



RADICAL SPORTSCARS MECHANIC'S GUIDE



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INTRODUCTION

This handbook is intended as a guide to the basic running of all Radical cars. We have included basic at circuit responsibilities, engine installation guides, service tips and workshop prep sheets to give you some guidance towards looking after a Radical Sportscar.

We have put this together based on our 20+ years of production, testing and racing these cars. If this guide is followed diligently and sympathetically it will improve our customer's appreciation and satisfaction of our world leading product range.

MECHANIC RESPONSIBILITIES

MECHANICS GENERAL RESPONSIBILITIES AT CIRCUIT

- Follow timetable as closely as possible.
- Make sure car is noise tested as soon as possible.
- Ensure driver(s) are where they should be - signed on, briefings attended and ready in good time for the session.
- Ensure driver is fully aware of any new parts on the car, whether it is brake pads, discs, tyre's or development parts.
- Ensure driver knows the procedure for running any new parts, if they needed bedding in, and if so how it should be done and for what length of time.
- Ensure driver knows what is expected of them, whether it's testing of new parts, bedding-in new parts or set up of the car.
- Ensure a full log of car history is kept, including fuel used, parts used and replaced, running time of car and reasons for changing parts, so hours of components can be worked out.
- Make sure any failed parts are kept for inspection, with technical staff notified where possible.

PRE-SESSION CHECKS (1HR TO SESSION)

- Remove engine cover and wheels and check the water level, plug in engine oil pre-heater.
- Run the car up to temperature whilst checking for leaks (Do not exceed 3000rpm below 50° oil temperature)
- Once the oil temperature is above 60° warm the gearbox (SR8/RXC)
- Hold the rpm at 4000 for 5 seconds then switch the ignition off to check the oil.
- Check with your engineer to see if there are any changes to be made.
- Ensure the correct fuel level has been set. For accuracy, always drain then fill the car from empty.
- Fit and torque wheels, fit wheel nut safety clips.
- Fit engine cover, and ensure all bodywork is securely fitted.
- Loosen seatbelts and remove steering wheel if necessary, ready for driver.
- Set tyre pressures, and any spares/wets you're taking to the pit lane.
- Mark fuel in and tyre set the car will start with on the run sheet.
- Ensure fire extinguisher is active/pin removed.

PRE-SESSION CHECKS (10MINS TO SESSION)

- Tape up the radiator ducts depending on ambient temp
- Strap the driver in making sure the seatbelts are correctly seated on the HANS device.
- Adjust mirrors if necessary.
- Plug in the radio and check operation (if fitted)
- Remind the driver of any new components e.g. brakes, tyre's, any setup changes and the plan for the session.
- Ensure driver knows their way to the pit lane (if in the paddock)
- Ensure all tools equipment and tyre's are taken to the pit lane.
- Do not let the car leave unless the oil temperature is above 50°C.

EQUIPMENT TO TAKE TO THE PIT-LANE

- Spare wheels and wets if required
- Radio headset
- Tyre pressure gauge
- Run sheets and stopwatch
- Pitboard and numbers
- Tool bag
- Air line, gun, lance, air bottle
- Roll bars, dive planes (if necessary).
- Spare wheel nuts and clips (if changing tyres)
- Tape
- Drink for the driver

WHEN THE CAR COMES IN TO THE PITS (MID SESSION)

- Check and record tyre pressures and temperatures on the run sheet while they are hot
- Ask the driver if everything was okay (would they like any setup changes etc)
- Check the oil/water temperatures on the dash. If any are higher or lower than expected, adjust radiator blanking to suit
- Check with the engineer if there are any changes to be made
- Check over the car for any damage, check bodywork clips, check for fluid leaks

PREPARATION (POST SESSION)

- Shake wheels to check wheel bearing, then remove the wheels and place tidily out of sight
- Remove the engine cover and nose
- Drain the fuel, record on the run sheet how much fuel was removed and inform the engineer
- Check the condition of the brake pads and discs, look for cracks and excessive wear
- Check brake and clutch fluid levels, bleed both if pedal does not feel good
- Clean wheels and tyres that were removed
- Check for play in all suspension components, rockers, wishbones and spherical bearings
- Check for play in steering system, rack & pinion, track rod ends etc
- Check throttle bodies, pedal and throttle cable for free movement, lubricate if necessary
- Check wiring for chaffing or tight wires
- Mechanically check full throttle (engine off, depress the pedal then push/rotate the throttle bodies by hand checking for any additional opening, ensure dash reading is over 100%)
- Check the data after **every** session for:
 - Oil temp between 70°C and 115°C
 - Car is charging at 13V to 14V
 - Water temp between 70°C and 95°C
 - Fuel pressure average 3 bar etc
 - No oil surge
 - TPS 25%+ blip/4% idle
 - ACT sensor reading well
 - Check Neutral gear voltage is correct (3.901 SR3, 1.051 SR8, 1.100 RXC)
 - Check for full throttle
 - Check GearShiftDecision and engineEnable.
 - Check GSP is rising back up to 7bar and not leaking
 - Check wheel speed is reading consistently
 - Check syncState for crank/cam sensor synchronization.
- Check the gearbox actuator bearings for wear and play, check actuator length.
- Drain oil catch tank if required.
- Check engine oil level after **every** session using normal procedure
- Check coolant level when the temperature is cool enough <50degrees

SR3 ENGINE REMOVAL

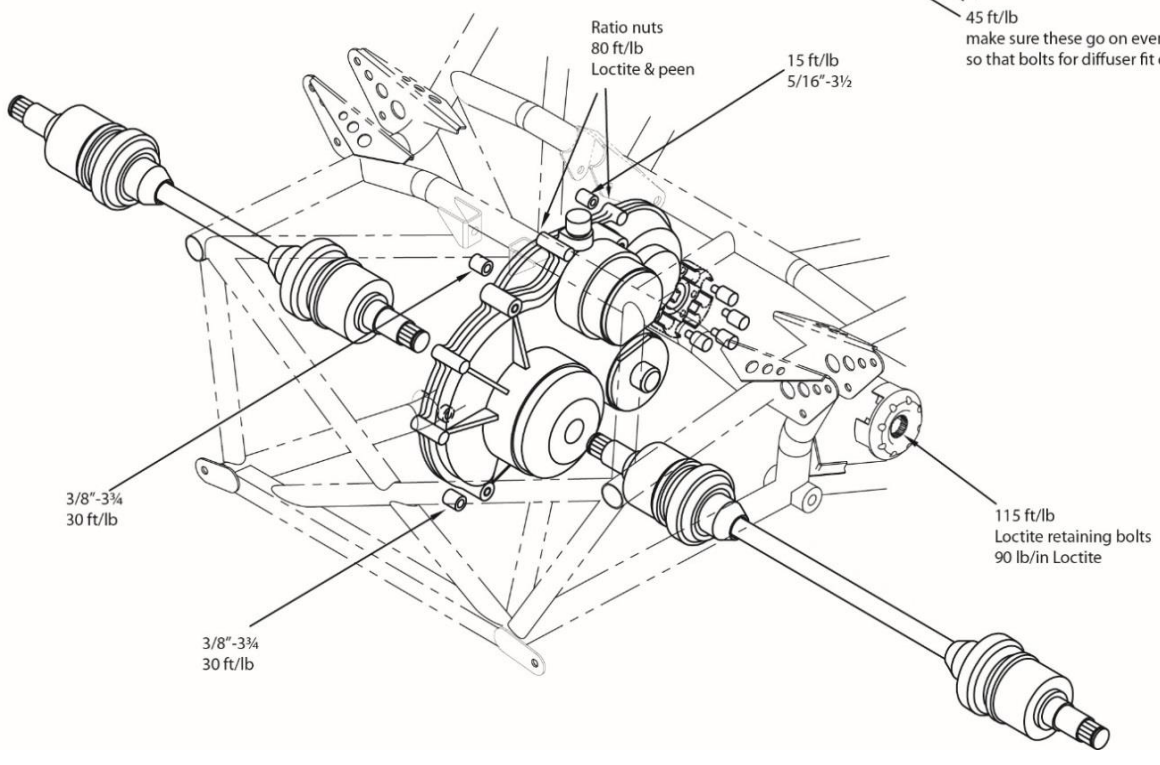
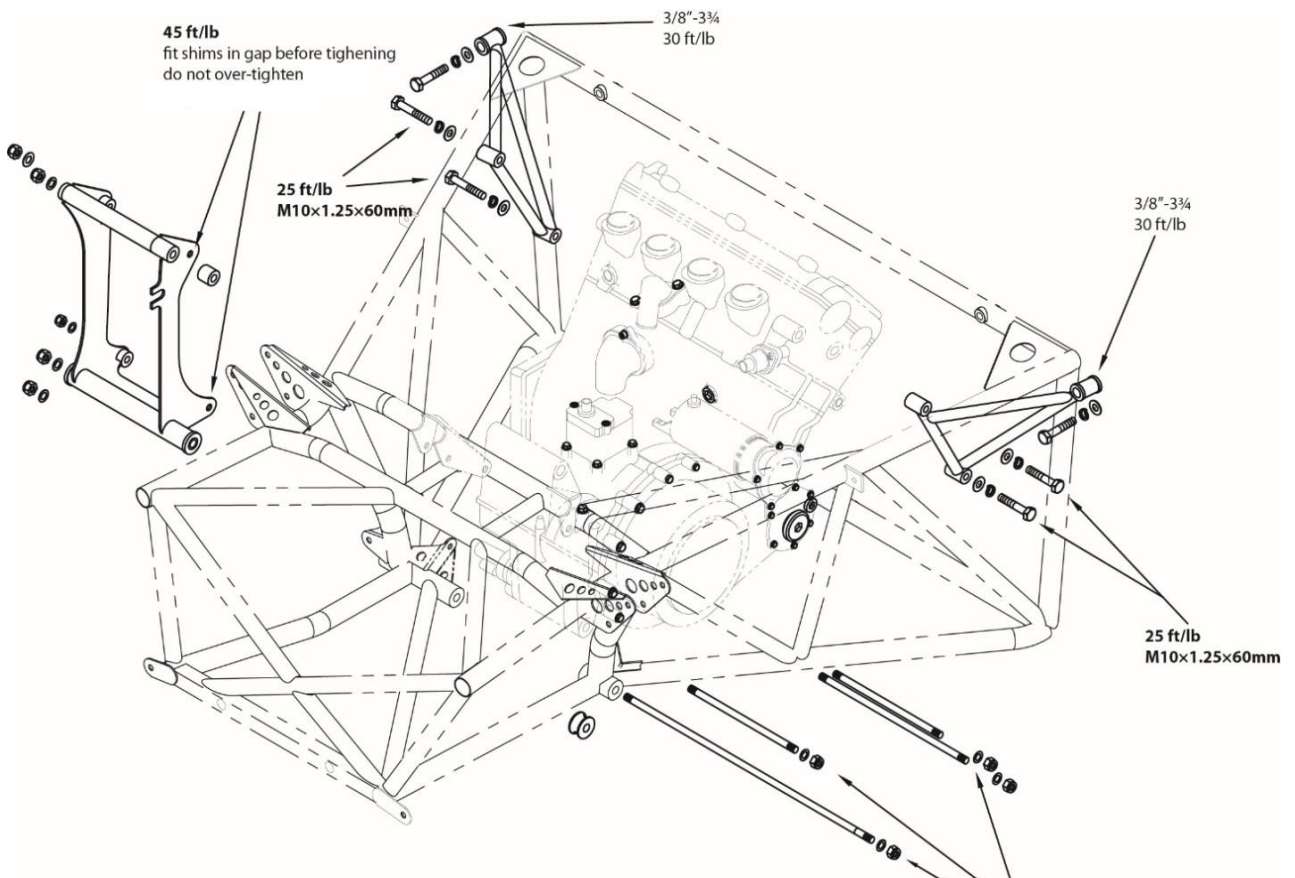
1. Raise the car up to suitable working height (trolley/ axle stands). Removing the floor and wheels
2. Remove engine cover
3. Drain engine oil and coolant (remove lower hoses)
4. Remove tail section and wing assembly, disconnecting rear light loom (2x 7/16 top bolts, 2x 3/8 bottom bolts, split exhaust at Y pipe)
5. Remove exhaust secondary's
6. Disconnect engine loom (all wires connected to engine): air temp, water temp, cam sensor, injectors, tps, coil pack, gearV, crank & stator connection, starter motor and earth wire
7. Disconnect paddleshift actuator (2 x M8 bolts)
8. Disconnect fuel lines at either end of rail and secure
9. Slacken throttle body rubbers and cut airbox securing cable ties
10. Remove throttle bodies and place to one side (throttle cable can remain connected)
11. Unplug and disconnect coil pack, remove HT leads
12. Remove diagonal engine brace at lower mount and pivot to left (1x M10 bolt), GDU breather hose may need removing for better access
13. Remove engine breather, oil scavenge pipe (sump to radiator), oil feed pipe (tank to sump), oil pressure line (to sensor), top water pipe (to thermostat), bottom water pipe (to electrical pump), thermostat housing belled pipe (to swirl pot)
14. Disconnect clutch fluid line to slave cylinder (9/16 banjo bolt)
15. Remove upper engine mounts (2 x M10 bolts per side)
16. Remove exhaust primaries (8x M8 bolts)
17. Disconnect GDU reverse cable (remove clevis pin and slacken 2x 24mm nuts), remove from cable from engine cradle
18. Support engine using crane (put the upper engine mount bolts back in and secure onto these)
19. Remove cradle to chassis pin nuts (1x M12 nut on each side)
20. Knock out engine securing pins (bottom one first), when both pins are out remove spacers
21. Manoeuvre engine to right to disconnect from GDU coupling, hoist upwards and out.

To prepare engine for shipment:

- Remove exhaust gaskets
- Remove engine cradle
- Remove clutch slave cylinder and pushrod (3xM6 bolts)
- Ensure all fluids are drained
- Bung all inlets and outlets
- Package with ECU and injectors

SR3 ENGINE FITMENT

1. Fit engine cradle to engine (leave loose)
2. Refit clutch slave cylinder and pushrod (indent slave side)
3. Fit new drive pegs (use assembly grease to hold in place)
4. Lower engine into engine bay and slot into GDU coupling
5. Refit engine pin with spacers (top first)
6. Refit exhaust primaries with gaskets (leave loose)
7. Refit top engine mounts
8. Tighten all engine securing bolts (top cradle pin 45ft/lb)
9. Refit clutch slave cylinder
10. Refit paddleshift actuator
11. Refit oil and coolant hoses
12. Refit diagonal engine brace
13. Refit coil pack and mount with HT plugs
14. Refit throttle bodies and airbox
15. Refit fuel lines
16. Reconnect electrical connections
17. Refit exhaust and tail section
18. Add oil and coolant
19. Dry crank until oil pressure is showing
20. Run engine, ensure water is swirling in pot and level is correct, allow engine oil to warm up and check the level the normal way.



SR8 ENGINE REMOVAL

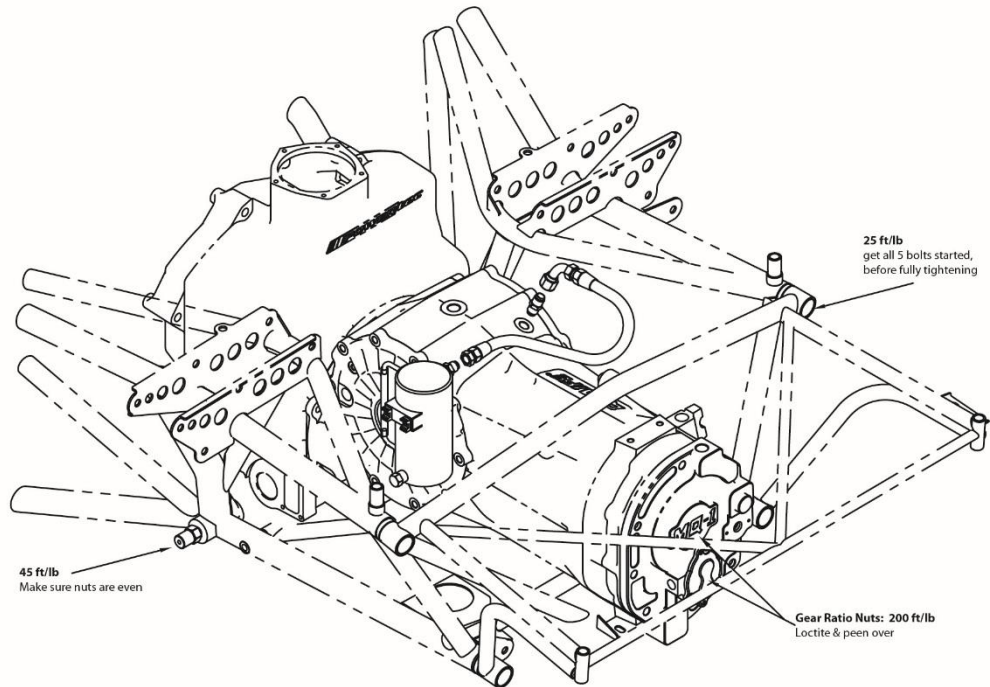
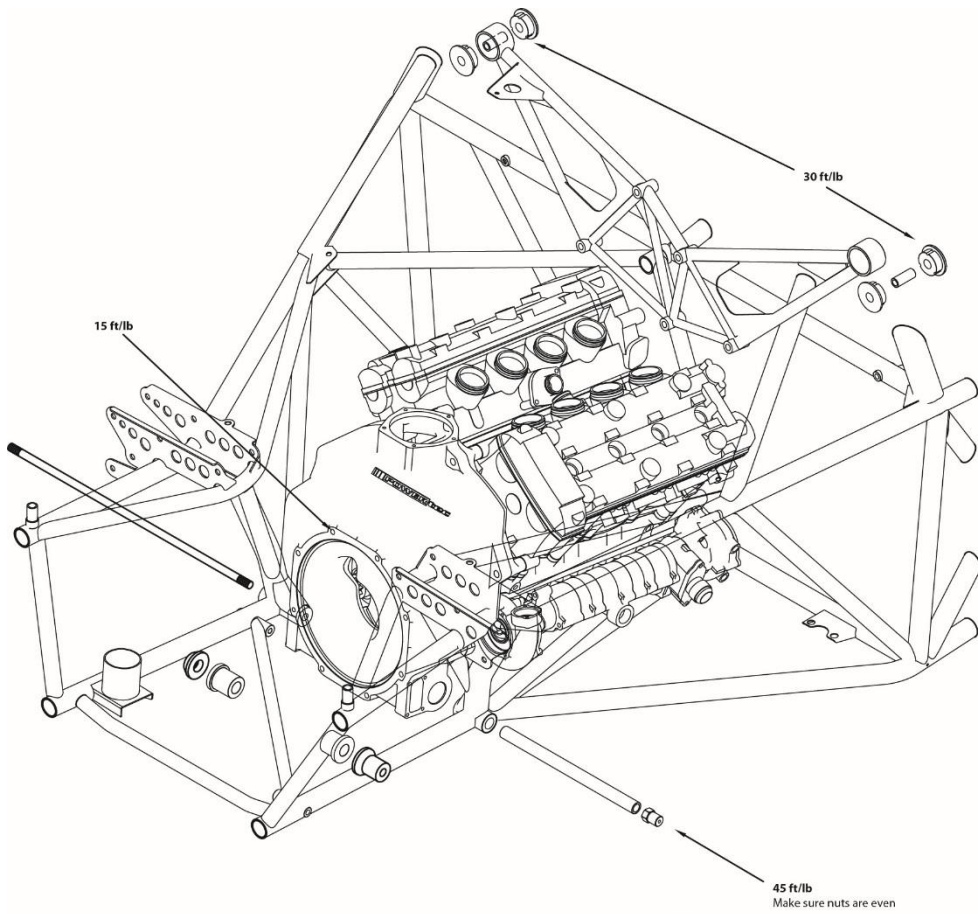
1. Raise the car up to suitable working height (trolley/ axle stands). Removing the floor and wheels
2. Remove engine cover
3. Drain engine oil and coolant
4. Remove wing (4 x M6 bolts)
5. Remove rear bodywork section including light loom (4x M6 bolts)
6. Remove rear section of exhaust including secondary's (2 xM8 bolts with spacers and washers)
7. Remove wing frame (2x 7/16 bolts, 2x 3/8 bolts)
8. Drain gearbox oil (19mm bung)
9. Remove 4 gearbox oil lines and plug and bung
10. Remove tail frame (5x 10mm cap head bolts)
11. Disconnect 2 paddleshift actuator pipes
12. Disconnect compressor and remove assembly on triangular frame (4x 3/8 bolts securing frame)
13. Undo driveshaft securing bolts (inside hub, M10 cap heads)
14. Remove top upright bolt, cut lock wire (2 x 7/16 bolt, may require heat gun as locktite used)
15. Pivot upright and remove driveshaft (leave inner driveshaft cup attached to gearbox, mark rotation direction of driveshafts)
16. Disconnect clutch pipes (pressure and bleed)
17. Disconnect gearbox breather (from top of gearbox)
18. Disconnect gear position sensor from back of gearbox
19. Undo front gearbox securing nuts (7x M8 nuts, 1x M8 cap head bolt)
20. Take out gearbox (lift at rear as removing)
21. Remove airbox upper and lower (4x M6 nuts, 10x M4 nuts)
22. Disconnect engine loom: airbox temp, cam sensor, water temp, injectors, oil temp, tps, coil packs, crank sensor, engine earth, starter motor battery and signal, alternator battery and signal.
23. Remove coil packs from cam covers (leave on bracket)
24. Disconnect throttle cable and blipper (place in sidepod to avoid extra work)
25. Remove plug securing plates and unplug HT leads
26. Disconnect fuel lines from throttle bodies
27. Loosen throttle body rubbers and remove throttle bodies
28. Disconnect cam cover breather, oil tank to bell housing breather pipe, bell housing to laminover pipe, oil tank to oil pump feed pipe, oil tank to oil pump pipe, oil pump to laminover pipe
29. Remove exhaust primaries
30. Remove oil pressure line (to sensor)
31. Disconnect water pump to laminover hose, remove engine coolant outlet to swirl pot hose, remove electric water pump to radiator hose (runs over engine)
32. Disconnect swirl pot outlet and maneuver swirl pot out the way
33. Remove cross engine brace (2x M8, 1x M10 cap head)
34. Support engine with engine crane (under whole engine)
35. Remove front cradle (5x M10)
36. Remove rear engine securing pin (2x 12mm nuts)
37. Knock out engine securing pin
38. Raise engine and remove

To prepare engine for shipment:

- Remove exhaust gaskets
- Remove starter motor
- Remove alternator
- Ensure all fluids are drained
- Bung all inlets and outlets
- Package with ECU and injectors

SR8 ENGINE FITMENT

1. Refit starter and alternator
2. Manoeuvre engine into engine bay
3. Refit rear engine securing pin
4. Refit front cradle and tighten all securing bolts
5. Refit engine cross brace
6. Refit primaries
7. Refit coolant and engine oil pipes to engine
8. Refit oil pressure sensor line
9. Refit throttle bodies
10. Reconnect fuel lines
11. Refit throttle cable blipper assembly
12. Refit coil packs and HT leads and securing plates
13. Refit engine loom
14. Refit airbox lower and upper
15. Refit gearbox (rotate to realign spline as required)
16. Refit gearbox sensor (set to 1.051 in N)
17. Reconnect gearbox breather
18. Reconnect clutch lines
19. Refit driveshafts and uprights (Loctite and Lockwire, re-attach outer cup to hub)
20. Refit compressor assembly and reconnect
21. Refit tail frame
22. Refit gearbox oil lines
23. Refit wing frame, exhaust and rear bodywork section including wing
24. Refill gearbox oil, engine oil and engine coolant
25. Bleed clutch
26. Dry crank until oil pressure is showing
27. Run engine, ensure water is swirling in pot and level is correct, allow engine oil to warm up and check the level the normal way.



CHECKING THE TRACKING

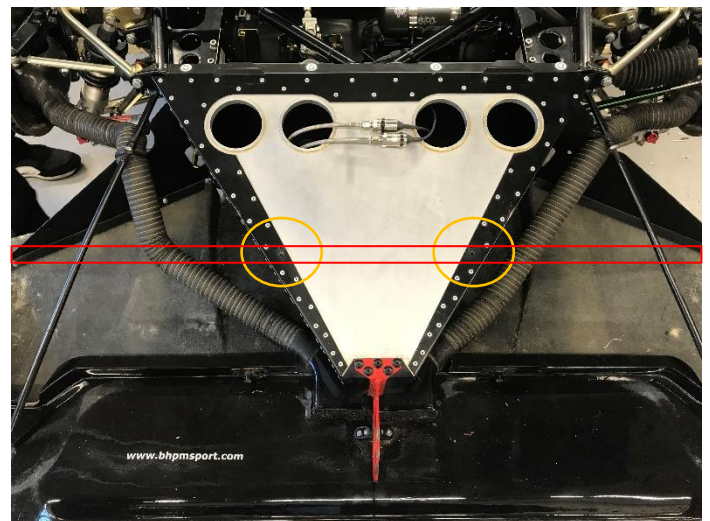
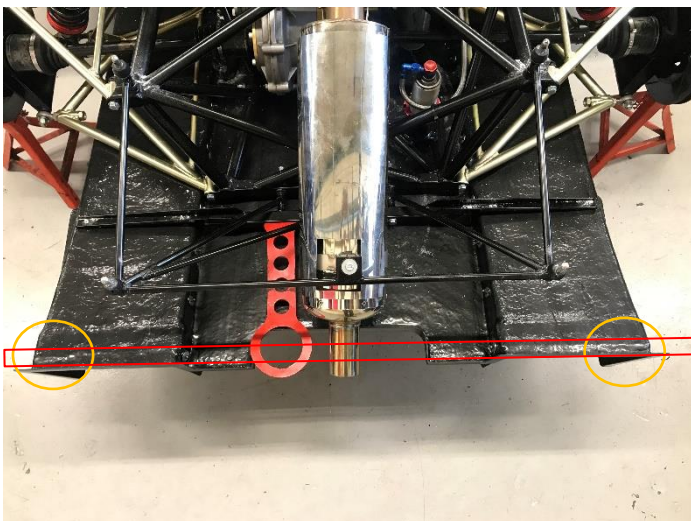
TOOLS LIST

Tracking Bars	10mmx2000mm (x2)
String/Fishing Line	
Steel Ruler	30cm
Tank Tape	
Cable Ties	
Cable Tie Bases	4mm
Drill	4mm
Rivets	4mm
Rivet Pliers	

FITTING THE TRACKING BARS

If the cable tie bases for the tracking bars are not fitted, follow these steps:

- Drill the two rivets in the crashbox as shown in the picture.
- Fit two rivet bases in the drilled holes in the crashbox.
- Drill two holes on the rear diffuser as shown.



SETTING UP THE TRACKING BARS

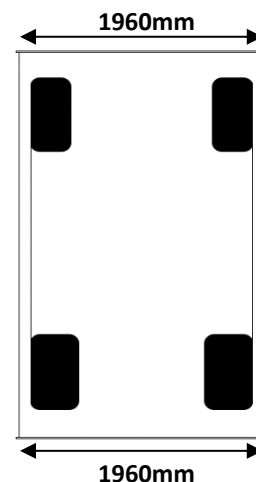
Cut the steel tube into two equal lengths, both 2000mm each.

Cut a slot for the string to sit in 20mm in from the edge of the steel tube, the gap between the string should be 1960mm, as shown in the diagram below:

Cable tie the bars onto the crashbox using the cable tie bases fitted, the rear should sit on the inside of the diffuser up against the rear, as shown.

Fit the string ensuring it sits in the slots on both ends. You will now need to 'Square' the bars up. To do this measure from the outside face of the stub axle to the string, these numbers should be equal on both sides of the bars. If they are not equal slide the bar until they are equal.

It isn't important that the measurement front to rear is the same, just that it is even side to side.



CHECKING THE TRACKING

Ensure that the steering wheel is straight always. This is best achieved by having someone sit in the car and hold the steering wheel straight.

Once you have 'squared' the string up, then it is just a case of measuring from the string, to the corner or the wheel rim. (as shown in picture to the right)

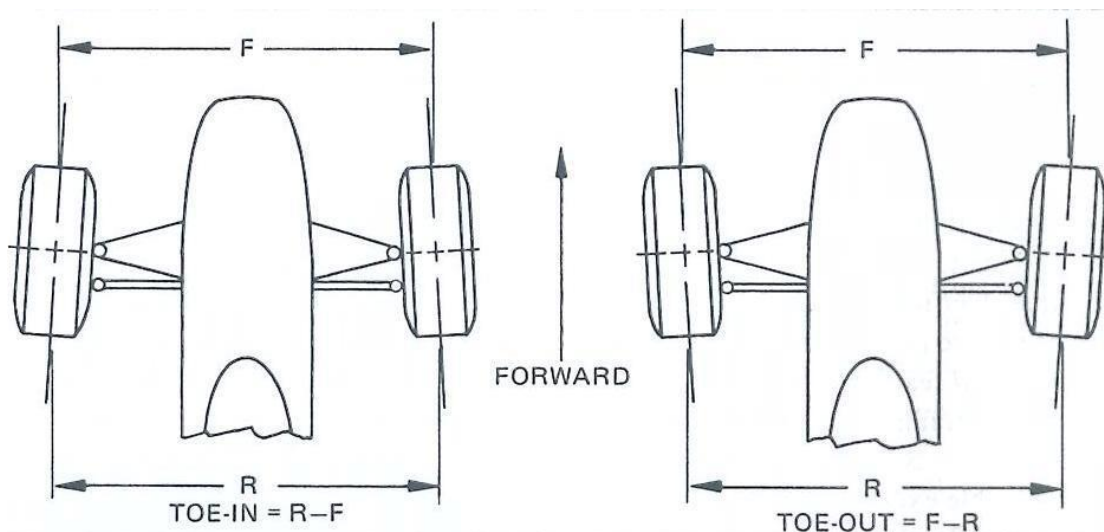
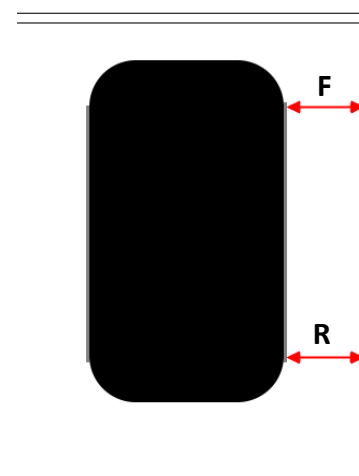
If the measurements are the same, then the toe in/out is zero. If the front edge of the rim is 60mm, and the back edge of the rim is 62mm, you have 2mm toe out.

The term toe in/out refers to the angle at which the wheel is pointing, in relation to the direction of the car. (see below)

To change the toe setting on the front of the car, adjust the steering track rod.

To change the toe setting on the rear, adjust the lower rear wishbone rod end.

Ensure the lock nuts are tight once you have finished.

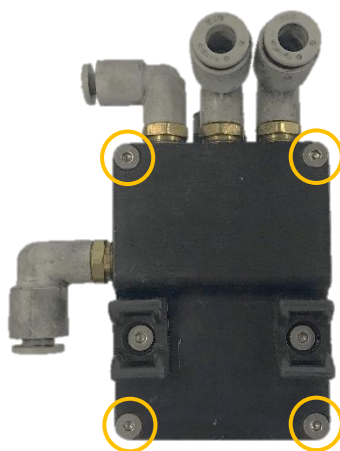


VALVE BLOCK

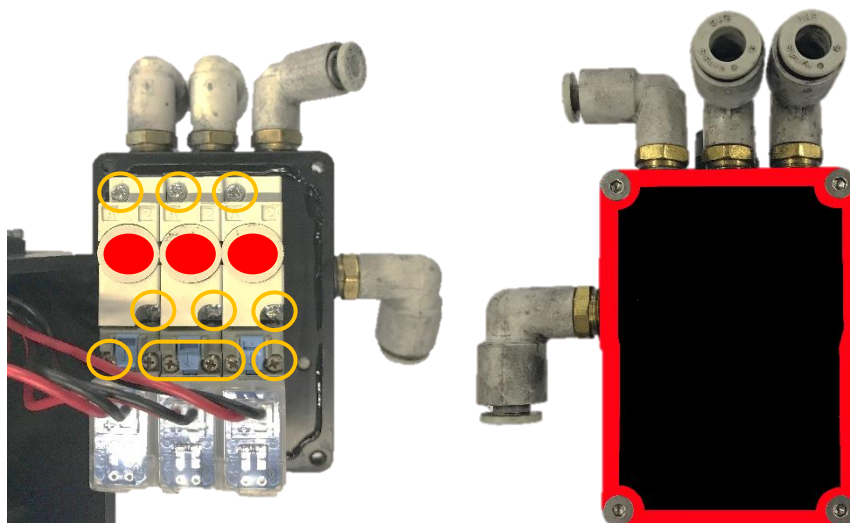


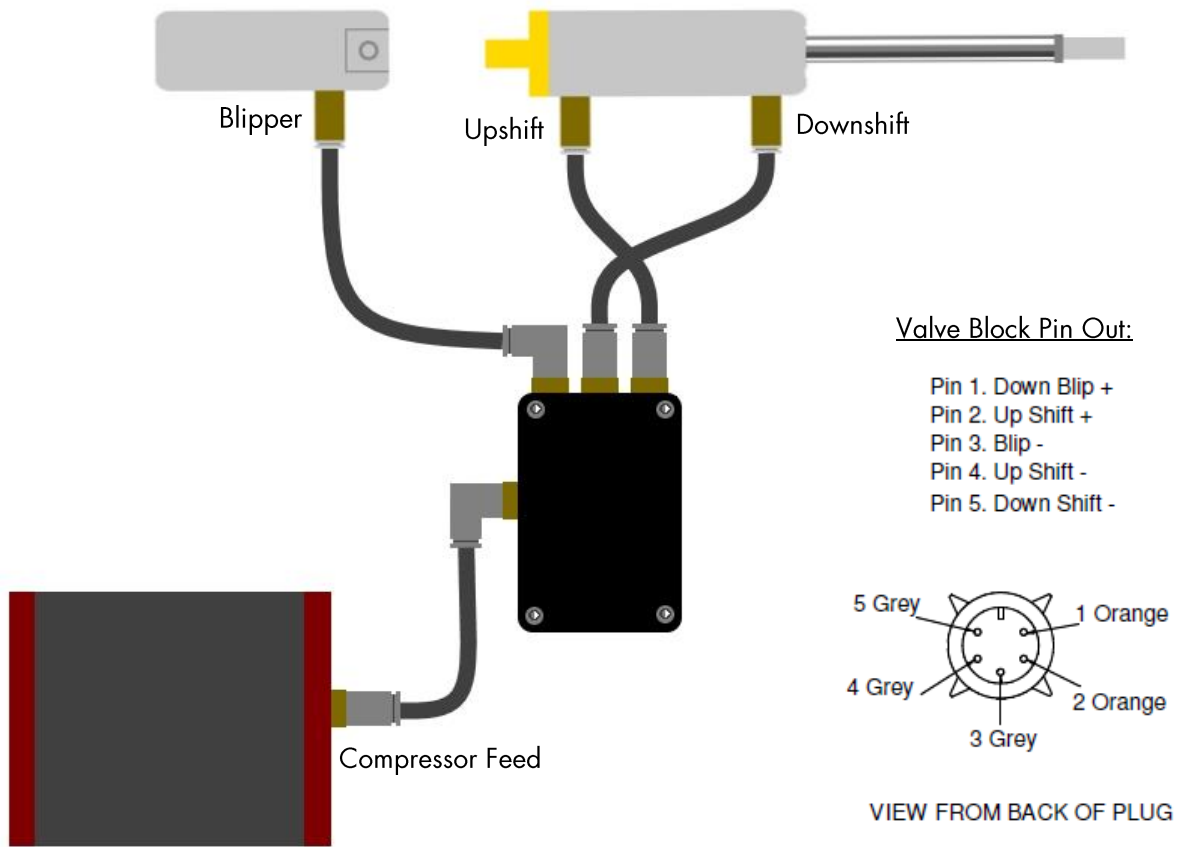
Over time the screws in the valve block can work loose. If they do it can cause a gradual pressure loss in the system over time and can potentially lead to paddleshift issues. Carrying out this bit of maintenance can increase the amount of time the system holds pressure for. If you notice the gearshift compressor cutting in, it is likely that the screws have worked slightly loose.

Remove the four screws shown in the picture. The cover is sealed with a small amount of silicon so this will need to be broken. It may require some force to remove the cover, a light tap with a soft hammer should remove the cap.



Once the cap has been removed. Remove the three rubber dampers, then tighten the 12 screws with a small Philips screwdriver. When re-assembling, apply a small amount of silicone to the rubber dampers and place them on the red circles, as shown in the picture. Then apply a small layer of silicone around the large cap to prevent any potential water damage, shown in the diagram on the right, then reattach the cover.





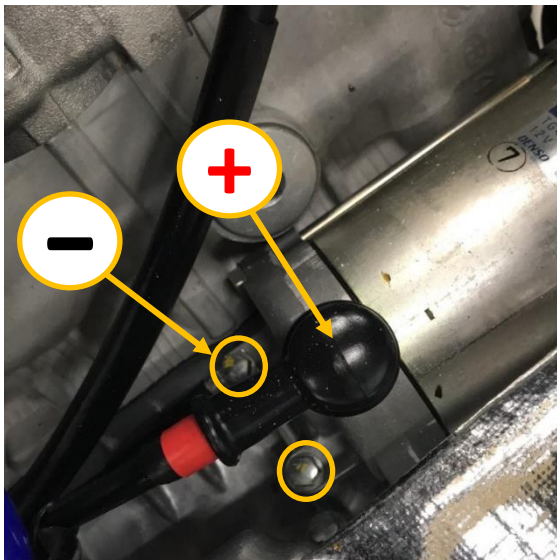
INSPECTING THE STARTER MOTOR

In the event of the spin, if the clutch is not depressed and the engine spins backwards, there is a chance that the starter and opposing gears can get damaged. If there are any doubts over whether the engine is damaged after a spin, it should not be started again prior to inspecting the starter motor.

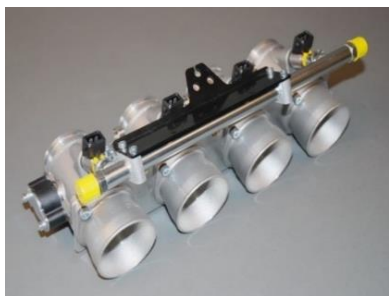
The first stage in inspecting the starter motor is to remove the positive terminal under the black cover, once it is removed cover it in tape. Then remove the two bolts going into the engine cases, noting which bolt holds the negative wire on.

The starter motor can then be pulled from the starter cover, the first check is to turn the shaft on the starter motor, this should turn normally. If it doesn't turn this will need to be replaced.

It is imperative to check the starter idler gear if the engine has turned backwards, the gear will only turn one way, so the teeth may be stripped in the event of a spin. If the gear is damaged you must consult a 'Radical Authorised Engine Builder'.

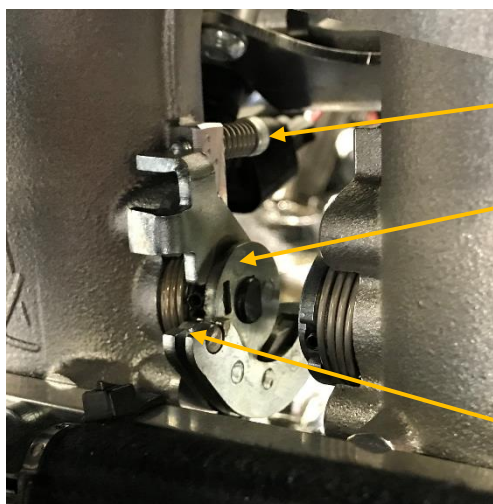


THROTTLE BODIES



There are three main components in the throttle bodies that need to be checked to maximize performance; the throttle position sensor, the idle adjuster and the throttle cable linkage.

To set up the throttle bodies, the idle screw must be completely wound off, ensure the bodies are fully closed and the throttle cable is at the correct tension. The 'throttle position sensor' must then be set to 2%. The idle screw can then be turned in until the 'throttle position sensor' reads 4%, this sets the closed position of the butterfly's.

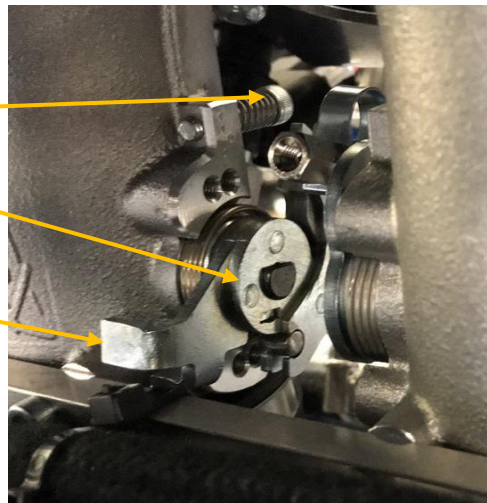


Idle Adjuster Screw

Cable Linkage

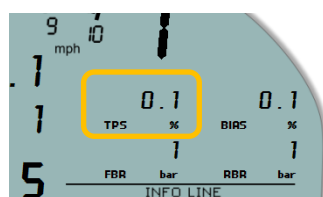
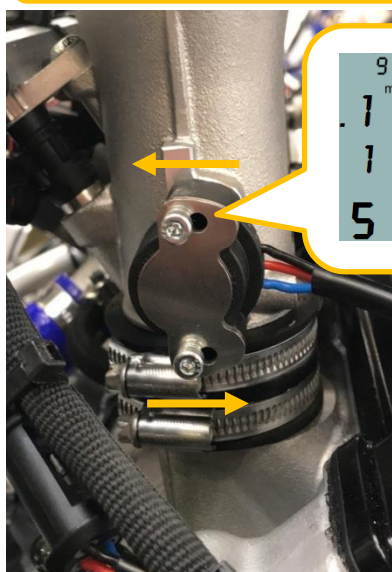
Full Throttle >

Closed Throttle <



To check full throttle, the throttle pedal must then be fully depressed, while at full throttle push down on the cable linkage to see if there is any more travel, check the TPS reading at the same time. It should read just over 100% and with no extra movement on the bodies. If there is more movement adjust the pedal on the stop or adjust the tension of the cable, whichever is appropriate. The RPM needs to idle at 1600.

Setting the Throttle Position Sensor



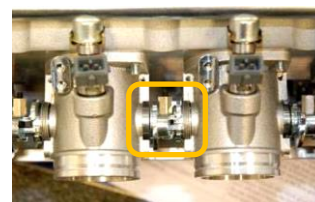
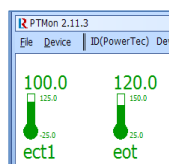
When setting the TPS, loosen the two M4 bolts then turn the sensor until the dash shows 4.0% as shown below. Then tighten up the bolts, they should not be overtightened.

Balancing the Throttle Bodies

When the engine is idling at around 1600rpm, the Syncrometer reading needs to be equal on each of the individual throttle bodies and the TPS should be 4.0%. The TPS value can be seen on a computer connected to the ECU or it is displayed on the dashboard. When adjusting the TPS ensure the engine is turned off.

This is achieved by adjusting the idle speed screw and throttle body adjusters.

During this procedure it is essential that you have a laptop connected, with PTmon displayed. Check the engine coolant temperature is a minimum of 50°C and maximum of 90°C while the engine is running.



BRAKE CALIPER SEAL SERVICING

1. Extend pistons for easy removal – unbolt calipers, take out brake pads and place a block in the caliper to prevent pistons from falling out. Then pump the pedal until all pistons are extended 10-15mm (or carefully use an airline in the fluid inlet if the calipers are off the vehicle).
2. Remove calipers from vehicle.
3. Remove pistons by hand – do not use pliers or any kind of tool that could damage the outside of the piston.
4. Remove old seals from the caliper body.
5. Clean and inspect the pistons. You are looking to remove all contaminants from the outside of the pistons and ensure that there is no scratches/damage. You can polish the pistons to get the surface perfect.
6. Thoroughly clean the calipers – use an airline to blow out any contaminants from piston bore and fluid ways,
7. Grease the new seals and pistons, recommended product for this is:

Rocol Sapphire Aqua-Sil

Alternately soak the seals in brake fluid for 24hrs prior to installation and lubricate the pistons with brake fluid.
8. Install the new seals in the caliper body – ensure that the seal is seated correctly to prevent damaging them when pushing the pistons in.
9. Push the pistons in by hand, the seal should offer minimal resistance when the piston goes in square. If resistance is high, the seal is not seated correctly.
10. Install calipers and bleed brakes. Make sure the outside of the calipers are dry then leave overnight. Check brake calipers after they have been left overnight for any leaks.

REPACKING DRIVESHAFT GREASE

The driveshafts should be stripped, cleaned and re-greased over the course of the driveshafts life. To do this, remove the driveshafts from the car, then remove the CV boot clips and slide them back away from the housing. Remove both housings and clean all the old grease in a wash tank. When re-assembling the driveshafts a set amount of grease should be applied to each end of the driveshaft, the amount and service intervals are listed below. New clips should be fitted to the CV boots to prevent them from coming off.

SR1 (Per Joint): 70g every 10 hours

SR3 (Per Joint): 70g every 10 hours

SR8 (Per Joint): 105g every 6 hours

RXC (Per Joint): 105g every 6 hours

APPENDICIES

The following pages contain documents that can be printed out and filled in:

- SR1 Workshop preparation sheet (print pages 20 and 21 double-sided)
- SR3 Workshop preparation sheet (print pages 22 and 23 double-sided)
- SR8 Workshop preparation sheet (print pages 24 and 25 double-sided)
- RXC GT3 Workshop preparation sheet (print pages 26 and 27 double-sided)
- Radical Run Lap Sheet (print page 28)



Technician:

Customer:

Chassis:

Engine Hours:

Mileage:

Pre/Post Event:

Date:



SR1 WORKSHOP PREPARATION SHEET

SR1					
Description	Faults/Advisory	Parts Fitted	Initials	Hours	+ Hours
1. Check for any loose bodywork or damage				0.25	
2. Shake Test remove wheels inspect for damage				0.5	
3. Check Life Data				0.25	
4. Check, adjust tension and lube chain. Replace chain every 40 hours, grease differential unit				0.25	
5. Check and grease CV joints				0.25	
6. Re-pack silencer if required				0.5	
7. Check condition of braking system				0.25	
8. Bleed Brakes and Clutch				0.25	
9. Clean corners, checking for cracks and worn out bushes				1	

Description	Faults/Advisory	Parts Fitted	Initials	Hours	+ Hours
10. Check and clean engine bay				0.25	
11. Check wiring				0.25	
12. Check poddleshift, bearings etc. Valve block/pipe.				0.25	
13 Change oil and filter				0.25	
13. Run engine up				0.5	
14. Spanner check all components on the car				0.5	
15. Check fire extinguisher is full and in date, check seat belts aren't torn or showing wear marks and are in date.				0.25	
16. Set down on the car, set up the car.				2	
17. Clean interior and exterior				0.25	

Comments:

Blank area for handwritten comments, consisting of several horizontal lines.

If prepping the car after a wet event make sure everything is sprayed with silicone spray or WD40. Make sure everything that came in with the car goes back, radios, spare seat, ratios etc.



Technician:

Chassis:

Mileage:

Date:

Customer:

Engine Hours:

Pre/Post Event:



SR3 WORKSHOP PREPARATION SHEET

SR3					
Description	Faults/Advisory	Parts Fitted	Initials	Hours	+ Hours
Check for any loose bodywork or damage				0.5	
Pre Test remove wheels inspect for damage				0.75	
Check Life Data				0.5	
Inspect Drive Unit and change ratios if necessary				1	
Check and grease CV joints				1	
Check condition of braking system				0.5	
Brakes and Clutch				0.5	
Check corners, checking for cracks and washes				1	

Description	Faults/Advisory	Parts Fitted	Initials	Hours	+ Hours
Wash and clean engine bay				0.5	
Check wiring				0.75	
Check paddleshift, bearings etc. Valve /pipe.				0.5	
Change oil and filter				1	
Start engine up				1	
Thoroughly check all components on the car				0.5	
Check fire extinguisher is full and in date, check seat belts aren't torn or showing wear and are in date.				0.5	
Wash down on the car, set up the car.				2	
Check interior and exterior				0.5	
Comments:					
If prepping the car after a wet event make sure everything is sprayed with silicone spray or WD40. Make sure everything that came in with the car goes back, radios, spare seat, ratios etc.					



Technician:

Chassis:

Mileage:

Date:

Customer:

Engine Hours:

Pre/Post Event:



SR8 WORKSHOP PREPARATION SHEET

SR8					
Description	Faults/Advisory	Parts Fitted	Initials	Hours	+ Hours
1. Check for any loose bodywork or damage				0.5	
2. Shake Test remove wheels inspect for damage				0.75	
3. Check Life Data				0.5	
4. Inspect gearbox and change ratios if necessary				2.5	
5. Check and grease CV joints				1	
6. Check condition of braking system				0.5	
7. Bleed Brakes and Clutch				0.5	
8. Clean corners, checking for cracks and worn out bushes				1	



Technician:

Customer:

Chassis:

Engine Hours:

Mileage:

Pre/Post Event:

Date:



RXC WORKSHOP PERPARATION SHEET

RXC (V6/V8 Models)					
Description	Faults/Advisory	Parts Fitted	Initials	Hours	+ Hours
1. Check for any loose bodywork or damage				0.5	
2. Shake Test remove wheels inspect for damage				0.75	
3. Check Life Data				0.5	
4. Inspect gearbox and change ratios if necessary				2.5	
5. Check and grease CV joints				1	
6. Check wheel functions (Switches, Wipers etc.)				0.25	
7. Check condition of braking system				0.5	
8. Bleed Brakes and Clutch				0.5	
9. Clean corners, checking for cracks and worn out bushes				1	

Description	Faults/Advisory	Parts Fitted	Initials	Hours	+ Hours
10. Check and clean engine bay				0.5	
11. Check wiring				0.5	
12. Check paddleshift, bearings etc. Valve block/pipe.				0.25	
13 Change oil and filter				1	
13. Run engine up				0.5	
14. Spanner check all components on the car				0.5	
15. Check fire extinguisher is full and in date, check seat belts aren't torn or showing wear marks and are in date.				0.25	
16. Set down on the car, Set up the car.				2	
17. Clean interior and exterior				0.5	

Comments:

If prepping the car after a wet event make sure everything is sprayed with silicone spray or WD40. Make sure everything that came in with the car goes back, radios, spare seat, ratios etc.

Lap Run Sheet

RADICAL

Date & Time:	/ / :	Car:	Technician:			
Conditions:		Driver:	Circuit:			
Track Temp:		Ambient Temp:	Track Length:			
#	Tyre Set	Laptime	Comments/Notes	Fuel in/out	Sheet Number Per Event	Key
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
Tyre mileages at the start of the sheet		Tyre mileages at the end of the sheet		Total fuel:		
Set #	Mileage	Set #	Mileage	Total distance:		
				Fuel per km:		
				Fuel per lap:		
				Fastest Lap:		
Work Required:						



SR3

Note: When carrying out set-up on flat-patch, set tyre pressures to hot pressure. Ensure that they are returned to cold pressures after setup is complete.

Date		Chassis #		Driver	
Post Event		Pre Event		Technician	

Camber		
	↑	

Toes		
	↑	

Triple Intrax		Springs/Preload		Triple Intrax	
Bump LS:		Rate	FARB	Rate	Bump LS:
Bump HS:			Soft 15.8mm		Bump HS:
Rebound:			Medium 19mm		Rebound:
		Length	Hard 22.2mm	Length	
			X Hard 22.2mm		
		Preload	↑	Preload	

Corner weights/Drop/Ride Height		
	Front diffuser H	
	Ballast Weight	
Weight	Cross%	Weight
	Total weight kg	

Triple Intrax		Springs/Preload		Triple Intrax	
Bump LS:		Rate	RARB	Rate	Bump LS:
Bump HS:			Soft 12.7mm		Bump HS:
Rebound:			Medium 15.8mm		Rebound:
		Length	Hard 19 mm	Length	
			X Hard 22.2mm		
		Preload		Preload	

Rake			
	mm		
	↑		
Weight	LHD	RHD	Weight

Fuel Level

Dive planes:	Y / N
--------------	-------

Tyre Pressure (PSI) (Cold & Hot)		
	Hankook	
	↑	

PADS

PADS

Rear Wing	
Holes (from the bottom)	
Main	out of 4
Bi-wing	out of 9

Comments:



SR8

Note: When carrying out set-up on flat-patch, set tyre pressures to hot pressure. Ensure that they are returned to cold pressures after setup is complete.

Date		Chassis #		Driver	
Post Event		Pre Event		Technician	

Camber		
	↑	

Toes		
	↑	

Triple Intrax		Springs/Preload		Triple Intrax	
Bump LS:		Rate	FARB	Rate	Bump LS:
Bump HS:			Soft 15.8mm		Bump HS:
Rebound:			Medium 19mm		Rebound:
		Length	Hard 22.2mm	Length	
			X Hard 22.2mm		
		Preload	↑	Preload	

Corner weights/Drop/Ride Height		
	Front diffuser H	
	Ballast Weight	
Weight	Cross%	Weight
	Total weight kg	

Triple Intrax		Springs/Preload		Triple Intrax	
Bump LS:		Rate	RARB	Rate	Bump LS:
Bump HS:			Soft 12.7mm		Bump HS:
Rebound:			Medium 15.8mm		Rebound:
		Length	Hard 19 mm	Length	
			X Hard 22.2mm		
		Preload		Preload	

Rake			
mm			
↑			
Weight	LHD	RHD	Weight

Fuel Level

Upper Dive planes:	Y / N
Lower Dive planes:	Y / N

Tyre Pressure (PSI) (Cold & Hot)		
	Hankook	
	↑	

PADS
PADS

Rear Wing	
Holes (from the bottom)	
Main	out of 4
Bi-wing	out of 9

Comments:



GT3 - Factory setup sheet - Hankook

Note: When carrying out set-up on flat-patch, set tyre pressures to hot pressure. Ensure that they are returned to cold pressures after setup is complete.

Date		Chassis #		Job #	
		Technician 1		Technician 2	

Camber		
	↑	
	↑	

Toes		
	↑	
	↑	

FARB

Triple Intrax		Springs/Preload		Triple Intrax	
Bump LS:		Rate	FARB	Rate	Bump LS:
Bump HS:			22.2mm		Bump HS:
Rebound:			25.4mm		Rebound:
		Length	28.6mm	Length	
		Preload	↑	Preload	

RARB

Corner weights/Drop/Ride Height		
	Front diffuser H	
	Ballast Weight	
Weight	Cross%	Weight
	Total weight kg	

Triple Intrax		Springs/Preload		Triple Intrax	
Bump LS:		Rate	RARB	Rate	Bump LS:
Bump HS:			15.9mm		Bump HS:
Rebound:			19.1mm		Rebound:
		Length	22.2mm	Length	
		Preload	25.0mm	Preload	
				0mm	

Wheel Size
Front
Rear

Rake mm			
	↑		
Weight	LHD	RHD	Weight

BOP Ballast
Fuel Level

Dive planes:	Y / N
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Tyre Pressure (PSI) (Cold & Hot)	
	Hankook

PADS
PADS

Rear Wing	
Holes (from the bottom)	
Main	out of
Bi-wing	out of

Comments:

VERSION HISTORY

2018-04-16 v1.0 initial public release

2018-11-12 v1.1 Tracking added.

2019-02-04 v1.2 Driveshaft repacking added.

Congratulations! You've made it to the end of the Mechanics Guide, by now you've probably read your car specific manual as well as taken a look at the Handling Guide and Data Analysis Manual. These guides were put together to help you run your Radical car to its best potential, we hope you found the guides useful but if you feel there is anything that could be added to improve them - please let us know. Feedback is appreciated.

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