



**AXN**  
HEAVY DUTY

# AIR DISC BRAKE

## Repair & Replacement Parts Manual



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## 1. General Information

### Before You Begin

1. Read and understand all instructions and procedures before beginning.
  2. To prevent serious personal injury always wear eye protection and appropriate personal protection equipment.
  3. Use of special tools will aid in performing service and maintenance as well as help avoid serious personal injury and damage to components.
  4. Follow all warning and caution messages in this publication to prevent personal injury and/or damage to components.
  5. Follow your company's guidelines when performing diagnostic, maintenance, service or installation procedures.
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### Pre-assembly Considerations

1. Verify the correct parts have been supplied.
  2. Verify the installation drawings match the parts supplied.
  3. Ride height, hubs, wheel and tire size need to suit the application.
  4. Verify that the correct tools and equipment are available to do the installation.
  5. Only qualified personnel should be in charge of the installation.
  6. For any parts identification and requirements, refer to the engineering drawings for your project.
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**IMPORTANT:**

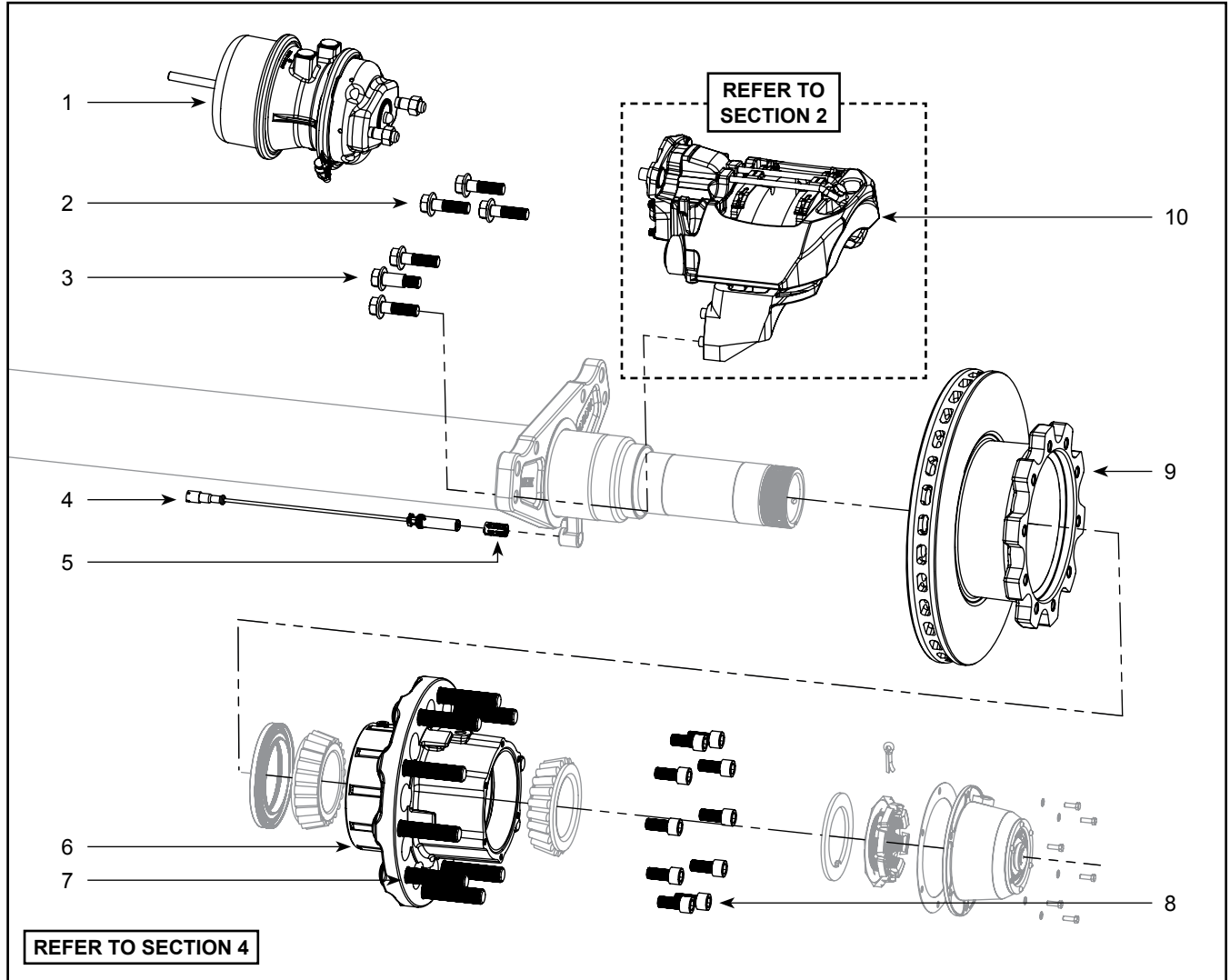
**FOR COMPLETE ASSEMBLY AND  
MAINTENANCE INSTRUCTIONS,  
PLEASE REFER TO THE FOLLOWING  
MANUAL:**

**PAN 22-1 Assembly and  
Maintenance Instructions**

New versions can be found in INFORM under  
[www.wabco-auto.com](http://www.wabco-auto.com).

## 1. General Information (cont.)

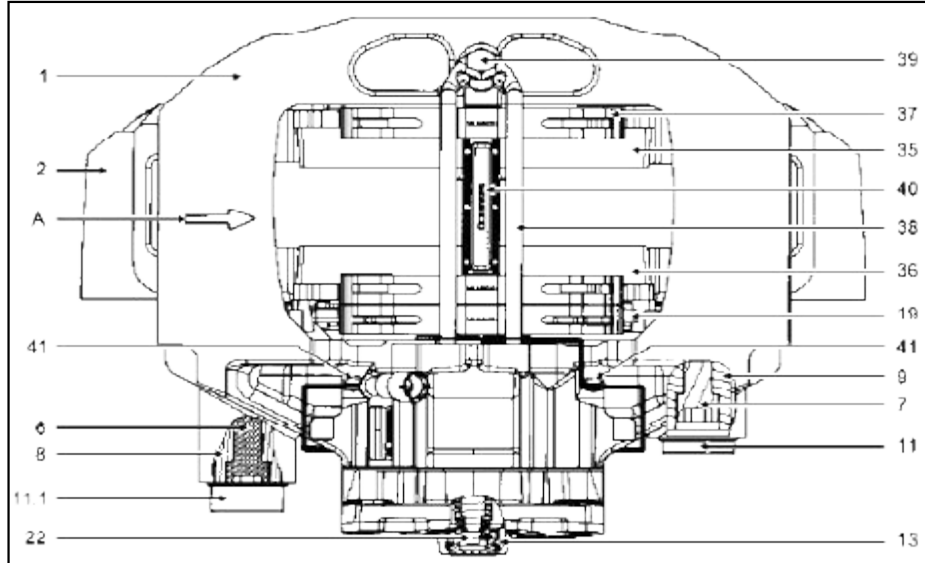
### Exploded View of Air Disc Brake Axle Wheel End Components (Refer to Section 04 for WHEEL END Parts)



- 1 Air brake actuator
- 2 Caliper bolt (standard)
- 3 Caliper bolt (shoulder)
- 4 ABS sensor
- 5 ABS clip
- 6 Hub
- 7 Wheel stud
- 8 Rotor bolt
- 9 ABS Rotor
- 10 Caliper

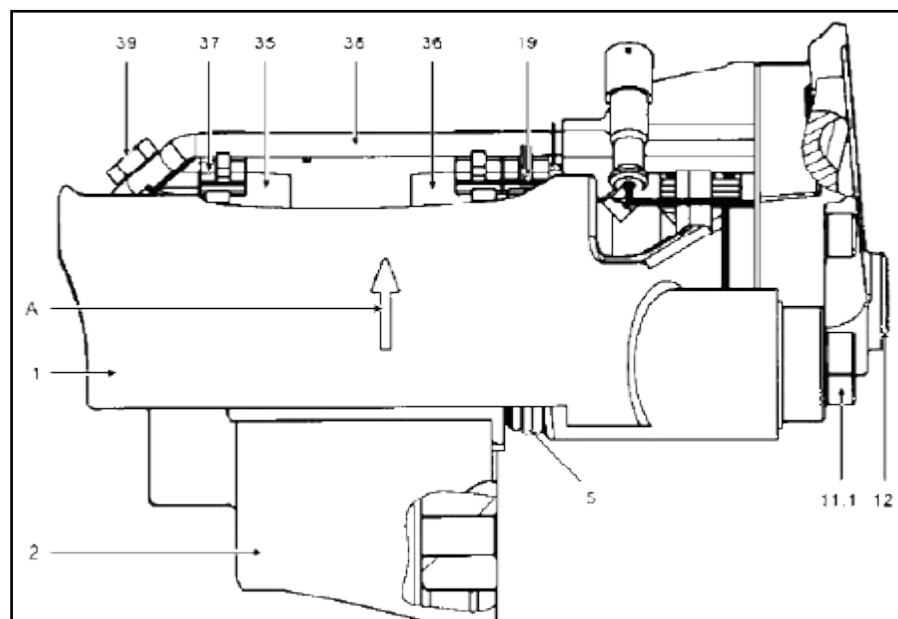
## 2. WABCO PARTS IDENTIFICATION

**Description of the Mechanical Sliding Calliper Disc Brake Components**  
**(Refer to Section 03 for AIR DISC BRAKE Parts)**



### Top view and sectional view (left brake)

1	Brake calliper	11	Closing cover (short)	37	Retaining spring
2	Brake anchor plate	11.1	Closing cover (long)	38	Lining retaining pin
6	Internal hexagon socket screw (long)	13	Protection cap of the adjuster	39	Hexagon screw
7	Internal hexagon socket screw (short)	19	Pressure plate	40	Cable guide with wear indicators
8	Guide pin (long)	22	Hexagon of the adjuster	41	Retaining clip
9	Guide pin (short)	35	Brake lining rim side	A	Forward driving, direction of rotation
		36	Brake lining cylinder side		



### Side view and sectional view (left brake)

1	Brake calliper
2	Brake anchor plate
5	Protection caps for guide pins
11.1	Closing cover (long)
12	Sealing plug for adjuster
19	Pressure plate
35	Brake lining rim side
36	Brake lining cylinder side
37	Retaining spring
38	Lining retaining pin
39	Hexagon screw
A	Forward driving, direction of rotation



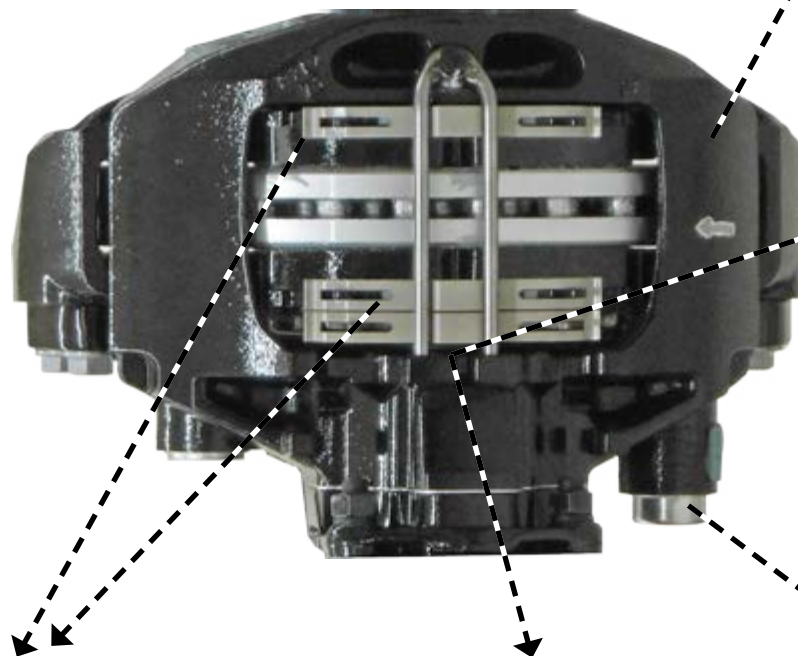
**IMPORTANT:** As referenced in the PAN 22-1 Assembly and Maintenance Instructions. New versions can be found in INFORM under [www.wabco-auto.com](http://www.wabco-auto.com).

## 3. REPLACEMENT PARTS - WABCO Air Disc Brakes

### Overview

Easy maintenance & repair with Optimized Repair Kits.

- A. Brake Pads including hold down system
- B. Pressure Plate
- C. Guiding System
- D. Sealing Kit
- E. AM Caliper



E. AM Caliper



D. Sealing kit



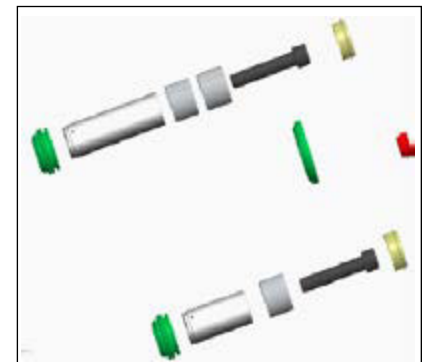
A. Brake Pads including hold down system



B. Pressure Plate



C. Guiding System



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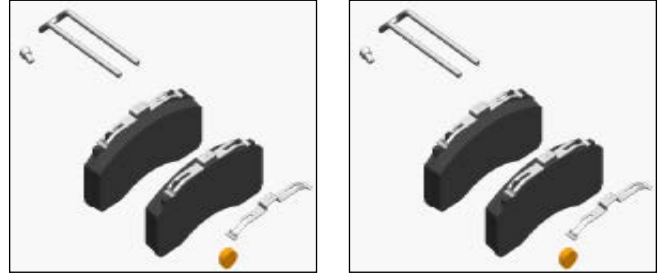


### 3. REPLACEMENT PARTS - WABCO Air Disc Brakes (cont.)

#### A. BRAKE PADS - INCLUDING HOLD DOWN SYSTEM **PN: 12 999 796**

**Content (per Axle):**

- 4 x Pad with fixed hold down spring
- 2 x Hold down hoop
- 2 x Bolt
- 2 x Pressure plate hold down spring
- 2 x Plug



#### B. PRESSURE PLATES **PN: 640 225 926 2**

**Content (per Axle):**

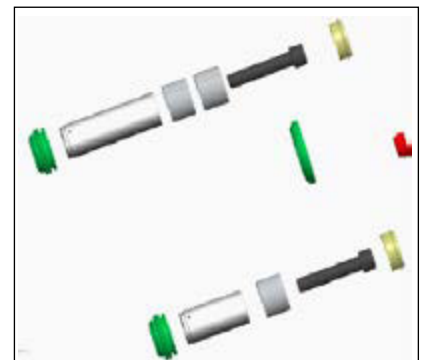
- 1 x Pressure Plate LH
- 1 x Pressure Plate RH



#### C. GUIDING SYSTEM **PN: 640 225 921 2**

**Content (per Brake):**

- 1 x Plug
- 2 x Cover
- 2 x Bolt
- 1 x Seal
- 3 x Bushing
- 2 x Sliding bolt
- 2 x Seal
- 1 x Grease



**IMPORTANT:** As referenced in the PAN 22-1 Assembly and Maintenance Instructions.  
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### 3. REPLACEMENT PARTS - WABCO Air Disc Brakes (cont.)

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#### D. SEAL KIT PN: 640 175 920 2

**Content (per Brake):**

- 1 x Seal
- 1 x Plug
- 1 x Grease



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#### E. AM CALIPER

**PN: 40 225 015 (LH)**

*or*

**PN: 40 225 016 (RH)**

**Content (per Brake):**

- Aftermarket calipers without pads and hold down system



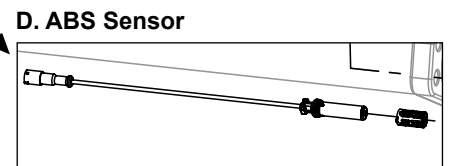
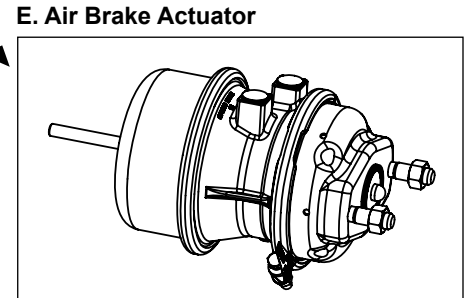
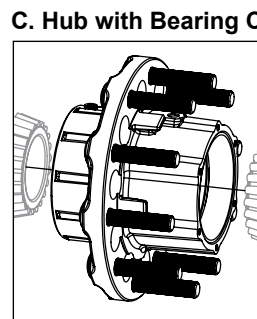
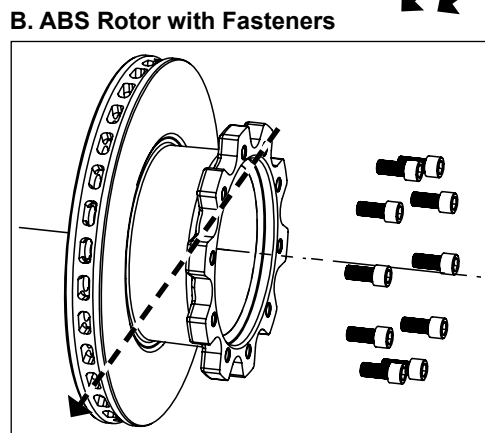
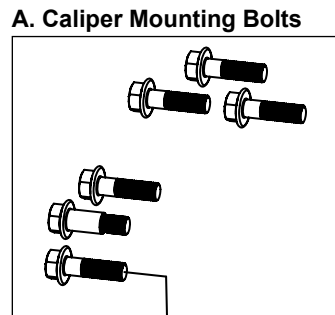
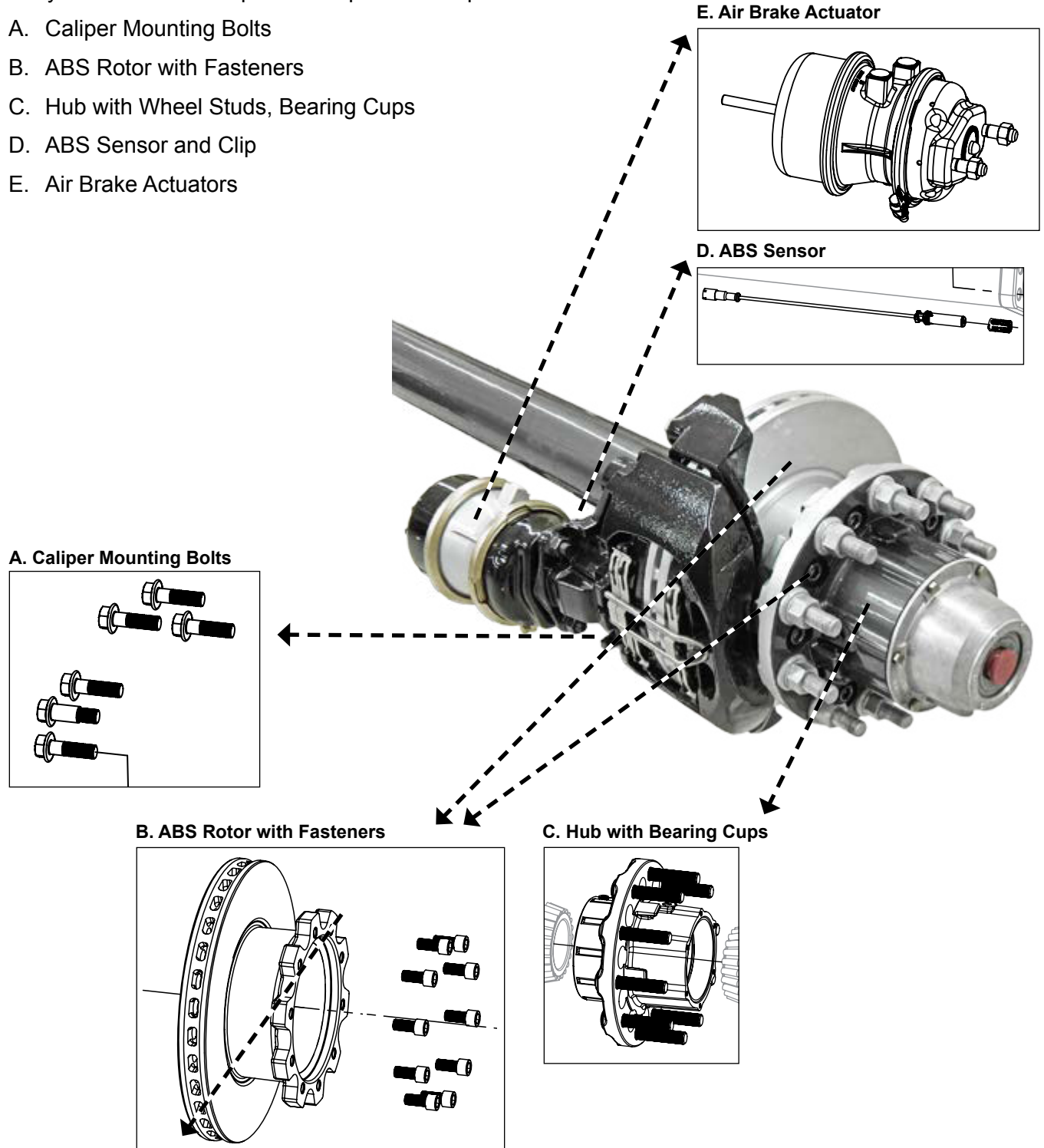
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### 4. REPLACEMENT PARTS - WHEEL-END

#### Overview

Easy maintenance & repair with Optimized Repair Kits.

- A. Caliper Mounting Bolts
- B. ABS Rotor with Fasteners
- C. Hub with Wheel Studs, Bearing Cups
- D. ABS Sensor and Clip
- E. Air Brake Actuators



**⚠ IMPORTANT:** As referenced in the PAN 22-1 Assembly and Maintenance Instructions. New versions can be found in INFORM under [www.wabco-auto.com](http://www.wabco-auto.com).



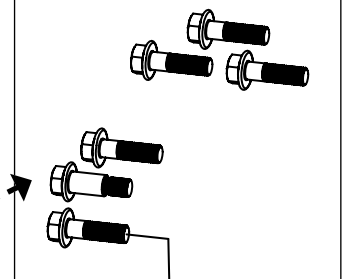
## 4. WHEEL-END REPLACEMENT PARTS - AXN

### A. CALIPER MOUNTING BOLTS PN: AK-DB-CMB-001

**Content (per Brake):**

- 5 x M16 x 1.5 x 55mm Grade 10.9 Flange Head Bolt
- 1 x M16 x 1.5 x 55mm Grade 10.9 Flange Head Shoulder Bolt

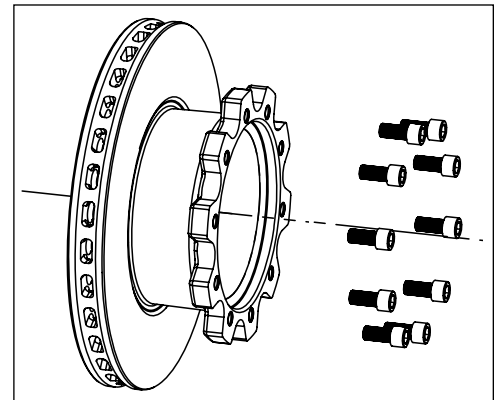
**NOTE: Special  
Shoulder Bolt**



### B. ABS ROTOR w/FASTENERS PN: AK-DB-RF-001

**Content (per Wheel-end):**

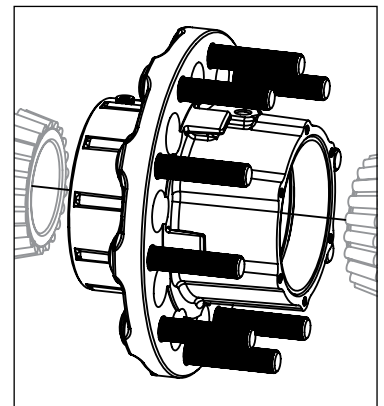
- 1 x 22.5" Rotor (ABS)
- 10 x M16 x 35mm Socket Head Bolt



### C. HUB WITH BEARING CUPS PN: AK-DB-HB-001

**Content (per Wheel-end):**

- 1 x Hub
- 10 x M22x1.5-122.5 Stud (Long, pressed in)
- 2 x Bearing Cup (HM518410)



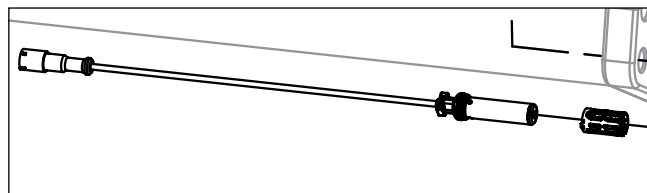
**IMPORTANT:** As referenced in the PAN 22-1 Assembly and Maintenance Instructions.  
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## 4. WHEEL-END REPLACEMENT PARTS - AXN

### D. ABS SENSOR PN: AK-ABS-001

**Content (per Brake):**

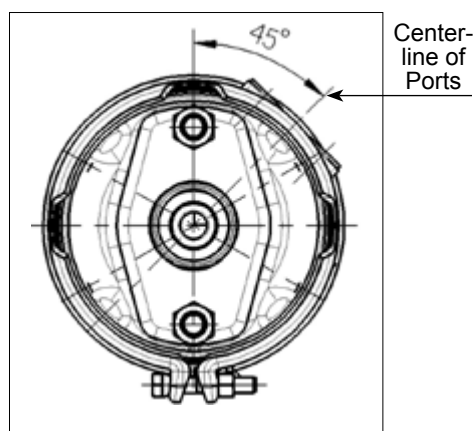
- 1 x ABS Sensor: Wabco, Straight, 1 ft
- 1 x ABS Sensor Clip: Wabco



### E. AIR BRAKE ACTUATORS (45° Clocking)

**WABCO 20/24 PN: 925 380 003 0****WABCO TYPE 20 SERVICE PN: 423 505 074 0****TSE 24/24 PN: 2424TLD2-3721****Content (per Brake):**

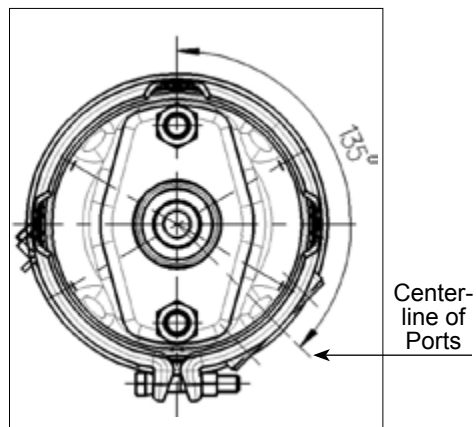
- 1 x Actuator



### AIR BRAKE ACTUATORS (135° Clocking)

**WABCO 20/24 PN: 925 380 004 0****WABCO TYPE 20 SERVICE PN: 423 505 073 0****TSE 24/24 PN: 2424TLD2-3722****Content (per Brake):**

- 1 x Actuator

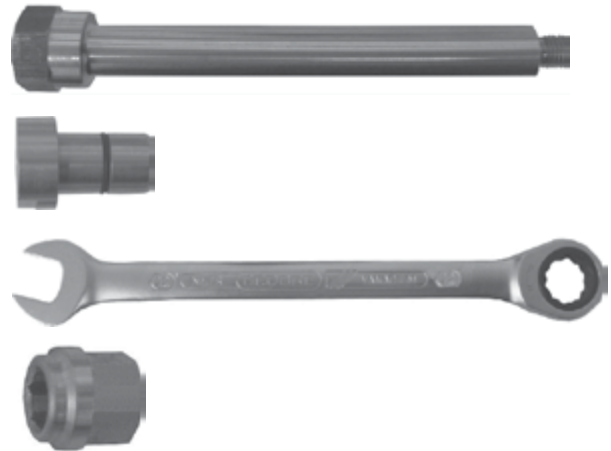
**IMPORTANT:** As referenced in the PAN 22-1 Assembly and Maintenance Instructions.  
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## 4. SERVICE TOOLS

### BASIC SET PN: 640 195 522 2

**Content (per Set):**

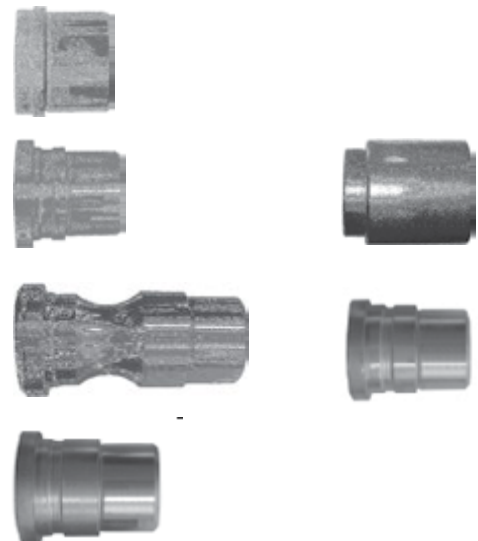
- 1 x Handle Bar
- 1 x Adapter
- 1 x Ratchet
- 1 x Drive Extension



### WABCO PAN 22-1 PN: 640 195 521 2

**Content (per Set):**

- 1 x Drive-out bushing
- 1 x Drive-in bushing long 1
- 1 x Drive-in bushing long 2
- 1 x Drive-in bushing short
- 1 x Drive-in bushing cover
- 1 x Drive-in bushing short



**IMPORTANT:** As referenced in the PAN 22-1 Assembly and Maintenance Instructions.  
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## 5. PROCUREMENT AND DISPOSAL OF SPARE PARTS

### Procurement of Spare Parts

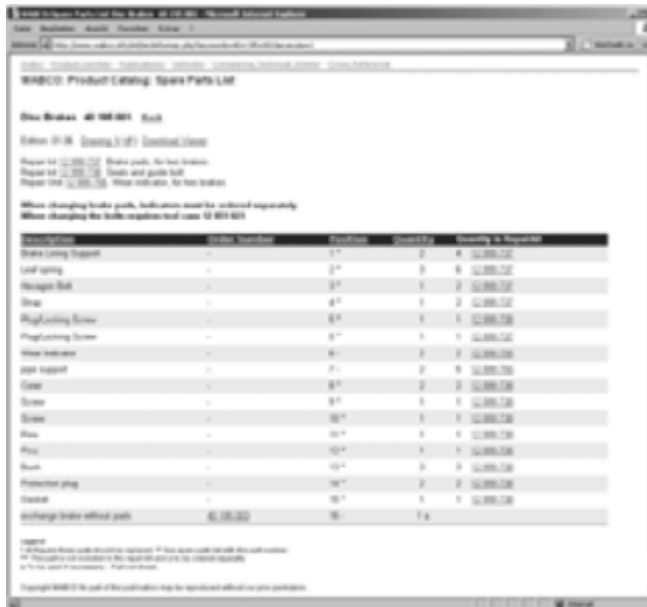
1. Identify the brake by means of the WABCO part number.



- A - Vehicle manufacturer part number  
(this field may be blank)
- B - Date of production
- C - Assembly number
- D - WABCO part number


### Open INFORM at [www.wabco-auto.com](http://www.wabco-auto.com):


1. Enter the WABCO part number of the brake calliper.
2. Click “Repair”.
3. Open the spare part sheet.



### Disposing of the brake components

1. Dispose of used and replaced parts in accordance with the national and regional regulations regarding environmental protection.

 Generally brake components can be scrapped.

 **IMPORTANT:** As referenced in the PAN 22-1 Assembly and Maintenance Instructions. New versions can be found in INFORM under [www.wabco-auto.com](http://www.wabco-auto.com).

If you have additional questions about Installation and Maintenance, please contact your AXN Heavy Duty representative, or call AXN Headquarters at 502.749.3200.