

MECHANICAL UPDATE

PLUME Meeting

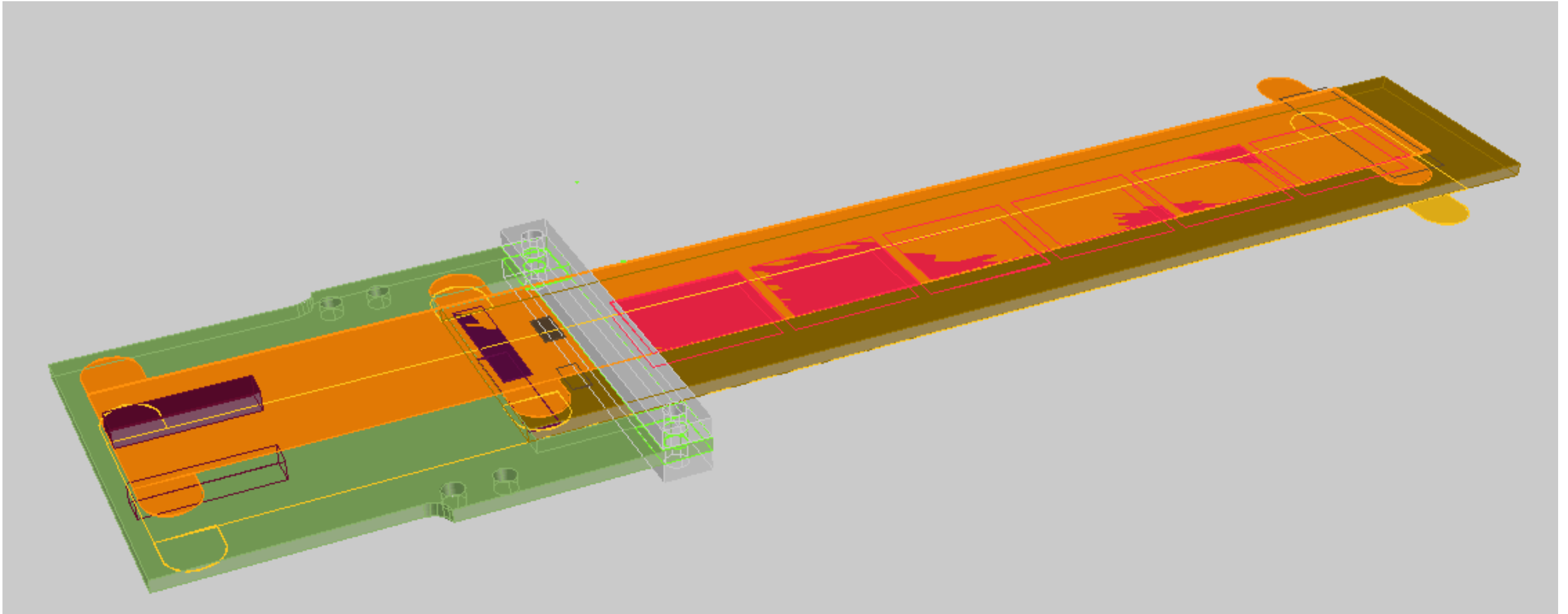
18/6/10

Joel Goldstein

Status

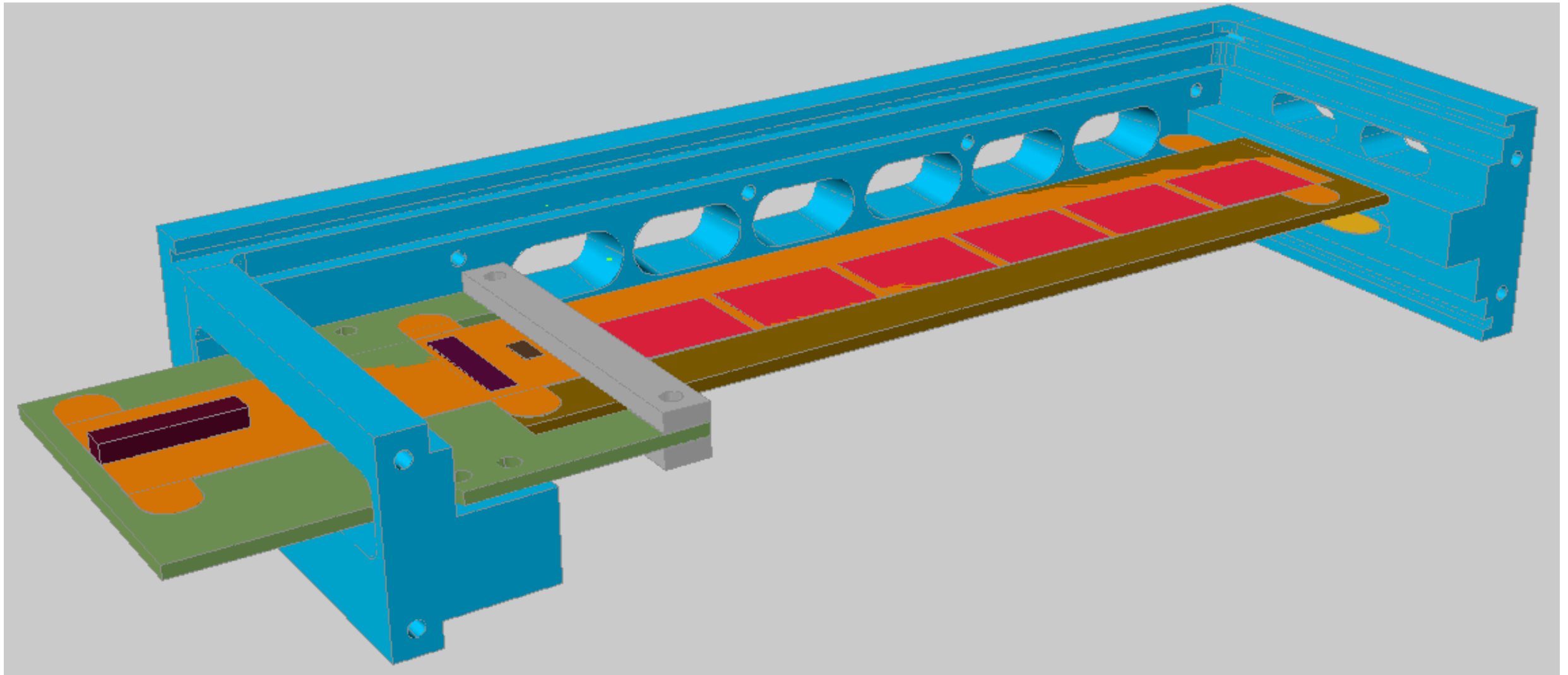
- * SiC foam substrates ordered
 - * Difficulty with tolerance on flatness
 - * Delivery ~ weeks
- * Ladder/box design modified as per discussion
 - * A few details to finalise before production
- * Assembly scheme proposed

Design Mods



- * Ladder now includes end plate
- * Supports flex, allows handling
- * Precision screw mount, no glue joint to box

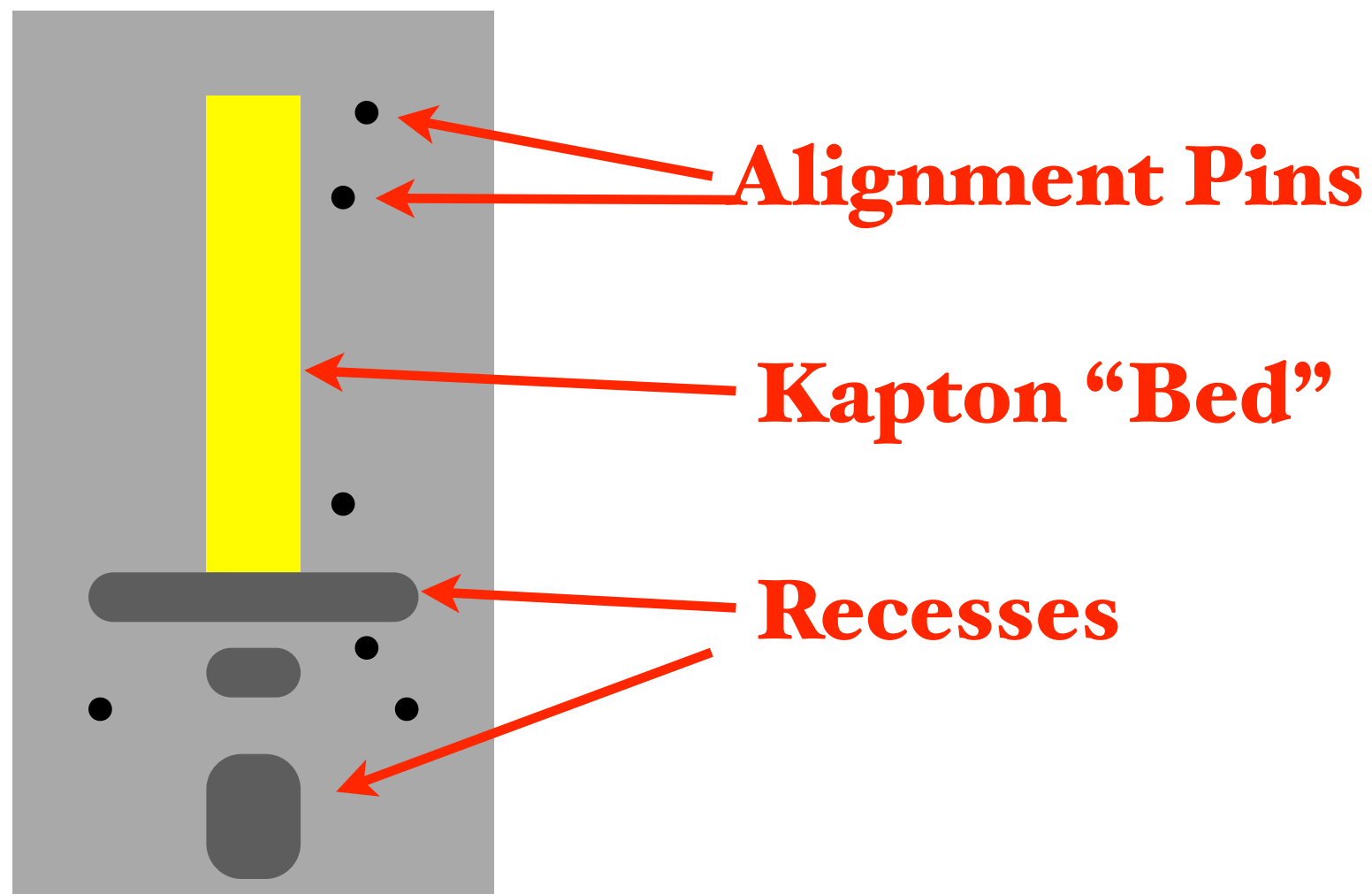
Box



- * Cross- or length-wise airflow
- * Foam inserts into slot at far end

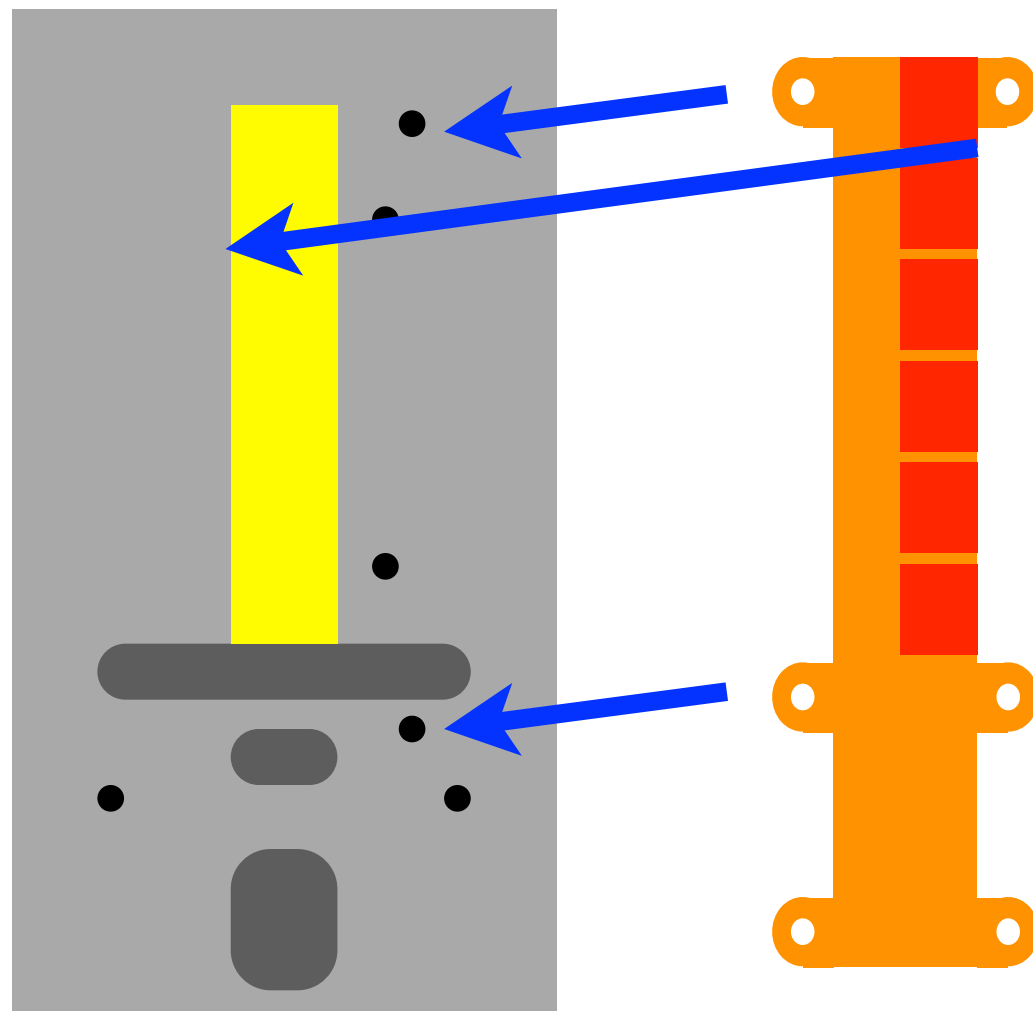
Assembly

- * Simple, single fixture process
- * Pins align flex tags to endplate precision screw holes



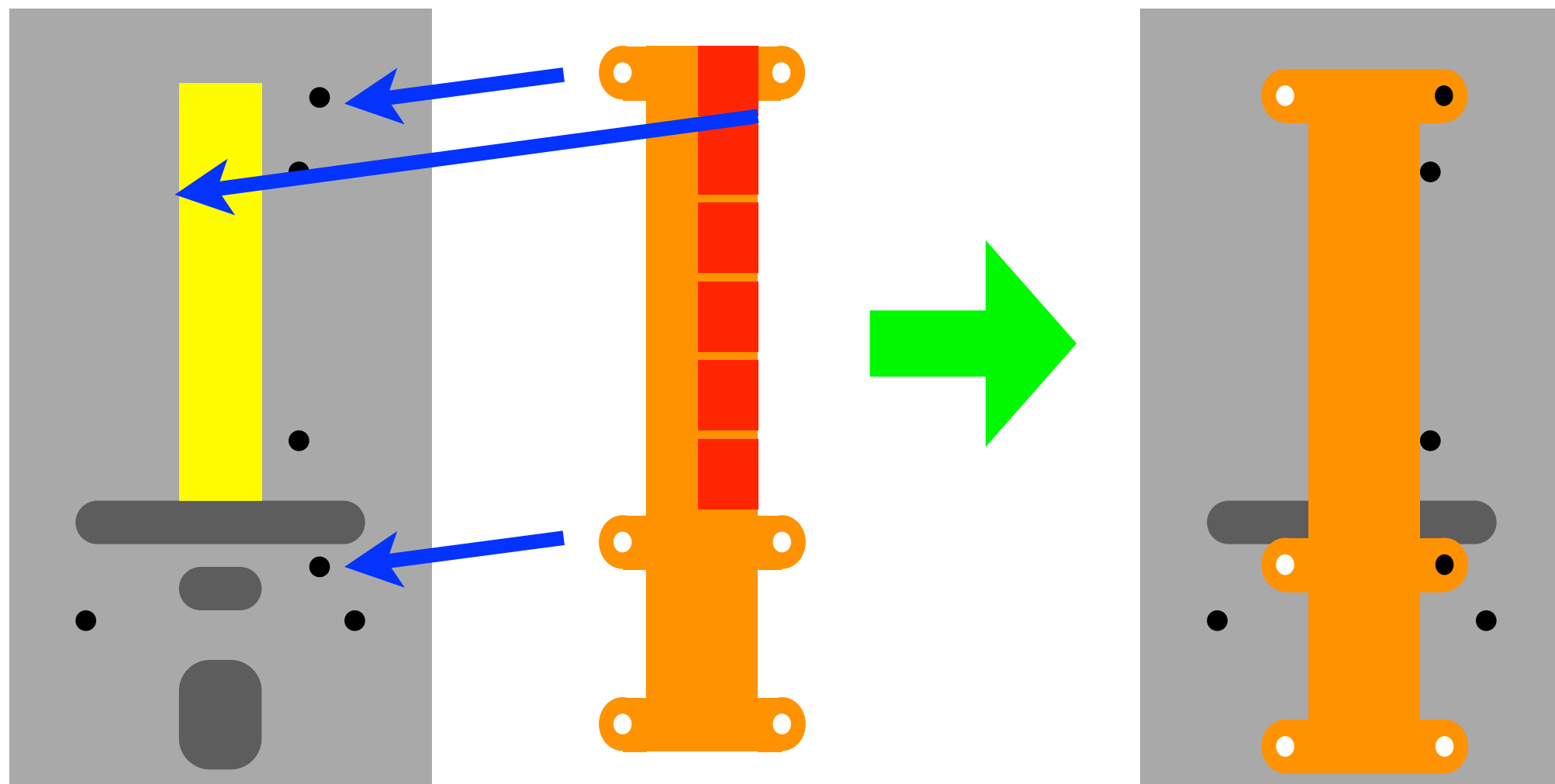
Procedure -1

1. Flex placed manually upside-down on fixture
2. Pins align two flex tab holes
3. Glue dispensed onto flex

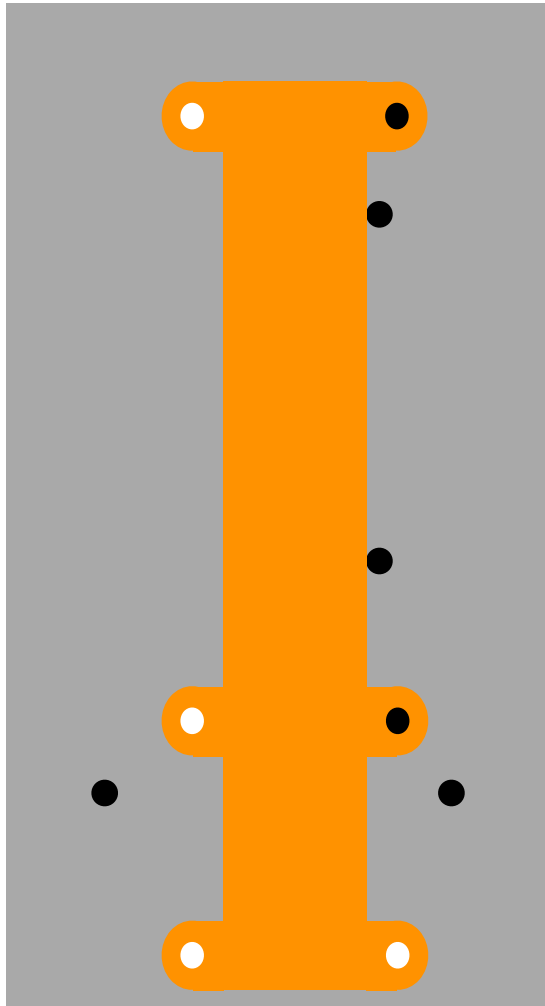


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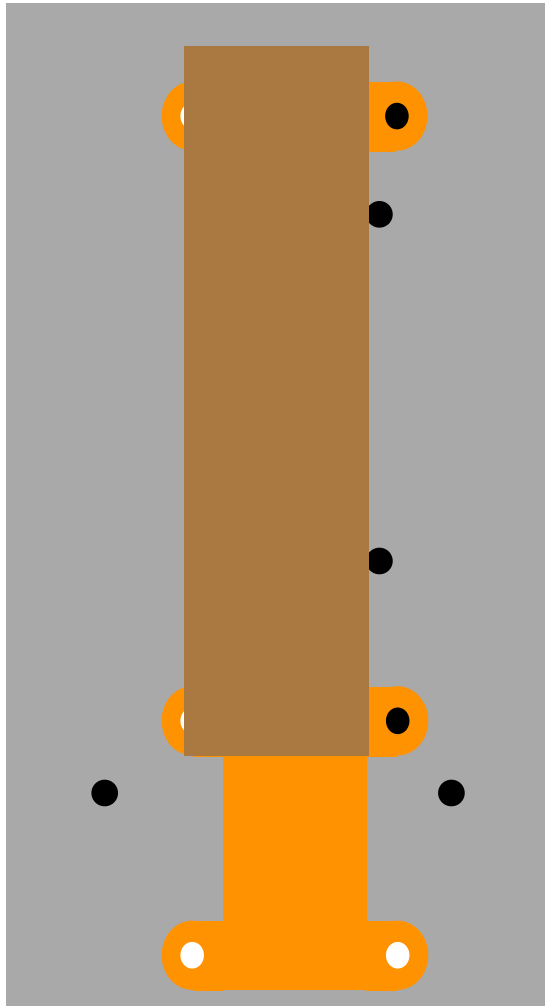


Procedure - 2



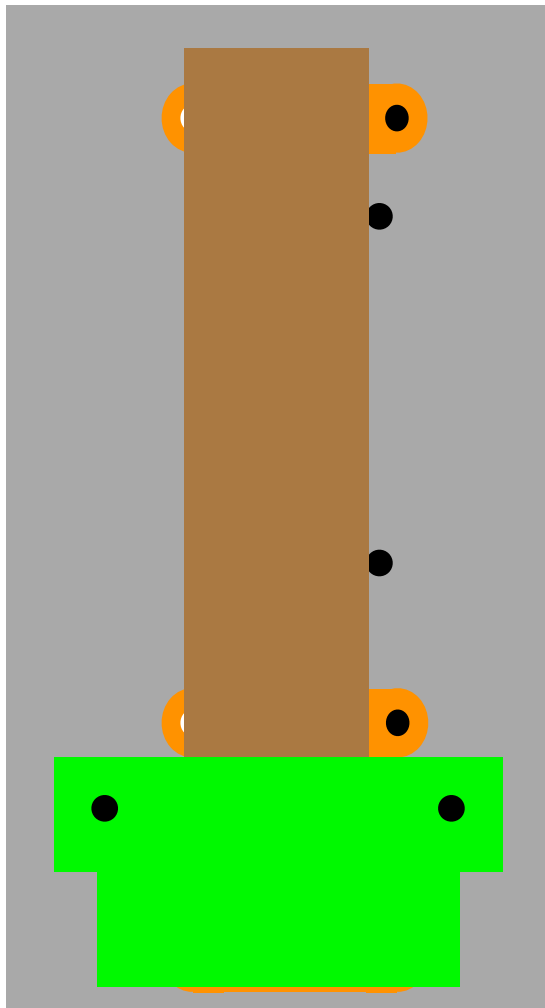
1. Foam placed on flex aligned against pins
2. Adhesive manually applied to end of foam
3. Endplate aligned on pins forming joint
4. Adhesive cures

Procedure - 2



1. Foam placed on flex aligned against pins
2. Adhesive manually applied to end of foam
3. Endplate aligned on pins forming joint
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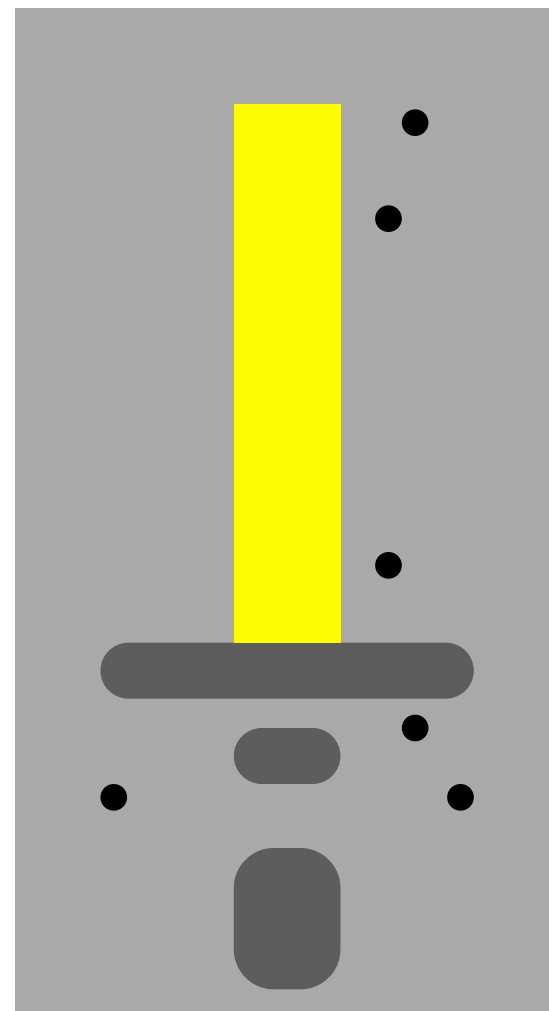
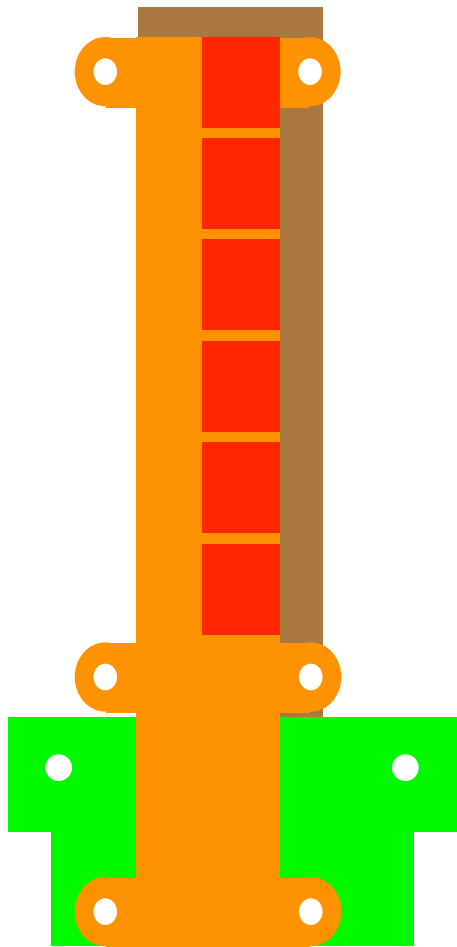
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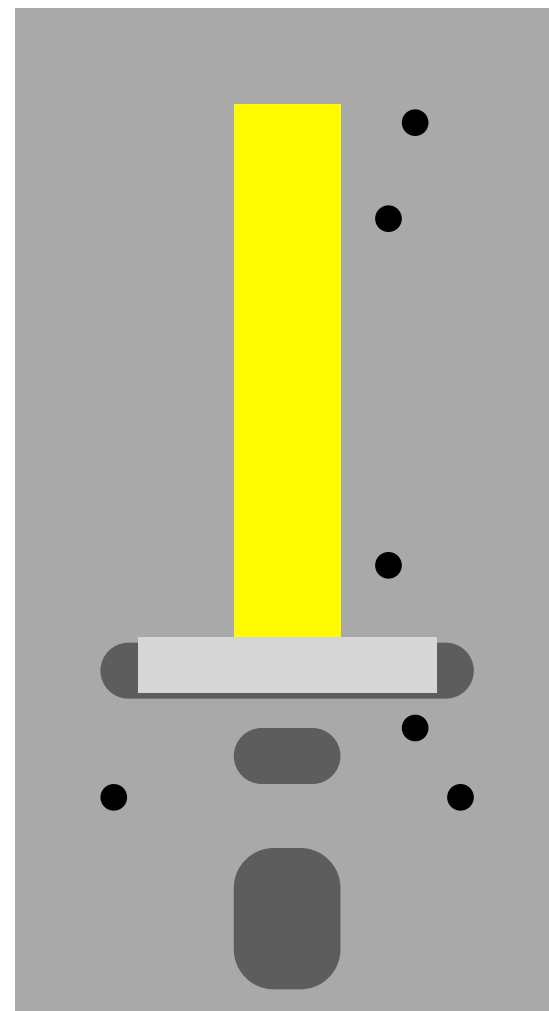
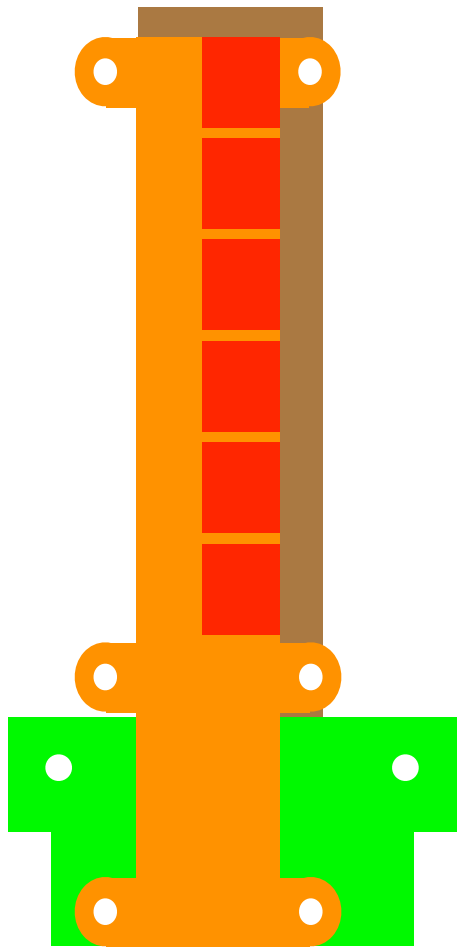
Procedure - 3

1. Structure removed from fixture
2. Lower half of clamp placed in recess
3. Second flex manually placed upside-down on fixture
4. Adhesive applied and structure placed on top



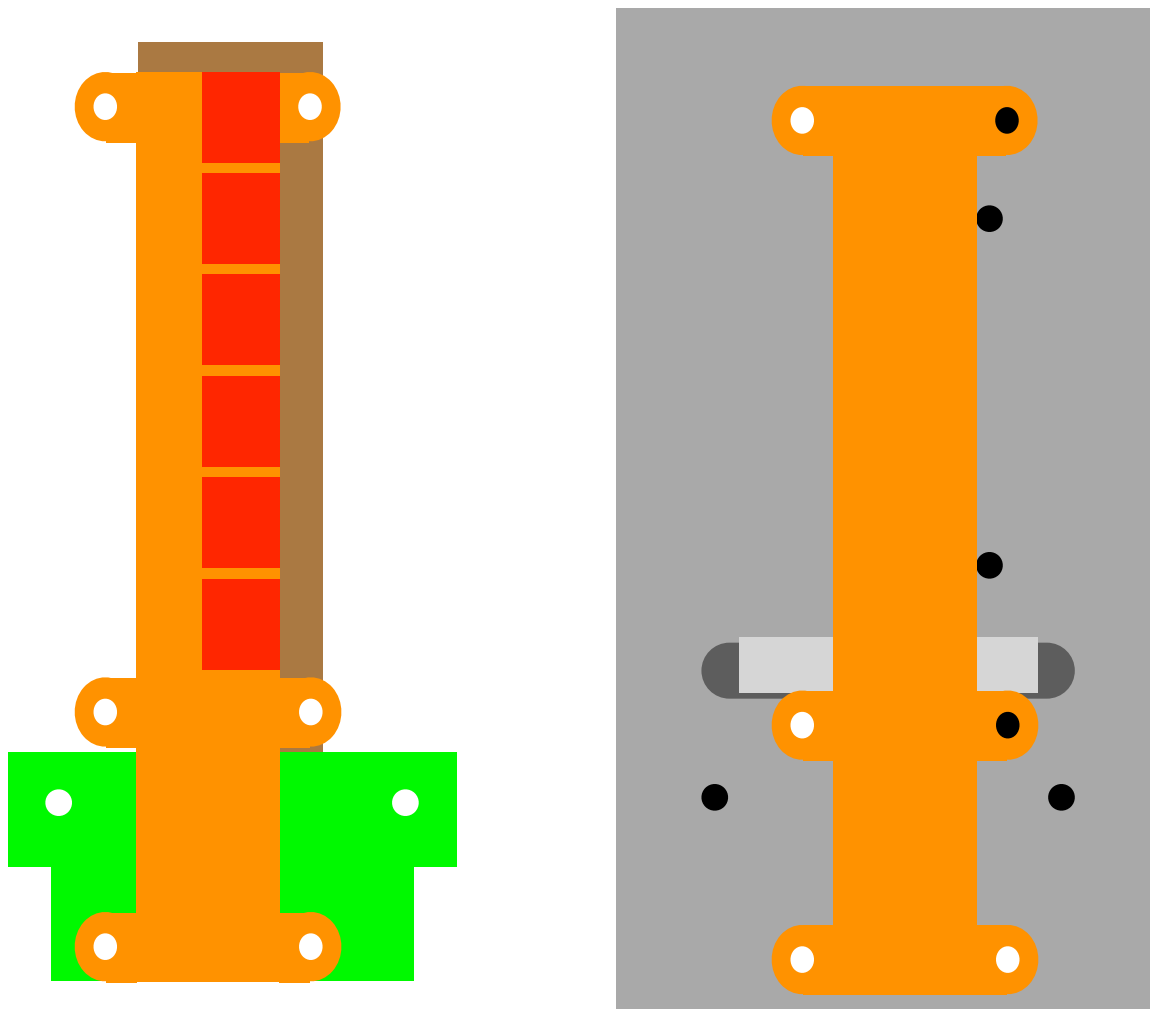
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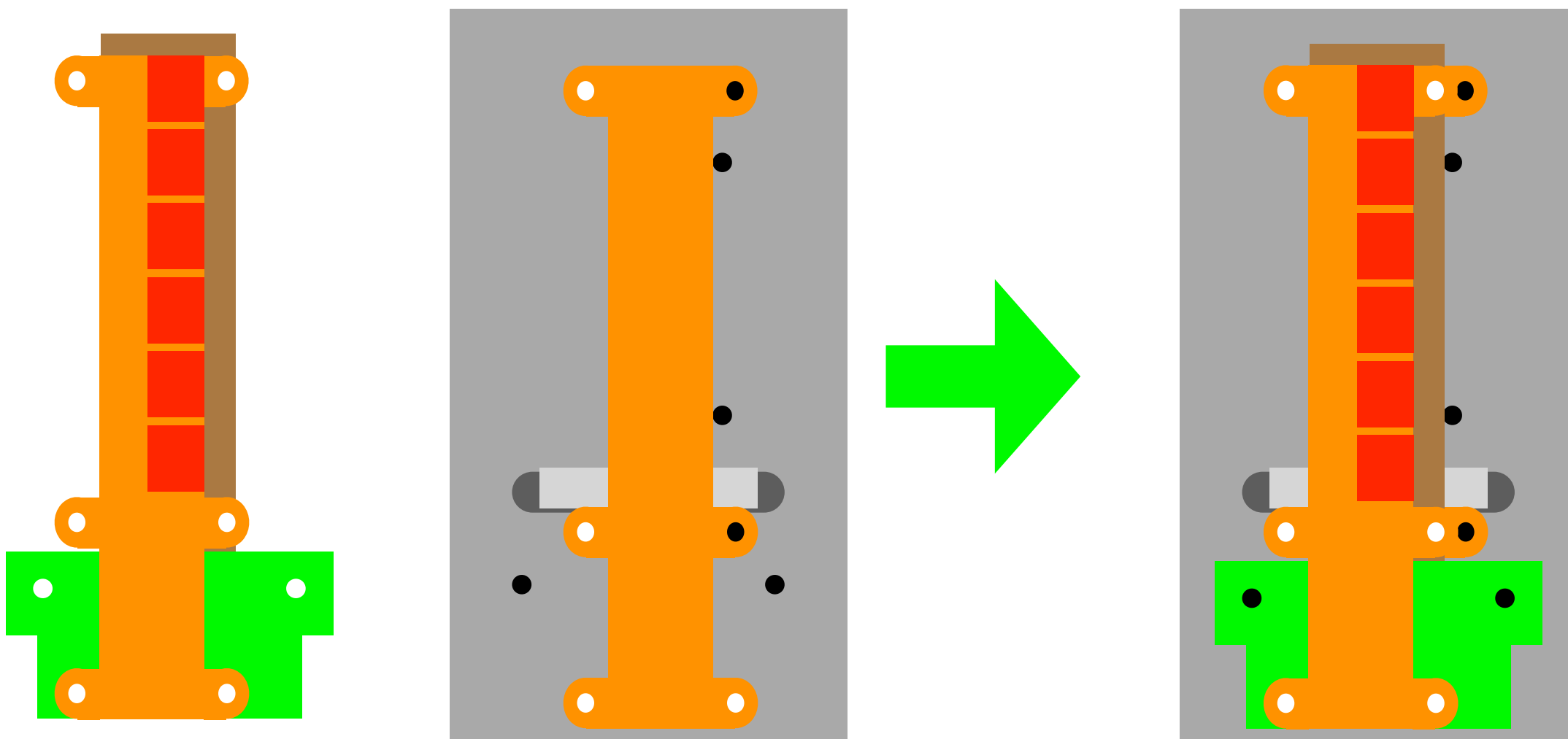
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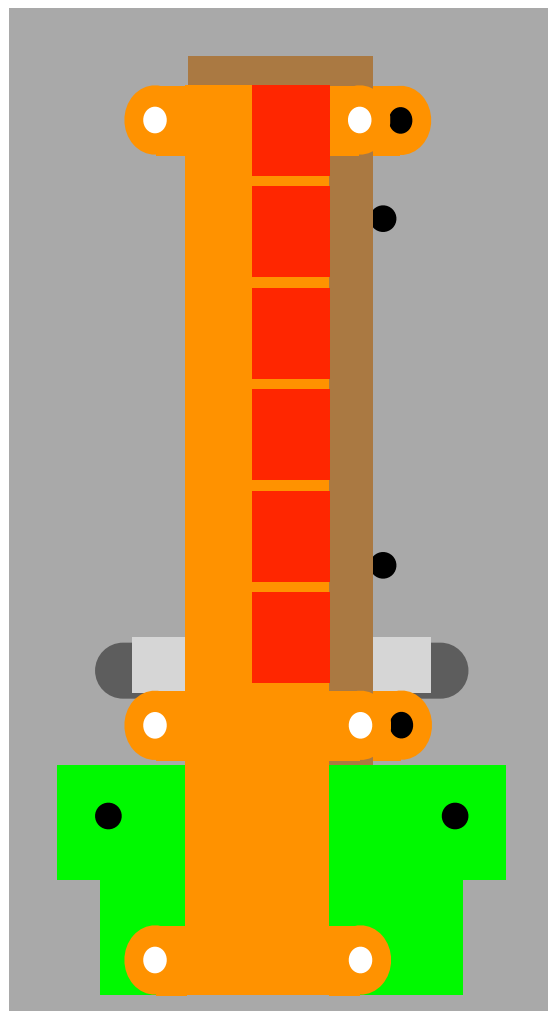


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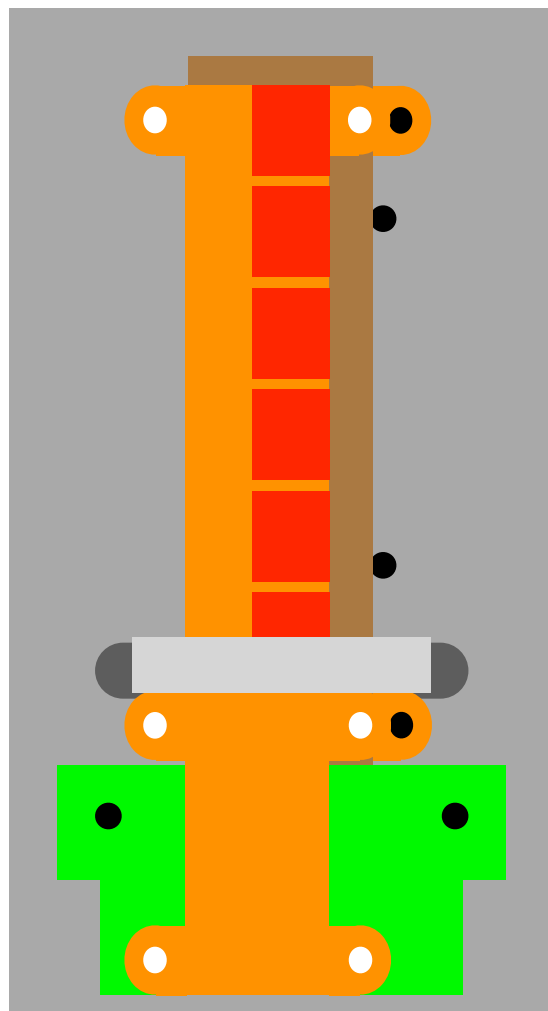


Procedure - 4



1. Full structure cures
2. Top half of clamp applied
3. Ladder removed from fixture
4. Inserted into box

Procedure - 4



1. Full structure cures
2. Top half of clamp applied
3. Ladder removed from fixture
4. Inserted into box

Interfaces

- * Need to confirm connection to outside world
 - * Screw holes in endplate
 - * Box attachment to test rig