A2L System Evacuation Technical Bulletin

The TEZ8 vacuum pump is compatible to use with systems that utilize A2L refrigerants. Due to the mildly flammable nature of A2L refrigerants, it is important to ensure proper technical training prior to handling these refrigerants. Some jurisdictions may require special licensing or certification before handling flammable refrigerants. Additional regulations or guidelines may be required by your local, state, or federal agencies. Check your local occupational health and safety codes.

Proper precautions should be followed when servicing or evacuating a system that contains A2L refrigerants.

These precautions include, but are not limited to the following:

- Always verify that the vacuum pump is operating normally before performing an evacuation. If you suspect the vacuum pump may have an issue it must be serviced by an Appion Factory Service Center.
- A temporary flammable zone should be created with a 3-meter perimeter around the work area.
- Place “No Smoking”, “Do Not Enter”, and any other appropriate warning signs in the area.
- A CO2 or dry powder-type fire extinguisher should be available within the work area.
- Use a suitable flammable gas detector to monitor the air in the work area for refrigerant gas concentrations.
- Ensure adequate ventilation of the area.
- Service equipment should be connected to and disconnected from a power source outside of the flammable zone.
- Properly ground the vacuum pump, hoses, system, and other elements to prevent static buildup.
- Do not reset the service equipment circuit breaker unless power has been removed from the equipment or the area is free of ignitable concentrations.
- Disable and lock off the power to the system being serviced.
- **Do not mix A2L refrigerants with air**. All precautions must be taken to eliminate the mixing of air with flammable refrigerants.
- The system should be purged with oxygen-free dry nitrogen (OFDN) after refrigerant recovery and prior to evacuation. Do not use compressed air or oxygen.

Always use “best practices” when it comes to safety and follow all proper training procedures!

Technical Bulletin

www.AppionTools.com

Knurled Fittings Are For Hand-Tightening

A **knurled** metal surface is impressed with ridges or serrations which provide a rough surface that aids in gripping. **A knurled cap or fitting should only be tightened by hand**. Tools should not be used on a knurled surface.

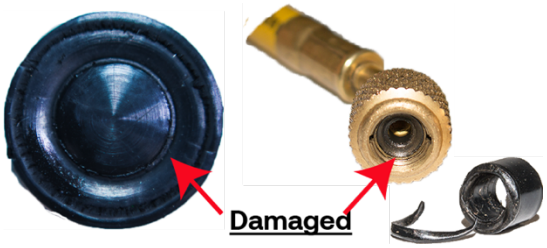
Knurled port caps on a vacuum pump should only be tightened by hand. DO NOT use tools to tighten a knurled port cap. Using tools on a knurled port cap may over tighten the cap and damage the cap or gasket, **creating a leak**. Additional damage may occur with severe over-tightening, where connected fittings are broken free of their vacuum-tight seal.

Apply a small drop of vacuum oil, vacuum grease, or blue nylog to threaded fittings. **Be careful NOT to clog the fittings with the sealing agent.** Inspect the condition of the fitting seals before tightening to ensure there is no leakage. **Blue nylog is vacuum-rated and should be used in vacuum applications.**

Service Tip: Do NOT use tools on knurled caps, knurled swivel female flare hose fittings, or other items with knurled surfaces. A knurled surface implies that an item should be tightened by hand and may be damaged if tools are used on it.

Incorrect

*Using tools on a knurled surface could damage the item **and may cause leaks**.*



Correct

Always hand-tighten caps, fittings, and other items with knurled surfaces.

Appion Inc
2800 S Tejon St, Englewood, CO 80110 USA

303-937-1580 | Support@AppionTools.com

Safety Alert

Safely Handling AC/R Service Tools

AC/R service tools and equipment, such as recovery machines, refrigerant hoses, and valve core removal tools, are for use by technicians that are **professionally trained and certified** in the safe handling of refrigerant, and safe refrigerant recovery techniques.

It may go without saying, but the following tips are important for your safety:

- Do not operate or work with temporary connections involving refrigerant when fatigued or under the influence of alcohol or drugs.
- Never defeat the safety features of Appion tools and equipment.
- Do not operate Appion tools with missing, broken, or unauthorized parts. Remove broken or altered equipment from service immediately.

PERSONAL PROTECTIVE EQUIPMENT AND MSDS

⚠ WARNING When working with refrigerants, always use the appropriate Personal Protective Equipment (PPE), including eye and hand protection. Basic safety precautions should always be followed to reduce the risk of personal injury.

⚠ WARNING Read all Material Safety Data Sheets (MSDS) for any compounds that you are likely to encounter during operation. Failure to do so could lead to injury or death.

USE ALL REASONABLE PRECAUTIONS DURING USE

Some situations may require additional safety precautions to ensure your personal safety. Follow all OSHA guidelines and industry standard safety precautions before, during and after use.

⚠ DANGER

REFRIGERANT EXPOSURE CAN BE HARMFUL OR TOXIC

WHAT CAN HAPPEN	HOW TO PREVENT IT
Refrigerant vapors may be harmful or toxic when inhaled.	Work in well ventilated areas. In enclosed areas, mechanical ventilation should provide at least four air changes per hour.
Temporary connections, such as hoses or ball valves, may fail and allow refrigerant to escape, leading to unexpected refrigerant exposure.	Always wears gloves and eye protection when connecting and removing service tools and equipment from systems, even when you do not expect high volumes of refrigerant.

Appion Inc
2800 S Tejon St, Englewood, CO 80110 USA

303-937-1580 | Support@AppionTools.com