REAR SUSPENSION

CONTENTS

120002524

GENERAL INFORMATION

120002187

The rear suspension is the 5-link coil spring type axle suspension, which assures comfortable ride and outstanding steering stability or the leaf spring type axle suspension, which features outstanding strength.

LEAF SPRING

Items	PA3V, PA5V	PB3V, PB5V	PD4V, PD5V
Number of leaf springs	3	4	3
Straight span mm	1,200	1,200	1,200
Spring constant N/mm	35.4–75.0	40.6–96.9	35.8–80.6

COIL SPRING

Items	PA3W, PA5W	PA4W	PD4W, PD5W
Wire dia. × O.D. × free length mm	14.5–16.8 × 140.5 –142.8 × 322.5	14.0–16.5 × 140.0 –142.5 × 338.5	16.8 × 142.8 × 366.5
Spring constant N/mm	40.2–92.0	36.9–84.4	37.9–86.7
Identification colour	Brown × 2	Green × 2	Green

SHOCK ABSORBER

<LEAF SPRING TYPE>

Items		2WD	4WD
Stroke mm		170	226
Damping force (at 0.3 m/sec.)	Expansion N	1,177	1,177
	Contraction N	539	539

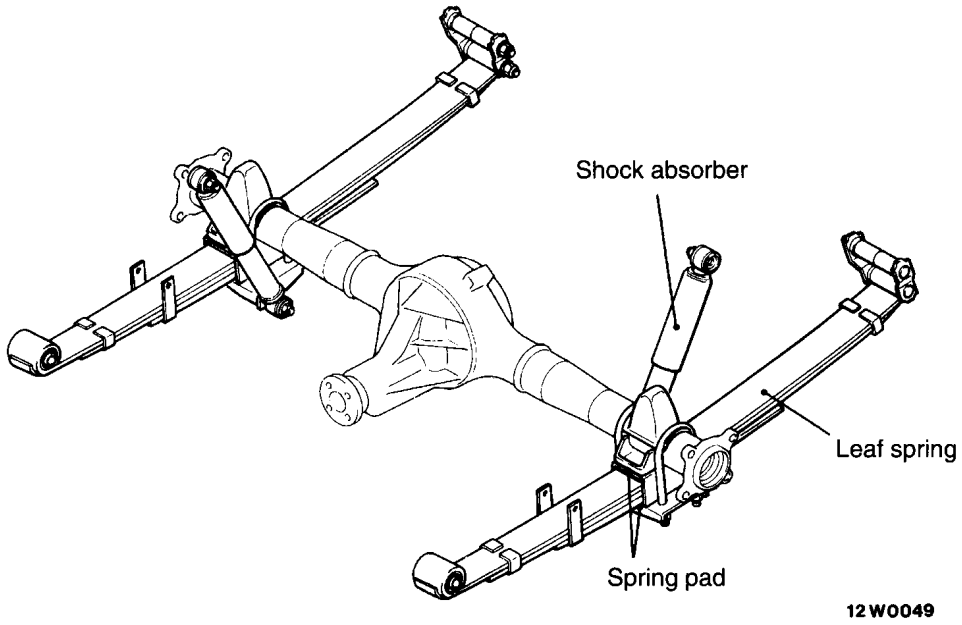
<COIL SPRING TYPE>

Items		2WD	4WD
Stroke mm		191	226
Damping force (at 0.3 m/sec.)	Expansion N	1,177	1,177
	Contraction N	539	539

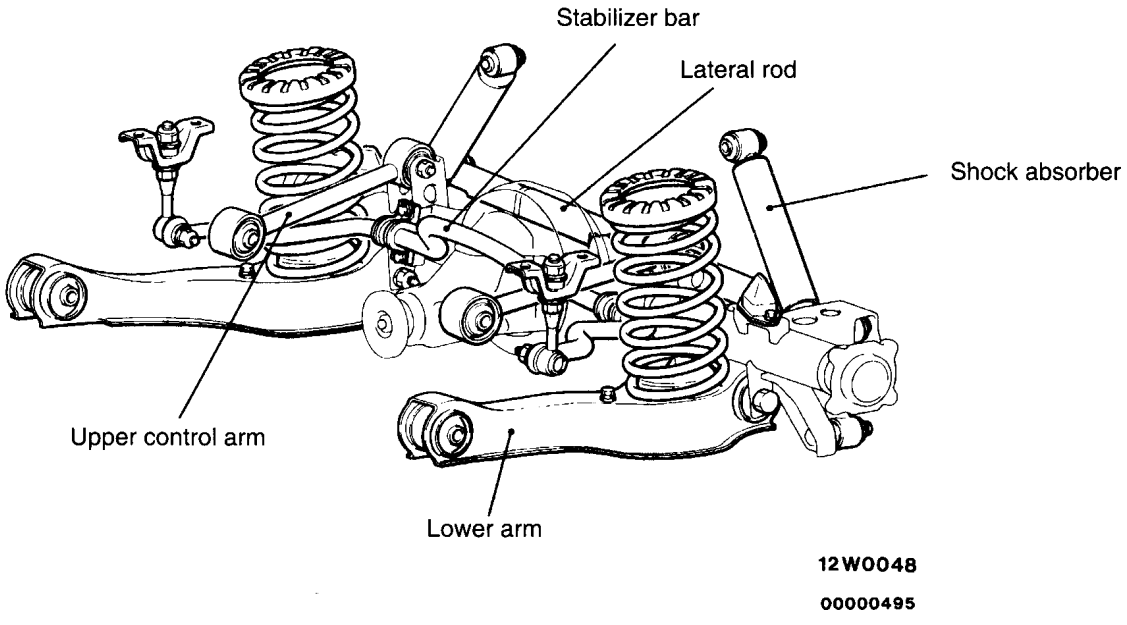
CONSTRUCTION DIAGRAM

120000146

<LEAF SPRING TYPE>



<COIL SPRING TYPE>



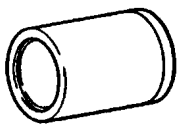
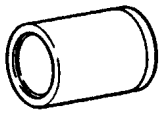
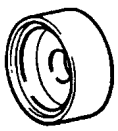
SERVICE SPECIFICATIONS

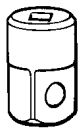
120002189

Items	Standard value
Toe-in mm	0
Camber	0°
Protruding length of shock absorber piston rod mm	1–2
Rotation torque for stabilizer link ball joint Nm	0.7–2.0
Protrusion amount of stabilizer link stud mm	3.8–5.8
Press-fitting force for lower arm bushing kN	14.7 or more

SPECIAL TOOLS

120000148

Tool	Number	Name	Use
	MB990650	Bar	• Removal and press-fitting of lateral rod bushing • Removal and press-fitting of lower arm bushing
	MB990891	Base	Removal of lower arm bushing
	MB990887	Ring	
	MB991526	Installer guide	
	MB991523	Remover base	Press-fitting of lower arm bushing
	MB991525	Installer base	

Tool	Number	Name	Use
	MB991558	Bushing remover and installer support	Removal and press-fitting of lower arm bushing
	MB990968	Torque wrench	Measurement of rotation torque of stabilizer link ball joint
	MB990326	Preload socket	

SERVICE ADJUSTMENT PROCEDURES

120000149

REAR WHEEL ALIGNMENT

The rear suspension assembly must be free of worn, loose or damaged parts prior to measurement of rear wheel alignment.

Standard value:
Toe-in 0 mm
Camber 0°

NOTE
Toe-in and camber are set at the factory and cannot be adjusted.

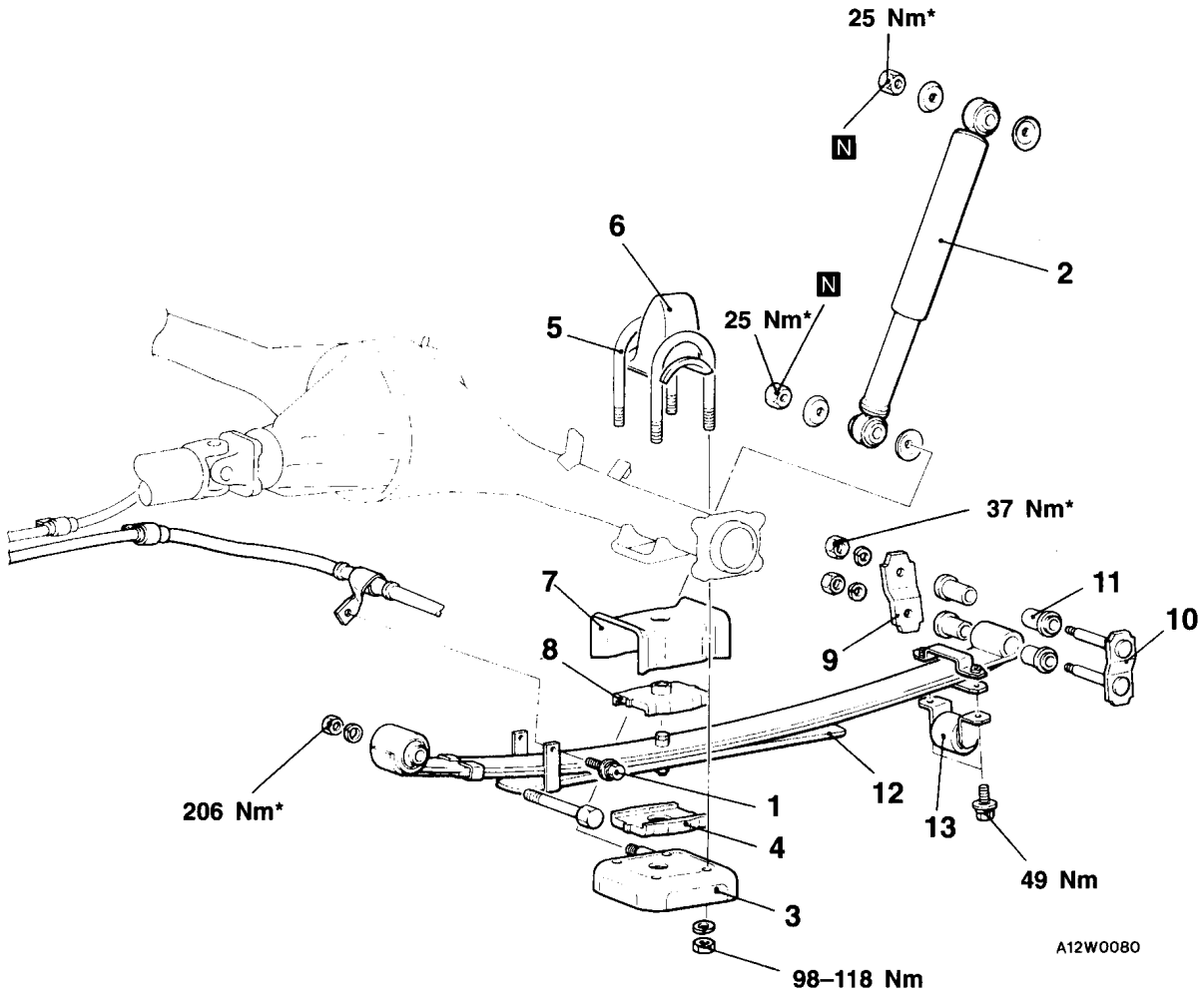
REAR SUSPENSION ASSEMBLY <LEAF SPRING TYPE>

120002188

REMOVAL AND INSTALLATION

<2WD>

Pre-removal Operation
- Support the axle housing with a jack.



Removal steps

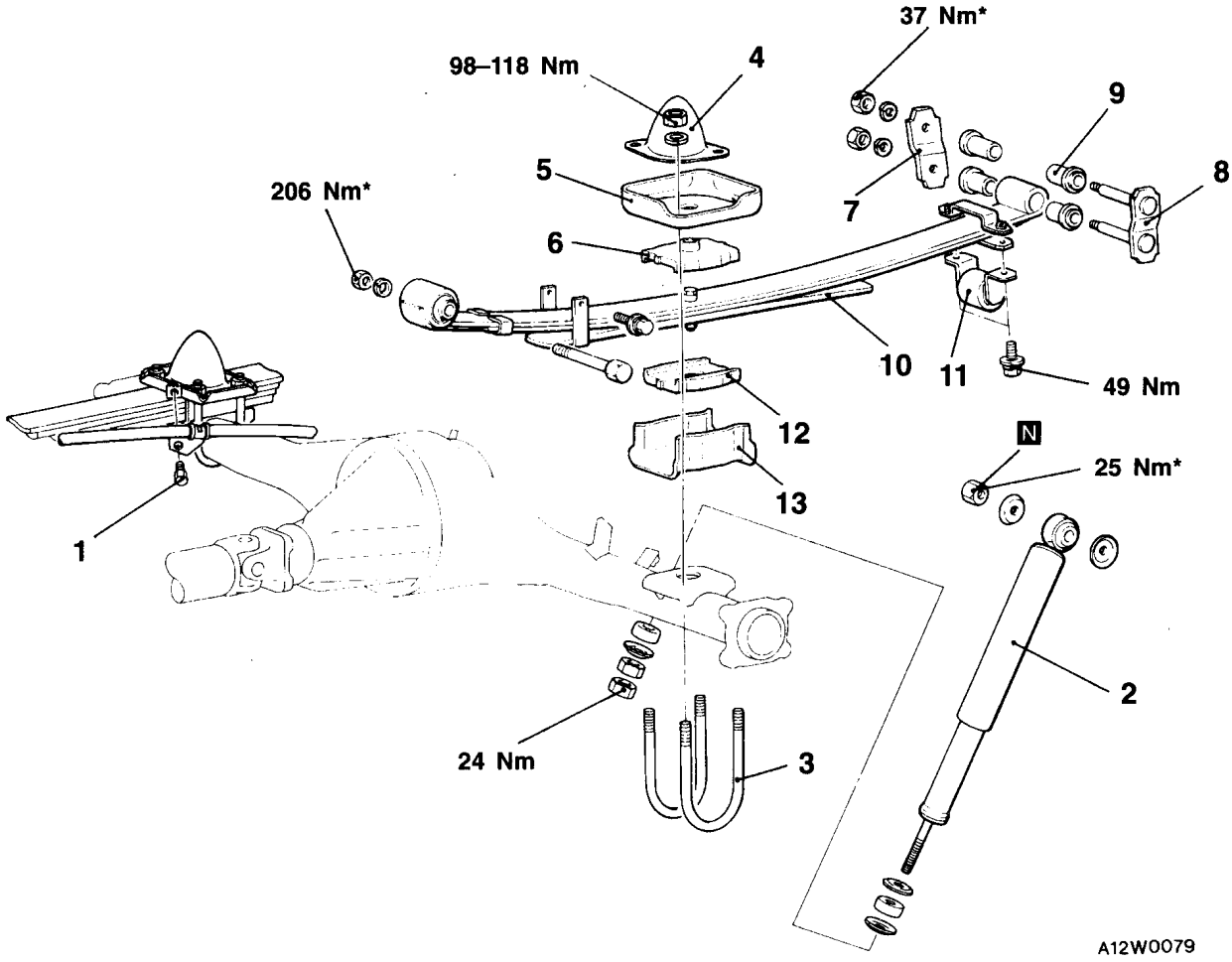
1. Parking brake cable attaching bolt
2. Shock absorber
3. U-bolt seat
4. Spring pad
▶B◀ 5. U-bolts
6. Bump stopper
7. Clamp
8. Spring pad
9. Shackle plate
10. Shackle assembly
11. Rubber bushings
12. Rear spring
13. Leaf damper

Caution

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

<4WD>

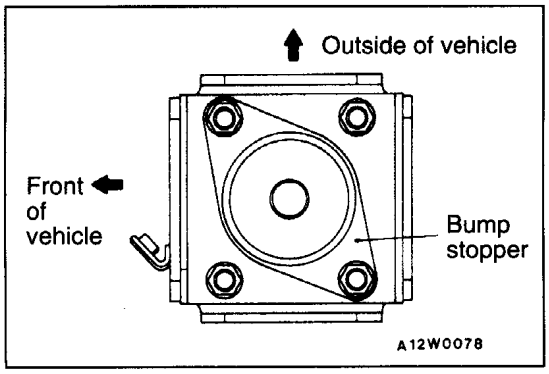
Pre-removal Operation
- Support the axle housing with a jack.



Removal steps

1. Parking brake cable attaching bolt
▶C◀ 2. Shock absorber
▶B◀ 3. U-bolts
▶A◀ 4. Bump stopper
5. U-bolt seat
6. Spring pad
7. Shackle plate
8. Shackle assembly
9. Rubber bushings
10. Rear spring
11. Leaf damper
12. Spring pad
13. Clamp

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

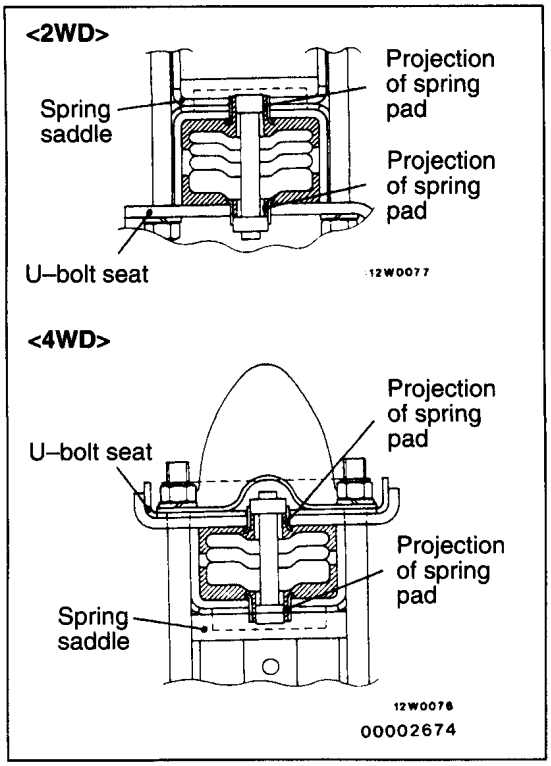


INSTALLATION SERVICE POINTS

▶A◀ BUMP STOPPER INSTALLATION

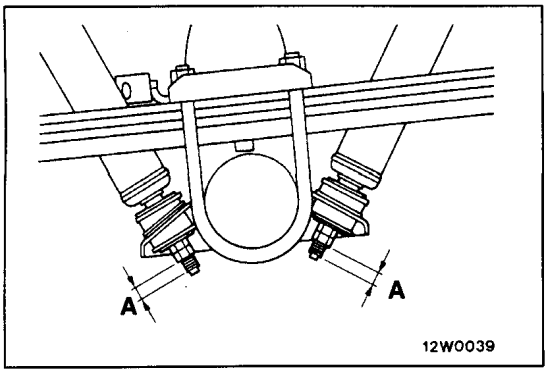
Install the bump stopper as shown in the figure.

NOTE
The illustration indicates the right side. The left side is symmetrical.



▶B◀ U–BOLTS INSTALLATION

Insert the projections on each spring pad securely into the spring saddle and U–bolt seat hole.



▶C◀ SHOCK ABSORBER INSTALLATION

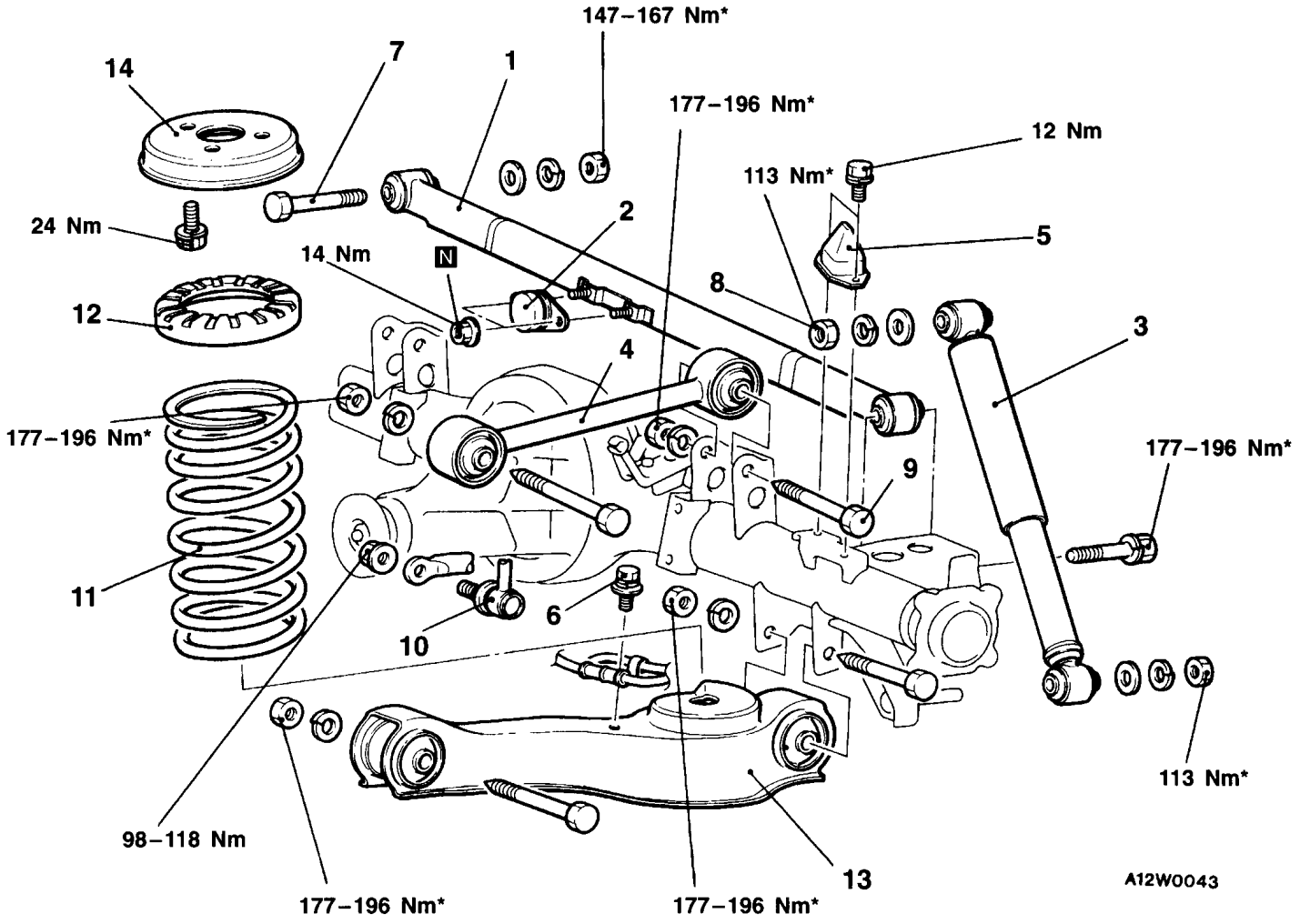
Standard value (A): 1–2 mm

REAR SUSPENSION ASSEMBLY <COIL SPRING TYPE>

120000151

REMOVAL AND INSTALLATION

Pre-removal Operation
- Support the axle housing with a jack.



Removal steps

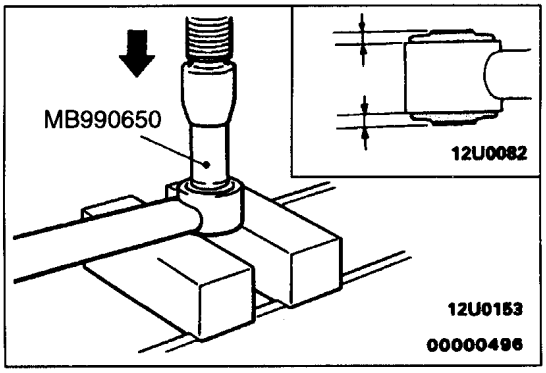
1. Lateral rod
2. Dynamic damper
3. Shock absorber
4. Upper control arm
5. Bump stopper

Rear spring and lower arm removal steps

6. Parking brake cable attaching bolt
7. Lateral rod mounting bolt (body side)
8. Shock absorber mounting bolt (body side)
9. Upper control arm mounting bolt (axle housing side)
10. Connection for stabilizer link
11. Rear spring
12. Rear spring pad
13. Lower arm
14. Rear spring support bracket

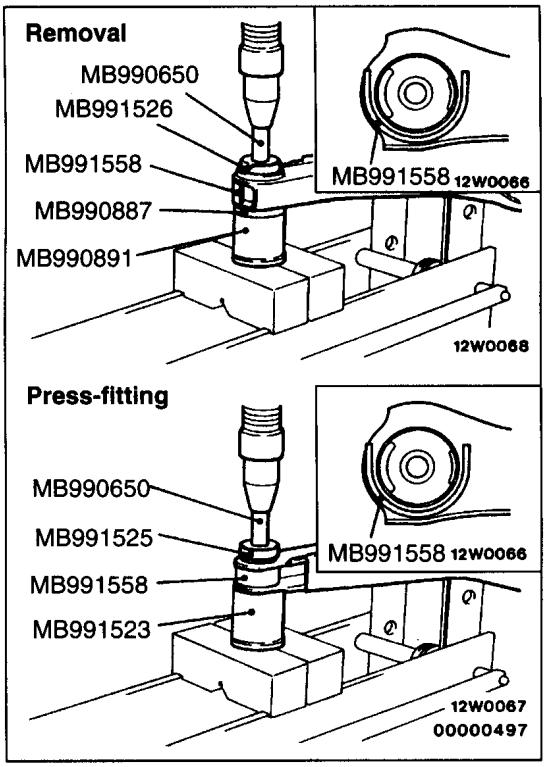
Caution

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



LATERAL ROD BUSHING REPLACEMENT

(1) Use the special tool to drive out and press in the lateral rod bushing.
(2) Install the bushing so that the projection length is uniform.



LOWER ARM BUSHING REPLACEMENT

(1) Use the special tool to drive out and press-fit the lower arm bushing.

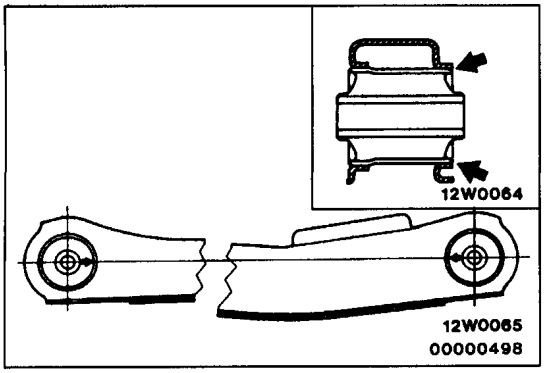
NOTE
If the special tool (MB991558) is hard to install, tap it with a plastic hammer.

Caution
Because the outside diameter of both edges of the bushing are different, be careful not to mistake the direction when driving out and press-fitting.

(2) Check that the press-fitting force is at the standard value while press-fitting the bushing.

Standard value:14.7 kN or more

(3) If the press-fitting force is less than the standard value, replace the lower arm.

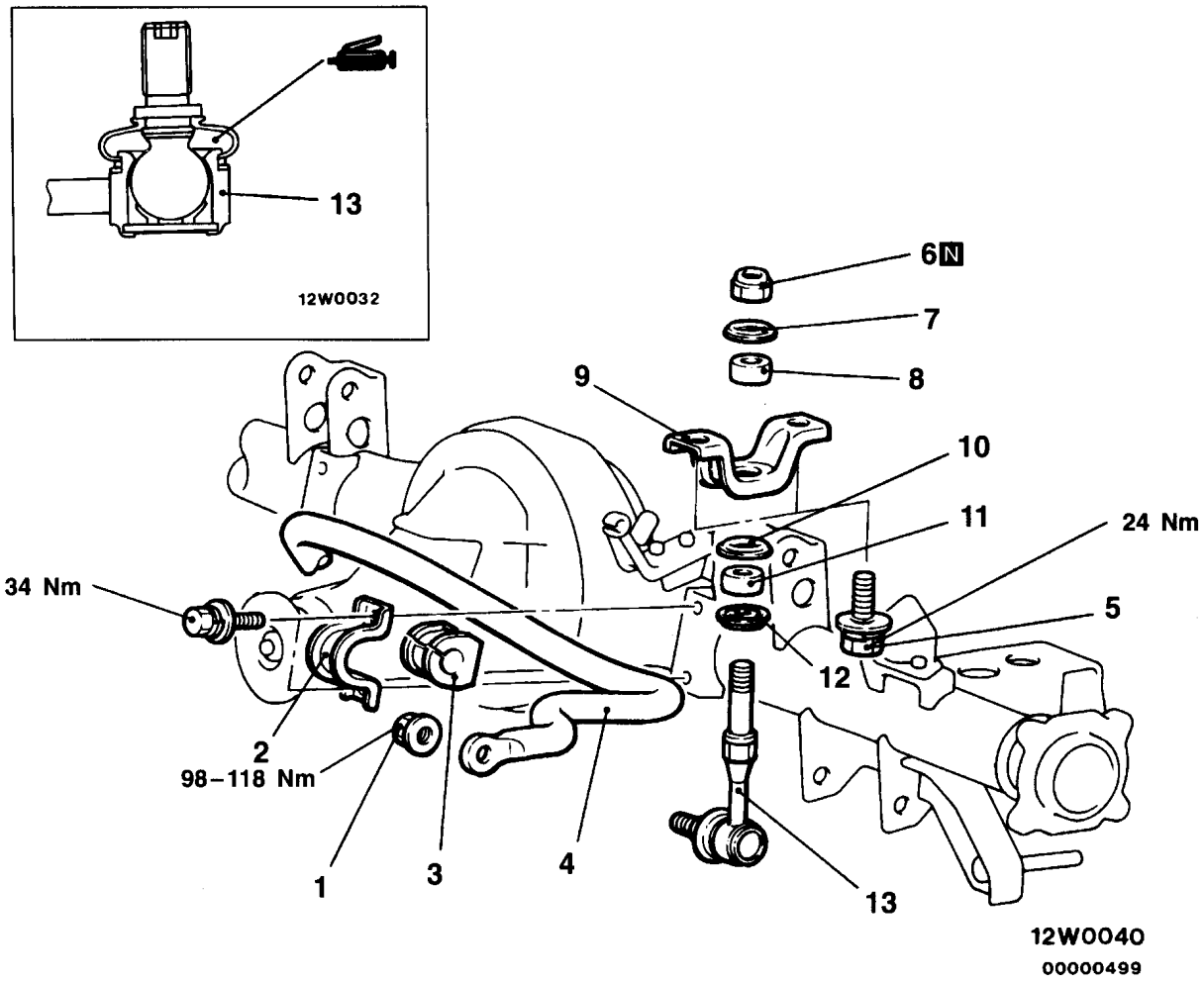


(4) Install so that the sections of the lower arm bushing and lower arm shown in the illustration are flush.
(5) Install the lower arm bushing so that the arrow marks point as shown in the illustration.

STABILIZER BAR <COIL SPRING TYPE>

120000152

REMOVAL AND INSTALLATION



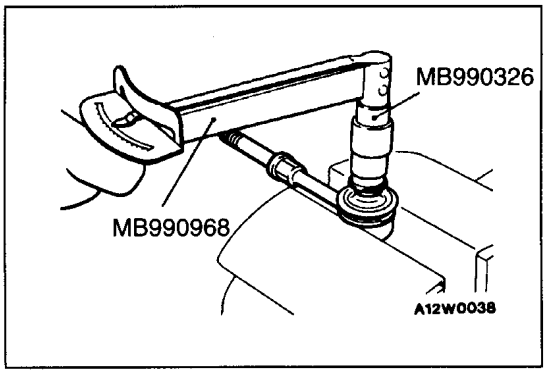
Stabilizer bar removal steps

1. Flange nut
2. Clamp
3. Bushing
4. Stabilizer bar

Stabilizer link removal steps

1. Flange nut
5. Stabilizer link bracket mounting bolt
6. Self-locking nut
7. Joint cup (A)
8. Stabilizer rubber
9. Stabilizer link bracket
10. Joint cup (B)
11. Stabilizer rubber
12. Joint cup (A)

▶A◀ 13. Stabilizer link



INSPECTION

STABILIZER LINK BALL JOINT ROTATION TORQUE INSPECTION

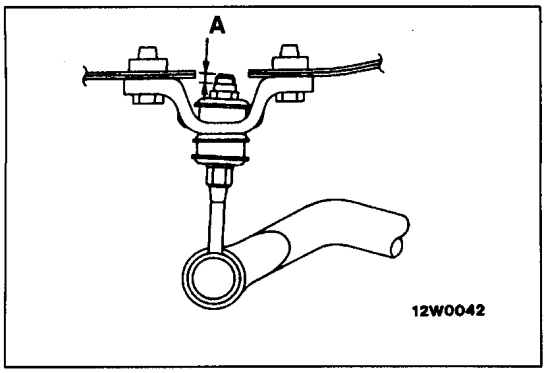
(1) Move the stabilizer link ball joint stud several times before installing the nut to the stud. Then use the special tool to measure the rotation torque of the stabilizer link ball joint.

Standard value: 0.7–2.0 Nm

(2) If the rotation torque exceeds the standard value, replace the stabilizer link.
(3) If the rotation torque is lower than the standard value, check whether the ball joint moves smoothly or not. If it doesn't move smoothly, it is possible to use the ball joint.

STABILIZER LINK DUST COVER REPLACEMENT

Refer to GROUP 33A – Stabilizer Bar.



INSTALLATION SERVICE POINT

▶A◀ STABILIZER LINK INSTALLATION

Install the stabilizer link so that the stud protrusion is at the standard value.

Standard value (A): 3.8–5.8 mm

Caution
There should not be any twisting in the stabilizer bar and stabilizer link when the vehicle is on the ground and in the unladen condition.