



Service Bulletin No. 1045

MODEL : T800 Series ; T900 Series ; T2100 Series

TYPE : Service information

MANUAL & SECTION : Maintenance Manual :
Chapter 10 - HVAC System

DATE : April 30th, 2000

SUBJECT : Carrier O5G compressor discharge valve retrofit campaign

CONDITIONS : Service information only. Customers who own coaches entitled to this campaign have the option of receiving free parts and labor at a Carrier or ABC Service Center, or can have the free parts sent to them at no charge and receive a 2 hour labor allowance, if they have the expertise and choose to do the labor on their own. Recovery of this labor credit will be made via an ABC warranty claim form completed and returned to ABC. Units, the valve plates or compressor of which have been replaced already, have been excluded from this campaign.

DESCRIPTION:

1. Carrier/Sütrak are currently running a field retrofit campaign to improve the reliability of a series of O5G compressors in R-134a applications. It has been determined that under certain operating conditions the discharge valve of these compressors may fail. Although such failures are few in number on Van Hool coaches, Carrier/Sütrak recommend the replacement of the OE valves and valve plates by new and improved ones to eliminate the risk of compressor breakdown. A list with vehicle identification numbers (VIN) of coaches which may be affected is included with this Bulletin.
2. The serial numbers of the compressors affected and on which the retrofit is applicable have been prefixed 3198J..., 3298J..., 3398J... and so on up to and including 4098J... If you have coaches in service with these compressors, contact your local Carrier Transicold Service Center or call Carrier Transicold-A/C Industries Service Hotline at (800) 450-2211 for further valve plate replacement information. Compressors may also be retrofitted by an ABC Service Center, or by the customer.
3. There is no charge to have your compressor retrofitted. Parts and labor will be provided by Carrier Transicold-A/C Industries or by ABC Bus Companies Inc./Van Hool. The campaign expires by October 31st, 2000. No claims will be accepted after this date.

Description continued on next page.

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.

K:\SERVICE\USA\SB1045LH

Continued from page 1

- The valves and valve plates should be replaced by a qualified HVAC technician. For your information, a copy of the "Valve plate & valve changeout procedure", issued by Carrier/Sütrak, is provided as an attachment to this Bulletin.

SERVICE INFORMATION:

<i>NOTE</i>
<i>Units, the valve plates or compressor of which have been replaced already, have been excluded from this campaign.</i>

Application:

Vehicle identification numbers (VIN) of units which may be affected.

29488	42119	43254	43284	43306	43340	43423	43795
29741	42120	43255	43285	43307	43343	43427	43796
29742	42126	43258	43286	43308	43345	43428	43797
29745	42135	43262	43287	43309	43347	43429	43798
29747	42136	43263	43288	43310	43349	43430	43799
29749	42137	43264	43289	43311	43354	43432	43800
29750	42138	43265	43290	43312	43367	43747	43887
40128	42140	43267	43291	43313	43369	43751	43924
40129	42141	43268	43292	43314	43388	43752	43930
40130	42142	43269	43293	43315	43390	43753	43931
40131	42143	43270	43294	43316	43394	43754	43946
40138	42144	43271	43295	43319	43398	43755	43947
40139	42146	43272	43296	43320	43399	43756	43980
40588	42147	43273	43297	43321	43400	43761	44035
40593	42148	43274	43298	43322	43402	43779	44046
40594	42150	43276	43299	43323	43409	43782	45002
40596	43241	43277	43300	43324	43417	43786	45506
40597	43242	43278	43301	43325	43418	43789	45508
42028	43248	43279	43302	43326	43419	43790	
42104	43251	43281	43303	43327	43420	43791	
42114	43252	43282	43304	43328	43421	43792	
42115	43253	43283	43305	43338	43422	43793	

K:\SERVICE\USA\SB1045LH

Annexe 2

VALVE PLATE & VALVE CHANGEOUT PROCEDURE

<p>!!!! CAUTION !!!! THIS SYSTEM CONTAINS R134a REFRIGERANT IN CONJUNCTION WITH POLYOLESTER OIL. <u>SERVICE BY A CERTIFIED</u> TECHNICIAN ONLY:</p>

1. For cylinder head or valve plate removal, it is necessary to first remove the compressor internal pressure. This can be done by performing a low side pump down of the system, or by shutting off the bus engine, frontseating the discharge and suction service valves and reclaiming refrigerant contained in the compressor, until zero PSIG pressure is maintained.

Note: If it is not possible to jump the low pressure switch for the low side pump down, the remaining refrigerant may have to be reclaimed, once the compressor has been isolated.

2. Clean the surface of compressor heads and surrounding area of all dirt, to avoid contaminating the interior of compressor when the heads and valve plates are removed.

Note: Do not remove bolts until the head has been unseated from the cylinder deck of compressor, and any pressure that may be contained inside the head has been relieved.

3. Using a 9/16 wrench or socket, loosen the head bolts a few turns using a cross-hatch pattern. Use a mallet (plastic, wood or rawhide) to tap the head to free it.
4. If the valve plate did not come loose from the cylinder deck during cylinder head removal, the following procedure should be used:
 - a) Remove the discharge valve stop bolts and valves.
 - b) Using one of the capscrews that was removed (minus the lock washer), thread it back into an outer valve retaining hole.
 - c) It will seat against the cylinder deck and jack the plate away from the crankcase.

Caution: Be certain to account for all suction valve springs and dowel pins so that they are not lost inside the compressor body.

5. Install the new suction valves and valve plates. The side heads should have 4 dowel pins for placement of the suction reeds. Place the new suction valve springs on dowel pins, with the springs bowing upward. Then position the new suction reeds on dowel pins and springs. Place a new gasket and valve plate onto the cylinder deck over the suction reeds and aligned with dowel pins.



- 2 -

Caution: Ensure that the suction reeds remain centered on dowels when positioning valve plates. The center valve plate should be installed in the same manner, but it should be noted that there are five (5) dowel pins on cylinder deck, and there is no check valve on the center valve plate.

6. Once the valve plates are in place, position the new head gaskets and heads onto valve plates and snug up the bolts slightly. Using a cross-hatch pattern, tighten the head bolts from the center to outside of each head. The final torque value for bolts is 40 to 50 ft-lb.

Note: This torque should be obtained by stepping up the value in two separate sequences (Example: 25 ft-lb the first sequence, then 40 - 50 ft-lb on the second sequence).

Note: The side head gaskets are different from the center head gaskets and can be distinguished by a small hole at top center, which is necessary for the unloaders.

7. Evacuate the compressor to 1000 Microns and verify the vacuum holds for ten minutes, with no more than a 500 Micron rise in that period.
8. Backseat (open) the discharge and suction service valves.
9. Run system at fast idle for twenty minutes to verify proper compressor operation.

Field Change Program Conditions:

This campaign is run through CARRIER TRANSICOLD A/C INDUSTRIES, and all parts required for this change will be supplied without charge. To obtain the upgrades outlined in this Field Change Program contact the Carrier Service Center at 1-800-450-2211 for the nearest service center.

Customers who own coaches that are on warranty have the option of receiving free parts and labor at a Carrier Service Center, or can have the free parts sent to them at no charge and receive a 2 hour labor allowance if they have the expertise and choose to do the labor on their own. Recovery of this labor credit will be made via an CARRIER TRANSICOLD A/C INDUSTRIES Warranty Claim form completed and returned to CARRIER TRANSICOLD A/C INDUSTRIES YORK.

This program will close six (6) months from the date of notification of this bulletin.

Carrier Sutrak GmbH apologizes for any inconvenience resulting from this campaign, but urges you to implement this change as soon as possible.