

HR 2 BREAKDOWN

TEAM: Team 19F08 - Baja

Due Date:

Friday, March 6, 2020 at 11:59pm

Provide several pics of the current state of your completed system thus far here:



Figure 1: Current State of Frame

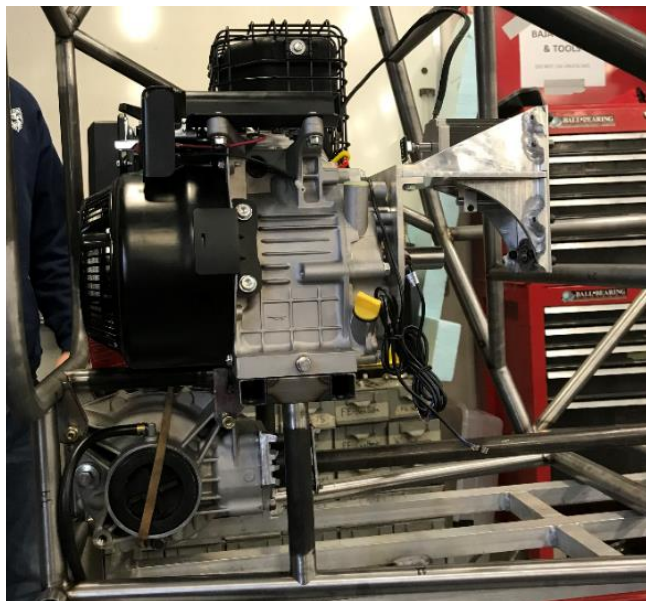


Figure 2: Current State of Drivetrain






Figure 3: Current State of Rear-End



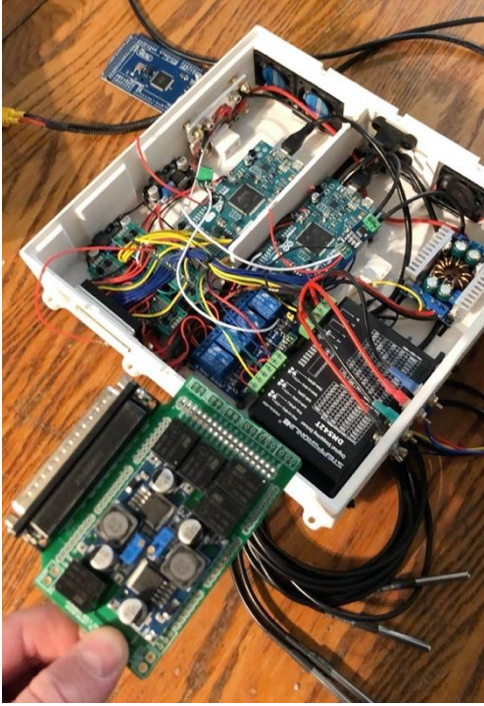
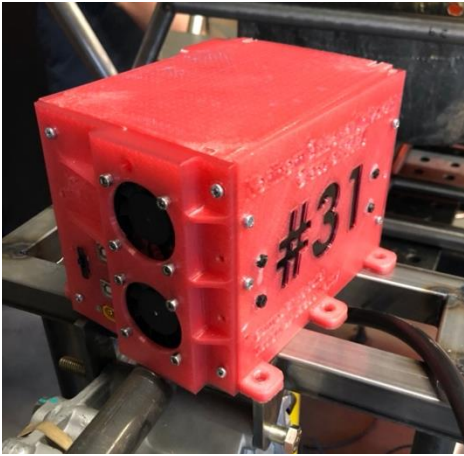
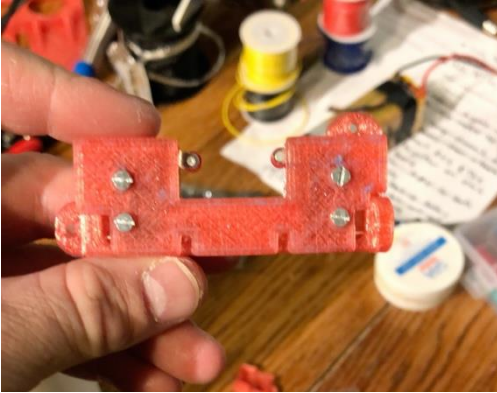
Figure 4: Current State of Front-End

The following are the Action Items each person completed between Hardware Review 1 and Hardware Review 2:





Team Member: Lucas Cramer



Action Item	Date Completed	Result/Proof of Completion
Prepped design for welding process	3/3/20	
Performed Coping on multiple trailing arms	2/10/20-3/2/20	
Performed tube bending for trailing arm	2/23/20	

Team Member: Jacob Najmy


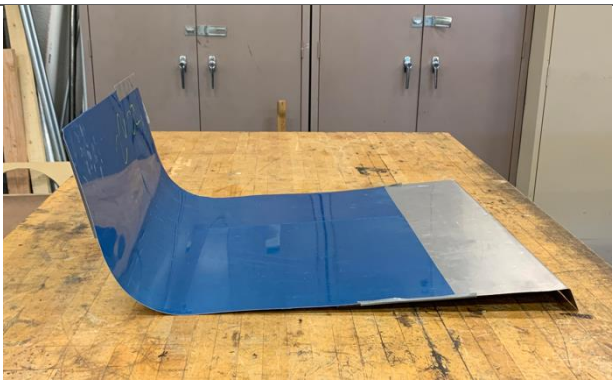
Action Item	Date Completed	Result/Proof of Completion
Designed ECVT computer v2 with smaller v3 computer	2/15	
Finished ECVT Computer v3	2/24	
Finished limit sensor and encoder sensor housing	3/5	

Team Member: Jacob Grudynski



Action Item	Date Completed	Result/Proof of Completion				
Cut and bent upper and lower arm tubing	2/1/2020					
Heim joints	2/1/2020					
Bearing ordered	2/10/2020	<p data-bbox="1094 1010 1409 1041">Item # HAB-7T, HAB-TG & HAB-T High Misalignment Series Spherical Bearings</p> <ul data-bbox="1117 1073 1414 1146" style="list-style-type: none"> • Ball - Alloy steel, heat treated, hard chrome plated. • Race - 17-4 PH stainless steel, heat treated. • PTFE liner - (AT 3200) Permanently bonded to race inside diameter. • Qualified to SAE-ASB1620. • Staking Groove is available. When a staking groove is required, specify by adding suffix "G". Ex.: HAB-4TG.  <p data-bbox="1101 1371 1219 1388">Specifications HAB-T Note</p> <p data-bbox="1101 1398 1170 1415">Specifications</p> <table border="1" data-bbox="1101 1415 1398 1436"> <tr> <td>Bearing Type</td> <td>Plain</td> </tr> <tr> <td>B - Ball Bore</td> <td>1.4375 in</td> </tr> </table>	Bearing Type	Plain	B - Ball Bore	1.4375 in
Bearing Type	Plain					
B - Ball Bore	1.4375 in					
Rod ends for upper and lower arm tubing for frame side	2/10/2020					

<p>Cut and notched crossmember for upper and lower arms</p>	<p>2/17/2020</p>	
<p>Tacked upper and lower arms together</p>	<p>2/17/2020</p>	


Team Member: Riley Karg

Action Item	Date Completed	Result/Proof of Completion
Necessary supporting frame members welded in place. Misc. Brackets welded on.	2/25/2020	
Firewall fabricated Seat mounting brackets made and tac welded on.	3/2/2020	
Mold and plan for composite paneling made	2/27/2020	

Team Member: Jesse Summers

Action Item	Date Completed	Result/Proof of Completion
Source wheels	02/26/20	The wheels have been ordered but not yet delivered. 
Source tires	02/11/20	The tires have been ordered but we are still waiting on delivery. 

Team Member: Aaron King

Action Item	Date Completed	Result/Proof of Completion
Bored out hole for bearing sleeve	2/19/20	 Two aluminum sleeves are shown side-by-side on a wooden workbench. The sleeve on the left is shorter and has a smaller diameter hole. The sleeve on the right is longer and has a larger diameter hole. Both sleeves have a brushed metal finish.
Drilled hole for rear lateral links	2/26/20	 A close-up view of a silver-colored aluminum rod lying on a wooden workbench. The rod has a threaded hole drilled through its center, with a metal plug inserted into it. The rod has some markings on its side.
Press-fit bearings	3/4/20	 A close-up view of a silver-colored aluminum sleeve on a wooden workbench. Two bearings are press-fitted into the sleeve. The bearings are dark in color and have a smooth, polished surface. The sleeve has a brushed metal finish.




Team Member: Jacob Kelley




Action Item	Date Completed	Result/Proof of Completion
Make miscellaneous frame tabs	3/3	Done and tack welded
Body panels	2/19	Mostly done, need trim
Fire Extinguisher mounting and sourcing	2/27	Done and Tacked in place
Helping other teams with compatibility and fabrication	Ongoing	Competed front diff mounting, seat and driveshaft clearance solution, steering rack positioning, A-arm avocado positioning, brake pedal mount fabrication, A-arm tacking, some ECVT parts machined, trailing arms tacked

Team Member: Kaleb Brunmeier





Action Item	Date Completed	Result/Proof of Completion

Team Member: Jacob Ruiz

Action Item	Date Completed	Result/Proof of Completion
Rear heim plugs	Feb. 11th	
Bent and coped tubing	Feb. 19th	
Shock mounts	Feb. 19th	


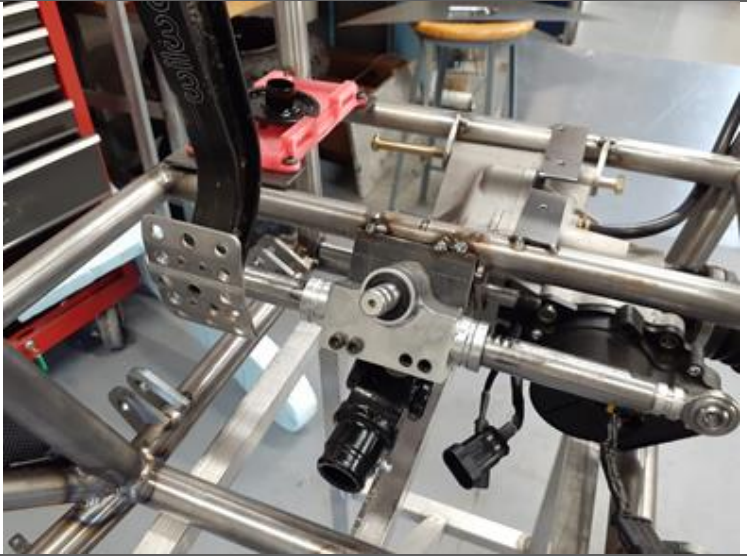
<p>Frame lateral link mounts</p>	<p>Feb. 21st</p>	
<p>Face plates</p>	<p>Feb. 28th</p>	
<p>Tapped Lateral Links. right handed and half of them left handed.</p>	<p>March 4</p>	

Team Member: Tye Jorgenson



Action Item	Date Completed	Result/Proof of Completion
Wrote CAM for CNC Plasma Cutting pedal mount, driveshaft flanges, and other miscellaneous brackets	2/15/2020	 A collection of several custom-machined metal parts, including brackets and flanges, laid out on a light-colored fabric surface. The parts are made of a dark metal, likely steel, and feature various shapes, holes, and slots.
Rear differential mounting tabs design, cut, and install	2/18/2020	 A close-up view of a rear differential assembly. The differential housing is a complex, cast metal part with a central opening. Two mounting tabs are visible, secured with bolts, and are part of the assembly.
Rear Diff Output Flange Weight Shaving w/ Kelley	2/25/2020	 A close-up view of a rear differential output flange. It is a circular metal part with a central hole and two smaller holes on the outer edge. The surface shows signs of machining and weight shaving.
Gear Reducer CAM/machining with Tyler	2/26/2020	 A close-up view of a gear reducer housing. It is a complex, cast metal part with a ribbed exterior and a central opening. The housing is shown in a workshop setting.

Working on ECVT Brackets	3/05/2020	
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Team Member: Michael Edirmannasinghe

Action Item	Date Completed	Result/Proof of Completion
Finalizing best suitable steering rack and begin mounting	2/21	
Steering rack mounting	03/04	

Team Member: Will Preston

Action Item	Date Completed	Result/Proof of Completion
Manufacture and bend Brake Pedal Mount	2/18	
Finalize front, rear brake rotor designs for plasma cutting	3/4	

The following are the Action Items for each team member between HR 2 and the Final Product presentation:

Team Member	Action Items	Date Due
Lucas Cramer	<ul style="list-style-type: none"> • Further welding Prep • Press fit bearings • Test Final Product 	<ol style="list-style-type: none"> 1. 3/10/20 2. 3/9/20 3. 3/25/20
Jacob Najmy	<ol style="list-style-type: none"> 1. Finish wiring harness for entire buggy 2. Finish ECVT Testing 	<ol style="list-style-type: none"> 1. 3/29/20 2. 4/10/20
Jacob Grudynski	<ol style="list-style-type: none"> 1. Shock mounts tacked 2. Acquire necessary hardware 3. Bolt system together 4. Dry test suspension 	<ol style="list-style-type: none"> 1. 3/13/20 2. 4/3/20 3. 4/3/20 4. 4/3/20
Riley Karg	<ol style="list-style-type: none"> 1. Ensure all steel brackets are welded onto frame 2. Develop power train guard 3. Have all paneling and seat composites made 	<ol style="list-style-type: none"> 1. 3/13/20 2. 4/3/20 3. 4/3/20
Jesse Summers	<ol style="list-style-type: none"> 1. Manufacture Brake caliper mounting brackets 2. Install wheels and tires 	<ol style="list-style-type: none"> 1. 3/13/20 2. 3/23/20
Aaron King	<ol style="list-style-type: none"> 1. Further welding Prep 2. Press fit bearings 3. Bore out more bearing sleeves 4. Test Final Product 	<ol style="list-style-type: none"> 1. 3/10/20 2. 3/9/20 3. 3/8/20 4. 3/25/20
Jacob Kelley	<ol style="list-style-type: none"> 1. Finish body panel mounts 	<ol style="list-style-type: none"> 1. 3/13/20
Kaleb Brunmeier		
Jacob Ruiz	<ol style="list-style-type: none"> 1. Finish left hand taps on lateral links 2. Make shock mount for frame 3. Acquire nuts and bolts as needed 4. Get full welds on trailing arm 	<ol style="list-style-type: none"> 1. 3/10/20 2. 3/23/20 3. As Needed 4. 3/20/20

Tye Jorgenson	<ol style="list-style-type: none"> 1. Finish Gear Reducer Mounting Designs 2. Write CAM for CNC Plasma cutting more brackets 3. Mount Gear Reducer Casing 4. Machine Gear Reducer Shafts 5. Assemble Gear Reducer 6. Cut driveshaft to length/mount 	<ol style="list-style-type: none"> 1. 3/06/20 2. 03/08/20 3. 3/10/20 4. 3/12/20 5. 3/12/20 6. 3/25/20
Michael Edirmannasinghe	<ol style="list-style-type: none"> 1. Clevis joint fabrication and mounting 2. Tie Rod lengths adjustments and mounting 3. Steering column attachment 4. Steering column bearing 	<ol style="list-style-type: none"> 1. 03/12/20 2. 03/13/20 3. 03/13/20 4. 03/18/20
Will Preston	<ol style="list-style-type: none"> 1. Order additional brake lines and fittings, if needed 2. Full brake system bleed and assembly 	<ol style="list-style-type: none"> 3. 3/13/20 4. 3/23/20