

Hardware Status Update

Northern Arizona University

NAU SAE Baja

Rear Suspension

Team #74

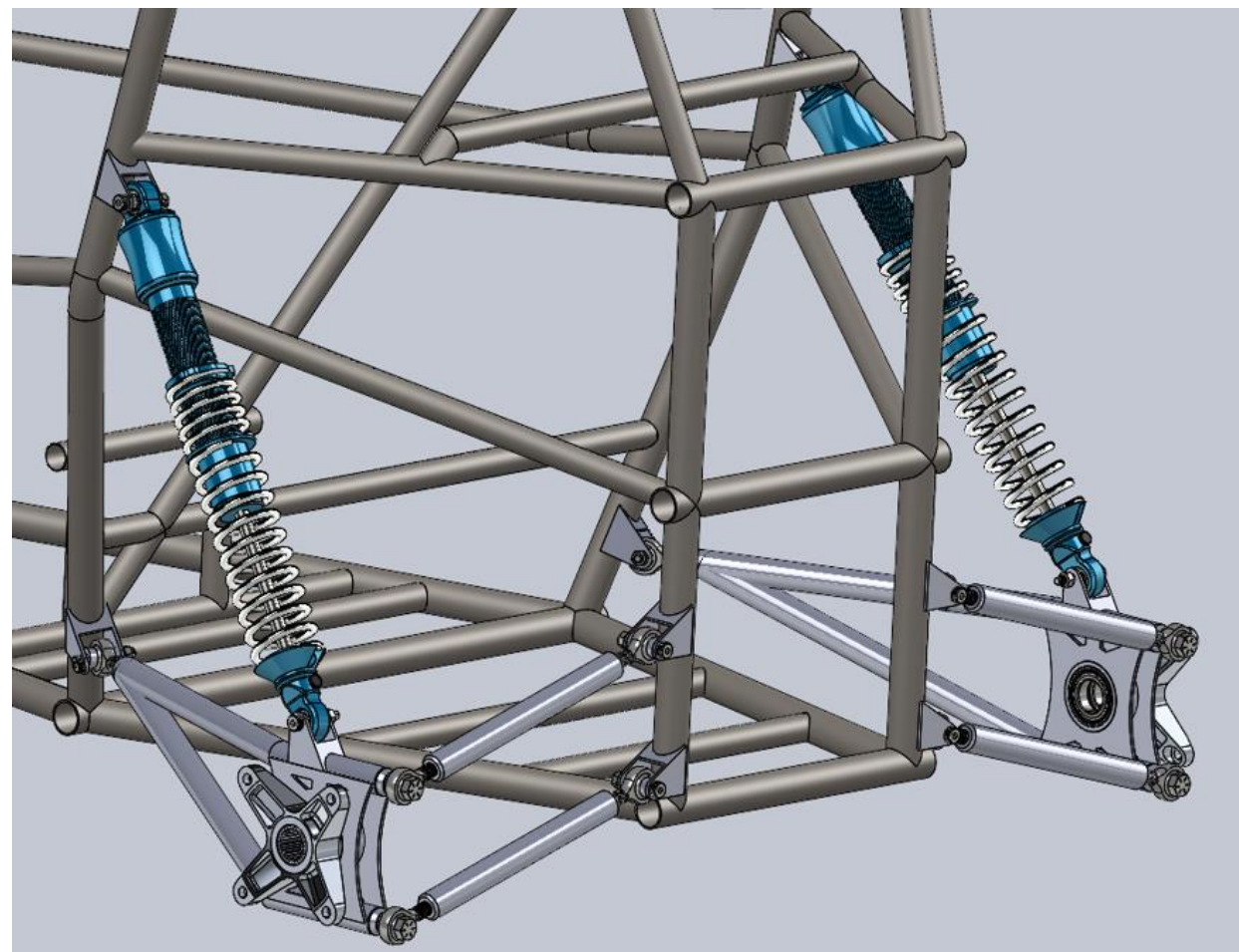
By: Robert Gerlinger, Tanner Bunch, Samuel Larios

Rear Suspension

Design Efforts

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Roll_Cage_V2.8.SLDprt		1
2	mounting fixture1		8
3	60645K161	Ball Joint Rod End	8
4	AFCO 63		2
5	rear hub v2		2
7	Control arms (new build)		1
8	Control arms (new build)		1
9	spline for axle		2
10	mounting fixture(1in tubing)		2
11	tie rods		4
12	91259A628	Alloy Steel Shoulder Screw	10
13	94895A115	High-Strength Steel Hex Nut	10

NAME	DATE	SIZE	DWG. NO.	REV
DRAWN	RG	2/13/23	A REAR SUSPENSION	
SCALE: 1:10 WEIGHT:			SHEET 1 OF 1	



Rear Suspension

Purchasing Plan

Rear Suspension											
No.	Part Name	Action Needed	Size/Dimensions	QTY	Price (Each)	Price (Total)	Link to Website	Part No. (From Website)	Manufacture	Primary Vendor	Secondary Vendor
1	Hubs (Aluminum)	Been Made	See Cad File	3	0	0	N/A	N/A	Henry	N/A	N/A
2	Heims	Ordered	1/2"-20 Thread	12	12.5	209.79	https://racetechnology.com	60645K16	RaceTech Titanium	RaceTech Titanium	N/A
3	Steel Plates	Been Made	5"x5" inches	4	0	0	https://www.advmetals.com	N/A	Advanced Metals	Advanced Metals	N/A
4	Tie Rods	Fabricated	9" Length	4	0	0	https://www.advmetals.com	CMR1065	Advanced Metals	Advanced Metals	N/A
5	Shocks	None	N/A	4	0	0	N/A	N/A	AFCO	AFCO	N/A
6	Shock Mounts	CAD and Fab	Reference CAD File	4	0	0	N/A	N/A	Machine Shop	Machine Shop	N/A
7	Tie Rod Mounts	CAD and Fab	Reference CAD File	8	0	0	N/A	N/A	Machine Shop	Machine Shop	N/A
8	Brake Caliper/With	None	See Website	1	139.99	139.99	https://www.hypertrac.com	366-050	Hyperracing	HBS	N/A
9	Brake Rotor	None	Reference CAD File	2	0	0	N/A	N/A	Machine Shop	Machine Shop	N/A
10	Control Arms	None	Reference CAD File	2	0	0	https://www.industrialmetals.com	4130RDT12506	Industrial Metals	Industrial Metals	N/A
11	Shock Bolts	None	2" 5/16 ID	6	0	0	N/A	N/A	N/A	N/A	N/A
12	Shock Nuts	None	.25 ID	6	0	0	N/A	N/A	N/A	N/A	N/A
13	Heim Nuts	Ordered	1/2" D 20 thread	12	4.86	58.32		RT65009	RaceTech Titanium	RaceTech Titanium	N/A
14	Heim Bolts	None	1/2" D 20 thread	8	0	0	N/A	TBD	RaceTech Titanium	RaceTech Titanium	N/A
15	Wheel Studs	None	3/8"	8	0	0	N/A	TBD	N/A	N/A	N/A
16	Lug Nuts	None	3/8"	8	0	0	N/A	TBD	N/A	N/A	N/A
17	Hub Bearings	None	OD 2.165"	4	0	0	https://www.skf.com	6006 -2RS1	SKF	SKF	N/A
18	Axle Nuts	Purchase			0	0		TBD	GO AZ	Go AZ	N/A
19	Heim Spacers	None	Reference CAD File	20	0	0	N/A	N/A	N/A	N/A	N/A
20	Brake Mount	CAD and Fab	Reference CAD File	1	0	0	N/A	N/A	Machine Shop	Machine Shop	N/A
21	Brake Mount Bolts	None	3/8" OD 1.5" Length	2	0	0	N/A	N/A	N/A	N/A	N/A
22	Axles	Purchase	Dependent on Drive	2	150	300		TBD	GO AZ	Go AZ	N/A
23	Shock Tabs	CAD and Fab	Reference CAD File	8	0	0	N/A	N/A	Machine Shop	Machine Shop	N/A
24	Heim Bolts (In cont	None	2" Length 1/2" OD	4	0	0	N/A	N/A	N/A	N/A	N/A

Key		
Item Already owned (reused)	20	83.33%
Item Ordered	2	8.33%
Total Purchased		91.67%
Need to order (In Process)	2	8.33%
Running Total	\$708.10	100.00%
Total Items Needed	24	Rear End Suspension

Rear Suspension

Manufacturing Plan

Importance	Part	Number of parts	Who	Time to manufacture/ part (hr)	Total times (hr)	Percent of time	Total # of parts manufactured	Percent of parts to be built	Percent of total build	Raw Material	Location	Material on hand	Status
CNC													
1	Rear Hubs	3	Henry	5	15	44.60%	3	100.00%	44.60%	6061 T6	Machine shop	Yes	on hand/ finished
Plasma Cutter													
1	Housing plates	4	Tanner	0.033	0.133	0.40%	4	100.00%	0.40%	4130	Family shop	Yes	on hand/ finished
Fab													
1	Right/ left upper control arm	2	Tanner	0.5	1	2.97%	2	100.00%	2.97%	4130	Family shop	yes	on hand/ finished
2	Right/left lower control arm	2	Tanner	0.5	1	2.97%	2	100.00%	2.97%	4130	Family shop	Yes	on hand/ finished
3	Shock/tie rod mounts	10	Samuel	0.5	5	14.87%	0	0.00%	0.00%	4130	Machine shop	yes	Not made
Lathe													
1	Lateral link	4	Robert	0.75	3	8.92%	0	0.00%	0.00%	4130	Machine shop	No	Not made
2	Control arm bearing housing	2	Travis	3	6	17.84%	2	100.00%	17.84%	4130	Machine shop	Yes	on hand/ finished
3	Heim spacers	10	Robert	0.25	2.5	7.43%	10	100.00%	7.43%	6061 T6	Machine shop	yes	on hand/ finished
Outsource													
1	Rear axles	2	Samuel	NA	NA	NA	NA	NA	NA	NA	GoAZ	No	Not ordered
3	1/2" Heims	10	Samuel	NA	NA	NA	NA	NA	NA	NA	Race Tech Titanium	No	Ordered
4	Brake caliper	1	NA	NA	NA	NA	NA	NA	NA	NA	Last years materials	yes	on hand/ finished
5	Brake pads	2	NA	NA	NA	NA	NA	NA	NA	NA	Last years materials	yes	on hand/ finished
6	Brake rotor	1	NA	NA	NA	NA	NA	NA	NA	NA	Last years materials	yes	on hand/ finished
7	Brake caliper hardware set	1	NA	NA	NA	NA	NA	NA	NA	NA	Last years materials	yes	on hand/ finished
8	Shocks	2	NA	NA	NA	NA	NA	NA	NA	NA	Last years materials	yes	on hand/ finished
9	shock hardware set	2	NA	NA	NA	NA	NA	NA	NA	NA	Last years materials	yes	on hand/ finished
10	Heim hardware set	10	NA	NA	NA	NA	NA	NA	NA	NA	Race Tech Titanium	yes	on hand/ finished
11	Wheel studs	8	NA	NA	NA	NA	NA	NA	NA	NA	Last years materials	yes	on hand/ finished
12	Lug nuts	8	NA	NA	NA	NA	NA	NA	NA	NA	Last years materials	yes	on hand/ finished
13	Hub bearings	4	NA	NA	NA	NA	NA	NA	NA	NA	Last years materials	yes	on hand/ finished
2	Axle nuts	2	Samuel	NA	NA	NA	NA	NA	NA	NA	GoAZ	No	Not ordered
14	Spline inserts	2	Tanner	NA	NA	NA	NA	NA	NA	4130	Last years materials	Yes	on hand/ finished
15	Threaded inserts	6	NA	NA	NA	NA	NA	NA	NA	4130	Fodrills	yes	on hand/ finished
					Total hours=	33.633	100.00%	Percent Build=	76.21%				

Rear Suspension

Demonstration



Rear Suspension

Gantt Chart

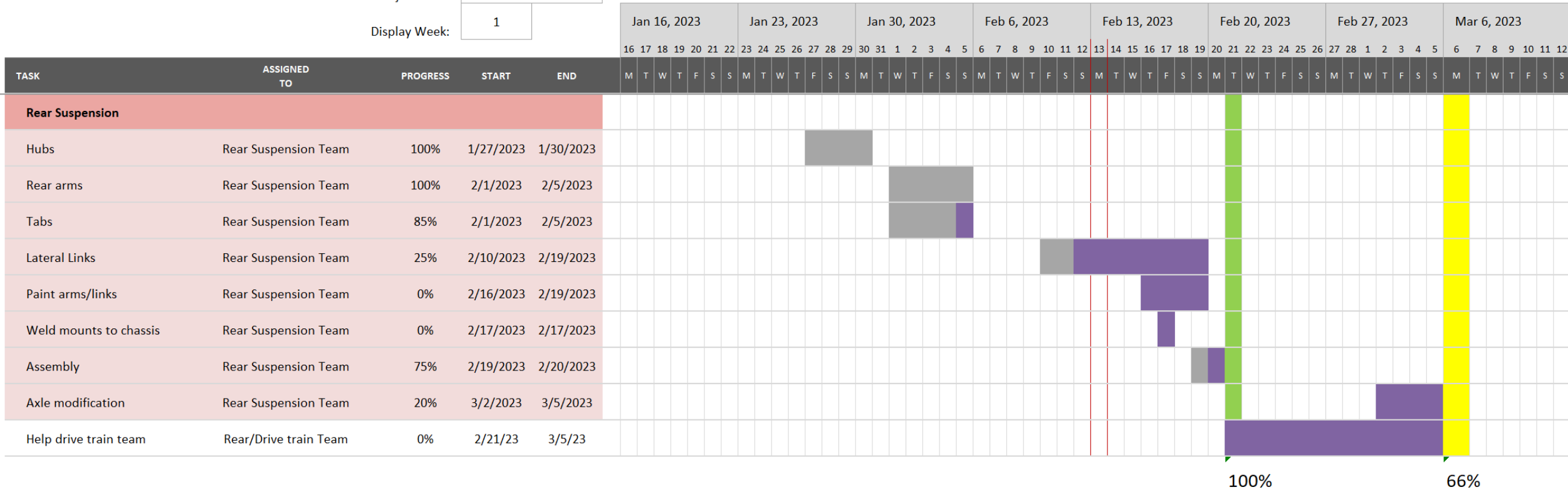
Rear Suspension Gantt Chart

SIMPLE GANTT CHART by Vertex42.com
<https://www.vertex42.com/ExcelTemplates/simple-gantt-chart.html>

Lumberjacks Motorsports
 Project Lead

Project Start:

Display Week:



Rear Suspension

System Integration

Our 33% build and purchasing plan update focuses on just our rear end team and what we have accomplished so far. As a team we are still in the process of allocating the remaining miscellaneous parts that need to be purchased and or assembled within our vehicle. As some items have been designated to the entire team such as body panels, splash guards, firewall, etc.

Questions?

