DAIKIN

Si20 - 701_B

Pocket Manual

Service Diagnosis

SkyAir

1. List of Applicable Models

■ R-FU Series

Series	Outdoor Units	Indoor Units
R-FUV1	R71FUV1	FA71FVEK
	R100FUV1	FA100FVEK
	R71FUV1	FH71BVE
	R100FUV1	FH100BVE
	R71FUV1	FHC71KVE
	R100FUV1	FHC100KVE
	R71FUV1	FV71LVE
	R100FUV1	FV100LVE
R-FUY1	R71FUY1	FA71FVEK
	R100FUY1	FA100FVEK
	R71FUY1	FH71BVE
	R100FUY1	FH100BVE
	R125FUY1	FH125BVE
	R71FUY1	FHC71KVE
	R100FUY1	FHC100KVE
	R125FUY1	FHC125KVE
	R140KUY1	FHYC140KVE
	R71FUY1	FV71LVE
	R100FUY1	FV100LVE
	R125FUY1	FV125LVE
R-FUVAL	R71FUVAL	FA71FVEK
	R100FUVAL	FA100FVEK
	R71FUVAL	FH71BVE
	R100FUVAL	FH100BVE
	R71FUVAL	FHC71KVE
	R100FUVAL	FHC100KVE
	R71FUVAL	FV71LVE
	R100FUVAL	FV100LVE
R-FUTAL	R125FUTAL	FH125BVE
	R125FUTAL	FHC125KVE
	R125FUTAL	FV125LVE

■ R-GA Series

Series	Outdoor Units	Indoor Units
R-GAV	R50GAV1A	FH50BVE
	R60GAV1A	FH60BVE

■ R-G Series

Series	Outdoor Units	Indoor Units
R-GV1	R35GV1	FH35BVE
	R50GV1	FH50BVE
	R60GV1	FH60BVE
	R35GV1	FHB35FV1
	R50GV1	FHB45FV1
	R60GV1	FHB60FV1
	R35GV1	FHC35KVE
	R50GV1	FHC50KVE
	R60GV1	FHC60KVE
	R35GV1	FHK35FV1
	R50GV1	FHK45FV1
	R60GV1	FHK60FV1
R-GV1A	R35GV1A	FHC35KVE
	R50GV1A	FHC50KVE
	R60GV1A	FHC60KVE
R-GVAL	R50GVAL	FH50BVE
	R60GVAL	FH60BVE
	R50GVAL	FHC50KVE
	R60GVAL	FHC60KVE
R-GV1K	R60GV1K	FHC60KVE
	R60GV1K	FH60BVE
	R60GV1K	FHB60FV1
	R60GV1K	FHK60FV1

■ R-KU Series

Series	Outdoor Units	Indoor Units
R-KUV1	R71KUV1	FAY71FAVE
	R100KUV1	FAY100FAVE
	R71KUV1	FHK71FV1
	R71KUV1	FHY71BVE
	R100KUV1	FHY100BVE
	R71KUV1	FHYB71FV1
	R100KUV1	FHYB100FV1
	R71KUV1	FHYC71KVE
	R100KUV1	FHYC100KVE
	R71KUV1	FUY71FJV1
	R100KUV1	FUY100FJV1
	R71KUV1	FVY71LVE
	R100KUV1	FVY100LVE
R-KUY1	R71KUY1	FAY71FAVE
	R100KUY1	FAY100FAVE
	R71KUY1	FHK71FV1
	R71KUY1	FHY71BVE
	R100KUY1	FHY100BVE
	R125KUY1	FHY125BVE
	R71KUY1	FHYB71FV1
	R100KUY1	FHYB100FV1
	R125KUY1	FHYB125FV1
	R71KUY1	FHYC71KVE
	R100KUY1	FHYC100KVE
	R125KUY1	FHYC125KVE
	R71KUY1	FUY71FJV1
	R100KUY1	FUY100FJV1
	R125KUY1	FUY125FJV1
	R71KUY1	FVY71LVE
	R100KUY1	FVY100LVE
	R125KUY1	FVY125LVE

Series	Outdoor Units	Indoor Units
R-KUVAL	R71KUVAL	FAY71FAVE
	R100KUVAL	FAY100FAVE
	R71KUVAL	FHY71BVE
	R100KUVAL	FHY100BVE
	R71KUVAL	FHYC71KVE
	R100KUVAL	FHYC100KVE
	R71KUVAL	FVY71LVE
	R100KUVAL	FVY100LVE
R-KUTAL	R125KUTAL	FHY125BVE
	R125KUTAL	FHYC125KVE
	R140KUTAL	FHYC140KVE
	R125KUTAL	FVY125LVE
R-KUTALK	R140KUTALK	FHYC140KVE
R-KUYALK	R140KUYALK	FHYC140KVE
R-KUYAL	R125KUYAL	FHY125BVE
	R125KUYAL	FHYC125KVE
	R140KUYAL	FHYC140KVE
	R125KUYAL	FVY125LVE

■ R-LU Series

Series	Outdoor Units	Indoor Units
R-LUV1	R71LUV1	FAY71FAVE
	R100LUV1	FAY100FAVE
	R71LUV1	FAY71LVE
	R71LUV1	FDYM03FAV1
	R100LUV1	FDYM04FAV1
	R71LUV1	FHY71BVE
	R100LUV1	FHY100BVE
	R71LUV1	FHYB71FV1
	R100LUV1	FHYB100FV1
	R71LUV1	FHYC71KVE
	R100LUV1	FHYC100KVE
	R71LUV1	FHYK71FJV1
	R71LUV1	FUY71FJV1
	R100LUV1	FUY100FJV1
	R71LUV1	FVY71LAVE
	R100LUV1	FVY100LAVE

Series	Outdoor Units	Indoor Units
R-LUV1 (Twin)	R71LUV1	FHY35BVE × 2
	R100LUV1	FHY50BVE × 2
	R71LUV1	FHYC35KVE × 2
	R100LUV1	FHYC50KVE × 2
R-LUY1	R71LUY1	FAY71FAVE
	R100LUY1	FAY100FAVE
	R71LUY1	FAY71LVE
	R71LUY1	FDYM03FAV1
	R100LUY1	FDYM04FAV1
	R125LUY1	FDYM05FAV1
	R140LUY1	FDYM06FAV1
	R71LUY1	FHY71BVE
	R100LUY1	FHY100BVE
	R125LUY1	FHY125BVE
	R71LUY1	FHYB71FV1
	R100LUY1	FHYB100FV1
	R125LUY1	FHYB125FV1
	R71LUY1	FHYC71KVE(4)
	R100LUY1	FHYC100KVE(4)
	R125LUY1	FHYC125KVE(4)
	R140LUY1	FHYC140KVE(4)
	R71LUY1	FHYK71FJV1
	R71LUY1	FUY71FJV1
	R100LUY1	FUY100FJV1
	R125LUY1	FUY125FJV1
	R71LUY1	FVY71LAVE(4)
	R100LUY1	FVY100LAVE(4)
	R125LUY1	FVY125LAVE(4)
R-LUY1 (Twin)	R71LUY1	FHY35BVE × 2
	R100LUY1	FHY50BVE × 2
	R125LUY1	FHY60BVE × 2
	R140LUY1	FHY71BVE × 2
	R71LUY1	FHYC35KVE × 2
	R100LUY1	FHYC50KVE × 2
	R125LUY1	FHYC60KVE × 2
	R140LUY1	FHYC71KVE × 2

Series	Outdoor Units	Indoor Units
R-LUY1 (Triple)	R140LUY1	FHY50BVE × 3
	R140LUY1	FHYC50KVE × 3
R-LUY2S (Twin)	R42LUY2S	FHC21KV2S × 2
R-LUVAL	R71LUVAL	FAY71FAVE
	R100LUVAL	FAY100FAVE
	R71LUVAL	FAY71LVE
	R71LUVAL	FDYM03FAVAL
	R100LUVAL	FDYM04FAVAL
	R100LUVAL	FHY100BVE
	R71LUVAL	FHYC71KVE
	R100LUVAL	FHYC100KVE
	R71LUVAL	FVY71LAVE
	R100LUVAL	FVY100LAVE
R-LUTAL	R125LUTAL	FDYM05FAVAL
	R140LUTAL	FDYM06FAVAL
	R125LUTAL	FHY125BVE
	R125LUTAL	FVY125LAVE
R-LUTAL (Twin)	R140LUTAL	FHY71BVE × 2
	R140LUTAL	FHYC71KVE × 2
R-LUTAL (Multi Use)	R140LUTAL	FHY50BVE × 3
	R140LUTAL	FHYC50KVE × 3
R-LUYAL	R125LUYAL	FDYM05FAVAL
	R140LUYAL	FDYM06FAVAL
	R125LUYAL	FHY125BVE
	R125LUYAL	FVY125LAVE
R-LUYAL (Twin)	R71LUYAL	FHY35BVE × 2
	R100LUYAL	FHY50BVE × 2
	R125LUYAL	FHY60BVE × 2
	R140LUYAL	FHY71BVE × 2
	R71LUYAL	FHYC35KVE × 2
	R100LUYAL	FHYC50KVE × 2
	R125LUYAL	FHYC60KVE × 2
	R140LUYAL	FHYC71KVE × 2
R-LUYAL (Multi Use)	R140LUYAL	FHY50BVE × 3
	R140LUYAL	FHYC50KVE × 3

■ R-NU Series

Series	Outdoor Units	Indoor Units
R-NUV1	R18NUV1(4)(5)	FDBG18NUV1(4)(5)
	R21NUV1(4)(5)	FDBG21NUV1(4)(5)
	R26NUV1(4)(5)	FDBG26NUV1(4)(5)
	R26NUV1(4)(5)	FDMG26NUV1(4)(5)
	R30NUV1	FDMG30NUV1
	R36NUV1(5)	FDMG36NUV1(5)
	R21NUV1(4)(5)	FH21NUV1(4)(5)
	R26NUV1(4)(5)	FH26NUV1(4)(5)
	R30NUV1	FH30NUV1
	R36NUV1(5)	FH36NUV1(5)
	R18NUV1(4)(5)	FHC18NUV1(4)(5)
	R21NUV1(4)(5)	FHC21NUV1(4)(5)
	R26NUV1(4)(5)	FHC26NUV1(4)(5)
	R30NUV1	FHC30NUV1
	R36NUV1(5)	FHC36NUV1(5)
R-NUY1	R26NUY1(4)(5)	FDBG26NUV1(4)(5)
	R26NUY1(4)(5)	FDMG26NUV1(4)(5)
	R30NUY1	FDMG30NUV1
	R36NUY1(4)(5)	FDMG36NUV1(4)(5)
	R42NUY1(4)(5)	FDMG42NUV1(4)(5)
	R48NUY1(4)(5)	FDMG48NUV1(4)(5)
	R51NUY1(4)(5)	FDMG51NUV1(4)(5)
	R56NUY1(4)(5)	FDMG56NUV1(4)(5)
	R26NUY1(4)(5)	FH26NUV1(4)(5)
	R30NUY1	FH30NUV1
	R36NUY1(4)(5)	FH36NUV1(4)(5)
	R42NUY1(4)(5)	FH42NUV1(4)(5)
	R48NUY1(4)(5)	FH48NUV1(4)(5)
	R26NUY1(4)(5)	FHC26NUV1(4)(5)
	R30NUY1	FHC30NUV1
	R36NUY1(4)(5)	FHC36NUV1(4)(5)
	R42NUY1(4)(5)	FHC42NUV1(4)(5)
	R48NUY1(4)(5)	FHC48NUV1(4)(5)

Series	Outdoor Units	Indoor Units
R-NUV2S	R13NUV2S	FDBT13NUV2S
	R13NUV2S	FDBT13PUV2S
	R18NUV2S	FDBT18NUV2S
	R18NUV2S	FDBT18PUV2S
	R24NUV2S	FDBT24NUV2S
	R24NUV2S	FDBT24PUV2S
	R30NUV2S	FDBT30NUV2S
	R30NUV2S	FDBT33NUV2S
	R36NUV2S	FDBT36NUV2S
	R30NUV2S	FDMG30NUV2S
	R36NUV2S	FDMG36NUV2S
	R13NUV2S1	FH13NUV2S
	R18NUV2S1	FH18NUV2S
	R24NUV2S	FH24NUV2S
	R30NUV2S	FH30NUV2S
	R36NUV2S	FH36NUV2S
	R18NUV2S	FHC18NUV2S
	R24NUV2S	FHC24NUV2S
	R30NUV2S	FHC30NUV2S
	R36NUV2S	FHC36NUV2S

Series	Outdoor Units	Indoor Units
R-NUY2S	R30NUY2S	FDBT30NUV2S
	R30NUY2S	FDBT33NUV2S
	R36NUY2S	FDBT36NUV2S
	R42NUY2S	FDBT42NUV2S
	R48NUY2S	FDBT48NUV2S
	R48NUY2S	FDBT48PUV2S
	R30NUY2S	FDMG30NUV2S
	R36NUY2S	FDMG36NUV2S
	R42NUY2S	FDMG42NUV2S
	R48NUY2S	FDMG48NUV2S
	R51NUY2S	FDMG51NUV2S
	R56NUY2S	FDMG56NUV2S
	R48NUY2S	FDMG48NVV2S
	R51NUY2S	FDMG51NVV2S
	R56NUY2S	FDMG56NVV2S
	R48NUY2S	FDMG48PUV2S
	R51NUY2S	FDMG51PUV2S
	R30NUY2S	FH30NUV2S
	R36NUY2S	FH36NUV2S
	R42NUY2S	FH42NUV2S
	R48NUY2S	FH48NUV2S
	R30NUY2S	FHC30NUV2S
	R36NUY2S	FHC36NUV2S
	R42NUY2S	FHC42NUV2S
	R48NUY2S	FHC48NUV2S

■ R-PU Series

Series	Outdoor Units	Indoor Units
R-PUV2S	R30PUV2S	FDBT30PUV2S
	R33PUV2S	FDBT33PUV2S
	R36PUV2S	FDBT36PUV2S
	R30PUV2S	FDMG30PUV2S
	R36PUV2S	FDMG36PUV2S
	R30PUV2S	FDMG30NVV2S
	R36PUV2S	FDMG36NVV2S
	R30PUV2S	FH30PUV2S
	R36PUV2S	FH36PUV2S
	R30PUV2S	FHC30PUV2S
	R36PUV2S	FHC36PUV2S
R-PUY2S	R30PUY2S	FH30PUV2S
	R36PUY2S	FH36PUV2S
	R42PUY2S	FH42PUV2S
	R30PUY2S	FHC30PUV2S
	R36PUY2S	FHC36PUV2S
	R42PUY2S	FHC42PUV2S
	R30PUY2S	FDBT30PUV2S
	R33PUY2S	FDBT33PUV2S
	R36PUY2S	FDBT36PUV2S
	R42PUY2S	FDBT42PUV2S
	R30PUY2S	FDMG30NVV2S
	R36PUY2S	FDMG36NVV2S
	R42PUY2S	FDMG42NVV2S
	R30PUY2S	FDMG30PUV2S
	R36PUY2S	FDMG36PUV2S
	R42PUY2S	FDMG42PUV2S
	R56NUY2S	FDMG56PUV2S

■ RR-M Series

Series	Outdoor Units	Indoor Units
RR-MV1	RR71MV1	FAQ71BVV1B
	RR71MV1	FBQ71DV1
	RR71MV1	FCQ71KVEA
	RR71MV1	FHQ71BVV1B
RR-MY1	RR71MY1	FAQ71BVV1B
	RR100MY1	FAQ100BVV1B
	RR71MY1	FBQ71DV1
	RR100MY1	FBQ100DV1
	RR125MY1	FBQ125DV1
	RR140MY1	FBQ140DV1
	RR71MY1	FCQ71KVEA
	RR100MY1	FCQ100KVEA
	RR125MY1	FCQ125KVEA
	RR140MY1	FCQ140KVEA
	RR71MY1	FHQ71BVV1B
	RR100MY1	FHQ100BVV1B
	RR125MY1	FHQ125BVV1B

■ RY-FU Series

Series	Outdoor Units	Indoor Units
RY-FUVAL	RY71FUVAL	FAY71FVE
	RY100FUVAL	FAY100FVE
	RY71FUVAL	FHY71BVE
	RY100FUVAL	FHY100BVE
	RY71FUVAL	FHYB71FVAL
	RY100FUVAL	FHYB100FVAL
	RY71FUVAL	FHYC71KVE
	RY100FUVAL	FHYC100KVE
	RY71FUVAL	FVY71LVE
	RY100FUVAL	FVY100LVE
RY-FUTAL	RY125FUTAL	FHY125BVE
	RY125FUTAL	FHYB125FVAL
	RY125FUTAL	FHYC125KVE
	RY125FUTAL	FVY125LVE

■ RY-FV Series

Series	Outdoor Units	Indoor Units
RY-FV1A	RY35FV1A	FHY35BVE
	RY35FV1A	FHYB35FV1
	RY35FV1A	FHYC35KVE
	RY35FV1A	FHYK35FJV1

■ RY-G Series

Series	Outdoor Units	Indoor Units
RY-GVAL	RY50GVAL	FHY50BVE
	RY60GVAL	FHY60BVE
	RY50GVAL	FHYC50KVE
	RY60GVAL	FHYC60KVE
RY-GV1A	RY50GV1A	FHYB45FV1
	RY60GV1A	FHYB60FV1
	RY50GV1A	FHYC50KVE
	RY60GV1A	FHYC60KVE
	RY50GV1A	FHYK45FJV1
	RY60GV1A	FHYK60FJV1

■ RY-GAV Series

Series	Outdoor Units	Indoor Units
RY-GAV	RY50GAV1A	FHY50BVE
	RY60GAV1A	FHY60BVE

■ RY-KU Series

Series	Outdoor Units	Indoor Units
RY-KUV1	RY71KUV1	FAY71FAVE
	RY100KUV1	FAY100FAVE
	RY71KUV1	FHY71BVE
	RY100KUV1	FHY100BVE
	RY71KUV1	FHYB71FV1
	RY100KUV1	FHYB100FV1
	RY71KUV1	FHYC71KVE
	RY100KUV1	FHYC100KVE
	RY71KUV1	FHYK71FJV1
	RY71KUY1	FHYK71FJV1
	RY71KUV1	FUY71FJV1
	RY100KUV1	FUY100FJV1
	RY71KUV1	FVY71LVE
	RY100KUV1	FVY100LVE
RY-KUY1	RY71KUY1	FAY71FAVE
	RY100KUY1	FAY100FAVE
	RY71KUY1	FHY71BVE
	RY100KUY1	FHY100BVE
	RY125KUY1	FHY125BVE
	RY71KUY1	FHYB71FV1
	RY100KUY1	FHYB100FV1
	RY125KUY1	FHYB125FV1
	RY71KUY1	FHYC71KVE
	RY100KUY1	FHYC100KVE
	RY125KUY1	FHYC125KVE
	RY140KUY1	FHYC140KVE
	RY71KUY1	FUY71FJV1
	RY100KUY1	FUY100FJV1
	RY125KUY1	FUY125FJV1
	RY71KUY1	FVY71LVE
	RY100KUY1	FVY100LVE
	RY125KUY1	FVY125LVE
RY-KUTAL	RY140KUTAL	FHYC140KVE
RY-KUTALK	RY140KUTALK	FHYC140KVE
RY-KUYAL	RY140KUYAL	FHYC140KVE
RY-KUYALK	RY140KUYALK	FHYC140KVE

■ RY-LU Series

Series	Outdoor Units	Indoor Units
RY-LUV1	RY71LUV1	FAY71FAVE
	RY100LUV1	FAY100FAVE
	RY71LUV1	FAY71LVE
	RY71LUV1	FDYB71KAVE
	RY71LUV1	FDYM03FAV1
	RY100LUV1	FDYM04FAV1
	RY71LUV1	FHY71BVE
	RY100LUV1	FHY100BVE
	RY71LUV1	FHYB71FV1
	RY100LUV1	FHYB100FV1
	RY71LUV1	FHYC71KVE
	RY100LUV1	FHYC100KVE
	RY71LUV1	FHYK71FJV1
	RY71LUV1	FUY71FJV1
	RY100LUV1	FUY100FJV1
	RY71LUV1	FVY71LAVE
	RY100LUV1	FVY100LAVE
RY-LUV1 (Twin)	RY71LUV1	FHY35BVE × 2
	RY100LUV1	FHY50BVE × 2
	RY71LUV1	FHYC35KVE × 2
	RY100LUV1	FHYC50KVE × 2

Series	Outdoor Units	Indoor Units
RY-LUY1	RY71LUY1	FAY71FAVE
	RY100LUY1	FAY100FAVE
	RY71LUY1	FAY71LVE
	RY140LUY1	FDY06KAY1
	RY71LUY1	FDY71KFV1
	RY100LUY1	FDY100KFV1
	RY125LUY1	FDY125KFV1
	RY160LUY1	FDY160KFV1
	RY71LUY1	FDYB71KAVE
	RY71LUY1	FDYM03FAV1
	RY100LUY1	FDYM04FAV1
	RY125LUY1	FDYM05FAV1
	RY140LUY1	FDYM06FAV1
	RY71LUY1	FHY71BVE
	RY100LUY1	FHY100BVE
	RY125LUY1	FHY125BVE
	RY71LUY1	FHYB71FV1
	RY100LUY1	FHYB100FV1
	RY125LUY1	FHYB125FV1
	RY71LUY1	FHYC71KVE
	RY100LUY1	FHYC100KVE
	RY125LUY1	FHYC125KVE
	RY140LUY1	FHYC140KVE
	RY71LUY1	FHYK71FJV1
	RY71LUY1	FUY71FJV1
	RY100LUY1	FUY100FJV1
	RY125LUY1	FUY125FJV1
	RY71LUY1	FVY71LAVE
	RY100LUY1	FVY100LAVE
	RY125LUY1	FVY125LAVE

Series	Outdoor Units	Indoor Units
RY-LUY1	RY71LUY1	FHY35BVE × 2
	RY100LUY1	FHY50BVE × 2
	RY125LUY1	FHY60BVE × 2
	RY140LUY1	FHY71BVE × 2
	RY71LUY1	FHYC35KVE × 2
	RY100LUY1	FHYC50KVE × 2
	RY125LUY1	FHYC60KVE × 2
	RY140LUY1	FHYC71KVE × 2
RY-LUY1	RY140LUY1	FHY50BVE × 3
	RY140LUY1	FHYC50KVE × 3
RY-LUTAL	RY140LUTAL	FDYM06FAVAL
	RY140LUTAL	FHYC140KVE
	RY140LUTAL	FHY50KVE × 3
	RY140LUTAL	FHY71KVE × 2
	RY140LUTAL	FHYC50KVE × 3
	RY140LUTAL	FHYC71KVE × 2
RY-LUVAL	RY140LUVAL	FDYM06FAVAL
	RY140LUVAL	FHYC140KVE
RY-LUYAL (Twin)	RY140LUYAL	FHY71KVE × 2
	RY140LUYAL	FHYC71KVE × 2
RY-LUYAL (Triple)	RY140LUYAL	FHY50KVE × 3
	RY140LUYAL	FHYC50KVE × 3

■ RZ-L Series

Series	Outdoor Units	Indoor Units
RZ-LV1	RZ71LV1	FAY71FAVE
	RZ71LV1	FHYB71FV1
	RZ71LV1	FHYC71KVE

■ RZQ-B Series

Series	Outdoor Units	Indoor Units
RZQ-B7V3B	RZQS100B7V3B	FCQ35C7VEB × 3
RZQ-B8W1B	RZQ100B8W1B	FAQ100BUV1B
	RZQ100B8W1B	FBQ100B7V3B
	RZQ125B8W1B	FBQ125B7V3B
	RZQ100B8W1B	FCQ100C7VEB
	RZQ125B8W1B	FCQ125C7VEB
	RZQ100B8W1B	FCQH100C7VEB
	RZQ125B8W1B	FCQH125C7VEB
	RZQ140B8W1B	FCQH140C7VEB
	RZQ125B8W1B	FDQ125B7V3B
	RZQ100B8W1B	FHQ100BUV1B
	RZQ125B8W1B	FHQ125BUV1B
	RZQ100B8W1B	FUQ100BUV1B
	RZQ125B8W1B	FUQ125BUV1B
RZQ-B8W1B (Twin)	RZQ140B8W1B	FAQ71BUV1B × 2
	RZQ100B8W1B	FBQ50B7V1 × 2
	RZQ125B8W1B	FBQ60B7V1 × 2
	RZQ140B8W1B	FBQ71B7V3B × 2
	RZQ100B8W1B	FCQ50C7VEB × 2
	RZQ125B8W1B	FCQ60C7VEB × 2
	RZQ140B8W1B	FCQ71C7VEB × 2
	RZQ140B8W1B	FCQH71C7VEB × 2
	RZQ100B8W1B	FFQ50BV1B × 2
	RZQ125B8W1B	FFQ60BV1B × 2
	RZQ100B8W1B	FHQ50BUV1B × 2
	RZQ125B8W1B	FHQ60BUV1B × 2
	RZQ140B8W1B	FHQ71BUV1B × 2
	RZQ140B8W1B	FUQ71BUV1B × 2

Series	Outdoor Units	Indoor Units
RZQ-B8W1B (Triple)	RZQ100B8W1B	FBQ35B7V1 × 3
	RZQ125B8W1B	FBQ50B7V1 × 3
	RZQ140B8W1B	FBQ50B7V1 × 3
	RZQ100B8W1B	FCQ35C7VEB × 3
	RZQ125B8W1B	FCQ50C7VEB × 3
	RZQ140B8W1B	FCQ50C7VEB × 3
	RZQ100B8W1B	FFQ35BV1B × 3
	RZQ125B8W1B	FFQ50BV1B × 3
	RZQ140B8W1B	FFQ50BV1B × 3
	RZQ100B8W1B	FHQ35BUV1B × 3
	RZQ125B8W1B	FHQ50BUV1B × 3
	RZQ140B8W1B	FHQ50BUV1B × 3
RZQ-B8W1B (Double-twin)	RZQ125B8W1B	FBQ35B7V1 × 4
	RZQ140B8W1B	FBQ35B7V1 × 4
	RZQ125B8W1B	FCQ35C7VEB × 4
	RZQ140B8W1B	FCQ35C7VEB × 4
	RZQ125B8W1B	FFQ35BV1B × 4
	RZQ140B8W1B	FFQ35BV1B × 4
	RZQ125B8W1B	FHQ35BUV1B × 4
	RZQ140B8W1B	FHQ35BUV1B × 4
RZQ-B9V3B	RZQ71B9V3B	FAQ71BUV1B
	RZQ71B9V3B	FBQ71B7V3B
	RZQ71B9V3B	FCQ71C7VEB
	RZQ71B9V3B	FCQH71C7VEB
	RZQ71B9V3B	FHQ71BUV1B
	RZQ71B9V3B	FUQ71BUV1B
RZQ-B9V3B (Twin)	RZQ71B9V3B	FBQ35B7V1 × 2
	RZQ71B9V3B	FCQ35C7VEB × 2
	RZQ71B9V3B	FFQ35BV1B × 2
	RZQ71B9V3B	FHQ35BUV1B × 2

■ RZQ-C Series

Series	Outdoor Units	Indoor Units
RZQ-C7V1B	RZQ71C7V1B	FAQ71BUV1B
	RZQ100C7V1B	FAQ100BUV1B
	RZQ71C7V1B	FBQ71B7V3B
	RZQ100C7V1B	FBQ100B7V3B
	RZQ125C7V1B	FBQ125B7V3B
	RZQ100C7V1B	FCQ100C7VEB
	RZQ125C7V1B	FCQ125C7VEB
	RZQ140C7V1B	FCQ140C7VEB
	RZQ71C7V1B	FCQ71C7V3B
	RZQ100C7V1B	FCQ100C7V3B
	RZQ125C7V1B	FCQ125C7V3B
	RZQ140C7V1B	FCQ140C7V3B
	RZQ100C7V1B	FCQH100C7VEB
	RZQ125C7V1B	FCQH125C7VEB
	RZQ140C7V1B	FCQH140C7VEB
	RZQ71C7V1B	FCQH71C7V3B
	RZQ100C7V1B	FCQH100C7V3B
	RZQ125C7V1B	FCQH125C7V3B
	RZQ140C7V1B	FCQH140C7V3B
	RZQ125C7V1B	FDQ125B7V3B
	RZQ71C7V1B	FHQ71BUV1B
	RZQ100C7V1B	FHQ100BUV1B
	RZQ125C7V1B	FHQ125BUV1B
	RZQ71C7V1B	FUQ71BUV1B
	RZQ100C7V1B	FUQ100BUV1B
	RZQ125C7V1B	FUQ125BUV1B

Series	Outdoor Units	Indoor Units
RZQ-C7V1B (Twin)	RZQ140C7V1B	FAQ71BUV1B × 2
	RZQ71C7V1B	FBQ35B7V1 × 2
	RZQ100C7V1B	FBQ50B7V1 × 2
	RZQ125C7V1B	FBQ60B7V1 × 2
	RZQ140C7V1B	FBQ71B7V3B × 2
	RZQ100C7V1B	FCQ50C7VEB × 2
	RZQ125C7V1B	FCQ60C7VEB × 2
	RZQ140C7V1B	FCQ71C7VEB × 2
	RZQ71C7V1B	FCQ35C7V3B × 2
	RZQ100C7V1B	FCQ50C7V3B × 2
	RZQ125C7V1B	FCQ60C7V3B × 2
	RZQ140C7V1B	FCQ71C7V3B × 2
	RZQ140C7V1B	FCQH71C7VEB × 2
	RZQ71C7V1B	FFQ35BV1B × 2
	RZQ100C7V1B	FFQ50BV1B × 2
	RZQ125C7V1B	FFQ60BV1B × 2
	RZQ71C7V1B	FHQ35BUV1B × 2
	RZQ100C7V1B	FHQ50BUV1B × 2
	RZQ125C7V1B	FHQ60BUV1B × 2
	RZQ140C7V1B	FHQ71BUV1B × 2
	RZQ140C7V1B	FUQ71BUV1B × 2
RZQ-C7V1B (Triple)	RZQ100C7V1B	FBQ35B7V1 × 3
	RZQ125C7V1B	FBQ50B7V1 × 3
	RZQ140C7V1B	FBQ50B7V1 × 3
	RZQ100C7V1B	FCQ35C7VEB × 3
	RZQ125C7V1B	FCQ50C7VEB × 3
	RZQ140C7V1B	FCQ50C7VEB × 3
	RZQ100C7V1B	FCQ35C7V3B × 3
	RZQ125C7V1B	FCQ50C7V3B × 3
	RZQ140C7V1B	FCQ50V7V3B × 3
	RZQ100C7V1B	FFQ35BV1B × 3
	RZQ125C7V1B	FFQ50BV1B × 3
	RZQ140C7V1B	FFQ50BV1B × 3
	RZQ100C7V1B	FHQ35BUV1B × 3
	RZQ125C7V1B	FHQ50BUV1B × 3
	RZQ140C7V1B	FHQ50BUV1B × 3

Series	Outdoor Units	Indoor Units
RZQ-C7V1B (Double-twin)	RZQ125C7V1B	FBQ35B7V1 × 4
	RZQ140C7V1B	FBQ35B7V1 × 4
	RZQ125C7V1B	FCQ35C7VEB × 4
	RZQ140C7V1B	FCQ35C7VEB × 4
	RZQ125C7V1B	FCQ35C7V3B × 4
	RZQ140C7V1B	FCQ35C7V3B × 4
	RZQ125C7V1B	FFQ35BV1B × 4
	RZQ140C7V1B	FFQ35BV1B × 4
	RZQ125C7V1B	FHQ35BUV1B × 4
	RZQ140C7V1B	FHQ35BUV1B × 4
RZQ-C7Y1B	RZQ200C7Y1B	FDQ200B7V3B
	RZQ250C7Y1B	FDQ250B7V3B
RZQ-C7Y1B (Twin)	RZQ200C7Y1B	FAQ100BUV1B × 2
	RZQ200C7Y1B	FBQ 100B7V3B × 2
	RZQ250C7Y1B	FBQ 125B7V3B × 2
	RZQ200C7Y1B	FCQ100C7VEB × 2
	RZQ250C7Y1B	FCQ125C7VEB × 2
	RZQ250C7Y1B	FDQ125B7V3B × 2
	RZQ200C7Y1B	FHQ100BUV1B × 2
	RZQ250C7Y1B	FHQ125BUV1B × 2
	RZQ200C7Y1B	FUQ100BUV1B × 2
	RZQ250C7Y1B	FUQ125BUV1B × 2
RZQ-C7Y1B (Triple)	RZQ200C7Y1B	FAQ71BUV1B × 3
	RZQ200C7Y1B	FBQ60B7V1 × 3
	RZQ200C7Y1B	FBQ71B7V3B × 3
	RZQ200C7Y1B	FCQ60C7VEB × 3
	RZQ200C7Y1B	FCQ71C7VEB × 3
	RZQ200C7Y1B	FFQ60BV1B × 3
	RZQ200C7Y1B	FHQ60BUV1B × 3
	RZQ200C7Y1B	FHQ71BUV1B × 3
	RZQ200C7Y1B	FUQ71BUV1B × 3

Series	Outdoor Units	Indoor Units
RZQ-C7Y1B (Double-twin)	RZQ200C7Y1B	FBQ50B7V1 × 4
	RZQ250C7Y1B	FBQ60B7V1 × 4
	RZQ200C7Y1B	FCQ50C7VEB × 4
	RZQ250C7Y1B	FCQ60C7VEB × 4
	RZQ200C7Y1B	FFQ50BV1B × 4
	RZQ250C7Y1B	FFQ60BV1B × 4
	RZQ200C7Y1B	FHQ50BUV1B × 4
	RZQ250C7Y1B	FHQ60BUV1B × 4

■ RZQG-L Series

Series	Outdoor Units	Indoor Units
RZQG-LV1B	RZQG71LV1B	FCQG71EVEB
	RZQG100LV1B	FCQG100EVEB
	RZQG125LV1B	FCQG125EVEB
	RZQG140LV1B	FCQG140EVEB
	RZQG71LV1B	FHQG71CVEB
	RZQG100LV1B	FHQG100CVEB
	RZQG125LV1B	FHQG125CVEB
	RZQG140LV1B	FHQG140CVEB

■ RZQ-H Series

Series	Outdoor Units	Indoor Units
RZQ-HY	RZQ100HY4A	FBQ100DV1
	RZQ125HY4A	FBQ125DV1
	RZQ160HY4A	FBQ140DV1
	RZQ100HY4A	FCQ100KVEA
	RZQ125HY4A	FCQ125KVEA
	RZQ100HY4A	FHQ100BVV1B
	RZQ125HY4A	FHQ125BVV1B

■ RZQ-K Series

Series	Outdoor Units	Indoor Units
RZQ-KA	RZQ71KAVLT	FBQ71DVET
	RZQ100KAVLT	FBQ100DVET
	RZQ125KATLT	FBQ125DVET
	RZQ140KATLT	FBQ140DVET
	RZQ71KAVLT	FCQ71KVLT
	RZQ100KAVLT	FCQ100KVLT
	RZQ125KATLT	FCQ125KVLT
	RZQ140KATLT	FCQ140KVLT
RZQ-KB	RZQ71KBV1	FAQ71BVV1B
	RZQ100KBV1	FAQ100BVV1B
	RZQ71KBV1	FBQ71DV1
	RZQ71KBV1	FCQ71KVEA
	RZQ100KBV1	FCQ100KVEA
	RZQ160HY4A	FCQ140KVEA
	RZQ71KBV1	FHQ71BVV1B
	RZQ100KBV1	FHQ100BVV1B
RZQ-KC	RZQ71KCVLT	FBQ71DAVET
	RZQ100KCVLT	FBQ100DAVET
	RZQ125KCTLT	FBQ125DAVET
	RZQ140KCTLT	FBQ140DAVET
	RZQ71KCVLT	FCQ71KVLT
	RZQ100KCVLT	FCQ100KVLT
	RZQ125KCTLT	FCQ125KAVLT
	RZQ140KCTLT	FCQ140KAVLT

■ RZQS-B Series

Series	Outdoor Units	Indoor Units
RZQS-B7V3B	RZQS71B7V3B	FAQ71BUV1B
	RZQS100B7V3B	FAQ100BUV1B
	RZQS71B7V3B	FBQ71B7V3B
	RZQS100B7V3B	FBQ100B7V3B
	RZQS71B7V3B	FCQ71C7VEB
	RZQS100B7V3B	FCQ100C7VEB
	RZQS71B7V3B	FCQH71C7VEB
	RZQS100B7V3B	FCQH100C7VEB
	RZQS71B7V3B	FHQ71BUV1B
	RZQS100B7V3B	FHQ100BUV1B
	RZQS71B7V3B	FUQ71BUV1B
	RZQS100B7V3B	FUQ100BUV1B
RZQS-B7V3B (Twin)	RZQS71B7V3B	FBQ35B7V1 × 2
	RZQS100B7V3B	FBQ50B7V1 × 2
	RZQS71B7V3B	FCQ35C7VEB × 2
	RZQS100B7V3B	FCQ50C7VEB × 2
	RZQS71B7V3B	FFQ35BV1B × 2
	RZQS100B7V3B	FFQ50BV1B × 2
	RZQS71B7V3B	FHQ35BUV1B × 2
	RZQS100B7V3B	FHQ50BUV1B × 2
RZQS-B7V3B (Triple)	RZQS100B7V3B	FFQ35BV1B × 3
	RZQS100B7V3B	FBQ35B7V1 × 3
	RZQS100B7V3B	FHQ35BUV1B × 3

■ RZQS-C Series

Series	Outdoor Units	Indoor Units
RZQS-C7V1B	RZQS125C7V1B	FBQ125B7V3B
	RZQS125C7V1B	FCQ125C7VEB
	RZQS140C7V1B	FCQ140C7VEB
	RZQS125C7V1B	FCQH125C7VEB
	RZQS140C7V1B	FCQH140C7VEB
	RZQS125C7V1B	FDQ125B7V3B
	RZQS125C7V1B	FHQ125BUV1B
	RZQS125C7V1B	FUQ125BUV1B
RZQS-C7V1B (Twin)	RZQS140C7V1B	FAQ71BUV1B × 2
	RZQS125C7V1B	FBQ60B7V1 × 2
	RZQS140C7V1B	FBQ71B7V3B × 2
	RZQS125C7V1B	FCQ60C7VEB × 2
	RZQS140C7V1B	FCQ71C7VEB × 2
	RZQS140C7V1B	FCQH71C7VEB × 2
	RZQS125C7V1B	FFQ60BV1B × 2
	RZQS125C7V1B	FHQ60BUV1B × 2
	RZQS140C7V1B	FHQ71BUV1B × 2
	RZQS140C7V1B	FUQ71BUV1B × 2
RZQS-C7V1B (Triple)	RZQS125C7V1B	FBQ50B7V1 × 3
	RZQS140C7V1B	FBQ50B7V1 × 3
	RZQS125C7V1B	FCQ50C7VEB × 3
	RZQS140C7V1B	FCQ50C7VEB × 3
	RZQS125C7V1B	FFQ50BV1B × 3
	RZQS140C7V1B	FFQ50BV1B × 3
	RZQS125C7V1B	FHQ50BUV1B × 3
	RZQS140C7V1B	FHQ50BUV1B × 3
RZQS-C7V1B (Double-twin)	RZQS125C7V1B	FBQ35B7V1 × 4
	RZQS140C7V1B	FBQ35B7V1 × 4
	RZQS125C7V1B	FCQ35C7VEB × 4
	RZQS140C7V1B	FCQ35C7VEB × 4
	RZQS125C7V1B	FFQ35BV1B × 4
	RZQS140C7V1B	FFQ35BV1B × 4
	RZQS125C7V1B	FHQ35BUV1B × 4
	RZQS140C7V1B	FHQ35BUV1B × 4

■ RZR-HU Series

Series	Outdoor Units	Indoor Units
RZR-HUY1	RZR100HUY1	FBQ100DV1
	RZR125HUY1	FBQ125DV1
	RZR140HUY1	FBQ140DV1
	RZR100HUY1	FCQ100KVEA
	RZR125HUY1	FCQ125KVEA
	RZR140HUY1	FCQ140KVEA
	RZR100HUY1	FHQ100BV1B
	RZR125HUY1	FHQ125BV1B
	RZR100HUY1	FHQ100BVV1B
	RZR125HUY1	FHQ125BVV1B
RZR-HUY2S	RZR30HUY2S	FBQ30DV2S
	RZR36HUY2S	FBQ36DV2S
	RZR42HUY2S	FBQ42DV2S
	RZR48HUY2S	FBQ48DV2S
	RZR30HUY2S	FCQ30KV2S
	RZR36HUY2S	FCQ36KV2S
	RZR42HUY2S	FCQ42KV2S
	RZR48HUY2S	FCQ48KV2S

■ RZR-KU Series

Series	Outdoor Units	Indoor Units
RZR-KUV1	RZR71KUV1	FBQ71DV1
	RZR100KUV1	FBQ100DV1
	RZR125KUV1	FBQ125DV1
	RZR140KUV1	FBQ140DV1
	RZR71KUV1	FCQ71KVEA
	RZR100KUV1	FCQ100KVEA
	RZR125KUV1	FCQ125KVEA
	RZR140KUV1	FCQ140KVEA
	RZR71KUV1	FHQ71BV1B
	RZR100KUV1	FHQ100BV1B
	RZR125KUV1	FHQ125BV1B
	RZR71KUV1	FHQ71BVV1B
	RZR100KUV1	FHQ100BVV1B
	RZR125KUV1	FHQ125BVV1B

Series	Outdoor Units	Indoor Units
RZR-KUV2S	RZR30KUV2S	FBQ30DV2S
	RZR36KUV2S	FBQ36DV2S
	RZR42KUV2S	FBQ42DV2S
	RZR48KUV2S	FBQ48DV2S
	RZR30KUV2S	FCQ30KV2S
	RZR36KUV2S	FCQ36KV2S
	RZR42KUV2S	FCQ42KV2S
	RZR48KUV2S	FCQ48KV2S

■ RZY-L Series

Series	Outdoor Units	Indoor Units
RZY-LV1	RZY71LV1	FAY71FAVE
	RZY71LV1	FHYB71FV1
	RZY71LV1	FHYC71KVE
RZY-LVAL	RZY71LVAL	FAY71FAVE
	RZY71LVAL	FHYB71FVAL
	RZY71LVAL	FHYC71KVE
RZY-LTAL	RZY100LTAL	FAY100FAVE
	RZY100LTAL	FHYB100FVAL
	RZY125LTAL	FHYB125FVAL
	RZY100LTAL	FHYC100KVE
	RZY125LTAL	FHYC125KVE
	RZY100LTAL	FVY100LVE
	RZY125LTAL	FVY125LVE

■ CMSQ Series

Series	Outdoor Units	Indoor Units
CMSQ-A7W1B (Multi)	CMSQ200A7W1B CMSQ250A7W1B	FMCQ50A7VEB
		FMCQ60A7VEB
		FMCQ71A7VEB
		FMCQ100A7VEB
		FMCQ125A7VEB
		FMDQ50A7V3B
		FMDQ60A7V3B
		FMDQ71A7V3B
		FMDQ100A7V3B
		FMDQ125A7V3B
		FMDQ50B7VEB
		FMDQ60B7VEB
		FMDQ71B7VEB
		FMDQ100B7VEB
		FMDQ125B7VEB

2. Symptom-based Troubleshooting

2.1 Overview

	Symptom	Details of Measures
1	Equipment does not operate.	Refer to P.31
2	Indoor unit fan operates, but compressor does not operate.	Refer to P.33
3	Cooling/heating operation starts but stops immediately.	Refer to P.36
4	After unit shuts down, it cannot be restarted for a while.	Refer to P.38
5	Equipment operates but does not provide cooling.	Refer to P.41
6	Equipment operates but does not provide heating.	Refer to P.44
7	Equipment discharges white mist.	Refer to P.47
8	Equipment produces loud noise or vibration.	Refer to P.49
9	Equipment discharges dust.	Refer to P.52
10	Remote controller LCD displays “88”.	Refer to P.53
11	Equipment emits odor.	Room smell and cigarette odors accumulated inside the indoor unit are discharged with air. Inside of the indoor unit must be cleaned.
12	Flap operates when power is turned ON.	It is normal. The flap initializes for accurate positioning.
13	Change of operation mode causes flap to move.	It is normal. There is a control function that moves the flap when operation mode is changed.
14	Fan operates in “M” tap during heating even if remote controller is set to “L” tap.	It is normal. It is caused by the activation of the overload control (airflow shift control).
15	Flap automatically moves during cooling.	It is normal. It is caused by the activation of the dew condensation prevention function or ceiling soiling prevention function.

	Symptom	Details of Measures
16	Indoor unit fan operates in “L” tap for 1 minute in “program dry” mode even if compressor is not operating.	It is normal. The monitoring function forcibly operates the fan for 1 minute.
17	Indoor unit fan operates after heating operation stops.	It is normal. The fan operates in the “LL” tap for 60 to 100 seconds to dissipate the residual heat in the heater.
18	Drain pump operates when equipment is not operating.	It is normal. The drain pump continues to operate for several minutes after equipment is turned OFF.
19	Horizontal swing sends air to different directions in cooling and heating even if it is set to the same position.	It is normal. The airflow direction in cooling/ dry operation is different from that in heating/fan operation.
20	Flap remains horizontal even if it is set to swing mode.	It is normal. The flap does not swing in the thermostat OFF mode.
21	When operating in remote control thermostat, the thermostat turns OFF before temperature of remote control reaches the set temperature.	It is normal. The thermostat may be controlled with the suction air temperature (body thermostat), concurrently with the set temperature.

2.2 Equipment does not Operate

Applicable Model

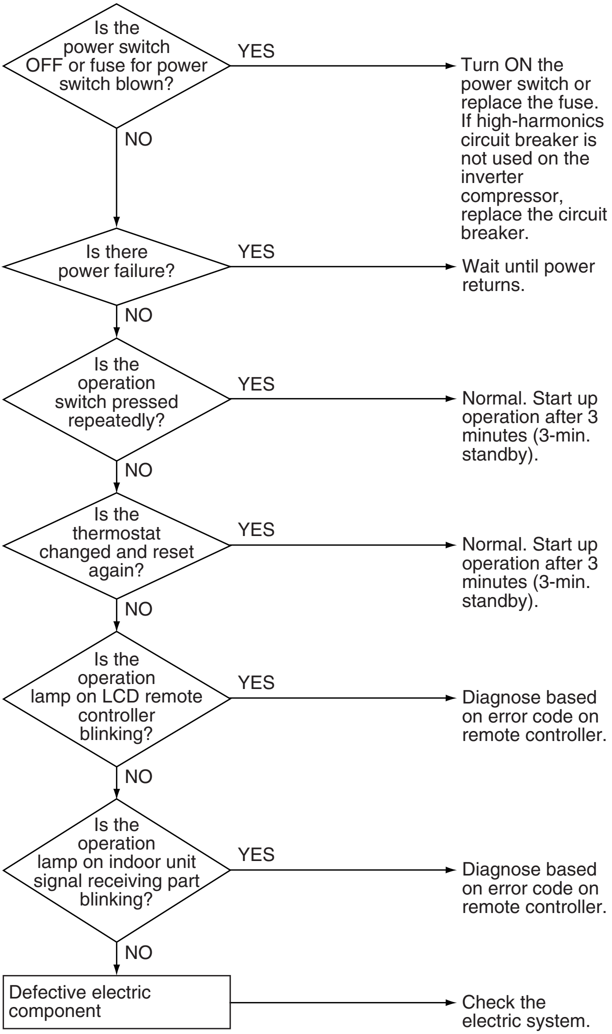
All models of SkyAir series

Supposed Causes

- Fuse blown or disorder of contact in operation circuit
- Defective operation switch or contact point
- Defective high pressure switch
- Defective magnetic switch for fan motor
- Activation or fault of overcurrent relay for fan motor
- Defective overcurrent relay for compressor
- Defective compressor protection thermostat
- Insufficient insulation in electric system
- Defective contact point of magnetic switch for compressor
- Defective compressor
- Defective remote controller or low batteries (wireless)
- Incorrect address setting of wireless remote controller

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



2.3 Indoor Unit Fan Operates, but Compressor does not Operate

Applicable Model

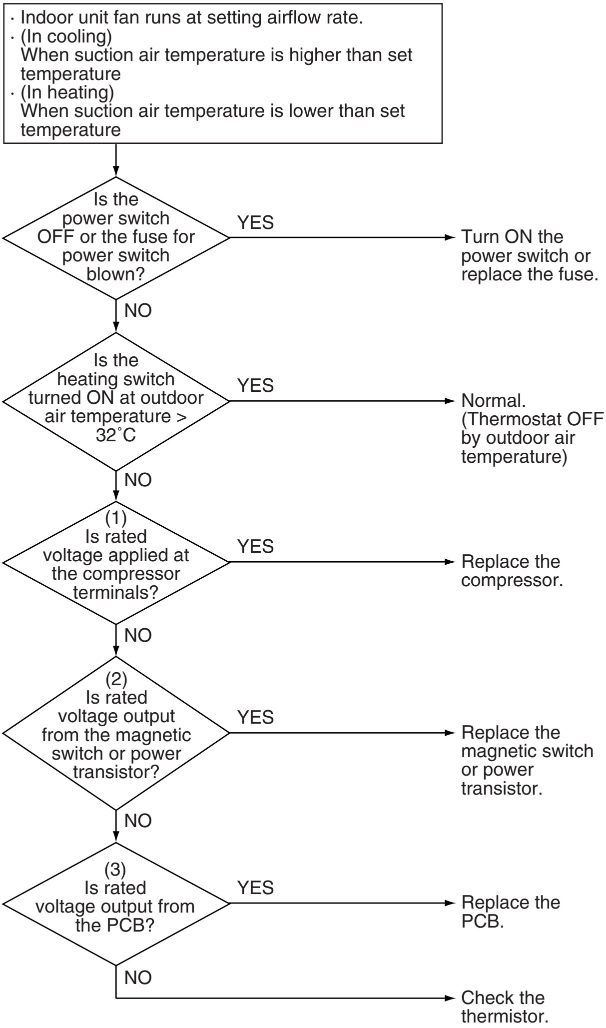
All models of SkyAir series

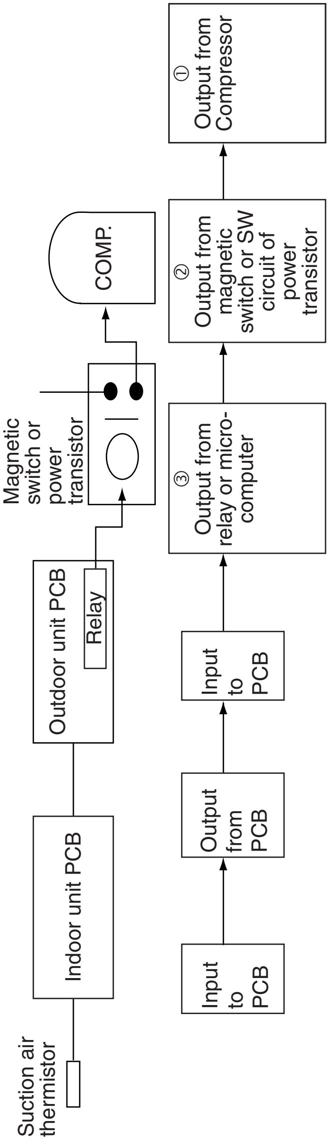
Supposed Causes

- Fuse blown or disorder of contact in operation circuit
- Defective thermistor
- Defective indoor/outdoor unit PCB
- Defective magnetic switch
- Defective power transistor
- Defective compressor

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




Suction air thermistor
Indoor unit PCB
Outdoor unit PCB
Relay
Magnetic switch or power transistor
COMP.
Input to PCB
Output from PCB
Input to PCB
③ Output from relay or micro-computer
② Output from magnetic switch or SW circuit of power transistor
① Output from Compressor

2.4 Cooling / Heating Operation Starts but Stops Immediately

Applicable Model

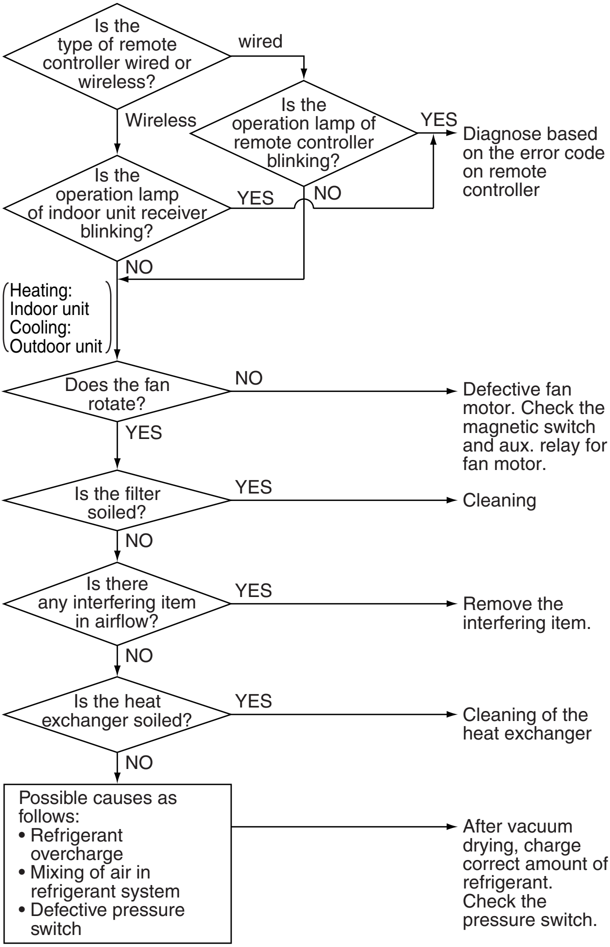
All models of SkyAir series

Supposed Causes

- Refrigerant overcharge
- Air mixed in refrigerant system
- Defective pressure switch
- Defective magnetic switch for outdoor unit fan motor
- Defective aux. relay for outdoor unit fan motor
- Soiled heat exchanger of outdoor unit
- There is an interfering item in airflow of outdoor unit
- Defective outdoor unit fan
- Soiled air filter of indoor unit
- Soiled heat exchanger of indoor unit
- There is some interfering item in airflow of indoor unit
- Defective indoor unit fan

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



2.5 After Unit Shuts Down, It cannot be Restarted for a While

Applicable Model

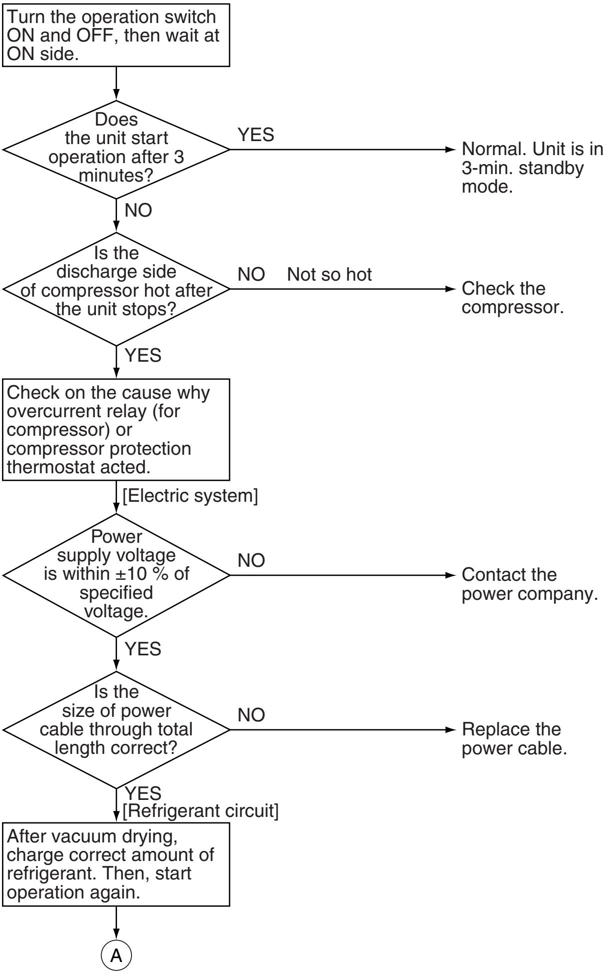
All models of SkyAir series

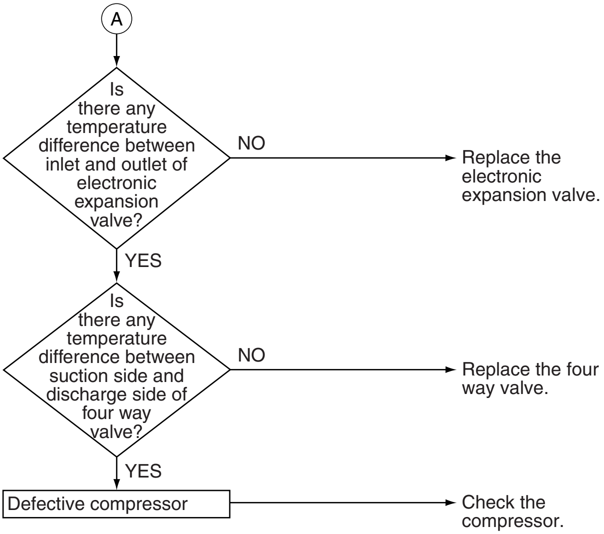
Supposed Causes

- Overcurrent relay (for compressor)
  Overcurrent relay may act due to the following reasons
  - Lower voltage of power supply
  - Excess level of high pressure
  - Insufficient size of power cable
  - Defective compressor
- Compressor protection thermostat
  Compressor protection thermostat may act due to the following reasons
  - Internal leakage of four way valve (There is no difference between suction air temperature and discharge pipe temperature)
  - Insufficient compression of compressor
  - Incorrect refrigerant
  - Defective electronic expansion valve
  - Insufficient circulation of refrigerant

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Is there any temperature difference between inlet and outlet of electronic expansion valve?
NO
Replace the electronic expansion valve.
YES
Is there any temperature difference between suction side and discharge side of four way valve?
NO
Replace the four way valve.
YES
Defective compressor
Check the compressor.

2.6 Equipment Operates but does not Provide Cooling

Applicable Model

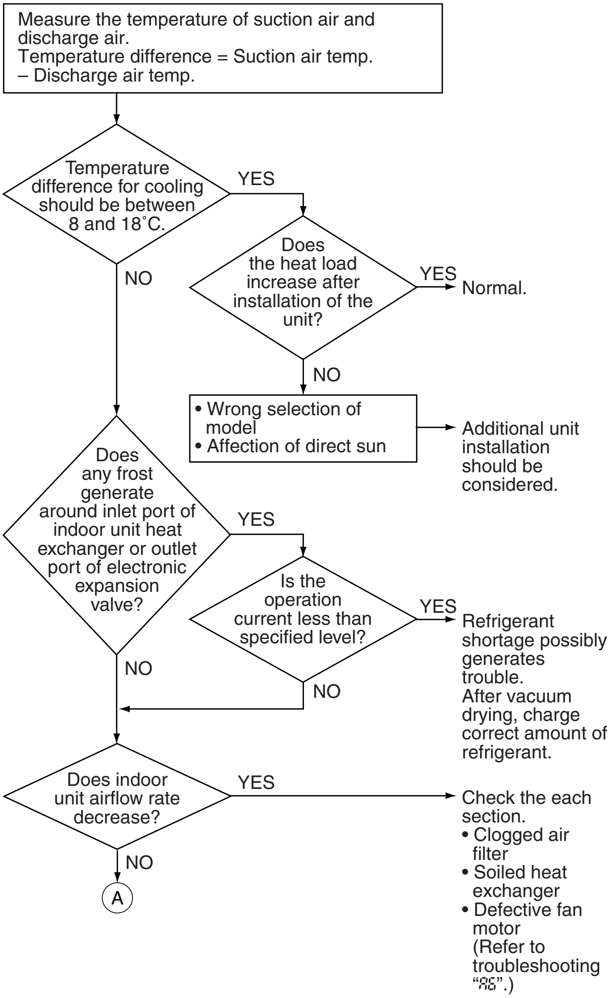
All models of SkyAir series

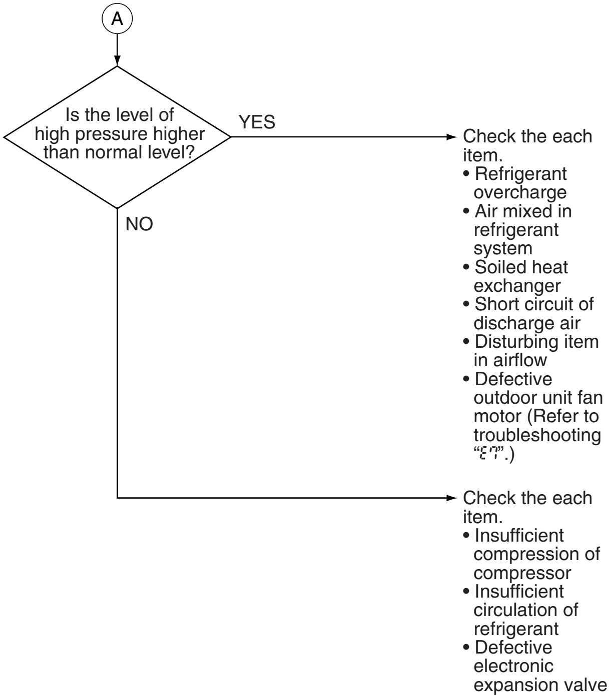
Supposed Causes

- Wrong selection of model
- Refrigerant shortage
- Insufficient airflow in the indoor unit
- Increase of high pressure
  - * In addition, the following errors may be conceivable
    - Insufficient compression of the compressor
    - Insufficient circulation of refrigerant
    - Defective electronic expansion valve

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Is the level of high pressure higher than normal level?
YES
Check the each item.
• Refrigerant overcharge
• Air mixed in refrigerant system
• Soiled heat exchanger
• Short circuit of discharge air
• Disturbing item in airflow
• Defective outdoor unit fan motor (Refer to troubleshooting “E7”.)
NO
Check the each item.
• Insufficient compression of compressor
• Insufficient circulation of refrigerant
• Defective electronic expansion valve

2.7 Equipment Operates but does not Provide Heating

Applicable Model

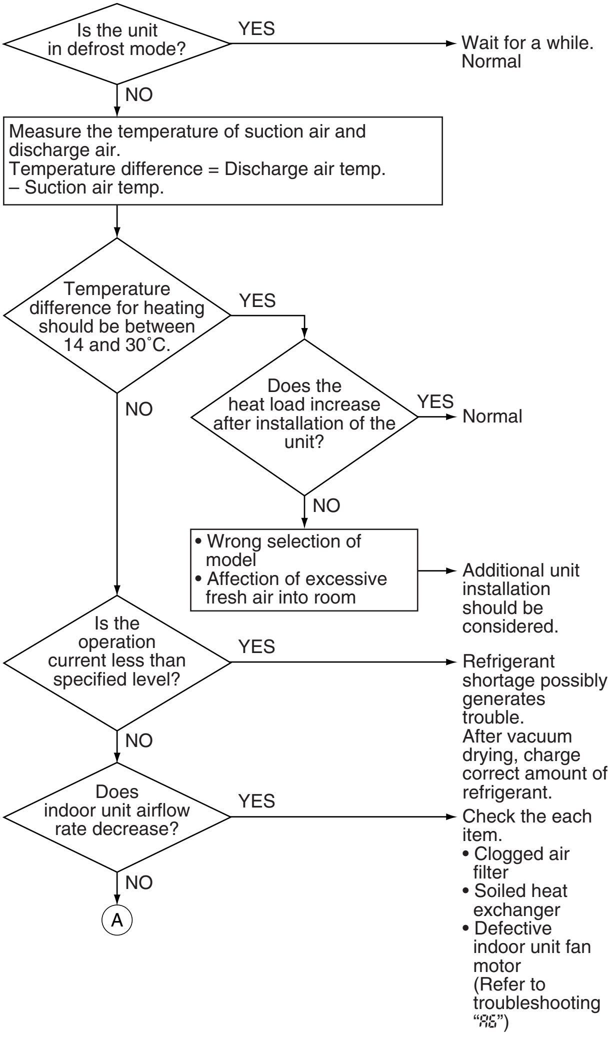
All models of SkyAir series

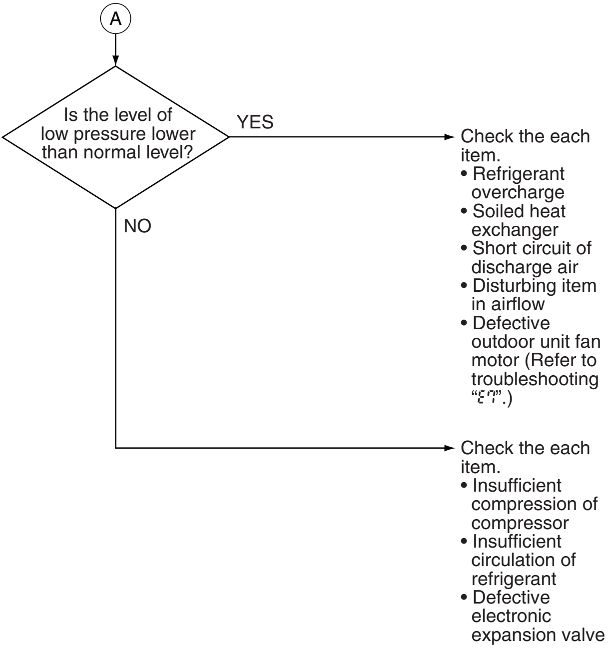
Supposed Causes

- Wrong selection of model
- Refrigerant shortage
- Insufficient airflow in the indoor unit
- Decrease of low pressure
  - ∗ In addition, the following errors may be conceivable
    - Insufficient compression of the compressor
    - Insufficient circulation of refrigerant
    - Defective electronic expansion valve

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





A
Is the level of low pressure lower than normal level?
YES
NO
Check the each item.
• Refrigerant overcharge
• Soiled heat exchanger
• Short circuit of discharge air
• Disturbing item in airflow
• Defective outdoor unit fan motor (Refer to troubleshooting “E7”.)
Check the each item.
• Insufficient compression of compressor
• Insufficient circulation of refrigerant
• Defective electronic expansion valve

2.8 Equipment Discharges White Mist

Applicable Model

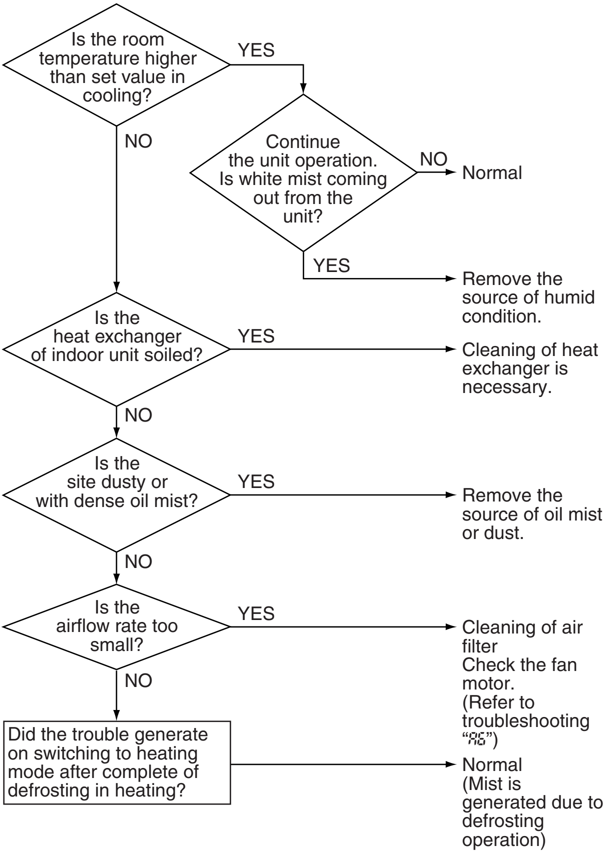
All models of SkyAir series

Supposed Causes

- Humid installation site
- Installation site is dirty and with dense oil mists
- Soiled heat exchanger
- Clogged air filter
- Defective fan motor

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



2.9 Equipment Produces Loud Noise or Vibration

Applicable Model

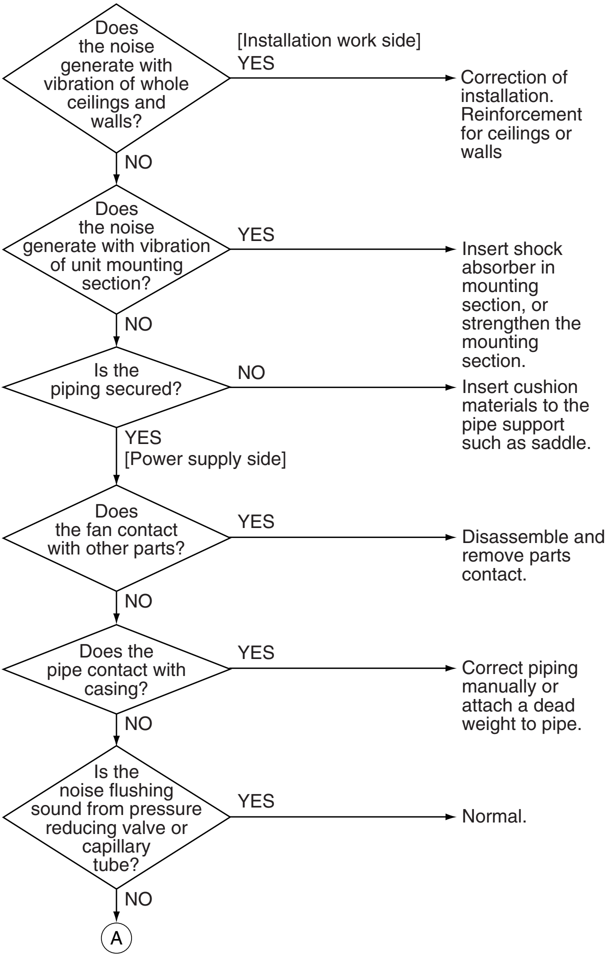
All models of SkyAir series

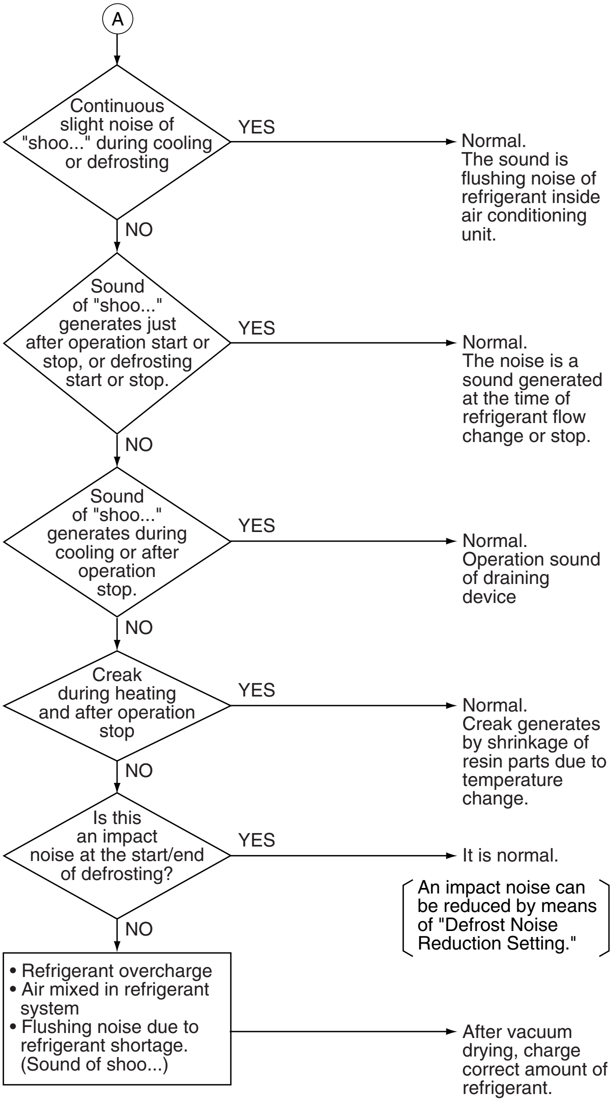
Supposed Causes

- Improper installation
- Contacts of fan, piping, casing, etc.
- Noise of refrigerant flow
- Operating noise of drain discharge equipment
- Noise of resin components contracting
  - ∗ In addition, the following errors may be conceivable
    - Refrigerant overcharge
    - Air interfusion
    - Flash noise of insufficient refrigerant (hushing noise)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Continuous slight noise of "shoo..." during cooling or defrosting
YES
Normal.
The sound is flushing noise of refrigerant inside air conditioning unit.
NO
Sound of "shoo..." generates just after operation start or stop, or defrosting start or stop.
YES
Normal.
The noise is a sound generated at the time of refrigerant flow change or stop.
NO
Sound of "shoo..." generates during cooling or after operation stop.
YES
Normal.
Operation sound of draining device
NO
Creak during heating and after operation stop
YES
Normal.
Creak generates by shrinkage of resin parts due to temperature change.
NO
Is this an impact noise at the start/end of defrosting?
YES
It is normal.
An impact noise can be reduced by means of "Defrost Noise Reduction Setting."
NO
• Refrigerant overcharge
• Air mixed in refrigerant system
• Flushing noise due to refrigerant shortage. (Sound of shoo...)
After vacuum drying, charge correct amount of refrigerant.

2.10 Equipment Discharges Dust

Applicable Model

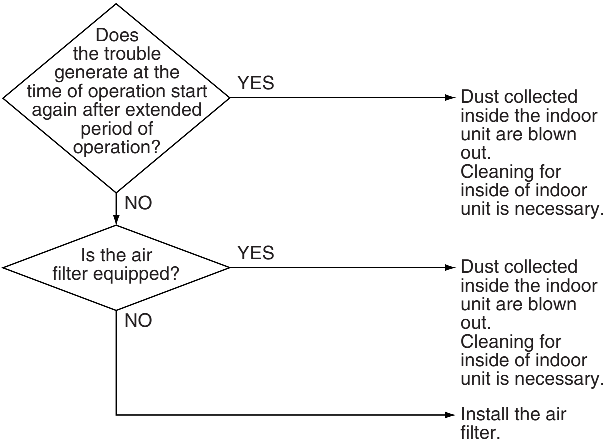
All models of SkyAir series

Supposed Causes

- Carpet
- Animal hair
- Application (cloth shop,...)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



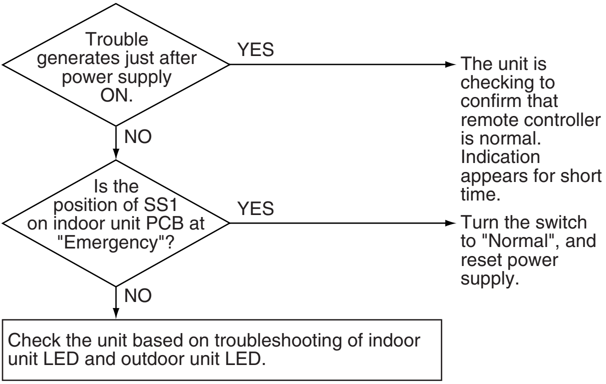
2.11 Remote Controller LCD Displays "88"

Applicable Model

All models of SkyAir series

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

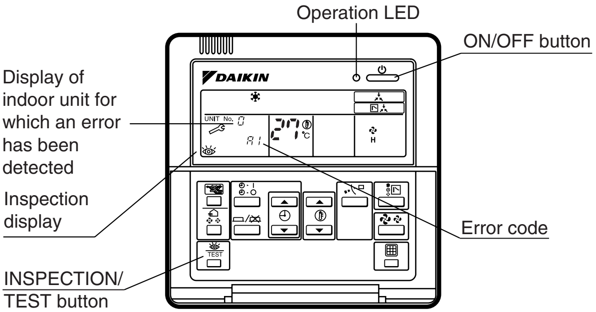


3. Troubleshooting by Remote Controller

3.1 Procedure of Self-diagnosis by Remote Controller

3.1.1 Wired Remote Controller — BRC1C61/BRC1D61

If operation stops due to error, the remote controller's operation LED blinks, and error code is displayed. (Even if stop operation is carried out, error contents are displayed when the inspection mode is entered.) The error code enables you to tell what kind of error caused operation to stop.

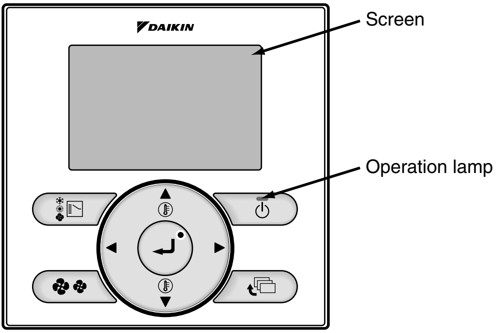


Note:

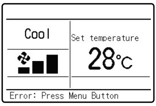
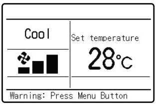
1. Pressing the INSPECTION/TEST button will blink the check indication.
2. While in service mode, holding down the ON/OFF button for a period of 5 seconds or more will clear the error history indication shown above. In this case, on the codes display, the error code will blink twice and then change to "00" (= Normal), the Unit No. will change to "0", and the operation mode will automatically switch from service mode to normal mode (displaying the set temperature).

3.1.2 Wired Remote Controller — BRC1E61

The following will be displayed on the screen when an error (or a warning) occurs during operation.
Check the error code and take the corrective action specified for the particular model.



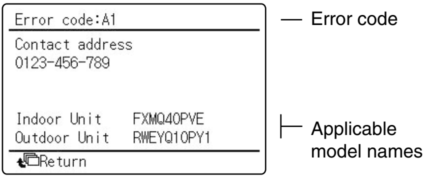
(1)Checking an error or warning

	Operation Status	Display	
Abnormal shutdown	The system stops operating.	The operation lamp (green) starts to blink. The message "Error: Press Menu button" will appear and blink at the bottom of the screen.	
Warning	The system continues its operation.	The operation lamp (green) remains ON. The message "Warning: Press Menu button" will appear and blink at the bottom of the screen.	

(2)Taking corrective action

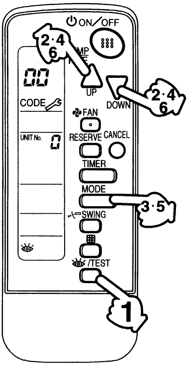
· Press the Menu/Enter button to check the error code.

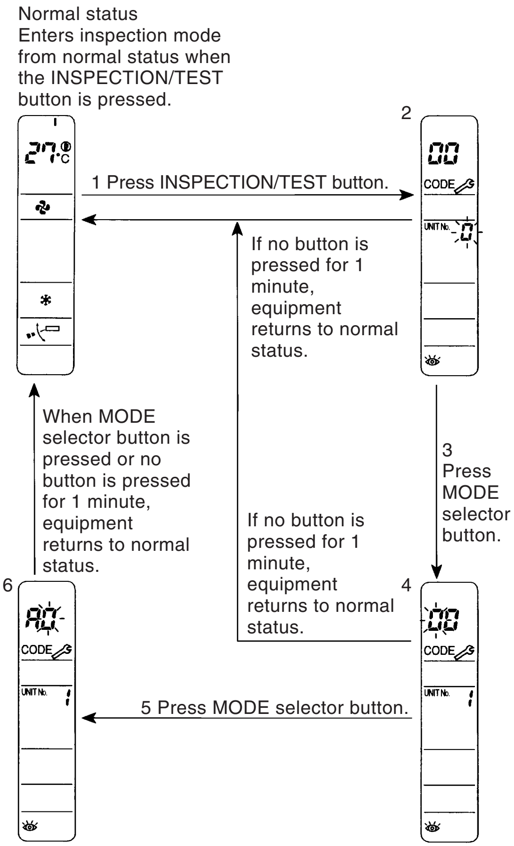
· Take the corrective action specific to the model.



3.1.3 Wireless Remote Controller

If unit stops due to an error, the operation indicating LED on the signal receiving part of indoor unit blinks.
The error code can be determined by following the procedure described on next page. (The error code is displayed when an operation error has occurred. In normal condition, the error code of the last problem is displayed.)

1	Press the INSPECTION/TEST button to select “inspection”. The equipment enters the inspection mode. The “Unit” indication is displayed and the Unit No. display shows blinking “0” indication.	
2	Set the Unit No. Press the UP or DOWN button and change the Unit No. display until the buzzer (∗1) is generated from the indoor unit. ∗1 Number of beeps **3 short beeps:** Conduct all of the following operations. **1 short beep:** Conduct steps 3 and 4. Continue the operation in step 4 until a buzzer remains ON. The continuous buzzer indicates that the error code is confirmed. **Continuous beep:** No abnormality.	
3	Press the MODE selector button. The left “0” (upper digit) indication of the error code blinks.	
4	Error code upper digit diagnosis Press the UP or DOWN button and change the error code upper digit until the error code matching buzzer (∗2) is generated. ■ The upper digit of the code changes as shown below when the UP and DOWN buttons are pressed.  ⇨ **"UP" button** ⬅ **"DOWN" button** ∗2 Number of beeps **Continuous beep:** Both upper and lower digits matched. (Error code confirmed) **2 short beeps:** Upper digit matched. **1 short beep:** Lower digit matched.	
5	Press the MODE selector button. The right “0” (lower digit) indication of the error code blinks.	
6	Error code lower digit diagnosis Press the UP or DOWN button and change the error code lower digit until the continuous error code matching buzzer (∗2) is generated. The lower digit of the code changes as shown below when the UP and DOWN buttons are pressed.  ⇨ **"UP" button** ⬅ **"DOWN" button**	


Normal status
Enters inspection mode from normal status when the INSPECTION/TEST button is pressed.
2
1 Press INSPECTION/TEST button.
CODE
UNIT No.
If no button is pressed for 1 minute, equipment returns to normal status.
When MODE selector button is pressed or no button is pressed for 1 minute, equipment returns to normal status.
3 Press MODE selector button.
If no button is pressed for 1 minute, equipment returns to normal status.
6
4
CODE
UNIT No.
5 Press MODE selector button.
CODE
UNIT No.

3.2 Error Codes and Description

3.2.1 Indoor Unit

Error Code	Contents of Error	Model Name							Reference Page
		FH(Y)C	FH(Y)K	FH(Y)B	FH(Y)	FA(Y)	FV(Y)	FUY, FHC, FH FDBG, FDBT, FDMG	
A1	Indoor Unit PCB Abnormality	●	●	●	●	●	●	●	81
A3	Drain Water Level System Abnormality	●	●	●	●	● ∗1	●	●	83
A6	Indoor Unit Fan Motor Abnormality				●	● ∗1		●	86
A7	Swing Flap Motor Abnormality/Lock	●	●		●	●	●	●	98
AF	Drain System Abnormality	●	●	●	●	● ∗1	●	●	105
AJ	Capacity Setting Abnormality	●	●	●	●	● ∗1	●	●	108
C4	Thermistor Abnormality	●	●	●	●	● ∗1	●	●	121
C9	Thermistor Abnormality	●	●	●	●	● ∗1	●	●	121
CJ	Remote Controller Thermistor Abnormality	●			● ∗2	●	●	●	128

∗1 For only FAY
∗2 For only FHY

Error Code	Contents of Error	Model Name							Reference Page
		FCQ(H)(G)	FHQ(G), FAQ	FBQ	FDQ	FUQ, FFQ, FVQ	FMCQ	FMDQ	
A0	Error of External Protection Device	● ∗3					●		79
A1	Indoor Unit PCB Abnormality	●	●	●	●	●	●	●	81
A3	Drain Water Level System Abnormality	●	●	●	●	● ∗2, 6	●	●	83
A6	Indoor Unit Fan Motor Abnormality		● ∗1						86
	Drain Water Level System Abnormality	● ∗3	● ∗1						88
	Indoor Unit Fan Motor Abnormality			●					90
	Indoor Unit Fan Motor Abnormality				●				94
	Fan Motor (M1F) Lock, Overload						●	●	96
A7	Swing Flap Motor Abnormality/Lock	● ∗3, 4	● ∗1	●		●	●		98
A8	Abnormal Power Supply Voltage	● ∗3		●				●	100
A9	Electronic Expansion Valve Coil (Y1E) Abnormality						●	●	102
AF	Drain System Abnormality	● ∗3, 4	● ∗1	●	●	● ∗2, 6			105
	Drain Level above Limit						●	●	107

∗1 For except FHQG
∗2 For except FVG
∗3 For only FCQ
∗4 For only FCQH
∗5 For only FCQG
∗6 For except FVQ

Error Code	Contents of Error	Model Name							Reference Page
		FCQ(H)(G)	FHQ(G), FAQ	FBQ	FDQ	FUQ, FFQ, FVQ	FMCQ	FMDQ	
AJ	Capacity Setting Abnormality	● *3, 4	● *1		●	●			110
	Capacity Setting Abnormality	● *3	● *1	●		● *2, 6	●	●	112
	Capacity Setting Abnormality	●	●						113
C1	Transmission Error (between Indoor Unit PCB and Fan PCB)			●				●	115
	Transmission Error (between Indoor Unit PCB and Adaptor PCB)	● *5							118
C4	Thermistor Abnormality	●	●	●	●	●	●	●	121
C5	Thermistor Abnormality	● *4							121
C6	Defective Combination (between Indoor Unit PCB and Fan PCB)			●				●	123
C9	Thermistor Abnormality	●	●	●	●	●	●	●	121
CC	Humidity Sensor System Abnormality	● *3, 4							125
	Humidity Sensor System Abnormality	● *3, 5					●		126
CJ	Remote Controller Thermistor Abnormality	●	●	●	●	●	●	●	128

*1 For except FHQG
*2 For except FVG
*3 For only FCQ
*4 For only FCQH
*5 For only FCQG
*6 For except FVQ

3.2.2 Outdoor Unit, System

NON-Inverter Series

Error Code	Contents of Error	Series Name							Reference Page
		RY-F	R(Y)-FU	R(Y)-G/GA	R(Y)-KU	R(Y)-LU	RR-M	R-NU/PU	
E0	Actuation of Safety Device	●	●	●	●				130
	Actuation of Safety Device							●	132
	Actuation of Safety Device					●	●		135
E1	Defective Outdoor Unit PCB					●	●		140
E3	High Pressure System Abnormality	●		●	●				143
	High Pressure System Abnormality					●	●		145
E4	Low Pressure System Abnormality	●		●	●	●	●		162
E6	Compressor Overcurrent					●	●		181
E9	Electronic Expansion Valve Abnormality	●		●	●	●			196
F3	Discharge Pipe Temperature Abnormality	●		●	●				210
	Discharge Pipe Temperature Abnormality					●	●		212
F6	Abnormal Heat Exchanging Temperature					●			220
H3	High Pressure Switch Abnormality	●		●	●				224
	High Pressure Switch Abnormality					●			226
H9	Outdoor Air Thermistor System Abnormality	●	●	●	●	●	●		239
J2	Current Sensor System Abnormality					●	●		243
J3	Discharge Pipe Thermistor System Abnormality	●	●	●	●	●	●		245
J6	Heat Exchanger Thermistor System Abnormality	●	●	●	●	●	●		250

Error Code	Contents of Error	Series Name							Reference Page
		RY-F	R(Y)-FU	R(Y)-G/GA	R(Y)-KU	R(Y)-LU	RR-M	R-NU/PU	
PJ	Defective Capacity Setting					●	●		336
U0	Refrigerant Shortage	●		●	●	●	●		347
U1	Reverse Phase	●		●	●				358
	Reverse Phase					●	●		359
U4	Transmission Error (Between Indoor Unit and Outdoor Unit)		●						375
	Transmission Error (Between Indoor Unit and Outdoor Unit)	●		●	●	●	●	●	378
U5	Transmission Error (Between Indoor Unit and Remote Controller)	●	●	●	●	●	●	●	404
U8	Transmission Error Between Main Remote Controller and Sub Remote Controller	●		●	●	●			415
UA	Defective Field Setting Switch	●		●	●	●			424
UF	Transmission Error (Between Indoor Unit and Outdoor Unit)	●		●	●	●	●	●	444
	Mis-connection of Field Wiring		●						447

Inverter Series

Error Code	Contents of Error	Model Name: RZ(Y)	RZQ-K/H	RZR-KU/HU	RZQ(S)-B/C	RZQG-L	CMSQ	Reference Page
E0	Activation of Outdoor Unit Protection Device	●						138
E1	Outdoor Unit PCB Abnormality						●	141
	Outdoor Unit PCB Abnormality		●	●	●	●		142
E3	Abnormally High Pressure Level (HPS)	●						148
	High Pressure Abnormality (Detected by the High Pressure Switch)		●	●	●			150
	Actuation of High Pressure Switch						●	153
	Actuation of High Pressure Switch					●		156
	Actuation of High Pressure Switch					●		159
E4	Actuation of Pressure Sensor		● *1	●	● *4	●		164
	Actuation of Low Pressure Sensor						●	168
	Actuation of Pressure Sensor		● *2		● *5			171
	Low Pressure System Abnormality				● *6			173
E5	Compressor Motor Lock		●	●	●			176
	Compressor Motor Lock						●	178
E7	Outdoor Unit Fan Motor Abnormality		●	●	●	●		184
	Outdoor Unit Fan Motor Abnormality				● *6			187
	Outdoor Unit Fan Motor Abnormality						●	191

*1 For only RZQ-K
*2 For only RZQ-H
*3 For only RZQ-KU
*4 For only RZQ(S)-C
*5 For only RZQ(S)-B
*6 For only RZQ-C7

Error Code	Contents of Error	Model Name						Reference Page
		RZ(Y)	RZQ-K/H	RZR-KU/HU	RZQ(S)-B/C	RZQG-L	CMSQ	
E9	Electronic Expansion Valve Abnormality	●			● ∗6			198
	Electronic Expansion Valve Coil Abnormality						●	200
	Electronic Expansion Valve Abnormality		● ∗1	●	● ∗5	●		203
	Electronic Expansion Valve Abnormality		● ∗2		● ∗4			207
F3	Discharge Pipe Temperature Abnormality	●						214
	Discharge Pipe Temperature Abnormality						●	216
	Discharge Pipe Temperature Control		●	●	●	●		218
F6	Refrigerant Overcharged						●	222
H3	High Pressure Switch Abnormality	●						228
	High Pressure Switch Abnormality		●	●	●	●		229
H4	Low Pressure Switch System Abnormality		● ∗2					231
	Low Pressure Switch System Abnormality				● ∗5			233
H7	Outdoor Unit Fan Motor Signal Abnormality				● ∗6		●	235
H9	Thermistor System Abnormality		●	●	●			237
	Outdoor Air Thermistor System Abnormality	●					●	240
J1	Pressure Sensor Abnormality		● ∗1	●	● ∗4			241

∗1 For only RZQ-K
∗2 For only RZQ-H
∗3 For only RZQ-KU
∗4 For only RZQ(S)-C
∗5 For only RZQ(S)-B
∗6 For only RZQ-C7

Error Code	Contents of Error	Model Name						Reference Page
		RZ(Y)	RZQ-K/H	RZR-KU/HU	RZQ(S)-B/C	RZQG-L	CMSQ	
J3	Discharge Pipe Thermistor System Abnormality	●					●	246
	Discharge Pipe Thermistor System Abnormality		●	●	●			237
J5	Thermistor System Abnormality		●	●	●			237
	Thermistor System Abnormality						●	248
J6	Heat Exchanger Thermistor System Abnormality	●					●	251
	Thermistor System Abnormality		●	●	●			237
J7	Thermistor System Abnormality		●	●	●			237
	Liquid Pipe Thermistor Abnormality						●	252
J8	Thermistor System Abnormality		●	●	●			237
J9	Subcooling Heat Exchanger Gas Pipe Thermistor Abnormality						●	254
JA	High Pressure Sensor Abnormality				● ∗6		●	256
JC	Suction Pipe Pressure Sensor Abnormality				● ∗5, 6		●	259
L1	Outdoor Unit PCB Abnormality		●	●	● ∗4			261
	Outdoor Inverter PCB Abnormality				● ∗6			263
	Outdoor Unit PCB Abnormality					●		265

∗1 For only RZQ-K
∗2 For only RZQ-H
∗3 For only RZQ-KU
∗4 For only RZQ(S)-C
∗5 For only RZQ(S)-B
∗6 For only RZQ-C7

Error Code	Contents of Error	RZ(Y)	RZQ-K/H	RZR-KU/HU	RZQ(S)-B/C	RZQG-L	CMSQ	Reference Page
L4	Overcurrent of DC Output (Instantaneous)	●						268
	Radiation Fin Temperature Rise		●	●	●	●		270
	Radiation Fin Temperature Rise						●	273
	Radiation Fin Temperature Rise				● ∗6			276
L5	Overcurrent of DC Output (Instantaneous)	●						278
	Momentary Overcurrent of Inverter Compressor				● ∗6			281
	Output Overcurrent Detection					●		284
	Inverter Compressor Abnormality						●	287
	Output Overcurrent Detection		●	●				290
(L8)	Electronic Thermal Switch (Time Lag)	●						294
L8	Inverter Current Abnormality						●	297
	Inverter Compressor Overcurrent				● ∗6			300
	Electronic Thermal (Time Lag)					●		303
	Electronic Thermal (Time Lag)		●	●	●			306
L9	Stall Prevention (Time Lag)	●						309
	Inverter Startup Error				● ∗6		●	311
	Stall Prevention (Time Lag)		●	●	● ∗4, 5	●		314

∗1 For only RZQ-K
∗2 For only RZQ-H
∗3 For only RZQ-KU
∗4 For only RZQ(S)-C
∗5 For only RZQ(S)-B
∗6 For only RZQ-C7

Error Code	Contents of Error	Model Name RZ(Y)	RZQ-K/H	RZR-KU/HU	RZQ(S)-B/C	RZQG-L	CMSQ	Reference Page
LC	Transmission Error (between Control PCB and Inverter PCB)				● ∗6		●	317
	Transmission Error (between Control PCB and Inverter PCB)					●		321
	Transmission Error (between Control PCB and Inverter PCB)		●	●	● ∗4, 5			323
P1	Inverter Over-Ripple Protection				● ∗6		●	326
	Transmission Error (between Control PCB and Inverter PCB)		●	●	● ∗4, 5	●		329
P4	Radiation Fin Thermistor Abnormality	●						331
	Radiation Fin Thermistor Abnormality						●	333
	Radiation Fin Thermistor or Related Abnormality		●	●	●			335
PJ	Error in Capacity Setting	●						338
	Field Setting Error after Replacing Main PCB or Defective Combination of PCB						●	339
	Defective Combination of Inverter and Fan Driver				● ∗6			341
	Defective Capacity Setting					●		343
	Defective Capacity Setting		●	●	● ∗4, 5			345

∗1 For only RZQ-K
∗2 For only RZQ-H
∗3 For only RZQ-KU
∗4 For only RZQ(S)-C
∗5 For only RZQ(S)-B
∗6 For only RZQ-C7

Error Code	Contents of Error	Model Name RZ(Y)	RZQ-K/H	RZR-KU/HU	RZQ(S)-B/C	RZQG-L	CMSQ	Reference Page
U0	Refrigerant Shortage	●						348
	Low Pressure Drop Due to Refrigerant Shortage or Electronic Expansion Valve Failure						●	349
	Refrigerant Shortage		●		● ∗5			352
	Refrigerant Shortage				● ∗4			354
	Refrigerant Shortage			● ∗3			●	356
U1	Reverse Phase				● ∗6			359
	Reverse Phase						●	360
U2	Insufficient Voltage	●						361
	Power Supply Voltage Abnormality		●	●	●			363
	Power Supply Insufficient or Instantaneous Failure				● ∗6		●	365
	Power Supply Voltage Abnormality					●		370
U3	Check Operation is not Executed						●	373

∗1 For only RZQ-K
∗2 For only RZQ-H
∗3 For only RZQ-KU
∗4 For only RZQ(S)-C
∗5 For only RZQ(S)-B
∗6 For only RZQ-C7

Error Code	Contents of Error	Model Name						Reference Page
		RZ(Y)	RZQ-K/H	RZR-KU/HU	RZQ(S)-B/C	RZQG-L	CMSQ	
U4	Transmission Error (Between Indoor Unit and Outdoor Unit)	●						381
	Transmission Error (Between Indoor Unit and Outdoor Unit)		●	●				384
	Transmission Error (Between Indoor Unit and Outdoor Unit)						●	388
	Transmission Error (Between Indoor Unit and Outdoor Unit)				● ∗4, 5			391
	Transmission Error (Between Indoor Unit and Outdoor Unit)				● ∗6			396
	Transmission Error (Between Indoor Unit and Outdoor Unit)					●		400
U5	Transmission Error (Between Indoor Unit and Remote Controller)	●						406
	Transmission Error (Between Indoor Unit and Remote Controller)		●	●	● ∗4, 5			408
	Transmission Error (Between Indoor Unit and Remote Controller)				● ∗6	●	●	410
U7	Transmission Error Between Outdoor Units						●	412

∗1 For only RZQ-K
∗2 For only RZQ-H
∗3 For only RZQ-KU
∗4 For only RZQ(S)-C
∗5 For only RZQ(S)-B
∗6 For only RZQ-C7

Error Code	Contents of Error	Model Name RZ(Y)	RZQ-K/H	RZR-KU/HU	RZQ(S)-B/C	RZQG-L	CMSQ	Reference Page
U8	Transmission Error (Between Main Remote Controller and Sub Remote Controller)						●	415
	Transmission Error (Between Main Remote Controller and Sub Remote Controller)	●						417
	Transmission Error (Between Main Remote Controller and Sub Remote Controller)		●	●	●	●		419
U9	Transmission Error (Between Indoor and Outdoor Units in the Same System)				● ∗6		●	421
UA	Improper Combination of Indoor and Outdoor Units, Indoor Units and Remote Controller						●	427
	Field Setting Switch Abnormality		●	●	●			430
	Field Setting Switch and Transmission Line Abnormality				● ∗6	●		433
UC	Centralized Address Setting Error		●	●	●	●		437
	Address Duplication of Centralized Controller						●	438

∗1 For only RZQ-K
∗2 For only RZQ-H
∗3 For only RZQ-KU
∗4 For only RZQ(S)-C
∗5 For only RZQ(S)-B
∗6 For only RZQ-C7

Error Code	Contents of Error	Model Name						Reference Page
		RZ(Y)	RZQ-K/H	RZR-KU/HU	RZQ(S)-B/C	RZQG-L	CMSQ	
UE	Transmission Error between Centralized Controller and Indoor Unit						●	439
	Transmission Error between Centralized Controller and Indoor Unit				● ∗6	●		444
UF	System is not Set yet						●	448
	Transmission Error (Between Indoor and Outdoor Unit) / Piping and Wiring Mismatch / Refrigerant Shortage		●	●		●		450
	System is not Set yet				● ∗4, 5			453
	System is not Set yet				● ∗6			455
	Transmission Error (Between Indoor Unit and Outdoor Unit)				●			391
UH	System Error, Refrigerant System Address Undefined						●	456

∗1 For only RZQ-K
∗2 For only RZQ-H
∗3 For only RZQ-KU
∗4 For only RZQ(S)-C
∗5 For only RZQ(S)-B
∗6 For only RZQ-C7

3.3 Detailed Error Codes

3.3.1 Indoor Unit

Error code	Troubleshooting	
	Description of error	Description of diagnosis
A6 - 01	Fan motor locked	A locked fan motor current has been detected. Turn the fan by hand to check for the connection of connectors.
A6 - 10	Fan overcurrent error	A fan motor overcurrent has been detected. Check for the connection of the connector between the fan motor and the fan PCB. If the connection is normal, replace the fan motor. If this still cannot solve the error, replace the fan PCB.
A6 - 11	Fan position detection error	An error in the detection of position of the fan motor. Check for the connection of the connector between the fan motor and the fan PCB. If the connection is normal, replace the fan motor. If this still cannot solve the error, replace the fan PCB.
AH - 03	Transmission error (between the self-cleaning decoration panel and the indoor unit) [when the self-cleaning decoration panel is mounted]	Check for the connection of the harness connector between the panel PCB and the indoor unit PCB.
AH - 04	Dust detection sensor error [when the self-cleaning decoration panel is mounted]	Check for the connections of the connector X12A on the panel PCB and the connectors X18A and X19A on the sensor PCB.
AH - 05	Dust collection sign error [when the self-cleaning decoration panel is mounted]	Check for clogging with dust at the dust collection port as well as in the brush unit, S-shaped pipe, and dust box. Furthermore, check for any stains of the light receiving and emitting parts of the infrared unit.
AH - 06	Air filter rotation error [when the self-cleaning decoration panel is mounted]	Check for anything getting in the way of rotating the filter (e.g. the filter comes off or the drive gear is clogged with foreign matters).

Error code	Troubleshooting	
	Description of error	Description of diagnosis
AH - 07	Damper rotation error [when the self-cleaning decoration panel is mounted]	The damper does not rotate normally. Check for any foreign matters around the damper and for the operation of the gear and limit switch.
AH - 08	Filter self-cleaning operation error [when the self-cleaning decoration panel is mounted]	The unit has not yet completed the filter self-cleaning operation even after the lapse of specified period of time. Check for any external noise, etc.
C6 - 01	Faulty combination of indoor unit PCB and fan PCB	A combination of indoor unit PCB and fan PCB is defective. Check whether the capacity setting adaptor is correct and the type of the fan PCB is correct.

3.3.2 Outdoor Unit

Error code	Troubleshooting	
	Description of error	Description of diagnosis
E7 - 01	Fan motor lock	The fan motor has caused abnormal rotation. Check for the connection of the connector between the fan motor and the outdoor unit PCB. If the connection is normal, replace the fan motor. If this still cannot solve the error, replace the outdoor unit PCB.
L1 - 01	Instantaneous overcurrent error (while in startup operation)	Refer to the “L1” flow chart of each manual and make a diagnosis of the relevant unit based on the Error code shown to the left.
L1 - 02	Current sensor error in PCB	
L1 - 03	Current offset error	
L1 - 04	IGBT error	
L1 - 05	Jumper setting error	
L1 - 06	SP/MP-PAM overvoltage error	

Error code	Troubleshooting	
	Description of error	Description of diagnosis
L8 - 01	Electronic thermal 1 error	Overload current continues for a period of 260 seconds or more. This error is supposed to have resulted from excessive charging of refrigerant, damage caused to the compressor bearing, too high pressure, etc.. Check and probe the cause.
L8 - 02	Electronic thermal 2 error	Overload current close to the locked current flowed in the thermal for a period of 5 seconds. This error is supposed to have resulted from closed stop valve, disconnected wire in the compressor motor, etc. Check and probe the cause.
L8 - 03	Drop in compressor revolutions	Compressor load has been increased after startup. This error is supposed to have resulted from instantaneous power failure, liquid back, etc. Check and probe the cause.
L8 - 04	Thunder detection error	Surges caused by thunder
L8 - 05	Inverter limiting current	Excessive limiting current is flowing in the inverter. This error is supposed to have resulted from failure to open the stop valve, excessive charging of refrigerant, clogging in the indoor unit filter stain in the indoor/ outdoor unit heat exchanger etc.. Check and probe the cause.
L9 - 01	Stall prevention (current increase)	Overload current has been applied to start up the compressor. This error is supposed to have resulted from high startup differential pressure, liquid back, excessive compressor oil, abnormal compressor coil, seizure of the compressor shaft, etc. Check and probe the cause.

Error code	Troubleshooting	
	Description of error	Description of diagnosis
L9 - 02	Stall prevention (startup error)	The compressor has not completed startup operation. This error is supposed to have resulted from high startup differential pressure, liquid back, excessive compressor oil, abnormal compressor coil, seizure of the compressor shaft, defective position detection circuit, etc.. Check and probe the cause.
LC - 01	Defective wiring	Defective transmission including that caused when the power supply turns ON. This error is supposed to have resulted from 1 Defective wire connections around the PCB, 2 defective outdoor unit PCB, or 3 defective fan motor. Check and probe the cause.
LC - 02	Transmission error between compressor and micro controller	There is an error in transmission between the compressor and the outdoor unit PCB. If the wire connections of the compressor are normal, check for the same of the outdoor unit PCB.
PJ - 01	Capacity setting not made	This is an outdoor unit PCB for repair, but has no capacity setting adaptor connected. Connect a correct capacity setting adaptor to the PCB.
PJ - 04	Defective capacity setting	This error results from a mismatch of signals between the controller in the PCB and the inverter. Check whether the type of the PCB is correct and correct capacity setting adaptor is connected.
U0 - 02	Refrigerant shortage - Outdoor unit (Factor 0)	This error results from a refrigerant shortage. Refer to the “U0” Troubleshooting flow chart and make a diagnosis, and then take countermeasures.

Error code	Troubleshooting	
	Description of error	Description of diagnosis
U0 - 03	Refrigerant shortage - Outdoor unit (Factor 1)	This error results from a refrigerant shortage cause by gas leakage. Charge refrigerant up to the normal refrigerant amount.
U0 - 04	Refrigerant shortage - Outdoor unit (Factor 2)	This error results from clogging caused somewhere in the refrigerant piping system. Check for a failure to open the stop valve and clogging in the refrigerant system.
U2 - 01	Power supply voltage error	This error is supposed to have resulted from under- or overvoltage of the power supply, or defective voltage sensor in the PCB.
U2 - 02	Open phase of power supply	Check for any open phase of the power supply.
U2 - 03	Main circuit capacitor charge error	There is abnormal circuit current flowing in the PCB. If wire connections related to the PCB are normal, replace the outdoor unit PCB.
U2 - 04	SP/MP - PAM overvoltage error	There is overvoltage between SP/MP and PAM (Single phase). If wire connections related to the PCB are normal, replace the outdoor unit PCB.
UA - 01	Incorrect number of indoor units connected	This error will be displayed if the locally-set number of indoor units is different from the detected number of indoor unit.
UA - 02	Multiple master units detected	There are a number of indoor units with a remote controller connected. Connect the remote controller to only one indoor unit.
UA - 03	Excess indoor units connected	This error will be displayed if 5 or more indoor units are connected.

Error code	Troubleshooting	
	Description of error	Description of diagnosis
UA - 05	Indoor-Outdoor transmission error between slave 1 and outdoor unit	There is an error in transmission between the outdoor unit and slave indoor unit 1. Check for the connection of the jumper between the slave indoor unit (with no remote controller connected) and the outdoor unit.
UA - 07	Indoor-Outdoor transmission error between slave 2 and outdoor unit	There is an error in transmission between the outdoor unit and slave indoor unit 2. Check for the connection of the jumper between the slave indoor unit (with no remote controller connected) and the outdoor unit.
UA - 09	Indoor-Outdoor transmission error between slave 3 and outdoor unit	There is an error in transmission between the outdoor unit and slave indoor unit 3. Check for the connection of the jumper between the slave indoor unit (with no remote controller connected) and the outdoor unit.
UF - 01	Incorrect wiring	There is an error in wire connections for transmission between indoor and outdoor units (judged with the indoor unit). Check for the connections of jumpers 1, 2, and 3 between the indoor and outdoor units.
UF - 02	Piping connected the other way round	There is an error in operation mode and refrigerant piping detection temperature. Check for any refrigerant piping connected the other way round, refrigerant shortage, etc.

3.4 A0 Error of External Protection Device

Remote Controller Display

A0

Applicable Models

FCQ, FMCQ

Method of Error Detection

Detect open or short circuit between external input terminals in indoor unit.

Error Decision Conditions

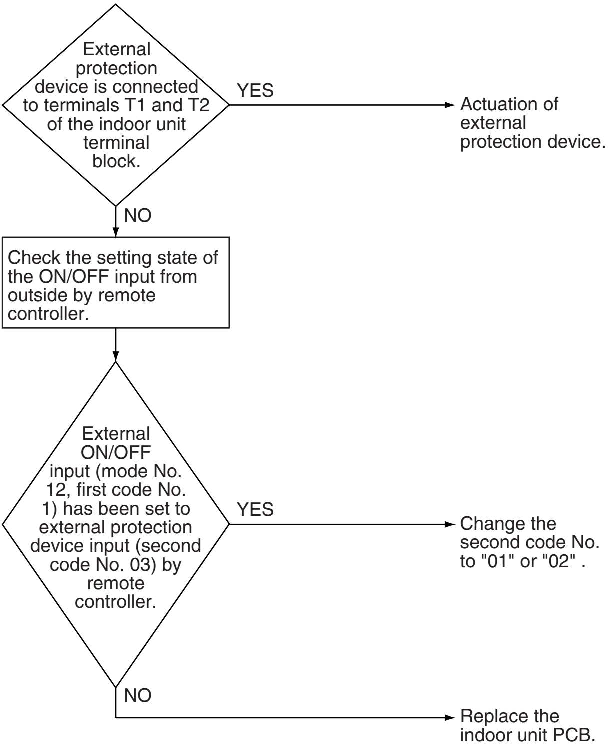
When an open circuit occurs between external input terminals with the remote controller set to "external ON/OFF terminal".

Supposed Causes

- Actuation of external protection device
- Improper field setting
- Defective indoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.5 A1 Indoor Unit PCB Abnormality

Remote Controller Display

A1

Applicable Models

All indoor models

Method of Error Detection

Check data from E^{2}PROM.

Error Decision Conditions

The error is generated when the data from the E^{2}PROM is not received correctly.

E^{2}PROM (Electrically Erasable Programmable Read Only Memory): A memory chip that holds its content without power. It can be erased, either within the computer or externally and usually requires more voltage for erasure than the common +5 volts used in logic circuits. It functions like non-volatile RAM, but writing to E^{2}PROM is slower than writing to RAM.

Supposed Causes

- Defective indoor unit PCB
- External factor (Noise, etc.)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

Switch the power OFF and ON again to restart.

Normal reset?

NO → Replace the indoor unit PCB.

YES → The error may be caused by an external factor, rather than damaged parts. Locate the cause and correct the situation.

3.6 A3 Drain Water Level System Abnormality

Remote Controller Display

A3

Applicable Models

FH(Y)C, FH(Y)K, FH(Y)B, FH(Y), FAY, FV(Y), FUY, FHC, FH, FDMG, FDBG, FDBT, FCQ(H), FMCQ, FFQ, FCQG, FHQ (option), FHQG, FAQ (option), FBQ, FDQ, FMDQ, FUQ

Method of Error Detection

By float switch OFF detection

Error Decision Conditions

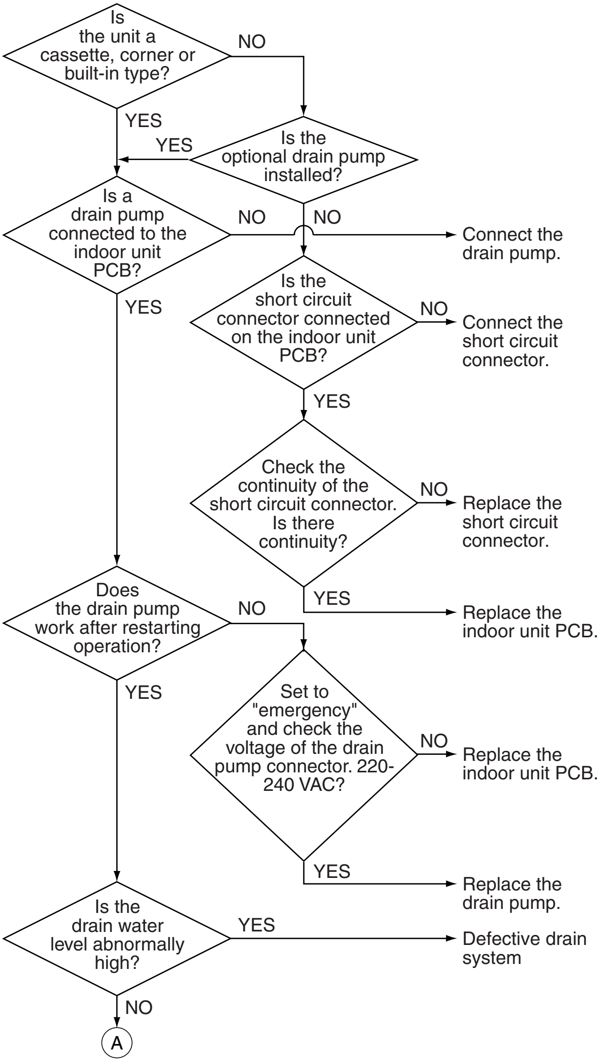
The error is generated when the water level reaches its upper limit and when the float switch turns OFF.

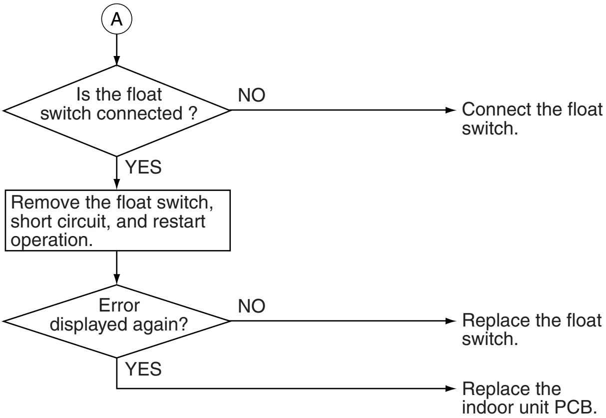
Supposed Causes

- Defective drain pump
- Improper drain piping work
- Drain piping clogging
- Defective float switch
- Defective indoor unit PCB
- Defective short circuit connector

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





Note:

If "A3" is detected by a PCB without X15A, the PCB is defective.

3.7 A6 Indoor Unit Fan Motor Abnormality

Remote Controller Display

A6

Applicable Models

FH(Y), FAY, FUY, FHC, FH, FDBG, FDBT, FDMG, FAQ100BU, FHQ-BU

Method of Error Detection

Detection by failure of signal for detecting number of turns to come from the fan motor

Error Decision Conditions

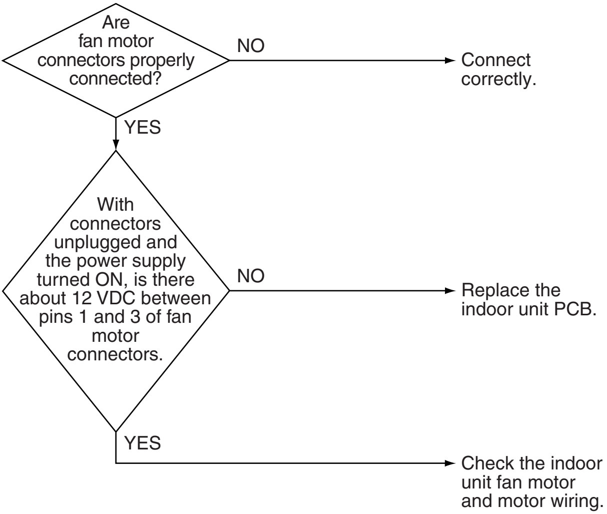
When number of turns cannot be detected even when output voltage to the fan is maximum

Supposed Causes

- Defective indoor unit fan motor
- Broken or disconnected wire
- Defective contact
- Defective indoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

A6

Applicable Models

FCQ, FHQ, FAQ

Method of Error Detection

Detection of abnormal fan speed by signal from the fan motor

Error Decision Conditions

The error is generated when the rotation speed of the fan motor are not detected while the output voltage to the fan is at its maximum.

For FCQ-C7, FAQ-BU

When fan speed does not increase

Supposed Causes

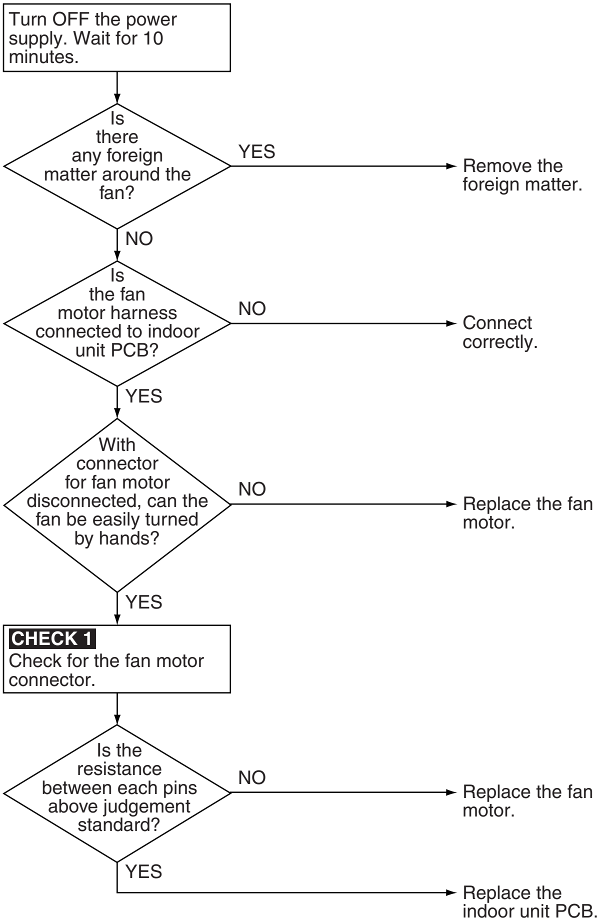
- Defective indoor unit fan motor
- Breaking or disconnection of wire
- Defective contact
- Defective indoor unit PCB

For FCQ-C7, FAQ-BU

- Disconnection, short circuit or disengagement of connector in fan motor harness
- Defective fan motor (disconnection, poor insulation)
- Abnormal signal from fan motor (defective circuit)
- Defective Indoor unit PCB
- Instantaneous fluctuation of power supply voltage
- Fan motor lock
  (Caused by motor or other external factors)
- Fan does not turn due to a tangle of foreign matters.
- The connector between the high-voltage PCB and the low-voltage PCB is disconnected.

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 1 **Refer to P.459.**

Remote Controller Display

A6

Applicable Models

FBQ

Method of Error Detection

- Detection from the current flow on the fan PCB.
- Detection from the rotation speed of the fan motor in operation.
- Detection from the position signal of the fan motor.
- Detection from the current flow on the fan PCB when the fan motor starting operation.

Error Decision Conditions

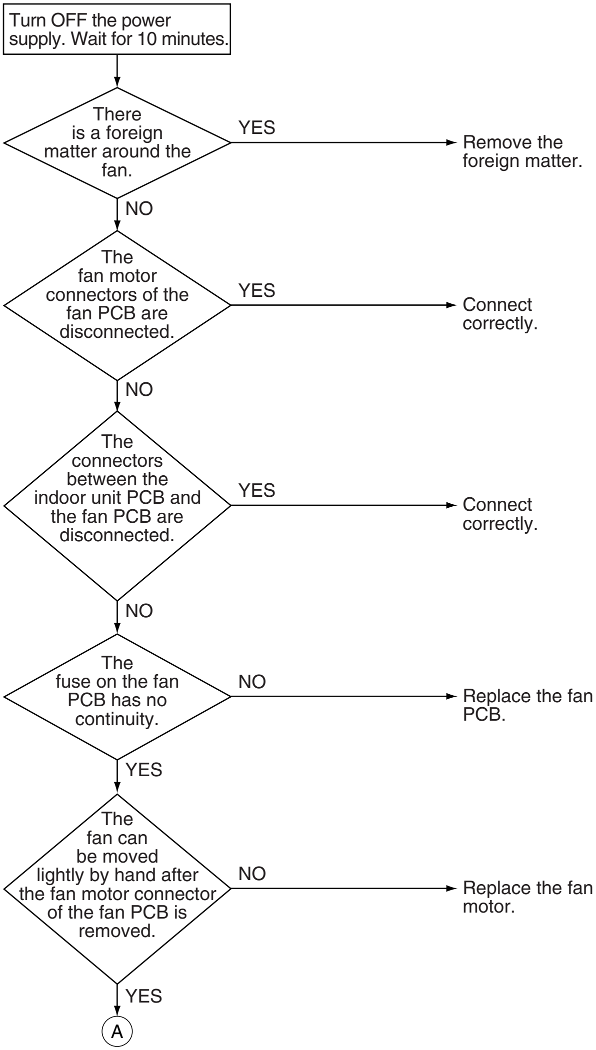
- An overcurrent flow
- The rotation speed is less than a certain level for 6 seconds.
- A position error in the fan rotor continues for 5 seconds or more.
- An overcurrent flow

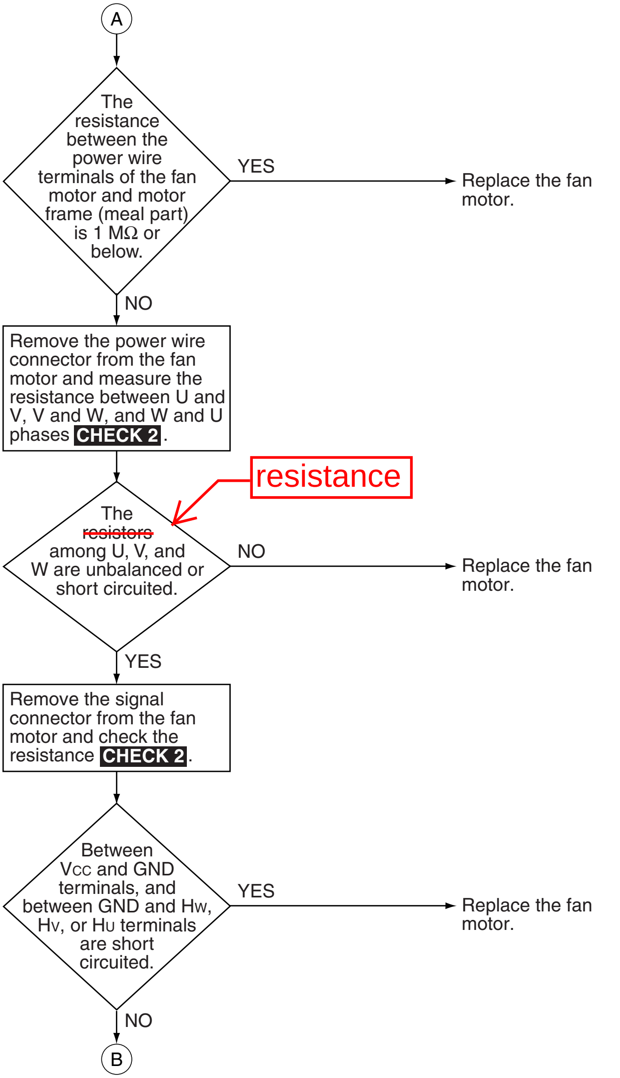
Supposed Causes

- The clogging of a foreign matter
- The disconnection of the fan motor connectors
- The disconnection of the connectors between the indoor unit PCB and fan PCB
- Defective fan PCB
- Defective fan motor

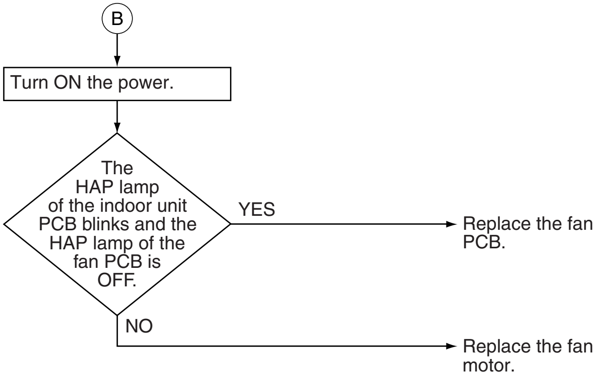
Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





CHECK 2 **Refer to P.460.**


B
Turn ON the power.
The HAP lamp of the indoor unit PCB blinks and the HAP lamp of the fan PCB is OFF.
YES
Replace the fan PCB.
NO
Replace the fan motor.

Remote Controller Display

A6

Applicable Models

FDQ200 • 250

Method of Error Detection

Detect the status in which the separate power supply for the fan is cut OFF.

Error Decision Conditions

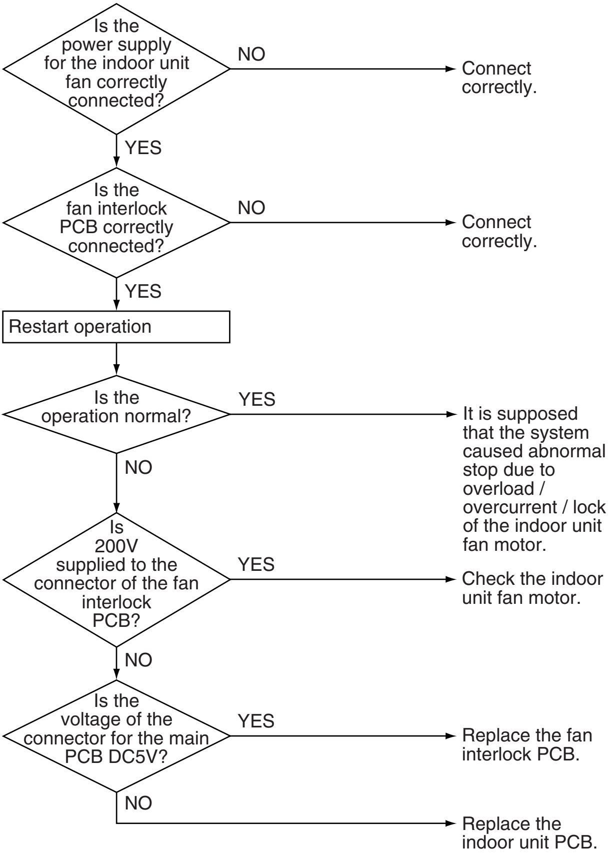
Unable to detect that separate power supply for the indoor unit fan is turned ON

Supposed Causes

- Defective power supply for the indoor unit fan motor
- Clogging in the drain pipe
- Protection device for the indoor unit fan is operated.
- Defective contact for the fan wiring circuit

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.8 A6 Fan Motor (M1F) Lock, Overload

Remote Controller Display

A6

Applicable Models

FMCQ, FMDQ

Method of Error Detection

Detection by failure of signal for detecting number of turns to come from the fan motor

Error Decision Conditions

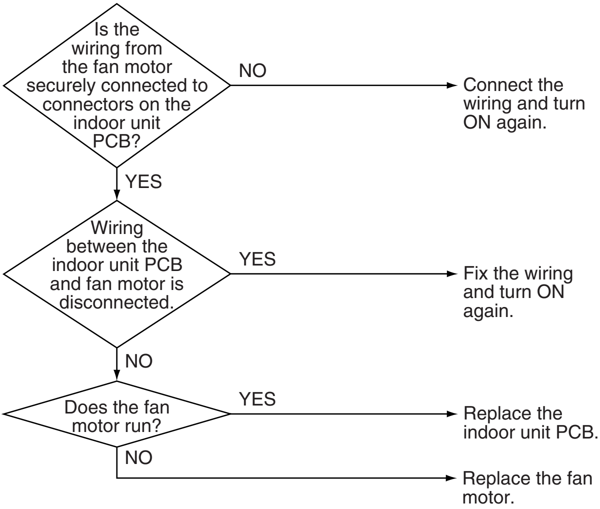
When number of turns can not be detected even when output voltage to the fan is maximum

Supposed Causes

- Fan motor lock
- Disconnected or defective wiring between fan motor and PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.9 A7 Swing Flap Motor Abnormality / Lock

Remote Controller Display

A7

Applicable Models

FH(Y)C, FH(Y)K, FH(Y), FA(Y), FV(Y), FUY, FHC, FH, FDBG, FDBT, FDMG, FCQ(H), FMCQ, FFQ, FHQ, FAQ(except FAQ71BU), FBQ, FUQ, FVQ

Method of Error Detection

The error is detected by the limit switch when the motor turns.

Error Decision Conditions

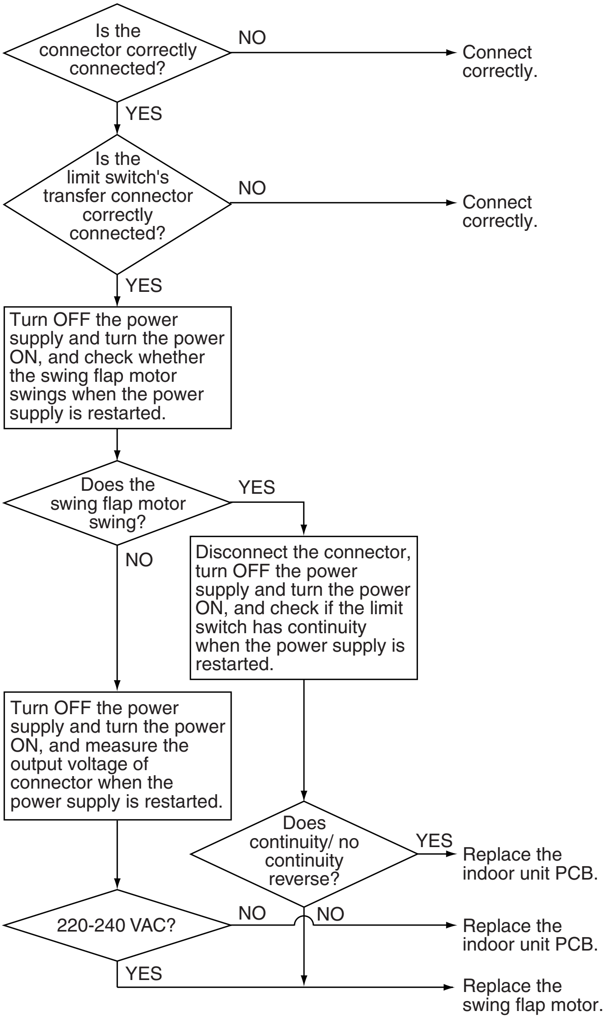
When ON/OFF of the micro-switch for position detection cannot be reversed even though the swing flap motor is energized for a specified amount of time (about 30 seconds).

Supposed Causes

- Defective swing flap motor
- Defective micro-switch
- Defective connector connection
- Defective indoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.10 A8 Abnormal Power Supply Voltage

Remote Controller Display

A8

Applicable Models

FCQ, FBQ, FMDQ-B7

Method of Error Detection

Detect error checking the input voltage of fan motor.

Error Decision Conditions

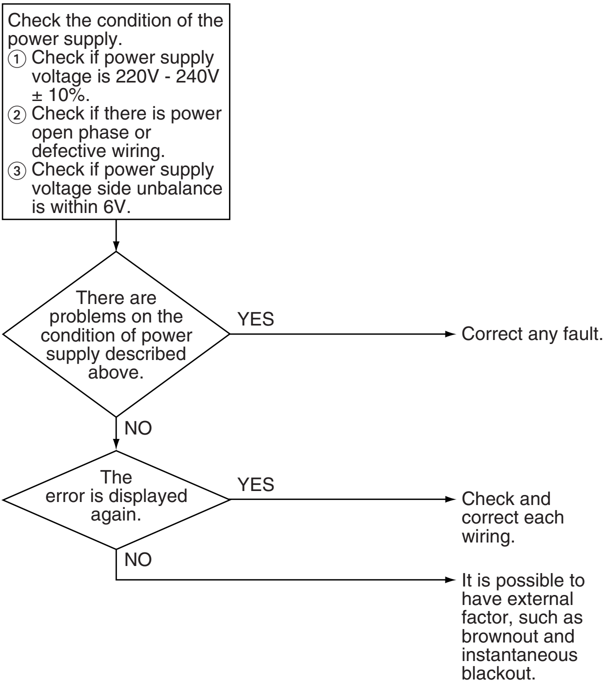
When the input voltage of fan motor is 150V and below, or 386V and above.

Supposed Causes

- Power supply voltage abnormality
- Connection defect on signal line
- Wiring defect
- Instantaneous blackout, others

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.11 A9 Electronic Expansion Valve Coil (Y1E) Abnormality

Remote Controller Display

A9

Applicable Models

FMCQ, FMDQ

Method of Error Detection

Use a micro-computer to check the electronic expansion valve for coil conditions.

Error Decision Conditions

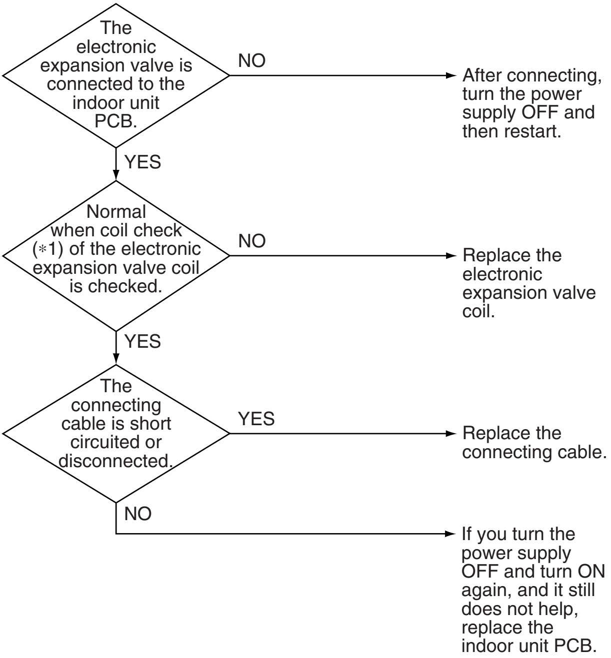
When the pin input of the electronic expansion valve is not normal while in the initialization of the micro-computer.

Supposed Causes

- Defective electronic expansion valve coil
- Defective indoor unit PCB
- Defective connecting cable

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



∗1: Coil check method for the electronic expansion valve coil

Disconnect the electronic expansion valve from the PCB and check the continuity between the connector pins.

(Normal)

Pin No.	1. White	2. Yellow	3. Orange	4. Blue	5. Red	6. Brown
1. White		×	○ Approx. 300Ω	×	○ Approx. 150Ω	×
2. Yellow			×	○ Approx. 300Ω	×	○ Approx. 150Ω
3. Orange				×	○ Approx. 150Ω	×
4. Blue					×	○ Approx. 150Ω
5. Red						×
6. Brown						

○: Continuity

× : No continuity

3.12 AF Drain System Abnormality

Remote Controller Display

AF

Applicable Models

FH(Y)C, FH(Y)K, FH(Y)B, FH(Y), FAY, FV(Y), FUY, FHC, FH, FDMG, FDBG, FDBT, FCQ(H), FFQ, FHQ, FAQ, FBQ, FDQ, FUQ

Method of Error Detection

Water leakage is detected based on float switch ON/OFF operation while the compressor is in non-operation.

Error Decision Conditions

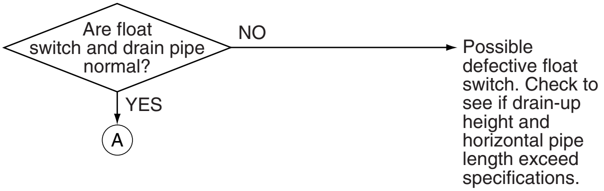
The float switch changes from ON to OFF while the compressor is OFF.

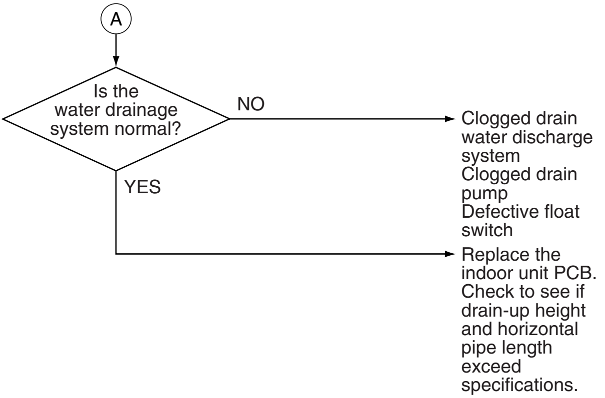
Supposed Causes

- Error in the drain pipe installation
- Defective float switch
- Defective indoor unit PCB

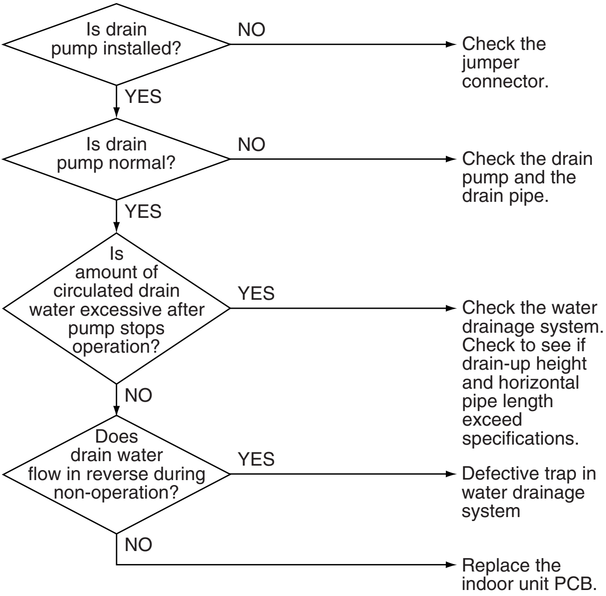
Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





∗ In FHY, FAY, and FHQ problems can also occur in the optional drain pump.



3.13 AF Drain Level above Limit

Remote Controller Display

AF

Applicable Models

FMCQ, FMDQ

Method of Error Detection

Water leakage is detected based on float switch ON/OFF operation while the compressor is in non-operation.

Error Decision Conditions

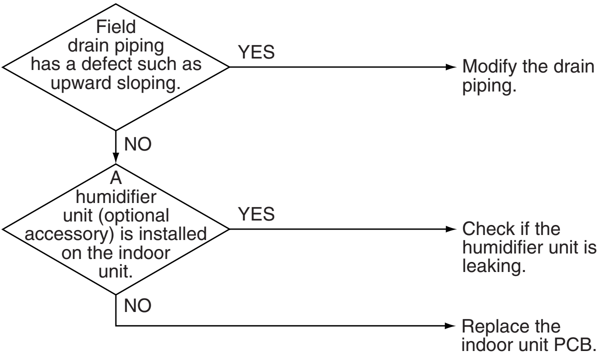
When the float switch changes from ON to OFF while the compressor is in non-operation.

Supposed Causes

- Humidifier unit (optional accessory) leaking
- Defective drain pipe (upward slope, etc.)
- Defective indoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.14 AJ Capacity Setting Abnormality

Remote Controller Display

AJ

Applicable Models

FH(Y)C, FH(Y)K, FH(Y)B, FH(Y), FAY, FV(Y), FUY, FHC, FH, FDBG, FDBT, FDMG

Method of Error Detection

Capacity is determined according to resistance of the capacity setting adaptor and the memory inside the IC memory on the indoor unit PCB, and whether the value is normal or abnormal is determined.

Error Decision Conditions

Operation and:

(1)When the capacity code is not contained in the PCB's memory, and the capacity setting adaptor is not connected.

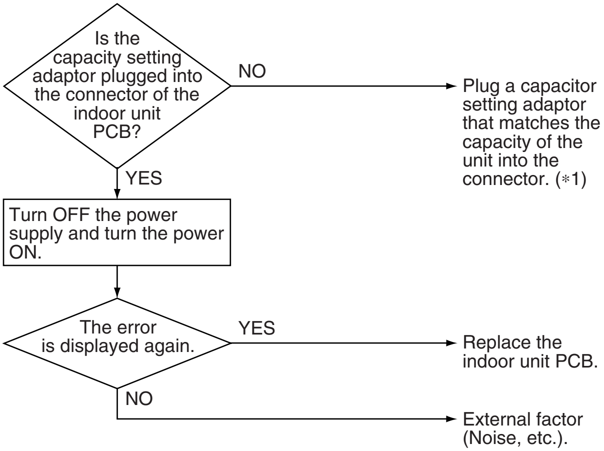
(2)When a capacity that does not exist for that unit is set.

Supposed Causes

- Defective capacity setting adaptor connection
- Defective indoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1 Capacity is factory setting in the data IC on the PCB.
A capacity setting adaptor that matches the capacity of the unit is required in the following case.
If the indoor unit PCB installed at the factory is for some reason changed at the installation site, the capacity will not be contained in the replacement PCB.
If you connect a capacity setting adaptor to a PCB in which the capacity is memorized, the capacity setting for the PCB will become the capacity setting of the adaptor. (Priority of capacity setting adaptor)

Remote Controller Display

AJ

Applicable Models

FCQ(H), FFQ, FDQ, FHQ, FAQ, FUQ, FVQ

Method of Error Detection

Capacity is determined according to resistance of the capacity setting adaptor and the memory inside the IC memory on the indoor unit PCB, and whether the value is normal or abnormal is determined.

Error Decision Conditions

The error is generated when the following conditions are fulfilled:

Condition	Description
1	● The unit is in operation. ● The PCB's memory IC does not contain the capacity code. ● The capacity setting adaptor is not connected.
2	● The unit is in operation. ● The capacity that is set, does not exist for that unit.

Supposed Causes

- Defective capacity setting adaptor connection
- Defective indoor unit PCB

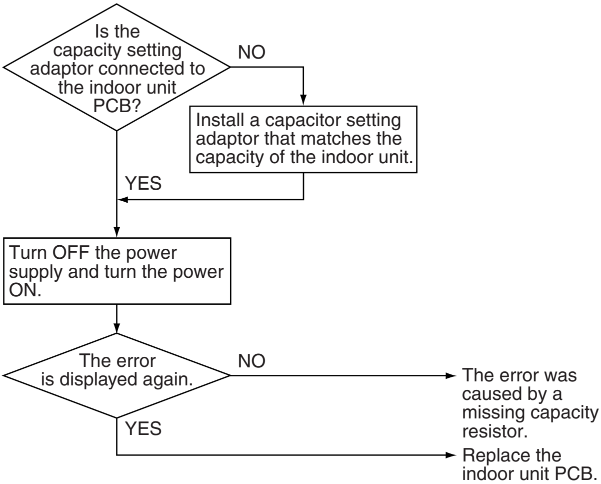
Capacity Setting Adaptor

The capacity is set in the PCB's memory IC. A capacity setting adaptor that matches the capacity of the unit is required in the following case:

In case the indoor unit PCB installed at the factory is for some reason changed at the installation site, the capacity will not be contained in the replacement PCB. To set the correct capacity for the PCB you have to connect a capacity setting adaptor with the correct capacity setting to the PCB. The capacity setting for the PCB will become the capacity setting of the adaptor because the capacity setting adaptor has priority.

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

AJ

Application Models

FBQ, FMDQ, FAQ-BU, FCQ-C7, FMCQ, FFQ-B, FHQ-B, FUQ

Error Decision Conditions

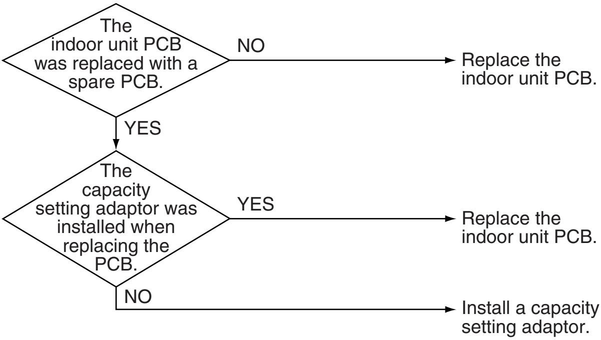
Operation and:
When the capacity code is not saved to the PCB, and the capacity setting adaptor is not connected.

Supposed Causes

- Defective capacity setting adaptor connection
- Defective indoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

AJ

Applicable Models

FCQG, FHQG

Method of Error Detection

Capacity is determined according to resistance of the capacity setting adaptor and the memory inside the IC memory on the indoor unit PCB, and whether the value is normal or abnormal is determined.

Error Decision Conditions

The error is generated when the following conditions are fulfilled:

Condition	Description
1	● The unit is in operation. ● The PCB's memory IC does not contain the capacity code. ● The capacity setting adaptor is not connected.
2	● The unit is in operation. ● The capacity that is set, does not exist for that unit.

Supposed Causes

- Defective capacity setting adaptor connection
- Defective indoor unit PCB

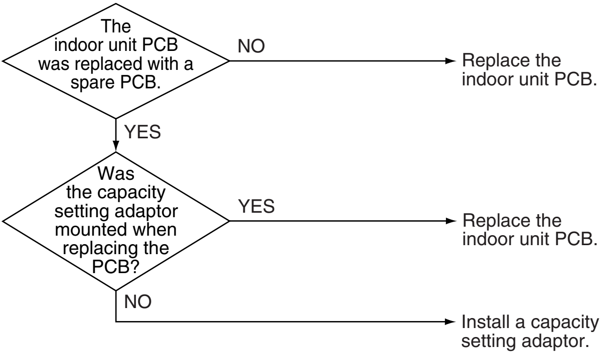
Capacity setting adaptor

The capacity is set in the PCB’s memory IC. A capacity setting adaptor that matches the capacity of the unit is required in the following case:

In case the indoor unit PCB installed at the factory is for some reason changed at the installation site, the capacity will not be contained in the replacement PCB. To set the correct capacity for the PCB you have to connect a capacity setting adaptor with the correct capacity setting to the PCB. The capacity setting for the PCB will become the capacity setting of the adaptor because the capacity setting adaptor has priority.

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.15 C1 Transmission Error (between Indoor Unit PCB and Fan PCB)

Remote Controller Display

C1

Applicable Models

FBQ, FMDQ

Method of Error Detection

Check the condition of transmission between indoor unit PCB and fan PCB using computer.

Error Decision Conditions

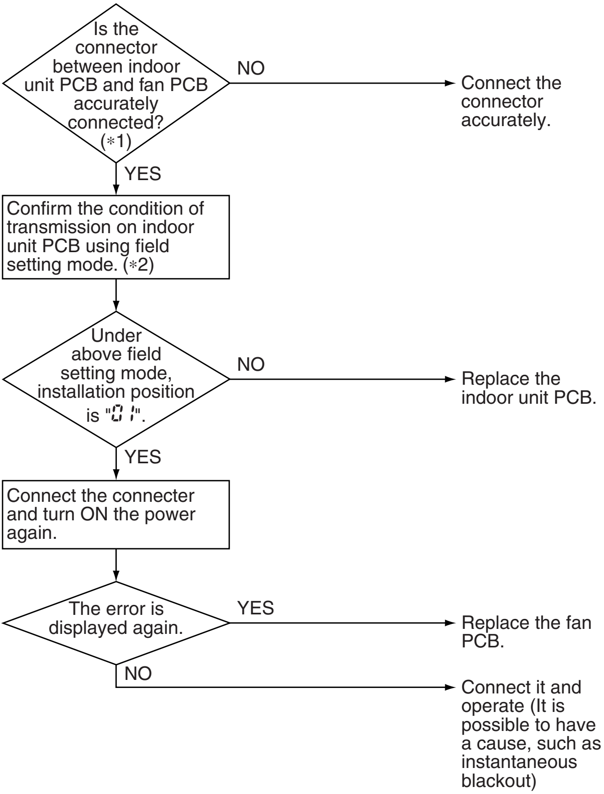
When normal transmission is not conducted for certain duration.

Supposed Causes

- Connection defect of the connecter between indoor unit PCB and fan PCB
- Defective indoor unit PCB
- Defective fan PCB
- External factor, such as instantaneous blackout

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. Pull out and insert the connecter once and check it is absolutely connected.

∗2. Method to check transmission part of indoor unit PCB.

① Turn OFF the power and remove the connecter X70A of indoor unit PCB.
② Short circuit X70A.
③ After turning ON the power, check below numbers under local setting remote control. (Confirmation: Second code No. at the condition of first code No. 21 on mode No. 41)

↓

Determination [01: Normal
Other than 01: Transmission defect on indoor unit PCB]

∗ After confirmation, turn OFF the power, take off the short circuit and connect X70A back to original condition.

3.16 C1 Transmission Error (between Indoor Unit PCB and Adaptor PCB)

Remote Controller Display

C1

Applicable Models

FCQG

Method of Error Detection

Check the condition of transmission between indoor unit PCB and adaptor PCB using micro-computer.

Error Decision Conditions

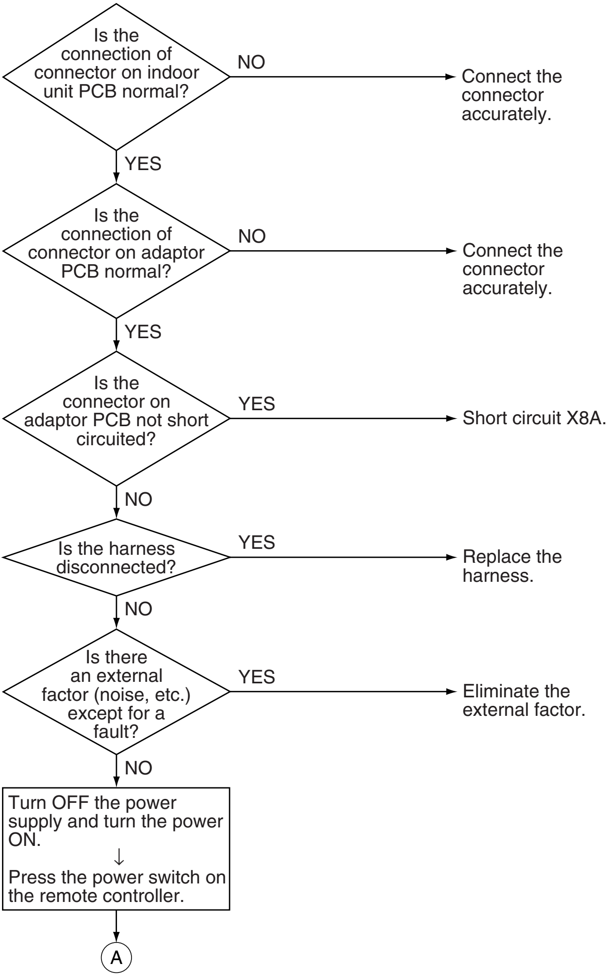
When normal transmission is not conducted for certain duration (15 seconds or more). After 60 seconds, error is display on the remote controller.

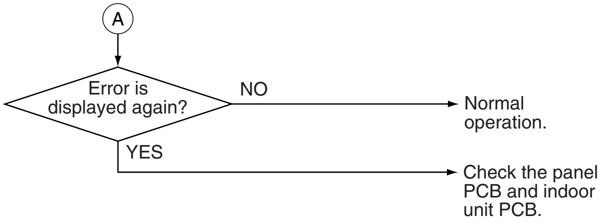
Supposed Causes

- Connection defect of the connector indoor unit PCB and adaptor PCB
- Defective indoor unit PCB
- Defective adaptor PCB
- External factor (Noise, etc.)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Error is displayed again?
NO
Normal operation.
YES
Check the panel PCB and indoor unit PCB.

3.17 C4, C5, C9 Thermistor Abnormality

Remote Controller Display

C4, C5, C9

Applicable Models

FH(Y)C, FH(Y)K, FH(Y)B, FH(Y), FAY, FV(Y), FUY, FHC, FH, FDBG, FDBT, FDMG, FCQ(H), FMCQ, FFQ, FHQ, FAQ, FBQ,FDQ, FMDQ, FUQ, FVQ, FCQG, FHQG

Method of Error Detection

The error is detected by temperature detected by thermistor.

Error Decision Conditions

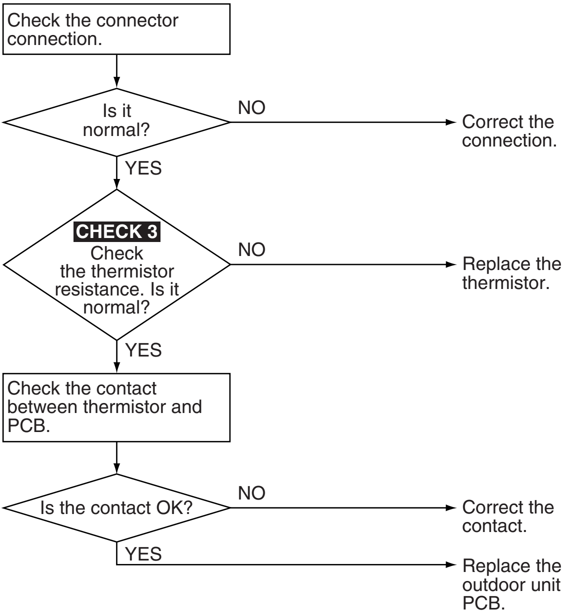
When the thermistor becomes disconnected or shorted while the unit is running.

Supposed Causes

- Defective connector connection
- Defective thermistor
- Defective indoor unit PCB
- Broken or disconnected wire

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



C4: Heat exchanger thermistor
C5: Gas pipe thermistor
C9: Suction air thermistor

CHECK 3 **Refer to P.460.**

3.18 C6 Defective Combination (between Indoor Unit PCB and Fan PCB)

Remote Controller Display

C6

Applicable Models

FBQ, FMDQ-B7

Method of Error Detection

Conduct open line detection with fan PCB using indoor unit PCB.

Error Decision Conditions

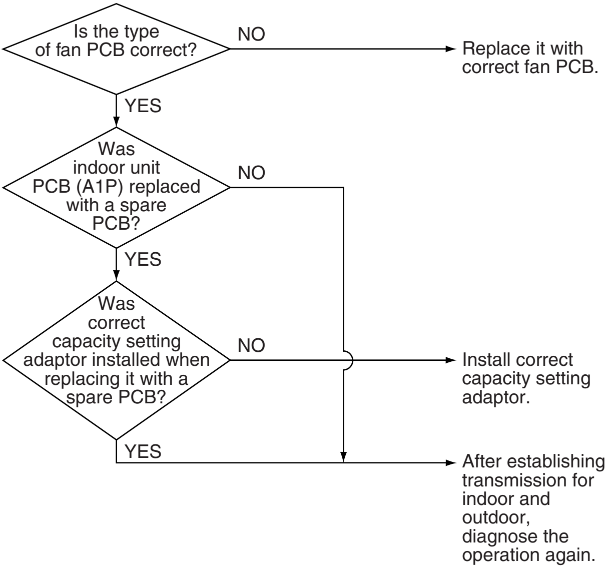
When the communication data of fan PCB is determined as incorrect.

Supposed Causes

- Defective fan PCB
- Defective connection of capacity setting adaptor
- Setting mistake on site

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.19 CC Humidity Sensor System Abnormality

Remote Controller Display

CC

Applicable Models

FCQ(H)

Method of Error Detection

The error is detected by humidity detected by humidity sensor.

Error Decision Conditions

The error is generated when the humidity sensor becomes disconnected or shorted when the unit is running.

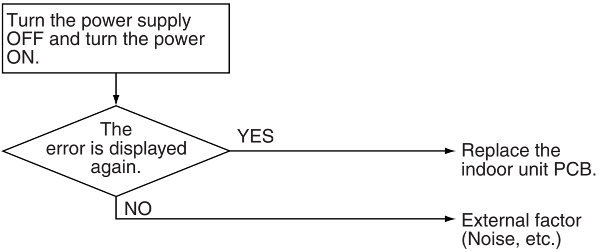
Even if the sensor is defective, the system can operate.

Supposed Causes

- Defective sensor
- Broken wire
- External factor (Noise, etc.)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

CC

Applicable Models

FCQ-C7, FCQG, FMCQ

Method of Error Detection

Even if an error occurs, operation still continues.
Error is detected according to the moisture (output voltage) detected by the moisture sensor.

Error Decision Conditions

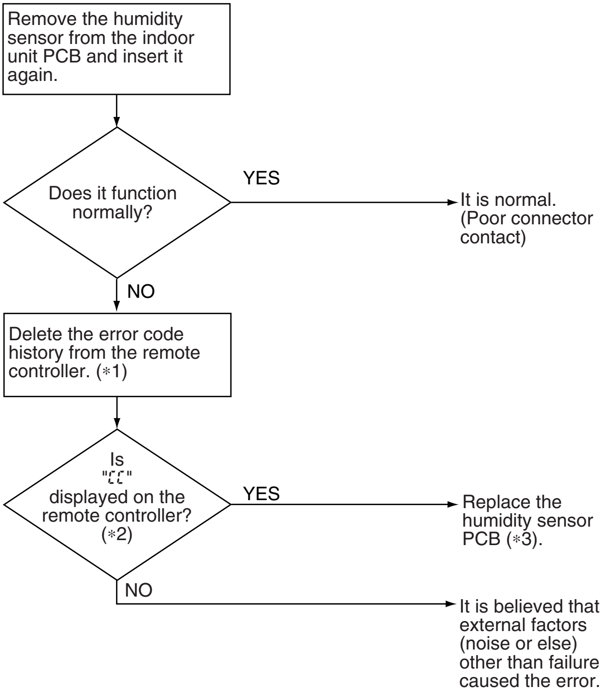
When the moisture sensor is disconnected or short circuited

Supposed Causes

- Defective sensor
- Disconnection

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. To delete the history, the ON/OFF button of the remote controller must be pressed and held for 5 seconds in the check mode.

∗2. To display the code, the Inspection/Test Operation button of the remote controller must be pressed and held in the normal mode.

∗3. If "CC" is displayed even after replacing the humidity sensor PCB assy and taking the steps ∗1 and ∗2, replace the indoor unit PCB assy.

3.20 CJ Remote Controller Thermistor Abnormality

Remote Controller Display

CJ

Applicable Models

FHY, FHYC, FUY, FAY, FV(Y) (Available for 2 remote controller use.), FHC, FH, FDBG, FDBT, FDMG, FCQ(H), FMCQ, FFQ, FHQ, FAQ, FBQ, FDQ, FMDQ, FUQ, FVQ, FCQG, FHQG

Method of Error Detection

Even if remote controller thermistor is defective, system is possible to operate by system thermistor.
The error is detected by temperature of remote controller thermistor.

Error Decision Conditions

The error is generated when the remote controller thermistor becomes disconnected or shorted when the unit is running.

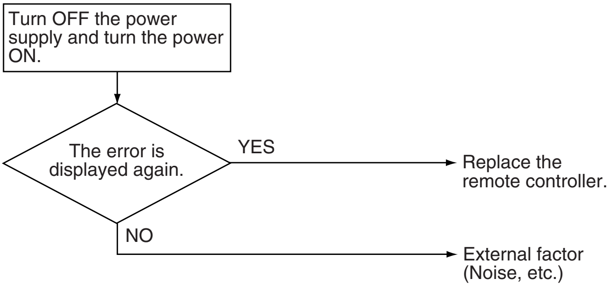
Even if the remote controller thermistor is defective, the system can operate with the system thermistor.

Supposed Causes

- Defective thermistor
- Broken wire

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.21 E0 Actuation of Safety Device

Remote Controller Display

E0

Applicable Models

RY-F/FU, R(Y)-G/GA/KU

Method of Error Detection

Actuation of each safety device is detected by safety device input circuit.
(Safety device unified detection)

Supposed Causes

<Causes related to PCB>

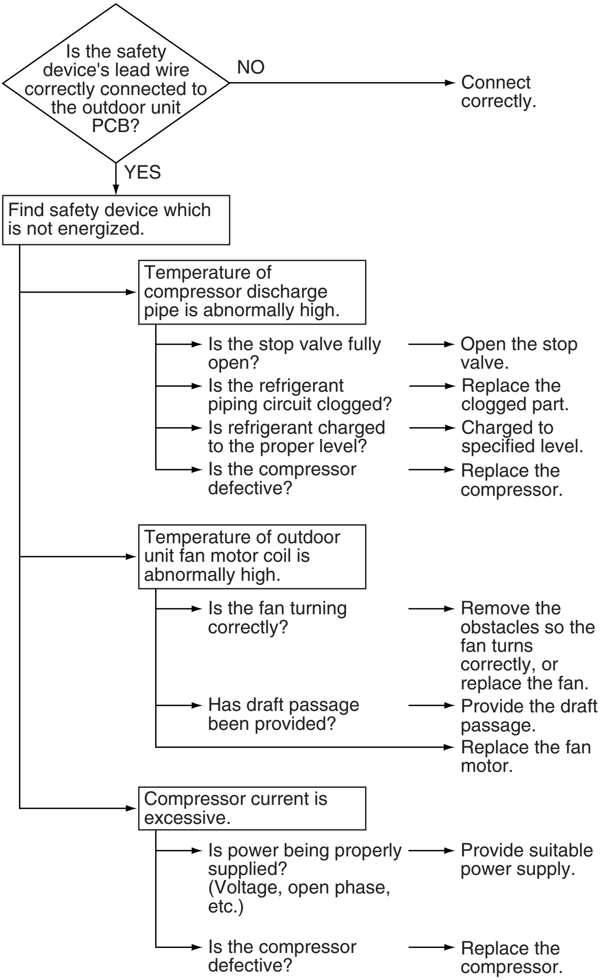
- Defective outdoor unit PCB
- Defective safety device input connection
- Safety device’s harness is broken or disconnected

<Causes related to product as a whole>

- Stop valve is not opened
- Refrigerant piping circuit clogging

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

E0

Applicable Models

R-NU/PU

Method of Error Detection

Actuation of each safety device is detected by safety device input circuit.
(Safety device unified detection)

Supposed Causes

<Causes related to safety devices>

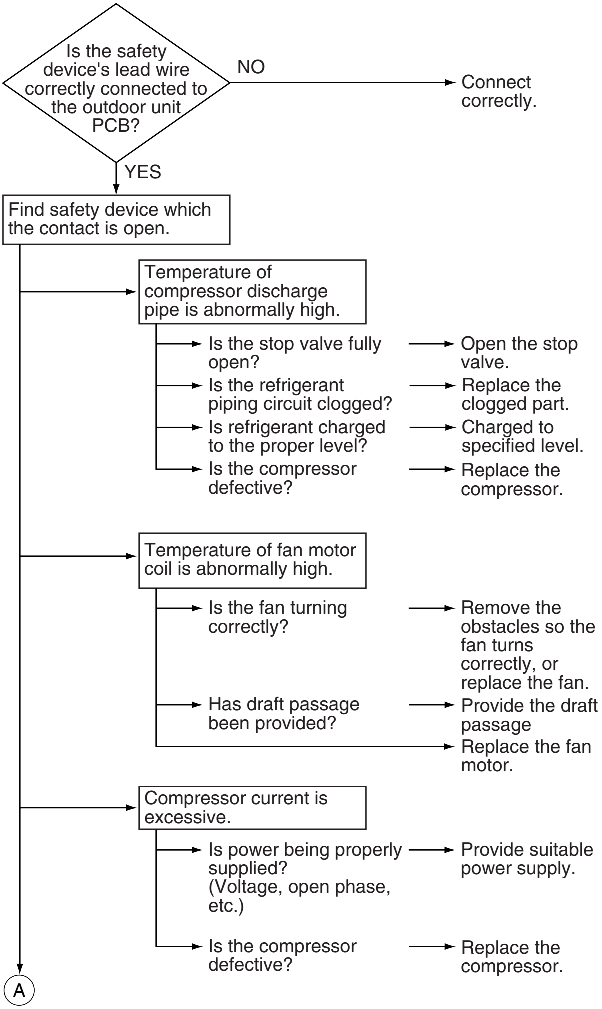
- Defective safety device input connection
- Safety device's harness is broken or disconnected

<Causes related to product as a whole>

- Stop valve is set to "close"
- Refrigerant piping circuit clogging
- Refrigerant shortage
- Defective compressor

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



A

- Reverse phase power supply.
  - Is the power supply phase correct? → Change the phase if the power supply is not correct.
- Low pressure switch activation.
  - Is the stop valve fully opened? → Open the stop valve.
  - Is the refrigerant piping circuit clogged? → Replace the clogged part.
  - Is the refrigerant charged correctly or leaked? → Check and repair the leaked part and charge refrigerant correctly.
- High pressure switch activation.
  - Does the outdoor unit fan operate properly? → Check and replace the outdoor unit fan motor.
  - Is the outdoor unit heat exchanger clogged? → Clean the heat exchanger.
  - Is the outdoor unit installed properly? (Outdoor air short circuit etc.) → Correct installation.
  - Is the refrigerant overcharged? → Conduct refrigerant collection and vacuum drying, and then add proper amount refrigerant.
  - Does the air enter the refrigerant system? → Conduct refrigerant collection and vacuum drying, and then add proper amount refrigerant.

Remote Controller Display

E0

Applicable Model

R(Y)-LU, RR-M

Method of Error Detection

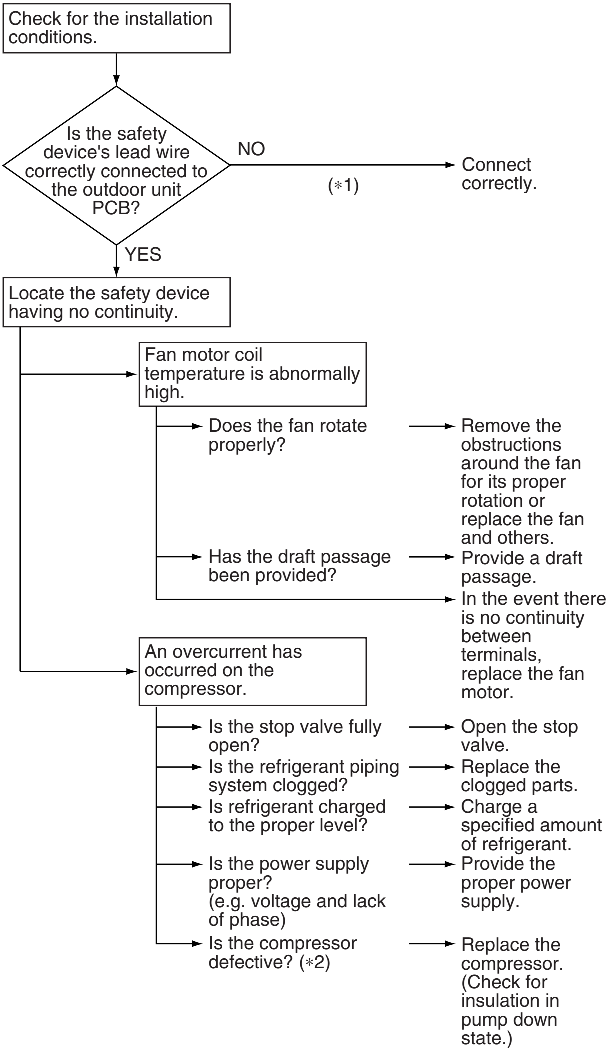
Actuation of each safety device is detected with safety device input circuit.
(Unified detection of actuation of each safety device)

Possible Causes

- Defective input connection of safety device
- Defective harness of safety device
- Stop valve is not opened
- Clogged refrigerant piping system
- Actuation of internal safety device of compressor (Only for R(Y) 71/100LU)
- Defective compressor (Except for R-LU)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. In the case of R(Y)71, or 100, make sure the short circuiting connector is correctly mounted.

∗2. R(Y)71, and 100LU, are provided with a safety device for errors in the compressor.
If the compressor errors due to closed stop valve or refrigerant shortage, this safety device may be actuated.
In this case, the compressor cannot restart and its terminal section has no continuity until the internal temperature of the compressor falls and the safety device is reset. (The temperature will fall in a couple of 10 minutes to a couple of hours.)

3.22 E0 Activation of Outdoor Unit Protection Device

Remote Controller Display

E0

Applicable Models

RZ(Y)

Method of Error Detection

Motor abnormality is detected when the temperature of outdoor unit fan motor coil rises excessively due to motor seizing or other reason and the thermal switch turns OFF.

Error Decision Conditions

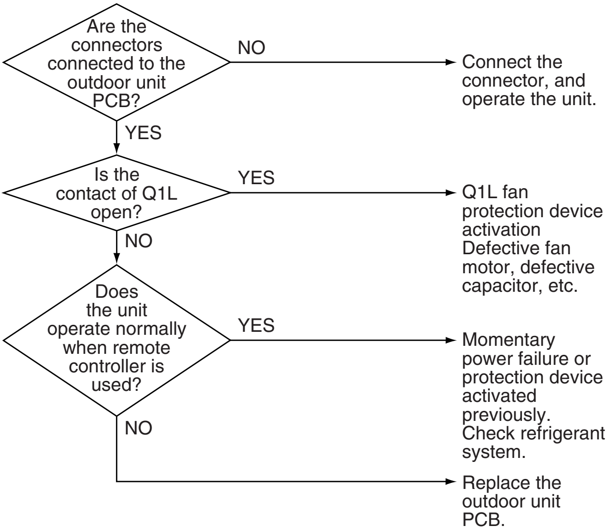
When the fan motor coil temperature increases abnormally

Supposed Causes

- Activation of outdoor unit protection device
- Defective outdoor unit PCB
- Momentary power failure
- Open phase in power supply

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.23 E1 Outdoor Unit PCB Abnormality

Remote Controller Display

E1

Applicable Model

R(Y)-LU, RR-M

Method of Error Detection

A micro-computer checks whether or not E^2PROM is normal.

Error Decision Conditions

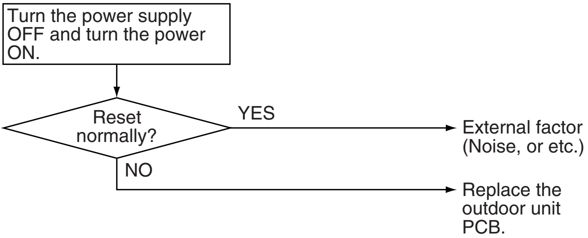
When E^2PROM error when turning the power supply ON

Possible Causes

- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

Applicable Models

CMSQ

Method of Error Detection

Check data from E²PROM

Error Decision Conditions

When data could not be correctly received from the E²PROM

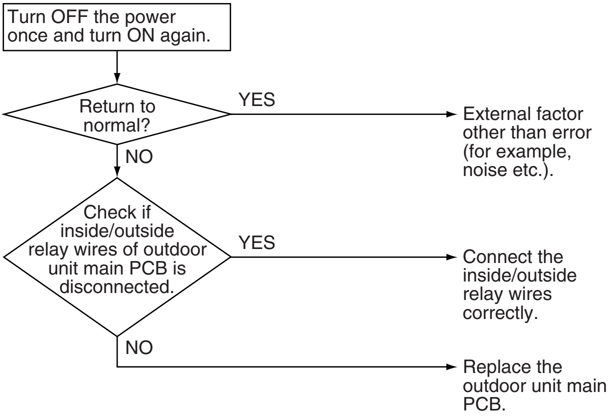
E²PROM : Type of nonvolatile memory. Maintains memory contents even when the power supply is turned OFF.

Supposed Causes

- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

E1

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZQG-L, RZR-KU/HU

Method of Error Detection

Micro-computer checks whether E^2PROM is normal.

Error Decision Conditions

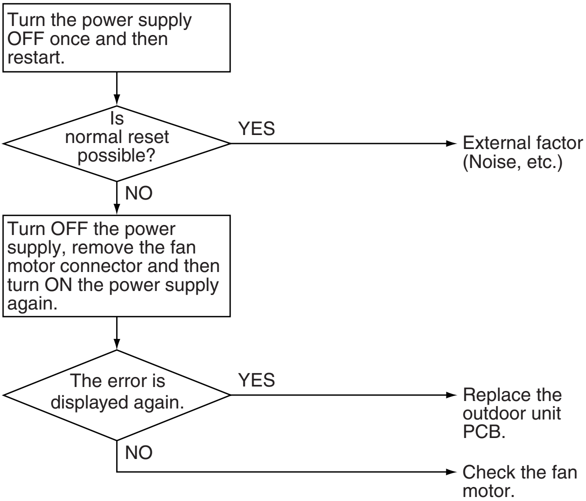
When E^2PROM error when turning the power supply ON

Supposed Causes

- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.24 E3 High Pressure System Abnormality

Remote Controller Display

E3

Applicable Models

RY-F, R(Y)-G/GA/KU

Method of Error Detection

Continuity of the high pressure switch is detected by the safety device circuitry.

Error Decision Conditions

Case where high pressure switch is actuated when the compressor is operating

Supposed Causes

<Causes related to PCB>

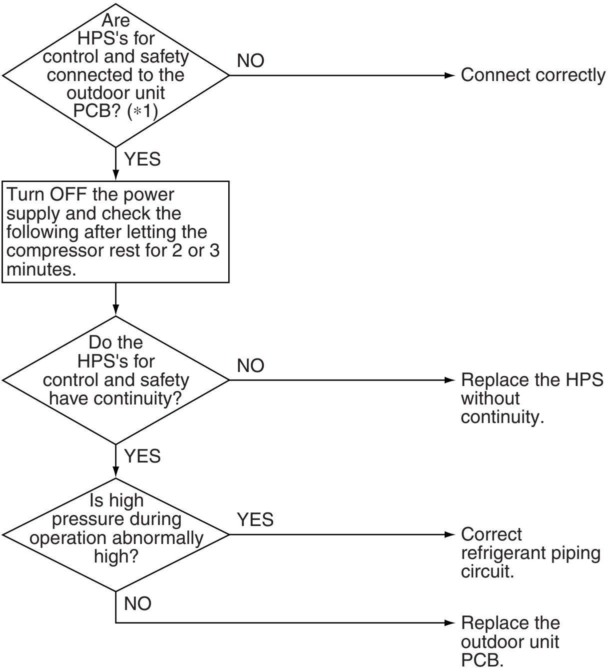
- Defective high pressure switch
- High pressure switch’s harness is broken or disconnected
- Defective high pressure switch’s connector connection
- Defective outdoor unit PCB

<Causes related to product as a whole>

- Soiled outdoor unit’s best exchanger
- Room cooling heat load is excessively high
- Short circuit of discharged air
- Contrary wing
- Defective refrigerant piping circuit

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. Some models are not equipped with an HPS for control or safety.

Remote Controller Display

E3

Applicable Models

R(Y)-LU, RR-M

Method of Error Detection

Continuity of the high pressure switch is detected by the safety device circuitry.

Error Decision Conditions

Case where high pressure switch is actuated when the compressor is operating

Supposed Causes

<Causes related to PCB>

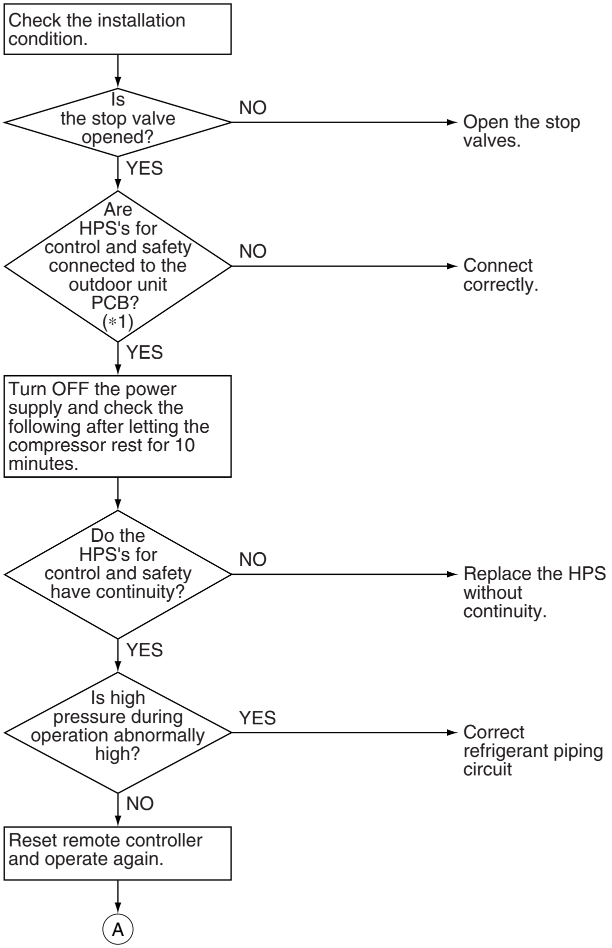
- Defective high pressure switch
- High pressure switch's harness is broken or disconnected
- Defective high pressure switch's connector connection
- Defective outdoor unit PCB

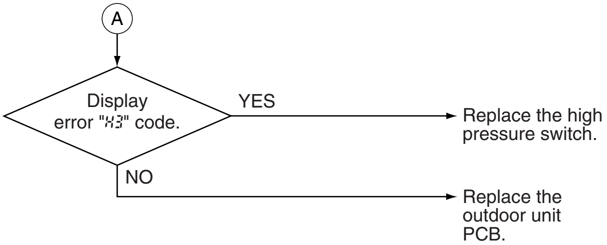
<Causes related to product as a whole>

- Indoor unit air filter is clogged
- Outdoor unit heat exchanger dirty
- Defective outdoor unit fan
- Refrigerant overcharged
- Stop valve is not opened

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





Note:

∗1. Some models are not equipped with an HPS for control or safety.

3.25 E3 Abnormally High Pressure Level (HPS)

Remote Controller Display

E3

Applicable Models

RZ(Y)

Method of Error Detection

The error is detected when the contact of the high pressure protection switch opens.

Error Decision Conditions

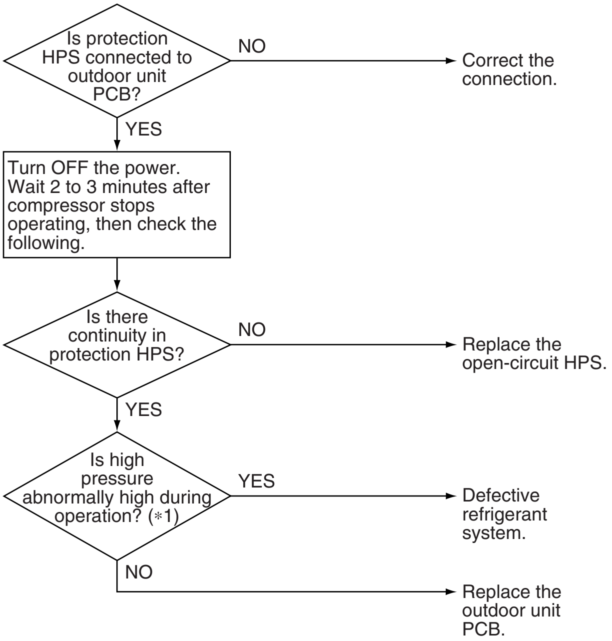
The error is generated when the HPS activation count reaches the number specific to the operation mode.

Supposed Causes

- Disconnection of connector or terminal on outdoor unit PCB
- Dirty outdoor unit heat exchanger
- Defective outdoor unit fan
- Refrigerant overcharge
- Defective high pressure switch

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. HPS activating value is approximately 3.0 MPa.

3.26 E3 High Pressure Abnormality (HPS)

Remote Controller Display

E3

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZR-KU/HU

Method of Error Detection

The protection device circuit checks continuity in the high pressure switch.

Error Decision Conditions

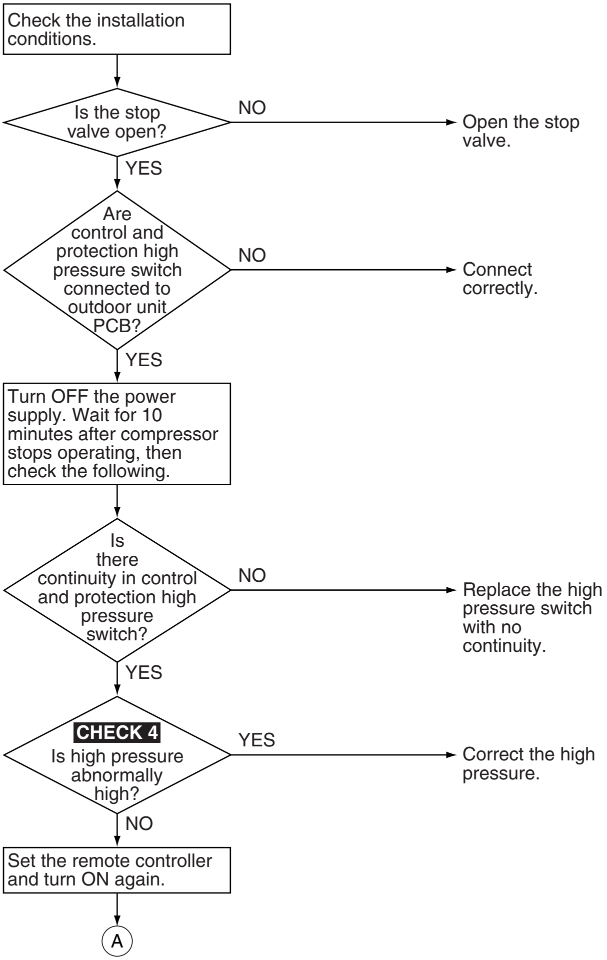
When the high pressure switch is actuated

Supposed Causes

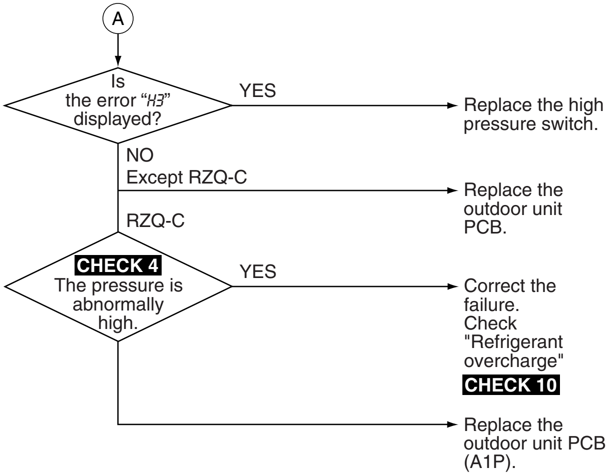
- Defective high pressure switch
- Disconnection in high pressure switch harness
- Defective connection of high pressure switch connector
- Clogged indoor unit suction filter (in heating)
- Dirty outdoor unit heat exchanger
- Defective outdoor unit fan
- Refrigerant overcharge
- Stop valve is not opened

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 4 **Refer to P.464.**



CHECK 4 **Refer to P.464.**

CHECK 10 **Refer to P.475.**

3.27 E3 Actuation of High Pressure Switch

Remote Controller Display

E3

Applicable Models

CMSQ

Method of Error Detection

Abnormality is detected when the contact of the high pressure protection switch opens.

Error Decision Conditions

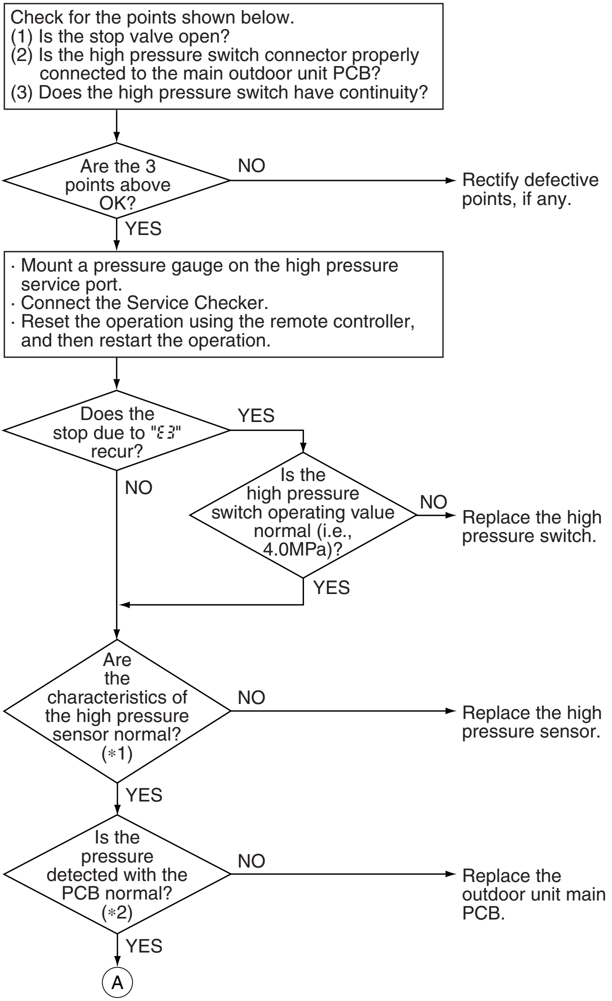
Error is generated when the HPS activation count reaches the number specific to the operation mode.
(Reference) Operating pressure of high pressure switch
Operating pressure: 4.0MPa
Reset pressure: 2.85MPa

Supposed Causes

- Actuation of outdoor unit high pressure switch
- Defective high pressure switch
- Defective outdoor unit PCB
- Instantaneous power failure
- Defective high pressure sensor

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



A

· The high pressure sensor is normal, and the pressure detected with the PCB is also normal.
· The high pressure has really become high.

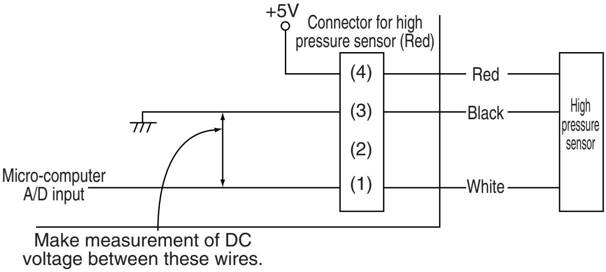
CHECK 14 Remove the causes by which the high pressure has become high.

Note:

∗1: Make a comparison between the voltage of the pressure sensor and that read by the pressure gauge. (As to the voltage of the pressure sensor, make measurement of voltage at the connector, and then convert it to pressure according to information on P.471.)

∗2: Make a comparison between the high pressure value checked with the Service Checker and the voltage of the pressure sensor (∗1).

∗3: Make measurement of voltage of the pressure sensor.



CHECK 14 **Refer to P.483.**

Remote Controller Display

E3

Applicable Models

RZQG71, 100L

Method of Error Detection

[In cooling]

- The error is detected by the outdoor unit intermediate heat exchanger thermistor (R5T).

[In heating]

- The error is detected by the indoor unit intermediate heat exchanger thermistor (R3T).

Error Decision Conditions

[In cooling]

- When the outdoor unit intermediate thermistor (R5T) detects the pressure shown below.
  3.92 MPa or more continuously for 1 minute
  (Reference: equivalent saturation temperature 62°C)

[In heating]

- When the indoor unit intermediate thermistor (R3T) detects the pressure shown below.
  3.92 MPa or more continuously for 1 minute
  (Reference: equivalent saturation temperature 62°C)

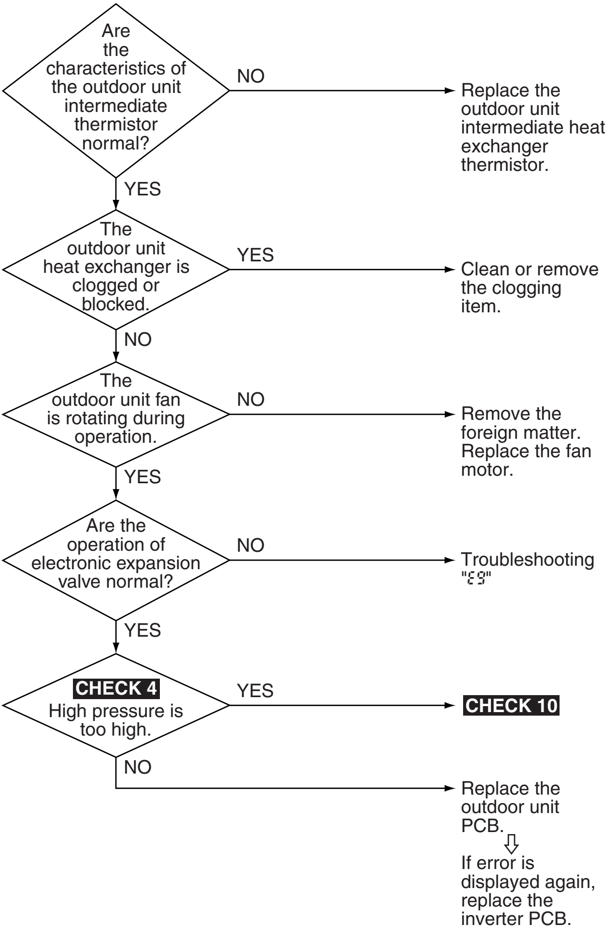
Supposed Causes

- Dirt and blockage of the outdoor unit heat exchanger
- Defective outdoor unit fan motor
- Defective indoor unit fan motor
- Defective electronic expansion valve
- Refrigerant overcharge
- Defective indoor unit PCB
- Defective outdoor unit inverter PCB

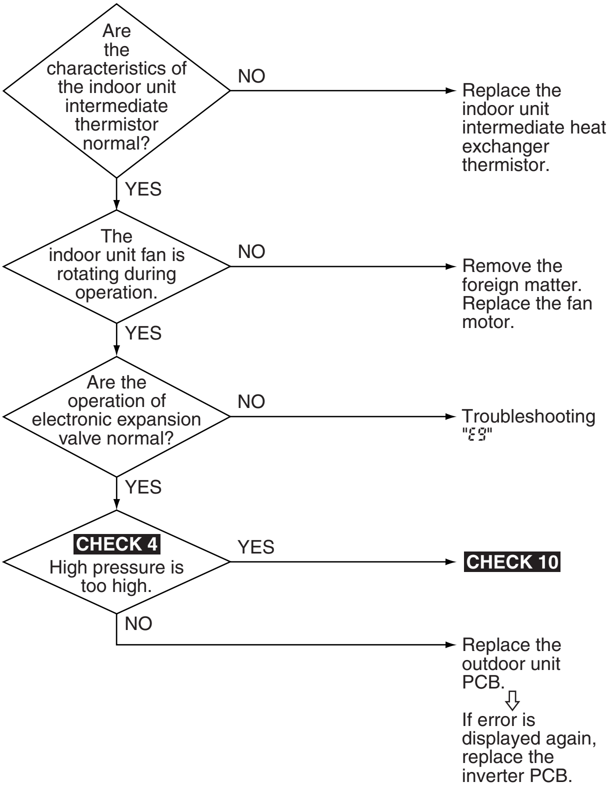
Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

[In cooling]



[In heating]



CHECK 4 **Refer to P.464.**

CHECK 10 **Refer to P.475.**

Remote Controller Display

E3

Applicable Models

RZQG125, 140L

Method of Error Detection

[In cooling]

- Detect the continuity of high pressure switch (S1PH) with the protection device circuit.
- The error is detected by the outdoor unit intermediate heat exchanger thermistor (R5T).

[In heating]

- Detect the continuity of high pressure switch (S1PH) with the protection device circuit.
- The error is detected by the indoor unit intermediate heat exchanger thermistor (R3T).

Error Decision Conditions

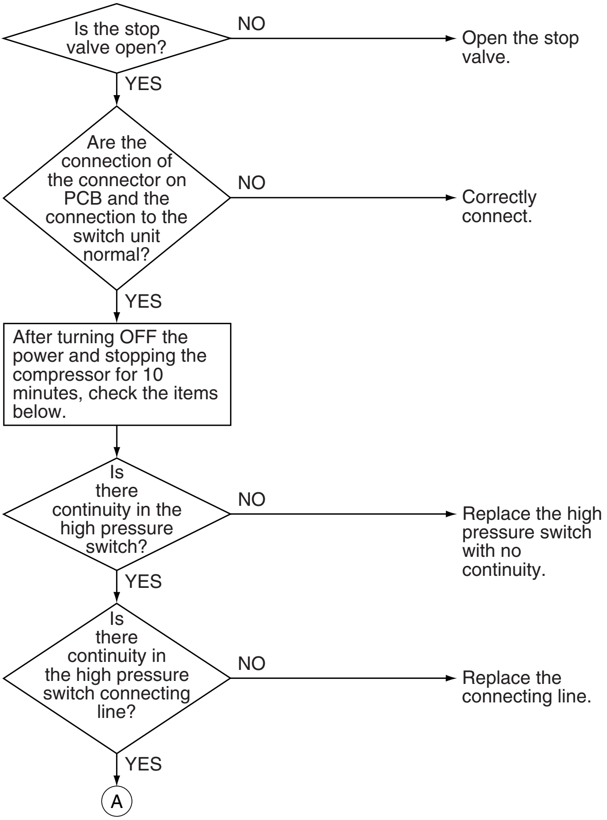
- When the high pressure switch is activated (4.0 MPa)
- When the outdoor unit intermediate thermistor (R5T) detects the pressure shown below.
  3.92 MPa or more continuously for 1 minute
  (Reference: equivalent saturation temperature 62°C)
- When the indoor unit intermediate thermistor (R3T) detects the pressure shown below.
  3.92 MPa or more continuously for 1 minute
  (Reference: equivalent saturation temperature 62°C)

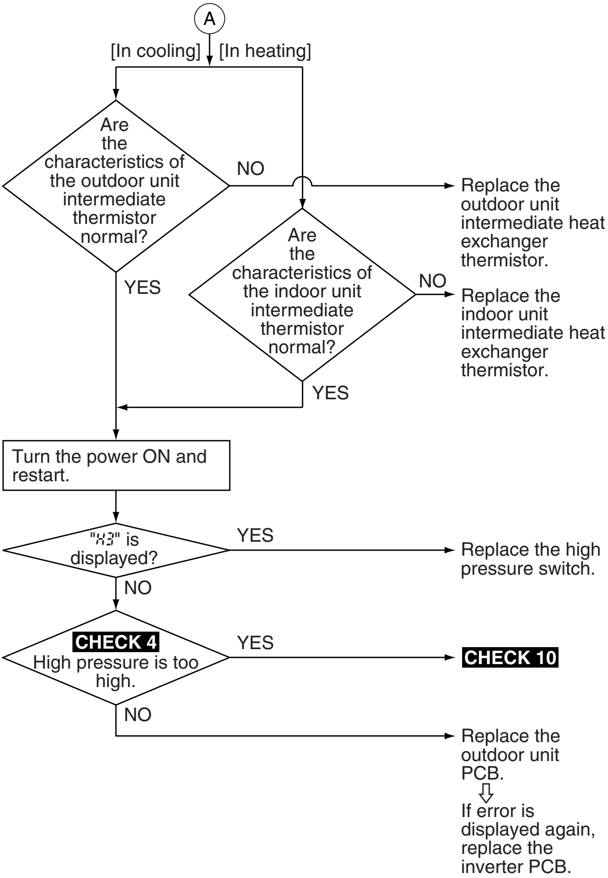
Supposed Causes

- Stop valve is not opened
- Harness breaking or poor connector connection of the high pressure switch
- Defective high pressure switch
- Indoor unit suction filter is blocked (In heating)
- Defective indoor unit fan (In heating)
- Outdoor heat exchanger is dirt (In cooling)
- Defective outdoor unit fan (In cooling)
- Refrigerant overcharge
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





CHECK 4 **Refer to P.464.**

CHECK 10 **Refer to P.475.**

3.28 E4 Low Pressure System Abnormality

Remote Controller Display

E4

Applicable Models

RY-F, R(Y)-G/GA/KU/LU, RR-M

Method of Error Detection

Continuity of the low pressure switch is detected by the safety device circuitry.

Error Decision Conditions

Case where low pressure switch is actuated when the compressor is operating

Supposed Causes

<Causes related to PCB>

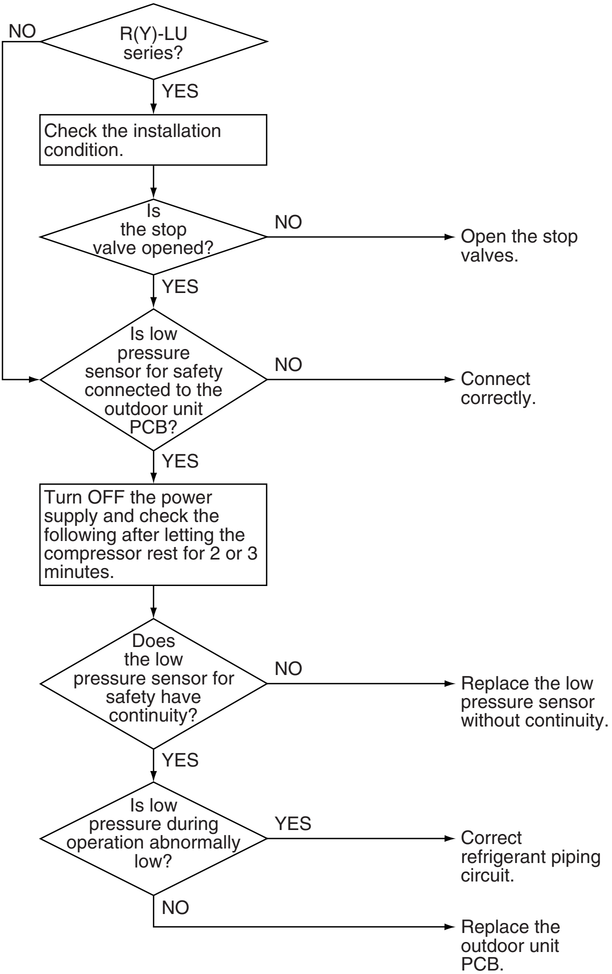
- Defective low pressure switch
- Low pressure switch’s harness is broken or disconnected
- Defective low pressure switch’s connector connection
- Defective outdoor unit PCB

<Causes related to product as a whole>

- Defective refrigerant piping circuit
- Stop valve is not opened (For R(Y)-LU)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.29 E4 Actuation of Pressure Sensor

Remote Controller Display

E4

Applicable Models

RZQ-K, RZQ(S)-C, RZQG-L, RZR-KU/HU

Method of Error Detection

For except RZQG

[In cooling]

- Detect error by the pressure sensor.

[In heating]

- Detect error by the intermediate heat exchanger thermistor.

For RZQG

[In cooling]

- Detect error by the indoor unit intermediate thermistor.

[In heating]

- Detect error by the intermediate heat exchanger thermistor.

Error Decision Conditions

[In cooling]

- When the detection pressure is the following value 0.12MPa or less continues for 5 minutes

For except RZQG

- When the saturated pressure equivalent to the detection temperature is the following value 0.12MPa or less continues for 5 minutes

For RZQG

- When the saturated pressure equivalent temperature is -34°C

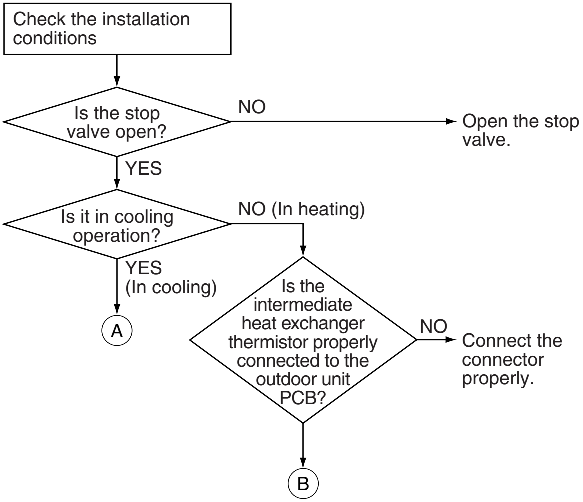
Supposed Causes

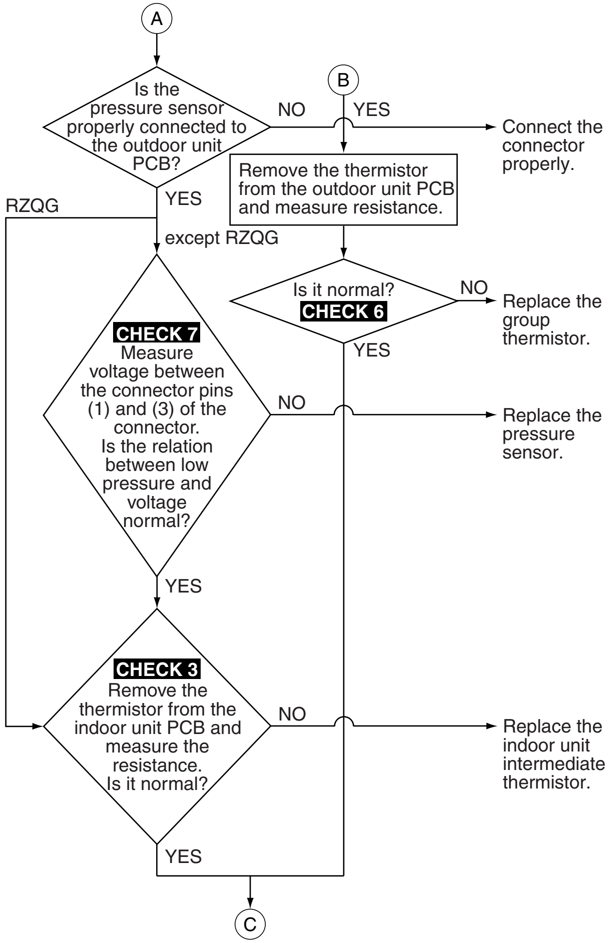
- The stop valve is not opened
- Defective pressure sensor and intermittent harness
- Defective thermistor

- Defective outdoor unit PCB
- Abnormal drop of low pressure
  (Inadequate refrigerant)
  (Defective refrigerant piping system (liquid pipe system))
  (Defective electronic expansion valve)

Troubleshooting

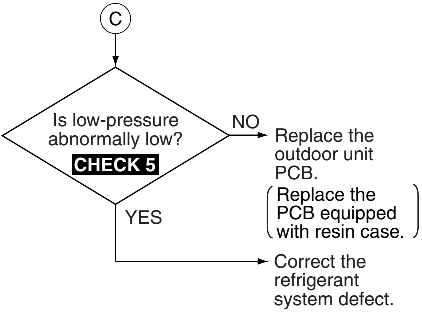
Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





CHECK 6 **Refer to P.468.**

CHECK 7 **Refer to P.470.**



CHECK 5 **Refer to P.466.**

3.30 E4 Actuation of Low Pressure Sensor

Remote Controller Display

E4

Applicable Models

CMSQ

Method of Error Detection

Abnormality is detected by the pressure value with the low pressure sensor.

Error Decision Conditions

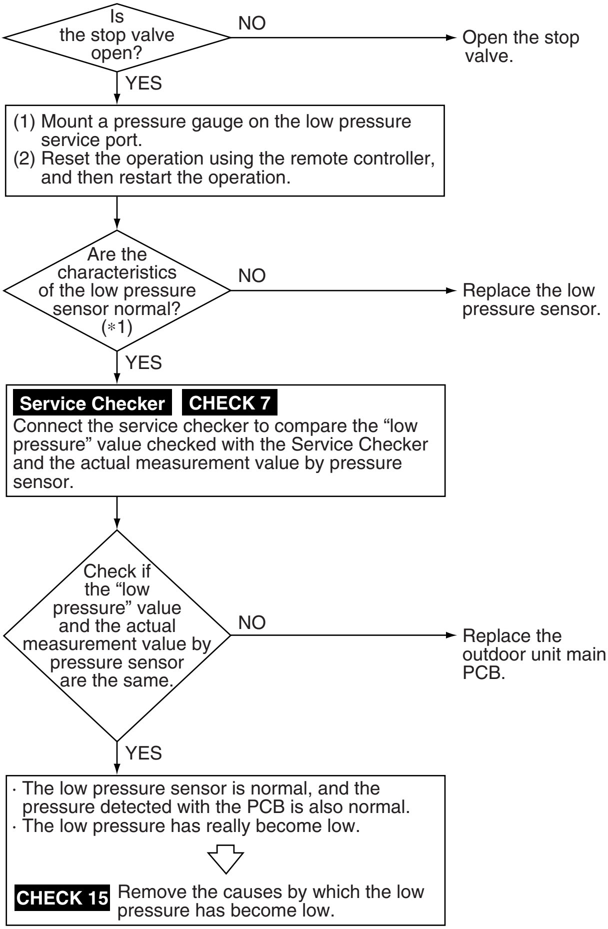
Error is generated when the low pressure drops while the compressor is in operation.

Supposed Causes

- Abnormal drop of low pressure
- Defective low pressure sensor
- Defective outdoor unit PCB
- Stop valve is not opened
- Clogged filter

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



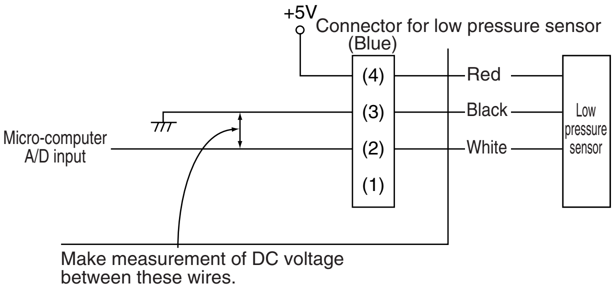
CHECK 7 **Refer to P.470.**

CHECK 15 **Refer to P.485.**

Note:

∗1. Make a comparison between the voltage of the pressure sensor and that read by the pressure gauge.
(As to the voltage of the pressure sensor, make measurement of voltage at the connector, and then convert it to pressure. **CHECK 7**)

∗2. Make measurement of voltage of the pressure sensor.



CHECK 7 **Refer to P.470.**

CHECK 15 **Refer to P.485.**

Remote Controller Display

E4

Applicable Models

RZQ-H, RZQ(S)-B

Method of Error Detection

The protection device circuit checks continuity in the low pressure switch.

Error Decision Conditions

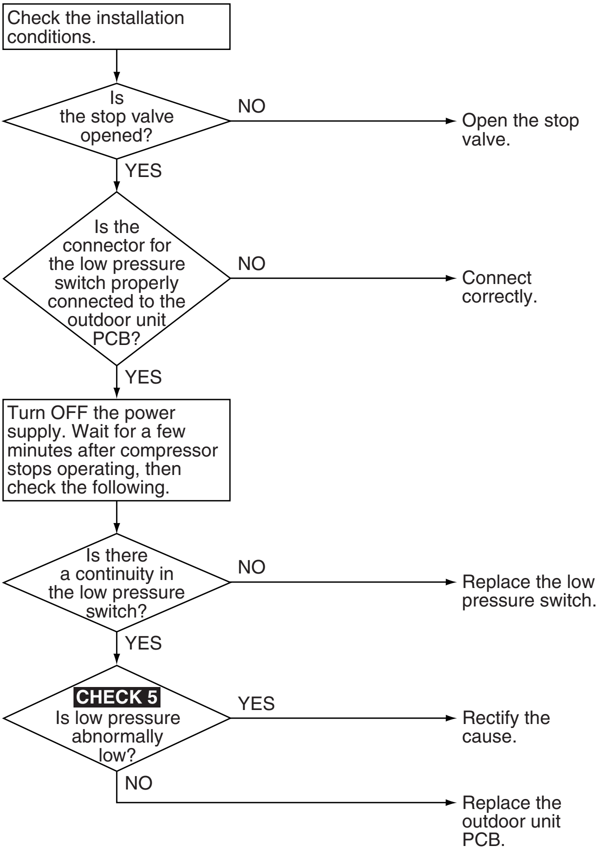
When the low pressure switch is activated during compressor operating.
Operating pressure: 0.12 MPa continuous 5 minutes

Supposed Causes

∗ Compressor is not defective.
- Stop valve is not opened
- Defective connection of low pressure switch connector
- Disconnection in low pressure switch harness
- Defective low pressure switch
- Defective refrigerant system
- Refrigerant shortage
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 5 **Refer to P.466.**

3.31 E4 Low Pressure System Abnormality

Remote Controller Display

E4

Applicable Models

RZQ-C

Method of Error Detection

- Detect errors by the low pressure sensor.

Error Decision Conditions

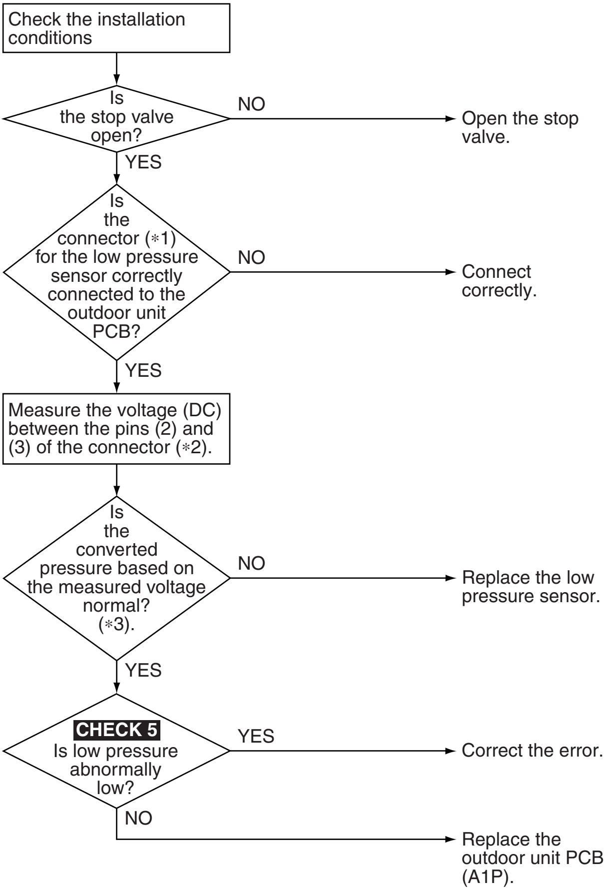
- When the detection pressure is the following value
  Actuating pressure: 0.07MPa

Supposed Causes

- Defective low pressure switch
- Disconnection of the wire harness of the low pressure switch
- Defective connection of the connector of the low pressure switch
- The refrigerant piping circuit abnormality
- The stop valve is not opened
- Defective outdoor unit main PCB
- Refrigerant shortage

Troubleshooting

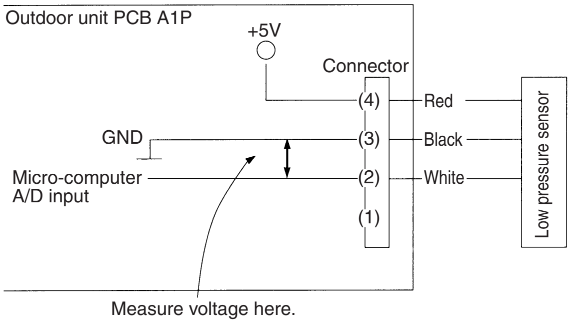
Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



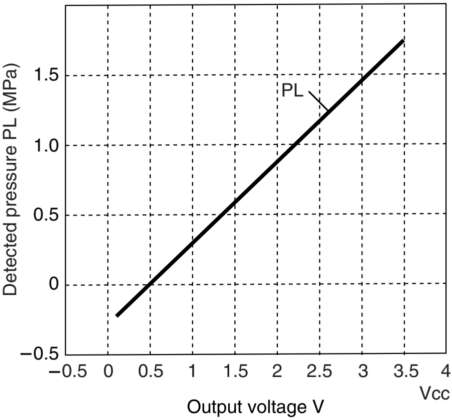
CHECK 5 **Refer to P.466.**

∗1: Connector code: X31A

∗2: Method of voltage measurement



∗3: Pressure/ voltage characteristic of the sensor



PL=0.57V−0.28

PL: detected pressure (Mpa)

V: output voltage (V)

3.32 E5 Compressor Motor Lock

Remote Controller Display

E5

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZR-KU/HU

Method of Error Detection

Inverter PCB takes the position signal from UVWN line connected between the inverter and compressor, and detects the position signal pattern.

Error Decision Conditions

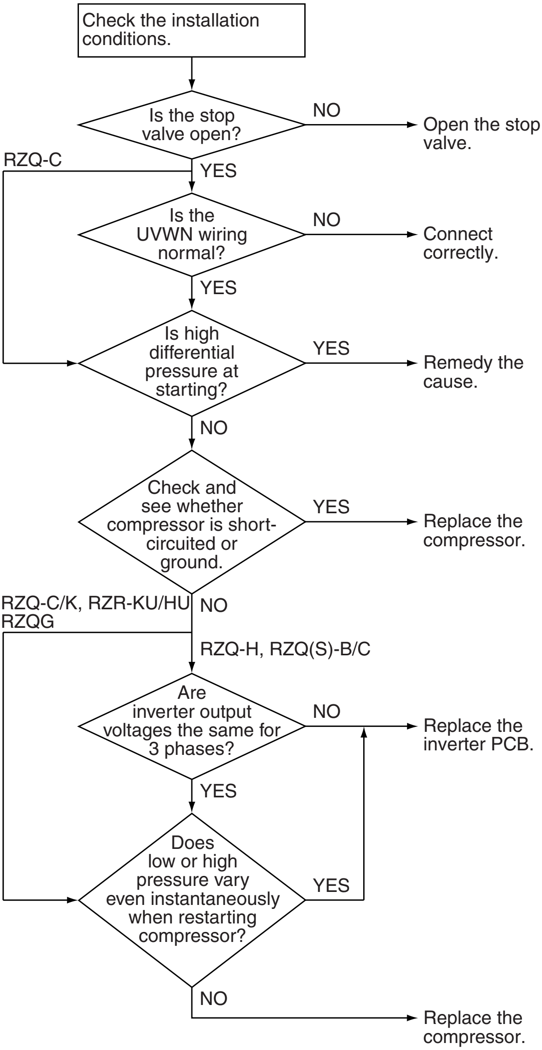
The position signal with 3 times cycle as imposed frequency is detected when compressor motor operates normally, but 2 times cycle when compressor motor locks. When the position signal in 2 times cycle is detected

Supposed Causes

- Compressor lock
- Incorrect UVWN wiring
- Defective inverter PCB
- Stop valve is not opened
- High discharge pressure starting (For RZQ-K, RZQG, RZR-KU/HU)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

E5

Applicable Models

CMSQ

Method of Error Detection

Inverter PCB takes the position signal from UVW line connected between the inverter and compressor, and the error is detected when any abnormality is observed in the phase-current waveform.

Error Decision Conditions

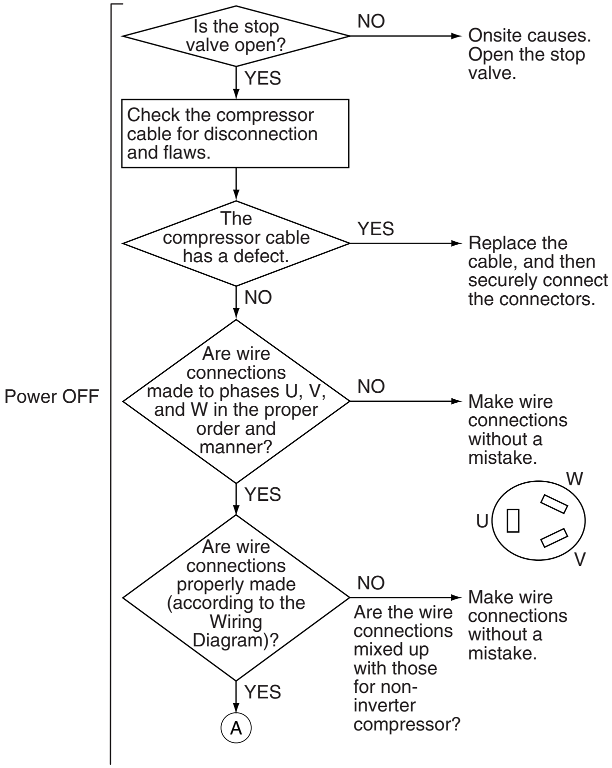
This error will be output when the inverter compressor motor does not start up even in forced startup mode.

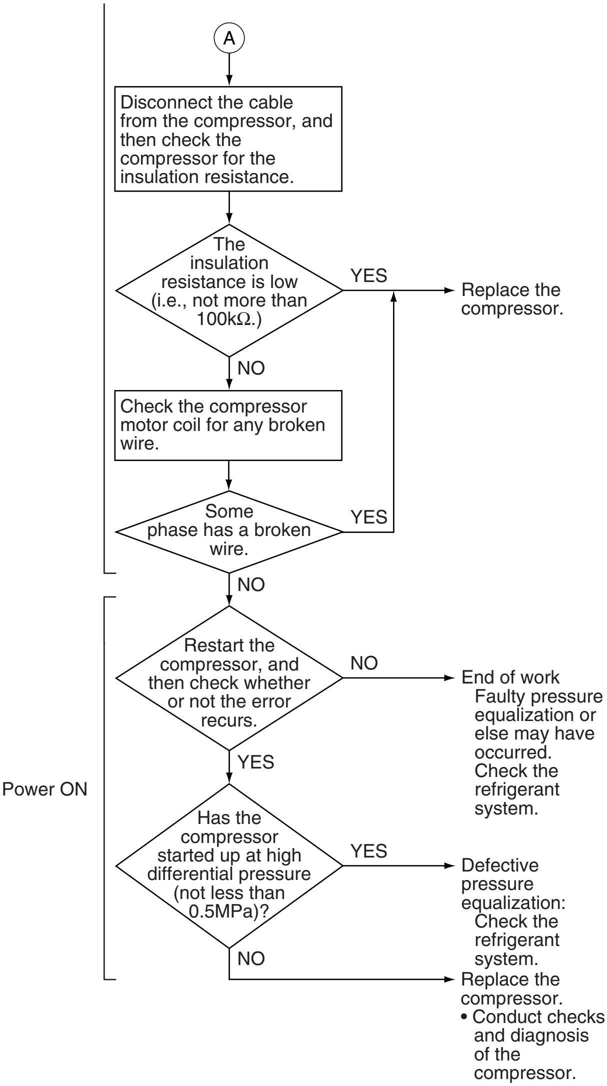
Supposed Causes

- Inverter compressor lock
- High differential pressure (0.5MPa or more)
- Incorrect UVW wiring
- Defective inverter PCB
- Stop valve is not opened

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Disconnect the cable from the compressor, and then check the compressor for the insulation resistance.
The insulation resistance is low (i.e., not more than 100kΩ.)
YES
Replace the compressor.
NO
Check the compressor motor coil for any broken wire.
Some phase has a broken wire.
YES
NO
Power ON
Restart the compressor, and then check whether or not the error recurs.
NO
End of work
Faulty pressure equalization or else may have occurred.
Check the refrigerant system.
YES
Has the compressor started up at high differential pressure (not less than 0.5MPa)?
YES
Defective pressure equalization:
Check the refrigerant system.
NO
Replace the compressor.
• Conduct checks and diagnosis of the compressor.

3.33 E6 Compressor Overcurrent

Remote Controller Display

E6

Applicable Model

R(Y)-LU, RR-M

Method of Error Detection

The input current value is detected with a current sensor.

Error Decision Conditions

When the compressor input current exceeds the specified input current value.

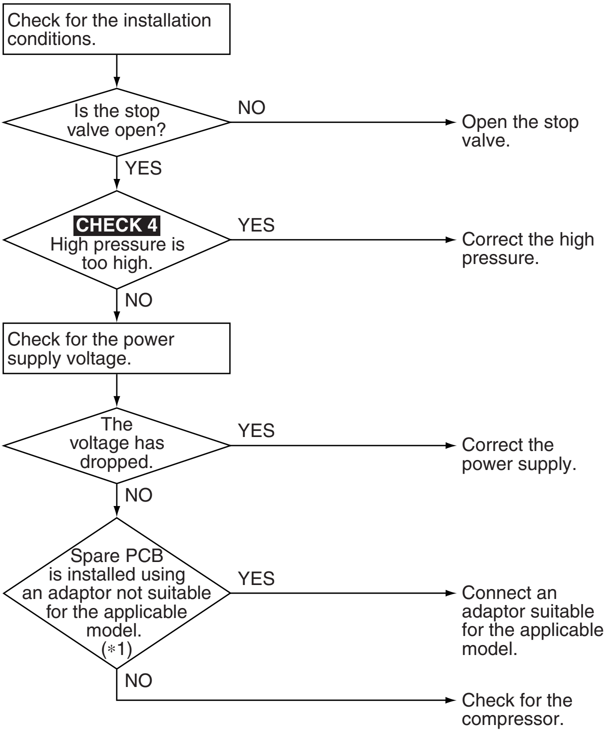
∗ Refer to “Approximate Input current value” on following page.

Possible Causes

- High pressure increased too high
- Voltage drop
- Stop valve is not opened
- Defective compressor (compressor lock)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

For details, refer to information in troubleshooting “PJ”.

CHECK 4 **Refer to P.464.**

∗1. Approximate Input current value

Model	Input current value
R71LUVAL	25.30 A
R(Y)71LUV1	25.30 A
R(Y)71LUY1	8.63 A
R100LUVAL	29.90 A
R(Y)100LUV1	29.90 A
R(Y)100LUY1	11.50 A
R125LUTAL	25.30 A
R125LUYAL	14.95 A
R(Y)125LUY1	14.95 A
R(Y)140LUTAL	32.20 A
R(Y)140LUYAL	17.25 A
R(Y)140LUY1	17.25 A
RY160LUY1	17.25 A

Model	Input current value
RR71MV1	25.3 A
RR71MY1	11.5 A
RR100MY1	11.5 A
RR125MY1	15.0 A

3.34 E7 Outdoor Unit Fan Motor Abnormality

Remote Controller Display

E7

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZQG, RZR-KU/HU

Method of Error Detection

Abnormality of fan motor system is detected according to the fan speed detected by hall IC when the fan motor runs.

Error Decision Conditions

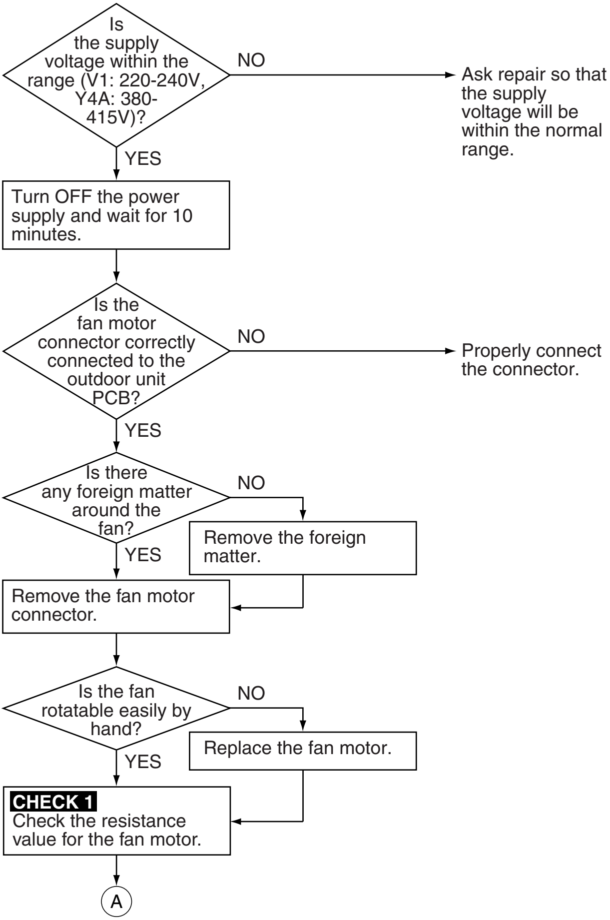
- When the fan runs with speed less than a specified one for 15 seconds or more when the fan motor running conditions are met
- When connector detecting fan speed is disconnected
- When the error is generated 4 times, the system shuts down.

Supposed Causes

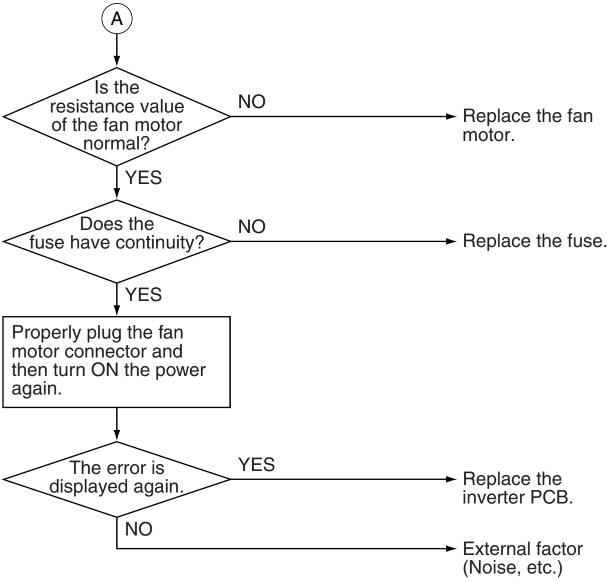
- Defective fan motor
- The harness connector between fan motor and PCB is left in disconnected, or defective connector
- Fan does not run due to foreign matters tangled
- Defective outdoor unit PCB
- Blowout of fuse
- External factor (Noise, etc.)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 1 **Refer to P.459.**


A
Is the resistance value of the fan motor normal?
NO
Replace the fan motor.
YES
Does the fuse have continuity?
NO
Replace the fuse.
YES
Properly plug the fan motor connector and then turn ON the power again.
The error is displayed again.
YES
Replace the inverter PCB.
NO
External factor (Noise, etc.)

Remote Controller Display

E7

Applicable Models

RZQ-C7

Method of Error Detection

Defective fan motor system is detected according to the fan speed detected by hall IC when the fan motor runs.

Error Decision Conditions

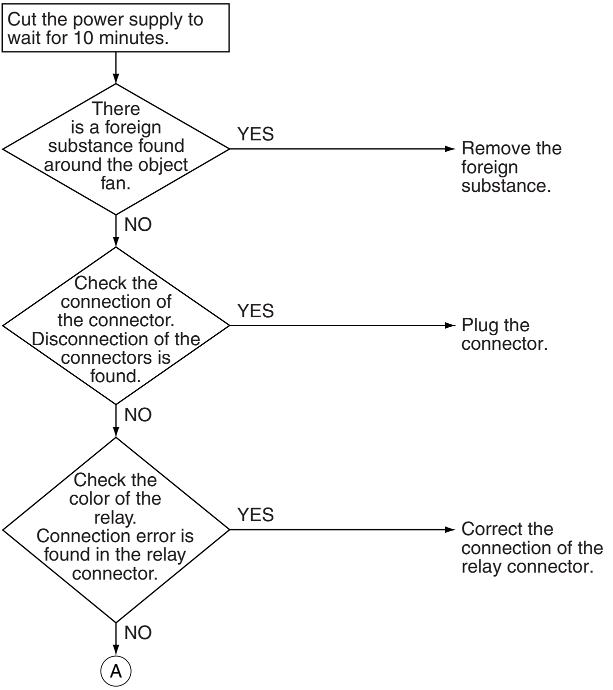
- When the fan runs with speed less than a specified one for 6 seconds or more when the fan motor running conditions are met
- When connector detecting fan speed is disconnected
- When the error is generated 4 times, the system shuts down.

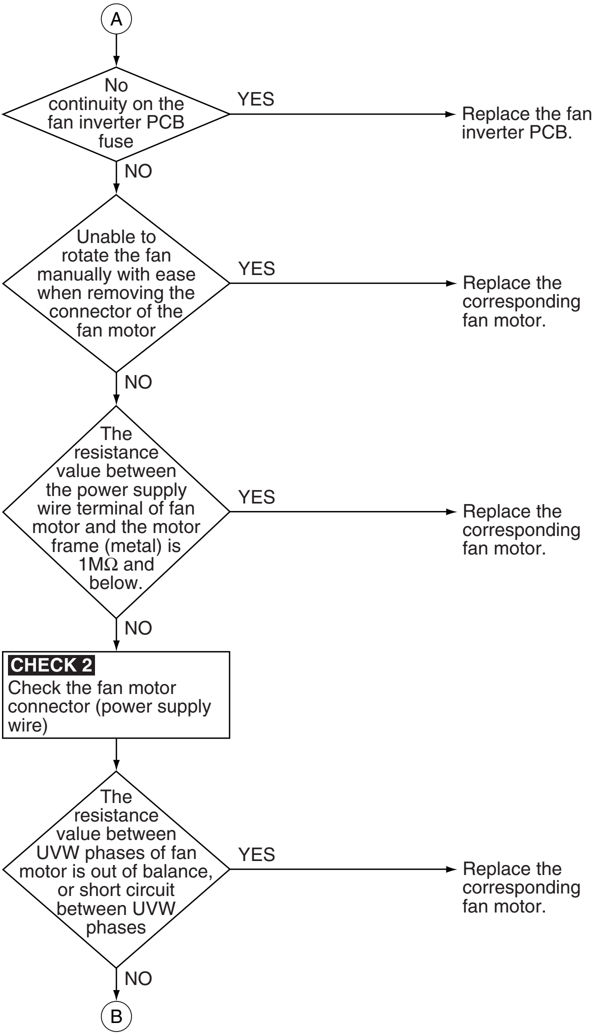
Supposed Causes

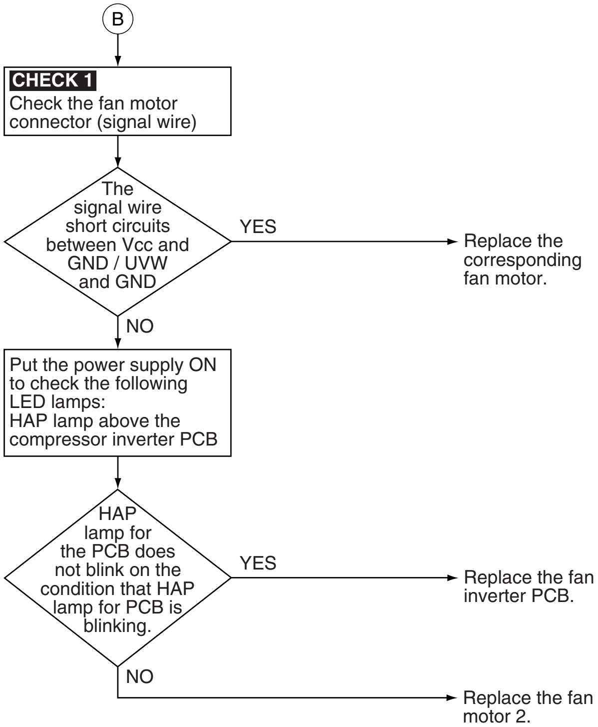
- Disconnection of connector
- Defective fan motor
- The harness connector between fan motor and PCB is left in disconnected, or defective connector
- Fan does not run due to foreign matters tangled
- Clearing condition: Operate for 5 minutes (normal)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
No continuity on the fan inverter PCB fuse
YES
Replace the fan inverter PCB.
NO
Unable to rotate the fan manually with ease when removing the connector of the fan motor
YES
Replace the corresponding fan motor.
NO
The resistance value between the power supply wire terminal of fan motor and the motor frame (metal) is 1MΩ and below.
YES
Replace the corresponding fan motor.
NO
CHECK 2
Check the fan motor connector (power supply wire)
The resistance value between UVW phases of fan motor is out of balance, or short circuit between UVW phases
YES
Replace the corresponding fan motor.
NO
B



CHECK 1 **Refer to P.459.**

CHECK 2 **Refer to P.460.**

Remote Controller Display

E7

Applicable Models

CMSQ

Method of Error Detection

Error of fan motor system is detected according to the fan speed detected by hall IC when the fan motor runs.

Error Decision Conditions

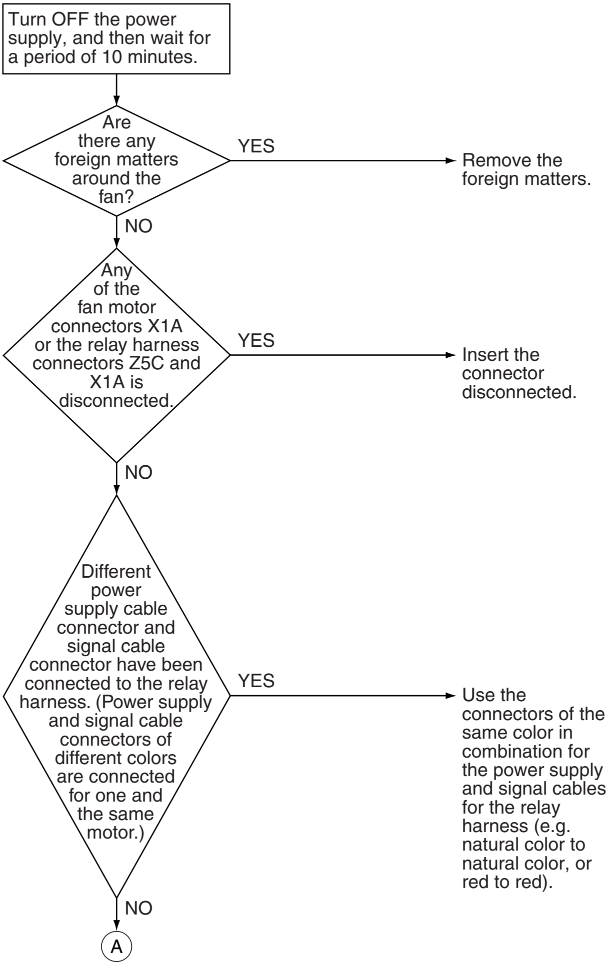
- When the fan runs with speed less than a specified one for 6 seconds or more when the fan motor running conditions are met
- When connector detecting fan speed is disconnected
- When error is generated 4 times, the system shuts down.

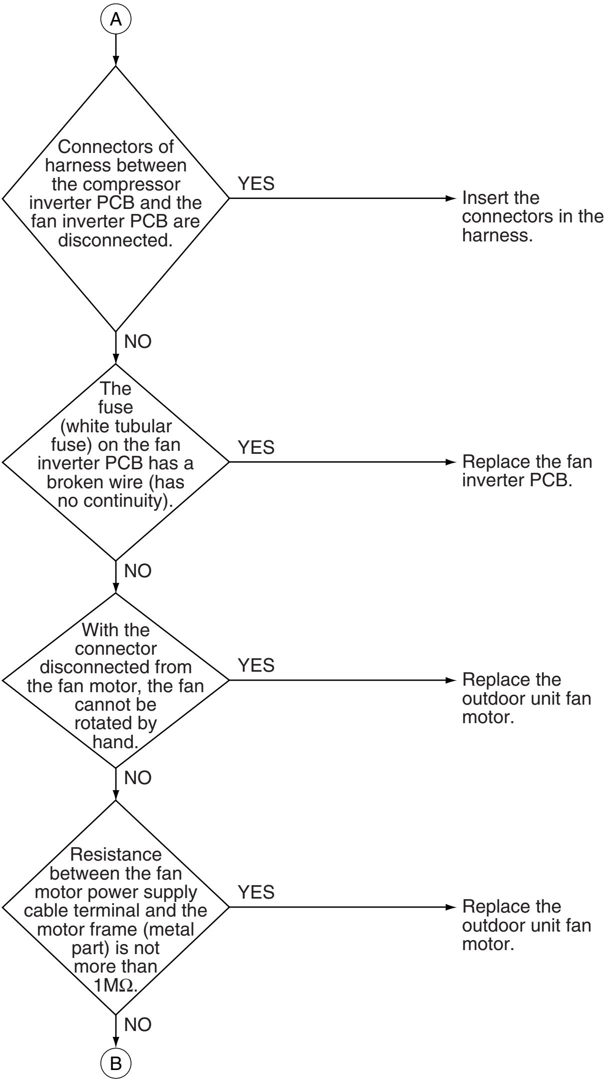
Supposed Causes

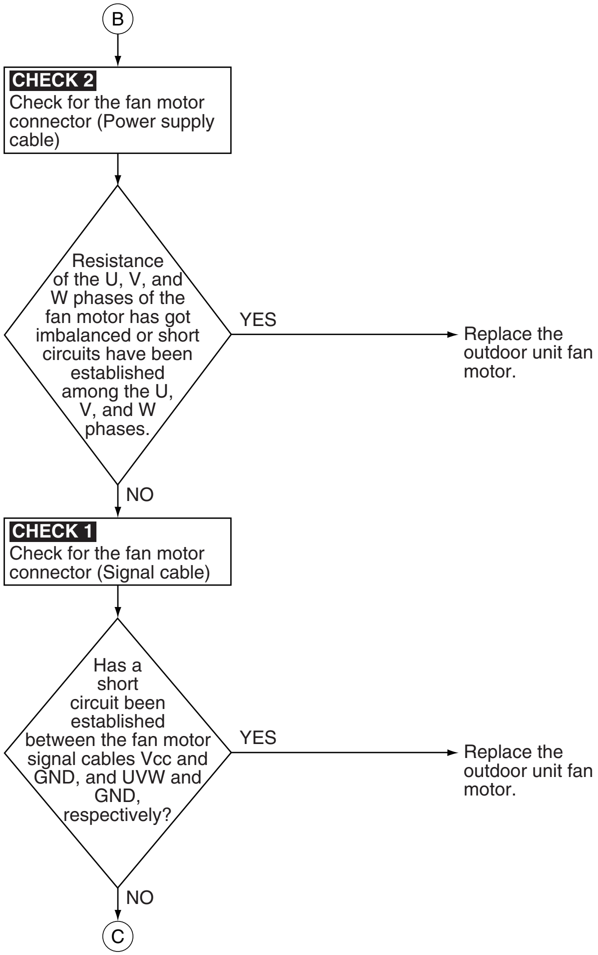
- Defective fan motor
- The harness connector between fan motor and PCB is left in disconnected, or defective connector
- Fan does not run due to foreign matters tangled
- Clearing condition: Operate for 5 minutes (normal)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

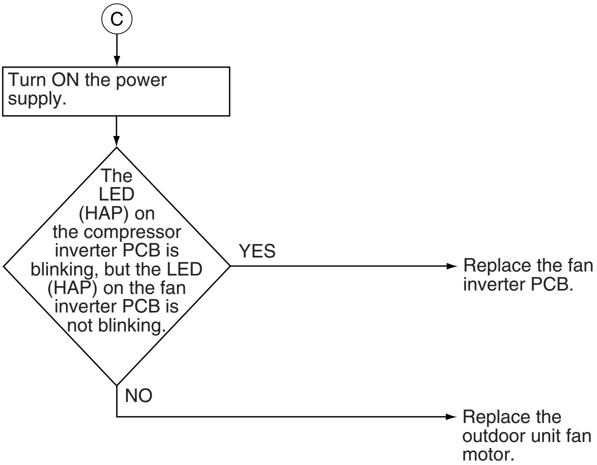



A
Connectors of harness between the compressor inverter PCB and the fan inverter PCB are disconnected.
YES
Insert the connectors in the harness.
NO
The fuse (white tubular fuse) on the fan inverter PCB has a broken wire (has no continuity).
YES
Replace the fan inverter PCB.
NO
With the connector disconnected from the fan motor, the fan cannot be rotated by hand.
YES
Replace the outdoor unit fan motor.
NO
Resistance between the fan motor power supply cable terminal and the motor frame (metal part) is not more than 1MΩ.
YES
Replace the outdoor unit fan motor.
NO
B



CHECK 1 **Refer to P.459.**

CHECK 2 **Refer to P.460.**


C
Turn ON the power supply.
The LED (HAP) on the compressor inverter PCB is blinking, but the LED (HAP) on the fan inverter PCB is not blinking.
YES
Replace the fan inverter PCB.
NO
Replace the outdoor unit fan motor.

3.35 E9 Electronic Expansion Valve Abnormality

Remote Controller Display

E9

Applicable Models

RY-F, R(Y)-G/GA/KU/LU

Method of Error Detection

With electronic expansion valve error detection, coil current is detected and open and short circuits are detected.

Error Decision Conditions

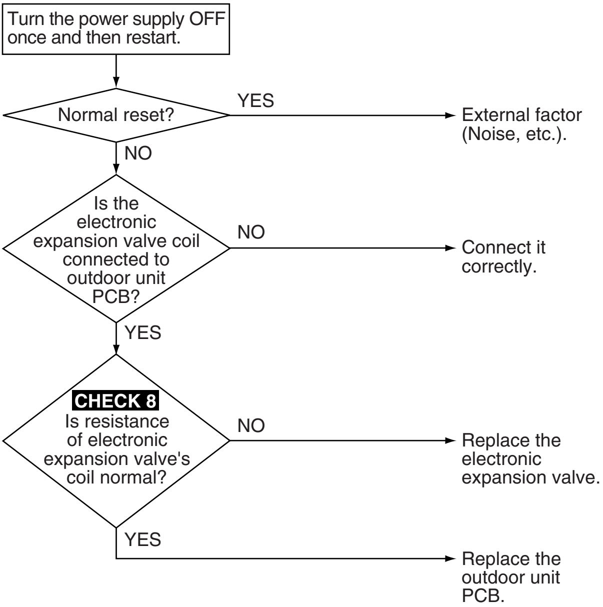
The error is determined by the following condition.
[For R(Y)-LU]
There is no common power supply when the power is ON.
[For RY-F, R(Y)-G/GA/KU]
Coil current: open circuit < normal < short circuit

Supposed Causes

- Defective electronic expansion valve
- Electronic expansion valve's harness is broken or disconnected.
- Defective electronic expansion valve's connector connection
- Defective outdoor unit PCB
- External factor (Noise, etc.)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 8 **Refer to P.473.**

Remote Controller Display

E9

Applicable Models

RZ(Y), RZQ-C

Method of Error Detection

For RZ(Y)
The error detection function detects coil current to determine open circuit and short circuit.
For RZQ-C
Check disconnection of connector
Check continuity of electronic expansion valve coil

Error Decision Conditions

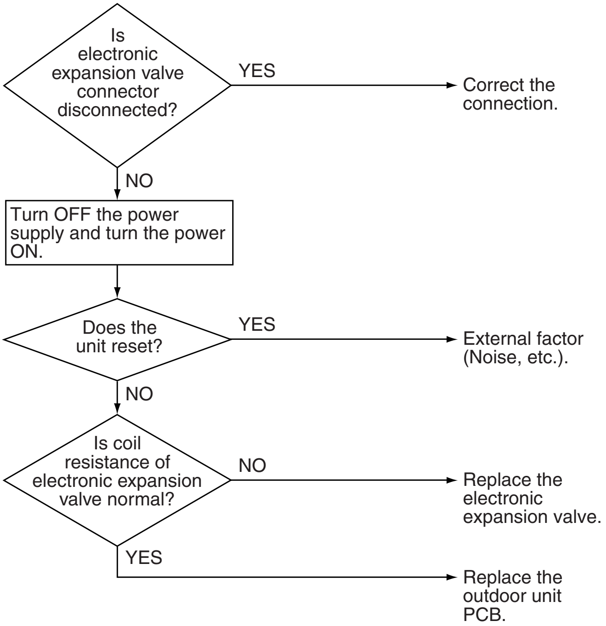
For RZ(Y)
Error is generated under the following condition.
Coil current:
Open circuit < Normal < Short circuit
For RZQ-C
Error is generated under no common power supply when the power is ON.

Supposed Causes

- Defective electronic expansion valve
- Open circuit in electronic expansion valve harness
- Defective connection of electronic expansion valve connector
- Defective outdoor unit PCB
- External factor (Noise, etc.)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.36 E9 Electronic Expansion Valve Coil Abnormality

Remote Controller Display

E9

Applicable Models

CMSQ

Method of Error Detection

Check disconnection of connector
Check continuity of electronic expansion valve coil

Error Decision Conditions

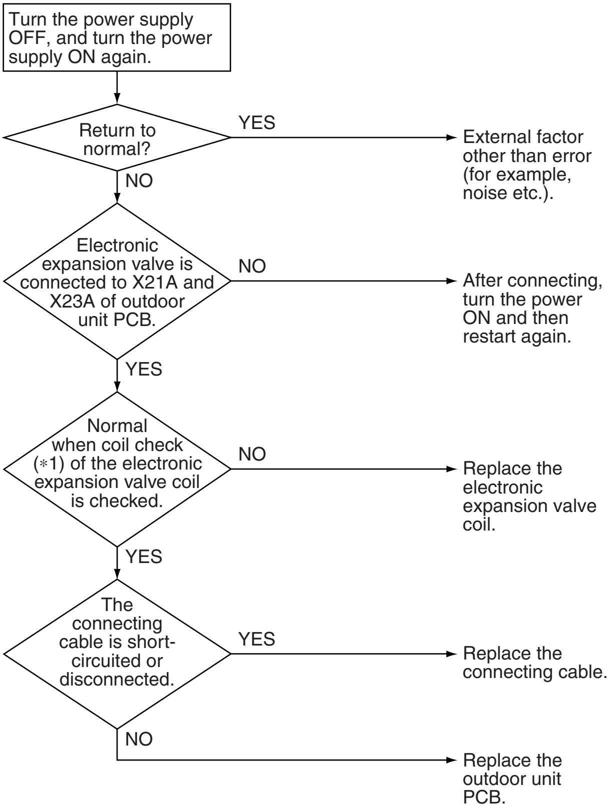
Error is generated under no common power supply when the power is ON.

Supposed Causes

- Defective electronic expansion valve coil
- Defective outdoor unit PCB
- Defective connecting cable

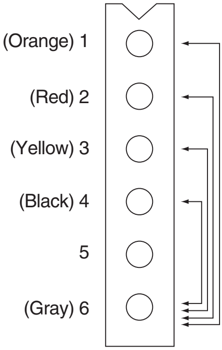
Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. Make measurement of resistance between the connector pins, and then make sure the resistance falls in the range of 40 to 50Ω.



Measuring points
1 - 6
2 - 6
3 - 6
4 - 6

Remote Controller Display

E9

Applicable Models

RZQ-K, RZQ(S)-B, RZQG, RZR-KU/HU

Method of Error Detection

The error is detected by the suction pipe superheated degree and electronic expansion valve opening degree calculated by values of pressure sensor and suction pipe thermistor.

Error Decision Conditions

When the following conditions are met for 10 minutes

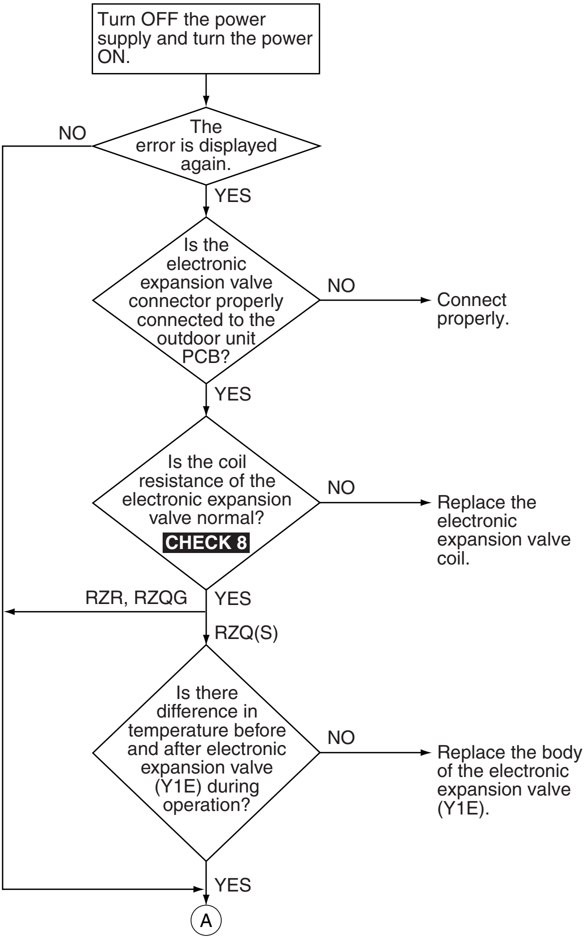
- Suction pipe superheated degree < 4°C
- Minimum electronic expansion valve opening degree
- Connector of electronic expansion valve is missing when the power is ON.

Supposed Causes

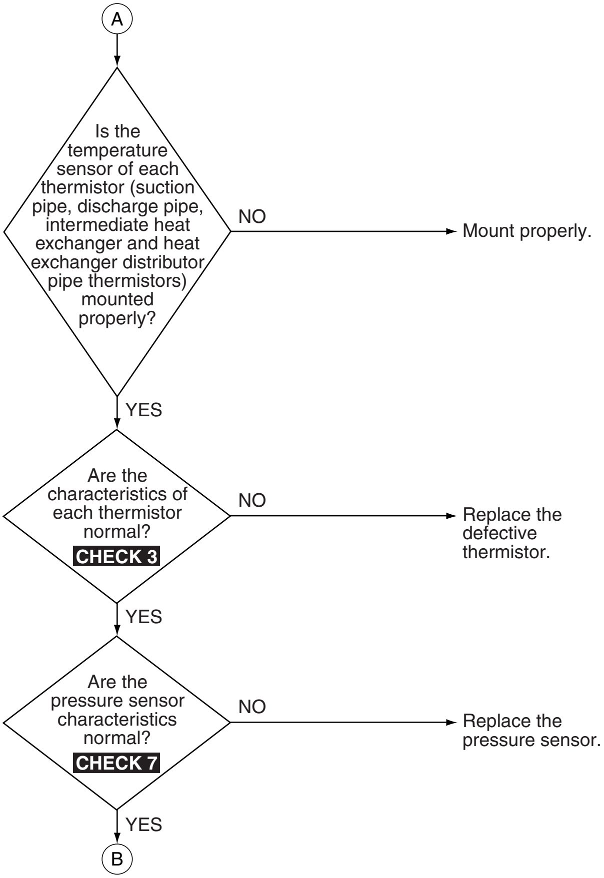
- Defective electronic expansion valve
- Defective solenoid valve
- Defective check valve
- Disconnection of electronic expansion valve harness
- Defective connection of electronic expansion valve connector
- Defective each thermistor
- Defective mounting
- Defective pressure sensor
- Defective outdoor unit control PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

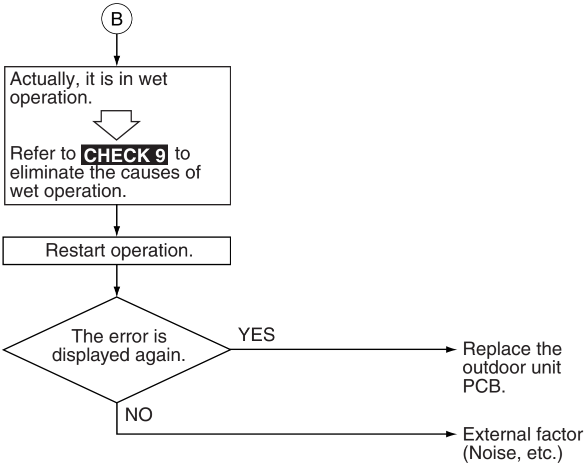


CHECK 8 **Refer to P.473.**



CHECK 3 **Refer to P.460.**

CHECK 7 **Refer to P.470.**



CHECK 9 **Refer to P.474.**

Remote Controller Display

E9

Applicable Models

RZQ-H, RZQ(S)-C

Method of Error Detection

The error is detected by the suction pipe superheated degree and electronic expansion valve opening degree calculated by values of suction pipe thermistor.

Error Decision Conditions

When the following conditions are met for 10 minutes

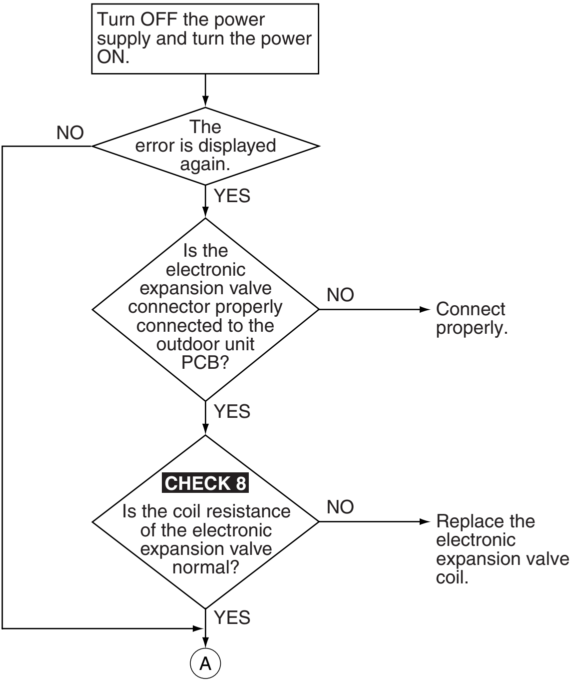
- Suction pipe superheated degree < 4°C
- Minimum electronic expansion valve opening degree
- Connector of electronic expansion valve is missing when the power is ON.

Supposed Causes

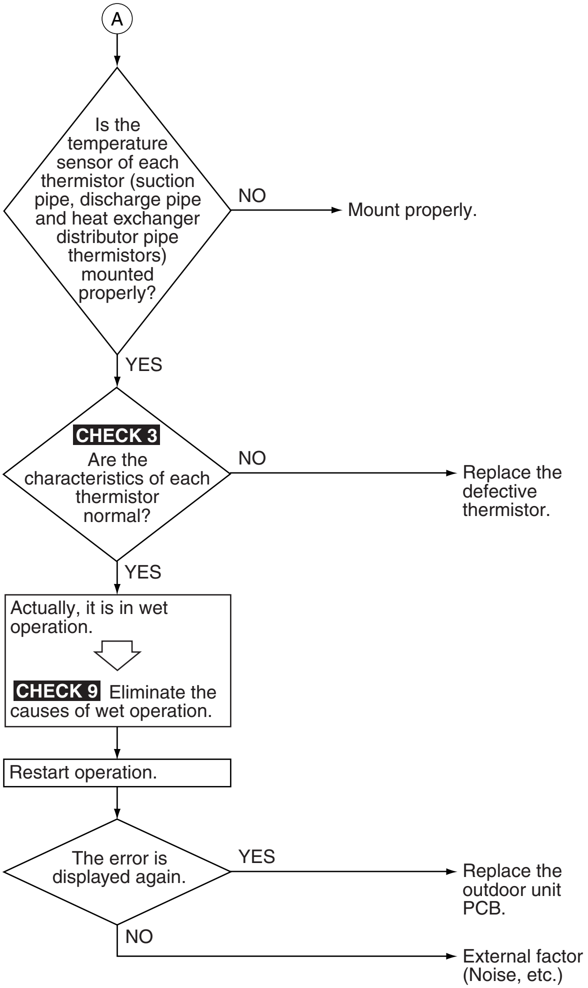
- Defective electronic expansion valve
- Defective solenoid valve
- Defective check valve
- Disconnection of electronic expansion valve harness
- Defective connection of electronic expansion valve connector
- Defective each thermistor
- Defective mounting
- Defective outdoor unit control PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 8 **Refer to P.473.**



CHECK 3 **Refer to P.460.**

CHECK 9 **Refer to P.474.**

3.37 F3 Discharge Pipe Temperature Abnormality

Remote Controller Display

F3

Applicable Models

RY-F, R(Y)-G/GA/KU

Method of Error Detection

The error is detected according to temperature detected by discharge pipe thermistor.

Error Decision Conditions

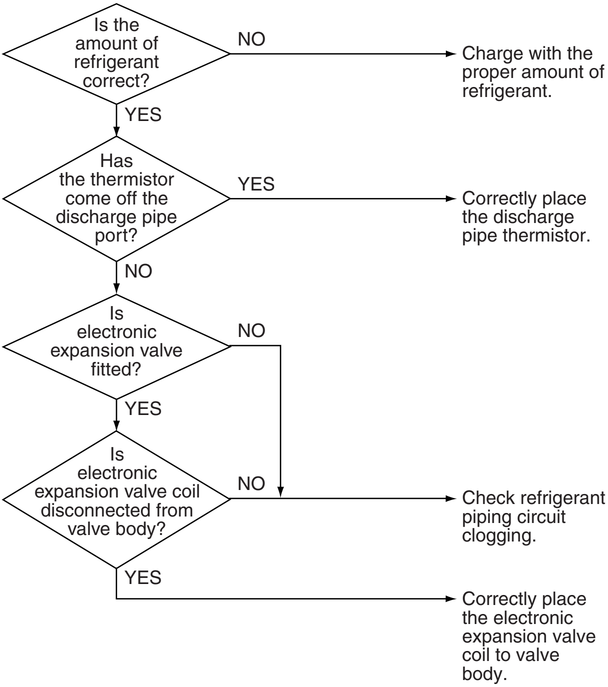
- When discharge pipe temperature becomes abnormally high
- When discharge pipe temperature rises suddenly
- When the discharge pipe thermistor comes out of its installed position

Supposed Causes

- Improper amount of refrigerant
- Refrigerant piping circuit clogging

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

F3

Applicable Models

R(Y)-LU, RR-M

Method of Error Detection

The error is detected according to temperature detected by discharge pipe thermistor.

Error Decision Conditions

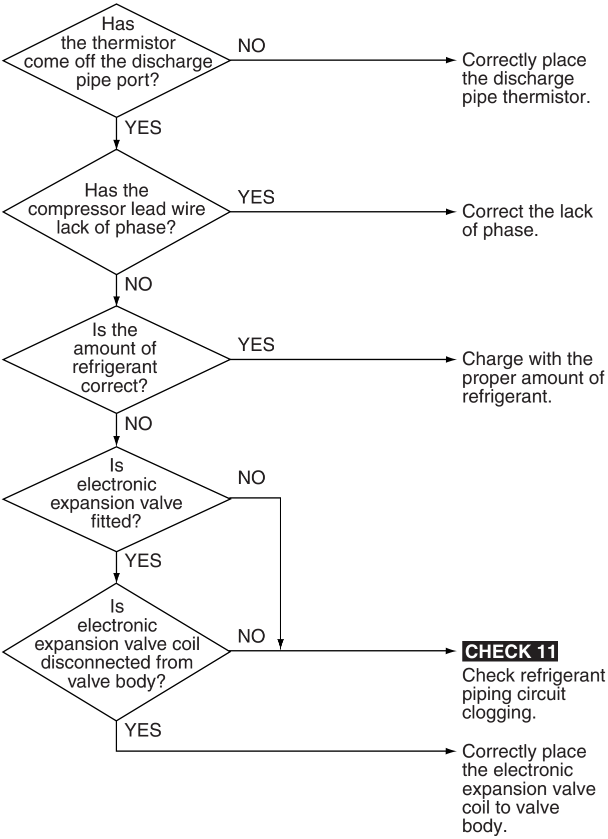
- When discharge pipe temperature becomes abnormally high
- When discharge pipe temperature rises suddenly
- When the discharge pipe thermistor comes out of its installed position

Supposed Causes

- Improper amount of refrigerant
- Refrigerant piping circuit clogging
- Discharge pipe thermistor comes off the discharge pipe port
- Electronic expansion valve coil is disconnected from valve body
- Compressor lead wire has lack of phase

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 11 **Refer to P.477.**

Remote Controller Display

F3

Applicable Models

RZ(Y)

Method of Error Detection

The error is detected according to the temperature detected by the discharge pipe thermistor.

Error Decision Conditions

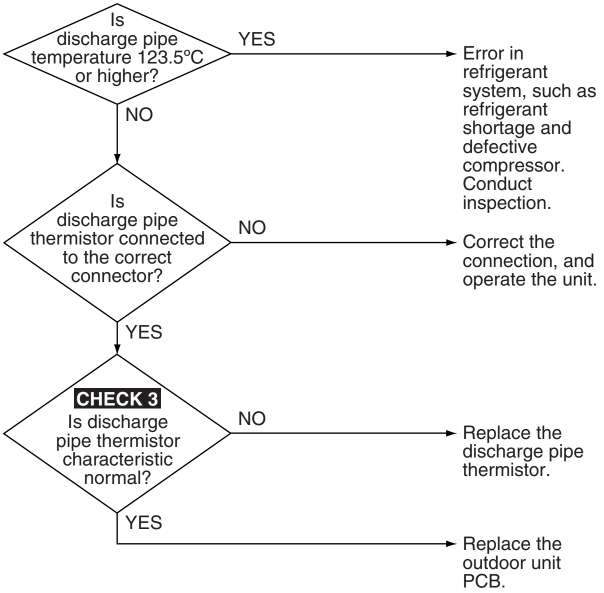
- When the discharge pipe temperature rises to an abnormally high level
- When the discharge pipe temperature rises suddenly

Supposed Causes

- Defective discharge pipe thermistor
- Defective connection of discharge pipe thermistor
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 3 **Refer to P.460.**

Remote Controller Display

F3

Applicable Models

CMSQ

Method of Error Detection

Abnormality is detected according to the temperature detected by the discharge pipe temperature sensor.

Error Decision Conditions

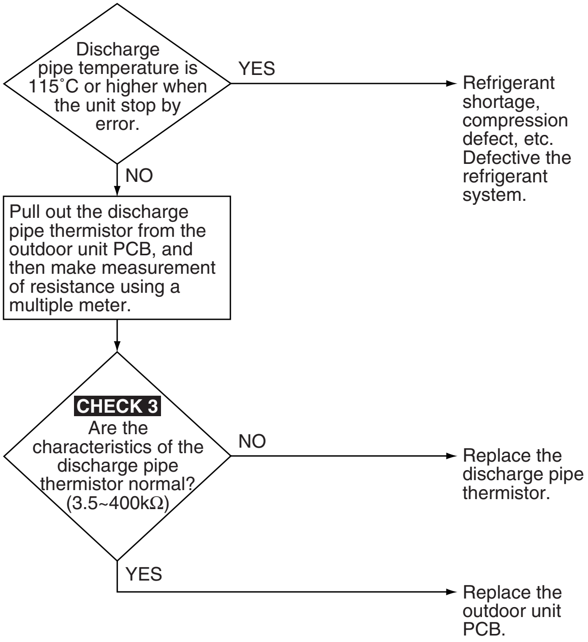
- When the discharge pipe temperature rises to an abnormally high level
- When the discharge pipe temperature rises suddenly

Supposed Causes

- Defective discharge pipe temperature sensor
- Defective connection of discharge pipe temperature sensor
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 3 **Refer to P.460.**

3.38 F3 Discharge Pipe Temperature Control

Remote Controller Display

F3

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZQG, RZR-KU / HU

Method of Error Detection

The error is detected according to the temperature detected by the discharge pipe thermistor.

Error Decision Conditions

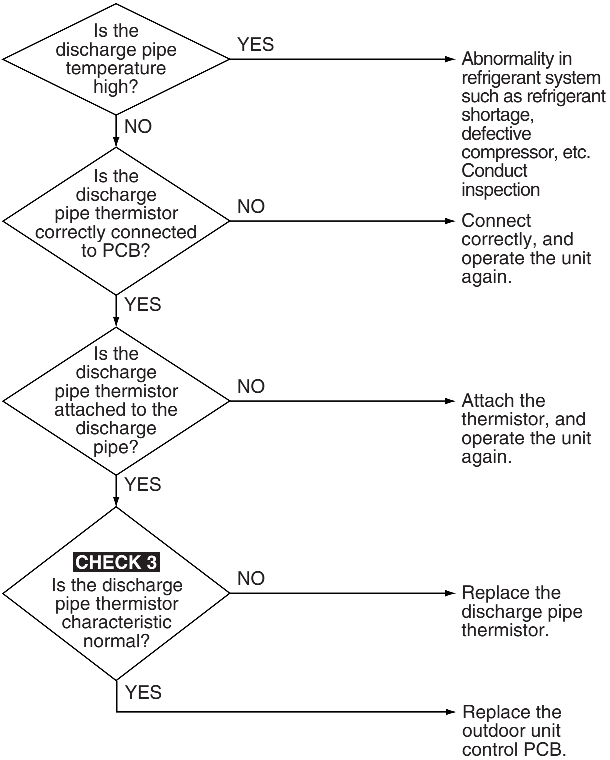
- When the discharge pipe temperature rises to an abnormally high level
- When the discharge pipe temperature rises suddenly
- When the discharge pipe temperature does not rise after operation start

Supposed Causes

- Defective discharge pipe thermistor
- Defective connection of discharge pipe thermistor
- Refrigerant shortage
- Defective compressor
- Disconnection of discharge pipe thermistor
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 3 **Refer to P.460.**

3.39 F6 Abnormal Heat Exchanging Temperature

Remote Controller Display

F6

Applicable Model

R(Y)71~100LU

Method of Error Detection

The high pressure control (stop) is made according to temperature detected with outdoor unit heat exchanger thermistor in cooling operation or indoor unit heat exchanger thermistor in heating operation.

Error Decision Conditions

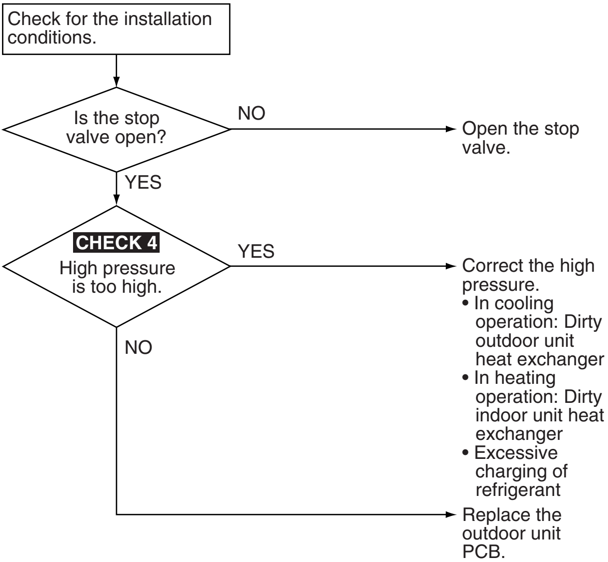
When the outdoor unit heat exchanging temperature in cooling operation or the indoor unit heat exchanging temperature in heating operation exceeds a rated value.

Possible Causes

- Clogged indoor unit suction filter (in heating operation)
- Dirty outdoor unit heat exchanger
- Defective outdoor unit fan
- Excessive charging of refrigerant
- Stop valve is not opened

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 4 **Refer to P.464.**

3.40 F6 Refrigerant Overcharged

Remote Controller Display

F6

Applicable Models

CMSQ

Method of Error Detection

Excessive charging of refrigerant is detected by using the outdoor air temperature, heat exchanger deicer temperature and liquid pipe temperature during check operation.

Error Decision Conditions

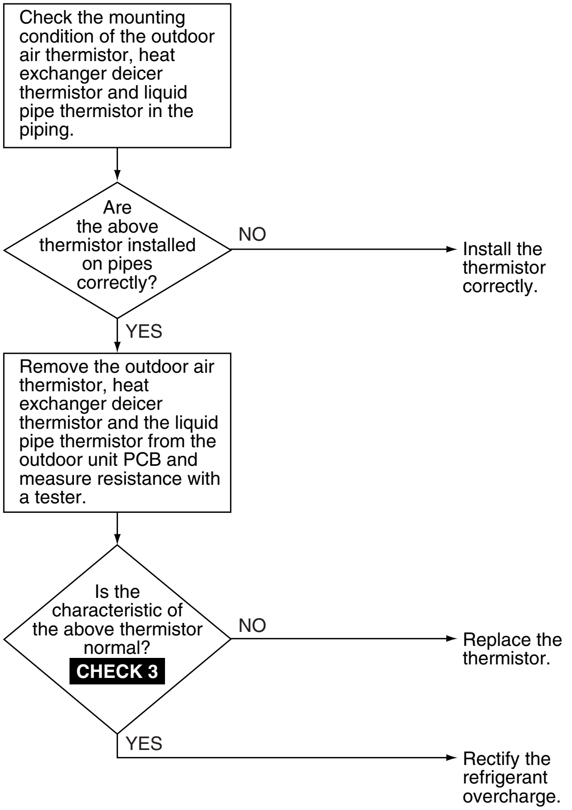
When the amount of refrigerant, which is calculated by using the outdoor air temperature, heat exchanging deicer temperature and liquid pipe temperature during check operation, exceeds the criteria.

Supposed Causes

- Refrigerant overcharge
- Disconnection of outdoor air thermistor
- Disconnection of heat exchanger deicer thermistor
- Defective liquid pipe thermistor

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 3 **Refer to P.460.**

3.41 H3 High Pressure Switch Abnormality

Remote Controller Display

H3

Applicable Models

RY-F, R(Y)-G/GA/KU

Method of Error Detection

Continuity of the high pressure switch is detected by the safety device circuitry.

Error Decision Conditions

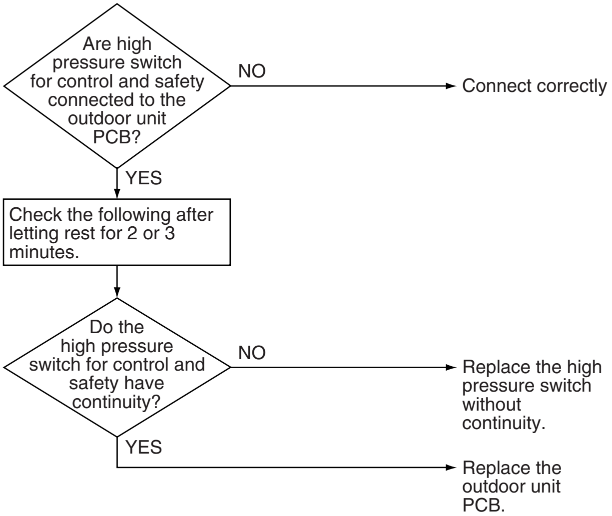
When the compressor is OFF and the high pressure switch does not have continuity

Supposed Causes

- Defective high pressure switch
- High pressure switch's harness is broken or disconnected
- Defective high pressure switch's connector connection
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

H3

Applicable Model

R(Y)125 • 140LU

Method of Error Detection

The protection device circuit checks for the continuity in the high pressure switch.

Error Decision Conditions

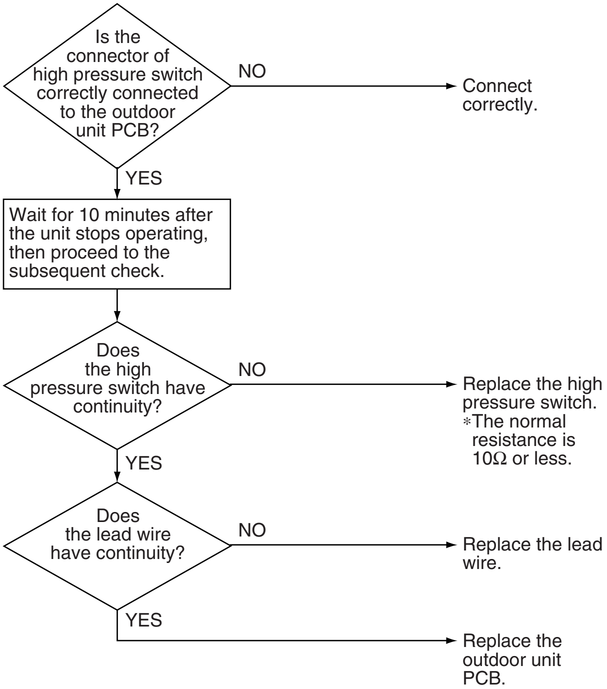
When the high pressure switch has no continuity during the compressor stops operating.

Possible Causes

- Defective high pressure switch
- Disconnection in harness of high pressure switch
- Defective connection of high pressure switch connector
- Defective outdoor unit PCB
- Disconnection in lead wire

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

H3

Applicable Models

RZ(Y)

Method of Error Detection

The protection device circuit checks continuity in the high pressure switch.

Error Decision Conditions

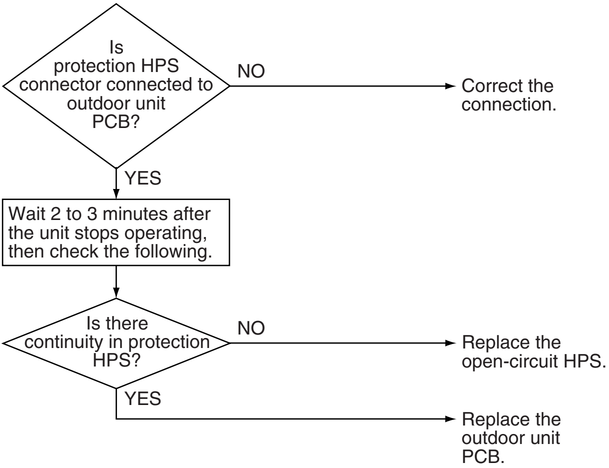
When there is no continuity in the high pressure switch during compressor non-operating period.

Supposed Causes

- Defective high pressure switch
- Open circuit in high pressure switch harness
- Defective connection of high pressure switch connector
- Defective outdoor unit PCB.

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.42 H3 High Pressure Switch System Abnormality

Remote Controller Display

H3

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZQG, RZR-KU/HU

Method of Error Detection

The protection device circuit checks continuity in the high pressure switch.

Error Decision Conditions

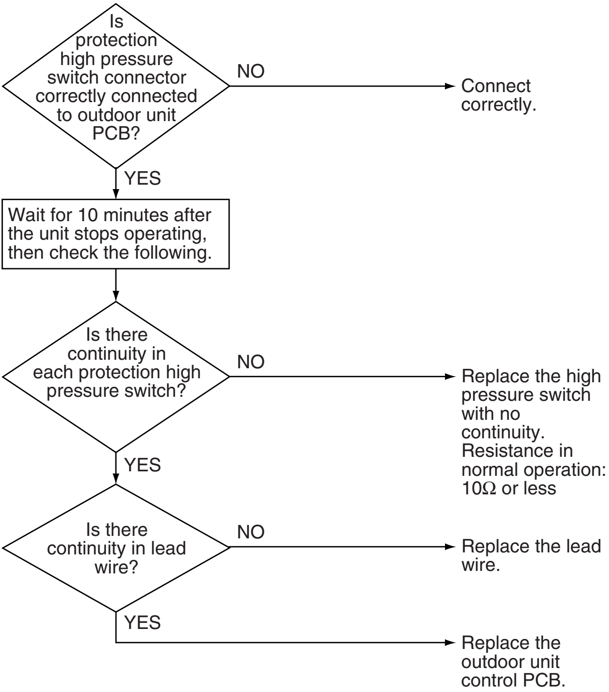
When there is no continuity in the high pressure switch during compressor stops operating.

Supposed Causes

- Incomplete high pressure switch
- Disconnection in high pressure switch harness
- Defective connection of high pressure switch connector
- Defective outdoor unit PCB
- Disconnected lead wire

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.43 H4 Low Pressure Sensor System Abnormality

Remote Controller Display

H4

Applicable Models

RZQ-H

Method of Error Detection

- Check the continuity of low pressure sensor
- Low pressure sensor is not operated when the low pressure is dropped under specific pressure (0.12MPa).

Error Decision Conditions

When there is no continuity in the low pressure sensor during compressor start operating.

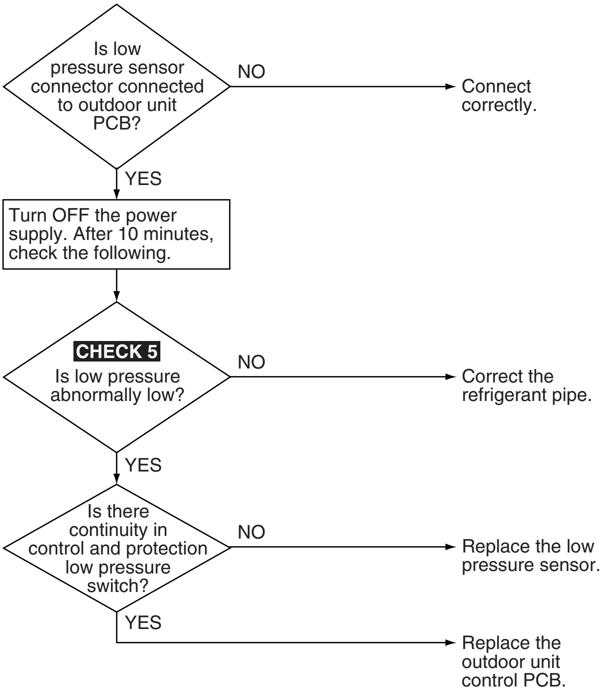
Low pressure sensor is not operated when the low pressure is dropped under specific pressure (0.12MPa) during compressor operating.

Supposed Causes

- Defective low pressure sensor
- Disconnection in low pressure switch harness
- Defective connection of low pressure sensor connector
- Defective outdoor unit PCB
- Refrigerant shortage
- Stop valve is not opened
- Defective electronic expansion valve
- Clogged check valve

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 5 **Refer to P.466.**

Remote Controller Display

H4

Applicable Models

RZQ-B

Method of Error Detection

- Check the continuity of LPS
- LPS is not operated when the low pressure is dropped under specific pressure (0.12MPa).

Error Decision Conditions

When there is no continuity in the LPS during compressor start operating.

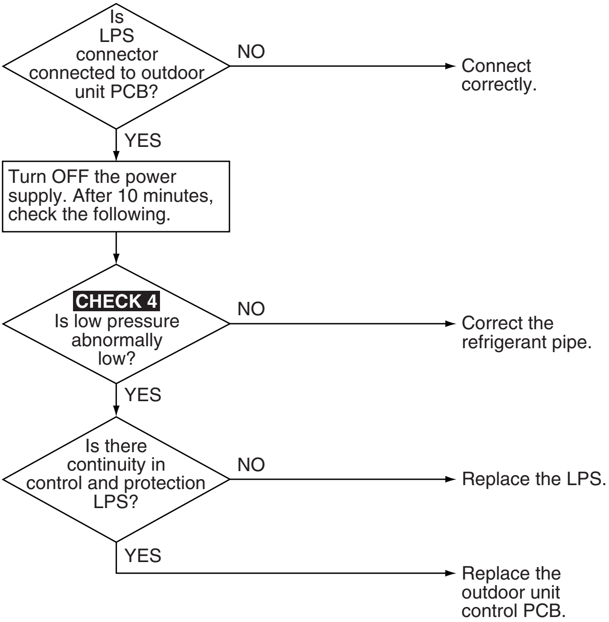
LPS is not operated when the low pressure is dropped under specific pressure (0.12MPa) during compressor operating.

Supposed Causes

- Defective LPS
- Disconnection in LPS harness
- Defective connection of LPS connector
- Defective outdoor unit PCB
- Refrigerant shortage
- Stop valve is not opened
- Defective electronic expansion valve
- Clogged check valve

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 4 **Refer to P.464.**

3.44 H7 Outdoor Unit Fan Motor Signal Abnormality

Remote Controller Display

H7

Applicable Models

CMSQ, RZQ-C7

Method of Error Detection

Detection of abnormal signal from fan motor.

Error Decision Conditions

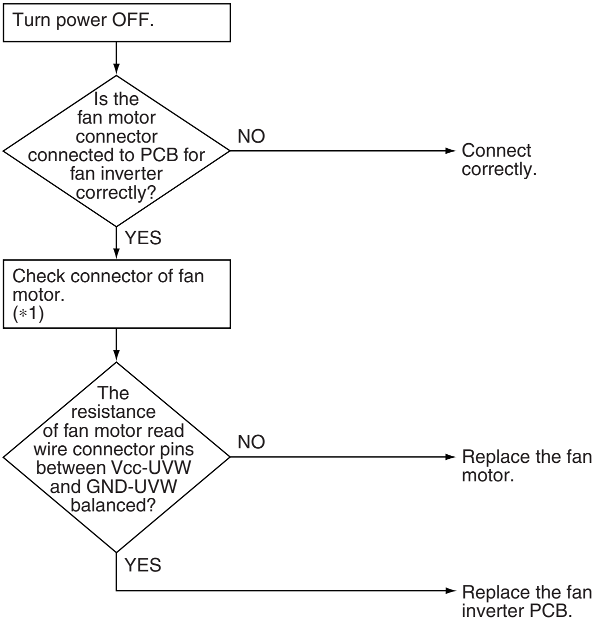
In case of detection of abnormal signal at starting fan motor.

Supposed Causes

- Abnormal fan motor signal (circuit error)
- Broken, short or disconnection connector of fan motor connection cable
- Defective fan Inverter PCB

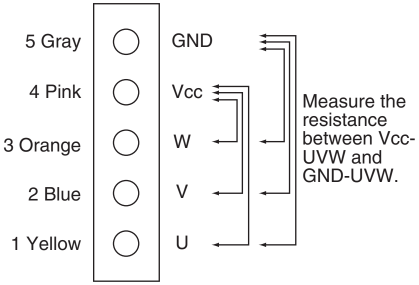
Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1: Disconnect connector and measure the following resistance.



3.45 H9, J3, J5, J6, J7, J8 Thermistor System Abnormality

Remote Controller Display

H9, J3, J5, J6, J7, J8

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZR-KU/HU

Method of Error Detection

The error is detected according to the temperature detected by each individual thermistor.

Error Decision Conditions

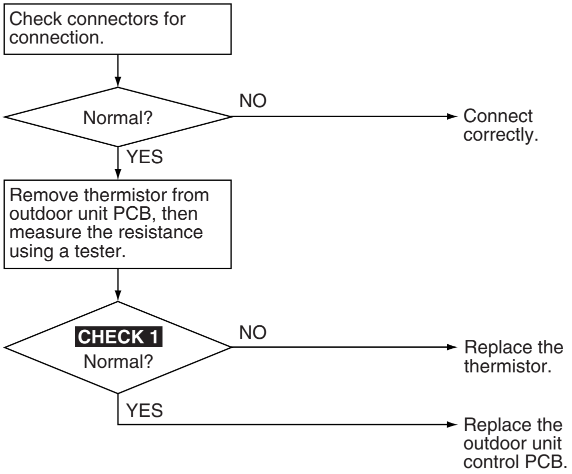
When thermistor is disconnected or short-circuited during operation

Supposed Causes

- Defective thermistor
- Defective connection of connector
- Defective outdoor unit control PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Error Code	Defective Thermistor
H9	Outdoor air thermistor
J3	Discharge pipe thermistor
J5	Suction pipe thermistor
J6	Heat exchanger thermistor
J7	Intermediate heat exchanger thermistor
J8	Liquid pipe thermistor

CHECK 1 **Refer to P.459.**

3.46 H9 Outdoor Air Thermistor System Abnormality

Remote Controller Display

H9

Applicable Models

RY-F/FU, R(Y)-G/GA/KU/LU, RR-M

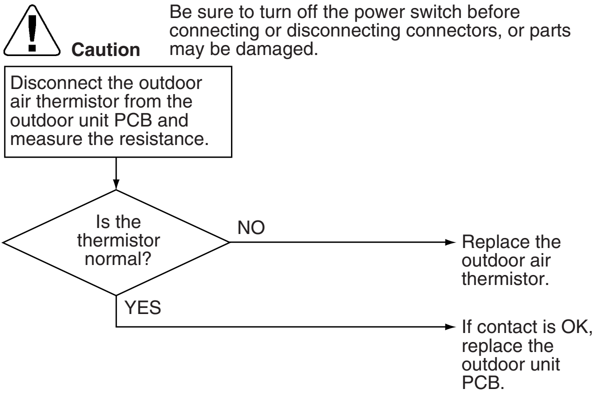
Error Decision Conditions

Case where the outdoor air thermistor has a short or open circuit

Supposed Causes

- Defective outdoor air thermistor
- Defective outdoor air thermistor connector connection
- Defective outdoor unit PCB

Troubleshooting



Remote Controller Display

H9

Applicable Models

RZ(Y), CMSQ

Method of Error Detection

The detection is based on abnormal resistance value of the thermistor.

Error Decision Conditions

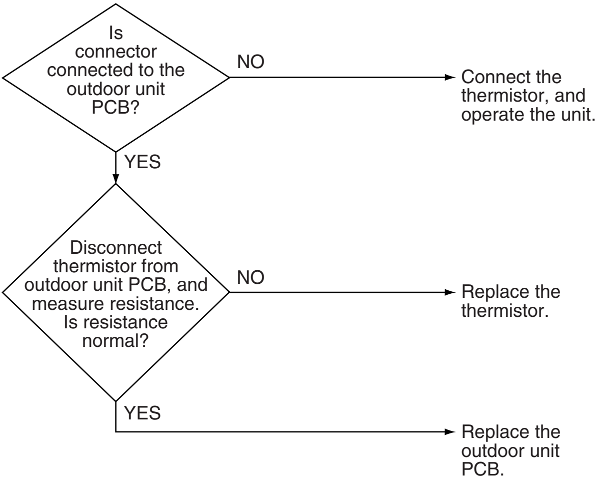
When the outdoor air thermistor has short circuit or open circuit.

Supposed Causes

- Defective outdoor air thermistor
- Defective connection of outdoor air thermistor connector
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.47 J1 Pressure Sensor Abnormality

Remote Controller Display

J1

Applicable Models

RZQ-K, RZQ(S)-C, RZR-KU/HU

Method of Error Detection

The error is detected by the pressure measured with pressure sensor

Error Decision Conditions

When the detect pressure becomes following;

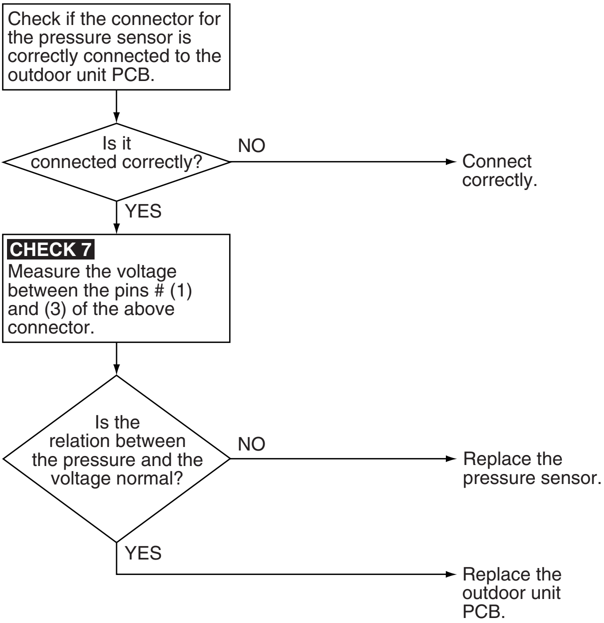
- Detected pressure ≤ – 0.05MPa continues 185 sec.
- Detected pressure ≥ 4.4MPa continues 185 sec.

Supposed Causes

- Defective pressure sensor
- Defective outdoor unit PCB
- Incorrect connection of connector

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 7 **Refer to P.470.**

3.48 J2 Current Sensor System Abnormality

Remote Controller Display

J2

Applicable Model

R(Y)-LU, RR-M

Method of Error Detection

The error of current sensor is detected through the current detected with the current sensor.

Error Decision Conditions

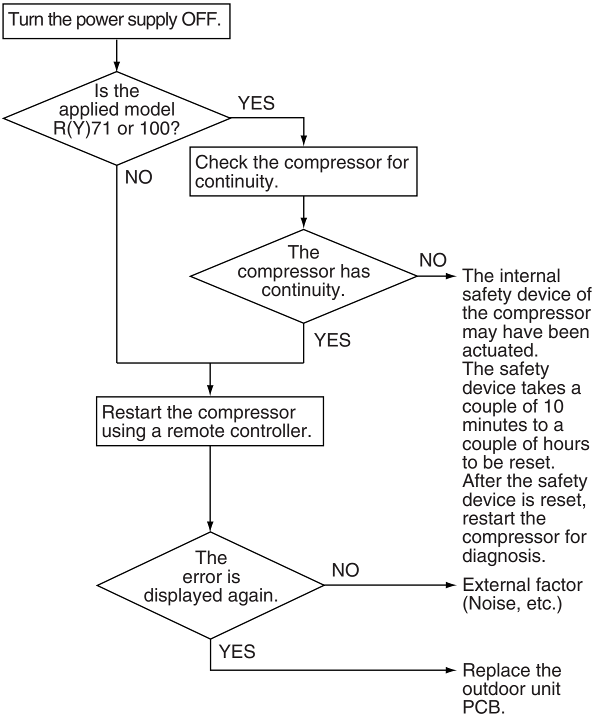
While in operation:
When the current detected with the current sensor is not more than a constant value (1.5A).
While in stopping:
When the current detected with the current sensor is not less than a constant value (5A).

Possible Causes

- Defective current sensor
- Defective outdoor unit PCB
- Actuation of internal safety device of compressor (Only on R(Y)71/100LU)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.49 J3 Discharge Pipe Thermistor System Abnormality

Remote Controller Display

J3

Applicable Models

RY-F/FU, R(Y)-G/GA/KU/LU, RR-M

Error Decision Conditions

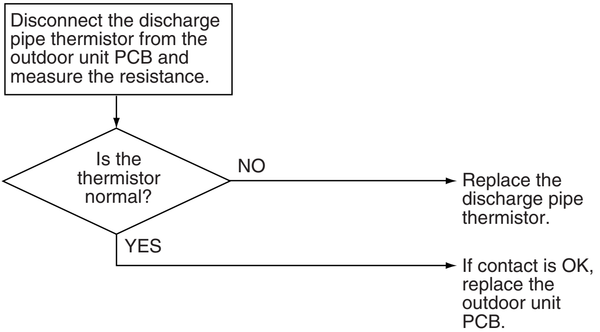
Case where the discharge pipe thermistor has a short or open circuit

Supposed Causes

- Defective discharge pipe thermistor
- Defective discharge pipe thermistor’s connector connection
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

J3

Applicable Models

RZ(Y), CMSQ

Method of Error Detection

The error is detected whether the resistance of thermistor is abnormal or normal.

Error Decision Conditions

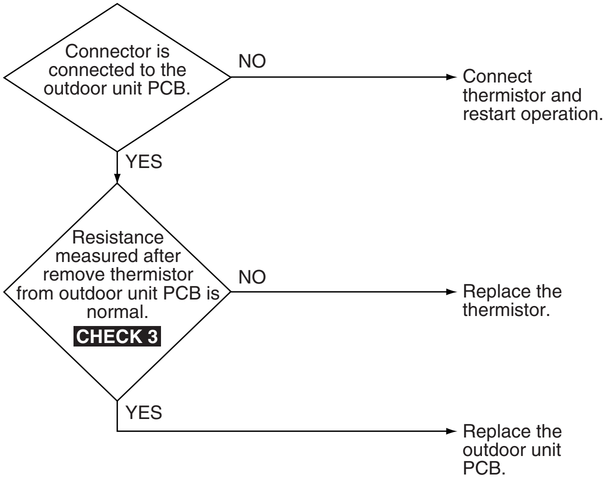
When a short circuit or an open circuit in the discharge pipe thermistor is detected.

Supposed Causes

- Defective discharge pipe thermistor
- Incomplete connection of discharge pipe thermistor
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 3 **Refer to P.460.**

3.50 J5 Suction Pipe Thermistor Abnormality

Remote Controller Display

J5

Applicable Models

CMSQ

Method of Error Detection

The error is detected from the temperature detected by the suction pipe thermistor.

Error Decision Conditions

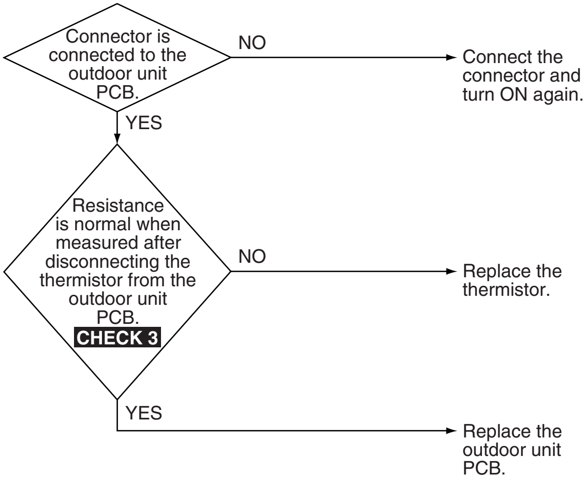
When a short circuit or an open circuit in the suction pipe thermistor is detected.

Supposed Causes

- Defective thermistor for outdoor unit suction pipe
- Defective outdoor unit PCB
- Defective thermistor connection

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 3 **Refer to P.460.**

3.51 J6 Heat Exchanger Thermistor System Abnormality

Remote Controller Display

J6

Applicable Models

RY-F/FU, R(Y)-G/GA/KU/LU, RR-M

Error Decision Conditions

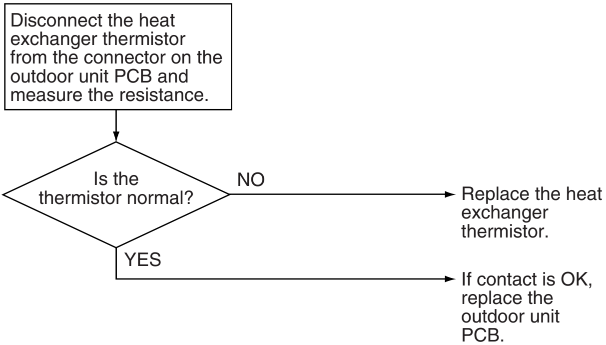
Case where the heat exchanger thermistor has a short or open circuit

Supposed Causes

- Defective heat exchanger thermistor
- Defective heat exchanger thermistor's connector connection
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

J6

Applicable Models

RZ(Y), CMSQ

Method of Error Detection

The error is detected whether the resistance of thermistor is abnormal or normal.

Error Decision Conditions

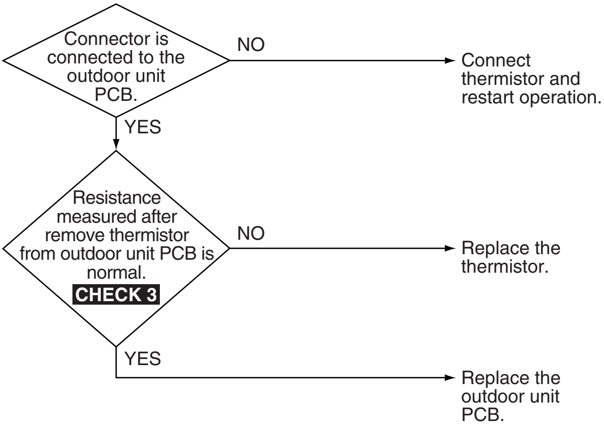
When a short circuit or an open circuit in the outdoor air thermistor is detected.

Supposed Causes

- Defective heat exchanger thermistor
- Incomplete connection of heat exchanger thermistor
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 3 **Refer to P.460.**

3.52 J7 Liquid Pipe Thermistor Abnormality

Remote Controller Display

J7

Applicable Models

CMSQ

Method of Error Detection

The error is detected according to the temperature detected by liquid pipe thermistor.

Error Decision Conditions

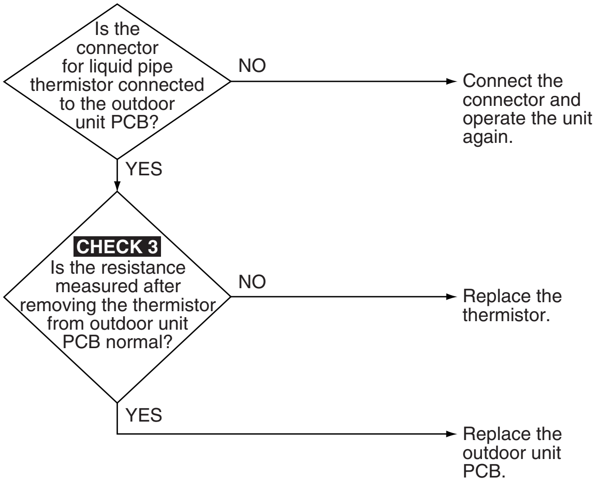
When the liquid pipe thermistor is short circuited or open circuited

Supposed Causes

- Defective liquid pipe thermistor (R6T)
- Defective outdoor unit PCB
- Defective thermistor connection

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 3 **Refer to P.460.**

3.53 J9 Subcooling Heat Exchanger Gas Pipe Thermistor Abnormality

Remote Controller Display

J9

Applicable Models

CMSQ

Method of Error Detection

The error is detected according to the temperature detected by subcooling heat exchanger gas pipe thermistor.

Error Decision Conditions

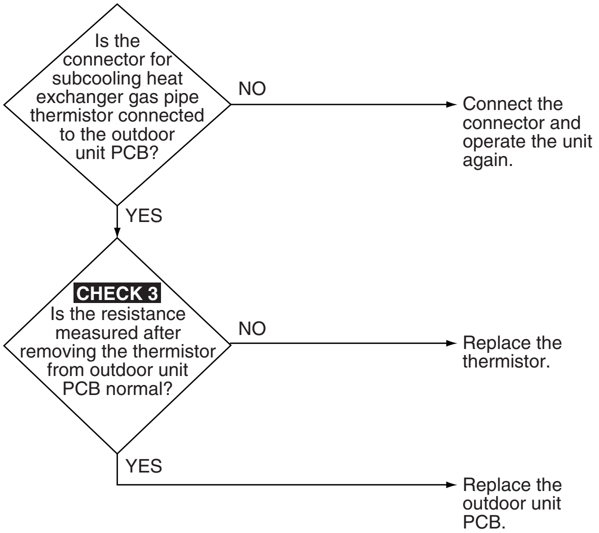
When the subcooling heat exchanger gas pipe thermistor is short circuited or open circuited.

Supposed Causes

- Defective subcooling heat exchanger gas pipe thermistor
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 3 **Refer to P.460.**

3.54 JA High Pressure Sensor Abnormality

Remote Controller Display

JA

Applicable Models

RZQ, CMSQ

Method of Error Detection

The error is detected from the pressure detected by the high pressure sensor.

Error Decision Conditions

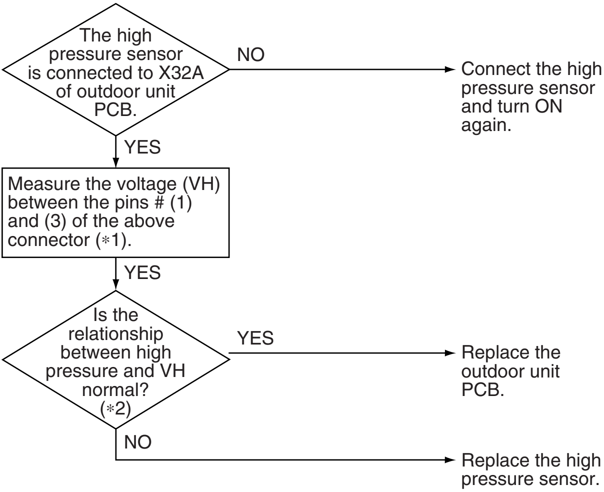
When the high pressure sensor is short circuit or open circuit

Supposed Causes

- Defective high pressure sensor
- Connection of low pressure sensor with wrong connection
- Defective outdoor unit PCB

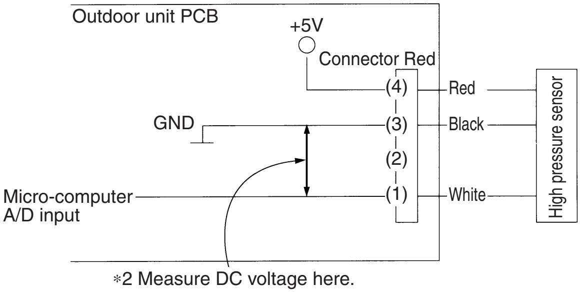
Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

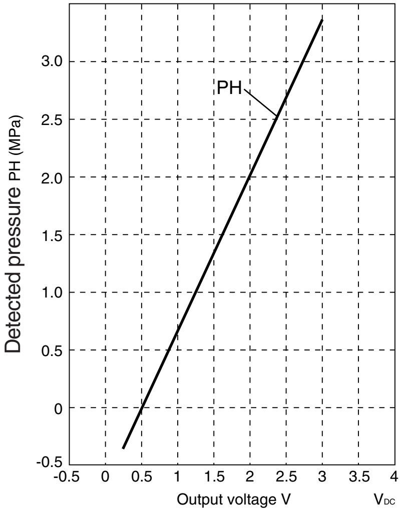


Note:

∗1: Voltage measurement point



∗2: “Pressure Sensor”, pressure / voltage characteristics table.



PH = 1.38V-0.69
PH : Detected pressure (MPa)
V : Output Voltage (V)

3.55 JC Suction Pipe Pressure Sensor Abnormality

Remote Controller Display

JC

Applicable Models

RZQ(S)-B, RZQ-C7, CMSQ

Method of Error Detection

The error is detected from pressure detected by low pressure sensor.

Error Decision Conditions

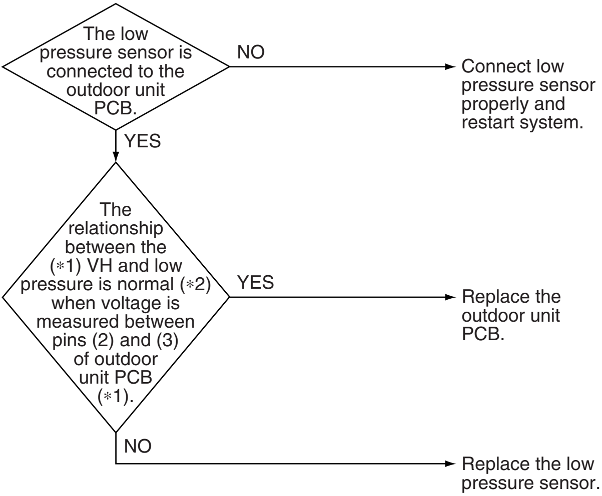
When the suction pipe pressure sensor is short circuit or open circuit.

Supposed Causes

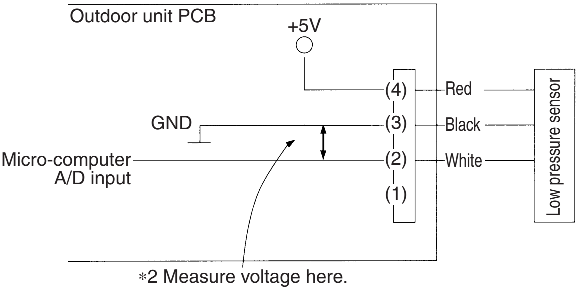
- Defective low pressure sensor system
- Connection of high pressure sensor with wrong connection.
- Defective outdoor unit PCB.

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



∗1: Voltage measurement point



∗2: Refer to pressure sensor, pressure/voltage characteristics table on P.471.

3.56 L1 Outdoor Unit PCB Abnormality

Remote Controller Display

L1

Applicable Models

RZQ-K/H, RZQ(S)-C, RZR-KU/HU

Method of Error Detection

- Detect error by current value during waveform output before compressor startup.
- Detect error by current sensor value during synchronized operation at the time of startup.
- Detect error using an MP-PAM series capacitor overvoltage sensor.

Error Decision Conditions

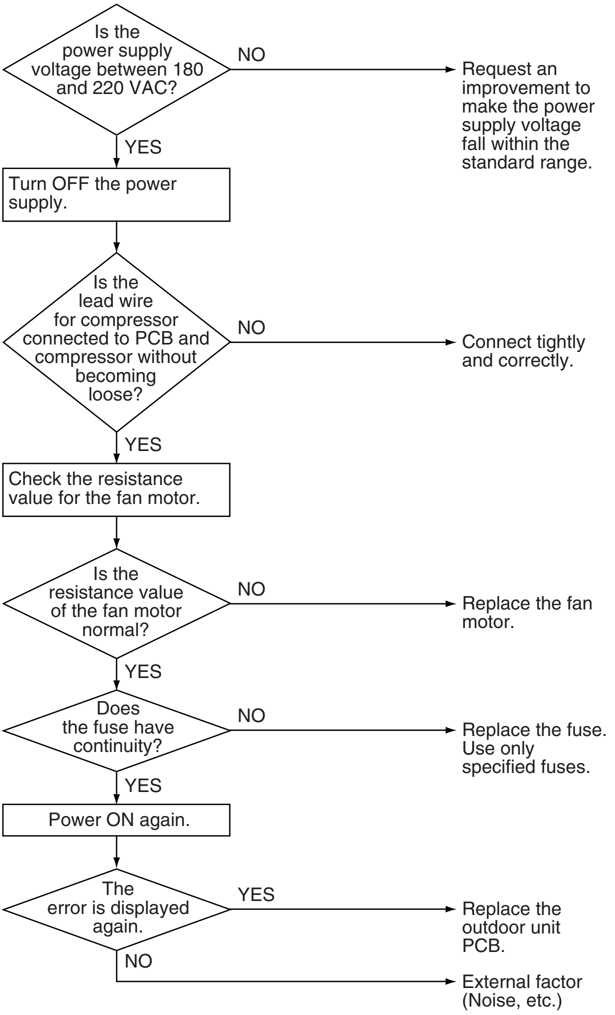
- When overcurrent is detected at the time of waveform output before operating the compressor
- When the current sensor error during synchronized operation
- When overvoltage occurs in MP-PAM
- In case of IGBT error
- In case of defective jumper setting

Supposed Causes

- Defective outdoor unit PCB
  - Defective IPM
  - Defective Current sensor
  - Defective MP-PAM
  - Defective IGBT or drive circuit

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.57 L1 Outdoor Inverter PCB Abnormality

Remote Controller Display

L1

Applicable Models

RZQ-C7

Method of Error Detection

- Detect the error by current value during waveform output before compressor startup.
- Detect the error by current sensor value during synchronized operation at the time of startup.

Error Decision Conditions

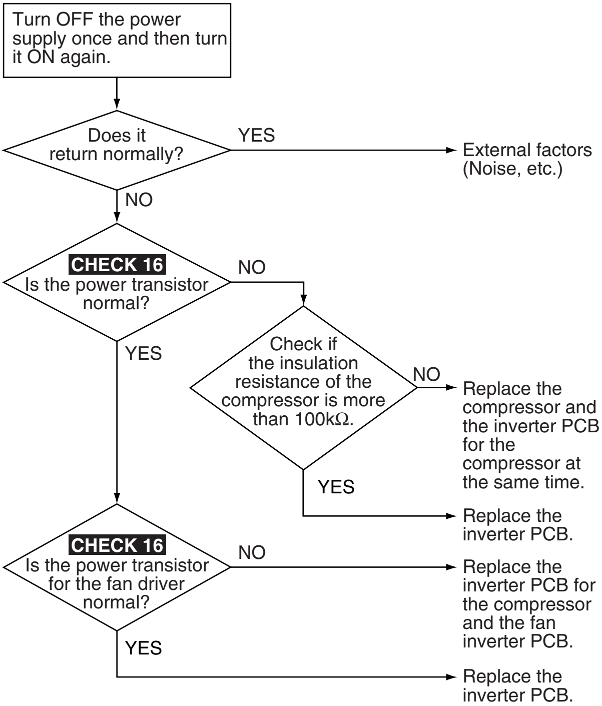
- In case of overcurrent during waveform output
- When the current sensor errors during synchronized operation
- In case of IPM error

Supposed Causes

- Defective outdoor inverter PCB
  - Defective IPM
  - Defective Current sensor
  - Defective IGBT or drive circuit

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 16 **Refer to P.488.**

3.58 L1 Outdoor Unit PCB Abnormality

Remote Controller Display

L1

Applicable Models

RZQG

Method of Error Detection

- Detect error by current value during waveform output before compressor startup.
- Detect error by current sensor value during synchronized operation at the time of startup.
- Detect error using an MP-PAM series capacitor overvoltage sensor.

Error Decision Conditions

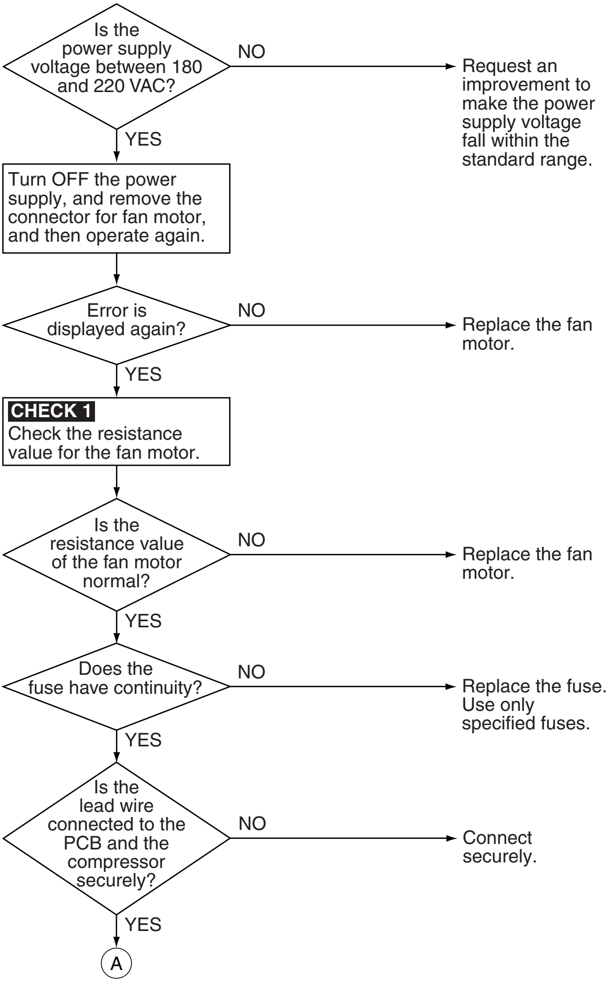
- When over-current is detected at the time of waveform output during operating the compressor
- When the current sensor error during synchronized operation
- When overvoltage occurs in MP-PAM
- IGBT error
- Defective E^{2}PROM

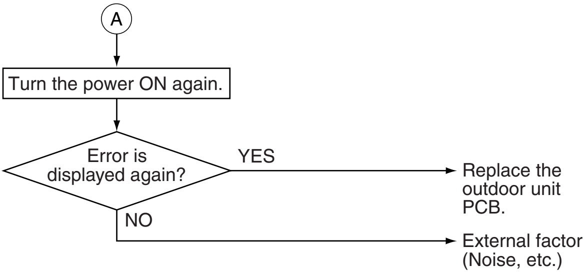
Supposed Causes

- External factor (Noise, etc.)
- Defective outdoor unit fan motor
- Broken fuse
- Disconnection of compressor
- Defective outdoor unit PCB
  - Defective IPM
  - Defective Current sensor
  - Defective MP-PAM
  - Defective IGBT or drive circuit
  - Defective inverter E^{2}PROM

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





CHECK 1 **Refer to P.459.**

3.59 L4 Overcurrent of DC Output (Instantaneous)

Remote Controller Display

L4

Applicable Models

RZ(Y)

Method of Error Detection

Fin temperature is detected by the thermistor of the radiation fin.

Error Decision Conditions

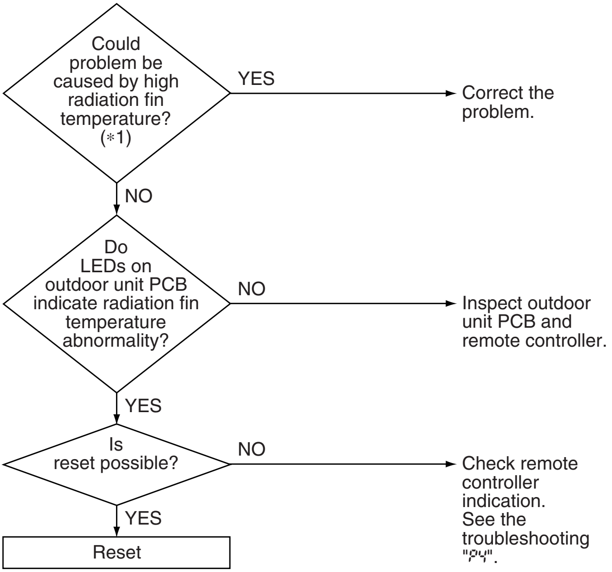
When the temperature of the inverter radiation fin increases abnormally due to defective heat dissipation.

Supposed Causes

- Activation of fin thermal switch
- Defective radiation fin thermistor
- High outdoor air temperature
- Insufficient cooling of inverter radiation fin
- Blocked suction opening
- Dirty radiation fin
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. Fin temperature detection values

Model	Detection	Reset
RZ(Y)71L	85.5°C	80.5°C
RZY100~125L	85.0°C	80.0°C

3.60 L4 Radiation Fin Temperature Rise

Remote Controller Display

L4

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZQG, RZR-KU/HU

Method of Error Detection

Radiation fin temperature is detected by the radiation fin thermistor.

Error Decision Conditions

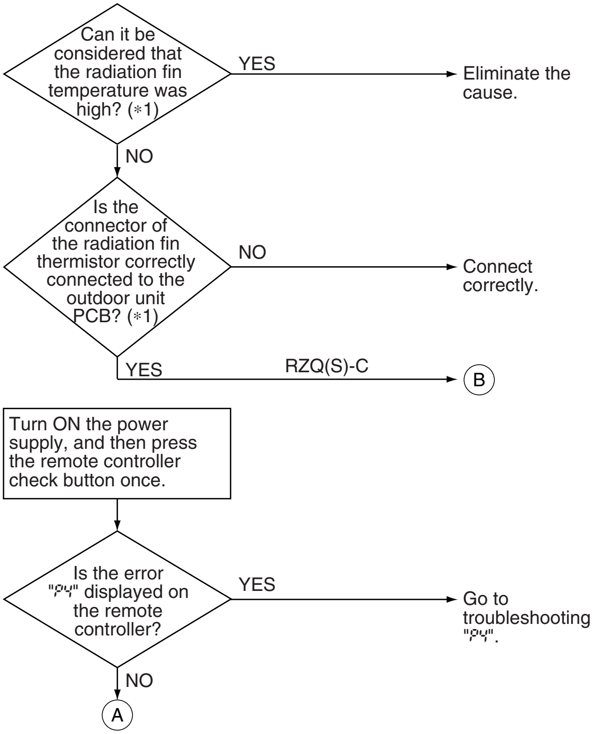
When the temperature of the inverter radiation fin rises abnormally due to defective heat dissipation.

Supposed Causes

- Defective radiation fin thermistor
- High outdoor air temperature
- Blocked suction opening
- Dirty radiation fin
- Defective outdoor inverter PCB
- Activation of fin thermal switch (For RZQ-K, RZQ(S)-B/C, RZQG, RZR-KU/HU)
- Insufficient cooling of inverter radiation fin (For RZQ-K, RZQ(S)-B/C, RZQG, RZR-KU/HU)
- Defective propeller fan (For RZR-KUV2S)

Troubleshooting

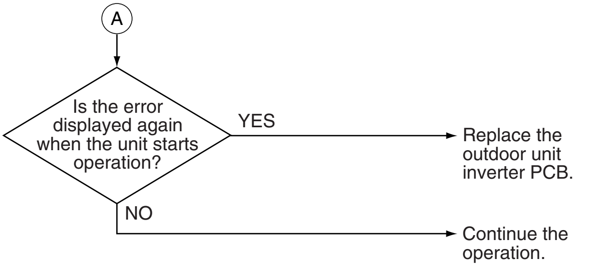
Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

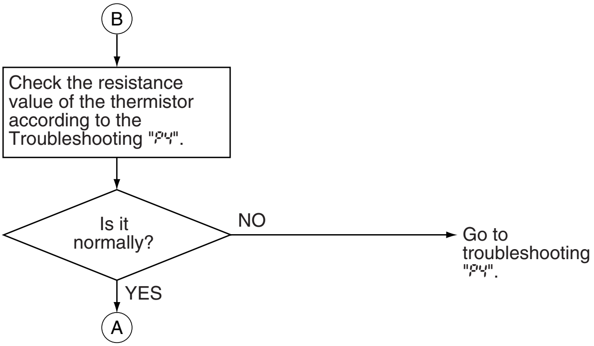


Note:

∗1. Radiation fin temperature detection value

Model	Detection	Reset
RZQ RZQ100~140B8W1B	76°C	66°C
RZR71KUV1 RZQ71B9V3B RZQS71·100B7V3B RZQ71C7V1B RZQS71·100C7V1B	87°C	77°C
RZQG71LV1B	85°C	75°C
RZR100~140KUV1 RZR100~140HUY1 RZR-KUV2S RZR-HUY2S RZQ100~140C7V1B RZQS125·140C7V1B	88°C	78°C
RZQG100~140LV1B	89°C	79°C





Remote Controller Display

L4

Applicable Models

CMSQ

Method of Error Detection

Fin temperature is detected by the thermistor of the radiation fin.

Error Decision Conditions

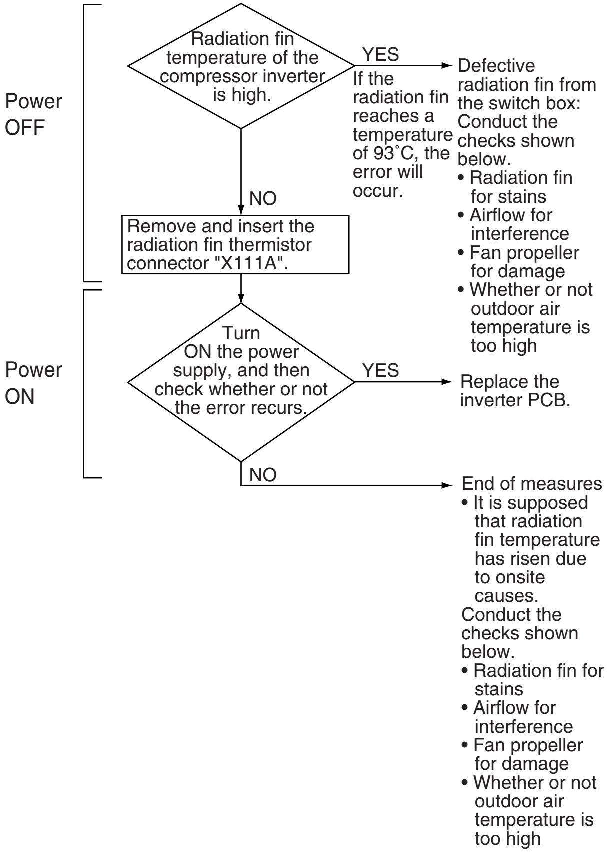
When the temperature of the inverter radiation fin increases above 93°C.

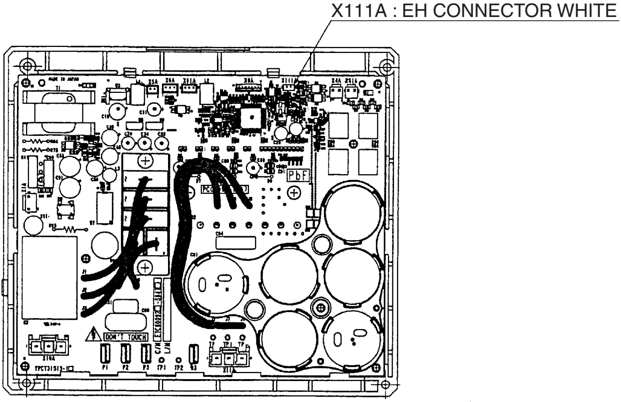
Supposed Causes

- Actuation of fin thermal (Actuates above 93°C)
- Defective inverter PCB
- Defective radiation fin thermistor

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





Refer to **CHECK 3** on P.460.

Remote Controller Display

L4

Applicable Models

RZQ-C7

Method of Error Detection

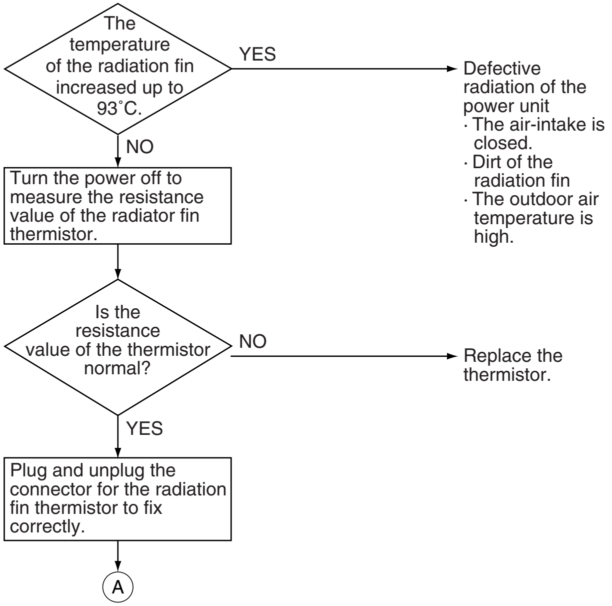
Radiation fin temperature is detected by the thermistor of the radiation fin.

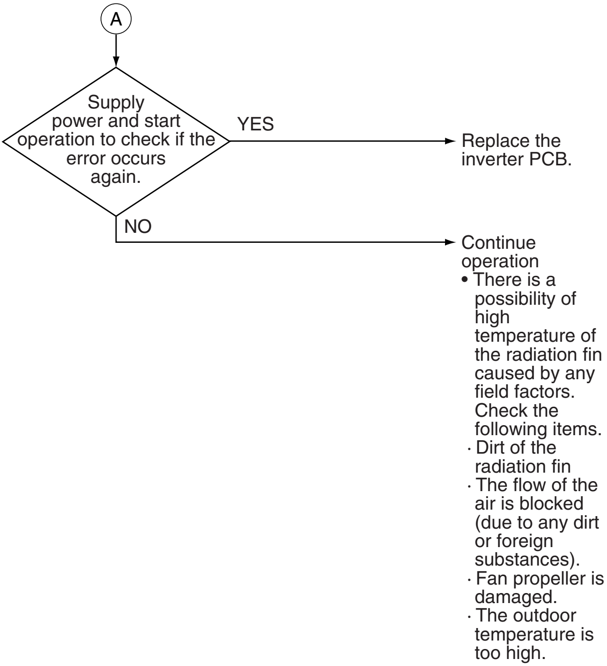
Supposed Causes

- Activation of fin thermal switch (93°C or more)
- Defective outdoor unit inverter PCB
- Defective radiation fin thermistor

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Supply power and start operation to check if the error occurs again.
YES
Replace the inverter PCB.
NO
Continue operation
• There is a possibility of high temperature of the radiation fin caused by any field factors. Check the following items.
· Dirt of the radiation fin
· The flow of the air is blocked (due to any dirt or foreign substances).
· Fan propeller is damaged.
· The outdoor temperature is too high.

3.61 LS Overcurrent of DC Output (Instantaneous)

Remote Controller Display

LS

Applicable Models

RZ(Y)

Method of Error Detection

Current flowing in the power transistor is converted to voltage by T1C (DC current sensor) for detection.

Error Decision Conditions

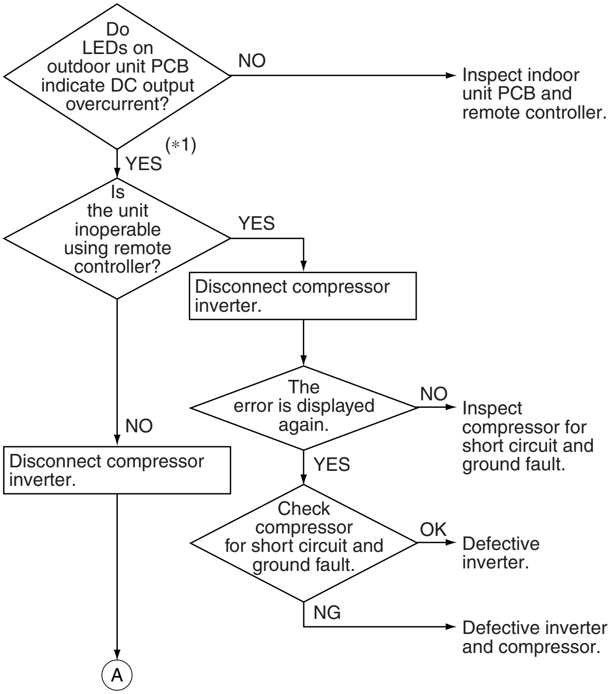
When an excessive current flows in the power transistor. (Instantaneous overcurrent also causes activation.)

Supposed Causes

- Defective compressor coil (open circuit, defective insulation)
- Defective compressor startup (seizing)
- Defective inverter
- Defective outdoor unit PCB
- Momentary disturbance in supply voltage

Troubleshooting

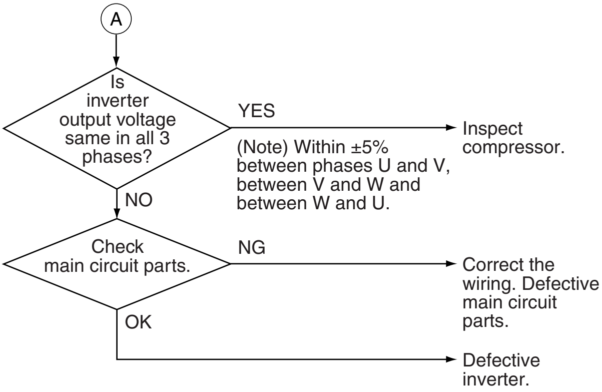
Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. Guideline values

Model	Instantaneous overcurrent detection value
RZ(Y)71~125L	65A



Note:

If an overcurrent results during motor pre-heating, reset by remote controller may not be possible.

3.62 LS Momentary Overcurrent of Inverter Compressor

Remote Controller Display

LS

Applicable Models

RZQ-C7

Method of Error Detection

The error is detected by converting the current flowing in the power transistor.

Error Decision Conditions

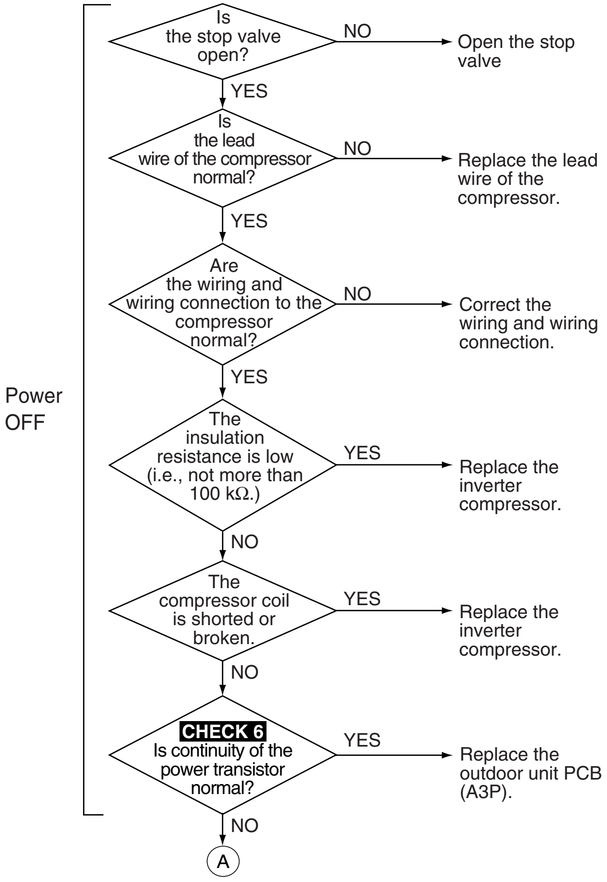
When an excessive current flows in the power transistor (32.3A).

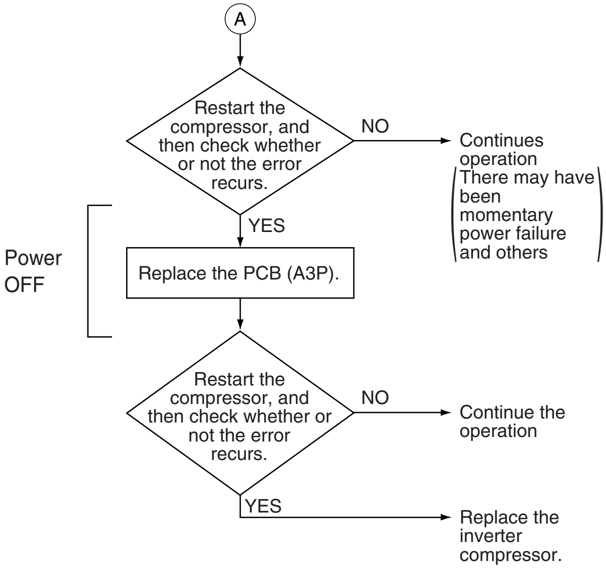
Supposed Causes

- Defective compressor coil (disconnection, poor insulation)
- Compressor startup error (mechanical lock)
- Defective inverter PCB
- Instantaneous power failure
- Lightning surge

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





CHECK 6 **Refer to P.468.**

3.63 L5 Output Overcurrent Detection

Remote Controller Display

L5

Applicable Models

RZQG

Method of Error Detection

The error is detected by converting the current flowing to power transistor into voltage with CT1 (DC current sensor).

Error Decision Conditions

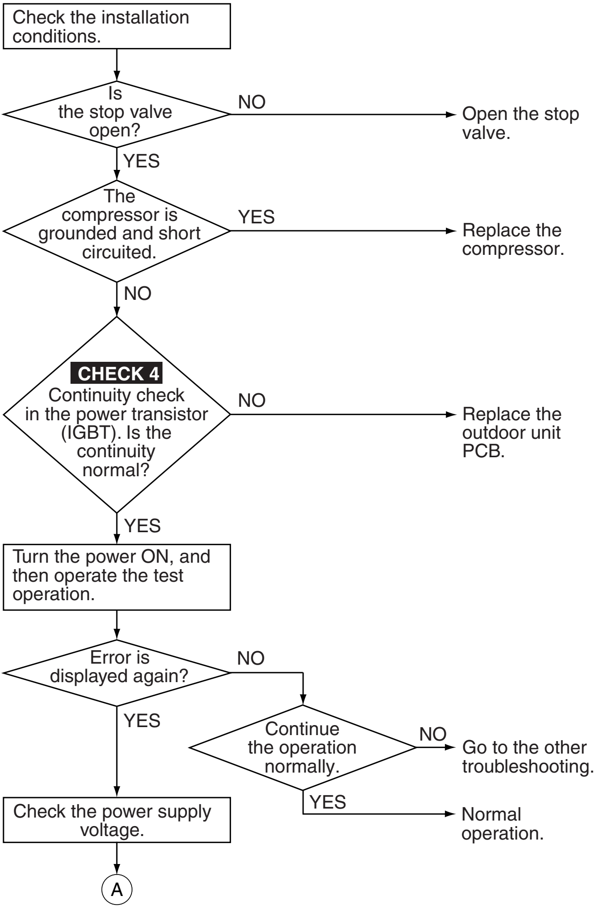
When overcurrent has run to power transistor.
(Actuated even by instantaneous overcurrent)

Supposed Causes

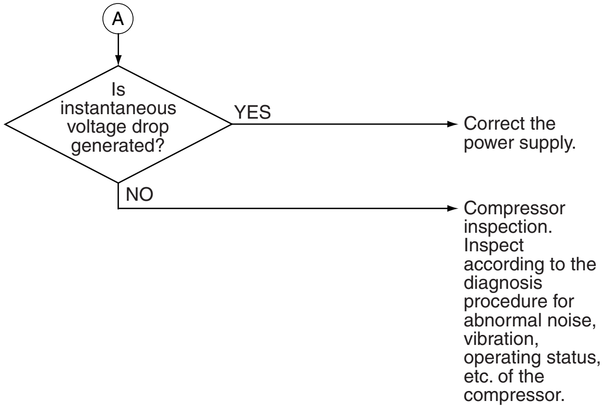
- Defective compressor (mechanical lock, poor insulation)
- Defective inverter PCB
- Instantaneous fluctuation of power supply voltage
- Defective compressor (if bearing is scratched)
- Stop valve is not opened

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 4 **Refer to P.464.**


A
Is instantaneous voltage drop generated?
YES
Correct the power supply.
NO
Compressor inspection. Inspect according to the diagnosis procedure for abnormal noise, vibration, operating status, etc. of the compressor.

3.64 LS Inverter Compressor Abnormality

Remote Controller Display

LS

Applicable Models

CMSQ

Method of Error Detection

The error is detected from current flowing in the power transistor.

Error Decision Conditions

When an excessive current flows in the power transistor. (Instantaneous overcurrent also causes activation.)

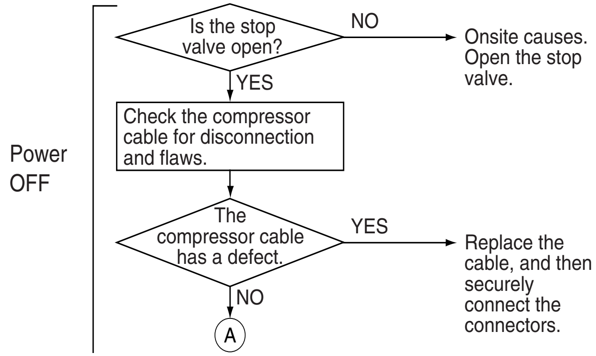
Supposed Causes

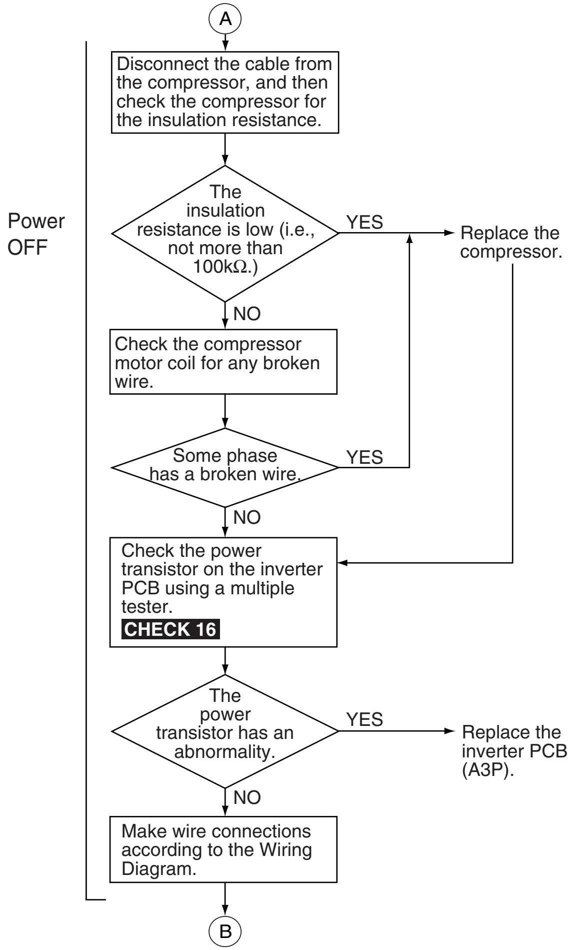
- Defective compressor coil (disconnected, defective insulation)
- Compressor startup error (mechanical lock)
- Defective inverter PCB

Troubleshooting

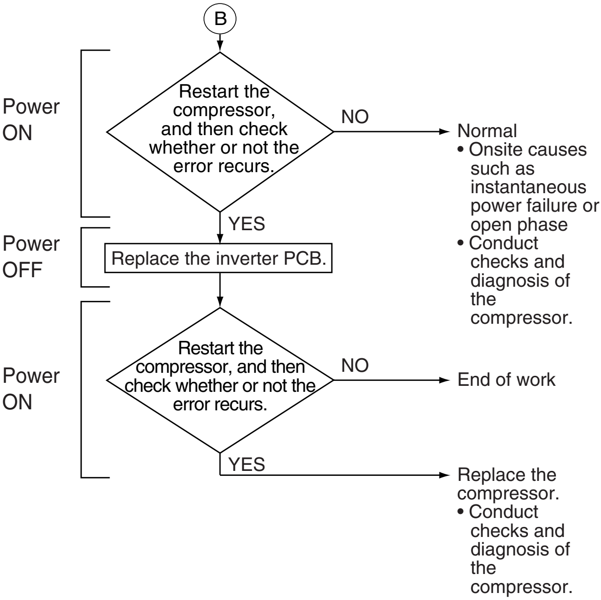
Compressor inspection

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





CHECK 16 **Refer to P.488.**


B
Power ON
Restart the compressor, and then check whether or not the error recurs.
NO
Normal
• Onsite causes such as instantaneous power failure or open phase
• Conduct checks and diagnosis of the compressor.
YES
Power OFF
Replace the inverter PCB.
Power ON
Restart the compressor, and then check whether or not the error recurs.
NO
End of work
YES
Replace the compressor.
• Conduct checks and diagnosis of the compressor.

3.65 LS Output Overcurrent Detection

Remote Controller Display

LS

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZR-KU/HU

Method of Error Detection

The error is detected by converting the current flowing to power transistor into voltage with CT1 (DC current sensor).

Error Decision Conditions

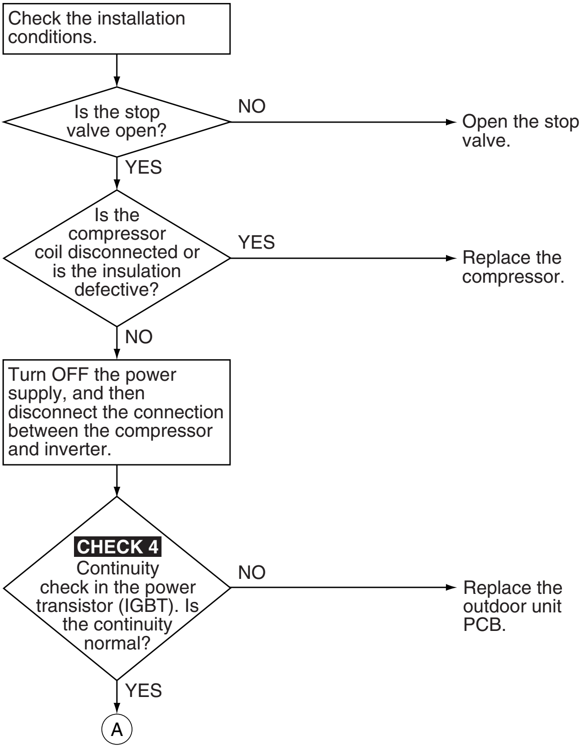
When overcurrent has run to power transistor
(Actuated even by instantaneous overcurrent)

Supposed Causes

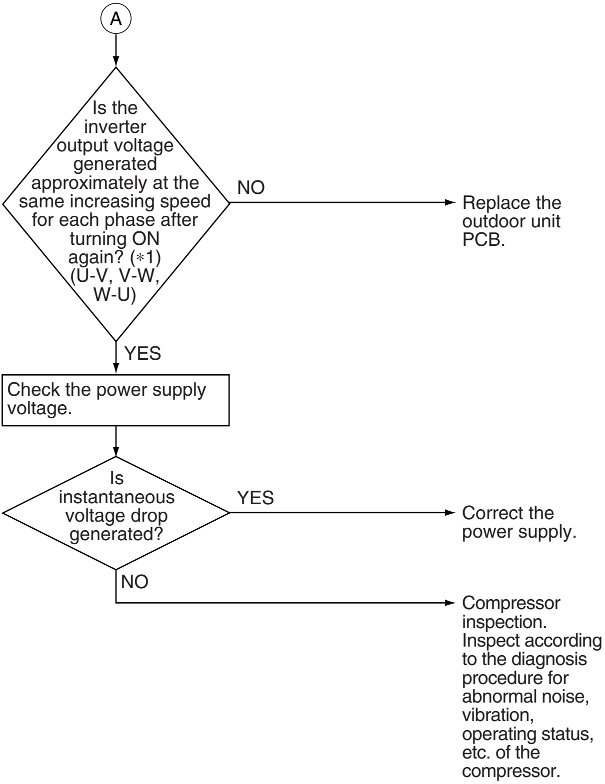
- Defective compressor coil (disconnection, poor insulation)
- Compressor startup error (mechanical lock)
- Defective inverter PCB
- Instantaneous fluctuation of power supply voltage
- Defective compressor (if bearing is scratched)
- The stop valve is not opened

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 4 **Refer to P.464.**


A
Is the inverter output voltage generated approximately at the same increasing speed for each phase after turning ON again? (∗1) (U-V, V-W, W-U)
NO
Replace the outdoor unit PCB.
YES
Check the power supply voltage.
Is instantaneous voltage drop generated?
YES
Correct the power supply.
NO
Compressor inspection. Inspect according to the diagnosis procedure for abnormal noise, vibration, operating status, etc. of the compressor.

Note:

∗1. Approximate value

When operating compressor with compressor output line disconnected, the compressor stops due to error after elapsed time of 5 seconds. Therefore, check the voltage increase for 5 seconds.

Model	Instantaneous overcurrent detection value
RZQ71K, RZR71K RZQ71B9V3B RZQS71·100B7V3B RZQ71C7V1B RZQS71·100C7V1B	32.0A
RZQ100-160H RZQ100-140B8W1B	32.3A
RZR100-140HUY1 RZR-KUV2S RZR-HUY2S RZQ100-140C7V1B RZQS125·140C7V1B	51.7A

3.66 (L8) Electronic Thermal Switch (Time Lag)

Remote Controller Display

(L8)

* No display on remote controller. See “Error decision condition” below for more detail.

Applicable Models

RZ(Y)

Method of Error Detection

Current flowing in the power transistor is converted to voltage by T1C (DC current sensor) for detection.

Error Decision Conditions

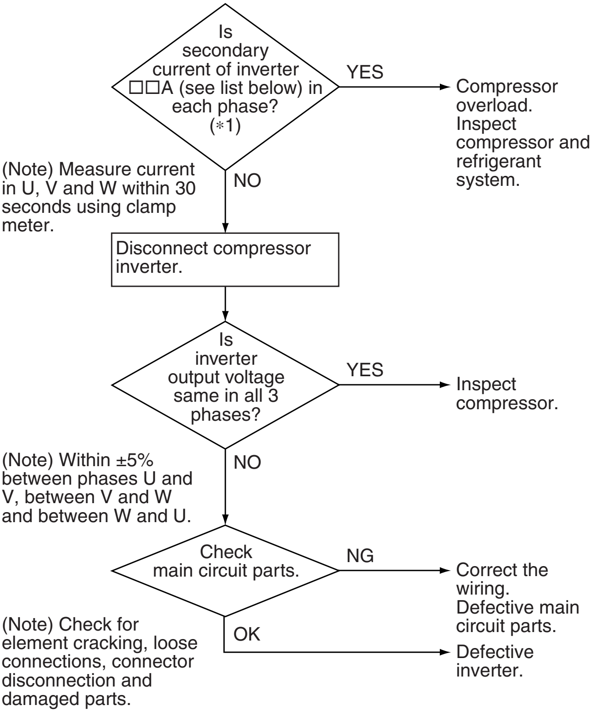
When overload in the compressor is detected (exception: at startup).
* In RZ(Y), error is not generated by the electronic thermal switch. Instead, the unit repeats retry operations. The remote controller does not indication "L8." Therefore, check the LED indication in the outdoor unit for problem diagnosis.

Supposed Causes

- Compressor overload (in operation)
- Open circuit in compressor coil
- Defective outdoor unit PCB
- Defective inverter

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. Electronic thermal switch detecting value

Model	Cool/Heat ∗2	Detection Value
RZY71L	Cool	20.5~22.0A
	Heat	24.0A
RZY100L	Cool	20.1~23.0A
	Heat	21.8~23.0A
RZY125L	Cool	21.0~23.7A
	Heat	21.3~23.7A

Note:

∗2. • Detecting values vary according to operating frequency.
• Detecting value decrease 10% for each HPS activation.

3.67 L8 Inverter Current Abnormality

Remote Controller Display

L8

Applicable Models

CMSQ

Method of Error Detection

The error is detected by current flowing in the power transistor.

Error Decision Conditions

When overload in the compressor is detected. (Inverter secondary current 16.1A)

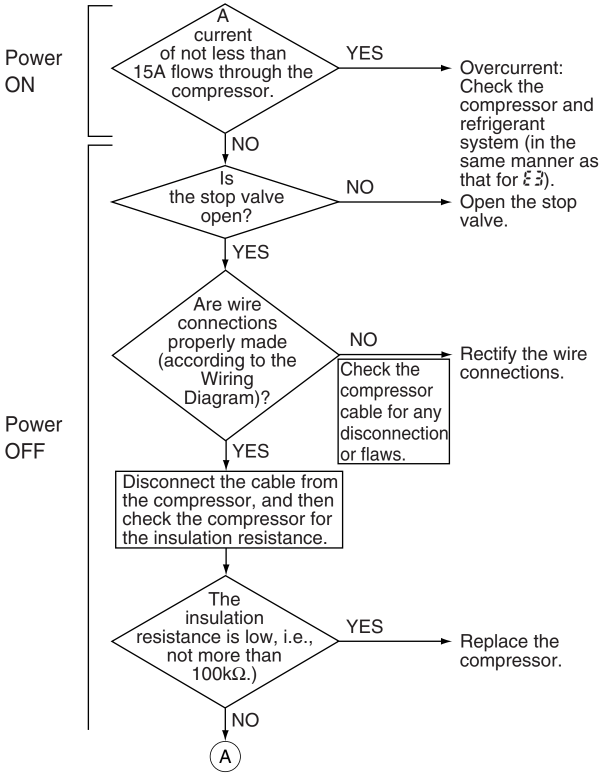
Supposed Causes

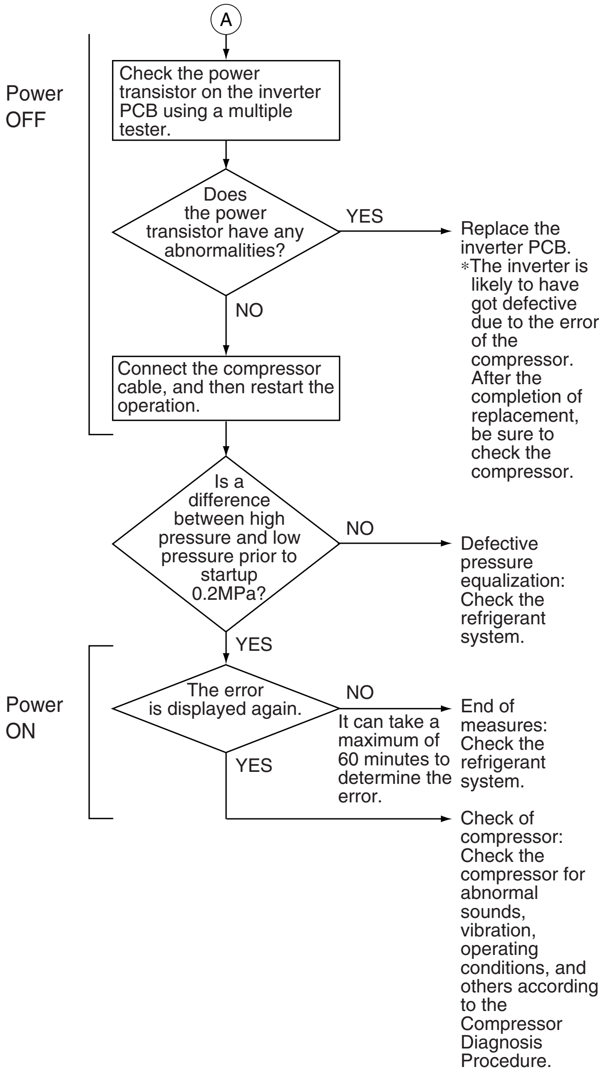
- Compressor overload
- Compressor coil disconnected
- Defective inverter PCB
- Defective compressor

Troubleshooting

Output current check

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Power OFF
Check the power transistor on the inverter PCB using a multiple tester.
Does the power transistor have any abnormalities?
YES
Replace the inverter PCB.
*The inverter is likely to have got defective due to the error of the compressor. After the completion of replacement, be sure to check the compressor.
NO
Connect the compressor cable, and then restart the operation.
Is a difference between high pressure and low pressure prior to startup 0.2MPa?
NO
Defective pressure equalization: Check the refrigerant system.
YES
Power ON
The error is displayed again.
NO
It can take a maximum of 60 minutes to determine the error.
End of measures: Check the refrigerant system.
YES
Check of compressor: Check the compressor for abnormal sounds, vibration, operating conditions, and others according to the Compressor Diagnosis Procedure.

3.68 L8 Inverter Compressor Overcurrent

Remote Controller Display

L8

Applicable Models

RZQ-C7

Method of Error Detection

The error is detected by current flowing in the power transistor.

Error Decision Conditions

When overload in the compressor is detected
For 460V units
(1) 19.0A and over continues for 5 seconds.
(2) 16.1A and over continues for 260 seconds.
For 230V units
(1) A current of 33.5A or more continues for a period of consecutive 5 sec.
(2) A current of 27.6A or more continues for a period of consecutive 260 sec.

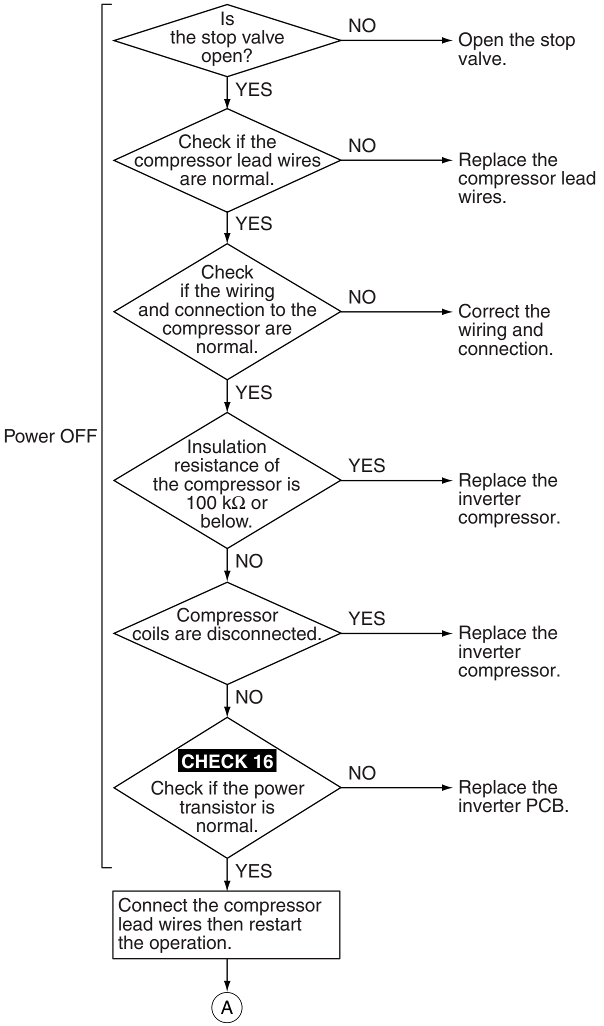
Supposed Causes

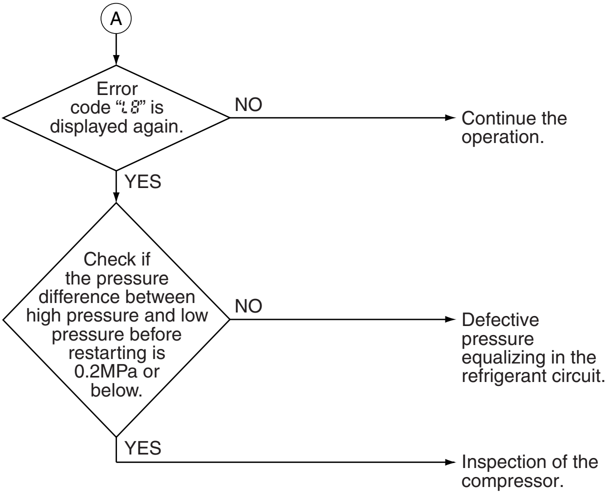
- Compressor overload
- Compressor coil disconnected
- Defective inverter PCB
- Disconnection of compressor

Troubleshooting

Output current check

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





CHECK 16 **Refer to P.488.**

3.69 L8 Electronic Thermal (Time Lag)

Remote Controller Display

L8

Applicable Models

RZQG

Method of Error Detection

The error is detected from the current flowing to power transistor into voltage with CT1 (DC current sensor).

Error Decision Conditions

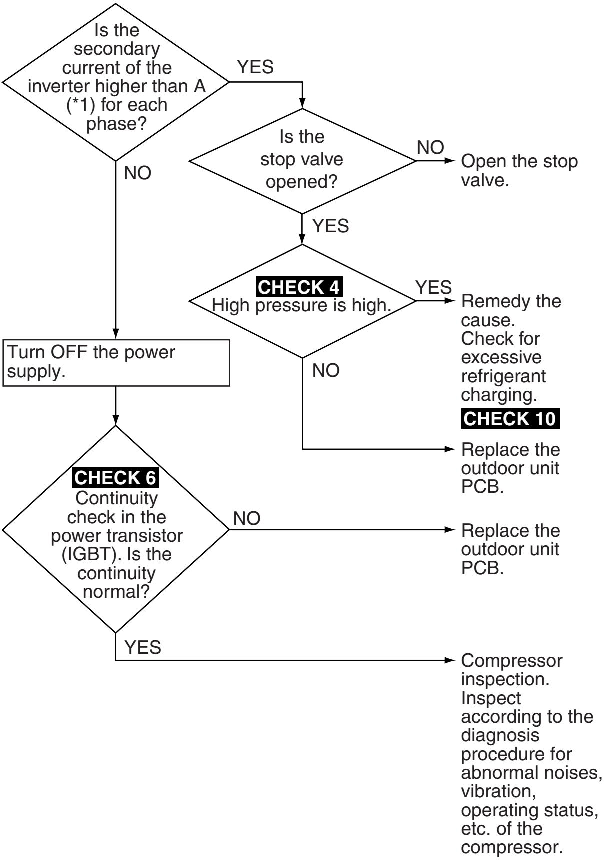
When compressor overload (except for when startup) is detected

Supposed Causes

- Disconnected compressor coil
- High pressure is abnormal high
- Defective compressor (if bearing is scratched)
- Defective outdoor unit PCB
- Stop valve is not opened

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1 Secondary electronic thermal detection value

Model		Detection value
RZQG71	Cooling	12.6 or 12.2A × 260 seconds
	Heating	14.8A × 260 seconds
RZQG100-140	Cooling	16.1A × 260 seconds
	Heating	22.1A × 260 seconds

CHECK 4 **Refer to P.464.**

CHECK 6 **Refer to P.468.**

CHECK 10 **Refer to P.475.**

Remote Controller Display

L8

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZR-KU/HU

Method of Error Detection

The error is detected from the current flowing to power transistor into voltage with CT1 (DC current sensor).
Inverter PCB detects the disorder of position signal.

Error Decision Conditions

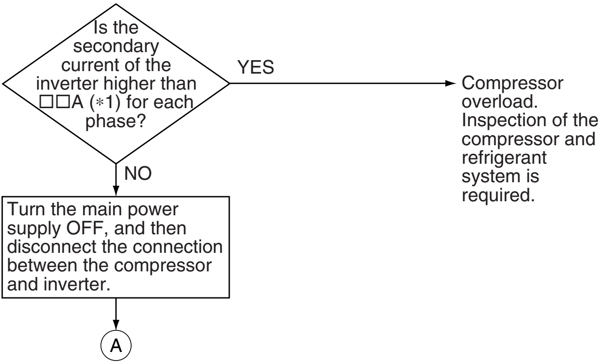
When compressor overload (except for when startup) is detected.

Supposed Causes

- Compressor overload (during operation)
- Disconnected compressor coil
- Defective inverter
- Defective compressor (if bearing is scratched)
- Defective outdoor unit PCB

Troubleshooting

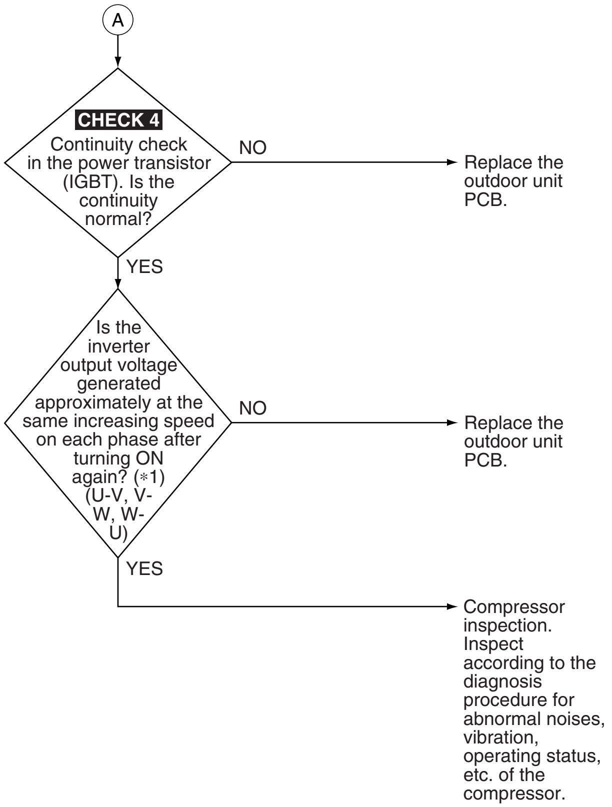
Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. Electronic thermal detection value

Model		Detection value
RZQ RZQ100-140B8W1B	Cooling	17A × 5 seconds or 12.1A × 260 seconds
	Heating	17A × 5 seconds or 14.1A × 260 seconds
RZQ71B9V3B RZQS71 · 100B7V3B	Cooling	17A × 5 seconds or 14.8A × 260 seconds
	Heating	
RZQ71C7V1B RZQS71 · 100C7V1B	Cooling	13.8A × 260 seconds
	Heating	14.8A × 260 seconds
RZQ100 · 140C7V1B RZQS125 · 140C7V1B	Cooling	31A × 5 seconds or 21.1A × 260 seconds
	Heating	



Note:

∗1. When operating compressor with compressor output line disconnected, the compressor stops due to error after elapsed time of 5 seconds. Therefore, check the voltage increase for 5 seconds.

CHECK 4 **Refer to P.464.**

3.70 L9 Stall Prevention (Time Lag)

Remote Controller Display

L9

Applicable Models

RZ(Y)

Method of Error Detection

Current flowing in the power transistor is converted to voltage by T1C (DC current sensor) for detection.

Error Decision Conditions

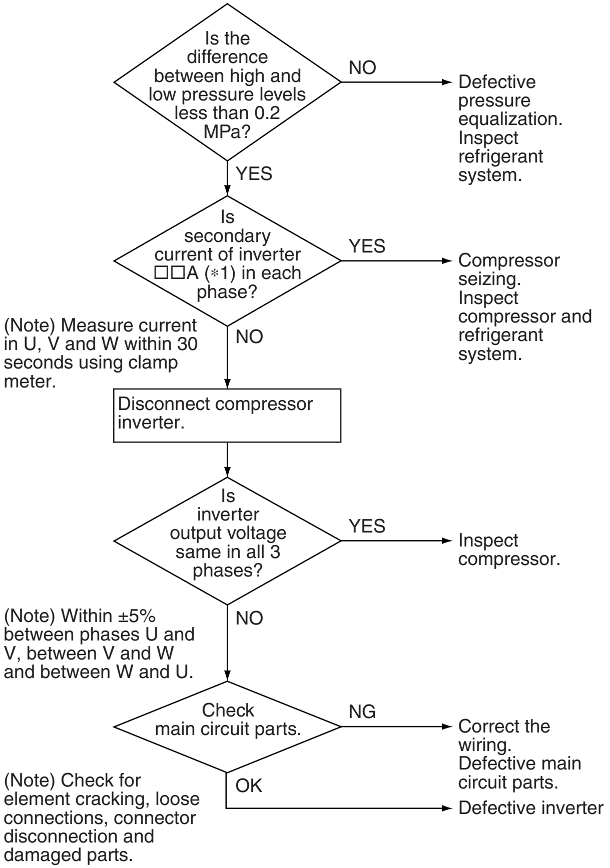
When overload in the compressor is detected during startup

Supposed Causes

- Defective compressor (seizing)
- Pressure difference during startup
- Defective inverter
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. Guideline values

Model	Instantaneous overcurrent detection value
RZ(Y)71~125L	24.0A

3.71 L9 Inverter Startup Error

Remote Controller Display

L9

Applicable Models

CMSQ, RZQ-C7

Method of Error Detection

This error code will be output if overcurrent occurs at the time of startup.

Error Decision Conditions

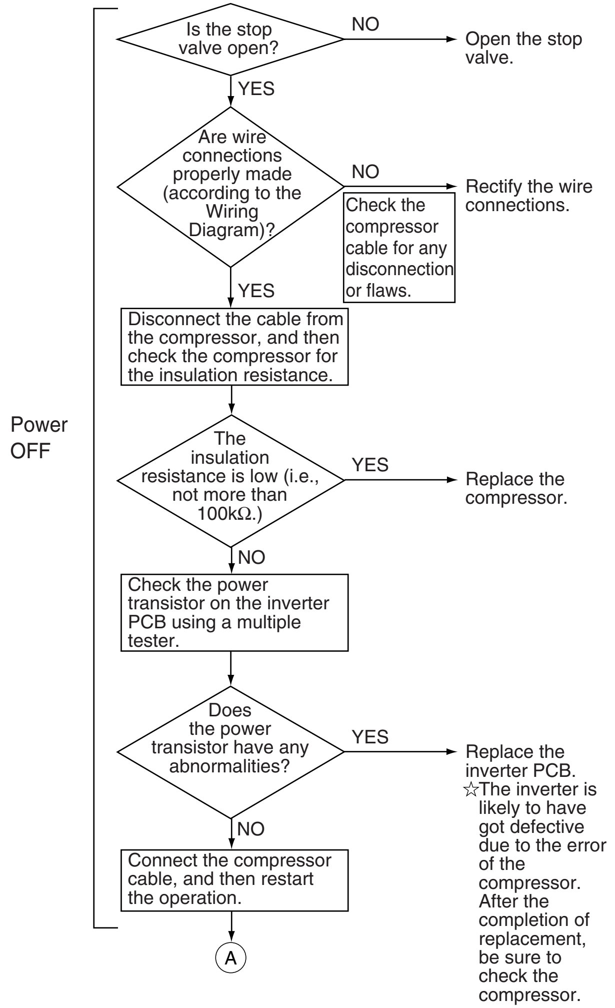
When the startup control is failed
When an overcurrent is passed to the inverter due to the error of a compressor or electrical system

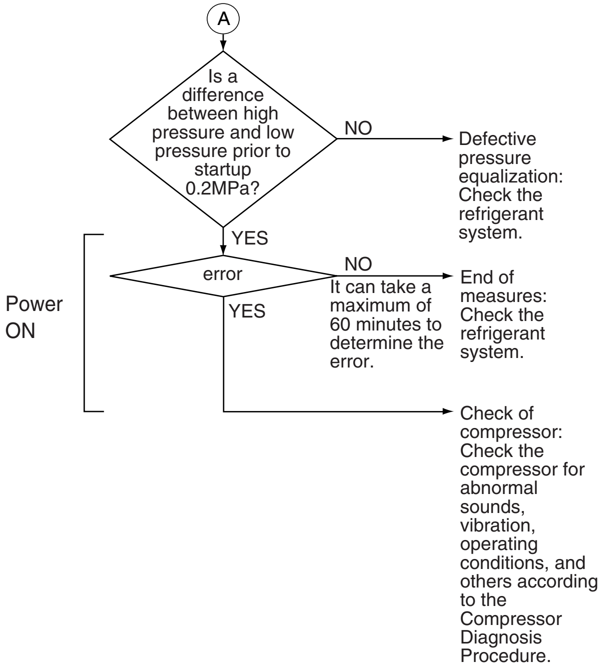
Supposed Causes

- Defective compressor
- The stop valve is not opened
- Pressure differential start
- Defective compressor connection
- Defective inverter PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Is a difference between high pressure and low pressure prior to startup 0.2MPa?
NO
Defective pressure equalization: Check the refrigerant system.
YES
Power ON
error
NO
It can take a maximum of 60 minutes to determine the error.
End of measures: Check the refrigerant system.
YES
Check of compressor: Check the compressor for abnormal sounds, vibration, operating conditions, and others according to the Compressor Diagnosis Procedure.

Remote Controller Display

L9

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZQG, RZR-KU/HU

Method of Error Detection

The error is detected from the current flowing to power transistor into voltage with CT1 (DC current sensor).
Inverter PCB detects the disorder of position signal.

Error Decision Conditions

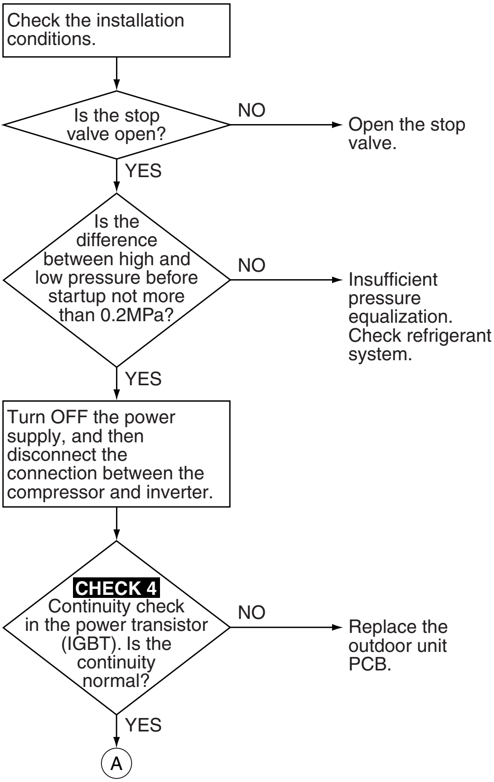
When compressor overload and change of load on is detected
When position signal is disordered.

Supposed Causes

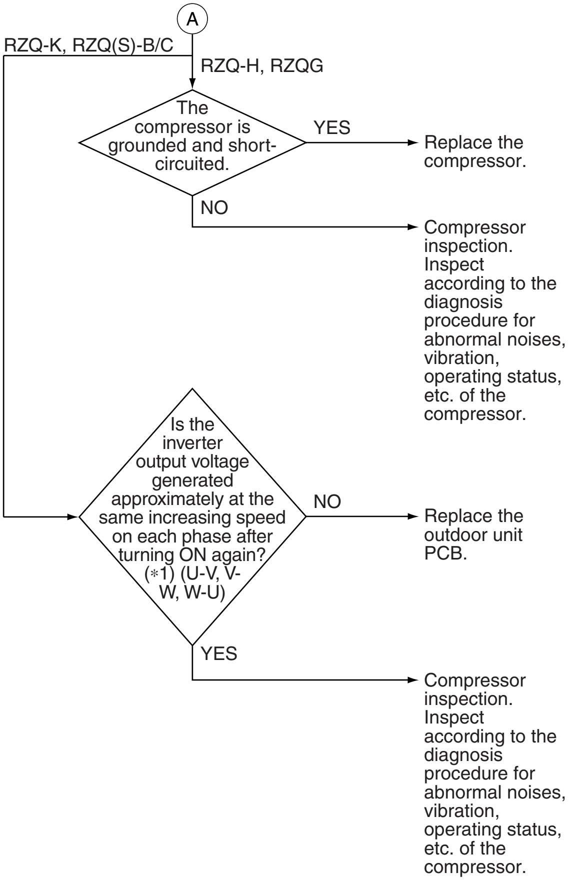
- The stop valve is not opened
- Pressure differential startup
- Defective outdoor unit inverter PCB
- Defective compressor (lock)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 4 **Refer to P.464.**



Note:

∗1. When operating compressor with compressor output line disconnected, the compressor stops due to error after elapsed time of 5 seconds. Therefore, check the voltage increase for 5 seconds.

3.72 LC Transmission Error Between Inverter and Control PCB

Remote Controller Display

LC

Applicable Models

CMSQ, RZQ-C7

Method of Error Detection

Check the communication state between inverter PCB and control PCB by micro-computer.

Error Decision Conditions

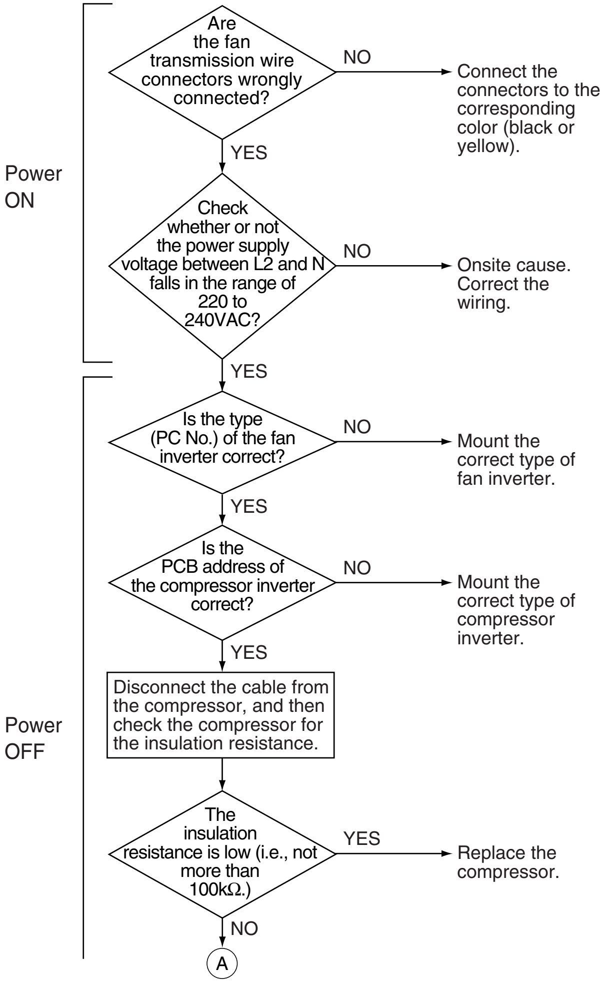
When the correct communication is not conducted in certain period.

Supposed Causes

- Connection error between the inverter PCB and outdoor control PCB
- Defective outdoor control PCB (transmission section)
- Defective inverter PCB
- Defective noise filter
- Defective fan inverter
- Incorrect type of fan inverter
- Defective compressor
- Defective fan motor
- Address conflict on inverter PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



A

Power OFF

Disconnect the cable from the fan, and then check the fan motor for the insulation resistance.

The insulation resistance is low (i.e., not more than 1MΩ.)

YES → Replace the fan motor. Replace the fan driver PCB.

NO ↓

Check for connector connections: Remove and insert the connectors shown below.
<Example> CMSQ-A7
[Fan 1]
- A1P X28A ⇔ X6A A3P
- A1P X20A ⇔ X4A A3P
- A3P X61A ⇔ X402A A2P
- A3P X1A ⇔ X403A A2P
- A3P X5A ⇔ X5A A4P
- A3P X41A ⇔ X3A A4P
- A4P X4A Short connector

Note) X3A: black
X4A: yellow

F400U of the A2P has been molten.

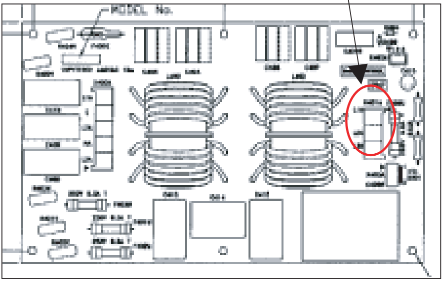
YES → Replace the noise filter of the A2P.

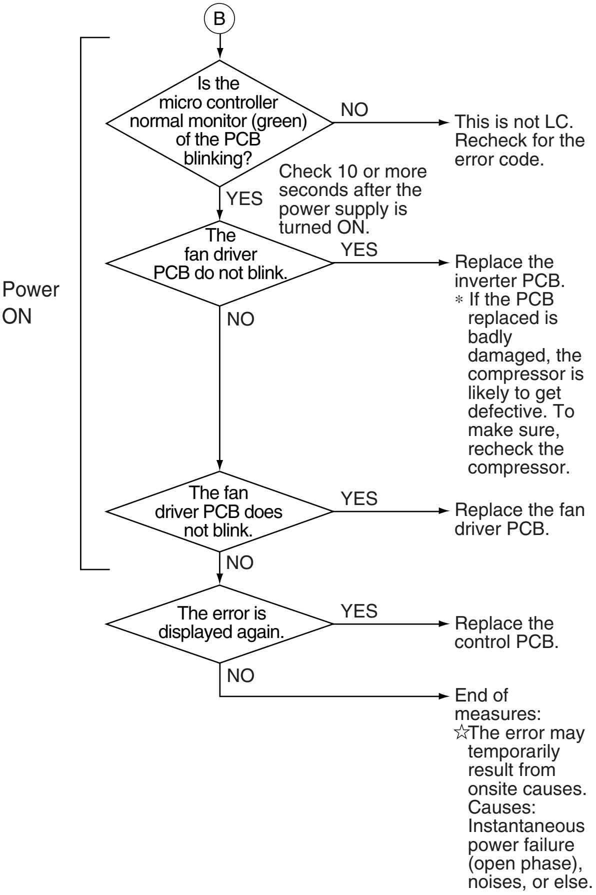
NO ↓

B

CMSQ-A7

F400U




B
Power ON
Is the micro controller normal monitor (green) of the PCB blinking?
NO
This is not LC. Recheck for the error code.
Check 10 or more seconds after the power supply is turned ON.
YES
The fan driver PCB do not blink.
YES
Replace the inverter PCB.
∗ If the PCB replaced is badly damaged, the compressor is likely to get defective. To make sure, recheck the compressor.
NO
The fan driver PCB does not blink.
YES
Replace the fan driver PCB.
NO
The error is displayed again.
YES
Replace the control PCB.
NO
End of measures:
☆The error may temporarily result from onsite causes. Causes: Instantaneous power failure (open phase), noises, or else.

Remote Controller Display

LC

Applicable Models

RZQG

Method of Error Detection

Check whether transmission between control and inverter PCB is carried out normally.

Error Decision Conditions

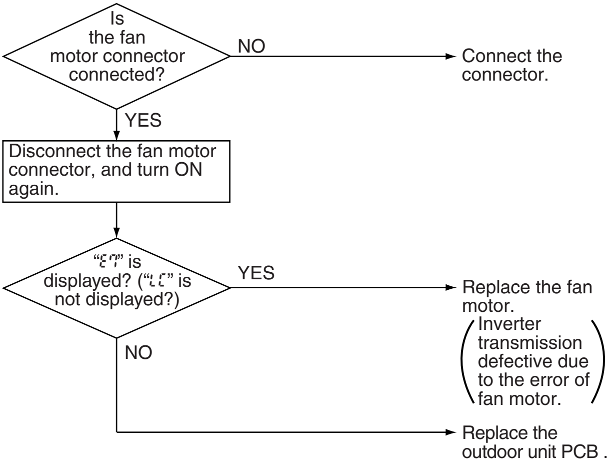
When the transmission is not carried out in a specified period of time or longer

Supposed Causes

- Defective outdoor unit fan motor
- Defective fan motor connector contact
- Defective control and inverter PCB
- External factor (Noise, etc.)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.73 LC Transmission Error (between Control PCB and Inverter PCB)

Remote Controller Display

LC

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZR-KU/HU

Method of Error Detection

Check whether transmission between control PCB and inverter PCB is carried out normally.

Error Decision Conditions

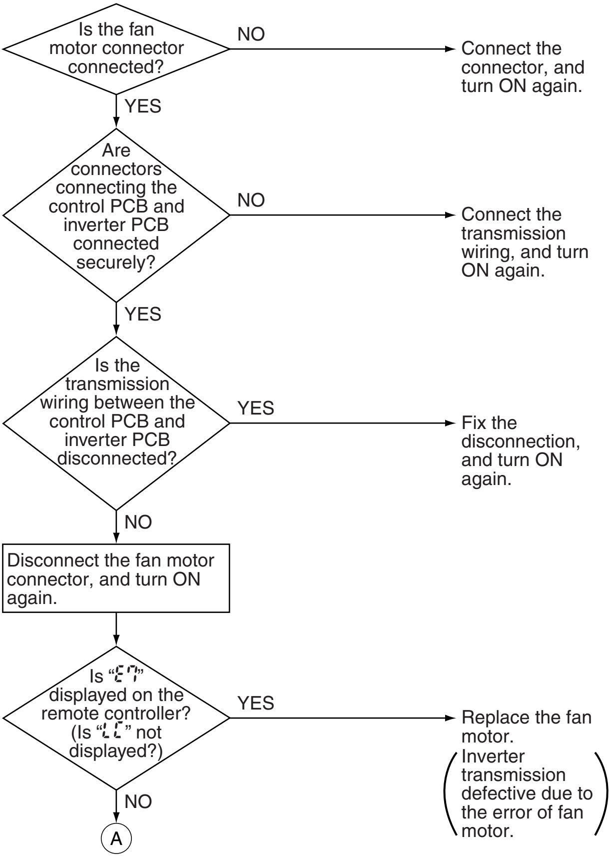
When the transmission is not carried out in a specified period of time or longer

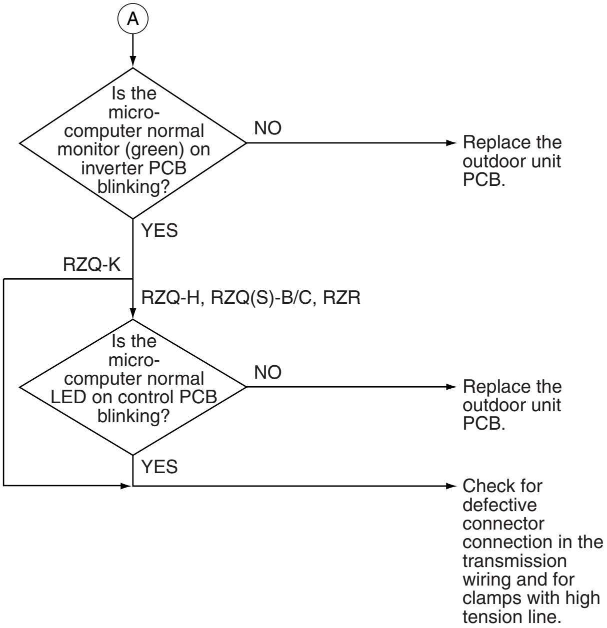
Supposed Causes

- Incorrect transmission wiring between control PCB and inverter PCB/insufficient contact in wiring
- Defective control PCB and inverter PCB
- External factor (Noise, etc.)
- Defective outdoor unit fan motor
- Defective fan motor connector contact

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Is the micro-computer normal monitor (green) on inverter PCB blinking?
NO
Replace the outdoor unit PCB.
YES
RZQ-K
RZQ-H, RZQ(S)-B/C, RZR
Is the micro-computer normal LED on control PCB blinking?
NO
Replace the outdoor unit PCB.
YES
Check for defective connector connection in the transmission wiring and for clamps with high tension line.

3.74 P1 Inverter Over-Ripple Protection

Remote Controller Display

P1

Applicable Models

CMSQ, RZQ-C7

Method of Error Detection

Imbalance in supply voltage is detected in PCB.
Imbalance in the power supply voltage causes increased ripple of voltage of the main circuit capacitor in the inverter. Consequently, the increased ripple is detected.

Error Decision Conditions

When the resistance value of thermistor becomes a value equivalent to open or short circuited status.

∗ Error is not decided while the unit operation is continued.
"P1" will be displayed by pressing the inspection button.

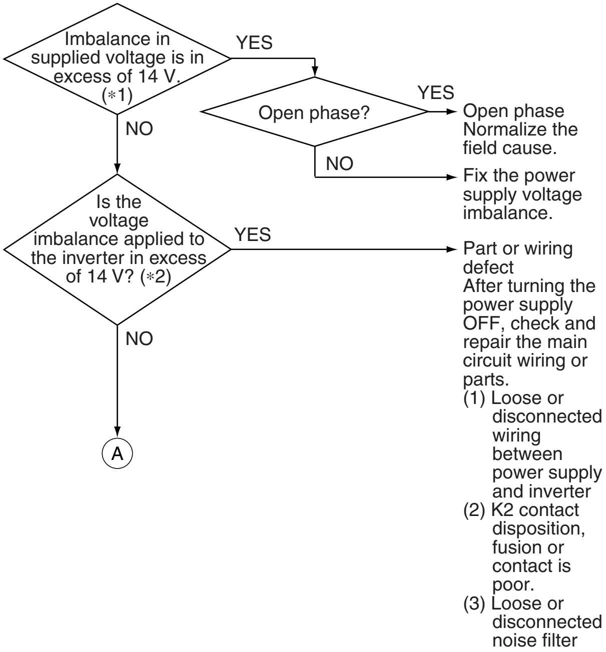
When the amplitude of the ripple exceeding a certain value is detected for consecutive 4 minutes.

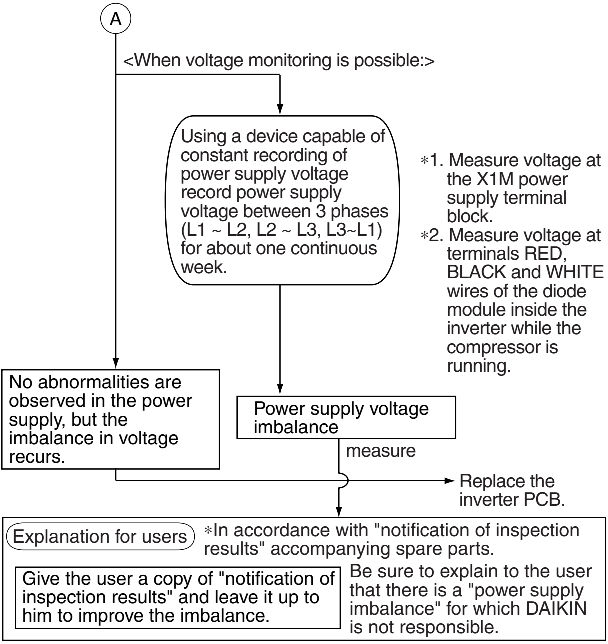
Supposed Causes

- Open phase
- Voltage imbalance between phases
- Defective main circuit capacitor
- Defective inverter PCB
- Defective K2 relay in inverter PCB
- Improper main circuit wiring

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
<When voltage monitoring is possible:>
Using a device capable of constant recording of power supply voltage record power supply voltage between 3 phases (L1 ~ L2, L2 ~ L3, L3~L1) for about one continuous week.
∗1. Measure voltage at the X1M power supply terminal block.
∗2. Measure voltage at terminals RED, BLACK and WHITE wires of the diode module inside the inverter while the compressor is running.
No abnormalities are observed in the power supply, but the imbalance in voltage recurs.
Power supply voltage imbalance
measure
Replace the inverter PCB.
Explanation for users
∗In accordance with "notification of inspection results" accompanying spare parts.
Give the user a copy of "notification of inspection results" and leave it up to him to improve the imbalance.
Be sure to explain to the user that there is a "power supply imbalance" for which DAIKIN is not responsible.

3.75 P1 Open Phase or Power Supply Voltage Imbalance

Remote Controller Display

P1

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZQG, RZR-KU/HU

Method of Error Detection

The error is detected according to the voltage waveform of main circuit capacitor built in inverter.

Error Decision Conditions

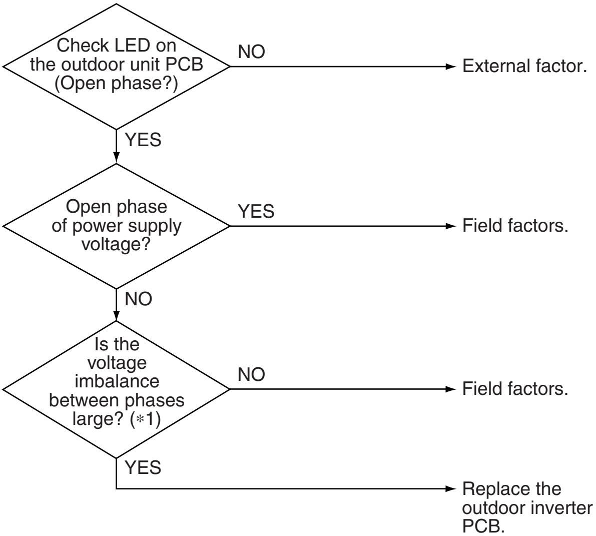
When the aforementioned voltage waveform becomes identical with the waveform of the power supply open phase.

Supposed Causes

- Open phase
- Voltage imbalance between phases
- Defective outdoor inverter PCB
  - Defective main circuit capacitor
  - Power unit (Disconnection in diode module)
  - Defective magnetic relay
  - Improper main circuit wiring

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. Target : ±10V between phases, R-S, S-T, T-R

3.76 P4 Radiation Fin Thermistor Abnormality

Remote Controller Display

P4

Applicable Models

RZ(Y)

Method of Error Detection

Open circuit or short circuit in radiation fin thermistor is detected when the compressor is not operating.

Error Decision Conditions

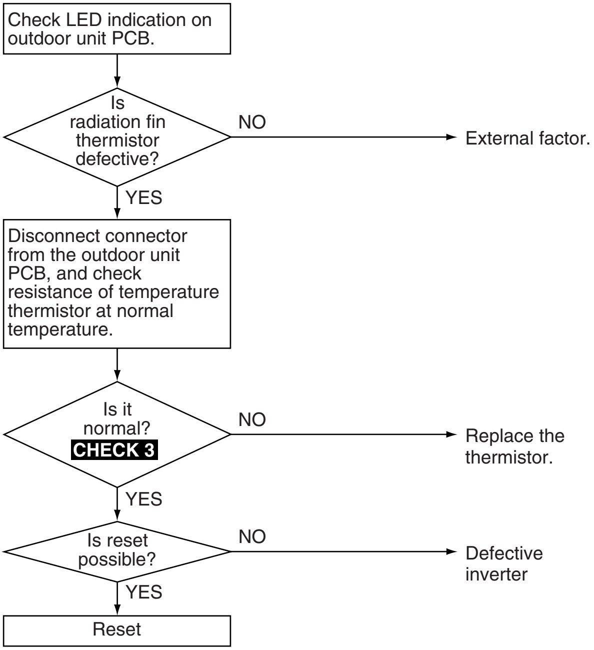
When open circuit or short circuit in radiation fin thermistor is detected in non-operating compressor

Supposed Causes

- Defective thermistor
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 3 **Refer to P.460.**

Remote Controller Display

P4

Applicable Models

CMSQ

Method of Error Detection

Resistance of radiation fin thermistor is detected when the compressor is not operating.

Error Decision Conditions

When the resistance value of thermistor becomes a value equivalent to open or short circuited status.

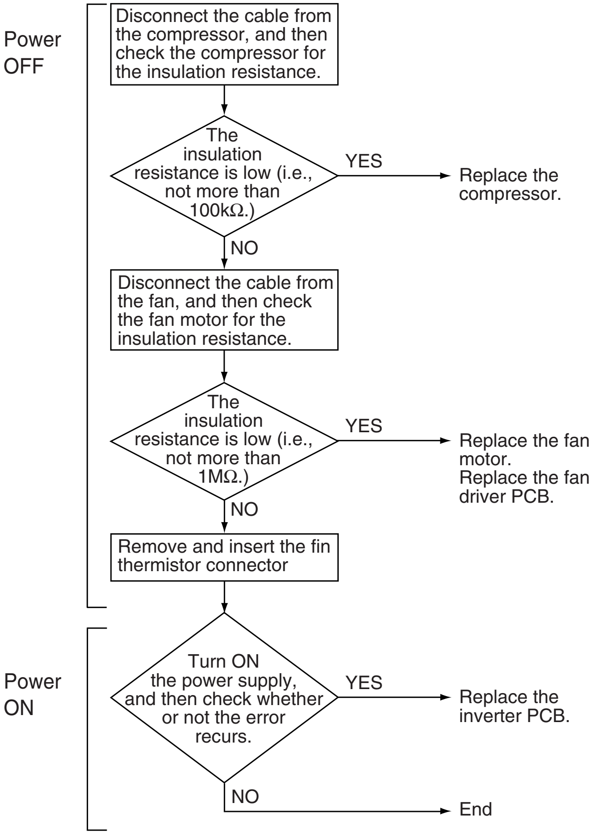
* Error is not decided while the unit operation is continued.
  "P4" will be displayed by pressing the inspection button.

Supposed Causes

- Defective radiation fin temperature thermistor
- Defective inverter PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.77 P4 Radiation Fin Thermistor or Related Abnormality

Remote Controller Display

P4

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZR-KU/HU

Method of Error Detection

Detection by open or short circuit of the radiation fin thermistor during the compressor stops operating.

Error Decision Conditions

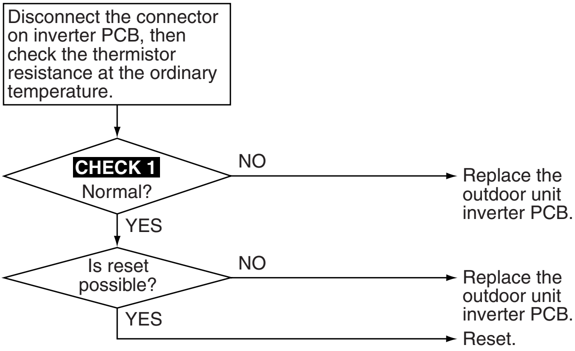
When open or short circuit of the radiation fin thermistor is detected during the compressor stops operating

Supposed Causes

- Defective radiation fin thermistor
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 1 Refer to P.459.

3.78 PJ Defective Capacity Setting

Remote Controller Display

PJ

Applicable Model

R(Y)-LU, RR-M

Method of Error Detection

Check whether set value (i.e., factory setting value) written in E^{2}PROM or set value with the (replaced) capacity setting adaptor (X26A) is the same as that of outdoor unit capacity.

Error Decision Conditions

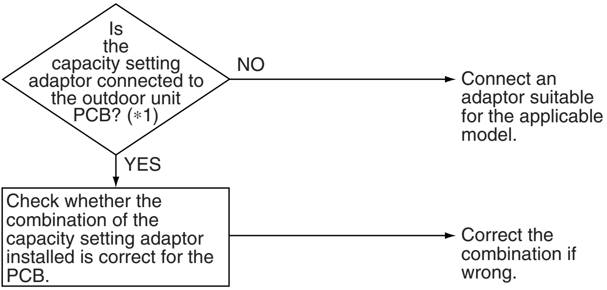
When the set value with the E^{2}PROM differs from that of the outdoor unit capacity or any capacity setting adaptor other than that suitable for the applicable PCB is installed. (However, the error decision is made only when the power supply is turned ON.)

Possible Causes

- Improper set value with E^{2}PROM
- Improper capacity setting adaptor installed
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. The capacity setting adaptor is not connected at the time of shipment from factory. (The capacity is written in the E^2PROM.)
This capacity setting adaptor is required only when the PCB is replaced with a spare PCB.

3.79 PJ Error in Capacity Setting

Remote Controller Display

PJ

Applicable Models

RZ(Y)

Method of Error Detection

Checks if the value set in the capacity setting adaptor is the same as the capacity set in the outdoor unit PCB.

Error Decision Conditions

Error is generated when installed with the capacity setting adaptor incompatible with the PCB. (Judgement is made only when the power switch is turned ON.)

Supposed Causes

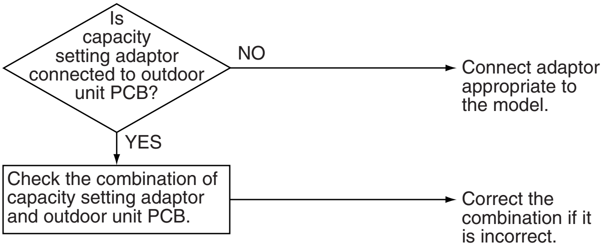
- Inappropriate capacity setting adaptor
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

Incorrect combination of capacity setting adaptor and outdoor unit PCB.
Capacity setting adaptor is not connected to outdoor unit PCB.

Install correct adaptor.



3.80 PJ Field Setting Error after Replacing Main PCB or Defective Combination of PCB

Remote Controller Display

PJ

Applicable Models

CMSQ

Method of Error Detection

The defective (or no) field setting after replacing PCB or defective PCB combination is detected through communications with the inverter.

Error Decision Conditions

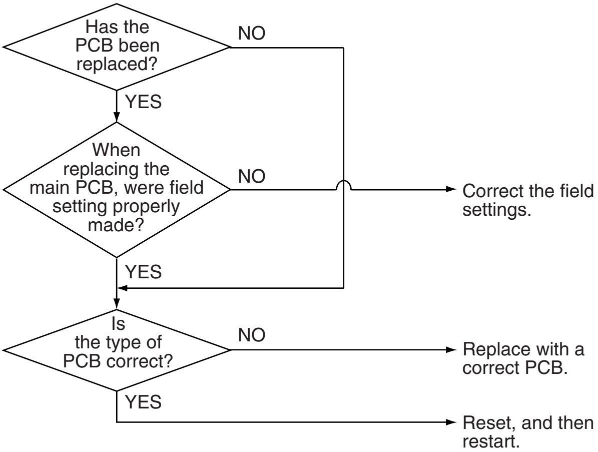
Whether or not the field setting or the type of the PCB is correct through the communication date is judged.

Supposed Causes

- Defective (or no) field setting after replacing main PCB
- Mis-matching of type of PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.81 PJ Defective Combination of Inverter and Fan Driver

Remote Controller Display

PJ

Applicable Models

RZQ-C7

Method of Error Detection

To be detected based on the data transmission with INV.

Error Decision Conditions

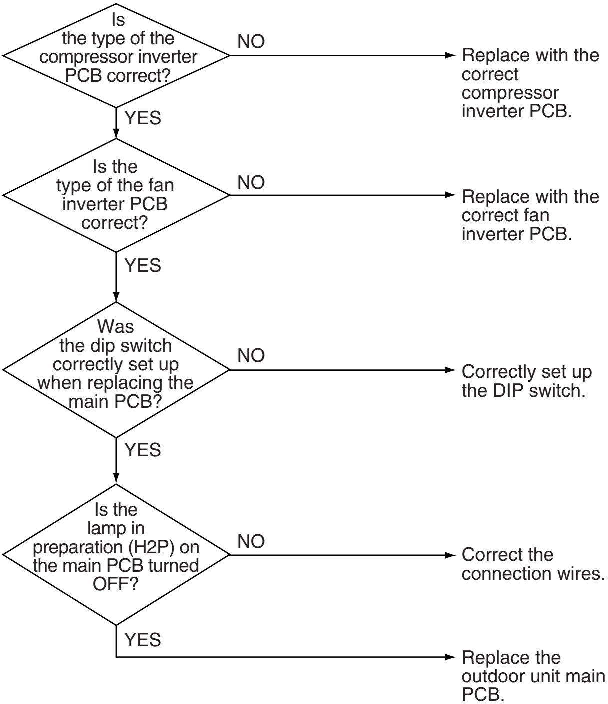
Judge if the inverter PCB type is correct based on the data transmission.

Supposed Causes

- Mismatch of the PCB types
- Field setting error

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.82 PJ Defective Capacity Setting

Remote Controller Display

PJ

Applicable Models

RZQG

Method of Error Detection

Check whether set value written in E^2PROM (at factory) or set value of capacity setting adaptor (for spare) is the same as outdoor unit capacity.

Error Decision Conditions

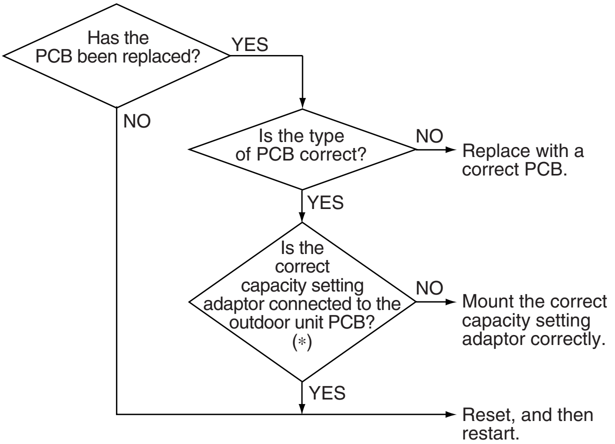
When the set value on E^2PROM differs from the outdoor unit capacity or a capacity setting adaptor except for PCB applicable models is installed. (Error decision is made only when turning the power supply ON.)

Supposed Causes

- Improper set value of E^2PROM
- Improper capacity setting adaptor
- Mismatching of type of PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗ Capacity setting adaptor is not connected at factory. (Capacity is written in E^2PROM.) Capacity setting adaptor is required only when the PCB was replaced with a spare PCB.

Remote Controller Display

PJ

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZR-KU/HU

Method of Error Detection

Check whether set value written in E^2PROM (at factory) or set value of capacity setting adaptor (for replacement) is the same as outdoor unit capacity.

Error Decision Conditions

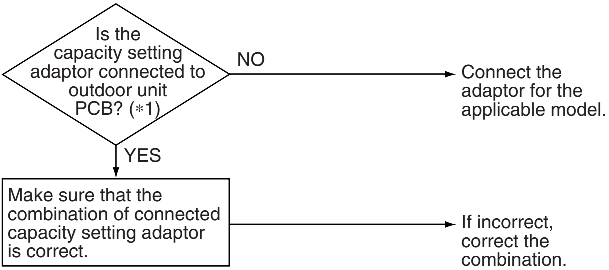
When the set value on E^2PROM differs from the outdoor unit capacity or a capacity setting adaptor except for PCB applicable models is installed. (Error decision is made only when turning the power supply ON.)

Supposed Causes

- Improper set value of E^2PROM
- Improper capacity setting adaptor
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. Capacity setting adaptor is not connected at factory. (Capacity is written in E^2PROM.) Capacity setting adaptor is required only when the PCB was replaced with a spare PCB.

3.83 U0 Refrigerant Shortage

Remote Controller Display

U0

Applicable Models

RY-F, R(Y)-G/GA/KU/LU, RR-M

Method of Error Detection

Lack of gas is detected according to discharge pipe temperature.

Error Decision Conditions

Micro-computer decides whether there is a refrigerant shortage and detects error.

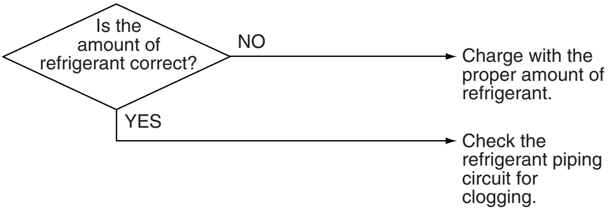
- Stop due to error does not occur even though an error is determined to have occurred.

Supposed Causes

- Refrigerant shortage
- Refrigerant piping circuit clogging

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

U0

Applicable Models

RZ(Y)

Method of Error Detection

Refrigerant shortage is detected based on the discharge pipe temperature.

Error Decision Conditions

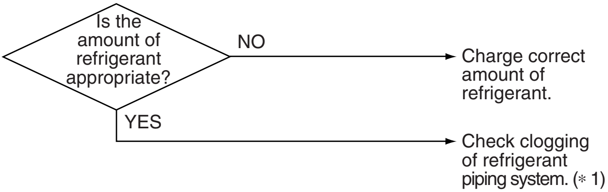
Micro-computer judges and detects whether refrigerant shortage occurs or not.
∗ The system does not decide to error and repeats retry.
Press the check button to indication "U0"

Supposed Causes

- Refrigerant shortage
- Clogged refrigerant piping system (∗1)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. Check point:
1. Refrigerant filter clogging
2. Electronic expansion valve operation
3. Check valve operation
4. Defective thermistor

3.84 U0 Low Pressure Drop Due to Refrigerant Shortage or Electronic Expansion Valve Failure

Remote Controller Display

U0

Applicable Models

CMSQ

Method of Error Detection

Refrigerant shortage is detected by discharge pipe thermistor.

Error Decision Conditions

Micro-computer judge and detect if the system is short of refrigerant.

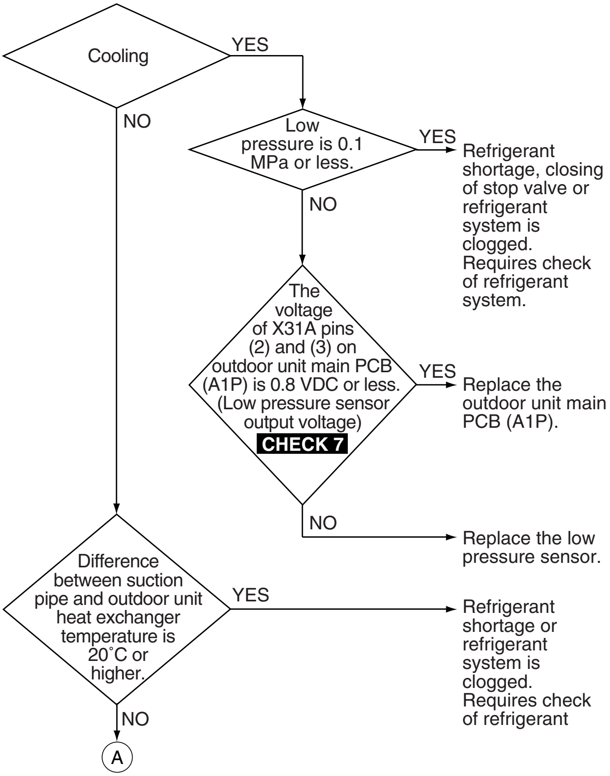
∗ The error is not decided while the unit operation is continued.

Supposed Causes

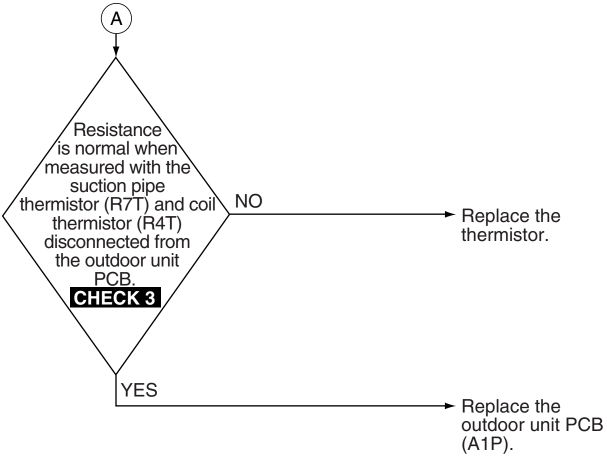
- Refrigerant shortage or refrigerant system clogging (incorrect piping)
- Defective low pressure sensor
- Defective outdoor unit PCB (A1P)
- Defective thermistor R7T or R4T

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 7 **Refer to P.470.**



CHECK 3 Refer to P.460.

3.85 U0 Refrigerant Shortage

Remote Controller Display

U0

Applicable Models

RZQ-K/H, RZQ(S)-B

Method of Error Detection

(In normal operation)
Refrigerant shortage is detected according to the electronic expansion valve opening degree and measured temperatures and pressures.

Error Decision Conditions

(In cooling operation)
When the electronic expansion valve opens fully and low pressure is below 0.1 MPa (For RZQ-C, RZQG: 0.25MPa) continuously for 30 minutes.

(In heating operation)
When the electronic expansion valve opens fully and the suction superheat is large (more than 20°C) continuously for 30 minutes (For RZQ-C, RZQG: 60 minutes).

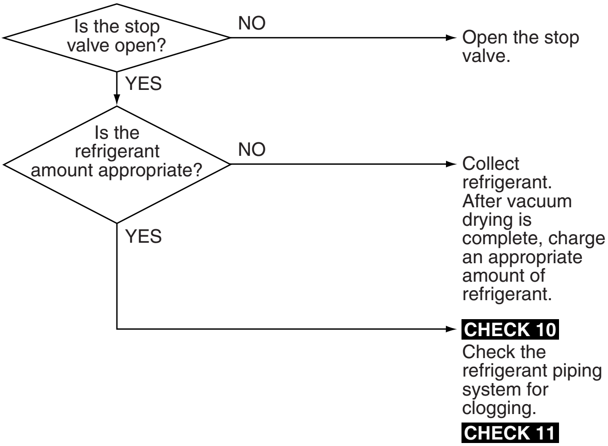
∗ Refrigerant shortage alarm is indicated but operation continues.

Supposed Causes

- The stop valve is not opened
- Insufficient refrigerant amount
- Clogged refrigerant piping system

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 10 **Refer to P.475.**

CHECK 11 **Refer to P.477.**

Remote Controller Display

U0

Applicable Models

RZQ(S)-C

Method of Error Detection

(In cooling operation)
Detection based on difference in temperature between temperature preset by remote controller and indoor suction air temperature, electronic expansion valve opening degree, compressor frequency and low pressure.

(In heating operation)
Detection based on difference in temperature between temperature preset by remote controller and indoor suction air temperature, electronic expansion valve opening degree during the control of suction air superheating, high pressure, indoor heat exchanger temperature and indoor suction air temperature.

Error Decision Conditions

(In cooling operation)
When compressor frequency does not increase even though the load is heavy because the electronic expansion valve is opened to the fullest extent
[If low pressure drops when the compressor is at 41Hz, error is confirmed.]

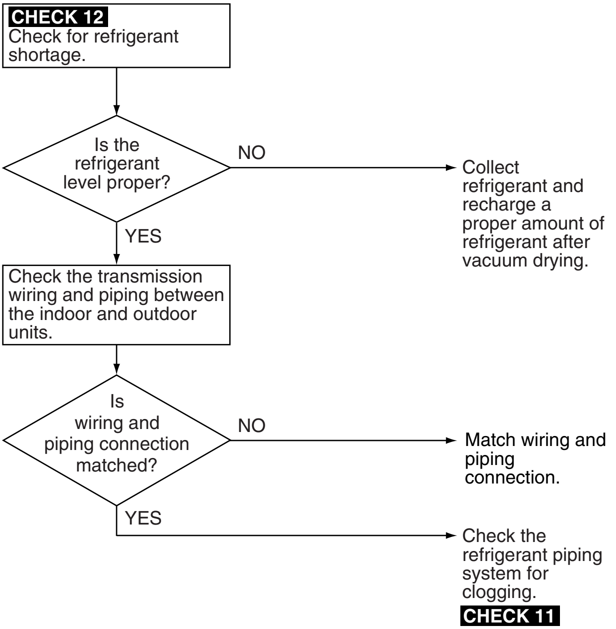
(In heating operation)
When suction gas superheated degree is large, compressor frequency is low and the electronic expansion valve is opened to the fullest extent even though heating load is heavy
[If high pressure is lower than saturated pressure for indoor heat exchanger temperature (or indoor suction air temperature), error is confirmed.]

Supposed Causes

- Refrigerant shortage
- Clogged refrigerant piping system
- Mismatching of wiring and piping

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 11 **Refer to P.477.**

CHECK 12 **Refer to P.478.**

Remote Controller Display

U0

Applicable Models

RZR71KUV1, RZQG

Method of Error Detection

(In cooling operation)
Detection based on difference in temperature between temperature preset by remote controller and suction air temperature, electronic expansion valve opening degree, compressor frequency and low pressure.

Error Decision Conditions

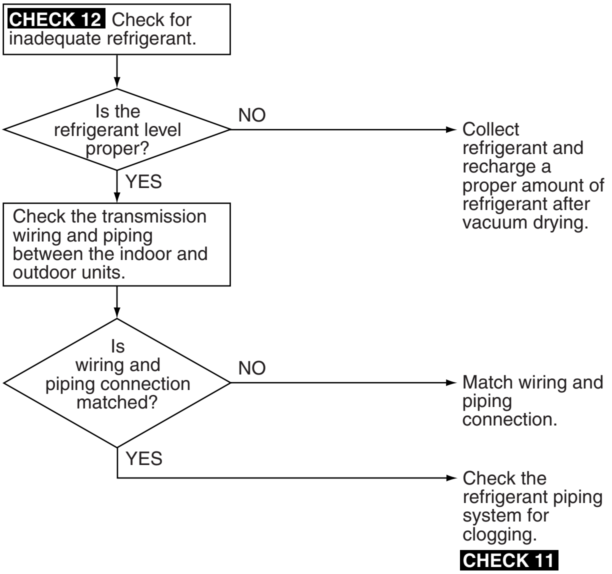
(In cooling operation)
When compressor frequency does not increase even though the load is heavy because the electronic expansion valve is opened to the fullest extent
[If low pressure drops when the compressor is at 41Hz, error is confirmed.]

Supposed Causes

- Refrigerant shortage
- Clogged refrigerant piping system
- Mismatching of wiring and piping

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 11 **Refer to P.477.**

CHECK 12 **Refer to P.478.**

3.86 U1 Reverse Phase

Remote Controller Display

U1

Applicable Models

RY-F, R(Y)-G/GA/KU
(3-phase equipment only)

Method of Error Detection

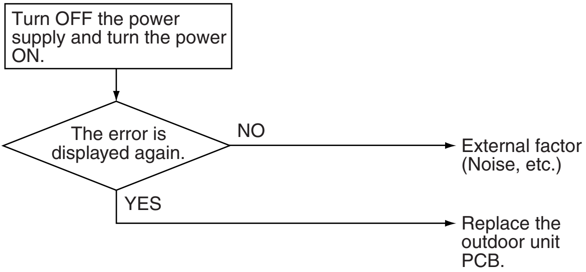
Reverse phase detection circuit detects the phase of each phase and determines whether it is normal phase, reverse phase or lack of phase.

Supposed Causes

- Defective power supply wiring connection
- Power supply wiring is broken or disconnected.
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

U1

Applicable Model

R(Y)-LU, RR-M, RZQ-C7

Method of Error Detection

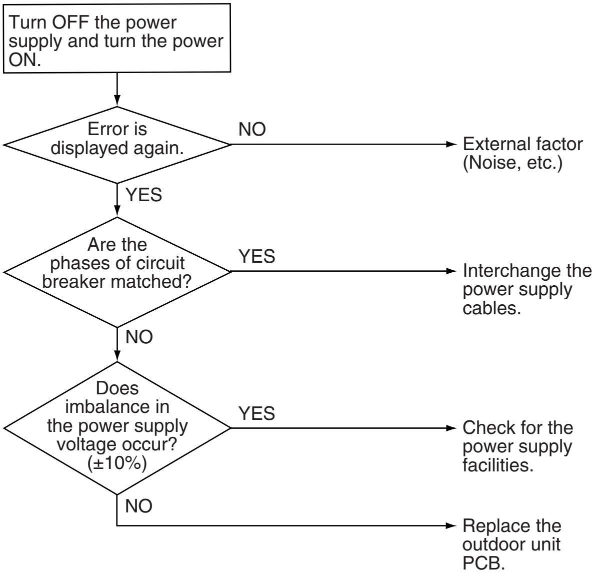
The reverse phase detection circuit detects the phase of each phase and judge whether it is normal or reverse.

Possible Causes

- Defective connection of power supply wiring
- Disconnection in power supply wiring

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

U1

Applicable Models

CMSQ

Method of Error Detection

The phase of each phase are detected by reverse phase detection circuit and right phase or reverse phase are judged.

Error Decision Conditions

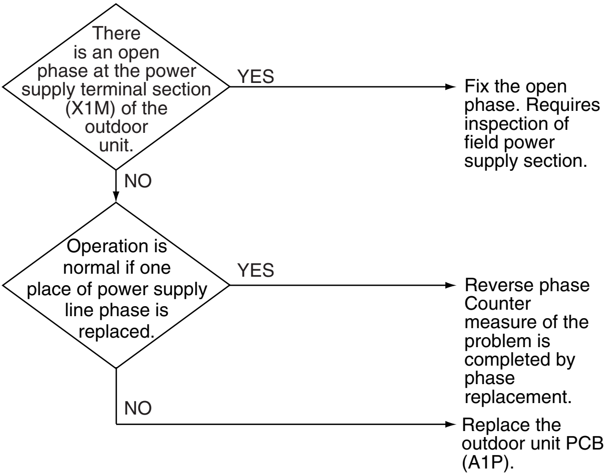
When a significant phase difference is made between phases

Supposed Causes

- Power supply reverse phase
- Power supply open phase
- Defective outdoor unit PCB (A1P)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.87 U2 Insufficient Voltage

Remote Controller Display

U2

Applicable Models

RZ(Y)

Method of Error Detection

Detection is based on the voltage in main circuit capacitor for inverter and the supply voltage.

Error Decision Conditions

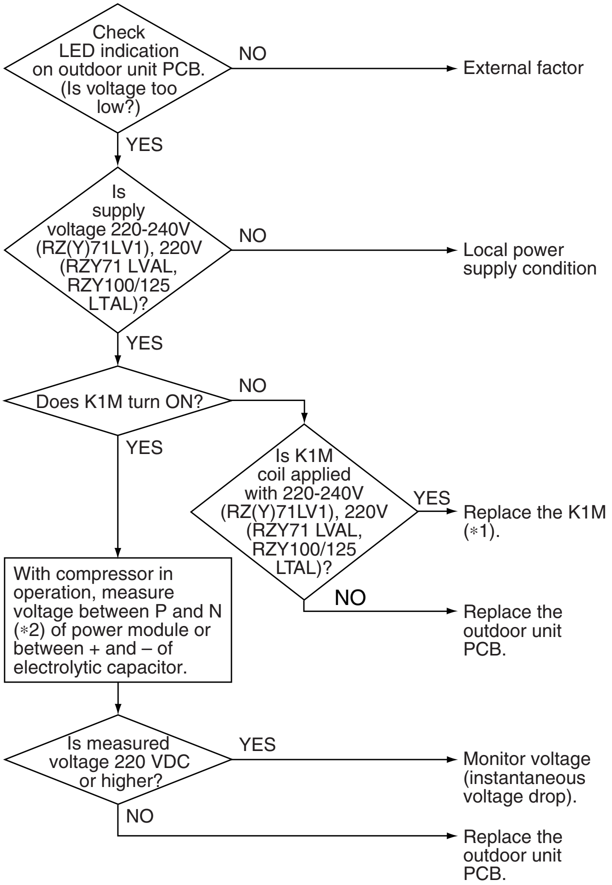
When the voltage in main circuit capacitor for inverter and the supply voltage drop (171 - 190 VAC), or when power outage of more than 20 or 30 ms occurs.

Supposed Causes

- Supply voltage drop (lower than 198 V)
- Momentary power failure
- Open phase
- Defective K1M
- Defective contact or open circuit in X51A
- Defective wiring in main circuit
- Defective outdoor unit PCB
- Damaged main circuit parts

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. K1M replacement possible in RZY100/125L.
∗2. For RZY71: Between terminals P1 and N1
For RZY100~125L: Between terminals P2 and N1

3.88 U2 Power Supply Voltage Abnormality

Remote Controller Display

U2

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZR-KU/HU

Method of Error Detection

The error is detected according to the voltage of main circuit capacitor built in the inverter and power supply voltage.

Error Decision Conditions

When the voltage of main circuit capacitor built in the inverter and power supply voltage drop (150-170 VAC) or when the power failure of several tens of ms or more is generated.

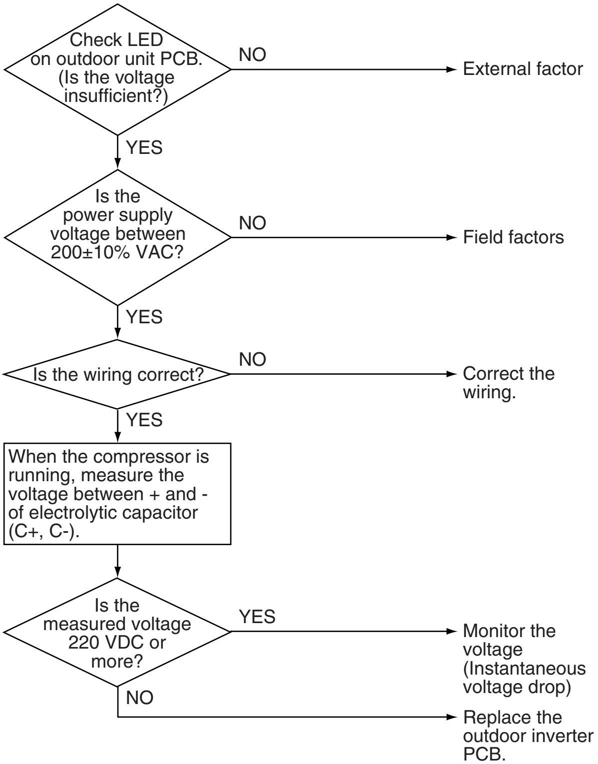
∗ Remote controller does not decide the abnormality.

Supposed Causes

- Drop in power supply voltage (180 V or less)
- Instantaneous power failure
- Inverter open phase (Phase T)
- Defective main circuit wiring
- Defective outdoor unit inverter PCB
- Main circuit parts damaged

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.89 U2 Power Supply Insufficient or Instantaneous Failure

Remote Controller Display

U2

Applicable Models

RZQ-C7, CMSQ

Method of Error Detection

Detection of voltage of main circuit capacitor built in the inverter and power supply voltage.

Error Decision Conditions

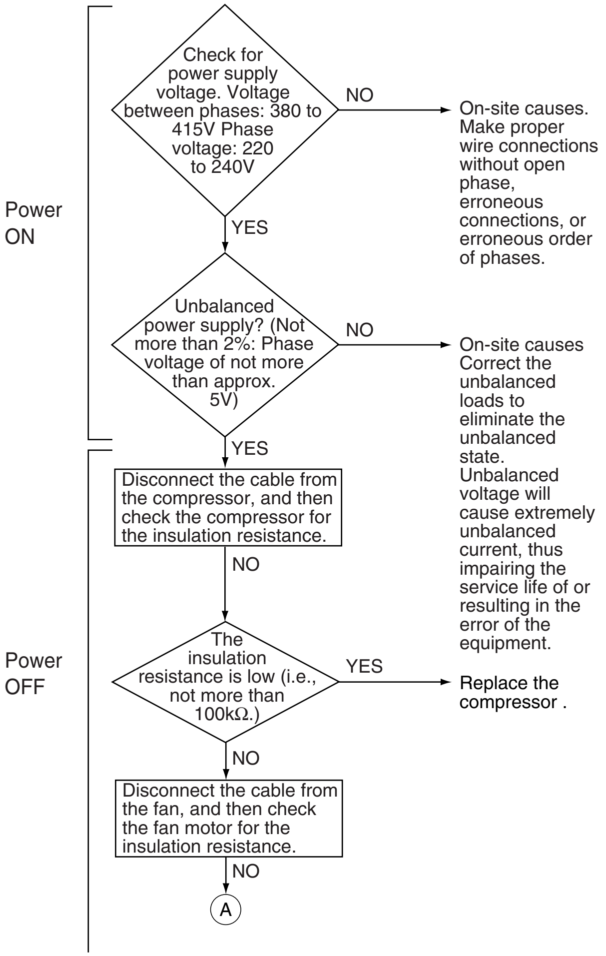
When the voltage aforementioned is not less than 780V or not more than 320V, or when the current-limiting voltage does not reach 200V or more or exceeds 740V.

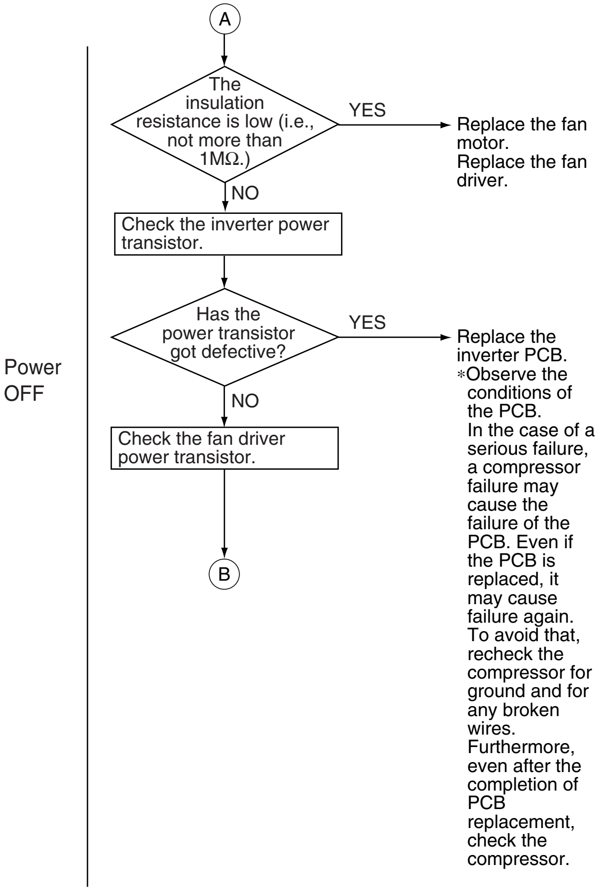
Supposed Causes

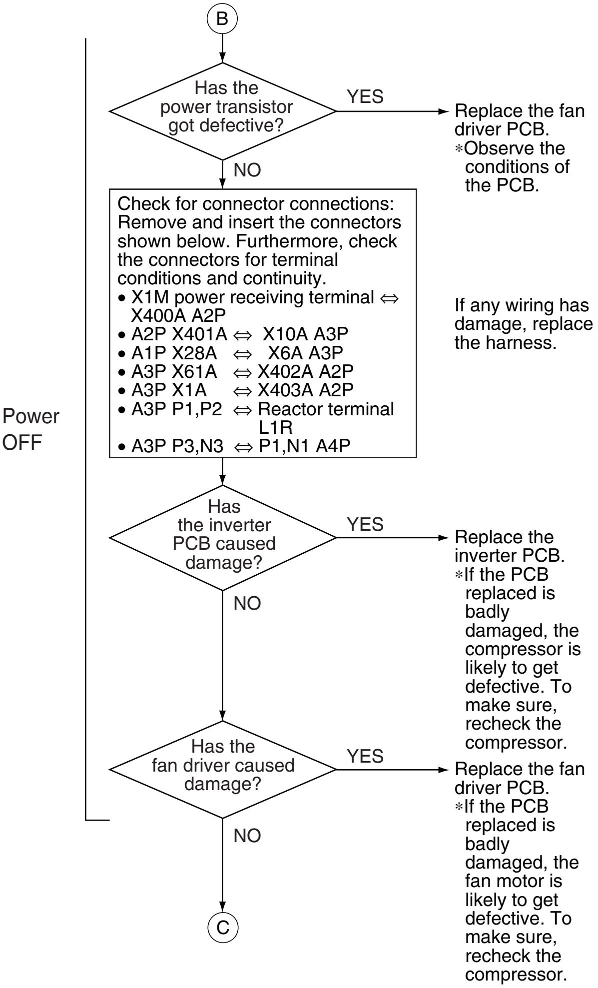
- Power supply insufficient
- Instantaneous power failure
- Open phase
- Defective inverter PCB
- Defective outdoor control PCB
- Main circuit wiring defect
- Defective compressor
- Defective fan motor
- Defective connection of signal cable

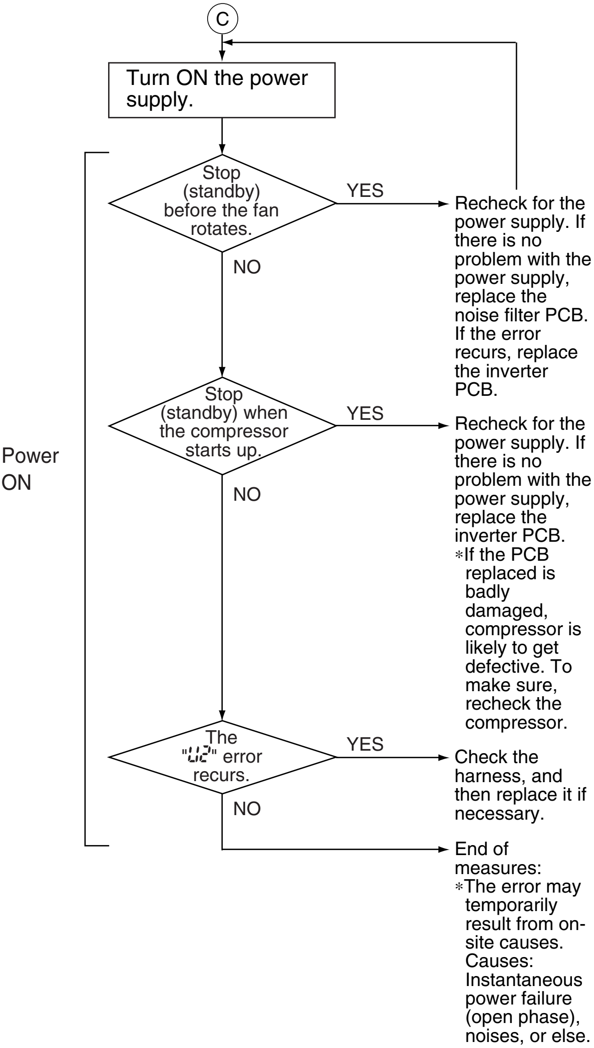
Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
The insulation resistance is low (i.e., not more than 1MΩ.)
YES
Replace the fan motor.
Replace the fan driver.
NO
Check the inverter power transistor.
Has the power transistor got defective?
YES
Replace the inverter PCB.
∗Observe the conditions of the PCB.
In the case of a serious failure, a compressor failure may cause the failure of the PCB. Even if the PCB is replaced, it may cause failure again.
To avoid that, recheck the compressor for ground and for any broken wires.
Furthermore, even after the completion of PCB replacement, check the compressor.
NO
Check the fan driver power transistor.
B
Power OFF


B
Has the power transistor got defective?
YES
Replace the fan driver PCB.
∗Observe the conditions of the PCB.
NO
Check for connector connections: Remove and insert the connectors shown below. Furthermore, check the connectors for terminal conditions and continuity.
• X1M power receiving terminal ⇔ X400A A2P
• A2P X401A ⇔ X10A A3P
• A1P X28A ⇔ X6A A3P
• A3P X61A ⇔ X402A A2P
• A3P X1A ⇔ X403A A2P
• A3P P1,P2 ⇔ Reactor terminal L1R
• A3P P3,N3 ⇔ P1,N1 A4P
If any wiring has damage, replace the harness.
Power OFF
Has the inverter PCB caused damage?
YES
Replace the inverter PCB.
∗If the PCB replaced is badly damaged, the compressor is likely to get defective. To make sure, recheck the compressor.
NO
Has the fan driver caused damage?
YES
Replace the fan driver PCB.
∗If the PCB replaced is badly damaged, the fan motor is likely to get defective. To make sure, recheck the compressor.
NO
C


C
Turn ON the power supply.
Power ON
Stop (standby) before the fan rotates.
YES
Recheck for the power supply. If there is no problem with the power supply, replace the noise filter PCB. If the error recurs, replace the inverter PCB.
NO
Stop (standby) when the compressor starts up.
YES
Recheck for the power supply. If there is no problem with the power supply, replace the inverter PCB.
∗If the PCB replaced is badly damaged, compressor is likely to get defective. To make sure, recheck the compressor.
NO
The "U2" error recurs.
YES
Check the harness, and then replace it if necessary.
NO
End of measures:
∗The error may temporarily result from on-site causes. Causes: Instantaneous power failure (open phase), noises, or else.

3.90 U2 Power Supply Voltage Abnormality

Remote Controller Display

U2

Applicable Models

RZQG

Method of Error Detection

The error is detected according to the voltage of main circuit capacitor built in the inverter and power supply voltage.

Error Decision Conditions

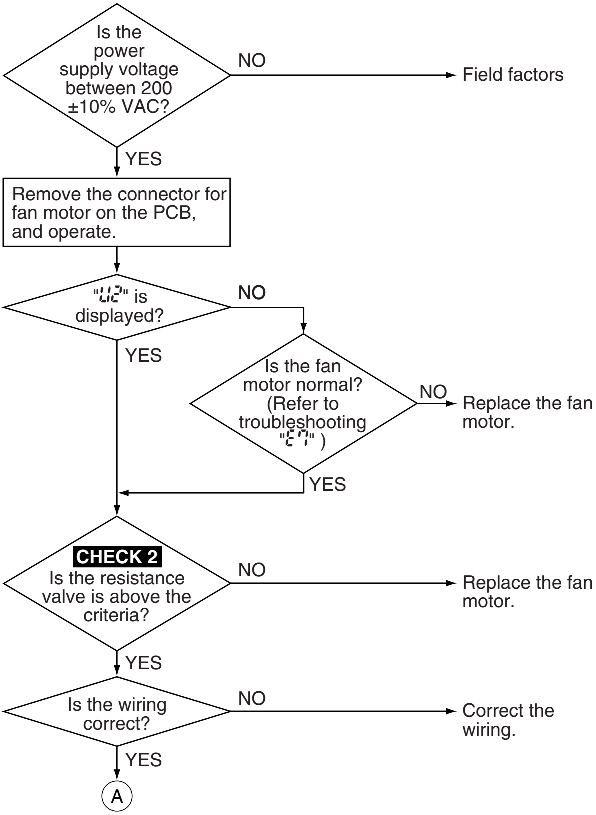
When the voltage of main circuit capacitor built in the inverter and power supply voltage drop or when the power failure of several tens of ms or more is generated

Supposed Causes

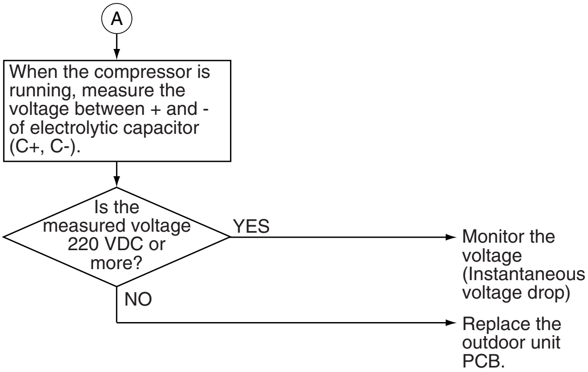
- Drop in power supply voltage
- Defective outdoor unit fan motor
- Instantaneous power failure
- Defective outdoor unit inverter PCB
- Main circuit parts damaged

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 2 **Refer to P.460.**


A
When the compressor is running, measure the voltage between + and - of electrolytic capacitor (C+, C-).
Is the measured voltage 220 VDC or more?
YES
Monitor the voltage (Instantaneous voltage drop)
NO
Replace the outdoor unit PCB.

3.91 U3 Check Operation is not Executed

Remote Controller Display

U3

Applicable Models

CMSQ

Method of Error Detection

Check operation is executed or not executed

Error Decision Conditions

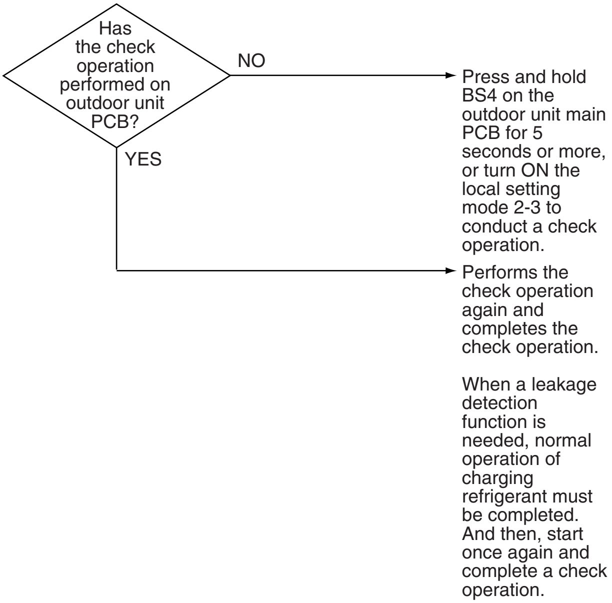
The error is decided when the unit starts operation without check operation.

Supposed Causes

- Check operation is not executed.

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.92 U4 or UF Transmission Error (Between Indoor Unit and Outdoor Unit)

Remote Controller Display

U4 or UF

Applicable Models

R(Y)-FU

Method of Error Detection

Micro-computer checks if transmission between indoor and outdoor units is normal.

Error Decision Conditions

When transmission is not carried out normally for a certain amount of time

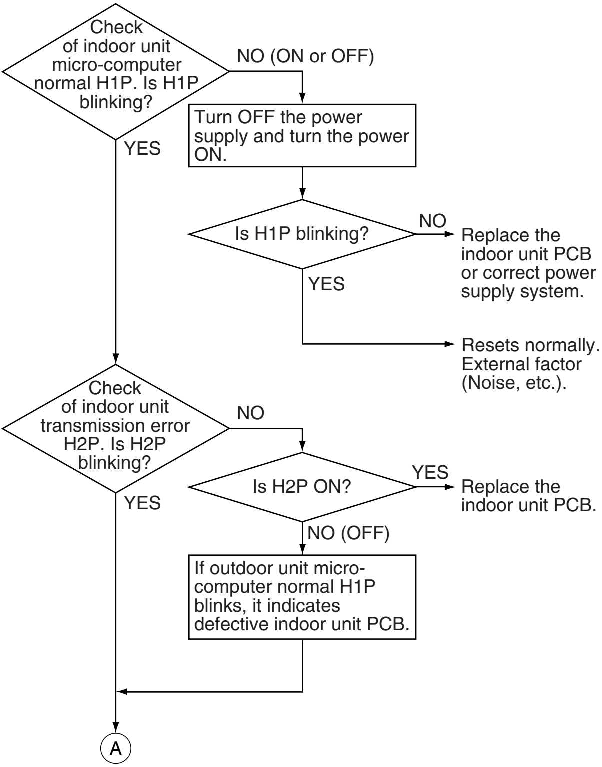
Supposed Causes

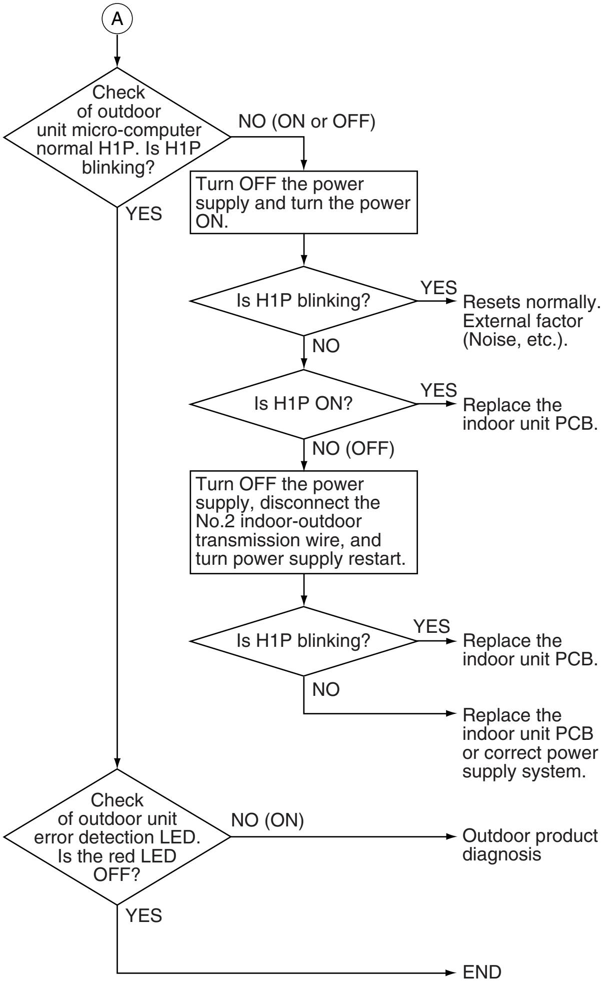
- Wiring indoor-outdoor transmission wire is incorrect.
- Defective indoor unit PCB
- Defective outdoor unit PCB
- External factor (Noise, etc.)

Troubleshooting

Diagnosis of incorrect or broken/disconnected wiring
If the LEDs on the indoor unit PCB are OFF, it indicates that the transmission wiring between indoor and outdoor units may be incorrect or broken/disconnected.

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Check of outdoor unit micro-computer normal H1P. Is H1P blinking?
NO (ON or OFF)
Turn OFF the power supply and turn the power ON.
YES
Is H1P blinking?
YES
Resets normally. External factor (Noise, etc.).
NO
Is H1P ON?
YES
Replace the indoor unit PCB.
NO (OFF)
Turn OFF the power supply, disconnect the No.2 indoor-outdoor transmission wire, and turn power supply restart.
Is H1P blinking?
YES
Replace the indoor unit PCB.
NO
Replace the indoor unit PCB or correct power supply system.
Check of outdoor unit error detection LED. Is the red LED OFF?
NO (ON)
Outdoor product diagnosis
YES
END

Remote Controller Display

U4 or UF

Applicable Models

RY-F, R(Y)-G/GA/KU/LU/NU/PU, RR-M

Method of Error Detection

Micro-computer checks if transmission between indoor and outdoor units is normal.

Error Decision Conditions

When transmission is not carried out normally for a certain amount of time

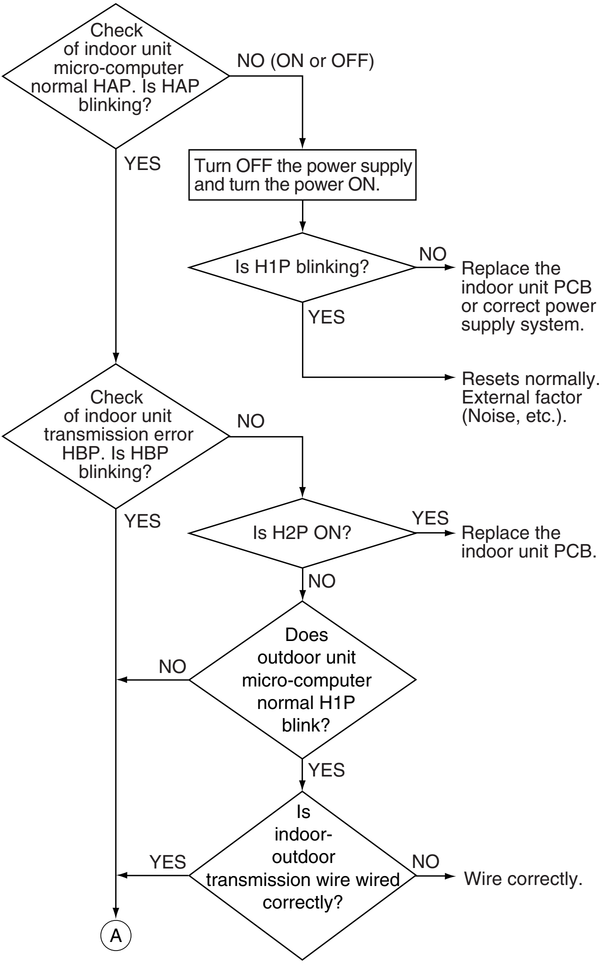
Supposed Causes

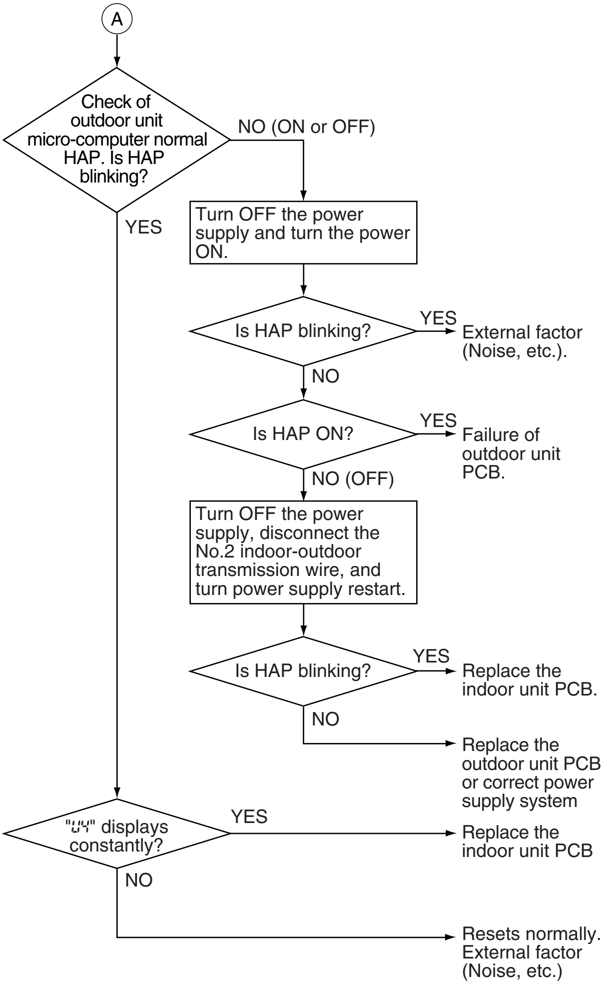
- Wiring indoor-outdoor transmission wire is incorrect.
- Defective indoor unit PCB
- Defective outdoor unit PCB
- External factor (Noise, etc.)

Troubleshooting

Diagnosis of incorrect or broken/disconnected wiring
If the LEDs on the indoor unit PCB are OFF, it indicates that the transmission wiring between
indoor and outdoor units may be incorrect or broken/ disconnected.

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Check of outdoor unit micro-computer normal HAP. Is HAP blinking?
NO (ON or OFF)
YES
Turn OFF the power supply and turn the power ON.
Is HAP blinking?
YES
External factor (Noise, etc.).
NO
Is HAP ON?
YES
Failure of outdoor unit PCB.
NO (OFF)
Turn OFF the power supply, disconnect the No.2 indoor-outdoor transmission wire, and turn power supply restart.
Is HAP blinking?
YES
Replace the indoor unit PCB.
NO
Replace the outdoor unit PCB or correct power supply system
"U4" displays constantly?
YES
Replace the indoor unit PCB
NO
Resets normally. External factor (Noise, etc.)

3.93 U4 Transmission Error Between Indoor Unit and Outdoor Unit

Remote Controller Display

U4

Applicable Models

RZ(Y)

Method of Error Detection

Micro-computer checks if transmission between indoor and outdoor units is normal.

Error Decision Conditions

When transmission is not carried out normally for a certain amount of time

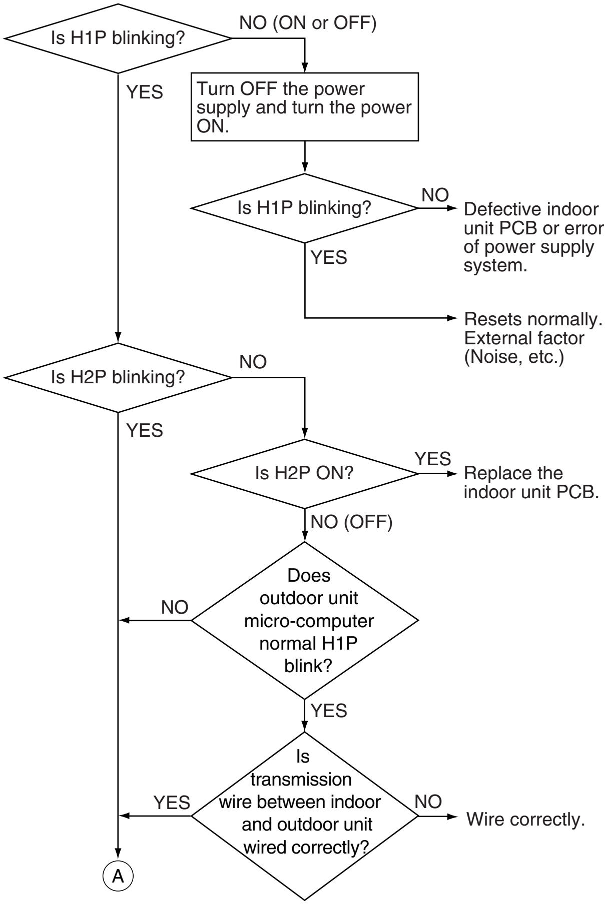
Supposed Causes

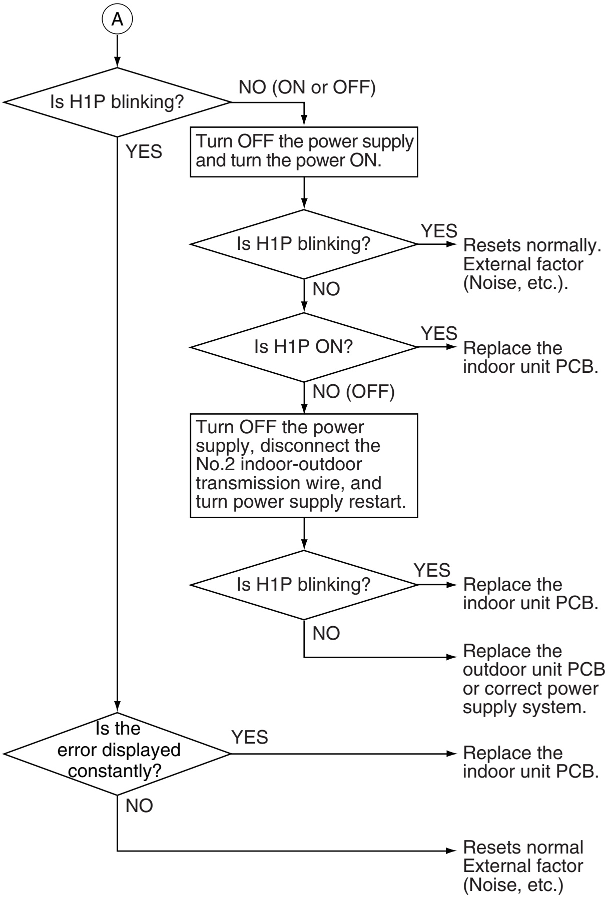
- Wiring indoor-outdoor transmission wire is incorrect.
- Defective indoor unit PCB
- Defective outdoor unit PCB
- External factor (Noise, etc.)
- Power supply -open phase

Troubleshooting

Diagnosis of incorrect or broken/disconnected wiring
If the LEDs on the indoor unit PCB are OFF, it indicates that the transmission wiring between indoor and outdoor units may be incorrect or broken/disconnected.

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Is H1P blinking?
NO (ON or OFF)
YES
Turn OFF the power supply and turn the power ON.
Is H1P blinking?
YES
Resets normally. External factor (Noise, etc.).
NO
Is H1P ON?
YES
Replace the indoor unit PCB.
NO (OFF)
Turn OFF the power supply, disconnect the No.2 indoor-outdoor transmission wire, and turn power supply restart.
Is H1P blinking?
YES
Replace the indoor unit PCB.
NO
Replace the outdoor unit PCB or correct power supply system.
Is the error displayed constantly?
YES
Replace the indoor unit PCB.
NO
Resets normal External factor (Noise, etc.)

Remote Controller Display

U4

Applicable Models

RZQ-K/H, RZR-KU/HU

Error Decision Conditions

The error is generated when the micro-processor detects that the transmission between the indoor unit and the outdoor unit is not normal over a certain amount of time.

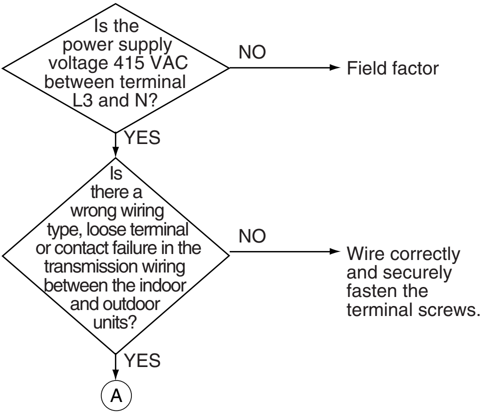
Supposed Causes

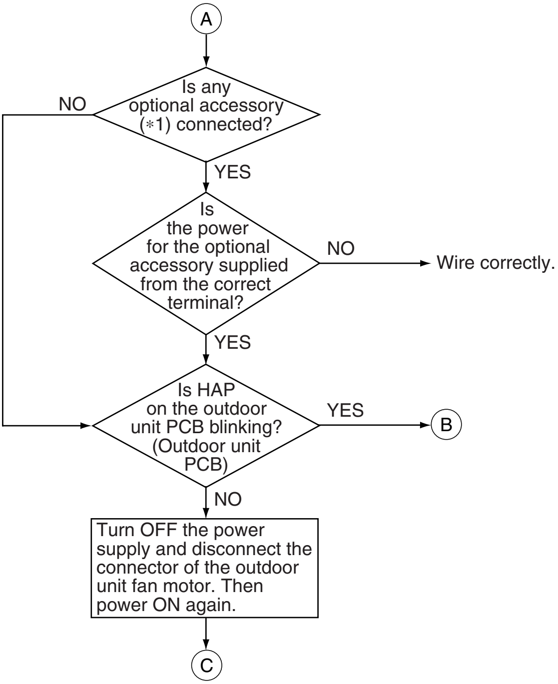
- Wiring indoor-outdoor transmission wire is incorrect
- Defective indoor unit PCB
- Defective outdoor unit PCB
- Burning out fuse
- Defective fan motor
- External factor (Noise, etc.)

Troubleshooting

Diagnosis of incorrect or broken/disconnected wiring. If the LEDs on the indoor unit PCB are OFF, it indicates that the transmission wiring between indoor and outdoor units may be incorrect or broken/disconnected.

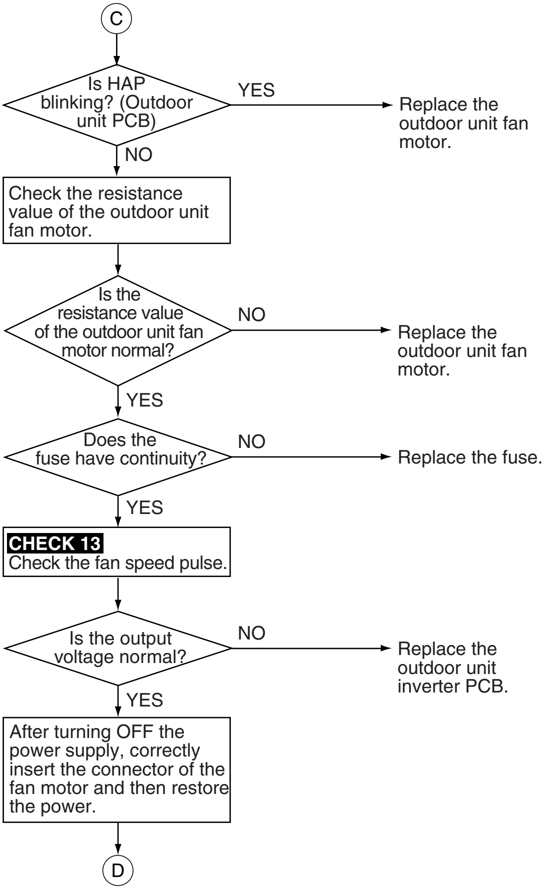
Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



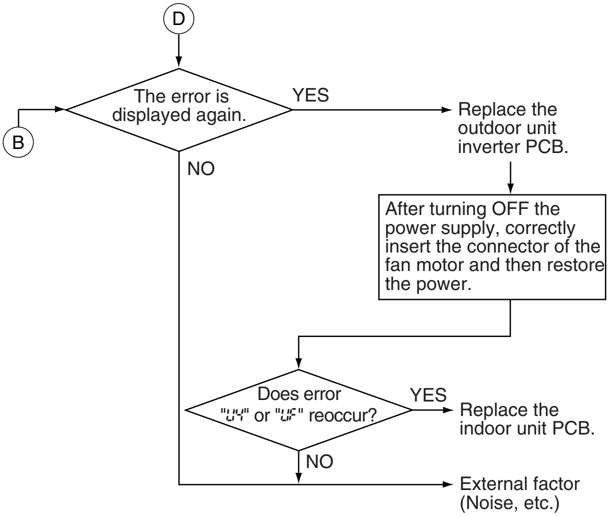


Note:

∗1. Optional accessories refer to wire adaptor, auto grill and other accessories.



CHECK 13 **Refer to P.482.**


D
The error is displayed again.
B
YES
Replace the outdoor unit inverter PCB.
NO
After turning OFF the power supply, correctly insert the connector of the fan motor and then restore the power.
Does error "U4" or "UF" reoccur?
YES
Replace the indoor unit PCB.
NO
External factor (Noise, etc.)

Remote Controller Display

U4

Applicable Models

FMCQ, FMDQ-A7/B7
CMSQ

Method of Error Detection

Micro-computer checks if transmission between indoor and outdoor units is normal.

Error Decision Conditions

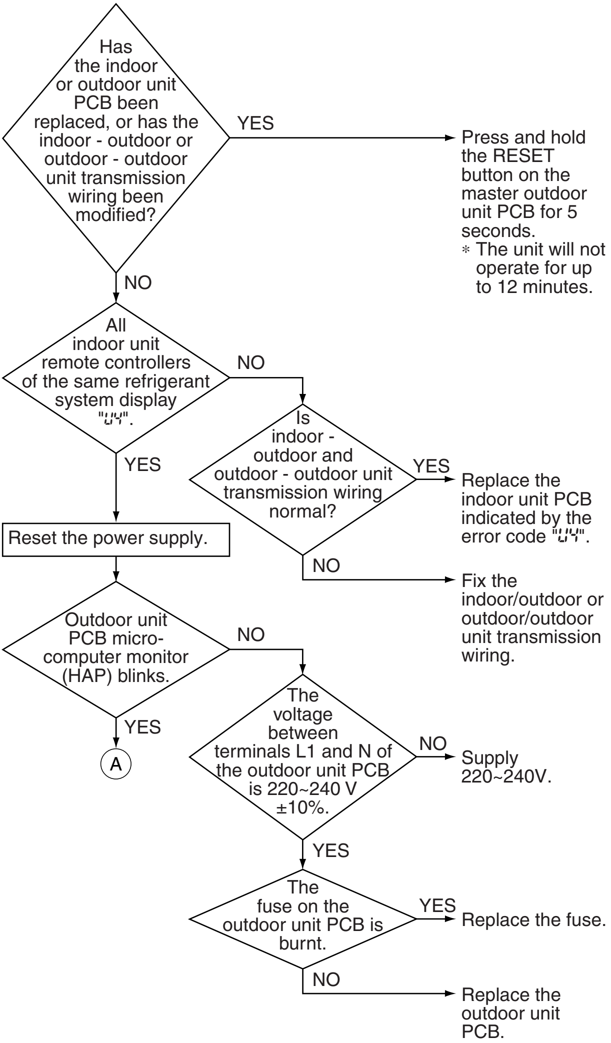
When transmission is not carried out normally for a certain amount of time

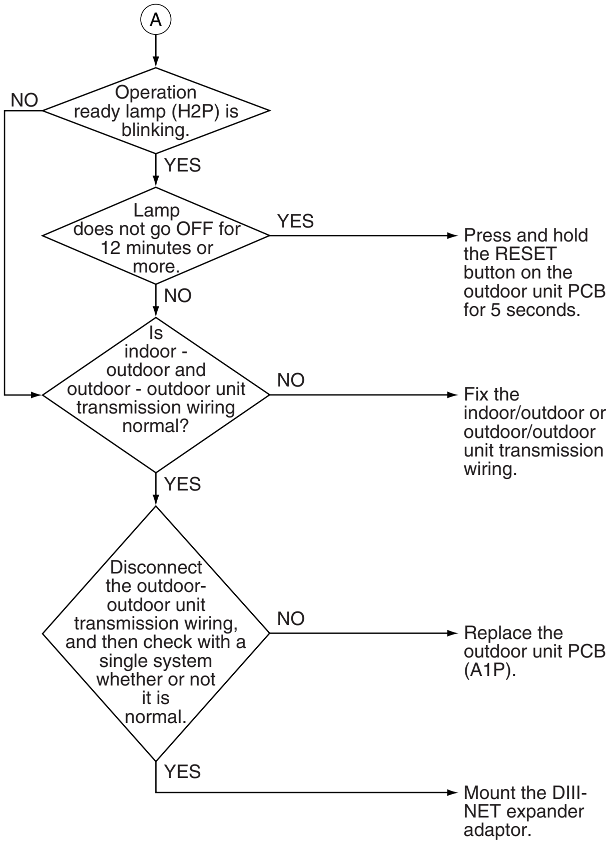
Supposed Causes

- Indoor to outdoor, outdoor to outdoor transmission wiring F1, F2 disconnection, short circuit or wrong wiring
- Outdoor unit power supply is OFF
- System address does not match
- Defective indoor unit PCB
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Operation ready lamp (H2P) is blinking.
NO
YES
Lamp does not go OFF for 12 minutes or more.
YES
Press and hold the RESET button on the outdoor unit PCB for 5 seconds.
NO
Is indoor - outdoor and outdoor - outdoor unit transmission wiring normal?
NO
Fix the indoor/outdoor or outdoor/outdoor unit transmission wiring.
YES
Disconnect the outdoor-outdoor unit transmission wiring, and then check with a single system whether or not it is normal.
NO
Replace the outdoor unit PCB (A1P).
YES
Mount the DIII-NET expander adaptor.

Remote Controller Display

U4 or UF

Applicable Models

RZQ(S)-B/C

Error Decision Conditions

The error is generated when the micro-processor detects that the transmission between the indoor and the outdoor unit is not normal over a certain amount of time.

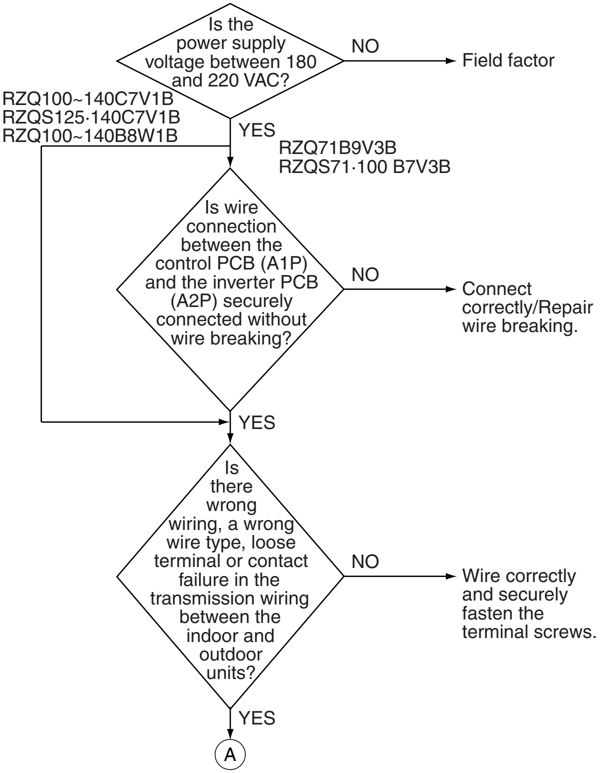
Supposed Causes

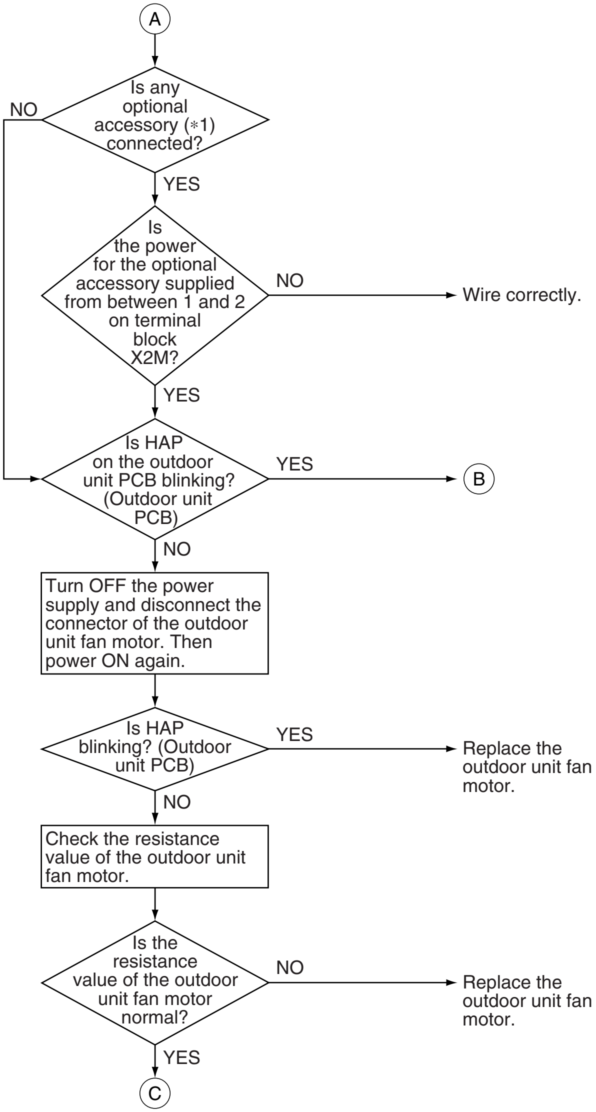
- Wiring indoor-outdoor transmission wire is incorrect
- Defective indoor unit PCB
- Defective outdoor unit PCB
- Burning out fuse
- Defective fan motor
- External factor (Noise, etc.)

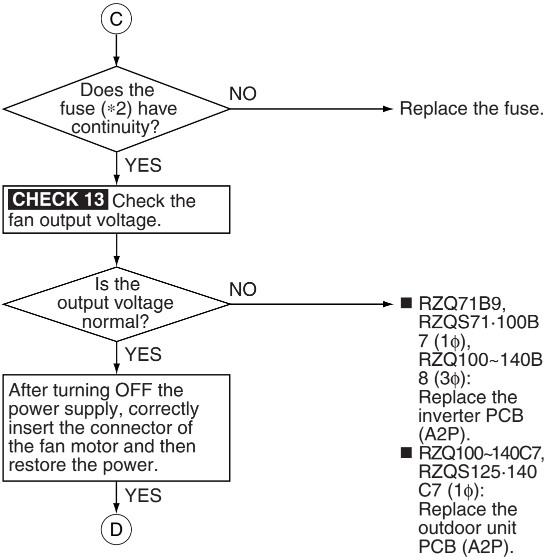
Troubleshooting

Diagnosis of incorrect or broken/disconnected wiring. If the LEDs on the indoor unit PCB are OFF, it indicates that the transmission wiring between indoor and outdoor units may be incorrect or broken/disconnected.

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Is any optional accessory (∗1) connected?
NO
YES
Is the power for the optional accessory supplied from between 1 and 2 on terminal block X2M?
NO
Wire correctly.
YES
Is HAP on the outdoor unit PCB blinking? (Outdoor unit PCB)
YES
B
NO
Turn OFF the power supply and disconnect the connector of the outdoor unit fan motor. Then power ON again.
Is HAP blinking? (Outdoor unit PCB)
YES
Replace the outdoor unit fan motor.
NO
Check the resistance value of the outdoor unit fan motor.
Is the resistance value of the outdoor unit fan motor normal?
NO
Replace the outdoor unit fan motor.
YES
C

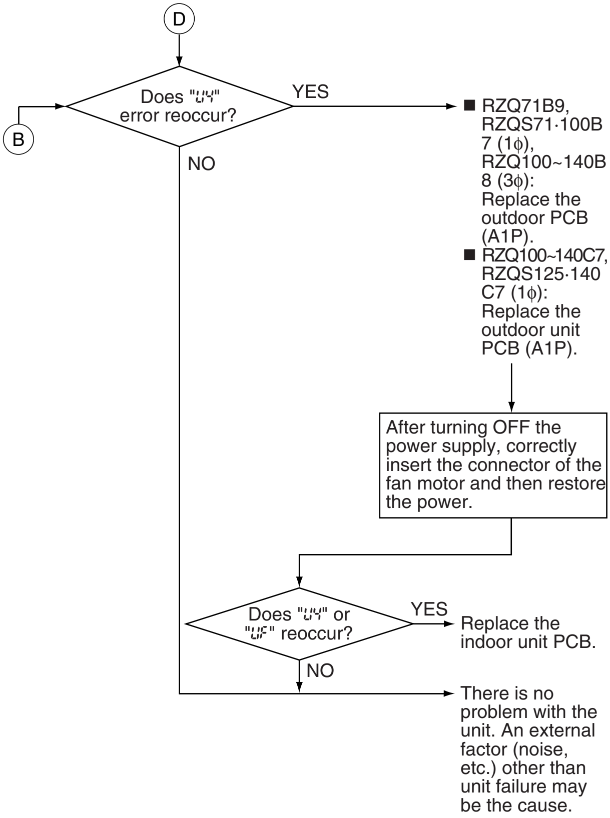


Note:

∗1 Optional accessories refer to wire adaptor, auto grill and other accessories.

∗2 RZQ71B9V3B⇒No fuse
RZQS71·100B7V3B⇒No fuse
RZQ100~140C7V1B⇒F6U
RZQ125·140C7V1B⇒F6U
RZQ100~140B8W1B⇒F1U

CHECK 13 **Refer to P.482.**


D
B
Does "U4" error reoccur?
YES
NO
■ RZQ71B9, RZQS71·100B7 (1ϕ), RZQ100~140B8 (3ϕ): Replace the outdoor PCB (A1P).
■ RZQ100~140C7, RZQS125·140C7 (1ϕ): Replace the outdoor unit PCB (A1P).
After turning OFF the power supply, correctly insert the connector of the fan motor and then restore the power.
Does "U4" or "UF" reoccur?
YES
NO
Replace the indoor unit PCB.
There is no problem with the unit. An external factor (noise, etc.) other than unit failure may be the cause.

Remote Controller Display

U4

Applicable Models

RZQ-C7

Method of Error Detection

Micro-computer checks if transmission between indoor and outdoor units is normal.

Error Decision Conditions

When transmission is not carried out normally for a certain amount of time

Supposed Causes

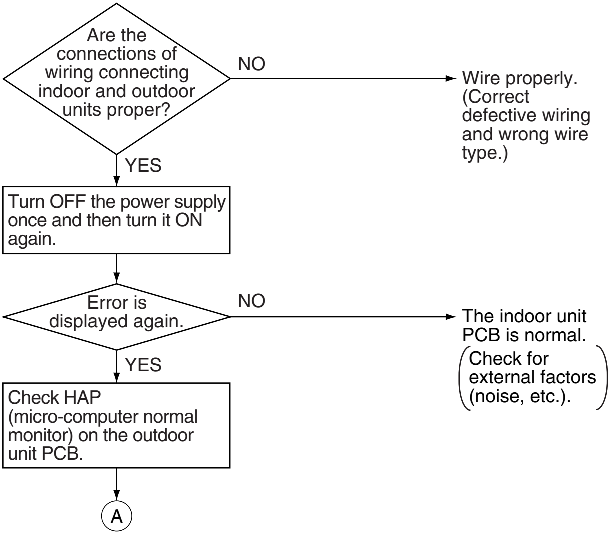
- Wiring indoor-outdoor transmission wire is incorrect.
- Outside cause (noise, etc.)
- Defective indoor unit PCB
- Defective outdoor unit PCB
- Defective outdoor unit fan
- Power supply -open phase etc.

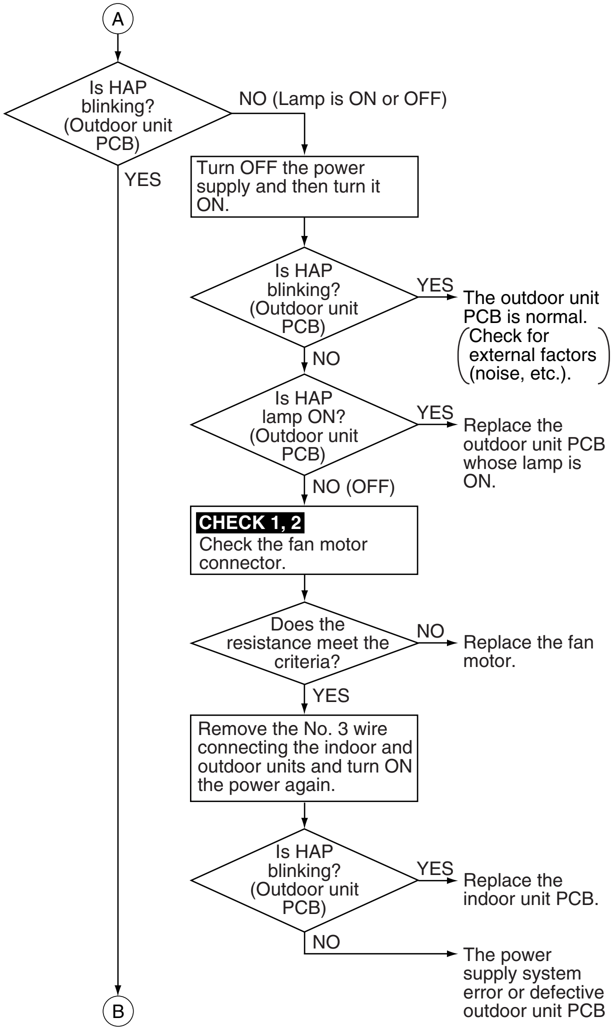
Troubleshooting

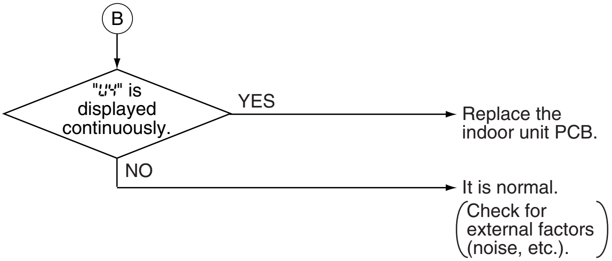
Diagnosis of incorrect or broken/disconnected wiring

If the LEDs on the indoor unit PCB are OFF, it indicates that the transmission wiring between indoor and outdoor units may be incorrect or broken/ disconnected.

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Is HAP blinking? (Outdoor unit PCB)
NO (Lamp is ON or OFF)
YES
Turn OFF the power supply and then turn it ON.
Is HAP blinking? (Outdoor unit PCB)
YES
The outdoor unit PCB is normal.
(Check for external factors (noise, etc.).)
NO
Is HAP lamp ON? (Outdoor unit PCB)
YES
Replace the outdoor unit PCB whose lamp is ON.
NO (OFF)
CHECK 1, 2
Check the fan motor connector.
Does the resistance meet the criteria?
NO
Replace the fan motor.
YES
Remove the No. 3 wire connecting the indoor and outdoor units and turn ON the power again.
Is HAP blinking? (Outdoor unit PCB)
YES
Replace the indoor unit PCB.
NO
The power supply system error or defective outdoor unit PCB
B


B
"U4" is displayed continuously.
YES
Replace the indoor unit PCB.
NO
It is normal.
(Check for external factors (noise, etc.).)

Remote Controller Display

U4

Applicable Models

RZQG

Method of Error Detection

The error is generated when the micro-processor detects that the transmission between the indoor and the outdoor unit is not normal over a certain amount of time.

Error Decision Conditions

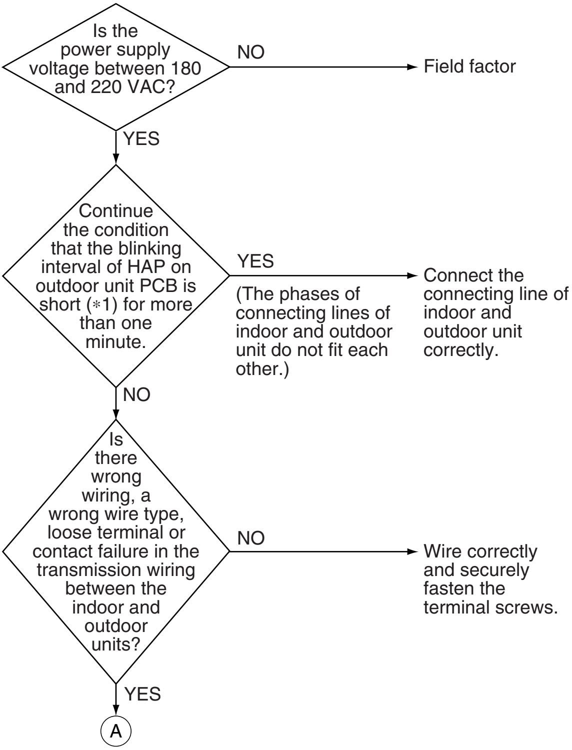
When the transmission is not carried out normally over a certain amount of time

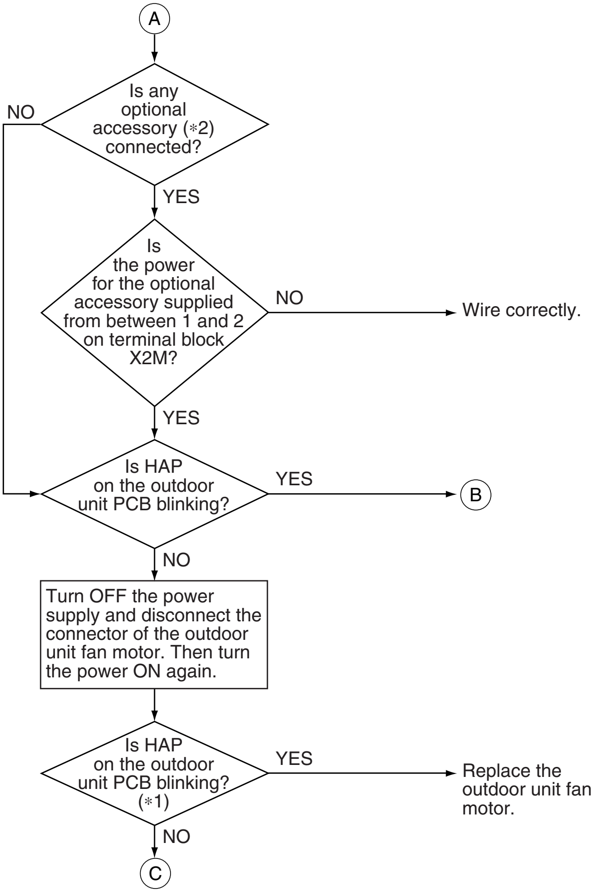
Supposed Causes

- Wiring indoor-outdoor transmission wire is incorrect
- Defective indoor unit PCB
- Defective outdoor unit PCB
- Burning out fuse
- Defective outdoor unit fan motor
- External factor (Noise, etc.)
- Defective power supply
- Disconnection of optional equipments

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

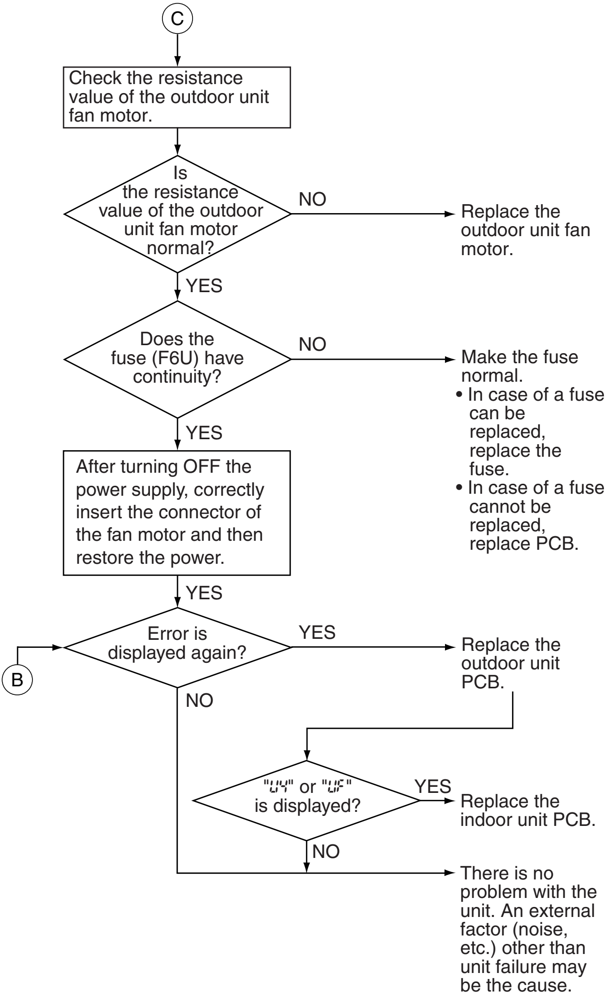




Note:

∗1 ON for 0.2 second and OFF for 0.2 second (Blink about 25 times for 10 seconds)
(Normally, ON for 0.4 second and OFF for 0.4 second (Blink about 12 times for 10 seconds))

∗2 Optional accessories refer to adaptor for wiring, auto grill and other accessories.


C
Check the resistance value of the outdoor unit fan motor.
Is the resistance value of the outdoor unit fan motor normal?
NO
Replace the outdoor unit fan motor.
YES
Does the fuse (F6U) have continuity?
NO
Make the fuse normal.
• In case of a fuse can be replaced, replace the fuse.
• In case of a fuse cannot be replaced, replace PCB.
YES
After turning OFF the power supply, correctly insert the connector of the fan motor and then restore the power.
YES
Error is displayed again?
B
YES
Replace the outdoor unit PCB.
NO
"U4" or "UF" is displayed?
YES
Replace the indoor unit PCB.
NO
There is no problem with the unit. An external factor (noise, etc.) other than unit failure may be the cause.

3.94 U5 Transmission Error Between Indoor Unit and Remote Controller

Remote Controller Display

U5

Applicable Models

RY-F, R(Y)-G/GA/FU/KU/LU/NU/PU, RR-M

Method of Error Detection

Micro-computer checks if transmission between indoor unit and remote controller is normal.

Error Decision Conditions

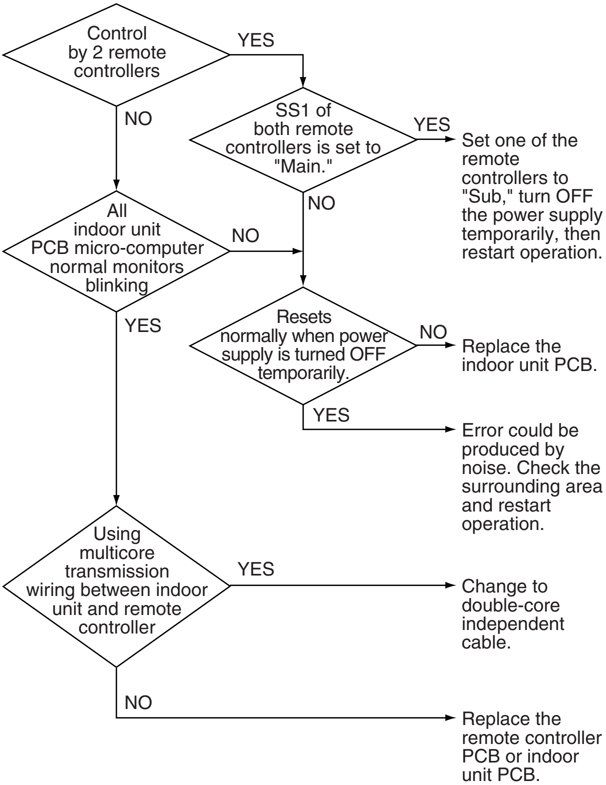
When transmission is not carried out normally for a certain amount of time

Supposed Causes

- Defective remote controller
- Defective indoor unit PCB
- External factor (Noise, etc.)
- Connection of 2 main remote controllers (When using 2 remote controllers)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

U5

Applicable Models

RZ(Y)

Method of Error Detection

Micro-computer checks if transmission between indoor unit and remote controller is normal.

Error Decision Conditions

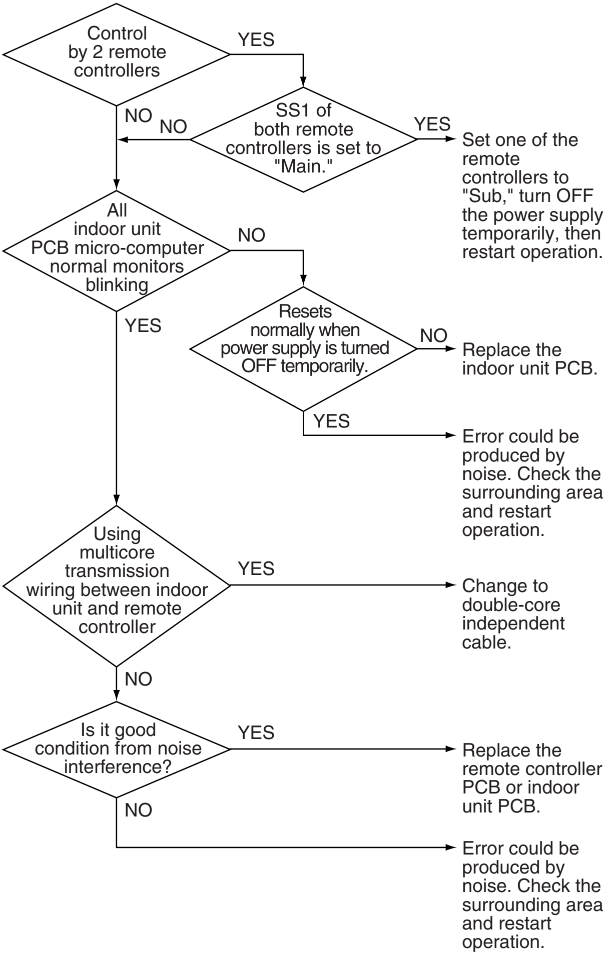
When transmission is not carried out normally for a certain amount of time

Supposed Causes

- Defective remote controller
- Defective indoor unit PCB
- External factor (Noise, etc.)
- Connection of 2 main remote controllers (When using 2 remote controllers)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

U5

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZR-KU/HU

Method of Error Detection

Micro-computer checks if transmission between indoor unit and remote controller is normal.

Error Decision Conditions

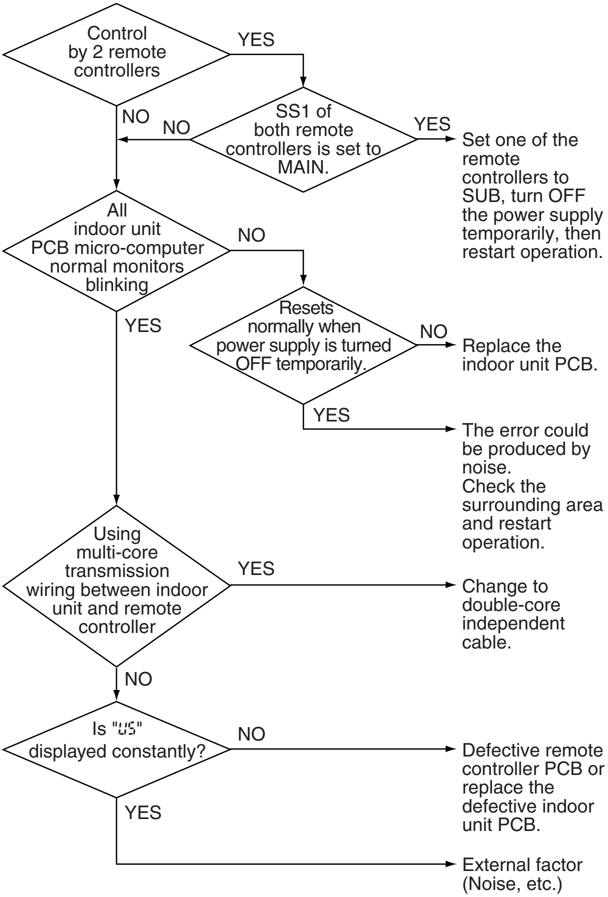
The error is generated when the micro-processor detects that the transmission between the indoor unit and the remote controller is not normal over a certain amount of time.

Supposed Causes

- Defective remote controller
- Defective indoor unit PCB
- External factor (Noise, etc.)
- Connection of 2 main remote controllers (when using 2 remote controllers).

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

U5

Applicable Models

RZQ-C7, RZQG, CMSQ

Method of Error Detection

The error is generated when the micro-computer detects that the transmission between the indoor and the outdoor unit is not normal over a certain amount of time.

Error Decision Conditions

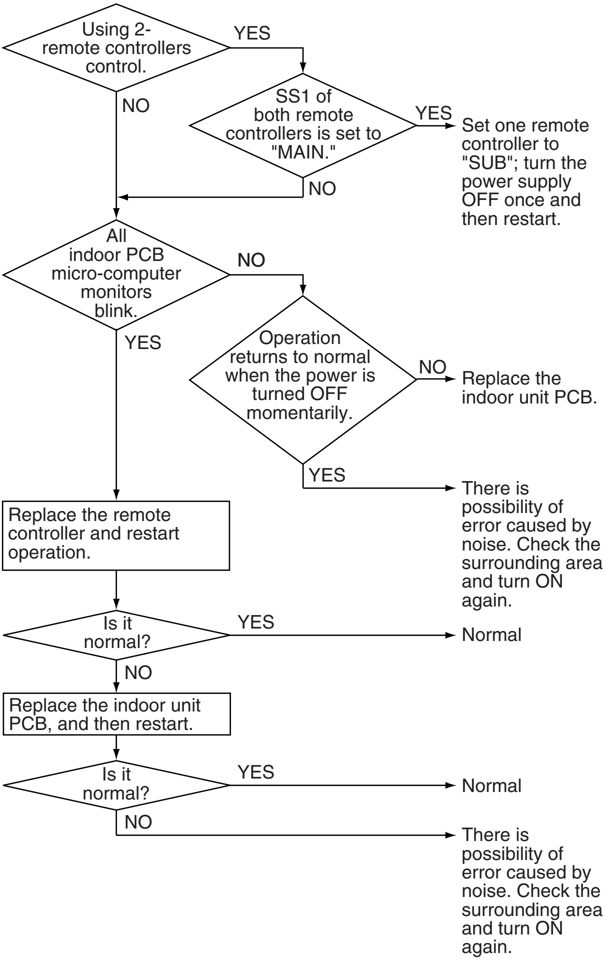
Normal transmission does not continue for specified period.

Supposed Causes

- Connection of 2 main remote controllers (when using 2 remote controllers)
- Defective remote controller
- Defective indoor unit PCB
- External factor (Noise, etc.)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.95 U7 Transmission Error Between Outdoor Units

Remote Controller Display

U7

Applicable Models

CMSQ

Method of Error Detection

Micro-computer checks if transmission between outdoor units.

Error Decision Conditions

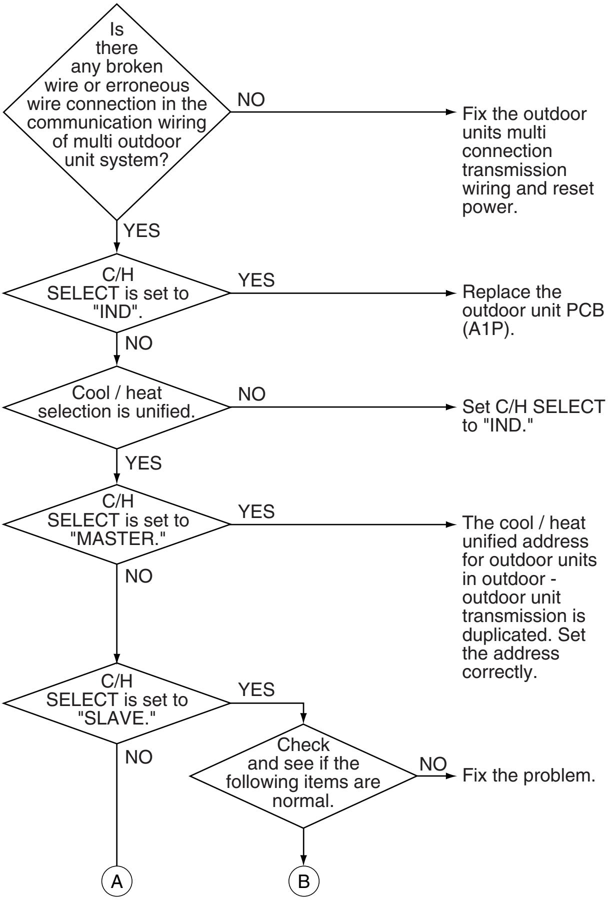
When transmission is not carried out normally for a certain amount of time

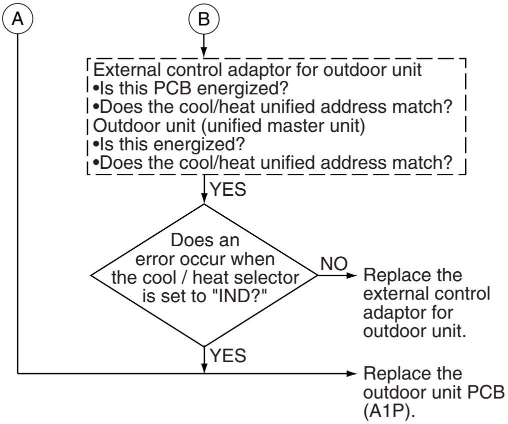
Supposed Causes

- Improper connection of transmission wiring between outdoor unit and external control adaptor for outdoor unit
- Improper connection of transmission wiring between outdoor units
- Improper cool/heat selection
- Improper cool/heat unified address (outdoor unit, external control adaptor for outdoor unit)
- Defective outdoor unit PCB (A1P)
- Defective external control adaptor for outdoor unit

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
B
External control adaptor for outdoor unit
•Is this PCB energized?
•Does the cool/heat unified address match?
Outdoor unit (unified master unit)
•Is this energized?
•Does the cool/heat unified address match?
YES
Does an error occur when the cool / heat selector is set to "IND?"
NO
Replace the external control adaptor for outdoor unit.
YES
Replace the outdoor unit PCB (A1P).

3.96 U8 Transmission Error Between Main Remote Controller and Sub Remote Controller

Remote Controller Display

U8

Applicable Models

RY-F, R(Y)-G/GA/KU/LU, CMSQ

Method of Error Detection

In case of controlling with 2- remote controller, check the system using micro-computer if signal transmission between indoor unit and remote controller (main and sub) is normal.

Error Decision Conditions

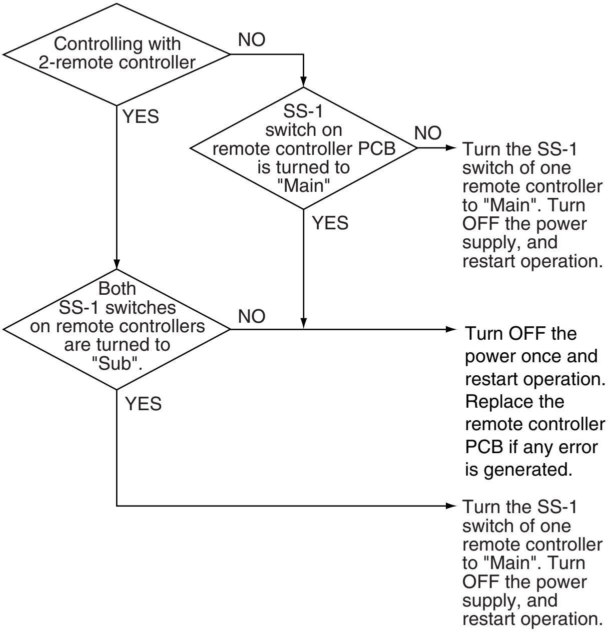
Normal transmission does not continue for specified period.

Supposed Causes

- Transmission error between main remote controller and sub remote controller
- Connection among “sub” remote controllers
- Defective remote controller PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

U8

Applicable Models

RZ(Y)

Method of Error Detection

In case of controlling with 2- remote controller, check the system using micro-computer if signal transmission between indoor unit and remote controller (main and sub) is normal.

Error Decision Conditions

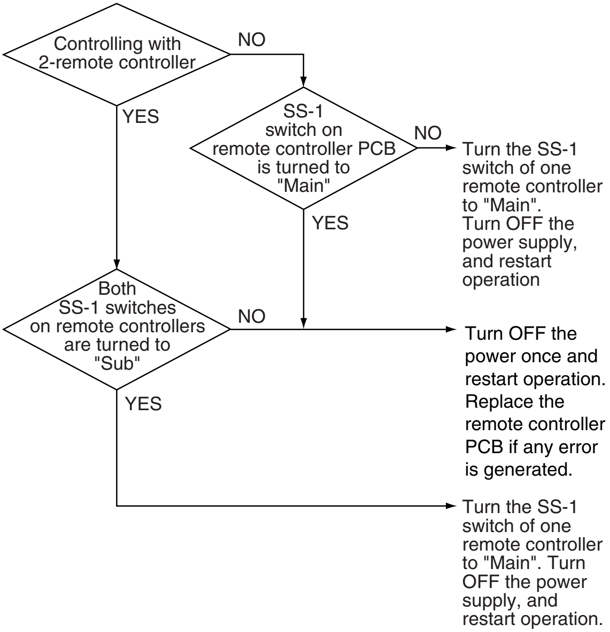
Normal transmission does not continue for specified period.

Supposed Causes

- Transmission error between main remote controller and Sub remote controller
- Connection among “sub” remote controllers
- Defective remote controller PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Remote Controller Display

U8

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZQG, RZR-KU/HU

Method of Error Detection

In case of controlling with 2- remote controller, check the system using micro-computer if signal transmission between indoor unit and remote controller (main and sub) is normal.

Error Decision Conditions

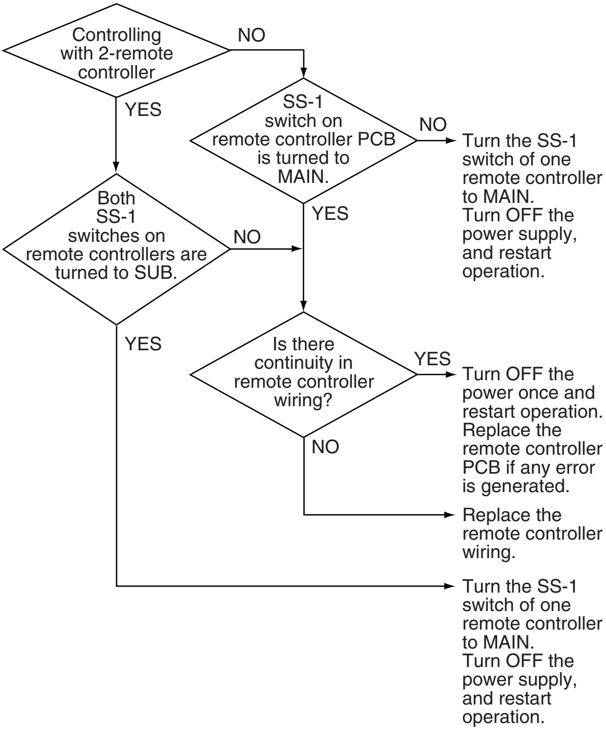
The error is generated when, in case of controlling with 2 remote controllers, the micro-processor detects that the transmission between the indoor unit and the remote controllers (main and sub) is not normal over a certain amount of time.

Supposed Causes

- Transmission error between main remote controller and sub remote controller
- Connection among sub remote controllers
- Defective remote controller PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.97 U9 Transmission Error Between Indoor and Outdoor Units in the Same System

Remote Controller Display

U9

Applicable Models

RZQ-C7, CMSQ

Method of Error Detection

Detect the error signal of any other indoor unit within the system concerned.

Error Decision Conditions

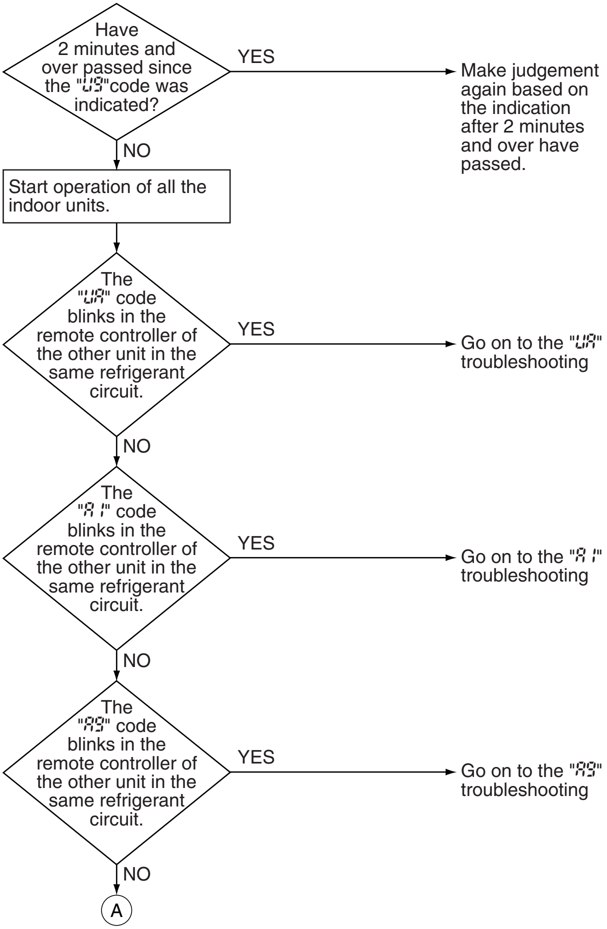
When the error decision is made on any other indoor unit within the system concerned

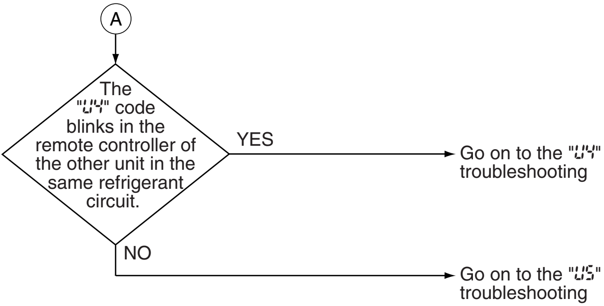
Supposed Causes

- Defective transmission within or outside of other system
- Defective electronic expansion valve in indoor unit of other system
- Defective indoor unit PCB in other system
- Improper connection of transmission wiring between indoor and outdoor unit

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
The "U4" code blinks in the remote controller of the other unit in the same refrigerant circuit.
YES
Go on to the "U4" troubleshooting
NO
Go on to the "U5" troubleshooting

3.98 UA Defective Field Setting Switch

Remote Controller Display

UA

Applicable Models

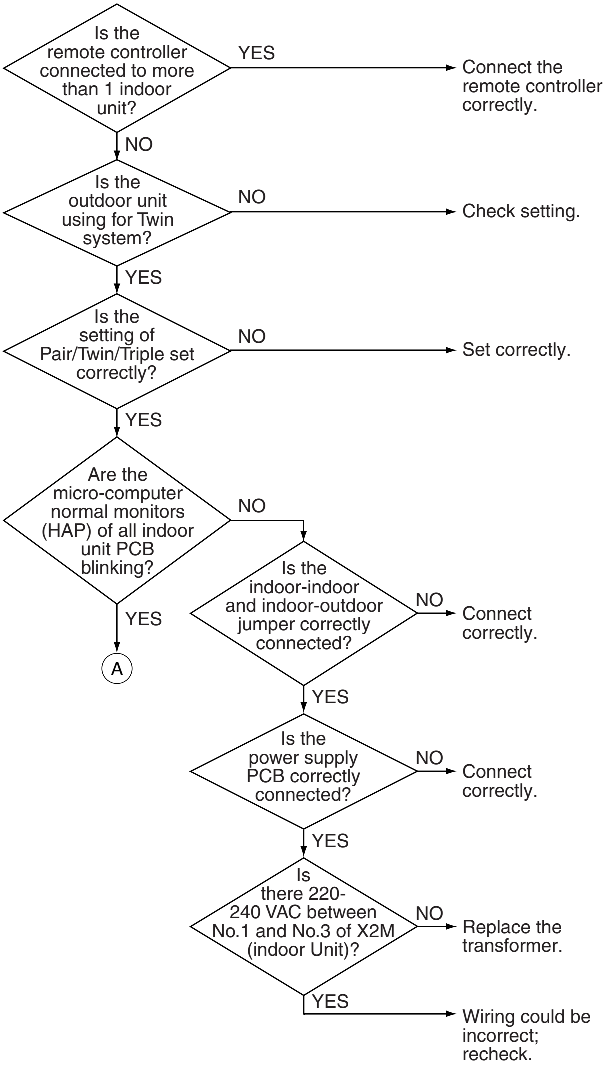
RY-F, R(Y)-G/GA/KU/LU

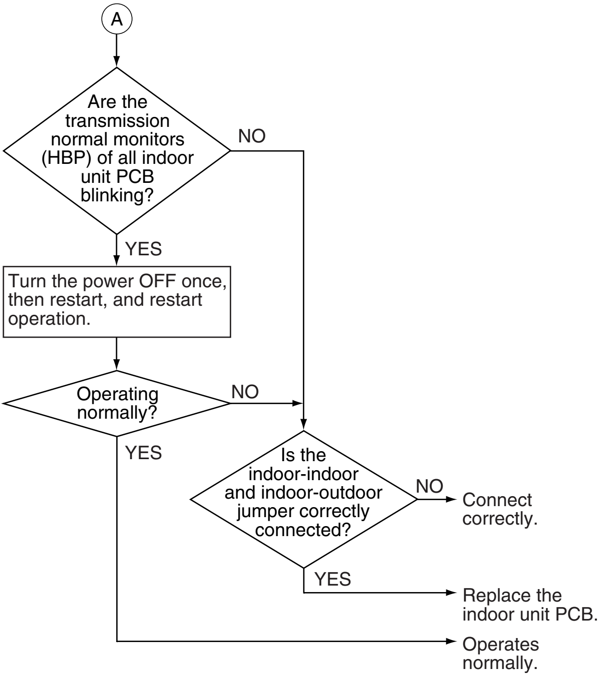
Supposed Causes

- Defective indoor unit or outdoor unit PCB
- Defective power supply PCB
- Indoor-outdoor, indoor-indoor unit transmission wiring
- Defective remote controller wiring

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Are the transmission normal monitors (HBP) of all indoor unit PCB blinking?
NO
YES
Turn the power OFF once, then restart, and restart operation.
Operating normally?
NO
YES
Is the indoor-indoor and indoor-outdoor jumper correctly connected?
NO
Connect correctly.
YES
Replace the indoor unit PCB.
Operates normally.

3.99 UA Improper Combination of Indoor and Outdoor Units, Indoor Units and Remote Controller

Remote Controller Display

UA

Applicable Models

FMCQ, FMDQ-A7/B7
CMSQ

Method of Error Detection

A difference occurs in data by the type of refrigerant between indoor and outdoor units.
The number of indoor units is out of the allowable range.

Error Decision Conditions

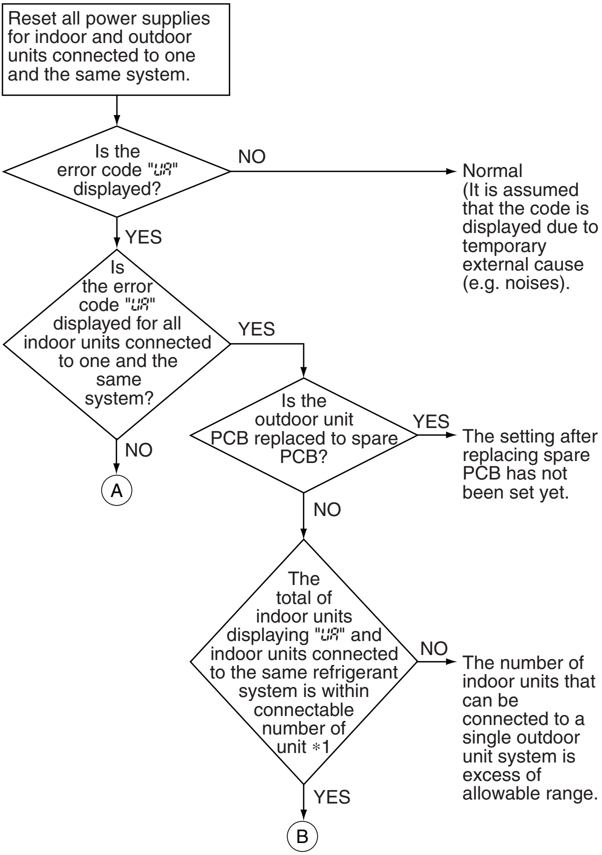
The error decision is made as soon as either of the abnormalities aforementioned is detected.

Supposed Causes

- Excess of connected indoor units
- Defective outdoor unit PCB (A1P)
- Mis-matching of the refrigerant type of indoor and outdoor unit.
- Setting of outdoor unit PCB was not conducted after replacing to a spare PCB.

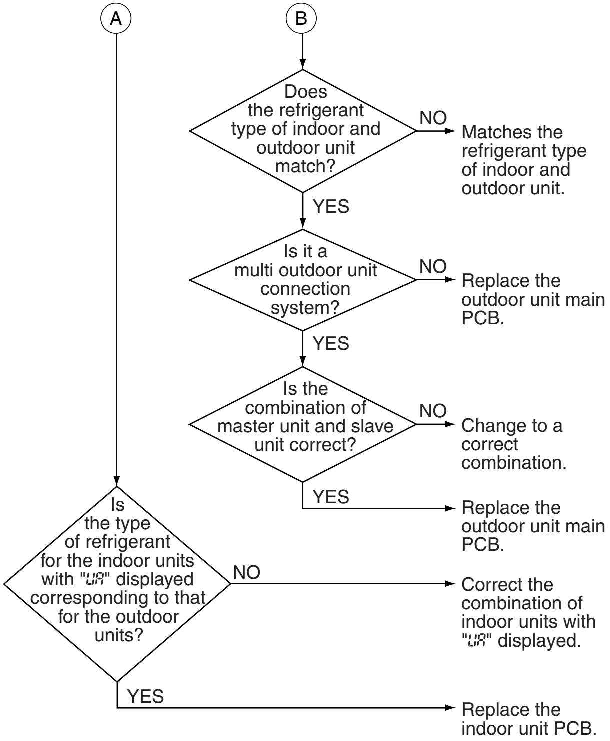
Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1 The number of indoor units that can be connected to a single outdoor unit system depends on the model of outdoor unit.


A
B
Does the refrigerant type of indoor and outdoor unit match?
NO
Matches the refrigerant type of indoor and outdoor unit.
YES
Is it a multi outdoor unit connection system?
NO
Replace the outdoor unit main PCB.
YES
Is the combination of master unit and slave unit correct?
NO
Change to a correct combination.
YES
Replace the outdoor unit main PCB.
Is the type of refrigerant for the indoor units with "UA" displayed corresponding to that for the outdoor units?
NO
Correct the combination of indoor units with "UA" displayed.
YES
Replace the indoor unit PCB.

3.100 UA Field Setting Switch Abnormality

Remote Controller Display

UA

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZR-KU/HU

Error Decision Conditions

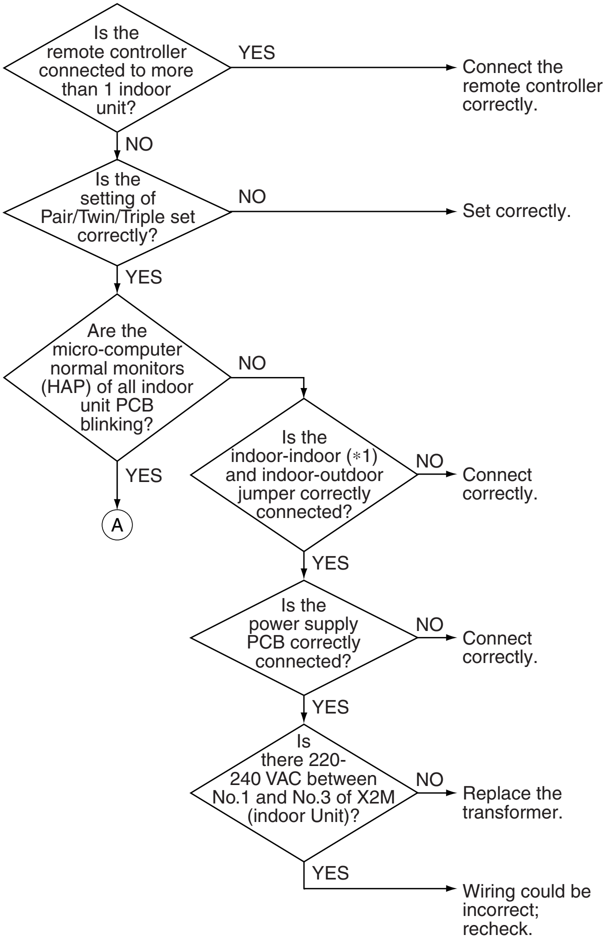
The error is generated when incorrect field settings have been set for pair / twin / triple / double twin.

Supposed Causes

- Defective indoor unit or outdoor unit PCB
- Defective power supply PCB
- Indoor-outdoor, indoor-indoor unit transmission wiring
- Defective remote controller wiring

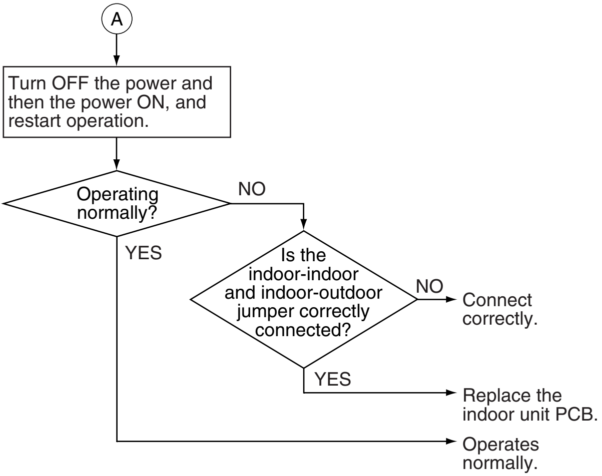
Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

∗1. Only for pair/twin/triple/double twin


A
Turn OFF the power and then the power ON, and restart operation.
Operating normally?
NO
YES
Is the indoor-indoor and indoor-outdoor jumper correctly connected?
NO
Connect correctly.
YES
Replace the indoor unit PCB.
Operates normally.

3.101 UA Field Setting Switch and Transmission Line Abnormality

Remote Controller Display

UA

Applicable Models

RZQ-C7, RZQG

Error Decision Conditions

Incorrect field setting
For RZQ-C7
The number of indoor units connected to this system is more than limited.
For RZQG
Incorrect combination indoor unit and outdoor unit

Supposed Causes

For RZQ-C7

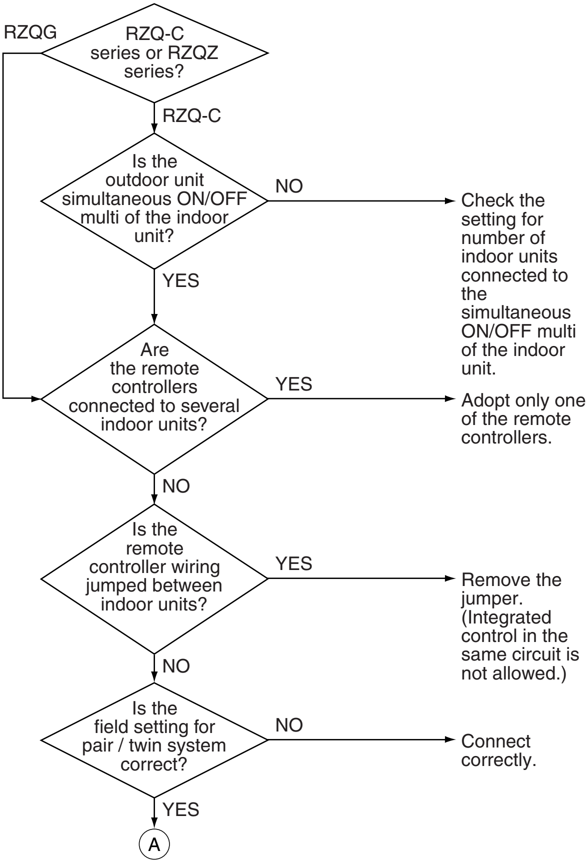
- Indoor-Outdoor, Indoor-Indoor transmission line
- Defective remote controller wiring

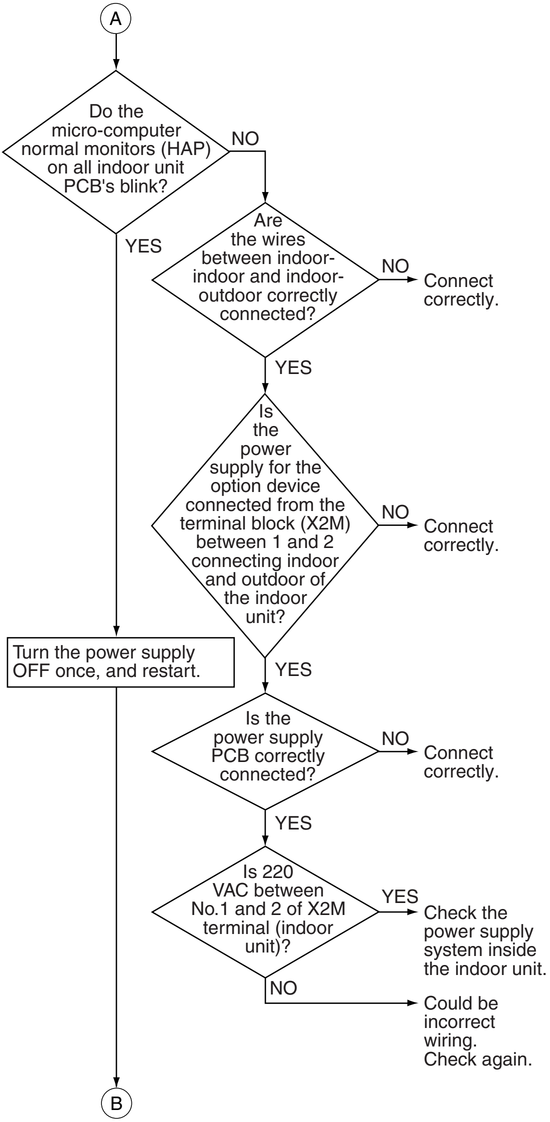
For RZQG

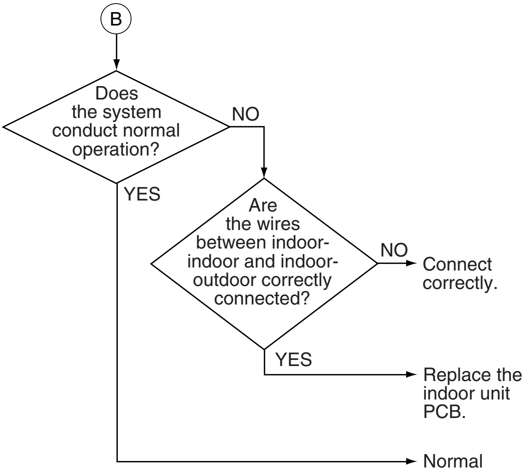
- Defective indoor unit PCB and wrong wiring
- Defective power supply PCB connection
- Defective remote controller wiring
- Defective indoor unit PCB
- Failure for setting the number of simultaneous multi-units
- Wrong wiring of crossing transition wire
- Defective connection of optional equipment

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Do the micro-computer normal monitors (HAP) on all indoor unit PCB's blink?
NO
YES
Are the wires between indoor-indoor and indoor-outdoor correctly connected?
NO
Connect correctly.
YES
Is the power supply for the option device connected from the terminal block (X2M) between 1 and 2 connecting indoor and outdoor of the indoor unit?
NO
Connect correctly.
YES
Turn the power supply OFF once, and restart.
Is the power supply PCB correctly connected?
NO
Connect correctly.
YES
Is 220 VAC between No.1 and 2 of X2M terminal (indoor unit)?
YES
Check the power supply system inside the indoor unit.
NO
Could be incorrect wiring. Check again.
B


B
Does the system conduct normal operation?
NO
YES
Are the wires between indoor-indoor and indoor-outdoor correctly connected?
NO
Connect correctly.
YES
Replace the indoor unit PCB.
Normal

3.102 UC Centralized Address Setting Error

Remote Controller Display

UC

Applicable Models

RZQ-K/H, RZQ(S)-B/C, RZQG, RZR-KU/HU

Method of Error Detection

Indoor unit micro-computer detects and judges the centralized address signal according to the transmission between indoor units.

Error Decision Conditions

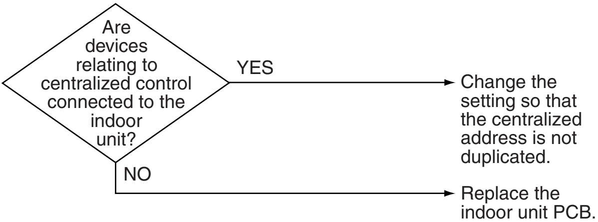
When the micro-computer judges that the centralized address signal is duplicated

Supposed Causes

- Defective centralized address setting
- Defective indoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.103 UC Address Duplication of Centralized Controller

Remote Controller Display

UC

Applicable Models

CMSQ

Method of Error Detection

The principal indoor unit detects the same address as that of its own on any other indoor unit.

Error Decision Conditions

The error decision is made as soon as the abnormality aforementioned is detected.

Supposed Causes

- Address duplication of centralized controller

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

The centralized address is duplicated. → Make setting change so that the centralized address will not be duplicated.

3.104 UE Transmission Error between Centralized Controller and Indoor Unit

Remote Controller Display

UE

Applicable Models

FMCQ, FMDQ-A7/B7
Centralized controller
Schedule timer
intelligent Touch Controller

Method of Error Detection

Micro-computer checks if transmission between indoor unit and centralized controller is normal.

Error Decision Conditions

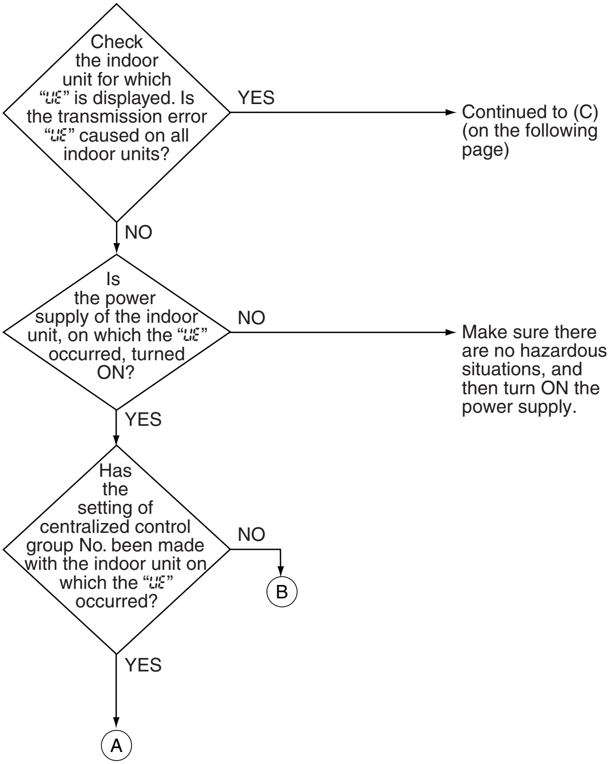
When transmission is not carried out normally for a certain amount of time

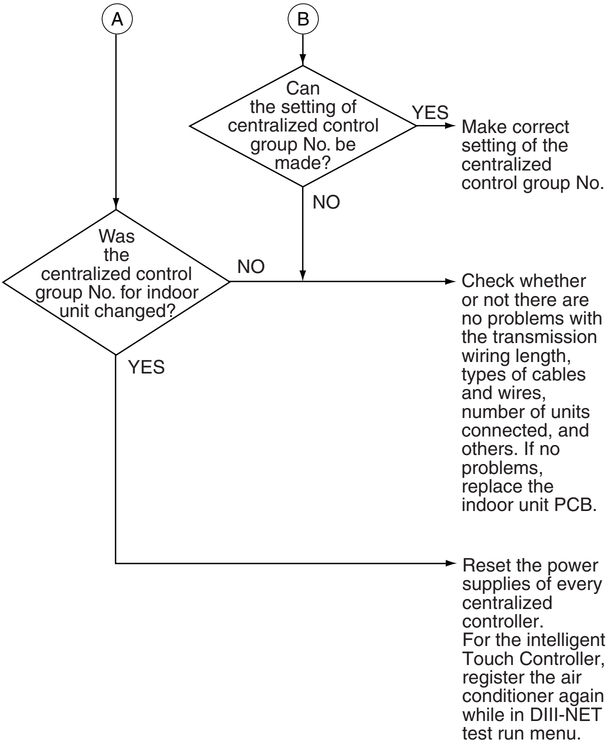
Supposed Causes

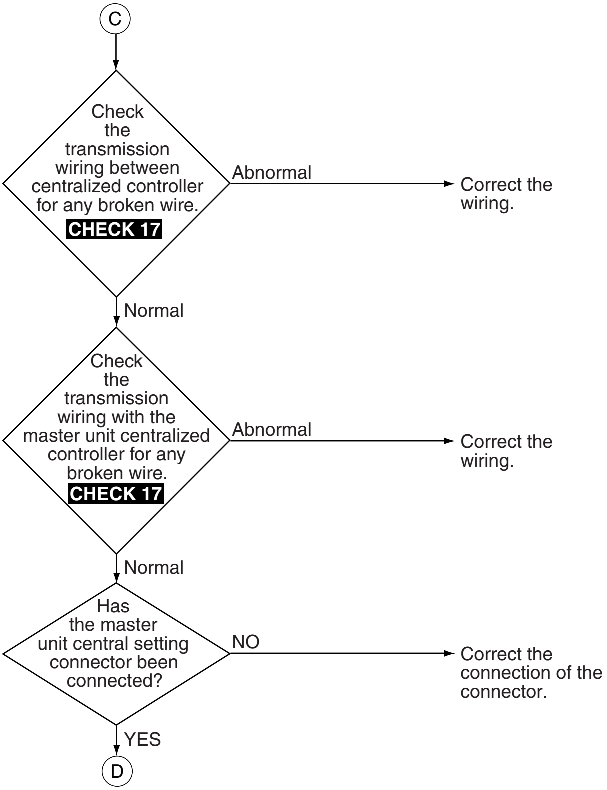
- Transmission error between optional controllers for centralized control and indoor unit
- Connector for setting main controller is disconnected. (or disconnection of connector for independent / combined use changeover switch.)
- Defective PCB for centralized remote controller
- Defective indoor unit PCB

Troubleshooting

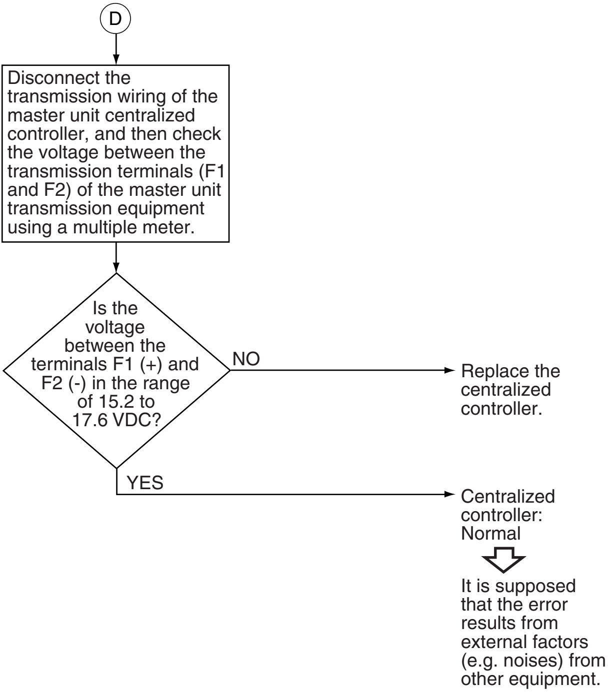
Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
B
Can the setting of centralized control group No. be made?
YES
Make correct setting of the centralized control group No.
NO
Was the centralized control group No. for indoor unit changed?
NO
Check whether or not there are no problems with the transmission wiring length, types of cables and wires, number of units connected, and others. If no problems, replace the indoor unit PCB.
YES
Reset the power supplies of every centralized controller.
For the intelligent Touch Controller, register the air conditioner again while in DIII-NET test run menu.



CHECK 17 Refer to P.492.


D
Disconnect the transmission wiring of the master unit centralized controller, and then check the voltage between the transmission terminals (F1 and F2) of the master unit transmission equipment using a multiple meter.
Is the voltage between the terminals F1 (+) and F2 (-) in the range of 15.2 to 17.6 VDC?
NO
Replace the centralized controller.
YES
Centralized controller: Normal
It is supposed that the error results from external factors (e.g. noises) from other equipment.

Remote Controller Display

UE

Applicable Models

Centralized remote controller
Schedule timer
All models of indoor units of RZQG and RZQ-C series

Method of Error Detection

Micro-computer checks if transmission between indoor unit and centralized controller is normal.

Error Decision Conditions

When transmission is not carried out normally for a certain amount of time

Supposed Causes

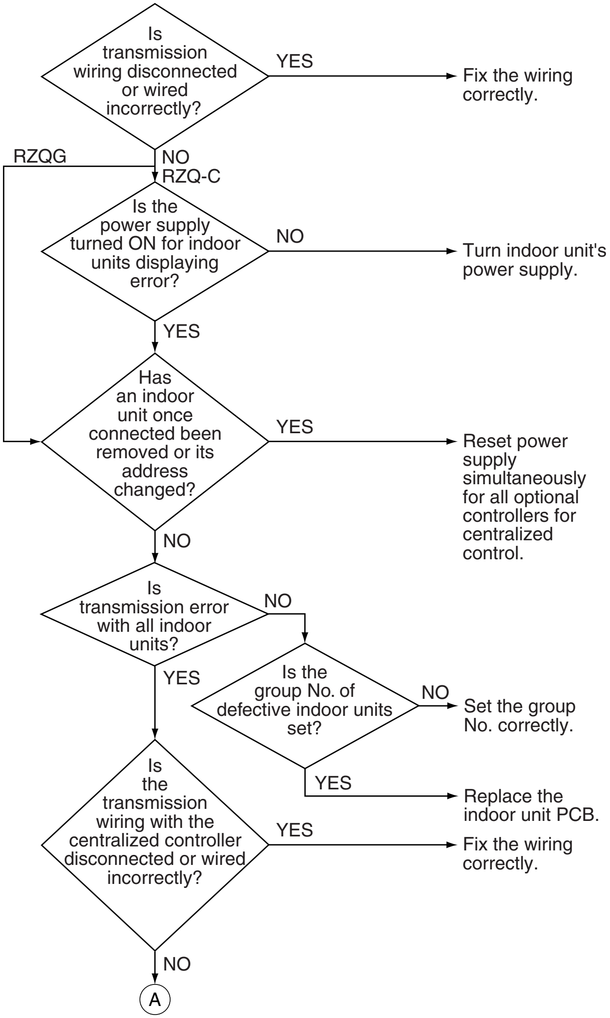
- Transmission error between optional controllers for centralized control and indoor unit
- Defective indoor unit PCB

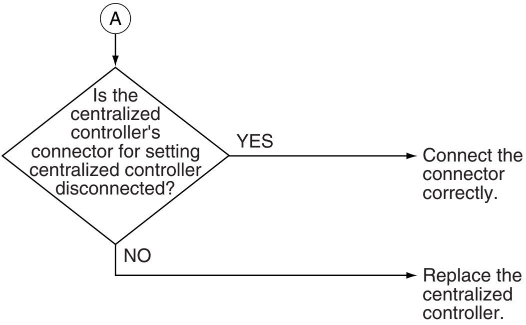
For RZQG

- Defective PCB for central remote controller
- Breaking and wrong wiring of connecting wire
- Failure of the setting of group No. and address

Troubleshooting

Caution: Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.




A
Is the centralized controller's connector for setting centralized controller disconnected?
YES
Connect the connector correctly.
NO
Replace the centralized controller.

3.105 UF Mis-connection of Field Wiring

Remote Controller Display

UF

Applicable Models

Cooling Only model
R-FU

Method of Error Detection

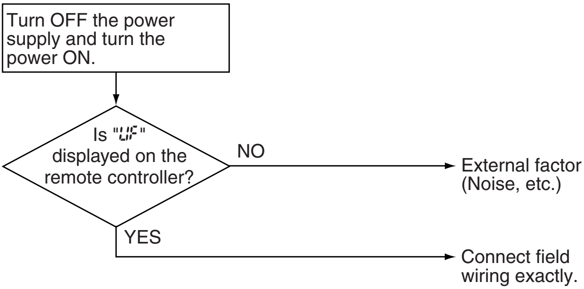
Judgement by circuit of the PCB to detect wrong wiring.

Supposed Causes

- Power supply wiring is broken or disconnected.
- Mis-connection of field wiring

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



3.106 UF System is not Set yet

Remote Controller Display

UF

Applicable Models

FMCQ, FMDQ-A7/B7
CMSQ

Method of Error Detection

On check operation, the number of indoor units in terms of transmission is not corresponding to that of indoor units that have made changes in temperature.

Error Decision Conditions

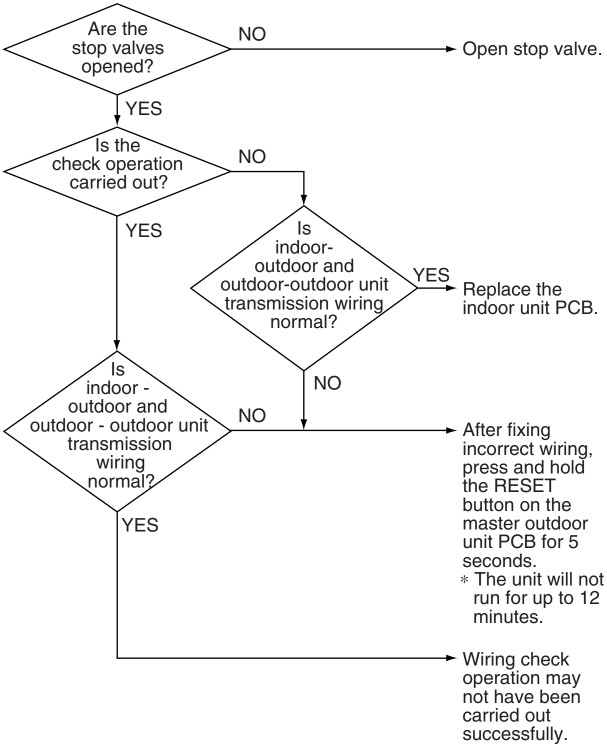
The error is determined as soon as the abnormality aforementioned is detected through checking the system for any erroneous connection of units on the check operation.

Supposed Causes

- Improper connection of transmission wiring between indoor-outdoor units and outdoor-outdoor units
- Failure to execute check operation
- Defective indoor unit PCB
- Stop valve is not opened

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note:

Wiring check operation may not be successful if carried out after the outdoor unit has been OFF for more than 12 hours, or if it is not carried out after running all connected indoor units in the fan mode for at least an hour.

3.107 UF Transmission Error between Indoor and Outdoor Unit / Piping and Wiring Mismatch / Refrigerant Shortage

Remote Controller Display

UF

Applicable Models

RZQ-K/H, RZR-KU/HU, RZQG

Method of Error Detection

Check the transmission between the indoor and outdoor units with a micro-computer when the power turned ON.

Detect by checking the following temperature differences during compressor operation.

A: Difference in temperature detected by the indoor heat exchanger thermistor and the indoor suction air thermistor

B: Difference in indoor suction air thermistor evaporation temperature (Te) (or condensing temperature (Tc) during heating operation) detected by the indoor heat exchanger thermistor and the compressor sensor

Error Decision Conditions

When the transmission wiring between the indoor and outdoor units is incorrect

When the following conditions continue for 20 minutes during compressor operation

A: indoor heat exchanger thermistor – indoor suction air thermistor < 4ºC, and

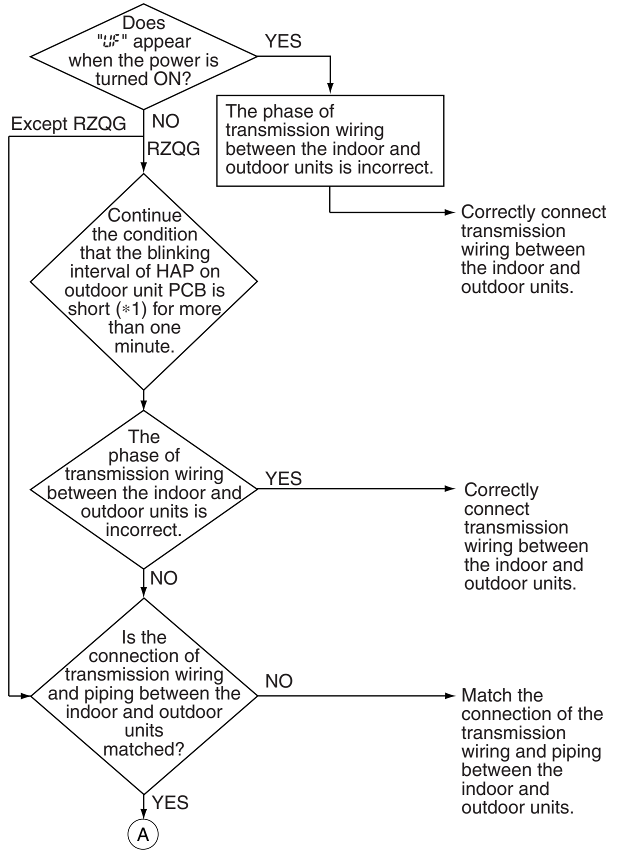
B: indoor heat exchanger thermistor – Te (or Tc during heating operation) > 14ºC (24ºC during heating operation)

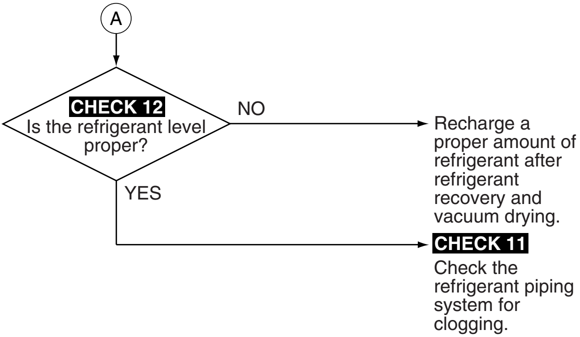
Supposed Causes

- Defective transmission wiring between the indoor and outdoor units
- Mismatching of wiring and piping
- Refrigerant shortage
- Clogged refrigerant piping system

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





Note:

∗1 ON for 0.2 second and OFF for 0.2 second (Blink about 25 times for 10 seconds)
(Normally, ON for 0.4 second and OFF for 0.4 second (Blink about 12 times for 10 seconds))

CHECK 11 **Refer to P.477.**

CHECK 12 **Refer to P.478.**

Remote Controller Display

UF

Applicable Models

RZQ(S)-B/C

Method of Error Detection

Check the transmission between the indoor and outdoor units with a micro-computer when the power turned ON. Detect by checking the following temperature differences during compressor operation.

A: Difference in temperature detected by the indoor heat exchanger thermistor (R2T) and the indoor suction air thermistor (R1T)

B: Difference in evaporation temperature (Te) (or condensation temperature (Tc) during heating operation) detected by the indoor heat exchanger thermistor (R2T) and the compressor sensor

Error Decision Conditions

- When the transmission wiring between the indoor and outdoor units is incorrect
- When the following conditions continue for 20 minutes during compressor operation

  A: R2T – R1T < 4ºC, and

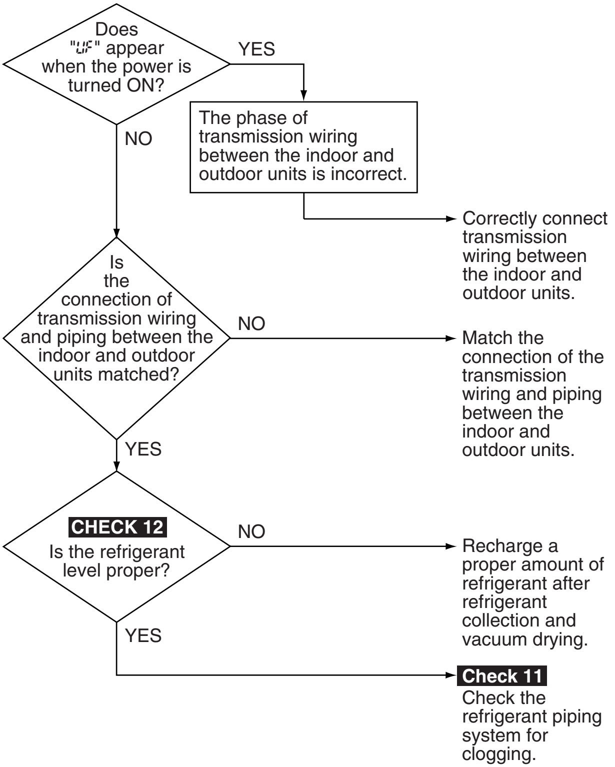
  B: R2T – Te (or Tc during heating operation) > 14ºC (24ºC during heating operation)

Supposed Causes

- Defective transmission wiring between the indoor and outdoor units
- Mismatching of wiring and piping
- Refrigerant shortage
- Clogged refrigerant piping system

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



CHECK 11 **Refer to P.477.**

CHECK 12 **Refer to P.478.**

3.108 UF Transmission System Abnormality (between Indoor and Outdoor Units)

Remote Controller Display

UF

Applicable Models

RZQ-C7

Method of Error Detection

- Check transmission between the indoor and outdoor units with a micro-computer when the power is supplied.

Error Decision Conditions

- When wiring connecting the indoor and outdoor units is not proper

Supposed Causes

- Poor wiring connecting the indoor and outdoor units

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

The phases of the wire connecting the indoor and outdoor unites are inconsistent.

→ Connect the wiring connecting the indoor and outdoor units properly.

3.109 UH System Error, Refrigerant System Address Undefined

Remote Controller Display

UH

Applicable Models

FMCQ, FMDQ-A7/B7

Method of Error Detection

Detect an indoor unit with no address setting.

Error Decision Conditions

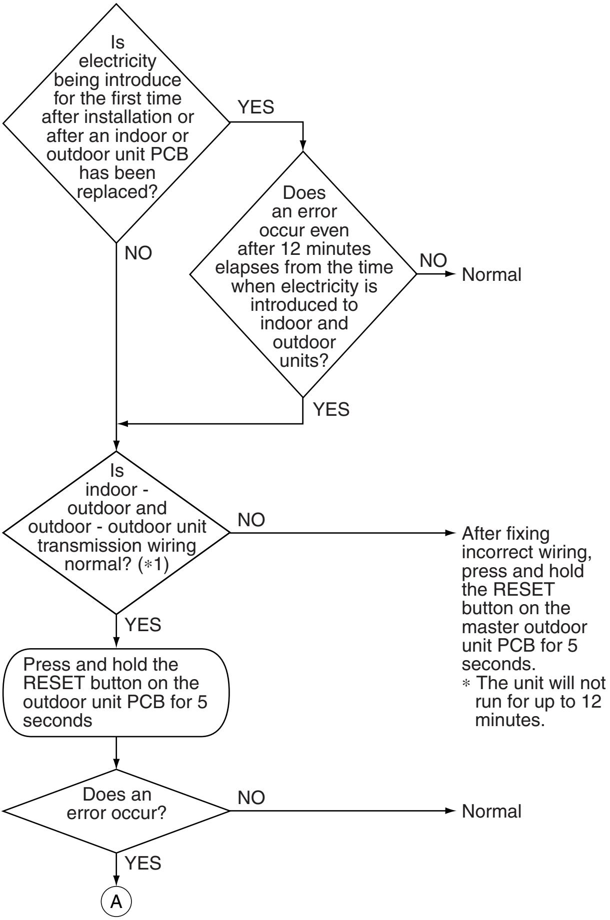
The error decision is made as soon as the abnormality aforementioned is detected.

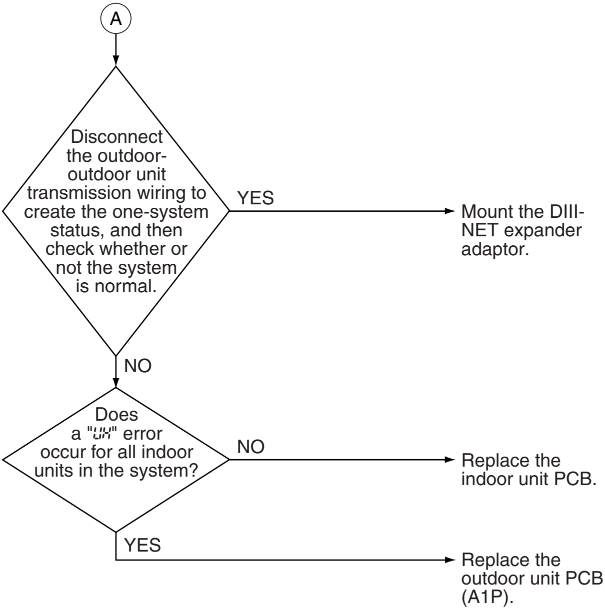
Supposed Causes

- Improper connection of transmission wiring between indoor-outdoor units and outdoor-outdoor units
- Defective indoor unit PCB
- Defective outdoor unit PCB (A1P)

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





Note:

∗1: Check the correct indoor-outdoor unit transmission wiring and outdoor-outdoor unit transmission wiring with the installation manual.

3.110 Check

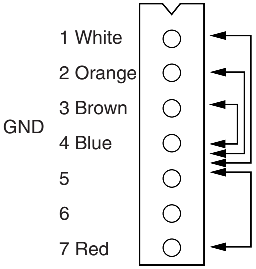
CHECK 1

Check for Fan Motor Connector (Signal Line)

(1) Turn the power supply OFF.

For except FBQ

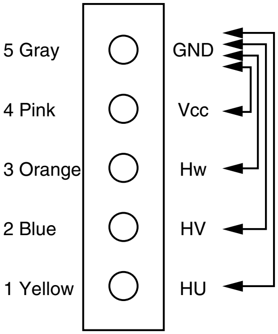
(2) With the fan motor connector disconnected, measure the resistance between each pin, then make sure that the resistance is more than the value mentioned in the following table.



Measurement point	Judgement
1 - 4	1MΩ or more
2 - 4	100kΩ or more
3 - 4	100Ω or more
4 - 7	100kΩ or more

For FBQ

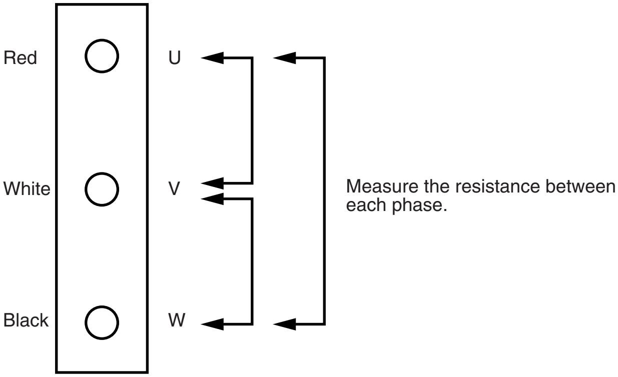
(2) With the fan motor connector disconnected, measure the resistance between each pin, then make sure that the resistance is balanced in ±30%.



CHECK 2

Check for Fan Motor Connector (Power Supply Line)

(1) Turn the power supply OFF.
With the relay connector disconnected, measure the resistance between UVW phases of the connector (3 cores) at the motor side, then make sure that the resistance between each phase is balanced and not short-circuited.



CHECK 3

Checking the Thermistors

If the cause of the problem is related to the thermistors, then the thermistors should be checked prior to changing the PCB.

To check the thermistors, proceed as follows:

Step	Action
1	Disconnect the thermistor from the PCB.
2	Read the temperature and the resistor value.
3	Check if the measured values correspond with the values in the table on the next pages.

Thermistor Resistance / Temperature Characteristics

For radiation fin thermistor

T°C	kΩ
-30	354.1
-25	259.7
-20	192.6
-15	144.2
-10	109.1
-5	83.25
0	64.10
5	49.70
10	38.85
15	30.61
20	24.29
25	19.41
30	15.61
35	12.64
40	10.30
45	8.439
50	6.954

T°C	kΩ
55	5.761
60	4.797
65	4.014
70	3.375
75	2.851
80	2.418
85	2.060
90	1.762
95	1.513
100	1.304
105	1.128
110	0.9790
115	0.8527
120	0.7450
125	0.6530
130	0.5741

3PA61998L (AD92A057)

For outdoor air thermistor
For suction pipe thermistor
For heat exchanger thermistor
For intermediate heat exchanger thermistor
For liquid thermistor
For remote controller thermistor

T°C	kΩ
-30	361.7719
-25	265.4704
-20	196.9198
-15	147.5687
-10	111.6578
-5	85.2610
0	65.6705
5	50.9947
10	39.9149
15	31.4796
20	25.0060
25	20.0000
30	16.1008
35	13.0426

T°C	kΩ
40	10.6281
45	8.7097
50	7.1764
55	5.9407
60	4.9439
65	4.1352
70	3.4757
75	2.9349
80	2.4894
85	2.1205
90	1.8138
95	1.5575
100	1.3425
105	1.1614

3SA48001 (AD87A001J)

For discharge pipe thermistor

T°C	kΩ	T°C	kΩ
-30	3257.371	65	41.4168
-25	2429.222	70	34.7923
-20	1827.883	75	29.3499
-15	1387.099	80	24.8586
-10	1061.098	85	21.1360
-5	817.9329	90	18.0377
0	635.0831	95	15.4487
5	496.5712	100	13.2768
10	391.0070	105	11.4395
15	309.9511	110	9.8902
20	247.2696	115	8.5788
25	198.4674	120	7.4650
30	160.2244	125	6.5156
35	130.0697	130	5.7038
40	106.1517	135	5.0073
45	87.0725	140	4.4080
50	71.7703	145	3.8907
55	59.4735	150	3.4429
60	49.5180		

3SA48006 (AD87A001J)

CHECK 4

Evaluation of Abnormal High Pressure

Abnormally high pressure level is mostly caused by the condenser side.
The following contents are provided by service engineer based on their field checks.
Further, the number is listed in the order of degree of influence.

In cooling operation

Check items (Possible causes)	Judgement
Does the outdoor unit fan run normally?	Visual inspection
Is the outdoor unit heat exchanger clogged?	Visual inspection
Is there clogging before or after the EV (capillary)?	Check if there is a temperature difference before and after EV (capillary). Check if the main valve unit of EV operates (by noise, vibration).
Is the check valve clogged? ∗ Heat Pump model only	Check if there is a temperature difference before and after check valve. → If YES, the check valve is caught.
Is the HPS normal?	Check continuity by using a tester.
Is the outdoor unit installed under such conditions that short circuit easily occurs?	Visual inspection
Is the piping length 5 meters or less?	Visual inspection
Does air enter the refrigerant system?	Conduct refrigerant collection and vacuum drying, and then add proper amount refrigerant.
Is the refrigerant overcharged?	Conduct refrigerant collection and vacuum drying, and then add proper amount refrigerant.

In heating operation

Check items (Possible causes)	**Judgement**
Does the indoor unit fan run normally?	Visual inspection
Is the indoor unit heat exchanger clogged?	Visual inspection
Is the indoor unit installed under such conditions that short circuit easily occurs?	Visual inspection
Is there clogging before or after the EV (capillary)?	Check if there is a temperature difference before and after EV (capillary). Check if the main valve unit of EV operates (by noise, vibration).
Is the check valve clogged? ∗ Heat Pump model only	Check if there is a temperature difference before and after check valve. → If YES, the check valve is caught.
Is the HPS normal?	Check continuity using a tester.
Is the piping length 5 meters or less?	Visual inspection
Does air enter the refrigerant system?	Conduct refrigerant collection and vacuum drying, and then add proper amount refrigerant.
Is the refrigerant overcharged?	Conduct refrigerant collection and vacuum drying, and then add proper amount refrigerant.

CHECK 5

Evaluation of Abnormal Low Pressure

Abnormally low pressure level is mostly caused by the evaporator side. The following contents are provided based on field checking of service engineer. Further, the number is listed in the order of degree of influence.

In cooling operation

Check items (Possible causes)	Judgement
Does the outdoor unit fan run normally?	Visual inspection
Is the indoor unit filter clogged?	Visual inspection
Is there clogging before or after the EV (capillary)?	Check if there is a temperature difference before and after EV (capillary). Check if the main valve unit of EV operates (by noise, vibration).
Is the check valve clogged? ∗ Heat Pump model only	Check if there is a temperature difference before and after check valve. → If YES, the check valve is caught.
Is the LPS normal?	Check continuity using a tester.
Is the indoor unit installed under such conditions that short circuit easily occurs?	Visual inspection
Is the refrigerant shortage?	Conduct refrigerant collection and vacuum drying, and then add proper amount refrigerant.

In heating operation

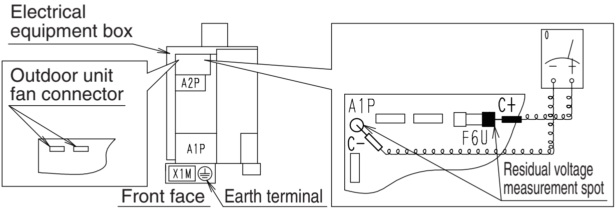
Check items (Possible causes)	Judgement
Does the outdoor unit fan run normally?	Visual inspection
Is the outdoor unit heat exchanger clogged?	Visual inspection
Is the outdoor unit installed under such conditions that short circuit easily occurs?	Visual inspection
Is there clogging before or after the EV (capillary)?	Check if there is a temperature difference before and after EV (capillary). Check if the main valve unit of EV operates (by noise, vibration).
Is the check valve clogged?	Check if there is a temperature difference before and after check valve. → If YES, the check valve is caught.
Is the LPS normal?	Check continuity using a tester.
Is the refrigerant shortage?	Conduct refrigerant collection and vacuum drying, and then add proper amount refrigerant.

CHECK 6

Check for Power Transistor

Judgement is made through cable check with an analog tester.

(1) Do not touch the energized part (high voltage part) for at least 10 minutes after the power is turned OFF.
(2) Be sure to touch the earth terminal with a hand to release static electricity from the body (to prevent PCB from being damaged).
(3) Also with a tester, take measurements at the following spots and confirm that residual electric charge of the power transistor is DC 50V or less.

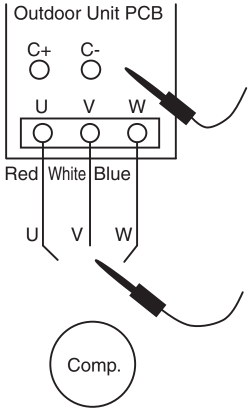


(4) After checking the residual electric charge, remove the connector of the outdoor unit fan motor. When the outdoor unit fan is rotated by strong headwind, remove the connector of the outdoor unit fan motor after confirming that the outdoor unit fan has stopped because electrical energy is stored in the capacitor and there may be a risk of electric shock.
(5) Remove the wire connecting the power transistor and the compressor. Remove it from the compressor terminal side.
During this work, be careful not to deform. Faston terminal at the end of the relay wire.

(6) Using an analog tester, measure resistance and fill in the blanks in the following table.
In case of unbalanced resistance for one of the 3 phases in each table (when the resistance value is equal to 5 times or more than the other resistance values), the power transistor is broken.
In normal cases, each phase shows a similar resistance value.

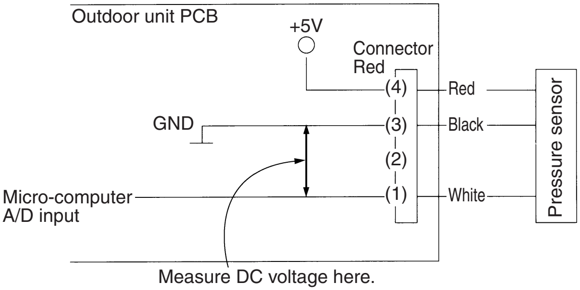
Tester		Resistance
(+)	(-)	Ω
C+	U	
C+	V	
C+	W	
U	C+	∞
V	C+	∞
W	C+	∞

Tester		Resistance
(+)	(-)	Ω
C-	U	∞
C-	V	∞
C-	W	∞
U	C-	
V	C-	
W	C-	



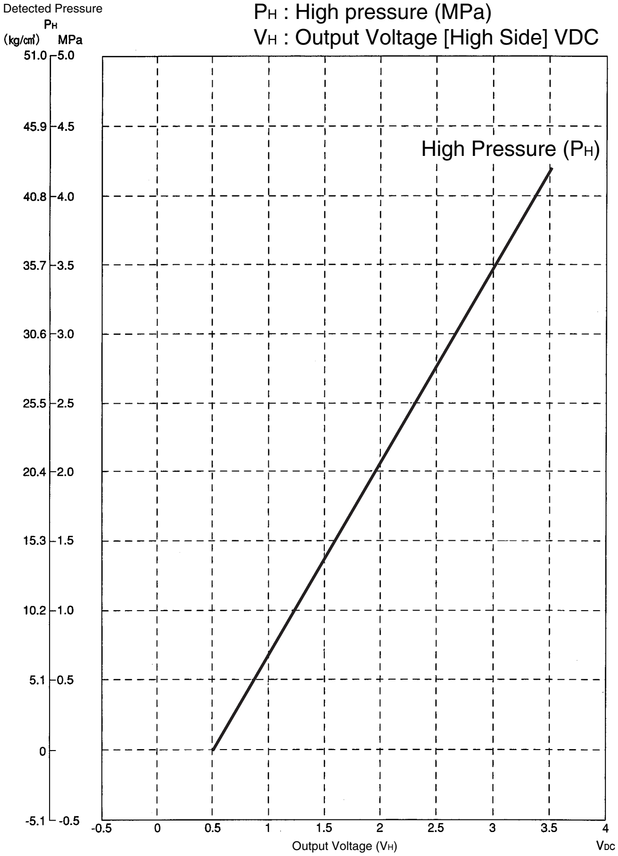
CHECK 7

Voltage Measuring Method



Pressure Sensor for except RZQ(S)-B, RZQ-C7 and CMSQ

$P_H = 1.38V_H - 0.69$
P_H : High pressure (MPa)
V_H : Output Voltage [High Side] VDC

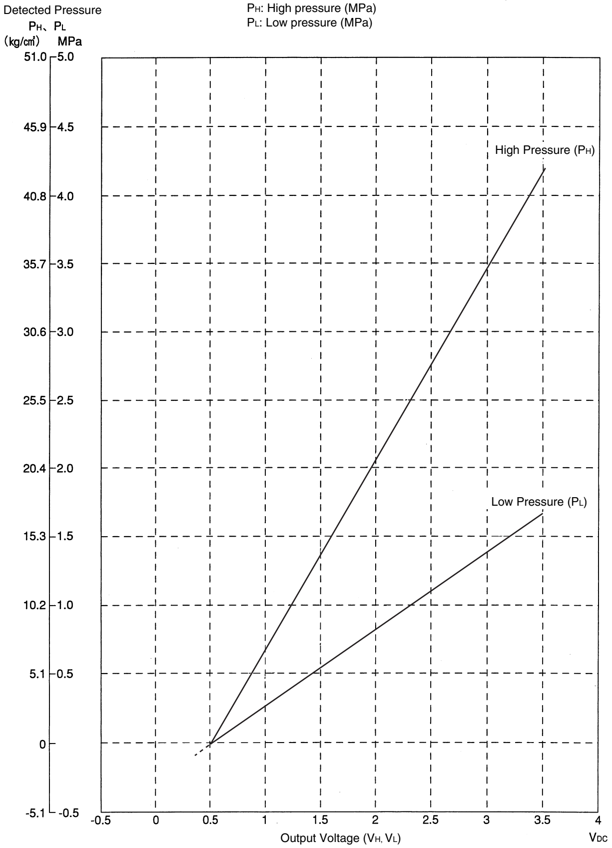


This graph is available for both high pressure sensor and low pressure sensor.

Pressure Sensor for RZQ(S)-B, RZQ-C7 and CMSQ

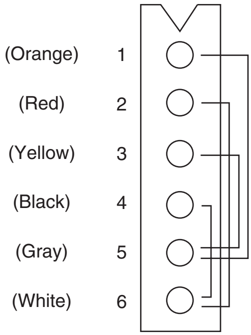
$P_H = 1.38V_H-0.69$
$P_L = 0.57V_L-0.28$
P_H: High pressure (MPa)
P_L: Low pressure (MPa)

V_H: Output Voltage [High Side] V_{DC}
V_L: Output Voltage [Low Side] V_{DC}



CHECK 8

Electronic Expansion Valve Connector and Coil Resistance Criteria

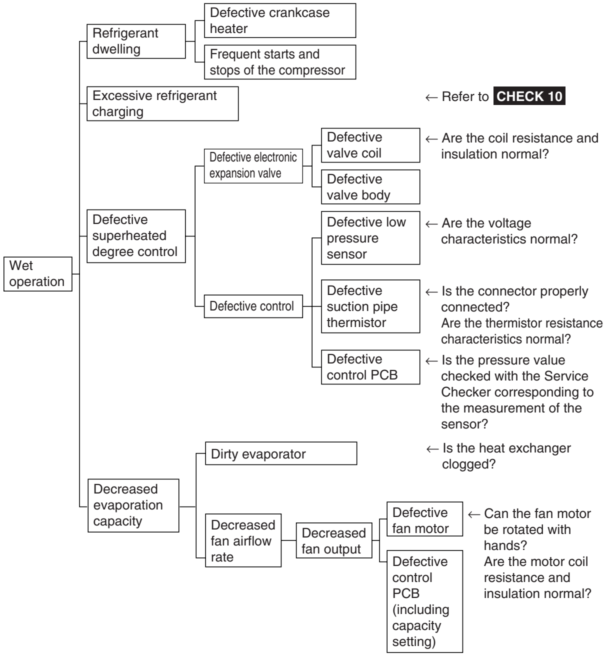


Measurement point	Criteria
1 - 5	40~50Ω
3 - 5	
2 - 6	
4 - 6	

CHECK 9

Check for Factors Causing Wet Operation

Referring to the Fault Tree Analysis (FTA) shown below, identify the defective points.



Note:

Reference values for superheated degree to be used in the judgement of wet operation
(1) Suction pipe superheated degree: 4°C or more
(2) Discharge pipe superheated degree: 5°C or less
(The values above must be used only for reference purposes. Even it is operated within the range above, operation may be normal in other conditions.)

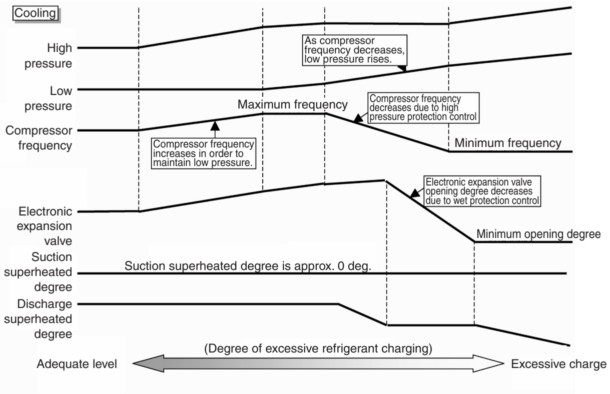
CHECK 10

Check for Excessive Refrigerant Charging

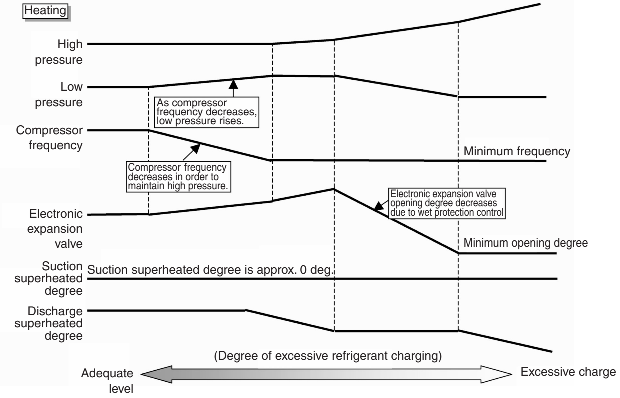
As criteria for judging whether refrigerant is excessively charged or not, refer to the following operating conditions.

<Diagnosis of excessive refrigerant charging>
<u>In cooling operation</u>

(1) Because high pressure rises due to excessive charging, overload control is carried out and capacity tends to run short.
(2) Considering pressure load, compressor discharge pipe temperature is low.
(3) Subcooling degree of condensate liquid becomes large. Therefore, temperature of blown air passing through subcooling part decreases in heating operation.



Cooling
High pressure
Low pressure
Compressor frequency
Electronic expansion valve
Suction superheated degree
Discharge superheated degree
As compressor frequency decreases, low pressure rises.
Maximum frequency
Compressor frequency decreases due to high pressure protection control
Minimum frequency
Compressor frequency increases in order to maintain low pressure.
Electronic expansion valve opening degree decreases due to wet protection control
Minimum opening degree
Suction superheated degree is approx. 0 deg.
(Degree of excessive refrigerant charging)
Adequate level
Excessive charge

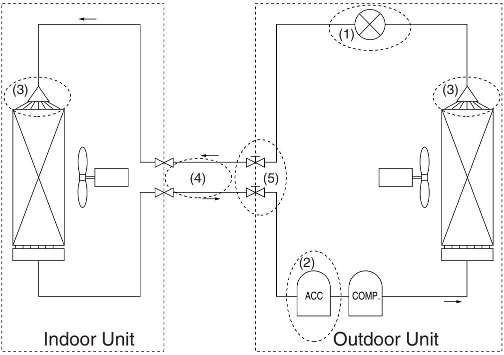


Heating
High pressure
Low pressure
Compressor frequency
Electronic expansion valve
Suction superheated degree
Discharge superheated degree
As compressor frequency decreases, low pressure rises.
Minimum frequency
Compressor frequency decreases in order to maintain high pressure.
Electronic expansion valve opening degree decreases due to wet protection control
Minimum opening degree
Suction superheated degree is approx. 0 deg.
(Degree of excessive refrigerant charging)
Adequate level
Excessive charge

CHECK 11

Check for Clogged Points

Temperature differences must occur before or after the clogged points!



Check points		Check factor	Causes	Remedies
(1)	Around expansion mechanism	Temperature difference	· Dust · Choked moisture · Reduced effective pipe diameter due to adherent contamination, etc.	Replace the electronic expansion valve.
(2)	Accumulator	Frosting	· Choked moisture	Blow a nitrogen gas, and then replace the refrigerant.
(3)	Distributor	Temperature difference	· Dust · Choked moisture · Reduced effective pipe diameter due to adherent contamination, etc.	Replace the heat exchanger or distributor.
(4)	Field piping	Temperature difference	· Collapsed pipe	Replace the pipe.
(5)	Stop valve	Temperature difference	· The stop valve is not fully open.	Open the stop valve fully.

CHECK 12

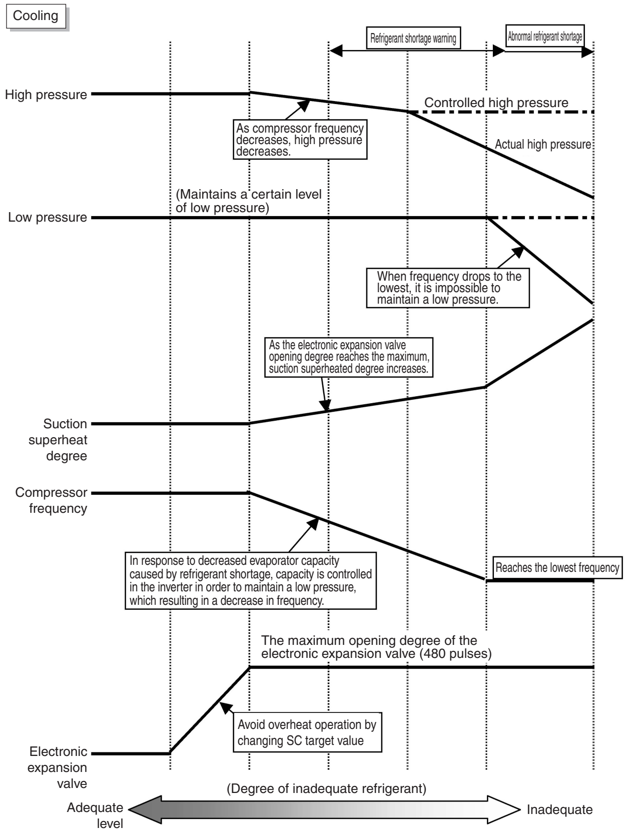
Check for Inadequate Refrigerant

As criteria for judging whether refrigerant is inadequate or not, refer to the following operating conditions.

<Diagnosis of inadequate refrigerant>

In cooling operation

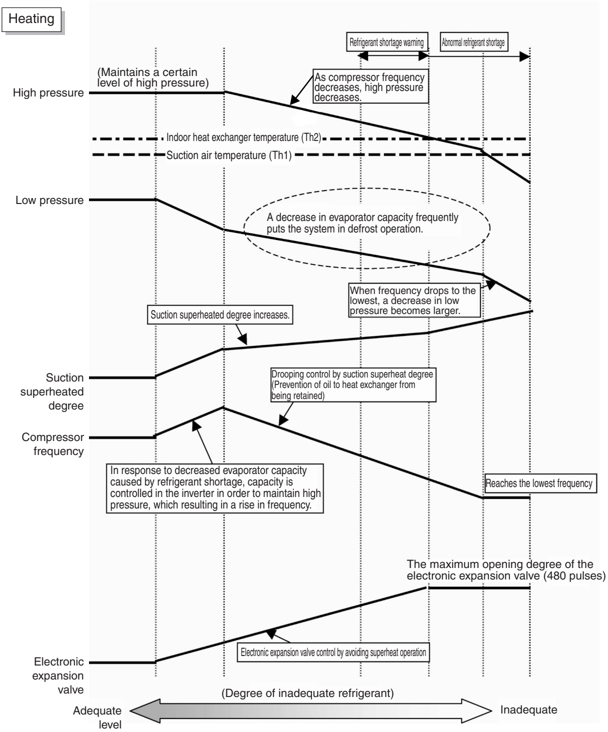
(1) As suction superheated degree increases due to refrigerant shortage, the electronic expansion valve tends to open (opens fully) in order to avoid overheat operation.
(2) In response to decreased evaporator capacity caused by refrigerant shortage, capacity is controlled in the inverter in order to maintain low pressure, which results in a decrease in frequency.
(3) Because of (1) and (2) above, the compressor frequency decreases despite a large difference (large load) between temperature set by the remote controller and suction air temperature, resulting that cooling capacity becomes unavailable.
(4) If refrigerant shortage worsens, the electronic expansion valve remains fully open and suction superheated degree further increases. In addition, as compressor frequency drops to the level of the lowest frequency (41 Hz), low pressure cannot be maintained.


Cooling
Refrigerant shortage warning
Abnormal refrigerant shortage
High pressure
Controlled high pressure
As compressor frequency decreases, high pressure decreases.
Actual high pressure
(Maintains a certain level of low pressure)
Low pressure
When frequency drops to the lowest, it is impossible to maintain a low pressure.
As the electronic expansion valve opening degree reaches the maximum, suction superheated degree increases.
Suction superheat degree
Compressor frequency
In response to decreased evaporator capacity caused by refrigerant shortage, capacity is controlled in the inverter in order to maintain a low pressure, which resulting in a decrease in frequency.
Reaches the lowest frequency
The maximum opening degree of the electronic expansion valve (480 pulses)
Avoid overheat operation by changing SC target value
Electronic expansion valve
(Degree of inadequate refrigerant)
Adequate level
Inadequate

<Diagnosis of inadequate refrigerant>

In heating operation

(1) As suction superheated degree increases due to refrigerant shortage, the electronic expansion valve tends to open (opens fully) to avoid overheat operation.
(2) As suction superheated degree increases due to refrigerant shortage, compressor frequency decreases because suction superheated degree is controlled in order to prevent oil to the outdoor unit heat exchanger from being retained.
(3) Because of (1) and (2) above, evaporator capacity and compressor frequency decrease despite a large difference (large load) between temperature set by the remote controller and suction air temperature, resulting that high pressure cannot be maintained and heating capacity becomes unavailable. Also a decrease in evaporator capacity frequently puts the system in defrost operation.
(4) If refrigerant shortage worsens, high pressure becomes smaller than saturated pressure equivalent to indoor heat exchanger temperature (or suction air temperature).

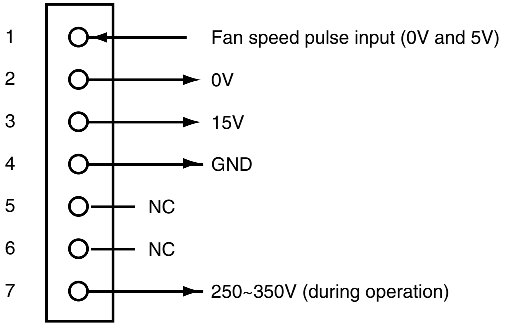

Heating
Refrigerant shortage warning
Abnormal refrigerant shortage
(Maintains a certain level of high pressure)
High pressure
As compressor frequency decreases, high pressure decreases.
Indoor heat exchanger temperature (Th2)
Suction air temperature (Th1)
Low pressure
A decrease in evaporator capacity frequently puts the system in defrost operation.
When frequency drops to the lowest, a decrease in low pressure becomes larger.
Suction superheated degree increases.
Suction superheated degree
Drooping control by suction superheat degree (Prevention of oil to heat exchanger from being retained)
Compressor frequency
In response to decreased evaporator capacity caused by refrigerant shortage, capacity is controlled in the inverter in order to maintain high pressure, which resulting in a rise in frequency.
Reaches the lowest frequency
The maximum opening degree of the electronic expansion valve (480 pulses)
Electronic expansion valve control by avoiding superheat operation
Electronic expansion valve
(Degree of inadequate refrigerant)
Adequate level
Inadequate

CHECK 13

Fan Motor Pulse Check

(1) Set operation OFF and power OFF. Disconnect the connector.
(2) Check that the voltage between the pins 3 - 4 is about 15 VDC.
(3) Check that the voltage between the pins 1 - 4 is about 5 VDC.
(4) Keep operation OFF and power OFF. Connect the connector.
(5) Check whether 2 pulses (0 and 5 VDC) are output 4 times at the pins 1 - 4 when the fan motor is rotated 1 turn by hand.

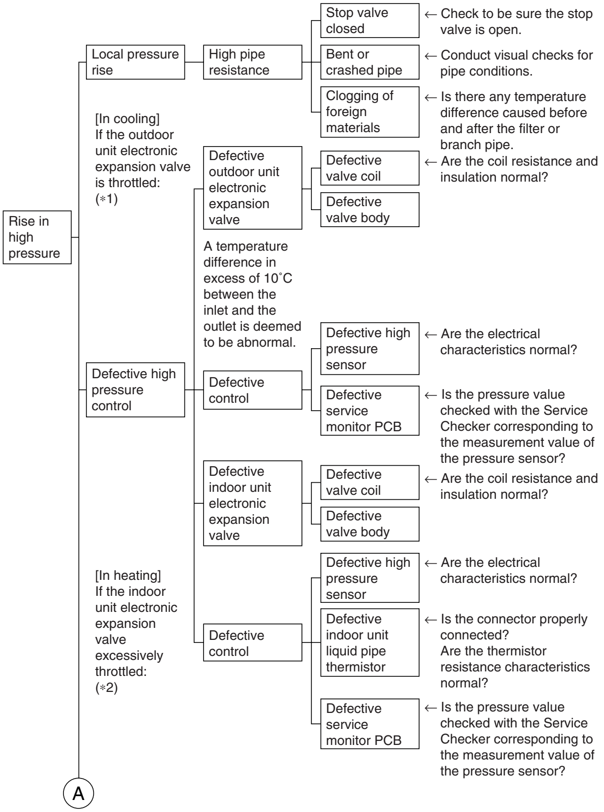
Check	Measure
If NG in steps 2 and 3	Defective PCB Replace the outdoor unit PCB.
If NG in step 5	Defective Hall IC Replace the outdoor unit fan motor.
If OK in steps 2, 3 and 5	Replace the outdoor unit PCB.



CHECK 14

Check for causes of rise in high pressure

Referring to the Fault Tree Analysis (FTA) shown below, probe the defective points.



A

- High suction air temperature of the condenser
  - [In cooling]
    - High suction air temperature of outdoor unit
      - Short circuit ← Is the suction air temperature less than 43˚C?
      - High outdoor air temperature ← Is the outdoor temperature less than 43˚C?
  - [In heating]
    - High suction air temperature of indoor unit
      - Short circuit ← Is the suction air temperature less than 27˚C?
      - High room temperature ← Is the room temperature less than 27˚C?
    - Defective suction air thermistor of indoor unit ← Is the connector properly connected? Are the thermistor resistance characteristics normal?
    - High suction air temperature of outdoor unit ← Is the outdoor air temperature less than 16˚CWB?
    - Defective outdoor air temperature thermistor of outdoor unit ← Is the connector properly connected? Are the thermistor resistance characteristics normal?
- Degradation in condensing capacity
  - Dirty condenser ← Is the heat exchanger clogged? (In cooling)
  - Mixing of non-condensable gas ← Is air or else mixed in the refrigerant system?
  - Decreased airflow rate
    - Decreased fan output
      - Defective fan motor ← Can the fan motor be rotated with hands? Are the motor coil resistance and insulation normal?
      - Defective service monitor PCB (Including capacity setting) ← If a spare PCB is mounted, is the capacity setting properly made?
    - High airflow passage resistance
      - Dirty filter ← Is the air filter clogged?
      - Obstacle ← Is there any obstacle in the airflow passage?
- Excessive refrigerant charging ← Refer to error code "F6".
- Improper model selection [In heating] ← Is the indoor unit too small compared to the large-sized outdoor unit?

Note:

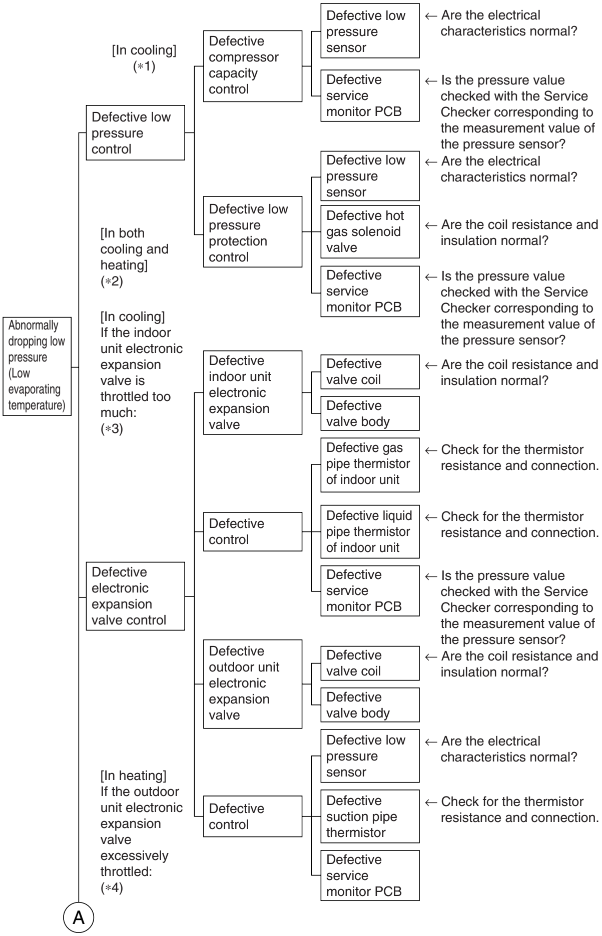
∗1. In cooling, it is normal if the outdoor unit electronic expansion valve (EVM) is fully open.

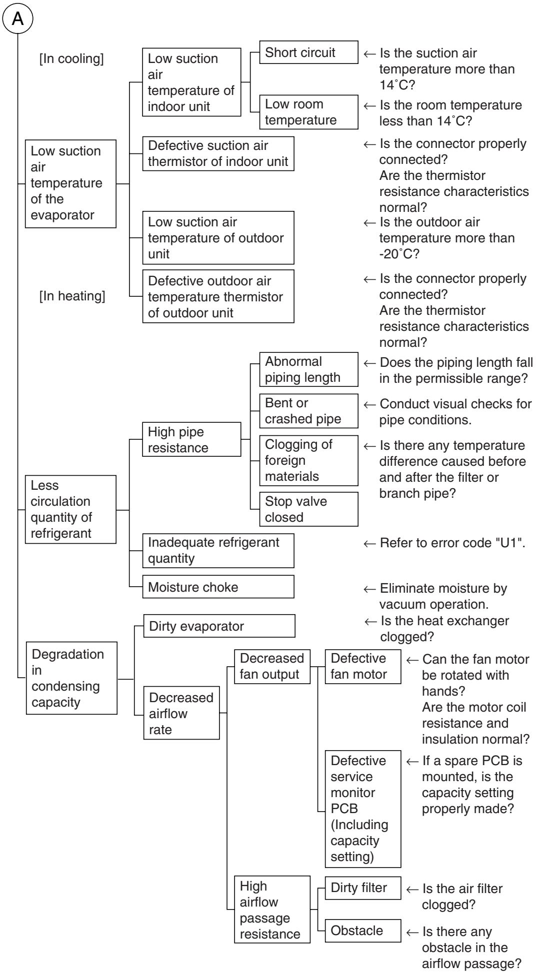
∗2. In heating, the indoor unit electronic expansion valve is used for “subcooling degree control”.

CHECK 15

Check for causes of drop in low pressure

Referring to the Fault Tree Analysis (FTA) shown below, probe the defective points.




A
[In cooling]
[In heating]
Low suction air temperature of the evaporator
Low suction air temperature of indoor unit
Short circuit
← Is the suction air temperature more than 14˚C?
Low room temperature
← Is the room temperature less than 14˚C?
Defective suction air thermistor of indoor unit
← Is the connector properly connected? Are the thermistor resistance characteristics normal?
Low suction air temperature of outdoor unit
← Is the outdoor air temperature more than -20˚C?
Defective outdoor air temperature thermistor of outdoor unit
← Is the connector properly connected? Are the thermistor resistance characteristics normal?
Less circulation quantity of refrigerant
High pipe resistance
Abnormal piping length
← Does the piping length fall in the permissible range?
Bent or crashed pipe
← Conduct visual checks for pipe conditions.
Clogging of foreign materials
← Is there any temperature difference caused before and after the filter or branch pipe?
Stop valve closed
Inadequate refrigerant quantity
← Refer to error code "U1".
Moisture choke
← Eliminate moisture by vacuum operation.
Degradation in condensing capacity
Dirty evaporator
← Is the heat exchanger clogged?
Decreased airflow rate
Decreased fan output
Defective fan motor
← Can the fan motor be rotated with hands? Are the motor coil resistance and insulation normal?
Defective service monitor PCB (Including capacity setting)
← If a spare PCB is mounted, is the capacity setting properly made?
High airflow passage resistance
Dirty filter
← Is the air filter clogged?
Obstacle
← Is there any obstacle in the airflow passage?

Note:

∗1. For details of compressor capacity control while in cooling, refer to “Compressor PI control”.
∗2. The “low pressure protection control” includes low pressure protection control and hot gas bypass control.
∗3. In cooling, the indoor unit electronic expansion valve is used for “superheated degree control”.
∗4. In heating, the outdoor unit electronic expansion valve (EVM) is used for “superheated degree control of outdoor unit heat exchanger”.

CHECK 16

Method of Checking the Inverter's Power Transistors and Diode Modules
Checking failures in power semiconductors mounted on inverter PCB (A3P)

Check the power semiconductors mounted on the inverter PCB by the use of a multiple tester.

<Items to be prepared>

- Multiple tester : Prepare the analog type of multiple tester.
  For the digital type of multiple tester, those with diode check function are available for the checking.

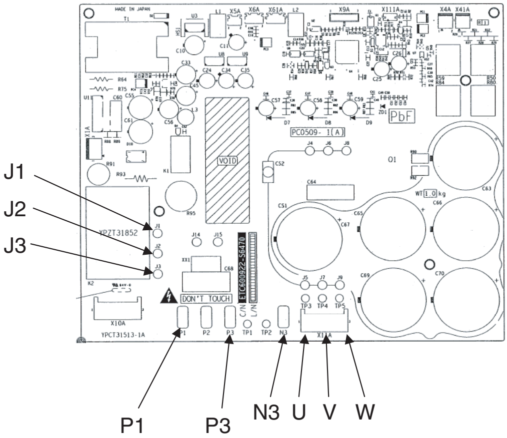
<Test points>

- Turn OFF the power supply. Then, after a lapse of 10 minutes or more, make measurement of resistance.

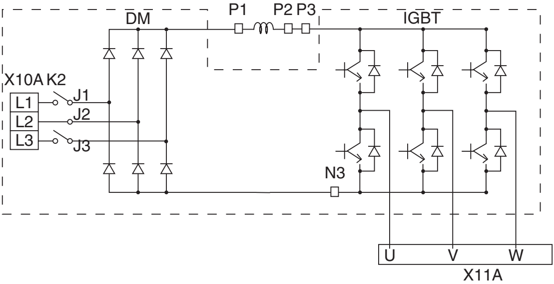
<Preparation>

- To make measurement, disconnect all connectors and terminals.

Inverter PCB



Electronic circuit



- According to the checking aforementioned, it is probed that the error results from the defective inverter. The following section describes supposed causes of the defective inverter.
- Defective compressor (ground leakage)
- Defective fan motor (ground leakage)
- Entry of conductive foreign particles
- Abnormal voltage (e.g. overvoltage, surge (thunder), or unbalanced voltage)

In order to replace the defective inverter, be sure to check for the points aforementioned.

1. Power module checking

When using the analog type of multiple tester, make measurement in resistance measurement mode in the x1kΩ range.

No.	Measuring point +	Measuring point -	Criterion	Remark
1	P3	U	2 to 15kΩ	
2	P3	V		
3	P3	W		
4	U	P3	Not less than 15kΩ (including)	It may take time to determine the resistance due to capacitor charge or else.
5	V	P3		
6	W	P3		
7	N3	U		
8	N3	V		
9	N3	W		
10	U	N3	2 to 15kΩ	
11	V	N3		
12	W	N3		

When using the digital type of multiple tester, make measurement in diode check mode (→|—).

No.	Measuring point +	Measuring point -	Criterion	Remark
1	P3	U	Not less than 1.2V (including)	It may take time to determine the voltage due to capacitor charge or else.
2	P3	V		
3	P3	W		
4	U	P3	0.3 to 0.7V	
5	V	P3		
6	W	P3		
7	N3	U		
8	N3	V		
9	N3	W		
10	U	N3	Not less than 1.2V (including)	It may take time to determine the voltage due to capacitor charge or else.
11	V	N3		
12	W	N3		

2. Diode module checking

When using the analog type of multiple tester, make measurement in resistance measurement mode in the x1kΩ range.

<table>
<tr><th rowspan="2">No.</th><th colspan="2">Measuring point</th><th rowspan="2">Criterion</th><th rowspan="2">Remark</th></tr>
<tr><th>+</th><th>-</th></tr>
<tr><td>1</td><td>P1</td><td>J1</td><td rowspan="3">2 to 15kΩ</td><td rowspan="3"></td></tr>
<tr><td>2</td><td>P1</td><td>J2</td></tr>
<tr><td>3</td><td>P1</td><td>J3</td></tr>
<tr><td>4</td><td>J1</td><td>P1</td><td rowspan="6">Not less than 15kΩ (including)</td><td rowspan="6">It may take time to determine the resistance due to capacitor charge or else.</td></tr>
<tr><td>5</td><td>J2</td><td>P1</td></tr>
<tr><td>6</td><td>J3</td><td>P1</td></tr>
<tr><td>7</td><td>N3</td><td>J1</td></tr>
<tr><td>8</td><td>N3</td><td>J2</td></tr>
<tr><td>9</td><td>N3</td><td>J3</td></tr>
<tr><td>10</td><td>J1</td><td>N3</td><td rowspan="3">2 to 15kΩ</td><td rowspan="3"></td></tr>
<tr><td>11</td><td>J2</td><td>N3</td></tr>
<tr><td>12</td><td>J3</td><td>N3</td></tr>
</table>

When using the digital type of multiple tester, make measurement in diode check mode (→|—).

<table>
<tr><th rowspan="2">No.</th><th colspan="2">Measuring point</th><th rowspan="2">Criterion</th><th rowspan="2">Remark</th></tr>
<tr><th>+</th><th>-</th></tr>
<tr><td>1</td><td>P1</td><td>J1</td><td rowspan="3">Not less than 1.2V (including)</td><td rowspan="3">It may take time to determine the voltage due to capacitor charge or else.</td></tr>
<tr><td>2</td><td>P1</td><td>J2</td></tr>
<tr><td>3</td><td>P1</td><td>J3</td></tr>
<tr><td>4</td><td>J1</td><td>P1</td><td rowspan="6">0.3 to 0.7V</td><td rowspan="6"></td></tr>
<tr><td>5</td><td>J2</td><td>P1</td></tr>
<tr><td>6</td><td>J3</td><td>P1</td></tr>
<tr><td>7</td><td>N3</td><td>J1</td></tr>
<tr><td>8</td><td>N3</td><td>J2</td></tr>
<tr><td>9</td><td>N3</td><td>J3</td></tr>
<tr><td>10</td><td>J1</td><td>N3</td><td rowspan="3">Not less than 1.2V (including)</td><td rowspan="3">It may take time to determine the voltage due to capacitor charge or else.</td></tr>
<tr><td>11</td><td>J2</td><td>N3</td></tr>
<tr><td>12</td><td>J3</td><td>N3</td></tr>
</table>

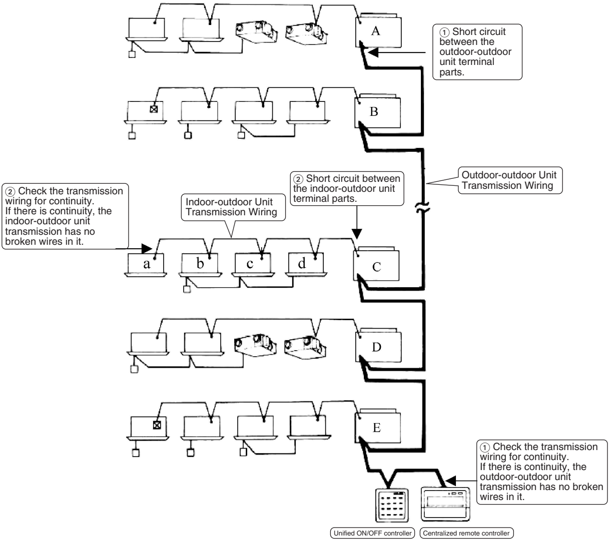
CHECK 17

Broken Wire Check of the Connecting Wires

1. Procedure for checking outdoor-outdoor unit transmission wiring for broken wires
   On the system shown below, turn OFF the power supply to all equipment, short circuit between the outdoor-outdoor unit terminal F1 and F2 in the "Outdoor Unit A" that is farthest from the centralized remote controller, and then conduct continuity checks between the transmission wiring terminal blocks F1 and F2 of the centralized remote controller using a multiple meter. If there is continuity between the said terminal blocks, the outdoor-outdoor unit transmission wiring has no broken wires in it.
   If there is no continuity, the transmission wiring may have broken wires. With the outdoor-outdoor unit terminal of the "Outdoor Unit A" short circuited, conduct continuity checks between the transmission wiring terminal blocks F1 and F2 of the unified ON/OFF controller. If there is no continuity as well, conduct continuity checks between the outdoor-outdoor unit terminal of the "Outdoor Unit E", between the outdoor-outdoor unit terminal of the "Outdoor Unit D", between the outdoor-outdoor unit terminal of the "Outdoor Unit C", … in the order described, thus identifying the place with continuity.
   If the place with continuity can be identified, there may be broken wires in places before the said place with continuity.

2. Procedure for checking indoor-outdoor unit transmission wiring for broken wires (for checking the indoor-outdoor unit transmission wiring of the "Outdoor Unit C" for broken wires)
   Turn OFF the power supply to all equipment, short circuit between the indoor-outdoor unit terminal F1 and F2 in the "Outdoor Unit C", and then conduct continuity checks between the transmission wirings F1

and F2 of the "Indoor Unit a" that is farthest from the "Outdoor Unit C" using a multiple meter. If there is continuity between the said transmission wirings, the indoor-outdoor unit transmission wiring has no broken wires in it.
If there is no continuity, the transmission wiring may have broken wires. With the indoor-outdoor unit terminal of the "Outdoor Unit C" short circuited, identify the place with continuity in the transmission wiring of the "Indoor Unit b", transmission wiring of the "Indoor Unit c", and transmission wiring of the "Indoor Unit d" in the order described.
If the place with continuity can be identified, there may be broken wires in places before the said place with continuity.



Warning

- Daikin products are manufactured for export to numerous countries throughout the world. Prior to purchase, please confirm with your local authorised importer, distributor and/or retailer whether this product conforms to the applicable standards, and is suitable for use, in the region where the product will be used. This statement does not purport to exclude, restrict or modify the application of any local legislation.
- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorised parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Read the User's Manual carefully before using this product. The User's Manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have any enquiries, please contact your local importer, distributor and/or retailer.

Cautions on product corrosion

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided. If you need to install the outdoor unit close to the sea shore, contact your local distributor.

JMI-0107

Organization:
DAIKIN INDUSTRIES, LTD.
AIR CONDITIONING MANUFACTURING DIVISION

Scope of Registration:
THE DESIGN/DEVELOPMENT AND MANUFACTURE OF COMMERCIAL AIR CONDITIONING, HEATING, COOLING, REFRIGERATING EQUIPMENT, HEATING EQUIPMENT, RESIDENTIAL AIR CONDITIONING EQUIPMENT, HEAT RECLAIM VENTILATION, AIR CLEANING EQUIPMENT, COMPRESSORS AND VALVES.

JQA-1452

Organization:
DAIKIN INDUSTRIES (THAILAND) LTD.

Scope of Registration:
THE DESIGN/DEVELOPMENT AND MANUFACTURE OF AIR CONDITIONERS AND THE COMPONENTS INCLUDING COMPRESSORS USED FOR THEM

EC99J2044

All of the Daikin Group's business facilities and subsidiaries in Japan are certified under the ISO 14001 international standard for environment management.

Dealer

DAIKIN INDUSTRIES, LTD.

Head Office:
Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka, 530-8323 Japan

Tokyo Office:
JR Shinagawa East Bldg., 2-18-1, Konan, Minato-ku, Tokyo, 108-0075 Japan

http://www.daikin.com/global_ac/

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