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1.31000. Air Supply for air bearing:

1.31101. Can you describe the principles of an air bearing?

In its simplest form we have a small plate above a flat surface. If air is blown under the plate, pressure will lift it and the plate will slide away. Such a system is unstable. To make the plate float above the surface it is necessary to bring compressed air between both surfaces. To use compressed air we need to overcome atmospheric pressure. The extra pressure between two surfaces will create force and push them apart. In order for this distance to be stable and that the plates do not move away, pressurised air is introduced through holes in the gap on one plate. The more holes there are, the more stable is the air bearing. Between the surfaces this air acts as a cushion and a spring but to keep a constant and stable gap the cushion and spring must be as stiff as possible.

Thus the best choice for sliding and rotating motion is a bush bearing. The bearing shaft is of solid polished metal surrounded by a bearing bush. A bush bearing has a lot of supply holes or nozzles where air pressure creates force between the shaft and the bush. Being captured it centres the bush around the shaft. If we move the shaft towards one side the nozzles have a smaller gap, thus higher force is created and this automatically pushes the shaft towards the centre in order to achieve an equilibrium. More holes and higher pressure gives a stiffer and more self-centering bearing. This means that higher force is needed to displace the bearing bush and to maintain the highest possible stiffness of the bearing. The proper air bearing itself does not act like an air cushion.

Air bearings have been used for years in equipment when high precision is required, due to the almost zero friction, high stiffness and zero vibration which such a bearing possesses. The latest bearings do not have a large number of drilled holes but use a porous bearing which has an almost infinite number of tiny holes.

1.31102. Can you describe the basic principle of producing compressed air?

Air around us has a pressure of 1 bar (15 psi). Compressed air has a pressure above atmospheric pressure. A compressor (pump) in an aquarium for example, produces pressure that is less than 10 psi above normal air pressure. The pressure in car tyres is about 2 bar (30 psi).

In principle every compressor or pump sucks air inside a chamber where the air is sealed and then compressed by decreasing the volume in the chamber. Then this compressed air is moved along a tube and stored in a reservoir. The problems that arise with the production of compressed air are heat and noise. In addition air contains a certain amount of moisture and dirt particles. When air is compressed this is multiplied. If air is compressed to 8 bar then that means 8 times more dirt and moisture in the same volume of air. This has to be removed, possibly in more than one stage, before the air can be used, or malfunction and irreparable damage may be caused.

Moisture can be removed in various ways, by water filters, absorber, coolers etc. The moisture content of air is also variable according to the weather and different climates and the more the air is compressed the more moisture has to be removed.

Compressors are noisy and can be divided into two basic types: oil-less – very noisy and oil lubricated – less noisy but with an intermittent working cycle. With an oil lubricated compressor, some oil will leak into the compressed air where it can block nozzles and make the bearing sticky. This, therefore, must also be removed by filters. The hotter the compressor, the more oil there will be in the air supply system.

Compressed air is normally stored in a reservoir which is filled, in pulses, from the compressor. For smooth operation a steady flow of air is needed. The reservoir smoothes the flow and a pressure regulator ensures that the pressure and air flow are constant.

The quality of the air thus depends on the amount of moisture, oil mist and dust particles it contains. For high quality air a great deal of filtering is necessary and filters as well as regulators need regular maintenance, much of which occurs automatically in the compressors.

1.31103. Can you describe the air supply system for the Kuzma air bearing?

The compressor is equipped with an automatic system for all functions i.e.. filling pressure, drainage systems for oil and water and control of output pressure.

The working pressure for the Kuzma Air Line is set at 4 bar (60 psi). The cartridge will still move the tonearm with a pressure as low as 0.5 bar (1-15 psi) but with a slacker bearing.

WARNING: The compressor should NEVER work for more than two minutes, which is followed by two minutes cooling down. This is an automated cycle when the compressor is permanently switched on at the main switch. If it is left for a long period of time the compressor should be turned off at the main switch below the cover. See [1.31501](#) working cycle.

For quieter operation we selected an oil lubricated compressor which consists of a compressor head, powered by an electrical motor, reservoir, air, water and oil filters, pressure indicators and an automatic waste removal system. It is best located away from the audio system and a tube is supplied that allows location up to 25 m away. This distance could be increased but it must be situated in a position above freezing point.

Before the compressor's main switch is turned on, an air supply line for the tonearm must be connected. The compressor will start to build up pressure from zero to 8 - 8.5 bar (120 psi) in about 3-5 minutes and will then switch off automatically.

The left hand indicator shows the pressure in the reservoir. When air is consumed and the pressure in the reservoir drops to 6 bar (75 psi) the compressor will automatically switch on and refill the reservoir to 8 bar. This working cycle is 50:50%.

As air cools down in the reservoir not all the moisture can be contained and some will collect at the bottom. Every 3 – 4 hours some of the moisture will be emptied into the drainage bottle via the reservoir drain tube. The timer will open a valve for 1 – 2 seconds and compressed air will push out a mixture of oil and water with a loud short hiss.

At the end of each working cycle some pressure remains inside the compressor head, which is released into the head release tube with a short hiss.

As part of the pressure regulator there is an oil and moisture filter which filters out some of the water and oil from the air. This is collected in the small reservoir (transparent or black) below the regulator. Pressure inside will automatically empty liquid into the drainage bottle via the filter release tube.

These three drainage tubes are not a part of the pressurised air supply for the tonearm but act as exhaust tubes for the automatic drainage systems. Cleaning is accomplished by occasional bursts of air through them automatically, when air is allowed to rush out for 1 -2 seconds removing moisture and oil.

There should never be a permanent air leak. If this happens then automatic systems have not sealed properly and the compressor will have difficulty reaching the desired pressure.

Air is supplied by a thin tube to the tonearm. To ensure that air is free of moisture and oil, extra filters are installed further down the air supply line towards tonearm (silver- in past red filters). These have an automatic draining system at the

bottom which is sealed by pressure. Only very small amounts of liquid will collect, which will be cleared by natural evaporation.

If the pressure for some reason is too low then the silver filter draining system might leak and pressure will drop further. This will cause the compressor to work too hard and be unable to create enough pressure.

On the tonearm is a valve which we open to get air into the bearing and the pressure indicator there should also show a pressure of 4 bar.

In case of overheating the compressor will switch off protecting it from further damage. The motor will, in such a case, not operate and overheating protection will have to be replaced. See [1.315053](#).

1.31201. How can I set up the Kuzma air supply system?

Please refer to the instruction manual for further information.

Unpack the compressor and put it in a suitable space which will block the noise but will allow good surrounding air flow for cooling. Do not close it in a cupboard which has inadequate air flow. If possible connect the compressor to a mains rig different to that of the audio system. The compressor can be positioned up to 20 – 25 m away from the tonearm. If necessary an even longer tube can be attached to run from compressor to tonearm. If located outside it must be above freezing point.

The compressor is already set up for the correct pressure of 4 bar.

Fix the tonearm onto the turntable and position the red filters nearby in their stands. They must be in an upright, vertical position.

Remove the cap closing the air intake tube and pour oil into the compressor at the back. Then close tube with the air filter.

Connect the double drain bottle system to the three thicker tubes on the compressor. If these are left unconnected it will not affect compressor function but it will make a mess around the compressor as an oil and water mixture spills out.

Connect the longer air tube from the compressor to the silver filter with the valve. Simply push the tube on until it stops. These are quick fit connectors (to release the tube see section [1.31202](#)). A shorter tube connects the silver filters and the tonearm. Keep both air valves (on the tube and on the tonearm) in the closed position as supplied.

Start the compressor by turning on the main switch below the cover. The compressor will start building up pressure from zero to 8 bar and will switch off in about 3 – 5 minutes automatically.

If this takes longer than 10 minutes then check for leaks and ensure that the air intake tube at the rear of the compressor is not blocked.

Open the valve on the tube and air will rush into the silver filters which will seal automatically seal with the rush or compressed air. If for some reason they do not seal then pressure loss will be too high and the compressor will work for longer causing overheating. Should you hear air leaks seal the red filters with your fingers and this will increase pressure, sealing further leaks. See [1.31205](#). Red filters need manual sealing with fingers as described in manual.

Open the valve on the tonearm and the indicator should show around 4 bar pressure. The compressor should now be working on a 50/50 duty cycle of about 2 minutes (90-130 seconds) on and 2 minutes (90-130 seconds) off. If the cooling time is a little longer then this is even better.

The automatic timer will occasionally (every 3 – 4 hours) empty liquid from the reservoir into the drainage system causing some noise lasting for about 1 – 2 seconds. In addition at the end of every working cycle there will be a noise, lasting about 1 – 2 seconds, of air pressure being released from the compressor head.

When not in use close the valve on the tonearm and the compressor will have very low air consumption, switching on only a few times in 24 hours. If you turn the main switch on the compressor off pressure might drop to zero in a few days via leakage and it will be necessary to re-start the compressor as you did the very first time to build up pressure in the system. The red filters will lose pressure and will leak until they are sealed again. (See above.) In normal use, therefore, keep the main switch on and only close the valve on the tonearm when not in use.

1.31202. How does the quick fit system for connecting air tubes work?

Simply push in the right size tube until it will go no further and suddenly stops. When there is pressure inside it is very difficult to remove the tube from a quick fit connection especially in larger sizes, so it is best to let pressure reduce to zero

first. Then push the blue (or black or metal) plastic ring around the tube, away from the tube pulling the tube out at the same time. If this is difficult you will need to push the plastic ring away more evenly using two fingers or a metal tool while pulling out the tube. Ensure that pressure inside is zero.

1.31203. How do I change air pressure for the air bearing?

The compressor is factory preset at 4 – 4.3 bar (around 60 psi). This is controlled by the pressure regulator which can be adjusted from zero to 5 bar. It gives a continuous, smooth flow of compressed air. If the output pressure is lower, then check on the left hand pressure indicator that there is enough air pressure inside the reservoir. If it is below 6 bar then something is not functioning properly so check elsewhere. See [1.31505](#). If the pressure in the reservoir is below 4 bar the output pressure regulator will not work as it cannot be higher than pressure in the reservoir.

1.31204. How important is it that the working pressure is 4 bar (60psi)?

For tonearm function it is not. It will work fine between 2- 4,5 bar. No damage or any harm can be done even with pressure as low 1 bar But for best sound keep it as factory set. But if it is between 3.5 - 4.5 bar (55-65 psi) it makes almost no difference.

1.31205. How do I seal the red filters (since 2010 we use silver filters)?

Normally they will be sealed when pressure is built up in the compressor and the valve on the air supply tube to red filters is opened quickly. The red filters must be in a vertical position for automatic seals to work.

Remove them from their stands and shake them or even turn them upside down- but be careful for out coming air or some remain liquid might rush out and cause a mess. This will remove any possible dirt which was preventing sealing.

If pressure is too low they might also not seal. To build up pressure, hold the filters vertically with your hand and with fingers seal the lower black tubes (especially first one) for about 30 seconds then remove them quickly. This will seal the red filters.

Silver filters seals automaticcaly.

See also [1.31501](#).

1.31301. What maintenance is required?

Check oil in the compressor monthly when new but every few months afterwards depending on use. Oil should be visible in the bubble. If not, switch the compressor off at the main switch then rest it for 3 hours so that all oil collects at the indicator level. If oil is only just visible then it will need topping up soon but if you cannot see an oil line do not run the compressor until oil is added. With normal use, however, the oil should last a few years.

Check working time cycles weekly when new, less often later. See [1.30201](#). If the working time is over 5 minutes then turn off the system. Do not run the system for 10 minutes, hoping that pressure will build up. If there is a leak or a compressor malfunction the system will not build up a high enough pressure and will overheat causing further damage.

The water and oil mixture level in the drainage bottles should be checked monthly when new and in times and areas of high humidity, less often otherwise. When the second bottle is half full of liquid you need empty the second bottle only as the first bottle automatically moves liquid into this. You can, of course, empty both. Ensure first that the tonearm valve is closed and that the main switch is turned off to avoid the automatic timer switching off and causing a mess.

In the air supply system there are three filter systems. Normally these are used in industry where there are more severe working conditions.

The Air Intake Filter – at the rear of the compressor where oil is added does not need any maintenance. Once a year remove it and check the intake hole at the side, removing any dust or particles which may have collected.

The Oil, Dust and Moisture Filter – below the air pressure regulator does not need any maintenance with normal use. Excess liquid will be automatically collected in the drainage bottles.

The Red Filters or sSilver filters – consist of two bottles containing mechanical and friction filters. Excess liquid will be automatically drained in small quantities and will evaporate, though in time a few drops of oil may eventually collect.

1.31302. How can I transport the compressor?

The compressor can be moved for a short time if kept in a vertical position due to the oil inside. When shipping, however, the oil must be removed from the compressor as you cannot be sure that it will be kept in a vertical position. Remove the cover and compressor head and turn the compressor upside down draining out the oil into a container for an hour. Replace the cover and either save the oil or obtain new.

1.31303. When should I change the air filter at the back of the compressor?

You do not need to change this, it will last for years under normal circumstances. Only if air is obtained from a very dusty environment might air intake be slowed.

1.31304. How do I clean the red filters (since 2010 we use Silver filters)?

You do not clean them. They were designed for a much higher air flow than our application. The top indicator will show red when full, but this will never happen.

Silver filters does not have indicators and it will drain automacially.

1.31305. How do I clean the oil and moisture filter below the pressure regulator on the compressor?

You don't. It was designed for much higher air flow.

1.31401. If I want to use a different compressor, what criteria are necessary?

Check List:

- It should not be too noisy.
- It must have adequate capacity and pressure output.
- It should have a reservoir for storing and controlling air flow.
- It should have dust, moisture and oil mist filters.
- It should have an output pressure regulator.
- You must obtain from us the final filters silver filters) which are positioned before the tonearm for fine final filtering and removal of moisture and oil mist- or consult us!

Tonearm requirements for air:

Pressure: 4 bar (60 psi), clean, free of water and oil. (ISO 8573.1 Air Quality Class 3 or 4)

Consumption: 4 litres per minute (gallon per minute)

Compressor data supplied with Air Line tonearm:

SIL AIR 15 Kuzma version, oil lubricated.

Mains: 110V OR 230V/50-60 Hz.

Air output: 12 L/minute (CFM:0.45)

Output tube: 4 mm (quick fit connection)

Reservoir: 4 litres (1 gal.)

Power: 150 W.

Noise: 30 dBA.

Mass: 20 Kg.

Dimensions: 220x440x440 mm.

Build in:

Dust filters: 5 and 1 micron.

Moisture and oil mist filters.

Output pressure regulator.

Automatic drainage system from reservoir and pressure regulator.

Overheating protection.

Automatic safety valve for release of excessive pressure in reservoir. (If metal ring is pulled air will escape from reservoir).

1.31402. What is the zero switching kit?

If the sound of the compressor switching on and off is audible through the speakers of the system then a 'zero switching kit', which eliminates spikes, can be added to the compressor. (See also [1.31507](#).)

This is a small box which must be connected inside the compressor's electrical mains switch. Connection should only be done by a qualified electrician.

1.31501. How can I test the air supply system and working cycle of the compressor?

Measure the working time of the compressor while the valve on the tonearm is open and ensure that the bearing is working at 4 bar pressure. Check that the pressure on the left hand indicator is at 6 bar (85 – 95 psi) when the compressor is on and at 8 bar (110 – 125) when the compressor switches off. The time working, i.e. compressing air, should be in the region of 90 – 120 seconds. At least the same time should be spent cooling, that is not working, when the pressure will slide from 8 bar to 6 bar at which point the compressor will switch on again.

If the heating time is longer, this indicates that the compressor must work harder, possibly due to leaks or damage inside the compressor, and will overheat and eventually fail. In this case it should not be used until the problem is solved.

See [1.31504](#).

1.31502. I can smell oil in the room?

Check pressure on the tonearm and compressor. Close down the air supply on the tonearm and check the air supply system for possible leaks. The most likely cause would be the compressor overheating and oil mist travelling along the air supply line. Start up the compressor and perform working duty test. See [1.31501](#).

1.31503. Why do I have no, or inadequate, air pressure in the tonearm?

The air supply consists of three main parts: the compressor, air tubes with red filters (since 2010 silver filters) and the tonearm. We must locate where the problem is and then repair it. If the cause is a leak then the pressure level will drop due to a large consumption of air and the compressor will be unable to produce enough compressed air. The result is lower pressure and, due to overwork, the compressor will overheat and even switch off. Overheating could cause some damage. See [1.31504](#) and more FAQ in this section.

First listen for any possible air leaks, checking that all tubes are properly plugged along the air supply line. If the tubes of the drainage bottle system are not connected they will not affect the air pressure (though there will be a mess around them). For details see [1.31103](#). Check, however, that the red filters are sealed. See [1.31501](#).

Close the air valve on the tonearm. Check the pressure regulators on the compressor. The one on the left hand side shows the pressure inside the reservoir of the compressor (it should be between 6 – 8 bar) while the one on the right side shows the set up working pressure of 4 -4.5 bar. Check the working time of the compressor. See details in [1.31501](#). If these criteria are not met, switch the compressor off and try to solve the problem. Continued use of the compressor will cause further problems. Before performing any further tests, allow the compressor to cool down for an hour.

1.31504. How can I locate where is the problem in the air supply system?

Follow the air supply line from the compressor to the tonearm to be sure that the tonearm is not using air. All valves should be closed on the air supply tube in front of the red filters (not all tonearms have these) and on the tonearm itself. Listen along the tube for any noise or hiss created by air leaks.

The most likely problem can be with the compressor, or a leak at the red filters. Check that the air supply tube is not broken, bent sharply or squashed between doors or furniture etc.

Compressor check:

The pressure regulator can be adjusted from zero pressure to maximum. To separate the compressor from the air supply line, the output should be closed to zero. The pressure regulator has a knob on the top. Rotation is only possible when this knob is in the up position – lift it up until a click is heard. To close output, rotate the knob in an anticlockwise direction until you feel resistance. Unplug the air tube leading to the tonearm. If any pressure is showing on the left hand indicator, turn off the main switch and release the extra pressure by clockwise rotation of the pressure regulator. When no noise is heard rotate the pressure regulator anti-clockwise again to close the output.

Turn on the main switch on the compressor and observe the pressure indicator on the left side (reservoir pressure). Air should not leak out where the air supply tube is connected. If it is then the pressure regulator is not fully closed. Pressure should automatically start building up and in about 4 – 5 minutes should reach around 8 bar when the compressor will automatically switch off. Open the pressure just a little. Air will start to leak out and pressure on the left hand indicator will drop to 6 bar when the compressor should automatically switch on again. Close the pressure regulator and the compressor should again reach 8 bar and automatically switch off after about 90 – 120 seconds.

If this occurs the compressor is not the cause of the problem. If these conditions are not met then check further.

See [1.31505](#).

Red filter check:(since 2010 silver filters)

Connect the air supply tube leading to the tonearm. Readjust pressure by clockwise rotation of the pressure regulator until the indicator on the right shows 4 – 4.5 bar. Open the valve on the tube in front of the red filters and ascertain whether the red filters seal or not by listening for any hiss indicating a leak. Shake the filters and ensure that they are positioned vertically. If there are any leaks see [1.31205](#). If there are no leaks here and the problem cannot be solved see [1.31506](#).

Listen for possible leaks at the tonearm pressure indicator or at the tonearm bearing. See [1.31503](#).

Silver filters seals automatically and is very unlikely that they will leak.

1.31505. Compressor failure?

WARNING: If the compressor does not achieve its 50:50 working cycle, do not use it until you solve the problem.

See [1.31501](#).

The main reason for compressor failure is overheating. The reason for overheating is that the compressor is working too hard as the process of compressing air generates a lot of heat. If there is a leak in the system the compressor works harder to supply this increased air demand. The compressor does have overheating protection which will switch the compressor off. If this occurs the overheating protection will have to be replaced. This is located at the back of the compressor where the mains cable is attached.

Damage can occur without overheating when the compressor continues to work, supplying a very small amount of air pressure (about 2 – 4 bar or 40 – 60 psi). Do not allow the compressor to run for more than 5 – 6 minutes in the hope that the pressure will build up.

See [1.31504](#) – compressor checking. If these checks do not give a satisfactory result and the left hand regulator indicator shows very little pressure (less than 1 bar or 10 – 15 psi, or even building to 3 – 4 bar) then close the output by rotating the pressure regulator knob clockwise. Listen for any leaks or noise, specifically where the tubes join the drain bottles. More than likely only one of them will be leaking. Find which tube it is and unplug it (this is not so easy) and check again for noise. Seal the tube with a finger and listen for other leaks.

If pressure starts building up then the problem is that the seals of one of the drain tubes is not functioning properly and the compressor is losing air, preventing it from building up pressure. Each tube has its own sealing system. When the problem is located we must check how to “repair” the drain tubes. See [1.315051](#).

Also listen for leaks around the other tubes leading from the compressor head to the reservoir.

If no leaks are heard then there has been damage to the motor head. There are sealed valves inside the compressor head which, if overheated, break and burn so the compressor can produce little pressure up to only 3 – 4 bar. See [1.315052](#).

1.315051. What can I do if one of the automatic seals of drain tubes is leaking?

There are three tubes which drain various parts of the compressor into drainage bottles. They are sealed with automatic seals. If they are not sealing properly this will cause a leak, an increased demand for air supply, problems of reaching desired pressure and eventual overheating of the compressor.

The three tubes are, from top to bottom:

Head release tube – the top tube is connected below the main switch and releases pressure (with some oil mist) from the compressor head, at the end of each working cycle, into the drain bottle. (Every 4 minutes a loud noise can be heard created by this air pressure release, the noise lasting about 1 – 2 seconds.) It is sealed by an automatic piston valve.

Filter release tube – the middle tube is connected below the pressure regulator and releases a mixture of water and oil, which is collected in a bowl at the bottom. It is connected via a metal L shaped connector and quietly releases liquid occasionally into drainage bottles.

Reservoir drain tube – is the lowest tube and releases liquid (a mixture of water and brown oil) which has collected at the bottom of the reservoir. It is connected to the reservoir via an automatic electrical drainage system and is controlled by an electrical timer on the lower front part of the reservoir. This timer is switched on every 3 – 4 hours. (It could be set at any time from 1 – 12 hours). An electric solenoid moves the piston, opens the valve and releases pressure from the reservoir in 1 – 2 second long bursts, removing some of the liquid from the reservoir into the drainage bottle, before sealing it back.

If any small particles are caught in these automatic drainage systems the seals will not close properly and air will leak out causing high air consumption or preventing pressure build up. This problem will cause failure of the working cycle test.

First try to remove particles from the seal by letting through more pressurised air in an attempt to clean surfaces or paths (press TEST button-see below). Of course if there is no air pressure in the compressor this will not work so try to seal tubes with fingers to increase pressure.

Sometimes tubes become clogged even if there is no leak. If dirt is not removed it can be pushed back clogging another drain tube or automatic system and in addition, with a clogged tube, it will not be possible to detect any leaks. To check that tubes are not clogged all tubes should be disconnected from the drainage bottles. Do not forget to reconnect them. Perform these tests and check that pressure on the left hand indicator is starting to build up.

Compressor’s head release tube:

Dismantle the piston system below the main switch and clean it with alcohol. Replace this and try it. Although unlikely, damage to this seal system is invisible and we will supply you with a spare part.

Filter release tube:

A leak is occasionally caused by small particles blocking sealing valves. There is an L shaped metal part where the tube is connected. Push it up and the pressure inside will push liquid out into the drainage bottle. Then try to shake and move the metal part until it seals back.

Reservoir drainage tube:

This valve is opened electrically. It is sealed by a piston and spring constantly, even without electricity. When switched on an electric solenoid with a timer will pull the piston and release both pressure and liquid. This can be done by pressing the label marked ‘TEST’. If there is a leak and pressure in the reservoir is above 1 bar or more, press this ‘TEST’ button. You will hear a click and the release of pressurised air will hopefully clean the seal. Wait for the compressor to build up pressure and press ‘TEST’ again repeating the process a few times. If you still hear a leak then the valve must be cleaned.

Valve cleaning:

To clean the valve which is the most likely cause of a leak first unplug the compressor from the mains then let air pressure go to zero in the reservoir. Note the following assembly.

Unscrew the connector on top of the timer. Lift up the timer and release the nut with ‘U’ key 14 mm. Remove black block and the rounded metal tube-valve will be exposed. With ‘U’ key 13 mm. you can unscrew this, being careful not to lose the piston and spring inside. Clean the brass block inside with alcohol, then clean inside the piston and spring and re-assemble.

Plug in compressor, turn on main switch, ensure that drainage bottles are connected (or use a PVC bag to collect debris) and when the reservoir pressure indicator shows at least 1 – 2 bars, press ‘test’ and listen for a leak. If you hear nothing, wait until maximum pressure is reached and repeat this ‘test’.

If there is still a leak and you hear no clicks of the valve solenoid (one at the beginning and one at the end of 1 – 2 seconds), the problem could be electrical, a faulty timer or the solenoid is not moving the piston.

Normally if you press ‘TEST’ LED shows even if there is no click or air leak noise. If no LED shows for 1 – 2 seconds then the timer is faulty. Check that there is mains electricity and that the motor is working.

If you do not hear a click, the solenoid is not moving the piston. Both these parts are available as spare parts.

1.31502. I have checked everything but the pressure in the reservoir does not reach above 4 – 5 bar (60 – 70 psi).

Do not run the compressor for more than the working cycle or for a maximum of 5 minutes when trying to solve the problem. If there are no leaks and the compressor is running all the time, failure of the compressor head is most likely. If the seals inside the compressor have failed they must be replaced.

Unplug the compressor. Remove the compressor cover and compressor head. At the back you will see inside 4 screws holding a thick square metal plate which is not easily accessible. Beyond this are 2 thin metal seals with two sealing plates. Try to remember the order of assembly. You will need to obtain a compressor seals kit. For this contact a specialist in air compressor repairs.

1.31503. Why is the motor compressor not working?

This could be caused if the overheating protection has switched off the motor. In this case it needs replacing and the problem of overheating must be solved. It is located at the back where the cable enters the compressor and it must be replaced by a qualified electrician. (We will supply the part).

Although unlikely the compressor head might be blocked because lack of oil prevents motor rotation. Do not try to run it. Unplug the compressor and arrange for a specialist service of the compressor.

1.31506. What if the red filters are leaking (since 2010 we use silver filters and they do not leak)?

First perform the sealing process. The compressor must give an output of 4 bar. See [1.31205](#). When the pressure drops below 0.5 – 1 bar, seals will not function!

The red filters must stand vertically. If you cannot seal them by shaking them in their stands, lift them out and see if, by slightly tilting them from the vertical, you hear the leak stop for a short period of time.

To clean seals, turn the filters upside down. Air pressure will rush out. If necessary clean out any debris along with any moisture that will have collected. Shake them a few times, turn them upside down a few times and then try to seal them. This is normally effective.

If you hear a hissing leak at the top where there are the black plastic tops and indicators, there are two possible causes. First there may be damage to the top part, or a sealing ring inside may be broken. When pressure is at zero, use a screwdriver and check rings below. Check that the two small ‘O’ rings are present around the black plastic nozzle. If not, or damaged, replace. These parts are available from us.

Silver filtertare more reliable then red filters!

1.31507. Why can I hear a noise through the audio system when the compressor switches on and/or off?

The on/off noise comes via the mains line into the audio system. Sometimes RFI (spike filters) mains line filters in front of the compressor might help. If possible, connect the compressor to a different mains rig.

If you cannot do this we can supply a ‘zero switching kit’ which eliminates spikes. This is a small box which must be connected inside the compressor’s electrical mains switch. Connection requires a qualified electrician.