



Service Bulletin No. 1046

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 suction 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 suction valves 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. All compressors with serial numbers prior to 1198JO should be retrofitted. 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\SB1046LH

Continued from page 1

4. 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:

NOTE

Units which already have had the valve plates or compressor replaced are excluded from this campaign.

Application:

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

18551	18592	24833	24917	24955	26718	26756	26794
18552	18593	24834	24918	24956	26719	26757	26795
18553	18594	24835	24919	24957	26720	26758	26796
18554	19657	24836	24920	24958	26721	26759	26797
18556	19658	24837	24921	24959	26722	26760	26798
18557	19659	24838	24922	24960	26723	26761	26799
18558	19660	24839	24923	24961	26724	26762	26800
18559	19661	24840	24924	24962	26725	26763	26801
18560	19662	24841	24925	24963	26726	26764	26802
18561	19663	24842	24926	24964	26727	26765	26803
18562	19664	24843	24927	24965	26728	26766	26804
18563	19665	24844	24928	24966	26729	26767	26805
18564	19666	24846	24929	24967	26730	26768	26806
18565	19667	24847	24930	24968	26731	26769	26807
18566	19668	24889	24931	24969	26732	26770	26808
18567	19669	24890	24932	24970	26733	26771	26809
18568	19670	24891	24933	24971	26734	26772	26810
18569	19671	24892	24934	24972	26735	26773	26811
18570	19672	24893	24935	24973	26736	26774	26812
18571	19673	24894	24936	24974	26737	26775	26813
18572	19677	24895	24937	24975	26738	26776	26814
18573	19678	24896	24938	25000	26739	26777	26815
18574	20116	24897	24939	26702	26740	26778	26816
18575	22199	24898	24940	26703	26741	26779	26817
18576	22235	24899	24941	26704	26742	26780	26818
18577	22240	24900	24942	26705	26743	26781	26819
18578	22241	24901	24943	26706	26744	26782	26820
18579	22242	24902	24944	26707	26745	26783	26821
18580	24823	24907	24945	26708	26746	26784	26822
18581	24824	24908	24946	26709	26747	26785	26823
18582	24825	24909	24947	26710	26748	26786	26824
18583	24826	24910	24948	26711	26749	26787	26825
18585	24827	24911	24949	26712	26750	26788	26826
18586	24828	24912	24950	26713	26751	26789	26827
18587	24829	24913	24951	26714	26752	26790	26828
18589	24830	24914	24952	26715	26753	26791	26829
18590	24831	24915	24953	26716	26754	26792	26830
18591	24832	24916	24954	26717	26755	26793	26831

K:\SERVICE\USA\SB1046LH

26832	27519	27580	27640	28405	28465	28560	29020
26833	27520	27581	27641	28406	28466	28561	29021
26834	27521	27582	27642	28407	28467	28562	29022
26835	27522	27583	27643	28408	28468	28563	29023
26836	27523	27584	27644	28409	28469	28564	29024
26837	27524	27585	27645	28410	28470	28565	29025
26838	27525	27586	27646	28411	28471	28566	29026
26839	27526	27587	27647	28412	28472	28567	29027
26840	27527	27588	27648	28413	28473	28568	29029
26841	27528	27589	27649	28414	28474	28569	29030
26842	27529	27590	27650	28415	28475	28570	29031
26843	27530	27591	27651	28416	28476	28571	29032
26844	27531	27592	27652	28417	28477	28572	29033
26845	27532	27593	27653	28418	28478	28573	29034
26846	27533	27594	27654	28419	28479	28573	29035
26847	27534	27595	27655	28420	28480	28574	29036
26848	27535	27596	27656	28421	28481	28575	29037
26849	27536	27597	27657	28422	28482	28576	29038
26850	27537	27598	27658	28423	28483	28577	29039
26851	27538	27599	27659	28424	28484	28578	29040
26852	27539	27600	27660	28425	28485	28579	29041
26853	27540	27601	27661	28426	28507	28581	29042
26854	27541	27602	27662	28427	28511	28582	29043
26855	27542	27603	27663	28428	28512	28583	29044
26856	27543	27604	27664	28429	28513	28584	29045
26857	27544	27605	27665	28430	28514	28585	29046
26858	27545	27606	27666	28431	28515	28586	29047
26859	27546	27607	27667	28432	28516	28587	29048
26860	27547	27608	27668	28433	28517	28588	29049
26861	27548	27609	27669	28434	28518	28589	29050
26862	27549	27610	27670	28435	28519	28590	29051
26863	27550	27611	27671	28436	28520	28591	29052
26864	27551	27612	27672	28437	28521	28592	29053
26865	27552	27613	27673	28438	28522	28593	29054
26866	27553	27614	27674	28439	28523	28594	29055
26867	27554	27615	27675	28440	28524	28595	29056
26868	27555	27616	27676	28441	28525	28596	29057
26869	27556	27617	27677	28442	28526	28597	29059
26870	27557	27618	27678	28443	28527	28598	29060
26871	27558	27619	27679	28444	28528	28599	29061
26872	27559	27620	27680	28445	28529	28600	29062
26873	27560	27621	27681	28446	28530	29001	29063
26874	27561	27622	27682	28447	28531	29002	29064
26875	27562	27623	27683	28448	28532	29003	29065
26876	27563	27624	27684	28449	28533	29004	29066
26877	27564	27625	27685	28450	28534	29005	29067
26878	27565	27626	27686	28451	28535	29006	29068
26879	27566	27627	27687	28452	28547	29007	29069
26896	27567	27628	27688	28453	28548	29008	29070
26897	27568	27629	27689	28454	28549	29009	29071
26898	27569	27630	27690	28455	28550	29010	29072
26899	27571	27631	27691	28456	28551	29011	29073
26900	27572	27632	27692	28457	28552	29012	29074
27512	27573	27633	27693	28458	28553	29013	29075
27513	27574	27634	27694	28459	28554	29014	29076
27514	27575	27635	27695	28460	28555	29015	29077
27515	27576	27636	28401	28461	28556	29016	29078
27516	27577	27637	28402	28462	28557	29017	29079
27517	27578	27638	28403	28463	28558	29018	29080
27518	27579	27639	28404	28464	28559	29019	29081

K:\SERVICE\USA\SB1046LH

29082	29144	29312	29375	29437	29916	40024	40093
29083	29145	29313	29376	29438	29917	40025	40095
29084	29146	29314	29377	29439	29919	40026	40096
29085	29148	29315	29378	29440	29920	40027	40097
29086	29149	29316	29379	29441	29921	40028	40105
29087	29150	29317	29380	29442	29922	40029	40106
29088	29151	29318	29381	29443	29924	40030	40501
29089	29152	29319	29382	29444	29925	40031	40502
29090	29153	29320	29383	29445	29926	40032	40503
29091	29154	29321	29384	29446	29928	40033	40504
29092	29155	29322	29385	29447	29929	40034	40506
29093	29156	29323	29386	29448	29930	40036	40508
29094	29157	29324	29387	29449	29932	40037	40510
29095	29158	29325	29388	29451	29933	40038	40511
29096	29159	29326	29389	29452	29934	40039	40512
29097	29160	29327	29390	29453	29936	40040	40513
29098	29163	29328	29391	29455	29937	40041	40514
29099	29164	29329	29392	29456	29938	40042	40515
29100	29165	29330	29393	29457	29939	40045	40516
29101	29167	29331	29394	29458	29940	40048	40517
29103	29168	29332	29395	29459	29941	40049	40518
29104	29170	29333	29396	29463	29942	40050	40519
29105	29171	29334	29397	29466	29943	40051	40520
29106	29172	29335	29398	29467	29944	40052	40521
29107	29173	29336	29399	29469	29946	40053	40522
29108	29174	29337	29401	29470	29947	40054	40523
29109	29175	29338	29402	29472	29948	40055	40524
29110	29176	29339	29403	29473	29949	40056	40525
29111	29178	29340	29404	29475	29950	40057	40526
29112	29179	29341	29405	29476	29951	40058	40527
29113	29180	29342	29406	29477	29952	40060	40528
29114	29181	29343	29407	29480	29953	40061	40529
29115	29182	29344	29408	29481	29954	40062	40530
29116	29183	29346	29409	29482	29955	40063	40531
29117	29184	29348	29410	29485	29956	40064	40532
29118	29186	29349	29411	29486	29957	40065	40534
29119	29187	29350	29412	29487	29958	40067	40535
29120	29188	29352	29413	29489	29967	40068	40536
29121	29189	29353	29414	29490	40000	40069	40538
29122	29190	29354	29415	29491	40001	40070	40540
29123	29191	29355	29416	29492	40002	40071	40541
29124	29192	29356	29417	29493	40003	40072	40542
29125	29193	29357	29418	29496	40004	40074	40543
29126	29194	29358	29419	29497	40005	40075	40544
29127	29195	29359	29420	29498	40006	40076	40545
29128	29196	29360	29421	29499	40006	40077	40547
29129	29197	29361	29422	29500	40007	40078	40548
29130	29198	29362	29423	29517	40008	40079	40549
29131	29200	29363	29424	29707	40012	40080	40550
29133	29301	29364	29425	29708	40013	40081	40551
29134	29302	29365	29426	29719	40014	40082	40552
29135	29303	29366	29427	29903	40015	40083	40553
29136	29304	29367	29428	29905	40016	40084	40554
29137	29305	29368	29429	29907	40017	40085	40555
29138	29306	29369	29430	29908	40018	40086	40556
29139	29307	29370	29431	29910	40019	40087	40557
29140	29308	29371	29432	29911	40020	40088	40559
29141	29309	29372	29433	29913	40021	40090	40560
29142	29310	29373	29434	29914	40022	40091	40567
29143	29311	29374	29435	29915	40023	40092	42001

K:\SERVICE\USA\SB1046LH

42002	43048	43113	43220	43557	43622	43702
42003	43049	43114	43224	43558	43623	43708
42004	43050	43115	43275	43559	43624	43719
42005	43051	43116	43376	43560	43625	43801
42006	43052	43117	43414	43561	43626	43802
42007	43053	43118	43415	43562	43627	43803
42008	43054	43119	43425	43563	43628	43804
42009	43056	43120	43426	43564	43630	43805
42010	43057	43121	43456	43565	43631	43806
42011	43058	43122	43501	43566	43632	43807
42012	43059	43124	43502	43567	43633	43976
42013	43061	43125	43503	43568	43634	44042
42014	43062	43127	43504	43569	43635	44083
42015	43063	43128	43505	43570	43636	45001
42016	43064	43129	43506	43571	43637	45502
42018	43065	43130	43507	43572	43638	
42021	43066	43131	43509	43574	43639	
42026	43067	43132	43511	43575	43640	
43000	43068	43133	43512	43576	43641	
43002	43069	43134	43514	43577	43642	
43003	43070	43135	43515	43578	43643	
43004	43071	43136	43516	43579	43644	
43005	43072	43137	43517	43580	43645	
43006	43073	43138	43518	43581	43646	
43007	43074	43139	43519	43582	43647	
43008	43075	43140	43521	43583	43648	
43009	43077	43141	43522	43584	43649	
43010	43078	43142	43523	43585	43650	
43011	43079	43143	43524	43587	43651	
43012	43080	43144	43525	43588	43652	
43013	43081	43145	43526	43589	43653	
43014	43082	43146	43527	43590	43654	
43016	43083	43147	43528	43591	43655	
43018	43084	43149	43529	43592	43656	
43019	43085	43150	43530	43593	43657	
43020	43086	43151	43531	43594	43658	
43021	43087	43152	43532	43595	43659	
43022	43088	43153	43533	43596	43660	
43023	43089	43154	43534	43597	43661	
43024	43090	43155	43535	43599	43662	
43025	43091	43156	43536	43600	43664	
43027	43092	43157	43537	43601	43665	
43028	43094	43158	43538	43602	43666	
43029	43095	43159	43539	43603	43667	
43030	43096	43160	43540	43604	43668	
43032	43097	43161	43542	43605	43670	
43033	43098	43164	43543	43606	43671	
43034	43099	43173	43544	43607	43672	
43035	43100	43175	43545	43608	43673	
43036	43101	43178	43546	43609	43674	
43037	43102	43181	43547	43610	43675	
43038	43103	43182	43548	43611	43676	
43039	43104	43184	43549	43612	43677	
43040	43105	43189	43550	43614	43678	
43041	43106	43211	43551	43615	43682	
43042	43107	43212	43552	43617	43688	
43043	43109	43213	43553	43618	43692	
43044	43110	43214	43554	43619	43694	
43046	43111	43215	43555	43620	43699	
43047	43112	43218	43556	43621	43700	

K:\SERVICE\USA\SB1046LH

THIS PAGE HAS BEEN LEFT BLANK INTENTIONALLY

Annexe 2

VALVE PLATE & VALVE CHANGEOUT PROCEDURE

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

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