



Sport Performance Aviation LLC
1528 Virgils Way, Suite 8
Green Cove Springs, FL 32043
904.626.7777
www.FlywithSPA.com

Corvaire Carb Heat Box

The Air box for the Corvaire engine is designed to provide a Carburetor heat valve and Air duct hose to carburetor adapter in one package. The filtered air inlet is through the front 2.5 inch opening, the unfiltered carb heat is through the side 2 inch opening. The 2.5 inch filtered air duct hose attaches to the flange on the air filter box mounted to the lower cowl.

There is a Panther specific air filter and box available separately from SPA. Contact SPA for more information.

The Carb heat air duct hose is attached to the "heat muff" on the right-hand exhaust system. The heat muff ends and clamps come with the basic exhaust system. The shroud and flange must be manually fabricated by the builder.

Hardware list – included in the kit.

- Qty 4 Ms21047L08K nut plates with counter sunk rivet holes for cover plate
- Qty 4 AN526C-832R8 for cover plate
- Qty 8 ccc-32 rivets for attaching nut plates
- Qty 2 Set screw shaft collars (Mcmaster-Carr # 6432K19) for securing flapper door shaft
- Qty 1 AN3-12A bolts for securing control arm
- Qty 1 MS21042-3 for control arm bolt
- Qty 2 AN960-10 for control arm nut/bolt
- Qty 2 Continental #21323 bottom carb gaskets for top and bottom of air box spacer
- Qty 6 AB4-6CLD 46 length closed end protruding head rivets (or equivalent) for bearings
- Qty 40 AB4-2CLD 42 length closed end protruding head rivet (or equivalent) for air box assembly
- Qty 4 MS21042 nuts for attaching air box to MA-3SPA carb
- Qty2 AN960-416 washers for air box mounting nuts
- Qty 2 dash 008 (1/16 x3/16 OD) "O rings" Mc master-Carr # 9452K16 for flapper door shaft.

Air box assembly

1. Cleco the sheet metal parts and bearings together per photos.
2. Drill all holes to #30
3. Cleco the top mount plate in place and drill /cleco #40 as shown in photos
4. Disassemble and debur all parts.



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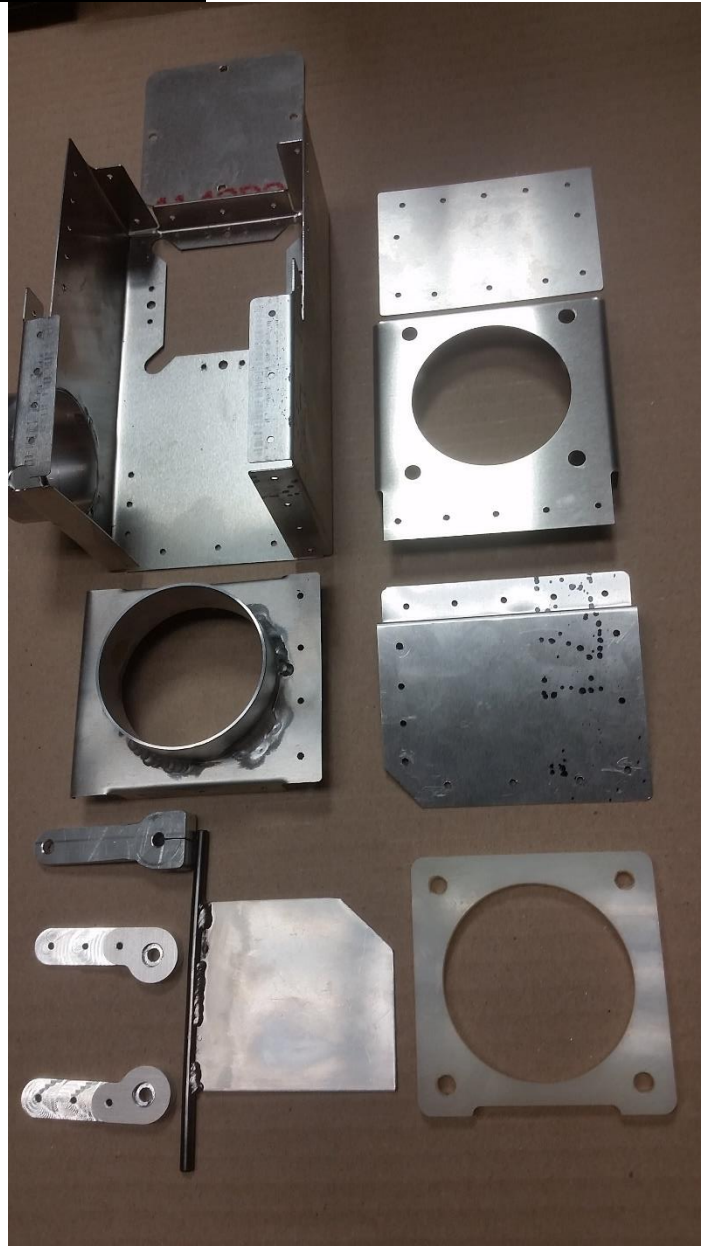
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5. Install cover nut plates per photo with xxxx 32 flush rivets
6. Locate drill and celco air duct flanges per photos
7. Debur airducts and counter sink holes on the inside for flush rivets
8. Debur side and top and dimple for air duct flange rivets install flush on inside of the bock
9. Rivet lower air box bearing in place with AB4-6CLD closed end rivets
10. Slide air box door into lower bearing per photos.
11. Cleco remaining air box parts together
12. Install "O" rings and shaft collars per photo, and verify smooth door operation
13. Install AB4-6CLD closed end air box bearing rivets
14. Install all AB4-2CLD closed end rivets



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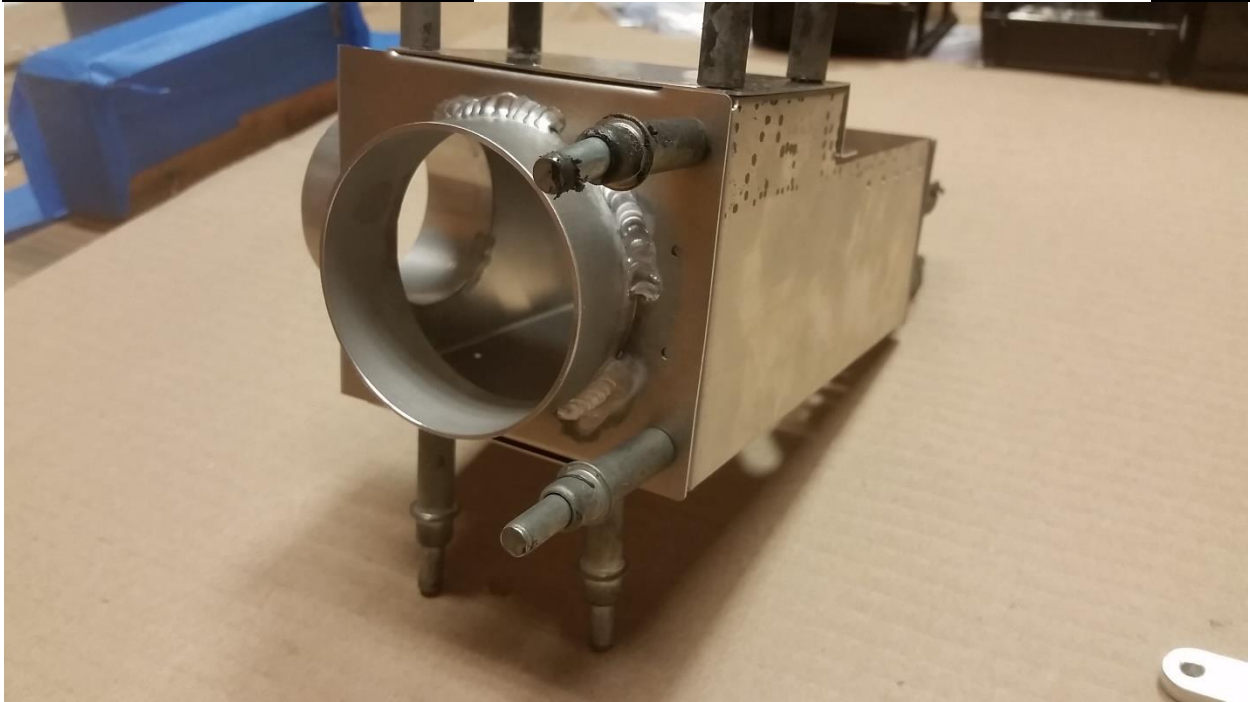
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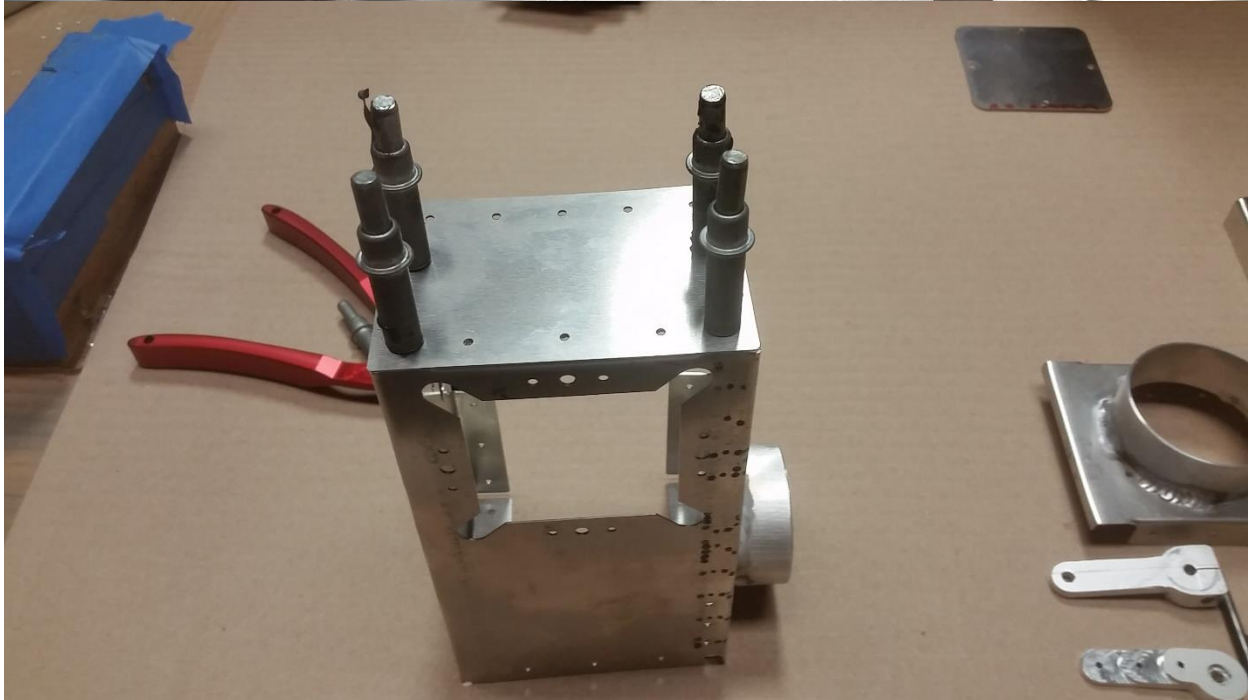
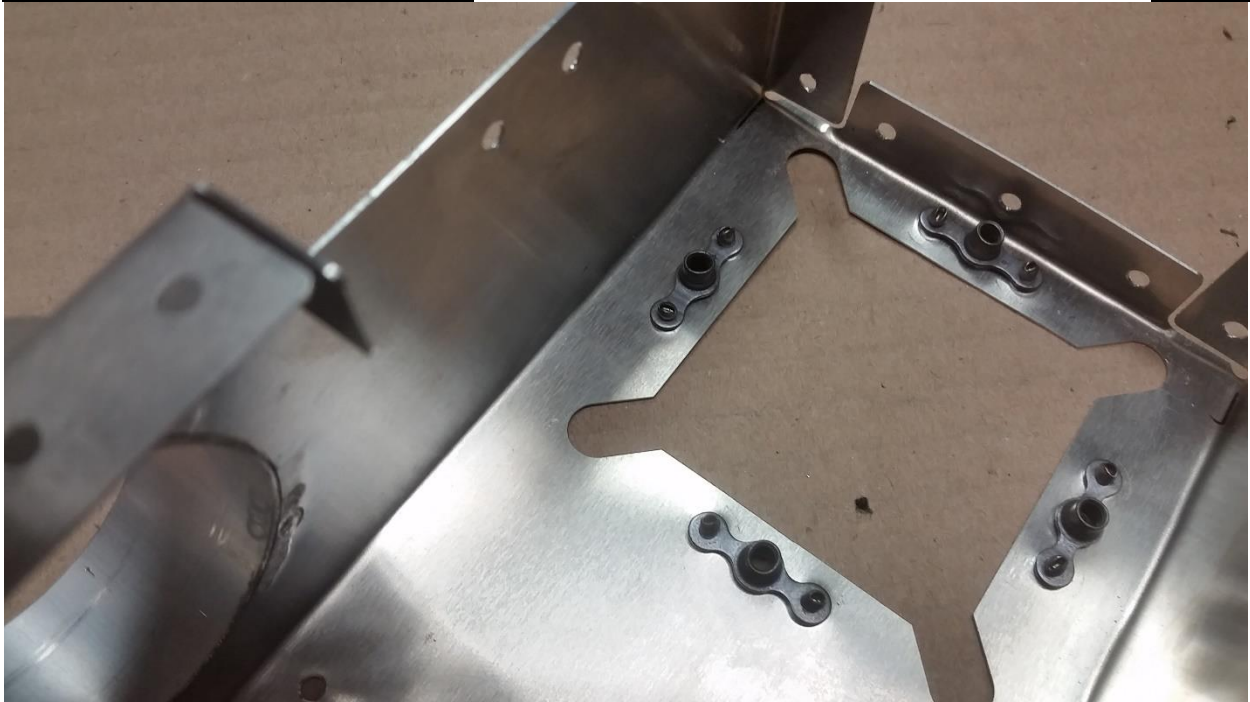
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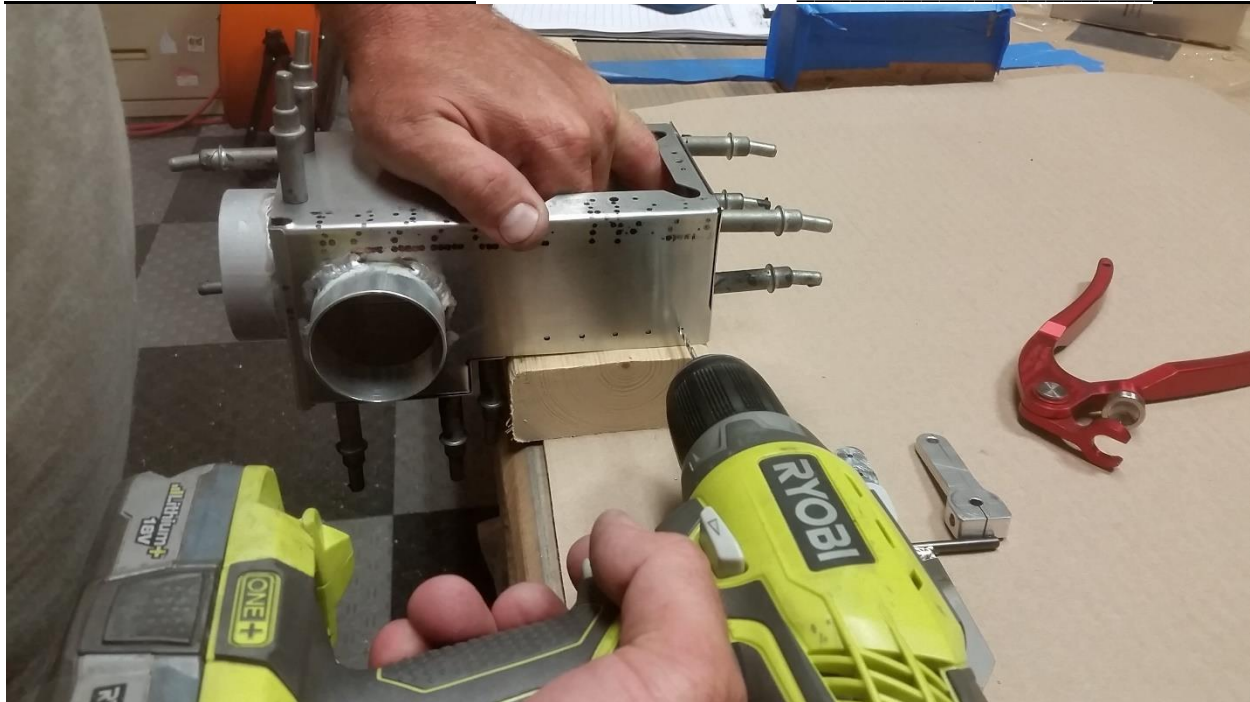
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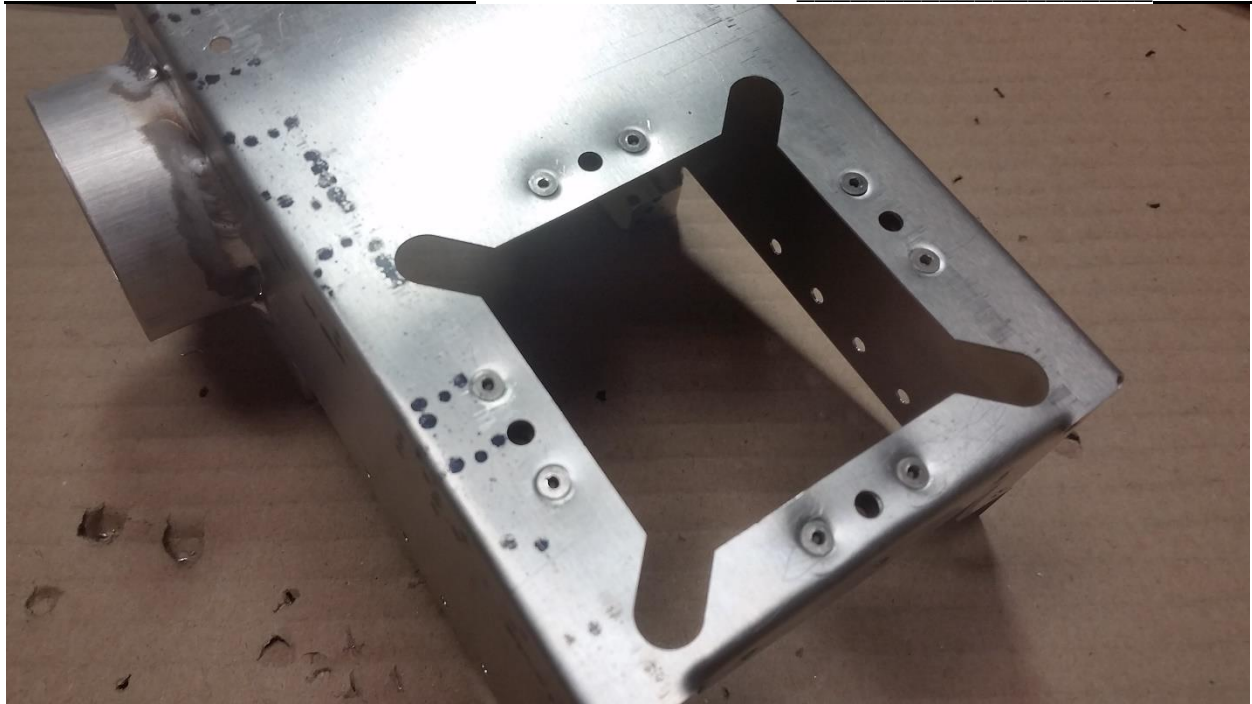
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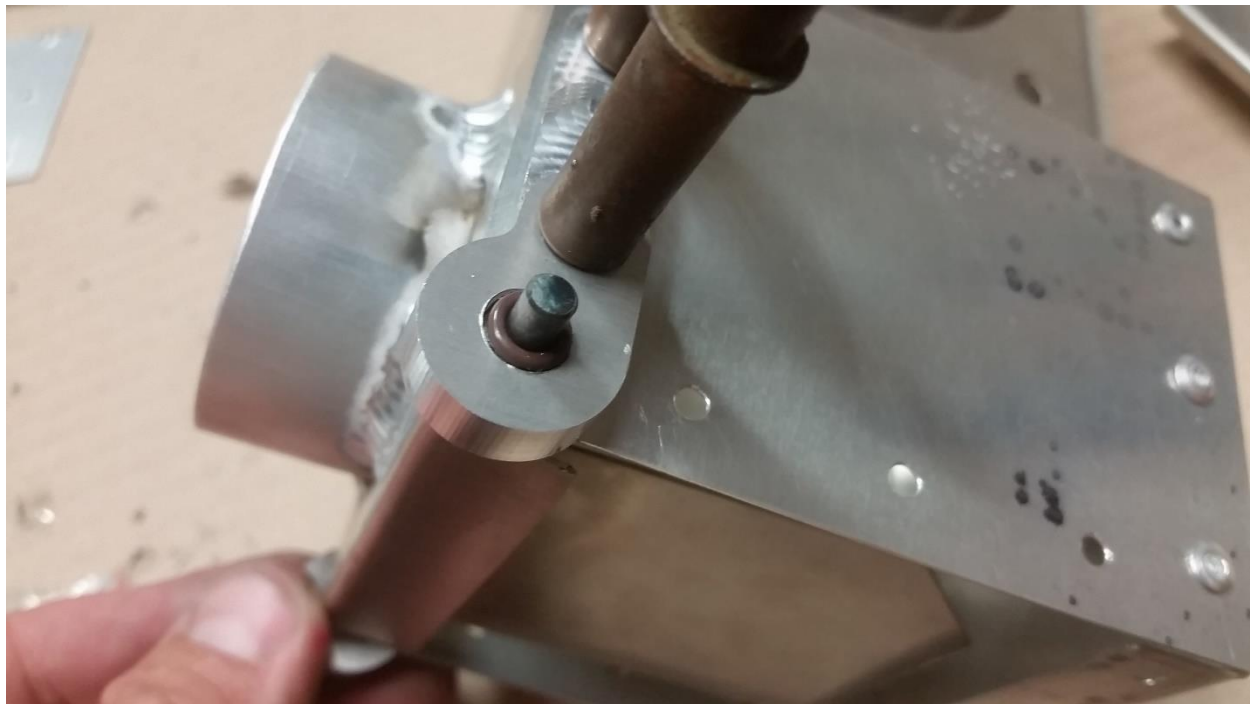
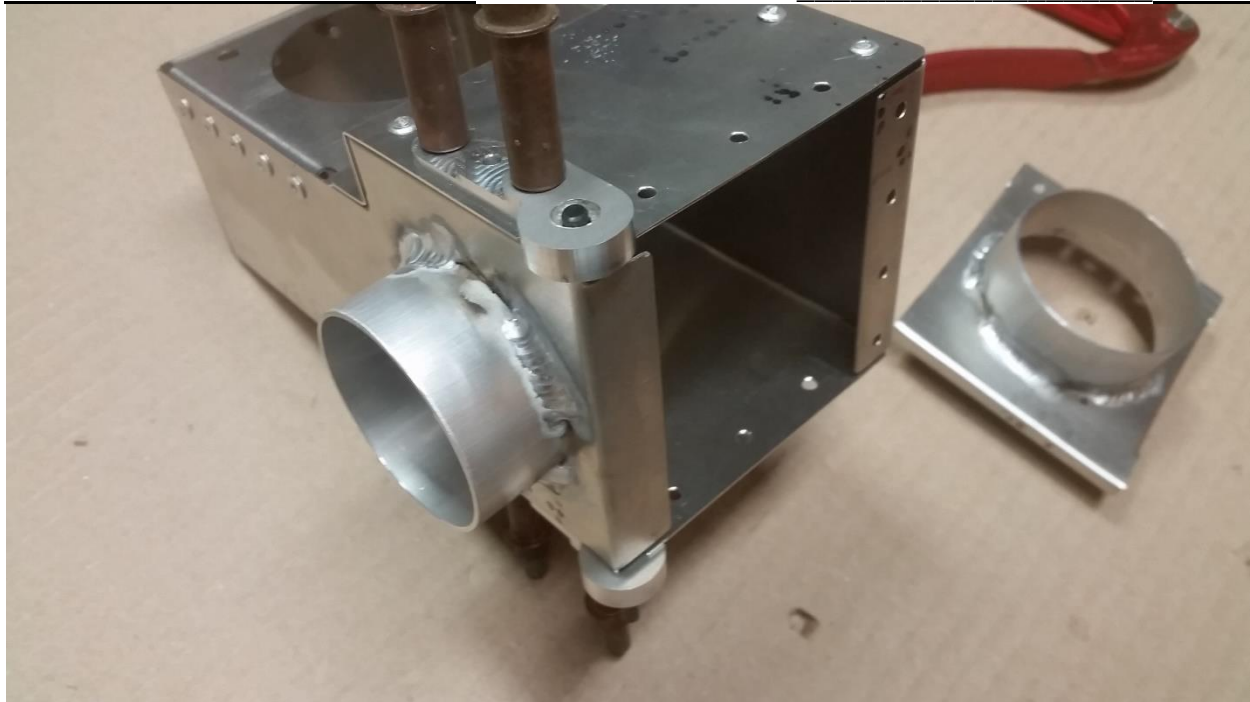
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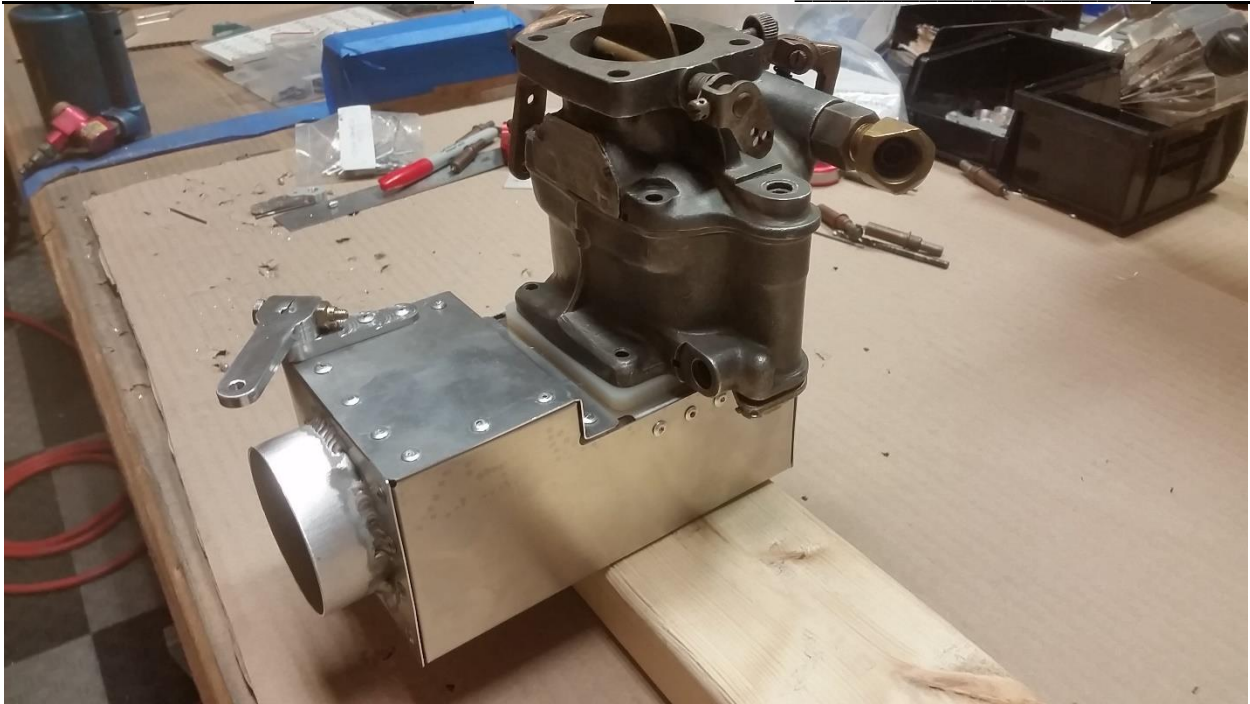
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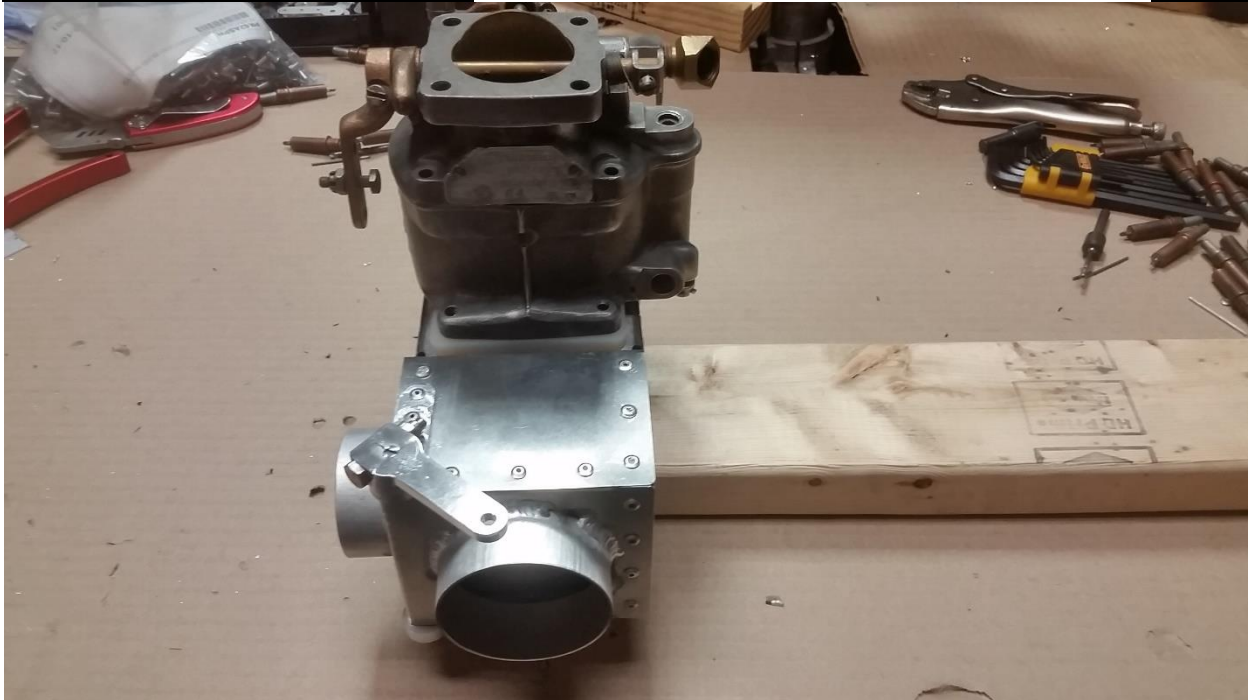
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Air box installation

Install the airbox per photo with two Continental #21323 gaskets, and the nylon spacer using the supplied AN363-10 nuts and AN960-10 washers.

Fabricate and appropriate carb heat door actuation cable mount using photos as a guide and rivet in place.

Note: use caution to ensure not debris are able to get into carburetor.

Attach carb heat hose and filtered air duct hoses.