

Driveshaft and axle



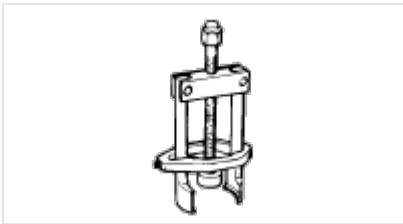
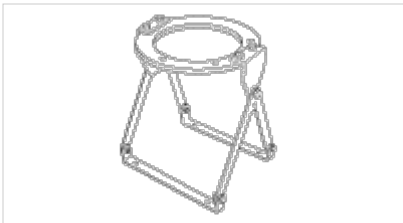

Lubricants


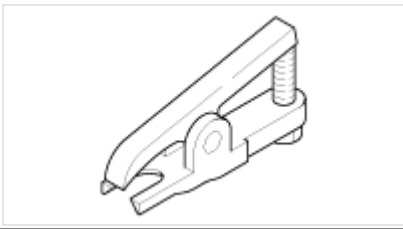
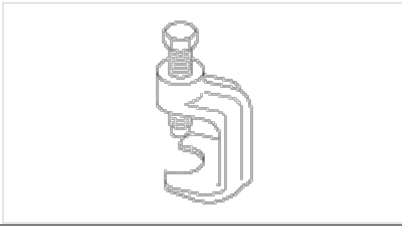
Items	Lubricants	Quantity
Rear driveshaft	BJ	115 ± 5g
	TSJ	130 ± 5g

Driveshaft and axle



Special Service Tools

Tool(Number and Name)	Illustration	Use
09495-33000Puller		Removal of spider assembly from a drive shaft.
09517-43401Working base		Support for the differential carrier
09517-43500Adapter		Support for the differential carrier(Use with 09517-43401)
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

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Troubleshooting

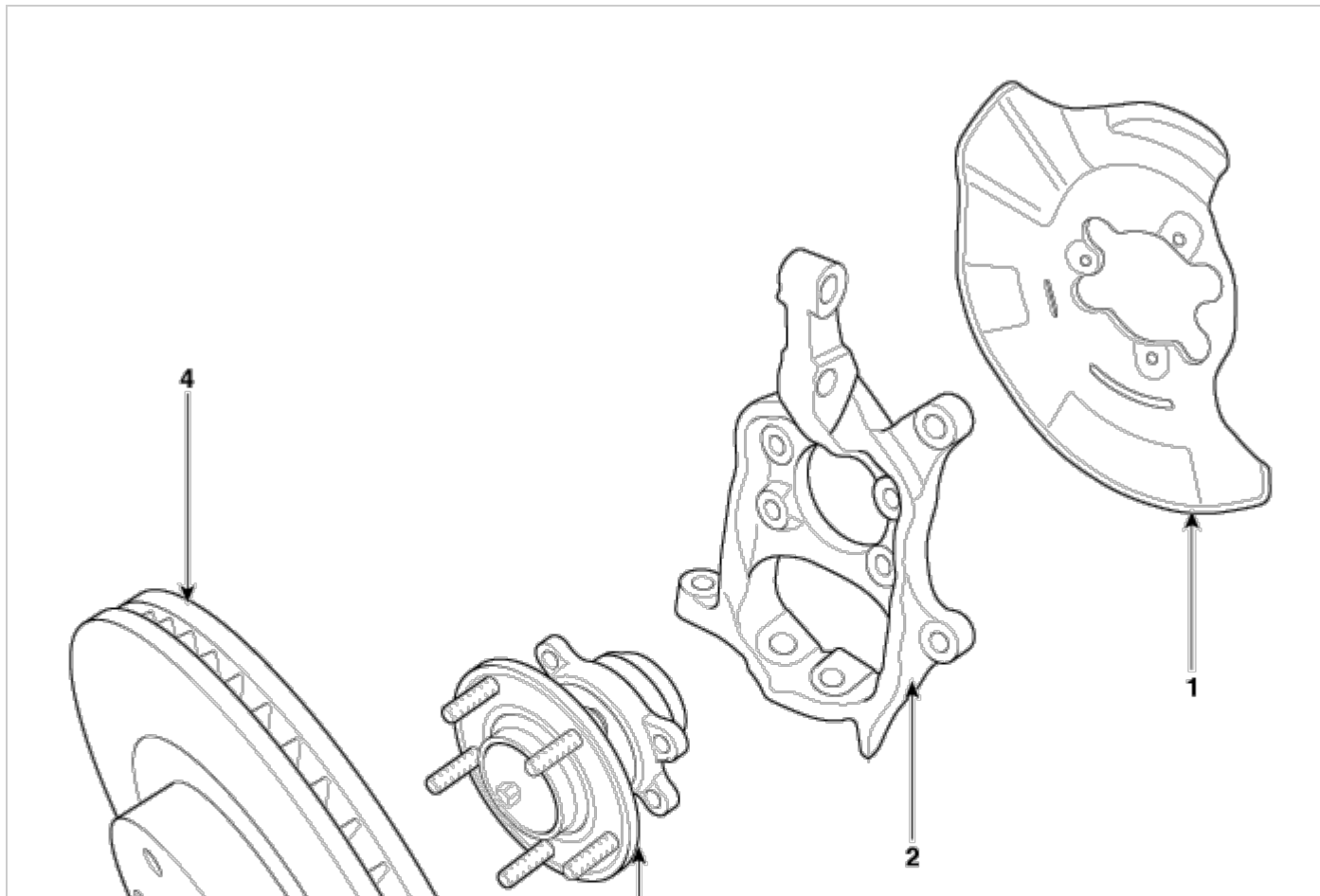
Trouble Symptom	Probable cause	Remedy
Vehicle pulls to one side	Scoring of driveshaft ball joint	Replace
	Wear, rattle or scoring of wheel bearing	Replace
	Defective front suspension and steering	Adjustment or Replace
	Tire inflation	Adjustment
	Tire pull, rotate tires	Adjustment
	Front camber/caster value	Adjustment
	Brakes dragging	Adjustment
	Road test on flat road (no crown)	Adjustment
	Etc	Adjustment
Vibration	Wear, damage or bending of driveshaft	Replace
	Driveshaft rattle and hub serration	Replace
	Wear, rattle or scratching of wheel bearing	Replace

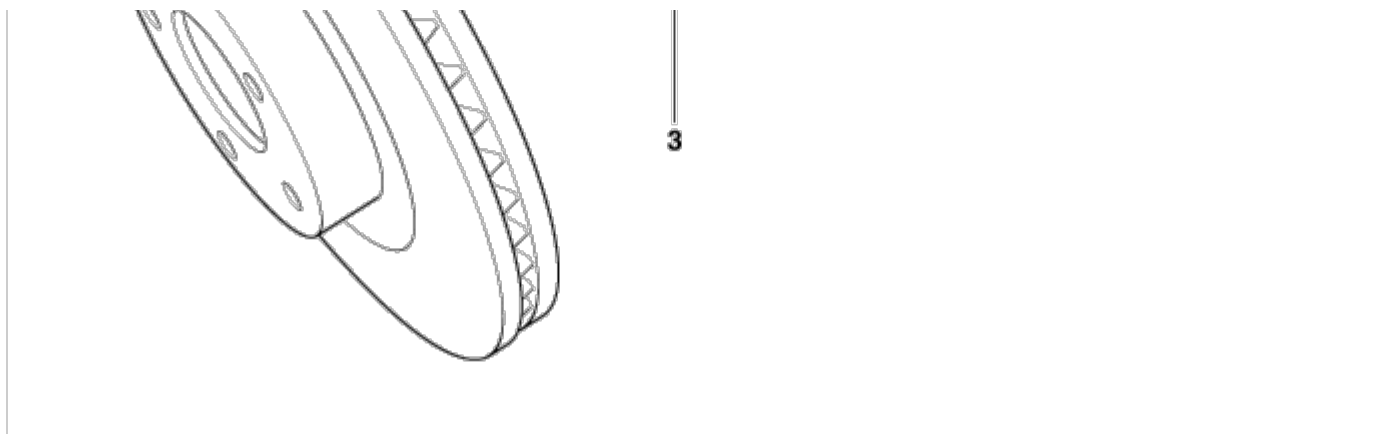
Shimmy	Defective wheel balance	Adjustment or Replace
	Defective front suspension and steering	Adjustment or Replace
Excessive noise	Wear, damage or bending of driveshaft	Replace
	Rattle of driveshaft and worn hub splines	Replace
	Wear, rattle or scoring of wheel bearing	Replace
	Loose hub nut	Adjustment or Replace
	Defective front suspension and steering	Adjustment or Replace

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Component





1. Dust cover
2. Knuckle

3. Hub assembly
4. Brake disc

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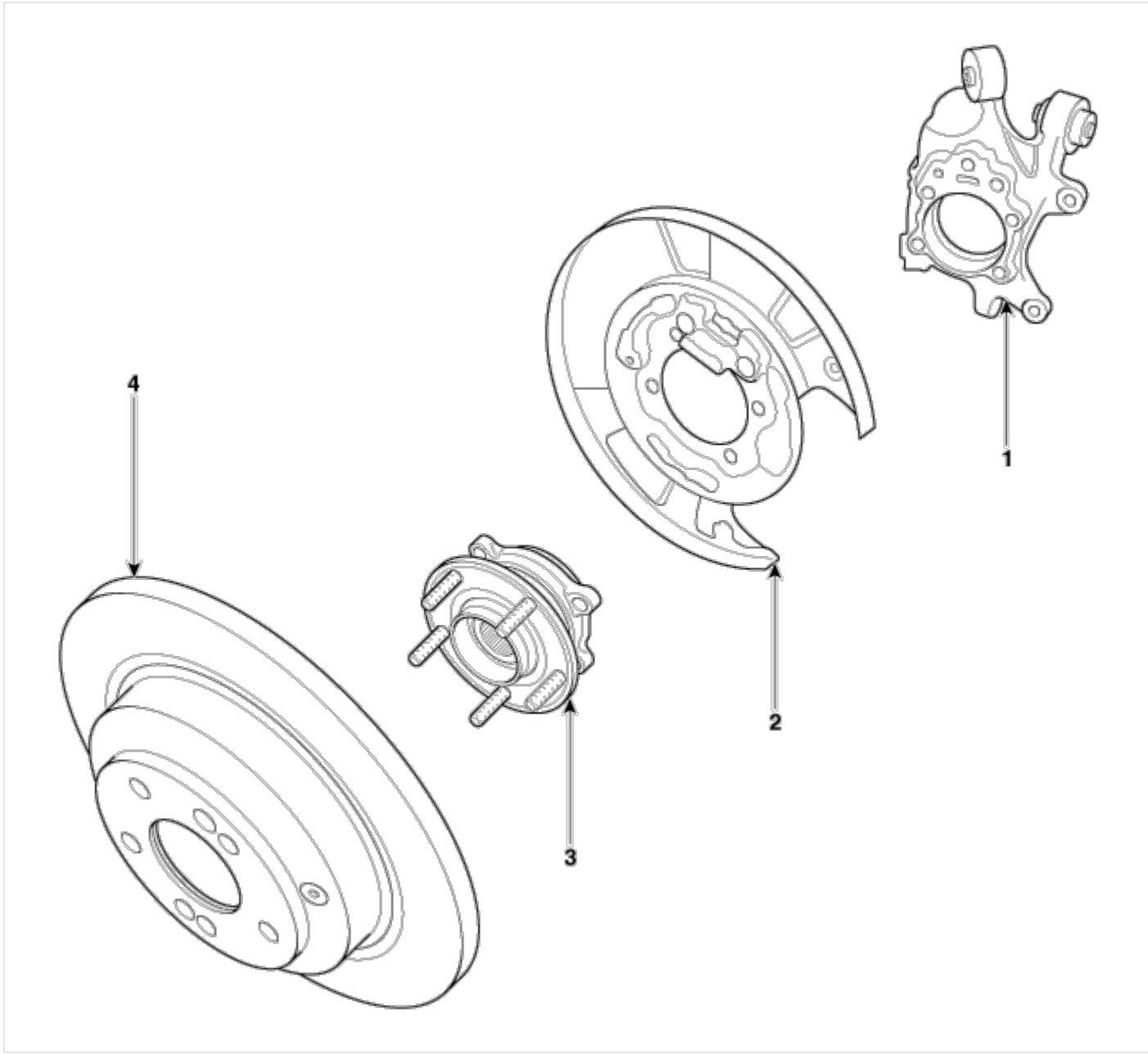
Inspection

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.

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Components



1. Rear carrier assembly
2. Rear dust cover

3. Rear hub assembly
4. Rear brake disc

Driveshaft and axle



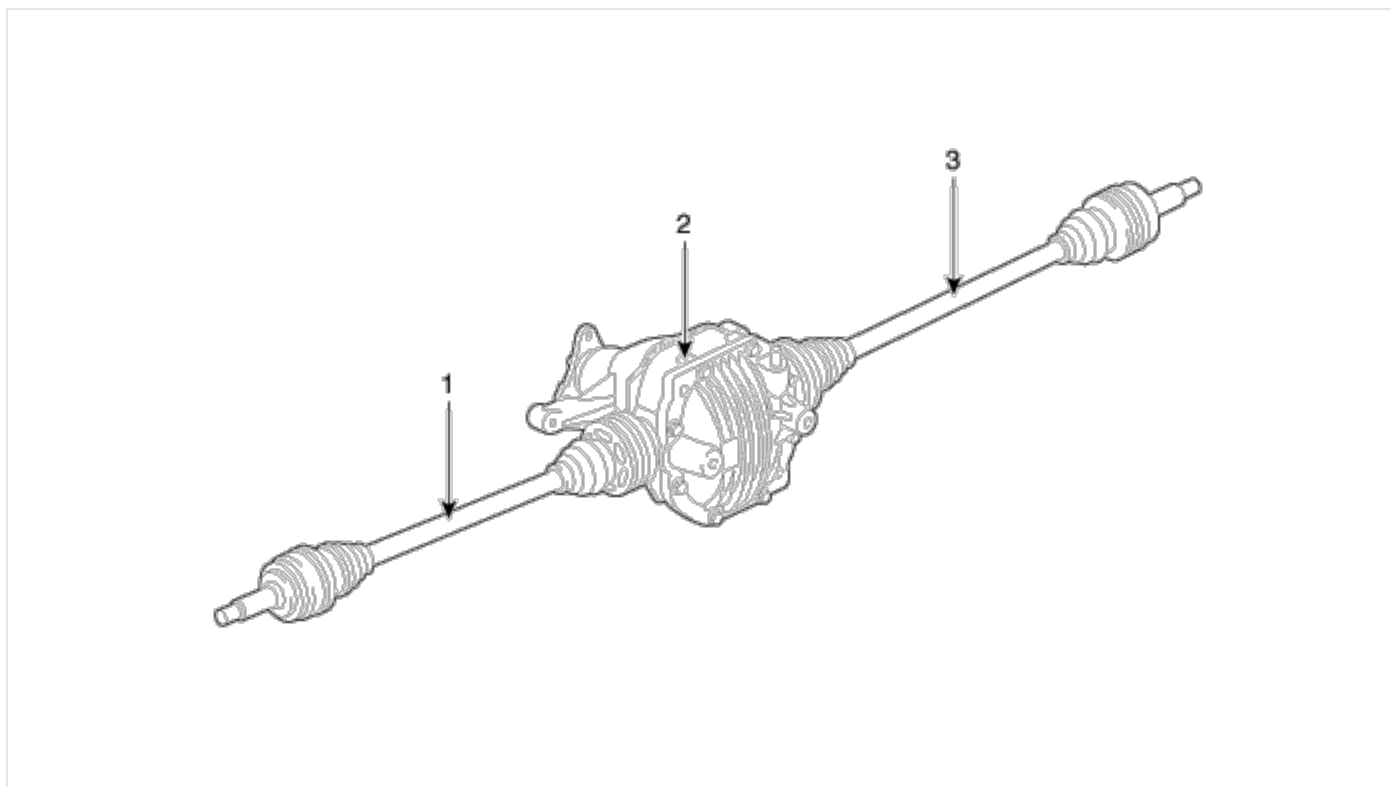
Inspection

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.

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Component Location



1. Drive shaft (LH)
2. Drive shaft (RH)

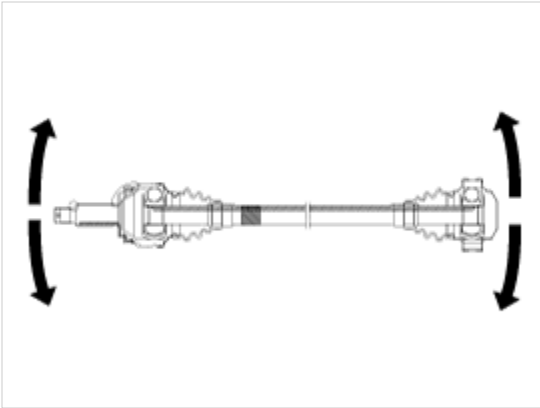
3. Defferential assembly

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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.

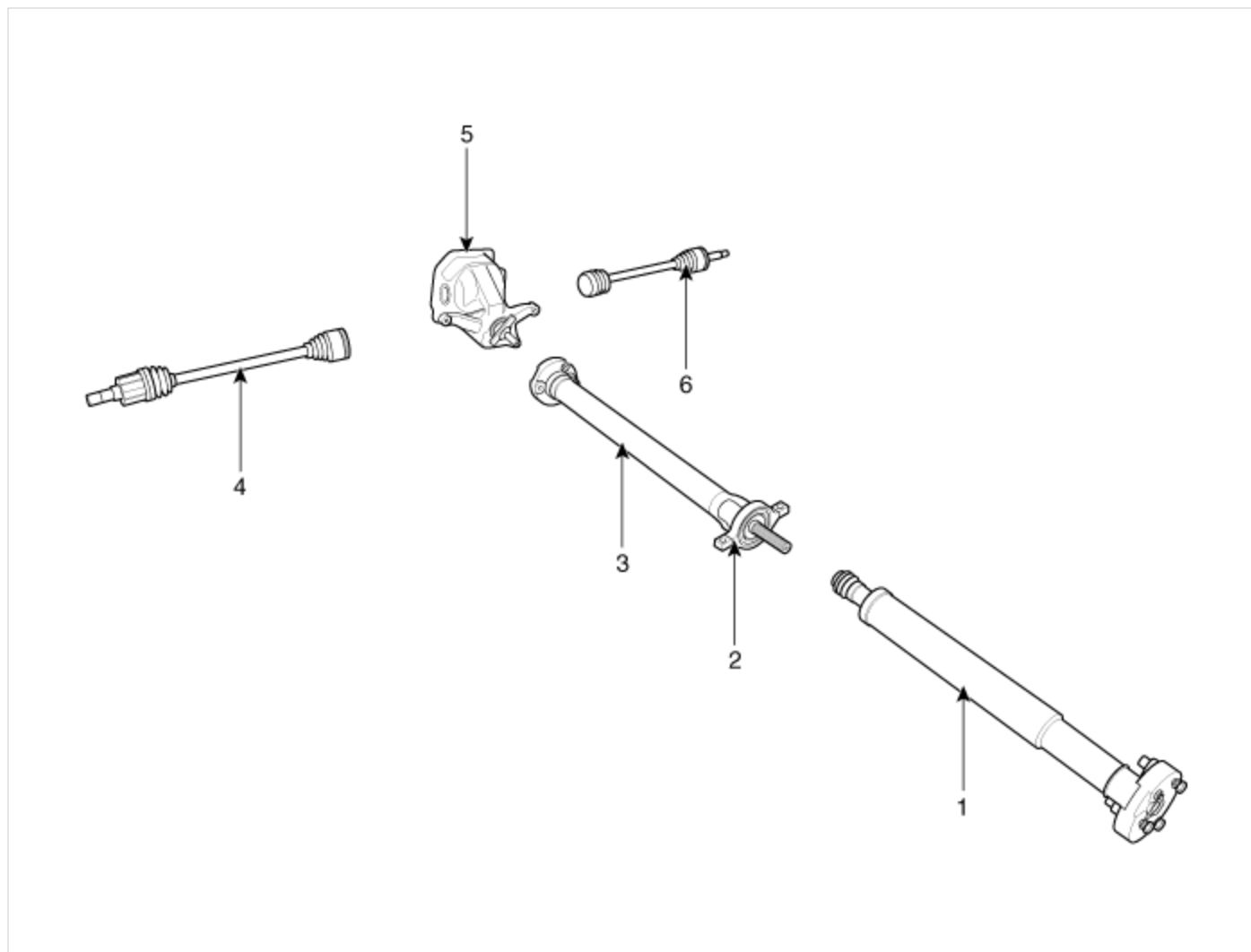


5. Check the driveshaft for cracks and wears.

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Components



1. Front propeller shaft
2. Center bearing bracket
3. Rear propeller shaft

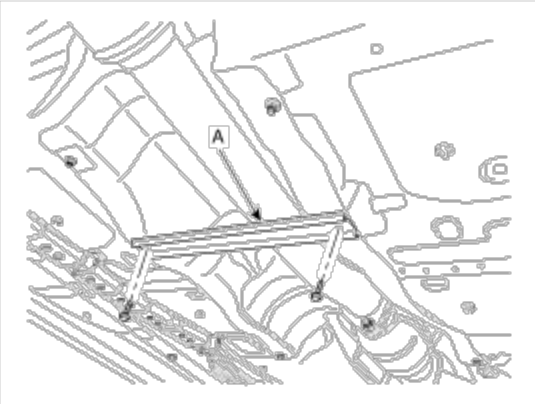
4. Drive shaft (R)
5. Differential carrier
6. Drive shaft (L)

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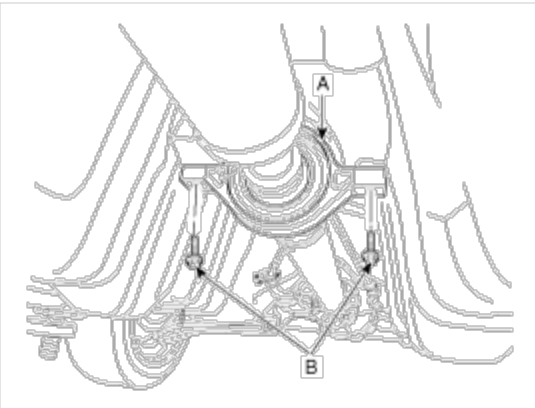


Replacement

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



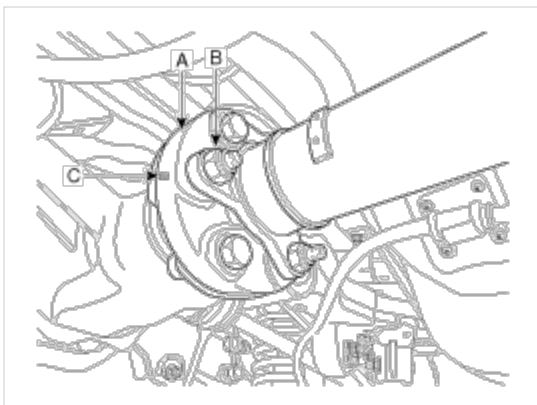
2. Remove the rear muffler(Refer to FL group-Muffler)
3. Loosen the mount bolts and then heating bracket.
4. Remove the center bearing bracket(A) mounting bolts(B).



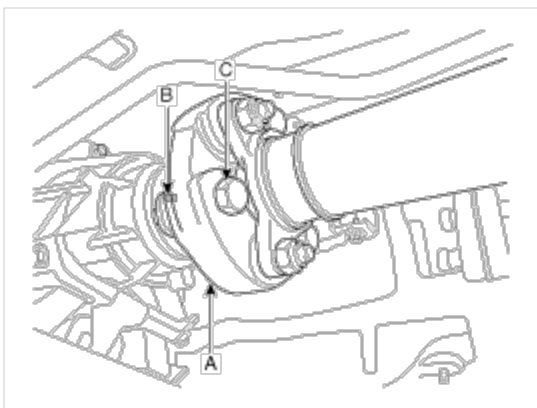
5. After making a match mark(C) on the rubber coupling(A) and rear differential companion(B), remove the propeller shaft mounting bolts(D).

Tightening torque :

90 ~ 110 N.m (9.0 ~ 11.0 kgf.m, 65.0 ~ 79.5 lb-ft)

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90 ~ 110 N.m (9.0 ~ 11.0 kgf.m, 65.0 ~ 79.5 lb-ft)

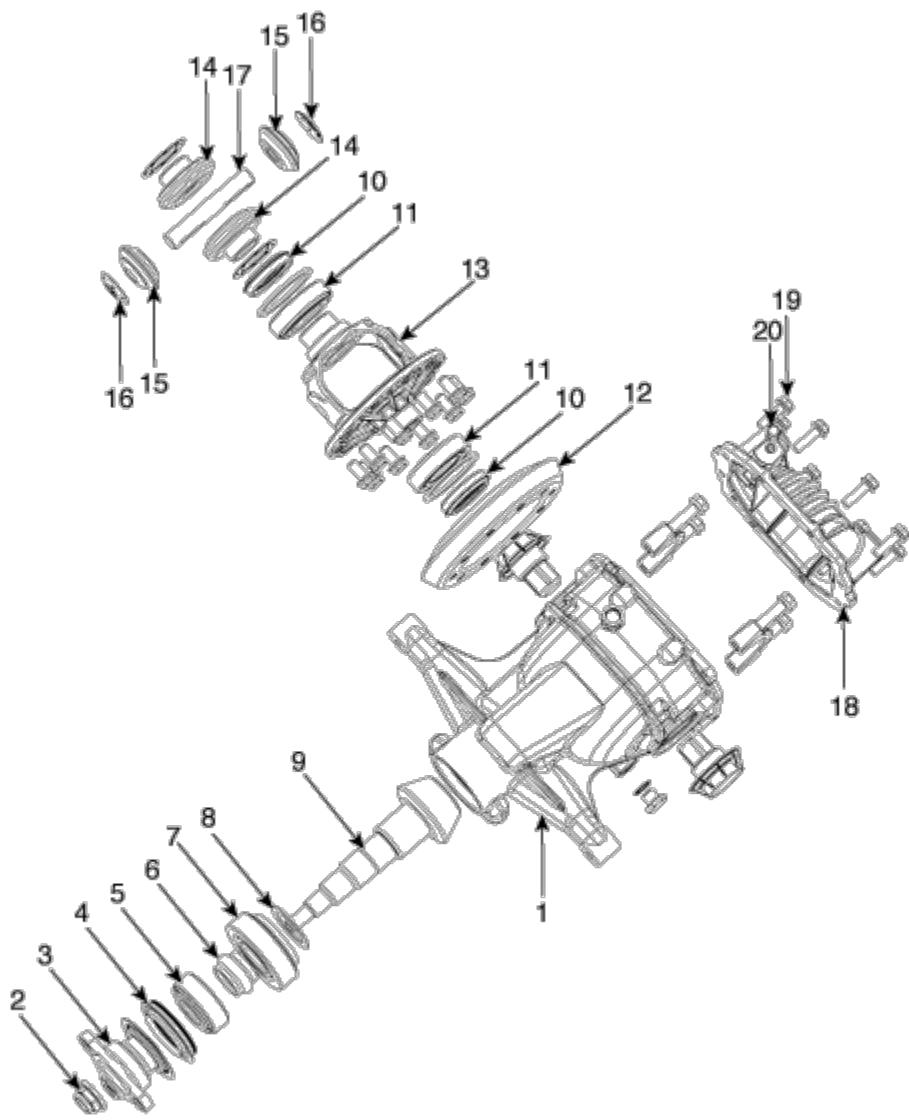
**⚠ CAUTION**

- 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.

Driveshaft and axle



Components



1. Differential	8. Inner bearing adjust shim	15. Pinion gear
2. Pinion locking nut	9. Drive gear	16. Thrust washer
3. Oil Seal guide	10. Oil seal	17. Differential pinion shaft
4. Pinion oil swal	11. Differential side bearing	18. Differential cover
5. Outer pinion bearing	12. Ring gear	19. Differential cover mounting bolts
6. Pinion bearing spacer	13. Differential	20. Air breather
7. Inner pinion bearing	14. Cam side gear	21. Filler piug

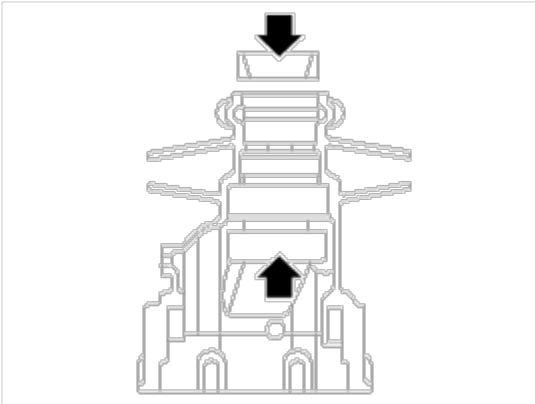
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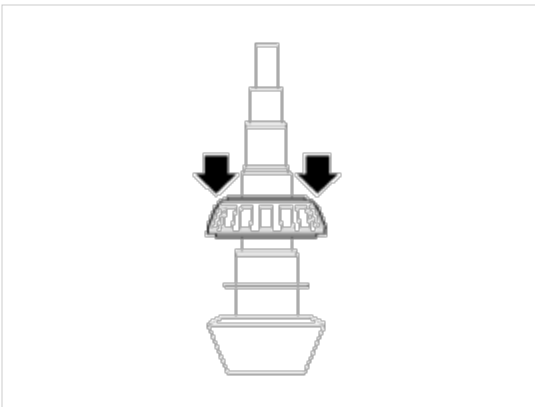
Reassembly

Pinion assembly

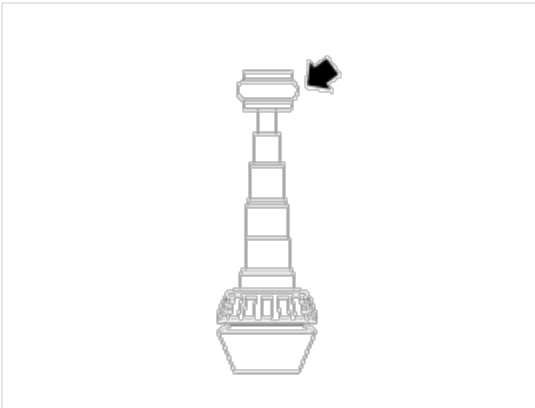
1. Press the inner/outer bearing race.



2. Select the pinion gear adjust shim and install it to the pinio gear. And then press the inner bearing.



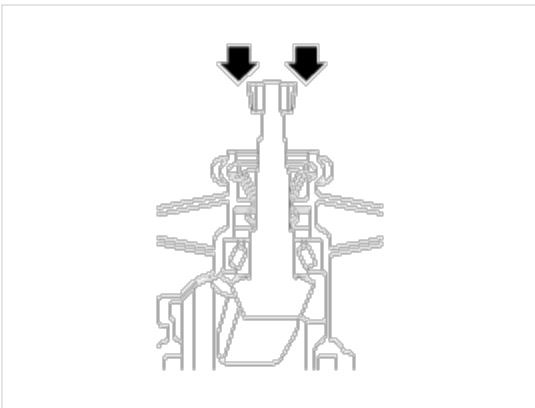
3. Install the bearing spacer.



CAUTION

Will have to use from new spacer.

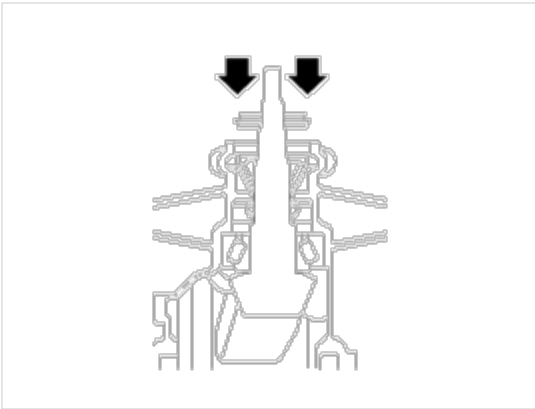
4. Press the installed pinion assembly to carrier with outer bearing in the illustration.



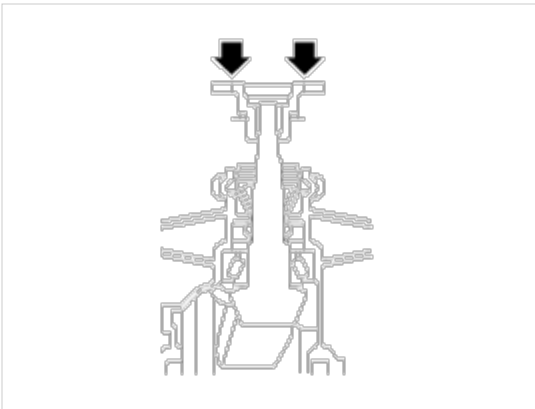
NOTICE

Will have to be below pressure 5 ton.

5. Press the pinion oil seal.



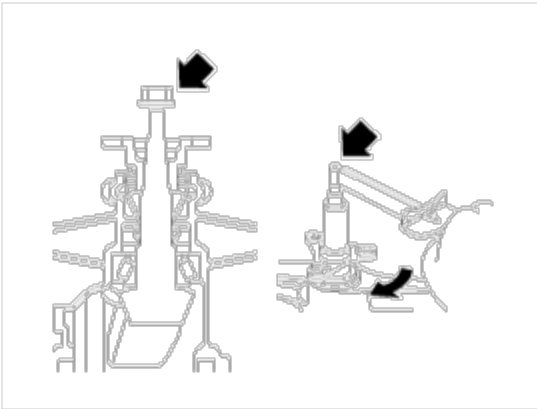
6. Press the companion flange.



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

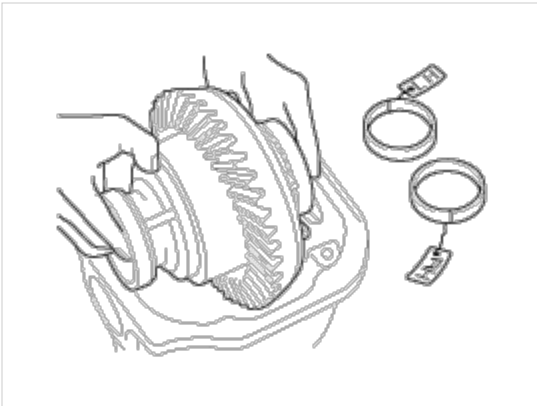
Tightening torque :

112.7 ~ 161.8 N.m (11.5 ~ 16.5 kgf.m, 83.1 ~ 119.3 lb-ft)

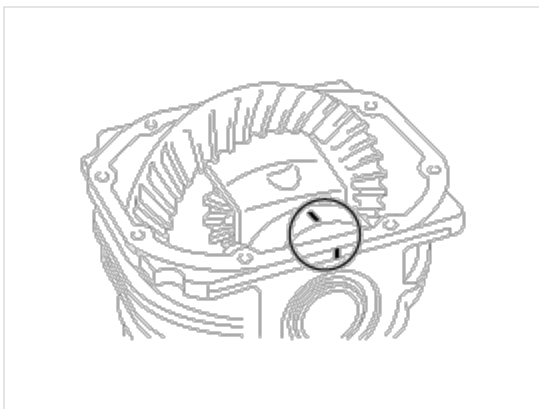


Differential case

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

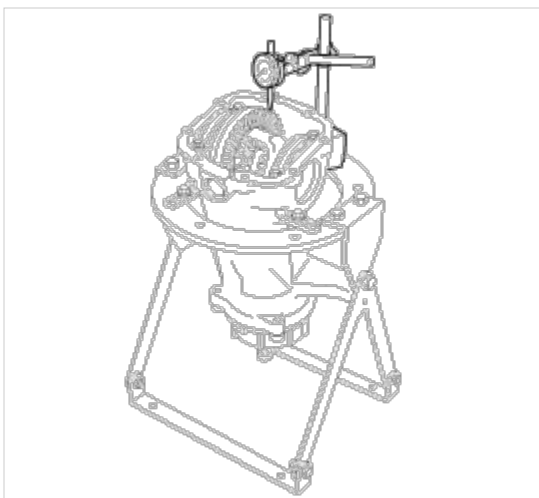


2. Insert the left/right diff shim between the diff side bearing and carrier. And then install the bearing cap with marks.



3. Adjust the diff shim.

Standard:0.10~0.15mm

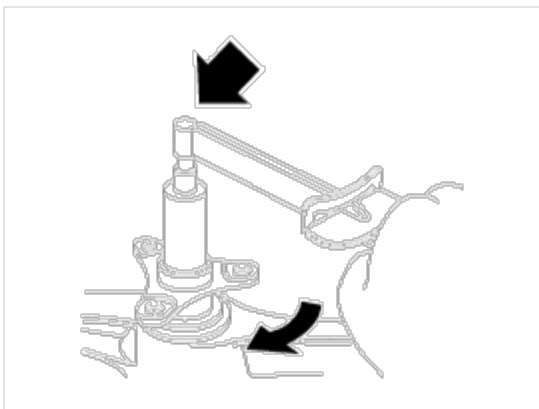


NOTICE

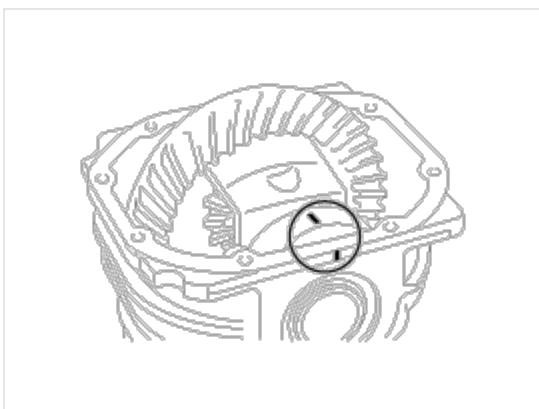
Thickness of the diff shim need to adjusted if backrash is small. Lessen the thickness of the left side diff shim. By contraries enlarge the thickness of the right side diff shim that much.

4. Measures the frea road.

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



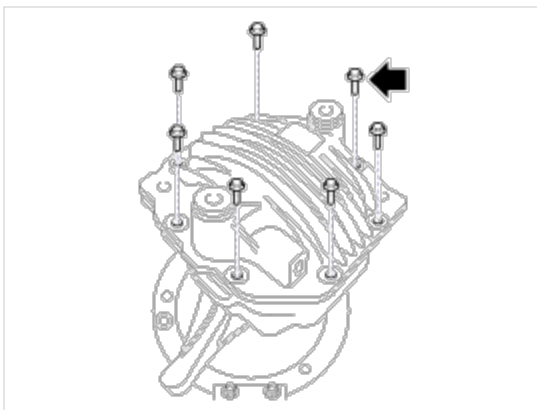
5. Applies a sealant in the carrier.



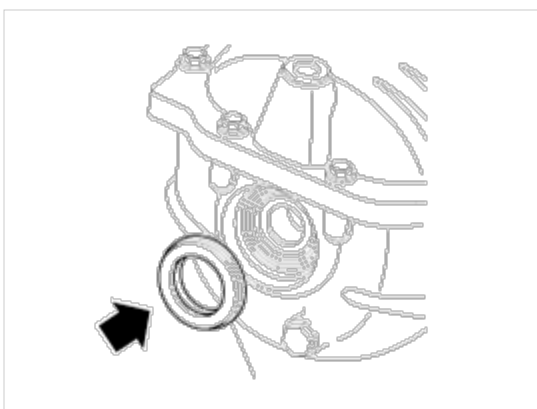
6. Install the differential cover.

Tightening torque Nm (kgf.m, lb-ft) :

39.2 ~ 49.0 N.m (4.0 ~ 5.0 kgf.m, 28.9 ~ 39.1 lb-ft)



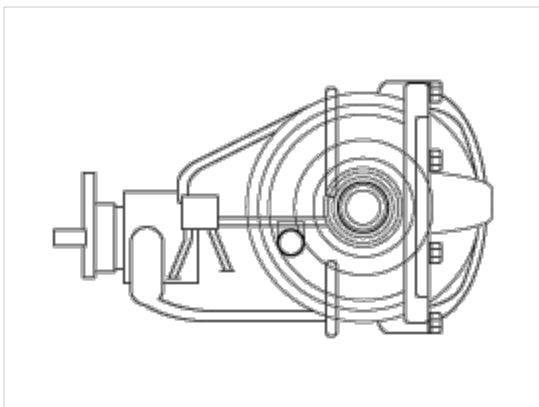
7. Install the diff oil seal.



8. Install the drain plug and pinar plug.

Pillar plug: 4 ~ 6 kgf.m

Drain plug: 5 ~ 7 kgf.m



9. Install the air breather.

Tightening torque :

9.8 ~ 19.6 N.m (1.0 ~ 2.0 kgf.m, 7.2 ~ 14.4 lb-ft)

