

CITGO CITGARD® SYNDURANCE®
SYNTHETIC HEAVY DUTY ENGINE OIL



Date 08/13

DESCRIPTION: CITGO CITGARD SynDurance Synthetic Heavy Duty Engine Oil utilizes premium synthetic base stocks to improve high and low temperature properties that give maximum engine protection over a wider temperature range compared to conventional 15W-40 engine oil. The careful balance of synthetic components and wide range viscosities gives improved fuel economy and optimized engine oil change intervals when combined with LubeAlert HD® Oil Analysis Program. Since the introduction of lower emission engines, controlling soot has been one of the leading challenges for diesel engine oil. The advanced additive Soot Arrest™ Technology improves soot control and stabilizes viscosity in most severe operating conditions. CITGO CITGARD SynDurance Synthetic Heavy Duty Engine Oil is formulated with an extremely shear stable viscosity modifier to insure heavily loaded engine parts have protective oil films which provide superior wear protection and engine durability. With the future focus on reducing greenhouse gases and the carbon footprint, CITGO CITGARD SynDurance Synthetic Heavy Duty Engine Oil has proven to improve fuel economy compared to other viscosity grades while maintaining optimum engine durability. CITGO CITGARD SynDurance Synthetic Heavy Duty Engine Oil improves overall engine efficiency and prolongs the life of the diesel particulate filters (DPF's), and Diesel Oxidation Catalyst (DOC's) low emission systems.

- PERFORMANCE BENEFITS:**
- Promotes fuel savings
 - Provides year-round engine protection for fleets operating in wide temperature conditions
 - Permits quick-fill lubrication flow during cold weather start-up
 - Exhibits excellent high temperature wear protection
 - Eliminates seasonal changeover and inventory problems when going from SAE 10W-30 in winter to 15W-40 in the summer
 - Helps avoid engine damage from using cold weather starting aids such as ether
 - Reduces dependency on engine block heaters
 - Provides drain interval optimization capability
 - Promotes longer engine life
 - Improves equipment productivity and service availability

APPLICATIONS: CITGO CITGARD SynDurance Synthetic Heavy Duty Engine Oil is recommended for modern turbo-charged, low emission diesel engines operating in severe conditions needing improved engine oil fuel efficiency.

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TYPICAL PROPERTIES:

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SAE Grade	5W-40
Material Code	622675001
Gravity, ASTM D 4052, °API	34.0
Pounds Per Gallon	7.12
Flash Point, COC, ASTM D 92, °F (°C)	446 (230)
Viscosity, ASTM D 445, cSt at 40°C	92
cSt at 100°C	14.9
Viscosity Index, ASTM D 2270	170
CCS Vis, ASTM D 5293, cP at °C	5,560 at -30°C
MRV Vis, ASTM D 4684, cP at °C	33,990 at -35°C
MRV Yield Stress, ASTM D 4684, Pa at °C	<35
Pour Point, ASTM D 97, °F (°C)	-49°F (-45°C)
TBN (Total Base No.), ASTM D 2896	10
Color, ASTM D 1500	4.5
NOACK Volatility, ASTM 05800, % Loss	11.2