

GSI & ZIMMERMAN DRYER PRE-SEASON CHECKLIST PROCEDURES

Lubricate Blower Bearings:

Use high quality, grade #2 lithium based grease. Clean grease fittings. Count pumps put in the bottom bearing until grease begins to come out of seal and put the same in top bearing.

Lubricate blower motor bearings:

Use high quality, grade #2 lithium based grease. If motor is equipped with relief plug then operate motor for 20 minutes and shutdown. Clean grease fitting. Remove grease relief plug and pump in enough grease to pass through bearing. Allow motor to run for 10 minutes before replacing relief plug.

If motor is not equipped with relief plug clean grease fitting and put in one pump of grease per ten horsepower of motor.

Check blower belts and adjust:

Squalling belts is indication that belts need tightened. Do not over tighten or motor could draw to many amps. Each belt should be able to push in a belts width halfway between pulleys, with thumb.

Check and record blower motor amps:

With amp probe check amperage for each blower motor. Record amp readings to service ticket.

Inspect physical structure of dryer:

Look over entire dryer for any damage, excessive wear, or rust. Report any findings to customer and suggest they contact GSI for a repair quote.

Inspect sheets for rips or missing bolts:

Inspect internal and external sheets for rips, excessive wear or rust. Look for missing bolts. Patch sheets and replace bolts if reachable. Report any findings to customer and suggest they contact GSI for a repair quote.

Confirm sheets are under .094 perforations:

Standard sheet perforation has never been larger than .078 perforations. In a few special cases .094 has been installed at the outside top of the dryer. Confirm that customer hasn't put any thing larger than .094 perforations on the dryer.

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Inspect inlet & outlet, including plenum cap:

Check fill cap, inlet tube, and plenum roof cap for damage, excessive wear, or rust. Note on service ticket if fill tube is less than 12". Check discharge hopper and moisture sensor housing (if equipped) for damage, excessive wear, or rust. Report any findings to customer and suggest they contact GSI for a repair quote.

Inspect Hatch & Door Seals:

Check integrity of seals on cooling floors doors, heat doors, and roof/ roof hatch and replace if necessary. If seal is not on truck, advise customer to order and explain how to replace.

Check oil level in gear cases, fill as needed:

Older Zimmerman dryers have a triple stacked gearbox inside for unload augers. The bottom two gearboxes have reservoirs that should be completely full. The top (blue) gearbox has a dipstick that should be filled to the bottom line. There is also a right angle gearbox on the outside of the dryer at the bottom floor. This gearbox has two Allen screw plugs on one side. Remove both plugs and fill from the top hole until oil begins to run out of bottom hole, and then reinstall both plugs. All the fore mentioned gearboxes take 80/90W gear lube. The newer Zimmerman dryers with the accutrol unload system has one gearbox on the top floor. This gearbox will take a mobilegear 629 or comparable gear lube and will fill between the marking bands on the sight level. GSI dryers will take a mobilegear 630 or equivalent gear lube and will fill to the check plug. This box is also located inside at the cooling section floor (some models with full floor it may be located between the two floors).

Check Sweeps, idler, sprockets:

Older Zimmerman dryers with the auger system have sprockets and chain on the inner gearbox that must be checked for damage or excessive wear. Also check the augers (sweeps) for damage or excessive wear. Check that augers are level. Replace if necessary or advise customer to order and explain how to replace or contact GSI for quote.

Inspect Unload Mechanism:

This is for the newer Zimmerman and GSI dryers. Check the accutrol for damage excessive wear or damage. Check that sweep arms are level. On GSI dryer check metering drum for damage or excessive wear paying special attention to leading edge. Report any findings to customer and suggest they contact GSI for a repair quote.

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Clean covers, MC sensors:

Older Zimmerman dryer with Partlow style moisture control has sensor mounted behind ladder with protective covers. Covers have flap at bottom that can be opened to let out any foreign material collected inside. Older GSI dryers need to remove cover on bolt sensor boxes and check for dirt and clean if necessary. Newer GSI & Zimmerman dryers remove cover from grain probe and check for dirt, clean if necessary.

Inspect Bindicator(s)

Make sure bindicators are turning when should be. Stop bindicator by hand and ensure indication comes on at panel. Remove outside cover of bindicator. Clean inside if necessary. Check switch and motor for corrosion or rust. Replace any parts necessary.

Check, clean DC motor brushes:

Older Zimmerman dryers with DC unload motor need the brushes pulled out and checked for wear. Excessive wear will require replacement or motor will burn up. While brushes are out clean/blow brush dust out of motor and off of brushes.

Lubricate u-joints:

Older Zimmerman dryers with auger unload system has two u-joints joining outside gearbox with inside gearboxes. Lubricate both u-joint until grease begins to come out.

Inspect divider hopper:

Check for excessive fines built up in hopper. If hopper is dirty advise customer to clean and explain the risk of fire. Check bottom gap in hopper to ensure it is open evenly all the way around hopper; if not, readjust gap with a piece of flat bar.

Clean burner and pilot ports:

Brush/blow burner out. On older steel burners (pre-2002) drill pilot ports with a no. 47 or 5/64" diameter bit, no shorter than 5". On new aluminum burners (2002-present) drilling pilot ports should be cut dramatically; if need be drill with a no. 43 bit, no shorter than 5". For either burner you should feel the bit go through the top of the burner pipe about an inch, then open up, and the bit will hit the bottom of the pipe. A short bit will not drill deep enough before the chuck of the drill hits the mixing plates of the burner.

Inspect igniter and flame rod:

Look for damaged (cracked porcelain) or excessive build up of soot. Check wiring and connections to both igniter and flame rod. Replace if necessary.

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Check CV valve is operational:

Disconnect linkage between valve and motor. Move valve arm left to right while pulling out. If valve shaft is broken, shaft will come off in your hand. Inspect valve body for cracks, replace if necessary.

Check modutrol motor is operational:

With power on jump F to + and motor should open up. Remove jumper and motor should close. Check motor operates correctly when starting up dryer.

Clean modutrol motor contacts:

Remove lid from motor and carefully clean interior paying special attention to contacts.

Check gas pressure gauges:

Make sure gauges are not sprung and are reading correctly. Check glass is not cracked and face is legible. Replace if necessary.

Check interior of maxon valve:

Clean inside if necessary. Check that switch and solenoid are operational and look for corrosion or rust, replace if necessary.

Check gas train integrity:

Check for leaks and physical appearance of gas train is not rusty. Advise customer to paint if necessary. Remove strainer filters and clean.

Check gas train plug/valve is open:

Check if customer removed gas train plug or opened drain valve at end of season. If plug has not been removed or drain valve has not been opened, gas train may have damaged cv valve or gauges. Advise customer to always remove plug or open drain valve at end of drying season.

Clean panel & tighten connections:

Clean inside of control panel. If using compressed air ensure compressor has filter so water doesn't get to components. For the first three or four years tighten all connections in panel. Check for leaks/water damage.

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Start up to check controls/safety circuit:

Start dryer and turn on burner and unload. Ensure that all controls and dryer is operating properly. Close manual gas valve and ensure that maxons slam shut. If unable to start blowers or burner because customer is on demand please note this on service ticket.

Review end of season shutdown w/customer:

Remind customer at the end of each drying season the dryer should be cleaned inside and out; paying special attention to the inner roof, burner, divider hopper, cooling floor, and unload area. The burner should be tarped and the gas train drain plug should be removed or the drain valve opened.

Advise customer of available parts kit:

Inform customer that we have a service parts kit available for his dryer. Explain the components in the kit are parts that cannot be jumped out and will not allow the dryer to run in the case of a failure. Kits should be in stock on service trucks and can be left with customer. Advise customer of kit price (call for current prices) and mark down on service ticket if kit is left.