How To Diagnose Trouble In Outdoor Unit - Toshiba RAS-13SKV-E Service Manual

Split type indoor/outdoor unit

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

119
120
121

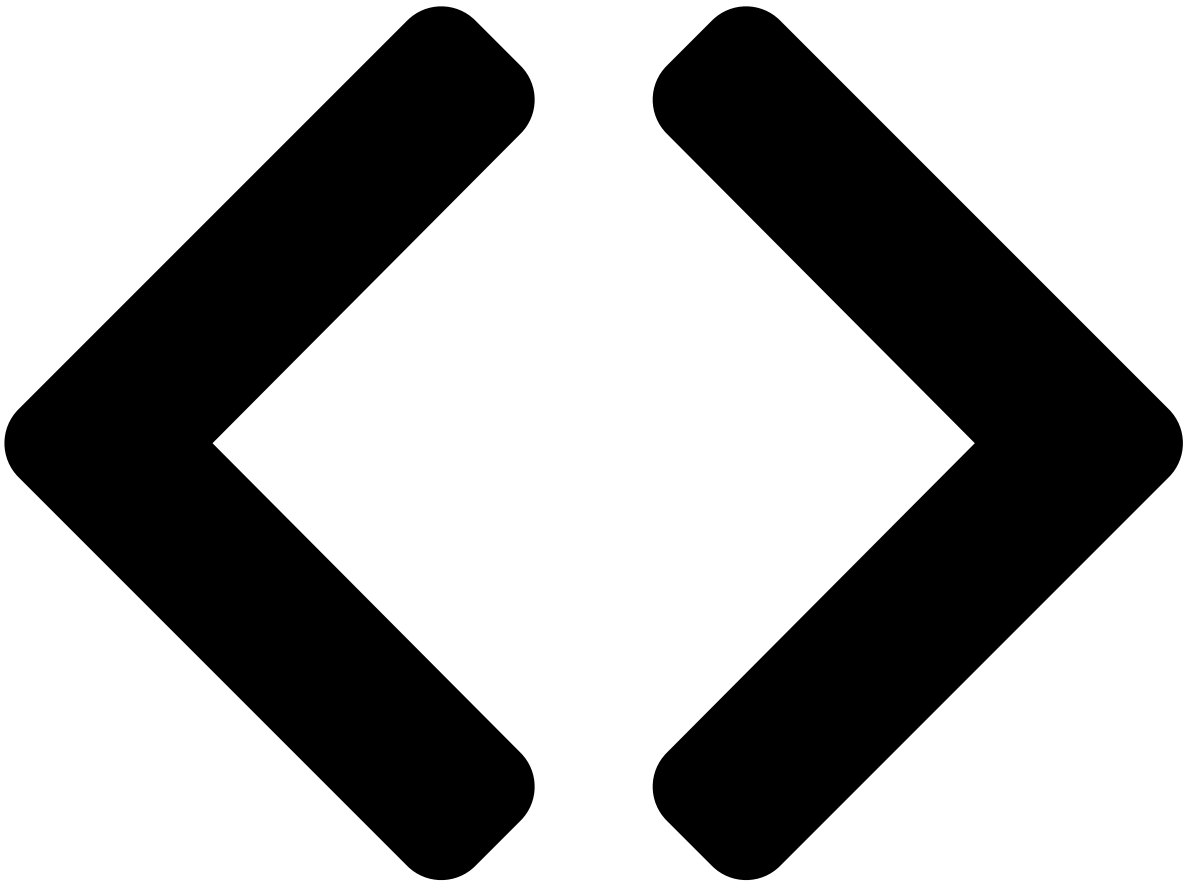
-

Table of Contents

-

Troubleshooting

Bookmarks



11-8. How to Diagnose Trouble in Outdoor Unit

11-8-1. Summarized Inner Diagnosis of Inverter Assembly

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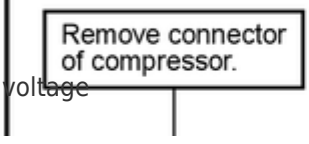
11-8-1. Summarized Inner Diagnosis of Inverter Assembly

Table 11-8-1

Diagnosis/Process flowchart	Item	Contents
	Preparation	Turn “OFF” the power supply breaker, and remove 3P connector which connects inverter and compressor.

Diagnosis/Process flowchart

Remove connector of compressor.

NG

Check 25A fuse (Part No.F01).

OK

Replace fuse. capacitor, diode block (DB01), Check

NG

terminal voltage

of electrolytic capacitor.
OK
capacitor, diode
NO
Does outdoor fan rotate?
YES
Remove connector CN300 of outdoor fan
NG
motor, and using a tester, check resistance value between every phases at motor side.
Replace outdoor fan motor.
A
Item
Preparation
Check
Check
Check electrolytic etc.
Check electrolytic (DB01), etc.
Operation
Measure-ment
Check
Stop
OK
Check
Measure-ment
B
Table 11-8-1
Contents
Turn "OFF" the power supply breaker, and remove 3P connector which connects inverter and compressor.
• Check whether 25A fuse on the control board assembly is blown or not. (F01)
Turn on the power breaker,

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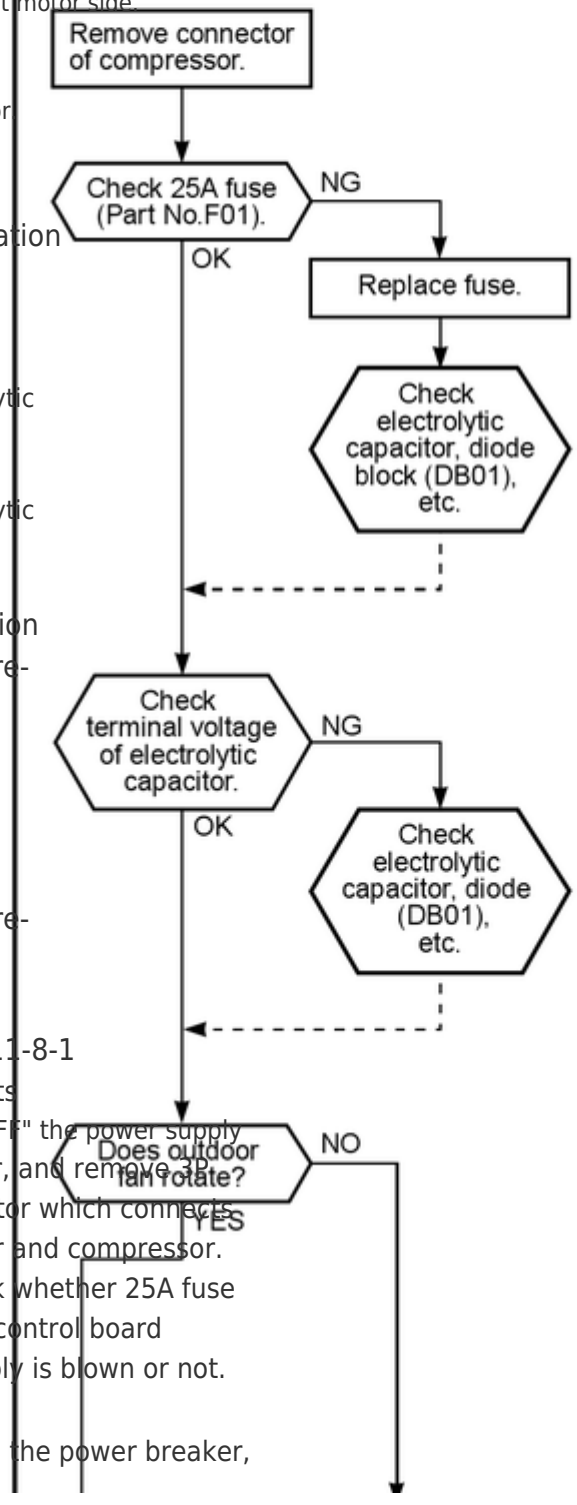	Preparation	Turn “OFF” the power supply breaker, and remove 3P connector which connects inverter and compressor.
	Check	• Check whether 25A fuse on the control board assembly is blown or not. (F01)
	Check	
	Operation	Turn on the power breaker, and operate the air conditioner in COOL mode by time shortening.
	Measure-ment	Measure terminal voltage of the electrolytic capacity. 500µF:400WV x 3 760µF:400WV x 3

and operate the air conditioner in COOL mode by time shortening.

Measure terminal voltage of the electrolytic capacity.

500µF:400WV x 3

760µF:400WV x 3

After operation, turn off the power breaker after 2 minutes 20 seconds passed, and discharge the electrolytic capacitor by soldering iron.

Check voltage between motor phases.

• Is not winding between

R

R

S

Q

S

-

, or

-

or short-circuited?

• Is not frame grounded with

Q

R

S

,

, or

?

Summary

If fuse was blown, be sure to check the electrolytic capacitor and diode block, (DB01)

• Connect discharge resistance (approx. 100Ω, 40W) or soldering iron (plug) between +, – terminals of the electrolytic capacitor (500µF or

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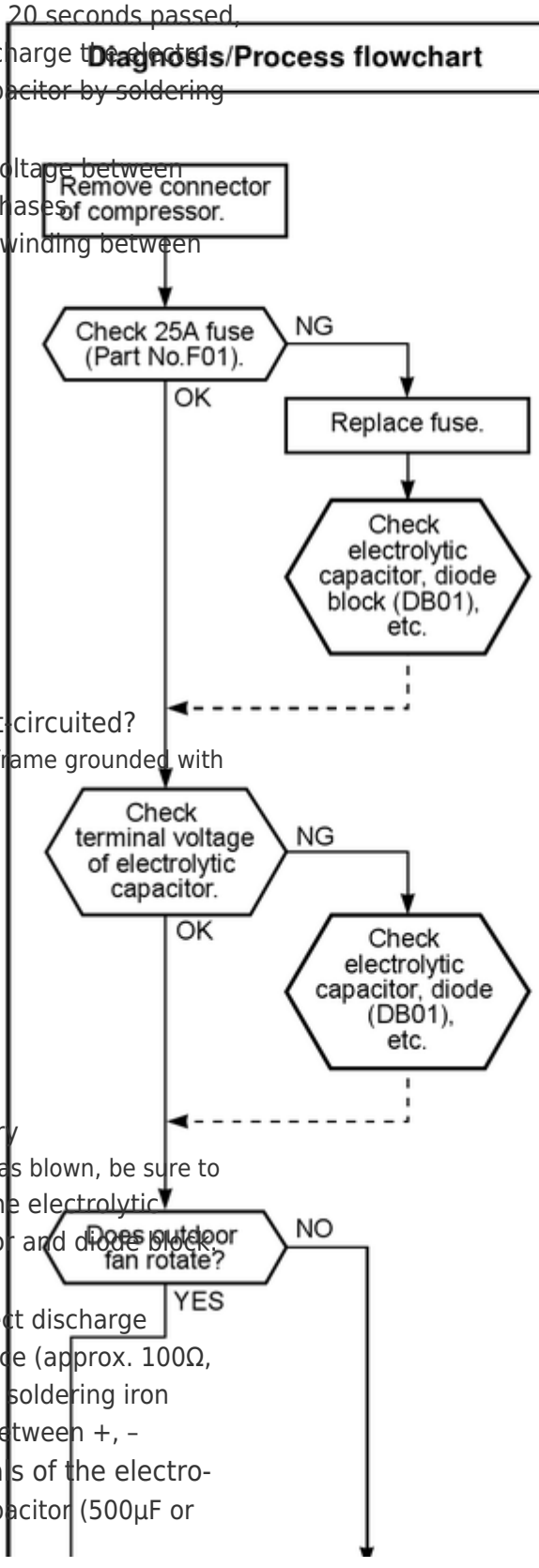	Preparation	Turn "OFF" the power supply breaker, and remove 3P connector which connects inverter and compressor.
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	Check	
	Operation	Turn on the power breaker, and operate the air conditioner in COOL mode by time shortening.
	Measurement	Measure terminal voltage of the electrolytic capacity. 500µF:400WV x 3 760µF:400WV x 3

760µF) of C14 (with printed CAUTION HIGH VOLTAGE) on P.C. board.
Discharging position (Discharging period 10 seconds or more)
OK if 500µF or 760µF →
DC280 to 380V
Remove CN300 while pushing the part indicated by an arrow because CN300 is a connector with lock.
Q
-
→ Resistance between opened phases should be approx. 55 to 77Ω
→ Should be 10MΩ or more.
Revised-1
Plug of soldering iron

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Diagnosis/Process flowchart	Item	Contents
Remove connector of compressor.	Preparation	Turn "OFF" the power supply breaker, and remove 3P connector which connects inverter and compressor.
Check 25A fuse (Part No.F01). NG → Replace fuse. OK → Check electrolytic	Check	• Check whether 25A fuse on the control board assembly is blown or not. (F01)
	Check	

Table of Contents

Previous Page
Next Page

Quick Links:

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(119 pages)

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Toshiba RAS-25SKVP2-ND

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Toshiba RAS-13UKV-E

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