

REAR SUSPENSION

CONTENTS

M34AA-

<AWD-UP TO 1992 MODELS>

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<FWD>

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SPECIFICATIONS <FWD>

GENERAL SPECIFICATIONS

M34CA-A

Items	SOHC		DOHC
	High line	Premium line	
Suspension system	3-link, torsion axle with coil spring type		
Coil spring <Vehicles without Active ECS> Wire dia. x O.D. x free length mm (in.) [Coil spring identification color]	< 1989 models> 10.5 x 105.5 x 342.5 (.41 x 4.15 x 13.48) [Blue x 1] <From 1990 models> 10.5 x 105.5 x 349.5 (.41 x 4.15 x 13.76) [Blue x 2]	< 1989 models> 10.5 x 105.5 x 349.5 (.41 x 4.15 x 13.76) [Blue x 21] <From 1990 models> 10.8 x 105.8 x 356.5 (.43 x 4.17 x 14.04) [White x 1]	<From 1990.5 models> 10.8 x 105.8 x 356.5 (.43 x 4.17 x 14.04) [White x 1]
Coil spring <Vehicles with Active ECS> Wire dia. x upper end O.D. x lower end O.D. x free length mm (in.) [Coil spring identification color]	–	–	<Up to 1990 models> L.H. side 9.5 x 119.5 x 119.5 x 428 (.37 x 4.70 x 4.70 x 16.85) [Light green x 1] R.H. side 9.5 x 119.5 x 119.5 x 412 (.51 x 4.70 x 4.70 x 16.22) [Light green x 2] <From 1991 models> L.H. side 10.1 x 122.1 x 381.5 (.40 x 4.81 x 15.02) [Light green x 2] R.H. side 10.1 x 122.1 x 370 (.40 x 4.81 x 14.57) [Light green x 1]
Spring constant N/mm (lbs./in.) <Vehicles without Active ECS>	21 (117.6)	21 (117.6)	21 (117.6)
Spring constant N / m m (lbs./in.) <Vehicles with Active ECS>	–	–	9.4 (52.64) <Up to 1990 models> 13.5 (75.60) <From 1991 models>
Shock absorber Type	Hydraulic, cylindrical, double-acting type		Hydraulic, cylindrical double-acting type

Items	SOHC		DOHC
	High line	Premium line	
<Vehicles without Active ECS>			<From 1990.5 models>
Max. length mm (in.)	505 (19.9)		505 (19.9)
Min. length mm (in.)	315 (12.4)		315 (12.4)
Stroke mm (in.)	190 (7.5)		190 (7.5)
Damping force [at 0.3 m/sec. (.9 ft./sec.)]			
Expansion N (lbs.)	750 (165)		750 (165)
Contraction N (lbs.)	350 (77)		350 (77)
<Vehicles with Active ECS>			<Up to 1990 models> <From 1991 models>
Max. length mm (in.)	–		491 (19.33) 491 (19.33)
Min. length mm (in.)	–		341 (13.43) 341 (13.43)
Stroke mm (in.)	–		150 (5.91) 150 (5.91)
Damping force [at 0.3 m/sec. (.9 ft./sec.)]			
Expansion N (lbs.)			
HARD	–		1,450 (320) 1,700 (375)
MEDIUM	–		850 (187) 850 (187)
SOFT			270 (60) 270 (60)
Contraction N (lbs.)			
HARD			500 (110) 540 (119)
MEDIUM			350 (77) 350 (77)
SOFT	–		200 (44) 200 (44)
Wheel bearing Type	Tapered roller bearing		Unit ball bearing
O.D. x I.D. mm (in.)			
Outer	39.9 x 17.5 (1.57 x .69)		
Inner	50.3 x 27.0 (1.98 x 1.06)		

SERVICE SPECIFICATIONS

M34CB-A

Items	SOHC	DOHC
Standard value		
Toe-in (Left-right difference) mm (in.)	0 ± 3 (0 ± .118)	0 ± 3 (0 ± .118)
Camber	-45' ± 30'	-45' ± 30'

NOTE
Toe-in and camber cannot be adjusted.

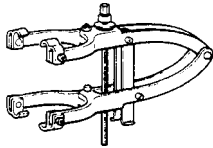
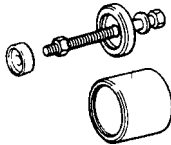


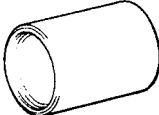
TORQUE SPECIFICATIONS

M34CC-A

Items	Nm	ft.lbs.
Dust shield	9-14	7-10
Flange nut	200-260	144-188
Wheel bearing nut	20 → 0 → 10	14 → 0 → 7
Shock absorber upper mounting nut	40-50	29-36
Shock absorber lower mounting nut	80-100	58-72
Speed sensor <Vehicles with ABS>	9-14	7-10
Lateral rod mounting nut (body side)	80-100	58-72
Lateral rod mounting bolt (axle beam side)	100-120	72-87
Trailing arm mounting bolt	100-120	72-87
Piston rod tightening nut	20-25	14-18
Brake hose and tube bracket mounting bolt	17-26	12-19
Rear drum brake assembly (backing plate) to axle beam	50-60	36-43

SPECIAL TOOLS

M34DA-A

Tool	Number	Name	Use
	MB990987-01	Spring compressor	Removal and installation of the coil spring
	MB991159	Bushing remover and installer	Driving-out and press-fitting of the trailing arm bushing
	MB990947-01	Lower arm bushing arbor	Driving-out and press-fitting of the lateral rod bushing
	MB990945	Lower arm bushing ring	
	MB990847-01	Bushing remover and installer base	

TSB Revision

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
Poor ride	Excessive tire inflation pressure	Adjust the pressure
	Malfunction of shock absorber Weak or broken springs	Replace
Body tilting	Weak or deteriorated bushings Weak or broken springs	Replace

SERVICE ADJUSTMENT PROCEDURES

M34FAAC

REAR WHEEL ALIGNMENT INSPECTION

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

Standard value:

Toe-in (Left-right difference)

0 ± 3 mm (0 ± .118 in.)

Camber

-45' ± 30'

NOTE

The rear wheel alignment is set at the factory and cannot be adjusted.

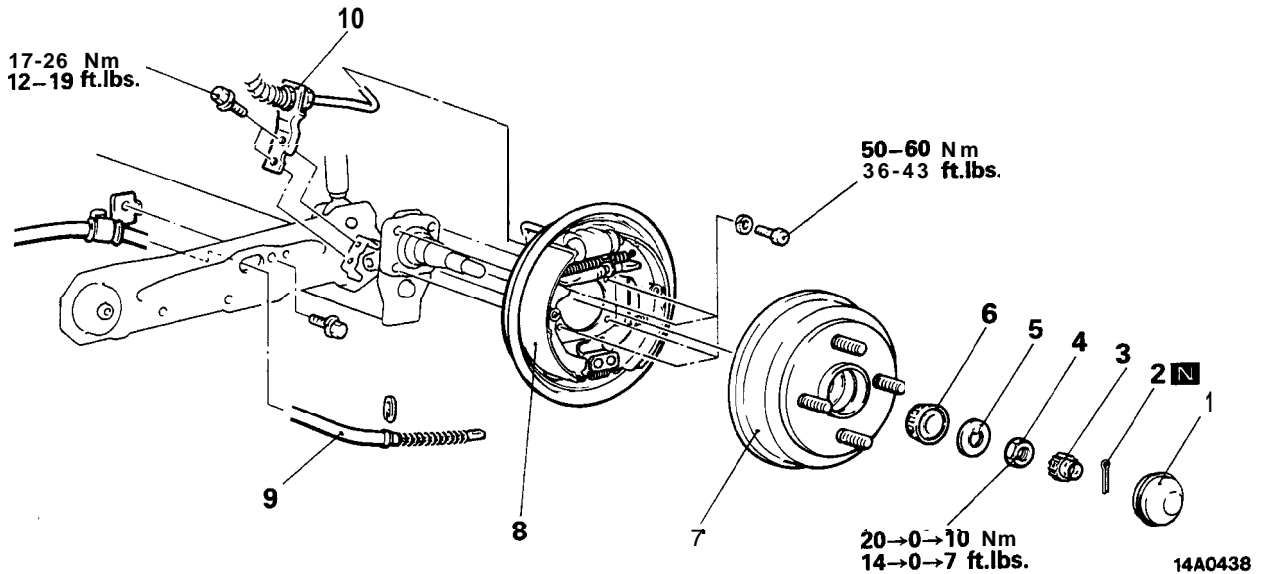
If toe-in or camber is not within the standard value, replace bent or damaged parts.

REAR SUSPENSION ASSEMBLY

REMOVAL AND INSTALLATION

M34GA-A

<Vehicles with Rear Drum Brake>



Pre-removal Operation

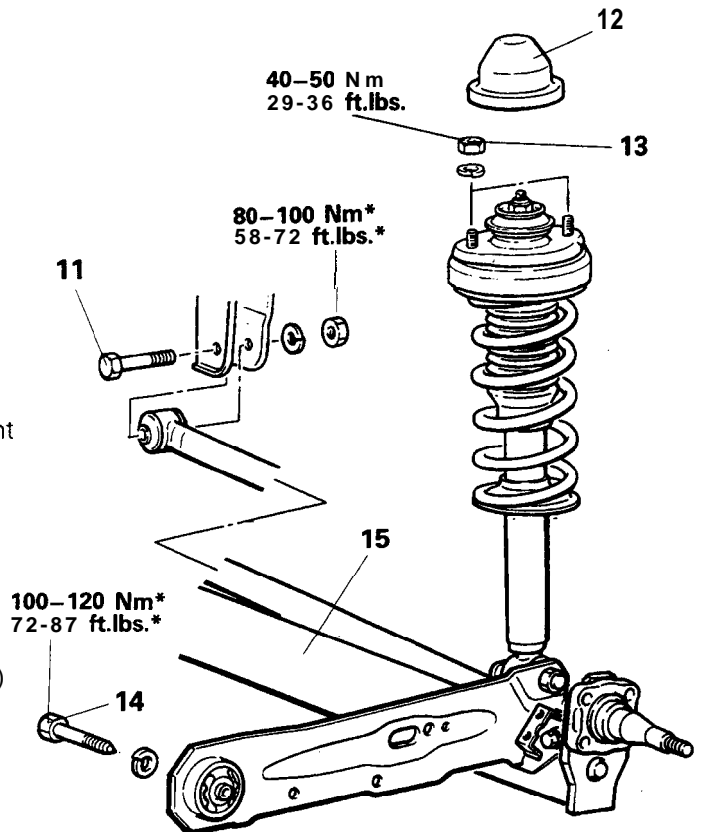
- Removal of the Trunk Side Trim (Refer to GROUP 52- Trims.)

Post-installation Operation

- Installation of the Trunk Side Trim (Refer to GROUP 52- Trims.)
- Parking Brake Lever Stroke Adjustment (Refer to GROUP 36- Service Adjustment Procedures.)

Removal steps

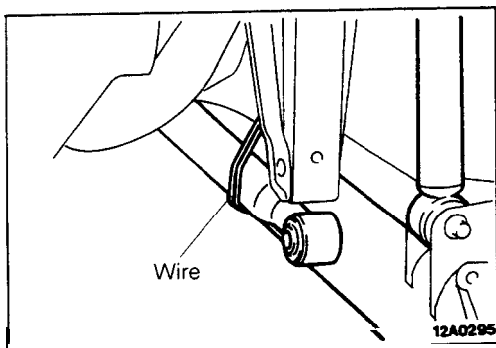
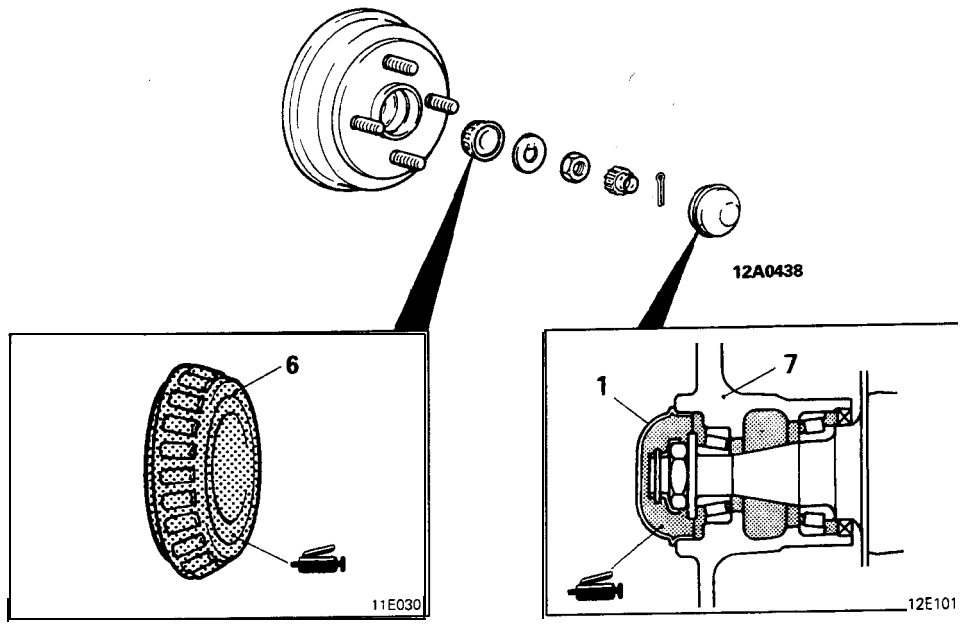
- Adjustment of wheel bearing end play (Refer to GROUP 27- Service Adjustment Procedures)
- 1. Hub cap
- 2. Cotter pin
- 3. Lock cap
- 4. Wheel bearing nut
- 5. Washer
- 6. Outer wheel bearing inner race
- 7. Brake drum
- 8. Rear drum brake (Refer to GROUP 35- Rear Drum Brakes)
- 9. Parking brake cable
- 10. Brake hose and tube bracket
- ◆◆ 11. Lateral rod mounting bolt
- ◆◆ 12. Cap
- ◆◆ 13. Shock absorber upper mounting nut
- ◆◆ 14. Trailing arm mounting bolt
- ◆◆ 15. Rear suspension assembly



NOTE

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

Lubrication points

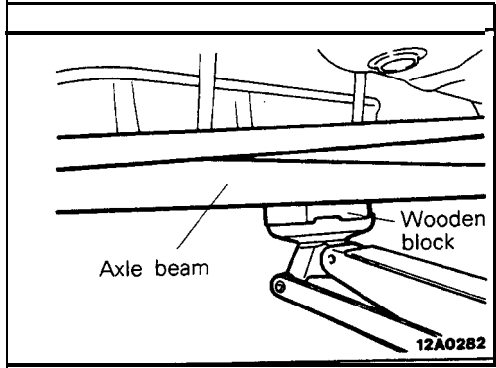


SERVICE POINTS OF REMOVAL

M34GBAJ

11. REMOVAL OF LATERAL ROD MOUNTING BOLT

- (1) Remove the lateral rod mounting bolt.
- (2) Secure and hold the lateral rod to the axle beam with wire, etc.



13. REMOVAL OF SHOCK ABSORBER UPPER MOUNTING NUT/ 14. TRAILING ARM MOUNTING BOLT/ 15. REAR SUSPENSION ASSEMBLY

- (1) Jack up the torsion axle and arm assembly in order to raise it slightly.

Caution

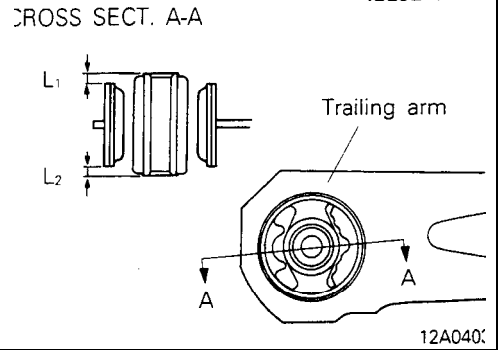
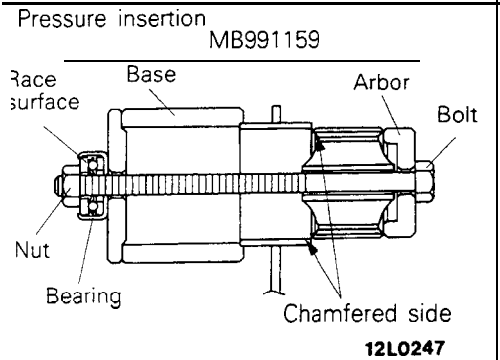
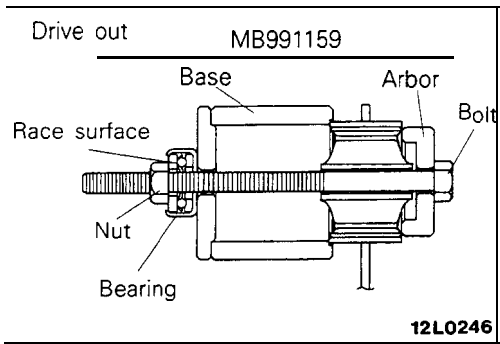
1. Always insert a wooden block between the jack receptacle and the axle beam and place the jack at the centre of the axle beam.
2. Make sure that the jack does not contact the lateral rod.

- (2) Remove the shock absorber mounting nut and trailing arm mounting bolt.
- (3) Lower the jack slowly, and then remove the rear suspension assembly.

INSPECTION

M34GCAL

- Check the trailing arm and axle beam for deformation or damage.
- Check the torsion bar for damage.
- Check the lateral rod for damage or deformation.
- Check the bushings for cracking, deterioration, or unusual wear.



**BUSHING REPLACEMENT
TRAILING ARM BUSHING**

- (1) Drive out the trailing arm bushing using the special tool.

Caution

The bearing within the special tool should be installed, as shown in the figure, at the race surface nut side of the bearing.

- (2) Press the bushing with the special tool into the trailing arm (from the chamfered part of the trailing arm) so that the bushing hole is at the position indicated in the figure.
- (3) Be careful that the bushing hole is at the position indicated in the figure and that the difference in bushing projection distances does not exceed the following value.

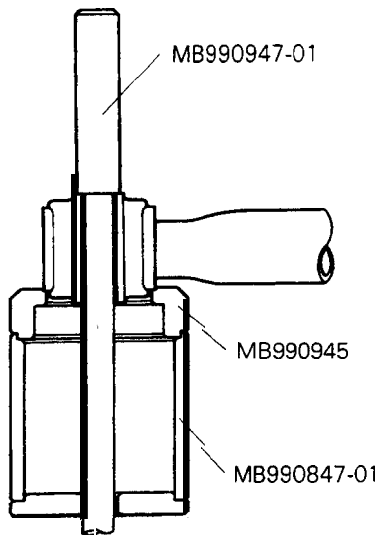
$$L_1 - L_2 = 0 \pm 1.0 \text{ mm } (0 \pm .04 \text{ in.})$$

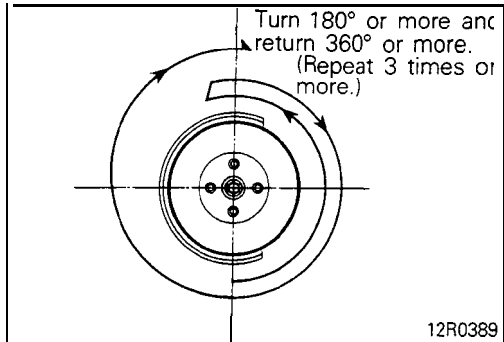
LATERAL ROD BUSHING (BODY SIDE)

- (1) Drive out the lateral rod bushing using the special tool.
- (2) Press in the bushing using the special tool so that the amount of projection is equal at the left and right.

NOTE

The replacement of the lateral rod bushing at the axle beam side is made by the same procedures described in steps (1) and (2) above.



**SERVICE POINTS OF INSTALLATION**

M34GDAS

4. INSTALLATION OF WHEEL BEARING NUT

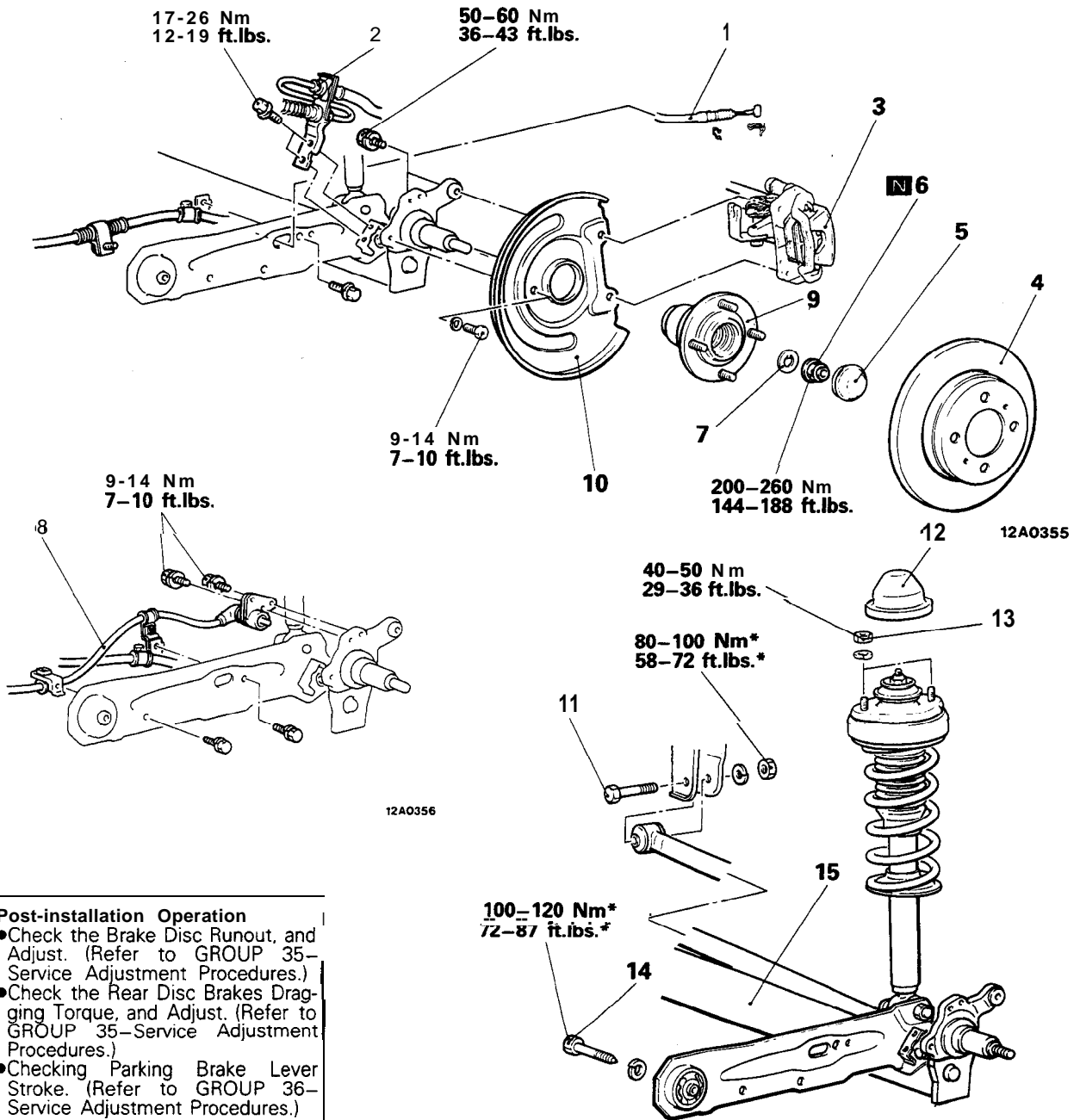
- (1) After tightening the wheel bearing nut to 20 Nm (14 ft.lbs.), turn the hub a few times to seat the bearing.
- (2) In order to seat the bearing properly, turn the hub (brake drum) 180° or more and then return it 360° or more; repeat this procedure again three or more times.
- (3) Return the wheel bearing nut to 0 Nm (0 ft.lbs.).
- (4) After tightening the wheel bearing nut at a torque of 10 Nm (7 ft.lbs.), rotate the hub again in the same way as described in step (2) so as to seat the bearing.
- (5) Then once again tighten the wheel bearing nut to 10 Nm (7 ft.lbs.).
- (6) Install the lock cap and cotter pin.
- (7) If the position of the cotter pin is not matched with the holes of the lock cap, reposition the lock cap so that the holes align. If this can not be accomplished, back off the nut by not more than 15°.

Caution

Check to be sure that the lock nut cannot be loosened manually.

- (8) After setting the split pin in place, seat the bearing in the same manner as in step (2).

<Vehicles with Rear Disc Brake>



Post-installation Operation

- Check the Brake Disc Runout, and Adjust. (Refer to GROUP 35–Service Adjustment Procedures.)
- Check the Rear Disc Brakes Dragging Torque, and Adjust. (Refer to GROUP 35–Service Adjustment Procedures.)
- Checking Parking Brake Lever Stroke. (Refer to GROUP 36–Service Adjustment Procedures.)

Removal steps

1. Parking brake cable
2. Brake tube and hose bracket
3. Rear disc brake
4. Brake disc
5. Hub cap
- ◆◆ 6. Flange nut (Refer to GROUP 33B–Rear Suspension Assembly.)
7. Washer
8. Speed sensor <Vehicles with A.B.S.>
9. Rear axle assembly
10. Dust shield
- ◆◆ 11. Lateral rod mounting bolt (Refer to P.34-6.)

12. Cap
- ◆◆ 13. Shock absorber upper mounting nut (Refer to P.34-6.)
- ◆◆ 14. Trailing arm mounting bolt (Refer to P.34-6.)
- ◆◆ 15. Rear suspension assembly (Refer to P.34-6.)

NOTE
*: Indicates part which should be temporarily tightened, and then fully tightened with the vehicle in the unladen condition.

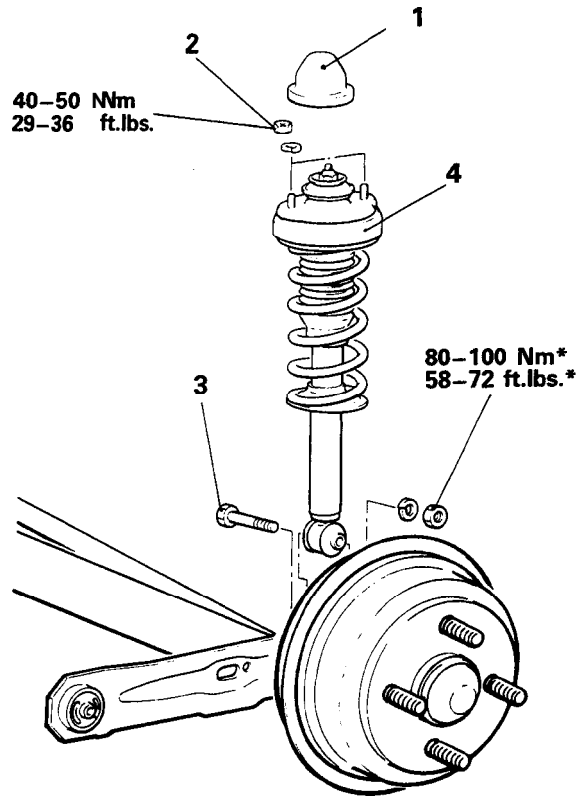
SHOCK ABSORBER ASSEMBLY

M34NA-A

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation

- Removal and Installation of the Trunk Side Trim (Refer to GROUP 52-Trims.)



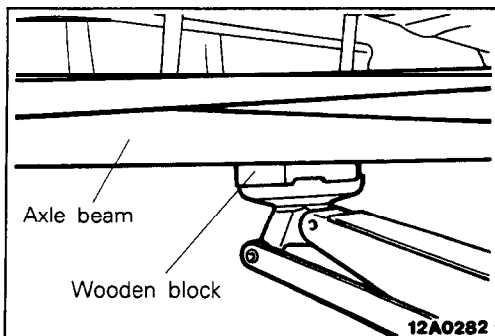
Removal steps

- 1. Cap
- ↔ 2. Shock absorber upper mounting nuts
- ↔ 3. Shock absorber lower mounting bolt
- ↔ 4. Shock absorber

NOTE

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

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SERVICE POINTS OF REMOVAL

M34NBAA

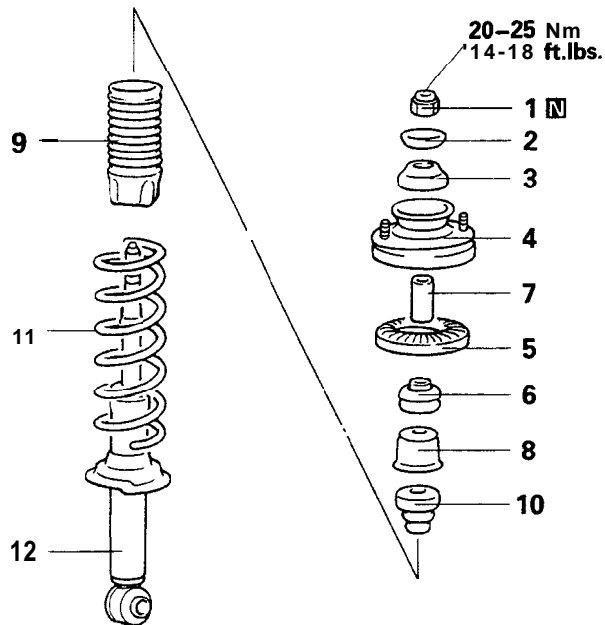
2. REMOVAL OF SHOCK ABSORBER UPPER MOUNTING NUT/B. SHOCK ABSORBER LOWER MOUNTING BOLT/4. SHOCK ABSORBER

- (1) Jack up the torsion axle and arm assembly in order to raise it slightly.

Caution

- 1. Always insert a wooden block between the jack receptacle and the axle beam and place the jack at the center of the axle beam.
 - 2. Be sure that the jack does not contact the lateral rod.
- (2) Remove the shock absorber's upper mounting nut and lower mounting bolt, and then remove the shock absorber.

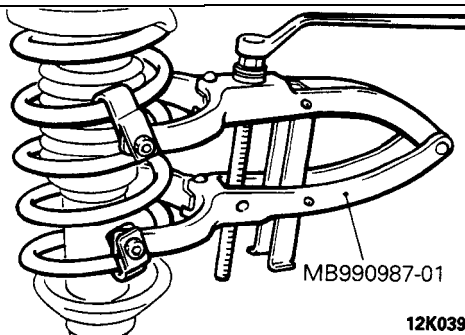
DISASSEMBLY AND REASSEMBLY



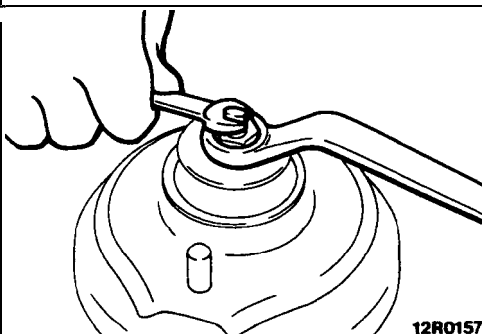
Disassembly steps

- ◄● + 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



12K039



12R0157

SERVICE POINTS OF DISASSEMBLY

M34GNAA

1. REMOVAL OF PISTON ROD TIGHTENING NUT

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

Caution

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

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

INSPECTION

M34GOAA

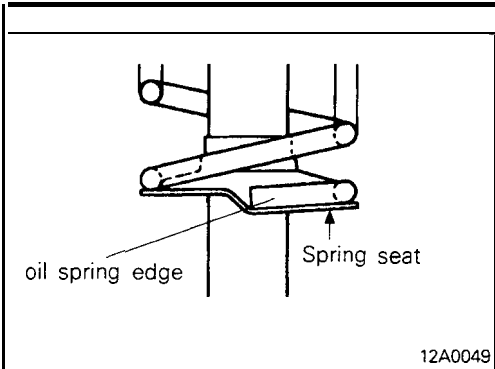
- Check the rubber parts for damage.
- Check the coil springs for crack, damage or deterioration.

M34GPAB

SERVICE POINTS OF REASSEMBLY

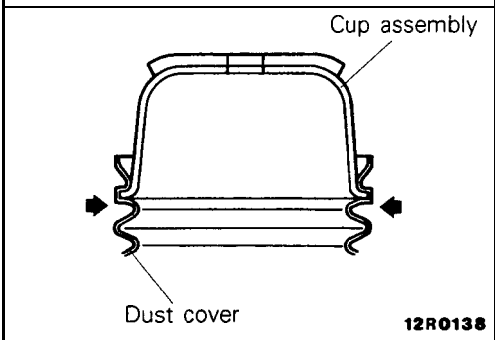
11. INSTALLATION OF COIL SPRING

- (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.



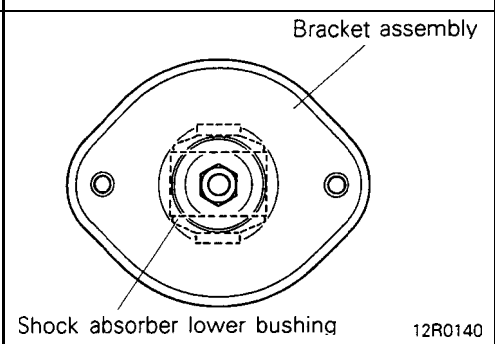
9. INSTALLATION OF DUST COVER/8. CUP ASSEMBLY

As shown in the illustration, fit the dust cover to the cup assembly.



4. INSTALLATION OF BRACKET ASSEMBLY/I. 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).



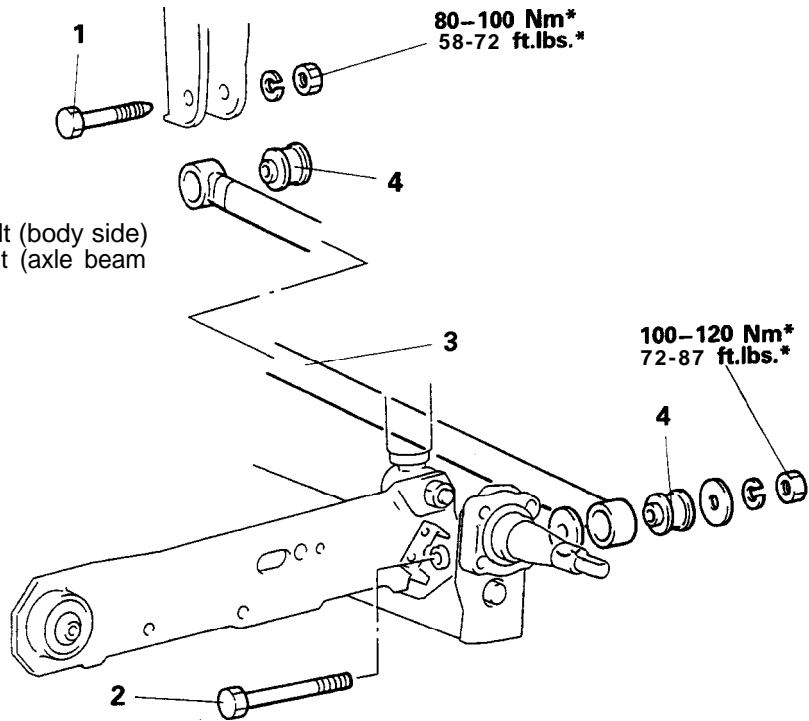
LATERAL ROD

REMOVAL AND INSTALLATION

M340A--

Removal steps

1. Lateral rod mounting bolt (body side)
- ➡➡ 2. Lateral rod mounting bolt (axle beam side)
3. Lateral rod
4. Lateral rod bushing



NOTE

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

12A0232

INSPECTION

M340CAAa

- Check the lateral rod for damage or deformation.
- Check the bushings for cracking, deterioration, or unusual wear.

NOTE

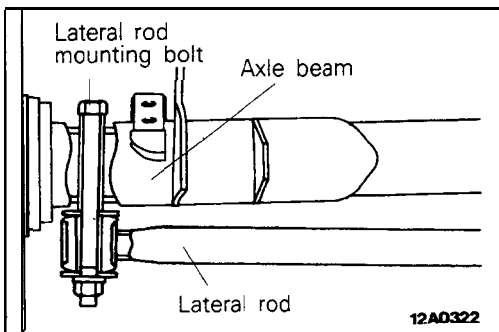
For information concerning the replacement of the lateral rod bushing, refer to P.34-8.

SERVICE POINTS OF INSTALLATION

M340DAA

2. INSTALLATION OF LATERAL ROD MOUNTING BOLT (AXLE BEAM SIDE)

Install the lateral rod mounting bolt from the direction shown in the illustration.



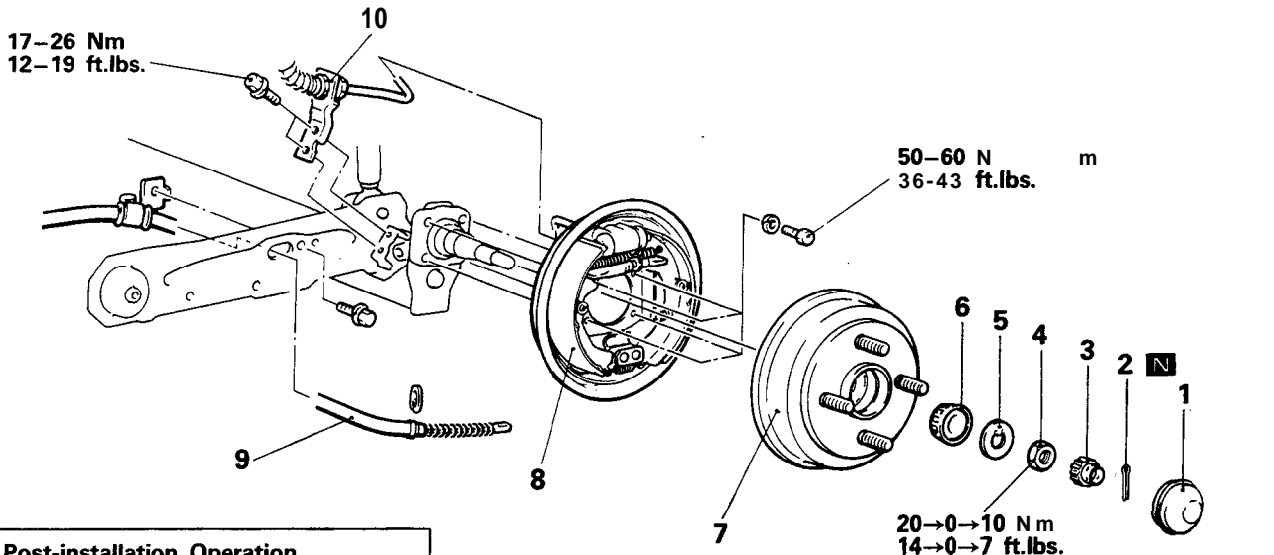
12A0322

M34PA-

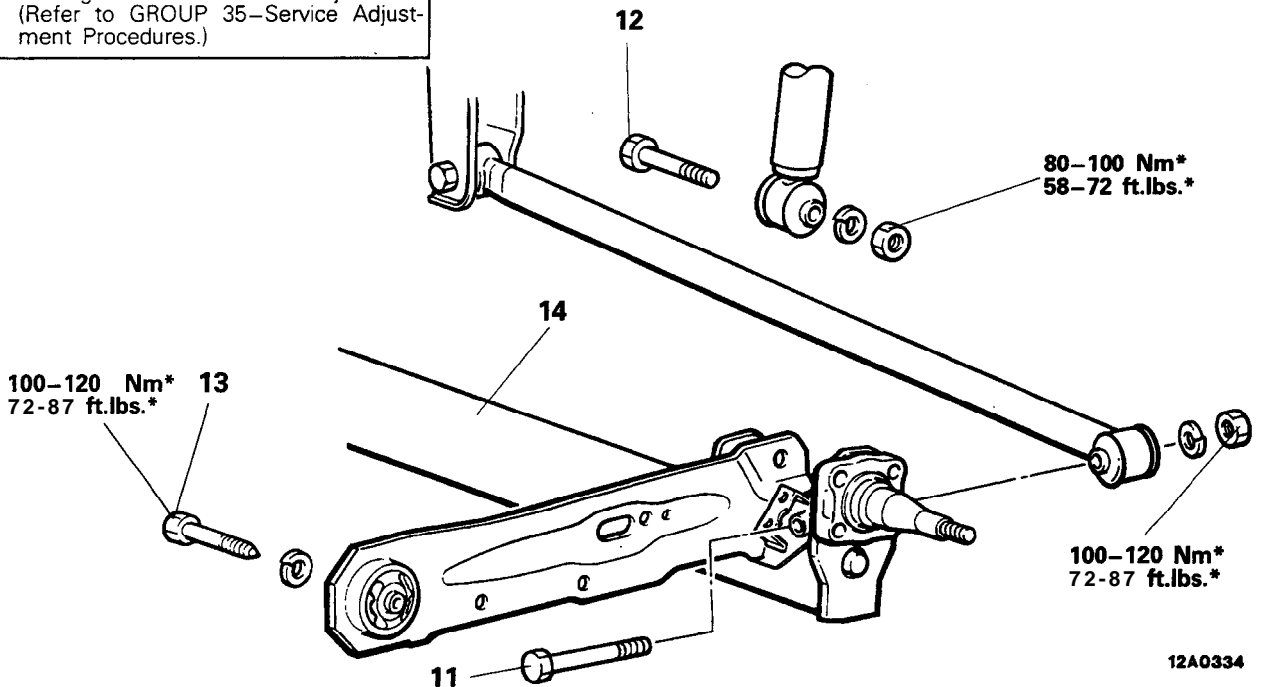
TORSION AXLE AND ARM ASSEMBLY

REMOVAL AND INSTALLATION

<Vehicles with Rear Drum Brake>



Post-installation Operation
 ● Parking Brake Lever Stroke Adjustment
 (Refer to GROUP 35—Service Adjustment Procedures.)



Removal steps

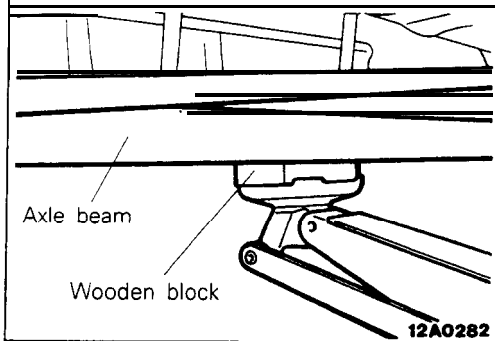
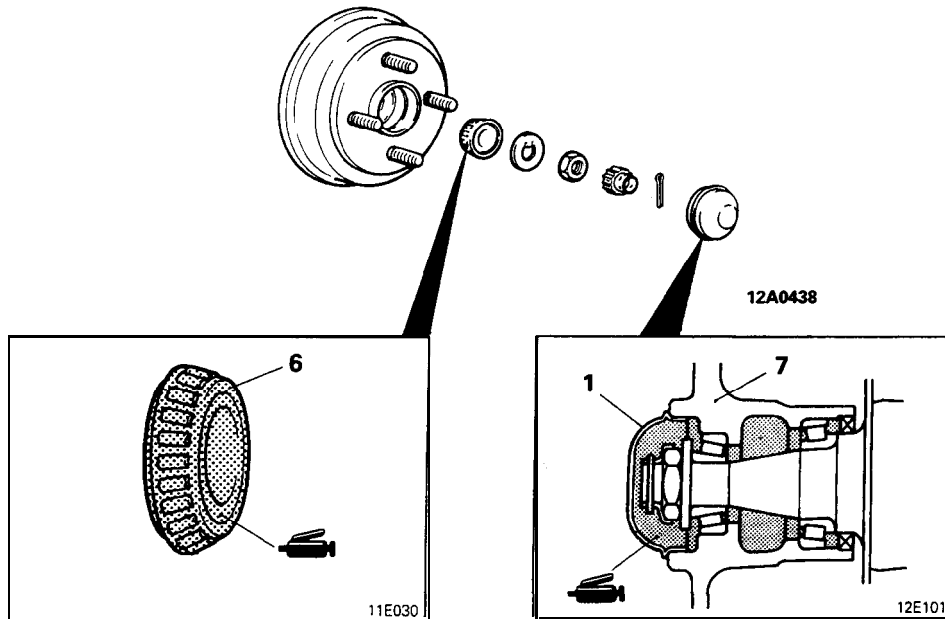
- Adjustment of wheel bearing end play
 (Refer to GROUP 27—Service Adjustment Procedures)
- 1. Hubcap
- 2. Cotter pin
- 3. Cap
- + 4. Wheel bearing nut
- 5. Washer
- 6. Outer wheel bearing inner race
- 7. Brake drum
- 8. Rear drum brake
 (Refer to GROUP 35—Rear Drum Brakes)

- 9. Parking brake cable
- 10. Brake hose and tube bracket
- ◆◆◆ 11. Lateral rod mounting bolt
- ◆◆◆ 12. Shock absorber lower mounting bolt
- ◆◆◆ 13. Trailing arm mounting bolt
- ◆◆◆ 14. Torsion axle and arm assembly

NOTE
 *: Indicates part which should be temporarily tightened, and then fully tightened with the vehicle in the unladen condition.

34-16 REAR SUSPENSION <FWD> – Torsion Axle and Arm Assembly

Lubrication points



SERVICE POINTS OF REMOVAL

M34PBAC

12. REMOVAL OF SHOCK ABSORBER LOWER MOUNTING BOLT/ 13. TRAILING ARM MOUNTING BOLT 14. TORSION AXLE AND ARM ASSEMBLY

- (1) Jack up the torsion axle and arm assembly in order to raise it slightly.

Caution

1. Always insert a wooden block between the jack receptacle and the axle beam and place the jack at the center of the axle beam.
 2. Be sure that the jack does not contact the lateral rod.
- (2) Remove the shock absorber's mounting bolts and the trailing arm mounting bolt.
 - (3) Lower the jack slowly, and then remove the torsion axle and arm assembly.

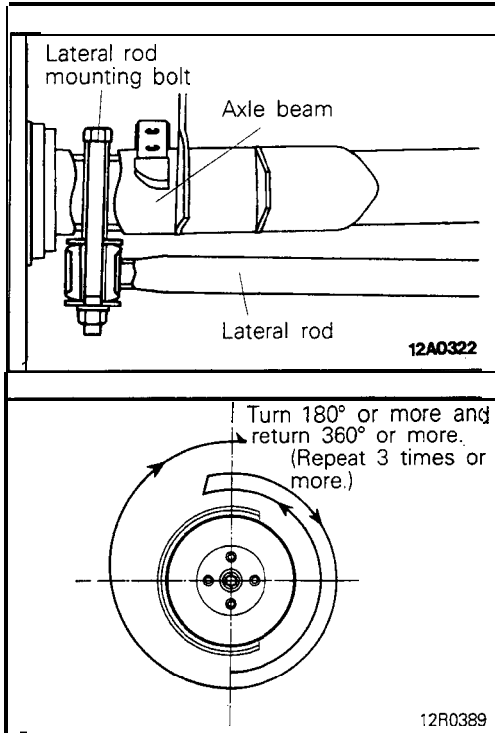
INSPECTION

M34PCAAa

- Check the trailing arm and axle beam for deformation or damage.
- Check the torsion bar for damage.
- Check the bushings for cracking, deterioration, or unusual wear.

NOTE

For information concerning the replacement of the trailing arm bushing, refer to P.34-8.



SERVICE POINTS OF INSTALLATION

M34PDAH

11. INSTALLATION OF LATERAL ROD MOUNTING BOLT

Install the lateral rod mounting bolt from the direction shown in the illustration.

4. INSTALLATION OF WHEEL BEARING NUT

- (1) After tightening the wheel bearing nut to 20 Nm (14 ft.lbs.), turn the hub a few times to seat the bearing.
- (2) In order to seat the bearing properly, turn the hub (brake drum) 180° or more and then return it 360° or more; repeat this procedure again three or more times.
- (3) Return the wheel bearing nut to 0 Nm (0 ft.lbs.).
- (4) After tightening the wheel bearing nut at a torque of 10 Nm (7 ft.lbs.), rotate the hub again in the same way as described in step (2) so as to seat the bearing.
- (5) Then once again tighten the wheel bearing nut to 10 Nm (7 ft.lbs.).
- (6) Install the lock cap and cotter pin.
- (7) If the position of the cotter pin is not matched with the holes of the lock cap, reposition the lock cap so that the holes align. If this can not be accomplished, back off the nut by not more than 15”.

Caution

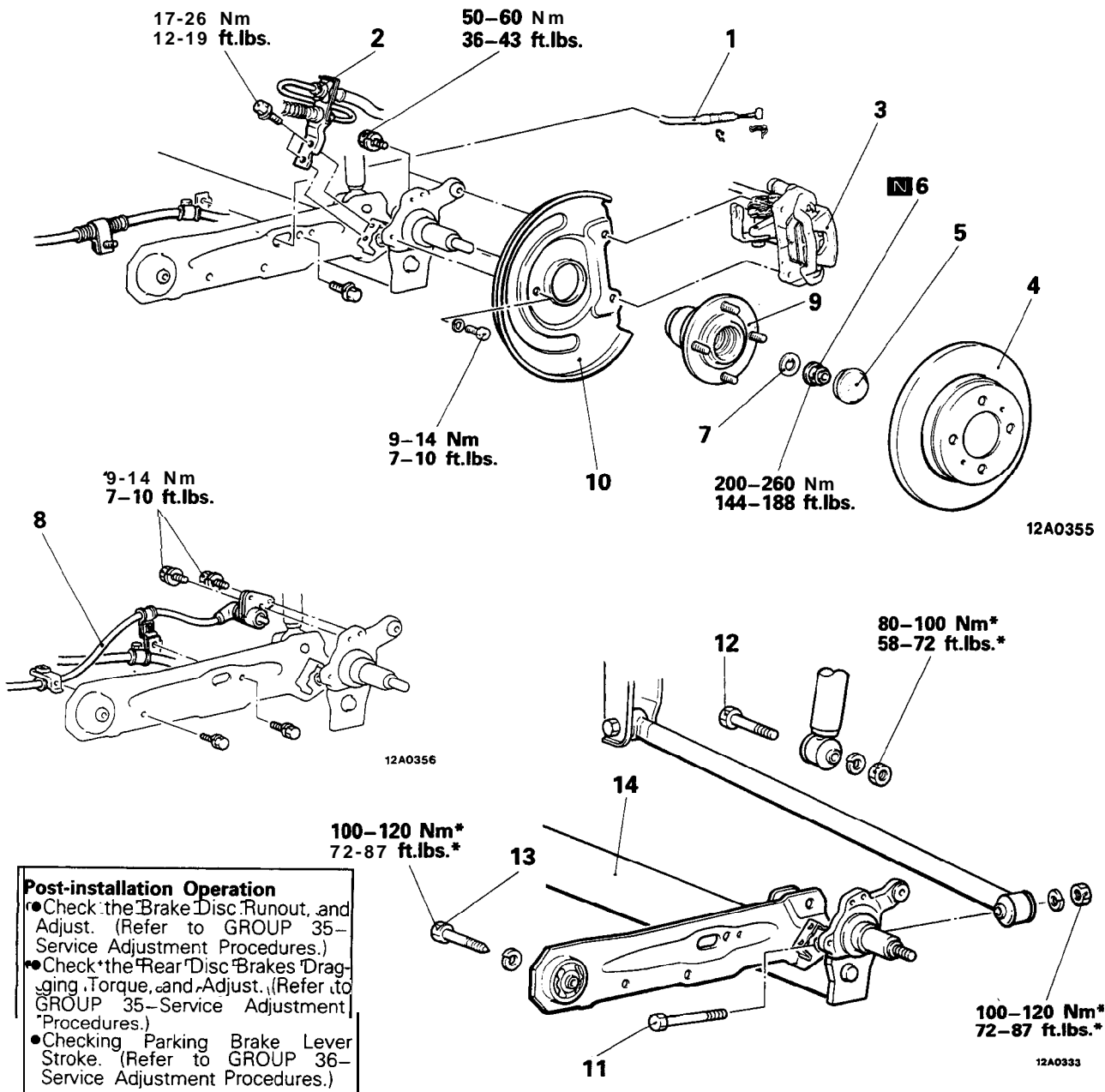
Check to be sure that the lock nut cannot be loosened manually.

- (8) After setting the cotter pin in place, seat the bearing in the same manner as in step (2).

34-18 REAR SUSPENSION <FWD> – Torsion Axle and Arm Assembly

M34PA-A

<Vehicles with Rear Disc Brake>



Post-installation Operation

- Check the Brake Disc Runout, and Adjust. (Refer to GROUP 35-Service Adjustment Procedures.)
- Check the Rear Disc Brakes Dragging, Torque, and Adjust. (Refer to GROUP 35-Service Adjustment Procedures.)
- Checking Parking Brake Lever Stroke. (Refer to GROUP 36-Service Adjustment Procedures.)

Removal steps

1. Parking brake cable
2. Brake tube and hose bracket
3. Rear disc brake
4. Brake disc
5. Hub cap
- 6. Flange nut (Refer to GROUP 33B-Rear Suspension Assembly.)
7. Washer
8. Speed sensor <Vehicles with A.B.S.>
9. Rear axle assembly
10. Dust shield
- ☒ 11. Lateral rod mounting bolt (Refer to P.34-14.)

- ◆◆ 12. Shock absorber lower mounting bolt (Refer to P.34-16.)
- ◆◆ 13. Trailing arm mounting bolt (Refer to P.34-16.)
- ◆◆ 14. Torsion axle and arm assembly (Refer to P.34-16.)

NOTE
* : Indicates part which should be temporarily tightened, and then fully tightened with the vehicle in the unladen condition.

SPECIFICATIONS <AWD–UP TO 1992 MODELS>

GENERAL SPECIFICATIONS

M34CA-B

Items	Specifications
Suspension system	Double wishbone suspension type
Coil spring	
Wire dia. x O.D. x free length	mm (in.) 11.0 x 106.0 x 389.5 (.43 x 4.17 x 15.3)
Coil spring identification colour	Pink x1
Spring constant	N/mm (lbs./in.) 20.0 (112.0)
Shock absorber	
Type	Hydraulic, cylindrical, double-acting type
Max. length	mm (in.) 583 (23.0)
Min. length	mm (in.) 391 (15.4)
Stroke	mm (in.) 192 (7.6)
Damping force [at 0.3m/sec. (0.9 ft./sec.)]	
Expansion	N (lbs.) 1,200 (265)
Contraction	N (lbs.) 450 (99)

SERVICE SPECIFICATIONS

M34CB-B

Items	Specifications
Standard value	
Toe-in	mm (in.) 3 ± 3 (.12 ± .12)
Camber	-1°00' ± 30'
Lower and upper arm ball joint starting torque	Nm (in.lbs.) 2-9 (17-78)
Protruding length of stabilizer link installation nut	mm (in.) 9-11 (.354-.433)
Stabilizer link ball joint starting torque	Nm (in.lbs.) 1.7-3.2 (15-28)

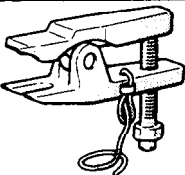
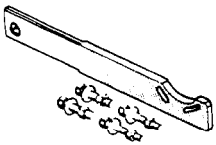
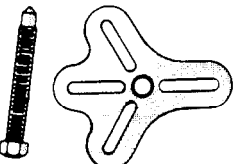
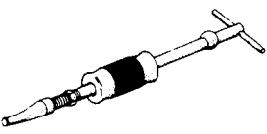
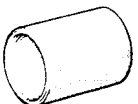
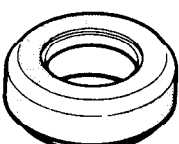
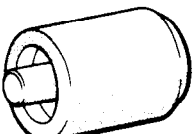
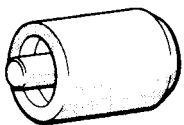

TORQUE SPECIFICATIONS

M34CC-B


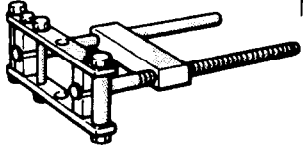
Items	Nm	ft.lbs.
Rear suspension assembly		
Center exhaust pipe to main muffler installation bolt	30–40	22-29
Hook installation bolt	10–15	7-11
Hanger installation bolt	10–15	7-11
Center exhaust pipe to front exhaust pipe installation nut	30–40	22-29
Rear shock absorber installation nut	40–50	29-36
Differential carrier to differential support member	80–100	58-72
Differential support member to body	110–130	80–94
Brake tube bracket to rear shock absorber	17-26	12-19
Differential carrier to propeller shaft	30–35	22-25
Crossmember bracket to body	70–85	51-61
Crossmember bracket to crossmember	110–130	80–94
Rear brake assembly installation bolt	50–60	36-43
Upper and lower arm		
Upper arm to crossmember	140–160	101–116
Upper arm to knuckle	60–72	43-52
Lower arm to crossmember	90–110	65–80
Lower arm to knuckle	60–72	43-52
Trailing arm		
Companion flange to rear axle shaft	160–220	116-159
Companion flange to drive shaft	55-65	40–47
Trailing arm to crossmember	140–160	101–116
Upper arm to knuckle	60–72	43-52
Lower arm to knuckle	60–72	43-52
Rear shock absorber (lower)	90–110	65–80
Rear brake assembly installation bolt	50–60	36-43
Rear speed sensor	9-14	7–10
Shock absorber assembly		
Shock absorber installation nut	40–50	29-36
Shock absorber installation bolt	90–110	65–80
Brake tube bracket to rear shock absorber	17-26	12-19
Piston rod tightening nut	20–25	14-18
Stabilizer bar		
Differential support member to body	110–130	80–94
Crossmember bracket to crossmember	110–130	80–94
Crossmember bracket to body	70–85	51-61
Stabilizer link to stabilizer bar	35-45	25-33

SPECIAL TOOLS

M34DA-B

Tool	Number	Name	Use
	MB991113-01 OPTIONAL: AVAILABLE FROM O.T.C.	Steering linkage puller	Disconnection of the ball joint
	MB990767-01	End yoke holder	Removal of the rear axle shaft
	GENERAL SERVICE TOOL	Axle puller	
	MB990211-01	Sliding hammer with adapter	
	MB990847-01	Base	Removal and press-fitting of the lower arm bushing
	MB991245	Lower arm bushing ring	
	MB991246	Lower arm bushing arbor	
	MB990849	Upper arm bushing arbor	Removal and press-fitting of the trailing arm bushing
	MB990646	Control arm bushing installer and remover	

34-22 REAR SUSPENSION <AWD> – Special Tools/Troubleshooting

Tool	Number	Name	Use
	MB990800-01 OPTIONAL: AVAILABLE FROM O.T.C.	Ball joint remover and installer	Installation of the ball joint dust cover
	MB991254	Rod remover and installer	Replacement of trailing arm connecting rod

TROUBLESHOOTING

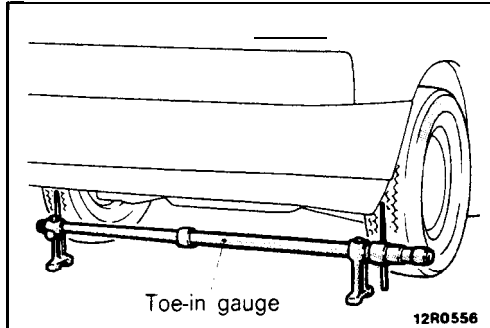
M34EA-B

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

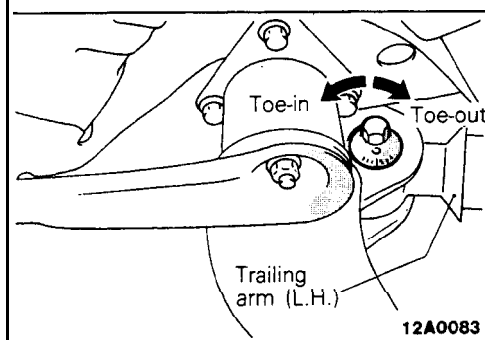
REAR WHEEL ALIGNMENT INSPECTION M34FDAB

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



TOE-IN

- (1) Measure the toe-in with a toe-in gauge.
Standard value: 3 ± 3 mm (.12 \pm .12 in.)

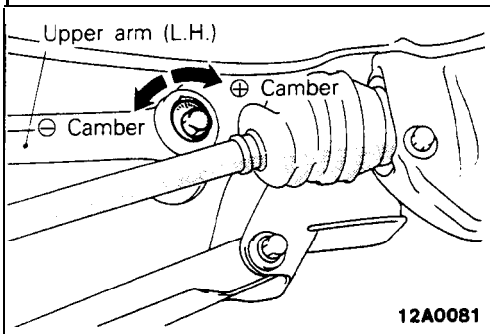


- (2) If the toe-in is not within the standard value, adjust it by moving the mounting bolts located on the crossmember side of the trailing arm.

NOTE

Make the adjustment by moving the left and the right bolts equally.

Movement of one division on the scale will cause toe-in variation of about 2 mm (.08 in.).



CAMBER

- (1) Measure the camber with a camber/caster/kingpin gauge.
Standard value: $-1^{\circ}00' \pm 30'$

- (2) If the camber is not within the standard value, adjust it by moving the mounting bolt located on the crossmember side of the upper arm.

NOTE

Movement of one division on the scale will cause camber variation of about 15'.

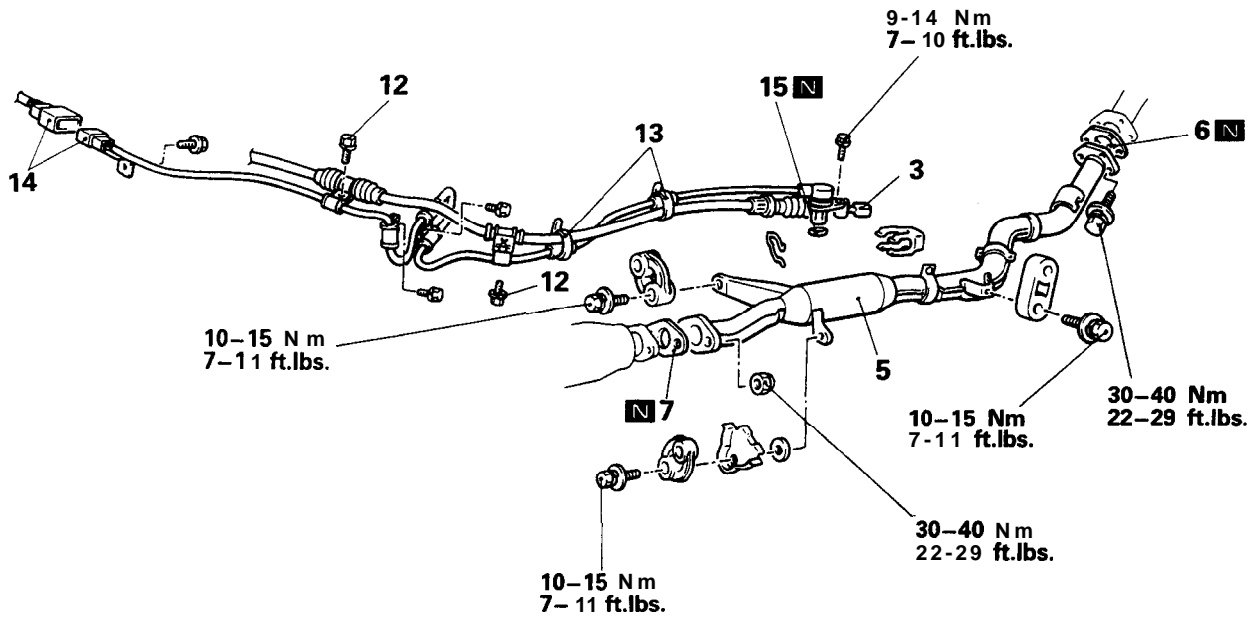
Caution

1. As toe-in will vary 0.9 mm (.035 in.) for every camber scale adjustment, adjust the toe after adjusting camber.
2. The difference between the left and the right camber shall be less than 15'.

REAR SUSPENSION ASSEMBLY

REMOVAL AND INSTALLATION

M34GA-B



12A0514

Pre-removal Operation

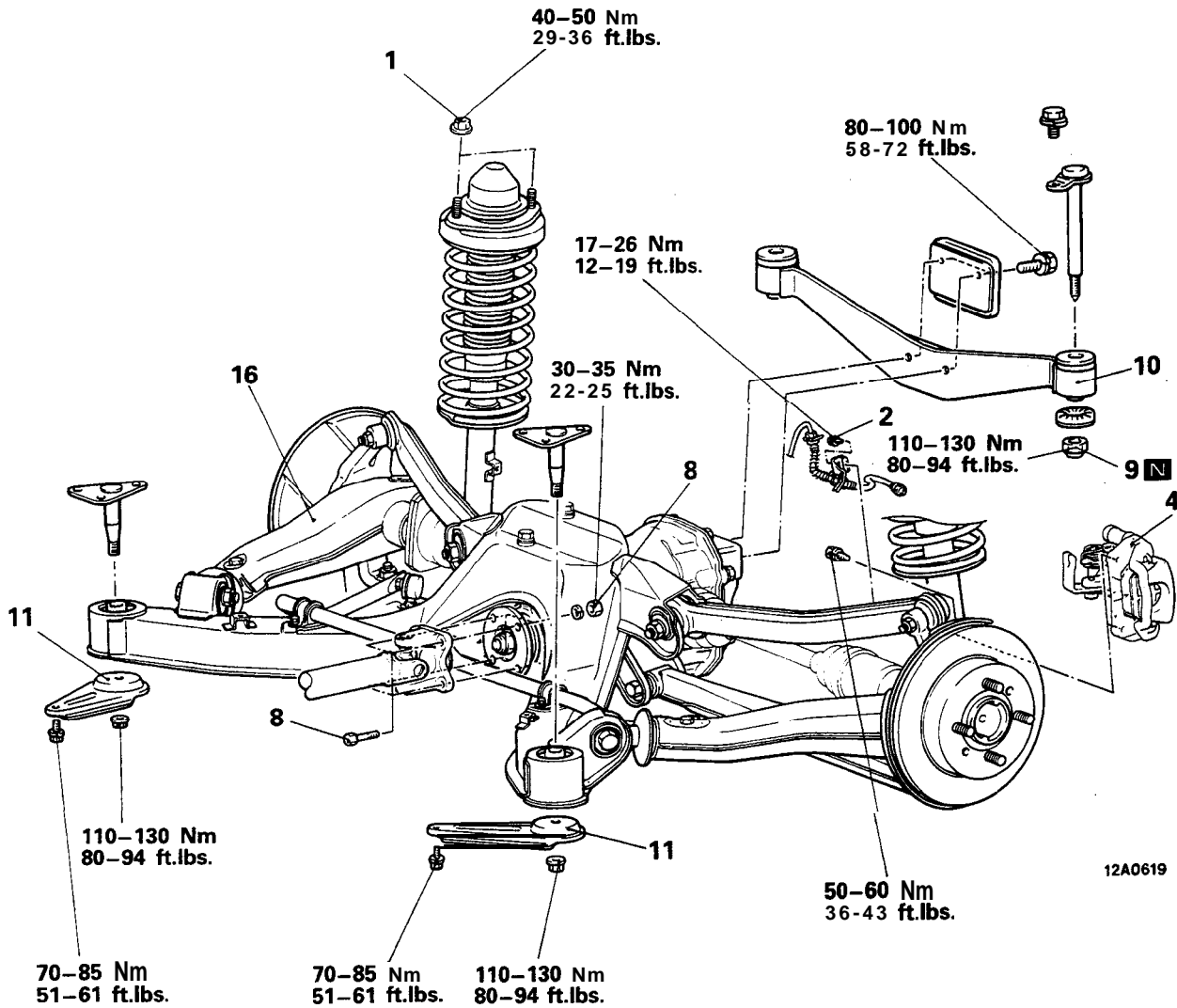
- Removal of Trunk Room Trim (Refer to GROUP 52-Trims.)

Post-installation Operation

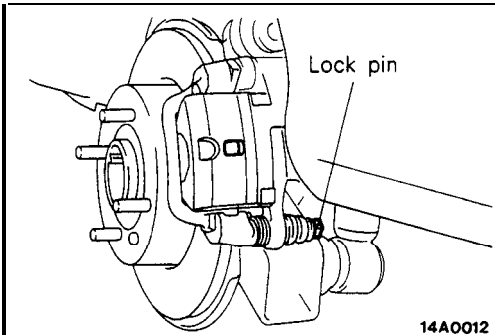
- Check of Wheel Alignment (Refer to P.34-23.)
- Check of Parking Brake Lever Stroke (Refer to GROUP 36-Service Adjustment Procedures.)
- Installation of Trunk Room Trim (Refer to GROUP 52-Trims.)

Removal steps

1. Shock absorber installation nut
2. Brake tube bracket installation bolt
3. Parking brake cable end
4. Caliper assembly
5. Center exhaust pipe
6. Gasket
7. Gasket
8. Propeller shaft installation bolt and nut



- ◄► 9. Self locking nut
- ◄► 10. Differential support member
- ◄► 11. Crossmember bracket
- ◄► 12. Parking brake cable and rear speed sensor installation bolt
- 13. Cable band
- 14. Rear speed sensor connector
- 15. O-ring
- ◄► 16. Rear suspension assembly

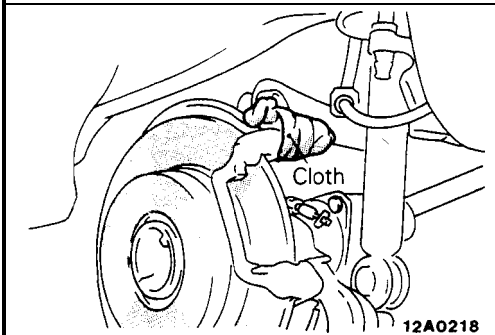
**SERVICE POINTS OF REMOVAL****4. REMOVAL OF CALIPER ASSEMBLY**

- (1) Remove the lock pin, rotate the caliper assembly upward, then remove the caliper assembly and secure it with wire, etc.

Caution

The lock pin has a special grease applied to it, so be sure not to wipe it off, and ensure that the lock pin stays clean.

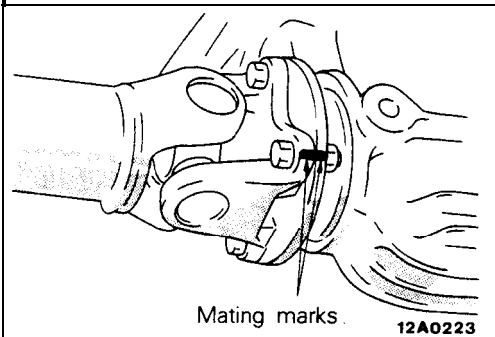
- (2) After removing the caliper assembly, cover the guide pin with a cloth, etc.

**8. REMOVAL OF PROPELLER SHAFT' INSTALLATION BOLT AND NUT**

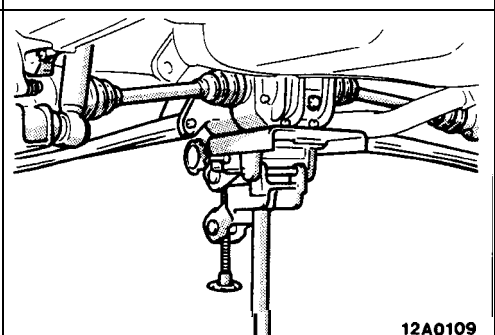
Place mating marks on the differential carrier companion flange and the propeller shaft flange yoke.

NOTE

The mating marks should be used as a reference for re-installation.

**9. REMOVAL OF SELF LOCKING NUT**

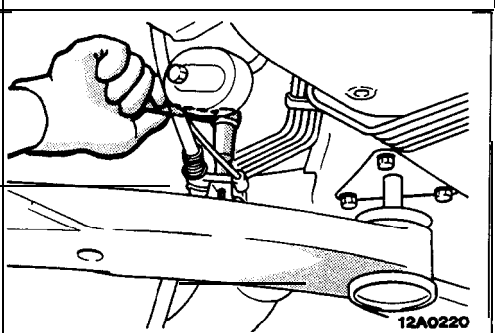
- (1) Before removing the self locking nuts, support the differential case with a transaxle jack.
- (2) Remove the self locking nuts.

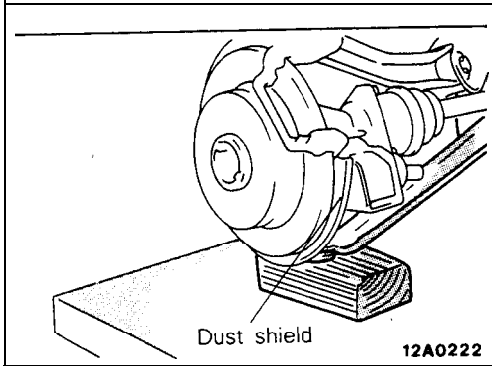
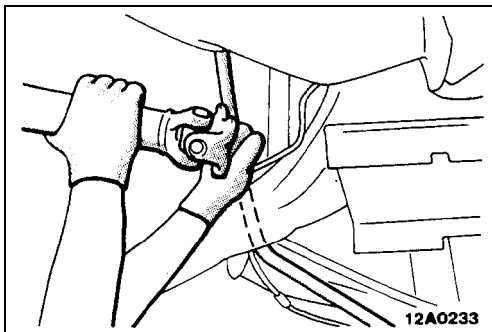
**12. REMOVAL OF PARKING BRAKE CABLE AND REAR SPEED SENSOR INSTALLATION BOLT**

- (1) Lower the transaxle jack slightly.
- (2) Remove the parking brake cable and the rear speed sensor installation bolts.

NOTE

The task may be made easier by increasing the gap between the body and the crossmember.





16. REMOVAL OF REAR SUSPENSION ASSEMBLY

- (1) Supporting the rear suspension assembly with a transmission jack, move it toward the rear (in the direction of the fuel tank).
- (2) Gradually lower the transmission jack, avoiding contact with the stabilizer bar and the propeller shaft.

Caution

1. Ensure that the propeller shaft does not bend greatly.
2. Ensure that the löbro joint does not receive any shock.

NOTE

The lowering of the rear suspension assembly from the transmission jack requires three individuals due to the amount of weight being handled (one on the differential, and one on either side of the lower arm).

- (3) In order to protect the rear suspension assembly dust shield, support the lower arm ball joint with a wooden block.

INSPECTION

M34GCAM

- Check crossmember for cracks or other damage.

SERVICE POINTS OF INSTALLATION

M34GDAR

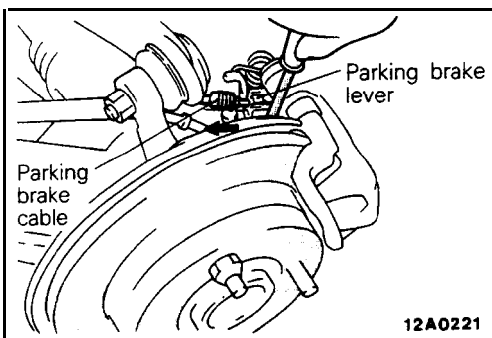
8. INSTALLATION OF PROPELLER SHAFT INSTALLATION BOLT AND NUT

Install the propeller shaft to the differential carrier, ensuring that the mating marks are aligned.

3. INSTALLATION OF PARKING BRAKE CABLE END

NOTE

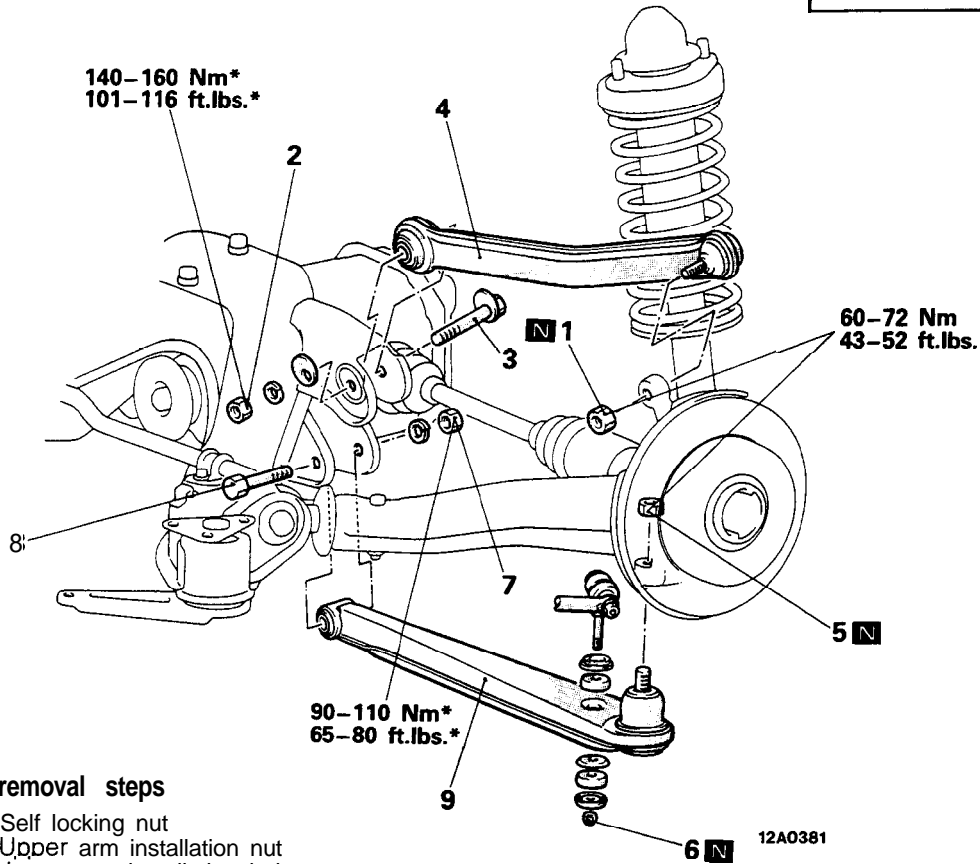
Connecting a parking brake cable end to parking brake lever and prying up the parking brake lever, the installation of the other cable end will be easy.



UPPER AND LOWER ARM

REMOVAL AND INSTALLATION

Post-installation Operation
 ●Check of Wheel Alignment
 (Refer to P.34-23.)



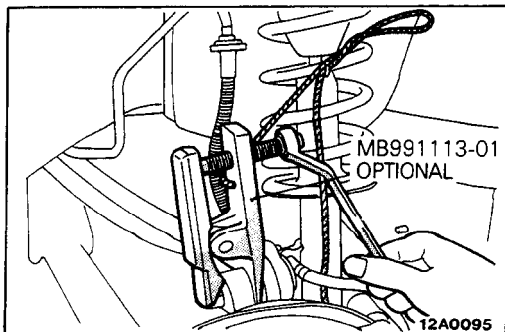
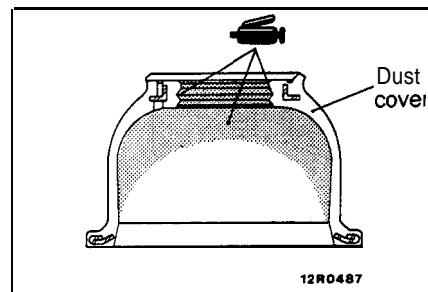
Upper arm removal steps

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

Lower arm removal steps

- ◆◆ 5. Self locking nut
- ◆◆◆◆ 6. Stabilizer link installation nut
- ◆◆◆◆ 7. Lower arm installation nut
- ◆◆◆◆ 8. Lower arm installation bolt
- ◆◆◆◆ 9. Lower arm

NOTE
 *: Indicates parts which should first be temporarily tightened, then fully tightened with the vehicle on the ground with no load (curb weight).



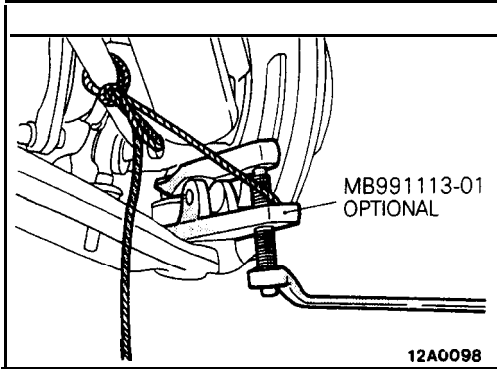
SERVICE POINTS OF REMOVAL

1. REMOVAL OF SELF LOCKING NUT

With the special tool, disconnect the upper arm ball joint and knuckle.

Caution

While the special tool is being used, do not remove the self locking nut; only loosen it.

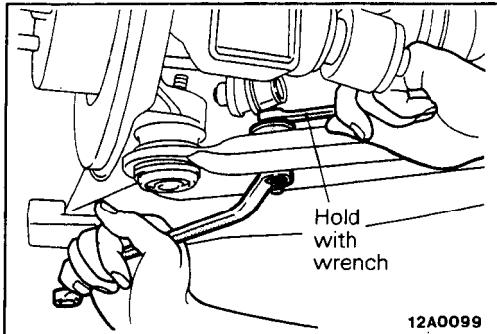


6. REMOVAL OF SELF LOCKING NUT

With the special tool, disconnect the lower arm ball joint and knuckle.

Caution

While the special tool is being used, do not remove the self locking nut; only loosen it.



6. REMOVAL OF STABILIZER LINK INSTALLATION NUT

Hold the stabilizer link with a wrench and remove the installation nut.

INSPECTION

M34SCAA

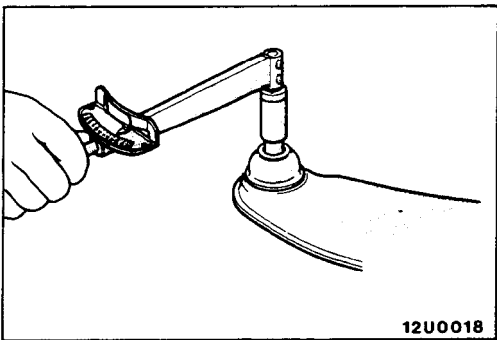
- Check the bushing for wear and deterioration.
- Check the upper arm or lower arm for bend or breakage.
- Check the ball joint dust cover for cracks.
- Check all bolts for condition and straightness.

CHECKING OF BALL JOINT FOR STARTING TORQUE

- (1) If a crack is noted in the dust cover, replace it, adding grease.
- (2) Deflect side to side the ball joint stud several times.
- (3) Mount two nuts on the ball joint, and then measure the ball joint starting torque.

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

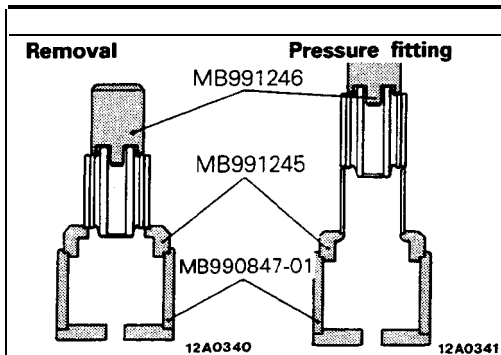
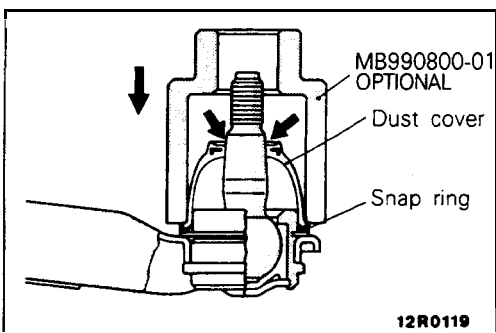
- (4) If the starting torque exceeds the upper limit of standard value, replace the upper and lower arm assembly.
- (5) Even if the starting torque is below the lower limit of the standard value, the ball joint may be reused unless it has drag and excessive play.



BALL JOINT DUST COVER REPLACEMENT

M34SEAA

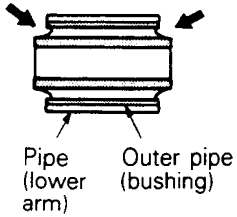
- (1) Remove the dust cover.
- (2) Apply multipurpose grease to the lip and inside of the dust cover.
- (3) Drive in the dust cover with special tool until it is fully seated.



LOWER ARM BUSHING REPLACEMENT

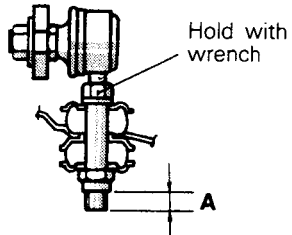
M34SFAA

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



12A0039

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



12A0100

SERVICE POINTS OF INSTALLATION

M34SDAA

6. INSTALLATION OF STABILIZER LINK INSTALLATION NUT

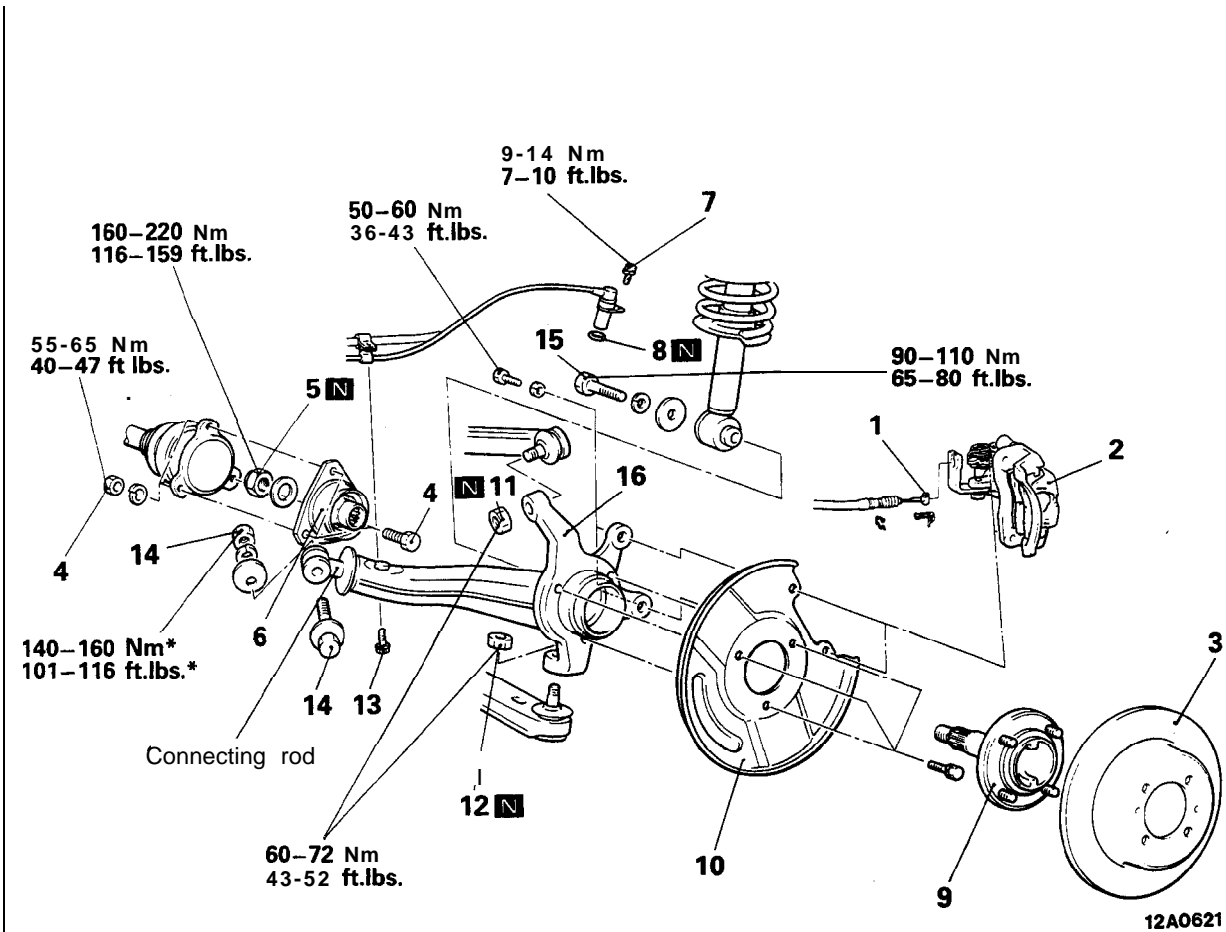
Holding the stabilizer link with a wrench, tighten the self locking nut so that the protrusion of the stabilizer link (dimension A indicated in illustration) is within the standard value.

Standard value: 9-11 mm (.354-.433 in.)

TRAILING ARM

REMOVAL AND INSTALLATION

M34TA--



Removal steps

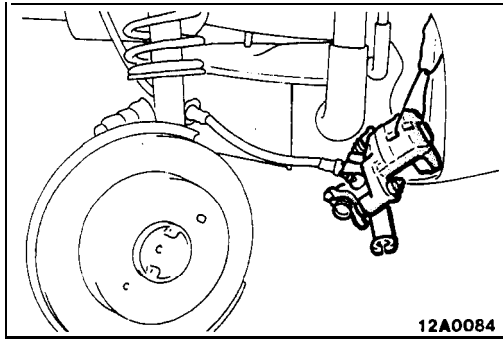
- ◄► 1. Parking cable end
- ◄► 2. Rear brake assembly
- ◄► 3. Rear brake disc
- ◄► 4. Drive shaft and companion flange installation bolt, nut
- ◄► ● + 5. Self locking nut
- + 6. Companion flange
- ◄► ● + 7. Rear speed sensor installation bolt <Vehicles with ABS>
- ◄► ● + 8. O-ring
- ◄► ● + 9. Rear axle shaft
- ◄► 10. Dust shield
- ◄► 11. Self locking nut (upper arm)
- ◄► 12. Self locking nut (lower arm)
- ◄► 13. Parking brake cable and rear speed sensor installation bolt
- ◄► 14. Trailing arm installation bolt, nut
- ◄► 15. Rear shock absorber installation bolt
- ◄► 16. 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

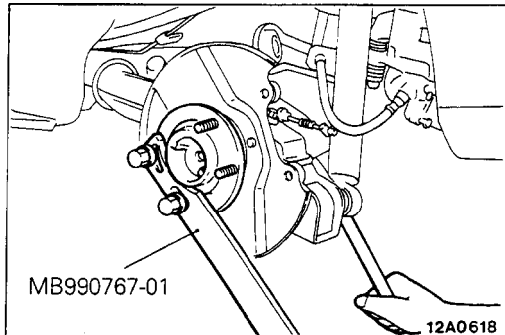
*: Indicates parts which should first be temporarily tightened, then fully tightened with the vehicle on the ground with no load (curb weight).

**SERVICE POINTS OF REMOVAL**

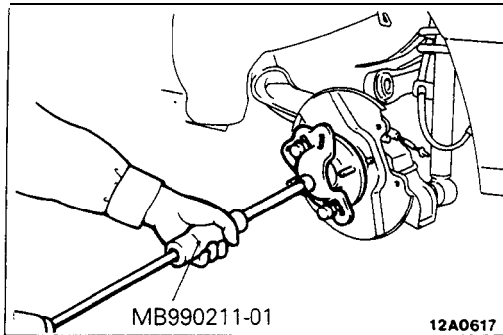
M34TBAA

2. REMOVAL OF REAR BRAKE ASSEMBLY

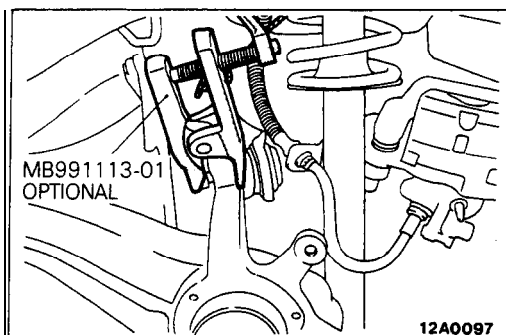
Remove the rear brake assembly installation bolts, then suspend the rear brake assembly from the vehicle with wire, etc.

**5. REMOVAL OF SELF LOCKING NUT**

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

**9. REMOVAL OF REAR AXLE SHAFT**

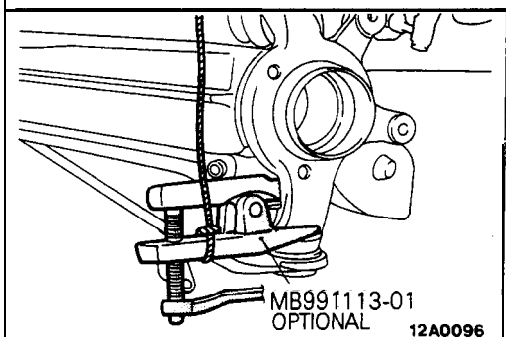
With the special tool, remove the rear axle shaft.

**11. REMOVAL OF SELF LOCKING NUT (UPPER ARM)**

With the special tool, disconnect the upper arm ball joint and knuckle.

Caution

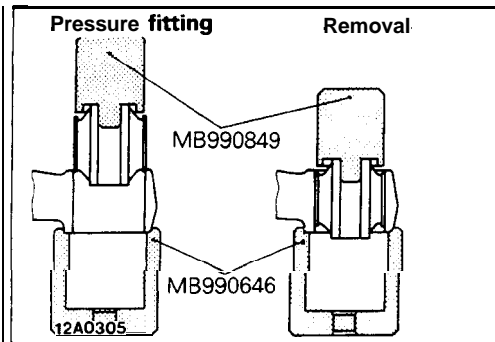
While the special tool is being used, do not remove the self locking nut; only loosen it.

**12. REMOVAL OF SELF LOCKING NUT (LOWER ARM)**

With the special tool, disconnect the lower arm ball joint and knuckle.

Caution

While the special tool is being used, do not remove the self locking nut; only loosen it.



INSPECTION

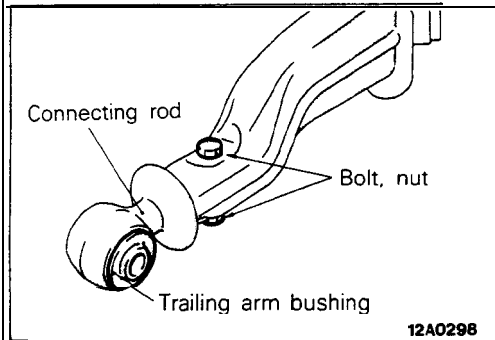
M34TCAA

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

TRAILING ARM BUSHING REPLACEMENT

M34TEAA

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

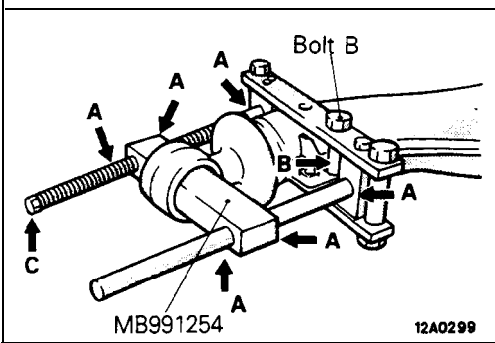


CONNECTING ROD REPLACEMENT

M34TFAA

Replace the connecting rod using the following procedure:

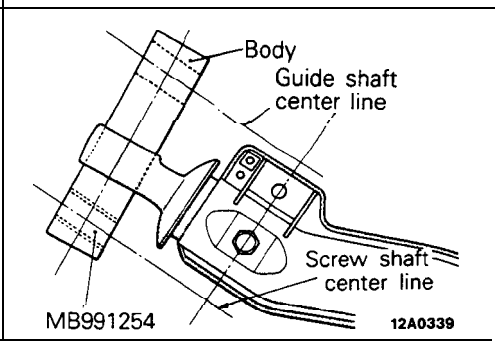
- (1) Remove the trailing arm bushing.
- (2) Remove the bolt and nut.



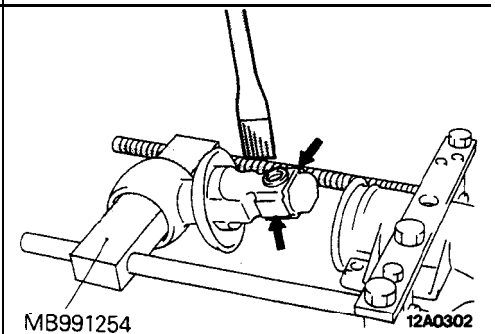
- (3) Set the special tool onto the trailing arm as shown in the illustration.

NOTE

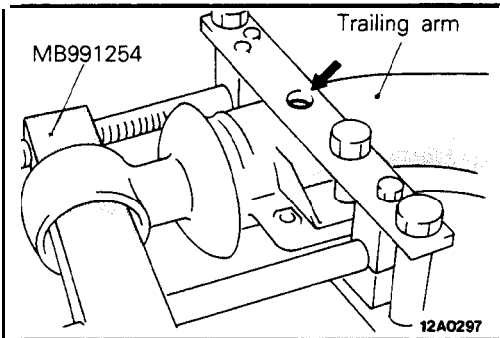
- (1) Apply lubricant to the sliding portion of the special tool (at the arrow marked "A" in the illustration).
- (2) Install bolt B to the trailing arm, at the point shown in the figure.
- (4) Use a spanner, etc., to turn the portion marked "C" in the illustration to remove the connecting rod.



- (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.

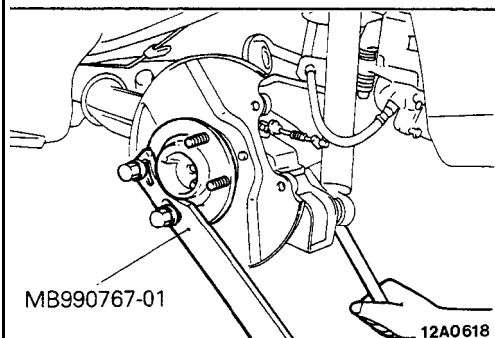
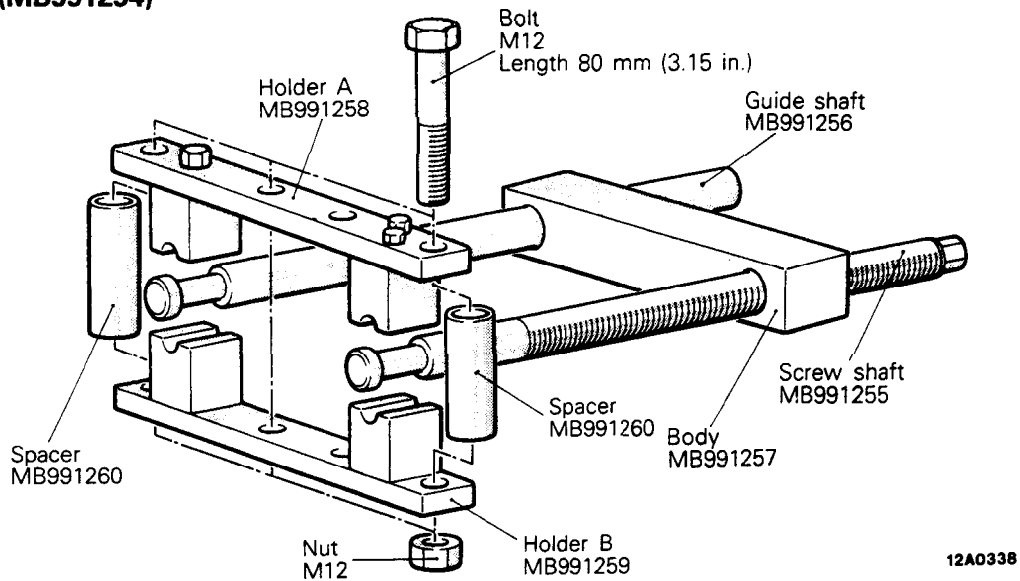
(9) Tighten the bolts and nuts to the specified torque.

Tightening torque: 85–110 Nm (61–80 ft.lbs.)

(10) Press fit the trailing arm bushing. (Refer to P.34-33.)

<Reference>

Special tool (MB991254)



SERVICE POINTS OF INSTALLATION

M34TDAA

9. INSTALLATION OF REAR AXLE SHAFT/6. COMPANION FLANGE/5. SELF LOCKING NUT

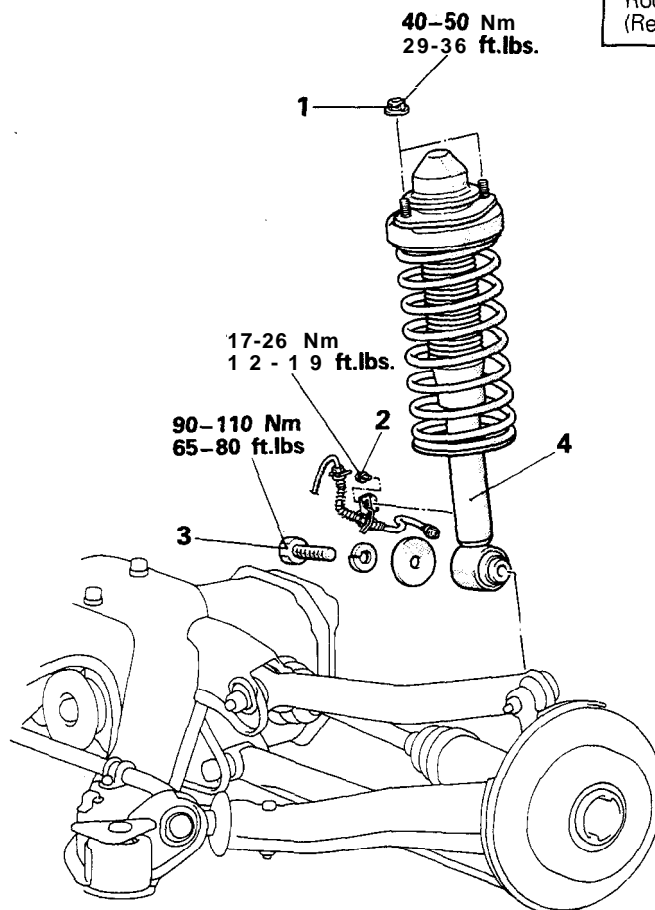
- (1) Temporarily assemble the rear axle shaft to the trailing arm.
- (2) Install the companion flange to the rear axle shaft, then install the self locking nut.
- (3) Hold the rear axle shaft with the special tool so that it doesn't turn and tighten the locking nut.

SHOCK ABSORBER ASSEMBLY

REMOVAL AND INSTALLATION

M34NA-B

Pre-removal and Post-installation Operation
 ● Removal and Installation of Trunk Room Trim
 (Refer to GROUP 52–Trims.)



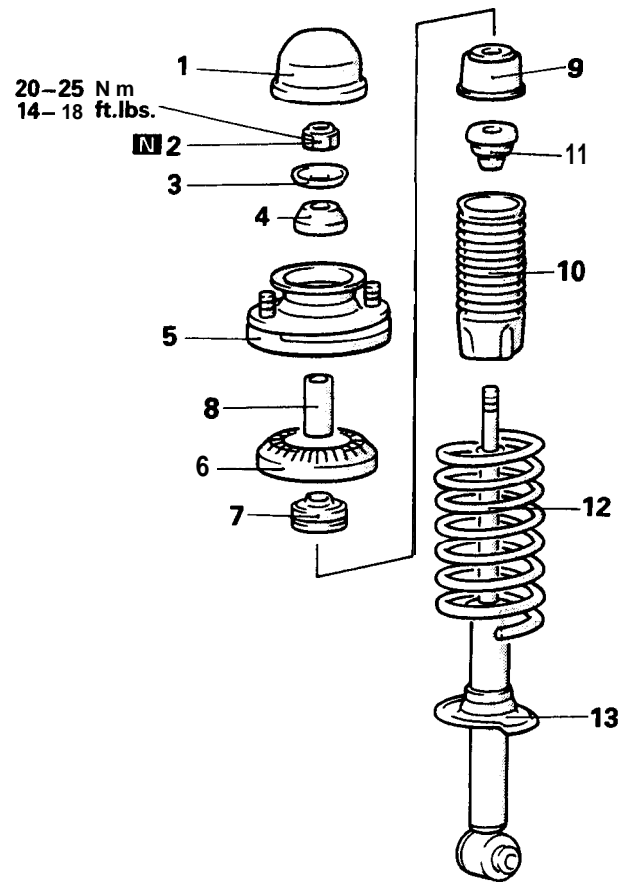
12A0383

Removal steps

1. Shock absorber upper installation nut
2. Brake tube bracket installation bolt
3. Shock absorber lower installation bolt
4. Shock absorber assembly

DISASSEMBLY AND REASSEMBLY

M34GM-B



Disassembly steps

1. Cap
2. Piston rod tightening nut
(Refer to P.34-13.)
3. Washer
4. Upper bushing (A)
5. Bracket assembly (Refer to P.34- 3.)
6. Spring pad
7. Upper bushing (B)
8. Collar
9. Cup assembly (Refer to P.34-13.)
10. Dust cover (Refer to P.34-13.)
11. Bump rubber
12. Coil spring (Refer to P.34-13.)
13. Shock absorber

12A0360

INSPECTION

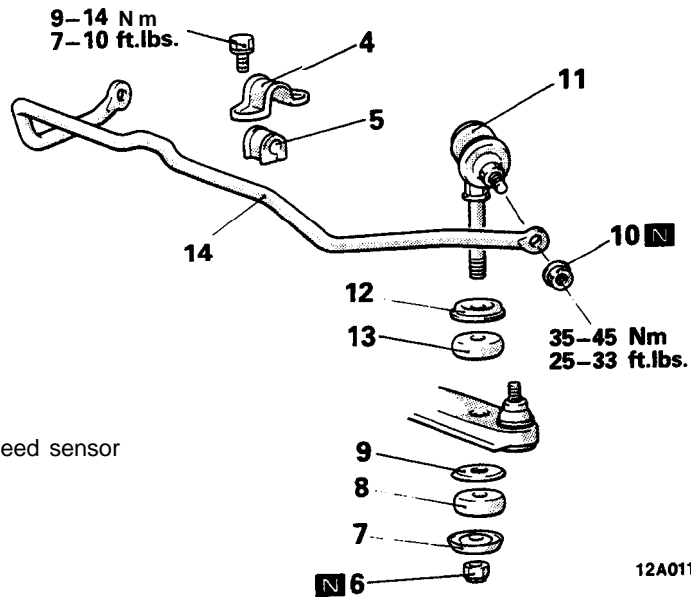
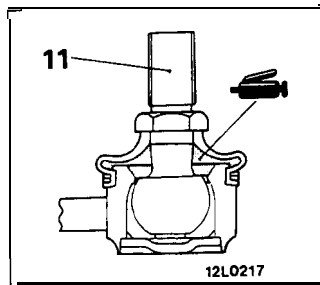
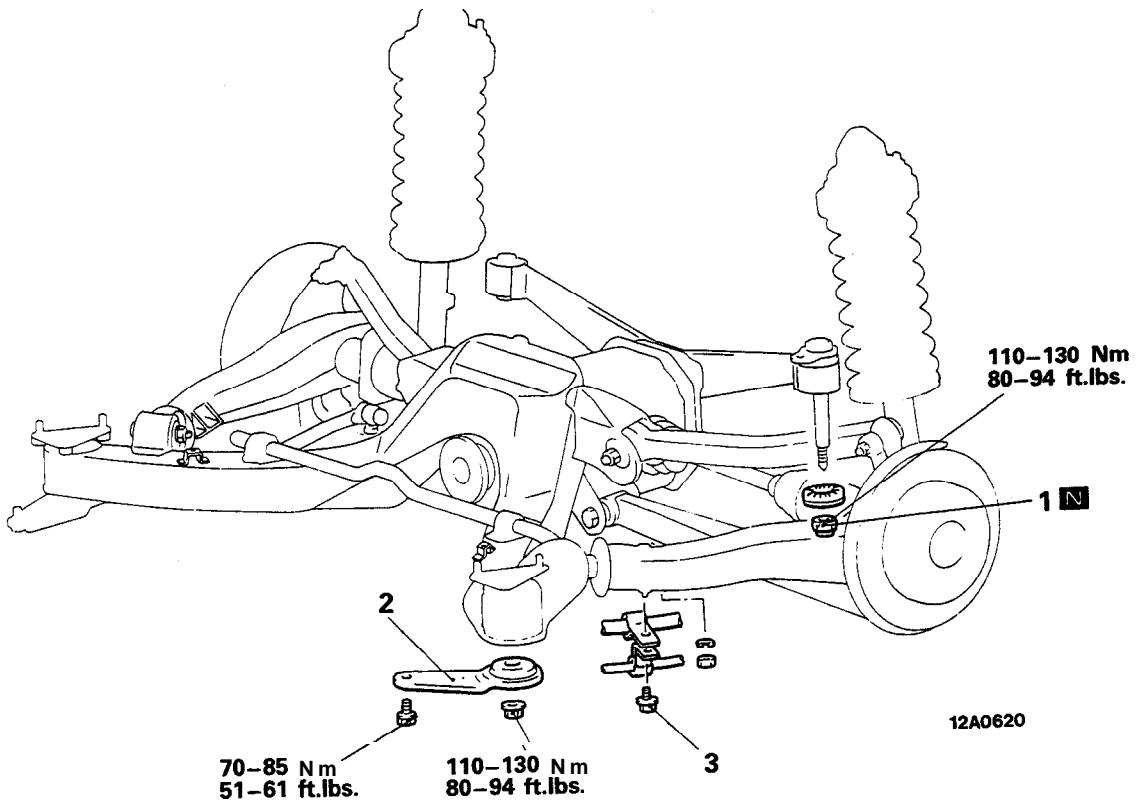
M34GOAB

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

STABILIZER BAR

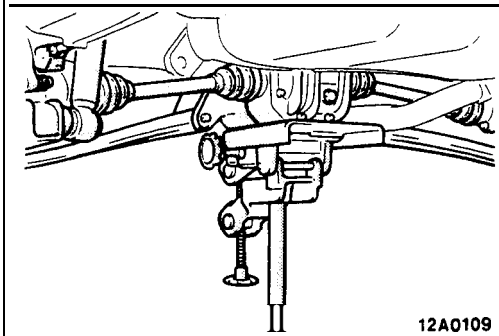
REMOVAL AND INSTALLATION

M34IA--

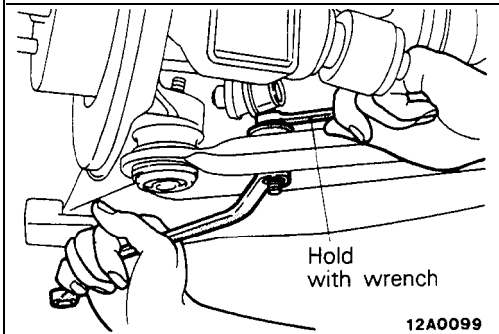


Removal steps

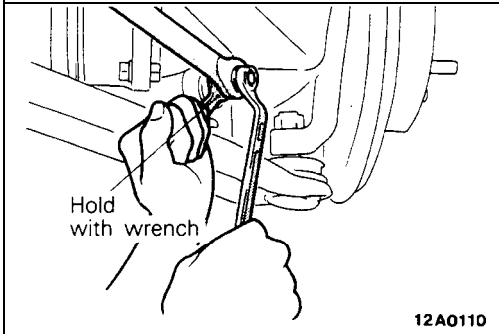
- ◄◄ 1. Self locking nut
- ◄◄ 2. Crossmember bracket
- ◄◄ 3. Parking brake cable and rear speed sensor installation bolt
- ◄◄ 4. Stabilizer bracket
- ◄◄ 5. Bushing
- ◄◄◄ 6. Self locking nut
- ◄◄◄ 7. Joint cup (A)
- ◄◄◄ 8. Stabilizer rubber
- ◄◄◄ 9. Joint cup (B)
- ◄◄◄◄ 10. Self locking nut
- ◄◄◄◄ + 11. Stabilizer link
- ◄◄◄◄ 12. Joint cup (A)
- ◄◄◄◄ 13. Stabilizer rubber
- ◄◄◄◄ 14. Stabilizer bar



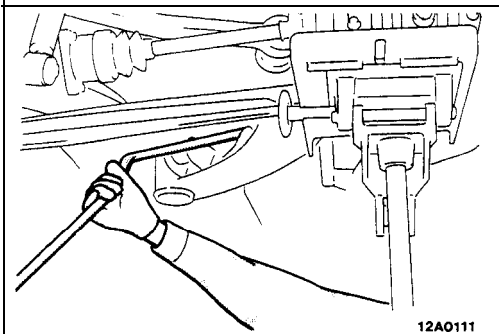
12A0109



12A0099



12A0110



12A0111

SERVICE POINTS OF REMOVAL

M34IDAB

**1. REMOVAL OF SELF LOCKING NUT/
2. CROSSMEMBER BRACKET**

- (1) Support the rear suspension assembly with a transaxle jack.
- (2) Remove the self locking nuts and crossmember brackets.

6. REMOVAL OF SELF LOCKING NUT

Hold the stabilizer link with a wrench, then remove the self locking nut.

10. REMOVAL OF SELF LOCKING NUT/ 1. STABILIZER LINK

- (1) Hold the stabilizer links with a wrench and remove the self locking nuts.
- (2) Remove the stabilizer links.

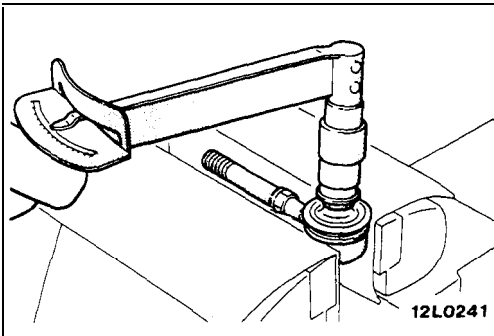
14. REMOVAL OF STABILIZER BAR

- (1) Lower the transaxle jack slightly, maintaining a gap between the rear suspension and the body.
- (2) Remove the stabilizer bar.

INSPECTION

M34TCAF

- 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

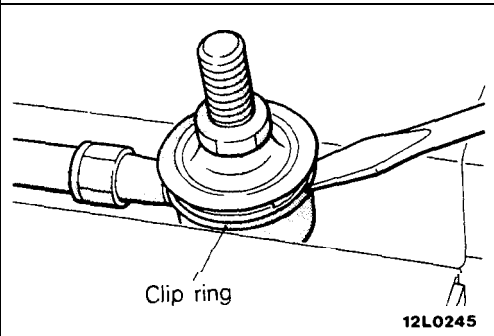
- (1) If a crack is noted in the dust cover, replace it, adding grease.
- (2) Deflect side to side the stabilizer link ball joint stud several times.
- (3) Mount two nuts on the ball joint, and then measure the ball joint starting torque.

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

- (4) If the starting torque exceeds the upper limit of standard value, replace the stabilizer link.
- (5) Even if the starting torque is below the lower limit of the standard value, the ball joint may be reused unless it has drag and excessive play.

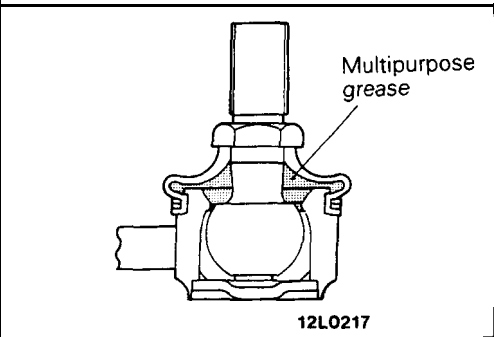
BALL JOINT DUST COVER REPLACEMENT M34KEAA

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



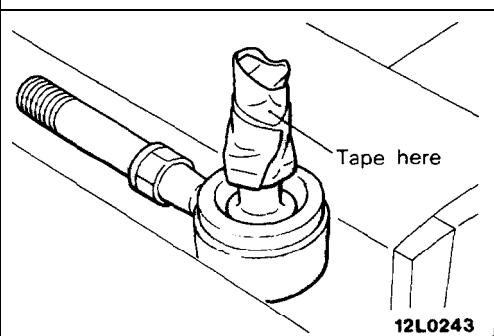
12L0245

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



12L0217

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



12L0243

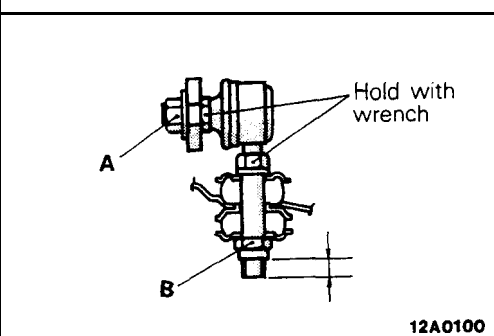
- (4) Secure the dust cover by the clip ring.

SERVICE POINTS OF INSTALLATION M34ICAD

11. INSTALLATION OF STABILIZER LINK/ 10. SELF LOCKING NUT/G. 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: 9-11 mm (.354–.433 in.)



12A0100

NOTES