

SPECIFICATION

Title of the Invention

Outdoor Unit for a Split Type Air Conditioner

5 Technical Field

The present invention relates to an outdoor unit for a split type air conditioner.

Background Art

10 FIG. 3 shows an example of a conventional split type air conditioner.

An outdoor unit 1 is installed outside a room, and an indoor unit 2 is installed in the room. Then, with a service panel 7 being removed, a liquid refrigerant pipe 3a and gas refrigerant pipe 3b, which run from the indoor unit 2, are connected to operation valves 4a and 4b, respectively, and a control signal line 5 is connected to a terminal 6, by which the outdoor unit and indoor unit are connected to each other.

15 In the case where two indoor units 2 are connected to one outdoor unit 1, two liquid-side operation valves 4a to each of which the liquid refrigerant pipe 3a is connected and two gas-side operation valves 4b to each of which the gas refrigerant pipe 3b is connected are fixed to an attaching surface 9a of an operation valve bracket 9 with screws 10, as
20 shown in FIG. 2.
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In the aforementioned conventional air conditioner, when the liquid refrigerant pipe 3a and gas refrigerant pipe 3b are connected to or disconnected from the liquid-side operation valve 4a and gas-side operation valve 4b, respectively, an operation nut for each valve must be turned. However, since the attaching surface 9a of the operation valve bracket 9 is flat, the distance between the operation nut 4c and the attaching surface 9a is short, so that a closed wrench cannot be used.

Therefore, a monkey wrench or spanner has been used. However, since the turning angle thereof is small, much labor and time are required.

Disclosure of the Invention

The present invention was made to solve the above problem, and an object thereof is to provide an outdoor unit for a split type air conditioner, in which an operation valve bracket is provided and operation valves to each of which a refrigerant pipe running from an indoor unit is connected are installed on this operation valve bracket, characterized in that a recess for providing a clearance between the operation valve bracket and an operation nut for the operation valve is formed in the operation valve bracket.

The outdoor unit for a split type air conditioner is also characterized in that the recess is formed so as to have

dimensions such that at least a closed wrench can be inserted.

Brief Description of the Drawings

5 FIG. 1 shows an embodiment of the present invention; FIG. 1(A) is a front view of an operation valve bracket, and FIG. 1(B) is a sectional view taken along the line B-B of FIG. 1(A);

 FIG. 2 shows a conventional operation valve bracket; 10 FIG. 2(A) is a front view thereof, and FIG. 2(B) is a view taken in the direction of the arrows along the line B-B of FIG. 2(A); and

 FIG. 3 is a perspective view of a conventional split type air conditioner.

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Best Mode for Carrying Out the Invention

 An embodiment of the present invention is shown in FIG. 1. FIG. 1(A) is a front view of an operation valve bracket, and FIG. 1(B) is a sectional view taken along the line B-B of 20 FIG. 1(A).

 An operation valve bracket 9 is formed with recesses 20 for providing a clearance between the operation valve bracket 9 and an operation nut 4c at portions corresponding to the operation nut 4c for each liquid-side operation valve 4a and 25 gas-side operation valve 4b.

It is desirable that this recess 20 have dimensions such that at least a closed wrench can be inserted.

The configuration except for the recess 20 is the same as the conventional one shown in FIGS. 2 and 3. In FIG. 1, therefore, the same reference numerals are applied to the same elements as those shown in FIGS. 2 and 3, and the explanation of these elements is omitted.

When a liquid refrigerant pipe 3a and gas refrigerant pipe 3b are connected to or disconnected from the liquid-side operation valve 4a and gas-side operation valve 4b, respectively, an operation nut 4c can be turned by inserting a closed wrench, monkey wrench, spanner, or the like in the recess 20.

At this time, since the clearance between the operation nut 4c and the bottom surface of the recess 20 is large, a closed wrench can be used. Also, when a monkey wrench or spanner is used, the turning angle can be made large, so that the operation nut 4c can be turned easily and rapidly.

Industrial Applicability

According to the present invention, since the recess for providing a clearance between the operation valve bracket and the operation nut for operation valve is formed in the operation valve bracket, in the case where the refrigerant pipe running from the indoor unit is connected to or

disconnected from the operation valve, when a monkey wrench or spanner is used, the turning angle thereof can be made large, so that the operation nut can be turned easily and rapidly.

- 5 If the recess is formed so as to have dimensions such that at least a closed wrench can be used, the operation nut can be turned by using a closed wrench.

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CLAIMS

1. An outdoor unit for a split type air conditioner, in which an operation valve bracket is provided and operation valves to each of which a refrigerant pipe running from an indoor unit is connected are installed on said operation valve bracket, characterized in that

a recess for providing a clearance between said operation valve bracket and an operation nut for said operation valve is formed in said operation valve bracket.

2. An outdoor unit for a split type air conditioner according to claim 1, wherein said recess is formed so as to have dimensions such that at least a closed wrench can be inserted.

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ABSTRACT

In an outdoor unit for a split type air conditioner in which an operation valve bracket 9 is provided with operation valves 4a and 4b to each of which a refrigerant pipe running from an indoor unit is connected, when the refrigerant pipe is connected to or disconnected from the operation valve 4a, 4b, the work can be performed easily and rapidly.

A recess 20 for providing a clearance between the operation valve bracket 9 and an operation nut 4c for the operation valve 4a, 4b is formed in the operation valve bracket 9.

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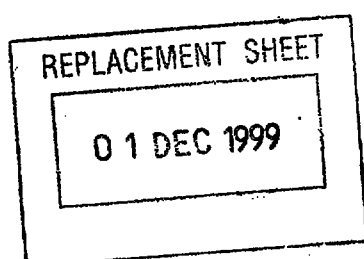
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**CLAIMS**

1. An outdoor unit for a split type air conditioner, in which an operation valve bracket is provided and operation valves to each of which a refrigerant pipe running from an indoor unit is connected are installed on said operation valve bracket, characterized in that

a recess for providing a clearance between said operation valve bracket and an operation nut for said operation valve is formed in said operation valve bracket, said recess being adjacent to operation nut and the horizontal plane of said recess is at substantially right angle to the vertical plane of operation nut.

2. An outdoor unit for a split type air conditioner according to claim 1, wherein said recess is formed so as to have dimensions such that at least the front of a closed wrench can be inserted into said recess to allow for turning of said closed wrench.

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REPLACEMENT SHEET

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CLAIMS

1. An outdoor unit for a split type air conditioner, in which an operation valve bracket is provided and operation valves to each of which a refrigerant pipe running from an indoor unit is connected are installed on said operation valve bracket, characterized in that

a recess for providing a clearance between said operation valve bracket and an operation nut for said operation valve is formed in said operation valve bracket, said recess being adjacent to operation nut and the horizontal plane of said recess is at substantially right angle to the vertical plane of operation nut.

2. An outdoor unit for a split type air conditioner according to claim 1, wherein said recess is formed so as to have dimensions such that at least the front of a closed wrench can be inserted into said recess to allow for turning of said closed wrench.

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