



Service Bulletin No.1009A

MODEL	: T-900 Series, T2100 Series,
TYPE	: Product improvement
MANUAL & SECTION	: Maintenance Manual Chapter 4 - Axles, Wheels and Tires Chapter 5 - Brakes Chapter 12 - Maintenance Schedule
DATE	: May 3rd, 1999
SUBJECT	: Front and tag axle hub grease application
CONDITIONS	: Service information only. Parts may be purchased from your nearest International Coach Parts Inc. dealer.

This Service Bulletin supersedes the relevant information in the following Maintenance Manuals:

- **T-900 Series: Manuals No. M377 and No. M377B**
- **T2100 Series: Manuals No. M380 and No. M380B**

DESCRIPTION :

Note: This description refers to the service procedures and maintenance schedules of Maintenance Manuals updated in accordance with Service Bulletins No.1017 dated February 28th, 1998 and No.1018 dated March 4th, 1998.

1. In an effort to increase wheel bearing maintenance intervals from 60,000 miles to 300,000 miles, M.A.N. who manufacture and supply the front and tag axles fitted to the T-900 and T2100 Series coaches, have revised their requirements regarding the installation and lubrication of the wheel bearings used on these axles.

Description continued on next page.

PARTS: Always use genuine maintenance products and parts. Do not accept imitations!

Part No.	Description	Qty.
VH 10645087	Grease seal assembly, double lip, hub to knuckle	1
VH 10659944	Silicopaste 1000 (bulk)	#

Service Bulletins are issued to supplement or supersede information in the Van Hool manuals. Note Service Bulletin number, date and subject on the register at the end of the relevant chapter(s). File Service Bulletin separately for future reference.

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2. The new requirements are as follows:

- a. The wheel bearings must be packed with a high temperature grease meeting M.A.N.-standard No. 284-LiH2, for undiminished lubrication at the elevated temperatures encountered in hubs equipped with brake discs. Refer to the service information at the end of this Bulletin for names of approved brands and product designation.
- b. When the hubs are serviced a grease seal with double lip (VH 10645087) must be fitted for added bearing protection. The new seal replaces the single lip seal (VH. No. L562890369) and should be installed with the proper VH tool No. 10647688.
- c. The hub caps must be filled with high temperature grease meeting M.A.N.-standard No. 284-Li H2 to provide a grease buffer and the hub cap threads must be sealed with Silicopaste 1000 (VH 10659944).

This Bulletin includes a service procedure which explains hub grease replacement in detail.

3. In order to comply with the new M.A.N.-requirements, following action must be taken:

When the coach has covered 60,000 miles or more and is due for the next B-type service (6,000 miles interval):

- Remove former spec grease from hubs.
- Clean and check the bearings.
- Repack the bearings with high temperature grease.
- Replace the single lip seals by double lip type seals.
- Fill the hub caps with high temperature grease.
- Refit the caps and stamp the hub flanges with the letter "G".

as per the service procedure in this Bulletin.

Bearing installation and lubrication are now up to the new specifications and are guaranteed to last 300,000 miles making the F-type maintenance interval redundant.

4. Refer to the list below for vehicle identification numbers (VIN) of units which already meet the new specifications:

Coach type	VIN
T-900/40	42035 on
T-900/45	42123 on
T-900 Shell	29748 on
T2140 CUM	40126 on
T2145 CUM	43306 on
T2140 DD	40580 on
T2145 DD	43741 on

Description continued on next page.

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5. Following items in the Maintenance Manual are affected by the service procedure in this Bulletin:

Chapter 4: To replace hub grease
Chapter 4: To check wheel bearing end-play
Chapter 4: To assemble and install hubs
Chapter 12: Maintenance schedule

SERVICE PROCEDURE:

!!! CAUTION !!!

USE SAFE SHOP PRACTICES AT ALL TIMES.

READ THE ENTIRE PROCEDURE BEFORE BEGINNING WORK.

To replace hub grease

For customary service intervals, refer to chapter 12 of the Maintenance Manual.

NOTE

Instructions for wheel hub removal/installation are given in chapter 4 of the Maintenance Manual.

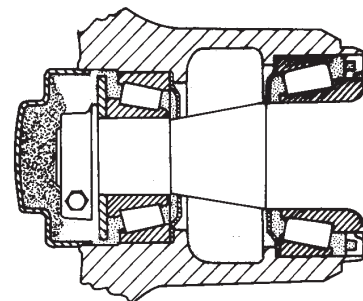
1. Remove hub assembly from steering knuckle. Lift outer bearing cone and roller assembly out of hub. Pull inner bearing cone and roller assembly from spindle. Remove and discard grease seal.
2. Remove and wash all old grease from hub, hub cavity, bearings and hub cap using a putty knife, a suitable solvent and a stiff brush.

!!! CAUTION !!!

DO NOT ALLOW BEARINGS TO SPIN WHEN BLOWING THEM DRY. DAMAGE TO BEARING COMPONENTS AND PERSONAL INJURY MAY RESULT.

3. Dry all cleaned parts with compressed air. Inspect bearing race, cage and rollers for pitting, scoring, cracks, deterioration or wear. Replace complete bearing when necessary.
4. Pack bearing cone and roller assemblies with the recommended grease. A bearing packer is desirable for this operation. If this tool is not available, pack bearings by hand, pressing as much grease as possible between rollers and cage.
5. Place inner bearing cone and roller assembly inside hub. Pack grease around bearing as indicated in figure 1.

Dotted areas indicate amount of grease



T03258

Figure 1: Grease distribution in wheel hub

NOTE

Two types of inner bearing grease seals were used in production. One has a single lip (earlier coaches) and the other a double lip (current coaches). When fitting a new grease seal, the double lip type must be used (see Figure 4).

6. Apply grease to new inner bearing seal. Position seal squarely on the hub and drive into position using a suitable mandrel (VH No.10647688). Remove excess grease from bearing bore. Check with the tail of a sliding caliper that the case of the seal is square and is actually set back 3/16 inch from the rear hub flange (see Figure 2).
7. Remove any burrs or nicks from spindle using emery cloth.
8. Reinstall hub assembly onto steering knuckle taking care not to damage the grease seal nor the grease retaining discs.
9. Locate the outer bearing cone, fit the thrust washer and hub nut, and adjust bearing end-play to specifications.
10. Clean and degrease hub cap screw threads thoroughly.
11. Clean the screw threads inside the hub thoroughly with a scraper (Do not use solvents!).
12. Put 120 g (4.23 Oz) of grease in center of hub cap as indicated in figure 3. Do not touch screw threads.
13. Fill the threads of the hub cap completely with Silicopaste 1000 (VH No. 10659944), using a spatula.

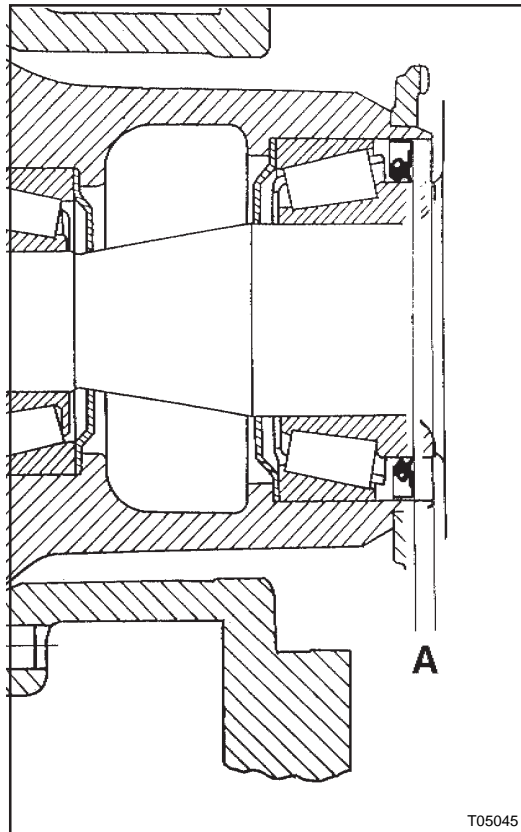


Figure 2: Double lip seal set back. Dimension "A" equals 3/16 inch

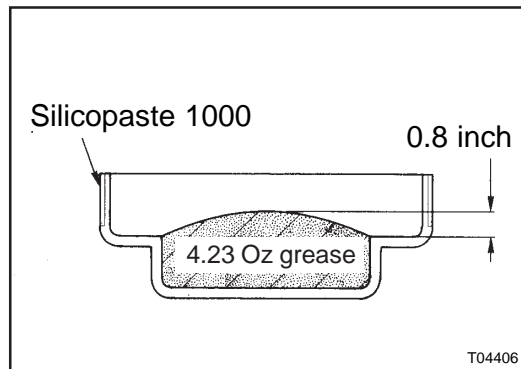


Figure 3: Grease distribution in hub cap

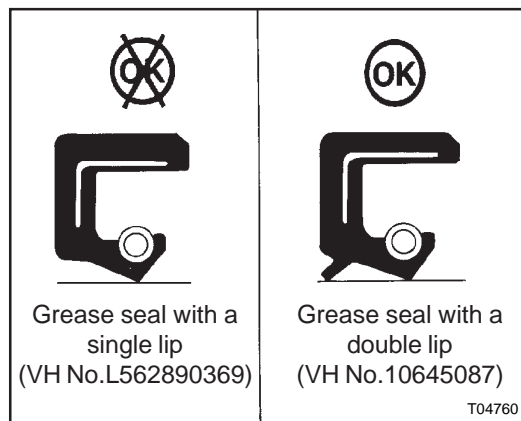


Figure 4: Grease seal types

14. Screw in hub cap and tighten to a torque of 103 ± 10 ft.lbf. Remove remains of Silicopaste 1000.

Service procedure complete.

SERVICE INFORMATION:

1. Approved high temperature greases.

**HIGH TEMPERATURE GREASES, complying with
M.A.N. Standard 284 Li-H 2 requirements (edition 06.1998)**



Approval granted to:

Aral AG
Castrol Ltd
DEA Mineralöl AG
Texaco
Veedol International Ltd.

Product designation:

Aral Radlagerfett
Castrol LMX
Paragon EP 2
Starplex EP 2
Veedol LX

NOTE:

*Other brands of high temperature greases, complying with
M.A.N. Standard 284 Li-H2 requirements, may be granted approval
upon request. Please contact:*

*ABC Coach Inc.
17469 West Colonial Drive
Wintergarden, FL 34787
(407)656-7977/ (800)222-2871
Fax (407)905-7020*

2. New parts are directly interchangeable with the old parts. Only new parts will be offered for service replacement.

3. Old parts (VH No. L562890369) must no longer be used for service replacement.

