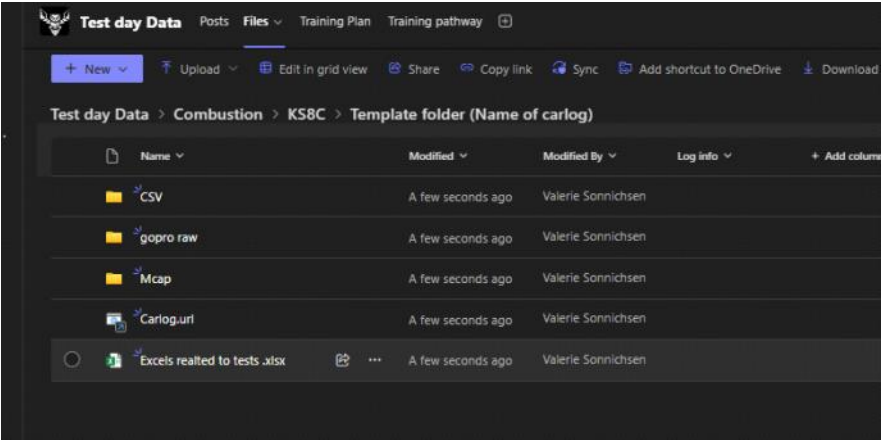


1/1 Template (TEST PLAN)

Monday, June 26, 2023 8:48 PM

Copy and paste the entire grouping of tabs

Copy test overview from testing plan to here day of test



Where to post data, and related excels and videos

- ☐ Packing list
- ☐ VD
- ☐ EV Driveline
- ☐ LV
- ☐ Aero/Composites
- ☐ Tech Inspections

- The General Packing list for a Test Day:
MUST HAVE:
- ☐ Test Day Box (bruh)
- ☐ Tire pyrometer
- ☐ Toughbook
- ☐ Toughbook charger
- ☐ Tire pyrometer
- ☐ Longene (red) tire pressure gauge
- ☐ Test Day Documents
- ☐ Test Plan/Proposal
- ☐ Results logging (excel or paper)
- ☐ Two Jack Stands
- ☐ Timing Gates
- ☐ Cones
- ☐ Tools
- ☐ Fire Extinguisher

VD checklist

- SUSPENSION BOLTS CHECK
- FRONT LEFT
- ☐ Bellcrank chassis
- ☐ Control arm
- ☐ Steering Tie rod
- ☐ Tie rod
- ☐ Tie rod shims
- ☐ Upright bolts
- ☐ TORQUE WHEEL (40 ft/lb)

- FRONT RIGHT
- ☐ Bellcrank chassis
- ☐ Control arm
- ☐ Steering Tie rod
- ☐ Tie rod
- ☐ Tie rod shims
- ☐ Upright bolts
- ☐ TORQUE WHEEL (40 ft/lb)

- RIGHT REAR
- ☐ Bellcrank chassis
- ☐ Control arm
- ☐ Tie rod
- ☐ Tie rod shims
- ☐ Upright bolts
- ☐ TORQUE WHEEL (40 ft/lb)

- LEFT REAR
- ☐ Bellcrank chassis
- ☐ Control arm
- ☐ Tie rod
- ☐ Tie rod shims
- ☐ Upright bolts
- ☐ TORQUE WHEEL (40 ft/lb)

- Tire Alignment:
- ☐ When you do this please record who did it: **huber**
- ☐ With tape measure, measure the tie rod (not the toe rod, rods coming out of steering rack) length and make it equal left and right and paint marker a line where the tie rod and steering rack meet
- ☐ Ensure shims are correctly at zero amount (5 shims on the front, 3 shims in the rear) everything should b in the green suspension box and tire pressures are at 12 (sidewall deflection with pressure is real)
- ☐ Undo jam nuts on toe rod and using toe plates (ensure they are centered with each other) tape measure front and rear of each tire)
- ☐ Ensure the length front to rear of the tire is the same
- ☐ Rinse and repeat for rear

- Corner Balance:
- ☐ Record names of who did it and make sure to save this for last: **huber**
- ☐ Fill tires to 12 psi, get a person in the car
- ☐ Loosen jam nuts on the push rods
- ☐ Put scales next to each side, turn on, ZERO BEFORE PUTTING CAR ON, put the car on
- ☐ I would take a pic here before doing anything to see the difference of before zeroing and after zeroing
- ☐ When corner balancing think about it as legs on a table, they work diagonally so try to corner balance across the car (guessing and checking is also fine as well). You do need to make sure to avoid bottoming out the push rod (you are pre loading it when adjusting which can be bad for the push rod under load)
- ☐ I try to get it to within 5 lbs of each corner but when you're done take a picture and put it in car-testing channel or in here (in here is preferred)
- ☐ Lock jam nuts and pack it up
- ☐ Measurements before taking car out:

- Corner Balance
- LF Weight:
- RF Weight:
- LR Weight:
- RR Weight:

- Camber
- LF:
- RF:
- LR:
- RR:

NEED ONE FOR IC DRIVELINE

Driveline checklist

Each main item should be checked off if it is present and ready to go. If any sub-checks apply when inspecting, also check off. It is assumed that if any of the sub-checks apply, they are written in the blank below and corrected before checking off the main item. Pictures of failures/more information beyond a basic description is not required, but recommended.

Example: Left emrax plate has a loose bolt on the top rear and bottom rear. Technician tightens the bolt and moves on.

Bolt tightness (PLT A WRENCH ON IT)

- ☐ Left emrax mounting plate
- ☐ 8x 3/4-28 bolts
- ☐ 7/16 wrench and 5/16 wrench
- ☐ Loose?

- ☐ Right emrax bearing mounting plate
- ☐ 8x 3/4-28 bolts
- ☐ 7/16 wrench and 5/16 wrench
- ☐ Loose?

- ☐ Yoke plate bolts (6x 3/8)
- ☐ 6x 2/8
- ☐ Hex and 1/2 wrench
- ☐ Loose?

- ☐ Left bearing carrier
- ☐ 2x 1/4-28
- ☐ 7/16 wrench and 5/16 wrench
- ☐ Loose?

- ☐ Right bearing carrier
- ☐ 2x 1/4-28
- ☐ 7/16 wrench and 5/16 wrench
- ☐ Loose?

- ☐ Rear sprocket bolts
- ☐ 8x 10-32
- ☐ Hex and 5/16 wrench
- ☐ Loose?

Bolt inspection (VISUALLY CHECK SAFETY WIRE)

- ☐ Emrax mounting bolts
- ☐ 6x M8
- ☐ Loose/missing safety wire?

- ☐ Emrax sprocket adapter bolts
- ☐ 6x M8
- ☐ Loose/missing safety wire?

- ☐ Inner/spool left tension cap
- ☐ 6x 10-24
- ☐ Loose/missing safety wire?

- ☐ Inner/spool right tension cap
- ☐ 3x 10-24
- ☐ Loose/missing safety wire?

- ☐ Outer/hub left tension cap
- ☐ 6x 10-24
- ☐ Loose/missing safety wire?

- ☐ Outer/hub right tension cap
- ☐ 3x 10-24
- ☐ Loose/missing safety wire?

Visual inspection items (LOOK AT ITEMS TO CONFIRM PRESENCE AND OTHER ASPECTS)

- ☐ Left emrax mounting plate
- ☐ Bent?

- ☐ Right emrax bearing mounting plate
- ☐ Bent?

- ☐ Front sprocket teeth
- ☐ Missing?
- ☐ Bent/chipped?

- ☐ Front sprocket spacer
- ☐ Bent/chipped?

- ☐ Rear sprocket teeth
- ☐ Missing?
- ☐ Bent/chipped?

- ☐ Chain misalignment
- ☐ Looking from rear of car straight towards both sprockets, record estimate below appropriate checkbox
- ☐ Left chain misalignment
- ☐ Right chain misalignment

- ☐ Chain tension
- ☐ check as using the image below (note flipped drive direction from our car), a straight edge placed on top tangent to both sprockets, and a small measurement device. Pull the chain upwards and measure the distance, recording it below appropriate checkbox
- ☐ Left tension
- ☐ Right tension

- ☐ Left bearing carrier
- ☐ Installed in correct direction (bearing not rotated)
- ☐ Bearing fully seated and in working order

- ☐ Right bearing carrier
- ☐ Installed in correct direction (bearing not rotated)
- ☐ Bearing fully seated and in working order

- ☐ Left bearing carrier
- ☐ Installed in correct direction (bearing not rotated)
- ☐ Bearing fully seated and in working order

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- ☐ Bearing fully seated and in working order

LV checklist

- ☐ @BLV fill this guy in more but this is what I can think of
- ☐ Fully charge LV batteries
- ☐ Check and see if any loose/ USB cables are lose
- ☐ Pull SD card and upload them to the teams -> **Test day data**
- ☐ Turn LV on-off to generate fresh log, check that SD card is logging
- ☐ Create a new folder in **Test day data** for the new test day
- ☐ Install any gopro's. Check that its recording
- ☐ Grab DAQ pack kit
- ☐ Install any daq (will flush more out)

Aero checklist

- ☐ @Aero @Composites fill this guy in more but this is what I can think of
- ☐ Front wing
- ☐ On?
- ☐ Level?
- ☐ Bolts tight?
- ☐ Any debonding on mounts? (Check after each run)
- ☐ Any debonding on wing? (Check after each run)
- ☐ Any cracks in carbon? (Check after each run)
- ☐ Undertray
- ☐ On?
- ☐ Level?
- ☐ Bolts tight?
- ☐ Any debonding on mounts? (Check after each run)
- ☐ Any debonding on wing? (Check after each run)
- ☐ Any cracks in carbon? (Check after each run)
- ☐ Body
- ☐ Pushpins tight?
- ☐ Any cracks in carbon?
- ☐ Side body
- ☐ Pushpins tight?
- ☐ Any cracks in carbon?
- ☐ Swiss Cheese
- ☐ Pushpins tight?
- ☐ Any cracks in carbon?
- ☐ ECU mount
- ☐ Any cracks in carbon?
- ☐ Floor Fan
- ☐ Bolts tight?
- ☐ Cracks in carbon?
- ☐ Tools
- ☐ FW tools
- ☐ RW tools
- ☐ UT tools

Tech

(did we doing any Tech inspections before going out, any issue/ illegal write below each category)

- ☐ Mechanical
- ☐ Acc tech
- ☐ Ev active

Details

Monday, May 27, 2024 11:28 PM

How did the test go?

-
-

Critical Issues:

-
-

Future to-do:

-
-

Full description & sequence of events:

Full description & sequence of events:

FEBURARY 2025

Monday, February 17, 2025 7:49 PM

Week of 2/16 - 2/22:

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			First Drive			

Week of 2/23 - 3/1:

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				Suspension Alignment Check	Small Test	Benchmark Testing

02/19 First Drive

Wednesday, February 19, 2025 10:44 AM

Testing Brief:

- First drive for combustion car!
- Run through a brakes test on the car
- Drive a couple laps around east parking lot to shakedown mechanical side
- Easy on the engine, before driving couple of issues with the engine (leaking oil)

Results:

- During first drive we did a mini shakedown in the east lot
- After Running the car, issues with the coolant loop arose and requires further investigation to verify it is functioning as intended
- Car was half shifting and not properly going into gear
- Oil coolant line running near the headers partially melted
- Vapor or smoke coming from the crankcase vent and accumulating in the catch-can, so after going back to shop we checked oil and we potentially had a mix of water, and metal in our oil.
- In summary engine no happy :(





02/19 Pre-Check

Wednesday, February 19, 2025

7:06 PM

Checklist for Tech Inspection Items before Test [HERE](#)

Other Notes

- First ever run of the KS8C
- Has bad motor (non-rebuilt/comp running) in it currently
- Had issues with trying to find positive locking solution and cascaded into problems and solutions. The conversation can be followed [HERE](#)
- Other parts to note:
 - o Old Hubs
 - o Old 13deg Caster Uprights (KS5)

02/28 Mini Shakedown

Monday, February 24, 2025

10:18 PM

02/24 Work Day

Monday, February 24, 2025

10:18 PM

Week of 2/23 - 3/1:

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	<input type="checkbox"/> Take old motor out <input type="checkbox"/> New motor built <input type="checkbox"/> Fix broken Cooling lines <input type="checkbox"/> Put oil in car <input type="checkbox"/> Zip tie <u>Seat belt</u> ends so they don't drag or burn	<input type="checkbox"/> Run Thu a tech sheet after new motor is in vs <input type="checkbox"/> Work on fixing items that aren't really legal on IC Sound test with Old muffler New headers		Suspension Alignment Check Small Test		Benchmark Testing

02/27 Suspension Alignment + Pre Check

Monday, February 24, 2025 10:19 PM

-----MARCH 2025-----

Monday, February 24, 2025 10:11 PM

Week of 3/2 - 3/8:

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Week of 3/9 - 3/15:

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Week of 3/16 - 3/22:

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Week of 3/23 - 3/29:

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		Dyno 1	Tuning Plan Review Shakedown	CG Testing	Dyno 2	GTMS DYNO

03/01 Benchmark Test

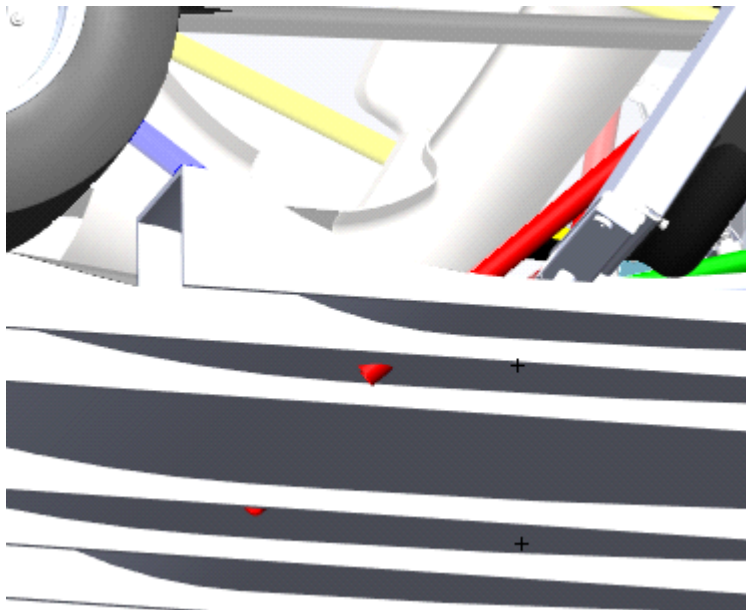
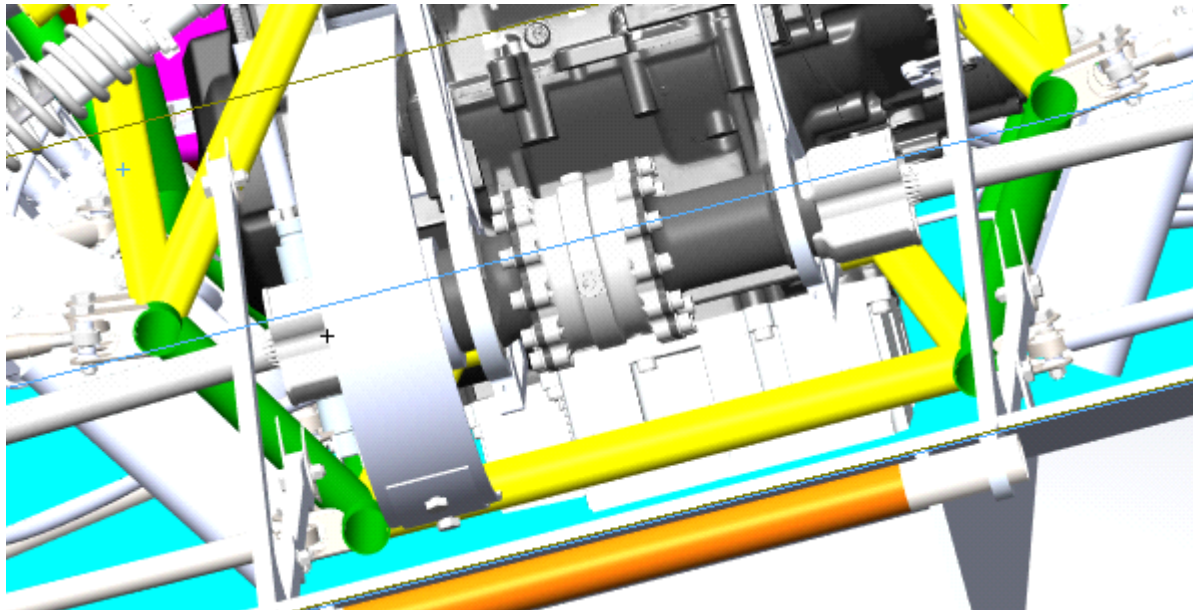
Monday, February 24, 2025

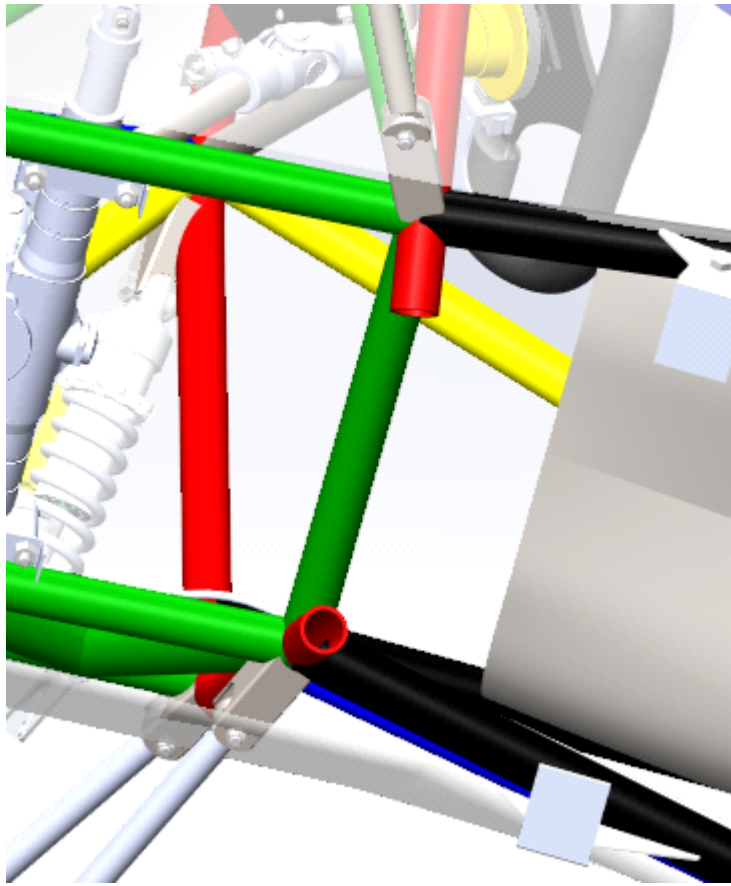
10:13 PM

3/9/25 IC tech

Sunday, March 9, 2025 9:42 PM

S8 violation





3/14/25 Tech Inspection (IC)

Friday, March 14, 2025 1:25 AM

Cut date for the KS8-C is 3/15, we got the car together and ran a tech inspection today and this was everything that is not rules legal on the car. This will all need to be fixed by the deadline (use your best discretion for some of these, obviously we will not cut the car for a transponder but it is something that we need to do):

- VE 1.5 - Transponder/RFID Tag Missing
- VE 1.1 - Wrong Car #s on body
- VE 1.3 - SAE Decals missing on rear wing
- T.7.2 - Bodywork has holes
- T.1.8 - Missing cover for fuel system, missing radiator covers (Garrett)
- T.1.7 - Missing front floorpan (Jordan), and gaps in floorpan
- T.1.3 - Cover sharp objects on steering column (safety wire/socket heads on ujoints)
- T.2.5.8, T.2.6.4, T.2.7.5 - Not enough threads sticking out of lap belt tab on one side, must be a critical fastener as well (Wasim)
- V.3.2.8 - Left front steering pickup missing bolt (David)
- T.3.1 - Brake lines under frame, should be fixed once floorpan went on (Jordan), Critical fasteners need replaced on caliper mounts, currently nylock needs to be switched to non flanged DT hardware. (David)
- IC.7.2 - Exhaust outlet too high - max 60cm measured behind axle rear centerline. Will require some cutting and rewelding to fix this. (tentative, please verify height-DO, JM)(Measure from exhaust center or top?)
- T.5.2 - Chain guard hardware doesn't have enough threads sticking out. (David)
- T.5.6 Both Catch Cans missing (Jordan)

(Borderline passing items)
T.7.5-8 - Front Mounted Aero (FW Aero Box) (Alexander, David)

- Final Tech Inspection: PASS but fix following small things
- VE 1.5 - Transponder/RFID Tag Missing
 - VE 1.1 - Wrong Car #s on body
 - VE 1.3 - SAE Decals missing on rear wing
 - T.7.2 - Bodywork has holes
 - VE.2.2 Pushbar, always with car, push and pull, usable by 2 people standing behind car.
 - S11.F.8.5.6 Bottom leading edge of IA must be lower than 220 mm above lowest point of top surface of lower SIS tube (I think)
 - T.1.3 Covers inside cockpit over sharp points or moving suspension and steering components. (Steering Column U-Joint Pinch points)
 - T.3.1 Critical Fasteners- Brake Calipers, need smaller height DT nut for fronts
 - T.5.6 Catch Cans- Missing Tubes

Not related, Pneumatics need to get finished.

Running Bolt List

Rule	Part	Item	Qty	Notes
T.2.5.8	Sub Belt	7/16-20 x 2" Bolt	2	
• T.3.2.1	Front Left Caliper	3/8-24 DT Nut	8	3/8-24 x 1.75 or 2" to meet 2 threads, maybe dt's are smaller than nylock and will show thread just fine, 8 just in case all are nylocks, please verify before purchase if concerned.


3/24/25 "Shakedown"


Monday, March 24, 2025 10:03 PM


Prep

- Fluids checked
- Weight: 466 lbs
- Not Corner Balanced or ride height adjusted
- Idle good
 - Fine for first engine start
 - Smoke from oil and grime burning
- Potential Exhaust leak?
 - One startup, fireball was produced from muffler exit and ~~Primary-Secondary connector.~~
 - ~~Leak from P-S connector?~~
 - Found the leak in primary muffler bottom bolt holes, towards headers. (Bolts fell out)(NEED TO PUT IN!!!)
- First gear engaged, wheels spinning
 - Chain extremely tight, no slack, still spun wheels
 - Ben fixing chain tension
 - Shims After Fix
 - Top Right: .54"
 - Top Left: .56"
 - Bottom Right: .57"
 - Bottom Left: .54"
- Rolling car back in for shim fix, Clutch cable pulled too hard and broke
 - Positive stop is advised
 - Moloney Fixing
- Ecu mount bracket bolts loose

March 25, 2025

 **Valerie S.** 2:10 AM
For later notes :
battery's were dieing , measured voltage out from rectifier, nothing was outputting
Measured the stator fases , inconsistent to the middle "white " connector
Measured ac to stator output. White had 5 v other 2 had ~15 ~16 v . Measured internal resistance of the coils and compared to spec sheet , middle didn't match . Measured the spare from dyno
resistances were fine
Concluiong from that is
stator bad , replacing tonight

 **Valerie S.** 3:25 PM
r* Forwarded
For documentation purposes, the resistance between each of the phases of the new stator are all 0.27 ohms
#lv-general • 3:25 PM >

 **Valerie S.** For later notes : battery's were dieing , measured voltage out from rectifier, nothing was outputting ...
Chance | Coup Master 4:28 PM
Oh and the values i remember from this were that the middle "white" phase was giving 4-5 amps, and had a potential unconnected of like milliVolts, while the other 2 phases where like 15-16 amps with a potential of 23-30 volts, the resistance between the two outer guys where .36 ohms but the resistance of the middle fella to the outers was like .12 ohms

👍 1 🗨

3/26/2025 Dyno 1

Wednesday, March 26, 2025 2:55 AM

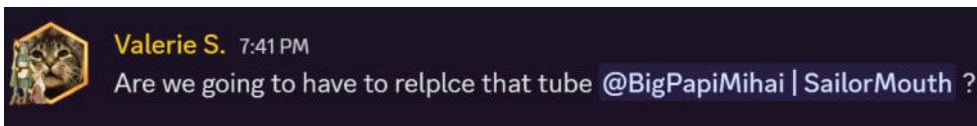
- TPS Was not functioning for this dyno, and caused significant issues with vehicle performance
 - Very poor throttle response
 - Consistent stalling at high throttle
 - REV Bouncing at low throttle position



- Results of the Dyno Pulls:

Test	HP
Pull 1:	19
Pull 2:	25
Pull 3:	25

- During the first pull, the master link in the chain broke and had to be replaced.
 - Damage was done to the lower engine motor mount when the chain broke





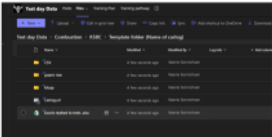
BigPapiMihai | SailorMouth 7:43 PM

lol I think that's how the last one looked after we slung a few chains at it, it should be fine



3/26/2025 Shake Down

Wednesday, March 26, 2025 7:45 PM



Where to post data, and related exacts and videos

Test Plan :
Shake down the Car in the lot with aero

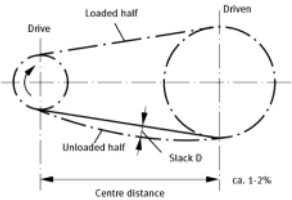
- Items we are checking during testing:
- Temp stickers on the Aero to the muffler (What temp is bad?)
 -
 -
 -
 -
 -
 -
 -
 - Sound Test (recorded Number)
 - Breaks test?

Items Checked/Prepped:

Marco | Papi Dulce 7:45 PM
Tires changed, Fluids checked, ready for @Aero



- ☐ Chain tension- check as using the image below (note flipped drive direction from our car), a straight edge placed on top tangent to both sprockets, and a small measurement device. Pull the chain upwards and measure the distance, recording it below appropriate checkbox
- ☐ < x inches
- ☐ > x inches



Critical Issues:

-

Full description & sequence of events:

Future to-Do:

- Feedback:
- Total laps:
- o Car response:
 - 83.1 db idle
 - P = 86.6 db running

- Really bad engine noise:
Shit to do after:
- Drain engine and flip car on side
 - o Inspect internals
 - o Likely pull motor again
 - Leaking oil from stator and clutch cover
 - o Stator was leaking more, was using gasket and not RTV
 - o Prob do both
 - o Clutch cover was seeping not dripping
- DAM, I saw the fluid last night and told Alexander, it was unclear if it was spilled oil or not, saw it from the "hedders" side of the motor
- Consistently through pulls, loud clunk during down shifts
 - o Chain might have hit the chain guard, chain was very loose after
 - Pull diff out
 - o Inspect driveline including diff housing
 - Need a new diff carrier
 - Rear sprocket bolts loose



- o Driver thoughts(Emil):
 - Stuck throttle, would stay at high rpm after driver let go
 - Significant jump in power before shifting around 9000rpm, no torque or power right before this moment
 - Slugging along
 - Weird shift delay, has to press then hold in order to shift
- o Anything broke?:
 - Leaking oil from stator case
 - Evil noise while running mid lap after about 6 laps
 - o Gear oil exiting out the side of the drexler
 - o Tulip cup came out of the drexler, causing leak
 - o Left diff carrier



03/26/2025 Damage Report

Thursday, March 27, 2025 1:21 AM

1. Car drove for a couple of laps around parking lot, stator plate was leaking oil
 - a. <https://discord.com/channels/@me/1028121665294573588/1354688364393267302>
2. Car was stopped in the middle of a run, heard a really really bad noise
3. Immediately noticed differential carrier was cracked



5. Oil leaking from clutch cover



6. Got back to shop, engine was having a really bad noise
7. Drained oil, bucket was very metallic
8. Opened oil pan



1.

1. When trying to remove engine, motor sprocket would not turn, is seized
2. Decided to remove engine from car
3. Noticed bent valve



2.

1. Decided to take engine to dyno and open it
2. Loose bolt on the cam gear

David's Theory

Cam gear bolt not tightened (12) > Backs out enough to eat at the head wall (13b) > Cam gear skips timing > Valve slaps, bends and gets stuck (10, 14a, b) > Contamination introduced to oil (7) > Engine fucked

Shit that happened to it:

- Drilled into the head
- Welded the head
- Ran without oil
 - o Multiple times
- Ran hard with new bearings
- Off and on
- Reused hardware, torque to yield
- Used a different top for different bottom

3.



4. In the head

a.



Bent valve was stuck down

a.



5. "that's why we're making 25 hp"

a.



b.





- a. Pistons 1 - 4 Respectively
- 1. Stator gasket



- Notes:
- Bolts holding cams were loose, threads were completely stripped
 - o Pulled one of bolts out and threads had completely left
 - Bolt on the oil pan is completely stripped

What we have current:

- Turned one of bolts out and threads not completely flat
- Bolt on the oil pan is completely stripped

What we have current:

- Pistons (non big bore)
- Valves
- Block is fine (couple of bottom ends)
- Timing chain
- Clutch cover gasket
- Stator gasket
- Chains
- Cams

3/27 Plan
 Sam call deck shop
 Sam call UGA
 Inform parties involved
 Board meeting

Need to check:

- Bottom end
- Bearings
- Con rod
- Wrist pin
- Head gasket
- Oil pump chain



o

IMG_1665

-

Need to get/ make a plan for:

- Hardware
- Top end
 - o Deck the head
 - Sam will call
 - o Buy new (last resort)

Week of 3/30 - 4/5:

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	Engine in car and ready for dyno	Day dyno	dyno	dyno	dyno	endurance
			Check suspension alignment		Benchmark (run all events)	
		dyno		Shakedown?		Hella skidpad

4/7

4/8

4/9

4/10

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	IC: Mech Tech Dyno Brakes Shakedown	Shakedown Autocross	Accel Skidpad	No car run-Prep	<div>INVITATIONAL</div>	

04/07 Dyno

Tuesday, April 8, 2025

3:00 AM

- Heat cycled the car up to 180 F and let it heat soak/slow cool back down to 90 F.
- After heat cycling the engine we did a compression test
 - o Results are questionable, batteries kept dying and seemed to be lacking in adequate power output to turn the starter

Cylinder	Pressure
1	155
2	145
3	150
4	150

- o
- Pneumatics has a small air leak, not sure where it is coming from but it can be heard
- Started to run but ran into redlining issue
 - o Car would redline at a 8k-9k rpm, at which the crankshaft and camshaft position sensor de-synced
 - o Discovered that the Crankshaft position sensor was missing the 10k pullup resistor
 - o Couldn't find a 10k so we used a 10.1k resistor
 - o Replaced the resistor and solved this issue
- - o Due to the very low ride height and the compressed suspension from the dyno straps, the axles are contacting the chassis
- Starter solenoid got stuck in between one of the runs but was fixed with a good ol' smack
- Both batteries died so then had to try to start off a jump pack.
 - o Worked surprisingly well. Could use another time
- Attempted two different dyno pulls
 - o Due to the very low ride height and the compressed suspension from the dyno straps, the axles are contacting the chassis
 - o During both dyno pulls the tripods popped out again and one came off the axle splines
 - o We tried pushing the tripod back onto the spine and run it again but it just came back off during the pull
 - o Axle splines might be cooked hard to tell without pulling them out
- Current plan is to swap the new hubs on the front to the rear and to install the new axles and tripods and continue dyno testing tomorrow (4/8/25)
 - o Press the hubs out of the uprights, swap fronts and rears

04/08 Dyno

Wednesday, April 9, 2025

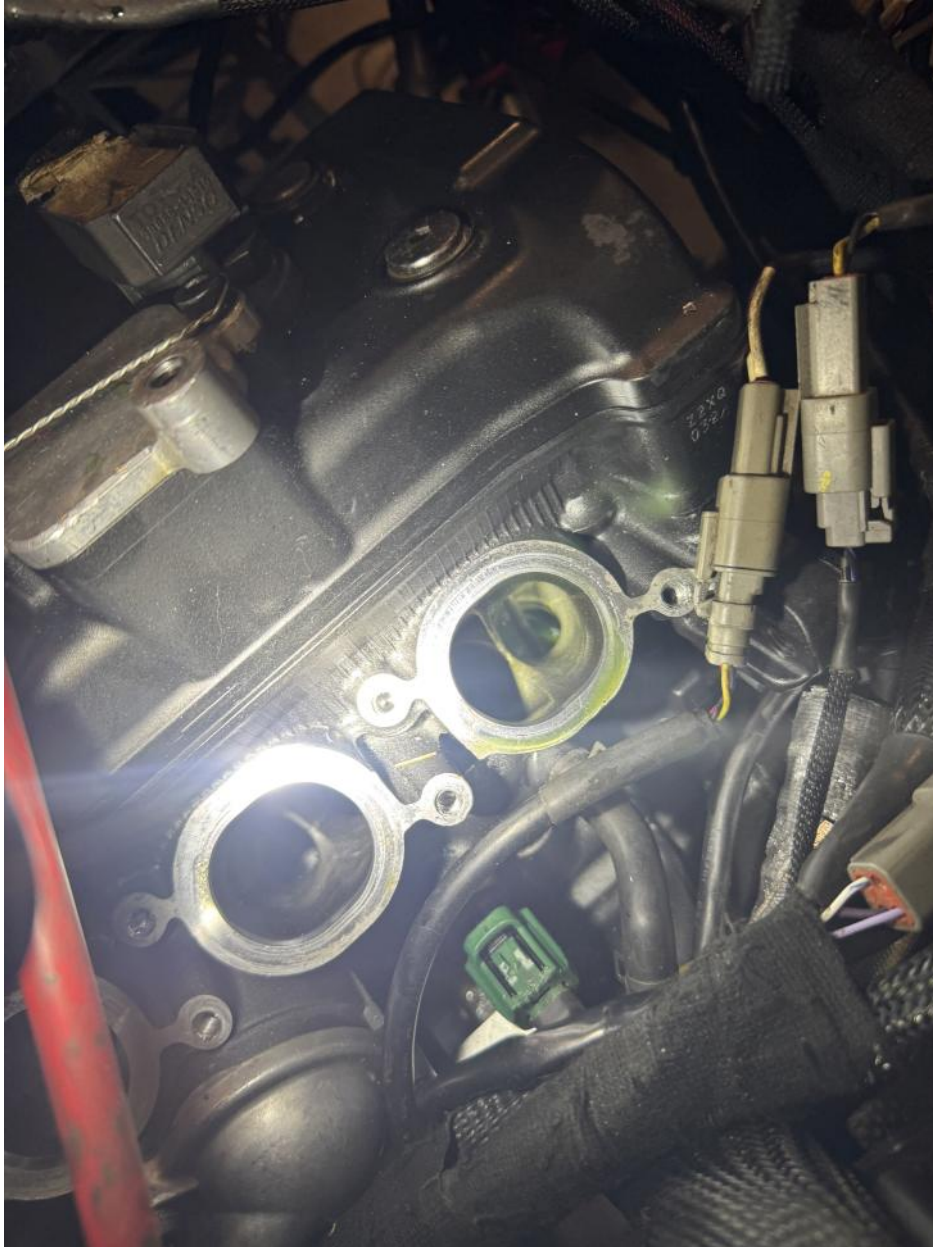
3:04 AM

- Replaced IC axles
- Swapped hubs from the front to the rear so that the issue where the tripods fall out does not happen anymore.
- Found the diff to be sitting at an angle with equal shims on all 4 corners.
 - o Temp fix of adding shims to the right side to even out the diff
 - o Looks like the bearing carrier is oriented backwards & should be spun 180 degrees
 - o Need to check the left to right diff carrier alignment
 - o Bearing carrier has significant misalignment with diff carrier on the right side, probably pretty bad for the bearing



- When ready to start dyno testing we found that the motor would crank over but would not start.
 - o Further testing led to checking spark, coils, and the crank sensor

- Was getting very sporadic readings form the crank sensor
- Have not solved this issue
- Conducted a compression test.
 - Found that cylinder 1 was not getting any compression.
 - Thought it was just a head gasket but apon further inspection we found that one of the intake valves dropped.
 - Unknown if the headgasket is blown or not





- Current plan is to pull the motor and inspect for further damage

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8am				Preliminary Dyno	Val gone Skidpad Setup - On/Off		Mock Comp / Continuous Autocross
2pm				Accel and Skidpad	GTMS Dyno No Sam, Emil, Seth	Skidpad Setup	Stop Driving
8pm			Car done Aligned and Mech Tech	Mock Endurance Autocross Testing 1	 Autocross Testing 2	No Emil Skidpad Setup	 Final Mech Tech

Skidpad - Dom + Chance
Accel - Chance + Micah

Autocross- Emil + Mihai
Endurance- Emil + Mihai

- Who can lead a test:
- Sam
 - Val
 - Emil
 - Mihai*
 - Bailey*

 - Train Carter
 - Train Seth

	A	B	C	D	E	F	G	H	I	J
1	Wednesday Morning	Wednesday Afternoon	Wednesday Night	Thursday Morning	Thursday Afternoon	Thursday Night	Friday Morning	Friday Afternoon	Friday Night	Saturday Morning
2	Emil	Emil	Sam Y.	Seth	Carter (GTMS Dyno)	Sam Y.			Sam Y.	Sam Y.
3	Micah*	Chance**	Emil*	Emil		Emil*			Chance*	Emil*
4	David	Dom*	Mihai*	Adi		Tyler B.			Dom*	Chance*
5		Carter	Tyler B.	Chance*		Adi			Carter	Dom*
6		Seth	Adi	Dom*		Mitchell			Wasim	Tyler B.
7		Micah*	Cooper	James M.		James			Tyler B.	James
8		Adi	Jordan	Micah		David			Adi	David
9		Noah	Seth						Mitchell	Seth
10			Carter							Cooper
11			Val							Adi
12										Wasim
13										
14										
15										
16										

Preliminary Dyno

Tuesday, May 6, 2025 12:13 AM

Lead: Emil

Goal:

- Benchmark car with new motor
- Slowly warm up engine in new car

People / Jobs:

- Emil
- Micah (Driving)
- David

Prep and Tech

Wednesday, May 7, 2025 12:55 AM

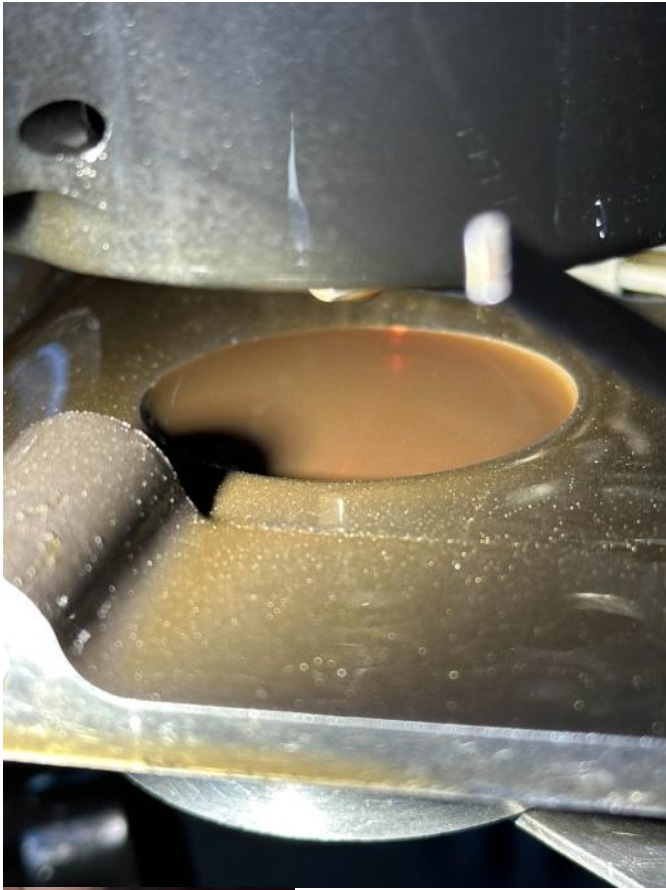
New engine Oil



Maintenance stuff done while installing motor

- Greased rear axles
 - Both rear hubs
 - All tripods
 - Tulip cups
- Swapped right rear upright
- Replaced Rear Brake pads
- FR Steering Pickup Bent
 - Bent back into place, temp fix
- Front Right Motor Mount Stripped
 - Adding 10x1.5 helicoil
- Rear Bell Crank-Shock Bolt/Hole bent (bent back so 1 washer and 1 thin washer fits), need remanufacturing
- 3 qts Mobil1 Racing 10w-40 4T Oil bought and added.
 - No Engine oil in pan from shipping
 - 1 Little ferrous bit found in pan along with a coupe hard plastics
 - Pickup clear, no oil on glitter or in filter.
- Lots of time spent trying to find out why crank position sensor and coolant temp sensor was not working. The fusccking connections were swapped
 - Coolant temp was spiking abnormally while cranking. Like it was a crtank snesor





5/7 Tech Inspection

Wednesday, May 7, 2025 9:50 AM

Check Boxes on To-do list when resolved
Inspector: Emil

I skipped frame and aero stuff, no aero on car and we know what frame stuff is close from FS but I mostly skipped for the sake of time, someone should do another one soon cause the car was not really in a complete enough state for me to do a full inspection

- ☒ Brake Light Missing
- ☐ Ujoint screws need padding (hold off on this for a little while)
- ☐ Jacking Bar Missing
- ☐ Pneumatic Cylinder Missing
- ☒ Headrest Missing
- ☒ Intake missing safety wire
- ☐ Rack mount hardware on left side has a debatable amount of thread
- ☐ Camber shim bolts are really sus
- ☐ Catch cans missing
- ☒ Chain guard missing
- ☐ Master switch has a ton of play in it1
- ☐ Double check for nylocks on all harness bolts
- ☐ IA missing
- ☐ RR Outboard UCA bolt too short

Items that are legal but very close:
Steering wheel to front hoop vertical height
FL upper caliper bolt is a little long

Things that were just loose:
Jam nuts on FL/FR toe rods
Toe shim bolts on the FL

Other notes:
Major lack of consistency in washer usage on suspension components, lots of bolts that should have washers under the head that didnt

Seth's Inspection:

- ☐ Seal firewall with aluminum tape
- ☐ Tape floor pan with gaff tape
- ☐ Lap Belt bolts need shoulder bolts
- ☐

Accel and Skidpad

Tuesday, May 6, 2025

12:55 AM

Lead: Emil

Goal:

- Make Micah and chance not stall
- Get a benchmark for accel time
- Get chance and Dom ready to run Skidpad at comp
- Move standard deviation below 0.5

START USING FLAGS FOR DAY TESTING, LIGHTS ARENT EFFECTIVE

People:

- Emil (Lead)
- Micah (Driver) (Corner)
- Chance (Driver)
- Dom (Driver)
- Seth (Track Setup)
- Adi (Timing) (Track Setup)
- Noah

Run Order:

Brakes Test

- Chance

Accel

- Chance (5 Runs)
- Micah (5 Runs)

Check for Damage / Bolts on Car

Adi - Suspension

Dom - Driveline

Seth - Aero (If Applicable)

Skidpad (Would not do setup changes yet)

- 15 Run Intervals and Switch off
- Monitor Standard Deviation

Mock Endurance 1

Tuesday, May 6, 2025

12:56 AM

Lead: Sam

Goal:

- Get emil and mihai seat time in car
- Monitor car for any failures during
- Test car reliability

Autocross Testing 1

Tuesday, May 6, 2025

12:58 AM

Lead: Sam

Goal:

- Get Mihai most amount of seat time in the car
- Stress car after endurance testing

Autocross Testing 2

Tuesday, May 6, 2025 12:59 AM

Lead: Sam

Goal:

- Identity setup issues on the car
- Create a tested autocross setup for comp

5/8/25 Ebay Engine Possible Damage Report

Thursday, May 8, 2025 2:12 AM

1. Ebay motor purchased by Paul Scarpinato (Last name possibly spelled incorrectly, to be corrected later)
2. Some material (ferrous metallic and also plastic) was found in oil pan upon initial inspection following delivery
3. Break-in and warm-up procedure that was provided by seller was followed
4. No significant noise was noticed
5. Oil pressure was not measured due to not having a working oil pressure sensor since Barnesville 2024
6. The engine developed a knocking sound when the car was being warmed up to take down to dyno
7. An email was sent to Paul describing the situation, more details will be added once a response has been received
8. Add pictures/videos (remove later)

5/11 Full Endurance

Sunday, May 11, 2025

15:49

Mechanical Issues to Fix

- ☒ Throttle cable loose
 - Soldering barrel connector on
- ☒ Radiator shroud off
- ☒ Broken intake filter
 - Concern with solution: foam filter may get damp with water
- ☐ Brake pedal slop
 - Brakes bled, but slop looks to be from busing compliance
- ☐ No-lift shift issue
- ☐ Brake Light
 - Sensor replaced with EV, DTC may be wrong, does not light up
- ☐ (Side Note) Wheels not torqued
- ☒ Chain Guard tab needs re-welding

Tech Inspection Fails

- ☒ Name of School
- ☒ Number on Body
- ☐ SAE Sticker on Body
- ☒ Safety wire throttle body bolt

Garrett notes for his Mech Tech

Missing driver head padding for roll bar -done

Rear left bell crank bottom bolt should get swapped for longer

If possible flip shims for toe adjustment around da car

Swiss cheese needs some good tape

Metal tape for firewall

Muffler Packing

5/12/25 Car prep for Tech

Tuesday, May 20, 2025 11:33 AM

What was fixed in the parking lot

5/15/25 Comp Dynamics

Tuesday, May 20, 2025 11:31 AM

Aero Problems (From entire comp)

- Left FW inner EP de-bond
- UT mounts de-bond
- FW INNER EP too close to tire!! Damage to FW and contact with body on right side
- UT front scraped, cut about 3/4" to raise clearance
- RW struts added a two nuts to two rod ends to make
- FW Bottom, holes in Kevlar center piece

5/16/25 Comp Endurance

Saturday, May 17, 2025 12:35 PM

After Endurance:

- LR shock might've blown
 - o Lifting a wheel in corner
- Clutch cable was tensioned by safety wire, safety wire came loose and lost tension cable
- Revisit rectifier and stator
 - o Battery dies
- Co2 tank was leaking
 - o Check full pneumatic system for leaks
- Delays for the no lift shift are still not working
- Baffles for fuel tank are broken (known issue)
- Cock pit is tight - emil and dom
- FW clearance and tire endplate are very close
- FW mounts were bent when car was dropped on the FW

----- NOVEMBER 2025 -----

Tuesday, November 4, 2025 1:40 AM

11/3/25 IC Prep Plan for Barnesville

Monday, November 3, 2025 9:12 PM

Plan is to have car ready to drive at Barnesville.

To-do:

Motor back in chassis:

- Pulling off ETS
- David T. and Micah

Brakes:

- Pedal Box needs parts machined
- Emil will take a look on Tuesday, making list for Sam and Cameron
 - o Jacob's pedal spacer
- Put Pedal Box together (Mihai, Emil)
- Check reservoir to MC fittings

Parts list-

- Pedal box attachment to chassis c clips (getting cut at GT)
- brake light sensor (arriving today)
- MC to brake line woven hose.



- Splitter thing for front brakes (mc to brake line)(pic below of ev car) (found)



- All the necessary brake fittings (all are on pedal box)
- Pedal Box Mounting Hardware (found in fuckit bucket :skull emoji:)

Shocks:

- Needs to be picked up
- Richard needs to get payment or at least confirmation of payment process thru to traxxion, ASAP.

☑ IA

- Needs IA bonded on
 - o David O.

Regulator

-

Fuel Tank Issues? Mentioned by Emil, but need more info

11/5/25 Shakedown

Thursday, November 6, 2025

4:43 AM

Broke a toe rod end before going out trying to adjust. Replaced.

Emil drove down and did a few laps. Said car feels fine mechanically but low on power and setup is horrible

David drove a few laps. No real notes, still getting used to car. Pedal box too close (3rd from the front)

Micah drove for a few laps. Brake bias too far rear, super easy to spin out under breaking. No lift shift not working, setup really bad, Near the end started to have high idle.

Need to fix:

No lift shift

Brake bias

Setup

Set belts properly

Set pedal box further forward for David, Micah can use seat insert.

Body pogos broken

Not as necessary but should get a spring for brake pedal before the weekend.

Need to check:

Chain tensioning

There might be a bit of dynamic chain tensioning

Maybe high idle