

# I Know Exactly When to Stop.

When guesswork is replaced with the "Acoustic Lubrication Method™," bearing failures drop **dramatically**.

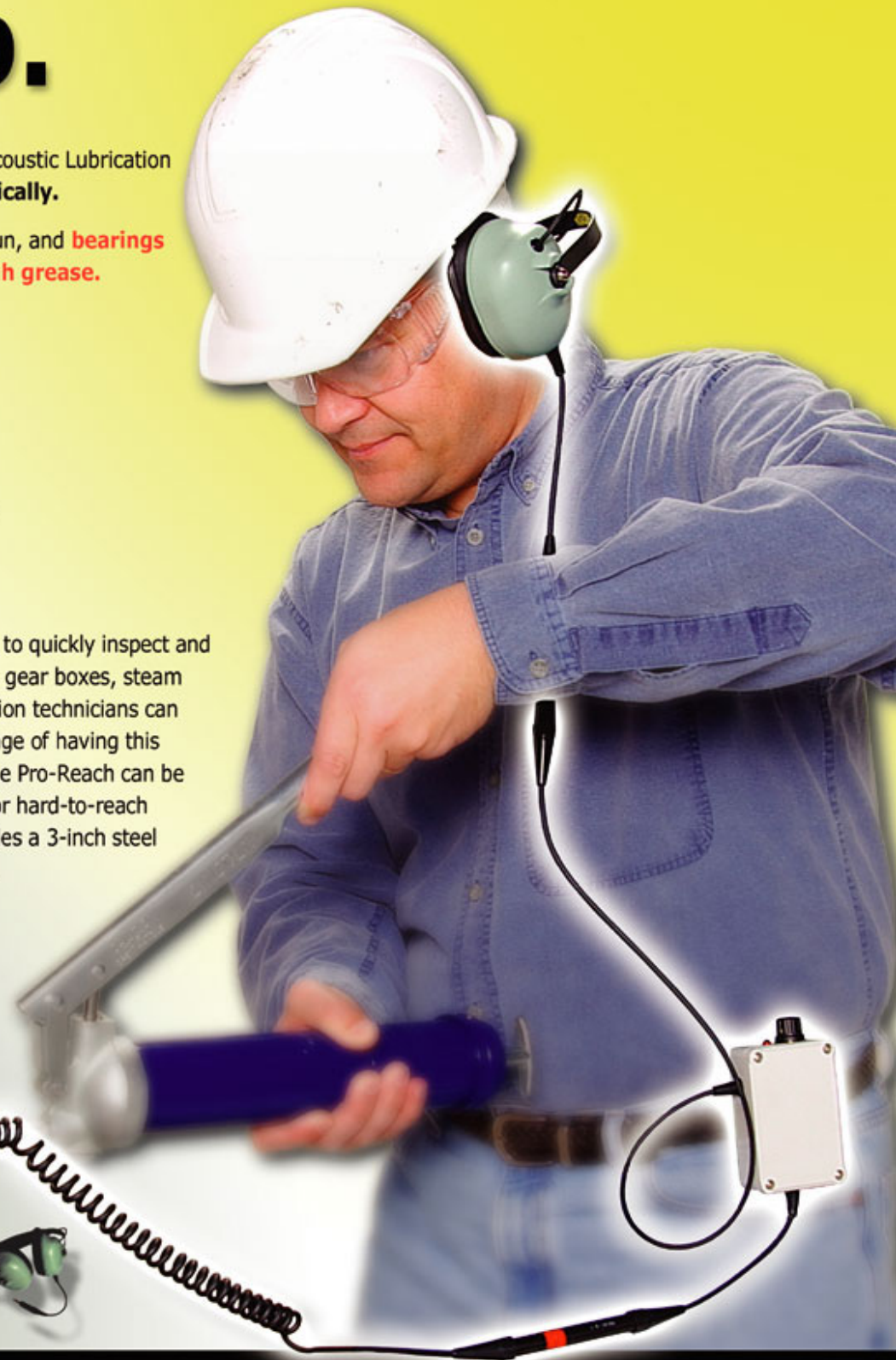
Attach the **Ultra-Lube** to your grease gun, and **bearings will tell you when they've had enough grease.**

## The Ultra-Lube

- ◊ Safe and simple to use
- ◊ Inexpensive
- ◊ Extremely durable
- ◊ Reveals existing bearing problems
- ◊ Prevents over- and underlubrication
- ◊ Eliminates grease gun calibration

## NEW Pro-Reach!

The Pro-Reach provides an excellent way to quickly inspect and diagnose potential problems on bearings, gear boxes, steam traps, etc. Vibration analysts and lubrication technicians can both take advantage of having this important tool. The Pro-Reach can be extended 5 feet for hard-to-reach equipment. Includes a 3-inch steel stinger probe tip.



## Personalized In-Plant Training Program

Revitalize your lubrication program, using the newest methods and train in your plant, on your equipment.

**800-736-3757**















# UVLM, Inc.

360.736.2333 ◊ Fax 360.736.1579

[www.uvlm.com](http://www.uvlm.com)

## Parts Explanation

Part #	Item Description	Item Explanation	
UVLM97-2	<b>Ultra-Lube</b> Acoustic Lubrication Device (complete kit)	This is the complete kit used for proactive acoustic lubrication and comes complete with David Clark headset w/23dB ambient noise reduction rating, electronics enclosure w/adjustable volume control and Probe Tip Sensor (transducer).	
GP-001A	<b>Probe Tip Sensor</b> (extra transducers)	Purchased in addition to the sensor that comes with the Ultra-Lube kit. Commonly used for situations where different grease types are used.	
DCH-001A	<b>Headset</b>	Headset with 23dB ambient noise reduction rating.	
YC-001A	<b>"Y" Cable</b> (for recording to data collector)	This Y-Cable adapter is used for recording the Ultra-Lube signal into your existing data collector, vibration analyzer or mini disk recorder. The Y-Cable comes with one end with raw wire leads so that adaptation can be made to whichever plug or jack mates to your equipment. A .wav file or other recording may then be taken into existing analysis software and analyzed.	
YC-002B	<b>"Y" Cable</b> (for splicing two headsets together)	This Y-Cable adapter is designed to be used with two headsets. For comparison of sound or equipment, by two individuals, at the same time.	
DEP-001A	<b>Pro-Reach Diagnostic Extension Pole</b> , 4ft extendable (w/out extra sensor)	This item provides an excellent way to quickly inspect and diagnose potential problems on bearings, gear boxes, steam traps, etc. Vibration analysts and Lubrication Technicians can both take advantage of having this important tool. The pole can be extended 4+ feet for hard to reach equipment. Requires purchase of an Ultra-Lube kit (P/N UVLM97-2) and can utilize the existing Probe Tip Sensor (P/N GP-001A). Also comes with a 3" steel stinger probe tip.	

<p><b>MEP-001A</b></p>	<p><b>Mini-Reach Diagnostic Extension Pole, 18 inches (w/out extra sensor)</b></p>	<p>This item is similar in style as its bigger brother. Designed specifically for Vibration Analysts and Lubrication Technicians, at only 18 inches in length, it also provides an excellent way to quickly inspect and diagnose potential problems on bearings, g</p>	
<p><b>MEP-002B</b></p>	<p><b>Mini-Reach Diagnostic Extension Pole, 18 inches (with extra sensor)</b></p>	<p>Same as Part # MEP-001A, but comes with additional Probe Tip Sensor.</p>	
<p><b>PRS-001A</b></p>	<p><b>ProReach Stinger</b></p>	<p>Staninless steel stinger, designed to enhance transmission of sound through Probe Tip Sensor (transducer).</p>	
<p><b>CC-001A</b></p>	<p><b>Comfort Covers, pair (black cloth ear seal protector)</b></p>	<p>These cloth covers fit over each ear pad on the headset. They help keep dust, dirt and grease out of the inner components of the headset. Also handy for issues of hygiene where more than one person may be using equipment.</p>	
<p><b>ES-001A</b></p>	<p><b>Ear Seals (foam padded), pair</b></p>	<p>Replacement ear seals/pads, if needed. Designed with soft foam.</p>	
<p><b>ES-002B</b></p>	<p><b>Ear Seals, (gel filled pads), pair</b></p>	<p>Upgrade from standard ear seals/pads. These are designed with gel filled padding and are extremely comfortable.</p>	

# Ultra-Lube Technical Data Sheet

## **Purpose:**

The Ultra-Lube allows Lubrication Technicians to listen to the quality of sound of a bearing while lubricating. The ability to listen to the bearing as lubrication is being injected prevents over and under-lubrication, because the user is able to hear bearing sound change when enough lubrication has entered cavity.

## **Benefits:**

- **Proactively Lubricates** – The Ultra-Lube allows Lubrication Technicians to proactively lubricate bearings using a proven method of lubrication. The ability to determine the exact requirements of a bearing at proper intervals extends bearing life and customizes outdated time/amount based lubrication schedules.
- **Identifies Bad Bearings** – The Ultra-Lube’s sensitivity can detect sounds generated by problems associated with bearing failure.
- **Saves Time** – Lubrication Technician will first listen to a bearing. If lubrication is not needed, then no further time is spent there and on to the next bearing in the lubrication schedule. Also, a Lubrication Technician, upon hearing a possibly damaged bearing, may now report it, saving time for higher echelon maintenance.
- **Safe To Use** - The Ultra-Lube has many safety features, including special connectors that easily disconnect should any part become entangled in rotating equipment. Electronics are sealed in epoxy and enclosed in a NEMA 4 rated, ABS plastic enclosure. All electrical cords are shielded and shrink-wrapped where connections have been made. Headsets have a noise reduction rating of 23 decibels.
- **Simple To Use** – No special training is necessary to operate the Ultra-Lube.
- **Eliminates Grease Gun Calibration** – The Ultra-Lube customizes the grease lubrication requirements of bearings, therefore eliminating the necessity of having every grease gun calibrated for what each pump or “shot” yields. The Ultra-Lube can also hear if grease has reached bearing.
- **Environmentally Conscious** – Because the Ultra-Lube allows you to properly lubricate, the risk of excess lubricant entering ground water or wastewater run-off treatment facilities is greatly reduced. This also saves money on chemicals used to treat wastewater.

## **Technical Data:**

Frequency Range	:20Hz – 20kHz, 4.6kHz median peak
Operating Temperature	:0-45°C (32-113°F)
Output Volume	:adjustable
Headset	:8 Ohm, attenuating NRR – 23dbl
Power Supply	:9V Alkaline industrial battery
Output Power	:.7V (point 7 volts)
Battery Life	:approx. 20-22 hours; on/off indicator light
Electronics Box	:NEMA 4, ABS plastic, hermetically sealed
Dimensions	:9.842 x 6.35 x 3.81 cm (3.875 x 2.5 x 1.5 in)
Weight (Headset)	:360 g (12.5 oz)
Weight (Electronics Box)	:275 g (9.5 oz)
Weight (Probe Tip Sensor)	:190 g (6.5 oz)

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Abitibi-Consolidated Inc.  
Alabama River Newsprint  
Appleton Papers Inc.  
Avenor Inc.  
Banks Lumber Company  
Boise Cascade Paper Solutions  
Bowater Inc.  
Bright Woods Corp.  
Buckeye Florida, L.P.  
Cedar River Paper Co.  
Champion International  
Consolidated Papers, Inc.  
Domtar Inc.  
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Fort James Corp.  
Georgia Pacific Corp.  
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MacMillan Bloedel Limited  
Manke Lumber Co.  
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Newark Sierra Paperboard Corp.  
Newsprint South  
NorskeCanada  
Packaging Corporation of America  
Pacific Veneer, Ltd.  
Plum Creek Mfg.  
Pope & Talbot Ltd.  
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Potlatch Forest Industries  
Proctor & Gamble Co.  
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Rand Whitney Containerboard  
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Sierra Pine Ltd.  
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Temple Inland Inc.  
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Union Camp Corp.  
Wausau Paper  
Welco Lumber Co.  
Weyerhaeuser Co.  
Yuen Foong Yu Paper Mfg Co

**Utilities/Power Generation**

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Al Taweelah Power Co, United Arab Emirates  
AmerGen Energy Company, LLC  
American National Power  
ATCO Power Canada Ltd.  
Arizona Power Services  
Calpine/Androscoffin Energy LLC  
Centerpoint Energy  
Citizens Thermal Energy  
City of Peoria Arizona  
Cleveland Electric Illuminating Co.  
Columbia Improvement District  
Commonwealth Edison  
County of Jackson Resource Recovery  
Dairyland Power Cooperative  
Dayton Power & Light  
Desert Water Agency  
Detroit Edison  
Dominion Generation  
Energy NW, Colombia Generating Stn  
Energy Corp.  
Exelon  
Florida Power Corp.  
Georgia Power  
Greater Vancouver Reg. Dist. - WWTP  
InterGen  
Kansas City Power & Light Co.  
Kewaunee Nuclear Power Plant  
LaPaloma Generating Company  
Las Vegas Valley Water District  
LCRA Environmental Laboratory Services  
LG&E Energy Corporation  
Logan Generating Company  
Los Alamos National Laboratories  
Magnolia Energy  
Mid Georgia CoGen  
Midlothian Energy L.P.  
Northern States Power Co.  
Northampton Generating Co.  
Onondaga County Water Dept.  
Ontario Power Generation  
Pacific Corp.  
Pacific Gas & Electric  
PGE Coyote Springs  
Point Beach Nuclear Power Co.  
Portland General Electric  
Prairie Island Nuclear  
Progress Energy  
Puente Hills Perg Facility  
Rathdrum Operating Services Co.  
Salt River Project – Santan Gntng Stn  
Seattle Public Utilities  
Selkirk CoGen  
South Carolina Electric & Gas  
Southern California Edison  
Southern Nuclear Operating Company  
Suncor Energy.  
Thunder Basin Coal  
U.S. Generating Co.  
Tenaska Alabama Partners LP  
Tennessee Valley Authority  
Texas Utilities Electric  
Texas Industrial LP  
Tractebel Electricity & Gas International  
Trigen Energy Corporation  
Vectren Culley Generating Station  
Virginia Power Co.  
Westcoast Energy Inc.  
Weststar Energy  
Xcel Energy

**Chemicals/Petrochemicals**

3V Chemical Corp.  
Air Liquide America  
Air Liquide Canada  
ALCOA Inc.  
Aristech Chemical Co.  
Ashta Chemicals Inc.  
BASF Corporation  
Big West Oil & Gas Inc.  
Borden Chemicals  
BP Canada Chemical Co.  
BP Offshore  
Calgone Carbon Corp.  
Cargill Crop Nutrition  
Chevron Phillips Chemical  
Citgo Petroleum Corporation  
ConocoPhillips Alaska, Inc.  
Dixie Chemical Company Inc.  
Dow Chemical Co.  
East Texas Salt Water Disposal  
E.I. DuPont de Nemours & Co.  
Engelhard  
Ergon Refining  
ESSO Australia Ltd.  
Formosa Petrochemical Corp.  
GAF Corporation  
Graymont Western US, Inc.  
Great Lakes Chemical  
Henkle Corp.  
Hung Chou Chemical Ind. Co. Ltd.  
Hyundai Petro Chemicals, S. Korea  
IMC-Agrico Co.  
IMC Chemicals Corp.  
IMC Potash Colonsay  
IMC Phosphates  
Kinder Morgan Bulk Terminals  
LaRoche Industries  
LG-Caltex Oil Refinery Co, S. Korea  
Marathon Ashland Petroleum, LLC  
Mosaic Phosphates Company  
Monsanto Co.  
Morton International  
Nat'l Petrochemical Company, Thailand  
Nova Chemicals  
Occidental Petroleum Corp, Ecuador  
Penn Specialty Chemicals  
Pioneer Natural Resources  
PolyOne Corp.  
Praxair Inc.  
Qatar Petroleum  
Reilly Industries, Inc.  
Saudi Aramco, Ju'aymah Gas Plant  
Saehan Co, S. Korea  
Searles Valley Minerals  
SF Phosphates Limited Co.  
Sheffield Plastics Inc.  
Shell Chemical  
Shintech Co.  
Solutia, Inc.  
Solvay Advanced Polymers  
Sumitomo Sitix Silicon, Inc.  
Suncor Firebag Operations  
Syngenta Crop Protection, Inc.  
Texas Genco II, LP  
Thiele Kaolin Co.  
Tosco Corp.  
Union Carbide Corp.  
Uno-Ven Refinery  
Vulcan Chemicals

**Governmental/Defense Contractors**

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The Dalles Dam  
Hill Air Force Base  
Johnson Controls  
NASA  
Naval Air Warfare Center  
U.S. Army Corp. of Engineers

**Manufacturing/OEM**

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AlliedSignal Inc.  
Anderson Corp.  
Arcadia Corp.  
Armstrong World Industries, Inc.  
Avery Dennison  
B&M Plastics  
Beloit Corp.  
Boeing Commercial  
Brush Wellman, Inc.  
CertainTeed Corp.  
Clopay Corporation  
Cummins Engine Co., Inc.  
Cyril Scott Corp.  
DAF Trucks, The Netherlands  
Delphi Corporation  
Doorcraft of Indiana  
Dunlop Slazenger LLC  
E.I. DuPont de Nemours & Co.  
FiberVisions Products Inc.  
Firestone/Bridgestone Corp.  
FNA Polymer Corp.  
Formosa Plastics Corporation  
Fujitsu Microelectronics, Inc.  
GAF Materials Corporation  
General Electric Co.  
General Mills Inc.  
General Motors Corp.  
General Motors Powertrain  
Guardian Industries Corp.  
GVX Automation  
Honeywell International Inc.  
Huhtamaki Food Service/Chinet  
IBM Corporation  
Northrop Grumman  
Intel Corporation  
Mikron Industries  
National Oilwell  
New England Woodenware  
Osram Sylvania  
Owens Corning  
Pace Co.  
Peterbilt Motors Company  
Phillip Morris USA  
PMC Industries  
Procter & Gamble  
QTG Canada  
Redlon & Johnson  
Safety-Kleen Corp.  
Saint-Gobain  
Saudi Cable Co.  
SC Johnson & Son, Inc.  
Subaru - Isuzu Automotive Inc.  
Taiwan Semiconductor Mfg Co. Ltd.  
Tate & Lyle Sucralose  
Timken Co.  
Tolko Industries Ltd.  
Toray Plastics  
Thiele Kaolin Co.  
US Intec Inc.  
Velcro USA, Inc.  
Wellman Inc.  
Whirlpool Corporation  
Wilsonart

**Mining/Aggregates**

Albian Sands Energy Inc.  
Ash Grove Cement  
Barrick Goldstrike Mines  
Carmeuse Lime & Stone Inc.  
Cemex Inc.  
Continental Cement Company  
Eastern Associated Coal  
Graniterock  
Graymont Western US  
Holcim (US) Inc.  
IMC Phosphates Co.  
Lee Ranch Coal Co.  
LeHigh Cement Co.  
Lone Star Industries, Inc.  
Minera Los Pelambres, Chile  
NYCO Minerals  
OCI Wyoming  
Phoenix Cement  
St. Mary's Cement Inc.  
Texas Industries, Inc.  
U.S. Borax  
U.S. Silica Co.  
Youngquist Brothers

**Food/Agriculture**

ADM Corn Sweeteners  
A.E. Staley Manufacturing Co.  
Amalgamated Sugar Company  
American Crystal Sugar Co.  
Archer Daniels Midland Co.  
Basic American Foods  
ConAgra-Lamb Weston Foods  
Caprock Industries  
Cargill B.V., The Netherlands  
Cargill Incorporated  
Consolidated Grain & Barge, Co.  
Coors Brewing Company  
Darigold  
Excel Corporation  
Fisher Mills, Inc.  
Golden Foods/Golden Brands  
Lily of the Desert  
Masterfoods USA  
Monsanto Company  
National Frozen Foods  
Pace Co.  
Purina-Ralston Foods Corp.  
Seneca Foods  
Southern Minnesota Beet Sugar  
State Fair Foods  
Symons Frozen Foods  
Tropicana  
Welch's  
Western Empires Inc.  
WestFarm Foods

**Metals/Metal Forming**

Alcan Primary Metal BC  
Algoma Steel Inc.  
AK Steel  
Harrison Steel Castings  
King Extrusions Ltd.  
Korea Zinc Co, S. Korea  
National Steel  
Nichols Aluminum  
Nucor Yamato Steel Company  
Oregon Steel Mills  
Reynolds Metals Co.  
Teck Cominco Metals Ltd  
U.S. Steel

**Pharmaceuticals/Labs**

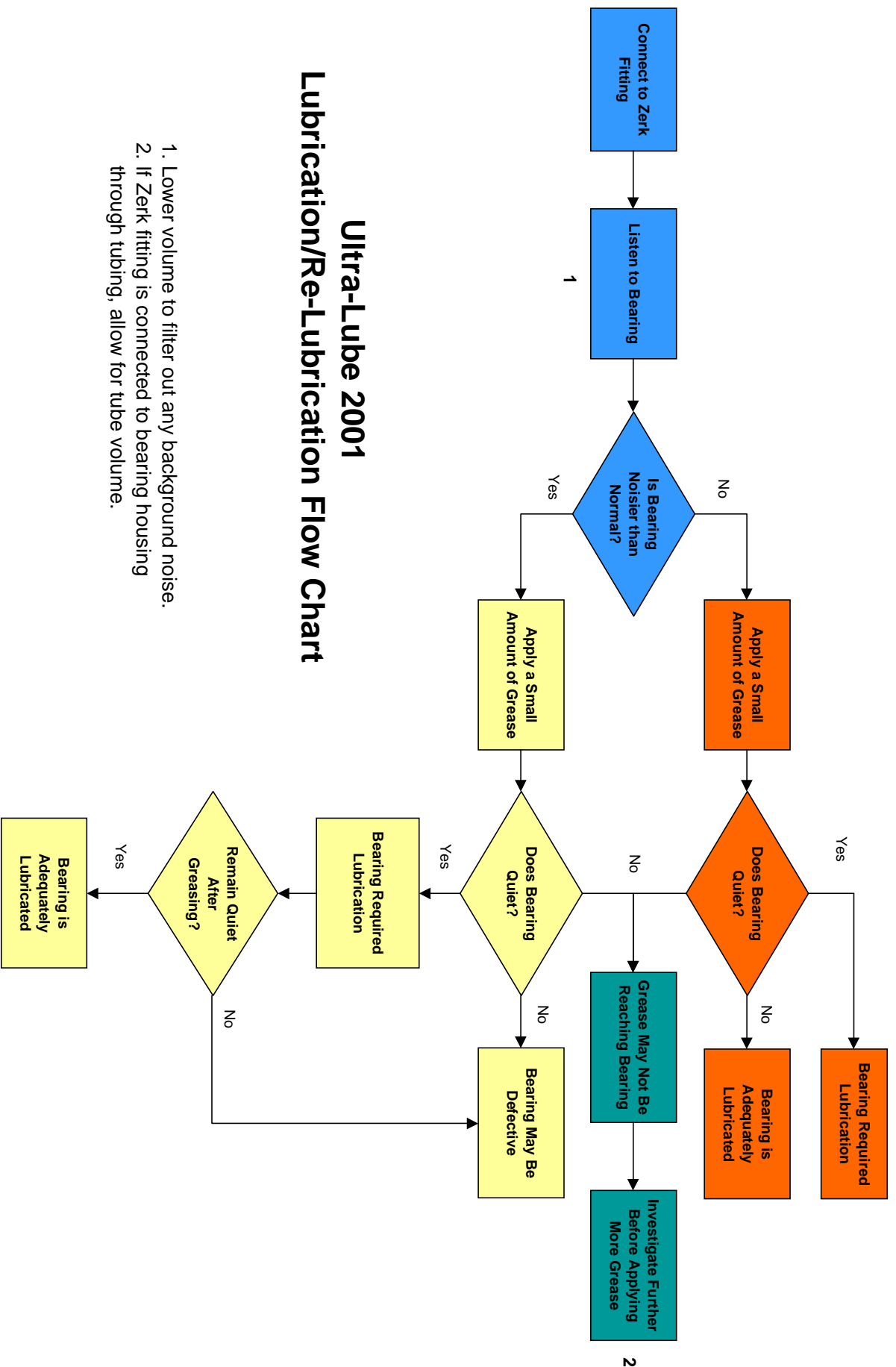
Abbott Laboratories  
Amgen Inc.  
Becton, Dickinson & Company  
Eli Lilly & Company  
Fermi National Laboratories  
FMC Corp.  
Genencor International Wisconsin Inc  
Genzyme Transgenics Corp.  
Immunex  
Los Alamos National Laboratories  
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Novo Nordisk BioChem, Inc.  
Pfizer Pharmaceutical LLC  
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Roche Carolina

**Hospitals/Institutions**

Big Bend Community College  
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Ozarks Technical Community College  
St. Vincent Hospital  
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2R Systems Inc.  
Aera Energy, LLC  
Antimu Engineering Co. Pty. India  
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Associated Products, LLC  
Bearing & Oil Seal Specialists  
Bearing & Transmission, Canada  
Betko Peru, Peru  
Brunette Equipment  
Burns & Roe Services Corp.  
CB Richard Ellis  
Centre de Services Aux Entreprises  
Chemserve Systems, South Africa  
C.I. Sealco S.A., Medellin, Colombia  
Export Oilfield Services  
Federal Express  
Federal Reserve Bank  
Global E-Technic, Malaysia  
Hagemeyer Worldwide  
Hawera Rewind (New Zealand)  
Ind. Lubrication & Maint. Co.  
Ingelube S.A., Chile  
Invenma, Venezuela  
KICer Technology Ltd, Taiwan  
Maintenance Systems Consolidated, Australia  
Metalux Molecular, Singapore  
Mobil Lubrication Services  
Overall Laundry  
Peel Resource Recovery, Canada  
Raymonds Supply Co. Ltd., Hong Kong  
Reliability Equipment Specialists  
Schematic Approach Inc, Canada  
Services Industriels HPL, Canada  
Sicelub, Mexico  
Solge Corp, South Korea  
Solinas Benelux BV, The Netherlands  
T&V Services  
Tecviusa, Mexico  
Tricom Services  
VibeAssist Inc.  
Vitech Asia-Pacific Pty. Ltd, Australia  
Whelco Ltd



## Ultra-Lube 2001 Lubrication/Re-Lubrication Flow Chart

1. Lower volume to filter out any background noise.
2. If Zerik fitting is connected to bearing housing through tubing, allow for tube volume.

## **Ultra-Lube Testimonials and Comments**

### **Gary Latham, Algoma Steel Inc.**

The Ultra-Lube 2001 is allowing us to, very simply and at a low cost, revolutionize the way we grease our equipment. It inspires us to step back and think about the effect of greasing and how we should change our antiquated methods handed down over generations that were wrong.

The use of this unit should be the first basic step any company must make toward proactive maintenance as it is extremely cost effective.

Already, in a very short time, the Ultra-Lube has enabled us to make some major breakthroughs in thinking on fan bearings. We also saved a 3000HP induction fan motor, which saved the company an estimated \$3,000,000. We are destined to save the company many more millions of dollars in maintenance costs and heightened operating time.

Thank you UVLM for a truly awesome product that has great proactive potential.

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### **Robin Gray, Lubrication Technician, Tenneco Packaging Co.**

I've used a number of electronic stethoscopes over my 24 years of oiling machinery at this mill. The first and most obvious benefit to me was the clear sound transfer from equipment to the ears. My being able to monitor the internal sound was invaluable. That capability allowed me to convey important information to the right people.

In oiling, greasing intervals and the amount vary on different pieces of machinery. The Ultra-Lube helped me to establish a time frame to re-lubricate. It's saved some catastrophic failures over the years. By using it on a daily basis, my listening skills increased. I got to know what is normal and what is not on the equipment's internal operation. You develop skills to differentiate a bad raceway, an imbalance issue, a worn rolling element or a bad coupling. Many situations occurred over the years. Vibration people at our facility would gather data to determine a failure. There were times where human ears proved better. I would state, I hear what you see. I'm not saying vibration isn't valuable, but the Ultra-Lube has its place right along side the vibration program.

Over the years I've put the Ultra-Lube to the test. My job duties were in all environments. From a hot, wet end of a paper machine to a cold environment when lubricating exhaust fans on a roof in the middle of winter. In the heat of the dryer sections temps probably average 140 degrees to 150 degrees ambient. The tool took this punishment. The cord of the headset and other internals still functioned. The headset still provided a good seal from external noise coming from other equipment. The transducer continues to still perform well after all these years of abuse. From the first generation to this improved version the Ultra-Lube is relentless and rugged. I can't emphasize enough that it's a quality tool.

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### **Judson Patterson, Vibration Analyst, U.S. Alliance**

After our plant purchased the Ultra-Lubes for our Lubrication Technicians, I was interested to see how it would work for the Vibration Analyst group. I never gave it back. I use it for all my interim vibration inspections to check conditions. I use it to check up on my Vibration Analysis equipment and confirm what it is saying is going on in the machinery. It also helps my time wave analysis. I have found numerous cracked and damaged bearings with it and it helps on motor analysis. I'd say it has helped my job 30% or better.





**UVLM, Inc.**

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Centralia, WA 98531  
Ph – 360-736-2333

## Ultra-Lube Personalized Hands-On Training Schedule

**2 persons in attendance, per session. A session is commonly 1-3 Hours per day. A total of 4 persons may be trained in one scheduled day or 2 persons each half day.**

### Each Session

#### **15-30min. – Classroom**

Introduction to the Ultra-Lube Acoustic Lubrication Device and familiarization (if applicable).  
Assembly and care of the Ultra-Lube tool. Instruction in initial use of Ultra-Lube and purpose.  
Troubleshooting tips and in field repair.

#### **1-3 hours (as needed) – In Field Practicum.**

Begin to listen with the Ultra-Lube, making notations of various bearing sounds. Each attendee will take their own notes (ie: which bearings they would grease or report, etc.) and make numeric values based on a 1-10 scale method about condition of each bearing listened to.

#### **1-3 hours (as needed) – In Field Practicum**

Return to bearing route and listen again. Instruction in determining which bearings need lubrication and which bearings do not and the reasons why. Begin proper and proactive lubrication of bearings that need further attention. Instructor will also alert attendees to any bearings that might have been missed as well. Attendees will be instructed on how to begin to implement an effective, trendable lubrication routine and make necessary changes or modifications to an existing one. Attendees will be instructed on techniques to use while lubricating bearings and things in plant to be on the lookout for during a lubrication routine. This includes instruction on ways to quickly check gearboxes, valves, steam traps, etc. while getting to and from point to point. Attendees will also be shown advantages of implementing lubrication practices that align with vibration groups and other condition based monitoring groups.

A full report of any instructor findings on equipment in plant during training will be provided, upon request.

Due to the nature of this personalized training, more than 2 people per training session is prohibitive. Two people per training session are optimum. Depending upon the structure of the maintenance process used in plant (ie: engineers, mechanics, operators, lubrication technicians, etc and depending upon which individuals grease which equipment) it may not be necessary to have every potential Ultra-Lube user attend a session. However, each group should have two or three key people trained and each group should have a separate training session scheduled, customized for the machinery under their control.

Cost per person, minimum 1 day (2 Sessions): \$650 per person, plus expenses fee. Expenses to be determined, as needed. Many factors affect On-Site training, including fluctuations in airfare, amount of advance notice, etc.

Training performed by: Jeff Gribble, UVLM, Inc.

