

Eaton Warranty Guide

TCWY0900

May 2012

Roadranger

General Information

Knowing and understanding Roadranger warranty is the responsibility of the vehicle owner. It is also the responsibility of the selling dealer to identify the Roadranger products in the vehicle and inform the purchaser of the warranty for those products, based on the vehicle vocation at the time of sale.

The combined use of the Roadranger Warranty Manual TCWY0600 and the Roadranger Warranty Guide TCWY0900 expresses Eaton and Dana component time and mileage warranty coverages for the Roadranger products. Roadranger warranty training is also available to assist dealers in understanding and identifying vocation coverage and warranty parameters. See your Roadranger Representative for details.

TCWY0900, Roadranger Warranty Guide

Roadranger component warranty is identified using the Roadranger Warranty Guide TCWY0900. The Warranty Guide explains Roadranger vocation definitions, component time and mileage limits per vocation, aftermarket component / part warranties, and extended purchase warranty options.

How do I define my vocation coverage?

1. Review all the “Vocational Definitions” listed and select the one that most accurately describes the use and configuration of the vehicle.
2. Ensure your vehicle vocation is listed in the “Typical Vehicle Types” under the selected Vocational Definition.
3. Once the vocation is defined refer to the “Product Time and Mileage Coverage Per Vocation” section.
4. Identify the component in question using the product model number for the time and mileage coverage.
5. Refer to and understand any notes that pertain to a specific coverage (i.e. lube requirements).
6. If you cannot determine coverage, contact your Roadranger Representative or call the Roadranger Call Center at the time of sale at 1-800-826-HELP (4357).

TCWY0600, Roadranger Warranty Manual

The Roadranger Warranty Manual TCWY0600 documents the specifics of Roadranger product warranty. This manual includes:

- Product Warranty Statements for Eaton Truck Business Group and Dana Commercial Vehicle Product Group of Dana Holding Corporation
- Warranty terminology
- Warranty programs
- Claim procedures and claim information
- Important information regarding claim approval
- Component repair or replacement guidelines
- Labor hour guidelines (SRTs)
- Limits, exclusions, and requirements
- Other important resources

General Information

Other Important Resources

Printed copies of this document are not controlled. Please refer to the electronic copy on Roadranger.com for up-to-date information.

For additional information on the below topics, see the below publications available on Roadranger.com:

Lubrication

- TCMT0020 - Roadranger Approved Lubricants
- TCMT0021 - Roadranger Product Lubrication Manual
- TCSL0001 - Roadranger Transmission Synthetic Lubricant Data Sheet

Warranty

- TCWY0750 - Extended Protection Plan Registration Form
- TCWY0900 - Roadranger Warranty Guide (Time and Mileage, Vocational Definitions, Purchased Warranties)
- RRSL0001 - Roadranger Condensed Specifications (Product Offering Guide)
- Frequently Asked Warranty Questions and Answers (<http://www.roadranger.com/Roadranger/warranty/faq/index.htm>)

General Repair & Service

- AXSM0020 - Axle and Brake Failure Analysis
- TCSM0912 - Seal Maintenance Guide
- TRSM0913 - Understanding Spur Gear Life
- TRSM0915 - Transmission Synchronizer Repair Strategy
- TRSM0916 - Transmission Warranty Repair Strategy
- TRTS0910 - General Transmission Troubleshooting Guide

General Information

TCWY0900, Roadranger Warranty Guide..... i
 TCWY0600, Roadranger Warranty Manual i
 Other Important Resources..... ii
 Lubrication..... ii
 Warranty ii
 General Repair & Service ii

Introduction

Effective Date 1
 Don't Be Confused - Help is Available 1

Pick Up and Delivery

Warranty Coverage for Vehicles Meeting
 Vocation Definitions and Application
 Guidelines (For U.S. and Canada Only) 3

Construction

Warranty Coverage for Vehicles Meeting
 Vocation Definitions and Application
 Guidelines (For U.S. and Canada Only) 7

Heavy Haul

Warranty Coverage for Vehicles Meeting
 Vocation Definitions and Application
 Guidelines (For U.S. and Canada Only) 11

Line Haul

Warranty Coverage for Vehicles Meeting
 Vocation Definitions and Application
 Guidelines (For U.S. and Canada Only) 13
 Axle Model Family Warranty Coverage..... 16

Logging

Warranty Coverage for Vehicles Meeting
 Vocation Definitions and Application
 Guidelines (For U.S. and Canada Only) 17

Mining

Warranty Coverage for Vehicles Meeting
 Vocation Definitions and Application
 Guidelines (For U.S. and Canada Only) 19

Oil Field

Warranty Coverage for Vehicles Meeting
 Vocation Definitions and Application
 Guidelines (For U.S. and Canada Only) 21

Refuse

Warranty Coverage for Vehicles Meeting
 Vocation Definitions and Application
 Guidelines (For U.S. and Canada Only) 23

Specialized Applications

School Bus..... 25
 Yard Tractor..... 25
 Rescue Vehicle..... 25
 Recreation Vehicle 25
 Fire Service 26
 Transit Coach..... 26
 Off-Highway 26
 Industrial Equipment..... 26
 InterCity Bus 26
 Agriculture 27
 Warranty Coverage for Vehicles Meeting
 Vocation Definitions and Application
 Guidelines (For U.S. and Canada Only) 28

Dana Service / Aftermarket Parts

Warranty Coverage

Warranty 31
 Remedy..... 31
 Warranty Exclusions 31
 Warranty Periods 31
 Claims Procedure..... 32
 Warranty Disclaimer 32
 LIMITATION OF LIABILITY 32
 Effective Date 32
 Service Support 33
 Governing Law 33

Eaton Service / Aftermarket Parts Warranty

Coverage - U.S. and Canada Only 35
 Exceptions 36
 Definitions..... 37

Notes	37
Extended Protection Plan Requirements, Limitations, and Exclusions	39
Lubricant Specifications	41
Transmission Lubricants.....	41
Heavy Duty	41
Medium Duty	41
Drive Axle Lubricants	42
Steer Axle Lubricants	42
Clutch Lubricants.....	43
Brake Lubricants	43
Driveline Lubricants	44
Steering Shaft Lubricants	44
Wheel End Lubricants	45
Change Control Log	47

Introduction

Our experience in extended warranty coverage dates back to the mid 80's. Since then, we have pioneered many new programs designed to deliver warranties, which meet the demands of an ever-changing trucking industry.

From our first versions of the on/off-highway coverages, to our more recent vocational warranties, released in January 1997, customization and customer satisfaction, have always been our goals. The recently released warranties, covered in this Warranty Guide, are no exception.

Moving to vocational warranties in 1997, was certainly a change from the way coverages were defined in the past. But, we considered the move as a means to significantly reduce incidents of misapplied products and customer disappointment. It has done exactly that.

When first released, the vocational warranties were a fairly complete package, which allowed for many variations in coverage. However, the introduction of new models and the resulting need to expand extended warranty coverages, have necessitated updates to this Warranty Guide.

Effective Date

Warranties listed in this guide are effective for vehicles placed in service after the first day for the month / year of this publication month / year revision.

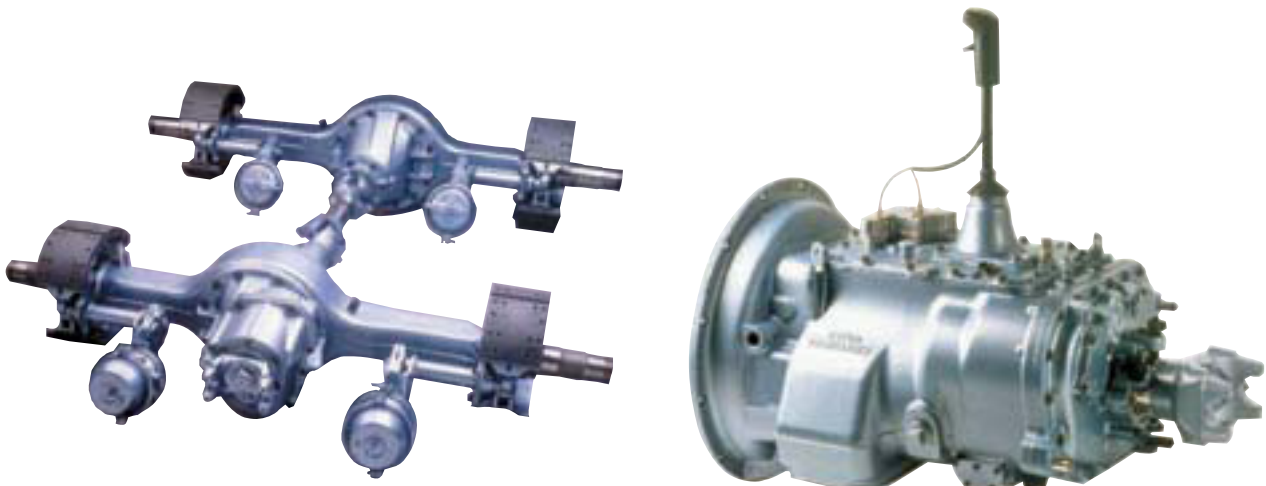
Don't Be Confused - Help is Available

We realize, there are many different warranties available. Manufacturers and suppliers have established coverages to suit their specific products. Remembering all these guidelines, can be very difficult.

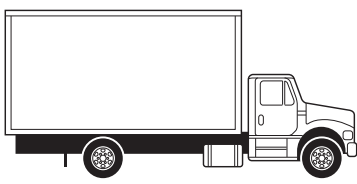
If, at any time, you have questions regarding Roadranger warranty coverages or model eligibility, contact the Roadranger Call Center at 1-800-826-HELP (4357). A customer service coordinator will be glad to assist you in getting the answers you need.

For warranty limits, exclusions, and requirements see the Roadranger Warranty Manual TCWY0600. Additional limits, exclusions, and requirements for the Extended Protection Plan are available within this guide.

See the Change Log at the end of this guide for detailed updates to both the Roadranger Warranty Manual and the Roadranger Warranty Guide.



Self Service Guide



Pick Up and Delivery

- Pick up and delivery service consists of the movement of freight typically within a 100 mile radius in cities and/or sub-urban areas.
- Operation on road surfaces of concrete, asphalt and maintained gravel.
- Three (3) to thirty (30) miles between starts/stops (typical).
- Annual mileage less than 60,000 miles (95,000 Km).
- 100% load going /40% load return (typical).
- 40% load going / 100% load return.

Typical Vehicle Types

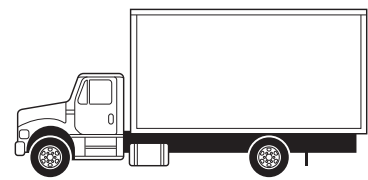
Beverage Truck	Municipal Truck	Stake Truck	Step Van
Flatbed Truck	Pickup and Delivery	Tanker	Grain Hauler (grain hopper / bottom dump trailers)
Moving Van	Refrigerated Truck	Wrecker	

Warranty Coverage for Vehicles Meeting Vocation Definitions and Application Guidelines

(For U.S. and Canada Only)

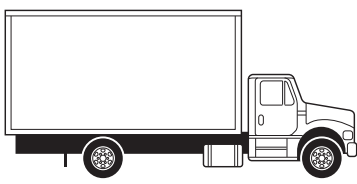
Single Drive Axles	S110, S130, S14-110,17060S, 19065T, 21065T, 22065T, 23082T, 26082T, 23082C, 26062C (Note 4, 7)	2 Years / Unlimited Mileage
	S21-170, 23-190, S23-170, 26-190 (Note 3, 4, 7)	3 years / 350,000 miles (560,000 km)
Tandem Drive Axles	DS405(P) (Note 3, 4, 7)	2 Years / Unlimited Mileage
	DSP41, DSH40-(P), D40-170, DSH44, D46-170 (Note 3, 4, 7)	3 years / 350,000 miles (560,000 km)
Non-Driving Steer Axles	All Models	3 Years / Unlimited Mileage (Tie rod end limited to 1 year / 125,000 miles (200,000 km))
Outrunner Wheel Seal	Standard Wheel Seal	2 years / 200,000 miles (320,000 km)
	LMS and Preset	3 years / 350,000 miles (560,000 km)
Brakes	All Models (Note 8)	See Bendix Warranty Web Site
Automatic Slack Adjusters	All Models (Note 8)	See Bendix Warranty Web Site
Clutches	All Models except UltraShift® PLUS and Advantage Series (Note 3)	Per OEM Standard Chassis Warranty Coverage
	Ultrashift - HV Models	3 years/ 150,000 Mileage
	UltraShift PLUS LAS Clutch & Low Capacity Inertia Brake (LCIB) (Note 1)	3 years / 350,000 Mileage
	UltraShift PLUS VCS, VAS, VHP Clutch, and LCIB (Note 1)	3 years / Unlimited Mileage
	Easy Pedal Advantage and Solo Advantage™ (Note 1, 11)	2 years / 200,000 Mileage
Hydraulic Clutch Actuator (Adapter Assembly and Release Fork Assembly)	Assembly	3 Years / Unlimited Mileage

Pick Up and Delivery



Electronic Clutch Actuator	Electronic Clutch Actuator	Same as Transmission Coverage
Driveshafts	All Models	Contact OEM for Warranty Coverage
Low Maintenance Systems (LMS) Hubs	All Models (Note 2)	3 years / 350,000 miles (560,000 km)
	Trailers w/ Approved Semi-Fluid Lubricant (Note 2)	5 years / 500,000 miles (800,000 km)
Tire Inflation and Monitor System (TIMS)	All Models	3 years / 300,000 miles (480,000 km)
SmartWave™ Tire Pressure Monitoring System (TPMS)	All Models	3 years / Unlimited Mileage
Tire Pressure Control System (TPCS)	All Models	1 year / Unlimited Mileage
Transmissions	Models: 7, 9, 10 Speeds (Note 1) [Excludes Fuller UltraShift LST (DM)] 8600 / 8700 Series (Model exceptions shown below)	3 years / Unlimited Mileage
	Multispeed: 13, 15, 18, 8LL (Note 1) (Excludes Fuller UltraShift LHP)	3 years / Unlimited Mileage
	UltraShift <i>PLUS</i> VCS, VHP, VMS, VXP, MXP, MHP (Note 1)	3 years / Unlimited Mileage
	UltraShift <i>PLUS</i> LAS - VAS Excludes Clutch and LCIB (Note 1)	5 years / 750,000 Mileage
	FS Series, RT-6609A, FO-6406-ASX, FO-8406-ASX (Notes 1, 5) (Excludes clutch module)	2 years / Unlimited Mileage
	FO-6406-ASW, FO-8406-ASW (Note 1) (Includes clutch module)	3 years / 150,000 miles (240,000 km)
	UltraShift HV: F-5405B-DM3, FO-5406B-DM3, F-5505B-DM3, F-6505B-DM3, FO-5506B-DM3	3 years/ Unlimited Mileage
	Hybrid Models: EH-8E306A-CD, EH-8E306A-T, EH-6E606B-CD (Note 1, 9, 10)	3 years/ 150,000 miles (240,000 Km)
Oil-to-Water Heat Exchangers	All Models (Note 1)	3 years / Unlimited Mileage
Auxiliary Transmission	Models: AT-1202, 2A-92	1 year / Unlimited Mileage
Bendix™ VORAD® Collision Warning System	EVT-200 Series EVT-300 Series (Note 8)	See Bendix Warranty Web Site
	VS-400 Series (Note 8)	See Bendix Warranty Web Site
	Retrofit Units (All Series) (Note 8)	See Bendix Warranty Web Site

Note 1: All transmission models require the use of a Roadranger approved lubricant. Automated transmissions and transmissions with Purchased Extended Protection Plans must use Roadranger Synthetic Lubricant meeting Eaton PS 164 Rev7 specification (Refer to Lubrication Manual, TCMT0021.) All transmission and clutch models must meet and have Eaton Engineering Application Approval prior to sale to qualify for any warranty coverage, and then be operated in the approved applications. Those that do not will void their warranty. No blanket approvals are available at this time for UltraShift **PLUS** models and Hybrid Systems.



Pick Up and Delivery

Note 2: Requires Roadranger approved OEM installation procedures and lubes.

Note 3: Refer to “Extended Protection Plan Matrix” section on www.roadranger.com

Note 4: Driver controlled wheel differential lock options carry the same warranty as single reduction models.

Note 5: FS Series synchronizer wear coverage (synchronizers with Eaton Friction Material) is only available for transmissions that use Eaton approved synthetic lubricant in conjunction with either a Solo Adjustment Free or a 365 MM Clutch (Transmission Robust Package). Without stated package requirements, synchronizer wear is not covered.

Note 7: Use of non-genuine Dana Axle Housing Breather will void warranty for pinion, input, and output seals.

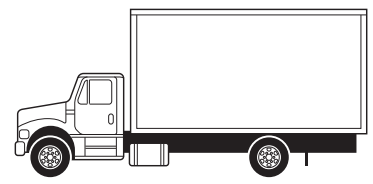
Note 8: Please refer to the Bendix web site (<http://www.bendix.com/en-us/service/Pages/Warranty.aspx>) for the most current policy in effect. Bendix Commercial Vehicle Systems LLC and Bendix Spicer Foundation Brake LLC reserves the right to make policy changes at anytime. The Bendix SmartWave and VORAD trademarks are licensed or owned by Bendix Commercial Vehicle Systems LLC.

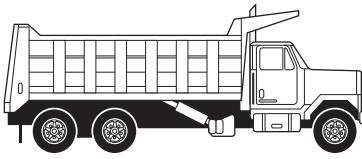
Note 9: EH-8E306A-T model restricted to “4x2 tractor only.”

Note 10: EH-6E606B-CD model for Low Profile use restricted to Step Van and GVW. See engineering approval.

Note 11: Eaton highly recommends when a replacement is necessary that a like for like, should be used. Example: Solo Advantage for Solo Advantage.

Pick Up and Delivery





Construction

- Movement of material to and from a job site.
- Or vehicles used in transfer / relocation on a maximum grade of 8%, typically greater than 10 miles per trip.
- 90% of loaded operation on road surfaces of concrete, asphalt, gravel, crushed rock or hard packed dirt and up to 10% of loaded operation into sandy or muddy job sites. Vehicles operating less than 90%, refer to Specialized Applications “Off-Highway” coverages.

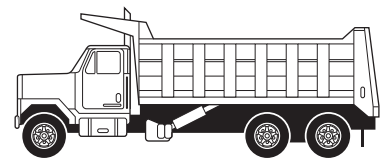
Typical Vehicle Types

Asphalt Truck	Dump Truck	Mixer	Tank Truck
Block Truck	Flatbed Truck	Roll-off	Utility Truck
Concrete Pumper	Landscape Truck	Snowplow	

Warranty Coverage for Vehicles Meeting Vocation Definitions and Application Guidelines

(For U.S. and Canada Only)

Single Drive Axles	S14-110, 17060S, 19060S, 21065T, 22065T, 23082T, 23082C (Note 4, 11)	2 Years / Unlimited Mileage
	S21-170, S23-170, S23-190, 23105S, S25-170, S25-190, S26-190, S30-190 (Note 4, 11)	3 years / 350,000 miles (560,000 km)
Tandem Drive Axles	DS405(P) (Note 11)	2 Years / Unlimited Mileage
	DSH40(P), DSH44-(P), D40-170, D50-170, D46-170, D46-170H (Note 11)	3 years / Unlimited Mileage
	D46-590P, DT463P, D52-590HP, D52-190P, D45-590P, D60-190P, D60-590P, D70-590P (Note 4, 11)	2 Years / Unlimited Mileage
Non-Driving Steer Axles	All Models	3 years / Unlimited Mileage (Tie rod end limited to 1 year / 125,000 miles (200,000 km))
Outrunner Wheel Seal	Standard Wheel Seal	2 years / 200,000 miles (320,000 km)
	LMS and Preset	3 years / 350,000 miles (560,000 km)
Brakes	All Models (Note 12)	See Bendix Warranty Web Site
Automatic Slack Adjusters	All Models (Note 12)	See Bendix Warranty Web Site
Clutches	All Models except UltraShift <i>PLUS</i> and Advantage Series. (Note 4)	Per OEM Standard Chassis Warranty Coverage
	UltraShift <i>PLUS</i> Clutch & Low Capacity Inertia Brake (LCIB) (Note 1)	3 years / Unlimited Mileage
	Easy Pedal Advantage and Solo Advantage™ (Note 1, 13)	2 years / 200,000 Mileage
Hydraulic Clutch Actuator (Adapter Assembly and Release Fork Assembly)	Assembly	3 years / Unlimited Mileage
Electronic Clutch Actuator	Electronic Clutch Actuator	Same as Transmission Coverage



Driveshafts	All Models	Contact OEM for Warranty Coverage
Low Maintenance Systems (LMS) Hubs	All Models (Note 2)	3 years / 350,000 miles (560,000 km)
	Trailers w/ Approved Semi-Fluid Lubricant (Note 2)	5 years / 500,000 miles (800,000 km)
Tire Inflation and Monitor System (TIMS)	All Models	3 years / 300,000 miles (480,000 km)
SmartWave Tire Pressure Monitoring System (TPMS)	All Models	3 years / Unlimited Mileage
Tire Pressure Control System (TPCS)	All Models	1 year / Unlimited Mileage
Transmissions	Models: 7, 9, 10 Speeds (Note 1) 1100-1800 lb-ft. 8600/8700 Series (Model exceptions shown below) [Excludes Fuller UltraShift LST (DM)]	3 years / Unlimited Mileage
	Multispeed: 13, 15, 18, 8LL, MLL, 9ALL (Notes 1, 4) (Excludes Fuller UltraShift LHP)	3 years / Unlimited Mileage
	UltraShift <i>PLUS</i> VCS, VMS, VXP, VAS, VHP & MXP (Note 1)	3 years / Unlimited Mileage
	FS Series, RT-6609A (Notes 5, 8)	2 years / Unlimited Mileage
	Hybrid: EH-8E306A-UPG, EH-8E306A-UP (Notes 1)	3 years / 150,000 miles (240,000 km)
Oil-to-Water Heat Exchangers	All Models (Note 1)	3 years / Unlimited Mileage
Auxiliary Transmission	Models: AT-1202, 2A-92	1 year / Unlimited Mileage
Bendix VORAD Collision Warning System	EVT-200 Series EVT-300 Series (Note 12)	See Bendix Warranty Web Site
	VS-400 Series (Note 12)	See Bendix Warranty Web Site
	Retrofit Units (All Series) (Note 12)	See Bendix Warranty Web Site

Note 1: All transmission models require the use of a Roadranger approved lubricant. Automated transmissions and transmissions with Purchased Extended Protection Plans must use Roadranger Synthetic Lubricant meeting Eaton PS 164 Rev7 specification (Refer to Lubrication Manual, TCMT0021.) All transmission and clutch models must meet and have Eaton Engineering Application Approval prior to sale to qualify for any warranty coverage, and then be operated in the approved applications. Those that do not will void their warranty. No blanket approvals are available at this time for UltraShift *PLUS* models and Hybrid Systems.

Note 2: Requires Roadranger approved OEM installation procedures and lubes.

Note 3: With Approved Synthetic Lube, Without Approved Synthetic Lube, Warranty = 3 years/300,000 miles (480,000 km).

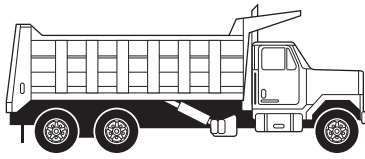
Note 4: Refer to "Extended Protection Plan Matrix" on www.roadranger.com

Note 5: 1 year/Unlimited for Snow Plows in FS Series.

Note 7: Driver controlled wheel differential lock options carry the same warranty as single reduction models.

Note 8: FS Series synchronizer wear coverage (synchronizers with Eaton Friction Material) is only available for transmissions that use Eaton approved synthetic lubricant in conjunction with either a Solo Adjustment Free or a 365 MM Clutch (Transmission Robust Package). Without stated package requirements, synchronizer wear is not covered.

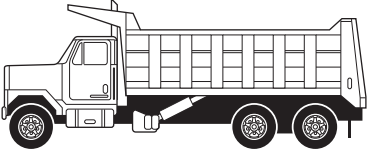
Note 11: Use of non-genuine Dana Axle Housing Breather will void warranty for pinion, input, and output seals.

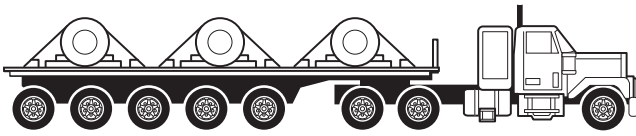


Construction

Note 12: Please refer to the Bendix web site (<http://www.bendix.com/en-us/service/Pages/Warranty.aspx>) for the most current policy in effect. Bendix Commercial Vehicle Systems LLC and Bendix Spicer Foundation Brake LLC reserves the right to make policy changes at anytime. The Bendix SmartWave and VORAD trademarks are licensed or owned by Bendix Commercial Vehicle Systems LLC.

Note 13: Eaton highly recommends when a replacement is necessary that a like for like, should be used. Example: Solo Advantage for Solo Advantage.





Heavy Haul

- Movement of heavy equipment or materials at legal maximums or special permit loadings, typically at GCW in excess of 140,000 lbs.
- Operation on road surfaces of concrete, asphalt and maintained gravel.
- High horsepower engines and auxiliary gear boxes might be used.
- Vehicles may be equipped with two retarders.
- 100% load going and empty return.

Typical Vehicle Types

Equipment Hauling

Lowboy

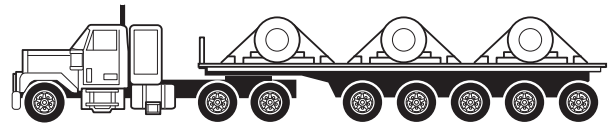
Steel Hauling

Warranty Coverage for Vehicles Meeting Vocation Definitions and Application Guidelines

(For U.S. and Canada Only)

Tandem Drive Axles	D46-170H, D50-170, T69-170 (Note 3, 4, 5)	3 years / Unlimited Mileage
	D60-590P, D70-590P, DT463P, D46-590HP, D52-190P, D52-590P, T78-190, T78-590, DTS521P (Note 3, 4, 5)	2 year/ Unlimited Mileage
Non-Driving Steer Axles	All Models	2 years / Unlimited Mileage (Tie rod end limited to 1 year / 125,000 miles (200,000 km))
Outrunner Wheel Seal	Standard Wheel Seal	2 years / 200,000 miles (320,000 km)
	LMS and Preset	3 years / 350,000 miles (560,000 km)
Brakes	All Models (Note 6)	See Bendix Warranty Web Site
Automatic Slack Adjusters	All Models (Note 6)	See Bendix Warranty Web Site
Clutches	All Models except UltraShift <i>PLUS</i> and Advantage Series. (Note 3)	Per OEM Standard Chassis Warranty Coverage
	UltraShift <i>PLUS</i> Clutch & Low Capacity Inertia Brake (LCIB) (Note 1)	2 years / Unlimited Mileage
	Easy Pedal Advantage and Solo Advantage™ (Note 1, 7)	2 years / 200,000 Mileage
Hydraulic Clutch Actuator (Adapter Assembly and Release Fork Assembly)	Assembly	3 years / Unlimited Mileage
Electronic Clutch Actuator	Electronic Clutch Actuator	Same as Transmission Coverage
Driveshafts	All Models	Contact OEM for Warranty Coverage
Low Maintenance Systems (LMS) Hubs	All Models (Note 2)	3 years / 350,000 miles (560,000 km)
	Trailers w/ Approved Semi-Fluid Lubricant (Note 2)	5 years / 500,000 miles (800,000 km)
Tire Inflation and Monitor System (TIMS)	All Models	3 years / 300,000 miles (480,000 km)

Heavy Haul



SmartWave Tire Pressure Monitoring System (TPMS)	All Models	3 years / Unlimited Mileage
Tire Pressure Control System (TPCS)	All Models	1 year / Unlimited Mileage
Transmissions	Models: 9, 10 Speeds (Note 1) (Excludes Fuller UltraShift LST (DM) & LHP) Multispeed: 13, 15, 18, 8LL, MLL, 9ALL (Note 1)	2 years / Unlimited Mileage
	UltraShift <i>PLUS</i> VXP, MXP, MHP, VHP (Note 1)	2 years / Unlimited Mileage
Oil-to-Water Heat Exchangers	All Models (Note 1)	2 years / Unlimited Mileage
Auxiliary Transmission	Models: AT-1202, 2A-92	1 year / Unlimited Mileage
Bendix VORAD Collision Warning System	EVT-200 Series EVT-300 Series (Note 6)	See Bendix Warranty Web Site
	VS-400 Series (Note 6)	See Bendix Warranty Web Site
	Retrofit Units (All Series) (Note 6)	See Bendix Warranty Web Site

Note 1: All transmission models require the use of a Roadranger approved lubricant. Automated transmissions and transmissions with Purchased Extended Protection Plans must use Roadranger Synthetic Lubricant meeting Eaton PS 164 Rev7 specification (Refer to Lubrication Manual, TCMT0021.) All transmission and clutch models must meet and have Eaton Engineering Application Approval prior to sale to qualify for any warranty coverage, and then be operated in the approved applications. Those that do not will void their warranty. No blanket approvals are available at this time for UltraShift *PLUS* models and Hybrid Systems.

Note 2: Requires Roadranger approved OEM installation procedures and lubes.

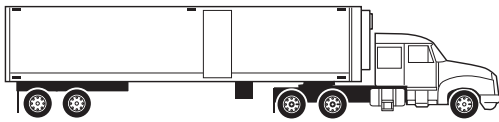
Note 3: Refer to "Extended Protection Plan Matrix" on www.roadranger.com

Note 4: Driver controlled wheel differential lock options carry the same warranty as single reduction models.

Note 5: Use of non-genuine Dana Axle Housing Breather will void warranty for pinion, input, and output seals.

Note 6: Please refer to the Bendix web site (<http://www.bendix.com/en-us/service/Pages/Warranty.aspx>) for the most current policy in effect. Bendix Commercial Vehicle Systems LLC and Bendix Spicer Foundation Brake LLC reserves the right to make policy changes at anytime. The Bendix SmartWave and VORAD trademarks are licensed or owned by Bendix Commercial Vehicle Systems LLC.

Note 7: Eaton highly recommends when a replacement is necessary that a like for like, should be used. Example: Solo Advantage for Solo Advantage.



Line Haul

- Line haul is moving different types of freight in high mileage operation (over 60,000 miles (95,000 km) / year).
- Operation on road surfaces of good to excellent concrete or asphalt.
- Distances are more than 30 miles between starting and stopping.
- Typical vehicle configurations are 4X2, 6X2, and 6X4 tractor / trailer combinations and straight trucks.

Typical Vehicle Types

Auto Hauler	Flatbed Trailer	Livestock Hauler	Tanker
Bulk Hauler	General Freight	Moving Van	Triples
Doubles	Grain Hauler (grain hopper / bottom dump trailer)	Refrigerated Freight	

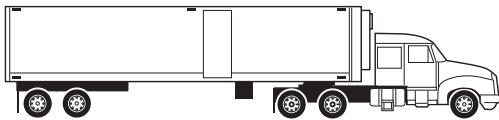
Warranty Coverage for Vehicles Meeting Vocation Definitions and Application Guidelines (For U.S. and Canada Only)

Single Drive Axles	S23-170, D23-190, S26-190 (Notes 3, 7, 9, 12)	5 years/750,000 miles (1,200,000 km)
Tandem Drive Axles	DS404/405(P), DSP40, DSP41, DST40(P), D40-170, DST41, D46-170, D46-170H, T69-170 (Notes 3, 6, 7, 9, 12)	5 years/750,000 miles (1,200,000 km)
	DSH40(P) (Notes 4, 9, 12)	3 years / 350,000 miles (560,000 km)
Non-Driving Steer Axles	E1002I, E1002W, E1202I, E1202W, E1203I, E1322I, E1322W, E1462I, E1462W (Notes 5, 9)	5 years/750,000 miles (1,200,000 km) (Tie rod ends, king pins, and bushings limited to 3 years / 350,000 miles (560,000 km))
	All Other Steer Axle Models (Note 5)	5 years / 750,000 miles (1,200,000 km) (Tie rod ends limited to 1 years / 125,000 miles (200,000 km)) (King pins and bushings limited to 3 years / 350,000 miles (560,000 km))
Outrunner Wheel Seal	Standard Wheel Seal	2 years / 200,000 miles (320,000 km)
	LMS and Preset	3 years / 350,000 miles (560,000 km)
Brakes	ES (Note 5, 13)	See Bendix Warranty Web Site
	Air Disc Brakes (Note 13)	See Bendix Warranty Web Site
Automatic Slack Adjusters	All Models (Note 13)	See Bendix Warranty Web Site

Line Haul



Clutches	All Models Except DM, UltraShift PLUS , and Advantage Series. (Note 4)	Per OEM Standard Chassis Warranty Coverage
	UltraShift PLUS LAS, VAS Clutch & Low Capacity Inertia Brake (LCIB) (Note 1)	3 years / 350,000 Mileage
	UltraShift PLUS MHP, MXP, VHP Clutch and LCIB (Note 1)	3 years / 350,000 Mileage
	Medium-Duty DM Models	3 years / Unlimited Mileage
	Heavy-Duty DM Models	3 years / 350,000 (560,000 km) parts and labor
	Solo Advantage™ (Note 1, 15)	3 years / 350,000 Mileage
	Easy Pedal Advantage™ (Note 1, 15)	2 years / 200,000 Mileage
Hydraulic Clutch Actuator (Adapter Assembly and Release Fork Assembly)	Assembly	3 years / 300,000 miles (480,000 km)
Electronic Clutch Actuator	Electronic Clutch Actuator	Same as Transmission Coverage
Driveshafts	All Models	Contact OEM for Warranty Coverage
Hubs	All Models (Note 2)	3 years / 350,000 miles (560,000 km)
	Trailers w/ Approved Semi-Fluid Lubricant (Note 2)	5 years / 500,000 miles (800,000 km)
Low Maintenance Systems (LMS) Hubs	Steer, Drive and Trailer (Note 2)	3 years / 350,000 miles (560,000 km)
Tire Inflation and Monitor System (TIMS)	All Models	3 years / 300,000 miles (480,000 km)
SmartWave Tire Pressure Monitoring System (TPMS)	All Models	3 years / Unlimited Mileage
Tire Pressure Control System (TPCS)	All Models	1 year / Unlimited Mileage
Transmissions	All Models: 7, 9, 10 Speeds (1750 lb-ft. and below) Includes AutoShift (AS), Top 2 models, and Fuller UltraShift LST (DM) (excludes DM clutch) for above models (Notes 1,8,10) (Model exceptions shown below)	5 years / 750,000 miles (1,200,000 km)
	8600/8700 Series	3 years / Unlimited Mileage
	FS Series, RT-6609A (Note 11) FO-6406-ASX, FO-8406-ASX (Note 1) (excludes clutch module)	2 years/ Unlimited Mileage
	FO-6406-ASW, FO-8406-ASW (Note 1) (includes clutch module)	3 years / 150,000 miles (240,000 km)
	UltraShift HV Models: FO-6406B-DM3, FO-6506B-DM3, F-6405B-DM3, F-6505B-DM3	3 years / Unlimited Mileage
	FRO-18210C, RTLO-18610B, RTO-18910B-AS2 (Notes 1, 8)	5 years / 500,000 miles (800,000 km)



Transmissions	Multi-speeds: 13,15,18, 8LL Includes AutoShift (AS), Top 2 models for 13, 18 speed models (Notes 1, 4)	3 years / 300,000 miles (480,000 km)
	UltraShift <i>PLUS</i> LAS, VAS (Excludes Clutch & LCIB). (Note 1)	5 years / 750,000 Mileage
	UltraShift <i>PLUS</i> MXP, MHP (Excludes Clutch & LCIB). (Note 1)	5 years / 500,000 Mileage
	UltraShift <i>PLUS</i> VCS, VMS, VXP, VHP (Excludes Clutch & LCIB). (Note 1)	3 years / 300,000 Mileage
	RTLO/RTLOM-16913L-DM3 (Notes 1 & 10)	5 years / 500,000 miles (800,000 km)
	FO/FOM-16D313E-LEP	5 years / 500,000 miles (800,000 km)
	Convertible Models: RTOC/RTOFC-16909A/E RTLOC/RTLOFC-16909A-T2 RTLOC-16709A, RTOC-18909A RTLC-16609E, RTLOC-18909A-T2 Scenario 1 [converted within first 3 years/ 300,000 miles (480,000 km) of service] Scenario 2 [converted after the expiration of 3 years/300,000 miles (480,000 km) but prior to the expiration of 5 years/500,000 miles (800,000 km) of service]	Original 9 Speed Configuration (prior to conversion) 5 years / 500,000 miles (800,000 km) Converted to 13 Speed Configuration 1 year/100,000 miles(160,000 km) or to the expiration of 3 years/300,000 miles (480,000 km) whichever is greater 1 year/100,000 (160,000 km) Note: In any case, there is no warranty coverage beyond 6 years/600,000 miles (960,000 km) of service.
External Oil-to-Water Heat Exchangers	All Models (Note 1)	3 years / 300,000 (480,000 km)
Auxiliary Transmission	Models: AT-1202, 2A-92	1 year / Unlimited Mileage
Bendix VORAD Collision Warning Systems	EVT-200 Series EVT-300 Series (Note 13)	See Bendix Warranty Web Site
	VS-400 Series (Note 13)	See Bendix Warranty Web Site
	Retrofit Units (All Series) (Note 13)	See Bendix Warranty Web Site

Note 1: All transmission models require the use of a Roadranger approved lubricant. Automated transmissions and transmissions with Purchased Extended Protection Plans must use Roadranger Synthetic Lubricant meeting Eaton PS 164 Rev7 specification (Refer to Lubrication Manual, TCMT0021.) All transmission and clutch models must meet and have Eaton Engineering Application Approval prior to sale to qualify for any warranty coverage, and then be operated in the approved applications. Those that do not will void their warranty. No blanket approvals are available at this time for UltraShift *PLUS* models and Hybrid Systems.

Note 2: Requires Roadranger approved OEM installation procedures and lubes.

Note 3: With Approved Synthetic Lube, Without Approved Synthetic Lube, Warranty = 3 years/300,000 miles (480,000 km).

Note 4: Refer to "Extended Protection Plan Matrix" on www.roadranger.com

Note 5: When spec'd with approved Drive Axle; without qualifying Drive Axle, warranty 3 year/350,000 miles (560,000 km).

Note 6: 40,000 Lb. Tandem Axle Warranty for Linehaul Service. See the following matrix.

Note 7: Drive axle pinion seals limited to 3 years / 350,000 miles (560,000 km) - Input, Output, and Pinion.

Note 8: For manual transmissions with Approved Synthetic Lube, Without Approved Synthetic Lube, Warranty = 3 years/300,000 miles (480,000 km).

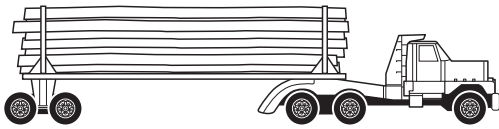
Line Haul



- Note 9:** Driver controlled wheel differential lock options carry the same warranty as single reduction models.
- Note 10:** Fuller UltraShift LST (DM) transmission warranty less the DM clutch (see “Clutch” for DM clutch warranty).
- Note 11:** FS Series synchronizer wear coverage (synchronizers with Eaton Friction Material) is only available for transmissions that use Eaton approved synthetic lubricant in conjunction with either a Solo Adjustment Free or a 365 MM Clutch (Transmission Robust Package). Without stated package requirements, synchronizer wear is not covered.
- Note 12:** Use of non-genuine Dana Axle Housing Breather will void warranty for pinion, input, and output seals.
- Note 13:** Please refer to the Bendix web site (<http://www.bendix.com/en-us/service/Pages/Warranty.aspx>) for the most current policy in effect. Bendix Commercial Vehicle Systems LLC and Bendix Spicer Foundation Brake LLC reserves the right to make policy changes at anytime. The Bendix SmartWave and VORAD trademarks are licensed or owned by Bendix Commercial Vehicle Systems LLC.
- Note 14:** FOM-16E310C-LAS is rated at 1850 lb-ft. due to multi-torque feature.
- Note 15:** Eaton highly recommends when a replacement is necessary that a like for like, should be used. Example: Solo Advantage for Solo Advantage.

Axle Model Family Warranty Coverage

Line Haul Applications Only	Current Warranty Coverage	Maximum Engine Horsepower	Torque Maximum GCW Lbs.	
DST40(P),DS,DA,DD404/405 (P)	5 years / 750,000 miles (1,200,000 km)	500	1650	110,000
DS,DA,DD404/405(P), DST40	5 years / 750,000 miles (1,200,000 km)	550	1850	80,000
DSH,DDH40-(P)	3 years / 350,000 miles (560,000 km)	650	2050	110,000
DSS,DDS40(P)	5 years / 750,000 miles (1,200,000 km)	650	2050	140,000



Logging

- Movement of logs, chips, and pulp between logging sites and / or mills.
- High horsepower engines and multiple retarders are typically used in this vocation.
- 3 to 30 miles between starts and stops (typical).
- 90% of loaded operation on road surfaces of concrete, asphalt, maintained gravel, crushed rock or hard packed dirt and up to 10% of loaded operation into sandy or muddy job sites. Vehicles operating less than 90%, refer to Specialized Applications “Off-Highway” coverages.
- 100% load going and empty return.

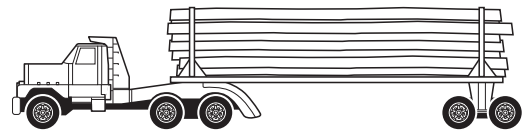
Typical Vehicle Types

Tractors with Pole Trailers Tractor / Trailer Excluding Log Skidders
 Log Hauler

Warranty Coverage for Vehicles Meeting Vocation Definitions and Application Guidelines (For U.S. and Canada Only)

Tandem Drive Axles	D40-170, DSH40-(P), D46-170, D46-170H, T69-170 (Note 4, 5, 6)	3 years / Unlimited Mileage
	DS405(P), DT463-P, D52-190P, D46-590HP, D52-590P, D60-190P, D60-590P, D70-590P, T78-190, T78-590, DT521P (Note 4, 5, 6)	2 years / Unlimited Mileage
Non-Driving Steer Axles	All Models	3 years / Unlimited Mileage (Tie rod end limited to 1 year / 125,000 miles (200,000 km))
Outrunner Wheel Seal	Standard Wheel Seal	2 years / 200,000 miles (320,000 km)
	LMS and Preset	3 years / 350,000 miles (560,000 km)
Brakes	All Models (Note 8)	See Bendix Warranty Web Site
Automatic Slack Adjusters	All Models (Note 8)	See Bendix Warranty Web Site
Clutches	All Models except UltraShift <i>PLUS</i> and Advantage Series. (Note 4)	Per OEM Standard Chassis Warranty Coverage
	UltraShift <i>PLUS</i> Clutch & Low Capacity Inertia Brake (LCIB) (Note 1)	2 years / Unlimited Mileage
	Easy Pedal Advantage and Solo Advantage™ (Note 1, 9)	2 years / 200,000 Mileage
Hydraulic Clutch Actuator (Adapter Assembly and Release Fork Assembly)	Assembly	3 years / Unlimited Mileage
Electronic Clutch Actuator	Electronic Clutch Actuator	Same as Transmission Coverage
Driveshafts	All Models	Contact OEM for Warranty Coverage
Low Maintenance Systems (LMS) Hubs	All Models (Note 2)	3 years / 350,000 miles (560,000 km)
	Trailers w/ Approved Semi-Fluid Lubricant (Note 2)	5 years / 500,000 miles (800,000 km)

Logging



Tire Inflation and Monitor System (TIMS)	All Models	3 years / 300,000 miles (480,000 km)
SmartWave Tire Pressure Monitoring System (TPMS)	All Models	3 years / Unlimited Mileage
Tire Pressure Control System (TPCS)	All Models	1 year / Unlimited Mileage
Transmissions	Models: 9, 10 Speeds (Note 1) (Excludes Fuller UltraShift LST (DM) & LHP) Multispeed: 13, 15, 18, 8LL (Notes 1,4)	2 years / Unlimited Mileage
	UltraShift PLUS VCS, VMS, VXP, VHP, VAS, MXP (Note 1)	2 years / Unlimited Mileage
Oil-to-Water Heat Exchangers	All Models (Note 1)	2 years / Unlimited Mileage
Auxiliary Transmission	Models: AT-1202, 2A-92	1 year / Unlimited Mileage
Bendix VORAD Collision Warning System	EVT-200 Series EVT-300 Series (Note 8)	See Bendix Warranty Web Site
	VS-400 Series (Note 8)	See Bendix Warranty Web Site
	Retrofit Units (All Series) (Note 8)	See Bendix Warranty Web Site

Note 1: All transmission models require the use of a Roadranger approved lubricant. Automated transmissions and transmissions with Purchased Extended Protection Plans must use Roadranger Synthetic Lubricant meeting Eaton PS 164 Rev7 specification (Refer to Lubrication Manual, TCMT0021.) All transmission and clutch models must meet and have Eaton Engineering Application Approval prior to sale to qualify for any warranty coverage, and then be operated in the approved applications. Those that do not will void their warranty. No blanket approvals are available at this time for UltraShift *PLUS* models and Hybrid Systems.

Note 2: Requires Roadranger approved OEM installation procedures and lubes.

Note 3: With Approved Synthetic Lube, Without Approved Synthetic Lube, Warranty = 3 years/300,000 miles (480,000 km).

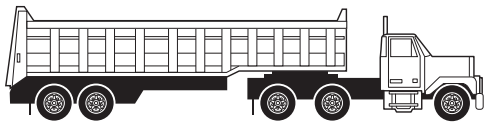
Note 4: Refer to "Extended Protection Plan Matrix" on www.roadranger.com

Note 5: Driver controlled wheel differential lock options carry the same warranty as single reduction models.

Note 6: Use of non-genuine Dana Axle Housing Breather will void warranty for pinion, input, and output seals.

Note 8: Please refer to the Bendix web site (<http://www.bendix.com/en-us/service/Pages/Warranty.aspx>) for the most current policy in effect. Bendix Commercial Vehicle Systems LLC and Bendix Spicer Foundation Brake LLC reserves the right to make policy changes at anytime. The Bendix SmartWave and VORAD trademarks are licensed or owned by Bendix Commercial Vehicle Systems LLC.

Note 9: Eaton highly recommends when a replacement is necessary that a like for like, should be used. Example: Solo Advantage for Solo Advantage.



Mining

- Movement of rock, ore, gravel, and minerals between mine sites and delivery sites.
- High horsepower engines are typically used in this vocation.
- 3 to 30 miles between starts and stops (typical).
- 90% operation on-highway and up to 10% into sandy or muddy job site. Vehicles operating less than 90%, refer to Specialized Applications “Off-highway” coverages.
- 100% load going and empty return.

Typical Vehicle Types

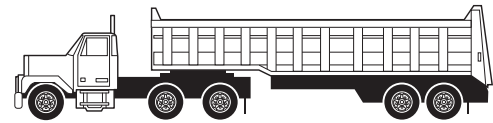
Bottom Dump Trailer Semi-End Dump
 Hopper Trailer Combinations Transfer Dump

Warranty Coverage for Vehicles Meeting Vocation Definitions and Application Guidelines

(For U.S. and Canada Only)

Tandem Drive Axles	D40-170, D46-170H, T69-170, D46-590HP, D50-170, D52-190P, D52-590P (Note 3, 4, 5)	2 years / Unlimited Mileage
	D60-190P, D60-590P, D70-190P, T78-190, T78-590 (Note 3, 4, 5)	2 year / Unlimited Mileage
Non-Driving Steer Axles	All Models	2 years / Unlimited Mileage (Tie rod end limited to 1 year / 125,000 miles (200,000 km))
Outrunner Wheel Seal	Standard Wheel Seal	2 years / 200,000 miles (320,000 km)
	LMS and Preset	3 years / 350,000 miles (560,000 km)
Brakes	All Models (Note 7)	See Bendix Warranty Web Site
Automatic Slack Adjusters	All Models (Note 7)	See Bendix Warranty Web Site
Clutches	All Models except UltraShift <i>PLUS</i> and Advantage Series. (Note 3)	Per OEM Standard Chassis Warranty Coverage
	UltraShift <i>PLUS</i> Clutch & Low Capacity Inertia Brake (LCIB) (Note 1)	2 years / Unlimited Mileage
	Easy Pedal Advantage and Solo Advantage™ (Note 1, 8)	2 years / 200,000 Mileage
Hydraulic Clutch Actuator (Adapter Assembly and Release Fork Assembly)	Assembly	3 years / Unlimited Mileage
Electronic Clutch Actuator	Electronic Clutch Actuator	Same as Transmission Coverage
Driveshafts	All Models	Contact OEM for Warranty Coverage
Low Maintenance Systems (LMS) Hubs	All Models (Note 2)	3 years / 350,000 miles (560,000 km)
	Trailers w/ Approved Semi-Fluid Lubricant (Note 2)	5 years / 500,000 miles (800,000 km)

Mining



Tire Inflation and Monitor System (TIMS)	All Models	3 years / 300,000 miles (480,000 km)
SmartWave Tire Pressure Monitoring System (TPMS)	All Models	3 years / Unlimited Mileage
Tire Pressure Control System (TPCS)	All Models	1 year / Unlimited Mileage
Transmissions	Models: 9, 10 Speeds (Note 1) (Excludes Fuller UltraShift LST (DM) & LHP) 8600 / 8700 Series Multispeed: 13, 15, 18, 8LL (Note 1)	2 years / Unlimited Mileage
	UltraShift PLUS VCS, VMS, VXP, VAS, VHP, MXP (Note 1)	2 years / Unlimited Mileage
Oil-to-Water Heat Exchangers	All Models (Note 1)	2 years / Unlimited Mileage
Auxiliary Transmission	Models: AT-1202, 2A-92	1 year / Unlimited Mileage
Bendix VORAD Collision Warning System	EVT-200 Series EVT-300 Series (Note 7)	See Bendix Warranty Web Site
	VS-400 Series (Note 7)	See Bendix Warranty Web Site
	Retrofit Units (All Series) (Note 7)	See Bendix Warranty Web Site

Note 1: All transmission models require the use of a Roadranger approved lubricant. Automated transmissions and transmissions with Purchased Extended Protection Plans must use Roadranger Synthetic Lubricant meeting Eaton PS 164 Rev7 specification (Refer to Lubrication Manual, TCMT0021.) All transmission and clutch models must meet and have Eaton Engineering Application Approval prior to sale to qualify for any warranty coverage, and then be operated in the approved applications. Those that do not will void their warranty. No blanket approvals are available at this time for UltraShift *PLUS* models and Hybrid Systems.

Note 2: Requires Roadranger approved OEM installations procedures and lubes.

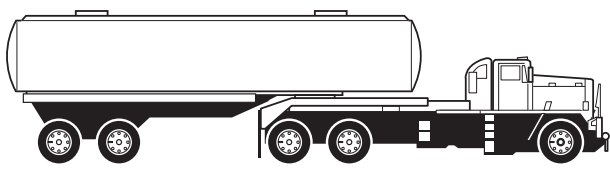
Note 3: Contact your OEM for details. Refer to “Extended Protection Plan Matrix” on www.roadranger.com

Note 4: Driver controlled wheel differential lock options carry the same warranty as single reduction models.

Note 5: Use of non-genuine Dana Axle Housing Breather will void warranty for pinion, input, and output seals.

Note 7: Please refer to the Bendix web site (<http://www.bendix.com/en-us/service/Pages/Warranty.aspx>) for the most current policy in effect. Bendix Commercial Vehicle Systems LLC and Bendix Spicer Foundation Brake LLC reserves the right to make policy changes at anytime. The Bendix SmartWave and VORAD trademarks are licensed or owned by Bendix Commercial Vehicle Systems LLC.

Note 8: Eaton highly recommends when a replacement is necessary that a like for like, should be used. Example: Solo Advantage for Solo Advantage.



Oil Field

- Movement of production related products, supplies, and tools between job sites.
- Movement of processing equipment and laboratories on job sites.
- Low mileage operation on road surfaces made of concrete, asphalt, maintained gravel, crushed rock or hard packed dirt.

Typical Vehicle Types

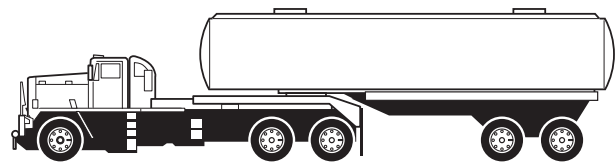
Cementing Vehicle Drill Rig Geophysical Exploration Winch Truck
 Demolition Fracturing Truck Tanker

Warranty Coverage for Vehicles Meeting Vocation Definitions and Application Guidelines (For U.S. and Canada Only)

Single Drive Axles	None (Note 6, 8)	N/A
Tandem Drive Axles	D40-170, D46-170H, D50-170, DSH40-(P), DSH44-(P), T69-170 (Note 4, 6, 8)	3 years / Unlimited Mileage
Tandem Drive Axles	DS405(P), D46-590HP, D52-190P, D52-590P, DT463-P, D60-190P, D60-590P, D70-590P, T78-190, T78-590 (Notes 4, 6, 8)	2 years/ Unlimited Mileage
Non-Driving Steer Axles	All Models	3 years / Unlimited Mileage (Tie rod end limited to 1 year / 125,000 miles (200,000 km))
Outrunner Wheel Seal	Standard Wheel Seal	2 years / 200,000 miles (320,000 km)
	LMS and Preset	3 years / 350,000 miles (560,000 km)
Brakes	All Models (Note 10)	See Bendix Warranty Web Site
Automatic Slack Adjusters	All Models (Note 10)	See Bendix Warranty Web Site
Clutches	All Models except UltraShift <i>PLUS</i> and Advantage Series. (Note 4)	Per OEM Standard Chassis Warranty Coverage
	UltraShift <i>PLUS</i> Clutch & Low Capacity Inertia Brake (LCIB) (Note 1)	2 years / Unlimited Mileage
	Easy Pedal Advantage and Solo Advantage™ (Note 1, 11)	2 years/ 200,000 Mileage
Hydraulic Clutch Actuator (Adapter Assembly and Release Fork Assembly)	Assembly	2 years / Unlimited Mileage
Electronic Clutch Actuator	Electronic Clutch Actuator	Same as Transmission Coverage
Driveshafts	All Models	Contact OEM for Warranty Coverage
Low Maintenance Systems (LMS) Hubs	All Models (Note 2)	3 years / 350,000 miles (560,000 km)
	Trailers w/ Approved Semi-Fluid Lubricant (Note 2)	5 years / 500,000 miles(800,000 km)

Oil Field

Oil Field



Tire Inflation and Monitor System (TIMS)	All Models	3 years / 300,000 miles (480,000 km)
SmartWave Tire Pressure Monitoring System (TPMS)	All Models	3 years / Unlimited Mileage
Tire Pressure Control System (TPCS)	All Models	1 year / Unlimited Mileage
Transmissions	Models: 7, 9, 10 Speeds (Note 1) (Excludes Fuller UltraShift LST (DM) & LHP) 8600 / 8700 Series Multispeed: 13, 15, 18, 8LL (Note 1) (Model exceptions shown below)	2 years / Unlimited Mileage
	UltraShift PLUS VCS, VMS, VXP, VAS, VHP, MXP (Note 1)	2 years / Unlimited Mileage
	FS Series, RT-6609A (Note 7)	1 year/ Unlimited Mileage
Oil-to-Water Heat Exchangers	All Models (Note 1)	2 years / Unlimited Mileage
Auxiliary Transmission	Models: AT-1202, 2A-92	1 year / Unlimited Mileage
Bendix VORAD Collision Warning System	EVT-200 Series EVT-300 Series (Note 10)	See Bendix Warranty Web Site
	VS-400 Series (Note 10)	See Bendix Warranty Web Site
	Retrofit Units (All Series) (Note 10)	See Bendix Warranty Web Site

Note 1: All transmission models require the use of a Roadranger approved lubricant. Automated transmissions and transmissions with Purchased Extended Protection Plans must use Roadranger Synthetic Lubricant meeting Eaton PS 164 Rev7 specification (Refer to Lubrication Manual, TCMT0021.) All transmission and clutch models must meet and have Eaton Engineering Application Approval prior to sale to qualify for any warranty coverage, and then be operated in the approved applications. Those that do not will void their warranty. No blanket approvals are available at this time for UltraShift *PLUS* models and Hybrid Systems.

Note 2: Requires Roadranger approved OEM installation procedures and lubes.

Note 4: Contact your OEM for details. See “Extended Protection Plan Matrix” on www.roadranger.com

Note 5: Drive axle pinion seals limited to 3 year / 350,000 mile (560,000 km) input, output, and pinion.

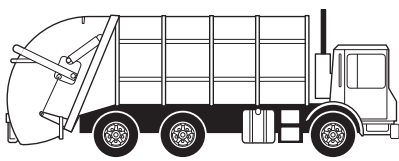
Note 6: Driver controlled wheel differential lock options carry the same warranty as single reduction models.

Note 7: FS Series synchronizer wear coverage (synchronizers with Eaton Friction Material) is only available for transmissions that use Eaton approved synthetic lubricant in conjunction with either a Solo Adjustment Free or a 365 MM Clutch (Transmission Robust Package). Without stated package requirements, synchronizer wear is not covered.

Note 8: Use of non-genuine Dana Axle Housing Breather will void warranty for pinion, input, and output seals.

Note 10: Please refer to the Bendix web site (<http://www.bendix.com/en-us/service/Pages/Warranty.aspx>) for the most current policy in effect. Bendix Commercial Vehicle Systems LLC and Bendix Spicer Foundation Brake LLC reserves the right to make policy changes at anytime. The Bendix SmartWave and VORAD trademarks are licensed or owned by Bendix Commercial Vehicle Systems LLC.

Note 11: Eaton highly recommends when a replacement is necessary that a like for like, should be used. Example: Solo Advantage for Solo Advantage.



Refuse

- Vehicles used for residential refuse / recycle pickup, typically a high number of stops per mile.
- Or vehicles operated in commercial / industrial pickup, typically a low number of stops per mile.
- Or vehicles used in transfer / relocation, typically greater than 10 miles per trip.
- 90% of loaded operation on road surfaces of concrete, asphalt, or maintained gravel and up to 10% of loaded operation into landfill, transfer or recycling sites. Vehicles operating less than 90%, refer to Specialized Applications “Off-Highway” coverages.

Typical Vehicle Types

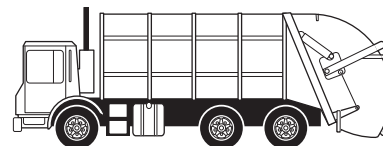
Front / Rear / Side Loader Sewer / Septic / Waste Transfer Vehicle
 Residential / Commercial Pickup Scrap Truck

Warranty Coverage for Vehicles Meeting Vocation Definitions and Application Guidelines (For U.S. and Canada Only)

Single Drive Axles	22082T, 22082C, S23-190, S26-190, S30-190, S30-590, S35-590 (Note 6, 8)	2 Years / Unlimited Mileage
	S23-170 (Note 4, 6, 8)	3 years / Unlimited Mileage
Tandem Drive Axles	DS405(P) (Note 4, 6, 8)	2 Years / Unlimited Mileage
	DSH40-(P), D40-170, DSH44-(P), D46-170, D46-170H, D50-170 (Note 4, 6, 8)	3 years / Unlimited Mileage
	D46-590HP, D52-590P, DT463P, D52-190P, D60-190P, D60-590P, D70-590P (Note 4, 6, 8)	2 Years / Unlimited Mileage
Non-Driving Steer Axles	All Models	3 years / Unlimited Mileage (Tie rod end limited to 1 year / 125,000 miles (200,000 km))
Outrunner Wheel Seal	Standard Wheel Seal	2 years / 200,000 miles (320,000 km)
	LMS and Preset	3 years / 350,000 miles (560,000 km)
Brakes	All Models (Note 9)	See Bendix Warranty Web Site
Automatic Slack Adjusters	All Models (Note 9)	See Bendix Warranty Web Site
Clutches	All Models except UltraShift <i>PLUS</i> and Advantage Series. (Note 4)	Per OEM Standard Chassis Warranty Coverage
	UltraShift <i>PLUS</i> Clutch & Low Capacity Inertia Brake (LCIB) (Note 1)	2 years / Unlimited Mileage
	Easy Pedal Advantage and Solo Advantage™ (Note 1, 10)	2 years / 200,000 Mileage
Hydraulic Clutch Actuator (Adapter Assembly and Release Fork Assembly)	Assembly	2 years / Unlimited Mileage
Hydraulic Launch Assist (HLA)	All Models	1 year / Unlimited Mileage
Electronic Clutch Actuator	Electronic Clutch Actuator	Same as Transmission Coverage

Refuse

Refuse



Driveshafts	All Models	Contact OEM for Warranty Coverage
Low Maintenance Systems (LMS) Hubs	All Models (Note 2)	3 years / 350,000 miles (560,000 km)
	Trailers w/ Approved Semi-Fluid Lubricant (Note 2)	5 years / 500,000 miles (800,000 km)
Tire Inflation and Monitor System (TIMS)	All Models	3 years / 300,000 miles (480,000 km)
SmartWave Tire Pressure Monitoring System (TPMS)	All Models	3 years / Unlimited Mileage
Tire Pressure Control System (TPCS)	All Models	1 year / Unlimited Mileage
Transmissions	Models: 7, 9, 10 Speeds (Note 1) (Excludes Fuller UltraShift LST (DM) & LHP) (Model exceptions shown below) 8600 / 8700 Series Multispeed: 13, 15, 18, 8LL (Note 1)	2 years / Unlimited Mileage
	UltraShift PLUS VCS, VMS, VXP, VAS, VHP, MXP (Note 1) (Excludes house-to-house residential pickup)	2 years / Unlimited Mileage
	FS Series, RT-6609A (Note 7)	1 year / Unlimited Mileage
Oil-to-Water Heat Exchangers	All Models (Note 1)	2 years / Unlimited Mileage
Auxiliary Transmission	Models: AT-1202, 2A-92	1 year / Unlimited Mileage
Bendix VORAD Collision Warning System	EVT-200 Series EVT-300 Series (Note 9)	See Bendix Warranty Web Site
	VS-400 Series (Note 9)	See Bendix Warranty Web Site
	Retrofit Units (All Series) (Note 9)	See Bendix Warranty Web Site

Note 1: All transmission models require the use of a Roadranger approved lubricant. Automated transmissions and transmissions with Purchased Extended Protection Plans must use Roadranger Synthetic Lubricant meeting Eaton PS 164 Rev7 specification (Refer to Lubrication Manual, TCMT0021.) All transmission and clutch models must meet and have Eaton Engineering Application Approval prior to sale to qualify for any warranty coverage, and then be operated in the approved applications. Those that do not will void their warranty. No blanket approvals are available at this time for UltraShift *PLUS* models and Hybrid Systems.

Note 2: Requires Roadranger approved OEM installation procedures and lubes.

Note 4: Contact your OEM for details. See "Extended Protection Plan Matrix" on www.roadranger.com

Note 6: Driver controlled wheel differential lock options carry the same warranty as single reduction models.

Note 7: FS Series synchronizer wear coverage (synchronizers with Eaton Friction Material) is only available for transmissions that use Eaton approved synthetic lubricant in conjunction with either a Solo Adjustment Free or a 365 MM Clutch (Transmission Robust Package). Without stated package requirements, synchronizer wear is not covered.

Note 8: Use of non-genuine Dana Axle Housing Breather will void warranty for pinion, input, and output seals.

Note 9: Please refer to the Bendix web site (<http://www.bendix.com/en-us/service/Pages/Warranty.aspx>) for the most current policy in effect. Bendix Commercial Vehicle Systems LLC and Bendix Spicer Foundation Brake LLC reserves the right to make policy changes at anytime. The Bendix SmartWave and VORAD trademarks are licensed or owned by Bendix Commercial Vehicle Systems LLC.

Note 10: Eaton highly recommends when a replacement is necessary that a like for like, should be used. Example: Solo Advantage for Solo Advantage.

Specialized Applications

School Bus

- Transporting students to and from school and /or school related events.
- Operation on road surfaces made of concrete, asphalt, maintained gravel, crushed rock, hard packed dirt, or other similar surfaces.

Typical Vehicle Types

Front Engine Commercial Chassis	Rear Engine Integral Coach
Front Engine Integral Coach	Rear Engine Commercial Chassis

Yard Tractor

- Moving and spotting trailers and containers around freight terminals, port facilities, and warehouses (short distances).
- Operation on well maintained concrete, asphalt, or gravel surfaces at yards, terminals, or docks.

Typical Vehicle Types

Load-On/ Load-Off	Roll-On/Roll-Off	Stevedoring Tractor	Yard Jockey
Port Tractor	Rail Yard Spotter	Trailer Spotter	

Rescue Vehicle

- Specialized vehicles for rapid acceleration to crash sites away from hydrant hookups.
- Airport rescue is the most common.
- Low mileage operation.

Typical Vehicle Types

Airport Rescue Fire (ARF)	Emergency Service
Crash Fire (CFR)	Rapid Intervention Vehicle (RIV)

Recreation Vehicle

- A privately owned recreational vehicle.
- Truck chassis based
- Bus chassis based

Typical Vehicle Types

Recreational Vehicles	Motor Homes Class A
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Specialized Applications

Fire Service

- Pumpers, tankers, or aerial ladders used in fighting structural fires.
- Low mileage operation.

Typical Vehicle Types

Ambulance	Aerial Platform	Tanker Truck
Aerial Ladder Truck	Pumper	

Transit Coach

- Transporting people and sometimes light freight between cities and/or suburban areas.
- Transporting people in and around city or suburban areas.

Typical Vehicle Types

Integral Coach	Cross Country Coach	Tour Bus / Coach
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Off-Highway

- Operation exceeding 10% of the time on unimproved surfaces such as loose dirt, mud, and sand.

Industrial Equipment

- Non-vehicle applications such as generator sets, winches, and cranes.

InterCity Bus

- Transporting people and sometimes light freight between cities and/or suburban areas.
- Transporting people in and around city or suburban areas.

Typical Vehicle Types

Airport Shuttle	Trolley
City Bus	Shuttle Bus

Agriculture

- Vehicles used in the agriculture industry. Use typically involves transportation of agricultural & dairy products to/from/on/around farm sites
- Includes operation off of improved surfaces while on the farm.

Typical Vehicle Types

Milk Tankers for Farm Pickup

Feed Trucks

Grain Silage, and Hay Haulers
(which load in the field)

Specialized Applications

Warranty Coverage for Vehicles Meeting Vocation Definitions and Application Guidelines (For U.S. and Canada Only)

Product	School Bus	Yard Tractor	Rescue Vehicle	Fire Service	Transit Coach	Off Highway	Other Industrial Equipment	Recreational Vehicle	Inter City Bus	Agriculture
Medium Duty Drive Axles (Note 3)	2 years/ Unlimited Miles	N/A	N/A	2 years/ Unlimited Miles	2 years/ Unlimited Miles	1 year / Unlimited Miles	1 year / Unlimited Miles	2 years/ Unlimited Miles	2 years/ Unlimited Miles	2 years/ Unlimited Miles
Heavy Duty Drive Axles (Note 3)	3 years/ Unlimited Miles	1 year / Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles	1 year / Unlimited Miles	1 year / Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles
Steer Axles	3 years/ Unlimited Miles	1 year / Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles	1 year / Unlimited Miles	1 year / Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles
Medium Duty Brakes	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)
Heavy Duty Brakes	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)
Anti-lock Braking System	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)
Automatic Slack Adjusters	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)
Hydraulic Clutch Actuator Adapter Assembly and Release Fork Assembly	1 year / 100,000 Miles	1 year / 100,000 Miles	1 year / 100,000 Miles	1 year / 100,000 Miles	1 year / 100,000 Miles	1 year / 100,000 Miles	N/A	1 year / 100,000 Miles	1 year / 100,000 Miles	1 year / 100,000 Miles
Hydraulic Launch Assist (HLA)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Electronic Clutch Actuator	N/A	N/A	N/A	N/A	Same as Transmission	Same as Transmission	N/A	Same as Transmission	Same as Transmission	Same as Transmission
Driveshaft	Contact OEM for Warranty Coverage	Contact OEM for Warranty Coverage	Contact OEM for Warranty Coverage	Contact OEM for Warranty Coverage	Contact OEM for Warranty Coverage	Contact OEM for Warranty Coverage	Contact OEM for Warranty Coverage	Contact OEM for Warranty Coverage	Contact OEM for Warranty Coverage	Contact OEM for Warranty Coverage
Outrunner Wheel Seals	2 years / 200,000 Miles	2 years / 200,000 Miles	2 years / 200,000 Miles	2 years / 200,000 Miles	2 years / 200,000 Miles	2 years / 200,000 Miles	2 years / 200,000 Miles	2 years / 200,000 Miles	2 years / 200,000 Miles	2 years / 200,000 Miles
Trailer Tire Maintenance Systems	3 years/ Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles
Tire Pressure Control System	1 year / Unlimited Miles	1 year / Unlimited Miles	1 year / Unlimited Miles	1 year / Unlimited Miles	1 year / Unlimited Miles	1 year / Unlimited Miles	1 year / Unlimited Miles	1 year / Unlimited Miles	1 year / Unlimited Miles	1 year / Unlimited Miles
FS Series Transmissions Under 1099 lb-ft. (Note 2)	2 years/ Unlimited Miles	N/A	2 years/ Unlimited Miles	2 years/ Unlimited Miles	2 years/ Unlimited Miles	N/A	N/A	2 years/ Unlimited Miles	N/A	N/A
UltraShift LST, LHP, AutoShift (Note 1)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5 years/ Unlimited Miles	N/A	N/A
Clutches - except UltraShift PLUS and Advantage Series models	(Note 4)	(Note 4)	(Note 4)	(Note 4)	(Note 4)	(Note 4)	(Note 4)	(Note 4)	(Note 4)	(Note 4)
UltraShift PLUS Clutch & Low Capacity Inertia Brake (LCIB) (Note 1)	N/A	N/A	N/A	N/A	Same as Transmission	Same as Transmission	N/A	Same as Transmission	N/A	Same as Transmission

Specialized Applications

Product	School Bus	Yard Tractor	Rescue Vehicle	Fire Service	Transit Coach	Off Highway	Other Industrial Equipment	Recreational Vehicle	Inter City Bus	Agriculture
Easy Pedal Advantage and Solo Advantage™ (Note 1, 7)	2 years/ 200,000 Miles	2 years/ 200,000 Miles	2 years/ 200,000 Miles	2 years/ 200,000 Miles	2 years/ 200,000 Miles	2 years/ 200,000 Miles	2 years/ 200,000 Miles	2 years/ 200,000 Miles	2 years/ 200,000 Miles	2 years/ 200,000 Miles
Transmission UltraShift PLUS Models (Note 1)	N/A	N/A	VCS, VMS, VXP, VAS, VHP 3 years/ Unlimited Miles	VCS, VMS, VXP, VAS, VHP 3 years/ Unlimited Miles	MPX, MHP, LAS, VAS, VHP, VCS, VMS, VXP 3 years/ Unlimited Miles	VCS, VMS, VXP, VAS, VHP, MPX 2 years/ Unlimited Miles	N/A	MPX, MHP, LAS, VAS, VHP, VCS, VMS, VXP 3 years/ Unlimited Miles	N/A	VCS, VMS, VXP, VAS, VHP, MPX 2 years/ Unlimited Miles
Hybrid Models: EH-8E306A-P EH-8E406A-P EH-6E706B-P (Note 1)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3 years / 150,000 Miles	N/A
Hybrid Models: EH-8FA0406A-PSB EH-6E706B-PSB (Note 1)	5 years/ Unlimited Miles	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Heavy-Duty Transmissions (Excludes Fuller UltraShift LST (DM) & LHP) (Note 1)	3 years/ Unlimited Miles	2 years / Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles	3 years/ Unlimited Miles	2 years / Unlimited Miles	N/A	3 years/ Unlimited Miles	2 years/ Unlimited Miles	2 years/ Unlimited Miles
Oil-to-Water Heat Exchangers	3 year / Unlimited Miles	1 year / Unlimited Miles	3 year / Unlimited Miles	3 year / Unlimited Miles	3 year / Unlimited Miles	1 year / Unlimited Miles	N/A	3 year / Unlimited Miles	2 year / Unlimited Miles	2 year / Unlimited Miles
Bendix VORAD Collision Warning System	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)	(Note 6)

Note 1: All transmission models require the use of a Roadranger approved lubricant. Automated transmissions and transmissions with Purchased Extended Protection Plans must use Roadranger Synthetic Lubricant meeting Eaton PS 164 Rev7 specification (Refer to Lubrication Manual, TCMT0021.) All transmission and clutch models must meet and have Eaton Engineering Application Approval prior to sale to qualify for any warranty coverage, and then be operated in the approved applications. Those that do not will void their warranty. No blanket approvals are available at this time for UltraShift PLUS models and Hybrid Systems.

Note 3: Use of non-genuine Dana Axle Housing Breather will void warranty for pinion, input, and output seals.

Note 4: Per OEM Standard Chassis Warranty Coverage.

Note 6: Please refer to the Bendix web site (<http://www.bendix.com/en-us/service/Pages/Warranty.aspx>) for the most current policy in effect. Bendix Commercial Vehicle Systems LLC and Bendix Spicer Foundation Brake LLC reserves the right to make policy changes at anytime. The Bendix SmartWave and VORAD trademarks are licensed or owned by Bendix Commercial Vehicle Systems LLC.

Note 7: Eaton highly recommends when a replacement is necessary that a like for like, should be used. Example: Solo Advantage for Solo Advantage.

Specialized Applications

Dana Service / Aftermarket Parts Warranty Coverage

Dana Service / Aftermarket Parts Warranty Coverage

Warranty

Subject to the conditions stated herein, Spicer® Commercial Vehicle Systems Division of Dana Corporation ('Dana') warrants to purchasers of its Spicer axle and brake parts, components and assemblies ("Products") sold as aftermarket parts, or OE loose parts, that the Products shall be free from defects in material and workmanship and shall conform to Dana's published specifications under normal use and proper maintenance for the warranty periods described in the "Warranty Periods" section below.

Product parts and components manufactured by others (such as, wheel seals, slack adjusters and tie rods) are warranted solely by their manufacturers and not by Dana.

Dana assumes no responsibility for the selection of any Product for a specific application absent its written approval of such application, and makes no general representations whatever in respect of any such selection.

Remedy

If any Product fails to comply with this warranty during the applicable warranty period, Dana shall reimburse (a) the cost of parts to repair the Product or (b) the cost of a replacement Product, whichever is less, except that for new carrier units, Dana shall reimburse (a) the cost of parts and labor (subject to pre-established prices and rates) to repair the unit or (b) the cost of a replacement unit, whichever is less.

The following are not reimbursable under Dana's warranty: (a) towing expenses, (b) meal and lodging expenses, (c) travel time or transportation expenses, and (d) downtime expenses.

Other exclusions are listed the Roadranger Warranty Guide TCWY0900 and the Roadranger Warranty Manual TCWY0600. In all cases Dana shall make the final determination as to the appropriate reimbursement for any warranty claim.

Warranty Exclusions

Dana's warranty does not cover normal wear and tear or extend to any Product that has been (a) used in any application contrary to Dana's written recommendations; (b) improperly installed or maintained; (c) altered or modified; (d) damaged by casualty or due to accident, negligence, abuse, or misuse in shipping or use; (e) subjected to abnormal operating conditions; (f) used with any lubricant not approved by Dana; or (g) used with non-Dana repair or replacement parts. All repaired and replacement Products shall be warranted hereunder for the unexpired portion of the original warranty period. (See also Product Specific and General Exclusions listed in TCWY0600.)

Warranty Periods

The product warranty periods (for replacement parts outside of the original warranty period) are as follows, commencing on the date of retail sale:

(a) New carrier exchange units	24 months / unlimited mileage
(b) All other Products	12 months / unlimited mileage

If a non-warrantable failure occurs within the standard / extended warranty coverage period, and the customer purchases a new carrier exchange to complete the repair, warranty coverage shall be two years, unlimited mileage, from the date of the new carrier purchase.

If a non-warrantable failure occurs within the standard / extended warranty coverage period, and the customer purchases original replacement parts to complete the repair, warranty coverage shall be one year from date of purchase and unlimited mileage on the replacement parts only. Non-warrantable failures due to abuse or neglect (i.e. overloading, shock load, spin-out, failure to maintain) will void the component warranty.

Dana Service / Aftermarket Parts Warranty Coverage

Claims Procedure

Warranty claims must be made in writing to: Dana Holding Corporation, Attention: Commercial Vehicle Warranty Department, 6515 Maumee Western, Maumee, OH 43537.

Dana's obligation to review any warranty claim is subject to the following conditions:

- a. The claim must be submitted as provided above no later than 90 days from the date of the failure and must include the following information: claim number, repair order number, installation date, failure date, mileage at time of failure, explanation of the failure and the repair, identification of the failed Product (including model and serial number), cost of replacement parts, labor hours to complete repair and labor (if applicable), and total amount of claim;
- b. If requested, the Product must be returned, freight collect, to Dana's Warranty Return Centers for examination.
- c. All warranty returns for Commercial Vehicle Axle Division component failures occurring in the USA are to be sent to:
 - Dana Holding Corp - COTC2, Comm Veh Drive Axle Warr Ret Center, 6515 Maumee, OH 43537
- d. Warranty returns occurring in Canada will continue to be sent to:
 - Eaton Truck Components, Attn: Warranty Returns, 2160 Williams Parkway, Brampton, Ontario L62 5X7
- e. All failed Driveline Components (U-Joints, Drive-Shafts, Center Bearings, Yokes and Steering Shafts) are to be returned to:
 - Dana Holding Corporation - COTC2, Attn: CVPG Drive-Shaft Warranty, 6515 Maumee Western, Maumee, OH 43537

Dana shall determine that none of the above warranty exclusions apply and that the Product was defective when originally delivered to the purchaser. Dana's determination of warranty coverage shall be final in all cases.

Dana reserves the right to reject a warranty claim for any of the following reasons:

- a. Original claim was filed after 90 days from the date of failure
- b. Failure occurred beyond applicable warranty period
- c. Claim information is insufficient
- d. Product was not returned for inspection as requested
- e. Product inspection does not substantiate claim or indicate a failure

Warranty Disclaimer

DANA'S WARRANTY HEREIN IS EXCLUSIVE AND GIVEN IN PLACE OF (a) ALL OTHER WARRANTIES FOR THE PRODUCTS, EXPRESS, IMPLIED OR STATUTORY, WHETHER WRITTEN OR ORAL, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE OR IMPLIED WARRANTIES ARISING FROM PERFORMANCE, COURSE OF DEALING OR USAGE OF TRADE, AND (b) ALL OTHER OBLIGATIONS, LIABILITIES, RIGHTS, CLAIMS OR REMEDIES RESPECTING THE PRODUCTS, INCLUDING, BUT NOT LIMITED TO, ANY RIGHT IN CONTRACT, TORT, OR STRICT LIABILITY AND ANY RIGHT ARISING FROM DANA'S NEGLIGENCE, ACTUAL OR IMPUTED.

LIMITATION OF LIABILITY

DANA'S OBLIGATIONS AND PURCHASER'S REMEDIES HEREIN ARE LIMITED TO THE REIMBURSEMENTS DESCRIBED ABOVE AND DANA SHALL NOT BE LIABLE FOR ANY INCIDENTAL, SPECIAL, CONSEQUENTIAL AND OTHER DAMAGES, INCLUDING, BUT NOT LIMITED TO, ECONOMIC LOSS, LOST REVENUE, LOST PROFITS, OR LOSS OF USE OR DAMAGE TO OTHER PROPERTY.

Effective Date

This warranty shall become effective and apply to Products sold on or after January 1, 1998, and applies only to Products sold for use in the United States or Canada. This warranty may not be changed, altered or modified in any way except in writing by Dana's authorized representative.

Dana Service / Aftermarket Parts Warranty Coverage

Service Support

Your service and support channel is the Roadranger Field Marketing network at 1-800-826-HELP (4357).

Governing Law

This warranty shall be governed, interpreted and construed by and in accordance with, the internal laws of the State of Ohio and all proceedings to interpret or enforce this warranty shall be brought exclusively in the state or federal court in Ohio with jurisdiction.

Dana Service / Aftermarket Parts Warranty Coverage

Service / Aftermarket Parts Warranty Coverage

Eaton Service / Aftermarket Parts Warranty Coverage - U.S. and Canada Only

Warranty coverages for genuine Eaton service / aftermarket parts, subcomponents, and complete components are as follows:

Product *purchased* as service / aftermarket parts, subcomponents, or complete components and installed outside of the warranty coverage period.

- Claims for service/aftermarket parts sold over the counter to a customer will be reimbursed for part(s) warranty.
- Claims for service/aftermarket parts purchased at and installed by an authorized OE dealer will be reimbursed for part(s) and labor.

Product *purchased* as service / aftermarket parts, subcomponents, or complete components and installed within of the warranty coverage period. (See exceptions, notes, and definitions below.)

Product Supplied	Warranty Term	Exceptions
Service / Aftermarket Parts	12 months / Unlimited Mileage (km)	See bulleted notes above
New, Exchange and Remanufactured Electronics		
Clutch Service / Remanufactured		
Clutch EverTough Brand™		
Clutch Advantage Series™	24 months / Unlimited Mileage (km)	
New or Reman™ Medium Duty Transmissions	12 months / Unlimited Mileage (km)	Parts and Labor*
Reman™ Heavy Duty Transmissions (see Note 1 & 3)	24 months / Unlimited Mileage (km)	Excludes Output Shaft Seals & Parts and Labor*
Reman™ Glider Kit Heavy Duty Transmissions (see Note 1 & 3)		
FLEX Reman™ Heavy Duty Transmissions (see Note 1 & 3)		
Reman™ Heavy Duty and Reman™ Glider Kit Heavy Duty Transmissions with: Enhanced Warranty Upgrade - Eaton Advantage Clutch with Roadranger approved lube (Rev 7) specified (see Note 2 & 3)	36 months / Unlimited Mileage (km)	
New Exchange Heavy Duty Transmissions		
Bendix Brake and VORAD Collision Warning System	See Bendix Warranty Web Site	

Note: 1 - Warranty terms apply to all purchases effective January 1, 2012. All transmissions purchased prior to January 1, 2012 carry their warranty terms at time of sale.

Note: 2 - The Enhanced Warranty Upgrade for 36 months / Unlimited Mileage (km) applies only to the transmission in Line Haul applications (must be registered on the Eaton warranty web site, www.roadranger.com)(FLEX Reman not included). In order for the Advantage Clutch™ to receive a 3rd year warranty coverage, a 1 year Extended Protection Plan (EPP) purchase is required for the clutch.

Note: 3 - All Vocations outside of Line Haul applications purchased between July 1, 2011 and January 1, 2012 will have an 18 months / Unlimited Mileage (km) warranty including "Parts and Labor" for warrantable repairs*.

* Labor reimbursed for repairs performed per the OEM Approved Channel.

Service / Aftermarket Parts Warranty Coverage

Exceptions

If a non-warrantable failure occurs within the **Standard** warranty coverage period, and the customer purchases a new Eaton Exchange Transmission to complete the repair; warranty coverage shall be the remainder of the *original* warranty period, or the coverage period of the new Exchange, whichever is greater. If an Eaton Remanufactured Transmission is purchased to complete a non-warrantable repair during the **Standard** warranty period, warranty coverage shall be the coverage period of the Eaton Remanufactured Transmission.

If a non-warrantable failure occurs within the **Extended** warranty coverage period, and the customer purchases a genuine New Exchange Transmission or an Eaton Remanufactured transmission to complete the repair; warranty coverage shall be the remainder of the original warranty period, or the defined coverage period of the purchased replacement transmission, whichever is greater.

If a non-warrantable failure occurs during the **Original** warranty period (*Standard or Extended*) and the customer purchases genuine Eaton service/aftermarket parts to complete the repair; the warranty coverage period of the service/aftermarket parts shall be one year from the date of installation. Remaining parts and subcomponents, which were not replaced at the time of the non-warrantable repair, shall maintain the coverage of the *original* warranty period.

See the Roadranger Warranty Manual TCWY0600 for replacement matrix.

Service / Aftermarket Parts Warranty Coverage

Definitions

Standard Warranty - The base warranty coverage, offered to all purchasers of a product. It is sometimes called, “the OEM warranty period.”

Extended Warranty - Additional coverage, which becomes effective when the Standard warranty period ends. Usually, there are other requirements for eligibility and, in some cases, a service charge must be paid to purchase the coverage.

Original Warranty - The total warranty coverage for which a product is eligible. A combination of the Standard and Extended warranty periods.

Notes

- Warranty coverages for genuine Eaton service / aftermarket parts, subcomponents, and complete components commence on the date of retail sale.
- Warranty coverages, stated herein, **apply only** to genuine Eaton service / aftermarket parts, subcomponents, and complete components, which are purchased by the customer at normal retail prices.
- Warranty coverages, states herein, **do not apply** to genuine Eaton service / aftermarket parts, or subcomponents for which Eaton has contributed, to any extent, to the purchase and/or installation by full or partial reimbursement in the form of check, coupon, or no charge parts to the customer as a goodwill or policy transaction. Such service/aftermarket parts shall be covered for a period of ninety (90) days from the date of installation. REMAN™ transmissions provided as the result of a good will or policy transaction, are warranted for 12 months from the installation date.
- To continue warranty coverage, the purchased component model must be the same as the failed component model, unless substitution is authorized by Eaton.
- All other Eaton warranty exclusions and limitations apply to the coverages stated herein and in the Roadranger Warranty Manual TCWY0600. Special aftermarket programs and products not listed in this manual have warranty parameters and requirements specified individually per released documentation.
- New / REMAN / Part Product warranty starts the date of RETAIL Sale when used in Glider Kits and vehicle refurbishing. IF a product is transferred to a Glider Kit or a vehicle / chassis other than the original vehicle / chassis, the warranty of the transferred product is VOID.

Service / Aftermarket Parts Warranty Coverage

Extended Protection Plan Requirements, Limitations, and Exclusions

- Application for purchased warranty must be made within one (1) year of the in-service date of the vehicle to avoid a late registration fee.
- Vehicles registered beyond the one year limitation are subject to the following late registration fees:
 - Vehicles registered from the 13th month through the 24th month of service require payment of:
 - HD Transmission: \$100 USD/\$115 CAD
 - MD Transmission: \$50 USD/\$55 CAD
 - Single Axle: \$50 USD/\$55 CAD
 - Tandem Axle: \$100 USD/\$115 CAD
 - Clutch: \$50 USD/\$55 CAD
 - Vehicles registered from the 25th month through the 36th month of service require payment of:
 - HD Transmission: \$300 USD/\$340 CAD
 - MD Transmission: \$100 USD/\$155 CAD
 - Single Axle: \$100 USD/\$155 CAD
 - Tandem Axle: \$300 USD/\$340 CAD
 - Clutch: \$100 USD/\$155 CAD
 - Warranty coverage for vehicles registered in the 2nd and 3rd year take effect 30 days from the date of registration.
- A vehicle or component may not be registered if it has exceeded:
 - Clutch - the basic published OEM clutch warranty.
 - Transmission - the time of the Eaton published standard warranty.
- Extended warranty is only available for the eligible models listed or referenced herein.
- Warranty applies only to clutches and transmissions installed in vehicles as original equipment.
- A Roadranger approved synthetic lubricant must be used. Lubricant must be changed per Roadranger prescribed maintenance schedules (Reference Roadranger publication TCMT0021). Lube change records might be requested for verification purposes.
- Transmission oil temperatures must be maintained per Roadranger publication TCMT0021.
- Warranty applies exclusively to vehicles licensed and operating in the United States of America or Canada.
- Warranty is transferable to only one subsequent vehicle owner. Warranty is only transferable within the same vehicle vocation. Changing vehicle vocations voids the warranty coverage.
- Re-rating engine torque above the approved torque capacity of the component, voids the warranty coverage. Dealer/ Purchaser shall be responsible for verifying the engine torque does not exceed the torque capacity of the drivetrain.
- Warranty covers parts and labor per Dana and Eaton established guidelines.
- Oil to water heat exchangers are not covered under the Roadranger Extended Protection Plans.
- See the Roadranger Warranty Manual TCWY0600 for time and mileage examples and warranty information, requirements, limits, and exclusions.
- Drive Axle Seals (Pinion, Input, Output) limited to 3 years / 350,000 miles.

Extended Protection Plan Matrix

For complete information on requirements, limitations or exclusions available warranty coverages, warranty claim filing procedures, and authorized repair times, reference the Warranty Manual (TCWY0600) and the Warranty Guide (TCWY0900) both available on Roadranger.com or contact the Roadranger Call Center at 1-800-826-HELP (4357).

Please refer to www.roadranger.com for a complete list of Extended Protection Plan options.

Note: Automated transmissions and transmissions with Purchased Extended Protection Plans must use Roadranger Synthetic Lubricant meeting Eaton PS 164 Rev7 specification (Refer to Lubrication Manual, TCMT0021.) All transmission and clutch models must meet and have Eaton Engineering Application Approval prior to sale to qualify for any warranty coverage, and then be operated in the approved applications. Those that do not will void their warranty. No blanket approvals are available at this time for UltraShift *PLUS* models and Hybrid Systems.

Lubricant Specifications

Transmission Lubricants

Eaton Recommends the Use of Roadranger Lubricants for Extended Drain

Use the Heavy-Duty and Medium-Duty charts, starting with transmission type, to locate the correct lubricant and change interval.

Note: See line haul and vocational definitions for more information.



Automated and above 1,850 ft. lbs. must use PS-164 R7 approved fluid.

Transmission Oil Filters

Transmission filters should be changed during regular lube intervals.

Inspection of the transmission filter should be conducted during preventative maintenance checks for damage or corrosion. Replace as necessary.

Heavy Duty

Product	Synthetic or Mineral	Lubricant	SAE	Change Interval for Line Haul	Change Interval for Vocational
Automated and above 1,850 lb-ft.	Synthetic	PS-164 R7	SAE 50	500,000 miles [800,000 Km] or 5 years	2,000 hours or 5 years
Mechanical	Synthetic	PS-164 R7	SAE 50	500,000 miles [800,000 Km] or 5 years	2,000 hours or 5 years
Mechanical	Mineral	Heavy Duty Engine Oil	SAE 50 (HD Engine Oil), Mil 2104H, Cat TO-4 (SAE 40 - SAE 50)	60,000 miles [96,000 Km] or 1 year	500 hours or 1 year

Medium Duty

Product	Synthetic or Mineral	Lubricant	SAE	Change Interval for Line Haul	Change Interval for Vocational
Automated	Synthetic	PS-164 R7	SAE 50	500,000 miles [800,000 Km] or 5 years	2,000 hours or 5 years
ASW Clutch Module	Synthetic	Dextron III ATF	N/A	150,000 miles [250,000 Km] or 3 years	150,000 miles [250,000 Km] or 3 years
Mechanical	Synthetic	PS-164 R7	SAE 50	500,000 miles [800,000 Km] or 5 years	2,000 hours or 5 years
Mechanical	Mineral	Heavy Duty Engine Oil	SAE 50 (HD Engine Oil), Mil 2104H, Cat TO-4 (SAE 40 - SAE 50)	60,000 miles [96,000 Km] or 1 year	500 hours or 1 year

Drive Axle Lubricants

Dana Recommends the Use of Roadranger Lubricants for Extended Drain

Use the chart to locate the correct lubricant and change interval.

Note: See the line haul and vocational definitions for more information.

Synthetic or Mineral	Lubricant	SAE	Change Interval for Line Haul	Change Interval for Vocational
Synthetic	SHAES 256 Rev C	SAE 75W-90	500,000 miles [800,000 Km] or 3 years	
Synthetic	SHAES 256 Rev C	SAE 75W-90, SAE 80W-140		120,000 miles [193,000 Km] or 1 year
Mineral	MIL-L-2105E/J-2360, API GL-5 Gear Oil, MIL-PRF-2105E	75W, 75W-80, 75W-140	120,000 miles [193,000 Km] or 1 year	60,000 miles [96,500 Km] or 1 year

Steer Axle Lubricants

Use the chart to locate the correct lubricant and change interval.

Note: See the line haul and vocational definitions for more information.

Type of Lubricant System	Lubricant	SAE	Change Interval for Line Haul	Change Interval for Vocational
Oil Bath	MIL-L-2105 E/J-2360	SAE 75W-90 80W-140	100,000 miles [161,000 Km] or 6 months	Every 50 hours
Grease Packed****	Heavy-Duty, multipurpose lithium based **	#2 grade	100,000 miles [161,000 Km] or 1 year	25,000 miles [40,000 Km]
King Pin Grease	Heavy-Duty, multipurpose lithium based **	#1 grade*** or #2 grade	25,000 miles [40,000 Km] or 6 months	Every 50 hours

** Do not mix with sodium base grease.

Do not use greases other than what is indicated above.

*** #1 grade is used for extreme cold.

**** Refer to OEM recommendations.

Clutch Lubricants

Use the chart, starting with clutch type, to locate the correct lubricant and change interval.

Note: See the line haul and vocational definitions for more information.

Product	Lubricant	Service Interval for Line Haul	Service Interval for Vocational
Stamped Angle Spring	NLGI #2 or #3 Lithium - Complex Roadranger Grease MP-2	10,000 miles [16,000 Km] or once a month	250 hours or once a month
Medium-Duty Solo™	NLGI #2 or #3 Lithium - Complex Roadranger Grease MP-2	10,000 miles [16,000 Km] or once a month	250 hours or once a month
365 mm	No Lubricant Needed	Not Applicable	Not Applicable
Easy Pedal 2000	NLGI #2 or #3 Lithium - Complex Roadranger Grease MP-2	20,000 miles [32,000 Km] or once a month	250 hours or once a month
Heavy-Duty Solo™	NLGI #2 or #3 Lithium - Complex Roadranger Grease MP-2	25,000 miles [40,000 Km] or once a month	250 hours or once a month
Solo™ XL	NLGI #2 or #3 Lithium - Complex Roadranger Grease MP-2	50,000 miles [80,000 Km] or once a month	250 hours or once a month
Value Clutch	NLGI #2 or #3 Lithium - Complex Roadranger Grease MP-2	20,000 miles [32,000 Km] or once a month	250 hours or once a month
DM	No Lubricant Needed	Not Applicable	Not Applicable
Easy Pedal Advantage and Solo Advantage.	NLGI #2 or #3 Lithium - Complex Roadranger Grease MP-2	25,000 miles [40,000 Km] or once a month. Note: Advantage Series Line Haul application only 50,000 miles [80,000Km] or once a month.	250 hours or once a month
Pedal Shaft	NLGI #2 Lithium - Complex Roadranger Grease MP-2	At every chassis lubrication	At every chassis lubrication

Brake Lubricants

Use the chart to locate the correct lubricant and change interval.

Product	Lubricant	Change Interval with Zerks	Change Interval without Zerks
Brake, Standard	NLGI #2 EP Lithium	Not Applicable	50,000 miles [80,000 Km] or 3 months
Brake, LMS-Low Lube *	SHC 460 Synthetic	Not Applicable	1 year
Brake Adjusters, Standard	NLGI #2 EP Lithium	At chassis lubrication	Not Applicable
Brake Adjusters, Spicer Haldex Self-Adjusting	NLGI #2 or #3 EP Lithium	50,000 miles [80,000 Km] or 3 months	Not Applicable

* For easy identification, note that the Dana LMS-Low Lube brake uses a special “button head” grease fitting and the Dana LMS Lube Free brake does not have a grease fitting.

Driveline Lubricants

For assistance identifying the driveshaft model, see DSMT0100.

Product	Service Interval for Line Haul	Service Interval for Vocational
10-Series (1480 thru 1810 & SPL90) Note: Slip member also requires lubrication.	10,000/15,000 miles [16,000/24,000 Km] or 3 mos. (which ever comes first)	5,000/8,000 miles [8,000/12,800 Km] or 3 mos. (which ever comes first)
Spicer Life Series (SPL55, 70, & 100) Booted and permanently lubricated slip member.	25,000 miles [40,000 Km] or 6 mos. (which ever comes first)	25,000 miles [40,000 Km] or 6 mos. (which ever comes first)
Spicer Life Series (SPL140, 170, & 250) Std. Spicer Life Series U-Joint. Booted and permanently lubricated slip member.	100,000 miles [160,000 Km] or 6 mos. (which ever comes first)	25,000 miles [40,000 Km] or 6 mos. (which ever comes first)
Spicer Life XL* (SPL170XL & 250XL) FIRST LUBRICATION CYCLE** Extended lubrication U-Joint. Booted and permanently lubricated slip member.***	350,000 miles [560,000 Km] or 3 yrs. (which ever comes first)	100,000 miles [160,000 Km] or 1 year (which ever comes first)
Spicer Life XL* (SPL170XL & 250XL) RE-LUBRICATION CYCLE** Extended lubrication U-Joint. Booted and permanently lubricated slip member.***	100,000 miles [160,000 Km] or 6 mos. (which ever comes first)	25,000 miles [40,000 Km] or 6 mos. (which ever comes first)

* Spicer Life XL universal joints are best identified by the rubber seal guards (a soft, pliable “boot”) fitted to the bearing cups. Spicer Life XL universal joints have a plastic zerk cover attached prior to the required initial 350,000 mile re-lubrication. Standard Spicer Life Series universal joints have a hard plastic slinger fitted to the bearing cups.

** Spicer Driveshaft Division recommends re-lubrication with grease meeting NLGI Grade 2 specifications with an operating range of +325°F/+163°C to -10°F/-23°C. The grease must also be compatible with commonly used seal materials (e.g. Nitrile - 'Buna N' types) and commonly used multipurpose greases (e.g. Lithium stearate types).

*** After initial miles (km) or time is reached, the plastic grease zerk cover must be removed and the joints re-lubricated. Once the grease zerk cover has been removed, the “Re-Lubrication Cycle” interval must be followed.

Steering Shaft Lubricants

Series	Service Interval for Line Haul	Service Interval for Vocational
SPL 6 (Aluminum with greaseable u-joints and permanently lubricated slip member design)	50,000 miles [80,000 Km] or 6 mos. (which ever comes first)	25,000 miles [40,000 Km] or 3 mos. (which ever comes first)
1000 (Steel with greaseable universal joints) Note: Slip member requires the same lubrication intervals)	50,000 miles [80,000 Km] or 6 mos. (which ever comes first)	25,000 miles [40,000 Km] or 3 mos. (which ever comes first)

Wheel End Lubricants

The standard lubricants specified by the Steer Product Engineering group are as follows:

Note: See the line haul and vocational definitions for more information.

Product	Lubricant Type	SAE	Change Interval for Line Haul	Change Interval for Vocational
Wheel End	Mineral Oil	SAE 75W-90	100,000 miles [161,000 Km] or 1 year	30,000 miles [48,000 Km] or 6 months
Wheel End	Mineral Grease - NLGI #2	AW 2	100,000 miles [161,000 Km] or 1 year	30,000 miles [48,000 Km] or 6 months
LMS-Low Lube***	Synthetic Oil	SAE 50	250,000 miles [400,000 Km] or 1 year	250,000 miles [400,000 Km] or 1 year
LMS-Lube Free***	Synthetic Oil	SAE 50	None (only needed if tear down)	None (only needed if tear down)
LMS-Low Lube***	Semi-Fluid Synthetic Grease	Chevron Delo SF	50,000 miles [80,000 Km] or 3 years	50,000 miles [80,000 Km] or 3 years
LMS-Low Lube***	Semi-Fluid Synthetic Grease**	Mobilith SHC 007	50,000 miles [80,000 Km] or 3 years	50,000 miles [80,000 Km] or 3 years
Use of this grease requires a signed waiver from customer. * For easy identification, note that the Dana LMS-Low Lube brake uses a special “button head” grease fitting and the Dana LMS-Lube Free brake does not have a grease fitting.				

Change Control Log

Last Revised Date	Description of Clarifications and Updates
May 2012	<p>Re-named the City Delivery section to "Pick Up and Delivery".</p> <p>Changed the Pick Up and Delivery Table: Transmission section - "UltraShift <i>PLUS</i> VCS, VAS, VHP" to "UltraShift <i>PLUS</i> VCS, VHP, VMS, VXP, MXP, MHP". "UltraShift <i>PLUS</i> LAS- VMS, VXP, MXP, MHP" to "UltraShift <i>PLUS</i> LAS - VAS".</p> <p>Specialized Section: Added "AutoShift" to the UltraShift LST, LHP row.</p> <p>Changed in the Pick Up and Delivery Section: First bullet - Original sentence read: "Pick up and delivery service within cities and/or suburban areas." to "Pick up and delivery service consists of the movement of freight typically within a 100 mile radius in cities and/or suburban areas." Third bullet - Original sentence read: "Three (3) miles between starts/stops (typical)." to "Three (3) to thirty (30) miles between starts/stops (typical)." Added Bullet to list - "Annual mileage less than 60,000 miles (95,000 Km)." Under the Typical Vehicle Types section: Changed "City Delivery" to "Pickup and Delivery" Added "Grain Hauler (grain hopper/bottom dump trailers)"</p> <p>Changed in the Line Haul Section: Under the Typical Vehicle Types section: Added to "Grain Hauler", "(grain hopper/bottom dump trailers)"</p> <p>Changed in the Specialized Applications Section: Under the Agriculture - Typical Vehicle Types section: Added "Grain Silage, and Hay Haulers (which load in the field)"</p>

Change Control Log

Change Control Log

Last Revised Date	Description of Clarifications and Updates
March 2012	<p>Changed in the City Delivery Table: The “UltraShift <i>PLUS</i> LAS - 1750 lb-ft. and above. Excludes Clutch and LCIB” section was changed to “UltraShift <i>PLUS</i> LAS - VMS, VXP, MXP & MHP. Excludes Clutch and LCIB” The “UltraShift <i>PLUS</i> LAS - 1850 lb-ft. and above. Excludes Clutch and LCIB. Includes FOM-16310C-LAS” section was removed entirely. Removed Note 11: “FOM-16E310C-LAS is rated at 1850 lb-ft. due to multi-torque feature.” entirely. Note 12 became new Note 11.</p> <p>Changed in the Construction Table: The “UltraShift <i>PLUS</i> VCS, VMS, VXP, VAS & VHP” section was changed to “UltraShift <i>PLUS</i> VCS, VMS, VXP, VAS, VHP & MXP”.</p> <p>Changed in the Specialized Applications Table: Added “Vehicle” to the “Recreational” column header.</p>
January 2012	<p>Changed in the Eaton Service / Aftermarket Parts Warranty Coverage - U.S. and Canada Table: The New or Reman Medium Duty Transmissions had “Parts Only” in the Exceptions Column, this was changed to “Parts and Labor*”.</p>
December 2011	<p>Changed in the Eaton Service / Aftermarket Parts Warranty Coverage - U.S. and Canada Table: Removed vertical columns, “Line Haul Only” and “All Other” Removed “Clutch Service / Remanufactured / Aftermarket parts” row Moved “New, Exchange and Remanufactured Electronics” up two rows Combined Reman Transmissions and Medium Duty Transmissions from the All Other group of rows and made one row called “New or Reman™ Medium Duty Transmissions” Added the words “Heavy Duty” to Reman, FLEX Reman and Reman Glider Kit Transmissions Split the Reman Glider Kit Transmission row into two - separating Standard Warranty from Enhanced Warranty Upgrade.</p> <p><u>Revised Note - 2 from:</u> “The Enhanced Warranty Upgrade for 36 months / Unlimited Mileage (km) applies only to the transmission. To match warranty for the Advantage Clutch™, a 1 year EPP purchase is required for the clutch”</p> <p><u>Revised Note - 3 from:</u> “Reman™ Performance Models 50R sold in the US and Reman™ Performance Models 50C sold in Canada have an 18 month parts and labor warranty. All Reman™ transmission warranty covers “Parts and Labor” for warrantable repairs performed per the OEM Approved Channel.”</p>
November 2011	<p>Changed in the Line Haul Table: <u>Transmissions -</u> UltraShift <i>PLUS</i> LAS - 1850 lb-ft. and above. to remove FOM-16E310C-LAS and move it to: <u>Transmissions -</u> All Models: 7, 9, 10 Speeds(1750 lb-ft. and below)</p>

Last Revised Date	Description of Clarifications and Updates
October 2011	<p>Changed in the City Delivery Table: <u>Transmissions -</u> UltraShift Plus LAS - 1850 lb-ft and above from 5 years/500,000 miles to 5 years / 750,00 miles warranty coverage</p> <p>Changed in the Line Haul Table: <u>Transmissions -</u> UltraShift Plus LAS - 1850 lb-ft and above from 5 years/500,000 miles to 5 years / 750,00 miles warranty coverage</p>
September 2011	Revised Cover for new September 2011 Warranty Changes Release
July 2011	<p>Added into the City Delivery table: <u>Clutches -</u> VAS and VHP to the UltraShift PLUS VCS Clutch & LCIB section</p> <p><u>Transmissions -</u> VAS and VHP to the UltraShift PLUS VCS section</p> <p>Added into the Construction table: <u>Transmissions -</u> VAS and VHP to the UltraShift PLUS VCS, VMS & VXP section</p> <p>Added into the Heavy Haul table: <u>Transmissions -</u> VHP to the UltraShift PLUS VXP, MXP & MHP section</p> <p>Added into the Line Haul table: <u>Clutches -</u> VAS to the UltraShift PLUS LAS Clutch & LCIB section VHP to the UltraShift PLUS MHP & MXP Clutch and LCIB section</p> <p><u>Transmissions -</u> VAS to the UltraShift PLUS LAS - 1750 lb-ft and below section VAS to the UltraShift PLUS LAS - 1850 lb-ft and above section VHP to the UltraShift PLUS MXP & MHP section</p> <p>Added into the Logging table: <u>Transmissions -</u> VHP to the UltraShift PLUS VCS, VMS & VXP section</p> <p>Added into the Oil Field table: <u>Transmissions -</u> VHP and VAS to the UltraShift PLUS VCS, VMS & VXP section</p> <p>Added into the Refuse table: <u>Transmissions -</u> VHP and VAS to the UltraShift PLUS VCS, VMS & VXP section</p> <p>Added into the Specialized Applications table: Transmission UltraShift PLUS Models - <u>Transit Coach:</u> VHP and VAS to the MXP, MHP & LAS section</p> <p><u>Recreational:</u> VHP and VAS to the MXP, MHP & LAS section</p>
July 2011	Edited typo in Warranty Terms for the Eaton Service / Aftermarket Parts Warranty Coverage - U.S. and Canada Only section from Se to See.

Change Control Log

Last Revised Date	Description of Clarifications and Updates
June 2011	Edited the word “PLans” to “Plans” in Note 1 of the “Warranty Coverage for Vehicles Meeting Vocation Definition Applications” sections and changed Warranty Terms for the Eaton Service / Aftermarket Parts Warranty Coverage - U.S. and Canada Only section.
February 2011	UltraShift HV Models (F-5505B-DM3, F-6505b-DM3, FO-5506B-DM3 & F06506-DM3) added to City Delivery Warranty Section.
	UltraShift HV Models(FO-6406B-DM3, FO-6506B-DM3, F-6405B-DM3 & F-6505B-DM3) added to the Line Haul Warranty Section.
October 2010	Clutch Product: Added Warranty coverages for Advantage Series and EverTough Brands.
	Added hybrid model to Specialized applications.
July 2010	Refuse Vocation Added Warranty coverage for Hydraulic Launch Assist (HLA).
February 2010	Changed UltraShift PLUS clutch warranty for the MHP / MXP transmission in the line haul vocation from 3 Year / Unlimited miles to 3 Year / 350,000 Mileage.

Change Control Log

Last Revised Date	Description of Clarifications and Updates
January 2010	<p><u>All Vocations</u> Added the 'Low Capacity Inertia Brake' to each of the Vocations approved for the UltraShift PLUS Clutch. The coverage is aligned to the UltraShift PLUS Clutch for the associated UltraShift PLUS transmission model.</p> <p><u>City Delivery Vocation</u> Increased the UltraShift PLUS - LAS transmission standard warranty coverage from a 3 Year / Unlimited Mileage warranty to: Transmission UltraShift PLUS - LAS - 1750 lb-ft. and below (Note 1) (Excludes clutch and LCIB) 5 years / 750,000 Mileage UltraShift PLUS - LAS - 1850 lb-ft. and above; Includes FOM-16E310C-LAS (Note 1 & new Note) (Excludes clutch and LCIB) 5 years / 500,000 Mileage New Note: Note # FOM-16E310C-LAS is rated at 1850 lb-ft. due to multi-torque feature. Clarified the UltraShift PLUS - LAS Clutch warranty from 3 years / Unlimited mileage to a 3 Year / 350,000 Mile coverage.</p> <p><u>Line Haul Vocation</u> Restated the UltraShift PLUS - LAS transmission standard warranty coverage from 5 year / 750,000 miles to: Transmission UltraShift PLUS - LAS - 1750 lb-ft. and below (Note 1) (Excludes clutch and LCIB) 5 years / 750,000 Mileage UltraShift PLUS - LAS - 1850 lb-ft. and above; Includes FOM-16E310C-LAS (Note 1 & new Note) (Excludes clutch and LCIB) 5 years / 500,000 Mileage New Note: Note # FOM-16E310C-LAS is rated at 1850 lb-ft. due to multi-torque feature. Clarified the UltraShift PLUS - LAS Clutch warranty from 3 years / Unlimited mileage to a 3 Year / 350,000 Mile coverage.</p> <p><u>Off-Highway Vocation</u> Increased the UltraShift PLUS - VCS, VMS, VXP Transmission, Clutch and Low Capacity Inertia Brake coverage from a 1 Year / Unlimited Mileage to a 2 Year / Unlimited Mileage.</p> <p><u>Construction, Mining, Oil Field, Refuse Vocation</u> Removed the "Maximum Grade percent" limitation from the Vocational Definition. Maximum Grade will be determined by the Engineering Application Approvals.</p>

Change Control Log

Last Revised Date	Description of Clarifications and Updates
September 2009	<p>Changed reference of Eaton Truck Components Division to Eaton Truck Business Group</p> <p>Added new Hybrid Transmission models and notes (EH-8E306A-T, EH-6E606B-CD, EH-8E306A-UPG)</p> <p>Removed Hybrid Transmission models (EH-8E306A, EH8E306A-UP) from City Delivery Vocation</p> <p>Removed Hybrid Transmission models (EH-8E306A-U, EH-8E306A-CD) from construction Vocation</p> <p>Added Ultrashift PLUS transmission model family (Transmission and clutch products)</p> <p>Updated transmission note #1 on all vocations from “Note 1: All automated transmission models require the use of a Roadranger approved synthetic lubricant. Transmission must meet and have Eaton application approval. Refer to TCMT-0021.”</p> <p>Removed the Extended Protection Plan Matrix from the Warranty Guide. EPP Matrix is available at Roadranger.com/Warranty tab.</p> <p>Eaton Service Parts Warranty - added note to clarify labor. * Labor reimbursed for repairs at OEM approved repair facilities</p>
March 2009	Update pricing on pg. 30
April 2008	Updated Eaton Service/Aftermarket Parts Warranty Coverage to include Clutch Service/Aftermarket parts information.
Jul 2007	Updated Service/Aftermarket Parts Warranty Coverage to specify REMAN Performance Models.
Apr 2007	Updated Purchased Warranty Matrix and Warranty Registration Form

Change Control Log

Last Revised Date	Description of Clarifications and Updates
Dec 2006	<p>Clutch Warranty listed for all vocations</p> <ul style="list-style-type: none"> • Change From: 1 year / 100,000 (160,000 km) • Change To: Contact OEM for Warranty Coverage • Rational: This change is necessary to eliminate confusion for the dealer and customers as the clutch warranty varies by OEM and chassis. <p>Clutch DM Models Warranty (Line Haul Vocation Only)</p> <ul style="list-style-type: none"> • Change From: 1st year - Parts and Labor, 2nd and 3rd year - Parts Only • Change To: 1st year / Unlimited Miles - Parts and Labor, 2nd and 3rd year / 300,000 mi (480,000 km) - Parts Only • Rational: Clarify the mileage limit for DM Warranty that was communicated to the OEM on the product introduction and sales literature. <p>Purchased Warranty Matrix</p> <ul style="list-style-type: none"> • Change From: A vehicle may not be registered if it has exceeded three (3) years or thirty-six (36) months of service. • Change To: A vehicle or component may not be registered if it has exceeded: <ul style="list-style-type: none"> • Clutch - the basic published OEM clutch warranty. • Transmission - the time and mileage of the Eaton published standard warranty. • Rational: To clarify and limit the interrupted warranty coverage for a customer who elects to purchase warranty outside the first year of operation.

Change Control Log

Change Control Log

Last Revised Date	Description of Clarifications and Updates
Nov 2005	<p>Added Change Control Log</p> <p>Further clarified the Roll Off application within Refuse (for trucks built prior to November 1, 2004) and Construction (for trucks built after November 1, 2004)</p> <p>Added "Other Important Resources"</p> <p>All Vocations</p> <ul style="list-style-type: none"> • Clarified the "Includes" and "Excludes" of the following models where appropriate <ul style="list-style-type: none"> • Fuller Ultrashift LST (DM) • Fuller Ultrashift LHP • Modified Note 1 to include "Transmissions must meet and have Eaton application approval." • Added FS Transmission Series "wear coverage" note were applicable to appropriate vocation <p>Line Haul Vocation</p> <ul style="list-style-type: none"> • Transmission <ul style="list-style-type: none"> • Added the RTO-18910B-AS2 (Note 1) model transmission @ 5 years / 500,000 miles (800,000 km) • Added the RTLO/RTL0M-16913L-DM3 (Notes 1 & 12) model transmission @ 5 years / 500,000 miles (800,000 km) • Multispeed note: "Includes Autoshift (AS), Top 2 models for 13, 18 speed models (Note 1) • Added Note 12 "Ultrashift transmission warranty less the DM clutch (see 'Clutch" for DM warranty). <p>Purchased Warranty Matrix</p> <ul style="list-style-type: none"> • Requirements, Limitations, and Exclusions <ul style="list-style-type: none"> • Added note "Dealers / Purchaser shall be responsible for verifying the engine torque does not exceed the torque capacity of the drivetrain." • All Transmissions Matrix and the Purchase Warranty Registration Form <ul style="list-style-type: none"> • Added the Canadian extended warranty premium pricing for premium after 12 months in service. • Heavy Duty Transmission Models matrix <ul style="list-style-type: none"> • Added "Note 1: All transmission models require the use of a Roadranger approved synthetic lubricant. Transmissions must meet and have Eaton application approval. Refer to TCMT-0021."

Last Revised Date	Description of Clarifications and Updates
Nov 2005	<ul style="list-style-type: none"> • Heavy Duty Automated Transmission Models matrix (Added the following models to the Matrix) <ul style="list-style-type: none"> • Fuller Ultrashift LST (DM) • Fuller Ultrashift LHP • Added “Note 1: All automated transmission models require the use of a Roadranger approved synthetic lubricant. Transmissions must meet and have Eaton application approval. Refer to TCMT-0021.” • Medium Duty Automated Transmission Models matrix (Added the following models to the Matrix) <ul style="list-style-type: none"> • Fuller Ultrashift HP (ASW) • Added “Note 1: All automated transmission models require the use of a Roadranger approved synthetic lubricant. Transmissions must meet and have Eaton application approval. Refer to TCMT-0021.” • Purchase Warranty Registration Form <ul style="list-style-type: none"> • Reduced the information required
Nov 2004	<p>Vocation Definitions</p> <ul style="list-style-type: none"> • Under Typical Vehicle Types - “Roll Off” was changed from “Refuse Vocation” to “Construction Vocation.” The construction definition must apply for coverage of Roll Off within the construction vocation. (For trucks built after November 1, 2004.) <p>Product Time and Mileage Coverage by Vocation</p> <ul style="list-style-type: none"> • Added the following components and sub-components for clarification of communication (all have been previously communicated to the OEM’s regarding warranty coverage): <ul style="list-style-type: none"> • Hydraulic Actuator • Oil-To-Water Heat Exchanger • Added model numbers to the components to identify actual component coverage. <p>Service / Aftermarket Parts for Eaton Transmission Products</p> <ul style="list-style-type: none"> • Added specifics to product coverage matrix that is communicated on aftermarket publications for REMAN transmission and Eaton Canadian Rebuilt Transmission. <p>Purchased Warranty</p> <ul style="list-style-type: none"> • Added purchased warranty information (Requirements, Limitations, Exclusions, Component and Price Matrix and form) from “Purchased Warranty Registration TCWY-0750.” Only the form will be available within the TCWY-0750 for the convenience of dealers. Both forms are identical. <p>Relocated the Eaton Corporation - Truck Division Product Warranty Statements to the Roadranger Warranty Manual (TCWY-0600).</p>

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In Mexico, call 001-800-826-4357.