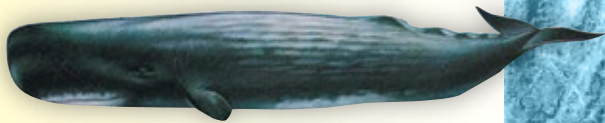




a division of Stellar Automotive Group

PRODUCT GUIDE

THE UNIQUE DIFFERENCE



YEARS AGO, Sperm whale oil and its derivatives were used as lubricant additives in virtually every automotive application because of the whale oil's exceptional lubricity, (wetting agent), and its heat resistance. Whale oil was so effective, that transmission fluid generally remained unchanged. Over 30 million pounds of whale oil per year was used in lubricants alone!

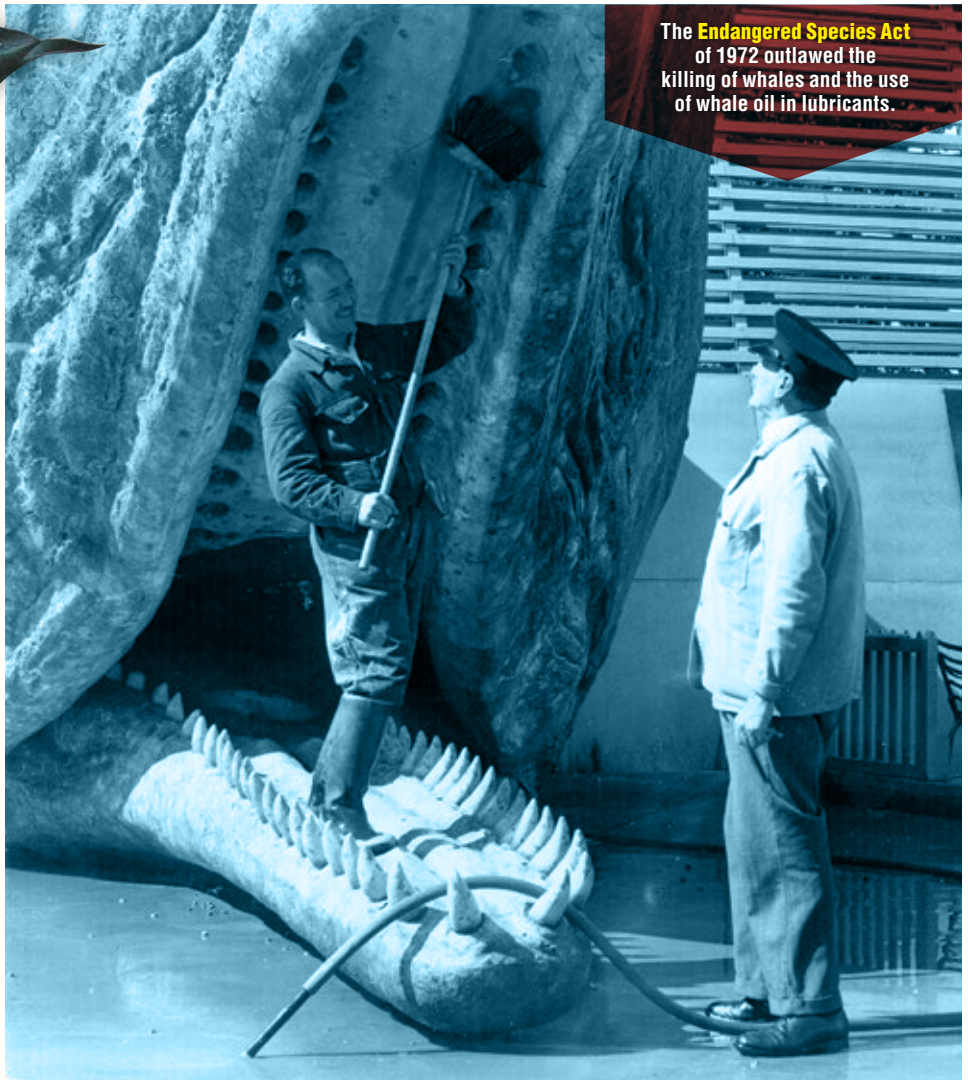
In 1972, the Endangered Species Act outlawed the killing of whales and the use of whale oil.

Afterward, no suitable replacement for whale oil was available. This resulted in a dramatic drop in lubricant performance. In particular, the heat transfer and heat resistance properties of ATF's were severely reduced.

Transmission failures skyrocketed from just under one million to over EIGHT million by 1975, due to the loss of the sperm whale oil additives.

Then, International Lubricants, Inc. (ILI) in conjunction with Dr. Philip Landis, a highly distinguished research chemist who headed the Mobil Oil Applied Lubrication Research Group, developed and patented the first and only high temperature synthetic sperm whale oil replacement - LUBEGARD's Liquid Wax Ester (LXE®) Technology.

This unique technology is proven to actually outperform the sperm whale oil additives. Independent third-party testing proved LUBEGARD with LXE reduced component wear by at least 50%, reduced oxygen uptake (oxidation) by 30%, and reduced pentane insolubles (sludge) by 60%, when added to GM® factory fill. (The reference oil for DEXRON® approval).



The **Endangered Species Act** of 1972 outlawed the killing of whales and the use of whale oil in lubricants.

Here are some key reasons why Lubegard products have the unique difference you need:

- » **LUBEGARD** is Used, Endorsed, Recommended, and Approved by multiple major OEM's (car manufacturers)
- » **LUBEGARD** has been awarded the most TOP SHOP PRODUCTS and TOP TOOL Awards by professional transmission technicians year after year.
- » **LUBEGARD** is named as the written solution in eight OEM technical service bulletins.
- » Unlike **ILI's** competitors, (who purchase prepackaged additives from commodity chemical companies and mix them together), **ILI** formulates its own raw materials and molecules to create the unique derivatives found only in **LUBEGARD®** patented products.
- » **LUBEGARD** won the prestigious 'Product of the Year' award for its patented LXE Technology from Lubricants World.
- » **LUBEGARD** has helped countless professional rebuilders reduce their number of comebacks for over two decades.
- » **LUBEGARD** is one of a few exclusive research and development manufacturers who produce their own unique synthetic materials.

REMOVES HEAT

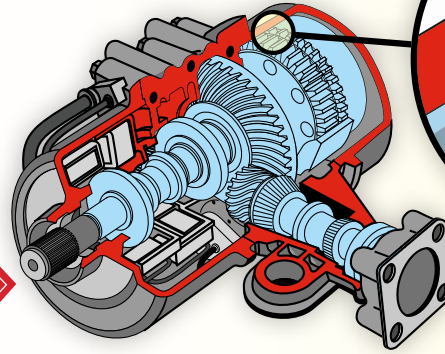
TESTING PROVES LXE TECHNOLOGY TO BE THE MOST HEAT STABLE MOLECULE

The Technology behind Lubegard's synthetic esters

LUBEGARD esters are most famous for their "heat sink" abilities. Heat sink is the absorption of heat, in the the oil phase generated at frictional surfaces, such as gear, or gear teeth.

In mechanical systems, heat is absorbed from the frictional surface through the bulk oil (whether it's synthetic or mineral), and is carried to and discharged out the container walls. For example, in the automatic transmission the heat is carried and discharged to the outer metal housing and cooling system.

Competing additives can actually trap in excess heat in a transmission's critical functional areas – likely resulting in failures.



Heat being transferred to the outer case by esters

When two metal surfaces come in close contact, they compress the oil molecules at the metal-oil interface. The friction generated at that interface generates heat (just like rubbing your hands together – you feel frictional heat on your skin).

When LUBEGARD LXE® (Liquid Wax Ester) Technology is present in the oil, its molecules are absorbed at metal interfaces soaking up the heat and transferring it to the bulk oil from the metal surface.

The oil & LXE molecules containing the heat are then dispersed to the metal housing where it is dissipated to the atmosphere (surroundings).

SUPERIOR LUBRICATION

THE LUBRICATION PROPERTIES OF LUBEGARD ARE UNPARALLELED!

Here's how LUBEGARD works in both types of mechanical lubrication

HYDRODYNAMIC LUBRICATION

Definition: Lubrication system where moving surfaces are actually separated by an oil film, eliminating all metal contact. Also referred to as "full film" lubrication.

In other words; when metal surfaces do not come close together or ever touch each other. In a mechanical assembly it's the viscosity of the fluid that creates the fluid film. That's why using the right additive is crucial! The movement of metal surfaces creates friction between the surfaces. LUBEGARD'S LXE molecules

actually REMOVE the heat and displace it to the outer core, thereby shielding, or protecting the internal components.

BOUNDARY LUBRICATION

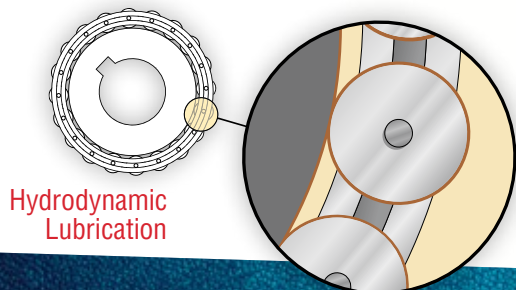
Definition: Conditions that do not permit the formation of lubricant film.

In other words, areas where surfaces actually touch. As in metal to metal contact.

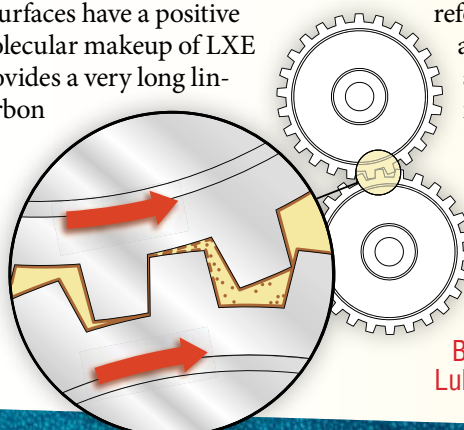
How does Lubegard LXE® technology work during boundary lubrication?

Simply, metal surfaces have a positive charge. The molecular makeup of LXE Technology provides a very long linear chain of carbon

atoms that are surrounded by oxygen atoms. The oxygen atoms have a negative charge, therefore attracting the molecule to metal surfaces. Advantageously, when the LXE molecules are heated in internal critical components, the attraction of the atoms moves the heat outward in a spiral centrifugal force (similar to spinning a toy top in a puddle of water) and keeps it harmlessly at bay in the outer metal case. LUBEGARD LXE molecules actually attach to the metal surfaces - and then are released (instead of scraping or scoring the metal) and instantly reforms again, then released again, reforms, released again and continues to reform infinitely.



Hydrodynamic Lubrication



Boundary Lubrication

Automatic Transmission Fluid Protectant

USED, ENDORSED, DESIGNATED, AND RECOMMENDED BY MULTIPLE OEM'S TO PROTECT TRANSMISSIONS AND REDUCE WARRANTY CLAIMS.



LUBEGARD® Synthetic Automatic Transmission Fluid Protectant is a concentrated additive package infused with superior seal conditioners and friction modifiers. This unique product restores additive content to used ATF and enhances new ATF resulting in improved performance and smoother, more consistent shifting. It can safely be added to any automatic transmission fluid (ATF) including full synthetic, semi synthetic, conventional, and low viscosity fluids except Ford Type F or CVT.

LUBEGARD® Synthetic Automatic Transmission Fluid Protectant is engineered to raise the thermal and oxidative stability level of automatic transmission fluids, so when it operates at elevated temperatures, it does not thin out and pyrolyze, burn, or react with oxygen and form deposits.

It is formulated with proprietary Liquid Wax Esters (LXE®) that are unique because of their natural lubricity, high viscosity index, and high flash and fire points. They have the ability to withstand repeated heating to temperatures as high as 570°F. LXE® gives automatic transmission fluid the extra lubricity needed for transmission's unique frictional requirements. They improve heat conductivity, suppress foaming and, consequently, reduce transmission-operating temperatures.



AVAILABILITY

Stock No.	Unit Size	Case Qty
60902	10 oz.	12/c
60902TL TRI-LINGUAL PACKAGING	10 oz.	12/c
50902	32 oz.	6/c
50904	5 gal.	n/a
50905	55 gal.	n/a

MULTIPLE OEM'S USE, ENDORSE, DESIGNATE, AND RECOMMEND LUBEGARD ATF PROTECTANT.

BENEFITS:

This synthetic formula protects transmissions by reducing internal heat and wear. It has been comprehensively tested in third party evaluations and proven:

- » Provides smoother shifting and reduces powertrain loss
- » Modifies harsh shifts and makes them quicker in duration
- » Prevents overheating and reduces elevated operating temperatures up to 40°F for more efficient transmission performance
- » Only product that increases the fluid's ability to transfer heat
- » Anti-chatter in clutch packs (allow overnight penetration for maximum benefit)
- » Anti-shudder with converter clutches (allow overnight penetration for maximum benefit)
- » Assists in freeing hung up governors and stuck valves in valve bodies
- » Improves efficiency and life of the transmission for the average daily driver as well as added protection for severe duty drivers in high traffic areas, or vehicles under load or tow
- » Ideal for commercial, fleet, and RV applications
- » Prevents costly comebacks
- » Reduces transmission wear
- » Raises the thermal and oxidative stability of the fluid
- » Conditions seals making them pliable without shrinking or swelling them
- » Does not contain any harmful chemicals such as zinc or seal swell agents

TYPICAL TECHNICAL PROPERTIES:

Viscosity at 40° C	28-34 cSt
Viscosity at 100° C	6-9cSt
Flashpoint (COC)	> 400°F
Pour Point	< 0°F
Viscosity Index	> 160
Gravity, API	28-31



Platinum® High Performance ATF Protectant

WITH LXE® TECHNOLOGY

**The highest quality transmission supplement available.
Engineered to extend the life of the transmission
and save shops time, space and money.**



2 jobs → 1 solution

- » Use as a Conversion Additive to enhance base ATFs into OEM ATF equivalents. Simply add to any base ATF (except Ford Type F and CVT) to create a premium OEM ATF equivalent. This one product eliminates ATF confusion, requires minimal shelf space, and costs significantly less than OEM ATFs.
- » Supplement your current ATF with Platinum to extend the life of the ATF and the transmission.

Third party testing shows the proprietary technologies in Platinum outperform even the best OEM formulas. (see table)

- » Doubles the life of the ATF when added to Dex III and performs 7% better than Dex VI
- » Increases frictional stability by 50%
- » Provides 65% more metal protection
- » Reduces transmission temperatures up to 40°F
- » Dramatically improves shift quality and transmission performance

LUBEGARD® PLATINUM® UNIVERSAL PROTECTANT ADDED TO DEXRON®III OEM REFERENCE FLUID RESULTS

**Total cycles before failure or out of specification,
20,000 cycles equals 100,000 service miles**

LUBEGARD® PLATINUM®	44,200 CYCLES
OEM	OEM REFERENCE ATF SPECIFICATION, 20,000 CYCLES

Results: Lubegard® Platinum® lasted more than TWICE the duration of OEM reference, equaling 221,000 service miles!

Shift time variability of Lubegard® Platinum® vs. OEM reference oil

LUBEGARD PLATINUM	PLATINUM® SHIFT VARIABILITY AT 20,000 CYCLES WAS .02 SECONDS
OEM	OEM SHIFT VARIABILITY AT 20,000 CYCLES WAS .04 SECONDS

Results: Lubegard® Platinum® dramatically tightened the shift time variability by 50% (from .04 to .02 seconds), increasing performance and reducing wear.

Total wear metals analysis of Lubegard® Platinum® fluid vs. used OEM fluid

LUBEGARD® PLATINUM®	PLATINUM® WEAR METALS, IRON, ALUMINUM, COPPER TOTAL 306 PPM
OEM	WEAR METALS 464 PPM

Results: Lubegard® Platinum® reduced harmful wear metals by 65% over OEM fluid performance!

Total acid number increase of Lubegard® vs. OEM standard

LUBEGARD® PLATINUM®	25% INCREASED OIL LIFE
OEM	OEM STANDARD TAN INCREASE FOR PASS

Results: Lubegard® Platinum® demonstrated a 0.79 TAN increase vs. OEM standard of 2.0!

AVAILABILITY

Stock No.	Unit Size	Case Qty
63010	10 oz.	12/c
63010TR TRI-LINGUAL PACKAGING	10 oz.	12/c
63016	15 oz.	12/c
63032	32 oz.	6/c
63015	5 gal.	n/a
63055	55 gal.	n/a
63330	330 gal. tote	n/a

BENEFITS

In addition, LUBEGARD®'s Platinum® meets and exceeds OEM performance requirements in extensive testing proven to further protect transmissions by:

- » Inhibiting fluid oxidation and foaming
- » Eliminates torque converter shudders, clutch pack chatters and shudders
- » Frees stuck valves and keeps them free
- » Protects seals and restores older seals to like new condition without adverse side effects
- » Extends fluid change intervals
- » Extends life of transmission
- » Restores performance to older and high mileage vehicles

THE SCIENCE

LUBEGARD®'s proprietary technologies make the difference. Platinum® is uniquely formulated using patented synthetic LXE® (liquid wax ester) and Synergol® TMS Technologies.

Together these technologies provide the most advanced and complete transmission protection available.

Synergol® TMS is the first non-active, low phosphorous-based surface molecule which, when added to ATF, drastically reduces wear on parts and metal surfaces. It makes all ATF work at its optimum, improving the surface layer performance in all components.

In fact, Synergol's lubricant performance will extend far beyond normal fluid life. Since Synergol® is not consumed, its effectiveness increases over time, providing continuous protection to all internal parts of the transmission.

LXE® (Liquid Wax Ester) has a molecular structure that allows unsurpassed transfer of heat making this technology the most heat stable transmission product sold. It's exceptional lubricity (wetting agent) and heat resistance is why this product is endorsed by multiple OEMs as well as by professional rebuild technicians around the world.

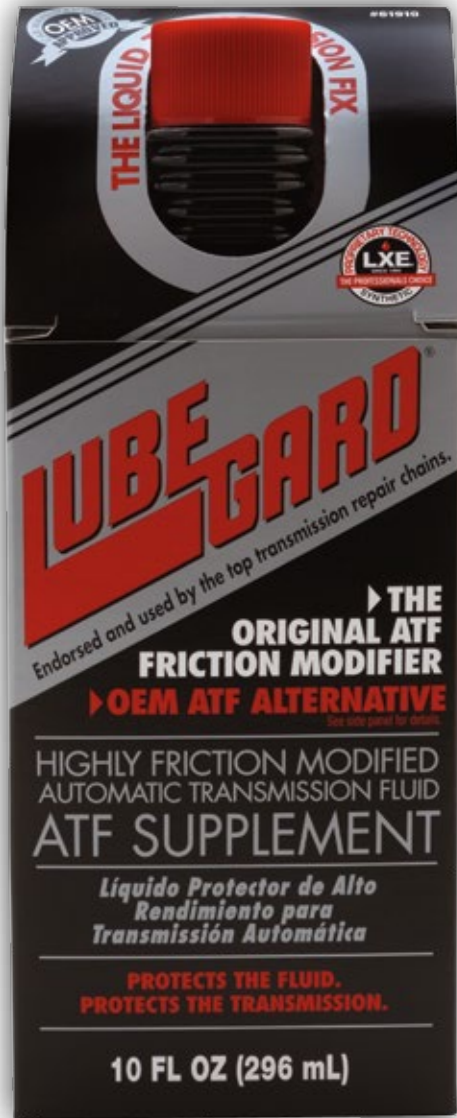


TYPICAL TECHNICAL PROPERTIES:

Viscosity at 40° C	60 cSt
Viscosity at 100° C	10 cSt
Flashpoint (COC)	>400°F
Pour Point	-10°F
Viscosity Index	150
Gravity, API	24



Highly Friction Modified Automatic Transmission Fluid Supplement



A dual-purpose problem solver that corrects friction modification problems and converts base ATFs to perform like highly friction modified OEM ATFs.

- » Use as a Conversion Supplement to enhance base ATF into a highly friction modified OEM equivalent. (See table for applications)
- » Supplement your current ATF with HFM to prevent and eliminate torque converter lock up shudder, soften and modify harsh shifts, and extend the life of the ATF

LUBEGARD® Highly Friction Modified (HFM) Automatic Transmission Supplement contains a concentrated additive package with additional friction modifiers that can be safely added to any ATF including full synthetic, semi-synthetic, and conventional fluids to eliminate severe torque converter lock-up shudder and soften harsh shifts.

BENEFITS

- » Converts ATF into highly friction modified ATF
- » Saves time, space, and money by eliminating the need to stock multiple OEM fluids
- » Prevents and eliminates torque converter lock-up shudder (allow penetration overnight for maximum benefit)
- » Anti-chatter in clutch packs (allow penetration overnight for maximum benefit)
- » Softens and modifies harsh shifts allowing smoother, quicker shifts
- » Prevents overheating and reduces elevated temperatures
- » Raises the thermal, shear, and oxidative stability of ATF
- » Reduces friction, wear, and drive train power loss
- » Conditions seals

AVAILABILITY

Stock No.	Unit Size	Case Qty
61910	10 oz.	12/c
61910TR TRI-LINGUAL PACKAGING	10 oz.	12/c
61904	5 gal.	n/a
61955	55 gal.	n/a

TABLE 1

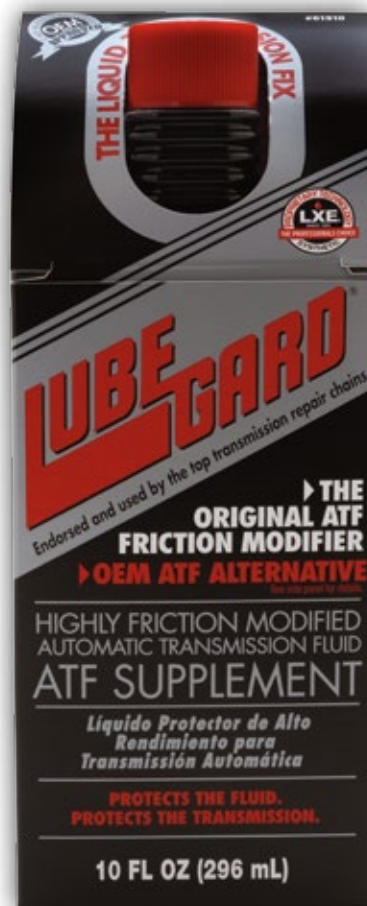
Use LUBEGARD® as an alternative to the OEM ATFs below:

MAKE	MANUFACTURER'S ATF
Acura	Honda Genuine/Z-1 & DW-1*
Chrysler	Mopar® ATF +4® (9602)
Chrysler/ Dodge	Mopar® ATF +4® (9602)
Eagle	Mopar® ATF +4® (9602)
Honda	Honda Genuine/Z-1 & DW-1*
Jeep	Mopar® ATF +4® (9602)
Kia, Hyundai, Mitsubishi	Mitsubishi Diamond SP III & SP IV*
Lexus	Toyota Type T IV & WS*
Plymouth	Mopar® ATF +4® (9602)
Saturn	Saturn Transaxle Fluid
Toyota	Toyota Type T IV & WS*
Ford/Mercury/ Lincoln Mercon SP*	
JWS 3309 applications for Audi, Chevy, Ford, Mazda, Mini, Volkswagen, Volvo	

*Low viscosity base fluid required

TYPICAL TECHNICAL PROPERTIES:

Viscosity at 40° C	36-40 cSt
Viscosity at 100° C	7-10 cSt
Flashpoint (COC)	Above 400°F
Pour Point	Below 0°C
Viscosity Index	Above 175
Gravity, API	25-29



THE #1 PRODUCT USED BY MORE TRANSMISSION PROFESSIONALS

Automatic Transmission Supplement

for Ford® Applications

A dual-purpose problem solver that corrects additive depletion problems and converts Dex/Merc ATF to perform like Mercon®V ATF.



LUBEGARD® Automatic Transmission Supplement for Ford® Applications will enhance any Dexron/Mercon® to perform like a Mercon® V. This uniquely engineered formula adds lubricity and maintains proper fluid viscosity of the ATF. It gives the ATF the ability to withstand consistently higher temperatures for today's hotter running transmissions. As a top treat, this product solves the reoccurring problem of additive depletion in Mercon® V ATFs. It effectively eliminates chronic torque converter shudder and clutch chatter. Added to Mercon® V ATF, LUBEGARD® Automatic Transmission Supplement for Ford® Applications will extend the life of the ATF by boosting frictional stability.

- » Eliminates the need to stock Mercon®V ATF.
- » Dramatically reduces friction and tightens the shift cycle without losing the friction modification at lock-up (Figure 1)
- » Prevents overheating and reduces elevated operating temperatures for more efficient automatic transmission performance
- » Only product of its kind that increases the fluids ability to transfer heat
- » Eliminates transmission fluid foaming and oxidation
- » Softens and modifies harsh shifts providing for smoother, quicker shifting

BENEFITS

Lubegard's Automatic Transmission Supplement for Ford® Applications is proven superior in optimizing total transmission performance and extending ATF life.

- » Eliminates clutch chatter and torque converter shudder
- » Keeps valves and governors free and frees stuck valves in valve bodies
- » Superior seal compatibility and conditioning
- » Raises the thermal and oxidative stability of the ATF

AVAILABILITY

Stock No.	Unit Size	Case Qty
62005	10 oz.	12/c
62005TL TRI-LINGUAL PACKAGING	10 oz.	12/c
62015	5 gal.	n/a
62055	55 gal.	n/a

LUBEGARD® WITH LIQUID WAX ESTERS (LXE)

Liquid Wax Esters (LXE®) are the most important component in our automatic transmission supplement. Liquid wax esters are unique because of their natural lubricity, high viscosity index, and high flash and fire points. They have the ability to not be affected by repeated heating to temperatures as high as 570°F. They give automatic transmission fluid the extra lubricity needed because of a transmission's unique frictional requirements. They also improve heat conductivity, suppress foaming and, consequently, reduce transmission operating temperature. The patented technology found in this product is a direct replacement for sperm whale oil used extensively in automatic transmission fluids before the enactment of the Endangered Species Act of 1972.

BASE OILS

The base oils in Lubegard's Automatic Transmission Supplement for Ford® Applications consist of high viscosity index petroleum base stocks with excellent heat resistance. Added to this material is polyalphaolefin synthetic fluid which also has excellent heat resistance, a high viscosity index, a low pour point, and a high flash point. These base oils give our additive the approximate viscosity of an automatic transmission fluid. No viscosity index improvers are used. These products are undesirable due to their tendency to shear and lose viscosity when exposed to extended use in an automatic transmission.

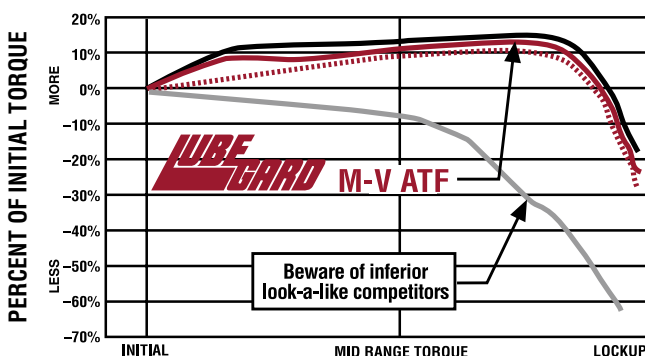
SUPERIOR PERFORMING ATF

The combination of these components provides excellent lubrication, reduced operating temperatures where overheating is a problem, and allows transmissions to operate at their optimum. Overheating is considered to be the #1 cause of transmission failure. Experts have reported that for each 10°F drop in fluid temperature, the life of the transmission fluid is doubled. For every 20°F reduction in fluid temperature, you double the life of the transmission. Although the optimum temperature range is considered to be 150 to 190°F, it is a well known fact that front-wheel drive transmissions may operate at temperatures as high as 225 to 250°F. Only LUBEGARD® helps to dramatically prevent overheating, reducing elevated operating temperatures up to 40°F!





TYPICAL TECHNICAL PROPERTIES:

Viscosity at 40° C	60 cSt
Viscosity at 100° C	10 cSt
Flashpoint (COC)	>400°F
Pour Point	<-5°F
Viscosity Index	>140
Gravity, API	24

CLUTCH SLIP AFTER ENGAGEMENT WITH VARIOUS TRANSMISSION FLUIDS



THE CHART ABOVE SHOWS:

-  **DEXRON® III/MERCON® ATF** has a lower friction performance during clutch engagement than the less frictionally-modified MERCON® V ATF.
-  Adding **LUBEGARD® M-V ATF** Supplement to the **DEXRON® III/MERCON® ATF** actually increases the measured friction of DEXRON® III/MERCON® ATF to make a crisper torque cycle, as seen in the less frictionally modified MERCON® V ATF, while rolling over at lockup to eliminate shudder.
-  **MERCON® V ATF** is a less frictionally-modified fluid and therefore has a larger torque fluctuation top-to-bottom than the DEXRON® III/MERCON® ATF.
-  An inferior look-alike M-V additive showing drastically reduced torque, actually changing the engagement profile of the clutch, moving it away from MERCON® V or DEXRON® III performance profiles. This could lead to excessive slippage and power loss.

COMPLETE™ Full Synthetic Automatic Transmission Fluid

WITH LXE® TECHNOLOGY



69005 »



69032 »

LUBEGARD® COMPLETE™ Full Synthetic ATF is a world-class lubricant formulated for outstanding performance and efficiency in meeting or exceeding OEM requirement for reduced viscosity.

Lubegard's unique, proprietary LXE® Technology provides superior wear protection with improved frictional and shear stability (high film strength for the life of the fluid).

This unique technology prevents and eliminates torque converter shudder, improves shift quality and imparts excellent torque carrying capacity for long clutch and component life. LXE® Technology is seal and o-ring friendly, ideal for new, older, and higher-mileage vehicles.

Lubegard® COMPLETE™ Full Synthetic ATF is recommended for all automatic transmissions that require a fully formulated low viscosity ATF with exceptional performance and uncompromising protection. It is engineered to meet or exceed OEM requirements where lower viscosity is required.

BENEFITS:

- » World class replacement for synthetic low viscosity ATF.
- » Backward compatible to replace DEXRON® fluids in older automatic transmissions that call for DEXRON® as well as Honda applications that call for Z-1® ATF.
- » Formulated with LXE® Technology to meet OEM requirements for shear stability, long term frictional stability, superior shift quality and anti-shudder properties.
- » Seal-friendly LXE® Technology restores seal flexibility and performance to older and high mileage transmissions.
- » Cures sluggish transmission performance on cold mornings.
- » The #1 technology used and endorsed by transmission shops for 30 years now available as a world class service solution for automatic transmissions.

AVAILABILITY:

Stock No.	Unit Size	Case/Qty
69032	32 oz. (946 mL)	6/c
69005	6 gal. (22.7 L)	n/a
69055	55 gal.	n/a
69275	275 gal. tote	n/a
69330	330 gal. tote	n/a

TYPICAL PROPERTIES:

PROPERTY	ASTM TEST METHOD	DATA
Viscosity @ 40° C, cSt	D445	31.00
Viscosity @ 100° C, cSt	D445	6.10
Viscosity Index	D2270	150
Flash Point, COC, °C (°F)	D92	208 (406)
Pour Point, °C (°F)	D97	-48 (-54)
Color	D1500	Red
Gravity, °API	D4052	32.9

LUBEGARD® COMPLETE™ Full Synthetic Transmission Fluid is compatible with the following ATF's:

ACURA

ATF Z-1
ATF DW-1

AISIN

M315
AW-1
3309

AUDI

Esso LT71141
G 052 990 A2
G 052 162 A1, A2
G 055 025 A2
G 055 005 A2
G 055 162 A2
G 055 540 A2
G 055 182 A2
G 060 162 A2

Allison

C-3
C-4
TES-295
TES-389

BMW

83 22 0 024 359
83 22 0 026 922
83 22 0 142 516
83 22 2 152 426
83 22 2 163 514
83 22 0 397 114
83 22 9 400 272
83 22 9 400 275
83 22 0 403 249
83 22 9 407 765
83 22 9 407 807
83 22 9 407 858
83 22 9 407 859

CATERPILLAR

Power Shift TO-2
Power Shift TO-4

CHRYSLER

Mopar ATF+3 (7176)
Mopar ATF +4 (9602)
Mopar ATF+5
Mopar AS68RC
05127382AA
Shell 3403
Shell L12108

DAEWOO

LT 71141

DAIHATSU

Alumix Multi

EAGLE

ATF+3
ATF+4

FIAT

MOPAR AW1

FORD

MERCON® SP
MERCON® LV
ESR-M2C-163-A2
FNR5 ATF
XT-8-QAW
XT-9-QMM5

GENERAL MOTORS

DEXRON, II, II-E, III, III-H
G, III-H
DEXRON VI
GM 12378515
GM 88900925

HONDA

Honda Genuine Z-1
Honda Genuine DW-1

HYUNDAI

SP-III ATF
SP-IV ATF
NWS 9638
Apollo ATF Red 1K

INFINITI

Matic D
Matic J
Matic K
Matic S

ISUZU

Isuzu Besco ATF-II, III
Isuzu Genuine Fluid

JAGUAR

LT 71141
JLM 20238
Shell 3403
Idemitsu K17
8342

JEEP

ATF+3
ATF+4
Shell 3403
JWS 3309

KIA

Kia SP-II, III, IV, VI
Kia Appollo Oil ATF Red-1K

LAND ROVER

LT 71141
Texaco N402
Shell 1375.4
AW1

LEXUS

Type WS

MAZDA

ATF M-3
ATF M-V
0000-77-114E-01
0000-77-122E-01
0000-77-120E-0

MERCEDES BENZ

MB 001 989 21 03-10
MB 001 989 68 03-10
MB 236.1
MB 236.12
MB 236.14/Shell 2634
MB 236.2
MB 236.5
MB 236.6
MB 236.7
MB 236.8
MB 236.81
MB 236.9

MINI

MC 83 22 0 402 413

MITSUBISHI

Diamond SP-II, III
Dia Queen J2
Dia Queen J3

NISSAN

Nissan Matic-D
Nissan Matic-J
Nissan Matic-S
Nissan-W

PORSCHE

000 043 304 00
Esso LT 71141
Shell ATF 3403

SAAB

93 160 393
93 165 146
93 165 147
Saab Aporoil

SATURN

21005966
22689186

SCION

Genuine WS

SUBARU

K0140Y0700
SOA868V9241

SUZUKI

Suzuki 3317
Suzuki 3309
Suzuki Matic J
Suzuki Matic S

TOYOTA

Toyota Type WS

VOLKSWAGEN

G 052 025 A2
G 052 162 A1
G 052 162 A2
G 055 025 A2
G 052 990 A2

VOLVO

1161521
1161540
1161641
97340
97341
31 256 774

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are property of their
respective owners.



COMPLETE™ CVT Fluid

WITH SYNTHETIC LXE® TECHNOLOGY

LUBEGARD®'s COMPLETE™ CVT FLUID is engineered to meet and exceed OEM fluid requirements eliminating the need to stock multiple fluids. This premium CVT fluid is infused with LUBEGARD's proprietary LXE® Technology that provides superior wear protection with improved friction and shear stability (high film strength).

BENEFITS

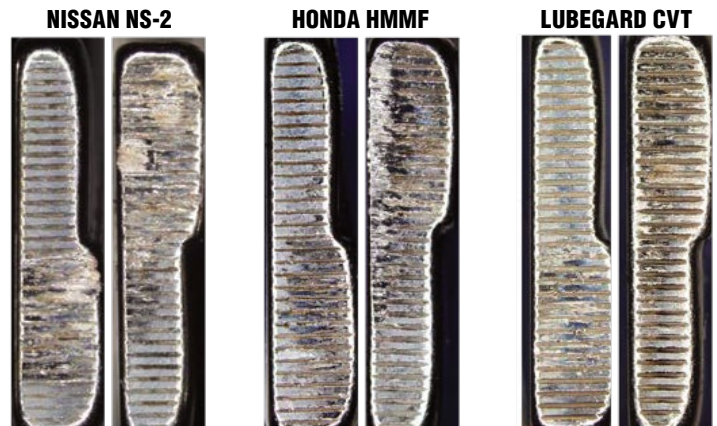
- » Protects continuously variable transmissions by minimizing friction between belts and pulleys which defends against fatigue damage
- » Provides superior anti-shudder performance
- » Imparts both shear and oxidative stability to the fluid
- » Remains fluid at low temperatures for excellent operation in cold weather
- » Prevents sludge and varnish build up

PROVEN SUPERIOR IN THIRD PARTY TESTING

FIGURE 1

CVT BELT BOX DURABILITY TEST

The wear analysis of belt elements and pulleys in this durability test shows that LUBEGARD® COMPLETE™ CVT FLUID has superior metal-to-metal wear protection as compared to both the Nissan and Honda CVT fluids.



AVAILABILITY

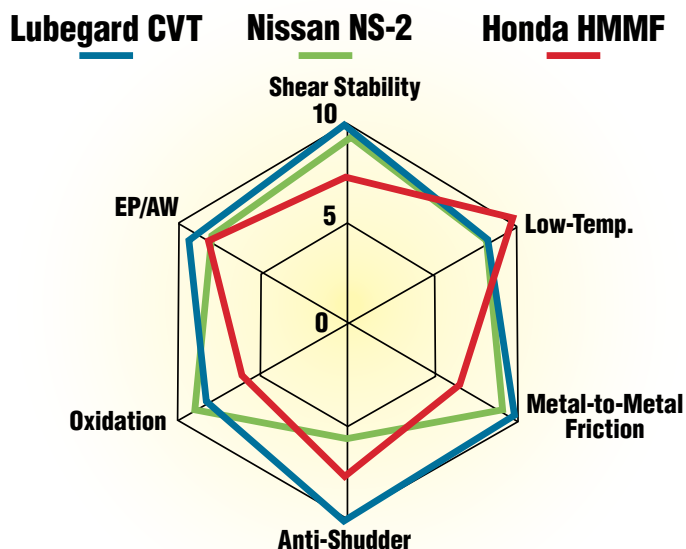
Stock No.	Unit Size	Case Qty
68112	32 oz.	6/c
69450	32 oz.	6/c
FRENCH/ENGLISH PACKAGING		
68232	5 gal.	n/a
68475	55 gal.	n/a
68330	330 gal. tote	n/a

FIGURE 2

LUBEGARD'S COMPLETE CVT FLUID MEETS AND EXCEEDS OEM FLUIDS REQUIREMENTS

LUBEGARD'S COMPLETE CVT FLUID proved equal or superior to OEM fluids in

- » Shear and Oxidative Stability
- » Low Temperature Fluidity
- » Anti Shudder Durability
- » Protection against wear and metal to metal friction



LUBEGARD COMPLETE CVT FLUID IS SUITABLE FOR USE IN THE FOLLOWING APPLICATIONS:

Audi/VW G 052 180; G 052 180 A2	GM Dexron CVT	Mini Cooper CVT; EZL 799A/ Esso CVT EZL 799A	Subaru CV-30
Audi/VW G 052 516; G 052 516 A2	Honda Genuine CVT (HMMF; HCF-2)	Mitsubishi Dia Queen CVTF-J1	Subaru High Torque CVT Fluid
Audi/VW TL 52180	Hyundai CVTF	Mitsubishi Dia Queen CVTF-J4	Subaru K0425Y0710
BMW 83 22 0 136 376	Hyundai SP-CVT 1	Mitsubishi Invecs III CVT	Subaru Lineartronic CVTF
BMW 83 22 0 429 154	Jeep CVTF+4	Mitsubishi Sportsmode 6 CVT	Suzuki CVTF 3320
Daihatsu TC; CVTF-DC; Amix CVTF-DFE	Jeep NS-2	Mopar CVT+4 (VTF)	Suzuki CVTF Green 1
Dodge CVTF+4	Kia CVTF	Motorcraft XT-7-QCFT CVTF (Ford CFT30)	Suzuki CVTF Green 2
Dodge NS-2	Kia SP-CVT 1	Nissan CVT NS-1	Suzuki NS-2
Ford CVT 23	Lexus FE	Nissan CVT NS-2	Suzuki TC
Ford CVT 30	Lexus TC	Nissan CVT NS-3	Toyota CVTF TC
Ford CVT WSS-M2C-933A (for CFT30)	Mazda CVTF	Punch EZL 799A	Toyota FE
Ford Mercon C	Mazda CVTF 3320	Saturn CVT	Toyota TC CVT
Fujiyuko ECVT	Mazda TC	Saturn DEX-CVT	ZF CVT VT1
Fujiyuko ICVT	Mercedes Benz 236.20	Shell Green 1V	
	Mercedes Benz CVT 28		

COMPLETE™ MULTI-VEHICLE Dual Clutch Transmission Fluid

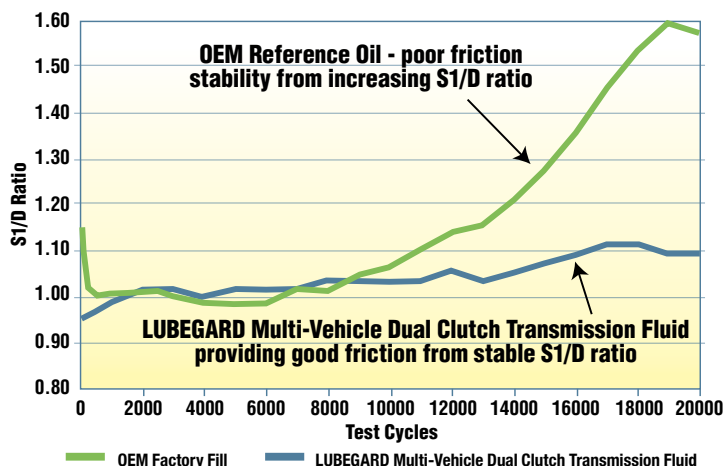
THE SERVICE SOLUTION FOR OVER
99% OF WET-CLUTCH APPLICATIONS



LUBEGARD® COMPLETE™ Multi-Vehicle Dual Clutch Transmission Fluid is designed to provide extreme pressure protection in high performance DCT vehicles. It is manufactured with the highest quality synthetic base oils and performance additives, producing improved shifting proficiency at all ambient temperatures. This formula is infused with proprietary LXE® which provides friction durability, unrivaled shear stability, and superior wear protection. The carefully calculated viscosity protects against wear while simultaneously improving fuel economies. LUBEGARD® Multi-Vehicle DCTF has been rigorously tested and evaluated against OEM approved fluids and proven superior in third party standardized industry tests in the following areas:

- » **Frictional Durability** resulting in **improved shifting** at all ambient temperatures, **longer fluid life**, and **extended drain intervals** (See figure 1)
- » **Load Carrying** insulating gears and bearings from extreme pressure, **increasing the life of the transmission** (See figure 2)
- » **Seal Performance** safeguarding against fluid leakage and preventing component failures due to oil starvation

FIGURE 1
**SUPERIOR FRICTION STABILITY OF LUBEGARD'S
MULTI-VEHICLE DUAL CLUTCH FLUID**



The S1/D measurement is commonly used to assess the overall friction quality between the lubricant and the clutch system. A stable S1/D ratio indicates good friction stability and an increasing S1/D ratio indicates poor friction stability.

Degradation of friction performance can be seen with the OEM factory fill after 10,000 cycles which could lead to loss in overall operating efficiency. LUBEGARD's Multi-Vehicle Dual Clutch Transmission Fluid ensures good shift quality over the life of the transmission.

AVAILABILITY

Stock No.	Unit Size	Case Qty
56032	1 qt.	6/c
56005	5 gal.	n/a
56055	55 gal.	n/a
56330	330 gal. tote	n/a

BENEFITS:

In addition, Lubegard's Multi-Vehicle Dual Clutch Transmission Fluid is proven superior in shear stability against both performance targets and competitive fluids. Further, this formula meets and exceeds performance requirements in a comprehensive range of extensive tests including:

- » Clutch friction durability
- » Synchronizer durability
- » Copper corrosion prevention
- » Steel corrosion prevention
- » Oxidation/Thermal stability
- » Elastomer compatibility
- » Gear wear protection
- » Bearing wear protection
- » Vane pump wear protection

FIGURE 2

FIELD TEST

With completion of a 160,000 km field trial using VW Jettas equipped with DQ250 transmissions for taxi service, full transmission inspections revealed LUBEGARD's Multi-Vehicle Dual Clutch Transmission Fluid had provided excellent protection to all components.



LUBEGARD MULTI-VEHICLE DUAL CLUTCH TRANSMISSION FLUID IS SUITABLE FOR THE FOLLOWING APPLICATIONS:

OEM	Vehicle Model	Transmissions	Specifications
Audi	A3, TT	DQ250, DQ500	VW TL 052 182
Audi	A4, A5, A6, A7, Q5	DL501	VW TL 052 529
BMW (Getrag)	1, 3, 5, 6 series, Z4, X1	7DCI600, DCI700	83 22 2 148 578, 83 22 2 148 579 83 22 0 440 214, 83 22 2 147 477 (BMW DCTF-1)
Citroen	DS5, C5, C4, C-Crosser	6DCT451	Peugeot/Citroen 9734.S2
Ferrari	California, LaFerrari, F12, 548	Getrag DCL750	TF DCT-F3
Fiat	Journey, 200	MPS6 (6DCT450)	BOT 341
Ford/Getrag	Fiesta, Focus, Mondeo, B-Max, C-Max, S-Max, Galaxy, Transit	6DCT450, 6DCT451, 7DCT300	Ford M2C936A (BOT 341)
Mercedes-Benz	A-Class, B-Class	F-DCT350, F-DCT500	MB 236.21 (001 989 85 03), MB236.25
Mitsubishi	Outlander	6DCT470	MZ320065 Dia-Queen SSTF-I
Nissan	Qashqai	6DCT451	Ford M2C936A
Peugeot	4007, 5008	6DCT451	Peugeot/Citroen 9734.S2
Porsche (ZF)	Boxster, Cayman, 911, Panamera	ZF 7DT45HL, 7DT45HLA, 7DT45FL, 7DFL, 7DT70HLA, 7DT75, 7DT75A	Porsche Oil No. 999.917.080.00 (FFL-3)
Renault		Getrag	BOT 450
Seat	Ibiza, Toledo, Leon, Altea	DQ250, DQ500	VW TL 052 182
Skoda	Fabia, Yeti, Octavia, Superb	DQ250, DQ500	VW TL 052 182
Volkswagen	Golf, Golf Plus, Eos, Jetta, Jetta SportWagen, New Beetle, Passat, Scirocco, Caddy, Touran, Tiguan, CC, Transporter, Sharan	DQ250, DQ400, DQ500	VW TL 052 182
Volvo	C30, S40, S60, V40, V50, V60, V70 S80, XC30, XC60	6DCT450	1161838 1161839

Transmission Flush

FOR USE WITH BOTH
AUTOMATIC AND STANDARD
TRANSMISSIONS



- » Safely removes varnish deposits
- » Prepares transmission for new fluid
- » Cleans internal transmission components
- » Contains rust & corrosion inhibitors
- » Does not contain harmful solvents
- » Safe for all seals

Today's automotive systems have tighter internal tolerances and are designed to operate cleaner and hotter than ever before. While these improvements have greatly decreased pollution, increased gas mileage, and extended the life of these precision systems, additional stress has been placed on both the oils and additives. The need to keep these systems free of varnish, sludge, and any other by-products that cause wear and reduce the performance of these units, is important to the total longevity of the complete system.

LUBEGARD® AUTOMATIC TRANSMISSION FLUSH WITH LX[®]

Technology is a premium synthetic blend that prepares any transmission for new ATF. It contains special detergents and dispersants to soften, clean, and aid in the removal of harmful deposits that have built up in the transmission. It will not harm metals, seals, frictionals, or compromise the ATF fluid itself. It also provides additional rust and corrosion protection. After completing the flushing procedure, add the appropriate LUBEGARD® ATF product for unsurpassed protection.

DIRECTIONS FOR USE:

With Flush Machine:

Follow manufacturers' directions.

Without Flush Machine:

Add one bottle of LUBEGARD® Automatic Transmission Flush to transmission fluid. With car on lift (wheels off ground) start engine, circulate for 5 minutes cycling through all gears. Drain completely. Refill with ATF. After the flush is completed add the appropriate LUBEGARD® ATF Product.

AVAILABILITY

Stock No.	Unit Size	Case Qty
95001	10 oz.	12/c
95005	5 gal.	n/a
95550	55 gal.	n/a
95333	330 gal.	n/a

TYPICAL TECHNICAL PROPERTIES:

Viscosity at 40° C	30-35 cSt
Viscosity at 100° C	5-8 cSt
Flashpoint (COC)	>400°F
Pour Point	10°F

Instant Shudder Fixx™

INSTANTLY eliminates torque converter lock up shudder in automatic transmissions

LUBEGARD® Instant Shudder Fixx™ is a concentrated friction modifier formulated specifically for eliminating torque converter shudder problems. It is the #1 shudder fix used by professionals.

- » Instantly eliminates torque converter shudder and problem shifts
- » Provides 4X less wear than regular ATF
- » Safe for use in ALL automatic transmissions except Ford Type F, CVT, and DCT
- » Compatible with conventional and synthetic ATFs
- » Commonly used as a diagnostic tool to determine if a problem is fluid related or a more mechanical fix is required
- » INSTANT GRATIFICATION PRODUCT
- » **Note:** For long term transmission benefits, use LUBEGARD® Synthetic ATF Protectant (60902)



19610 »

AVAILABILITY

Stock No.	Unit Size	Case Qty
19610	2oz	24/c
19610TL TRI-LINGUAL PACKAGING	2oz	24/c
19680 (Clamshell)	2 oz.	12/c
19689 (Display Box)	2 oz.	6/c

19680 »



19689 »



Transmission Filter Kits



Over 400 Filters and Kits available in a new cost effective program from the #1 recommended brand world-wide. These economical kits are professional grade at a price that makes you a profit.

- » Kits include durable Nitrile gasket
- » Each kit meets or exceeds all OE specifications
- » Lift available with minimum order

Assemblee Goo™

Firm and Light Tack

LUBEGARD® Assemblee Goo™ is formulated for use as an assembly aid and lubricant for virtually any assembly application (including engine). It facilitates the assembly process by holding components such as needle bearings and hydraulic seals in place, helping to achieve a faster, trouble-free rebuild. Assemblee Goo™ also provides the initial lubrication for the moving parts on the first start-up after service, preventing wear and scoring. It will not melt at shop or workbench temperatures and provides either light or firm tack as your assembly requires. Yet, it dissolves and becomes soluble in transmission fluids at operating temperatures, without clogging filters or solenoid valves. LUBEGARD® Assemblee Goo™ is dyed to eliminate misdiagnosing leaks and is NOT harmful with prolonged skin contact.

BENEFITS

- » Provides your choice of tack strength, firmer (GREEN) great for summer months and lighter tack (BLUE) great for winter months
- » No water/soapy residue to contaminate new automatic transmission fluid
- » Dyed green or blue to prevent misdiagnosing leaks
- » Will not melt at shop temperatures
- » Not harmful with prolonged skin contact
- » Will not clog filters
- » Dissolves quickly at operating temperatures
- » Proprietary green formula contains rust inhibitor
- » Compatible with all transmission fluids



19250 »



19260 »

AVAILABILITY

Stock No.	Unit Size	Case Qty
GREEN		
19250	16 oz.	12/c
19455	400 lb./55 gal.	n/a
BLUE		
19260	16 oz.	12/c
19655	400 lb./55 gal.	n/a

PRODUCT	GREEN	BLUE
Melting Temperature	130° F	116° F
Adhesive Strength	1.1 lbs.	1.1 lbs.
Color	Green	Blue
Rust Inhibitor Added	Yes	No

Kooler Kleen™

Transmission Flush

Solvent Based Formula

WINNER OF 9
INDUSTRY AWARDS!

LUBEGARD® Kooler Kleen™ Trans Flush (Solvent based) uses a proprietary mix of detergents to safely clean transmission lines. This product works without any water to remove grease, dirt, grime, and metal shavings that can clog up the lines, and it inhibits their return. Because of its unique solvent formulation, it will not degrade new automatic transmission fluid. The safest, most complete Transmission Cooler Line Flush available!

Solvent-Based formula chemically removes contaminants from transmission cooler lines safely and completely.

- » Flushes out grease, dirt, sludge and metal shavings
- » Inhibits the return of foreign deposits including rust
- » No water/soapy residue left to contaminate new automatic transmission flush
- » Prevents contamination of new or rebuilt units
- » Prevents costly comebacks
- » Formulated to not harm seals
- » Contains no CFC's or chlorinated solvents
- » OEM and large rebuilder approved
- » Ideal for those that do not have a dedicated flushing machine
- » Standard 5/16" fitting and universal tips available
- » Reduces warranty claims
- » Essential for installers and others that ship out transmissions
- » MIL PART: 6850-01-505-0642

DIRECTIONS FOR USE:

For Line Flush Cleaner: Attach connector to transmission feed line. Next, attach hose to transmission return line to collect flush and residue in a waste container. Hold can upright and actuate. Flush until clear. For best results, use entire content of can per installation. Then, turn can upside down and continue cleaning with air only.

**USED, ENDORSED, DESIGNATED,
AND APPROVED BY MULTIPLE OEM'S**



Standard 5/16" tip pictured. (Universal tip also available UNV19001)

AVAILABILITY

Stock No.	Description	Unit Size	Case Qty
KOD19001	Standard 5/16" tip	13.25 oz.	(12/c)
UNV19001	Universal tip	13.25 oz.	(12/c)

Kooler Kleen™

Transmission Flush

High pressure Formula

BY POPULAR DEMAND!

LUBEGARD® Kooler Kleen™ High Pressure Trans Flush (Water Based Formula) works like a fire hose, jettisoning away grease, dirt, sludge, and metal shavings that contaminate transmissions. And it inhibits their return! It's all about the high pressure dispensing and proprietary formula that contains no CFC's or chlorinated solvents. For those who prefer water based cleansers, this is your Trans Flush!

BENEFITS:

- » High pressure water based formula physically removes contaminants from transmission cooler lines
- » Flushes out grease, dirt, sludge, and metal shavings
- » Inhibits the return of foreign deposits including rust
- » Prevents contamination of new or rebuilt units
- » Prevents costly comebacks
- » Leaves no soapy residue
- » Contains no CFC's or chlorinated solvents
- » OEM and large rebuilder approved
- » Ideal for those that do not have a dedicated flushing machine
- » Standard 5/16" fitting
- » Reduces warranty claims

DIRECTIONS FOR USE:

Shake well before use. Attach connector to either cooler line and hand tighten. Next, attach hose to transmission return line to collect flush and residue in a waste container. Back flush for best results. Hold flush in an upright position flushing into container until clear. For best results, use entire content of can per installation. Then, turn can upside down and continue cleaning with air only.



AVAILABILITY

Stock No.	Unit Size	Case Qty
19025	18 oz.	(12/c)

**USED, ENDORSED, DESIGNATED,
AND APPROVED BY MULTIPLE OEM'S**

MULTI-PURPOSE LUBRICANTS



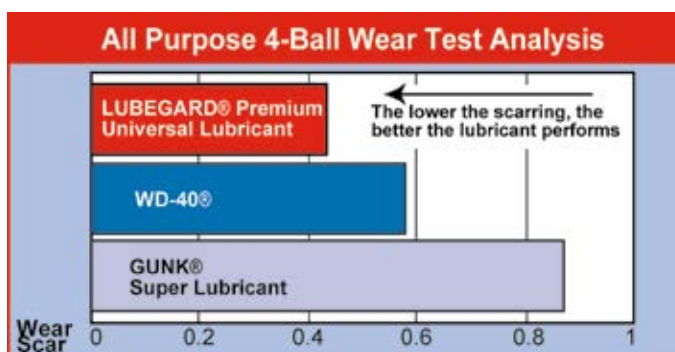
Originally formulated for professional transmission technicians, LUBEGARD® Universal Lubricant spray provides exceptional lubrication for the assembly of transmissions, engines, gear boxes, pumps, or any other general automotive use, but is also great for other general lubrication needs as well. Applications range from recreational uses to industrial, around the shop, or around the house!

LUBEGARD® Universal Lubricant spray contains patented LXE® (liquid wax ester) Technology which utilizes the unique benefits of the LXE® “polarity” allowing the lubricant to polarize to metal surfaces for long lasting fluid film and wear protection. LUBEGARD® Universal Lubricant protects all metal surfaces and is non-harmful to seals, o-rings, and end users.

- » Specially designed for automotive equipment rebuilders, but great for general lubrication needs
- » Keeps valves and governors free during assembly
- » Easy to use, simplifies and expedites the transmission assembly process
- » Biosynthetic formula with superior cold flow properties
- » Lubricates solenoid valves & other mechanical components
- » Environmentally responsible, non-aerosol and non-flammable, Biodegradable (EPA/560/6-82/003 and user friendly)
- » LXE® Technology has a natural polarity that strongly attaches to the metal surfaces providing superior lubrication
- » Excellent penetrant, protects against rust
- » Not harmful to seals or O-rings
- » Will not harm wiring harnesses

AVAILABILITY

Stock No.	Unit Size	Case Qty
61004	8 oz.	12/c
61016	16 oz.	12/c
61128	1 gal.	4/c
61105	5 gal.	n/a
61155	55 gal.	n/a





Zer0[®] All Purpose Lubricant

**ZERO SQUEAKS! ZERO RUST!
ZERO WASTE!**



The All Purpose Lubricant that lasts, and lasts, and lasts. In fact, it lasts up to 10 times longer than the competition and is: biodegradable, non-flammable, non-aerosol, practically odorless, and will not permanently stain fabric.

- » Zer0[®] is especially formulated with synthetic LXE[®] Technology to provide a non-flammable, biodegradable, all-purpose lubricant and protectant, that outperforms the competition.
- » This unique, highly effective product can be used for countless applications at work, home, or play, to instantly stop squeaks, free sticky mechanisms, loosen rusted fasteners, and provide unmatched lubrication and corrosion protection.

FEATURES:

- » Biodegradable
- » Non-flammable
- » Non-aerosol
- » No harsh odors

**LASTS
10X LONGER
THAN
LEADING BRANDS**

85222 »



85200 »



AVAILABILITY

Stock No.	Unit Size	Case Qty
85222	2 oz.	12/c with display
85200	8 oz.	12/c
85001	1 gal.	n/a
85055	55 gal.	n/a

Bio/Tech Engine Protectant

**Total Engine Protection
for use in all Diesel
and Gasoline Engines**



BIO/TECH Engine Protectant is a superior friction modifier that reduces engine wear and disperses heat using proprietary LXE® technology. It cools the engine by increasing the rate of heat transfer, without the use of chemical “enhancers” or solid lubricants such as Teflon™, graphite, or molybdenum disulphide that can create sludge and varnish. It replenishes oil components that have been lost in the stress of operation thus increasing the life of the engine.

This formula is engineered to meet the stringent demands of today’s hotter running engines, including turbos. It is also ideal to keep mixed truck fleets (gasoline and diesel) in good working condition.

- » Optimizes engine horsepower and performance
- » Reduces hot oil temperatures up to 30° F
- » Extends engine oil life, resulting in extended oil and filter change intervals
- » Increases fuel economy by reducing friction
- » Reduces wear on metal components
- » Allows easier starts, especially in cold weather
- » Eliminates lifter and other objectionable engine noises
- » Inhibits oxidation
- » Blends with ALL motor oils

AVAILABILITY

Stock No.	Unit Size	Case Qty
30902	10 oz	12/c
30901	15 oz	12/c
40902	32 oz	6/c
40904	5 gal	n/a
40905	55 gal	n/a

BENEFITS OF ADDING LUBEGARD TO NEW OR IN-SERVICE OIL:

All modern engine oils contain a highly refined petroleum or synthetic base oil which is fortified with additives to meet motor oil performance specifications. Even so, dated specifications may not represent the level of performance needed by a new engine design. A new oil may not contain sufficient additives such as ANTI-WEAR agents or ANTI-CORROSION compounds even though it passes all the tests. Furthermore, these protective compounds are depleted when the oil is in service.

The solution to this protection gap is LUBEGARD® BIO/TECH ENGINE PROTECTANT which supplements and enhances the effectiveness of the additive system already present in the oil. LUBEGARD® replaces the depleted or insufficient additives, and adds LXE® wear protectors and friction reducers which are unavailable in any other oil. Minimum friction means maximum mileage; minimum wear means maximum long term performance. In addition, LUBEGARD® increases the thermal and oxidative stability of motor oil to prevent creation of sludge and deposits.

There is a need for improved oil additives for protection and mileage in view of the rapid technological changes in modern engine design. LUBEGARD® provides a concentrated package that fulfills this need (without adding ZDDP, chlorine or other inappropriate sludge building additives like PTFE). LUBEGARD® does add LXE® technology which will carry your oil through the 21st century.

LUBEGARD® RATIO TO GASOLINE OR DIESEL ENGINES:

Add 3 oz. of LUBEGARD® to every quart of engine oil with oil change.

- » 10oz, bottle treats one 3-1/2 quart system
- » 15oz. bottle treats one 5 quart system

TYPICAL TECHNICAL PROPERTIES:	
Viscosity at 40° C	33-37 cSt
Viscosity at 100° C	5-8 cSt
Flashpoint (COC)	>410°F
Pour Point	<-10°F
Viscosity index	> 140
API Gravity (60°F)	27-32



Gear Fluid Supplement

For use in all manual transmissions, manual transaxles, and final drives that require gear oil



LUBEGARD® GEAR FLUID SUPPLEMENT contains LXE®, (liquid wax esters) and their derivatives, a blend of high grade petroleum oil, synthetic base oils, and a complete anti-wear formula. LUBEGARD® is designed to provide high temperature stability to prevent harmful deposits on synchros and gears.

- » Reduces drive train power loss
- » Lowers temperature and extends fluid life
- » Improves heat transfer from the fluid to the case wall and out the gear box
- » Improves all cold weather stiffness
- » Improves all manual and synchromesh transmission shifting characteristics
- » Reduces tooth drag and absorbs shock loads, thus improves the life of all gear units
- » Lowers friction on bearings and gears with high wiping stresses, especially hypoid gears
- » Minimizes oxidation and varnish deposits
- » Suppresses lubricant foaming
- » Safe for new MTF Fluids
- » Increases power transfer, and reduces energy consumption
- » Decreases equipment operating and maintenance costs

DIRECTIONS FOR USE:

Add 3 fluid oz. to each quart of gear oil.

AVAILABILITY

Stock No.	Unit Size	Case Qty
30903	8 oz.	12/c
70901	32 oz.	6/c
70902	5 gal.	n/a
70903	55 gal.	n/a



LUBEGARD® GEAR FLUID SUPPLEMENT PROVIDES:

MORE POWER

» Reduces back-lash frictional (i.e. tooth) drag in differentials, allowing more horsepower to the wheels.

LOWER OPERATING TEMPERATURES

- » Reduces rolling and sliding friction in the gears.
- » Reduces friction between the bearing rolling elements and their separators.
- » Improves heat transfer from the fluid to the case wall and out of the gear box.

LONGER EQUIPMENT LIFE

- » Reduces wear on gears and rolling elements.
- » Lowers operating temperature and prolongs fluid life.
- » Enhances the stability of the gear oil.
- » Contains no shear-sensitive viscosity components.
- » Will not cause sludge or varnish.
- » Contains no harmful solid lubricants or corrosive chemical enhancers.

ECONOMY

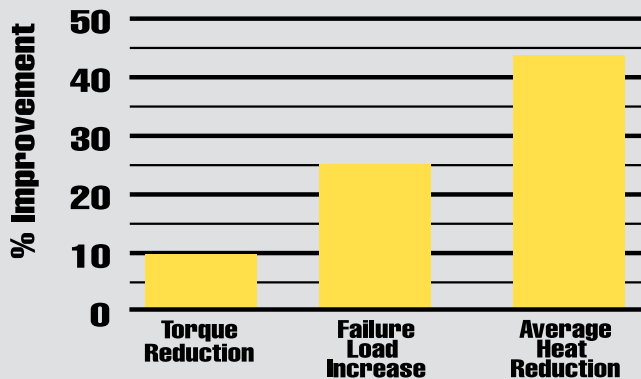
- » Ratio used is at 3 fluid oz. to a quart = 1 part in 10.
- » Saves on downtime by extending gear fluid changes.

TYPICAL TECHNICAL PROPERTIES:

Viscosity at 40° C	28-32 cSt
Viscosity at 100° C	5-7 cSt
Flashpoint (COC)	>400°F
Viscosity index	150
API Gravity (60°F)	32-35



Test Results Prove LUBEGARD® Is The Best Protection Against Wear and Heat Reduction





Engine Flush

PREMIUM SYNTHETIC BLEND!

LUBEGARD® Engine Flush is designed for use with or without a machine and will safely remove accumulated amounts of varnish, sludge, and by-products of combustion. The removal of these deposits is done at a controlled rate so that large amounts of possible clearance blocking debris is not generated during this service. LUBEGARD® Engine Flush with LXE® Technology is a premium synthetic blend that contains special detergents and dispersants, and NO harmful solvents that will damage seals & gaskets.

Today's gasoline and diesel engines have little room between internal tolerances and are designed to operate cleaner and hotter than ever before. While these improvements have greatly decreased pollution, increased gas mileage, and extended the life of these precision engines, additional stress has been placed on both the engine oils and additives. The need to keep these engines free of varnish and sludge, and any other by-products of combustion that cause wear and reduce the performance of these units, is important to the total longevity of the complete system.

BENEFITS:

- » Cleans Gums, Varnishes & Deposits
- » Frees Sticky Valves & Lifters
- » Improves Oil Circulation
- » Will Not Harm Seals & Gaskets
- » Does Not Contain Harmful Solvents

AVAILABILITY

Stock No.	Unit Size	Case Qty
95030	15 oz.	12/c
90722	5 gal.	n/a
90555	55 gal.	n/a
95330	330 gal. tote	n/a

REASONS YOUR CUSTOMERS SHOULD CHOOSE TO FLUSH THEIR ENGINE

Oil filters can typically remove contaminants measuring as small as 25 microns, and that’s with a GREAT filter. The most dangerous contaminants to your engine, however, are between 5 to 20 microns. These contaminants are larger than the finest tolerances in your engine, but too small for oil filters to remove, causing approximately 60% of wear. If you are not flushing these harmful contaminants out with a quality flush product, sludge, tar, varnish, and wear metals continue to circulate within the engine and accumulate in the passageways, oil pump, and oil pan. These contaminants will cause excess wear, higher operating temperatures, and reduced lubrication. Petroleum oils will create sludge and varnish on the inside of engines. That sludge and varnish will break loose and circulate throughout the engine, potentially clogging oil galleries and ports, and sticking lifters and valves.

After an engine is contaminated, regular oil changes do little to restore its operating efficiency. The detergent/dispersants found in most conventional engine oils can’t adequately remove these excessive amounts of contamination. The newly changed oil becomes dirty again within a short period of time, and actually helps to accelerate the formation of even more sludge and varnish!

Professional technicians recommend flushing engines every 50,000 miles, or if the vehicle is 8 years old or older.



USE BEFORE CHANGING OIL IN GAS OR DIESEL ENGINES!

TYPICAL TECHNICAL PROPERTIES:

Viscosity at 40° C	28-32 cSt
Viscosity at 100° C	4-9 cSt
Flashpoint (COC)	>400°F
Pour Point	10°F

DIRECTIONS FOR USE:

With Flush Machine:

Follow the manufacturer’s instructions.

Without Flush Machine:

With the engine warm, check for the proper oil level and add new oil if necessary. Add one bottle of LUBEGARD® Engine Flush and circulate at idle for 10 to 15 minutes. Stop the engine and drain as usual. Allow sufficient time for the system to drain completely. Install new oil filter and refill with new engine oil in the grade and quality level recommended by the manufacturer. For best protection and additional assurance of top performance and reduction in the formation of further sludge and varnish, always use LUBEGARD® BIO/TECH Engine Protectant (part# 30901) with each oil change.



31904 »



Limited Slip Supplement

Superior Friction Modifier Works in ALL Makes & Models including Ford, Chrysler, and GM

LUBEGARD® Limited Slip Supplement is a concentrated friction modifier formulated specifically for eliminating noise and chatter in clutch type limited slip differentials. It can safely be used in all limited slip differentials with either synthetic or petroleum lubricants, and replaces manufacturer-recommended friction modifiers.

Limited slip differentials depend on the operation of pre-loaded clutch packs on each axle shaft. Gear oils made for standard differentials do not contain the additives that make these clutches work. LUBEGARD® Limited Slip Supplement contains proprietary synthetic LXE® (liquid wax ester) Technology, an advanced friction modifier to eliminate chatter. LXE® Technology acts as an enhanced heat transfer component to pull heat out of the gearbox and clutches more quickly, providing cooler running units. This formula also contains rust and corrosion inhibitors to protect bearings and gear surfaces.

- » Eliminates differential chatter, groans, squeals, and popping
- » Reduces differential oil temperatures
- » Extends clutch pack and equipment life
- » Contains rust and corrosion inhibitors
- » Works for cone or plate type LS differentials

Ask for your free limited slip chart that includes identifications and applications.



42851 »



31921 »



AVAILABILITY

Stock No.	Unit Size	Case Qty
31904	4 oz.	12/c
31904TL TRI-LINGUAL PACKAGING	4 oz.	12/c
31921 (display box)	4 oz.	12/c
42851 (display box)	4 oz.	12/c
31901	1 gal.	4/c
31905	5 gal.	n/a
31955	55 gal.	n/a

TYPICAL TECHNICAL PROPERTIES:

Specific Gravity, API	0.84
Viscosity Index	193
Flashpoint	>450°F
Pour Point	<0°F

KOOL-IT™

Coolant Treatment

Coolant Alone is NOT Enough!



KOOL-IT™ Coolant Treatment is chemically engineered to reduce the surface tension of coolant, penetrating metal surfaces at vital heat-transfer areas. This formula's thinner endogenous surface films magnify the rate of heat transfer in both cylinder heads and radiators. And, because of their extraordinary resiliency, they provide tougher, longer lasting protection of the complex alloys in contemporary radiators.

Due to its unique chemical composition, Kool-It™ is also very effective at preventing damage from electrolysis, corrosion, and pitting. It provides 100% cooling system corrosion protection even in straight water applications. The overwhelming majority of failures associated with aluminum radiators found in most newer vehicles are due to corrosion. The corrosion forms as a result of deficient chemical protection within the coolant.

Kool-It™ is the easiest and most cost effective way to protect radiators and heater cores to prevent warranty claims. It is compatible with all types of antifreeze, providing total cooling system protection required for today's modern vehicles.



A. Stray electrical current can cause excessive corrosion of metal components



B. An electrochemical reaction that will produce voids in tubes.

- » Enhanced temperature reduction; cools engines even better; 5-10°F when used with antifreeze, and 15°-25°F degrees when used with straight water
- » Provides 100% cooling system corrosion protection even in straight water coolants
- » Prevents deposits and contamination, which lead to overheating
- » Protects all metals from electrolysis
- » Reduces wet-sleeve cylinder liner cavitation erosion
- » Reduces water pump, impeller, and intake manifold pitting
- » Corrects coolant pH balance
- » Race Track approved
- » 100% OAT formula; contains no silicates that are abrasive to water pumps
- » Compatible with all types of antifreeze
- » Prevents warranty claims
- » Extends coolant life up to 5 years

AVAILABILITY

Stock No.	Unit Size	Case Qty
96001	16 oz.	12/c
96808 CANADIAN CCR COMPLIANT	16 oz.	12/c
96110	1 gal.	4/c
96050	5 gal.	n/a
96055	55 gal.	n/a

THE #1 CAUSE OF ROADSIDE FAILURE IS COOLANT SYSTEM RELATED!

SOURCE: NATIONAL AUTOMOTIVE RADIATOR SERVICE ASSOCIATION



KOOL-IT™

Radiator Flush

KOOL-IT® Radiator Flush is chemically formulated to circulate through the cooling system and quickly remove scale, rust, mineral deposits, and combustion by-products from the coolant system and radiator of a car or truck. Radiators use coolants primarily composed of anti-freeze and water. Water contains minerals that form deposits on the metal surfaces of your cooling system and radiator over time. These deposits will reduce the heat transfer rate which can cause overheating. The deposits can also cause corrosion of the cooling system components and reduce the efficiency and life of the anti-freeze.

- » Quickly and safely removes scum, oily residue, sediments, rust, deposits, and other degradation products from the cooling system of any car or truck
- » Safe for all cooling systems, including aluminum radiators
- » Maximizes cooling system efficiency
- » Contains corrosion inhibitors
- » Contains no acids
- » Safe and easy to use
- » Requires no neutralizers



**Available in a
Flush and
Protect Pack
Includes:
Radiator Flush
and Coolant
Treatment
#98001**

AVAILABILITY

Stock No.	Unit Size	Case Qty
95020	16 oz.	12/c
95100	1 gal.	4/c
95055	55 gal.	n/a



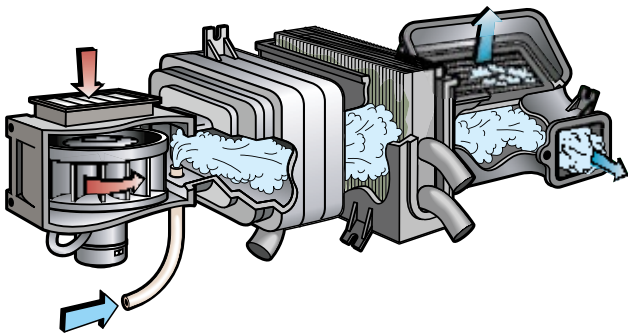
KOOL-IT™

Evaporator and Heater Foam Cleaner

Did you know that the air quality inside a vehicle can be up to **SIX** times worse than outside? Contaminated air conditioning and heater evaporator/cores can cause foul smelling, health threatening mold and mildew deposits. Use KOOL-IT® super foaming action to remove and neutralize the contaminants that live in air conditioning and heater systems of modern cars and trucks.

KOOL-IT® is released into the HVAC system and its super foaming action flushes out and neutralizes unwanted contaminants.

- » Quick and Easy!
- » Highly Profitable Service
- » No Equipment Needed
- » Customer Friendly Service
- » Ideal for Cars, Trucks, Vans & RV's
- » Repeat Service Opportunity
- » Eliminates Odors
- » Lasts up to Six Months
- » Improves air quality
- » Leaves a Clean, Fresh Scent
- » Reduces Allergens and Contaminates
- » Maximizes Cooling System Efficiency



AVAILABILITY

Stock No.	Unit Size	Case Qty
96030	6 oz.	6/c

Power Steering Fluid Protectant



LUBEGARD® Power Steering Fluid Protectant is proven to decrease system wear when added to any power steering fluid. This unique formula provides additional anti-wear, anti-corrosion, and anti-frictional compounds. It is infused with proprietary LXE® Technology (Liquid Wax Ester) that reduces heat and friction protecting the system from deterioration. The result is a longer running power steering system with increased responsiveness and less noise.

- » For use in ALL Power Steering Fluids
- » Converts power steering fluid into Honda Power Steering Fluid
- » Extends system and fluid life by significantly reducing wear
- » Eliminates stiffness on cold mornings
- » Prevents hardening and shrinking of seals
- » Eliminates power steering noises, whines, and squeals
- » Smooths operation of valves
- » Frees sticky turbines and pumps
- » Lowers operating temperatures preventing heat related problems



DIRECTIONS FOR USE:

Open power steering fluid reservoir. If low, top off with Lubegard® Power Steering Fluid Protectant. Do not overfill. If reservoir is full, up to 4 fluid ounces must be removed in order to add LUBEGARD®.

FOR BEST RESULTS:

Drain reservoir and flush with ATF or power steering fluid. For units with severe problems, flush twice. Refill with power steering fluid leaving 4oz. short and add Lubegard® Power Steering Fluid Protectant. Road test vehicle, making at least 8 complete turns to the left and 8 complete turns to the right.

AVAILABILITY

Stock No.	Unit Size	Case Qty
20404	4 oz.	12/case
20505	5 gal.	n/a
20455	55 gal.	n/a

TYPICAL TECHNICAL PROPERTIES:

Viscosity at 40° C	29.8-35.2 cSt
Viscosity at 100° C	7.0-8.0 cSt
Viscosity Index	>200
Density	0.85-0.89g/ml
Flashpoint (COC)	>450°F
Pour Point	<-25°F

COMPLETE™ Power Steering Fluid

WITH LXE® TECHNOLOGY

**FOR USE IN POWER AND POWER ASSISTED STEERING UNITS
THAT REQUIRE POWER STEERING FLUID.**

LUBEGARD® COMPLETE™ POWER STEERING FLUID is a hydraulic fluid that is intermittently pressurized by a high shear, high friction pump and is used in a high shear turbine motor to aid in turning a car's steering wheel. Since the fluid is subjected to hard, long term use, without regular changing intervals, it is critically important to provide extra anti-wear, anti-friction, and anti-corrosion components, as well as oxidation stability and a high flash point for fire protection. Power steering fluid is not interchangeable with automatic transmission fluid (ATF) because ATF does not have the anti-wear protection or shear stability needed to protect the power steering pump. LUBEGARD® POWER STEERING FLUID is specifically formulated for power steering systems and is useful in hot and cold weather environments. Top quality base oils plus a full complement of performance additives provide excellent viscosity characteristics, shear stability, rust and corrosion protection, seal integrity, and detergency; while the patented LXE® (liquid wax ester) derivatives provide the extra friction and wear protection, oxidation stability, and heat rejection. The flash point of LUBEGARD® is equal to that of motor oils (above 475°F) and higher than that of ATF fluids.

- » Relieve the whine and hum of power steering units.
- » Cleans and frees up sticky turbines and pumps.
- » Ensure a long, trouble-free life for the steering system.
- » For use in all power and power assisted steering units.
- » Reduces friction, heat, and wear
- » Reduces noise and vibration
- » Protects pumps and seals

DIRECTIONS FOR USE:

Fill as manufacturer recommends.

TYPICAL TECHNICAL PROPERTIES:

Viscosity at 40° C	29.61 cSt
Viscosity at 100° C	5.34 cSt
Flashpoint (COC)	208
Pour Point	-36°C
Viscosity Index	114
Specific Gravity	.86



20902 »

20910 »



AVAILABILITY

Stock No.	Unit Size	Case Qty
20910	10 oz.	12/c
20902	32 oz.	6/c
20905	5 gal.	n/a
20955	55 gal.	n/a
20330	330 gal. tote	n/a



COMPLETE™

Synthetic Power Steering Fluid

THE SERVICE SOLUTION FOR ALL EUROPEAN, NORTH AMERICAN, AND ASIAN VEHICLES*

LUBEGARD® COMPLETE™ Synthetic Power Steering Fluid is engineered to outperform competitive power steering fluids in three important ways:

- » Superior anti-wear formula significantly reduces friction, provides more potent rust and corrosion protection, and extends the life of the power steering unit (See figure 1)
- » Effective in a wider range of temperatures (-41°F to 130°F) providing excellent cold and high temperature performance
- » Protects seals and hoses reducing the risk of power steering leaks and prolonging the life of the parts

This formula is engineered with a proprietary additive package developed by ILI that includes 2 patented technologies: Synergol® TMS and LXE®. Together these technologies provide the most advanced anti-wear protection available. Synergol® TMS is the first non-active, phosphorous-free surface molecule composed solely of carbon, hydrogen, and oxygen. It contains no other toxic, corrosive, metallic, or polluting elements. As an extended life, anti-wear material, it extends far beyond normal power steering fluid in safeguarding system components. LXE® (Liquid Wax Ester) has a molecular structure that allows unsurpassed heat transfer, making it the most heat stable power steering product sold. The combination of these two technologies in a synthetic power steering base prolongs the life of the power steering unit.

* Honda fluid is recommended for Honda/ Acura vehicles

AVAILABILITY

Stock No.	Unit Size	Case Qty
23232	32 oz.	6/c
23205	5 gal.	n/a
23255	55 gal.	n/a
23330	330 gal.	n/a

THIS FORMULA ALSO:

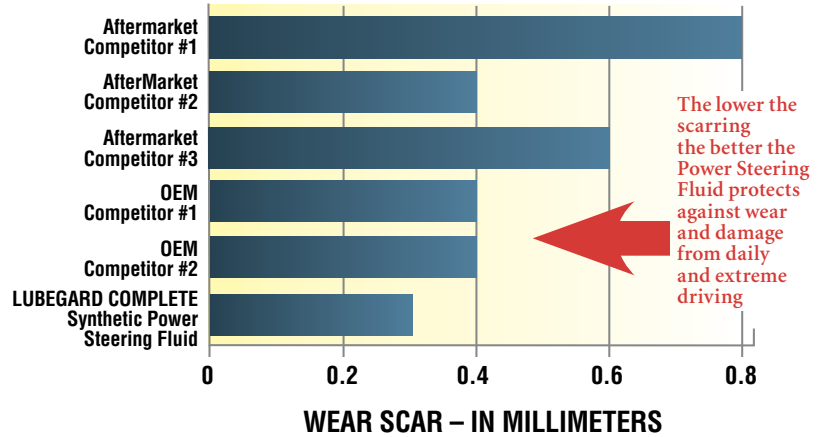
- » Eliminates power steering noises and whines
- » Eliminates rack and pinion stiffness
- » Cleans and frees sticky turbines and pumps
- » Inhibits fluid foaming and oxidation

TYPICAL TECHNICAL PROPERTIES:

Viscosity at 100° C	6.64 cSt
Viscosity at 40° C	36.29 cSt
Flashpoint (COC)	249
Pour Point	-42°C
Viscosity Index	140

FIGURE 1

FLEX PIN AND VEE BLOCK WEAR TEST



LUBEGARD® COMPLETE™ SYNTHETIC POWER STEERING FLUID IS SUITABLE FOR USE IN THE FOLLOWING APPLICATIONS:

Dexron II ATF	Mopar Hydraulic Fluid
Dexron III ATF	Audi/VW P/N G 002 000
ATF +4 ATF	Nissan E-PSF
Dexron VI	Power Steering Fluid WSS M2C204-A2
Mercon	Mercedes-Benz P/N 001 989 20 03
Mercon V	Mercedes-Benz P/N 001 989 24 03 10
Mercon LV	Mobil ATF320
GM P/N 1052884 Spec 9985010	GM P/N 89021185
GM P/N 89021184	Nissan PSF
Pentosin CHF 202	Porsche P/N 000 043 206 56
Pentosin CHF 11S	Audi/VW P/N G 004 000 M2
Mopar Hydraulic System Power Steering Fluid P/N 05142893AA (MS-10838)	GM P/N 89020661
Mopar P/N 04883077 (MS-5931)	Mazda ATF M-V
Hyundai PSF-4	Nissan Fluid A
Hyundai PSF-3	Subaru ATF P/N K0140Y0700 (Idemitsu ATF HP)
Kia PSF-IV	Volvo Gearbox Oil P/N 1161540-8
Kia PSF-III	Audi/VW P/N G 055 145 S2
Mercedes-Benz P/N 000 989 88 03	JWS 3309 ATF
Mitsubishi PS Fluid	Ford Type F
Mitsubishi Diamond SP, SPII	ATF Type G
Toyota PS Fluid Type EH, P/N 008886-01	





Power Steering Flush

- » Safely removes deposits and impurities
- » Conditions and revitalizes seals and components
- » Prepares system for new fluid
- » Deters hard-steering and squawks on cold starts
- » Deters internal power steering fluid leakage from developing

Power steering systems are generally only noticed when something has gone wrong. This system is one of the simplest to maintain and is also the most noticed complaint from a customer with their vehicle.

A power steering system is generally subject to harsh temperatures, leading to fluid deterioration over time. Through constant use and high operating pressures, other types of wear materials are also generated that degrade the system. The result of this pressure and heat is fluid break-down, contamination, loss of lubricating properties, and varnish deposits. When power steering fluid circulates throughout the system of pump and gear, it picks up wear material as well as contamination from the break-down of aging hoses and seals. Periodic maintenance of this intricate and precise system is necessary!

Flushing this system with LUBEGARD® Power Steering Flush & recharging it with new fluid is the best assurance you can have for extended optimum power steering performance. Even though most manufacturers don't provide a maintenance schedule for this important gear, it should be flushed and refilled any time work is done on the rack, a hose is replaced, or if you are having steering squawk or other operating problems.

DIRECTIONS FOR USE:

With Flush Machine:

Follow Manufacturer's Directions.

Without Flush Machine:

Open the reservoir & add one bottle of LUBEGARD® power steering FLUSH, do not overfill. With car in park and brake on, start engine. Turn steering wheel at least 4 times all the way left and right. Shut off engine and remove old fluid

To refill; Open the power steering reservoir. Add 4 fl oz (118 mL) LUBEGARD® Power Steering Fluid Protectant and top off with appropriate power steering fluid to proper level. Caution: Do not overfill. Do not use in systems that use brake fluid.

AVAILABILITY

Stock No.	Unit Size	Case Qty
95040	4 oz.	12/c
95050	5 gal.	n/a
95045	55 gal.	n/a

INCREASE PROFITS AT YOUR SHOP BY OFFERING MAINTENANCE AND FLUSH SERVICES.

POWER STEERING FLUSH SERVICE

A typical power steering fluid flush service involves the following:

- » Road test vehicle to observe power steering system.
- » Inspect for leaks.
- » Flush power steering lines as described previously with LUBEGARD® Power Steering Flush, including power steering pump, power steering rack and pinion, and/or gearbox to clean internal power steering components.
- » After flushing out the contaminated power steering fluid, refill with new power steering fluid. (LUBEGARD® Synthetic Power Steering Fluid #23232 or LUBEGARD® Power Steering Fluid #20902)

MAINTENANCE FLUSH SERVICE

Used as a preventative maintenance, LUBEGARD Power Steering Flush will:

- » Safely remove deposits and impurities
- » Condition and revitalize seals and components
- » Prepare system for new fluid
- » Deter hard-steering and squawks on cold starts.
- » Deter internal power steering fluid leakage from developing. If a customer is already experiencing power steering problems, a Rack and Pinion Flush Service:
- » Could postpone or eliminate the need to replace power steering components
- » Clean, condition and prepare the entire system for the replacement of worn components.

REASONS YOUR CUSTOMERS SHOULD CHOOSE TO FLUSH THEIR POWER STEERING SYSTEM

Surely your customer has encountered a power steering system failure of some sort with a power steering pump, hoses, gearbox, or rack & pinion. Failures can be defined as noise or squawks, stiffness, or even leaks when first starting the car.

Once your customer’s power steering fluid becomes dark and contaminated, their power steering pump and rack & pinion begin to clog with sludge and varnish deposits. The sludge and varnish causes the squawks and whines, stiffness, leaks, or even total system failures.

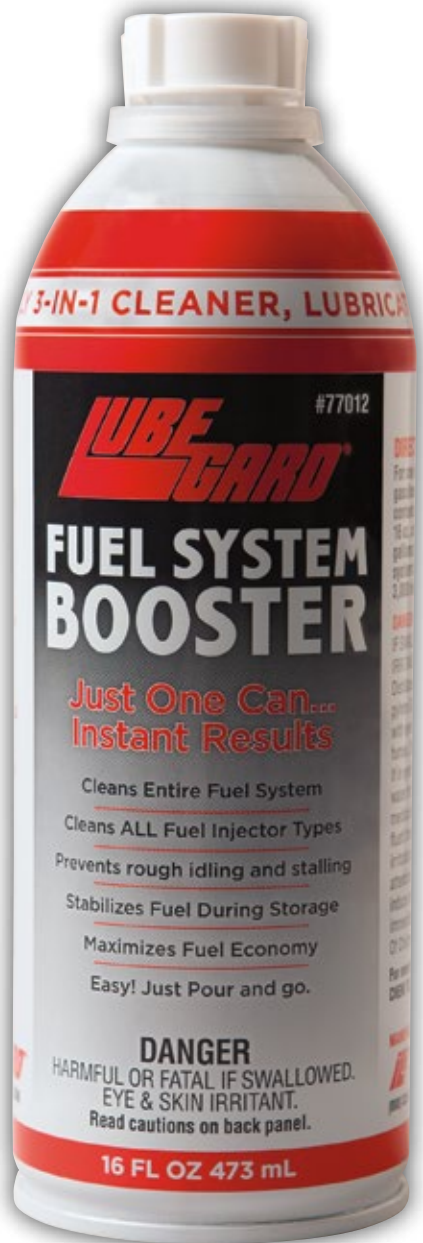
To assist in eliminating virtually all noise, stiffness, rough, or hard turning, a full power steering flush service should be the first thing you should try before it becomes necessary to perform major repair work or even the need for replacement of very expensive power steering components.

TYPICAL TECHNICAL PROPERTIES:

Viscosity at 40° C	30-35 cSt
Viscosity at 100° C	5-8 cSt
Flashpoint (COC)	>400°F
Pour Point	10°F



Fuel System Booster



COMPLETE FUEL SYSTEM CLEANER & STABILIZER FOR USE IN GASOLINE AND DIESEL ENGINES

with patented **FLA** (Fuel Lubricity Additive)

AVAILABILITY

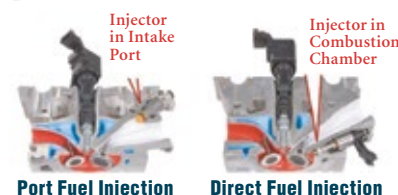
Stock No.	Unit Size	Case Qty
77012	16 oz.	(12/c)
77012TL TRI-LINGUAL PACKAGING	16 oz.	(12/c)

DESCRIPTION:

LUBEGARD® Fuel System Booster is a state-of-the-art, new fuel additive, made with the highest quality premium PEA and FLA® technologies. It is the first product of its kind able to specifically address and treat the newer DIG (direct injection) fuel systems in addition to the traditional intake-port delivery systems of today. LUBEGARD® Fuel System Booster is the first 3-in-1 product that provides a total system clean-up and keep-clean, fuel lubricity additive, and fuel stabilizer.

BENEFITS:

- » Contains a unique, proprietary polyether amine (PEA) detergent technology, the most effective chemistry for total fuel system cleanup that outperforms competitors
- » EPA/LAC, CARB, and TOP TIER™ compliant
- » Ideal for new DIG fuel systems
- » Can be used in any type of engine; gasoline or diesel
- » Cleans carburetor / fuel injectors in one tank
- » Removes deposits from combustion chamber and intake valves
- » One step process, just pour in the tank, does not require aerosol
- » Prevents hesitation, rough idle, and stalling
- » Improves fuel economy and horsepower
- » Allows less expensive, lower octane fuel to be used
- » Stabilizes fuel during storage
- » Reduces emissions



DIG vs PFI:

Because fuel is delivered directly into the cylinder, DIG engines do not have a throttle plate. So it is not necessary to use an accompanying aerosol in order to perform a complete clean-up.

- » DIG Functions at far higher pressures ~2,000 psi vs. ~50 psi
- » Injection cycle is a much shorter period of time
- » Port Injection has two rotations of the crankshaft to inject the fuel. At 6,000 rpm, this is 20 milliseconds.
- » DIG occurs in a portion of the intake stroke, which occurs in 0.4 to 5 milliseconds
- » Fuel stream is much more finely atomized
- » DIG stream is 1/5th the droplet size of PFI
- » Allows increased airflow into combustion chambers

ONE TANK CLEANS:

- ✓ Carburetors
- ✓ Port Fuel Injector
- ✓ Piston Surface
- ✓ DIG Injector
- ✓ Combustion Chamber
- ✓ Intake Valve Deposit

BMW Certification:

Testing in the standard BMW test (ASTM D 5500) using a US EPA 65th percentile fuel establishes a minimum dosage of 120 ppm LUBEGARD® Fuel System Booster for this combination of test and base fuel.

Test Method: ASTM D5500

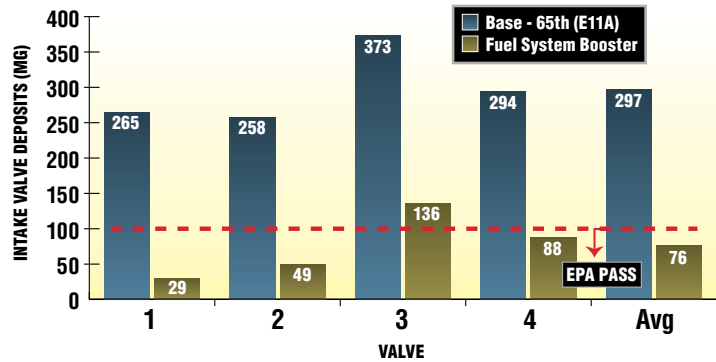
Engine: 1.8L (318i BMW)

Duration: 5,000 Miles

Fuel: Base E11A (No EtOH)

Duration: 10,100 Miles

Fuel: Base + 10.2% EtOH + LUBEGARD® Fuel System Booster



DIG Cleanup Test:

In the 1.8L Mitsubishi Carisma outfitted with GDI, an IVD cleanup test was run. Deposits were built up using a fuel containing a premium synthetic additive, then cleaned up in two tanks using 3200ppm LUBEGARD® Fuel System Booster. LUBEGARD® Fuel System Booster cleaned up 29% of the deposits left by the premium synthetic additive.



Conventional Additive



3200 ppm LUBEGARD Fuel System Booster

PFI Cleanup Test:

The pair of photos to the right represent a clean injector flow pattern (farthest right) and the corresponding image when the injector flow is restricted by 25%.

The dirtiest injector, when buildup was complete on the three tank cleanup, was 21% flow restricted. All of the dirty injectors cleaned up to within 1% of the original 100% flow.

Engine: Chrysler 2.2L tc, I-4 w/MPFI

Buildup: 999 miles

Cleanup: 1005 miles



Dirty Injector

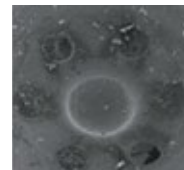


Clean Injector

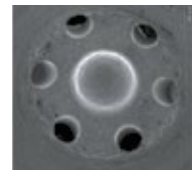
Long Term Fuel Trim (LTFT) Test Results (via OBD-2):

LTFT is an ECM algorithm for adaptive fuel trim. In order to accommodate a plugged DIG injector nozzle, the injector must stay open for longer period of time.

For this test, we used a 2012 Camaro 3.6L V6 LFX.



Dirty Injector



Clean Injector

NACE and ASTM D665A Corrosion Testing:

NACE Corrosion

Sample	*Result
De-polarized Iso-Octane	E
400 ppm LUBEGARD® Fuel System Booster	A

ASTM D665A Corrosion (24 hours at 100 deg F.)

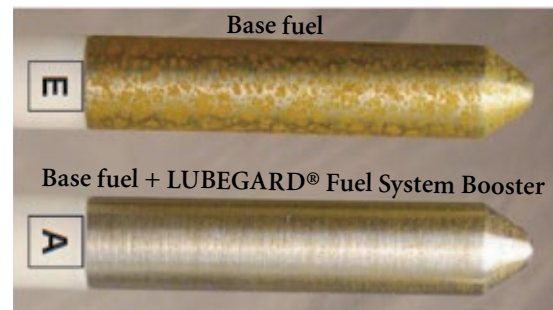
Sample	*Result
De-polarized Iso-Octane	E
1400 ppm LUBEGARD® Fuel System Booster	A

*Results

"E" - denotes 75-100% rust

"A" - denotes 0% rust

("B+" or better - generally considered to pass)



All tests and data were performed and gathered using third party testing.



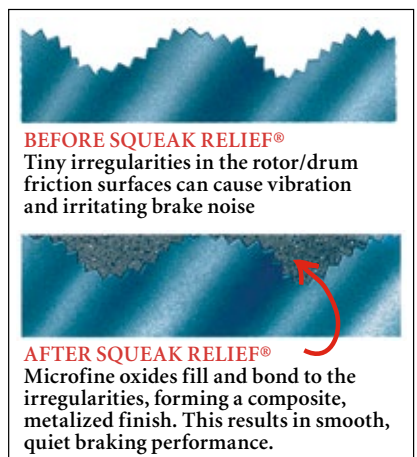
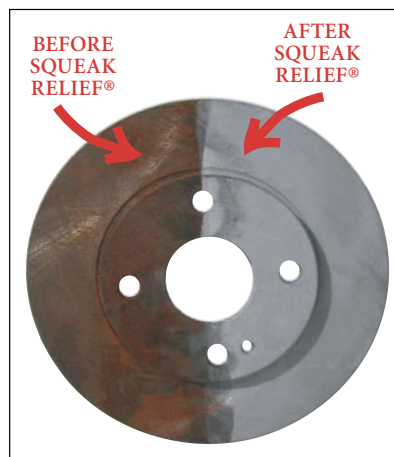
Brake Finishing Treatment

Even after a high quality brake job, harmonic vibration can produce aggravating brake squeal. The resulting comeback costs you time and money. Squeak Relief® Brake Finishing Treatment is applied directly to the rotor/drum friction surfaces to stop brake noise before it starts. When applied as directed, the Squeak Relief® microfine oxides form a molecular bond with the rotor/drum friction surfaces. The resulting composite finish helps to eliminate irritating vibration and brake squeal.

- » Effective on all brake systems: disc, drum, ABS, domestic, and import
- » Virtually eliminates customer brake-squeal comebacks by providing superior noise suppression
- » Will not void manufacturer warranty
- » Helps prevent brake surface oxidation
- » Increases customer satisfaction
- » Quiets stubborn “problem brakes”
- » No drying time required
- » Waterproof
- » Effectiveness tested from -1000 to +2,000°F
- » Prevents oxidation of rotors and drums
- » Keeps rotors looking like new
- » Will not damage ABS sensors or rubber components
- » No ozone-depleting CFC’s

DIRECTIONS FOR USE:

After brake servicing, clean rotor/drum friction surfaces. Prior to final assembly, spray a light coat (2 seconds) of Squeak Relief® directly to the rotor/drum friction surfaces. Burnish the relined brakes in a normal manner.



AVAILABILITY

Stock No.	Unit Size	Case Qty
90031	2 oz.	12/c



Lubegard® Heavy Duty Fluids are engineered to enhance the performance of transmissions, power steering units, and gas and diesel engines in heavy duty fleet applications. These products are proven to protect and restore vehicles and equipment. They are manufactured with LUBEGARD’s proprietary LXE® technology. LXE’s negative polarity is attracted to the positive polarity of metals, creating a powerful single-layer bond that provides superior lubrication and anti-wear protection under extreme pressure. Combined with LXE’s heat transfer properties, the results are more power, better fuel economy, smoother shifting, reduced component wear, and less downtime. The Heavy Duty Line comes in 4 formulas to protect and enhance the performance of each automotive system and will not void warranties.

Lubegard® Heavy Duty Engine Protectant for Gas and Diesel Engines

- » Reduces oil and fuel consumption! Improves fuel economy by reducing friction up to 29%
- » Extends oxidative stability 60% more than leading brand
- » Increases part life by reducing wear on metal components up to 70%
- » Extends oil life up to 30% by significantly reducing hot oil temperatures
- » Helps engines run smoother

AVAILABILITY

Stock No.	Unit Size	Case Qty
30916	32 oz.	6/c

Lubegard® Heavy Duty Power Transfer Protectant

- » Enhances all automatic transmission power steering and hydraulic fluids
- » Optimizes system performance by significantly reducing friction and wear
- » Reduces operating temperatures up to 40°F
- » Prevents fluid oxidation and foaming

AVAILABILITY

Stock No.	Unit Size	Case Qty
45142	32 oz.	6/c

Lubegard® Heavy Duty Coolant Treatment

- » Enhances coolants in diesel engines
- » Protects wet sleeve cylinder liners from cavitation erosion
- » Prevents build up of scales and deposits that cause overheating
- » Provides 100% protection from corrosion and electrolysis
- » Significantly extends life of water pump impellers and seals

AVAILABILITY

Stock No.	Unit Size	Case Qty
96430	32 oz.	6/c

Lubegard® Heavy Duty Gear Oil Protectant

- » Enhances all gear oils used in manual transmissions, tranaxles, or final drives
- » Extends oil and component life
- » Increases horsepower
- » Reduces friction and wear on gears and bearings
- » Reduces tooth drag and absorbs shock loads

AVAILABILITY

Stock No.	Unit Size	Case Qty
70944	32 oz.	6/c

Lubegard® Bio-Tap Drilling & Tapping Fluid

This biodegradable and water washable tapping oil is used to facilitate tapping of holes and threading of rods. It is fully biodegradable and washes easily from the machined part with water. It is safe for the operator, effective for the cutting tools and non-harmful to the environment.

- » Extends the life of the tool/bit/blade
- » Ensures exceptional finish
- » Eliminates galling and seizing
- » Aquatically non-toxic
- » Fully biodegradable
- » Safe and easy to use and clean up
- » Non-irritating

- » Washes off with water
- » Non-flammable
- » Increases through-put
- » Improves tool performance
- » Eliminates solvent degreasing chemicals, vapor degreaser dangers and high VOC solvents
- » Very low coefficient of friction

AVAILABILITY

Stock No.	Unit Size	Case Qty
81915	15 oz.	12/c
81901	1 gal.	4/c



Lubegard® 2 Cycle Engine Oil

Keeps your 2-cycle engine running at its optimum. Reduces friction, heat, and wear providing smoother idling and operation as well as increasing power. Improves the performance and longevity of all 2 stroke engines.

- » Helps engines run cooler by reducing friction and wear
- » Excellent rust and corrosion protection
- » Ash-less formulation prevents plug fouling, port clogging and ring sticking
- » Provides optimum thermal and oxidative stability

- » Reduces fuel consumption
- » Prevents piston and cylinder wall scuffing
- » Smoother idling at low RPM's
- » Cleaner burning
- » Enhances combustion efficiency with minimum deposits
- » Lowers treat rates

AVAILABILITY

Stock No.	Unit Size	Case Qty
12944	2.6 oz	12/c
12932	32 oz	6/c



Lubegard® Free-Eze™

For the really tough rust cutting jobs, get Free-eze™!

Lubegard® Free-eze™ Rusted Cylinder Treatment is a blend of biodegradable synthetic oil and LXE® esters for applications in gas or diesel engines. Free-eze™ is designed to penetrate and attack flash rust on steel surfaces, freeing critical cylinder components, providing a thin film of lubricant to protect the freed parts from binding and scoring. Free-eze™ burns cleanly leaving no deposits behind.

Free-eze™ can be used as a fogging oil to protect seasonal engines from rusting while they are in storage. It acts as a lubricant to allow movement of rust compromised com-

ponents without additional damage as well as being a penetrating oil.

- » Frees up seized/frozen engine cylinders and other mechanisms
- » Removes rust where access is limited
- » Superior corrosion protection
- » Lubricates critical moving parts
- » Ideal fogging oil for extended storage of vehicle engines
- » Protects engines from dry starts

AVAILABILITY

Stock No.	Unit Size	Case Qty
30990	15 oz	12/c





LUBEGARD® Cheat Sheet

Part No.	Description	Usage	Applications	Features / Benefits	Selling Points	Target Customer
69032-32oz. 69005-6gal.	COMPLETE™ Full Synthetic ATF 	ONE ATF covers over 100 OEM transmission fluids	Covers new low viscosity ATF's. Dexron VI, Toyota WS, Mercon SP/LV, Pentosin ATF-1 LV and more	Formulated to meet OEM requirement for shear stability, superior shift quality and anti-shudder properties	Competitively priced. Covers MORE OEM ATF's than any other ATF on the market	32oz.: 60% Retail, 40% General Repair 6gal: 40% Transmission Shop, 60% General Repair
68112-32oz. 68232-5gal.	COMPLETE™ CVT Fluid 	CVT Fluid w/ protectant properties	For use in both belt and chain type CVTs	Lubegard® CVT is a complete fluid w/ proven protectant properties.	Engineered to meet and exceed many OEM fluid requirements eliminating the need to stock multiple fluids	30% Retail, 70% General Repair
56032-32oz.	COMPLETE™ Multi-Vehicle Dual Clutch Transmission Fluid 	Synthetic base oils and performance additives provide extreme pressure protection in DCTs	Cost effective service application for over 99% of wet clutch type DCTs.	Improved shifting proficiency, Improved seal performance, Extended drain intervals, Reduces shop inventory	Makes Pentosin FFL2, FFL3, FFL4 redundant at a lower price	15% Retail, 85% General Repair
60902-10oz. 50902-32oz.	Transmission Fluid (ATF) Protectant 	ATF protection and improved system performance	Compatible with All ATF, Except CVT and Ford Type F	Prevents overheating, Extends fluid life, Eliminates chatter/shudder. Optimizes overall trans performance	#1 Used and trusted ATF protectant in the Industry. Reduces fluid temperature up to 40°	45% Retail, 35% General Repair, 30% Transmission Shop
61910-10oz.	Highly Friction Modified ATF Supplement (ATF-HFM) 	ATF conversion, protection and improved system performance for HFM applications like ATF+4, T-IV, Honda Z-1 and SP III	Converts Dexron/Mercon to Various OEM ATF's - Import Applications, Corrects friction modification problems for domestic and import applications	Reduces shop inventory, prevents/eliminates torque converter shudder and hard shifts, Reduces the operating temperature and extends the life of the fluid	The Only product of its kind used, endorsed, designated and approved by the OEM	25% Retail, 25% General Repair, 50% Transmission Shop
62005-10oz.	Automatic Transmission Fluid Supplement for Ford® Applications 	ATF conversion, protection and improved system performance	Ford specific protectant for all Ford fluids except CVTs and Type F, Converts Dexron/Mercon to Mercon V ATF - Ford Applications	Reduces shop inventory, Reduces friction/tightens shift cycles and lowers operating temperatures	Dual purpose problem solver that corrects additive depletion problems and converts Dex/Merc ATF to perform like Mercon V ATF	25% Retail, 25% General Repair, 50% Transmission Shop
63010-10oz. 63016-15oz. 63032-32oz.	Platinum® High Performance ATF Protectant 	Premium ATF conversion, protection and improved system performance	ATF Protectant or as a conversion from Dex/Mer ATF to an OEM equivalent fluid, Extends life of ATF and transmission	Reduces shop inventory, Eliminates confusion: "Which ATF do I use?", Includes proven protectant properties to improve shifting and reduce wear and lower operating temperature	The benefits of Red, Green and Black bottles combined into ONE!	65% Retail, 25% General Repair, 10% Transmission Shop
19610-2oz. bulk 19680-2oz. clamshell 19689-2oz. box	Instant Shudder Fixx™ 	Specifically designed to eliminate converter shudder problems instantly	Compatible with All ATF, Except CVT and Ford Type F	Results are immediate, no waiting.	The ONLY Instant Shudder fix product on the market today!	80% Retail, 20% General Repair
95001-10oz.	Transmission Flush 	Prepares transmission for new fluid.	For use with or without a flush machine in automatic and standard transmissions	Removes varnish deposits. Cleans internal trans components, Contains rust and corrosion inhibitors, Safe for all seals.	Ideal retail and small general repair shop alternative to expensive flush machines.	65% Retail, 25% General Repair, 10% Transmission Shop
19001-13.25oz.	Kooler Kleen™ Transmission Flush (Solvent Based) 	Flushing transmission oil cooler lines	Use every time a transmission is replaced or cooler installed.	No water/soapy residue to contaminate new ATF, Does not harm seals, Prevents comebacks	Designated and approved by multiple OEMs	30% Retail, 40% General Repair, 30% Transmission Shop

Part No.	Description	Usage	Applications	Features / Benefits	Selling Points	Target Customer
30902-10oz. 30901-15oz. 40902-32oz.	Bio/Tech Engine Protectant 	Engine oil protection and improved engine performance	Compatible with all conventional and synthetic oils.	Provides additional lubricity protection. Eliminates lifter and other noise on startup, Reduces engine oil temperature and improves fuel economy due to friction reduction	Optimizes horsepower, increases mileage and extends oil life	60% Retail, 40% General Repair
30903-8oz. 70901-32oz.	Gear Fluid Supplement 	Gear fluid protection and improved performance	Use in all manual transmissions, transaxles and final drives that require gear fluid	Reduces drive train power loss, lowers temperatures and extends fluid life, Improves all shifting characteristics. Reduces wear	Decreases equipment operating and maintenance costs	60% Retail, 40% General Repair
31904-4oz. bulk 31921-4oz. box 42851-4oz. bottle/box	Limited Slip Supplement 	Eliminates differential chatter and noise. Reduces differential oil temperatures. Extends clutch pack and equipment life	Universally works in all makes and models with limited slip differentials including Ford, GM and Chrysler	4 oz. tube is ideal for small units, Larger units require 8 oz., Competitive Products come in 6 or 7 oz. tubes.	Save over 30% compared to competitive products, and sell your customer the right amount to do the job, Replaces OEM friction modifier	80% Retail, 20% General Repair
96001-16oz.	KOOL-IT® Supreme Coolant Treatment 	Total cooling system protection	Compatible with all types of antifreeze	Prevents damage from electrolysis, corrosion and pitting, Enhances heat transfer and reduces operating temp.	Extends coolant life up to five years. Prevents deposit buildup which leads to overheating	60% Retail, 40% General Repair
95020-16oz.	KOOL-IT® Radiator Flush 	Prepares any radiator for new coolant.	For use with or without a flush machine, Safe for all cooling systems including aluminum radiators	Removes scum, oily residue, sediments, rust, deposits and other degradations from the cooling system	Quick and easy way to maximize cooling system efficiency	60% Retail, 40% General Repair
96030-6oz.	Kool-It® Evaporator & Heater Foam Cleaner 	Removes and neutralizes contaminants in air conditioning & heater systems	For use in all vehicle air conditioning & heater systems	Eliminates odors, allergens, bacteria, mold and mildew	Quick and easy way to refresh air conditioning and heater systems	15% Retail, 85% General Repair
23232-32oz	32oz. COMPLETE™ Synthetic Power Steering Fluid 	Formulated with synthetic base oils and 2 patented technologies to outperform aftermarket and OE power steering formulas	For use in all European, North American, and Asian vehicles excluding Honda	Superior anti-wear protection, effective in a wider range of temperatures protecting from cold starts and overheating, protects seals and pumps extending the life of the system	Multi-Vehicle formula replaces over 90% of power steering fluid formulas reducing inventory requirements	20% Retail, 80% General Repair
20910-10oz. 20902-32oz.	Power Steering Fluid 	Premium PSF designed to protect system from wear	For use in All vehicles	Extreme oxidative stability with a high flash point. Contains anti-friction and anti corrosion technologies	Multi-vehicle formula eliminates noises and whines, rack and pinion stiffness, Extends life of power steering system	20% Retail, 80% General Repair
20404-4oz.	Power Steering Fluid Protectant 	Power steering system protectant, Improve system performance	Use with all power steering fluids. Convert regular power steering fluid to Honda power steering fluid	Eliminates power steering system noises, whines, and stiffness. Frees sticky turbines and pumps	Extends system and fluid life, Safe for all seals and hoses. Prevents "morning sickness".	60% Retail, 40% General Repair
19250-16oz. firm (green) 19260-16oz. light (blue)	Assemblēe Gōō™ 	Aids in transmission rebuilding/assembly	Compatible with All ATF's	Adhesive strength up to 1.1 lbs. Dissolves quickly at operating temperature. Will not clog filters.	#1 selling assembly lubricant in the industry	10% Retail, 15% General Repair, 75% Transmission Shop
77012-16oz.	Fuel System Booster 	Provides total system clean-up, fuel lubricity additive, and fuel stabilizer	Specifically formulated for DIG engines	Cleans carburetor/fuel injectors in one tank, improves fuel economy and horsepower, reduces emission, stabilizes fuel during storage	Only 3 in 1 product on the market. Patented PEA detergent	40% Retail, 60% General Repair