

CUPRA LEON VZ TCR

SET UP PARTS SUMMARY

I N T R O D U C T I O N

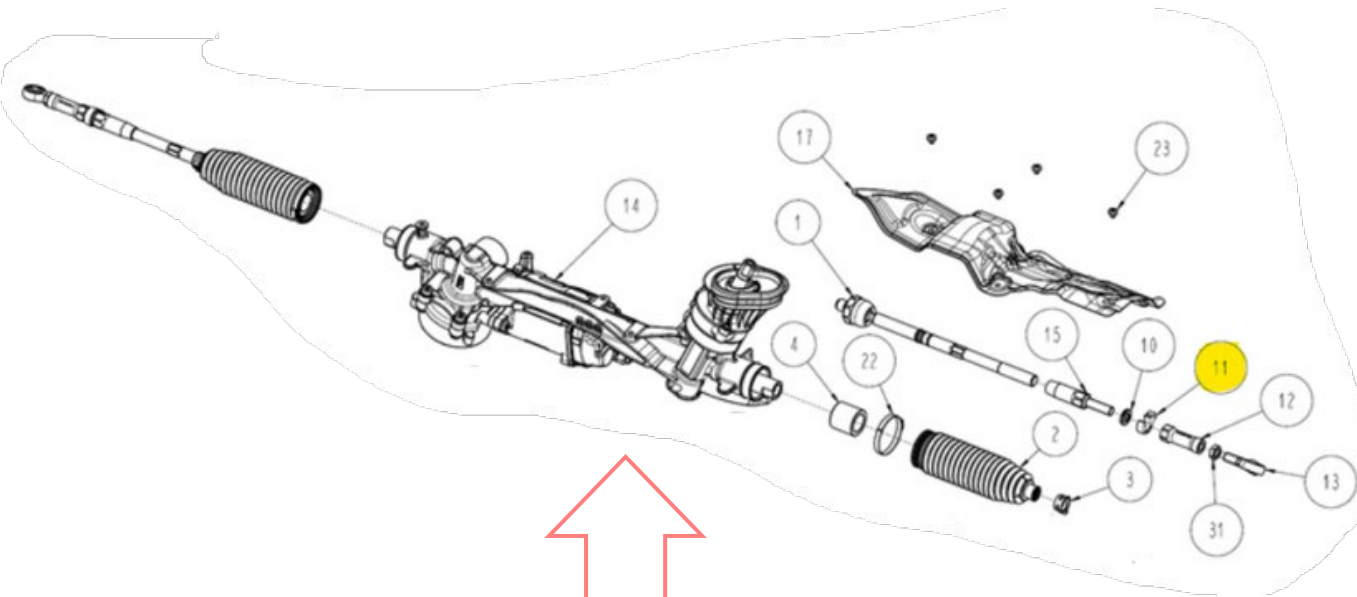
Suspension setup and adjustment elements are defined in the Suspension Manual. Additional adjustment spare parts to achieve those set up are available throughout the different sections of the Parts Catalog. This document is intended to be a summary of these parts with the objective to provide a better overview of the adjustment possibilities.

**Parts numbers shown in this document could differ with respect to those published in the Parts Catalogue. The Catalogue ones prevails.*

Index:

- TOE
- CASTER
- KINGPIN ADJUSTMENT
- CAMPER & ANTIS
- FRONT ANTI-ROLL BAR
- TRACK WIDTH SPACERS
- SHOCK ABSORBER OPTION
- SPRINGS
- REAR SUBFRAME ADJUSTMENTS
- REAR CAMBER & TOE ADJUSTMENTS
- REAR ANTI-ROLL BAR
- STEERING COLUMN & PEDALS SETUP
- SEAT ADJUSTMENTS & BALLAST
RANGE

T O E



PART	REFERENCE	DESCRIPTION	PIECE/CAR
11	5FR498003	WHEEL TOE ADJUSTING SHIM SET	1

A set contains a wide range of shims enough for a car.

1.2.2. TOE ADJUSTMENT

The toe setting can be made by the combination of shims with different thickness in order to get the required toe at the wheel. The available shims are **0.8, 1, 1.2 mm** (fine-tuning), **2, 5 and 10 mm** in thickness.

Toe is always measured per wheel at the rim flange.

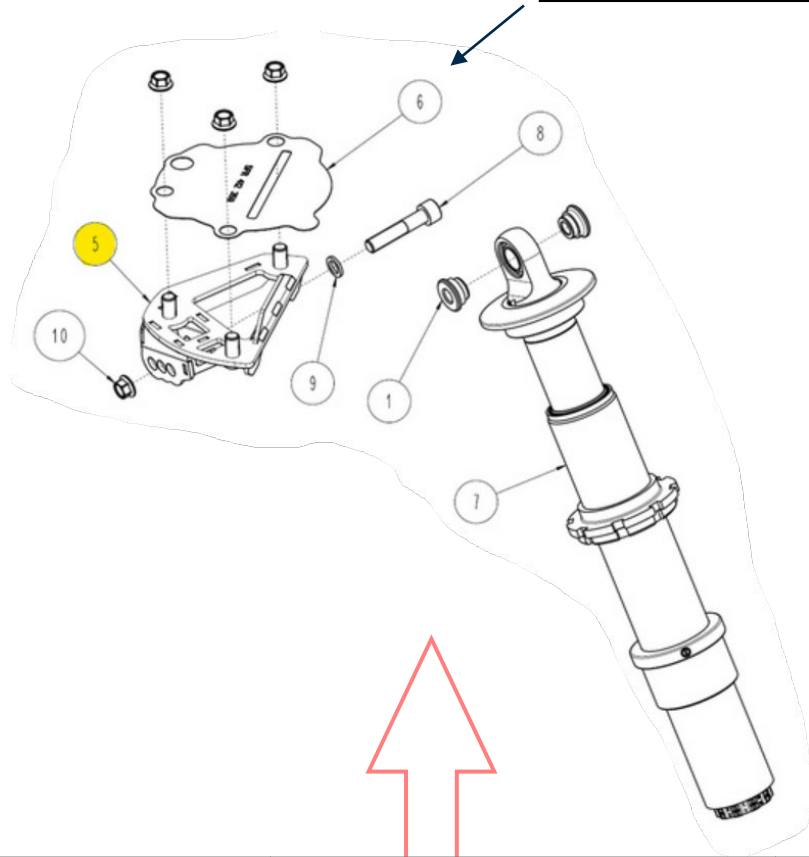
Δ Toe shims	Δ Toe per wheel at rim
+0.2mm	+0.7mm
+1.0mm	+3.5mm

The maximum recommended thickness of toe shims is 26mm.



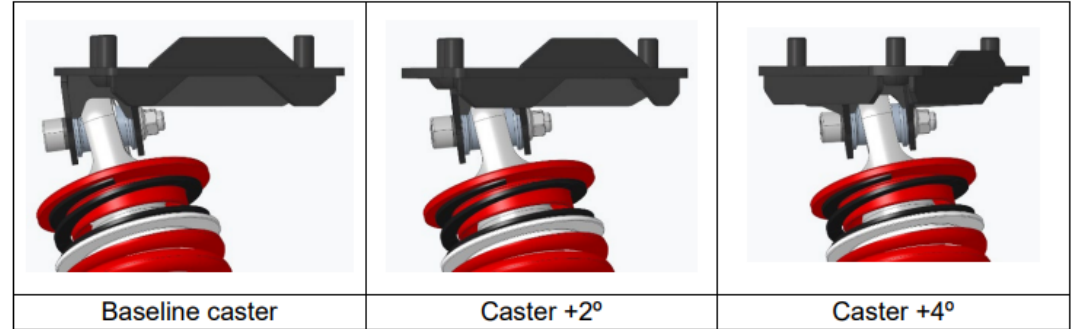
C A S T E R

Use Top Mount **Cover n°6: 5FR412359A** when the Top Mount Caster +4° 5FR412331J is used.



1.2.4. CASTER ADJUSTMENT

Three different top mounts have been designed to modify the caster.

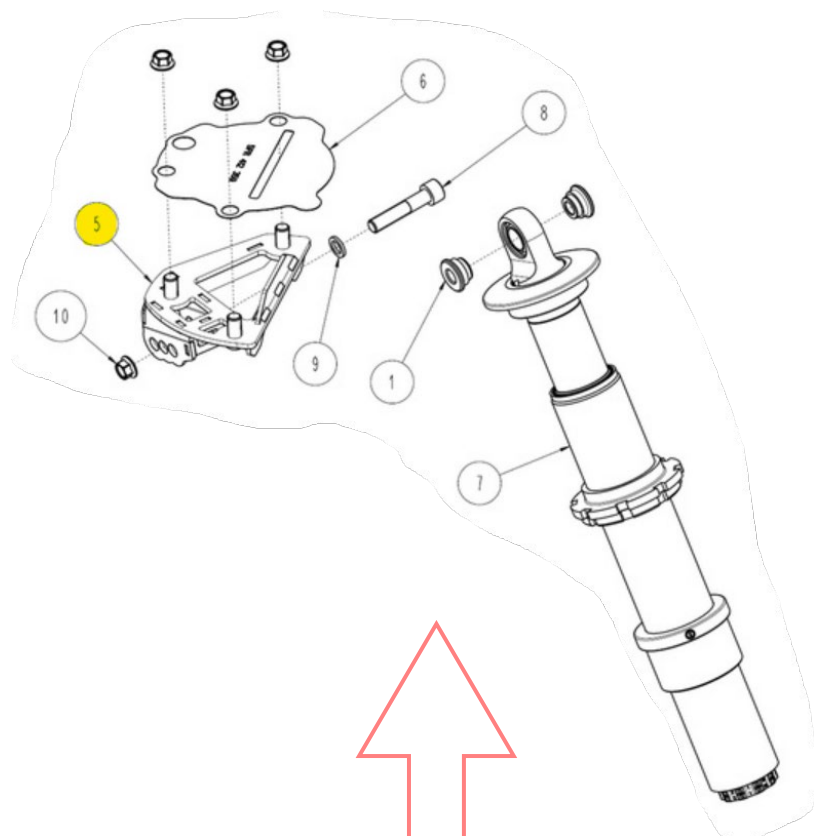


This adjustment will affect to the bumpsteer and it needs to be compensated replacing the steering arm bushings.

	Caster +2°	Caster +4°
Steering arm bushing height compensation (+ is upwards)*	+5mm	+10mm

PART	REFERENCE	DESCRIPTION	PIECE/CAR
05L	5FR412331D	LEFT SHOCK ABSORBER TOP MOUNT SET IN CAR PRODUCTION	1
05LBIS	5FR412331H	LEFT SHOCK ABSORBER TOP MOUNT	1
05LBIS1	5FR412331J	SHOCK ABSORBER FRONT LEFT TOP MOUNT ONLY WITH COVER 5FR412359A	1

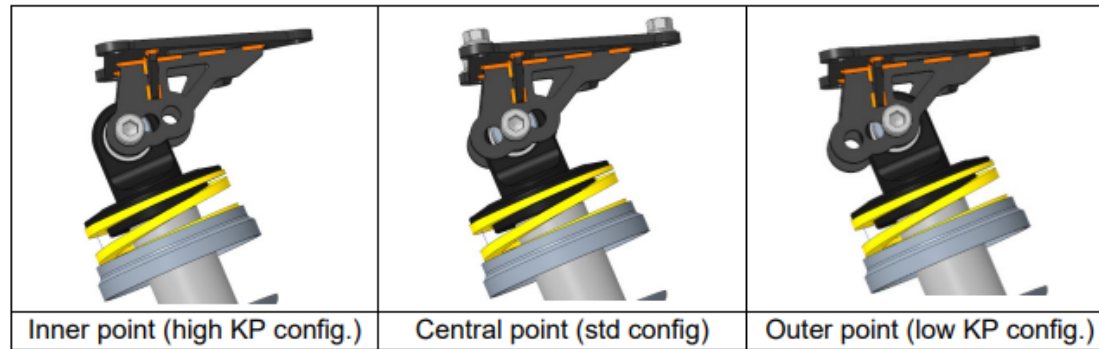
KINGPIN ADJUSTMENT



PART	REFERENCE	DESCRIPTION	PIECE/CAR
05L	5FR412331D	LEFT SHOCK ABSORBER TOP MOUNT SET IN CAR PRODUCTION	1
05LBIS	5FR412331H	LEFT SHOCK ABSORBER TOP MOUNT	1
05LBIS1	5FR412331J	SHOCK ABSORBER FRONT LEFT TOP MOUNT ONLY WITH COVER 5FR412359A	1

1.2.5. KINGPIN ADJUSTMENT

The Kingpin angle and the camber angle can be quickly modified by changing the position of the front shock absorber on the top mount.

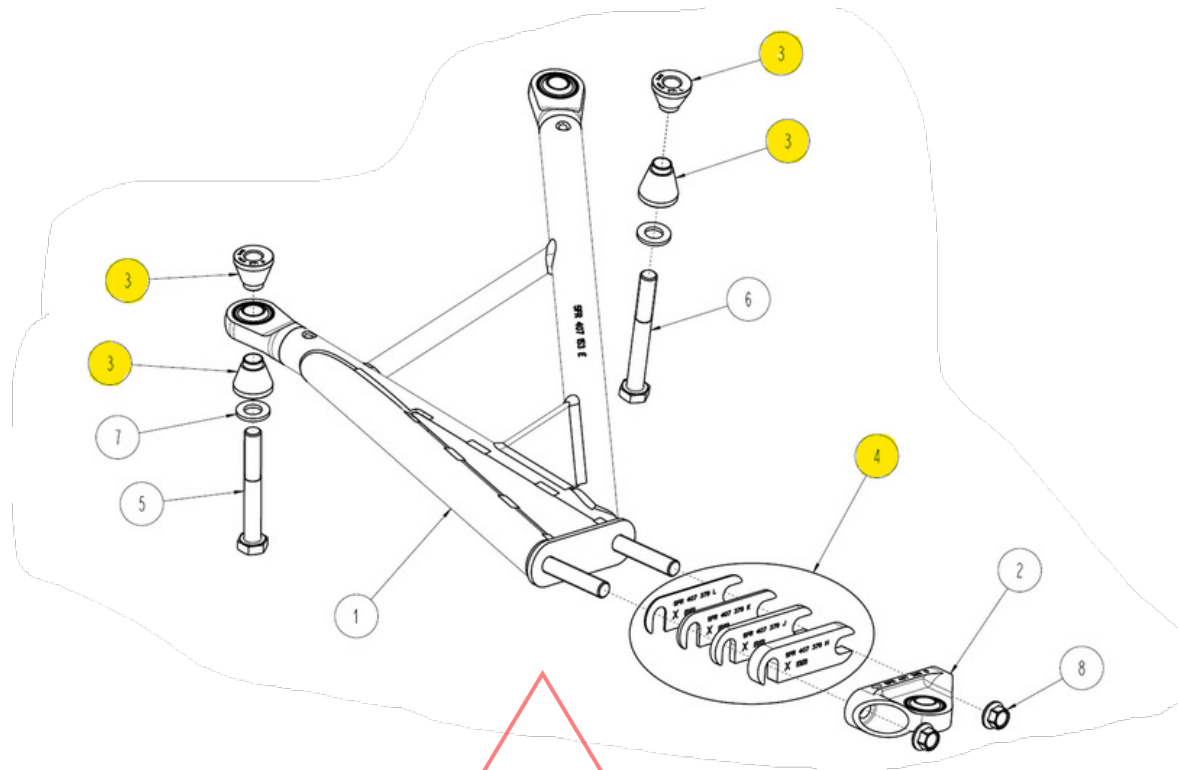


To cover the whole range of camber setting there are three different positions on the top mount and the standard is the central one.

Top mount position	Δ camber and KP angle	Toe shims compens.	Bumpsteer compens.
Outer	-1.1°	-3 mm	-3 mm
Inner	+1.1°	+3 mm	+4 mm

The maximum and minimum advisable camber angles on each position are:

C A M B E R & A N T I S



PART	REFERENCE	DESCRIPTION	PIECE/CAR
03	5FR498007A	WISHBONE FIXING BUSH SET SET IN CAR PRODUCTION	2
03BIS	5FR498007B	WISHBONE FIXING BUSH SET	2
04	5FR498001A	WHEEL CAMBER ADJUSTING SHIM SET	2

1.2.1. CAMBER ADJUSTMENT

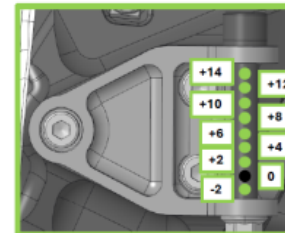
The camber setting can be made by the combination of shims with different thickness in order to get the required camber angle. The available shims are **1.2, 2.5, 5** and **10 mm** in thickness.

The maximum recommended thickness of camber shims is **37.5mm**.

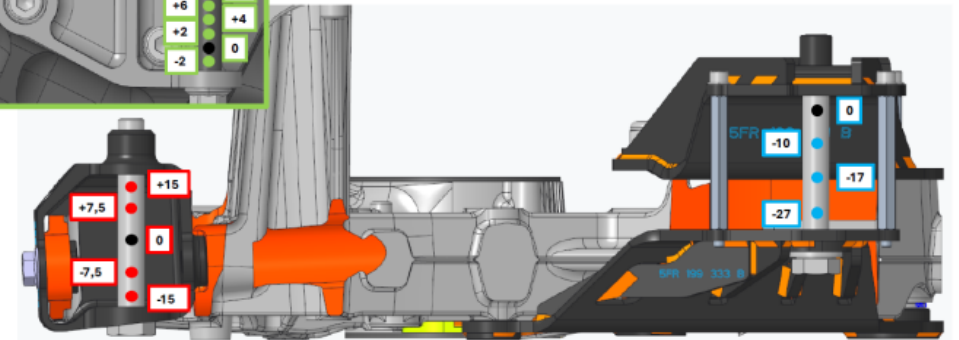
Δ Camber	Δ Camber shims	Ride height compensation on shock absorber	Toe shims compensation
+0.1°	+1.25mm	+3/8 turns preload	+1mm
+0.4°	+5.0mm	+1.5 turns preload	+4.2mm
+1.0°	+12.5mm	+3.75 turns preload	+10.5mm

1.2.3. FRONT KINEMATIC OPTIONS

There are many front kinematic combinations changing the bushes on the subframe and steering arm. Most affected parameters are Roll Centre Height, Anti-dive and Anti-lift. Here below, find the recommended options:



S2 -2 / +14 → 1x 5FR 419 775 Q + 1x 5FR 419 775 R
 0 → 1x 5FR 419 775 N + 1x 5FR 419 775 P
 +2 / +10 → 1x 5FR 419 775 L + 1x 5FR 419 775 M
 +4 / +8 → 1x 5FR 419 775 S + 1x 5FR 419 775 T
 +6 → 2x 5FR 419 775 K



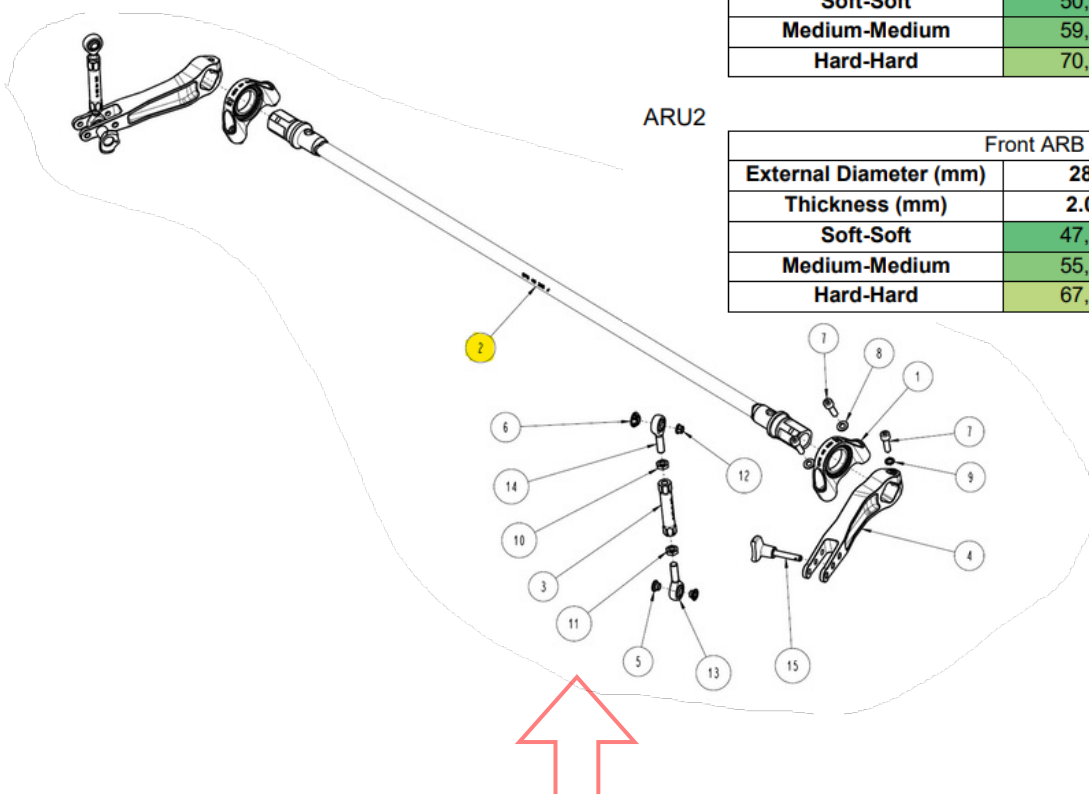
FRONT ANTI-ROLL BAR

ARU1

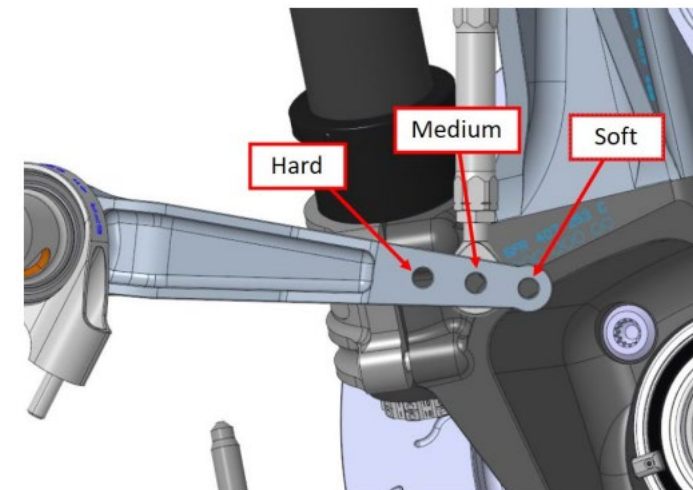
Front ARB Stiffness (%)			
External Diameter (mm)	28	30	35
Thickness (mm)	2.0	3.0	3.0
Soft-Soft	50,8	85,9	142,4
Medium-Medium	59,2	100,0	165,9
Hard-Hard	70,8	119,6	198,5

ARU2

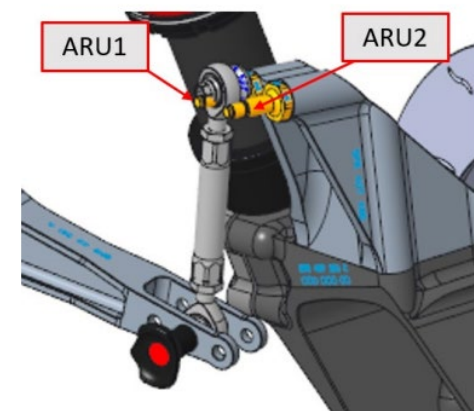
Front ARB Stiffness (%)			
External Diameter (mm)	28	30	35
Thickness (mm)	2.0	3.0	3.0
Soft-Soft	47,8	80,9	134,2
Medium-Medium	55,9	94,5	156,7
Hard-Hard	67,0	113,3	188,0



Each lever has been designed with three holes in order to be able to change the stiffness in smaller steps. The fixation to the drop link can be made with the quick-release pin (car delivery) for quick changes or a standard bolt can replace it.

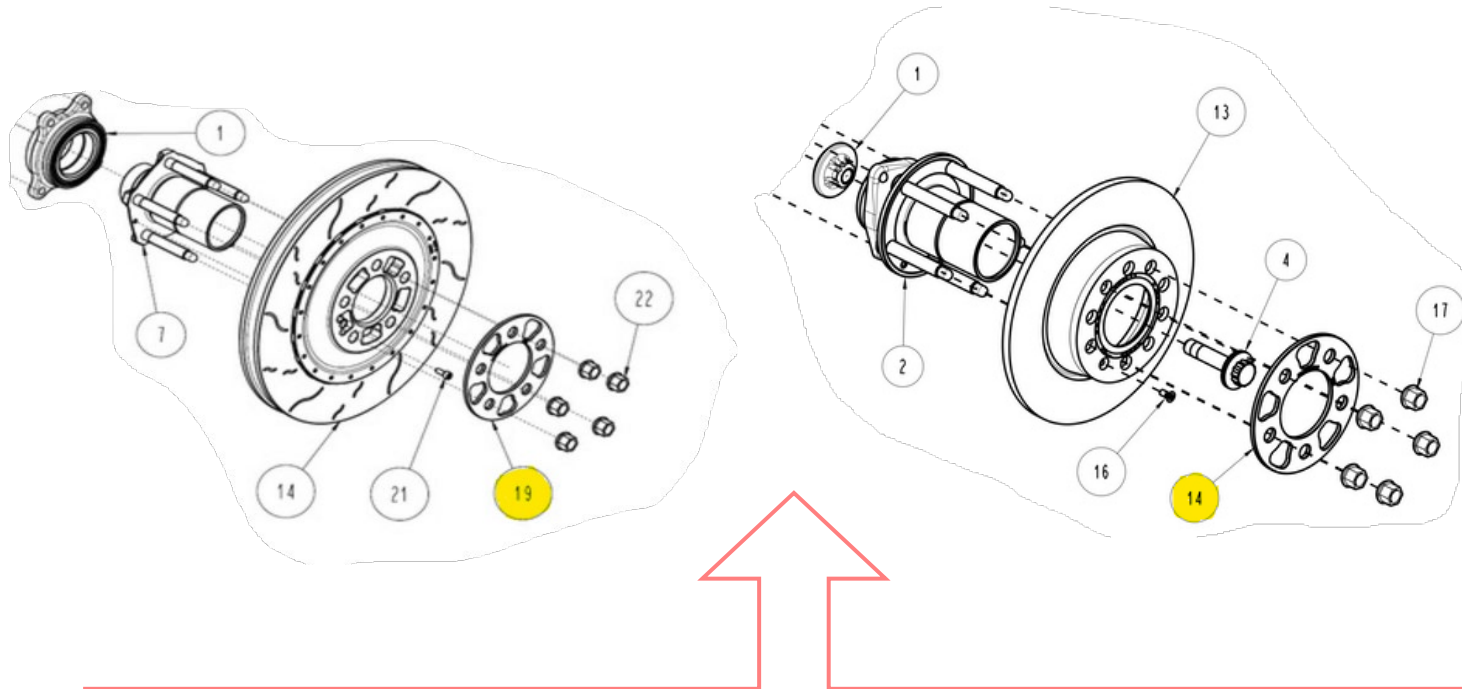


In addition, the drop link can be fixed to the upright in two different positions (ARU) that will change the ARB lever motion ratio and consequently the ARB stiffness.



PART	REFERENCE	DESCRIPTION	PIECE/CAR
02	5FR411305L	FRONT ANTI-ROLL BAR Ø30X3 SET IN CAR PRODUCTION	1
02BIS	5FR411305K	FRONT ANTI-ROLL BAR Ø28X2	1
02BIS1	5FR411305M	FRONT ANTI-ROLL BAR Ø35X3	1

TRACK WIDTH SPACERS



PART	REFERENCE	DESCRIPTION	PIECE/CAR
14	8YA601177	WHEEL SPACER 2MM	2
14BIS	8YA601177A	WHEEL SPACER 3MM	2
14BIS1	8YA601177B	WHEEL SPACER 5MM SET IN CAR PRODUCTION	2
14BIS2	8YA601177D	WHEEL SPACER 10MM	2

TF homologation:

Wheel spacer	Wheel spacer Option
 <p>Thickness: <u>Grey</u>: 2mm – <u>Blue</u>: 3 mm – <u>Red</u>: 5 mm – <u>Black</u>: 10 mm Material: <u>Aluminium</u> Maximum pairing thickness: 35mm</p>	 <p><u>Picture from 5mm spacer (red). All spacers same geometry</u></p> <p>Thickness: <u>Grey</u>: 2mm – <u>Blue</u>: 3 mm – <u>Red</u>: 5 mm – <u>Black</u>: 10 mm Material: <u>Aluminium</u> Maximum pairing thickness: 30 mm</p>
Wheel nut	Wheel nut Option
 <p>Material: <u>Steel</u></p>	 <p>Material: <u>Copper Coated Steel</u></p>

Cupra & Audi Wheel spacers are homologated for the Leon VZ TCR. Both designs are valid.

S H O C K A B S O R B E R O P T I O N A L K I T



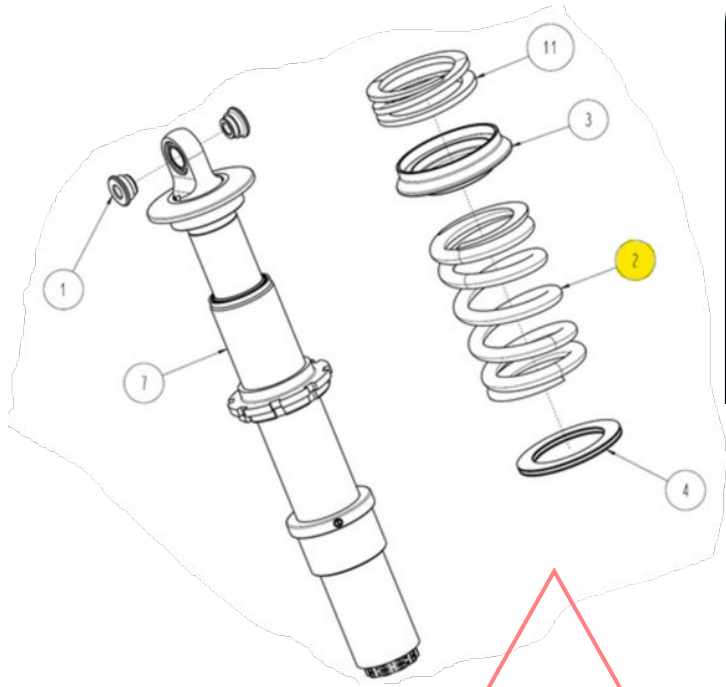
Optional Öhlins TTX dampers KIT with Leon VZ TCR settings available on the CUPRA Leon VZ parts catalogue (certified).

For technical information and characteristics, check Leon VZ suspension manual Art. 3 Dampers.



PART	REFERENCE	DESCRIPTION	PIECE/CAR
ND	5FR498009	OHLINS SHOCK ABSORBER KIT INCLUDES ALL 4 SHOCK ABSORBERS	1

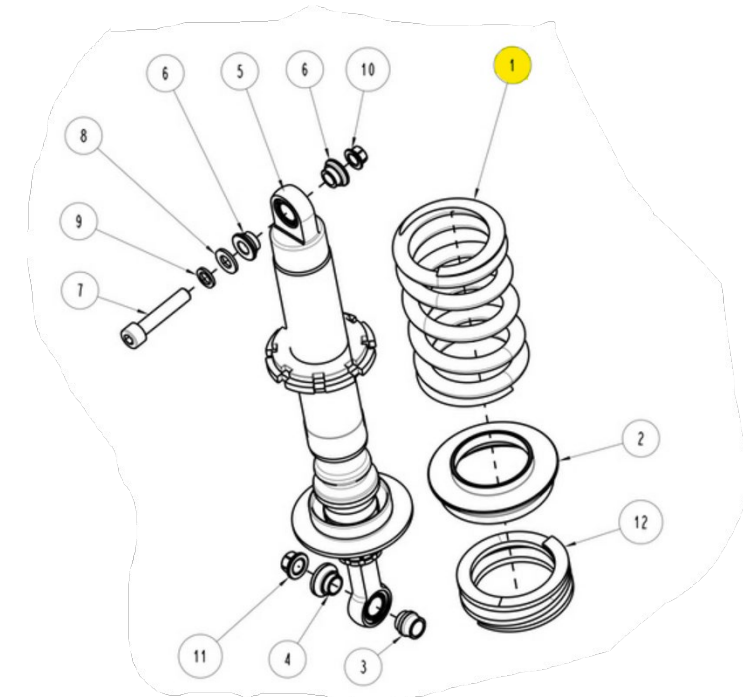
S P R I N G S



In the TCR class, the suspension springs are free.
Cupra catalogue offer a wide range of springs.
For the springs measures not available on the Leon VZ parts catalogue, see on the market.

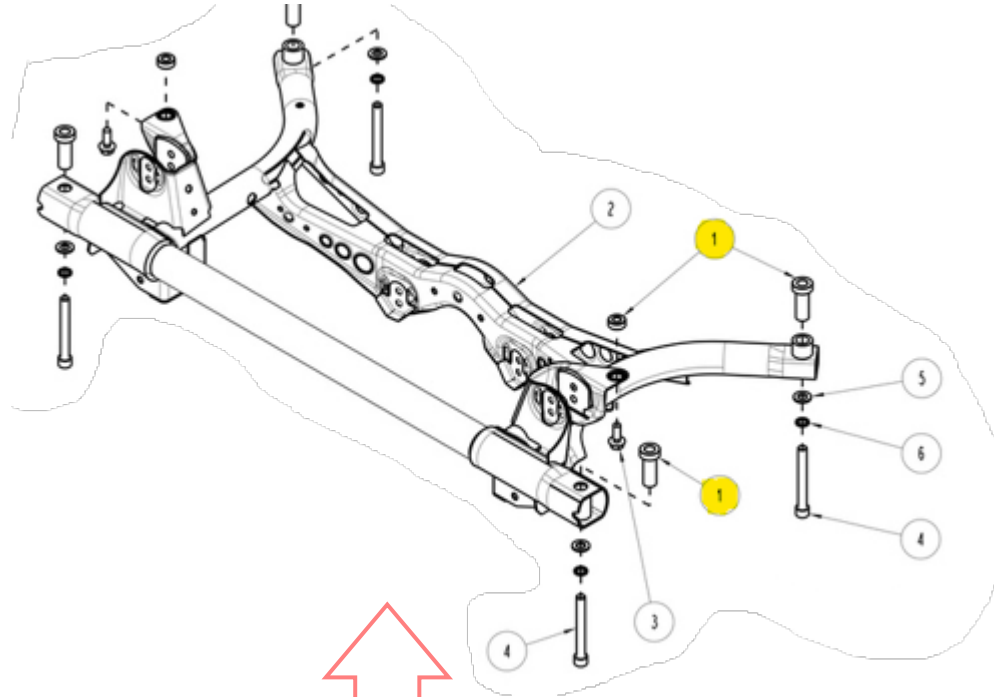
Advisement:
Front axle range to consider: 200-60-50 to 200-60-110.
Rear axle range to consider: 200-60-180 to 200-60-260.

PART	REFERENCE	DESCRIPTION	PIECE/CAR
02	5FR411105E	SPRING 200-60 - 0100 SET IN CAR PRODUCTION	2
02BIS	5FR411105B	SPRING 200-60 - 0070	2
02BIS1	5FR411105C	SPRING 200-60 - 0080	2
02BIS2	5FR411105D	SPRING 200-60 - 0090	2
02BIS3	5FR411105F	SPRING 200-60 - 0110	2



PART	REFERENCE	DESCRIPTION	PIECE/CAR
01	5FR411105K	SPRING 200-60 - 0200	2

REAR SUBFRAME ADJUSTMENTS

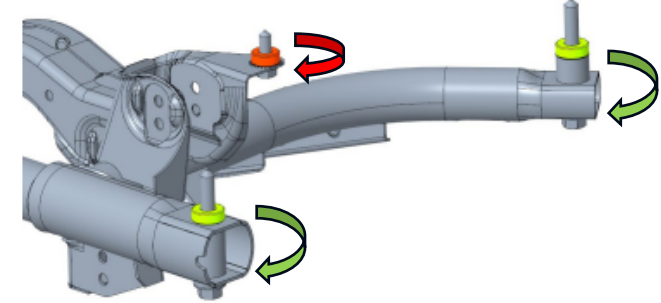


PART	REFERENCE	DESCRIPTION	PIECE/CAR
01	5FR598001	REAR AXLE HEIGHT BUSH SET INCLUDE 10MM AND 20MM BUSHES	1

*Parts set included in the car production in the upper position.

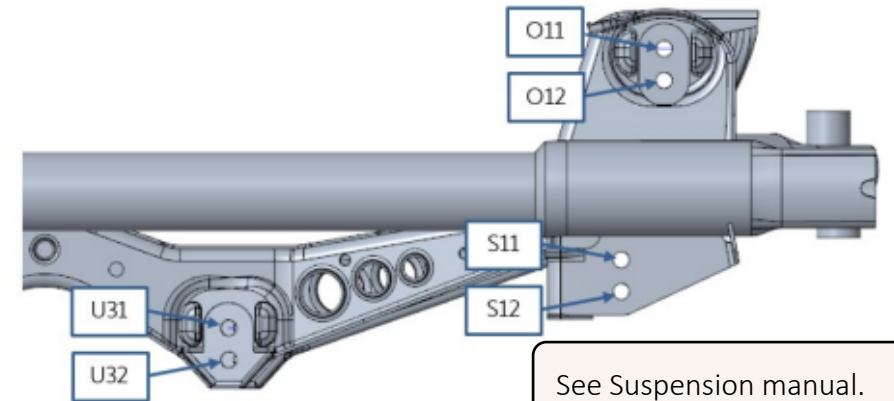
1.3.1. SUBFRAME SPACERS

There are 6 spacers at the fixing points of the subframe to the bodyshell in order to keep the same suspension geometry in case that the minimum Ride height changes. The baseline is using the 10mm thick. They have a centering function and can be placed upward or downward in case that are not useful. On the spare parts catalogue, there are available an option of 20mm thick.



1.3.2. REAR KINEMATICS OPTIONS

There are two different fixing points on the subframe for each arm, to be able to adjust the suspension geometry in different ways.



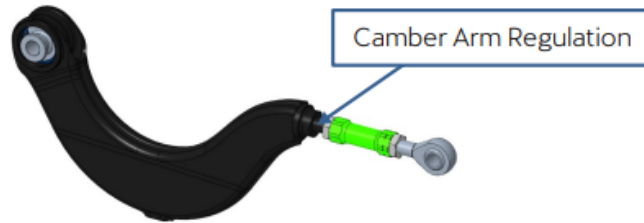
See Suspension manual.

R E A R C A M B E R & T O E A D J U S T M E N T S

1.3.3. CAMBER ADJUSTMENT

The camber angle can be set by adjusting the length of the camber arm through the rod.

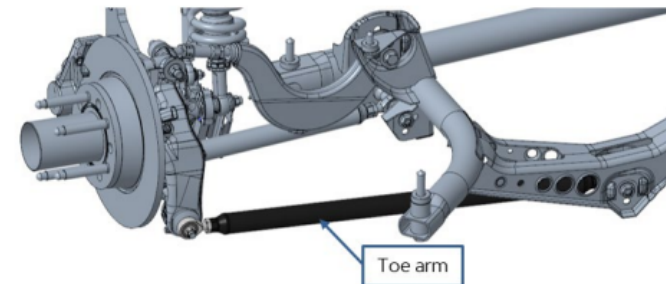
Arm regulation	Δ Arm length	Δ Camber	Ride height compensation on shock absorber
1 turn	-2.5mm	+0.86°	+1.7 turns preload
1 turn + 1 notch	-2.9mm	+1.00°	+2.0 turns preload



1.3.4. TOE ADJUSTMENT

The toe setting can be made by enlarging or shortening the toe arm through the rod.

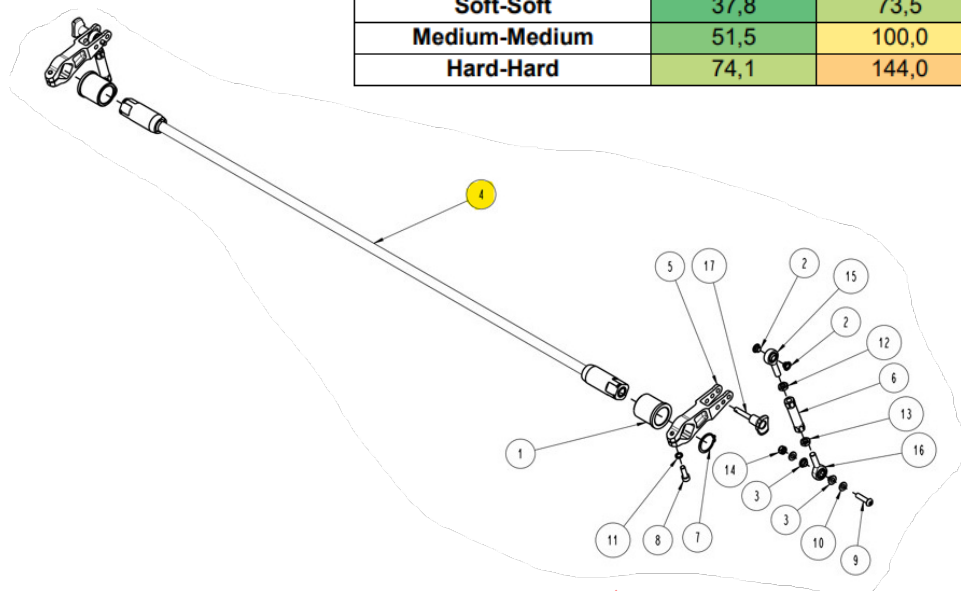
Arm regulation	Δ Arm length	Δ Toe per wheel at rim
1 notch	0.42mm	1mm
1 turn	2.5mm	6mm



No additional parts are required for setup the rear Camber and Toe. You can achieve the desired configuration using the adjustment rods available on the car.

R E A R A N T I - R O L L B A R S

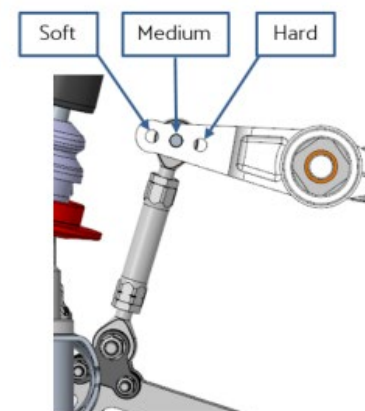
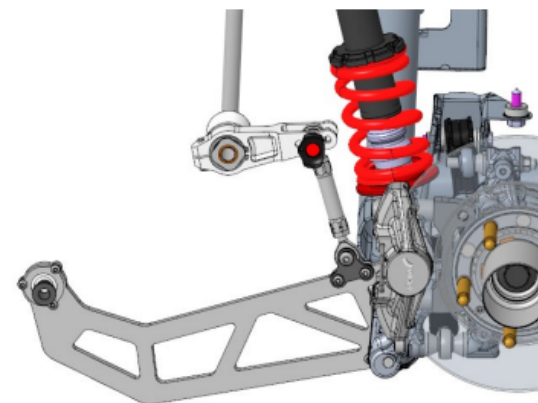
Rear ARB Stiffness (%)			
External Diameter (mm)	18	22	25
Thickness (mm)	2.0	2.0	3.0
Soft-Soft	37,8	73,5	147,9
Medium-Medium	51,5	100,0	201,4
Hard-Hard	74,1	144,0	289,9



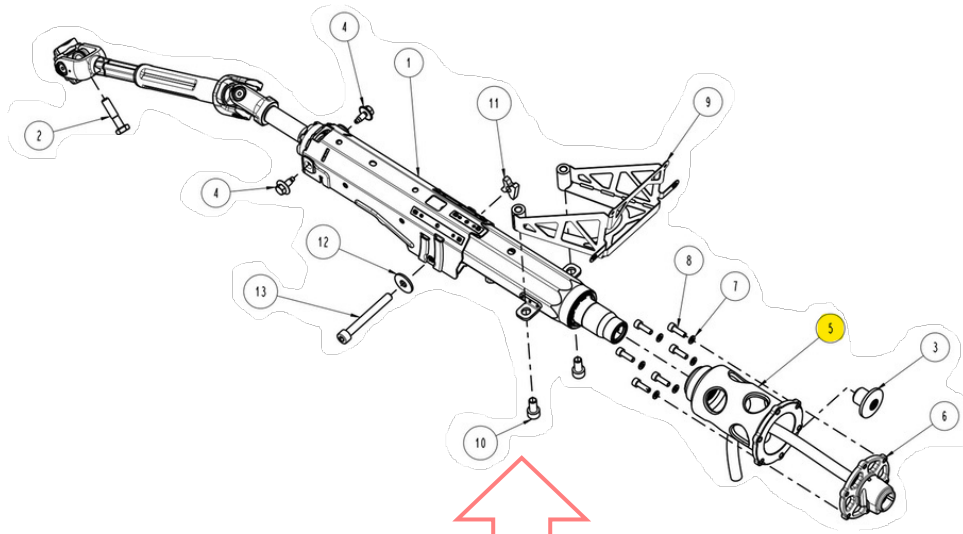
PART	REFERENCE	DESCRIPTION	PIECE/CAR
04	5FR511311	REAR ANTI-ROLL BAR Ø18X2 SET IN CAR PRODUCTION	1
04BIS	5FR511311A	REAR ANTI-ROLL BAR Ø22X2	1
04BIS1	5FR511311B	REAR ANTI-ROLL BAR Ø25X2	1

2.2. REAR ANTI-ROLL BAR

Three different bars with diameters of $\varnothing 18$, $\varnothing 22$ and $\varnothing 25$ mm are available to modify the stiffness that the anti-roll bar is giving to the rear suspension.

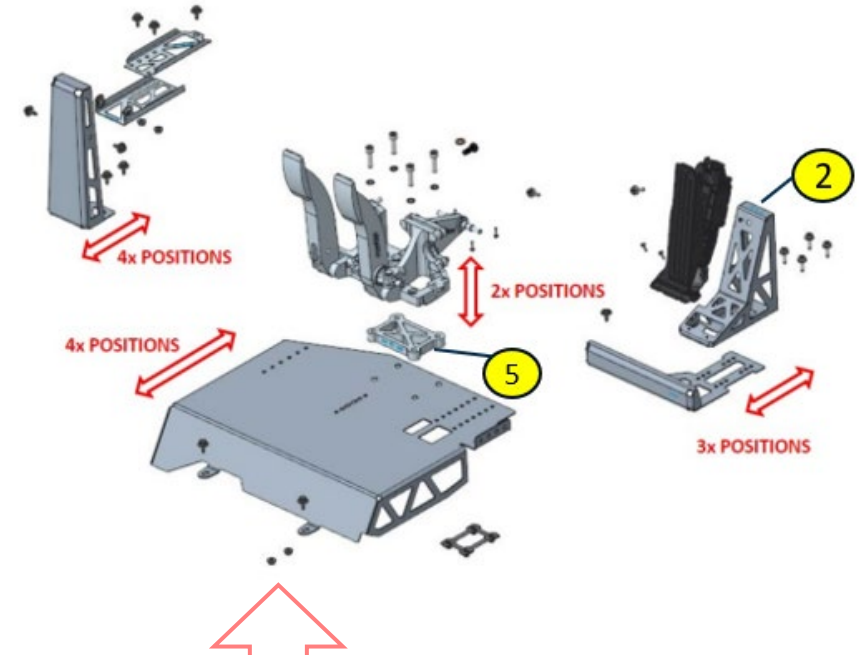


STEERING COLUMN & PEDALS SETUP



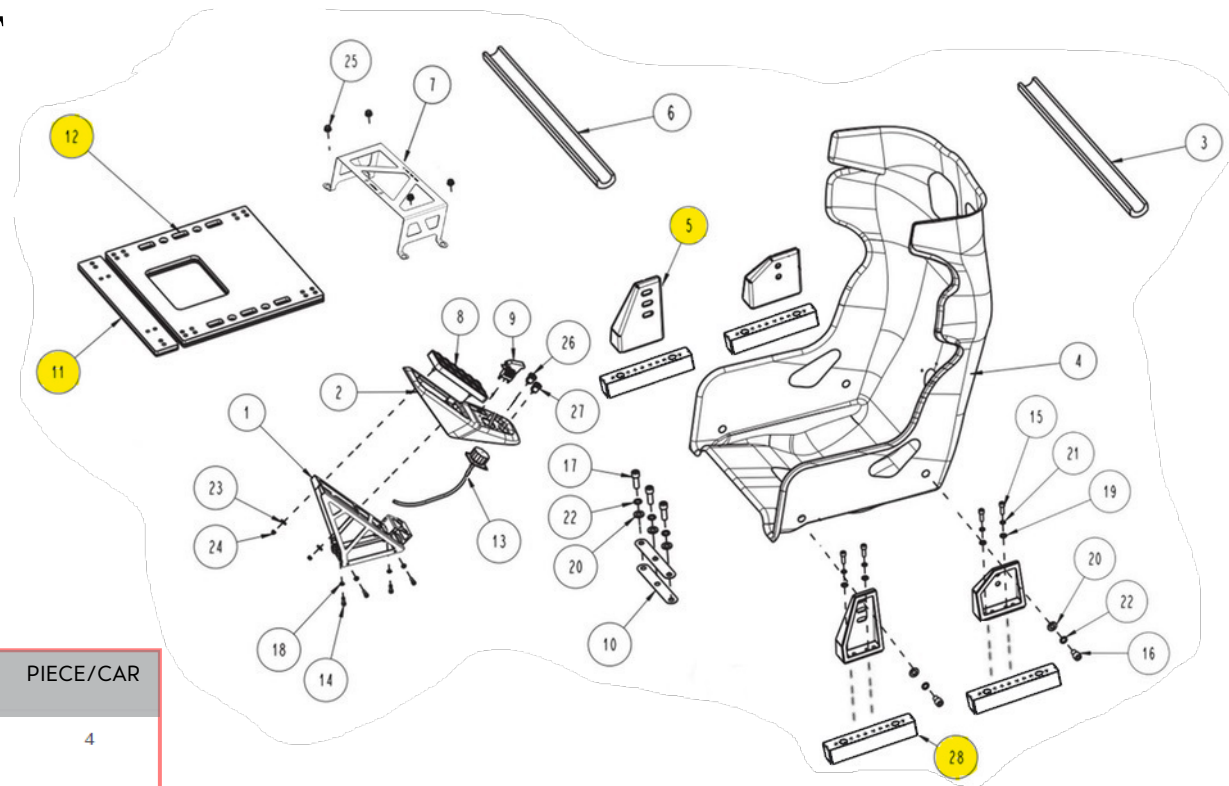
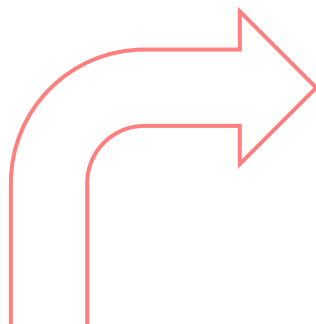
PART	REFERENCE	DESCRIPTION	PIECE/CAR
05	5F6419919B	STEERING COLUMN HUB 120MM SET IN CAR PRODUCTION	1
05BIS	5F6419919A	STEERING COLUMN HUB 100MM	1
05BIS1	5F6419919C	STEERING COLUMN HUB 140MM	1

N° 02. This part offers a different angle of the accelerator pedal. Ergonomics choice.
N° 05. The pedal box spacer is recommended for tall drivers. With it, you can raise and move forward the pedal box.



PART	REFERENCE	DESCRIPTION	PIECE/CAR
05	5FR721467	PEDAL BOX SPACER MOUNT SPACER WITH BOLTS NUMBER 17.	1
02	5F6721532	THROTTLE PEDAL SUPPORT 15° SET IN PRODUCTION CAR	1
02BIS	5F6721532A	THROTTLE PEDAL SUPPORT	1

SEAT ADJUSTMENT & BALLAST RANGE



PART	REFERENCE	DESCRIPTION	PIECE/CAR
N/D	5FR881351	BUCKET ADAPTER SPACER ONLY FOR LEON COMPETITION	4
05	5FR881689	"XL" BUCKET ADAPTER WITH FIXATIONS SET SET IN CAR PRODUCTION (INCLUDES FIXINGS)	1
05BIS	5FR881689A	"M" BUCKET ADAPTER WITH FIXATIONS SET (INCLUDES FIXINGS)	1
11	8S6861721	BALLAST WEIGHT -1KG-	1
11BIS	8S6861721A	BALLAST WEIGHT -3KG-	1
12	8S6861721B	BALLAST WEIGHT -5KG-	1
12BIS	8S6861721C	BALLAST WEIGHT -10KG	1
12BIS2	8S6861721D	BALLAST WEIGHT -20KG-	1

F O R M O R E I N F O R M A T I O N
C O N T A C T U S !

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