Suspension System

GENERAL

SPECIFICATIONS EHNC0100

Front suspension system	Macpherson strut type
Shock absorber	
Type	Gas type
Stroke mm (in)	165.1 (6.5)
Damping force at 0.3 m/s	
Expansion N(kg)	1270 ± 190 (127 ± 19)
Compression N(kg)	410 ± 90 (41 ± 9)
I.D color	Green (CBS), Gray (ABS)

Coil spring free height and identification color

Model	Free height mm (in.)	I.D color
1.6L M/T (ALL)	334.4 (13.2)	White-1
1.6L A/T (ALL)	340.1 (13.4)	Green-2
1.8L M/T (ALL)	344.0 (13.5)	Blue-2
1.8L A/T (ALL)	348.6 (13.7)	Yellow-2

* M/T : With manual T/A
* A/T : With automatic T/A
* CBS : With conventional brake system
* ABS : With Anti-lock Brake System

EHNC010A

Rear suspension system	Dual link
Shock absorber	
Type	Gas type
Stroke mm (in)	203.7 (8.02)
Damping force at 0.3 m/s	
Expansion N(kg)	720 ± 110 (72 ± 11)
Compression N(kg)	320 ± 70 (32 ± 7)
I.D color	Green (CBS), Gray (ABS)
Coil spring free height and identification color	
Free height mm(in.)	252.01 (9.92)
I.D color	Yellow-1

EHNC010B

SERVICE STANDARD EHNC0200

Standard value				
Toe-in mm (in.)		Front	-2 ~ +2 (-0.08 ~ ±0.08) (Max. difference between LH and RH : 1.5 mm)	
		Rear	4^{+3}_{-1} ($0.16^{+0.12}_{-0.04}$) (Max. difference between LH and RH : 2.5 ± 1mm)	
Camber		Front	0° ± 30′ (Max. difference between LH and RH : 0°30′)	
		Rear	-1° ± 30′ (Max. difference between LH and RH : 30′)	
Caster		Front	2°47′ ± 30′ (Max. difference between LH and RH : 0°30′)	
King pin angle		Front	12°12′ ± 30′	
King pin offset	mm (in.)	Front	-1.4 (0.055)	
Side slip	mm (in.)	Front	±3 (Front), 2-9 (Rear)	
Wheel and tire			185/65 R14, 195/55 R15, 205/55/R15	
Wheel type			[Steel wheel]	[Aluminum wheel]
Wheel size			5.5J x 14, 5.5J x 15	5.5J x 15, 6.0J x 15
Tire size			185/65 R14, 195/55 R15, 205/55 R15	
Tire inflation pressure	kg·cm² (PSI)		$2.0^{+0.07}_{0}$ (30^{+1}_{0})	
Temporary spare tire				
Wheel size			3.5J x 15	
Tire size			T115/70 R15, T115/70 D15	
Tire inflation pressure	kg·cm² (PSI)		4.2 (60)	

EHNC020A

LUBRICANTS EHDA1300

In ball joint of lower arm	Variant R-2 grease or poly lub gly 801 K	As required
In insulator bearing of strut	SAE J310a, Chassis grease (NLGI No.0 or equivalent)	As required

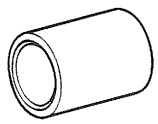
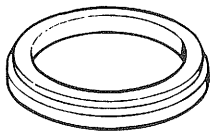
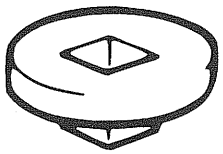
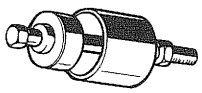
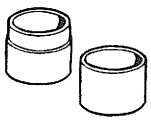
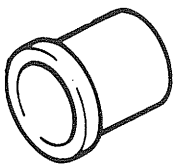
TIGHTENING TORQUE EHNC0300

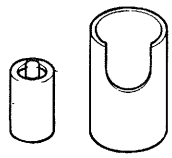
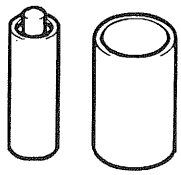
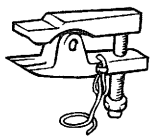
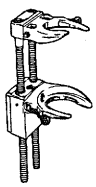
Items	Nm	kgf·cm	lb·ft
Wheel nut	90-110	900-1100	67-82
Driveshaft nut	200-260	2000-2600	148-192
Strut upper installation nut	40-50	400-500	29-37
Strut assembly to knuckle	110-130	1100-1300	81-96
Strut mounting self-locking nut	50-70	500-700	37-51
Lower arm ball joint to knuckle	60-72	600-720	43-52
Lower arm bushing (A) mounting bolt	95-120	950-1200	70-88
Lower arm bushing (G) mounting bolt	130-150	1300-1500	96-111
Crossmember mounting bolt/nut	160-180	1600-1800	118-133
Stabilizer bar bracket mounting bolt	17-26	170-260	13-19
Stabilizer link nut	35-45	350-450	26-33
Tie rod end ball joint to knuckle	16-34	160-340	12-25
Tie rod end lock nut	50-55	500-550	37-41
Rear strut upper mounting nut	30-40	300-400	22-29
Rear strut lower mounting nut	110-130	1100-1300	81-96
Rear strut mounting self locking nut	40-55	400-550	29.6-40.7
Rear stabilizer link to stabilizer bar	35-45	350-450	26-33
Rear stabilizer bar bracket bolt	17-26	170-260	13-19
Rear suspension arm tie rod nut	50-60	500-600	37-43
Rear suspension arm to rear axle carrier mounting nut	130-150	1300-1500	96-110
Rear suspension arm to rear crossmember mounting nut	110-130	1100-1300	81-96
Rear crossmember mounting bolt	100-120	1000-1200	74-88
Trailing arm to bracket nut	40-50	400-500	30-37
Trailing arm bracket to body frame	40-50	400-500	30-37

⚠ ***CAUTION***

Replace the self-locking nuts with new ones after removal.

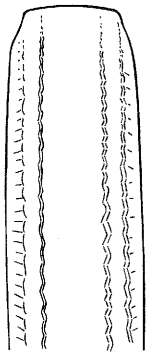
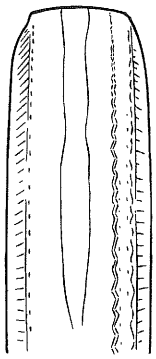
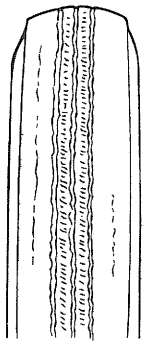
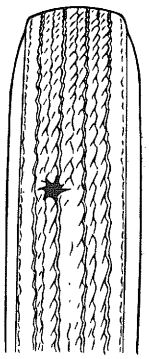
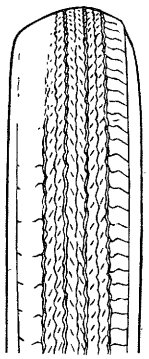
SPECIAL TOOLS EHKB0040

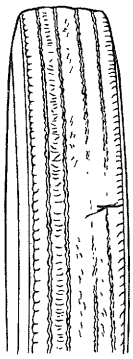
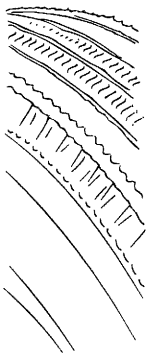
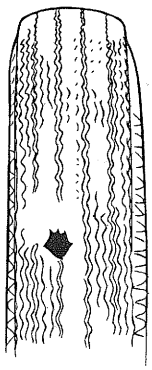
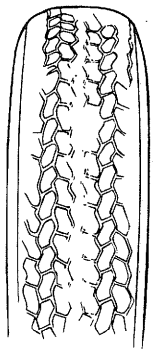
Tool (Number and Name)	Use	Illustration
09216-21100 Mount bushing remover and installer	 EHDA140A	Removal & installation of lower arm bushing (G) (Use with 09216-21200, 09545-02000)
09216-21200 Mount bushing remover and installer base	 B1621200	Removal & installation of the lower arm bushing (G) (Use with 09216-21100, 09545-02000)
09532-11600 Preload socket	 EHDA140C	Measurement of the lower arm ball joint & stabilizer link starting torque
09545-02000 Lower arm bushing remover and installer	 EHDA140D	Removal & installation of the lower arm bushing (G) (Use with 09216-21100, 09216-21200)
09545-11000 Ball joint remover and installer	 E4511000	Installation of the lower arm ball joint
09545-21100 Ball joint dust cover installer	 EHDA140E	Installation of the lower arm ball joint dust cover

Tool (Number and Name)	Use	Illustration
09551-25000 Trailing arm bushing remover and installer	 EHDA140G	Removal & installation of the trailing arm bushing
09551-25000 Rear suspension arm remover and installer	 EHDA140H	Removal & installation of the rear suspension arm bushing (Use with 09545-28100)
09568-34000 Ball joint puller	 EHDA140I	Separation of the lower arm ball joint
A-20 Strut compressor adapter	 EHDA140J	Compression of the rear coil spring (Use with J38402)
A-42 Strut compressor adapter	 EHDA140J	Compression of front coil spring (Use with J38402)
J38402 Strut spring compressor	 EHDA140K	Compression of the front & rear coil spring (Use with A-42 or A-20)

TROUBLESHOOTING EHDA1500

Symptom	Possible cause	Remedy
Hard steering	Improper front wheel alignment	Correct
	Excessive turning resistance of lower arm ball joint	Replace
	Low tire pressure	Adjust
	No power assist	Repair and replace
Poor return of steering wheel to center	Improper front wheel alignment	Correct
Poor or rough ride	Improper front wheel alignment	Correct
	Malfunctioning shock absorber	Repair or replace
	Broken or worn stabilizer	Replace
	Broken or worn coil spring	Replace
	Worn lower arm bushing	Replace the lower arm assembly
Abnormal tire wear	Improper front wheel alignment	Correct
	Improper tire pressure	Adjust
	Malfunctioning shock absorber	Replace
Wandering	Improper front wheel alignment	Correct
	Poor turning resistance of lower arm ball joint	Repair
	Loose or worn lower arm bushing	Retighten or replace
Vehicle pulls to one side	Improper front wheel alignment	Correct
	Excessive turning resistance of lower arm ball joint	Replace
	Broken or worn coil spring	Replace
	Bent lower arm	Repair
Steering wheel shimmy	Improper front wheel alignment	Correct
	Poor turning resistance of lower arm ball joint	Replace
	Broken or worn stabilizer	Replace
	Worn lower arm bushing	Replace
	Malfunctioning shock absorber	Replace
	Broken or worn coil spring	Replace
Bottoming	Broken or worn coil spring	Replace
	Malfunctioning shock absorber	Replace

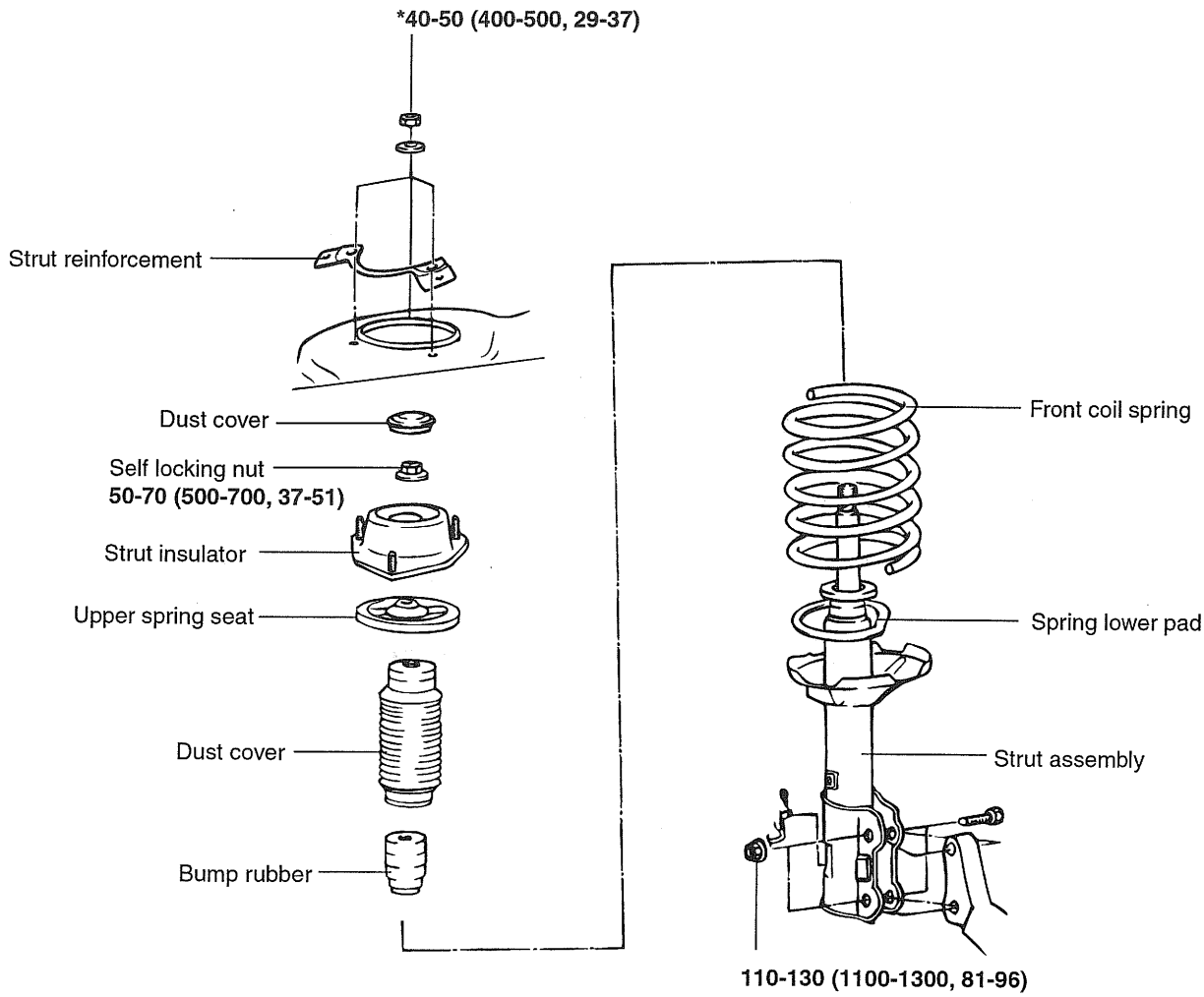
WHEEL AND TYPE DIAGNOSIS				
CENTER OF TREAD WORN		BOTH SIDES OF TREAD WORN	CHUNKING OF TIRE	ONE SIDE OF TIRE WORN
 EHDA150A	 EHDA150B	 EHDA150C	 EHDA150D	 EHDA150E
Over-Inflation	Center-tread down to fabric due to excessive over-Inflation	Under-Inflation Bulge at the shoulder Rapid wear	When a patch of tread has loosened, torn off the tire by centrifugal force at high speed	Incorrect camber angle

WHEEL AND TYPE DIAGNOSIS				
FLAT SPOT	FEATHERING	BAD PLUGGING	UNEVEN TIRE WEAR	TOTALLY UNSAFE TIRE
 EHDA150F	 EHDA150G	 EHDA150H	 EHDA150I	 EHDA150J
Caused by heavy braking which makes the wheels lock and scrubs the tires along the road surface	Excessive toe-in toe-out	Using more than one plug distorts the tread, resulting in carcass failure	Bad wheel balance, fault in suspension, steering gear or bearing	Tread worn below the limit

FRONT SUSPENSION SYSTEM

STRUT ASSEMBLY

COMPONENTS EHNC0700



CAUTION
- **Components marked with * should be temporaily tightened, and then fully tightened with the vehicle on the ground in an unladen condition.**
- **Replace the self-locking nuts with new ones after removal.**

TORQUE : Nm (kgf·cm, lb·ft)

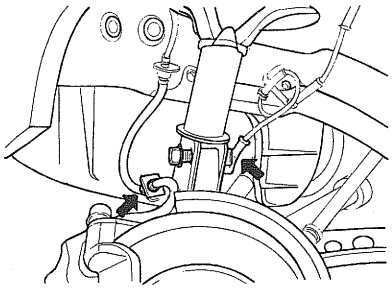
EFCSS01A

REMOVAL EHNC0800

1. Remove the front wheel.
2. Detach the brake hose bracket from the strut assembly.

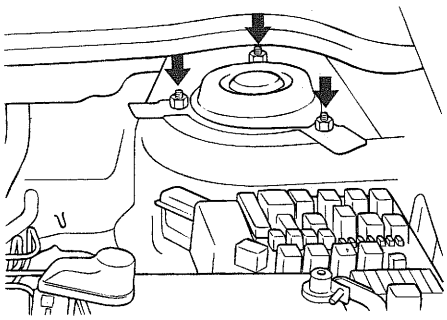
NOTE

Do not apply excessive force to the components.



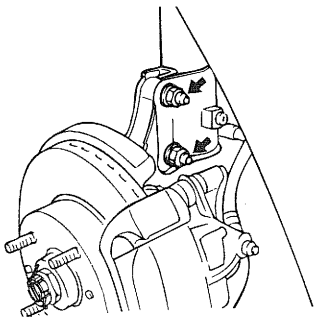
EIHA002A

3. Remove the wiper assembly, cowl top cover and cowl top under panel.
4. Remove the strut upper mounting bolts(3).



KFCSS02A

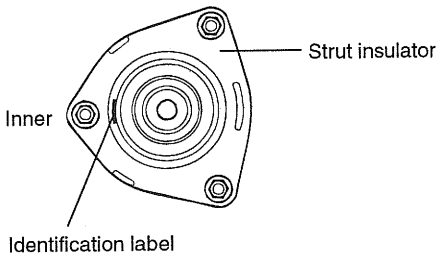
5. Remove the strut assembly.



EHDA201C

INSTALLATION EHNC0900

1. When installing the front strut, be sure to clear the conneting surface.
2. Install the strut assembly so the identification label on the strut insulator faces toward the inside of vehicle.



EFCSS03A

3. Tighten the components below to the specified torque as follows.

Items	Torque Nm (kgf·cm, lb·ft)
Front strut upper mounting nut	40-50 (400-500, 29-37)
Front strut to knuckle	110-130 (1100-1300, 81-96)

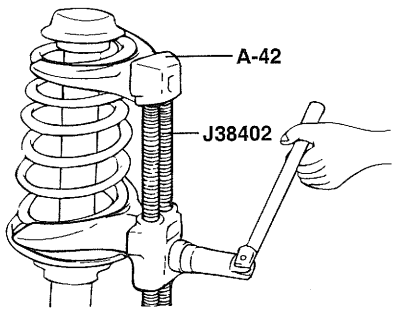
4. Install the brake hose and front wheel speed sensor wire on the front strut assembly.

DISASSEMBLY EHDA2020

1. Remove the dust cover with a flat-tip screw driver.
2. Using the Special Tools (J38402, A - 42), compress the coil spring until there is only a little tension on the strut.

NOTE

Do not use an impact gun.



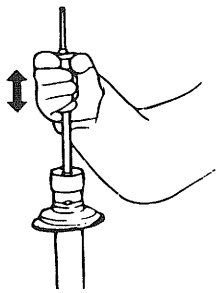
EHDA202A

3. Remove the nut at the top end of shock absorber.

4. Remove the insulator, spring seat, coil spring, dust cover from the strut assembly.

INSPECTION EHDA2030

1. Check the strut insulator bearing for wear or damage.
2. Check rubber parts for damage or deterioration.
3. Check the coil spring for sagging and weakness.
4. Check the shock absorber for abnormal resistance or unusual sound.



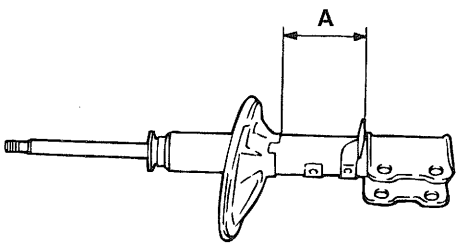
EHDA203A

DISPOSAL EHHA2050

1. Fully extend the shock absorber rod.
2. Drill a hole on the A section to remove gas from the cylinder.

CAUTION

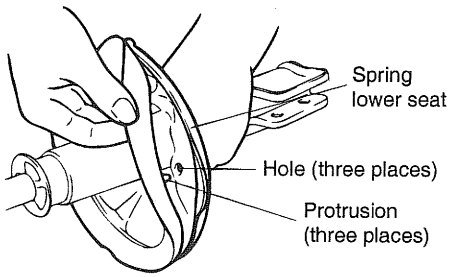
The gas coming out is harmless, but be careful of chips that may fly when drilling.



EHHA003A

REASSEMBLY EHNC1300

1. Install lower spring pad so that the protrusions fit in the holes of the spring lower seat.



EHDA204A

2. Install the dust cover on the shock absorber.
3. Using the Special Tools (J38402, A - 42), compress the coil spring.
   After the spring is fully compressed, install it on the shock absorber.

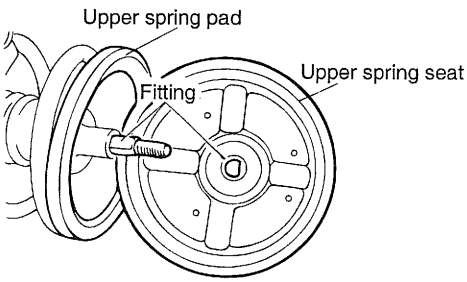
NOTE

Install the coil spring with the identification mark directed toward the knuckle.

4. After fully extending the piston rod, install the spring upper seat and insulator assembly.

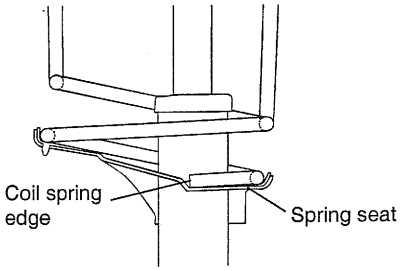
NOTE

Align the D-shaped hole in the spring seat upper assembly with the protrusion on the piston rod.



EHDA204B

5. After seating the upper and lower ends of the coil spring in the upper and lower spring seat grooves correctly, tighten the new self-locking nut temporarily.



ESMSS44A

6. Remove the Special Tools (J38402, A-42).
7. Tighten the self-locking nut to the specified torque.

Tightening torque
50-70 Nm (500-700 kgf·cm, 37-51 lb·ft)

8. Apply grease to the strut upper bearing and install the insulator cap.

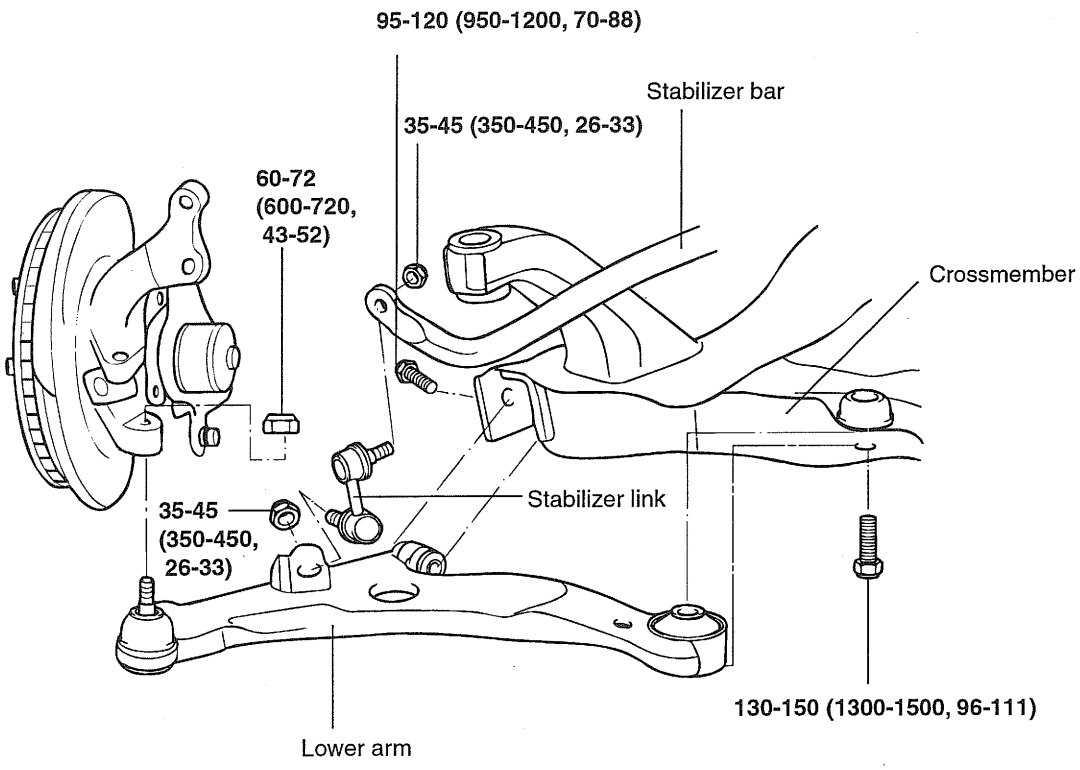
⚠ ***CAUTION***

When appling the grease, be careful so that it isn't smeared on the insulator rubber.

Recommended grease
Chassis grease NLGI No. 0 or equivalent

LOWER ARM

COMPONENTS EHNC1400

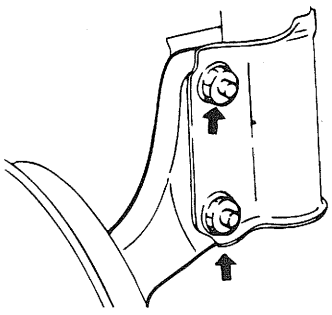


TORQUE : Nm (kgf·cm, lb· ft)

EFCSS04A

REMOVAL EHNC1500

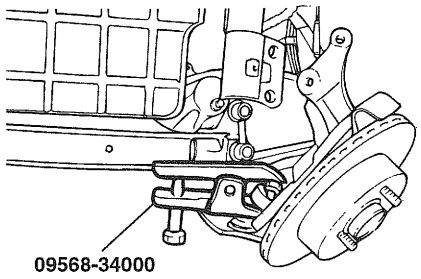
1. Remove the front wheel.
2. Remove the driveshaft split pin, nut and washer.
3. Loosen the lower arm ball joint nut, but do not remove it.
4. Remove the strut lower mounting bolts(2).



S5SS012B

5. Push the axle hub toward the outside to disconnect the driveshaft from the axle hub.

6. Using the Special Tool (09568 - 34000), disconnect the lower arm ball joint from the lower arm.



EIDA401C

7. Temporary install the strut lower mounting bolt.

8. Remove the stabilizer link nut.

9. Remove the lower arm bushing (A) and bushing (G) mounting bolts(2).

10. Remove the lower arm assembly.

INSTALLATION EHNC1600

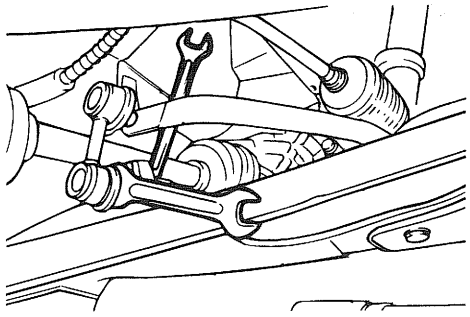
1. Installation is the reverse of removal.

   NOTE

   Tighten the components below to the specified torque as follows.

Items	Torque Nm (kgf·cm, lb·ft)
Wheel nut	90-110 (900-1100, 67-82)
Driveshaft nut	200-260 (2000-2600, 148-192)
Strut lower mounting	110-130 (1100-1300, 81-86)
Lower arm ball joint nut	60-72 (600-720, 43-52)
Lower arm bushing (A)	95-120 (950-1200, 70-88)
Lower arm bushing (G)	130-150 (1300-1500, 96-111)
Stabilizer link nut	35-45 (350-450, 26-33)

2. Secure the stabilizer link with an open-end wrench (14 mm or 9/16 in.), then install the self locking nut.

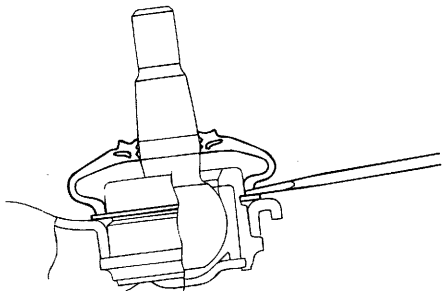


EHDA252A

REPLACEMENT EHNC1700

BALL JOINT AND DUST COVER

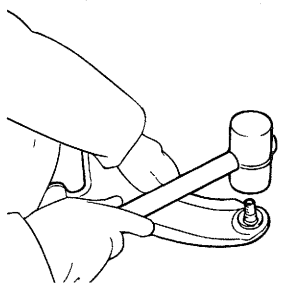
1. Using a flat-tipped screwdriver, remove the dust cover from the lower arm ball joint.



EHDA253D

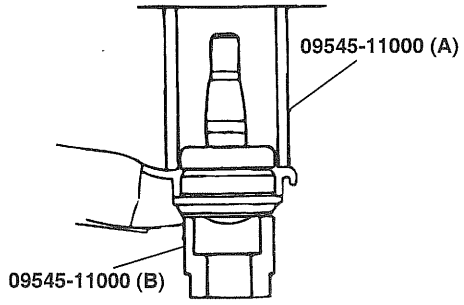
2. Remove the snap ring.

3. Using a plastic hammer, tap the ball joint out of the lower arm.



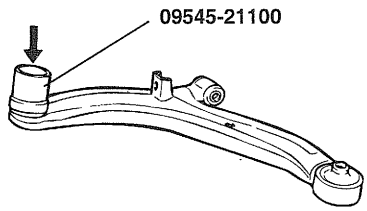
EHDA253A

4. Using Special Tool (09545 - 11000), press-fit the ball joint into the lower arm assembly.



EHDA253E

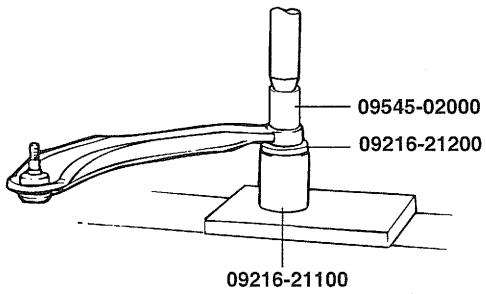
5. Install the snap ring.
6. Using the Special Tool (09545 - 21100), install the dust cover.



EHDA253B

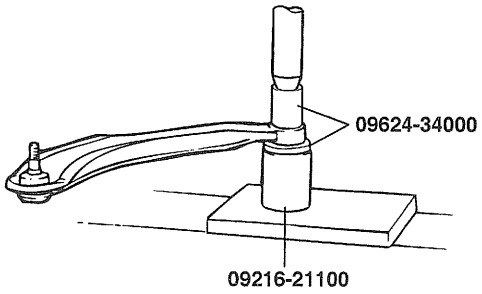
LOWER ARM BUSHING (G)

1. Install the Special Tools (09545 - 02000, 09216 - 21200 and 09216 - 21200) on the lower arm.
2. Press out the bushing.



KXDSS06A

3. Apply soap solution to the following parts.
   - Outer surface of the bushing
   - Inner surface of the lower arm bushing mounting part.
4. Install the new bushing on the lower arm by using Special Tools (09216 - 21100, 09624 - 34000).



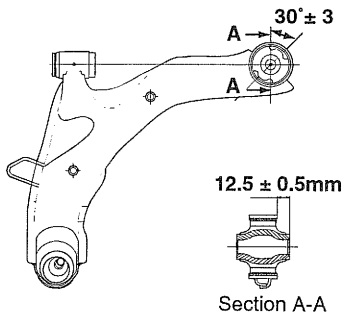
EHKB011A

NOTE

Press-in the lower arm bushing (G) in the same direction as shown in illustration.

Pull out force for the bushing :

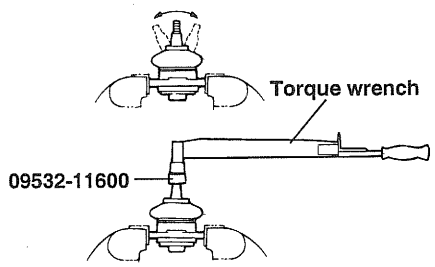
80 N [800 kg(f), 11.9 lb(f)] or more



EFCSS05A

INSPECTION EHNC1800

1. Check the bushing for wear and deterioration.
2. Check the lower arm for bending or breakage.
3. Check the ball joint dust cover for cracks and damage.
4. Check all bolts for damage and deformation.
5. Check the lower arm ball joint for rotating torque.



EXDSS85A

- If there is a crack in the dust cover, replace the ball joint assembly.
- Shake the ball joint stud several times.
- Measure the balll joint rotating torque.

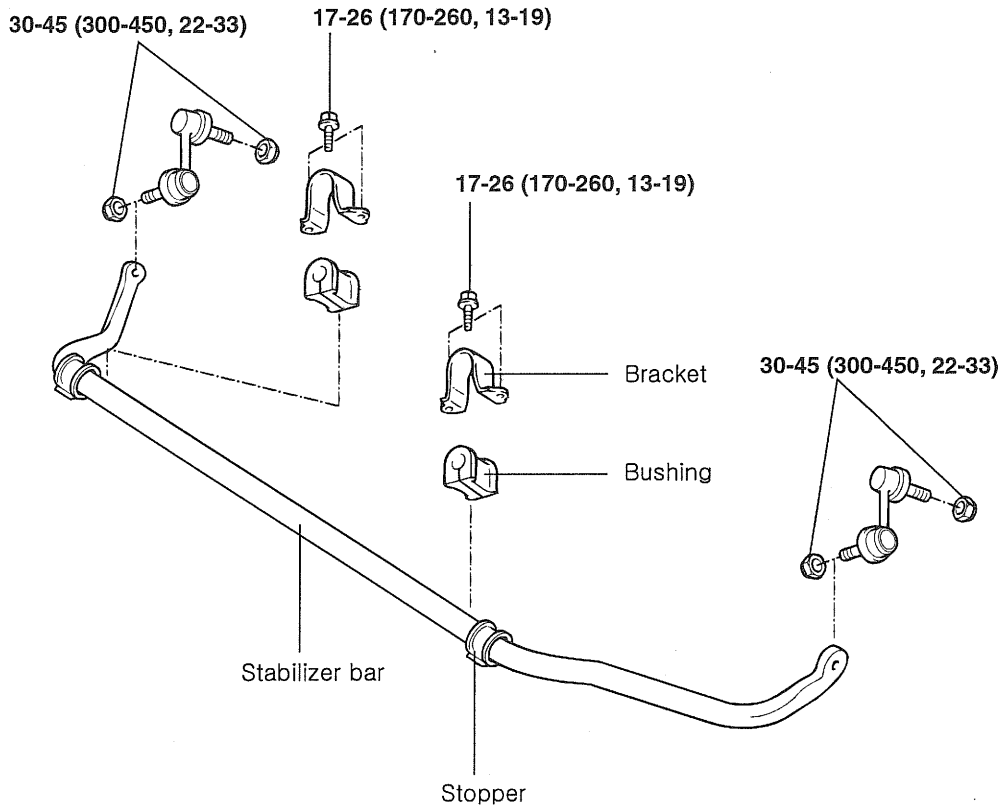
Standard value

3.5-10 Nm (35-100 kgf·cm, 2.6-7.4 lb·in)

- If the rotating torque is above the upper limit of the standard value, replace the ball joint assembly.
- Even if the rotating torque is below the lower limit of the standard value, the ball joint may be reused unless it has drag and excessive play.

FRONT STABILIZER BAR

COMPONENTS EHNC1900

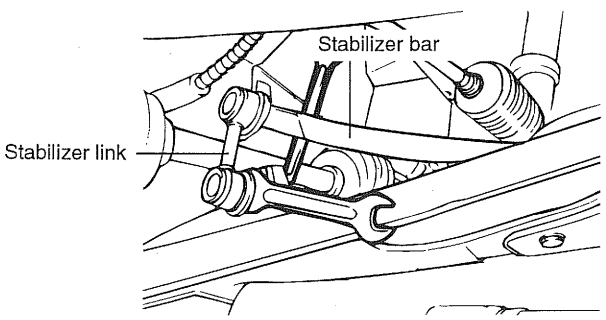


TORQUE : Nm (kgf·cm, lb·ft)

EFCSS06A

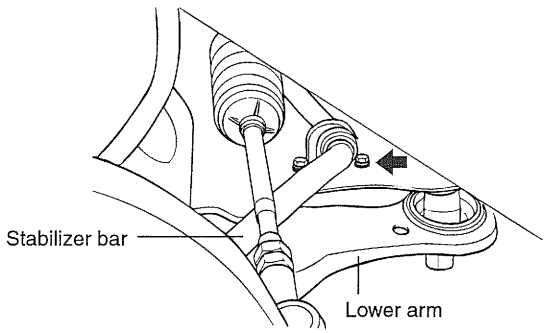
REMOVAL EHNC2000

1. Remove the front wheel.
2. Remove the stabilizer link assembly.



EFCSS45A

3. Remove the stabilizer bracket and bushing

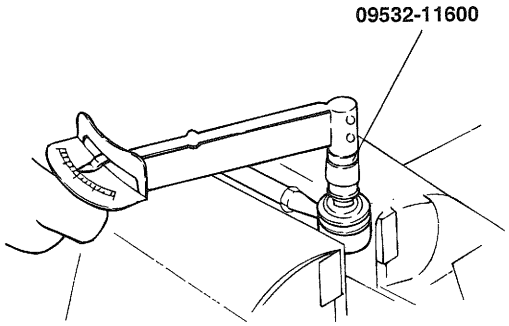


EFCSS07A

4. Remove the stabilizer bar.

INSPECTION EHNC2100

1. Check the stabilizer bar for deterioration and damage.
2. Check all bolts for damage and deformation.
3. Check the stabilizer link dust cover for cracks or damage.
4. Check the stabilizer link ball joint for rotating torque.



EHDA302A

- If there is a crack in the dust cover, replace it and add grease.
- Shake the stabilizer link ball joint stud several times.
- Mount the self-locking nut on the ball joint, and then measure the ball joint rotating torque.

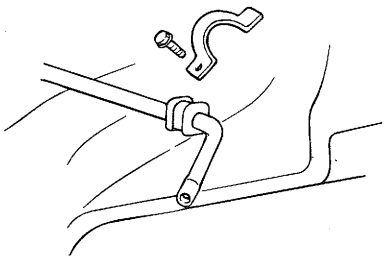
Standard value

0.7-2 Nm (7-20 kgf·cm, 6-18 lb·in.)

- If the rotating torque is higher than the upper limit of the standard value, replace the stabilizer link.
- If the rotating torque is below the lower limit of the standard value, the ball joint may be reused unless it has drag and excessive play.

INSTALLATION EHNC2200

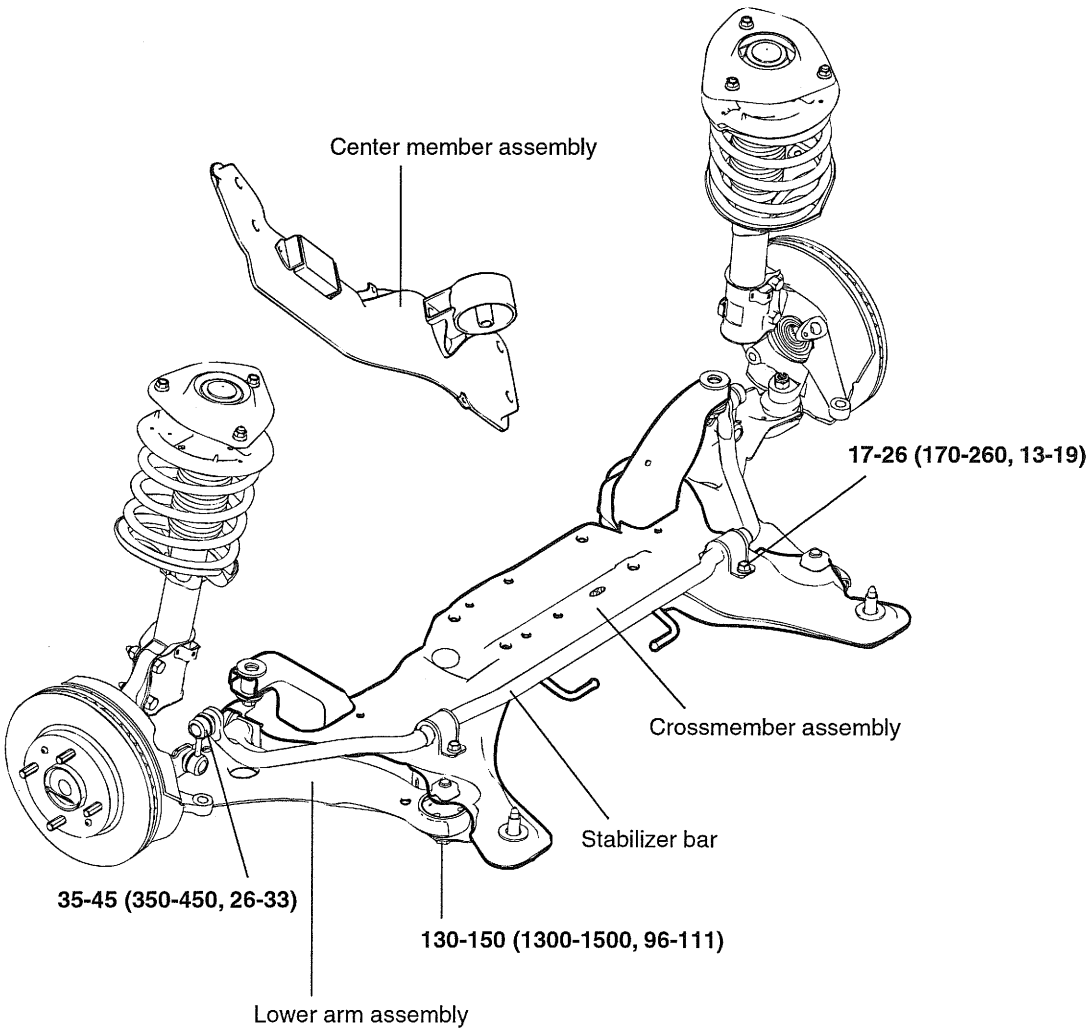
1. Install the bushing on the stabilizer bar.
2. Install the bracket on the bushing
3. Align and install the bushing with the white paint on the stabilizer bar. After tightening the bolts of the bushing bracket temporarily, install the bushing bracket on the opposite side.



EHDA303B

CROSS MEMBER

COMPONENTS EHNC2300

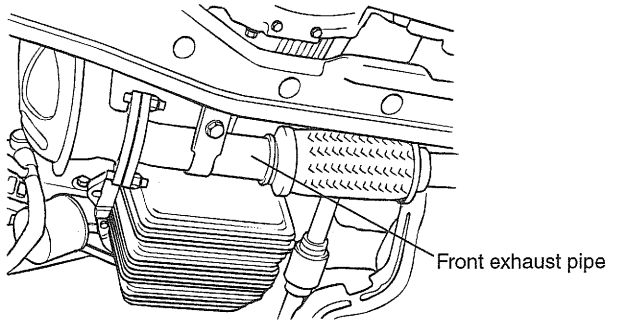


TORQUE : Nm (kgf·cm, lb· ft)

EFCSS08A

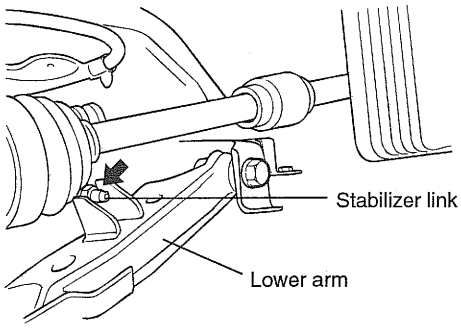
REMOVAL EHNC2400

1. Remove the front exhaust pipe.



EFCSS47A

2. Remove the under cover and the center member.
3. Remove the stabilizer link mounting nut.

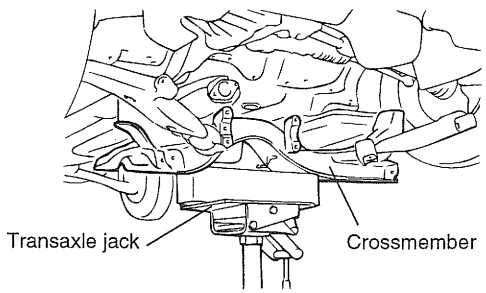


EFCSS09A

4. Remove the lower arm bushing mounting bolts.
5. To make it easier to remove the crossmember, remove steering gear box mounting bolts, and then support the steering gear and linkage on the vehicle.
6. Remove the lower arm bushing mounting bolts.

NOTE

After support the center of the crossmember assembly with a jack, remove the crossmember mounting bolts to the body.



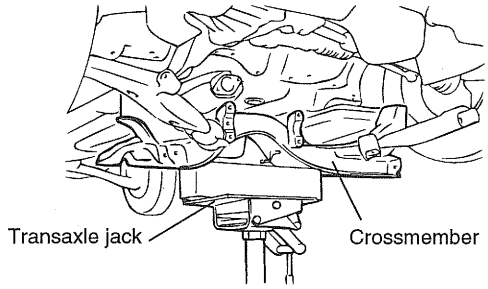
EHNB390A

INSPECTION EHNC2500

1. Check the crossmember for cracks or deformation.
2. Check the centermember for cracks or deformation.
3. Check each insulator and bushing for cracks or deterioration.

INSTALLATION EHNC2600

1. Install the crossmember while supporting it with a jack.



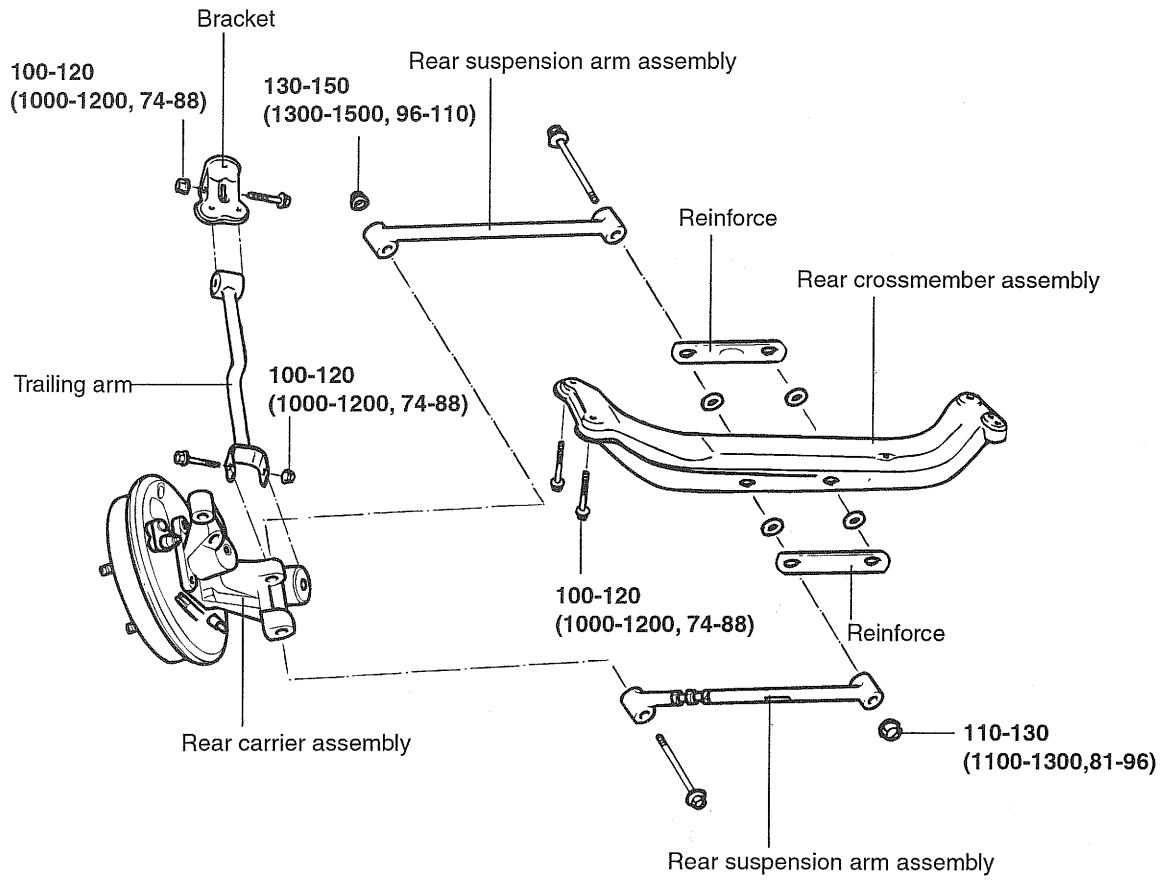
EHNB390A

2. Install steering gear box assembly and stabilizer bar link to the vehicle.
3. Install lower arm bushing mounting bolts and nuts.
4. Install the center member assembly and the under cover.
5. Temporarily tighten the front roll stopper bracket bolt. After the total weight of the engine has been placed on the vehicle body, securely tighten the nut.

Items	Torque Nm (kgf·cm, lb·ft)
Center member mounting bolt	45-64 (450-640, 33-47)
Front roll stopper bracket to center member bolt	45-64 (450-640, 33-47)
Crossmember to body mounting	160-180 (1600-1800, 118-133)

REAR SUSPENSION SYSTEM

COMPONENTS EHNC2700

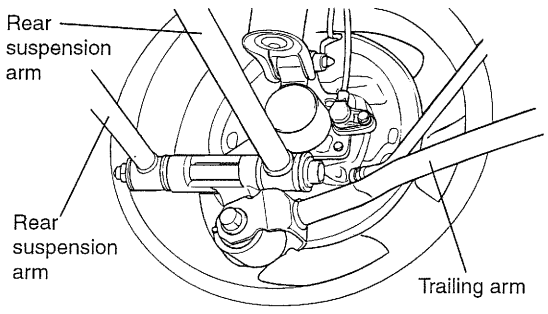


TORQUE : Nm (kgf·cm, lb· ft)

EFCSS16A

REMOVAL EHNC2800

1. Remove the wheel and tire.
2. Remove the stabilizer link.
3. After loosening the rear trailing arm mounting bolts, remove the trailing arm.
4. Remove the rear suspension arm mounting bolt from the rear axle carrier.
5. After supporting the center of the rear crossmember assembly with a jack, remove the rear crossmember mounting bolts to the body.



EFCSS25A

6. Remove the rear crossmember and suspension arm.

INSPECTION EHNC2900

1. Check the rubber parts for damage or deterioration.
2. Check the trailing arm and suspension arm for bent or deterioration.
3. Check the bolts for damage or rust.

INSTALLATION EHNC3000

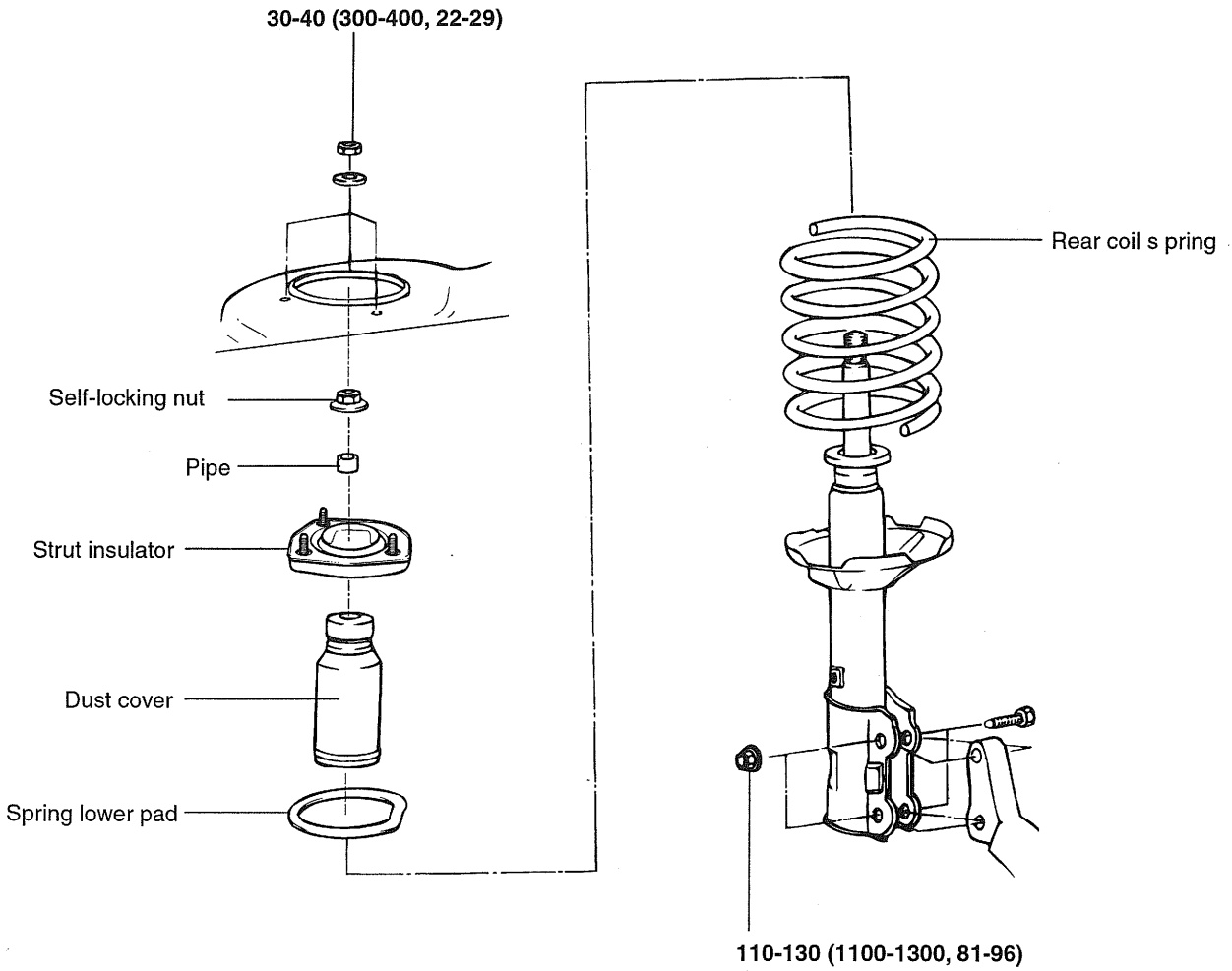
1. Installation is the reverse of removal.
2. Tighten the components below to the specified torque as follows.

Items	Torque Nm (kgf·cm, lb·ft)
Trailing arm mounting	100-120 (1000-1200, 74-88)
Trailing arm bracket mounting	40-50 (400-500, 29-37)
Stabilizer bar bracket mounting	17-26 (170-260, 13-19)
Stabilizer link nut	34-45 (340-450, 25-33)
Rear suspension arm to axle carrier mounting	130-150 (1300-1500, 96-110)
Rear suspension arm to crossmember mounting	110-130 (1100-1300, 81-96)
Rear crossmember mounting	100-120 (1000-1200, 74-88)

* Should be temporaily tightened, and then fully tightened with the vehicle on the ground in an unladen condition.

REAR STRUT

COMPONENTS EHNC3100



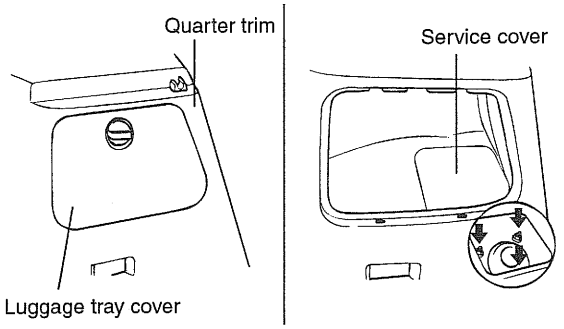
Caution
*** Replace the self-locking nuts with new ones after removal.**

TORQUE : Nm (kgf·cm, lb·ft)

EFCSS12A

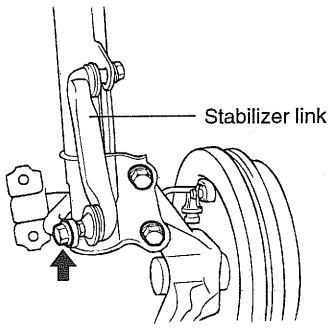
REMOVAL EHNC3200

1. Remove the wheel and tire.
2. Remove the luggage tray cover from the quarter trim and pry the service cover loose with a (-) screwdriver.



EFCSS30A

3. Remove the rear strut upper mounting nuts (3).
4. Disconnect the brake hose and wheel speed sensor wiring from the rear strut.
5. Remove the stabilizer bar link.



EFCSS14A

6. Remove the strut and carrier mounting bolts(2).

CAUTION

Be careful not to drop the rear strut.

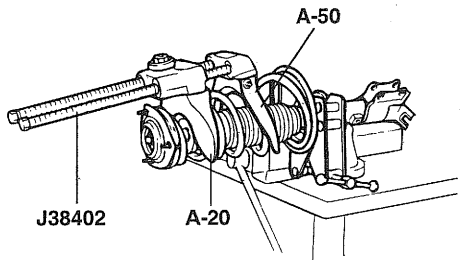
7. Remove the rear strut assembly.

DISASSEMBLY EHNC3300

1. Using the Special Tools (J38402, A - 20 and A - 50), compress the coil spring until there is only a little tension on the strut.

NOTE

Do not use an impact gun.

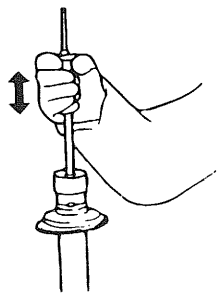


EHDA602A

2. Remove the self-locking nut at the top end of the shock absorber.
3. Remove the insulator, coil spring and dust cover from strut assembly.

INSPECTION EHKB0177

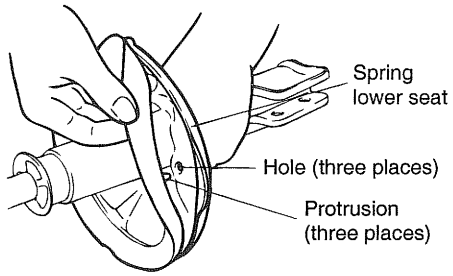
1. Check the strut insulator for wear or damage.
2. Check rubber parts for damage or deterioration.
3. Check the coil spring and strut assembly for sagging and deformation.
4. Check the shock absorber for abnormal resistance or unusual sound.



EHDA603B

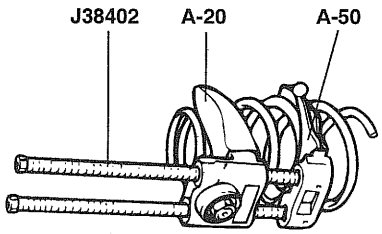
REASSEMBLY EHNC3500

1. Install the lower spring pad so that the protrusions fit in the holes in the spring lower seat.



EHDA604A

2. Install the dust cover on the shock absorber.
3. Using the Special Tools (J38402, A - 20 and A - 50), compress the coil spring.

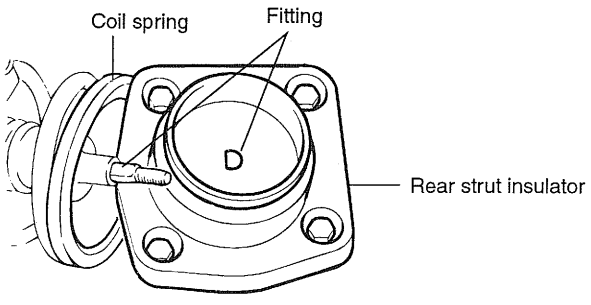


EHDA604C

4. After extending the piston rod fully, install the insulator assembly and pipe.

NOTE

Align the D-shaped hole in the spring seat upper assembly with the protrusion of the piston rod.

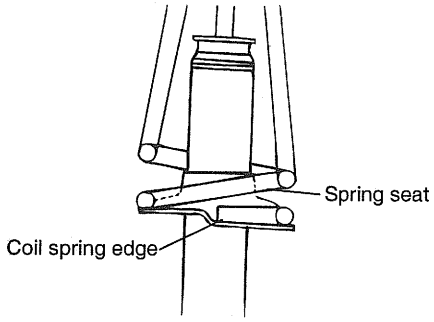


EFCSS15A

5. After seating the lower ends of the coil spring in the lower spring seat grooves correctly, tighten the new self-locking nut temporarily.

CAUTION

Replace the self-locking nut with new ones after removal.



EHDA604B

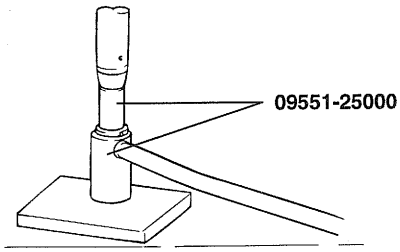
6. Remove the Special Tools (J38402, A - 20 and A - 40).
7. Tighten the self-locking nut to the specified torque.

Tightening torque
40-55 Nm (400-550 kgf·cm, 29.6-40.7 lb·ft)

TRAILING ARM

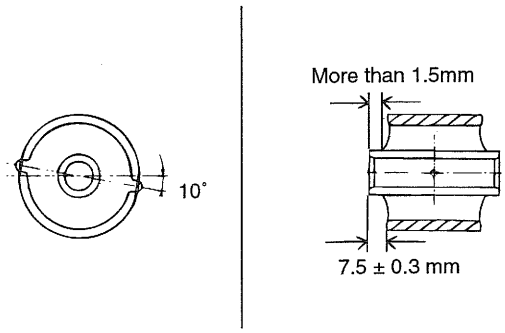
REPLACEMENT OF TRAILING ARM BUSHING EHNC3600

1. Install the special tool (09551 - 25000) on the trailing arm.



EHDA651A

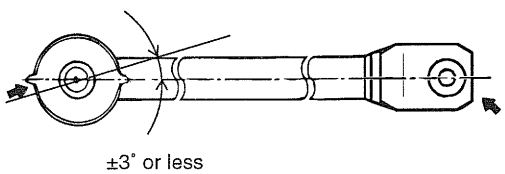
2. Remove the trailing arm bushing.
3. Using the special tool (09551 - 25000), press-fit the rear trailing arm bushing.



EFCSS46A

NOTE

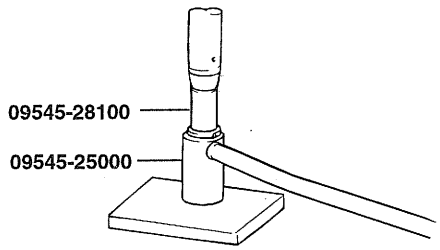
Press-fit the bushing in the same way as shown in the illustration.



EFCSS17A

REPLACEMENT OF REAR SUSPENSION ARM BUSHING EHKB0210

1. Install the special tools (09545 - 28100, 09545 - 25000) on the rear suspension arm.



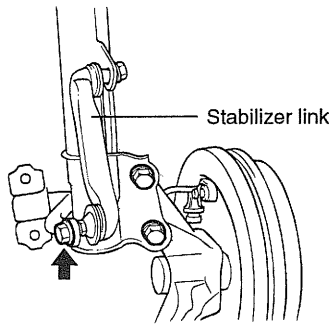
EHKB021A

2. Remove the rear suspension bushing.
3. Apply soap solution to the new bushing and the rear suspension arm.
4. Using the special tool (09552 - 25000), press-fit the the bushing.

REAR STABILIZER BAR

REPLACEMENT OF REAR STABILIZER BAR EHNC3700

1. Remove the stabilizer bar link from the rear strut assembly.

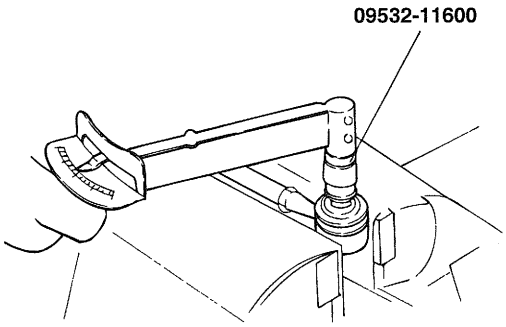


EFCSS14A

2. Remove the rear stabilizer bar mounting brackets.
3. Remove the stabilizer bar.

INSPECTION EHNC3800

Check the stabilizer link ball joint rotating torque.



EHDA653A

1. If there is a crack in the dust cover, replace it and add grease.
2. Shake the stabilizer link ball joint stud several times.
3. Mount the self-locking nut on the ball joint, and then measure the ball joint rotating torque.

Standard value

1.7-3.2 Nm (17-32 kgf·cm, 15-27 lb·in.)

4. If the rotating torque is above the upper limit of the standard value, replace the stabilizer link.
5. If the rotating torque is below the lower limit of the standard value, the ball joint may be reused unless it has drag and excessive play.

TIRES/WHEELS

TIRE

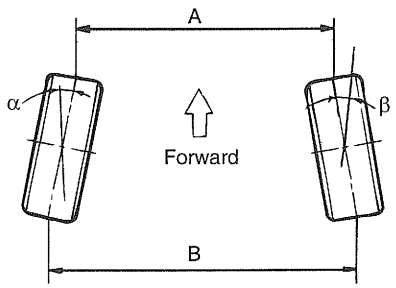
FRONT WHEEL ALIGNMENT EHNC3900

When using a wheel alignment tester to inspect the front wheel alignment, always position the car on a level surface with the front wheels facing straight ahead. Prior to inspection, make sure that the front suspension and steering system are in normal operating conditions and that the wheels and tires face straight ahead and the tires are inflated to the specified pressure.

TOE-IN

Toe-in (B-A or angle a+b) is adjusted by turning the tie rod turnbuckles. Toe-in on the left front wheel can be reduced by turning the tie rod toward the rear of the car. Toe-in change is adjusted by turning the tie rods for the right and left wheels simultaneously at the same amount as follows:

Standard value
Toe-in (B-A) mm (in.) : 0 ± 2 mm (0 ± 0.08 in.)

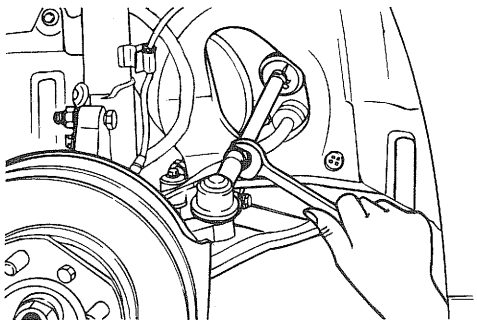


EHHA850A

NOTE

- *Toe-in adjustment should be made by turning the right and left tie rods at the same amount.*
- *When adjusting toe-in, loosen the outer bellows clip to prevent twisting the bellows.*
- *After the adjustment, tighten the tie rod end lock nuts firmly and reinstall the bellows clip.*
- *Adjust each toe-in to be the range of ±1mm*

Tightening torque
Tie rod end lock nuts :
50-55 Nm (500-550 kgf·cm, 37-41 lb·ft)



EHHA850B

CAMBER

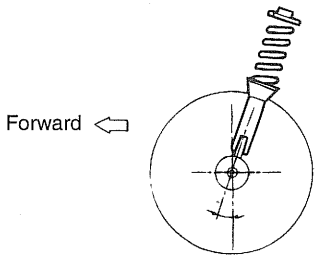
The steering knuckle which is installed with the strut assembly is pre-set to the specified camber at the factory and doesn't need to be adjusted.

Camber : 0°±30′

CASTER

Caster is pre-set at the factory and doesn't need to be adjusted. If the caster is not within the standard value, replace the bent or damaged parts.

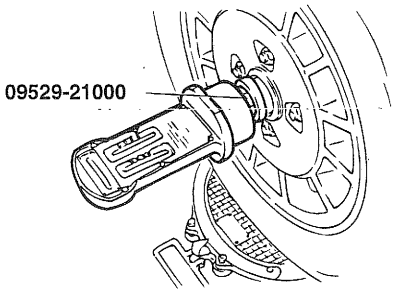
Caster : 2°47′±30′



EHHA850C

NOTE

1. *The worn loose or damaged parts of the front suspension assembly must be replaced prior to measuring front wheel alignment.*
2. *Measure the wheel alignment by using special tool (09529-21000).*
3. *Camber and caster are pre-set to the specified value at the factory and don't need to be adjusted.*
4. *If the camber and caster are not within specifications, replace bent or damaged parts.*
5. *The difference of left and right wheels about the camber and the caster must be within the range of 0° ± 30′.*



EHHA850D

REAR WHEEL ALIGNMENT

TOE-IN

Standard value : 4^{+3}_{-1} mm ($0.16^{+0.12}_{-0.04}$ in.)

EHKB023A

NOTE

- *Adjust the toe-in by turning the tie rod end of the rear suspension arm.*

Left tie rod : Clockwise direction : ton-in

Right tie rod : Clockwise direction : toe-out

A variation of toe by a rotation of the tie rod:

About 6mm (0.6°)

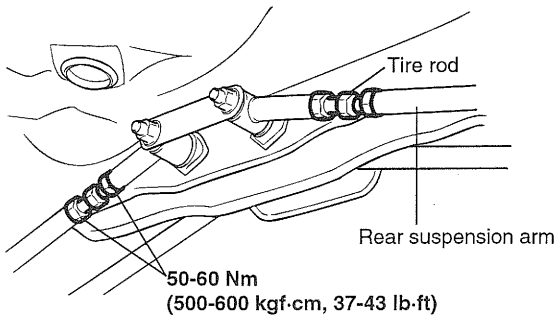
- *The cam bolt should be adjusted to a maximum of 90° left or right from the center position.*

CAUTION

After adjusting the tie rod, tighten both nuts to the specified torque.

Specified torque

50-60 Nm (500-600 kgf·cm, 37-43 lb·ft)



EXDSS13A

CAMBER

Camber is pre-set at the factory and doesn't need to be adjusted. If the camber is not within the standard value, replace the bent or damaged parts.

Camber : -1° ± 30′

TIRE WEAR

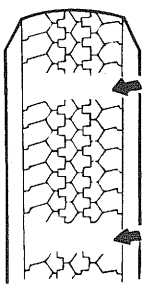
1. Measure the tread depth of the tires.

Tread depth of tire [Limit] : 1.6 mm (0.06 in.)

2. If the remaining tread depth is less than the limit, replace the tire.

NOTE

When the tread depth of the tires is less than 1.6 mm (0.06 in.) the wear indicators will appear.

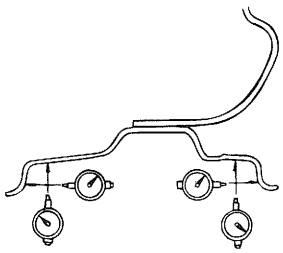


EHA9850E

WHEEL

WHEEL RUNOUT EHNC4000

1. Jack up the vehicle and support it with jack stands.
2. Measure the wheel runout with a dial indicator as illustrated.



EHDA852B

3. Replace the wheel if the wheel runout exceeds the limit.

Wheel runout [Limit]
Steel wheel
Radial : 0.6 mm (0.028 in.) : (Average of LH & RH)
Axial : 1.0 mm (0.039 in.)
Aluminum wheel
Radial : 0.3 mm (0.012 in.)
Axial : 0.3 mm (0.012 in.)

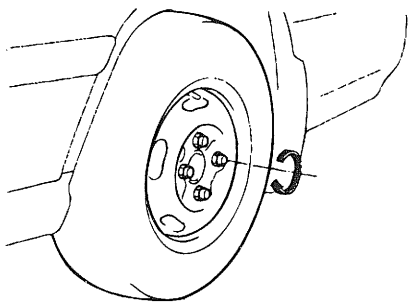
TIGHTENING WHEEL NUT

1. Tightening torque
   Steel and aluminum alloy wheel

Specified torque
90-110 Nm (900-1,100 kgf·cm, 65-80 lb·ft)

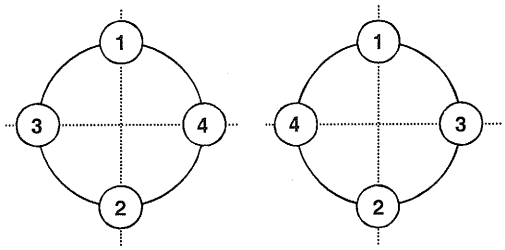
⚠ ***CAUTION***

When using an impact gun, final tightening torque should be checked using a torque wrench.



EHDA853A

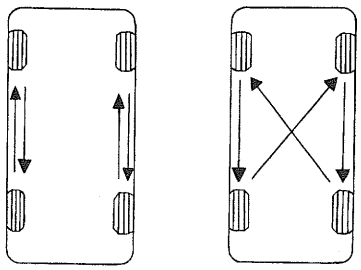
2. Tightening order
   Check the torque again after tightening the wheel nuts diagonally.



KXDSS51A

WHEEL ROTATION EHKB0244

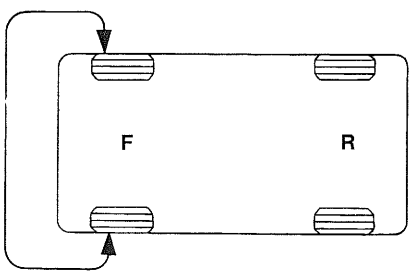
1. Rotate the tires in the pattern illustrated.



EHDA854A

CHECKING FOR PULL AND WANDER

1. If the steering pulls to one side, rotate the tires according to the following wheel rotation procedure.
   a. Rotate the front right and front left tires, and perform a road test in order to confirm vehicle stability.



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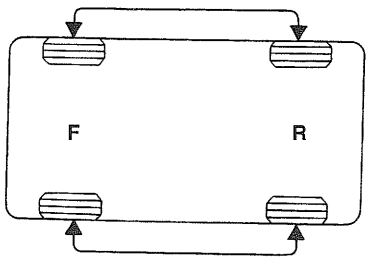
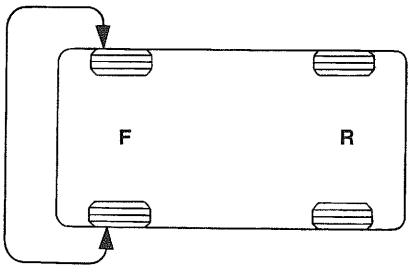
b. If the steering pulls to the opposite side, rotate the front and rear tires, and perform a road test again.



EHDA854C

c. If the steering continues to pull to one side, rotate the front right and left tires again, and perform a road test.



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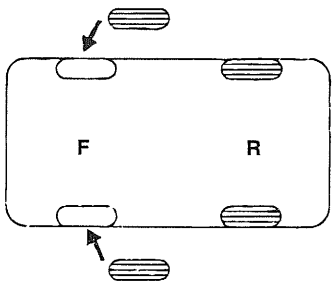
d. If the steering continues to pull to the opposite side, replace the front wheels with new ones.



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