

Spicer® Drive Axles










SPICER®
Drivetrain Products

Approved Lubricant Suppliers

FEBRUARY 2016

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General Information

Dana Lubrication Philosophy

In promoting component reliability and longevity, proper lubrication is the key to a sound and effective maintenance program. Without effective lubricants at proper levels, remaining maintenance procedures will not keep components functional.

We believe synthetic lubricants have proven to be superior to petroleum products and represent opportunities to promote superior maintenance and bottom line operating performance while significantly extending component service life and reliability.

Standard Fill Lubricants

Drive axle lubricants must meet a number of lubricant industry requirements. Refer to the charts in the Dana Lubrication Manual to select the proper lubricant.

Extended Drain Lubricants

Extended drain synthetic lubricants offer superior thermal and oxidative stability for extended product performance and reliability. The superior performance characteristics of these lubricants enable Dana to offer extended drain and extended warranties. Added benefits include more efficient drivetrain that translates into proven fuel economy savings over mineral based lubricants.

Important: Using extended drain synthetic lubricants is required to maintain Dana extended warranties.

It is important to use the lubricants that meet the current specifications set by Dana. Look for the appropriate approval code on the container.

Note: For additional information on Spicer® lubrication, see the Spicer Products Lubrication Manual.

Approved Lubricants

The following is a list of lubricants approved by Dana for use with the Spicer® drivetrain components. These lubricants have passed the appropriate performance specification for the type of service and lubrication drain interval.

If the drive axles are factory filled with approved lubricants, any top off lubricants must also be an approved lubricant in order to keep the extended warranty (if applicable) and extended drain interval intact.

Approved Lubricant Specifications for Extended Drain Intervals

| DRIVE AXLE | |
|-------------------------|--------------------|
| LUBRICANT SPECIFICATION | DRAIN INTERVAL |
| SHAES-256 Rev C | 500,000 miles |
| SHAES-429 (vocational) | 3 yr/180,000 miles |

General Information

Lubrication Intervals

Linehaul – 500,000-Mile Extended Lube Drain Interval

The extended drain interval program applies to the Dana axles listed below that meet the following conditions:

- Heavy-duty and medium-duty axles
- Linehaul service (on-highway)
 - Lubricant Approval Levels:
 - Drive Axle – SHAES 256 Rev C
- Factory filled with lubricants approved for 500,000-mile drain cycles (US/Canada); 250,000 mi/400,000 km (outside US/Canada)
- Refer to charts listed in this manual for axle drain intervals when using “Extended Drain Lubricants.”
- Dana-approved lubricant must be used to keep the extended warranty in place. The extended drain program and any extended warranty program are separate programs.

Vocational – 180,000-Mile Extended Lube Drain Interval

- 180,000-mile or three (3)-year extended drain interval
- The approved lubricants may be factory installed at the truck manufacturer, or service filled up to 500 miles, and may remain in the drive axles for the 180,000-mile or three (3)-year drain interval (whichever comes first).

Lubricant approval levels:

- Axle – SHAES 256 Rev C or SHAES 429

Vehicle Application Definitions

Linehaul (on-highway)

- High mileage operation (over 60,000 miles [96,500 km] per year)
- On-highway or good to excellent concrete or asphalt
- More than 30 miles [48 km] between starting and stopping
- 4x2, 6x2, 6x4 tractor/trailer combinations and straight trucks
- Check fluid levels and inspect for leaks at regular preventative maintenance intervals, not to exceed 12,000 miles

VOCATIONAL

- Low mileage operation (under 60,000 miles [96,500 km] per year)
- Off-highway or areas of unstable or loose unimproved road surfaces
- Less than 30 miles [48 km] between starting and stopping
- Heavy-duty, off-road or specialized application type vehicles
- Check fluid levels and inspect for leaks every 50 hours

Warnings and Cautions

When switching between types of lubricants, all areas of each affected component must be thoroughly drained.

Do not introduce additives and friction modifiers.

Do not mix lubricants of different grades.

Do not mix mineral and synthetic lubricants.

Do not mix heavy-duty, multi-purpose lithium based (#2 grade) grease with sodium based grease.

Approved Lubricant Suppliers – United States

Dana-Approved Drive Axle Lubricants

Approved Lubricants: SHAES 256 Rev C (Axle/Linehaul); SHAES 429 (Axle/Vocational)

| PRODUCT | USE |
|---|--|
| Spicer® FE 75W-90 (Fuel Efficient) Spicer® Emgard XFE 75W-90 (Extra Fuel Efficient) Spicer® 80W-140 (Synthetic Axle Lube) | Drive Axle Drive Axle Drive Axle |
| Allied Mag Synthetic EP 75W-90 Allied Mag Synthetic EP 80W-140 | Drive Axle Drive Axle (Vocational) |
| Roadranger EP 75W-90 Roadranger EP 80W-140 | Drive Axle Drive Axle (Vocational) |
| Emgard 75W-90 Synthetic Axle Lube Emgard FE 75W-90 Synthetic Axle Lube (Fuel Efficient) Emgard EP 80W-140 Synthetic Axle Lube | Drive Axle Drive Axle Drive Axle (Vocational) |
| Roadranger EP 75W-90 Roadranger EP 80W-140 | Drive Axle Drive Axle (Vocational) |
| Syn-Gear 75W-90 Syn-Gear 80W-140 Syntrax E 75W-90 Syntrax E 80W-140 | Drive Axle Drive Axle (Vocational) Drive Axle Drive Axle (Vocational) |
| Maxtron GL SAE 75W-90 Maxtron GL Enviro-EDGE SAE 75W-90 (Fuel Efficient) Maxtron GL SAE 80W-140 | Drive Axle Drive Axle Drive Axle (Vocational) |
| Kendall SHP® Synthetic Gear Lube 75W-90 | Drive Axle |
| Triton Synthetic® Gear Lube 75W-90 Triton Synthetic® Gear Lube 80W-140 | Drive Axle Drive Axle (Vocational) |
| Roadranger EP 75W-90 | Drive Axle |
| Advantage Full Synthetic 75W-90 Advantage Full Synthetic 80W-140 | Drive Axle Drive Axle (Vocational) |
| Roadranger EP 75W-90 Roadranger FE 75W-90 (Fuel Efficient) Roadranger EP 80W-140 | Drive Axle Drive Axle Drive Axle (Vocational) |
| Roadranger EP 75W-90 Roadranger FE 75W-90 Roadranger EP 80W-140 | Drive Axle (Fuel Efficient) Drive Axle Drive Axle (Vocational) |

Approved Lubricant Suppliers – United States

Dana-Approved Drive Axle Lubricants

Approved Lubricants: SHAES 256 Rev C (Axle/Linehaul); SHAES 429 (Axle/Vocational)

| PRODUCT | USE |
|--|---|
| Fleetrite Synthetic 75W-90 Gear Oil Fleetrite Synthetic 80W-140 Gear Oil | Drive Axle Drive Axle (Vocational) |
| Marathon Full Synthetic 75W-90 Marathon Full Synthetic 80W-140 | Drive Axle Drive Axle (Vocational) |
| PACCAR Genuine 75W-90 PACCAR Genuine 80W-140 | Drive Axle Drive Axle |
| Pennzoil Long Life Syn Gear EW 75W-90 (Fuel Efficient) Pennzoil Long Life EW 75W-90 Pennzoil Long Life EW 80W-140 | Drive Axle Drive Axle Drive Axle (Vocational) |
| National Full Synthetic 75W-90 National Full Synthetic 80W-140 | Drive Axle Drive Axle (Vocational) |
| Premium Express SAE 75W-90 Gear Oil | Drive Axle |
| Schaeffer 741 Synthetic Lube 70W-90 E/A Schaeffer 740 Synthetic Lube 80W-140 E/A | Drive Axle Drive Axle (Vocational) |
| Roadranger EP 75W-90 Roadranger EP 80W-140 | Drive Axle Drive Axle (Vocational) |
| Shell SPIRAX® ASX R 75W-90 (Fuel Efficient) Shell SPIRAX® S6 AXRME 75W-90 (Fuel Efficient) Shell SPIRAX® EW 75W-90 Shell SPIRAX® EW 80W-140 Shell SPIRAX® ASX 80W-140 Shell SPIRAX® S6 AXME 80W-140 | Drive Axle Drive Axle Drive Axle Drive Axle (Vocational) Drive Axle (Vocational) Drive Axle (Vocational) |
| Transmission XRD FE 75W-90 (Fuel Efficient) Transmission SYN NA 75W-90 Transmission SYN NA 80W-140 | Drive Axle Drive Axle Drive Axle (Vocational) |
| Valvoline HD Synthetic Gear Oil EP 75W-90 Valvoline HD Synthetic Gear Oil EP 80W-140 | Drive Axle Drive Axle (Vocational) |
| Roadranger EP 75W-90 Drive Axle Roadranger FE 75W-90 (Fuel Efficient) Roadranger EP 80W-140 | Drive Axle Drive Axle Drive Axle (Vocational) |

Approved Lubricant Suppliers – United States

Other Approved Lubricants Marketers of approved fluids meeting the Dana Extended Drain Specifications.

Approved Lubricants: SHAES 256 Rev C (Axle/Linehaul); SHAES 429 (Axle/Vocational)

| PRODUCT | USE |
|---|---------------------------------------|
| Spicer® Emgard XFE 75W-90 (Extra Fuel Efficient) Spicer® 80W-140 (Synthetic Axle Lube) | Drive Axle Drive Axle |
| Syngear EP 75W-90 AGIP Syngear EP 5/6 | Drive Axle Drive Axle (Vocational) |
| Chevron Delo Synthetic Gear Lube 75W-90 | Drive Axle |
| Citgo Synthetic Gear Lube 75W-90 Citgo Synthetic Gear Lube 80W-140 | Drive Axle Drive Axle (Vocational) |
| D-A SynSure™ 75W-90 D-A SynSure™ 80W-140 | Drive Axle Drive Axle (Vocational) |
| Gibraltar Synthetic Gear Lube 75W-90 Gibraltar Synthetic Gear Lube 80W-140 | Drive Axle Drive Axle (Vocational) |
| Mobil Delvac 1 Gear Oil 75W-90 Mobil Delvac 1 Gear Oil 80W-140 | Drive Axle Drive Axle (Vocational) |
| Hi-Tek Synthetic SAE 75W-90 Hi-Tek Synthetic SAE 80W-140 | Drive Axle Drive Axle (Vocational) |
| Advantage 75W-90 Synthetic Gear Oil Advantage 80W-140 Synthetic Gear Oil | Drive Axle Drive Axle (Vocational) |
| Triden Syn Gear 75W-90 Drive Axle Triden Syn Gear 80W-140 | Drive Axle Drive Axle (Vocational) |
| Bulldog Syn Gear Lube SAE 75W-90 | Drive Axle |
| SX-7000 75W-90 SX-7000 80W-140 | Drive Axle Drive Axle (Vocational) |
| Northland Synergy Synthetic Gear Lube EP 70W-90 Northland Synergy Synthetic Gear Lube EP 80W-140 | Drive Axle Drive Axle (Vocational) |
| Monarch SynGear Plus SAE 75W-90 Monarch SynGear Plus SAE 80W-140 | Drive Axle Drive Axle (Vocational) |

Approved Lubricant Suppliers – United States

Other Approved Lubricants Marketers of approved fluids meeting the Dana Extended Drain Specifications.

Approved Lubricants: SHAES 256 Rev C (Axle/Linehaul); SHAES 429 (Axle/Vocational)

| PRODUCT | USE |
|---|---------------------------------------|
| Syntex 2700 Gear 75W-90 Syntex 2700 Gear 80W-140 | Drive Axle Drive Axle (Vocational) |
| Volvo Synthetic Gear Oil 75W-90 | Drive Axle |
| Autoguard Fleet Synthetic 75W-90 | Drive Axle |
| Lubriguard Heavy Duty Synthetic 75W-90 | Drive Axle |
| Service Pro Synthetic 75W-90 Service Pro Synthetic 80W-140 | Drive Axle Drive Axle (Vocational) |

Approved Lubricant Suppliers – Canada

Dana-Approved Drive Axle Lubricants

Approved Lubricants: SHAES 256 Rev C (Axle/Linehaul); SHAES 429 (Axle/Vocational)

| PRODUCT | USE |
|---|--|
| Spicer® FE 75W-90 (Fuel Efficient) Spicer® Emgard XFE 75W-90 (Extra Fuel Efficient) Spicer® 80W-140 (Synthetic Axle Lube) | Drive Axle Drive Axle Drive Axle |
| Superpro Syn Gear 75W-90 | Drive Axle |
| Roadranger EP 75W-90 Roadranger FE 75W-90 (Fuel Efficient) Roadranger EP 80W-140 | Drive Axle Drive Axle Drive Axle (Vocational) |
| Syn-Gear 75W-90 Syn-Gear 80W-140 Syntrax E 75W-90 Syntrax E 80 W-140 | Drive Axle Drive Axle (Vocational) Drive Axle Drive Axle (Vocational) |
| Roadranger EP 75W-90 Roadranger FE 75W-90 (Fuel Efficient) Roadranger EP 80W-140 | Drive Axle Drive Axle Drive Axle (Vocational) |
| Sonic MP Gear Oil 75W-90 | Drive Axle |
| Titan Syndrive 75W-90 | Drive Axle |
| Gulf Syngear HD 75W-90 Gulf Syngear FE 75W-90 (Fuel Efficient) Gulf Syngear HD 80W-140 | Drive Axle Drive Axle Drive Axle (Vocational) |
| Fleetrite Synthetic 75W-90 Gear Oil Fleetrite 80W-140 Gear Oil | Drive Axle Drive Axle (Vocational) |
| HDH Synthetic 75W-90 | Drive Axle |
| Roadranger 75W-90 | Drive Axle |
| NEMCO Syngear 75W-90 | Drive Axle |
| Pennzoil Long Life Syn Gear EW 75W-90 (Fuel Efficient) Pennzoil Long Life EW 75W-90 Pennzoil Long Life EW 80W-140 | Drive Axle Drive Axle Drive Axle (Vocational) |

Approved Lubricant Suppliers – Canada

Dana-Approved Drive Axle Lubricants

Approved Lubricants: SHAES 256 Rev C (Axle/Linehaul); SHAES 429 (Axle/Vocational)

| PRODUCT | USE |
|--|---|
| Traxon E Synthetic 75W-90 Traxon E Synthetic 80W-140 | Drive Axle Drive Axle (Vocational) |
| Shell SPIRAX® ASX R 75W-90 (Fuel Efficient) Shell SPIRAX® S6 AXRME 75W-90 (Fuel Efficient) Shell SPIRAX® EW 75W-90 Shell SPIRAX® EW 80W-140 Shell SPIRAX® ASX 80W-140 Shell SPIRAX® S6 AXME 80W-140 | Drive Axle Drive Axle Drive Axle Drive Axle (Vocational) Drive Axle (Vocational) Drive Axle (Vocational) |
| Transmission SYN FE 75W-90 (Fuel Efficient) Transmission SYN NA 75W-90 Transmission SYN NA 80W-140 | Drive Axle Drive Axle Drive Axle (Vocational) |
| Ultramar Synthetic 75W-90 | Drive Axle |
| Valvoline HD Synthetic Gear Oil EP 75W-90 Valvoline HD Synthetic Gear Oil EP 80W-140 | Drive Axle Drive Axle (Vocational) |
| Roadranger 75W-90 | Drive Axle |

Other Approved Lubricants Marketers of approved fluids meeting the Dana Extended Drain Specifications.

| PRODUCT | USE |
|---|---------------------------------------|
| Chevron Delo Synthetic Gear Lube 75W-90 | Drive Axle |
| Mobil Delvac 1 Gear Oil 75W-90 Mobil Delvac 1 Gear Oil 80W-140 | Drive Axle Drive Axle (Vocational) |
| Roadranger 75W-90 Roadranger 80W-140 | Drive Axle Drive Axle (Vocational) |

Approved Lubricant Suppliers – Mexico

Dana-Approved Drive Axle Lubricants

Approved Lubricants: SHAES 256 Rev C (Axle/Linehaul); SHAES 429 (Axle/Vocational)

| PRODUCT | USE |
|---|---|
| Spicer® FE 75W-90 (Fuel Efficient) Spicer® Emgard XFE 75W-90 (Extra Fuel Efficient) Spicer® 80W-140 (Synthetic Axle Lube) | Drive Axle Drive Axle Drive Axle |
| Bardahl Gear Oil Fully Syn GL-5 SAE 75W-90 Bardahl Gear Oil Fully Syn SAE 80-140 | Drive Axle Drive Axle (Vocational) |
| Roadranger EP 75W-90 Roadranger FE 75W-90 (Fuel Efficient) Roadranger EP 80W-140 | Drive Axle Drive Axle Drive Axle (Vocational) |
| Aceite Gear Max SAE 80W-140 | Drive Axle |
| Roadranger EP 75W-90 Roadranger FE 75W-90 (Fuel Efficient) Roadranger EP 80W-140 | Drive Axle Drive Axle Drive Axle (Vocational) |
| Gulf Syngear HD 75W-90 Gulf Syngear FE 75W-90 (Fuel Efficient) Gulf Syngear HD 80W-140 | Drive Axle Drive Axle Drive Axle (Vocational) |
| Fleetrite Synthetic 75W-90 Gear Oil Fleetrite 80W-140 Gear Oil | Drive Axle Drive Axle (Vocational) |
| Vector S MTF SAE 50 Akron Vector H Axle 80W-140 | Drive Axle (Vocational) Drive Axle (Vocational) |
| PACCAR Genuine 75W-90 PACCAR Genuine 80W-140 | Drive Axle Drive Axle |
| Pennzoil Long Life Syn Gear EW 75W-90 (Fuel Efficient) Pennzoil Long Life EW 75W-90 Pennzoil Long Life EW 80W-140 | Drive Axle Drive Axle Drive Axle (Vocational) |
| Raloy Transintex Plus EP 75W-90 Raloy Transintex Plus EP 80W-140 | Drive Axle Drive Axle (Vocational) |

Approved Lubricant Suppliers – Mexico

Dana-Approved Drive Axle Lubricants

Approved Lubricants: SHAES 256 Rev C (Axle/Linehaul); SHAES 429 (Axle/Vocational)

| PRODUCT | USE |
|--|-------------------------|
| Shell SPIRAX® ASX R 75W-90 (Fuel Efficient) | Drive Axle |
| Shell SPIRAX® S6 AXRME 75W-90 (Fuel Efficient) | Drive Axle |
| Shell SPIRAX® EW 75W-90 | Drive Axle |
| Shell SPIRAX® EW 80W-140 | Drive Axle (Vocational) |
| Shell SPIRAX® ASX 80W-140 | Drive Axle (Vocational) |
| Shell SPIRAX® S6 AXME 80W-140 | Drive Axle (Vocational) |
| Synergy Syntech 75W-90 | Drive Axle |
| Synergy Syntech 80W-140 | Drive Axle (Vocational) |

Other Approved Lubricants Marketers of approved fluids meeting the Dana Extended Drain Specifications.

| PRODUCT | USE |
|---|-------------------------|
| Mobil Delvac 1 Gear Oil 75W-90 | Drive Axle |
| Mobil Delvac 1 Gear Oil 80W-140 | Drive Axle (Vocational) |
| Chevron DELO Synthetic Transmission Fluid SAE 50 Drive Axle | Drive Axle |
| Chevron DELO Synthetic Gear Lube 75W-90 | |

Approved Lubricant Suppliers – South America

Dana-Approved Drive Axle Lubricants

Approved Lubricants: SHAES 256 Rev C (Axle/Linehaul); SHAES 429 (Axle/Vocational)

| PRODUCT | USE |
|---|-------------------------|
| Spicer® FE 75W-90 (Fuel Efficient) | Drive Axle |
| Spicer® Emgard XFE 75W-90 (Extra Fuel Efficient) | Drive Axle |
| Spicer® 80W-140 (Synthetic Axle Lube) | Drive Axle |
| Roadranger EP 75W-90 | Drive Axle |
| Roadranger FE 75W-90 (Fuel Efficient) | Drive Axle |
| Roadranger EP 80W-140 | Drive Axle (Vocational) |
| Emgard 75W-90 Synthetic Axle Lube | Drive Axle |
| Emgard FE 75W-90 Synthetic Axle Lube (Fuel Efficient) | Drive Axle |
| Emgard EP 80W-140 Synthetic Axle Lube | Drive Axle (Vocational) |

Approved Lubricant Suppliers – Australia/ New Zealand

Dana-Approved Drive Axle Lubricants

Approved Lubricants: SHAES 256 Rev C (Axle/Linehaul); SHAES 429 (Axle/Vocational)

| PRODUCT | USE |
|---|-------------------------|
| Spicer® FE 75W-90 (Fuel Efficient) | Drive Axle |
| Spicer® Emgard XFE 75W-90 (Extra Fuel Efficient) | Drive Axle |
| Spicer® 80W-140 (Synthetic Axle Lube) | Drive Axle |
| Emgard 75W-90 Synthetic Axle Lube | Drive Axle |
| Emgard FE 75W-90 Synthetic Axle Lube (Fuel Efficient) | Drive Axle |
| Emgard EP 80W-140 Synthetic Axle Lube | Drive Axle (Vocational) |
| SYNSTAR GL 75W-90 | Drive Axle |
| SYNTRAX E 80W-140 | Drive Axle |
| Roadranger EP 75W-90 | Drive Axle |
| Roadranger FE 75W-90 (Fuel Efficient) | Drive Axle |
| Roadranger EP 80W-140 | Drive Axle (Vocational) |
| Titan Gear Synthetic 80W-140 | Drive Axle (Vocational) |
| Mobilube SHC 75W-90 | Drive Axle |
| Shell SPIRAX® ASX R 75W-90 (Fuel Efficient) | Drive Axle |
| Shell SPIRAX® S6 AXRME 75W-90 (Fuel Efficient) | Drive Axle (Vocational) |
| Shell SPIRAX® ASX 80W-140 | Drive Axle (Vocational) |
| Shell SPIRAX® S6 AXME 80W-140 | Drive Axle (Vocational) |
| Valvoline H.D. Synthetic Gear Oil 75W-90 | Drive Axle |
| Valvoline H.D. Synthetic Gear Oil 80W-140 | Drive Axle (Vocational) |

Approved Lubricant Suppliers – India

Dana-Approved Drive Axle Lubricants

Approved Lubricants: SHAES 256 Rev C (Axle/Linehaul); SHAES 429 (Axle/Vocational)

| PRODUCT | USE |
|--|-------------------------|
| Spicer® FE 75W-90 (Fuel Efficient) | Drive Axle |
| Spicer® Emgard XFE 75W-90 (Extra Fuel Efficient) | Drive Axle |
| Spicer® 80W-140 (Synthetic Axle Lube) | Drive Axle |
| Roadranger EP 75W-90 | Drive Axle |
| Roadranger FE 75W-90 (Fuel Efficient) | Drive Axle |
| Roadranger EP 80W-140 | Drive Axle (Vocational) |
| Roadranger EP 75W-90 | Drive Axle |
| Roadranger FE 75W-90 (Fuel Efficient) | Drive Axle |
| Roadranger EP 80W-140 | Drive Axle (Vocational) |
| Gulf Syngear HD 75W-90 | Drive Axle |
| Gulf Syngear FE 75W-90 (Fuel Efficient) | Drive Axle |
| Gulf Syngear HD 80W-140 | Drive Axle (Vocational) |