

# LUBRICATION HANDLING SOLUTIONS



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## Introduction

**iCan Group Ltd** are the manufacturer of iCan – The Intelligent Can

- \* iCan™ product lines will compliment your current range of products and services.
- \* iCan™ has been a leading fluid handling product brand in Australia.
- \* Designed to increase your customers' productivity and satisfaction.

### Containers to :

- Store Fluids Safely,
- Identify Fluids Clearly,
- Dispense Fluids Quickly.

### With iCan, we are committed to deliver:

- A world class product,
- Solutions to common lubricant transfer and storage problems value for money,
- Simple, easy to use and reliable product.



**Identify  
Store  
Pour**



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## CHAPTER ONE

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# FACTS

1. Contamination is a leading cause of machinery failure by directly impairing the lubricant's ability to control friction, wear and corrosion. Open containers create a high risk for spills and allow foreign particles such as dust, debris and water to easily contaminate the oil. 90% of machinery failure is due to unclean lubricants.
2. Poor handling creates messy workshop.
3. With proper identification, we can ensure that one container will only be used for one type of fluid, eliminating the possibility of fluid mixing, which can be catastrophic in certain applications.
4. By improving the cleanliness of oils introduced into machines and increasing productivity by reducing the oil refill time can reduce lube related failures.
5. By reducing contamination from its originating source, the life of the lubricant and machine can be greatly extended.
6. Metal oil cans prevent some airborne contaminants from entering, but not all. They are difficult to label and present other contamination problems.
7. The lubricant handling and dispensing procedures required change to keep contaminants from entering the equipment.
8. A better practice to invest in ways to keep contamination out of equipment than removing the contamination after ingress.

## CHAPTER TWO

# Problems in Lubrication Practices



"After all, how practical is it to go to the extra expense to deliver a clean, high-quality lubricant when this integrity is subsequently adulterated by careless handling and storage practices."

*Jim Fitch, Publisher and Editor, Machinery Lubrication Magazine  
Excerpt from "Lubricant Quality and the Chain of Custody"  
Machinery Lubrication Jan/Feb 2005*

**Many companies offer tools and equipments of fluids & lubricants handling, but most of them do not truly understand and or aware of what it needs.**

- The most common issue with viscosity problems is errors in lube dispensing. If this is confirmed to be a problem, then a priority task is to setup a system of colour coding of lubricants. Check with your lube supplier to see if they have any colour coding recommendations but generally lube colour code systems are generated locally by what seem appropriate. Colour labels or markings should be applied to lube storage containers, dispensing points, dispensing containers and machine fill points. There are commercial solutions for labeling and colour coding lube systems but you can also create your own system easily using good quality printed labels, colour vinyl self adhesive sheeting, cable ties and colour paint.

(resource: [http://www.sirfirt.com.au/wikis/imrt/index.php/Foundations\\_for\\_a\\_Good\\_Lube\\_Management\\_Program](http://www.sirfirt.com.au/wikis/imrt/index.php/Foundations_for_a_Good_Lube_Management_Program) )

#### **Other article says :**

Lubricant labeling is one aspect of storage and handling that is often overlooked. Labeling is just as critical as periodic filtration and without proper labeling it is very easy for lubricant cross contamination to occur.

Lubricant cross contamination is a result of mixing two lubricants together and can yield a devastating result. This happens more often in the dispensing equipment rather than the bulk storage equipment. A labeling system can be a simple concept but could prove to be difficult to implement and maintain.

Decide how to label each corresponding lubricant from bulk storage to the equipment it will be used in. It can be a color coded system, an alphanumeric code system that depicts important performance data about the lubricant, or a combination of both.

Any labeling system can efficiently ensure the right lubricant is used at the right location and prevent cross contamination, but in order to do this, the labeling system must be kept consistent and up to date with current lubricants that are in use and being stored.

For example, Noria's LIS system is a technical recommendation that denotes a lubricant's key performance properties and compiles them into an alpha-numeric code. Each performance property gets its own section of the alpha-numeric code. Once these alpha-numeric codes are determined, they can then be easily printed and incorporated in a labeling scheme.

There are hundreds of possibilities for the alpha-numeric codes, so a system that is easy to read and maintain is preferred. Matching stored lubricants to the machines in which they are used should be a primary focus of your labeling system.

We must be able to correctly identify lubricants in storage and also correctly identify their applications in the field.

Applying the labels to top-up containers, grease storage containers, totes, drums, etc., is the only way to ensure correct product delivery to application.

(resource - <http://www.machinerylubrication.com/Read/28429/improve-lubricant-storage> )

## CHAPTER THREE

# SOLUTIONS

### Lubricant Dispensing Equipment Identification

Lubricant dispensing equipment often lies at the root of cross contamination problems. By dispensing oil through equipment that was previously used with a different lubricant, the two fluids mix, potentially causing lubrication impairment. Cross contamination is also a trend-killer, reducing the effectiveness of oil analysis efforts. Equipment such as transport containers, hand pumps, transfer carts and filter carts should be labeled to match the lubricant to be used with. Where mixing is unavoidable, verify compatibility in advance with the lubricant supplier. Extend the identification process to the machine's lubricant fill ports. Using identification tags or color-codes helps to ensure that the proper lubricant is added to the reservoir fitted with the proper dispensing tools. If dispensing equipment must be used for a variety of lubricants, employ a proper cleaning or flushing procedure that emphasizes the removal of the previous lubricant and other contamination to minimize risk.

(resource - <http://www.machinerylubrication.com/Read/52/lubricant-storage-handling> )

### Why iCan ?

**Answer :** *iCan flexible labeling system allows for clear, accurate fluid identification and "Adhesive Backed iPouches" stick onto any iCan drum and give users the ability to store important documents such as MSDS sheet, operating instructions or fluids data sheets with the container at all times.*



## CHAPTER FOUR

# What Makes iCan Better?



Reduced SKU for suppliers and Distributors



Simple Products Guaranteed To Work



Quick Fill Port Of Safe Quick Refills



Desiccant Port For Added Protection



Breather On Off Toggle for Easy Operation



iPouches Hold And Store MSDS  
Directly On The Drums

## CHAPTER FIVE

# CONCLUSION

### Promote a Cleaner, More Organized Workplace

iCan™ products are not just ideal for keeping fluids clean, but are also perfect for maintaining a clean, well organized workplace. Replacing rusty, open top containers with well labeled iCan™ containers will have an immediate impact on the overall look and feel of the workplace. Not only will employees appreciate a cleaner environment, but customers will as well. Is your current workplace the kind of environment that would impress a potential customer? If the answer is "no", then consider investing in iCan™ products as a way to make your workplace cleaner, safer, and more organized.

An effective proactive maintenance program mandates effective storage and delivery of lubricants. Protecting your lubricants, and ultimately your equipment, from the harmful effects of contamination and lubricant degradation begins with proper in-plant storage. To ensure suitable storage of lubricants, containers should be stored indoors in a dry location where temperatures remain moderate at all times. Clearly identify lubricants and machine application to avoid confusion and the misapplication of products. And, be sure that the proper transfer equipment and procedures are employed for that specific lubricant. These simple steps can substantially impact the useful life of your lubricants and your equipment.

Ref: Wills, George, Lubrication Fundamentals, Marcel Dekker, Inc., 1980.





It's time to Clean Up Your Act,  
It's time for



“For every ISO code that you can bring it (oil contamination) down, you’ve increased the life of the components in the system by at least 40%”

*Larry Czernik, Senior Development Engineer Maintenance Products and Svcz. Group, Caterpillar.*

“It is often said that the cost of excluding a gram of dirt is only about 10 percent of what it will cost you once you let it enter the oil”

*Jim Fitch, Noria Corporation*

“With managerial support for training, improvements in storage and handling, and continuous improvements in lubrication procedures and practices... lubrication improvements can deliver strong financial rewards for relatively few dollars invested”

*Ed Bohn  
Plant Lubrication Specialist  
General Motors*

**“For every ISO code that you can bring it (oil contamination levels) down, you’ve increased the life of the components in the system by at least 40%”**

*- Larry Czernik, Senior Development Engineer, Maintenance Products and Service Group, Caterpillar Expert from “Take Control of Excavator Cost” – Equipment Today Magazine*



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## WHAT THE EXPERTS SAY

**"For every \$1,000 invested in tribology research and development, savings of \$50,000 per year could reasonably be expected in two years time - not a bad investment, one might say."**

Interview with Luminary Professor H. Peter Jost  
The man who gave birth to the word "Tribology"  
Machinery Lubrication Magazine  
January 2006

**"The biggest enemy for hydraulic fluids and hydraulic systems is contamination. It's a 'proven fact' that 75 to 80 percent of all hydraulic machinery failures can be traced to contamination in hydraulic fluids."**

Thelma Marougy, Principal Engineer for Lubricants and Fluids, Eaton Corporation  
Excerpt from "Contaminated Fluids: Guilty as Charged"  
Lube Report e-Newsletter, May 16 2006

**"I have always believed that keeping the equipment clean, dry and properly lubricated contributes to eliminating more than half of all machinery failures."**

V. Narayan, Former Manager of Royal Dutch Shell Group's Centre of Excellence in Maintenance and Reliability Engineering  
Author of Effective Maintenance Management: Risk and Reliability Strategies for Optimizing Performance  
From July 14, 2006 post at MaintenanceForums.com  
Topic: Reducing rotating machinery downtime

**"SKF, the bearing manufacturer, surmises that inadequate lubrication is a contributing cause in 90 percent of all bearing failures. In the same breath, SKF points to contamination, another lubrication-related root cause of bearing failure, as contributing to 70 percent of all bearing failures."**

Drew Troyer, Noria Corporation  
Excerpt from "This is your wakeup call"  
MRO Today magazine, February/March 2002 Issue

**"At a time of great technological and economic changes, tribology finds itself in a position in which insufficient attention is paid to the technological and economic benefits that can be reaped by its application."**

Professor H. Peter Jost, President, International Tribology Council  
Excerpt from opening address at the Second World Tribology Conference in Vienna, 2001  
Newsletter of the Society for Machinery Failure Prevention Technology, Sept. 2002

**"A hydraulic system is a precision unit...Cleanliness is critical to prolonging life."**

Ed Erisman, Chief Engineer of Components, Komatsu  
Excerpt from "Keep Hydrostatic Equipment Rolling"  
Equipment Today magazine, August 2002



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## WHAT THE EXPERTS SAY

*The primary cause of engine failure that we see on the old engines we get back is oil contamination."*

Mike Stivers, Vice President ReGen Technologies, Joint Venture Between Springfield Remanufacturing and Deere & Co.  
Excerpt from "Powerplant Overhaul vs. Replacement"  
Equipment Today magazine, February 2002 Issue

***"It is always good advice to stop treating the symptoms and start treating the causes. When we filter dirt from oil, we are treating the symptom. When we exclude its entry, we treat the cause."***

Jim Fitch, Noria Corporation  
Excerpt "From Whence Dirt Comes"  
Machinery Lubrication magazine, November/December 2002 Issue

***"For all of the power a hydraulic system provides to equipment, these systems are actually very delicate. The slightest bit of contamination can cause wear on components that will result in significant downtime and repair costs".***

Jeff Woosley, Assistant Editor, Equipment Today Magazine  
Excerpt from "Keeping Contaminants Out"  
Equipment Today magazine, June 2002 Issue

***"It has been said that the cost of preventing the ingress of contamination may only be 10 percent of what it will eventually cost once the contamination is allowed to enter lubricating oils."***

Charles Pitt, Sunoco Chemicals Lana Robin, PDMA Corporation  
Excerpt from "Sunoco's Contamination Counter Attack"  
Practicing Oil Analysis, July/August 2001 Issue

***"Historically, lubrication has been trivialized in the plant. This oversight has cost industry dearly."***

Drew Troyer, Noria Corporation  
Excerpt from "This is your wakeup call"  
MRO Today magazine, February/March 2002 Issue

***"Will the contamination of a lubricant impact on your operating costs? The simple answer is yes and it could do so dramatically."***

Peter Carlin, Alan Messenger & Turlough Guerin  
Excerpt from "Stay clean man! Lubricant cleanliness is crucial."  
World Mining Equipment, November 2003 Issue

***"When Shell undertook an industry-wide customer survey to identify and assess the level of contamination that could occur in the supply chain, it was revealed that only 10% of contamination occurs during the production of lubricants and hydraulic oils. The remaining 90% occurs during packaging, handling and storage (40%) and on site dispensing equipment and machinery fill points (50%)."***

Peter Carlin, Alan Messenger & Turlough Guerin  
Excerpt from "Stay clean man! Lubricant cleanliness is crucial."  
World Mining Equipment, November 2003 Issue



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