Frick® PureOil™ To Optimize The Performance Of Your Frick Equipment

FEATURES AND BENEFITS

Johnson Controls – Frick® has manufactured refrigeration compressors for all types of applications and refrigerants since 1882. Continuous research backed by years of experience has resulted in Frick oils that meet the demands of all refrigeration and gas compression applications. We offer a wide range of oils that address your specific compressor lubrication and budget requirements. Our rigid specifications ensure that all Frick oils are produced to the highest quality standards for premium performance and durability.

Frick compressor oils deliver:

- Highest quality, ensuring lubricity at designed operating temperatures and pressures
- Chemically stable at designed operating conditions
- Resistant to high temperature breakdown
- High flash points
- Low moisture content
- Low pour points to resist congealing in condensers and evaporators
- Exceptionally wax free
- Formulated to proper viscosities for specific applications

Frick oils offer superior performance lubrication to match your application. Synthetic oils offer superior breakdown characteristics, better lubricity, extended viscosities, and reduced oil change intervals.

By maintaining these high standards of quality and product excellence, Frick oils have won the approval of the entire refrigeration industry. Since few end-users have the resources to analyze the contents of oil and test their durability, it is a good engineering practice to use oil that is backed by the experience of the leading refrigeration equipment manufacturer.

COMPRESSOR OIL APPROVAL

Oil and its additives play a critical role in gas compressor operation. Frick WILL NOT APPROVE non-Frick oils for use with Frick compressors. This is because it is not possible for us to test all oils offered in the market, nor monitor oil composition over time as we can with our own products.

We understand that compressor owners and operators may sometimes elect to use non-Frick brands of oil. When doing this they take some portion of the responsibility for compressor performance and reliability. Frick cannot accept responsibility for compressor reliability, system performance, oil carryover, oil foaming or other oil related problems in systems using non-Frick oils.

In the event of a lubrication related system problem involving non-Frick oils, Frick may deny warranty after reviewing field data and circumstances related to the problem. In the event of a lubrication related compressor failure involving non-Frick oils, Frick will inspect any failed parts and if the failure is deemed to be caused by improper oil performance, may deny warranty.

We recognize there are many good compressor oils on the market. Choosing oil for a particular application involves consideration of many aspects of the lubricant, and how it and its additive package will react in the compressor unit.

This is often a complex choice that ultimately depends on a combination of field experience, lab and field-testing, and knowledge of lubricant chemistry. For the reasons stated above, Frick will stand behind its products when Frick oil is used. (From NS-34-02; October 25, 2002; JWP)

Frick PureOil™ To Optimize The Performance Of Your Frick® Equipment

Regularly scheduled analysis of your Frick compressor's oil is a valuable aid in assessing its internal mechanical condition. The presence of harmful acids, corrosion causing water, corrosion products, and metal particles indicating abnormal parts wear, are all detected by chemical analysis. Oil analysis can identify the need to tear down and visually inspect specific compressor parts, so conditions can be remedied during scheduled maintenance before they become expensive-to-repair problems. Using this proactive approach, you can extend the life of your equipment, minimize unplanned downtime and lower your operating costs while at the same time keeping your system at its peak performance.

When you choose genuine Frick oil analysis kits, you're working with an industry-trusted provider who has the ability to fully analyze the contents of your oil and provide a detailed report containing full spectrochemical analysis along with viscosity, water, and total acid content. All reports are available electronically with a very short turnaround time! Remember to order part number - 333Q0001853.

FRICK AMMONIA COMPRESSOR OIL SPECIFICATIONS

Frick® #3

Excellent medium/heavy-weight, hydrogenated mineral-based oil for ammonia refrigerant. Frick #3 oil has proven its versatility in thousands of reciprocating and screw compressor applications worldwide over the past 30 years. It is specially formulated with base oil and additives to meet our specifications. Frick #3 oil offers greater thermal stability than naphthenic products and better lubricity and viscosity in ammonia applications, and is a cost-effective alternative to most ammonia refrigerant applications. Recommended evaporator temperatures are -50°F and above.

Frick® #9

Premium semisynthetic hydro-treated oil designed for ammonia applications. Frick #9 oil provides high thermal stability for improved breakdown characteristics and extended service intervals. Frick #9 oil is less volatile and less soluble in ammonia resulting in decreased oil foaming for better compressor lubrication and lower oil carryover from the oil separator. This oil's higher viscosity results in less bearing wear than pure mineral based naphthenic oils. Recommended evaporator temperatures are -50°F and above. Frick #9 is registered as a lubricant where there is no possibility of food contact (H2) in and around food processing areas.

Frick® #9ST

Similar to Frick #9 but with additional seal treating properties. Frick #9ST is specially blended to condition O-rings in ammonia systems changing from naphthenic oils to higher quality paraffinic oils. This oil helps extend the life of elastomers and reduce leaks.

Frick® #11

Is registered by NSF as an (H1) lubricant suitable for incidental contact in and around food processing areas. Frick #11 is not suitable to retrofit systems that have operated on mineral oil due to risk of O-ring shrinkage. Recommended for evaporator temperatures of -80°F and above. NSF H1 rated.

Frick® #11ST

A premium version of Frick #11, blended to condition O-rings in ammonia systems that have operated on mineral oils. This product is also compatible with mineral oils and equipment designed for mineral oils. The seal treatment (ST) in the formulation reduces the risk of seal leakage caused by O-ring shrinkage in retrofit of systems that have operated on mineral oils. Frick #11ST is recommended for evaporator temps of -70°F and above, and meets the requirements for a lubricant where there is no possibility of food contact (H2) in and around food processing areas.

Frick® #11FST

Is the only premium H1 rated Food Grade suitable oil for use in new systems, but more importantly, suitable for retrofit of systems that have operated on mineral oils. Use without the risk of leakage of ammonia and oil due to O-ring shrinkage, while still maintaining a NSF H1 rating. It has a higher viscosity grade and is recommended for evaporator temperatures of -65°F and above. NSF H1 rated.

HCFC REFRIGERANT OILS

Frick® #2A

Excellent medium-weight, mineral-base oil for halocarbon refrigerants. Frick #2A oil is refined free of waxes that may congeal or precipitate at low evaporator temperatures. This oil has a naturally low pour point requiring no pour point depressants and a natural affinity to halocarbon refrigerants for good oil return and heat transfer. It is recommended for evaporator temperatures -50°F and above. **Frick® #2A** oil offers the lowest, first-cost alternative for halocarbon refrigerant applications.

HFC REFRIGERANT OILS

Frick® polyolester (POE)

POE-based synthetic lubricants are especially suited for HFC refrigerants, R-134A, R-507, R-404 and the new refrigerant blends. Frick synthetic oils are custom blended with additives for oxidation inhibition, corrosion protection, defoaming, and antiwear. Synthetic oils have extremely low pour points which make them specially suited for low temperature refrigeration applications. Frick synthetic oil's high thermal stability resists breakdown and extends service intervals. Consult factory for application assistance.

Frick® #13

Premium quality ester-based synthetic oil. Frick #13 oil is recommended for HFC refrigerant.

Frick® #13B

Premium quality ester-based synthetic oil. Frick #13B oil is recommended for HFC refrigerant applications where higher viscosity is required. Particularly suited for variable speed drives, high evaporator temperatures, and high refrigerant dilution of the oil.

FRICK COMPRESSOR OILS					
OIL TYPE	RECOMMENDED APPLICATIONS FOR FRICK REFRIGERANT OILS(1)		ORDERING INFORMATION		
	REFRIGERANT(2)	SUCTION TEMPERATURE °F	5 GALLON	55 GALLON	330 GALLON TOTE (3)
#2A	HCFC	-50°+	111Q0550019	111Q0550020	333Q0001866
#3	R-717	-35°+	111Q0550001	111Q0550010	333Q0001861
#9	R-717	-50°+	333Q0000850	333Q0000849	333Q0001862
#9ST	R-717	-50°+	333Q0001905	333Q0001904	–
#11	R-717	-80°+	333Q0000852	333Q0000851	333Q0001863
#11ST	R-717	-70°+	333Q0001907	333Q0001906	–
#11FST*	R-717	-65°+	see notes below	see notes below	–
#13	HFC	N/A	333Q0001253	333Q0001254	–
#13B	HFC	N/A	333Q0001938	333Q0001937	–
SHIPPING WEIGHT:			**40 lbs**	**466 lbs**	2,720 lbs

* #11FST requires special ordering and extended leadtime. Please contact factory for additional information.

OIL ANALYSIS KIT 333Q0001853
TUBE OF ODP MOTOR GREASE 333Q0001860

Notes:

1. For specific application questions, consult factory.
2. For gases and refrigerants not listed, consult factory.
3. Reusable Drain Valve for Tote - 333Q0001865

Compatibility

Frick oils are compatible with the standard materials utilized in refrigeration systems. Changing from one type of oil to another on equipment which has operated in the field may cause shrinkage of elastomers and could cause leaks. Replacement of leaking elastomers is required if this occurs. Consult factory for details.

Safety Data Sheets

Safety Data Sheets (SDS) are available from Baltimore Parts Center, phone 800-336-7264.

FRICK OIL PHYSICAL PROPERTIES (1)								
OIL TYPE	OIL(2) GROUP	@ 40 (104)	@ 100 (212)	VISCOSITY SUS @ 100°F	VISCOSITY INDEX ASTM D2270	POUR POINT °F MAX	FLASH POINT °F MAX	SERVICE TEMP. °F
#2A	M	62	6.9	338	42	-35	370	300
#3	M	70	9.1	365	105	-22	465	350
#9	M	62.9	8.5	327	106	-38	440	350
#9ST	M	67	9.2	348	114	-36	465	350
#11	PAO	48	7.9	241	139	<-76	514	350
#11ST	PAO	45.3	7.5	233	-	-60	485	350
#11FST	PAO	68	10.1	340	-	-58	495	350
#13	POE	64	8.9	332	114	-45	511	350
#13B	POE	127.7	12.7	675	-	-27	485	350

Notes:
1. Physical property values are not intended for use in preparing specifications.
2. Base oil - not considering various special treatments and additives.

***Key:**
M – Mineral
PAO - Polyalphaolefin synthetic
POE – Polyolester

⚠WARNING

DO NOT MIX OILS of different brands, manufacturers,or types. Mixing of oils can cause excessive oil foaming, nuisance oil level cutouts, oil pressure loss, gas or oil leakage and catastrophic compressor failure.

NOTICE

The Frick® oil charge shipped with the unit is the best suited lubricant for the conditions specified at the time of purchase.

For more information, please contact the Frick Parts Center Customer Service Group:
800-336-7264 or e-mail cg-baltimore-bpc@jci.com

Frick® INDUSTRIAL REFRIGERATION GENUINE PARTS

Johnson Controls