



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFO NUMBER
OIL10

PAGE
1

ADDRESS-CORRESPONDENCE TO ATTENTION OF
JO ANN ADKINS 304-558-8802

VENDOR

*426142524 304-927-2470
 HARRIS OIL COMPANY INC
 PO BOX 685
 330 OAK DRIVE
 SPENCER WV 25276

SHIP TO

ALL STATE AGENCIES
 AND POLITICAL SUBDIVISIONS
 VARIOUS LOCALES AS INDICATED
 BY ORDER

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
08/19/2010				

BID OPENING DATE: **09/21/2010** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
REQUEST FOR QUOTATION						
<p>THE PURCHASING DIVISION IS SOLICITING BIDS FOR OIL, LUBRICANTS AND GREASES FOR ALL WEST VIRGINIA STATE AGENCIES AND POLITICAL SUBDIVISIONS WITHIN THE STATE. BIDS SHALL MEET THE ATTACHED GENERAL AND LINE SPECIFICATIONS.</p> <p>VENDORS SHALL USE THE ATTACHED "PRICING PAGE -OIL10" TO ENTER THEIR QUOTATION FOR EACH ITEM. AN ELECTRONIC VERISON OF OIL10 PRICING PAGES CAN BE FOUND AT: HTTP://WWW.STATE.WV.US/ADMIN/PURCHASE/NEWBUL.HTM BIDDERS ARE REQUESTED THAT IN ADDITION TO THE REQUIRED PAPER BID THAT AN ELECTRONIC VERSION BE SUBMITTED WITH THEIR BID. VENDORS SHALL NOT E-MAIL THE ELECTRONIC COPY. IN THE EVENT THE PAPER BID AND THE ELECTRONIC BID COPY DO NOT MATCH, THE PAPER BID SHALL PREVAIL.</p> <p>ALL PRICES SHALL BE F.O.B. DESTINATION - SHIPPING PREPAID AND INCLUDED IN THE VENDOR PRICE SHOWN. PLEASE COMPLETE ALL INFORMATION REQUESTED ON THE OIL10 PRICING PAGES: LOCATION OF WAREHOUSES FROM WHICH SHIPMENTS MAY BE MADE; CONTRACT COORDINATOR NAME, TELEPHONE NUMBER, IF AVAILABLE LIST TOLL FREE NUMBER; FAX NUMBER AND E-MAIL.</p> <p>BIDDERS SHOULD ENTER THE NUMBER OF DAYS REQUIRED FOR DELIVERY AFTER RECEIPT OF ORDER (ARO). BIDDERS SHOULD ADD THEIR COMPANY NAME TO EACH PAGE; THE NAME, SIGNATURE, TITLE AND DATE ON THE LAST SHEET OF THE PRICING PAGE FORM SHOULD BE COMPLETED.</p>						

RECEIVED

2010 SEP 21 P 12: 51

PURCHASING DIVISION
STATE OF WV

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE	TELEPHONE	DATE	
<i>Wayne Harris</i>	304-927-2470	9/20/10	
TITLE	FED	ADDRESS CHANGES TO BE NOTED ABOVE	
<i>President</i>	550480256		

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

GENERAL TERMS & CONDITIONS PURCHASE ORDER/CONTRACT

1. **ACCEPTANCE:** Seller shall be bound by this order and its terms and conditions upon receipt of this order.
2. **APPLICABLE LAW:** The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
3. **NON-FUNDING:** All services performed or goods delivered under State Purchase Orders/Contracts are to be continued for the terms of the Purchase Order/Contract, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
4. **COMPLIANCE:** Seller shall comply with all federal, state and local laws, regulations and ordinances including, but not limited to, the prevailing wage rates of the WV Division of Labor.
5. **MODIFICATIONS:** This writing is the parties' final expression of intent. No modification of this order shall be binding unless agreed to in writing by the Buyer.
6. **ASSIGNMENT:** Neither this Order nor any monies due, or to become due hereunder may be assigned by the Seller without the Buyer's consent.
7. **WARRANTY:** The Seller expressly warrants that the goods and/or services covered by this order will:
{a} conform to the specifications, drawings, samples or other description furnished or specified by the Buyer; {b} be merchantable and fit for the purpose intended; and/or {c} be free from defect in material and workmanship.
8. **CANCELLATION:** The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
9. **SHIPPING, BILLING & PRICES:** Prices are those stated in this order. No price increase will be accepted without written authority from the Buyer. All goods or services shall be shipped on or before the date specified in this Order.
10. **LATE PAYMENTS:** Payments may only be made after the delivery of goods or services. Interest may be paid on late payments in accordance with the *West Virginia Code*.
11. **TAXES:** The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
12. **RENEWAL:** Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.htm and is hereby made part of the agreement provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.
16. **LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.
17. **ANTITRUST:** In accepting this purchase order or signing this contract with any agency for the State of West Virginia, the vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to vendor. Vendor certifies that this purchase order or contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law. Vendor further certifies that this purchase order or contract is in all respects fair and without collusion or fraud.



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LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		405-39		
<p>ANY CHARGES FOR SUPERFUND TAX MUST BE INCLUDED IN THE BID ITEM PRICE.</p> <p>PRICES ARE PER THE ATTACHED "PRICING PAGE -OIL10"</p> <p>ALL ORDERS THAT TOTAL \$100.00 OR MORE MUST BE SHIPPED F.O.B. DESTINATION. ORDERS LESS THAN \$100.00 MAY BE OBTAINED BY THE AGENCY USING ALTERNATIVE PROCUREMENT METHODS. IF THE AGENCY CHOOSES TO ORDER LESS THAN \$100.00 ANY TRANSPORTATION COSTS WILL BE INVOICED AS A SEPARATE CHARGE WITH THE ORIGINAL FREIGHT BILL ATTACHED TO THE INVOICE.</p> <p>THIS CONTRACT COVERS CASE LOTS, TRAILER LOAD PRICES AND BULK DELIVERY TO ANY LOCATION WITHIN WEST VIRGINIA. A TRAILER LOAD NORMALLY WILL BE BETWEEN 40,000 AND 45,000 POUNDS. TRAILER LOAD SHIPMENTS DO NOT NECESSARILY HAVE TO BE ONE PRODUCT. A COMBINATION OF ANY AND ALL PRODUCTS MAY BE ORDERED TO MEET THE TRAILER LOAD PRICE.</p> <p>CONTRACT AWARD: THIS CONTRACT WILL NOT BE SPLIT. THE AWARD WILL BE MADE TO THE VENDOR WITH THE LOW BID FOR ALL ITEMS SHOWN, (MEETING MANDATORY SPECIFICATIONS), UNIT PRICE LESS THAN TRUCKLOAD AND BULK PRICES.</p>						
LUBRICANTS, OIL AND GREASES						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Large Harris</i>	TELEPHONE	DATE <i>9/20/10</i>
TITLE <i>President</i>	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

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<p>INQUIRIES</p> <p>WRITTEN QUESTIONS SHALL BE ACCEPTED THROUGH CLOSE OF BUSINESS ON TUESDAY, SEPTEMBER 7, 2010. QUESTIONS MAY BE SENT VIA USPS, FAX, COURIER OR E-MAIL IN ORDER TO ASSURE NO VENDOR RECEIVES AN UNFAIR ADVANTAGE, NO SUBSTANTIVE QUESTIONS WILL BE ANSWERED ORALLY. IF POSSIBLE, E-MAIL QUESTIONS ARE PREFERRED. ADDRESS INQUIRIES TO:</p> <p>JO ANN ADKINS DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305 FAX: 304.558.4115 E-MAIL: JO.A.ADKINS@WV.GOV</p> <p>EXHIBIT 3</p> <p>LIFE OF CONTRACT: THIS CONTRACT BECOMES EFFECTIVE ON AND EXTENDS FOR A PERIOD OF ONE (1) YEAR OR UNTIL SUCH "REASONABLE TIME" THEREAFTER AS IS NECESSARY TO OBTAIN A NEW CONTRACT OR RENEW THE ORIGINAL CONTRACT. THE "REASONABLE TIME" PERIOD SHALL NOT EXCEED TWELVE (12) MONTHS. DURING THIS "REASONABLE TIME" THE VENDOR MAY TERMINATE THIS CONTRACT FOR ANY REASON UPON GIVING THE DIRECTOR OF PURCHASING 30 DAYS WRITTEN NOTICE.</p> <p>UNLESS SPECIFIC PROVISIONS ARE STIPULATED ELSEWHERE IN THIS CONTRACT DOCUMENT, THE TERMS, CONDITIONS AND PRICING SET HEREIN ARE FIRM FOR THE LIFE OF THE CONTRACT.</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Wesley Adams</i>	TELEPHONE	DATE 9/20/10
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

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<p>RENEWAL: THIS CONTRACT MAY BE RENEWED UPON THE MUTUAL WRITTEN CONSENT OF THE SPENDING UNIT AND VENDOR, SUBMITTED TO THE DIRECTOR OF PURCHASING THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. SUCH RENEWAL SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE ORIGINAL CONTRACT AND SHALL BE LIMITED TO TWO (2) ONE (1) YEAR PERIODS.</p> <p>CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICE SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM TO THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN.</p> <p>OPEN MARKET CLAUSE: THE DIRECTOR OF PURCHASING MAY AUTHORIZE A SPENDING UNIT TO PURCHASE ON THE OPEN MARKET, WITHOUT THE FILING OF A REQUISITION OR COST ESTIMATE, ITEMS SPECIFIED ON THIS CONTRACT FOR IMMEDIATE DELIVERY IN EMERGENCIES DUE TO UNFORESEEN CAUSES (INCLUDING BUT NOT LIMITED TO DELAYS IN TRANSPORTATION OR AN UNANTICIPATED INCREASE IN THE VOLUME OF WORK.)</p> <p>QUANTITIES: QUANTITIES LISTED IN THE REQUISITION ARE APPROXIMATIONS ONLY, BASED ON ESTIMATES SUPPLIED BY THE STATE SPENDING UNIT. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACT SHALL COVER THE QUANTITIES ACTUALLY ORDERED FOR DELIVERY DURING THE TERM OF THE CONTRACT, WHETHER MORE OR LESS THAN THE QUANTITIES SHOWN.</p> <p>ORDERING PROCEDURE: SPENDING UNIT(S) SHALL ISSUE A WRITTEN STATE CONTRACT ORDER (FORM NUMBER WV-39) TO THE VENDOR FOR COMMODITIES COVERED BY THIS CONTRACT. THE ORIGINAL COPY OF THE WV-39 SHALL BE MAILED TO THE VENDOR AS AUTHORIZATION FOR SHIPMENT, A SECOND COPY</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Worpe Harris</i>	TELEPHONE	DATE 9/20/10
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<p>MAILED TO THE PURCHASING DIVISION, AND A THIRD COPY RETAINED BY THE SPENDING UNIT.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID, AND IS TERMINATED WITHOUT FURTHER ORDER.</p> <p>THE TERMS AND CONDITIONS CONTAINED IN THIS CONTRACT SHALL SUPERSEDE ANY AND ALL SUBSEQUENT TERMS AND CONDITIONS WHICH MAY APPEAR ON ANY ATTACHED PRINTED DOCUMENTS SUCH AS PRICE LISTS, ORDER FORMS, SALES AGREEMENTS OR MAINTENANCE AGREEMENTS, INCLUDING ANY ELECTRONIC MEDIUM SUCH AS CD-ROM.</p> <p>PURCHASING CARD ACCEPTANCE: THE STATE OF WEST VIRGINIA CURRENTLY UTILIZES A VISA PURCHASING CARD PROGRAM WHICH IS ISSUED THROUGH A BANK. THE SUCCESSFUL VENDOR MUST ACCEPT THE STATE OF WEST VIRGINIA VISA PURCHASING CARD FOR PAYMENT OF ALL ORDERS PLACED BY ANY STATE AGENCY AS A CONDITION OF AWARD.</p> <p>EXHIBIT 10</p> <p>REQUISITION NO.: 0110.....</p> <p>ADDENDUM ACKNOWLEDGEMENT</p> <p>I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE <i>Narye Harris</i>	TELEPHONE	DATE <i>9/20/10</i>	
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE	

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<p>ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.</p> <p>ADDENDUM NO.'S:</p> <p>NO. 1 <i>X. [Signature]</i></p> <p>NO. 2 <i>X. [Signature]</i></p> <p>NO. 3</p> <p>NO. 4</p> <p>NO. 5</p> <p>I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.</p> <p>VENDOR MUST CLEARLY 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.</p> <p style="text-align: right;"><i>[Signature]</i> SIGNATURE <i>HARRIS OIL CO. INC.</i> COMPANY 9/20/10 DATE</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>[Signature]</i>	TELEPHONE	DATE 9/20/10
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<p>NOTE: THIS ADDENDUM ACKNOWLEDGEMENT SHOULD BE SUBMITTED WITH THE BID.</p> <p>REV. 09/21/2009</p> <p style="text-align: center;">NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p style="text-align: center;">DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <table style="width: 100%;"> <tr> <td>BUYER:</td> <td>FILE 42</td> </tr> <tr> <td>RFQ. NO.:</td> <td>OIL10</td> </tr> <tr> <td>BID OPENING DATE:</td> <td>09/21/2010</td> </tr> <tr> <td>BID OPENING TIME:</td> <td>1:30 PM</td> </tr> </table> <p>PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:</p>							BUYER:	FILE 42	RFQ. NO.:	OIL10	BID OPENING DATE:	09/21/2010	BID OPENING TIME:	1:30 PM
BUYER:	FILE 42													
RFQ. NO.:	OIL10													
BID OPENING DATE:	09/21/2010													
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<p>----- 304-927-4972 -----</p> <p>CONTACT PERSON (PLEASE PRINT CLEARLY): Wayne Harris</p> <p>-----</p> <p>***** THIS IS THE END OF RFQ OIL10 ***** TOTAL: _____</p>						

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SIGNATURE <i>Wayne Harris</i>	TELEPHONE	DATE 9/20/10
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OIL10

General Specifications

Each bid should be accompanied by nationally published certifiable literature and/or Certification from an independent laboratory that the oil has passed the ASTM requirements described herein. The bidder shall be responsible for the cost of the independent laboratory testing. Failure to provide information may be grounds for rejection of the bid.

Additionally, the West Virginia Department of Transportation will randomly test samples of the delivered product through its Material Division laboratory or an independent laboratory throughout the term of the contract to ensure continuous conformity with the specifications. Upon failure of a random test sample, the supplier shall be required to replace all containers of the product of the same batch number as the failed sample.

Each container of the oil furnished under this specification shall be labeled as follows: corresponding brand name, product name, SAE viscosity grade, API Seal of Approval, API categories, and batch number of its contents, date, and manufacture's name and address.

Successful bidder may be required to furnish a sample of any or all oil bid for test purposes prior to award.

NOTE: All drums shall be labeled as required by OSHA for hazardous material and Material Safety Data Sheets (MSDS) must be submitted with bid and shipped with product.

Packing slip must accompany all shipments. All drums to be sealed and shipped on two-way, non-returnable pallets.

Description: SAE viscosity grades and API service (where applicable) are specified under the detailed requirements for each product.

The successful bidder shall not substitute any other brand from that awarded, nor sell any additional items under their contract not specifically covered herein, without prior permission of the Purchasing Division.

The item(s) as specified is (are) shown only as an example of the quality level and operational characteristics requested by the agency and not intended to mean the only acceptable brand.

Applicable standards: The following documents of current issue and in effect on the bid opening date shall form a part of this specification to the extent specified:

ASTM D 217
ASTM D 811
ASTM D 874
ASTM D 1263
ASTM D 1264
ASTM D 2265
ASTM D 2619
ASTM D 4048
ASTM D 4049

American Society for Testing and Materials (ASTM)
100 Barr Harbor Drive
PO Box C700
West Conshohocken, PA 19428-2959
API Engine Service Classification System

American Petroleum Institute (API)
Division of Marketing
1220 L Street, NW
Washington, DC 20005-4070

SAE J183 – Engine oil performance and engine service classification.

Society of Automotive Engineers (SAE)
400 Commonwealth Drive
Warrendale, PA 15096

MIL-L-46152E
MIL-L-2104E
MIL-L-2105D

US Government Printing Office
Superintendent of Documents
Washington, DC

National Marine Manufacturers Association (NMMA)
401 North Michigan Avenue
Chicago, IL 60611

National Lubricating Grease Institute (NLGI)
4635 Wyandotte Street
Kansas City, MO 63113

Warranty:

The contractor warrants under penalty for fraud that any products furnished shall be of the grade and quality required in this specification.

Service and Manuals:

The contractor shall provide technical information and service concerning the use of Products furnished under these specifications when requested by using agencies.

Acceptance, inspection and quality assurance:

Normally, sampling and testing will not be required. The State reserves the right, however, to conduct tests, require samples or require test results to insure compliance with the requirements of this specification.

Using agencies shall inspect for proper identification of products, damaged or leaking containers and other apparent irregularities.

Delivery:

Product shall be furnished as specified and shall be packaged in accordance with the best commercial practice. All shipping container shall be marked to show the brand name and description of the products. All products should be palletized and shrink wrapped except 55 gallon containers.

Drum Deposits:

Where a deposit is required for shipping product in returnable drums the amount shall be shown as a separate item on the invoice and the full amount shall be refundable or credited to the agency's account upon return. The state reserves the right to consider the amount of the deposit as a factor in determining the award of this contract. Returnable drums may be returned by the contractor picking up the drums with his own truck or by the state shipping them to the contractor, transportation charges collect.

Deposit and credit for returnable 55 gal. drums \$ - 0 - each

Material Safety Data Sheets:

In addition to meeting current federal and state laws and requirements concerning hazardous chemicals, the contractor shall forward a proper and current material safety data sheet (MSDS). Furthermore, the contractor shall furnish the State and/or its agencies additional MSDS as required. By offering and signing a bid response the bidder agrees to these conditions:

Item Specifications:

Items 1&2

1. Chain Saw Motor Oil: (also Power Mowers, Pumps, and Snowmobiles). This oil shall be of high quality and specifically compounded and marketed for mixing with gasoline to lubricate two-cycle, air and water cooled engines. It shall meet the warranty requirements as an engine lubricant for the major manufactures of two-cycle engines used on chain saws, power mowers, pumps, and snowmobiles.

The motor oil shall be satisfactory for use in any fuel to oil ratio as specified by the engine manufacturer up to an including 50:1. The product offered shall be available in the SAE viscosity grade(s) specified for use in Homelite, McCulloch, Poulan and other two-cycle chain saws.

2. Out Board Motor Oil: This motor oil shall be high quality, ashless and specifically compound and marketed for mixing with gasoline to lubricate two cycle, water cooled engines. It shall have been tested and certified by the National Marine Manufacturers Association (NMMA) for TC-W III and each container shall state same.

The motor oil shall be satisfactory for use is any fuel to oil ratio as specified by the engine manufacturer, up to and including 50:1. The product offered shall be available in the SAE viscosity grade(s) specified by the engine manufacturers for use in all Evinrude, Johnson, Mercury and other two cycle outboard motors.

Items 3 -14, 47

Motor oil and hydraulic oil shipped in black 55 gallon drums or bulk tractor trailer load (6,000 gallons) shall be produced from virgin materials, suitable for use in passenger cars and trucks, diesel and gasoline engines, viscosity grade, SAE 15W40 must be API certified and have the API seal of approval on the product.

This is an engine oil suitable for use in passenger cars and heavy duty engines used in trucks and heavy construction equipment. The oil furnished under this specifications shall be viscosity grade SAE 15W-40 and shall meet all requirements for diesel and

gasoline engines.

The oil furnished shall meet the performance requirements (“Primary Performance Criteria”) described in ASTM designated D4485 for performance categories API, CJ-4, CI-4 Plus, CH-4, CG-4, CF-4/SL, SM. Conformance of the oil furnished with the performance requirements shall be Determined with the test methods identified in ASTM D 4485 for all categories.

Motor oil for all diesel and gasoline engine service:

API Service Categories:

SAE 30 API, CF-4, CF-2 CF/SJ

SAE15W40 API, CJ-4, CI-4 PLUS, CH-4 CG-4, CF-4SL, SM

SAE 10 API CF-4 CAT T0-2, ALLISON C-4

SAE 40 API CF-4, CF-2, CF/SJ

SAE 5W20 API SM, SL, SJ, ISLAC GF-4

SAE 5W30 API SM, SL, SJ, ISLAC GF-4

SAE 10W30 API SM, SL, SJ, ISLAC GF-4

SAE 20W50 API SL, SJ SH, SG

SAE 10W40 API SL, SJ SH, SG

Crankcase oil suitable for use in late model diesel and gasoline engines where this service category oil requirement is specified by the engine manufacturer.

Must meet the performance level of MIL-L-2104E and MIL-L-45152D

Sulfated ash (ASTM D-874) shall be a maximum of 1% by weight.

Minimum viscosity index for all motor oils shall be 95.

Items 15-17

Extreme Pressure Gear Lubricant:

API Service Category – GL-5, PG-1, PG-2

These lubricants are intended for use in passenger car, truck, and tractor differentials (particularly hypoid type), steering gears, and other points requiring a lubricant of exceptional load carrying ability.

SAE Viscosity Grades – 80W90 and 85W140

Item 18

Gear lubricants are designed for use in automotive and heavy duty equipment transmission and differentials where an EP (extreme pressure) lubricant is not required and where an API Service Designation GL-1 gear oil is specifically called for by the equipment manufacturer.

Item 19

Is a fully synthetic, SAE 50 lubricant for use in heavy-duty truck manual transmissions that meet EATON PS-164, R7, MACK TO-A PLUS, NAVISTAR TMS 6816.

Items 20 - 22

Wheel Bearing and Chassis Grease:

This grease shall be designated by the manufacturers as suitable for a multipurpose use in cars, light and heavy duty trucks, and industrial equipment. Made from a lithium complex soap.

Salient Characteristics: (High Dropping Point)

1. NLGI Consistency #1 and #2
2. Rust protection and resistance to oxidation
3. Resistance to water without washout (ASTM D 1264)
4. Leakage resistance (ASTM D 1263)
5. Extreme pressure properties
6. Anti-wear properties
7. Load carrying properties
8. Dropping point (ASTM D2265) of Min. 450 degree F.
9. Worked penetration (ASTM D217)

NLGI #1	310-340
NLGI #2	265-295
10. NLGI - GC/LB

Items 23 - 25

All Purpose Grease (Moly):

This grease shall be designated by the manufacturer as suitable for use in industrial, automotive and construction equipment applications including heavy stock loading conditions.

Salient Characteristics:

1. NLGI Consistency #2

2. Rust protection and resistance to oxidation
3. Resistance to water washout
4. Extreme pressure properties
5. Anti-wear properties
6. Good mechanical stability
7. Low pressure properties
8. Dropping point (ASTM D 2265) of Min. 500 Degree F.
9. 3% Moly (Cat. Reg.)

Items 26 - 32

Hydraulic Oil (Hydraulic Hoist Oil):

This product shall be specially blended for service in hydraulic systems employing either vane or gear type pumps on snow removal and road construction equipment and hydraulic-operated equipment.

Note: This oil is not intended for use in hydraulic brakes and automobile-type power Steering units.

Grades:

Light Weight – for use when outside temperature is generally below 32 degrees F.

Medium Weight – for use when outside temperature is generally between 32 Degrees and 100 Degrees F.

Heavy Weight – for use in some systems where ambient temperatures are generally higher and heavier weight products are recommended..

This hydraulic oil shall satisfy the requirements of hydraulic systems used in the application above. Oil shall have good demulsibility characteristics and shall not produce deleterious effects on neoprene, leather or other type seals used in such

hydraulic systems. Product shall contain corrosion, oxidation, antiwear and foam inhibitors in sufficient quantities and quality to adequately protect the hydraulic system including pumps, motor and valves. This oil shall have been tested per ASTM D2619 and approved for use as a quality product in this application.

Abex Denison HF-0, HF-1 HF-2
 Sperry Vickers M-2950-S, 1-286-S
 Sunstrand Hydrostatics

Minimum viscosity index for all Hydraulic Oils shall be 95

Light Weight – Cincinnati Milacron Specifications p-68

Medium Weight – Cincinnati Milacron Specifications p-70

Heavy Weight – Cincinnati Milacron Specifications p-69

Items 33 - 34

Transmission Fluid:

This automatic transmission fluid shall be suitable for use in any application where conventional ATF fluid is specified (Dexron III-Mercon).

Items 35-36

TO-4 Fluids

Transmission fluids to meet rigid demands of Caterpillar equipment and Allison C-4. Must provide outstanding rust corrosion control and oxidation stability, foam resistance and elastomer compatibility. The product offered shall meet CAT TO-4 requirements.

Item 37

Transmission Fluid:

This automatic transmission fluid shall be suitable for use in any application where multi-vehicle ATF fluid is specified meeting specification DEXRON III, MERCON, MERCON V, ATF +3, ATF +4.

Items 38 -39

Combination Fluid:

Formulated for late model farm equipment, off highway machinery, and industrial tractors where transmissions, final drives, wet brakes and hydraulics are supplied from a common fluid reservoir.

Combination fluid, combination hydraulic, transmission, differential fluid for use in tractors requiring combination fluid. This fluid shall have all the varying characteristics

of the following specifications John Deere J20A, Allis Chalmers 257541, Massey Ferguson Permatran III, White Equipment Q-1722, and Ford M2C134A.

Items 40

Railroad diesel engine oil must be a generation 4 oil as designated by (LOMA) EMD approved.

Items 41

Synthetic Motor Oil for Diesel and Gasoline Engines:

API Service Categories

SAE 5W30 – CF/SL

SAE 10W30 – CF/SL

SAE 5W40 – CJ-4

All should meet the following: Passenger cars and light truck – GM 6094M , GM 4718M and Ford ESE-MC153-E

Must meet the performance level of MIL-L-46152E and MIL-L-2104D

Items 42 - 44

Synthetic Multipurpose Gear Lubricant:

API Service Category – GL-5

These lubricants are intended for use in passenger car, truck, and tractor differentials, steering gears and other points requiring a lubricant of exceptional load carrying ability.

SAE Viscosity grades, 75W90 and 80W140

The gear lubricant shall be manufactured from synthesized hydrocarbon base oils and a sulfur phosphorus gear lubricant additive package.

Items 45 - 46

Formulated Gear Oil:

API Service Category – GL-5

These lubricants are intended for use in limited slip and conventional differentials of passenger cars and trucks. Product shall contain: rust, corrosion, antiwear and foam inhibitors for transmissions and differentials.

SAE Viscosity grade: 80W90

ITEM 48

Automatic Transmission Fluid meeting GM specification DEXRON-VI.

ITEM 49

A premium quality heavy-duty universal power shift and automatic transmission fluid which is suitable for use in transmissions requiring Allison TES-295 fluids.

These specifications cover the motor oils, lubricants and greases that are usually purchased by the State of West Virginia for use in automobiles, trucks and other motorized equipment.

VENDOR: Harris Oil Company

ITEM	DESCRIPTION	CONTAINERS/ PACKAGING	MFCR	BRAND BID	EST. QTY.	UNIT PRICE TRUCK LOAD	UNIT PRICE LESS THAN TRUCK LOAD	EXTENDED PRICE LESS THAN TRUCK LOAD
1	Motor oil for lubricating 2 cycle engines one pint containers (chain saw motor oil) API TC	24/8 oz. pbs./cs.	Pennzoil	Air Cool	1800	\$ /pt	\$ 1.00 /pt	\$ 24.00 /cs
2	Motor oil for lubricating 2 cycle engines (cut board motor oil) API TC-W3	12/1 qt. plastic containers	Shell	Nautilus	1300	\$ /qt	\$ 2.90 /qt	\$ 36.06 /cs
3	Motor oil for all diesel and gasoline engine service SAE30 CF-2 CF/SJ	12/1 qt. plastic containers	Shell	Rotella T130	3300	\$ /qt	\$ 2.65 /qt	\$ 31.80 /cs
4	Motor oil for all diesel and gasoline engine service SAE15W40 C1-4 CF/SJ C1-4, C1-4 PLUS, CH-4, CG-4	12/1 qt. plastic containers	Pennzoil	Long Life 15W40 Super	150,000	\$ /qt	\$ 2.69 /qt	\$ 32.28 /cs
5	Motor oil for all diesel and gasoline engine service SAE15W40 C1-4, C1-4 PLUS, CH-4, CG-4, CF-4/SL, SM	55 gal. drum	Shell	15W40	1320 gal	\$ /gal	\$ 8.36 /gal	\$ 459.80 /dr
6	Motor oil for all diesel and gasoline engine service SAE15W40 BULK C1-4, C1-4 PLUS, CH-4, CG-4, CF-4/SL, SM	BULK 6,000 gal. drum	Shell	Rimula Super 15W40	6000 gal	\$ /gal	\$ 7.96 /gal	\$ 7.96 /gal
7	Motor oil for all diesel and gasoline engine service SAE10 CF/SL CAT TO-2, ALLISON C-4	5 gal. containers	Shell	Donax TC10	2400 gal	\$ /gal	\$ 10.35 /gal	\$ 51.75 /pail
8	Motor oil for all diesel and gasoline engine service SAE10 CF/SL CAT TO-2, ALLISON C-4	55 gal. drum	Shell	Donax TC10	55 gal	\$ /gal	\$ 9.85 /gal	\$ 541.75 /dr
9	Motor oil for all diesel and gasoline engine service 5W20 CF/SL SM, SJ, ILSAC GF-4	12/1 qt. plastic containers	Shell	Formula Shell 5W20	5000	\$ /gal	\$ 2.33 /qt	\$ 27.96 /cs
10	Motor oil for all diesel and gasoline engine service 5W30 CF/SL ILSAC GF-4	12/1 qt. plastic containers	Shell	Formula Shell 5W30	10000	\$ /qt	\$ 2.33 /qt	\$ 27.96 /cs
11	Motor oil for all diesel and gasoline engine service 5W30 CF/SL SM, SJ, ILSAC GF-4	56 gal. drum	Shell	Fromal Shell 5W30	550 gal	\$ /gal	\$ 9.32 /gal	\$ 512.60 /dr
12	Motor oil for all diesel and gasoline engine service 10W30 CF/SL SM, SJ, ILSAC GF-4	12/1 qt. plastic containers	Shell	Formula Shell 10W30	58600	\$ /qt	\$ 2.33 /qt	\$ 27.96 /cs
13	Motor oil for all diesel and gasoline engine service 10W40 CF/SL	12/1 qt. plastic containers	Shell	Formula Shell 10W40	500	\$ /qt	\$ 2.33 /qt	\$ 27.96 /cs
14	Motor oil for all diesel and gasoline engine service 20W50 CF/SL	12/1 qt. plastic containers	Shell	Formula Shell 20W50	500	\$ /qt	\$ 2.33 /qt	\$ 27.96 /cs
15	Extreme pressure gear lubricant 80W90 GL-5, MT-1, MACK GO-J	35 lb. containers	Shell	Spirax HD 80W90	280 lb	\$ /lb	\$ 1.49 /lb	\$ 52.15 /pail
16	Extreme pressure gear lubricant 80W90 GL-5, MT-1, MACK GO-J	120 lb. containers	Shell	Spirax HD 80W90	3560 lb	\$ /lb	\$ 1.45 /lb	\$ 174.00 /kg
17	Extreme pressure gear lubricant 85W140 GL-5, MT-1, MACK GO-J	120 lb. containers	Shell	Spirax HD 85W140	720 lb	\$ /lb	\$ 1.44 /lb	\$ 172.80 /kg
18	Extreme pressure gear lubricant mineral gear lube 90 gl-1	35 lb. containers	Shell	Dentax 80W90	385 lb	\$ /lb	\$ 1.53 /lb	\$ 53.55 /pail
19	Powertrans EW 50 EATON PS-184, R7 MACK GO-A PLUS NAVISTAR TMS 8816	35 lb. containers (33 lb.)	Shell	Spirax GSX 50	350 lb	\$ /lb	\$ 3.28 /lb	\$ 108.24 /pl
20	Wheel bearing and chassis grease summer weight NLGI #2	14 to 14-1/2oz tubes 10 tubercase	Shell	Retinax LX II	2500	\$ /tubs	\$ 1.92 /tubs	\$ 19.20 /10pk
21	Wheel bearing and chassis grease summer weight NLGI #2	35 lb. containers	Shell	Retinax LXII	245 lb	\$ /lb	\$ 1.97 /lb	\$ 68.95 /pl

VENDOR: Harris Oil Company

ITEM	DESCRIPTION	CONTAINERS/ PACKAGING	MFR	BRAND BID	EST. QTY.	UNIT PRICE TRUCK LOAD	UNIT PRICE LESS THAN TRUCK LOAD	EXTENDED PRICE LESS THAN TRUCK LOAD
22	Wheel bearing and chassis grease summer weight NLGI #2	120 lb. containers	Shell	Retinax LXII	1200 lb	\$	\$ 2.00 / lb.	\$ 240.00 /kg
23	All purpose grease (3% moly) water and heat resistant grease NGLI #2	14 to 14-1/2oz tubes 10 tube/case	Shell	Retinax CMX II	120	\$	\$ 2.53 / tube	\$ 25.30 /10 pk
24	All purpose grease (3% moly) water and heat resistant grease NGLI #2	35 lb. containers	Shell	Retinax CMXII	200 lb	\$	\$ 2.64 / lb.	\$ 92.40 /pl
25	All purpose grease (3% moly) water and heat resistant grease NGLI #2	120 lb. containers	Shell	Retinax CMX II	240 lb	\$	\$ 2.58 / lb.	\$ 309.60 /kg
26	Hydraulic oil-light weight RO22 Turbine/Circulating Oil	5 gal. container	Shell	Tellus T 22	45 gal	\$	\$ 9.94 / gal.	\$ 49.70 /pl
27	Hydraulic oil-light weight	5 gal. container	Shell	Tellus 32	45 gal	\$	\$ 8.11 / gal.	\$ 40.55 /pl
28	Hydraulic oil-light weight	55 gal. drum	Shell	Tellus 32	24200 gal	\$	\$ 7.51 / gal.	\$ 413.05 /dr
29	Hydraulic oil-medium weight	5 gal. container	Shell	Tellus 46	35 gal	\$	\$ 8.11 / gal.	\$ 40.55 /pl
30	Hydraulic oil-medium weight	55 gal. drum	Shell	Tellus 46	11000 gal	\$	\$ 7.51 / gal.	\$ 413.05 /dr
31	Hydraulic oil-heavy weight	5 gal. container	Shell	Tellus 68	200 gal	\$	\$ 8.11 / gal.	\$ 40.55 /pl
32	Hydraulic oil-heavy weight	55 gal. drum	Shell	Tellus 68	850 gal	\$	\$ 7.51 / gal.	\$ 413.05 /pl
33	Transmission fluid - Multi Vehicle ATF	12/1 qt. plastic containers	Shell	Formula Shell ATF	22000	\$	\$ 8.64 / qt.	\$ 25.92 /cs
34	Transmission fluid - Multi Vehicle ATF	55 gal. drum	Shell	Formula Shell ATF	495 gal	\$	\$ 7.49 / gal.	\$ 411.95 /dr
35	Transmission fluid - TO - 4 fluid	5 gal. container	Shell	Donax TC10	350 gal	\$	\$ 10.07 / gal.	\$ 50.35 /pl
36	Transmission fluid - TO - 4 fluid	55 gal. drum	Shell	Donax TC10	605 gal	\$	\$ 9.57 / gal.	\$ 526.35 /dr
37	Automatic Transmission Fluid Multi-Vehicle ATF API DEXRON III, MERCON, MERCON V, ATF+3 ATF+4	12/1 qt. plastic containers	Shell	Multi-Vehicle ATF	1000	\$	\$ 2.90 / qt.	\$ 34.80 /cs
38	Combination fluid, combination hydraulic	5 gal. container	Shell	Donax TD 10W30	250 gal	\$	\$ 9.97 / gal.	\$ 49.85 /pl
39	Combination fluid, combination hydraulic	55 gal. drum	Shell	Donax TD 10W30	20900 gal	\$	\$ 8.22 / gal.	\$ 452.10 /dr
40	Railroad diesel engine oil must be a generation 4 oil as designated by (LOMA) EMD approved	55 gal. drum (LOMA) generation 4 SAE40	Shell	Caprinus XR-40	880 gal	\$	\$ 9.51 / gal.	\$ 523.05 /dr
41	Synthetic motor oil for gasoline and diesel engines SAE 5W40 CH-4/SJ Synthesized multipurpose gear lubricant /syntho DANA SHADES 256, REV. C, EATON E500, MACK GO J PLUS	12/1 qt. plastic containers	Shell	Rotella T-6 5W40	100	\$	\$ 5.20 / qt.	\$ 31.10 /cs
42		35 lb. container	Shell	Spirax ASXR 75W90	700 lb	\$	\$ 3.55 / lb.	\$ 124.25 /kg

VENDOR:

ITEM	DESCRIPTION	CONTAINERS/ PACKAGING	MFGR	BRAND BID	EST. QTY.	UNIT PRICE TRUCK LOAD	UNIT PRICE LESS THAN TRUCK LOAD	EXTENDED PRICE LESS THAN TRUCK LOAD
43	Synthesized multipurpose gear lubricant 80W140 DANA SHADES 256, ARVIN MERITOR O-76, MACK GO-J	35 lb. container	Shell	Spirax ASX 80W140	140 lb	\$ 3.42 / lb.	\$ 119.70 /pl	
44	Synthesized multipurpose gear lubricant 75W90 DANA SHADES 256, REV C, EATON E500, MACK GO-J PLUS	120 lb. container	Shell	Spirax ASXR 75W90	120 lb	\$ 3.55 / lb.	\$ 426.00 /kg	
45	Limited slip gear lubricant 80W90 GL-5	35 lb. container	Pennzoil	Gearplus 80W90	770 lb.	\$ 1.84 / lb.	\$ 64.40 /pl	
46	Limited slip gear lubricant 80W90 GL-5	120 lb. container	Pennzoil	Gearplus 80W90	1080lb	\$ 1.79 / lb.	\$ 214.80 /kg	
47	Motor oil for all diesel and gasoline engine service 5W20 CF/SL SM, ILSAC GF-4	55 gal. drum	Shell	Formula Shell 5W20	1300lb	\$ 9.32 / gal.	\$ 512.60 /dr	
48	Transmission fluid - Dexron -VI-ATF	6/1 qt. Plastic Containers	Pennzoil	Dexron VI	120	\$ 4.00 /gal.	\$ 24.00 /cs	
49	TES - 295 Alison TES Fluid	5-Gallon 6/4-qt. Plastic Containers	Shell	Donax TX	30	\$ 23.14 / gal.	\$ 115.70 /pl	

NOTE: DELIVERY: PRODUCTS WILL BE RECEIVED WITHIN 5 DAYS AFTER RECEIPT OF ORDER. (ARO)

DEPOSIT AND CREDIT FOR RETURNABLE 55 GAL DRUMS: -0- EACH.

LOCATION OF WAREHOUSES FROM WHICH SHIPMENT CAN BE MADE:

330 Oak Drive

Spencer, WV 25276

CONTRACT COORDINATOR: Wayne Harris
 PHONE: 304-927-2470
 TOLL FREE #:
 FAX: 304-927-4972
 EMAIL: wharris@harrisoil.com

NAME (Type) Wayne Harris
 SIGNATURE:
 TITLE: President
 DATE: 09/20/10



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
OIL10

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ADDRESS CORRESPONDENCE TO ATTENTION OF
JO ANN ADKINS 304-558-8802

VENDOR

*426142524 304-927-2470
 HARRIS OIL COMPANY INC
 PO BOX 685
 330 OAK DRIVE
 SPENCER WV 25276

SHIP TO

ALL STATE AGENCIES
 AND POLITICAL SUBDIVISIONS
 VARIOUS LOCALES AS INDICATED
 BY ORDER

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
08/25/2010				

BID OPENING DATE: 09/21/2010 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>***** ADDENDUM NO. 1 *****</p> <p>MANDATORY PRE-BID</p> <p>A MANDATORY PRE-BID WILL BE HELD ON THURSDAY, SEPTEMBER 9, 2010 @ 10:00AM AT 2019 WASHINGTON ST.E., CHARLESTON, WV 25305 IN THE PURCHASING DIVISION CONFERENCE ROOM. ALL INTERESTED PARTIES ARE REQUIRED TO ATTEND THIS MEETING. FAILURE TO ATTEND THE MANDATORY PRE-BID SHALL RESULT IN DISQUALIFICATION OF THE BID. NO ONE PERSON MAY REPRESENT MORE THAN ONE BIDDER.</p> <p>AN ATTENDANCE SHEET WILL BE MADE AVAILABLE FOR ALL POTENTIAL BIDDERS TO COMPLETE. THIS WILL SERVE AS THE OFFICIAL DOCUMENT VERIFYING ATTENDANCE AT THE MANDATORY PRE-BID. FAILURE TO PROVIDE YOUR COMPANY AND REPRESENTATIVE NAME ON THE ATTENDANCE SHEET WILL RESULT IN DISQUALIFICATION OF THE BID. THE STATE WILL NOT ACCEPT ANY OTHER DOCUMENTATION TO VERIFY ATTENDANCE. THE BIDDER IS RESPONSIBLE FOR ENSURING THEY HAVE COMPLETED THE INFORMATION REQUIRED ON THE ATTENDANCE SHEET. THE PURCHASING DIVISION AND THE STATE AGENCY WILL NOT ASSUME ANY RESPONSIBILITY FOR A BIDDER'S FAILURE TO COMPLETE THE PRE-BID ATTENDANCE SHEET. IN ADDITION, WE REQUEST THAT ALL POTENTIAL BIDDERS INCLUDE THEIR E-MAIL ADDRESS AND FAX NUMBER.</p> <p>ALL POTENTIAL BIDDERS ARE REQUESTED TO ARRIVE PRIOR TO THE STARTING TIME FOR THE PRE-BID. BIDDERS WHO ARRIVE LATE, BUT PRIOR TO THE DISMISSAL OF THE TECHNICAL PORTION OF THE PRE-BID WILL BE PERMITTED TO SIGN IN. BIDDERS WHO ARRIVE AFTER CONCLUSION OF THE TECHNICAL</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE <i>Wayne Harris</i>	TELEPHONE 304-927-2470	DATE 9/20/10	
TITLE President	FEIN 55048025L	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



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 Department of Administration
 Purchasing Division
 2019 Washington Street East
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 Charleston, WV 25305-0130

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ADDRESS CORRESPONDENCE TO ATTENTION OF
JO ANN ADKINS 304-558-8802

RODNEY HARRIS

*426142524 304-927-2470
 HARRIS OIL COMPANY INC
 PO BOX 685
 330 OAK DRIVE
 SPENCER WV 25276

SHIP TO

ALL STATE AGENCIES
 AND POLITICAL SUBDIVISIONS
 VARIOUS LOCALES AS INDICATED
 BY ORDER

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
08/25/2010				

BID OPENING DATE: 09/21/2010 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
PORTION OF THE PRE-BID, BUT DURING ANY SUBSEQUENT PART OF THE PRE-BID WILL NOT BE PERMITTED TO SIGN THE ATTENDANCE SHEET.						
***** END OF ADDENDUM NO. 1 *****						
0001	1	LS		405-39		
LUBRICANTS, OIL AND GREASES						
***** THIS IS THE END OF RFQ OIL10 ***** TOTAL: _____						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE <i>Wayne Harris</i>	TELEPHONE 304-927-2470	DATE 9/20/10	
TITLE <i>President</i>	FEIN 550480256	ADDRESS CHANGES TO BE NOTED ABOVE	

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 Charleston, WV 25305-0130

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ADDRESS CORRESPONDENCE TO ATTENTION OF:
**JO ANN ADKINS
 304-558-8802**

BIDDING

*426142524 304-927-2470
**HARRIS OIL COMPANY INC
 PO BOX 685
 330 OAK DRIVE
 SPENCER WV 25276**

SHIP TO

**ALL STATE AGENCIES
 AND POLITICAL SUBDIVISIONS
 VARIOUS LOCALES AS INDICATED
 BY ORDER**

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
09/12/2010				

BID OPENING DATE: **09/21/2010** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>***** ADDENDUM NO. 2 *****</p> <p>1. MANDATORY PRE-BID SIGN-IN SHEETS ATTACHED.</p> <p>2. ALL ORDERS THAT TOTAL \$250.00 OR MORE MUST BE SHIPPED F.O.B. DESTINATION. ORDERS LESS THAN \$250.00 MAY BE OBTAINED BY THE AGENCY USING ALTERNATIVE PROCUREMENT METHODS. IF THE AGENCY CHOOSE TO ORDER LESS THAN \$250.00 ANY TRANSPORTATION COSTS WILL BE INVOICED AS A SEPARATE CHARGE WITH THE ORIGINAL FREIGHT BILL ATTACHED TO THE INVOICE.</p> <p>AGENCIES MAY MAKE SMALL PURCHASES (UNDER \$250.00) FROM A LOCAL SOURCE IF PRICING INCLUDES DELIVERY AND A SAVINGS RESULTS.</p> <p>NOTE: AGENCIES ARE NOT PERMITTED TO STRING ORDERS TO CIRCUMVENT PURCHASING POLICY.</p> <p>EXHIBIT 6</p> <p>PRICE ADJSUTMENT PROVISION: THE STATE OF WEST VIRGINIA WILL CONSIDER BIDS THAT CONTAIN PROVISIONS FOR PRICE ADJUSTMENTS PRIOR TO THE ORIGINAL EXPIRATION OF THE CONTRACT, PROVIDED THAT SUCH PRICE ADJUSTMENT COVERS BOTH UPWARD AND DOWNWARD MOVEMENT OF THE COMMODITY PRICE, AND THAT ADJUSTMENT IS BASED ON THE "PASS THROUGH: INCREASE OR DECREASE OF RAW MATERIALS AND/OR LABOR, WHICH MAKE UP ALL OR A SUBSTANTIAL PART OF THE PRODUCT. ADJUSTMENTS ARE TO BE BASED UPON AN ACTUAL DOLLAR FIGURE, NOT A PERCENTAGE. ALL PRICE ADJUSTMENT REQUEST MUST BE SUBSTANTIATED IN MANNER ACCEPTABLE TI THE DIRECTOR PURCHASING, E.G.</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>James Harris</i>	TELEPHONE 304-927-2470	DATE 9/20/10
TITLE <i>President</i>	FEIN 350480256	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



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ADDRESS CORRESPONDENCE TO ATTENTION OF:
JO ANN ADKINS 304-558-8802

AUZDQOE

*426142524 304-927-2470
 HARRIS OIL COMPANY INC
 PO BOX 685
 330 OAK DRIVE
 SPENCER WV 25276

SHIPTO

ALL STATE AGENCIES
 AND POLITICAL SUBDIVISIONS
 VARIOUS LOCALES AS INDICATED
 BY ORDER

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
09/12/2010				

BID OPENING DATE: **09/21/2010** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>GOVERNMENTAL BENCH MARKS, GENERAL MARKET INCREASE, PUBLISHED PRICE LISTS. SUCH REQUESTS FOR AN INCREASE SHOULD BE RECEIVED IN WRITING BY THE DIRECTOR OF PURCHASING AT LEAST 30 DAYS IN ADVANCE OF THE EFFECTIVE DATE OF THE INCREASE. ANY TIME THE VENDOR REQUESTS A PRICE ADJUSTMENT, THE PURCHASING DIVISION MAY EITHER ACCEPT THE PRICE ADJUSTMENT AND AMEND THE CONTRACT ACCORDINGLY OR REJECT THE ADJUSTMENT IN ITS ENTIRETY AND CANCEL THE CONTRACT.</p> <p>PREFERRED TERMS: IT IS PREFERRED THAT THE PRICES ON THIS CONTRACT ARE FIRM FOR LIFE OF THE CONTRACT, AS INDICATED IN THE LIFE OF CONTRACT CLAUSE CONTAINED HEREIN, NOT TO EXCEED ONE (1) YEAR.</p> <p>IF THE VENDOR CANNOT GUARANTEE A FIRM PRICE FOR THE LIFE OF THE CONTRACT, HE MUST INDICATE ONE OF THE PARAGRAPHS LISTED BELOW. FAILURE TO QUALIFY THE PREFERRED TERMS WILL BIND THE VENDOR TO A FIRM PRICE FOR THE LIFE OF THE CONTRACT.</p> <p>ALTERNATE TERMS: (X) THE PRICES ON THIS CONTRACT WILL REMAIN FIRM FOR 90 DAYS AFTER THE EFFECTIVE DATE OF THE CONTRACT. PRICES WILL REMAIN FIRM AFTER EACH PRICE ADJUSTMENT FOR A MINIMUM OF 90 DAYS.</p> <p>3. ITEMS 33 AND 34 CONVENTIONAL ATF MERCONIII/DEXRON</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE <i>Wage Harris</i>	TELEPHONE 304-927-2470	DATE 9/20/10	
TITLE President	FEIN 55 0480256	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
OIL10

PAGE
3

ADDRESS CORRESPONDENCE TO ATTENTION OF
**JO ANN ADKINS
 304-558-8802**

BIDDER

*426142524 304-927-2470
**HARRIS OIL COMPANY INC
 PO BOX 685
 330 OAK DRIVE
 SPENCER WV 25276**

SHIP TO

**ALL STATE AGENCIES
 AND POLITICAL SUBDIVISIONS
 VARIOUS LOCALES AS INDICATED
 BY ORDER**

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
09/12/2010				

BID OPENING DATE: **09/21/2010** **BID OPENING TIME 01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		405-39		
	LUBRICANTS, OIL AND GREASES					
***** THIS IS THE END OF RFQ OIL10 ***** TOTAL:						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Darje Harris</i>	TELEPHONE 304-927-2470	DATE 9/20/10
TITLE President	FEIN 55-0480256	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

SIGN IN SHEET

Request for Proposal No. OIL10

PLEASE PRINT

Date: September 9, 2010

* PLEASE BE SURE TO PRINT LEGIBLY - IF POSSIBLE, LEAVE A BUSINESS CARD

FIRM & REPRESENTATIVE NAME	MAILING ADDRESS	TELEPHONE & FAX NUMBERS
Company: <u>D-A LUBRICANT Co.</u>	<u>260 PEACH ST. HAZARD KY</u>	PHONE <u>317-946-0573</u>
Rep: <u>BRIAN BLAIR</u>	<u>41701</u>	TOLL FREE <u>800-645-5823</u>
Email Address: <u>bblair@dalube.com</u>	<u>FAX 606-439-3613</u>	FAX <u>317-923-3884</u>
Company: <u>MATTHEWS LUBRICANTS</u>	<u>RT 50 West</u>	PHONE <u>304-623-3361</u>
Rep: <u>DAN ROBey</u>	<u>CLARKSBURG WV 26302</u>	TOLL FREE <u>1800 474-3361</u>
Email Address: <u>drobey@matthewslubricants.com</u>		FAX <u>304-623-3364</u>
Company: _____		PHONE _____
Rep: _____		TOLL FREE _____
Email Address: _____		FAX _____
Company: _____		PHONE _____
Rep: _____		TOLL FREE _____
Email Address: _____		FAX _____
Company: _____		PHONE _____
Rep: _____		TOLL FREE _____
Email Address: _____		FAX _____

SIGN IN SHEET

Request for Proposal No. OIL10

PLEASE PRINT

Date: September 9, 2010

* PLEASE BE SURE TO PRINT LEGIBLY - IF POSSIBLE, LEAVE A BUSINESS CARD

FIRM & REPRESENTATIVE NAME	MAILING ADDRESS	TELEPHONE & FAX NUMBERS
Company: <u>PETROLEUM PRODUCTS, INC.</u>	<u>PO Box 459 Nitro, WV 25143</u>	PHONE <u>(304) 204-1914</u>
Rep: <u>DAVID MARTIN</u>		TOLL FREE <u>(800) 774-4445</u>
Email Address: <u>dmartin@maxumpetro.com</u>		FAX <u>(304) 755-3792</u>
Company: <u>Apollo Oil, LLC</u>	<u>1175 Early Drive</u>	PHONE <u>304 722 6900</u>
Rep: <u>Dale Hardwick</u>	<u>Winchester, Ky 40391</u>	TOLL FREE <u>888 722 6900</u>
Email Address: <u>dhardwick@spelloil.com</u>		FAX <u>304 722 6972</u>
Company: <u>HARRIS OIL CO. INC.</u>		PHONE <u>304-927-2470</u>
Rep: <u>Wayne Harris</u>	<u>P.O. Box 685</u>	TOLL FREE
Email Address: <u>WHARRIS@WARRISOIL.COM</u>	<u>SPENCER, W.V. 25276</u>	FAX <u>304-927-4972</u>
Company:		PHONE
Rep:		TOLL FREE
Email Address:		FAX
Company:		PHONE
Rep:		TOLL FREE
Email Address:		FAX



2-CYCLE AIR-COOLED ENGINE OIL

For All Air-Cooled 2-Cycle Engines

PRODUCT DESCRIPTION

PENNZOIL® 2-CYCLE AIR-COOLED ENGINE OIL is formulated with high quality Pennzoil "tough film" base stocks and an additive package designed specifically for air-cooled engines. Air-cooled engines run hotter than water cooled outboard engines and require a lubricant formulated for their unique lubrication requirements. Applications such as small maintenance equipment can run extremely hot. Dust and dirt on the cooling fins increase the severity. PENNZOIL® 2-CYCLE AIR-COOLED ENGINE OIL contains a unique combination of detergents and ash-free dispersants to protect against high-temperature deposits and ring sticking, plug fouling and port plugging. Anti-wear protection for the high rpm needle roller bearing commonly found in small air-cooled engines is also critical.

PENNZOIL® 2-CYCLE AIR-COOLED ENGINE OIL is designed to protect these components and protect against piston scuffing during start up and extended use conditions. It also contains additives to protect against rust and corrosion.

The unique combination of base oils and additives provides superior protection (even at high temperatures and high loads) against piston scuffing, while minimizing exhaust smoke and spark plug fouling. It is prediluted to allow easy mixing with gasoline and smooth flowing in oil injection systems. It is dyed blue for easy identification in the fuel.

APPLICATION

PENNZOIL® 2-CYCLE AIR-COOLED ENGINE OIL is recommended for air-cooled, two-cycle engines in all applications which do not specify NMMA TC-W®, TC-WII® or TC-W3®. It may be used in premix with gasoline or oil injection systems. It is specifically formulated for higher temperature applications such as chain saws, weed cutters, air blowers, lawnmowers, snow blowers and small generators. It is also recommended for two-cycle engines in motorcycles, snowmobiles and ATV's which do not specify NMMA TC-W®, TC-WII®, or TC-W3® products. It may be used in any application which requires API Service TC lubricants and is suitable for use in Rotax engines. For applications calling for NMMA TC-W®, TC-WII® or TC-W3® oils, use Pennzoil® Premium Outboard and Multi-Purpose Two-Cycle Oil.

Under heavy-duty operating conditions in air-cooled engines, some TC-W®, TC-WII® or TC-W3® oils can promote the formation of deposits which result in ring sticking. PENNZOIL® 2-CYCLE AIR-COOLED ENGINE OIL contains special detergents that offer excellent protection against ring sticking in these applications.

PENNZOIL® 2-CYCLE AIR-COOLED ENGINE OIL is a highly fortified, high quality lubricant and should be used at the fuel to oil levels of original equipment oils. The use of lower fuel to oil ratios reduces economy and promotes deposits. Always check the manufacturer's recommendations for fuel to oil ratios and use at the highest ratio allowed.

Because of its special formulation, PENNZOIL® 2-CYCLE AIR-COOLED ENGINE OIL is generally not compatible with NMMA TC-W®, TC-WII® or TC-W3® lubricants. Caution should be exercised to assure that these products are not commingled. Special precautions should be taken when changing from a TC-W®, TC-WII® or TC-W3® lubricant, like Pennzoil® Premium Outboard and Multi-Purpose Two-Cycle Oil, to PENNZOIL® 2-CYCLE AIR-COOLED ENGINE OIL to avoid mixing these products in the equipment.

BENEFITS

- High temperature protection
- Protects against deposits and ring sticking
- Ideal for air cooled two-cycle engines
- For premix or injector systems
- Protects bearings and pistons from wear and scuffing
- Minimizes spark plug fouling
- Minimizes exhaust smoke
- Prediluted for easier gasoline mixing
- Dyed blue for ease of identification
- Prevents port plugging

**TYPICAL PHYSICAL AND CHEMICAL PROPERTIES
 PENNZOIL® 2-CYCLE AIR-COOLED ENGINE OIL**

TEST	METHOD	TYPICAL RESULTS
Gravity, °API	ASTM D-287	29.3
Density, g/cc	ASTM D-1298	0.88
Pounds per Gallon	ASTM D-1298	73.4
Viscosity		
@ 40°C, cSt	ASTM D-445	78.6
@ 100°C, cSt	ASTM D-445	10.3
Viscosity Index	ASTM D-2270	112
Pour Point, °C(°F)	ASTM D-97	-33(-27)
Flash Point, °C(°F)	ASTM D-92	104(219)
Color		Blue
Material Number		
Bulk		4132

**FUEL MIX TABLE OUNCES
 2-CYCLE AIR-COOLED ENGINE OIL
 TO GALLONS OF FUEL**

RATIO FUEL:OIL	1 GAL	2 GAL	3 GAL	4 GAL	5 GAL	6 GAL
16:1	8	16	24	32	40	48
20:1	6	13	19	26	32	38
24:1	5	11	16	21	27	32
32:1	4	8	12	16	20	24
50:1	3	5	8	11	13	16

BE SURE TO MIX GASOLINE AND OIL THOROUGHLY



Shell Rotella® T1

- **RELIABLE LUBRICATION**

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.



Performance 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

- **Hydraulic and Transmissions**
Shell Rotella® T1 oils can be used in certain transmission and mobile hydraulic systems where the equipment manufacturer recommends use of monograde engine oils.

Applications



- **Heavy Duty Diesel Engines**

Shell Rotella® T1 is suitable for mixed fleets combining large over the road diesel trucks with smaller diesel and gasoline-fuelled light trucks and passenger cars

Shell Rotella® T1 is suitable for heavy equipment used for construction, mining or quarry operations

Shell Rotella® T1 is suitable for use in Detroit Diesel two-cycle engines (Series 53471 and 92)

Specifications and Approvals

Approvals and Specifications	SAE Viscosity Grade			
	10W	30	40	50
API CF-24CF		✓	✓	✓
API CF	✓			
Detroit Diesel Series 53471 & 92		✓	✓	
Allison C-44C-3	✓			
CAT TO-2	✓			
Vickers 35VQ25	✓			



Health and Safety

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

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

For further guidance on Product Health & Safety refer to the appropriate Shell Product Safety Data Sheet. Take used oil to an authorized collection point. Do not discharge into drains, soil or water

Protect the environment

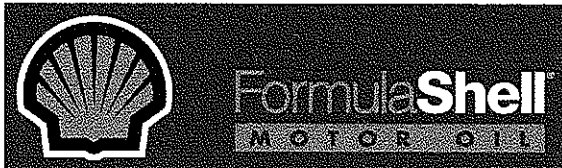
Advice

Advice on applications not covered in this leaflet may be obtained from your Shell Representative.

Typical Physical Characteristics

SAE Viscosity Grade	10W	30	40	50
Kinematic Viscosity (ASTM D445)				
@ 40°C cSt	38	107	150	221
100°C cSt	6.5	11.9	15.0	19.7
Viscosity Index (ASTM D2270)	120	101	99	99
Density @ 15°C kg/l (ASTM D4052)	0.876	0.887	0.890	0.892
Total Base Number mgKOH/g (ASTM D2896)	6	7.5	7.5	7.5
Flash Point °C (Cleveland Open Cup) (ASTM D92)	205	210	225	230
Pour Point °C (ASTM D97)	-33	-24	-21	-15

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



ENGINE OILS

PRODUCT DESCRIPTION

FormulaShell® SAE 5W-20, SAE 5W-30 and SAE 10W-30 Engine Oils are formulated to help improve fuel economy and provide complete engine protection. FormulaShell® SAE 5W-20, SAE 5W-30 and SAE 10W-30 Engine Oils are premium multi-grade motor oils formulated to provide excellent all weather engine protection.

FormulaShell® SAE 5W-20, SAE 5W-30 and SAE 10W-30 Engine Oils meet or exceed all automobile and light duty truck warranty requirements for gasoline and turbocharged engines where an ILSAC GF-4, API SM, SAE 5W-20, SAE 5W-30, or SAE 10W-30 engine oil is recommended. FormulaShell® Engine Oils contain select viscosity index improvers to provide easier cold weather starting and better high temperature protection demanded by modern high out-put engines. The SAE 5W-20, SAE 5W-30 and SAE 10W-30 grades are Energy Conserving and meet ILSAC GF-4 specifications and API SM and prior API categories. Follow manufacturer's recommendations for viscosity grade and API Service Category. These oils are suitable for use and meet the performance requirements of many automobile manufacturers for service fill oil: 5W-20 (GM 6094M, Chrysler MS 6395P, Ford WSS-M2C930-A), 5W-30 (GM 6094M, Chrysler MS 6395P, Ford WSS-M2C929-A), and 10W-30 (GM 6094M, Chrysler MS 6395P).

FormulaShell® SAE 10W-40 and SAE 20W-50 Engine Oils are premium high performance multigrade motor oils formulated to provide wide temperature range engine protection. FormulaShell® SAE 10W-40 and SAE 20W-50 Engine Oils meet or exceed all automobile and light duty truck warranty requirements for gasoline engines where a SAE 10W-40 or SAE 20W-50 engine oil is recommended. These grade oils meet API Classification SM and can be used in place of SL, SJ, and prior API category oils. Follow manufacturer's recommendations for viscosity grade and API Service Category.

FormulaShell® SAE 10W-40 and SAE 20W-50 Engine Oils are formulated with, thermally stable base stocks and select additive systems to provide protection for the demands made on modern crankcase lubricants. These oils provide a high level of protection against wear, rust and corrosion, piston scuffing and, high temperature oxidation and valve train wear.

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES FormulaShell® ENGINE OILS

TEST	TYPICAL RESULTS				
	5W-20	5W-30	10W-30	10W-40	20W-50
SAE Viscosity Grade	5W-20	5W-30	10W-30	10W-40	20W-50
API Gravity	32.84	32.60	31.37	31.30	29.40
Viscosity, cSt, 40°C	46.28	66.16	69.04	96.95	158.32
Viscosity, cSt, 100°C	8.16	10.75	10.5	14.0	17.63
Viscosity Index	151	153	138	147	122
Flash Point, °C (°F)	215 (420)	215 (420)	221 (430)	221 (430)	238 (460)
Pour Point, °C (°F)	-33 (-33)	-30 (-33)	-30 (-17)	-27 (-17)	-24 (-11)
Viscosity, cP, Max., 6600 @ cP, Max 7000 @ cP, Max., 9500 @	-30°C (-22°F)	-30°C (-22°F)	-25°C (-13°F)	-25°C (-13°F)	-15°C (5°F)
Low Temp. Pumping Viscosity, cP Max	-35°C (-31°F) 40,000	-35°C (-31°F) 40,000	-30°C (-22°F) 50,000	-30°C (-22°F) 60,000	-20°C (-4°F) 60,000



ENGINE OILS

PRODUCT DESCRIPTION

FormulaShell® SAE 5W-20, SAE 5W-30 and SAE 10W-30 Engine Oils are formulated to help improve fuel economy and provide complete engine protection. FormulaShell® SAE 5W-20, SAE 5W-30 and SAE 10W-30 Engine Oils are premium multi-grade motor oils formulated to provide excellent all weather engine protection.

FormulaShell® SAE 5W-20, SAE 5W-30 and SAE 10W-30 Engine Oils meet or exceed all automobile and light duty truck warranty requirements for gasoline and turbocharged engines where an ILSAC GF-4, API SM, SAE 5W-20, SAE 5W-30, or SAE 10W-30 engine oil is recommended. FormulaShell® Engine Oils contain select viscosity index improvers to provide easier cold weather starting and better high temperature protection demanded by modern high out-put engines. The SAE 5W-20, SAE 5W-30 and SAE 10W-30 grades are Energy Conserving and meet ILSAC GF-4 specifications and API SM and prior API categories. Follow manufacturer's recommendations for viscosity grade and API Service Category. These oils are suitable for use and meet the performance requirements of many automobile manufacturers for service fill oil: 5W-20 (GM 6094M, Chrysler MS 6395P, Ford WSS-M2C930-A), 5W-30 (GM 6094M, Chrysler MS 6395P, Ford WSS-M2C929-A), and 10W-30 (GM 6094M, Chrysler MS 6395P).

FormulaShell® SAE 10W-40 and SAE 20W-50 Engine Oils are premium high performance multigrade motor oils formulated to provide wide temperature range engine protection. FormulaShell® SAE 10W-40 and SAE 20W-50 Engine Oils meet or exceed all automobile and light duty truck warranty requirements for gasoline engines where a SAE 10W-40 or SAE 20W-50 engine oil is recommended. These grade oils meet API Classification SM and can be used in place of SL, SJ, and prior API category oils. Follow manufacturer's recommendations for viscosity grade and API Service Category.

FormulaShell® SAE 10W-40 and SAE 20W-50 Engine Oils are formulated with, thermally stable base stocks and select additive systems to provide protection for the demands made on modern crankcase lubricants. These oils provide a high level of protection against wear, rust and corrosion, piston scuffing and, high temperature oxidation and valve train wear.

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

FormulaShell® ENGINE OILS

TEST	TYPICAL RESULTS				
	5W-20	5W-30	10W-30	10W-40	20W-50
SAE Viscosity Grade					
API Gravity	32.84	32.60	31.37	31.30	29.40
Viscosity, cSt, 40°C	46.28	66.16	69.04	96.95	158.32
Viscosity, cSt, 100°C	8.16	10.75	10.5	14.0	17.63
Viscosity Index	151	153	138	147	122
Flash Point, °C (°F)	215 (420)	215 (420)	221 (430)	221 (430)	238 (460)
Pour Point, °C (°F)	-33 (-33)	-30 (-33)	-30 (-17)	-27 (-17)	-24 (-11)
Viscosity, cP, Max., 6600 @	-30°C (-22°F)	-30°C (-22°F)			
cP, Max 7000 @			-25°C (-13°F)	-25°C (-13°F)	
cP, Max., 9500 @					-15°C (5°F)
Low Temp. Pumping	-35°C (-31°F)	-35°C (-31°F)	-30°C (-22°F)	-30°C (-22°F)	-20°C (-4°F)
Viscosity, cP Max	40,000	40,000	50,000	60,000	60,000



Shell Rimula[®] Super

Advanced heavy duty fleet motor oil

Shell Rimula[®] Super oils are advanced high TBN/low-ash heavy duty motor oils for longer oil and engine life in virtually all diesel engines. Designed for fleet and off-highway use, Shell Rimula[®] Super oils offer the convenience of one oil for use in both the latest low-emission engines with exhaust emissions systems as well as offering excellent performance in pre-'07 engines.

Performance Benefits

- **Multipurpose Formulation**
Simplifying inventory needs for fleets
- **Extended drain capabilities**
Demonstrated by meeting the requirements of API CJ-4, CI-4 PLUS, and Cummins CES 20081, helping engine operators achieve maximum drain flexibility
- **Advanced SAE 15W-40 and 10W-30 viscosity grades**
Meet the engine oil requirements of low emission DPF/EGR engines as well as older engines reducing the need for additional oils in the fleet
- **Excellent shear stability and an enhanced soot control**
Additive system provide outstanding viscosity control throughout the drain interval for consistent lubrication and wear protection.
- **Limited warranty**
Product is covered by a limited warranty and meets virtually all US equipment manufacturer's engine oil warranty requirements minimizing operators risk

- **Suitable for North American trucks with the latest emission control systems**

Such as diesel particulate filters, and for older EGR and non-EGR models such as trucks manufactured by Freightliner, Kenworth, International, Mack, Peterbilt, Volvo and others.

- **Suited for use in heavy construction and mining equipment**

From leading makers such as Caterpillar and Komatsu.

- **Suitable for leading brands of agricultural equipment**

Including John Deere, Case-New Holland and Massey Ferguson

Specification and Approvals

Specifications and Approvals	SAE Viscosity Grade	
	10W-30	15W-40
API: CJ-4, CI-4 PLUS, CI-4, CH-4, CG-4, CF-4, CF	✓	✓
API: SM, SL	✓	✓
ACEA: E7		✓
Caterpillar: ECF-3, ECF-2	✓	✓
Cummins: CES 20081		✓
Detroit Diesel: 93K218		✓
Mack: EO-O Premium Plus		✓
MAN: M3275		✓
MB – Approval: 228.3, 228.31		✓
MTU : Category 2		✓
Volvo: VDS-4		✓

Applications



Advice

Advice on applications not covered on this datasheet may be obtained from your Shell Representative.

Guidance on Health and Safety are 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

Health & Safety

Typical Physical Characteristics

Rimula® Super		
SAE Viscosity Grade	10W-30	15W-40
Gravity, °API (D 1298)	29.0	29.2
Kinematic Viscosity (ASTM D 445) @ 40 °C mm ² /s 100 °C mm ² /s	80	118
	12	15.5
Viscosity Index (ASTM D 2270)	144	139
Flash Point (COC) °F (ASTM D92)	400min	400min
Pour Point °F (ASTM D 97)	-23	-25
Neutralization No TBN-E (STM D2896)	10.6	10.6
Sulphated Ash % (ASTM D874)	1.0 max	1.0 max

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



Shell Rotella® T6

Fully Synthetic Heavy Duty Diesel Engine Oil -Extreme Temperature Performance

- **LOW EMISSIONS**
- **ENERGY SAVING**

Shell Rotella® T6 Energized Protection™ oil features Shell exclusive "Low-SAPS" additive technology reinforced with a novel and unique anti-wear system. Protective power is further enhanced through the use of synthetic base oil technology that increases additive activity to deliver low-viscosity fuel saving performance with no compromise in durability. Key benefits include; compatibility with exhaust emissions control systems, protection in extreme operating temperatures and fuel economy performance*.



ENERGIZED PROTECTION

Adapting to your engine's changing needs

Performance Benefits

- **Improved Fuel Economy**
Through use of Shell's most advanced technology Shell Rotella® T6 oil offers enhanced fuel economy capability* that can save money in fuel consumption, without compromising engine protection or durability.
**eg compared to 15W-40 oils*
- **Improved Wear Performance**
Provides a significantly increased level of protection against harmful engine wear when compared to previous generation API CI-4+ engine oils.
- **Improved Deposit Control**
The advanced multi-functional dispersant additives in combination with synthetic base oils provide an enhanced level of protection against the effects of soot, dirt and other contaminants.
- **Improved Heat Resistance**
Shell Rotella® T6 Synthetic oil resists breakdown by heat to provide continuous protection throughout the service interval.
- **Emissions System Compatibility**
Advanced low-ash formulation helps control blocking of or poisoning of exhaust after-treatment devices, helping maintain vehicle emission compliance and engine fuel efficiency.

Protection in Extreme Climates

Shell Rotella® T6 Synthetic oil is based on free-flowing synthetic base oils that allow reliable pumping on start-up under cold climate conditions yet remain thick enough under high temperature operation to protect against wear.

Outstanding Shear Stability

Shell Rotella® T6 Synthetic oil resists viscosity loss through shear and will maintain optimal oil pressure in the engine

Applications



- **For new and older diesel powered vehicles**
Suitable for new and older diesel powered vehicles from Class 8 tractor/trailers to heavy-duty diesel pickups, delivery, utility, and school bus fleets.
- **Meets or exceeds diesel engine requirements**
Meets or exceeds requirements of API CJ-4, Cummins, Caterpillar, Detroit Diesel, Mack, Mercedes Benz, Volvo, Ford.
- **Gasoline engine applications**
Meets the requirements of API SM



Specification and Approvals

Specifications and Approvals	SAE Viscosity Grade
	5W-40
API: CJ-4, CI-4 PLUS, CI-4, CH-4, CG-4, CF-4, CF	✓
API: SM, SL, SJ, SH	✓
ACEA: E9	✓
Caterpillar: ECF-3, ECF-2	✓
Cummins: CES 20081	✓
DDC: 93K218	✓
Ford: WSS-M2C171-E	✓
JASO: DH2, MA	✓
Mack: EO-O Premium Plus	✓
MB Approval: 228.31	✓
Volvo: VDS-4	✓

Health and Safety

Shell Rotella® T6 oil is unlikely to present any significant health or safety hazard when properly used in the recommended application, and good standards of industrial and personal hygiene are maintained.

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

For further guidance on Product Health & Safety refer to the appropriate Shell Product Safety Data Sheet.

Protect the Environment

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

Advice

Advice on applications not covered in this leaflet may be obtained from your Shell Representative.

Typical Physical Characteristics

Shell Rotella® T6	
SAE Viscosity Grade	Rotella® T6 5W-40
Kinematic Viscosity (ASTM D 445) @ 40°C mm ² /s 100°C mm ² /s	87 14.2
Dyn. Viscosity (ASTM D 5293) @ -30 °C mPa s	6000
Total Base Number mg KOH/g (ASTM D 2896)	10.6
Sulfated Ash % (ASTM D 874)	1.0
Density @ 15°C kg/l (ASTM D 4052)	0.858
Flash Point (COC) °C (ASTM D 92)	224
Pour Point °C (ASTM D 97)	-42

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



FORMULA SHELL[®] ATF/ SHELL DONAX[®] T FLUIDS

Premium fluids for automatic transmissions

Product Description

FormulaShell[®] ATF MERCON[®]/DEXRON[®]-III - Donax[®] TG and FormulaShell[®] ATF Type F- Donax[®] TF are formulated to meet the viscometric, friction, wear and oxidation stability properties required in passenger car and light truck transmissions. They are available as DONAX[®] TG and TF in non-retail packages.

FormulaShell[®] ATF Mercon[®] /Dexron[®] -III- Donax[®] TG

Applications

- multipurpose product for use in GM and Ford automatic transmissions except for those that specify Type F or MERCON V.
- recommended for use in Allison automatic transmissions and Caterpillar transmissions that call for TO-2 performance.
- suitable for use in many automatic transmissions made by Voith, Daimler Benz and ZF.
- application as the operating fluid in hydraulic equipment (especially at low ambient temperatures), air compressors, and power steering systems

Approvals

- Ford MERCON
- GM DEXRON-III
- GM DEXRON, DEXRON-II, DEXRON-III, Type A and Type A Suffix A (GM Transmissions only)
- Allison C-4
- Caterpillar TO-2
- application as the operating fluid in hydraulic equipment (especially at low ambient temperatures), air compressors, and power steering systems

DONAX TF\FormulaShell ATF TYPE F

Applications

- **FormulaShell ATF TYPE F** is recommended for use in all 1976 and prior Ford automatic transmissions as well as many 1977 through 1980 Ford models that specify Type F.
- application as the operating fluid in hydraulic equipment (especially at low ambient temperatures), air compressors, and power steering systems

OEM and Industry Approvals

- Ford specification M2C33-F
- application as the operating fluid in hydraulic equipment (especially at low ambient temperatures), air compressors, and power steering systems

Typical Properties of Shell DONAX TF and TG Oils

	Test Method	FormulaShell ATF MERCON/DEXRON-III	FormulaShell ATF TYPE F
Product Code		53010	53026
Commerical Package		DONAX TG	DONAX T
Viscosity:			
@ -40°F, cP	D 2983	16300	35750
@ 0°F, cP	D 2983	1030	1460
@ 100°C, cSt	D 445	8.03	7.9
Gravity, °API @ 60°F	D 1298	31.2	30.4
Pour Point, °F	D 97	-45	-55
Flash Point, °F	D 92	405	415
Color	D 1500	Red	Red

HANDLING & SAFETY INFORMATION

For information on the safe handling and use of this product, refer to its Material Safety Data Sheet at <http://www.equivashellmsds.com>. For more information and availability, call 1+800-782-7852 or visit the World Wide Web: <http://www.shell-lubricants.com/>.

Shell Retinax Greases LX

**Ultra Heavy Duty High Temperature Grease -
Long Life Protection for Highly Loaded Wheel Bearing and
Other Applications**



THICKENER	NLGI	TEMP RANGE Retinax LX 2	BASE OIL VISCOSITY		EP	WATER RESISTANCE
LITHIUM COMPLEX	1, 2 & 3	-20°C to +140°C	40°C 160 cSt	100°C 15.5 cSt	ü	üüü

Shell Retinax Greases LX are very high performance, lead free, lithium complex, extreme pressure greases developed, primarily, for the lubrication of automotive wheel bearings subjected to high temperatures.

Applications

Automotive wheel bearings

Particularly effective in automotive wheel bearings subjected to high temperatures and load caused by braking from high speed.

Performance Features

Wide operating temperature range

Retinax LX 2 is designed for the lubrication of ball and rolling element bearings operating continuously at temperatures between -20°C and +140°C

Increased fretting protection

Overcomes problems suffered by bearings in conditions of excessive vibration

Excellent mechanical stability

Maintains consistency over long periods

Good pumpability

In grease lubrication systems

Low water wash-out.

Good water resistant properties

Good corrosion protection

In all operating conditions

Advice

Advice on applications not covered in this leaflet may be obtained from your Shell Representative

Typical Physical Characteristics

Shell Retinax Grease	LX 1	LX 2	LX 3
Color	Red	Red	Red
NLGI Consistency	1	2	3
Soap Type	Lithium Complex	Lithium Complex	Lithium Complex
Base Oil (type)	Mineral	Mineral	Mineral
Kinematic Viscosity @ 40°C cSt 100°C cSt (IP 71)	150 13.3	160 15.5	160 15.5
Dropping Point (IP 132) °C	240	245	245

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

Health & Safety

Shell Retinax Greases LX are unlikely to present any significant health or safety hazard when properly used in the recommended application, and good standards of industrial and personal hygiene are maintained. For further guidance on Product Health & Safety refer to the appropriate Shell Product Safety Data Sheet.



SHELL RETINAX[®] GREASES

CMX AND SDX

Multipurpose lithium complex grease with moly for construction, mining and agricultural equipment

Product Description

Shell Retinax[®] Greases CMX and SDX are Shell's multipurpose lithium complex high dropping point, extreme pressure (EP) greases containing molybdenum disulfide (moly). They are primarily intended for construction, mining and agricultural equipment applications. **Shell Retinax CMX Grease 1 and Grease 2, and SDX Grease 2** greases are recommended for use in applications requiring a Caterpillar Multipurpose Grease product.

Application

Construction, mining and agricultural applications for **Shell Retinax Grease CMX 1 and 2, and SDX Grease 2** include virtually all points of grease lubrication found on dozers, scrapers, earthmovers, cranes, backhoes, shovels, rollers, tractors, combines, and cotton pickers. These lubrication points include all types of anti-friction bearing arrangements from plain sleeve-type to rolling element bearings, as well as bushings and other sliding surface or pivot points. The presence of moly provides added shock loading protection. **Shell Retinax Greases CMX 1 and 2, and SDX 2** are formulated to perform well in conditions of high loads and temperature extremes. Additionally, **Shell Retinax Greases CMX 1 and 2, and SDX 2** provide excellent resistance to rust and corrosion and are highly resistant to water washout.

Features

Shell Retinax Greases CMX 1 and 2, and SDX 2 consist of a lithium complex soap thickened, multipurpose, extreme pressure (EP) grease compounded with a highly refined ISO 320 viscosity grade paraffinic base oil. **Shell Retinax Greases CMX 1 and 2** contain 3% moly by weight, and **Shell Retinax Grease SDX 2** contains 5% moly by weight. These greases are characterized by high dropping point (above 450°F) and are formulated with a special additive package to provide superior rust protection and resistance to water washout. A special tackifier helps keep **Shell Retinax Greases CMX 1 and 2, and SDX 2** in place on high speed machinery and in wet conditions. **Shell Retinax Greases CMX 1 and 2, and SDX 2** have been engineered with good pumpability characteristics making them ideal for centralized lubrication systems. **Shell Retinax Grease CMX 1** is recommended for those applications where very cold weather and/or long feed lines are involved.

The presence of moly provides an extra measure of protection in shock loading situations which are very common in both construction and agricultural usage. During heavy shock loading the lubricant film between metal surfaces can be temporarily ruptured or squeezed out. By using a moly grease, a film remains to prevent metal-to-metal contact which could cause equipment damage. The presence of moly is also valuable in dirty environments or when proper relubrication intervals are not followed. Some moly tends to stay in place and protect metal surfaces even when insufficient grease is used.

Benefits

- excellent heavy and shock load protection
- resistance to water washout
- wide range of applications
- high temperature capability
- good low temperature pumpability
- excellent rust and corrosion protection

Recommendations

- construction and mining equipment
- agricultural equipment
- for cold weather operations
- for especially severe applications requiring maximum heavy and shock load protection

Approvals

- meets requirements of Caterpillar's Multipurpose Molybdenum Grease specification.

Product Maintenance

Maintaining a clean work environment is critical when equipment greasing is performed. Grease fitting should be wiped clean prior to grease injection to prevent contaminants from entering the equipment. Bearing housings should be maintained one-third to one-half full of grease. Over-greasing should be avoided as excessive heat buildup can result. Periodic relubrication via grease gun or centralized system should be supplemented by complete cleaning and

Typical Properties of Shell Retinax Greases CMX and SDX

	Test Method	CMX 1	CMX 2	SDX 2
Product Code		71116	71118	71147
NLGI Grade		1	2	2
Appearance		-----Gray, Tacky----- -		
Thickener Type	Lithium Complex	Lithium Complex	Lithium Complex	Lithium Complex
Moly%		3%	3%	5%
Base Oil Viscosity @ 40°C, cSt @ 100°C, cSt	D 445 D 445	320 29.3	320 29.3	320 29.3
Penetration, dmm Worked, 60X Worked, 10,000X, % Change	D 217	325 10	280 10	280 10
Dropping Point, °F	Mettler	450+	450+	450+
Rust Protection	D 1743	Pass	Pass	Pass
Copper Corrosion	D 4048	1b	1b	1b
Water Washout wt% loss at 175°F	D 1264	4	2	2
Timken, OK Load, lbs	D 2509	50	50	60
Four-Ball EP Load Wear Index, kgf Weld Point, kgf	D 2596	68 400	68 400	68 400
Four-Ball Wear, mm 1 hr, 75°C, 1200 rpm, 40 kgf	D 2266	0.4	0.4	0.4
Grease Mobility, g/minute -20°F 0°F 20°F	U.S. Steel Method	- - -	0.2 4.0 30	0.2 4.0 30
Guide To Usable Temperature Min, °F Continuous Service, Max, °F Short Exposure, Max, °F		-30 325 450	-20 325 450	-20 325 450

Handling Practices

For information on the safe handling and use of these products, refer to their Material Safety Data Sheets at <http://www.equivashellmsds.com>. For more information and availability, call 1+800-782-7852 or visit the World Wide Web: <http://www.shell-lubricants.com/>.

Shell Spirax® GSX

High performance, synthetic transmission fluid



Shell Spirax® GSX SAE 50 is the latest addition to the Shell Spirax® family of axle and transmission fluids. It is a synthetic heavy-duty transmission fluid specially formulated for extended drain and severe service applications. This fluid is approved as a Roadranger® Genuine Lubricant for use in Eaton extended warranty transmission service.

Applications

- **Heavy-Duty transmissions**
Synchromesh gearboxes, including those with integrated retarders, and medium loaded axle drives where mineral or synthetic non EP gear oils are required.

Performance Features and Benefits

- **All-climate year round performance**
Formulated from synthetic base stocks and additives, which provide fluidity at sub-zero temperatures as well as lubricity and film strength at elevated temperatures.
- **Extended Drain Intervals**
Engineered to provide extended drain capabilities in transmissions such as Eaton, Volvo and ZF.
- **Longer transmission life**
Contains an effective anti-wear system along with corrosion and oxidation inhibitors that protect system components and helps achieve longer transmission life and potential reduced maintenance costs and less down time.
- **Potential for increased fuel economy over the oil drain interval**
The enhanced oxidative stability of the product helps maintain the original viscosity of the fluid, thereby increasing the potential for fuel economy savings over the drain interval.

- **Part of the Shell family of heavy-duty lubricants and coolants.**

Specification and Approvals

API Service Classification	MT-1
Eaton	PS-164 rev 7
Navistar	TMS 6816
Mack Truck	TO-A-Plus
Volvo I-Shift	120,000 km ODI
ZF FreedomLine	

Information

Information on applications not covered in this leaflet may be obtained from your Shell Representative.

Health and Safety

For information on the safe handling and use of this product, refer to its Material Safety Data Sheet at <http://www.shell-lubricants.com/msds/>. If you are a Shell Distributor, please call 1+800-468-6457 for all of your service needs. All other customers, please call 1+800-840-5737 for all of your service needs. Information is also available on the World Wide Web: <http://www.shell-lubricants.com/>.

Protect the environment

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

Roadranger® is a registered trademark of the Eaton Corporation.

Typical Physical Characteristics

Typical Properties of Shell Spirax® GSX		
	Shell Spirax® GSX SAE 50	Test Methods
Appearance, visual	Light Amber	
SAE Grade	50	SAE J-300
Viscosity, cSt		ASTM D-445
100°C	17.5	
40°C	132	
Viscosity, SUS		ASTM D-2161
210°F	89.9	
100°F	678	
Viscosity, cP		ASTM D-2983
-40°C	104,000	
Viscosity index	146	ASTM D-2270
Pour point, °C (°F)	< 45 (< 49)	ASTM D-97
Flash point, °C(°F)	221 (430)	ASTM D-92
Foam		ASTM D-892
sequence I	pass	
sequence II	pass	
sequence III	pass	
API gravity 15.6/15.6°C	33.0	ASTM D-287
Density, g/l, 15.6°C (lbs./gal., 60°F)	860 (7.16)	ASTM D-1298
Copper strip corrosion		ASTM D-130
3 hrs. at 100°C (212°F)	1a pass	
3 hrs. at 121°C (250°F)	1a pass	

SHELL SPIRAX[®] HD

Heavy-duty gear oil for automotive differentials and manual transmissions

Product Description

Shell Spirax[®] HD oils are high performance multigrade extreme-pressure, multipurpose gear lubricants. They are suitable for heavy-duty truck and automotive differentials, manual transmissions and oil lubricated wheel bearings, drive-train gears of heavy-duty automotive, trucking and off-road equipment operated under high-speed/shock load, high-speed/low torque and low-speed/high torque conditions. They meet the requirements of API GL-5 and MIL-PRF-2105E and are available in two SAE viscosity grades: 80W-90 and 85W-140.

Applications

- heavy-duty and conventional differentials in heavy and light duty trucks as well as passenger cars
- conventional manual transmissions calling for API GL-5
- heavy-duty manual transmissions requiring API MT-1 (SAE 80W-90)
- hypoid, spur, bevel, helical, spiral-bevel and worm gears in differentials, transmissions, final drives and steering mechanisms
- industrial gears sets where extreme pressure gear oils are required

Note: cars equipped with limited-slip differentials may require a different lubricant specified by the manufacturer, such as **Shell Spirax[®] LS**.

Features/Benefits

- protects hypoid gears against wear and scuffing
- multi-viscosity for year round use over wide temperature range
- contains a sulfur/phosphorus additive system for excellent load carrying capacity
- contains additives to inhibit oil oxidation and keep lubricated parts clean
- contains inhibitors to protect against corrosion, rust and foaming
- compatible with other automotive gear oils

Approvals and Recommendations

- API Service GL-5 and MT-1
- Mack GO-J, GO-H, GO-G
- MIL-PRF-2105E, SAE J2360
- Meritor Automotive, Inc (formerly Rockwell) O-76-A (SAE 85W-140) and O-76-D (SAE 80W-90)
- International Truck and Engine CEMS B-22

Typical Properties of Shell Spirax[®] HD

	Test Method	SAE Grade	
		80W-90	85W-140
Product Code		59210	59212
Gravity, °API	D 1298	26.6	24.6
Viscosity:			
@ - 26°C, cP	D 2983	112000 ¹	---
@ - 12°C, cP	D 2983	---	67000 ¹
@ 40°C, cSt	D 445	145	323
@ 100°C, cSt	D 445	14.7	24.6
Viscosity Index	D 270	100	98
Flash Point, COC, °C (°F)	D 92	224 (435)	222 (432)
Pour Point, °C (°F)	D 97	-30 (-22)	-15 (+5)

1 -- MIL-PRF-2105E and SAE J306 specify that viscosities measured at these temperatures do not exceed 150,000 cP.

Handling & Safety Information

For information on the safe handling and use of this product, refer to its Material Safety Data Sheet at <http://www.shell-lubricants.com/msds/>. If you are a Shell Distributor, please call **1+800-468-6457** for all of your service needs. All other customers, please call **1+800-840-5737** for all of your service needs. Information is also available on the World Wide Web: <http://www.shell-lubricants.com/>.

Shell Tellus Oils

High performance hydraulic oil



Shell Tellus Oils are premium quality, solvent refined, high viscosity index mineral oil based fluids generally acknowledged to be the 'standard-setter' in the field of industrial hydraulic and fluid power lubrication.

Applications

- Industrial hydraulic systems
- Mobile hydraulic fluid power transmission systems
- Marine hydraulic systems

Performance Features and Benefits

- **Thermal stability**
Thermally stable in modern hydraulic systems working in extreme conditions of load and temperature. Tellus Oils are highly resistant to degradation and sludge formation therefore improving system reliability and cleanliness.
- **Oxidation resistant**
Resist oxidation in the presence of air, water and copper. Turbine Oil Stability Test (TOST) results show outstanding performance for Tellus Oils; low acidity, low sludge formation, low copper loss; therefore extending oil drain interval life and minimising maintenance costs.
- **Hydrolytic stability**
Tellus Oils have good chemical stability in the presence of moisture, which ensures long oil life and reduces the risk of corrosion and rusting.
- **Outstanding anti-wear performance**
Proven anti-wear additives are incorporated to be effective throughout the range of operating conditions, including low 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. Tellus Oils help system components last longer.
- **Superior filterability**
Tellus Oils are suitable for ultra-fine filtration, an essential requirement in today's hydraulic systems. Unaffected by the usual products of contamination, such as water and calcium, which are known to cause blockage of fine filters. Customers can use finer filters, therefore achieving all the benefits of having in use cleaner fluids.

- **Low friction**
Tellus Oils possess high lubrication properties and excellent low friction characteristics in hydraulic systems operating at low or high speed. Prevents stick-slip problems in critical applications enabling very fine control of machinery.
- **Excellent air release and anti-foam properties**
Careful use of additives to ensure quick air release without excessive foaming. Quick air release helps minimise cavitation and slow oxidation, maintaining system and fluid performance.
- **Good water separation**
Good water separation properties (demulsibility). Resists the formation of water-in-oil emulsions and prevents consequent hydraulic system and pump damage.
- **All round versatility**
Tellus Oils are suitable for a wide range of other industrial applications.

Specifications and Approvals

Tellus Oils have the following approvals:

CINCINNATI P-68 (ISO 32)
CINCINNATI P-70 (ISO 46)
CINCINNATI P-69 (ISO 68)
DENISON HF-0
DENISON HF-1
DENISON HF-2
Eaton (Vickers) M-2950 S
Eaton (Vickers) I-286 S

Tellus Oils meet the requirements of:

ISO 11158 HM
GM LS/2
AFNOR NF-E 48-603
Bosch Rexroth Ref 17421-001 and RD 220-1/04.03
Swedish Standard SS 15 54 34 AM

Compatibility

Tellus Oils are compatible with most pumps. However, please consult your Shell

Representative before using in pumps containing silver plated components

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

Seal & Paint Compatibility

Tellus Oils are compatible with all seal materials and paints normally specified for use with mineral oils.

Protect the environment

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

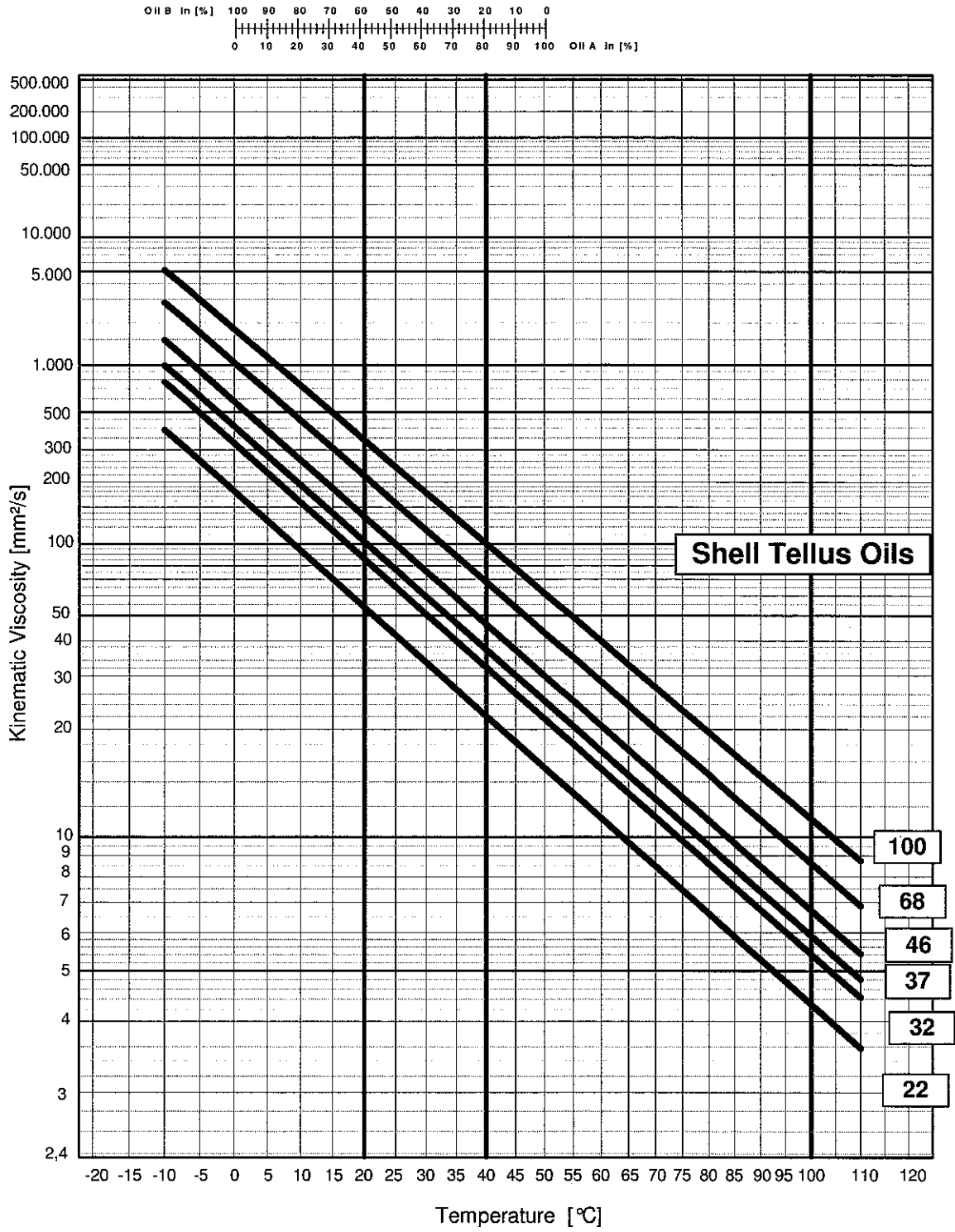
Health & Safety

Typical Physical Characteristics

Shell Tellus Oil	22	32	37	46	68	100
ISO Oil Type	HM	HM	HM	HM	HM	HM
Kinematic Viscosity						
@ 0°C cSt	180	338	440	580	1040	1790
40°C cSt	22	32	37	46	68	100
100°C cSt (IP 71)	4.3	5.4	5.9	6.7	8.6	11.1
Viscosity Index (IP 226)	100	99	99	98	97	96
Density @ 15 °C/kg/l (IP 365)	0.866	0.875	0.875	0.879	0.886	0.891
Flash Point °C (Pensky-Martens Closed Cup) (IP 34)	204	209	212	218	223	234
Pour Point °C (IP 15)	-30	-30	-30	-30	-24	-24

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

Viscosity - Temperature - Diagram





Shell Tellus[®] Oils T

High performance hydraulic oils for wide temperature ranges

Shell Tellus Oils T are premium quality hydraulic oils formulated with proprietary anti-wear technology and a shear stable viscosity index improver to enhance and maintain excellent viscosity/temperature characteristics. These oils are designed to meet the requirements of a large range of industrial and mobile hydraulic applications.

Applications

- Hydraulic and fluid power transmission systems subjected to wide variations in temperature or where low viscosity change with fluctuating temperature is required.

Certain critical hydraulic systems can only tolerate small variations in viscosity with fluctuating temperature if efficiency and responsiveness are to be maintained. Hydraulic oils, such as Shell Tellus Oil T, which exhibit multigrade viscosity characteristics may be used to particular advantage in these circumstances. If even further limited viscosity variations are required Shell Tellus Oils STX should be considered.

Performance Features and Benefits

- **Wide operating temperature range**

The use of a specially selected viscosity index improver reduces the viscosity variation with temperature, which helps the system to operate in a wide oil temperature range with more consistent performance. There are various reasons for oil temperature variation in service like: environment (ambient) temperature variation, intermediate working condition or variable workload.

- **Viscometric characteristics unchanged with time**

The excellent shear stability of the viscosity index improver helps minimize permanent viscosity loss allowing the oil to maintain its original viscometric characteristics at high temperatures. This helps prevent the loss of system efficiency and inadequate protection at the maximum operating temperature.

- **Outstanding anti-wear performance**

Next generation anti-wear additives are incorporated into the formulation to be effective throughout the range of operating conditions, including low and severe load conditions. Shell Tellus Oils T exhibit outstanding performance in a range of piston and vane pump tests; including the newest Denison T6H (the so called hybrid pump), the tough Denison T6C (dry and wet versions) and the demanding Vickers 35VQ25.

- **Hydrolytic stability**

Shell Tellus Oils T demonstrate good chemical stability in the presence of moisture, which helps promote long oil life and reduce the risk of corrosion and rusting.

- **Excellent filterability**

Shell Tellus Oils T are suitable for ultra-fine filtration, an essential requirement in today's hydraulic systems. Shell Tellus Oils T are virtually unaffected by minor contamination with water and calcium, which are known to cause blockage of fine filters. Customers can use finer filters, which helps achieve all the benefits of using cleaner fluids.

- **Oxidation resistant**

Shell Tellus Oils T resist oxidation in the presence of air, water and copper. These oils exhibit low increase in acidity, low sludge formation, and low copper loss therefore helping to maintain expected oil drain intervals and minimize maintenance costs.

- **Thermal stability**

Shell Tellus Oils T are thermally stable in modern hydraulic systems working in extreme conditions of load and temperature. Shell Tellus Oils T are highly resistant to degradation and sludge formation therefore helping to improve system reliability and cleanliness.

- **Excellent air release and anti-foam properties**
Careful use of additives provides quick air release without excessive foaming. Quick air release helps minimize cavitation and slows oxidation, helping to maintain system and fluid performance.

- **Good water separation**
Shell Tellus Oils T exhibit good water separation properties (demulsibility) thereby resisting the formation of water-in-oil emulsions and helping to prevent consequent hydraulic system and pump damage.

Specifications and Approvals

Shell Tellus Oils T have the following approvals:
 CINCINNATI P-68)ISO 32)
 CINCINNATI P-70)ISO 46)
 CINCINNATI P-69)ISO 68)
 DENISON HF-0
 DENISON HF-1
 DENISON HF-2
 Eaton)Vickers) M-2950 S
 Eaton)Vickers) I-286 S

Shell Tellus Oils T meet the requirements of:
 Swedish Standard SS 15 54 34 AM
 ISO 11158
 AFNOR NF-E 48-603

Typical Physical Characteristics

Shell Tellus Oil T	15	22	32
Product Code			
Bulk	500000297	500002851	500000426
Drums	6540700055	6540000055	6540100055
Pails	6540705203	6540005203	6540105203
Appearance	Light Pale	Light Pale	Pale
Kinematic Viscosity)ASTM D 445)			
cSt @ 40°C	15	22	32
cSt @ 100°C	3.7	4.8	6.1
Viscosity Index)ASTM D 2270)	140	140	140
Emulsion Test, 130 °F)ASTM D 1401)	Pass	Pass	Pass
Separation time, 30 minutes max			
Copper Corrosion)ASTM D 130)	1a	1a	1a
Rust Test)ASTM D 665B)	Pass	Pass	Pass
Pour Point, °C)ASTM D 5969)	-42	-42	-39
Dielectric Strength, kV*)ASTM D 877)	35 min	35 min	35 min

* On product in sealed containers from Shell blending plants only.

Compatibility

[Shell Tellus Oils T are compatible with most pumps.]
 However, please consult your Shell Representative before using in pumps containing silver plated components.

Seal & Paint Compatibility

Shell Tellus Oils T are compatible with seal materials and paints normally specified for use with mineral oils.

Health & Safety

For information on the safe handling and use of this product, refer to its Material Safety Data Sheet at <http://www.shell-lubricants.com/msds/>. If you are a Shell Distributor, please call **1+800-468-6457** for all of your service needs. All other customers, please call **1+800-840-5737** for all of your service needs. Information is also available on the World Wide Web: <http://www.shell-lubricants.com/>.

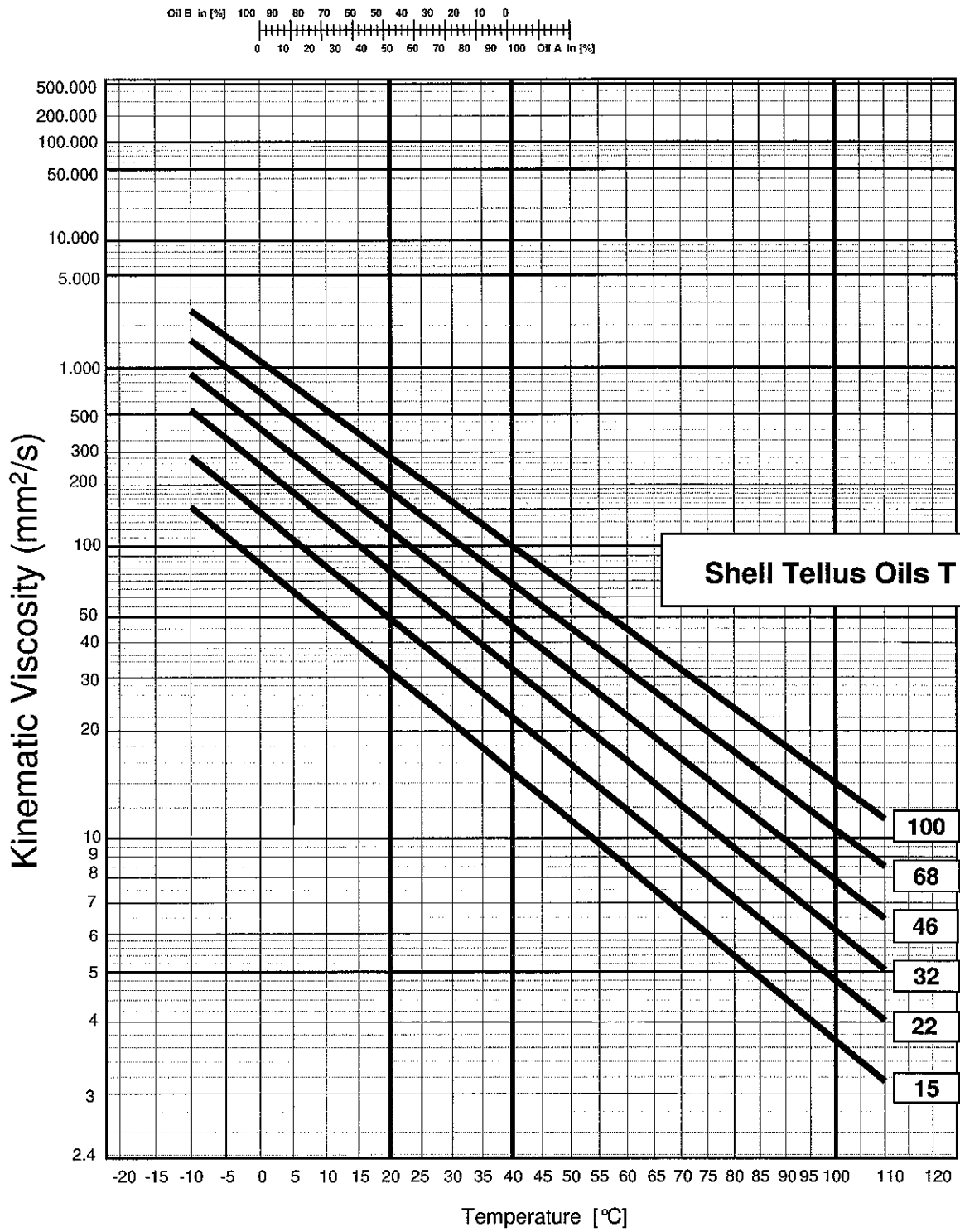
Protect the environment

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

Shell Tellus Oil T	46	68	100
Product Code			
Bulk	500000431	500000293	500000427
Drums	6540200055	6540300055	6540400055
Pails	6540205203	6540305203	----
Appearance	Pale	Pale	Dark Pale
Kinematic Viscosity)ASTM D 445)			
cSt @ 40°C	46	68	100
cSt @ 100°C	7.9	10.5	14.0
Viscosity Index)ASTM D 2270)	140	140	140
Emulsion Test, 130 °F)ASTM D 1401)	Pass	Pass	Pass @ 180 °F
Separation time, 30 minutes max			
Copper Corrosion)ASTM D 130)	1a	1a	1a
Rust Test)ASTM D 665B)	Pass	Pass	Pass
Pour Point, °C)ASTM D 5969)	-39	-36	-33
Dielectric Strength, kV*)ASTM D 877)	35 min	35 min	----

* On product in sealed containers from Shell blending plants only.

Viscosity - Temperature - Diagram





SHELL DENTAX[®] Oils

Automotive Gear Oils

Product Description

Shell Dentax[®] gear lubricants are designed for use in automotive and heavy duty equipment transmission and differentials where an EP (extreme pressure) lubricant is **not required** and where an API Service Designation GL-1 gear oil is specifically called for by the equipment manufacturer.

Applications

- heavy-duty manually operated transmission and gear boxes requiring API-GL1 lubricants
- spiral bevel and worm axles
- steering gears, universal joints, and spline shafts
- enclosed industrial gears and flexible couplings

Note: not recommended for hypoid gears

Features/Benefits

- good oxidation stability helps provide long service life
- low foaming tendency
- compatible with other gear oils

Approvals and Recommendations

- API Service GL-1
- International Trucks (80W-90)

Typical Properties of Shell Dentax Oils

	Test Method	SAE Grade		
		80W-90	140	250
Product Code.		59003	59050	59051
Gravity, °API	D 1298	29.2	22.8	21.7
Viscosity				
@ 40°C, cSt	D 445	139	955	1669
@ 100°C, cSt	D 445	14.8	41	56
@ 100°F, SSU	(calc)	728	5259	9315
@ 210°F, SSU	(calc)	79	198	271
Viscosity Index	D 2270	107	74	72
Flash, °C (°F)	D 92	210 (415)	303 (580)	321 (615)
Pour Point, °C (°F)	D 97	-21 (-5)	-9 (15)	-9 (15)
Brookfield Viscosity cP @ -15 °F	D 2893	80,600	-	-

Handling & Safety Information

For information on the safe handling and use of this product, refer to its Material Safety Data Sheet at <http://www.equivashellmsda.com>. For more information and availability, call 1+800-782-7852 or visit the World Wide Web: <http://www.shell-lubricants.com/>.



SHELL DONAX[®] TC

Premium fluids for heavy duty off-highway equipment transmission and hydraulic systems

Product Description

Shell Donax[®] TC oils are designed to meet the demanding requirements of modern transmission, final drive, oil immersed brake and hydraulic systems fitted to heavy-duty off-road equipment. Specially formulated, they meet the Caterpillar TO-4 specification as well as the Allison C-4 requirements for transmission and drive train fluids and are available in SAE viscosity grades 10W, 30, 50 and 60.

Applications

- applications requiring a TO-4 fluid such as transmissions, final drives and hydraulic systems
- manual, powershift and automatic transmissions requiring a Allison C-4 fluid (SAE 10W and 30 grades)
- high pressure hydraulic systems requiring antiwear properties and superior rust protection
- non-engine applications requiring an API CD/TO-2 fluid
- twin disc clutches

Donax TC is **not recommended** for farm tractor service that employs a common reservoir for transmission and hydraulic systems. Donax TD is recommended for those applications.

Features/Benefits

- outstanding oxidation resistance and sludge control
- available in SAE viscosity grades 10W, 30, 50, and 60 to meet varied operational needs
- provide excellent antiwear performance for gears, hydraulic pumps and drive train components
- excellent controlled frictional properties that minimizes chatter in wet-disc brakes, extend clutch life and provide transmission slippage control, especially during high-load operation at extreme temperatures
- do not contain friction modifiers, making them suitable for use in twin disc clutches

Approvals and Recommendations

Donax TC is recommended for use in all of the following applications:

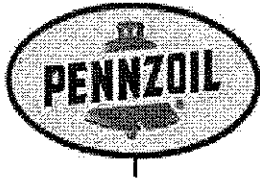
- Allison C-4, C-3 (SAE 10W, 30)
- Caterpillar TO-4, TO-2
- Eaton Fuller transmissions
- Euclid Equipment
- Ford Type F transmission fluid (SAE 10W)
- Komatsu-Dresser Equipment
- Terex Construction Equipment
- Vickers M-2950-S for Mobile Hydraulics
- ZF Powershift

Typical Properties of Shell Donax TC Oils

	Test Method	SAE Grade			
		10W	30	50	60
Product Code		53082	53083	53084	53180
Gravity, °API	D 1298	30.4	28.8	26.5	25.2
Viscosity:					
@ 40°C, cSt	D 445	40.3	93.5	219	310
@ 100°C, cSt	D 45	6.3	11.0	19.2	23.8
Viscosity Index	D 2270	104	102	99	97
Flash Point, °C (°F)	D 92	210 (410)	227 (440)	229 (445)	232 (450)
Pour Point, °C (°F)	D 97	-36 (-33)	-30 (-22)	-20 (-4)	-18 (0)

HANDLING & SAFETY INFORMATION

For information on the safe handling and use of this product, refer to its Material Safety Data Sheet at <http://equivashellmsds.com>. For more information and availability, call 1+800-782-7852 or visit the World Wide Web: <http://www.shell-lubricants.com/>.



MULTI-VEHICLE AUTOMATIC TRANSMISSION FLUID

PRODUCT DESCRIPTION

PENNZOIL® MULTI-VEHICLE ATF is a special blend of high quality base stocks with an advanced additive system for automatic and powershift transmissions. PENNZOIL® MULTI-VEHICLE ATF meets the performance requirements of a broad range of automatic transmission applications and can function as a Caterpillar TO-2 lubricant.

PENNZOIL® MULTI-VEHICLE ATF is formulated to provide the protection that meets or exceeds the quality standards in the industry. The specially balanced additive system protects against shudder, eliminates the need to stock ATF supplements and ensures a high-performance smooth driving experience. Carefully balanced friction modifiers allow friction retention for long life performance and maintain the smooth lock-ups required by a wide variety of vehicles. Enhanced oxidation, thermal stability and corrosion resistance helps maintain year-round protection of the transmission components.

APPLICATION

PENNZOIL® MULTI-VEHICLE ATF provides excellent wear protection for all passenger cars and light trucks requiring the use of a Type A or Type A Suffix A, GM DEXRON®, GM DEXRON®-II, GM DEXRON®-IIE, GM DEXRON®-III (H), Ford MERCON® or MERCON®V automatic transmission fluid. It is also recommended for applications requiring Toyota T®, T-III®, or some models T-IV®, Nissan Matic-D® and Matic-J®, Honda ATF-Z1®, and Mitsubishi Diamond SP-II® and SP-III® particularly where a DEXRON®/ MERCON® fluid is allowed for service fill. See the table below for fluid applications.

PENNZOIL® MULTI-VEHICLE ATF is not suitable in a few pre-1986 vehicles where Type F fluids are specified, or some recent vehicles equipped with continuous variable transmissions (CVT's). It also is not suitable for 2006 and later GM vehicles requiring DEXRON® VI, Ford requiring Type SP, Ford Mercon LV, Toyota WS, Nissan Matic-K, newer Daimler and some other manufacturer's 6 and 7 speed transmissions, and other specialty transmissions where a low viscosity ATF is recommended or an OEM specific fluid is required. Always check application before using or adding any automatic transmission fluid.

PENNZOIL® MULTI-VEHICLE ATF can be used in some passenger car manual transmissions trucks and buses, off-highway construction/mining equipment, agricultural equipment, mobile hydraulic systems, industrial machinery, and power steering systems where DEXRON®, DEXRON®-II, DEXRON®-IIE, DEXRON®-III (H), MERCON® or MERCON® V type fluids are specified.

BENEFITS

- Inventory optimization: Use single ATF for many specifications and applications without using ATF supplements
- Excellent friction performance to enhance shift quality -- no shudder
- A perfect balance of additive technology and in high quality base oil
- Excellent oxidation and thermal stability
- Excellent cold temperature flow properties

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES PENNZOIL® MULTI-VEHICLE ATF

TEST	METHOD	TYPICAL RESULTS
Density @ 15°C, g/mL	ASTM D-4052	0.861
Pounds per Gallon		7.64
Flash Point, °C	ASTM D-92	184
Pour Point, °C	ASTM D-97	-48
Color		Red
Viscosity		
@ 40°C, cSt	ASTM D-445	33.82
@ 100°C, cSt	ASTM D-445	7.60
Viscosity Index	ASTM D-2270	204
Brookfield Viscosity @ -40°C, cP	ASTM D-2983	10,200

Typical values that may vary from batch to batch

PENNZOIL® Multi-Vehicle Automatic Transmission Fluid

ALWAYS Check Application Before Using Any Automatic Transmission Fluid

(Not for Type F and not for Continuous Variable Transmission applications(1,2)*)

Suitable Fluid Applications		
Manufacturer	Fluid Specification	Notes
Allison	C-4	Recommended for use
BMW	LA2634	Recommended for use
BMW	LT71141	Recommended for use
Ford	MERCON	Recommended for use
Ford	MERCON V	Recommended for use
GM	DEXRON	Recommended for use
GM	DEXRON-II	Recommended for use
GM	DEXRON-II D	Recommended for use
GM	DEXRON-III H	Pre 2005 GM Vehicles
Honda	Premium	Recommended for use
Honda	ATF-Z1	Recommend for use where owners manual lists DEXRON® III as an alternative to genuine fluid
MAN	339F	Recommended for use
Manufacturer	Fluid Specification	Notes
Mercedes	Pre-1996	Suitable for use in Pre-1996 models
Mitsubishi	Diamond SP-II	Recommended for use
Mitsubishi	Diamond SP-III	Recommended for use
Nissan/Infiniti	Matic-D	Recommended for use
Nissan/Infiniti	Matic-J	Recommended for use
Toyota	Type T	Recommended for use
Toyota	Type T-III	Recommended for use
Toyota/Lexus	Type T-IV	Service fill or top off except 2004+ Prius, Landcruiser, 4-Runner, Lexus (GL, LS, LX models) where Dexron III is allowed
Voith	55.6335.32 (G607) Voith DIWA #013S	Recommended for use
Volvo	Volvo	Recommended for use
Various	ZF TE-ML 14B	Recommended for use
Various	ZF TE-ML 16L	Recommended for use
Suitable in many Kia, pre-2003 VW/Audi, Jeep, Mazda, Subaru, Suzuki, Isuzu, Hyundai, Daewoo transmissions where a Dexron/Mercon fluid is allowed		
*Note: 1) PENNZOIL® M-V ATF can not be used where type F type fluids are recommended, check your manual if your 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) PENNZOIL® L M-V ATF should not be used in Continuous Variable Transmissions (CVTs)		

Dexron is a registered trademark of General Motors Corporation. Mercon is a registered trademark of Ford Motor Company.

Shell Donax TD

High performance tractor transmission oil



Premium “universal tractor transmission oils” (UTTO) designed for use in transmissions, hydraulic systems, oil immersed brakes and other ancillary systems fitted to agricultural tractors and off-road equipment. Donax TD are recognised by leading agricultural equipment manufacturers and suitable for use in most modern equipment.

Applications

- **Agricultural Tractors Transmissions**
Donax TD has been evaluated against the latest requirements of leading tractor and transmission manufacturers including John Deere, Massey Ferguson, CNH and ZF.
- **Hydraulic Systems**
Donax TD is ideally suited for hydraulic systems of tractors and ancillary equipment. Donax TD is formulated using specially selected additives and high quality base oils to provide good low temperature fluidity and wear protection.
- **Oil Immersed Brakes**
Special friction modifying additives are included in Donax TD to ensure optimum performance of oil immersed brakes whilst minimising brake noise. Donax TD is recommended for most wet brake systems fitted to agricultural tractors and off-highway construction equipment.

For extreme wet brake noise, consider using **Shell Donax TDQ**.

Warning: *Not to be used as an engine oil*

Performance Features and Benefits

- **Enhanced Protection**
Excellent anti-oxidation, shear-stability, anti-wear, anti-corrosion and anti-foam characteristics result from the use of the latest additive technology leading to greater reliability and reduced down time thus minimising cost and maximising utilisation.
- **Operator Comfort**
The excellent low temperature fluidity of Donax TD, results in responsive hydraulic performance, and smooth gearshift performance, from cold starts to maximum operating temperatures. Friction modifying additives help create smooth, noise-free operation of oil immersed brakes.

● OEM Recognition

Donax TD has been tested and approved by a wide range of equipment manufacturers.

Specification and Approvals

API Gear Performance	API GL-4
Case New Holland	MAT-3525
	M2C-134D
	FNHA-2-D.201.00
John Deere	JDM-J20C
Massey-Ferguson	M1143
	M1145
Volvo	WB 101
ZF TE-ML	03E, 05F
Caterpillar	TO-2 (obsolete)
Komatsu	recommended for use in certain construction equipment

Recommendations

Donax TD is also recommended for use in Case equipment where fluids meeting MS 1207 or MS 1209 are specified.

Donax TD can be used when a SAE J 306 85W grade is recommended.

Advice

Advice on applications not covered in this leaflet may be obtained from your Shell Representative.

Health and Safety

Guidance on Health and Safety are 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.

Typical Physical Characteristics

Donax		TD
SAE Viscosity Grade		SAE J 300 10W-30
Kinematic Viscosity		ISO 3104
at 40°C	mm ² /s	60
at 100°C	mm ² /s	9,4
Shear stability (kin vis @ 100°C)		
after 20 hrs KRL	mm ² /s	CEC-L-45 8,1
John Deere	mm ² /s	JDQ 102 7,8
Dynamic Viscosity		
Brookfield @ -20°C	mPa.s	DIN 51398 4.750
Brookfield @ -35°C	mPa.s	64.800
Viscosity Index		ISO 2909 138
Density at 15°C	kg/m ³	ISO 12185 882
Flash Point COC	°C	ISO 2592 220
Pour Point	°C	ISO 3016 -42

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



SHELL CAPRINUS[®] XR OILS

High performance, zinc-free & chlorine-free railroad and marine engine oils

Product Description

Shell Caprinus[®] XR are premium quality, zinc-free, and chlorine-free railroad and marine engine oils with an established history of providing outstanding engine cleanliness. Caprinus XR oils are available in SAE 40 and SAE 20W-40 viscosity grades.

Applications

- recommended for medium speed two-cycle and four-cycle diesel engines, including:
 - EMD
 - Fairbanks-Morse
 - General Electric
 - ALCO
- other similar diesel engines used as auxiliary or main engines in marine service or as switching locomotives
- stationary engines requiring oils with API CF and API CD (obsolete) level performance

Features/Benefits

- formulated with a unique Shell additive system that is both zinc free and chlorine free
- provide excellent engine cleanliness, especially engine top decks
- provide superior in service retention of Total Base Number (TBN). (Note: EMD and General Electric, as well as the LMOA, recognize that new oil TBN is not an indicator of an oil's performance and do not include TBN in their oil specifications)
- provide extended oil drain interval capability
- multigrade Caprinus XR 20W-40 contains a shear-stable viscosity index improver additive that provides reduced oil consumption and better fuel economy, allows for longer oil drain intervals through control of used oil viscosity increase in severe applications & provides better lubrication and oil flow at low temperatures and during engine warm-up

Approvals and Recommendations

- ElectroMotive Division of General Motors (EMD)
- General Electric as Generation 4 Long Life Oils
- Locomotive Maintenance Officers Association (LMOA) Generation 5
- API CF
- API CD (obsolete)

Typical Properties of Shell Caprinus XR Oils

	Test Method	SAE Grade	
		40	20W-40
Product Code		54794	54793
Gravity, °API	D 1298	24.9	27.0
Viscosity:			
@ 40°C, cSt	D 445	150	139
@ 100°C, cSt	D 445	15.0	15.5
Viscosity Index	D 2270	97	115
Flash Point, COC, °C (°F)	D 92	246 (480)	222 (435)
Pour Point, °C (°F)	D 97	-21(-10)	-24 (-11)
Neutralization No, TBN-E	D 2896	13.6	13.6
Sulfated Ash, wt%	D 874	1.46	1.46
Calcium, wt%	X-ray	0.43	0.43
Zinc, ppm	X-ray	< 10	< 10

Handling & Safety Information

For information on the safe handling and use of this product, refer to its Material Safety Data Sheet at <http://www.equivashellmsds.com>. For more information and availability, call 1+800-782-7852 or World Wide Web: <http://www.shell-lubricants.com/>.



Shell Donax TX

Premium Heavy Duty Transmission Oil

Shell Donax TX Oil is a premium quality synthetic-blend, heavy duty universal power shift and automatic transmission fluid which is suitable for use in transmissions requiring Allison TES-295 fluids. Engineered to meet the requirements of the latest heavy duty transmissions, Donax TX is the ultimate performance synthetic-blend automatic transmission fluid which enables extended service intervals and extended limited warranty. Donax TX remains stable even under severe operating conditions.

Applications

- **Heavy Duty Automatic Transmissions**

Donax TX was developed to meet the extended drain requirements of late model heavy duty transmissions. It is particularly suitable for transmissions requiring a TES-295 type product. Donax TX is recommended for used in the following applications:-

- Municipal fleets
- Vans, school buses
- Buses and Coaches
- Emergency vehicles
- Commercial vehicles and trucks
- Motor-homes
- On/Off-highway vehicles
- Heavy duty pickup trucks

Donax TX can also be used in ZF and Voith manufactured heavy duty transmissions as well as those previously serviceable by Dexron® III and Mercon®, and is particularly suited to mixed fleet operations.

Performance Features and Benefits

Shell Donax TX offers the following performance features and benefits:

- **Excellent thermal and oxidation stability**
Donax TX resists formation of deposits to ensure longer fluid life and better fluid performance under arduous conditions.
- **High viscosity index**
Donax TX incorporates latest synthetic-blend base fluid technology, which provides outstanding high and low temperature performance. The physical characteristics provided by the additive technology and semi-synthetic base oils

allows for extremely low temperature fluidity, further protecting the transmission components from premature wear under extreme operating conditions.

- **Excellent shear stability, corrosion and foaming resistance**

Donax TX retains its fluid characteristics even under high loads and shear conditions. The excellent wear protection, shear stability and frictional characteristics of the additive technology provides outstanding oil performance allowing the equipment operator to extend oil drain intervals while maximising the life of the transmission.

- **Compatible with most other automotive transmission fluids and seals**

When changing to Donax TX, Shell recommends the transmission system is appropriately drained and flushed in order to obtain all of the performance benefits that changing to this fluid will provide. Donax TX is, however, compatible with most other transmission fluids and seals.

- **One fluid for year-round use in all geographic locations**

Oil Drain Interval Potential:

This technology allows extended oil drain intervals up to 50,000 miles for severe service and 100,000 miles for regular service, and should be accompanied by an appropriate oil analysis program.

Oil analysis should be conducted every 15,000 miles interval beyond the standard recommended drain interval of a C-4 fluid.

Shift Comfort and Maintenance Costs

The combination of these features and benefits translates into smooth shifting comfort, and lower

maintenance costs due to extended drain intervals and longer transmission component life.

Specifications and Approvals

- Allison TES-389 (AA-32332007)
- Former Dexron-III applications
- Former Ford Mercon applications
- Ford Mercon V (M5060501)
- Voith 55.6335.33 (Aug04)
- ZF TE-ML14B, 16L, 17C
- Allison C-4
- MAN 339 Type F

Health & Safety

Guidance on Health and Safety are 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

Typical Physical Characteristics

Shell Donax TX Typical Properties		
Properties	Test Method	Results
Kinematic Viscosity @40° C cSt @100° C cSt	ASTM D-445	33.7 7.1
Viscosity Index	ASTM D-2270	181
Specific Gravity at 16°C	ASTM D-287	0.85
Flash Point COC (°C)	ASTM D-92	212
Pour Point (°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.



GEARPLUS® SAE 80W-90 GL-5 GEAR LUBRICANT

Sure Protection For Vehicles Under A Broad Range Of Conditions

PRODUCT DESCRIPTION

PENNZOIL® GEARPLUS® SAE 80W-90 GL-5 GEAR LUBRICANT, formerly known as Multi-purpose 4096 80W-90, exceeds the latest requirements of gear manufacturers requiring API GL-5 lubricants. It is recommended for use in limited slip and conventional differentials of cars, pick up trucks and sports utility vehicles. It is designed to reduce or eliminate “chatter” that can sometimes occur in limited slip differentials. High-speed shock loads, higher torque requirements for extended periods of time and high operating temperatures call for heavy-duty quality lubricants of this caliber.

PENNZOIL® GEARPLUS® SAE 80W-90 GL-5 GEAR LUBRICANT is fortified with extreme pressure additives for tough protection under severe operating conditions. It contains rust and corrosion inhibitors to protect against the effects of moisture from condensation. Effective foam inhibitors prevent foaming and aeration that can lead to premature wear. PENNZOIL® GEARPLUS® SAE 80W-90 GL-5 GEAR LUBRICANT is a fully balanced, robust formulation for optimum axles and transmission protection.

PENNZOIL® GEARPLUS® SAE 80W-90 GL-5 gives the full protection of SAE 90 under high temperatures and hard driving conditions, while still providing the fast flow characteristics of SAE 80W when cold. This offers maximum lubrication and gear protection over a wide temperature range.

APPLICATION

PENNZOIL® GEARPLUS® SAE 80W-90 GL-5 is recommended for use in hypoid or spiral bevel gear differentials and manual transmissions where an API Service GL-5 lubricant and an SAE 80W, 90 or 80W-90 viscosity grade is specified. In addition, PENNZOIL® GEARPLUS® SAE 80W-90 GL-5 is fully formulated for all limited slip differentials. It may be used as a makeup or refill fluid, even for rebuilt limited slip units and is designed for all high performance hypoid axles of cars, pick up trucks, sports utility vehicles as well as sports, police and racing cars. It is also recommended for conventional differentials.

BENEFITS

- Exceeds requirements of API GL-5
- Outstanding gear and bearing protection
- Suitable for all limited slip applications
- Combats rust and corrosion
- Inhibits oil oxidation
- Provides outstanding anti-foam protection
- Compatible with other gear oils under a wide range of operating and storage conditions
-

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES
PENNZOIL® GEARPLUS® SAE 80W-90 GL-5 GEAR LUBRICANT

TEST	METHOD	TYPICAL RESULTS
SAE Grade		80W-90
API Service		GL-5
Gravity, °API	ASTM D-287	26
Viscosity		
@ 40°C, cSt	ASTM D-2161 & D-445	150
@ 100°C, cSt		14.5
@ 100°F, SUS		700
@ 210°F, SUS		76
Viscosity Index		95
Brookfield Viscosity	ASTM D-2983	
@ 150,000 cP, °-26C(°-15F)		<130,000
Pour Point, °C(°F)	ASTM D-97	-26(-15)
Flash Point, °C(°F)	ASTM D-92	204(400)
Color, ASTM	ASTM D-1500	5
Timken OK Load, lbs.	ASTM D-2782	70
Material Number		
12/1 Quart		4963
35 Pound Plastic Pail		4964
120 Pound Drum		4965
400 Pound Drum		4966



Shell Spirax® ASX SAE 80W-140

High performance, synthetic transmission and axle fluid

Shell Spirax ASX SAE 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.

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.
- high film strength and excellent shear stability
- excellent low temperature properties promotes 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

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

Performance Features and Benefits

- outstanding thermal stability especially in applications where heat, wear and extended drain intervals contribute to severe service
-

Specification and Approvals

- API Classifications GL-5 and MT-1
- Dana Specification SHAES 429 Rev. A
- Mack GO-J
- ArvinMeritor Specification O76-B (standard drain), O76-M (extended drain)
- General Electric D50E9C
- Harnischfeger (P&H) 474
- MIL-PRF-2105E
- International Truck and Engine TMS 6816
- Two industry standards for demulsibility -- U.S. Steel Specification 224, and the American Gear Manufacturers (AGMA) Standard 250.03

Advice

Advice on applications not covered in this leaflet may be obtained from your Shell representative.

Health and Safety

Guidance on Health and Safety are available on the appropriate Material Safety Data Sheet that 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

Typical Physical Characteristics

Typical Properties of Shell Spirax ASX		
	Test Methods	SAE Grade
		80W-140
Product Code		59227
Gravity, °API	D 287	23.6
Viscosity:		
@ 40°C, cSt	D 445	271
@ 100°C, cSt	D 445	30.5
@ -18°C, cP	D 2983	20500
@ -26°C, cP	D 2983	75000
@ -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. While future production will conform to Shell specification, variations in these characteristics may occur. The information contained herein is subject to change without notice.

Handling & Safety Information

For information on the safe handling and use of this product, refer to its Material Safety Data Sheet at <http://www.shell.com/us/lubricants>. For technical assistance, please call 1-800-771-6950. For orders and other inquiries, please call 1+800-468-6457 (Distributors) or 1-800-840-5777 (Customers).



Pennzoil® Dexron®-VI

Automatic Transmission Lubricant

PENNZOIL® Dexron®-VI Automatic Transmission Fluid is an exceptional automatic transmission fluid approved by General Motors for use in vehicles with automatic transmissions. It is specially formulated to provide twice the service life of a Dexron®-III(H) ATF and offers enhanced performance for both new and older transmissions. It is designed to protect transmissions through improved oxidation resistance, friction durability, shear stability and wear protection to help meet warranty protection requirements in late model vehicles.

Applications

PENNZOIL® Dexron®-VI Automatic Transmission Fluid is recommended for all 2006 and beyond GM vehicles with Hydra-Matic automatic transmissions. It is fully back serviceable for Dexron®-III (H), III and IIE applications. Meets GM specification GMN10060. Always consult your vehicle owner's manual for specific recommendation.

Performance Features and Benefits

- Extended fluid life vs. Dexron®-III (H) ATF and helps extend the life of the transmission
- Outstanding resistance against sludge and deposit formation
- Improved oxidation and thermal stability vs. Dexron®-III (H) ATF
- Superior anti-wear protection vs. Dexron®-III (H) ATF
- Outstanding low temperature fluidity
- Enhanced foam control which maintains responsive shifts and reduces wear on bearings, bushing and gears

- Helps prevent clutch shudder in modulated torque converters
- Improved torque transfer vs. Dexron®-III (H) ATF
- Improved shear stability vs. Dexron®-III (H) ATF

Specifications and Approvals

- PENNZOIL® Dexron®-VI Automatic Transmission Fluid is recommended for all 2006 and beyond GM vehicles with Hydra-Matic automatic transmissions.
- PENNZOIL® Dexron®-VI Automatic Transmission Fluid meets GM specification GMN10060

Health & Safety

Guidance on Health and Safety are 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.

Typical Physical Characteristics

Property	Test Method	Typical Results
Density, kg/l @ 15°C	ASTM D4052	0.846
Kinematic Viscosity		
cSt @ 40°C	ASTM D-445	29.8
cSt @ 100°C	ASTM D-445	6.0
Viscosity Index	ASTM D2270	151
Total Base No.	ASTM D2896	2.0
Flash Point °C / °F	ASTM D92	206 / 403
Brookfield Viscosity		
cSt @ -20°C	ASTM D2983	1,053
cSt @ -30°C		3,164
cSt @ -40°C		12,030
Pour Point °C / °F	ASTM D97	-54 / -65
Sulphated Ash, % wt	ASTM D874	0.02
Color	-	Red

These characteristics are typical of current production. While future production will conform to SOPUS Products specifications, variations in these characteristics may occur.

Dexron® is a registered trademark of General Motors Corporation.



LONG-LIFE® GOLD HEAVY DUTY ENGINE OIL

Premium Motor Oil For Heavy-Duty Diesel and Gasoline Engines

PRODUCT DESCRIPTION

PENNZOIL® LONG-LIFE® GOLD is a premium heavy duty engine oil with a formulation that exceeds the stringent performance requirements of the new API CJ-4 service category for 2007 diesel engines. PENNZOIL® LONG-LIFE® GOLD also provides excellent quality for diesel engines built prior to 2007 and in both on-and off-highway applications.

PENNZOIL® LONG-LIFE® GOLD SAE 15W-40 is formulated to deliver protection to diesel engine and helps provide long life for engines as it:

- Protects against all forms of wear
- Resists high temperature breakdown due to excellent oxidation stability
- Provides outstanding soot control
- Will not shear out-of-grade, even in the most stressful conditions due to outstanding shear-stability
- Protects moving parts while it helps to maximize engine performance and maintain fuel economy.

PENNZOIL® LONG-LIFE® GOLD HEAVY DUTY ENGINE OIL has been tested and proven effective in all kinds of engines, including Caterpillar, Cummins, Detroit Diesel, , Mack, Mercedes-Benz, International, Volvo, as well as others. Pennzoil Long-Life® Gold helps extend the life of virtually all diesel engines..

APPLICATION

PENNZOIL® LONG-LIFE® GOLD HEAVY DUTY ENGINE OIL is truly a universal oil. It is recommended for use in on- and off-highway medium and heavy duty diesel vehicles built prior to 2007 and models built from 2007.

PENNZOIL® LONG-LIFE® GOLD meets or exceeds the performance requirements of the following diesel engine manufacturers: Caterpillar, Cummins, Detroit Diesel, International, Mack, Mercedes, Volvo, as well as others. PENNZOIL® LONG-LIFE® GOLD also meets or exceeds the performance requirements of the following gasoline engine manufacturers: Daimler-Chrysler, Ford, and General Motors. PENNZOIL® LONG-LIFE® GOLD HEAVY DUTY MULTIGRADE ENGINE OIL is recommended wherever engine manufacturers specify the use of an engine oil meeting API Service Classification CJ-4, CI-4 PLUS, CI-4, CH-4, CG-4, CF-4, CF and SM / SL / SJ, or any combination of these. Always refer to the vehicle owner's manual for the correct viscosity choice.

BENEFITS

- Helps extend engine life
- Provides a shield against all forms of wear
- Helps maintain fuel economy
- Helps reduce oil consumption
- Outstanding soot control
- Consistent oil pressure for thorough engine lubrication
- Recommended for both diesel and gasoline engines - single line of motor oils for mixed fleets
- Recommended for engines incorporating Exhaust Gas Recirculation (EGR)
- Recommended for turbocharged diesel engines
- Minimizes piston and combustion chamber deposits
- Fights sludge and varnish
- Effectively neutralizes acids to help keep corrosive wear to a minimum
- Contains anti-wear and anti-scuff agents
- Meets requirement of Diesel Particulate Filters.

PERFORMANCE SPECIFICATIONS

Meets or exceed the performance requirements of :

- API	CJ-4, CI-4 Plus, CI-4, CH-4, CG-4, CF-4, CF/ SM, SL, SJ
- ACEA	E7 ¹
- Caterpillar	ECF-3, ECF-2
- Cummins	CES 20081 ¹
- Detroit Diesel	93K218 ¹ , 7SE270 ¹
- Deutz	DQC III-05 ¹
- Mack	EO-O Premium Plus 2007
- MAN	M3275 ¹
- Mercedes-Benz	228.3 ¹ , 228.31 ¹
- MTU	Category 2 ¹
- Volvo	VDS-4 ¹ , VDS-3 ¹
- Renault Trucks	RLD-3 ¹

¹ SAE 15W-40 only

HEALTH AND SAFETY

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

PROTECT THE ENVIRONMENT

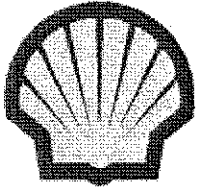
Take used oil to an authorized collection point. Do not discharge into drains, soil or water

Typical Physical Characteristics

Typical Properties of Pennzoil® Long-Life® Gold

	Test Method	SAE Grade	
		15W-40	10W-30
Gravity, °API	D 1298	29.2	29.0
Viscosity			
@ 40°C, cSt	D 445	118	80
@ 100°C, cSt	D 445	15.5	12.0
Viscosity Index	D 2270	139	144
Flash Point, °F	D 92	400 min.	400 min.
Pour Point, °F	D 97	-25	-23
Neutralization No. TBN-E	D 2896	10.6	10.6
Sulfated Ash, %wt	D 874	1.0 max.	1.0 max.

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



Lubricants Report



Product Data Sheet from Shell Lubricants

PDS# 1.09.11

NAUTILUS® PREMIUM OUTBOARD MOTOR OIL

PRODUCT LINE

Shell Canada, for years the proven lubricants leader in all two cycle, water cooled outboard engines with: **Nautilus**, now **introduces a new** formulation that goes beyond the latest TC-W3 performance standard issued by the NMMA to improve outboard engine life. **Nautilus** is designed to meet all outboard engine manufactures performance requirements for pre-mix, direct oil injection, and newer generation direct injection two cycle engines.

APPLICATIONS

The last decade has seen a gradual increase in the average horsepower produced by outboard engines, the introduction of fuel and lubricant injection systems, the phasing out of leaded fuels along with trends to higher fuel to oil ratios. More recently, new challenges such as smoke emissions and environmental concerns have come to the forefront. In addition, today's outboard engines must be able to withstand the effects of higher speed and much higher temperatures.

In response to the needs of outboard engine manufacturers, the NMMA defined the TC-W3 standard of performance. This standard, is designed to increase the quality of lubricants available to the industry and the public. This new standard of quality will result in longer, trouble-free engine life by offering vastly improved lubricity and anti-scuffing protection over the former TC-W II specification. In addition, superior dispersants ensure peak engine performance by keeping pistons clean and free of deposits.

Nautilus is formulated and tested to exceed the NMMA TC-W3 standard. To the boating enthusiasts, **Nautilus** provides the ultimate in protection and performance in all water cooled, two cycle outboard engines.

PERFORMANCE BENEFITS

- **National Marine Manufacturers Association (NMMA) Approval** - **Nautilus** has exceeded the recertification requirements of the severe TC-W3 standard.
- **Meets All Major Outboard Engine Manufacturers Recommendations** - **Nautilus** is specifically designed to meet the requirements of all major outboard engine manufacturers and provides performance demanded in their "own brand" TC-W3 oil. In addition, it meets the requirements of all other manufacturers requiring TC-W; TC-W II or TC-W3 quality lubricant. **Nautilus** is recommended for use in outboard engines manufactured by:
 - Bombardier (formerly O.M.C.) - the manufacturers of Johnson and Evinrude
 - Mercury Marine
 - Yamaha
 - Suzuki
 - Nissan
- **Low Aquatic Toxicity** - Through the use of unique additive chemistry **Nautilus** has proven to be more environmentally friendly than most other 2 cycle motor oils.
- **Reduced Spark Plug Fouling and Preignition** - Its state of the art "ashless" formulation minimizes the combustion chamber deposits which cause spark plug fouling and preignition.
- Reduced deposits result in enhanced performance and durability of the engine while eliminating the risk of preignition-induced engine damage.

- **Minimized Piston Deposits** - Superior dispersants enable the oil to help keep pistons clean and avoid ring sticking to ensure peak performance engine operation and lower maintenance costs.
- **Improved Lubricity/Scuffing Protection** - With its exclusive chemistry, Nautilus provides exceptional lubrication protection at higher temperatures in today's high powered, hard working outboard engines.
- **Superior Rust Protection** - Superb anti-rust additives help prevent rusting of critical engine parts during operation and storage for longer engine life.
- **Designed to Perform with Unleaded Fuels at Fuel to Oil Ratios up to 100:1** - Proven Shell performance when used in accordance with manufacturers recommended lubrication practices.
- **Reduced Smoke Emissions** - New Nautilus formulation responds to environmental concerns shared by all boating enthusiasts, by meeting the latest JASO FC smoke emission standard.
- **Blends Easily and Stays Mixed in Cold Temperatures** - It exceeds the requirements of an SAE FM 4 at -40°C for outstanding lubrication protection.
- **Compatibility** - Nautilus is fully compatible with all other TC-W3 and TC-W II lubricants to eliminate any risk of operating mishaps.
- **Dyed Blue for Pre-mix Systems** - Nautilus contains an easily seen blue dye as a safety check - if it's blue it's blended.

TYPICAL PROPERTIES

Product Code	427-531	ASTM METHOD
API Rating	TC	-
NMMA Rating	TC-W3	-
SAE Fluidity/Miscibility grade	FM 4	-
Density @ 15°C kg/m ³	863	D 1298
Colour	Blue	Visual
Pour Point, °C	-48	D 97
Flash Point PMCC, °C min.	65	D 93
Viscosity		
- cSt @ 40°C, mm ² /s	33.1	D 445
- cSt @ 100°C, mm ² /s	6.8	D 445
Brookfield @ -40°C, mPa.s	12,354	D 2983
Neutralization Value - TBNe,mg KOH/g	9.3	D 2896

Visit your nearest Shell Associate or 90 Reseller for more details.

Need more product information? Please the [Shell Helps Centre Technical Desk](#) at 1-800-661-1600 or e-mail us at questions@shell.com
MSDS requests? Please call 1(403)691-2615 or fax your request to 1(403)691-3321.

*Trademarks of Shell Canada Limited. Used under license by Shell Canada Products.

- TC-W II and TC-W3 are registered trademarks of the National Marine Manufacturers Association.
- ** TC-W is a registered trademark of the Boating Industry Association.



Shell Spirax® ASX R SAE 75W-90

High performance, synthetic axle fluid meeting Roadranger SHAES 256 Rev C specifications with enhanced fuel efficiency.

Shell Spirax ASX R SAE 75W-90 is a fuel-efficient, axle fluid, designed to provide ultimate protection to the latest heavy-duty axles that call for an API GL-5 type product. 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 ASX R SAE 75W-90 is capable of extended oil drain and is approved by several OEMs for their extended drain specifications. Standard industry and commercial fleet testing have demonstrated a fuel efficiency improvement of over 1% when compared to several products in the same application.

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 GSX SAE 50

Performance Features and 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. *Please contact your local Shell representative for more information about extended oil drain intervals.*
- **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 ASX R SAE 75W-90 and have formally approved it against their specifications.

Specification and Approvals

Shell Spirax ASX R SAE 75W-90	
API	GL-5, MT-1
ArvinMeritor	O76-N, O76-E
DANA	SHAES-256 Rev C
International	TMS 6816
US Military	MIL-PRF-2105E / SAE J2360
Mack	GO-J Plus

Advice

Advice on applications not covered in this leaflet may be obtained from your Shell representative.

Health and Safety

Guidance on Health and Safety are available on the appropriate Material Safety Data Sheet that 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

Typical Physical Characteristics

Shell Spirax ASX R		75W-90
SAE Viscosity Grade	SAE J-306	75W-90
Appearance		Amber
Kinematic Viscosity cSt @ 40°C @ 100°C	ASTM D-445	103.0 15.0
Viscosity, cP @ -40°C	ASTM D-2983	90,000
Viscosity Index	ASTM D-2270	152
Density @ 15.6°C g/l (lbs/gal., 60°F)	ASTM D-1298	891 7.42
Flash Point COC °C / (°F)	ASTM D-92	215 / (420)
Pour Point °C / (°F)	ASTM D-97	<-45 / (<-49)

These characteristics are typical of current production. While future production will conform to Shell specification, variations in these characteristics may occur. The information contained herein is subject to change without notice.

RFQ No. _____

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: 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 the debt owed is an amount greater than one thousand dollars in the aggregate.

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.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "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 exceeds five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this 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.

Under penalty of law for false swearing (*West Virginia Code* §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: Harris Oil Co. Inc.

Authorized Signature: Narpe Harris Date: 9/20/10

State of West Virginia

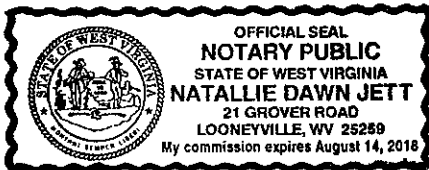
County of Roan, to-wit:

Taken, subscribed, and sworn to before me this 21st day of September, 2010.

My Commission expires August 14, 2018.

AFFIX SEAL HERE

NOTARY PUBLIC Natalie Dawn Jett



State of West Virginia

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 Resident Vendor Preference, if applicable.

- 1. Application is made for 2.5% resident 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% resident 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% resident 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% resident 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% resident 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% resident 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.

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: Harris Oil Co. Inc. Signed: Wayne Harris
 Date: 9/20/10 Title: President

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.