WHAT IS CLAIMED IS:

1. A process for dewaxing a hydrocarbon feed to produce an isomerized product, comprising:

contacting a C_{10+} hydrocarbon feed with a catalyst and hydrogen under isomerization conditions to produce an isomerized product, the catalyst comprising:

a molecular sieve having an MTT framework topology and a crystallite diameter of about 200 to about 400 Å in the longest direction,

at least one metal selected from the group consisting of Ca, Cr, Mg, La, Na, Pr, Sr, K and Nd, and

at least one Group VIII metal.

2. The process of claim 1 wherein the MTT molecular sieve is selected from the group consisting of SSZ-32, ZSM-23, EU-13, ISI-4, and KZ-1.

3. The process of claim 1, wherein said feed is selected from the group consisting of hydrotreated or hydrocracked gas oils, hydrotreated lube oil raffinates, bright stocks, lubricating oil stocks, synthetic oils, foots oils, Fischer-Tropsch synthesis oils, high pour point polyolefins, normal alphaolefin waxes, slack waxes, deoiled waxes, microcrystalline waxes, and mixtures thereof.

4. The process of claim 1, wherein Group VIII metals are selected from the group consisting of platinum and palladium, and mixtures thereof.

5. The process of claim 1 wherein said contacting is carried out at a temperature of from 232 - 427 °C (450 - 800°F), and a pressure in the range from about 103.4 kPa gauge (15 psig) to about 20,685 kPa gauge (3000 psig).

6. The process of claim 5 wherein said pressure is in the range from about 689.5 kPa gauge (100 psig) to about 17237 kPa gauge (2500 psig).

7. The process of claim 5, wherein the liquid hourly space velocity during contacting is from about 0.1 to about 20.

8. The process of claim 7, wherein the liquid hourly space velocity is from 0.5 to about 5.

9. The process of claim 1 wherein the hydrocarbon feed is hydrotreated prior to isomerization at a temperature in the range from 163 to 427 °C (325 to 800° F).

10. The process of claim 1 , further comprising a hydrofinishing step following isomerization.

11. The process of claim 10 wherein hydrofinishing is carried out at a temperature in the range from about 163 to about 310 °C (325 to about 590° F) and a pressure in the range from about 2068 kPa gauge (300 psig) to about 20,685 kPa gauge (3000 psig).

WHAT IS CLAIMED IS:

1. A process for dewaxing a hydrocarbon feed to produce an isomerized product, the feed including straight chain and slightly branched paraffins having 10 or more carbon atoms, comprising contacting the feed under isomerization conditions in the presence of hydrogen with a catalyst comprising a molecular sieve having MTT framework topology and having a crystallite diameter of about 200 to about 400 Angstroms in the longest direction, the catalyst containing at least one metal selected from the group consisting of Ca, Cr, Mg, La, Na, Pr, Sr, K and Nd and at least one Group VIII metal.

2. The process of claim 1 wherein the MTT molecular sieve is selected from the group consisting of SSZ-32, ZSM-23, EU-13, ISI-4, and KZ-1.

3. The process of claim 1, wherein said feed is selected from the group consisting of hydrotreated or hydrocracked gas oils, hydrotreated lube oil raffinates, bright stocks, lubricating oil stocks, synthetic oils, foots oils, Fischer-Tropsch synthesis oils, high pour point polyolefins, normal alphaolefin waxes, slack waxes, deoiled waxes, microcrystalline waxes, and mixtures thereof.

4. The process of claim 1, wherein Group VIII metals are selected from the group consisting of platinum and palladium, and mixtures thereof.

5. The process of claim 1 wherein said contacting is carried out at a temperature of from 232 – 427 °C (450 - 800°F), and a pressure in the range from about 103.4 kPa gauge (15 psig) to about 20,685 kPa gauge (3000 psig).

6. The process of claim 5 wherein said pressure is in the range from about 689.5 kPa gauge (100 psig) to about 17237 kPa gauge (2500 psig).

7. The process of claim 5, wherein the liquid hourly space velocity during contacting is from about 0.1 to about 20.

8. The process of claim 7, wherein the liquid hourly space velocity is from 0.5 to about 5.

9. The process of claim 1 wherein the hydrocarbon feed is hydrotreated prior to isomerization at a temperature in the range from 163 to 427 °C (325 to 800° F).

10. The process of claim 1, further comprising a hydrofinishing step following isomerization.

11. The process of claim 10 wherein hydrofinishing is carried out at a temperature in the range from about 163 to about 310 °C (325 to about 590° F) and a pressure in the range from about 2068 kPa gauge (300 psig) to about 20,685 kPa gauge (3000 psig).

12. The process of claim 1 further comprising hydrofinishing of isomerized product.

13. A dewaxing method, comprising isomerization dewaxing a hydrocarbon feed having at least 5 wt% wax over a catalyst to produce two or more isomerized products boiling at 343°C (650°F) or higher, each isomerized product having:

a. a pour point between 0 and -30°C, and

b. a corresponding viscosity index of 95 or higher;

wherein a line fit to a chart of the pour points on an x-axis and the viscosity indexes on a y-axis has a slope of the line for y of zero or less.

14. The dewaxing method of claim 13, wherein the hydrocarbon feed has at least 10 wt% wax.

15. The dewaxing method of claim 13, wherein the hydrocarbon feed has a kinematic viscosity at 100°C of 2.5 mm^2/s or greater.

16. The dewaxing method of claim 13, wherein the catalyst comprises a molecular sieve having MTT framework topology and having a crystallite diameter of about 200 to about 400 Angstroms in the longest direction.

17. The dewaxing method of claim 16, wherein the catalyst further comprises at least one metal selected from the group consisting of Ca, Cr, Mg, La, Na, Pr, Sr, K and Nd.

18. The dewaxing method of claim 17, wherein the catalyst further comprises at least one Group VIII metal.

19. The dewaxing method of claim 13, wherein the two or more isomerized products boiling at 343°C (650°F) or higher have a corresponding viscosity index of 104 or higher.

20. The dewaxing method of claim 13, wherein a yield of the two or more isomerized products boiling at 343°C (650°F) or higher is 90 wt% or greater based on the feed.

21. The dewaxing method of claim 20, wherein the yield is 94 wt% or greater.

22. The dewaxing method of claim 13, wherein the slope of the line is less than -0.05.

23. A dewaxing process, comprising isomerization dewaxing a hydrocarbon feed having at least 5 wt% wax over a catalyst to produce two or more isomerized products boiling at 343°C (650°F) or higher, each isomerized product having:

a. a pour point between 0 and -30°C, and

b. a corresponding viscosity index of 95 or higher;

wherein a line fit to a chart of the pour points on an x-axis and the viscosity indexes on a y-axis has a slope of the line for y of zero or less; and wherein the yield of the two or more isomerized products boiling at 343°C (650°F) or higher is 90 wt% or greater based on the feed.

24. The dewaxing process of claim 23, wherein the molecular sieve has MTT framework topology.

25. The dewaxing process of claim 23, wherein the molecular sieve has a crystallite size of about 200-400 Angstroms.