

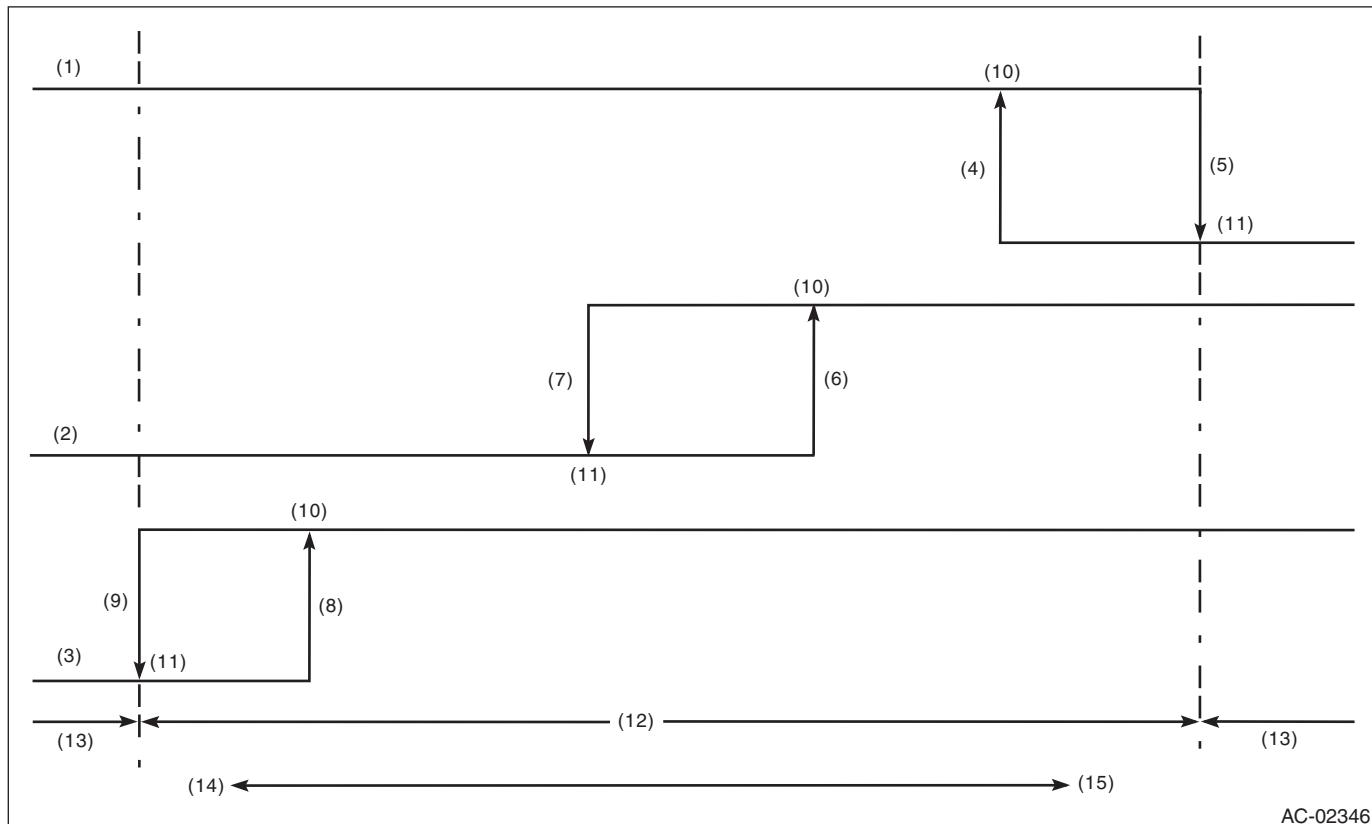
# Pressure Switch (Triple Pressure Switch)

HVAC SYSTEM (HEATER, VENTILATOR AND A/C)

## 21. Pressure Switch (Triple Pressure Switch)

### A: INSPECTION

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



(1) High pressure switch	(6) $1,770 \pm 100$ kPa ( $18.05 \pm 1.02$ kg/cm $^2$ , $256.65 \pm 14.5$ psi)	(11) OFF
(2) Middle pressure switch	(7) $1,470 \pm 120$ kPa ( $14.99 \pm 1.22$ kg/cm $^2$ , $213.15 \pm 17.4$ psi)	(12) Operative range of compressor assembly
(3) Low pressure switch	(8) $225 \pm 30$ kPa ( $2.29 \pm 0.31$ kg/cm $^2$ , $32.6 \pm 4.3$ psi)	(13) Inoperative range of compressor assembly
(4) $2,350 \pm 200$ kPa ( $24.00 \pm 2.04$ kg/cm $^2$ , $340.7 \pm 29.0$ psi)	(9) $196 \pm 25$ kPa ( $2.00 \pm 0.25$ kg/cm $^2$ , $28.4 \pm 3.6$ psi)	(14) Low pressure
(5) $2940 \pm 200$ kPa ( $29.98 \pm 2.04$ kg/cm $^2$ , $426.3 \pm 29.0$ psi)	(10) ON	(15) High pressure

#### NOTE:

- High pressure switch turns the compressor assembly (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, etc.
- The middle pressure switch is used to effectively control the radiator fan output by judging high load/low load in normal pressure range.
- The low pressure switch detects a refrigerant shortage and deactivates the compressor assembly (magnet clutch) if the refrigerant pressure is abnormally low. (Because any further compressor assembly operation in such a state may lead to compressor seizure)