CLAIMS

What is claimed is:

1. A marine gas oil composition comprising 1.0 vol% to ~~25~~ 5 vol% of a lubricant base stock, the lubricant base stock comprising a T5 distillation point of 350°C or more, a kinematic viscosity at 100°C of ~~3.0~~ 14 cSt to 40 cSt ~~or more~~, and a viscosity index of 80 or more, the marine gas oil composition comprising a density at 15°C of 0.81 g/cm^3 to 0.90 g/cm^3 ~~(or 0.81 g/cm^3 to 0.89 g/cm^3)~~, a calculated cetane index of 40 or more, and a kinematic viscosity at 40°C of 2.0 cSt to 11.0 cSt ~~(or 2.0 cSt to 6.0 cSt)~~.

2. The marine gas oil composition of Claim 1, wherein 50 vol% or more of the lubricant base stock has a distillation point of 380°C or more ~~(or 400°C or more)~~; or wherein the lubricant base stock comprises a T5 distillation point of 380°C or more; or a combination thereof.

3. The marine gas oil composition of any of the above claims, wherein the lubricant base stock comprises a hydroprocessed deasphalted oil, or wherein the lubricant base stock comprises 50 wt% or more naphthenes, or a combination thereof.

~~4. The marine gas oil composition of any of the above claims, wherein the lubricant base stock comprises a kinematic viscosity at 100°C of 3.0 cSt to 6.0 cSt; or wherein the lubricant base stock comprises a kinematic viscosity at 40°c of 14 cSt to 40 cSt; or a combination thereof.~~

~~5. The marine gas oil composition of any of Claims 1–3, wherein the marine gas oil comprises 1.0 vol% to 12 vol% of the lubricant base stock, the lubricant base stock optionally comprising a kinematic viscosity at 100°C of 6.5 cSt to 12 cSt, a kinematic viscosity at 40°C of 32 cSt to 160 cSt, or a combination thereof.~~

~~6.~~4. The marine gas oil composition of any of Claims 1– 3, wherein the marine gas oil comprises ~~1.0 vol% to 5.0 vol% of the lubricant base stock, the lubricant base stock optionally comprising a kinematic viscosity at 100°C of 14 cSt to 40 cSt,~~ a kinematic viscosity at 40°C of 115 cSt to 875 cSt~~, or a combination thereof~~.

~~7.~~5. The marine gas oil composition of any of the above claims, wherein the lubricant base stock comprises a viscosity index of 80 to 120.

~~8.~~6. The marine gas oil composition of any of Claims ~~1–6~~ 1–4, wherein the lubricant base stock comprises a viscosity index of greater than 120.

~~9.~~7. The marine gas oil composition of any of the above claims, wherein the lubricant base stock comprises 1 wt% or less of aromatics, or wherein the marine gas oil composition is clear and bright according to Procedure 1 of ASTM D4176, or a combination thereof.

~~10.~~8. The marine gas oil composition of any of the above claims, wherein the marine gas oil composition comprises a D86 distillation curve that is monotonically increasing.

~~11.~~9. The marine gas oil composition of any of Claims ~~1–9~~ 1–7, wherein the marine gas oil composition comprises a D86 distillation curve that does not include an inversion of greater than 1°C.

~~12.~~10. The marine gas oil composition of any of the above claims, wherein the marine gas oil composition comprises a sulfur content of 1000 wppm or less.

~~13.~~11. A method for operating an engine, the method comprising operating the engine using a fuel comprising the marine gas oil composition of any of Claims ~~1–12~~ 1–10, the engine optionally comprising a marine diesel engine.

~~14.~~12. The method of Claim 13, the method further comprising operating the engine at a load of 75% or more.

~~15.~~13. The method of Claim 13, the method further comprising operating the engine at a load of 30% or less.

14. A marine gas oil composition comprising 1.0 vol% to 25 vol% of a lubricant base stock, the lubricant base stock comprising a T5 distillation point of 350°C or more, a kinematic viscosity

at 100°C of 3.0 cSt to 6.0 cSt, a kinematic viscosity at 40°C of 14 cSt to 40 cSt, and a viscosity index of 80 or more, the marine gas oil composition comprising a density at 15°C of 0.81 g/cm^3 to 0.90 g/cm^3, a calculated cetane index of 40 or more, and a kinematic viscosity at 40°C of 2.0 cSt to 11.0 cSt.