

AIR COMPRESSOR, 185

WARNING!!

- Machine should be parked horizontally.
- Before disconnecting pipes and hoses of the compressed air supply from the machine, be sure to release the internal residue pressure.
- Wear helmet, safety glasses, earplugs, safety shoes, safety gloves and a mask according to the requirements of each operation.

2.7.1 Procedure to Start the Unit

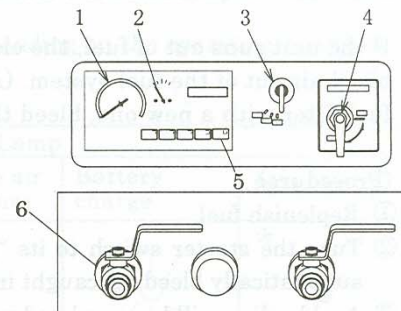
IMPORTANT

— Be sure to warm-up —

- Be sure to let unit warm-up after starting for smooth operation of the engine and the compressor. Do not operate the engine at full load immediately after it starts up. This will shorten the equipment life.
- During the warm-up operation, examine the different parts of the equipment for any looseness, leakage of water, oil, fuel, and other irregularities.
- Also, make sure that warning lamps are off.

(Procedure)

- ① Close fully service valves “6” .
- ② Set the starting unloader valve “4” to “START” position.
- ③ Turn the starter switch “3” to “RUN” position, and the preheating lamp goes on.
- ④ As soon as the preheating lamp “5” has gone out, turn the starter switch “3” fully clockwise to start up the engine. Hold the starter switch “3” at the “START” position till the oil pressure lamp will be off.
- ⑤ Once the engine has started up, leave it running to warm-up for five minutes. The discharge air pressure in this condition ranges from 57 to 100 psi (3.9 to 6.9 bar).
- ⑥ After warm-up of the unit, put the starting unloader valve “4” back to its “RUN” position, and open the service valve “6” . The unit is now ready to operate.



- Be sure to turn the starting unloader valve “4” to “RUN” position prior to work. The discharge pressure does not increase as long as the starting unloader valve “4” stays at “START” position.

2. Operation

2.7.2 Operating Procedures when Engine Fails to Start up on First Attempt

- When the engine fails to start up even after performing the startup procedures ① to ④, do not keep the starter running, but set the starter switch back to "STOP" and wait about 30 seconds. Then, repeat the startup procedure once again.
- If the repeated procedure does not allow the engine to run, the following causes are suspected. Check the following:
 - No fuel
 - Clogging of fuel filter
 - Clogging of filter inside the fuel air bleeding electromagnetic pump
 - Discharge of battery (Low cranking speed)

2.7.3 EFPA (Electrical Fuel Primer and Air Bleed)

If the unit runs out of fuel, the electromagnetic pump attached to the unit will automatically bleed air out of the fuel system. (After draining sediment from water sedimentor or changing fuel filter with a new one, bleed the air in the same procedure as below.)

(Procedure)

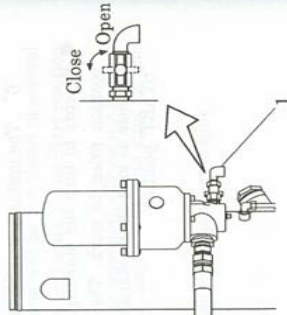
- ① Replenish fuel.
- ② Turn the starter switch to its "RUN" position. The electromagnetic pump starts pumping and automatically bleed air caught in the fuel pipes.
- ③ Air-bleeding will be completed within 40 to 50 seconds.

2.7.4 Operation under Cold Weather Conditions

When it is difficult to start engine in cold weather, take the following measures.

(Procedure)

- ① Close all the service valves and fully open the relief valve "1" provided at the front of the separator receiver tank.
- ② When engine starts after performing the startup procedure, gradually close the relief valve, watching the rise of engine revolutions. Then after closing the valve fully, perform warming-up operation in this state.



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IMPORTANT

- Use SAE10W-30 (CD class) for the engine oil.
 - Use LLC (antifreeze). Use correct amount to provide freeze protection, according to the ambient temperature.
 - Battery should always be kept fully charged.
- Operation under Cold Weather Conditions below 23°F (-5°C) —

2.7.5 Gauge Indication while Operating

IMPORTANT

- Minimum discharge air pressure is 73 psi (5.1 bar) during operation.
- Continuing equipment operation at a lower pressure than the above pressure may cause overheating, since it affects the separation of lubricating oil inside the oil separator and reduces the oil flow to the compressor air-end, resulting in temperature rise.
- Be sure to check at times to see if gauges or each component of the unit are properly working, or if there is any air-leak, oil-leak, water-leak or fuel-leak etc.
- During normal operation, each indication of instruments is shown in the table below. Refer to the table for daily checks.
- The table gives standard values. They may vary slightly depending on the operating conditions and other factors.

	Warning Lamp			
	Engine oil pressure	Coolant temperature	Discharge air temperature	Battery charge
Before Start up	☀ On	● Off	● Off	☀ On
In Operation	☀ On	● Off	● Off	☀ On

Note: The lamp marked with asterisk * goes out when preheating is completed.

	Discharge air pressure gauge
Unload	102 - 128 psi (7.1 - 9 bar)
Full load	73 - 100 psi (5.1 - 6.9 bar)

2.8 Stopping Procedures

- ① Close the service valve completely and operate the machine about 5 minutes, until it cools down.
 - ② Turn the starter switch to "STOP" position to stop the engine.
 - ③ Remove the key from the compressor every time when you stop the engine.
- Unless all the service valves are fully closed upon stopping operation, the compressed air will be sent in reverse direction in the hoses (pipes) connected to air tools and relieved to atmosphere continuously through the auto-relief valve. Further, when re-starting operation next time, compressed air will be jetted out through service valves.