

Oil Recommendations for Food Grade Applications

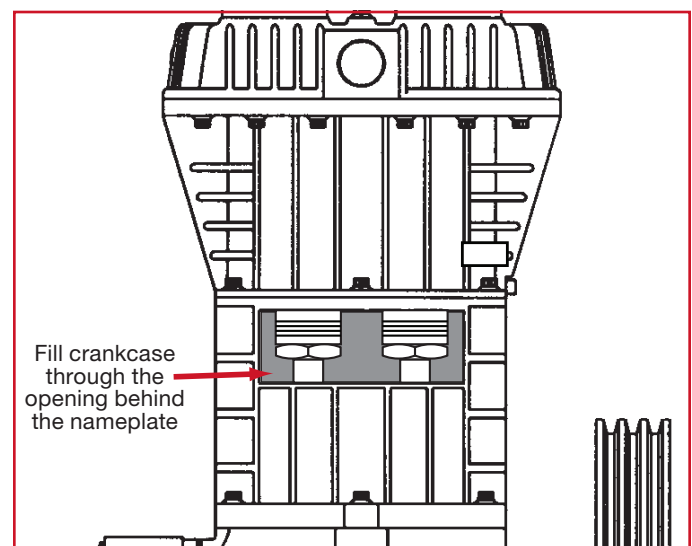
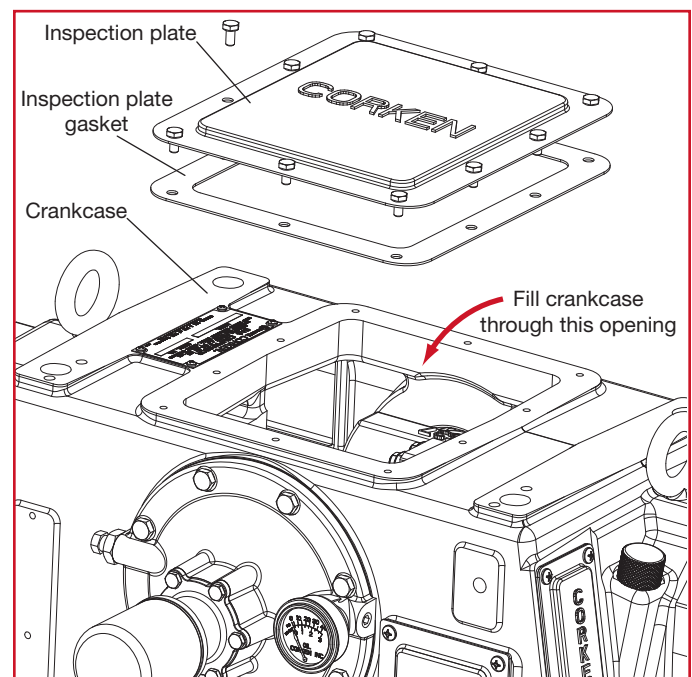
Oils used in “Food Grade” service fall under much more restrictive rules than a typical industrial lubricating oil. The various requirements for food grade oils are outlined by NSF, FDA Title 21, Orthodox Union (Kosher, Pareve), IFANCA (Halal), and others. The most prevalent requirement seems to be NSF H1 which dictates the requirements of lubricants that may have incidental food contact.

All lubricating oils consist of a base oil plus multiple additives that improve various properties of the base oil. For food safety reasons, many additives used in industrial lubricants are not permissible for use in food grade service. Thus, food grade oils generally have lesser lubricating properties or require more frequent oil changes.

Like industrial oils, the basis for a food grade oil can be either a conventional mineral oil or a synthetic oil. Since synthetic-based oils have significantly better lubricating properties and service life than mineral-based oils, Corken recommends using a synthetic food grade oil in applications requiring food grade oil. The inherent properties of the synthetic-based oil help overcome additives that may be less than ideal. Some synthetic food-grade oils perform better than non-food grade industrial mineral oils.

Due to the high viscosity index and low pour point of synthetic oils, most Corken compressor operators can use an ISO 100 grade oil year-round. Those in cooler climates may need an ISO 68 oil with a lower viscosity.

All Corken compressors are tested at the factory using a standard industrial (non-food grade) mineral oil. The mineral oil is drained, but some residual oil will always remain inside the crankcase. If the end user intends to use any synthetic oil (or a synthetic food grade oil in particular), the crankcase should be flushed with the new oil.



Basic steps for flushing oil:

- Confirm that the crankcase is drained to the lowest extent possible.
- Remove and drain the oil filter or replace with a new one (part number 4225). NOTE: The Corken model 91 compressor does not use an oil filter.
- Add the proper amount of new synthetic food grade oil to the compressor.
- Run the compressor five minutes to circulate the new synthetic oil.
- Drain the synthetic oil and discard since it will not be reused.
- Refill the crankcase with the proper amount of new synthetic food grade oil.
- Confirm proper oil level.

Corken Gas Compressors

Corken Crankcase Oil Recommendations (Synthetic Food Grade Oils)					
Ambient Temperature °F (°C) ¹	Oil Product	Viscosity ISO Grade ²	Viscosity Index ²	Pour Point °F (°C) ²	Registrations/Compliance/Certifications ²
10 to 100 (-12 to 38)	Mobil SHC Cibus 100	100	143	-49 (-45)	NSF H1, Kosher, Halal, FDA 21 CFR 178.3570, ISO 22000, ISO 21469
	Royal Purple Poly-Guard FDA 100	100	136	-38 (-39)	NSF H1, FDA 21 CFR 178.3620
	Ultrachem Omnilube 5131	100	145	-38 (-39)	NSF H1, FDA 21 CFR 178.3570, Halal, Kosher
	Summit (Kluber) R Series R300	100	149	-60 (-51)	NSF H1, Kosher, Halal, ISO 21469
	Petro-Canada Purity FG Synthetic 100	100	147	-71 (-57)	NSF H1, FDA 21 CFR 178.3570, Kosher, Pareve, Halal
-20 to 80 (-29 to 27)	Mobil SHC Cibus 68	68	140	-52 (-47)	NSF H1, Kosher, Halal, FDA 21 CFR 178.3570, ISO 22000, ISO 21469
	Royal Purple Poly-Guard FDA 68	68	140	-38 (-39)	NSF H1, FDA 21 CFR 178.3620
	Citgo Clarion CompressorGuard 68	68	135	-65 (-54)	NSF H1, FDA 21 CFR 178.3570

NOTES:

¹ Consult Corken for Oil Recommendations in very hot climates—ambient temperatures consistently above 100°F (38°C)

² Information stated by oil manufacturers at the time of publication. See oil manufacturer's product data sheets for additional details.



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