

2

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B

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### 041 Aluminum Crossbar Assembly



Created by:  
Joshua Vasquez

last edited:  
6/7/2020

SCALE: 1:2

SHEET 1 OF 8

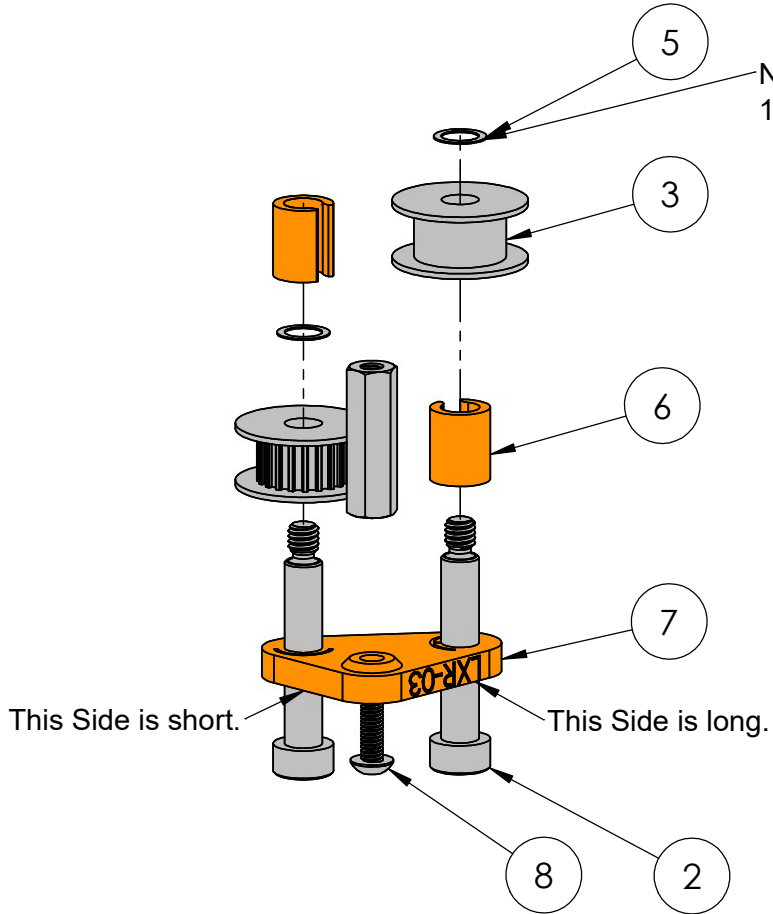
2

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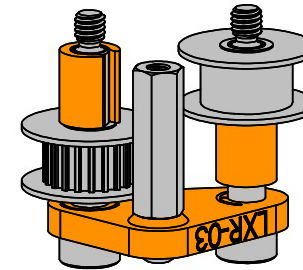
**Note:** This assembly step is for the **generic** brand pulleys only. If you are using genuine **Gates** brand pulleys, skip this page and see the next page.

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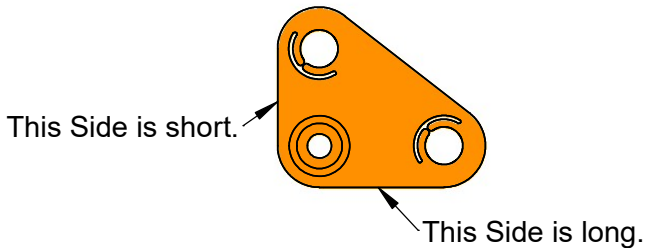
B



Note that these have a noticeably smaller diameter than the 10mm outer-diameter versions.



Note the orientation of the Reinforcement Plate



| ITEM NO. | DESCRIPTION                              | QTY |
|----------|--|-----|
| 1        | M3 Standoff, 20mm long, 6mm wide         | 1   |
| 2        | M4 Shoulder Screw, 25mm long             | 2   |
| 3        | 20T toothless idler, 5mm bore            | 1   |
| 4        | 20T Idler pulley, 2GT, 5mm bore          | 1   |
| 5        | M5 Shim, 0.2mm thick, 7mm OD             | 2   |
| 6        | Printed Pulley Spacer                    | 2   |
| 7        | Left Crossbar Pulley Reinforcement Plate | 1   |
| 8        | M3 Buttonhead Screw, 8mm long            | 1   |

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Left Crossbar Generic Pulley Assembly



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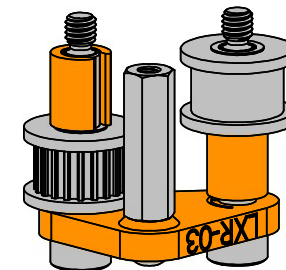
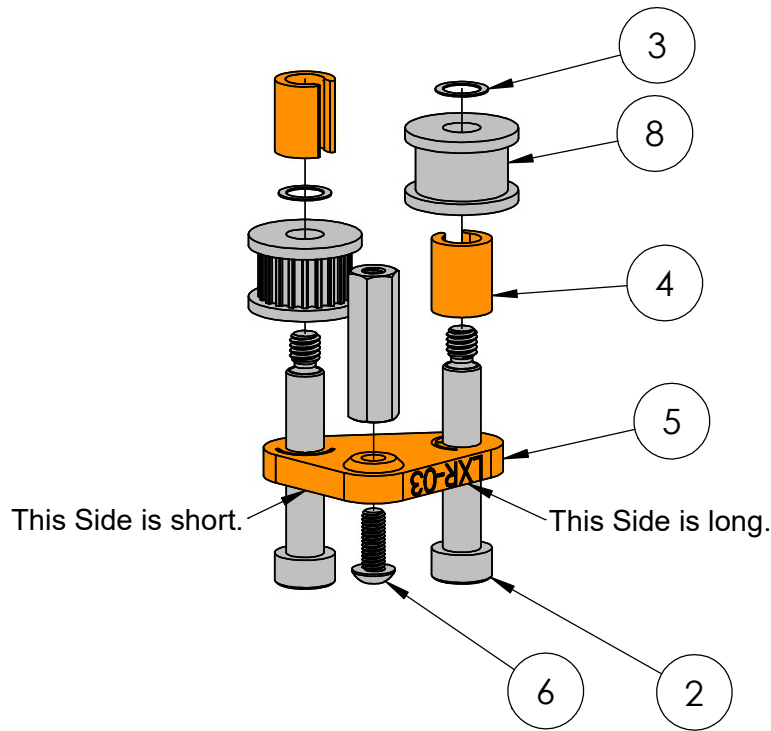
SCALE: 1:1

SHEET 2 OF 8

**Note:** This assembly step is for the genuine **Gates** brand pulleys only. If you are using **generic** brand pulleys, skip this page.

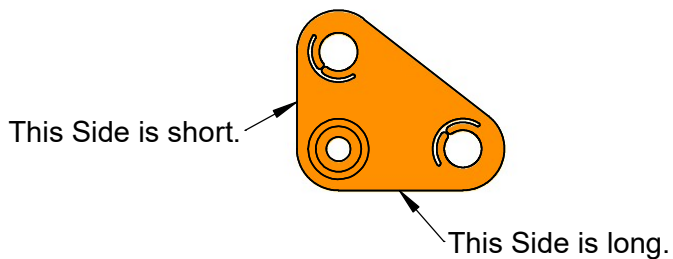
B

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| ITEM NO. | DESCRIPTION                               | QTY. |
|----------|---|------|
| 1        | M3 Standoff, 20mm long, 6mm wide          | 1    |
| 2        | M4 Shoulder Screw, 25mm long              | 2    |
| 3        | M5 Shim, 0.2mm thick, 7mm OD              | 2    |
| 4        | Printed Pulley Spacer                     | 2    |
| 5        | Left Crossbar Pulley Reinforcement Plate  | 1    |
| 6        | M3 Buttonhead Screw, 8mm long             | 1    |
| 7        | 20T Idler pulley, 2GT, 5mm bore           | 1    |
| 8        | 20T Toothless Idler pulley, 2GT, 5mm bore | 1    |

Note the orientation of the Reinforcement Plate



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### Left Crossbar Gates Pulley Assembly

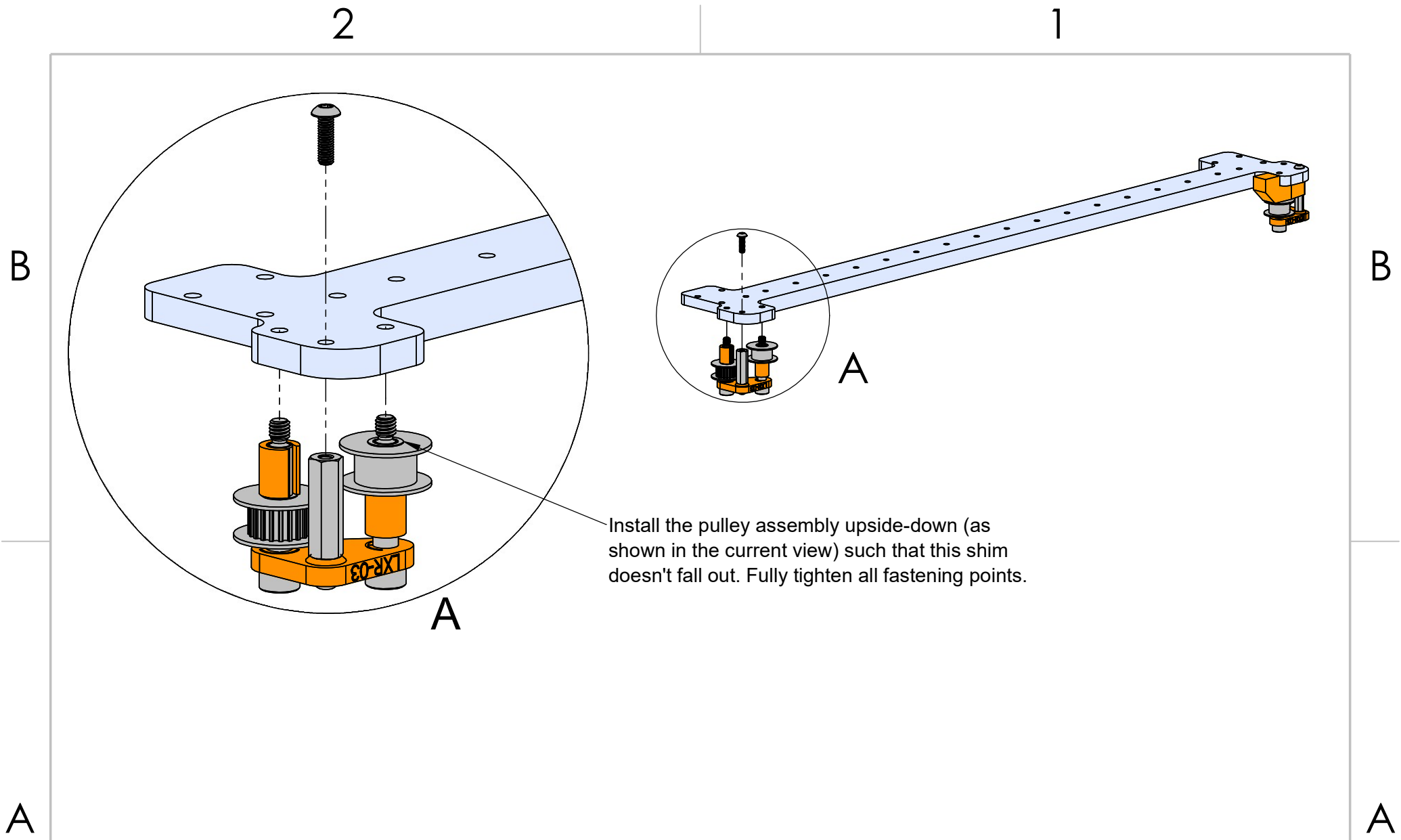


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SCALE: 1:1

SHEET 3 OF 8



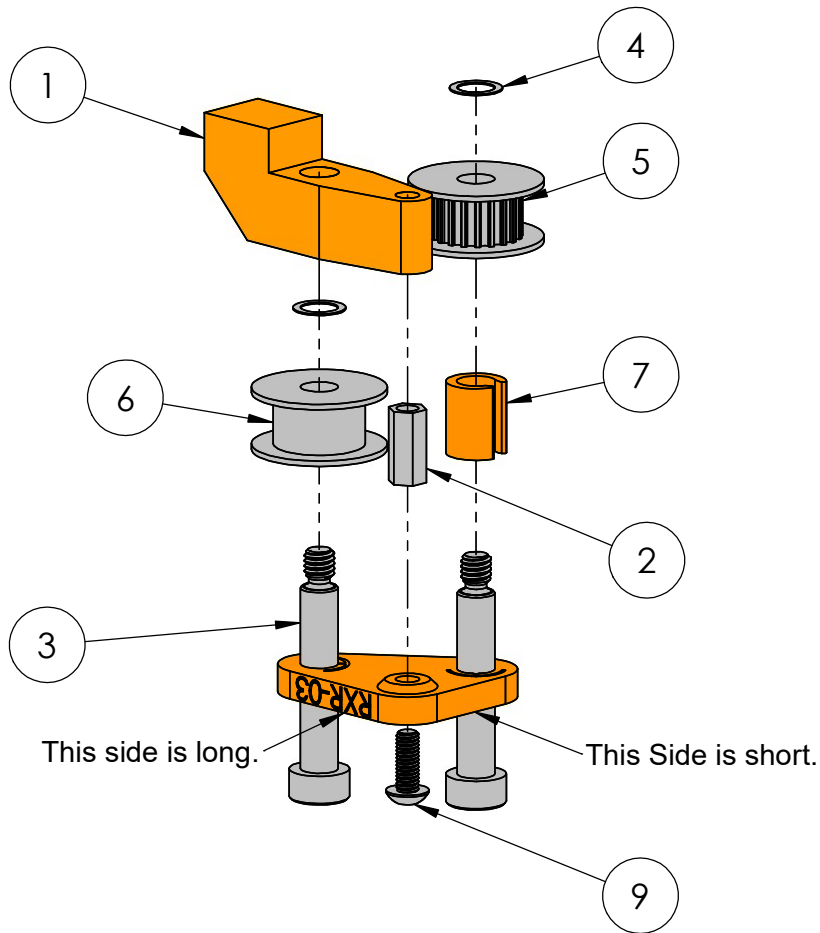
| ITEM NO. | DESCRIPTION                    | QTY. |
|----------|--------------------------------|------|
| 1        | Pocketed Crossbar              | 1    |
| 2        | Left Crossbar Pulley Assembly  | 1    |
| 3        | M3 Buttonhead Screw, 10mm long | 1    |

| Left Crossbar Pulley Installation |                |              |
|-----------------------------------|----------------|--------------|
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|                                   | SCALE: 1:3     | SHEET 4 OF 8 |

**Note:** This assembly step is for the **generic** brand pulleys only. If you are using genuine **Gates** brand pulleys, skip this page and see the next page.

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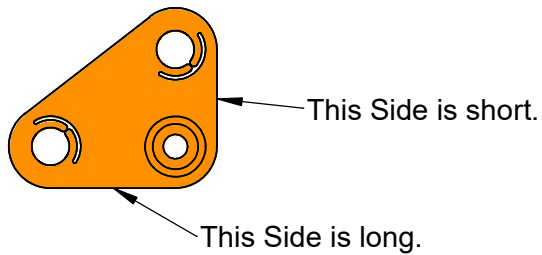
B



This side is long.

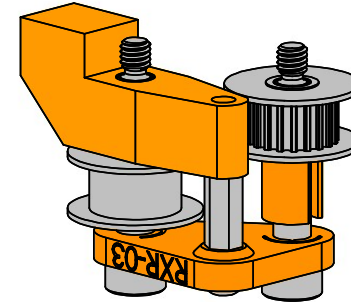
This Side is short.

Note the orientation of the Reinforcement Plate



This Side is short.

This Side is long.



| ITEM NO. | DESCRIPTION                               |   |
|----------|---|---|
| 1        | Crossbar X Limit Trigger                  | 1 |
| 2        | M3 10mm standoff, 4.5mm wide              | 1 |
| 3        | M4 Shoulder Screw, 25mm long              | 2 |
| 4        | M5 Shim, 0.2mm thick, 7mm OD              | 2 |
| 5        | 20T Idler pulley, 2GT, 5mm bore           | 1 |
| 6        | 20T toothless idler, 5mm bore             | 1 |
| 7        | Printed Pulley Spacer                     | 1 |
| 8        | Right Crossbar Pulley Reinforcement Plate | 1 |
| 9        | M3 Buttonhead Screw, 8mm long             | 1 |

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Right Crossbar Generic Pulley Assembly



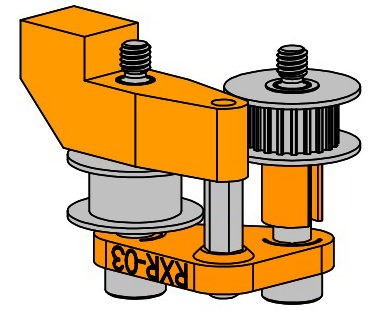
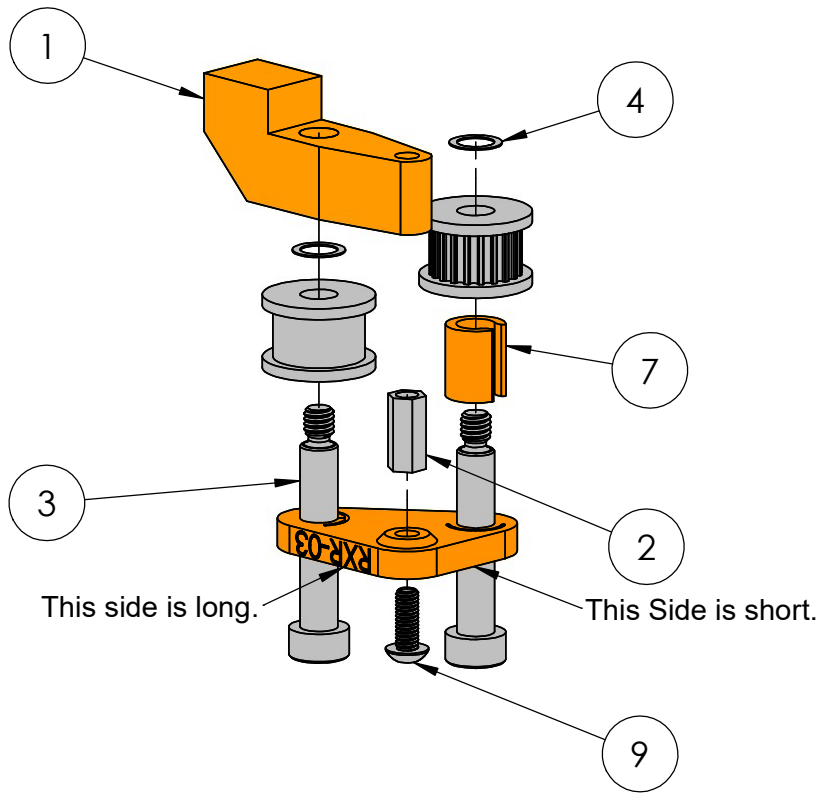
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SCALE: 1:1

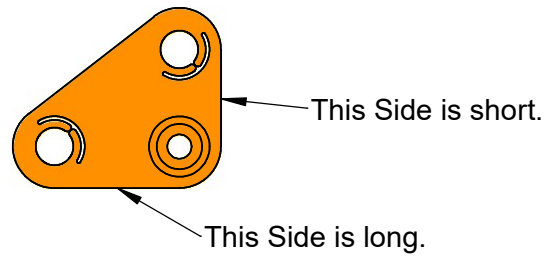
SHEET 5 OF 8

**Note:** This assembly step is for the genuine **Gates** brand pulleys only. If you are using **generic** brand pulleys, skip this page.



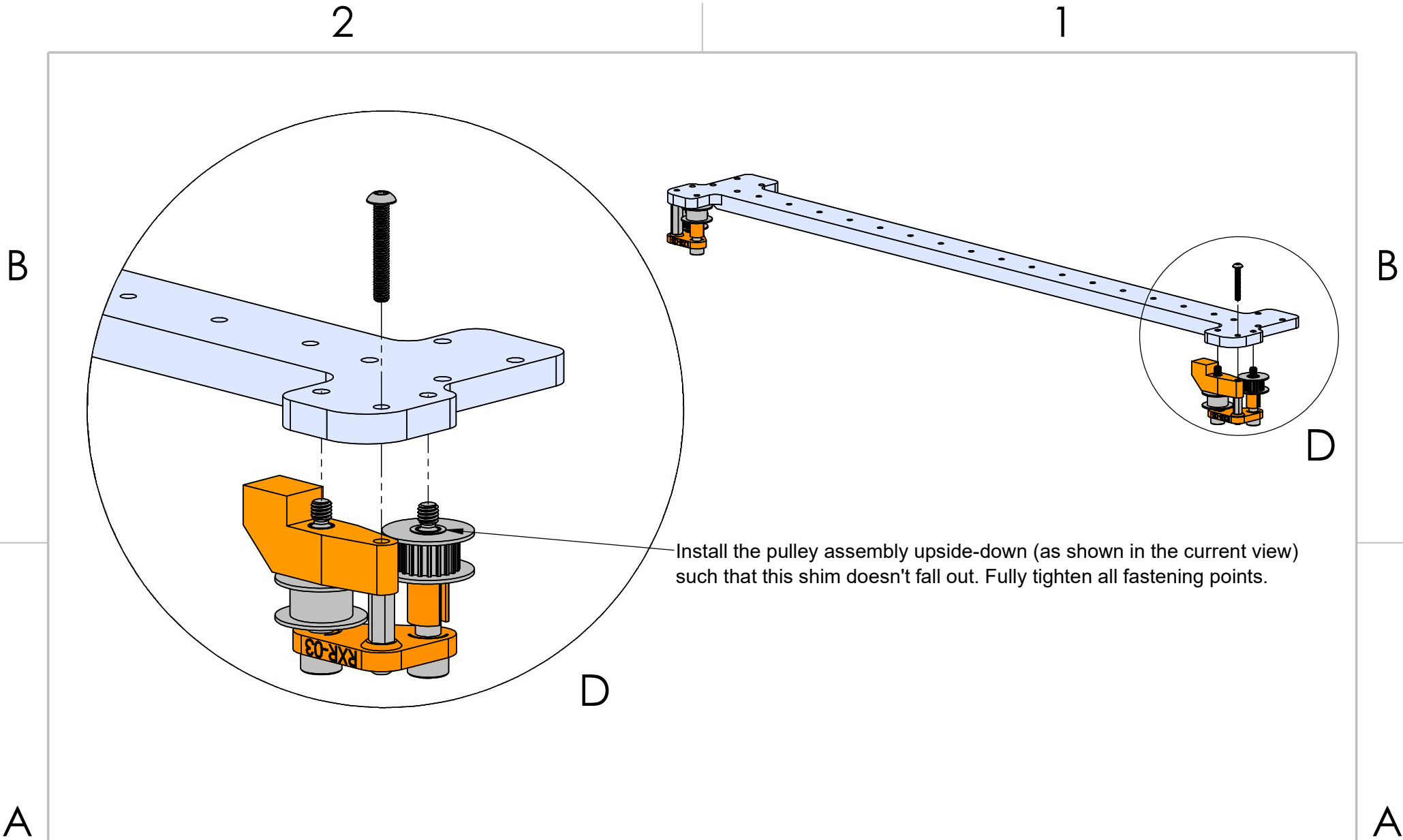
| ITEM NO. | DESCRIPTION                               |   |
|----------|---|---|
| 1        | Crossbar X Limit Trigger                  | 1 |
| 2        | M3 10mm standoff, 4.5mm wide              | 1 |
| 3        | M4 Shoulder Screw, 25mm long              | 2 |
| 4        | M5 Shim, 0.2mm thick, 7mm OD              | 2 |
| 5        | 20T Idler pulley, 2GT, 5mm bore           | 1 |
| 6        | 20T toothless idler, 5mm bore             | 1 |
| 7        | Printed Pulley Spacer                     | 1 |
| 8        | Right Crossbar Pulley Reinforcement Plate | 1 |
| 9        | M3 Buttonhead Screw, 8mm long             | 1 |

Note the orientation of the Reinforcement Plate



**Right Crossbar Gates Pulley Assembly**

|            |                |              |
|------------|----------------|--------------|
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| SCALE: 1:1 |                | SHEET 6 OF 8 |



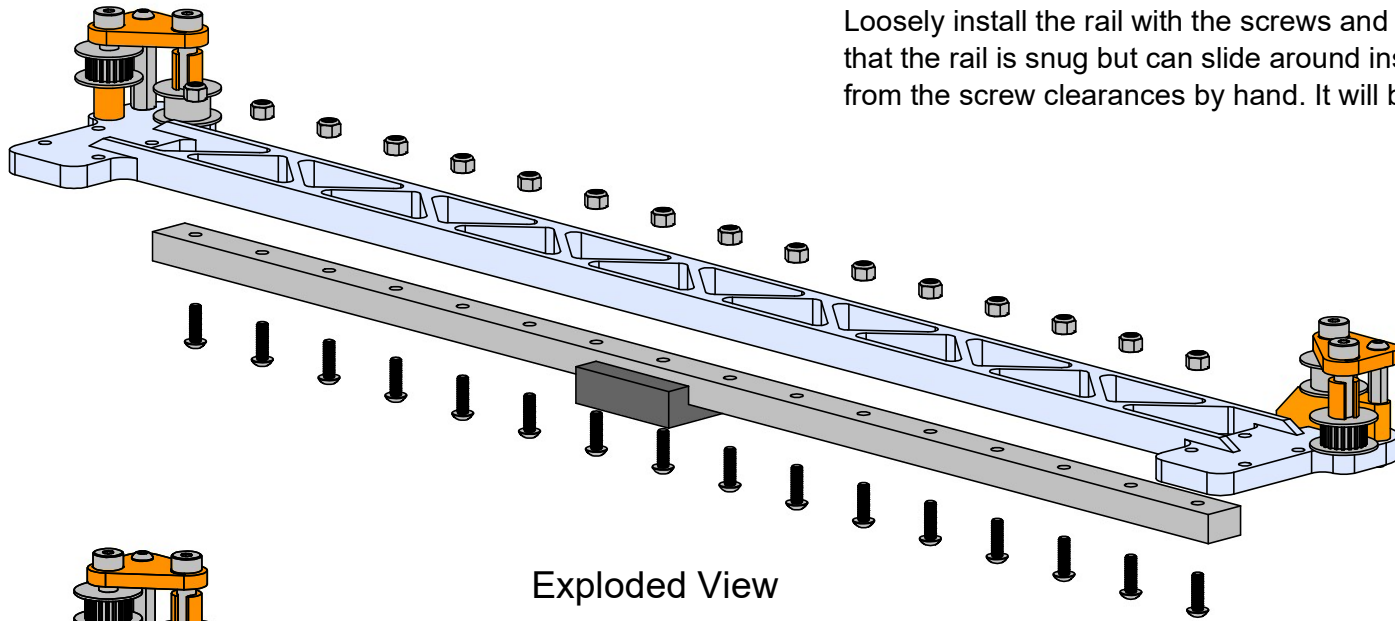
Install the pulley assembly upside-down (as shown in the current view) such that this shim doesn't fall out. Fully tighten all fastening points.

| ITEM NO. | DESCRIPTION                    | QTY. |
|----------|--------------------------------|------|
| 1        | Crossbar Assembly              | 1    |
| 2        | M3 Buttonhead Screw, 20mm long | 1    |
| 4        | Right Crossbar Pulley Assembly | 1    |

|   |                |              |
|---|----------------|--------------|
| <b>Right Crossbar Pulley Installation</b> |                |              |
|   | Created by:    | last edited: |
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| SCALE: 1:3                                |                | SHEET 7 OF 8 |

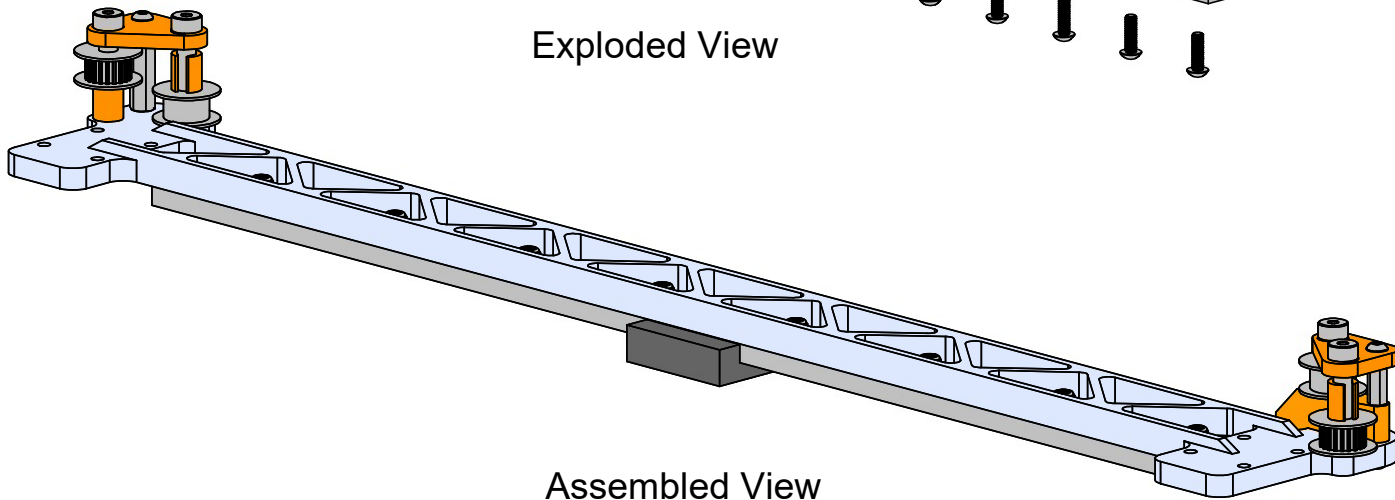
2

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Loosely install the rail with the screws and lock nuts such that the rail is snug but can slide around inside the holes from the screw clearances by hand. It will be tightened later.

Exploded View



Assembled View

| ITEM NO. | DESCRIPTION                     | QTY. |
|----------|---------------------------------|------|
| 2        | Crossbar with Pulley Assemblies | 1    |
| 3        | 395 or 400mm long MGN12 rail    | 1    |
| 4        | MGN12C Carriage Block           | 1    |
| 5        | M3 Buttonhead Screw, 10mm long  | 16   |
| 6        | M3 Locknut                      | 16   |

Rail Installation



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Joshua Vasquez

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6/7/2020

SCALE: 1:2

SHEET 8 OF 8

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