

INDEPENDENT TECHNICAL
ASSESSMENT REPORT

No: 12/0700

DATE: July 10, 2000
I.T.A.R. NO.: 12/700
COUNTRY: Malaysia
STATE: n/a

CLIENT NAME:

GOOD TEMP Sdn. Bhd

PRODUCT/SERVICES:

Vehicle air conditioning component supplier

ADDRESS:

11 Lorong Rahim Kajai Sebelas,
Taman Tun Dr Ismail, Kuala Lumpur 6000

PURPOSE:

To compare vehicle air conditioning performance of an Isuzu truck system using a Panasonic rotary compressor with originally fitted Polyakyleneglycol (PAG) lubricant to ROC Oil 68 AAl air conditioning compressor lubricant.

METHODOLOGY:

The testing was done on the same vehicle but carried out at different ambient and consequently different internal cabin temperatures.

The system was timed until the compressor cut out at a pre-set evaporator temperature of 3 degrees C.

The engine idle was set at 900 RPM, the Evaporator fan speed was set to maximum and the suction and discharge pressures, ambient, cabin and vent temperatures were recorded.

Prior to running the compressor the PAG oil was drained and oil flushed with 10 Mls. of ROC AAl, drained, and a full charge of ROC 68 AAl was added. The A/C system was run and temperatures etc. recorded.

The ROC Oil 68 AAl was drained, the original PAG oil added and the system run and recorded as in the ROC Oil test.

RESULTS :

Using ROC Oil 68 AAl with an ambient temperature of 37 degrees C and an internal cabin temperature of 46.2 degrees C the A/C system took 60 minutes to cycle out on it's thermostat.

The cabin temperature was reduced to 15.7 degrees C and the compressor was operating with a suction pressure of 12 PSI and discharge pressure of 235 PSI.

Using PAG oil with an ambient temperature of 35 degrees C and an internal cabin temperature of 37 degrees C the A/C system took 55 minutes to cycle out on the thermostat.

The cabin temperature was reduced to 13.6 degrees C and the compressor operated with a suction pressure of 15 PSI and a discharge pressure of 260 PSI.

CONCLUSIONS:

The test results indicated faster pull down times per minute using ROC Oil (0.508C/min.) compared to (0.425C/min.) with PAG oil.

Suction and discharge pressures were substantially reduced showing a definite performance advantage when using ROC Oil compared to using the original PAG oil used in this compressor.

Lower suction and discharge pressures indicate the system is operating more efficiently with less stress on the mechanical operation of the compressor.

Oil Type	Time (min)	Ambient	Start Cabin Temp	Final Cabin Temp	Suc. Press.	Dis. Press.	Temp. Chg/min.
PAG 46	55 min	35(C)	37.0(C)	13.6(C)	15(C)	260	0.425
ROC Oil AAl	60 min	37(C)	46.2(C)	15.7(C)	12(C)	235	0.508

TEST INFORMATION ON PRODUCTS CONTAINED IN THIS REPORT DOES NOT IMPLY AN ENDORSEMENT BY THE INDEPENDENT TEST COMPANY.

FOR FURTHER INFORMATION PLEASE CONTACT:

THE REFRIGERANT OIL COMPANY PTY LTD

Head Office:

3 - 5 Sabre Court, TULLAMARINE
Victoria 3043, Australia

Telephone: +613 9338 7522

Facsimile: +613 9338 7811

E-Mail: enquiries@rocoil.com