

The WEAR PROTECTION RANKING LIST itself, begins here:

1. Prolong Engine Treatment added to 5W30 Pennzoil Ultra, API SN synthetic = 136,658 psi
This oil on its own WITHOUT the Prolong Engine Treatment added to it, has a wear protection capability of 92,569 psi. With the recommended amount of Prolong added per qt, its wear protection capability WENT UP 48%.

The data here provides information on wear protection capability, but does NOT provide any information as to how compatible this products chlorine may be with a given oils additive package. Chlorine and additive package incompatibility has a possible risk of creating damaging bearing corrosion problems. There have been legal issues with this product that you can Google for yourself. Contact Prolongs maker for more information on compatibility, to find out if it is safe to use in your application. The test data on Prolong is included in my Ranking List for informational purposes only, because of requests I have received about testing this product. But, I do not endorse nor recommend its use. It is always best to simply choose a highly ranked oil in the first place, and avoid using any aftermarket additives at all.

2. Prolong Engine Treatment added to 5W30 Castrol GTX, API SN conventional = 130,366 psi
This oil on its own WITHOUT the Prolong Engine Treatment added to it, has a wear protection capability of 95,392 psi. With the recommended amount of Prolong added per qt, its wear protection capability WENT UP 37%.

The data here provides information on wear protection capability, but does NOT provide any information as to how compatible this products chlorine may be with a given oils additive package. Chlorine and additive package incompatibility has a possible risk of creating damaging bearing corrosion problems. There have been legal issues with this product that you can Google for yourself. Contact Prolongs maker for more information on compatibility, to find out if it is safe to use in your application. The test data on Prolong is included in my Ranking List for informational purposes only, because of requests I have received about testing this product. But, I do not endorse nor recommend its use. It is always best to simply choose a highly ranked oil in the first place, and avoid using any aftermarket additives at all.

3. 0W40 Mobil 1 FS European Car Formula, API SN, synthetic = 127,221 psi
This new oil replaces the older version called, 0W40 Mobil 1, European Formula, API SN, synthetic. See below for the older versions ranking position.

zinc = TBD

phos = TBD

moly = TBD

This new FS version was tested in Summer 2016. This oil produced the highest psi value ever seen in my testing, from any motor oil just as it comes right out of the bottle, with no aftermarket additives. Very impressive.

I also went on to test this oil at the much higher temperature of 275°F. At that elevated temperature, any hotter and thinner oil is expected to experience a drop in Wear Protection Capability. This oil did have a 16% drop in capability. But, even at that elevated temperature, it produced an impressive 106,876 psi, which still kept this much hotter and thinner oil in the INCREDIBLE Wear Protection Category.

I also tested this oil to find out its onset of thermal breakdown, which was 280F.

4. 0W20 Quaker State Ultimate Durability, API SN, synthetic (gold bottle) = 124,393 psi

zinc = TBD

phos = TBD

moly = TBD

This oil was tested in Spring 2016. The psi value of this oil, which came from testing it at the normal operating test temperature of 230°F, put it in the INCREDIBLE Wear Protection Category.

However, I went on to also test this oil at the much higher temperature of 275°F. At that elevated temperature, any hotter and thinner oil is expected to experience a drop in Wear Protection Capability. This oil did have a 14.7% drop in capability. But, even at that elevated temperature, it produced an impressive 106,163 psi, which still kept this much hotter and thinner oil in the INCREDIBLE Wear Protection Category.

5. 5W30 Pentosin Pento Super Performance III, for gas and diesel engines, API SM, ACEA C3, synthetic, made in Germany = 122,711 psi
 zinc = TBD
 phos = TBD
 moly = TBD

This oil was tested late 2016. For more information on this oil, see Tech Article 30.

6. 5W20 Quaker State Ultimate Durability, API SN, GM dexos 1 approved, synthetic (gold bottle) = 121,396 psi
 zinc = TBD
 phos = TBD
 moly = TBD

This oil was tested Fall 2015. The psi value of this oil, which came from testing it at the normal operating test temperature of 230°F, put it in the INCREDIBLE Wear Protection Category.

However, I went on to also test this oil at the much higher temperature of 275°F. At that elevated temperature, any hotter and thinner oil is expected to experience a drop in Wear Protection Capability. And this oil did have a significant 23% drop in capability. However, even at that reduced value down to 92,893 psi, this much hotter and thinner oil was in the OUTSTANDING Wear Protection Category.

7. 5W30 Mobil 1, Advanced Full Synthetic, API SN, GM dexos 1 approved = 117,799 psi
 zinc = TBD
 phos = TBD
 moly = TBD

This was the latest current version of this oil when tested at the end of 2015. This oil is used by a number of Auto Makers worldwide as factory fill oil in their High Performance cars. The psi value of this oil, which came from testing it at the normal operating test temperature of 230°F, put it in the INCREDIBLE Wear Protection Category.

However, I went on to also test this oil at the much higher temperature of 275°F. At that elevated temperature, any hotter and thinner oil is expected to experience a drop in Wear Protection Capability. And this oil did have a disappointing 36% drop in capability. At that reduced value down to 75,861 psi, this much hotter and thinner oil dropped down to the GOOD Wear Protection Category. You can avoid such a drop in capability by keeping the oil at a more reasonable cooler temperature.

8. Prolong Engine Treatment added to 5W30 Pennzoil, API SN conventional (yellow bottle) = 117,028 psi

This oil on its own WITHOUT the Prolong Engine Treatment added to it, has a wear protection capability of 76,989 psi. With the recommended amount of Prolong added per qt, its wear protection capability WENT UP 52%.

The data here provides information on wear protection capability, but does NOT provide any information as to how compatible this products chlorine may be with a given oils additive package. Chlorine and additive package incompatibility has a possible risk of creating damaging bearing corrosion problems. There have been legal issues with this product that you can Google for yourself. Contact Prolongs maker for more information on compatibility, to find out if it is safe to use in your application. The test data on Prolong is included in my Ranking List for informational purposes only, because of requests I have received about testing this product. But, I do not endorse nor recommend its use. It is always best to simply choose a highly ranked oil in the first place, and avoid using any aftermarket additives at all.

9. 10W30 Mobil 1, Advanced Full Synthetic, API SN = 115,635 psi
 zinc = TBD
 phos = TBD
 moly = TBD

This oil was tested at the end of 2015.

10. 5W30 Pennzoil Ultra, API SM synthetic = 115,612 psi

zinc = 806 ppm
 phosphorus = 812 ppm
 moly = 66 ppm
 calcium = 3,011 ppm
 TBN = 10.3

This oil is no longer available and has been replaced by newer API SN versions a couple of times. See below for the current SN versions ranking position.

11. 5W20 Valvoline MaxLife High Mileage, API SN, dexos 1 approved, synthetic blend (red bottle) = 114,125 psi

High Mileage oils are formulated for older engines with over 75,000 miles on them. And High Mileage oils include Seal Swell chemicals to help reduce oil leakage in those older engines.

zinc = TBD
 phos = TBD
 moly = TBD

This oil was tested Spring 2016.

12. 5W30 Mobil 1 ESP Formula (Emission System Protection), for diesel and gas engines, ACEA C2, C3, API SN, synthetic = 113,836 psi

zinc = TBD
 phos = TBD
 moly = TBD

This oil was tested late 2016. For more information on this oil, see Tech Article 30.

13. 5W30 Quaker State Ultimate Durability, API SN, GM dexos 1 approved, synthetic (gold bottle) = 113,377 psi

zinc = TBD
 phos = TBD
 moly = TBD

This was the latest current version of this oil when tested at the end of 2015. The psi value of this oil, which came from testing it at the normal operating test temperature of 230°F, put it in the INCREDIBLE Wear Protection Category.

However, I went on to also test this oil at the much higher temperature of 275°F. At that elevated temperature, any hotter and thinner oil is expected to experience a drop in Wear Protection Capability. But, this oil only had a very small 3.7% drop in capability. And even at that elevated temperature, it produced an extremely impressive 109,211 psi, which still kept this much hotter and thinner oil in the INCREDIBLE Wear Protection Category.

14. 5W30 Pennzoil Euro AV European Formula, for diesel and gas engines, ACEA C3, API SN, synthetic = 112,664 psi

zinc = TBD
 phos = TBD
 moly = TBD

This oil was tested late 2016. For more information on this oil, see Tech Article 30.

15. 5W30 Motul 300V Ester Core 4T Racing Oil, synthetic = 112,464 psi

This Motorcycle Road Racing oil is from France and comes in liter bottles (slightly more than a quart). At the time this oil was tested in spring 2014, it cost \$24.25 per bottle. And with the shipping cost added to that, the final cost was about \$33.00 per bottle (shipping was all inside the U.S.), making it THE most expensive motor oil Ive ever tested.

zinc = 1724 ppm
 phosphorus = 1547 ppm
 moly = 481 ppm
 calcium = 3141 ppm
 TBN = 7.4

This oil contains sufficient amounts of the components required (detergent, acid neutralizer, etc) for normal change intervals in street driven vehicles. But, it has way too much zinc/phos for use in cat equipped vehicles. However, it is well suited for Race Cars, Street Hotrods and Classic cars.

16. 5W30 Mag 1, FMX, European Formula, API SM, ACEA C3-08, synthetic, for gas and diesel cars and light trucks = 111,622 psi

zinc = TBD

phos = TBD

moly = TBD

This oil was tested Spring 2016.

17. Oil Extreme concentrate added to 5W30 Pennzoil Ultra, API SM synthetic = 111,570 psi
This oil on its own WITHOUT the Oil Extreme concentrate added to it, has a wear protection capability of 115,612 psi. But, with 2.0 OZ of concentrate added per qt, which is the amount intended for racing, its wear protection capability WENT DOWN 3.5%.

zinc = TBD

phosphorus = TBD.

moly = TBD

calcium = TBD

TBN = TBD

18. Oil Extreme concentrate added to 10W30 Brad Penn, Penn Grade 1 semi-synthetic = 111,061psi
This oil on its own WITHOUT the Oil Extreme concentrate added to it, has a wear protection capability of only 71,206 psi. But, with 2.0 OZ of concentrate added per qt, which is the amount intended for racing, its wear protection capability WENT UP A BREATH TAKING 56%.

zinc = TBD

phosphorus = TBD.

moly = TBD

calcium = TBD

TBN = TBD

19. 5W30 Oil Extreme Motor Oil, API SM synthetic (per the Oil Company, even though synthetic wording is not shown on the label) = 110,286 psi
The Company claims this oil contains their proprietary formula of calcium petroleum sulfonate EP (Extreme Pressure) technology that is NOT found in any other motor oil. They also claim that it will provide 5 to 7 more HP, 7 to 10% better fuel mileage, cut engine wear in half, and will extend drain intervals two or three times safely. This oil is endorsed and promoted by Tech Author David Vizard. And he was so impressed by this oil's performance that he also became a share holder in the Company. The results from the Dynamic Wear Testing Under Load performed here, fully supports their claim regarding wear protection. So, their hype about that, turned out to be absolutely true. And since this oil beat nearly every high zinc oil I've ever tested, it also proved another one of their claims, that using zinc as the primary anti-wear component, is outdated technology.

zinc = 765 ppm

phosphorus = 624 ppm

moly = 52 ppm

calcium = 7,652 ppm

TBN = 23.2

20. 5W40 Mag 1, FMX, European Formula, API SN, ACEA A3/B4, synthetic, for gas and diesel cars and light trucks = 109,147 psi

zinc = TBD

phos = TBD

moly = TBD

This oil was tested Spring 2016.

21. 5W30 Valvoline MaxLife High Mileage, API SN, synthetic blend (red bottle) = 108,045 psi
High Mileage oils are formulated for older engines with over 75,000 miles on them. And High Mileage oils include Seal Swell chemicals to help reduce oil leakage in those older engines.

zinc = TBD

phosphorus = TBD

moly = TBD

This is an earlier version that is no longer available. It has been replaced by a new formula version that now has GM dexos 1 approval. See below for the new versions ranking position.

22. 5W30 Castrol Edge Professional LL03, for diesel engines, ACEA C3, gold bottle, synthetic = 107,067 psi
 zinc = TBD
 phos = TBD
 moly = TBD

This oil was tested late 2016. For more information on this oil, see Tech Article 30.

23. 10W30 Lucas Racing Only synthetic = 106,505 psi
 zinc = 2642 ppm
 phosphorus = 3489 ppm
 moly = 1764 ppm
 calcium = 2,929 ppm
 TBN = 9.0

NOTE: This oil is suitable for short term racing use only, and is not suitable for street use.

24. CFS 0W30 NT Millers Nanodrive Racing Oil, API SM synthetic = 105,907 psi
 This oil is from England, comes in liter bottles (slightly more than a quart), and it uses a nanotechnology formulation. At the time this oil was tested in fall 2013, it cost \$22.45 per bottle. And with the shipping cost added to that, the final cost was about \$28.00 per bottle (shipping was all inside the U.S.), making it one of the most expensive oils Ive ever tested.
 zinc = TBD, but the maker claims it has approximately 1100 ppm ZDDP.
 phos = TBD
 moly = TBD
 calcium = TBD
 TBN = TBD

25. 5W30 Mobil 1, Advanced Full Synthetic, API SN = 105,875 psi
 zinc = 801 ppm
 phosphorus = 842 ppm
 moly = 112 ppm
 calcium = 799 ppm
 TBN = 7.5

This is an earlier version that is no longer available. It has been replaced by a new formula version that now has GM dexos 1 approval. See above for the new versions ranking position.

26. Oil Extreme concentrate added to 10W30 Lucas Hot Rod & Classic Hi-Performance Oil
 conventional = 105,758 psi
 This oil on its own WITHOUT the Oil Extreme concentrate added to it, has a wear protection capability of only 62,538 psi. But, with 2.0 OZ of concentrate added per qt, which is the amount intended for racing, its wear protection capability WENT UP A MIND BLOWING 69%.
 zinc = TBD
 phosphorus = TBD
 moly = TBD
 calcium = TBD
 TBN = TBD

27. 0W30 Amsoil Signature Series 25,000 miles, API SN synthetic = 105,008 psi
 zinc = 824 ppm
 phosphorus = 960 ppm
 moly = 161 ppm
 calcium = 3,354 ppm
 TBN = 11.4

28. 5W30 Joe Gibbs Driven LS30 Performance Motor Oil, synthetic = 104,487 psi
 The bottle says it is formulated specifically for high output GM LS engines, and that no ZDDP or additives required. This is by far, the best performing Joe Gibbs oil Ive ever tested. It is at the very top of the OUTSTANDING wear protection category, and fell just short of the INCREDIBLE wear protection category.
 zinc = 1610 ppm
 phosphorus = 1496 ppm
 moly = 0 ppm

calcium = 3515 ppm

TBN = 8.8

This oil contains sufficient amounts of the components required (detergent, acid neutralizer, etc) for normal change intervals in street driven vehicles. But, it has way too much zinc/phos for use in cat equipped vehicles. However, it is well suited for Race Cars, Street Hotrods and Classic cars.

29. 10W30 Valvoline NSL (Not Street Legal) Conventional Racing Oil = 103,846 psi

zinc = 1669 ppm

phosphorus = 1518 ppm

moly = 784 ppm

calcium = 1,607 ppm

TBN = 4.4

NOTE: This oil is suitable for short term racing use only, and is not suitable for street use. Since this testing was performed, Valvoline has discontinued this oil.

30. 10W40 Valvoline MaxLife High Mileage, API SN, synthetic blend (red bottle) = 103,840 psi
High Mileage oils are formulated for older engines with over 75,000 miles on them. And High Mileage oils include Seal Swell chemicals to help reduce oil leakage in those older engines.

zinc = TBD

phos = TBD

moly = TBD

This oil was tested at the end of 2015. The psi value of this oil, which came from testing it at the normal operating test temperature of 230°F, put it in the OUTSTANDING Wear Protection Category.

However, I went on to also test this oil at the much higher temperature of 275°F. At that elevated temperature, any hotter and thinner oil is expected to experience a drop in Wear Protection Capability. And this oil did have a significant 25% drop in capability. At that reduced value down to 77,817 psi, this much hotter and thinner oil dropped to the GOOD Wear Protection Category.

31. 5W50 Motorcraft, API SN synthetic = 103,517 psi

zinc = 606 ppm

phosphorus = 742 ppm

moly = 28 ppm

calcium = 1,710 ppm

TBN = 6.7

32. 10W30 Valvoline VR1 Conventional Racing Oil (silver bottle) = 103,505 psi

zinc = 1472 ppm

phosphorus = 1544 ppm

moly = 3 ppm

calcium = 2,707 ppm

TBN = 7.6

33. 5W30 Amsoil Series 3000 Heavy Duty Diesel Oil synthetic, API CI-4 PLUS, CF, SL, ACEA A3/B3, E2, E3, E5, E7 = 102,642 psi.

This oil is Engineered for Diesel engines not equipped with Diesel particulate filters (DPF). Amsoil says this oil delivers better wear protection than other popular Diesel oils. And in this case, their hype is absolutely true. They also say it effectively reduces fuel consumption, with its advanced fuel efficient formula. This oil costs \$11.15 per quart in the 2013 Amsoil Factory Direct Retail Catalog, which is 10% more than Amsoils 5W40 Premium Synthetic Diesel Oil. So, in this case, you pay only 10% more for the Amsoil Series 3000 Heavy Duty Diesel Oil, but you get a whopping 33% more wear protection than you get with the Amsoils 5W40 Premium Synthetic Diesel Oil. Money very well spent, if you run a Diesel oil intended for engines not equipped with Diesel particulate filters. This 5W30 Amsoil Series 3000 Heavy Duty Diesel Oil is one of the very best Diesel oils I have tested.

zinc = TBD

phos = TBD

moly = TBD

34. 5W30 Pennzoil High Mileage Vehicle, API SN, conventional = 102,402 psi
 High Mileage oils are formulated for older engines with over 75,000 miles on them. And High Mileage oils include Seal Swell chemicals to help reduce oil leakage in those older engines.
 zinc = TBD
 phos = TBD
 moly = TBD

35. Oil Extreme concentrate added to 5W30 Mobil 1, API SN synthetic = 102,059 psi
 This oil on its own WITHOUT the Oil Extreme concentrate added to it, has a wear protection capability of 105,875 psi. But, with 2.0 OZ of concentrate added per qt, which is the amount intended for racing, its wear protection capability WENT DOWN 3.6%.
 zinc = TBD
 phosphorus = TBD.
 moly = TBD
 calcium = TBD
 TBN = TBD

36. 0W20 Toyota Motor Oil, API SN, synthetic = 101,460 psi
 zinc = TBD
 phos = TBD
 moly = TBD
 This oil was tested Spring 2016.

37. 5W40 Joe Gibbs DT40, synthetic = 101,265 psi
 This oil claims to be formulated specifically for modern Sports Car engines, yet it has no API certifications at all, and claims to have a ZDDP anti-wear package, which would indicate that it does not have low enough zinc/phos levels to be safely used in modern cat equipped vehicles.
 zinc = TBD
 phos = TBD
 moly = TBD
 This oil was tested at the end of 2015.

38. 10W30 Valvoline VR1 Synthetic Racing Oil, API SL (black bottle) = 101,139 psi
 zinc = 1180 ppm
 phosphorus = 1112 ppm
 moly = 162 ppm
 calcium = 2,664 ppm
 TBN = 7.4

39. Oil Extreme concentrate added to 5W30 Pennzoil, API SN conventional (yellow bottle) = 100,252 psi
 This oil on its own WITHOUT the Oil Extreme concentrate added to it, has a wear protection capability of only 76,989 psi. But, with 1.5 OZ of concentrate added per qt, which is the bottles instruction for street driven vehicles, its wear protection capability WENT UP A WHOPPING 30%.
 zinc = 970 ppm
 phosphorus = 749 ppm, this value is 91 ppm lower than the basic oil because the concentrate has less phosphorus in it, which diluted the overall ppm count of the mixture.
 moly = 285 ppm
 calcium = 4,443 ppm
 TBN = 18.8

40. 0W20 Mobil 1 Extended Performance, API SN, dexos 1 approved, synthetic = 100,229 psi
 zinc = TBD
 phos = TBD
 moly = TBD
 This oil was tested in Spring 2016.

41. 5W30 Chevron Supreme, API SN conventional (blue bottle) = 100,011 psi
 This oil only cost \$4.29 per quart at an Auto Parts Store when I bought it.
 zinc = 1018 ppm
 phos = 728 ppm

moly = 161 ppm

42. 5W20 Castrol Edge with Titanium, API SN synthetic (gold bottle) = 99,983 psi

zinc = 1042 ppm

phos = 857 ppm

moly = 100 ppm

titanium = 49 ppm

This is an earlier version that is no longer available. It has been replaced by 5W20 Castrol Edge Extended Performance (gold bottle). See below for its ranking position.

43. 5W30 Pennzoil Platinum, API SN synthetic = 99,949 psi

This was the original API SN version, that was NOT made from natural gas.

zinc = TBD

phos = TBD

moly = TBD

44. Oil Extreme concentrate added to 5W30 Pennzoil, API SN conventional (yellow bottle) = 99,529 psi

This oil on its own WITHOUT the Oil Extreme concentrate added to it, has a wear protection capability of only 76,989 psi. But, with 2.0 OZ of concentrate added per qt, which is the amount intended for racing, its wear protection capability WENT UP 29%.

zinc = TBD

phos = TBD

moly = TBD

45. 5W30 Pennzoil Ultra Platinum, Pure Plus Technology, made from pure natural gas, API SN, GM dexos 1 approved = 99,039 psi

This oil was introduced in 2014, and comes in a dark gray bottle with a blue vertical stripe on the label.

zinc = TBD

phos = TBD

moly = TBD

The psi value of this oil, which came from testing it at the normal operating test temperature of 230°F, put it in the OUTSTANDING Wear Protection Category.

However, I went on to also test this oil late in 2015, at the much higher temperature of 275°F. At that elevated temperature, any hotter and thinner oil is expected to experience a drop in Wear Protection Capability. But, this oil had only an extremely small 2.7% drop in capability, the smallest drop I have seen. And at that reduced value down to 96,363 psi, this much hotter and thinner oil was still in the OUTSTANDING Wear Protection Category.

46. Oil Extreme concentrate added to 5W30 Oil Extreme Motor Oil, API SM synthetic = 98,396 psi

This oil on its own WITHOUT the Oil Extreme concentrate added to it, has a wear protection capability of 110,286 psi. But, with 2.0 OZ of concentrate added per qt, which is the amount intended for racing, its wear protection capability WENT DOWN 11%.

zinc = TBD

phos = TBD

moly = TBD

47. Oil Extreme concentrate added to 5W30 Pennzoil, API SN conventional, yellow bottle = 97,651 psi

This oil on its own WITHOUT the Oil Extreme concentrate added to it, has a wear protection capability of only 76,989 psi. But, with 3.0 OZ of concentrate added per qt, its wear protection capability WENT UP 27%.

zinc = TBD

phos = TBD

moly = TBD

48. 10W40 Pennzoil High Mileage Vehicle, API SN, conventional = 97,419 psi

High Mileage oils are formulated for older engines with over 75,000 miles on them. And High Mileage oils include Seal Swell chemicals to help reduce oil leakage in those older engines.

zinc = TBD

phos = TBD

moly = TBD

This oil was tested at the end of 2015.

49. 10W30 Amsoil Dominator Racing Oil synthetic = 97,118 psi

zinc = 1613 ppm

phos = 1394 ppm

moly = 0 ppm

50. 5W30 Pennzoil Platinum Euro L, made from natural gas, for diesel and gas engines, ACEA C3, GM dexos 2 approved, API SN, synthetic = 97,051 psi

zinc = TBD

phos = TBD

moly = TBD

This oil was tested late 2016. For more information on this oil, see Tech Article 30.

51. Oil Extreme concentrate added to 5W30 Pennzoil, API SN conventional, yellow bottle = 96,739 psi

This oil on its own WITHOUT the Oil Extreme concentrate added to it, has a wear protection capability of only 76,989 psi. But, with 4.0 OZ of concentrate added per qt, its wear protection capability WENT UP 26%.

zinc = TBD

phos = TBD

moly = TBD

52. 20W50 Castrol GTX, API SN conventional = 96,514 psi

zinc = 610 ppm

phos = 754 ppm

moly = 94 ppm

53. 30 wt Red Line Race Oil synthetic = 96,470 psi

zinc = 2207 ppm

phos = 2052 ppm

moly = 1235 ppm

NOTE: This oil is suitable for short term racing use only, and is not suitable for street use.

54. 0W20 Mobil 1 Advanced Fuel Economy, API SN synthetic = 96,364 psi

zinc = 742 ppm

phos = 677 ppm

moly = 81 ppm

This is an earlier version of this oil that did not have dexos 1 approval. See below for the later version of this oil that does have dexos 1 approval.

55. 5W30 Quaker State Ultimate Durability, API SN synthetic = 95,920 psi

zinc = 877 ppm

phos = 921 ppm

moly = 72 ppm

This is an earlier version that is no longer available. It has been replaced by a new formula version that now has GM dexos 1 approval. See above for the new versions ranking position.

56. 5W30 Castrol Edge with Titanium, API SN synthetic (gold bottle) = 95,717 psi

zinc = 818 ppm

phos = 883 ppm

moly = 90 ppm

titanium = 44 ppm

This is an earlier version that is no longer available. It has been replaced by 5W30 Castrol Edge Extended Performance (gold bottle). See below for its ranking position.

57. 10W30 Joe Gibbs XP3 NASCAR Racing Oil synthetic = 95,543 psi

zinc = 743 ppm

phos = 802 ppm

moly = 1125 ppm

NOTE: This oil is suitable for short term racing use only, and is not suitable for street use.

58. 5W20 Castrol GTX, API SN conventional = 95,543 psi

zinc = TBD

phos = TBD

moly = TBD

NOTE: The two oils above were tested weeks apart, but due to the similarities in their wear scar sizes, their averages ended up the same.

59. 5W30 Castrol GTX, API SN conventional = 95,392 psi

zinc = 830 ppm

phos = 791 ppm

moly = 1 ppm

60. 10W30 Amsoil Z-Rod Oil synthetic = 95,360 psi

zinc = 1431 ppm

phos = 1441 ppm

moly = 52 ppm

61. 5W30 Havoline, API SN conventional = 95,098 psi

zinc = TBD

phos = TBD

moly = TBD

62. 5W30 Valvoline SynPower, API SN synthetic = 94,942 psi

zinc = 969 ppm

phos = 761 ppm

moly = 0 ppm

63. Oil Extreme concentrate added to 5W30 Chevron Supreme, API SN conventional = 94,864 psi
This oil on its own WITHOUT the Oil Extreme concentrate added to it, has a wear protection capability of 100,011 psi. But, with 2.0 OZ of concentrate added per qt, which is the amount intended for racing, its wear protection capability WENT DOWN 5.1%.

zinc = TBD

phosphorus = TBD.

moly = TBD

64. 5W30 Valvoline Premium Conventional, API SN = 94,744 psi

zinc = TBD

phos = TBD

moly = TBD

65. 5W20 Mobil 1, Advanced Full Synthetic , API SN synthetic = 94,663 psi

zinc = 764 ppm

phos = 698 ppm

moly = 76 ppm

This is an earlier version that is no longer available. It has been replaced by 5W20 Mobil 1 that includes GM dexos 1 approval. See below for its ranking position.

66. 5W20 Valvoline SynPower, API SN synthetic = 94,460 psi

zinc = 1045 ppm

phos = 742 ppm

moly = 0 ppm

This is an earlier version that is no longer available. It has been replaced by 5W20 Valvoline SynPower that includes GM dexos 1 approval. See below for its ranking position.

67. 10W40 Mobil 1 Racing 4T, four stroke Motorcycle oil, synthetic = 93,661 psi

This oil claims to meet or exceed API SN.

zinc = TBD

phos = TBD

moly = TBD

68. 5W30 Eneos, API SN, synthetic = 93,135 psi

zinc = TBD

phos = TBD

moly = TBD

69. 5W40 High Performance Lubricants Racing Oil, synthetic = 92,693 psi

The bottle calls this oil, Bad Ass.

zinc = TBD

phos = TBD

moly = TBD

This oil was tested Summer 2016.

70. 5W30 Valvoline MaxLife High Mileage, API SN, GM dexos 1 approved, synthetic blend (red bottle) = 92,639 psi

High Mileage oils are formulated for older engines with over 75,000 miles on them. And High Mileage oils include Seal Swell chemicals to help reduce oil leakage in those older engines.

zinc = TBD

phos =TBD

moly = TBD

This was the latest current version of this oil when tested at the end of 2015. The psi value of this oil, which came from testing it at the normal operating test temperature of 230°F, put it in the OUTSTANDING Wear Protection Category.

However, I went on to also test this oil at the much higher temperature of 275°F. At that elevated temperature, any hotter and thinner oil is expected to experience a drop in Wear Protection Capability. And this oil did have an 8.3% drop in capability. At that reduced value down to 84,928 psi, this much hotter and thinner oil dropped to the GOOD Wear Protection Category.

71. 5W30 Pennzoil Ultra, API SN synthetic = 92,569 psi

This was the original API SN version, that was NOT made from natural gas.

zinc = TBD

phos = TBD

moly = TBD

The older API SM version of this oil, produced a wear protection capability value of 115,612 psi.

72. 0W20 Pennzoil Platinum, Pure Plus Technology, made from Natural Gas, API SN, synthetic (silver bottle with blue vertical stripe on the label) = 92,504 psi

zinc = TBD

phos = TBD

moly = TBD

This oil was tested in Spring 2016.

73. 5W30 Lucas, API SN conventional = 92,073 psi

zinc = 992 ppm

phos = 760 ppm

moly = 0 ppm

74. 5W30 OReilly (house brand), API SN conventional = 91,433 psi

This oil only cost \$3.99 per quart at an Auto Parts Store when I bought it.

zinc = 863 ppm

phos = 816 ppm

moly = 0 ppm

75. 5W30 Castrol GTX High Mileage, API SN, synthetic blend = 91,404 psi

High Mileage oils are formulated for older engines with over 75,000 miles on them. And High Mileage oils include Seal Swell chemicals to help reduce oil leakage in those older engines.

zinc = TBD

phos =TBD

moly = TBD

76. 5W30 Maxima RS530 Synthetic Racing Oil = 91,162 psi
 zinc = 2162 ppm
 phos = 2294 ppm
 moly = 181 ppm

77. 5W30 Red Line, API SN synthetic = 91,028 psi
 zinc = TBD
 phos = TBD
 moly = TBD

78. 0W20 Castrol Edge, Fluid Titanium Technology, API SN, dexos 1 approved, synthetic (black bottle) = 90,745 psi

zinc = TBD
 phos = TBD
 moly = TBD

This oil was tested in Spring 2016.

79. 5W20 Royal Purple API SN synthetic = 90,434 psi

zinc = 964 ppm
 phos = 892 ppm
 moly = 0 ppm

80. 10W30 Quaker State Defy High Mileage, API SL semi-synthetic = 90,226 psi

Defy has always been a High Mileage oil since it was first introduced. But, High Mileage hasn't always been prominently displayed on the front label. Newer bottles do now prominently display High Mileage on the front label. High Mileage oils are formulated for older engines with over 75,000 miles on them. And High Mileage oils include Seal Swell chemicals to help reduce oil leakage in those older engines.

zinc = 1221 ppm
 phos = 955 ppm
 moly = 99 ppm

81. 10W60 Castrol TWS Motorsport, API SJ conventional = 90,163 psi

This oil is manufactured in Europe and is sold in the US for BMW models M3, M5, M6, Z4M, and Z8.

zinc = TBD
 phos = TBD
 moly = TBD

82. 5W20 Valvoline Premium Conventional, API SN = 90,144 psi

zinc = TBD
 phos = TBD
 moly = TBD

83. Oil Extreme concentrate added to 5W30 Castrol GTX, API SN conventional = 89,659 psi

This oil on its own WITHOUT the Oil Extreme concentrate added to it, has a wear protection capability of 95,392 psi. But, with 2.0 OZ of concentrate added per qt, which is the amount intended for racing, its wear protection capability WENT DOWN 6%.

zinc = TBD
 phosphorus = TBD.
 moly = TBD

84. 0W20 Valvoline SynPower, API SN, synthetic = 89,556 psi

zinc = TBD
 phos = TBD
 moly = TBD

This oil was tested in Spring 2016.

85. 5W30 Havoline, API SN synthetic = 89,406 psi

zinc = TBD
 phos = TBD
 moly = TBD

86. 5W30 Penrite 10 Tenths Racing 5, synthetic = 88,992 psi
 This oil comes from Australia in 1 liter bottles (slightly more than a quart), and can be ordered in the U.S. from Summit Racing Equipment. It claims low friction for max power, and says it is not suitable for motorcycles with wet clutches. It also claims to have a full zinc formula.

zinc = TBD
 phos = TBD
 moly = TBD

87. 30 wt Castrol Heavy Duty, API SM conventional = 88,089 psi

zinc = 907 ppm
 phos = 829 ppm
 moly = 56 ppm

88. 5W30 Mobil 1 High Mileage, API SL, synthetic = 88,081 psi

High Mileage oils are formulated for older engines with over 75,000 miles on them. And High Mileage oils include Seal Swell chemicals to help reduce oil leakage in those older engines.

zinc = TBD
 phos = TBD
 moly = TBD

89. 20W50 LAT Synthetic Racing Oil, API SM = 87,930 psi

zinc = TBD
 phos = TBD
 moly = TBD

90. 5W30 Valvoline Nextgen 50% Recycled Oil, API SN conventional = 87,563 psi

zinc = 947 ppm
 phos = 778 ppm
 moly = 0 ppm

91. 5W30 Pennzoil Platinum, Pure Plus Technology, made from pure natural gas, API SN = 87,241 psi
 This oil was introduced in 2014, and comes in a silver bottle with a blue vertical stripe on the label.

zinc = TBD
 phos = TBD
 moly = TBD

92. 5W50 Mobil 1, API SN, synthetic = 86,456 psi

zinc = TBD
 phos = TBD
 moly = TBD

93. 10W30 Joe Gibbs HR4 Hotrod Oil synthetic = 86,270 psi

zinc = 1247 ppm
 phos = 1137 ppm
 moly = 24 ppm

94. 5W20 Pennzoil Ultra, API SM synthetic = 86,034 psi

zinc = TBD
 phos = TBD
 moly = TBD

95. 5W20 Mobil 1, API SN, GM dexos 1 approved, synthetic = 85,893 psi

zinc = TBD
 phos = TBD
 moly = TBD

This was the latest current version of this oil when tested Fall 2015

96. 15W40 RED LINE Diesel Oil synthetic, API CJ-4/CI-4 PLUS/CI-4/CF/CH-4/CF-4/SM/SL/SH/EO-O = 85,663 psi

zinc = 1615 ppm
 phos = 1551 ppm
 moly = 173 ppm

97. 5W30 Castrol Edge w/Syntec, API SN synthetic (formerly Castrol Syntec), (black bottle) = 85,179 psi
 zinc = TBD
 phos = TBD
 moly = TBD

98. 20W50 Millers Classic Performance Oil, API SJ, conventional = 84,764 psi
 zinc = TBD
 phos = TBD
 moly = TBD

Claims high ZDDP level. It comes from England in 1 Liter bottles, which is slightly more than a quart, and is available in the U.S.

99. 5W30 Schaeffers Supreme 9000, API SN, synthetic = 84,118 psi
 zinc = TBD
 phos = TBD
 moly = TBD

100. 5W30 Royal Purple API SN synthetic = 84,009 psi
 zinc = 942 ppm
 phos = 817 ppm
 moly = 0 ppm

101. 20W50 Royal Purple API SN synthetic = 83,487 psi
 zinc = 588 ppm
 phos = 697 ppm
 moly = 0 ppm

102. 20W50 Kendall GT-1 High Performance with liquid titanium, API SN conventional = 83,365 psi
 zinc = 991 ppm
 phos = 1253 ppm
 moly = 57 ppm
 titanium = 84 ppm

103. 5W30 Mobil 1 Extended Performance 15,000 mile, API SN synthetic = 83,263 psi
 zinc = 890 ppm
 phos = 819 ppm
 moly = 104 ppm

104. 0W20 Castrol Edge with Titanium, API SN synthetic (gold bottle) = 82,867 psi
 zinc = TBD
 phos = TBD
 moly = TBD

105. 0W40 Mobil 1, European Formula, API SN, made in the U.S., synthetic = 82,644 psi
 This is an earlier version that has been replaced by 0W40 Mobil 1 FS European Car Formula. See above for the newer versions ranking position.
 zinc = TBD
 phos = TBD
 moly = TBD

106. 0W40 Pennzoil Ultra, API SN, synthetic = 81,863 psi
 zinc = TBD
 phos = TBD
 moly = TBD

107. 5W30 LAT Synthetic Racing Oil, API SM = 81,800 psi

zinc = 1784 ppm
 phos = 1539 ppm
 moly = 598 ppm

108. Oil Extreme concentrate added to 5W30 Royal Purple XPR (extreme performance racing oil)
 synthetic = 81,723 psi

This oil on its own WITHOUT the Oil Extreme concentrate added to it, has a wear protection capability of only 74,860 psi. But, with 2.0 OZ of concentrate added per qt, which is the amount intended for racing, its wear protection capability WENT UP 9%.

zinc = TBD
 phos = TBD
 moly = TBD

109. 0W30 Mobil 1, API SN, Advanced Fuel Economy, synthetic = 81,240 psi

zinc = TBD
 phos = TBD.
 moly = TBD

110. 5W30 Peak, API SN synthetic = 80,716 psi

zinc = TBD
 phos = TBD
 moly = TBD

111. 0W20 Mobil 1 Advanced Fuel Economy, API SN, dexos 1 approved, synthetic = 79,612 psi

zinc = TBD
 phos = TBD
 moly = TBD

This oil was tested in Spring 2016. At that time, this was the latest current version of this oil.

112. 5W30 Edelbrock Cat-Safe, API SM synthetic = 78,609 psi

This oil is made for Edelbrock by Torco

zinc = 924 ppm
 phos = 659 ppm
 moly = 28 ppm

113. 30wt Amsoil Break-In Oil conventional = 78,192 psi

zinc = 2051 ppm
 phos = 1917 ppm
 moly = 0 ppm

114. 20W50 Resolute Racing Oil, API SN conventional = 77,554 psi

zinc = TBD
 phos = TBD
 moly = TBD

This oil cost only \$2.49 per quart when bought for this test. It is a Regional Oil from the Mid-Western U.S. farm country.

115. 5W40 Amsoil Premium Diesel Oil synthetic, API CJ-4, CI-4 PLUS, CF, SN, SM, ACEA E7, E9 = 77,207 psi

zinc = TBD
 phos = TBD
 moly = TBD

116. 10W30 Renegade Pro Series Racing Oil, synthetic blend = 77,136 psi

zinc = TBD, but bottle claims over 3000 ppm
 phos = TBD
 moly = TBD

117. 15W40 ROYAL PURPLE Diesel Oil synthetic, API CJ-4 /SM, CI-4 PLUS, CH-4, CI-4 = 76,997 psi

zinc = TBD
 phos = TBD
 moly = TBD

118. 5W30 Pennzoil, API SN conventional (yellow bottle) = 76,989 psi
 zinc = 839 ppm
 phos = 840 ppm
 moly = 267 ppm

119. 10W40 Chevron Supreme, API SN conventional (blue bottle) = 76,806 psi
 zinc = TBD
 phos = TBD
 moly = TBD

120. 5W30 Lucas API SM synthetic = 76,584 psi
 zinc = 1134 ppm
 phos = 666 ppm
 moly = 0 ppm

121. 5W30 GMs AC Delco dexos 1 API SN semi-synthetic = 76,501 psi
 zinc = 878 ppm
 phos = 758 ppm
 moly = 72 ppm

122. 10W30 Mobil Super 5000, API SN, conventional = 76,461 psi
 zinc = TBD
 phos = TBD
 moly = TBD
 This oil was tested at the end of 2015.

123. 5W30 Motul 8100 X-clean, API SM, synthetic = 76,166 psi
 This oil is made in France, and comes in a 1 liter bottle, which = 1.05 qts
 zinc = TBD
 phos = TBD
 moly = TBD
 For reference, 5W30 Motul 300V Ester Core 4T Racing Oil, synthetic, produced a wear protection capability of 112,464 psi

124. 20W50 Mobil 1 V-Twin 4 Cycle Motorcycle Oil, API SJ, synthetic = 75,855 psi
 zinc = TBD
 phos = TBD
 moly = TBD

125. 5W50 Castrol Edge with Syntec, API SN synthetic (formerly Castrol Syntec), (black bottle) = 75,409 psi
 zinc = 1252 ppm
 phos = 1197 ppm
 moly = 71 ppm

126. 5W30 Castrol Edge Extended Performance, API SN, GM dexos 1 approved, synthetic (gold bottle) = 74,899 psi
 zinc = TBD
 phos = TBD
 moly = TBD
 This was the latest current version of this oil when tested Fall 2015.

127. Oil Extreme concentrate added to 10W30 Comp Cams Muscle Car & Street Rod Oil semi-synthetic = 74,874 psi
 This oil on its own WITHOUT the Oil Extreme concentrate added to it, has a wear protection capability of only 60,413 psi. But, with 2.0 OZ of concentrate added per qt, which is the amount intended for racing, its wear protection capability WENT UP AN IMPRESSIVE 24%.

zinc = TBD
 phosphorus = TBD.
 moly = TBD

128. 5W30 Royal Purple XPR (Extreme Performance Racing) synthetic = 74,860 psi
 zinc = 1421 ppm
 phos = 1338 ppm
 moly = 204 ppm

129. 15W40 Cenpeco (Central Petroleum Company) S-3 Diesel Oil, conventional, API CI-4, CH-4, CG-4, CF, CE, CD, SL, SJ, SH = 74,593 psi
 zinc = TBD
 phos = TBD
 moly = TBD

130. 5W40 MOBIL 1 TURBO DIESEL TRUCK synthetic, API CJ-4, CI-4 Plus, CI-4, CH-4 and ACEA E7 = 74,312 psi
 zinc = 1211 ppm
 phos = 1168 ppm
 moly = 2 ppm

131. 0W50 Mobil 1 Racing Oil = 73,811 psi
 zinc = 1676 ppm
 phos = 1637 ppm
 moly = 1263 ppm

132. 5W30 Peak, API SN conventional = 73,690 psi
 zinc = TBD
 phos = TBD
 moly = TBD

133. 5W30 Mobil Super Synthetic, API SN, GM dexos 1 approved = 73,601 psi
 zinc = TBD
 phos = TBD
 moly = TBD

134. 5W30 Castrol GTX Magnatec, API SN, GM dexos 1 approved, synthetic blend = 73,566 psi
 This oil claims to have molecules that cling to parts, forming an extra layer of protection during warm-up, reducing engine wear.
 zinc = TBD
 phos = TBD
 moly = TBD

135. 15W40 CHEVRON DELO 400LE Diesel Oil, conventional, API CJ-4, CI-4 Plus, CH-4, CF-4,CF/SM, = 73,520 psi
 zinc = 1519 ppm
 phos = 1139 ppm
 moly = 80 ppm

136. 15W40 MOBIL DELVAC 1300 SUPER Diesel Oil conventional, API CJ-4, CI-4 Plus, CI-4, CH-4/SM, SL = 73,300 psi
 zinc = 1297 ppm
 phos = 1944 ppm
 moly = 46 ppm

137. 15W40 Farm Rated Heavy Duty Performance Diesel Oil conventional CI-4, CH-4, CG-4, CF/SL, SJ = 73,176 psi
 zinc = 1325ppm
 phos = 1234 ppm
 moly = 2 ppm

138. 5W30 Amalie Elixir Oil, API SN, synthetic = 72,825 psi

zinc = TBD

phos = TBD

moly = TBD

139. 5W20 Valvoline SynPower, API SN, GM dexos 1 approved = 72,581 psi

zinc = TBD

phos = TBD

moly = TBD

This was the latest current version of this oil when tested Fall 2015.

140. 15W40 NEW SHELL ROTELLA T Diesel Oil conventional, API CJ-4, CI-4 Plus, CH-4, CF-4,CF/SM = 72,022 psi

zinc = 1454 ppm

phos = 1062 ppm

moly = 0 ppm

141. Brad Penn, Penn Grade 1 Nitro 70 Racing Oil semi-synthetic = 72,003 psi

zinc = TBD

phos = TBD

moly = TBD

142. 0W30 Mobil 1 Racing Oil = 71,923 psi

zinc = 1693 ppm

phos = 1667 ppm

moly = 1326 ppm

143. 0W20 Kendall GT-1, with liquid Titanium, API SN, synthetic = 71,385 psi

zinc = TBD

phos = TBD

moly = TBD

This oil was tested in Spring 2016.

144. 0W30 Brad Penn, Penn Grade 1, partial synthetic = 71,377 psi

zinc = 1621 ppm

phos = 1437 ppm

moly = 0 ppm

145. 15W40 OLD SHELL ROTELLA T Diesel Oil conventional, API CI-4 PLUS, CI-4, CH-4,CG-4,CF-4,CF,SL, SJ, SH = 71,214 psi

zinc = 1171 ppm

phos = 1186 ppm

moly = 0 ppm

Yes its true, the old Rotella actually has LESS zinc than the new Rotella.

146. 10W30 Brad Penn, Penn Grade 1, partial synthetic = 71,206 psi

zinc = 1557 ppm

phos = 1651 ppm

moly = 3 ppm

147. 15W40 VALVOLINE PREMIUM BLUE HEAVY DUTY DIESEL Oil conventional, API CJ-4, CI-4 Plus, CI-4, CH-4, CG-4, CF-4, CF/SM = 70,869 psi

zinc = TBD

phos = TBD

moly = TBD

148. 5W20 Castrol Edge Extended Performance, API SN, GM dexos 1 approved, synthetic (gold bottle) = 70,417 psi

zinc = TBD

phos = TBD

moly = TBD

This was the latest current version of this oil when tested Fall 2015.

149. 15W50 Mobil 1, API SN synthetic = 70,235 psi
zinc = 1,133 ppm
phos = 1,168 ppm
moly = 83 ppm

150. 10W40 Resolute All Season Motor Oil, API SN conventional = 69,709 psi
zinc = TBD
phos = TBD
moly = TBD

This oil cost \$2.49 per quart when bought for this test. It is a Regional Oil from the Mid-Western U.S. farm country.

151. 5W40 CHEVRON DELO 400LE Diesel Oil synthetic, API CJ-4, CI-4 Plus, CI-4, SL, SM = 69,631 psi
zinc = TBD
phos = TBD
moly = TBD

152. 5W40 Liqui Moly Leichtlauf High Tech Oil, synthetic = 69,580 psi
zinc = TBD
phos = TBD
moly = TBD

This oil is made in Germany and is available in the U. S. It comes in 1 Liter bottles which is slightly more than a quart.

153. 0W40 Castrol Edge with Syntec, API SN, European Formula, made in Belgium and sold in the U.S., synthetic (black bottle) = 69,307 psi
zinc = TBD
phos = TBD
moly = TBD

154. 0W30 Castrol Edge with Syntec, API SL, European Formula, made in Germany and sold in the U.S., synthetic (black bottle) = 69,302 psi
zinc = TBD
phos = TBD
moly = TBD

155. 30wt Edelbrock Break-In Oil conventional = 69,160 psi
zinc = 1545 ppm
phos = 1465 ppm
moly = 4 ppm

156. 5W30 High Performance Lubricants Break-In Oil, synthetic = 69,097 psi
zinc = the bottle claims high zinc
phos = the bottle claims high phos
moly = TBD
This oil was tested Summer 2016.

157. 5W30 Motorcraft, API SN synthetic = 68,782 psi
zinc = 796 ppm
phos = 830 ppm
moly = 75 ppm

158. 10W40 Edelbrock synthetic = 68,603 psi
zinc = 1193 ppm
phos = 1146 ppm
moly = 121 ppm
This oil is manufactured for Edelbrock by Torco.

159. 5W30 Quaker State Advanced Durability, API SN, conventional = 68,581 psi

zinc = TBD

phos = TBD

moly = TBD

This oil was tested Fall 2015

160. 5W30 Toyota Motor Oil, API SN conventional = 68,069 psi

zinc = TBD

phos = TBD

moly = TBD

161. 5W40 SHELL ROTELLA T6 Diesel Oil, synthetic, API CJ-4, CI-4 Plus, CI-4, CH-4, SM, SL = 67,804 psi

zinc = TBD

phos = TBD

moly = TBD

162. 10W30 Champion Racing Oil, synthetic blend = 67,239 psi

zinc = TBD

phos = TBD

moly = TBD

163. 10W30 ProHonda HP4S, 4 Stroke Motorcycle Oil, API SJ, synthetic = 66,852 psi

zinc = TBD

phos = TBD

moly = TBD

This oil was tested Fall 2015

164. 15W40 LUCAS MAGNUM Diesel Oil, conventional, API CI-4,CH-4, CG-4, CF-4, CF/SL = 66,476 psi

zinc = 1441 ppm

phos = 1234 ppm

moly = 76 ppm

165. 15W40 CASTROL GTX DIESEL Oil, conventional, API CJ-4, CI-4 Plus, CI-4, CH-4, CG-4, CF-4/SN = 66,323 psi

zinc = TBD

phos = TBD

moly = TBD

166. 10W30 Royal Purple HPS (High Performance Street), synthetic = 66,211 psi

zinc = 1774 ppm

phos = 1347 ppm

moly = 189 ppm

167. 5W30 Schaeffer Supreme 7000 Synthetic Plus, API SN = 66,099 psi

zinc = TBD

phos = TBD

moly = TBD

This oil was tested Fall 2015

168. 10W40 Valvoline 4 Stroke Motorcycle Oil, API SJ, conventional = 65,553 psi

zinc = 1154 ppm

phos = 1075 ppm

moly = 0 ppm

169. 15W40 Swepco 306 Supreme Formula Engine Oil, with Dimonyl, conventional, API CI-4/SL, CF-2 = 65,185 psi

This oil is from Southwestern Petroleum Corporation.

zinc = TBD

phos = TBD

moly = TBD

170. 5W30 Klotz Estorlin Racing Oil, API SL, synthetic = 64,175 psi
 zinc = 1765 ppm
 phos = 2468 ppm
 moly = 339 ppm

171. ZDDPlus added to Royal Purple 20W50, API SN, synthetic = 63,595 psi
 zinc = 2436 ppm (up 1848 ppm)
 phos = 2053 ppm (up 1356 ppm)
 moly = 2 ppm (up 2 ppm)

The amount of ZDDPlus added to the oil, was the exact amount the manufacturer called for on the bottle. And the resulting psi value here was 24% LOWER than this oil had BEFORE the ZDDPlus was added to it. Most major Oil Companies say to NEVER add anything to their oils, because adding anything will upset the carefully balanced additive package, and ruin the oils chemical composition. And that is precisely what we see here. Adding ZDDPlus SIGNIFICANTLY REDUCED this oils wear prevention capability. Just the opposite of what was promised.

172. 5W30 PurOl Elite Series, synthetic = 63,282 psi
 zinc = TBD
 phos = TBD
 moly = TBD

173. Royal Purple 10W30 Break-In Oil, conventional = 62,931 psi
 zinc = 1170 ppm
 phos = 1039 ppm
 moly = 0 ppm

174. 10W40 Crane Cams Break-In Oil, conventional = 62,603 psi
 zinc = TBD, but claims high zinc formula
 phos = TBD
 moly = TBD

175. 10W30 Lucas Hot Rod & Classic Hi-Performance Oil, conventional = 62,538 psi
 zinc = 2116 ppm
 phos = 1855 ppm
 moly = 871 ppm

176. 5W30 Motul 8100 ECO-nergy, API SL, synthetic = 61,880 psi
 This oil is made in France, and comes in a 1 liter bottle, which = 1.05 qts
 zinc = TBD
 phos = TBD
 moly = TBD

For reference, 5W30 Motul 300V Ester Core 4T Racing Oil, synthetic, produced a wear protection capability of 112,464 psi

177. 0W20 Klotz Estorlin Racing Oil, API SL, synthetic = 60,941 psi
 zinc = TBD
 phos = TBD
 moly = TBD

178. 10W30 Comp Cams Muscle Car & Street Rod Oil, synthetic blend = 60,413 psi
 zinc = 1673 ppm
 phos = 1114 ppm
 moly = 67 ppm
 This oil is manufactured for Comp Cams by Endure.

179. 10W40 Torco TR-1 Racing Oil with MPZ, conventional = 59,905 psi
 zinc = 1456 ppm
 phos = 1150 ppm
 moly = 227 ppm

180. 10W40 Summit Racing Premium Racing Oil, API SL = 59,483 psi

This oil is made for Summit by I.L.C.

zinc = 1764 ppm

phos = 1974 ppm

moly = 41 ppm

NOTE: This oil line was discontinued in Spring 2013.

181. 10W40 Edelbrock, conventional = 59,120 psi

zinc = TBD

phos = TBD

moly = TBD

This oil is manufactured for Edelbrock by Torco.

182. 10W40 Spectro Motor-Guard High Performance Motorcycle Oil, API SL, conventional = 57,977 psi

zinc = 1800 ppm (claimed on bottle)

phos = 1800 ppm (claimed on bottle)

moly = TBD

183. 10W40 Brad Penn, Penn Grade 1, partial synthetic = 57,864 psi

zinc = TBD, but the bottle claims high zinc

phos = TBD

moly = TBD

184. 0W20 LAT Synthetic Racing Oil, API SM = 57,228 psi

zinc = TBD

phos = TBD

moly = TBD

185. ZDDPlus added to O'Reilly (house brand) 5W30, API SN, conventional = 56,728 psi

zinc = 2711 ppm (up 1848 ppm)

phos = 2172 ppm (up 1356 ppm)

moly = 2 ppm (up 2 ppm)

The amount of ZDDPlus added to the oil, was the exact amount the manufacturer called for on the bottle. And the resulting psi value here was 38% LOWER than this oil had BEFORE the ZDDPlus was added to it. Adding ZDDPlus SIGNIFICANTLY REDUCED this oils wear prevention capability. Just the opposite of what was promised.

186. ZDDPlus added to Motorcraft 5W30, API SN, synthetic = 56,243 psi

zinc = 2955 ppm (up 1848 ppm)

phos = 2114 ppm (up 1356 ppm)

moly = 76 ppm (up 2 ppm)

The amount of ZDDPlus added to the oil, was the exact amount the manufacturer called for on the bottle. And the resulting psi value here was 12% LOWER than this oil had BEFORE the ZDDPlus was added to it. Adding ZDDPlus SIGNIFICANTLY REDUCED this oils wear prevention capability. Just the opposite of what was promised.

187. 30wt Brad Penn, Penn Grade 1, Break-In Oil, conventional = 56,020 psi

zinc = TBD, but the bottle claims high zinc

phos = TBD

moly = TBD

188. 0W Mobil 1 Racing Oil = 55,080 psi

zinc = 1952 ppm

phos = 1671 ppm

moly = 1743 ppm

189. Edelbrock Zinc Additive added to Royal Purple 5W30, API SN, synthetic = 54,044 psi

zinc = 1515 ppm (up 573 ppm)

phos = 1334 ppm (up 517 ppm)

moly = 15 ppm (up 15 ppm)

The amount of Edelbrock Zinc Additive added to the oil, was the exact amount the manufacturer

called for on the bottle. And the resulting psi value here was a whopping 36% LOWER than this oil had BEFORE the Edelbrock Zinc Additive was added to it. Adding Edelbrock Zinc Additive SIGNIFICANTLY REDUCED this oils wear prevention capability. Just the opposite of what was promised.

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190. 10W30 Comp Cams Break-In Oil, conventional = 51,749 psi

zinc = 3004 ppm

phos = 2613 ppm

moly = 180 ppm

191. Edelbrock Zinc Additive added to Lucas 5W30, API SN, conventional = 51,545 psi

zinc = 1565 ppm (up 573 ppm)

phos = 1277 ppm (up 517 ppm)

moly = 15 ppm (up 15 ppm)

The amount of Edelbrock Zinc Additive added to the oil, was the exact amount the manufacturer called for on the bottle. And the resulting psi value here was a breath taking 44% LOWER than this oil had BEFORE the Edelbrock Zinc Additive was added to it. Adding Edelbrock Zinc Additive SIGNIFICANTLY REDUCED this oils wear prevention capability. Just the opposite of what was promised.

192. 15W50 Joe Gibbs Driven BR Break-In oil, conventional = 51,299 psi

NOTE: Total Seal also sells this Break-In Oil with their label on it.

zinc = TBD, but high levels are claimed on the bottle.

phos = TBD

moly = TBD

193. Edelbrock Zinc Additive added to Motorcraft 5W30, API SN, synthetic = 50,202 psi

zinc = 1680 ppm (up 573 ppm)

phos = 1275 ppm (up 517 ppm)

moly = 89 ppm (up 15 ppm)

The amount of Edelbrock Zinc Additive added to the oil, was the exact amount the manufacturer called for on the bottle. And the resulting psi value here was 22% LOWER than this oil had BEFORE the Edelbrock Zinc Additive was added to it. Adding Edelbrock Zinc Additive SIGNIFICANTLY REDUCED this oils wear prevention capability. Just the opposite of what was promised.

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194. 30wt Lucas Break-In Oil, conventional = 49,455 psi

zinc = 4483 ppm

phos = 3660 ppm

moly = 3 ppm

195. 5W30 Joe Gibbs Driven BR30 Break-In Oil, conventional = 47,483 psi

NOTE: Total Seal also sells this Break-In Oil with their label on it.

zinc = TBD, but high levels are claimed on the bottle.

phos = TBD

moly = TBD

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540 RAT
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