### Shimano Coaster Brake Parts Interchangeability

Vertical line between numbers indicate parts are not interchangeable.

#### E Type | D Type | B Type | A Type
---|---|---|---
Model 42  | Model 45
---|---|---|---
1. Flange Nut | 286 1500 | 282 3000 | 282 3000 | 282 2400 | 282 2400
2. Arm Nut | 283 0900-1 | 283 0900-1 | 283 0900 | 282 2400 | 282 2400
3. Arm Washer | 283 1600-1 | 283 1600-1 | 283 1600 | 282 2400 | 282 2400
4. Brake Arm | 286 1400 | 283 1405-1 | 283 1400 | 282 2100 | 282 2100
5. Left-Hand Dust Cap | 286 1100 | 283 1300-1 | 283 1300 | 282 1900 | 282 1900
6. Ball Retainer C | 282 9005 | 282 9005 | 282 9005 | 282 9005 | 282 9005
7. Brake Cone | 286 0800 | 283 1100 | 283 1100 | 282 1600 | 282 1600
8. Clutch Spring | 283 9033 | 283 0600 | 282 2500 | 282 2500
9. Shoe Spring | 282 | 2300 | 282 2300
10. Brake Shoes (2 pieces) | 286 9806 | 283 1000 | 283 1000 | 282 1500 | 282 1500
11. Clutch Washer | 283 1500 | 283 1500
12. Clutch Cone | 283 1200 | 283 1200
12a. Clutch Cone Unit | 286 9805 | 283 9801
13. Hub Shell | 24 holes @ 2.5 mm | 283 9012 | 283 9012 | 282 9001 | 282 9001
| 28 holes @ 2.8 mm | 283 9003 | 283 9003 | 282 9001 | 282 9001
| 28 holes @ 3.2 mm | 283 9004 | 283 9004 | 282 9001 | 282 9001
| 36 holes @ 2.8 mm | 283 9005 | 283 9005 | 282 9001 | 282 9001
| 20 holes | 282 1400-1 | 282 1400-1
14. Driver | 286 0400 | 283 0700 | 283 0700 | 282 1300-1 | 282 1300-1
15. Ball Retainer A | 321 9022 | 321 9022 | 321 9022 | 321 9022 | 321 9022
| 15T | 321 0311 | 321 0311 | 321 0311 | 321 0310 | 321 0310
| flat | flat | flat | dished | dished
19. Cone with Dust Cap | 286 9807 | 281 9013 | 281 9013 | 281 9015 | 281 9013
20. Locknut | 281 2100 | 281 2100 | 281 2100 | 281 2100 | 281 2100
21. Hub Axle | 150 mm (5.90") | 282 1203 | 282 1203
| 158 mm (6") | 283 0504 | 283 0504
| 163 mm (6") | 283 0501 | 283 0501 | 283 0501 | 282 1200 | 282 1200
| 165 mm (6") | 286 0130
| 170 mm (6") | 283 0503 | 283 0503 | 283 0503 | 282 1202 | 282 1202
| Internal Kit | 163 mm (6") | 281 9024
| 165 mm (6") | 286 9801
| 170 mm (6") | 281 9025

[^1]: Model 45 was used by Ross (Chain Bike Corporation).
45 indicates the chainline in millimeters from hub center to sprocket center.

[^2]: See Sprocket Interchangeability at beginning of Hub section.
**SHIMANO MIGHTY MITE COASTER BRAKE PARTS INTERCHANGEABILITY**

Vertical line between numbers indicates parts are not interchangeable.

Parts are interchangeable only if they are on the same line and they do not have a vertical line between them.

<table>
<thead>
<tr>
<th>Item #</th>
<th>New Type</th>
<th>Old Type with brake plate</th>
<th>Old Type with serrated brake plate</th>
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<td>1.</td>
<td>Flange Nut</td>
<td>282 3000&lt;sup&gt;1&lt;/sup&gt;</td>
<td>282 3000&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>2.</td>
<td>Locknut</td>
<td>281 2100&lt;sup&gt;1&lt;/sup&gt;</td>
<td>281 2100&lt;sup&gt;1&lt;/sup&gt;</td>
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<tr>
<td>3.</td>
<td>Cone with Dust Cap</td>
<td>284 9005</td>
<td>284 9005</td>
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<td>4.</td>
<td>Ball Retainer</td>
<td>321 9022&lt;sup&gt;1&lt;/sup&gt;</td>
<td>321 9022&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>5.</td>
<td>Snap Ring&lt;sup&gt;2&lt;/sup&gt;</td>
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<td>6.</td>
<td>Sprockets&lt;sup&gt;2&lt;/sup&gt;</td>
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<td>7.</td>
<td>Driver</td>
<td>284 1500</td>
<td>284 1500</td>
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<tr>
<td>8.</td>
<td>Hub Shell</td>
<td>284 9003</td>
<td>284 9003</td>
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<tr>
<td>9.</td>
<td>Clutch Cone</td>
<td>284 1300</td>
<td>284 1300</td>
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<tr>
<td>10.</td>
<td>Clutch Spring</td>
<td>284 1101</td>
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<td>11.</td>
<td>Brake Shoe</td>
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<tr>
<td>12.</td>
<td>Brake Cone with Ball Retainer</td>
<td>284 9020</td>
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</tr>
<tr>
<td>13.</td>
<td>Brake Arm</td>
<td>284 2100</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Brake Plate</td>
<td>284 0601</td>
<td></td>
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<td>15.</td>
<td>Hub Axle</td>
<td>284 0511</td>
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<tr>
<td>16.</td>
<td>Hub Axle 163 mm</td>
<td>284 0512</td>
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<tr>
<td>17.</td>
<td>Hub Axle 187 mm</td>
<td>284 0513</td>
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</tr>
<tr>
<td>18.</td>
<td>Brake Plate</td>
<td>284 0601</td>
<td></td>
</tr>
</tbody>
</table>

<sup>1</sup> Interchangeable with Shimano B and D type.

<sup>2</sup> See Sprocket Interchangeability at beginning of Hub section.
1 DISASSEMBLY

Note the distance that axle protrudes at each end of hub. Remove locknut, cone, small ball retainer (A), driver and large ball retainer (C). 1

Next Step

2 DISASSEMBLY

Type A, Type D and Type E Only
Lift off hub shell. Remove brake shoes and clutch cone assembly.

Type B Only 2
Lift off hub shell. To remove clutch cone, washer and clutch spring, pull cone while turning counterclockwise. To remove cone and washer without spring, pull and turn clockwise.

Type E Only
Remove large ball retainer C (not shown). 1

Next Step

SHIMANO TYPE A, B, D AND E COASTER BRAKES DISASSEMBLY AND ASSEMBLY (cont.)

Replace large ball retainer (C) flat side up. Install driver and small ball retainer (A) flat side up. Install cone and locknut and adjust bearing.

ASSEMBLY

Next Step

Seat greased brake shoes between brake cone tabs. Position hub shell straight-sided opening down and slip over assembly.

Type E Only
Place large ball retainer C flat side down on brake core.

Type A Only
Slip clutch cone assembly over axle.

Type B Only
Insert clutch washer and large end of spring in smooth end of clutch cone with a clockwise turning motion. Advance spring along axle, push clutch cone and turn assembly counterclockwise. Continue until spring touches brake cone.

Type D and Type E Only
Slip clutch cone assembly over axle seating spring holder between brake cone tabs as shown above.
SHIMANO TYPE A, B, D, AND E COASTER BRAKES
DISASSEMBLY AND ASSEMBLY

**DISASSEMBLY**

To remove ball retainer C, remove arm nut, arm washer
and brake arm. Push off dust
cap and ease ball retainer
over small end of brake cone.
If required, brake cone may
be threaded off axle.

**Type E Only**

Ball retainer C was removed
in previous step.

**SUBASSEMBLIES**

**Type A Only**

Clutch Cone

Pull brake shoe assembly off
clutch cone. Remove shoe
spring or clutch spring only
if it is to be replaced.

**Type D Only**

Clutch Cone

Insert washer and large end of clutch
spring into smooth end of clutch cone
with a *clockwise* turning motion. Push
spring holder into small end of clutch
spring with a *counter-clockwise* turning
motion.

**ASHLEY**

On old type Mighty Mite with a snap ring on the axle, cone is tightened against the snap ring. To
remove, loosen by threading cone inward ½ turn, remove snap ring and thread cone off axle. To install,
thread cone past snap ring groove, install snap ring and turn cone back until tightened against ring.
SHIMANO TYPE A, B, D AND E COASTER BRAKES
DISASSEMBLY AND ASSEMBLY (cont.)

CLEANING

Clean all parts, including outside of hub shell, in a suitable solvent. Be very careful not to introduce dirt or grit after cleaning.

POINTS TO CHECK

Numbers in parenthesis refer to parts chart and exploded drawing.

1. Mating threads of clutch cone (12) and driver (14) for wear and chipping
2. Conical surface of inside of hub shell and outside of clutch cone (12) for wear and burring
3. Clutch spring (8) for shape and tension
4. Brake shoe (10) and hub shell mating surfaces for wear or glazing
5. All threaded parts for damaged or stripped threads
6. Dustcaps and bearing retainers for straightness
7. All bearing races and balls for wear or pitting

LUBRICATION

Lubricate ball retainers by filling the spaces between balls with grease. Lubricate hub shell and brake shoes liberally with a high-temperature grease. Grease other internal parts.