



DTB

Date: November 24, 2008
 Order No.: **P-B-32.50/34e**
 Supersedes: P-B-32.50/34d September 16, 2008
 Group: 32

Revision History

Revision	Date	Purpose
e	11/24/08	Warranty Information Updated
d	9/16/08	Work Procedure, Parts and Warranty Inforamtion Updated
c	6/24/08	Note Added on Page 2
b	9/4/07	WIS Reference Updated
a	3/20/07	Warranty Information Updated
-	12/1/05	Initial issue

SUBJECT: Model 215.373/374/375/376/378/379
Model 220.170/173/174/175/176/178/179, Equipped with Code 487 (Active Body Control)
Model 230.474/475/476/479
Vehicle Level Lowers After Being Parked

If you receive customer reports in the above model vehicles of the vehicle's suspension level lowering after being parked (engine off) and any combination of the following fault codes stored, perform the corresponding action based upon the present condition.



Note: The vehicle's level may lower at any of the following: an individual strut, front or rear axle, right or left vehicle side and/or complete vehicle.

Fault Code	Fault Code Text
C1525 (001)	Critical vehicle level front left
C1525 (002)	Critical vehicle level front right
C1525 (004)	Critical vehicle level rear left
C1525 (008)	Critical vehicle level rear right
C1531 (001)	Left front suspension strut moves although locking valve is closed
C1531 (002)	Right front suspension strut moves although locking valve is closed
C1531 (004)	Left rear suspension strut moves although locking valve is closed
C1531 (008)	Right rear suspension strut moves although locking valve is closed

This bulletin has been created and maintained in accordance with MBUSA-SLP S423QH001, Document and Data Control, and MBUSA-SLP S424HH001, Control of Quality Records.



Note: For both conditions listed below, large temperature differences in the ABC suspension system between operating and when stationary for an extended period can also cause the vehicle to lower slightly. The lowering is caused by temperature dependent volume changes in the ABC oil within the suspension struts. The vehicle can lower up to 10 mm when the temperature difference is 30°C (ABC operating temperature 20°C / outside ambient temperature -10°C).

Condition 1:

If a vehicle lowers after being stationary (engine off) within approximately one week, this is likely due to internal leakage in the check valve of the front (Y36/1) or rear (Y36/2) axle valve blocks. The internal leakage is the result of deposits or contamination on the valve seat of the check valve. In order to remove the deposits, filter the ABC system (reference WIS document AR32.50-P-0025A).

If the complaint still continues to occur after the above procedure, the respective valve block must be replaced with revised parts, follow the procedure listed below.



Note: For Model 230, corresponding hydraulic lines and a guard plate are also required; refer to the parts information table.

1. Clean the oil reservoir, especially the lower portion of tank which has a small "tit" (Figure 1, circle) which can get a build-up of debris. You may need to pick the debris out of this area. Refer to WIS document GF32.50-P-4900A.
2. Filter ABC system (refer to WIS document AR32.50-P-0025A). Rodeo procedure should be performed for 0.5 hours in order to ensure fluid is at full operating temperature
3. Raise vehicle level with STAR Diagnosis to the maximum level via the following menu path: Control Units → Chassis → Suspension → ABC Active Body Control → Actuators → Control and Locking Valve (for each suspension strut) → F3 (Switch on) → F5 (+) → F4 (switch off).
4. Bleed oil from struts via bleed screws. Refer to WIS document AR32.50-P-0001-01N.
5. Repeat steps 3 and 4 three times. This removes any debris contained within the struts. Ensure that there is sufficient oil within the reservoir between each bleed routine.
6. Remove valve block. Refer to the following WIS documents: Model 215/220 – AR32.50-P-0001N and AR32.50-P-0002N and Model 230 – AR32.50-P-0001R and AR32.50-P-0002R.
7. Thoroughly clean threaded connections / hydraulic lines.
8. Replace valve block. Refer to the following WIS documents: Model 215/220 – AR32.50-P-0001N and AR32.50-P-0002N and Model 230 – AR32.50-P-0001R and AR32.50-P-0002R.
9. Filter ABC system. Refer to WIS document AR32.50-P-0025A. Rodeo procedure should be performed for 0.5 hours in order to ensure fluid is at full operating temperature.
10. Ensure correct ABC fluid level.



Caution! It is imperative that the utmost attention for cleanliness be observed when working on the ABC suspension system in order to ensure that **no** contamination enters the system. Small particles of debris can contaminate the hydraulic fluid, thus causing internal leakage.

Condition 2:

If a vehicle lowers only after being stationary (engine off) for more than approximately a week, this is a characteristic of the hydraulic design and is not a complaint that requires a repair. The check valves in the front and rear axle valve blocks have a metal valve seat. The inherent design of this sealing method, required for system durability, permits a limited level of leakage which can result in the vehicle slowly lowering. If the vehicle does not lower significantly until after approximately one week has passed, do not

perform any repair attempts.

i **Note:** The dropping vehicle level is **not** caused by a suspension strut. The suspension strut can only be responsible for a dropped vehicle level if it exhibits an external leak. This leak can be recognized by oil fouling on the boot.



Figure 1

Parts Information

Qty.	Part Name	Part Number
10	ABC hydraulic fluid, Pentosin (1 liter)	BQ132 0001
2	ABC oil filter	A003 184 61 01
1	ABC valve unit (front or rear)	A220 320 12 58
1	Hydraulic line – only required for model R230 when replacing rear axle valve block	A230 320 98 53
1	Hydraulic line – only required for model R230 when replacing rear axle valve block	A230 320 99 53
1	Hydraulic line – only required for model R230 when replacing rear axle valve block	A230 320 16 54
1	Guard plate	A230 327 02 86

i **Note:** The following allowable labor operations should be used when submitting a warranty claim for this repair. This information has been generated on November 11, 2008. Please refer to Netstar → Star TekInfo → Star Time for the most current labor time allowance.

In Case of Warranty

Operation: Short test, perform (54-1011)
 Hydraulic Fluid of ABC System (After Check), Filter (32-7501)
 Rodeo test – perform (32-0000)
 Active Body Control (ABC) – Front & Rear, Bleed (32-7498)
 Valve body – front axle for Act. Body Cont. (ABC), replace (32-7545)
 Valve body – rear axle for Act. Body Contr. (ABC), replace (32-7546)

Damage Code	Operation Number	Time (hrs.)	Model Indicator (s)
32554 B1	54 1011	0.3 hrs.	J3, M1, M2, M4, M5, M8, M9, N1, N2, N3, N4, N5, N6, R1, R2, R3, R4
	32 7501	1.2 hrs.	J3, M1, M2, M4, M5, M8, M9, N1, N2, N3, N4, N5, N6, R1, R2, R3, R4
If Necessary	32 0000	0.5 hrs. *	J3, M1, M2, M4, M5, M8, M9, N1, N2, N3, N4, N5, N6, R1, R2, R3, R4
	32 7501	1.2 hrs.	J3, M1, M2, M4, M5, M8, M9, N1, N2, N3, N4, N5, N6, R1, R2, R3, R4
	32 7498	0.6 hrs	J3, M1, M2, M4, M5, M8, M9, N1, N2, N3, N4, N5, N6, R1, R2, R3, R4
	32 7498	0.6 hrs	J3, M1, M2, M4, M5, M8, M9, N1, N2, N3, N4, N5, N6, R1, R2, R3, R4
	54 1012	0.5 hrs	J3, M1, M2, M4, M5, M8, M9, N1, N2, N3, N4, N5, N6, R1, R2, R3, R4
	32 7498	0.6 hrs	J3, M1, M2, M4, M5, M8, M9, N1, N2, N3, N4, N5, N6, R1, R2, R3, R4
	32 7545	1.4 hrs.	J3, M1, M2, M4, M5, M8, M9, N1, N2, N3, N4, N5, N6
		1.7 hrs.	R1, R2, R3, R4
	32 7546	1.4 hrs.	J3, M1, M2, M4, M5, M8, M9, N1, N2, N3, N4, N5, N6
		2.3 hrs.	R1, R2, R3, R4
	32 0000	0.5 hrs. *	J3, M1, M2, M4, M5, M8, M9, N1, N2, N3, N4, N5, N6, R1, R2, R3, R4
	32 7501	1.2 hrs.	J3, M1, M2, M4, M5, M8, M9, N1, N2, N3, N4, N5, N6, R1, R2, R3, R4

* Maximum time allowed with a separate time punch. Ensure that punches are labeled as NON time.