The Truth About Mixing Your Air Compressor Fluids

Quincy Compressor strongly discourages the mixing of products from other suppliers with Quincy-supplied fluids. Such mixing can result in reduced equipment and/or fluid life, malfunctions and/or lowering of system efficiency and possibly catastrophic system failure.

Also, if the equipment supplier/servicer has provided a warranty tied to the use of Quincy Compressor fluids, such a warranty will likely be voided with evidence of mixed fluids. Often times, failure modes develop over time and therefore may not be evident immediately. Regardless, Quincy Compressor or its agents and distributors will not be accountable in any way for failures resulting from co-mingled fluids.

That’s why mixing fluids from a variety of suppliers with Quincy Compressor fluids is not a good idea. The truth is, there are four costly consequences that may result.

1. Introduction of Lower Quality Lubricants in the System

Quincy Compressor products are manufactured in ISO-9001 and RC-14001 certified facilities under strict quality control, using the highest quality base fluids and additives. Also, Quincy Compressor fluids are tailor made for the application. Quincy Compressor product recommendations are always based on sound technical data and supported by years of airend engineering data. Such recommendations also rely on decades of demonstrated and problem-free field performance of Quincy Compressor fluids. Additionally, Quincy Compressor provides fluid condition monitoring services to further ensure product performance.

Quincy has found over the years that many competitive products sold as Quincy Compressor equivalents often use cheaper quality base fluids and components. In such cases, the resulting blend will often acquire the characteristics of the lower quality base stock. For example, if a mineral fluid is mixed with synthetic base fluids, it can lead to poorer properties for the blend.

Another impact to quality as a result of mixing is a lower flashpoint or auto-ignition temperature. This increases the fluid volatility, which can impact fluid carryover or operational efficiency.

More importantly, many lubricant suppliers also make their own base fluids. Due to this, their lubricants will predominantly contain the base fluids that they manufacture. Such ‘force-fitting’ leads to a ‘generic’ lubricant that is unlikely to meet the exacting requirements of an
application like customized Quincy Compressor fluids would.

2. Incompatibility of Base Fluids

Not all base fluids are necessarily compatible with each other. Some base fluids may interact over a period of time resulting in phase separation or air entrainment that is deleterious to the system. Quincy Compressor sells one of the widest ranges of ISO viscosity grades for each application. But many suppliers don’t offer this flexibility.

This means that the user will have to ‘make-do’ with the closest viscosity offered by the supplier. This is risky because mixing Quincy Compressor’s fluid with a lower viscosity could lead to loss of the lubricant film, while mixing with higher viscosity fluids can lead to loss of efficiency or create drag.

Additionally, in some cases, the base fluid from the competitor may be totally incompatible with the Quincy Compressor lubricant. In such situations even traces of the third-party products can cause catastrophic system failure.

From a longevity perspective, maintaining the proper viscosity across a range of compressor operating temperatures is one of the most important characteristics to obtain maximum airen life. Quincy Compressor’s factory-filled fluids have been carefully engineered to maintain the proper viscosity that the Quincy’s airen engineers desire and at the operating temperature of a Quincy compressor. The use of substandard fluids risks not only reduced bearing life, but also reduced energy efficiency and compressor output due to improper sealing between the mating rotors.

3. Incompatibility and Solubility Issues with Additives

As noted before, Quincy Compressor custom designs its formulations to meet specific needs of the Quincy rotary screw airen. In contrast, many suppliers use ‘off-the-shelf’ additive packages to develop their formulations. Such additive packages are designed to meet ‘general’ needs of various applications ranging from hydraulics to gears to compressors!

Often, generic additive packages may contain dispersants and detergents that can lead to water absorption. There is also a likelihood that the additives may interact with the Quincy Compressor fluid additives resulting in precipitation. Unfortunately, additive compatibility and its impact may not be evident easily since some interactions may only manifest themselves over a long period.

4. Performance Issues

Foaming: Quincy Compressor products are developed to prevent foaming. Certain mixtures or components from third-party suppliers can contain additives that may overpower the ability of Quincy’s fluids to control foaming, resulting in loss of performance.

Water Absorption: Commercial additive packages often contain products like detergents or other components that can make the formulation develop affinity for water and result in system corrosion. Other than viscosity, the second most important factor for maximizing airen life is the control of water. The use of fluids not approved by Quincy Compressor’s engineering team risks shortened airen life and increased cost of ownership.

Protect Your Air System

The problems above should not be undermined in any case, but especially if your supplier lacks adequate quality systems and support staff or state-of-the-art laboratories to provide continued technical support. This is because you, as the customer, are unlikely to obtain troubleshooting help should operational problems arise.

High quality demands high vigilance. Stay true to your branded warranty fluids to enjoy the maximum performance of your equipment. Questions? Visit online at www.quincycompressor.com to locate your distributor or post a question on Quincy’s facebook page.