

STARFIELD FRONTIER – 3D PRINT & ASSEMBLY GUIDE v1

3D Printing Design by [Sean Charlesworth](#)

See the large 2.5 foot Frontier build on [Adam Savage's Tested](#) – especially for color match and weathering tips!



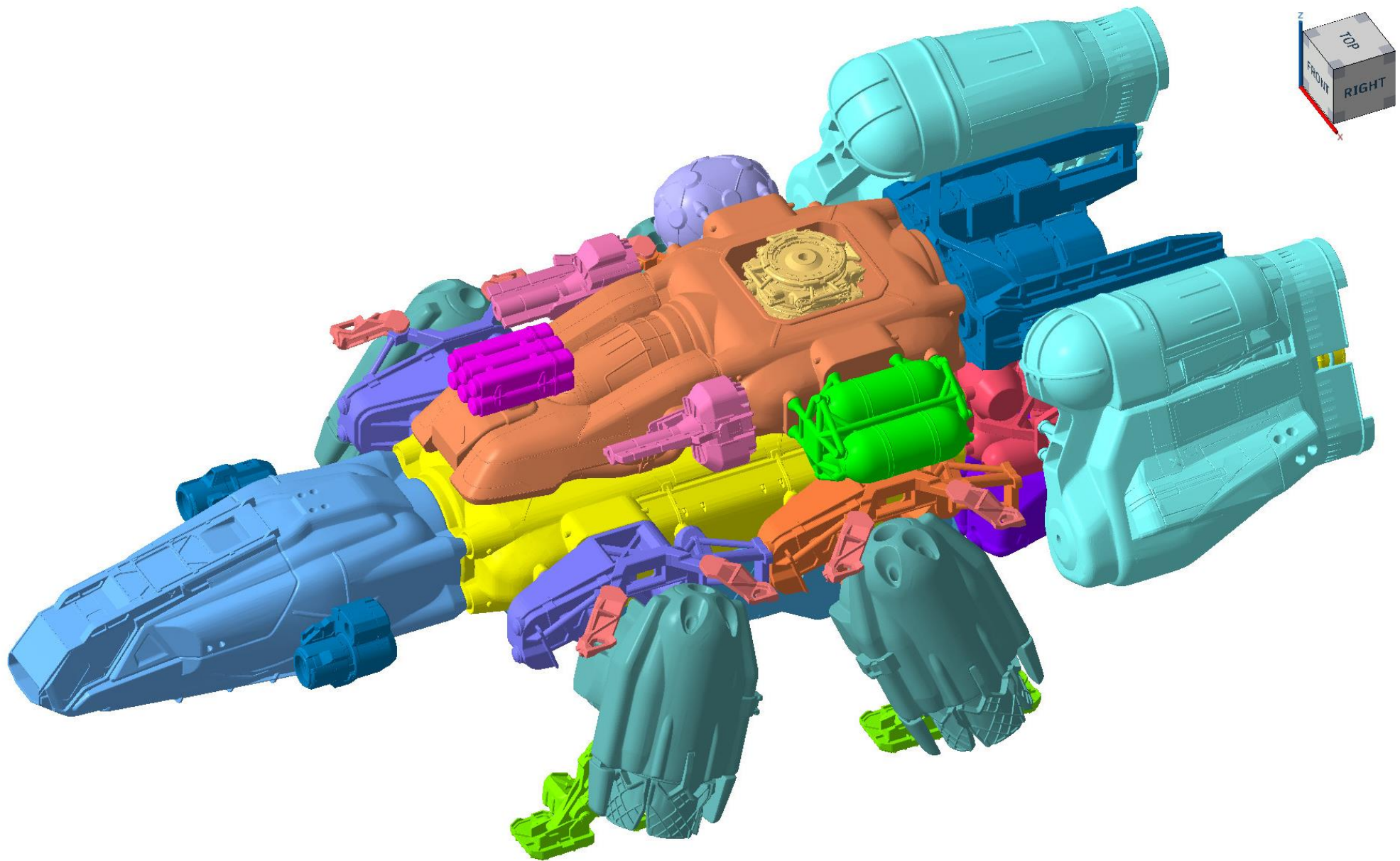
This is a 12" model designed for **3D printing in resin**.

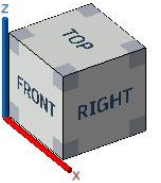
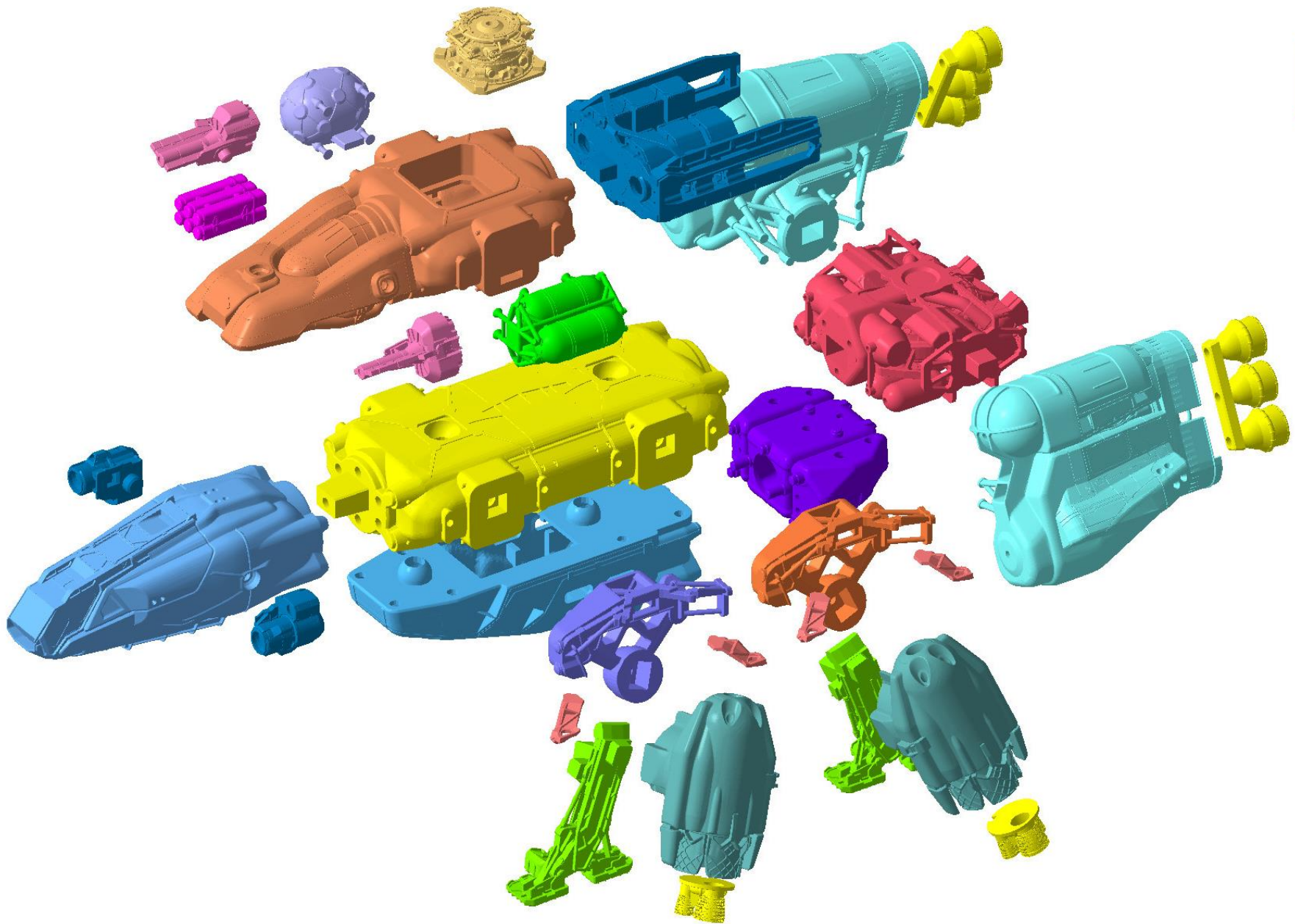
- HOLLOWED with 1.5mm walls – parts are **not ideal for FDM printing**.
- Should fit on most resin printers.
- Designed to glue together.
- Room for lighting.
- Optional retracted landing gear.
- Fit of parts may be snug depending on your printer and materials. Allow full curing of parts before assembly. Some minor sanding of the alignment keys may be necessary.
- 1/32" brass rod can be used for **Grav Drive** detail and adding railing around **HAB** and **Cowl**.
- May be able to shrink model to around 70% - this has not been tested - wall and feature details may become too thin/small to print properly!
- Should be able to enlarge prints without too much problem.
- Solid versions of parts are included for those who would like to try FDM prints or for custom modifications.

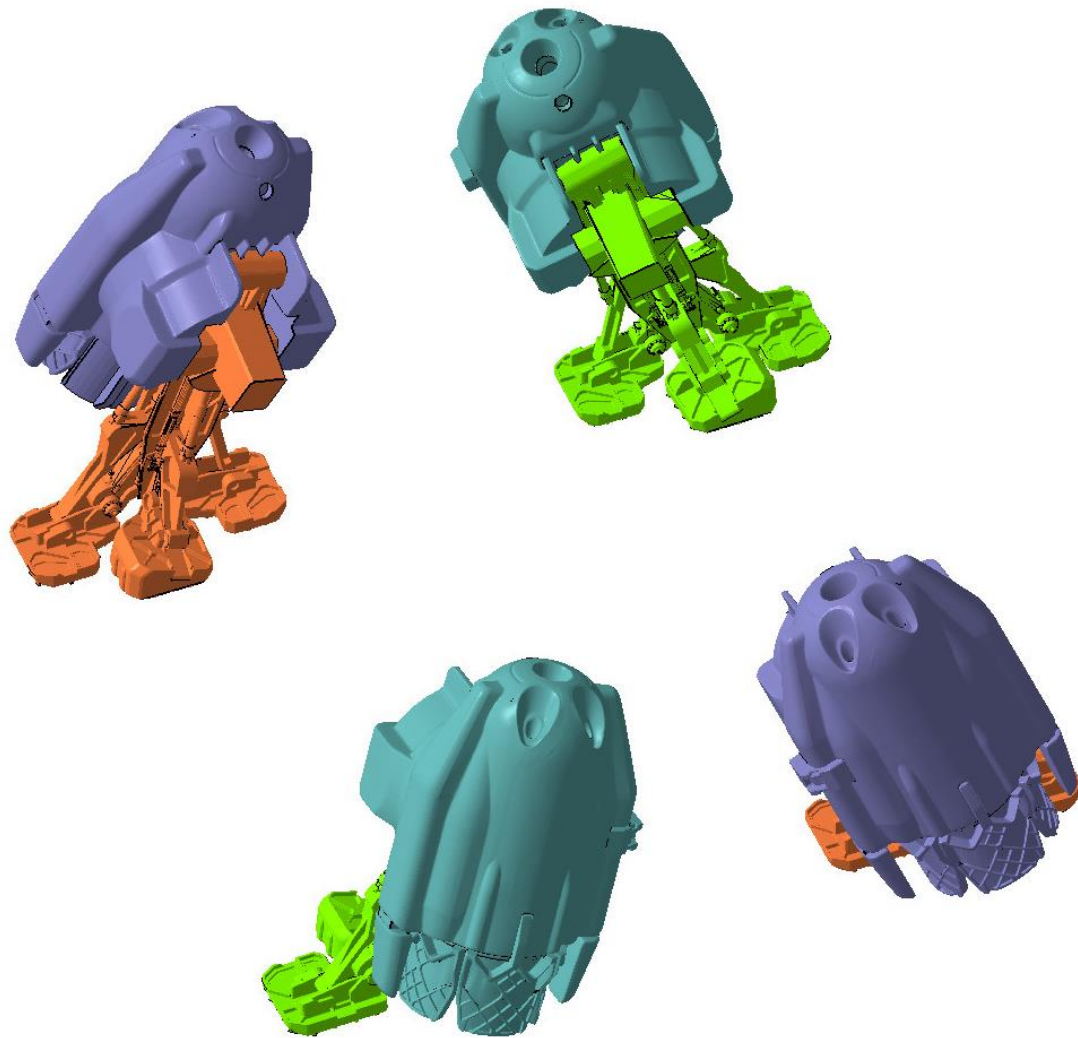
PRINTING

PARTS LIST	QTY	NOTES
10mm Cube	-	OPTIONAL - import with other parts to verify size
Cannon MID	2	
Cargo Bay		
Cargo Bay window	4	OPTIONAL - print in clear
Cargo Hold		
Cockpit		Included paint masks file can be used for windows. Also can be printed in clear for translucent windows.
Cockpit lasers	2	Not symmetrical, as in game.
Cowl Top		
Docker		
Engine LT		
Engine RT		
Engine nozzle assy	2	
Fuel Tanks LT		
Grav Drive		
HAB		
Landing Gear LT FRONT - RT REAR	2	LT FRONT & RT REAR are identical - thus x2. Can be mirrored to create LT REAR & RT FRONT
Landing Gear LT REAR - RT FRONT	2	
Landing Gear Retracted LT FRONT - RT REAR	2	OPTIONAL - Marked with a SQUARE - LT FRONT & RT REAR are identical - thus x2. Can be mirrored to create LT REAR & RT FRONT
Landing Gear Retracted LT REAR - RT FRONT	2	OPTIONAL - Marked with a CIRCLE
Landing mount clamp v1 Type 1	4	
Landing mount clamp v1 Type 2	4	
Landing Mount LT FRONT		
Landing Mount RT FRONT		
Landing Mount LT REAR		
Landing Mount RT REAR		
Missiles CENTER		
Reactor		
Shield Gen		
Thruster LT FRONT - RT REAR	2	Marked with a SQUARE - LT FRONT & RT REAR are identical - thus x2. Can be mirrored to create LT REAR & RT FRONT
Thruster LT REAR - RT FRONT	2	Marked with a CIRCLE
Thruster nozzles LT FRONT - RT REAR	2	Marked with a SQUARE - LT FRONT & RT REAR are identical - thus x2. Can be mirrored to create LT REAR & RT FRONT
Thruster nozzles LT REAR - RT FRONT	2	Marked with a CIRCLE

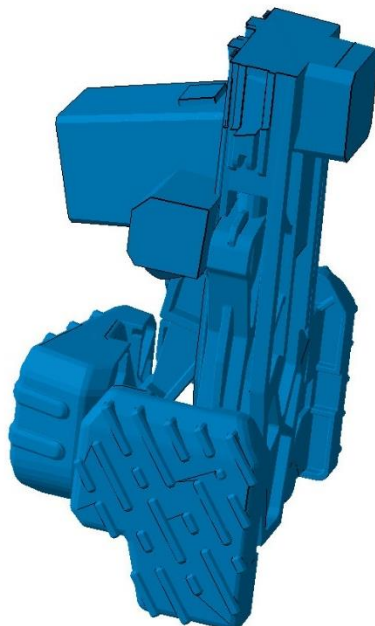
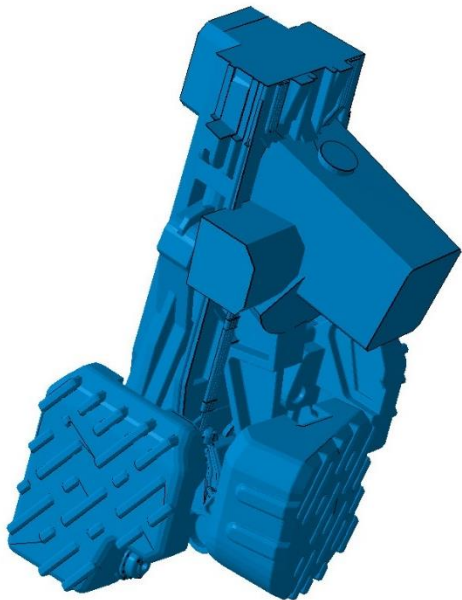
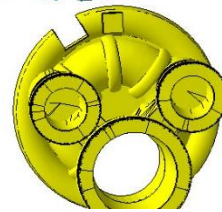
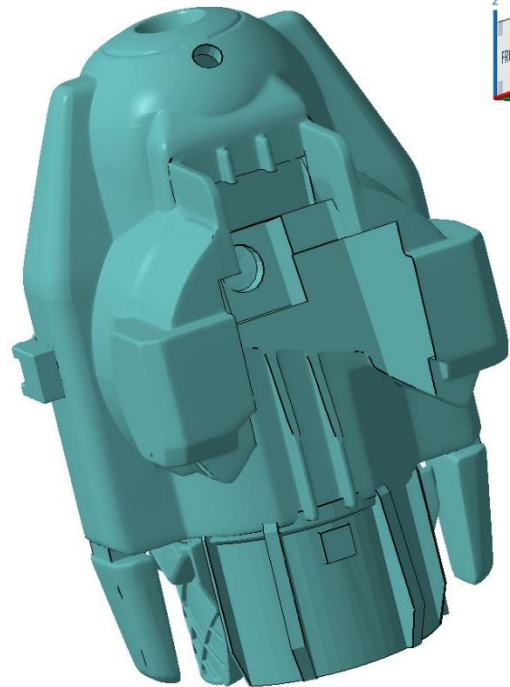
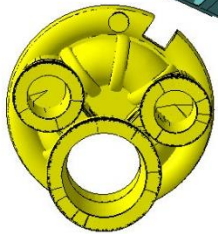
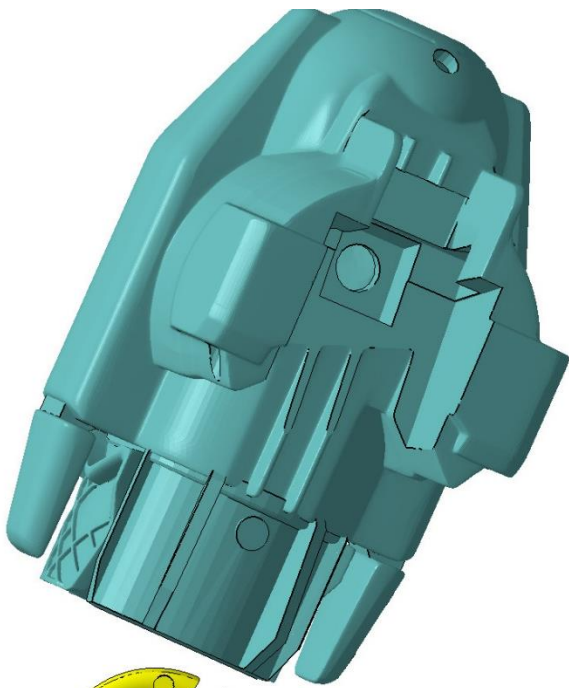
- You can import the '10mm Cube' along with the other parts to verify that they are at the correct scale.
- Print 1 of every part unless marked otherwise.
- Items that are highlighted in the same color are symmetrical (eg: landing gear, landing mounts, engines, etc) and can be mirrored to save setup time. If your slicing software allows it, load the first highlighted part, setup supports, then duplicate/mirror that part to create the symmetrical version.



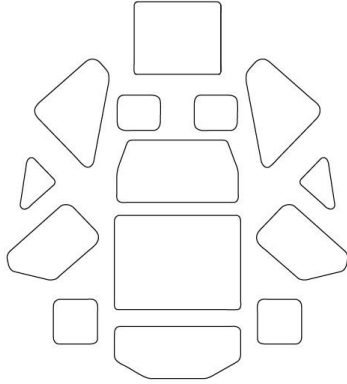
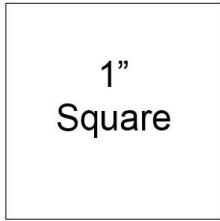




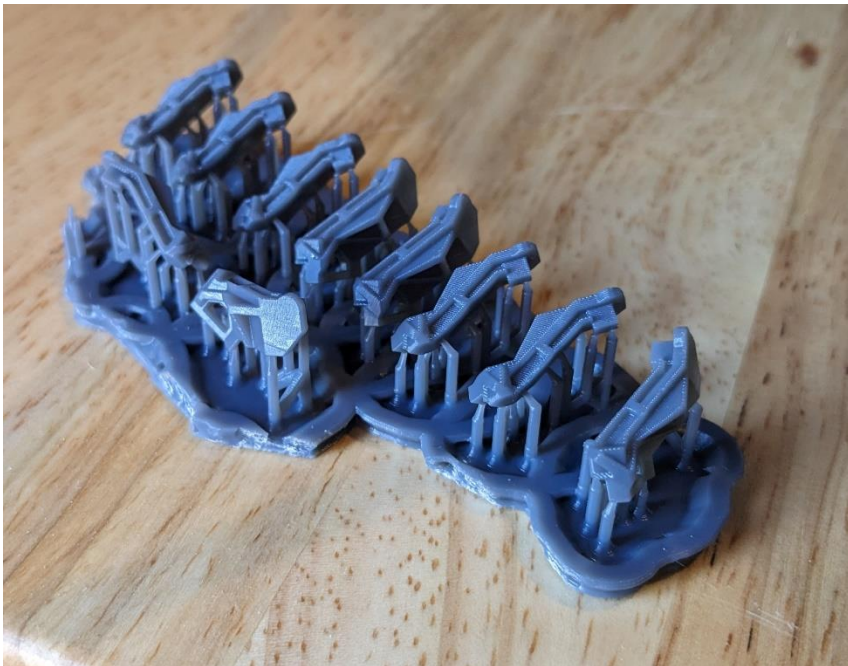
- The **Landing Gear**, **Thrusters** and **Thruster Nozzles** are a special case as they are symmetrical both side to side and front to back. So they are IDENTICAL crosswise. For example, load '**Landing Gear LT Front – RT Rear**', setup print supports and, in this case, the quantity needed is 2, so duplicate it. Now make a MIRRORED duplicate of BOTH, which will make the symmetrical set.



The symmetrical versions of the **Landing Gear Retracted**, **Thruster**, and **Thruster nozzles** are hard to tell apart, so they have been marked with a **square (LEFT)** and **circle (RIGHT)** to differentiate them.



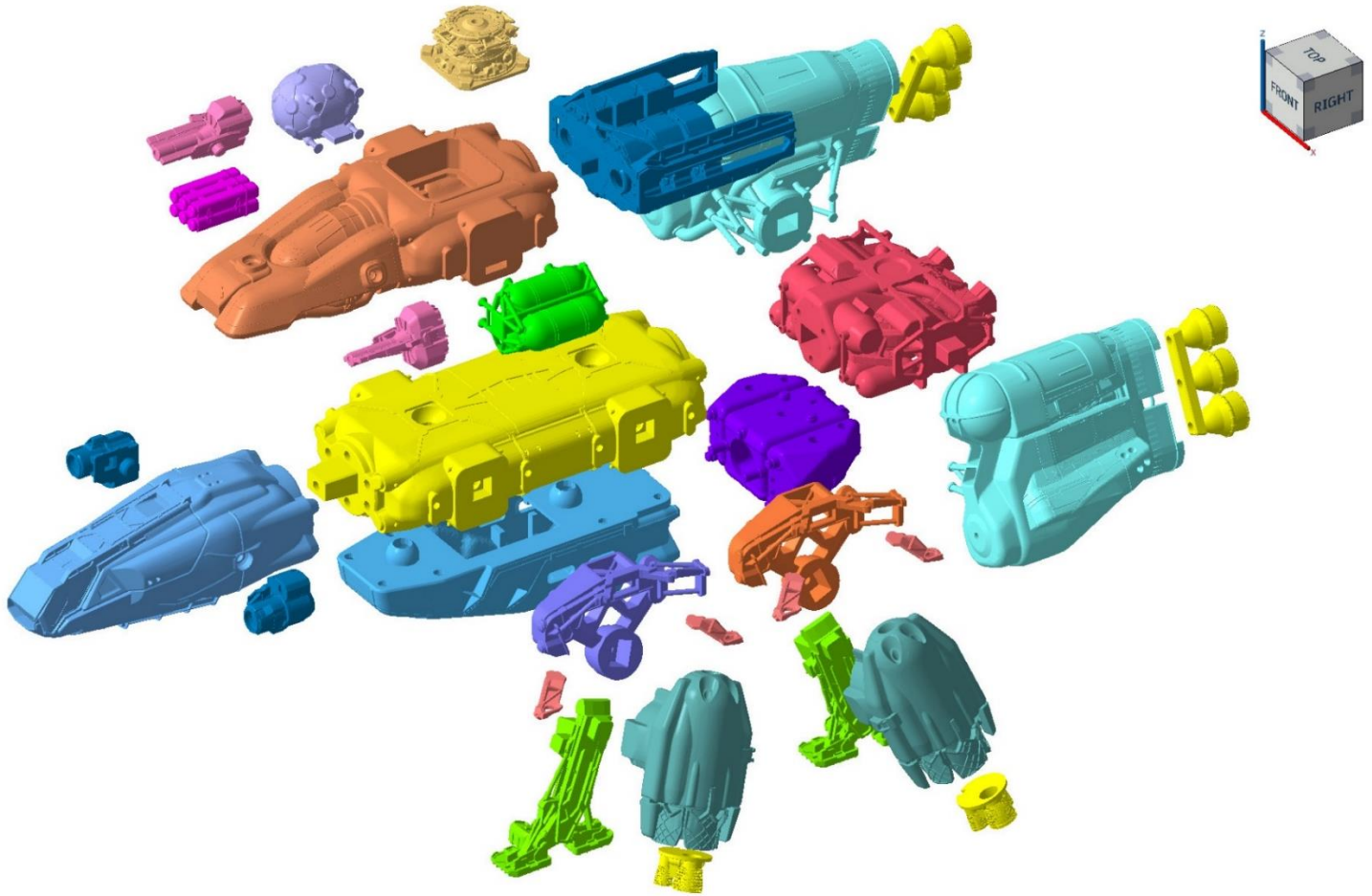
- The cockpit can be printed in clear and painted to create translucent windows. The included '**Cockpit glass masks**' file can be used to make paint masks for the windows using a vinyl cutter or possibly by hand. There is a 1" square included in the file to verify it has imported at the proper scale.



- Due to their small size, it's recommended to group the '**Landing mount clamps**' together and leave them on their supports for painting.

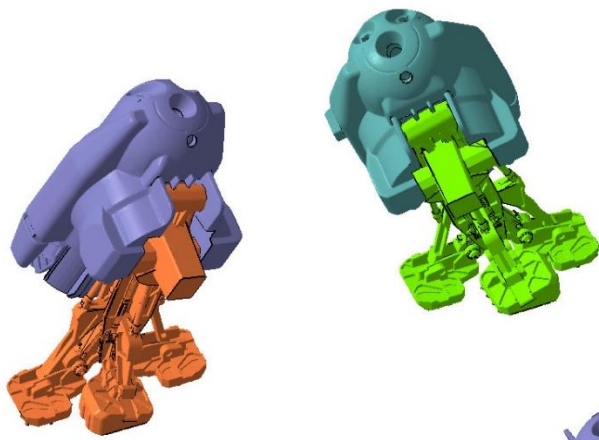
ASSEMBLY

Painting parts before assembly is recommended (see **PAINT REFERENCE** section). CA (Cyanoacrylate glue) is a good choice for assembly. Minor sanding of connecting keys may be necessary - test fit parts before assembly. Many parts have openings to allow for lighting.



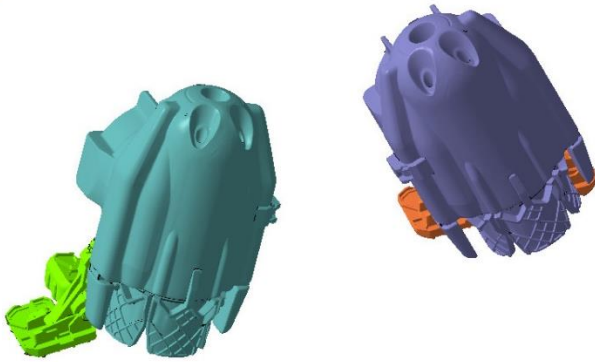
OPTIONAL

Before assembly you can install real metal rods into **Grav Drive** and/or **HAB and Cowl**. Use 1/32" brass rod. The **Grav Drive** already has holes, simply thread thru, cut off and glue. You will need to drill holes for **HAB and Cowl** railings where the tiny stand-offs are. Then bend and install railing.



As mentioned before, the **Landing Gear**, **Thrusters** and **Thruster Nozzles** are symmetrical left to right and front to back. So they are IDENTICAL crosswise.

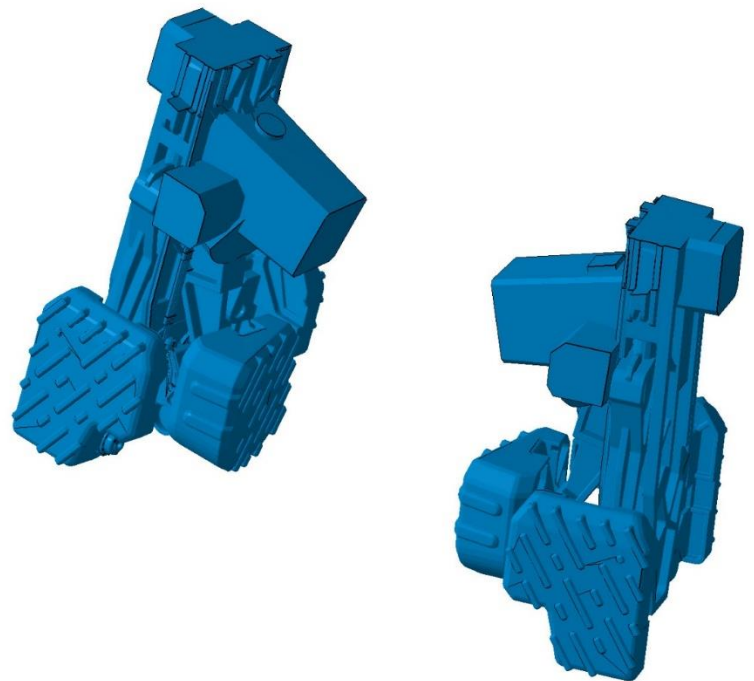
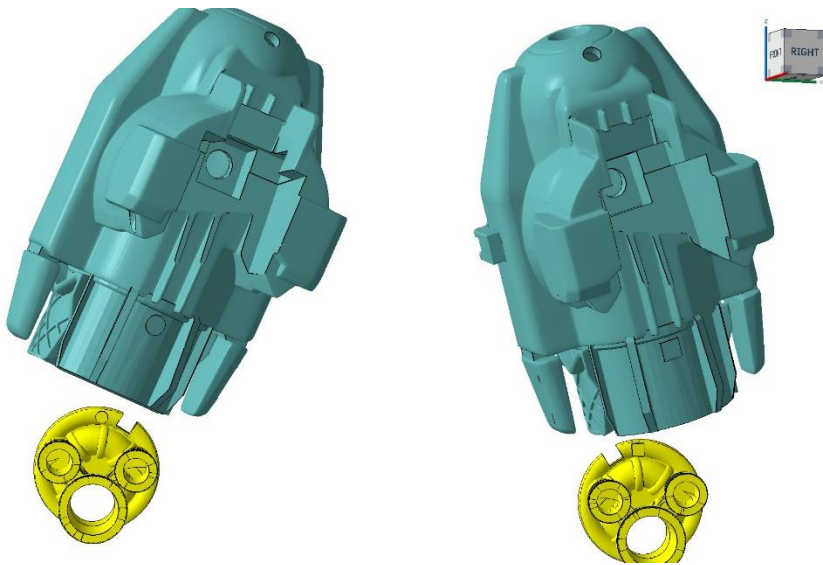
The optional **Retracted Landing Gear** can be used.

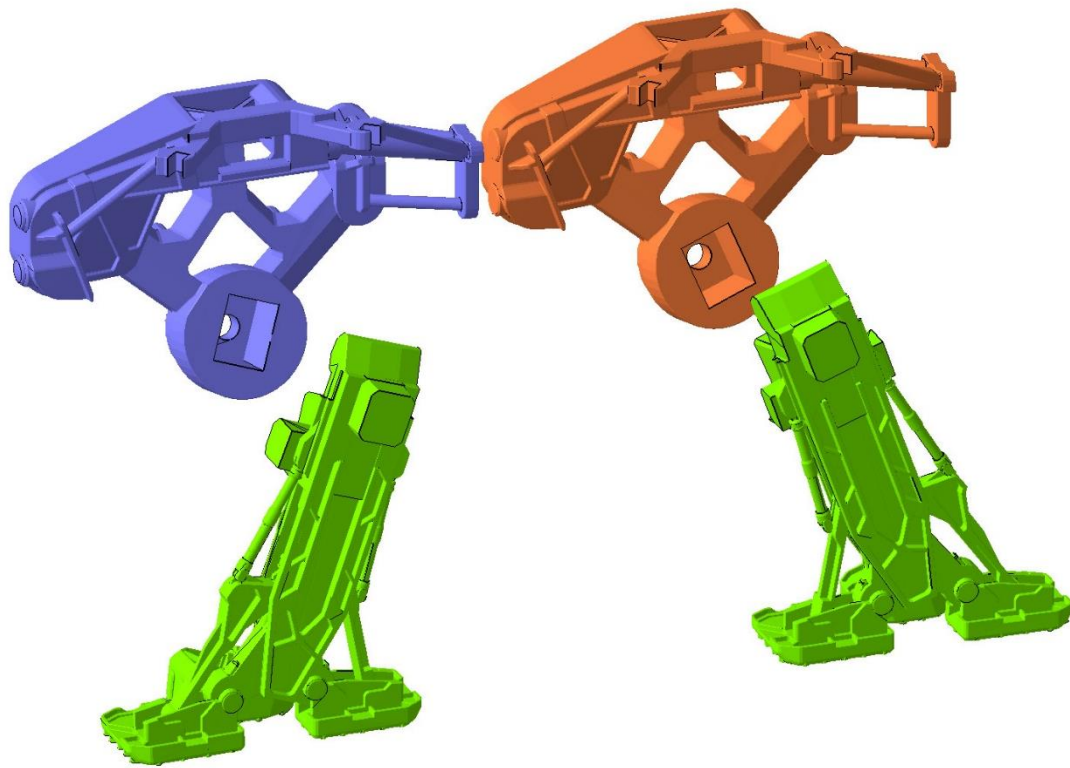


Landing Gear Retracted, **Thrusters** and **Thruster Nozzles** are hard to tell apart.

LEFT FRONT – RIGHT REAR are marked with a **SQUARE**.

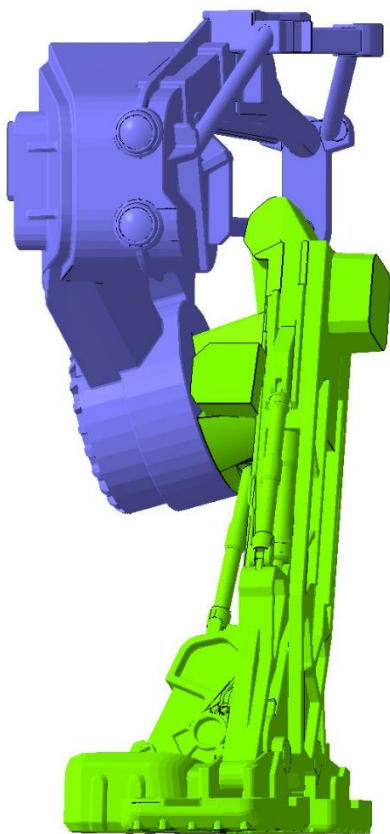
RIGHT FRONT – LEFT REAR with a **CIRCLE**.



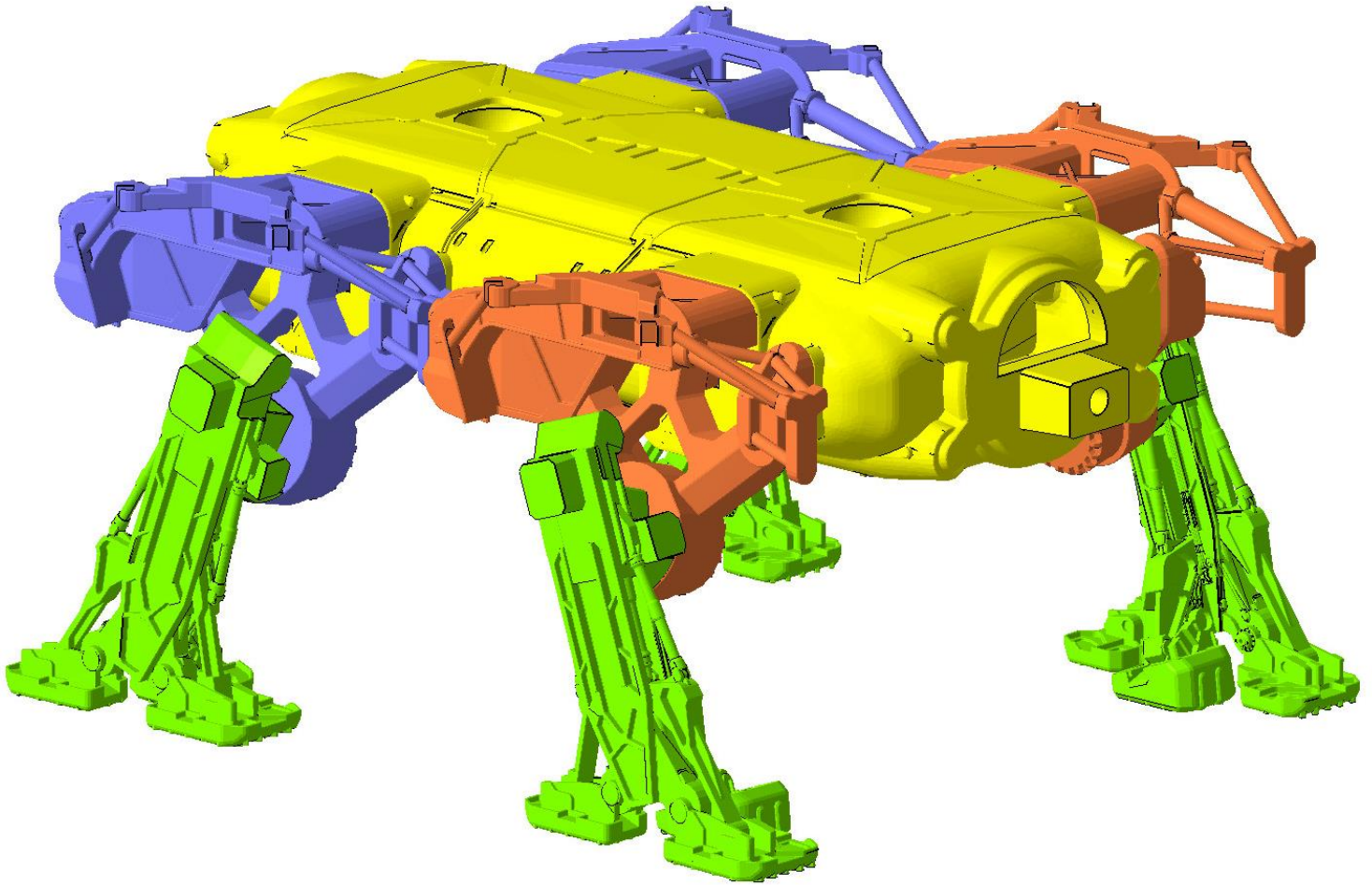


Glue **Landing Gear** to **Landing Mount** – notice that the rear **Landing Mount** has the key hole going in the opposite direction.

Repeat for opposite side.

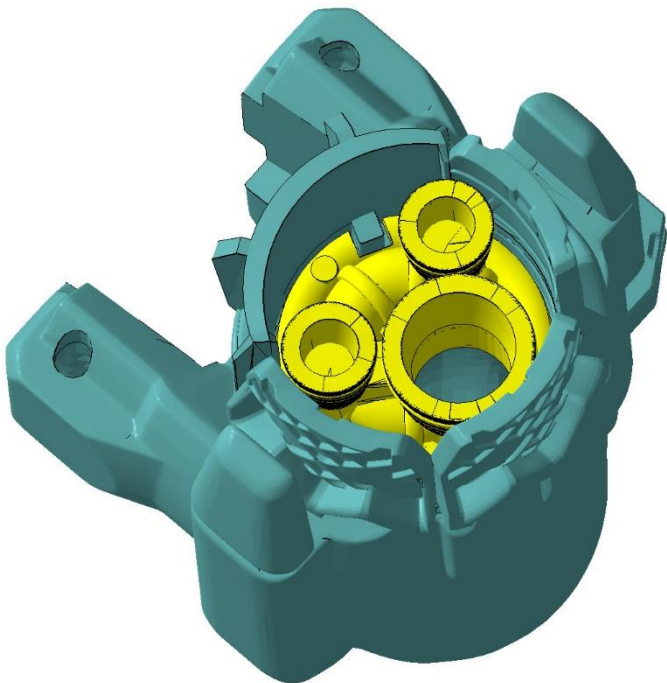


FRONT

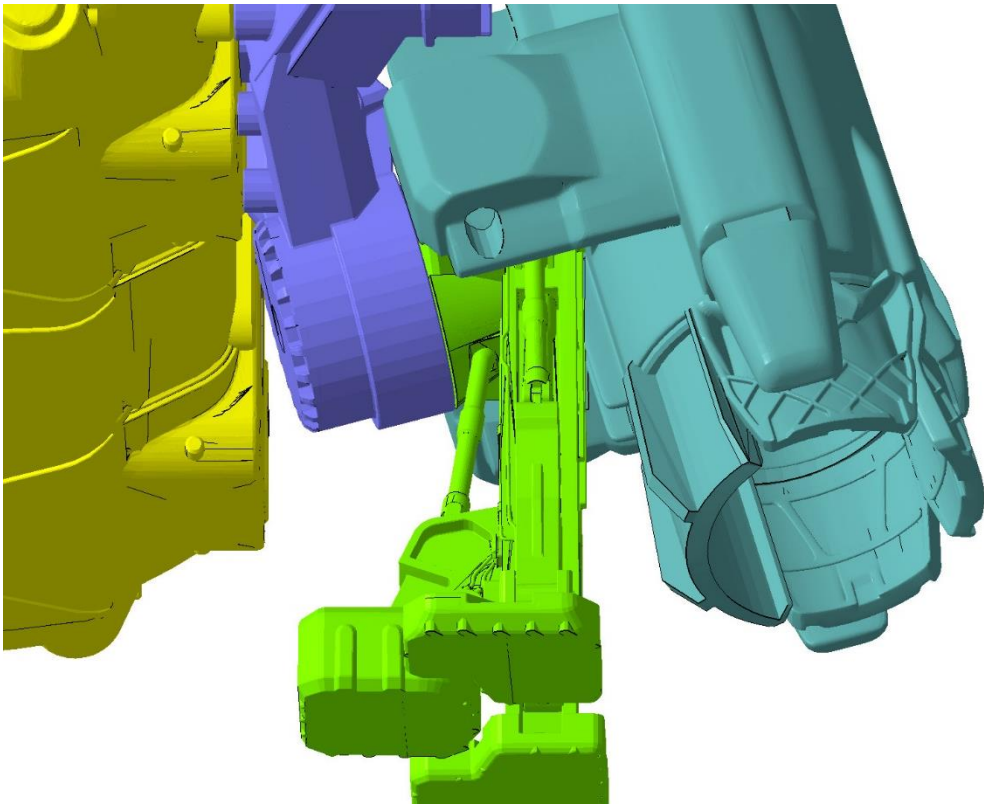
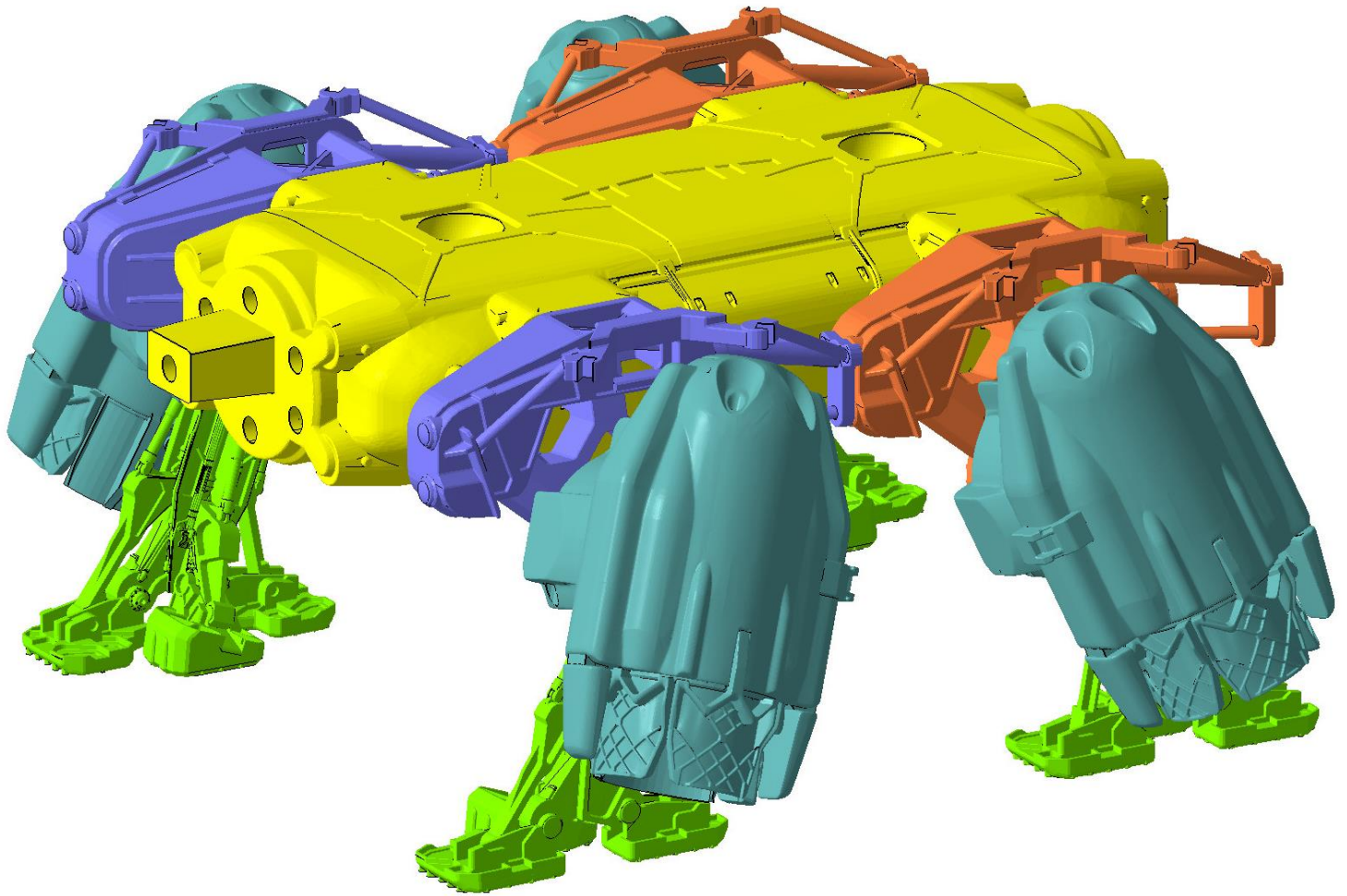


REAR

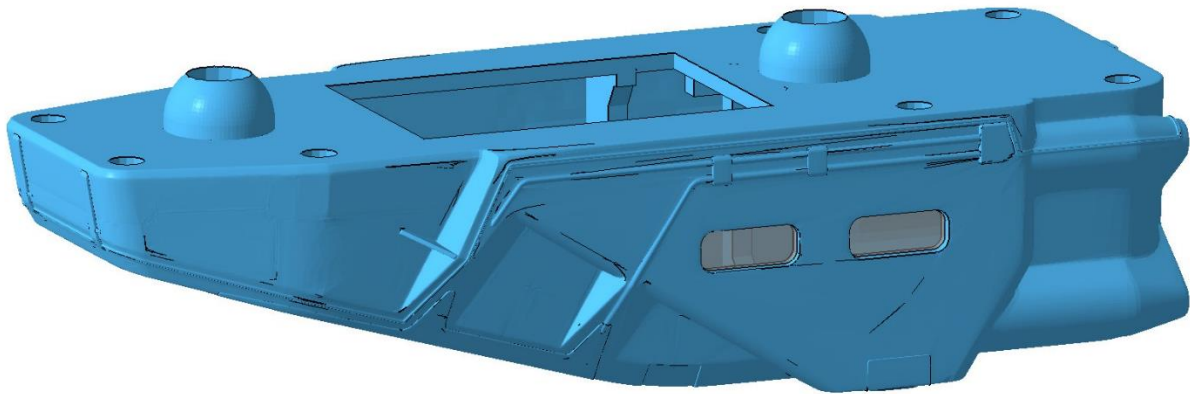
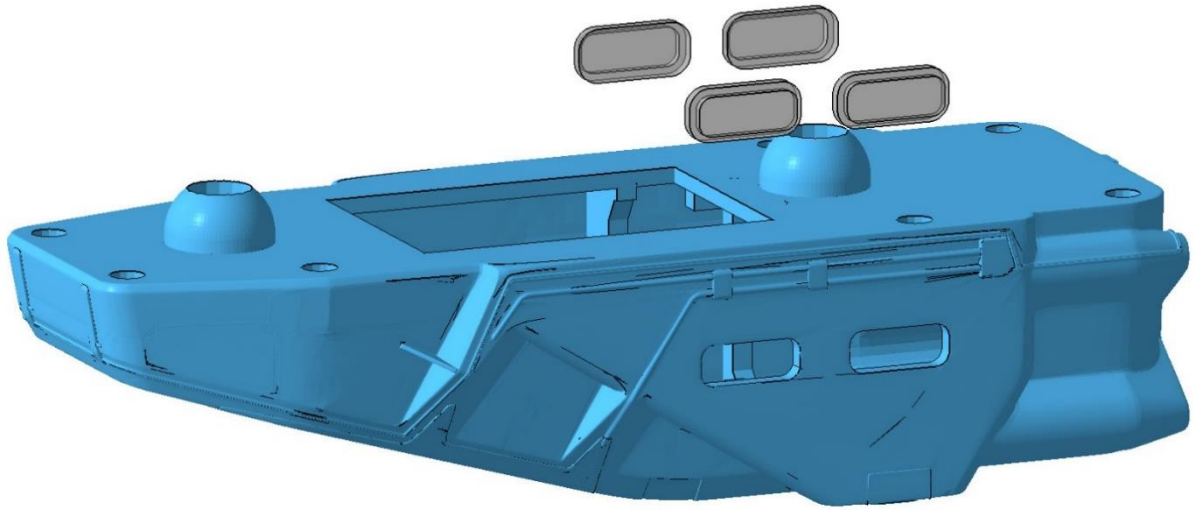
Glue **Landing Assemblies** to **HAB**. The semi-circle cutout is the **TOP REAR** of the **HAB**!



Glue **Thruster Nozzles** into **Thrusters**. Notice there is a key for alignment. Be sure to match parts marked with circle and square. (Remember if you mirrored parts in the slicing program they will all be squares!)

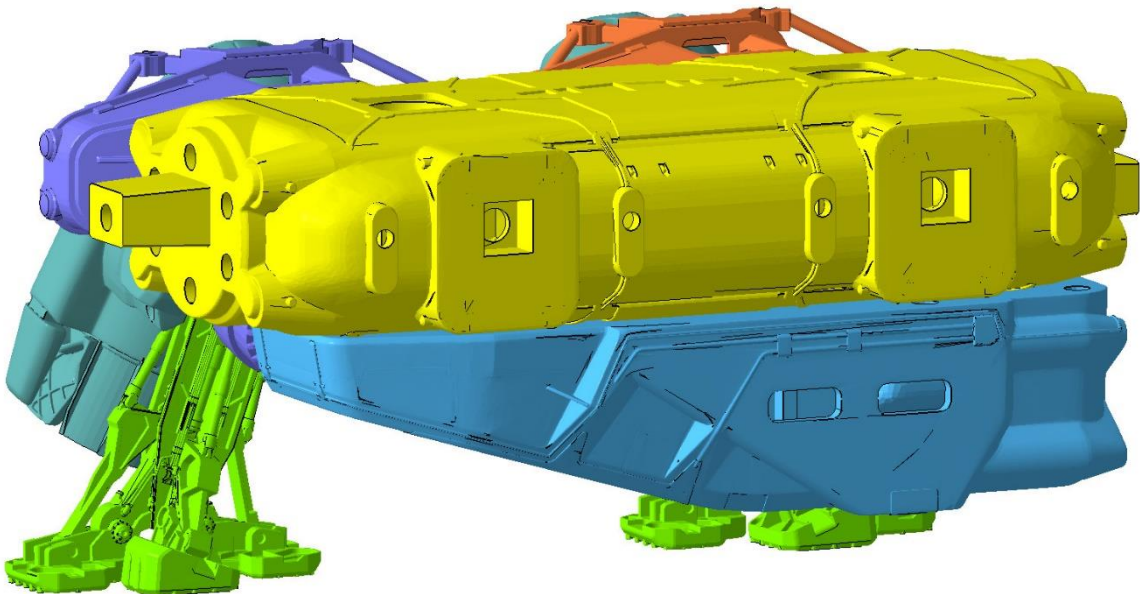


Glue Thrusters to Landing Gear using square keys. You may have to wiggle them around a bit to get them in position.

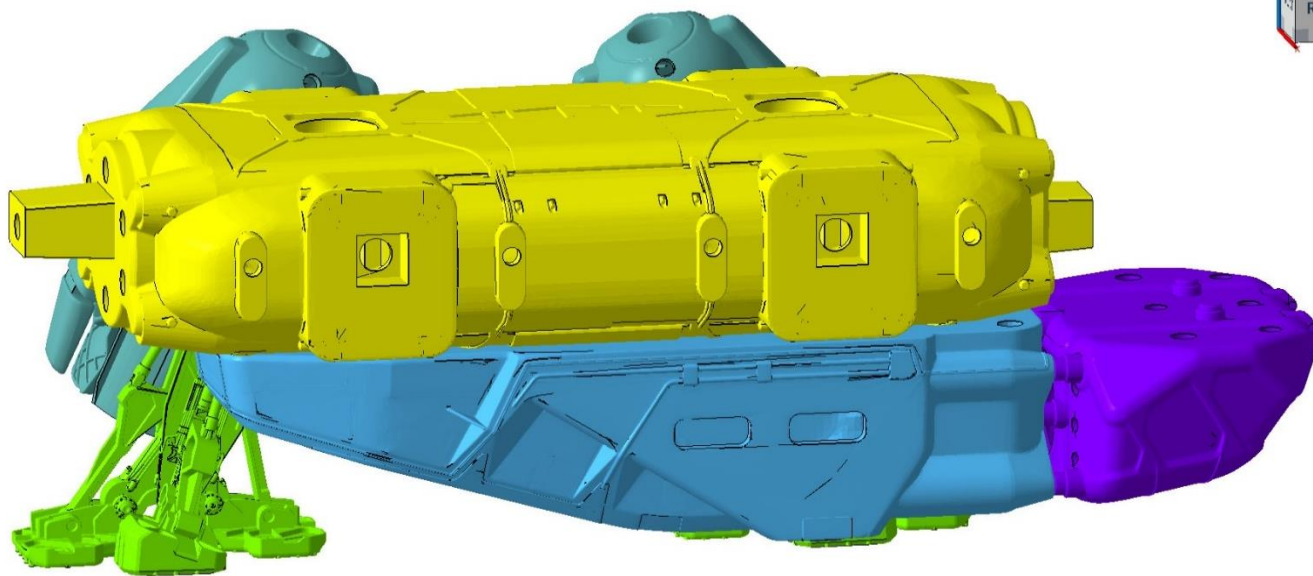


OPTIONAL

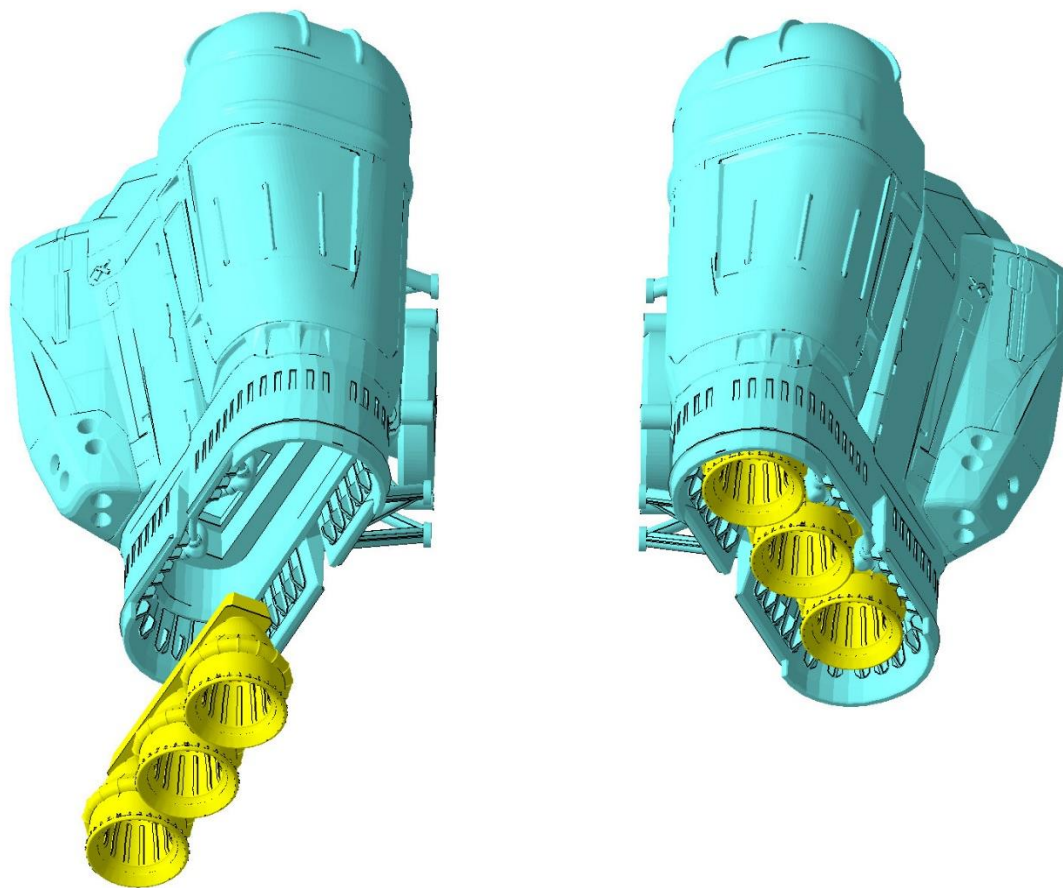
Print **Cargo Bay Windows** in clear and glue into **Cargo Bay** from the inside.



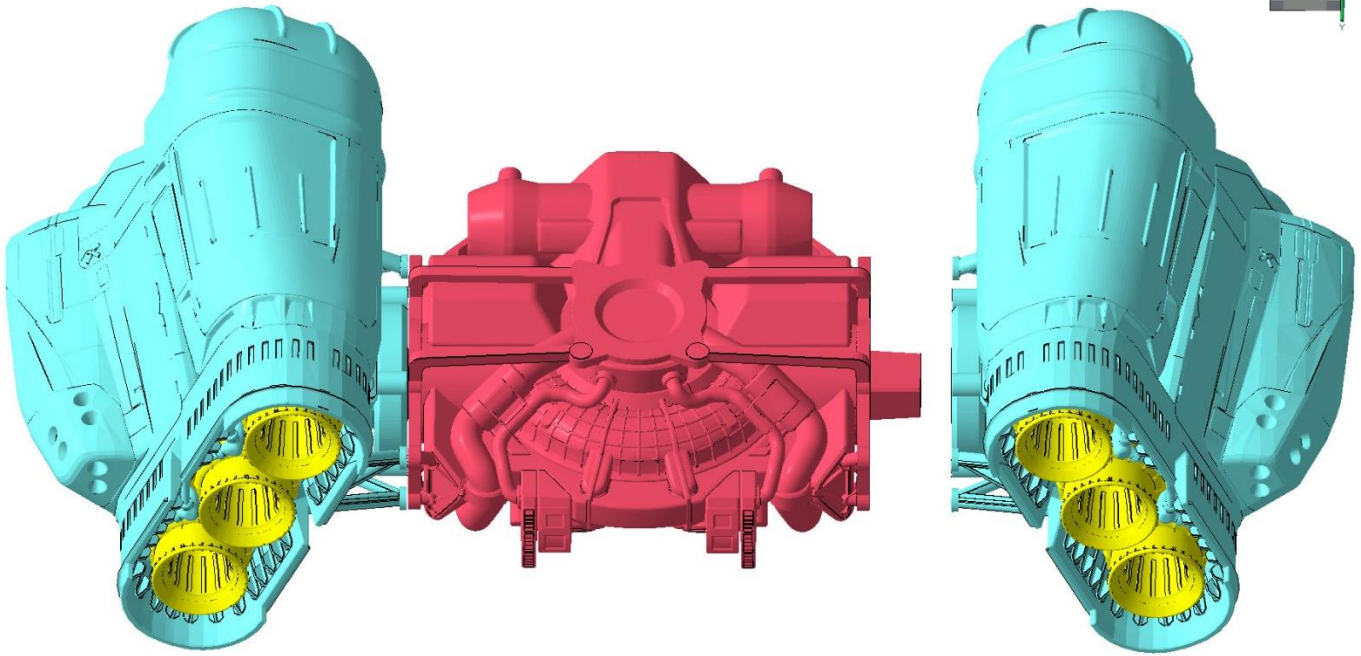
Glue **Cargo Bay** to **HAB** using round keys. Be sure **HAB** is positioned the right way!



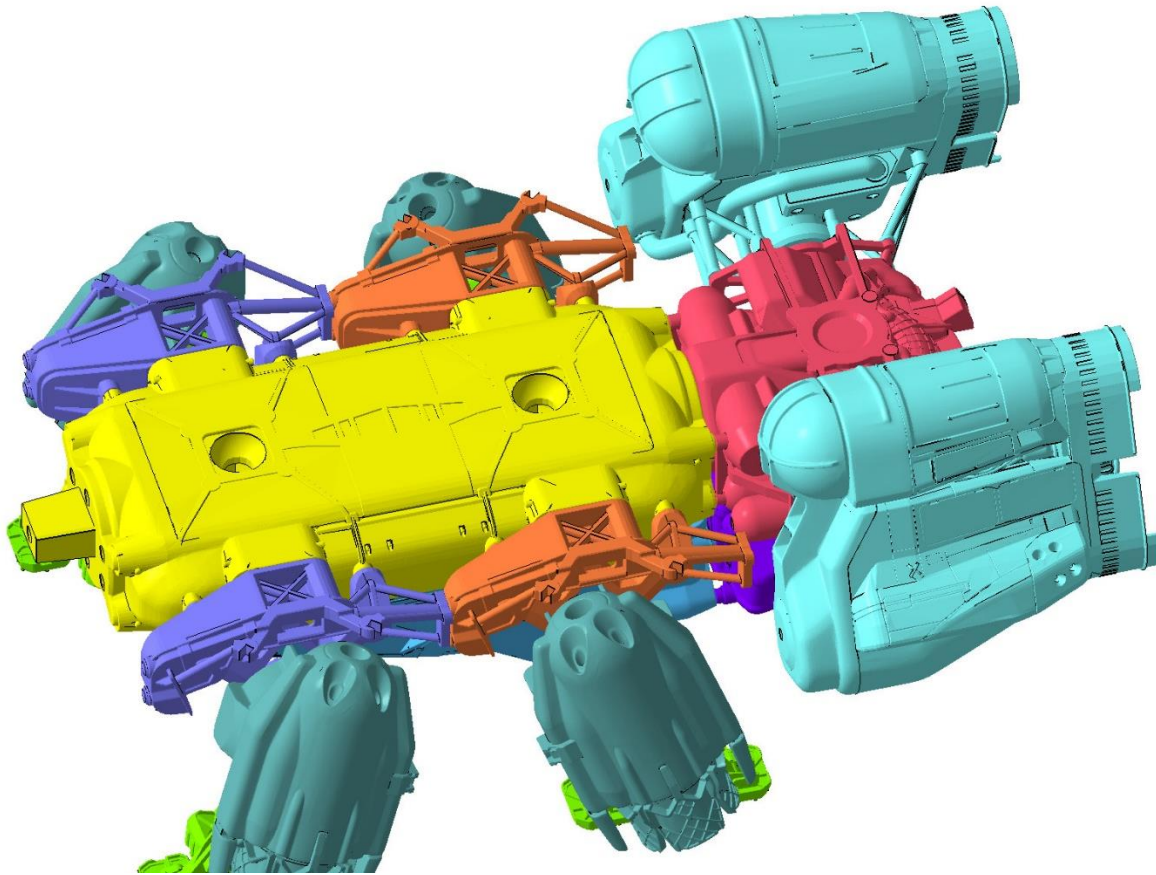
Glue **Cargo Hold** to **Cargo Bay** using two posts.



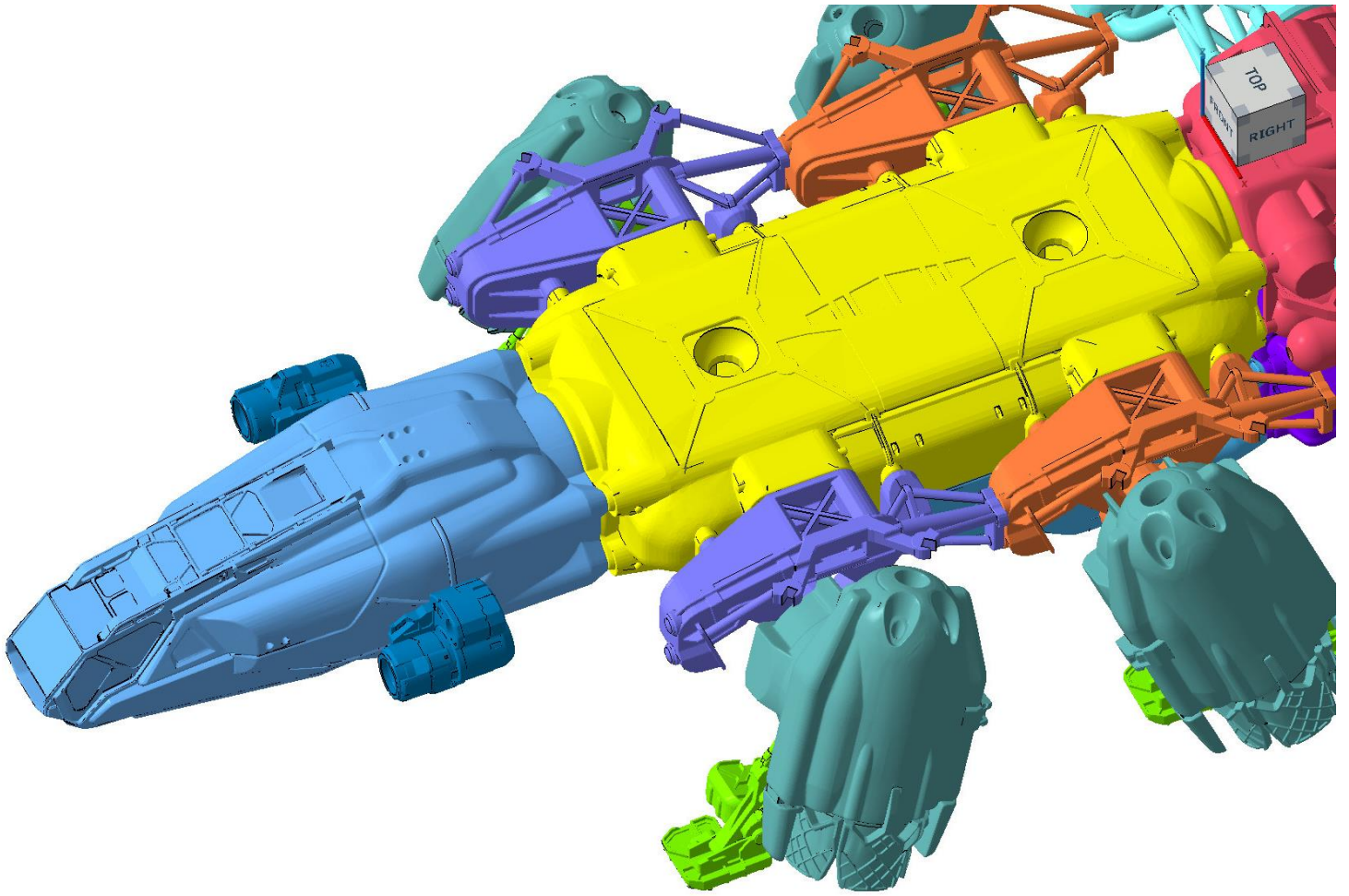
Glue **Engine Nozzles** into **Engines**.



Glue **Engines to Reactor**. You may need to sand the keys, so test fit first.

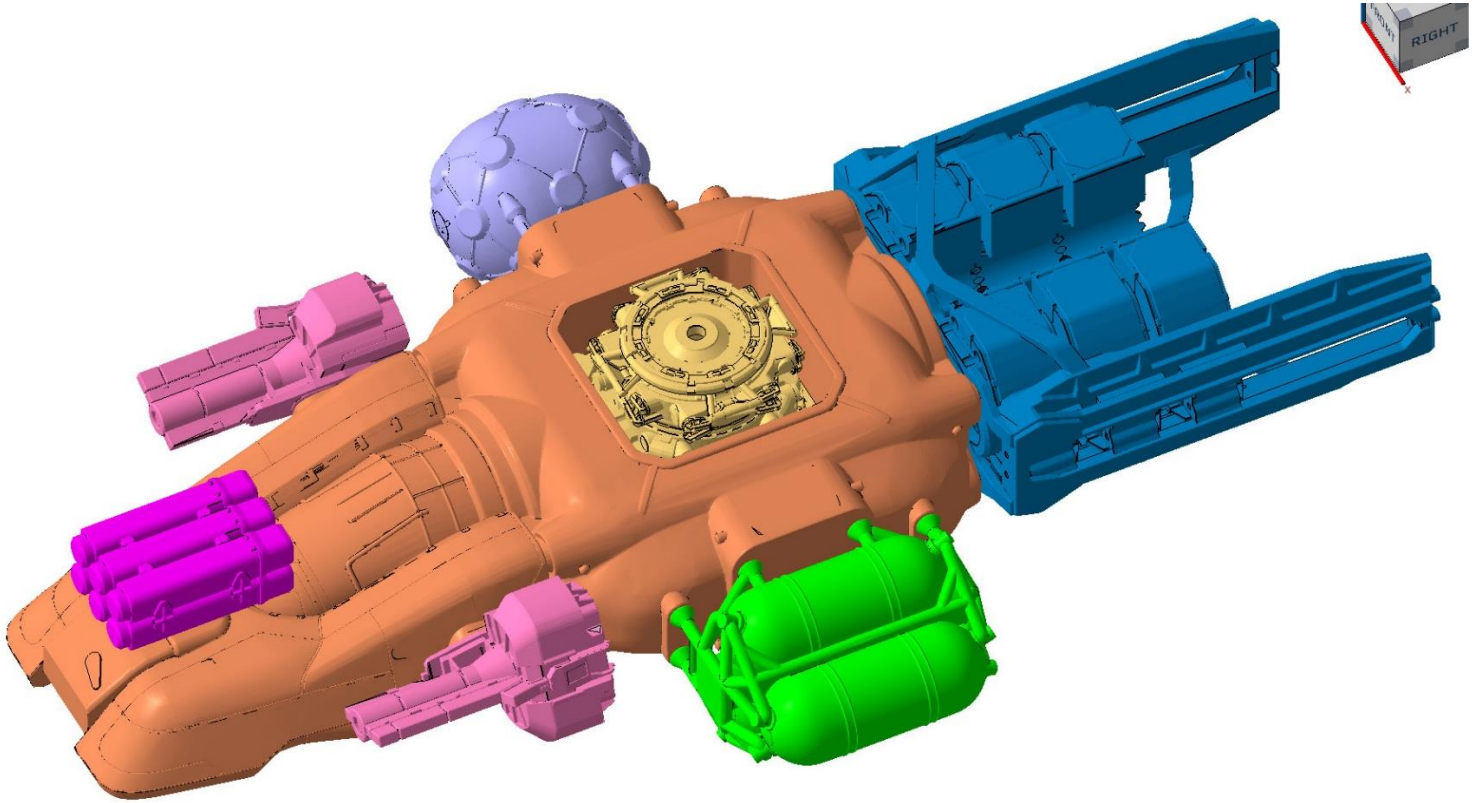


Glue **Reactor – Engine assembly to HAB**. Test fit and sand key if needed. To avoid ‘engine sag’ be generous with glue here and hold in position until glue sets.

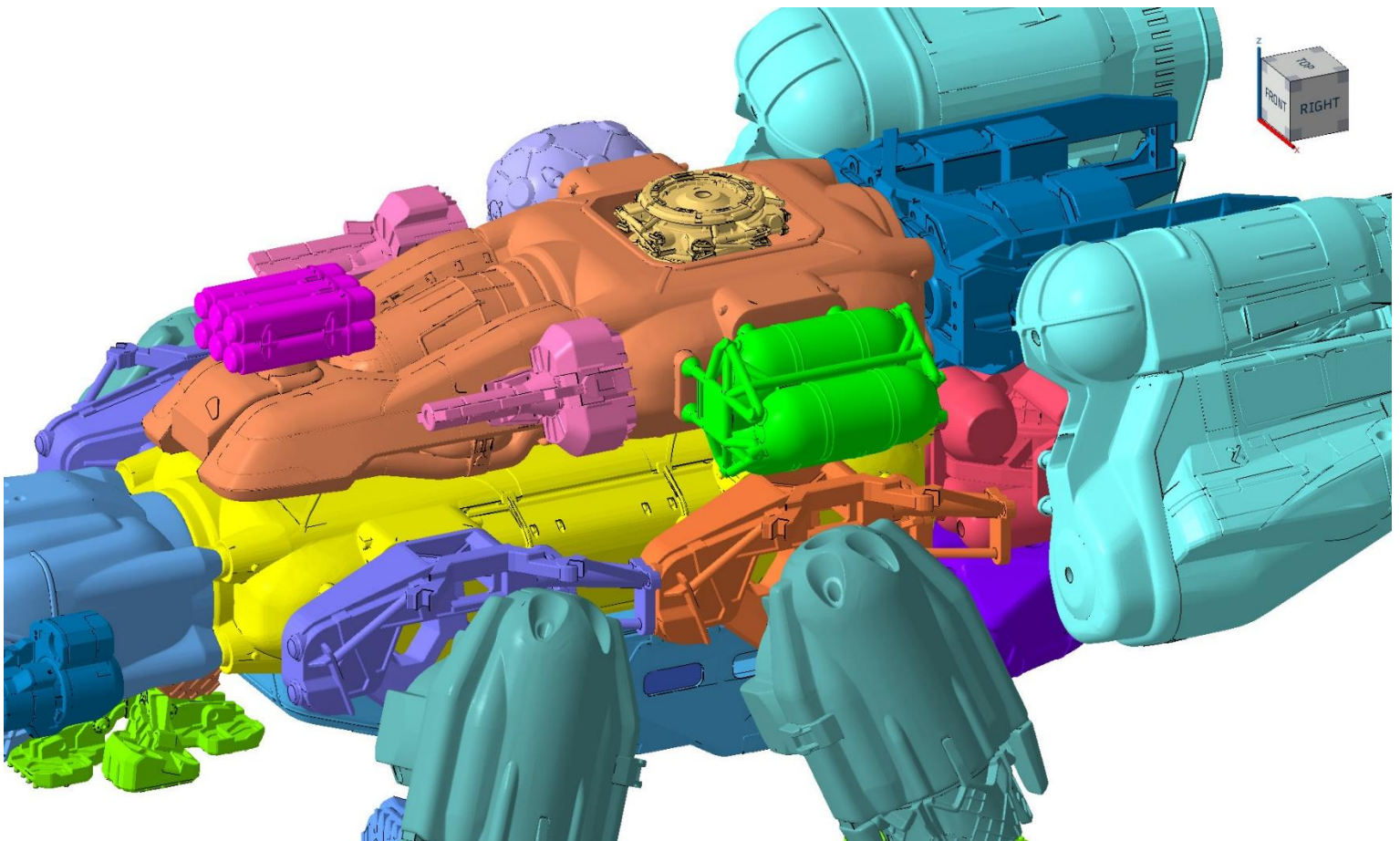


Glue **Cockpit Lasers** to **Cockpit**. As mentioned before, Lasers are NOT symmetrical.

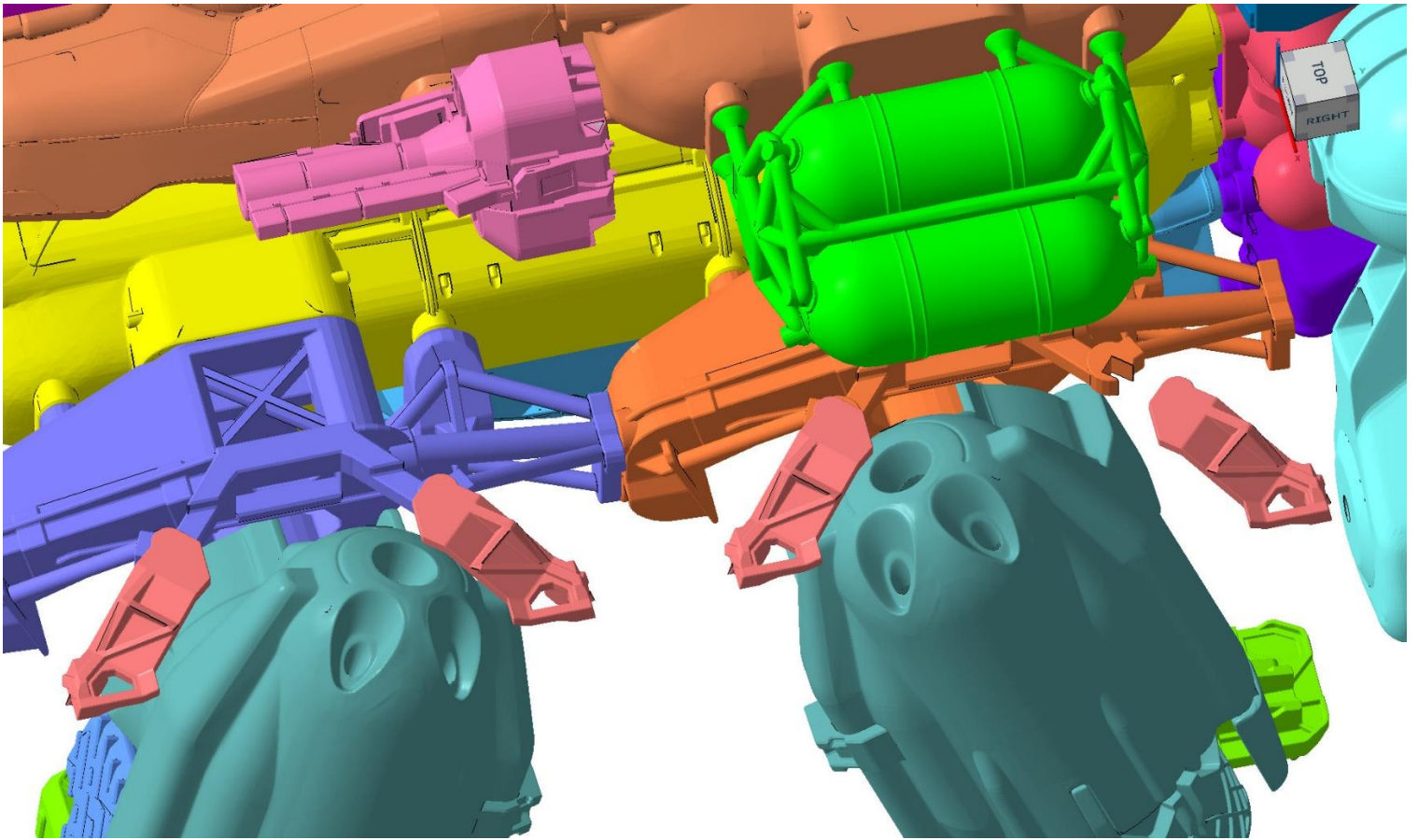
Glue **Cockpit** to **HAB** – test fit and sand key if needed.



Glue **Missiles, Cannons, Fuel Tanks, Shield Generator, Docker, and Grav Drive** to the **Cowl Top**. Once again, test fit parts and sand keys as needed. Note that the **Fuel Tanks** only properly fit on **LEFT** side and **Shield Gen** on **RIGHT**.



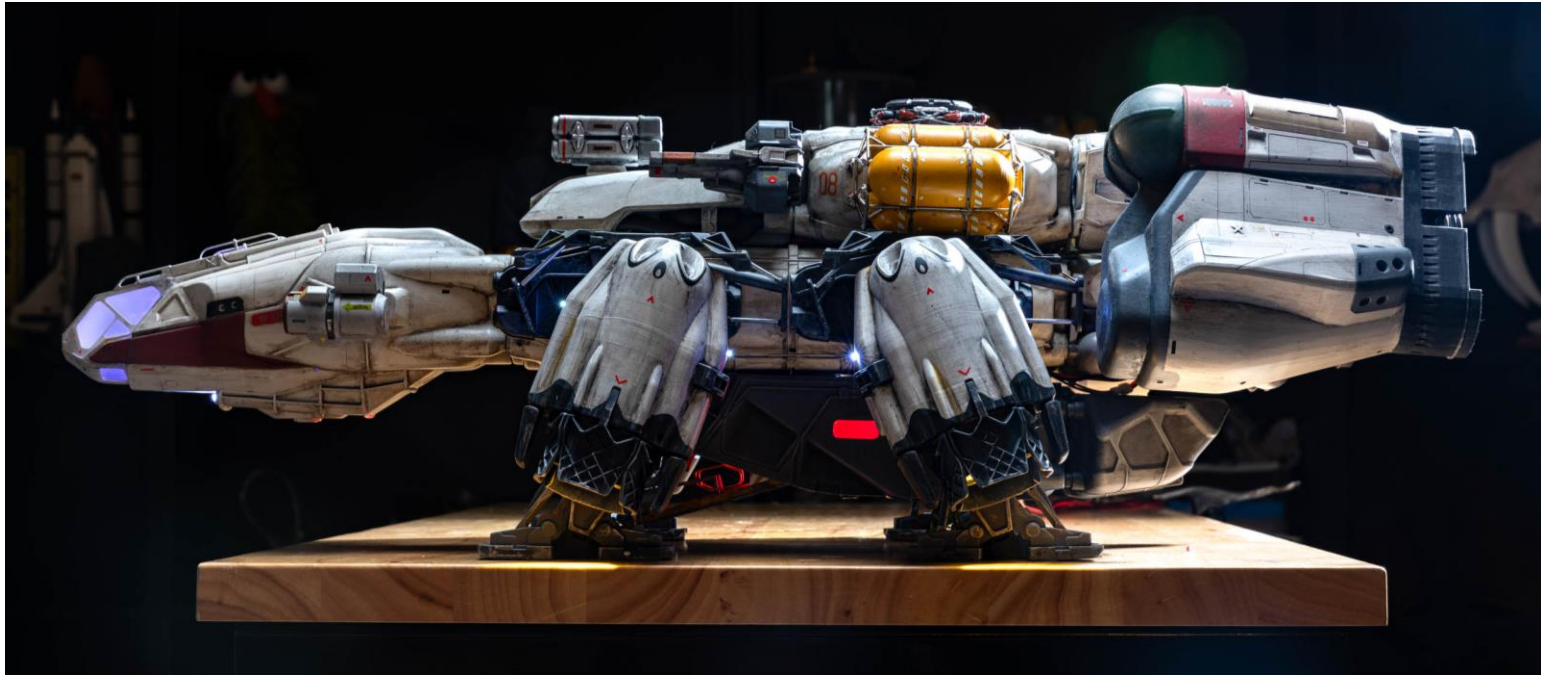
Glue **Cowl Assembly** to top of **HAB** using the round keys.



Final step is to glue on all the **Landing Clamps**. There are small keys on them that fit slots on the **Landing Mounts**. Be sure to position them correctly!



PAINT REFERENCE



Pictures by [Norman Chan](#). Ship lighting by [Mel Ho](#).

These are the bulk of the paints [Adam Savage](#) & [Kayte Sabicer](#) used on the 2.5 foot ship – be sure to [watch the build videos](#) for tips on painting and weathering!

Tamiya AS-20 Insignia White – Main ship pieces, Thrusters – any white parts.

Tamiya AS-27 Gunship Gray 2 – Landing Gear, Docking Clamps, front and small rear panel of Engines, rear of Cannons.

Flat Black Primer – Landing Mounts base paint – they were heavily weathered with grays and browns on top of this.

Tamiya Gray Primer – Cockpit Lasers, Cargo Bay & Hold.

Tamiya TS-82 Rubber Black – Docker, Bottom flaps of Thrusters, Thruster & Engine Nozzles, rear shroud on Engines, Reactor vents.

Tamiya TS-33 Dull Red – Cockpit panels, Docker hardware, Engine panel.

Tamiya TS-34 Camel Yellow – Fuel Tanks.

Silver – Shield Generator, front of Cannons, rear of Missiles.

Rub 'n Buff European Gold – gold panels on Engines.

Rub 'n Buff Ruby – Cannon details.

Rub 'n Buff Silver Leaf – dry brushing on Docker and various parts.

Moltow Liquid Chrome – Landing Mount struts, Landing Gear Pistons, Fuel Tank frame, Reactor pipes & fans, Docker rods, various dings & highlights all over ship.

Vallejo Wash – various colors of black, brown, etc. wash for weathering.



