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# SERVICE BULLETIN

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## 40-406B WHEEL ASSEMBLY – 164-25500 BRAKE DISC – REPLACE

### 1. PLANNING INFORMATION

#### A. APPLICABILITY

This service bulletin is applicable to the following Parker Hannifin wheel assemblies installed on the listed KAI aircraft and wheel assembly units in stores.

<u>Parker Hannifin Part No.</u>	<u>Korean Aerospace Industries Model</u>	<u>Serial Number</u>
40-406B	KC-100	All

#### B. REASON

To increase clearance between, and reduce potential interference between brake disc O.D. and brake cylinder throat during high speed taxi braking events.

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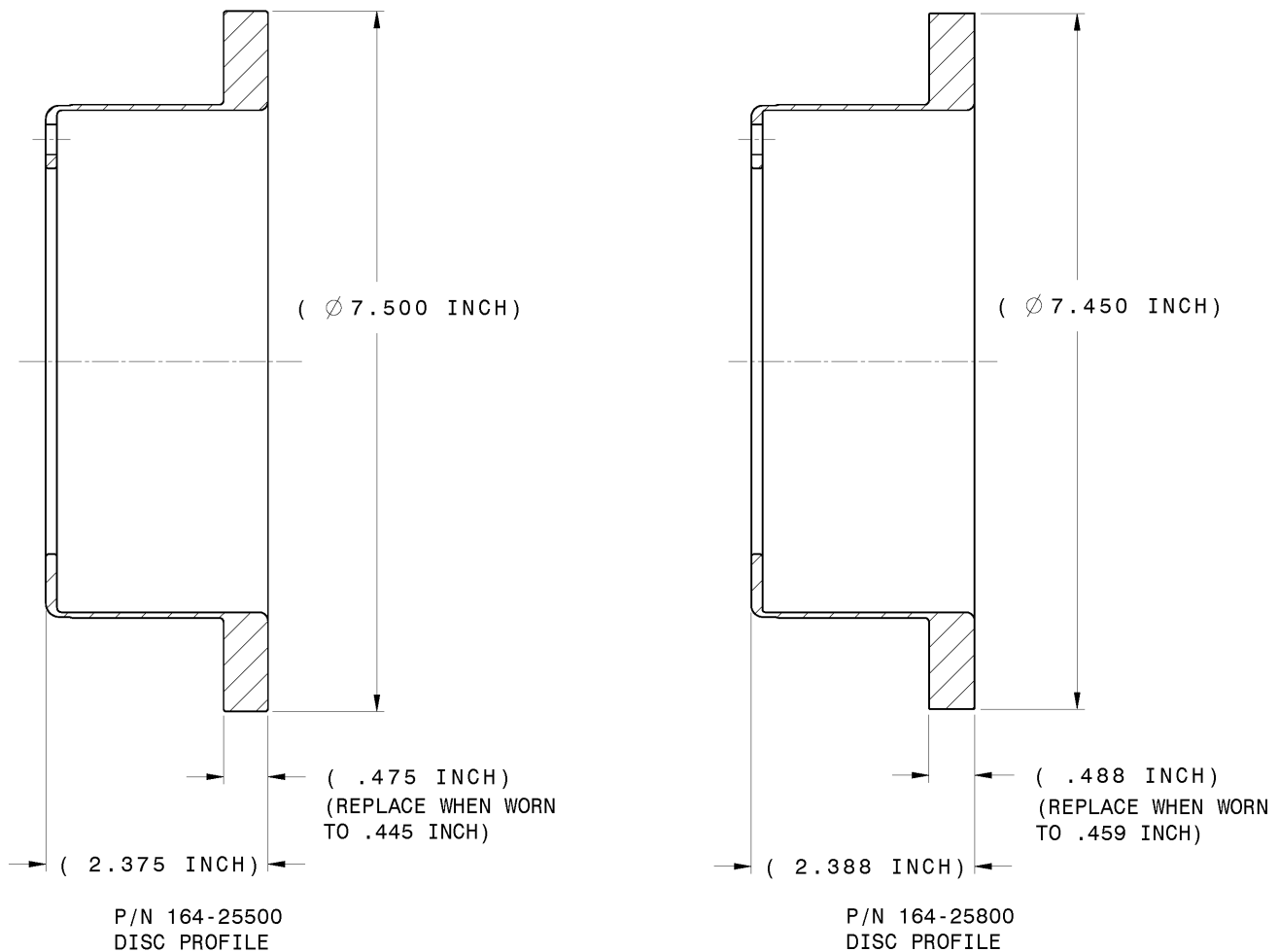
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## 40-406B WHEEL ASSEMBLY – 164-25500 BRAKE DISC – REPLACE

### C. DESCRIPTION

This service bulletin will provide instruction to the level required for replacement of the brake disc, P/N 164-25500 with P/N 164-25800.

- (1) Brake disc comparison. Refer to Figure 1 for dimensional differences.



NOTE: DIMENSIONS BASED ON NEW DISC AT NOMINAL CONDITION.

Figure 1 Brake disc comparison



# SERVICE BULLETIN

## 40-406B WHEEL ASSEMBLY – 164-25500 BRAKE DISC – REPLACE

### D. COMPLIANCE

Mandatory - Effective before delivery to customer of the aircraft.

### E. APPROVAL

This service bulletin is approved for support of an FAA TSO-C26 product.

### F. MANPOWER

Estimate. 60 to 90 minutes per aircraft.

### G. TOOLING

No additional special tooling is required.

### H. WEIGHT AND BALANCE

Not affected.

### I. REFERENCES

AWBPC0001 .....Product Catalog

AWBCMM0001 .....Component Maintenance Manual – External Design Wheels & Brakes

AWBTSG0001.....Technician's Service Guide

### J. OTHER PUBLICATIONS AFFECTED

None.

### K. PREVIOUS MODIFICATIONS

None.

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SB7111  
Page 3 of 10

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# SERVICE BULLETIN

## 40-406B WHEEL ASSEMBLY – 164-25500 BRAKE DISC – REPLACE



### SAFETY WARNING:

MAKE SURE THE AIRCRAFT IS SECURE AND STABLE BEFORE BEGINNING ANY WORK. WORKING AROUND AN AIRCRAFT THAT IS NOT SECURE AND STABLE CAN CAUSE INJURY OR DEATH.

## 2. ACCOMPLISHMENT INSTRUCTIONS

Instructions are per wheel assembly.

### A. REMOVE THE WHEEL ASSEMBLY

- (1) Refer to the airframe manufacturer's instructions to lift and support the aircraft.
- (2) Remove air from the tire by depressing the valve stem plunger in the inflation valve until air can no longer be heard escaping from the tire.



### SAFETY WARNING:

FULLY DEFLATE THE TIRE BEFORE REMOVING THE VALVE CORE. THE AIR IN A TIRE PUTS PRESSURE ON THE VALVE CORE. THE VALVE CORE CAN EJECT WITH GREAT FORCE AND CAN CAUSE INJURY OR DEATH.

- (3) When all the tire pressure is released, then carefully remove the valve core from the valve stem.

## 40-406B WHEEL ASSEMBLY – 164-25500 BRAKE DISC – REPLACE

**NOTE:** The brake disc (164-25500), is sandwiched between components of the brake assembly (back plate and pressure plate assemblies). The back plate assemblies must first be removed before the wheel assembly can be removed from the axle. Refer to AWBPC0001, Aircraft Wheel & Brake Product Catalog, for wheel and brake assembly component identification.

- (4) Refer to Figure 2. Loosen the six bolts (103-11800) on the brake cylinder and remove the back plate assemblies.

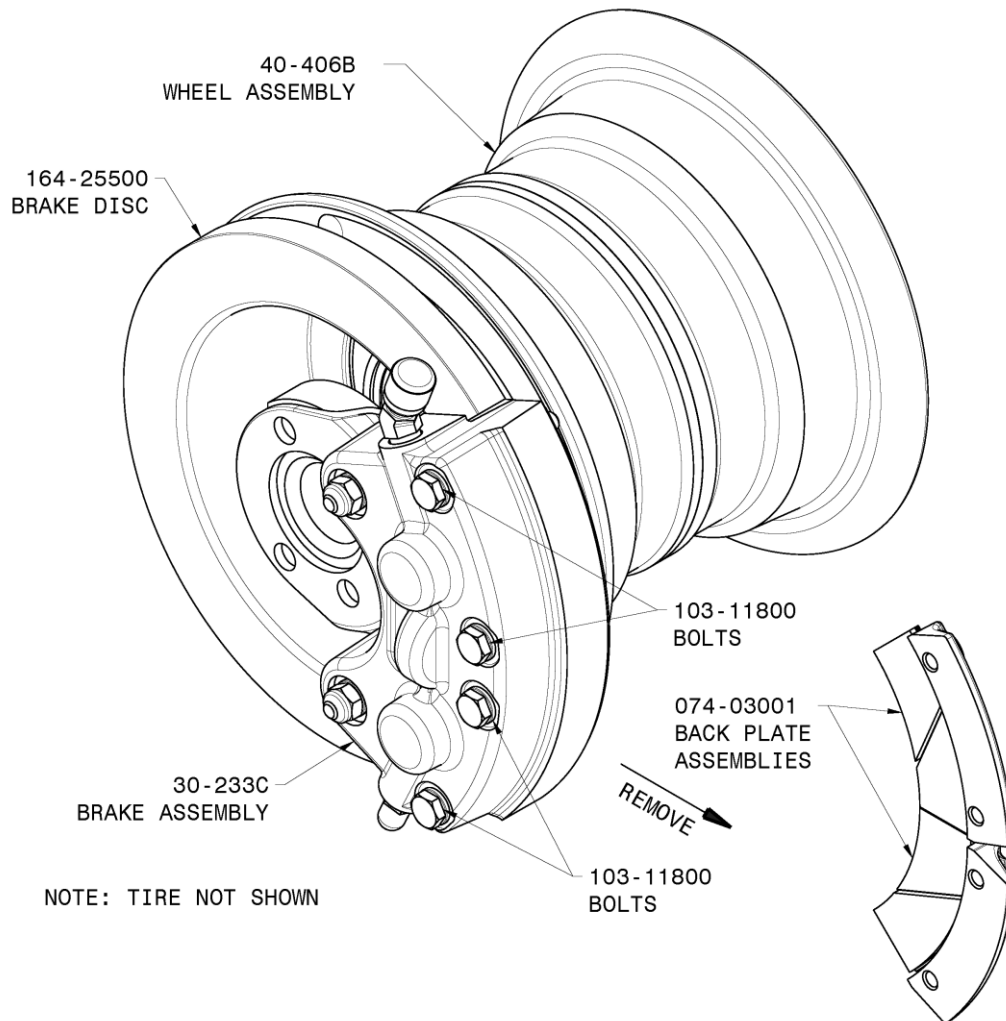


Figure 2 Remove the brake back plate assemblies

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SB7111  
Page 5 of 10

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## 40-406B WHEEL ASSEMBLY – 164-25500 BRAKE DISC – REPLACE

- (5) Refer to Figure 3 and remove the axle mounting hardware and remove the wheel/tire unit from the axle.

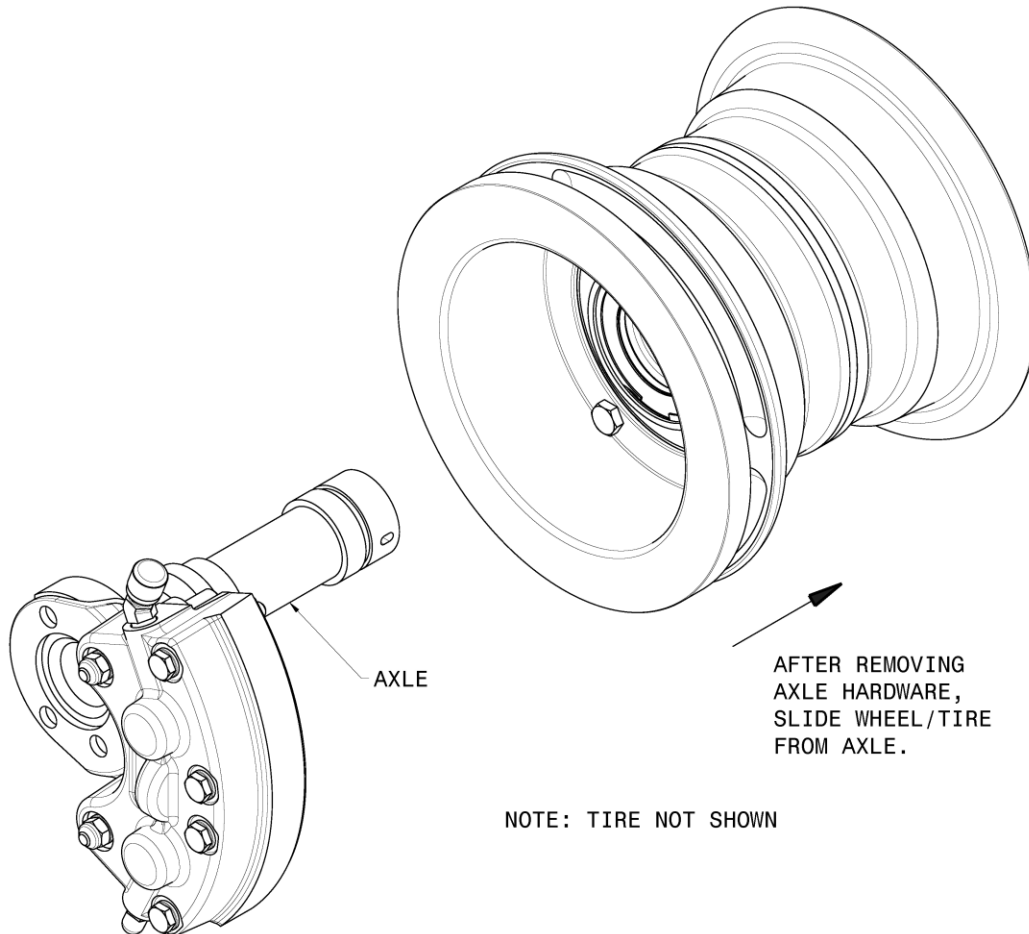


Figure 3 Remove the wheel/tire assembly

## 40-406B WHEEL ASSEMBLY – 164-25500 BRAKE DISC – REPLACE



### SAFETY WARNING:

DO NOT REMOVE COMPONENTS OF THE WHEEL ASSEMBLY UNTIL THE TIRE IS COMPLETELY DEFLATED. SERIOUS INJURY TO PERSONS, OR DAMAGE TO EQUIPMENT CAN RESULT.

### B. REMOVE THE OLD BRAKE DISC, P/N 164-25500

Refer to Figure 4.

**NOTE:** It is not necessary to remove the tire or completely disassemble the wheel assembly. Refer to AWBPC0001, Aircraft Wheel & Brake Product Catalog, for wheel assembly component identification

- (1) Confirm that the tire is completely deflated.

**CAUTION:** DO NOT USE AN IMPACT WRENCH OR A POWER WRENCH TO REMOVE THE WHEEL NUTS AND BOLTS. THESE TOOLS CAN DAMAGE THE NUTS AND BOLTS.

- (2) Remove the three sets of nuts (094-10400), washers (095-10700), and bolts (103-20400).
- (3) Remove the brake disc (164-25500).

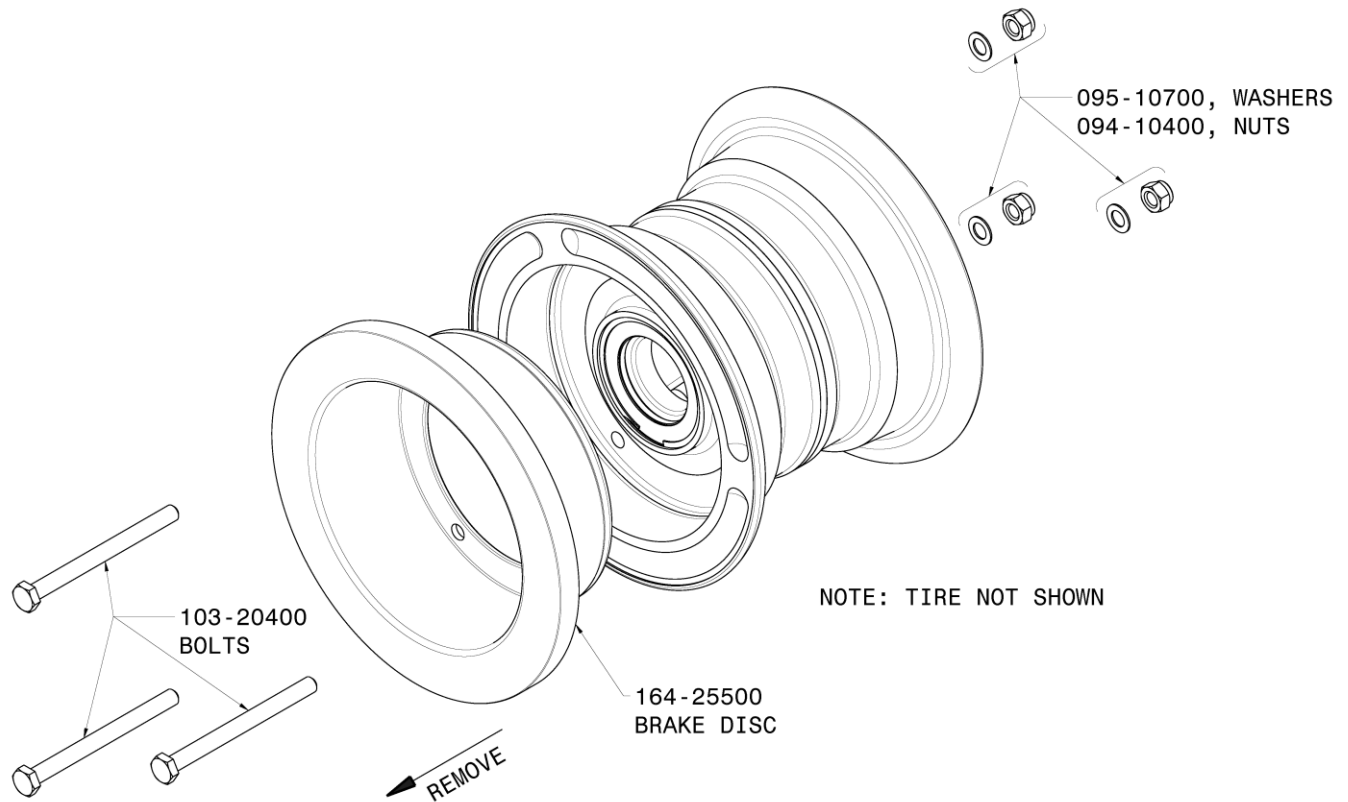


Figure 4 Remove the 164-25500 brake disc

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SB7111  
Page 7 of 10

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## 40-406B WHEEL ASSEMBLY – 164-25500 BRAKE DISC – REPLACE

### C. INSTALL THE NEW BRAKE DISC P/N 164-25800

Refer to Figure 5.

- (1) Install the 164-25800 brake disc.

**CAUTION:** DO NOT USE POWER TOOLS FOR THE INSTALLATION OF WHEEL FASTENERS. POWER TOOLS CAN CAUSE OVER TIGHTENING.

**CAUTION:** THE FASTENERS MUST BE TIGHTENED BY APPLYING THE TORQUE TO THE NUT WHILE SECURING THE BOLT HEAD.

- (2) Install the three sets of nuts (094-10400), washers (095-10700), and bolts (103-20400).
- (3) Apply the final torque evenly in a criss-cross pattern using calibrated tools until all nuts are properly torqued. Final torque is 150 in-lb (16.9 N-m).

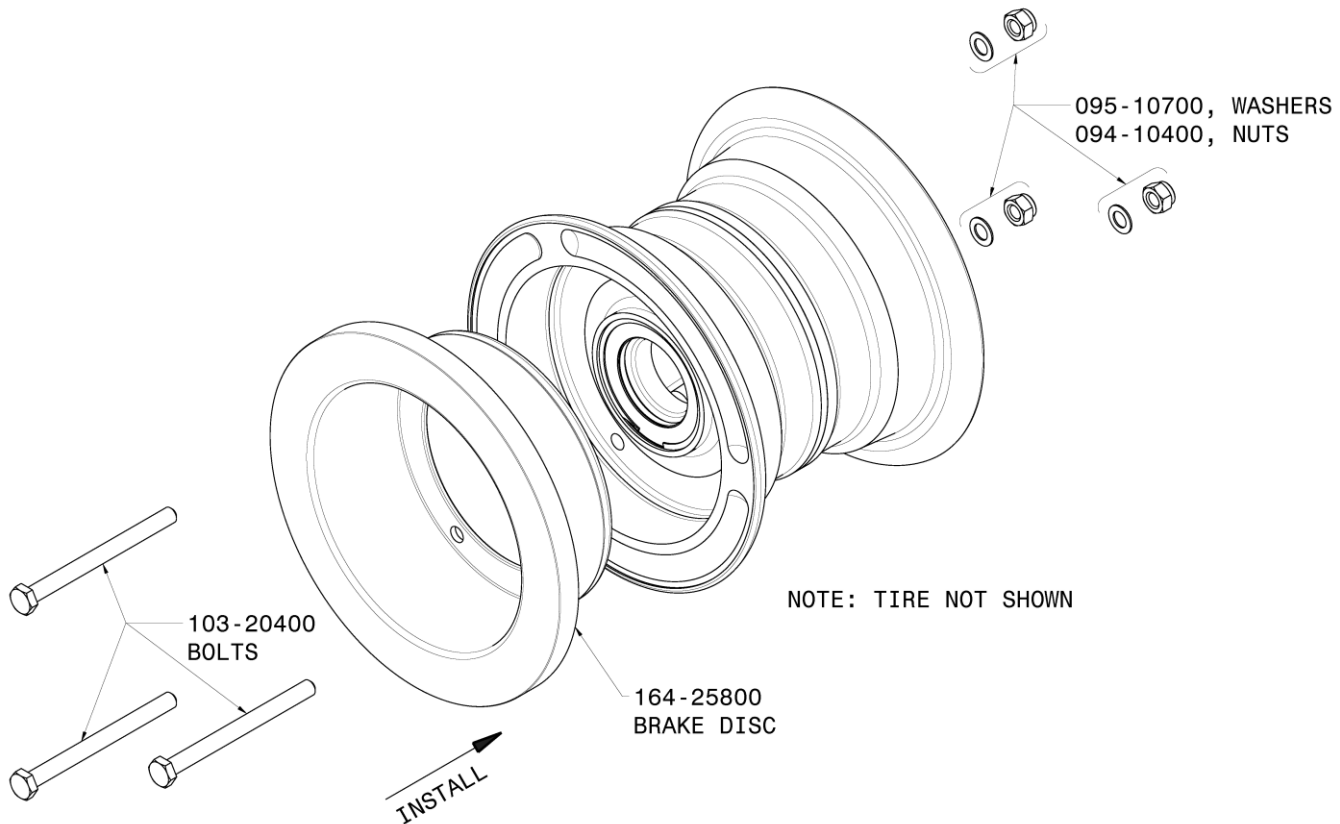


Figure 5 Install the 164-25800 brake disc



## 40-406B WHEEL ASSEMBLY – 164-25500 BRAKE DISC – REPLACE

### D. MOUNT THE WHEEL/TIRE ASSEMBLY AND BRAKE ASSEMBLY

- (1) Re-install the valve core into the valve stem.



#### **SAFETY WARNING:**

**ALWAYS FOLLOW PROPER TIRE INFLATION SAFETY PRACTICES. SERVICE THE TIRE WITH INFLATION SAFETY EQUIPMENT DESIGNED FOR THIS OPERATION.**

- (2) Inflate the tire to the airframe manufacturer's recommended inflation pressure.
- (3) Slide the wheel/tire assembly onto the axle making sure the inboard bearing cone is seated.
- (4) Install the axle hardware in accordance with the airframe manufacturer's manual.

### E. INSTALL THE BACK PLATE ASSEMBLIES

Refer to Figure 6.

- (1) Slide the two back plate assemblies (074-03001) between the brake disc and the wheel/tire and thread the bolts (103-11800) into the back plates. Tighten the bolts to 90 lb-in (10.2 N-m).
- (2) Make sure the wheel rotates freely.

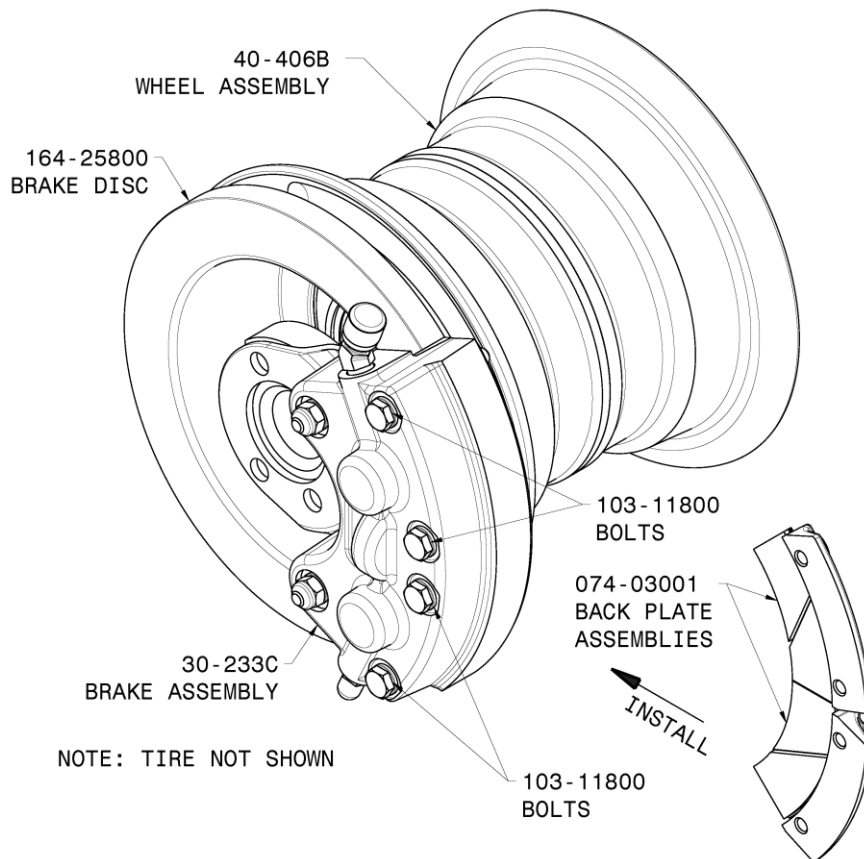


Figure 6 Install the brake back plate assemblies

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SB7111  
Page 9 of 10

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# SERVICE BULLETIN

## 40-406B WHEEL ASSEMBLY – 164-25500 BRAKE DISC – REPLACE

### F. LOGBOOK ENTRY

- (1) Make the appropriate airframe logbook entry of compliance.

### 3. MATERIAL INFORMATION

#### A. MATERIAL-REQUIREMENTS

Contact Parker Hannifin for replacement hardware availability.

Parker Hannifin Corporation  
Aircraft Wheel & Brake Division  
Technical Service Hotline: 1-800-BRAKING  
Customer Support Fax: 440-937-5409  
E-mail: clevelandwbhelp@parker.com

#### B. LIST OF COMPONENTS

**NOTE:** Quantities are per wheel assembly.

New part number	Name	Qty	Old part number	Qty	Operation
164-25800	Brake disc	1	164-25500	1	Replace

#### C. INTERCHANGEABILITY

None.

#### D. PARTS DISPOSITION

Discard the following removed components from the wheel assembly:

P/N 164-25500 .....Brake disc