Maintenance Product Handbook

JOHN DEERE

Protect your equipment with John Deere maintenance products

John Deere products aren't just machines — they're big investments that feature groundbreaking technology, long-lasting parts, and a supportive dealer network. Because proper maintenance products are the key to getting the most life from your equipment, we offer industry-leading products for top performance season after season.

John Deere engineers develop our fluids in conjunction with machine components and then perform extensive tests to ensure ultimate performance. Plus-50™ II engine oil, Cool-Gard™ II coolant, Hy-Gard™ hydraulic and transmission oil, John Deere Diesel Exhaust Fluid, Fuel-Protect, and filters all meeting Final Tier 4 regulations will protect your equipment and help extend the life of your machine.

Expect lower maintenance costs and preserve your investment for years to come. Make John Deere your source for Final Tier 4 maintenance solutions and a full line of other maintenance products.

Plus-50 II engine oil — lasts up to 500 hours in your John Deere equipment

Plus-50 II takes engine oil to the next level. It provides superior protection and the peace of mind that comes with using oil that lasts twice as long as standard oil.

Applications:

– For use in Interim and Final Tier 4 engines that require API CJ-4 oil
– Compatible with all off- and on-road vehicles, trucks, pickups, automobiles, and natural gas and marine engines
– Recommended in all applications specifying John Deere Plus-50 with 100-percent backward compatibility

Features and benefits:

– Exceeds API CJ-4 performance level for diesel engines and API SN performance level for gasoline engines
– Formulated specifically to inhibit oxidation, deposits, corrosion, and wear, with superior soot control
– Reduces maintenance costs and downtime
– Provides maximum sludge and varnish control
– Delivers excellent low-temperature fluidity and reduces wear in cold weather
– Extends drain intervals up to 500 hours when used with John Deere filters in John Deere engines
– Maintains diesel particulate filter service life through low-ash technology
– When you use Plus-50 II and a John Deere filter, we will pay for any damages to your engine that are caused by an oil defect*

Available in 0W-40, 15W-40, and 10W-30 viscosity grades.

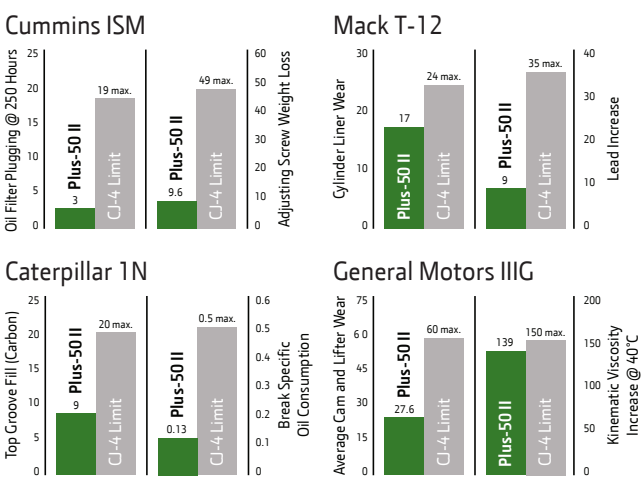
GUARANTEED PROTECTION

*Oil defect needs to be verified by routine and timely oil analysis, and confirmed to be unadulterated and non-contaminated. Plus-50 II must meet the engine manufacturer's specifications for service and application, and must be used under normal operating conditions in accordance with the manufacturer's recommendations. The engine must be operating with John Deere Plus-50 II and a John Deere filter, the engine oil volume must be maintained above the fill mark, and the engine must be operating within the specifications of the factory-rated power output. To make a claim under warranty, report the product failure to an authorized John Deere dealer. John Deere disclaims all liability for indirect or consequential damages. Your rights and remedies pertaining to this warranty are limited as set forth herein. Implied warranties of merchantability and fitness are not made and are excluded.

Competitive oil leaves soot in the piston, inhibiting ring performance. Plus-50 II is formulated for tough off-road conditions to reduce piston deposits.

Competitor CJ-4 Premium Oil *Plus-50 II Premium Oil*

These graphs demonstrate the performance of Plus-50 II compared to some of the tests required to meet API CJ-4 specifications.



Break-In Plus is a specially formulated lubricant that combines the 500-hour protection of Plus-50 II engine oil with a special formulation recipe to establish proper wear patterns during the initial service interval of new, rebuilt, and remanufactured engines.

- Protects up to 500 hours in new, rebuilt, and remanufactured engines
- Should be used for at least the first 100 hours to ensure rings and liners set correctly
- Provides a controlled environment for rings and cylinder liners to establish optimal surface mating
- Protects valve train and gears
- Prevents against excessive oil consumption and blow-by
- Meets oil requirements for Interim and Final Tier 4 and all other engines

Here's a standard-interval engine oil that protects in a broad range of applications, including four-stroke diesels, natural gas, and gasoline engines.

– Neutralizes acid to reduce corrosion
– Provides sludge control for cleaner engines
– Offers many viscosity grades for applications in moderate to cold operating temperatures
– Low-temperature fluidity for reduced engine start-up wear
– 250-hour standard drain intervals

Available in 15W-40, 10W-30, 5W-30, 30, and 10W.

Refer to chart on page 13–15 for specifications.

Get outstanding performance for your four-cycle gasoline engines. Turf-Gard is formulated specifically for riding and walk-behind mowers, lawn tractors, and other grounds-care equipment.

– Protects your lawn equipment all year long
– Keeps engines clean while providing wear protection
– Provides rapid oil circulation in both hot and cold weather
– Meets API SN and ILSAC GF-5 for gasoline engines using 10W-30 and 5W-30
– Meets API SN service category for gasoline engines using 10W-40
– Use in your edger, generator, mower, and lawn tractor

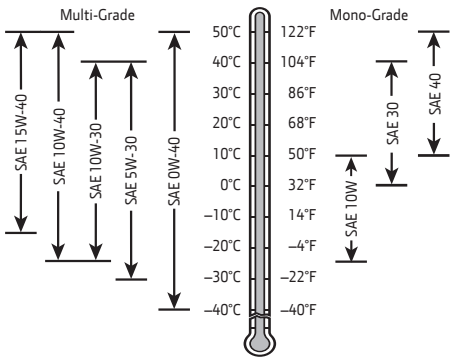
Available in 10W-40, 10W-30, and 5W-30.

Plus-4 is recommended for autos and trucks with gasoline engines, no matter what make or model. It can also take care of your lawn and garden equipment with four-cycle engines, providing you with one engine oil for your day-to-day vehicle needs.

– Meets API SN service category for gasoline engines
– 10W-30 viscosity grade provides rapid oil circulation in cold and hot weather
– Keeps engines clean while providing wear protection
– Meets ILSAC GF-5 for Energy Conservation with improved fuel economy

Available in 10W-30.

Determine oil viscosity based on the expected ambient temperature range between oil changes.



For heavy-duty diesel engines:

John Deere Plus-50 II
SAE 15W-40
SAE 10W-30
SAE 0W-40

John Deere Torq-Gard
SAE 15W-40
SAE 10W-30
SAE 5W-30
SAE 30
SAE 10W

John Deere Break-In Plus
SAE 10W-30

For gasoline engines:

John Deere Turf-Gard
SAE 10W-40
SAE 10W-30
SAE 5W-30

John Deere Plus-4
SAE 10W-30

John Deere Plus-50 II

John Deere Torq-Gard

Several global associations have established classifications and categories for gasoline and diesel engine oil performance ratings. The most common are the American Petroleum Institute (API) and the European Automobile Manufacturers Association (ACEA). In addition, some regions and equipment manufacturers have established performance specifications for their engines and/or oils. The chart shown at right lists these associations along with various manufacturers, and identifies which classifications John Deere Plus-50 II, Torq-Gard, Plus-4, and Turf-Gard engine oils meet.

Plus-50 II is subjected to additional tests besides industry requirements for API Service Category engine oils. These tests include:

– Quality control, low-temperature performance, and life and field tests
– JDQ-78X high-temperature diesel engine dyno test that exceeds industry requirements for viscosity increase and engine deposits and wear

How to use chart:

– Read down the chart to locate the service classification required by the application.
– Read across the chart to determine the John Deere oils with equivalent category.

	Service Classification	Plus-50 II			Torq-Gard					Plus-4	Turf-Gard			
		15W-40	10W-30	0W-40	15W-40	10W-30	5W-30	30	10W	10W-30	15W-40	10W-40	10W-30	5W-30
API	**CJ-4**	■	■	■	■	■								
	CI-4 PLUS	■	■	■	■									
	CI-4	■	■	■	■	■	■							
	CH-4	■	■	■	■	■	■							
	CG-4	■	■	■	■	■	■							
	CF-4	■	■	■	■	■	■							
	CF	■	■	■	■	■	■	■	■		■			
API (Gas)	**SN**	■	■	■	■					■		■	■	■
	SM	■	■	■	■	■	■			■		■	■	■
	SJ	■	■	■	■	■	■			■	■	■	■	■
ACEA	**E9**	■	■											
	E7	■	■		■									
	E3			■										
	E2			■										
JASO DH-2		■	■											
John Deere JDQ-78X		■	■	■										

	Service Classification	Plus-50 II			Torq-Gard					Plus-4	Turf-Gard			
		15W-40	10W-30	0W-40	15W-40	10W-30	5W-30	30	10W	10W-30	15W-40	10W-40	10W-30	5W-30
Mack	EO-O Premium Plus 07	■	■		■									
Mack	EO-N Premium Plus 03	■	■	■	■									
Mack	EO-M Plus	■	■	■	■									
Cummins	CES 20081	■	■	■	■	■								
Cummins	CES 20078			■										
Cummins	CES 20077	■	■											
Cummins	CES 20076	■												
Cummins	CES 20075	■	■	■										
MB	228.31	■	■	■										
MB	228.3				■									
Volvo	VDS-4	■	■		■									
Volvo	VDS-3	■	■		■									
Volvo	VDS-2	■	■											
Man M3275		■	■											
MTU Type 2.1		■	■											

	Service Classification	Plus-50 II			Torq-Gard					Plus-4	Turf-Gard			
		15W-40	10W-30	0W-40	15W-40	10W-30	5W-30	30	10W	10W-30	15W-40	10W-40	10W-30	5W-30
DDC	93K218	■			■									
DDC	93K214	■												
Renault	RLD	■	■											
Renault	RXD	■	■											
Renault	RD	■	■											
Allison C-4					■									
Caterpillar	ECF-3	■	■		■	■								
Caterpillar	ECF-2	■	■		■	■								
Caterpillar	ECF-1-a	■	■											
Caterpillar	TO-2	■	■	■										
GM 6094M										■			■	■
ILSAC GF-5										■			■	■
ILSAC GF-4										■			■	■
ILSAC GF-3												■	■	■

Note: Boldface classifications are current, whereas lightface classifications have become obsolete.

API Category	The American Petroleum Institute
ACEA Sequence	European Automobile Manufacturers Association (Association des Constructeurs Européens d'Automobiles)
JASO	The Japanese Automotive Standards Organization JASO is part of the Society of Automotive Engineers of Japan
ILSAC	The International Lubricant Standardization and Approval Committee

The API service ratings define minimum oil quality. Ratings beginning with “C” are oils intended for diesel engines, while those with “S” are oils intended for gasoline engines.

The second letter indicates a rating update; the “CJ-4” rating is more current than “CI-4,” and “SN” is more current than “SM,” etc.

Lubricants meeting more than one service rating may be identified “For Service CJ-4/SN,” etc. When dual ratings are indicated, the first rating is the primary use rating. In the above example, the oil “CJ-4/SN” is primarily a diesel oil, which also meets a gasoline rating. This chart provides a brief summary of the ratings and service oil descriptions.

Category	Status	Service
CJ-4	Current	For high-speed four-stroke cycle diesel engines designed to meet 2010 model year on-highway and Tier 4 non-road exhaust emission standards as well as for previous model year diesel engines. These oils are formulated for use in all applications with diesel fuels ranging in sulfur content up to 500 ppm (0.05% by weight). However, the use of these oils with greater than 15 ppm (0.0015% by weight) sulfur fuel may impact exhaust aftertreatment system durability and/or drain interval. CJ-4 oils are especially effective at sustaining emission control system durability where particulate filters and other advanced aftertreatment
CJ-4 (cont.)	Current	systems are used. Optimum protection is provided for control of catalyst poisoning, particulate filter blocking, engine wear, piston deposits, low- and high-temperature stability, soot handling properties, oxidative thickening, foaming, and viscosity loss due to shear. API CJ-4 oils exceed the performance criteria of API CI-4 with CI-4 PLUS, CI-4, CH-4, CG-4, and CF-4 and can effectively lubricate engines calling for those API Service Categories. When using CJ-4 oil with higher than 15 ppm sulfur fuel, consult the engine manufacturer for service interval.
CI-4	Current	Introduced in 2002. For high-speed, four-stroke engines designed to meet 2004 exhaust emission standards implemented in 2002. CI-4 oils are formulated to sustain engine durability where exhaust gas recirculation (EGR) is used and are intended for use with diesel fuels ranging in sulfur content up to 0.5% weight. Can be used in place of CD, CE, CF-4, CG-4, and CH-4 oils. Some CI-4 oils may also qualify for the CI-4 PLUS designation.
CH-4	Current	Introduced in 1998. For high-speed, four-stroke engines designed to meet 1998 exhaust emission standards. CH-4 oils are specifically compounded for use with diesel fuels ranging in sulfur content up to 0.5% weight. Can be used in place of CD, CE, CF-4, and CG-4 oils.

Category	Status	Service
CG-4	Obsolete	Introduced in 1995. For severe-duty, high-speed, four-stroke engines using fuel with less than 0.5% weight sulfur. CG-4 oils are required for engines meeting 1994 emission standards. Can be used in place of CD, CE, and CF-4 oils.
CF-4	Obsolete	Introduced in 1990. For high-speed, four-stroke, naturally aspirated, and turbocharged engines. Can be used in place of CD and CE oils.
CF-2	Obsolete	Introduced in 1994. For severe-duty, two-stroke-cycle engines. Can be used in place of CD-II oils.
CF	Obsolete	Introduced in 1994. For off-road, indirect-injected, and other diesel engines including those using fuel with over 0.5% weight sulfur. Can be used in place of CD oils.
CE	Obsolete	Introduced in 1985. For high-speed, four-stroke, naturally aspirated, and turbocharged engines. Can be used in place of CC and CD oils.
CD-II	Obsolete	Introduced in 1985. For two-stroke-cycle engines.
CD	Obsolete	Introduced in 1955. For certain naturally aspirated and turbocharged engines.
CC	Obsolete	CAUTION: Not suitable for use in diesel-powered engines built after 1990.
CB	Obsolete	CAUTION: Not suitable for use in diesel-powered engines built after 1961.
CA	Obsolete	CAUTION: Not suitable for use in diesel-powered engines built after 1959.

For an effective maintenance program, engine oil should be sampled before each drain interval, with transmission and hydraulic system oil sampling every 250 hours. By detecting problems early, costly failures can be avoided.

Oil analysis

The John Deere oil sampling program provides a comprehensive chemical and physical analysis of an oil sample taken from any enclosed lube system such as engine, hydraulics, or transmissions.

It's simple:

– Purchase a test kit.

– Fill out the sample container label.

– Collect an oil sample.

– Fill out the processing form.

– Send in the sample.

A lab report will be returned to you by mail or fax. The report includes oil sample condition data and maintenance recommendations.

For faster turnaround, results are now available online. Analysis reports are available within three to five days of the date the sample is mailed. Previous reports are also available for online viewing. Monitor machine performance and get early warnings of potential component failures using this Web-based service. Contact your John Deere dealer for information on how to get started.

Ensure your monitoring procedure is accurate before assuming an engine has oil-consumption problems. Check your oil level in the morning before starting your engine to ensure consistent readings.

Some oil consumption will occur during normal operation. Oil provides a seal between the piston rings and cylinders, and it's natural for this sealing oil to be burned off in normal combustion.

Excessive oil consumption is caused by several conditions, including:

– Incorrect oil viscosity
– Engine not running long enough under load for piston rings to seat
– Excessive engine speed
– External leaks
– Engine blow-by, an indication of worn rings or cylinder liners
– Worn valve guides
– Exceeding oil-change intervals

Engine oil pressure should also be monitored on a regular basis, as pressure readings that are too high or too low indicate problems that need immediate attention.

Low oil-pressure-reading causes:

– Crankcase oil level is too low or oil viscosity is too thin
– Engine bearings or oil pump are worn
– Filter or pump leaks
– Regulating valve spring is weak or needs adjustment
– Pressure sensor is faulty
– Operating temperature is too high

High oil-pressure-reading causes:

– Crankcase oil viscosity is too thick
– Pressure gauge or sender is defective
– Regulating valve is stuck or needs adjustment
– Pressure sensor is faulty
– Engine has not yet reached operating temperature

Protect your hydraulics and powertrain with Hy-Gard

Make sure your entire machine is protected the way John Deere engineers intended it to be with the best oil you can put in your system. Hy-Gard hydraulic and transmission oil meets and exceeds stringent John Deere equipment standards. In addition, Low-Viscosity Hy-Gard and Bio Hy-Gard II are also available.

How does Hy-Gard compare to other hydraulic oils?

Hy-Gard is a unique oil developed by John Deere engineers to meet the exact needs of John Deere equipment. Because there is no industry classification for hydraulic/transmission oil, each manufacturer establishes a minimum requirement that oil should meet for use in their equipment. Competitive oils may not meet even the minimum performance requirements for John Deere equipment.

Hy-Gard undergoes rigorous testing to meet the high performance standards set by John Deere. It not only meets JDM J20 requirements but far exceeds them.

Hy-Gard

It's specifically designed to protect your John Deere transmissions, wet clutches, wet brakes, and hydraulic systems with a multi-viscosity formula that allows your system to perform strongly year-round.

– Extensively tested and proven to deliver excellent performance
– Exceeds John Deere J20C specifications
– For equipment with common or separate transmission and hydraulic systems, wet brakes, or clutches
– Superior high-temperature performance ensures fewer deposits and a longer life

Low-Viscosity Hy-Gard

– Use in place of Hy-Gard in cold weather or for systems calling for John Deere J20D specification
– Use as a direct replacement for all-weather hydrostatic fluid

Bio Hy-Gard II

– Environmentally friendly and biodegradable
– Made with farm-grown canola oil
– Compatible with petroleum oil

Hy-Gard can be used where the following specifications are recommended (see chart to the right).

Manufacturer	Application
AGCO	
Massey Ferguson	M1135, M1141, M1139, M1143, M1145
White	Q-1722, Q-1766, Q-1766B, Q-1802, Q-1826
Allis-Chalmers, Deutz-Allis, AGCO Allis	Power Fluid 821XL
CNH	
Case, Case IH	MS1207, MS1209, MS1210, MAT3505
Ford/ New Holland	ESN-M2C41-B, M2C134-D, M2C48-B, M2C48-C, M2C159-B/C, M2C86-B, MAT3526, MAT3525, FNHA-2C-200, FNHA-2C-201
Caterpillar	TO-2, MTO
Clark	MS-68
Deutz	Hydraulic transmission fluid
Dresser	Transmission hydraulic fluid (HMS B806-0002)
Eaton Hydraulic Division	Hydraulic transmission fluid (Form 3-401-123)
IHC	B-6
John Deere	All-weather hydraulic fluid (JDM J21A)
Kubota	UDT hydraulic transmission fluid, Super UDT
Oliver	Type 55
Sunstrand	Hydrostatic transmission
Zetor	OT-H, GL-4
ZF	TE-ML 03E, TE-ML 03L, TE-ML 05F, TE-ML 06D, TE-ML 06E, TE-ML 17E, and TE-ML 21F

Check the operator manual for specific applications.
Low-Viscosity Hy-Gard or Hy-Gard should be used in place of an SAE 10W oil in John Deere combine hydraulic transmission systems.

It is imperative for hydraulic and transmission fluids to perform a variety of complex functions. Since there is little margin for error, insist on fluids developed to excel in your application.

In addition to providing the muscle to power various components, these fluids must also:

– Prevent wear on heavily loaded gears and bearings
– Provide proper friction for wet brakes to give maximum stopping performance with minimum brake chatter
– Provide proper friction for clutches to engage and absorb shock loads without excessive slipping
– Withstand extreme heat and pressure in the hydraulic system without breaking down
– Provide wear and corrosion protection for hydraulic pumps
– Prevent formation of deposits

Hy-Gard™ oil *Competing oil*

You can't tell the difference, but your machine can*

Tests performed using Hy-Gard and several competitive oils revealed Hy-Gard provides the best performance and wear protection for John Deere transmission and hydraulic systems.

Hy-Gard benefits:

– Superior high-temperature performance for less deposits and longer oil life
– Multi-viscosity rating ensures optimum performance at all temperatures
– 20-percent-less gear wear under high-stress loads
– 24-percent-less brake chatter and increased braking capacity
– 15-percent-better clutch performance and smooth clutch engagement

*Test results of Hy-Gard™ in the 300-hour T-HOT test.

Top-quality grease to keep your equipment running smoothly

Multi-purpose SD Polyurea

– Ideal for high temperatures and extreme pressures
– Use for U-joints, wheel bearings, and other grease points requiring severe-duty grease
– Factory-fill product

Multi-purpose HD Lithium Complex

– Use for wheel bearings, U-joints, and other grease points requiring heavy-duty grease where a lithium grease is recommended

Multi-purpose Lithium

– Ideal all-season grease for light- to medium-duty applications

Multi-purpose Extreme-Duty Synthetic

– High-temperature, extreme-pressure grease
– Recommended for most applications
– Non-toxic, non-staining, odorless, food grade
– Synthetic base oil

Special-purpose Corn Head

– Formulated for John Deere corn heads and other low-speed gear cases

Special-purpose HD Moly

– High-temperature, extreme-pressure grease with three-percent molybdenum disulfide (MoS_2)
– For use in applications with continuous sliding contact and shock loads such as pins and bushings, ball joints, chain, cable, and conveyors; and applications where pitting, scoring, and wear failures are a problem
– Compatible with lithium, aluminum, and calcium greases

Golf and Turf Cutting Unit

– High- and low-temperature, multi-purpose grease
– For use in John Deere reel mower gearboxes

Get six years of cooling-system protection with Cool-Gard™ II

Cool-Gard II is an extended-life nitrite-free engine coolant. It uses a proprietary blend of corrosion inhibitors that prevent wet-sleeve liner cavitation, foaming, rust, scale, and corrosion of the metals in the cooling system. It is designed to withstand thermal oxidation and breakdown due to higher heat loads typically found in newer, advanced engine-technology applications.

Cool-Gard™ II

- Delivers up to six-year/6,000-hour service life
- Protects against corrosion and deposits, extends coolant pump life, and minimizes liner cavitation
- Possesses the high thermal and oxidative stability traits required by engines equipped with cooled Exhaust Gas Recirculation (EGR)
- Provides superior performance in heavy-duty diesel engines as well as automotive engines
- Available in concentrate or ready-to-use pre-mix
- Preferred coolant in Interim and Final Tier 4 engines

Cool-Gard II PG

- Low-toxic environmentally friendly propylene glycol formula
- Provides all the same great benefits as Cool-Gard II
- Available in ready-to-use pre-mix

To ensure proper system corrosion protection, annually monitor Cool-Gard™ II coolant using Cool-Gard II test strips. If treatment is required, use only Cool-Gard™ II Extender.

Cool-Gard II Test Strips

These are specifically designed for on-site testing of Cool-Gard II and provide real-time indication of protection and when a treatment of Cool-Gard II Extender is required.

Cool-Gard II Extender

– Exclusively for use in Cool-Gard II-filled systems
– Matching formulation for precise treatment when indicated by the test strips

John Deere Coolant Test Kit

– Provides a comprehensive analysis of your coolant

It's simple:
– Purchase a test kit from your service dealer.*
– Follow instructions to collect the sample and complete the documentation.
– Send the sample to the independent lab location.

The lab will return the report, including the condition of the coolant sample and maintenance recommendations.

*Not available in all areas.

Coolant Refractometer

The use of a handheld coolant refractometer is the quickest, easiest, and most accurate method to determine coolant freeze point. This is more accurate than a test strip or float-type hydrometer, which oftentimes produces poor results.

A coolant refractometer is available through your John Deere dealer under the SERVICEGARD™ tool program. Part number 75240 provides an economical solution to accurate freeze-point determination in the field.

To use, simply place a few drops of coolant on the window and look through the eyepiece. Adjustments in freeze point can quickly be made by adding Cool-Gard II Concentrate if the freeze point isn't sufficient for the approaching winter conditions.

John Deere is your one-stop shop with the newest addition of John Deere Diesel Exhaust Fluid (DEF) to the maintenance fluids lineup.

John Deere DEF is compatible with all engines using selective catalytic reduction (SCR) aftertreatment technology. This includes John Deere diesel engines and equipment, off-road and stationary equipment, on-road trucks, and automobiles. With John Deere DEF, you can be confident you are getting a high-quality product that will provide unsurpassed performance while protecting your equipment investment. Simplify your operation by integrating John Deere DEF into your fluid-maintenance routine.

- Convenient container sizes
- Translucent containers to monitor fluid levels
- Non-toxic, non-hazardous, and non-flammable
- Dispense nozzle included with each jug
- Drums outfitted with 2" bung opening for direct-pump or closed-system dispensing valve and drop-tube installation
- Totes include integrated closed-system dispensing valve and drop tube
- Forklift access beneath tote cage for ease in handling
- ISO 22241 compliant
- American Petroleum Institute (API) certified

Typical Usage Rates*

John Deere Engine	Rate
6.8 L	0.4 L/hr (0.1 gal./hr)
9.0 L	0.8 L/hr (0.2 gal./hr)
13.5 L	1.1 L/hr (0.3 gal./hr)

*DEF usage rates shown are based on an average for typical engine duty cycles. DEF consumption is primarily a function of engine speed and load. Actual results may vary.

Dispensing Package

– DEF pump with 6.1-m (20 ft.) hose
– Auto-shutoff stainless steel nozzle
– Closed-system dispense coupler
– Drum dispensing valve and drop tube
– Hookup ready

Portable Dispensing Unit

– Removable 12-volt DEF-dispensing package
– Auto-shutoff stainless steel nozzle
– Sight gauge
– Lockable enclosure

John Deere Fuel-Protect Diesel Fuel Conditioner is specifically formulated to provide maximum engine horsepower and fuel efficiency by keeping legacy fuel systems clean, improving injector and high-pressure pump life, and improving the overall quality of fuel in storage tanks.

There are two formulas: winter or blue stripe label, for use when the outside temperature is below 32 deg. F (0 deg. C); and summer or red stripe label, for temperatures above 32 deg. F (0 deg. C).

John Deere fuel additives are the only fuel additives approved for use in John Deere engines.

Fuel-Protect Diesel Conditioner

- Designed primarily for legacy fuel systems
- Reduces downtime and maintains fuel-injector life
- For use with low-sulfur, ultra-low sulfur, and biodiesel fuel
- Minimizes smoking and emissions deterioration caused by deposits
- Improves water tolerance
- Improves lubricity of fuel
- Boosts cetane
- When added to diesel fuel in storage, it will also extend the useful life of the fuel by providing improved stability and preventing oxidation
- Winter formula available to improve operability in cold weather
- Can be combined with Keep Clean to gain the benefits of both products

John Deere Fuel-Protect Keep Clean (green stripe label) does exactly that. It keeps fuel systems clean. Designed for newer high-pressure fuel systems with tight clearances, John Deere Fuel-Protect Keep Clean will prevent and strip away harmful deposits that cause injector sticking, resulting in rough running, smoke, and misfire. Designed primarily for ultra-low sulfur diesel fuels, it may be used for higher sulfur-content fuels as well as when strong cleaning is necessary to prevent or remove stubborn fuel deposits.

Keep Clean may be used in two ways: a cleaning treat rate that doubles the dose to achieve a system clean-up in 20–40 hours of operation, and a maintenance treat rate which prevents the return of these stubborn deposits that rob power and result in poor engine operation.

John Deere fuel additives are the only fuel additives approved for use in John Deere engines.

Fuel-Protect Keep Clean

– Designed for newer higher-pressure fuel systems to remove stubborn fuel deposits
– For use with low-sulfur, ultra-low sulfur, and biodiesel fuel
– Eliminates hard starting, rough running, smoke, and misfire that often requires the replacement of injectors to resolve
– When added to diesel fuel in storage, it will also extend the useful life of the fuel by providing improved stability and preventing oxidation
– Can be combined with Diesel Fuel Conditioner to gain the benefits of both products

FuelSaver™

– Mitigates the effects of biological growth in diesel fuel due to the presence of water
– Effective in low-sulfur and ultra-low sulfur diesel as well as biodiesel, kerosene, jet fuel, and fuel oil
– Recommended as preventative maintenance semi-annually as seasons change to prevent microbial growth
– If required, a shock treatment may be used to mitigate microbial growth which prematurely plugs fuel filters
– Effective in both the water and fuel layers
– Leaves no corrosive deposits when burned in fuel

Fuel-Protect Gasoline Stabilizer

– Protects fuel all year long
– Does not require draining or disposal of fuel
– Helps engines start more easily, even after lengthy storage
– Prevents stored fuel from oxidizing and forming gum and varnish
– Helps fight rust and corrosion, including ethanol blends
– Helps prevent formation of deposits that could clog filters and passages in the fuel system
– Provides protection in both two- and four-cycle gasoline engines
– Must be used with fresh gasoline; do not mix with old fuel

Air-Conditioning System Flush (Acc-U-Flush II™)

– Recommended for flushing both R-12 and R134a air-conditioning systems when performing service work
– When properly handled and stored, it can be used in four to six flushes through the system — enough for two to three machines
– Non-flammable powerful solvent evacuates from the system within minutes

Belt Dressing

– Prevents belt slippage, dry rot, and air rot
– Makes belts last longer
– Does not make belts tacky
– Ideal on canvas, fabric, leather, rubber, auto fan belts, lawn and grounds care belts, V-belts, agricultural, industrial, and construction belt drives
– Performs under wet conditions
– Will not collect dirt or dust, and will not glaze
– Increases pulling power of belts by up to 50 percent

Starting Fluid

– 80-percent premium ether
– Improves starting by injecting fluid (ether) directly into the intake manifold
– Easier starting, especially in cold weather
– Prolongs battery life
– Specially designed to fit in John Deere equipment

R134a Refrigerant*

– Use as a replacement for R-12 refrigerant
– Non-toxic, non-flammable, and non-corrosive
– Safer for the environment than R-12

*Not available in Canada.

Electronic Contact Cleaner

– Helps prevent contact failure or malfunction by instantly dissolving and rinsing away contaminants such as oil, grease, dirt, or flux
– Quick-drying formula cleans and leaves no residue
– Will not harm plastics

Penetrating Oil

– Formulated for maximum penetrating power
– Designed to penetrate and loosen the toughest, locked-up parts
– Prevents corrosion and rust on metal parts and tools
– Stops binding and squeaking
– Non-conducting
– Displaces water
– Never dries

For more information about our John Deere chemicals line, please visit your John Deere dealer.

John Deere oil filters + Plus-50™ II engine oil = 500 hours free of downtime

When you pair John Deere oil filters with premium Plus-50 II engine oil, there's no stopping you for 500 hours! Because John Deere engineers design our maintenance products to work hand in hand to defend your machine from harsh conditions and wear. Plus, both John Deere filters and Plus-50 II are ready to protect new Tier 4 engines.

Don't take your equipment to the field without this winning combo. Trust John Deere filters and oil to help your machines last.

500-hour drain interval applies to John Deere diesel engines when the following criteria are met: 1. Engine is equipped with an extended drain interval oil pan; 2. Machine operates with Plus-50 II engine oil API CJ-4/SN; 3. Machine uses a John Deere oil filter; 4. Machine uses only ultra-low sulfur diesel fuel.

Improve performance with John Deere filters

These filters perfectly complement our top-of-the-line maintenance fluids. They protect your equipment from harmful particles while extending service life.

Benefits of John Deere oil filters:

– Tight pleats and even media spacing ensure filtration for better overall protection.
– Crimped spiral-center tube adds strength to prevent media from collapsing, allowing particles into the system.
– Rubber gaskets create a tighter seal than the plastic gaskets found in competitive filters.

John Deere oil filters have even media spacing with no gaps to admit contaminants.

Fuel filters

Water is the number-one enemy of fuel. That's why John Deere fuel filters are designed to trap and repel water, preventing rust and microbial growth that can lead to poor fuel economy.

Benefits of John Deere fuel filters:

– Tight pleats and even media spacing catch water and dust particles before they damage your fuel.
– Coated media repel water and prevent it from soaking through to fuel.
– A tight seal between media and the filter casing ensures dirty fuel won't reach the engine.

John Deere fuel filters feature tight pleats, coated media, and a tight seal between the media and filter casing.

Air filters

These filters mount a line of defense against engine-invading contaminants. They reduce engine wear by removing dust, dirt, and other pollutants from intake air.

Benefits of John Deere air filters:

– Design uses pleats and media for efficiency and longer service intervals.
– Better airflow ensures more contaminants are captured than with competitive filters.
– A tight seal keeps contaminants from bypassing the filter.

John Deere air filters (left) are more efficient thanks to evenly spaced pleats that cover a large surface area. Some air filters have gaps in their spacing (right) and are less effective in trapping contaminants.

Hydraulic filters

These filters are designed specifically to protect hydraulic systems from component wear and hydraulic surge flow. They keep contaminants out and prevent sludge and acid from damaging your equipment.

Benefits of John Deere hydraulic filters:

– Even pleats trap more contaminants and provide longer service intervals.
– Extra-hot glue melts strengthen media and ensure even spacing.

John Deere hydraulic filters (below left) feature five hot-glue melts to ensure higher capacity. Other filters may feature only two hot-glue melts (center and far right).

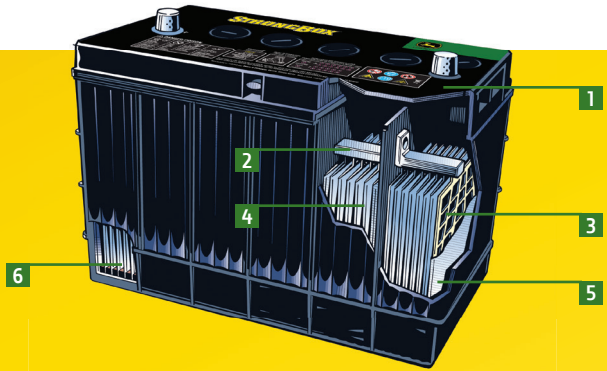
StrongBox™

The flagship of our battery line, StrongBox offers high-quality construction and computer-designed components for all makes of heavy- and light-duty farm, ranch, and construction vehicles; general utility and lawn and garden equipment; electric and sport utility vehicles; ATVs; and more.

Most StrongBox batteries come dry-charged from the factory, ensuring they remain in a state-of-life animation until they are activated with electrolyte, when they are "born" as brand-new wet-charged batteries.

The newest addition to the StrongBox family of batteries is the StrongBox AGM, which is not dry-charged but employs an absorbent glass mat to create a non-hazardous, leak-proof, and long-life battery.

All StrongBox batteries are backed by a comprehensive John Deere warranty.



1. **Available dry- or wet-charged from the factory.***
2. **Intercell connectors larger** than some brands provide increased power for quick starts in extreme cold.
3. **Super radial-grid design with inboard lug** provides higher cranking amps and faster charges.
4. **Extra-heavy plates** give extra reserve power, especially in extreme cold.
5. **Microporous plastic envelope separators** eliminate electrical shorts.
6. **Epoxy-anchored plates** reduce vibration to prevent failures.

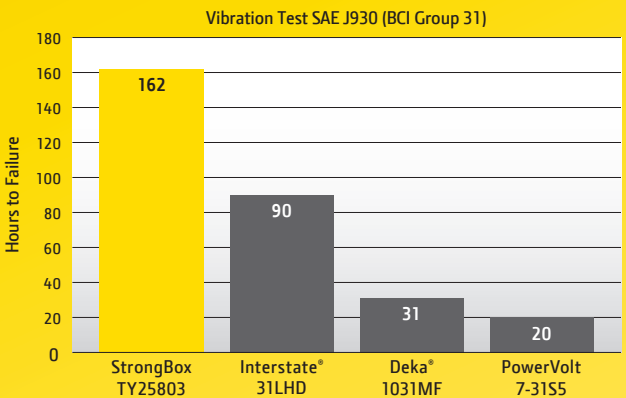
Features shown are applicable to heavy-duty, commercial StrongBox batteries, StrongBox Hibernator batteries, and StrongBox special-application tractor batteries, and are not necessarily applicable to all types of StrongBox batteries.

*Some StrongBox batteries may be activated at the factory for convenience.

Vibration is one of your battery's biggest enemies and a leading cause of battery failure

When tested under severe vibration by an independent laboratory, StrongBox kept going long after its top competitors called it quits. See for yourself — StrongBox holds up and keeps going when conditions get tough.

– Longer battery life in off-road applications
– 710-percent longer life than PowerVolt
– 422-percent longer life than Deka
– 80-percent longer life than Interstate



Test completed January 2012 by independent test laboratory JBI Corporation, 22325 Ohio 51, Genoa, OH 43430.

Performance batteries

An economical alternative to our premium StrongBox line, these batteries are built to exceed industry specifications. They fit a variety of applications including agricultural, commercial, automotive, light truck, sport utility, lawn and garden, utility vehicle, golf cart, electric vehicle, and marine.

Quality design features:

– Heavy-duty poly containers for rugged performance
– Hot-melt installation protects against vibration
– Welded intercell connectors to withstand vibration and provide quick starts — even in cold weather
– Envelope separators eliminate shorts and prevent corrosion

Notes

Service Maintenance Record

JOHN DEERE

Fluid	Type	
☐ Plus-50™ II	SAE Wt.	_____
☐ Torq-Gard™	Bio	yes / no
☐ Hy-Gard™	Synthetic	yes / no
☐ Cool-Gard™ II	Other	_____
☐ Other	_____	

Service	Odometer/ Hour Meter	✓	Date Oil Analysis
Engine Oil / Filter		☐	
Transmission Oil / Filter		☐	
Hydraulic Oil / Filter		☐	
Hydrostatic Oil / Filter		☐	
Coolant		☐	
Other Oil / Filter		☐	
Fuel Filter		☐	
Air Filter Primary		☐	
Air Filter Secondary		☐	
Batteries			
Battery Testing and Analysis		☐	
Service by:			

www.JohnDeere.com

DKD1620 Litho in U.S.A. (13-11)