

DOCKET
10-RADB-1

DATE	APR 26 2010
RECD.	APR 26 2010

CEC Review

April 26, 2010

Turbo Air, Inc



1. Company Introduction

- ▶ Established in 1997 and manufactured quality commercial refrigeration
- ▶ Certifications: UL, NSF, ISO9001
Energy Star, CEC
- ▶ 81 Employees
- ▶ Headquarters in Carson, CA
- Owns two manufacturing facilities in Korea and China
- USA factory Opening 2012



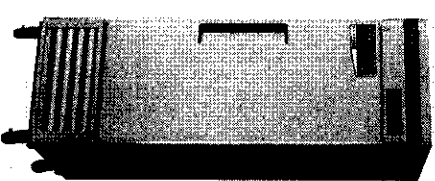
- ▶ Dedicated to provide customer good quality as addressed on the mission statement ;

*To be the most respected and trusted company in the foodservice industry.
We will achieve this recognition by consistently providing the highest quality products and services possible.*

2. Discrepancies

2-1. TSR-23SD

CEC Requirement	3.97 kWh / day	Volume 19.3 Cu. Ft
1st random sample test	5.105 kWh / day	1.135 kWh (28.6 %) ↑ than requirement
2nd random sample test	3.132 kWh / day	0.833 kWh (21.1 %) ↓ than requirement and close to the test back in 2002
Certification test	3.58 kWh / day	Report on 12/16/2002



► The 1st unit tested might have been defective by the factory or the incorrect testing procedures were performed.

► No specification changes since 2002

2. Discrepancies

2-1. TSR-23SD – Cont'd

■ Current activity

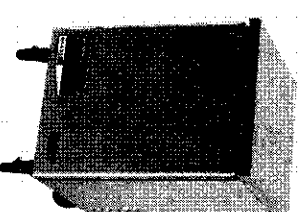
Recently developed improved energy efficiency by setting the digital control to the compressor with two (2) sensors in the unit to meet "Energy Star 2.0" Standard. This produced favorable results.

Modified sample was tested at CEC approved test lab in the Premier factory. Its daily power consumption is 2.51 kWh. See attachment.

2. Discrepancies

2-2. TUR-28SD

CEC Requirement	2.74 kWh / day	Volume 7.0 Cu. Ft
1st random sample test	3.612 kWh / day	0.872 kWh (31.8 %) ↑ than requirement
2nd random sample test	3.495 kWh / day	0.725 kWh (26.5 %) ↑ than requirement
Certification test	1.46 kWh / day	Report on 1/9/2008



- Factory modified two components on the model Feb. 2008 to meet the requests from the market but failed to review the affected power consumption and report to CEC.

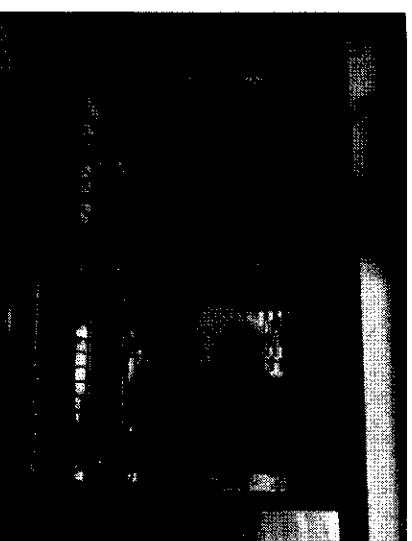
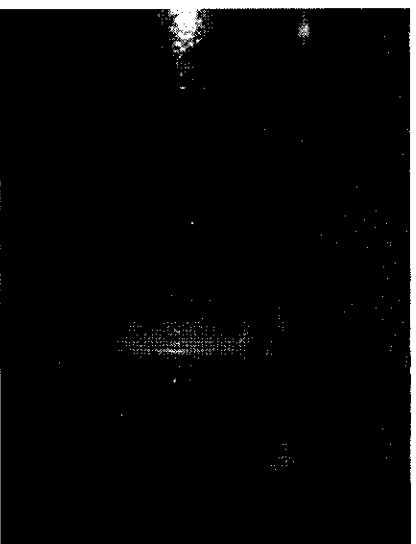
2. Discrepancies

2-2. TUR-28SD – Cont'd

► Specification changes

1) Inner liner material

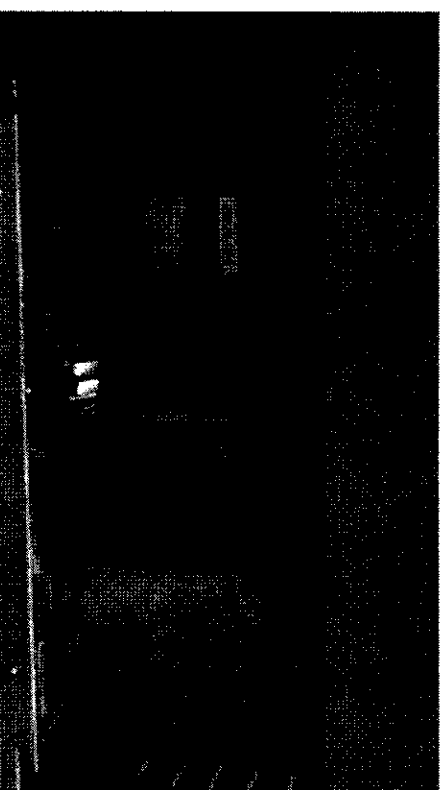
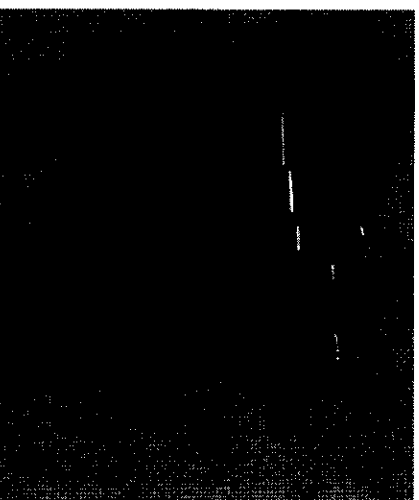
ABS → Stainless ; No affects to power consumption



2. Discrepancies

2-2. TUR-28SD – Cont'd

2)Condenser fan motor & Blade : Affects to power consumption



Model : IS-3210DWNFH-5

Q'ty : 2 pieces

Input : 12 W

Fan blade : Dia. 3.9 inches

Model : IS-4420DWSN-2A

Q'ty : 1 piece

Input : 43 W

Fan blade : Dia. 6.9 inches

2. Discrepancies

2-2. TUR-28SD – Cont'd

3) Errors

Factory simply calculated the power consumption difference between those two parts 0.252 kWh per day and has not performed actual test and assumed the modifications did not need to be reported to CEC.

The factory did not realize the new larger fan motor & blade accelerate heat exchange on the condenser coil and causes more power consumption.

4) Modified units were manufactured from Feb. 2008 and 135 units have been sold to the Californian market up to 4/21/2010.

ITEM_CODE	2008	2009	2010	Grand Total
TUR-28SD	91	32	12	135
Grand Total	91	32	12	135

2. Discrepancies

2-2. TUR-28SD – Cont'd

■ Current activity

We noticed the high power consumption thanks for the letter from CEC and recently developed the solution to meet the requirements by gearing compressor and evaporator fan motors. It spends 1.693 kWh per day now and submitted new test report to CEC on 4/19.