TOSHIBA

Toshiba MMW-AP0271LQ-E Service Manual

Hot water module

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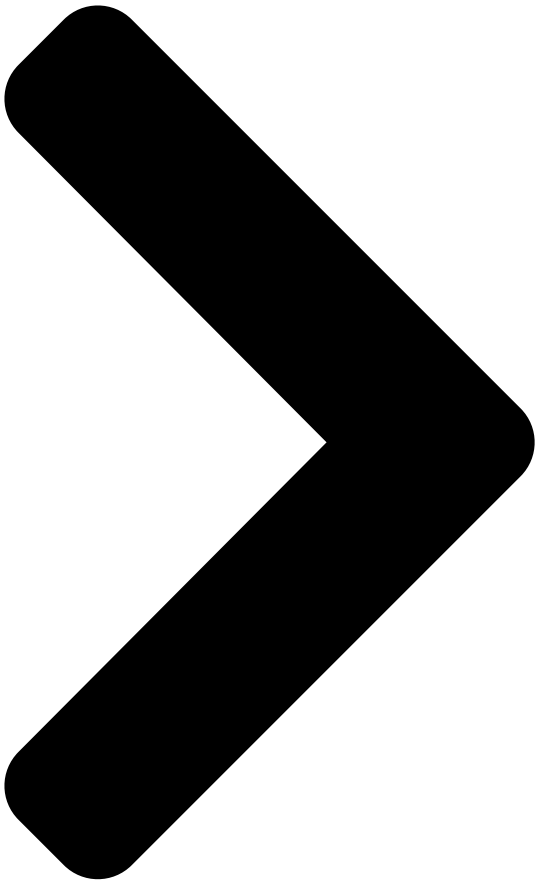

FILE No. A10-1412

AIR CONDITIONER (MULTI TYPE)

TOSHIBA

SERVICE MANUAL

Hot Water Module

Model name:

MMW-AP0271LQ-E

MMW-AP0561LQ-E

MMW-AP0271LQ-TR

MMW-AP0561LQ-TR

PRINTED IN JAPAN, May., 2014, TOMO

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Related Manuals for Toshiba MMW-AP0271LQ-E

Water Heater Toshiba MMW-AP0271LQ-E Installation Manual

Hot water module (multi type) (34 pages)

Water Heater Toshiba MMW-AP0271LQ-E Owner's Manual

Hot water module (multi type) (13 pages)

Water Heater Toshiba MMW-AP0271LQ-TR Installation Manual

Hot water module (multi type) (68 pages)

Air Conditioner Toshiba MMW-AP0481CHQ-E Installation Manual

High temperature hot water module (multi type) indoor unit (38 pages)

Air Conditioner Toshiba MMW-AP0481CHQ-E Service Manual

Hot water module high temperature type (150 pages)

Air Conditioner Toshiba MMW-UP0271LQ-E Service Manual

(90 pages)

Air Conditioner Toshiba MMU-AP0071MH Installation Manual

Indoor unit (32 pages)

Air Conditioner Toshiba MMU-AP0071MH Installation Manual

(145 pages)

Air Conditioner Toshiba MML-AP0074NH-E Service Manual

(132 pages)

Air Conditioner Toshiba MMK-AP0074MH-TR Owner's Manual

Air conditioner (multi type) (72 pages)

Air Conditioner Toshiba MMY-MAP0804HT8(Z)(ZG)-E Service Manual

Multi type heat pump model cooling only model (370 pages)

Air Conditioner Toshiba MMU-AP0074MH-E Installation Manual

Air conditioner (multi type) (52 pages)

Air Conditioner Toshiba MMk-AP0094MH-E Owner's Manual

High-wall type (36 pages)

Air Conditioner Toshiba MMU-P0121H Service Manual

Modular multi system, indoor unit, outdoor unit. (216 pages)

Air Conditioner Toshiba MMY-MAP0806HT8P-E Owner's Manual

(25 pages)

Air Conditioner Toshiba MMY-MAP0806FT8P-E Installation Manual

Air conditioner (multi type) (92 pages)

Summary of Contents for Toshiba MMW-AP0271LQ-E

Page 1: Service Manual

FILE No. A10-1412 AIR CONDITIONER (MULTI TYPE) SERVICE MANUAL Hot Water Module Model name: MMW-AP0271LQ-E MMW-AP0561LQ-E MMW-AP0271LQ-TR MMW-AP0561LQ-TR PRINTED

IN JAPAN, May., 2014, TOMO...

Page 2: Table Of Contents

CONTTENTS 1. SUMMARIES OF PRODUCT CHARACTERISTICS .....11 2. SPECIFICATION ..... 12 3. WIRING DIAGRAMS .....13 4. PARTS RATING ..... 14 5. REFRIGERANT CYCLE DIAGRAM ..... 15 6. CONTROL OUTLINE .....16 7. APPLIED CONTROL AND FUNCTIONS ..... 19 7-1.

Page 3 (including the hot water modules) made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work.

Page 4 Definition of Protective Gear When the air conditioner is to be transported, installed, maintained, repaired or removed, wear protective gloves and 'safety' work clothing. In addition to such normal protective gear, wear the protective gear described below when undertaking the special work detailed in the table below.

Page 5 Warning indications on the hot water module Warning indication Description WARNING WARNING ELECTRICAL SHOCK HAZARD ELECTRICAL SHOCK HAZARD Disconnect all remote Disconnect all remote electric power electric power supplies supplies before servicing. before servicing. – 5 –...

Page 6: Precautions For Safety

Precautions for Safety The manufacturer shall not assume any liability for the damage caused by not observing the description of this manual. DANGER Before carrying out the installation, maintenance, repair or removal work, be sure to set the circuit breaker for both the hot water module and outdoor units to the OFF position.

Page 7 WARNING Before starting to repair the hot water module, read carefully through the Service Manual, and repair the hot water module by following its instructions. Only qualified service person (*1) is allowed to repair the hot water module. Repair of the hot water module by unqualified person may give rise to a fire, electric shocks, injury, water leaks and / or other problems.

Page 8 When performing repairs using a gas burner, replace the refrigerant with nitrogen gas because the oil that coats the pipes may otherwise burn. When repairing the refrigerating cycle, take the following measures. 1) Be attentive to fire around the cycle. When using a gas stove, etc., be sure to put out fire before work; otherwise the oil mixed with refrigerant gas may catch fire.

Page 9 Once the repair work has been completed, check for refrigerant leaks, and check the insulation resistance and water drainage. Then perform a trial run to check that the hot water module is running properly. After repair work has finished, check there is no trouble. If check is not executed, a fire, electric shock or injury may be caused.

Page 10 Explanations given to user If you have discovered that the fan grille is damaged, do not approach the outdoor unit but set the circuit breaker to the OFF position, and contact a qualified service person to have the repairs done. Do not set the circuit breaker to the ON position until the repairs are completed.

Page 11: Summaries Of Product Characteristics

Office and residential apartment suits. • To create a single solution for our customers heating, cooling and domestic hot water requirements. Toshiba SMMS-i Hot Water Module –CHARACTER • New Design, specifically engineered for VRF application • Operating Control designed specifically to maximize both performance and efficiency.

Page 12: Specification

2. SPECIFICATION Model MMW-AP0271LQ-E MMW-AP0561LQ-E Heating capacity *1 (kW) 16.0 Electical characteristics Power supply *2 1 phase 50Hz 230V (220-240V) Running current 0.08 0.08 Power consumption Appearance Zinc hot dipping steel plate Dimention Unit Hight (mm) Width (leg inclued) (mm)

Page 13: Wiring Diagrams

3. WIRING DIAGRAMS – 13 –...

Page 14: Parts Rating

4. PARTS RATING Model MMW- AP0271LQ-E AP0271LQ-TR AP0561LQ-E AP0561LQ-TR Transformer TT-13 Flow switch VK320M, Cap color Blue VK320M, Cap color Black Pulse motor EFM-MD12TF-1 Pulse motor valve EDM-B40YGTF-3 EDM-B60YGTF-1 FQ-G593, AC220-240V 50/60Hz, Lead wire length 800 mm 2 way valve coil FDF2A88 2 way valve body TA (TWI) sensor...

Page 15: Refrigerant Cycle Diagram

5. REFRIGERANT CYCLE DIAGRAM (TWO) Gas side Water Outlet PLATE TYPE HEAT EXCHANGER (TWI) Water Inlet Liquid side PULSE (TCJ2) MOTOR VALVE Solenoid Capillary Check Tempe. Strainer Flow switch valve tube valve sensor – 15 –...

Page 16: Control Outline

6. CONTROL OUTLINE Item Specification Remarks Upon power 1. Identification of outdoor unit supply reset When the power supply is reset, the outdoor unit is identified, and control is redirected according to the identification result. 2. Indoor fan speed and air flow direction control availability settings Settings such as indoor fan speed and air flow direction control availability are replaced on the basis of EEPROM data.

Page 17

Item Specification Remarks Heater control 1. While the heating themal ON, the heater relay is output by difference between Temperature Ts and TA, and difference between Ts and TC2, Ts and TG. setting TC2: Water outlet Start condition: A and B as shown on the right, Table 1 or Table 2 temperature Release condition: A or B as shown on the right, Table 1 or Table 2 TG: Satisfaction...

Page 18

Item Specification Remarks Defrosting While the outdoor unit is engaged in defrosting control, thehot water modules • For defrosting control perform the following control tasks: commencement conditions, see 5 1) Close the hot water module PMV to a certain degree and open the SV valve. Control Outline “7.

Page 19: Applied Control And Functions

7. APPLIED CONTROL AND FUNCTIONS 7-1. Hot Water Module printed circuit board MCC-1403 – 19 –...

Page 20: Optional Connector Specifications Of Hot Water Module P.c. Board

7-2. Optional connector specifications of hot water module P.C. board Function Connector No. Pin No. Specification Remarks Start / stop input Start / stop input for HA (J01: In place / Removed = Pulse input (factory default) / Step input) 0 V (COM) —...

Page 21: Test Operation Of Hot Water Module Unit

7-3. Test operation of hot water module unit Check function for operation of hot water module (Functions at hot water module side) This function is provided to check the operation of the hot water module singly without communication with the remote controller or the outdoor unit.

Page 22: Method To Set Hot Water Module Function Dn Code

7-4. Method to set hot water module function DN code (When performing this task, be sure to use a wired remote controller.) <Procedure> To be performed only when system at rest Push the buttons simultaneously and hold for at least 4 seconds. The unit No.

Page 23: Applied Control Of Indoor Unit (Including Hot Water Module)

7-5. Applied control of indoor unit (including Hot Water Module) Manual address setting using the remote controller Procedure when setting indoor units’ addresses first under the condition that indoor wiring has been completed and outdoor wiring has not been started (manual setting using the remote controller) Wiring example of 2 refrigerant lines Refrigerant line 2 Refrigerant line 1...

Page 24 <Line (system) address> 12 12 12 12 12 Push the TEMP. buttons repeatedly to set the CODE No. to Push the TIME buttons repeatedly to set a system address. (Match the address with the address on the interface P.C. board of the header outdoor unit in the same refrigerant line.) Push button.

Page 25 Confirming the indoor unit addresses and the position of an indoor unit using the remote controller Confirming the numbers and positions of indoor units To see the indoor unit address of an indoor unit which you know the position of When the unit is individual (the indoor unit is paired with a wired remote controller one-to- one), or it is a group-controlled one.

Page 26 To find an indoor unit’s position from its address When checking unit numbers controlled as a group (Execute it while the units are stopped.) The indoor unit numbers in a group are indicated one after another. The fan and louvers of the indicated units are activated.

Page 27 To check all the indoor unit addresses using an arbitrary wired remote controller. (When communication wirings of 2 or more refrigerant lines are interconnected for central control) CODE NO. TEMP. ON / OFF TIMER SET MODE TIME SAVE VENT FILTER RESET TEST SWING/FIX...

Page 28 Changing the indoor unit address using a remote controller To change an indoor unit address using a wired remote controller. The method to change the address of an individual indoor unit (the indoor unit is paired with a wired remote controller one-to-one), or an indoor unit in a group. (The method is available when the addresses have already been set automatically.) Finish (Execute it while the units are stopped.)

Page 29 To change all the indoor unit addresses using an arbitrary wired remote controller. (The method is available when the addresses have already been set automatically.) (When communication wirings of 2 or more refrigerant lines are interconnected for central control) NOTE You can change the addresses of indoor units in each refrigerant line using an arbitrary wired remote controller.

Page 30 CODE NO. TEMP. ON / OFF TIMER SET MODE TIME SAVE VENT FILTER RESET TEST SWING/FIX UNIT LOUVER Finish 5, 7 Press to finish setting Push the TIME buttons repeatedly to change the value of the indoor unit address in SET DATA.

Page 31: Error Clearing Function

Error clearing function How to clear the error using the wired remote controller Clearing an error of the outdoor unit Clear the currently detected outdoor unit for each refrigerant line to which the indoor unit controlled by the remote controller is connected. (The indoor unit error is not cleared.) Use the service monitoring function of the remote controller.

Page 32 Monitoring function of wired remote controller The following monitoring function is available if the remote controller of RBC-ATM32E is used. Content Enter the service monitoring mode using the remote controller to check the sensor temperature or operation status of the remote controller, indoor unit, and outdoor unit. Push and hold the , and for 4 seconds or longer to enter the service monitoring mode.

Page 33 Target outdoor unit (SMMS-i – Series 4) for hot water module CODE No. Data Format Unit Remote controller display example Hot water Water inlet temperature (in control) ×1 ˚C module *2 Water inlet Temperature (TA) ×1 ˚C Heat exchanger Temperature (TCJ) ×1 ˚C [0024]=24 ˚C...

Page 34 CODE No. Data Format Unit Remote controller display example U1 U2 U3 U4 Individual 50 60 70 80 Rotation of compressor 1 ×10 data 2 of 51 61 71 81 Rotation of compressor 2 ×10 [0642]=64.2 rps outdoor unit 52 62 72 –...

Page 35: Test Operation Check

7-6. Test operation check Test operation START Refer to "Test operation procedure" Test operation for one indoor unit of the indoor remote controller. The operation does not start for approximately 3 minutes after Operation starts powering-on or stopping operation. Note: After powering-on, it may require up to 10 minutes to start the operation due to the initial communications of the system.

Page 36 Note 1: Criteria for the difference between suction and discharge temperatures, between water inlet and water outlet temperature (1) Cooling operation After operating for a minimum of 30 minutes in “COOL” mode, if the ΔT dry bulb temperature difference between suction and discharge air of the indoor unit is 8°C or more, it is normal. (2) Heating operation After operating for a minimum of 30 minutes in “HEAT”...

Page 37: Troubleshooting

8. TROUBLESHOOTING 8-1. Overview (1) Before engaging in troubleshooting (a) Applicable models Super Module Multi (SMMS-i) models. (Indoor units: MMW-APOOO, Outdoor units: MMY-MAPOOOO*) (b) Tools and measuring devices required • Screwdrivers (Philips, flat head), spanners, long-nose pliers, nipper, pin to push reset switch, etc. •...

Page 38: Troubleshooting Method

8-2. Troubleshooting method The remote controllers (main remote controller and central control remote controller) and the interface P.C. board of an outdoor unit are provided with an LCD display (remote controller) or a 7-segment display (outdoor interface P.C. board) to display operational status. Using this self-diagnosis feature, the fault site / faulty part may be identified in the event of a fault by following the method described below.

Page 39 (Error detected by main remote controller) Indoor unit (including Hot Water Module) Check code Outdoor 7-segment display Main Typical fault site Description of error remote Sub-code controller No master remote controller, Signals cannot be received from indoor unit; master remote —...

Page 40 List of check codes (outdoor unit) (Errors detected by SMMS outdoor interface - typical examples) IPDU: Intelligent Power Drive Unit (Inverter P.C. board) Indoor unit (including Hot Water Module) Check code Outdoor 7-segment display TCC-LINK central control Typical fault site Description of error or main remote Sub-code...

Page 41 Indoor unit (including Hot Water Module) Check code Outdoor 7-segment display TCC-LINK central control Typical fault site Description of error or main remote Sub-code controller display Output voltage of high pressure sensor (Pd) is zero or provides — High pressure sensor (Pd) error abnormal readings when compressors have been turned off.

Page 42 Indoor unit (including Hot Water Module) Check code Outdoor 7-segment display TCC-LINK central control Typical fault site Description of error or main remote Sub-code controller display Indoor external error input Indoor unit has been shut down for external error input in one L30 Detected indoor unit No.

Page 43 Indoor unit (including Hot Water Module) Check code Outdoor 7-segment display TCC-LINK central control Typical fault site Description of error or main remote Sub-code controller display Water temperature decrease • Check the water temperature. — error • Check the heat insulator of wate pipes. •...

Page 44: Troubleshooting Based On Information Displayed On Remote Controller

8-3. Troubleshooting based on information displayed on remote controller Using main remote controller (RBC-AMT32E) (1) Checking and testing When a fault occurs to an air conditioner, a check code and indoor unit No. are displayed on the display window of the remote controller. Check codes are only displayed while the air conditioner is in operation.

Page 45 Using TCC-LINK central control remote controller (TCB-SC642TLE2) (1) Checking and testing When a fault occurs to an air conditioner, a Display of Unit No. Display of check code check code and indoor unit No. are displayed on the display window of the remote controller. Check codes are only displayed while the air conditioner is in operation.

Page 46: Check Codes Displayed On Remote Controller And Smms Outdoor Unit (7-Segment Display On I/F Board) And Locations To Be Checked

8-4. Check codes displayed on remote controller and SMMS outdoor unit (7-segment display on I/F board) and locations to be checked IPDU: Intelligent Power Drive Unit (Inverter P.C. board) Indoor unit (including Hot Water Module) For other types of outdoor units, refer to their own

service manuals. Check code Location Error detection...

Page 47 Indoor unit (including Hot Water Module) Check code Location Error detection Main Outdoor 7-segment display Description System status Check items (locations) condition(s) remote Check detection Sub-code controller code Automatic All stop • Indoor automatic address • Perform automatic address Indoor-outdoor address starting setting is started while setting again after...

Page 48 Indoor unit (including Hot Water Module) Check code Location Error detection Main Outdoor 7-segment display Description System status Check items (locations) condition(s) remote Check detection Sub-code controller code Duplicated All stop There is duplication in Note: — follower outdoor outdoor addresses set Do not set outdoor addresses manually.

Page 49 Indoor unit (including Hot Water Module) Check code Location Error detection Main Outdoor 7-segment display Description System status Check items (locations) condition(s) remote Check detection Sub-code controller code Indoor Indoor TC1 Stop of Sensor resistance is infinity • Check connection of TC1 unit sensor error corresponding unit...

Page 50 Indoor unit (including Hot Water Module) Check code Location Error detection Main Outdoor 7-segment display Description System status Check items (locations) condition(s) remote Check detection Sub-code controller code Outdoor All stop During compressor • Check installation of TE1 temperature operation in HEAT mode, and TL sensors.

Page 51 Indoor unit (including Hot Water Module) Check code Location Error detection Main Outdoor 7-segment display Description System status Check items (locations) condition(s) remote Check detection Sub-code controller code 01: Compressor IPDU Compressor All stop Overcurrent is detected • Check for defect in 1 side error (lockup) several seconds after...

Page 52 Indoor unit (including Hot Water Module) Check code Location Error detection Main Outdoor 7-segment display Description System status Check items (locations) condition(s) remote Check detection Sub-code controller code 01: TK1 sensor Error in All stop Sensor resistance is infinity • Check connection of TK1 error temperature or zero (open / short circuit).

Page 53 Indoor unit (including Hot Water Module) Check code Location Error detection Main Outdoor 7-segment display Description System status Check items (locations) condition(s) remote Check detection Sub-code controller code SMMS-i Oil level • Check for disconnection of TK1 All stop No temperature change is (4 series) detection detected by TK1 despite...

Page 54 Indoor unit (including Hot Water Module) Check code Location Error detection Main Outdoor 7-segment display Description System status Check items (locations) condition(s) remote Check detection Sub-code controller code TD3 sensor All stop Air discharge temperature • Check installation of TD3 miswiring (TD3) does not increase sensor.

Page 55 Indoor unit (including Hot Water Module) Check code Location Error detection Main Outdoor 7-segment display Description System status Check items (locations) condition(s) remote Check detection Sub-code controller code AI-NET Duplicated All stop There is duplication in • Check central control Indoor unit central control central control address...

Page 56 Indoor unit (including Hot Water Module) Check code Location Error detection Main Outdoor 7-segment display Description System status Check items (locations) condition(s) remote Check detection Sub-code controller code 01: Compressor IPDU Activation of All stop High-pressure SW is • Check connection of high- 1 side high-pressure activated.

Page 57 Indoor unit (including Hot Water Module) Check code Location Error detection Main Outdoor 7-segment display Description System status Check items (locations) condition(s) remote Check detection Sub-code controller code Indoor unit Indoor fan Stop of • Motor speed • Check connection of fan motor error corresponding unit measurements...

Page 58 Indoor unit (including Hot Water Module) Check code Location Error detection Main Outdoor 7-segment display Description System status Check items (locations) condition(s) remote Check detection Sub-code controller code Discharge • Check outdoor service All stop Discharge temperature temperature (TD3) exceeds 115 ˚C. valves (gas side, liquid TD3 error side) to confirm full opening.

Page 59 Indoor unit (including Hot Water Module) Check code Location Error detection Main Outdoor 7-segment display Description System status Check items (locations) condition(s) remote Check detection Sub-code controller code SMMS-i IPDU Outdoor fan All stop (Sub code: 0) • Check fan motor. (Series 4) IPDU error Fan IPDU over current...

Page 60 Errors detected by TCC-LINK central control device Indoor unit (including Hot Water Module) Check code Location Error detection Main Outdoor 7-segment display Description System status Check items (locations) condition(s) remote detection Sub-code controller TCC-LINK TCC-LINK Continued Central control device is •...

Page 61: Sensor Characteristics

8-5. Sensor characteristics Indoor unit Temperature sensor characteristics TC1sensor Temperature [˚C] Resistance [k] Resistance [k] Resistance [k] (10 ˚C or below) (10 ˚C or below) Temperature [˚C] Temperature [˚C] Resistance [k] TA(TWI), TF(TCJ2), TCJ and TC2(TWO) sensor Resistance [k] Resistance [k] (10 ˚C or below)

Page 62: Board Exchange Procedures

9. P.C. BOARD EXCHANGE PROCEDURES Hot water module Replacement of Hot water module P.C. boards Part code Model type P.C. board type 431-6V-529 MMW-AP 1LQ series MCC-1403 Points to note when replacing hot water module P.C. board assembly The electrically erasable programmable read-only memory (hereinafter EEPROM, IC10) mounted on a P.C. board holds important setting data, including the type and capacity codes intrinsic to the model (set at the factory), as well as the line / indoor (including hot water module) / group addresses, and the like (during installation, either automatically or manually).

Page 63 Procedure 1: reading setting data from EEPROM (Read the setting data from EEPROM, including both the factory settings and any modifications made to them on site.) Push the buttons simultaneously and hold for at least 4 seconds. (This number corresponds to the same number shown on the Remote Controller Operation Diagram.) * In the case of group control, the unit No.

Page 64 Procedure 2: replacing P.C. board Replace the faulty P.C. board with a service P.C. board. Be sure to replicate the old jumper setting (removal) on the service P.C. board. (See the diagram at below.) (MCC-1403) JP001 CN041 CN030 It is necessary to establish a one-to-one correspondence between the hot water module being serviced and the remote controller.

Page 65 Procedure 3: writing setting data in EEPROM (The EEPROM of the service P.C. board has been set to the factory default values.) Push the buttons simultaneously and hold for at least 4 seconds. (This number corresponds to the same number shown on the Remote Controller Operation Diagram.) (Under UNIT No., is displayed.)

Page 66 CODE No. list (Example) CODE No. (DN) Item Setting data Factory-set value Central control address 0099: Not determined Type Depending on model type Indoor unit capacity Depending on capacity type System address 0099: Not determined Indoor unit address 0099: Not determined Group address 0099: Not determined Power failure automatic recovery...

Page 67: Detachments

10. DETACHMENTS WARNING CAUTION Stop the air conditioner(including HWM) operation, Wear a pair of gloves. Otherwise, you will risk an injury and turn off the circuit breaker. involving a replacement part or some other object. No. Part to be replaced Work procedure Remarks Front panel...

Page 68 No. Part to be replaced Work procedure Remarks P.C. board 1. Detachment Card edge spacer (MCC-1520) 1) Carry out the detachment of item (Front panel). 2) Remove connectors which are connected from the control P.C.board to the other parts. CN01 ..White 6P CN02 ..

Page 69 No. Part to be replaced Work procedure Remarks Electrical control 1. Detachment Terminal block 1) Carry out the detachment of item (Front panel). Clamp 2) Remove connectors which are connected from the control P.C.board to the other parts and then remove wiring from the clamp.

Page 70 No. Part to be replaced Work procedure Remarks Flow switch 1. Detachment 1)

Close the water supply source valve. 2) Carry out the detachment of item (Electrical control box). Flow switch Flow switch 3) Slowly, turn the cap of flow switch completely and then lift the flow switch upward.

Page 71 No. Part to be replaced Work procedure Remarks Heat exchanger 1. Detachment assembly 1) Close the water supply source valve and the valve of water pipe connected to the unit, carry out the refrigerant recovery and then remove the refrigerant and water pipes.

Page 72 No. Part to be replaced Work procedure Remarks Heat exchanger CAUTION assembly (Continued) After the vacuuming is completed, carry out the following procedure before adding refrigerant. • Plate heat exchanger may explode because the water in the plate heat exchanger frozen. To avoid this phenomenon, add refrigerant before carrying out a water supply to the water pipe system of the Hot water module.

Page 73 No. Part to be replaced Work procedure Remarks Base and legs 1. Detachment 1) Carry out the detachment of item (Drain pan). 2) Remove the screws for the legs.(5x10, 8pcs.) Base Base Base 2. Attachment 1) Carry out installation by following the detachment procedure in reverse.

Page 74 No. Part to be replaced Work procedure Remarks Sensor 1. Detachment TCJ, TF(TCJ2) and 1) Carry out the detachment of item (Front panel). TA(TWI) 2) Remove connectors which are connected from the control P.C.board to the other parts and then remove wiring from the clamp.

Page 75: Exploded Diagram / Service Parts List

11. EXPLODED DIAGRAM / SERVICE PARTS LIST MMW-AP0271LQ-E, MMW-AP0561LQ-E MMW-AP0271LQ-TR, MMW-AP0561LQ-TR 218, 219, 220 No label 225, 226 215, 216, 217 No, 229, 230 are not included in No. 210, 211 213, 214 210, 211 212 No label 231, 232 10 pieces/pkg.

Page 76 4310A111 PANEL, FRONT 43172249 PAN, DRAIN 4310A110 BASE 4310A112 43197190 SCREW, SET M5 L10 37517876 MARK, TOSHIBA 4314J508 PIPE, ASSY, WATER HEAT EXCHANGER 4314J509 PIPE, ASSY, WATER HEAT EXCHANGER 4314N047 COIL, VALVE, 2WAY, FQ-G593 37551737 SWITCH, FLOW 37551735 SWITCH, FLOW...

Page 77 E-Parts Q fty/Set MMW- Location Part No. Description AP0271 AP0561 AP0271 AP0561 LQ-E LQ-E LQ-TR LQ-TR 43050425 SENSOR ASSY, SERVICE,TC(F6) 43150320 SENSOR ASSY, SERVICE,TG(F4) 43160626 TERMINAL BLOCK, 2P, 20A 43160561 TERMINAL,4P 43160548 TERMINAL,6P 43158187 TRANSFORMER, TT-13 4316V529 P.C.BOARD ASSY, MCC-1403 4316V247 P.C.BOARD ASSY, MCC-1520 –...

Page 78: Owner's Manual (Excerpt)

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Page 84: Installation Manual (Excerpt)

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This manual is also suitable for:

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