

**Of All These Man-Made (Synthetic) Products, LUBEGARD with LXE® Is the ONLY Choice of OEM'S and is #1 with Professionals**

# LUBEGARD®

## SYNTHETIC Liquid Wax Ester (LXE®) Technology Is UNSURPASSED!



**LUBEGARD's** SYNTHETIC Liquid Wax Esters (LXE) are more heat stable than any product ever sold. *\*Review the Acid and Sludge information chart on the back cover.* LUBEGARD is so heat stable, it outperforms it's nearest competitor by over 100 degrees Fahrenheit!

**LUBEGARD's** SYNTHETIC Liquid Wax Esters (LXE) and its derivatives are functional molecules made in chemical reactors. Other aftermarket additive manufacturers (mix masters) purchase standard production chemicals and blend these materials together, often misrepresenting various claims of technological breakthroughs. In fact, International Lubricants Inc., holds over 80 U.S. and foreign patents on new innovative synthetic molecular technologies.

**LUBEGARD** is the ONLY product of its kind that is **Used, Endorsed, Designated and Approved** by multiple OEM's (Original Equipment Manufacturers). Other aftermarket transmission products may make similar claims, but none have ever produced a single technical service bulletin naming their product! **LUBEGARD has eight known service bulletins!**

**LUBEGARD** was selected by OEM's because International Lubricants, Inc., is one of a few exclusive research and development manufacturers who produce their own unique synthetic materials.

**LUBEGARD** ATF Protectants and Supplements have provided over 100 billion miles of performance.

**LUBEGARD** is the #1 product used by professional automotive technicians around the world.

**LUBEGARD With LXE Is The ONLY Product That Effectively Transfers HEAT!**

**Only LUBEGARD Reduces Excessive Heat Up To 40°F!** For Every 10 degrees of heat reduced you double the life of the fluid! For every 20 degrees of heat reduced you double the life of the transmission!

Review The Acid and Sludge Information Chart On The Back Cover

# LUBEGARD®

**World's Finest  
Lubricants!**

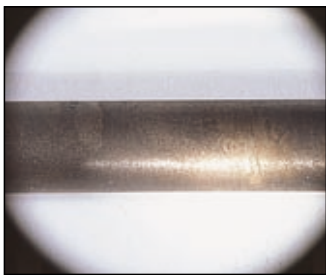


## CHLORINATED PARAFFIN'S

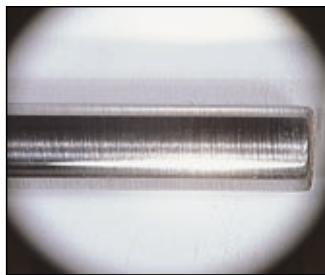
Are among the most reactive, corrosive and destructive chemical additives in the market today. The Federal Trade Commission has brought a number of these companies to legal action due to false performance claims.

When chlorinated paraffin's break down, they can form acids, which attack bearing materials and components. Acids also degrade the ATF additive packages and form sludge.

### Burnt Steel Bar Test



Bar Corroded by Chlorine



Clean-New Bar Surface Untouched



## SEAL SWELLERS/ SOLVENTS

Seal Swellers are designed to penetrate, soften and swell gaskets, o-rings and seals, expanding their volume and stopping leaks.

Good idea in theory, very bad in practice. The seal materials are actually physically damaged and this will cause them to fail completely. Professional rebuilders do not

use seal swellers or solvents for short-term fixes that will eventually cause comebacks. OEM transmission manufacturers specify that automatic transmission fluids be designed as neutral to seals and components.

Solvents do just what the name says; they dissolve and change the fluids behavior. Solvents are unstable in the presence of heat. Solvents also reduce the thermal stability of the ATF they are added to.

Normal O-Ring



Normal O-Ring Softened and Swollen After Soaking In Seal Swell Product.



# ALL OTHER OFF THE SHELF ATF ADDITIVES FIT INTO THESE CATEGORIES



## ZINC COMPOUNDS (ZDDP)

Inexpensive, outdated technology. This additive group is based on active zinc and phosphorous. These inexpensive additives were developed in the 1950's and have been used extensively in most conventional formulations since then.

Unlike what some companies would have you believe, ZDDP is neither a new or cutting edge technology. In fact, it can act as a sludge builder. Sludge and heat kills transmissions. The newest generation of GM Dexron®/Mercon® (factory fill), Mercon®V as well as Chrysler Mopar ATF +4® are completely Zinc free. See chart below and the acid/sludge information chart on back.

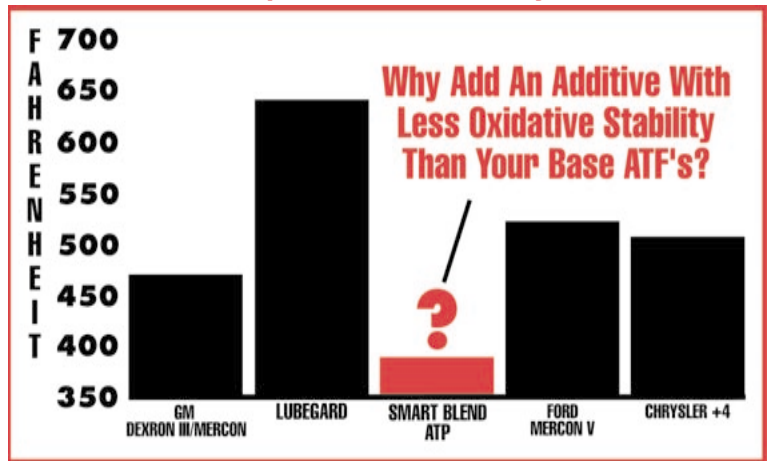
## What Do OEM's Say?

Manufacturers specify, "Specifically, ash will impact friction response. In addition, ATF with ash is likely to have a higher Zinc (Zn) content. Zinc will adhere to clutch linings and cause slippage, resulting in transmission damage," from Nissan Service Bulletin Reference #3NTBb98-042.



This is a transmission fluid containing a zinc additive after it has been exposed to heat.

Comparison Of Oxidative Stability



Comparison Of Thermal Breakdown

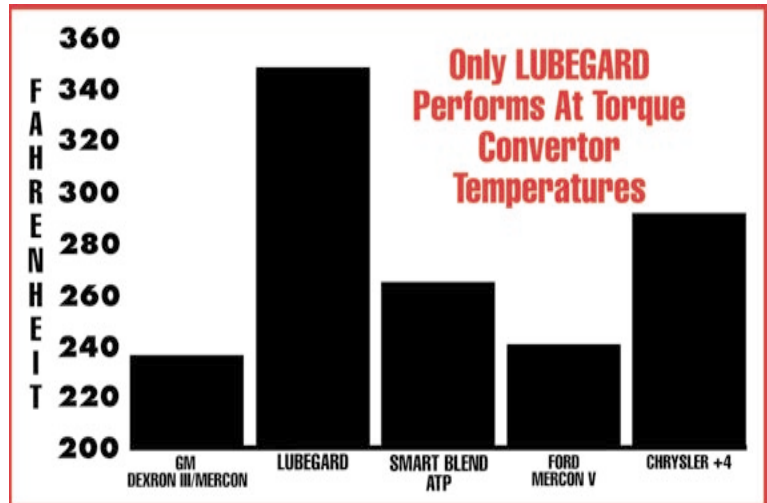


Chart Of Metals Of Some Known Old and New Fluids

TEST YEAR	1996	1996	1998	1999	2000
TYPE	GM: Goodwrench	Ford: Mercon V	BMW	Mopar ATF +4	GM: Reference & Factory Fill
CHEMICAL ELEMENT					
CALCIUM	90	0	0	0	27
MAGNESIUM	30	0	0	0	1
PHOSPHOROUS	340	187	283	450	265
BORON	90	76	174	130	121
<b>ZINC</b>	<b>70</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SULFUR	750	1300	1000	2400	1000

Chemical Analysis - ppm Zinc (ZDDP) Content

PRODUCT NAME	ATF Protectant	HFM-ATF Supplement	M-V Supplement
LUBEGARD	0	0	0
<b>SMART BLEND &amp; ATP</b>	<b>1500-1900</b>	<b>1500-1700</b>	<b>1300-1500</b>

Review The Acid and Sludge Information Chart On The Back Cover

# The LUBEGARD Story!

## YEARS AGO;

- Sperm Whale Oil and its derivatives were used as additives in virtually all automotive lubricants because of its exceptional lubricity (wetting agent) and heat resistance.
- The products were effective - so effective for example, a car's transmission fluid was generally never changed.
- 30 million pounds of whale oil was used per year in lubricants alone.
  - In 1972 the Endangered Species Act outlawed the killing of whales and the use of whale oil.

## PROBLEM

- There was no suitable replacement available.
- This resulted in a dramatic drop in performance, in particular the heat transfer and heat resistance properties in ATF's were severely reduced. Transmissions failures went from under 1,000,000 to over 8,000,000 by 1975, due to the loss of Sperm Whale Oil Additives.

## SOLUTION

- International Lubricants, Inc. in conjunction with Dr. Philip Landis, a highly distinguished research chemist who headed the Mobil Oil Applied Lubrication Research Group, developed and patented temperature Sperm Whale Oil replacement - LUBEGARD SYNTHETIC Liquid Wax Ester (LXE<sup>®</sup>) Technology.
- LUBEGARD's Unique Synthetic LXE Technology is proven to actually outperform the Sperm Whale Oil Additives!
- Independent third party test results prove LUBEGARD with its PATENTED SYNTHETIC LXE Technology reduces component wear by
  - at least 50%, reduces oxygen uptake (oxidation) by 30% and reduces pentane insoluble (sludge) by 60% when added to GM<sup>®</sup>



the first and only high temperature Sperm Whale Oil replacement - LUBEGARD SYNTHETIC Liquid Wax Ester (LXE<sup>®</sup>) Technology.

**LUBEGARD is The Only Product Of Its Kind To Be Used, Endorsed, Designated and Approved By Multiple Major Original Equipment Manufacturers (OEM's)!**



# LUBEGARD<sup>®</sup>

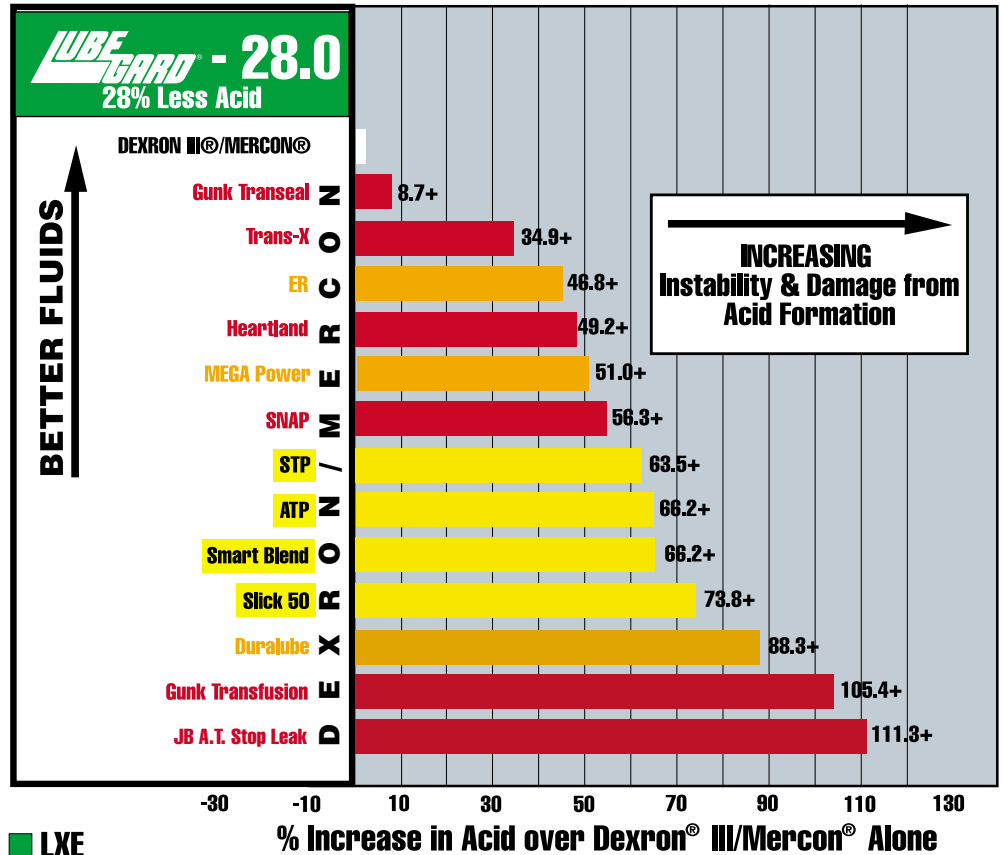
World's Finest Lubricants!

# Chemicals Used As Additives: How Heat Stable Are They?

90% Of All Transmission Failures Are Caused By Overheating.

Source: Automatic Transmission Rebuilders Assoc.

## Acid Formation Leads to Sludge (Dexron® III/Mercon® ATF with Additives)



- LXE
- Seal Swellers/Solvents
- Zinc
- Chlorinated

**TEST DESCRIPTION:** Samples of products were added in proper proportions to commercial ATF and were tested for Total Acid number, they were placed in an oven at 325°F for 48 hours, then removed and tested for Total Acid number again. Changes shown are changes of Total Acid number of the samples in excess of changes of Total Acid number of the Dexron.

All Trademarks are owned by their respective companies.

## World's Finest Lubricants!



# LUBE-GARD®

## World's Finest Lubricants!



**SAAB** Parts & Service Information

**Subject:** Automatic Transmission Upshift Noise

**Application:** 9000 Models with ZF Automatic Transmission

Year	Model	Code
1987-1988	9000	442

Some complaints have been received from owners of 9000 cars equipped with the ZF 4-speed automatic transmission. The noise may be described as a "clunk" or "rattle" that usually occurs at a certain light throttle pressure. A transmission fluid additive has been tested and approved for use as a general lubrication supplement.

Before this fluid supplement can be added, the condition of the transmission fluid must be checked. If there are any indications of either burned or contaminated fluid, the fluid adjustment will not cure the complaint. If a check is made and the specific reason described in this PDI does not indicate any mechanical failure, or depending on the cause, it may, however, be an input to the car owner and should be addressed.

**Cars Affected:** 9000 models with ZF automatic transmission.

**Parts:** LUBE-GARD ATF SUPPLEMENT, 10 FL. OZ. (300ml) bottle (2.0 FL. OZ. (60ml) required per year)

**NOTE:** LUBE-GARD ATF SUPPLEMENT can be added through any of the distributors listed on the following pages. Mercuron order quantities and prices may vary.

**Action:**

1. Evaluate the condition of the transmission fluid. If burned or other contaminants are found in the fluid, do not add this supplement. The source of the contamination must be determined and repaired.
2. Add 2.0 FL. OZ. (60ml) of LUBE-GARD to the transmission fluid. Check the fluid level and top up with Mercuron V<sup>®</sup> if necessary.
3. Road test the vehicle to assure that no other transmission-related problems exist.
4. Return the vehicle to the owner and advise them on the following:
  - The vehicle should be driven under their normal driving conditions to allow the LUBE-GARD to circulate throughout the transmission.

Figure 1. LUBE-GARD ATF SUPPLEMENT

Page 1 of 2

**Used, Endorsed, Designated & Approved by Multiple Major Car Manufacturers, (OEM's)**

**HERES WHY!**

**WITH**

**LXE**

# LUBEGARD IS THE ONLY PRODUCT WITH 28% LESS ACID!

BETTER FLUIDS

LUBEGARD 28% Less Acid

-28.0

DEXRON III/MERCON

GUNK TRANSEAL

TRANS-X

ER

HEARTLAND

MEGA POWER

SNAP

STP

ATP

SMART BLEND

SLICK 50

DURALUBE

GUNK TRANSFUSION

JB A.T. STOP LEAK

BASE DEXRON® / MERCON®

8.7+

34.9+

46.8+

49.2+

51.0+

56.3+

63.5+

66.2+

66.2+

73.8+

88.3+

105.4+

111.3+

## Additive Technology

- LXE®
- Seal Swellers/Solvents
- Zinc (ZDDP)
- Chlorinated Parrafins

The more acid, the more increase for instability and damage from acid formation.

-30 -10 0 10 30 50 70 90 110 130

% INCREASE IN ACID OVER DEXRON® III/MERCON® ALONE

# No automatic transmission fluid can live without it...

# LUBE GARD®



48 Hour test - 325°F  
1-oz. per quart

Without LUBE GARD

With LUBE GARD



48 Hour test - 325°F  
1-oz. per quart

Without LUBE GARD

With LUBE GARD



48 Hour test - 325°F  
1-oz. per quart

Without LUBE GARD

With LUBE GARD



48 Hour test - 325°F  
1-oz. per quart

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Without LUBE GARD

With LUBE GARD



48 Hour test - 325°F  
1-oz. per quart

Without LUBE GARD

With LUBE GARD



48 Hour test - 325°F  
1-oz. per quart

Without LUBE GARD

With LUBE GARD

#### PROCEDURE FOLLOWED

Samples: 50 ml of subject ATF (actual contents of the bottles pictured as purchased off the shelf) 50 ml of a mixture of subject ATF and 3.1% by volume (1-fl oz/qt) LUBE GARD® ATF Protectant. Each sample is poured into a glass dish with 63.6 square cm of surface area exposed to the air. The samples are placed in an oven and held at 163 C constant temperature until one sample no longer flows; approximately 48 hours, plus or minus 4 hours. The test results pictured above are based on the stated procedure followed in ILI's research laboratory. No warranty is expressed or implied concerning these data.

#### Report on the use of LUBE GARD ATF Protectant added to General Motors Factory Fill Automatic Transmission Fluid (Reference Fluid).

Wear, heat stability and frictional properties were tested at one of the two independent laboratories in the world certified by General Motors for Dexron® II testing. These tests represent the primary mechanical bench tests for Dexron® II approval. The ATF used was General Motors Factory Fill Automatic Transmission Fluid, the reference fluid for Dexron® II testing. LUBE GARD® ATF Protectant was added at the recommended level of 1 fluid oz. per quart.

#### TESTS CONDUCTED

The tests run on the ATF with and without LUBE GARD® were:

1. Vickers® Sliding Vane Pump Wear Test which measures the wear on rubbing metal parts of a pump after 100 hours of pumping hot ATF.
2. Turbo Hydra-matic Oxidation Test (THOT) which measures the condition of the ATF and a bench stand transmission after twelve and a half days of running and shifting at 325°F with air injected into the fluid.
3. High Energy Friction Coefficient and Durability Test (HEFCAD) which measures the twisting (torque) of the motionless shaft of a set of automatic transmission clutches when stopping a flywheel moving at 3600 rpm on the other shaft in less than a second. The wheel is stopped and started 3 times per minute for 100 hours.

#### TEST RESULTS

Test results on GM Factory Fill with LUBE GARD® were compared to GM Factory Fill without LUBE GARD®, they showed:

1. The wear on the contacting parts of the Vickers® Vane Pump was reduced over 50%.
2. Improvements in areas of Oxidative Stability:
  - a) 24% less oxidative breakdown of the ATF into acids.
  - b) Less sludge formation.
  - c) 30% less oxygen uptake
  - d) 60% less pentane insolubles.
  - e) No penalty to transmission seals or fluid viscosity.
3. The following frictional improvements were:
  - a) Smoother, more stable power transfer through the clutches with less shock, or torque peak, at the beginning or the end of clutch engagement.
  - b) No sign of extra slipperiness that might cause excess clutch slippage and wear.



# 9 Out Of 10 Transmissions Fail Due To **HEAT!**

Only With **LUBEGARD LXE** Products  
You Reduce That **HEAT**

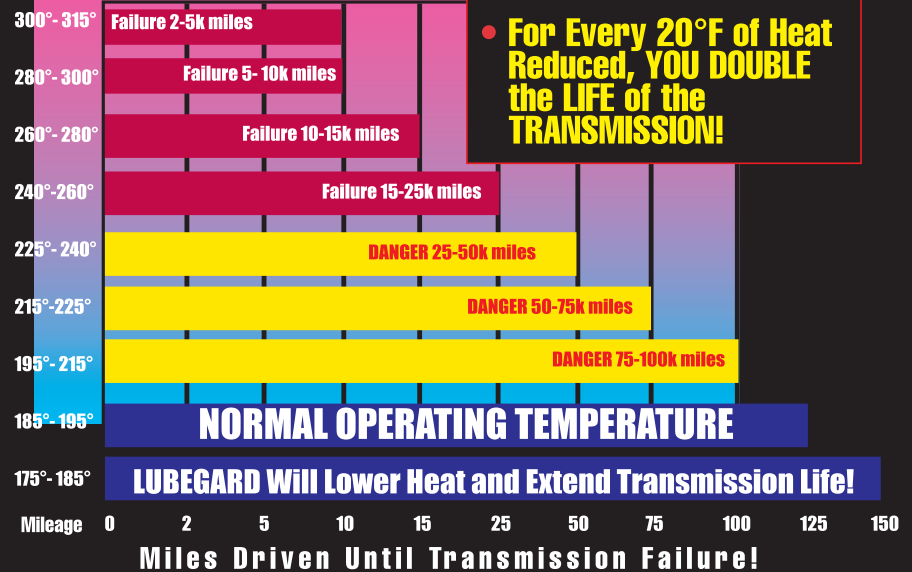
Up To **40°F**

- For Every 10°F of Heat Reduced, You **DOUBLE** the LIFE of the TRANSMISSION FLUID!
- For Every 20°F of Heat Reduced, YOU **DOUBLE** the LIFE of the TRANSMISSION!



- Used, Endorsed, Designated and Approved by Multiple Major Car Manufacturers (OEM's)
- #1 Used By Professionals

**USE LUBEGARD TODAY!**



# OEM's use

- Softens harsh shifts with no loss of lock-up time
- Eliminates objectionable noises during shifts
- Optimizes overall transmission performance
- Prevents lock-up torque converter shudder
- Inhibits oxidation and overheating
- Eliminates hung-up governors
- Prevents clutch chatter
- Increases fluid life
- Keeps valves free
- **Multiple OEM's use, endorse, recommend and designate!**

# LUBE GARD®

## shouldn't you?



### Parts & Service Information

**Subject:** Automatic Transmission Upshift Noise

**Application:** 9000 Models with ZF Automatic Transmission

CATEGORY	
Transmission	
SECTION	PAGE
4	14
ISSUE	CODE
06/93-0352	442

Some complaints have been received from owners of 9000 cars equipped with the ZF 4HP18 automatic transmission of a noise that occurs at the 2 - 3 upshift point. The noise may be described as a "squawk" or "moan" that usually occurs under light throttle pressure. A transmission fluid additive has been tested and approved for use as a service solution to address these complaints.

Before this fluid supplement can be added, the condition of the transmission fluid must be checked. If there are any indications of either burned or contaminated fluid, this may be the actual cause of the noise. In this case, the addition of the fluid supplement will not cure the complaint.

It should be noted that the specific noise described in this PSI does not indicate any mechanical failure, or impending failure. It may, however, be an irritant to the car owner and should be addressed.

#### Cars Affected:

9000 models with ZF automatic transmission.

#### Parts:

LUBEGARD ATF SUPPLEMENT, 10 fl. oz. (296ml) bottle (5.0 fl. oz. (150 ml) required per car).

#### NOTE

LUBEGARD ATF SUPPLEMENT can be obtained through any of the distributors listed on the following pages. Minimum order quantities and prices may vary.

#### Action:

1. Evaluate the condition of the transmission fluid. If coolant or other contaminants are found in the fluid, do not add this supplement. The source of the contamination must be determined and rectified.
2. Add 5.0 fl. oz. (150ml) of LUBEGARD to the transmission fluid. Check the fluid level and top off with Dexron II if necessary.
3. Road test the vehicle to ensure that no other transmission related problems exist.
4. Return the vehicle to the owner and counsel them on the following:
  - The vehicle should be driven under their normal driving conditions to allow the LUBEGARD to circulate throughout the transmission.

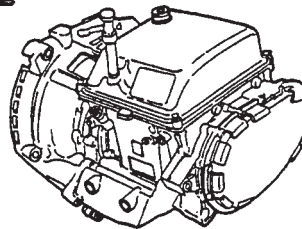


Figure 1. LUBEGARD ATF SUPPLEMENT

