COMMON WHEEL BLAST MACHINE PROBLEMS AND TROUBLESHOOTING TIPS

Wheel blast equipment is designed for years of reliable operation, but like any production system, performance issues can develop over time. Understanding the most common symptoms and their likely causes can help operators identify problems quickly and minimize downtime.

General Blasting Performance & Pattern Issues

Why doesn't my wheel blaster clean like it used to?

- Check if the impeller is gone or if the blades are worn.
- Determine if the blast pattern needs adjusting or if your parts have changed.
- Verify that the machine is not out of abrasive and that the blast wheel motor is not running backwards.

Why is one end wheel blast chamber liner wearing faster than the other?

- Your blast pattern may be off, or you may be experiencing "abrasive trailing," which occurs when abrasive leaves the tip of the blade and trails to the other side due to high-speed momentum.

How do I test and adjust the wheel blast pattern?

- Test the pattern using a painted plate of steel, never cardboard, as wheel blasters are aggressive and will immediately clog the screens with cardboard debris.
- To adjust the "Hot Spot" of the blast stream, use an adjustable wrench and a medium flat screwdriver to rotate the Control Cage clockwise or counter-clockwise.
- Ensure the notch in the cage is facing approximately 180 degrees away from the blast pattern, typically starting at the 12 o'clock position.

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Amperage & Blast Wheel Motor Issues

Why can't I get my blast wheel amperage above idle?

- Check if the abrasive valve is open and adjusted properly.
- Verify that the air is turned on to activate the abrasive valve.
- Ensure the solenoid/Mac valve is not leaking or stuck, and check that the blast wheel motor isn't running backwards.

How do I correctly set the blast wheel motor amperage during startup?

- Turn the blaster on and check the Full Load Amp (FLA) against the motor's schematic.
- If the amperage is higher than the FLA, shut the motor off immediately to prevent an overload condition.
- If the FLA is lower than required, adjust the abrasive valve cylinder to increase the abrasive flow rate until you reach the correct FLA.

Why is my blast wheel motor vibrating excessively?

- A rotating component—such as the impeller, blades, bare wheel, or hub—is likely out of balance, which becomes highly apparent at 3600 rpm
- Check all items for wear, and if nothing is obvious, remove them one at a time to isolate the problem
- Rotate the wheel by hand and wait for it to stop; if it rolls back the other way, it is out of balance
- Alternatively, the motor bearing may have failed

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Recovery System & Dust Collection Issues

Why does my wheel blasting recovery motor overload keep tripping?

- Check if the elevator belt is loose or slipping.
- Inspect for a clogged rotary screen or an abrasive gate restricting flow, both of which can backfill the elevator.
- Verify that there are no loose wires, the overload isn't malfunctioning, and the overload isn't set below the normal operating amperage.

Why isn't my dust collector performing like it used to?

- Check if the air pressure is too low for the reverse pulse system to function, or if the filter cartridges or dust pipes are clogged.
- Ensure the slide gate isn't open and that ambient air isn't entering the duct and reducing the air volume/CFM.
- Confirm whether it is time to change the filter cartridges, which is recommended at 5" of static pressure.

When should dust collector filter cartridges be replaced?

- Gibson recommends replacing filter cartridges when static pressure reaches approximately 5 inches.

I installed a dust collector and the reverse pulse system is not working. What should I check?

- Ensure the 110-volt electricity is hooked up to the reverse pulse system, as the equipment might be too loud for you to notice if it is on
- Verify that the pneumatic air is turned on to the system
- Check if the bolts on the bladder cover are loose, which allows air to leak by the air pipe

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Belt Tracking & General Equipment Setup

How should I adjust a tumble blast mill after installing a new belt?

- Tension the belt to the factory paint line to create a ¼" bow in the middle near the front roller.
- Run the mill conveyor belt for about 15 minutes to verify tracking.
- If tracking is improper, tension the same side the belt is moving toward by about 3/8" periodically (waiting 3-5 minutes per adjustment) until the belt centers.

What are the critical pre-startup checks before adding media?

- Ensure the equipment is anchored, shimmed, and placed on a level, flat concrete floor with proper weather protection, as steel media can oxidize overnight.
- Verify the correct voltage has been connected (208/230/380/460/575) to prevent component failure, and that the air is clean, dry, and set to the factory PSI requirement (typically 90psi).
- Check all visible set screws, bump the motors to check rotations, ensure doors open and close properly, and recommend earth-grounding the dust collector in dry areas.
- Make sure the abrasive valve closes just before the blast wheel motor comes to a stop, which serves as the primary safety device on most standard equipment.