

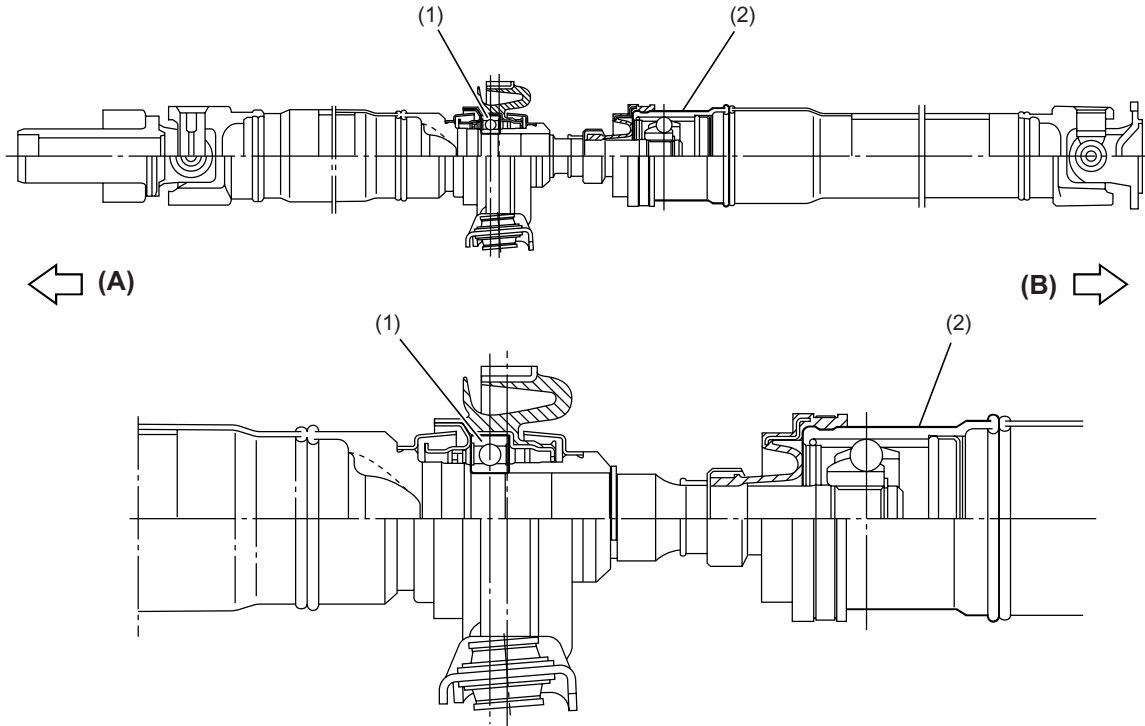
# **DRIVE SHAFT SYSTEM**

# PROPELLER SHAFT

## DRIVE SHAFT SYSTEM

### 1. Propeller Shaft

To reduce noise, constant velocity joints are used on the propeller shafts. The center joint is a compact and small EDJ (High Efficiency Compact Double Offset Joint) type that can extend and retract in axial directions.



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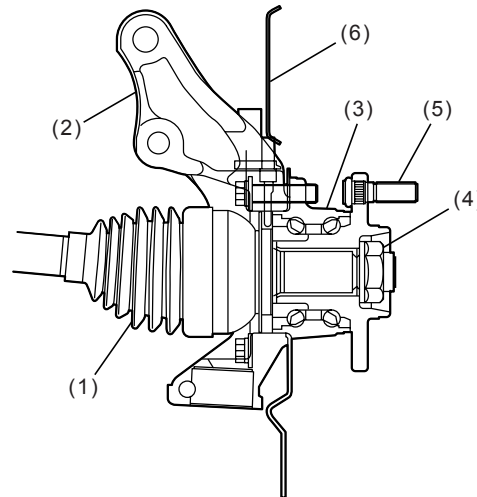
- (1) Center bearing
- (2) EDJ

- (A) Transmission side
- (B) Rear differential side

## 2. Front Axle

### A: GENERAL

- A double-rowed angular type ball bearing that features small rolling friction is used.
- The bearing is structured as a hub unit bearing where one of its bearing inner race is integrated with the hub, and features light weight and high rigidity.
- Also, the oil seal is integrated with the bearing.
- The hub unit, housing and the disk cover, which is sandwiched between them are held together with four bolts.
- To reduce noise from the front drive shafts, the transmission side drive axle shaft and joint are integrated. PTJ (Pillow Tripod Joint) type constant velocity joints are newly used at the transmission side, and light and compact EBJ (High Efficiency Compact Ball Fixed Joint) type joints are used at the wheel side.
- The EBJ's spindle is splined to the hub unit and is fastened with an axle nut which is clinched.



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|------------------|----------------------|----------------|
| (1) EBJ          | (3) Hub unit bearing | (5) Hub bolt   |
| (2) Axle housing | (4) Axle nut         | (6) Disc cover |

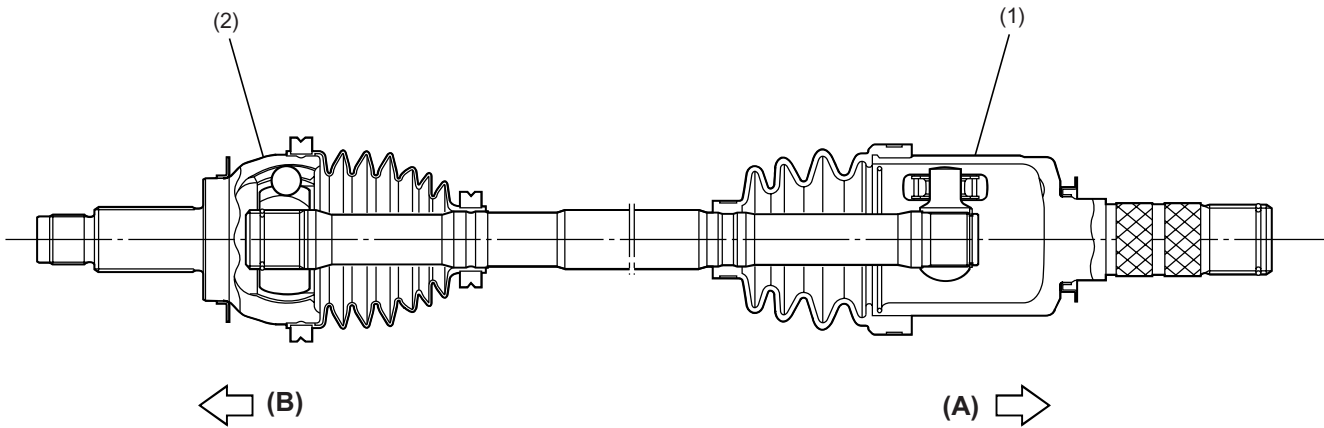
# FRONT AXLE

## DRIVE SHAFT SYSTEM

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### B: FRONT DRIVE SHAFT

- The spline connection between the transmission side axle drive axle shaft and joint is abolished and changed to an integrated structure. PTJ (Pillow Tripod Joint) type joints are newly used at the transmission side, and light and compact EBJ (High Efficiency Compact Ball Fixed Joint) type joints are used at the wheel side.
- The rollers in the PTJ will not change its attitude even when the joint is angled, as they will slide while rolling in axial directions. The rollers will not be effected by the operating angle and will move smoothly inside in axial directions to reduce friction.



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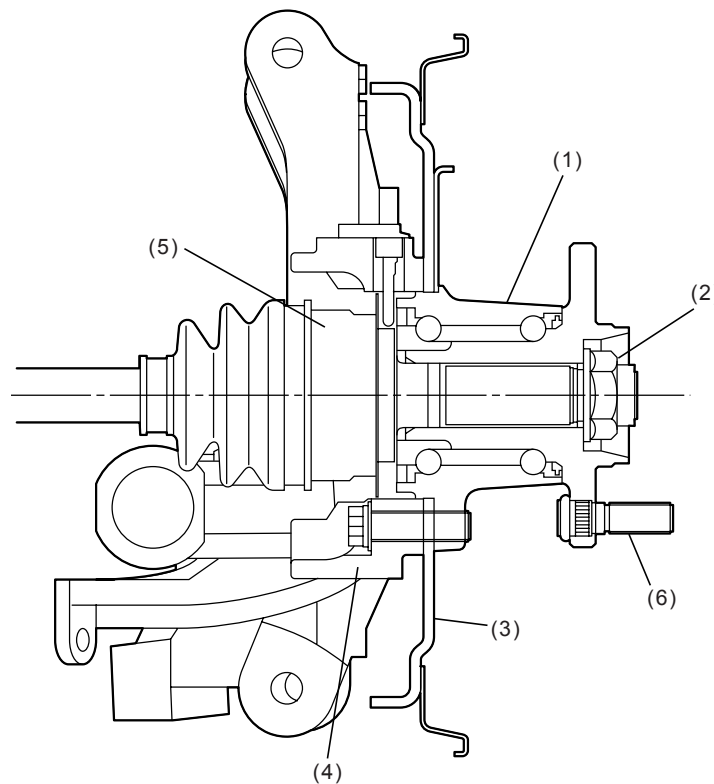
- (1) PTJ
- (2) EBJ

- (A) Transmission side
- (B) Wheel side

## 3. Rear Axle

### A: GENERAL

- A double-rowed angular type ball bearing that features small rolling friction is used.
- The bearing is structured as a hub unit bearing where one of its bearing inner race is integrated with the hub, and features light weight and high rigidity.
- Also, the oil seal is integrated with the bearing.
- The hub unit, rear arm and the brake backing plate, which is sandwiched between them are held together with four bolts.
- The drive shaft's spindle is splined to the hub unit and is fastened with an axle nut which is clinched.
- The disc rotor is held in position by the hub bolts and wheel nuts together with the wheel.



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|-------------------------|-----------------|
| (1) Hub unit            | (4) Rear arm    |
| (2) Axle nut            | (5) Drive shaft |
| (3) Brake backing plate | (6) Hub bolt    |

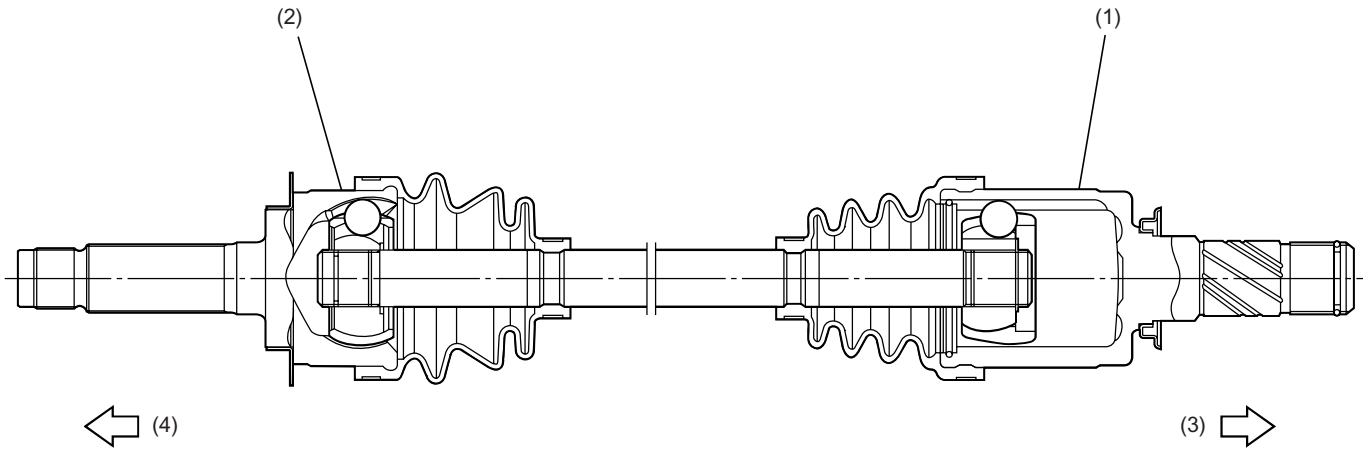
# REAR AXLE

## DRIVE SHAFT SYSTEM

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### B: REAR DRIVE SHAFT

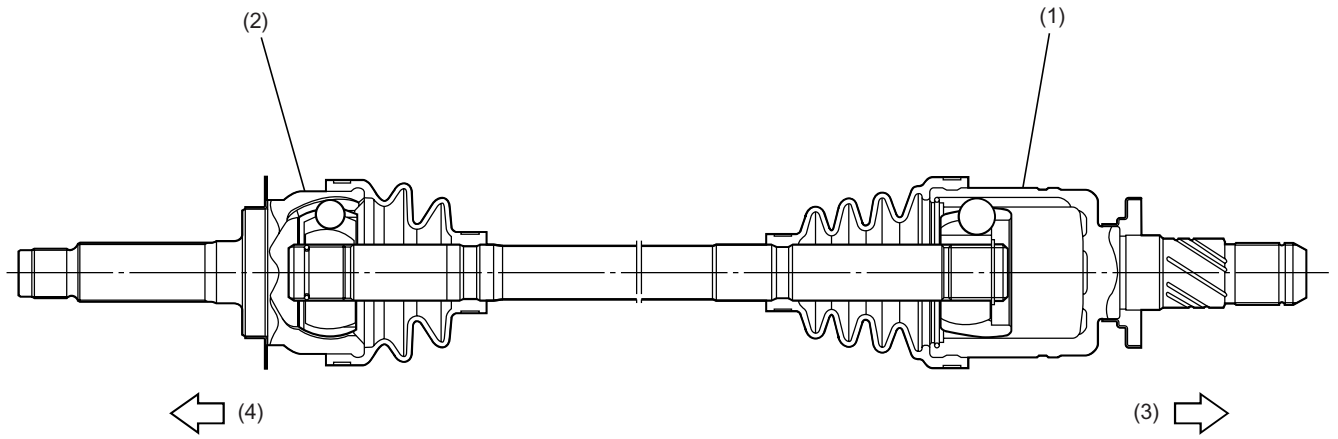
- A double offset joint (DOJ) is used on the differential side of each rear drive shaft.
- A bell joint (BJ) or a high efficiency compact ball fixed joint (EBJ) is used on the wheel side of each drive shaft.
- Rear drive shaft with BJ and DOJ joints



DS-00243

- (1) DOJ
- (2) BJ
- (3) Differential side
- (4) Wheel side

- Rear drive shaft with EBJ and DOJ joints



DS-00244

- (1) DOJ
- (2) EBJ
- (3) Differential side
- (4) Wheel side