

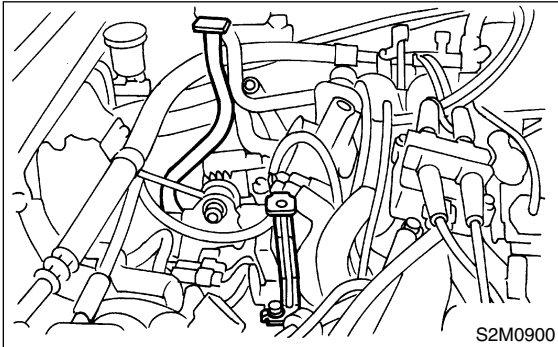
## 3. Manual Transmission Assembly

S503224

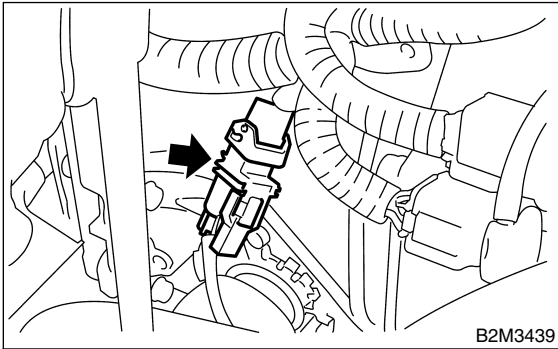
### A: REMOVAL

S503224A18

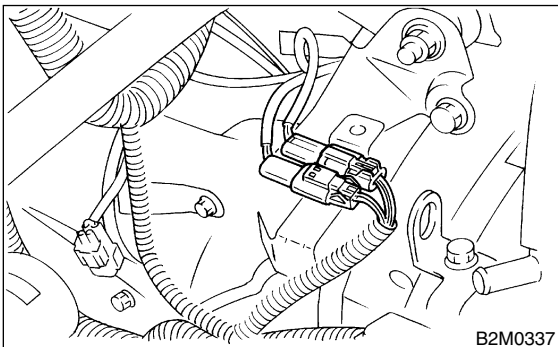
- 1) Open front hood fully, and support with stay.
- 2) Disconnect battery ground terminal.
- 3) Remove air intake duct <Ref. to IN-5 REMOVAL, Air Intake Duct.> and air cleaner case. <Ref. to IN-4 REMOVAL, Air Cleaner Case.>
- 4) Remove air cleaner case stay.



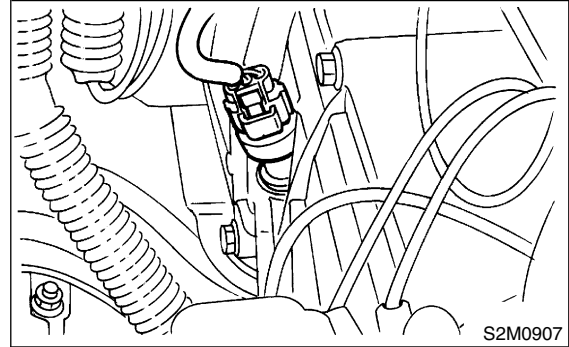
- 5) Disconnect the following connectors.
  - (1) Front oxygen sensor connector



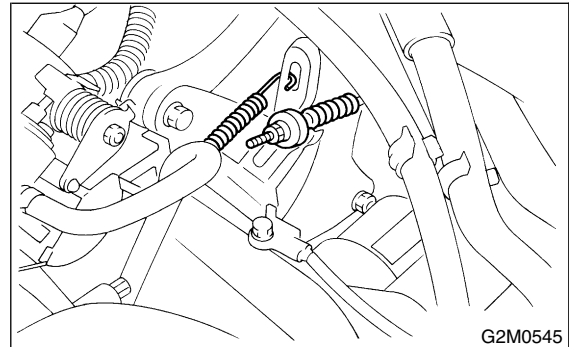
- (2) Transmission ground terminal
- (3) Neutral position switch connector
- (4) Back-up light switch connector



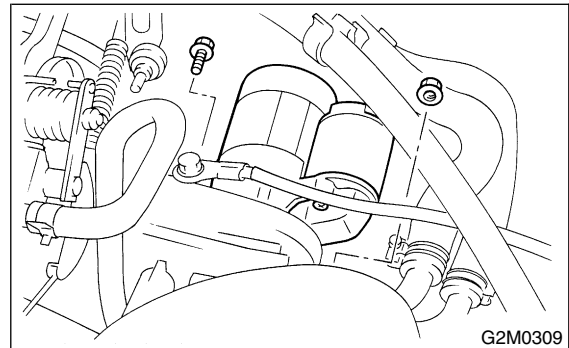
- (5) Vehicle speed sensor connector



- 6) Disconnect the following cable. (2200 cc vehicle)



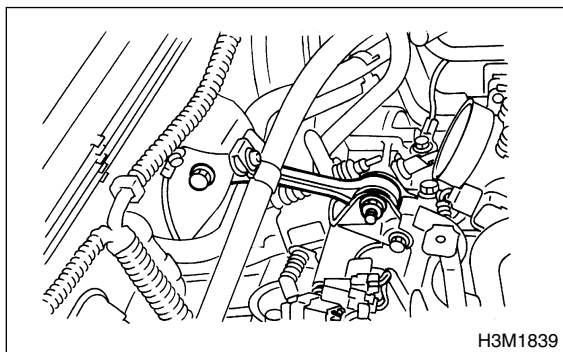
- 7) Remove starter.
  - (1) Disconnect connectors and terminal from starter.
  - (2) Remove bolt which installs upper side of starter.
  - (3) Remove nut which installs lower side of starter, and remove starter from transmission.



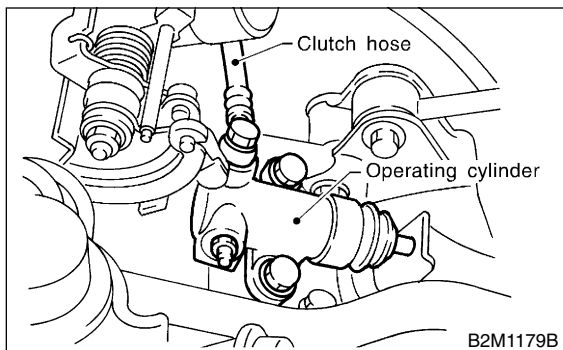
# MANUAL TRANSMISSION ASSEMBLY

## Manual Transmission and Differential

8) Remove pitching stopper.

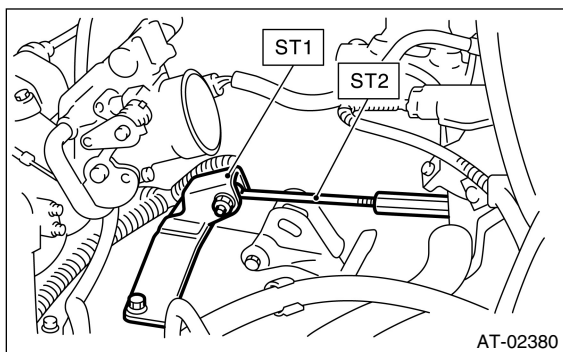


9) Remove operating cylinder. (2500 cc vehicle)

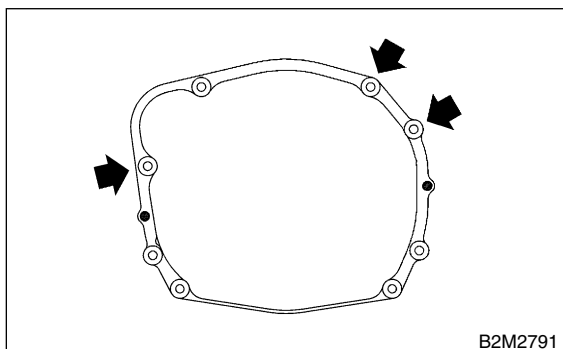


10) Set ST.

ST1 41099AA010 ENGINE SUPPORT  
ST2 41099AA020 ENGINE SUPPORT

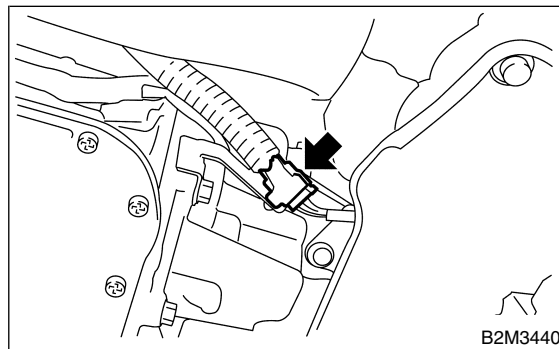


11) Remove bolt which holds right upper side of transmission to engine.

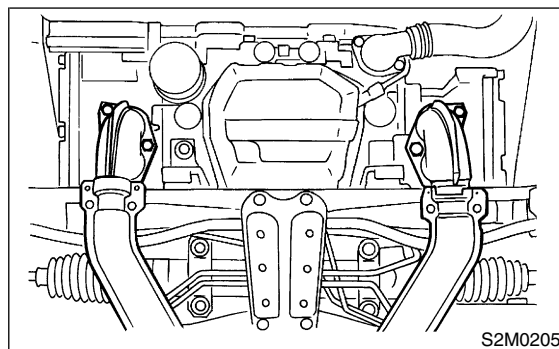


12) Remove exhaust system.

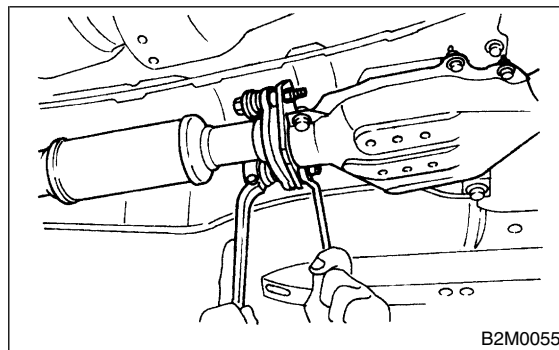
- (1) Lift-up the vehicle.
- (2) Disconnect connector from rear oxygen sensor.



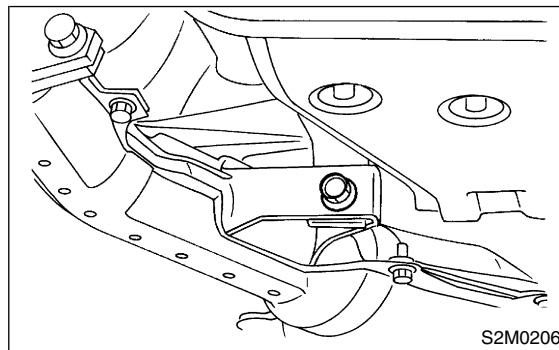
- (3) Remove nuts which install front exhaust pipe onto engine.



- (4) Separate center exhaust pipe from rear exhaust pipe.



- (5) Remove bolt which installs center exhaust pipe to hanger bracket.



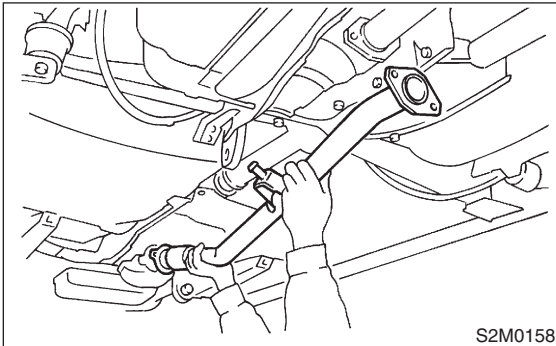
# MANUAL TRANSMISSION ASSEMBLY

Manual Transmission and Differential

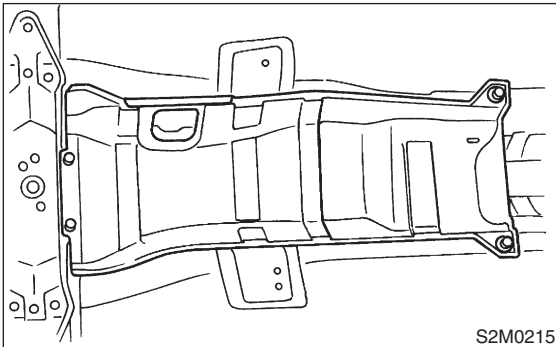
- (6) Take off front and center exhaust pipes.
- (7) Remove rear exhaust pipe.

## CAUTION:

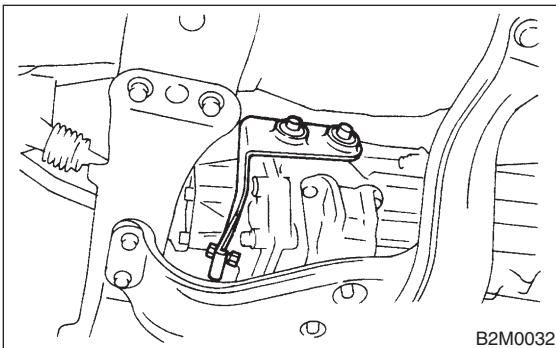
**When removing exhaust pipes, be careful each exhaust pipe does not drop out.**



- (8) Remove heat shield cover of rear exhaust pipe.

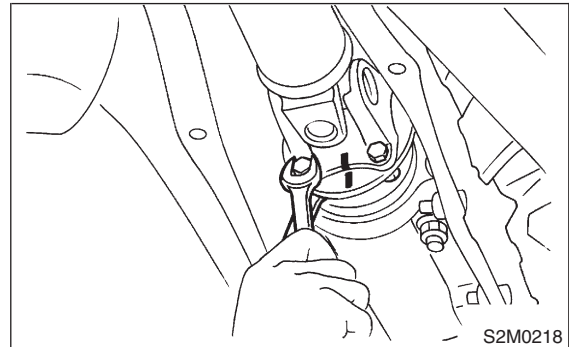


- (9) Remove hanger bracket from right side of transmission.



- 13) Remove propeller shaft.

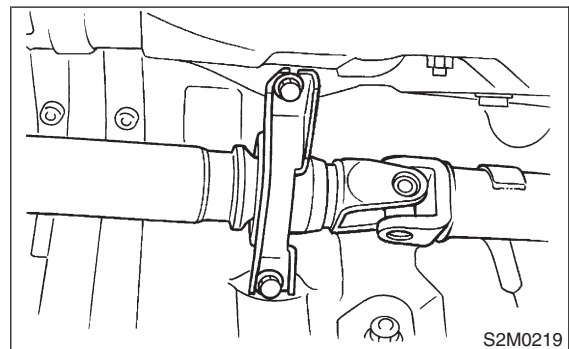
- (1) Remove front cover of rear differential mount.
- (2) Separate propeller shaft from rear differential.



- (3) Remove bolts which hold center bearing onto body.

## CAUTION:

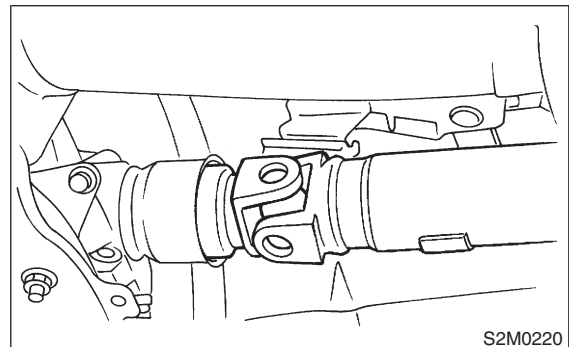
**Be careful not to drop propeller shaft.**



- (4) Remove propeller shaft from transmission.

## CAUTION:

- Be sure to use an empty container to catch oil flowing out when removing propeller shaft.
- Be sure not to damage oil seals and the frictional surface of sleeve yoke.
- Be sure to plug the opening in transmission after removal of propeller shaft.

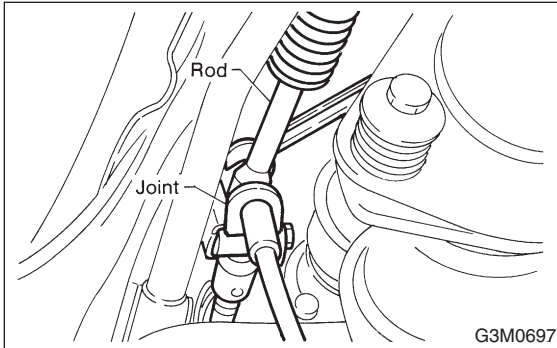


# MANUAL TRANSMISSION ASSEMBLY

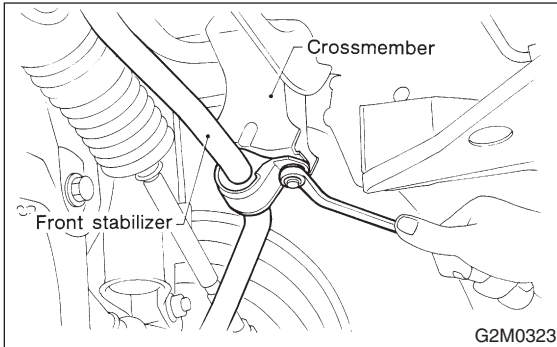
## Manual Transmission and Differential

14) Remove gear shift rod and stay from transmission.

- (1) Disconnect stay from transmission.
- (2) Disconnect rod from transmission.

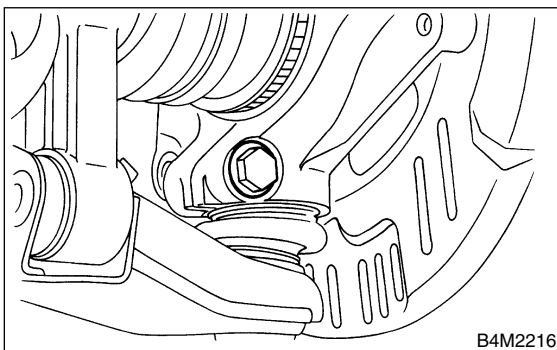


15) Remove bolts which install stabilizer clamps onto crossmember.



16) Remove front drive shafts from transmission.

- (1) Remove transverse link from housing.

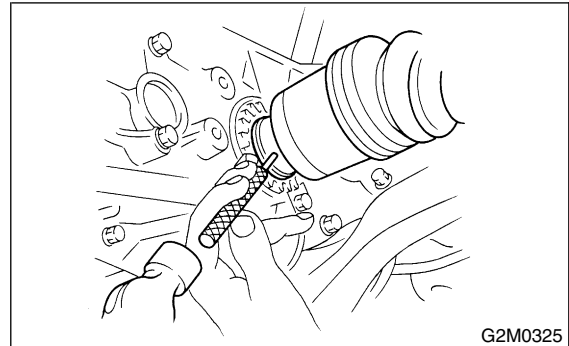


- (2) Lower transverse link.

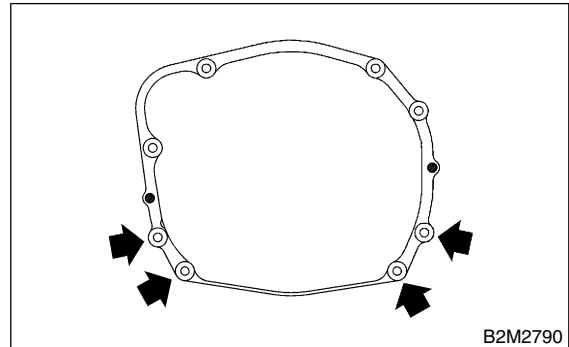
(3) Remove spring pins and separate front drive shafts from each side of the transmission.

### CAUTION:

**Discard removing spring pin. Replace with a new one.**



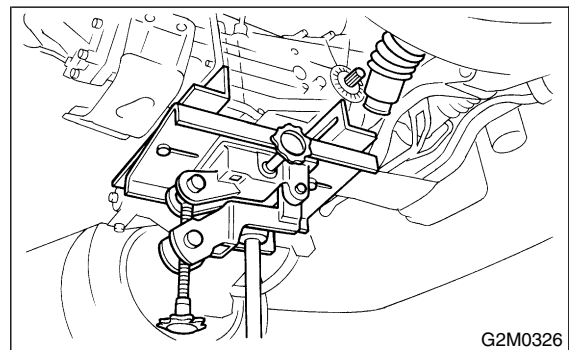
17) Remove nuts which hold lower side of transmission to engine.



18) Place transmission jack under transmission.

### CAUTION:

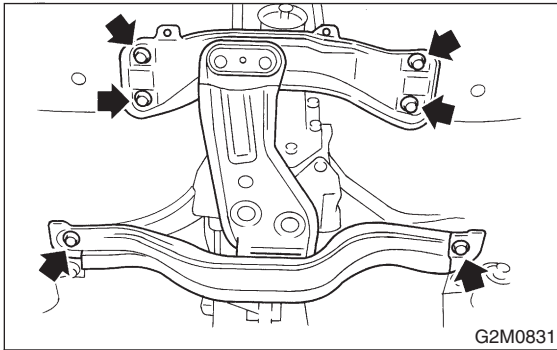
**Always support transmission case with a transmission jack.**



# MANUAL TRANSMISSION ASSEMBLY

Manual Transmission and Differential

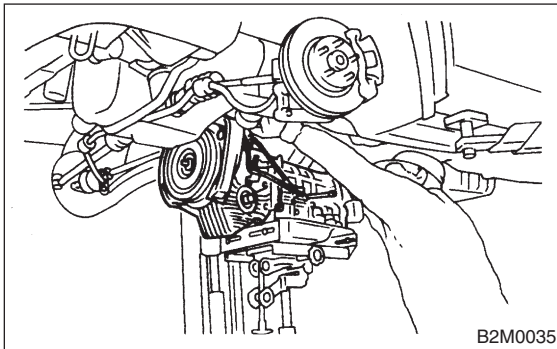
- 19) Remove transmission rear crossmember.



- 20) Remove transmission.

## CAUTION:

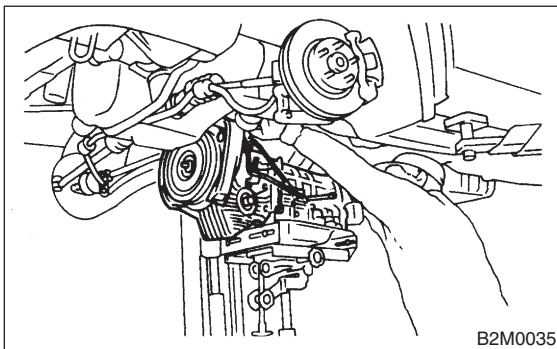
Move transmission jack toward rear until main-shaft is withdrawn from clutch cover.



## B: INSTALLATION

S503224A11

- 1) Install transmission to engine.  
(1) Gradually raise transmission with transmission jack.



- (2) Engage them at splines.

## CAUTION:

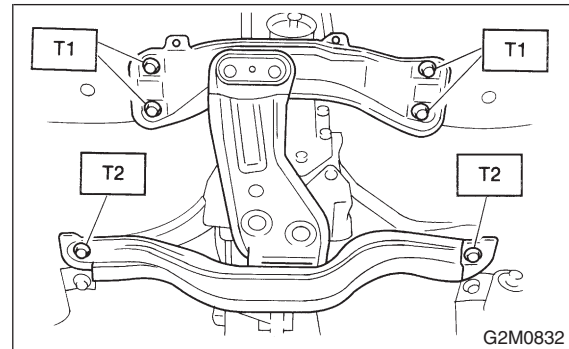
Be careful not to strike main shaft against clutch cover.

- 2) Install transmission rear crossmember.

## Tightening torque:

T1: 69 N·m (7.0 kgf-m, 51 ft-lb)

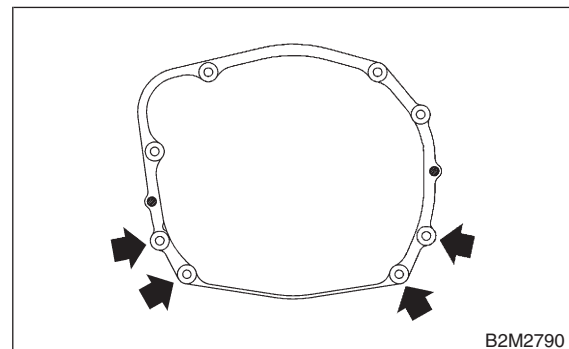
T2: 137 N·m (14 kgf-m, 101 ft-lb)



- 3) Take off transmission jack.  
4) Tighten nuts which hold lower side of transmission to engine.

## Tightening torque:

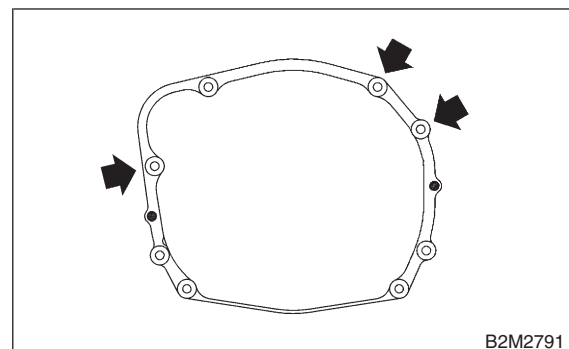
50 N·m (5.1 kgf-m, 36.9 ft-lb)



- 5) Tighten bolt which holds right upper side of transmission to engine.

## Tightening torque:

50 N·m (5.1 kgf-m, 36.9 ft-lb)





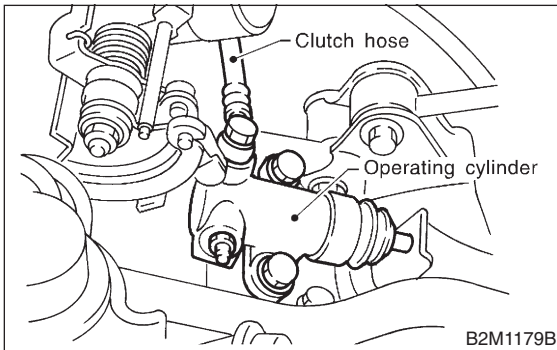
# MANUAL TRANSMISSION ASSEMBLY

## Manual Transmission and Differential

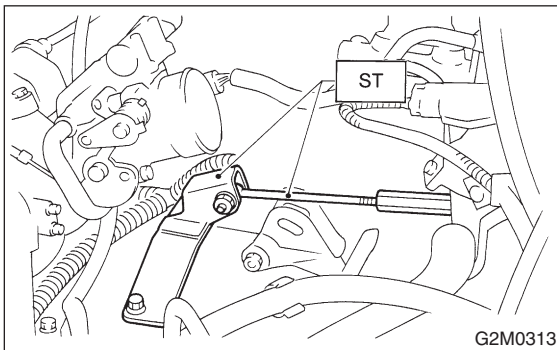
6) Install operating cylinder. (2500 cc vehicle)

**Tightening torque:**

**37 N·m (3.8 kgf-m, 27.5 ft-lb)**



7) Remove special tools.

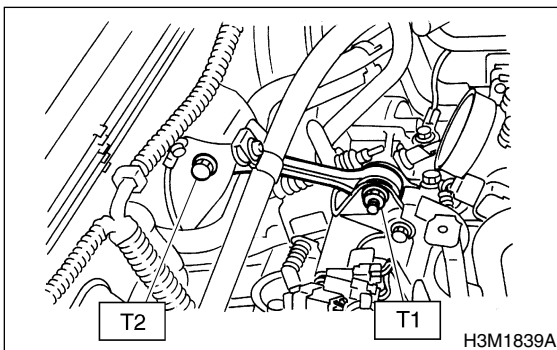


8) Install pitching stopper.

**Tightening torque:**

**T1: 49 N·m (5.0 kgf-m, 36.2 ft-lb)**

**T2: 57 N·m (5.8 kgf-m, 42 ft-lb)**



9) Install front drive shafts into transmission.

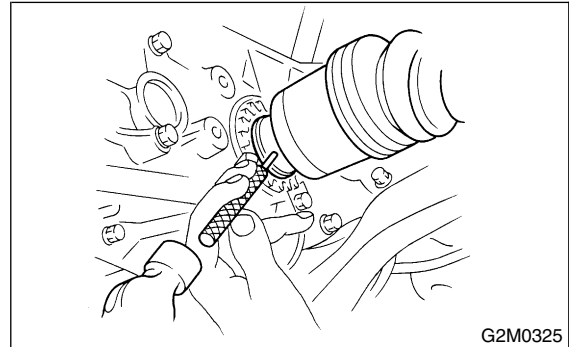
(1) Lift-up the vehicle.

(2) Install front drive shaft into transmission.

(3) Drive spring pin into chamfered hole of drive shaft.

**CAUTION:**

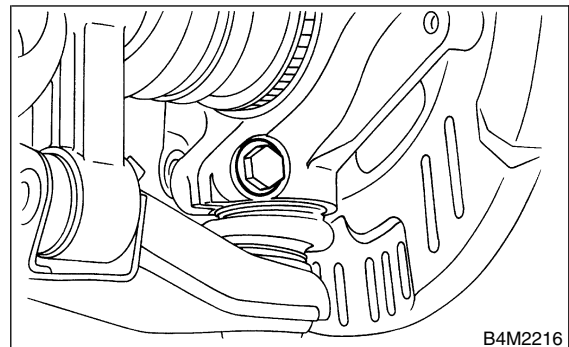
**Always use a new spring pin.**



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

**Tightening torque:**

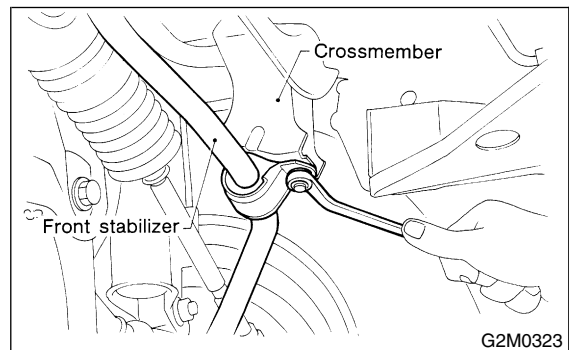
**49 N·m (5.0 kgf-m, 36 ft-lb)**



10) Install stabilizer clamps onto front crossmember.

**Tightening torque:**

**25 N·m (2.5 kgf-m, 18.1 ft-lb)**



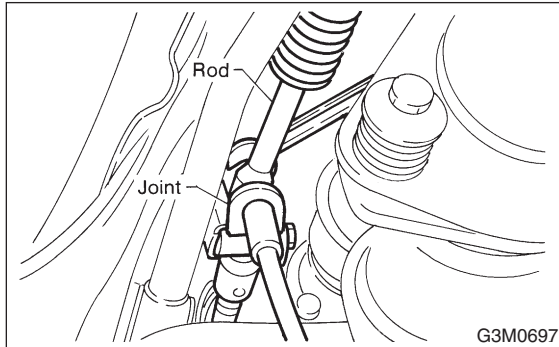
# MANUAL TRANSMISSION ASSEMBLY

Manual Transmission and Differential

- 11) Install gear shift rod and stay.  
(1) Install gear shift rod onto transmission.

**Tightening torque:**

**18 N·m (1.8 kgf-m, 13.6 ft-lb)**



- (2) Install stay onto transmission.

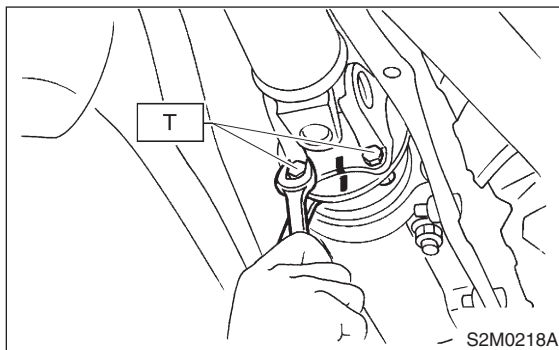
**Tightening torque:**

**18 N·m (1.8 kgf-m, 13.6 ft-lb)**

- 12) Install propeller shaft.  
(1) Install propeller shaft into transmission.  
(2) Tighten bolts which install propeller shaft onto companion flange of rear differential.

**Tightening torque:**

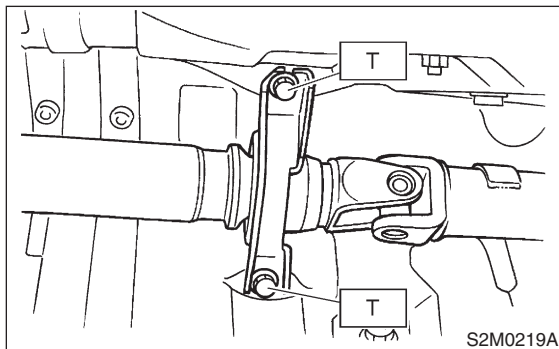
**T: 31 N·m (3.2 kgf-m, 23.1 ft-lb)**



- (3) Install center bearing bracket on body.

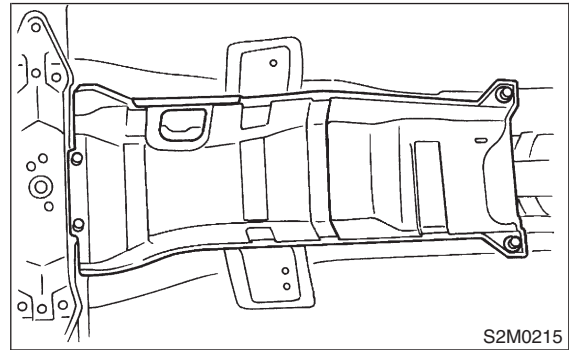
**Tightening torque:**

**T: 52 N·m (5.3 kgf-m, 38.3 ft-lb)**



- 13) Install exhaust system.

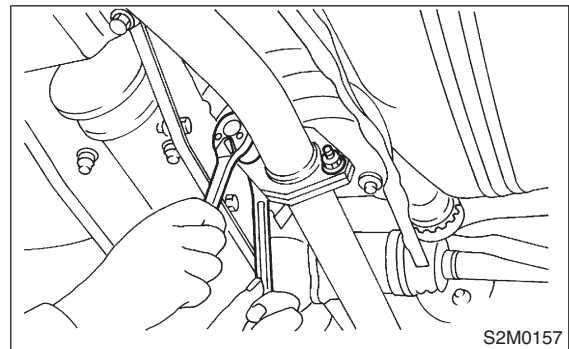
- (1) Install heat shield cover.



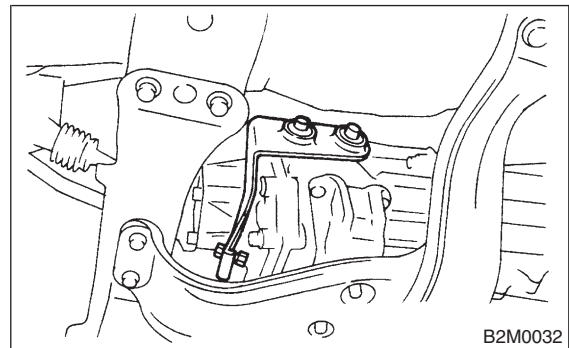
- (2) Install rear exhaust pipe to muffler.

**Tightening torque:**

**48 N·m (4.9 kgf-m, 35.4 ft-lb)**



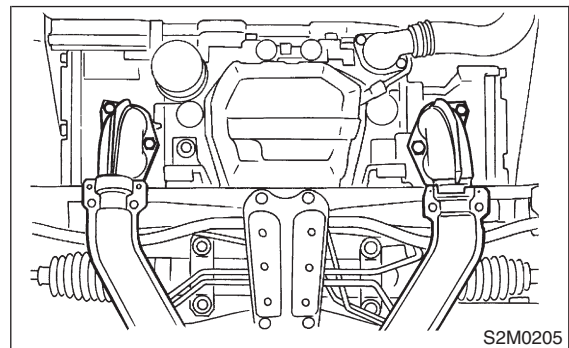
- (3) Install hanger bracket on right side of transmission.



- (4) Install front exhaust pipe onto engine.

**Tightening torque:**

**30 N·m (3.1 kgf-m, 22.4 ft-lb)**



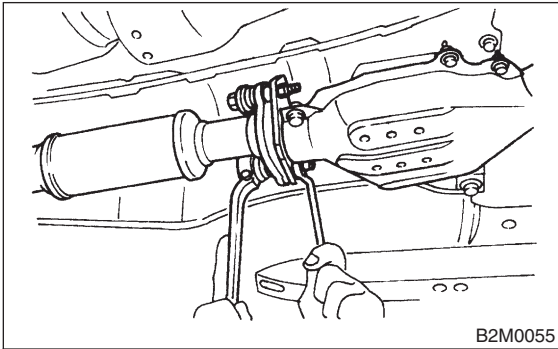
# MANUAL TRANSMISSION ASSEMBLY

## Manual Transmission and Differential

- (5) Install center exhaust pipe to rear exhaust pipe.

**Tightening torque:**

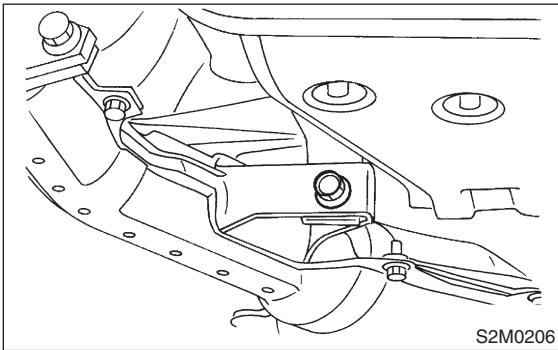
**18 N·m (1.8 kgf-m, 13.0 ft-lb)**



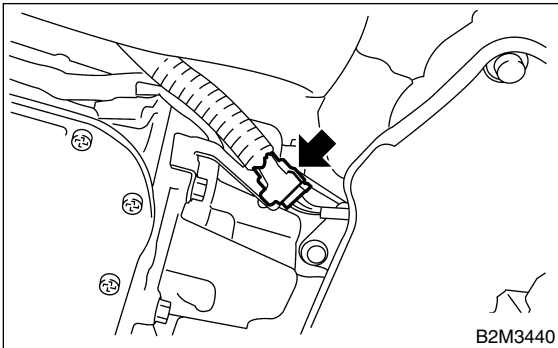
- (6) Tighten bolt which installs center exhaust pipe to hanger bracket.

**Tightening torque:**

**35 N·m (3.6 kgf-m, 26.0 ft-lb)**

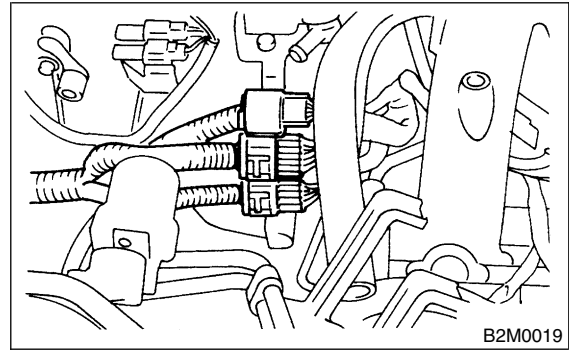


- (7) Connect connector to rear oxygen sensor.



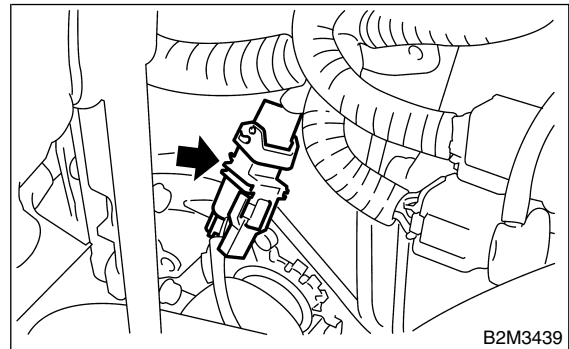
- 14) Connect the following connectors.

- (1) Transmission harness connectors

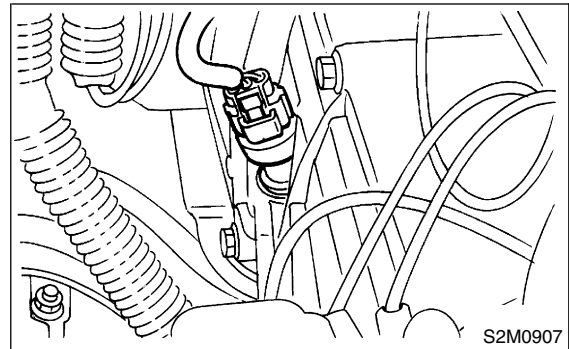


- (2) Transmission ground terminal

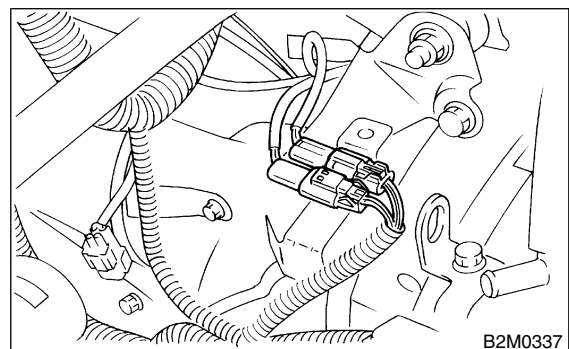
- (3) Front oxygen sensor connector



- (4) Vehicle speed sensor connector



- (5) Neutral position and back-up light switch connector





# MANUAL TRANSMISSION ASSEMBLY

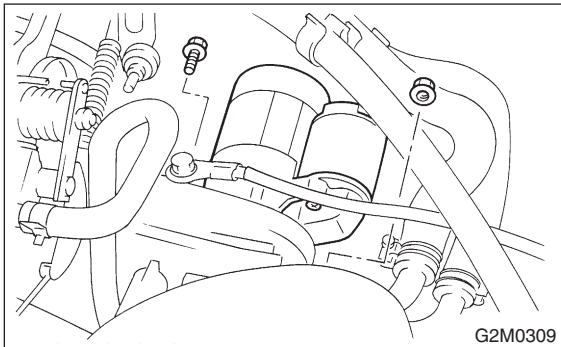
Manual Transmission and Differential

15) Install starter.

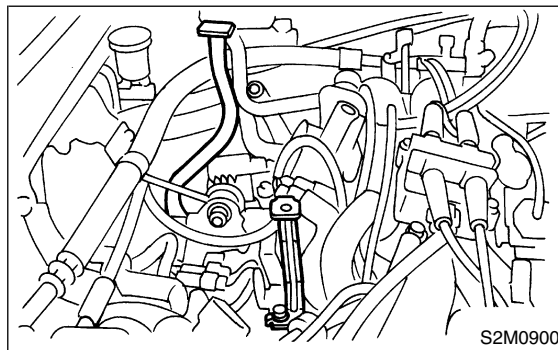
- (1) Install starter onto transmission case, and connect connectors and terminals.
- (2) Tighten bolt and nut which install starter onto transmission.

**Tightening torque:**

**50 N·m (5.1 kgf-m, 36.9 ft-lb)**



16) Install air cleaner case stay.



17) Install air intake duct <Ref. to IN-5 INSTALLATION, Air Intake Duct.> and air cleaner case. <Ref. to IN-4 INSTALLATION, Air Cleaner Case.>

18) Connect battery ground terminal.

19) Take off vehicle from lift arms.