CLAIMS:

1. A Group II lube base stock comprising from greater than or equal to 95 wt. % saturates, and less than 5 wt. % aromatics, and having an aromatic performance ratio between 1.5 and 3.5 and wherein the UV absorptivity at a wavelength between 280 nm and 320 nm is between 0.02 and 0.065 l/g-cm.

2. The lube base stock of claim 1, wherein the kinematic viscosity at 100°C is between 4.0 and 6.0 cSt.

3. The lube base stock of claim 1, wherein the UV absorptivity at a wavelength between 280 nm and 320 nm is between 0.03 and 0.05 l/g-cm.

4. The lube base stock of claim 1, wherein the kinematic viscosity at 100°C is between 10.0 and 16.0 cSt.

5. The lube base stock of claim 1 further including naphtheno-aromatics and, wherein the 3-4+ ring species of the aromatics and the naphtheno-aromatics ranges from 20 to 85 wt. % of the total aromatics and the naptheno-aromatics.

6. The lube base stock of claim 5, wherein the 3-4+ ring species of the aromatics and the naphtheno-aromatics ranges from 30 to 75 wt. % of the total aromatics and the naphtheno-aromatics.

7. The lube base stock of claim 6, wherein the 3-4+ ring species of the aromatics and the naphtheno-aromatics ranges from 40 to 65 wt % of the total aromatics and the naphtheno-aromatics.

8. The lube base stock of claim 1, wherein the Viscosity Index of the lube base stock is from 80 to 120.

9. The lube base stock of claim 1, wherein the Viscosity index of the lube base stock is from 100 to 120.

10. The lube base stock of claim 1 having a Noack volatility of less than 2 wt. % for a viscosity of at least 10 cSt.

11. The lube base stock of claim 1 having a Noack volatility of less than 1 wt. % for a viscosity of at least 10 cSt.

12. The lube base stock of claim 1 having a pour point less than -20°C.

13. The lube base stock of claim 1 having a pour point less than -30°C.

14. The lube base stock of claim 1 having a pour point less than -40°C.

15. A lubricating oil including the lube base stock of claim 1 and an effective amount of one or more one or more lubricant additives.

16. The lubricating oil of claim 15, wherein the one or more one or more lubricant additives are selected from the group consisting of antioxidants, stabilizers, detergents, dispersants, demulsifiers, antioxidants, anti-wear additives, viscosity index modifiers, pour point depressants, friction modifiers, anti-foam additives, defoaming agents, corrosion inhibitors, wetting agents, rust inhibitors, copper passivators, metal deactivators, extreme pressure additives, and combinations thereof.

17. The lubricating oil of claim 15, wherein the RPVOT per the D2272 test method yields a time to a 25.4 psi pressure drop of between 820 to 1,000 minutes.

18. The lubricating oil of claim 15, wherein the RPVOT per the D2272 test method yields a time to a 25.4 psi pressure drop of between 875 to 1,000 minutes.

19. The lubricating oil of claim 15, wherein the RPVOT per the D2272 test method yields a time to a 25.4 psi pressure drop of between 875 to 950 minutes.

20. A method for producing a diesel fuel and a Group II base stock, comprising:
contacting a feedstock comprising greater than or equal to 25 wt % light cycle

oil with a hydrotreating catalyst under first effective hydrotreating conditions to produce a hydrotreated effluent:

fractionating the hydrotreated effluent to produce at least a first diesel product fraction and a bottoms fraction;

dewaxing the bottoms fraction under effective catalytic dewaxing conditions, the dewaxing catalyst including at least one non-dealuminated, unidimensional, 10-member ring pore zeolite, and at least one Group VI metal, Group VIII metal or combination thereof;

hydrocracking the bottoms fraction under effective hydrocracking conditions; and

fractionating the hydrocracked, dewaxed bottoms fraction to form at least a second diesel product fraction and a Group II lubricant base stock product fraction,

wherein the Group II lubricant base stock product fraction includes greater than or equal to 95 wt. % saturates, and less than 5 wt. % aromatics, and has an aromatic performance ratio between 1.5 and 3.5 and wherein the UV absorptivity at a wavelength between 280 nm and 320 nm is between 0.02 and 0.065 l/g-cm.

21. The method of claim 20, wherein the effective hydrotreating conditions include a temperature of from 200°C to 450°C, hydrogen partial pressure of from 1.8 MPa to 34.6 MPa (250 psi to 5000 psi), a liquid hourly space velocity of from 0.2 to 10 hr^{-1}, and a hydrogen circulation rate of from 35.6 to 1781 m^3/m^3 (200 to 10,000 scf/B).

22. The method of claim 20, wherein the effective hydrocracking conditions include a temperature of 200°C to 450°C, a hydrogen partial pressure of 250 psig to 5000 psig (1.8 MPa to 34.6 MPa), a liquid hourly space velocity of 0.2 h^{-1} to 10 h^{-1}, and a hydrogen treat gas rate of 35.6 m^3/m^3 to 1781 m^3/m^3 (200 SCF/B to 10,000 SCF/B).

23. The method of claim 20, wherein the dewaxing catalyst comprises a molecular sieve having a SiO_2:Al_2O_3 ratio of 200:1 to30:1 and comprises from 0.1 wt % to 3.33 wt % framework Al_2O_3 content, the dewaxing catalyst including from 0.1 to 5 wt % platinum.

24. The method of claim 23, wherein the molecular sieve is EU-1, ZSM-35, ZSM-11, ZSM-57, NU-87, ZSM-22, EU-2, EU-11, ZBM-30, ZSM-48, ZSM-23, or a combination thereof.

25. The method of claim 24, wherein the molecular sieve is ZSM-48, ZSM-23, or a combination thereof.

26. The method of claim 20, wherein the dewaxing catalyst comprises at least one low surface area metal oxide, refractory binder, the binder being silica, alumina, titania, zirconia, or silica-alumina.

27. The method of claim 26, wherein the metal oxide, refractory binder further comprises a second metal oxide, refractory binder different from the first metal oxide, refractory binder.

28. The method of claim 27, wherein the dewaxing catalyst comprises a micropore surface area to total surface area ratio of greater than or equal to 25%, wherein the total surface area equals the surface area of the external zeolite plus the surface area of the binder, the surface area of the binder being 100 m^2/g or less.

29. The method of claim 20, wherein the hydrocracking catalyst is a zeolite Y based catalyst.

30. The method of claim 29, wherein the effective dewaxing conditions include a temperature of from 200°C to 450°C, a hydrogen partial pressure of from 1.8 MPa to 34.6 MPa (250 psi to 5000 psi), a liquid hourly space velocity of from 0.2 to 10 hr^{-1}, and a hydrogen circulation rate of from 35.6 to 1781 m^3/m^3 (200 to 10,000 scf/B).

31. The method of claim 20, wherein the total conversion of the hydrocracked, dewaxed bottoms relative to the feedstock is 70% to 90%.