Fleet grease guidance

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Fleet / over the road truck lubrication

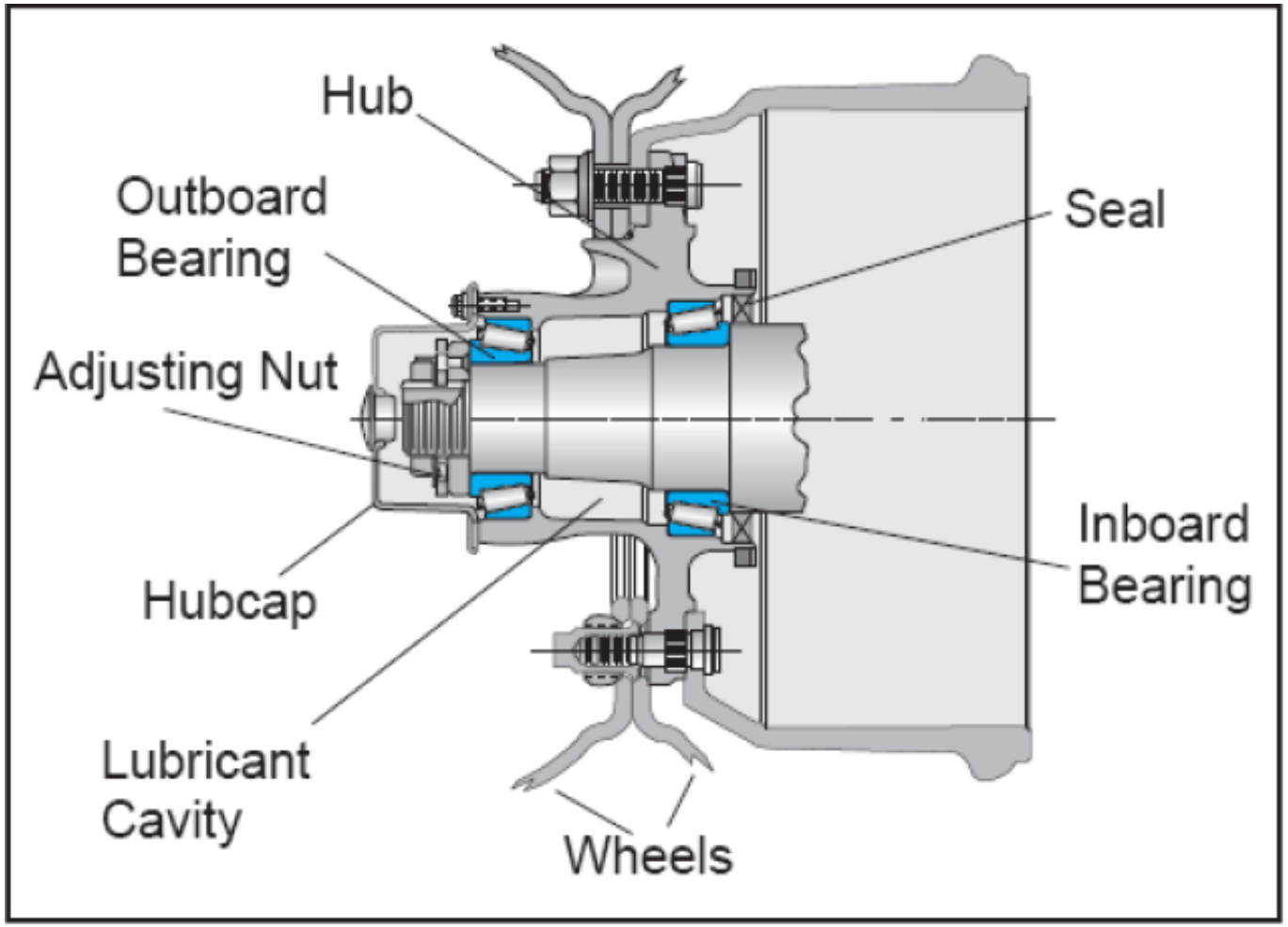
Technical Requirements

- Rolling Element Bearings such as Cardan U-Joints, Hub bearings, Steering Knuckles
- Pins and Bushings, Journals, Pivots, Linkages, Kingpin
- Fifth Wheel / Top Plate and Kingpin

Product Recommendations

Consequences of Consolidation

Q&A



Truck hub bearings

Good	**S3 V220C 2**
Best	**S5 V220 2**

Mechanical Stability

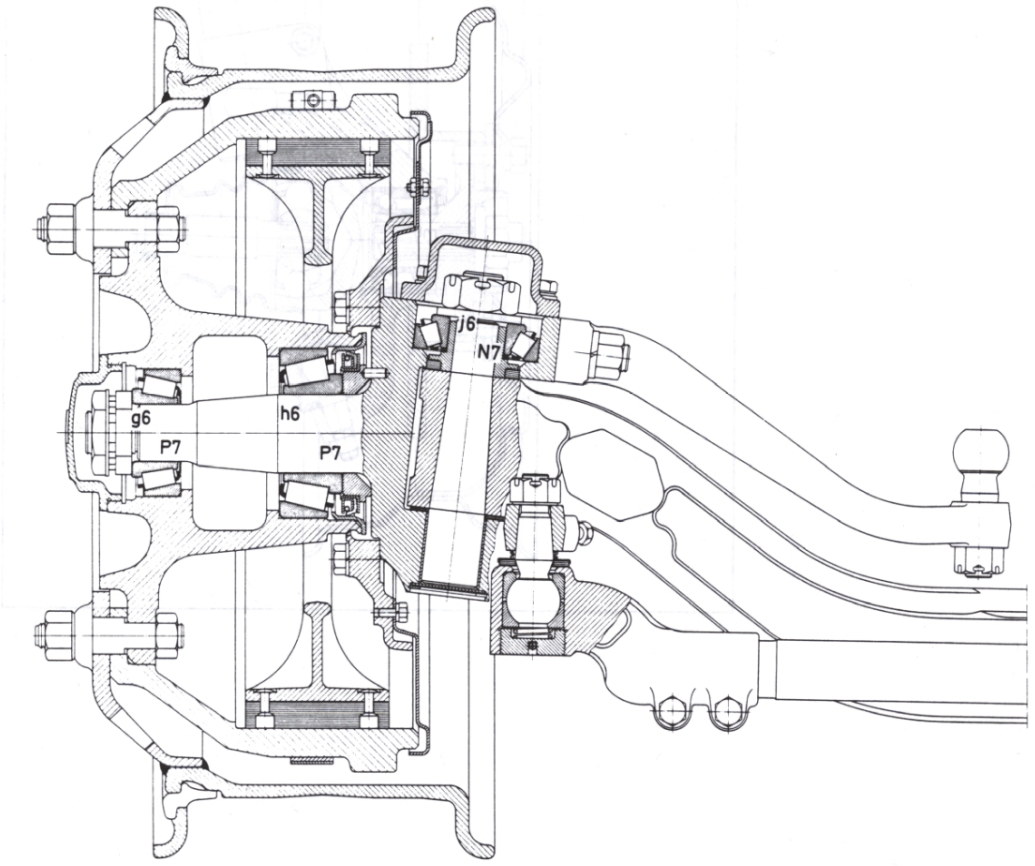
Water Resistance/Washout Resistance

Rust Inhibition esp. protection against saltwater corrosion

EP/AW

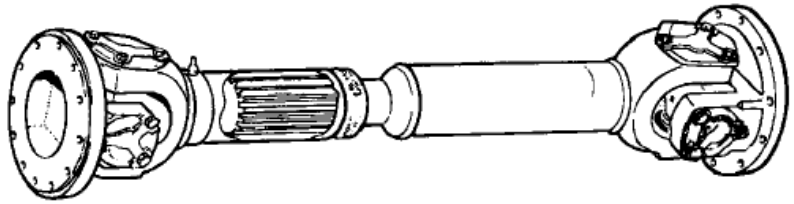
Low Temperature Torque

The industry standard is GC-LB compliant grease certified by the N
requirements. This standard covers the above performance needs,
(molybdenum disulfide).



Chassis lubrication

Cardan Driveshaft U-Joints



Good	**S3 V220C 2**
Best	**S5 V220 2**

Water Resistance/Washout Resistance

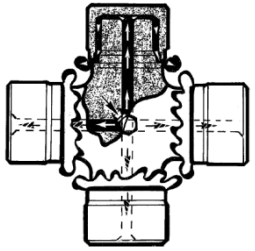
Rust Inhibition esp. protection against saltwater corrosion

EP/AW

Low Temperature Torque

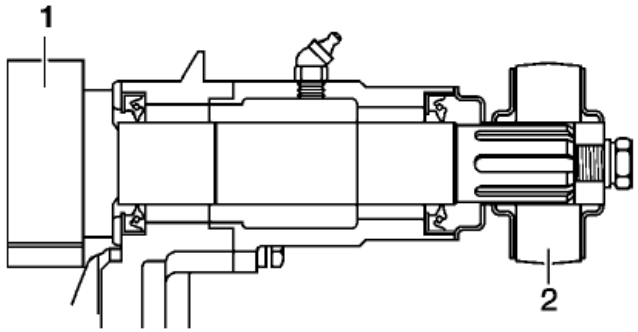
Conventional chassis greases are not recommended for lubrication of U-Joints with needle bearings. Chassis grease with tackifiers can increase low temperature torque preventing proper lubrication at low temperatures. Grease with molybdenum disulphide or other solid lubricants can increase risk for corrosive attack as well as risk for pitting and surface fatigue. Solid lubricants are generally not recommended for rolling element bearings due to their particle size versus the film thickness. If consolidating all chassis points to one grease, compromises will be made on performance.

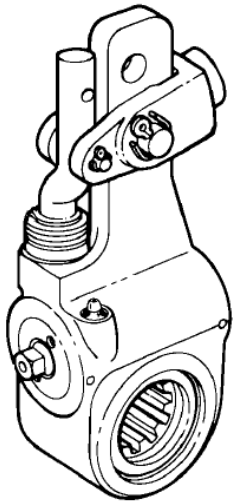
The driveshaft U-joints must be lubricated correctly for the bearings to receive grease. The most common case of U-joint failure is incorrect greasing. Always make sure that grease is coming out of all four seals. If one seal fails to purge old grease, move the driveshaft from side to side while applying gun pressure. This allows for greater clearance on the thrust end of the bearing that is not purging. New grease flushes abrasive contaminants from each bearing and assures that the bearing is filled properly.



Chassis lubrication

Break Cams & Slack Adjusters





Water Resistance/Washout Resistance

Rust Inhibition esp. protection against saltwater corrosion

EP/AW

Solid lubricants are not recommended for slack adjusters due to the risk for inducing corrosion. These applications are less torque sensitive and a higher viscosity will provide longer service life.

Good	**S3 V220C**
Better	**S2 V460A**
Best	**S3 V550L**

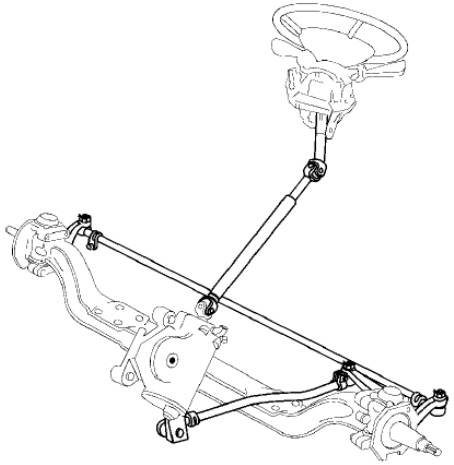
There is one grease fitting on each cam for front and rear wheel brakes. Fill with grease until old grease is forced out past the end seal and only uncontaminated grease is visible.

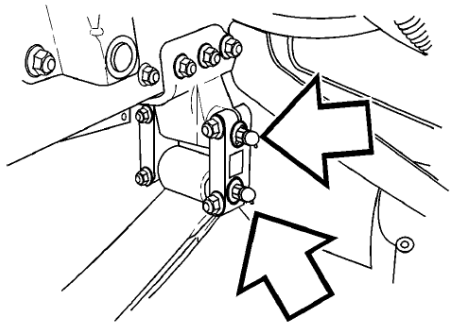
Note: Parking brake should be released so grease can penetrate properly throughout the brake cam.

There is one grease fitting per slack adjuster. Fill with grease until old grease is forced out past the splined center and adjustment pawl area, and only uncontaminated grease is visible.

Chassis lubrication

Steering Linkage & Spring Pins





Good	**S2 V460A**
Better	**S3 V550L**
Best	**S3 V460D**

Lubricate the Steering shaft and drag link.

Lubricated the tie rod.

TRW steering gears have a seal at the sector shaft that needs greasing **with a hand gun** every 4 months or more often if the weather and road conditions are severe.

Sheppard steering gears have seals at input shaft and at the sector shaft that need greasing **with a hand gun** every 4 months or more often if the weather and road conditions are severe.

Raise the front end of the truck up with a jack.

Place jack stands underneath the frame rails on both sides to relieve the suspension of any weight. Lower the jack so that the front axle hangs free.

Place jack stands underneath the frame rails on both sides to relieve the suspension of any weight. Lower the jack so that the front axle hangs free.

Then thoroughly grease through the grease fitting until the lubricant emerges past the bushing seals, cleaning out all contaminants.

After letting the truck down, grease the entire spring and bushing area again to ensure complete lubrication coverage.

Water Resistance/Washout Resistance

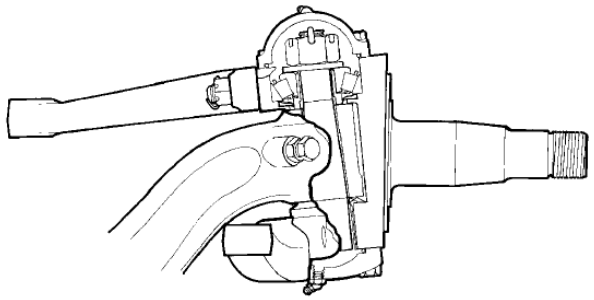
Rust Inhibition esp. protection against saltwater corrosion

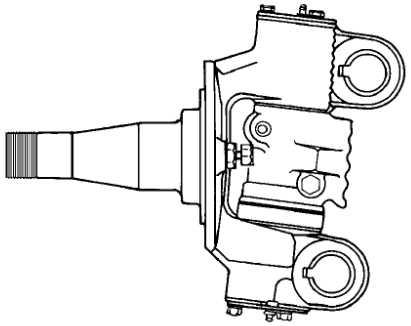
EP/AW

Solid lubricants such as molybdenum disulphide can provide additional protection in linkages and knuckles where the reciprocating motion tend to push grease away from the point of friction and the solid lubricants remain, providing component protection and reducing friction when the fluid film breaks down or is starved.

Chassis lubrication

Front Axle Steering Knuckles





Good	**S3 V220C**
Better	**S2 V460A**
Best	**S3 V550L**

Volvo: Two grease fittings on each side: one on the top knuckle cover (fill with grease until the old grease is forced out past the top seal), one on the bottom cover (fill with grease until the old grease is forced out past the bottom seal).

Note: Lubrication of the Volvo axle should be done with the wheels on the ground!

Meritor and Eaton: Raise the axle so the wheels are off the ground before attempting to grease the steering knuckles.
Two grease fittings on each side: one on the top knuckle cover, fill with grease until the old grease is forced out past the top seal; one on the bottom cover, fill with grease until the old grease is forced out past the bottom seal.

Water Resistance/Washout Resistance

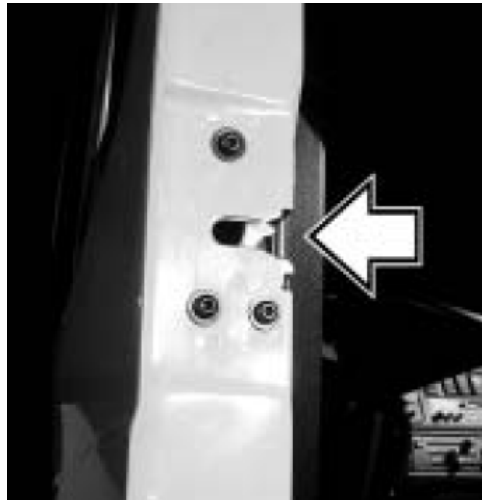
Rust Inhibition esp. protection against saltwater corrosion

EP/AW

Solid lubricants are not recommended for knuckles with thrust roller bearings due to the risk for inducing corrosion. These applications are less torque sensitive and a higher viscosity will provide longer service life.

Chassis lubrication

Door Lock Mechanism



Good	**S3 V220C 2**
Better	**S5 V220 2**

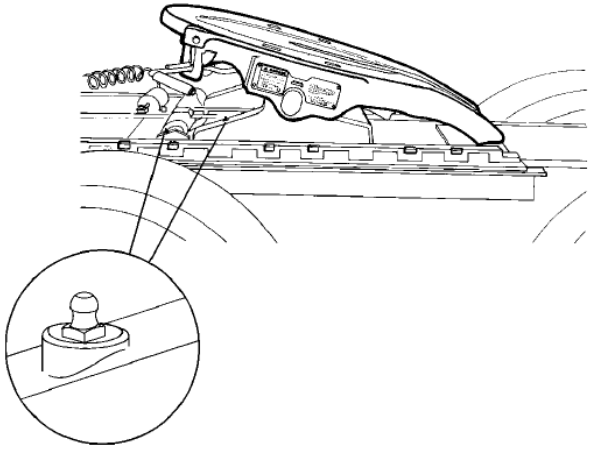
Low Temperature Torque

Rust Inhibition

A synthetic grease with excellent rust preventing properties is preferred for the lubrication of the door lock mechanism to ensure functionality wintertime. Solid lubricants such as molybdenum disulphide should not be used due to the risk for induced corrosion.

Chassis lubrication

Fifth Wheel



Water Resistance/Washout Resistance

Rust Inhibition esp. protection against saltwater corrosion

EP/AW

TOP PLATE

Good	**S3 V550L**
Better	**S3 V460D**
Best	**S3 A1000XD**

Lubricate the plate pivot points and slide mechanism. Apply a heavy coat of grease on top of the plate.

PIVOT & LOCK

Good	**S2 V460A**
Better	**S3 V550L**
Best	**S3 V460D**

The requirements of the top plate differs from those of the pivot points and lock and slack adjuster. Top plate greasing require exceptional adhesiveness and very high content of solid lubricants to prevent scuffing.

Portfolio consolidation

Optimization may cause inconvenience but over-consolidation may cause increase in equipment wear. What is the proper balance ?

	Fleet Grease Applications / Over-the Road Trucks						
	Wheel Bearings	**Drive Shaft- U-Joint**	**Brake Cams / Slack Adjusters**	**Steering Linkage and Spring Pins**	**Front Axle Steering Knuckles**	**Fifth Wheel Top Plate**	**5th Wheel Pivot / Latch**
Good	**Gadus S3 V220C**	**Gadus S3 V220C**	Gadus S3 V220C	Gadus S2 V460A	Gadus S2 V220C	**Gadus S3 V550L**	Gadus S2 V460A
Better			Gadus S2 V460A	**Gadus S3 V550L**	Gadus S2 V460A	Gadus S3 V460D	**Gadus S3 V550L**
Best	Gadus S5 V220	Gadus S5 V220	**Gadus S3 V550 L**	Gadus S3 V460D	**Gadus S3 V550L**	Gadus S3 A1000XD	Gadus S3 V460D

Consolidated product solution:

S3 V220C 2 or S5 V220-2	Driveshaft U-Joint, Steering Knuckles, Hub Bearings and Door Lock
S3 V550L	Break Cam & Slack Adjusters, Hinges
S3 V550L	Pivots, Linkages and Spring Pins
S3 A1000XD-2	Fifth Wheel Top Plate & Fifth Wheel Kingpin