

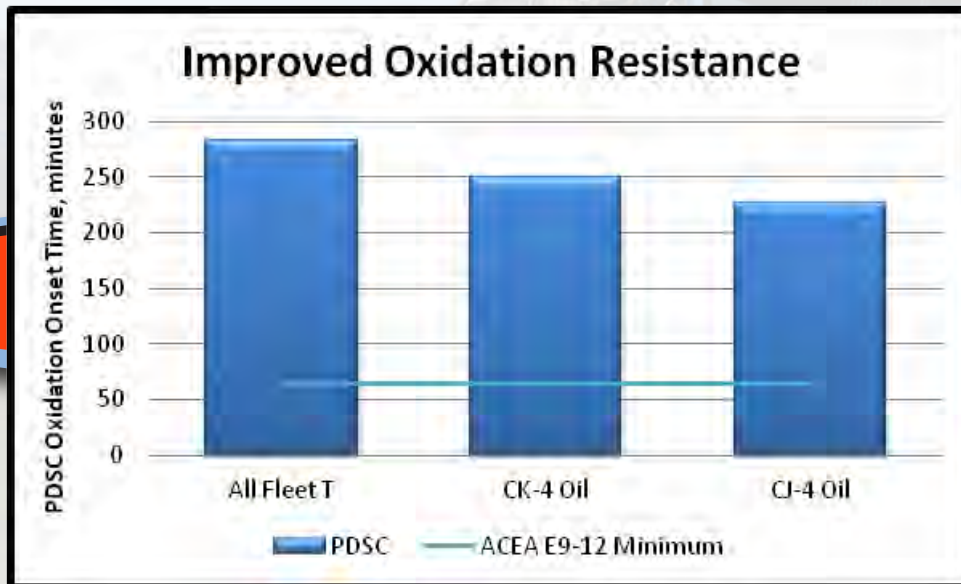


# ALL FLEET API CK-4

**Champion All Fleet T®** series engine oils are designed to provide premium performance to meet the needs of next generation of heavy duty engines. Increased power density, reduced oil volume and extended drain intervals place unique demands on engine oils to control oxidation by-products, sludge and deposits. Due to higher shear stress and lower viscosity minimums for engine oils, only oils with the highest wear protection and viscosity stability can maximize the performance and life of advanced diesel engines. Champion All Fleet T® builds on a long, trusted history protecting hard-working diesel engines.

**Oxidation Control-** Controlling oxidation is a key performance improvement for the API engine oil upgrades. Champion All Fleet T® series engine oils exceed industry and OEM oxidation performance, allowing users to achieve longer drain intervals, reduce maintenance and downtime, and extend engine life. Controlling oxidation, corrosive acids, sludge and varnish precursors allows for extended drains and minimized wear.

- Oxidation lower than OEM limits in over 60,000 mile on-highway and 600 hour off-highway drain intervals.
- Over 45% reduction in end-of-test oxidation in the new Volvo T-13 oxidation engine test.



**Wear Control-** Champion All Fleet T® series engine oils keep your engines going longer by reducing engine wear, preventing high temperature corrosion and controlling abrasive soot contamination, even while allowing for improved fuel economy and lower total cost of ownership.

- Over 75% less pushrod wear and 85% less injector screw wear than CJ-4 oils in proprietary, extra-severe engine testing.
- Outperformed corrosion bench testing limits by 70% for copper and over 98% for lead and tin.

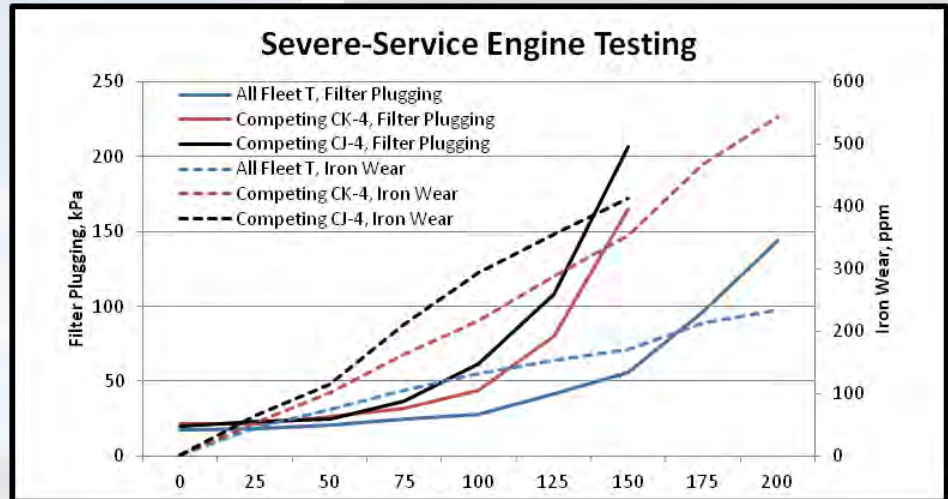
CHAMPION BRANDS, L.L.C. › 1001 GOLDEN DRIVE › CLINTON, MO 64735  
ORDER DESK 800-821-5693

Effective 08/16



# ALL FLEET API CK-4

17,000,000+ miles on-road field testing  
23,000+ hours off-road field testing



Backed by Top-Tier Technology and Testing Practices  
Advanced Protection for Older and Newer Heavy-Duty Engines

Champion All Fleet® CK-4 Oils Meet or Exceed the Following Specifications:

- API CK-4, CJ-4, CI-4 Plus, API SL (15W-40)
  - Volvo VDS-4.5, VDS-4
  - Detroit Diesel DFS93K222
  - Renault VI RLD-3
- ACEA E7-12, E9-12
  - Cummins CES 20086, CES 20081
  - Ford WSS-W2C171-F1
  - CAT ECF-3
- JASO DH-2
  - Detroit Diesel DFS93K218
  - Mack EO-O Premium Plus
  - MB 228.3

	Method	SAE 10W-30	SAE 15W-40
Part Number		4160	4158
Viscosity @ 40°C, cSt	D445	80	120
Viscosity @ 100°C, cSt	D445	11.7	15.5
Viscosity Index	D2270	140	135
Cold-Cranking Viscosity, cP	D5293	6,200 @ -25°C	6,400 @ -20°C
Pumping Viscosity, cP	D4684	20,000 @ -30°C	23,000 @ -25°C
HTHS @ 150°C, cP	D4683	3.5	4.3
NOACK Volatility, %	D5800	12	10
Zinc, ppm	D4951	1250	1250
Phosphorous, ppm	D4951	1140	1140
Oxidation Resistance, mins	D6186	283	283*
TBN, mgKOH/g	D2896	10.2	10.2

\*PDSC data collected for SAE 10W-30, API CK-4 viscosity grade

\*\*Typical properties; does not constitute a specification

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