

National Refrigerants, Inc.

Analytical Laboratory

661 Kenyon Avenue
Bridgeton, NJ 08302

Telephone (856) 455-2776
Fax (856) 455-4733

Refrigerant Analysis Report

Customer:	Johnson Controls	P.O. No.:	NRIHP
Address:	812 First State Blvd. Wilmington DE 19804	Refrigerant Type:	R-134a
Contact:	Kevin M. Fraze	Job Location:	DuPont Experimental E315
Telephone:	302-598-4688	System S/N:	MRP 626 904
Fax:	kevin.m.fraze@jci.com	Sample ID#:	Chiller 7
		Lab. Reference:	160218-72
		Date Rec.:	2/18/16

Analysis

		<u>Sample Results</u>	<u>AHRI-700 Spec.</u>
Identification	By Gas Chromatography	R-134a	_____
Moisture	parts per million by weight	7	10 Max. (1)
High Boiling Residue	per cent by volume	0.08	0.01 Max.
Acidity	parts per million (as HCl)	<0.2	1 Max.
Non-Condensable Gas	per cent by volume	-	1.5 Max.
Chloride	pass/fail	Pass	pass
Purity	% by weight (Gas Chromatography)	99.96	99.5 Min.
Particulates	pass/fail	Pass	pass
Other			

(1) 20 ppm for R-11, 113, 123.

Comments: The high boiling residue (0.08%) is a clear light yellow oil, most certainly system oil and the amount of oil-in-circulation. All other above test results show good quality in-service R-134a and indicate normal system performance. Trace organic impurities present are R-22: 0.01% and two unknowns totaling 0.02%. Resample at next scheduled maintenance interval.

Laboratory Supervisor: **Dan Wright, Manager**

Date: 2/19/2016

Attention: This Report is provided to the Customer only and may not be utilized by any other person or entity without written confirmation of same by National Refrigerants, Inc. (NRI). Upon written request, and with the written permission of the Customer, NRI will confirm the substance of this Report to any person or entity requesting such confirmation. Any alteration of this document by any person may constitute a violation of State and/or Federal Civil Criminal Law in the United States and/or other countries. The technical data and comments provided on the sample you supplied is done as a service to you as a customer of NRI. Since conditions of its use are outside of NRI's control, NRI assumes no liability for the use of such information or any damages incurred through its use or application. Nothing contained in such information is to be construed as contractual or providing some form of warranty on the part of NRI.