

KS8C AutomationDirect Writeup

Sunday, June 29, 2025 7:13 PM

KS8C Combustion Program

Tuesday, July 22, 2025 6:09 PM

Overview: Do we want to get a combustion car running?

- Some projects never got validated, tune for headers, senior design intake
- To go to Pittsburgh shootout and other events
- Having a car to take to multiple events, SCCA ATL, Formula South, Pitt Shootout, Michelin, and Barnesville
 - o Increase exposure of our team
 - o Having an event to get newer members involved during running the events

How much do we want to get the car involved with?

Will try to get RSO money from?

How much does combustion subgroup want to get involved personally?

- Carter is not willing to work on the car if the trends of last year is repeated with little funding and little help on the car
- Members would be interested in working on the car if the team isn't fighting to get resources for it
 - o Parts split across both cars
 - o If part is broken on the car, are we willing to buy parts immediately for it
- Carter: long term goal for the car, not worth if car ends up like Raptor and only runs for couple of years

What's needed to get the KS8C in running state:

- Front Uprights **Need**
- Wheel Hubs - New design Rear Hubs **???**
- Brake Calipers **2 But ask Emil**
- Pedal box
- Impact Attenuator **NTO**
- Clutch Cable
- Pneumatic Shifting - Diagnose and Fix **@Wasim**
- Intake **Just need to weld**
- Driveline - Reassemble
- Drexler - New Seals **@Richard to order**
- Exhaust **WELD?**
- Steering Rack - Rules Legal **@Sammy if we really need it rules legal**
- Bearings - Wheel + Driveline **@ micah pulling the bearing**
- Rear Damper **@ Sammy and Wasim about getting it sent off to get fixed**

Shit to figure out:

- Admin meeting with Santana + Paul **@Sammy is there an update on this**
- **@Carter**, cost out everything to be rebought
 - o Pneumatic Shifting
 - o Find what needs to be rebuilt

Events Could Attend ?

Monday, September 15, 2025 2:10 PM

Instead of big trailer , can use a smaller trailer to transport the car and make a Mulikie packout kit of tools and a SKB (big box) for parts and such to put inside a vehicle . To keep costs down

UTA- Texas Autocross



Texas
Autocross...

Kansas - Formula Wheat: <https://www.k-state.edu/powercatmotorsports/formulawheat/FormulaWheat.html>

Nor-Cal Shootout Thunderhill: https://docs.google.com/document/d/1OuvKZY_F2V3Usjy4nRkiTLkDqc8KB3QmN4bq1MPKjto/edit?tab=t.0

Oakland University - Oakland University Grand Prix



OUGP25
Handbook

Toronto Shootout : <https://fsaeutoronto.ca/shootout>

Pittsburg Shootout - <https://www.pittsburghshootout.com/>

Kennesaw - Bernville Shootout

Kennesaw - Formula South : <https://www.ksumotorsports.com/invitationa>

Michelin Shootout - <https://jobs.michelinman.com/michelin-fsae-shootout>

Atl SCCA events: <https://atlantasolo.motorsportreg.com/>

===NOTES===

Thursday, October 09, 2025 6:38 PM

2ND ETS Harness

Thursday, October 09, 2025 6:38 PM

Dear Diary:

Oct 6

- Dedicated Emma Brumbley to work on ETS
- Found and photographed the ETS and combustion harness poster board

Oct 7

- Found the pre-pinned and wired AMPSEAL connectors and settled on using it for ETS
- Begun de-pinning unused wires from white and grey connectors

Oct 8

- Organized and labeled:
 - Fuel PSI
 - IAT (intake air temp)
 - CLT (coolant temp)
 - MAP (mass air pressure)
 - Oil PSI (we choose pin 20)
 - TPS (throttle position sensor)
 - CAM
- Did not start on Grey connector
- Decided that we need to go down to dyno to know pinouts

Oct 9

- Traveled down to dyno and analyzed sensors on the engine
- Photographed the pinouts and wire colors
- Realized that a lot of the items for Grey connector are in main shop

Oct 13

- Val organized the spark coil wires and injector wires
- Discovered we needed injector pins
- Ordered pre-pinned pigtail injector connectors

Oct 14

- Completed the spark coils
- Spent like half the day over LV lead skill issue
- Begun work on injector coils

Notes from Oct 9 Dyno visit:

- Do not connect the OIL PSI (pin 20) as it is not clear if the sensor functions or is shorted
- Do not connect the CLT (coolant air temp)
- IAT means intake air temp
- CLT means coolant temp and is located on the engine
- TPS means throttle position sensor and is located on the intake
- MAP means mass air pressure and is located on the intake and is currently on combustion harness
- TPS and MAPs are the only two located on the intake
- We do not have an IAT but we plan on getting one in the future
- Need to ask Moloney what pins 20 and 23 are marked for on white connector
- The pins 3, 5, 7, 9 on the grey connector are bridged together and is a Power ground
- The sparks/coils are in the middle red cabinet in shop and use a 6 pin
- Can reference the combustion harness

Images of sensors on the Engine:

Crank Sensor:



Coolant Temp:



CAM sensor:



Throttle Position Sensor:



PX2DN1XX100PSAAX Oil Pressure:

