

REAR SUSPENSION

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M34AA-

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SPECIFICATIONS <FWD>

M34CA-A

GENERAL SPECIFICATIONS

| Items | Vehicles without ECS | Vehicles with ECS |
|--------------------------------------------|---------------------------------------------|---------------------------------------------------------------------------------------------|
| Suspension system | Multi-link | |
| Coil spring | | |
| Wire dia. x O.D. x free length mm (in.) | 12 x 95 x 350 (.47 x 3.74 x 13.78) | 12.2 x 105 x 350 (.48 x 4.13 x 13.78) |
| Coil spring identification color | Pink x 1 | Orange x 1 |
| Spring constant N/mm (lbs./in.) | 35 ± 1.8 (196 ± 10.1) | 35 ± 1.8 (196 ± 10.1) |
| Shock absorber | | |
| Type | Hydraulic cylindrical double-acting type | Hydraulic cylindrical double-acting type |
| Max. length mm (in.) | 515 ± 3 (20.2 ± .1) | 515 ± 3 (20.2 ± .1) |
| Min. length mm (in.) | 356 ± 3 (14.0 ± .1) | 356 ± 3 (14.0 ± .1) |
| Stroke mm (in.) | 159 (6.3) | 159 (6.3) |
| Damping force [at 0.3 m/sec.(.9 ft./sec.)] | | |
| Expansion N (lbs.) | 1,000 ± 150 (220 ± 33) | Hard: 1,800 ± 250 (397 ± 55) Medium: 1,200 ± 170 (265 ± 37) Soft: 550 ± 90 (121 ± 20) |
| Contraction N (lbs.) | 550 ± 80 (121 ± 18) | Hard: 950 ± 140 (209 ± 31) Medium: 850 ± 130 (187 ± 29) Soft: 650 ± 100 (143 ± 22) |
| Wheel bearing | Unit ball bearing | |
| Type | | |

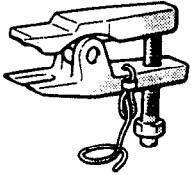
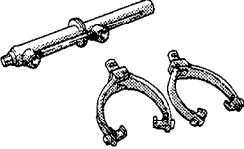
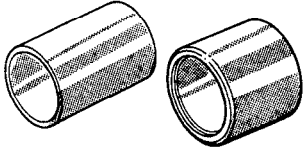
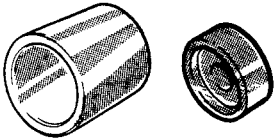
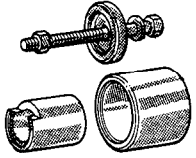

SERVICE SPECIFICATIONS

M34CB-A

| Items | Specifications |
|------------------------------------------------------------|-----------------------|
| Standard value | |
| Toe-in (Left-right difference) mm (in.) | 0.5 ± 2.5 (.01 ± .09) |
| Camber | 0° ± 30' |
| Stabilizer link ball joint starting torque Nm (in.lbs.) | 1.7 – 3.2 (15 – 28) |
| Ball joint rotation starting torque Nm (in.lbs.) | 2 – 9 (17 – 78) |
| Stabilizer link protrusion mm (in.) | 5 – 7 (.197 – .276) |
| Crossmember bushing projection, mm (in.) | 8.5 – 9.5 (.33 – .37) |
| Limit | |
| Wheel bearing end play mm (in.) | 0.05 (.002) or less |
| Rear hub rotary-sliding resistance N (lbs.) | 31 (7) or less |
| Rear hub rotary-sliding torque Nm (ft.lbs.) | 1.8 (1.30) or less |

SPECIAL TOOLS

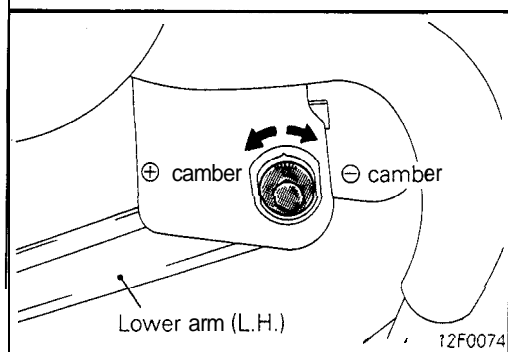
M34DA-A

| Tool | Number | Name | Use |
|-------------------------------------------------------------------------------------|-------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------|
|  | MB991113-01 | Steering linkage puller | Removal of the ball joint |
|  | MB991237 MB991238 | Spring compressor body Arm set | Compression of the coil spring |
|  | MB991389 MB991005 | Bushing remover base Arbor | Removal and installation of trailing arm bushing |
|  | MB991071-01 MB991072 MB991073 | Bushing remover and installer Base Arbor | Removal and installation of bushing from/to upper arm, lower arm, and assist link |
|  | MB991045 | Bushing remover and installer | Removal and installation of the cross member bushing |
|  | MB990800-01 | Ball joint remover and installer | Installation of the dust cover |

TROUBLESHOOTING

M34EA-A

| Symptom | Probable cause | Remedy |
|---------------------------------|---------------------------------------------------------------------|---------------------|
| Squeaks or other abnormal noise | Loose rear suspension installation bolts and nuts | Retighten |
| | Malfunction of shock absorber Worn bushings | Replace |
| | Upper arms and/or lower arms and/or assist link deformed or damaged | |
| | Trailing arms deformed or damaged | |
| | Crossmember deformed or damaged | |
| Poor ride | Excessive tire inflation pressure | Adjust the pressure |
| | Malfunction of shock absorber Weak or broken springs | Replace |
| | Stabilizer bar and/or stabilizer link deformed or damaged | |
| Body tilting | Weak or deteriorated bushings Weak or broken springs | Replace |
| | Upper arms and/or lower arms and/or assist link deformed or damaged | |
| | Trailing arms deformed or damaged | |
| | Crossmember deformed or damaged | |



SERVICE ADJUSTMENT PROCEDURES

REAR WHEEL ALIGNMENT INSPECTION

M34FAAH

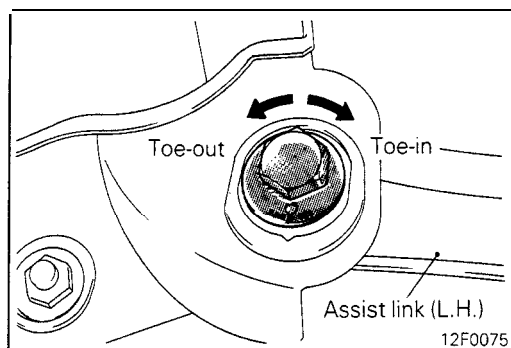
CAMBER

Standard value: 0" ± 30

To adjust camber, turn the lower arm mounting bolt (crossmember side).

NOTE

- (1) Make the adjustment with the assist link mounting bolt (crossmember side) loosened.
- (2) The difference between the right and left wheels should be 30' or less.
- (3) Left wheel: Clockwise (⊖ camber)
Right wheel: Clockwise (⊕ camber)
One graduation changes camber by about 15'.



TOE-IN

Standard value: 0.5 ± 2.5 mm (.01±.09 in.)

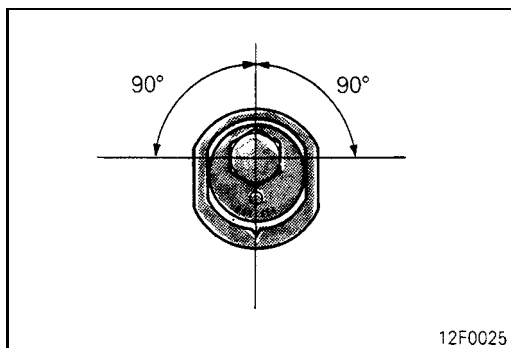
To adjust toe, turn the assist link mounting bolts (on crossmember side) on both sides the same amount.

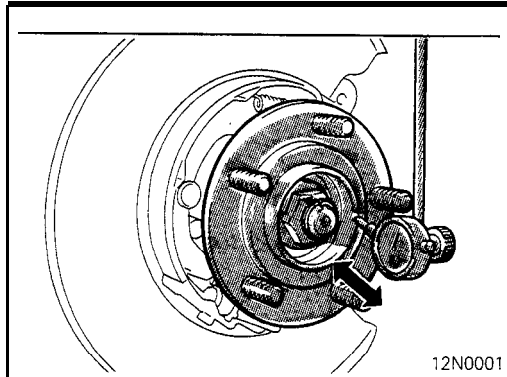
NOTE

- (1) The difference between right and left wheels should be 3 mm (.12 in.) or less.
- (2) Left wheel: Clockwise (toe-in)
Right wheel: Clockwise (toe-out)
One graduation changes toe by about 4.8 mm (.19 in.) <equivalent to toe angle 27' on one side>.

Caution

1. Adjust the eccentric bolt within 90° from the central position.
2. Adjust camber and toe, in that order, and, if camber is adjusted, be sure to adjust toe also.



**WHEEL BEARING END PLAY INSPECTION**

M34FBAG

1. Inspect the play of the bearings while the vehicle is jacked up and resting on floor jack.
2. Remove the hub cap and then release the parking brake.
3. Remove the caliper assembly and the brake disc.
4. Check the bearing's end play.

Place a dial gauge against the hub surface; then move the hub in the axial direction and check whether or not there is end play.

Limit: 0.05 mm (.002 in.) or less

NOTE

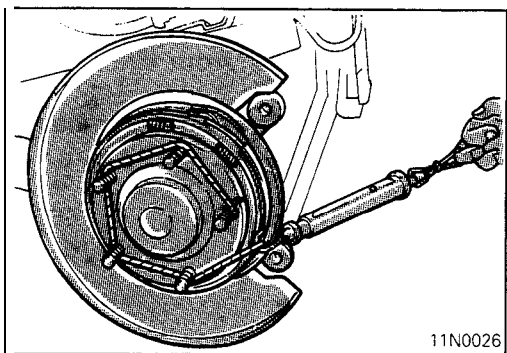
If the limit value is exceeded, the lock nut should be tightened to the specified torque and check the end play again.

5. Replace the rear hub bearing unit if an adjustment cannot be made to within the limit.

REAR HUB ROTARY-SLIDING RESISTANCE (TORQUE) INSPECTION

M34FCAC

1. Inspect the play of the bearings while the vehicle is jacked up and resting on floor jack.
2. Release the parking brake.
3. Remove the caliper assembly and the brake disc.



4. After turning the hub a few times to seat the bearing, attach a spring balance to the hub bolt, and, pulling at a 90° angle from the hub bolt, measure to determine whether or not the rotary-sliding resistance of the rear hub (the rotary-sliding torque of the rear hub) is the standard value.

Limit:

Rear hub rotary-sliding resistance

31 N (7 lbs.) or less

Rear hub rotary-sliding torque

1.8 Nm (1.30 ft.lbs.) or less

NOTE

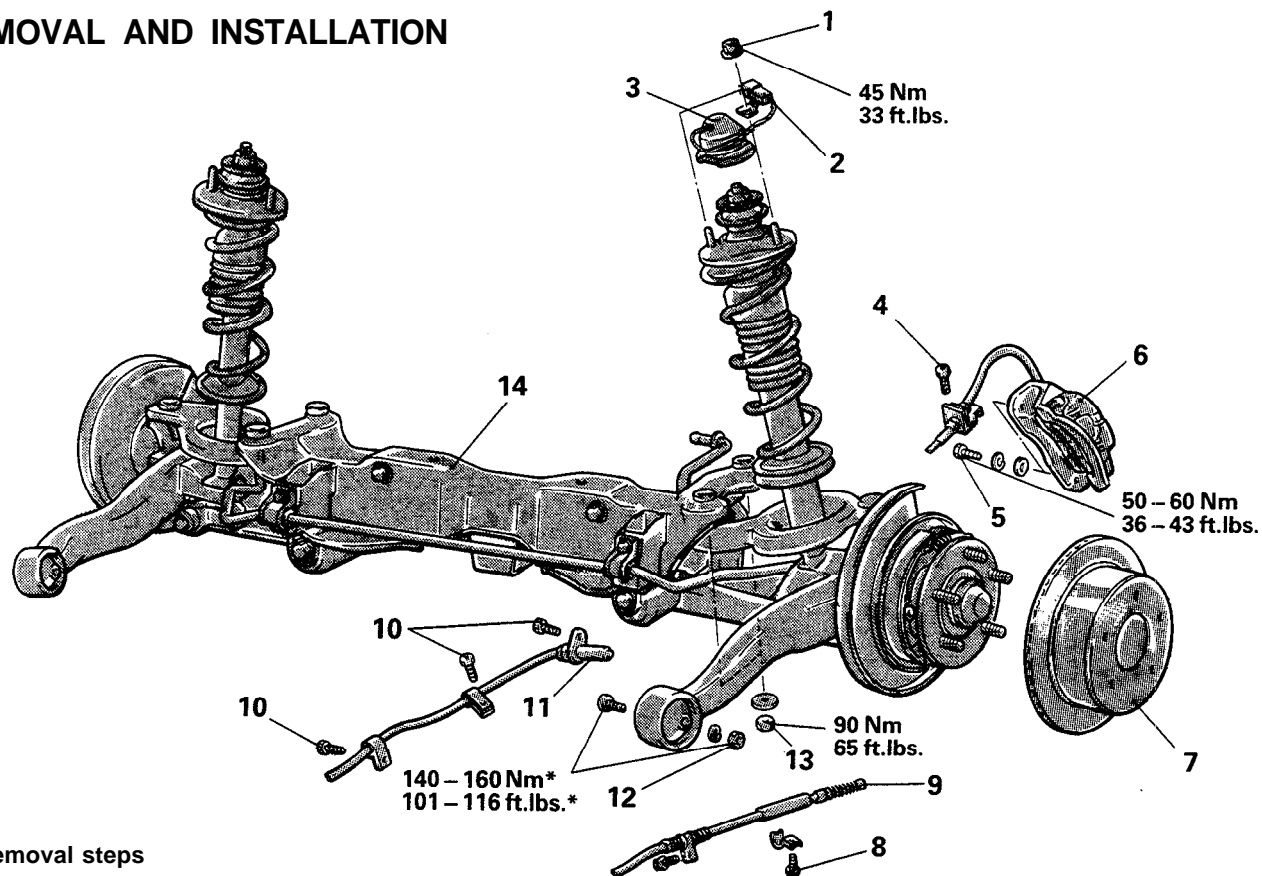
If the limit value is exceeded, the lock nut should be tightened to the specified torque and check the end play again.

5. Replace the rear hub unit bearing if an adjustment cannot be made to within the limit.

M34GA-A

REAR SUSPENSION ASSEMBLY

REMOVAL AND INSTALLATION



Removal steps

1. Shock absorber mounting nuts (upper)
2. ECS connector (ECS)
3. Cap
4. Brake line clamp bolt
5. Brake caliper mounting bolt
6. Brake caliper assembly
7. Brake disc
8. Parking brake cable clamp bolt
- * • + 9. Parking brake cable end
(Refer to GROUP 36 – Parking Brake.)
10. Rear speed sensor clamp bolt (ABS)
11. ABS speed sensor (ABS)
12. Trailing arm mounting bolt and nut
- ↔ 13. Crossmember mounting nut
- ↔ 14. Rear suspension assembly

NOTE

* indicates parts which should be temporarily tightened, and then fully tightened with the vehicle in the unladen condition.

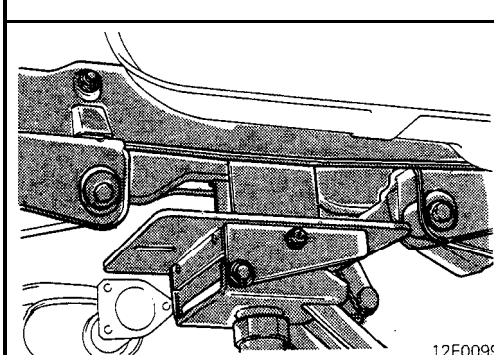
Pre-removal Operation

- Removal of the Absorber Lid from Rear Side Trim (Refer to GROUP 52A – Trims.)
- Removal of the Main Muffler (Refer to GROUP 15 – Exhaust Pipe and Main Muffler.)

Post-installation Operation

- Installation of the Main Muffler (Refer to GROUP 15 – Exhaust Pipe and Main Muffler.)
- Check of Wheel Alignment (Refer to P.34-5.)
- Check of Parking Brake Lever Stroke (Refer to GROUP 36 -Service Adjustment Procedures.)
- Installation of the Absorber Lid to Rear Side Trim (Refer to GROUP 52A – Trims.)

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12F0095

SERVICE POINTS OF REMOVAL

M34GBAT

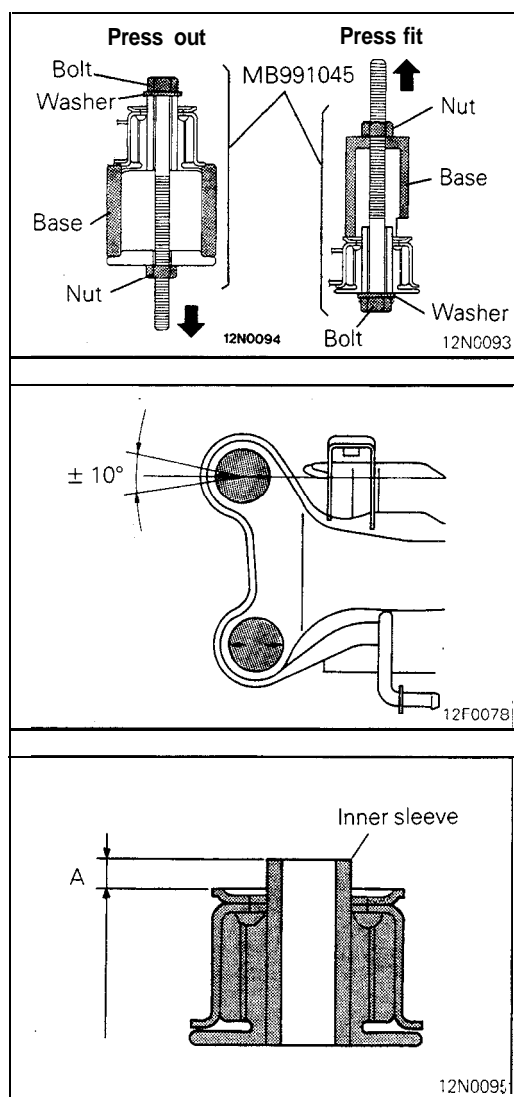
13. REMOVAL OF CROSSMEMBER MOUNTING NUT / 14. REAR SUSPENSION ASSEMBLY

Support the crossmember with a transmission jack, then remove the crossmember mounting nut and rear suspension assembly.

INSPECTION

M34GCAN1

- Check the crossmember for cracks or deformation.
- Check the bushings for cracks or deterioration.



CROSSMEMBER BUSHING REPLACEMENT M34GTAF

(1) Using the special tool, remove and press-fit the bushing.

(2) When press-fitting the bushing, apply soapsuds to it and position the arrows as shown.

(3) Make sure that the protrusion (dimension A) of the inner sleeve is up to specification.

Standard value: 8.5 – 9.5 mm (.33 – .37 in.)

UPPER ARM, LOWER ARM AND ASSIST LINK

REMOVAL AND INSTALLATION

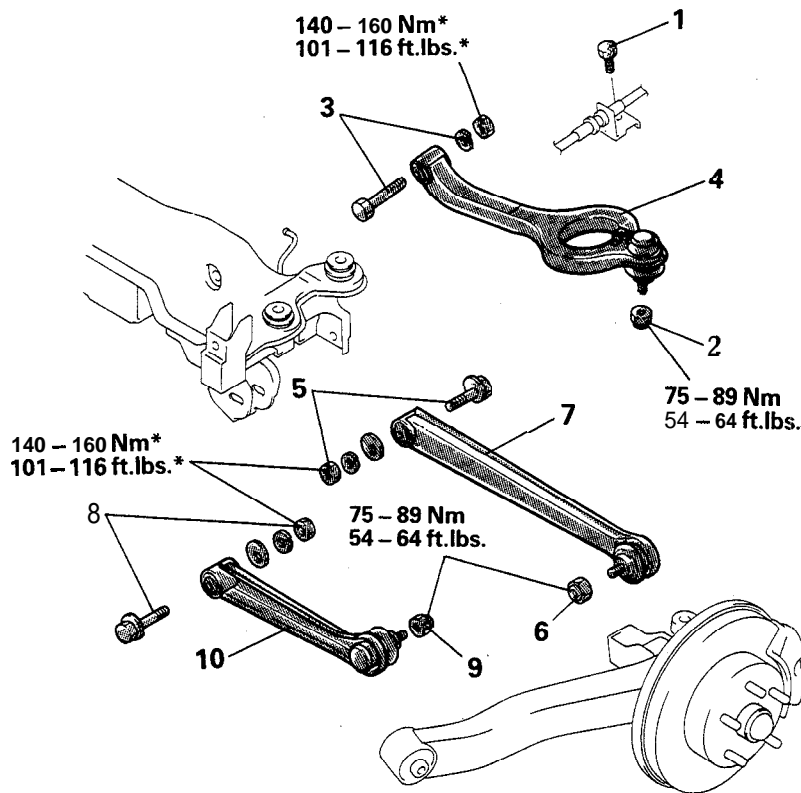
M34SA-S

Pre-removal Operation

- Removal of the Shock Absorber (Refer to P.34-13.)

Post-installation Operation

- Check of Wheel Alignment (Refer to P.34-5.)
- Installation of the Shock Absorber (Refer to P.34-13.)



12F0101

Upper arm removal steps

1. Brake line clamp bolt
2. Self-locking nut
3. Upper arm mounting bolt and nut
4. Upper arm

Lower arm removal steps

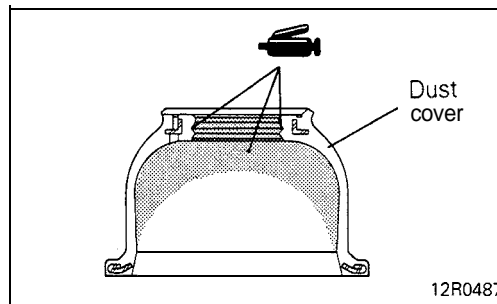
5. Lower arm mounting bolt and nut
6. Self-locking nut
7. Lower arm

Assist link removal steps

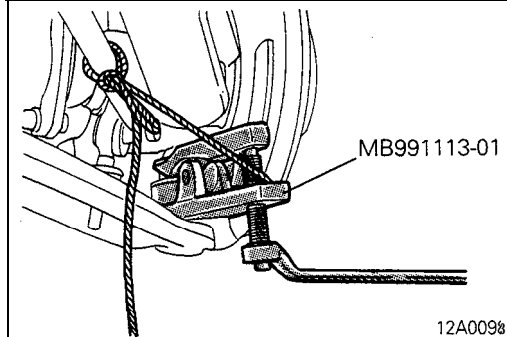
8. Assist link mounting bolt and nut
9. Self-locking nut
10. Assist link

NOTE

*: indicates parts which should be temporarily tightened, and then fully tightened with the vehicle in the unladen condition.



12R0487



12A0098

SERVICE POINTS OF REMOVAL

M34SBAB

2. 6. 9. REMOVAL OF SELF-LOCKING NUT

Using the special tool, disconnect the knuckle from the upper arm, lower arm, and assist link.

NOTE

- (1) Do not remove the nut from the ball joint, but just loosen it.
- (2) Suspend the special tool with a rope to prevent it from dropping.

INSPECTION

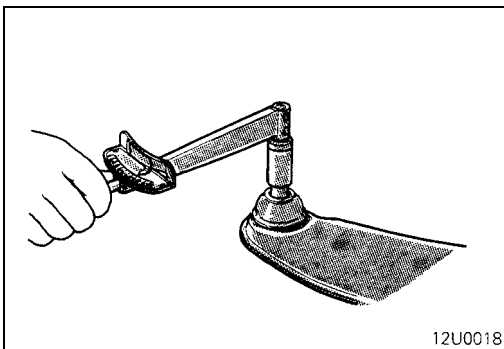
M34SCAB

- Check the bushing for wear and deterioration.
- Check the upper, lower arm or assist link for bend or breakage.
- Check the ball joint dust cover for cracks.
- Check all bolts for condition and straightness.

CHECKING OF BALL JOINT FOR STARTING TORQUE

Mount two nuts on the ball joint, and then measure the ball joint starting torque.

Standard value: 2 – 9 Nm (17 – 78 in.lbs.)

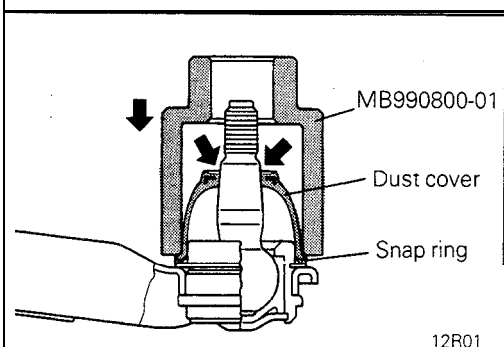


12U0018

BALL JOINT DUST COVER REPLACEMENT

M34SEAB1

- (1) Remove the dust cover.
- (2) Apply multipurpose grease to the lip and inside of the dust cover.
- (3) Drive in the dust cover with special tool until it is fully seated.

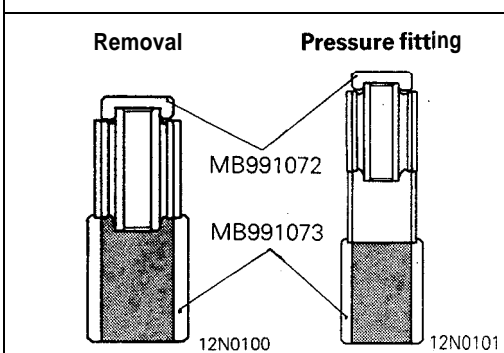


12R01

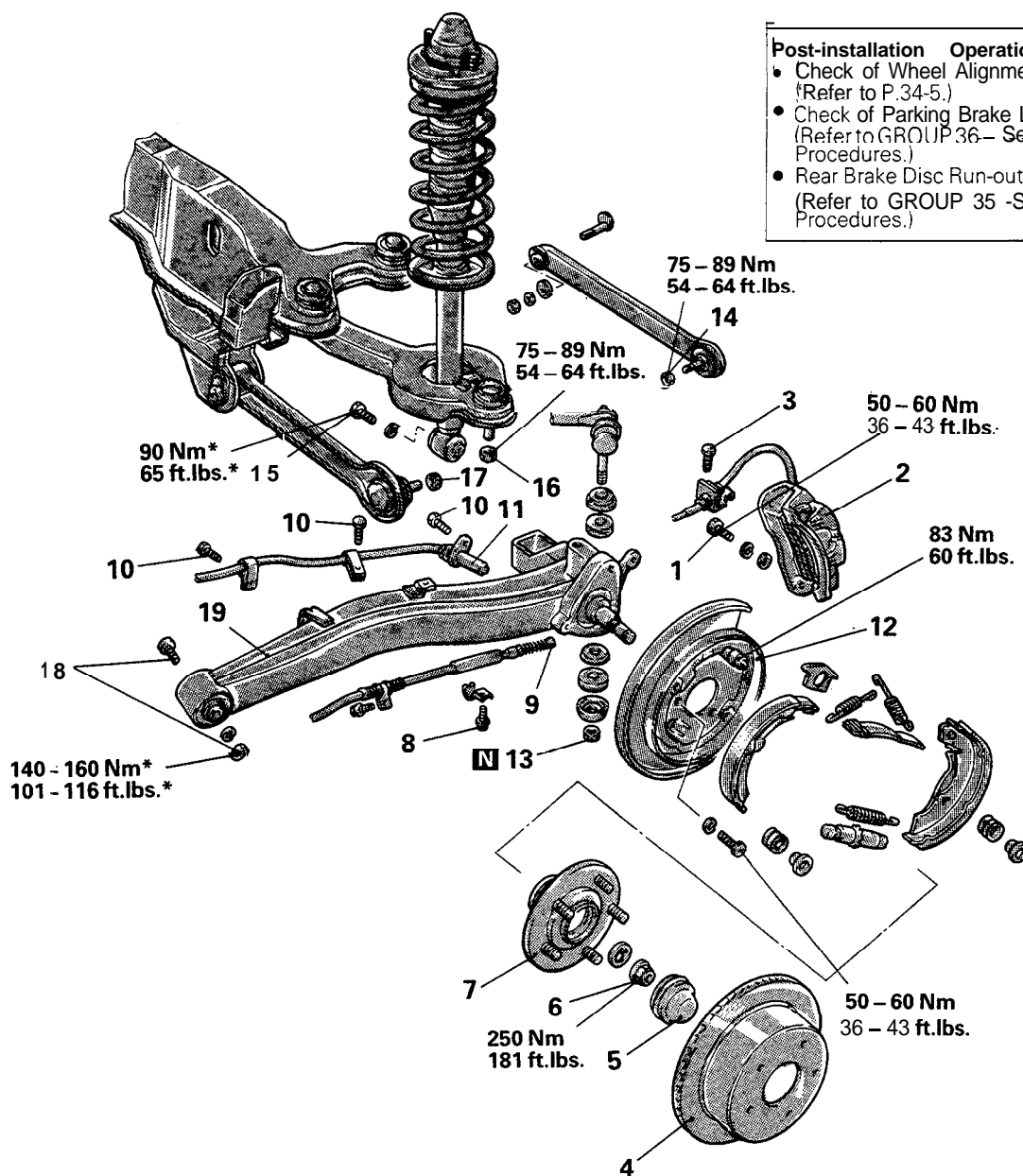
LOWER ARM, UPPER ARM, ASSIST LINK BUSHING REPLACEMENT

M34SFAB

Use the special tool to remove and press-fit the bushing.



TRAILING ARM REMOVAL AND INSTALLATION



Post-installation Operation

- Check of Wheel Alignment
(Refer to P.34-5.)
- Check of Parking Brake Lever Stroke
(Refer to GROUP 36 – Service Adjustment Procedures.)
- Rear Brake Disc Run-out Check
(Refer to GROUP 35 – Service Adjustment Procedures.)

Removal steps

1. Brake caliper mounting bolt
2. Brake caliper
3. Brake line clamp bolt
4. Rear brake disc
5. Hubcap
6. Wheel bearing nut
7. Hub assembly
8. Parking brake cable clamp bolt
9. Parking brake cable end (Refer to GROUP 36 – Parking Brake.)
10. Rear speed sensor clamp bolt (ABS)
11. ABS speed sensor (ABS)

12. Backing plate

13. Stabilizer link mounting nut

14. Self-locking nut

15. Shock absorber mounting bolt (upper)

16. Self-locking nut

17. Self-locking nut

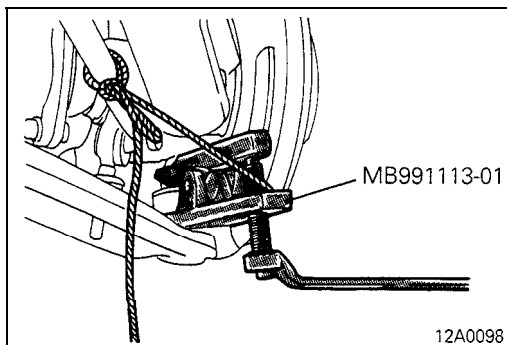
18. Trailing arm mounting bolt and nut

19. Trailing arm assembly

NOTE

*: indicates parts which should be temporarily tightened, and then fully tightened with the vehicle in the unladen condition.

12FOIII

**SERVICE POINTS OF REMOVAL**

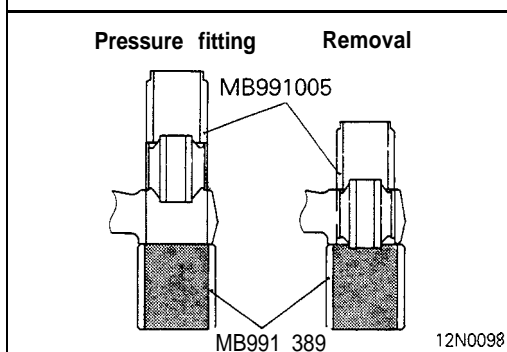
M34TBAB

14.16. 17. REMOVAL OF SELF-LOCKING NUT

Using the special tool, remove the knuckle from the lower, arm, upper arm, and assist link.

NOTE

- (1) Do not remove the nut from the ball joint, but just loosen it.
- (2) Suspend the special tool with a rope to prevent it from dropping.

**INSPECTION**

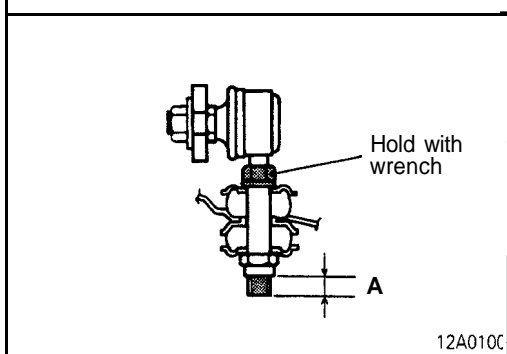
M34TCAB1

- Check trailing arm for cracks and deformation.
- Check bushing for cracks, deterioration and wear.

TRAILING ARM BUSHING REPLACEMENT

M34TEAB1

Use the special tool to remove and press-fit the bushing.

**SERVICE POINT OF INSTALLATION**

M34TDAA

13. INSTALLATION OF STABILIZER LINK MOUNTING NUT

Holding the stabilizer link with a wrench, tighten the self-locking nut so that the protrusion of the stabilizer link (dimension A indicated in illustration) is within the standard value.

Standard value: 5 – 7 mm (.197 – .276 in.)

SHOCK ABSORBER ASSEMBLY

M34NA-A

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation

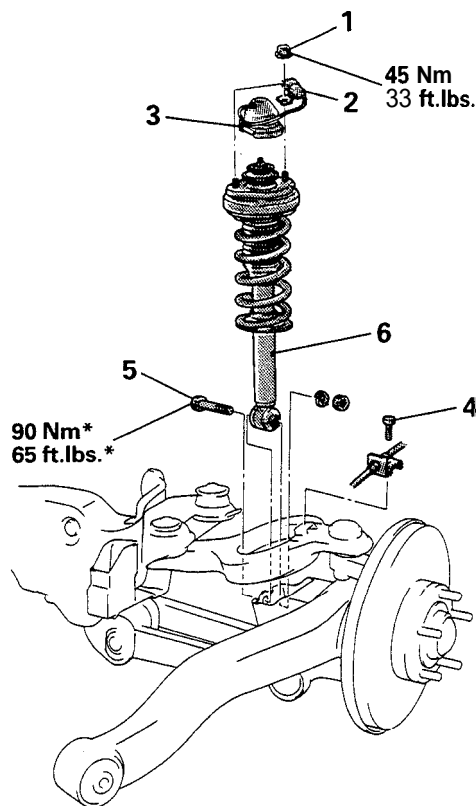
- Removal and Installation of the Rear Side Trim Absorber Lid
(Refer to GROUP 52A – Trims.)

Removal steps

1. Shock absorber upper mounting nut
2. ECS connector (ECS)
3. Cap
4. Brake line clamp bolt
5. Shock absorber lower mounting bolt
6. Shock absorber

NOTE

*: indicates parts which should be temporarily tightened, and then fully tightened with the vehicle in the unladen condition.



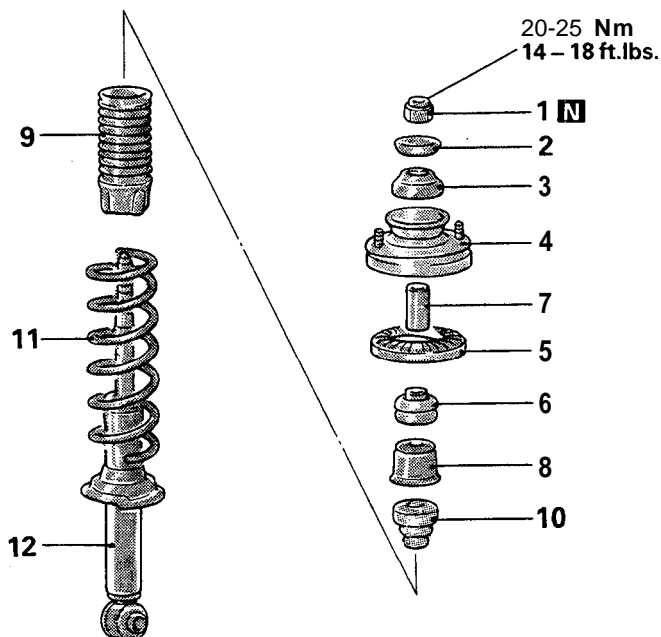
12F0087

DISASSEMBLY AND REASSEMBLY

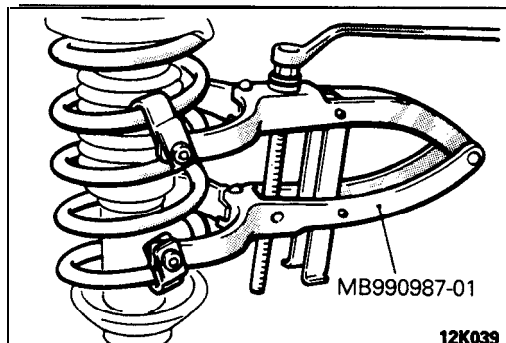
M34GM-A

Disassembly steps

- • a 1. Piston rod tightening nut
- 2. Washer
- 3. Upper bushing (A)
- ♦♦ 4. Bracket assembly
- 5. Upper spring pad
- 6. Upper bushing (B)
- 7. Collar
- 8. Cup assembly
- 9. Dust cover
- 10. Bump rubber
- ♦♦ 11. Coil spring
- 12. Shock absorber



12A0328

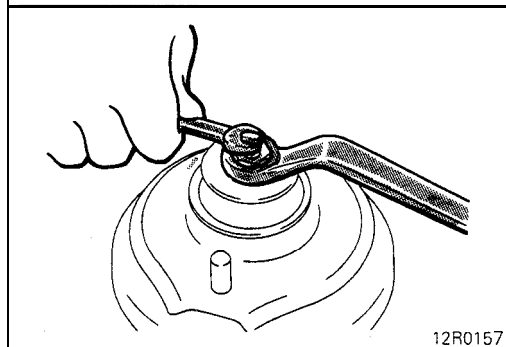
**SERVICE POINT OF DISASSEMBLY**

M34GNAB

1. REMOVAL OF PISTON ROD TIGHTENING NUT

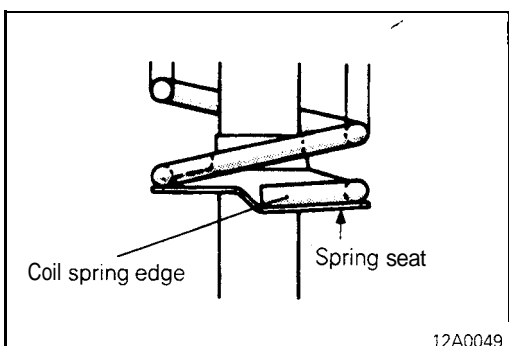
- (1) Before removing the piston rod tightening nut, compress the coil spring using the special tool.

- (2) While holding the piston rod, remove the piston rod tightening nut.

**INSPECTION**

M34GOAC1

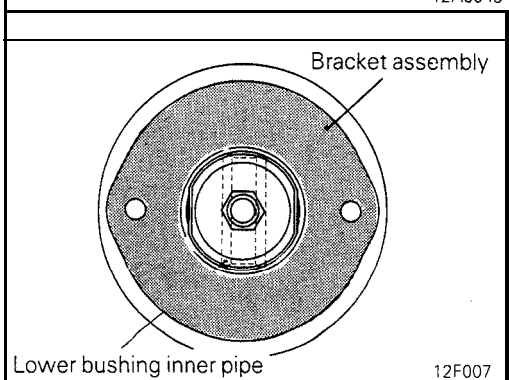
- Check the rubber parts for damage.
- Check the coil springs for crack, damage or deterioration.

**SERVICE POINTS OF REASSEMBLY**

M34GPAC

11. INSTALLATION OF COIL SPRING

- (1) Use the special tool (MB990987-01) to compress the coil spring and insert it in the shock absorber.
- (2) Align the edge of the coil spring to the position of the shock absorber spring seat as shown.

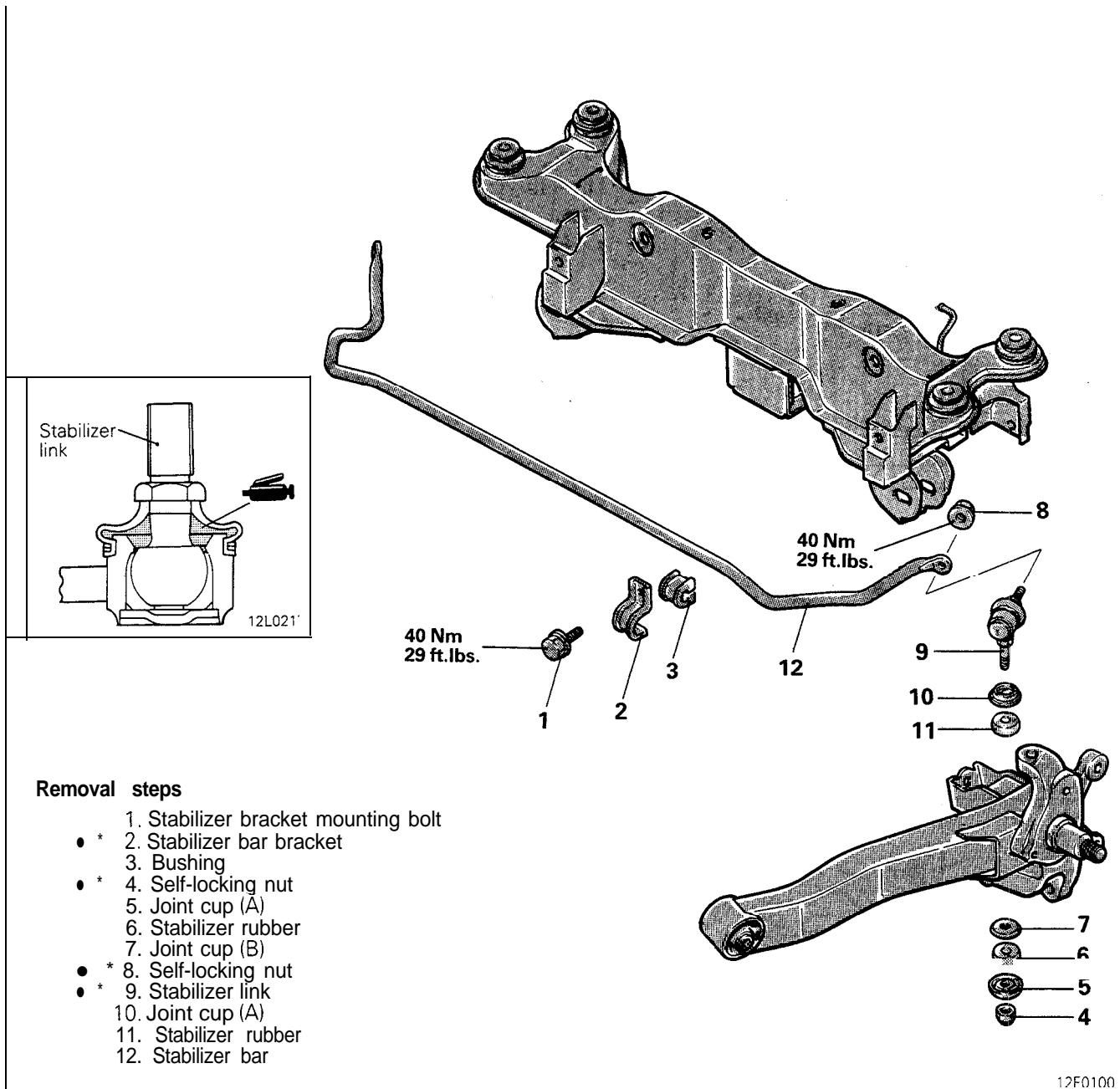
**4. INSTALLATION OF BRACKET ASSEMBLY / 1. PISTON ROD TIGHTENING NUT**

- (1) With the position of the bracket assembly as shown in the figure, tighten the tightening nut to the specified torque.
- (2) Install the coil spring so that the lower edge fits into the spring seat groove and the upper edge fits into the spring pad groove, then remove the special tool (MB990987-01).

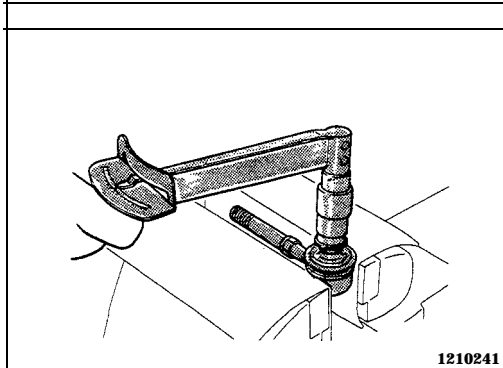
STABILIZER BAR

M341A-A

REMOVAL AND INSTALLATION



12F0100



INSPECTION

M341BAC1

- Check the bushing for wear and deterioration.
- Check the stabilizer bar for deterioration or damage.
- Check the stabilizer link ball joint dust cover for cracks.
- Check all bolts for condition and straightness.

CHECKING OF STABILIZER LINK BALL JOINT FOR STARTING TORQUE

Mount two nuts on the ball joint, and then measure the ball joint starting torque.

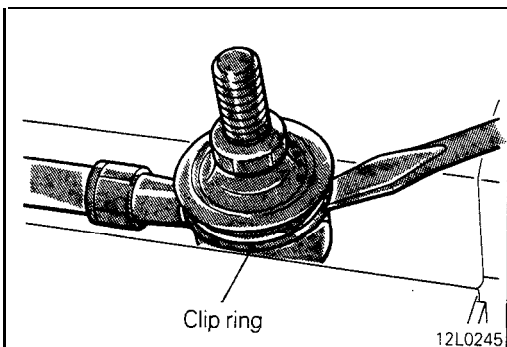
Standard value: 1.7 – 3.2 Nm (15 – 28 in.lbs.)

TSB Revision

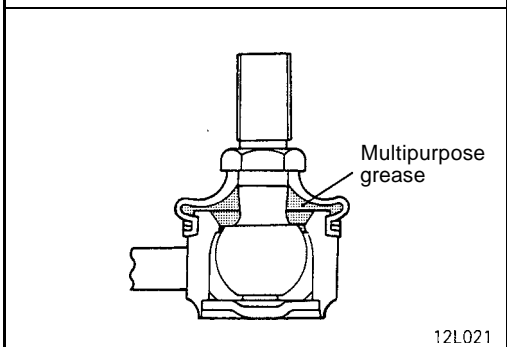
BALL JOINT DUST COVER REPLACEMENT

M34IEAA

- (1) Remove the clip ring and the dust cover.

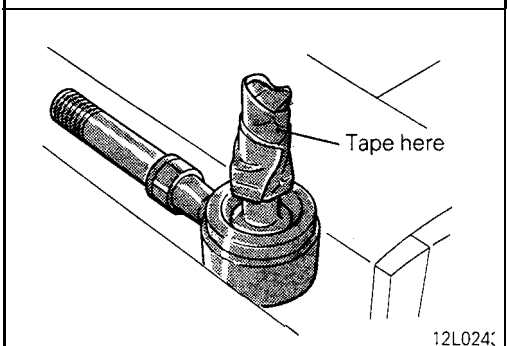


- (2) Apply multipurpose grease to the lip and inside of the dust cover.



- (3) Use vinyl tape to tape the stabilizer link where shown in the illustration, and then install the dust cover to the stabilizer link.

- (4) Secure the dust cover by the clip ring.

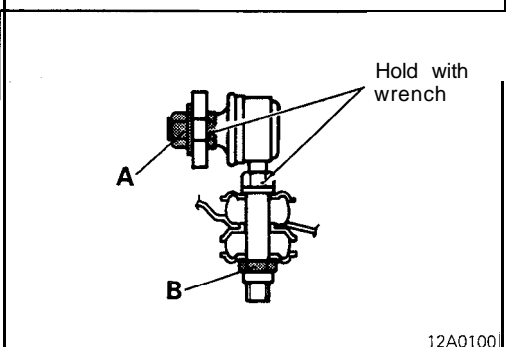
**SERVICE POINTS OF INSTALLATION**

M34ICAE

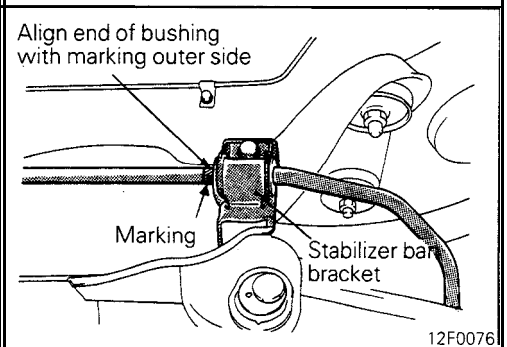
9. INSTALLATION OF STABILIZER LINK / 8. SELF-LOCKING NUT / 4. SELF-LOCKING NUT

- (1) Hold the stabilizer link ball studs with a wrench and install the self-locking nut (A).
- (2) Holding the stabilizer link with a wrench, tighten the self-locking nut (B) so that the protrusion of the stabilizer link is within the standard value.

Standard value: 5 – 7 mm (.197 – .276 in.)

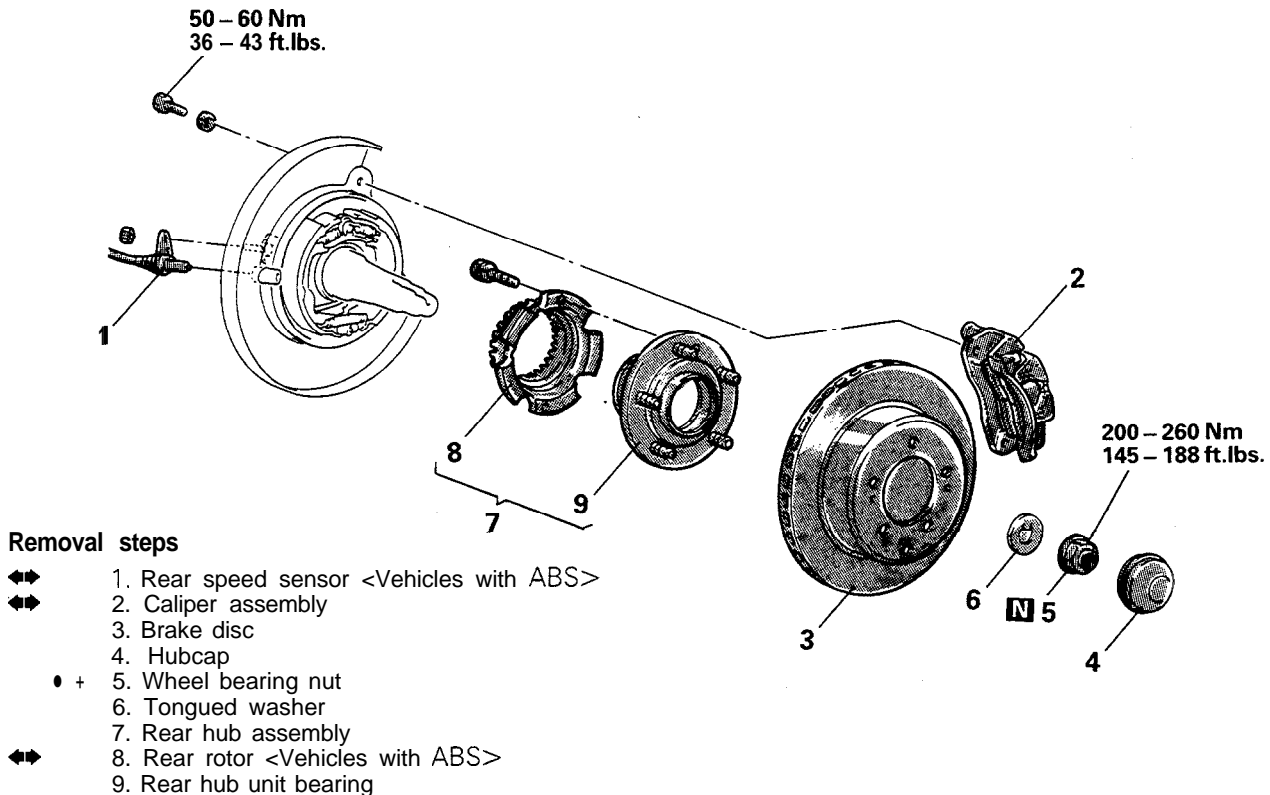
**2. INSTALLATION OF STABILIZER BAR BRACKET**

- (1) Align the bushing (L.H.) with the stabilizer bar marking end and temporarily tighten the stabilizer bar bracket (L.H.).
- (2) In this condition, mount the stabilizer bar bracket (R.H.) and temporarily tighten it.
- (3) Temporarily fix the both ends of the stabilizer bar to the link and tighten the stabilizer bar bracket mounting bolts to specification.



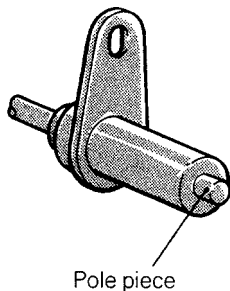
REAR AXLE HUB

REMOVAL AND INSTALLATION



Caution
Rear hub unit bearing cannot be disassembled.

11N0018



14N010

SERVICE POINTS OF REMOVAL

M34MBAC

1. REMOVAL OF REAR SPEED SENSOR <VEHICLES WITH ABS>

Caution

Be careful when handling the pole piece at the tip of the speed sensor and the toothed edge of the rotor so as not to damage them by striking against other parts.

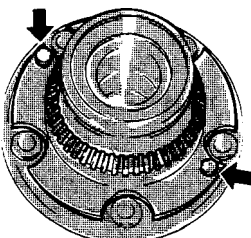
2. REMOVAL OF CALIPER ASSEMBLY

Remove the caliper assembly and suspend it with a piece of wire.

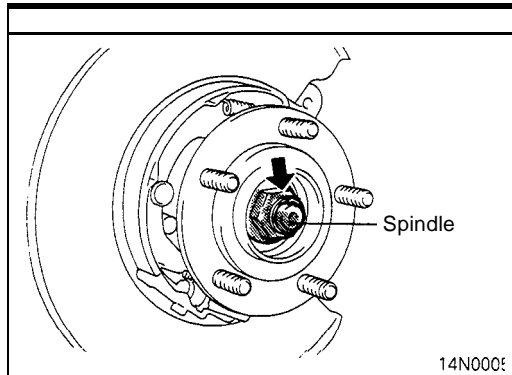
8. REMOVAL OF REAR ROTOR <VEHICLES WITH ABS>

Caution

Care must be taken not to scratch or scar the rotor's toothed surface, and not to drop it.
If the rotor's toothed surface is chipped or the rotor is deformed, it might not be able to accurately sense the wheel rotation speed and the system as a result might not perform normally.



14N0099

**SERVICE POINT OF INSTALLATION**

M34MDAG

5. INSTALLATION OF WHEEL BEARING NUT

After tightening the wheel bearing nut, align with the spindle's indentation and crimp.

SPECIFICATIONS <AWD>

M34CA-B

GENERAL SPECIFICATIONS

| Items | Specifications |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suspension system | Double wishbone suspension type |
| Coil spring Wire dia. x O.D. x free length mm (in.) Coil spring identification color Spring constant N/mm (lbs./in.) | 12.2 x 105 x 379.3 (.48 x 4.13 x 14.93) Blue x 2 28.0 ± 1.4 (157 ± 8) |
| Shock absorber Type Max. length mm (in.) Min. length mm (in.) Stroke mm (in.) Damping force [at 0.3 m/sec. (0.9 ft./sec.)] Expansion N (lbs.) Contraction N (lbs.) | Hydraulic, cylindrical, double-acting type 610 ± 3 (24.0 ± .1) 407 ± 3 (16.0 ± .1) 203 (8.0) Hard: 1,800 ± 250 (397 ± 55) Medium: 1,200 ± 170 (265 ± 37) Soft: 550 ± 90 (121 ± 20) Hard: 950 ± 140 (209 ± 31) Medium: 850 ± 130 (187 ± 29) Soft: 650 ± 100 (143 ± 22) |


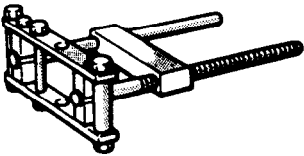
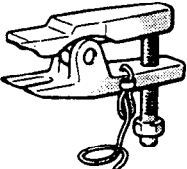
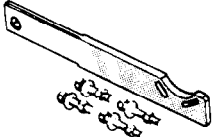
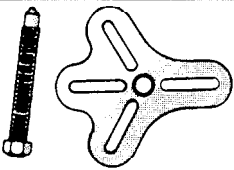
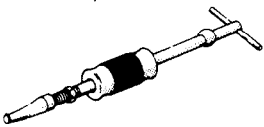
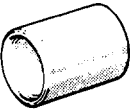
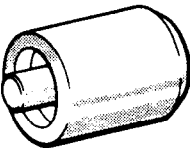
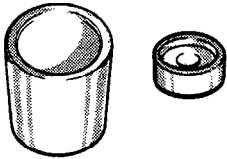
SERVICE SPECIFICATIONS


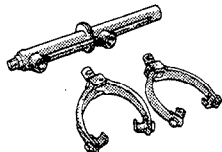
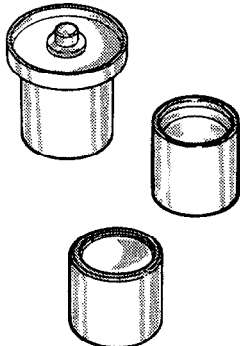
M34CB-B

| Items | Specifications |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard value Toe-in mm (in.) Camber Protruding length of stabilizer bar mounting bolt mm (in.) Lower arm ball joint starting torque Nm (in.lbs.) Stabilizer link ball joint starting torque Nm (in.lbs.) Crossmember support bushing projection mm (in.) Upper part Lower part Differential support bushing projection mm (in.) | 0.5 ± 2.5 (.01 ± .09) – 0°10' ± 30' 5 - 7 (.197 – .276) 2.0 – 9.0 (17 – 78) 1.7 – 3.2 (15 – 28) 15.5 (.59) 2.1 – 3.7 (.08 – .15) 6.7-7.3 (.26 – .29) |

SPECIAL TOOLS

M34DA-B

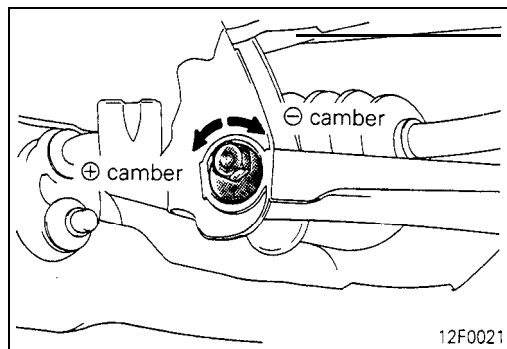
| Tool | Number | Name | Use |
|-------------------------------------------------------------------------------------|-------------------------------------|------------------------------------------------|-------------------------------------------------------|
|  | MB990800-01 | Ball joint remover and installer | Installation of the ball joint dust cover |
|  | MB991254 | Rod remover and installer | Replacement of trailing arm connecting rod |
|  | MB991113-01 | Steering linkage puller | Disconnection of the ball joint |
|  | MB990767-01 | End yoke holder | Removal of the rear axle shaft |
|  | MB990241-01 | Axle puller | |
|  | MB990211-01 | Sliding hammer with adapter | |
|  | MB990847 | Base | |
|  | MB990880 | Arbor | Removal and press-fitting of the trailing arm bushing |
|  | MB991071-01 MB991072 MB991073 | Bushing remover and installer Base Arbor | |

| Tool | Number | Name | Use |
|-----------------------------------------------------------------------------------|----------------------------------|--------------------------------------|-----------------------------------------------------|
|  | MB990958-01 | Arbor | Removal and installation of crossmember bushings |
|  | MB991237 MB991239 | Spring compressor body Arm set | Compression of the coil spring |
|  | MB991387 MB991388 MB990890 | Arbor Base Base | Removal and installation of the crossmember bushing |

TROUBLESHOOTING

M34EA-B

| Symptom | Probable cause | Remedy |
|---------------------------------|-----------------------------------------------------------|---------------------|
| Squeaks or other abnormal noise | Loose rear suspension installation bolts and nuts | Retighten |
| | Malfunction of shock absorber Worn bushings | Replace |
| | Upper arms and/or lower arms deformed or damaged | |
| | Trailing arms deformed or damaged | |
| | Crossmember deformed or damaged | |
| Poor ride | Excessive tire inflation pressure | Adjust the pressure |
| | Malfunction of shock absorber Weak or broken springs | Replace |
| | Stabilizer bar and/or stabilizer link deformed or damaged | |
| Body tilting | Weak or deteriorated bushings Weak or broken springs | Replace |
| | Upper arms and/or lower arms deformed or damaged | |
| | Trailing arms deformed or damaged | |
| | Crossmember deformed or damaged | |



SERVICE ADJUSTMENT PROCEDURES

REAR WHEEL ALIGNMENT INSPECTION

M34FDAC

CAMBER

Standard value: $-0^{\circ}10' \pm 30'$

To adjust camber, turn the lower arm mounting bolt on the crossmember side.

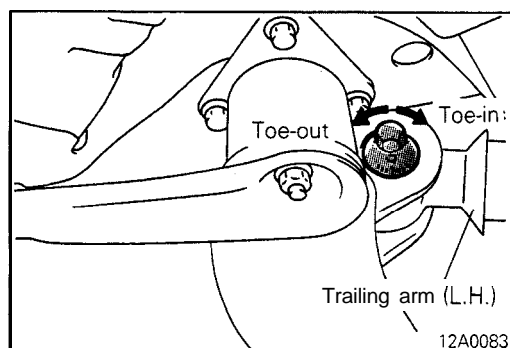
NOTE

Left wheel: Clockwise (⊖ camber)

Right wheel: Clockwise (⊕ camber)

The difference between the right and left wheels should be 30' or less.

One graduation changes camber by about 12'.



TOE-IN

Standard value: $0.5 \pm 2.5 \text{ mm } (.01 \pm .09 \text{ in.})$

To adjust toe, turn the trailing arm mounting bolts on the crossmember side on both sides the same amount.

NOTE

Left wheel: Clockwise (toe-in)

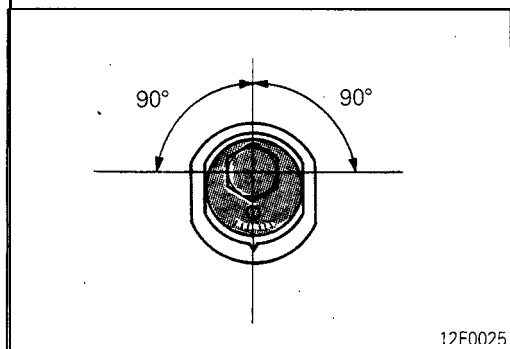
Right wheel: Clockwise (toe-out)

The difference between right and left wheels should be 3 mm (.12 in.) or less.

One graduation changes toe by about 2 mm (.08 in.).

Caution

1. Adjust the eccentric cam bolt within 90° from the central position.
2. Adjust camber and toe, in that order, and, if camber is adjusted, be sure to adjust toe also.
3. For the vehicles with 4WS, make the adjustments with the 4WS tie rod end disconnected from the trailing arm.



REAR SUSPENSION ASSEMBLY

M34GA-B

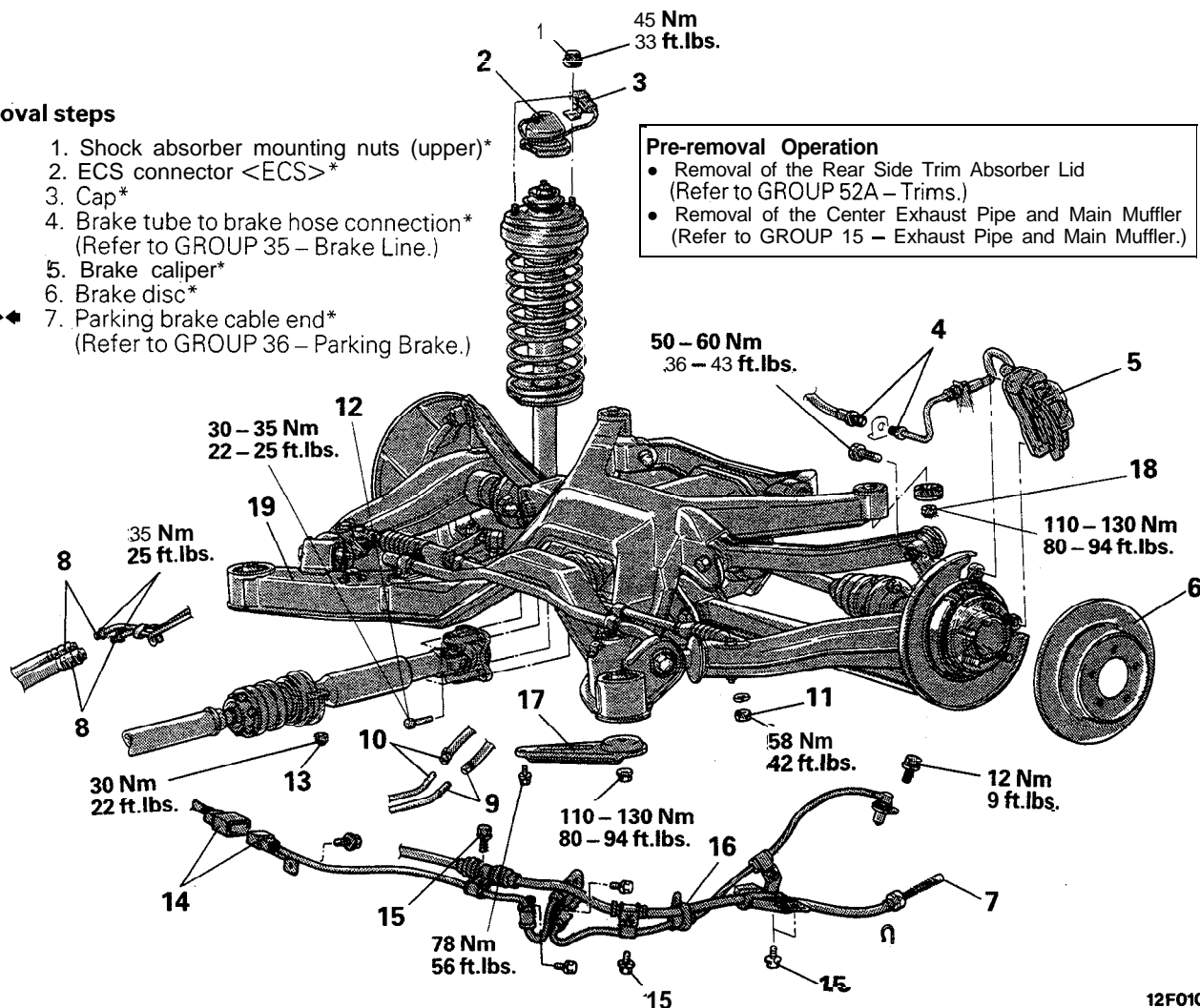
REMOVAL AND INSTALLATION

Removal steps

1. Shock absorber mounting nuts (upper)*
2. ECS connector <ECS>*
3. Cap*
4. Brake tube to brake hose connection*
(Refer to GROUP 35 – Brake Line.)
5. Brake caliper*
6. Brake disc*
7. Parking brake cable end*
(Refer to GROUP 36 – Parking Brake.)

Pre-removal Operation

- Removal of the Rear Side Trim Absorber Lid
(Refer to GROUP 52A – Trims.)
- Removal of the Center Exhaust Pipe and Main Muffler
(Refer to GROUP 15 – Exhaust Pipe and Main Muffler.)



12F0108

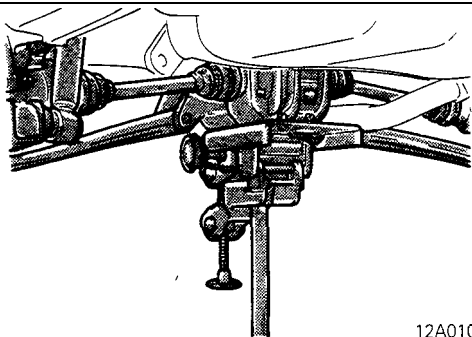
8. Pressure tube assembly to pipe assembly connection <4WS>
9. Feed pipe assembly to suction hose connection <4WS>
10. Return pipe assembly to rubber hose connection <4WS>
11. Power cylinder tie rod coupling nut <4WS>*
12. Differential carrier to propeller shaft coupling bolt and nut
13. Center bearing mounting nut
14. Harness connector connection <ABS>*
15. Parking brake cable and ABS sensor fixing bolt <ABS>*
16. Cable band*
17. Crossmember bracket*
18. Crossmember mounting nut (on differential side)*
19. Rear suspension assembly

Post-installation Operation

- Installation of the Center Exhaust Pipe and Main Muffler
(Refer to GROUP 15 – Exhaust Pipe and Main Muffler.)
- Installation of the Rear Side Trim Absorber Lid
(Refer to GROUP 52A – Trims.)
- Refilling and Bleeding of the Power Steering System
(Refer to GROUP 37A – Service Adjustment Procedures.)
- Checking Wheel Alignment
(Refer to P.34-23.)
- Bleeding of 4WS System
(Refer to GROUP 37B – Service Adjustment Procedures.)
- Operation Inspection of the 4WS System
(Refer to GROUP 37B – Service Adjustment Procedures.)
- Checking the Parking Brake Lever Stroke
(Refer to GROUP 36 – Service Adjustment Procedures.)

NOTE

Parts marked with * are symmetrical.



12A0109

SERVICE POINTS OF REMOVAL

M34GBAU

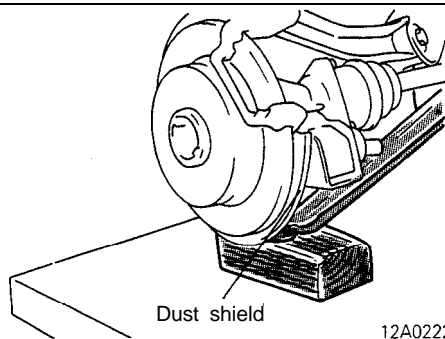
17. REMOVAL OF CROSSMEMBER BRACKET / 18. CROSSMEMBER MOUNTING NUT (ON DIFFERENTIAL SIDE) / 19. REAR SUSPENSION ASSEMBLY

- (1) Before removing the crossmember bracket, support the differential case with the transmission jack.
- (2) Remove the crossmember mounting bolt and nut.

NOTE

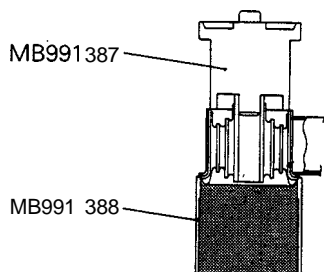
Lowering the rear suspension assembly down from the transmission jack requires three persons, as the rear suspension assembly is very heavy. (Assign one person to the differential and one each to the left and right lower arm.)

- (3) Apply a wood block to the ball joint of the lower arm to prevent the dust shield from being deformed.



12A0222

Press out



12N008E

INSPECTION

M34GCAN2

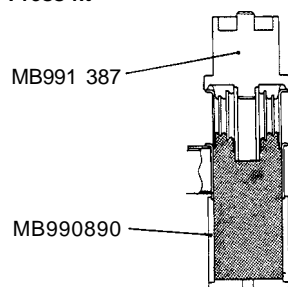
- Check the crossmember for cracks or deformation.
- Check the bushings for cracks or deterioration.

CROSSMEMBER SUPPORT BUSHING (FRONT) REPLACEMENT

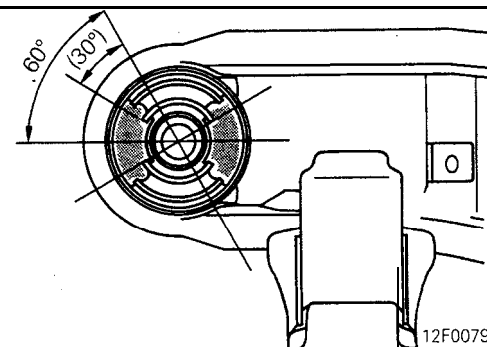
M34GTAG

- (1) Using the special tool, remove and press-fit the crossmember support bushing.

Press-fit



12N008F

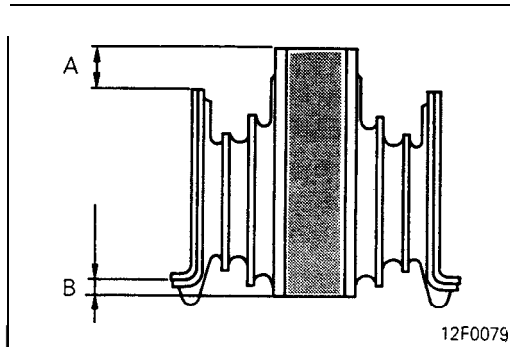


12F0079

- (2) When press-fitting the bushing, make sure that the hollow portions are positioned as shown.

NOTE

Ensure that the shift in rotating direction is within $\pm 5^\circ$.



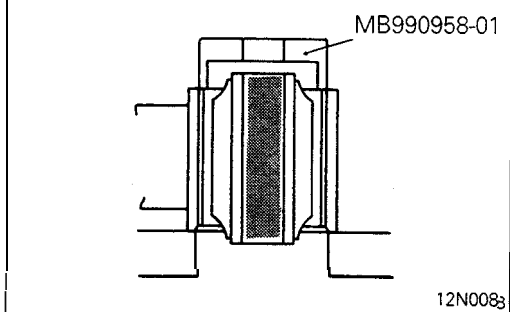
- (3) Make sure that the protrusion of the inner sleeve (dimension A and B) are up to specifications.

Standard value

Dimension A: 15.5 mm (.59 in.)

Dimension B: 2.1 – 3.7 mm (.08 – .15 in.)

Press out

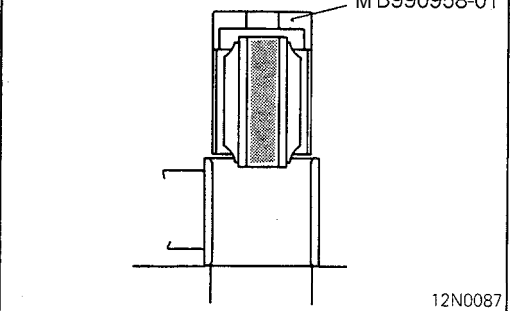


CROSSMEMBER BUSHING (REAR) REPLACEMENT

M34GTAH

- (1) Using the special tool, remove and press-fit the bushing.

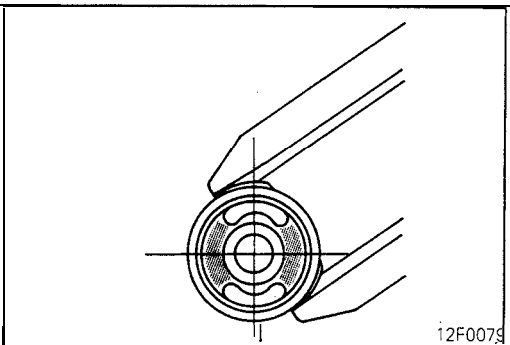
Press-fit



- (2) When press-fitting, position the bushing as shown.

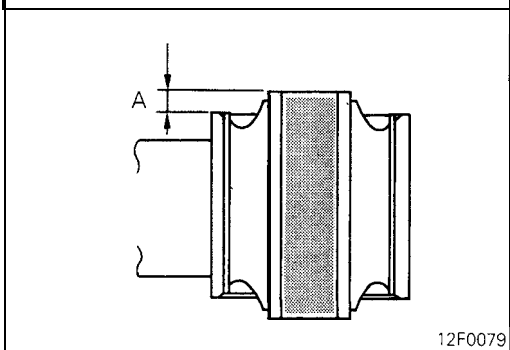
NOTE

Ensure that the shift in rotating direction is within $\pm 5^\circ$.



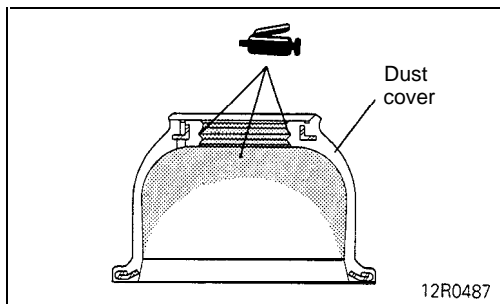
- (3) Make sure that the protrusion of the inner sleeve (dimension A) is up to specification.

Standard value: 6.7 – 7.3 mm (.26 – .29 in.)



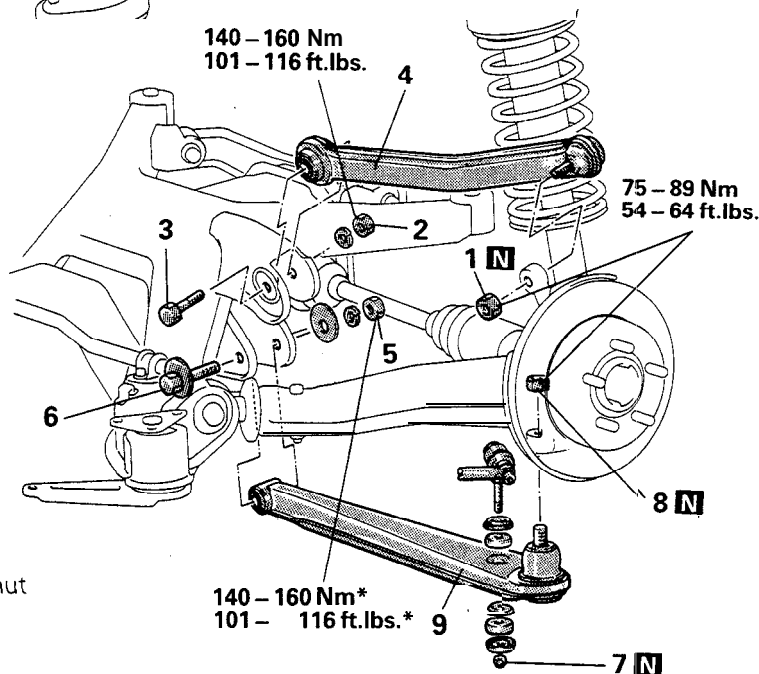
M34SA-B

UPPER AND LOWER ARM REMOVAL AND INSTALLATION



Post-installation Operation

• Check of Wheel Alignment
(o P.34-23)



Upper arm removal steps

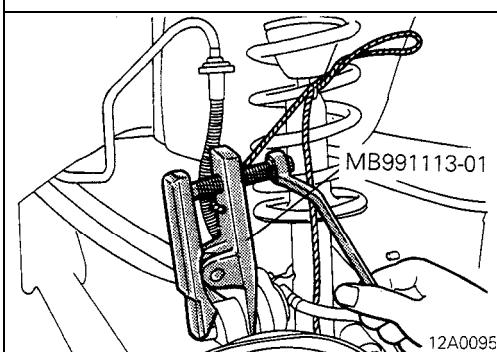
1. Self-locking nut
2. Upper arm mounting nut
3. Upper arm mounting bolt
4. Upper arm

Lower arm removal steps

5. Lower arm mounting nut
6. Lower arm mounting bolt
7. Stabilizer link to lower arm coupling nut
8. Self-locking nut
9. Lower arm

NOTE

For tightening points marked with *, first temporarily tighten and then ground the vehicle to torque to specification where the vehicle is empty.



SERVICE POINTS OF REMOVAL

M34SBAC

1. REMOVAL OF SELF-LOCKING NUT

Using the special tool, disconnect the upper arm ball joint from the knuckle.

NOTE

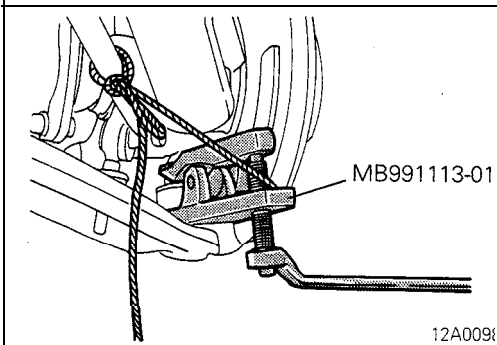
- (1) Do not remove the nut from the ball joint, but just loosen it.
- (2) Suspend the special tool with a rope to prevent it from dropping.

8. REMOVAL OF SELF-LOCKING NUT

Lower down the lower arm on the crossmember side. Then, install the special tool and disconnect the lower arm ball joint from the knuckle.

NOTE

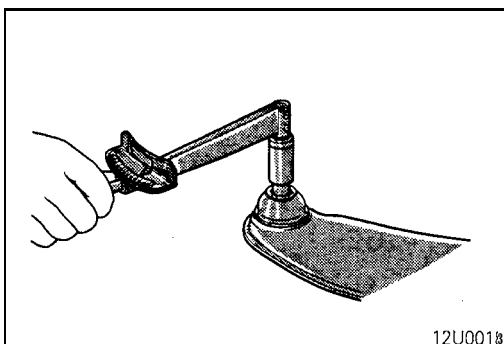
- (1) Do not remove the nut from the ball joint, but just loosen it.
- (2) Suspend the special tool with a rope to prevent it from dropping.



INSPECTION

M34SCAC

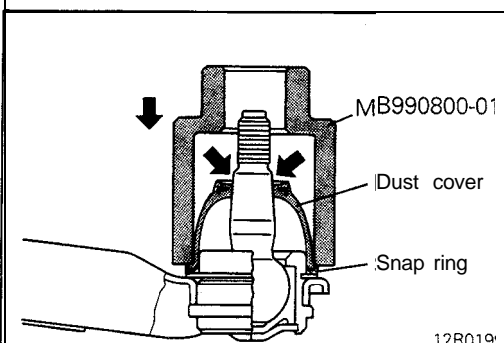
- Check the bushing for wear and deterioration.
- Check the upper arm or lower arm for bend or breakage.
- Check the ball joint dust cover for cracks.
- Check all bolts for condition and straightness.



CHECKING OF BALL JOINT FOR STARTING TORQUE

Mount two nuts on the ball joint, and then measure the ball joint starting torque.

Standard value: 2 – 9 Nm (17 – 78 in.lbs.)

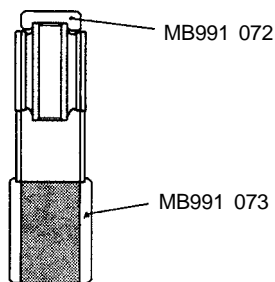


BALL JOINT DUST COVER REPLACEMENT

M34SEAB2

- (1) Remove the dust cover.
- (2) Apply multipurpose grease to the lip and inside of the dust cover.
- (3) Drive in the dust cover with special tool until it is fully seated.

Removal

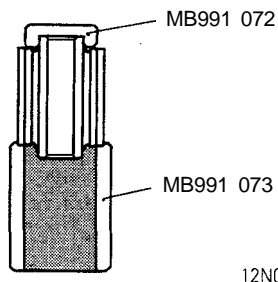


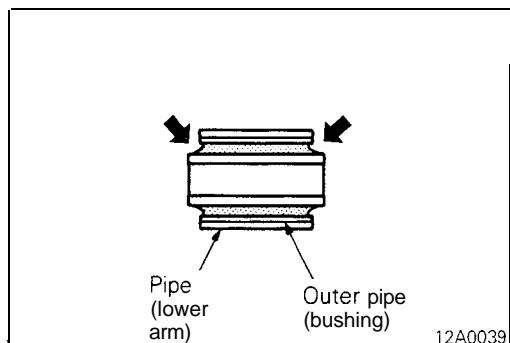
LOWER ARM BUSHING REPLACEMENT

M34SFAC

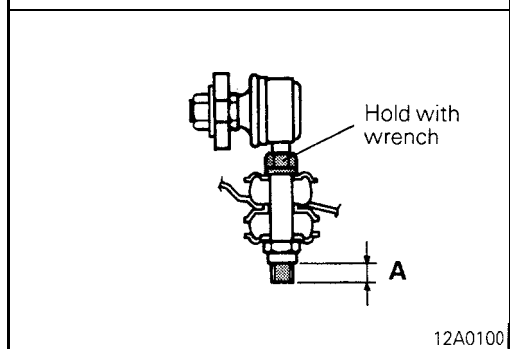
- (1) Use the special tool to remove and press-fit the bushing.

Press-fit





- (2) Press-fit the lower arm bushing until the bushing outer pipe edge flush with the lower arm pipe edge.



SERVICE POINT OF INSTALLATION

M34SDAB

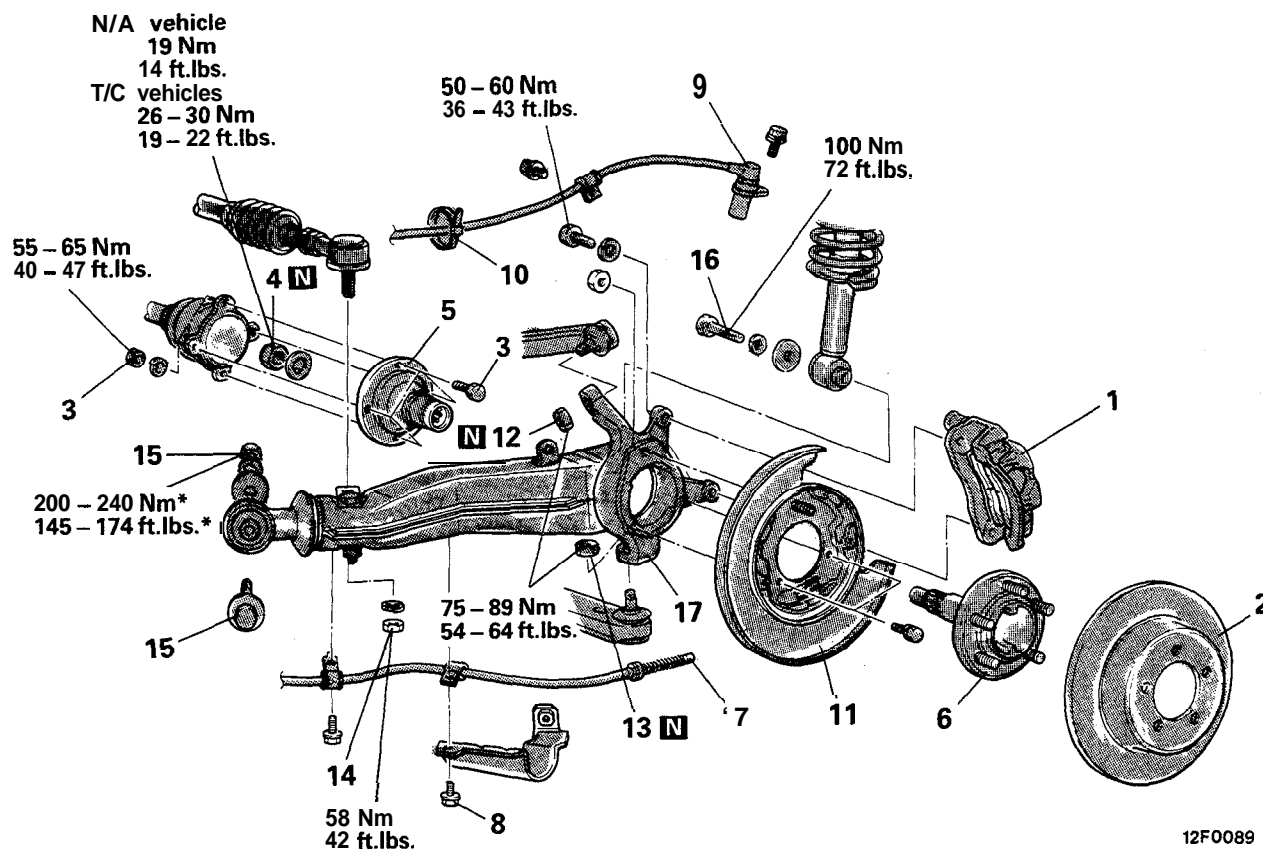
7. INSTALLATION OF STABILIZER LINK TO LOWER ARM COUPLING NUT

Holding the stabilizer link with a wrench, tighten the self-locking nut so that the protrusion of the stabilizer link (dimension A indicated in illustration) is within the standard value.

Standard value: 5 – 7 mm (.197 – .276 in.)

TRAILING ARM

REMOVAL AND INSTALLATION



12F0089

Removal steps

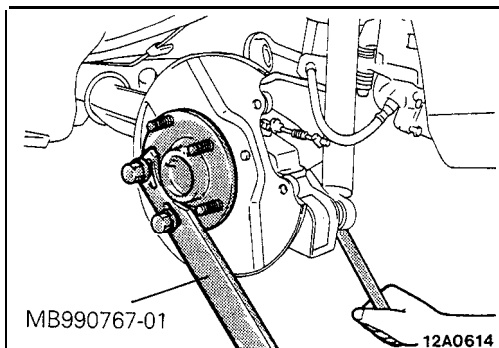
1. Rear brake caliper assembly
2. Rear brake disc
3. Drive shaft to companion flange mounting bolt and nut
4. Self-locking nut
5. Companion flange
6. Rear axle shaft
7. Parking brake cable end
8. Parking brake cable clamp bolt
9. Rear speed sensor (ABS)
10. Rear speed sensor cable and parking brake cable bands (ABS)
11. Dust shield
12. Self-locking nut (upper arm)
13. Self-locking nut (lower arm)
14. Tie rod end mounting nut
15. Trailing arm mounting bolt and nut
16. Rear shock absorber mounting bolt
17. Trailing arm

Post-installation Operation

- Check of Wheel Alignment (Refer to P.34-23)
- Check of Parking Brake Lever Stroke (Refer to GROUP 36 – Service Adjustment Procedures.)
- Rear Brake Disc Run-out Check (Refer to GROUP 35 – Service Adjustment Procedures.)

NOTE

For tightening points marked with *, first temporarily tighten and then ground the vehicle to torque to specification where the vehicle is empty.

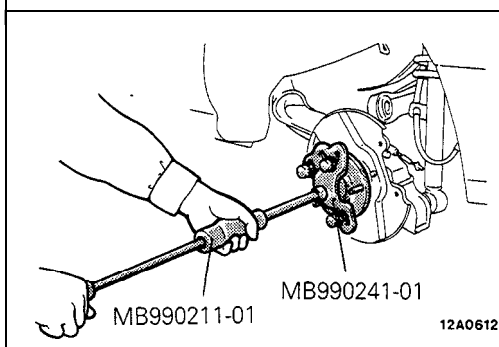


SERVICE POINTS OF REMOVAL

M34TBAC

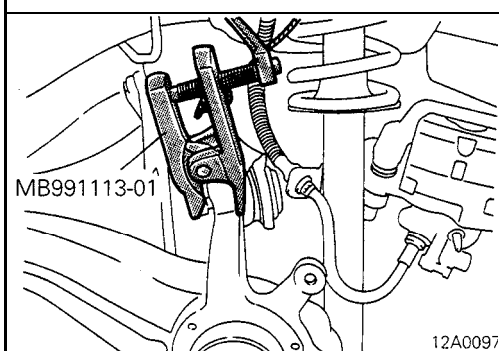
4. REMOVAL OF SELF-LOCKING NUT

With the special tool, secure the rear axle shaft, then remove the self-locking nut.



6. REMOVAL OF REAR AXLE SHAFT

With the special tool, remove the rear axle shaft

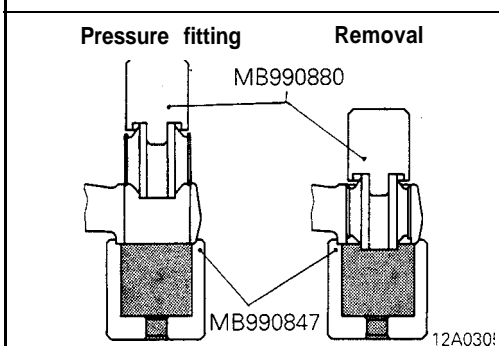


12. REMOVAL OF SELF-LOCKING NUT (UPPER ARM) / 13. SELF-LOCKING NUT (LOWER ARM)

Using the special tool, disconnect the ball joint from the knuckle.

NOTE

- (1) Do not remove the nut from the ball joint, but just loosen it.
- (2) Suspend the special tool with a rope to prevent it from dropping.



INSPECTION

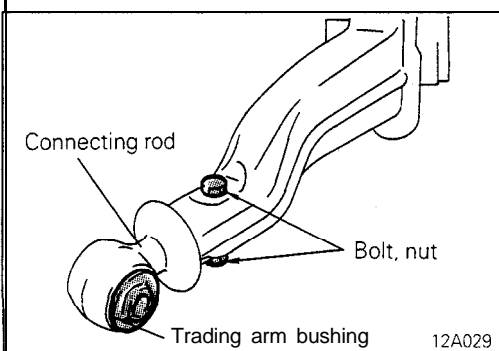
M34TCAB2

- Check trailing arm for cracks and deformation.
- Check bushing for cracks, deterioration and wear.

TRAILING ARM BUSHING REPLACEMENT

M34TEAB2

Use the special tool to remove and press-fit the bushing.

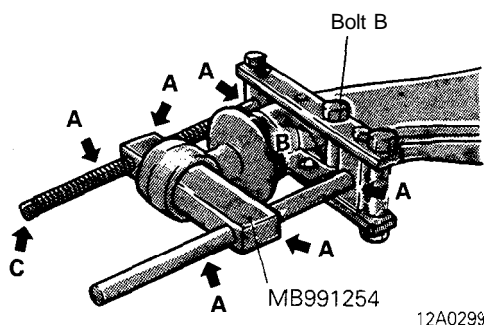


CONNECTING ROD REPLACEMENT

M34TFAB

Replace the connecting rod using the following procedure:

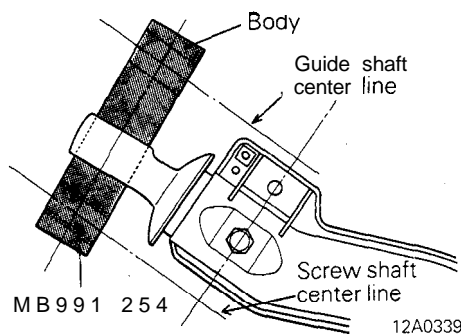
- (1) Remove the trailing arm bushing.
- (2) Remove the bolt and nut.



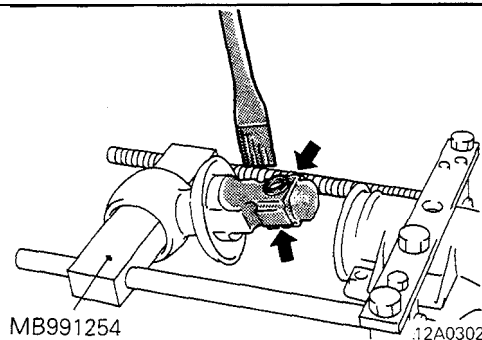
- (3) Set the special tool onto the trailing arm as shown in the illustration.

NOTE

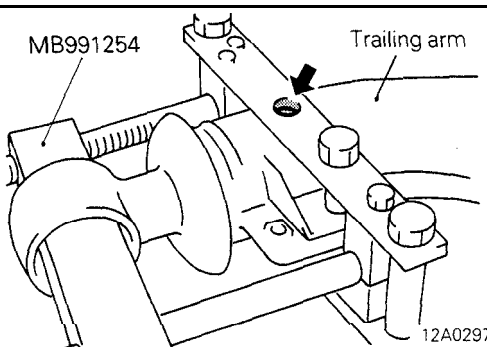
- (1) Apply lubricant to the sliding portion of the special tool (at the arrow marked "A" in the illustration).
 (2) Install bolt B to the trailing arm, at the point shown in the figure.
 (4) Use a spanner, etc., to turn the portion marked "C" in the illustration to remove the connecting rod.



- (5) installation of the body (special tool) should be performed with the screw shaft and guide shaft center lines oriented as shown in the illustration.



- (6) Apply soapy water to the rubber portion of the connecting rod.
 (7) Reverse the removal procedures to press-fit.



- (8) Remove the special tool after aligning the holes in the special tool and trailing arm.
 (9) Tighten the bolts and nuts to the specified torque.

Tightening torque : 98 Nm (71 ft.lbs.)

- (10) Press-fit the trailing arm bushing. (Refer to P.34-31.)

SHOCK ABSORBER ASSEMBLY

REMOVAL AND INSTALLATION

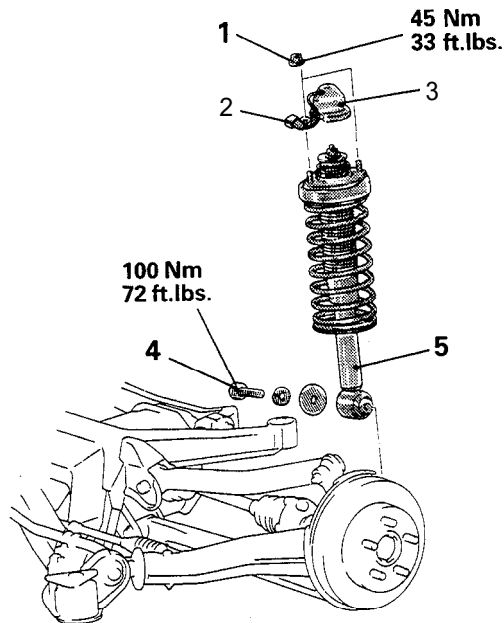
M34NA-B

Pre-removal and Post-installation Operation

- Removal and Installation of the Rear Side Trim Absorber Lid
(Refer to GROUP 52A – Trims.)

Removal steps

- Shock absorber upper mounting nut
- ECS connector (ECS)
- Cap
- Shock absorber lower mounting bolt
- Shock absorber assembly



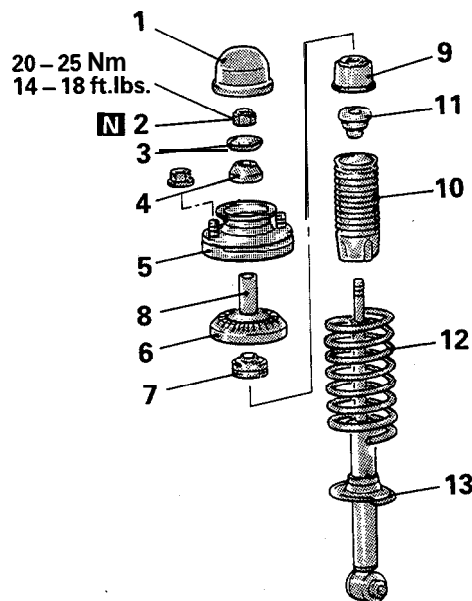
12F0086

DISASSEMBLY AND REASSEMBLY

M34GM-B

Disassembly steps

- Cap
- Piston rod tightening nut
(Refer to P.34-14.)
- Washer
- Upper bushing (A)
- Bracket assembly (Refer to P.34-14.)
- Spring pad
- Upper bushing (B)
- Collar
- Cup assembly
- Dust cover
- Bump rubber
- Coil spring (Refer to P.34-14.)
- Shock absorber



12A0360

INSPECTION

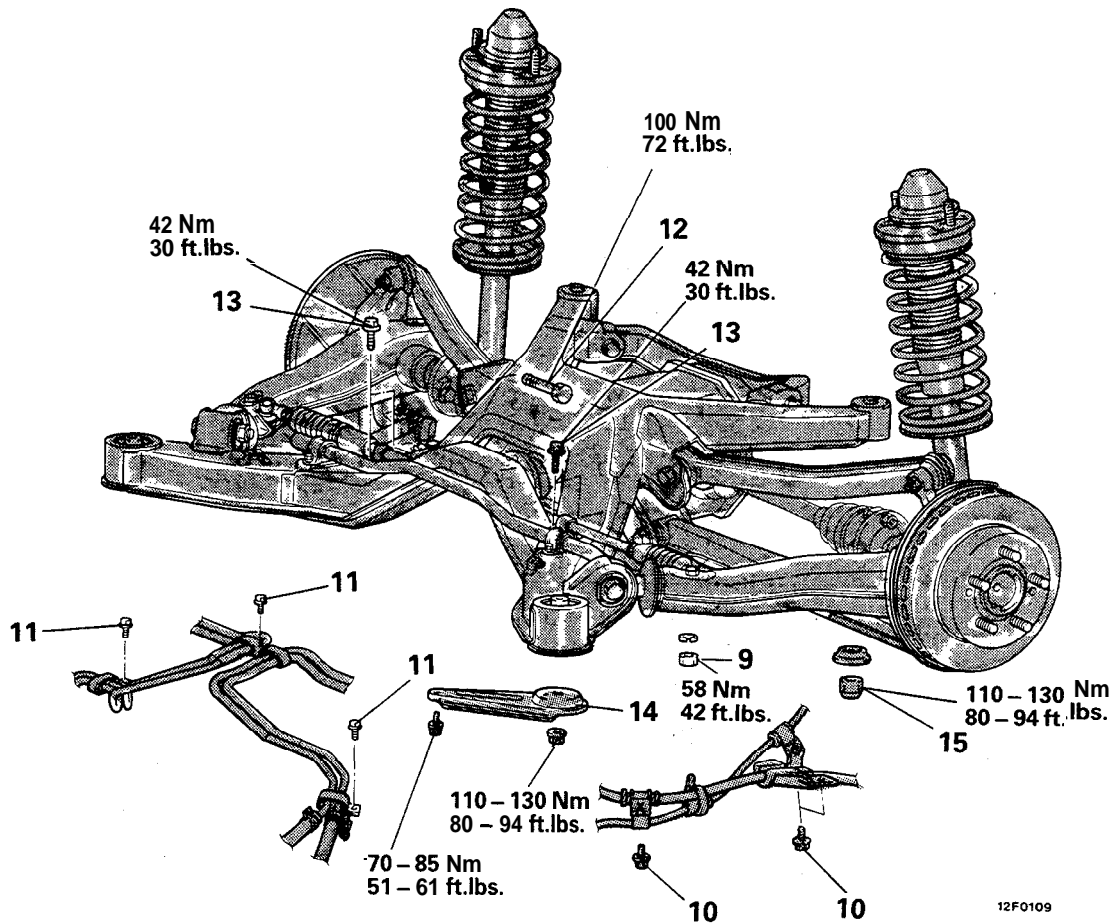
M34GOAC2

- Check the rubber parts for damage.
- Check the coil springs for crack, damage or deterioration.

STABILIZER BAR

REMOVAL AND INSTALLATION

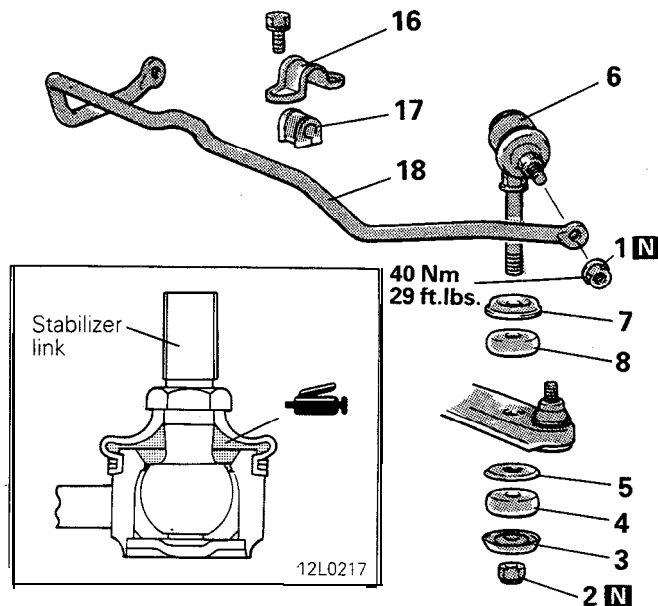
M341A-B



12F0109

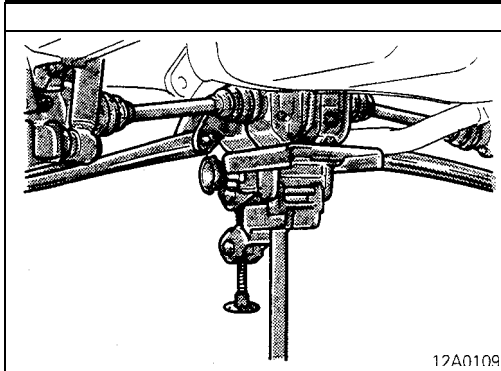
Removal steps

- * 1. Self-locking nut*
- a 2. Self-locking nut*
- 3. Joint cup A*
- 4. Stabilizer rubber*
- 5. Joint cup B*
- ◆◆ 6. Stabilizer link*
- 7. Joint cup A*
- 8. Stabilizer rubber*
- 9. Tie rod end mounting nut*
- 10. Parking brake cable bracket mounting bolt*
- 11. 4WS piping fixing bolt <4WS>
- 12. Rear shock absorber mounting bolt
- 13. Power cylinder mounting bolt <4WS>
- ◆◆ 14. Crossmember bracket*
- ◆◆ 15. Crossmember mounting nut*
- 16. Stabilizer bracket*
- 17. Bushing*
- ◆◆ 18. Stabilizer bar



NOTE
Parts marked with * are symmetrical

12A0113



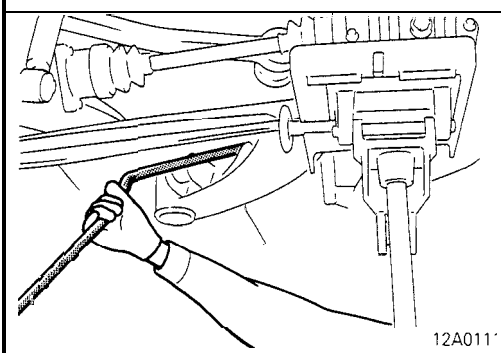
12A0109

SERVICE POINTS OF REMOVAL

M34IDAC

14. REMOVAL OF CROSSMEMBER BRACKET / 15. CROSSMEMBER MOUNTING NUT

- (1) Support the rear suspension assembly with the transmission jack.
- (2) Remove the crossmember bracket and crossmember mounting nut.



12A0111

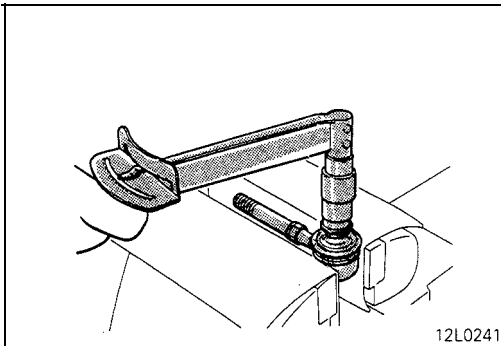
18. REMOVAL OF STABILIZER BAR

- (1) Lower the transmission jack a little to obtain a gap between the rear suspension and body.
- (2) Remove the stabilizer bar.

INSPECTION

M34IBAC2

- Check the bushing for wear and deterioration.
- Check the stabilizer bar for deterioration or damage.
- Check the stabilizer link ball joint dust cover for cracks.
- Check all bolts for condition and straightness.

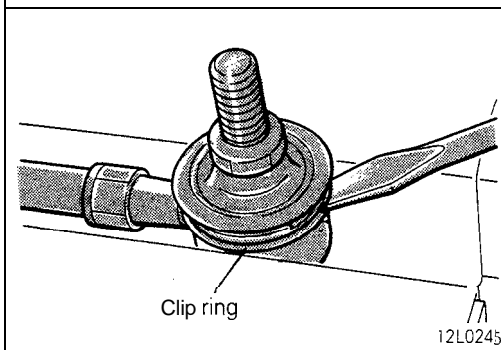


12L0241

CHECKING OF STABILIZER LINK BALL JOINT FOR STARTING TORQUE

Mount two nuts on the ball joint, and then measure the ball joint starting torque.

Standard value: 1.7 – 3.2 Nm (15 – 28 in.lbs.)

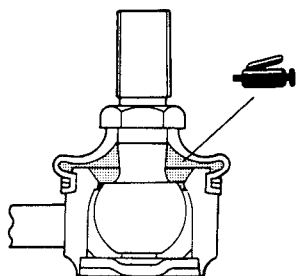


12L0245

BALL JOINT DUST COVER REPLACEMENT

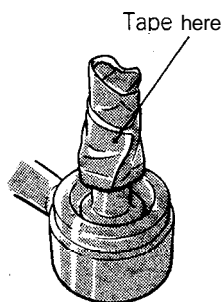
M34IEBA

- (1) Remove the clip ring and the dust cover.

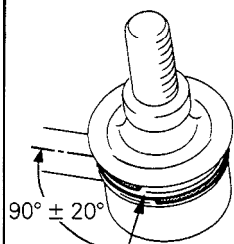


12L0217

- (2) Apply multipurpose grease to the lip and inside of the dust cover.



12P0156



Clip ring ends
(Could be 180°
opposite end) 12P0252

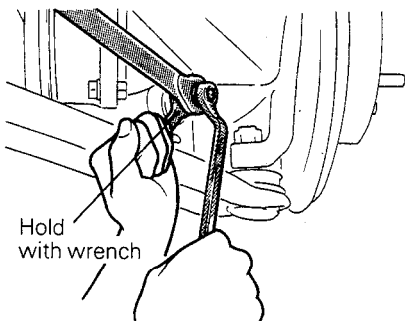
- (3) Wind tape around the threads of the stabilizer link stud and install the dust cover.
(4) Secure the dust cover with the clip ring.
At this time, make sure that the clip ring ends are located at a point $90^\circ \pm 20^\circ$ with reference to the link axis.

SERVICE POINTS OF INSTALLATION

M34ICAF

6. INSTALLATION OF STABILIZER LINK / 2. SELF-LOCKING NUT / 1. SELF-LOCKING NUT

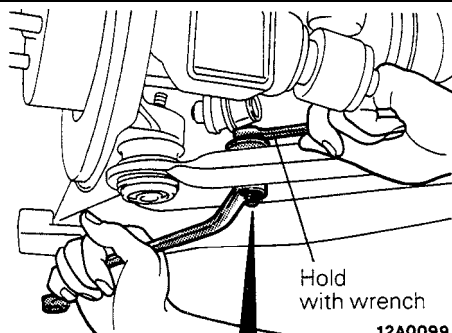
- (1) Secure the stabilizer link ball stud with a wrench and mount the self-locking nut.



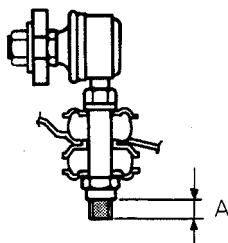
12A0110

- (2) Hold the stabilizer link with a wrench so that its protrusion on the lower arm side (dimension A) is up to specification, then mount the self-locking nut.

Standard value: 5 – 7 mm (.197 – .276 in.)



12A0099



12A010C