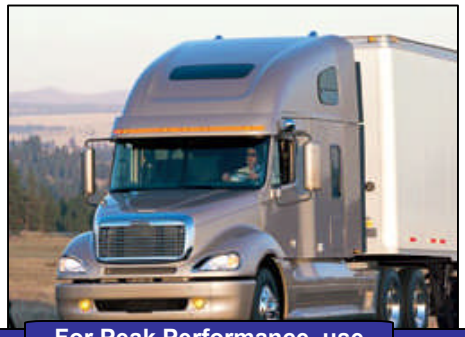
Spectra™ Xtreme 15W40 CJ-4

Advanced Performance Synthetic Blend Motor Oil

SAE 15W-40

Synthetic blend, multi-grade Diesel or Gasoline motor oil formulated for severe duty and extended drain intervals

Provides superior protection against deposit formation, oil breakdown, parts wear, and loss of compression.



For Peak Performance, use with LubeMaster System Purge

Specifically Engineered for

- Construction
- Agriculture
- Trucking & Fleet
- Logging
- Waste Hauling
- Material Handling Equipment
- Marine
- Federal, State, and Local Agencies
- Other Industries that Utilize Heavy Equipment

- Synthetic Blend Formula Engineered for Extended Drain Intervals*
- TBN of 13 Provides Extended Acid Neutralization While Maintaining Low Ash
- Excellent Performance with EGR, ACERT™, ASET™ and Turbo Charged Equipment
- Superior Thermal Stability for Higher Temperature Operation
- High Detergent Retention Prevents Deposit Build-up
- Contains SOLUMOL** for Superior Wear Protection
- Highly Resistant to Oxidation for Longer Oil Life
- High V.I. Number Provides Stable Viscosity Over a Wide Temperature Range
- Superior Cold Cranking and Oil Pumpability at Low Temperature
- Compatible with Synthetic, Synthetic Blend, and Mineral Based Motor Oils

* Always use oil analysis to establish new drain intervals

** SOLUMOL is an oil soluble synthetic molybdenum compound

Meets or Exceeds the Following Performance Requirements

- API Service Classification: CJ-4 CI-4, CI-4 Plus, CH-4 Plus, CH-4, and SM for gasoline engines
- ACEA E&-04 (2004)
- MIL-PRF-2104G, CID-A-A-52306A, and CID-A-A-52039B
- Mack EO-O Premium Plus 07
- MTU Type 2
- MAN 3275
- Caterpillar ECF-1-A, ECF-2, ECF-3
- Cummins CES 20081
- Renault RVI RLD-3
- Daimler Chrysler MB228.31, MB228.3
- Detroit Diesel DDC 93K218
- Volvo VDS-4

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Consult the label for complete directions and precautions before using this product.

LUBEMASTER™ EQUIPMENT PROTECTION

Division of Certified Laboratories

SPECTRA XTREME Motor Oils contain a total additive package that sets it apart from all other motor oils

Additives	Benefits
Premium, Synthetic Blend Base Oil	Highly-refined, oxidation-resistant synthetic blend base oils provide excptional, long-term lubrication to reduce friction, decrease heat and prevent wear.
Acid Neutralizers	SPECTRA XTREME prevents the formation of various acids and sludge. SPECTRA XTREME outlasts conventional oils by up to 300% due to it's high residual TBN.
Friction Reducers	Plate out on metal surfaces to prevent friction and wear under heavy loads. Prevents dry starts.
Anti-Wear Agents	Form a lubricant film on metal surfaces in the presence of heavy loads and high temperatures. Prevents cold welding.
Shear Stabilizers	Increase surface viscosity and improve shear stability to carry heavier loads, withstand extreme pressures and prevent shock impact.
Dispersants	Keep sludge, carbon, soot, varnish and gum suspended in the oil and carry them to the filter. Prevent deposits on high-contact surfaces.
Detergents	Keep surfaces clean and free of deposits that cause wear and increase blow-by.
Oxidation Inhibitors	Extend service life of the lubricant by retarding the oxidation or breakdown process.
Corrosion Inhibitors	Shield sensitive metals against acids and other corrosive compounds.
Rust Inhibitors	Plate metal surfaces to retard metal deterioration and reduce abrasive rust contaminants.
Viscosity Index Improvers	Maintain full viscosity over a wider temperature range to ensure full protection in fluctuating conditions. Eliminates the need to switch oil grades in different seasons.
Pour Point Depressants	Keep oil flowing properly in cold temperature. Lowers frictional drag and keeps equipment running in cold temperatures.
Solumol	An oil soluble synthetic molybdenum compound that plates onto the metal to provide exceptional wear protection.

Physical Properties

TEST	15W-40
Specific Gravity (API)	29.7
Viscosity, CCS	
cP @-20 °C, Max	6200
Viscosity SUS	
cSte @ 40 °C	105.5
cSte @100 °C	14.1
Viscosity Index	134
Flash Point (°F)	440
Pour Point (°F)	-17
ASTM D130 Corrosion	1A
Foam Suppression	
Sequence I	0
Sequence II	0
Sequence III	0
Sulphated Ash, %	1
TBN	13

IDEAL FOR USE:
Compatible with gasoline or diesel engines or combustion engines which have been converted to natural gas.

DO NOT USE:
Not compatible with 2-cycle gasoline engines that mix oil with fuel.

LUBEMASTER™ EQUIPMENT LUBRICATION SPECIALISTS PROTECTION

Comparison of CJ-4 Engine Oils

Engine Oil Test Methods, Descriptions, Test Result Values and What They Mean	Engine Oil Property	Amsoil CJ-4 15W40	Shell Rotella T 15W40	Mobil Delvac Elite 15W40	Schaeffer Supreme 7000 15W40	Chevron Ursa Plus EC 15W40	Royal Purple CJ-4 15W40	Castrol Hypuron 15W-40	Certified Labs Spectra Xtreme 15W40 CJ-4	Performance Benefit
ASTM D 3945: Shear Stability Index Measures the percent viscosity loss at 100°C of polymer-containing fluids when evaluated by using the Fuel Injector Shear Stability Test (FISST). The less viscosity loss the better protection and lubrication.	**Engine Oil Thermal Performance and Operating Viscosity**	4.2%	Data Not Available	Data Not Available	9.9%	Data Not Available	Data Not Available	Data Not Available	**<3% Loss**	**Spectra Xtreme has greater shear stability which allows for improved protection and extended drain intervals.**
ASTM D 2270: Viscosity Index Measures variation in viscosity due to changes in temperature. The higher the number, the more stable the oil will be at varying temperatures and conditions.		153	135	140	145 Ave	138	140	133	**134**	
ASTM D 2602: Viscosity by Cold Cranking Simulator Measures the apparent viscosity of the oil at cold temperatures. The results are related to the cranking characteristics of the oil. The lower viscosity reading the easier the oil will flow at low temperatures.		5210cp	Data Not Available	Data Not Available	5,460cp	Data Not Available	3250cp	Data Not Available	**6200cp**	
ASTM D 4683: High Shear/High Temperature Viscosity at the shear rate and temperature of this test method is the condition encountered in the bearings of automotive engines in severe service. Should have a minimum viscosity of 3.5 cp according to SAE.		4.2cp	Data Not Available	Data Not Available	4.3cp	Data Not Available	Data Not Available	Data Not Available	**4.8cp**	**Spectra Xtreme has exceptional low temperature flow which reduces equipment warm-uptime and will improve cold temperature protection.**
ASTM D 3829: Borderline Pumping Temperature of Engine Oil Measures the lowest temperature at which engine oil can be continuously and adequately supplied to the oil pump inlet of an automotive engine. In this case, measures viscosity at 20°C.		Data Not Available	Data Not Available	Data Not Available	-20 °F -	20 °F -	20°F	Data Not Available	**-25°F**	
FTM 203C: Stable Pour Point Measures the lowest temperature at which movement of the fluid is observed. The lower the pour point, the better utility the fluid has for certain applications at low temperatures.		-40°F -	30°F -	32°F -	41°F -	41°F -	30°F -	38°F	**-17°F**	
ASTM D 2896: Total Base Number (TBN) Measures the engine oil's ability to neutralize acid formation, which commonly occurs. The highest TBN for engine oil is 14. The higher the TBN, the more acid will be neutralized and the longer the oil will last.	**Engine Oil Anti-wear and Contamination Control Performance**	10.4 10	.1 10	.7	12	8	10.5	11	**13**	**Spectra Xtreme has a higher TBN which will extend the drain intervals and higher concentrations of anti-wear additives for greater wear protection for extended component life.**
ASTM D 5158: Phosphorous/Zinc Content Measures the amount of additive elements, wear metals and contaminants in lubricating oils. Phosphorous and zinc are part of the anti-wear package. The greater the concentration in ppm's of each in the oil the better the oil will protect various engine components.		Data Not Available	Data Not Available	Data Not Available	<0.003% Ave Phosphorous/ Zinc Content	<0.003% Ave Phosphorous/ Zinc Content	n/a ppm Phosphorus 812 ppm Zinc	<0.003% Ave	**0.07% Phosphorus** **0.05% Zinc**	
ASTM D 874: Sulfated Ash Content Measures the amount of sulfated ash from unused lubricating oils containing additives. The less amount of sulfated ash the better.		1.0% 1.	0% 0.	9% 1.	0%	0.96%	0.96%	1.0%	**<1%**	

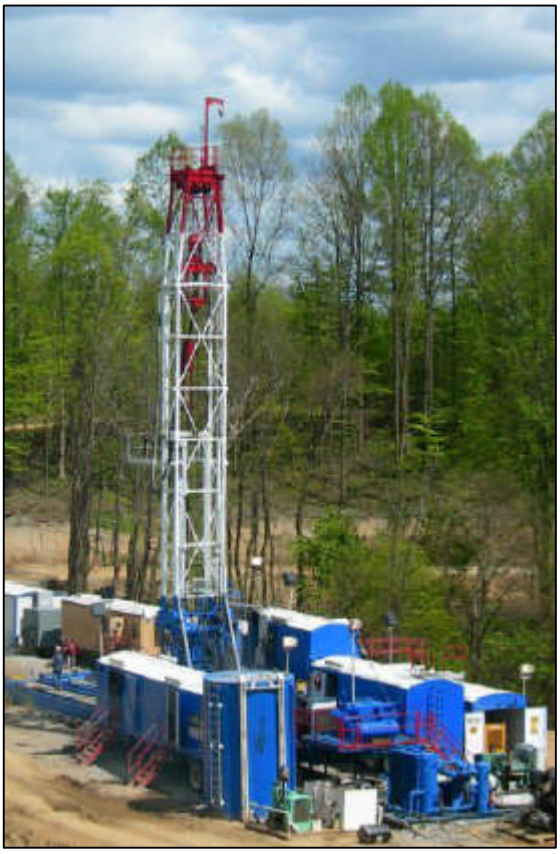
Value Recognition Report

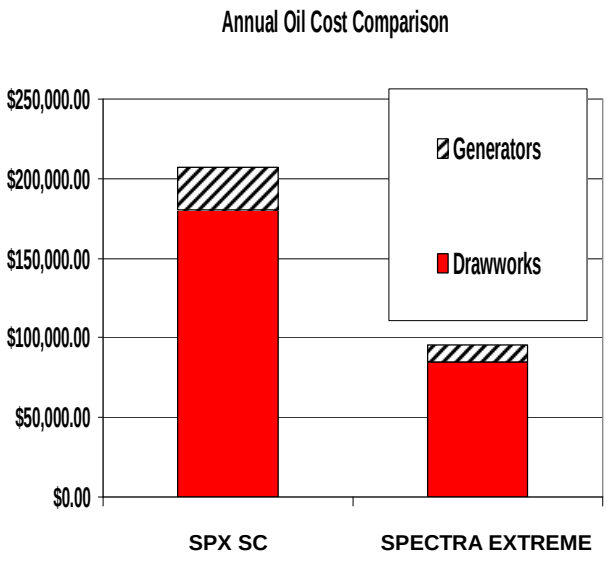
A Drilling Company in US

Account History: The company's fleet of 8 rigs accommodates shallow-to-medium depth drilling projects. The fleet of directional tools designed to accommodate a full range of hole sizes and directional profile considerations. Pinpoint utilizes both mud pulse (MP) and electromagnetic (EM) telemetry measurement while drilling (MWD) technologies.

Certified Labs' Objective: Provide a reliability partner starting with a performance engine oil (**SPECTRA XTREME**) in place of the Simons Petroleum SPX SC to reduce oil changes and labor costs producing a recognizable savings. Using the ***Certified Complete Reliability-Based Partnership Model***, Certified Labs is creating a value based relationship through the following in order to establish a Reliability Centered Maintenance approach using

- Performance Products
- Complete Diagnostic Support
- Oil and Fuel Analysis





Engine Oil

Results: Upon implementation, a recognized annual savings from extended engine oil drain intervals using **SPECTRA XTREME** was **$111,384.48**. Additional Savings will increase through a reduction of engine parts replacement, labor costs and downtime.
See back for details

Value Recognition Report
Using Caterpillar Equipment

Drawworks (2 Caterpillar 3406 TA), Mud Pumps (2 Caterpillar D398), Power Swive1 (Caterpillar C-9 Engine)

Oil	**SPX SC 15W-40**	**SPECTRA XTREME 14W-40**
Oil Amount	(5) 12 gal = 60	(5) 12 gal = 60
Oil Cost per Gallon, Unit, Total	$15.61/gl, $187.32, $936.60	$20.95/gl, $251.40, $1,257.00
Oil Filter	(5) $20 (2) = $200	(5) $20 (2) = $200
Labor	(5) $50 = $250	(5) $50 = $250
Cost per Change, Total Units	**(5) $277.32 = $1,386.60**	**(5) $341.40 = $1,707.00**
Annual Change Interval	300 Hours	750 Hours
Operation Runs 24/7/325 days	7,800/unit	7,800/unit
Number of Units	5	5
Number of Oil Changes	**26**	**10**
Annual Cost per Unit	$36,051.60	$17,070
Total Annual Cost for 5 Units	**$180,258.00**	**$85,350.00**
Savings	**--**	**$94,908.00**

Engine Generator Sets (2 Detroit Series 60 Diesel Engines)

Oil	**SPX SC 15W-40**	**SPECTRA XTREME 15W-40**
Oil Amount	(2) 12 gal = 24	(2) 12 gal = 24
Oil Cost per Gallon, Unit, Total	$15.61/gl, 187.32, $374.64	$20.95/gl, $251.40, $502.80
Oil Filter	(2) $20	(2) $20
Labor	(2) $50	(2) $50
Cost per Change	**(2) $257.32 = $514.64**	**(2) $321.40 = $642.80**
Annual Change Interval	(2) at 300 Hours	(2) at 1000 Hours
Operation Runs 24/7/325	7,800/unit	7,800/unit
Number of Units	2	2
Number of Oil Changes	**26**	**8**
Annual Cost	$13,380.64	$5,142.40
Total Annual Cost for 2 Units	**$26,761.28**	**$10,284.80**
Savings	**--**	**$16,476.48**

Annual Savings from Extended Engine Oil Drain Intervals = $111,384.48

Additional Savings Will Increase Through a Reduction of Engine Parts Replacement, Labor Costs and Downtime.

Spectra™ Xtreme 15W40 CJ-4

Advanced Performance Synthetic Blend Motor Oil

SAE 15W-40

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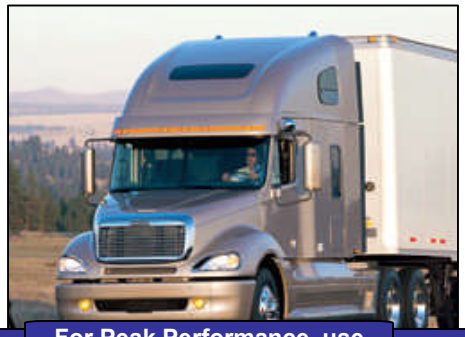

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- Renault RVI RLD-3
- Daimler Chrysler MB228.31, MB228.3
- Detroit Diesel DDC 93K218
- Volvo VDS-4

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Pour Point (°F)	-17
ASTM D130 Corrosion	1A
Foam Suppression	
Sequence I	0
Sequence II	0
Sequence III	0
Sulphated Ash, %	1
TBN	13

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DO NOT USE:
Not compatible with 2-cycle gasoline engines that mix oil with fuel.

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ASTM D 874: Sulfated Ash Content Measures the amount of sulfated ash from unused lubricating oils containing additives. The less amount of sulfated ash the better.		1.0% 1.	0% 0.	9% 1.	0%	0.96%	0.96%	1.0%	**<1%**	

Value Recognition Report
Underground Operations, Canada

Account History: One of Canada's best-known companies and largest exporters. Employs over 10,000 people around the world. Underground operations rely on vertical shafts to provide machinery and men to the mine site and to remove ore for further processing. The lifts, also known as the cage, carry men, machines, and skips carrying ore to the surface. Wire rope is an essential component. It is exposed to severe conditions including extreme loads, high speeds and contamination such as high alkaline mine water and abrasive material.

The Certified Lab's Objective: To develop a reliability partnership that reduces downtime, lowers maintenance and operating expenses, and drives a proactive maintenance initiative. The objective included the development of a wire rope dressing designed explicitly for the problems which occur in the vertical shafts. The products being used were only designed for seasonal applications, requiring different products for different temperatures. The wire rope was also experiencing severe corrosion from the alkaline water and abrasive wear.

Reduced Lubricant Products Used

A winter and summer grade wire rope dressing was being used prior to SUPREME EXTRA wire rope dressing. The wide application temperature and functionality of SUPREME EXTRA wire rope dressing allowed for **year-round use**.

Performance Improvement

The Wire rope was originally lubricated with a competitive product, then re-lubricated with SUPREME EXTRA wire rope dressing. Within a one year period, corrosion of the wire rope improved from a 2B rating to a **1A rating**. The breaking load **increased 10,000 psi** and the modulus of elasticity was **reduced 31%** resulting in less wire rope stretch. The wire rope rating was upgraded from CAUTIONARY to **NORMAL** after 6 months of using SUPREME EXTRA.

Annual Savings - Lubricant Related Downtime

The downtime related to applying the wire rope dressing was reduced by 24 hours annually (at a rate of $70/hr) and clean-up time costing $16,000 annually was reduced by at **least 50%** resulting in reduced clean-up labor costs totaling **$9000**.

Savings Summary

Lubricant Reduction from Two Products to One.

Overall Performance Improvements

Reduced Lubricant Related Downtime by $9000

Value Added Contributions

- On-Site Technical Support Visits for Bearing Purging and Monitoring **Typical Charge $1800/each**
- 2 Lubrication Training Seminars: **Typical Charge $1375/each**

