

SPORTAGE FRONT HUB SEAL CHANGE

TECHNICAL SERVICE BULLETIN

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GROUP: Chassis

SUBJECT

Sportage Front Hub Seal Change

This bulletin provides information on a change to Sportage 4WD hub seals. To improve hub vacuum sealing during 4WD operation, a new inner seal along with corresponding revisions to knuckles and CV shafts has been developed. This new seal design was incorporated from 10/21/00 production.

[Fig. 1: Identifying New & Previous Style Hub Seals](#)

To service earlier 1998-2001 vehicles (prior to 10/21/00 production) that experience inner seal problems, a service kit is available to retrofit the new seal.

Use the procedures in this bulletin to install the service kit.

REPAIR PROCEDURE:

1. Raise vehicle on hoist.
2. Remove front wheel/tire assembly.
3. Remove two bolts attaching brake caliper/anchor to knuckle and remove caliper/anchor assembly from rotor. Secure caliper/anchor assembly out of the way with wire or tie wraps.

NOTE: Do not allow caliper/anchor assembly to hang from brake hose.

[Fig. 2: Locating Caliper](#)

4. Remove two screws securing brake rotor to wheel hub and remove rotor.
5. Disconnect vacuum hose from fitting on knuckle.
6. Remove ABS sensor attaching bolt and sensor from knuckle (if ABS equipped).

[Fig. 3: Locating ABS Sensor & Vacuum Line Connection](#)

7. Remove six bolts securing vacuum locking hub to wheel hub and remove hub.
8. Remove snap ring and washer from CV axle shaft. Discard snap ring.

[Fig. 4: Removing Snap Ring And Washer From CV Axle Shaft](#)

9. Remove tie rod cotter pin and nut, then with a suitable puller (such as Snap-On CJ82B), disconnect tie rod end from knuckle.

NOTE: Do not use pickle fork type tie-rod separator - seal damage will occur.

Fig. 5: Identifying 2 Jaw Puller

10. Remove lower ball joint cotter pin and nut then, with a suitable puller (such as Snap-On CJ119B) separate ball joint from knuckle.

NOTE: Do not use pickle fork type ball joint separator - seal damage will occur.

Fig. 6: Identifying Lower Ball Joint Removal Tool

11. Remove 10 mm pinch bolt and nut securing upper ball joint to knuckle.
12. Remove knuckle/hub assembly from vehicle.
13. Using a suitable jack under lower control arm, load suspension and raise strut fork opening sufficiently to allow drive shaft removal. Pull CV shaft free from front axle by using the outer part of shaft as slide hammer.

Fig. 7: Removing Drive Shaft

14. Remove shaft from vehicle, carefully guiding CV joint through strut fork.

NOTE: Apply lubricant to CV boot edge and fork edges to facilitate removal Do not use undue force as damage to boot may occur.

Fig. 8: Applying Lubricant To CV Boot Edge & Fork Edges

15. Mark the edge of the lower control arm at 1/8 inch from edge as shown.

Fig. 9: Marking Edge Of Lower Control Arm At 1/8 Inch From Edge

16. Remove the 1/8 inch of material marked in step [15](#) by grinding the edge at an angle as shown. Touch up reworked area with black paint.

NOTE: This material removal on the lower control arm is necessary to prevent interference between the lower control arm and the new knuckle and/or inner seal dust shield on CV shaft.

Fig. 10: Grinding Edge Of Lower Control Arm

17. Inspect retaining ring on output shaft of front axle, replace if damaged.

Position/rotate new drive shaft to line up with splines in front axle output shaft, then install by

pushing in place, using outer part of shaft as slide hammer.

Fig. 11: Installing Drive Shaft

18. Unload suspension and remove jack.
19. Remove 4 bolts and separate old ball joint from lower control arm. Install ball joint on new knuckle and hand tighten attaching nut.

NOTE: **Installing knuckle to upper control arm first with lower ball joint already installed on knuckle will help prevent damage to the dust shield on the drive shaft and/or seal.**

Fig. 12: Hand Tightening Attaching Nut

20. Apply grease to inner bearing surface and to both sides of new knuckle spacer (0K011-33-044, included in kit) and install onto CV joint.

NOTE: **The spacer has a chamfer on the inside diameter; this chamfer must face the CV joint.**

Fig. 13: Applying Grease To Inner Bearing Surface & Sides Of Knuckle Spacer

21. Apply grease to inner seal in new knuckle/hub assembly.
22. Install knuckle/hub assy by first installing over CV axle shaft, then insert upper ball joint through top of knuckle. Retain with 10 mm pinch bolt and nut.

NOTE: **Suspending knuckle from the upper control arm before attaching ball joint to lower control arm will help prevent damage to the dust shield on the drive shaft and/or to the seal.**

Fig. 14: Securing Knuckle With Pinch Bolt

23. Make sure CV axle shaft is inserted all the way into hub, install washer and secure with new snap ring (P/N 0K-011-27-145, included in kit).

Fig. 15: Installing Washer And Snap Ring

24. Lift knuckle assembly up and guide lower ball joint flange under lower control arm and secure with 4 bolts. Torque bolts to 16 - 19 lb-ft.

Fig. 16: Guiding Lower Ball Joint Flange Under Lower Control Arm

25. Tighten upper ball joint pinch bolt to 36 lb-ft.
26. Tighten lower ball joint nut to 110 lb - ft and install new cotter pin.
27. Insert tie rod end into knuckle, install nut, tighten to 27 lb - ft, and install new cotter.
28. Make sure there is no interference between lower control arm and knuckle or inner seal dust

shield when turning steering from full left to full right. If there is interference, recheck/repeat steps 15 and 16.

29. Install ABS sensor into knuckle and tighten mounting bolt to 7 lb - ft (if ABS equipped).
30. Apply small amount of oil to O-ring on vacuum locking hub.
31. Install vacuum locking hub to wheel hub and tighten the six bolts in two passes using crisscross pattern.
 - First pass: Tighten to 19 lb - ft
 - Second pass: Tighten to 23 lb - ft
32. Connect a hand held vacuum pump to vacuum fitting on knuckle and check for vacuum leakage. Hub should hold a vacuum of 20 in Hg for 10--20 seconds. If it does not, check for seal damage or mis-installation and excessive wheel bearing play.

Fig. 17: Locating Vacuum Connection

33. Check vacuum hoses, steel lines, vacuum canister and vacuum solenoid for restrictions, cracks, and contamination or rust. Clear with compressed air if any debris or restrictions are found. Replace any unserviceable parts.
34. Connect vacuum hose to fitting on knuckle.
35. Install brake rotor and two retaining screws.
36. Install brake caliper/anchor assembly and tighten the two mounting bolts to 72 lb - ft.
37. Install wheel/tire assembly and tighten lug nuts to 74 lb - ft.
38. Repeat procedure for other side of vehicle.
39. Confirm that vacuum solenoid harness connector is securely installed on solenoid.

NOTE: This connector may have been disconnected on vehicles modified for use with earlier style locking hubs.

40. Test vehicle and verify 4 wheel drive operation.

Fig. 18: Locating Vacuum Solenoid Connector

AFFECTED PRODUCTION RANGE:

1998, 1999, 2000 and some 2001 MY Sportage 4WD models with production dates between 9/1/97 and 10/21/00.

PART NUMBER INFORMATION:

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Description	Previous P/N	New P/N
Knuckle/Hub Assy w/o ABS	0K083 04 500	QK081 33 020 DQ
Knuckle/Hub Assy w/ABS	0K083 04 600	QK082 33 020 EQ

WARRANTY CLAIM INFORMATION:

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Claim Type	Causal P/N	Qty.	Cond. Code	Cause Code	Repair Description	Labor OP Code	Time	Related Parts	Qty.
W	0K083 04 500 (NonABS)	0	N99	C99	Knuckle/Hub Assy R&R	98991R00	2.0	QK081 33 020 DQ (Non ABS)	1
	0K083 04 600 (ABS)							QK082 33 020 EQ (ABS)	

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