

# Troubleshooting of the LubeTech Grease System

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The LubeTech grease system is designed to be a preventative maintenance system that will extend the life of your bearings that are connected to it. Unfortunately, I would be lying if I said that this is a system that you can put on and completely forget about. There are four areas that the operator needs to be aware of and watch out for. I will talk about each of these areas and give all possible problems and solutions for them. **This troubleshooting guide will very helpful for systems installed or sold by LubeTech.** Systems installed by other manufactures or dealers my not have all of the troubleshooting components built in.



## 1.) Light in cab-

The light in the cab is available on all fault indication systems. It lets you know the status of the grease system. If the light is green then your pump should be on. If it's off then the system should be in an off cycle. If you see the pump on and the light is not on then you may need to change the bulb. If the light is blinking, it is telling you that you have a problem. The light will continue to blink and the system will not come back on until you fix the problem and hold the light switch down for 5 minutes to reset the pump. The light can be a sign of a blockage in the system, low level, motor malfunction, or pump element failure.

## 2.) Pump-

Make sure that the pump has grease in it. This is by far the most common problem. The reservoir is clear all the way around and the pump is usually located in an easy to see location. Operators need to make sure that the pump always has grease in it.

- A.) Fill the pump with grease. 2 liter pumps have one grease fitting on the pump to fill it with. 4 and 8 liter pumps have that fitting and a spin-off top. It is important to remember not to get dirty grease or any other contaminates in the pump. Contaminates

in the grease could cause a block to lock up or the check valve in the pump element to fail. If you are in a dusty or dirty environment, I would not open the top and risk contamination. Use the grease fitting whenever possible.

- B.) If you have a 2 or 4 liter pump that is continuously running out of grease, you may wish to go to a the larger 8 liter pump.

### 3.) **Broken Lines-**

Since we are using a type 2 grease in most applications, any broken lines will be very evident. Fresh grease will start to accumulate. I know that this sounds almost as basic as filling the pump with grease when it runs out, but if a line is broken, all of the points downstream of the break are not getting grease. Unless it is a main line, it will only affect one grease fitting. The rest of the system will still work fine. Regardless, the line needs to be fixed.

- A.) If it looks like the broken line was a fluke and will probably never happen again, then just fix the line. The tubing that we use is 1/4" thick walled nylon tubing. It is not air line. If you replace the line with air line, it will not be able to handle the pressure of this system. If the line burst from pressure, then you will need to use a 244058 quickline union. Compression ferrules will not fit the tubing because it has swollen. ( just a helpful hint ). If the line burst and you don't fix the issue that caused the line to burst, it WILL burst again. The hose that we use is harder to splice. You have to use 2 reuseable hose fittings with a coupler in between. You do not want to splice a hose in an area that will bend. You will need to replace the entire line or repair it at a stationary place in the line.
- B.) If you can see that this could happen again, you need to find a way to route the line so that it is not in harms way again. In some instances it may be necessary to weld protective armor onto the machine to protect the line. If you have questions about how to protect the line, you can call your representative for technical support.
- C.) Abrasion may have caused the leak. In this instance you can either reroute the line or tie it down to stop the abrasion.

### 4.) **Pressure Relief Valve is Leaking-**

This indicates that there is a point on the system that is not accepting grease. The LubeTech System will not bypass, so it is pumping 4000psi to the point to get it to take grease. The pressure relief valve is designed to give a visual indication that there is a problem. It should be located in a prominate spot. When the pressure relief valve is discharging, your grease system is no longer getting grease to the bearings. All of the grease is discharging instead of bursting your lines. This can be caused by a number of things. If you do the following test you can quickly locate the origin of the problem.

- A.) Using a hand held grease gun, go to each of the secondary valves and grease the fitting on them. If there is no problem with the valve that you are on, it will be easy to pump. If you find that one of them is hard to pump, **do not try to force it**. The grease gun that

you are using can build up to 11,000psi of pressure. The tubing is only rated for 3500psi. You can use an automatic grease gun but I do not recommend it. You can not tell how much pressure that you are building up unless you listen to the frequency of the air releases from the pump. It is very easy to put too much pressure to the tube this way. If too much pressure is applied to the tubing, it will permanently expand and make it difficult or impossible to get a ferrule on it.

- B.) Assuming one of the valves does not take grease, start unscrewing the compression fitting at the bearing of each of the points connected to that block. If you hit the one that is giving you problems, it will begin to ooze grease. Remember that it has a lot of pressure on it. The grease will not shoot out, but it will get all over very quickly. If this happens then you have located your problem. You can dig in the fitting to see if it is clogged but normally the bearing is not taking grease.
- C.) If you found a valve that will not take grease, but all of the compression fittings are not under pressure then you have two options. It is either the valve itself or the tubing (rarely). Disconnect the tube at the valve. Quicklincs are easy to remove because they swivel. Do not try to remove the tube from the quicklincs. This is not only harder to do, but also you risk damaging the tube and the quicklincs. Clean the area around the quicklincs so that you do not get contamination in the block or fitting when you open it up. Remember to put them back into the same holes that they came from. Once you remove the quicklincs, use the grease gun to test the valve. If it works, the problem is in a tube. Check each tube by putting the quicklincs back in the valve one at a time and testing the valve. This will pinpoint the culprit. If this is the problem, you should find that one of the lines is pinched or kinked.
- D.) If you disconnect the quicklincs and the valve still will not cycle, then the problem is in the valve. This is almost always caused by dirt in the block. You can muscle down on the grease gun to get the valve to cycle. You can do this only if there are no grease lines connected to the valve. If this does not work, then you need to replace the valve. The pistons in the valve are machine fit for each hole and only fit one way. Cleaning the valve is largely unsuccessful and very time consuming.
- E.) If you tested all of the valves and none of them were hard to cycle, then the problem is in the primary block. Remove the primary block line and put a grease fitting on the block and try to flush it out. When you remove the fitting going into the block, there should be a good deal of pressure (3500psi). If there is no pressure, you need to check the pressure relief valve and make sure it is not damaged and releasing at a lower pressure. If the primary does not work then you will need order another block. You can still grease the rest of the system from the grease fittings on the secondary blocks. There are check valves in the fittings going to the secondaries to prevent the grease from backing up.
- F.) **Do not block off lines that are broken or where the block is removed.** This will cause the system to shutdown because the grease will not be able to go where it was designed to go. Remember that each point has to take grease or the system goes into default and all of the grease is pushed out of the pressure relief. Just let the grease run out until you get it fixed. Maybe it will help you remember to get it fixed sooner.

## Other Possible Problems

In the past I have run across a few other problems that are rare at best, but worth mentioning if it can help someone identify a problem and find a solution.

### 1.) Pump does not work.

- A.) This can be caused by four different problems. The first is that the connections have come loose. This can be the plug on the pump or the connections to the equipment.
- Check and tighten the connections. If the system has a fuse, this is a good time to make sure that it is not blown.
- B.) The second is that there is a cut or short in the wiring harness.
- This is a tough one to test. You can use a circuit tester but you have to know what you are looking for. Detailed next. If it is the harness, you can order a replacement for it.
- C.) The third is that the circuit board is shorted out.
- There is a LED light inside the pump on the PC board to the left of the blue hour timer knob. If it is on, the harness is OK. If it is out, then the PC board or the harness could be bad. The PC board will be shorted out if water got inside of the timer compartment. Most times it is the PC board instead of the harness. The best way to test it is to hook the harness to another pump and see if it works. I realize that this may not be practical for everyone but it is the best way to check it in the field.
- D.) The motor is burned up.
- If the right LED light is on, then it could be the PC board or the motor. If it is the motor, then you should hear a slight groaning noise. It is a wise idea to check the connection to the motor itself. I have seen instances where this has come loose. If it is the motor, it is best to send it in for service.

### 2.) Pump is working but grease is not going out. (Be aware of this)

- A.) This will be noticeable when you go to fill the pump and it is still full of grease. Activate the pump and watch the indicator pin on the primary. If it does not move within a minute and the pressure relief is not set off, then your element's check valve is leaking back into the pump. **This is caused by contaminates in the grease.** I have mainly seen this problem on 4 and 8 liter pumps that are filled from the top or systems using moly greases. If you have this problem, then you might consider filling your pump from the fitting.

- Remove and replace the element. Until the element comes in you can still manually grease the equipment at the secondary valves. When changing the element, replace the element but do not connect the pressure relief assembly to the element. A couple of key things to keep in mind. The element is metal and the housing is plastic so make sure you are lined up correctly. The element should go on by hand all the way to the last turn. Also the back end of the element is not actually connected so that it freely floats on the cam. Make sure it does not fall off. Turn the key on and reset the timer so that the pump is working. Let the pump run until you see grease coming out of the element. This can take 2 - 12 minutes. It will get any air out of the system and prime the system much faster. Then you can cut off the pump and connect your pressure relief assembly and your main hose. The indicator pin should start moving in 2 - 5 minutes.

**3.) The pump is running all of the time.**

A.) This is caused by an electrical surge through the system. Typically it is caused by welding on the machine with the electric still connected or from an alternator surge. The grease system should be disconnected electrically from the machine by unscrewing the power plug on the side of the pump whenever you may experience an electrical surge ( welding, jump starting, etc...).

**4.) Pressure relief valve is continuously leaking.**

A.) If you have a pressure relief valve that is leaking but everything is taking grease downstream, then the pressure relief valve maybe damaged causing it to release at lower pressures.

- Replace the pressure relief assembly.

**5.) You feel you are getting to much or too little grease.**

A.) Contact me and we can discuss this. Do not adjust the timer on your own.

If you have any further questions fill free to contact me at 225-869-1006 for technical questions. Leave a message on my voice mail if you miss me and I will get right back to you.

Todd Alvis