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 Availability: ISIS, Bus ISIS, NotSIR Revision: 1
 Major System: ELECTRIC VEHICLE Created: 7/30/2025
 Current Language: English Last Modified: 8/13/2025
 Other Languages: NONE Author: Joseph Hampton
 Viewed: 84

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Coding Information

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Title: Driveline Vibration w/SPL170

Applies To: 2021 - 2025 International® IC Bus® Electric CE Series

CHANGE LOG

Please refer to the change log text box below for recent changes to this article:

08/13/2025 - Initial Article Release

DESCRIPTION

Models Involved: International® IC Bus® Electric CE Series w/feature 0006DGL built between 6/7/2021 and 6/25/2025. (DRIVELINE SYSTEM {Dana Spicer} Service Free SPL170, for 4x2/6x2)

Defect Description: Certain International® IC Bus® Electric CE Series school buses may experience road vibration induced by an imbalance in the driveline. This concern may be corrected by retrofitting to the SPL100 drive line which reduces driveline weight with improved driveline balance specifications.

SYMPTOMS

Diagnostic Trouble Code(s) & Dashboard Indicator Light(s):

DTC/Light	Description
N/A	N/A

Customer Observations or Concerns:

Perceptible vibration in the cabin of the bus, common at speeds from 45mph to 60+mph. The vibration may be audible and/or felt throughout the cabin of the bus and may become more prevalent as vehicle speed increases.

SPECIAL TOOLS / SOFTWARE

Tool Description	Tool Number	Comments	Instructions
N/A			

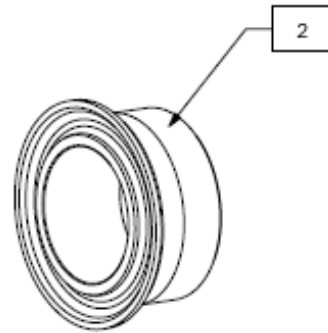
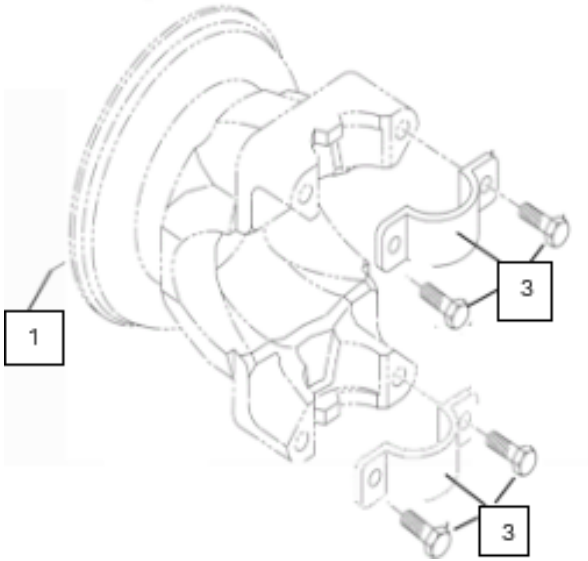
SERVICE PARTS INFORMATION

Service Parts for the SPL100 retrofit work will be ordered according to vehicle Rear Axle Feature Coding. SWB Buses built with Feature Code 0014AKT or 0014AKR AXLE, REAR, {Dana Spicer 21060SH} 21,000-lb Capacity will require different components at the differential than LWB Buses built with Feature Code 0014ERW AXLE, REAR, {Dana Spicer S23-172F} 23,000-lb Capacity. See Below.

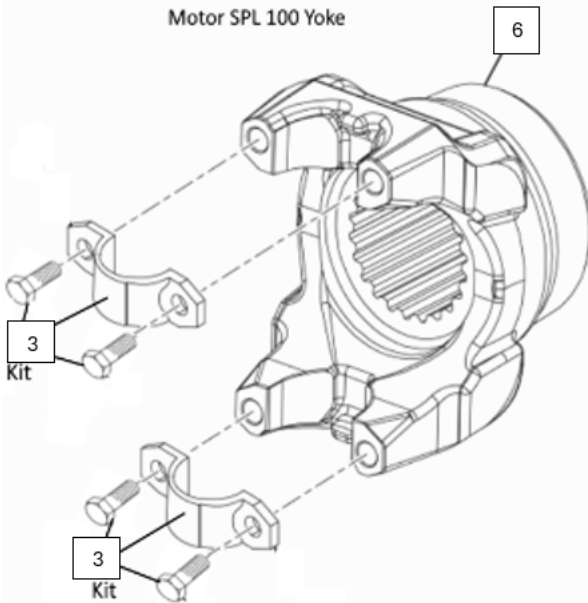
Item #	Part Number	0014AKT / 0014AKR Kit Description	Quantity Required	Not
1	4110949C91	DRIVE SHAFT END YOKE, SPL100 SERIES, 39 SPLINE COUNT, BS YOKE STYLE	1	

2	4252904C1	SPACER, MOTOR YOKE	1	
3	1685128C91	KIT, U JOINT STRAPS AND BOLTS	2	P/N
4	DS127589	NUT, PINION FLANGE, DIFFERENTIAL, M36 X 1.5 (55mm Socket)	1	
5	2527114C91	MOTOR YOKE NUT HW-2030 W/ COTTER PIN	1	
6	4657334C1	YOKE, SLIP JOINT, SPL100 MOTOR	1	
7	410LTJ0760	SHAFT, DRIVE LINE PROP, PROP SHAFT (217" Wheel Base)	1	DS

Differential SPL100 Yoke

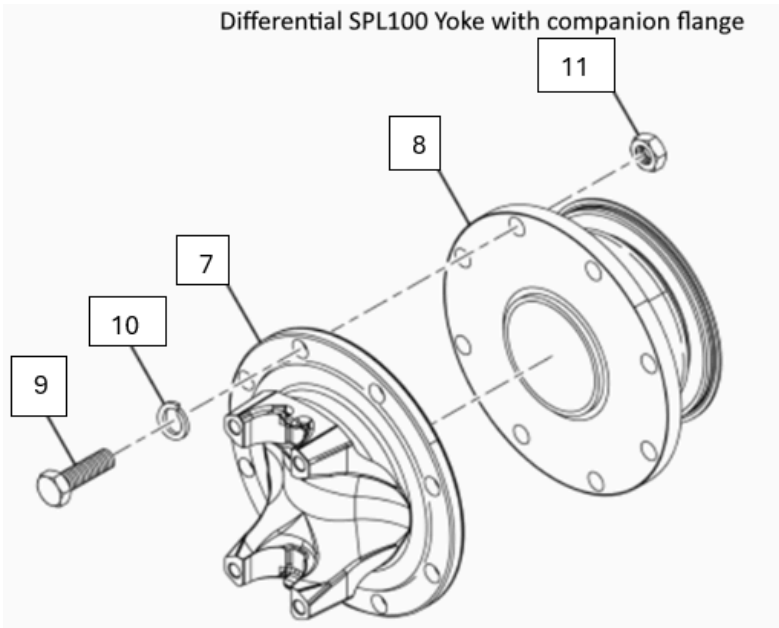
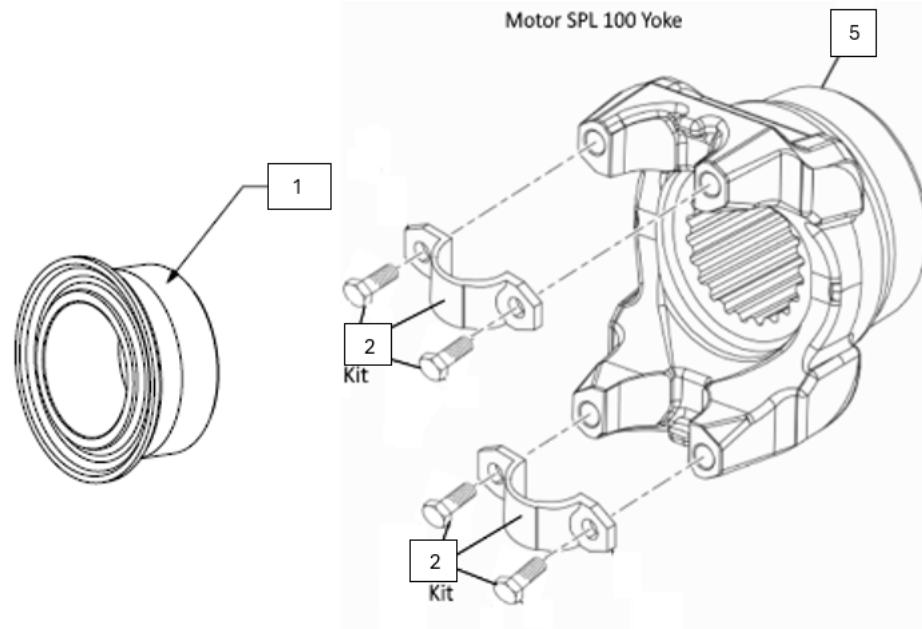


Motor SPL 100 Yoke



Item #	Part Number	0014ERW Kit Description	Quantity Required	Notes
1	4252904C1	SPACER, MOTOR YOKE	1	
2	1685128C91	KIT, U JOINT STRAPS AND BOLTS	2	
3	2598104C1	NUT (Axle Yoke Nut)	1	
4	2527114C91	MOTOR YOKE NUT HW-2030 W/ COTTER PIN	1	
5	4657334C1	YOKE, SLIP JOINT, SPL100 MOTOR	1	
6	410LTJ0760	SHAFT, DRIVE LINE PROP, PROP SHAFT (254" & 276" Wheel Bases)	1	DS100DS
7	2527001C1	FLANGE, YOKE	1	
8	2527002C1	FLANGE, COMPANION DRIVE SHAFT	1	

9	2527003C1	BOLT, DRIVE SHAFT	8	
10	2527004C1	WASHER, LOCK	8	
11	2527005C1	NUT, DRIVE SHAFT	8	



DIAGNOSTIC STEPS

WARNING! To prevent personal injury and / or death, or damage to property, park vehicle on hard flat surface, turn the vehicle off, set the parking brake, and install wheel chocks to prevent the vehicle from moving in both directions.

WARNING! To prevent personal injury and / or death, always wear safe eye protection when performing vehicle maintenance.

WARNING! To prevent personal injury and / or death, NEVER service a high voltage vehicle without completing high-voltage safety training. Before working on vehicle, read and obey all High-Voltage Safety and Lock-Out Tag-Out procedures and information.

WARNING! To prevent personal injury and / or death, wear and use approved high-voltage Personal Protective Equipment (PPE) when near a high-voltage electric vehicle. Inspect PPE before use. Do not use gloves or other PPE with expired

dates, holes, cracks, or damage. NEVER touch energized orange highvoltage cables or high-voltage components without wearing approved highvoltage PPE.

WARNING! To prevent personal injury and / or death, read all information in the Safety Information and High-Voltage Safety sections of the service manual.

Step	Action	Decision
#1	DIAGNOSTIC: Are the U-Joints properly seated in yokes and are all drive line components properly secured, clean of debris, and undamaged?	Yes. Move to Step 2.
		No. Make repairs as needed and retest for vibration.

Step	Action	Decision
#2	DIAGNOSTIC: Has Ride Height been checked and verified to be within vehicle spec?	Yes. Move to Step 3. No. Adjust ride height to proper specification and retest for vibration. See IK1400005 - Driveline Troubleshooting Procedures for additional information.
		NOTE: Refer to IK1400039 - Flat Floor Bus - Ride Height Specification for vehicles with Feature

Step	Action	Decision
#3	DIAGNOSTIC: Have drive line angles and runout been checked and verified to be within vehicle spec?	Yes. Proceed with SPL100 retrofit. No. Perform work to adjust driveline angles and/or run out to vehicle specification and retest for Driveline Information Center and Troubleshooting Procedures for additional information.

REPAIR STEPS

Refer to Service Manual for Component repair instruction.

For torque values concerning updated components, see tables below for specific component torque values:

0014AKT / 0014AKR Torque Values		
1685128C91	KIT, U JOINT STRAPS AND BOLTS	45-60 LB FT (61-81 Nm)
DS127589	NUT, PINION FLANGE, DIFFERENTIAL, M36 X 1.5 (55mm Socket)	575-703 LB FT (779-953 Nm)
2527114C91	MOTOR YOKE NUT HW-2030 W/ COTTER PIN	66-81 LB FT (90-110 Nm)

0014ERW Torque Values		
4737466C91	FLANGE, TRUNNION BRG, SPL100 SPICER W/SLINGER W/ADAPTER	40-48 LB FT (54-65 Nm)
1685128C91	KIT, U JOINT STRAPS AND BOLTS	45-60 LB FT (61-81 Nm)
2598104C1	NUT (Axle Yoke Nut)	800-1000 LB FT (1084-1355 Nm)

2527114C91

MOTOR YOKE NUT HW-2030 W/ COTTER PIN

66-81 LB FT (90-110 Nm)

WARRANTY INFORMATION

Warranty Claim Coding:

Refer to the [Warranty Coding Manual](#) for Group and Noun Codes.

Standard Repair Time(s):

Refer to the [SRT Manual](#) for Repair Times

OTHER RESOURCES

[Master Service Information Site](#)

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