REDUCING OPERATIONAL COST WITH AUTOMATIC LUBRICATION

Ron van Os, sales manager port applications

GROENEVELD LUBRICATION SOLUTIONS

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LUBRICATION SOLUTIONS
BY TIMKEN

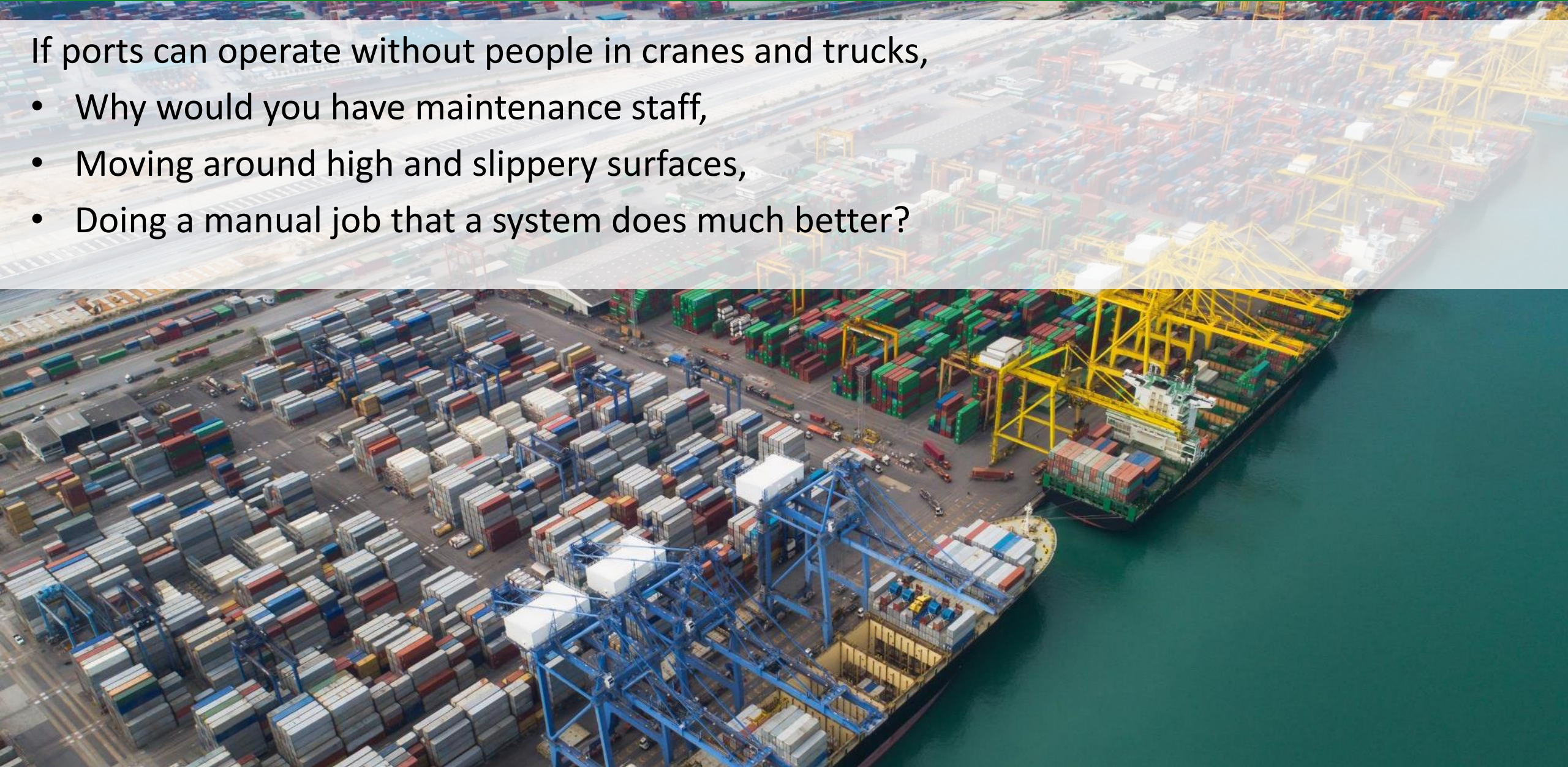# 'All over the world the challenges are the same…'

Ports are continuously working on safety, efficiency and automated processes

Automating port operations

If ports can operate without people in cranes and trucks,

- Why would you have maintenance staff,

- Moving around high and slippery surfaces,

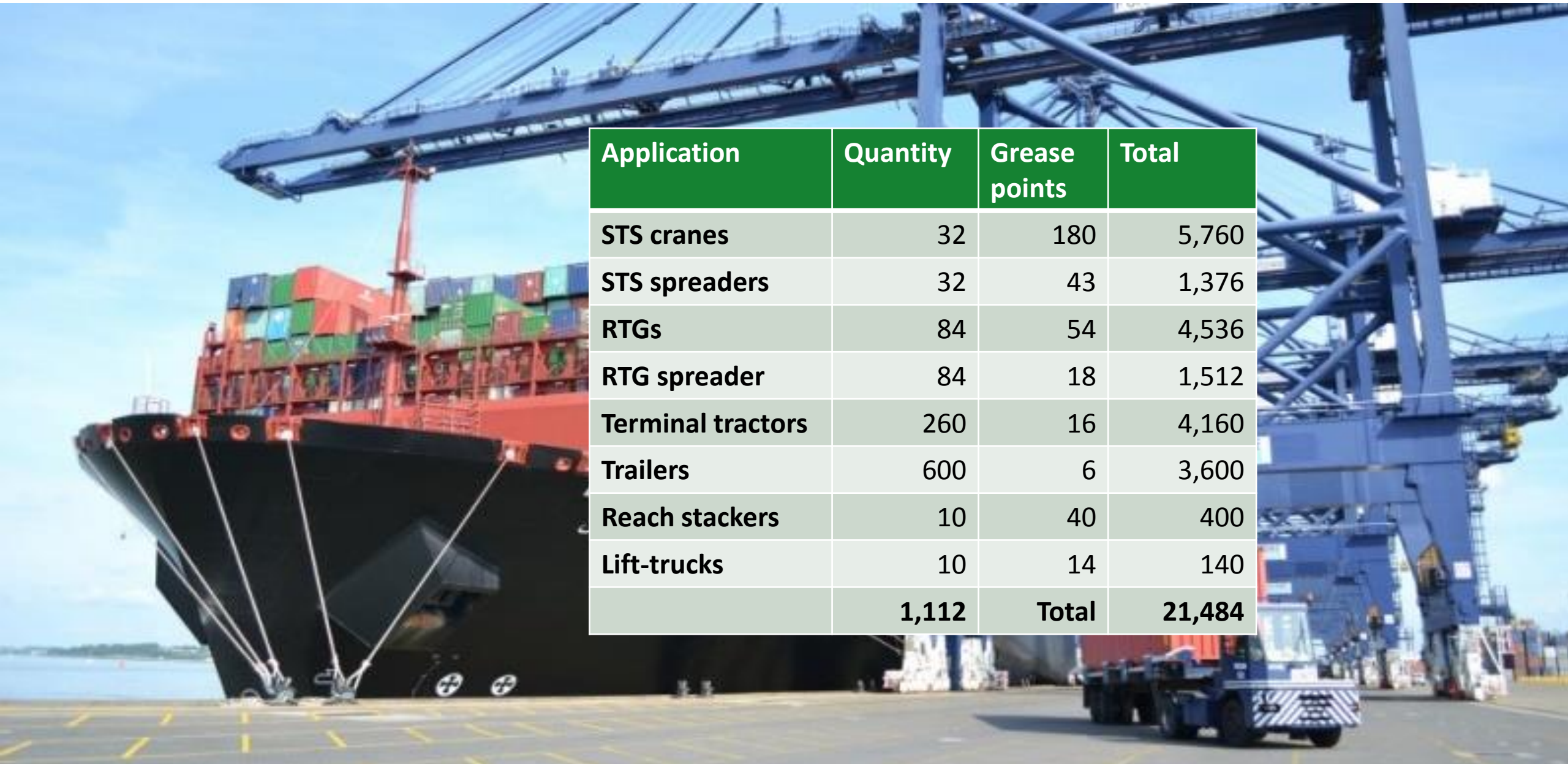- Doing a manual job that a system does much better?

Manual lubrication?

How many lubrication points are there in a container terminal?

Example: 4 million TEU terminal

| Application	Quantity	Grease points	Total
STS cranes	32	180	5,760
STS spreaders	32	43	1,376
RTGs	84	54	4,536
RTG spreader	84	18	1,512
Terminal tractors	260	16	4,160
Trailers	600	6	3,600
Reach stackers	10	40	400
Lift-trucks	10	14	140
	1,112	Total	21,484

Why do we need to lubricate?

→ To prevent (metal to metal) contact between two moving components (a thin layer of grease)

→ To seal
   (to keep out dirt, water, cleaning agents etc.)

→ To cool and reduce friction

→ To lubricate seals (to maintain tightness)

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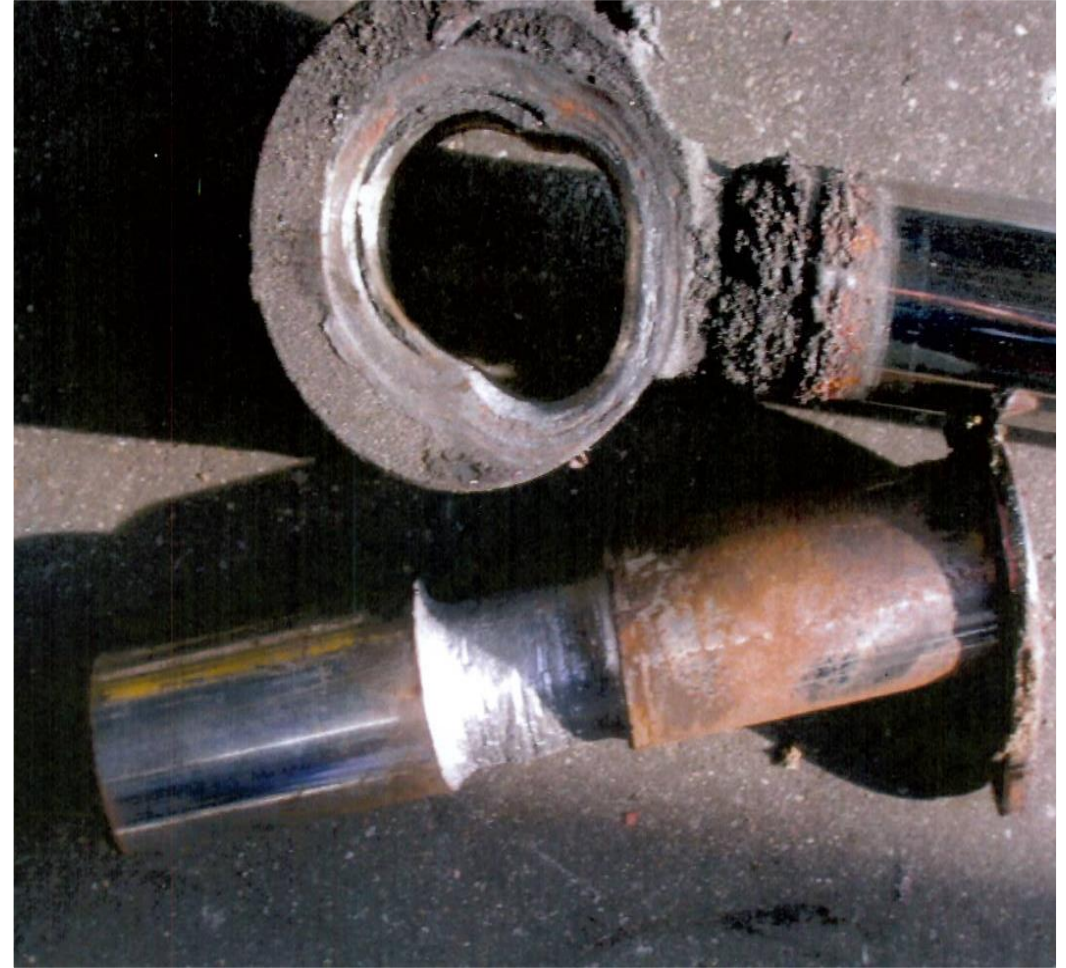
Manual versus automatic lubrication
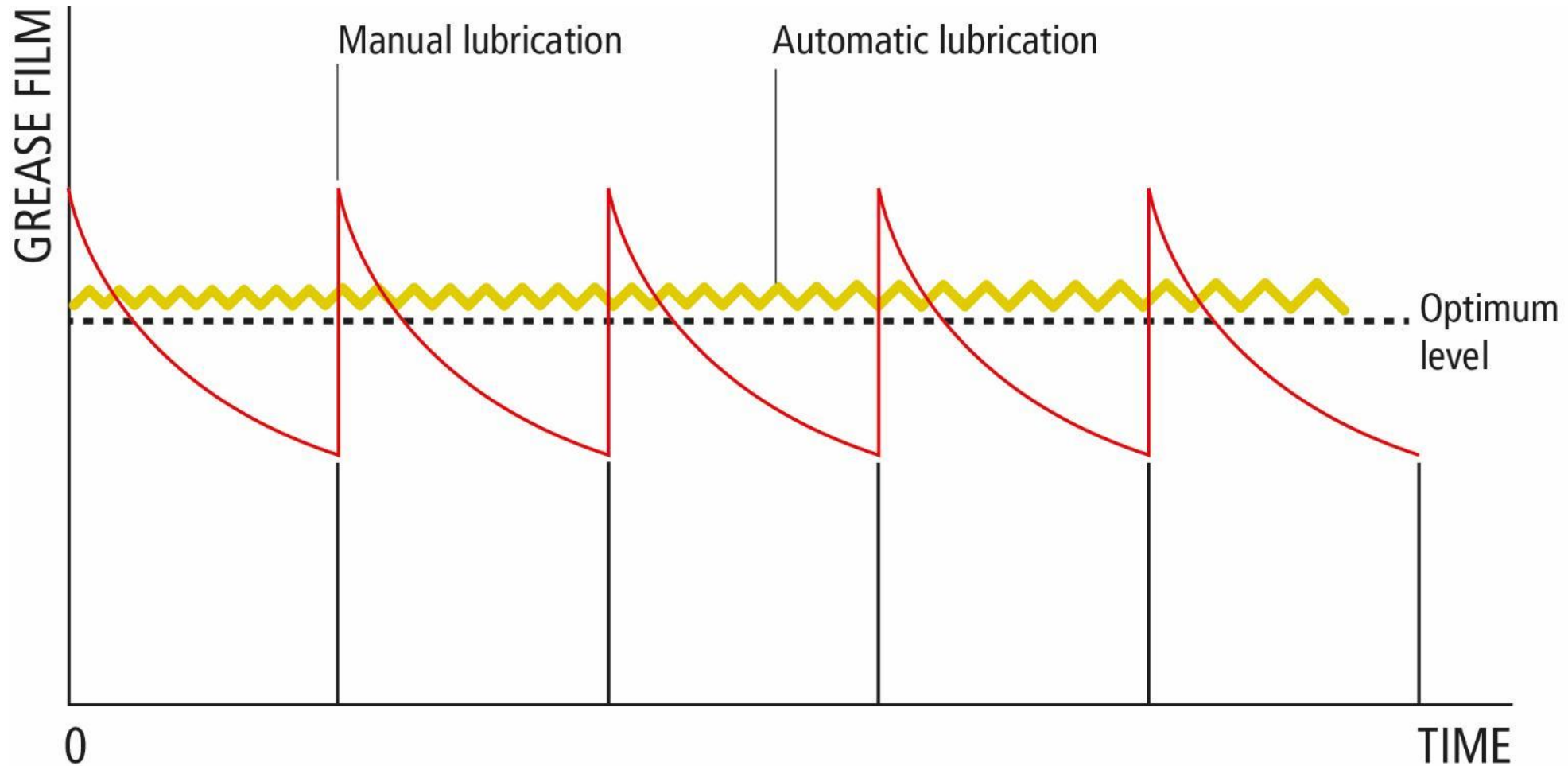
Manual versus automatic lubrication
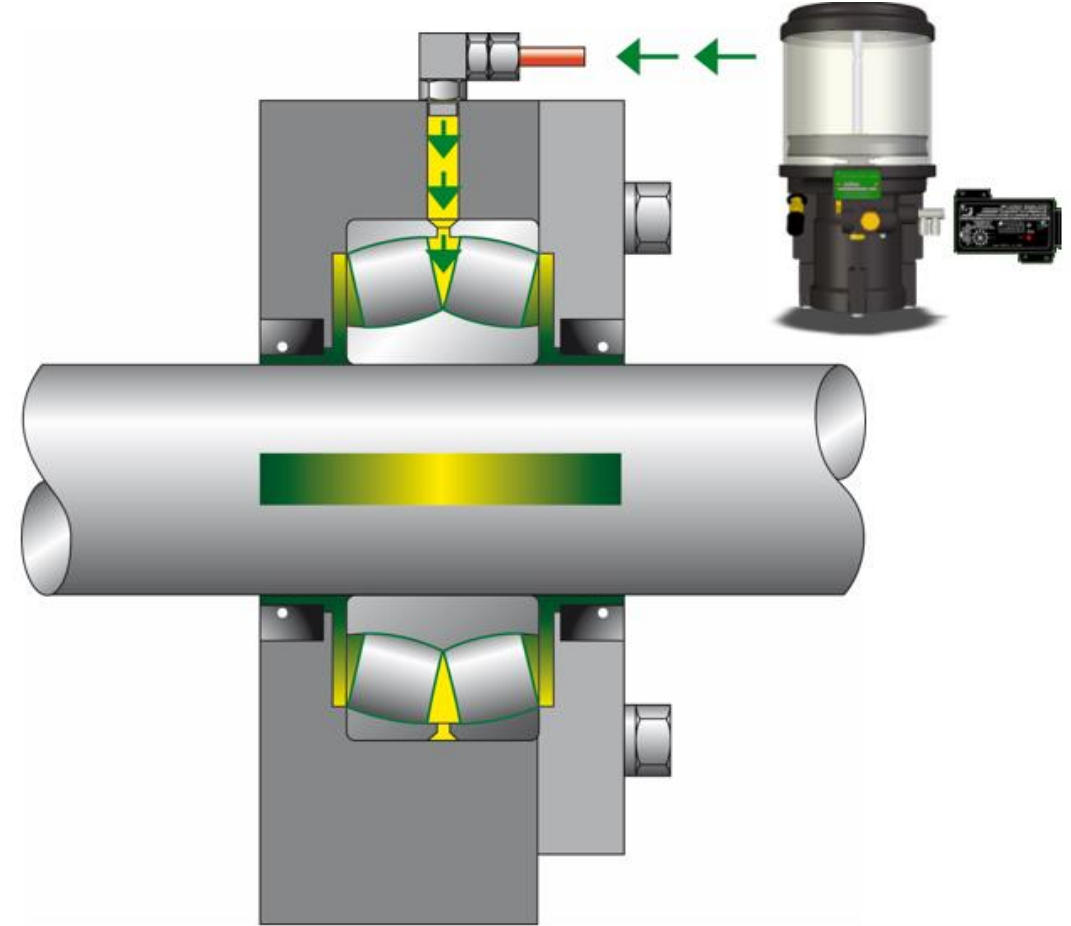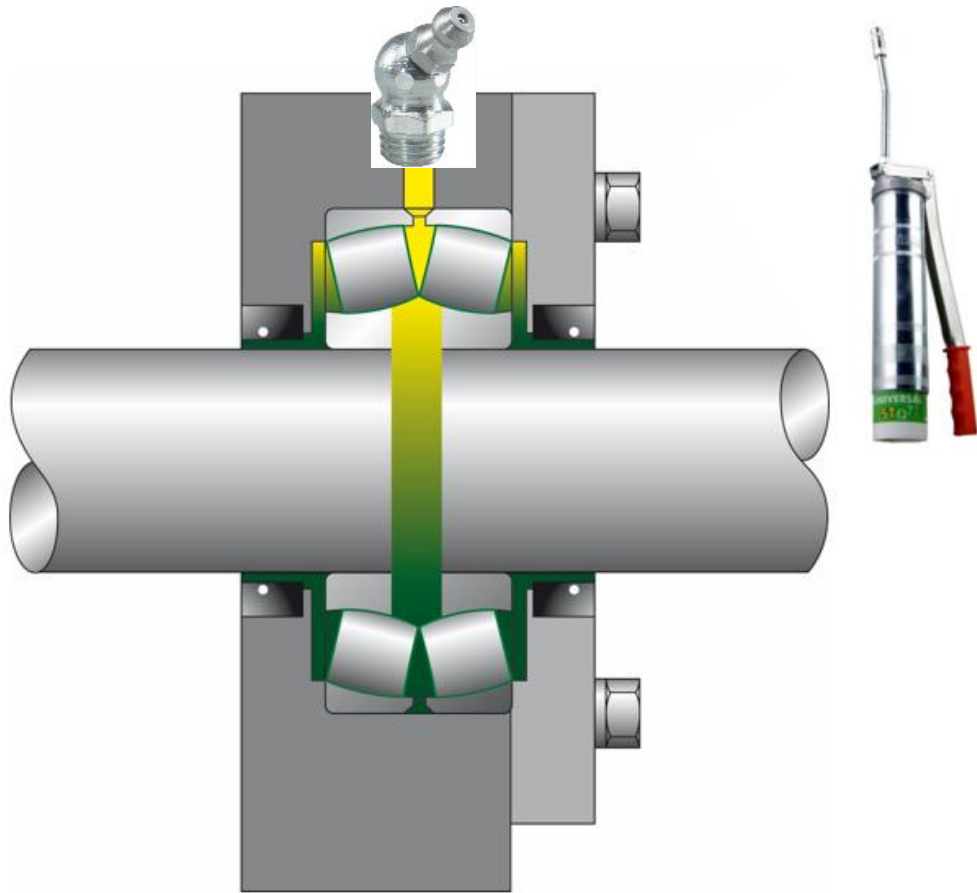
Why invest in automatic lubrication?

It is all about…

- SAFETY
- UPTIME
- RELIABILITY
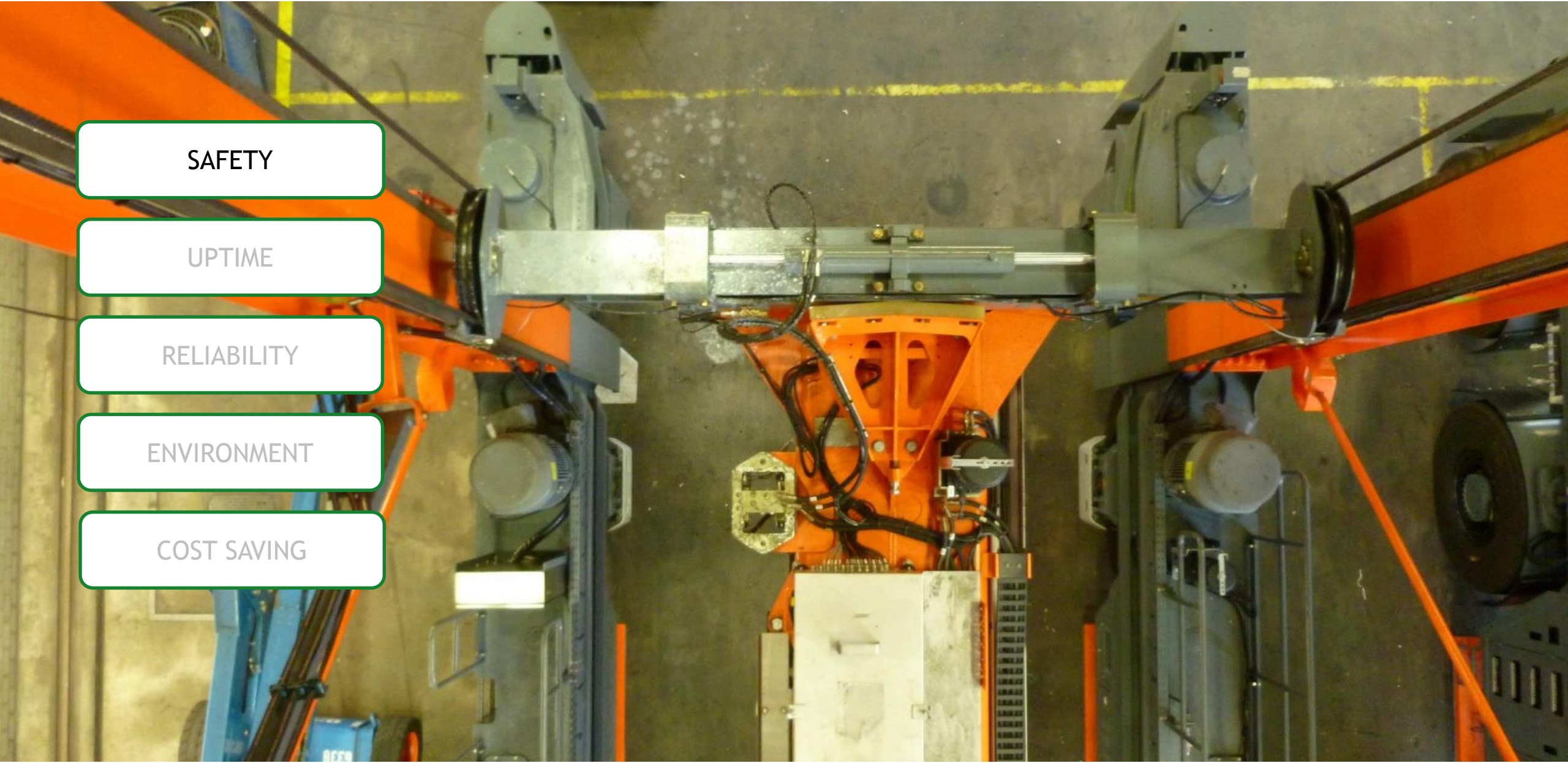- ENVIRONMENT
- COST SAVING

It is all about...

SAFETY

UPTIME

RELIABILITY

ENVIRONMENT

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Lubrication points:
- Headblock: 20
- Spreader: 36
- **Total:**   **56**

7.0 SERVICING AND MAINTENANCE INSTRUCTIONS

7.1 Recommended Preventive Maintenance Schedule

| S/N	Description	Initial	Daily	Weekly	Monthly	Quarterly	Annually
9	Greasing of Telescopic sliding surface.	X	-	-	X	-	-
10	Greasing of twistlock pin, spherical washers & landpin sliding surfaces.	X	-	-	X	-	-
11	Greasing of drive chains and idler wheel bearing.	X	-	-	X	-	-
12	Greasing of hydraulic cylinder rod end bearings & exposed piston rods.	X	-	-	X	-	-

It is all about...

SAFETY

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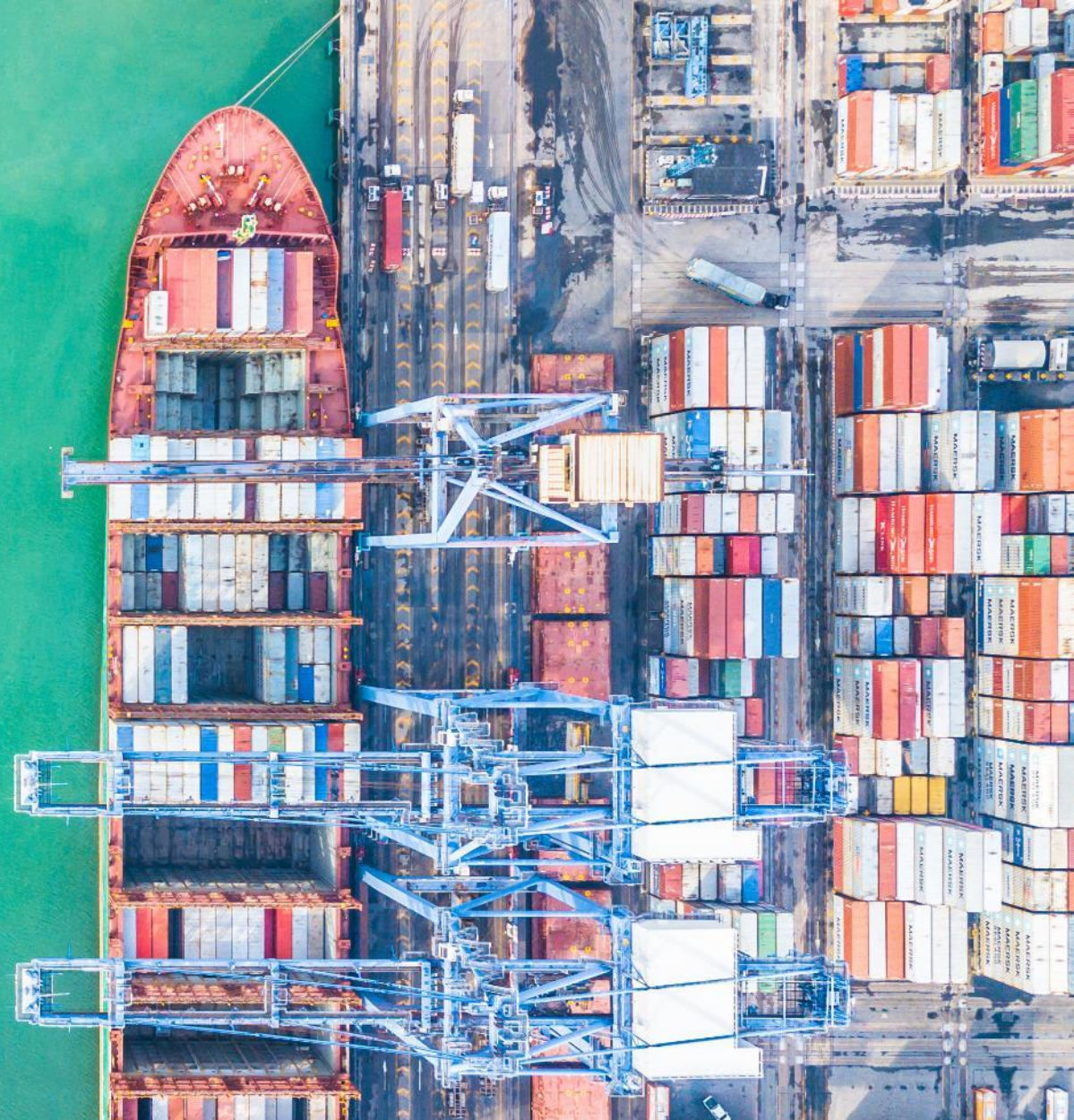
COST SAVING

It is all about...

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COST SAVING

→ 50% less grease, less cleaning

→ Bio-degradable grease

→ Less component replacements

# It is all about...

SAFETY

UPTIME

RELIABILITY

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COST SAVING

Back to the container terminal example:

➡ 21,484 x 2 min x 12 (monthly) = 8,600 hrs/year

➡ Labour € 30 per hour makes € 258,000.- per year

➡ 25 years: € 6,450,000 (€ 300/greasing point)

➡ *Not including the value of uptime and extra grease?*

➡ *And less component replacement?*

Twin

1. Parallel system

2. For heavy duty applications

3. Low operating pressure

4. Virtually unlimited number of greasing points

5. Virtually unlimited lengths/distances
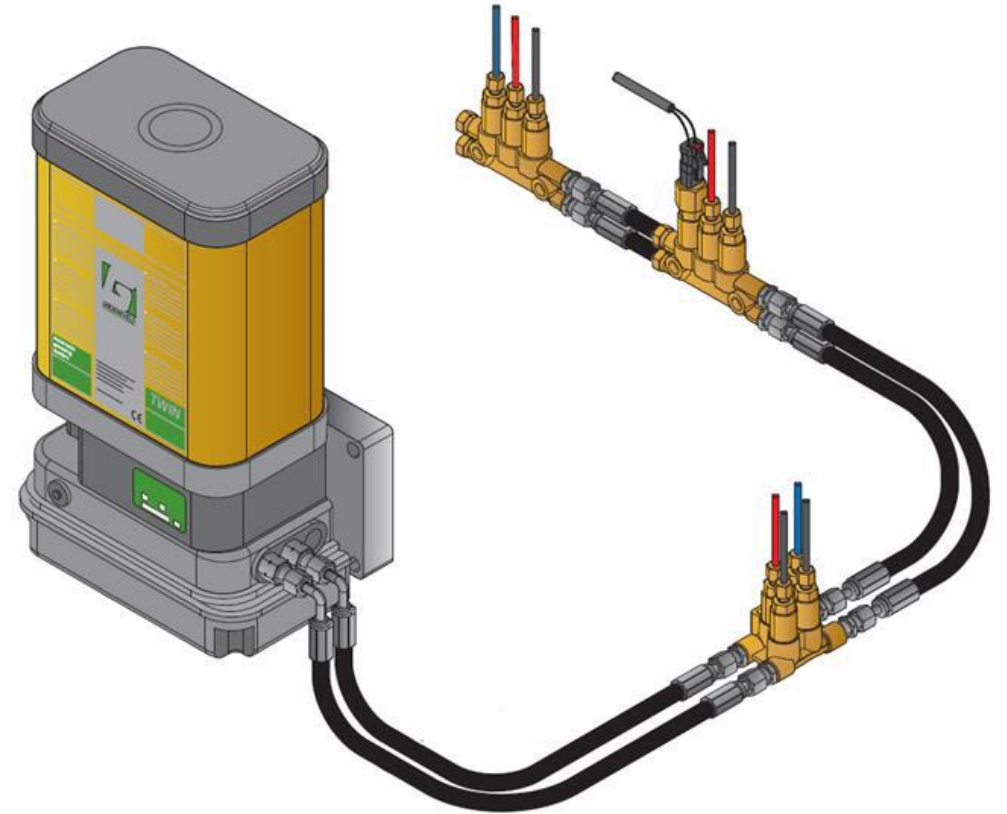
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Lubrication solutions – product range

Lubrication solutions installed on different applications

A selection of OEM partners
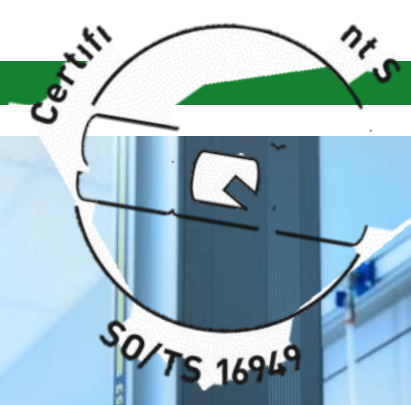
Terminal operators with Groeneveld's solutions

Groeneveld today

TIMKEN

Part of the Mechanical Power Transmission division

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Groeneveld worldwide sales & distribution network

Production facilities in Italy

Groeneveld distribution strategy

OEM Sales

➔ Focus on OEMs

➔ Solid commercial and technical support

➔ Co-design and co-development

Direct and Indirect Sales

➔ Direct sales to key accounts

➔ Fully owned sales and service organisations in 14 countries

➔ Independent distributors in other areas

➔ Hybrid model of branches and distributors

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Groeneveld – Your missing link in port automation

Did you automate everything?

STS Cranes ☑

Transportation ☑

Stacking Cranes ☑

Lubrication ☐

For more information contact me at: r.vanos@groeneveld-group.com

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