

# RAILWAY LUBRICATION TECHNOLOGY

50 TIMES MORE POWERFUL THAN ORDINARY LUBRICANTS

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# RAILWAY LUBRICATION TECHNOLOGY

## PREVENTATIVE MAINTENANCE = PROACTIVE MAINTENANCE

ProOne has developed an advanced state-of-the-art lubrication technology for railway engines and applications that is 50 Times More Powerful Than Ordinary Lubricants and Greases.

It was designed specifically for customers seeking peak performance, productivity, and fuel cost savings in the most demanding railway applications.

ProOne has also formulated a Fuel Technology that solves problems with carbon and fuel economy.

ProOne helps avoid catastrophic failures by solving problems before they happen, ensuring operational safety and efficiency.



The savings from using ProOne's advanced lubrication and fuel technology include:

- INCREASE ENGINE & EQUIPMENT LIFE
- IMPROVE ENGINE & EQUIPMENT PERFORMANCE
- DRAMATICALLY REDUCE FUEL CONSUMPTION
- FEWER COMPONENT & PARTS CHANGEOUTS
- LOWER MAINTENANCE COSTS
- INCREASE SAFETY
- LOWER TRANSPORTATION COSTS
- REDUCE UNSCHEDULED DOWNTIME
- REDUCE EQUIPMENT FAILURES
- EXTEND INTERVALS
- IMPROVE PERFORMANCE IN UNDERPERFORMING EQUIPMENT

# HOW XPL+ TECHNOLOGY WORKS

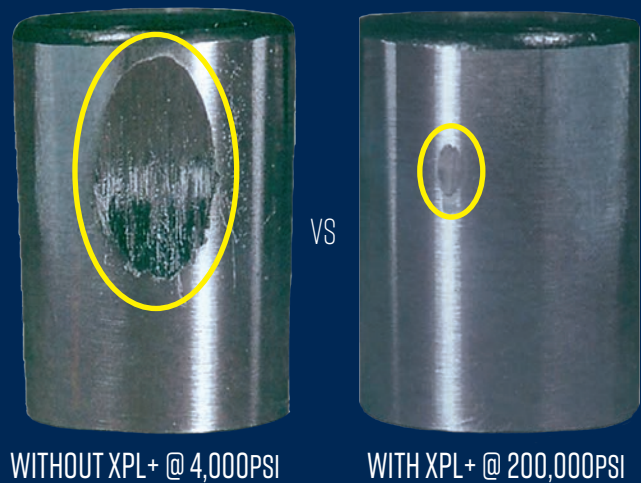


ProOne XPL+ Technology has a strong ionic charge so that it bonds to metal. This gives it exceptional film strength to withstand extreme friction, pressure, and heat.

On a bench cross axis friction machine test, bearings are subjected to pressure on a spinning race.

Using a leading oil without XPL+, the bearing sustains severe damage at only 4,000 pounds per square inch of pressure.

With ProOne's exclusive XPL+ Technology, there is minimal damage at 200,000 per square inch of pressure...over 50 times the pressure!



## TRUSTED:

For over 10 years ProOne has been used and trusted by top Fortune 500 companies around the world. It has also been approved by a leading car company to be used in any of their manufacturing facilities.

## PROVEN:

ProOne's problem solving technology has saved millions in the Industrial, Drilling, Trucking, and Marine Industries.

## LABORATORY TESTED:

ProOne has invested millions in lubricant testing to prove its effectiveness and quality. It is also safe for use in expensive machinery and systems.

## SAFE FOR HUMAN CONTACT:

ProOne products are formulated to be as safe for human contact as possible with minimal inhalation, skin contact or ingestion problems for operators.

## DOES NOT CONTAIN HARMFUL INGREDIENTS:

ProOne does not contain any solids or harmful solvents like chlorine.





# ENGINES / TRANSMISSIONS / GEARBOXES / FINAL DRIVE

## HEAVY DUTY OIL STABILIZER

### Unmatched in Protection & Performance

This high performance heavy-duty formula is designed to fortify your oil in severe operating conditions to provide extra protection and power output per cylinder for your engine as well as transmission and gearbox.

It is formulated with XPL+ Technology which offers 50 times more film strength protection other stabilizers can't provide. Exceptional results in engines that are burning, leaking, or using oil.

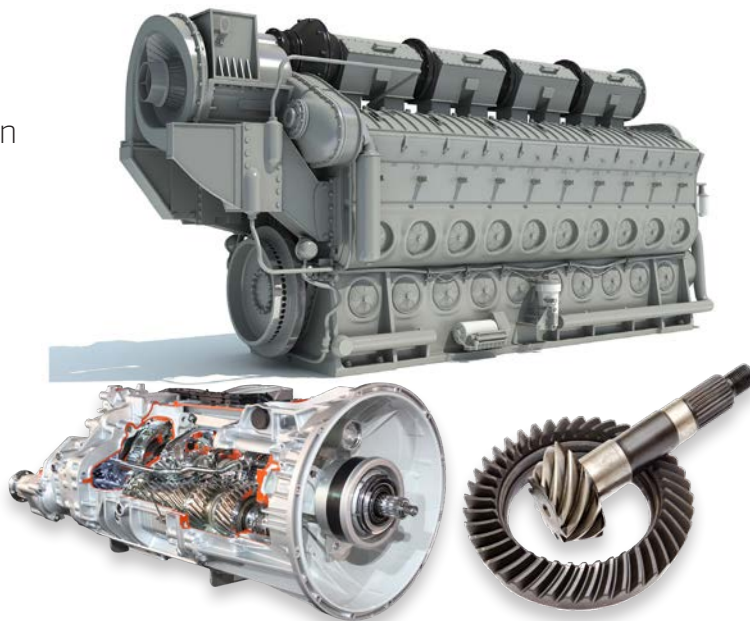


No Solids or Harmful Solvents Like Chlorine

### ADVANTAGES

- Extend oil life by 25% to 50% or more
- Slows oil degradation
- Extreme pressure protection
- Stop oil burning & oil leaks
- Slows blow-by, smoking & oil contamination
- Protect against wear to extend engine life
- Smoother operation
- Give more power with better fuel economy
- Provide dry start protection
- High viscosity index
- Easier starting at all temperatures
- Increase oil pressure

ProOne#	Size	Case Pack
13032	32oz/946mL	12
13001	1 gal/3.785L	4
13005	5 gallon/18.9L Pail	1
13055	55 gallon/208L Drum	1



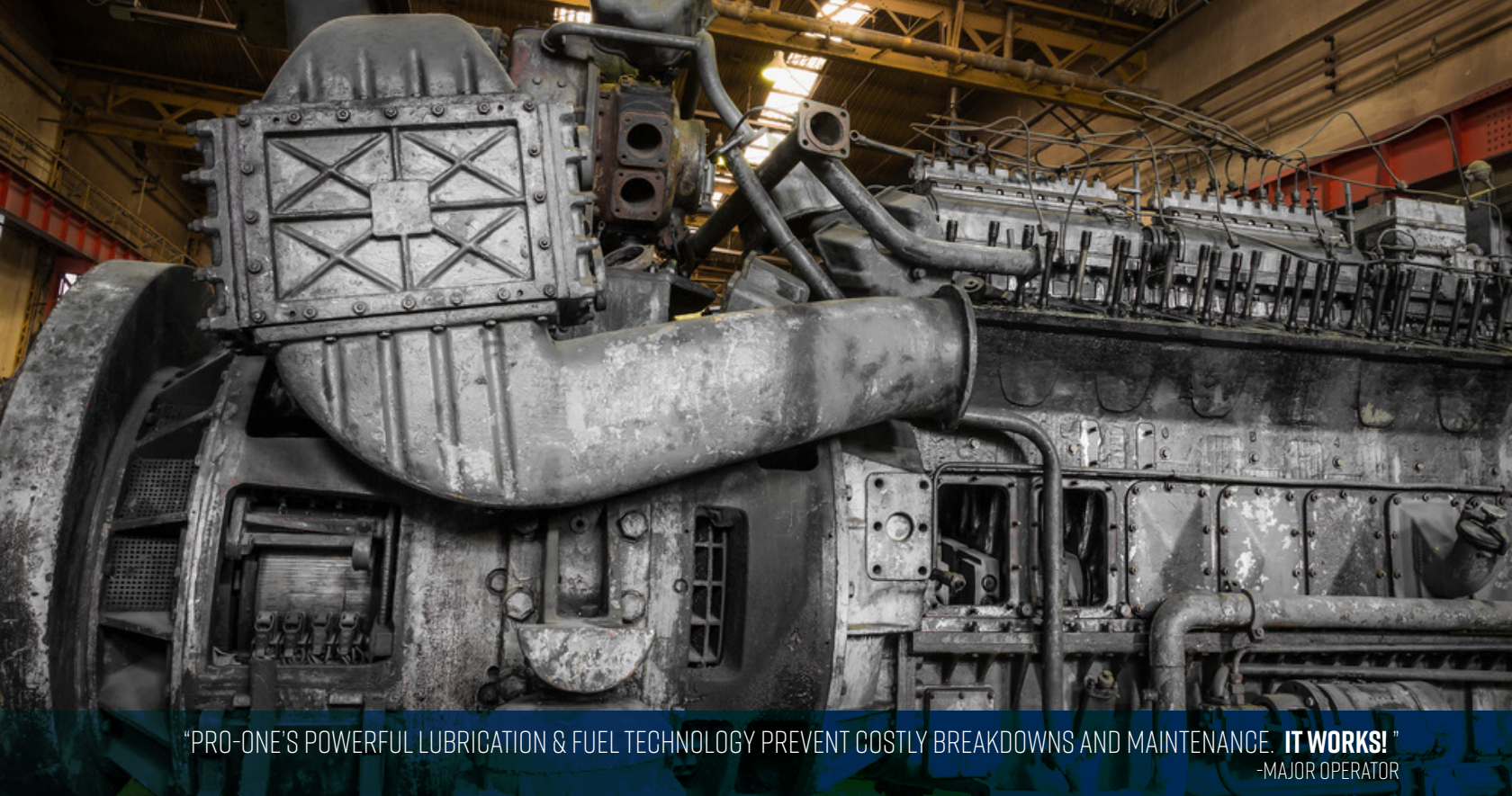
### BOTTOM LINE BENEFITS:

- Extend equipment operation hours
- Reduce expensive downtime
- Reduce labor hours (man hours)
- Reduce expensive planned and unplanned repair costs
- Reduce parts costs
- Avoid catastrophic failures & breakdowns
- Increase productivity

### TREATMENT RATIO BY VOLUME

- Diesel engines 20%
- Badly worn engines 40%
- Manual transmissions 20%
- Gear boxes 20%
- Gas engines 20%





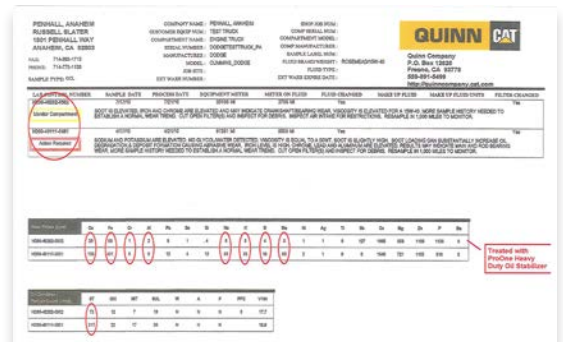
"PRO-ONE'S POWERFUL LUBRICATION & FUEL TECHNOLOGY PREVENT COSTLY BREAKDOWNS AND MAINTENANCE. **IT WORKS!**"  
-MAJOR OPERATOR

# OIL ANALYSIS TESTING

## DODGE CUMMINS

This is an example from a major construction equipment company that was notified of immediate action from an oil analysis test on their Cummins engine due to high levels of iron, chrome, lead, aluminum and soot.

After adding XPL+ at only one oil change interval, subsequent testing shows XPL+ still adhered to the metal protecting the engine and significantly reduce wear metals.



Wear Metals (ppm)	Cu	Fe	Cr	Al	Pb	Sn	Si
H390-40202-0902	20	68	1	2	9	1	.4
H390-40111-0601	135	431	6	9	12	4	12

**WEAR METALS**

Oil Condition / Particle Count (ct/ml)	ST	OXI	NIT	SUL	W	A	F	PFC	V100
H390-40202-0902	73	12	7	19	N	N	N	0	17.7
H390-40111-0601	317	22	17	35	N	N	N		16.6

**SOOT**

## RESULTS:

- Copper (Bushings, Bearings) = 135ppm to 20ppm **85% REDUCTION**
- Iron (Cylinders, Rings, Crankshaft) = 431ppm to 68ppm **84% REDUCTION**
- Aluminum (Pistons, Bearings, Pumps) = 9ppm to 2ppm **77% REDUCTION**

317ct/ml to 73ct/ml = **76% REDUCTION**

Improper air/fuel ratio contaminates the oil. By reducing friction less fuel is required. In addition, ProOne's XPL+ technology frees stuck rings restoring compression and reducing soot from contaminating the oil.

# EP-2 INDUSTRIAL GREASE

## Extreme Pressure High Temperature Performance from -40°F to 615°F!

EP-2 grease delivers outstanding extreme pressure protection in closed and open gear systems to help maximize equipment life and performance.

Formulated with XPL+ Technology, EP-2 grease can withstand shock loads and vibration stress.

Able to withstand the harshest mining conditions in extreme high and low temperature operations. Resistant to water, dust, and dirt.

And with no harmful additives, this premium grease is environmentally friendly!



*Approved by Ford TOX# 185984*

### TYPICAL PROPERTIES

NLGI Grade	2
Color	Blue
Thickener	Calcium Complex
Operating temperature range	-40°F to 615°F
Kinematic viscosity of base oils @40°C (ASTM 445)	216 cSt (1000 SUS)
Penetration @ 25°C (77°F) (ASTM D-217), mm/10	
Worked 60 strokes	270-295
Mechanical Stability (ASTM D-217) % change from P60	
P100,000 strokes	2.5%
P10,000 strokes with 50% H2O	<6.0%
Dropping Point (ASTM D-2265) °F (°C)	+572 (+300)
Oil Separation (ASTM D-1742) -24 hours @ 25°C (77°F)	0.17
Shell Roll Stability (ASTM D-1831)	<4.0%
Oxidation Stability (ASTM D-942) psi drop/500 hours	6.0 lbs
Oxidation Bearing Life (ASTM D-3527)	200 hours
4-Ball Wear Test (ASTM D-2266)	
mm scar, 40kg, 1200 RPM, 75°F, 1H	0.42mm
4-Ball EP test (ASTM D-2596) LWI, kg	>75
Weld Load, kgf	600
Timken OK Load (ASTM D-2509) lbs/kg	60/27
Rust test (ASTM D-1743)	Pass
Copper Corrosion test (ASTM D-130)	Pass/lb
Salt Fog Spray (ASTM B-117) hours to failure	>1000 hours
Water Washout (ASTM D-1264) @ 80°C, % loss	<2.5%
Wheel bearing leakage grams (ASTM D-1263) Modified @ 163°C (325°F)	0.4
Base Oil Characteristics	
Viscosity SUS @ 100°F	1100
Viscosity SUS @ 210°F	85
Pour Point, °F	+5
V.I. Min	95

### ADVANTAGES:

- Extreme pressure protection
- Heavy load carrying capability
- Excellent adhesion
- Extreme temperature range
- Shear stability
- Superior tooth flank protection
- Withstands shockloads
- Withstands vibration stress
- Reduces noise
- Oxidation resistant
- Corrosion resistant
- Reduces downtime
- Reduces power consumption
- Seal compatibility

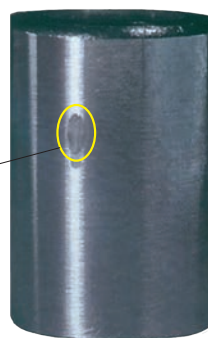
ProOne#	Size	Case Pack
46014	14 oz./397g Cartridge	12
46035	35 lb./15.9 kg Pail	1
46120	120 lb./54.4 kg Keg	1
46400	400 lb./181.4 kg Drum	1





WITH EP-2 GREASE  
@ 200,000PSI

ORDINARY GREASE  
@ 4,000PSI



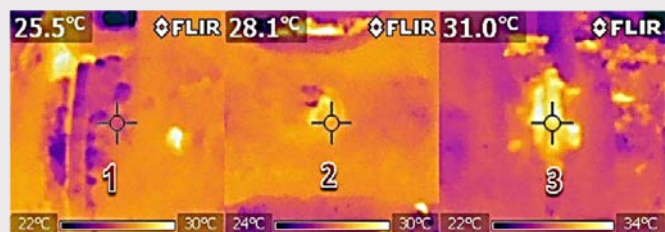
## BEARINGS

**NOTE:** EP-2 Can be mixed with existing grease. For optimum results, remove existing grease and clean the application being serviced, then apply EP-2.

Formulated with XPL+ Bonding Technology, EP-2 Grease is designed to run toward heat and friction. Most greases run away. It is also resistant to water, dust, and other elements. This means more protection, less failures and less downtime.

### MAJOR COMPANY - SOUTH AFRICA

A thermal device was used to accurately measure temperature in a 20 ton excavator bucket pin and bushing. A reading was taken after four hours with the company's pre-existing grease. After mixing in EP-2, a heat reduction of 11% was recorded after only 45 minutes!



BEFORE - 4 HOURS WITH EXISTING GREASE



AFTER 45 MINUTES WITH EP-2 MIXED IN 11% HEAT REDUCTION

## GEARS

Major cause of premature failures, regreasing and downtime in gear applications is insufficient load capacity of grease, alignment, and lack of lubrication.

EP-2 grease is 50 times more powerful than typical greases and provides superior tooth and flank shearing protection to withstand high loads, vibration and stress.

### FLANK

*Most load and wear takes place here where the tooth shears against the flank*



### TOOTH



# HYDRAULIC TREATMENT

## Unsurpassed Hydraulic System Protection

With advanced XPL+ technology, ProOne Hydraulic Treatment bonds to metal and reduces fluid friction providing exceptional power transfer performance.

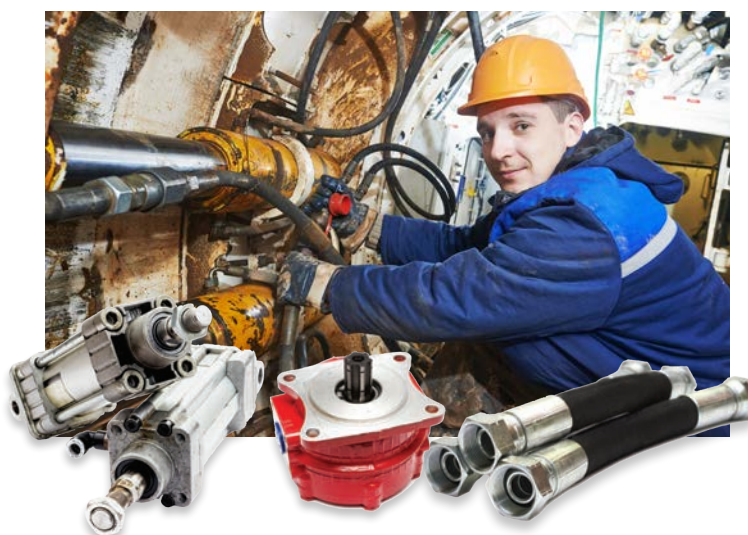
At points of extreme pressure, it helps hydraulic systems run at peak efficiency, which means less heat, less leaking, less down time and lower operating costs.

ProOne Hydraulic Treatment is the best preventative maintenance tool for Hydraulic operations.



### 🔥 BOTTOM LINE BENEFITS:

- Lowers fluid friction & operating temperatures
- Provides excellent thermal & oxidation stability
- Exceptional anti-wear technology
- Compatible with all hydraulic oils
- Compatible with all seals
- Reduces electrolysis up to 94%
- Prevents oxidation & corrosion
- Helps extend component life
- Reduces pump wear
- Protects and conditions DCV's
- Protects/conditions hoses & lines
- Maintains power transfer performance
- Reduces noise levels
- Helps to protect & condition seals from leaking
- Reduces heavy line pulsing



### 🔥 DILUTION RATIOS:

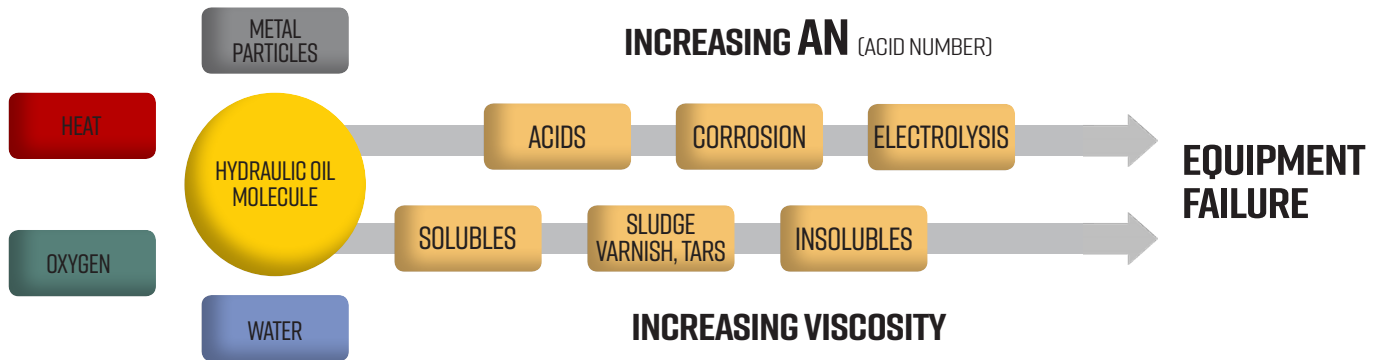
- Hydraulic Systems: 10% by volume
- Wet bath Clutches, Brakes: 5% by volume
- Automatic Transmissions: 2% by volume

### 🔥 APPLICATIONS:

- Hydraulic Systems
- Power transmission equipment
- Power steering units
- Automatic transmissions
- Smelter equipment

ProOne#	Size	Case Pack
22001	1 gallon/3.785L	4
22005	5 gallon/ 18.9L Pail	1
22055	55 gallon/ 208L Drum	1

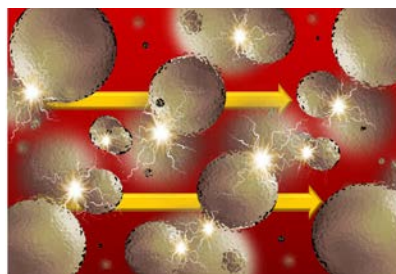
# DEMANDS ON HYDRAULIC OIL & PRO-ONE'S XPL+ TECHNOLOGY



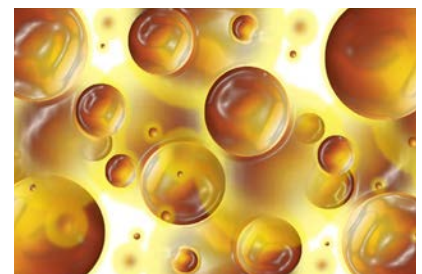
The degradation of oil begins the moment it's exposed to these elements. ProOne's XPL+Technology protects against the elements and contamination. It is designed to maintain oil stability under the most extreme conditions.

## HEAT - FLUID FRICTION

As with metal XPL+Technology encapsulates around the hydraulic oil molecule reducing fluid friction thereby reducing heat in the system. This also allows smoother and efficient operation.



BEFORE HYDRAULIC TREATMENT



AFTER HYDRAULIC TREATMENT

## METAL PARTICLES - FRICTION

Metal particles and contaminants in suspension can cause more friction, block openings and result in a catalytic reaction that will cause oxidation. XPL+ bonds to these particles reducing friction, and potential problems in the system.

In addition, ProOne Hydraulic Treatment contains no zinc, moly, PTFE, or chlorinated solvents that could be harmful to a hydraulic system.

## WATER/ MOISTURE

Water is the most destructive element in any hydraulic system and should always be removed immediately if detected. Once ProOne Hydraulic Treatment is in the system it immediately protects the pump and will help prevent cavitation and bearing failure. It will also help the hydraulic oil maintain a stable viscosity and continue to provide wear protection.

# FOR ALL DIESEL AND GAS ENGINES

## FUEL MAXIMIZER

### Advanced Fuel Conditioning Technology

Fuel is a major expenditure in railway operation. ProOne's Fuel Maximizer is a super-concentrated fuel catalyst/conditioner that liberates fuel's chemical energy and addresses fuel problems.

This allows more oxygen and helps create better performance, significantly reduce fuel consumption, reduce maintenance costs, and dramatically lower GHG emissions even under high loads.

It dramatically reduces carbon preventing build-up and fouling. **Turbochargers remain cleaner and require less maintenance.**

#### ADVANTAGES:

- No mixing-blends instantly
- Atomizes fuel for better combustion
- Prevents carbon build-up
- Cleans Turbocharger
- Virtually eliminates opacity
- Adds lubricity to fuel
- Improves engine performance
- Increases cetane
- Improves starting in all conditions
- High thermal efficiency



#### TREATMENT RATIO

1:4,000 or 1oz per 30 gallons  
Double dose first tank



ProOne#	Size	Case Pack
32010	10oz/295ml	12
32001	1 Gallon/3.78L	4
32055	55 Gallon Drum /208L	1

#### BOTTOM LINE BENEFITS:

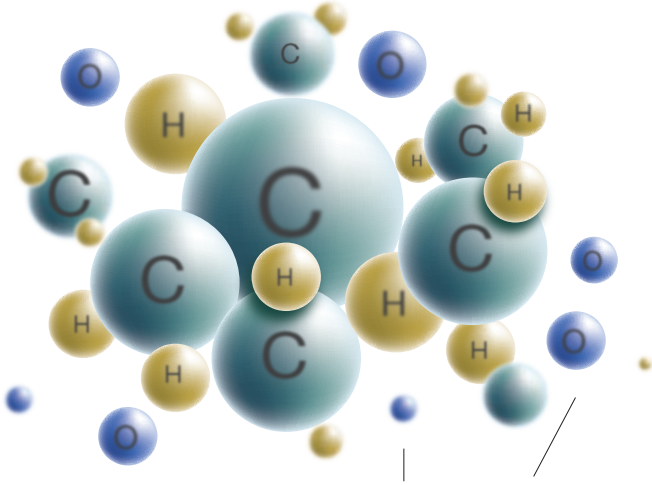
- Reduce fuel cost
- Cleaner engine components (injectors, lines, manifolds)
- Reduce expensive downtime
- Reduce labor hours (man hours)
- Reduce expensive planned and unplanned repair costs
- Reduce parts costs (cleaner parts, less failure)
- Reduce emissions (reduce respiratory hazards)
- Avoid catastrophic failures & breakdowns (carbon)
- Increase productivity (engine performance increase)



# HOW IT WORKS

## WITHOUT FUEL MAXIMIZER

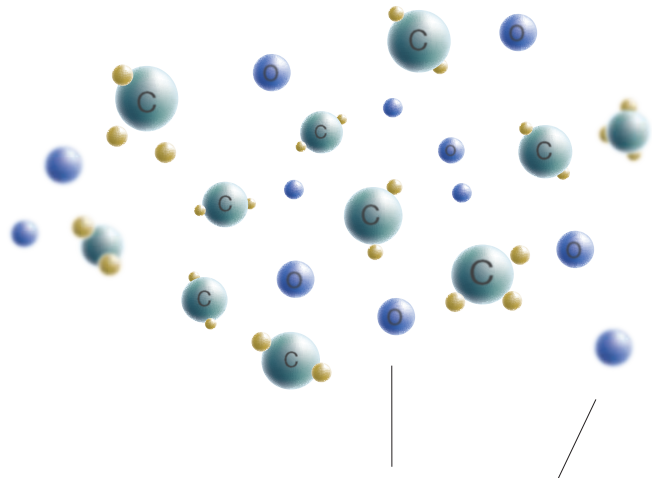
Fuel's chemical energy is stored in a hydrocarbon. In this state, Hydrocarbons do not burn completely resulting in carbon, soot, and harmful emissions.



Oxygen is required to create efficient combustion. However, its ability to perform its function is diminished by not being accessible resulting in unburned hydrocarbons.

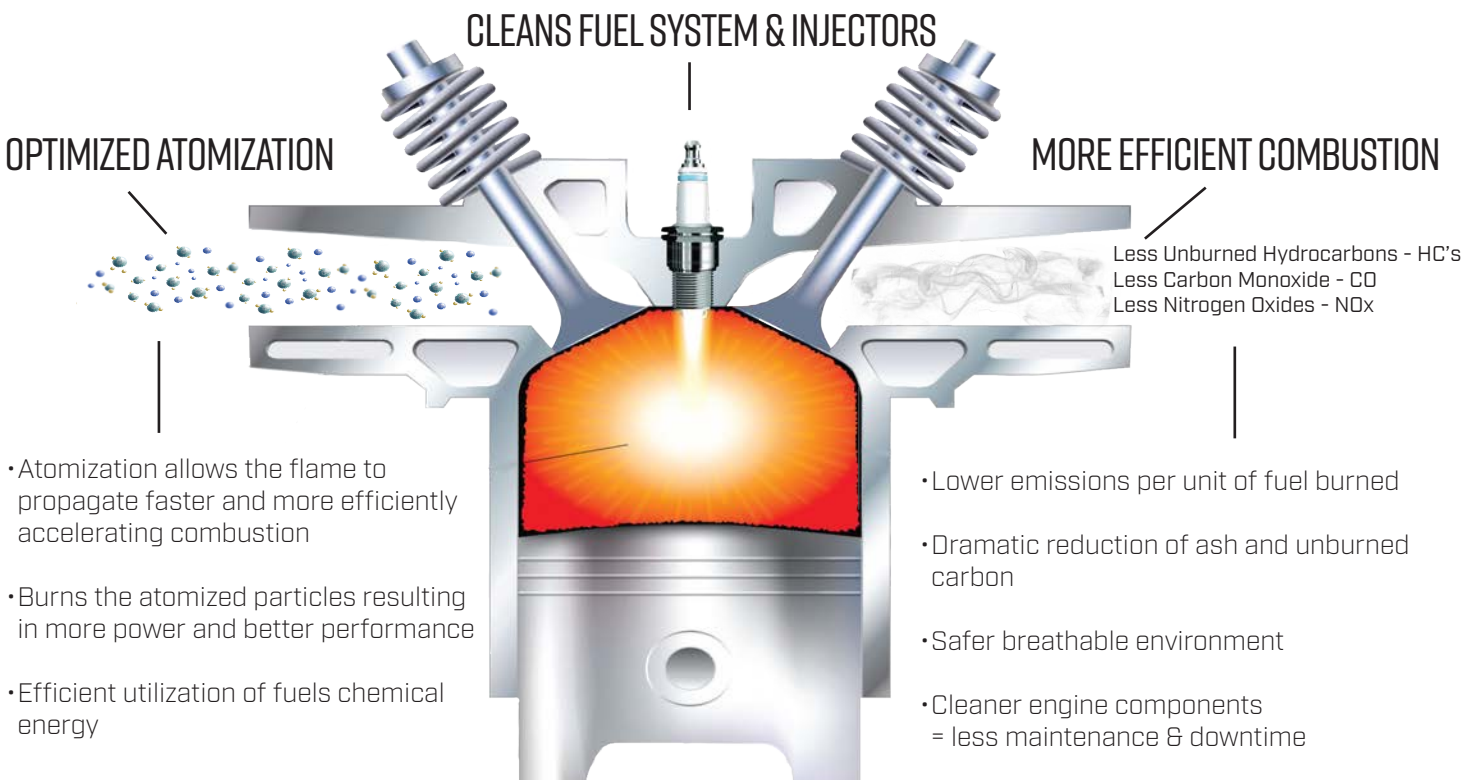
## WITH FUEL MAXIMIZER

Fuel Maximizer is a catalyst that breaks apart large particulates, accelerating the chemical reaction of the fuel thus liberating its chemical energy.



Fuel Maximizer makes Oxygen available to burn more completely

# IN YOUR EQUIPMENT



# TESTED & PROVEN

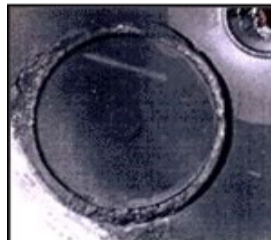
## CARBON & SOOT

90% OF ALL ENGINE PROBLEMS CAUSED BY INCOMPLETE COMBUSTION RESULTING IN CARBON BUILD UP.

Incomplete combustion results in carbon and soot buildup which will:

- Contaminate your oil and clog oil and fuel filters
- Increase oil viscosity and create sludge
- Cause detrimental wear in cylinders and valve components
- Rob your engine of fuel economy and performance

WITHOUT FUEL MAXIMIZER



WITH FUEL MAXIMIZER



(EGR VALVE SOAKED IN FUEL MAX FOR 4 MINUTES)



WITHOUT FUEL MAXIMIZER



WITH FUEL MAXIMIZER

## WATER CONTAMINATION

Water contamination creates a harmful breeding ground for Bacteria & Algae. This leads to:

- Fuel filter contamination
- Dramatic acceleration of oxidation THEN corrosion
- Poor fuel detonation = Lower fuel efficiency



WATER CONTAMINATION



ALGAE/FUNGI



CORROSION

## FUEL STORAGE



#2 DIESEL 95ML



TREATED @ 1:30 RATIO 98ML



58% WATER REMOVED  
42% EMULSIFIED

## FUEL ECONOMY

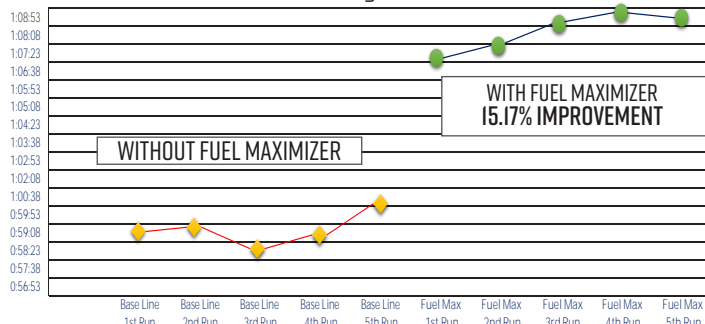
Fuel does not completely atomize, even with today's modern engine designs:

- Robbing performance and fuel economy\*
- Results in an increase in emissions and carbon build-up
- Which eventually contaminate your oil and could result in engine failure

*\*LABORATORY TESTS DEPICT FUEL ECONOMY RESULTS UNDER CONTROLLED CONDITIONS. FIELD TEST DATA SHOWS A MINIMUM OF 3% UP TO 18% IMPROVEMENT IN FUEL SAVINGS.*

## MPG+ SAE J1321 FUEL CONSUMPTION TEST RESULTS

Engine: Cummins N14 with #2 Sinclair Diesel  
Ratio: 1oz to 23 gallons of fuel



# TESTED & PROVEN

## ULSD & LUBRICITY

The EPA has mandated ULSD fuels to reduce emissions, dropping sulphur content from 500ppm to 15ppm.

This unfortunately results in:

- Low lubricity = injector and pump failure, excessive carbon build-up, upper cylinder wear
- Increased NOx emissions
- Provides a breeding ground for microbes and bacteria which will expand and clog filters and lead to fuel starvation or catastrophic failure

## INJECTOR SPRAY

Common injector malfunction is caused by carbon build-up, contaminated fuel and lack of lubrication (ULSD, Ethanol Fuels)

- Spray pattern must allow fuel to fully atomize for ideal burn
- Steady stream will not burn efficiently and creates carbon



WITHOUT FUEL MAXIMIZER



WITH FUEL MAXIMIZER

## CLEANLINESS TEST

Cummins L-10 Injector Cleaning Test

Test method designed for evaluation of diesel fuel and overall quality for deposit reduction.

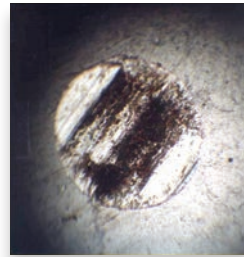
Inadequate fuel quality affects:

- Deposit tendency
- Corrosivity
- Lubricity
- Injector performance

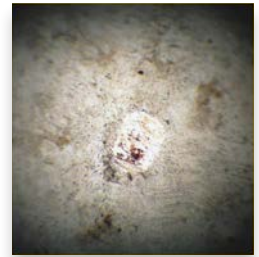
*PLUNGER RATING - REMOVED AND RATED FOR INJECTOR DEPOSITS. THE LOWER THE PERCENTAGE, THE LESS CARBON THERE IS ON THE INJECTOR PREVENTING FLOW LOSS OF FUEL.*

### ASTM D6079 LUBRICITY TEST

Improves Lubricity in Fuel



BEFORE



AFTER

WITHOUT  
FUEL MAXIMIZER



WITH  
FUEL MAXIMIZER



FUEL MAXIMIZER HELPS SAFELY REMOVE EXISTING CARBON BUILD-UP, ALLOWING INJECTORS TO OPERATE

### IMPROVES DIESEL FUEL CLEANLINESS



WITHOUT FUEL MAXIMIZER

PLUNGER RATING - UNTREATED AVERAGE 23.38%



WITH FUEL MAXIMIZER

PLUNGER RATING - W/FUEL MAXIMIZER 8.2%



# RAILGLIDE WHEEL FLANGE LUBRICANT

## Superior Film Strength & Biodegradable

ProOne RailGlide is a high film strength lubricant for use in top-of-rail lubrication components such as wheel flanges, switches, and rails.

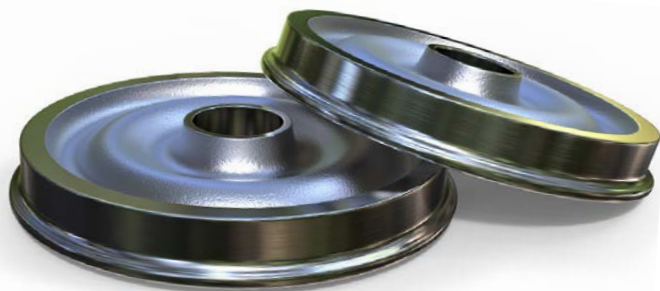
ProOne RailGlide is formulated with XPL+ Technology which bonds to metal and withstands high forces while driving and can withstand enormous pressures in any demanding operation. It dramatically reduces friction and wear and helps operators reduce maintenance costs and increase profitability.

It is environmentally friendly and readily biodegradable and can withstand both low and high temperature ranges.



### ADVANTAGES

- Extreme pressure protection
- Bonds to metal
- Shear stability
- Protect against wear to extend life
- Extreme high and low temperature operation
- Smoother operation
- Reduce noise
- Biodegradable
- Conditions seals
- Prevents oxidation and corrosion
- Protects in the harshest environments



### BOTTOM LINE BENEFITS:

- Extend equipment operation hours
- Reduce expensive downtime
- Considerable energy savings
- Reduce labor hours (man hours)
- Reduce expensive planned and unplanned repair costs
- Reduce parts costs
- Avoid catastrophic failures & breakdowns

ProOne#	Size	Case Pack
81001	1 gallon/3.78L	4
81005	5 gallon/18.9L	1
81055	55 gallon/208L	1

# XPL-101 PENETRATING SPRAY

## Most Powerful All-in-One Spray Lubricant on the Market!

No other penetrating lubricant offers XPL+ lubrication technology which protects metal surfaces from heat, friction, moisture and the elements, and easily loosens rusted or sticky mechanisms. We guarantee that once you use this environmentally friendly formula you will never settle for anything else.

### 🔥 BENEFITS:

- Extreme performance film strength
- 50 times more powerful than typical spray lubricants
- Penetrates and bonds to metal
- Reduces friction and heat
- Stops squeaks and reduces noise
- Major air tool protectant
- Frees sticky, corroded rust parts
- Protects metal from rusting
- Displaces water & moisture
- Non-toxic, environmentally friendly



*APPROVED BY FORD  
TOX# 186095 (AEROSOL) AND #186018 (SPRAY)*

### 🔥 FOR USE IN:

- Air Tools
- Bolts
- Bushings
- Chains
- Cables
- Electrical Terminals
- Hand Tools
- Hinges
- Ignition Wires
- Levers
- Linkages
- Locks
- Nuts
- Pulleys
- Shafts
- Wheels
- Bearings
- Fasteners
- Casters
- Knobs
- Pistons
- Gears
- Valve Train
- Oil Pump
- Latches
- Conveyors
- Drill Bits
- O-Rings
- Fishing Reels
- Springs
- Firearms
- Stamping Tools
- Rollers
- Sliding Doors
- Tumblers
- Mold Release
- Pivot Joints
- Rusty Metal
- Spark Plugs
- Garage doors
- Screw Jacks
- EGR Valves

ProOne#	Size	Case Pack
40004	4 oz./113g Aerosol	12
40012	11.5 oz./326g Aerosol	12
40022	22 oz./650mL Trigger	6
40001	1 Gallon/3.785L	4
40005	5 Gallon/18.9L Pail	1
40055	55 Gallon/208L Drum	1



SEE A LIVE DEMONSTRATION AT  
[WWW.PRO1INDUSTRIAL.COM](http://WWW.PRO1INDUSTRIAL.COM)

POWERED BY



TECHNOLOGY