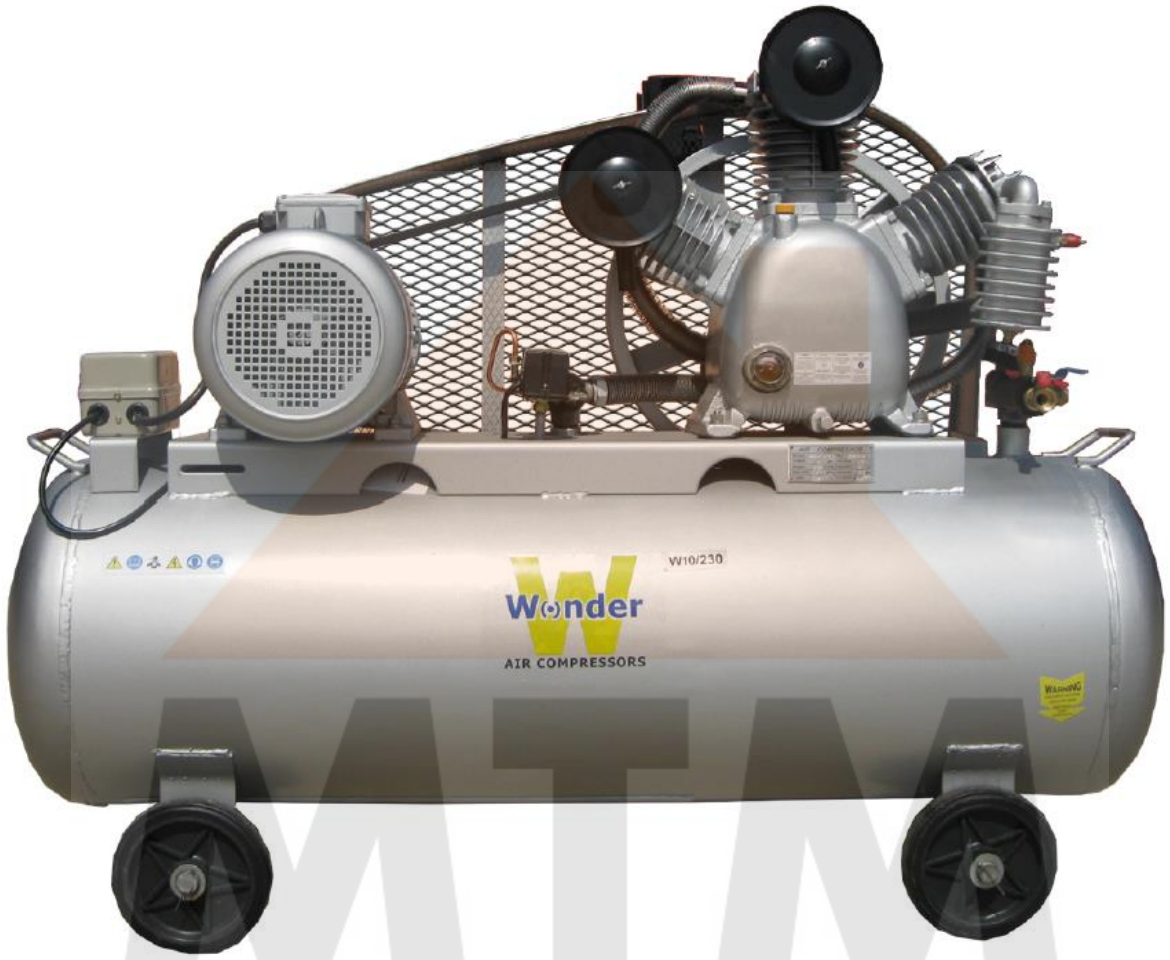
AIR COMPRESSOR

OPERATION MANUAL



BEFORE OPERATION, PLEASE BE FAMILIAR WITH THE OPERATION MANUAL FIRST

CONTENT

1 SAFETY GUIDELINES

DANGER – AN IMMEDIATE HAZARD THAT WILL CAUSE SERIOUS INJURY OR LOSS OF LIFE.

1. **TO REDUCE THE RISK OF FIRE OR EXPLOSION, NEVER SPRAY FLAMMABLE LIQUIDS IN A CONFINED AREA**. It is normal for the motor and pressure switch to produce sparks while operating. If sparks come into contact with vapours from gasoline or other solvents, they, may ignite, causing a fire or explosion. Always operate the compressor in a well-ventilated area. Do not smoke while spraying. Do not spray where sparks or flame are present. Keep compressor as far from spray area as possible.
2. The solvents Trichloroethane and Methylene Chloride can chemically react with aluminium used paint spray guns, paint pump etc, and cause an explosion. If you are using these solvents, use only stainless-steel spray equipment. This does not affect your air compressor, but may affect the equipment being used.
3. Never directly inhale the compressed air produced by a compressor. It is not suitable for breathing purposes.

WARNING – A POTENTIAL HAZARD THAT COULD CAUSE SERIOUS INJURY OR LOSS OF LIFE

1. Do not weld on the air tank of this compressor. Welding on the air compressor tank strength and cause an extremely hazardous condition. Welding on the tank in any manner will void the warranty.
2. Never use an electric air compressor outdoors when it is raining or on a wet surface, as it may cause an electric shock.

3. This unit starts automatically. ALWAYS shut off the compressor, remove the plug from the outlet, and bleed all pressure from the system before servicing the compressor, and when the compressor is not in use.
4. Check the manufacturer's maximum pressure rating for air tools and accessories. Compressor outlet pressure must be regulated as to never exceed the maximum pressure rating of the tool.
5. High temperatures and moving parts are present under the shroud. To prevent burns or other injuries. DO NOT operate with the shroud removed. Allow the compressor components to cool down before handling or servicing.
6. Be certain to read all labels when you are spraying paints or toxic materials, and follow the safety instructions. Use a respirator mask if there is a chance of inhaling anything you are spraying. Read all instructions and be sure that your respirator mask will protect you.
7. Always wear safety goggles or glasses when using an air compressor. Never point any nozzle or sprayer towards a person or any part of the body.
8. Do no adjust the pressure switch or relief valve for any reason. Doing so will void all warranties as they have been pre-set at the factory for the maximum pressure.

CAUTION – A POTENTIAL HAZARD THAT MAY CAUSE MODERATE INJURY OR DAMAGE TO EQUIPMENT

1. Drain the moisture from the tank daily. A clean/dry tank will help prevent corrosion.
2. Pull the pressure relief valve ring daily to ensure that the valve is functioning properly, and to clear the valve of any possible obstructions.
3. To provide proper ventilation for cooling, the compressor must be kept to a minimum of 31cm (12 inches) from the nearest wall in a well-ventilated area.
4. Fasten the compressor down securely if transporting is necessary. Pressure must be released from the tank before transporting.
5. Protect the air hose and electric cord from damage and puncture. Inspect them weekly for weak or worn spots and replace if necessary.

2 PREPARATION AND STARTING

1. The place to set the compressor should be clean, dry and ventilated.
2. Keep the operating voltage within ± 5% of the rated voltage.
3. Keep the oil level in the red circle leveller.
4. Recommended compressor oil must be SAE30 or L – DAB100 when the indoor temperature is over 10°C and use SAE10 or L-DAB68 below 10°C.
5. Open the outlet valve, set the pressure switch to into the ON position, and let the compressor run 10 minutes with no load to ensure the moving parts are lubricated before regular service.
6. Check the tension of V-belt. It is recommended that the belt can be depressed down 10 ~ 15mm by hand in the middle of the belt.

3 OPERATION AND ADJUSTMENT

The compressor is controlled by a pressure switch when operating. It can be stopped automatically as pressure increases to the maximum. It will also restart when pressure decreases to the minimum meter. This adjusts the rated pressure when produced. Don't change it carelessly. As soon as the motor is switched off, the compressed air in the discharge pipe should be released through the release valve by moving the switch. This is the necessary requirement for restarting the motor, otherwise it can damage the motor. The rated pressure can be adjusted by turning the adjusting bolt of the switch (Fig 1 or Fig 2)

Fig 1.

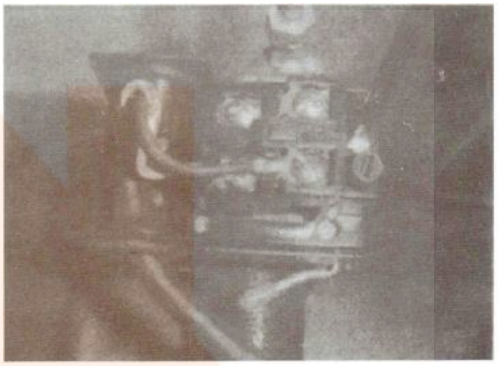


Fig 2.

4 CAUTION

1. Never unscrew any connecting parts when the tank is in a pressurised condition.
2. Never disassemble any electrical parts before connecting the plug.
3. Never adjust the safety valve carelessly.
4. Never use the compressor in place where the voltage is too low or too high.
5. Never use an electric wire less than 4mm² and more than 5m in length.
6. Never disconnect the plug to stop the compressor, set switch to OFF position instead.
7. If the release valve doesn't work as the motor stops, find the cause immediately to prevent any chances of damaging the motor
8. Lubricating oil must be clean. Oil level should be kept in the red circle of leveller.
9. Disconnect the plug to cut off power supply after usage.

5 MAINTENANCE

1. Clean the crankcase and renew lubricating oil after the first 20 operating hours.
2. Check the oil level after every 20 working hours and replenish when necessary.
3. Open the drain cock under the tank to exhaust condensate after every 60 operating hours.
4. Clean the crankcase and renew the oil, clean air filter, and check safety valve and pressure gauge after every 120 operating hours.

6 TROUBLES AND REMEDIES

Trouble	Possible Causes	Remedies
1. Motor is unable to run, running too slow, or getting too hot	1) Fault line, or insufficient voltage. 2) Power wire too thin or too long. 3) Fault in pressure switch. 4) Fault in motor. 5) Sticking within the main compressor	1) Check the line. 2) Replace the wire. 3) Repair or replace the pressure switch. 4) Repair or replace the motor. 5) Check and repair the main compressor.
2. Sticking within the bare compressor	1) Moving parts burnt due to insufficient oil. 2) Moving parts damaged or foreign body stuck inside.	Check the crankshaft, bearing, connecting rod, piston, piston ring and any other moving parts. Replace if necessary.
3. Excessive shaking or abnormal noise	1) Connecting components loosed. 2) Foreign body got into the main compressor. 3) Piston knocking valve seat. 4) Moving part seriously worn.	1) Check and retighten affect components. 2) Check and clean away the foreign body. 3) Replace with thicker paper gasket. 4) Repair or replace if necessary.
4. Pressure insufficient or discharge capacity decreased	1) Motor running too slow. 2) V-belt excessive slack or strained with greasy dirt. 3) Air filter choked up. 4) Leakage of safety valve. 5) Leakage of discharge pipe. 6) Sealing gasket damaged. 7) Valve plate damaged, carbon build-up or stuck. 8) Piston ring and cylinder worn or damaged.	1) Check and do remedy 1. 2) Adjust and/or clean the V-belt. 3) Clean or replace the cartridge. 4) Check and adjust the valve. 5) Check and repair the pipe. 6) Check and replace sealing gasket. 7) Replace and clean valve plate. 8) Repair or replace the piston ring and cylinder.
5. Excessive oil consumption	1) Oil level too high. 2) Breath pipe choked up. 3) Piston ring and cylinder worn or damaged.	1) Keep the level within set range. 2) Check and clean the pipe. 3) Repair or replace the piston ring and cylinder

7 AIR COMPRESSOR TECHNICAL SPECIFICALTIONS

AIR COMPRESSOR			
Power	10HP	**Voltage**	415 V
Speed	860 RPM	**Frequency**	50 Hz
Air Delivery	900 L/min (31.7 cfm)	**Pressure**	12.5 Bar (181 psi)
Tank	230 L	**Cylinder (L x H x T)**	90 x 265 x 1 Ø

8 MAIN COMPRESSOR PARTS LIST

No.	Designation	Qty.	No.	Designation	Qty.
1	Fan Pulley	1	**25**	Valve clack	4
2	Bolt	4	**26**	Spring clack	4
3	Spring washer	13	**27**	Cylinder head gasket	2
4	Washer	4	**28**	Wing nut	2
5	Bearing	1	**29**	Spring washer	2
6	Bearing gasket	1	**30**	Air filter	2
7	Oil Seal	1	**31**	Spring washer	8
8	Bearing	1	**32**	Socket cap screw	8
9	Crankshaft	1	**33**	Cylinder head	2
10	Bearing	1	**34**	Nut	1
11	Crankcase	1	**35**	Nut	8
12	Oil drain plug	1	**36**	Stud	8
13	Oil leveller	1	**37**	Piston ring I	2
14	Oil leveller washer	1	**38**	Piston ring II	2
15	Connecting rod	2	**39**	Oil scraper ring	2
16	Piston	2	**40**	Breath pipe	1
17	Piston pin	2	**41**	Breath pipe washer	1
18	Piston pin circlip	4	**42**	Shaft end washer	1
19	Cylinder gasket	2	**43**	Bolt	1
20	Cylinder	2	**44**	Right-angle connector	1
21	Valve gasket	2	**45**	Radiator tube assembly	1
22	Lower valve plate	2	**46**	Right-angle tee	1
23	Valve inner gasket	2	**47**	Bearing seat gasket	1
24	Upper valve plate	2	**48**	Bearing seat	1

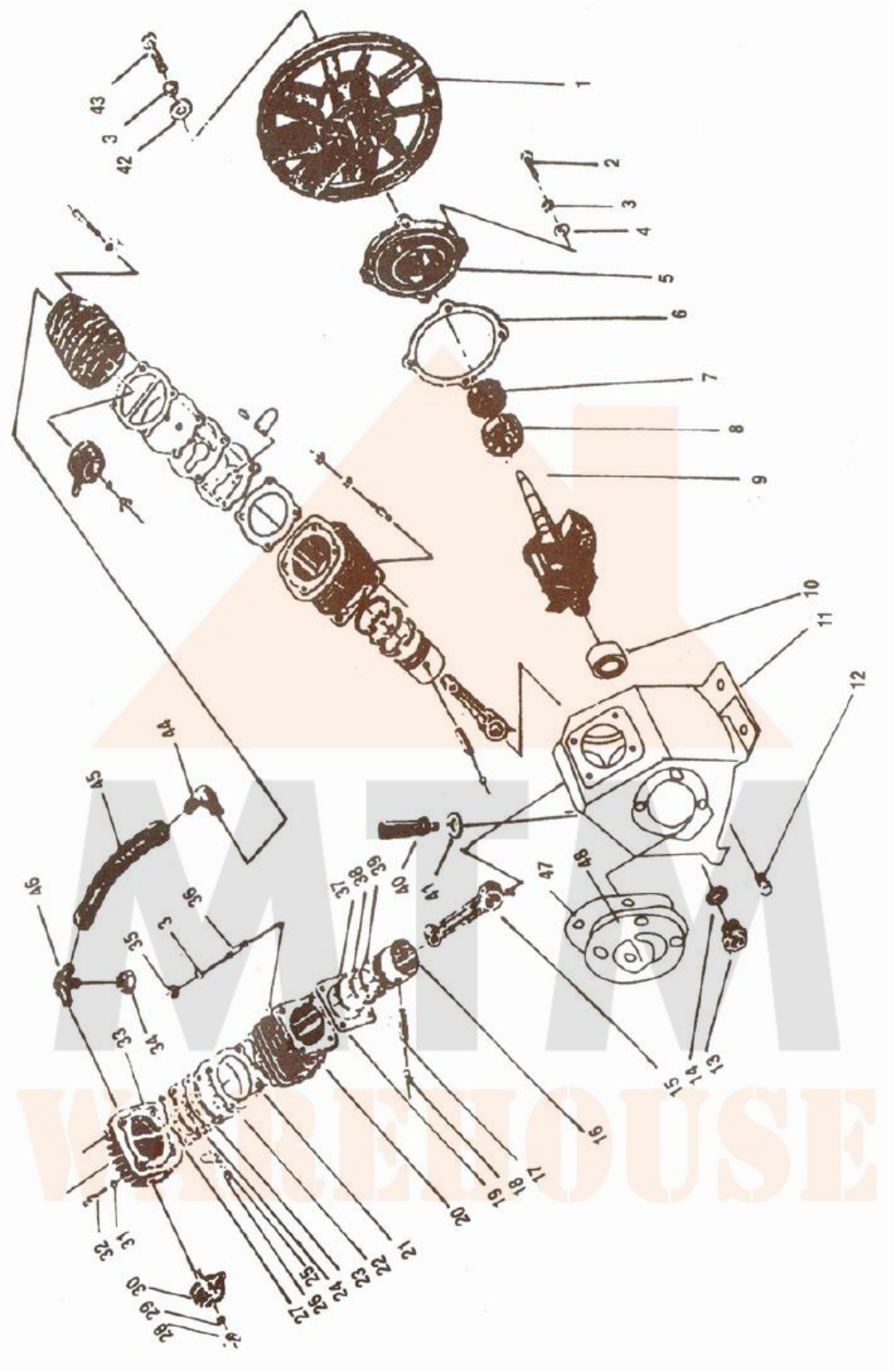


Fig 3. Bare-Compressor

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