D-A®
LUBRICANT COMPANY

PERFORMANCE ENGINEERED LUBRICANTS SINCE 1919

ANTIFREEZE/COOLANTS

PERFORMANCE & PROTECTION. REVOLUTIONIZED.

D-A LUBRICANT COMPANY
TRUSTED SINCE 1919

COOLANTS THAT PROTECT.

D-A LUBRICANT COMPANY | **The standard of quality since 1919.**

Protect your system components from harsh conditions.

D-A Lubricant Company's high-quality antifreeze/coolants keep your gear functioning. With our antifreeze/coolants, your equipment will perform efficiently to maximize production, operate safely and work reliably. We offer the ultimate protection for your equipment.

Whether it's heavy duty or light duty applications, use the lubricants the pros use. Our antifreeze/coolants provide exceptional performance and balance vital for today's equipment. Trust the most dependable, highest-quality antifreeze/coolants to keep your equipment in peak condition.

THE FUNCTION OF COOLANTS

The coolant system controls temperatures of all metallic and non-metallic material, along with other engine fluids. To properly transfer heat, you must protect system components from corrosion, cavitation and scale. Antifreeze/coolant selection and maintenance is key to the life of the equipment. That's why so many chose D-A's high-quality and reliable products. D-A Lubricant Company is leading the transformation and creation of the future of lubricant performance and protection. We constantly evolve and improve formulations with innovative chemistry.

Coolant Composition

1. **WATER (49%)**
   Transfers heat to radiator
2. **GLYCOL (49%)**
   Lowers freeze point
   Raises boiling point
   Transfers heat to radiator
   Reduces water surface tension
3. **ADDITIVES (2%)**
   Provides corrosion protection
   Liner pitting protection
   Scaling protection
   Bitterant and dye (color)

THE IMPORTANCE OF H_2O

Using **high-quality** water is important to the performance of the antifreeze/coolant. Many original equipment manufacturers (OEMs) set water purity specifications for the antifreeze/coolant used in their engines.

Scale buildup and inhibitor drop out can occur when water with too many ions (magnesium, calcium, sodium, etc.) are added to a cooling system.

Chlorides and sulfates promote corrosion and even bacteria in engines. Always use **deionized** or **reverse osmosis** (RO) water to prevent buildups and accelerated corrosion.

TWO DIFFERENT TYPES OF COOLANTS

▶ LIGHT DUTY

- Intended for use in light duty vehicles such as passenger cars & trucks
- Damaging if used in heavy duty application

▶ HEAVY DUTY

- Intended for use in heavy duty vehicles such as diesel trucks, buses, construction equipment, agricultural equipment, etc.
- A light duty coolant plus inhibitors to protect against cavitation corrosion equals a heavy duty coolant
- Acceptable for use in light duty application

PROBLEMS THAT CAN OCCUR

SCALE
Scale can reduce heat transfer. Formation occurs on system surfaces when tap water is used to mix the antifreeze/coolant to the correct concentration. Scale issues can be eliminated by using deionized or RO water.

ADDITIVE DROP OUT
Additives can become unstable due to contamination, using low-quality water, poor formulation, or the over addition of SCAs.

CORROSION & DEGRADATION
Poorly formulated antifreeze/coolant will cause corrosion of the cooling system. It will also premature coolant degradation, coolant life and the ability to protect internal engine components, along with freeze and boiling point protection.

CAVITATION/LINER PITTING
Antifreeze/coolants not properly formulated for heavy duty use will not protect wet sleeve liners from cavitation pitting. This can be a very expensive engine overhaul. Shockwave cavitation explosions are measured at 15,000-20,000 PSI. The ONLY way to avoid cavitation is to use an antifreeze/coolant with the proper additives. This forms a protective barrier on the wet sleeve liner to prevent this catastrophic occurrence.

QUALITY D-A PROTECTION

Our properly formulated antifreeze/coolants meet D6210 and/or D3306 requirements. This includes multiple corrosion testing and ability to protect brass, solder, copper, aluminum, iron and steel.

The antifreeze/coolant is tested to ensure compatibility with the elastometers or plastic components in a cooling system used for hoses and seals. Improve service life with the most advanced antifreeze formulation.

For heavy duty and light duty engines, discover D-A's huge variety of bulk antifreeze and coolants.

MADE IN USA

PROVEN D-A RESULTS

There are many benefits when choosing D-A Lubricant Company's antifreeze/coolants.

Vehicles and equipment aren't made the same, but they do have one thing in common. They need to be protected. That's why D-A's line of heavy duty and light duty antifreeze/coolants have become a necessity for operations over time. Here are some of the many benefits D-A's antifreeze/coolants can offer:

- **Helps Maintain Optimal Fuel Economy**
- **Provides Valuable Engine Protection**
- **Reduces Maintenance Costs and Downtime**
- **Formulated using Nitrited Organic Acid Technology (NOAT)**
- **Helps to Prevent Breakdowns**

D-A® LUBRICANT COMPANY

The standard of quality since 1919.

D-A ANTIFREEZE/COOLANTS

	NAME	IMAGE	TECHNOLOGY	DUTY	DESCRIPTION
CONVENTIONAL	PennGrade® Conventional		Conventional (older technology)	Light	Designed for automotive applications. Spin-on filters or addition of SCAs for HD use.
CONVENTIONAL	Reliant Heavy Duty™ Fully Formulated		Conventional (older technology)	Heavy	Conventional technology with the initial charge of SCAs which must be maintained throughout service life at PM and rigorous maintenance practices kept.
ORGANIC	Reliant Heavy Duty™ Multi-Vehicle		OAT (Silicated)	Heavy	Designed for automotive and heavy- duty applications that require additional silicates. Intended to extend service interval beyond that of a conventional antifreeze.
ORGANIC	PennGrade® DEX-COOL®		OAT (NAPS free)	Light	All makes, all models automotive & light-duty diesel (non wet-sleeve liners). Current technology for many American made cars. DEX-COOL® is a registered trademark of the General Motors Corporation.
ORGANIC	Reliant Heavy Duty™ Extended Life		OAT (Nitrited)	Heavy	2EHA (2-Ethylhexyl Acrylate) - Containing NOAT (Typically for CAT).
ORGANIC	Reliant Heavy Duty™ Nitrite-Free		OAT (NAPS free)	Heavy	No Nitrites, Amines, Phosphates, or Silicates. Current technology for many HD OEMs.

Antifreeze/Coolant is poisonous; Clean up any leaks or spills immediately. Store away from children and animals. Do not store in open or unlabeled containers. When disposing of antifreeze/coolant, follow local laws and regulations. If required, dispose at facilities licensed to accept household hazardous waste. If permitted, dispose of in sanitary sewer systems. Do NOT discard into storm sewers, septic systems or onto the ground.

CONVENTIONAL ANTIFREEZE/COOLANT

PennGrade® Conventional

PennGrade® Conventional Antifreeze/Coolant is a premium ethylene glycol-based fluid specially formulated with industry-leading additives to provide optimum performance in all gasoline, light and heavy-duty diesel engines*.

PRODUCT FEATURES AND BENEFITS

- Protects against corrosion of brass, copper, solder, steel, cast iron, and aluminum.
- Provides freeze and boil-over protection.
- Designed for use in passenger cars, and light duty and heavy-duty vehicles.
- Ideal for conventional antifreeze applications.
- Phosphate-free with low silicates.
- High-quality defoamer system; Non-harmful to hoses, plastics, or gaskets.
- Compatible with most major American brands of conventional antifreeze/coolants.

PennGrade® Conventional	50/50	Concentrate
Specific Gravity at 68° F	1.072	1.119
pH	10.6	10.8
RA, mL	3.0	6.0
Base Fluid	Virgin Ethylene Glycol	Virgin Ethylene Glycol
Product Color	Green	Green
Bitterant	Yes	Yes
Freeze Point of 50/50 solution by Volume	-34°F (-36°C)	-34°F (-36°C)
Boil Point of 50/50 solution by Volume	226°F (108°C)	226°F (108°C)

Reserve alkalinity (RA) is a term used to indicate the amount of alkaline present in an antifreeze/coolant formulation. Advanced formulations contain new inhibitors which give added protection to certain metals but do not raise the RA number.

Meets or exceeds these performance specifications:
ASTM D3306, ASTM D4985, John Deere JDM H24C, Navistar MPAPS B-1 Type I

Works in/suitable for:
Bombardier, BMW, Chrysler MS-7170, Case New Holland MAT 3620, Daimler DBL 7700.00, Daimler DBL 7700.10/.20, EMD MI 1748F, Ford ESE-M97B44-A, GM1825M, GM1899M, Wisconsin Motors

D-A Part Number:	50/50	Concentrate
Bulk	88301	N/A
Tote – 275 Gal	88307	88317
Drum – 55 Gal	88302	88312
Case – 3/1 Gal	88304	N/A

**Conventional formulation can be used with the addition of SCA (Supplemental Coolant Additives) in heavy-duty vehicles. Consult your vehicle's owner's manual for recommendations.*

CONVENTIONAL ANTIFREEZE/COOLANT

Reliant HD™ Fully Formulated

Reliant HD™ Fully Formulated Antifreeze/Coolant is a premium quality, conventional technology ethylene glycol-based fluid. This product is specially formulated with industry-leading additives to provide optimum performance in heavy-duty vehicles maintained with supplemental coolant additives (SCAs).

PRODUCT FEATURES AND BENEFITS

- Contains nitrites for superior wet sleeve liner cavitation protection.
- Provides maximum freeze and boil-over protection.
- Designed for heavy duty applications, yet can be used in automotive applications where conventional technology coolants are acceptable.
- Phosphate-free with low silicates.
- Effective, long-term corrosion protection for steel, solder, copper, iron, brass and aluminum.
- High-quality defoamer system; Non-harmful to hoses, plastics, or gaskets.
- Compatible with all major American brands of conventional coolants, with or without the addition of SCAs.*
- Appropriate for use in on-and off-road diesel engines, as well as in stationary engine applications where a conventional pre-charged coolant is required.

Reliant HD™ Fully Formulated	50/50	Concentrate
Specific Gravity at 68°F	1.075	1.125
pH	10.5	10.8
RA, mL	2.8	5.6
Base Fluid	Virgin Ethylene Glycol	Virgin Ethylene Glycol
Product Color	Fuchsia or Green (88371)	Fuchsia
Bitterant	Yes	Yes
Freeze Point of 50/50 solution by Volume	-34°F (-36°C)	-34°F (-36°C)
Boil Point of 50/50 solution by Volume	226°F (108°C)	226°F (108°C)

Reserve alkalinity (RA) is a term used to indicate the amount of alkaline present in an antifreeze/coolant formulation. Advanced formulations contain new inhibitors which give added protection to certain metals but do not raise the RA number.

Meets or exceeds these performance specifications:
ASTM D3306, ASTM D6210, John Deere H24A, Navistar MPAPS B-1 Type II, Perkins SEBU7833-03, TMC RP 329B

Works in/suitable for:
CAT EC-1, Chrysler MS-7170, Case New Holland MAT 3620, Cummins CES 14603, Detroit Diesel 93K217, EMD 1748F, Ford ESE-M97B18-C, Ford ESE-M97B44-A, MAN 324 Type N

D-A Part Number:	50/50	Concentrate
Bulk	88351 (Fuchsia), 88371 (Green)	N/A
Tote – 275 Gal	88357	88367
Drum – 55 Gal	88352	88362
Case – 3/1 Gal	88354	N/A

**SCA levels will need maintaining throughout the life of the engine. Consult your vehicle's owner's manual for recommendations.*

ORGANIC ANTIFREEZE/COOLANT

Reliant HD™ Multi-Vehicle

Reliant HD™ Multi-Vehicle Antifreeze/Coolant is a premium quality global Hybrid Organic Acid Technology (HOAT), ethylene glycol-based fluid. This product is specially formulated with industry-leading additives to provide optimum performance in gasoline engines, light duty diesel engines, and heavy-duty applications.

PRODUCT FEATURES AND BENEFITS

- User-friendly fluid color and product formulation allows for top-off of any fluid color and fluid consolidation.
- Can be used in automobiles and heavy-duty diesel engines.
- Contains a combination of nitrite and molybdate additives to provide superior wet sleeve liner cavitation protection.
- No initial SCA pre-charge required.
- Eliminates the need for SCAs at initial fill and when topping off.
- Phosphate-free with low silicates.
- Corrosion protection for steel, solder, copper, iron, brass, and aluminum.
- High-quality defoamer system; Non-harmful to hoses, plastics, or gaskets.
- Compatible with most conventional and extended life Organic Acid Technology (OAT)-type Antifreeze/Coolants.

Reliant HD™ Multi-Vehicle	50/50	Concentrate
Specific Gravity at 68° F	1.072	1.119
pH	10.5	10.8
RA, mL	3.5	6.5
Base Fluid	Virgin Ethylene Glycol	Virgin Ethylene Glycol
Product Color	Yellow	Yellow
Bitterant	Yes	Yes
Freeze Point of 50/50 solution by Volume	-34°F (-36°C)	-34°F (-36°C)
Boil Point of 50/50 solution by Volume	226°F (108°C)	226°F (108°C)

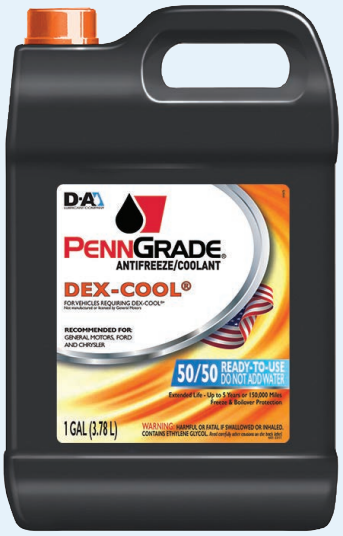
Reserve alkalinity (RA) is a term used to indicate the amount of alkaline present in an antifreeze/coolant formulation. Advanced formulations contain new inhibitors which give added protection to certain metals but do not raise the RA number.

Meets or exceeds these performance specifications:
ASTM D3306, ASTM D6210, John Deere H24A, Perkins SEBU7833-03, TMC RP 329B

Works in/suitable for:
CAT EC-1, Chrysler MS-7170, Case New Holland MAT 3620, Cummins CES 14603, Detroit Diesel 93K217, EMD 1748F, Ford ESE-M97B18-C, Ford ESE-M97B44-A, Ford WSS-M97B51-A1, MAN 324 Type N, Navistar MPAPS B-1 Type III

D-A Part Number:	50/50	Concentrate
Bulk	88321	N/A
Tote – 275 Gal	88327	N/A
Drum – 55 Gal	88322	88332
Case – 3/1 Gal	88324	N/A

ORGANIC ANTIFREEZE/COOLANT



PennGrade® DEX-COOL®

PennGrade® DEX-COOL® Antifreeze/Coolant is formulated for use in vehicles requiring DEX-COOL®. This premium carboxylate-based Organic Acid Technology (OAT) ethylene glycol-based fluid is specially formulated with industry-leading additives. This product provides optimum performance in vehicles requiring DEX-COOL® (GM 6277M, GMW 3420) coolant.

PRODUCT FEATURES AND BENEFITS

- Premium quality, extended life coolant.
- Provides up to 5 years or 150,000 miles of protection.
- Free of phosphate, borates, nitrites, silicates, and amines.
- Protects against corrosion of all cooling system metals, including aluminum.
- High-quality defoamer system; Non-harmful to hoses, plastics, or gaskets.
- Compatible with all major American brands of extended life Organic Acid Technology (OAT)-type Antifreeze/Coolant formulated to meet the DEX- COOL® requirement (GM 6277M).

PennGrade® DEX-COOL®	50/50
Specific Gravity at 68°F	1.069
pH	8.1
RA, mL	2.0
Base Fluid	Virgin Ethylene Glycol
Product Color	Orange
Bitterant	Yes
Freeze Point of 50/50 solution by Volume	-34°F (-36°C)
Boil Point of 50/50 solution by Volume	226°F (108°C)

Reserve alkalinity (RA) is a term used to indicate the amount of alkaline present in an antifreeze/coolant formulation. Advanced formulations contain new inhibitors which give added protection to certain metals but do not raise the RA number.

Meets or exceeds these performance specifications:
ASTM D3306

Works in/suitable for:
Bombardier, BMW, Chrysler MS-7170, Case New Holland MAT 3620, Daimler DBL 7700.00, Daimler DBL 7700.10/.20, EMD MI 1748F, Ford ESE-M97B44-A, Ford WSS-M97B44-D, GMW3420, GM1825M, GM1899M, GME B 040, John Deere JDM H24C, Navistar MPAPS B-1 Type I, Wisconsin Motors

D-A Part Number:	50/50
Bulk	88341
Tote – 275 Gal	88347
Drum – 55 Gal	88342
Case – 3/1 Gal	88344**

***Not Currently Available*

DEX-COOL® is a registered trademark of the General Motors®.

ORGANIC ANTIFREEZE/COOLANT

Reliant HD™ Extended Life

Reliant HD™ Extended Life Antifreeze/Coolant is a premium quality Nitrited Organic Acid Technology (NOAT), ethylene glycol-based fluid. Specially formulated with industry-leading additives, this product provides extended service interval protection in heavy duty applications without the addition of SCAs.

PRODUCT FEATURES AND BENEFITS

- Extended service life of 1,000,000 miles on-road | 8 years or 20,000 hours of off-road use.*
- Offers excellent wet sleeve liner cavitation protection with a nitrite and molybdate additive combination.
- Reduces maintenance with no SCAs required*.
- Provides maximum freeze and boil-over protection.
- Free of phosphates, silicates, and amines.
- Extended life corrosion protection for steel, solder, copper, iron, brass, and aluminum.
- High-quality defoamer system; Non-harmful to hoses, plastics or gaskets.
- Compatible with most major American brands of extended life Organic Acid Technology (OAT)-type Antifreeze/Coolant.

Reliant HD™ Extended Life	50/50	Concentrate
Specific Gravity at 68° F	1.072	1.119
pH	8.5	8.7
RA, mL	2.8	4.9
Base Fluid	Virgin Ethylene Glycol	Virgin Ethylene Glycol
Product Color	Red	Red
Bitterant	Yes	Yes
Freeze Point of 50/50 solution by Volume	-34°F (-36°C)	-34°F (-36°C)
Boil Point of 50/50 solution by Volume	226°F (108°C)	226°F (108°C)

Reserve alkalinity (RA) is a term used to indicate the amount of alkaline present in an antifreeze/coolant formulation. Advanced formulations contain new inhibitors which give added protection to certain metals but do not raise the RA number.

Meets or exceeds these performance specifications:
ASTM D3306, ASTM D6210, John Deere H24A, Navistar MPAPS B-1 Type III, Perkins SEBU7833-03, TMC RP 329B

Works in/suitable for:
CAT EC-1, Chrysler MS-7170, Case New Holland MAT 3620, EMD 1748F, Ford ESE-M97B18-C, Ford ESE-M97B44-A, Ford WSS-M97B51-A1, MAN 324 Type N, Volvo 20774185

**HD Extender may be needed based on test results.*

D-A Part Number:	50/50	Concentrate
Bulk	88381	N/A
Tote – 275 Gal	88387	N/A
Drum – 55 Gal	88382	88392
Case – 3/1 Gal	88384	N/A

ORGANIC ANTIFREEZE/COOLANT

Reliant HD™ Nitrite-Free

Reliant HD™ Nitrite-Free Antifreeze/Coolant is a premium quality Organic Acid Technology (OAT), ethylene glycol-based fluid. Specially formulated with advanced additive technology, this product provides extended service maintenance protection in heavy duty applications without the addition of SCAs, and meets nitrite-free coolant requirements of many industry-leading OEMs.

PRODUCT FEATURES AND BENEFITS

- Extended service life of 1,000,000 miles | 8 years or 20,000 hours of off-road use.*
- Free of phosphates, silicate, nitrites, amines, and borates.
- Offers excellent wet sleeve liner cavitation protection.
- Reduces maintenance with no SCAs required*.
- Provides maximum freeze and boil-over protection.
- Extended life corrosion protection for steel, solder, copper, iron, brass, and aluminum.
- High-quality defoamer system; Non-harmful to hoses, plastics or gaskets.
- Compatible with all major American brands of coolant technologies including conventional and Organic Acid Technology (OAT).

Reliant HD™ Nitrite-Free	50/50
Specific Gravity at 68°F	1.082
pH	8.6
RA, mL	4.0
Base Fluid	Virgin Ethylene Glycol
Product Color	Yellow
Bitterant	Yes
Freeze Point of 50/50 solution by Volume	-34°F (-36°C)
Boil Point of 50/50 solution by Volume	226°F (108°C)

Reserve alkalinity (RA) is a term used to indicate the amount of alkaline present in an antifreeze/coolant formulation. Advanced formulations contain new inhibitors which give added protection to certain metals but do not raise the RA number.

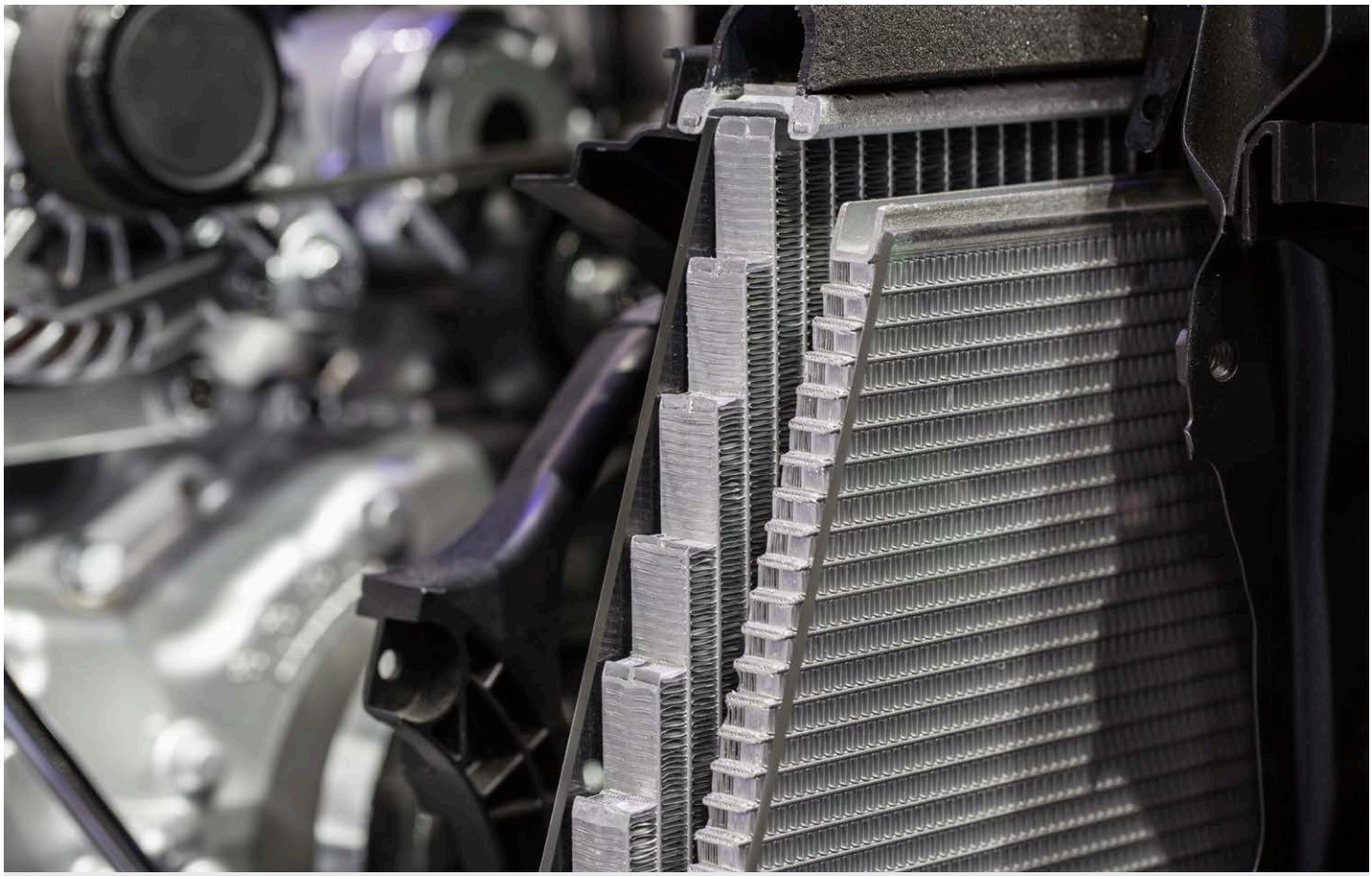
Meets or exceeds these performance specifications:
ASTM D3306, ASTM D6210, Cummins CES 14603, JDS-G135, John Deere H24A, Navistar MPAPS B-1 Type IIIA, Perkins SEBU7833-03, TMC RP 329B

Works in/suitable for:
CAT EC-1, Chrysler MS-7170, Case New Holland MAT 3620, Detroit Diesel 93K217, EMD 1748F, Ford ESE-M97B18-C, Ford ESE-M97B44-A, Komatsu KES 07892, MAN 324 Type SNF, Volvo 20774185

D-A Part Number:	50/50
Bulk	88401
Tote – 275 Gal	N/A
Drum – 55 Gal	88402
Case – 3/1 Gal	88404**

***Not Currently Available*

**Recommended test interval is 300,000 miles/6,000 hours/1 year. Proper inhibitor can typically be achieved by topping off with Reliant HD Nitrite Free.*



SERVICES AND SUPPORT

A partial list of customer support capabilities includes:

- Lubricant surveys and recommendations
- Lab and field testing
- Parts analysis
- On-site training
- Over-the-phone technical assistance

ISO 9001-2015 CERTIFIED

We meet and exceed the nationwide industry standards.

PROFESSIONAL SERVICE. PERSONAL ATTENTION.

The D-A Lubrication team includes a network of regional distributors in North America. Find a listing of our Territory Business Managers for each state/province (with names and phone numbers) on our website at **dalube.com**.

For government bids, please contact **bids@dalube.com**. For additional details about D-A products and services, call **1-800-645-5823** to speak directly to a customer service representative.

D-A LUBRICANT COMPANY

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