

REFERENCE:	Nova Bus Manuals
SECTION:	05 Rear Axle ZF AV-132
RS N°:	MQR 7621-183
EFFECTIVE IN PROD.:	L574 (2010OC19)

APPLICATION DEADLINE:
2013DE27

SUBJECT:	ZF Differential Thrust Washer
JUSTIFICATION:	ZF Differential Thrust Washer Failure

LEVEL	DESCRIPTION	DIRECT CHARGES		TIME
		LABOUR	MATERIAL	
1	Differential oil sampling and copper level analysis	Nova Bus	–	15min
2	If non-compliant, proceed with ZF differential portal axle conversion	Nova Bus	Client*	14hrs

* The cost of the material will be reimbursed when claiming for this service document.

MATERIAL

QTY	PART N°	REV.	DESCRIPTION	REPLACES PART N°
LEVEL 1				
1	N8900046	–	Oil-PEK oil sampling kit ¹	–
x	N8900047		Oil pump ¹	
LEVEL 2 (only if required*)				
4	N8893152	–	Slot pin	–
4	N8893153	–	Slot pin	–
1	N8898597	–	O-ring	–
2	N8898604	–	Differential side gear	–
2	N8893147	–	Thrust washer	–

Materials in level 1 will be available within 49 days. To order, please contact Prevost Parts by phone at 1-800-771-6682, by fax at 1-888-668-2555 or by email at prevostparts.commandes@volvo.com. Specify document number, quantity of parts required and shipping address.

¹ One oil pump can be used on multiple vehicles, therefore order a quantity (x) according to your needs. However, ONE oil sampling kit with hose per vehicle is essential to avoid any cross-contamination of the samples and ensure the accuracy of the results.

* The material identified in Level 2 is to be ordered only for vehicles that respect the criteria defined in Level 1. Order information will be provided by your Service Representative.

DISPOSAL OF PARTS

REMOVED PARTS ARE:	DISCARDED	RETAINED *	* To be reimbursed, the parts must be retained and presented to your after-sales service representative at the time of the claim.
	–	Yes	

REVISION HISTORY

REV.	DATE	CHANGE DESCRIPTION	WRITTEN BY
NR	2012OC23	Initial release	Isabel Estañ

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
Academy Bus - New Jersey	L333	—	—	L82U273000207	L82U473000211	5
Academy Bus - New Jersey	L339	—	—	L82U483000047	L82U883000052	5
BC Transit - BCT - British Columbia	L342	9232	9236	L82U173000294	L82U973000298	5
BC Transit - BCT - British Columbia	L342	9239	9240	L82U573000301	L82U773000302	2
BC Transit - BCT - British Columbia	L342	9244	9244	L82U173000294	L82U473000306	1
BC Transit - BCT - British Columbia	L343	9252	9267	L82U973000463	L82U073000478	16
BC Transit - BCT - British Columbia	L430	9308	9308	L82U183000510	L82U183000510	1
BC Transit - BCT - British Columbia	L463	9319	9333	L82U093000273	L82U093000287	15
Belleville Transit - Ontario	L542	—	—	L82UXA3000088	L82U8A3000090	3
Brampton - Ontario	L348	0701	0715	L82U273000479	L82U773000493	15
Brampton - Ontario	L425	0901	0916	L82U993000045	L82U593000060	16
Brampton - Ontario	L501	0917	0926	L82U893000506	L82U893000523	10
Brantford - Ontario	L547	10101	10105	L82X6A3000082	L82X3A3000086	5
CMBC (TransLink) - British Columbia	L301	9602	9649	L82U373000216	L82U173000263	48
CMBC (TransLink) - British Columbia	L302	9650	9650	L82U273000336	L82U273000336	1
CMBC (TransLink) - British Columbia	L302	9652	9654	L82U673000338	L82U473000340	3
CMBC (TransLink) - British Columbia	L317	9601	9601	L82U973000155	L82U973000155	1
CMBC (TransLink) - British Columbia	L341	V9710	V9710	L82U973000415	L82U973000415	1
CMBC (TransLink) - British Columbia	L341	V9713	V9713	L82U473000418	L82U473000418	1
CMBC (TransLink) - British Columbia	L341	V9715	V9715	L82U273000420	L82U273000420	1
CMBC (TransLink) - British Columbia	L341	V9717	V9717	L82U673000422	L82U673000422	1
CMBC (TransLink) - British Columbia	L341	V9720	V9725	L82U173000425	L82U573000430	6
CMBC (TransLink) - British Columbia	L412	9401	9401	L82X993000136	L82X993000136	1
CMBC (TransLink) - British Columbia	L454	9402	9470	L82X793000359	L82XX93000453	69
CMBC (TransLink) - British Columbia	L455	9471	9491	L82X093000459	L82X993000489	21
CMBC (TransLink) - British Columbia	L532	9543	9551	L82U093000497	L82U693000505	9
CMBC (TransLink) - British Columbia	L533	9552	9573	L82U193000511	L82U093000537	22
CMBC (West Vancouver) - British Columbia	L345	701	702	L82U373000264	L82U573000265	2
Fredericton - New Brunswick	L282	8071	8072	L82UX73000097	L82U173000098	2
Fredericton - New Brunswick	L369	1	1	L82U693000018	L82U693000018	1
Fredericton - New Brunswick	L375	8081	8081	L82U983000142	L82U983000142	1
Gaylord Opryland - Nashville, Tennessee	L353	—	—	L82U583000008	L82U383000010	3
Grand River Transit - GRT - Ontario	L337	2701	2712	L82U373000281	L82UX73000293	12
Grand River Transit - GRT - Ontario	L464	20901	20913	L82U193000296	L82U493000308	13
Greater Toronto Airports Authority - GTAA - Ontario	L432	432-1	432-1	L82U793000061	L82U793000061	1
Guelph - Ontario	L431	207	209	L82U993000031	L82U293000033	3
Guelph - Ontario	L431	211	213	L82U693000035	L82UX93000037	3
Guelph - Ontario	L431	216	219	L82UX93000040	L82U593000043	4
Leduc Bus Line - Ontario	L346	—	—	L82UX83000053	L82UX83000053	1
Lethbridge - Alberta	L489	165	169	L82U493000454	L82U193000458	5
Moncton (Codiac) - New Brunswick	L334	600	603	L82U673000212	L82U173000215	4
Moncton (Codiac) - New Brunswick	L358	358-1	358-1	L82U093000001	L82U093000001	1

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
Moncton (Codiac) - New Brunswick	L361	361-1	361-1	L82U293000002	L82U293000002	1
Niagara Falls - Ontario	L499	2986	2989	L82U093000564	L82U693000567	4
Peterborough - Ontario	L490	—	—	L82UX93000345	L82U593000348	4
Regina - Saskatchewan	L304	611	616	L82U373000457	L82U773000462	6
Regina - Saskatchewan	L476	625	628	L82U893000313	L82U393000316	4
St. John - New Brunswick	L272	—	—	S92U483000011	S92U483000011	1
St. John - New Brunswick	L273	—	—	S92U383000050	S92U383000050	1
St. John's - Newfoundland	L352	0857	0861	L82U683000003	L82U383000007	5
Strathcona County Transit - Alberta	L303	930	936	L82U073000156	L82U673000162	7
Strathcona County Transit - Alberta	L523	2010	2010	L82U693000603	L82U693000603	1
Strathcona County Transit - Alberta	L524	3005	3010	L82X593000604	L82X493000609	6
Strathcona County Transit - Alberta	L580	2011	2013	L82U1A3000464	L82U5A3000466	3
Strathcona County Transit - Alberta	L580	2018	2018	L82U9A3000471	L82U9A3000471	1
Sudbury - Ontario	L293	—	—	L82U673000128	L82U673000131	4
Sudbury - Ontario	L294	—	—	L82U873000132	L82UX73000133	2
Sudbury - Ontario	L385	781	782	L82U583000137	L82U783000138	2
Sudbury - Ontario	L386	785	785	L82U783000141	L82U783000141	1
Sudbury - Ontario	L399	783	784	L82U983000139	L82U583000140	2
Sudbury - Ontario	L465	791	795	L82U593000317	L82U793000321	5
Thunder Bay - Ontario	L488	—	—	L82U193000332	L82U593000334	3
Timmins - Ontario	L475	—	—	L82U493000311	L82U693000312	2
University of Alabama - Alabama	L295	7001	7001	L82U173000134	L82U173000134	1
University of Alabama - Alabama	L296	7002	7003	L82U373000135	L82U573000136	2
University of Alabama - Alabama	L310	7004	7013	L82U973000267	L82UX73000276	10
University of Alabama - Alabama	L311	7014	7017	L82U173000277	L82U173000280	4
University of Colorado - Colorado	L336	—	—	L82U773000266	L82U773000266	1
Woodstock - Ontario	L335	—	—	L82U083000093	L82U083000093	1
Woodstock - Ontario	L460	—	—	L82U693000309	L82U693000309	1

**WARNING**

Follow your internal safety procedures.

**NOTE**

During the next scheduled vehicle oil change, proceed with the following oil sampling prior to completing the oil change.

PROCEDURE

LEVEL 1: INSPECT

1.1. Raise the vehicle.

**CAUTION**

For more information on the raising and lowering of the vehicle, refer to section 18: HOISTING AND TOWING of the Nova LFS maintenance manual. Respect your current internal safety procedures. Use the proper hoisting equipment for your safety.

- 1.2. Locate the differential oil filler screw, located on the street side of the portal drive.
- 1.3. Take a differential oil sample. Follow the sampling and documentation instructions included in the Oil-PEK oil sampling kit.
- 1.4. Lower the vehicle.
- 1.5. Proceed with the warranty claim for Level 1 of this service bulletin. Return the oil sample according to the established procedure. The oil sample will serve to support your claim
- 1.6. Oil sample testing will be conducted by ZF. Based on the results, ZF will determine whether to proceed with LEVEL 2: INSTALL. Your Service Representative will inform you whether further action is required. In the interim, the vehicle can remain in service.

LEVEL 2: INSTALL

2.1. Raise the vehicle.

**CAUTION**

For more information on the raising and lowering of the vehicle, refer to section 18: HOISTING AND TOWING of the Nova LFS maintenance manual. Respect your current internal safety procedures. Use the proper hoisting equipment for your safety.

2.2. Use an additional lifting support under the axle housing to secure the rear axle in a slightly off-center position

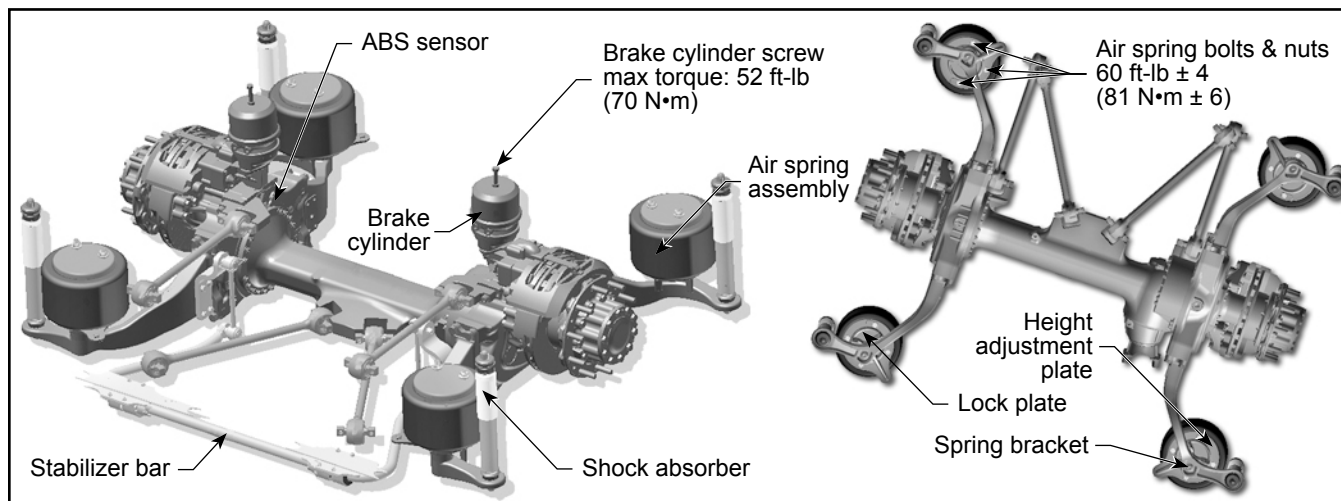


Figure 1 - Rear Axle AV 132 (ZF) Assembly

towards the differential.

- 2.3. Completely loosen the rear wheel hex nuts, but do not fully remove the nut in the 12 o'clock position.
- 2.4. Support the wheel with a wheel lift, remove the remaining hex nut, and remove the wheel.
- 2.5. Support the interior wheel with a wheel lift. Unscrew the hex nuts and remove the wheel.
- 2.6. Loosen the screw plug of the level check hole, located on the street side, and check the oil level. See Figure 2.



Figure 2 - Oil Level Check



WARNING

Some oil may escape. Waste oil must be disposed of according to local environmental regulations.

- 2.7 Enter the oil level in ANNEX B: DOCUMENTATION SHEET, at the end of this document.

- 2.8. Open the screw plug of both portal drives (oil drain holes) located on the underside of the axle, and drain the oil.

**WARNING**

Waste oil must be disposed of according to local environmental regulations.

- 2.9. Inspect the screw plugs (and magnetic plugs). Note any chips or abrasions.
2.10. Loosen the bolts from the mud flap cover, and remove the cover. See Figure 3.
2.11. Release the pressure from both rear suspension air spring bellows.



Figure 3 - Releasing Cover

**NOTE**

Pressure must be released from both air spring bellows prior to proceeding to the next steps.

- 2.12. Loosen the lower screws of both air springs.
2.13. Manually open the spring brake actuator on the brake cylinder.
2.14. Loosen the screws at the potentiometer (wear indicator) and pull off the releasing plug.
2.15. Loosen the cylindrical screw on the ABS sensor, and remove the ABS sensor.
2.16. Loosen the screws on the brake cylinder and remove the brake cylinder carrier plate. Loosen the locknuts and remove the brake cylinder. See Figure 4.
2.17. Fix the brake cylinder within the wheelhouse with a tie-wrap, wire, or rope, and cover its opening. Protect the mounting face of the brake caliper with an adequate cover or cloth. See Figure 4.

- 2.18. Remove the screws from the stabilizer bar in order to release it.
- 2.19. Loosen the screws on the fixing plate for the compressed air lines.

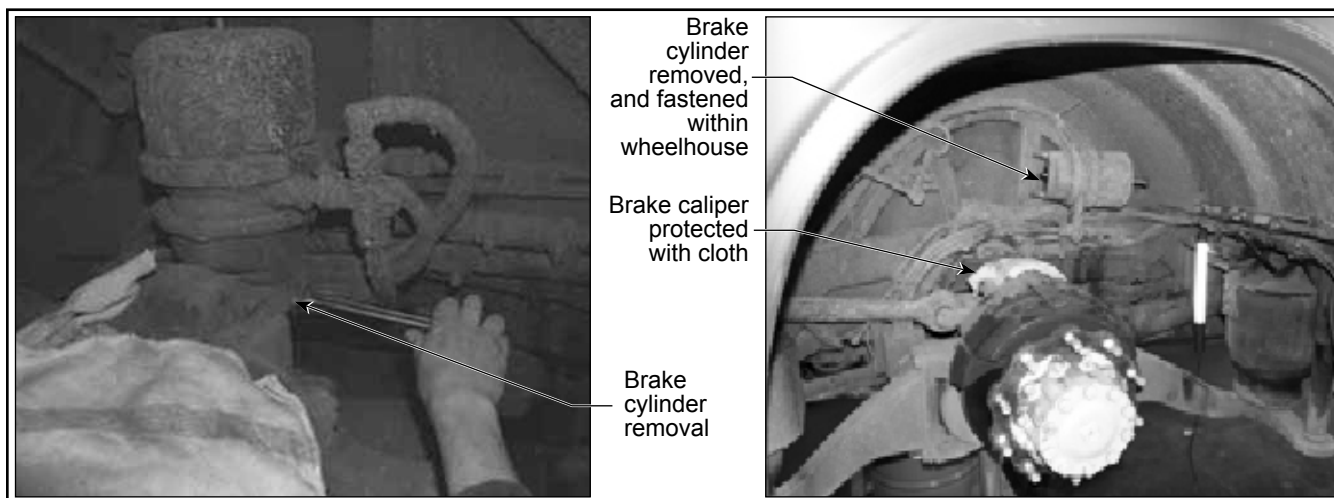


Figure 4 - Brake Cylinder Removal

- 2.20. With a tie-wrap, wire, or rope, temporarily fasten the fixing plate and the ABS sensor in a suitable location in the wheelhouse.
- 2.21. Raise the axle until the radius rod is in a horizontal position. See Figure 5. Loosen the threaded connection between the radius rod and the bracket.
- 2.22. Loosen the portal drive nuts from the street side portal, except for the nuts in the 6 and 12 o'clock positions. See Figure 6.

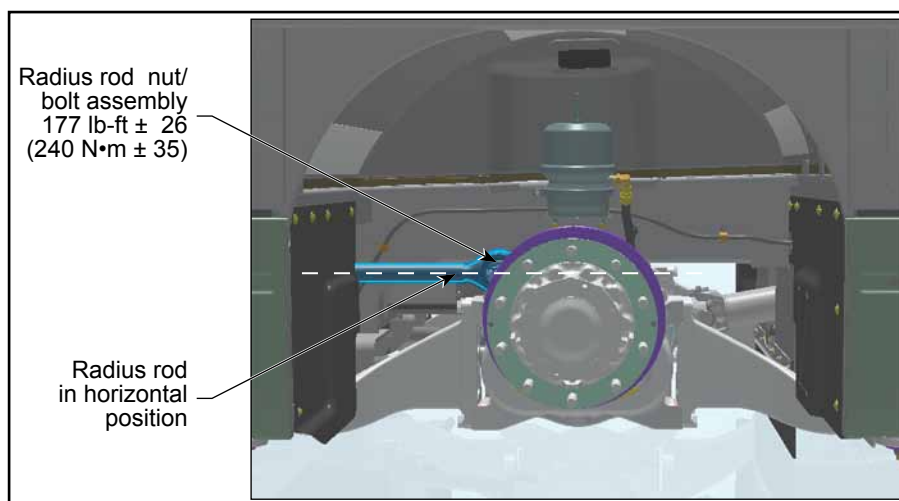


Figure 5 - Radius Rod

- 2.23. Secure the portal drive onto the lifting bracket (NOVA # 19506090 or equivalent) and lift truck or boom. Slightly lift the portal drive.

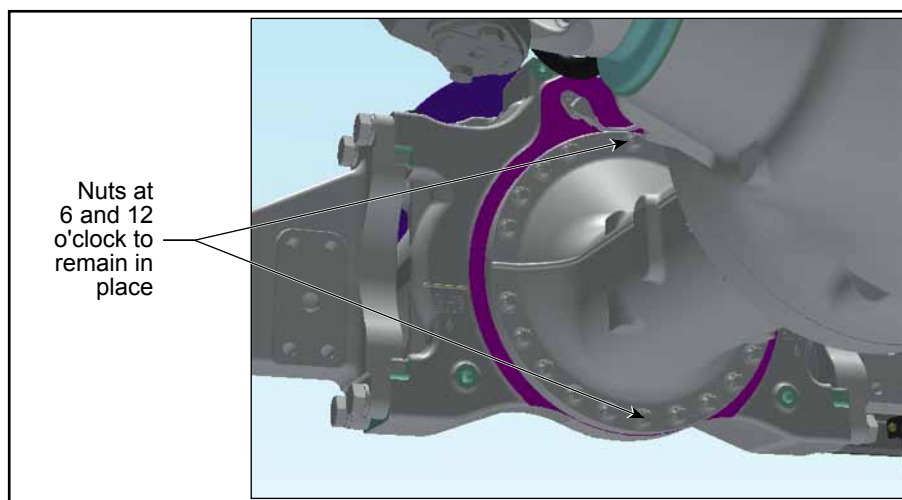


Figure 6 - Portal Drive Mounting Nuts

- 2.24. Loosen the lower threaded connection of the two shock absorbers, and push the shock absorber upwards. See Figure 7.
- 2.25. Remove the two remaining portal drive mounting nuts and separate the entire portal drive carefully from the axle.

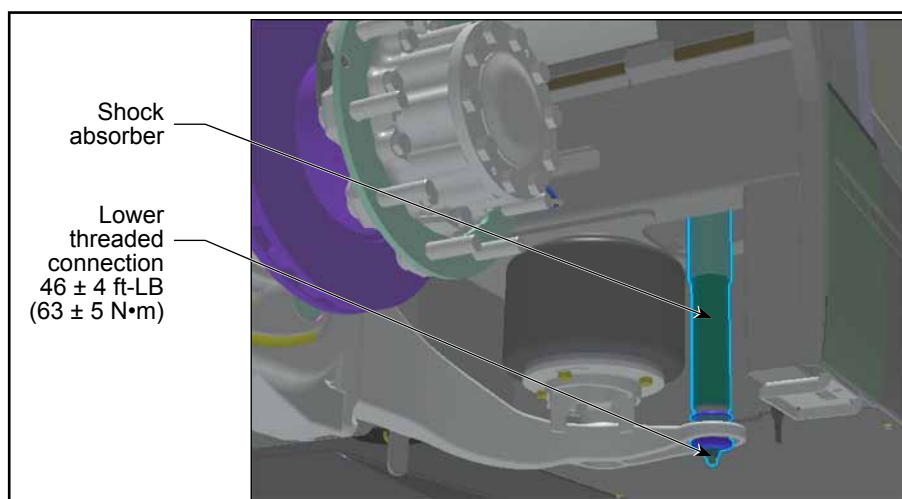


Figure 7 - Shock Absorber

**NOTE**

Ensure the axle remains in the horizontal position and that the differential does not drop.

**CAUTION**

Ensure the air spring bellows do not drop.

2.26. Remove the differential from the axle housing with the appropriate tool. See Figure 8.

2.27. Pull the long stub shaft out of the axle housing, and remove the O-ring. See Figure 9.



Figure 8 - Differential Removal

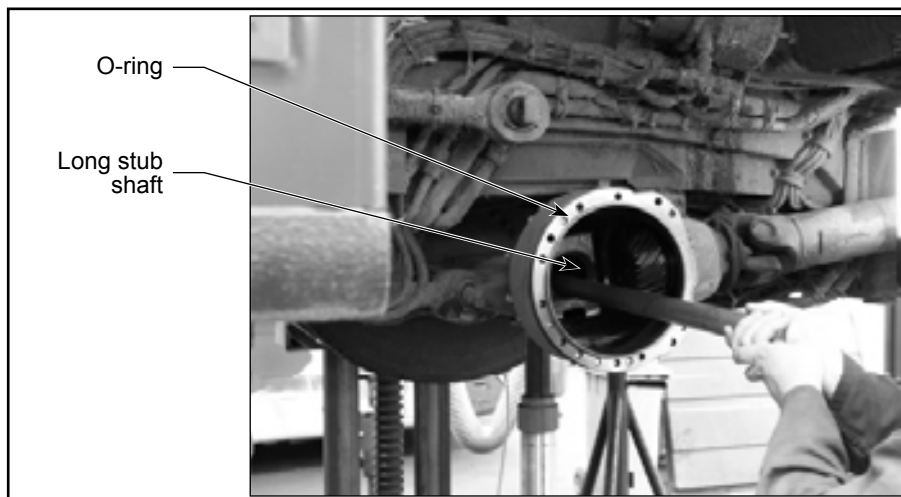


Figure 9 - Axle Housing



NOTE

Enter the exact designation of the long stub shaft in ANNEX B: DOCUMENTATION SHEET (see sheet 20 of 20)

2.28. Pull the short stub shaft out of the drive gear in the portal drive. See Figure 10.



NOTE

Enter the exact designation of the short stub shaft in ANNEX B: DOCUMENTATION SHEET (SEE SHEET 20 OF 20)

2.29. Look into the portal drive in order to inspect the intermediate and drive gears for damage. See Figure 10.

Also, on the opposite side of the portal drive, look through the oil drain hole on the bottom of the portal drive in order to have a different view for inspection of the intermediate and drive gears.

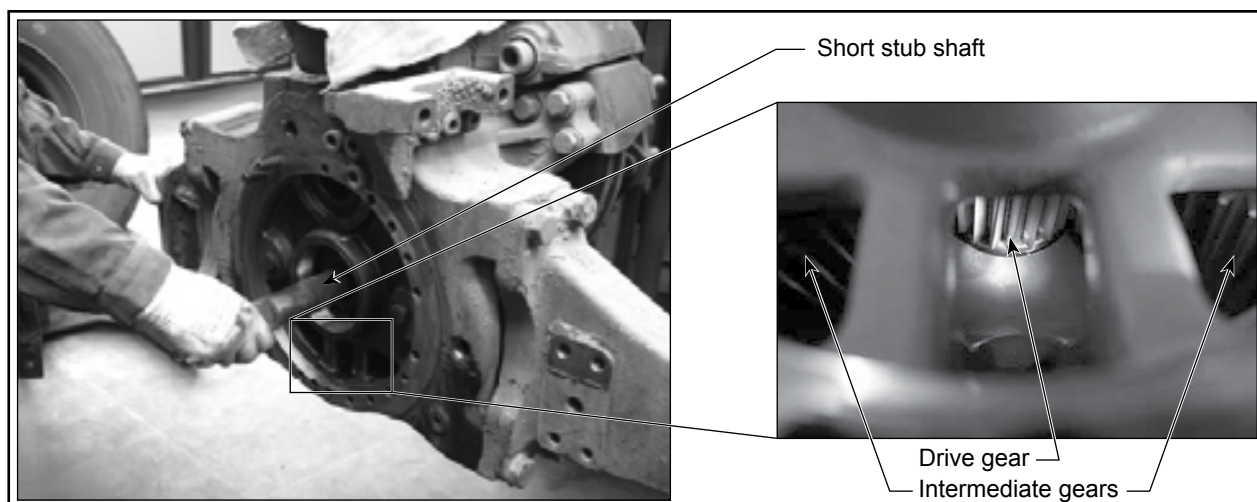


Figure 10 - Portal Drive Gear

- 2.30. Mount and support the differential bearing on the pressure piece.
- 2.31. Loosen the crown wheel connection on the differential bearing. Remove and retain the locking bolts. See Figure 11.

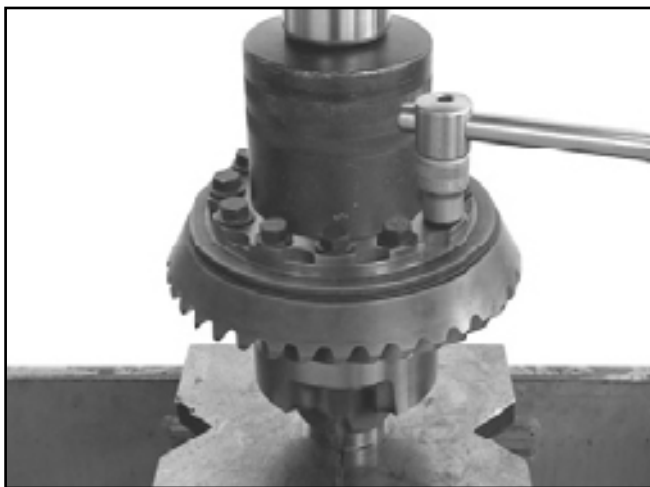


Figure 11 - Differential Bearing Crown Wheel

- 2.32. Press the crown wheel off the differential carrier.
- 2.33. Pull the differential cover out of the differential carrier using a pulling device. See Figure 12.



Figure 12 - Differential Cover Removal

2.34. Remove the axle bevel gear and thrust washer (crown wheel side) from the differential carrier. See Figure 13.



Figure 13 - Bevel Gear and Thrust Washer Removal

2.35. Measure the thickness of the thrust washer with a caliper.



NOTE

Enter the installation position of the axle bevel and thrust washer, along with the washer thickness (in mm) in ANNEX B: DOCUMENTATION SHEET at the end of this document.

2.36. Force the slotted pins out of the cross joint. See Figure 14(a).

2.37. Force the four differential pins out of the differential carrier. See Figures 14b and 14c. Remove the differential pins, cross joint, axle bevel gear, and thrust washer from the carrier.

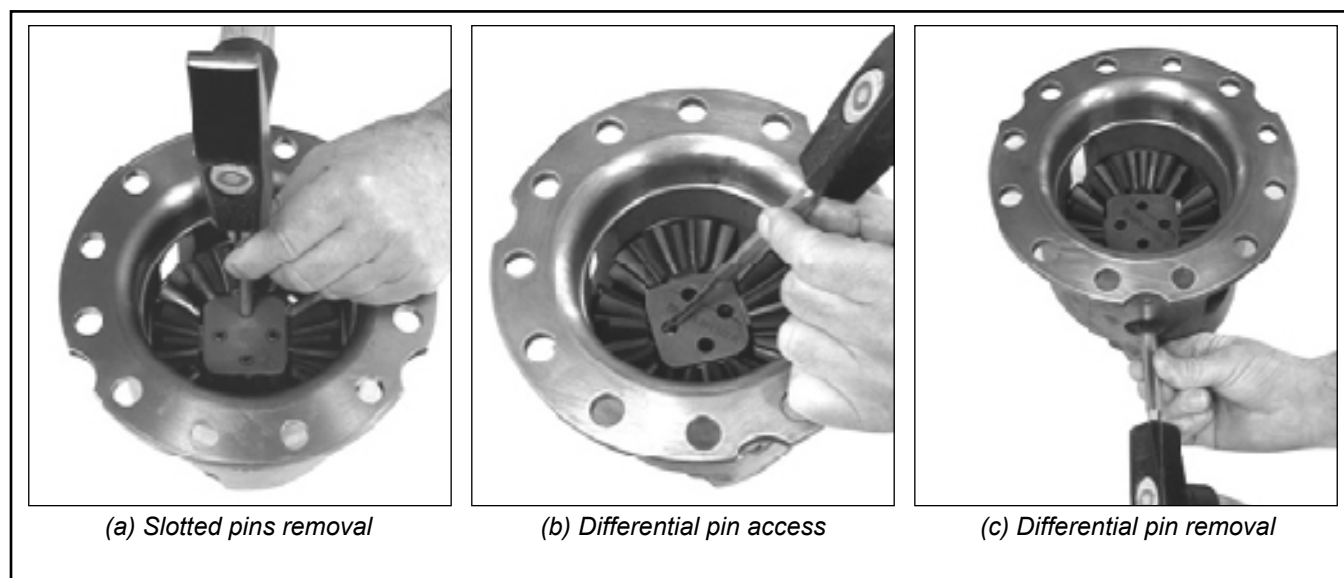


Figure 14 - Differential Carrier Disassembly

2.38. Measure the thickness of the thrust washer on the axle bevel gear (on the axle housing side) with a caliper.

**NOTE**

Enter the installation position of the axle bevel and thrust washer (on the axle housing side), along with the washer thickness (in mm) in ANNEX B: DOCUMENTATION SHEET

2.39. Clean all mounting faces and components of the rear axle assembly and portal.

**NOTE**

During cleaning, cover components and roller bearings, and plug the housing openings.

2.40. Support the differential carrier on the pressure piece.

2.41. Place a new thrust washer (part # N8893147) and axle bevel gear (part # N8898604) into the differential carrier. Apply oil on all components according to the ZF List of Lubricants TE-ML. See Figure 15(a).

**NOTE**

Ensure radial alignment of the thrust washer, and all subsequent parts during re-assembly

2.42. Insert the retained cross joint and the four differential pins into the differential carrier. See Figures 15b and 15c.

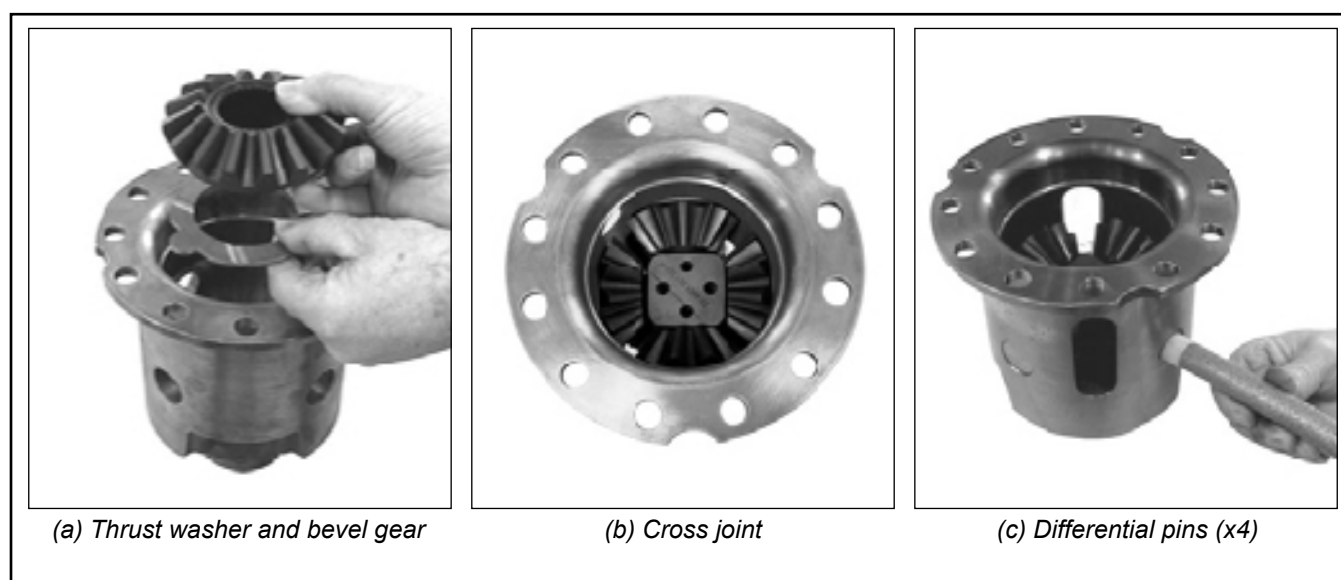


Figure 15 - Differential Carrier Re-assembly

2.43. Force the slotted pins (part # N8893152 and N8893153) into the cross joints and differential pins. Ensure the openings of the slotted pins are offset in a 180° position to each other. See Figure 16.

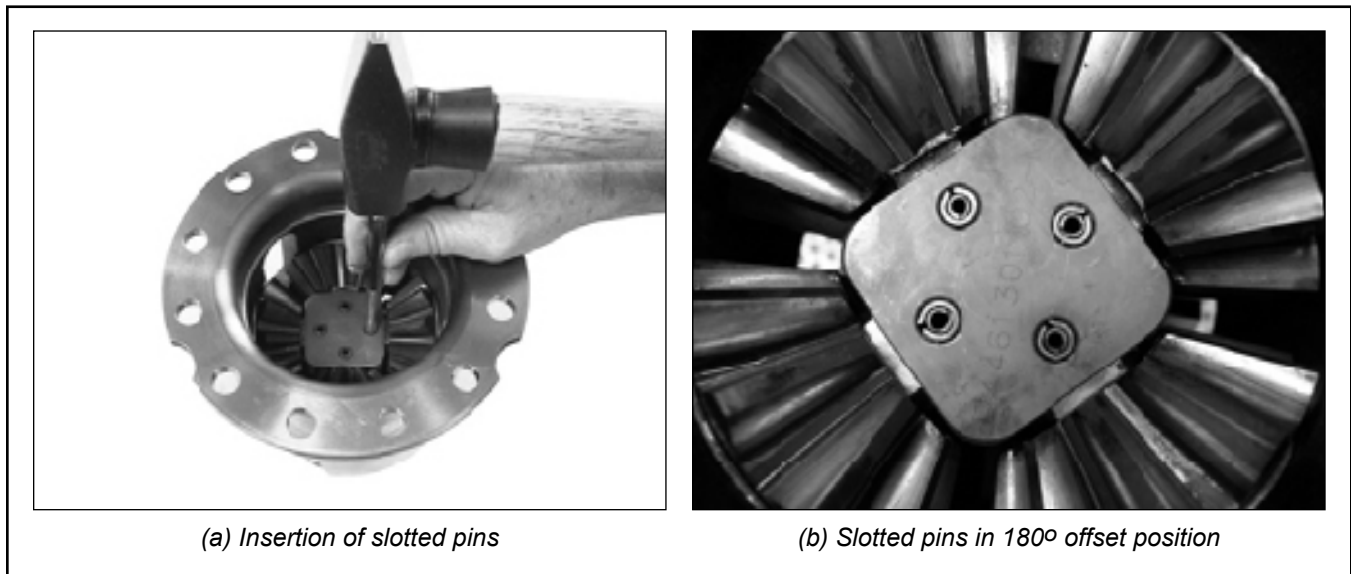


Figure 16 - Slotted Pins

2.44. Insert the second axle bevel gear (part # N8898604) into the differential carrier. See Figure 17.

2.45. Grease the sliding surface of the second thrust washer (part # N8893147) according to the ZF List of Lubricants TE-ML 12. Insert the thrust washer into the differential carrier cover. See Figure 17.



Figure 17 - Thrust Washer Placed in Differential Cover Carrier

- 2.46. Radially align the differential cover by means of locating pins and then press it into the differential carrier until contact is obtained. See Figure 18.



Figure 18 - Differential Cover Alignment

- 2.47. Mount two locating pins on the crown wheel, insert the differential carrier and bring it into contact position by means of the press. See Figure 19.

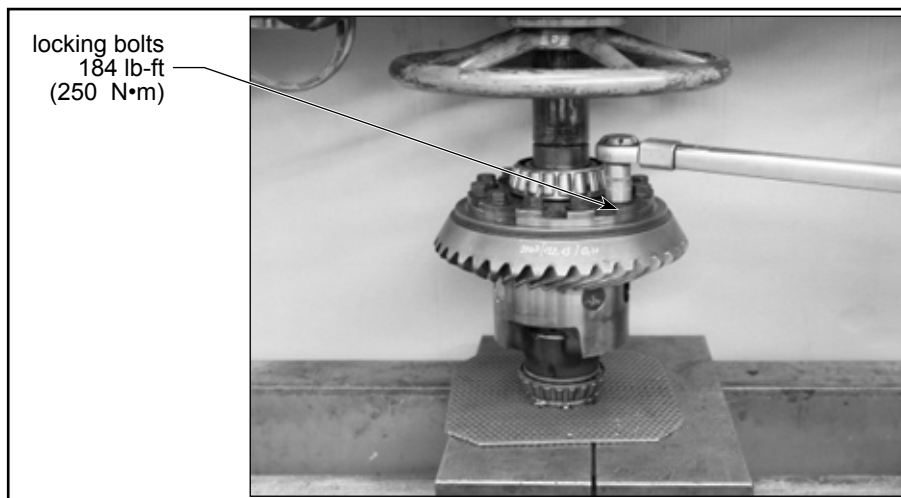


Figure 19 - Mounting of Crown Wheel on Differential Carrier



NOTE

Ensure to protect the gears of the crown wheel with a rag or cloth.

- 2.48. Fix the differential carrier onto the crown wheel by means of a press. Place and tighten the retained locking bolts. Secure the locking bolts with Loctite type-no.2701 (or equivalent). See Figure 19.

2.49. Install the stud bolts of the portal drive and secure with Loctite Type no. 262 (or equivalent). See Figure 20.

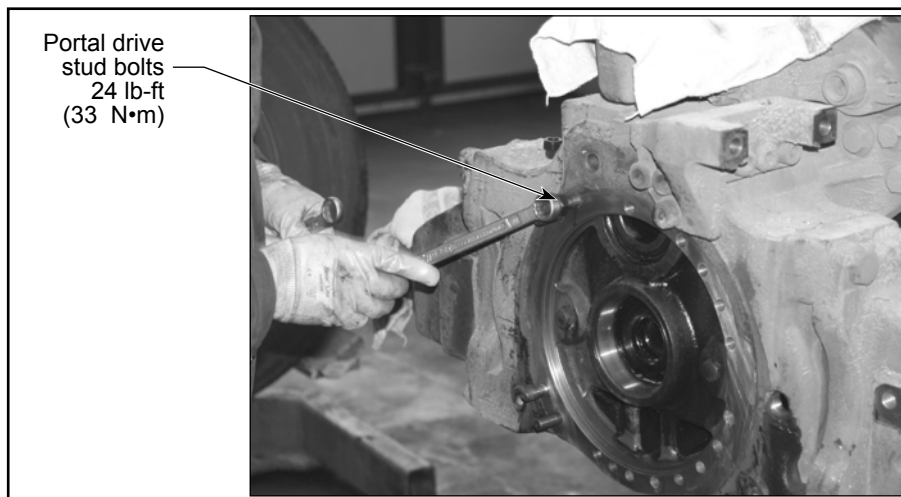


Figure 20 - Portal Drive Stud Bolts

2.50. Mount the short stub shaft on the portal drive gear. See Figure 10.

2.51. Insert the long stub shaft into the axle housing. See Figure 9.

2.52. Mount the differential onto the long stub shaft until contact is reached. See Figure 8.

2.53. Install the new O-ring (part # N8898597). Apply sealing compound DREI-BOND SILIKON 1207 (or equivalent) onto the mounting face immediately before assembly of the portal drive.

2.54. Using a lifting bracket, carefully attach the complete portal drive onto the axle housing. Simultaneously mount the short stub shaft on the differential.

2.55. Secure the portal drive in place with the retained Torx screws and hex nuts. See Figure 21.



Figure 21 - Portal Drive Mounting

- 2.56. Attach both shock absorbers and rubber joint on the spring carrier, and fix the appropriate retained hex nuts. See Figure 7. Apply a lubricant such as Never-Seez or equivalent.
- 2.57. Remove the lifting device from the portal drive.
- 2.58. Raise the axle until the radius rod can be attached in a horizontal position. See Figure 5.
- 2.59. Fix the radius rod in place with the retained hex screws. See Figure 5. Apply a lubricant such as Never-Seez or equivalent.
- 2.60. Insert and secure the air spring bellows with the retained washers and mounting screws. See Figure 1. Apply a lubricant such as Never-Seez or equivalent.
- 2.61. Mount the brake caliper onto the brake cylinder and secure it with the retained locknuts. Apply a torque of 144 ± 11 lb-ft (195 ± 15 N•m).
- 2.62. Mount the air line carrier plate on the brake cylinder, and secure it with the retained hex nut. Refer to section 8: BREAKING SYSTEM of the Nova LFS maintenance manual, for detailed installation procedures and torque.
- 2.63. If required, install a new O-ring onto the ABS sensor. Apply a torque of 7 lb-ft (9.5 N•m).
- 2.64. Screw the potentiometer (wear indicator) in place.
- 2.65. Install and secure the stabilizer bar with the retained screws. Refer to section 5: ZF AV-132 REAR AXLE of the Nova LFS maintenance manual, for detailed installation procedures and torque.
- 2.66. Position the fixing plate for the compressed air lines and secure it with the retained hex screws.
- 2.67. Clean both sides of the screw plugs on the bottom of the portal drive, and mount them with new O-rings. Apply a torque of 96 lb-ft (130 N•m).
- 2.68. Fill the axle until the oil reaches the level check hole on the opposite side of the portal drive (approximately 16 liters). Use oil according to the ZF List of Lubricants TE-ML 12.

**NOTE**

For further information, refer to Lubrication and Maintenance Instructions AV-132.

- 2.69. Turn the screw in the brake cylinder in order to close the spring brake actuator. Apply torque according to Figure 1.
- 2.70. Mount the mud flap cover with the retained screws.
- 2.71. Use a suitable wheel lift in order to subsequently mount both wheels. Place wheel nuts and tighten crosswise. Apply a torque of 443 lb-ft (600 N•m). See section 6: WHEELS AND TIRES of the Nova LFS maintenance manual.

**CAUTION**

Retighten wheel nuts after 31 miles (50km) of travel.

2.72. Stamp the letter "A" in the "Version" field of the identification plate in order to indicate the completed axle conversion. See Figure 22.

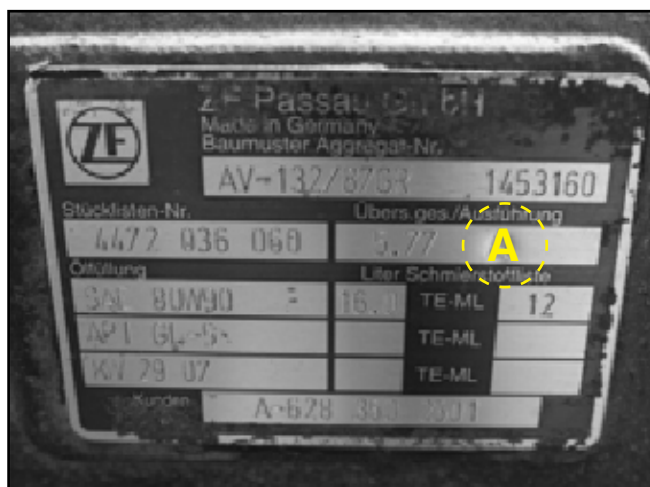


Figure 22 - Identification Plate

2.73. Place the lifting jack under the wheel and raise slightly. Remove all supports and evenly lower the vehicle.



CAUTION

Prior to the first test drive, check the vehicle on the brake test rig.



NOTE

Following the first test drive, check the axle for leaks. ❖

ANNEX A (page 1 of 3)

The following information is provided by ZF. Nova Bus cannot be held responsible for its content.

Ordner/Files:	7	 Service Information Arbeitsmaschinen-Antriebstechnik und Achssysteme Off-Road Driveline Technology and Axle Systems
Type:	AV-132	
Seite/Page:	1 von/of 3	
lfd. Nr/ Current No.:	70/10e	

Introduction of new oil sampling kits (oil PEK) for AV-132

This Service Info has been designed to inform you about the introduction of new oil sampling kits (ZF order no. AA00 322 625) for AV bus axles. In future this oil PEK shall replace the previous oil sampling device („gun“).

The ZF P/N AA00322 625 is equivalent to Nova Bus P/N N8900046

The oil-PEK includes 1 sample bottles as well as the related hose.
It also contains 1 addressed mailing bag and 1 oil sample form.

In addition, a pump (ZF order no. AA00 315 961) is required for oil sampling (one time). *The ZF P/N AA00 315 961 is equivalent to Nova Bus P/N N8900047*

Important: For each oil sample a new hose must be used to avoid any contaminations of the oil! The pump can be used many times, as it is not in direct contact with the oil.



Oil-PEK
ZF-order no. AA00 322 625



Oil pump in the analysis case
ZF-order no. AA00 315 961

19079101 A2

Datum/Date: 2011-03-01
Abteilung/Dept.: ASDS / März
Email: Juergen.maerz@zf.com
Telefon/Phone: +49 851 494 2855
Fax/Telefax: +49 851 494 902855

ZF Passau GmbH
- Kundendienst / Service Department -
Donaustr. 25 - 71, 94030 Passau

ANNEX A (page 2 of 3)

Ordner/Files:	7	Service Information  Arbeitsmaschinen-Antriebstechnik und Achssysteme Off-Road Driveline Technology and Axle Systems
Type:	AV-132	
Seite/Page:	2 von/of 3	
lfd. Nr/ Current No.:	70/10e	

Notes for sampling**Period of sampling**

The oil samples must be taken in operating temperature condition, immediately after standstill of the vehicle (max. 3 minutes).

Sampling point

Oil filler screw portal housing

Sampling

Please be careful that dirt / water does not penetrate into the oil sample!

- Carefully clean the sampling point before taking the sample
- Enter the hose through the oil filler hole into the oil bath

The hose may not come into contact with contaminated parts or floors!

- It is indispensable to **complete** the oil sample form **as specified**.

Attachment:

Sample template for oil sample form (see page 3)

ANNEX A (page 3 of 3)

[illegible]

ANNEX B (page 1 of 1)

The following information is provided by ZF. Nova Bus cannot be held responsible for its content.

AV-132

Documentation - Campagne du différentiel

Documentation sheet - Differential campaign

Arbeitsmaschinen-Antriebstechnik
und Achssysteme

No. de série Serial-No.		Liste de pièces Parts List	4472 _ _ _ _
Nom client/Compagnie de transport Name Owner/Transport company			
Ville City		Pays Country	
Manufacturier du véhicule/OEM Vehicle manufacturer/OEM			
Type de véhicule Vehicle type		Numéro du véhicule Vehicle number	
No. d'identification du véhicule Vehicle identification number			
Premier enregistrement First registration		Date de remise en état Date of rebuilding	
Millage Mileage		Type d'huile et marque Oil-brand/type	
Manufacturier d'engrenage Gear manufacturer		Type d'engrenage Gear type	
Niveau d'huile AV-132 Oil level in AV-132	OK ☐ pas OK ☐ not OK ☐ →		

Côté de la roue plate
Crown Wheel SideCôté de la poutre d'essieu
Axle Beam Side

Les deux planétaires et anneaux de butée doivent être identifiés avec le no. de série AV-132 et sa position (TR = côté roue plate, ou AB = côté poutre d'essieu)!

Both axle bevel gears and shims have to be marked with AV-132 serial no. and position (TR = Crown Wheel- or AB = Axle Beam-Side)!

Épaisseur de l'anneau de butée
Thickness of shims

TR: X (TR) = mm

AB: X (AB) = mm

Identification du faux arbre
Marking on stub shaft

Id. du faux arbre court:

Stub shaft short:

Id. du faux arbre long:

Stub shaft long:

z.B./e.g.: elbe 43/08 ZF 4472 335 665

Les pièces retirées ainsi que ce document complété doivent être envoyés à:

Exchanged parts including filled documentation sheet have to be sent to:

ZF Passau GmbH
Werk 1, Kundendienst, AVTP
Donastr. 25-75
94034 Passau
Germany

Ville / Date

City / Date:

Sceau / Signature du garage
Rubber stamp / Signature of workshop