



## ***STi PERFORMANCE CLUTCH DISC (5MT) INSTRUCTIONS***

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Installation instructions are intended only for certified trained automotive technicians or those with the necessary automotive knowledge to properly complete the job. In some cases, special tools may be required. Installation should never be undertaken by unqualified persons or by those lacking the necessary tools and facilities.

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# SUBARU®



**STi PERFORMANCE CLUTCH COVER**

**STi PERFORMANCE CLUTCH DISC**

**STi PERFORMANCE FLYWHEEL**

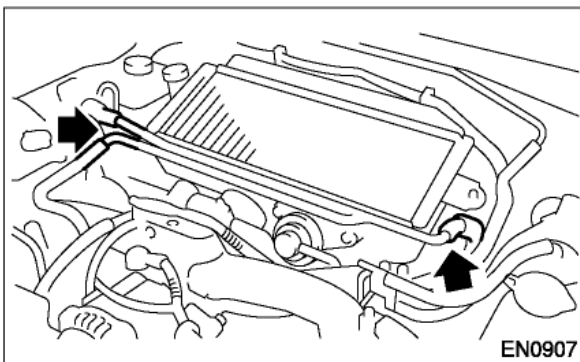
## **Clutch Installation Instructions**

### **Remove Manual Transmission Assembly**

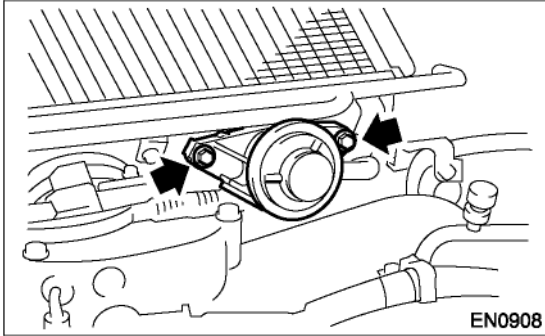
- 1) Disconnect the battery ground terminal.

### **REMOVE THE INTERCOOLER**

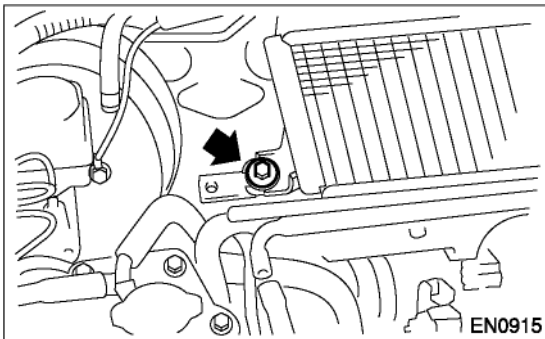
- 1) Disconnect the air by-pass hoses from intercooler.



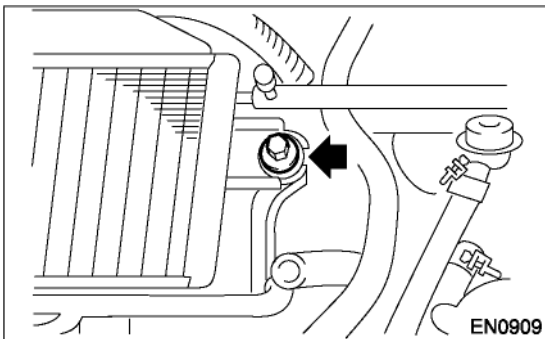
- 2) Separate the air by-pass valve from intercooler.



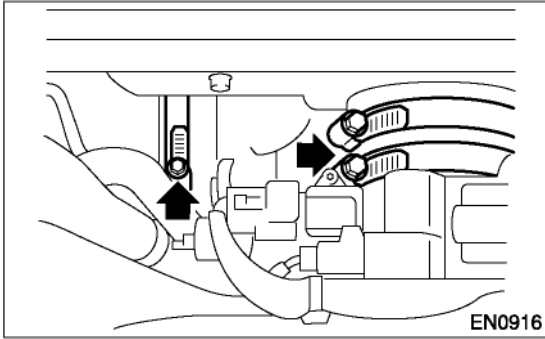
3) Remove the bolts which secure intercooler to bracket.



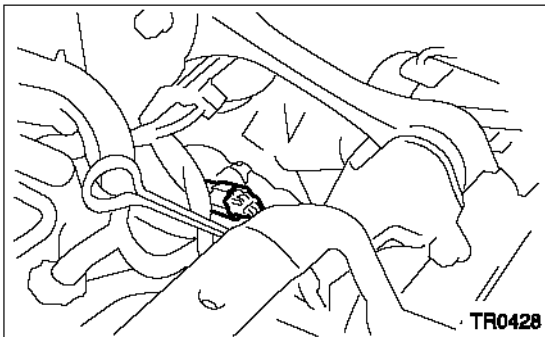
4) Separate the intercooler air duct from turbocharger.



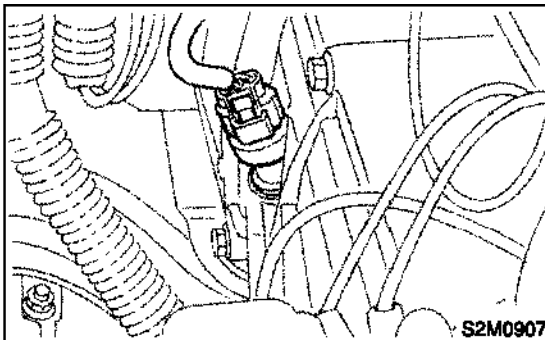
5) Separate the intercooler from throttle body.



6) Disconnect the back-up light switch connector.

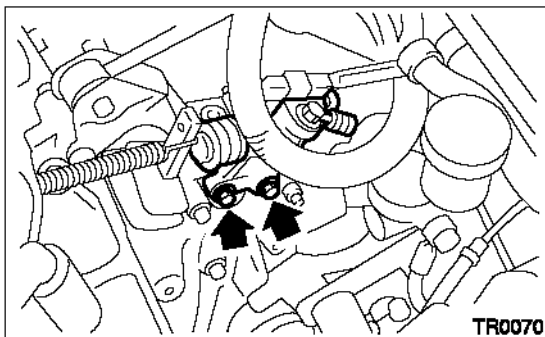


(7) Disconnect the vehicle speed sensor connector.

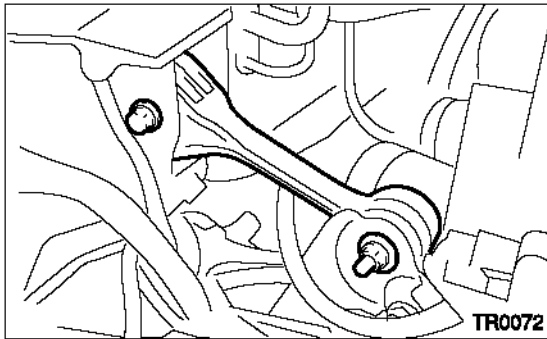


8) Disconnect wires at starter and remove the starter.

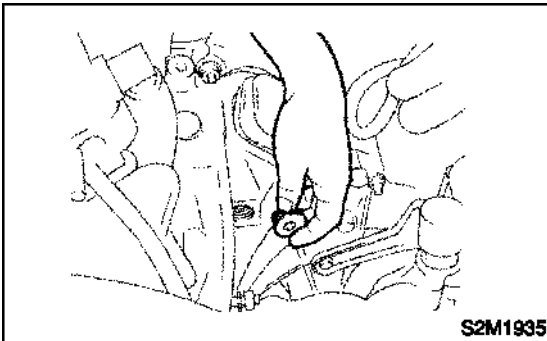
9) Remove the operating (slave) cylinder from the transmission.



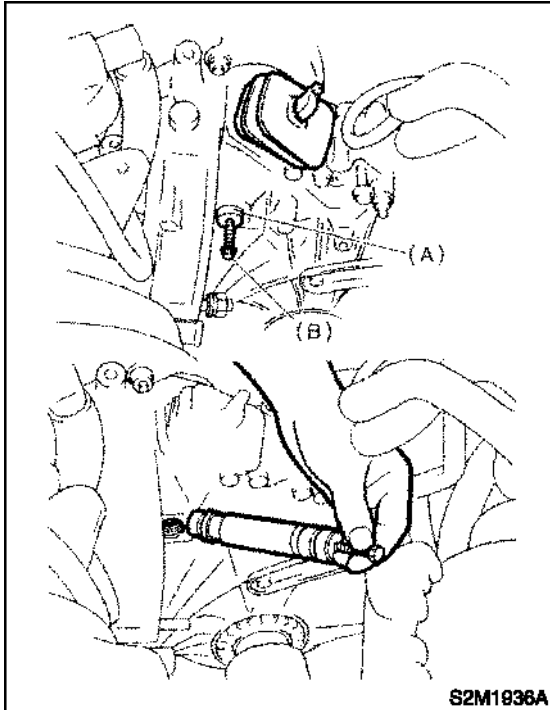
10) Remove the pitching stopper (motor strut).



11) Separate the clutch release fork from the release bearing by first removing the plug using 10 mm allen wrench.



(12) Screw the 6 mm dia. bolt into the release fork shaft, and remove it.

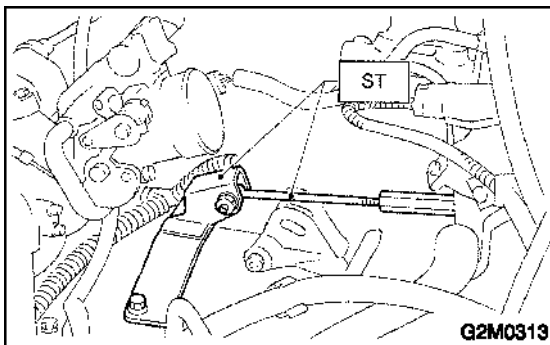


(A) Shaft  
(B) Bolt

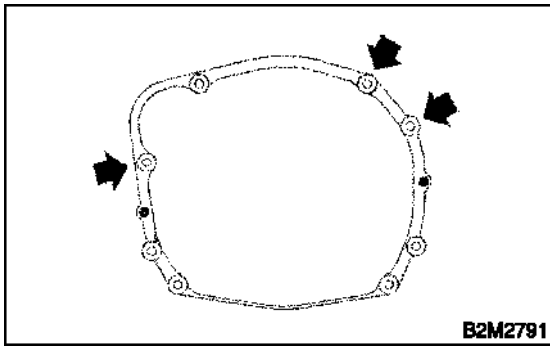
(13) Raise the release fork and unfasten the release bearing tabs to free release fork.

**CAUTION:**  
**Step (13) is required to prevent interference with engine when removing engine from transmission.**

Install ENGINE SUPPORT ASSY tool ST 41099AA020 as shown.



14) Remove the bolt which holds right upper side of transmission to the engine.

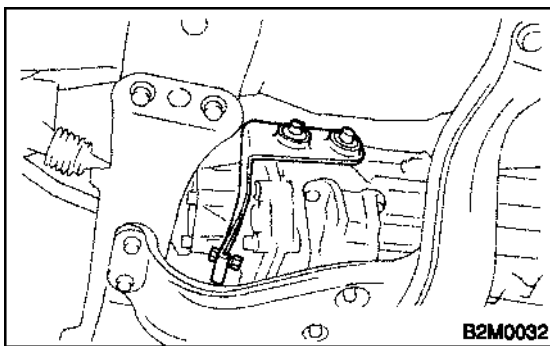


- 15) Remove the center exhaust pipe.
- 16) Remove the rear exhaust pipe and muffler.

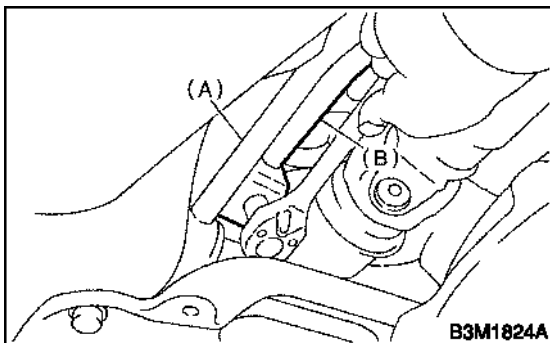
**CAUTION:**

**When removing exhaust pipes, be careful each exhaust pipe does not drop out.**

- 17) Remove the heat shield cover. (If equipped)
- 18) Remove the hanger bracket from right side of transmission.



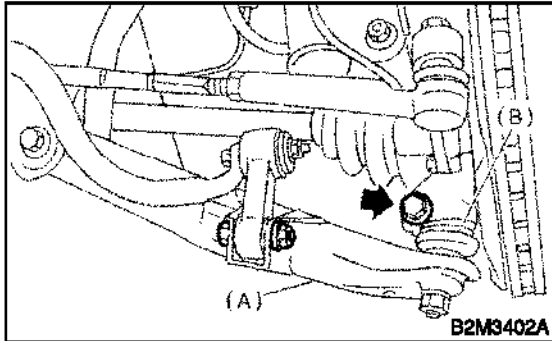
- 19) Remove the center drive (propeller) shaft.
- 20) Remove the gear shift rod and stay from transmission by disconnecting the stay from the transmission and then the rod from the transmission.



- (A) Stay
- (B) Rod

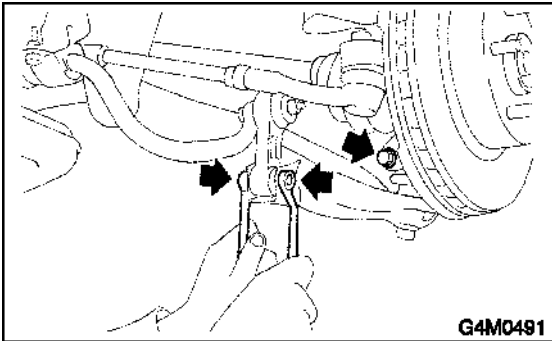
21) Disconnect the stabilizer link from the transverse link.

22) Remove the bolt securing ball joint of transverse link to housing.

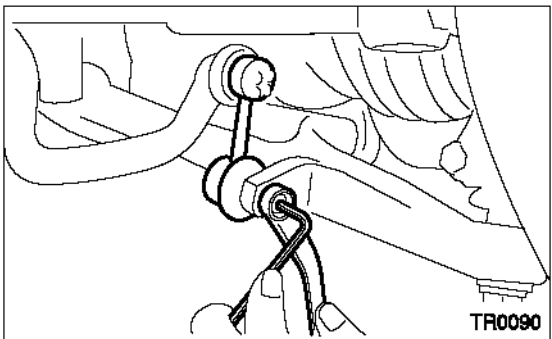


(A) Transverse link  
(B) Ball joint

• Except sedan turbo model



• Sedan turbo model

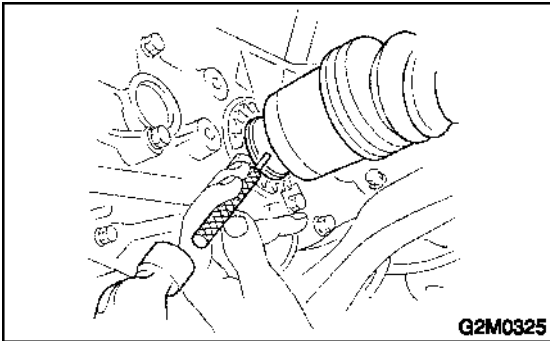


23) Remove the spring pins and separate front drive shafts from each side of the transmission.

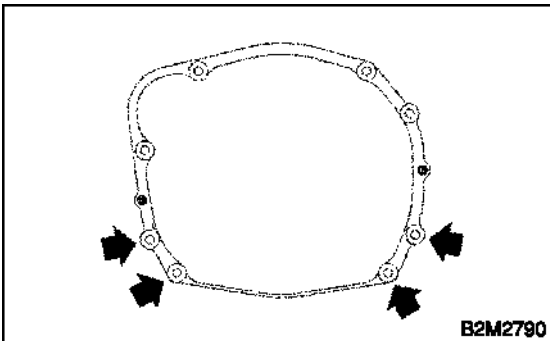
**CAUTION:**



Discard old spring pins. Replace with new spring pins.



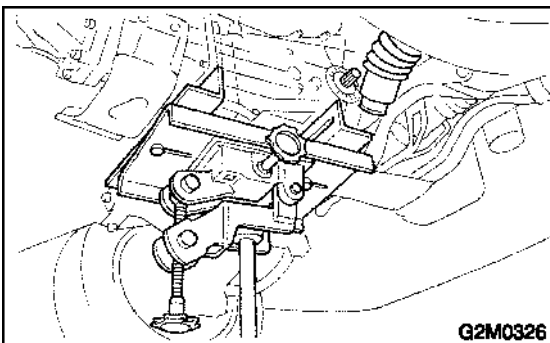
24) Remove the nuts which hold lower side of transmission to the engine.



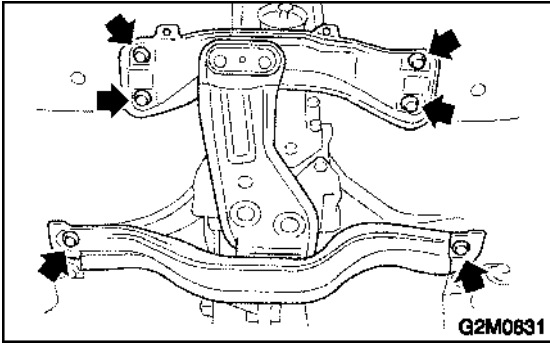
25) Place the transmission jack under transmission.

**CAUTION:**

**Always support transmission case with a transmission jack.**



26) Remove the transmission rear crossmember from the vehicle.



27) Remove the transmission.

**CAUTION:**

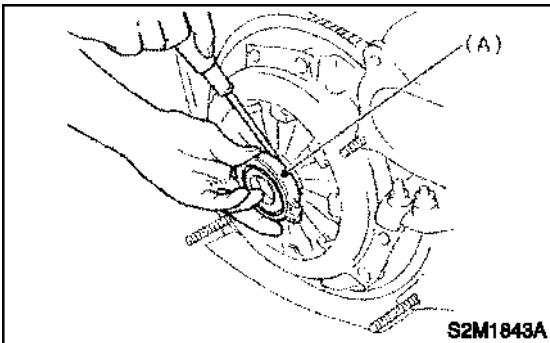
**Move transmission jack toward rear until main shaft is withdrawn from clutch cover.**

28) Separate the transmission assembly and rear cushion rubber.

29) Remove the clutch release lever from transmission.

30) Put the clutch release bearing in engine side.

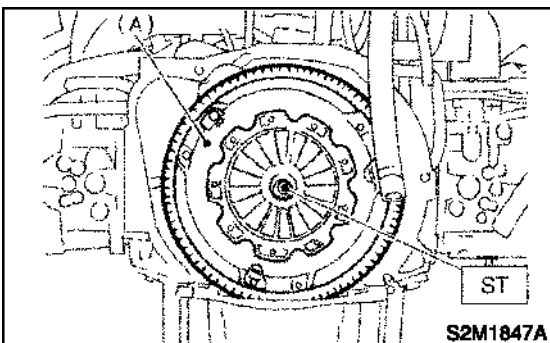
31) Remove the clutch release bearing from clutch cover using a flat-type screwdriver.



(A) Clutch release bearing

**Remove Clutch Cover and Disc**

1) Install the ST 499747100 CLUTCH DISC GUIDE on flywheel.



(A) Clutch cover

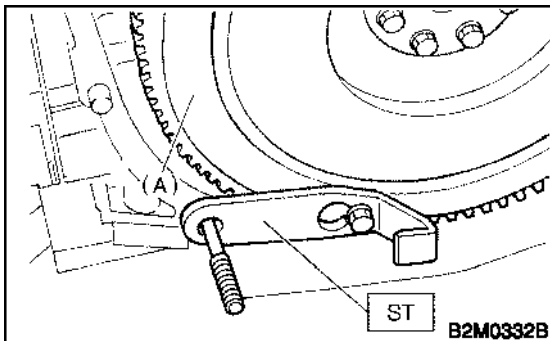
2) Remove the clutch cover and clutch disc.

**CAUTION:**

- Take care not to allow oil on the clutch disc facing.
- Do not disassemble either the clutch cover or clutch disc.

**Remove Flywheel**

1) Remove the flywheel by using ST 498497100 CRANKSHAFT STOPPER.

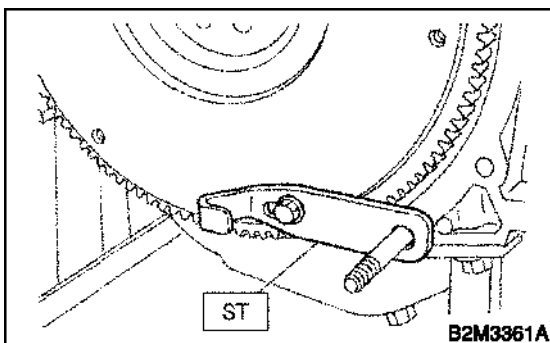


(A) Flywheel

2) Remove attaching bolts.

**Install Flywheel**

1) Install the flywheel by using ST 498497100 CRANKSHAFT STOPPER.



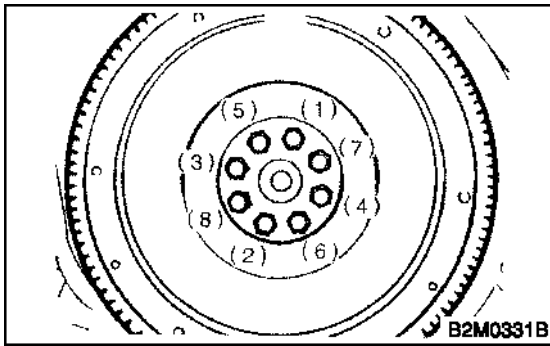
2) Tighten the flywheel attaching bolts to the specified torque.

**NOTE:**

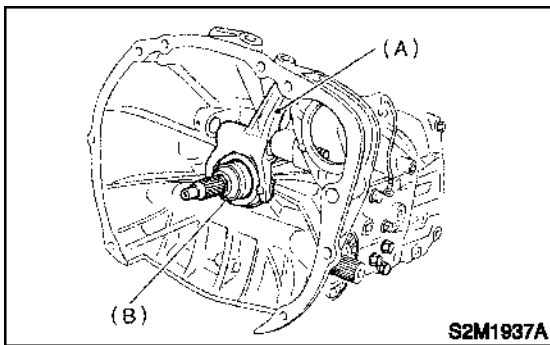
Tighten the flywheel installing bolts gradually. Each bolt should be tightened to the specified torque in a crisscross method.

***Tightening torque:***

***72 N·m (7.3 kgf-m, 52.8 ft-lb)***

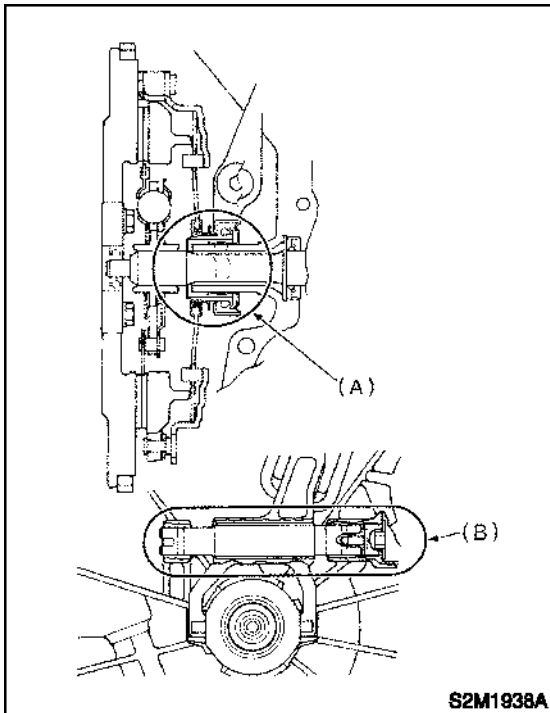


- 3) Install the release bearing on transmission.
- 4) Insert the release fork into release bearing tab.



- (A) Release fork  
(B) Release bearing

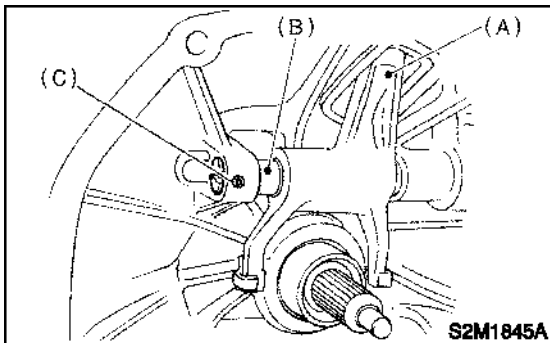
- 5) Apply grease to the specified points:
  - Spline FX2200
  - Shaft SUNLIGHT 2



(A) Spline (FX2200)  
 (B) Shaft (SUNLIGHT 2)

6) Insert the release fork shaft into release fork.

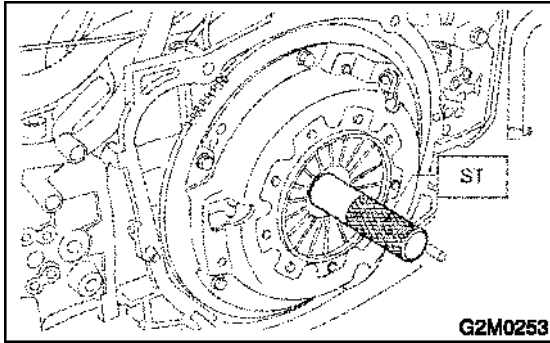
**CAUTION:**  
**Make sure the cutout portion of the release fork shaft contacts spring pin.**



(A) Release fork  
 (B) Release shaft  
 (C) Spring pin

### **Install Clutch Cover and Disc**

1) Insert the ST 499747100 CLUTCH DISC GUIDE into the clutch disc and install the on the flywheel by inserting the tool end into the pilot bearing.



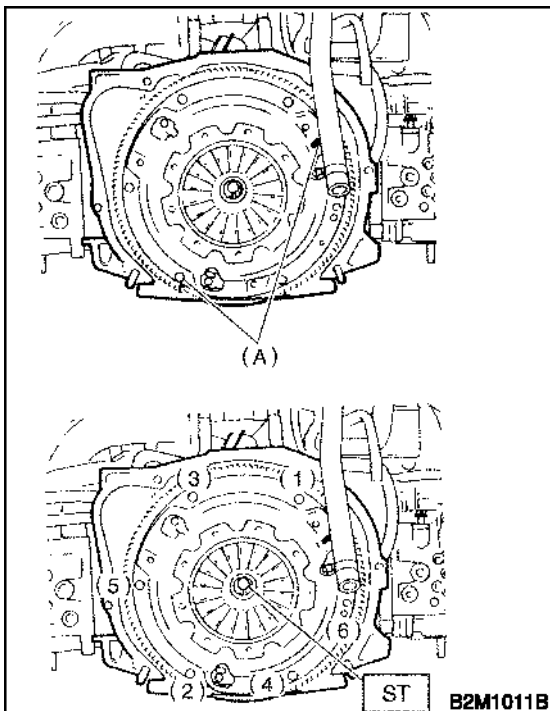
2) Install the clutch cover on flywheel and tighten bolts to the specified torque.

NOTE:

- When installing the clutch cover on the flywheel, position the clutch cover so that there is a gap of 120° or more between “0” marks on the flywheel and clutch cover. (“0” marks indicate the directions of residual unbalance.)
- Note the front and rear of the clutch disc when installing.
- Temporarily tighten the bolts by hand. Each bolt should be tightened to the specified torque in a crisscross method.

**Tightening torque:**

**15.7 N·m (1.6 kgf-m, 11.6 ft-lb)**



(A) “0” marks

3) Remove the ST 499747100 CLUTCH DISC GUIDE.

## **Install Manual Transmission Assembly**

1) Install the rear cushion rubber to the transmission assembly.

### ***Tightening torque:***

**35 N·m (3.6 kgf·m, 26.3 ft·lb)**

2) Install the transmission onto the engine.

(a) Gradually raise the transmission with transmission jack.

(b) Engage them at splines.

### **CAUTION:**

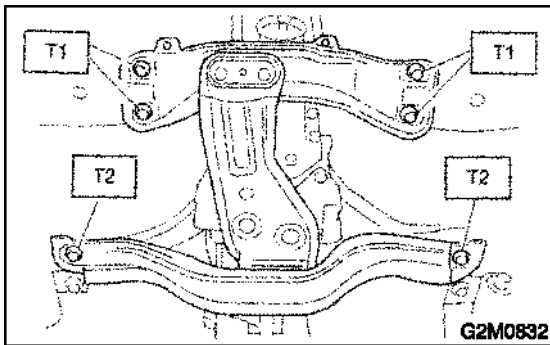
**Be careful not to strike main shaft against clutch cover.**

3) Install the transmission rear crossmember.

### ***Tightening torque:***

**T1: 70 N·m (7.1 kgf·m, 51 ft·lb)**

**T2: 140 N·m (14.3 kgf·m, 103 ft·lb)**

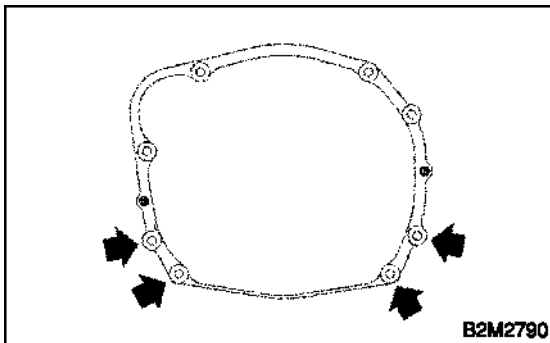


4) Take off the transmission jack.

5) Tighten the nuts which hold lower side of transmission to the engine.

### ***Tightening torque:***

**50 N·m (5.1 kgf·m, 36.9 ft·lb)**



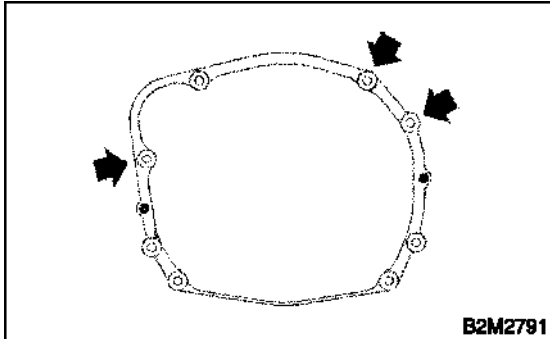
6) Connect the engine and transmission.

7) Install the starter.

8) Tighten the bolts which hold right upper side of transmission to the engine.

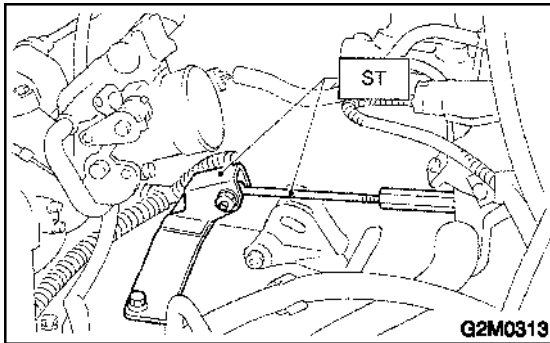
**Tightening torque:**

**50 N·m (5.1 kgf-m, 36.9 ft-lb)**



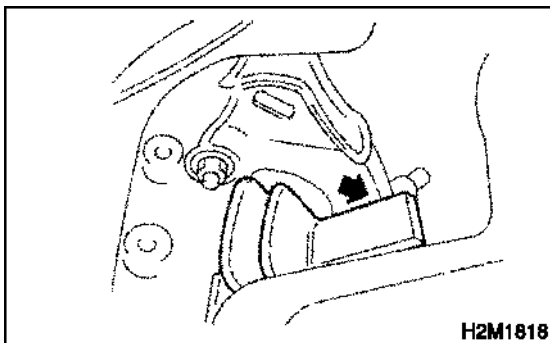
**B2M2791**

9) Remove ENGINE SUPPORT ASSY tool.



**G2M0313**

10) Push the clutch release lever to fit bearing into clutch cover.



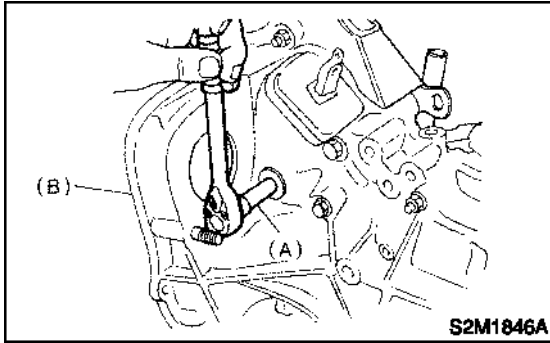
**H2M1818**

11) Install the plug.

**Tightening torque:**

**44 N·m (4.5 kgf-m, 32.5 ft-lb)**





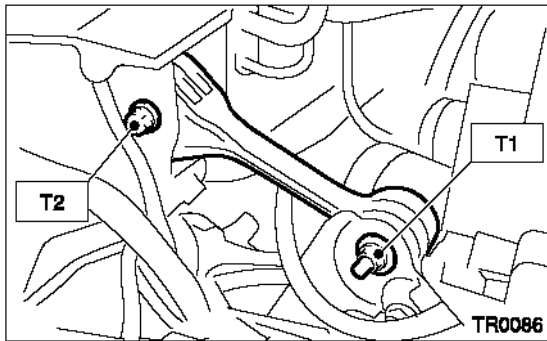
- (A) Plug
- (B) Transmission ASSY

12) Install the pitching stopper (motor strut).

**Tightening torque:**

**T1: 50 N·m (5.1 kgf-m, 37 ft-lb)**

**T2: 58 N·m (5.9 kgf-m, 43 ft-lb)**

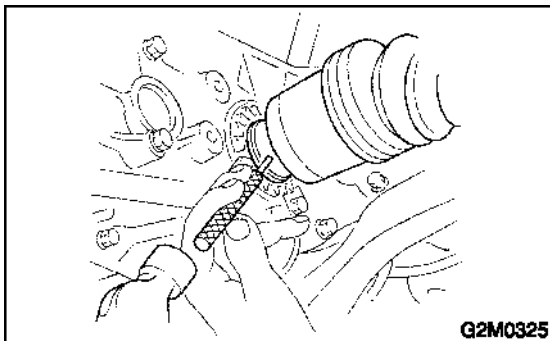


13) Install the front drive shaft into the transmission.

14) Drive the spring pin into the chamfered hole of drive shaft.

**CAUTION:**

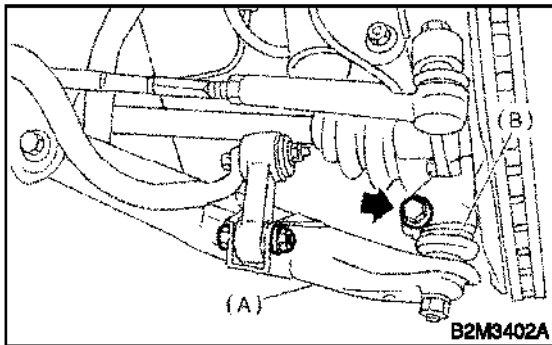
**Always use a new spring pin.**



15) Install the ball joints of lower arm into knuckle arm of housing, and tighten the installing bolts.

**Tightening torque:**

**49 N·m (5.0 kgf-m, 36 ft-lb)**



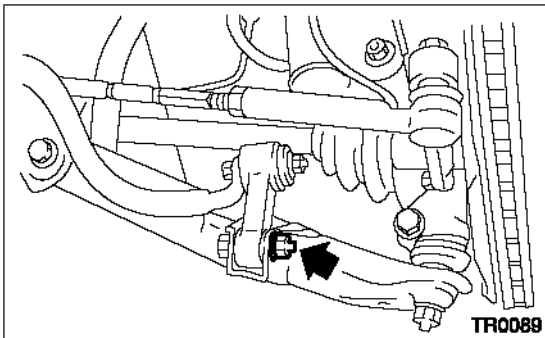
(A) Transverse link  
(B) Ball joint

16) Install the stabilizer link from the transverse link.

- Except sedan turbo model

**Tightening torque:**

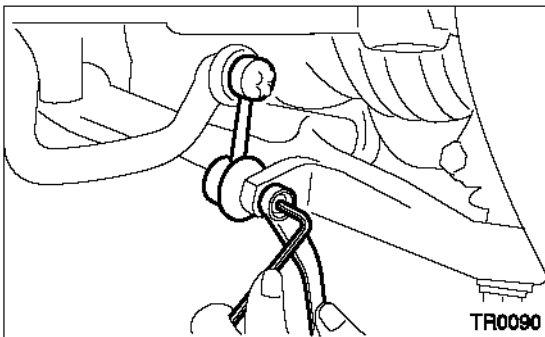
**30 N·m (3.1 kgf-m, 22.1 ft-lb)**



- Sedan turbo model

**Tightening torque:**

**45 N·m (4.6 kgf-m, 33.2 ft-lb)**

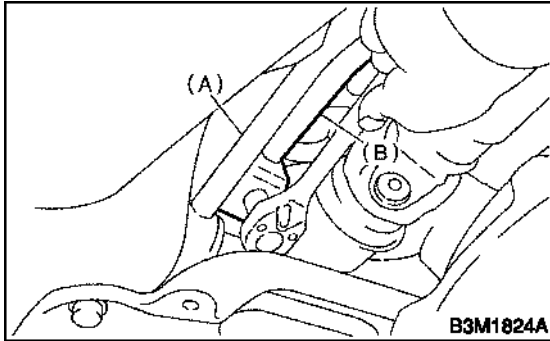


17) Install the gear shift rod and stay.

(a) Connect the rod to the joint.

**Tightening torque:**

**18 N·m (1.8 kgf-m, 13.0 ft-lb)**

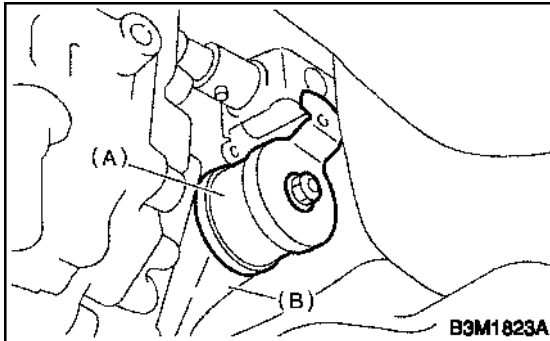


(A) Stay  
(B) Rod

(b) Connect the stay to the transmission bracket.

**Tightening torque:**

**18 N·m (1.8 kgf-m, 13.0 ft-lb)**



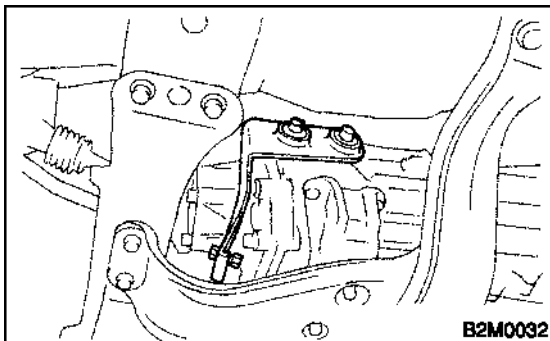
(A) Stay  
(B) Transmission bracket

18) Install the center drive (propeller) shaft.

19) Install the heat shield cover. (If equipped)

20) Install the rear exhaust pipe and muffler.

21) Install the hanger bracket on the right side of transmission.



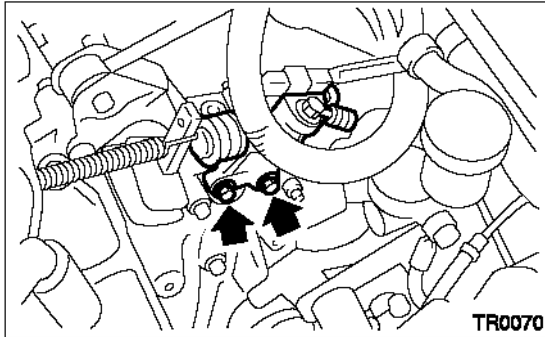
22) Install the center exhaust pipe.

23) Install the under cover.

24) Install the operating (slave) cylinder.

**Tightening torque:**

**37 N·m (3.8 kgf-m, 27.5 ft-lb)**



25) Connect the following connectors.

(a) Transmission ground terminal

**Tightening torque:**

**13 N·m (1.3 kgf-m, 9.4 ft-lb)**

(b) Vehicle speed sensor connector

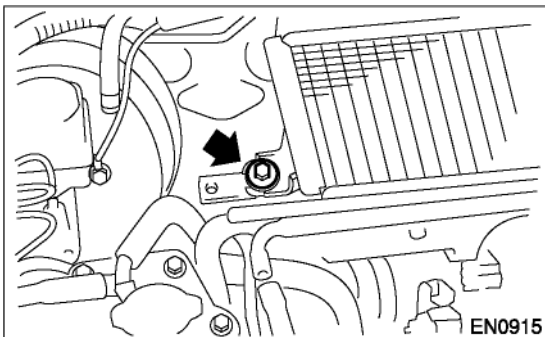
(c) Back-up light switch connector

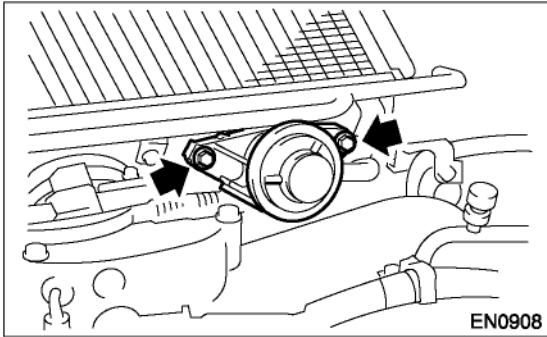
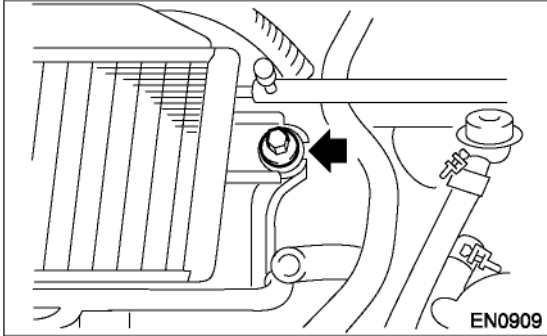
## INSTALL THE INTERCOOLER

Install in the reverse order of removal.

**Tightening torque:**

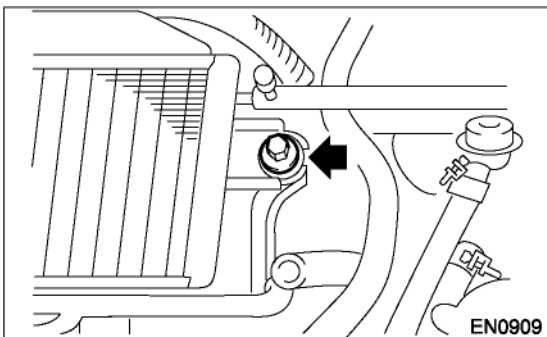
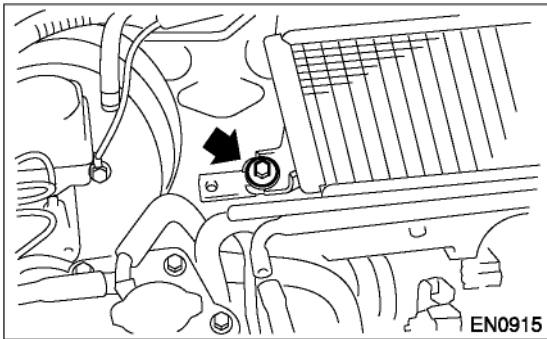
**16 N·m (1.6 kgf-m, 11.7 ft-lb)**

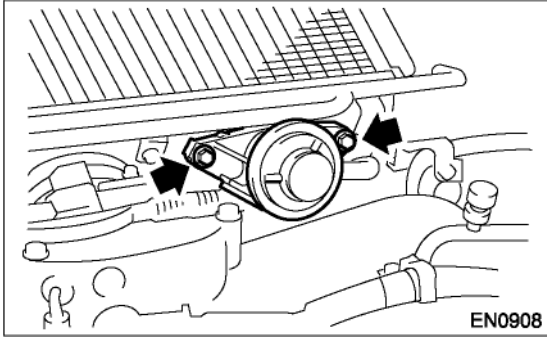




Install in the reverse order of removal.

**Tightening torque:**  
**16 N·m (1.6 kgf-m, 11.7 ft-lb)**





26) Connect the battery ground terminal.