

Request for Proposal Number: 13-37

Addendum 1

Date: July 2, 2013

Acknowledgment of Addenda

The undersigned acknowledges receipt of the following addenda to the bidding document:

**THE COMPLETED ACKNOWLEDGEMENT OF ADDENDA FORM
SHOULD BE RETURNED WITH BID RESPONSE PACKAGE: NOT
SENT TO RIPTA SEPARATELY**

NOTE: Failure to acknowledge receipt of all addenda may cause the bid to be considered non-responsive to the solicitation. Acknowledged receipt of each addendum must be clearly established and included with the bid.

Name of Bidder

Street Address

City, State, Zip

Signature of Authorized Official

Date

Request for Proposal Number: 13-37

Addendum 1

Date: July 2, 2013

Please be advised that an addenda to IFB 13-37 has been posted on the State of Rhode Island Purchasing Web page at the following address:

www.purchasing.ri.gov/RVIP/ExternalBidSearch.asp

This addenda contains Request for Approved Equals and RIPTA's response to the specific requests.

RHODE ISLAND PUBLIC TRANSIT AUTHORITY

Invitation for Bids Number 13-37

VI.. REQUEST FOR APPROVED EQUAL FORM

**This form must be submitted electronically IN MICROSOFT WORD
FORMAT TO RIPTA CONTRACTS MANAGER**

**REQUEST FOR APPROVAL APPROVED EQUAL QUALIFICATION OR
CLARIFICATION**

Page: 80

Ref: IFB NO. 13-37

Project No. _____

To: **Rhode Island Public Transit Authority**

From: **Industrial Oil & Supply Co. Inc.**

Page & Reference: _____

Request Description

**Request approved equal status for "Universal Synthetic LV Dexron VI
Automatic Transmission Fluid"**

WITH

Pinnacle Oil Dexron VI.

Use Additional Sheet If More Space Is Required

Accepted: X Rejected: _____ See Addendum # _____

Explanation: J. Monti; 7-2-13



PRODUCT DATA SHEET

Premium Quality Lubricants

NATIONAL™ DEXRON VI ATF PREMIUM AUTOMATIC TRANSMISSION FLUID FOR GM

PRODUCT DESCRIPTION

NATIONAL™ Dexron VI is a high performance automatic transmission fluid approved by General Motors. It is formulated to meet the stringent viscometric, friction, wear and oxidation stability properties required in passenger car and light truck transmissions. It provides twice the service life and fuel economy compared to Dexron III and offers enhanced performance in new and old transmissions.

INDUSTRY AND OEM SPECIFICATIONS

- ◆ GM DEXRON VI
- ◆ GM DEXRON III/II (Obsolete)

APPLICATIONS

NATIONAL™ DEXRON VI is recommended for use in GM automatic transmissions built since 2006 with Hydramatic automatic transmissions. It is fully back serviceable where Dexron IIIH/Dexron III/Dexron IIE is specified by GM

TYPICAL PROPERTIES

	TEST	DEXRON VI
Viscosity @100°C	D445	6.0
Viscosity Index	D2770	151
Pour Point °C	D97	-454
Color	Visual	Red
BFV@-20°C, cP	D2983	1,053
BFV@-30°C, cP	D2983	3,164
BFV@-40°C, cP	D2983	12,030

PN2008JAN

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Project No. _____

To: Rhode Island Public Transit Authority

From: Industrial Oil & Supply Co. Inc.

Page & Reference: _____

Request Description

Request approved equal status for "Mobilube 80W90 Heavy Duty Plus"

WITH

Pinnacle Oil 80W90

Use Additional Sheet If More Space Is Required

Accepted: X Rejected: _____ See Addendum # _____

Explanation: J. Monti; 7-2-13



HDH

Heavy Duty Hypoid Gear Oil

HDH is amber to dark colored mineral oil. HDH oils are extreme pressure (EP) automotive gear lubricants made from high quality, high viscosity index (VI) paraffinic base oils. Their special additives make them particularly effective at providing high load-carrying protection with excellent rust, corrosion and foam prevention. Excellent oxidation control and thermal stability prevents the formation of sludge and deposits, leaving clean gears after many thousands of miles service.

HDH oils are also able to satisfy the top-up requirements of limited-slip differentials.

HDH is recommended for all automotive differentials, as well as transmissions where the manufacturer specifies the use of oils that meet the performance requirements of API MT-1.

HDH oils in outdoor industrial applications are suitable for enclosed gear sets. Their high film strength gives low wear rates even in slow speed, heavily-loaded gear sets.

HDH 80W90 LS are suitable for use in limited-slip differentials, giving strong performance in the Big Wheel / Little Wheel test as well as the Low Velocity Friction Apparatus.

Features

Meets or exceed the following severe performance requirements:

- API GL-5
- API MT-1
- Rockwell 076-A (80W90)
- Rockwell 076-D (85W140)
- US MIL-PRF-2105E
- Mack GO-J (approved)
- ZF

Benifits

- Outstanding service
- Full industry approvals
- Suitable for service in limited-slip differentials
- Proven performance over millions of miles



Lubricants

Version January 2013

sizes & part numbers

Typical performance results

SAE GRADE	75W90	80W90	80W140	85W140	80W90 LS
VISCOSITY (D-445)					
cSt @ 40°C	92.2	136.9	250.0	340.5	125.0
cSt @ 100°C	16.7	14.7	30.0	26.7	14.2
VISCOSITY INDEX (D-2270)	197	108	160	104	113
BROOKFIELD VISCOSITY (D-2983)					
cP @ -12°C	-	-	-	-	---
cP @ -26°C	-	109200	71200	142000	60000
cP @ -40°C	138000	-	-	-	---
POUR POINT (°C) (D-97)	-42	-33	-24	-20	-33
CHANNEL POINT (°C)	-43	-35	-30	-22	-35
DENSITY @ 15°C (D-4052) Kg/l	0.886	0.893	0.897	0.905	0.896
FLASH POINT (°C) (D-92)	194	234	228	246	222
TIMKEN LOAD (D-2782) (KG)	32	32	32	32	32

Available sizes & part numbers

HDH	946ml (1 US quart)	3.78L (1 US gal)	18.9L Pail (5.0 US gal)	60 L (15.85 US gal)	205L Drum (54.2 US gal)	1000L (264 US Gal)	Bulk
HDH 75W90			F0086840	F0005245	F0012450	F0005260	B0005201
HDH 80W90	F0005415	F0005426	F0087040	F0005445	F0012550	F0005460	B0005401
HDH 80W140			F0086940	F0005345	F0005350	F0005360	B0005301
HDH 85W140			F0087140	F0005545	F0012650		B0005501
HDH 80W90 LS			F0080340		F0073550		B0073501



Lubricants

www.irvinglubricants.com

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Page & Reference: _____

Request Description

Request approved equal status for "Mobil Grease XHP 0220 Series"

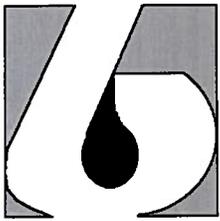
WITH

Industrial Oil Li-Plex HD #2

Use Additional Sheet If More Space Is Required

Accepted: X Rejected: _____ See Addendum # _____

Explanation: J. Monti; 7-2-13



Battenfeld

PRODUCT DATA

Li Plex HD #2

7/10

Code 11,063-2

TEST METHOD	DESCRIPTION	SPECIFICATIONS
	NLGI GRADE	2
ASTM D 217	CONE PENETRATION @ 77°F, WORKED 60 STROKES	265-295
ASTM D 128	THICKENER TYPE	LITHIUM COMPLEX
ASTM D 128	THICKENER CONTENT, %	8-12
ASTM D 2265	DROPPING POINT, °F	525 MIN
ASTM D 445	BASE OIL VISCOSITY CST @ 40°C CST @ 100°C	175-215 16-24
ASTM D 2270	VISCOSITY INDEX	95 MIN
VISUAL	COLOR	RED
VISUAL	APPEARANCE	SMOOTH
ASTM D 2509	TIMKEN OK LOAD LBS.	60 MIN
ASTM D 2596	FOUR BALL EP WELD PT. KG.	400 MIN
	LOAD WEAR INDEX	30 MIN
ASTM D 1743	RUST PREVENTION	PASS
ASTM D 4170	FRETTING PROTECTIONS WT. LOSS G.	10 MAX
ASTM D 3527	HIGH TEMP LIFE HRS	80 MIN
ASTM D 2266	FOUR BALL WEAR, SCAR DIA. M.M.	0.6 MAX
ASTM D 4693	LOW TEMP TORQUE @ -40°C., N•M	15.5 MAX

BATTENFELD GREASE & OIL CORP. OF NY
P. O. BOX 728 - 1174 ERIE AVENUE
NORTH TONAWANDA, NEW YORK 14120-0728
Phone: (716)695-2100 Fax: (716)695-0367

BATTENFELD-AMERICAN, INC.
1575 CLINTON STREET
BUFFALO, NEW YORK 14206-3064
Phone: (716)822-8410 Fax: (716) 823-5934

E-mail: info@battenfeld-grease.com
Web Site: www.battenfeld-grease.com
QS-9000/ISO 9001:2000 Registered

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To: Rhode Island Public Transit Authority

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Page & Reference: _____

Request Description

Request approved equal status for "Exxon Univis J-13"

WITH

Industrial Oil Hydraulic Oil AW32

Use Additional Sheet If More Space Is Required

Accepted: X Rejected: _____ See Addendum # _____

Explanation: J. Monti; 7-2-13



PRODUCT DATA SHEET

Premium Quality Lubricants

NATIONAL™ VHVI HYDRAULIC OILS

High viscosity Index & Low Pour Point

PRODUCT DESCRIPTION

NATIONAL™ VHIV hydraulic oils are designed to give long service in high-output hydraulic systems using vane, piston or gear pumps. These oils have high viscosity index (VI) and low pour point for use over a wider temperature range than conventional anti-wear hydraulic fluids. *Since these oils contain a Zincdithiophosphate anti-wear agent, it should not be used in those specialized pumps having silver-faced bearing surfaces.* These oils are recommended for high-pressure pumps and hydraulic systems from leading manufacturers such as:

INDUSTRY AND OEM SPECIFICATIONS

- ◆ John Barnes
- ◆ Denison HF-O
- ◆ Cincinnati Machine (appropriate viscosity grades)
- ◆ Bellows-Valveair
- ◆ Dynes
- ◆ Sundstrand
- ◆ Hydrec0
- ◆ Pesco
- ◆ Racine, Variable volume pump
- ◆ Vickers M-2950-S (mobile) and I-286-S (industrial)

APPLICATIONS

NATIONAL™ VHIV hydraulic oils are ideally suited for piston, gear and vane pump used in industrial, marine, woodlands, and mining and other mobile hydraulic systems operating in cold weather or with wide temperature fluctuations. The typical applications also include hydraulic control systems for machine tools and press, mobile construction equipment, hydraulic elevators, hoists and lifts.

TYPICAL PROPERTIES

ISO GRADE	TEST	15	22	32	46	68	100
Viscosity @100°C	D445	3.84	4.86	6.42	8.3	10.5	13.1
Viscosity @40°C	D445	15.23	22.77	34.6	50.0	67.7	100
Viscosity Index	D2770	151	141	140	140	143	130
Pour Point °C	D97	-54	-54	-50	-41	-40	-40
Color	D1500	0.5	0.5	0.5	1.0	1.5	1.5

PN2009MAR

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The product described above is designed for a specific use and may not be valid for other uses not specified in our specification sheet or in applications not requiring this specific product. Pinnacle Oil believes that the information presented in this specification is accurate at the time written and is based upon internally generated information and information as presented by its vendors. No representation, warranty or guarantee is made as to its accuracy or completeness. We do not accept any liability for any loss or damage that may occur from the use of this information.

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Ref: IFB NO. 13-37

Project No. _____

To: Rhode Island Public Transit Authority

From: Industrial Oil & Supply Co. Inc.

Page & Reference: _____

Request Description

Request approved equal status for "Exxon Superflo SAE 5W30"

WITH

Pinnacle Oil Premium 5W30

Use Additional Sheet If More Space Is Required

Accepted: X Rejected: _____ See Addendum # _____

Explanation: J. Monti; 7-2-13



PRODUCT DATA SHEET

Premium Quality Lubricants

NATIONAL™ PREMIUM MOTOR OILS PREMIUM CONVENTIONAL MOTOR OILS

PRODUCT DESCRIPTION

NATIONAL™ PREMIUM motor oils are formulated from quality base stocks combined with advanced additive technology to protect today's engines against undesirable deposits, viscosity and thermal breakdown under sever service conditions.

FEATURES & BENEFITS

- Excellent low-temperature pumpability for protection during cold starts
- Formulated to protect emissions control system catalyts
- Keep engine clean by minimizing deposit formation
- Improved gas mileage in lower viscosity grades (5W-20; 5W-30 and 10W-30) by reducing friction
- Reduce oil consumption by reducing volatility and oil evaporation

INDUSTRY AND OEM SPECIFICATIONS

- ◆ API SN/RC; SM/SL
- ◆ API SJ and SH (obsolete)
- ◆ ILSAC GF-5 (5W-20, 5W-30 and 10W-30)
- ◆ FORD (WSS-M2C945A) (5W-20)
- ◆ FORD (WSS-M2C946A) (5W-30)
- ◆ CHRYSLER MS-6395

APPLICATIONS

NATIONAL™ PREMIUM motor oils meet performance requirements of all naturally aspirated, turbo charged and supercharged gasoline fueled passenger cars, SUV's, Vans and light duty trucks including domestic and imports.

TYPICAL PROPERTIES

SAE GRADE	TEST	5W-20	5W-30	10W-30	10W-40	20W-50	30
Viscosity @100°C	D445	8.70	10.5	10.3	14.2	19.5	10.2
Viscosity Index	D2770	150	153	140	148	121	110
CCS Viscosity	D5293						
@-30°C (cP max.)		6600	6600	NA	6600	NA	NA
@-25°C (cP max.)		NA	NA	6600	6600	NA	NA
@-15°C (cP max.)		NA	NA	NA	NA	6600	NA
Pour Point °C	D97	-39	-39	-35	-30	-25	-30
Color	D1500	2.5	2.5	2.5	2.5	2.5	2.5

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Project No. _____

To: Rhode Island Public Transit Authority

From: Industrial Oil & Supply Co. Inc.

Page & Reference: _____

Request Description

Request approved equal status for "Exxon Humble Hydraulic H46"

WITH

Industrial Oil Hydraulic Oil AW46

Use Additional Sheet If More Space Is Required

Accepted: X Rejected: _____ See Addendum # _____

Explanation: J. Monti; 7-2-13



PRODUCT DATA SHEET

Premium Quality Lubricants

NATIONAL™ VHVI HYDRAULIC OILS

High viscosity Index & Low Pour Point

PRODUCT DESCRIPTION

NATIONAL™ VHIV hydraulic oils are designed to give long service in high-output hydraulic systems using vane, piston or gear pumps. These oils have high viscosity index (VI) and low pour point for use over a wider temperature range than conventional anti-wear hydraulic fluids. *Since these oils contain a Zincdithiophosphate anti-wear agent, it should not be used in those specialized pumps having silver-faced bearing surfaces.* These oils are recommended for high-pressure pumps and hydraulic systems from leading manufacturers such as:

INDUSTRY AND OEM SPECIFICATIONS

- ◆ John Barnes
- ◆ Denison HF-O
- ◆ Cincinnati Machine (appropriate viscosity grades)
- ◆ Bellows-Valveair
- ◆ Dynes
- ◆ Sundstrand
- ◆ Hydrec0
- ◆ Pesco
- ◆ Racine, Variable volume pump
- ◆ Vickers M-2950-S (mobile) and I-286-S (industrial)

APPLICATIONS

NATIONAL™ VHIV hydraulic oils are ideally suited for piston, gear and vane pump used in industrial, marine, woodlands, and mining and other mobile hydraulic systems operating in cold weather or with wide temperature fluctuations. The typical applications also include hydraulic control systems for machine tools and press, mobile construction equipment, hydraulic elevators, hoists and lifts.

TYPICAL PROPERTIES

ISO GRADE	TEST	15	22	32	46	68	100
Viscosity @100°C	D445	3.84	4.86	6.42	8.3	10.5	13.1
Viscosity @40°C	D445	15.23	22.77	34.6	50.0	67.7	100
Viscosity Index	D2770	151	141	140	140	143	130
Pour Point °C	D97	-54	-54	-50	-41	-40	-40
Color	D1500	0.5	0.5	0.5	1.0	1.5	1.5

PN2009MAR

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Ref: IFB NO. 13-37
Project No. _____

To: Rhode Island Public Transit Authority

From: Industrial Oil & Supply Co. Inc.

Page & Reference: _____

Request Description

Request approved equal status for "Mobil Delvac Synthetic Gear Oil"

WITH

Irving Oil Syn HDH 75W90

Use Additional Sheet If More Space Is Required

Accepted: _____ Rejected: X See Addendum # _____

Explanation: Does not meet ARVIN Meritor 0-76N Please see Meritor
Maintenance Manual 23A Revised 04-243



SYN HD & IDO

Heavy Duty Synthetic Gear Oil

These lubricants are intended for the lubrication of transmissions, transfer cases, differentials and planetary gear sets found in trucks and construction equipment. They use a synthetic base for excellent stability, long life, extreme temperature operation, improved fuel economy, reduced wear and cleaner components.

SYN HDH and **SYN IDO** are suitable alternatives for use where an Eaton Roadranger™ product is recommended. Mack Trucks Inc approves **SYN HDH** for use under its GO-J and GO-J Plus programs, and also approves **SYN IDO** under its TO-A Plus program. The US Military also approves the use of **SYN HDH** under its Mil-PRF-2105E program.

Features

Meets or exceeds the following and other specifications:

SYN HDH 75W90:

- API MT-1
- API GL-5
- Mack GO-J Plus
- SAE J2360

SYN IDO 50:

- Eaton PS-164 REV 7
- Mack TO-A Plus
- ARVIN MERITOR 0-81
- INTERNATIONAL TMS 6816

Irving **SYN HDH** has a complete protection package for the extreme pressure (EP) conditions of differentials, including limited slip, and planetaries working under the heaviest load conditions. It meets the performance requirements of API* GL-5, Rockwell Corporation and Dana Corporation.

Irving **SYN HDH** is available in 2 multi-grades to cover the broadest possible temperature ranges. The use of synthetic base rather than mineral oil reduces friction in extreme conditions, increasing fuel economy by making more horsepower available to the driving wheels.

SYN IDO is specially formulated for manual transmissions in class 6, 7 and 8 trucks where straight mineral oils (non-EP) or SAE 50 diesel engine oil is usually recommended. Irving **SYN IDO** has wider operating temperature range than the alternatives. At low temperatures, this gives easier shifting with less drag and gear wear, and lubricating vital transmission parts quickly. At high temperatures, this oil provides a thicker protective oil film than mineral oil lubricants, reducing friction and wear. Taken together, these advantages mean better fuel economy and transmission life.

NOTE: SYN IDO IS NOT APPROVED FOR USE AS ENGINE OIL.

When switching from mineral to synthetic lubricants, the two may not be compatible so it is important to drain the unit completely before refilling with the synthetic lubricant. After the change, all seal areas should be checked for the first 20,000 Km.

Benefits

- Extreme protection
- Long life – enhanced fluid and equipment durability
- Excellent stability
- Improved economy
- Improved Component Protection
- Reduces heat

*API : American Petroleum Institute

SYN HDH & IDO

Typical performance results

NAME	SYN HDH	SYN IDO
SAE GRADE	75W90	50
VISCOSITY (D-445)		
cSt @ 40°C	137	132
cSt @ 100°C	17.5	17.5
VISCOSITY INDEX (D-2270)	152	146
BROOKFIELD VISC. (D-2602)		
cP @ -18°C	7125	--
cP @ -26°C	--	24250
cP @ -40°C	140000	104000
POUR POINT (°C) (D-97)	< -45	< -45
CHANNEL POINT (°C) (FTMS 3456)	< -51	--
FLASH POINT (°C) (D-92)	205	221
FOAM PREVENTION (D-892)		
SEQUENCE I	PASS	PASS
SEQUENCE II	PASS	PASS
SEQUENCE III	PASS	PASS
COPPER STRIP CORROSION (D-130)		
3 Hrs. @ 121°C	PASS	PASS

Available sizes & part numbers

	18.9 L (5.0 US Gal)	60L (15.85 US Gal)	205L (54.2 US Gal)	500L (132 US Gal)	1000L (264 US Gal)	1200L (317 US Gal)	Bulk
SYN HDH 75W90 R			F0076450				
SYN HDH 75W90	F0085940	F0020045	F0073650				
SYN IDO 50	F0086040	F0020245	F0074750				

Check with sales representative or website for the latest product approvals.



Lubricants

www.irvinglubricants.com

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Request Description

**Request approved equal status for "Mobil Aero HF Series Aviation
Hydraulic Fluid"**

WITH

Pinnacle Oil VHVI AW32

Use Additional Sheet If More Space Is Required

Accepted: X Rejected: _____ See Addendum # _____

Explanation:

J. Monti, 7-2-13



PRODUCT DATA SHEET

Premium Quality Lubricants

NATIONAL™ VHVI HYDRAULIC OILS

High viscosity Index & Low Pour Point

PRODUCT DESCRIPTION

NATIONAL™ VHIV hydraulic oils are designed to give long service in high-output hydraulic systems using vane, piston or gear pumps. These oils have high viscosity index (VI) and low pour point for use over a wider temperature range than conventional anti-wear hydraulic fluids. *Since these oils contain a Zincdithiophosphate anti-wear agent, it should not be used in those specialized pumps having silver-faced bearing surfaces.* These oils are recommended for high-pressure pumps and hydraulic systems from leading manufacturers such as:

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- ◆ Cincinnati Machine (appropriate viscosity grades)
- ◆ Bellows-Valveair
- ◆ Dynes
- ◆ Sundstrand
- ◆ Hydrec0
- ◆ Pesco
- ◆ Racine, Variable volume pump
- ◆ Vickers M-2950-S (mobile) and I-286-S (industrial)

APPLICATIONS

NATIONAL™ VHIV hydraulic oils are ideally suited for piston, gear and vane pump used in industrial, marine, woodlands, and mining and other mobile hydraulic systems operating in cold weather or with wide temperature fluctuations. The typical applications also include hydraulic control systems for machine tools and press, mobile construction equipment, hydraulic elevators, hoists and lifts.

TYPICAL PROPERTIES

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Viscosity Index	D2770	151	141	140	140	143	130
Pour Point °C	D97	-54	-54	-50	-41	-40	-40
Color	D1500	0.5	0.5	0.5	1.0	1.5	1.5

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Industrial Oil AW32 / AW46

The **INDUSTRIAL OIL HYDRAULIC** series of oils are premium performance anti-wear hydraulic oils. They are blended from quality paraffinic mineral oil for its stability and high natural Viscosity Index, which gives these oils their ability to maintain their viscosity over a relatively wide range of operating temperatures. All grades of **INDUSTRIAL OIL HYDRAULIC** oils are fortified with additives to provide the best possible wear-protection and service life.

Hydraulic oil performance is defined in three ways:

- Ability to protect hydraulic pumps and motors from wear damage, particularly at the high operating pressures often used in modern hydraulic systems.
- Ability to resist deterioration, particularly oxidation, which is caused by the effect of air on the oil and thermal degradation, caused by the effect of heat.
- Ability to resist the harmful effects of water contamination, which can hydrolyze additives, accelerates oxidation, promote sludge formation and cause filters to plug.

INDUSTRIAL OIL HYDRAULIC oils provide superior performance in all critical areas as proven by industry standard tests, many of them developed by the pump manufacturers themselves.

INDUSTRIAL OIL HYDRAULIC oils are suitable for use with all types of hydraulic pumps and motors, even at pressures as high as 5,000 psi (350 Bar). They are NOT recommended for use with those pumps that contain silver-plated parts.

INDUSTRIAL OIL HYDRAULIC oils meet or exceed the following industry performance specifications:

- Denison HF-0 (grades 32, 46 and 68), HF-2
- Cincinnati-Milacron P-68, P-69, P-70 (grades 32, 68 and 46 respectively)
- Racine model 'S'
- Vickers M-2950-S, I-286-S, 35VQ25
- ASTM D-2882 (includes Vickers V-104C vane pump test)
- Bosch Rexroth Corp.
- Sundstrand
- Linde
- CGSB 3-GP-36Mb – grades 22, 32, 68 and 100 (Canadian Government and Military standard)

INDUSTRIAL OIL HYDRAULIC offer the following benefits:

- Excellent corrosion and wear protection for long pump life
- Excellent foam resistance for efficient pump operation
- Excellent water tolerance where contamination is unavoidable
- Outstanding oxidation resistance for long service life

HYDRAULIC OIL	32	46
COLOUR (ASTM D1500)	1.0	1.5
VISCOSITY (D-445)		
CST @ 40°C	32.4	47.4
CST @ 100°C	6.0	6.8
DENSITY (D-4052), KG/L	0.8765	0.8797
BROOKFIELD VISCOSITY (D-2983), CP @ -30°C	-	-
VISCOSITY INDEX (D-2270)	133	96
POUR POINT (D-97), °C	-33	-33
FLASH POINT (D-92), °C	202	238
OXIDATION LIFE (D-943), HRS	4000+	4000+
CORROSION RUST PROTECTION	PASS	PASS
COPPER CORROSION		
3HR/100 °C	1a	1a
ZINC CONTENT, %WT	0.04	0.04
USEFUL OPERATING TEMP RANGE, °C – MIN/MAX	-12/64	-6/75
DEMULSE (D-1401), TIME TO 40/40/0, MIN.	10	5

RHODE ISLAND PUBLIC TRANSIT AUTHORITY
Invitation for Bids Number 13-37

VI.. REQUEST FOR APPROVED EQUAL FORM
This form must be submitted electronically IN MICROSOFT WORD
FORMAT TO RIPTA CONTRACTS MANAGER

**REQUEST FOR APPROVAL APPROVED EQUAL QUALIFICATION OR
CLARIFICATION**

Page: 84

Ref: IFB NO. 13-37
Project No. _____

To: Rhode Island Public Transit Authority

From: Industrial Oil & Supply Co. Inc.

Page & Reference: _____

Request Description

Request approved equal status for "Mobil HW32 Hydraulic Oil"

WITH

Industrial Oil Hydraulic Oil AW32

Use Additional Sheet If More Space Is Required

Accepted: X Rejected: _____ See Addendum # _____

Explanation: J. Monti, July 2, 2013



PRODUCT DATA SHEET

Premium Quality Lubricants

NATIONAL™ VHVI HYDRAULIC OILS

High viscosity Index & Low Pour Point

PRODUCT DESCRIPTION

NATIONAL™ VHIV hydraulic oils are designed to give long service in high-output hydraulic systems using vane, piston or gear pumps. These oils have high viscosity index (VI) and low pour point for use over a wider temperature range than conventional anti-wear hydraulic fluids. *Since these oils contain a Zincdithiophosphate anti-wear agent, it should not be used in those specialized pumps having silver-faced bearing surfaces.* These oils are recommended for high-pressure pumps and hydraulic systems from leading manufacturers such as:

INDUSTRY AND OEM SPECIFICATIONS

- ◆ John Barnes
- ◆ Denison HF-O
- ◆ Cincinnati Machine (appropriate viscosity grades)
- ◆ Bellows-Valveair
- ◆ Dynes
- ◆ Sundstrand
- ◆ Hydrec0
- ◆ Pesco
- ◆ Racine, Variable volume pump
- ◆ Vickers M-2950-S (mobile) and I-286-S (industrial)

APPLICATIONS

NATIONAL™ VHIV hydraulic oils are ideally suited for piston, gear and vane pump used in industrial, marine, woodlands, and mining and other mobile hydraulic systems operating in cold weather or with wide temperature fluctuations. The typical applications also include hydraulic control systems for machine tools and press, mobile construction equipment, hydraulic elevators, hoists and lifts.

TYPICAL PROPERTIES

ISO GRADE	TEST	15	22	32	46	68	100
Viscosity @100°C	D445	3.84	4.86	6.42	8.3	10.5	13.1
Viscosity @40°C	D445	15.23	22.77	34.6	50.0	67.7	100
Viscosity Index	D2770	151	141	140	140	143	130
Pour Point °C	D97	-54	-54	-50	-41	-40	-40
Color	D1500	0.5	0.5	0.5	1.0	1.5	1.5

PN2009MAR

5009 WEST 81ST STREET INDIANAPOLIS INDIANA 46268 800-829-8899 FAX 317-875-0889

The product described above is designed for a specific use and may not be valid for other uses not specified in our specification sheet or in applications not requiring this specific product. Pinnacle Oil believes that the information presented in this specification is accurate at the time written and is based upon internally generated information and information as presented by its vendors. No representation, warranty or guarantee is made as to its accuracy or completeness. We do not accept any liability for any loss or damage that may occur from the use of this information.

RHODE ISLAND PUBLIC TRANSIT AUTHORITY
Invitation for Bids Number 13-37

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To: Rhode Island Public Transit Authority

From: Industrial Oil & Supply Co. Inc.

Page & Reference: _____

Request Description

**Request approved equal status for "Mobil SHC 629 Synthetic Gear and
Bearing Oil"**

WITH

Irving Oil Syn Gear 150

Use Additional Sheet If More Space Is Required

Accepted: X Rejected: _____ See Addendum # _____

Explanation: J. Monti; July 2, 2013

SYN GEAR

Full Synthetic Gear Oil



Features

SYN GEAR oils meet or exceed the following industry standards:

- US Steel 222 and 224
- AGMA 250.04 and 9005-D94
- DIN 51517, part 3
- David Brown S1.53 101
- Cincinnati-Milacron P-35, P-59, P-63, P-74, P-76, P-77, P-78
- FZG Load Stage 12 Pass

Benefits

- Long life – less waste oil generated
- Compatible with mineral gear oils (except **SYN GEAR PG** oils)
- Excellent stability
- Wide choice of grades available
- Top level performance

SYN GEAR oils are industrial extreme pressure (EP) gear oils made with synthetic bases and top performance additives. Their chief advantage over mineral oils is their exceptional resistance to thermal and oxidative degradation, which gives a significantly longer oil life where contamination can be avoided. In addition, since synthetic oils have a degree of natural 'multi-grading',

SYN GEAR oils offer a wider operating temperature range than the equivalent grades of mineral-based gear oils. This can be important in applications where low temperature start-up may be needed, or where there is a wide variation in ambient temperatures.

SYN GEAR oils have highly effective EP additives to prevent the welding and transfer of metal between the contact surfaces of heavily-loaded gear teeth. This reduces the possibility of damage to the gear surfaces even when shock loading is present.

SYN GEAR oils are non-corrosive to gearbox and bearing materials, and will prevent the rusting of ferrous (iron-containing) metals. They also separate readily from water, allowing it to settle to the bottom of the gearbox where it can be drained away. Water mixed with the oil would reduce its lubricating ability and act as a promoter of oxidation and other degenerative processes.

SYN GEAR PG uses a Poly Glycol synthetic base. These oils have very low coefficient of friction and are ideal for reducing frictional wear damage where rubbing contact occurs, as in worm gear sets. The PG oils are non-corrosive to gearbox and bearing materials that contain copper and its alloys, such as brass and bronze.

SYN GEAR and **SYN GEAR PG** are not recommended where constant operating temperatures exceed 100°C. In the appropriate grades, these oils are recommended for all types of gear sets except automotive differentials: In those applications, we recommend **SYN HDH**.

SYN GEAR

Typical performance results

ISO GRADE	150	220	460 PG	1000
AGMA GRADE	4 EP	5 EP	7 EP	8A EP
VISCOSITY (D-445) cSt @ 40°C cSt @ 100°C	150 20.2	220 27.5	390 56.0	1003 84.1
VISCOSITY INDEX (D-2270)	159	161	220	165
POUR POINT (°C) (D-97)	-40	-38	-29	N/D
FLASH POINT (°C) (D-92)	248	249	183	284
TIMKEN LOAD (Kg) (D-2782)	36.2	36.2	16	36.2
4-BALL WEAR SCAR DIAM. (mm) (D-2266) 1Hr., 40 Kg, 1200RPM, @ 75°C	0.3	0.3	0.36	0.3
4-BALL EP (D-2783) LD. WEAR INDEX (Kg)	51	51	N/D	51
FZG LOAD STAGE	12	12	12	12
FOAM PREVENTION (D-892) SEQ. I (75°F) SEQ. II (200°F) SEQ. III (75°F)	0/0 0/0 0/0	0/0 0/0 0/0	0/0 0/0 0/0	0/0 0/0 0/0
DEMULSIBILITY (D-2711) WATER IN OIL % TOTAL FREE WATER (mL) EMULSION (mL)	0.5 82.0 0	0.5 82.0 0	N/D N/D N/D	0.5 82.0 0
RUST PREVENTION (D-665) WITH DISTILLED WATER	PASS	PASS	PASS	PASS

Available sizes & part numbers

	3.78L (1 US gal)	18.9 L Pail (5.0 US gal)	205L Drum (54.2 US gal)	205L Metal Drum (54.2 US gal)	1000L Cube (264 US gal)	Bulk
Syn Gear 150		F0085740	F0071950			
Syn Gear 220		F0085840		F0019650		
Syn Gear 460 PG		F0079140	F0035050			
Syn Gear 1000			F0037350			

Check with sales representative or website for the latest product approvals.



Lubricants

www.irvinglubricants.com

RHODE ISLAND PUBLIC TRANSIT AUTHORITY
Invitation for Bids Number 13-37

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**REQUEST FOR APPROVAL APPROVED EQUAL QUALIFICATION OR
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Ref: IFB NO. 13-37
Project No. _____

To: Rhode Island Public Transit Authority

From: Industrial Oil & Supply Co. Inc.

Page & Reference: _____

Request Description

Request approved equal status for "Mobil DTE Oil Heavy Medium"

WITH

Pinnacle Oil Turbine Oil 68

Use Additional Sheet If More Space Is Required

Accepted: X Rejected: _____ See Addendum # _____

Explanation: J. Monti; 7-2-13



PRODUCT DATA SHEET

Premium Quality Lubricants

NATIONAL™ PREMIUM R&O TURBINE OILS

Premium General Purpose turbine quality R&O oils

PRODUCT DESCRIPTION

NATIONAL™ Premium R&O turbine oils are formulated to provide superior oxidation stability, rust & corrosion protection, minimum foam, fast air release, rapid water separation and excellent thermal stability. These oils are designed to meet the demands of gas, steam, and hydroelectric turbine bearing lubrication, and lubrication of reduction gears in marine operations. These oils meet the following requirements:

INDUSTRY AND OEM SPECIFICATIONS

- ◆ General Electric GEK 32568E
- ◆ Denison HF-O, HF-1
- ◆ Cincinnati Machine (appropriate viscosity grades) P38, P54 and P57
- ◆ Solar Turbines ES 9-224U

APPLICATIONS

NATIONAL™ Premium R&O turbine oils provide dependable turbine lubrication with trouble free performance. These oils meet the requirements of major turbine builders including GE, Siemens, Westinghouse, ABB Alstom, Elliot and Demag Delaval steam turbines. General recommendations for the various kinds of turbine are:

Type	Viscosity (cSt)@40C	ISO Grade
Steam Turbines		
Direct Drive-ring oiled w/water cooling	54-75	68
Direct Drive – forced feed	30-38	32
Gear Drive – forced feed	54-75	68
Hydraulic Turbines		
Large Vertical Machines	54-75	68
Small Vertical Machines	30-38	32
Horizontal Machines	30-38	32

TYPICAL PROPERTIES

ISO GRADE	TEST	32	46	68	100	150	220	320	460	
Viscosity @100°C	D445	5.55	6.75	8.72	12.0	14.5	18.5	22.8	29.3	
Viscosity @40°C	D445	32	46	68	100	150	220	320	460	
Viscosity Index	D2770	108	100	100	100	95	93	93	93	
Oxidation Stability,hrs	D943	4000+	4000+	3000+	3000+	NA	NA	NA	NA	
Color	D1500	0.5	0.5	1.0	1.5	2.5	3.5	4.0	4.5	PN2009MAR

RHODE ISLAND PUBLIC TRANSIT AUTHORITY
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**REQUEST FOR APPROVAL APPROVED EQUAL QUALIFICATION OR
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Ref: IFB NO. 13-37
Project No. _____

To: Rhode Island Public Transit Authority

From: Industrial Oil & Supply Co. Inc.

Page & Reference: _____

Request Description

Request approved equal status for "Mobil Multipurpose Tractor Lubricant"

WITH

Pinnacle Oil Agripro UTHF

Use Additional Sheet If More Space Is Required

Accepted: X Rejected: _____ See Addendum # _____

Explanation: J. Monti; 7-2-13



PRODUCT DATA SHEET

Premium Quality Lubricants

AGRIPRO™ UNIVERSAL TRACTOR HYDRAULIC FLUID (UTHF)

Premium transmission, hydraulic, wet brake fluid for tractors

PRODUCT DESCRIPTION

AGRIPRO™ Universal Tractor Hydraulic Fluid (UTHF) is an all season hydraulic and transmission fluid designed to meet the special lube requirements of most tractors and implements. It is formulated to provide extreme pressure (EP) protection, resistance to oxidation and corrosion, and moisture dispersion.

INDUSTRY AND OEM SPECIFICATIONS

Agripro UTHF meets the performance requirements of the following:

- ◆ AGCO-ALLIS, ALLIS-CHALMERS (Deutz-Allis) Powerfluid 821XL, PF821, 272843, 257541, 2466
- ◆ Allison C-4, C-3
- ◆ Case JIC-143, 144, 145, 185, MS-1210/1209/1207/1206/1205/1204
- ◆ Caterpillar TO2
- ◆ Clark Transmissions MS266 (lift truck)
- ◆ Dennison HF-0, HF-1, HF-2
- ◆ Heston-Fiat AF-87
- ◆ John Deere J20C/20A/20B/14B/C, JD 303
- ◆ Ford New Holland M2C134-A/B/C/D, M2C53-B, M2C48-B, M2C86-B, FNHA-2-C-200/201, ESN-M2C41-B
- ◆ Kubota UDT
- ◆ International Harvester IHC B-6/B-5 (HY-Tran)
- ◆ Landini (M1135)
- ◆ Massey Ferguson M1141 (Permatran III), M1135, M1129A, M1127 A/B
- ◆ Minneapolis-Moline 35154/35202/35301
- ◆ Oliver Type 55 & S3727B Fluid
- ◆ Renk 874 A/B Transmission
- ◆ Steiger SEMS 17001
- ◆ Vickers M-2950-S, I-286-S
- ◆ White Farm Q-1286/1705/1766B/1802 (Type 55)

APPLICATIONS

Agripro™ UTHF is recommended for use in tractors and other farm equipment.

TYPICAL PROPERTIES

	TEST	15W20
Viscosity @100°C	D445	9.2
Color	D1500	L2.5
Pour Point °C	D97	-35

PN2009SEP

RHODE ISLAND PUBLIC TRANSIT AUTHORITY
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Ref: IFB NO. 13-37
Project No. _____

To: Rhode Island Public Transit Authority

From: Industrial Oil & Supply Co. Inc.

Page & Reference: _____

Request Description

Request approved equal status for "15W-40 Motor Oil"

WITH

Pinnacle Oil FleetPro Ultra 15W40 CJ-4

Use Additional Sheet If More Space Is Required

Accepted: X Rejected: _____ See Addendum # _____

Explanation: J. Monti; July 2, 2013



PRODUCT DATA SHEET

Premium Quality Lubricants

FLEETPRO™ ULTRA MOTOR OILS ALL SEASON HIGH PERFORMANCE DIESEL ENGINE OIL

PRODUCT DESCRIPTION

FLEET PRO™ ULTRA heavy duty diesel engine oils are designed for high-speed, four stroke engines designed to meet 2007 model year on-highway exhaust emission standards. CJ-4 oils are compounded for use in all applications with diesel fuels ranging in sulfur content up to 500 ppm (0.05% by weight). However, use of these oils with greater than 15 ppm (0.0015%) sulfur fuel may impact exhaust after-treatment system durability and/or drain interval. They are effective at sustaining emission control system durability where particulate filters and other advanced after-treatment systems are used. Optimum protection is provided for control of catalyst poisoning, particulate filter blocking, foaming, oxidative thickening and viscosity loss due to shear. When using CJ-4 oils with higher than 15 ppm sulfur fuel, consult the engine manufacturer for service interval.

INDUSTRY AND OEM SPECIFICATIONS

- * API CJ-4/CI-4 Plus/CI-4 and CH-4
- * API SM and SL
- * ACEA E7-04
- * Mack EO-O Premium Plus 07/03/PP
- * Cummins CES 20081
- * Volvo VDS 4/3 and 2
- * CAT ECF-3/1
- * Detroit Diesel 93K218
- * Mercedes-Benz p228.3
- * Man 3275
- * Allison C4 (demonstration)
- * Global DHD-1
- * JASO DH-2
- * Renault RLD-3
- * MIL-PRF-2104H QUALITY

APPLICATIONS

FLEETPRO™ ULTRA motor oils are recommended for heavy duty diesel and mixed fleets in all types of over the road service. These oils are excellent choice for use in diesel powered equipment provided by Caterpillar, Cummins, John Deere, Detroit Diesel, Mack, Mercedes-Benz, International and Volvo engine in all types of service.

TYPICAL PROPERTIES

SAE GRADE	TEST	15W40	10W-30
Viscosity @100°C	D445	15.6	10.5
Viscosity Index	D2770	132	153
CCS Viscosity @-25°C (cP max.)	D5293	NA	6600
@-20°C (cP max.)		7000	NA
Pour Point °C	D97	-30	-39
TBN	D2896	10	10
Sulfated Ash mass%	D874	0.99	0.99
HTHS @150C, cP	D4683	4.2	3.5

PN2009MAR

RHODE ISLAND PUBLIC TRANSIT AUTHORITY

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Project No. _____

To: Rhode Island Public Transit Authority

From: Industrial Oil & Supply Co. Inc.

Page & Reference: _____

Request Description

Request approved equal status for "Urea Fluid Blue DEF"

WITH

Irving Oil Terracair DEF

Use Additional Sheet If More Space Is Required

Accepted: X

Rejected: _____

See Addendum # _____

Explanation: **J. Monti; 7-2-13**

DEF Diesel Exhaust Fluid



IRVING DEF is a 32.5% aqueous Urea Solution, AUS 32, a manufactured product of technically pure urea mixed with demin quality water designed to meet the specifications of DIN 70070:2005 and ISO 22241 1:2006 for NOx abatement technologies.

IRVING DEF is certified as a Diesel Exhaust Fluid by the American Petroleum Institute.

IRVING DEF transforms harmful nitrogen oxide emissions from diesel powered vehicles into harmless water vapor and nitrogen.

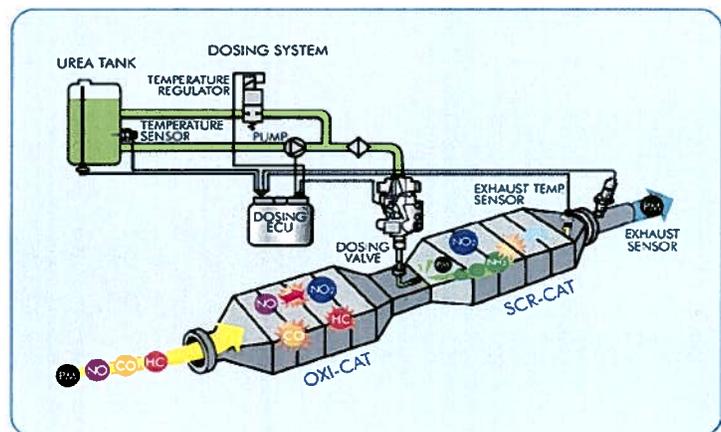
IRVING DEF is contained in a separate tank and sprayed from the SCR (Selective Catalytic Reduction) systems into the exhaust gases.

Features

- API Certified
- Nontoxic, nonpolluting, nonhazardous and non-flammable
- Smells like ammonia
- Store in cool dry well-ventilated area out of direct sunlight

Benefits

- 2 year shelf life if kept out of direct sun
- Transforms harmful emissions to water vapor
- Adheres to clean air initiatives
- Selective Catalytic Reduction systems can provide better fuel mileage and create less pollution



DEF Diesel Exhaust Fluid

Typical performance results

Typical Chemical and Physical Analysis	
Parameter	Typical
Urea Concentration	32.5 +/- 0.7%
Specific gravity at 20° C	1.087 – 1.093 kg/m ³
Refractive index at 20° C	1.3814 – 1.3843
Free Ammonia (alkalinity)	0.2% max
Biuret	0.3% max
Formaldehyde	None
Insoluble matter	20 ppm max
Phosphates	0.5 ppm max
Calcium	0.5 ppm max
Iron	0.5 ppm max
Copper	0.2 ppm max
Zinc	0.2 ppm max
Chromium	0.2 ppm max
Nickel	0.2 ppm max
Aluminum	0.5 ppm max
Magnesium	0.5 ppm max
Sodium	0.5 ppm max
Potassium	0.5 ppm max
Water quality	Demin—ISO 3696 applicable

Available sizes & part numbers

	2 x 2.5 Gallon Case	208 L	1041L cube	1250 L cube	Bulk
Irving DEF	F0102520	F0102550	F0102560	F0102565	B0102501

Check with sales representative or website for the latest product approvals.



Lubricants

www.irvinglubricants.com

RHODE ISLAND PUBLIC TRANSIT AUTHORITY
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Project No. _____

To: Rhode Island Public Transit Authority

From: Industrial Oil & Supply Co. Inc.

Page & Reference: _____

Request Description

**Request approved equal status for "Security Heavy Duty, Fully Formulated
Pre Mix Antifreeze"**

WITH

Irving Oil IDC Premixed

Use Additional Sheet If More Space Is Required

Accepted: X Rejected: _____ See Addendum # _____

Explanation: J. Monti; 7-2-13

IDC Extended Life Antifreeze

Long Life Diesel Antifreeze



Features

Irving **Extended Life Diesel Coolant** meets or exceeds the following industry standards:

- ASTM D-3306, D-6210
- JIS K-2234
- TMC RP 329
- Detroit Diesel 7SE298
- CAT EC-1
- MTU MTL 5048
- Low silicate, phosphate, & amine free
- For use in on-road, off-road, and marine applications

Benefits

- Initial fill service of 480,000km (300,000 miles), 4 years or 6,000 hours
- Maximum service life — 960,000km (600,000 miles), 12,000 hours or 6 years between changes if used after a complete drain, flush and fill
- Reduces maintenance down time
- Available in a ready to use pre-mix for ultimate convenience
- Continuous proven field performance
- No need for initial SCA

IDC EXTENDED LIFE DIESEL ANTIFREEZE is an advanced formulation intended for cooling systems in on-road, off-road, and marine diesel engines. It uses ethylene glycol along with technologically advanced additives to provide complete protection against corrosion and deposits in the cooling system and excellent wet sleeve liner cavitation protection for up to 5 times longer than regular antifreeze/coolants. This product should not be mixed with regular coolants, and is dyed **RED** for easy identification.

IDC EXTENDED LIFE DIESEL ANTIFREEZE does not need an initial charge of Supplemental Coolant Additive (SCA). It is a fully-formulated product and will provide excellent service life up to 480,000km (300,000 miles), 4 years or 6,000 hours service when added as an initial fill and properly maintained. At that time, it can be treated with SCA, which will allow the product's life to be extended even further. When used after a complete coolant system drain, flush and fill, this product provides a maximum extended performance interval up to 960,000km (600,000 miles), 6 years or 12,000 hours.

IDC EXTENDED LIFE DIESEL ANTIFREEZE is phosphate-free and amine-free, and is low in silicates. It is compatible with hard water although de-ionized water will always give the best results. Never use pure antifreeze: Glycols give their best freeze and boil-over protection when mixed with water. Irving recommends a 50/50 mix with distilled or demineralized water for best system protection. Most tap and well water contains impurities that will immediately tie-up some of the corrosion and deposit-protection additives in the coolants. Softened water can also contain unacceptable levels of chlorides.

For maximum convenience, **IDC PRE-MIXED EXTENDED LIFE DIESEL ANTIFREEZE** is a 50/50 blend with demineralized water.

For extended-life protection in gasoline engine cooling systems, use our **GLOBAL ANTIFREEZE**.

IDC Extended Life Coolant

Typical performance results

	CONCENTRATE	PREMIX
COLOUR	RED	RED
SPECIFIC GRAVITY (15.6°C/60°F)	1.125 – 1.14	1.07 – 1.08
FLASH POINT	116°C/240°F	NONE
FREEZING POINT 50/50 mix	-37°C/-34°F	-37°C/-34°F
PH (50% by vol.)	7.5-8.6	7.6-8.5
FOAM VOLUME (mL)	50 max.	50 max.
FOAM BREAK TIME (sec.)	5 max.	5 max.
TOTAL GLYCOLS (wt. %)	94 min.	49 min.
INHIBITORS & WATER (wt. %)	6.0 max.	51 max.
CHLORIDE (ppm)	25 max.	25 max.

Available sizes & part numbers

EXTENDED LIFE DIESEL COOLANT	3.78L (1 US gal)	20L Pail (5.28 US gal)	205L Drum (54.2 US gal)	210L Drum (55.5 US gal)	500L Cube (132 US gal)	1000L Cube (264 US gal)	Bulk
CONCENTRATE		F0066240					
PREMIXED	F0076126			F0068651		F0068660	

Check with sales representative or website for the latest product approvals.



Lubricants

www.irvinglubricants.com

RHODE ISLAND PUBLIC TRANSIT AUTHORITY
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Project No. _____

To: Rhode Island Public Transit Authority

From: Industrial Oil & Supply Co. Inc.

Page & Reference: _____

Request Description

Request approved equal status for "Blacrank Equipment"

WITH

Alemite Equipment

Use Additional Sheet If More Space Is Required

Accepted: _____ Rejected: X See Addendum # _____

Explanation: No Technical information Provided

J. Monti 7-2-13

