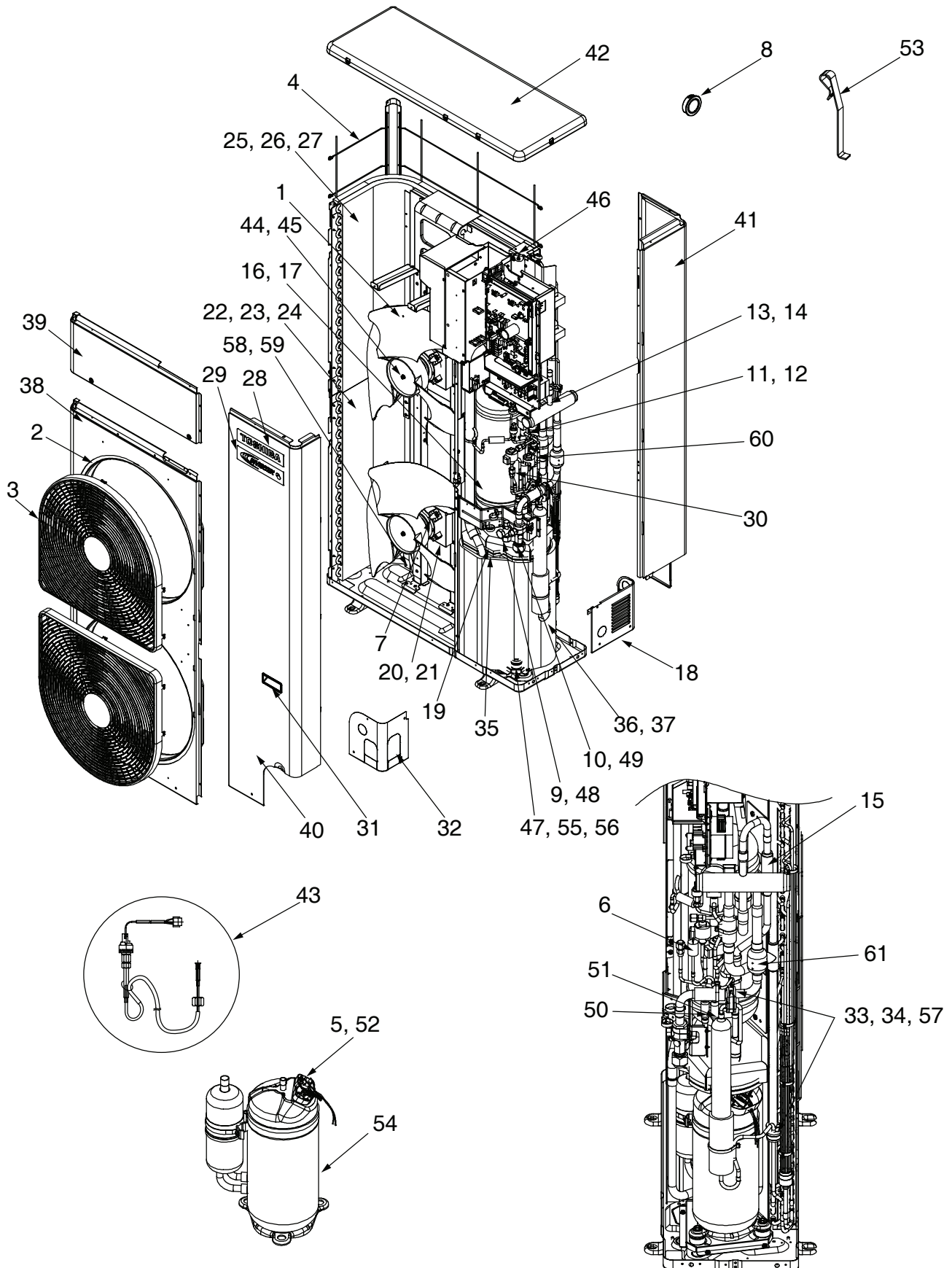


15. EXPLODED VIEWS AND PARTS LIST

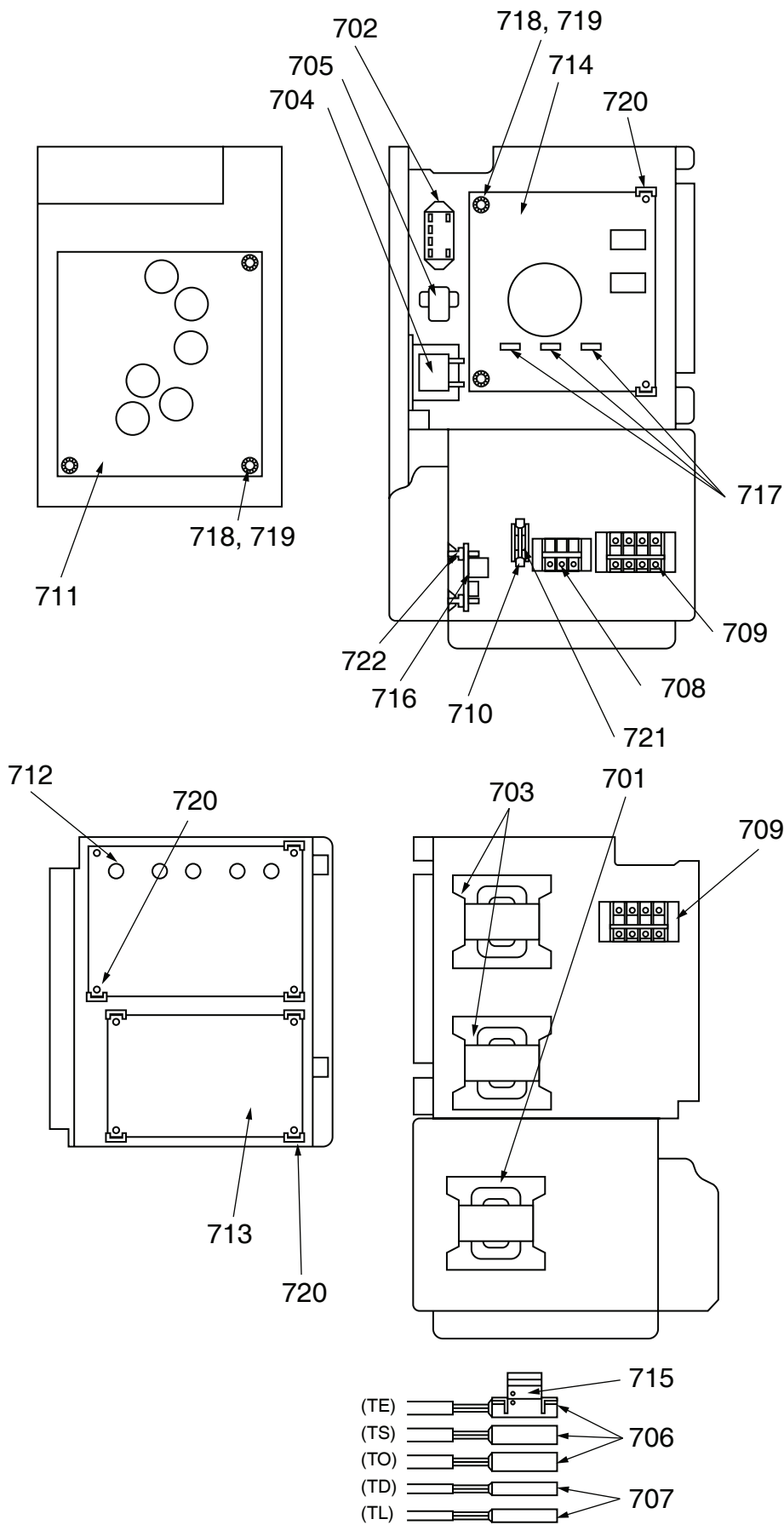
15-1. Outdoor Unit

RAV-SM2244AT8 (Z) (ZG) -E, RAV-SM2804AT8 (Z) (ZG) -E



Location No.	Part No.	Description	Model name					
			RAV-SM2244			RAV-SM2804		
			AT8-E	AT8Z-E	AT8ZG-E	AT8-E	AT8Z-E	AT8ZG-E
1	43120224	Fan, Propeller, PE492	2	2	2	2	2	2
2	43122065	Bell Mouth	2	2	2	2	2	2
3	43191651	Guard, Fan	2	2	2	2	2	2
4	43100323	Guard, Fin	1	1	1	1	1	1
5	43050407	Thermostat, Bimetal	1	1	1	1	1	1
6	43151301	Switch, Pressure	1	1	1	1	1	1
7	4312C037	Motor, Fan, ICF-280-A100-1	2	2	2	2	2	2
8	4316V135	Bush	1	1	1	1	1	1
9	43146680	Valve, Packed, 12.7	1	1	1	1	1	1
10	43146725	Valve, Ball, SBV-JA6GTC-1	1	1	1	1	1	1
11	43146700	Valve, 2-way, VPV-603D	1	1	1	1	1	1
12	37546847	Coil, Solenoid, 2-way, AC220-240V	1	1	1	1	1	1
13	43146722	Coil, Solenoid, STF-01AJ502E1	1	1	1	1	1	1
14	43146698	Valve, 4-way, STF-0731G	1	1	1	1	1	1
15	43146734	Valve, Check, ZGV-S55B-A	1	1	1	1	1	1
16	43148208	Accumulator	1	1		1	1	
17	43148209	Accumulator			1			1
18	43100345	Panel, Back, Piping	1	1	1	1	1	1
19	43111337	Rubber	1	1	1	1	1	1
20	43122095	Base Ass'y, Motor	1			1		
21	43122105	Base Ass'y, Motor		1	1		1	1
22	4314G187	Condenser Ass'y, Lower	1			1		
23	4314G188	Condenser Ass'y, Lower		1			1	
24	4314G189	Condenser Ass'y, Lower			1			1
25	4314G191	Condenser Ass'y, Up	1			1		
26	4314G192	Condenser Ass'y, Up		1			1	
27	4314G193	Condenser Ass'y, Up			1			1
28	4301P703	Mark, TOSHIBA	1	1	1	1	1	1
29	4301P729	Mark, Inverter	1	1	1	1	1	1
30	43146676	Joint, Check	2	2	2	2	2	2
31	43119390	Hanger	3	3	3	3	3	3
32	43100347	Panel, Front, Piping	1	1	1	1	1	1
33	43149318	Rubber, Supporter, Pipe, DIA 19.0	2	2	2	2	2	2
34	43149320	Rubber, Supporter, Pipe, DIA 8.0	2	2	2	2	2	2
35	43111334	Insulator, Sound, Up	1	1	1	1	1	1
36	43111335	Insulator, Sound, In	1	1	1	1	1	1
37	43111336	Insulator, Sound, Out	1	1	1	1	1	1
38	43100329	Cabinet Ass'y, Out	1	1	1	1	1	1
39	43100332	Cabinet Ass'y, Up	1	1	1	1	1	1
40	43100335	Cabinet Ass'y, Front	1	1	1	1	1	1
41	43100338	Panel Ass'y, Side	1	1	1	1	1	1
42	43100341	Cabinet Ass'y, Top	1	1	1	1	1	1
43	43150321	Sensor Ass'y, Low Pressure, NSK-BC010F-067	1	1	1	1	1	1
44	43197164	Nut, Flange		2	2		2	2
45	43047669	Nut, Flange	2			2		
46	43196113	Bushing	2	2	2	2	2	2
47	43149324	Rubber, Cushion	3	3	3	3	3	3
48	43047692	Bonnet	1	1	1	1	1	1
49	43147451	Bonnet, 3/4 IN	1	1	1	1	1	1
50	43147649	Strainer	1	1	1	1	1	1
51	4314Q008	Strainer	1	1	1	1	1	1
52	43063317	Holder, Thermostat	1	1	1	1	1	1
53	43019904	Holder, Sensor	3	3	3	3	3	3
54	43141513	Compressor, DA550A3F-11M	1	1	1	1	1	1
55	43197183	Bolt, Compressor, M6	3			3		
56	43197184	Bolt, Compressor, M6		3	3		3	3
57	43149325	Band, Fix	2	2	2	2	2	2
58	43119477	Plate, Fix, Condenser	2			2		
59	43119478	Plate, Fix, Condenser		2	2		2	2
60	43046494	Coil, PMV Ass'y, UKV-A040	2	2	2	2	2	2
61	4314Q004	Strainer	1	1	1	1	1	1

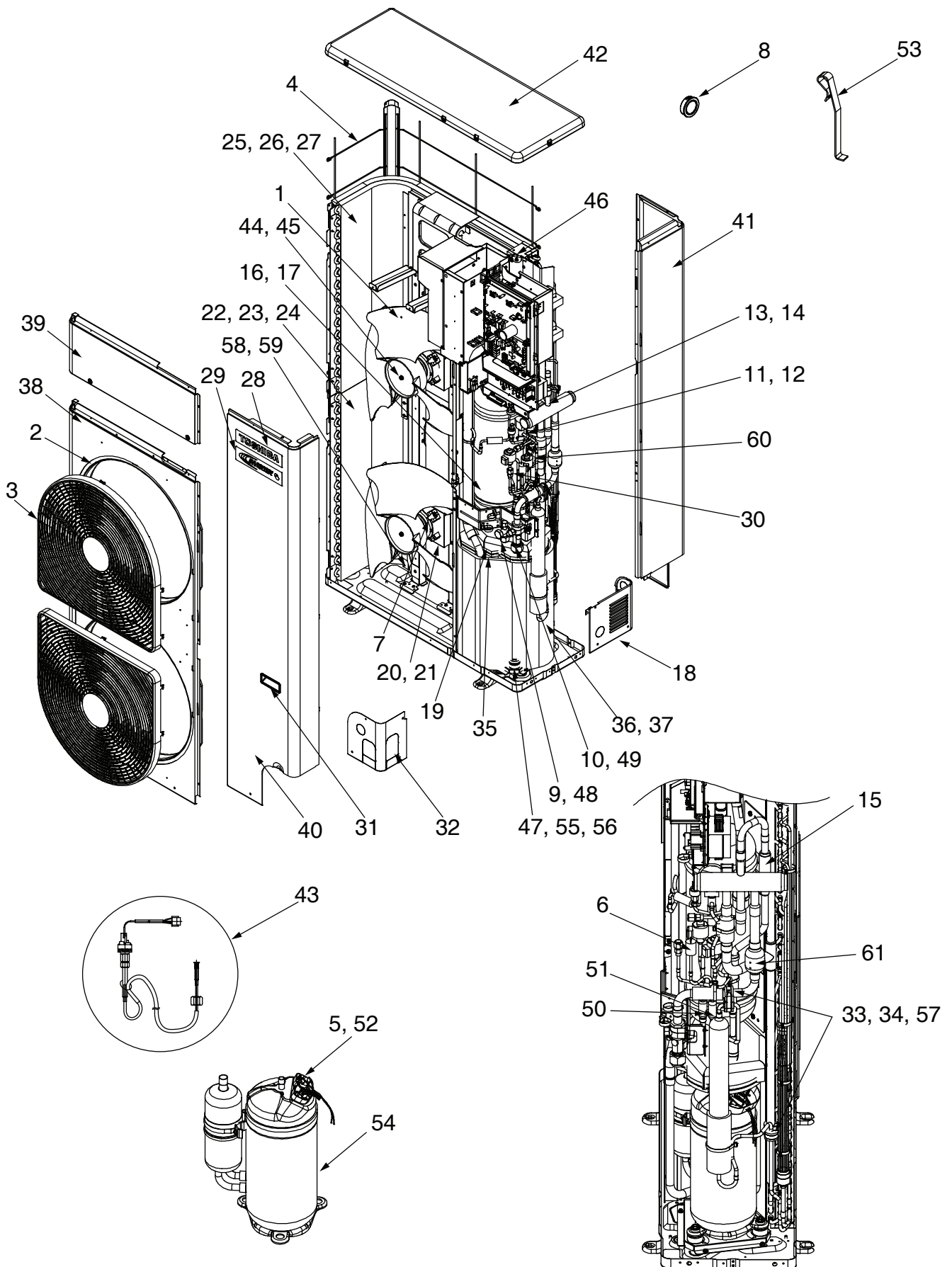
15-2. Inverter Assembly
RAV-SM2244AT8 (Z) (ZG) -E, RAV-SM2804AT8 (Z) (ZG) -E



Location No.	Part No.	Description	Model name RAV-SM		
			2244AT8-E 2804AT8-E	2244AT8Z-E 2804AT8Z-E	2244AT8ZG-E 2804AT8ZG-E
701	43058288	Reactor, CH-56-4Z	1	1	1
702	43154177	Relay, 480V, 20A (Contact)	1	1	1
703	43158199	Reactor, CH-44-FCZ-2	2	2	2
704	43158207	Reactor, CH-68	1	1	1
705	43153006	PTC-Thermistor, ZPROYCE101A500	1	1	1
706	43050425	Sensor Ass'y, Service, TC (F6)	3	3	3
707	43150319	Sensor Ass'y, Service, TD (F4)	2	2	2
708	43160565	Terminal Block, 3P, 20A, AC250V	1	1	1
709	43160579	Terminal, 4P, 30A	2	2	2
710	43060859	Fuse Block, 30A, 250V, FH153-PB	1	1	1
711	4316V390	P.C. Board Ass'y, MCC-1596, Comp-IPDU	1	1	1
712	4316V391	P.C. Board Ass'y, MCC-1597, Fan-IPDU	1	1	1
713	4316V392	P.C. Board Ass'y, MCC-1599, CDB	1	1	1
714	4316V398	P.C. Board Ass'y, MCC-1600, N/F	1	1	1
715	43063325	Holder, Sensor, 6-6.35, 8	1	1	1
716	4316V393	P.C. Board Ass'y, MCC-1436	1	1	1
717	43160590	Fuse, 6.3A, AC250V	3	3	3
718	43282001	Bushing	5	5	5
719	43183020	Collar	5	5	5
720	43063248	Supporter Ass'y	2	2	2
721	43060639	Fuse, 25A, 250V	1	1	1
722	43163015	Supporter	4	4	4

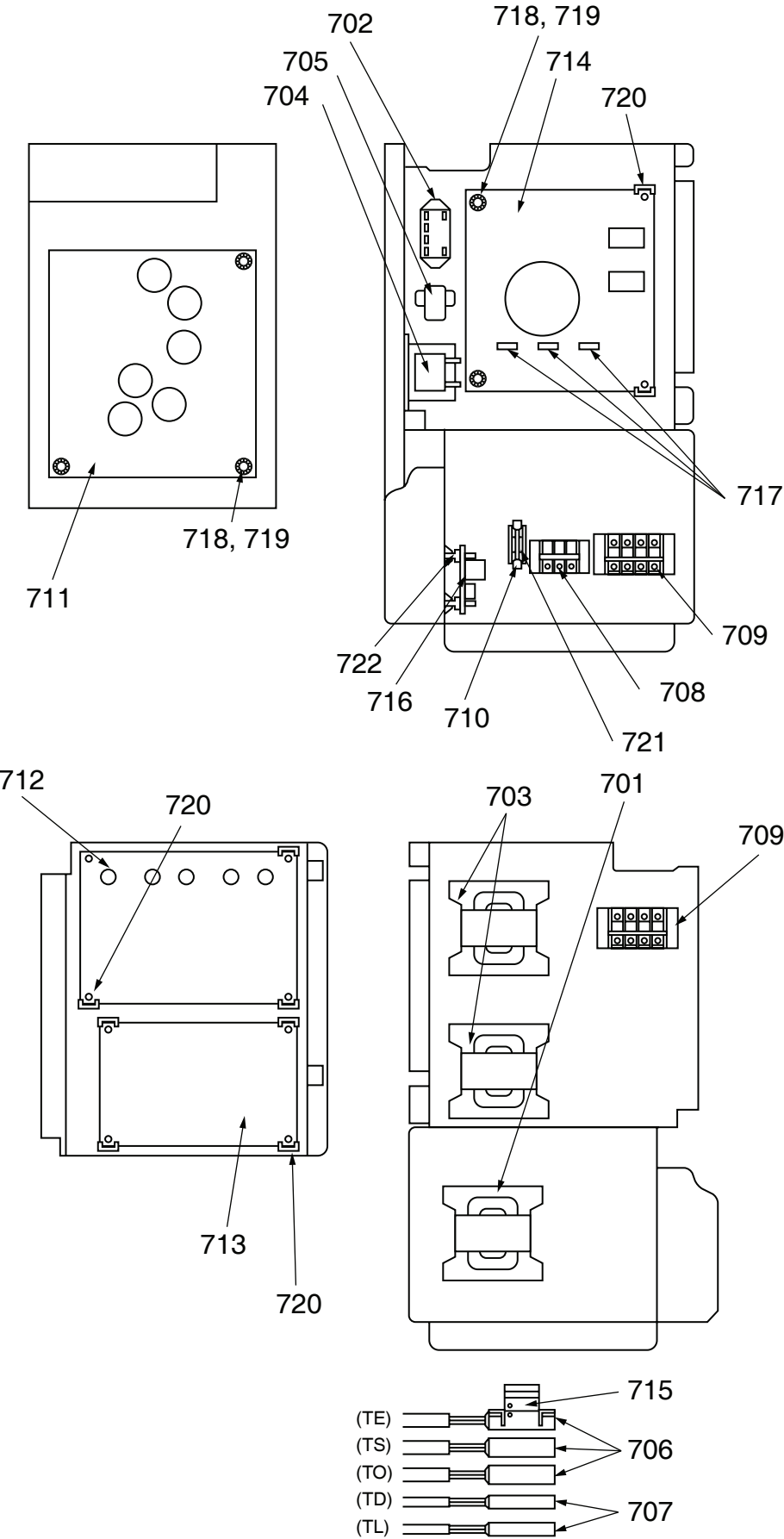
15-3. Outdoor Unit

RAV-SM2244AT7 (Z) (ZG), RAV-SM2804AT7 (Z) (ZG)



Location No.	Part No.	Description	Model name					
			RAV-SM2244			RAV-SM2804		
			AT7	AT7Z	AT7ZG	AT7	AT7Z	AT7ZG
1	43120224	Fan, Propeller, PE492	2	2	2	2	2	2
2	43122065	Bell Mouth	2	2	2	2	2	2
3	43191651	Guard, Fan	2	2	2	2	2	2
4	43100323	Guard, Fin	1	1	1	1	1	1
5	43050407	Thermostat, Bimetal	1	1	1	1	1	1
6	43151301	Switch, Pressure	1	1	1	1	1	1
7	4312C037	Motor, Fan, ICF-280-A100-1	2	2	2	2	2	2
8	4316V135	Bush	1	1	1	1	1	1
9	43146680	Valve, Packed, 12.7	1	1	1	1	1	1
10	43146725	Valve, Ball, SBV-JA6GTC-1	1	1	1	1	1	1
11	43146700	Valve, 2-way, VPV-603D	1	1	1	1	1	1
12	43146716	Coil, Solenoid, 2-way, AC220V, 60Hz	1	1	1	1	1	1
13	43146706	Coil, Solenoid, VHV-01AJ502E1	1	1	1	1	1	1
14	43146698	Valve, 4-way, STF-0731G	1	1	1	1	1	1
15	43146734	Valve, Check, ZGV-S55B-A	1	1	1	1	1	1
16	43148208	Accumulator	1	1		1	1	
17	43148209	Accumulator			1			1
18	43100345	Panel, Back, Piping	1	1	1	1	1	1
19	43111337	Rubber	1	1	1	1	1	1
20	43122095	Base Ass'y, Motor	1			1		
21	43122105	Base Ass'y, Motor		1	1		1	1
22	4314G187	Condenser Ass'y, Lower	1			1		
23	4314G188	Condenser Ass'y, Lower		1			1	
24	4314G189	Condenser Ass'y, Lower			1			1
25	4314G191	Condenser Ass'y, Up	1			1		
26	4314G192	Condenser Ass'y, Up		1			1	
27	4314G193	Condenser Ass'y, Up			1			1
28	4301P703	Mark, TOSHIBA	1	1	1	1	1	1
29	4301P729	Mark, Inverter	1	1	1	1	1	1
30	43146676	Joint, Check	2	2	2	2	2	2
31	43119390	Hanger	3	3	3	3	3	3
32	43100347	Panel, Front, Piping	1	1	1	1	1	1
33	43149318	Rubber, Supporter, Pipe, DIA 19.0	2	2	2	2	2	2
34	43149320	Rubber, Supporter, Pipe, DIA 8.0	2	2	2	2	2	2
35	43111334	Insulator, Sound, Up	1	1	1	1	1	1
36	43111335	Insulator, Sound, In	1	1	1	1	1	1
37	43111336	Insulator, Sound, Out	1	1	1	1	1	1
38	43100329	Cabinet Ass'y, Out	1	1	1	1	1	1
39	43100332	Cabinet Ass'y, Up	1	1	1	1	1	1
40	43100335	Cabinet Ass'y, Front	1	1	1	1	1	1
41	43100338	Panel Ass'y, Side	1	1	1	1	1	1
42	43100341	Cabinet Ass'y, Top	1	1	1	1	1	1
43	43150321	Sensor Ass'y, Low Pressure, NSK-BC010F-067	1	1	1	1	1	1
44	43197164	Nut, Flange		2	2		2	2
45	43047669	Nut, Flange	2			2		
46	43196113	Bushing	2	2	2	2	2	2
47	43149324	Rubber, Cushion	3	3	3	3	3	3
48	43047692	Bonnet	1	1	1	1	1	1
49	43147451	Bonnet, 3/4 IN	1	1	1	1	1	1
50	43147649	Strainer	1	1	1	1	1	1
51	4314Q008	Strainer	1	1	1	1	1	1
52	43063317	Holder, Thermostat	1	1	1	1	1	1
53	43019904	Holder, Sensor	3	3	3	3	3	3
54	43141513	Compressor, DA550A3F-11M	1	1	1	1	1	1
55	43197183	Bolt, Compressor, M6	3			3		
56	43197184	Bolt, Compressor, M6		3	3		3	3
57	43149325	Band, Fix	2	2	2	2	2	2
58	43119477	Plate, Fix, Condenser	2			2		
59	43119478	Plate, Fix, Condenser		2	2		2	2
60	43046494	Coil, PMV Ass'y, UKV-A040	2	2	2	2	2	2
61	4314Q004	Strainer	1	1	1	1	1	1

15-4. Inverter Assembly
RAV-SM2244AT7 (Z) (ZG), RAV-SM2804AT7 (Z) (ZG)



Location No.	Part No.	Description	Model name RAV-SM		
			2244AT7 2804AT7	2244AT7Z 2804AT7Z	2244AT7ZG 2804AT7ZG
701	43058288	Reactor, CH-56-4Z	1	1	1
702	43154177	Relay, 480V, 20A (Contact)	1	1	1
703	43158199	Reactor, CH-44-FCZ-2	2	2	2
704	43158207	Reactor, CH-68	1	1	1
705	43153006	PTC-Thermistor, ZPROYCE101A500	1	1	1
706	43050425	Sensor Ass'y, Service, TC (F6)	3	3	3
707	43150319	Sensor Ass'y, Service, TD (F4)	2	2	2
708	43160565	Terminal Block, 3P, 20A, AC250V	1	1	1
709	43160579	Terminal, 4P, 30A	2	2	2
710	43060859	Fuse Block, 30A, 250V, FH153-PB	1	1	1
711	4316V390	P.C. Board Ass'y, MCC-1596, Comp-IPDU	1	1	1
712	4316V391	P.C. Board Ass'y, MCC-1597, Fan-IPDU	1	1	1
713	4316V392	P.C. Board Ass'y, MCC-1599, CDB	1	1	1
714	4316V398	P.C. Board Ass'y, MCC-1600, N/F	1	1	1
715	43063325	Holder, Sensor, 6-6.35, 8	1	1	1
716	4316V393	P.C. Board Ass'y, MCC-1436	1	1	1
717	43160590	Fuse, 6.3A, AC250V	3	3	3
718	43282001	Bushing	5	5	5
719	43183020	Collar	5	5	5
720	43063248	Supporter Ass'y	2	2	2
721	43060639	Fuse, 25A, 250V	1	1	1
722	43163015	Supporter	4	4	4

WARNINGS ON REFRIGERANT LEAKAGE

Important

Check of Concentration Limit

The room in which the air conditioner is to be installed requires a design that in the event of refrigerant gas leaking out, its concentration will not exceed a set limit.

The refrigerant R410A which is used in the air conditioner is safe, without the toxicity or combustibility of ammonia, and is not restricted by laws to be imposed which protect the ozone layer. However, since it contains more than air, it poses the risk of suffocation if its concentration should rise excessively. Suffocation from leakage of R410A is almost non-existent. With the recent increase in the number of high concentration buildings, however, the installation of multi air conditioner systems is on the increase because of the need for effective use of floor space, individual control, energy conservation by curtailing heat and carrying power etc.

Most importantly, the multi air conditioner system is able to replenish a large amount of refrigerant compared with conventional individual air conditioners. If a single unit of the multi conditioner system is to be installed in a small room, select a suitable model and installation procedure so that if the refrigerant accidentally leaks out, its concentration does not reach the limit (and in the event of an emergency, measures can be made before injury can occur).

In a room where the concentration may exceed the limit, create an opening with adjacent rooms, or install mechanical ventilation combined with a gas leak detection device.

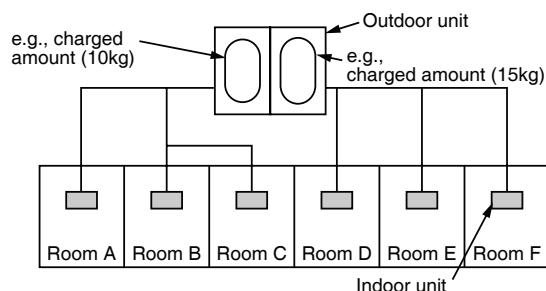
The concentration is as given below.

$$\frac{\text{Total amount of refrigerant (kg)}}{\text{Min. volume of the indoor unit installed room (m}^3\text{)}} \leq \text{Concentration limit (kg/m}^3\text{)}$$

The concentration limit of R410A which is used in multi air conditioners is 0.3kg/m³.

NOTE 1 :

If there are 2 or more refrigerating systems in a single refrigerating device, the amounts of refrigerant should be as charged in each independent device.



For the amount of charge in this example:

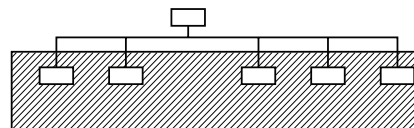
The possible amount of leaked refrigerant gas in rooms A, B and C is 10kg.

The possible amount of leaked refrigerant gas in rooms D, E and F is 15kg.

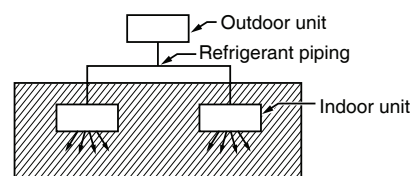
NOTE 2 :

The standards for minimum room volume are as follows.

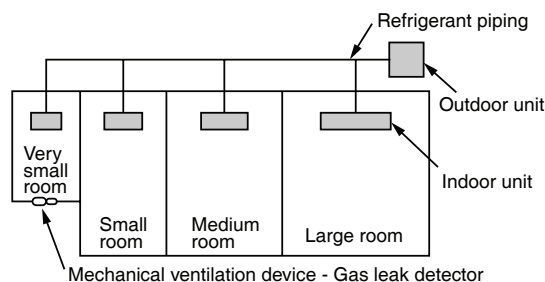
- 1) No partition (shaded portion)



- 2) When there is an effective opening with the adjacent room for ventilation of leaking refrigerant gas (opening without a door, or an opening 0.15% or larger than the respective floor spaces at the top or bottom of the door).



- 3) If an indoor unit is installed in each partitioned room and the refrigerant piping is interconnected, the smallest room of course becomes the object. But when a mechanical ventilation is installed interlocked with a gas leakage detector in the smallest room where the density limit is exceeded, the volume of the next smallest room becomes the object.



NOTE 3 :

The minimum indoor floor area compared with the amount of refrigerant is roughly as follows:
(When the ceiling is 2.7m high)

