MANUAL TRANSMISSION

MANUAL TRANSMISSION

CONTENTS

22109000371

GENERAL INFORMATION	Reverse Mis-operation Prevention Function Check
SERVICE SPECIFICATION 2	TRANSMISSION CONTROL <f5mr1>* 7</f5mr1>
LUBRICANTS 2	Shift Lever Assembly 8
SPECIAL TOOLS 3	TRANSMISSION CONTROL <f5m42>* 9</f5m42>
ON-VEHICLE SERVICE 4	Shift Lever Assembly
Transmission Oil Level Check 4	TRANSMISSION ASSEMBLY <f5mr1> 12</f5mr1>
Transmission Oil Replacement4	TRANSMICCION ACCEMBLY JEMAS 40
Oil Temperature Sensor Check	TRANSMISSION ASSEMBLY <f5m42> 16</f5m42>

WARNINGS REGARDING SERVICING OF SUPPLEMENTAL RESTRAINT SYSTEM (SRS) EQUIPPED VEHICLES **WARNING!**

- (1) Improper service or maintenance of any component of the SRS, or any SRS-related component, can lead to personal injury or death to service personnel (from inadvertent firing of the air bag) or to the driver and passenger (from rendering the SRS inoperative).
- (2) Service or maintenance of any SRS component or SRS-related component must be performed only at an authorized MITSUBISHI dealer.
- (3) MITSUBISHI dealer personnel must thoroughly review this manual, and especially its GROUP 52B Supplemental Restraint System (SRS) before beginning any service or maintenance of any component of the SRS or any SRS-related component.

The SRS includes the following components: SRS-ECU, SRS warning lamp, air bag module, clock spring and interconnecting wiring. Other SRS-related components (that may have to be removed/installed in connection with SRS service or maintenance) are indicated in the table of contents by an asterisk (*).

GENERAL INFORMATION

22100010212

The F5MR1 and F5M42 manual transmissions are designed.

Items		Specifications	
Model		F5MR1	F5M42
Туре		Manual, 5-speed, Front wheel drive	
Gear ratio 1st		3.727	3.583
	2nd	2.074	1.947
	3rd	1.321	1.266
	4th	0.966	0.970
		0.794	0.767
		3.545	3.363
Final reduction ra	ntio	4.214	3.722

LUBRICANTS 22100040297

Item		Specified lubricant	Quantity ℓ
Transmission oil F5MR1		ELF Tranself TRX 75W-80W (XT3556)	3.4
F5M42		Hypoid gear oil SAE 75W–90 or 75W–85W conforming to API GL-4	2.2

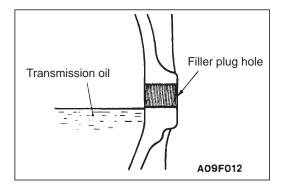
SEALANT 22100050016

Item	Specified sealant	Remark
Spring pin	MITSUBISHI GENUINE PART MD970389 or equivalent	Semi-drying sealant

SPECIAL TOOLS

22100060217

Tool	Number	Name	Use
	MB990635 or MB991113	Steering linkage puller	Tie rod end and lower arm disconnection
	GENERAL SERVICE TOOL MZ203827	Engine lifter	Supporting the engine assembly during removal and installation of the transmission
	MB991453	Engine hanger	



ON-VEHICLE SERVICE

22100090285

TRANSMISSION OIL LEVEL CHECK

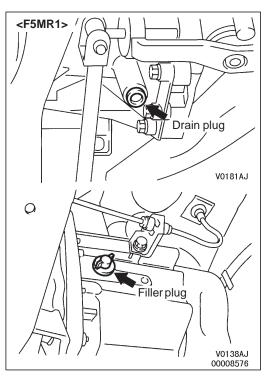
Inspect each component for evidence of leakage, and check the oil level by remaining the filler plug. If the oil is contaminated, it is necessary to replace it with new oil.

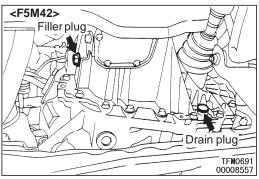
- Oil level should be at the lower portion of the filler plug hole.
- 2. Check that the transmission oil is not noticeably dirty, and that it has a suitable viscosity.
- 3. Tighten filler plug firmly by hand.<F5MR1>

Reference tightening torque: 2.3 Nm

4. Tighten filler plug to specified torque.<F5M42>

Tightening torque: 32 Nm





TRANSMISSION OIL REPLACEMENT

22100100285

- 1. Remove transmission drain plug.
- 2. Drain oil.
- 3. Tighten drain plug to specified torque.

Tightening torque:

<F5MR1> 38 Nm

<F5M42> 32 Nm

4. Remove filler plug and fill with specified oil till the level comes to the lower portion of filler plug hole.

Specified oil:

<F5MR1> Elf Tranself TRX 75W-80W (XT3556)

<F5M42> Hypoid gear oil SAE 75W-90 or 75W-85W conforming to API GL-4

Quantity:

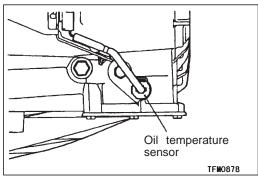
<F5MR1> 3.4 ℓ

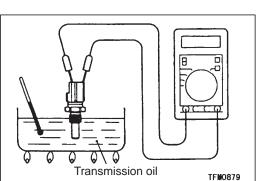
<F5M42> 2.2 ℓ

Tighten filler plug firmly by hand. <F5MR1>
 Reference tightening torque: 2.3 Nm

6. Tighten filler plug to specified torque. <F5M42>

Tightening torque: 32 Nm





OIL TEMPERATURE SENSOR CHECK

22100670021

- Remove the oil drain plug, and then drain the transmission oil.
- 2. Remove the oil temperature sensor.

3. Measure the resistance between terminals 1 and 2 of the oil temperature sensor connector.

Standard value:

Oil temperature (°C)	Resistance (kΩ)
20	2.31 – 2.59
110	0.145 – 0.149

- 4. If the resistance is not within the standard value, replace the oil temperature sensor.
- 5. Install the oil temperature sensor, and then tighten it to the specified torque.

Tightening torque: 20 - 25 Nm

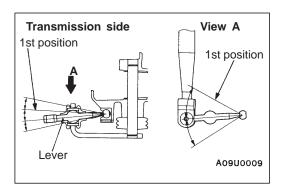
6. Install the drain plug and tighten it to the specified torque. Supply a transmission oil. (Refer to P.22-4.)

REVERSE MIS-OPERATION PREVENTION FUNCTION CHECK

22100570017

1. Carry out the following checks.

Checking procedure	Check conditions		Check contents (normal condition)
1	Locking knob: Cannot be pulled up	Shift lever: Move the lever in the select	Shifts to 1st
2	Locking knob: Can be pulled up	direction (reverse direction) until it stops, and then move it forward.	Shifts to reverse



- 2. If the above operations cannot be carried out, adjust the shift rod by the following procedure.
 - a. Loosen the shift rod adjustment bolt.
 - b. Move the transmission-side lever and the shift lever assembly to 1st position.
 - c. Tighten the shift rod adjustment bolt.

TRANSMISSION CONTROL <F5MR1>

22100380283

REMOVAL AND INSTALLATION

Caution: SRS

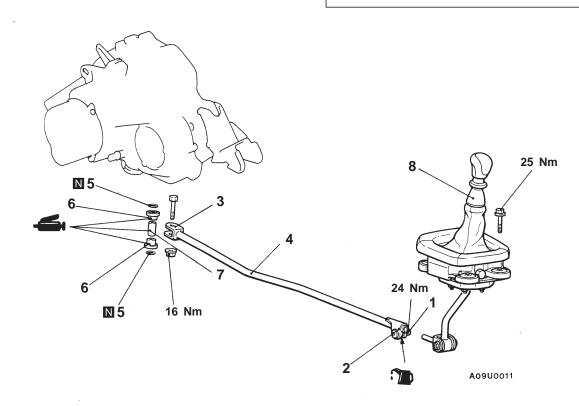
Be careful not to subject the SRS-ECU to any shocks during removal and installation of the shift lever assembly and shift rod assembly.

Pre-removal Operation

Floor Console Box Removal (Refer to GROUP 52A.)

Post-installation Operation

- Floor Console Box Installation (Refer to GROUP 52A.)
- Reverse Mis-operation Prevention Function Check (Refer to P.22-6.)
- Shift Lever Operation Check



Shift rod assembly removal steps

- 1. Shift rod adjusting bolt
- 2. Shift rod assembly connection (Shift lever side)
- 3. Shift rod assembly connection (Transmission side)
- 4. Shift rod assembly
- 5. O-ring

- 6. Shift rod bushing
- 7. Collar

Shift lever assembly removal steps

- 2. Shift rod assembly connection (Shift lever side)
- 8. Shift lever assembly

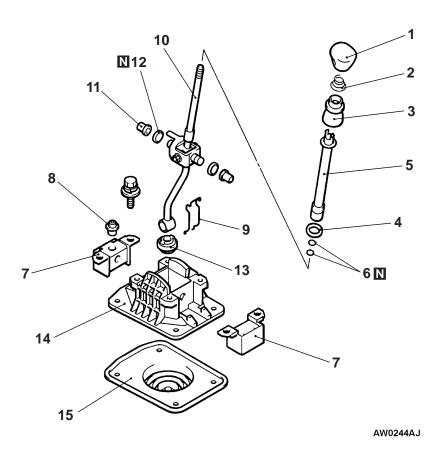
REMOVAL SERVICE POINT

▲A SHIFT ROD ASSEMBLY DISCONNECTION

Suspend the shift rod assembly from the vehicle with wire.

SHIFT LEVER ASSEMBLY **DISASSEMBLY AND REASSEMBLY**

22100400125



Disassembly steps

- 1. Shift knob
- 2. Spring3. Locking knob
- 4. Stopper rubber A
- 5. Locking tube
- 6. O-ring7. Insulator
- 8. Detent assembly

- 9. Steel rod
- 10. Shift lever assembly11. Shift bushing

- 12. O-ring13. Lower stopper assembly14. Base assembly15. Dust cover

TRANSMISSION CONTROL <F5M42>

22100380290

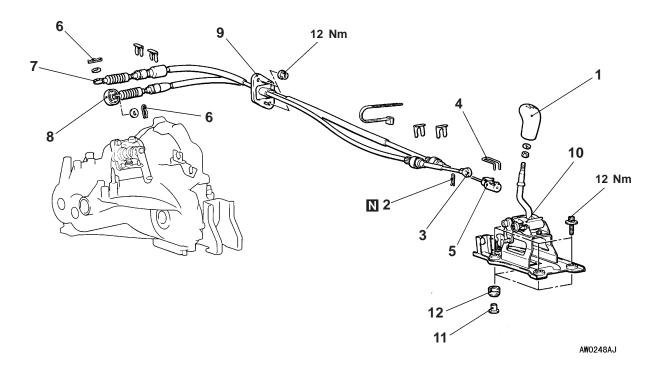
REMOVAL AND INSTALLATION

Caution: SRS

Be careful not to subject the SRS-ECU to any shocks during removal and installation of the shift lever assembly, shift cable and select cable assembly.

Pre-removal and Post-installation Operation

- Air Cleaner Assembly Removal and Installation
- Floor Console Box Removal and Installation (Refer to GROUP 52A.)

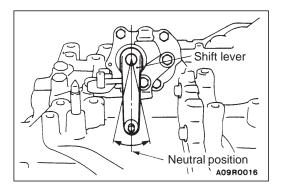


Shift cable and select cable assembly removal steps

- 1. Split pin
- ▶A 2. Select cable connection (passenger compartment side)
 - 3. Člip
 - 4. Shift cable connection (passenger compartment side)
 - 5. Snap pin
- ► A 6. Select cable connection (Transmission side)
- ►A 7. Shift cable connection (Transmission side)
- ►A 8. Shift cable and select cable assembly

Shift lever assembly removal steps

- 1. Split pin
- 2. Select cable connection (passenger compartment side)
- 3. Člip
- 4. Shift cable connection (passenger compartment side)
- 9. Shift lever assembly
- 10. Distance piece
- 11. Bushing

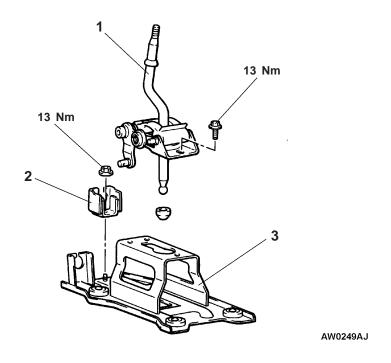


INSTALLATION SERVICE POINTS

- ►A SHIFT CABLE AND SELECT CABLE ASSEMBLY/ SHIFT CABLE CONNECTION/SELECT CABLE CONNECTION
- 1. Set the transmission side shift lever and the passenger compartment side shift lever to the neutral position.
- 2. For the transmission side, face the white and yellow paint marks on the shift and select cable ends to the snap pins, and install the cables.
- 3. For the passenger compartment side, face the flange surface of the resin bushing on the select cable end to the split pin, and install the cable.
- 4. Move the shift lever to all positions and check that the operation is smooth.

SHIFT LEVER ASSEMBLY **DISASSEMBLY AND REASSEMBLY**

22100400132



Disassembly steps

- Lever assembly
 Cable bracket
 Bracket assembly

TRANSMISSION ASSEMBLY <F5MR1>

22100270450

REMOVAL AND INSTALLATION

Caution

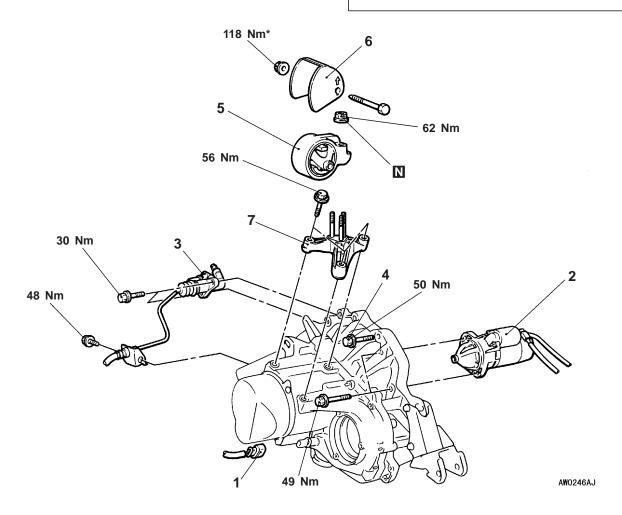
In order to prevent the insulator from being damaged, mounting locations marked by * should be provisionally tightened, and then fully tightened when the body is supporting the full weight of the engine.

Pre-removal Operation

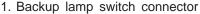
- Transmission Oil Draining (Refer to P.22-4.)
- Under Cover Removal
- Air Cleaner Assembly Removal
- Battery Removal
- Canister Removal (Refer to GROUP 17.)
- Shift Rod Assembly Removal (Refer to P.22-7.)

Post-installation Operation

- Shift Rod Assembly Installation (Refer to P.22-7.)
- Canister Installation (Refer to GROUP 17.)
- Battery Installation
- Air Cleaner Assembly Installation
- Under Cover Installation
- Transmission Oil Supplying (Refer to P.22-4.)
- Shift Lever Operation Check
- Speedometer Operation Check



Removal steps





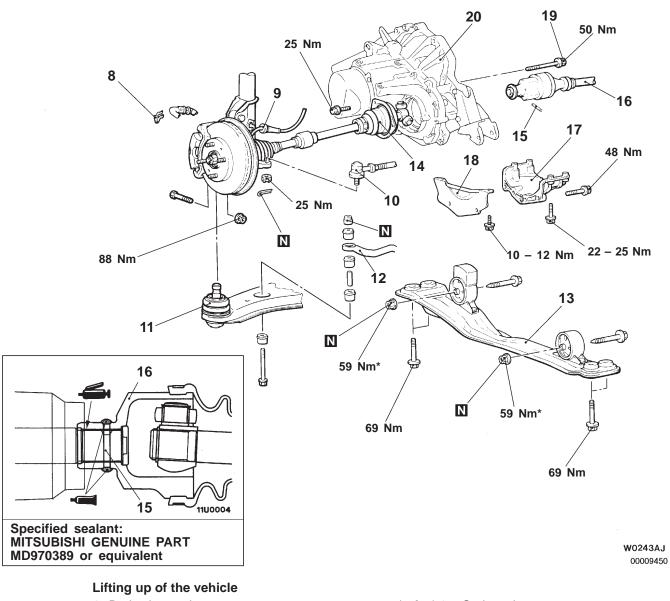
3. Clutch release cylinder connection

Transmission assembly upper part coupling bolts



- 5. Transmission mount bracket
- 6. Transmission mount stopper
- 7. Transmission mount lower bracket
- Engine assembly supporting





- 8. Brake hose clamp
- Speed sensor cable connection Vehicles with ABS>
- 10. Tie rod end connection
- 11. Lower arm ball joint connection
- 12. Stabilizer bar connection
- 13. Centermember assembly
- 14. Drive shaft <L.H.> connection

- ►A 15. Spring pin
- ►A 16. Drive shaft <R.H.> connection
 - 17. Transmission stay
 - 18. Bell housing cover
 - Transmission assembly lower part coupling bolts
 - 20. Transmission assembly

REMOVAL SERVICE POINTS

▲A► STARTER MOTOR REMOVAL

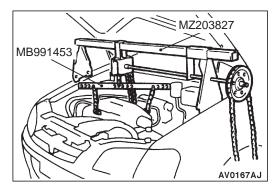
Remove the starter motor with the starter motor harness still connected and secure it inside the engine compartment.

▲B▶ CLUTCH RELEASE CYLINDER REMOVAL

Remove the clutch release cylinder without disconnecting the oil line connection, and fix it to the vehicle chassis.

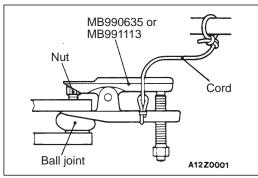
◆C▶ TRANSMISSION MOUNT BRACKET REMOVAL

Jack up the transmission assembly gently with a garage jack, and then remove the transmission mount bracket.



◆D**▶** ENGINE ASSEMBLY SUPPORTING

Set the special tool to the vehicle to support the engine assembly.



■ TIE ROD END/LOWER ARM BALL JOINT DISCONNECTION

Caution

- 1. Use the special tool to loosen the tie-rod end mounting nut. Only loosen the nut; do not remove it from the ball joint.
- 2. Support the special tool with a cord, etc. not to let it come off.

◆F▶ DRIVE SHAFT <L.H.> REMOVAL

- 1. Remove the drive shaft with the hub and knuckle, etc., still attached.
- Suspend the removed drive shaft inside the wheel housing with wire so that there are no sharp bends in any of the joints.

INSTALLATION SERVICE POINTS

►A DRIVE SHAFT <R.H.>/SPRING PIN INSTALLATION

 After applying multipurpose grease to the transmissionside spline of the drive shaft, align the spring pin hole at the end of the drive shaft with the spring pin hole at the end of the shaft at the transmission side, and then install the drive shaft.

If the spring pin hole is slightly off-line, turn the drive shaft 180° and then install it again.

NOTE

Because there are an odd number of splines on the drive shaft, the pin hole will be off-line by half the width of the hole if the drive shaft is turned 180°.

2. Apply specified sealant to the spring pin, and then insert it into the drive shaft.

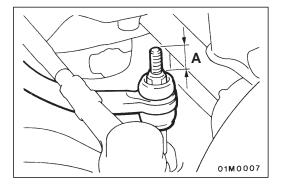
Specified sealant:

MITSUBISHI GENUINE PART MD970389 or equivalent

3. After inserting the pin, apply sealant to both ends of the pin hole to fully seal the hole.

Specified sealant:

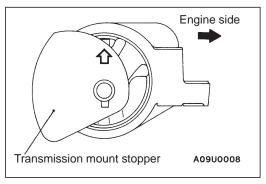
MITSUBISHI GENUINE PART MD970389 or equivalent



▶B **STABILIZER BAR INSTALLATION**

Tighten the self-locking nut so that the stabilizer bar mounting bolt protrudes as shown.

Standard value (A): 22 mm



▶C TRANSMISSION MOUNT STOPPER INSTALLATION

Install the transmission mount stopper so that the arrow points as shown in the illustration.

TRANSMISSION ASSEMBLY <F5M42>

22100270467

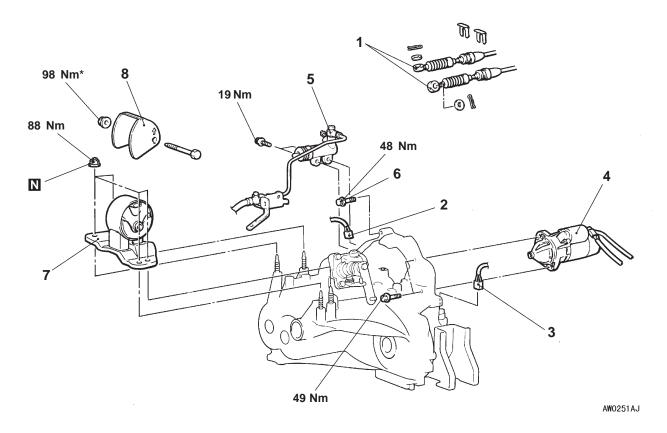
REMOVAL AND INSTALLATION

In order to prevent the insulator from being damaged, mounting locations marked by * should be provisionally tightened, and then fully tightened when the body is supporting the full weight of the engine.

- Pre-removal OperationTransmission Oil Draining (Refer to P.22-4.)
- Under Cover Removal
- Air Cleaner Assembly Removal
- Battery Removal
- Canister Removal (Refer to GROUP 17.)

Post-installation Operation

- Canister Installation (Refer to GROUP 17.)
- Battery Installation
- Air Cleaner Assembly Installation
- Under Cover Installation
- Transmission Oil Supplying (Refer to P.22-4.) Shift Lever Operation Check
- Speedometer Operation Check



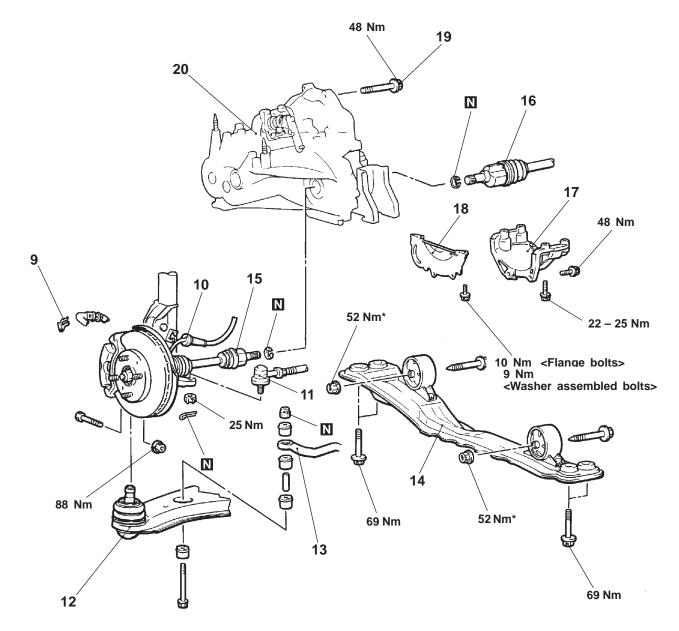
Removal steps

- 1. Shift cable and select cable connection (Refer to P.22-10.)
- 2. Backup lamp switch connector
- 3. Vehicle speed sensor connector
- 4. Starter motor



- 5. Clutch release cylinder connection
- 6. Transmission assembly upper part coupling bolts
- 7. Transmission mount bracket
 - 8. Transmission mount stopper
 - Engine assembly supporting





AW0250AJ

Lifting up of the vehicle

►A 9. Brake hose clamp

10. Wheel speed sensor cable connection <Vehicles with ABS>
11. Tie rod end connection

- 12. Lower arm ball joint connection
- 13. Stabilizer bar connection
- 14. Centermember assembly



- 15. Drive shaft <LH> connection
- 16. Drive shaft <RH> connection
- 17. Transmission stay
- 18. Bell housing cover19. Transmission assembly lower part coupling bolts
- 20. Transmission assembly

REMOVAL SERVICE POINTS

▲A► STARTER MOTOR REMOVAL

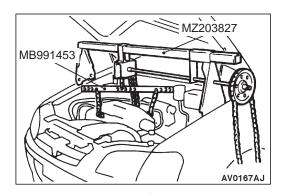
Remove the starter motor with the starter motor harness still connected and secure it inside the engine compartment.

◆B CLUTCH RELEASE CYLINDER REMOVAL

Remove the clutch release cylinder without disconnecting the oil line connection, and fix it to the vehicle chassis.

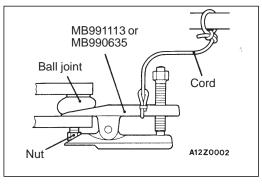
▼C▶ TRANSMISSION MOUNT BRACKET REMOVAL

Jack up the transmission assembly gently with a garage jack, and then remove the transmission mount bracket.



◆D▶ ENGINE ASSEMBLY SUPPORTING

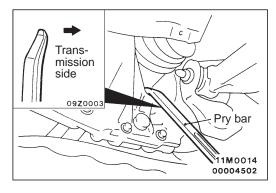
Set the special tool to the vehicle to support the engine assembly.



▼E TIE ROD END/LOWER ARM BALL JOINT DISCONNECTION

Caution

- 1. Loosen the nut only; do not remove it from the ball joint. Otherwise ball joint thread will be damaged.
- 2. The special tool should be suspended by a cord to prevent it from coming off.



◆F▶ DRIVE SHAFT <LH>/DRIVE SHAFT <RH> DISCONNECTION

1. Insert a pry bar between the transmission case and the drive shaft as shown to remove the drive shaft.

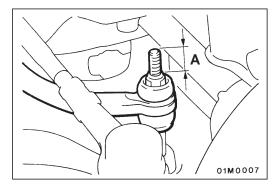
NOTE

Do not remove the hub and knuckle from the drive shaft.

Caution

Always use a pry bar, or the TJ will be damaged.

- 2. Suspend the removed drive shaft with a wire so that there are no sharp bends in any of the joints.
- 3. Use a shop towel to cover the transmission case not to let foreign material get into it.

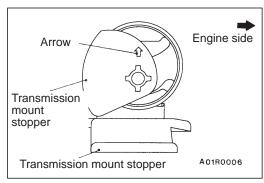


INSTALLATION SERVICE POINTS

►A STABILIZER BAR INSTALLATION

Tighten the self-locking nut so that the stabilizer bar mounting bolt protrudes as shown.

Standard value (A): 22 mm



▶B **TRANSMISSION MOUNT STOPPER INSTALLATION**

Install the transmission mount stopper so that the arrow points as shown in the illustration.

NOTES

MANUAL TRANSMISSION

CONTENTS

GENERAL INFORMATION 2	Transmission Oil Level Check
LUBRICANTS 2	Transmission Oil Replacement
SEALANT 2	TRANSMISSION CONTROL 4 Shift Lever Assembly <f5m42, f5mv1=""> 6</f5m42,>
SPECIAL TOOLS 2	
ON-VEHICLE SERVICE 3	

WARNINGS REGARDING SERVICING OF SUPPLEMENTAL RESTRAINT SYSTEM (SRS) EQUIPPED VEHICLES WARNING!

- (1) Improper service or maintenance of any component of the SRS, or any SRS-related component, can lead to personal injury or death to service personnel (from inadvertent firing of the air bag) or to the driver and passenger (from rendering the SRS inoperative).
- (2) Service or maintenance of any SRS component or SRS-related component must be performed only at an authorized MITSUBISHI dealer.
- (3) MITSUBISHI dealer personnel must thoroughly review this manual, and especially its GROUP 52B Supplemental Restraint System (SRS) before beginning any service or maintenance of any component of the SRS or any SRS-related component.

NOTE

The SRS includes the following components: SRS-ECU, SRS warning lamp, air bag module, clock spring and interconnecting wiring. Other SRS-related components (that may have to be removed/installed in connection with SRS service or maintenance) are indicated in the table of contents by an asterisk (*).

GENERAL INFORMATION

The following service procedures have been established due to the addition of the F5MV1 type transmission and the changes on the F5M42 type transmission control.

Model		Specifications
		F5MV1
		Manual, 5-speed, Front wheel drive
Gear ratio	1st	3.385
	2nd	1.905
	3rd	1.194
	4th	0.868
	5th	0.652
Reverse		3.298
Final reduction ratio		3.565

LUBRICANT

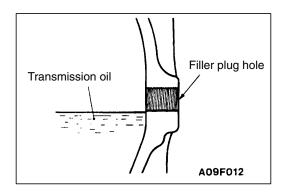
Item	Specified lubricant	Quantity L
Transmission oil	Volvo oil 97308	2.1

SEALANT

Item	Specified sealant	Remark
Drive shaft spring pin	MITSUBISHI GENUINE PART MD970389 or equivalent	Semi-drying sealant

SPECIAL TOOLS

Tool	Number	Name	Use
	MB990635 or MB991113	Steering linkage puller	Tie rod end and lower arm disconnection
	GENERAL SERVICE TOOL MZ203827	Engine lifter	Supporting the engine assembly during removal and installation of the transmission
	MB991453	Engine hanger	



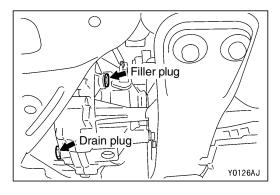
ON-VEHICLE SERVICE

TRANSMISSION OIL LEVEL CHECK

Inspect each component for evidence of leakage, and check the oil level by remaining the filler plug. If the oil is contaminated, it is necessary to replace it with new oil.

- 1. Oil level should be at the lower portion of the filler plug hole.
- 2. Check that the transmission oil is not noticeably dirty, and that it has a suitable viscosity.
- 3. Tighten filler plug to specified torque.

Tightening torque: 35 Nm



TRANSMISSION OIL REPLACEMENT

- Remove transmission drain plug.
- 2. Drain oil.
- 3. Tighten drain plug to specified torque.

Tightening torque: 35 Nm

4. Remove filler plug and fill with specified oil till the level comes to the lower portion of filler plug hole.

Specified oil: Volvo oil 97308

Quantity: 2.1 L

5. Tighten filler plug to specified torque.

Tightening torque: 35 Nm

TRANSMISSION CONTROL

REMOVAL AND INSTALLATION

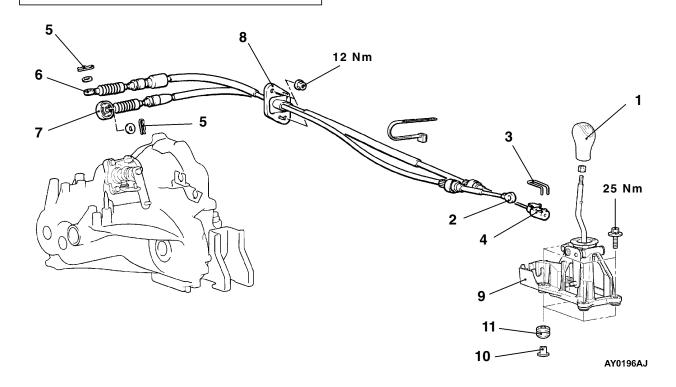
<F5M42>

Caution: SRS

Be careful not to subject the SRS-ECU to any shocks during removal and installation of the shift lever assembly, shift cable and select cable assembly.

Pre-removal and Post-installation Operation

- Air Cleaner Assembly Removal and Installation
- Floor Console Box Removal and Installation (Refer to GROUP 52A.)



Shift cable and select cable assembly removal steps

- 2. Select cable connection (passenger compartment side)
 3. Clip
- 4. Shift cable connection (passenger compartment side)
 5. Snap pin
- 6. Select cable connection (Transmission side)
- 7. Shift cable connection (Transmission side)
- 8. Shift cable and select cable assembly

Shift lever assembly removal steps

- 1. Shift knob
- 2. Select cable connection (passenger compartment side)
- 3. Člip
- 4. Shift cable connection (passenger compartment side)
 9. Shift lever assembly
- 10. Distance piece
- 11. Bushing

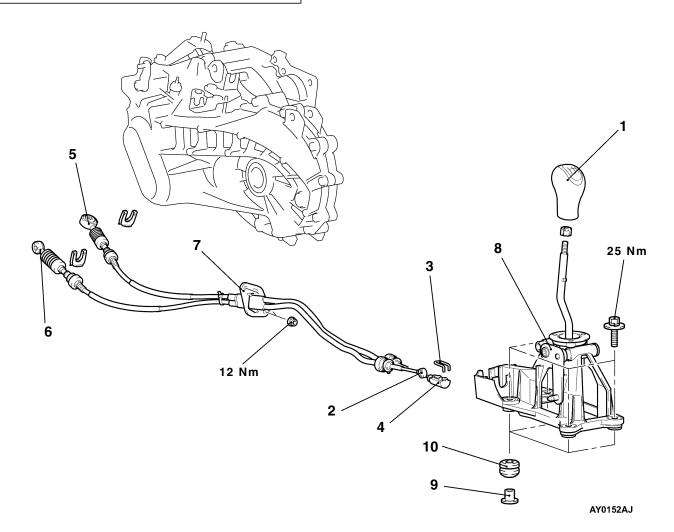
<F5MV1>

Caution: SRS

Be careful not to subject the SRS-ECU to any shocks during removal and installation of the shift lever assembly, shift cable and select cable assembly.

Pre-removal and Post-installation Operation

- Air Cleaner Assembly Removal and Installation Floor Console Box Removal and Installation (Refer to GROUP 52A.)
- Transmission Mount Lower Bracket Removal and Installation (Refer to GROUP 32.)



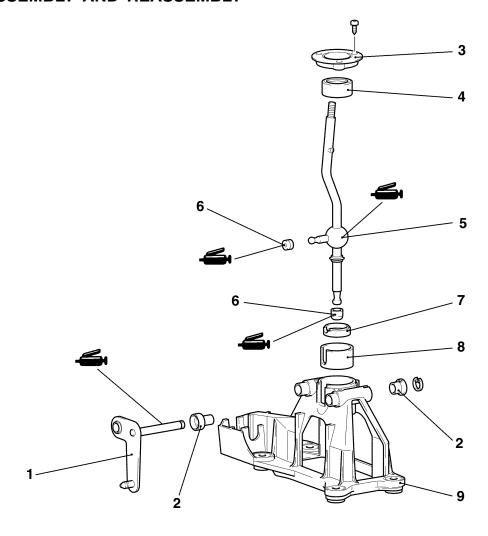
Shift cable and select cable assembly removal steps

- 2. Select cable connection (passenger compartment side)
 3. Clip
- 4. Shift cable connection (passenger compartment side)
- 5. Select cable connection (Transmission side)
- 6. Shift cable connection (Transmission side)
- 7. Shift cable and select cable assembly

Shift lever assembly removal steps

- 1. Shift knob
- 2. Select cable connection (passenger compartment side)
 3. Clip
- 4. Shift cable connection (passenger compartment side)
- 8. Shift lever assembly
- 9. Distance piece
- 10. Bushing

SHIFT LEVER ASSEMBLY <F5M42, F5MV1> **DISASSEMBLY AND REASSEMBLY**



AY0147AJ

Disassembly steps

- 1. Lever
- 2. Bushing
- 3. Cap 4. Ball socket
- 5. Gear lever

- 6. Ball seat7. Balll socket8. Shroud insulation9. Housing

TRANSMISSION ASSEMBLY <F5MV1>

REMOVAL AND INSTALLATION

Caution

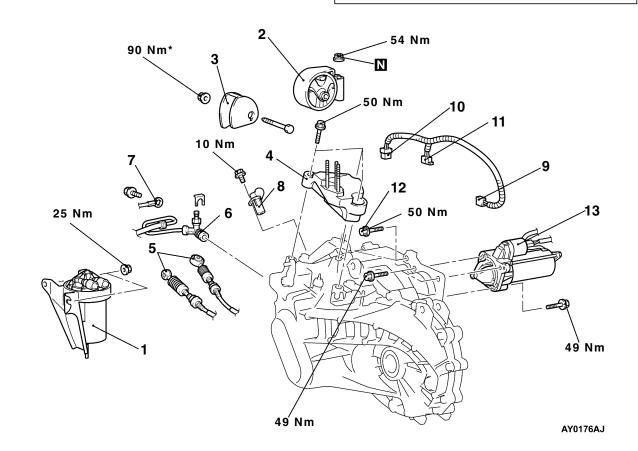
In order to prevent the insulator from being damaged, mounting locations marked by * should be provisionally tightened, and then fully tightened when the body is supporting the full weight of the engine.

Pre-removal Operation

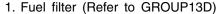
- Transmission Oil Draining (Refer to P.22-3.)
- Under Cover Removal
- Air Cleaner Assembly Removal
- Battery Removal
- Intercooler Hose Removal (Refer to GROUP 15.)

Post-installation Operation

- Intercooler Hose Installation (Refer to GROUP 15.)
- Battery Installation
- Air Cleaner Assembly Installation
- Under Cover Installation
- Transmission Oil Supplying (Refer to P.22-3.)
- Shift Lever Operation Check
- Speedometer Operation Check



Removal steps

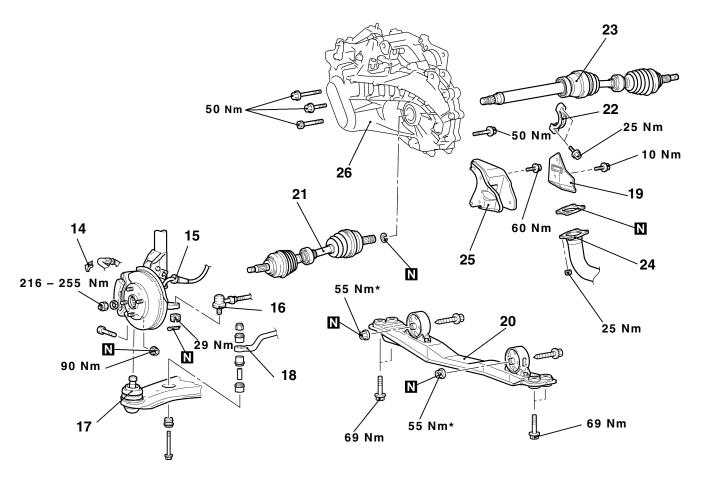




- Transmission mount
 Transmission mount stopper
- 4. Transmission mount lower bracket
- 5. Transmission control cable (transmission side)
- 6. Clutch tube connection
- 7. Earth cable

- 8. Crank angle sensor
- 9. Speed sensor connector
- 10. Backup lamp switch connector
- 11. Control harness and sub-harness connection
- 12. Transmission upper mounting bolt
- 13. Starter

∢B▶



AY0177AJ

Lifting up of the vehicle

- 14. Brake hose clamp15. Wheel speed sensor cable connection < Vehicles with ABS>
- 16. Tie rod end connection17. Lower arm ball joint connection18. Stabilizer bar connection
- - 19. Heat protector

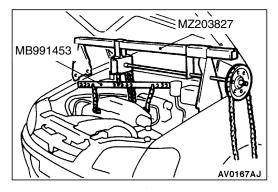
- 20. Centermember assembly21. Drive shaft <L.H.> connection
- 22. Bearing bracket
- 23. Drive shaft <R.H.> connection
 24. Front exhaust pipe connection
 25. Rear roll stopper bracket

- 26. Transmission assembly

REMOVAL SERVICE POINTS

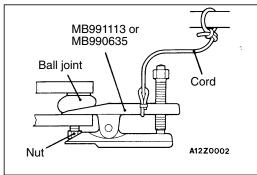
◆A▶ TRANSMISSION MOUNT BRACKET REMOVAL

Jack up the transmission assembly gently with a garage jack, and then remove the transmission mount bracket.



◆B ENGINE ASSEMBLY SUPPORTING

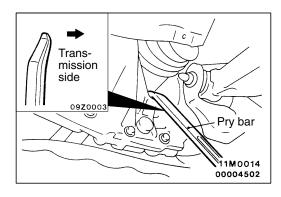
Set the special tool to the vehicle to support the engine assembly.



◆C▶ TIE ROD END DISCONNECTION

Caution

- 1. Loosen the nut only; do not remove it from the ball joint. Otherwise ball joint thread will be damaged.
- 2. The special tool should be suspended by a cord to prevent it from coming off.



DISCONNECTION

1. Insert a pry bar between the transmission case and the drive shaft as shown to remove the drive shaft.

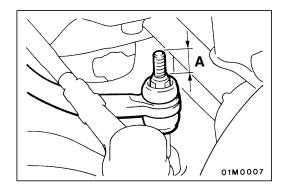
NOTE

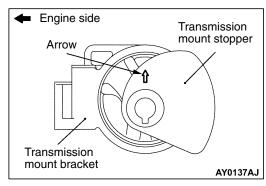
Do not remove the hub and knuckle from the drive shaft.

Caution

Always use a pry bar, or the T.J. will be damaged.

- 2. Suspend the removed drive shaft with a wire so that there are no sharp bends in any of the joints.
- 3. Use a shop towel to cover the transmission case not to let foreign material get into it.





INSTALLATION SERVICE POINTS

►A STABILIZER BAR INSTALLATION

Tighten the self-locking nut so that the stabilizer bar mounting bolt protrudes as shown.

Standard value (A): 22 mm

▶B TRANSMISSION MOUNT STOPPER INSTALLATION

Install the transmission mount stopper so that the arrow points as shown in the illustration.

MANUAL TRANSMISSION

GENERAL INFORMATION

The newly introduced 4G18 engine models are combined with the F5MR1 transmission. This transmission is similar to one which has been mounted on the current 4G13 engine models, but its specifications are different.

SERVICE SPECIFICATION

Items		Specifications	
Transmission model		F5MR1	
Engine model		4G13	4G18
Transmission type		Five forward speeds and one reverse, constant mesh type	
Gear ratio	1st	3.727	3.363
	2nd	2.047	1.863
	3rd	1.321	1.321
	4th	0.966	0.966
	5th	0.794	0.794
	Reverse	3.545	3.545
Final reduction ratio (Differential gear ratio)		4.214	4.066
Transmission oil	Specified lubricant	ELF Tranself TRX 75W-80W	
	Quantity L	3.4	

NOTES