

DRIVE SHAFT AND AXLE

4110-01

GENERAL INFORMATION

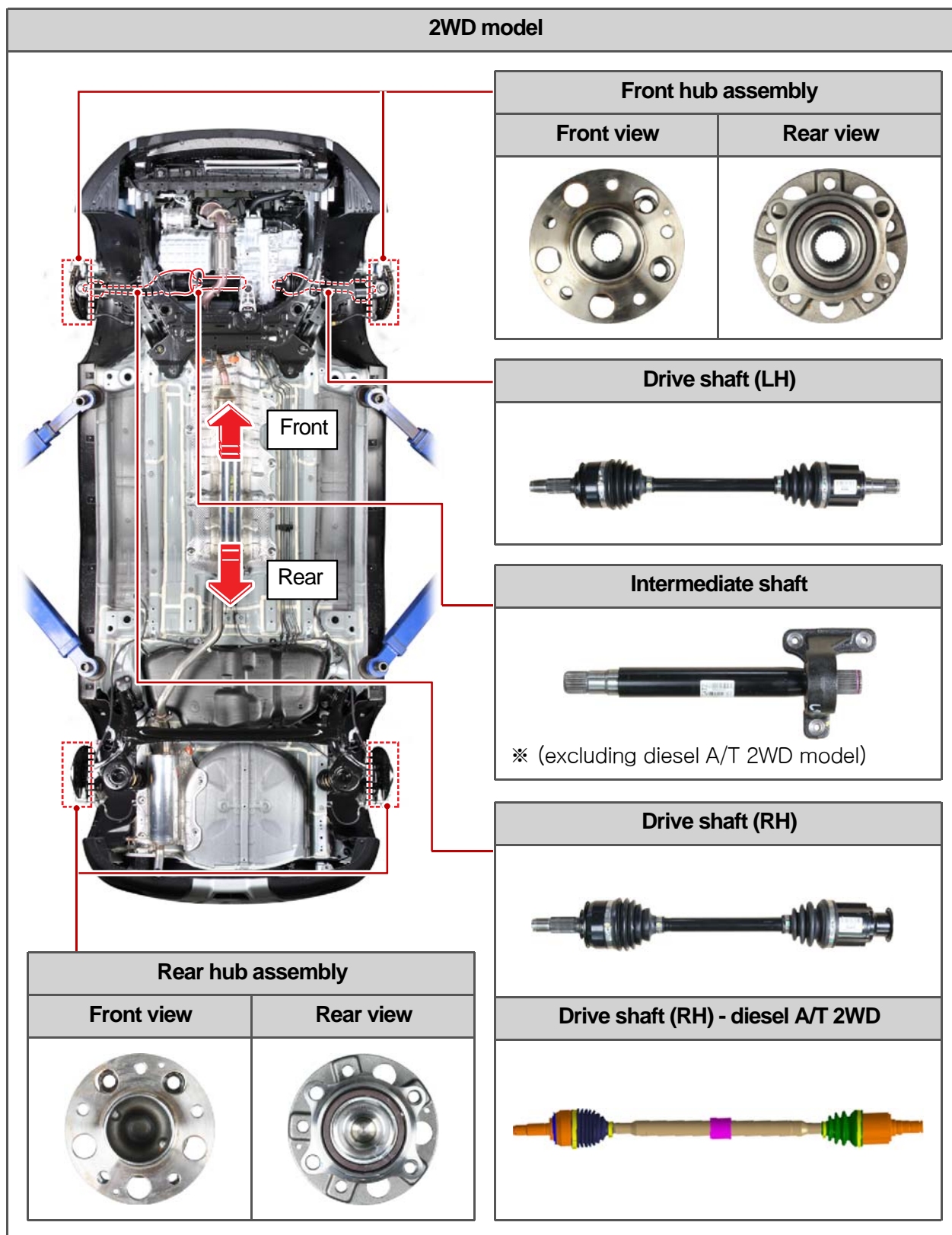
1. SPECIFICATIONS

Category		Items		Specifications
Common for 2WD and AWD	Front drive shaft	Joint type		Inner: Tripod joint Outer: Ball joint
		Max. allowed angle		Inner: 23° Outer: 46°
		Compensation for bending angle	DSL-AT (2WD)	Non-same length shaft (Hollow shaft)
			Others	Same length shaft
Dedicated AWD	Rear drive shaft	Joint type		Inner: Tripod joint Outer: Ball joint
		Max. allowed angle		Inner: 23° Outer: 46°
	Rear differential carrier	Type		Split axle type (IRDA)
		Reduction gear type		Hypoid gear
		Reduction gear ratio		2.533
		Diameter of ring gear		Φ145mm
		Oil type		Hypoid gear oil (SAE 80W/90, API GL-5)
		Pinion offset		22mm
		Hypoid gear backlash		Max 0.15mm
		Differential gear backlash		Max 0.05mm
		Air breather type		Built-in type

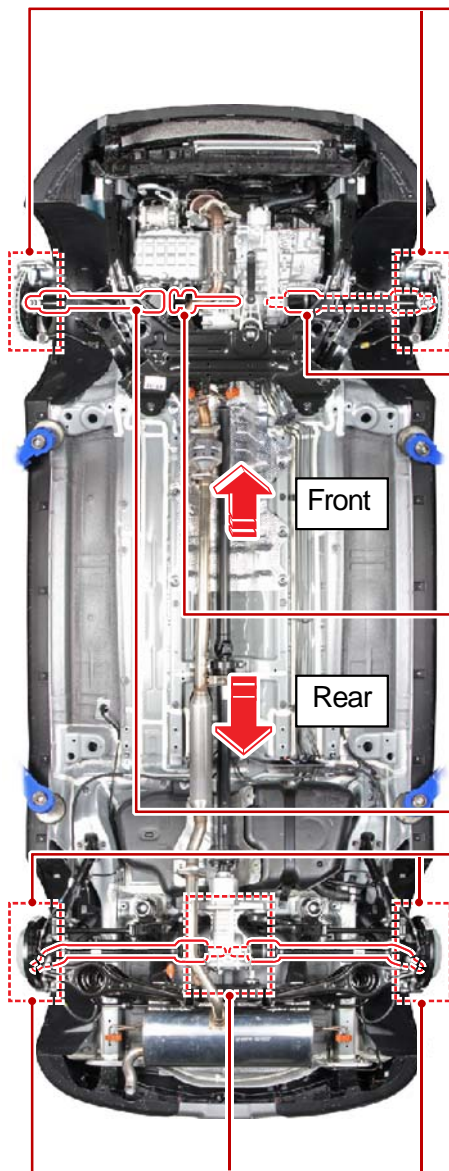
Modification basis	
Application basis	
Affected VIN	

OVERVIEW AND OPERATING PROCESS

1. COMPONENTS



AWD model



Front hub assembly

Front view



Rear view



Drive shaft (LH)



Intermediate shaft



Drive shaft (RH)



Rear hub assembly

Front view



Rear view



Rear axle



Rear drive shaft (RH)



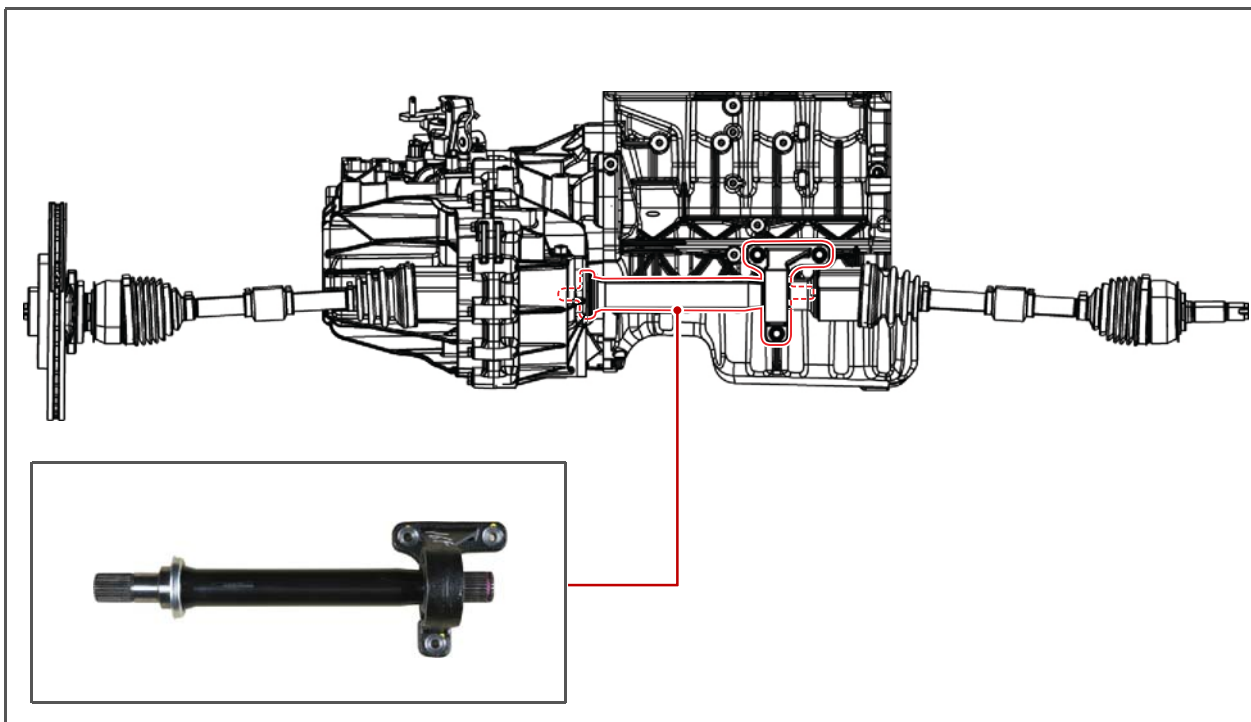
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2. TORQUE STEER

Torque steer is a condition in which a vehicle pulls to either side because of an inequality of traction between the left and right driving wheels when a large torque is applied to the front wheels of a FWD or 4WD vehicle.

Especially for a FWD vehicle, this mechanical condition can cause the steering effect because of the output torque (rotational force) produced by the gyroscope. This rotational force is due to the difference in distance between the left/right front wheels and the transaxle, which leads to the change of the shaft bending angle.

To prevent this, the intermediate shaft, called equivalent length shaft, is employed so that the bending angle and the length are kept constant for both sides.



NOTE

Gyroscope: Gyroscope is a device consists of a spinning mass like a top, usually mounted on a gimbal so that its axis can turn freely in any directions and thereby maintain its orientation regardless of any movement of the base.