

Oil		density at 15°C	Viscosity 40°C mm <sup>2</sup> /s	Viscosity 100°C mm <sup>2</sup> /s	viscosity index
GRO Extrem 75W	synthetic	0.91	20	5.2	212
Nils Clutch Trial	synthetic		24.7	7.5	302
Maxima MTL 75Wt -XL		0.86	31.63	5.54	125
Mohican Chief ATF III	synthetic	0.86	33.3	7.1	204
Nulon ATF III synth prem	synthetic	0.8514	33.4	7	179
Putoline GP10		0.877	33.5	5.5	98
Nulon ATF III semi	semi-synth	0.861	33.8	7	175
Shell Spirax S3 ATF MD3		0.864	33.8	7.3	175
Putoline Nano Trans		0.842	34.7	7	168
Castrol Transmax multivehicle	synthetic	0.848	35	7.1	170
Putoline ATF Dexron III		0.865	35.3	7.7	193
Putoline Light Gear		0.87	36	5.84	98
Castrol ATF III		0.855	36	7.2	172
Penrite ATF Dexron III	Full Synthetic	0.848	38	7.9	189
IPONE Dextron 2R	Mineral	0.857	39.5	7.9	176
Nulon ATF III	mineral	0.854	40.28	7.52	156
Motul 75W-80		0.878	58.8	10.1	160
Motul 300V 5W30 4T Factory Line	100% syn	0.855	63.38	11.41	178
Maxima MTL 80Wt -R		0.86	63.45	8.57	125
Penrite 75W-85 Gear Oil		0.873	77	12	152
Silkolene 75W		0.883	79.7	14.34	188
Rock Oil Lite Gear Oil		0.877	86	12	133
Ipone Box X-Trem - gear oil	Full Synthetic	0.854	88.2	14.2	168
Maxima MTL 85Wt -E		0.86	89.29	10.66	135
Ipone Box2 Synthetic Plus	synthetic	0.87	93.8	14	153
Rock Oil GRO Racing Gear Oil	synthetic	0.873	96.5	14	148
Penrite 10W-40	Full Synthetic	0.865	97	15.1	165
Nils Clutch		0.89	104	14	137

**From:** <https://www.machinerylubrication.com/Read/28956/lubricant-viscosity-index>

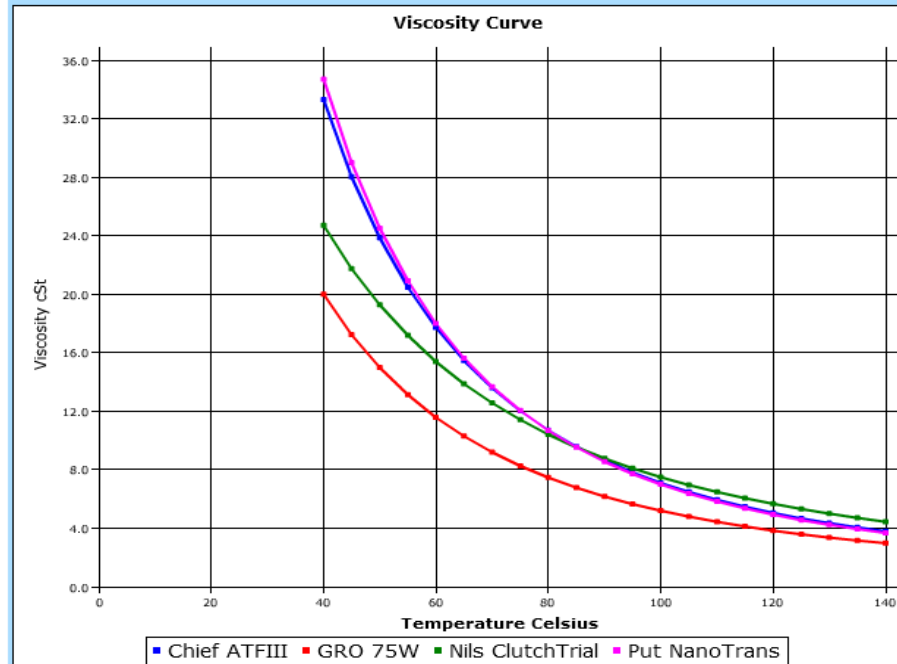
The higher the VI, the more stable the viscosity across a range of temperatures (more desirable). The temperatures used to determine the VI are 40 degrees C to 100 degrees C.

For machines of constant load, constant speed and constant ambient temperatures, the ideal viscosity very often results in the lowest stabilized oil temperature. Oils of lower or higher viscosities (than the optimum viscosity) will typically increase the oil's stabilized temperature due to either churning losses (too much viscosity) or mechanical friction (too little viscosity).

If conditions are not constant (variable loads, variable speeds, variable ambient temperatures, etc.), then there is a need for not only the optimum viscosity but also a high viscosity index to stabilize the optimum viscosity. The more variable the conditions, the greater the need for high VI oils.

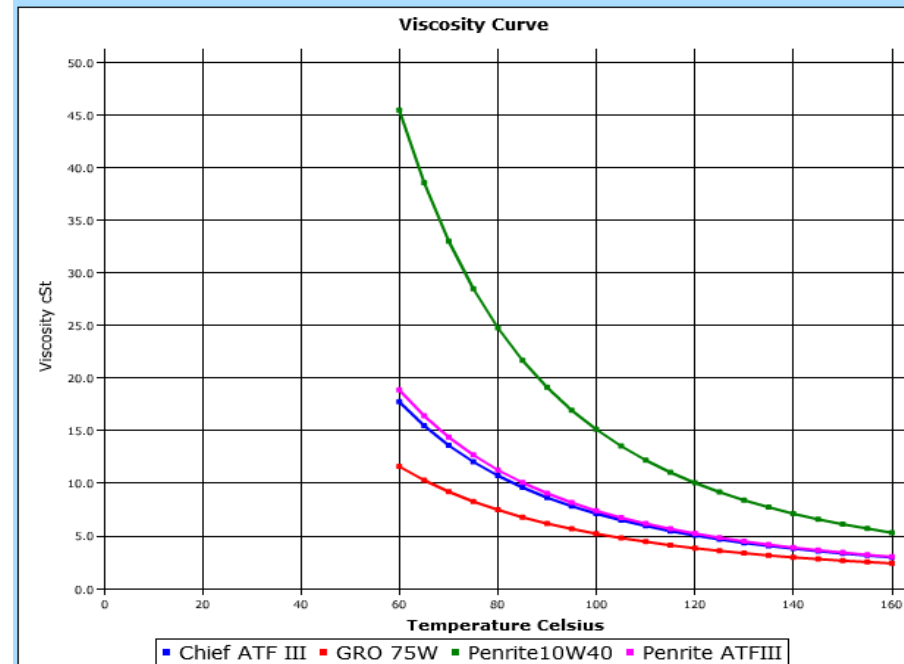
Graph below generated from this website:  
<http://www.widman.biz/English/Calculators/Graph.html>

	Oil 1	Oil 2	Oil 3	Oil 4	Temperature
Product Name	Chief ATFIII	GRO 75W	Nils ClutchTri	Put NanoTran	Minimum (Celsius)
Viscosity cSt at 40°C	33.3	20.0	24.7	34.7	40
Viscosity cSt at 100°C	7.1	5.2	7.5	7.0	



Temperature	40	45	50	55	60	65	70	75	80	85	90	95
Chief ATFIII	33.3	28.0	23.8	20.5	17.7	15.5	13.6	12.0	10.7	9.6	8.6	7.8
GRO 75W	20.0	17.2	15.0	13.1	11.6	10.3	9.2	8.3	7.5	6.8	6.2	5.7
Nils ClutchTri	24.7	21.8	19.3	17.2	15.4	13.9	12.6	11.4	10.4	9.5	8.8	8.1
Put NanoTrans	34.7	29.0	24.5	20.9	18.0	15.6	13.7	12.0	10.7	9.5	8.6	7.7

	Oil 1	Oil 2	Oil 3	Oil 4	Temperature
Product Name	Chief ATF III	GRO 75W	Penrite10W40	Penrite ATFIII	Minimum (Celsius)
Viscosity cSt at 40°C	33.3	20.0	97.0	36.0	60
Viscosity cSt at 100°C	7.1	5.2	15.1	7.4	



Temperature	60	65	70	75	80	85	90	95	100	105	110	115
Chief ATF III	17.7	15.5	13.6	12.0	10.7	9.6	8.6	7.8	7.1	6.5	5.9	5.5
GRO 75W	11.6	10.3	9.2	8.3	7.5	6.8	6.2	5.7	5.2	4.8	4.4	4.1
Penrite10W40	45.4	38.5	33.0	28.5	24.7	21.7	19.1	16.9	15.1	13.5	12.2	11.0
Penrite ATFIII	18.9	16.4	14.4	12.7	11.3	10.1	9.0	8.2	7.4	6.7	6.2	5.7