



Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

State of West Virginia  
 Request for Quotation

Proc Folder: 60515

Doc Description: OIL 15 - STATEWIDE CONTRACT FOR OILS, LUBRICANTS & GREASE

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2014-12-09	2015-01-20 13:30:00	CRFQ 0212 SWC150000010	1

**BID RECEIVING LOCATION**

BID CLERK  
 DEPARTMENT OF ADMINISTRATION  
 PURCHASING DIVISION  
 2019 WASHINGTON ST E  
 CHARLESTON WV 25305  
 US

**VENDOR**

Vendor Name, Address and Telephone Number:

*Apollo Oil, LLC  
 800 First Avenue South  
 Nitro, WV 25143*

01/16/15 11:01:13  
 WV Purchasing Division

**FOR INFORMATION CONTACT THE BUYER**

Evelyn Melton  
 (304) 558-7023  
 evelyn.p.melton@wv.gov

Signature X

*William E. Stever* FEIN # *61-1009071*

DATE *1-7-15*

All offers subject to all terms and conditions contained in this solicitation

7. MISCELLANEOUS:

- 7.1 **Warranty/Manuals:** The Vendor warrants under the penalty for fraud, that any products furnished shall be of the grade and quality required in this specification.

The Vendor shall provide technical information concerning the use of products when requested by the Agency.

- 7.2 **Certifications/Samples:** Each Vendor should provide nationally published certifiable literature and/or certification from an independent laboratory that contract items passed the ASTM requirements described herein. Vendors shall be responsible for the cost of the independent laboratory testing.

The successful Vendor may be required to furnish a sample of any or all oil bid submitted for test purposes prior to award.

- 7.3 **No Substitutions:** Vendor shall supply only Contract Items submitted in response to the RFQ unless a contract modification is approved in accordance with the provisions contained in this Contract.

- 7.4 **Vendor Supply:** Vendor must carry sufficient inventory of the Contract Items being offered to fulfill its obligations under this Contract. By signing its bid, Vendor certifies that it can supply the Contract Items contained in its bid response.

- 7.5 **Reports:** Vendor shall provide quarterly reports and annual summaries to the Agency showing the Agency's items purchased, quantities of items purchased, and total dollar value of the items purchased. Vendor shall also provide reports, upon request, showing the items purchased during the term of this Contract, the quantity purchased for each of those items, and the total value of purchases for each of those items. Failure to supply such reports may be grounds for cancellation of this Contract.

- 7.6 **Contract Manager:** During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

Contract Manager: Randy Ward  
Vendor's Address: 800 First Ave South  
Nixa MO 65713  
Telephone Number: 304-382-1626  
Fax Number: 304-722-6972  
Email Address: Rward@Apollolub.com

**CERTIFICATION AND SIGNATURE PAGE**

By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Apollo Oil, LLC  
(Company)

William E Steyer William E Steyers, V.P.  
(Authorized Signature) (Representative Name, Title)

502-643-4165(C) (Fax) 304-722-6972 1/5/15  
(Phone Number) (Fax Number) (Date)

ADDENDUM ACKNOWLEDGEMENT FORM  
SOLICITATION NO.: SCW150000010

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:  
(Check the box next to each addendum received)

- |   |  |
|---|--|
| <input type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Apollo O.I. LLC  
Company

William E. Star  
Authorized Signature

1-5-15  
Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.



STATE OF WEST VIRGINIA  
Purchasing Division

**PURCHASING AFFIDAVIT**

**MANDATE:** Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**DEFINITIONS:**

**"Debt"** means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

**"Employer default"** means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

**"Related party"** means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**

Vendor's Name: Apollo Oil, LLC

Authorized Signature: William E. Stone Date: 1-6-15

State of Kentucky

County of Jefferson, to-wit:

Taken, subscribed, and sworn to before me this 6 day of January, 2015.

My Commission expires August 4, 2018.

AFFIX SEAL HERE



NOTARY PUBLIC

[Signature]

# VENDOR PREFERENCE CERTIFICATE

Certification and application\* is hereby made for Preference in accordance with **West Virginia Code**, §5A-3-37. (Does not apply to construction contracts). **West Virginia Code**, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the **West Virginia Code**. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Vendor Preference, if applicable.

1. **Application is made for 2.5% vendor preference for the reason checked:**

- Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or**,
- Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or**,
- Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or**,

2. **Application is made for 2.5% vendor preference for the reason checked:**

Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or**,

3. **Application is made for 2.5% vendor preference for the reason checked:**

Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or**,

4. **Application is made for 5% vendor preference for the reason checked:**

Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or**,

5. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**

Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or**,

6. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**

Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

7. **Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with West Virginia Code §5A-3-59 and West Virginia Code of State Rules.**

Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

**Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.**

Bidder: Apollo Oil, LLC

Signed: William E. St...

Date: 1-7-15

Title: V.P.



## *Typical Properties Specification*

### *STA-MIX SM3248SM*

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<i>Typ Vis @ 100C, cSt</i>	9
<i>Typ Vis @ 40C, cSt</i>	90
<i>Typ VI</i>	80
<i>Typical API Gravity @ 60F</i>	25.3
<i>Density - pounds/gallon</i>	7.5
<i>Typical Pour Point F</i>	-2 F
<i>Flash open or closed</i>	CLOSED
<i>Typical Flash Point F</i>	220 F
<i>Color(Visual)</i>	GREEN
<i>Typical Moisture</i>	PASS POP TEST

*Sta-mix 16/32:1 Two Cycle Engine Lubricant meets or exceeds manufacturer's requirements for all ratios up to 32:1. This oil can be used in all two cycle air cooled engines, and for unleaded fuel. This product meets API TC requirements.*

*Spectrum Corporation is committed to work toward customers' satisfaction and to continually improve products and services that meet or exceed customer expectation.*

*Quality Assurance Manager - Valeria Wedley  
Telephone (731)645-4937*



# Shell Spirax S5 ATF X

*Premium, Synthetic Technology Multi-Vehicle Automatic Transmission Fluid*

Shell Spirax S5 ATF X is a premium performance, synthetic technology fluid designed to meet the needs of multiple vehicle types for service fill in automatic transmission service. Shell Spirax S5 ATF X meets the needs of many Asian and North American designed automatic transmissions.

## DESIGNED TO MEET CHALLENGES

### Main Applications



- Passenger car automatic transmissions
- Heavy duty automatic transmissions
- Power steering units
- Hydraulic systems requiring this grade of fluid

### Performance, Features & Benefits

- **Friction modified**  
Provides consistent, reliable, smooth and trouble free operation of automotive transmission systems.
- **Exceptionally high oxidation resistance**  
Resistant to oil degradation and keeps automatic transmissions clean.
- **Excellent shear-stability**  
A special 'VI' improver minimises the changes in viscosity with operating temperature.

- **Dependable anti-wear and gear protection**  
Long component life.
- **Low temperature performance**  
Excellent oil fluidity at low temperatures.
- **Synthetic base fluids**  
Excellent fluid life in the most demanding applications.

### Specifications, Approvals & Recommendations

Suitable for use in applications which require

- Allison C-4
- Aisin JWS 3309 (all applications)
- JASO 1-A, 2A-02
- Ford Mercon® V, Mercon®
- General Motors Dexron®, Dexron® II, Dexron® III
- Toyota T III, T IV

See the Application Table and notes for additional vehicle coverage

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

### Typical Physical Characteristics

Properties			Method	Shell Spirax S5 ATF X
Flash Point (COC)		°C	ASTM D92	190
Viscosity	@-40°C	mPa s	ASTM D2983	12000
Viscosity	@40°C	mm <sup>2</sup> /s	ASTM D445	35
Viscosity	@100°C	mm <sup>2</sup> /s	ASTM D445	7.2
Density	@15°C	kg/m <sup>3</sup>	ASTM D1298	850

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

## Application Table

Spirax S5 ATF-X is suitable for use in the following:

Manufacturer	Fluid Specification	Manufacturer	Fluid Specification
Aisin	JWS 3309	Mercedes-Benz	Pre-1996
Allison	C4	Mini	83 2 0 402 42
Audi	G 055 025-A2	Mitsubishi	Diamond SP-II
Audi	G 052 162-A1	Mitsubishi	Diamond SP-III
BMW	LA2634, ETL-7045E	Nissan/ Infiniti	Matic-D
BMW	LT71141	Nissan/ Infiniti	Matic-J (Note 3)
Fiat	9.55550 AV	Nissan/ Infiniti	Matic-K
Ford	MERCON	Porsche	JWS 3309 (Cayenne)
Ford	MERCON V	Saab	JWS 3309 and 5 Speed Automatics, Transmax J, TIV
Ford	M2C138-CJ	Scion	T-II, T-III, T-IV
Ford	M2C166-H	Subaru	ATF
Ford	M2C202-B	Subaru	ATF-HP
Ford	WSS-M2C924-A (JWS 3309 in Five Hundred and Montego)	Suzuki	Dexron III
Ford	M2C922-A1	Texaco	ETL-7045E, N402
GM	Type A, Suffix A	Toyota	Type T-II
GM/Saturn	9986195 (JWS 3309)	Toyota	Type T-III, and where a Dexron III fluid is allowed
GM	DEXRON	Toyota/ Lexus	Type T-IV
GM	DEXRON-II	Voith	55.6335.32 (G607, G1363) Voith DIWA #013S
GM	DEXRON-II D	Volvo	JWS 3309, 5 Speed Automatics
GM	DEXRON-III G, III H	Volvo	Volvo 1273.41 and 97340
Honda/Acura	Premium	Various	ZF TE-ML 14B
Honda/Acura	ATF-Z1	Various	ZF-TE-ML 16L
Hyundai	SP-II or SP-III	Various	JWS-3309
Idemitsu	K17	VW	G 055 25-A2, TL-5612, TL-52162
Isuzu	SCS, ATF-II, ATF-III, Genuine	ZF	TE-ML 02F
JASO	JASO 1A	ZF	TE-ML 03D
Kia	SP-II or SP-III	ZF	TE-ML 04D
Kia	ATF Red I-K	ZF	TE-ML 09
MAN	339F Ty V-1, V-2, Z-1, Z-2, Z-3	ZF	TE-ML 11A
Mazda	ATF M-111	ZF	TE-ML 14A/14B/14C
Mazda	ATF MV	ZF	TE-ML 16L
Mercedes-Benz	Sheet 236.1, 236.2, 236.5, 236.6, 236.7, 236.9, 236.10	ZF	TE-ML 17C

Shell Spirax S5 ATF X is suitable in many Kia, pre-2003 VW/Audi, Mazda, Subaru, Suzuki, Isuzu, Hyundai, Daewoo transmissions where a DEXRON®/MERCON®/MERCON® V fluid is allowed.

### Application Exceptions

1) Shell Spirax S5 ATF X should not be used where Type F fluids are recommended; check application manual if the vehicle is one of the following: Datsun/Nissan pre 1971, Lincoln pre 1978, Ford/Mercury pre 1981, Toyota pre 1983, Volvo pre 1985, Mazda pre 1986, Saab pre 1993.

2) Shell Spirax S5 ATF X should not be used in Continuous Variable Transmissions (CVTs) or Double Clutch Transmissions (DCTs).

3) Shell Spirax S5 ATF X does not meet the low viscosity requirements of 2006 and later GM vehicles requiring DEXRON®-VI, Ford applications requiring Ford MERCON® LV or Mercon® SP, Shell 1375.4, Toyota WS, Hyundai SP-IV or SPH-IVRR, Nissan Matic-S, Honda ATF DW-1, Chrysler ZF 8 and 9 speed ATF, other ZF 8 and 9-speed ATFs (in a number of European cars), newer Daimler transmissions (ATF 134 or later MB Approval 236.12, 236.14, 236.15 or 236.16) and other specialty transmissions where a low viscosity ATF is recommended.

Where applications allow use of an alternate fluid of a higher viscosity (example Nissan Matic-J when Nissan Matic-S is not available) to one of the above fluid specifications, Pennzoil Platinum™ High Mileage & Import MV ATF is an excellent recommendation.

- DEXRON is a registered trademark of General Motors Corporation. MERCON is a registered trademark of Ford Motor Company.

## Health, Safety & Environment

- **Health and Safety**

Shell Spirax S5 ATF X is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from <http://www.epc.shell.com/>

- **Protect the Environment**

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

## Additional Information

- **Colour**

Shell Spirax S5 ATF X is dyed red for identification purposes.

- **Advice**

Advice on applications not covered here may be obtained from your Shell representative.





Previous Name: Shell Donax TC 10W

# Shell Spirax S4 CX 10W

*High performance off-highway transmission and hydraulic oil*

Shell Spirax S4 CX 10W is designed to provide operators with trouble-free operation and maximum reliability for the lifetime of the equipment. Spirax S4 CX 10W meets the demanding requirements of modern transmission, oil-immersed brake and hydraulic systems fitted to heavy-duty off-highway equipment.

## DESIGNED TO MEET CHALLENGES

### Performance, Features & Benefits

- **Frictional performance and material compatibility**

Highly consistent and reliable friction performance when used with the advanced metallic and non-metallic materials found in modern systems. Minimal clutch slippage, smooth and quiet brake operation, and trouble-free hydraulic and transmission operation.

- **Anti-wear protection**

The shear-stable SAE 10W viscosity grade is free from viscosity index (VI) improvers and thickeners and give the best protection of heavily loaded components.

- **Low temperature characteristics**

Formulated to meet low temperature viscosity and fluidity requirements, providing superior protection during start-up and low operating temperature conditions.

- **Optimum mechanical performance and long oil life**

Wide-ranging protection for critical components, such as bronze friction discs in powershift transmissions and highly loaded hydraulic pumps.

- **Vickers 35V25 hydraulic pump test**

Excellent performance in this demanding test.

- **Oxidation stability**

Contains inhibitors to control oxidation and deposit formation. Protects both ferrous and non-ferrous metals from corrosion. Suppresses foaming. With improved flow properties at low temperatures enhances efficiency.

### Main Applications



- Shell Spirax S4 CX 10W is recommended for use in heavy duty off-highway equipment produced by the world's leading manufacturers including; Caterpillar, Komatsu, Komatsu-Dresser and in transmissions manufactured by Eaton, Eaton Fuller, ZF, Dana, Rockwell amongst others:
- Powershift transmissions
- Oil immersed brakes
- Hydraulic systems

### Specifications, Approvals & Recommendations

- Caterpillar Tractor TO-4
- ZF TE-ML 03C
- Suitable for use in applications where Allison C-4 type fluids are required
- Shell Spirax S4 CX 10W is suitable\* for use in many powershift or manual transmissions, wet brake systems, and many off-highway hydraulic systems including those of Komatsu and Caterpillar.

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

\*Please check equipment manuals for appropriate selection of viscosity grade.

## Typical Physical Characteristics

Properties			Method	Shell Spirax S4 CX 10W
SAE Viscosity Grade			SAE J 300	10W
Kinematic Viscosity	@40°C	mm <sup>2</sup> /s	ISO 3104	36
Kinematic Viscosity	@100°C	mm <sup>2</sup> /s	ISO 3104	6
Density	@15°C	kg/m <sup>3</sup>	ISO 12185	884
Flash Point (COC)			ISO 2592	200
Pour Point			ISO 3016	-36

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

### Health, Safety & Environment

#### • Health and Safety

Shell Spirax S4 CX 10W is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from <http://www.epc.shell.com/>

#### • Protect the Environment

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

### Additional Information

#### • Advice

Advice on applications not covered here may be obtained from your Shell representative.





Previous Name: Shell Spirax ASX-R 75W-90

# Shell Spirax S6 AXRME 75W-90

*Superior performance, extended drain synthetic, GL-5 axle oil for Roadranger, Meritor and others*

Shell Spirax S6 AXRME 75W-90 is a fuel-efficient axle fluid, designed to provide ultimate protection to the latest heavy-duty axles calling for API GL-5 type products. Specially formulated with synthetic base oils and additive technology that provide improved lubrication of the drive train, lowers the operating temperature and helps promote longer life for the equipment. Shell Spirax S6 AXRME 75W-90 is capable of extended oil drain and is approved by several OEMs for extended drain specifications. Extensive fleet testing has demonstrated a fuel efficiency improvement of over 1% when compared to several products in the same application.

## DESIGNED TO MEET CHALLENGES

### Performance, Features & Benefits

- **Fuel efficient formulation**

Proven fuel efficiencies in both standard industry and commercial fleet testing methods of over 1%.

- **Longer oil drain capability**

Meets the requirements of Dana SHAES 256 Rev C, (500,000 mile oil drains, with warranty for 750,000 miles), which documents the long drain capability of the fuel efficient formulation.

- **Longer equipment life**

Excellent protection against gear wear and pitting, helps prevent premature failures. Outstanding oxidation resistance also helps prevent damage to seals due to deposit formation.

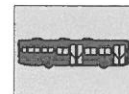
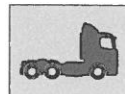
- **Less lubricant usage**

Excellent static and dynamic seal compatibility that meets or exceeds a number of leading OEM requirements, which helps minimize seal leaks. The extended drain capabilities help maximize oil drain intervals resulting in less overall lubricant usage during the life of the equipment.

- **Recognized by leading equipment manufacturers**

A number of leading equipment manufacturers recognize the benefits of Shell Spirax S6 AXRME 75W-90 and have formally approved it against their specifications.

### Main Applications



- **Drive axles in heavy duty on-highway trucks**

Heavy duty axles and other applications where a 75W-90 API GL-5 extreme pressure (EP) mineral or synthetic gear oil is recommended.

Note: For Eaton Roadranger Transmissions Use Spirax S6 GME 50

### Specifications, Approvals & Recommendations

- ArvinMeritor O76-N
- DANA SHAES-256 Rev C
- International TMS 6816
- Mack GO-J Plus
- API GL-5, MT-1
- SAE J2360
- US Military MIL-PRF-2105E

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Help Desk.

## Typical Physical Characteristics

Properties			Method	Shell Spirax S6 AXRME 75W-90
SAE Viscosity Grade			SAE J306	75W-90
Appearance				Amber
Kinematic Viscosity	@40°C	cSt	ASTM D445	103
Kinematic Viscosity	@100°C	cSt	ASTM D445	15
Viscosity	@-40°C	cP	ASTM D2983	90000
Viscosity Index			ASTM D2270	152
Density	@15.6°C	g/l	ASTM D1298	891
Density	60°F	lbs/gal.	ASTM D1298	7.42
Flash Point (COC)			ASTM D92	215 / (420)
Pour Point			ASTM D97	<-45 / (<-49)

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

### Health, Safety & Environment

#### • Health and Safety

Shell Spirax S6 AXRME 75W-90 is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from your Shell representative.

#### • Protect the Environment

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

### Additional Information

#### • Advice

Advice on applications not covered here may be obtained from your Shell representative.



Previous Name: Shell Spirax ASX 80W-140

# Shell Spirax S6 AXME 80W-140

*Superior performance, extended drain, synthetic transmission axle oil for many premium applications*

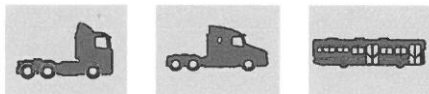
Shell Spirax S6 AXME 80W-140 is a fully synthetic, multipurpose, heavy-duty gear lubricant specifically designed for heavy duty differentials that call for an API GL-5 type product.

## DESIGNED TO MEET CHALLENGES

### Performance, Features & Benefits

- Outstanding thermal stability especially in applications where heat, wear and extended drain intervals contribute to severe service.
- High film strength and excellent shear stability.
- Excellent low temperature properties promote oil flow to help protect gears and bearings even at sub-zero temperatures.
- Synthetic formula provides maximum protection over a wide range of temperatures.
- Separates readily from water.
- Compatible with other MIL-L-2105D or MIL-PRF-2105E quality gear lubricants.

### Main Applications



- Heavy duty differentials.
- All applications normally lubricated by automotive gear oil such as rear wheel bearings, manual steering gears and universal joints calling for an SAE 80W-140 grade.
- Transfer cases for automobiles, light and heavy-duty trucks, farm equipment and heavy construction equipment calling for SAE 80W-140 or 85W-140 grades.

- Industrial gear applications where extreme pressure oils with excellent low and high temperature properties are required.
- Differentials used in conjunction with Eaton and Meritor extended warranties calling for an SAE 80W-140 grade.
- Manual transmissions where the manufacturer specifies a GL-5 oil of SAE 80W-140 or 85W-140 grades.

### Specifications, Approvals & Recommendations

- Dana Specification SHAES 429 Rev. A
- Mack GO-J
- ArvinMeritor Specification O76-B (standard drain), O76-Q and R (extended drain)
- SAE J2360
- Harnischfeger (P&H) 474
- International Truck and Engine TMS 6816
- API Classifications GL-5 and MT-1
- General Electric D50E9C
- US Military MIL-PRF-2105E
- U.S. Steel Specification 224
- American Gear Manufacturers (AGMA) Standard 250.03
- Scania STO 1:0

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

## Typical physical Characteristics

Properties		Method	Shell Spirax S6 AXME 80W-140
SAE Viscosity Grade			80W-140
Product Code			59227
Gravity	°API	D 287	23.6
Viscosity	@40°C cSt	D 445	271
Viscosity	@100°C cSt	D 445	30.5
Viscosity	@-18°C cP	D 2983	20500
Viscosity	@-26°C cP	D 2983	75000
Viscosity	@-40°C cP	D 2983	-
Viscosity Index		D 2270	146
Flash Point	°C (°F)	D 92	201 (395)
Pour Point	°C (°F)	D 97	< -40 (< -40)
Timken, OK Load		D 2509	85
FZG Gear Test			12

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

### Health, Safety & Environment

#### • Health and Safety

Shell Spirax S6 AXME 80W-140 is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from <http://www.epc.shell.com/>

#### • Protect the Environment

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

### Additional Information

#### • Optimum Performance

For optimum performance, mineral oil lubricants should be drained before using Shell Spirax S6 AXME 80W-140. Mixing with other products may reduce its effectiveness and field performance.

#### • Advice

Advice on applications not covered here may be obtained from your Shell representative.



The Shell Company of Australia Limited  
 (ABN 46 004 610 459) 8 Redfern Road  
 Hawthorn East Victoria 3123 Australia



# Shell Spirax S6 ATF A295

- Maintenance Saving
- Enhanced Efficiency

## Synthetic Extended Drain Heavy Duty Automatic Transmission Fluid

Shell Spirax S6 ATF A295 Oil is a fully synthetic, heavy-duty automatic transmission fluid which is specifically designed and approved for use in transmissions requiring Allison TES-295 fluids. Spirax S6 ATF A295 is approved for extended service intervals and remains stable even under severe operating conditions.

### DESIGNED TO MEET CHALLENGES

#### Performance, Features & Benefits

- **Long enhanced protection – long equipment life**

Viscosity Control : Spirax S6 ATF A295 incorporates latest synthetic base fluid technology and mechanically stable viscosity index improver technology to help ensure the viscosity of the oil remains constant over the complete oil drain, thus helping to ensure consistent lubrication and oil film thickness required to ensure protection of the gears, bearings and other mechanical components.

- **Long fluid life – maintenance saving**

The exceptional oxidation resistance of Spirax S6 ATF A295 helps resist formation of deposits to ensure longer fluid life and better fluid performance under arduous conditions.

Extended fluid life demonstrated in full scale long duration transmission testing.

- **Enhanced efficiency**

Extremely high frictional stability, excellent viscometric control and durability helps ensure consistent shifting and power transfer characteristics. This helps provide smooth shifting and helps maintain the fuel efficient operation of the transmissions.

Excellent low temperature properties help ensure efficient transmission operation even under cold climate conditions.

Excellent anti-foam and filterability characteristics to help ensure efficient and effective lubrication and hydraulic control system performance within the transmission.

- **Allison Medium/Heavy Duty Automatic Transmissions**

Spirax S6 ATF A295 was developed to meet the extended drain requirements of late model medium and heavy duty Allison automatic transmissions. It is particularly suitable for transmissions requiring a TES-295 type product.

Spirax S6 ATF A295 is recommended for use in transmissions found in the following applications:

- Municipal fleets
- Vans, school buses
- Buses and Coaches
- Emergency vehicles
- Commercial vehicles and trucks
- Motor-homes
- Heavy duty pickup trucks
- Spirax S6 ATF A295 can also be used in some ZF and Voith heavy duty transmissions as well as those previously serviceable by Dexron® III and Mercon® fluids, and is particularly suited to mixed fleet operations.

#### Specifications, Approvals & Recommendations

Approved:

- Allison TES-295 AN-121008
- Allison TES-468 AN-121008

Suitable for use in applications calling for:

- Former Dexron-III applications
- Voith DIWA transmissions
- ZF TE-ML, 14A, 14B, 14C
- MAN 339 Z3
- MB 236.91
- Caterpillar AT-1

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Help Desk.

#### Main Applications



## Typical Physical Characteristics

Properties			Method	Shell Spirax S6 ATF A295
Kinematic Viscosity	@40 <sup>o</sup> C	cSt	ASTM D445	36
Kinematic Viscosity	@100 <sup>o</sup> C	cSt	ASTM D445	7.3
Viscosity Index			ASTM D2270	181
Density	@15 <sup>o</sup> C	kg/l	ASTM D287	0.840
Flash Point (COC)		<sup>o</sup> C	ASTM D92	213
Pour Point		<sup>o</sup> C	ISO 3016	-51

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

### Health, Safety & Environment

#### • Health and Safety

Shell Spirax S6 ATF A295 is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from <http://www.epc.shell.com/>

#### • Protect the Environment

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

### Additional Information

#### • Advice

Advice on applications not covered here may be obtained from your Shell representative.





# Shell Rotella® T1 30 (CF/CF-2)

## High Quality Heavy Duty Diesel Engine Oils

Shell Rotella® T1 Energized Protection™ oils use well-proven performance additives to fight engine wear and prevent deposits, providing reliable lubrication and consistent performance. Suitable for day to day use in turbo and non-turbocharged older engines.



**ENERGIZED PROTECTION**  
Adapting to your engine's changing needs

### Performance, Features & Benefits

#### Reliable performance

Provide reliable all-year-round performance in the applications for which they are intended.

#### Proven durability

Shell Rotella® T1 provides excellent wear protection that promotes engine durability. It has a low ash content which minimizes the formation of deposits and keeps intake ports clean. It offers excellent rust and corrosion protection for critical engine parts.

### Main Applications



#### Heavy duty diesel engines

Shell Rotella® T1 is suitable for a variety of applications including older on and off-road trucks and some stationary engines.

- Shell Rotella® T1 is suitable for heavy equipment used for construction, mining or quarry operations.
- Shell Rotella® T1 30 is suitable for use in Detroit Diesel two-cycle engines (Series 53, 71 and 92).
- **Hydraulic and transmissions**  
Shell Rotella® T1 oils can be used in certain transmission and mobile hydraulic systems where the equipment manufacturer recommends use of mono-grade engine oils.

### Specifications, Approvals & Recommendations

- API CF-2, CF
- Detroit Diesel Series 53,71,92
- For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Help Desk, or the OEM Approvals website.

### Typical Physical Characteristics

Properties			Method	Shell Rotella T1 30
SAE Viscosity Grade			J300	30
Kinematic Viscosity	@40°C	cSt	ASTM D445	107
Kinematic Viscosity	@100°C	cSt	ASTM D445	11.9
Viscosity Index			ASTM D2270	101
Density	@15°C	kg/l	ASTM D4052	0.887
Total Base Number			ASTM D2896	7.5
Flash Point (Cleveland Open Cup)			ASTM D92	210
Pour Point			ASTM D97	-24

These characteristics are typical of current production. While future production will conform to Shell's specification, variations in these characteristics may occur.

## **Health, Safety & Environment**

### **▪ Health and Safety**

Shell Rotella T1 is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from your Shell representative.

### **▪ Protect the Environment**

Take used oil to an authorized collection point. Do not discharge into drains, soil or water.

## **Additional Information**

### **▪ Advice**

Product recommendations for applications and specifications not covered here may be obtained from your Shell representative.





Previous Name: Shell Tellus T

# Shell Tellus S2 V 22

- Extra Protection
- Versatile Applications

## Industrial Hydraulic Fluid for wide temperature range

Shell Tellus S2 V fluids are high performance hydraulic fluids that use Shell's unique patented technology with excellent viscosity control under both severe mechanical stress and across a wide range of temperatures. They provide outstanding protection and performance in most mobile equipment and other applications subjected to wider ranges of ambient or operating temperatures.

### DESIGNED TO MEET CHALLENGES

#### Performance, Features & Benefits

##### • Long fluid life – Maintenance saving

Shell Tellus S2 V fluids help extend equipment maintenance intervals by resisting thermal and chemical breakdown. This minimizes sludge formation and provides excellent performance in the industry standard ASTM D943 TOST test (Turbine Oil Stability Test), providing better reliability and system cleanliness.

Shell Tellus S2 V fluids also have good stability in the presence of moisture, which ensures long fluid life and reduces the risk of corrosion and rusting, particularly in moist or humid environments.

Highly shear stable viscosity modifiers help minimize variations in the fluid properties throughout the fluid drain interval.

##### • Outstanding wear protection

Proven zinc-based anti-wear additives are incorporated to be effective throughout the range of operating conditions, including low load and severe duty high load conditions. Outstanding performance in a range of piston and vane pump tests, including the tough Denison T6C (dry and wet versions) and the demanding Vickers 35VQ25, demonstrates how Shell Tellus S2 V fluids can help system components last longer.

##### • Maintaining system efficiency

The extended temperature range capability of Shell Tellus S2 V allows efficient operation of mobile equipment from cold start to normal operating conditions.

Superior cleanliness, excellent filterability and high performance water separation, air release and anti-foam characteristics all help contribute to maintaining or enhancing the efficiency of hydraulic systems.

The unique additive system in Shell Tellus S2 V, in combination with superior cleanliness (meeting the requirements of max ISO 4406 21/19/16 class, ex Shell filling lines. As recognized by DIN 51524 specification, the oil is exposed to various influences with transport and storage that could effect the cleanliness level) helps reduce the impact of contaminants on filter blocking, allowing both extended filter life and use of finer filtration for extra equipment protection.

Shell Tellus S2 V fluids are formulated for fast air release without excessive foaming to help efficient hydraulic power transfer and minimise fluid and equipment impacts of cavitation-induced oxidation that can shorten fluid life.

#### Main Applications



##### • Mobile/ exterior hydraulic applications

Hydraulic and fluid power transmission systems in exposed environments can be subject to wide variations in temperature. The high viscosity index of Shell Tellus S2 V helps deliver responsive performance from cold start conditions to full load, severe duty operation.

##### • Precision hydraulic systems

Precision hydraulic systems require excellent control of fluid viscosity over the operating cycle. Shell Tellus S2 V provides greater temperature-viscosity stability compared to ISO HM fluids that can help improve the performance of such systems.

For more severe operating conditions, longer fluid life and enhanced efficiency, the Shell Tellus "S3" and "S4" ranges offer additional performance benefits.

## Specifications, Approvals & Recommendations

- Denison Hydraulics (HF-0, HF-1, HF-2)
- Fives Cincinnati P-68 (ISO 32), P-70 (ISO 46), P-69 (ISO 68)
- Eaton Vickers (Brochure 694)
- Swedish Standard SS 15 54 34 AM
- ISO 11158 (HV fluids)
- AFNOR NF-E 48-603
- ASTM 6158-05 (HV fluids)
- DIN 51524 Part 3 HVLP type
- GB 111181-1-94 (HV fluids)

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

## Typical Physical Characteristics

Properties			Method	Tellus S2 V 22
ISO Viscosity Grade			ISO 3448	22
ISO Fluid Type				HV
Kinematic Viscosity	@-20°C	cSt	ASTM D445	695
Kinematic Viscosity	@40°C	cSt	ASTM D445	22
Kinematic Viscosity	@100°C	cSt	ASTM D445	4.8
Viscosity Index			ISO 2909	142
Density	@15°C	kg/m <sup>3</sup>	ISO 12185	872
Flash Point (COC)			ISO 2592	190
Pour Point			ISO 3016	-42
Dielectric Strength*			ASTM D877	>30

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

- \* Dielectric strength value applies only to "point of manufacture" at a Shell authorized manufacturing facility. As with all hydraulic fluids, contamination with water or particulate leads to a reduction in dielectric strength.

## Health, Safety & Environment

- Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from <http://www.epc.shell.com/>
- **Protect the Environment**  
Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

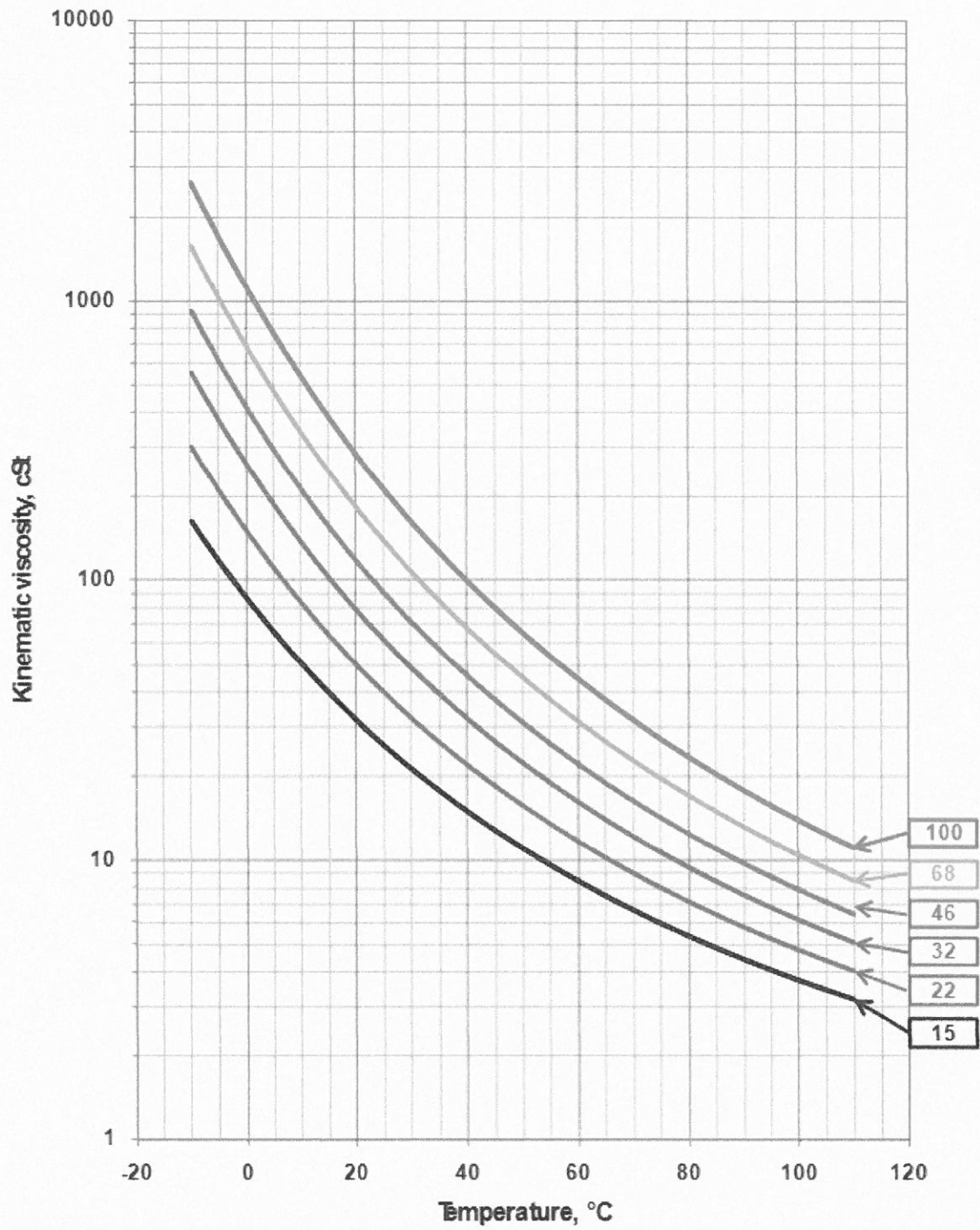
## Additional Information

- **Advice**  
Advice on applications not covered here may be obtained from your Shell representative.

## Compatibility & Miscibility

- **Compatibility**  
Shell Tellus S2 V fluids are suitable for use with most hydraulic pumps. However, please consult your Shell Representative before using in pumps containing silver plated components.
- **Fluid Compatibility**  
Shell Tellus S2 V fluids are compatible with most other mineral oil based hydraulic fluids. However, mineral oil hydraulic fluids should not be mixed with other fluid types (e.g. environmentally acceptable or fire resistant fluids).
- **Seal & Paint Compatibility**  
Shell Tellus S2 V fluids are compatible with seal materials and paints normally specified for use with mineral oils.

### Viscosity - Temperature Diagram for Shell Tellus S2 V



# Shell Spirax S5 ATF X



DESIGNED TO MEET CHALLENGES

Every part of your vehicle has been meticulously engineered, so you want to use a lubricant that has been designed to ensure that your equipment is well protected and works efficiently.

The Shell Spirax range of multi-vehicle automatic-transmission fluids has been developed to enable mixed fleet operators, independent workshops and other consumers to select the oil that will deliver optimum value through wear protection, long oil life and efficiency. As this single fluid is suitable for a wide variety of vehicle types, it can also help to simplify your operations.

## KEY BENEFITS

- ✓ Exceptional wear protection for longer equipment life
- ✓ Exceptional thermal, oxidation and shear stability for longer oil life
- ✓ Excellent oil fluidity at low temperatures and reduced friction for improved fuel efficiency
- ✓ Special viscosity index improver for less change in viscosity with operating temperature



## SHELL'S MOST-ADVANCED, MULTI-VEHICLE, SYNTHETIC AUTOMATIC-TRANSMISSION FLUID

Shell Spirax S5 ATF X is Shell's most-advanced, multi-vehicle, synthetic automatic-transmission fluid and is designed to provide efficient, smooth and trouble-free operation. Shell Spirax S5 ATF X is a fluid that you can rely on to offer exceptional oxidation and shear stability for excellent fluid life in the most demanding applications and in a wide range of vehicle types. A special viscosity-index improver reduces the change in viscosity with operating temperature for excellent oil fluidity at low temperatures.

## DESIGNED TO PROTECT

Protecting automatic-transmission systems from wear, pitting and corrosion can help to extend component life and maximise your return on investment. Shell Spirax S5 ATF X offers

- **exceptional wear and gear protection,**  
*which can promote long component life and help to extend transmission life.*



**SHELL SPIRAX S5 ATF X IS DESIGNED TO MEET THE NEEDS OF KEY ASIAN, EUROPEAN AND NORTH AMERICAN VEHICLE MANUFACTURERS**

### DESIGNED FOR LONG OIL LIFE

Limiting fluid degradation can help to prolong oil and component life. Shell Spirax S5 ATF X has exceptional resistance to physical and chemical breakdown, which means that it can go on protecting components for longer. It offers

- **excellent resistant to oil degradation,** which helps to prolong oil and equipment life
- **a special viscosity index improver,** which reduces the changes in viscosity with operating temperature, so that the oil can protect components for longer.



### SPECIFICATIONS AND APPROVALS

Shell Spirax S5 ATF X is designed to meet the requirements of key Asian, European and North American equipment manufacturers, and has the following approvals:

- Aisin JWS 3309 (all applications)
- Allison C-4
- Ford Mercon® and Mercon V
- General Motors Dexron® IIIH
- JASO 1-A and 2A-02.

### FULL PRODUCT AND SERVICE PORTFOLIO

Whatever your needs or application, we can provide a full range of lubricants and services, including Shell Helix, Pennzoil and Quaker State passenger car engine oils, Shell Gadus greases and the Shell LubeAnalyst oil and equipment condition monitoring service.

### APPLICATIONS



Suitable for passenger car, SUV and pickup truck automatic-transmission systems

For more information, please contact

[shell.com/lubricants](http://shell.com/lubricants)





# Product Information

A PRODUCT OF VALVOLINE, A DIVISION OF ASHLAND INC.



## Valvoline™ All-Fleet Plus™ Engine Oil

Valvoline™ All-Fleet Plus™ Engine Oils are formulated to provide optimum performance in modern, emissions treatment equipped diesel engines operating under a wide variety of service conditions, including engines with diesel particulate filters (DPF) and cooled exhaust gas recirculation (EGR). They are blended with premium basestocks and high quality additive chemistry to achieve the following benefits: high temperature piston deposit control, foam protection, soot dispersancy and oil-thickening control, oxidation inhibition, low temperature sludge protection, corrosion and rust inhibition, valve train wear protection and TBN retention.

Valvoline™ All-Fleet Plus™ Engine Oils are recommended for use in turbocharged and naturally aspirated two and four cycle diesel engines. They may also be used in gasoline engines for the "mixed fleet" operator. These motor oils provide excellent performance in local stop and go routes, on-and off-highway, farm, construction, and mining applications. All Fleet Plus meets all the requirements for Tier IV engines and is backwards compatible with Tier III.

### Approvals/Formulated to Meet Performance

API CJ-4, CI-4, CH-4, CG-4	15W-40	10W-30					
API CF	15W-40	10W-30	10W	20W	30	40	50
API CF-2			10W	20W	30	40	50
API SM	15W-40	10W-30					
API SF					30	40	50
ACEA E9/E7-08	15W-40						
CATERPILLAR	15W-40#	10W-30#					
CUMMINS (CES 20081/20078)	15W-40##	10W-30##					
DETROIT DIESEL	15W-40**				30*	40*	50*
DEUTZ DQC III-10 LA	15W-40^						
MACK EO-O PP-07	15W40	10W-30					
MB p228.31	15W-40^						
NAVISTAR	15W-40						
ALLISON C-4	15W-40^		10W^		30^		
VOLVO VDS-4	15W-40	10W-30					
Global DHD-1	15W-40^^	10W-30^^					
JASO DH-2	15W-40^^	10W-30^^					

Typical Properties	15W-40	10W-30	10W	20W	30	40	50
Gravity, degree API	29.5	31.1	31.5	30.4	29.7	29.3	27.8
Specific Gravity, 15 C	0.879	0.870	0.868	0.874	0.878	0.880	0.888
Viscosity @ 40 C, cSt	117	80	37	52	87	138	204
Viscosity @ 100 C, cSt	15.2	11.9	6.4	8.0	11.0	14.6	20.0
Viscosity Index	135	143	122	122	113	105	113
CCS Viscosity, cP	6600@-20	6600@-25	6800@-25	8000@-15	-----	-----	-----
HTHS Viscosity, cP	4.2	3.5	-----	-----	3.7	>3.7	>3.7
Borderline Pumping Viscosity	Pass	Pass	Pass	Pass	-----	-----	-----
Pour Point, deg. C	-30	-33	-36	-30	-24	-21	-18
Total Base Number (D-2896)	9	10	7	7	7	7	7
Sulfated Ash, %	1.0	1.0	0.8	0.8	0.8	0.8	0.8
Zinc, wt %	0.127	0.127	0.126	0.126	0.126	0.126	0.126

### Part Numbers

Bulk	VV3850	VV3820	VV3900	VV3920	VV3930	VV3980	VV4010
Tote	852824	853212	841599		841622	841623	844139
55 Gallon Drum	VV385	VV382	VV390		VV393	VV398	VV401
5 Gallon Plastic Pail	VV386		VV391		VV395	VV400	
1 Gallon Jug	773634				773635		
12/1 Quart	VV388				VV396		

\* Two-Stroke engines only.

\*\* Approved for DDC 93K218 (Detroit Diesel recommends this viscosity grade only for their four-cycle engines.)

# Meets Caterpillar ECF-3 and older Specification Requirements

## Meets the engine performance requirements of CES 20078. Is approved against CES 20081.

^ Meets the performance requirements of

^^ Meets engine performance requirements of

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# Product Information



A PRODUCT OF VALVOLINE, A DIVISION OF ASHLAND INC.

## Valvoline's Premium Blue<sup>®</sup> Extreme Engine Oil Hi-Performance Synthetic Engine Oil

Valvoline Premium Blue<sup>®</sup> Extreme continues the tradition of providing a superior full synthetic oil that is field proven and delivers exceptional TBN retention, extended drain approved\*, enhanced fuel economy potential over conventional oils, advanced soot control, outstanding viscosity retention and excellent all weather performance. The hi-performance synthetic technology meets the stringent demands of modern diesel engines; including EGR (Exhaust Gas Recirculation) and DPF (Diesel Particulate Filter) control systems, operating under standard and extended service interval\*, running both ultra-low sulfur diesel fuel and low sulfur diesel fuel.

Premium Blue Extreme provides fuel economy benefits for on-highway Class-8 trucks. Statistically significant test results find up to 3% maximum improvement in fuel economy using SAE J1321/TMC RMP 1103, Type II techniques. Testing was conducted by a leading independent laboratory.

### The Premium Blue<sup>®</sup> Extreme Advantage

- Hi-Performance Synthetic Technology meets the most demanding requirements of modern EGR engines operating at elevated temperatures, higher soot and higher acid levels in the engine oil.
- Cummins approved for 5,000-mile oil drain extension, under normal duty, for 2007 engines.
- Superior synthetic basestocks provide faster, safe starts during freezing weather and enhanced thermal properties for hot weather operations.
- Unique formulation has enhanced fuel economy potential over conventional oils.
- Reduced high temperature carbon buildup - both single and two-piece pistons - and ring/liner wear protection leads to improved oil consumption control.
- Unique dispersive polymer technology (DPT) provides advanced soot control and outstanding engine cleanliness.
- Provides fuel economy benefits for on-highway Class-8 trucks.

Valvoline's Premium Blue Extreme Engine Oil is endorsed by Cummins Engine Company and is approved against the CES 20081 specification. The product meets, and is approved against, Mack EO-O Premium Plus, Volvo VDS-4, Detroit Diesel 93K218, and MB-approval 228.31. In addition, the product meets API CJ-4/SM and older category, Caterpillar ECF-3/2/1a, Renault RLD-3, ACEA E9-08/E7-08 and Perkins/Wilson engine requirements. It also meets the engine test performance requirements of MTU Type I/II, MAN 3275, JASO DH-2, and Global DHD-1 specifications. Premium Blue Extreme provides excellent performance in "mixed fleet" gasoline engines, pickup and delivery, city fleet, long haul over-the-road, and off-highway applications.

Typical Properties	SAE 5W-40
Viscosity @ 40 C, cSt	88.6
Viscosity @ 100 C, cSt	14.5
Viscosity Index	170
CCS Viscosity @ -30 C, cP	6,300
Borderline Pumping Viscosity @ -35 C, cP	40,000
High Temp. High Shear Viscosity @ 150 C, cP	3.8
Pour Point, deg. C	-39
Sulfated Ash, %	<1.0
Total Base Number (D-2896)	10
Foam / Aeration Tests	Pass

Endorsed and Recommended by Cummins Inc.



Part Numbers	
Bulk	VV705160
55 Gallon Drum	VV70516
1 Gallon Jug	774038

\* Approval is for Cummin ISX and ISM engines On-Highway. To determine your optimum maintenance interval, consult your owner's manual or call Valvoline at 1-800-ALL-FLEET. Results may vary based on environment, operating, and maintenance procedures.

Refer to Valvoline's Material Safety Data Sheet for health and safety information.

This information only applies to products manufactured in the following location(s): USA, Canada.

Effective Date:	Expiration Date:	Replaces:	Author's Initials:	Pages	Code
1/6/12	NA	3/31/10	JRT	1	PBX 1201

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# Product Information

A PRODUCT OF VALVOLINE, A DIVISION OF ASHLAND INC.



## Valvoline's Cerulean® Grease

Valvoline's Cerulean grease is a uniquely formulated premium product designed to meet the stressful demands of both industrial and commercial fleet environments. It provides excellent performance over a variety of operating conditions and may displace other top of the line greases for severe and general purpose lubrication.

Valvoline's Cerulean grease is a tacky lithium complex grease containing a high level of select extreme pressure additives for maximum loading protection. The product also contains oxidation, rust and corrosion inhibitors for long life performance. It has excellent resistance to water wash-out.

Valvoline's Cerulean grease is dyed blue for easy identification and is recommended in numerous fleet, agricultural, mining and industrial applications where maximum performance grease is required. Typical examples are disc and other wheel bearings, sleeve and anti-friction bearings, chassis, bucket and king pins, universal joints, couplings, crushers and vibratory rollers. Valvoline's Cerulean grease meets GC/LB specifications.

Typical Properties	Test Method	NLGI 0	NLGI 1	NLGI 2
Thickener Type	---	Lithium Complex	Lithium Complex	Lithium Complex
Color and Texture	Visual	Blue, Smooth,	Blue, Smooth,	Blue, Smooth,
Penetration, worked	ASTM D217	355-385	310-340	265-295
Dropping Point, °F, min	ASTM D2265	N/A	475	500
Dropping Point, °C, min	ASTM D2265	N/A	246	260
Rust Prevention Rating	ASTM D1473	Pass	Pass	Pass
Copper Corrosion	ASTM D4048	1B	1B	1B
Timken OK Load, lbs.	ASTM D2509	60	65	65
Four Ball EP: Weld Point, kg	ASTM D2596	400	400	400
Four Ball EP: Load Wear Index,	ASTM D2596	59	59	59
Four Ball Wear: Scar, mm	ASTM D2266	0.55	0.55	0.55
Water Washout, 80 °C, % loss,	ASTM D1264	N/A	15	10
Leakage Tendency, gram. max.	ASTM D4290	N/A	6.0	4.0
High Temp Life, hrs., min	ASTM D3527	80	80	80

Base Oil Characteristics		ISO 220	ISO 220	ISO 220
Pour Point, °F (°C)	ASTM D5949	+5(-15)	+5(-15)	+5(-15)
Flash Point, °F (°C)	ASTM D92	400(204)	400(204)	400(204)

## Part Numbers

400 Lb. Drum	VV70125	VV70125	VV70129
120 Lb. Keg (L)			VV70130
35 Lb. Plastic Pail			VV70132
50/14 Oz. Carton			VV70133

Refer to Valvoline's Material Safety Data Sheet for health and safety information.

This information only applies to products manufactured in the following location(s): USA, Canada.

Effective Date:	Expiration Date:	Replaces:	Author's Initials:	Code
02/18/2013	N/A	10/25/2010	KD	PI 1301

**ASHLAND**



# Product Information

A PRODUCT OF VALVOLINE, A DIVISION OF ASHLAND INC.



## Valvoline's Palladium® Grease

Valvoline's Palladium grease is a premium quality multi-purpose lubricant for use in extreme pressure and high temperature operating conditions. It is manufactured from carefully selected petroleum oils and performance additives to create superior grease with a dropping point of 460-500° F. The smooth textured grease has a heavy bodied consistency but provides good pumpability in both hot and cold operating temperatures. The product has excellent resistance to water washout problems. Oil separation is minimal even under extreme pressures.

Valvoline's Palladium grease is formulated with special lubricity, anti-wear and extreme pressure additives including molybdenum disulfide and is completely fortified with oxidation, rust and corrosion inhibitors. It displaces other greases as top-of-the-line quality products for severe applications and general purpose lubrication.

The product is recommended for all types of bearing and slide applications, for shock loading, pounding, rough chassis usage and high loads. Four NLGI grades are available for seasonal temperature changes.

Typical Properties	Test Method	NLGI 00	NLGI 0	NLGI 1	NLGI 2
Molybdenum Disulfide, %	---	3	3	3	3
Thickener Type	---	Lithium Complex	Lithium Complex	Lithium Complex	Lithium Complex
Texture	Visual	Smooth	Smooth	Smooth, Tacky	Smooth, Tacky
Color	Visual	Grey	Grey	Grey	Grey
Penetration, Worked	ASTM D217	400-430	355-385	310-340	265-295
Dropping Point, °F, min	ASTM D2265	N/A	N/A	500	500
Dropping Point, °C, min	ASTM D2265	N/A	N/A	260	260
Rust Prevention, Rating	ASTM D1473	N/A	N/A	Pass	Pass
Copper Corrosion	ASTM D4048	1b	1b	1b	1b
Water Washout, % Loss, max	ASTM D1264	N/A	N/A	10	5
Timken OK Load, lbs.	ASTM D2509	50	50	55	55
Four Ball Wear: Scar, mm	ASTM D2266	0.6	0.6	0.6	0.6
Four Ball EP: Weld Point, kg	ASTM D2596	315	315	400	400
Four Ball EP: Load Wear Index, kg	ASTM D2596	50	50	65	65
Leakage Tendency, g, min	ASTM D4290	N/A	N/A	5.0	2.0
Oil Separation, wt. %, max	ASTM D1742	N/A	N/A	6	6
Base Oil Characteristics		ISO 320	ISO 320	ISO 320	ISO 320
Pour Point, °F (°C)	ASTM D97	-15 (-26)	-15 (-26)	+10 (-12)	+10 (-12)
Flash Point, °F (°C)	ASTM D92	400(204)	400(204)	400 (204)	400 (204)

Part Numbers				
Tote			NA	NA
400 Lb. Drum			VV70142	VV70109
120 Lb. Keg (L)			VV70143	VV70110
50/14 Oz. Carton				VV70112

Refer to Valvoline's Material Safety Data Sheet for health and safety instructions.

This information only applies to products manufactured in the following location(s): USA, Canada.

Effective Date: 02/18/2013      Expiration Date: N/A      Replaces: 12/19/2011      Author's Initials: KD      Code: PI 1301



# Product Information

A PRODUCT OF VALVOLINE, A DIVISION OF ASHLAND INC.



## Valvoline™ Drive Train Transmission Oil

Valvoline™ Drive Train Transmission Oil is a heavy duty powershift transmission and drive train lubricant designed and recommended for applications requiring oils meeting the Caterpillar TO-4 specification and Allison C-4 (Off-road applications) specification or in any other equipment in which TO-4 is called for. They also meet performance requirements of Komatsu equipments, Komatsu micro clutch, where TO-4 is called for in Dana Powershifts, Eaton Fuller, and Tremac/TTC equipments.

The oils are formulated from premium base stocks and a select additive system to meet the challenging demands of modern equipment. It provides friction material and elastomer compatibility, while guarding against gear wear, rust and corrosion, foaming and oxidation. Valvoline™ Drive Train Transmission Oil provides superior wear control and strong extreme pressure performance.

Valvoline™ Drive Train Transmission Oil is designed for transmissions and drive trains only and should not be used as engine oil.

Typical Properties	10W	30	50
Gravity, degree API	30.3	28.9	26.5
Viscosity @ 40°C (cSt)	42	94	220
Viscosity @ 100°C (cSt)	6.6	11.0	19.3
Viscosity @ -25°C (cP)	<6800		
Viscosity Index	109	102	99
Pour Point (°C) max	-35	-25	-15
Sulfated Ash, wt. %	1.2	1.2	1.2
Part Numbers			
Tote	853214	841597	841598
Bulk	VV3190	VV3230	VV3270
55 Gallon Drum	VV319	VV323	VV327
5 Gallon Pail	VV321	VV325	VV329

Refer To Valvoline's Material Safety Data Sheet for health and safety instructions.

This information only applies to products manufactured in the following location(s): USA, Canada

Effective Date:	Expiration Date:	Replaces:	Author's Initials:	Pages	Code
8/04/2014	N/A	4/29/2014	KD	1	PI 1402

ASHLAND

# Product Information

A PRODUCT OF VALVOLINE, A DIVISION OF ASHLAND INC.



## Valvoline® Heavy Duty Synthetic Transmission Fluid SAE 50

Valvoline Heavy Duty Synthetic Transmission Fluid SAE 50 is selectively engineered for heavy duty manual transmissions operating in severe service applications (temperature extremes, extended drain intervals, critical units, etc.) and requiring a MIL-L-2104 mineral engine oil, and is approved against Eaton PS-164 revision 7. It is a blend of premium synthetic base stocks and high quality additives to meet the challenging demands of manual transmission lubrication in modern equipment. In addition, the reformulated product is now amber in color to differentiate it from older versions, and other products, that do not meet the new Eaton PS-164 revision 7 requirements.

### Advantages of Valvoline Heavy Duty Synthetic Transmission Fluid SAE 50 include:

- Improved cold weather shift ability and quicker lubrication of transmission components.
- Longer seal life due to fewer deposits, better seal compatibility and improved high temperature properties.
- Increased thermal stability and reduced component deposits.
- Reduced component wear and deposits lead to longer transmission and lubricant service life.
- Operational benefits such as the potential for fuel economy and reduced downtime maintenance.
- Allows extended warranty coverage (750,000 miles) at Eaton and Rockwell International.
- Meets the requirements of Dana, Navistar, Rockwell International 0-81, Eaton Transmission Division PS-081 & PS-164 REV 7, ArvinMeritor 0-81, Mack TO-A Plus, ZF FreedomLine, International TMS 6816, and API MT-1.
- Meets the requirements of Volvo 97305-89, and can be used in Volvo I-Shift transmissions at the standard drain intervals.

Typical Properties	SAE 50
Gravity, degree API	23.0
Viscosity @ 100° C, cSt	18.20
Viscosity Index	151
Pour Point, °C	<-40
Flash Point - COC, °C	225
Foaming Test (ASTM D-892)	Pass
Copper Strip Corrosion (ASTM D130)	Pass
FZG, stages for pass	10
Part Numbers	
55 Gallon Drum	VV70601
16 Gallon Keg	VV70602
5 Gallon Pail	VV706035M

Refer to Valvoline's Material Safety Data Sheet for health and safety information.

This information only applies to products manufactured in the following location(s): USA, Canada.

Effective Date:	Expiration Date:	Replaces:	Author's Initials:	Pages	Code
08/27/2008	N/A	04/14/2008	JH	1	PI 0802

**ASHLAND**

# Product Information



A PRODUCT OF ASHSLAND CONSUMER MARKETS, A BUSINESS UNIT OF ASHSLAND INC.

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## VALVOLINE OUTBOARD 2-CYCLE MARINE ENGINE OIL

Valvoline Outboard 2-Cycle Marine Engine Oil is a superior quality NMMA certified ashless two-cycle lubricant. Premium base stocks are blended with a modern ashless detergent additive package to provide fortification for maximum performance in outboard engines. It is pre-diluted for ease of mixing with gasoline and may also be used in direct fuel injection systems.

This product is recommended for all leading outboard engines, including the latest high horsepower units direct fuel injection models. Valvoline Outboard 2-Cycle Marine Engine Oil will also provide excellent performance in two-cycle engines of motorcycles, all-terrain vehicles, snowmobiles and personal watercrafts. It may be used at manufacturers recommended fuel/oil ratios from 11:1 to 100:1.

The Valvoline Outboard 2-Cycle Marine Engine Oil Advantages:

- Improves engine life through enhanced deposit protection
- Improves wear protection
- Controls combustion and exhaust system deposits
- Maintains torque and acceleration
- Acceptable for outboards with Direct Fuel Injection (DFI) systems
- NMMA (formerly BIA) TC-W3 certified

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### Approvals/Performance Levels

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NMMA TC-W3

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### Typical Properties

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Gravity (API)	31.9
Vis @ 100°C (cSt)	6.70
Vis @ -25°C, cP	3000
Pour Point, °C max	-36
Sulfated Ash, wt%	Nil
Color	Blue-Green
Flash Point (D-93), °C	65

This information only applies to products manufactured in the following location(s): USA, Canada.

Effective Date:  
04-10-13

Replaces:  
07-08-03

Author's Initials:  
Alexey Stiop

Code

# Product Information



A PRODUCT OF ASHLAND CONSUMER MARKETS, A DIVISION OF ASHLAND INC.

## Valvoline DEXRON®-VI ATF

Valvoline DEXRON®-VI ATF (automatic transmission fluid) is formulated with premium synthetic base stocks and advanced additive technology, and meets all the stringent requirements of General Motors' DEXRON®-VI specification\*, which is designed for the modern automatic transmissions in GM vehicles. Valvoline DEXRON®-VI ATF is officially licensed with GM and can be used in new and old GM automatic transmissions. It is fully back-serviceable and can be used wherever DEXRON®-II and/or DEXRON®-III are recommended.

\* DEXRON® is a registered trademark of General Motors Corporation.

### The Valvoline DEXRON®-VI ATF Advantages:

- Provides consistent shift performance for new and old GM transmissions
- Extends transmission fluid life and prevents fluid breakdown at higher operating temperatures
- Provides excellent oxidative stability under severe conditions
- Reduces sludge and varnish build-up
- Protects transmission gears and allows them to operate smoothly
- Maintains lubricity
- Flows well for cold start-up
- Thoroughly field tested

### Approvals

DEXRON®-VI

Exceeds the latest performance requirements of DEXRON®-III, DEXRON®-II

Meets the performance requirements of Allison C-4

Test	Method	Typical Property
Viscosity @ 100°C	ASTM D445	6.0 cSt
Viscosity @ 40°C	ASTM D445	29.5 cSt
Viscosity Index	ASTM D2270	155
Cold Crank Simulation @ -30°C	ASTM D5293	2,900 cP
Brookfield Viscosity @ -40°C	ASTM D2983	12,500 cP
Pour Point	ASTM D5949/5950/6892	-48 °C / -54 °F
Density @ 15°C	ASTM D4052	0.848 g/cm <sup>3</sup> / 7.08 lb/gal
Flash Point	ASTM D92	208 °C / 406 °F
Color	ASTM D1500	7.0
Appearance	Visual	Red
Sulfur	ASTM D4951	1620 ppm
Phosphorus	ASTM D4951	190 ppm

Effective Date: 10/26/11

Replaces: 4/22/2009

Approved by *Alexey Stiop*

Doc #231-Rev 4

# Product Information



A PRODUCT OF THE VALVOLINE COMPANY A DIVISION OF ASHLAND INC.

## VALVOLINE CVT FLUID

Valvoline CVT (Continuously Variable Transmission) Fluid is specifically formulated for today's technologically sophisticated variable transmissions. It is formulated with premium synthetic base stocks, long-life friction modifiers, special anti-wear additives, and shear stable viscosity modifiers. Valvoline CVT Fluid is recommended for use in most belt and chain-driven continuously variable transmissions and will not void new car warranties. Valvoline CVT Fluid is not recommended for Hybrid CVT units (Toyota and Ford).

### The Valvoline CVT Fluid Advantages:

- Full synthetic fluid
- Excellent anti-shudder durability
- Superior wet clutch performance
- Excellent anti-wear performance
- Excellent metal-metal friction protection
- Designed to provide excellent torque transfer

### Valvoline CVT fluid recommended for use where the following fluids are called for:

- BMW Mini Cooper EZL 799
- Dodge/Jeep NS-2, CVTF+4
- Ford CVT23, CVT30/Motorcraft XT-7-QCFT, Mercon C
- GM/ Saturn DEX-CVT
- Honda HMMF, HCF-2
- Hyundai/ Kia CVT applications (SP-CVT 1)
- Mazda CVTF 3320
- Mercedes Benz 236.20
- Mitsubishi CVTF-J1, CVTF-J4
- Nissan NS-2, NS-3
- Shell Green 1V
- Subaru Lineartronic CVTF (P/N K0425Y0710), CV-30, High Torque CVTF, e-CVTF
- Suzuki TC, NS-2, CVTF 3320, CVT Green 1, CVT Green 2
- Toyota TC, FE
- Volkswagen/Audi TL 52180; G 052 180, G 052 516

Test	Typical Property
Viscosity @ 100°C, cSt	7.2
Specific Gravity @ 60°F	0.852
Brookfield Viscosity @ -40°C, cP	9,000
Calcium, %	0.060
Phosphorus, %	0.074
Sulfur, %	0.105

Part Number	804751
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# Product Information



A PRODUCT OF VALVOLINE, A DIVISION OF ASHLAND INC.

## VALVOLINE PREMIUM CONVENTIONAL MOTOR OIL

Valvoline Premium Conventional multigrade motor oils are formulated with advanced additive technology and highly refined, premium quality basestocks that protect today's engines against undesirable deposits, contamination, and viscosity and thermal breakdown under severe service conditions. They meet the performance requirements of virtually all naturally aspirated, turbocharged and supercharged gasoline fueled passenger cars and light duty trucks, including European and Japanese vehicles\*.

### The Valvoline Premium Conventional Motor Oil Advantage

- **High Temperature Protection:** Resists breakdown in the most severe engine environments.
- **Low Temperature Protection:** Flows easily at low temperatures, reducing wear at start-up.
- **High Detergency:** Fights formation of sludge and varnish deposits that reduce engine life.
- **Wear Protection:** Contains anti-wear additives that dramatically reduce engine wear. Meets European and Japanese Wear requirements.
- **Turbo Approved:** Provides excellent protection to critical turbo unit components.

### Approvals/Performance Levels

API SN/SM	SAE 10W-40	SAE 20W-50
Meets engine & emission system protection requirements of ILSAC GF-5		

Test	SAE 10W-40	SAE 20W-50
Vis @ 100°C (cSt)	14.5	18.5
Vis @ 40°C (cSt)	95.4	170.9
Viscosity Index	151	121
Spec Gravity @ 60°F	0.8685	0.8802
Density (lbs/gal)	7.24	7.34
Total Base No.	7.5	7.5
Flash COC (°C)	220	236
Pour Point (°C) max	-33	-24
CCS cP (°C)	6200(-25°C)	8200(-15°C)
MRV TP-1 cP (°C)	35,000(-30°C)	21,000(-20°C)
Noack % off @ 250°C	<15.0	<15.0
Sulfated Ash	0.80	0.80
Zinc/Phosphorus	0.083/0.076	0.083/0.076
Calcium/Sodium	0.167/0.049	0.167/0.049

\* VALVOLINE PREMIUM CONVENTIONAL MOTOR OILS are not recommended for use in diesel fueled vehicles. Use Valvoline All Fleet Plus, Valvoline Durablend, Valvoline SynPower motor oils(see owner's manual)

See operator's manual for recommended viscosity grade and API service classification.

This information only applies to products manufactured in the following location(s): USA, Canada.

Effective Date: 10-26-11	Replaces: 12-15-10	Author's Initials: ZGZ	Rev. Code 007
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ASHLAND

## SPECIAL HEAVY-DUTY MOTOR OILS

### SAE 10W, 20W-20, 30, 40, 50

SAE Grade Automotive	<u>Typical Properties</u>				
	10W	20W-20	30	40	50
Viscosity, cSt					
At 40 C	42	72	114	155	233
At 100 C	6.5	8.8	11.8	15.1	18.7
Viscosity, SUS					
At 100 F	210	363	560	800	1100
At 210 F	48	56	65	77	93
Viscosity Index	+90	+90	+90	+90	+90
Flash Pt.,(COC) F	+400	+420	+435	+450	+465
Pour Point, Deg F	-30	-20	-5	0	+5
Sulfated Ash, %wt	<1.0	<1.0	<1.0	<1.0	<1.0
Neut. No., TBN-E (min)	7.5	7.5	7.5	7.5	7.5
Gravity, API @ 60F	27.9	27.2	26.5	25.5	24.9

The values shown are typical of current production. Some are controlled in the manufacturing process, while others are not. All of them may vary within tolerable ranges.

These HDMOs (Heavy Duty Motor Oil) SAE Single-Grade crankcase oils are formulated for diesel and gasoline engines. These oils are blended from selected and highly refined base stocks. They are compounded with detergents, dispersants, wear control elements, anti-oxidants, corrosion inhibitors, and a foam suppressant additive.

### APPLICATIONS

Recommended for all major automotive diesel and four-cycle gasoline engines in all services and under all operating conditions. SAE grades 30, 40, and 50 meet current API Service Classifications CF, CF-2/SM (including API Classification SJ and SL) and SAE Grades 10W and 20W meet API CF/SM; all comply with obsolete API classifications CD, CD-II, CE. These products meet the performance requirements of MIL-L-2104F (SAE 10W, 30, 40), MIL-L-46152D and conform to all major automobile manufacturers' and automotive/truck diesel engine builders' requirements, including Caterpillar, Cummins, Detroit Diesel-Allison, and Mack Truck. SAE 10W thru SAE 30 meet the Allison Type C-3, C-4 transmission performance requirements recommended for hydraulic systems.

[Do not use in EMD Diesel Engines (railroad, marine) which require oil with <10 ppm zinc content].



## PREMIUM TRACTOR HYDRAULIC FLUID

	<u>Typical Properties</u>
SAE Grade	
Automotive	10W-20 (Approx)
Gear	75
Viscosity, cSt	
At 40 C	55
At 100 C	9.2
Viscosity, SUS	
At 100 F	220
At 210 F	58
Viscosity Index	140 (Minimum)
Flash Point, Deg F	392
Pour Point, Deg F	-40
Gravity, API @ 60 F	28.2
Density, lbs/gallon	7.38

The values shown are typical of current production. Some are controlled in the manufacturing process, while other are not. All of them may vary within tolerable ranges.

A high quality, specially designed lubricant containing anti-rust, anti-foam and oxidation inhibitors; plus other additives necessary for the wide range of applications recommended by various tractor manufacturers. The product is an "all-seasonal" type of oil that resists thickening in cold weather and thinning in the heat of summer. It is compounded with detergents to keep transmissions clean and maintain hydraulic control circuits in perfect working condition; and provides excellent protection against seal and pump deterioration. Operators, especially farmers, will appreciate the multi-purpose application of Premium Tractor Hydraulic Fluid for transmissions, final drives, and hydraulic systems of tractors thereby eliminating the requirement to stock a variety of oil products. Premium Tractor Hydraulic Fluid is currently being used in a variety of mechanical systems world-wide.

### APPLICATION

Formulated and recommended for multipurpose use in transmissions, differentials, hydraulic and power steering units in many different makes of tractors and farm equipment. A listing below suggests those applications where Premium Tractor Hydraulic Fluid may be used with confidence.

Allis Chalmers - 272843

Allison Transmission Div., GMC C-3, C-4 \*

J.I. Case MS-1206 & MS-1210

Caterpillar TO-2\*\*

Clark Transmissions

John Deere J20C, J21A, J14C

Deutz-Allis 272843

Ford New Holland ESN-M2C41-B, M2C134-D

Hesston Fiat AF-87

International Harvester B-6

Kubota UDT Fluid

Landini

Massey Ferguson M-141

Oliver Type 55

Steiger

Sundstrand

White Q 1826 & Type 55

\*Allison does not recommend Tractor Hydraulic Fluids for C-4 service.

\*\*Premium Tractor Hydraulic Fluid is not recommended for Cat T0-4 service.

Use Drive Train TC of the appropriate viscosity.

**MULTIPURPOSE GEAR LUBRICANT**  
**SAE GEAR 80W-90 and 85W-140**  
**GL-5, MT-1**

Typical Properties

SAE Grade Gear	80W-90	85W-140
Viscosity, cSt		
At 40 C	136	406
At 100 C	14.0	27.0
Viscosity, SUS		
At 100 F	716	2172
At 210 F	75.6	133.3
Viscosity Index	100	96
Flash Point, (COC) Deg F	410	420
Pour Point, Deg F	-15	+5
Deg C	-26	-15
Gravity, API @ 60 F	24.5	24.0

The values shown are typical of current production. Some are controlled in the manufacturing process, while others are not. All of them may vary within tolerable ranges.

A multi-purpose sulfur/phosphorus type gear lubricant designed for API Service Classifications GL-5 and MT-1. Compounded with highly refined paraffinic base stocks and additives to ensure extreme pressure characteristics, anti-wear performance, anti-corrosion inhibition, rust prevention, anti-foaming tendencies and service fill limited slip capability.

APPLICATIONS

Recommended for differentials, rear axles, final drives, conventional manual transmissions, manual steering gears, and limited slip top-off suitability, in passenger cars and trucks where GL-5 type lubricant is specified. Recommended for gear applications where sulfur/phosphorus controlled chemically-active additive package is designated. Meets MT-1 capability for non-synchronized manual transmissions in heavy duty systems. Meets the requirements of U.S. Military Specification MIL-L-2105D, MIL-PRF-2105E and Mack GO-G, H, & GO-J classifications. SAE Grade 80W-90 is primarily recommended for passenger cars and light trucks; Grade 85W-140 for heavy duty equipment, both on and off-highway fleets, as well as many industrial and commercial mechanical systems applications.

## PREMIUM ANTI-WEAR "HD" HYDRAULIC OILS

### ISO GRADES 22, 32, 46, 68, 100

#### Typical Properties

ISO Grade	22	32	46	68	100
Viscosity, cSt					
At 40 C	22.0	30.2	44.2	66.2	93.8
At 100 C	4.3	5.2	6.6	8.5	10.6
Viscosity Index	100	100	98	95	95
Flash Point, (COC) Deg F	385	390	415	425	450
Pour Point, Deg F	-30	-25	-20	-15	-0
Neut. No., ASTM D 974	0.55	0.55	0.55	0.55	0.55
Gravity, API @ 60 F	31.0	30.0	29.0	28.7	28.3
Oxidation Life, ASTM D 943, Hrs	+4500	+4500	+4500	+4500	+4500
Rust Test, ASTM D-665 A & B	No rust	No Rust	No Rust	No Rust	No Rust
Demulsibility, ASTM D-1401	Pass	Pass	Pass	Pass	Pass
**Dielectric Strength, ASTM D 877	30 KV+	30KV+	30KV+	30KV+	-----

The values shown are typical of current production. Some are controlled in the manufacturing process, while others are not. All of them may vary within tolerable ranges.

The five grades are premium-quality anti-wear hydraulic oils with excellent stability, designed to meet the most stringent requirements of most all the major manufacturers and users of hydraulic equipment. These oils are characterized by providing rust protection, low deposit formation, rapid release of entrained air, oxidation resistance, low pour points, and good anti-foam properties. They contain an effective anti-wear agent that helps reduce wear in high-speed, high-pressure vane and gear pumps.

### APPLICATIONS

Recommended for vane, gear, and piston-type pumps where operating pressures may exceed 3000 psi. These anti-wear hydraulic oils are very effective in reducing vane and gear pump wear and greatly extend the life of systems operating at high loads, speeds, and temperatures. In a clean dry system, typical value\*\* for ASTM D-877, "Dielectric Breakdown Voltage of Insulating Liquids" will exceed 30 Kilovolts. These hydraulic oils meet performance requirements of Denison HF-0, Eaton-Vickers I-286-S, M-2950-S and Cincinnati Lamb Landis P-68, P69, and P-70.

\*\*Application ISO Grades 22, 32, 46, & 68 meet dielectric strength test results described in ASTM D-877 @ 30KV+ providing customer storage and containment are free of moisture under all conditions.

**PREMIUM SYNTHETIC BLEND MULTIGRADE PCMO**  
**[Passenger Car Motor Oil, API SN]**  
**SAE GRADES: 5W-20, 5W-30, 10W-30, 10W-40, 20W-50**

Typical Properties

	5W-20	5W-30	10W-30	10W-40	20W-50
SAE Auto Grade	5W-20	5W-30	10W-30	10W-40	20W-50
API Service Category	SN	SN	SN	SN	SN
ILSAC	GF-5	GF-5	GF-5		
Viscosity, cSt					
At 40° C	49.5	61.9	69.5	105.0	165.9
At 100° C	8.7	10.6	10.7	14.5	18.5
Viscosity Index	155	162	142	145	125
Viscosity, cP max @ -30°C	6600	6600			
cP max @ -25°C			7000	7000	
cP max @ -15°C					9500
Flash Point, (COC) Deg °F	+405	+410	+415	+420	+460
Pour Point, Deg °F	-35	-35	-30	-30	-20
Neut. No., TBN-E, ASTM D-2896	7.5	7.5	7.5	7.5	7.5
Gravity, API @ 60°F	31.5	31.0	30.5	29.5	28.0
Sulfated Ash, %wt.	<1.0	<1.0	<1.0	<1.0	<1.0

The values shown are typical of current production. Some are controlled in the manufacturing process, while others are not. All of them may vary within tolerable ranges.

Premium Synthetic Blend Passenger Car Motor Oils (PCMO) are formulated to provide engine protection under severe operating limits (SAE 5W-20, SAE 5W-30, SAE 10W-30) provided by ILSAC GF-5 requirements. These API SN oils (including SAE 10W-40 and SAE 20W-50) are intended to extend automotive life by providing engine protection against city traffic and reducing the harmful effects of high and low-temperature operations. Their backward compatibility with previous API/ILSAC Specifications allows for use in older vehicles. They are blended from selected and highly refined base oils and synthetic base stocks compounded to provide protection against wear and corrosion, prevent oxidative thickening, inhibit the promotion of engine acids, prevent sludge, and reduce varnish deposits. These multi-grades may be used over an extended temperature range and permit easier cold weather starting thereby minimizing the effects of engine friction at startup.

## APPLICATIONS

Recommended for all major automotive gasoline engine applications, including those equipped with both superchargers and turbochargers, used in passenger cars, light trucks, power boats, motorcycles, and other mobile and stationary equipment. SAE grades 5W-20, 5W-30, and 10W-30 meet current ILSAC GF-5 requirements and all grades are suggested for use in place of former API Classifications SH, SJ, SL, SM. For optimum vehicle performance, operating under normal conditions, it is recommended that crankcase oil change intervals should not exceed the manufacturers requirements.

## SPECIAL HD 15W-40 MULTIGRADE HEAVY-DUTY MOTOR OIL CJ-4

[Meeting API Service Levels CF-4, CG-4, CH-4, CI-4, CI-4 PLUS, CJ-4/SN]

	<u>Typical Properties</u>
SAE Grade, Automotive	15W-40
Viscosity, cSt	
At 40° C	115
At 100° C	15.2
Viscosity Index	138 ✓
Viscosity, CCS, D-5293, -20°C/cP	6000
Flash Point, (COC), °C/°F	227/440
Pour Point, °C/°F	-30/-22
Sulfated Ash, %wt	1.0 ✓
Neutralization No., TBN-E	9.3
HTHS, Vis/cP, D-4683	4.3
Gravity, API @ 60° F	29.0

The values shown are typical of current production. Some are controlled in the manufacturing process, while others are not. All of them may vary within tolerable ranges.

Special HD 15W-40 Multigrade, API CJ-4, is the most current formulated heavy duty motor oil for all-season use in highway commercial diesel engines, including EGR equipped engine emission controlled systems. The product is manufactured from selected premium quality base stocks with additive technology to provide engine protection for current EPA exhaust particulate emissions standards using Ultra-Low Sulfur Diesel (ULSD). It meets performance requirements for all naturally aspirated, turbocharged and supercharged, diesel engines as well as all four-cycle gasoline engines. The product reflects test improvements in reducing aeration, better oxidation stability, enhanced soot control, and advanced wear protection.

Special HD 15W-40 meets API current service classifications CF, CF-4, CG-4, CH-4, CI-4, CI-4 Plus, and CJ-4 and ACEA European Oil Sequences Section E-7. The product satisfies the following engine manufacturer requirements: Mack EO-0 Premium Plus '07, Caterpillar ECF-1, ECF-3, Cummins CES 200801, Detroit Diesel (DDC) Power Guard 93K218, JASO DH-2, Navistar, Global DHD-1, MB-228.31, MAN 3275, and Volvo VDS-4. For gasoline engines, Special HD 15W-40 is classified API SH, SJ, SL, and SM.

### APPLICATIONS

Recommended for all major diesel and mixed fleet (diesel/four-cycle gasoline) engine operations in all service and under all operating conditions where the equipment owner specifies the additional performance benefits of multigrade oils. This product is preferable for newer diesel engines with EGR systems and those equipped with Diesel Particulate Filter (DPF) and Diesel Oxidation Catalyst (DOC) technologies.

## EMD/TRANS ENGINE OIL MARINE & RAILROAD

### Typical Properties

SAE Grade		
Engine Class	30	40
Viscosity, cSt		
At 40 C	135	180
At 100 C	12.1	14.5
Viscosity Index	76	77
Flash Point, (COC) Deg F	465	480
Pour Point, Deg F	-5	+5
TBN, ASTM D 2896	13	13
Ash, %wt.-Sulfated	1.5	1.5
Zinc Content, ppm	< 10	< 10
Gravity, API @ 60 F	27	24

The values shown are typical of current production. Some are controlled in the manufacturing process, while others are not. All of them may vary within tolerable ranges.

Outstanding high-dispersancy, high-alkalinity crankcase oil for railroad and marine diesel engines. Compounded from MVI Base (Mixed-Base/Paraffinic-Napthenic) Oils to reduce hard carbon formation in ring belt area and minimize port blocking in 2-stroke cycle diesel engines. Contains detergent, dispersant, anti-wear, anti-oxidant, corrosion inhibitor, and foam-suppressant additives. The additives used do NOT contain 'zinc-compound' derivatives.

### APPLICATIONS

Recommended for use in Electro-Motive Division of General Motors Corporation (EMD), Caterpillar, and other diesel engines operating on higher than normal sulfur distillate-fuel where sulfated ash of +1% is acceptable. Also highly recommended for medium speed industrial engines such as Fairbanks-Morse opposed-piston (OP) engines for which a medium viscosity index oil is the preferred product. In many marine applications this product can be used in both main propulsion engines as well as auxiliaries. Meets API Service Classification Level "CF" and obsolete "CD".



## AUTOMOTIVE GEAR LUBRICANT GRADES GL-1 SAE GEAR 90 & 140

### Typical Properties

SAE Grade		
Gear	90	140
Viscosity, cSt		
At 40 C	270	563
At 100 C	17.5	28.0
Flash Point, (COC) Deg F	420	425
Pour Point, Deg F	10	25
Gravity, API @ 60 F	24.3	22.8

The values shown are typical of current production. Some are controlled in the manufacturing process, while others are not. All of them may vary within tolerable ranges.

An uninhibited gear lubricant designed for API Service Classification "GL-1". These gear oils are blended from highly refined base stocks that resist oxidation and thickening.

### APPLICATIONS

Recommended for manual transmissions in passenger cars and trucks, and those applications where API Service Level GL-1 lubricant is specified.

## Automatic Transmission Fluid

# National™ Multi-Vehicle/MERCON® V ATF

### New performance requirements

The desire for fuel economy is rapidly changing in the automatic transmission designs for a growing number of late model vehicles being sold in the U.S.

Global OEMs are increasing the number of gears in newer transmissions from four or five, to six or as many as eight. Many of these newer models are designed to engage the torque converter clutch in a slipping mode at lower speeds to improve fuel efficiency. This operation causes newer transmissions to be more prone to shudder. Standard DIIIH/M fluids do not provide the friction control to meet these demands.

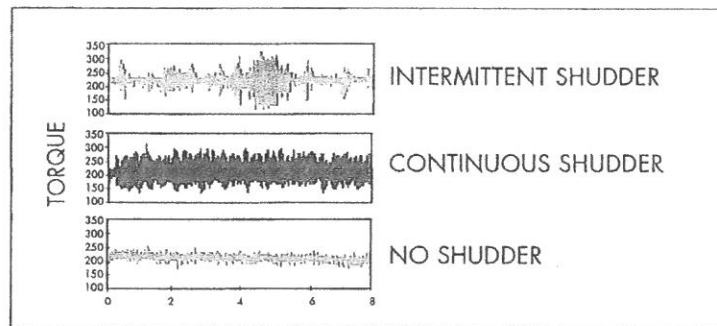
To ensure optimum transmission performance, OEMs are demanding more specialized fluids. Today, there are literally dozens of ATF types specified for the North American service fill market, creating confusion, increased inventory costs, and opportunities for error or misapplication.

National Multi-Vehicle/MERCON® V ATF is specially formulated to exceed the performance and protection requirements of newer transmissions. Installers can rely on this single fluid to conveniently and accurately meet a wide array of global OEM requirements in North America.

### Extended Anti-Shudder Protection

Newer transmission designs require ATFs with specialized frictional performance for proper operation. It is estimated that the number of transmissions requiring anti-shudder durability has doubled in the past four years.

National Multi-Vehicle/MERCON® V ATF offers extended friction control protection that lasts over the life of the fluid—long after the anti-shudder protection found in many competitive brands has broken down.



Shudder is disturbing to drivers, who expect comfort and smooth driving. National Multi-Vehicle/MERCON® V ATF reduces transmission shudder, and improves operability and fuel efficiency.

### Outstanding Benefits

- Exceeds the most demanding JASO 1A performance standard
- Covers OEM specialty requirements
- Delivers superior wear protection
- Provides extended anti-shudder performance for smooth driving
- Lowers inventory needs
- Reduces risk of installer error

**Specifications** National Multi-Vehicle/MERCON® V ATF technology is suitable where the following ATF types are specified:

- |                           |                        |                      |                         |
|---------------------------|------------------------|----------------------|-------------------------|
| • Allison C4              | • Honda ATF-Z1         | • Nissan Matic K     | • Texaco N402           |
| • Audi Part #G 052 025-A2 | • Idemitsu K17         | • Shell LA2634       | • Toyota JWS 3309       |
| • Chrysler                | • MERCON® V            | • Shell ATF M-1375.4 | • Toyota Type T IV      |
| • DIIIH/M                 | • Mitsubishi SP-II/III | • Texaco 7045-E      | • Toyota Type WS        |
| • Esso Type LT 71141 ATF  | • Nissan Matic J       | • Texaco ETL-8072 B  | • Volvo Part #1161540-B |

Note: For Continuously Variable Transmission (CVT) applications, use only CVT fluids supplied by the vehicle manufacturer.

MERCON® is a registered trademark of Ford Motor Co.

PINNACLE OIL, INC.  
5009 West 81st Street, Indianapolis, IN 46268  
800-829-8899 • www.pinnoil.com





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F O R M U L A



## CJ-4 /SN 15W-40 Motor Oil

FORMULA 500® CJ-4/SN 15W-40 motor oil is for use in diesel engines under service conditions from mild to heavy duty with fuel of any sulfur level. This oil is recommended for use in nearly all two- and four-cycle diesel applications. The current formulation meets all API Service Classifications up to CJ-4 including CI-4, CI-4 PLUS, and CH-4. FORMULA 500® CJ-4/SN 15W-40 is also suitable where Cummins CES 20081, CAT® ECF-3 and ECF-1-a, ACEA E7-04 Issue 2 (2007) and E9-08 (2008) specifications are demanded.

FORMULA 500® CJ-4/SN 15W-40 motor oil is licensed by the API as a CJ-4/SN motor oil and holds formal approvals for Mack EO-O Premium Plus, Detroit Diesel DDC 93K218, Volvo VDS-4 and Renault VI RLD-3. These formal approvals demonstrate the commitment of FORMULA 500® to produce quality products on the leading edge of lubrication technology.

This oil should not be used in Caterpillar TO-4 applications, two-cycle gasoline engines, aircraft engines, or EMD Diesel engines.

### Typical Properties:

Product: FORMULA 500® CJ-4/SN 15W-40	
Product Code:	61119
SAE Viscosity Grade	15W-40
Kinematic Viscosity @ 100°C, cSt (ASTM D-445)	15.9
Kinematic Viscosity @ 40°C, cSt (ASTM D-445)	132.9
Viscosity Index (ASTM D-2270)	138
Total Base Number (ASTM D-2896)	8.3
Flash Point °C (°F) (ASTM D-92)	232,(449)
Pour Point °C (°F) (ASTM D-97)	-36,(-33)
Zn (ppm)	1218
Ca (ppm)	2300
P (ppm)	1094

# Motorcraft® Chemicals and Lubricants U.S. Catalog

## TRANSMISSION FLUID



A/C & Engine Cooling Products	Brake & Engine Performance	Collision & Body Repair	Exterior & Interior Vehicle Cleaners	Greases	Hand Care Products	
Motor Oil	Touch-up Paint	Sealers & Adhesives	Steering Fluid	Transaxle Fluid	<b>Transmission Fluid</b>	
Home	FAQ	Product Search	MSDS / Fiche signalétique / Ficha de datos de seguridad	CPSC General Conformity Certification	Quick Reference Charts	Related Links

### MERCON® LV Automatic Transmission Fluid



- Motorcraft® MERCON® LV is a premium-quality automatic transmission fluid recommended by Ford Motor Company for use in Ford, Lincoln and Mercury vehicles that require MERCON® LV type fluid. This product also provides excellent performance in electronically controlled automatic transmissions. Check Owner Guide and transmission fluid charts for application
- Motorcraft® MERCON® LV is manufactured with high-viscosity index, premium-quality, hydroprocessed base oils and specially designed performance additives, which provide excellent shifting characteristics at high and low ambient temperatures and guards against transmission shudder. This fluid has excellent thermal, oxidation and shear stability and good low temperature fluidity. It provides wear protection and inhibits the formation of gum, sludge, lacquer and foam. It also prevents against rust and corrosion. It is dyed red for ease of leak detection
- Do not use in applications where MERCON® V, MERCON® SP (except TorqShift®), Continuously Variable Chain Type Transmission Fluid, Motorcraft® Premium Automatic Transmission Fluid, FNR5 Automatic Transmission Fluid or Type F Automatic Transmission Fluid is recommended, or in transfer cases
- Refer to the Motorcraft® MERCON® LV specification sheet below for additional information. For MSDS information call 1-800-448-2063

**Note: MERCON® LV Automatic Transmission Fluid is available in bulk quantities at substantial savings. Use of bulk oil products is environmentally proactive. Contact your FCSD Aftermarket Account Manager, an approved Motorcraft® Bulk Oil Distributor, or [www.Motorcraft.com](http://www.Motorcraft.com) for details.**

Specifications		
Motorcraft® Part Number	XT-10-QLVC	XT-10-DLV
Specification Number	MERCON® LV	MERCON® LV
Size	1 Qt.	55 U.S. gal.
FIR No.	179895	179895
Unit Pack	12 (Case Qty.)	1

<b>MSDS</b>
179895

<b>Additional Information</b>
Product Data Sheet MERCON LV

## EXHIBIT A OIL15 - PRICING PAGE

### SECTION 1 - TRUCK LOAD

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
ITEM	DESCRIPTION	PREFERRED SIZE/WT ( for information use only and not to be used for calculations)	MANUFACTURER	BRAND BID	ESTIMATED QUANTITY	UNIT PRICE TRUCK LOAD	Unit of Measure (For calculation purposes only)	EXTENDED PRICE TRUCK LOAD
1	Motor oil for lubricating 2 cycle engines one pint containers (chain saw motor oil) - API TC or equal	8 oz.	Spectrum	Sta-Mix	1800	\$ 0.13	1 oz.	\$ 234.00
2	Motor oil for lubricating 2 cycle engines (outboard motor oil) - API TC-W3 or equal	1 qt.	Valvoline	Outboard	1300	\$ 3.87	1 qt.	\$ 5,031.00
3	Motor oil for all diesel and gasoline engine service SAE30 - CF-4, CF-2 CF/SJ	1 qt.	Shell	Rotella T1	3300	\$ 3.16	1 qt.	\$ 10,428.00
4	Motor oil for all diesel and gasoline engine service SAE15W40 - CI-4 CF/SJ CI-4, CI-4 PLUS, CH-4, CG-4	1 qt.	Hicks	Formula 500	150,000	\$ 2.09	1 qt.	\$ 313,500.00
5	Motor oil for all diesel and gasoline engine service 4, CI-4 PLUS, CH-4, CG-4, CF-4/SL, SM	55 gal.	Pinnacle Res.	MG HD Premium	1320	\$ 6.54	1 gal.	\$ 8,632.80
6	Motor oil for all diesel and gasoline engine service BULK CI-4, CI-4PLUS, CH-4, CG4, CF-4/SL, SM	BULK 6,000 gallon	Valvoline	AF Plus	6000	\$ 5.99	1 gal.	\$ 35,940.00
7	Motor oil for all diesel and gasoline engine service - CF/SL CAT TO-2, ALLISON C-4 or equal	5 gallon	Pinnacle Res.	MG Premium	2400	\$ 6.25	1 gal.	\$ 15,000.00
8	Motor oil for all diesel and gasoline engine service SAE10 - CF/SL CAT TO-2, ALLISON C-4 or equal	55 gal.	Pinnacle Res.	MG Premium	55	\$ 6.75	1 gal.	\$ 371.25
9	Motor oil for all diesel and gasoline engine service - CF/SL SM, SJ, ILSAC GF-4	1 qt.	Pinnacle Res.	MG Syn. Blend	5000	\$ 1.78	1 qt.	\$ 8,900.00
10	Motor oil for all diesel and gasoline engine service 5W30 - CF/SL ILSAC GF-4	1 qt.	Pinnacle Res.	MG Syn. Blend	10000	\$ 1.78	1 qt.	\$ 17,800.00
11	Motor oil for all diesel and gasoline engine service 5W30 - CF/SL SM, SJ, ILSAC GF-4	55 gal.	Pinnacle Res.	MG Syn. Blend	550	\$ 5.80	1 gal.	\$ 3,190.00
12	Motor oil for all diesel and gasoline engine service 10W30 - CF/SL SM, SJ, ILSAC GF-4	1 qt.	Pinnacle Res.	MG Syn. Blend	58000	\$ 1.78	1 qt.	\$ 103,240.00
13	Motor oil for all diesel and gasoline engine service 10W40 - CF/SL	1 qt.	Pinnacle Res.	MG Syn. Blend	500	\$ 1.78	1 qt.	\$ 890.00
14	Motor oil for all diesel and gasoline engine service 20W50 - CF/SL	1 qt.	Valvoline	Premium Conventional	500	\$ 3.50	1 qt.	\$ 1,750.00
15	Extreme pressure gear lubricant 80W90 GL-5, MT-1, MACK GO-J or equal	35 lb.	Pinnacle Res.	MG HD GL-5	280	\$ 1.20	1 lb.	\$ 336.00
16	Extreme pressure gear lubricant 80W90 GL-5, MT-1, MACK GO-J or equal	120 lb.	Pinnacle Res.	MG HD GL-5	3360	\$ 1.20	1 lb.	\$ 4,032.00
17	Extreme pressure gear lubricant 85W140 GL-5, MT-1, MACK GO-J or equal	120 lb.	Pinnacle Res.	MG HD GI-5	720	\$ 1.40	1 lb.	\$ 1,008.00
18	Extreme pressure gear lubricant - mineral gear lube 90 gl-1	35 lb.	Pinnacle Res.	MG GL-1 90	385	\$ 1.20	1 lb.	\$ 462.00
19	Powertranz EW 50 EATON PS-164, R7 MACK GO-A PLUS NAVISTAR TMS 6816 or equal	35 lb.	Valvoline	HD Syn. Trans. 50	350	\$ 4.42	1 lb.	\$ 1,547.00
20	Wheel bearing and chassis grease summer weight NLGI #2	14 to 14-1/2 oz. tubes	Valvoline	Cerulean	2500	\$ 0.18	1 oz.	\$ 450.00
21	Wheel bearing and chassis grease summer weight NLGI #2	35 lb.	Valvoline	Cerulean	245	\$ 2.85	1 lb.	\$ 698.25
22	Wheel bearing and chassis grease summer weight NLGI #2	120 lb.	Valvoline	Cerulean	1200	\$ 2.53	1 lb.	\$ 3,036.00
23	All purpose grease (3% molly) water and heat resistant grease NGLI #2	14 to 14-1/2 oz. tubes	Valvoline	Palladium	120	\$ 0.22	1 oz.	\$ 26.40
24	All purpose grease (3% molly) water and heat resistant grease NGLI #2	35 lb.	Valvoline	Palladium	200	\$ 3.04	1 lb.	\$ 608.00
25	All purpose grease (3% molly) water and heat resistant grease NGLI #2	120 lb.	Valvoline	Palladium	240	\$ 3.04	1 lb.	\$ 729.60
26	Hydraulic oil-light weight RO22 Turbine/Circulating Oil	5 gal.	Shell	Tellus S2 V22	45	\$ 13.82	1 gal.	\$ 621.90



**EXHIBIT A**  
**OIL15 - PRICING PAGE**

27	Hydraulic oil-light weight	5 gal.	Pinnacle Res.	MG Premium AW 32	45	\$ 4.85	1 gal.	\$ 218.25
28	Hydraulic oil-light weight	55 gal.	Pinnacle Res.	MG Premium AW 32	24200	\$ 4.40	1 gal.	\$ 106,480.00
29	Hydraulic oil-medium weight	5 gal.	Pinnacle Res.	MG Premium AW 46	35	\$ 4.85	1 gal.	\$ 169.75
30	Hydraulic oil-medium weight	55 gal.	Pinnacle Res.	MG Premium AW 46	11000	\$ 4.40	1 gal.	\$ 48,400.00
31	Hydraulic oil-heavy weight	5 gal.	Pinnacle Res.	MG Premium AW 68	200	\$ 5.05	1 gal.	\$ 1,010.00
32	Hydraulic oil-heavy weight	55 gal.	Pinnacle Res.	MG Premium AW 68	880	\$ 4.60	1 gal.	\$ 4,048.00
33	Transmission fluid - Multi Vehicle ATF	1 qt.	Shell	Spirax S5 ATF X	22000	\$ 3.00	1 qt.	\$ 66,000.00
34	Transmission fluid - Multi Vehicle ATF	55 gal.	Pinnacle Res.	MG MV ATF	495	\$ 8.55	1 gal.	\$ 4,232.25
35	Transmission fluid - TO - 4 fluid	5 gal.	Valvoline	Drive Train 30	350	\$ 9.23	1 gal.	\$ 3,230.50
36	Transmission fluid - TO - 4 fluid	55 gal.	Valvoline	Drive Train 30	605	\$ 9.23	1 gal.	\$ 5,584.15
37	Automatic Transmission Fluid Multi-Vehicle ATF API DEXRON III, MERCON, MERCON V, ATF+3 ATF+4 or equal	1 qt.	Shell	Spirax S5 ATF X	1000	\$ 3.00	1 qt.	\$ 3,000.00
38	Combination fluid, combination hydraulic	5 gal.	Pinnacle Res.	MG Premium UTH	250	\$ 6.24	1 gal.	\$ 1,560.00
39	Combination fluid, combination hydraulic	55 gal.	Pinnacle Res.	MG Premium UTH	20900	\$ 5.82	1 gal.	\$ 121,638.00
40	Railroad diesel engine oil - must be a generation 4 oil as designated by (LOMA) EMD approved, (LOMA) generation 4 SAE40	55 gal.	Pinnacle Res.	MG EMD 40	880	\$ 8.00	1 gal.	\$ 7,040.00
41	Synthetic motor oil for gasoline and diesel engines SAE 5W40 - CF/SL, SAE 10W30 - CF/SL, SAE 5W40 - CJ-4, CH-4/SL	1 qt.	Valvoline	Premium Blue Extreme	100	\$ 4.60	1 qt.	\$ 460.00
42	Synthesized multipurpose gear lubricant 75W90 DANA SHADES 256, REV. C, EATON E500, MACK GO J PLUS or equal	35 lb.	Shell	Spirax S6 AXRME	700	\$ 4.93	1 lb.	\$ 3,451.00
43	Synthesized multipurpose gear lubricant 80W140 DANA SHADES 256, ARVIN MERITOR O-76, MACK GO-J or equal	35 lb.	Shell	Spirax S6 AXME	140	\$ 4.54	1 lb.	\$ 635.60
44	Synthesized multipurpose gear lubricant 75W90 DANA SHADES 256, REV C, EATON E500, MACK GO-J PLUS or equal	120 lb.	Shell	Spirax S6 AXRME	120	\$ 4.34	1 lb.	\$ 520.80
45	Limited slip gear lubricant 80W90 GL-5	35 lb.	Pinnacle Res.	MG HP GL-5	770	\$ 1.20	1 lb.	\$ 924.00
46	Limited slip gear lubricant 80W90 GL-5	120 lb.	Pinnacle Res.	MG HP GL-5	1080	\$ 1.20	1 lb.	\$ 1,296.00
47	Motor oil for all diesel and gasoline engine service CF/SL, SM, ILSAC GF-4	55 gal.	Pinnacle Res.	MG Syn. Blend	1300	\$ 5.59	1 gal.	\$ 7,267.00
48	Transmission fluid - Dexron -VI-ATF or equal	1 qt.	Valvoline	ATF Mercon VI	120	\$ 4.43	1 qt.	\$ 531.60
49	TES - 295 Alison TES Fluid or equal	1 qt.	Shell	Spirax S6 A295	30	\$ 6.40	1 qt.	\$ 192.00
50	Hydraulic/Transmission Oil: HY-GARD Transmission Oil or equal	5 gal	Pinnacle Res.	MG Premium UTH	150	\$ 6.24	1 gal.	\$ 936.00
51	Hydraulic/Transmission Oil: HY-GARD Transmission Oil or equal	55 gal	Pinnacle Res.	MG Premium UTH	8,250	\$ 5.82	1 gal.	\$ 48,015.00
52	Hydraulic Oil - CAT HYDO ADVANCED 10 or equal	5 gal	Shell	Spirax S4 CX	120	\$ 13.41	1 gal.	\$ 1,609.20
53	Hydraulic Oil - CAT HYDO ADVANCED 10 or equal	55 gal	Shell	Spirax S4 CX	6,600	\$ 13.41	1 gal.	\$ 88,506.00
54	Automatic Transmission Fluid - MOTORCRAFT MERCON LV or equal	1 qt.	Motorcraft	Mercon LV	30	\$ 3.86	1 qt.	\$ 115.80
55	Automatic Transmission Fluid - MOTORCRAFT MERCON LV or equal	1 gal	Motorcraft	Mercon LV	120	\$ 15.44	1 gal.	\$ 1,852.80



**EXHIBIT A  
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56	Transmission Fluid - VALVOLINE CVT FLUID or equal	1 qt.	Valvoline	Syn. CVT Fluid	30	\$ 6.54	1 qt.	\$ 196.20
57	Transmission Fluid - VALVOLINE CVT FLUID or equal	1 gal	Valvoline	Syn. CVT Fluid	120	\$ 26.16	1 gal.	\$ 3,139.20
58	Deposit & Credit for Returnable 55 Gal. Drum	55 Gallon			1	\$ -	each	\$ -
<b>SECTION 1 : TOTAL - TRUCK LOAD</b>								<b>\$ 1,070,721.30</b>

## EXHIBIT A OIL15 - PRICING PAGE

### SECTION 2 - LESS THAN TRUCK LOAD (LTL)

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
LINE ITEM	DESCRIPTION	PREFERRED SIZE/WT ( for information use only and not to be used for calculations)	MANUFACTURER	BRAND BID	ESTIMATED QTY.	UNIT PRICE LESS THAN TRUCK LOAD (LTL)	Unit of Measure (For calculation purposes only)	EXTENDED PRICE LESS THAN TRUCK LOAD (LTL)
1	Motor oil for lubricating 2 cycle engines one pint containers (chain saw motor oil) - API TC or equal	8 oz.	Spectrum	Sta-Mix	1800	\$ 0.13	1 oz.	\$ 234.00
2	Motor oil for lubricating 2 cycle engines (outboard motor oil) - API TC-W3 or equal	1 qt.	Valvoline	Outboard	1300	\$ 3.87	1 qt.	\$ 5,031.00
3	Motor oil for all diesel and gasoline engine service SAE30 - CF-4, CF-2 CF/SJ	1 qt.	Shell	Rotella T1	3300	\$ 3.16	1 qt.	\$ 10,428.00
4	Motor oil for all diesel and gasoline engine service SAE15W40 - CI-4 CF/SJ CJ-4, CI-4 PLUS, CH-4, CG-4	1 qt.	Hicks	Formula 500	150,000	\$ 2.09	1 qt.	\$ 313,500.00
5	Motor oil for all diesel and gasoline engine service SAE15W40 - CI-4, CI-4 PLUS, CH-4, CG-4, CF-4/SL, SM	55 gal.	Pinnacle Resources	MG HD Premium	1320	\$ 6.54	1 gal.	\$ 8,632.80
6	Motor oil for all diesel and gasoline engine service BULK CJ-4, CI-4PLUS, CH-4, CG4, CF-4/SL, SM	BULK 6,000 gallon	Valvoline	AF Plus	6000	\$ 5.99	1 gal.	\$ 35,940.00
7	Motor oil for all diesel and gasoline engine service - CF/SL CAT TO-2, ALLISON C-4 or equal	5 gallon	Pinnacle Resources	MG HD Premium	2400	\$ 6.25	1 gal.	\$ 15,000.00
8	Motor oil for all diesel and gasoline engine service SAE10 - CF/SL CAT TO-2, ALLISON C-4 or equal	55 gal.	Pinnacle Resources	MG HD Premium	55	\$ 6.75	1 gal.	\$ 371.25
9	Motor oil for all diesel and gasoline engine service - CF/SL SM, SJ, ILSAC GF-4	1 qt.	Pinnacle Resources	MG Syn. Blend	5000	\$ 1.78	1 qt.	\$ 8,900.00
10	Motor oil for all diesel and gasoline engine service 5W30 - CF/SL ILSAC GF-4	1 qt.	Pinnacle Resources	MG Syn. Blend	10000	\$ 1.78	1 qt.	\$ 17,800.00
11	Motor oil for all diesel and gasoline engine service 5W30 - CF/SL SM, SJ, ILSAC GF-4	55 gal.	Pinnacle Resources	MG Syn. Blend	550	\$ 5.80	1 gal.	\$ 3,190.00
12	Motor oil for all diesel and gasoline engine service 10W30 - CF/SL SM, SJ, ILSAC GF-4	1 qt.	Pinnacle Resources	MG Syn. Blend	58000	\$ 1.78	1 qt.	\$ 103,240.00
13	Motor oil for all diesel and gasoline engine service 10W40 - CF/SL	1 qt.	Pinnacle Resources	MG Syn. Blend	500	\$ 1.78	1 qt.	\$ 890.00
14	Motor oil for all diesel and gasoline engine service 20W50 - CF/SL	1 qt.	Valvoline	Premium Conventional	500	\$ 3.50	1 qt.	\$ 1,750.00
15	Extreme pressure gear lubricant 80W90 GL-5, MT-1, MACK GO-J or equal	35 lb.	Pinnacle Resources	MG HD GL-5	280	\$ 1.20	1 lb.	\$ 336.00
16	Extreme pressure gear lubricant 80W90 GL-5, MT-1, MACK GO-J or equal	120 lb.	Pinnacle Resources	MG HD GL-5	3360	\$ 1.20	1 lb.	\$ 4,032.00
17	Extreme pressure gear lubricant 85W140 GL-5, MT-1, MACK GO-J or equal	120 lb.	Pinnacle Resources	MG HD GL-5	720	\$ 1.40	1 lb.	\$ 1,008.00
18	Extreme pressure gear lubricant - mineral gear lube 90 gl-1	35 lb.	Pinnacle Resources	MG GL-1 90	385	\$ 1.20	1 lb.	\$ 462.00
19	Powertranz EW 50 EATON PS-164, R7 MACK GO-A PLUS NAVISTAR TMS 6816 or equal	35 lb.	Valvoline	HD Syn. Trans 50	350	\$ 4.42	1 lb.	\$ 1,547.00
20	Wheel bearing and chassis grease summer weight NLGI #2	14 to 14-1/2 oz. tubes	Valvoline	Cerulean	2500	\$ 0.18	1 oz.	\$ 450.00
21	Wheel bearing and chassis grease summer weight NLGI #2	35 lb.	Valvoline	Cerulean	245	\$ 2.85	1 lb.	\$ 698.25
22	Wheel bearing and chassis grease summer weight NLGI #2	120 lb.	Valvoline	Cerulean	1200	\$ 2.53	1 lb.	\$ 3,036.00
23	All purpose grease (3% molly) water and heat resistant grease NGLI #2	14 to 14-1/2 oz. tubes	Valvoline	Palladium	120	\$ 0.22	1 oz.	\$ 26.40
24	All purpose grease (3% molly) water and heat resistant grease NGLI #2	35 lb.	Valvoline	Palladium	200	\$ 3.04	1 lb.	\$ 608.00
25	All purpose grease (3% molly) water and heat resistant grease NGLI #2	120 lb.	Valvoline	Palladium	240	\$ 3.04	1 lb.	\$ 729.60

## EXHIBIT A OIL15 - PRICING PAGE

26	Hydraulic oil-light weight RO22 Turbine/Circulating Oil	5 gal.	Shell	Tellus S2 V22	45	\$ 13.82	1 gal.	\$ 621.90
27	Hydraulic oil-light weight	5 gal.	Pinnacle Resources	MG Premium AW32	45	\$ 4.85	1 gal.	\$ 218.25
28	Hydraulic oil-light weight	55 gal.	Pinnacle Resources	MG Premium AW32	24200	\$ 4.40	1 gal.	\$ 106,480.00
29	Hydraulic oil-medium weight	5 gal.	Pinnacle Resources	MG Premium AW46	35	\$ 4.85	1 gal.	\$ 169.75
30	Hydraulic oil-medium weight	55 gal.	Pinnacle Resources	MG Premium AW46	11000	\$ 4.40	1 gal.	\$ 48,400.00
31	Hydraulic oil-heavy weight	5 gal.	Pinnacle Resources	MG Premium AW68	200	\$ 5.05	1 gal.	\$ 1,010.00
32	Hydraulic oil-heavy weight	55 gal.	Pinnacle Resources	MG Premium AW68	880	\$ 4.60	1 gal.	\$ 4,048.00
33	Transmission fluid - Multi Vehicle ATF	1 qt.	Shell	Spirax S5 ATF X	22000	\$ 3.00	1 qt.	\$ 66,000.00
34	Transmission fluid - Multi Vehicle ATF	55 gal.	Pinnacle Resources	MG MV ATF	495	\$ 8.55	1 gal.	\$ 4,232.25
35	Transmission fluid - TO - 4 fluid	5 gal.	Valvoline	Drive Train 30	350	\$ 9.23	1 gal.	\$ 3,230.50
36	Transmission fluid - TO - 4 fluid	55 gal.	Valvoline	Drive Train 30	605	\$ 9.23	1 gal.	\$ 5,584.15
37	Automatic Transmission Fluid Multi-Vehicle ATF API DEXRON III, MERCON, MERCON V, ATF+3 ATF+4 or equal	1 qt.	Shell	Spirax S5 ATF X	1000	\$ 3.00	1 qt.	\$ 3,000.00
38	Combination fluid, combination hydraulic	5 gal.	Pinnacle Resources	MG Premium UTH	250	\$ 6.24	1 gal.	\$ 1,560.00
39	Combination fluid, combination hydraulic	55 gal.	Pinnacle Resources	MG Premium UTH	20900	\$ 5.82	1 gal.	\$ 121,638.00
40	Railroad diesel engine oil must be a generation 4 oil as designated by (LOMA) EMD approved	55 gal.	Pinnacle Resources	MG EMD 40	880	\$ 8.00	1 gal.	\$ 7,040.00
41	Synthetic motor oil for gasoline and diesel engines SAE 5W40 - CF/SL, SAE 10W30 - CF/SL, SAE 5W40 - CJ-4, CH-4/SL	1 qt.	Valvoline	Premium Blue Extreme	100	\$ 4.60	1 qt.	\$ 460.00
42	Synthesized multipurpose gear lubricant 75W90 DANA SHADES 256, REV. C, EATON E500, MACK GO J PLUS or equal	35 lb.	Shell	Spirax S6 AXRME	700	\$ 4.93	1 lb.	\$ 3,451.00
43	Synthesized multipurpose gear lubricant 80W140 DANA SHADES 256, ARVIN MERITOR O-76, MACK GO -J or equal	35 lb.	Shell	Spirax S6 AXME	140	\$ 4.54	1 lb.	\$ 635.60
44	Synthesized multipurpose gear lubricant 75W90 DANA SHADES 256, REV C, EATON E500, MACK GO-J PLUS or equal	120 lb.	Shell	Spirax S6 AXRME	120	\$ 4.34	1 lb.	\$ 520.80
45	Limited slip gear lubricant 80W90 GL-5	35 lb.	Pinnacle Resources	MG GL-5	770	\$ 1.20	1 lb.	\$ 924.00
46	Limited slip gear lubricant 80W90 GL-5	120 lb.	Pinnacle Resources	MG GL-5	1080	\$ 1.20	1 lb.	\$ 1,296.00
47	Motor oil for all diesel and gasoline engine service CF/SL, SM, ILSAC GF-4	55 gal.	Pinnacle Resources	MG Syn. Blend	1300	\$ 5.59	1 gal.	\$ 7,267.00
48	Transmission fluid - Dexron -VI-ATF or equal	1 qt.	Valvoline	ATF Mercon VI	120	\$ 4.43	1 qt.	\$ 531.60
49	TES - 295 Alison TES Fluid	1 qt.	Shell	Spirax S6 A295	30	\$ 6.40	1 qt.	\$ 192.00
50	Hydraulic/Transmission Oil: HY-GARD Transmission Oil or equal	5 gal	Pinnacle Resources	MG Premium UTH	150	\$ 6.24	1 gal.	\$ 936.00
51	Hydraulic/Transmission Oil: HY-GARD Transmission Oil or equal	55 gal	Pinnacle Resources	MG Premium UTH	8,250	\$ 5.82	1 gal.	\$ 48,015.00
52	Hydraulic Oil - CAT HYDO ADVANCED 10 or equal	5 gal	Shell	Spirax S4 CX	120	\$ 13.41	1 gal.	\$ 1,609.20
53	Hydraulic Oil - CAT HYDO ADVANCED 10 or equal	55 gal	Shell	Spirax S4 CX	6,600	\$ 13.41	1 gal.	\$ 88,506.00
54	Automatic Transmission Fluid - MOTORCRAFT MERCON LV or equal	1 qt.	Motorcraft	Mercon LV	30	\$ 3.86	1 qt.	\$ 115.80

**EXHIBIT A  
OIL15 - PRICING PAGE**

55	Automatic Transmission Fluid - MOTORCRAFT MERCON LV or equal	1 gal	Motorcraft	Mercon LV	120	\$ 15.44	1 gal.	\$ 1,852.80
56	Transmission Fluid - VALVOLINE CVT FLUID or equal	1 qt.	Valvoline	Syn. CVT Fluid	30	\$ 6.54	1 qt.	\$ 196.20
57	Transmission Fluid - VALVOLINE CVT FLUID or equal	1 gal	Valvoline	Syn. CVT Fluid	120	\$ 26.16	1 gal.	\$ 3,139.20
50	Deposit & Credit for Returnable 55 Gal. Drum	55 Gallon			1	\$ -	each	\$ -
<b>SECTION2: TOTAL - LESS THAN TRUCK LOAD (LTL)</b>								\$ 1,070,721.30

**EXHIBIT A  
OIL15 - PRICING PAGE**

Vendor Contract Manager's Name:	<u>RANDY WARD</u>
Vendor Name:	<u>Apollo O.I., LLC</u>
Address:	<u>800 FIRST AVENUE South</u> <u>NITRO, WV 25143</u>
Authorized Signature:	<u>William E Star</u>
Date:	<u>1-12-15</u>
Phone:	<u>502-643-9165</u>
Fax:	<u>502-643-9165</u>
Email:	<u>ESTEVENS@Apollooi.com</u>

IF RESPONDING IN WVOASIS VSS,  
PLEASE ENTER THIS AMOUNT AS YOUR  
UNIT PRICE ----->

TOTAL: SECTION 1 - TRUCK LOAD	\$	1,070,721.30
TOTAL: SECTION 2 - LESS THAN TRUCK LOAD (LTL)	\$	1,070,721.30
<b>GRAND TOTAL:</b>	\$	2,141,442.60

STANDARD DELIVERY AFTER RECEIPT OF ORDER (ARO)	DAYS	5 days
EMERGENCY DELIVERY AFTER RECEIPT OF ORDER (ARO)	DAYS	2 DAYS

LOCATION OF WAREHOUSE FROM WHICH SHIPMENT CAN BE MADE FROM:

Apollo Oil, Nitro, WV.

800 FIRST AVENUE South

NITRO, WV 25143



**Powell · Walton · Milward**

*a division of J. Smith Lanier & Co.*

**Date:** 01/05/15 11:55:38 AM

**To:**

**From:** <playell@pwm-jsl.com>

**Pages (w/cover):** 3

**Fax #:** 15023665867

**Re:** Proof of Insurance Coverage

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360 East Vine Street  
Lexington, KY 40588  
Phone 859.254.8023 Fax 859.254.8020

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Client#: 123041

41ROOFSEVIC

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 01/05/2015

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement.

PRODUCER: J Smith Lanier & Co-Lexington, Powell-Walton-Milward, P O Box 2030, Lexington, KY 40588. CONTACT NAME: Karen Marshall, PHONE: 800-796-3567, FAX: 859-254-8020, E-MAIL: kmarshall@pwm-jsl.com. INSURER(S) AFFORDING COVERAGE: INSURER A: Westfield Insurance Company, INSURER B: KY Assoc. General Contractors, INSURER C: , INSURER D: , INSURER E: , INSURER F: .

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES.

Table with columns: INSR LTR, TYPE OF INSURANCE, ADDL INSR, SUBR WVD, POLICY NUMBER, POLICY EFF (MM/DD/YYYY), POLICY EXP (MM/DD/YYYY), LIMITS. Rows include General Liability (TRA3477887), Automobile Liability (TRA3477887), Umbrella Liab (TRA3477887), and Workers Compensation (16798).

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER: Apollo Oil, Attn: Larry Grimes, 1508 Crums Lane, Louisville, KY 40216. CANCELLATION: SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE: [Signature]

Please see attached documents for proof of insurance sent from J. Smith Lanier & Co. If you have any questions about your proof of insurance, please contact your J. Smith Lanier & Co. representative. This proof of insurance supersedes all previously issued certificates. Please include Named Insured details with all correspondence.

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