



Wildcat Formula Racing Business Proposal Round 1

Suspension Sub-System Sponsorship Request

December 22nd, 2025

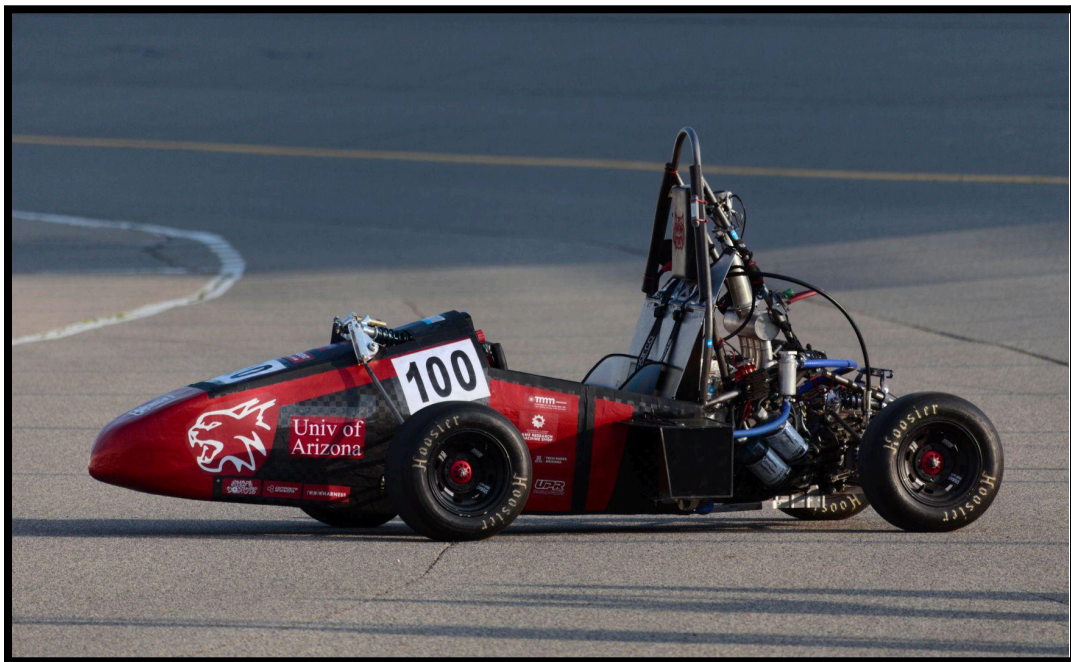




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Summary of Request

Wildcat Formula Racing is a design, build, and compete FSAE team for the University of Arizona. We are backed by the UA College of Engineering and compete under SAE (Society of Automotive Engineers). Each year, we build and race a single-seater race car from the ground up, giving students experience in both design and hands-on manufacturing. While our club is mainly composed of engineering students (mostly mechanical and aerospace), we accept a wide variety of majors, including art and business.

To finish our car for 2026, we are requesting help sourcing materials and components for our suspension system. The scope of this project includes everything after the steering rack to the wheel corners. The main categories of materials we are requesting are hardware, shocks, rod ends, bearings, metal stock (rockers and bearing cups), and sensors. We believe a partnership can prove to be mutually beneficial. This document will pitch our requests, justifications, benefits, deliverables, and success metrics for this project. The intent is to give a high-level overview, while other documents, like the RFQ, will go into greater detail on manufacturing. We believe partnerships can prove to be beneficial for all parties involved, and we look forward to presenting our case.

Sponsor Identification

For our suspension system on the WF-26, we have identified seven sponsors to supply materials. A more detailed bill of materials will be presented later in the document. The recipients of this proposal are as follows.



1. McMaster-Carr Supply Company
 - hardware
2. Ohlins Racing AB
 - shocks
 - springs
3. FK Rod Ends
 - rod ends
 - bearings
4. Midwest Steel and Aluminum
 - metal and tube supply
5. Milspec Wiring
 - potentiometers
6. Hoosier Racing Tire Corporation
 - FSAE tires (wet and dry set)
7. Braid Wheels
 - FSAE wheels

For the complete Suspension subsystem, multiple sponsors are required as several specialized parts are not offered by one company. Additionally, sourcing parts from suppliers who are experts in their fields (such as Ohlins for FSAE shocks) will ensure our suspension system is safe and meets our performance standards. While we would prefer to use only one sponsor, we found the only way to achieve our subsystem goals for suspension is to utilize multiple sponsors.

The Ask / Justification

Wildcat Formula Racing is requesting sponsorship for only supplies and materials, not services. We have the resources to fabricate the suspension system in-house fully, so only materials are needed from specialty suppliers.

Benefits to sponsors will include measurable brand exposure at the competition and online, marketing assets (photos + videos), and access to highly skilled engineering students for internships and entry-level positions.

Success Metrics

To evaluate if our partnerships were successful, we have determined 3 KPIs to meet. The focus is on quantitative metrics and clear results that will prove to both us sponsors and that the relationships were profitable.

KPIs:

1. Exposure on social media for all parties involved
 - increased engagement on social media, website, email chain (5%)



2. Brand logo placement on the car and official team merch
 - logo in 100+ photos and videos from competition and testing
 - Exposure to 1000+ attendees at the competition, including engineers, recruiters, and industry professionals
3. Assist in suspension performance improvement
 - The system will be 2lbs lighter as a whole in comparison to our previous car (WF-25), with every suspension component being lighter
 - Maintain and improve performance through validated testing

This widespread use of performance indicators is intentional, as we did not want to focus on just one aspect of success. From a competitive and design-centric perspective, we want to place high value on saving weight and making the car faster. From a business and marketing perspective, we want to place high value on exposure and return on investment. Thus, to encompass the interests of all stakeholders, we decided to expand our perspective of success in our metrics.

Team Deliverables

When entering a partnership with Wildcat Formula Racing, there are several benefits to expect. Below are our deliverables for this partnership and project in no particular order:

1. The WF-26
 - The first deliverable is our club's main product for the year, which is our race car
 - Your contributions to our suspension system will make this a reality
2. Social Media brand exposure
 - Our social media is very consistent, and we produce semi-viral content regularly
 - A partnership with WFR includes multiple social media shout-outs and potentially collaboration posts
3. Logo placement on the car and official team merch
 - Depending on the contribution size, your logo will be showcased the entire year
 - At competitions, hundreds of photos are taken of the car on track, and we can share those photos for your use cases
4. Access to the UA Engineering Department
 - If you are looking for interns or recent graduates with experience in engineering design, fabrication, machining, or project management, you will have direct access to our members and their resumes
 - If you are looking to get more involved with the college for job fairs, we can be a great resource due to our connections to staff involved with on-campus events



Competitive Edge

Wildcat Formula Racing is the ideal partner for any company for several reasons. We understand that resources are limited and wish to prove why we are the best team to back.

Most racing teams, FSAE teams especially, struggle with deadlines, inter-team communication, and follow-through on projects. WFR has targeted these deficiencies and, in recent years, has become consistent in the delivery of all outputs from design to fabrication to everything else, like reports, updates, and performance data. Additionally, this year, we have opened communication channels with sponsors to give periodic updates. This includes high-quality documentation for CAD, BOMs, Gantt charts, and testing logs (if applicable and requested). This makes all contributions low-maintenance and high-impact.

With a recently improved physical testing plan, we can share our validated testing procedures, data-driven decision-making, and quantifiable results. For example, this year we are performing strain gauge testing on the frame to validate our FEA (finite element analysis). We will also be collecting testing day data on items such as tire performance, suspension setups, fuel efficiency, and implementing driver feedback loops to fine-tune car performance. All of our components and sub-assemblies are tested, validated, and ready for showcasing using engineering validation.

An additional edge you can expect from a partnership with WFR is access to an exceptional talent pipeline. This is an opportunity to get early access to top engineering talent in an industry-simulated environment. All members get real technical, project management, and operations experience. Hands-on work is key in Wildcat Formula Racing, where members learn SolidWorks, FEA, Ansys, and MATLAB. WFR has a track record of strong alumni performance in many industries.

Our team takes project management and operations very seriously. Our strategic approach to design, manufacturing, fabrication, and testing sets us apart from our competitors. We utilize tools such as Gantt charts, alumni reviews for iterative designs, project milestones, and a cross-subteam integration strategy. These ensure sponsor components (for the suspension sub-system) are used effectively and showcased on a predetermined timeline. This all reduces the risk of the car not being finished on time or sponsorships being underutilized.

Ultimately, we can ensure that this is more than just sponsorship; it's a genuine relationship. We will consistently communicate with all stakeholders (such as through newsletters and beyond) by reporting on things such as performance benchmarks, testing insights, and photo sets for marketing purposes. Sponsors are also invited and encouraged to attend some of our testing days and local events (Southwest Shootout). Even more in-depth opportunities, such as collaboration with team members on R&D and prototyping, are available. A sponsorship with WFR means that we are strategic partners, providing more than just exposure, but also continuous, quality engagement and marketing assets.



Suspension System Properties (BOMs)

We have divided the suspension system into multiple parts for manufacturing and purchasing: hardware, steel tubing, metal, and miscellaneous. These bills of materials are displayed below, with a summary BOM at the end.

Hardware:

Part	Company	Part #	QTY	Single Unit Price	Cost	Application
RH rod end	FK rod ends	JMX4	24	\$13.99	\$335.76	Inboard toe points, control arms, push rod
LH rod end	FK rod ends	JMXL4	8	\$13.99	\$111.92	Outboard toe, push points
1/4 ID spherical bearing	FK rod ends	WSSX4T	8	\$15.99	\$127.92	Control arms
RH 1/4-28 tube end weld nuts	Mcmaster	94640A881	24	\$7.02	\$168.48	Inboard toe points, control arms, push rod
LH 1/4-28 tube end weld nuts	Mcmaster	94640A882	8	\$7.02	\$56.16	Outboard toe, push points
Needle bearings	Mcmaster	5905K333	8	\$6.19	\$49.52	Rocker pivot point
Thrust bearings	Mcmaster	5909K24	8	\$3.81	\$30.48	Rocker pivot point
Thrust Washer	Mcmaster	5909K241	16	\$1.23	\$19.68	Rocker pivot point
1/4 ID spacers 1/8 inch thick	Mcmaster	92510A760	16	\$2.04	\$32.64	Spacers for 1/4 in rod ends
Shoulder bolts	Mcmaster	AN4-13A	8	\$0.59	\$4.72	All the 1/4 in suspension points
Right-hand jam nuts	Mcmaster	AN316-4-R	8	\$0.39	\$3.12	Goes on the right-hand rod ends
Left-hand Jam nuts	Mcmaster	AN316-4-L	8	\$0.64	\$5.12	Goes on the left-hand rod ends
Right-hand nylock nuts	Mcmaster	AN364-4	50	\$0.49	\$24.50	For mounting 1/4 in bolts in rockers
1/4 1/16 wide washers	Mcmaster	AN960-416	8	\$8.29	\$66.32	Spacers for the shoulder bolts



5/16 shoulder bolts	Mcmaster	AN5-13A	8	\$0.79	\$6.32	Coilover mounting bolts
5/16 nylock nuts	Mcmaster	AN364-5	12	\$0.99	\$11.88	Coilover mounting nuts
5/16 shoulder bolts with drilled heads	Mcmaster	AN5H-16A	4	\$1.49	\$5.96	Rocker pivot point
1/4 1 and 9/16 shoulder bolt	Mcmaster	AN4-20A	50	\$1.82	\$91.00	All suspension arm hardware
954 Bearing Bronze Flanged Sleeve Bearing	Mcmaster	2934T24	2	\$11.72	\$23.44	ARB bushings

Steel Tubing:

Total Amount of Tubing		Total Estimated Costs	Company
Round 4130 .625"	6 7/2" tubes	\$168.30	Midwest Steel and Aluminum
Round 4130 .75"	24.5"	\$18.33	Midwest Steel and Aluminum
Round 4130 .50"	7"	\$6.51	Midwest Steel and Aluminum

Metal:

Total Amount of Metal		Total Estimated Costs	Company
4130- 0.05"-17GA	12" X 12"	\$30.59	Midwest Steel and Aluminum
1020-0.0747 14GA	3' X 3'	\$123.30	Midwest Steel and Aluminum
7075-T6-AL 0.125"	3" X 6"	\$90.72	Midwest Steel and Aluminum
1020 - 0.125"	2' X 1'	\$33.64	Midwest Steel and Aluminum

Miscellaneous:

Part	Company	Part Number / Description	Quantity	Unit price	Cost
Tires (Slicks)	Hoosier	16.0X7.5-10 R20 H43075R20 FSAE	4	\$315.00	\$1,260.00



Tires (wets)	Hoosier	16.0X7.0-10 W3 H44070W3	4	\$315.00	\$1,260.00
Wheels	Braid	10 X 5.5; Offset et4; Weight = 7lbs	8	\$801.00	\$6,408.00
Coilovers	Ohlins	TTX25 MKII	4	\$715.00	\$2,860.00
Springs	Ohlins	Hyperco TTX25 Springs (300 lb/in)	4	\$62.50	\$250.00
Springs	Ohlins	Hyperco TTX25 Springs (250 lb/in)	4	\$62.50	\$250.00
Springs	Ohlins	Hyperco TTX25 Springs (200 lb/in)	4	\$62.50	\$250.00
Springs	Ohlins	Hyperco TTX25 Springs (350 lb/in)	4	\$62.50	\$250.00
Linear Position Sensor	Milspec Wiring	Linear position sensor - 75mm	4	\$321.80	\$1,287.20

Summary:

	FK Rod Ends	McMast er-Carr	Midwest Steel and Aluminum	Hoosier	Braid	Ohlins	Milspec Wiring	Subsystem Totals
Hardware	\$575.60	\$599.34						\$1,174.94
Steel Tubing			\$193.14					\$193.14
Metal			\$278.25					\$278.25
Miscellaneous				\$2,520. 00	\$6,408. 00	\$3,860. 00	\$1,287. 20	\$14,075.20
Sponsor Totals	\$575.60	\$599.34	\$471.39	\$2,520. 00	\$6,408. 00	\$3,860. 00	\$1,287. 20	\$15,721.53

Grand total = \$15,721.53

Manufacturing Timeline

A more detailed breakdown is provided in the RFQ; however, this timeline is expected to take place in the Fall.

Week 0: RFQ issued to suppliers

Week 1: Material receipt and laser cutting of flat components

Week 2: Tube cutting, coping, and jig preparation

Week 3: Bung welding and thread cleanup

Week 4: Control arm fabrication and bearing cup machining



Week 5: Chassis tab welding

Week 6: Final assembly and integration