Specification

Items		Inner side		Outer side	
Rear drive shaft	Joint type	TSJ		BJ	
	Max. permissible angle	28.5°		15°	
	Backlash	M/T : 0.4° below A/T : 0.6° below			
Differential	Oil type	Hypoid gear oil (API GL-5, SAE 75W/90)			
	Oil capacity (L)	About 1.4			
	Reduction gear type	Hypoid gear			
	Reduction gear ratio	Theta 2.0 AT	Theta 2.0 MT	Lambda 3.8 AT	Lambda 3.8 MT
		3.909		3.727	3.538
	Final drive gear backlash mm(in.)	0.10~0.15			

Tightening Torque

Items		Nm	Kgf.m	lb-ft
Front	Wheel nut	88.3~107.9	9~11	65.1~79.6
	Strut assembly lower mounting bolt	137.2~160	14~16	101.1~115.7
	Break caliper mounting bolt	49~58.8	5~6	36.1~43.3
	Wheel speed sensor mounting bolt	6.9~10.8	0.7~1.1	5.1~8.0
	Break disc mounting screw	4.9~5.9	0.5~0.6	3.6~4.3
	Hub assembly mounting bolt	78.5~98.1	8~10	57.9~72.3
	Lower arm ball joint mounting bolt	98.1~117.7	10~12	72.3~86.8
	Tie rod end ball joint mounting nut	78.4~88.2	8~9	57.8~65.0
Rear	Wheel nut	88.3~107.9	9~11	65.0~75.6
	Driveshaft castle nut	196.1~255.0	20~26	144.7~188.1
	Shock absorber upper mounting bolt	44.1~58.8	4.5~6	32.5~43.3
	Break caliper mounting bolt	49.1~58.8	5~6	36.1~43.4
	Wheel speed sensor mounting bolt	6.9~10.8	0.7~1.1	5.1~8.0
	Break disc mounting screw	4.9~5.9	0.5~0.6	3.6~4.3
	Hub assembly mounting bolt	78.5~88.3	8~9	57.9~65.1
	Upper arm ball joint mounting nut	98.1~117.7	10~12	72.3~86.8
	Lower arm mounting bolt	137.3~156.9	14~16	101.3~115.7
	Assist arm ball joint mounting nut	98.1~117.7	10~12	72.3~86.8
	Trailing arm mounting bolt	98.1~117.7	10~12	72.3~86.8

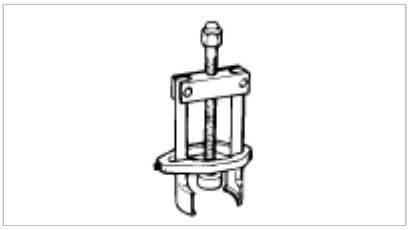
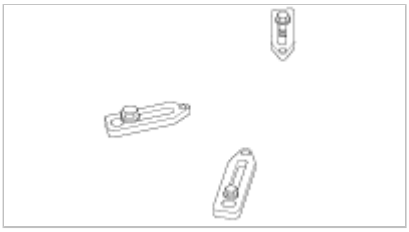
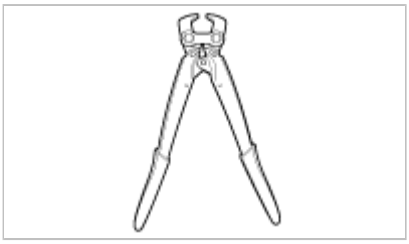
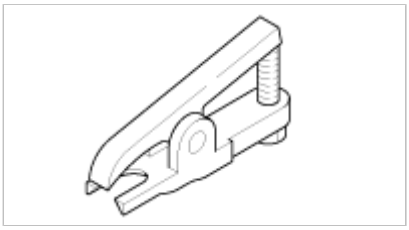
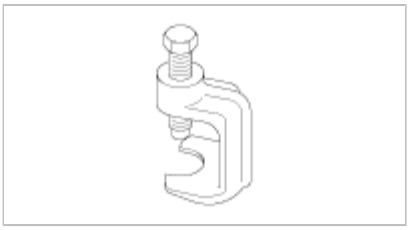
CAUTION

Replace self-locking nuts with new ones after removal.

Lubricants

Items		Lubricants	Quantity
Rear driveshaft	BJ	RBA	115 ± 5g
	TSJ	RBA	130 ± 5g

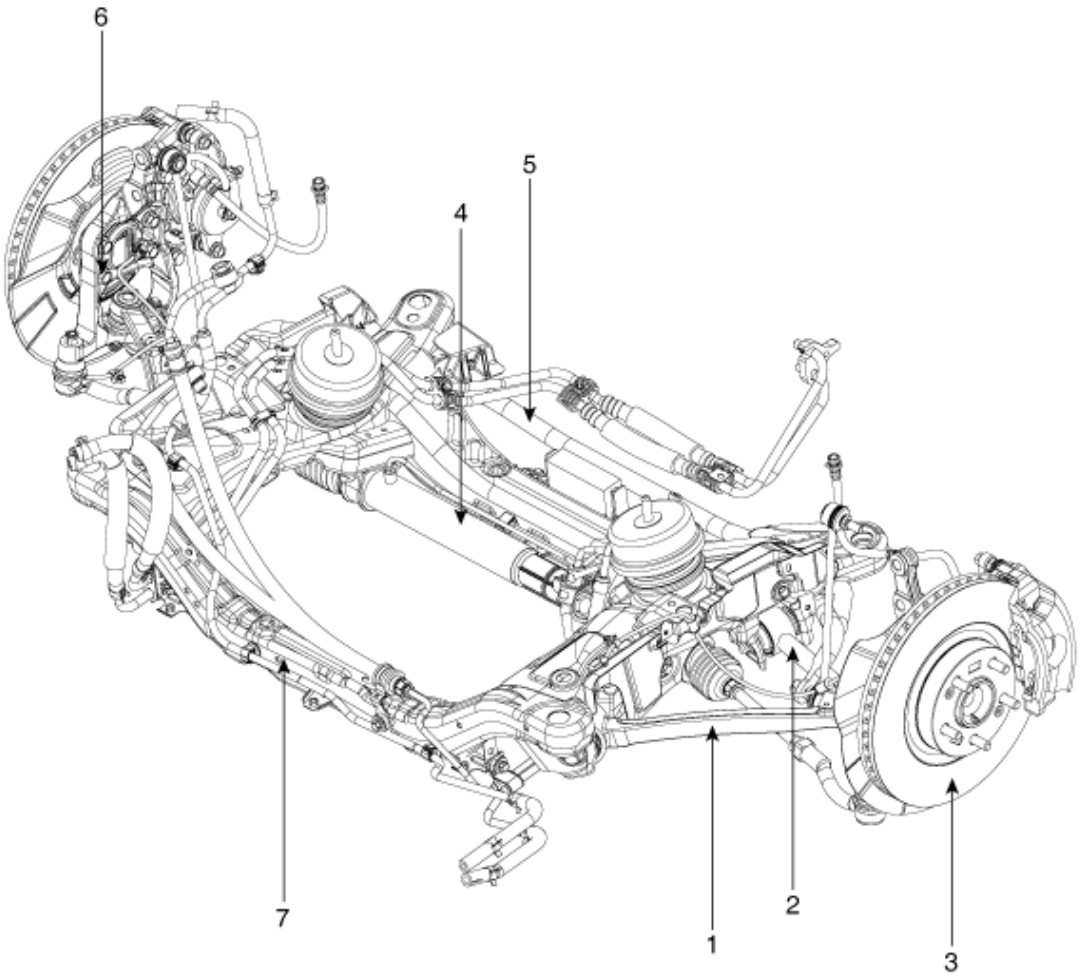
Special Service Tools

Tool(Number and Name)	Illustration	Use
09495-33000Puller		Removal of spider assembly from a drive shaft.
09517-43101Working base		Support for the differential carrier
09517-43500Adapter		Support for the differential carrier(Use with 09517-43101)
09495-3K000Band installer		Installation of ear type boot band
09568-34000Ball joint remover		Removal of the rear upper arm ball joint
09568-4A000Ball joint remover		Removal of the front lower arm and tie rod end ball joint

Troubleshooting

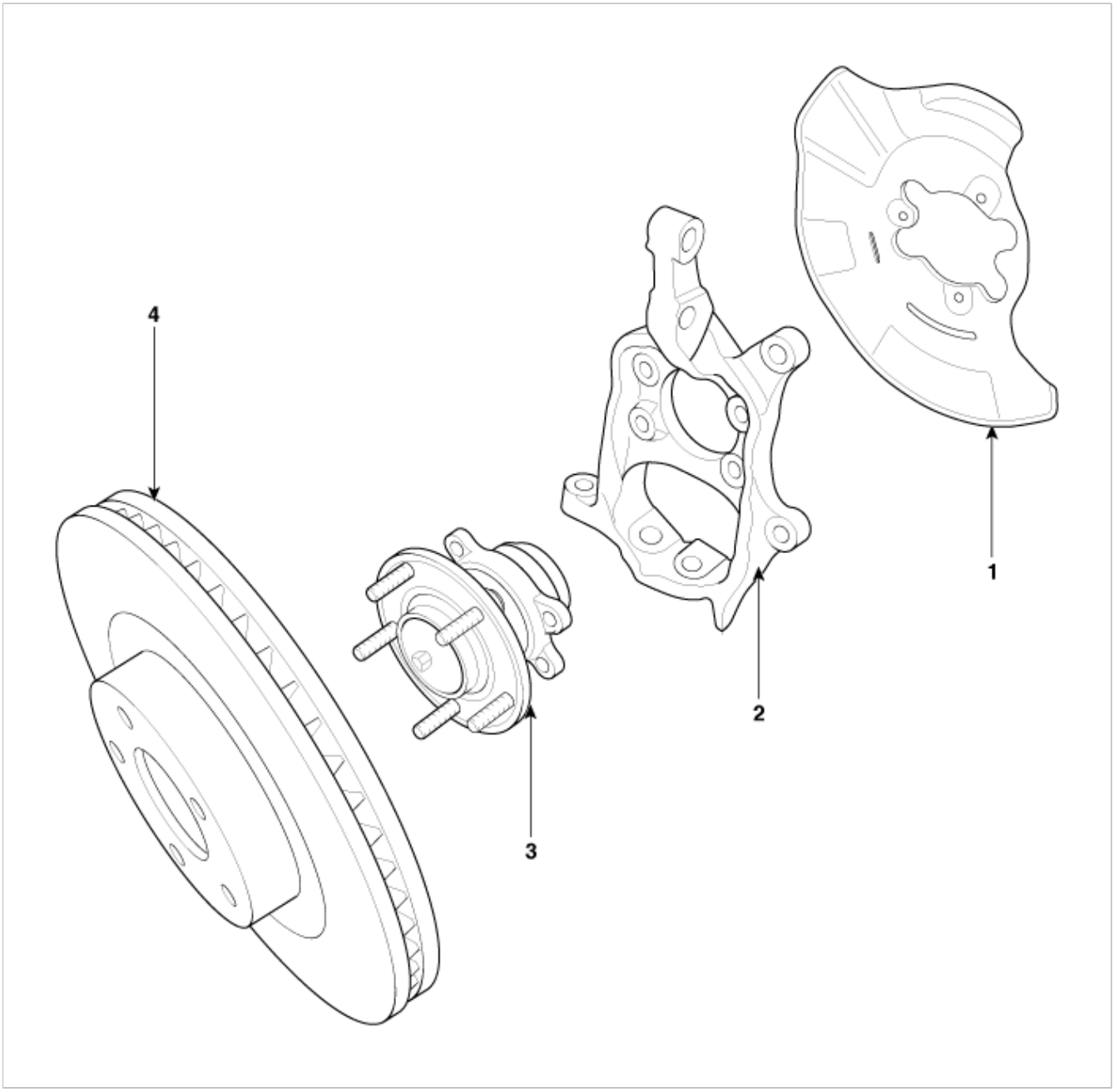
Trouble Symptom	Probable cause	Remedy
Vehicle pulls to one side	Scoring of driveshaft ball joint	Replace
	Wear, rattle or scoring of wheel bearing	Replace
	Defective front suspension and steering	Adjustment or Replace
Vibartion	Wear, damage or bending of driveshaft	Replace
	Driveshaft rattle and hub serration	Replace
	Wear, rattle or scratching of wheel bearing	Replace
Shimmy	Defective wheel balance	Adjustment or Replace
	Defective front suspension and steering	Adjustment or Replace
Excessive noise	Wear, damage or bending of driveshaft	Replace
	Rattle of driveshaft and worn hub splines	Replace
	Wear, rattle or scoring of wheel bearing	Replace
	Loose hub nut	Adjustment or Replace
	Defective front suspension and steering	Adjustment or Replace

Component Locations



1. Tension arm	5. Stabilizer bar
2. Lateral arm	6. Front axle
3. Front disc	7. Sub frame
4. Steering gear box	

Component

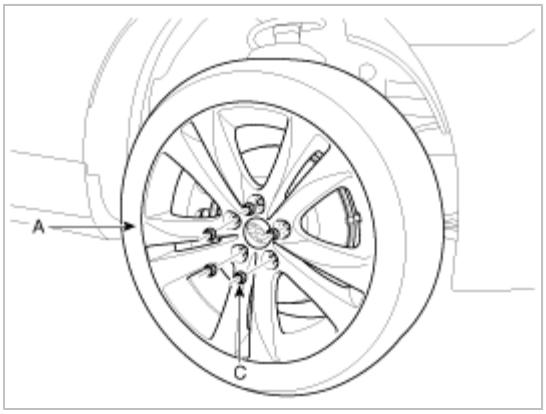


1. Dust cover 2. Knuckle	3. Hub assembly 4. Brake disc

Replacement

1. Loosen the wheel nuts slightly. Raise the vehicle, and make sure it is securely supported.
2. Remove the front wheel and tire(A) from front hub .

Tightening torque Nm (kgf.m, lb-ft) :
137.2~156.9 (9.0~11.0, 101.2~332.7)

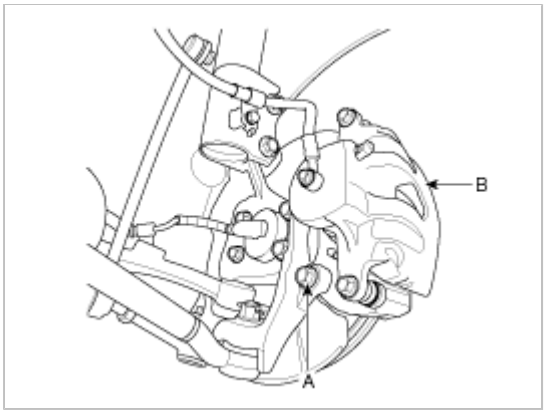


CAUTION

Be careful not to damage to the hub bolts when removing the front wheel and tire.

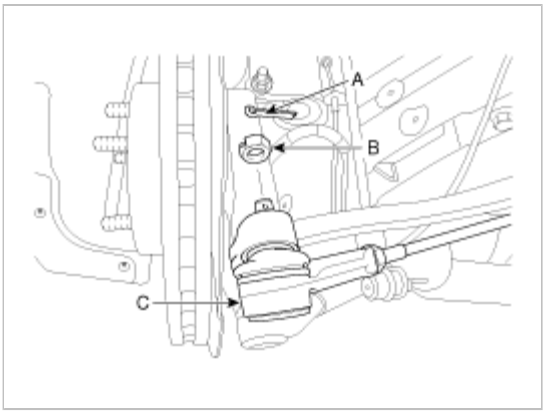
3. Remove the brake caliper mounting bolts (A), and then place the brake caliper assembly (B) with wire.

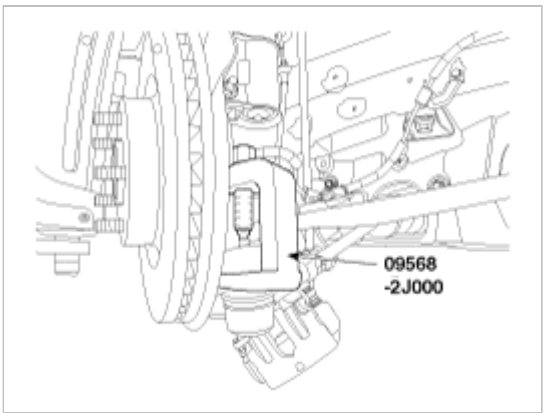
Tightening torque Nm (kgf.m, lb-ft) :
49~58.8 (5.0~6.0, 36.1~43.3)



4. Remove the tie rod end ball joint from the knuckle.
   (1) Remove the split pin.
   (2) Remove the castle nut.
   (3) Disconnect the ball joint(A) from knuckle(B) using the special tool (09568-4A000).

Tightening torque Nm (kgf.m, lb-ft) :
78.4~88.2 (8.0~9.0, 57.8~65.0)



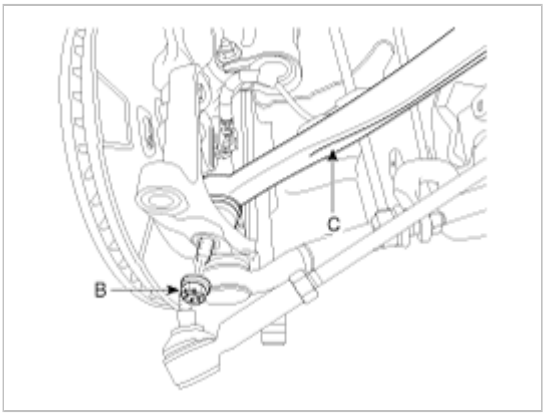


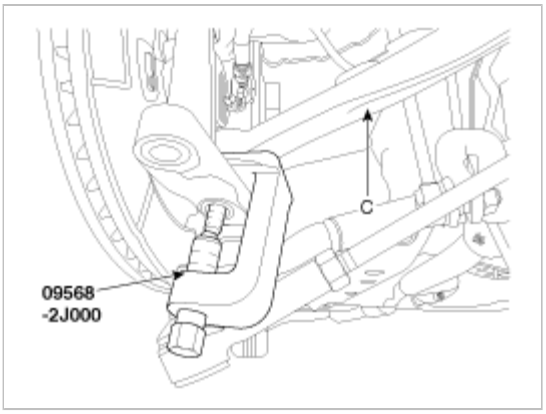
CAUTION

Apply a few drops of oil to the special tool. (Boot contact part)

5. Loosen the tension arm mount bolt(A), and then remove the tension arm(B).
   (1) Remove the split pin.
   (2) Remove the castle nut.
   (3) Disconnect the ball joint(A) from tension arm(B) using the special tool (09568-4A000).

Tightening torque Nm (kgf.m, lb-ft) :
78.4~88.2 (8.0~9.0, 57.8~65.0)



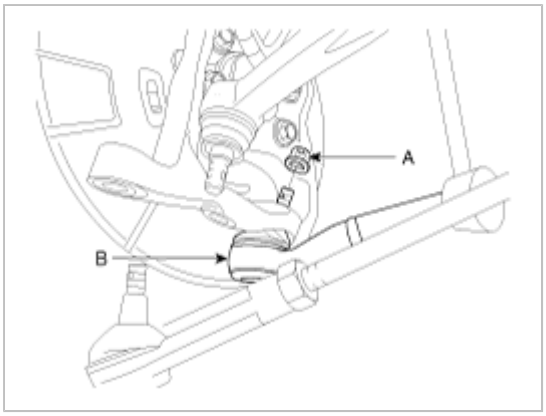


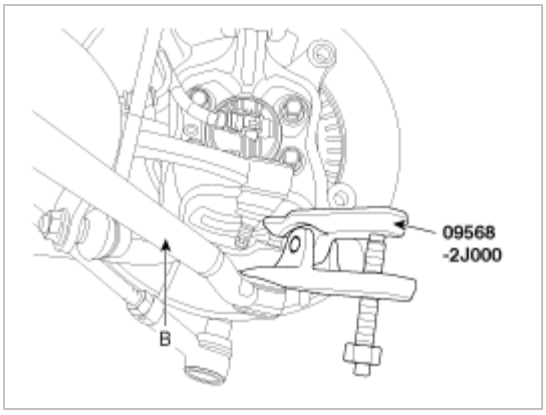
CAUTION

Be careful not to damage the boot and rotor teeth.

6. Loosen the lateral mount nut(A) and then disconet the laterral arm(B).

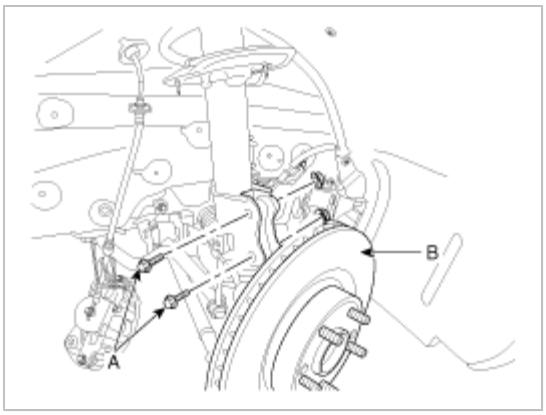
Tightening torque Nm (kgf.m, lb-ft) :
78.4~88.2 (8.0~9.0, 57.8~65.0)



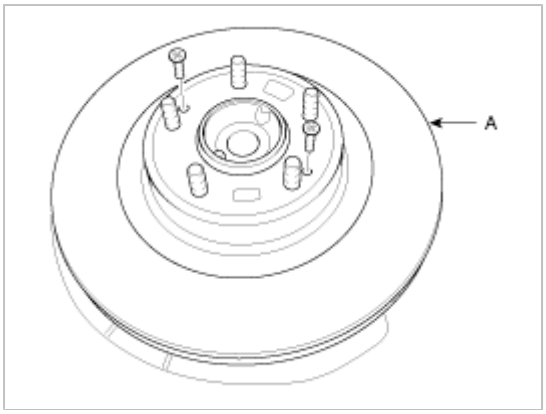


7. Remove the strut mounting bolt and then remove the knuckle assembly(A).

Tightening torque Nm (kgf.m, lb-ft) :
137.2~156.9 (14.0~16.0, 101.2~332.7)

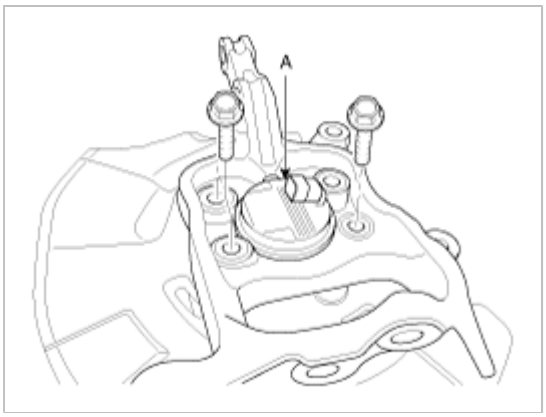


8. Remove the brake disc(A) from knuckle.

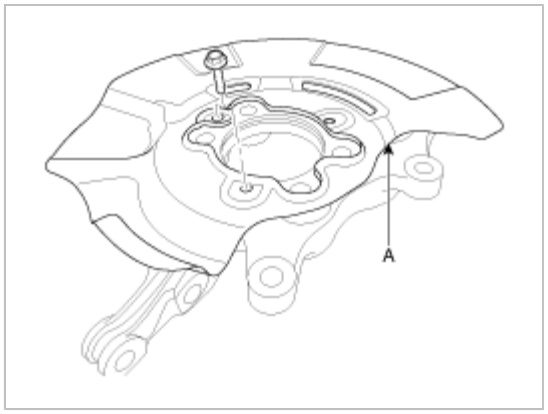


9. Remove the hub assembly(A) from knuckle assembly.

Tightening torque Nm (kgf.m, lb-ft) :
80~100 (8.0~10.0, 57.8~72.3)



10. Loosen the dust cover mount bolts and then remove the dust cover(B).

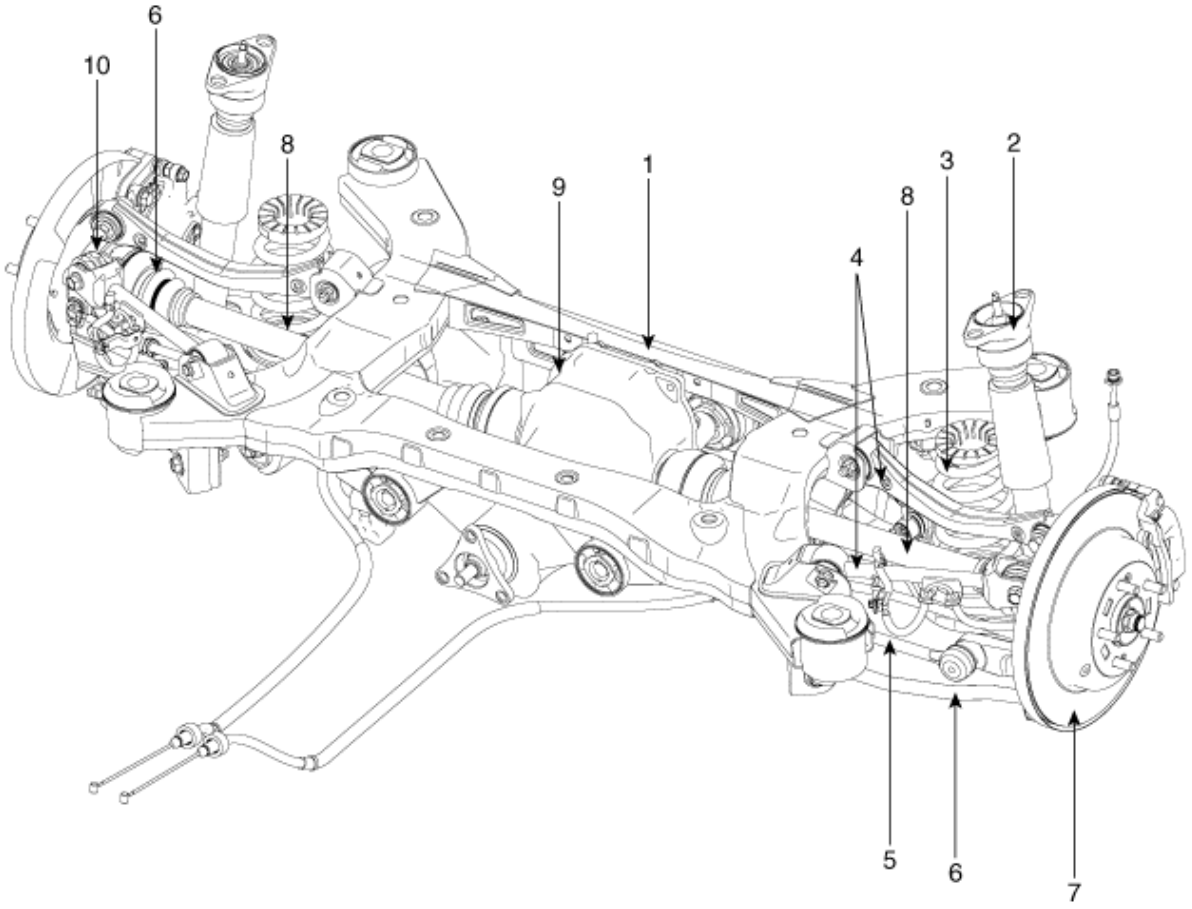


11. Installation is the reverse order of removal.

Inspection

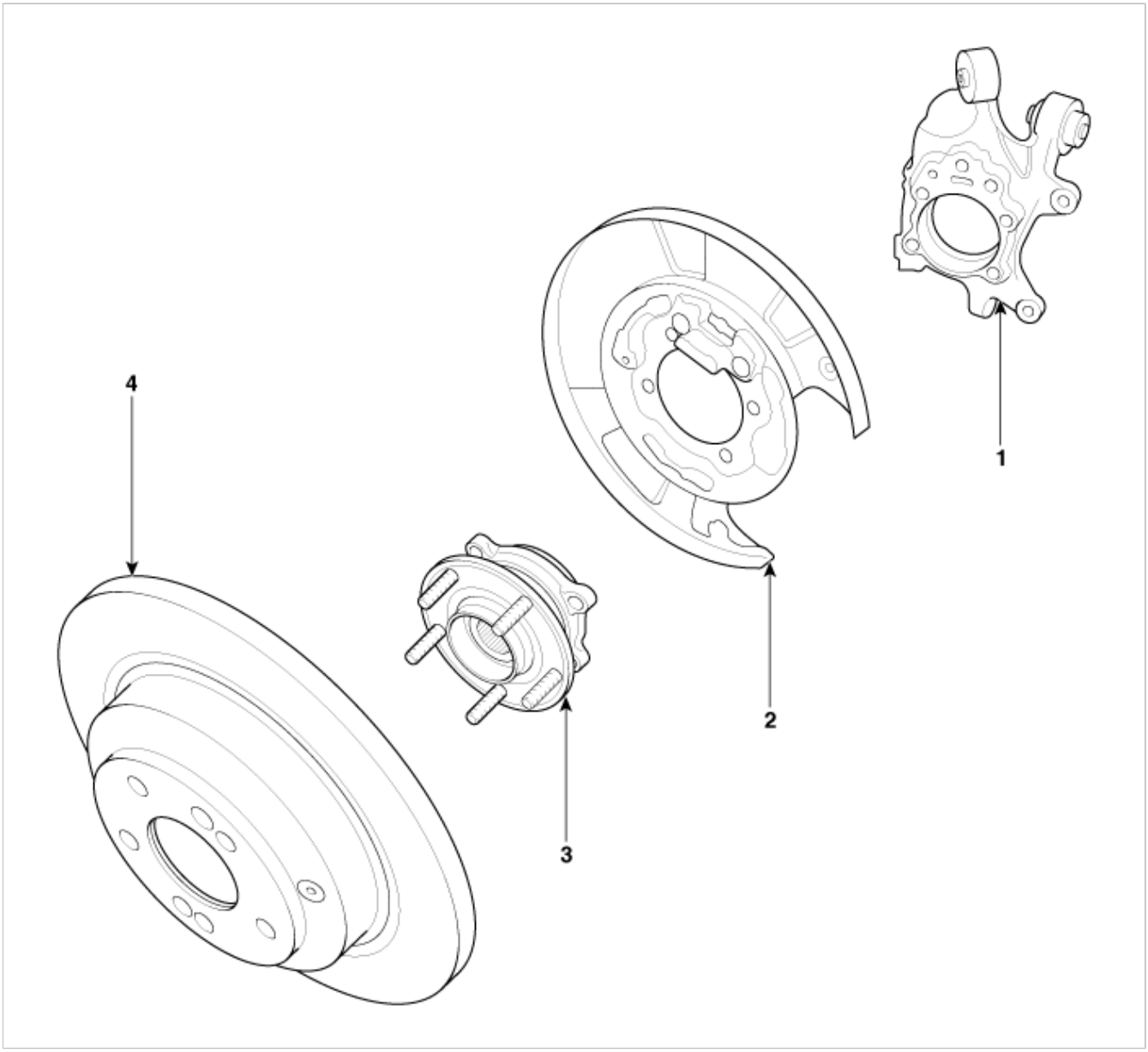
1. Check the hub for cracks and the splines for wear.
2. Check the brake disc for scoring and damage.
3. Check the knuckle for cracks.
4. Check the bearing for cracks or damage.

Component Locations



1. Sub frame	6. Trailing arm
2. Rear shock absorber	7. Rear disc
3. Coil spring	8. Rear drive shaft
4. Rear upper arm	9. Differential assembly
5. Asist arm	10. Rear axle

Components

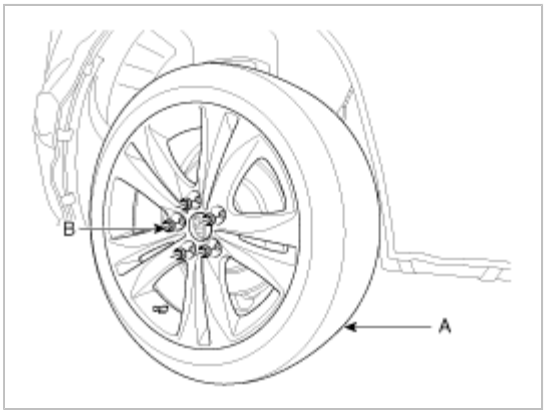


1. Rear carrier assembly 2. Rear dust cover	3. Rear hub assembly 4. Rear brake disc

Replacement

1. Loosen the wheel nuts slightly. Raise the vehicle, and make sure it is securely supported.
2. Remove the rear wheel and tire(A) from rear hub .

Tightening torque Nm (kgf.m, lb-ft) :
88.3~107.9 (9.0~11.0, 65.1~79.6)

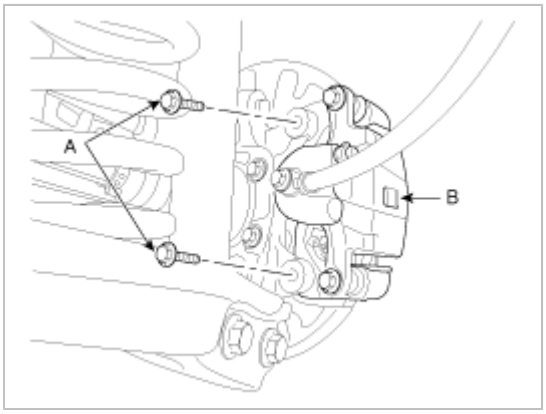


CAUTION

Be careful not to damage to the hub bolts when removing the rear wheel and tire.

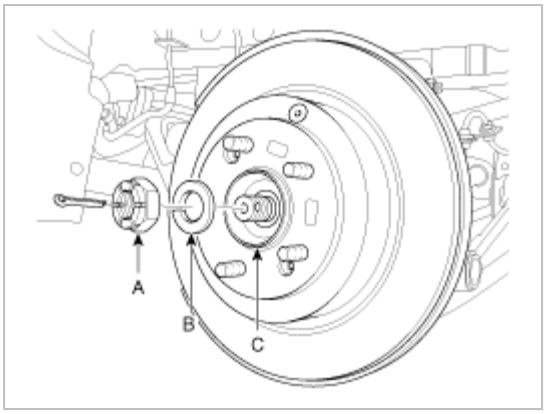
3. Remove the brake caliper mounting bolts (A), and then place the brake caliper assembly (B) with wire as shown in the illustration.

Tightening torque Nm (kgf.m, lb-ft) :
49~58.8 (5.0~6.0, 36.1~43.3)



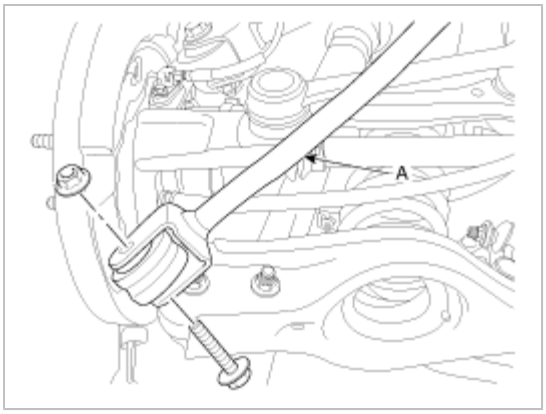
4. Remove the split pin(A), then remove castle nut(B) and washer(C) from the front hub under applying the break.

Tightening torque Nm (kgf.m, lb-ft) :
196.1~255.0 (20.0~26.0, 144.7~188.1)



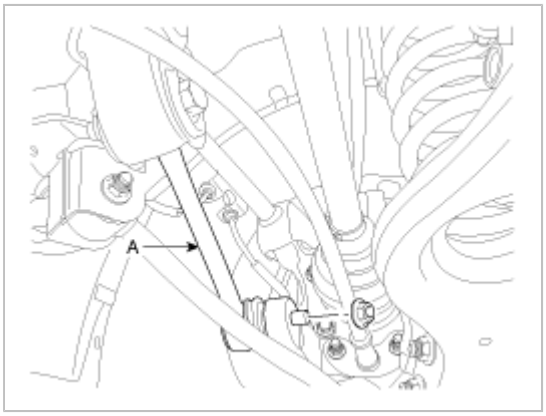
5. Remove the rear break lining. (Refer to BR group-Rear Brake)
6. Loosen the trailing arm mount bolt & nut and than remove the trailing arm(A).

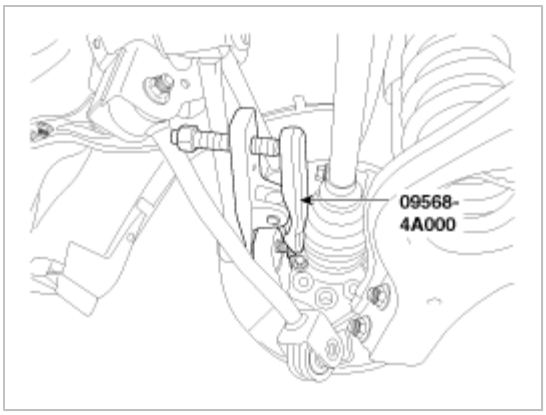
Tightening torque Nm (kgf.m, lb-ft) :
98.1~117.7 (10.0~12.0, 72.3~86.8)



7. Loosen the assist arm mount nut and than disconnect the assist arm(A).

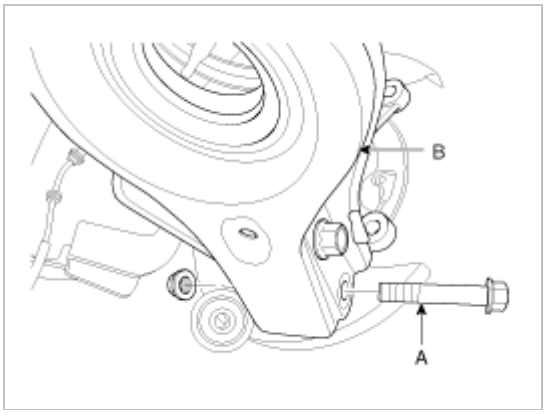
Tightening torque Nm (kgf.m, lb-ft) :
98.1~117.7 (10.0~12.0, 72.3~86.8)





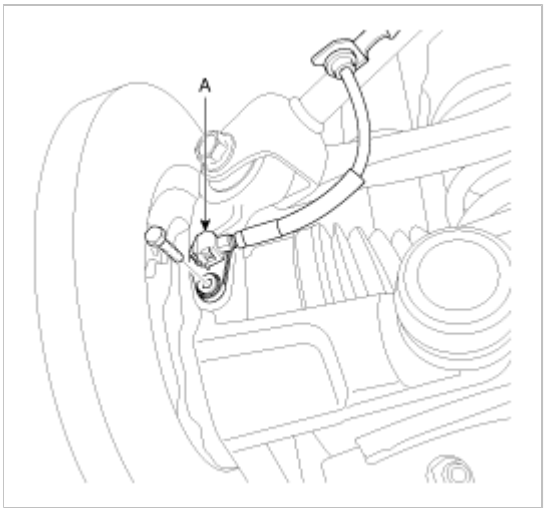
8. Remove lower arm mount bolt(A) and than remove the lower arm(B).

Tightening torque Nm (kgf.m, lb-ft) :
140~160 (14.0~16.0, 101.2~115.7)

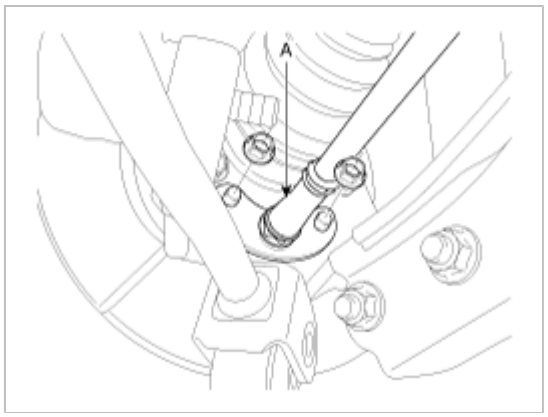


9. Remove the wheel speed sensor(A).

Tightening torque Nm (kgf.m, lb-ft) :
6.9~10.8 (0.7~1.1, 5.1~8.0)

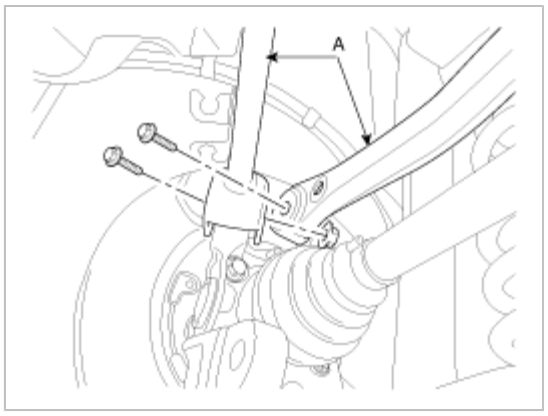


10. Loosen the brake cable mount nuts and than remove the brake cable(A).



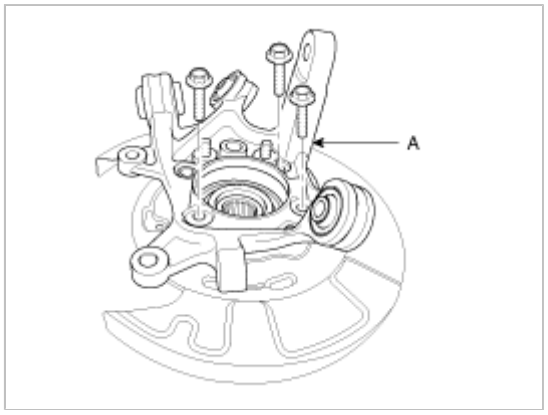
11. Loosen the upper arm(A) link mount bolt & nut and then remove the carrier assembly(B).

Tightening torque Nm (kgf.m, lb-ft) :
98.1~117.7 (10.0~12.0, 72.3~86.8)



12. Remove the hub assembly mount bolts from the rear axle carrier(A).

Tightening torque Nm (kgf.m, lb-ft) :
78.5~98.1 (8.0~10.0, 57.9~72.3)

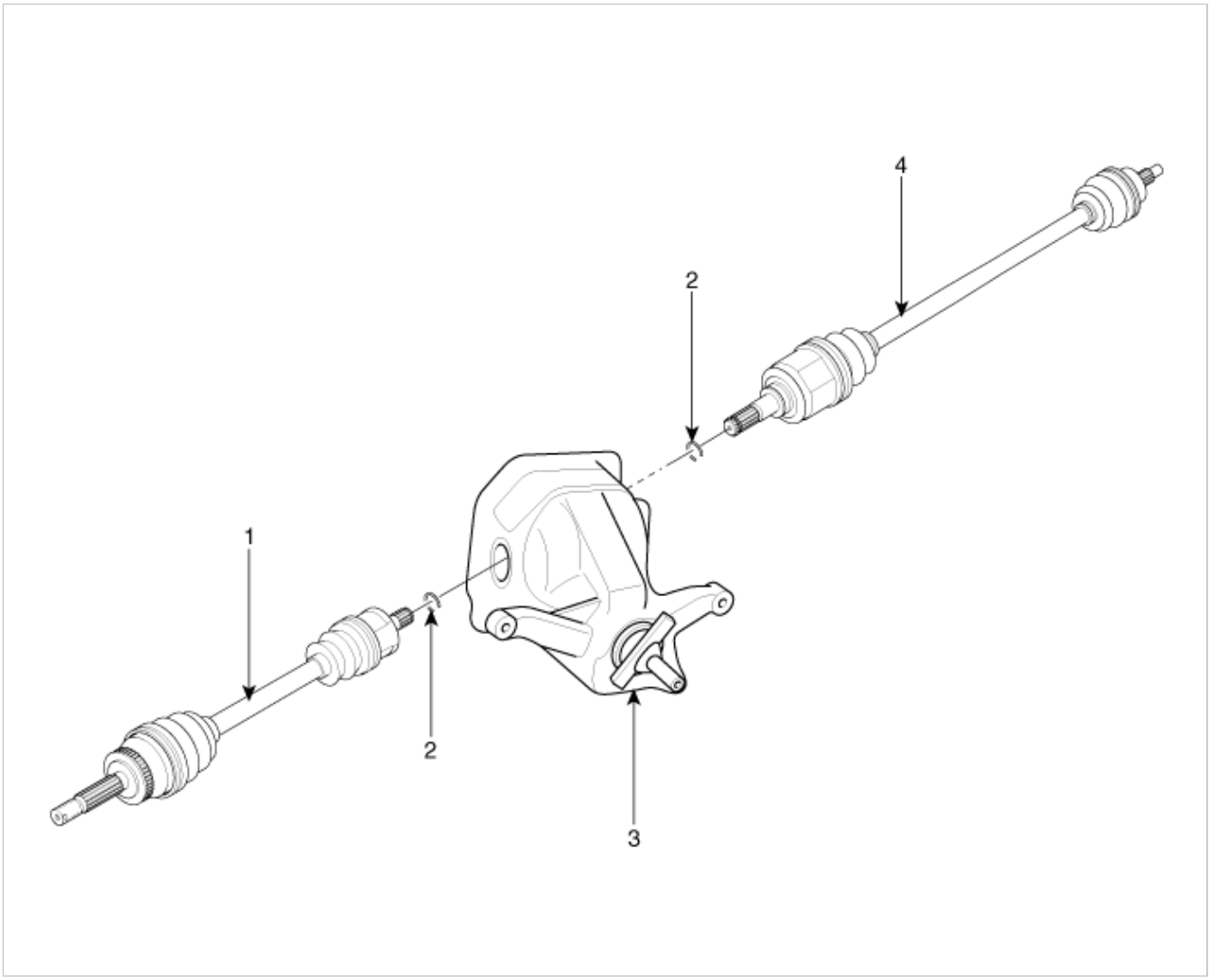


13. Installation is the reverse order of removal.

Ispection

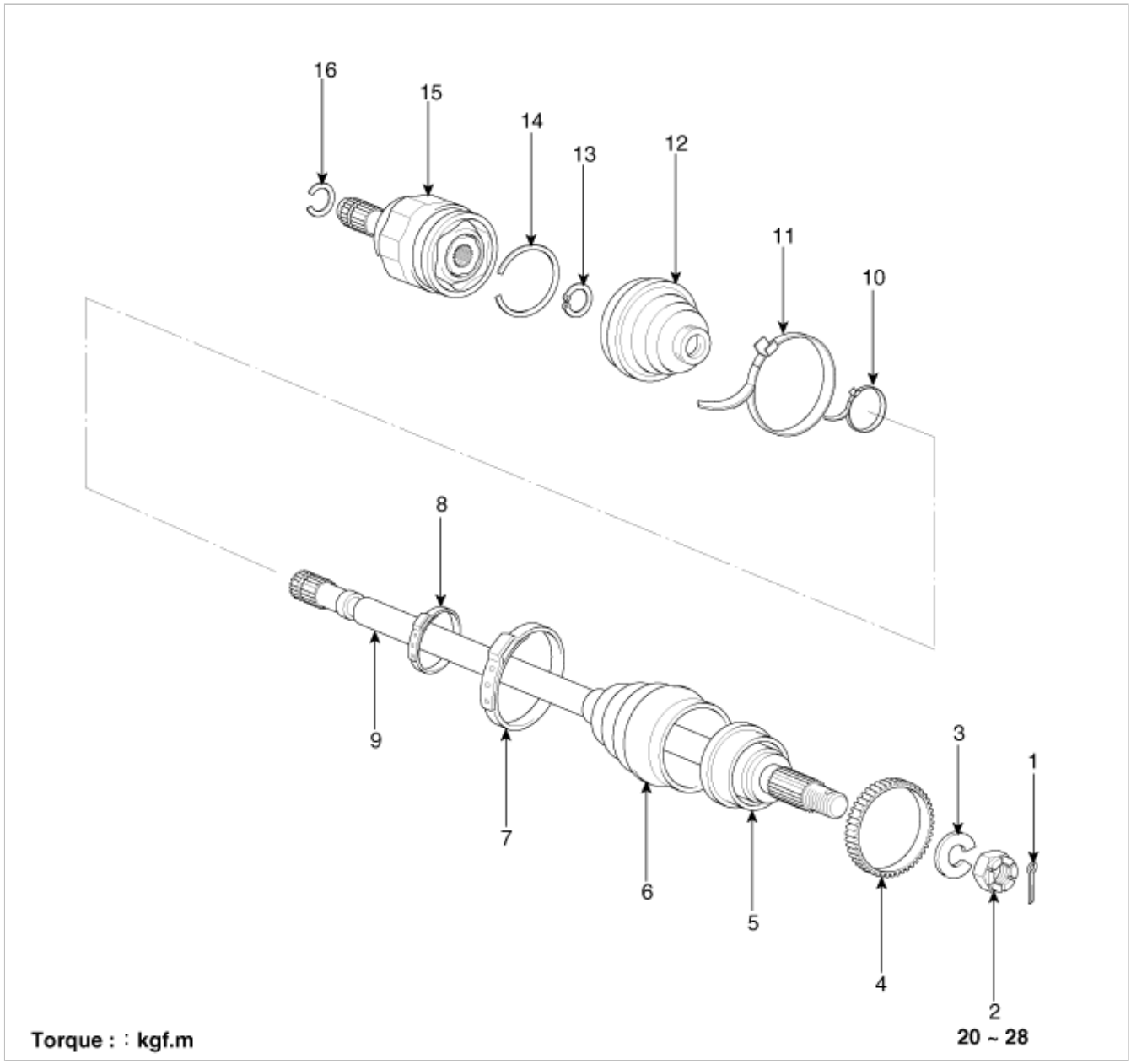
1. Check the hub for cracks and the splines for wear.
2. Check the brake disc for scoring and damage.
3. Check the knuckle for cracks.
4. Check the bearing for cracks or damage.

Component Location



1. Drive shaft(L) 2. Circlip	3. Defferential carrier 4. Circlip

Components

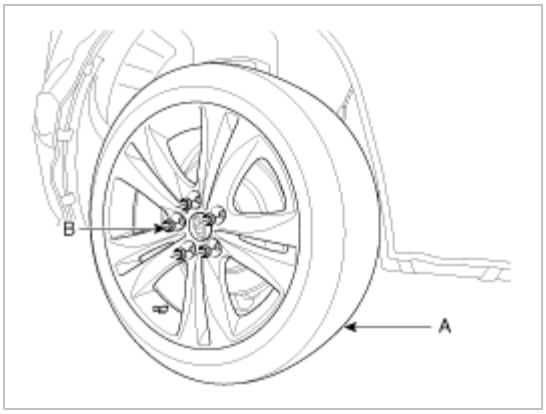


1. Split pin	9. Shaft
2. Castle nut	10. TSJ boot small part band
3. Washer	11. TSJ boot big part band
4. Dust cover & tone wheel	12. TSJ boot
5. BJ assembly	13. Snap ring
6. BJ boot	14. Circlip
7. BJ boot big part band	15. TSJ assembly
8. Boot small part band	16. Circlip

Replacement

1. Loosen the wheel nuts slightly. Raise the vehicle, and make sure it is securely supported.
2. Remove the rear wheel and tire(A) from rear hub .

Tightening torque Nm (kgf.m, lb-ft) :
88.3~107.9 (9.0~11.0, 65.1~79.6)

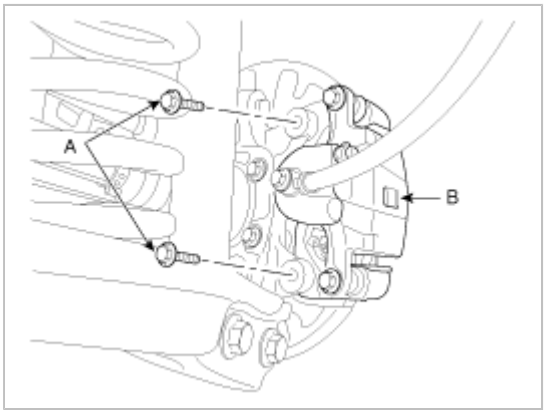


CAUTION

Be careful not to damage to the hub bolts when removing the rear wheel and tire.

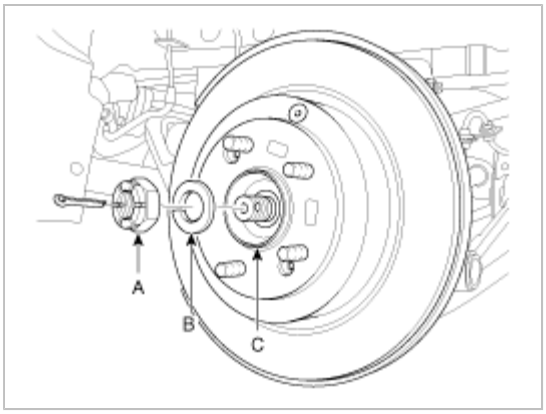
3. Remove the brake caliper mounting bolts (A), and then place the brake caliper assembly (B) with wire as shown in the illustration.

Tightening torque Nm (kgf.m, lb-ft) :
49.0~58.8 (5.0~6.0, 36.1~43.3)



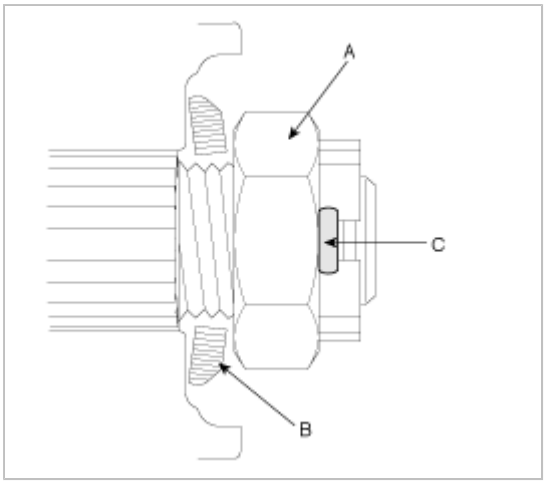
4. Remove the split pin(A), then remove castle nut(B) and washer(C) from the front hub under applying the break.

Tightening torque Nm (kgf.m, lb-ft) :
200~280 (20.0~28.0, 144.6~202.5)



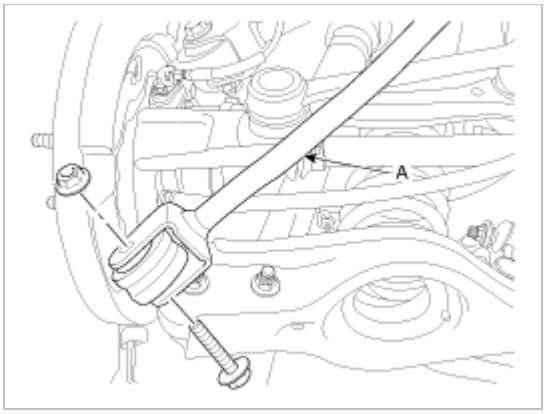
CAUTION

The washer (B) should be assembled with convex surface outward when installing the castle nut (A) and split pin (C).

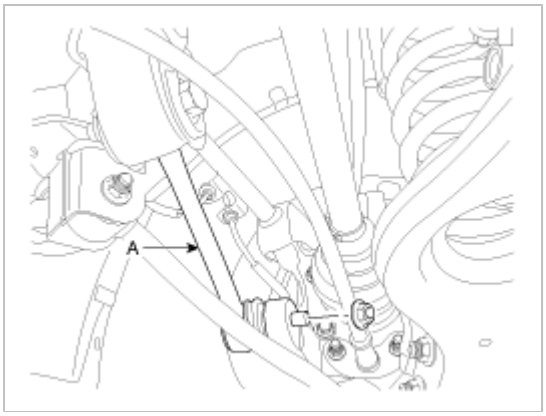


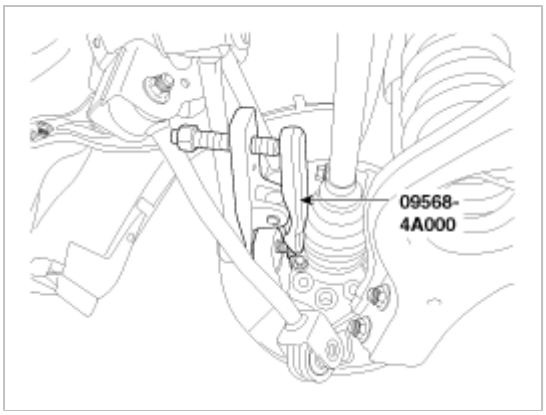
5. Remove the rear break lining (Refer to BR group-Front brake).
6. Loosen the trailing arm mount bolt & nut and than remove the trailing arm (A).

Tightening torque Nm (kgf.m, lb-ft) :
98.1~117.7 (10.0~12.0, 72.3~86.8)



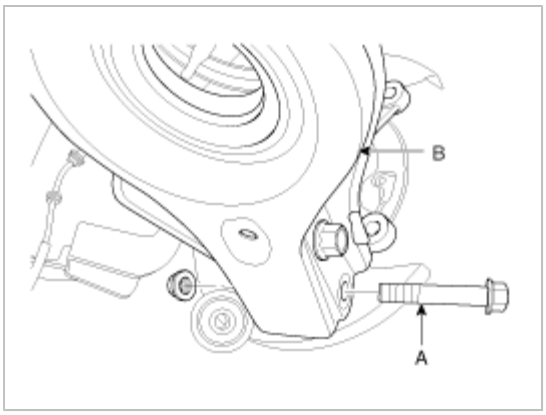
7. Loosen the assist arm mount nut and than disconnect the assist arm(A).





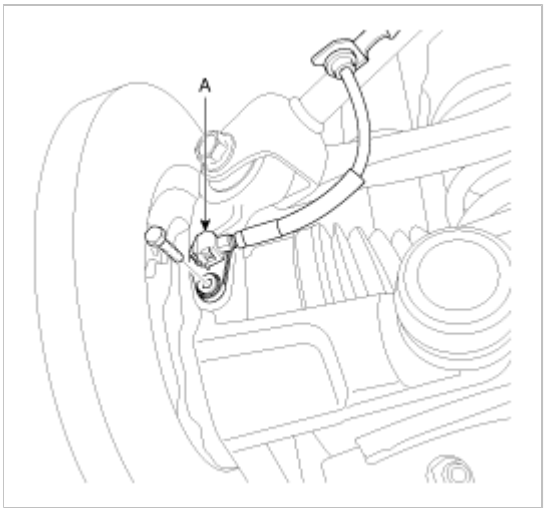
8. Remove lower arm mount bolt(A) and than remove the lower arm(B).

Tightening torque Nm (kgf.m, lb-ft) :
140~160 (14.0~16.0, 101.2~115.7)

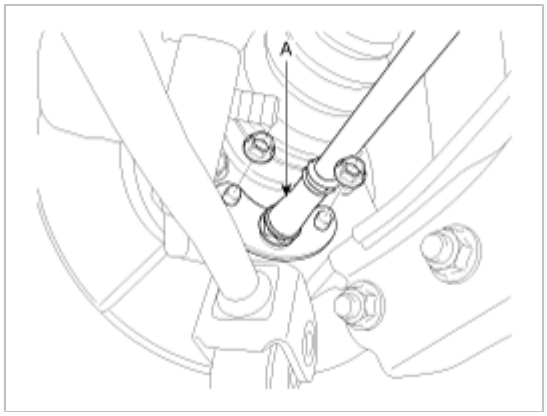


9. Remove the wheel speed sensor(A).

Tightening torque Nm (kgf.m, lb-ft) :
6.9~10.8 (0.7~1.1, 5.1~8.0)

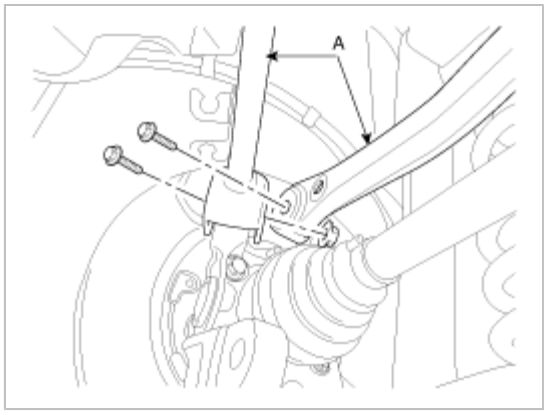


10. Loosen the brake cable mount nuts and than remove the brake cable(A).



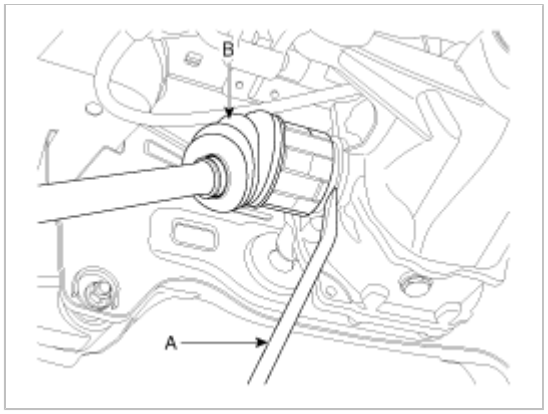
11. Loosen the upper arm(A) link mount bolt & nut and then remove the carrier assembly(B).

Tightening torque Nm (kgf.m, lb-ft) :
98.1~117.7 (10.0~12.0, 72.3~86.8)



12. Push the rear axle carrier (A) outward and separate the driveshaft (B) from the axle hub.

13. Insert a pry bar (A) between the differential case and joint case, and separate the driveshaft (B) from the differential case.



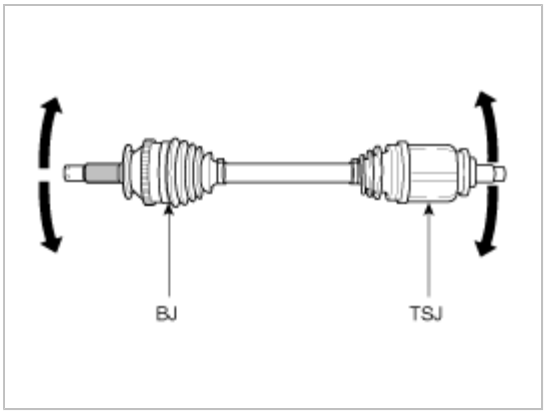
CAUTION

- Use a pry bar(A) being careful not to damage the differential and joint.
- Do not insert the pry bar(A) too deep, as this may cause damage to the oil seal.
- Do not pull the driveshaft by excessive force it may cause components inside the joint kit to dislodge resulting in a torn boot or a damaged bearing.
- Plug the hole of the differential case with the oil seal cap to prevent contamination.
- Support the driveshaft properly.
- Replace the retainer ring whenever the driveshaft is removed from the differential case.
- Do not take the drive shaft a part. Please, replace drive shaft with assembly.

14. Installation is the reverse order of removal.

Inspection

1. Check the driveshaft boots for damage and deterioration.
2. Check the ball joint for wear and damage.
3. Check the splines for wear and damage.
4. Check the dynamic damper for cracks, wear and position.



5. Check the driveshaft for cracks and wears.

Disassembly

CAUTION

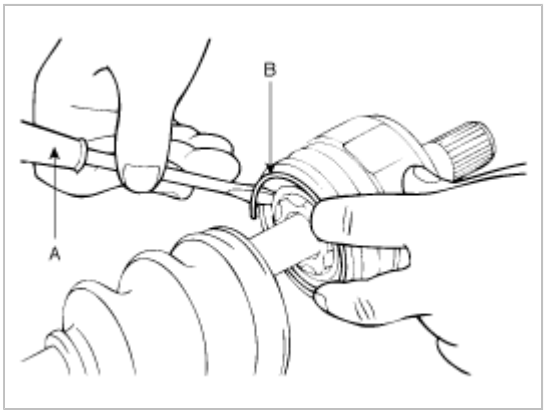
- Do not disassemble the BJ assembly.
- Special grease must be applied to the driveshaft joint. Do not substitute with another type of grease.
- The boot band should be replaced with a new one.

1. Remove the TSJ boot bands and pull the TSJ boot from the TSJ outer race.
   (1) Using a plier or flat-tipped (-) screwdriver, remove the TSJ boot bands of differential side from the driveshaft.
   (2) Remove BJ boot bands of wheel side in the same way of TSJ boot bands removal procedure.

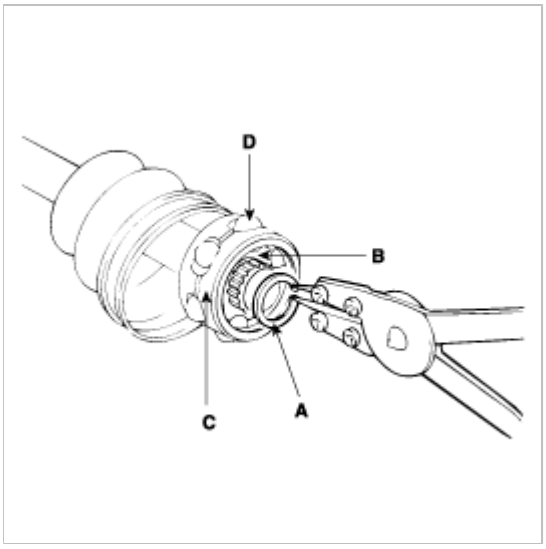
   CAUTION

   Be careful not to damage the boot.

2. Remove the circlip (B) with a flat-tipped (-) screwdriver (A).

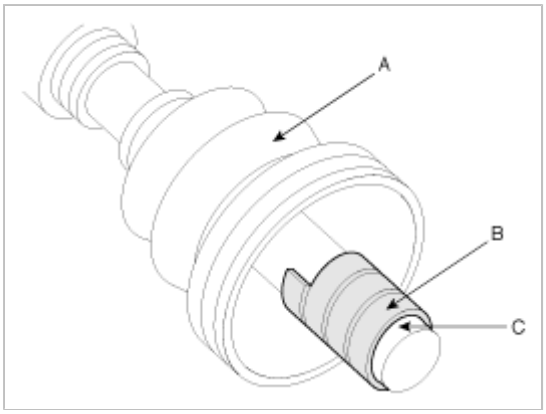


3. Pull out the driveshaft from the TSJ outer race.
4. Remove the snap ring (A) and take out the inner race (B), cage (C) and balls (D) as an assembly.



5. Clean the inner race, cage and balls without disassembling.
6. Remove the BJ boot bands and pull out the TSJ boot and BJ boot.

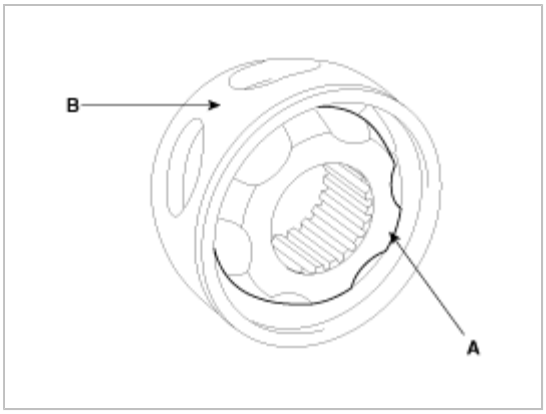
> CAUTION
>
> If the boot (A) is to be reused, wrap tape (B) around the driveshaft splines (C) to protect the boot (A).



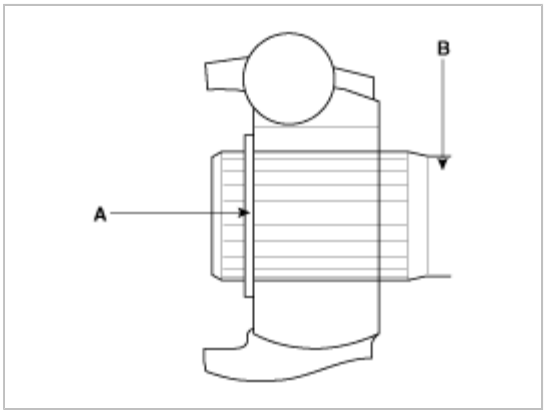
Reassembly

1. Wrap tape around the driveshaft splines (TSJ. side) to prevent damage to the boots.
2. Apply grease to the driveshaft and install the boots.
3. Apply the specified grease to the inner race(A) and cage(B). Install the cage(B) so that it is offset on the race as shown.

> CAUTION
>
> Use the grease included in the repair kit.

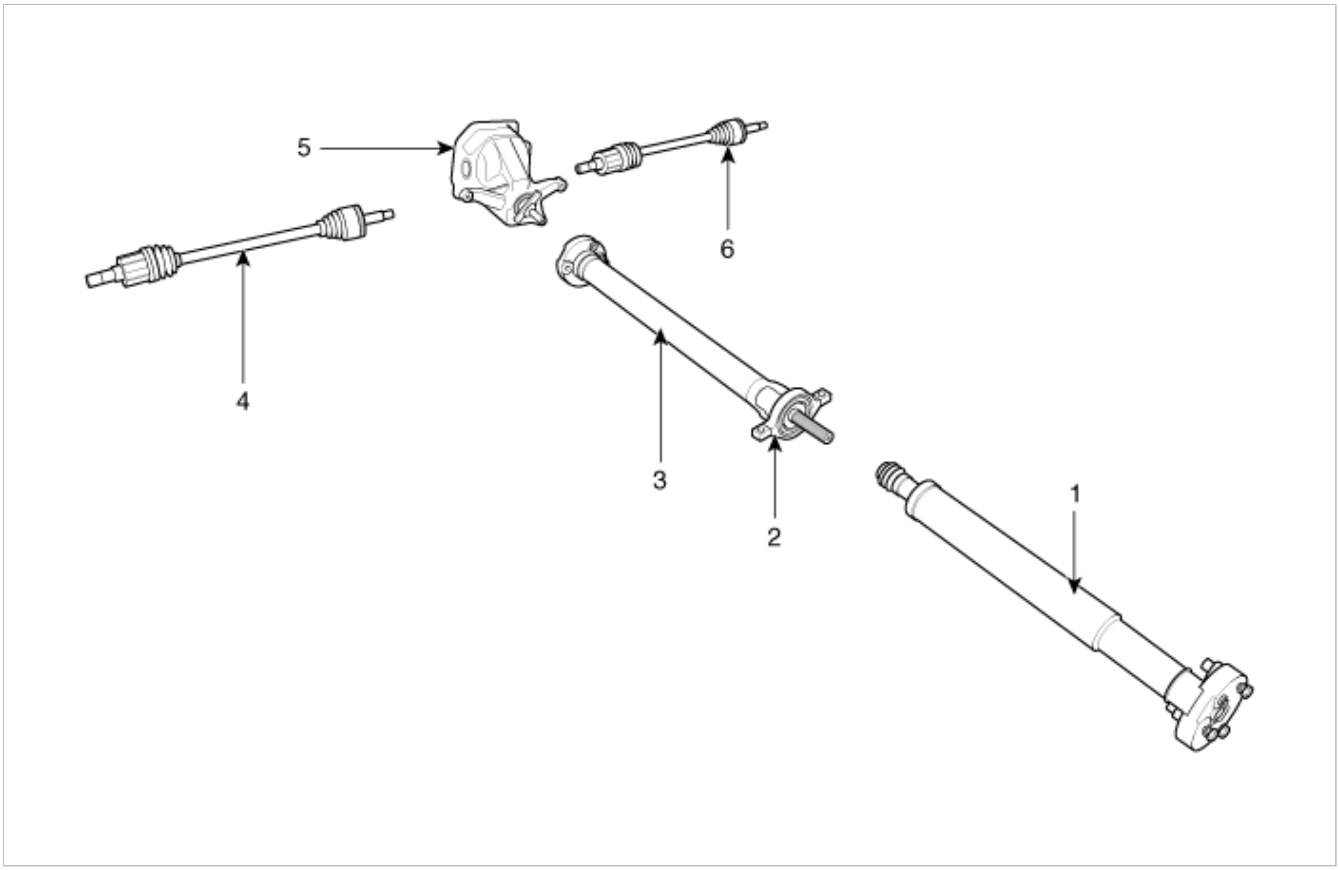


4. Apply the specified grease to the cage and fit the balls into the cage.
5. Position the chamfered side(A) as shown in the illustration. Install the inner race on the driveshaft(B), and then the snap ring.



6. Apply the specified grease to the outer race and install the BJ outer race onto the driveshaft.
7. Apply the specified grease into the TJ boot and install the boot with a clip.
8. Tighten the TJ boot bands.
9. Add the specified grease to the BJ as much as wiped away at inspection.
10. Install the boots.
11. Tighten the BJ boot bands.

Components

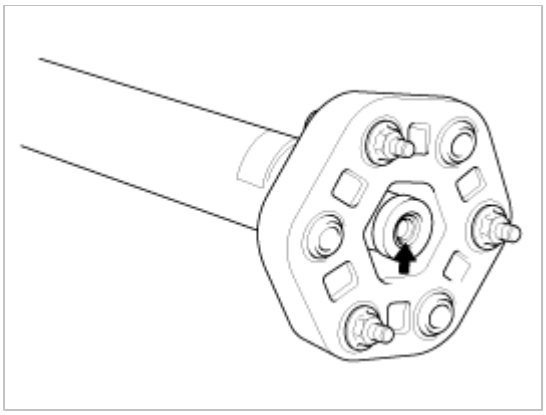


1. Front propeller shaft	4. Drive shaft (R)
2. Center bearing bracket	5. Differential carrier
3. Rear propeller shaft	6. Drive shaft (L)

Inspection

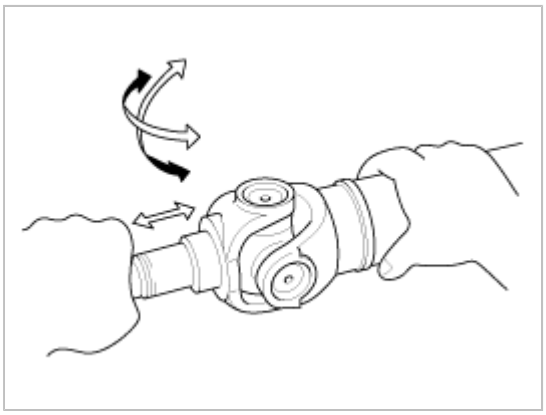
Inspect Flexibl Coupling

1. Check the front and rear flexible couplings for cracks or damage.
2. Inspect the flexible coupling centering bushing. If the busing is damaged, replace the propel shaft assembly.



Universal Joint Inspect

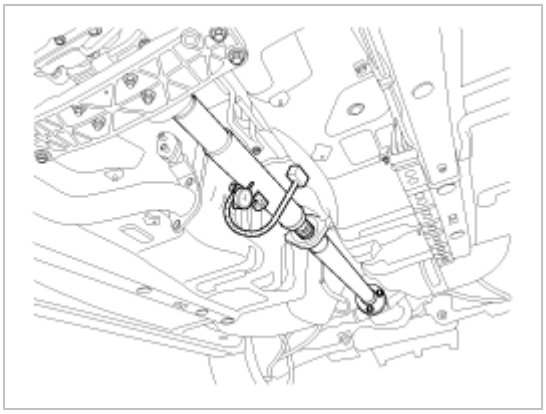
1. Check that the spider berring rotates smoothly.
2. Check that there is no play in the spider bearing if necessary, replace the propel shaft.



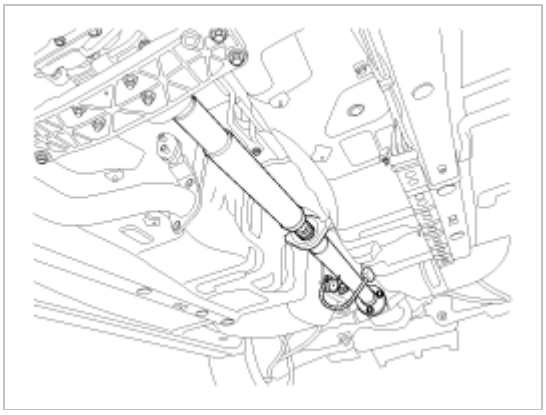
Propeller Shaft Runout

1. Install a dial indicator with its needle on the center of front propeller shaft or rear propeller shaft.
2. Turn the other propeller shaft slowly and check the runout. Repear this procedure for the other propeller shaft.

Front Propeller Shaft Runout : 0.3mm (0.012in.)



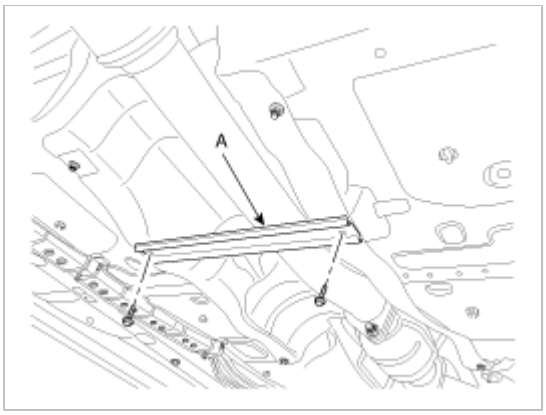
Rear Propeller Shaft Runout : 0.3mm (0.012in.)



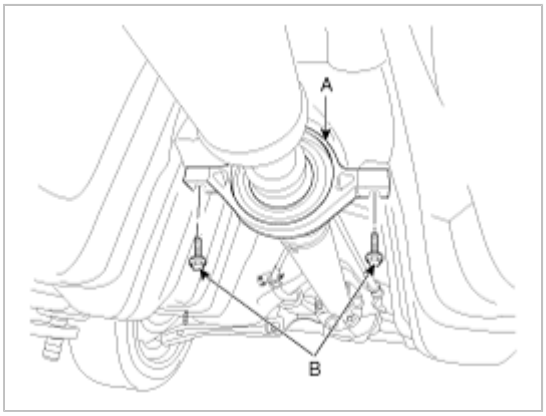
3. If the runout on either propeller shaft exceeds the service limit, replace the propeller shaft assembly.

Replacement

1. loosen the mount bolt and then remove the bracket(A).

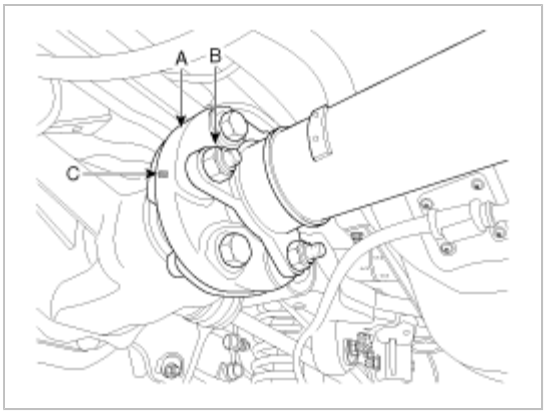


2. Remove the rear muffler(Refer to FL group-Muffler)
3. Loosen the mount bolts and then heating bracket.
4. Remove the center bearing bracket(A) mounting bolts(B).

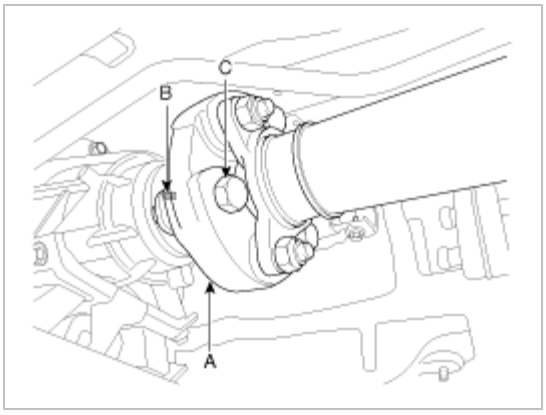


5. After making a match mark(C) on the rubber coupling(A) and rear differential companion(B), remove the propeller shaft mounting bolts(D).

Tightening torque Nm (kgf.m, lb-ft) :
90~110 (9.0~11.0, 65.0~79.5)



Tightening torque Nm (kgf.m, lb-ft) :
90~110 (9.0~11.0, 65.0~79.5)

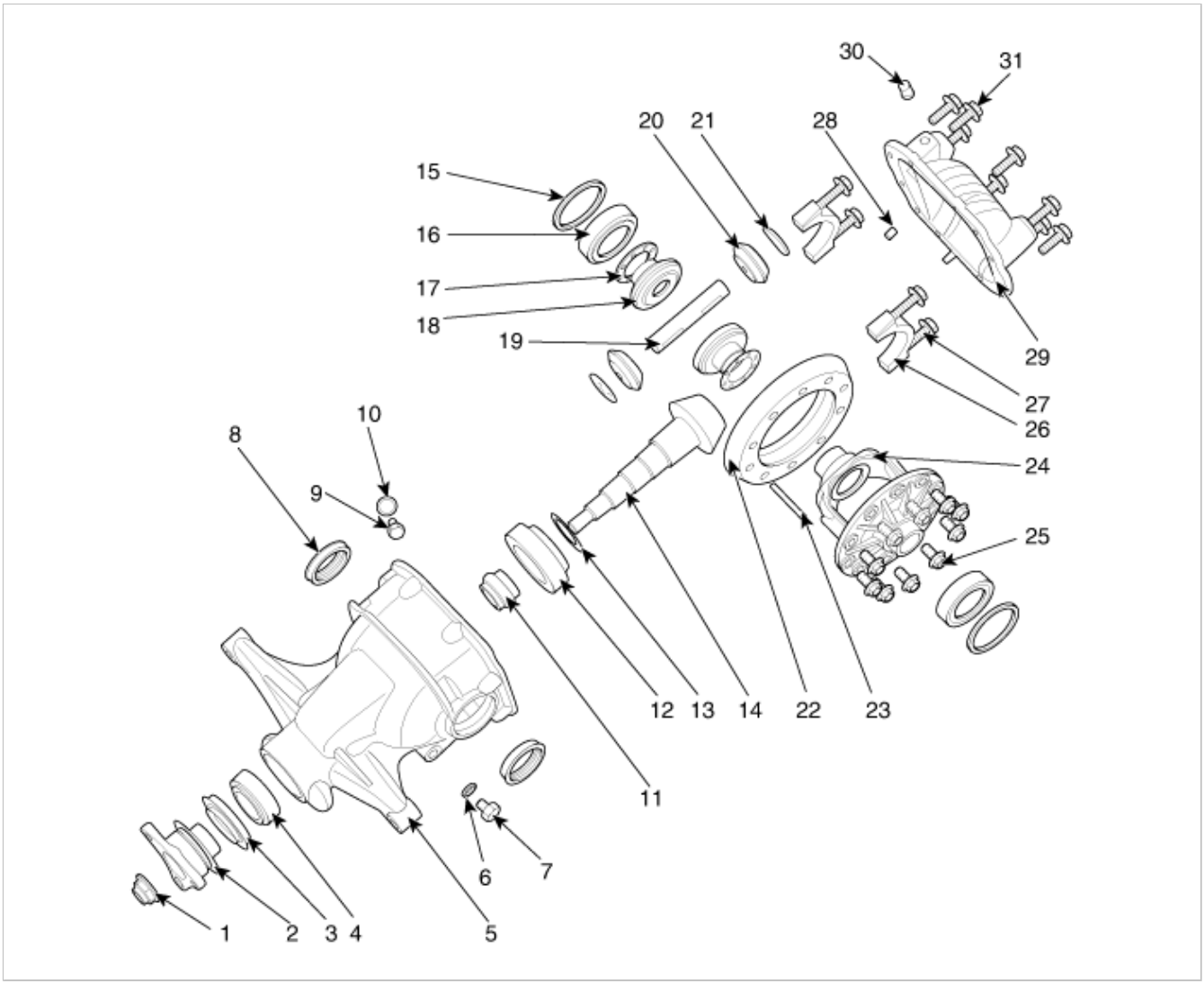


CAUTION

A. Use the hexagonal wrench to prevent damage of bolt head when removing bolts.
B. When retightening the propeller shaft mounting bolts after removing them, each bolt and washer must be placed in its original position and bolt insertion direction must be the same as before, so make marks not to allow the bolts and washers to be mixed up before removing the propeller shaft.
C. If the position and direction of the propeller shaft mounting bolts and washers are reversed, it may cause vibration and noise at high vehicle speeds due to imbalance in the propeller shaft.
D. If abnormal vibration and noise occur at high vehicle speeds after replacing propeller shaft with new one, balance the propeller shaft with a balancing machine.

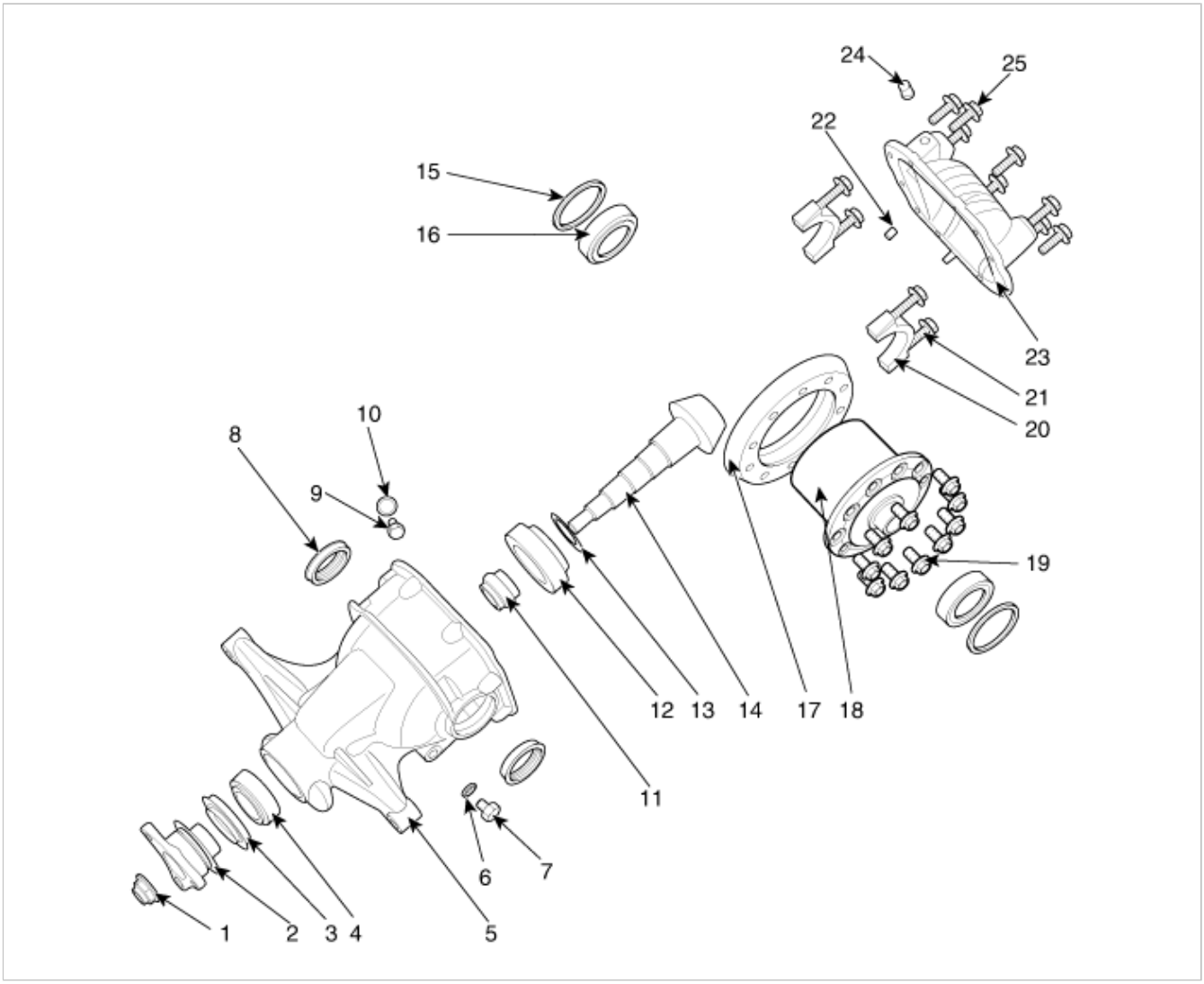
6. Installation is the reverse order of removal.

Component (Open Type)



1. Drive pinion nut	12. Pinion rear bearing	24. Differential case
2. Companion flange	13. Pinion height adjusting shim	25. Ring gear bolt
3. Front oil seal	14. Drive pinion gear	26. Bearing cap
4. Pinion front bearing	15. Side bearing adjusting washer	27. Bearing cap bolt
5. Differential carrier	16. Side bearing	28. Dowel pin
6. Gasket	17. Side gear thrust washer	29. Rear cover
7. Filler plug	18. Side gear	30. Air breather
8. Side oil seal	19. Pinion mate shaft	31. Cover bolt
9. Drain plug	20. Pinion mate gear	
10. Gasket	21. Pinion mate thrust washer	
11. Pinion bearing adjusting spacer (Collapsible spacer)	22. Drive gear(Ring gear)	
	23. Lock pin	

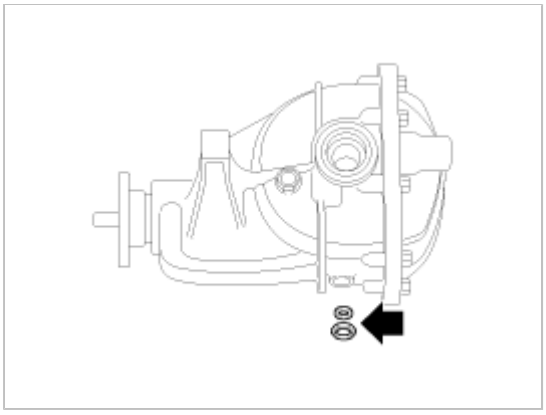
Component (LSD Type)



1. Drive pinion nut	10. Gasket	19. Ring gear bolt
2. Companion flange	11. Pinion bearing adjusting spacer	20. Bearing cap
3. front oil seal	(Collapsible spacer)	21. Bearing cap bolt
4. Pinion front bearing	12. Pinion rear bearing	22. Dowel pin
5. Differential carrier	13. Pinion height adjusting shim	23. Rear cover
6. Gasket	14. Drive pinion gear	24. Air breather
7. Filler plug	15. Side bearing adjusting washer	25. Cover bolt
8. Side oil seal	16. Side bearing	
9. Drain plug	17. Drive gear(Ring gear)	
	18. Limited slip differential assy(LSD)	

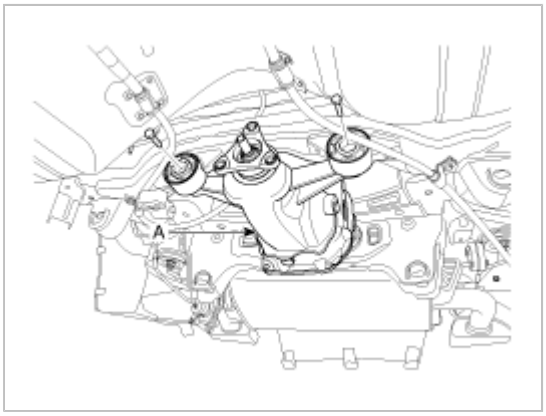
Replacement

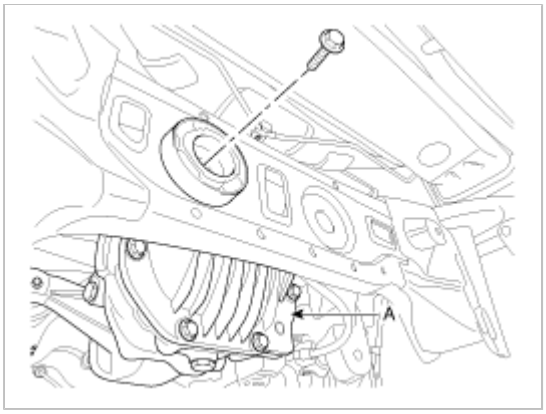
1. Drain the differential gear oil.



2. Remove the rear driveshaft(Refer to DS group-Rear driveshaft)
3. Remove the propellshaft assembly(Refer to DS group-Propellshaft)
4. Loosen the differential carrier assembly mount bolts and than remove the differential assembly(A)

Tightening torque Nm (kgf.m, lb-ft) :
80~100 (8.0~10.0, 57.8~72.3)



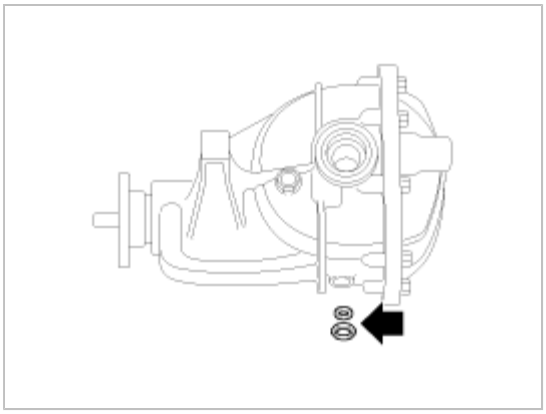


5. Installation is the reverse order of removal.

Disassembly

Rear differential carrier

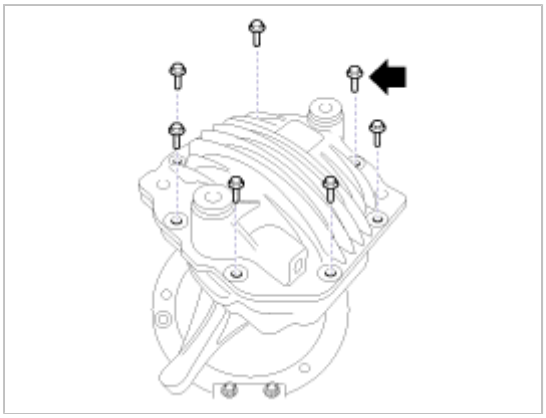
1. Before disassembling Rear differential carrier, drain off oil from Rear differential carrier.



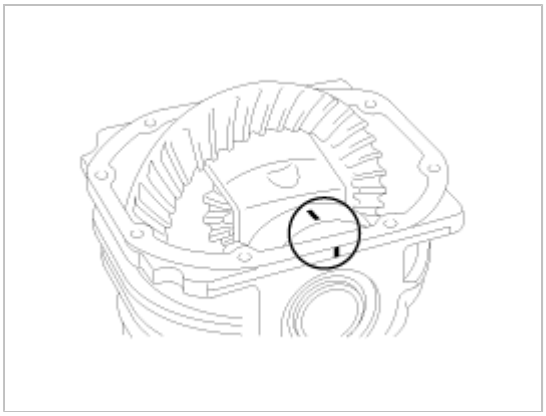
NOTE

For the first time of oil change, there is a possibility that oil color looks black due to a phosphating wear.

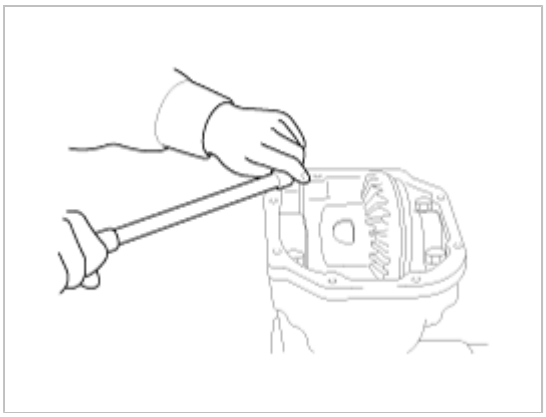
2. Remove the cover bolts.



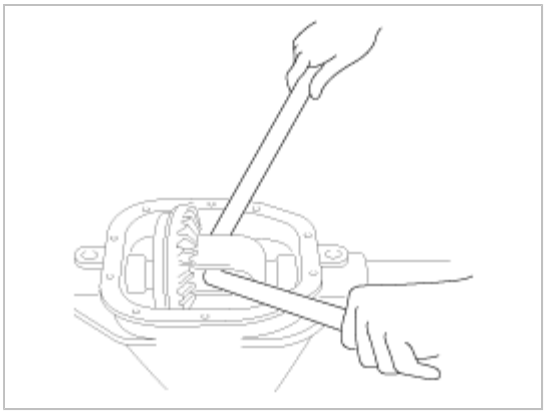
3. Before disassembling differential case assembly, paint match marks on one side of the bearing cap.



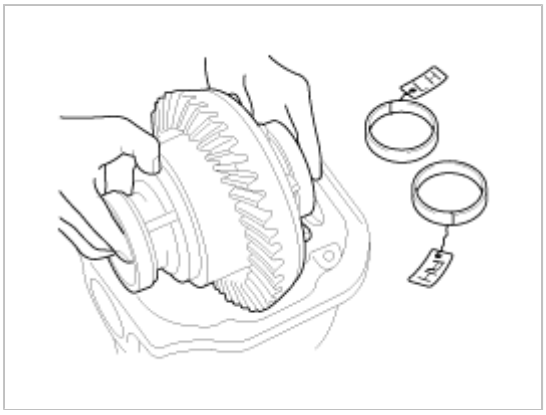
4. Loosen bearing cap bolts and remove bearing caps.



5. Lift differential case assembly out with tool.



6. Keep the side bearing outer races together with inner races.

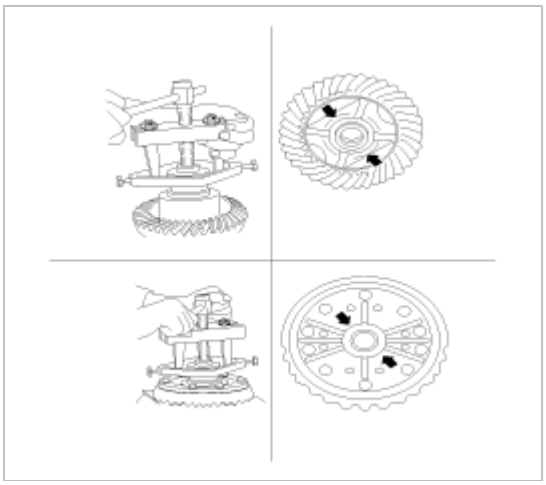


NOTE

Do not mix them up.
Also, keep side bearing adjusting washers together with bearings.

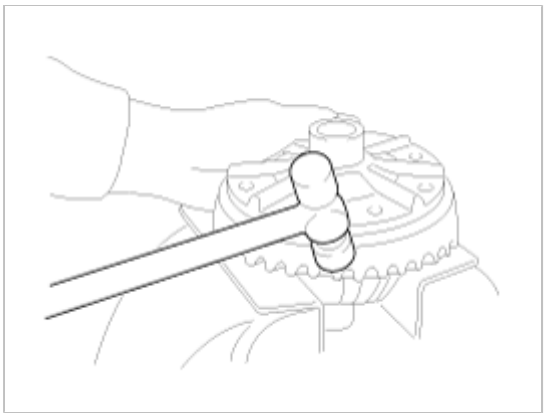
Diff assembly Disassembly

1. Remove side bearing inner races. To prevent damage to bearing, engage puller jaws in groove.

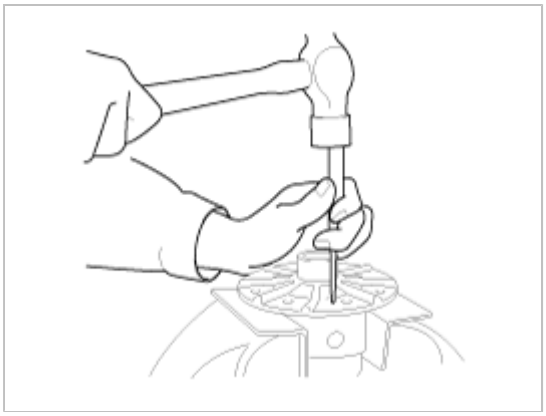


2. Be careful not to confuse left- and right-hand parts.

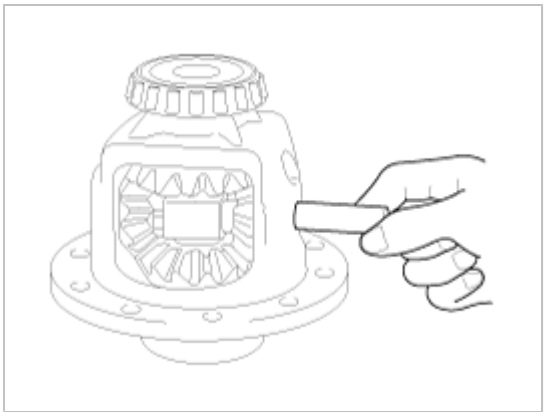
3. Loosen ring gear bolts.
   Tap drive gear off the differential case with a soft hammer.
   Tap evenly all around to keep drive gear from binding.



4. Drive out pinion mate shaft lock pin with punch from drive gear side.



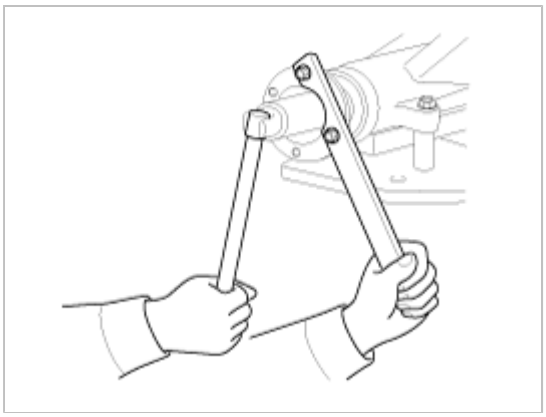
5. Remove the pinion mate shaft.



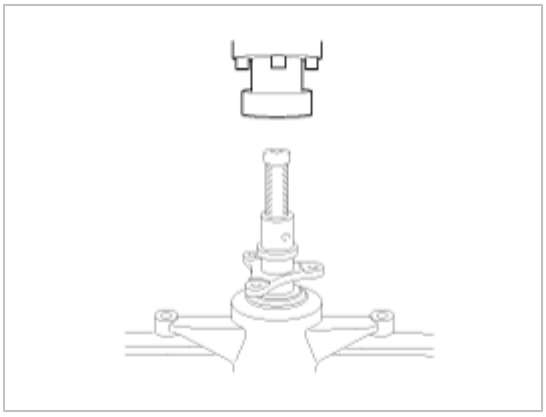
6. Remove side gears, pinion mate gears, side gear thrust washers, pinion mate thrust washers from differential case.

Pinion assembly disassembly

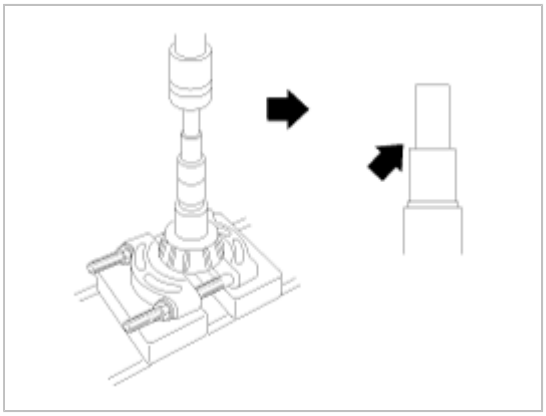
1. Loosen the pinion locking nut.



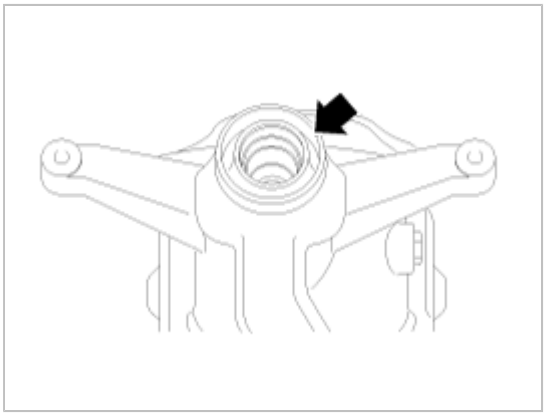
2. Using the press, take out drive pinion (together with pinion rear bearing inner race,pinion bearing adjusting spacer)
   Remove companion flange.



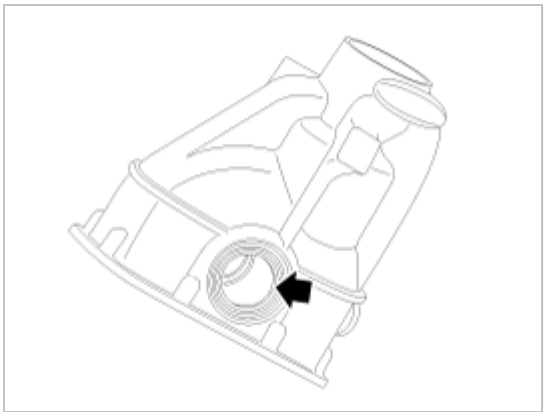
3. Using the press, remove pinion rear bearing inner race and pinion height adjusting shim .



4. Using the screwdriver, remove front oil seal.

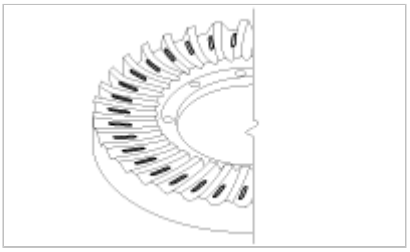
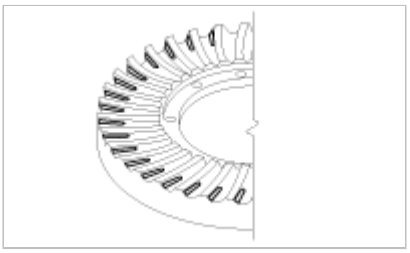
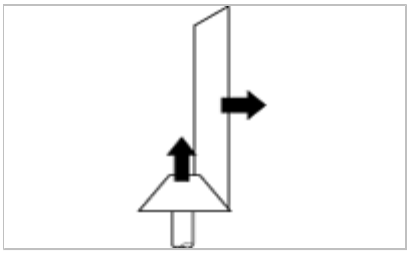
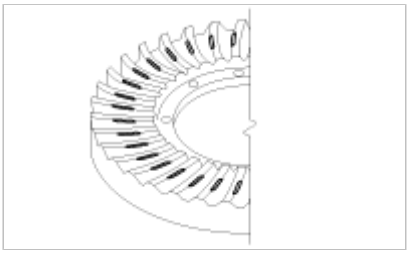
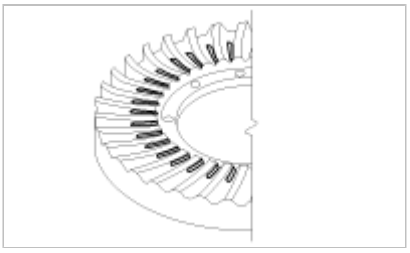
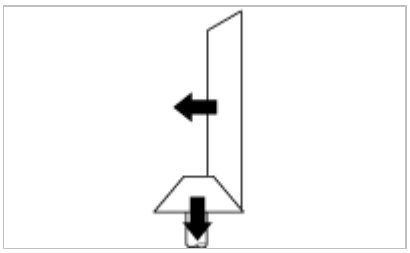


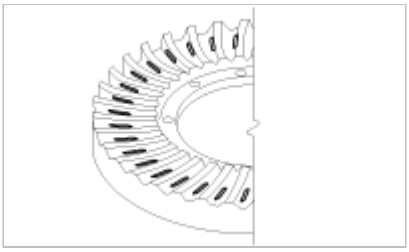
5. Using the screwdriver, Remove side oil seals.



Inspection

1. Check the tooth contact pattern.

Tooth contact	Contact state	Solution	
Standard contact			
1. Heal contact		Increase the thickness of the pinion height adjusting shim, and position the drive pinion closer to the center of the drive gear. Also, for backlash adjustment, reposition the drive gear further from the drive pinion.	
2. Face contact			
3. Toe contact		Decrease the thickness of the pinion height adjusting shim, and position the drive pinion further from the center of the drive gear. Also, for backlash adjustment, reposition the drive gear closer to the drive pinion.	
4. Flank contact			

NOTE

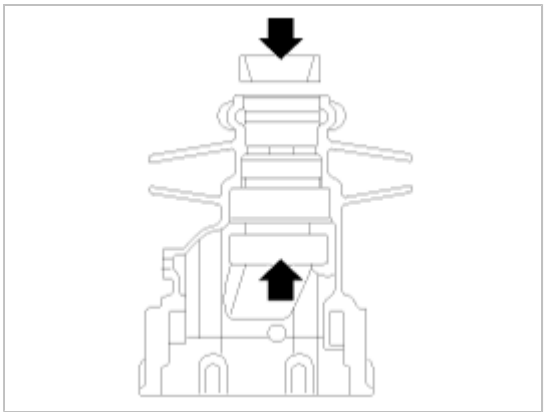
1. Tooth contact pattern is a method for judging the result of the adjustmentof drive pinion height and final drive gear backlash. The adjustment of drivepinion height and final drive gear backlash should be repeated until the toothcontact patterns are similar to the standard tooth contact pattern.
2. When you cannot obtain a correct pattern, the drive gear and drive pinionhave exceeded their limits. Both gears should be replaced as a set.

Content		Measures
Hypoid gear set(14+22) (Drive pinion & Drive gear)		If the gear teeth do not mesh or line-up correctly, determine the cause and adjust, repair, or replace as necessary. If the gear are worn, cracked, damaged, pitted or chipped (by friction) noticeably, replace with a new gear set.
Bearing (4, 12, 16)		If found any chipped (by friction), pitted, worn, rusted, scratched mark, or unusual noise from the Bearing, replace with a new bearing ASSY (as a new set)
Oil seal (3, 8)		Oil seals must be replaced with a new one whenever disassembled.
Differential carrier (5)		Replace with a new one if found any wear or cracks on the contact sides of the Differential carrier.
Companion flange (2)		Replace with a new one if found any chipped marks or other damage on the contact sides of the Lips of the front oil seal.
Open type diff assy	side gear(18) & pinion mate gear(20)	Replace with a new one if found that it is chipped (by friction), damaged, or unusual worn.
	side gear thrust washer(17) & pinion mate thrust washer (21)	Replace with a new one if found that it is chipped (by friction), damaged, or unusual worn.
Lsd type diff assy	Limited slip differential assy (18)	Replace with a new one if found any wear or cracks on the contact sides of the Limited slip differential assy.

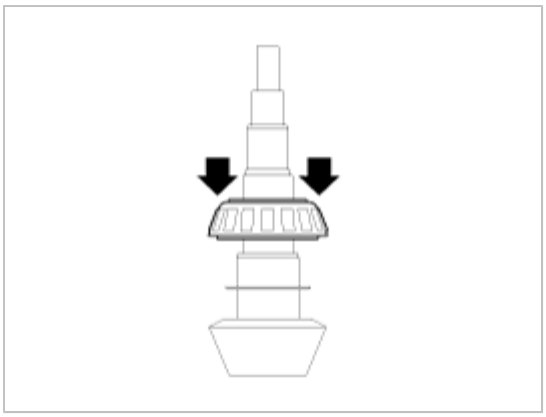
Reassembly

Pinion assembly

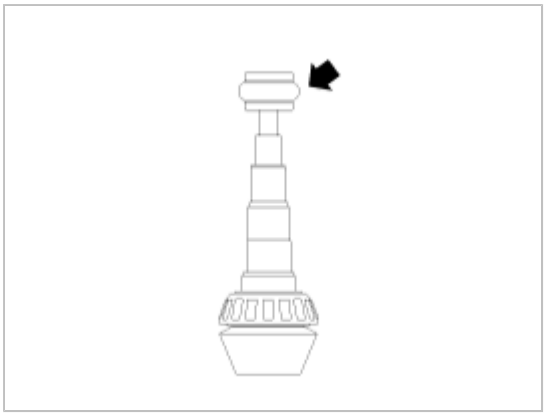
1. Press-fit pinion front and rear bearing outer races with tools.



2. Install selected pinion height adjusting shim in drive pinion gear.
   Using press and tool, press-fit pinion rear bearing inner race into it.

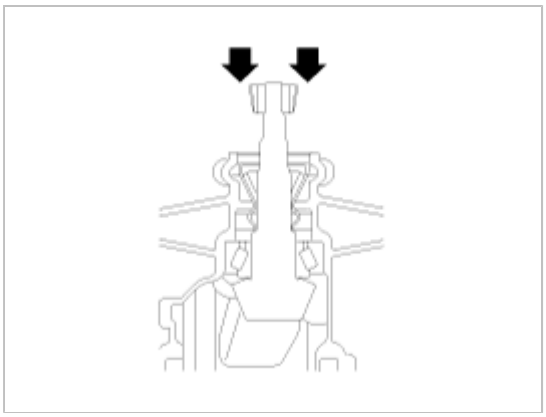


3. Install the pinion bearing adjusting spacer to the drive pinion.



> **CAUTION**
>
> Pinion bearing adjusting spacer is not reusable.
> Never reuse pinion bearing adjusting spacer.

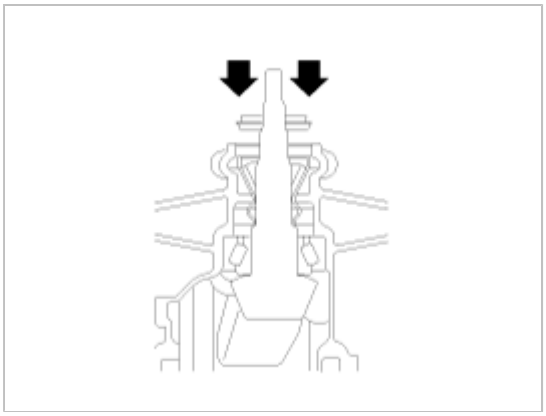
4. Using press and tool, press-fit pinion front bearing inner race.



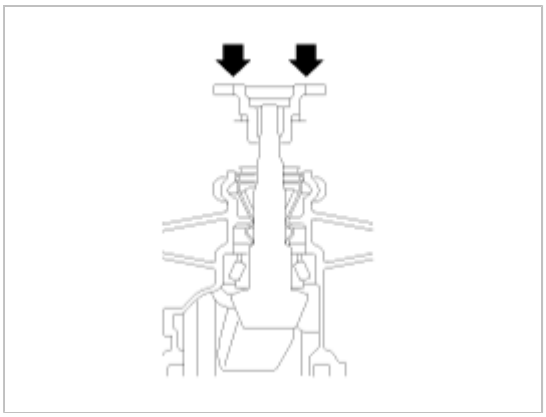
NOTE

The pressure do not exceed 5ton.

5. Using press and tool, press-fit front oil seal.



6. Using press and tool, press-fit companion flange.

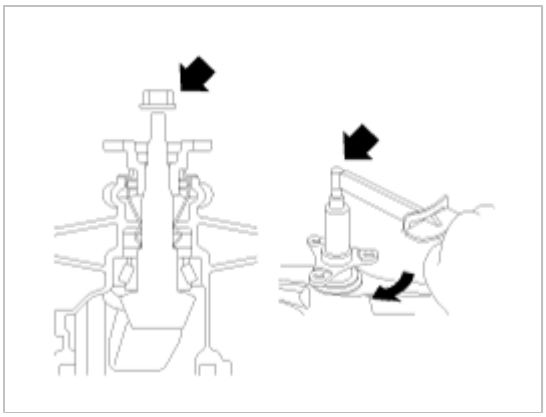


NOTE

The pressure do not exceed 5ton.

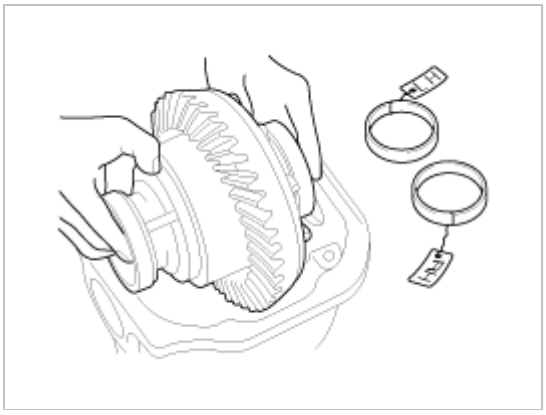
7. Install the pinion locking nut to make that the bearing freeroad is standard.

Tightening torque Nm (kgf.m, lb-ft) :
112.7~161.8 (11.5~16.5, 83.1~119.3)

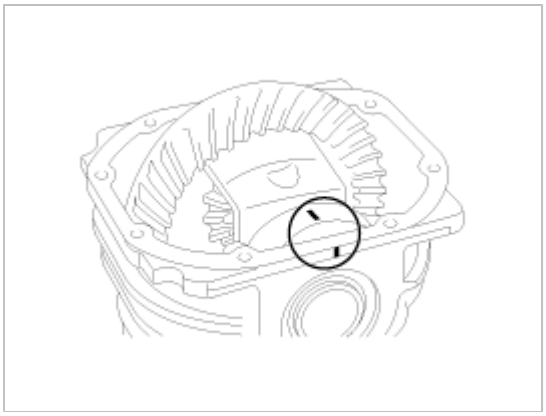


Differential case

1. Fix the diff assembly with both hands and install it to the differential carrier.

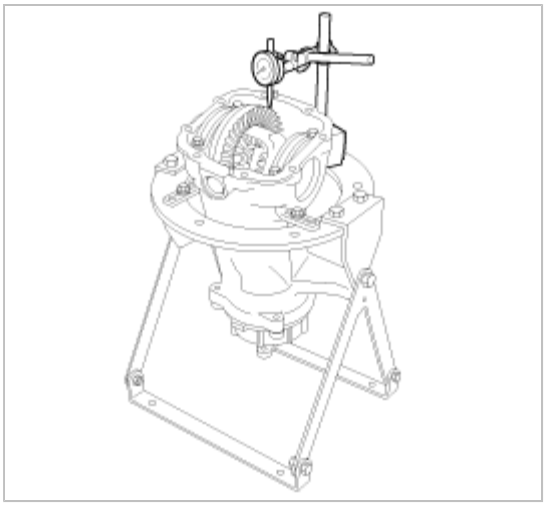


2. Instert the left/right diff shim between the diff side bearing and carrier. And then install the bearing cap with marks.



3. Measure drive gear-to-drive pinion backlash with a dial indicator at several point.

Standard :0.10~0.15mm

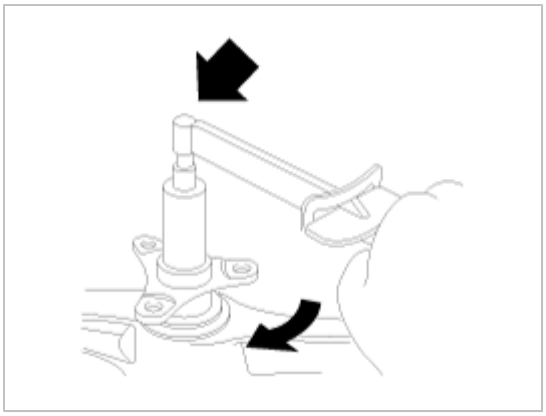


NOTE

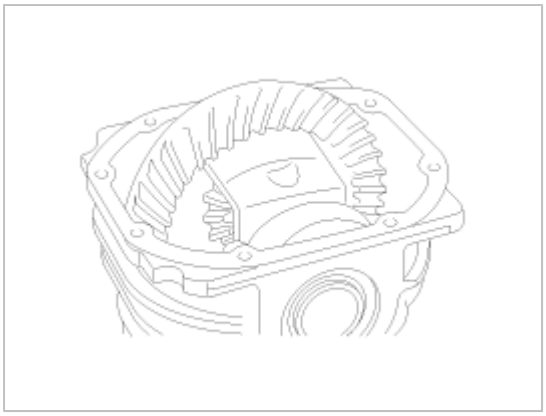
Thickness of the diff shim need to adjusted if backrash is small. Lessen the thickness of the left side diff shim. By contraries enlarge the thickness of the right side diff shim that much.

4. Check total preload with tool.

Standard : Pinion freeroad : 1.9~4.9(0.2~0.5, 1.4~3.6)

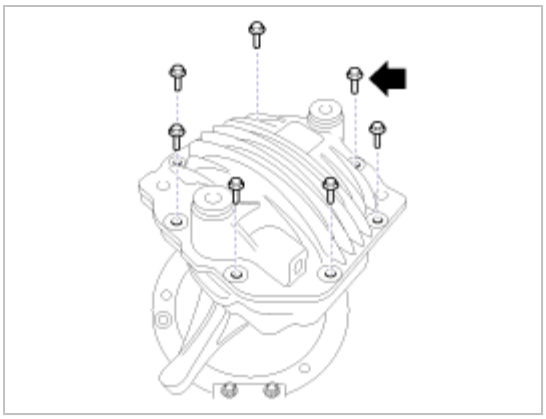


5. Applies liquid sealant to differential carrier as shown in figure

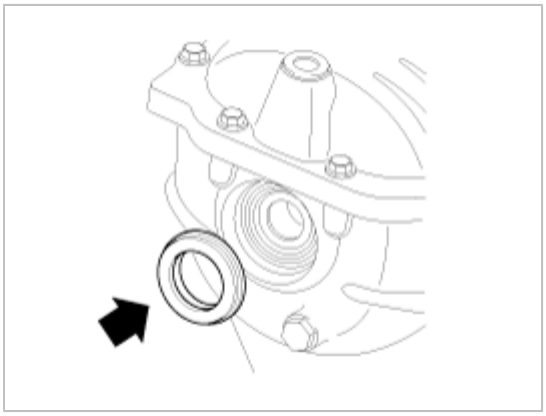


6. Install the differential cover.

Tightening torque Nm (kgf.m, lb-ft) :
39.2~49.0 (4.0~5.0, 28.9~39.1)

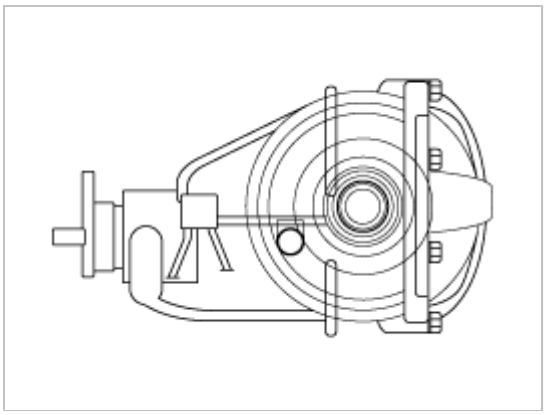


7. Using press and tool, press-fit side oil seals.



8. Install the drain plug and pinar plug.

Pillar plug : 39.2~58.8(4.0~5.0, 28.9~43.3)
Drain plug : 49.0~68.6(5.0~7.0, 36.1~50.6)



9. Tighten air breather.

Tightening torque Nm (kgf.m, lb-ft) :
9.8~19.6 (1.0~2.0, 7.2~14.4)