**Creating a Smooth Transition Between Greases** 

The webinar will begin in less than 10 minutes.





**Creating a Smooth Transition Between Greases** 

The webinar will begin in less than 5 minutes.





#### Webinar starting soon; until then...

ar Lynes A Year

#### TEST YOUR KNOWLEDGE

When mixing two different lithium complex greases, they are always compatible.

True

False





### Webinar starting soon; until then...

#### TEST YOUR KNOWLEDGE

Incompatibility is caused by interactions between different

#### Thickeners

Additives

Base Oils

#### All of the Above

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JBRICANTS



### Webinar starting soon; until then...

ar Lyner A Yes

#### TEST YOUR KNOWLEDGE

If all the other compatibility testing results were in range, but the worked-60 penetration of the 50:50 mixture was measured as 290 (when the neat greases were 275 and 288), the greases would be

#### Compatible

Borderline Compatible

#### Incompatible







### **Creating a Smooth Transition Between Greases**





### Amber Fessler – NLGI CLGS; STLE CLS & OMA-I

- CITGO Senior Sector Manager
- Materials Engineer
- 13 Years of Experience in Lubricants
- STLE Certified
  - Certified Lubrication Specialist
  - Oil Monitoring Analyst I
- NLGI Certified
  - Certified Lubricating Grease Specialist



### Want Resources?



# **Future Webinars**

April 28: Solving Problems with Industrial Synthetics

May 19: Earning Customer Loyalty with Lube Surveys

June 23: Succeeding with Landfill Products



### Doug Rice - NLGI CLGS; STLE CLS & OMA-I

Sr. Product Specialist Grease Technology B.S. Chemistry 30 Years of Experience in the Lubricants Including: OC Laboratory Manager Sr. Technical Service Representative Sr. Account Manager



### **Tobiah Isbell - NLGI CLGS**

CITGO Product Specialist
Grease Technology
B.S. Chemical Engineering
10 Years of Experience in the Lubricants Industry







# **Risks When Switching Greases**

# Grease Compatibility

# **Change Out Procedures**





# Risks When Switching Greases



## Softening

### Hardening

### **Drop Point**

Performance Losses



## Additives

### Thickeners

Causes

Base Oils





### **ASTM D6185**

### Primary Testing

- Dropping Point
- Wk/60
- Wk/100,000

 High Temperature Storage

### Secondary Testing

 Suggestions Given for Various Applications

#### **Ratios and Results**

- **50:50, 90:10, 10:90**
- Compatible, Borderline Compatible, Incompatible

#### lssues

- Similar vs Largely Different Greases
- Tedious/Expensive Testing
- About 8 lbs. of Each Grease Minimum for Primary Testing

#### **GREASE THICKENER COMPATIBILITY CHART**

General Guide - Exceptions Are Possible	PHI A	uminum C2	comple neum s	earate	thydrov neium Ca	sy t smolet	utonate	niumst	sarate nium 12	Hydrof nium Co	y mplet	dium 502P
Aluminum Complex	С	-	В	-	-	-	-	-	-	*	-	
Calcium Stearate	-	С	С	-	В	- 1	С	в	С	*	-	
Calcium 12-Hydroxy †	В	С	С	В	С	-	С	С	С	*	- 1	
Calcium Complex	- 1	1	В	С	-	-		-	В	С	-	
Calcium Sulfonate	- 1	В	С	Ι	С	-	-	в	В	-	-	
Clay	-	- 1	-	-	-	С	-	-	Ι	-	-	
Lithium Stearate	-	С	С	-	-		С	С	С	*	-	
Lithium 12-Hydroxy	1	В	С	I	в	-	С	С	С	*	-	
Lithium Complex		С	С	В	В	1	С	С	С	*	1	
Polyurea	<b>I</b> *	*	*	С	1	1	*	<b>I</b> *	*	С	1	
Sodium Soap	-	1	1	-	-			Ι	-	-	С	

- C Compatible
- B Borderline
- I Incompatible
- I\* Dependent Upon Type
- † Anhydrous Calcium



### **Don't Blindly Trust Compatibility Charts**

Many different charts have been published and often include conflicting information

Additives and base oils can also cause incompatibility, not just thickeners







# Change Out Procedures



### **Change Out Procedures**

If changing to a new grease that is not compatible...

If possible, thoroughly clean the bearing/application site and apply new grease

If not possible, follow OEM recommendations if available



## General Recommendation

Open the purge valve, flush out the old grease with new grease until none of the old grease is visible.

Let the bearing cycle for a short time to remove the excess grease, then close the purge valve. It is critical that the bearing not contain too much or too little grease.

Monitor application and shorten relubrication intervals until all old grease has been removed.



# IF IN DOUBT CLEAN IT OUT!









Please post your questions using the Q&A function.

> For technical inquiries or issues: Lubes Answer Line 800-248-4684 <u>lubeshelp@citgo.com</u>









# Thank You

See you next time!