
FRONT SUSPENSION

CONTENTS

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COMPRESSION LOWER ARM AND LATERAL LOWER ARM ASSEMBLIES	11	SHOCK ABSORBER ASSEMBLY..	8
GENERAL INFORMATION	2	SPECIAL TOOLS	3
ON-VEHICLE SERVICE	4	STABILIZER BAR*	14
Front Wheel Alignment Check and Adjustment	4	TROUBLESHOOTING	4
SERVICE SPECIFICATIONS	3	UPPER ARM ASSEMBLY	6

GENERAL INFORMATION

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The front suspension is of a multi-link construction with two lower arms which create the ideal virtual kingpin axis for the suspension system. In addition,

by mounting the upper arm in a higher position than the tires, excellent steering stability and ride comfort are obtained.

<ECLIPSE>

items		Medium price <M/T> High price <M/T> Low price <M/T>	Medium price <A/T> High price <A/T> Low price <A/T>	Premium price – FWD <M/T>	Premium price – FWD <A/T>
Coil spring	Wire diameter x O.D. x free length mm (in.)	13.1 x 84.2 – 124.2 x 309.5 (.516 x 3.315 – 4.890 x 12.185)	13.2 x 84.4 – 124.4 x 315.5 (.520 x 3.323 – 4.898 x 12.421)	13.1 x 84.2 – 124.2 x 309.5 (.516 x 3.315 – 4.890 x 12.185)	13.2 x 84.4 – 124.4 x 315.5 (.520 x 3.323 – 4.898 x 12.421)
	Identification color	White + Pink	White + Gray	White + pink	White + Gray
	Spring constant N/mm (lbs./in.)	43.0 (246)	43.0 (246)	43.0 (246)	43.0 (246)
Shock absorber stroke mm(in.)		118 (4.6)	118 (4.6)	116 (4.6)	118 (4.6)
Shock absorber damping force [at 0.3m/sec. (0.9 ft/sec.)]	Expansion N (lbs.)	1255 – 1667 (282 – 379), 1167 – 1579 (267 – 355)		1432 – 1902 (322 – 528) 1481 – 1952 (333 – 439)	
	Contraction N (lbs.)	471 -706 (106 – 159), 412 – 627 (93 – 141)		520 – 755 (117 – 170) 441 – 657 (99 – 148)	

Items		Premium price – AWD <M/T>	Premium price – AWD <A/T>
Coil spring	Wire diameter x O.D. x free length mm (in.)	13.3 x 84.6 – 124.6 x 312.0 (.524 x 3.331 – 4.906 x 12.283)	13.5 x 85.0 – 125.0 x 317.5 (.531 x 3.346 – 4.921 x 12.500)
	Identification color	Green + Light blue	Green + Purple
	Spring constant N/mm (lbs./in.)	43.0 (246)	43.0 (246)
Shock absorber stroke mm (in.)		118 (4.6)	118 (4.6)
Shock absorber damping force [at 0.3m/sec. (0.9ft/sec.)]	Expansion N (lbs.)	1432 -1902 (322 – 428)	
	Contraction N (lbs.)	530 – 785 (119 – 176)	

<ECLIPSE SPYDER>

Items		Medium price	Premium price <M/T>	Premium price <A/T>
Coil spring	Wire diameter x O.D. x free length mm (in.)	13.5 x 85.0 – 125.0 x 304.5 (.531 x 3.346 – 4.921 x 11.988)	13.6 x 85.2 – 125.2 x 309.5 (.535 x 3.354 – 4.929 x 12.165)	13.8 x 85.6 – 125.6 x 315.0 (.543 x 3.370 – 4.945 x 12.402)
	Identification color	Cream + Purple	Cream + Red	Cream + Light blue
	Spring constant N/mm (lbs./in.)	43.0 (246)	43.0 (246)	43.0 (246)
Shock absorber stroke mm(in.)		118 (4.6)	118 (4.6)	118 (4.6)
Shock absorber damping force [at 0.3 m/sec. (0.9 ft/sec.)]	Expansion N (lbs.)	1206 – 1638 (271 – 368)		
	Contraction N (lbs.)	471 -706 (106 – 159)		

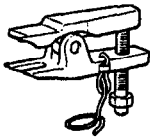

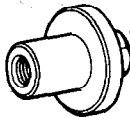
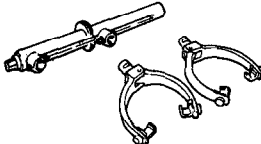

SERVICE SPECIFICATIONS

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Items			Standard value
Toe-in mm (in.)			0 ± 3 (0 ± .12)
Steering angle	Inner wheel	FWD	32°30'±2°
		AWD	31°30'±2°
	Outer wheel	FWD	27°00'
		AWD	26°30'
Camber	FWD (Vehicles with 16-inch wheels)		-0°20'±30
	FWD (Vehicles with 14-inch wheels), AWD		-0°05'±30
Caster			4°40'±1°30'
Upper arm ball joint breakaway torque Nm (in.lbs.)			0.3 – 2.5 (3 – 22)
Compression lower arm ball joint breakaway torque Nm (in.lbs.)			0.5 – 2.5 (4 – 22)
Lateral lower arm ball joint breakaway torque Nm (in.lbs.)			1.5 (13) or less
Stabilizer link ball joint breakaway torque Nm (in.lbs.)			0.5 – 1.5 (4 – 13)

SPECIAL TOOLS

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Tool	Tool number and name	Supersession	Application
	MB991113 Steering linkage puller	MB991113-01	Ball joint and knuckle disconnection
	MB990326 Preload socket	General service tool	Ball joint breakaway torque measurement
	MB991004 Wheel alignment gauge attachment	MB991004-01 or General service tool	Wheel alignment measurement <Vehicles with aluminum wheels>
	MB991237 Spring compressor body MB991239 Arm set	MIT62220	Front coil spring compression
	MB990800 Ball joint remover and installer	MB990800-01	Dust cover installation

TROUBLESHOOTING

33200070028

Symptom	Probable cause	Remedy
Steering wheel is heavy, vibrates or pulls to one side	Suspension malfunction	Adjust or replace
	Ball joint	Adjust or replace
	Coil spring	Adjust or replace
	Wheel alignment	Adjust or replace
	Unbalanced or worn tires	Adjust or replace
Excessive vehicle rolling	Broken or deteriorated stabilizer	Replace
	Shock absorber malfunction	Replace
Poor riding	Improper tire inflation pressure	Adjust
	Broken or deteriorated coil spring	Replace
	Shock absorber malfunction	Replace
Inclination of vehicle	Broken or deteriorated coil spring	Replace
Noise	Lack of lubrication	Lubricate
	Looseness and wear of each part	Replace
	Broken coil spring	Replace
	Shock absorber malfunction	Replace

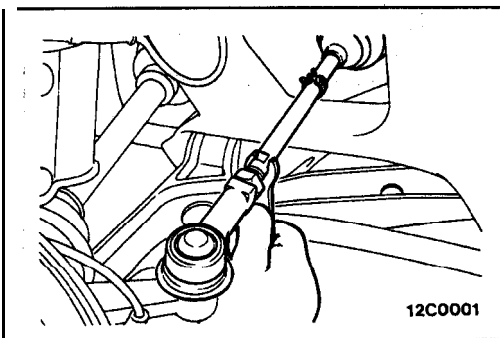
ON-VEHICLE SERVICE

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FRONT WHEEL ALIGNMENT CHECK AND ADJUSTMENT

Measure wheel alignment with alignment equipment **on a level surface.**

The 'front' suspension, **steering system**, and **wheels** should be serviced to normal condition prior to measurement of wheel alignment.



TOE-IN

The rear suspension wheel alignment should be serviced to normal condition before toe-in adjustment.

Standard value: 0 ± 3 mm (0 ± .12 in.)

NOTE

1. If the toe-in is not **within the** standard value, adjust the toe-in by undoing, the **clips** and **turning** the **left and right** tie rod **turnbuckles** by the same amount (in opposite directions).
2. The toe will move out as the **left turnbuckle** is turned toward the front of the vehicle and the **right turnbuckle** is turned toward the rear of the vehicle.

STEERING ANGLE

Standard value:

Inner wheel

32°30'±2° (FWD)**31°30'±2° (AWD)**

Outer wheel

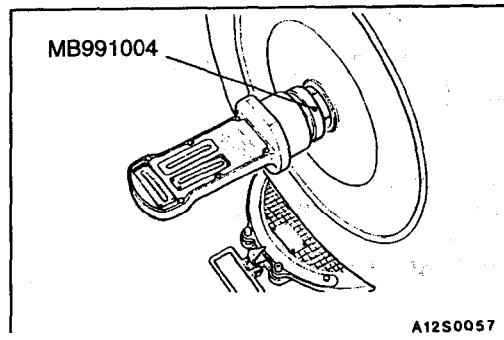
27°00' (FWD)**26°30' (AWD)**

CAMBER

Standard value:

-0°20'±30' FWD (Vehicles with 16-inch wheels)**-0°05'±30' FWD (Vehicles with 14-inch wheels), AWD**

CASTER

Standard value: **4°40'±1°30'**

NOTE

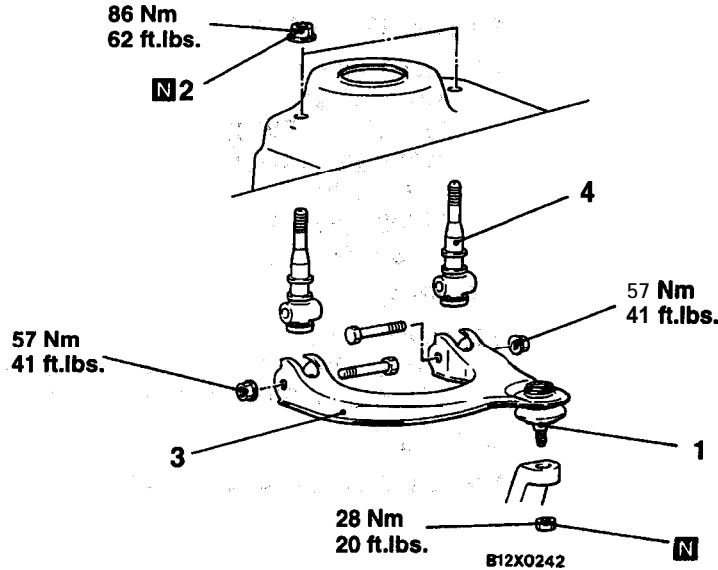
1. Camber and caster are preset at the factory and cannot be adjusted.
2. If camber is not within the standard value, check **and** replace bent or damaged parts.
3. For vehicles with aluminum type wheels, attach the camber/caster/kingpin gauge to the drive shaft by using the special tool. Tighten the special tool, to the same torque [**196–255 Nm (142–184ft.lbs.)**] as the drive shaft nut.

Caution

Never subject the wheel bearings to the vehicle load when the drive shaft nuts are loosened.

UPPER ARM ASSEMBLY
REMOVAL AND INSTALLATION

Post-installation Operation
 Front Wheel Alignment Adjustment
 (Refer to P.33A-4.)



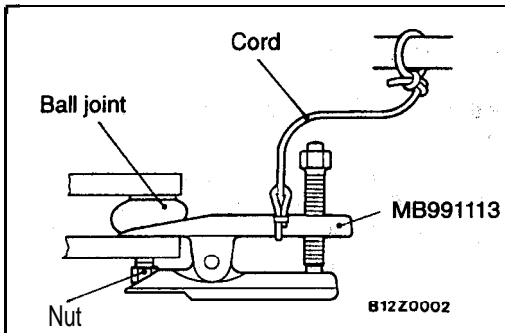
Removal steps



1. Upper arm ball joint and knuckle connection
2. Upper arm self-locking nut



3. Upper arm assembly
4. Upper arm shaft assembly

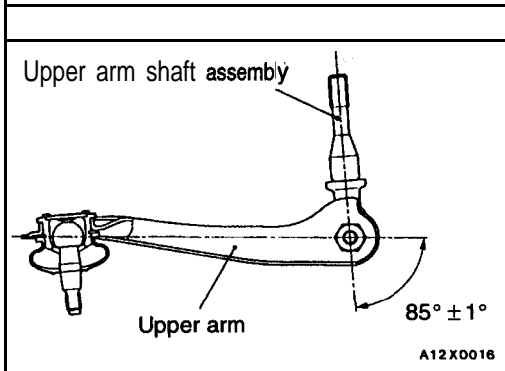


REMOVAL SERVICE POINT

◀▶ UPPER ARM BALL JOINT AND KNUCKLE 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. to prevent it from coming off.



INSTALLATION SERVICE POINT

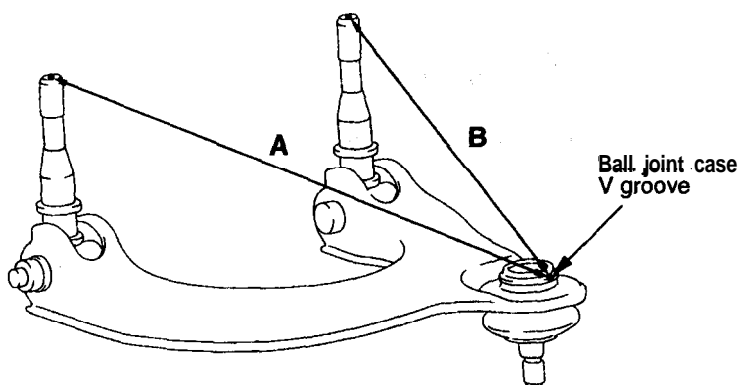
▶◀ UPPER ARM SHAFT ASSEMBLY INSTALLATION

Install the upper arm shaft assembly at the angle shown in the illustration.

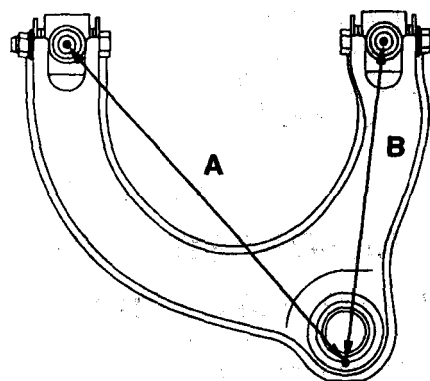
NOTE

If the upper arm shaft is installed at the above-mentioned angle, the reference dimension is determined as follows;

A : 299.9 mm (11.8 in.)
 B : 234.0 mm (9.2 in.)



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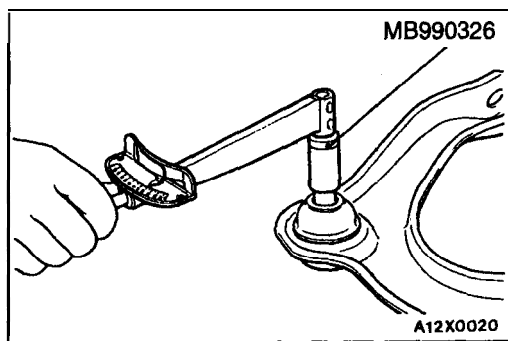
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INSPECTION

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- Check the bushings for wear and deterioration.
- Check the upper arm for bends or damage.
- Check all bolts for condition and straightness.



BALL JOINT BREAKAWAY TORQUE CHECK

- (1) After shaking the ball joint stud **several** times, install the nut to the stud and use the special tool to measure the breakaway torque of the ball joint.

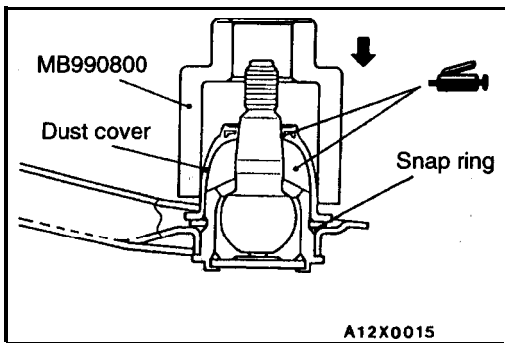
Standard value: 0.3–2.5 Nm (3-22 in.lbs.)

- (2) When the measured value exceeds the standard value, replace the upper arm assembly.
- (3) When the measured value is lower than the standard value, check that the ball joint turns smoothly without excessive play. If so, it is possible to use that ball joint.

BALL JOINT DUST COVER CHECK

If there are any cracks in or damage to the dust cover, replace the arm assembly.

33A-8 FRONT SUSPENSION – Upper Arm Assembly/Shock Absorber Assembly



UPPER ARM BALL JOINT DUST COVER REPLACEMENT

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Replace the dust cover by the following procedure only if the **dust cover** has become damaged by accident during servicing.

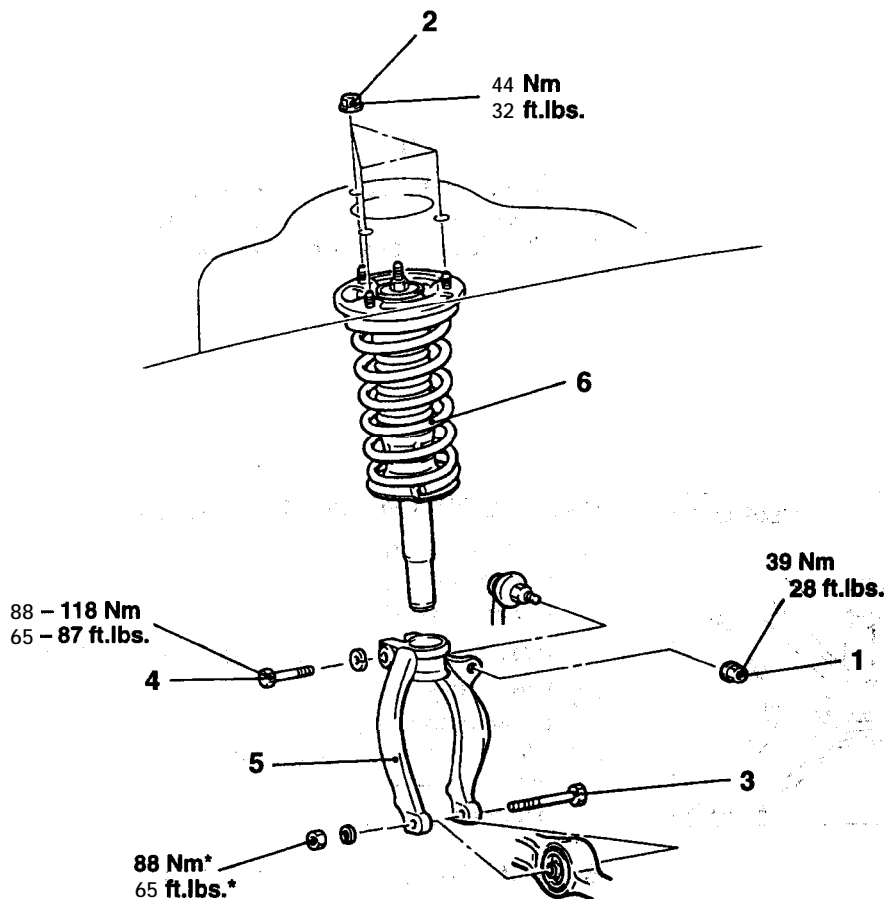
- (1) Remove the dust cover.
- (2) Apply multipurpose grease to the lip and **inside of** the dust cover.
- (3) Drive in the dust cover with **special** tool until it is fully seated.

SHOCK ABSORBER ASSEMBLY

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REMOVAL AND INSTALLATION

Post-installation Operation
Front Wheel Alignment Adjustment
(Refer to P.33A-4.)



Removal steps

1. Stabilizer link mounting nut
2. Shock absorber upper mounting nuts
3. Shock absorber lower mounting bolt
4. Damper fork mounting bolt

5. Damper fork
6. Shock absorber assembly

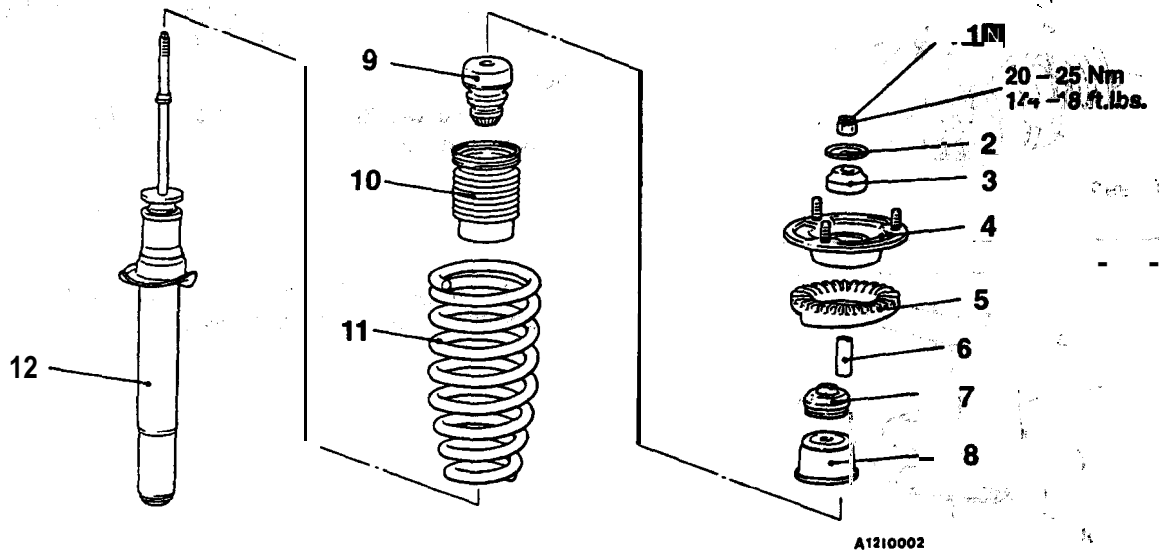
Caution

† Indicates parts which should be **temporarily** tightened, and then fully tightened **with the vehicle on the ground in the unladen condition.**

TSB Revision

DISASSEMBLY AND, REASSEMBLY

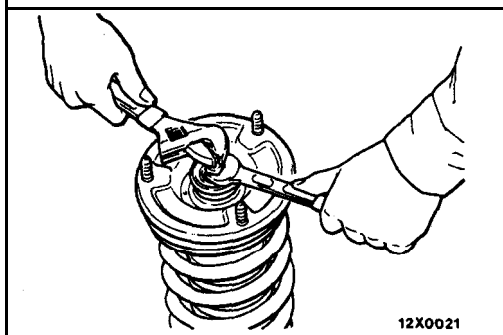
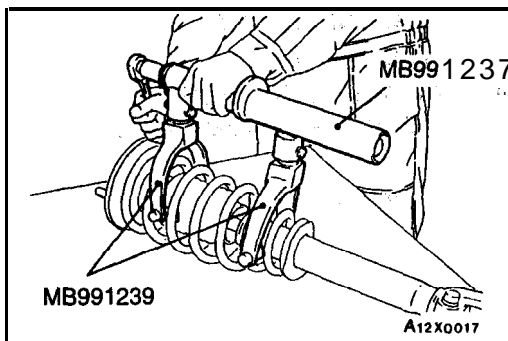
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Disassembly steps

- ◀A▶ ▶C▶ 1. Self-locking nut
- 2. Washer
- 3. Upper bushing A
- ▶B▶ 4. Upper bracket assembly
- 5. Upper spring pad
- 6. Collar

- 7. Upper bushing B
- 8. Cup assembly
- 9. Bump rubber
- 10. Dust cover
- ▶A▶ 11. Coil spring
- 12. Shock absorber assembly



DISASSEMBLY SERVICE POINT

◀A▶ SELF-LOCKING NUT REMOVAL

(1) Compress the coil spring using the special tools.

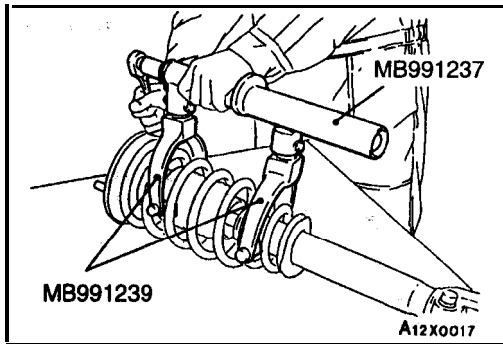
Caution

1. Install the special tools evenly so that the maximum length will be attained within the installation range.
2. Do not use an impact wrench to tighten the special tool bolt.

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

Caution

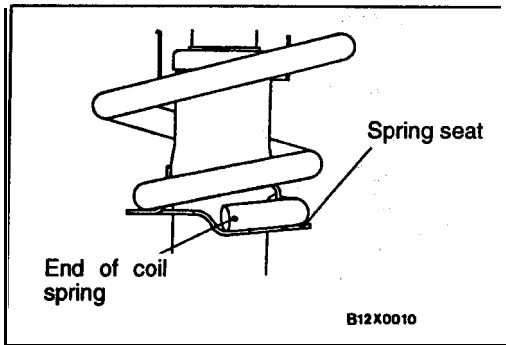
- Do not use an impact wrench to tighten the special tool bolt.

**REASSEMBLY. SERVICE POINTS****▶A◀ COIL SPRING INSTALLATION**

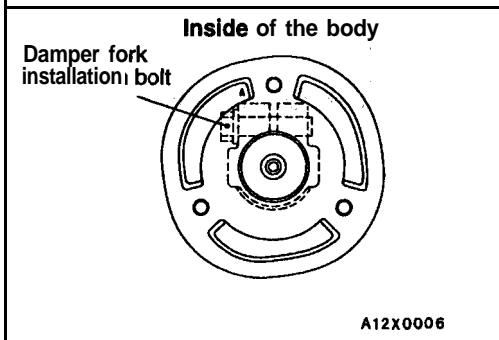
- (1) Use the special tools to **compress** the coil spring and install it to the shock absorber.

Caution

Do not use an impact wrench to tighten the bolt of the special tool.



- (2) Align the edge of the coil spring to the stepped part of the shock **absorber** spring seat.

**▶B◀ UPPER BRACKET ASSEMBLY INSTALLATION**

Install so that the position of the three bolts are as shown in the illustration with respect to the damper fork installation bolt.

▶C◀ SELF-LOCKING NUT INSTALLATION

- (1) Temporarily tighten the self-locking nut.
- (2) Remove the special tools (MB991237, MB991239), and tighten the self-locking nut to the specified torque.

Caution

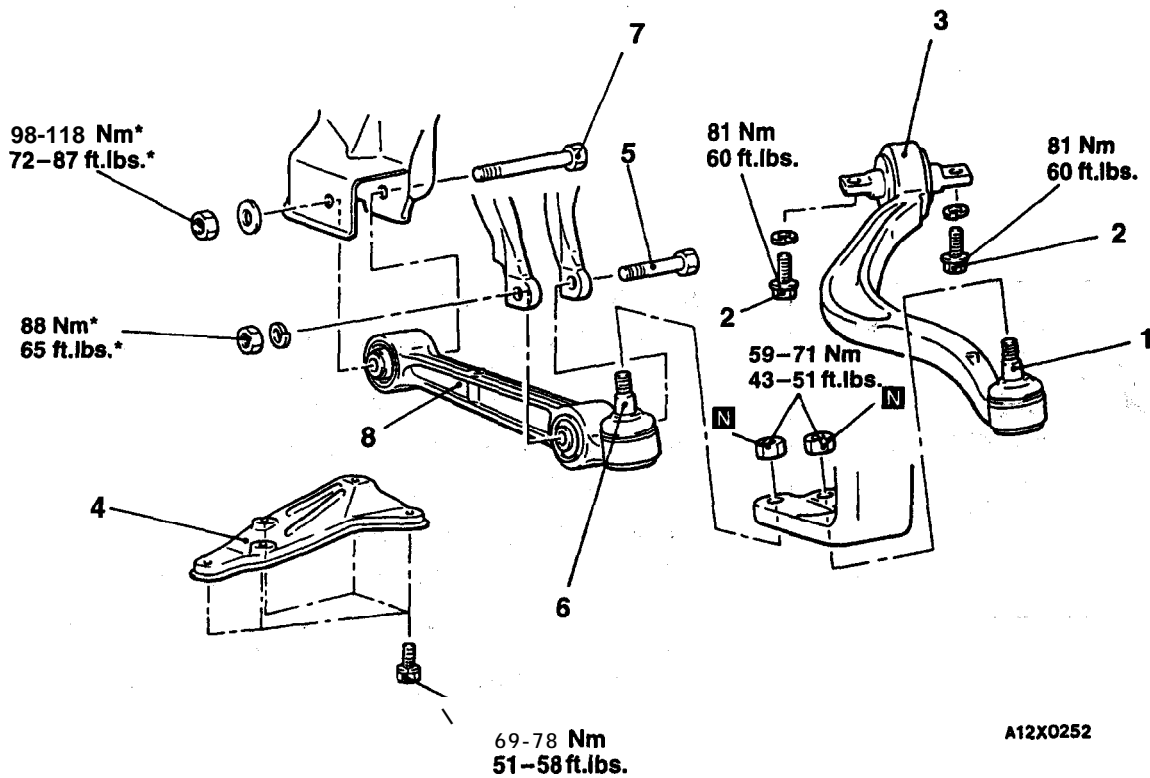
Do not use an impact wrench.

COMPRESSION LOWER ARM AND LATERAL LOWER ARM ASSEMBLIES

33200510070

REMOVAL AND INSTALLATION

- Post-installation Operation**
- Front Wheel Alignment Adjustment (Refer to P.33A-4.)



Compression lower arm assembly removal steps



1. Compression lower arm bail joint and knuckle connection
2. Compression lower arm mounting bolts
3. Compression lower arm assembly

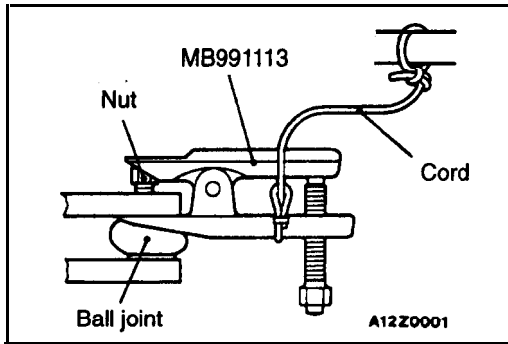
Lateral lower arm assembly removal steps



4. Stay
5. Shock absorber lower mounting bolt
6. Lateral lower arm ball joint and knuckle connection
7. Lateral lower arm mounting bolt
8. Lateral lower arm assembly

Caution

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



REMOVAL SERVICE POINT

◀A▶ COMPRESSION LOWER ARM BALL JOINT AND KNUCKLE/LATERAL LOWER ARM BALL JOINT AND KNUCKLE DISCONNECTION

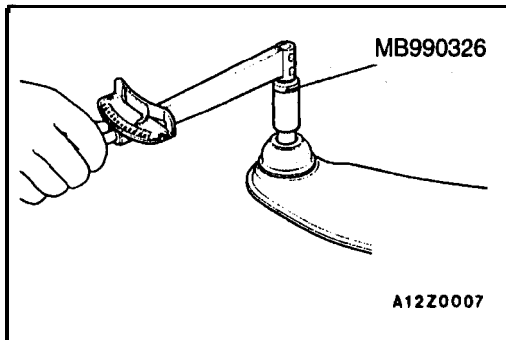
Caution

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. to prevent it from coming off.

INSPECTION

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- Check the bushings for wear and deterioration.
- Check the lower arm for bends or damage.
- Check all bolts for condition and straightness.



BALL JOINT BREAKAWAY TORQUE CHECK

- (1) After shaking the ball joint stud several times; install the nut to the stud and use the special tool to measure the breakaway torque of **the** ball joint.

Compression lower arm ball joint

Standard value: **0.5–2.5 'Nm (4-22 in.lbs.)**

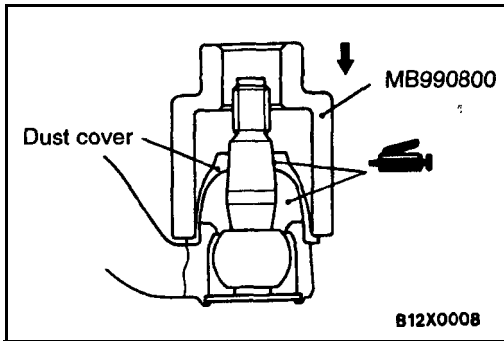
Lateral lower arm ball joint

Standard value: **1.5 Nm (13 in.lbs.) or less**

- (2) When the measured value exceeds the standard value, replace the compression lower arm assembly or lateral lower arm assembly
- (3) When the measured value is lower than the standard value, check that the ball joint turns smoothly without excessive play. If so, it is possible to use that ball joint.

BALL JOINT DUST COVER CHECK

If there are any cracks in or damage to **the** dust cover, replace the arm assembly.



LOWER ARM BALL JOINT DUST COVER REPLACEMENT

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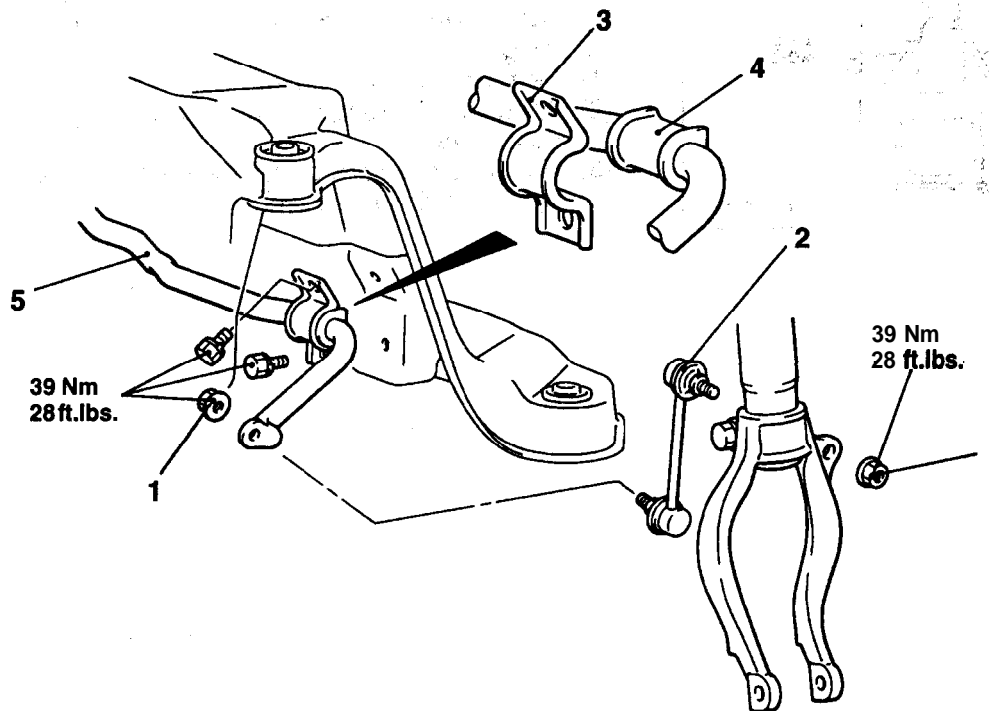
Replace the dust cover by the following procedure only if the dust cover has become damaged by accident during servicing.

- (1) Remove the dust cover.
- (2) Apply multipurpose grease to the lip and inside of the dust cover.
- (3) Using the special tool, drive in the dust cover to the position shown in the illustration.

STABILIZER BAR

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REMOVAL AND INSTALLATION

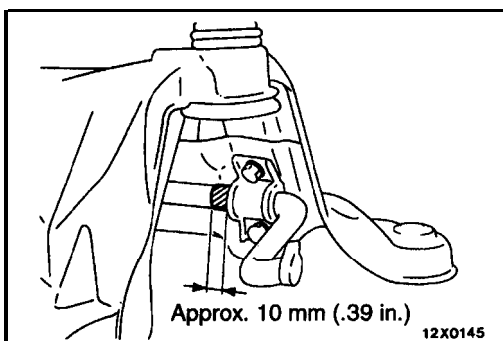


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Removal steps

1. Stabilizer link mounting nut
2. Stabilizer link
- ▶◀ 3. Stabilizer bar bracket

4. Bushing
5. Stabilizer bar



INSTALLATION SERVICE POINT

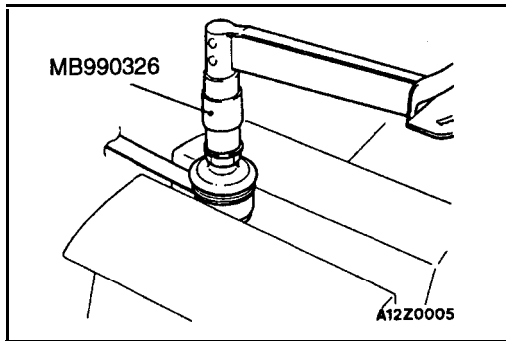
▶◀ STABILIZER BAR BRACKET INSTALLATION

Position the stabilizer bar so that the marking on the stabilizer bar and the edge of the bracket becomes the reference value, and then tighten the stabilizer bar bracket mounting bolt.

INSPECTION

33200550065

- Check the bushings for wear and deterioration.
- Check the stabilizer bar for deterioration or damage.
- Check all bolts for condition and straightness.



STABILIZER LINK BALL JOINT BREAKAWAY TORQUE CHECK

(1) After shaking the ball joint stud several times, install the nut to the stud and use the special tool to measure the breakaway torque of the ball joint.

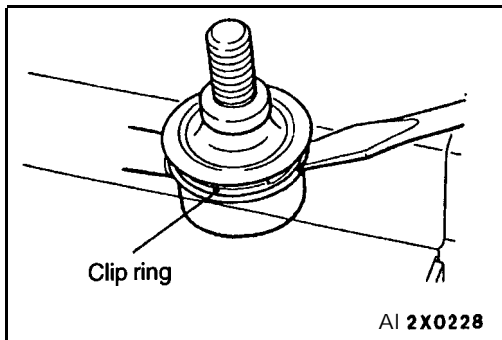
Standard value: 0.5–1.5 Nm (4-13 in.lbs.)

(2) When the measured value exceeds the standard value, replace the stabilizer link.

(3) When the measured value is lower than the standard value, check that the ball joint turns smoothly without excessive play. If so, it is possible to use that ball joint.

BALL JOINT DUST COVER CHECK

If there are any cracks in or damage to the dust cover, replace the stabilizer link.



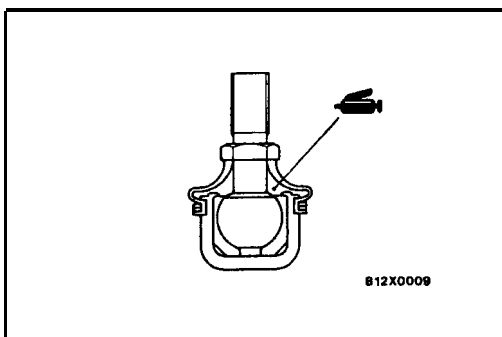
STABILIZER LINK BALL JOINT DUST COVER REPLACEMENT

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Replace the dust cover by the following procedure only if the dust cover has become damaged by accident during servicing.

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

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

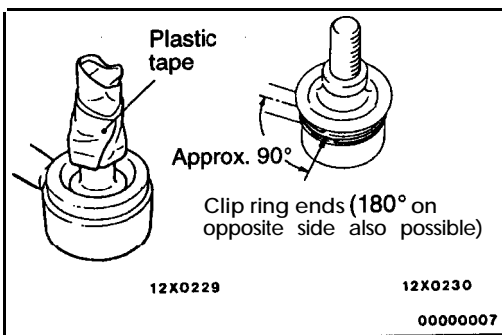


(3) Use plastic tape on the stabilizer link threads as shown in the illustration, and then install the dust cover to the stabilizer link.

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

NOTE

When installing the clip ring, align the ends at a 90° angle from the axis of the stabilizer link.



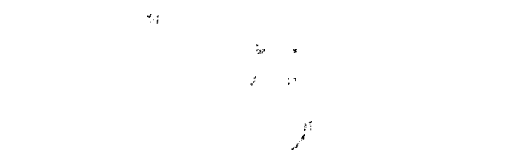
NOTES



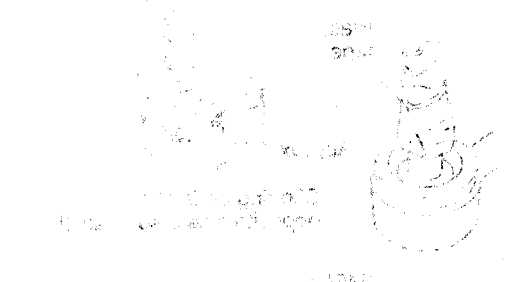
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REAR SUSPENSION-

CONTENTS

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GENERAL INFORMATION	2	SHOCK ABSORBER ASSEMBLY	14
LOWER ARM AND TOE CONTROL ARM ASSEMBLIES	12	SPECIAL TOOLS	4
REAR SUSPENSION ASSEMBLY	7	STABILIZER BAR	17
ON-VEHICLE SERVICE	6	TRAILING ARM ASSEMBLY	11
Rear Wheel Alignment Check and Adjustment	6	TROUBLESHOOTING	6
SERVICE SPECIFICATIONS	4	UPPER ARM ASSEMBLY	9



GENERAL INFORMATION

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A newly-developed multi-link type of suspension has been adopted for the rear suspension. The layout of each arm and the rigidity balance of each

bushing have been rationalized to provide both excellent steering stability and riding comfort.

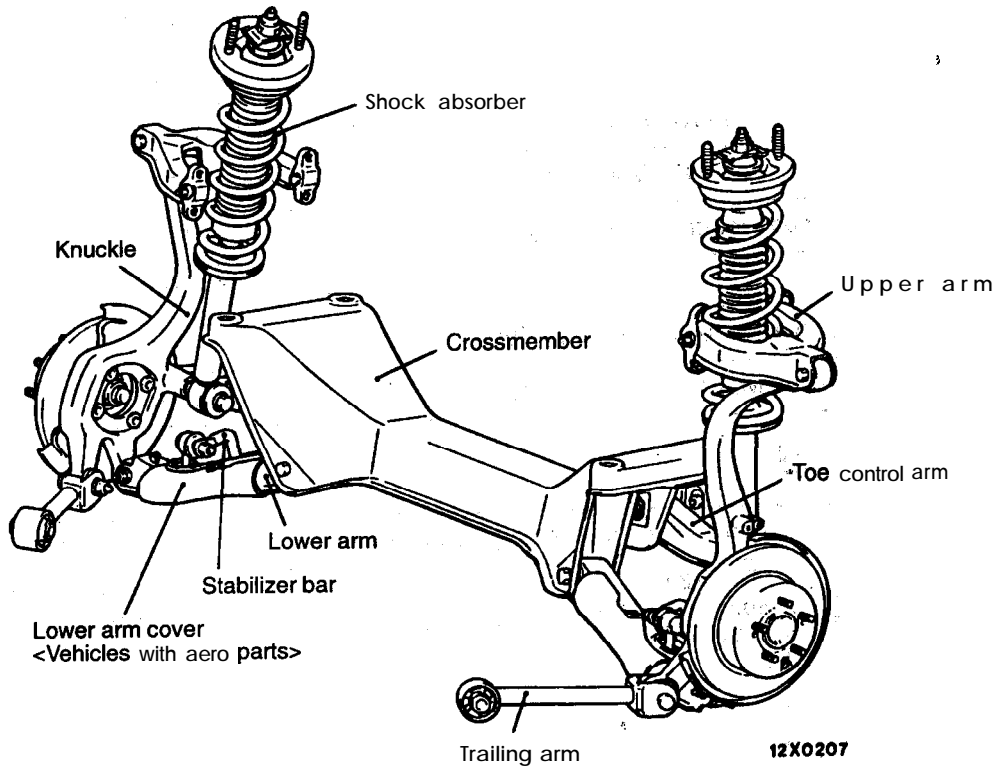
<ECLIPSE>

Items		Medium price, High price, Low price.	Premium price-FWD	Premium price-AWD
Coil spring	Wire diameter x O.D. x free length mm (in.)	11.0 x 75.0 – 117.0 x 303.0 (.433 x 2.953 – 4.606 x 11.929)	11.0 x 75.0 – 117.0 x 303.0 (.433 x 2.953 – 4.606 x 11.929)	11.1 x 75.2 – 117.2 x 360.5 (.433 x 2.961 – 4.614 x 11.830)
	Identification color	Purple x 2	Purple x 2	Orange x 2
	Spring constant N/mm (lbs./in.)	26.5 (151)	26.5 (151)	26.5 (151)
Shock absorber stroke mm (in.)		154 (6.1)	154 (6.1)	154 (6.1)
Shock absorber damping force [at 0.3m/sec. (0.9ft./sec.)]	Expansion N (lbs.)	834–1128 (187–254)	794–1069 (179–240)	922–1236 (207–278)
	Contraction N (lbs.)	353–530 (79–119)	392–588 (88–132)	392–588 (88–132)

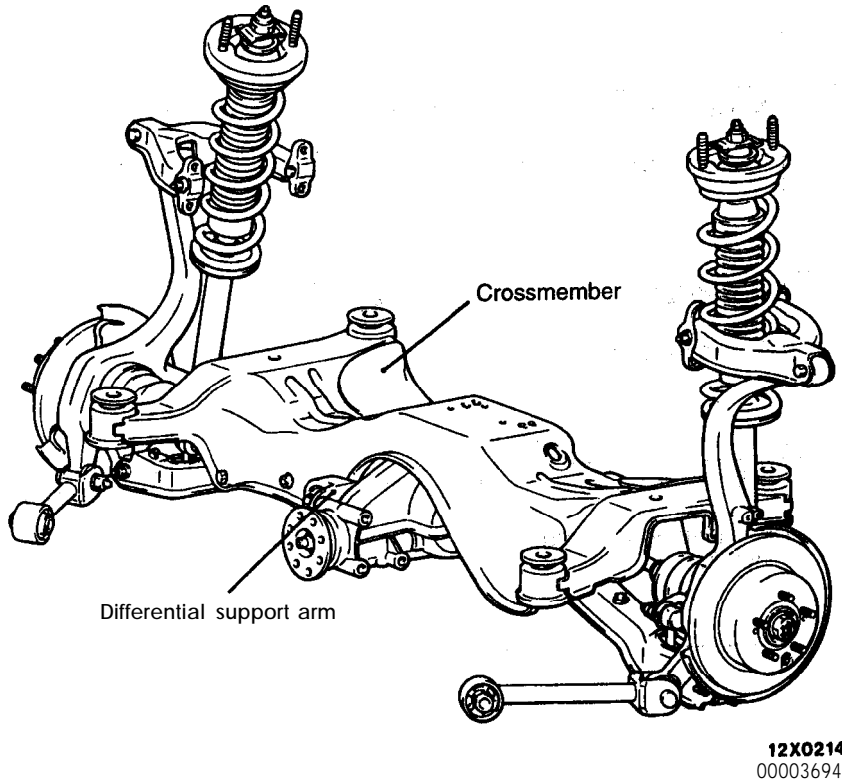
<ECLIPSE SPYDER>

Items		Medium price	Premium price
Coil spring	Wire diameter x O.D. x free length mm (in.)	11.7 x 76.4 – 118.4 x 309.5 (.460 x 3.008 – 4.661 x 12.185)	11.8 x 76.6 – 118.6 x 315.5 (.465 x 3.016 – 4.670 x 12.421)
	Identification color	Blue x 2	Red x 2
	Spring constant N/mm (lbs./in.)	28.4 (162)	28.4 (162)
Shock absorber stroke mm (in.)		169 (6.7)	169 (6.7)
Shock absorber damping force [at 0.3m/sec. (0.9ft./sec.)]	Expansion N (lbs.)	667 – 902 (150 – 379), 1187 – 1579 (267 – 355)	
	Contraction N (lbs.)	471 – 706 (106 – 159), 412–627 (93 – 141)	

<FWD>



<AWD>



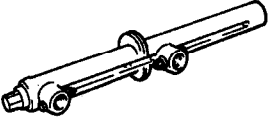
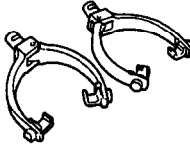



SERVICE SPECIFICATIONS

34100030150

Items	Standard value
Toe-in mm (in.)	3 ± 3 (.12 \pm .12)
Camber	FWD (Vehicles with 16-inch wheels)
	FWD (Vehicles with 14-inch wheels), AWD
Dimension for positioning upper arm bracket mm(in.)	37.2% 2 (1.46 \pm .08)
Thrust angle	$0^\circ \pm 9$
Toe control arm ball joint breakaway torque Nm(in.lbs.)	0.1–2.65 (1–23)
Stabilizer link ball joint breakaway torque Nm(in.lbs.)	0.5–1.5 (4–13)

SPECIAL TOOLS

34100060067

Tool	Tool number and name	Supersession	Application
	MB991237 Spring compressor body	MIT62220	Coil spring removal and installation
	MB991239 Arm set		
	MB991113 Steering linkage puller	MB991113-01	Ball joint disconnection
	MB990326 Preload socket	General service tool	Ball joint breakaway torque check
	MB990800 Ball joint remover and installer	MB990800-01	Dust cover installation

TROUBLESHOOTING

34100070046

Symptom	Probable cause	Remedy
Squeaks or other abnormal noise	Loose rear suspension mounting bolts and nuts	Retighten
	Malfunction of shock absorber	Replace
	Worn bushings	
	Upper arms and/or lower arms and/or toe control arm 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	Replace
	Weak or broken springs	
	Stabilizer bar and/or stabilizer link deformed or damaged	
Body tilting	Weak or deteriorated bushings	Replace
	Weak or broken springs	
	Upper arms and/or lower arms and/or toe control arm deformed or damaged	
	Trailing arms deformed or damaged	
	Crossmember deformed or damaged	

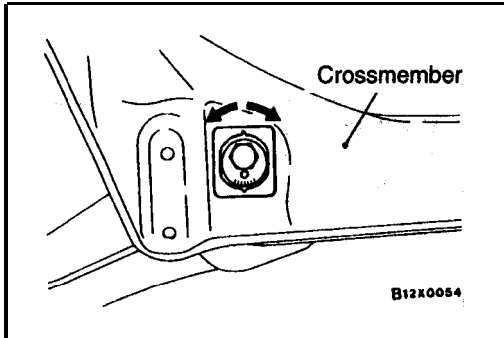
ON-VEHICLE SERVICE

33100100089

REAR WHEEL ALIGNMENT CHECK AND ADJUSTMENT

Measure wheel alignment with alignment equipment on level ground.

The rear suspension and wheels should be serviced to the normal condition prior to wheel alignment.

**T O E - I N**

Standard value: 3 ± 3 mm. ($.12 \pm .12$ in.)

Turn the toe control arm mounting bolt to the left or right by equal amounts to adjust.

L.H.: Turning clockwise toe-out direction

R.H.: Turning clockwise toe-in direction

Furthermore, toe adjustment can be made at graduations of approximately 1.3 mm (.05 in.).

CAMBER

Standard value:

$-1^{\circ}40' \pm 30'$ FWD (Vehicles with 16-inch wheels)

$-1^{\circ}20' \pm 30'$ FWD (Vehicles with 14-inch wheels), AWD

NOTE

1. Camber is preset at the factory and can not be adjusted.
2. If camber is not within the standard value, check and replace bent or damaged parts.

REAR SUSPENSION ASSEMBLY

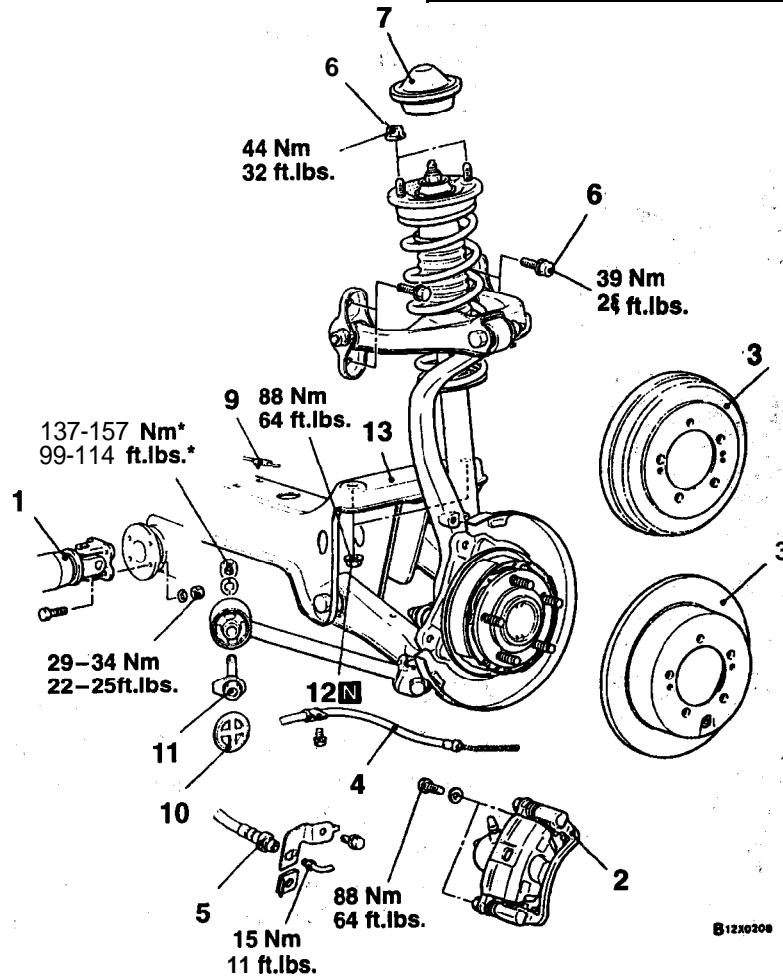
REMOVAL AND INSTALLATION

Pre-removal Operation

- (1) Service Lid Removal (Refer to GROUP 52A – Trims.)
- (2) Luggage compartment side trim <ECLIPSE SPYDER> (Refer to GROUP 52A – Trims)
- (3) Rear Crossmember Under Cover Panel Removal <FWD> (Refer to GROUP 42 – Under Cover.)
- (4) Center Exhaust Pipe Removal (Refer to GROUP 15 – Exhaust Pipe.)

Post-installation Operation

- (1) Center Exhaust Pipe Installation (Refer to GROUP 15 – Exhaust Pipe and Main Muffler.)
- (2) Brake Line Bleeding <Vehicles with drum brakes> (Refer to GROUP 35A – On-vehicle Service.)
- (3) Luggage compartment side trim <ECLIPSE SPYDER> (Refer to GROUP 52A – Trims.)
- (4) Service Lid Installation (Refer to GROUP 52A – Trims.)
- (5) Parking brake Lever Stroke Check (Refer to GROUP 36 – On-vehicle Service.)
- (6) Wheel Alignment Check and Adjustment (Refer to P.34-6.)



Removal steps



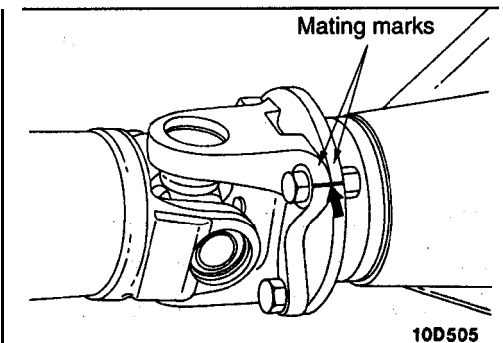
1. Propeller shaft connection <AWD>
2. Brake caliper assembly <Vehicles with disc brakes>
3. Brake disc <Vehicles with disc brakes> or brake drum <Vehicles with drum brakes>
4. Parking brake cable end (Refer to GROUP 36 – Parking Brake Cable <Drum Brake>.) (Refer to GROUP 36 – Parking Brake Cable <Drum-In-Disk Brake>.)
5. Brake hose connection <Vehicles with drum brakes>
6. Upper arm bracket mounting bolts



7. Cap
8. Shock absorber mounting nuts
9. Rear wheel-speed sensor connector <Vehicles with ABS>
10. Grommet
11. Trailing arm mounting bolt
12. Crossmember mounting self-locking nuts
13. Rear suspension assembly

Caution

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



REMOVAL SERVICE POINTS

◀A▶ PROPELLER SHAFT REMOVAL

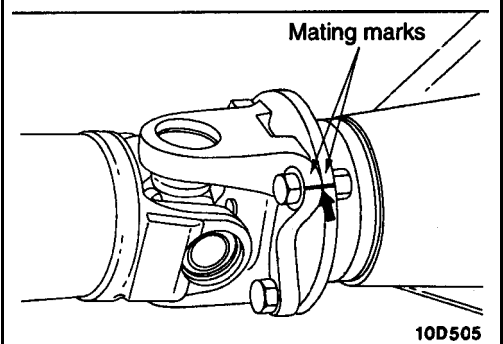
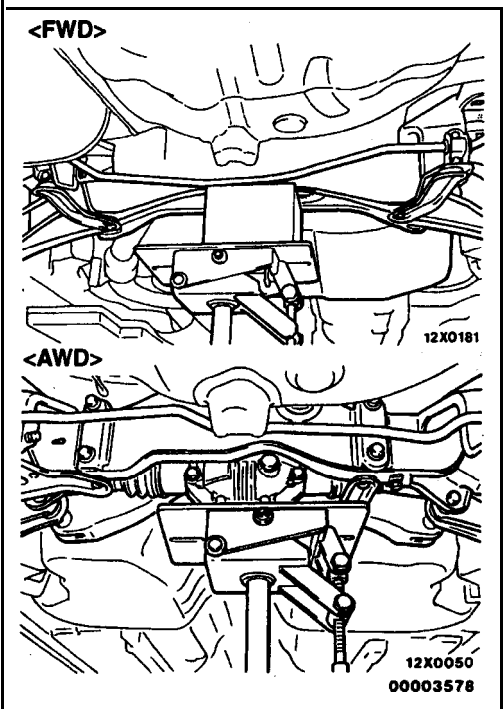
- (1) Make mating marks on the differential- **companion flange** and flange yoke, and then separate the differential carrier assembly and the propeller shaft.
- (2) Suspend the propeller shaft from the body, **with** wire, etc, so that there are no sharp bends...

Caution

Be careful that there are no sharp bends in the propeller shaft, as they may damage the **Löbro** joint.

◀B▶ CROSSMEMBER MOUNTING SELF-LOCKING NUTS REMOVAL

After supporting the crossmember in FWD vehicles or the differential case in AWD vehicles with a garage jack or transmission jack respectively, remove the crossmember mounting nuts.



INSTALLATION SERVICE POINT

▶A◀ PROPELLER SHAFT INSTALLATION

Install with the mating marks of the differential carrier and propeller aligned.

Caution

Tighten installation bolts and nuts after removing oil and grease from threads to prevent them from loosening.

INSPECTION

34100340024

- Check crossmember for cracks or **other** damage.

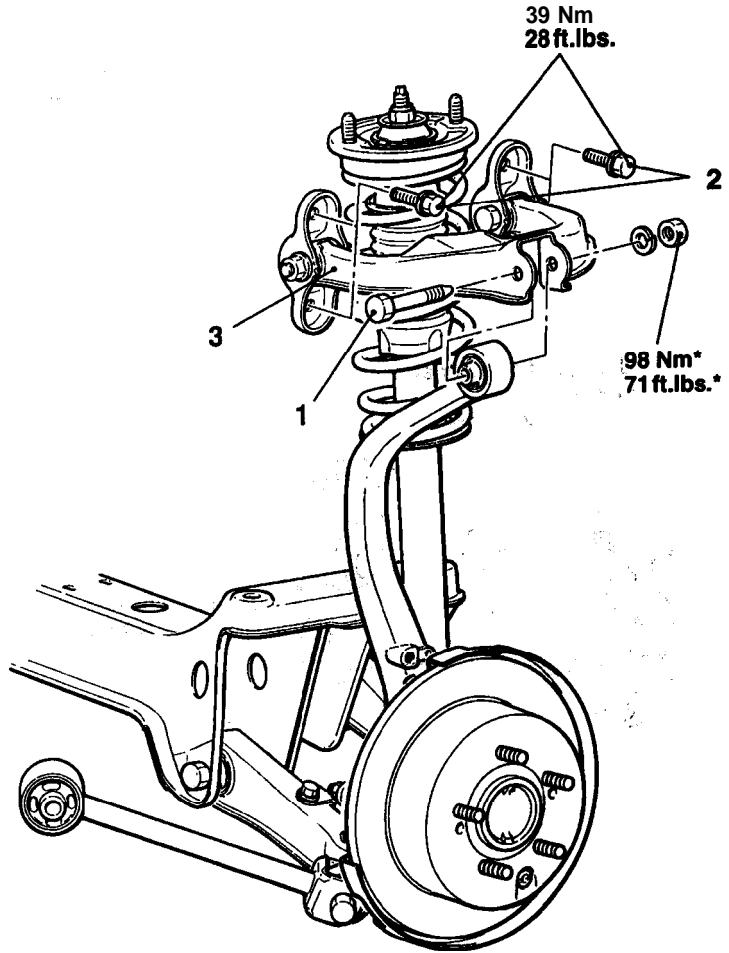
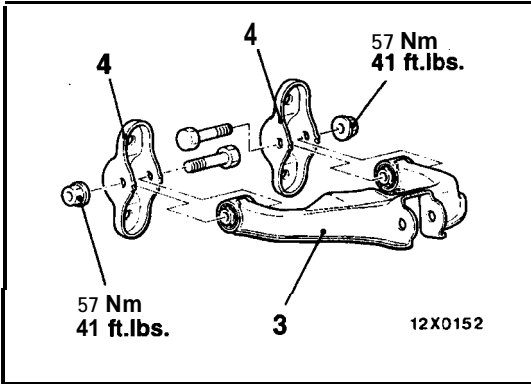
UPPER ARM ASSEMBLY

34100360044

REMOVAL AND INSTALLATION

Post-installation Operation

- Wheel Alignment Check and Adjustment (Refer to P.34-6.)



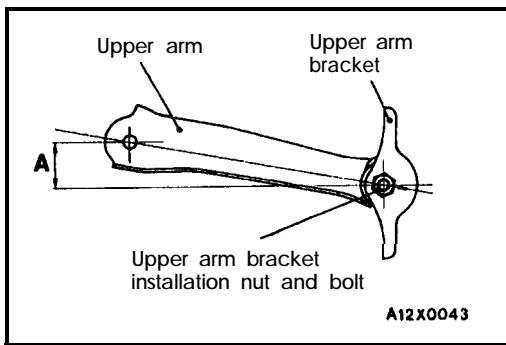
12X0211
00000164

Removal steps

1. Upper arm and knuckle connecting bolt
2. Upper arm assembly mounting bolts
3. Upper arm assembly
- ▶◀ 4. Upper arm bracket

Caution

* : Indicates parts which should be temporarily tightened, and then fully tightened with the vehicles on the ground in the unladen condition.



INSTALLATION SERVICE POINT

▶◀ UPPER ARM BRACKET INSTALLATION

Tighten the upper arm bracket installation nut and bolt so that the dimension shown in the illustration is at the standard value.

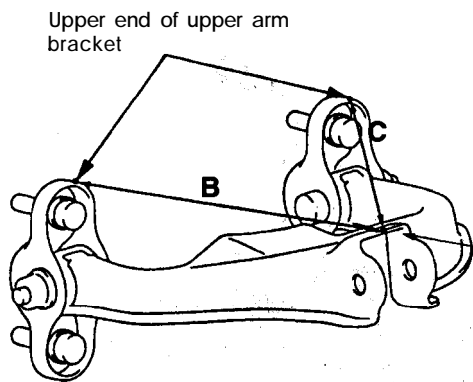
Standard value (A) : 37.2 ± 2 mm (1.46 ± .08 in.)

NOTE

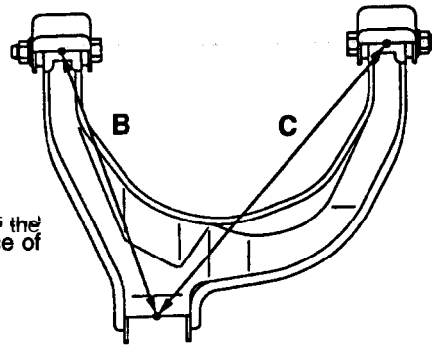
If the upper arm bracket is installed with the former-mentioned standard value, the reference dimension is determined as follows;

B: 213.5 mm (8.4 in.)

C: 289.2 mm (10.6 in.)



12X6204



12X0201
00005478

INSPECTION

34100370023

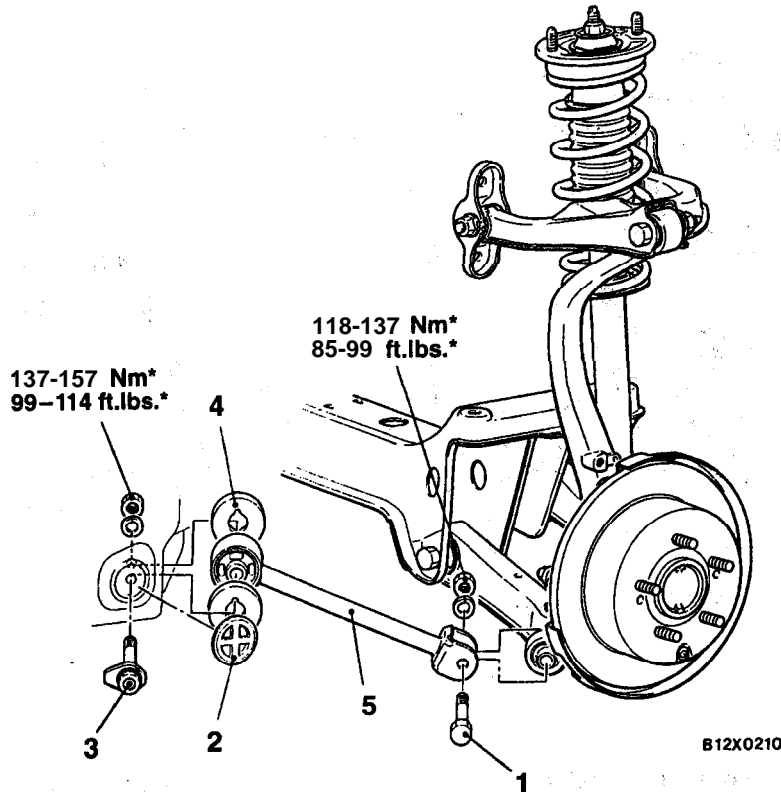
- Check the bushings for wear and deterioration.
- Check the upper arm for bends or damage.
- Check all bolts for condition and straightness.

TRAILING ARM ASSEMBLY

REMOVAL AND INSTALLATION

Post-installation Operation

- Wheel Alignment Check and Adjustment (Refer to P.34-6.)



Removal steps

1. Knuckle and trailing arm assembly connecting bolt
2. Grommet
3. Trailing arm assembly mounting bolt
4. Stopper
5. Trailing arm assembly

Caution

* : Indicates parts which should be temporarily tightened, and then fully tightened with the vehicles on the ground in the unladen condition.

INSPECTION

- Check the bushings for wear and deterioration.
- Check the trailing arm for bends or damage.

34-12 REAR SUSPENSION – Lower Arm and Toe Control Arm Assemblies

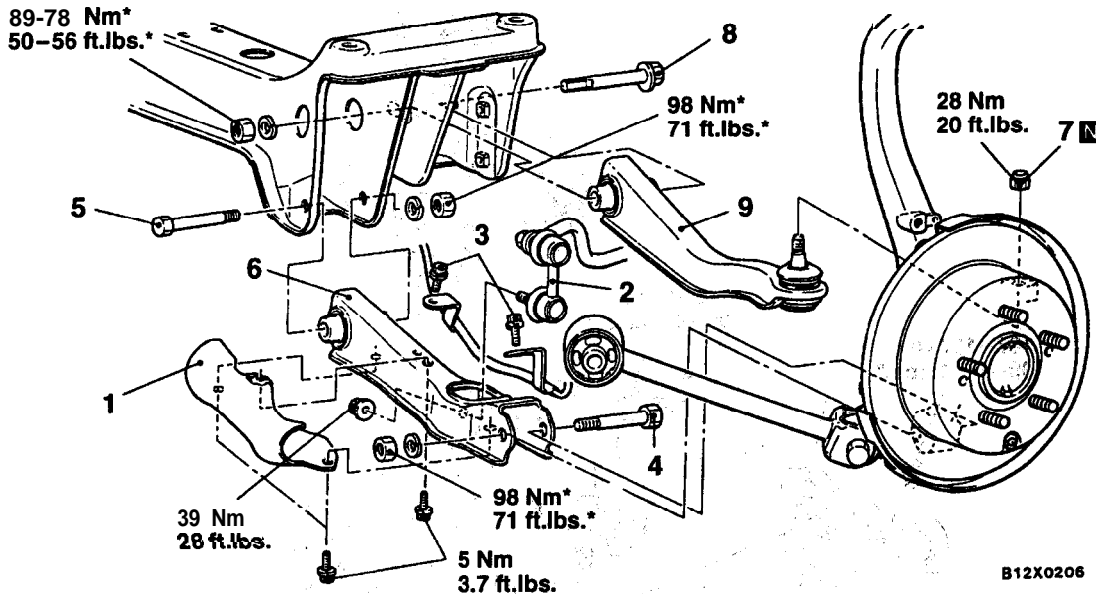
LOWER ARM AND TOE CONTROL ARM ASSEMBLIES

34100450048

REMOVAL AND INSTALLATION

Post-installation Operation

- Wheel Alignment Check and Adjustment (Refer to P.34-6.)



Lower arm assembly removal steps

1. Lower arm cover
<Vehicles with aero parts>
2. Stabilizer link ball joint and lower arm connection
3. ABS wheel-speed sensor clamp bolts <Vehicles with ABS>
4. Lower arm assembly and knuckle connecting bolt
5. Lower arm assembly mounting bolt
6. Lower arm assembly

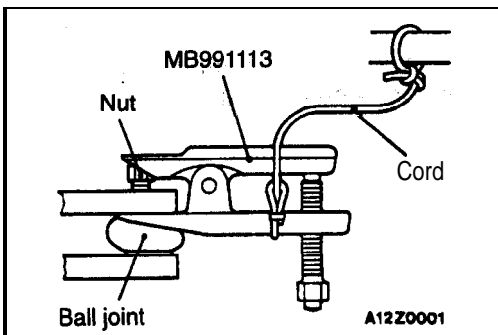
Toe control arm assembly removal steps



7. Toe control arm ball joint and knuckle connection
6. Toe control arm assembly mounting bolt
9. Toe control arm assembly

Caution

- : Indicates parts which should be temporarily tightened, and then fully tightened with the vehicles on the ground in the unladen condition.

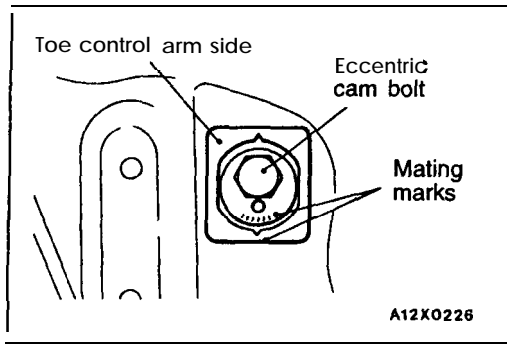


REMOVAL SERVICE POINTS

◀A▶ TOE CONTROL ARM BALL JOINT AND KNUCKLE DISCONNECTION

Caution

1. Be sure to tie the cord of the special tool to a nearby part.
2. Loosen the nut but do not remove it.



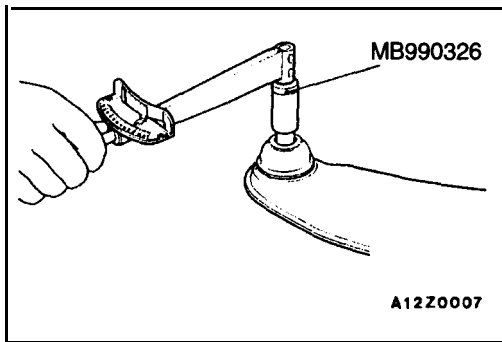
TOE CONTROL, ARM ASSEMBLY MOUNTING BOLT REMOVAL

Make mating marks on the toe control arm and eccentric cam bolt before removing the bolt.

INSPECTION

34100480072

- Check the bushings for wear and deterioration.
- Check the lower arm or toe control arm for bends or damage.
- Check **all** bolts for condition and straightness.



BALL JOINT BREAKAWAY TORQUE CHECK

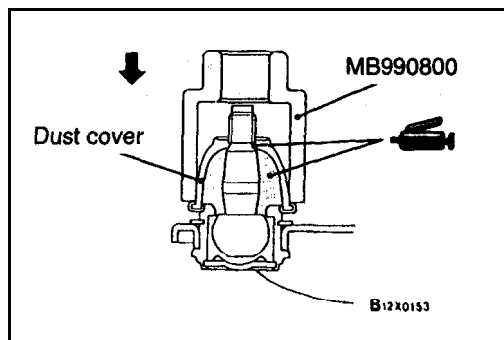
- (1) After shaking the ball joint stud several times, install the nut to the stud and use the special tool to measure the breakaway torque of the ball joint.

Standard value: 0.1–2.65 Nm (1–23 in.lbs.)

- (2) When the measured value exceeds the standard value, replace the toe control arm assembly.
- (3) When the measured value is lower than the standard value, check that the ball joint turns smoothly without excessive play. If so, it is possible to use that ball joint.

BALL JOINT DUST COVER CHECK

If there are any cracks in or damage to the dust cover, replace the arm assembly.



TOE CONTROL ARM BALL JOINT DUST COVER REPLACEMENT

34101080031

Replace the dust cover by the following procedure only if the dust cover has become damaged by accident during servicing.

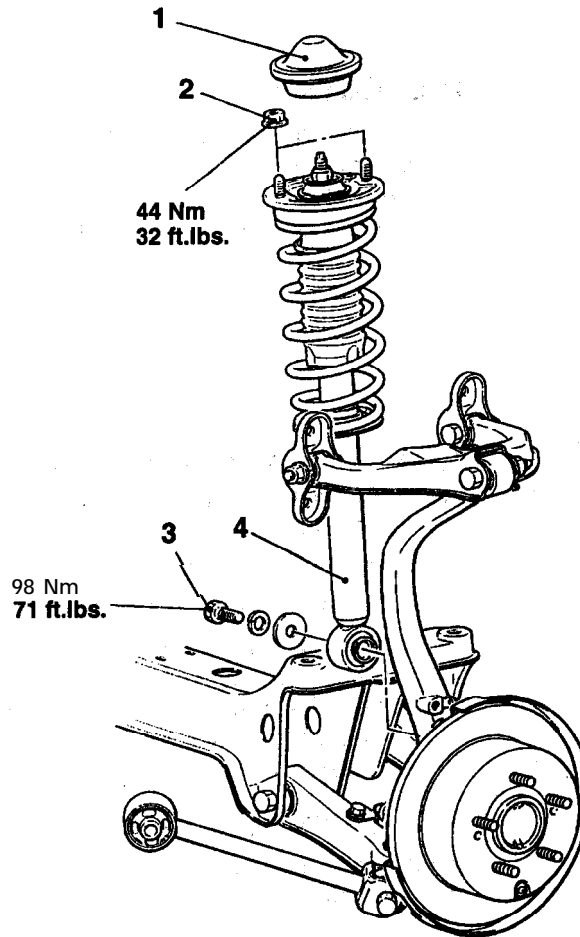
- (1) Remove the dust cover.
- (2) Apply multi-purpose grease to the lip and inside of the **dust cover**.
- (3) Drive in the dust cover with the special tool until it is fully seated.

SHOCK ABSORBER ASSEMBLY

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation

- (1) Service Lid Removal and Installation (Refer to GROUP 52A-Trims.)
- (2) Luggage compartment side trim <ECLIPSE SPYDER> (Refer to GROUP 52A - Trims.)



A12X0213

Removal steps

1. Cap
2. Flange nuts
3. Bolt
4. Shock absorber

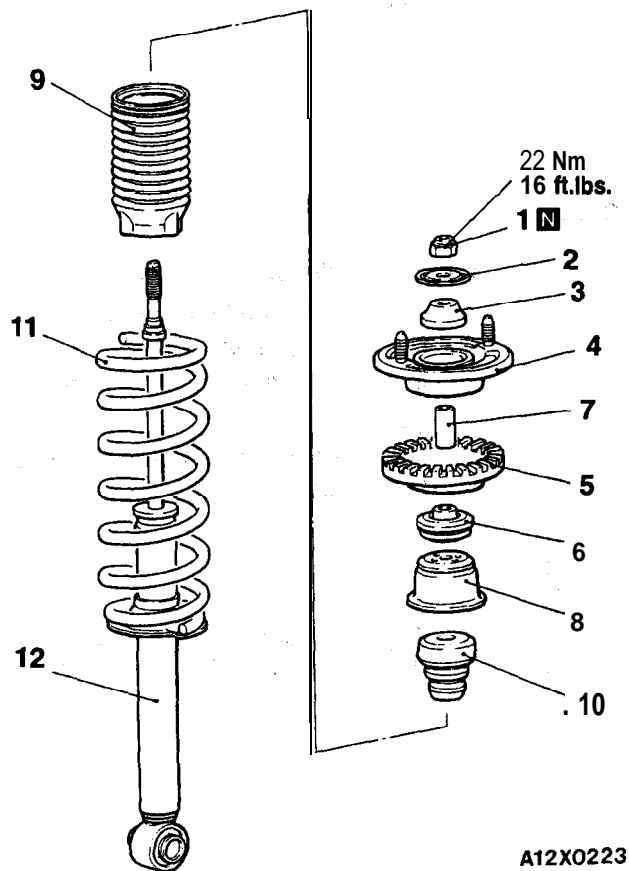
INSPECTION

34100520039

- Check the rubber parts for cracks **and wear**.
- Check the shock, absorber for **malfunctions**, oil leakage or abnormal noise.

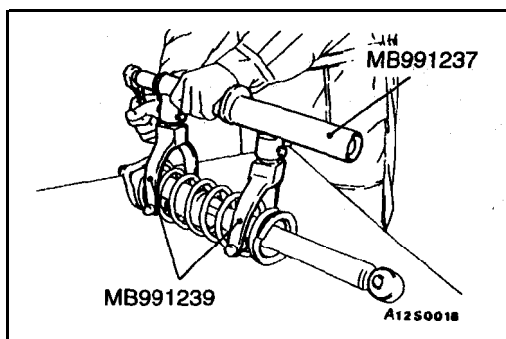
DISASSEMBLY AND REASSEMBLY

34100530056



- Disassembly steps**
- ◀A▶ ▶C▶ 1. Self-locking nut
 - 2. Washer
 - 3. Upper bushing A
 - ▶B▶ 4. Upper bracket assembly
 - 5. Upper spring pad
 - 6. Upper bushing B

- 7. Collar
- 8. Cup assembly
- 9. Dust cover
- 10. Bump rubber
- ▶A▶ 11. Coil spring
- 12. Shock absorber assembly



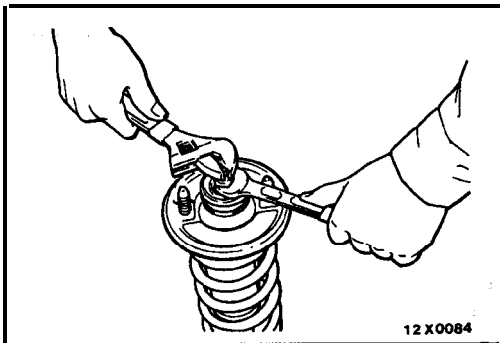
DISASSEMBLY SERVICE POINTS

◀A▶ **SELF-LOCKING NUT REMOVAL**

(1) Compress the coil spring using the special tools.

Caution

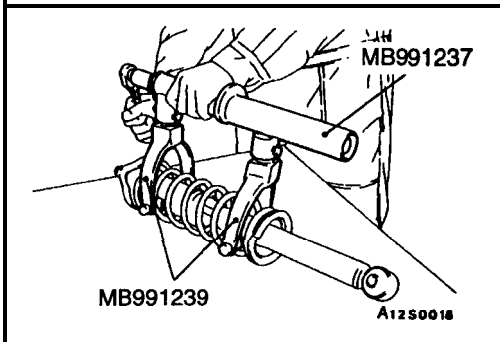
1. Install the special tools evenly, and so that the maximum length will be attained **within** the installation range.
2. Do not use an impact wrench to tighten the special tool bolt.



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

Caution

Do not use an impact wrench to tighten the self-locking nut.



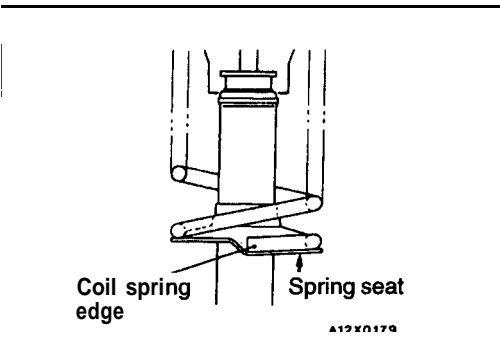
REASSEMBLY SERVICE POINTS

▶A◀ COIL SPRING INSTALLATION

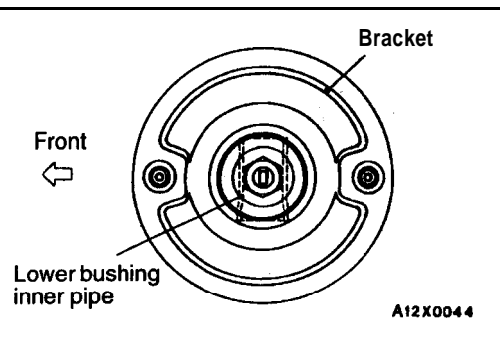
- (1) Use the special tools to compress the coil spring and install it to the shock absorber.

Caution

Do not use an impact wrench to tighten the special tool bolt.



- (2) Align the edge of the coil spring to the stepped part of the shock absorber spring seat.



▶B◀ UPPER BRACKET ASSEMBLY INSTALLATION

Install the bracket as shown in the illustration.

▶C◀ SELF-LOCKING NUT INSTALLATION

- (1) Temporarily tighten the self-locking nut.
(2) Remove the special tools (MB991237, MB991239), and tighten the self-locking nut to the specified torque.

Caution

Do not use an impact wrench.

INSPECTION

34100280012

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

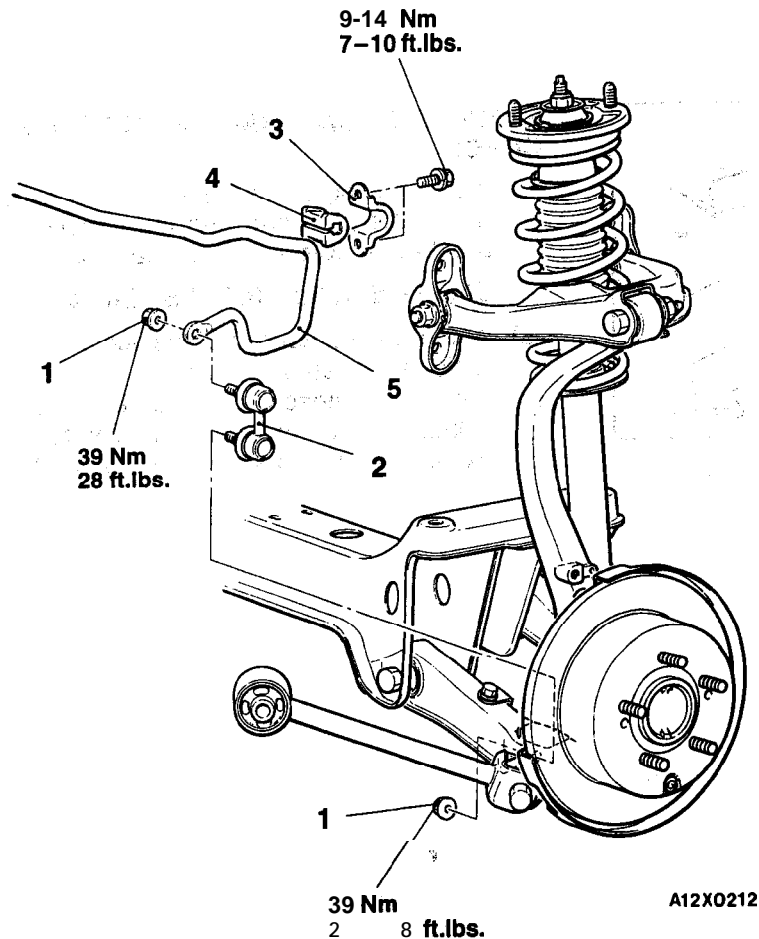
STABILIZER BAR

34100560048

REMOVAL AND INSTALLATION,

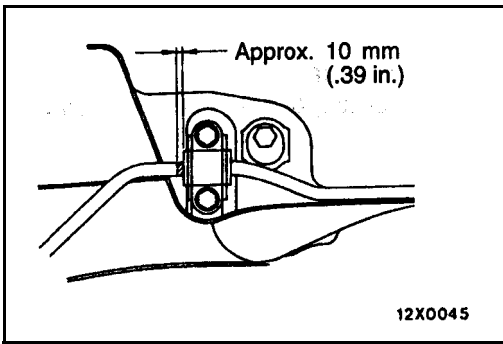
Pre-removal and Post-installation Operation

- Lower Arm Cover Removal and Installation
<Vehicles with aero parts> (Refer to P.34-12.)



Removal steps

1. Stabilizer link mounting nuts
2. Stabilizer link
- ▶◀ 3. Stabilizer bar bracket
4. Bushing
5. Stabilizer bar



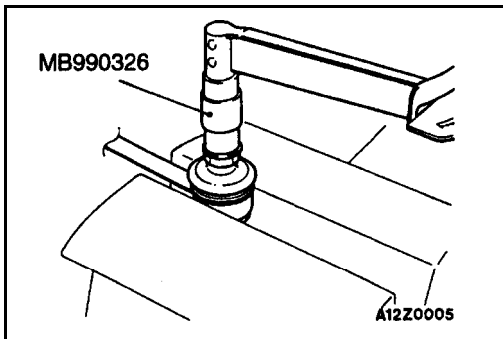
INSTALLATION SERVICE POINT

▶A◀ STABILIZER BAR BRACKET INSTALLATION

Position the **stabilizer** bar so that the making on the stabilizer bar and the edge of the bracket becomes the reference value, and then tighten the stabilizer bar bracket mounting bolt.

INSPECTION

- Check the bushings for wear and, **deterioration.**
- Check the stabilizer bar **for deterioration or damage.**
- Check all bolts for condition and straightness:-



STABILIZER LINK BALL JOINT BREAKAWAY TORQUE CHECK

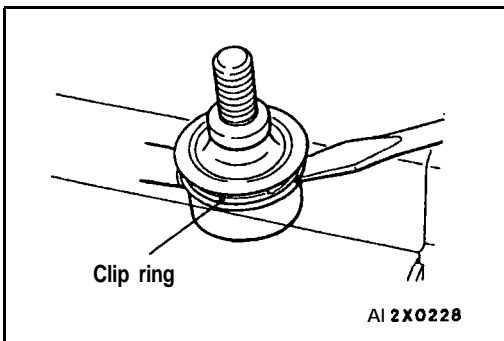
- (1) After shaking the ball joint stud several times, install the nut to the stud and use the **special** tool to measure the breakaway torque of the ball joint.

Standard value: 0.5–1.5 Nm (4-13 in.lbs.)

- (2) When the measured value exceeds the standard value, replace the stabilizer link.
- (3) When the measured value is low'er than the standard value, check **that** the ball joint turns smoothly without excessive play. If so, it is **possible** to use that ball joint.

BALL JOINT DUST COVER CHECK

If there are any cracks in or damage to the dust cover, replace the stabilizer link.

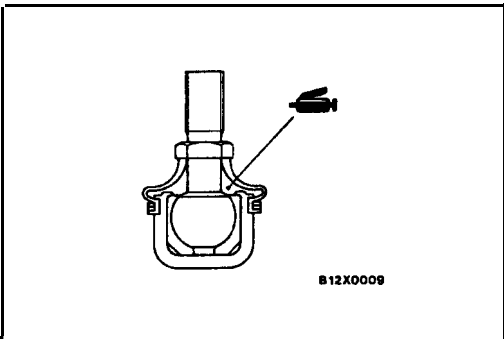


STABILIZER LINK BALL JOINT DUST COVER REPLACEMENT

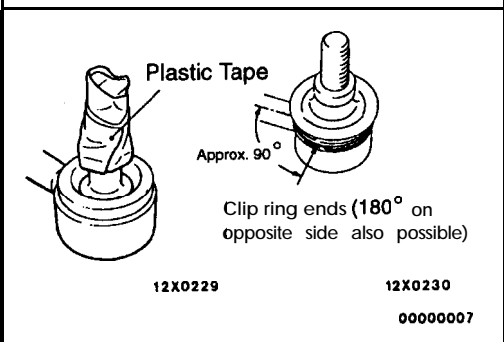
34101090034

Replace the dust cover by the following procedure only if the dust cover has become damaged by accident during servicing.

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



(2) Apply multi-purpose grease to the inside of the dust cover.



(3) Use plastic tape on the stabilizer link threads as shown in the illustration, and then install the dust cover to the stabilizer link.

(4) Secure the dust cover with the clip ring.

NOTE

When installing the clip ring, align the ends at a 90° angle from the axis of the stabilizer link.