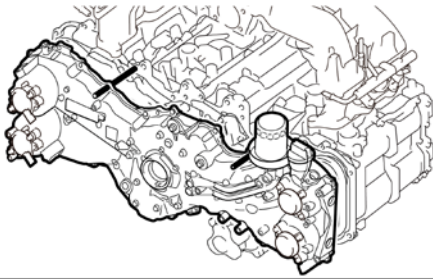
Check contact surfaces for oil and degrease

Hold chain cover set for adhesion

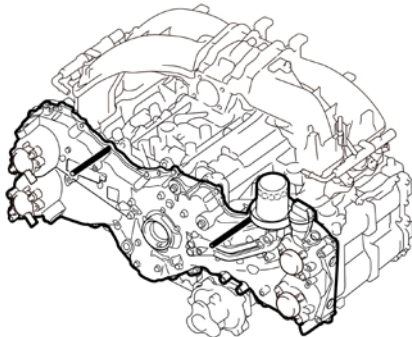
Attach cover



**DO NOT** attach yet  
Check for oil and degrease



Attach



S89600bSE

c) Install the timing chain or belt cover sub-assembly.

- 1) Using the procedure outlined in the illustration (detailed procedures are described below), clean and degrease the timing chain or belt cover sub-assembly.

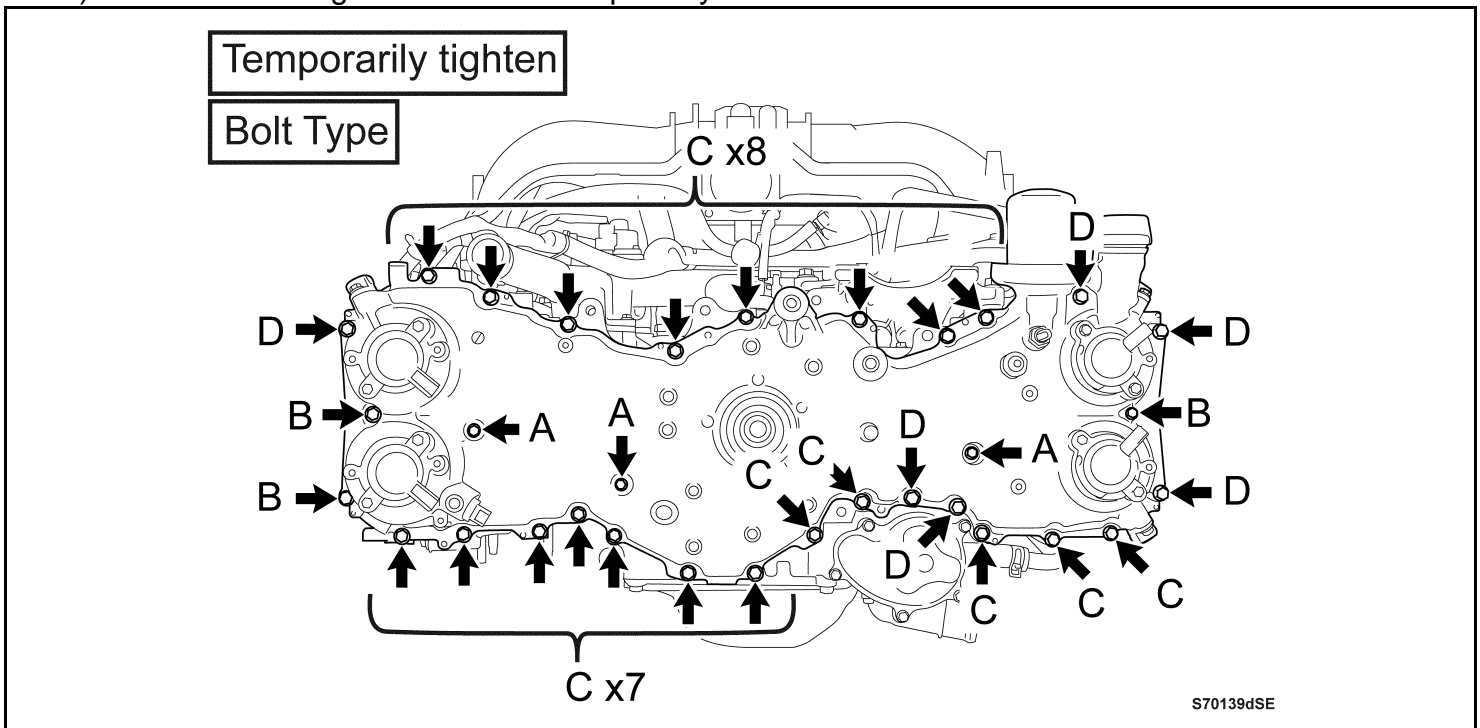


**Components must be installed within 5 minutes of seal packing application, and the bolts must be tightened to the specified torques within 15 minutes of the application.**

- 2) Clean and degrease the timing chain or belt cover sub-assembly installation surfaces on the engine.
- 3) While sets the timing chain or belt cover sub-assembly prepared for adhesion using the 2 guide bolts and holds it in place as shown, check the contact surfaces for any oil.
- 4) Clean and degrease as necessary.
- 5) Attach the timing chain or belt cover sub-assembly.



d) Remove the 2 guide bolts and temporarily install the 32 bolts.



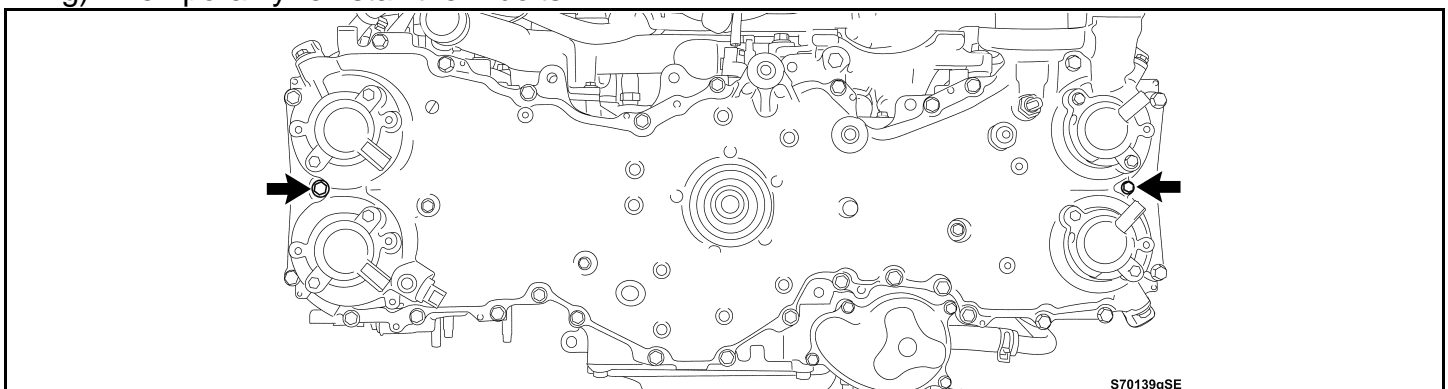
Bolt type	Width across flats mm / in.	Bolt length mm / in.	Bolt Qty
A	10 / 0.39	20 / 0.79	3
B		50 / 1.97	2
C	12 / 0.47	25 / 0.98	20
D		60 / 2.36	7

- e) Remove the 2 bolts shown in the illustration.
- f) Remove any seal packing from the bolts and the bolt holes.



**If the seal packing is not completely removed from the bolts and the bolt holes, the front camshaft cap may be damaged.**

g) Temporarily reinstall the 2 bolts.

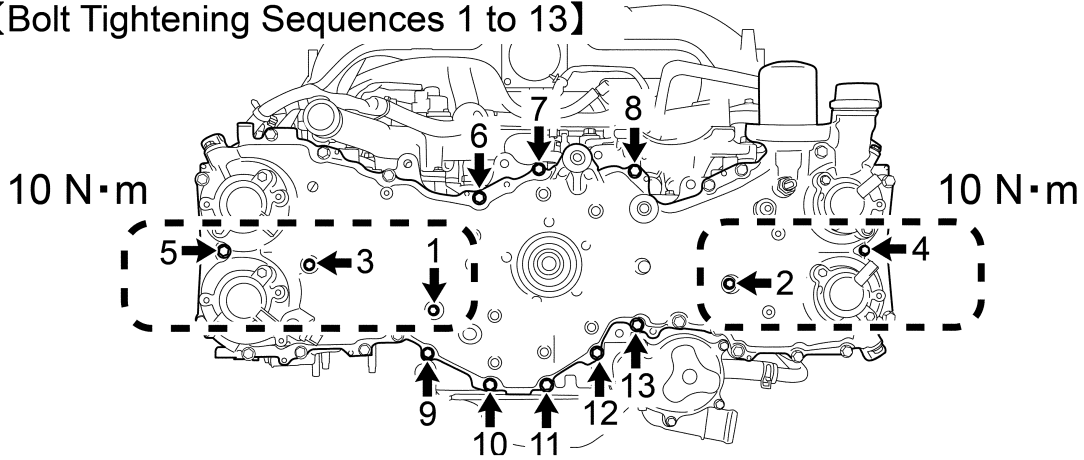


- h) Uniformly tighten the 32 bolts to the specified torque in the specified order in several passes.  
**Specified torque:**  
 7 ft.\*lbf (10 N\*m, 102 kgf\*cm) (5 bolts with 10 mm (0.39 in.) width across flats, bolts 1 to 5 inside the dotted lines in the illustration)  
 18 ft.\*lbf (25 N\*m, 255 kgf\*cm) (27 bolts with 12 mm (0.47 in.) width across flats)
- i) Place a paint mark on the bolt head after tightening to the specified torque, so as not to leave any bolt untightened.

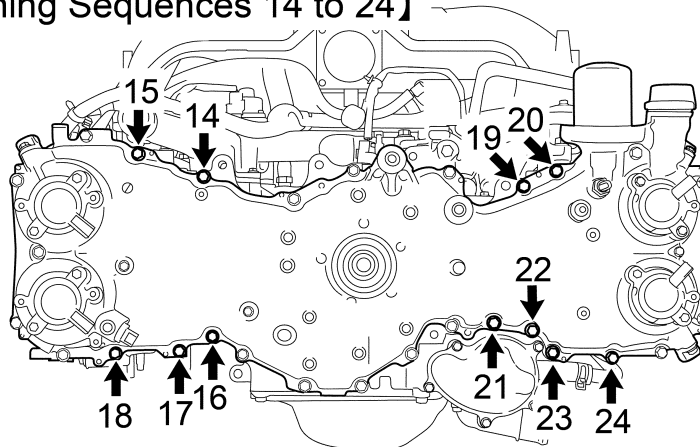
## [Bolt Tightening Sequences]

NOTE: 3 illustrations are used to show the bolt tightening sequences, just to simplify each drawing for easier understanding. However, it does NOT mean to complete tightening of bolts 1 to 10 and then proceed to tightening of bolts 11 to 20, and further on. Be sure to uniformly tighten the 32 bolts in several steps, in the sequence shown in a continuous manner.

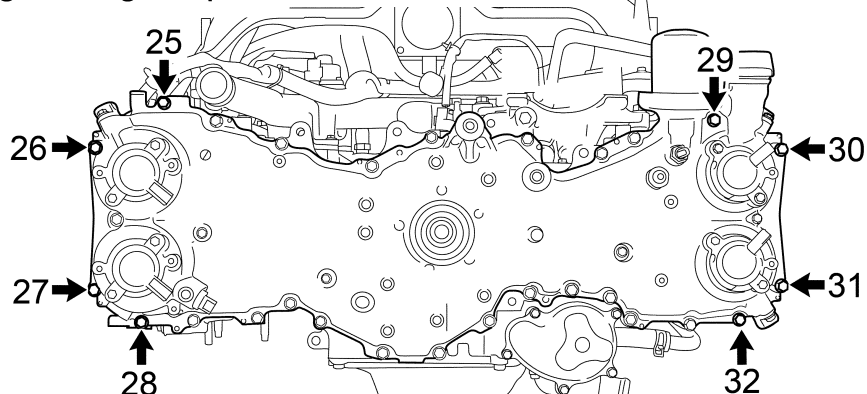
### [Bolt Tightening Sequences 1 to 13]



### [Bolt Tightening Sequences 14 to 24]



### [Bolt Tightening Sequences 25 to 32]



S70139fSE

- j) Put a sign onto the vehicle that shows the time when the timing chain or belt cover sub-assembly was reinstalled and the time the engine will be allowed to start.
- k) The engine should not be started until 2 hours elapse after the reinstallation (adhesion).

■ **Make a copy of this sheet, and put the sign onto the vehicle after the timing chain cover is reinstalled.**

**Timing chain cover was reinstalled at:**

\_\_\_\_\_

**AM/PM**

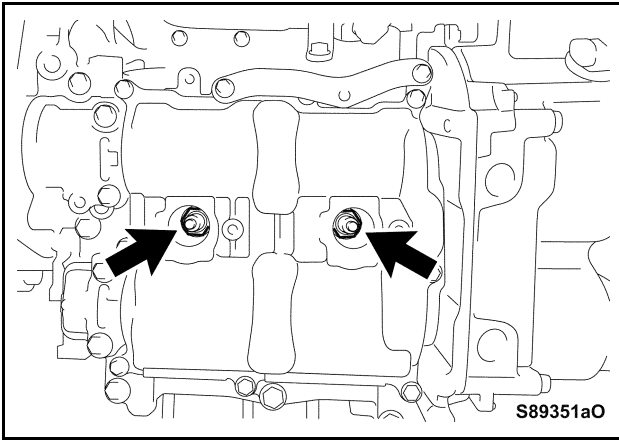
**Engine will be allowed to start after:**  
**(2 hours later of the reinstallation)**

\_\_\_\_\_

**AM/PM**

**Person in charge of:**

\_\_\_\_\_

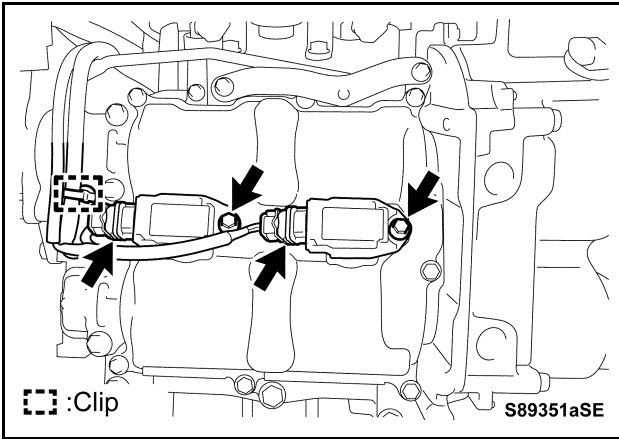


### 11. REINSTALL SPARK PLUGS (for RH Bank)

- a) Using a 14 mm (0.55 in.) spark plug wrench, reinstall the 2 spark plugs.

**Specified torque:**

**13 ft.\*lbf (17 N\*m, 173 kgf\*cm)**

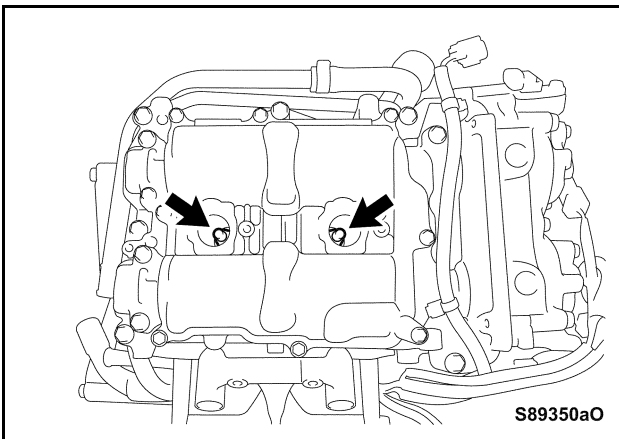


### 12. REINSTALL IGNITION COIL ASSEMBLIES (for RH Bank)

- a) Reconnect the 2 connectors and attach the clip (included in the Valve Spring Kit).
- b) Reinstall the 2 ignition coil assemblies with the 2 bolts.

**Specified torque:**

**75 in.\*lbf (8.5 N\*m, 87 kgf\*cm)**

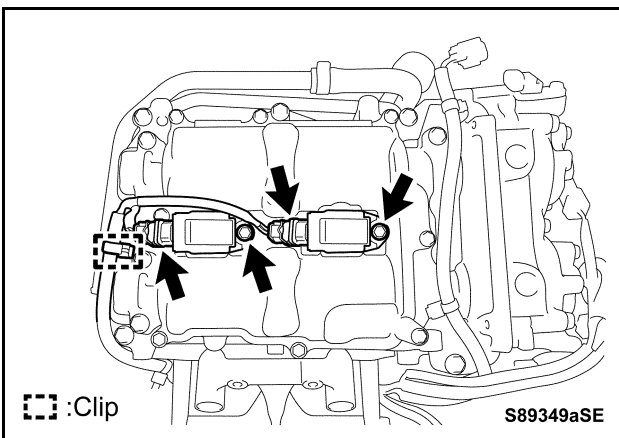


### 13. REINSTALL SPARK PLUGS (for LH Bank)

- a) Using a 14 mm (0.55 in.) spark plug wrench, reinstall the 2 spark plugs.

**Specified torque:**

**13 ft.\*lbf (17 N\*m, 173 kgf\*cm)**



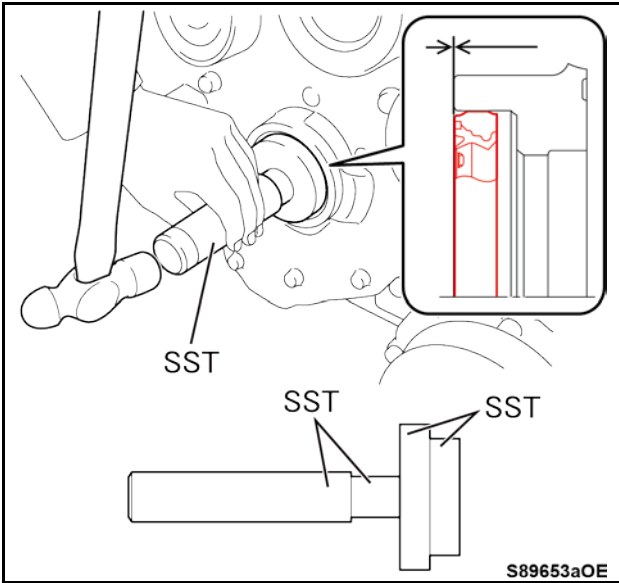
### 14. REINSTALL IGNITION COIL ASSEMBLIES (for LH Bank)

- a) Reinstall the 2 ignition coil assemblies with the 2 bolts.

**Specified torque:**

**75 in.\*lbf (8.5 N\*m, 87 kgf\*cm)**

- b) Reconnect the 2 connectors and attach the clip (included in the Valve Spring Kit).



## 15. INSTALL TIMING CHAIN OR BELT COVER OIL SEAL

- a) Apply engine oil to the lip of a **NEW** timing chain or belt cover oil seal.



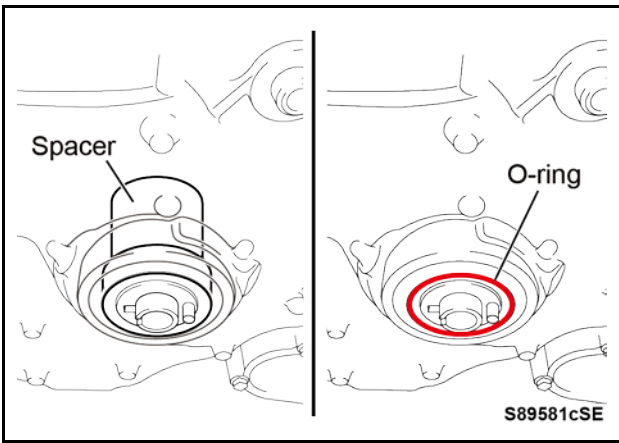
**DO NOT** allow any foreign matter to adhere to the oil seal lip.

- b) Using SST, tap in the timing chain or belt cover oil seal until its surface is flush with the timing chain or belt cover edge.

**SST : 09950-60010**

**(09951-00490, 09951-00650,  
09952-06010)**

**09950-70010 (09951-07100)**



## 16. REINSTALL CRANKSHAFT PULLEY

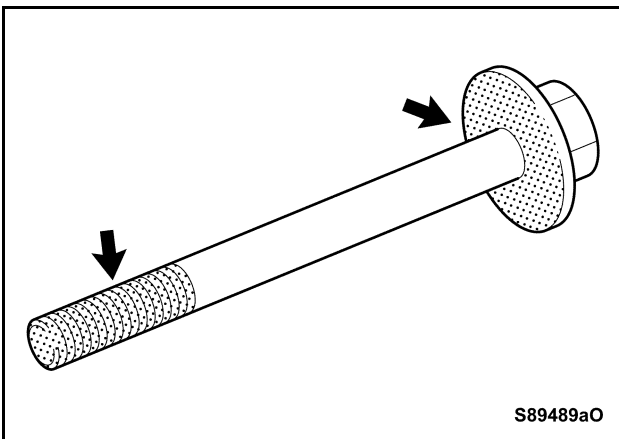
- a) Reinstall the spacer.  
b) Install a **NEW** O-ring.

**NOTE:**

**Part No.: SU003-02190 (8069390609R)**

**φ 39.0 mm (1.54 in.) inner diameter,**

**φ 43.0 mm (1.69 in.) outer diameter**

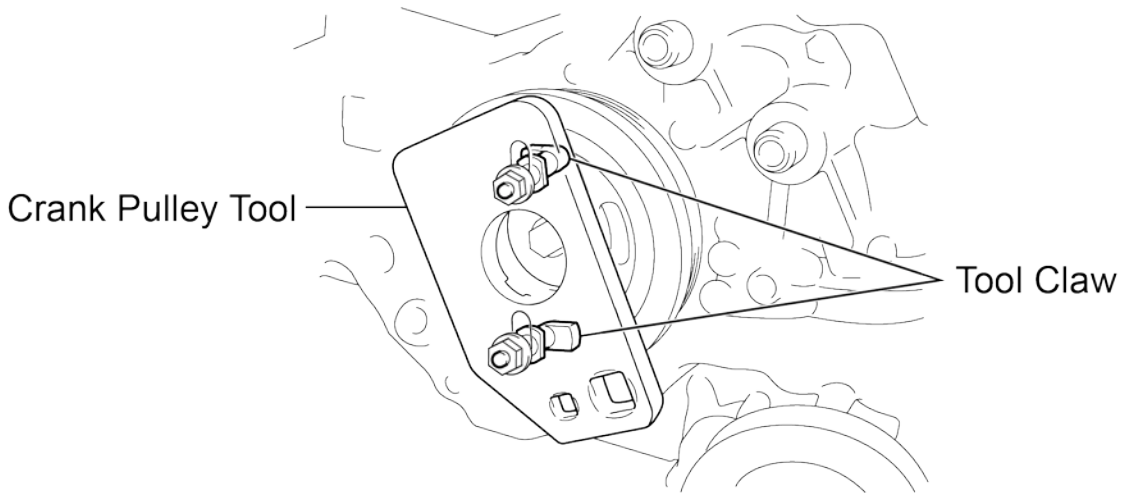


- c) Apply engine oil to the bolt threads and the bolt seat.  
d) Install the spacer, the crankshaft pulley and the bolt.

e) Attach the crank pulley tool to the crankshaft pulley.

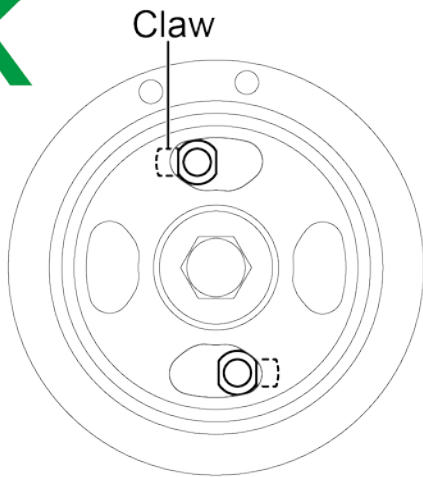


Be sure to set the tool facing the correct direction as shown. (In the orientation opposite to that for removal, so that the claws engage with the pulley when tightening the nut.)



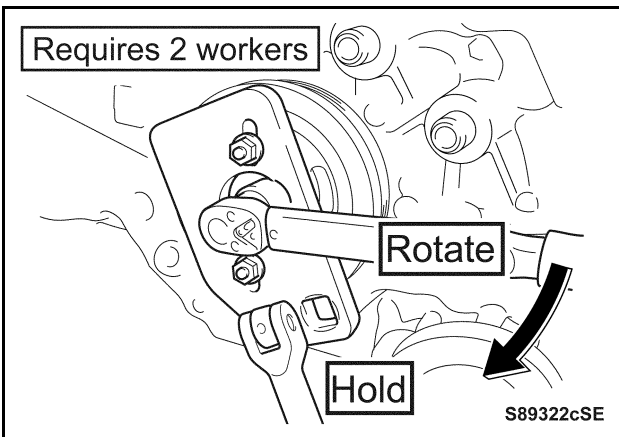
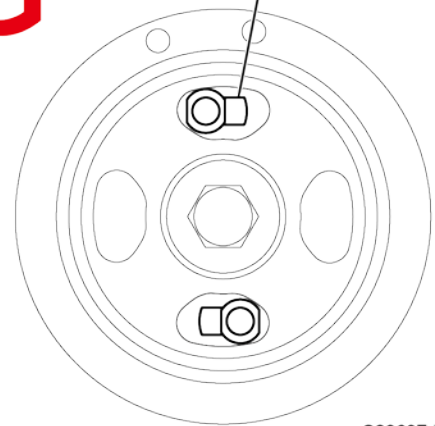
【Proper Claw Orientations (Front View)】

OK



NG

Claws are not engaged and easily detaches



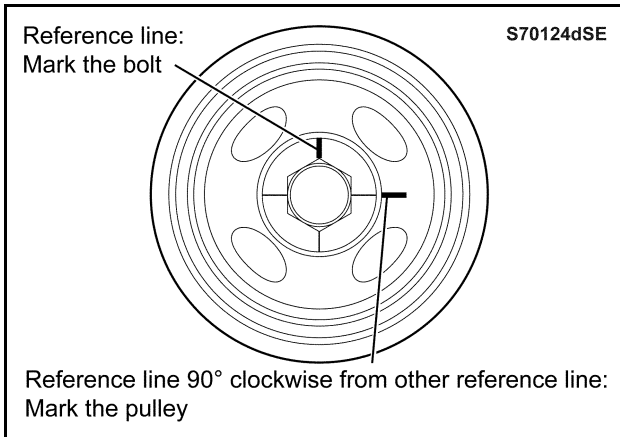
f) While another worker holds the crankshaft pulley in place using SST, install the bolt.

**Specified torque:**

**15 ft.\*lbf (20 N\*m, 204 kgf\*cm)**



Be sure to observe the specified instructions. The crankshaft pulley must be installed by angle controlled tightening method.

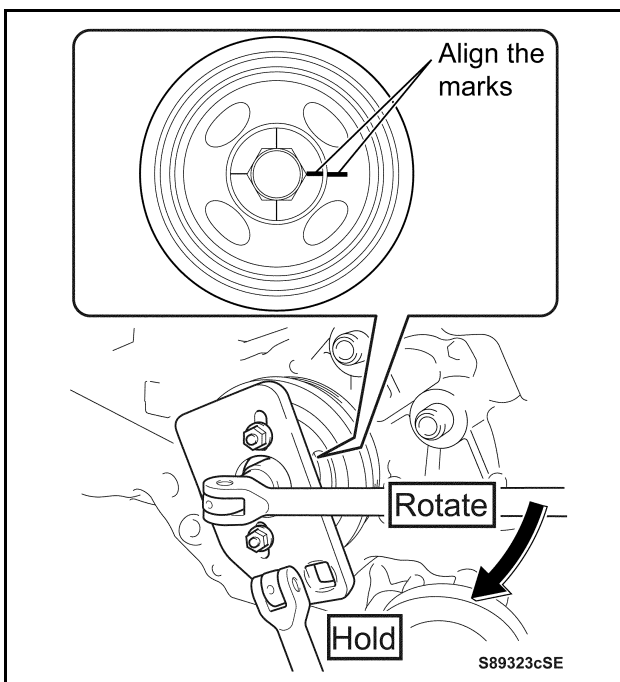


- g) Draw a reference line on the crankshaft pulley set bolt, with a marker, according to the line engraved around the crankshaft pulley set bolt head (Mark the bolt).

**NOTE:**

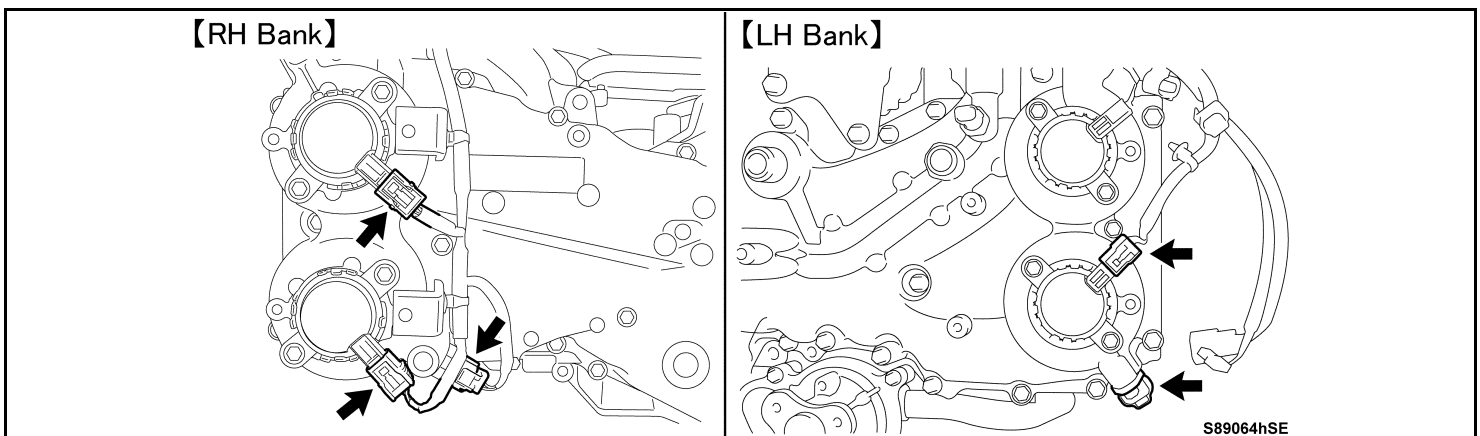
**Lines are engraved on a crankshaft pulley set bolt head every 90°.**

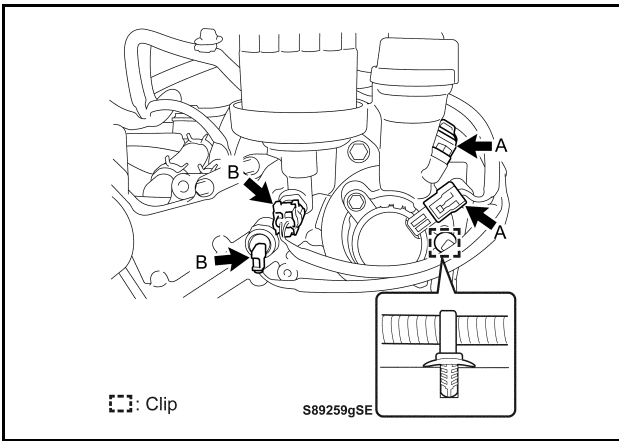
- h) Draw a reference line on the crankshaft pulley, with a marker, according to the engraved line 90° clockwise from the drawn line (Mark the pulley).
- i) While another worker holds the pulley in place, further tighten the bolt by 90° until the marks on the bolt and pulley are aligned.



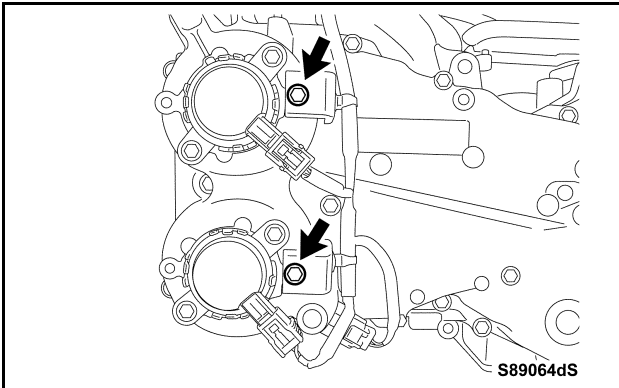
**17. REINSTALL ENGINE WIRE**

- a) Reconnect the 5 connectors.





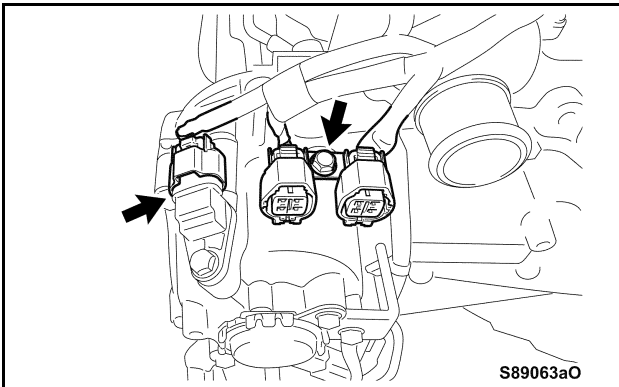
- b) Reconnect the 4 connectors.
- c) Attach the clip (included in the Valve Spring Kit).



- d) Reinstall the 2 wire harness brackets with the 2 bolts.

**Specified torque:**

**57 in.\*lbf (6.4 N\*m 65 kgf\*cm)**

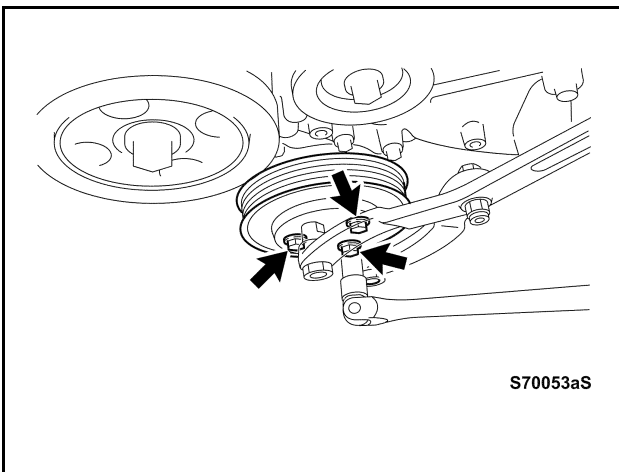


- e) Reinstall the harness clamp bracket with the bolt.

**Specified torque:**

**57 in.\*lbf (6.4 N\*m 65 kgf\*cm)**

- f) Reconnect the connector.



## 18. REINSTALL WATER PUMP PULLEY

- a) Temporarily install the water pump pulley with the 3 bolts.
- b) Using SST, hold the water pump pulley in place.

**SST : 09960-10010**

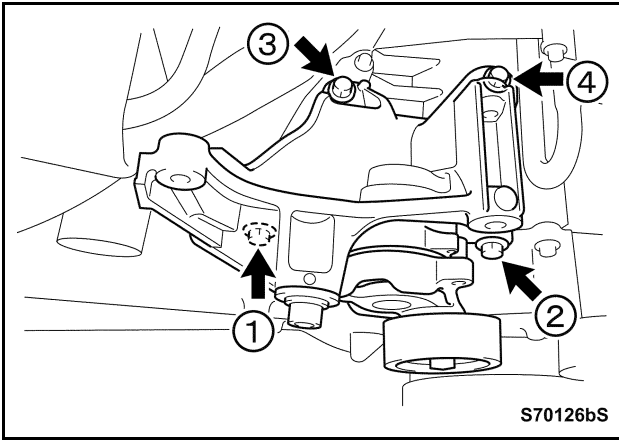
**(09962-01000, 09963-00700)**

- c) Tighten the 3 bolts to the specified torque to install the water pump pulley.

**Specified torque:**

**10 ft.\*lbf (14 N\*m, 143 kgf\*cm)**





## 19. REINSTALL V-RIBBED BELT TENSIONER ASSEMBLY

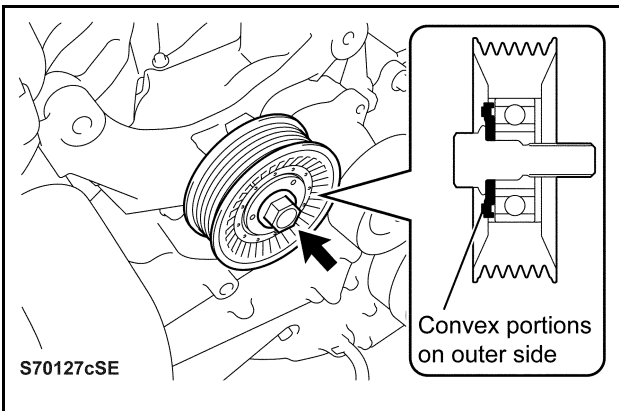
- Temporarily install the V-ribbed belt tensioner assembly with the 4 bolts.
- Tighten the 4 bolts in the order specified in the illustration.



**Be sure to tighten the bolts in the specified order, to install the part in the proper location.**

**Specified torque:**

**27 ft.\*lbf (36 N\*m, 367 kgf\*cm)**

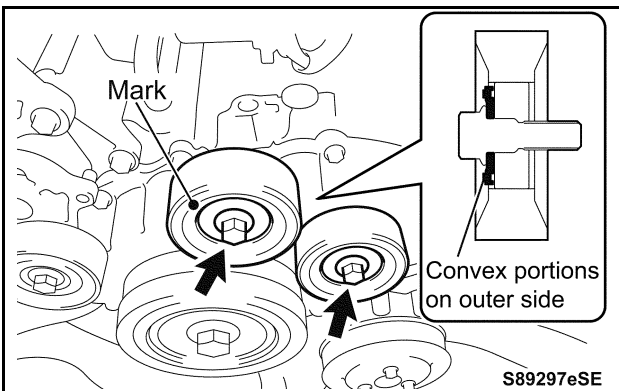


## 20. REINSTALL NO. 2 IDLER PULLEY SUB-ASSMEBLY

- Reinstall the pulley cover in the direction shown in the illustration.
- Reinstall the No. 2 idler pulley with the bolt.

**Specified torque:**

**27 ft.\*lbf (36 N\*m 367 kgf\*cm)**

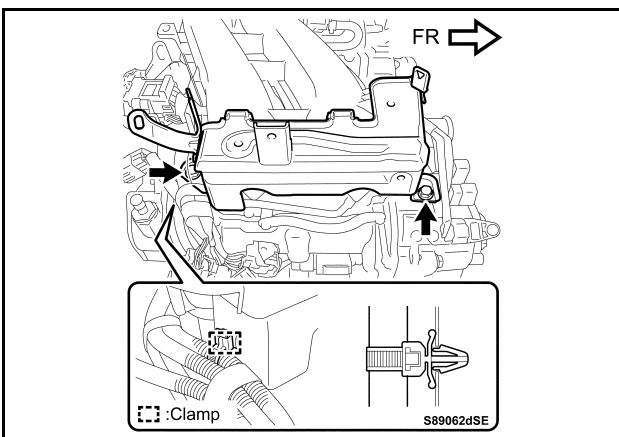


## 21. REINSTALL NO. 1 IDLER PULLEY SUB-ASSEMBLIES

- Reinstall the pulley cover in the direction shown in the illustration.
- Reinstall the 2 pulleys to their original locations, with the pulley applied with a mark upon removal to the upper left hand side, with the 2 bolts.

**Specified torque:**

**27 ft.\*lbf (36 N\*m, 367 kgf\*cm)**



## 22. REINSTALL INJECTOR COVER (for RH Bank)

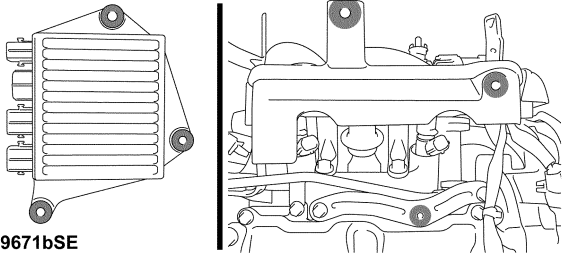
- Re-engage the clamp and reinstall the injector cover with the 2 bolts.

**Specified torque:**

**14 ft.\*lbf (19 N\*m, 194 kgf\*cm)**

- Attach the harness clamp.

## Clean and degrease



S89671bSE

## 23. REINSTALL INJECTOR DRIVER



**DO NOT** apply impact to the injector driver.

- a) The injector driver is grounded at the bolt and the nut. To ensure that it is grounded, clean all oil and foreign matter from the installation areas of the injector driver and the engine before installing the injector driver.

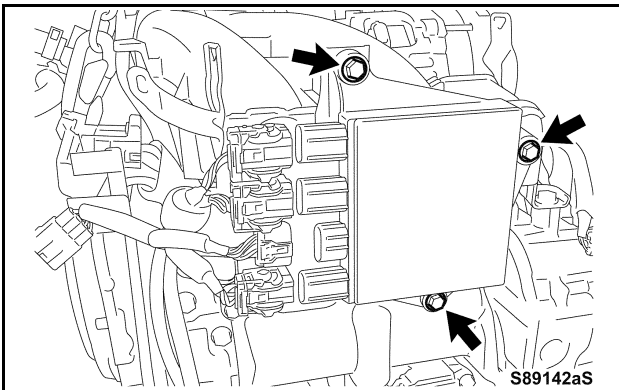
- b) Reinstall the injector driver with the 3 bolts.

**Specified torque:**

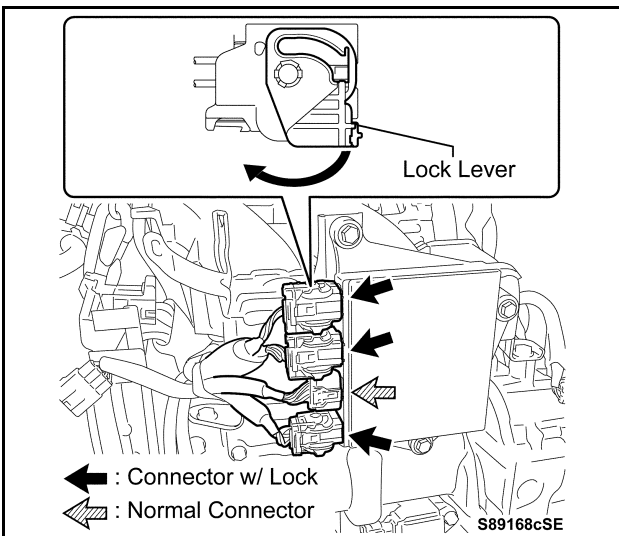
**57 in.\*lbf (6.4 N\*m 65 kgf\*cm)**

- c) Reconnect the 3 connectors with lock, and securely lock them by moving the lock levers in the direction indicated by the arrow.

- d) Reconnect the normal connector.



S89142aS



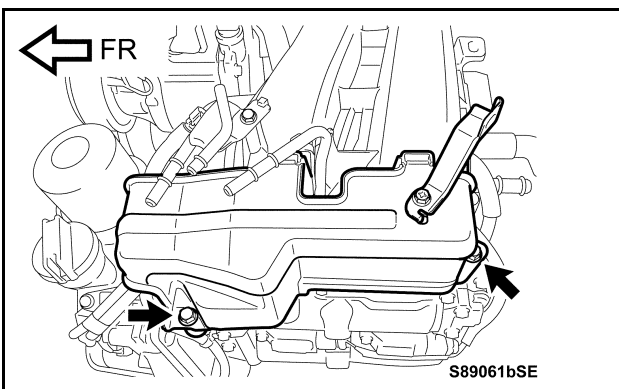
S89168cSE

## 24. REINSTALL INJECTOR COVER (for LH Bank)

- a) Reinstall the injector cover with the 2 bolts.

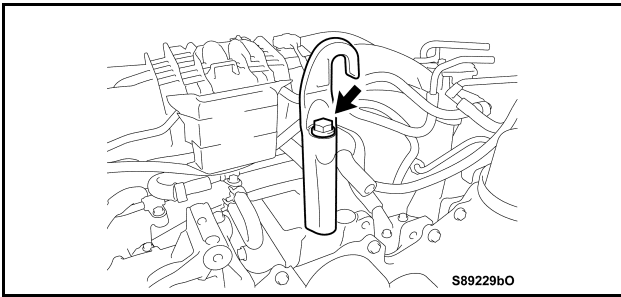
**Specified torque:**

**14 ft.\*lbf (19 N\*m, 194 kgf\*cm)**



S89061bSE

## XXI. REINSTALLATION OF ENGINE ASSEMBLY

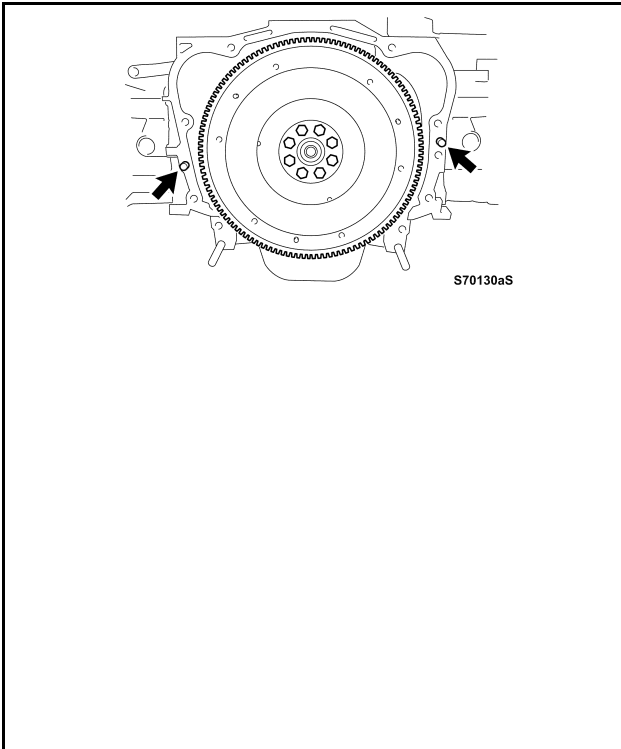


### 1. ATTACH ENGINE HANGER

- a) Attach the engine hanger with the bolt.

**Specified torque:**

**32 ft.\*lbf (43 N\*m, 439 kgf\*cm)**



### 2. CHECK KNOCK PINS

- a) Confirm that 2 knock pins are on the transmission assembly contact surface of the engine block, at the 2 locations shown in the illustration.
- b) If there are no knock pins in the specified locations, remove them from the transmission assembly and reinstall them to the engine block



**The knock pins are for the centering of the engine block and the transmission assembly.**  
**If any knock pin is on the transmission side, it will be pushed into the transmission assembly when reinstalling the engine block, causing the knock pin to not function correctly, resulting in damage to the components due to misalignment.**

### 3. SUSPEND ENGINE ASSEMBLY

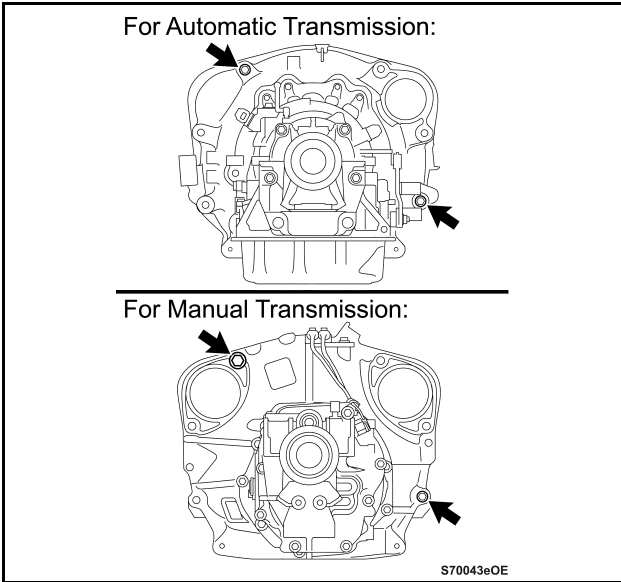
- a) Suspend the engine assembly.
- b) Remove the 4 bolts and remove the engine stand from the engine.

### 4. REINSTALL ENGINE ASSEMBLY

- a) Align the knock pins and the stud bolts on the engine block with each hole on the transmission assembly, while another worker observes them.



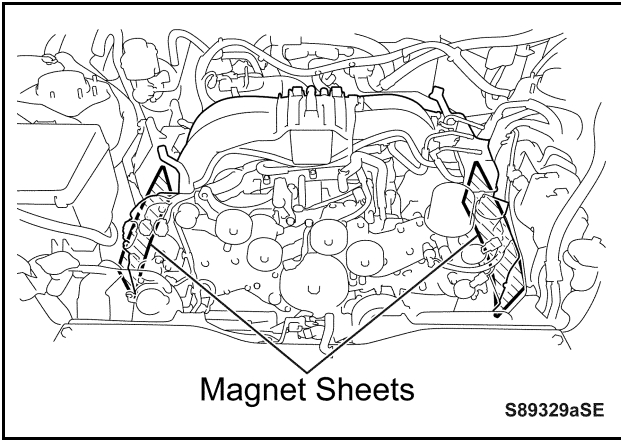
- **DO NOT** allow any wire harness, air conditioning piping, or fuel hose, etc. to get caught.
- Reinstall the engine assembly, ensuring that the splines of the input shaft and the clutch disc are properly engaged, or components may be damaged (For Manual Transmission).



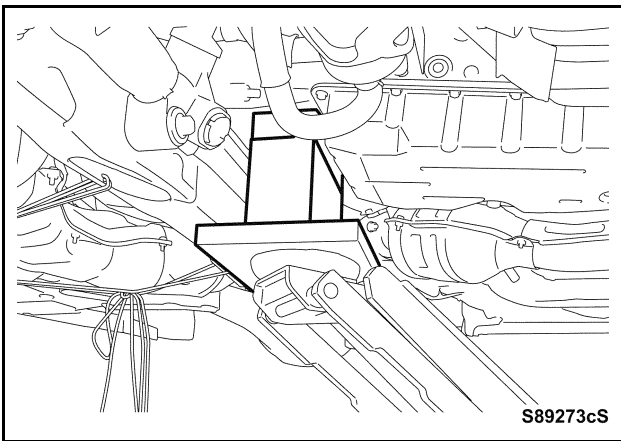
b) Reinstall the 2 transmission coupling bolts.

**Specified torque:**

**37 ft.\*lbf (50 N\*m, 510 kgf\*cm)**

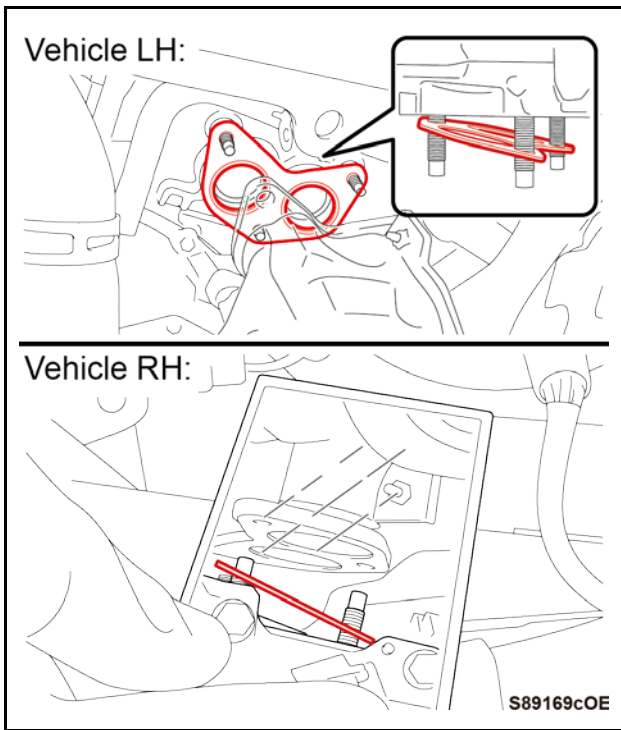


## 5. REMOVE MAGNET SHEETS



## 6. REMOVE GARAGE JACK

a) Remove the garage jack and the attachment that are supporting the transmission.



## 7. REINSTALL EXHAUST MANIFOLD TO HEAD GASKETS (Requires 2 Workers)

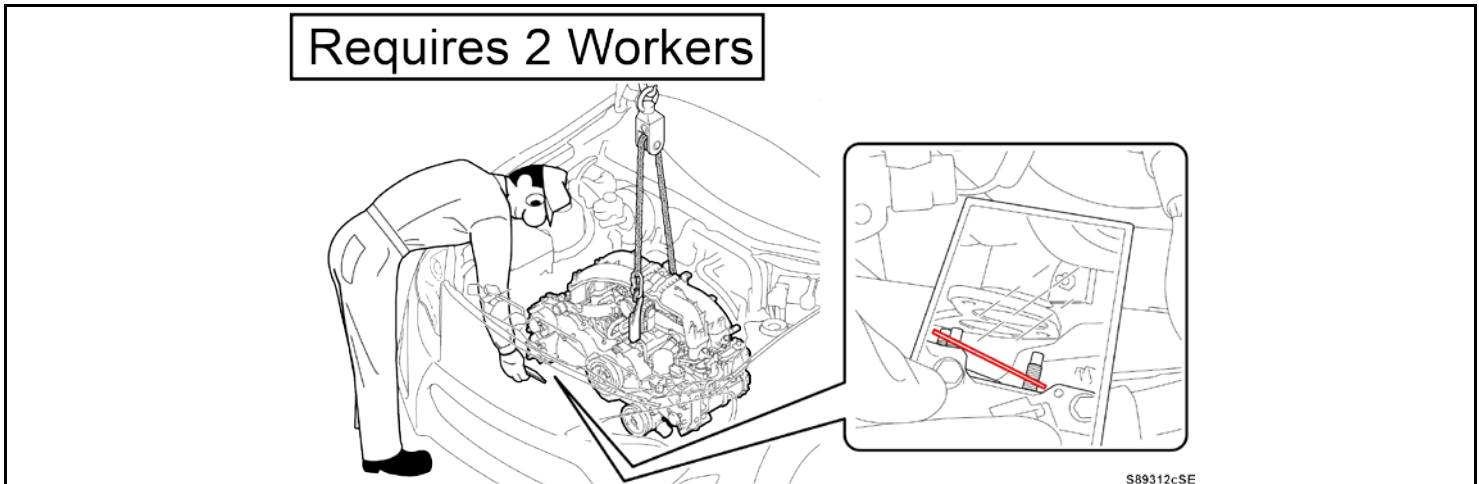
- With the engine and the transmission assemblies suspended, hang the left side exhaust manifold to head gasket on the stud bolts diagonally from the vehicle under side.
- Use a mirror and hang the right side exhaust manifold to head gasket on the stud bolts diagonally from the vehicle under side.

### NOTE:

- The 2 gaskets are identical and can be installed facing either side.
- When the exhaust manifold is brought close to the engine block to reinstall the exhaust manifold, the exhaust manifold to head gaskets cannot be visually confirmed if they are reinstalled properly. Thus, be sure to properly set the gaskets as described in the following procedures.

- The worker in charge of engine lifting: While lowering the engine, use a mirror to check the clearance between the engine and the exhaust manifold, and the gaskets to ensure that they are not detached.

**Engine lowering stop position: Just before the right side stud bolt on the engine block is taken in the exhaust manifold hole.**



- The other worker: Align the left side stud bolt on the engine block with the exhaust manifold hole, from the vehicle underside.

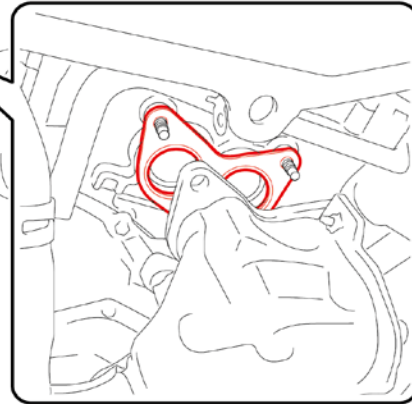


To be safe, **DO NOT** get directly under the engine.

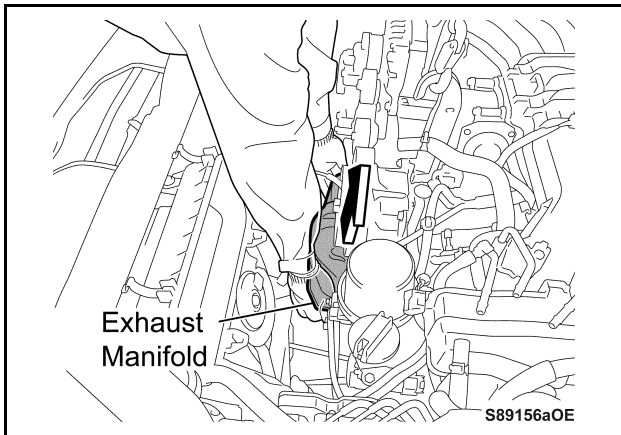
## Requires 2 Workers

The worker in charge of engine lifting

The other worker



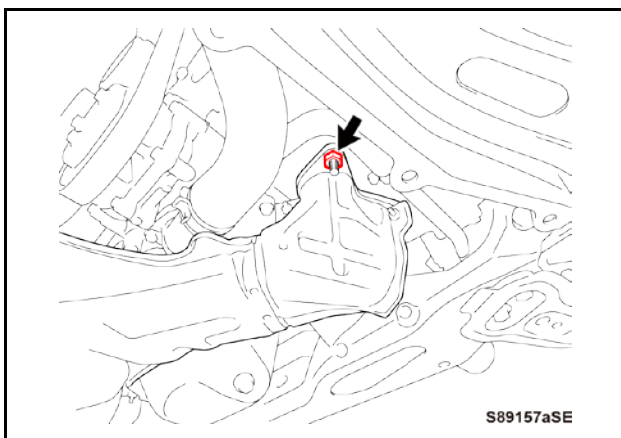
S89313cSE



Exhaust Manifold

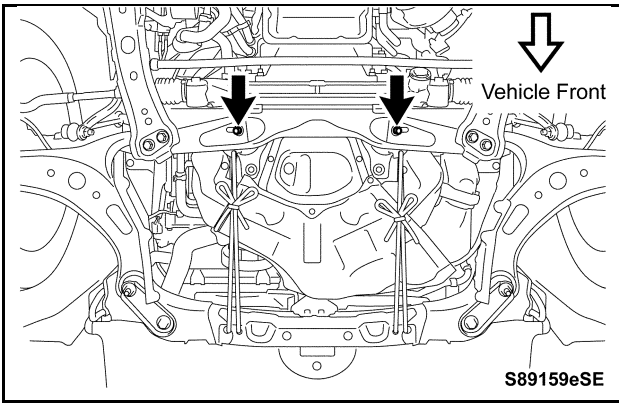
S89156aOE

- e) The worker in charge of engine lifting:  
Raise the exhaust manifold by hand and insert the 2 stud bolts on the engine to the holes in the exhaust manifold.

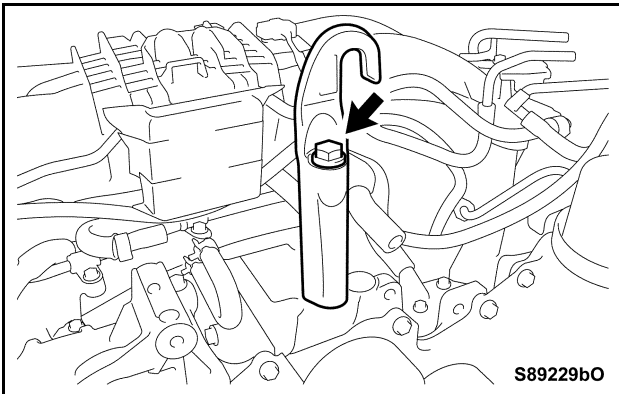


S89157aSE

- f) The other worker:  
Temporarily install a **NEW** nut to the exhaust manifold from underneath the vehicle.



- g) Slowly lower the engine and lead the engine mounting stud bolts through the cross member holes.

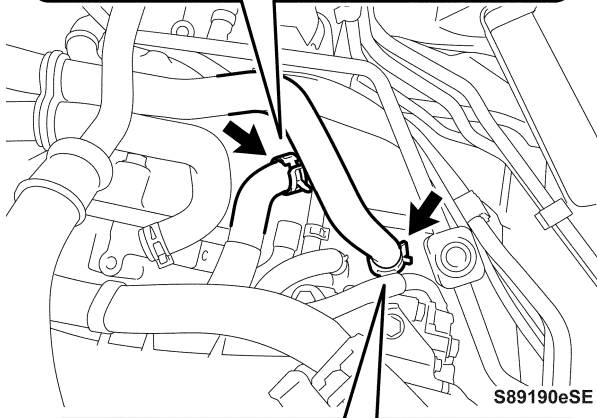
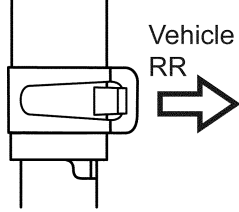
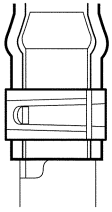


- 8. REMOVE ENGINE SLING DEVICE AND ENGINE HANGER**

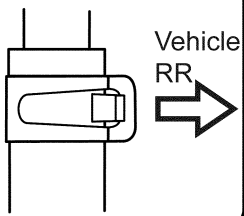
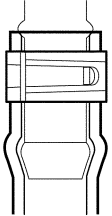
- 9. RECONNECT FUEL HOSES NO. 1, NO. 2 AND NO. 3**

**【For Automatic Transmission:】**

**【Clamp position】**    **【Clamp orientation】**



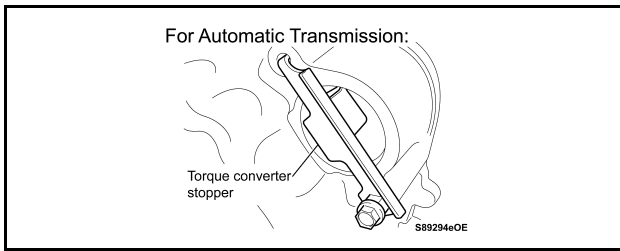
**【Insertion amount】**    **【Clamp orientation】**



**10. RECONNECT TRANSMISSION OIL COOLER HOSE NO. 3 AND HEATER WATER HOSE OUTLET B (for Automatic Transmission)**

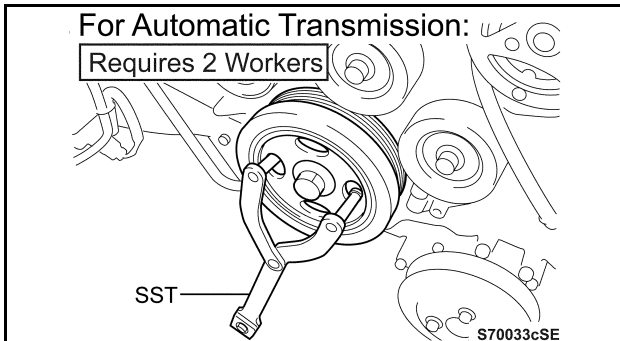


## XXII. REINSTALLATION OF ENGINE ACCESSORIES



1. REMOVE TORQUE CONVERTER STOPPER  
(for Automatic Transmission)

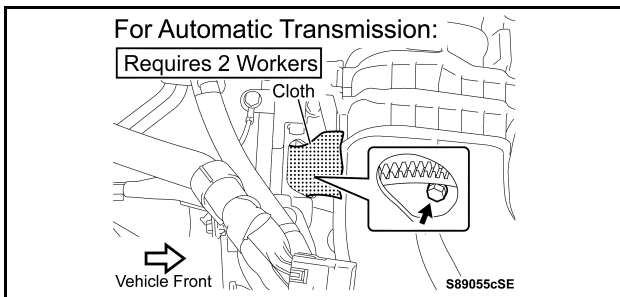
### 2. SET HOOD SUB-ASSEMBLY



3. REINSTALL DRIVE PLATE AND TORQUE CONVERTER SETTING BOLTS  
(for Automatic Transmission)  
(Requires 2 Workers)

[Worker in charge of holding the crankshaft]

- a) Using SST, rotate and hold the crankshaft pulley at positions where the bolts can be removed.



[Worker in charge of tightening the bolts]

- b) Reinstall the 6 bolts (all identical) while another worker maintains the crankshaft pulley in place.
  - 1) Be sure to set a piece of cloth in the service hole to prevent the bolts from falling in.
  - 2) Tighten the bolts one at a time through the service hole.

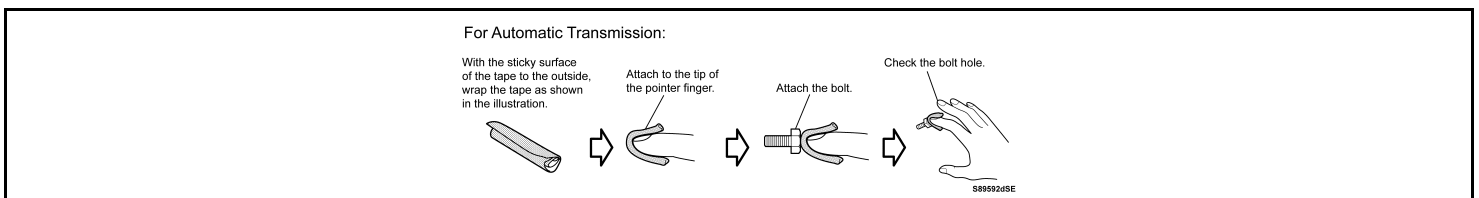
**Specified torque:**

**18 ft.\*lbf (25 N\*m, 255 kgf\*cm)**



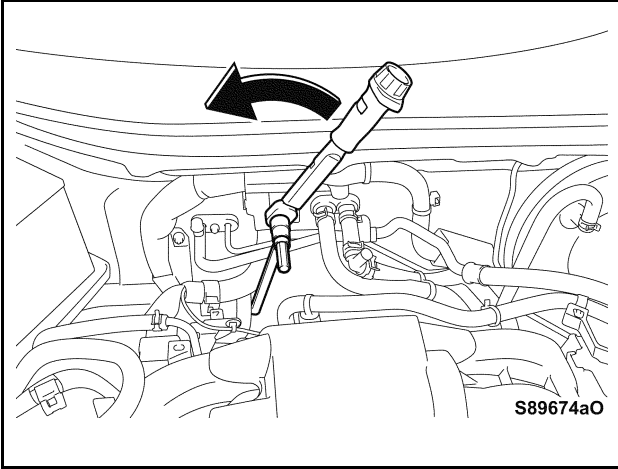
**The work space is very narrow. The procedure below is an example of a right handed work.**

- a) Use packing tape (**DO NOT** use tape with weak adhesion) and stick the bolt to the tip of the pointer finger.
- b) Check the position of the bolt hole with the middle finger.
- c) Align the bolt to the bolt hole and temporarily screw into place.
- d) Use a tool (Take care not to let it drop) and tighten the bolt.



### 4. REINSTALL FLYWHEEL HOUSING UNDER COVER (for Automatic Transmission)

## 5. REINSTALL STARTER ASSEMBLY



- a) Using a 12 x 14 mm (0.47 x 0.55 in.) offset wrench and a 12 mm (0.47 in.) hexagon socket, tighten the bolt on the upper portion of the starter.

**Specified torque:**

**37 ft.\*lbf (50 N\*m, 510 kgf\*cm)**



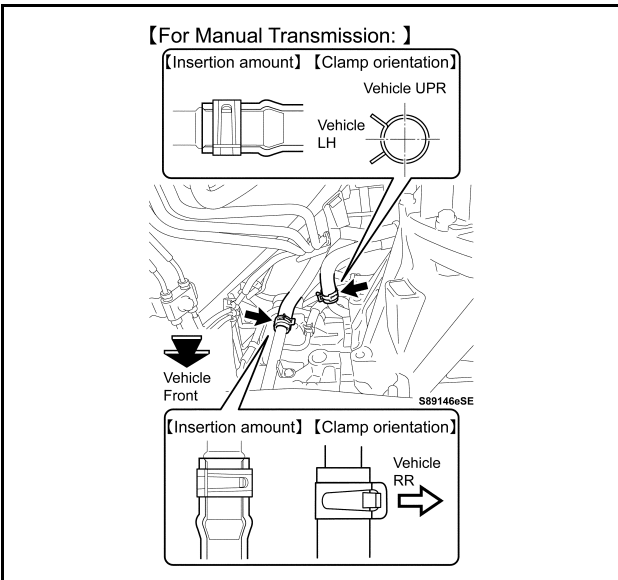
**Use the formula below to calculate the torque reading values as the extension tool is used.**

Formula:  $T' = T \times L1 / (L + L1)$

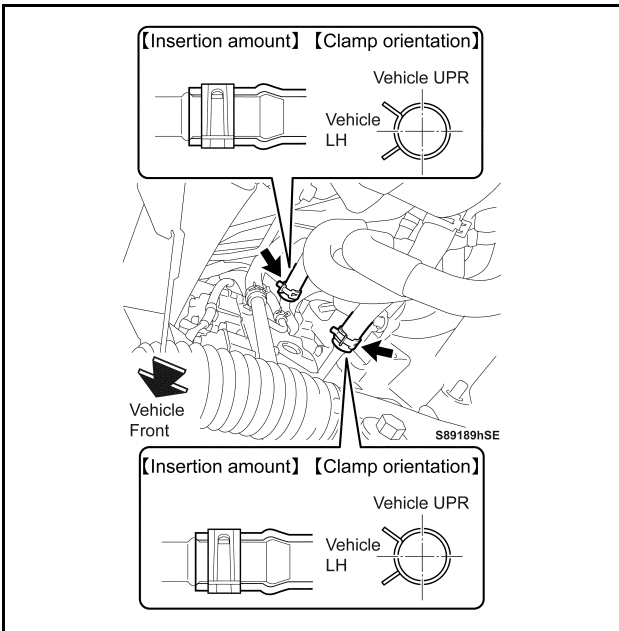
T'	Reading of torque wrench {N*m (kgf*cm, ft.*lbf)}
T	Specified torque {N*m (kgf*cm, ft.*lbf)}
L	Length of extension tool {mm (in.)}
L1	Length of torque wrench {mm (in.)}

S89738aS

## 6. REINSTALL FRONT CROSSMEMBER SUB-ASSEMBLY

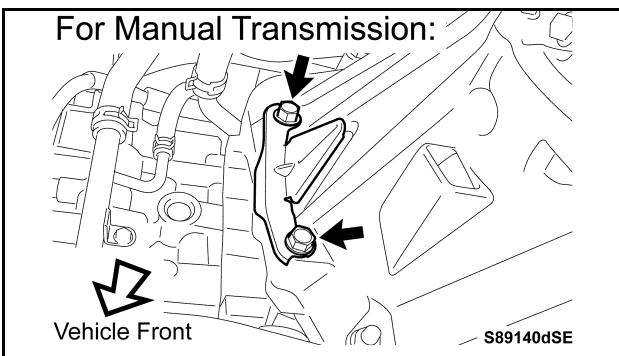


## 7. RECONNECT HEATER WATER HOSES (for Manual Transmission)



**8. CONNECT TRANSMISSION OIL COOLER HOSE NO. 1 AND HEATER WATER HOSE INLET A  
(for Automatic Transmission)**

- a) Remove the hose plugs, plastic bags, etc.
- b) Reconnect the 2 hoses.

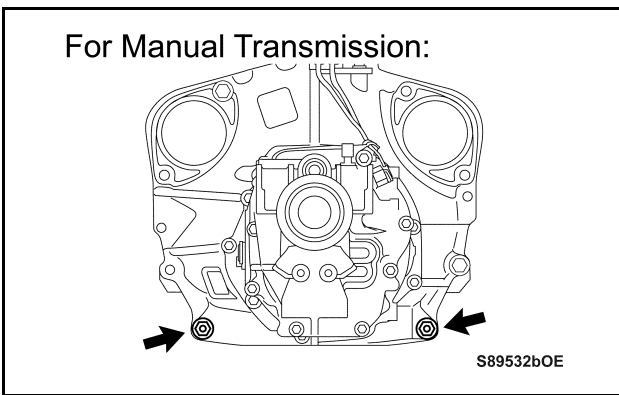


**9. REINSTALL AUTOMATIC TRANSMISSION ASSEMBLY COUPLING BOLTS AND NUTS  
(for Manual Transmission)**

- a) Reinstall the clutch housing cover with the 2 bolts.

**Specified torque:**

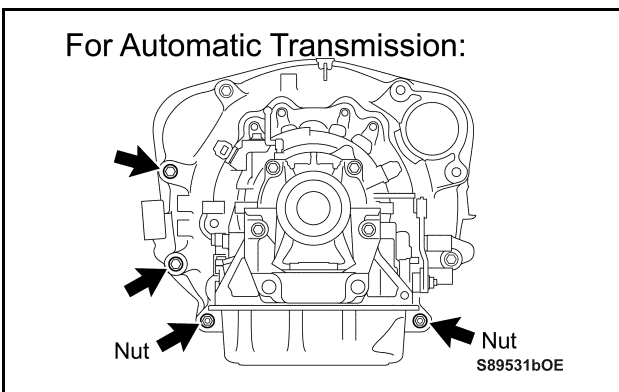
**37 ft.\*lbf (50 N\*m, 510 kgf\*cm)**



- b) Reinstall the 2 nuts.

**Specified torque:**

**37 ft.\*lbf (50 N\*m, 510 kgf\*cm)**



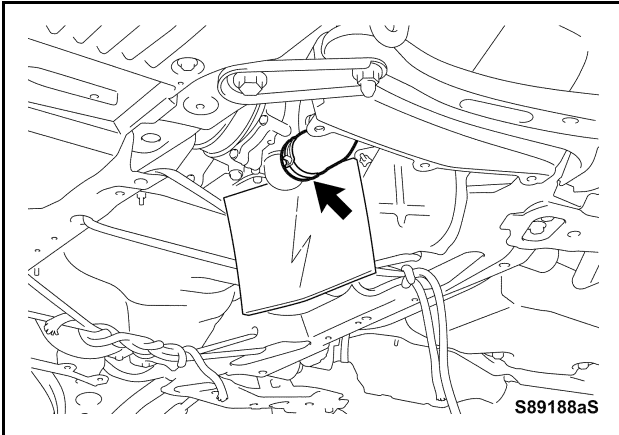
**10. REINSTALL MANUAL TRANSMISSION ASSEMBLY COUPLING BOLTS AND NUTS  
(for Automatic Transmission)**

- a) Reinstall the automatic transmission assembly with the 2 bolts and 2 nuts.

**Specified torque:**

**37 ft.\*lbf (50 N\*m, 510 kgf\*cm)**

## 11. REINSTALL EARTH CABLES

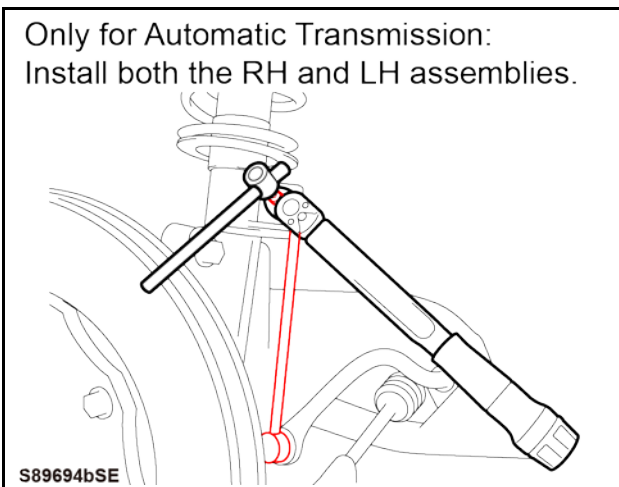


## 12. RECONNECT RADIATOR OUTLET HOSE

## 13. REINSTALL EXHAUST MANIFOLD

## 14. REINSTALL FRONT STABILIZER BARS RH AND LH (for Automatic Transmission)

Only for Automatic Transmission:  
Install both the RH and LH assemblies.



## 15. INSTALL FRONT STABILIZER LINK

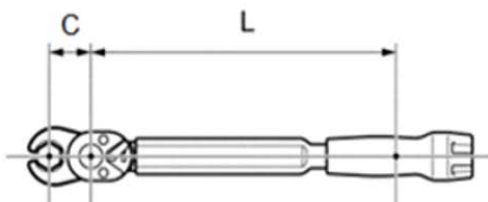
### ASSEMBLIES RH AND LH (for Automatic Transmission)

- Set 2 **NEW** front stabilizer link assemblies on the vehicle (the 2 assemblies are identical and can be installed facing either direction).
- Using a 6 mm (0.34 in.) socket hexagon, hold the stud bolt.
- Using a 17 mm (0.67 in.) union nut wrench, install 4 **NEW** nuts while holding the stud bolt.

**Specified torque:**

**34 ft.\*lbf (46 N\*m, 469 kgf\*cm)**

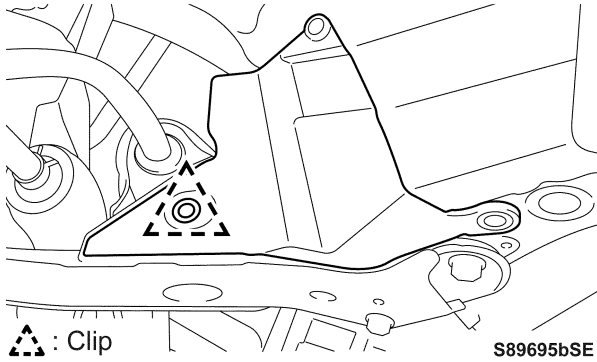
**Be sure to use the formula below to calculate the torque reading values as an extension tool is used.**



$$\text{Torque Setting (ft.lbs)} = \frac{34 \times L}{C + L}$$

L	Length of torque wrench ( in. )
C	Length of crowfoot wrench ( in. )

Only for Automatic Transmission:  
Reinstall 1 clip each on the RH and LH covers.

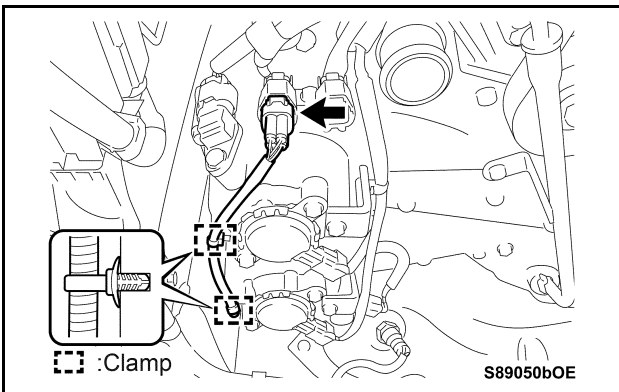


- d) Reinstall 1 clip each on the left and right engine under covers.

**16. REINSTALL REAR ENGINE UNDER COVER LH AND RH (w/ Floor Under Cover)**

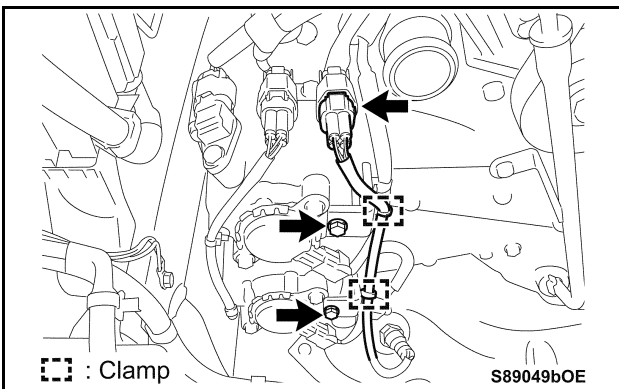
**17. REINSTALL No.1 ENGINE UNDER COVER**

**18. REINSTALL No.2 ENGINE UNDER COVER**



**19. REINSTALL OXYGEN SENSOR**

- a) Reconnect the connector and attach the 2 clips (included in the Valve Spring Kit) to reinstall the oxygen sensor.



**20. REINSTALL AIR FUEL RATIO SENSOR**

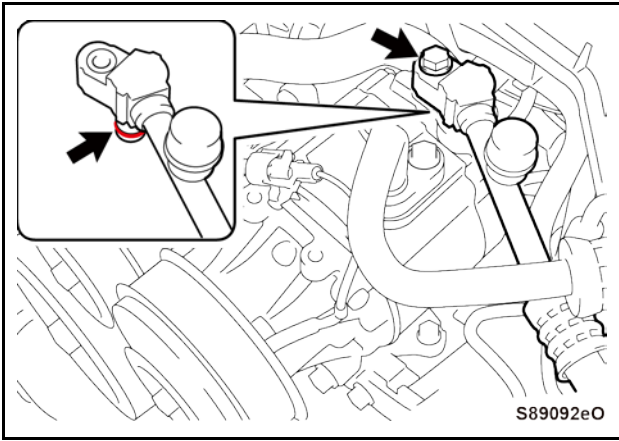
**21. RECONNECT VACUUM TUBE CONNECTOR HOSE**

**22. RECONNECT ENGINE WIRE**

**23. REINSTALL THROTTLE WITH MOTOR BODY ASSEMBLY**

**24. REINSTALL GENERATOR ASSEMBLY**

**25. REINSTALL COMPRESSOR WITH MAGNET CLUTCH ASSEMBLY (for Models with Air Conditioning System)**



**26. RECONNECT NO. 1 COOLER REFRIGERANT DISCHARGE HOSE (for Models with Air Conditioning System)**

- a) Remove the protective tape.
- b) Apply compressor oil (ND-OIL8) to a **NEW** O-ring and the compressor engagement portions.

**NOTE:**

**Part No.: SU003-A0025 (73796KC0209R)**

**φ 10.8 mm (0.43 in.) inner diameter,**

**φ 15.6 mm (0.61 in.) outer diameter**

- c) Install the **NEW** O-ring to the No. 1 cooler refrigerant discharge hose.



**DO NOT allow foreign matter to adhere to the NEW O-ring or its sealing surfaces.**

- d) Reinstall the bolt.

**Specified torque:**

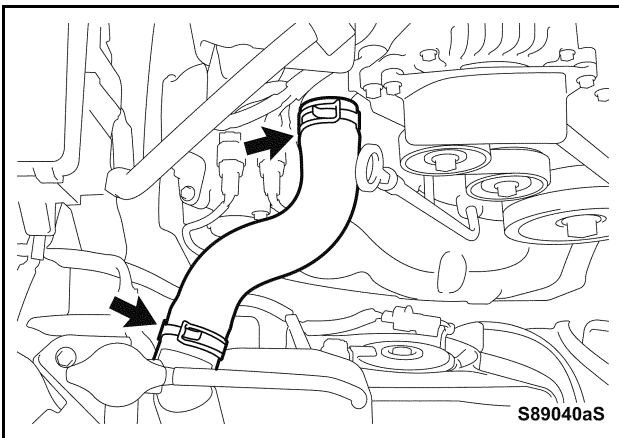
**7 ft.\*lbf (10 N\*m, 102 kgf\*cm)**

**27. REINSTALL FAN AND GENERATOR V BELT**

**28. REINSTALL ENGINE OIL LEVEL DIPSTICK GUIDE**

**29. REINSTALL BELT GENERATOR COVER**

**30. REINSTALL GENERATOR COVER**



**31. REINSTALL RADIATOR INLET HOSE**

**32. REINSTALL AIR CLEANER WITH HOSE ASSEMBLY**

**33. REINSTALL FRONT SUSPENSION UPPER TO COWL BRACE SUB-ASSEMBLIES RH AND LH**

**34. REINSTALL FUEL TANK CAP ASSEMBLY**

**35. RECONNECT CABLE TO BATTERY NEGATIVE TERMINAL**

**Specified torque:**

**53 in.\*lbf (6.0 N\*m, 61 kgf\*cm)**

**36. REINSTALL FRONT TIRES**

**Specified torque:**

**89 ft.\*lbf (120 N\*m, 1224 kgf\*cm)**

**37. CHECK BEFORE STARTING ENGINE**



**Ensure that after the engine has been reassembled, and allow the engine assembly to sit for a minimum of 2 hours before adding oil as previously mentioned. This time helps FIPG completely cure.**

**38. REFILL ENGINE OIL**

**39. CHARGE REFRIGERANT HFC-134a (R134a) (for Models with Air Conditioning System)**

**40. ADD ENGINE COOLANT (Toyota Genuine Super LLC50)**



**It is recommended before starting the engine for the first time, remove EFI Main3 Relay and crank the engine to build up oil pressure.**

**41. INSPECT FOR COOLANT LEAKS**

**42. INSPECT FOR ENGINE OIL LEAKS**

**43. INSPECT FOR FUEL LEAKS**

**44. INSPECT FOR EXHAUST GAS LEAKS**

**45. CHECK FOR REFRIGERANT GAS LEAKS (for Models with Air Conditioning System)**

**46. INSPECT THROTTLE WITH MOTOR BODY ASSEMBLY**

**47. CHECK IGNITION TIMING**

**48. CHECK ENGINE IDLING SPEED**

**49. CHECK ENGINE COOLANT LEVEL**

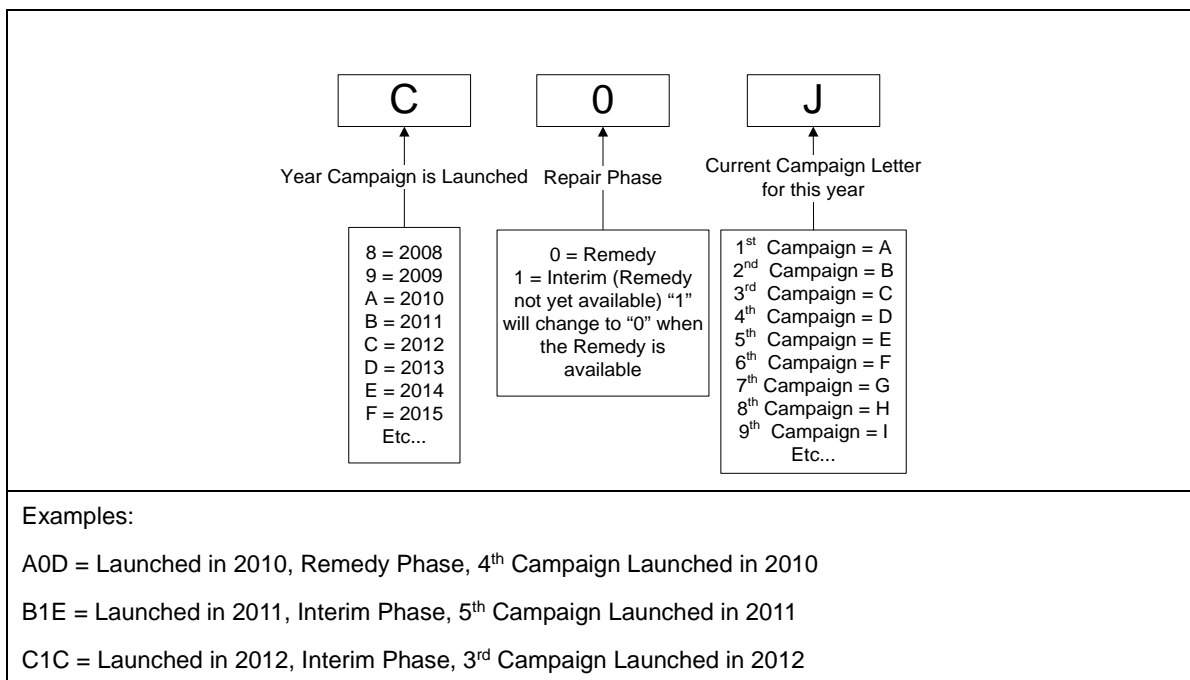
## ◀ VERIFY REPAIR QUALITY ▶

- Check all fluid levels
- Test drive vehicle to ensure proper operation of engine
- Ensure there are no DTC's before and after test drive
- Ensure there are no fluid leaks before and after test drive
- Check for any abnormal engine noise

If you have any questions regarding this **recall**, please contact your regional representative.

## XXIII. APPENDIX

### A. CAMPAIGN DESIGNATION DECODER



### B. CAMPAIGN PARTS DISPOSAL

As required by Federal Regulations, please make sure all campaign parts (original parts) removed from the vehicle are disposed of in a manner in which they will not be reused, ***unless requested for parts recovery return.***