

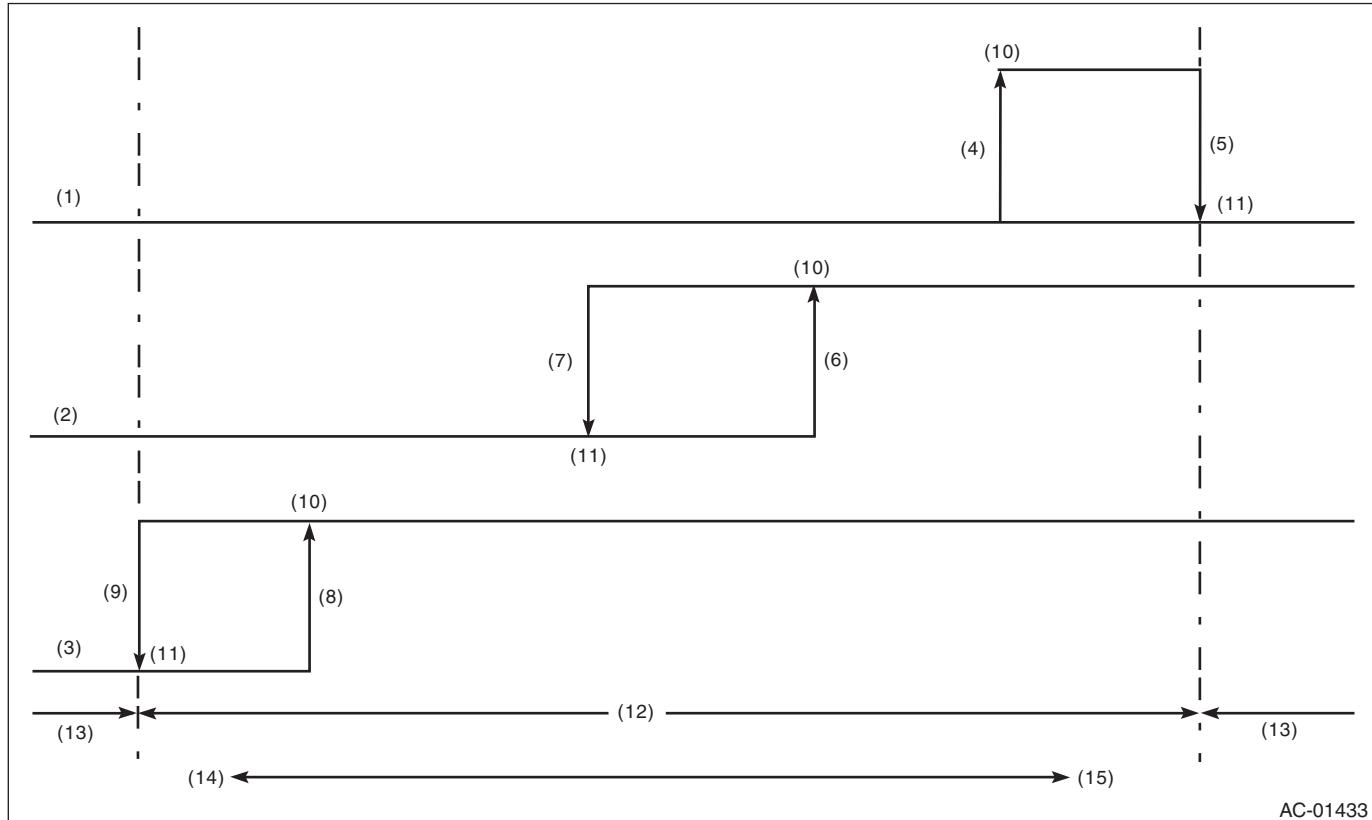
Pressure Switch (Triple Pressure Switch)

HVAC SYSTEM (HEATER, VENTILATOR AND A/C)

20. Pressure Switch (Triple Pressure Switch)

A: INSPECTION

- 1) Connect the manifold gauge to the service valve on the high-pressure side.
- 2) Start the air conditioner, and check the operating pressure of switch by turning the compressor (magnet clutch) to ON/OFF. Operation of each switch is as follows.



(1) High pressure switch	(6) $1,770 \pm 80 \text{ kPa}$ ($18 \pm 1 \text{ kg/cm}^2$, $256 \pm 14 \text{ psi}$)	(11) OFF
(2) Middle pressure switch	(7) $1,370 \pm 120 \text{ kPa}$ ($14 \pm 1 \text{ kg/cm}^2$, $199 \pm 14 \text{ psi}$)	(12) Operative range of compressor
(3) Low pressure switch	(8) $225^{+25}_{-29} \text{ kPa}$ ($2.29^{+0.25}_{-0.30} \text{ kg/cm}^2$, $32.6^{+3.6}_{-4.2} \text{ psi}$)	(13) Range that compressor does not operate
(4) $2,550 \pm 200 \text{ kPa}$ ($26.00 \pm 2.04 \text{ kg/cm}^2$, $369.8 \pm 29.0 \text{ psi}$)	(9) $196 \pm 20 \text{ kPa}$ ($2.00 \pm 0.20 \text{ kg/cm}^2$, $28.4 \pm 2.9 \text{ psi}$)	(14) Low pressure
(5) $3,140^{+50}_{-200} \text{ kPa}$ ($32.02^{+0.51}_{-2.04} \text{ kg/cm}^2$, $455.4^{+7.25}_{-29.0} \text{ psi}$)	(10) ON	(15) High pressure

NOTE:

- High pressure switch turns the compressor (magnet clutch) to OFF when the refrigerant pressure becomes extremely high to prevent the evaporator, air conditioner piping and expansion valve from getting damaged or frozen.
- Middle pressure switch effectively controls the radiator fan output by judging high load/low load in normal pressure range.
- If the refrigerant pressure is abnormally low, the low pressure switch determines that there is insufficient refrigerant, and turns the compressor (magnet clutch) OFF since there is a possibility that the compressor will seize if it is continued to run.