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Compressors: Trends, new models and maintenance strategies

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Portable compressor Be prepared for top performance

Portable compressors are the workhorses of rental shops and are used for a number of applications and needs.

ortable compressors are the workhorses of rental shops across the country. The wide range of sizes available support a number of applications and uses from powering paving breakers and post drivers to sandblasting and irrigation blowouts.

Portable compressors are designed to be durable, but this doesn't mean they are exempt from routine maintenance. Having a plan in place to regularly check your portable compressors for maintenance issues will keep them running at their best and out in the field earning revenue.

Here are points to check daily, regularly and annually for optimal portable compressor performance.

BY CHANCE CHARTTERS



Daily

Whenever you are preparing a compressor to leave your yards for a job, inspect the chassis and body – including the door hinges, towbar and hitch, safety chains, lights, tires and lug nuts for signs of rust, wear and proper operation. Additionally, check the engine oil, coolant and fuel levels. Don't forget to check the air inlet filters and fuel water separator. A clogged air inlet filter can lower efficiency and increase operating temperature. If the filter is lightly contaminated, you can blow it off. If it's deeply contaminated or hasn't been changed in the last year, replace it.

The fuel water separator and fuel filters help assure clean fuel is delivered to the engine. If fuel has too much water, it can wear off the lubricants on the fuel injectors. Contaminants can cause wear and tear on the engine and compressor components. Making sure the compressor has the cleanest fuel possible will keep it running efficiently and will prevent unnecessary engine and compressor failures.

It's a good idea to keep a maintenance log for each compressor where you can note daily checks—as well as track major maintenance items. A little bit of paperwork can go a long way in helping you stay on top of preventive maintenance. It can also help reinforce accountability with your employees.

Many newer portable compressors have electronic controllers that monitor maintenance and performance. Check this controller for any service-related warnings or alarms and address them as needed before sending the compressor on its way.

Regularly

As a guideline, these maintenance items should be checked or performed every 250 to 500 operating hours.

Replace the engine oil and filter.

Engine oil lubricates, cools and helps flush out contaminants. Much like regular oil changes for your car, doing the same for your portable compressor will keep it running smoothly, ensure proper cooling and lubrication and prevent costly downtime.

Clean the fuel tank and check/ replace the fuel filters. You'll also want to thoroughly examine the fuel lines and hose clamps and replace as necessary. Fuel lines can deteriorate over time and when left unchecked, cracked and leaking fuel lines can compromise safe operation and will prevent the engine from getting enough fuel to operate the compressor at peak performance.

Check the drive coupling or belts for signs of wear. Check motor belts for proper tension and wear and





Top: Valve maintenance is important for compressor and operator safety and should be performed annually. Bottom: Many portable compressors come with integrated controllers that show maintenance alarms. replace as needed. Belts are always a good item to have on hand. As they wear, the slippage means power isn't transferred as efficiently. A broken belt means a compressor out of service.

Lubricate door hinges, maintain any rubber sealing strips, and if the compressor has a lifting eye, inspect it. For safety, check that it is securely fastened to the frame and look for wear in the metal where lifting hooks contact the eye.

Miscellaneous items: Check all screw fittings, pipes and clamps. Look at all accessible components for wear and tightness and all hoses for proper seating, wear or any leaks. Check tightness of all electrical connections.

Annually

Generally more intensive in terms of skill, training and equipment needed to perform, annual items may best be handled by an authorized service provider.

Change the compressor fluid, compressor fluid filter and the separator cartridge in the fluid separator tank. Properly maintaining the oil circuit keeps the operating temperature down and protects the compressor air end from contaminants. Just as in your vehicle, this is vital for longevity.

Inspect any and all valves and adjust as needed. Valves are critical safety features for your compressor. If they are not operating correctly, catastrophic failure can occur and in extreme cases can injure the operator. Check valves to make sure they are cracking at the right pressure and seated properly.

To ensure road worthiness, check tire pressure and the wheel bolts and nuts for tightness. Examine the tow bar for cracks and warping and grease the ball coupling and joints. It's also important to check the brake system, including the parking brake. While it may be tempting to use aftermarket parts, they may not save you money in the long run. When considering maintenance for your portable compressor, keep in mind these benefits from using genuine replacement parts:

EFFICIENCY: Each component contributes to the overall compressor efficiency, and this efficiency is calculated using genuine factory parts. Aftermarket parts may not give the same caliber of performance.

SERVICE INTERVALS: The recommended service intervals are determined after extensive testing using genuine factory parts. Aftermarket parts may require more frequent replacement.

QUALITY: The material compatibility of aftermarket parts has not been tested with the equipment. Neither has the durability. This can lead to other issues such as higher fuel consumption.

WARRANTY: The use of aftermarket parts may void any manufacturer warranties associated with your compressor, which could prove very costly in the long run.

Guidelines

Keep in mind that the recommended intervals outlined here are guidelines. If the compressors will be operating in adverse conditions and subject to poor fuel quality, high or low temperatures, heavy dust or have frequent use, it may be necessary to adjust the intervals as needed.

Your service manual has a wealth of information in it. Consult it for tips on service intervals and basic instructions on how to perform maintenance. If you have any questions, check with the compressor manufacturer. Manufacturers are the most familiar with their equipment and can help you come up with a plan tailored to your rental shop needs.

Applying consistent preventive maintenance will ensure maximum uptime and availability for generating revenue. Further, it will extend the life of your revenue-creating assets. Just as important, providing reliable equipment will enhance your customers' experience and keep them coming back to you for rentals. **PCR**

Chance Chartters is the sales manager for Kaeser's Mobilair line of portable compressors.

CHECK OUT THE COMPRESSOR your customers will keep asking for



Out on the job site or out in the rental yard, your team has enough to think about without having to worry about the compressor.

Kaeser Compressors' award-winning line of Mobilair[™] portable air compressors are designed to pack the most efficiency possible into a compact, rugged design. They are exceptionally durable and are built to withstand even the most demanding job sites. Their superior German engineering means reliable performance year after year. Available in a wide range of sizes, Kaeser's portable compressor line comes standard with the energy-saving Sigma Profile[™] airend for longer life and better efficiency with 15-20% more air per gallon of fuel than our competition. Superb reliability and simple maintenance save time and money. Mobilairs are easy to operate and to maintain. That's why customers keep coming back and asking for Kaeser by name.

Whether you rent or operate them, Mobilairs' longevity means they spend more time out in the field getting the job done.



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M58 Portable Compressor

- 210 cfm at 100 psig
- 48 hp, Tier 4 Final Kubota Diesel Engine
 Over-sized fuel tank gives up to 10 hours of uninterrupted service
 - High pressure and aftercooler options available



M58 Utility Portable Compressor

- 210 cfm at 100 psig
- 48 hp, Tier 4 Final Kubota Diesel Engine
- Designed for cross-mounting on service vehicles
- High pressure and aftercooler options available



M114 Portable Compressor

- 375 cfm at 100 psig
- 103.3 hp, Tier 4 (interim) Deutz diesel engine
- Available in high pressure options and skid-mounting
- Aftercooler and filtration packages available



M27 Portable Compressor

- 92 cfm at 100 psig
- 21 hp, Tier 4 Final Kubota Diesel Engine
- Polyethylene enclosure
- Stationary/skid-mounted option available
- Optional 5 year warranty available on all models