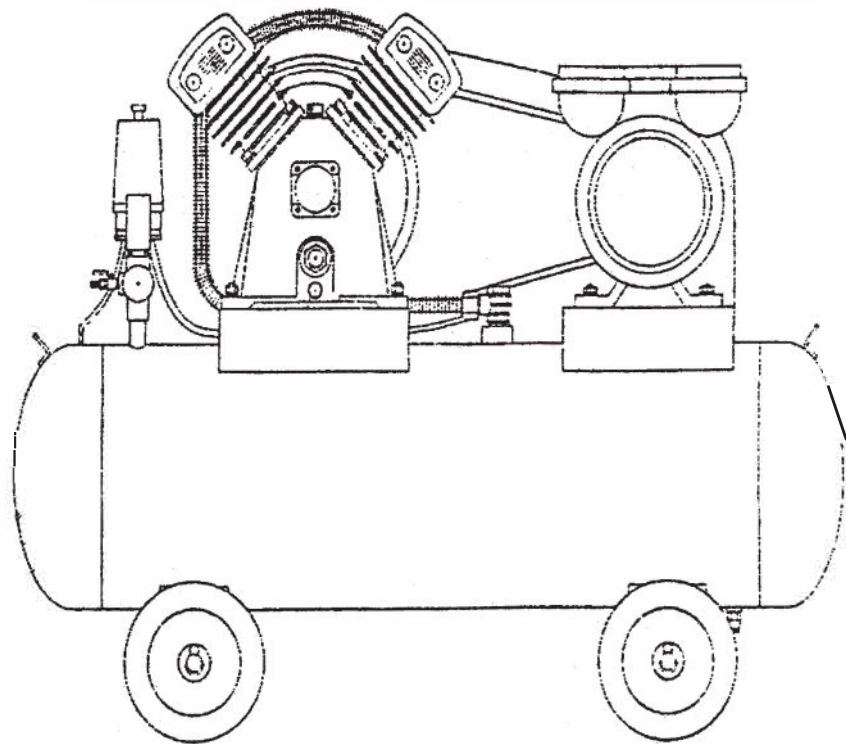


INSTRUCTION MANUAL FOR AIR COMPRESSORS



Air Compressor is very popular in every country of the world. You can find its footprints anywhere. With your care-taking, we believe, that will help you with your business ever prosperous is definitely beyond doubt.

Advantages of Air Compressor:

This serial product is the crystallization through gathering the practical, years' experiences of the technologists who have engaged in making, assembling, developing, designing, and post-servicing and maintaining of the air compressors. They have got hold of the most important points of the compressor and have used modern thermodynamic theory and fluid mechanic analysis to make out this delicate offer. The serial products have made a long-time-running test. It has been proved their unique quality can be saved by using this compressor.

Structural Features of Air Compressor:

1. Using a special discharging system coupled with Sweden-made ASSAB alloy valves, the best flow-rate is designed, almost 10-30% of capacity efficiency is increased. The air ventilating area is greatly enlarged. With more smooth operation, noises are greatly decreased, while heat radiation becomes much better.
2. The crankshaft and all revolving parts are made of wrought steel through heat treatment and fine grinding. Owing to their high strength, best balance, least vibration, all parts are durable.
3. The cylinder head and the main cast parts are made of first rate cast iron (FC-25) coupled with fine processing. fastened with four screws, never has gas or oil leakage, the highest compression rate can be obtained.
4. All types of fastening and angle are designed under the best steady consideration and are kept above the oil level,

besides, the discharge muzzle of the crankcase being design-crooked can never have leakage.

5. The design of the air tank being on ASME V DIV-1, is absolutely safe and reliable.
6. The piston is specially heat-treated and processed. The piston piston pins have been worked with carbon treatment.
7. The compression ring and oil control ring of the piston
8. The specially designed filtering silencer, being very effective in filtering ability, is very quiet during working.
9. Will forever meet any technical demands of the customers, running on the solid ground, pursuing high quality and low price as its object, and will guarantee rapid delivery and best post service.

Viewing to the advantages of the Air Compressor mentioned above, choose Air Compressor to create biggest fortune for you will be your most wise decision!

INSTRUCTION MANUAL

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1. Preface.

Your expected Air Compressor has been delivered to you. Perhaps you have already got acquainted with it. However, for it forever does you good service, under a good condition, please spare a little time and read over the instruction manual written through years experience. If you can observe what is said on each paragraph, the Air Compressor will serve you forever and create you a big fortune.

2. Check up the machine as you received it.

1. Whether it is the right type and specification as those You have ordered.
2. Base on the stock list attached to the machine, check to See whether the accessories are complete.
3. Whether there is damage made of any screw loosen during Shipping. If there is any of the above case happened, Please contacts the seller, who will give a satisfactory solution.

3. Air Compressor & motor installation and preparation

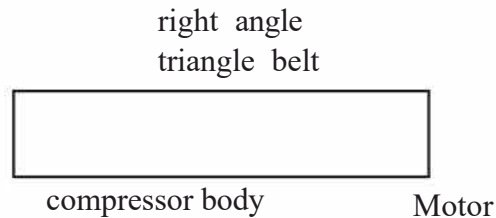
Air Compressor installation-site selection:

1. The place which is not humid, little of dust and dirt, with clean air and good ventilation will be suitable and the life of the machine will last longer with increased efficiency.
2. The place is full of light, easy for oiling.
3. The place is easy doing for removing or checking the machine. The machine must be able to be placed as level as possible. The machine must be able to be placed as level as possible. The belt side should be on the wall side, but not too close as to affect the function of the fan. (space above 30cm should be kept).

Motor installation:

1. If you buy the motor yourself, please buy one that has the same horse power (HP) as that the compressor uses.

- Following the main points as shown in the diagram, install the triangle belt:



- Adjust the tightness of the belt to a suitable condition. The method is to press down the belt at the middle between the two wheels to 10-15mm as is shown in the following figure:

○ : 6 : ○ ! S mm

Because (1) if the belt is too tight, loading will increase, the motor jigs easily getting heated and consume more electricity, while the belt will be easily broken as the belt strains too much, (2) if the triangle belt is too loose, it slips easily and generates high temperature which breaks the belt and makes revolving number unsteady,

Oiling

- Generally speaking, the lubricants used in the compressor having high oiliness, comprising of antioxidant, not apt to be thickening or foaming, low carbon remnant and high sparking points, would be more ideal. Their kinds are generally include:
 - Kuo juang special class revolving lub oil R68, R44, & R47 of

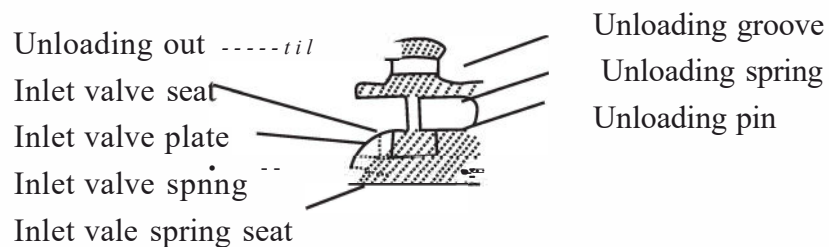
- China petroleum Corp
- Teressa 52 and 65 or Esstic 55 or 56 of American standard oil (ESSO).
 - D.T.E Oil 103 or 105 of MEIFG Company (Mobil). For compressor with small hp can use SAE 30 lub for its substitution. But those with medium large hp, the above revolving oil or oil with the same class is preferred,
- Please keep the oil level in the red area on the oil gage. if oil kips used too much, it will be not only waste much lub oil, but also allow carbon to stick to the valve easily if oil is used too little, it will be burned or worn out easily for poor lubrication, so, the oil level should always keep in the red area.
 - When oil becomes dark or polluted (using after some 500hours), replace it.
 - When replacing oil first open the oil draining plug under crankcase, using a piece of cardboard or other utensil to guide out the polluted oil, inclining the compressor forward until all the polluted oil is let out. Replace the oil plug tightly (it is better to apply some stoppage glue or stoppage paste on the teeth of the oil plug to avoid oil leaking). Open the oiling cover and fill in new oil until it reaches in the middle of the red circular area.
 - Please don't fill new oil when the machine is running,
 - Forbid to use thick lub jkoil or wasted oil.
- #### 4 Notices taken in operation
- Check every part of the bolts and nuts to see whether they are loosen
 - Check to see whether the pipe lines are normal.
 - Check to see whether the pipe lines are normal.
 - Check to see whether electric wires and electric switches are

In accordance with the prescribed rules and the wire connections are correct.

5 Check to see whether each of the wheel foot support is packed firmly or level.

6 Check to see whether the belt pulley of the compressor can be easily turned by hand.

7 Before start, if there is compressed air in the tank, for preventing the motor from over loading and burnt out, in model 1/4HP, the center knob of the cylinder is first turned to the place in the groove, so that it starts without loading. Then lift upon the cotter knob and turn to place it on the upper edge of the groove and enter into the normal operation, as in fig A:



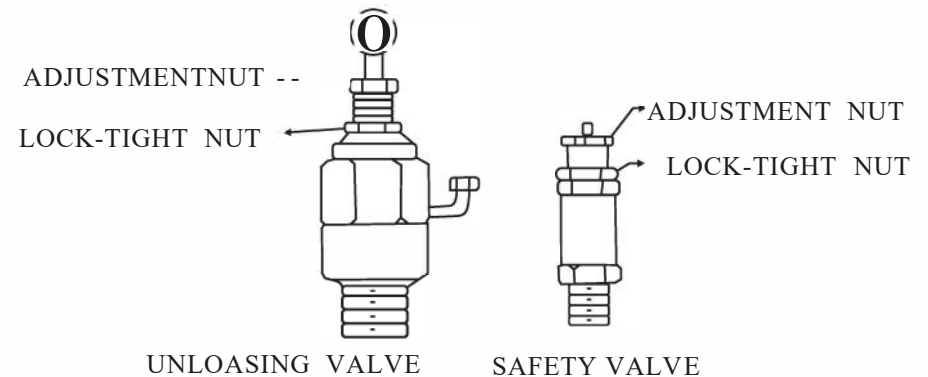
For the semi-auto 1/2HP, first lift up the auto unloading valve handle ring to let it start without loading, then put down the handle ring and enter into the normal compression operation,

8. Check the revolving direction and see whether it is the same as the arrow head indicated, if not, in 3-phase motor, please cross-change any two of the three power wires will be OK
9. The air cleaner should be checked to see whether there is dirt that stuck to it, the cleaning cotton should be often taken off and cleaned (with gasoline) or replaced in order to keep good, air cleaning effect.

10. Each day after the air compressor is used, the water draining Valve should be turned open to let out the coagulated water vapor and greasy filth to full clean,
11. The cylinder head of the compressor and the copper tube will become hot for air compressors, temperature runs high This is nothing abnormal.
12. When the compressor is running, the electric power goes off the middle way, or after operation, remember shut off the power supply to assure safety.

5. Safety valve and auto unloading valve adjustment

1. When raising operating pressure is desired, please turn left loose the number (1) lock-tight nut first, then turn right tight (2) the pressure adjustment nut, the pressure will rise high, after a desired pressure is reached, fix the lock-tight nut
2. When lower operating pressure is desired, turn left loose (1) The lock-tight nut and (2) the pressure adjustment nut, the pressure will drop low, till the desired pressure is reached, then turn right tight (1) the lock tight nut

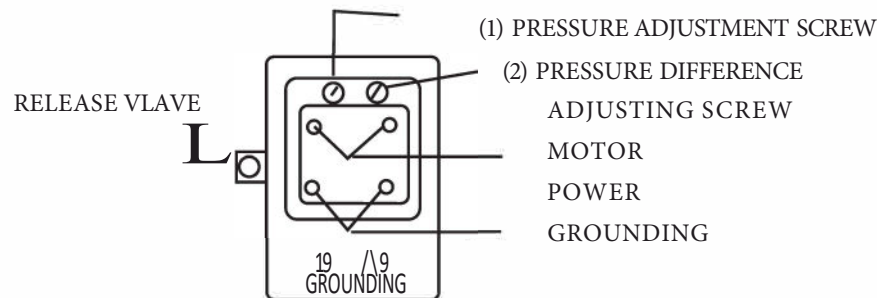


3. Except 1/4HP Model adjusts operating pressure by using a safety valve, the acting pressure on the safety valve of other type must

be higher than the acting pressure of the checking pressure system from 1-2kg/cm².

6 pressure adjustment method of the auto pressure adjustment cock

- 1 Pressure up-down adjustment: tum (1) the pressure-adjustment screw right, the pressure will raise up., On the contrary, the pressure will drop down, but the pressure difference does not change.
- 2 Pressure difference adjustment: Tum (2) the pressure difference adjusting screw right, the pressure difference width, which shuts off the electricity, will be increased on the contrary, tum it left, the width decreases.



3 When the compressor is running to a set pressure, the saturation draining valve will let off the gas from within the tube. This is a normal condition, not a leakage,

4 If a 3-phase power supply is used, pick any of the three wires to connect with the motor

5 The adjusting screws (1) and (2) have related to each other, please adjust them accordingly.

7 Trouble and trouble-shooting

The compressor being able to revolve.

- 1 The revolving direction is not right-motor with wrong wiring-correct wiring

- The operating pressure is too high-lower the pressure
- The inlet tube is too small & too long-change a larger and shorter one
- The air cleaner or the valve being blocked by accumulated carbon-remove it and clean up.
- The valve assembly being broken jot incorrectly positioned
- send it to the technical shop for repair
- The packing gaving leakage-change a new one
- The unloading system being damaged out of effect-change a new one
- The piston ring jot the cylinder being worn out-sent it to the technical shop to repair

2 Parts of the compressor being too hut

- The belt being too tight or the central line being out of alignment-read just it
- The revolving speed being too high-lower the speed
- improper lubrication-refer to instructions
- The temperature being too high or a poor ventilation in the surroundings-move to the place with good ventilation

3 revolving slow

- Voltage descended-contact the power company to correct
- The connecting wires being too fine or too long-change to bigger or shorter wires
- The belt being too loose-adjust the belt
- The motor being out of work-send to the electric mechanic shop to repair

4. Revolving with drastic vibration

- Discharging pressure being too high-lower the discharging pressure
- The speed being too high-lower the speed

- The v-belt being improperly mounted or the fly pulley being loosened-readjust it
 - The crankshaft being out of shape-send to the technical shop to repair
5. Create a 'Hai-Hai' sounding during revolving
 - The valve seat vein loose-lock the seat tightly
 - The piston pounding the cylinder cover-thicken the packing
 - The connecting bearing alloy being worn out-repair or change the bearing alloy
 - The flu pulley or the flu wheel key dropping off-plug tight
 6. Pressure can not be raised or reached a specified pressure
 - Poor function of valve plate-grinding to correct or change
 - Valve plate leakage
 - The valve seat ring out of work-change a new one
 - The valve plate stuck with carbon or varnish etc remove and clean or replace a new one
 - The safety valve or the auto-unloading valve having leakage-remove and clean or replace a new one
 - The air valve, draining valve, tube connection or screw having leakage-repair and lock tight or replace it
 - The piston ring being worn out-replace the piston ring
 7. The pressure gauge being incorrect-replace it
 8. The belt being slippery
 - The belt being loose for extension-replace the belt
 - The operating pressure being too high-lower operating pressure
 - The belt being too old-replace it
 9. The lob oil consumed too much
 - Oiling too much-adjusted oil lever
 - The piston ring being worn out-replace it

- The cylinder being worn out
10. The motor being over-heated
 - The pressure being adjust too high resulted in over loading running-lower the pressure
 - The electric voltage being too low or the wire used being too long-contact the power company checking correct or replace with heavy wires
 - Discharge valve being in trouble-replace a new one
 - The bearing being burnt
 - The piston being burnt-replace or repair
 11. Outpout wind less
 - The wind demanded larger than the wind specified-change a compressor with larger HP
 - The output pressure being large than the specified pressure-lower the operating pressure
 - The inlet tube being too small and too long-change to a bigger and shorter one
 - The air cleaner being too small and too long-changer to a bigger and shorter one
 - The valve assembly being damaged or not properly positioned-send to technical shop to repair
 - The packing being damaged-replace a new one
 - The piston ring or the cylinder being worn out-replace a new one
 - The triangle belt being loose-readjust it
 - The unloading pin being unable to slip off-adjust it
 - The discharge tube having leakage-replace a new one
 12. The unload action being out of functioning
 - The unloading valve holder being worn out at the top end or other parts being damaged-replace or repair

- The unloading pipeline being blocked or having leakage remove and clean or replace it
 - The unloading valve stuck dead-remove and repair or replace it
13. The air tank pressure being too high or the safety valve whistling
- The output pressure being higher than the set pressure adjust to lower the pressure
 - The unloading system being damaged or out of work replace or repair it
 - The unloading set pressure being too high-lower the set pressure
 - The pressure gauge being damaged-replace or repair it
 - The unloading air pipe line having leakage-repair or replace it
 - The safety valve set pressure being too low or damaged adjust to heighten the safety valve pressure or replace a new one
14. The valve assembly being worn or broken
- The valve assembly being dirty-remove and clean
 - The pressure being too high-lower the operating pressure
 - The valve seat being too hot-check to see if the discharge pipeline is smooth and clean it
 - The valve seat being loose-relock it tightly
 - Dirt, rust getting into valve seat-remove and clean
 - The valve plate being broken-replace or repair
- The Air Compressor cannot revolve
- 1 When silence
- Stop electricity supply-consult electric power company
 - The supply wire or fuse being broken-replace or repair

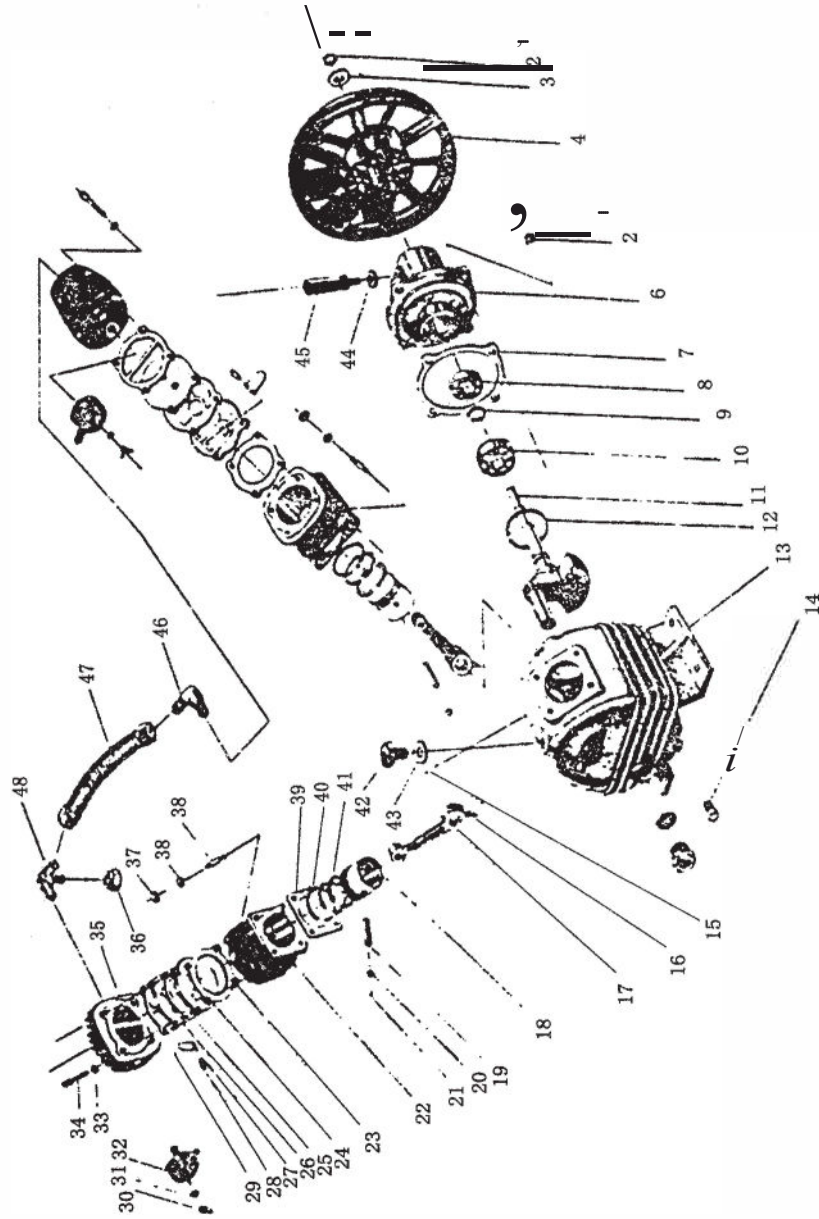
- The motor being out of work-send to the electro mechanic shop to repair
- 2 The motor grumbling without start
- The supply wire or fuse being broken-replace a new one
 - The voltage dropping low-consult the electric power company for repair
 - The discharge valve having leakage-remove the valve and repair
 - The supply wire being wrong-replace the wire
 - The motor being out of work-send to the electro mechanic shop for repair.
 - The motors being over-loading-lower the loading
 - The crankshaft being too tight-remove and repair
8. The parts list of Air Compressor
- For the convenience and good service to customers, this Company has prepared
- Air compressor parts list. When you need our service or replacing parts, the only thing to do is to notify this company of the Model of the Compressor, horse power, the serial number and quantity of the parts needed, you will immediately acquire a satisfactory service without delay.
- Please refer to the Air Compressor main parts chart and write out the serial number of the parts needed.
- For example:
1. The part needed to replace is the inlet valve assembly Model SF-1 (1/4HP Semi-auto), then you can write us: SF-1-A
 2. The part needed to replace is the piston of Model SF-2P (1/2HP ALL Auto), you can write us: SF-2P-2002.
 3. The part needed to replace is the pressure switch of Model SF-310P (10HP ALL Auto), you can write us: SF-310P-4013.

PARTS LIST

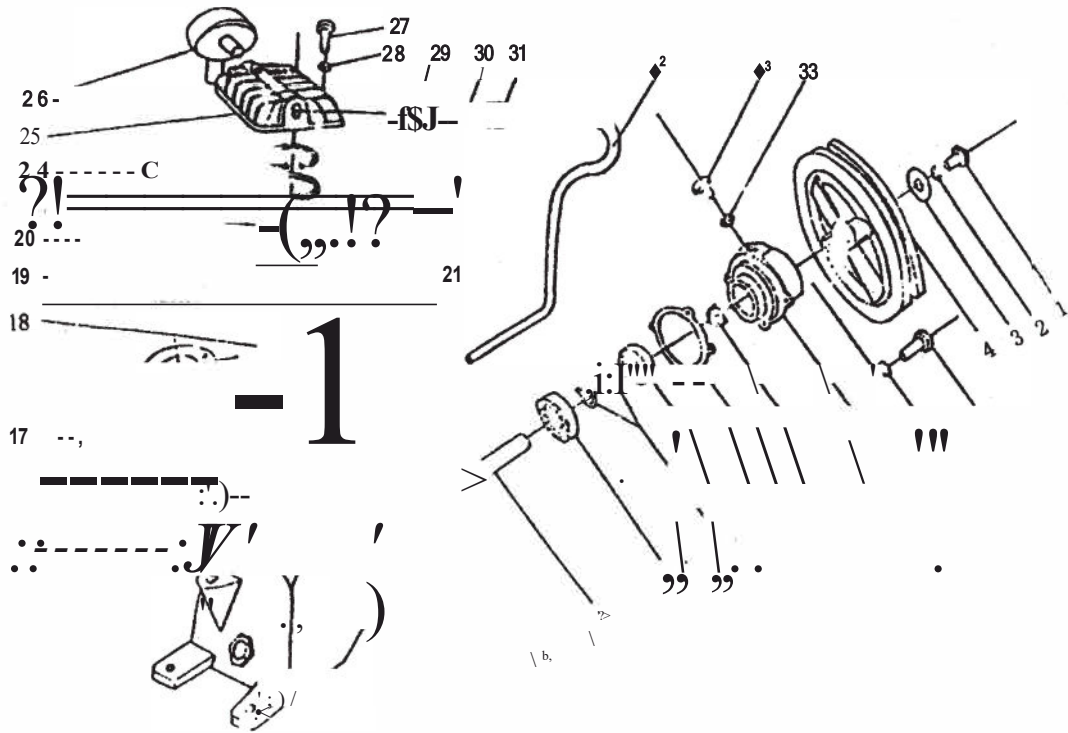
NO.		Parts in English
	-1	-310
	1/2HP	IOHp
	-1P	-310P
1		Bolt
2		Spring washer
3		Shaft end washer
4		Fly pulley
5		Bolt
6		Bearing cover
7		bearing cover packing
8		Bearing
9		Circlet for shaft
10		Bearing
11		Crankshaft
12		Circlet for hoe
13		Cranky case
14		Oil draining gins
15		Oil leveler
16		Oil leveler washer
17		Connecting rod
18		Piston
19		Piston pin
20		Piston pin snap ring
21		Cylinder packing
22		Cylinder
23		Valve gasket
24		Lower valve plate
25		Valve inner gasket

26	Upper valve plate
27	Valve clack
28	Spying clack
29	Cylinder head packing
30	Wing nut
31	Spring washer
32	Air cleaner
33	Spring washer
34	Socket cap screw
35	Cylinder head
36	Nut
37	Nut
38	Stud
39	Compressor ring
40	Compressor ring
41	Oil control ring
42	Oil folding ping
43	Breathing cover
43	Discharge elbow
44	Radiator tube assy
45	Discharge three way pipe

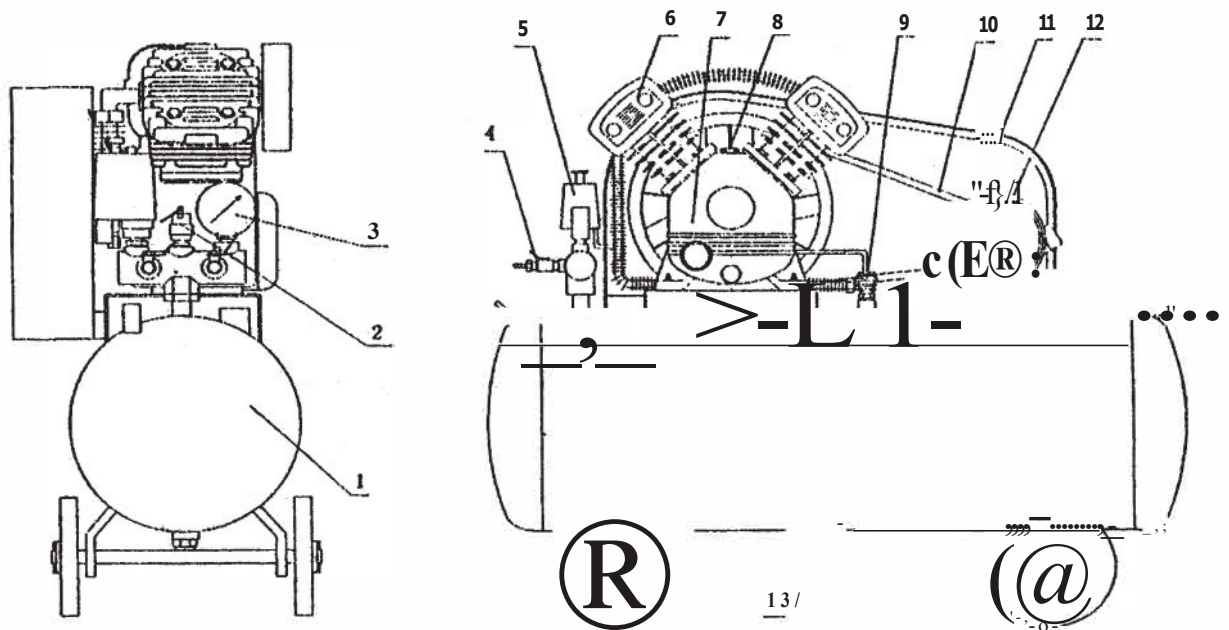
Belt drive main compressor



- | | |
|----|-------------------------|
| 1 | Bolt |
| 2 | Spring washer |
| 3 | washer |
| 4 | Fly pulley |
| 5 | Bolt |
| 6 | Spring washer |
| 7 | Bearing cover |
| 8 | Oil seat |
| 9 | Bearing gasket |
| 10 | Bearing |
| 11 | Circllet for shaft |
| 12 | Bearing |
| 13 | Crankshaft |
| 14 | Cranky case |
| 15 | Breathing cover washer |
| 16 | Breathing cover |
| 17 | Cylinder head packing |
| 18 | Connecting rod |
| 19 | Piston |
| 20 | Piston pin |
| 21 | Piston pin snap ring |
| 22 | Compressor ring |
| 23 | Compressor ring |
| 24 | Oil control ring |
| 25 | Cylinder head |
| 26 | Air cleaner |
| 27 | Socket cap screw |
| 28 | Spring washer |
| 29 | Discharge joint |
| 30 | Discharge thrust washer |



Belt drive main compressor



belt drive air compressor

- 1. Air tank 2. Safety valve 3. pressure gauge 4. Outlet valve 5. Pressure switch
- 6. air cleaner 7. Main compressor 8. oil folling ping 9. one-way valve 10. V-belt 11. Pulley shield
- 12. Moter 13. Drain cock