F1MISTRAL

Wolf GB08 Mistral Circuit

Technical information v03_2022-05-02

Wolf POWER

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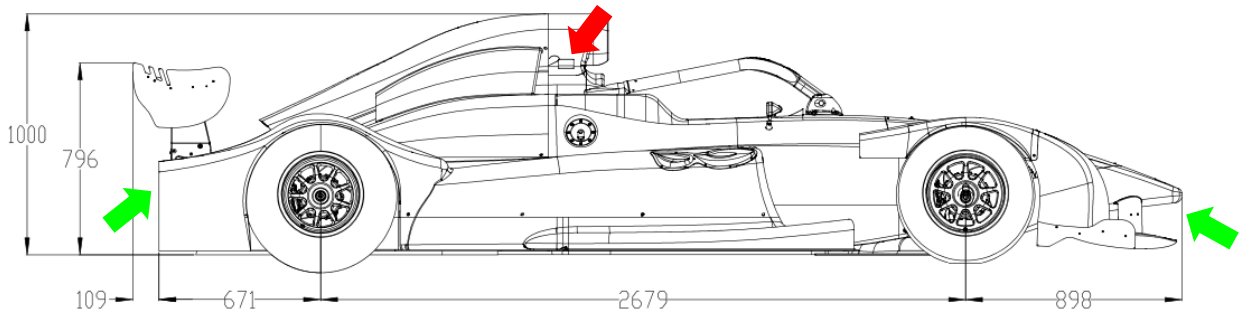
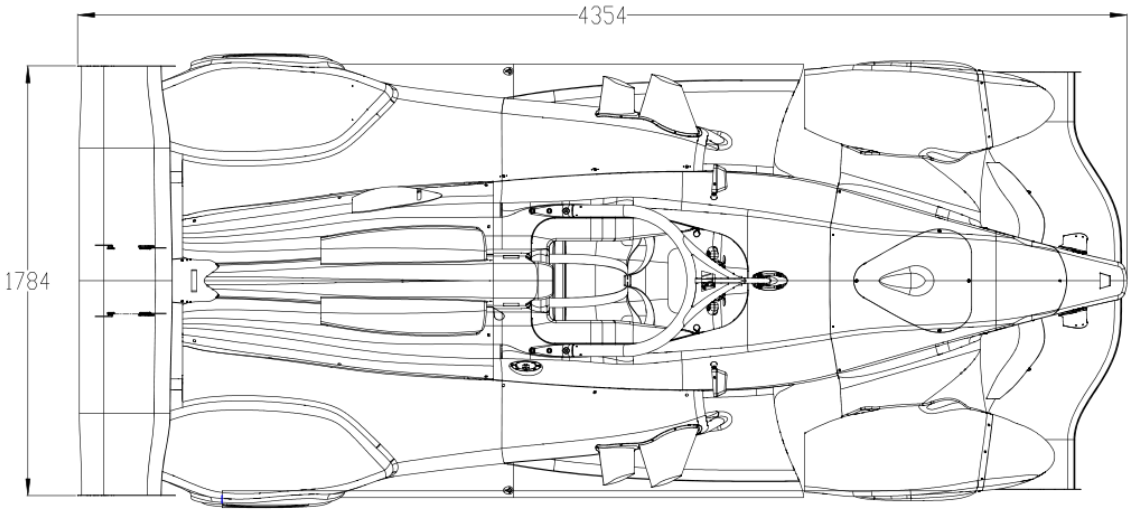
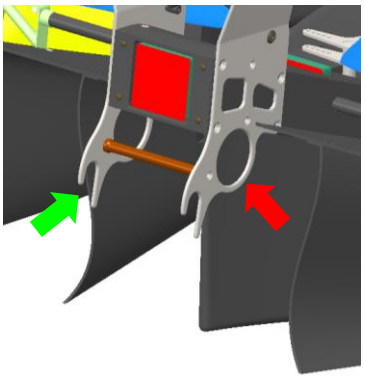
Table of contents (changes section in red)

General dimensions

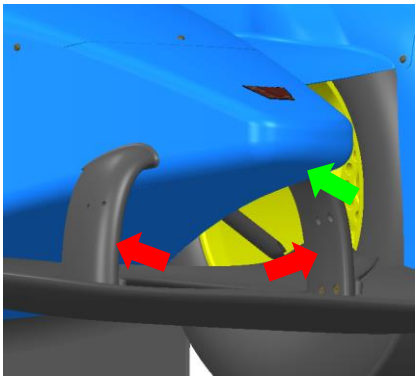






Dry weight *	**520 kg**
Wheelbase	**2679 mm**

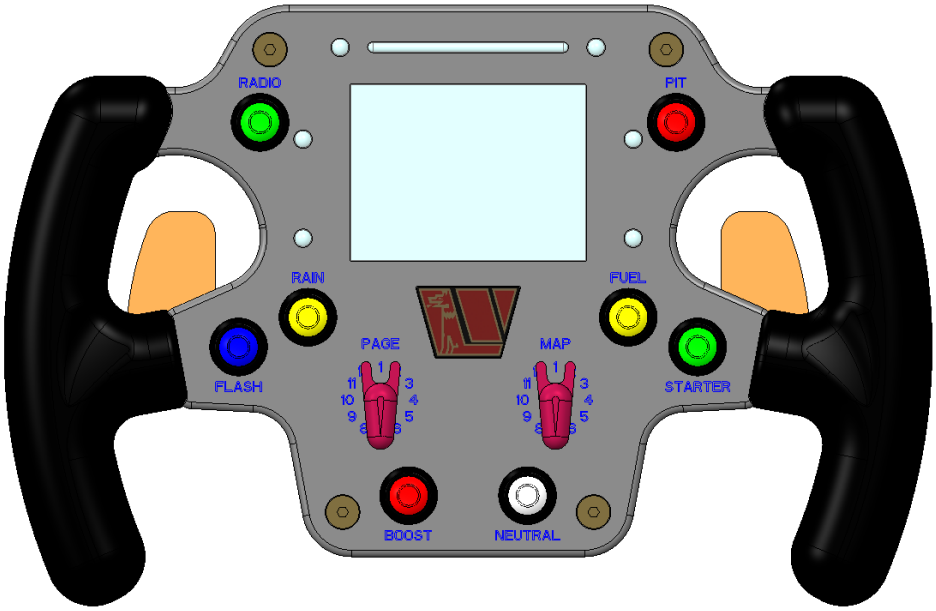
* configuration dependent



Tow point

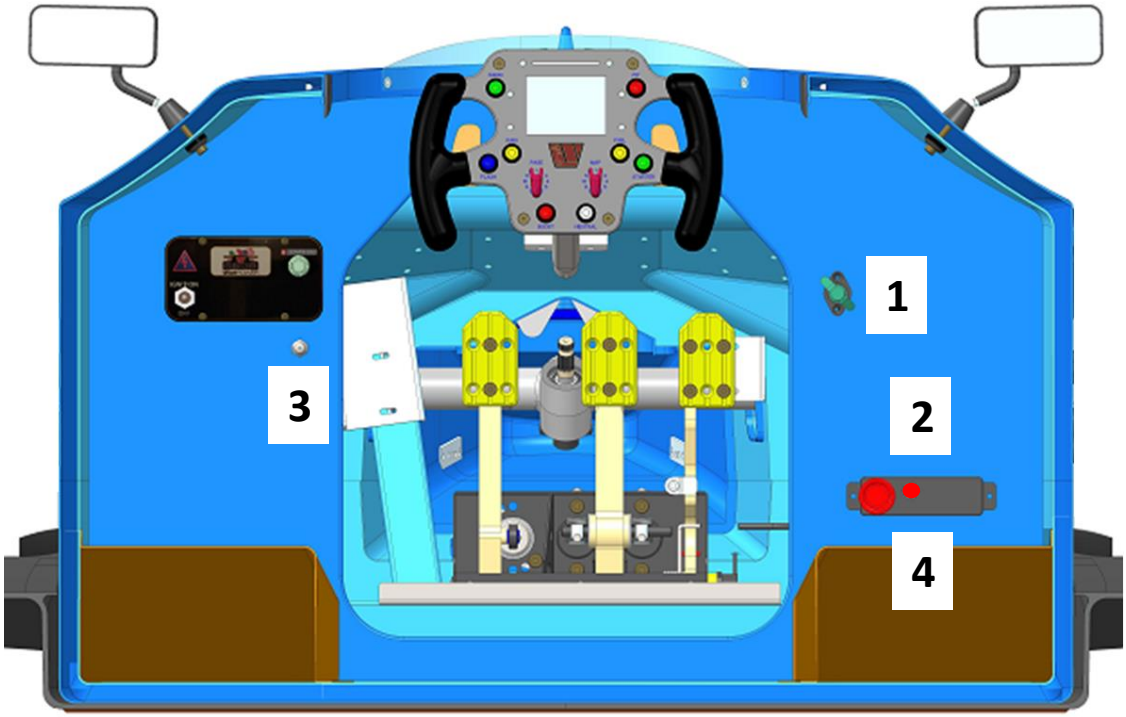
Lifting point with manual or pneumatic jack

Steering wheel



RADIO	press and hold to talk in radio
PIT	press to switch on/off pitlane limiter
RAIN	press for 3 sec. to switch on/off rain light
FUEL	press to reset fuel consuption, will be reset also data for lap time predict (necessary when change track lenght)
FLASH	press for light flashing (3 times)
STARTER	press for engine start
BOOST	press for temporary boost in overtaking (to be configurate)
NEUTRAL	press for first gear and for neutral
PAGE 1-6	race setting view (engine parameter, lap time) with different brightness level (from 6x to 1x)
PAGE 7-8	qualify setting view (speed, lap time, predict lap time) with different brightness level (from 6x to 1x)
PAGE 9	check output current load
PAGE 10	check output current load
PAGE 11	check brake bias value
PAGE 12	check engine/chassis parameters
MAP 1-12	change engine parameter (to be configurate)

Cockpit



1	brake bias, clockwise more front braking
2	push for extinguisher action
3	extinguisher nozzle
4	extinguisher control unit

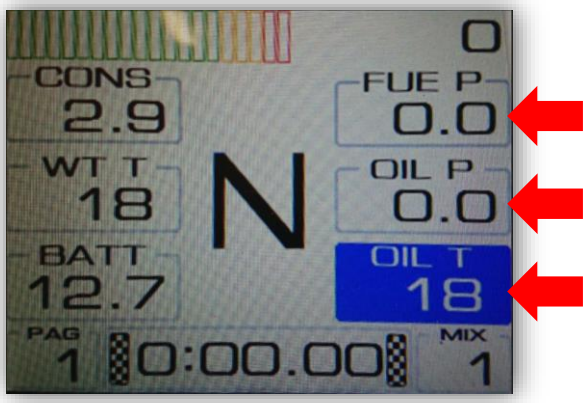
IGNITION	main switch: off, on, ignition
DOWNLOAD	plug for data download and ECU mapping

Recommended engine values

Peugeot 1.1-1.6 Turbo		
	Range	Alarm
Rpm	4500-6600	> 7000
Water temp. (°C)	85-95	> 105
Oil temp. (°C)	95-115	> 125
Oil press. (bar)	3,5-6	< 2,5
Battery (V)	12,5-14	< 11,5

Engine fire-up

1. Move the IGNITION switch from OFF to CENTRAL position
2. Push the STARTER button on the steering wheel until OIL PRESSURE became more than zero
3. Move the IGNITION switch from CENTRAL position to UP position
4. Check if the FUEL PRESSURE is about 5 bar (70 psi)
5. Push the STARTER button without throttle, the engine will start
6. Oil PRESSURE and TEMPERATURE will be highlighted in BLUE until the engine warm-up is not completed



Cooling temperature management with turbo engine

- In the case of water temperature rise over the limit ECU will cut the engine rev as protection
- If you stop the car in this condition the temperature will continue to rise over the limit
- So you need to continue running for 2-3km with long gear; during this lap water temperature need to go down
- If temperature continue rising stop the car immediately and check for cooling leakage in the system

First shakedown

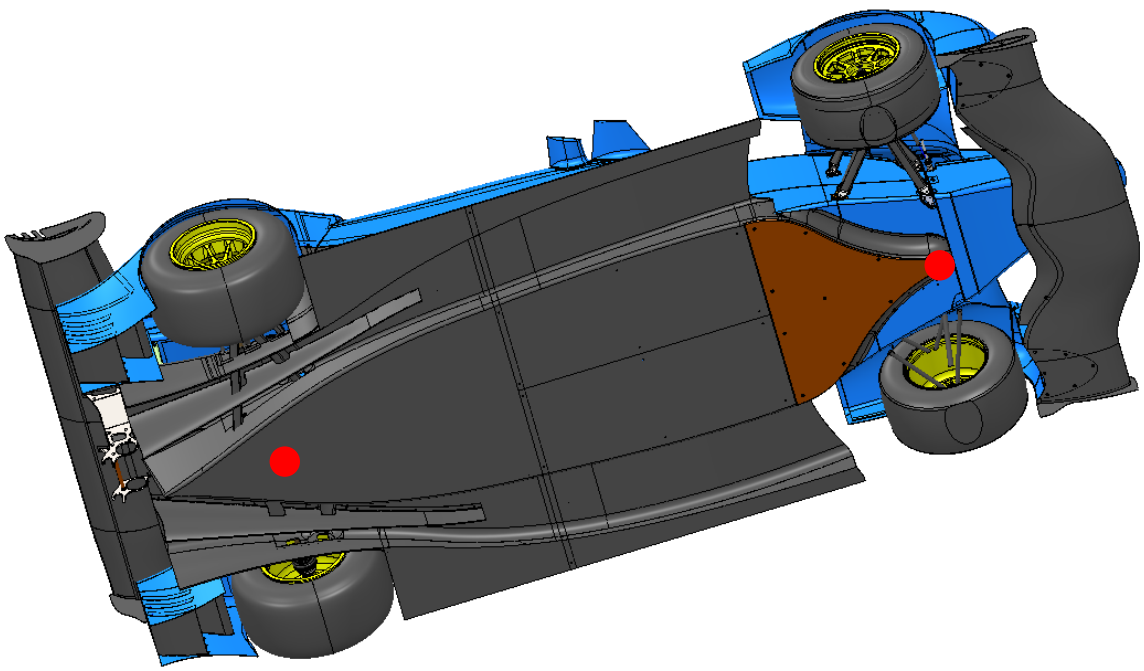
These steps need to be done after car delivering:

1. Generally look at car to exclude any damage during transport
2. Warm up the car and check water and oil levels
3. Run one installation lap at 50% of car's performance
4. Remove complete bodywork and check for any fluid leaks in car systems (cooling, engine oil, gearbox, brake)
5. Check if suspension bolts are correctly tighten
6. If everything goes well do run for 5 laps at 80% of car's performance
7. Check again for any fluid leaks
8. Run at 100% of car's performance with your scheduled test following the instructions in this handbook

Chassis setup

	Front	Rear
H	30 mm	68 mm
Toe	15’ OUT	0
Caster	std +5 mm	std
Spring	700 (2T Preload)	1000 (0 Preload)
Dumper	B: -5	B: -5
	R: -1	R: -10
Stop rebound	Yes	
Camber	3°	2°
Anti roll-bar	136 ( ) ( ) ( ) ( ) +5 click	
Pads	SS	SS

Reference points for height measure



Setup setting

SLICK TIRES	
Rear wing FAST TRACK	P8
Rear wing MID SPEED TRACK	P12
Front tire pressure (cold)	0,90 bar
Rear tire pressure (cold)	0,95 bar
Front tire pressure (hot)	1,40 bar
Rear tire pressure (hot)	1,40 bar

RAIN TIRES	
Rear wing (if very wet track)	add 1-2 holes to slick setup
Camber (if very wet track)	add 4 mm (+1°) shim each wheel
Front tire pressure (cold)	1,30 bar
Rear tire pressure (cold)	1,30 bar
Front tire pressure (hot)	1,60 bar
Rear tire pressure (hot)	1,60 bar

ADJUSTMENT		
Front height (mm)	1 pushrod turn	4,9 mm
Rear height (mm)	1 pushrod turn	6,2 mm
Camber	shim 1 mm thickness	0,25°

Tires and rims

HANKOOK slick		
	Front	**Rear**
Tire	23/56-13	28/58-13
Rim	10"x13"	12,5"x13"
Overall diameter (mm)	555	575
Overall circumference (mm)	1743	1806
Overall width (mm)	265	318
Tread width (mm)	230	283

Brakes

- The only compounds of the pads available is the one supplied by Wolf Racing Cars
- To complete a correct bedding of discs and pads, proceed as follows:

1. Perform, with normal braking power, 2-3 laps or in any case until the pedal stroke becomes long and the system loses braking power
2. Come back to the pit and rest the system until its completely cooled
3. At this point the bedding is finished and the braking system is full ready

Antiroll bars

FRONT ARB				
Spring configuration	Max deflection (mm)	Spring stack height (mm)	Stiffness without preload (kg/mm)	Max preload (click)
(((( ))))	1,12	17,50	2504	8
((( )))	1,12	13,50	1796	8
((( ))) (((	1,69	20,25	1197	12
(( )) ((	1,69	14,25	761	12
(( )) (( ))	2,25	19,00	571	17
(( )) (( )) ((	2,81	23,75	457	22
( ) (	1,69	8,25	362	14
( ) ( )	2,25	11,00	272	17
( ) ( ) (	2,81	13,75	218	22
( ) ( ) ( )	3,37	16,50	181	26
( ) ( ) ( ) (	3,93	19,25	155	28
( ) ( ) ( ) ( )	4,5	22,00	136	34
( ) ( ) ( ) ( ) ( )	5,62	27,50	109	44

Damper adjustment

- Same front and rear dampers
- Click 0: completely closed (clockwise) max bump/rebound
- Click -20: completely open (anti-clockwise) min bump/rebound

REBOUND

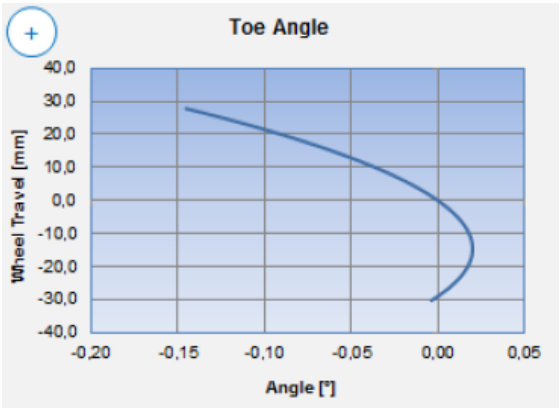
BUMP

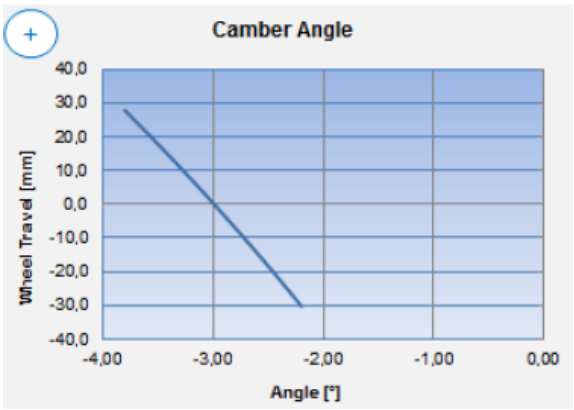
Front suspension geometry

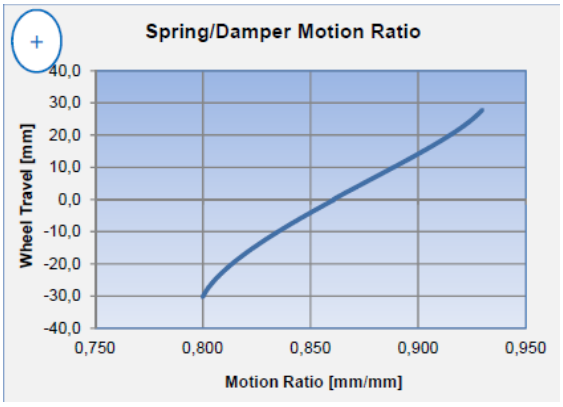
CALCULATION RESULTS - STATIC SUSPENSION SYSTEM DESIGN PARAMETERS						
Bump Steer [°/m]	Camber Gain [°/m]	Roll Center Height [mm]	Roll Center Height Movement / Wheel Travel Ratio [-]	Spring/Damper Travel / Wheel Travel Ratio [-]	Wheel Center Anti-Angle [°]	Contact Patch Anti-Angle [°]
-2,71	-27,64	35,62	1,76	0,86	1,55	-0,71

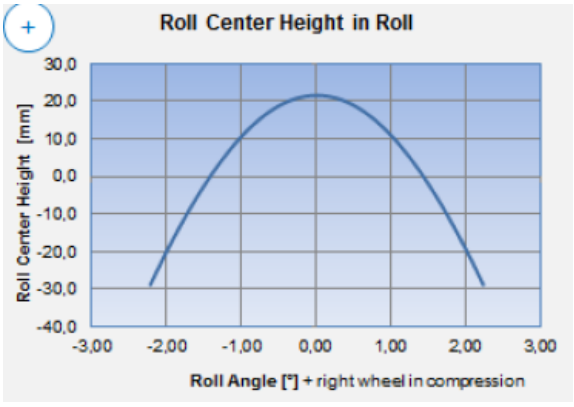
CALCULATION RESULTS - STATIC STEERING SYSTEM DESIGN PARAMETERS							
Toe [°]	Camber [°]	Caster [°]	Caster Trail [mm]	KPI [°]	Scrub Radius [mm]	KPI Off. [mm]	Caster Off. [mm]
0,00	-3,00	9,10	23,75	17,56	22,45	91,72	-18,24

CALCULATION RESULTS - STATIC PUSH-/PULL-ROD, ROCKER & ROLLBAR LINKAGE DESIGN PARAMETERS						
U-Bar Motion Ratio [-]	T-Bar Motion Ratio [-]	Push-/Pull-Rod Motion Ratio [-]	3rd Spring/Damper Motion Ratio [-]	Rocker Angular Motion Ratio [°/mm]	U-Bar Beam Ang. Motion Ratio [°/mm]	T-Bar Beam Ang. Motion Ratio [°/mm]
N/A	N/A	0,774	N/A	0,807	N/A	N/A





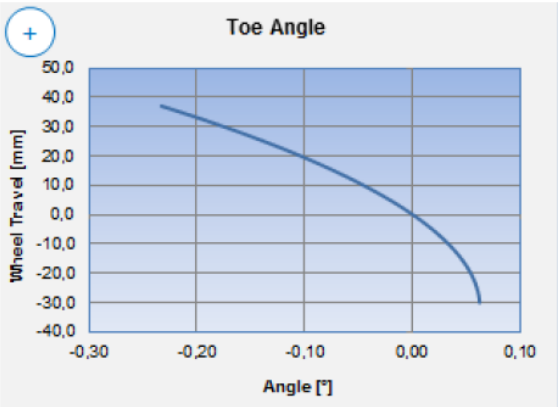


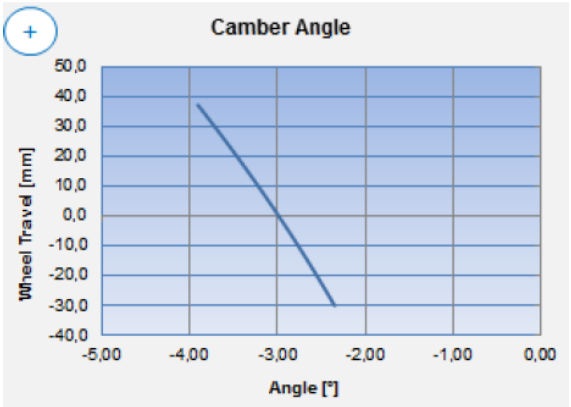


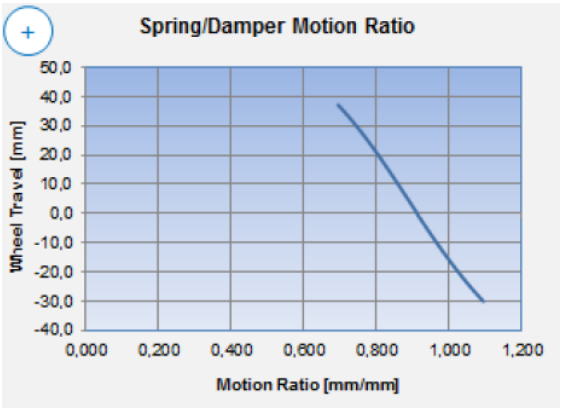
Rear suspension geometry

CALCULATION RESULTS - STATIC SUSPENSION SYSTEM DESIGN PARAMETERS						
Bump Steer [°/m]	Camber Gain [°/m]	Roll Center Height [mm]	Roll Center Height Movement / Wheel Travel Ratio [-]	Spring/Damper Travel / Wheel Travel Ratio [-]	Wheel Center Anti-Angle [°]	Contact Patch Anti-Angle [°]
-3,92	-22,73	21,32	1,02	0,91	2,43	4,56

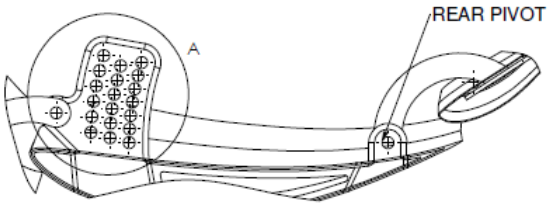
CALCULATION RESULTS - STATIC STEERING SYSTEM DESIGN PARAMETERS							
Toe [°]	Camber [°]	Caster [°]	Caster Trail [mm]	KPI [°]	Scrub Radius [mm]	KPI Off. [mm]	Caster Off. [mm]
0,00	-3,00	-23,23	-87,99	13,02	32,87	89,14	47,08





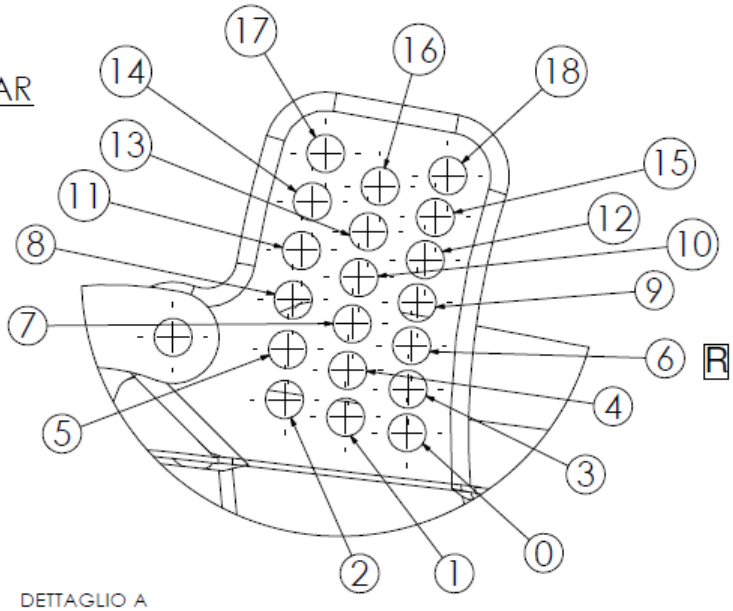


Rear wing adjustment



FRONT

REAR



DETTAGLIO A
SCALA 1.5 : 1

OPERATION AT RACE TRACK :

1) **DO NOT** USE CLINOMETER TO SET ATTACK ANGLE

2) **POS. #6 R** REFERENCE ATTACK ANGLE

3) DOWNFORCE AND DRAG DELTA % WITH REFERENCE TO #18 (MAX DOWNFORCE) AS SHOWN ON THE TABLE

4) OPTIMAL RANGE OF OPERATION POS# 2 -POS#14

REAR WING AERO DATA				
Rear wing #holes	**-CL**	**Drag**	**Efficiency [-L/D]**	**CoP %Front Move**
18	-1	1	1	0
17	-0,98	0,97	1,01030928	0,8
16	-0,97	0,94	1,03191489	1,2
15	-0,92	0,86	1,06976744	2,4
14	-0,88	0,84	1,04761905	3,3
13	-0,85	0,75	1,13333333	3,9
12	-0,79	0,69	1,14492754	5,2
11	-0,77	0,58	1,32758621	5,9
10	-0,74	0,57	1,29824561	6,5
9	-0,69	0,56	1,23214286	6,9
8	-0,65	0,55	1,18181818	9,2
7	-0,62	0,51	1,21568627	9,8
6	-0,59	0,47	1,25531915	10,2
5	-0,48	0,42	1,14285714	10,4
4	-0,44	0,39	1,12820513	10,9
3	-0,40	0,35	1,14285714	11,5
2	-0,37	0,31	1,19354839	12,3
1	-0,35	0,30	1,16666667	14,1
0	-0,31	0,29	1,06896552	15,3

Checking and replacing components

Checking after every race/daily test
- General chassis bolts
- Air filter cleaning
- Intercooler air cleaning
- Water radiator air cleaning
- Brake bleeding
- Power steering screws
- Clean and lubricate with copper grease wheel stud and nut
- Check the wheel nut retainer; pins need to move freely and shouldn't be worn

Checking after every year
- Power steering brackets
- Pedal assembly

Replacement
- Every 5h: oil and oil filter
- Every 10h: gearbox oil
- Every 20h: coils and spark plugs (spare kit code: WF01-EI-C11)

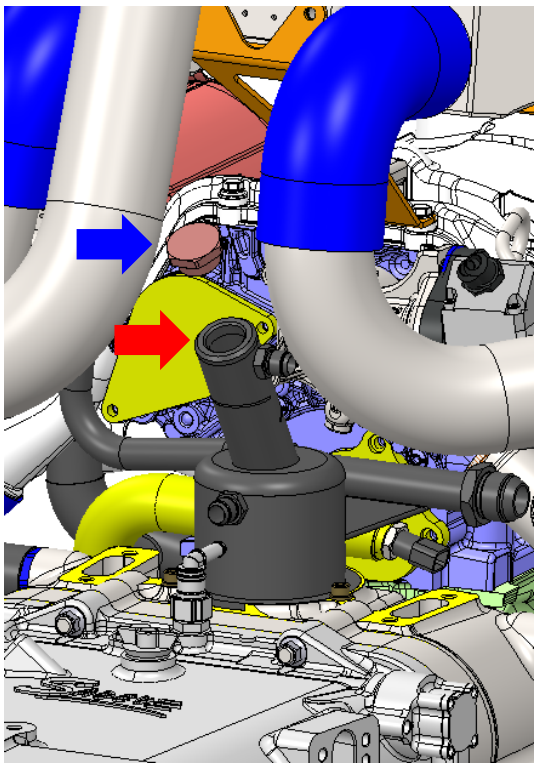
Engine rebuilt
- Need to be done every 40h

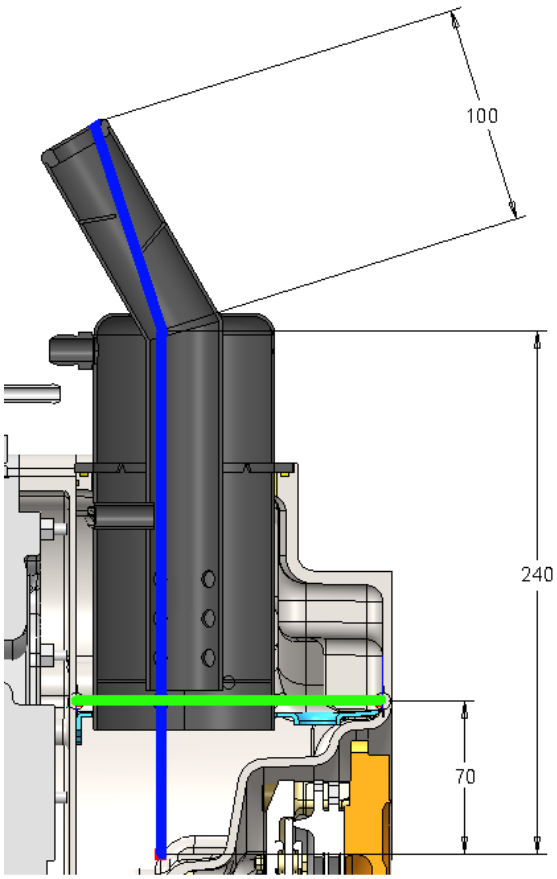
Tightening torque

COMPONENT	TIGHTENING TORQUE	THREADLOCKER
Wheel nut: RED Clockwise GREEN Counterclockwise	140Nm	No
Front wheel stud/CV joint nut	350Nm	Strong (Loctite 270)
Upright stud nut	90Nm	No
Wishbone/pushrod uniball nut	27Nm	No
Wishbone bracket chassis/gearbox side	30Nm	Medium (Loctite 243)
Caliper nut on upright	70Nm	No
Drive pegs	70Nm	Strong (Loctite 270)

Checking engine oil level

- Warm-up engine until water temperature is 60°C
- Kill the engine
- Remove oil-tank cap (blue arrow)
- Check oil level into oil-tank (red arrow) with a flat ruler
- Ruler need to be flat because had to go through baffles
- When ruler is inserted for 340(240+100)mm oil level (green line) need to be at 70mm (wet part of ruler)





Cooling circuit filling

- Fill the cooling circuit until middle volume of swirl pot (see image)

- Use the screw on left side pipe close to radiator for bleed air from circuit (see image)

- Do first test session (with water temperature around 80°C)
- When circuit is cold refill again until middle volume of swirl pot

Gearbox

Please refer to handbook «SLR82-14 Gear Box Technical Details» for all technical information about gearbox.

sadev

SLR82-14 GEAR BOX

TECHNICAL DETAILS

For more details, please contact :

Plant address :

SADEV
6, rue des Grand'Montains
85110 SAINT PROUANT
France

Postal address :

SADEV
BP 1
85 111 CHANTONNAY
France

Oil and lubricant

Engine oil
Kennol Grand Prix 20W60
Quantity: 6,5lt

Brake fluid
Castrol SRF FMVSS 116 DOT 4

Gearbox oil
Kennol Ultima 75W140
Quantity: 1,8lt

Engine cooling
Total Glacelf (mixed with distilled water)
Total quantity: about 7lt

General agreement

- Motorsport is not covered by warranty for the voluntary and intentional choice of drivers to compete in a dangerous environment
- Monocoque, rollover structures, steering column, front and rear crash boxes are **Safety Components** approved by FIA
- **Safety Components** cannot be modified
- Any repairs on **Safety Components** need to be done in WOLF RACING CARS factory or in centres recognised by FIA
- After 2 years or after any major accident **Safety Components** need to be check
- WOLF RACING CARS is not responsible for any damage caused by use of non-original spare parts

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