

What PC-11 means for engines and oil

Changes to engine design and technology driven by better fuel economy and lower emissions are presenting opportunities for better oil performance.

Engine oils will play a vital role in improving durability through the use of advanced additive systems, polymeric viscosity modifier technology and better base oils. Additionally, lighter viscosity grades paired with OEMs' engine modifications will deliver better fuel economy benefits.

Changes to next-generation diesel engines include:

- Engine downsizing
- Downspeeding
- Active oil temperature control
- Advanced combustion design
- Higher oil temperatures
- Start/stop technology
- Variable valve timing.

PC-11 categories

A new API category, PC-11, has been introduced to improve the current CJ-4 specifications and help OEMs and lubrication blenders meet federal regulations.

PC-11A will be backwards compatible for older engines using higher viscosity High-Temperature High-Shear oils (HT/HS). API CJ-4 specifications will become CK-4.



PC-11B will be designed for engines 2017 and newer requiring lower viscosity (thinner) HT/HS oils. PC-11B will become FA-4 **and will not be backwards compatible.**

PC-11 timeline

The first API licensing for PC-11 will take effect in early 2017 with the new categories superseding the current API CJ-4 specifications. To ensure compliance, oils will have to pass stricter oxidation, shear stability, and aeration performance tests.

PC-11 will address:

- Improved oxidative stability
- Increased resistance to aeration
- Increased wear protection
- Increased shear stability
- Increased fuel economy.

What this means to you

SAE 15W-40 will not be the oil of choice for newer diesel engines. Next-generation engines will require the use of thinner oils that will be subjected to higher operating temperatures. Oils will have to work harder and last longer to provide long-term engine durability that vehicle owners expect.

API CJ-4 will become API CK-4. Traditional viscosities such as 15W-40

or 10W-30 will maintain their same performance benefits for existing vehicles, but they'll be designed to meet PC-11 requirements. The oil you've been using for older vehicles will still be available, only better.

More viscosities and oil types to choose from. Knowing the oil recommendations for your engine will be important as OEMs' specifications are becoming increasingly fragmented. Running a mixed fleet of trucks? You'll need to keep track of the model years and OEMs to make sure you're using the right oil for each truck.

Off-highway vehicles are included in PC-11. Agricultural and construction equipment will benefit from improvements in oxidation stability and shear stability as a result of PC-11 requirements.

How Schaeffer is preparing for PC-11

Schaeffer is committed to providing superior lubricants that help your equipment run more efficiently. For over 70 years, we've used proven friction modifiers Micron Moly® and our proprietary additive Penetro® in our oils to reduce friction and maximize engine durability. Our Technical Department is diligently working on this new advanced formulation; we'll keep you updated.



Founded in 1839, Schaeffer's Specialized Lubricants is a family-owned company that delivers the right solution to every lubrication challenge.



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