FICHA TÉCNICA
LEÓN SUPERCOPA MK2

año / year
2008

Modelo:
Model: **LEON SUPERCOPA MK2**

FICHA TÉCNICA PARA EL LEÓN SUPERCOPA MK2 2008
TECHNICAL FORM FROM LEÓN SUPERCOPA MK2 2008

Ficha técnica valida a partir de:
Technical form valid as from: **01/01/2008**

A) Vehículo visto de ¾ delante
Car seen from ¾ front.

B) Vehículo visto de ¾ detrás
Car seen from ¾ rear.

1. GENERALIDADES / GENERAL

1.1. ***Constructor /***
Manufacturer **SEAT SPORT**

1.2. Denominación comercial – Marca, Modelo y tipo
Comercial name – Make, model and type **SEAT LEON SUPERCOPA MK2**

1.3. Motor tipo
Engine type ***2.0 l. TFSI***

1.4. Cilindrada
Cylinder capacity **1984.3 cm3**

Cilindrada corregida
Corrected cylinder capacity ***1984.3 x 1.7 = 3373.3 cm3***

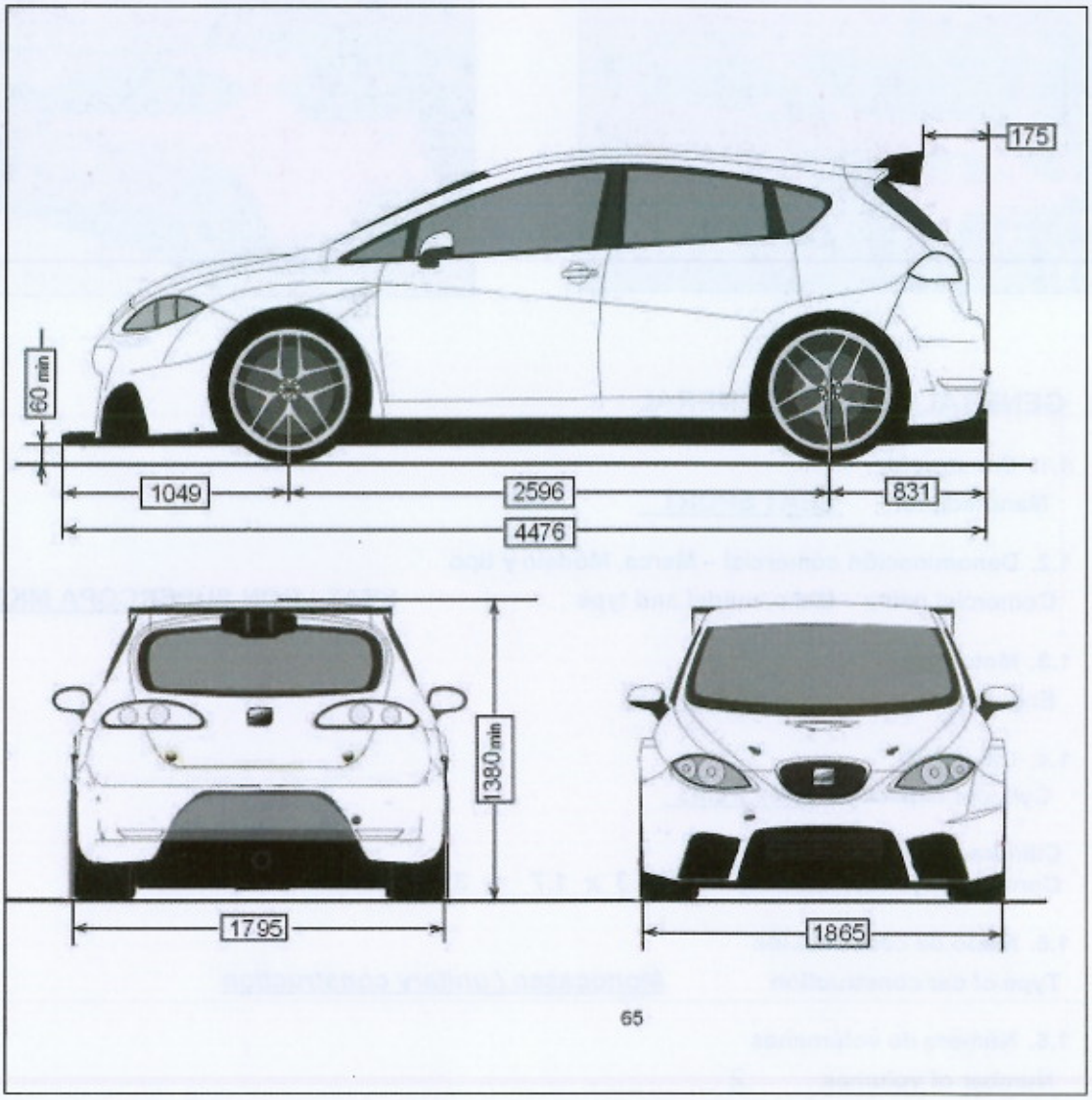
1.5. Modo de construcción
Type of car construction ***Monocasco / unitary construction***

1.6. Número de volúmenes
Number of volumes 2

2. CARROCERÍA / BODY WORK

2.1. *Dimensiones / Dimensions*

Descripción	Description	Medida Dimension	Notas / Notes
Longitud	Overall length	4476 mm ± 1%	
Ancho carrocería anterior máximo	Overall bodywork front width maximum	1875 mm	Measured at the front axle fender
Ancho carrocería posterior máximo	Overall bodywork rear width	1795 mm	Measured at the rear axle fender
Batalla	Wheel base	2596 mm ± 1%	
Voladizo anterior	Over hang front	1049 mm ± 1%	
Voladizo posterior	Over hang rear	831 mm ± 1%	
Voladizo ala posterior	Over hang rear wing	175 mm ± 1%	Medido en posición C1 Measured in C1 position
Altura mínima carrocería	Minimum body work height	1380 mm	
Altura mínima fondo plano	Minimum ground clearance	60 mm	



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2.2. Ancho de Vía permitido
Axle witdth allowed

La parte superior de la llanta, con el coche en orden de marcha, debe quedar en el interior del ancho de carrocería permitido en cada eje.

The higher part of the rim, with the car in race order, must be in side of the maximum overall bodywork axle width allowed.

2.3. Peso de la carrocería con elementos móviles y arco de seguridad
Body shell weight with doors and bonnets and roll cage ***370 kg*** +/- 1.5kg

2.4. Peso mínimo vehículo completo ensamblado (sin gasolina)
Minimum Weight Complete car assembled (without fuel) ***1130 Kg***

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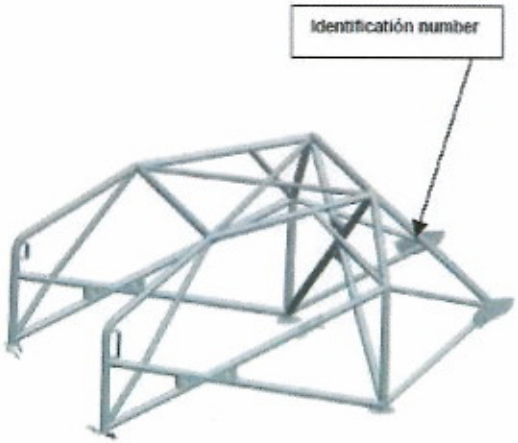
3. ARCO DE SEGURIDAD / ROLLCAGE

3.1. Nº de Homologación
Homologation number **HES2001205**

HOMOLOGATION NUMBER: HES2001205

SERIAL NUMBER: XMK2 xxx

Estructura completa fuera del vehículo
Complete structure outside the car



3.2. Tipo Arco de seguridad
Rollcage Type ***Arco de seguridad especial soldado a la carrocería***
Special cage welded into the body-shell

3.3. Foto Identificación soldada en el arco
Welded Rollcage identification view

3.4 Caracteristicas del acero
Steel specifications

	ARCO PRINCIPAL MAIN ROLLBAR ARCEAU PRINCIPAL	TIRANTES LONGITUDINALES LONGITUDINAL STRUT ENTRETOISE LONGITUDINALE	TIRANTES DIAGONALES DIAGONAL STRUT ENTRETOISE DIAGONALE	ARCO DELANTERO FRONT ROLLBAR ARCEAU AVANT
MATERIAL MATERIAL MATERIAU	25CrMo4	25CrMo4	25CrMo4	25CrMo4
DIAMETRO EXTERIOR OUTER DIAMETER DIAMETRE EXTÉRIEUR	40 mm	40 mm	40 mm	40 mm
ESPESOR DE PAREDES WALL THICKNESS EPAISSEUR DE PAROI	1.5 mm	1.5 mm	1.5 mm	1.5 mm
LIMITE ELASTICO ELASTIC LIMIT LIMITE ELASTIQUE	78,1 daN/mm²	78,1 daN/mm²	78,1 daN/mm²	78,1 aN/mm²
RESISTENCIA A LA TRACCIÓN TENSILE STRENGTH RESISTANCE A LA TRACTION	84,3 daN/mm²	84,3 daN/mm²	84,3 daN/mm²	84,3 daN/mm²

3.5 Fijación a la carrocería / chasis
Connection to the body work / Frame

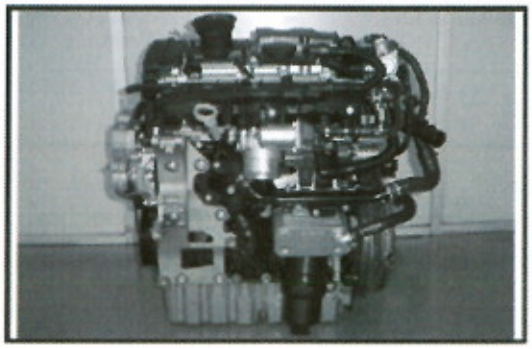
Soldado a la carrocería por medio de placas de 3mm de espesor y 120mm² de superficie
Welded into the body-shell thru with 3mm thickness plates and 120mm² surface area .

4. MOTOR / ENGINE

4.1. Letras distintivas de motor
Identification Engine letter ***BHZ***

4.2. Emplazamiento y posición
Location and position of the engine ***Front transversal, 12º to the rear***

a) Perfil delantero motor desmontado
Front view of dismounted engine



b) Perfil trasero motor desmontado
Rear view of dismounted engine

4.3. Marca **Modelo**
Make **SEAT** Model ***León 2.0 TFSI***

4.4. Número y dispoción de cilindros
Number and layout of cilindres ***4 in line***

4.5. Cilindrada a) Unitaria b) Total
Cylinder capacity **Unitary** ***496.1 cm3*** **Total** ***1984.3 cm3***

4.6. Material del bloque cilindros
Cylinder block material ***Fundición de acero / Cast Iron***

4.7. Diámetro cilindro
Bore ***82.52*** +/-0.1mm

4.8. Carrera
Stroke ***92.8*** +/-0.1mm

4.9. Volante motor
Flywheel

a) Tipo
Tipe ***Doble masa / Double mass***

b) Material

Material ***Acero y caucho / Iron and rubber***

c) Peso (con corona de motor de arranque)
Minimum (with starter ring) ***11,400 kg ± 200g***

4.10. Alimentación por inyección directa
Fuel feed by direct injection

a) Marca / Make **Bosch**

b) Modelo / Model ***Motronic MED 9.1***

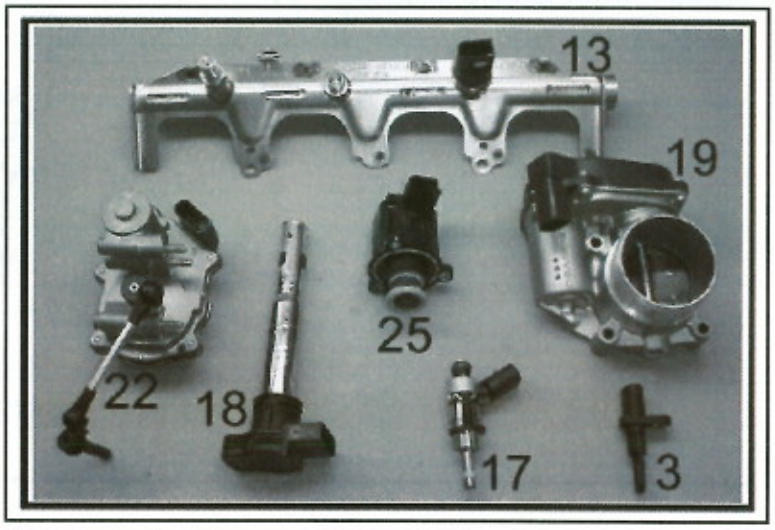
c) Diámetro del conducto de admisión en la mariposa admisión
Dimension of intake pipe at the throttle side location ***57 mm ± 0.25***

d) Captadores del sistema de inyección
Sensor of inyecctions system

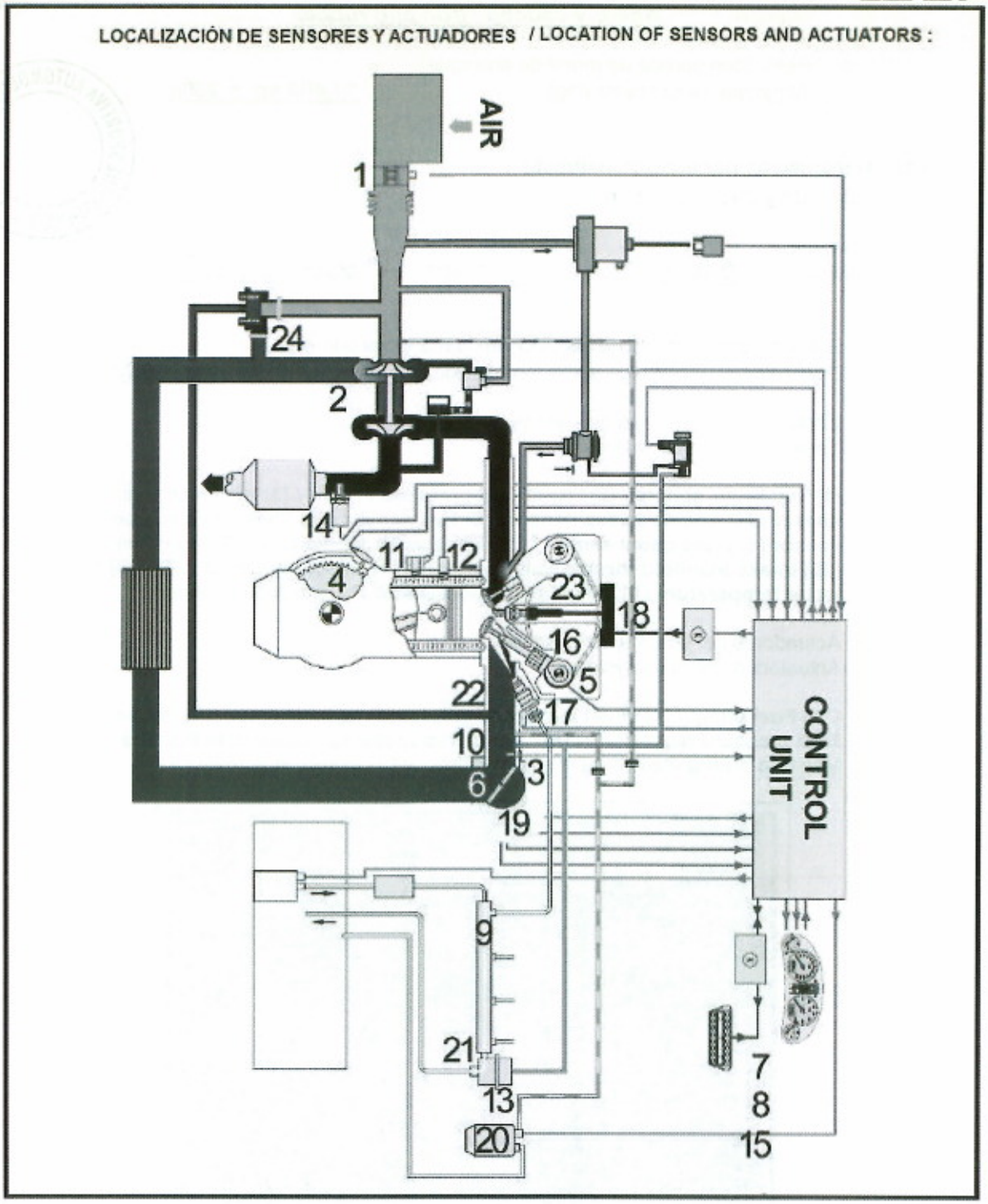
(1) Intake air sensor / (2) Overboost preasure sensor / (3) Intake air temperature sensor / (4) Engine speed sensor / (5) Hall sensor / (6) Throttle valve potenciometer sensor / (7) Gas pedal sensor / (8) Brake swith transmitter / (9) Fuel Temp. Sensor (10) Intake manifold throttle valve sensor / (11) Knocking sensor x2 / (12) Cooling water temperature / (13) Fuel pressure sensor/ (14) Lambda probes x1

e) Actuadores del sistema de inyección
Actuators of injection system

(16) Fuel pump / (17) Fuel injectors / (18) Ignitions coils / (19) Throttle valve / (21) Fuel pressure regulator valve / (22) Servo-motor for intake manifolf flaps / (23) Variable timing electrovalve / (24) Overboost pressure regulator



LOCALIZACIÓN DE SENSORES Y ACTUADORES / LOCATION OF SENSORS AND ACTUATORS :



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4.11. Referencia de los Módulos de control:
Control module reference:

ECU Motor	ECU Engine	**V4PL907112 B**
Inmovilizador	Black box	**V4PL906909 -950.081.990.001-**
Gate-way	Gate-way	**1K0907530K / L**
Módulo ESP	ESP module	**V4PL614517**
Mecatronica	Mecatronic	**VL1E331171**

4.12. Referencia de los sensores entrada ECU
ECU Inlet sensors reference:

Presión de turbo	Turbo boost	**038906051C**
Caudal de aire	Air flow meter	**06D906461**
Temperatura aire aspirado	Inlet air temperature	**06B905379D**
Temperatura agua motor	Engine water	**06A919501**
Presión gasolina de alta	Fuel pressure Height	**06J906051**
Sonda lambda	Lambda prove	**06F906262AC**
Sensor de picado 1 (cil 3+4)	Knock sensor 1 (cil 3+4)	**06F905377**
Sensor de picado 2 (cil 1+2)	Knock sensor 2 (cil 1+2)	**06E905377A**

4.13. Referencia actuadores salida ECU.
ECU outlet engine actuator reference:

Inyector	Injector	**06F906036F**
Bobina	Coil	**07K905715B / C / D**
Electro-Válvula de descarga	Waste gate electro valve	**O6F906283D**
Mariposa motor	Throtle	**06F133062G**

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4.14. Sistema de encendido
Ignition system

a) Nº de bujías x cilindro
Nº of plugs per cylinder **1**

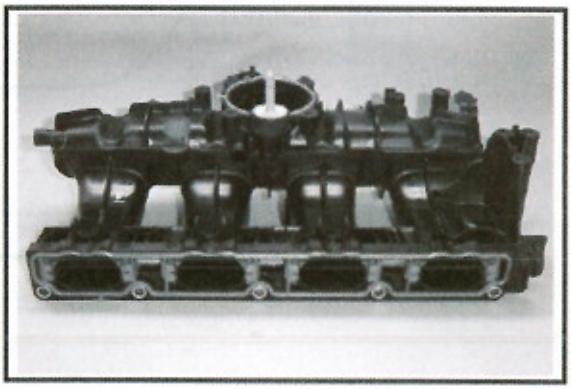
b) Nº de bobinas x cilindro
Nº of coils x cylinder **1**

4.15. Colector de admisión
Intake manifold

b) Material del colector
Manifold material

Plástico / Plastic

Vista colector de admisión / Intake manifold view



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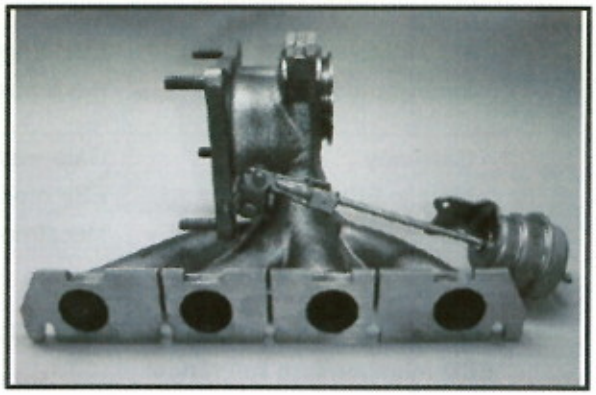
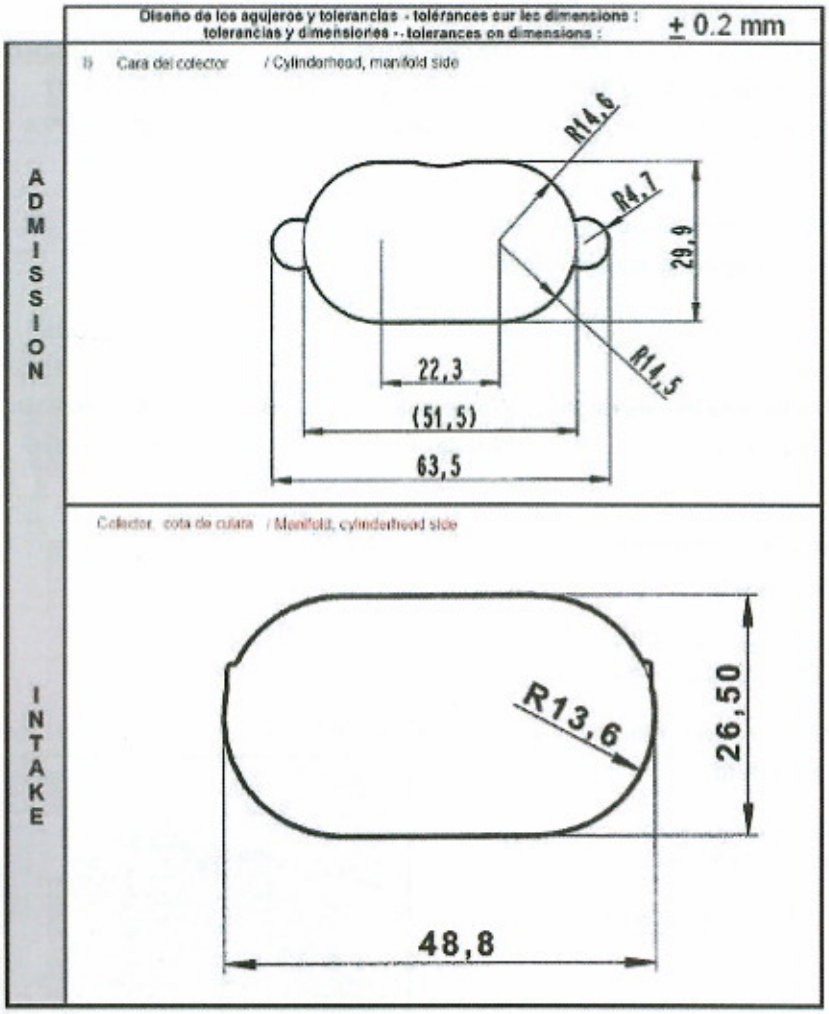
4.16. Colector de escape
Exhaust manifold

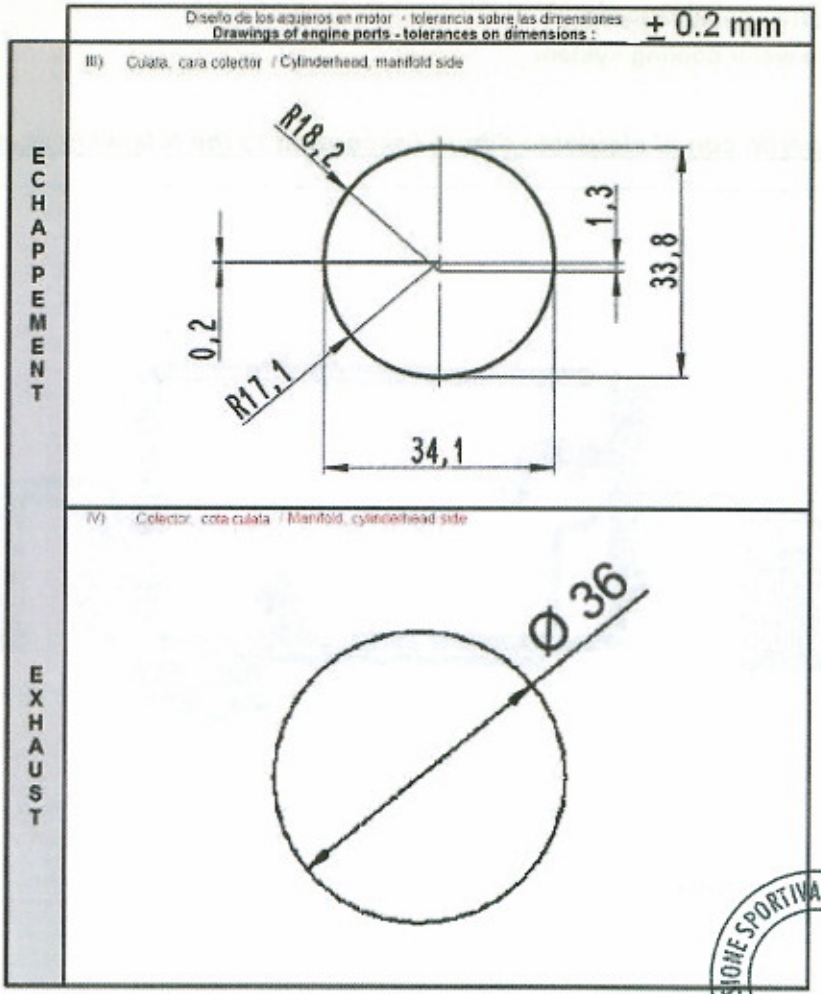
a) Material
Material ***Cast Iron***

Colector de escape / exhaust manifold



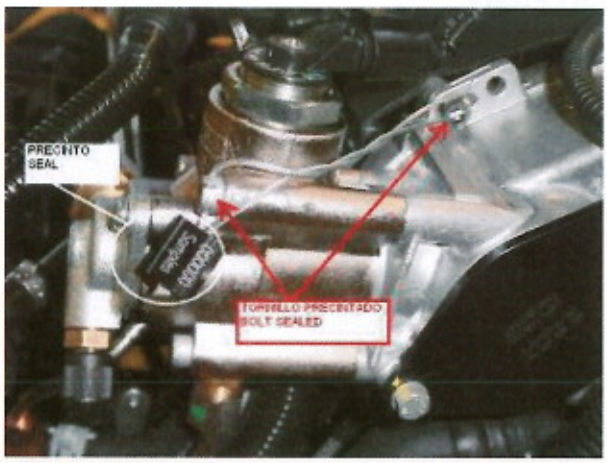
4.17. Medidas de los tubos del colector de admisión y escape
Intake and exhaust manifold holes dimensions



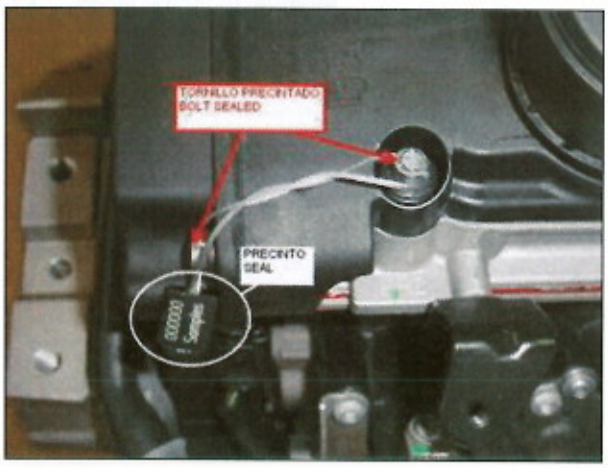


4.18. Precintos motor
Engine seals

a) Un precinto en tapa distribución
One seal on the distribution cover



b) Un precinto en bomba de gasolina de alta
One seal on the high pressure fuel pump



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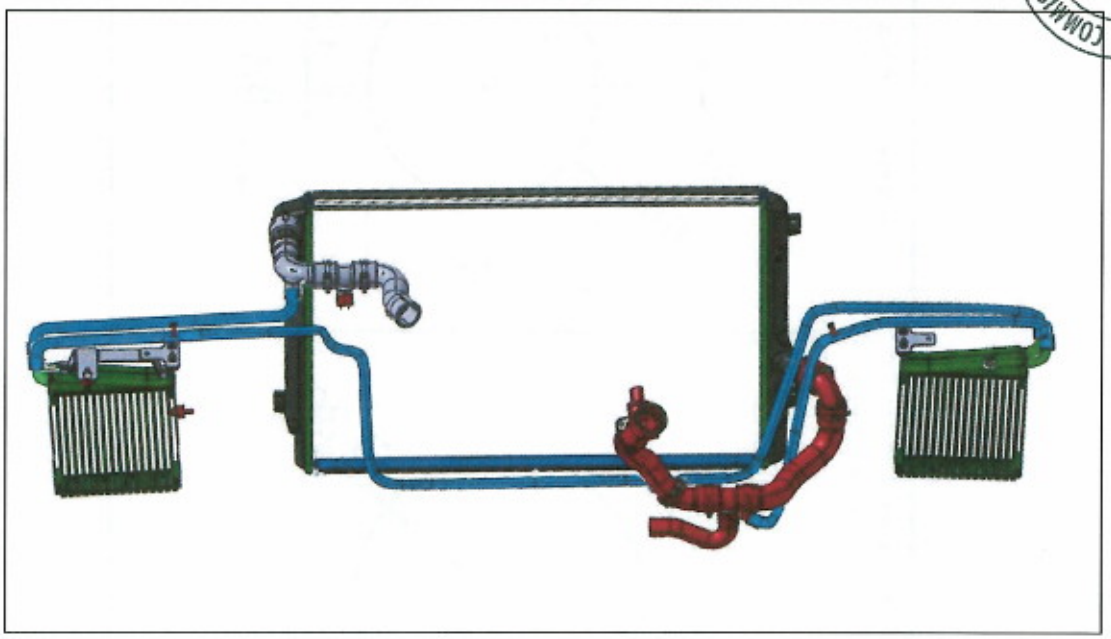
4.19. Refrigeración agua motor
Engine water cooling system

De acuerdo con el siguiente dibujo / according to the following sketch.



Radiador principal
Main radiator:

a) Referencia
Reference: ***1K0121251AB***

b) Nº de pasos radiador principal
Nº of tube of the primary radiator: **P = 56**

c) Material de los pasos:
Tube material: **Aluminio / Aluminium**

d) Material de las cubetas:
Material of lateral cover: **Plastico / Plastic**

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4.20. Entrada de aire
Air intake

a) Material caja filtro
Air box material **Carbono / Carbon**

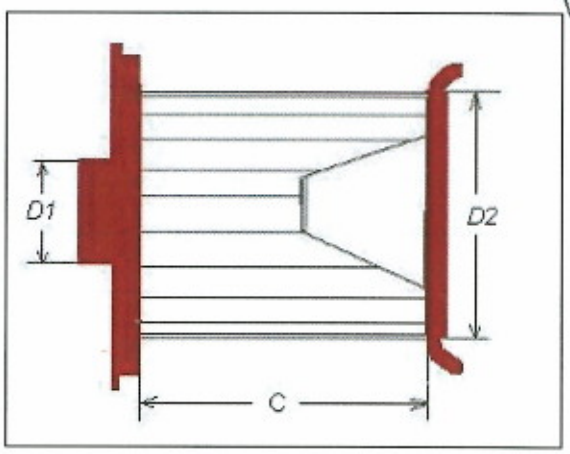
b) Material elemento filtrante
Air filter material **Gasa de Algodón / Cotton Gauze**

c) Dimensiones D1, D2, C, del elemento filtrante son las siguientes:
Dimension A, B, C, Air filter acording to the following aketch

D1 = **75** ± 1 mm (diámetro exterior / external diametre)

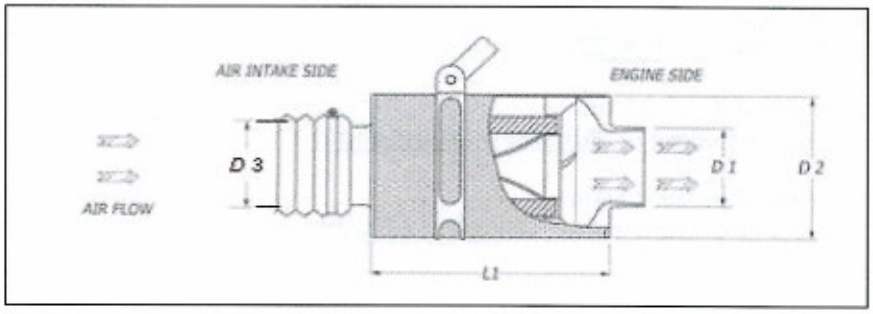
D2 = **110** ± 1 mm (diámetro exterior / external diametre)

C= **130** ± 1 mm



d) Dimensiones D1, D2, D3, L1, de la caja filtro de aire son las siguientes:
Airbox dimension D1, D2, D3, L1, acording to the folllowing sketch:

D 1 = ***80 mm*** ± 1 mm (diámetro exterior / external diametre)
D 2 = ***150 mm*** ± 1 mm (diámetro exterior / external diametre)
D 3 = ***75 mm*** ± 1 mm (diámetro exterior / external diametre)
L 1 = ***235 mm*** ± 0.5 mm

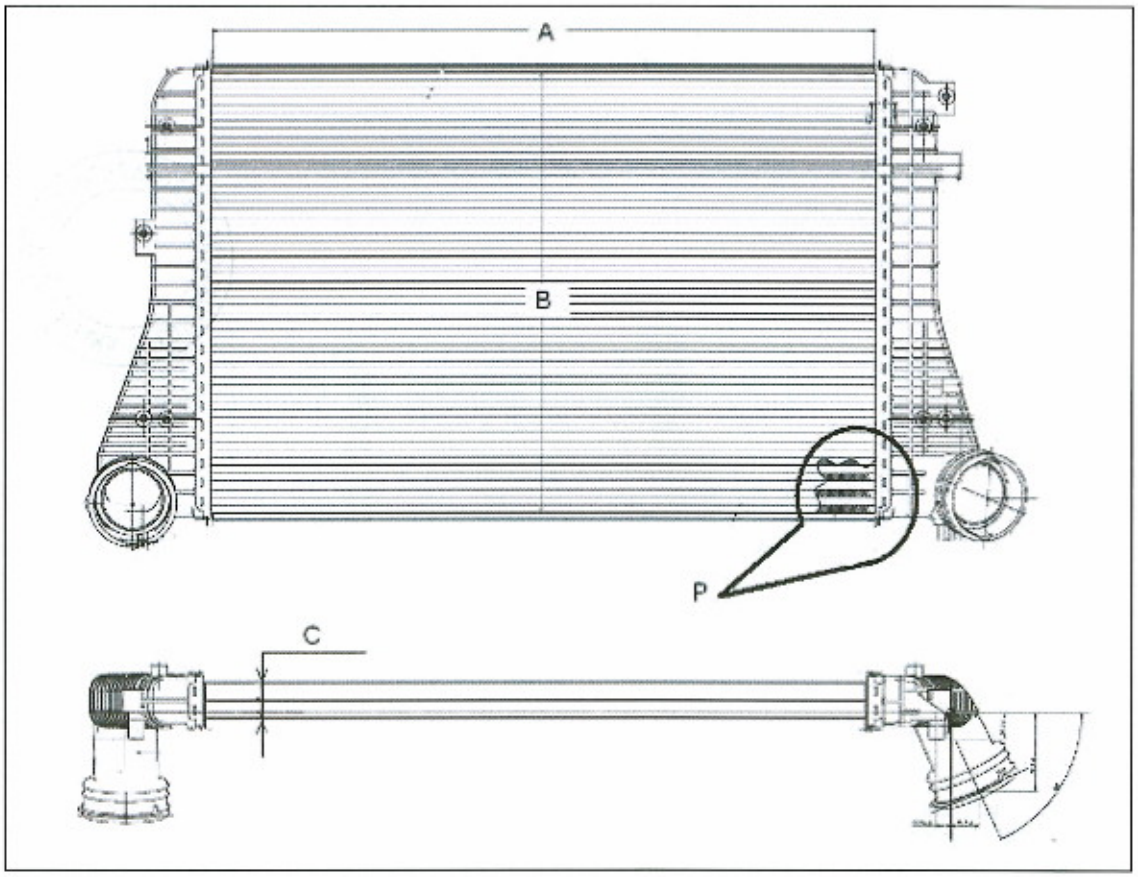


4.21. Intercooler, medidas A, B, C, son las siguientes:
Intercooler, dimension A, B, C, according with the following sketch

A = 614 ± 1 mm

B = 406.6 ± 1 mm

C = 32 ± 0.5 mm



e) Referencia
Reference: ***1K0145803A o/or 1K0145803S***

f) Nº de pasos
Nº of tube: **P = 27**

g) Material de los pasos:
Tube material: **Aluminio / Aluminium**

h) Material de las cubetas:
Material of lateral cover: **Plastico / Plastic**

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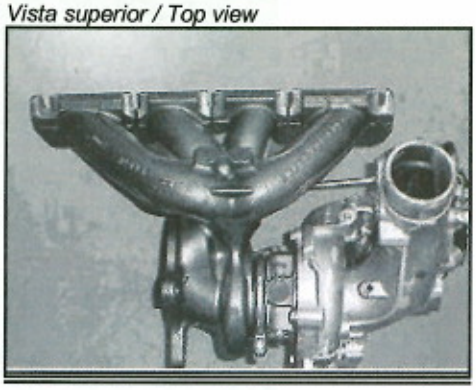
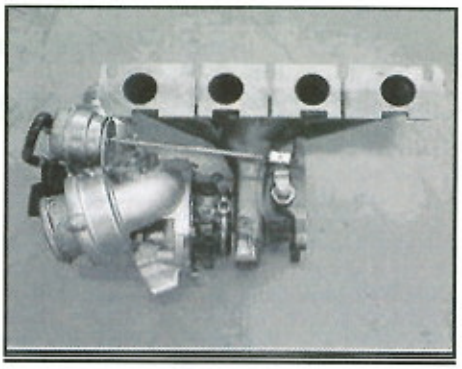
4.22. Turbocompresor
Turbocharger

Vista superior / Top view





a) Marca y tipo de turbocompresor
Make and type of the turbocharger

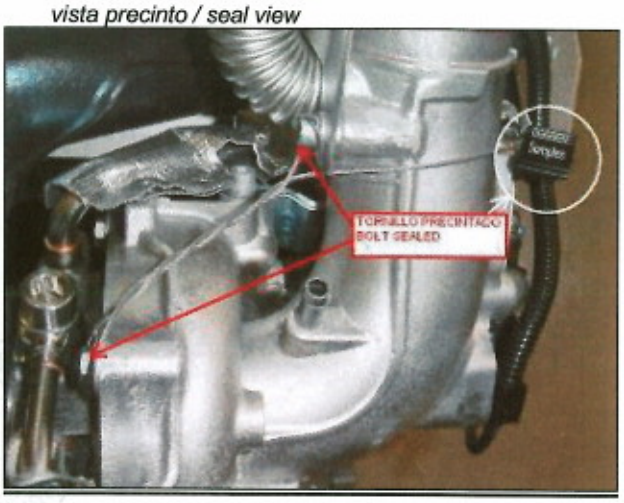
VW – Audi / KK3

b) Referencia
Reference ***06F145702C***

Posición etiqueta / label position

vista precinto / seal view

c) Precintaje SEAT Sport
SEAT Sport seal ***SI / YES***



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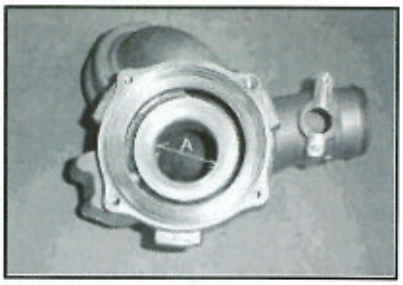
d) Turbina de compresión y cuerpo
Turbine wheel and Impeler housing

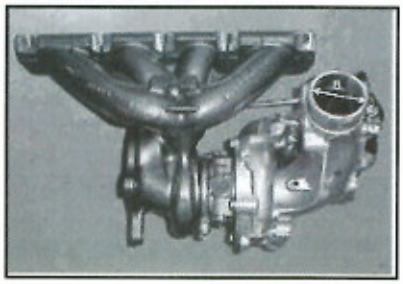
1- Cota A, interior turbina de compresión
Dimension A, inlet turbine housing

47.2 mm +/-0.3



2- Cota B, tubo entrada aire (dibujo B)
B Air inlet diameter, (photo

52.3 mm max



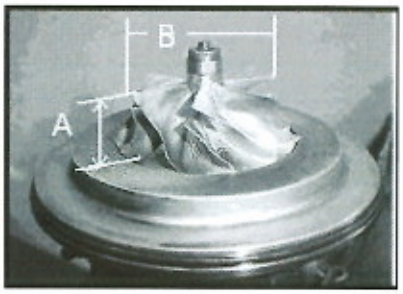
3- Número de alabes admisión
Number of blades

6 + 6 = 12

4- Altura álabe alto "A"
Hight big blade "A"

A = 18.35 ± 0.2 mm.

B = 46.45 ± 0.5 mm.

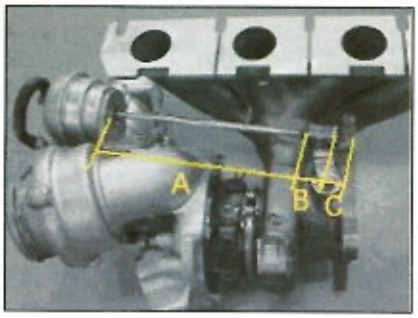


e) Material turbina escape
Material impeler wheel ***Inconel (Crome-Molibden alloy)***

f) Numero de alabes turbina de escape
Number of blades **12**

g) Tipo de regulación de sobrepresión
Over boost regulation type ***Válvula de descarga /Waste Gate valve***

h) Medida varilla Válvula Descarga
Waste Gate push rod measurement



- Base WG to interanl screw
A= 168 ± 1 mm

- External screw to final push rod
B= 22.7 ± 0,3 mm

- Screw pacage on waste gate valve
C= 10 ± 0,5 mm

5. Escape / Exhaust

5.1. Material

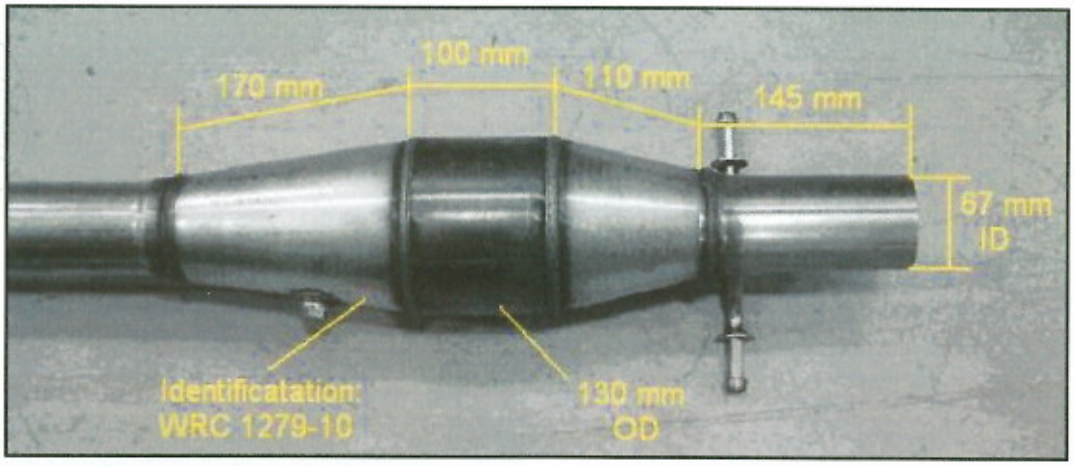
Material ***Inox***

5.2. Catalizador: marca y tipo:

Catalyst: brand, type: ***HJS - WRC 1279-10***

5.3. Medidas catalizador

Catalyst dimensions: ***Tolerancia 1% / 1% tolerance***



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6. CIRCUITO DE GASOLINA / FUEL CIRCUIT

6.1. Deposito a) Número depositos
Fuel tank Fuel cell number 1

b) Emplazamiento
Location ***Under rear seat***

c) Material
Material ***PP-Polypropylene***

d) Capacidad
Capacity ***62 lts +/- 1***

e) Número de bombas de gasolina
Number of fuel pump
2 de baja presión en deposito + 1 de alta presión en el motor
2 low press in the fuel cell + 1 hight press on the engine

7. ELECTRÓNICA DE MOTOR / ELECTRONIC CONTROL UNIT

7.1. Identificación
Identification

a) Marca
Make ***VW-Audi /Bosch***

b) Modelo
Model ***Motronic MED***

c) Referencia
Reference ***8P0 907 115 E***

d) Software Identificación
e) Software identification ***Software ID: SSC5***

f) Precintaje
Sealed **00XXXXX**
SEAT

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7.2. Adquisición de datos

Data logger

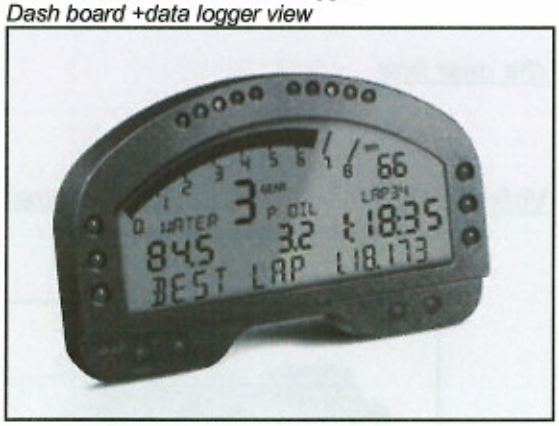
a) Marca / Marke ***AIM***

b) Tipo / Type ***MXL***

c) Canales disponibles / Available channels **25 CAN + 8 analogic**

d) Posibilidad de conexión de GPS / GPS conexión possibility ***SI / YES***

Vista del Dash board + data logger
Dash board +data logger view



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7.3. Limpiaparabrisas

Wippers ***Solo una ragueta lado piloto / Only one wiper on the driver side***

8. TRANSMISION / POWER TRAIN

8.1. Ruedas motrices
Driven wheels ***2 front***

8.2. Embrague a) Sistema de gestión
Clutch Control system: ***Electrico-hydraulic***

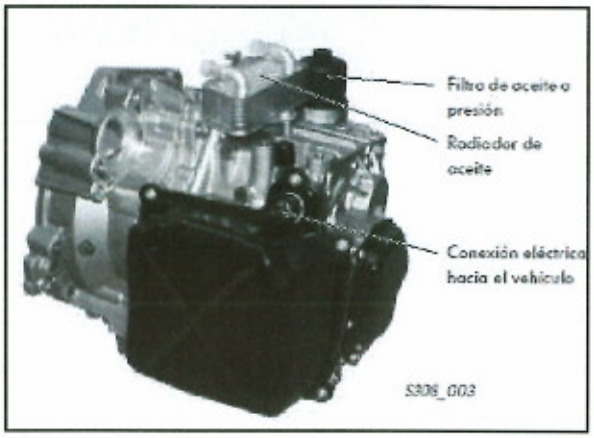
b) Número de embragues **2** c) Tipo
Number of clutches Type **Multidisco bañado en aceite**
Multidisc in oil bath

c) Emplazamiento
Location ***Inside of the gear box***

8.3. Caja de cambios a) Marca b) Tipo
Gearbox Make ***Volkswagen*** Type ***DSG Automatic***

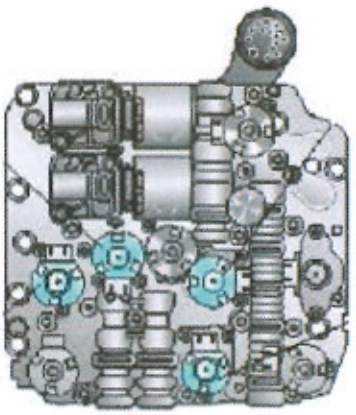
c) Refrigeración caja cambios
Gear box cooling system

Por intercambiador aceite/agua
By oil/water radiator



d) Sistema de gestión de marchas
Gears shift system
Electronico / Electric

(esta pieza "Mecatrónica" se encuentra dentro de la caja de cambios)
(this part "Mecatronica" is placed into the gear box)

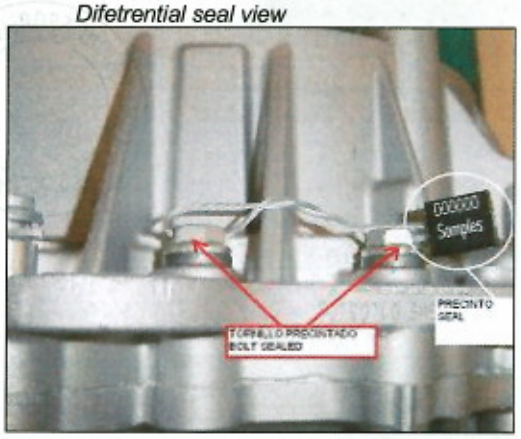


e) Identificación del software
Software Identification. **C11K051_DFYY_25A_SuperCopa**

f) Precintaje SEAT Sport
SEAT Sport sealed ***2 precintos / 2 seals***

- Uno precintando el diferencial / One sealing the diferencial
- Uno precintando la mecatronica y tapa lateralOne sealing the mecatronica and lateral cover

Vista precinto diferencial
Difetrential seal view



Vista precinto tapa mecatrónica
Mecatronica cover seal

g) Relación de cambio
Gearbox Ratio

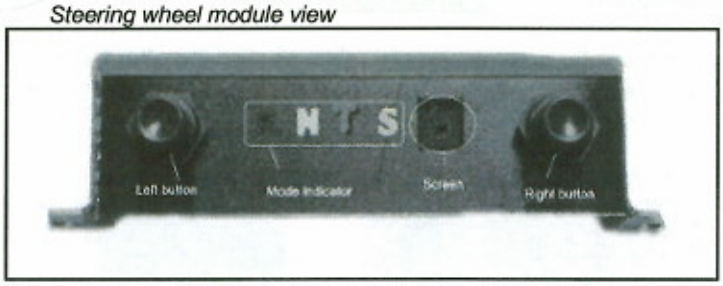
Description	Value	Ratio	Speed
Gearbox	6-speed DSG automated		
Clutch	Two clutches in DSG oil bath	Total ratio	Speed 6800 rpm.
Ratio I	15/44	0.071	59
II	22/45	0.102	84
III	28/41	0.142	118
IV	38/41	0.193	160
V	32/35	0.254	211
VI	38/35	0.302	250
Final group 1-2-3-4	15/72		
Final group 5-6	20/72		
Differential	Seat sport limited slip	Ramps of 25/45	

8.4. Gestión de cambio DSG
DSG Gear box control

h) Tipo de gestión y posición
Type and control and position

Módulo electrónico en el volante / Electronic module on the steering wheel

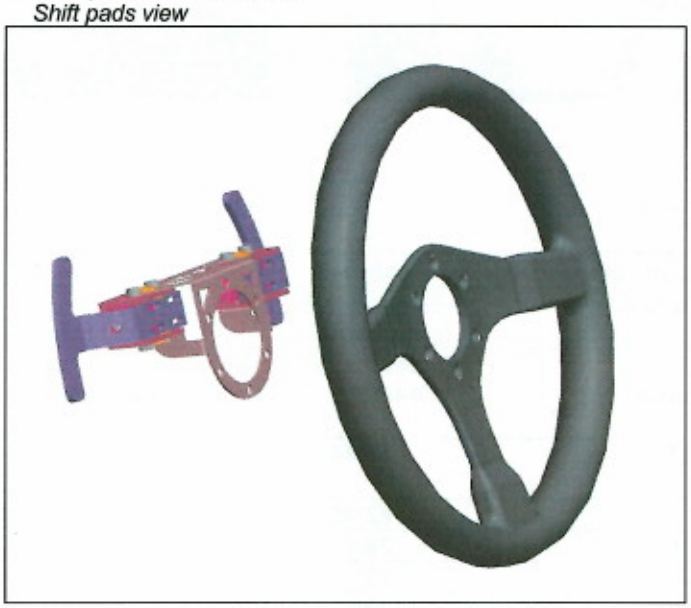
Vista modulo de volante
Steering wheel module view



i) Tipo accionamiento y posición
Action type and position

Por palancas en el volante / By Shift pads at the steering wheel

Vista palancas de cambio
Shift pads view



9. TREN RODANTE / RUNNING GEAR

9.1. Llanta a) Fabricante - medida
Rim Manufacturer - dimension ***Braid - 9.5" x 18 - ET 30***

b) Modelo
Model ***SEAT Sport***

b) Peso mínimo
Minimum Weight

10.7 kg

9.2. Distancial de rueda
Wheel spacers

a) Eje anterior
Front axle ***Not allowed***

b) Eje posterior
Rear axle ***10*** ± *0.1mm Cada lado / Each side*

9.3. Discos anteriores a)diámetro / Diameter = 362 ± 1.5 mm.
Front disc b) Ancho / Width **= 32 ± 1 mm.**
c) ventanas / vanes = 48.
d) Material / material ***Fundición de acero / Cast iron***

9.4. Discos posteriores a) Diámetro / Diameter = 255 ± 1.5 mm
Rear discs b) Ancho / Width **= 10 ± 1 mm.**
c) ventanas / vanes = **NO**
d) Material / material ***Fundición de acero / Cast iron***

9.5. Pinzas de freno anteriores
Front Brake callipers

a) Marca
Make ***SEAT Sport***

b) Material

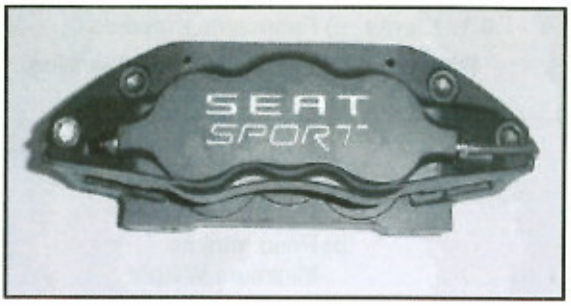
b) Fabricado por
Made by ***AP Racing***

d) Muelles de pistones

Material ***Aluminium Alloy*** Springs rear the pistons ***NO***

c) Diámetro pistones delanteros
Front calliper piston diameter

2x27 mm / 2x31.7 mm / 2x38.1 mm



d) Refrigeración forzada
Forced cooling ***Si / Yes***

e) Tipo
Type ***aire-aire por tubo flexible Ø100***
Air-air by flexible pipe Ø100

9.6. Pinzas de freno posteriores
Rear Brake callipers

a) Marca
Make ***SEAT Sport***

b) Material
Material ***Cast aluminium***

c) Diámetro pistones posteriores
Rear calliper piston diameter ***1x38 mm***

9.7. Diámetro bombas de freno opcionales
Master cylinder options

SEAT Sport Reference	Internal diameter
V4PL614165	15.88 mm
V4PL614165A	17.78 mm
V4PL614165B	19.05 mm
V4PL614165C	20.64 mm
V4PL614165D	22.23 mm
V4PL614165E	23.81 mm

9.8. Regulador de frenada, tipo
Brake vias adjustment, type

Mecánico en el pedal, por cable / Mechanical on the pedal box, by cable

SEAT SPORT

10. DIRECCIÓN / STEERING

10.1. Caja de dirección; medidas A, B, C, D, E, corresponden al siguiente esquema:
Steering rack; dimension A, B, C, D, E, according to the following sketch:

- Entre centros de soportes / between centre support holes

  A = 494 ± 1 mm.

- Entre centro articulaciones / between ball joints

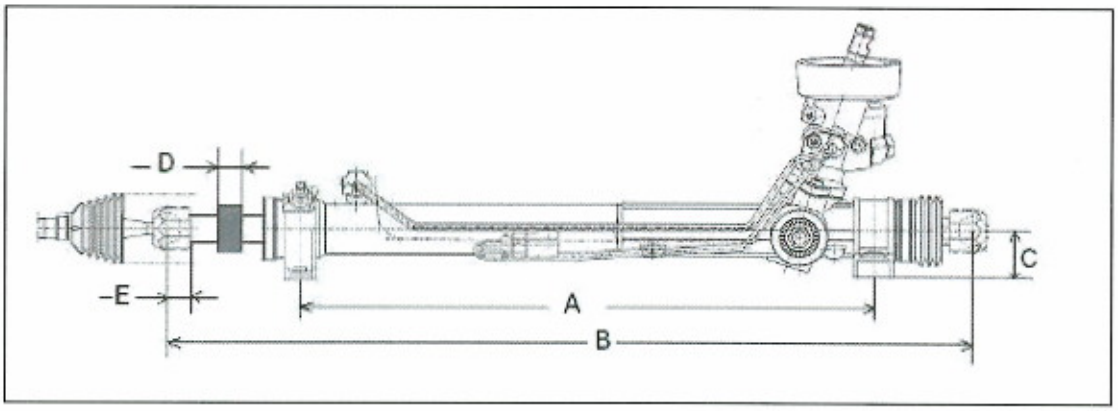
  B = 664 ± 1 mm. **E = 19.6** ± 0.02 mm.

- Altura centro de caja / Steering rack centreline height

  C = 41 ± 0.5 mm.

- Distancial tope de giro / steering lock restrictor

  D = 30 ± 0.5 mm.



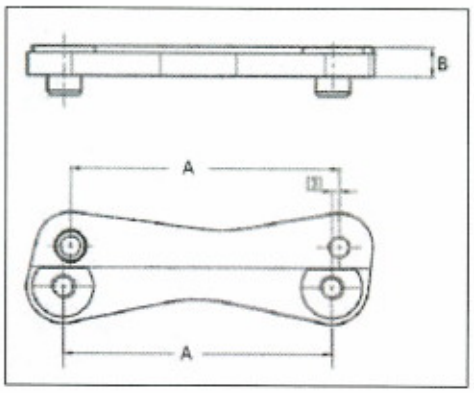
10.2. Forma y dimensiones soporte caja dirección
Steering rack support shape and dimension

- Entre centros / Between cetres

  A= 110 ± 1 mm.

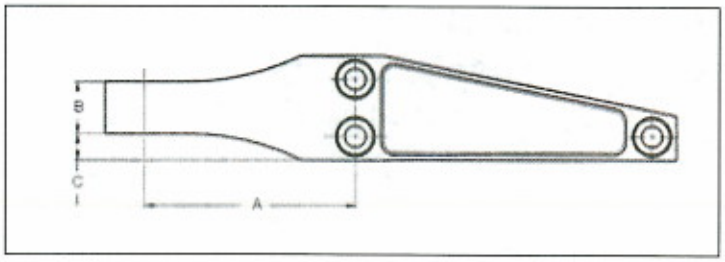
- Altura soporte / Support height

  B = 12 ± 0.3 mm.



10.3. Manota de dirección, medidas A, B, C, son las siguientes
Steering handle, dimension A, B , C, according to the following sketch:

A= 81.5 ± 1 mm.
B= 20 ± 0.5 mm.
C= 10 ± 0.5 mm.



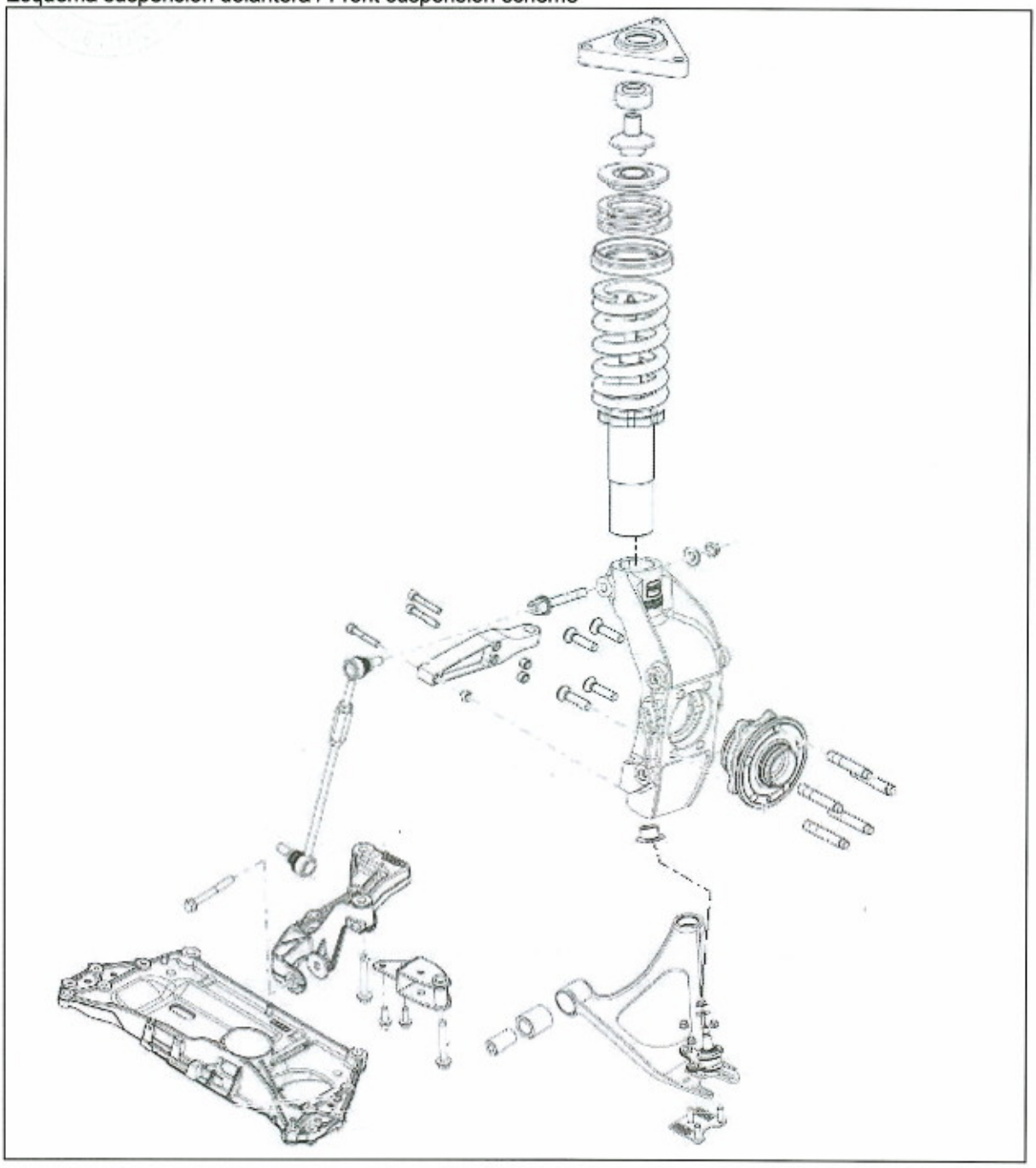
SEAT SPORT

11.SUSPENSION

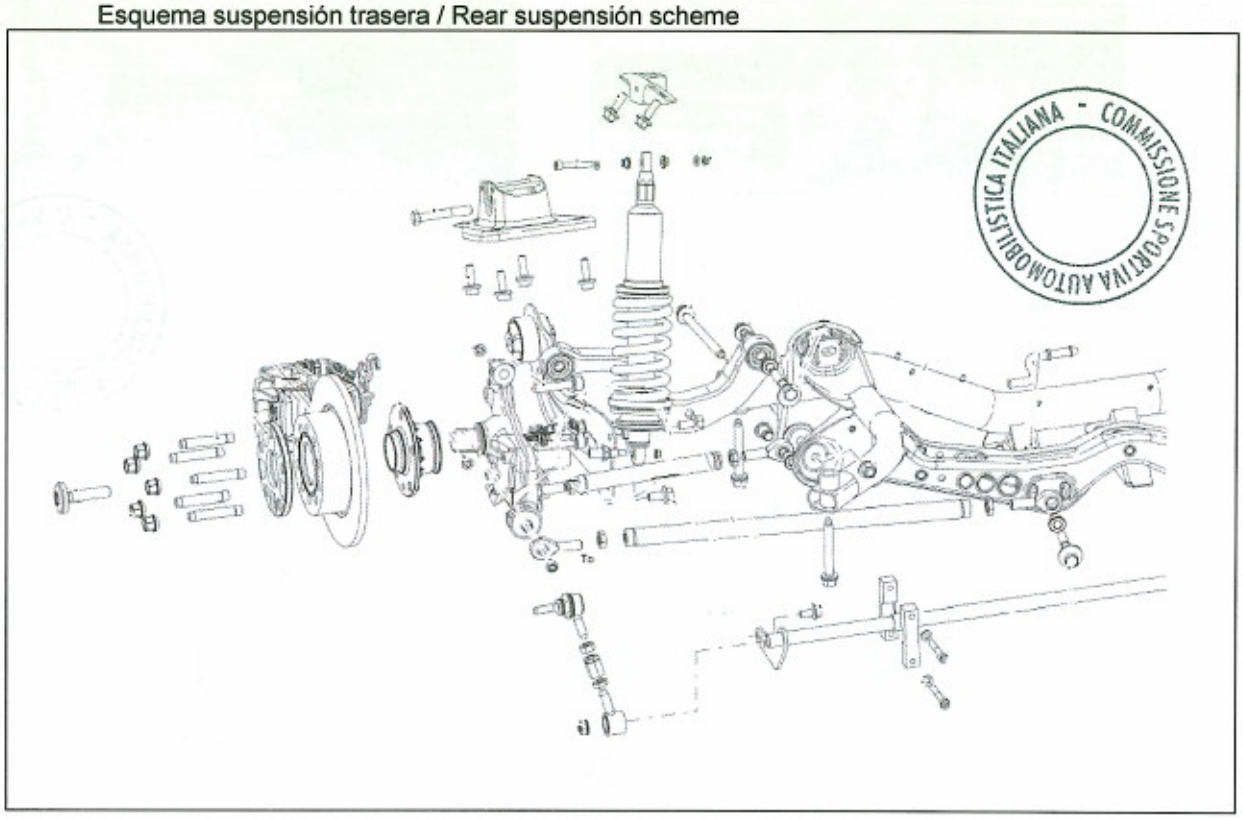
11.1. Generalidades
General

a) Tipo	Delante		Detrás	
Type	Front	***Mcpherson***	Rear	***Multilink***

Esquema suspensión delantera / Front suspension scheme



Esquema suspensión trasera / Rear suspensión scheme



11.2. Amortiguadores

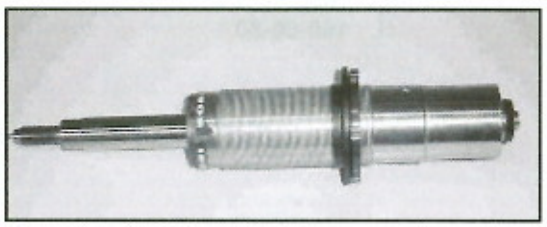
a) Tipo anterior
Front type ***Mcpherson***

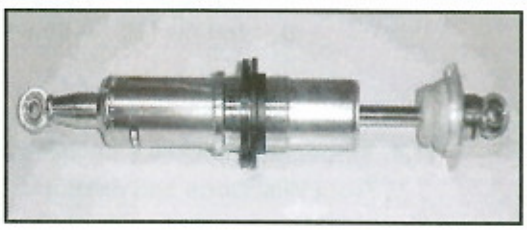
b) Marca
Brand ***Koni***

c) Tipo posterior
Rear type ***Telescopic***

d) Modelo del anterior
Front model ***8710-1011***

e) Modelo del posterior
Rear model ***3011-1150***

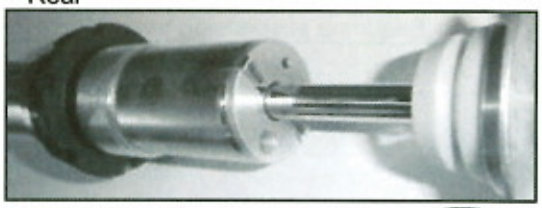




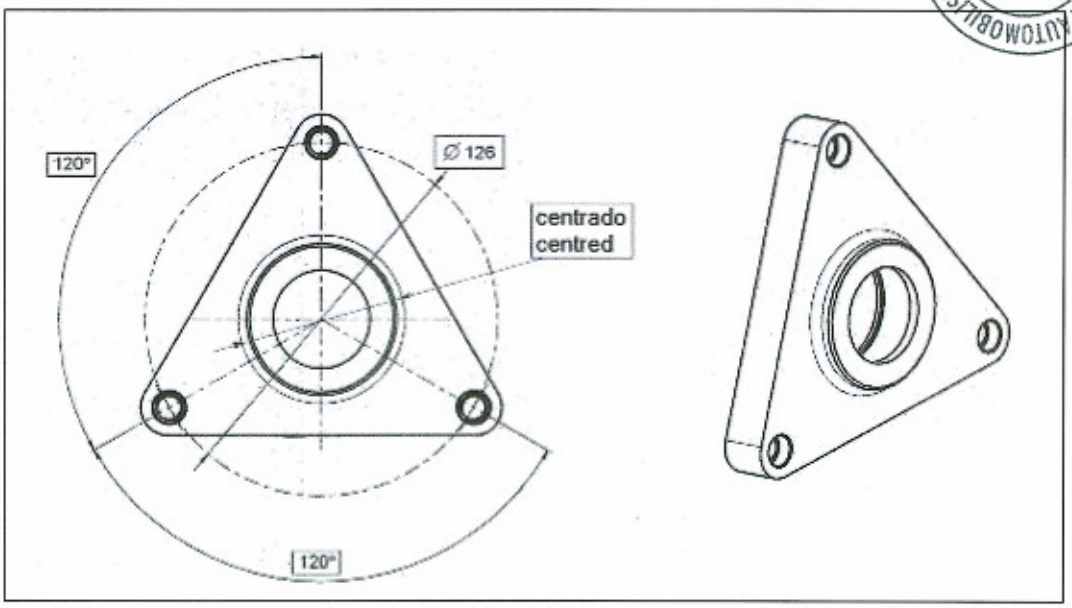
e) Tipo precinto amortiguador
Shock absorver seal tipe ***Etiqueta inviolable / unviolable adhesive foil tape***

Front

Rear



f) Medidas de la copela superior amortiguador anterior
Top mount shock absorber support dimension



11.3. Muelles
Springs

a) Delateros
Front

a.	**250-60-70**	**-- --**
b.	**160-60-90**	**+ 60-60-2**
c.	**160-60-110**	**+ 60-60-2**
d.	**160-60-130**	**+ 60-60-2**

b) Traseros
Rear

a.	**160-60-50**
b.	**160-60-60**
c.	**160-60-70**
d.	**160-60-80**

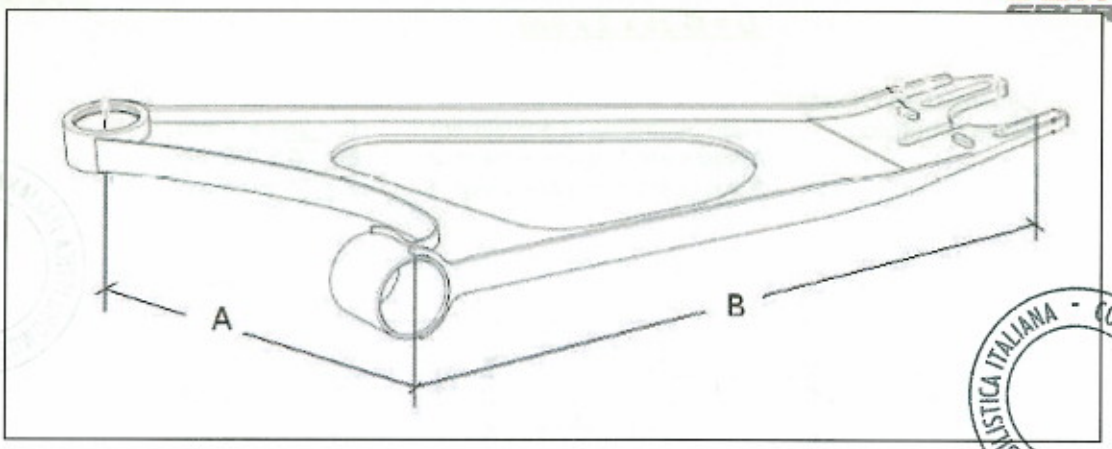
11.4. Trapecio delantero y anclajes
Front Wishbone and fixations

a) Trapecio, material y medidas A, B son las siguientes:
Triangle, dimension A, B, and material are the following:

Material: **Acero / Steel**

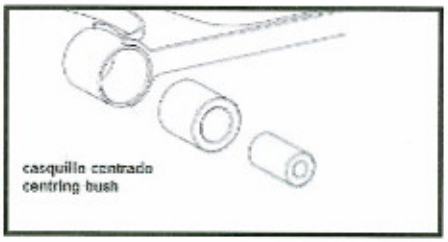
Medidas / Dimension: A= **326** ± 1 mm.

B= **394.5** ± 18 mm.



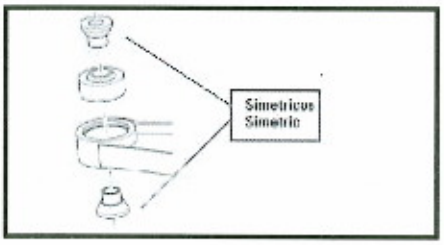
i. Casquillo centrador punto E-1
E-1 Centring bus

Centrado / Centered



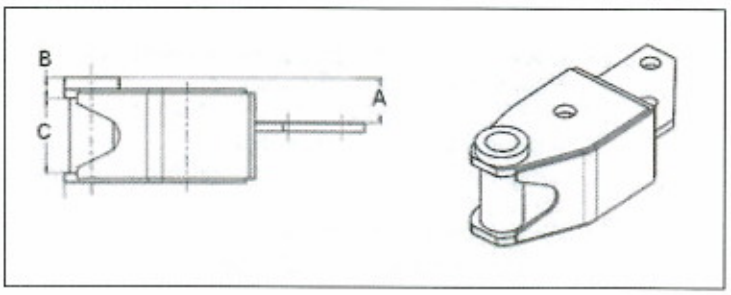
ii. Casquillo centrador punto E-2
E-2 Centring bush

Simétricos / Simetrics



11.5. Soporte trapecio, medidas A, B, C, son las siguientes:
Triangle support, dimension A, B, C, according to the following sketch:

A= **24.43** ± 1 mm.
B= **11.6** ± 0.5 mm.
C= **41.2** ± 0.5 mm.



11.6. ***Dimensiones barra estabilizadora anterior***
Front anti-roll bar Dimensions

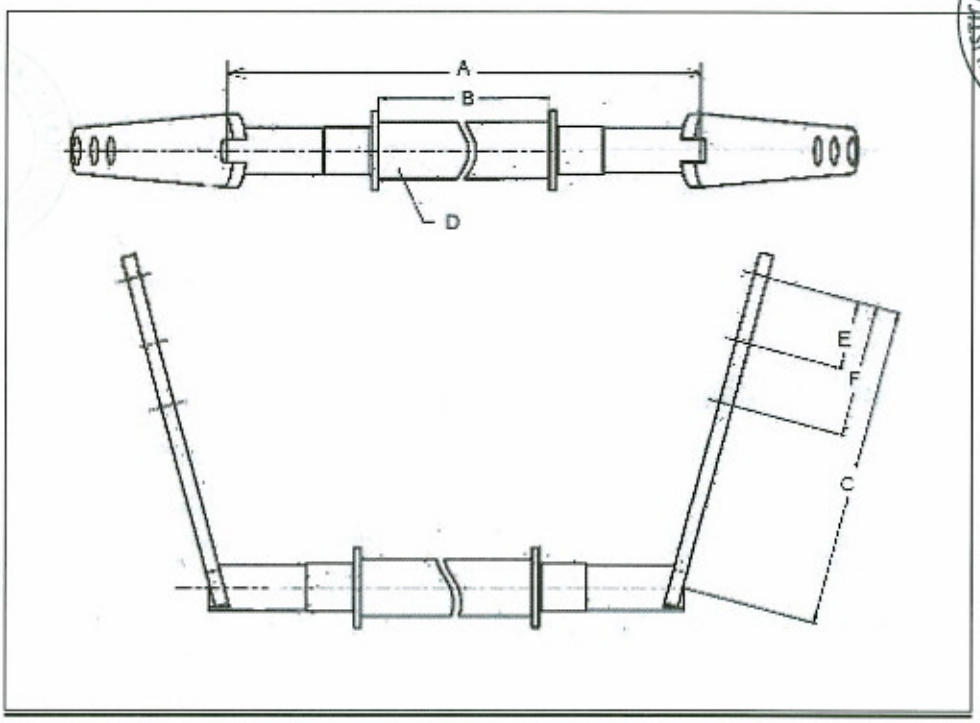
Longitud total A es la siguiente:
Long A according with the following sketch: ***A = 953*** ± 2 mm

Dimensión del tubo de torsión
Torsion bar dimension: ***B = 820*** ± 1 mm

D = Ø 25 x 2 x 820

Dimensiones Espada:
Blade dimension:

Tube centreline to adjustment 1	**C = 256** ± 1 mm.
Adjustment 1 to adjustment 2	**E = 30** ± 0.5 mm.
Adjustment 1 to adjustment 3	**F = 58** ± 0.5 mm.



b) Dimensiones barra estabilizadora posterior
Rear anti-roll bar Dimensions

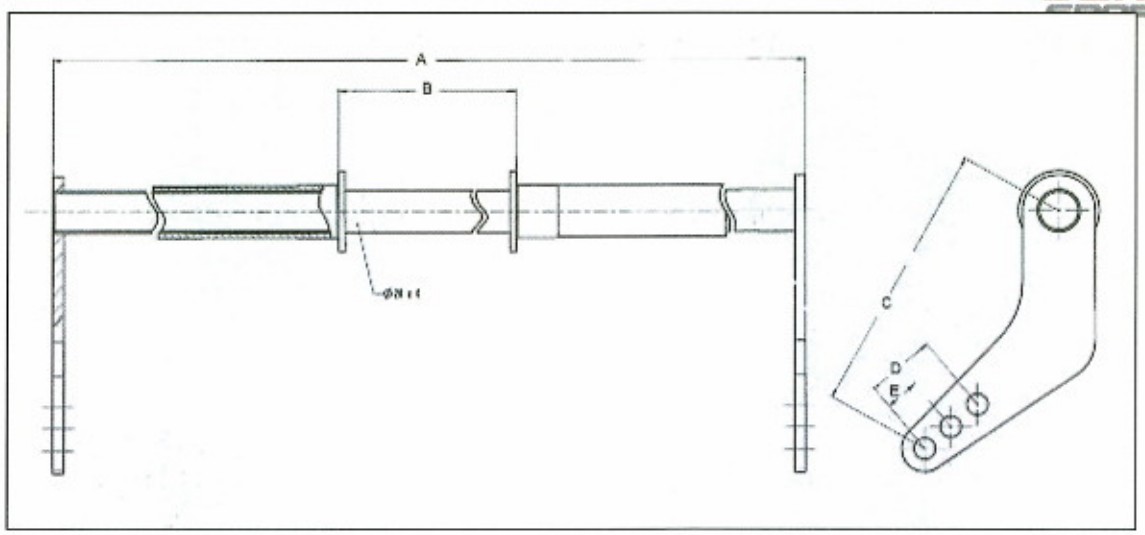
Logitud total A es la siguiente
Length total A according with the following sketch: ***A = 1069*** ± 1.5 mm

Dimensión del tubo de torsión:
Tosion bar dimension: ***B = 688*** ± 1 mm.

D = Ø 20 x 6

Dimensiones Espada
Blade dimension

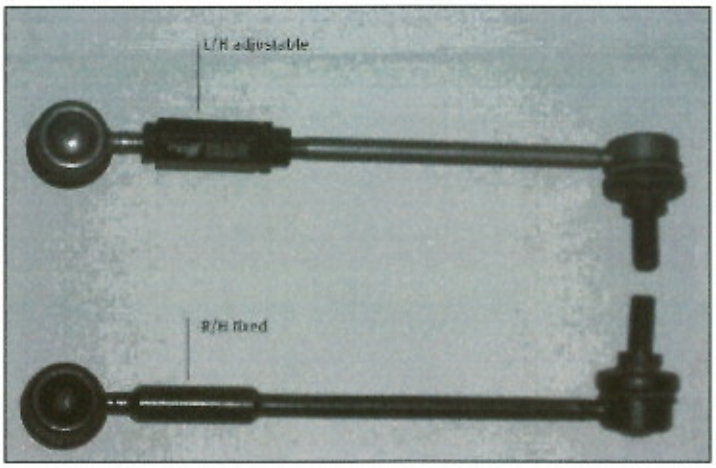
Tube centreline to adjustment 1	**C =** 130 ± 1 mm.
Adjustment 1 to adjustment 2	**E =** 16 ± 0.5 mm.
Adjustment 2 to adjustment 3	**F =** 33 ± 0.5 mm.



11.7. Biela estabilizadora
Anti-roll-bar drop link dimensions

a) Bieleta fija anterior entre centros
Front fixed length center to center ***250*** ± 1 mm.

b) Bieleta fija posterior
Rear fixed length ***100*** ± 1 mm.



11.8. Mangueta delantera
Front Upright

a) Material
Material ***Fundición de aluminio / Cast alloy***

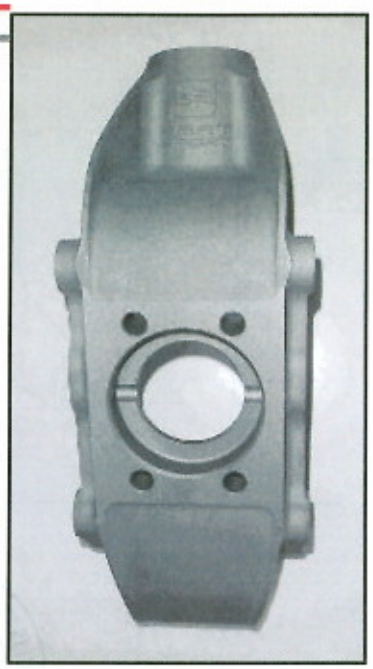
b) Posición
Position ***Ambidiestra / ambiextrous***

Vista frontal / front view

Vista posterior / rear view

FICHA TÉCNICA
LEÓN SUPERCOPA MK2

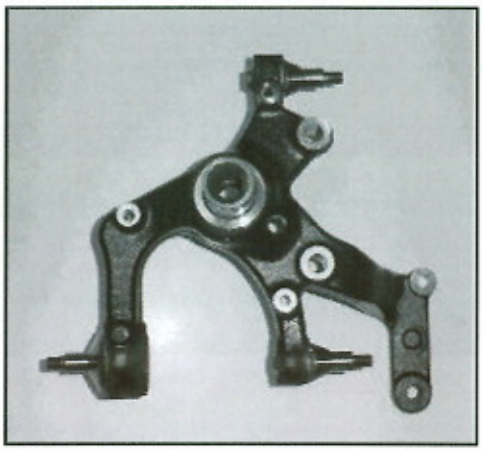
año / year
2008



11.9. Mangueta posterior
Rear upright

a) Material
Material ***Fundición de acero / Cast Iron***

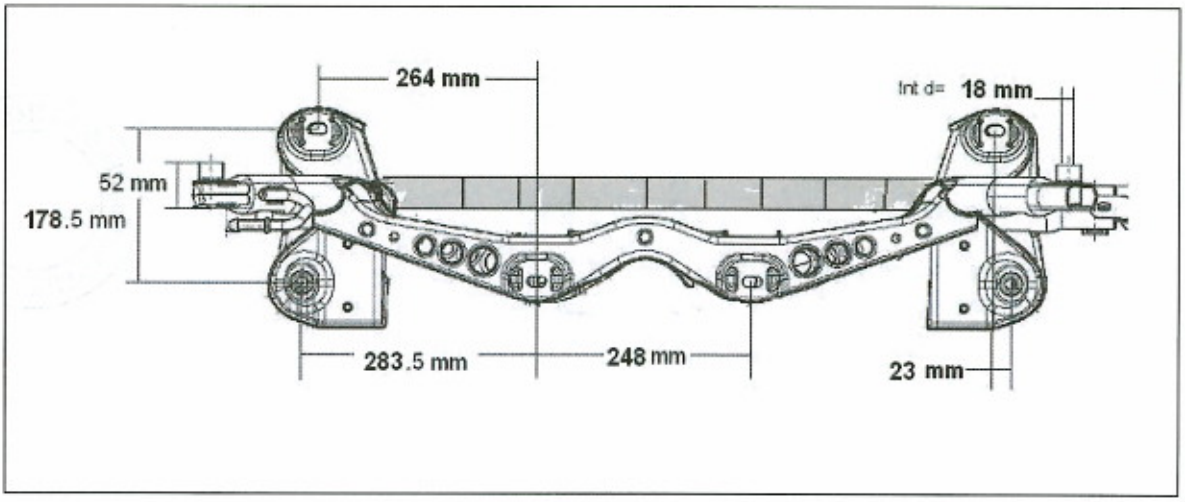
b) Posición
Position ***Diferente Izq y Der / Left and Right hand***



11.10. Subchasis posterior
Rear Subframe

a) Material
Material ***Acero soldado / Iron welded***

b) Dimensiones
Dimensions



12. CARROCERÍA / BODYWORK

a) Nº de puertas
Number of doors ***4***

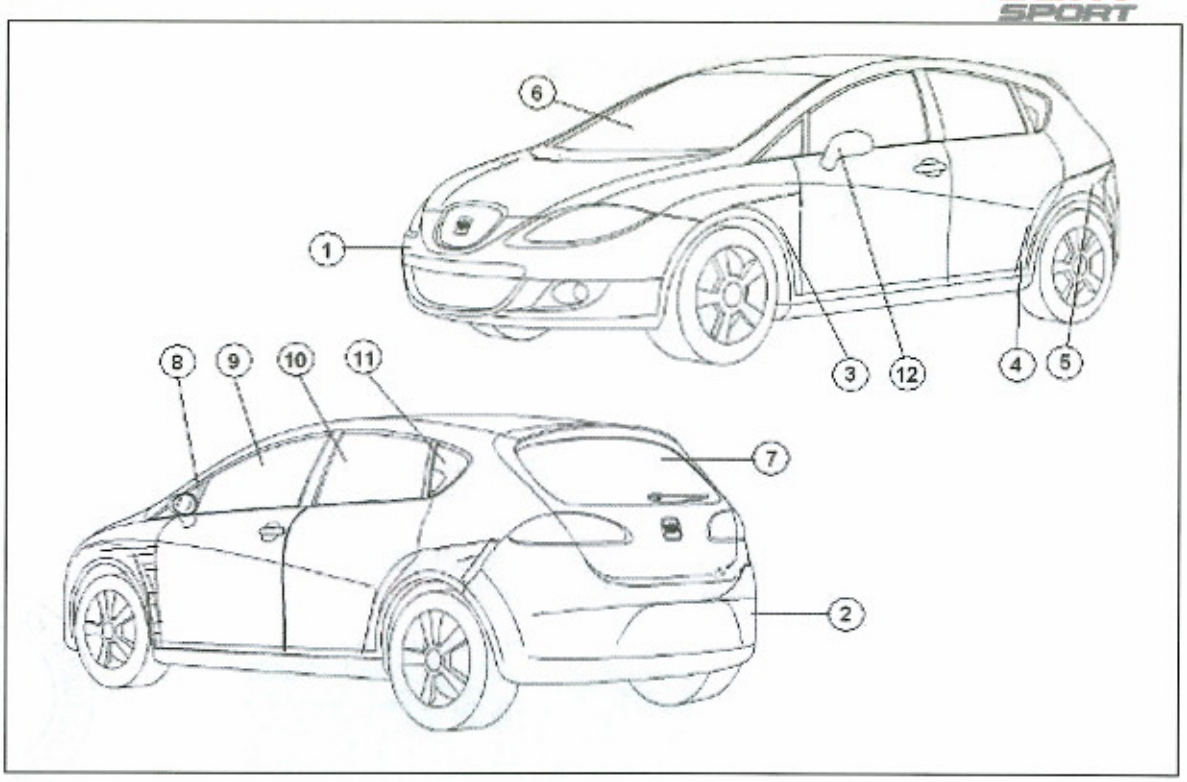
b) Material del capó
Front bonnet material ***Acero / Steel***

c) Material del portón
Rear bonnet material ***Acero / Steel***

d) Material de la carrocería
Bodywork material ***Acero / Steel***

e) Partes de carrocería no metálicas
Non metalic parts of the body

Número / Number	Pieza / Part	Material / Material
1	Parachoques anterior / fornt bumper	Composite / Epolam
2	Parachoques posterior / rear bumper	Polypropylene
3	Aletas anteriores / Front fenders	Composite / Epolam
4	Extensión puerta / Rear door extensión	Composite / Epolam
5	Aletas posteriores / Rear fenders extension	Composite / Epolam
6	Parabrisas / Front windscreen	Safey glass
7	Cristal portón / Rear windscreen	Safety glass + laminated
8	Ventana triangulo anterior / Front quarter windows	Safety glass + laminated
9	Cristales puertas anteriores / Front doors windows	Polypropylene
10	Cristales puertas posteriors / Rear doors windows	Polypropylene
11	Ventana triangulo posterior / Rear quarter window	Polypropylene
12	Carcasa espejo retrovisor / Exteranl mirrow cover	Polypropylene



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13. AERODINÁMICA / AERODYNAMICS

13.1. Fondo plano completo
Complete flat bottom

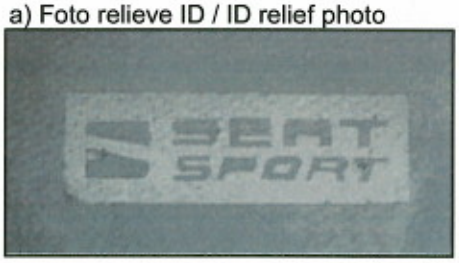
f) **Material**
Material ***Twintex***

g) **Nº de piezas**
Nº of parts **3**

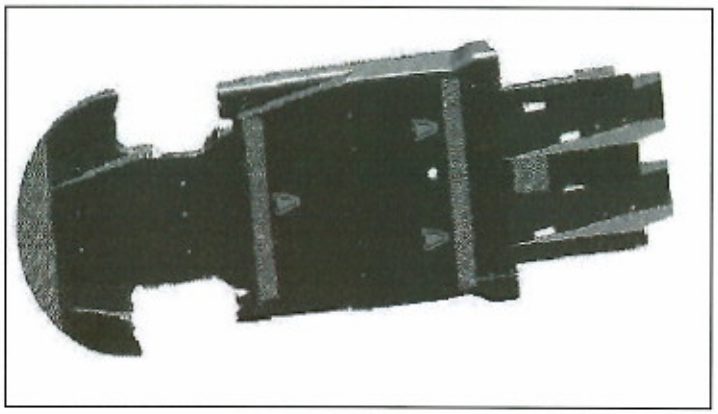
h) **Identificación fabricante** *(marca debajo de la pieza)*
Manufacturer identification *(marker underneath of the part)*

Las tres piezas marcada con relieve "SEAT Sport"
The 3 parts market with relief "SEAT Sport"

a) Foto relieve ID / ID relief photo



i) **Vista del fondo plano completo**
Complete flan bottom view



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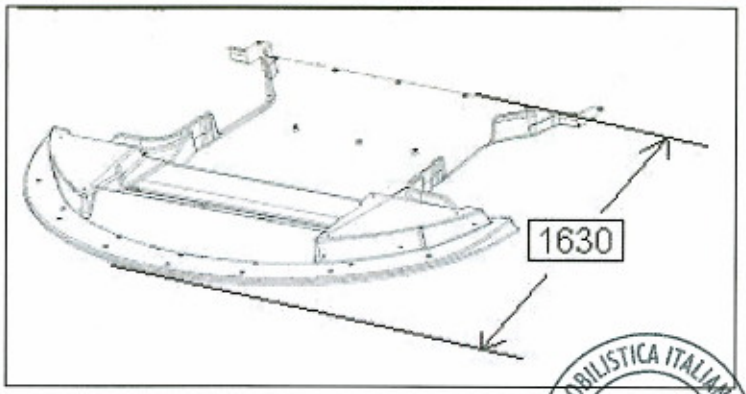
13.2. Splitter

a) Peso
Weight ***15,4 kg***

b) Largo total
Overall length
1630 ± 5mm

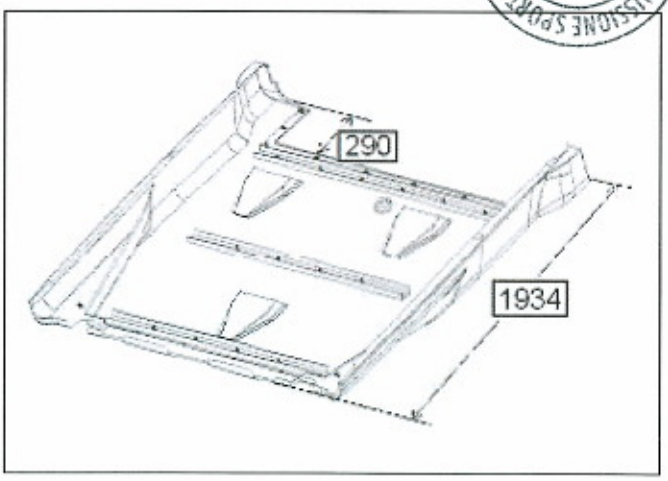


13.3. Fondo plano central
Central flat bottom

c) Peso
Weight:
15 kg ± 5mm

d) Nº de NACAs
Nº of NACA **3**

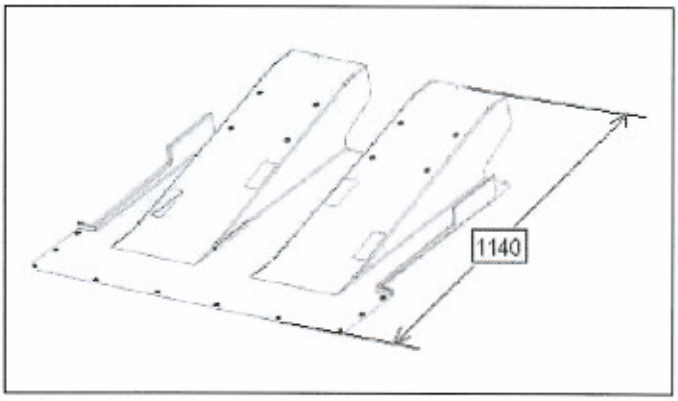
e) Largo total
Overall length
1943 ± 5mm



13.4. Difusor posterior
Rear diffuser

f) Peso
Weight ***8 kg***

g) Largo total
Overall length ***1140***

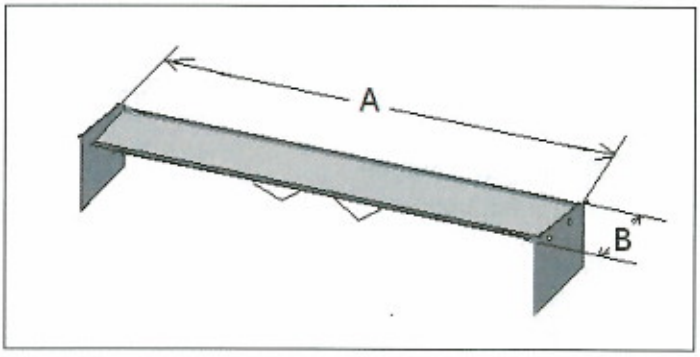


13.5. Ala
Wing

a) Material
Material ***Carbono / Carbon***

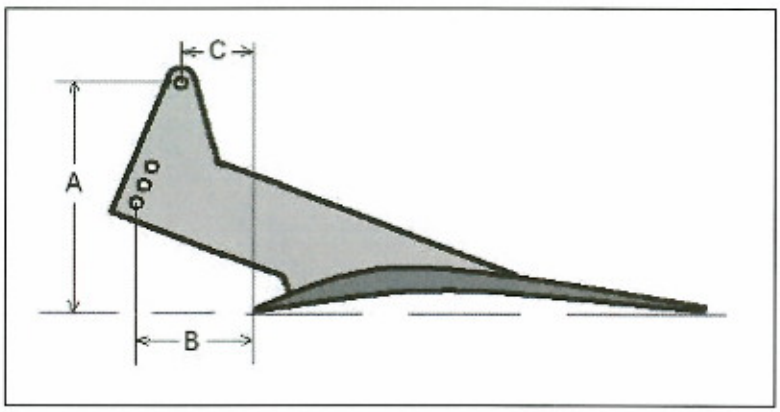
b) Medidas, A, B, son las siguientes:
Dimensions A, B, according to the following sketch

A = *1144* ± 1 mm.
B = *150* ± 1 mm.



13.6. Sporte ala, medidas A, B, C, son las siguientes:
Wing support A, B, C, according with the following sketch:

A = 103 mm ± 1%
B = 43 mm ± 3%
C = 26 mm ± 3%



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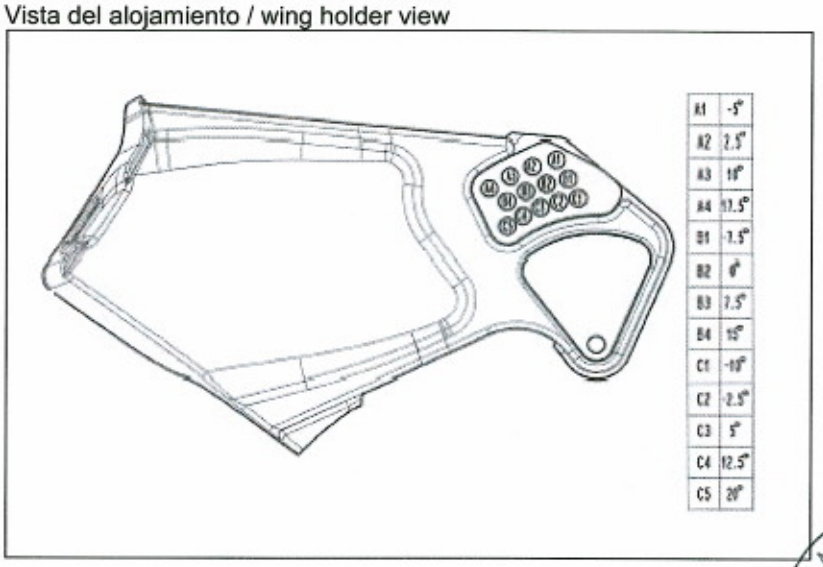
13.7. Reglaje posición ala

Wing adjustments ***El ala dispone de 12 puntos de reglaje***
The rear wing has 12 adjustable positions

Vista del alojamiento / wing holder view



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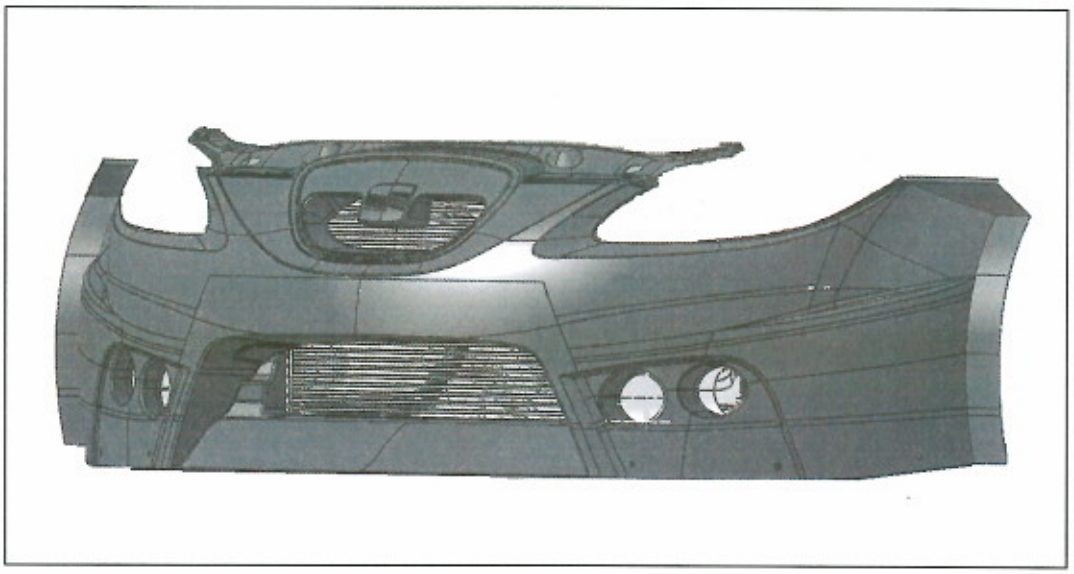
13.8. Parachoques anterior

Front bumper:



SEAT SPORT

SEAT
SPORT

SEAT SPORT

SEAT SPORT

Modelo / Model

León Supercopa Mk2

Technical Form N°

Año / Year 2008

Extension N°

01/09 VO

EXTENSIÓN DE FICAH TÉCNICA
TECHNICAL FORM EXTENSION

- ☐ **ES** Evolution sportive du type / Sporting evolution of the type
- ☒ **VO** Variante option / Option variant
- ☐ **ET** Evolution normale du type / Normal evolution of the type
- ☐ **VP** Variante de Production / Production variant
- ☐ **VF** Variante de fourniture / Supply variant
- ☐ **ER** Erratum / Erratum

Véhicule : Constructeur
Vehicle : Manufacturer — **SEAT SPORT**

Modèle et type
Model and type — **LEON SUPERCOPA MK2 2008**

Homologation valable à partir du
Homologation valid as from — **21 MAY 2008**

COMMISSIONE SPORTIVA AUTOMOBILISTICA ITALIANA

Marque / Make: **SEAT SPORT**

Modèle / Model: **LEON SUPERCOPA MK2**

Technical Form N°

Año / Year 2008

Extension N°

01/09 VO

Page or ext.	Article	Description
29/40	11.3	**MUELLES / SPRING** **Photo 1 : Montaje muelle de suspension / Suspension spring assembling:** **a) Delanteros / Front** — **b) Delanteros y traseros / Frotn & Rear** **250-60-70 — —** **160-60-50 + 60-60-2** **160-60-60 + 60-60-2** **160-60-70 + 60-60-2** **160-60-80 + 60-60-2** **160-60-90 + 60-60-2** **160-60-100 + 60-60-2 (new)** **160-60-110 + 60-60-2** **160-60-130 + 60-60-2**

Technical Form N°

Marque / Make: **SEAT SPORT** — Modèle / Model: **LEON SUPERCOPA MK2** — Año / Year 2008

Extension N°

01/09 VO

Page or ext.	Article	Description
		The use of this complete VO is a option from the date of publication Reference : Catalogo Leon Supercopa 2009 Leon Supercopa 2009 Spare parts catalog Page 33 & Page 49
30/40	11.6.1	**BARRA ESTABILIZADORA POSTERIOR / REAR ANTI ROLL BAR** Photo 2 Rear Anti roll bar Longitud total A es la siguiente: Long A according with the following sketch: *A = 1069* ± 1.5 mm Dimensión del tubo de torsión Torsion bar dimension: *B = 688* ± 1 mm *D = Ø 22 x 5* Dimensiones Espada: Blade dimension: Tube centreline to adjustment 1 — C = 130 ± 1 mm. Adjustment 1 to adjustment 2 — E = 16 ± 0.5 mm. Adjustment 1 to adjustment 3 — F = 33 ± 0.5 mm. Reference : Catalogo Leon supercopa / Leon Supercopa catalog Page 35 Part nº V4PL505407B

COMMISSIONE SPORTIVA AUTOMOBILISTICA ITALIANA

Marque / Make: **SEAT SPORT**

Modèle / Model: **LEON SUPERCOPA MK2**

Technical Form N°

Año / Year 2008

Extension N°

01/09 VO

PHOTO N° 1

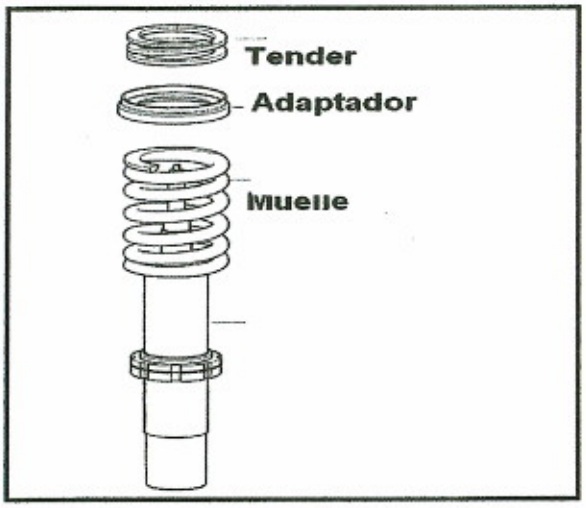
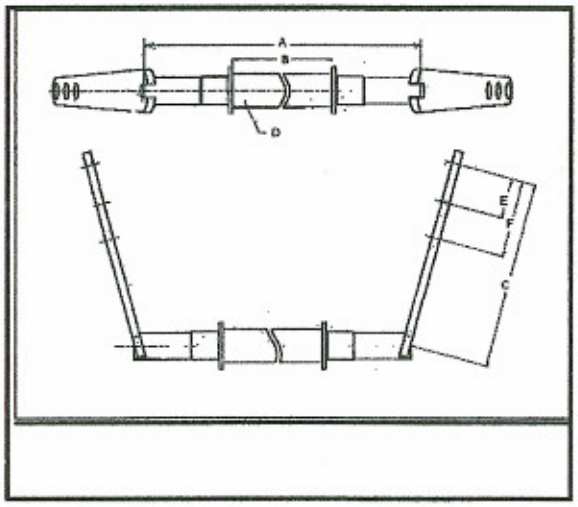


PHOTO N° 2



COMMISSIONE SPORTIVA AUTOMOBILISTICA ITALIANA

Supercopa LR 2010

SEAT SPORT

SEAT LEON LR

SEAT SPORT

COMMISSIONE SPORTIVA AUTOMOBILISTICA ITALIANA

Supercopa LR 2010

Concept

The performance and features of the 2010 León Supercup LR will enable to retain its status as the fastest single-make touring car race in Europe.

The new León Supercup LR is the most powerful León racing version in the SEAT range, the 240 hp TFSI, on which SEAT Sport has carried out intensive work with the aim of producing a car with features that are as similar as possible to those of the cars participating in the WTCC.

Supercopa LR 2010

Technical specifications

SEAT SPORT

ENGINE

Type	4-cylinder line+turbo charger
Capacity (cc)	1984
Bore x stroke (mm)	82,5 x 92,8
Power (hp)	330
Torque (Nm)	370
ECU	BOSCH MED 9.1
Exhaust	Hi-flow Motorsport catalyst with 98dB
Fuel tank	Series tank with double pump

COMMISSIONE SPORTIVA AUTOMOBILISTICA ITALIANA

Supercopa LR 2010
Technical specifications

SEAT SPORT

TRANSMISSION

Transmission	Front wheel drive
Gearbox	6-speed sequential with cut-off system
Differential	Mechanical limited slip 25/45 ramps
Shift	Command on the hand lever

COMMISSIONE SPORTIVA AUTOMOBILISTICA ITALIANA

Supercopa LR 2010

Sequential Kit adaptation on a Supercopa Leon car

SEAT SPORT

DISSASAMBLING PARTS TO BE CHANGED

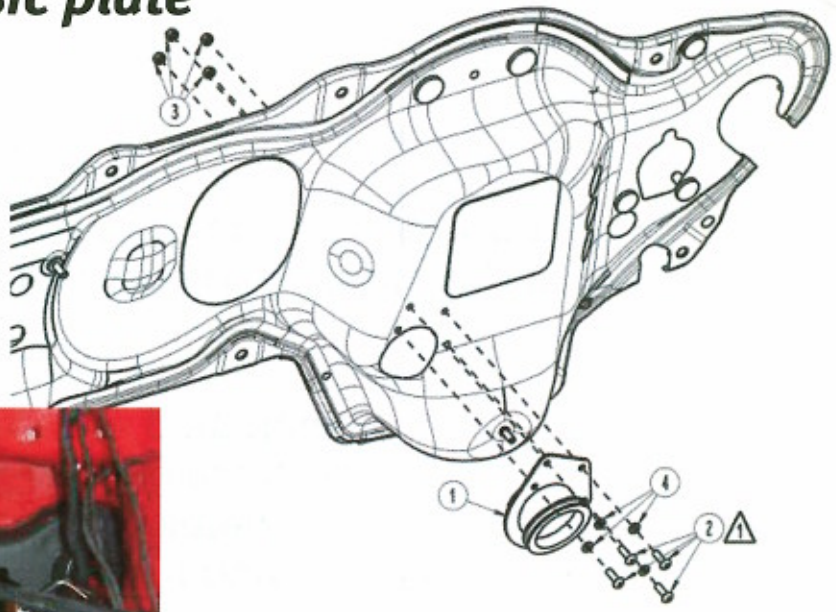
AERODYNAMIC:	Take out the flat bottom, front bumper and bonnet
FRONT END:	Take out the front-end completely
	Take out the auxiliary cooling radiators
DSG GEAR BOX:	Take out the DSG gear box completely
ENGINE:	Take out completely
EXHAUST:	Take out completely
PEDAL:	Take out the brake pedal and driver feet support
EXTRAS:	Take out the racing seat, feet support and exhaust protection on the tunnel.

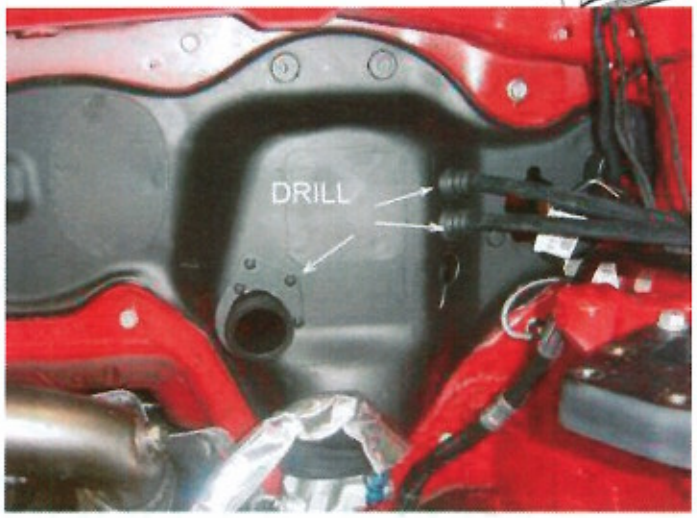
COMMISSIONE SPORTIVA AUTOMOBILISTICA ITALIANA

Supercopa LR 2010
Sequential Kit: Adaptation on a Supercopa Leon car

Works on the body shell basic plate

- Drill a 52mm hole as showed on the picture.
- Fit the shift bar grommet support over the hole.
- Drill two 22mm holes on the same position as showed on the photo.
- After drill and fix the bar grommet you can cover the basic plate with a thermal cover.





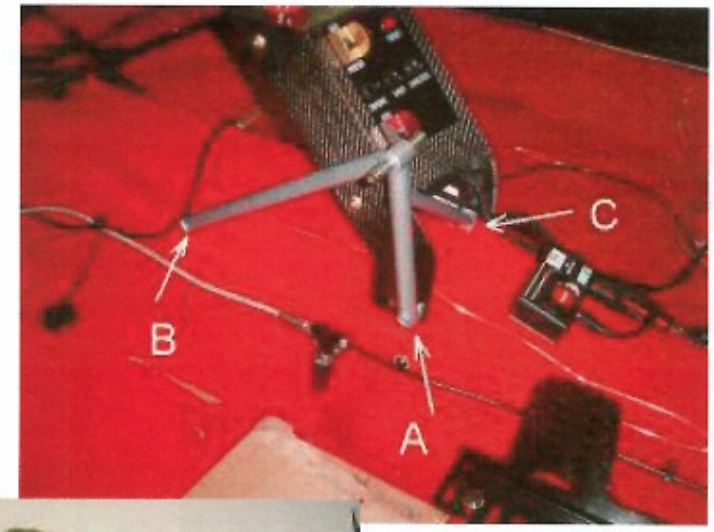
COMMISSIONE SPORTIVA AUTOMOBILISTICA ITALIANA

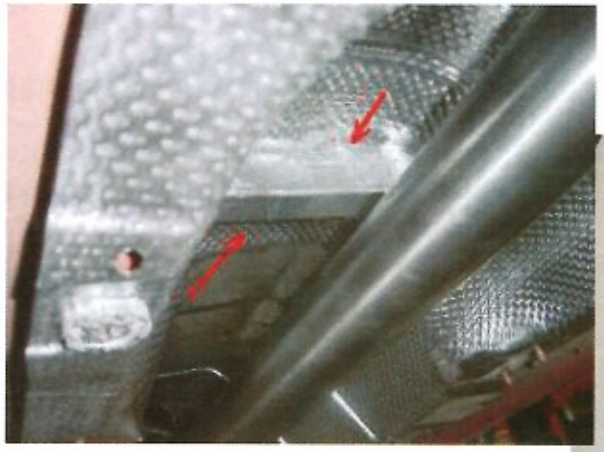
Supercopa LR 2010
Sequential Kit: Adaptation on a Supercopa Leon car

SEAT SPORT

Works on the body shell tunnel

- Taking as reference the central console fixation bolt A (in the photo) mark the positions B and C and drill a 8 mm holes.
- Place the gear shift lever support reinforcement under the body shell tunnel. Mark the rest of the support holes and fixt it all.
- Adapt the exhaust protection on the tunnel as show in the photo



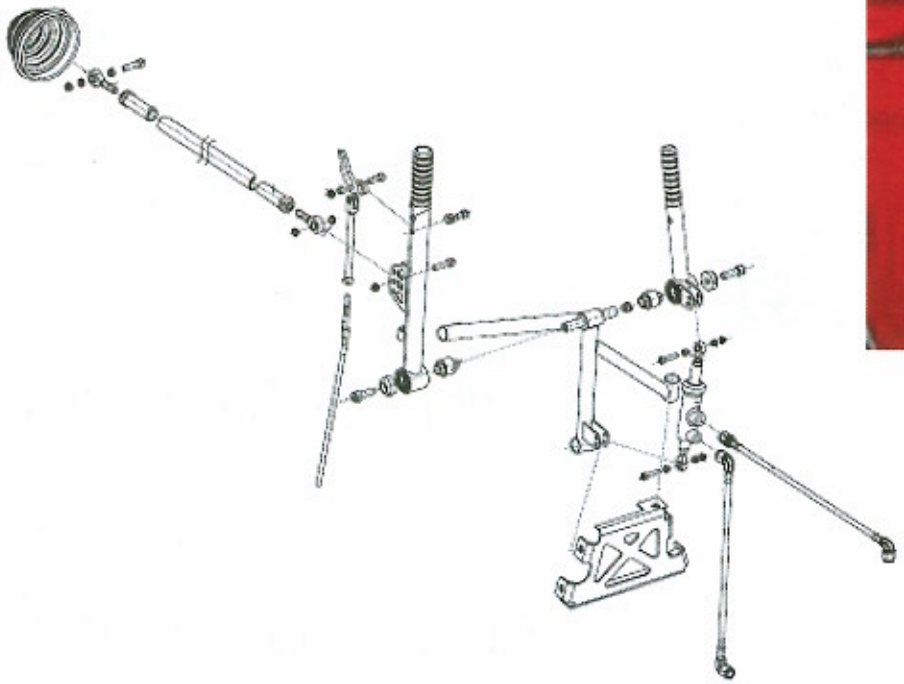


COMMISSIONE SPORTIVA AUTOMOBILISTICA ITALIANA

Supercopa LR 2010
Sequential Kit: Adaptation on a Supercopa Leon car

Works on the cockpit

- Assemble the gear shift lever and hand brake.
- Connect the brake pipes as in the photo.
- Connect the cable from the lever to the gear box for the Neutral position. Go with the cable under the seat.

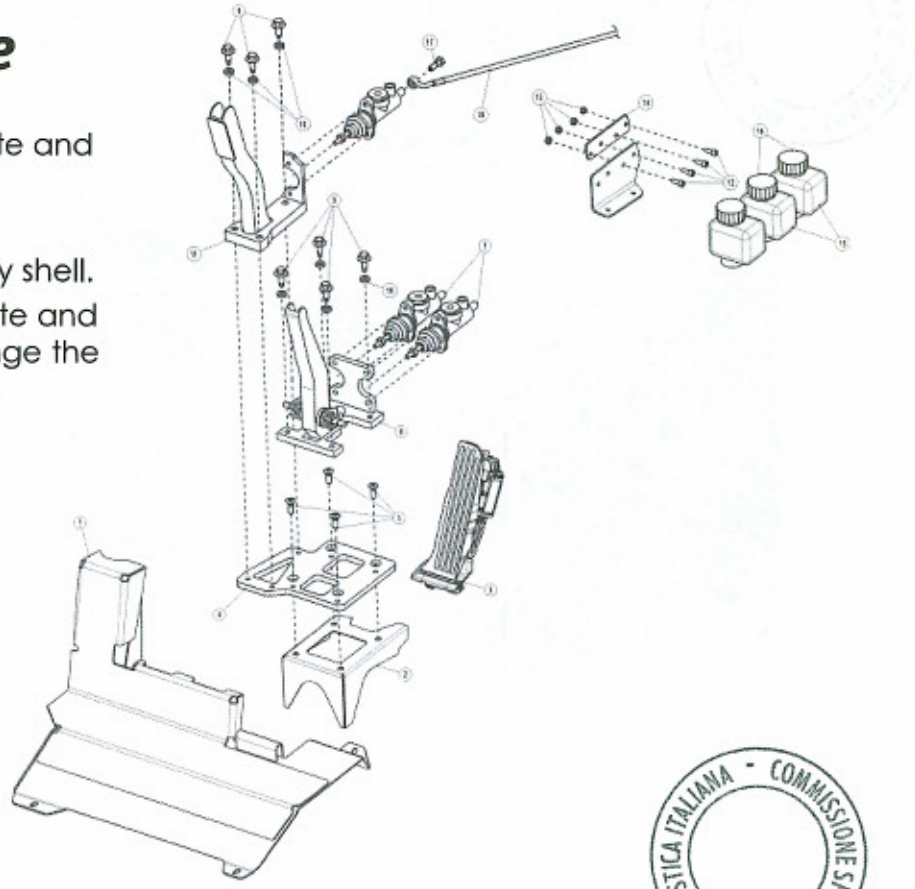


Supercopa LR 2010
Sequential Kit: Adaptation on a Supercopa Leon car

SEAT SPORT

Fitting clutch pedal and brake

- Fix the clutch pedal and pump on the base plate and mount the clutch pressure pipe.
- Set up the clutch pedal stoper.
- Fix the base plate with clutch pedal on the body shell.
- Fix the brake pedal with pumps on the base plate and assembly the 90° balance cable adapter. Change the hand balance command label,, (now reverse).



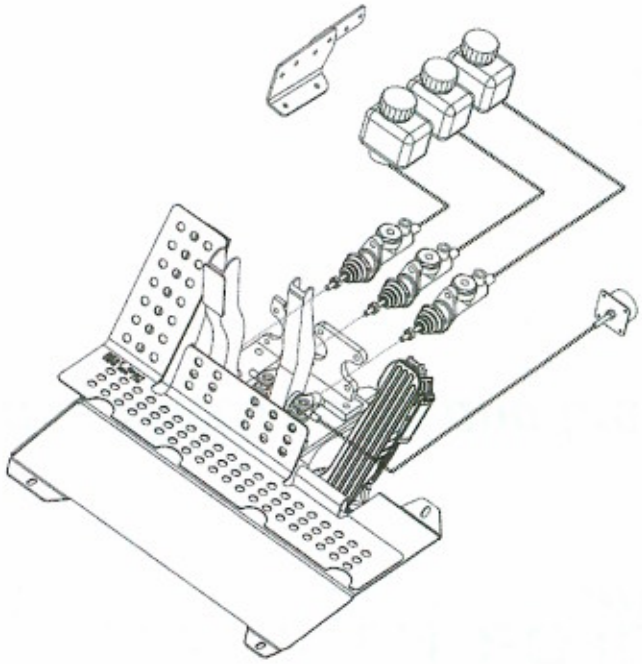
COMMISSIONE SPORTIVA AUTOMOBILISTICA ITALIANA

Supercopa LR 2010
Sequential Kit: Adaptation on a Supercopa Leon car

SEAT SPORT

Fitting clutch pedal and brake

- Fix the adapter reservoirs support for the clutch and gear box airing
- Connect the inlet brake and clutch pipes going trough the base plate. (see photo)



Supercopa LR 2010
Sequential Kit: Adaptation on a Supercopa Leon car

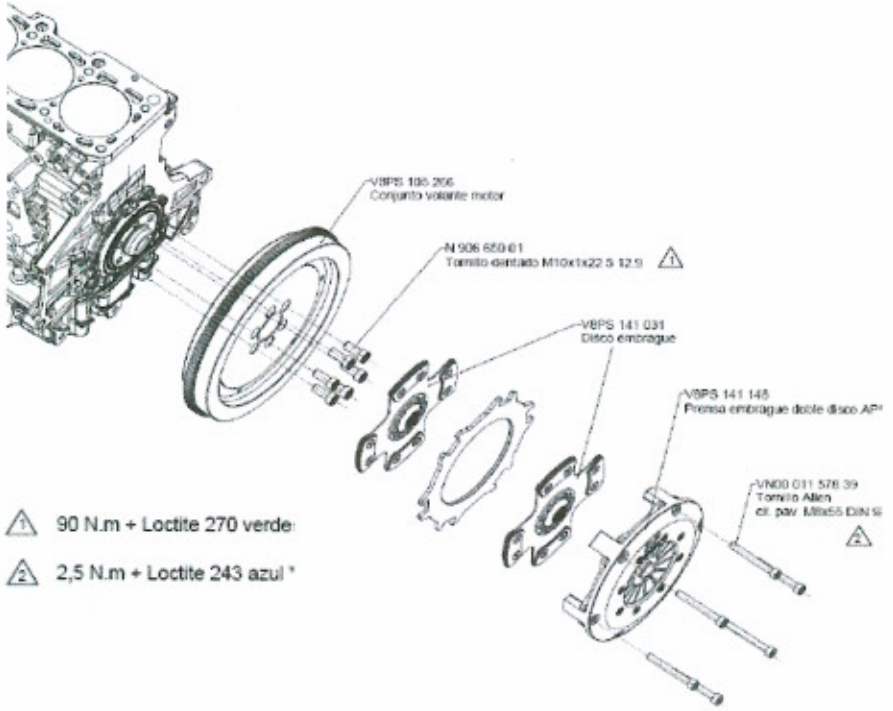
Works on the engine : Fly wheel and Cluch

Disassemble from the engine:
- Double mass Fly wheel
- Metal sheet spacer (reject part)

Assemble on the engine:
- Mono mass Fly wheel
- Clutch, press and discs

- Change now the engine wiring loom for the new one that have the cut-off connector. Ref V8PS972619
- Change the two pipes of the water DSG radiator from the new bridge pipe.

**App the specific torque indicates.*

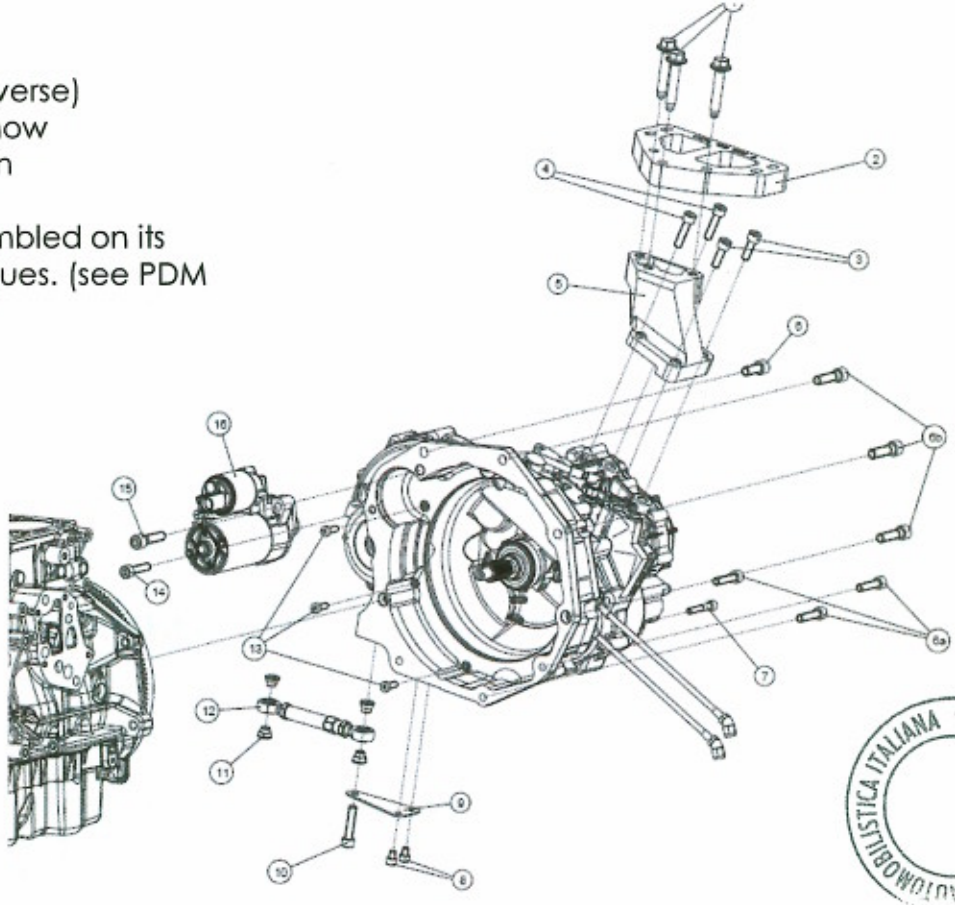


Supercopa LR 2010
Sequential Kit: Adaptation on a Supercopa Leon car

Assembling the sequential gear box

Assemble the gear box to the engine:
- Assemble the gear box
- Fix the starter (new ref because turn reverse)
- Connect the new starter wiring loom now
- Assemble the metallic starter protection

- Fit now the engine and gear box assembled on its car position following the indicated torques. (see PDM at document end).



App the specific torque indicates

Part n°: 1-6-6a-6b-14-15-17 → 80 Nm

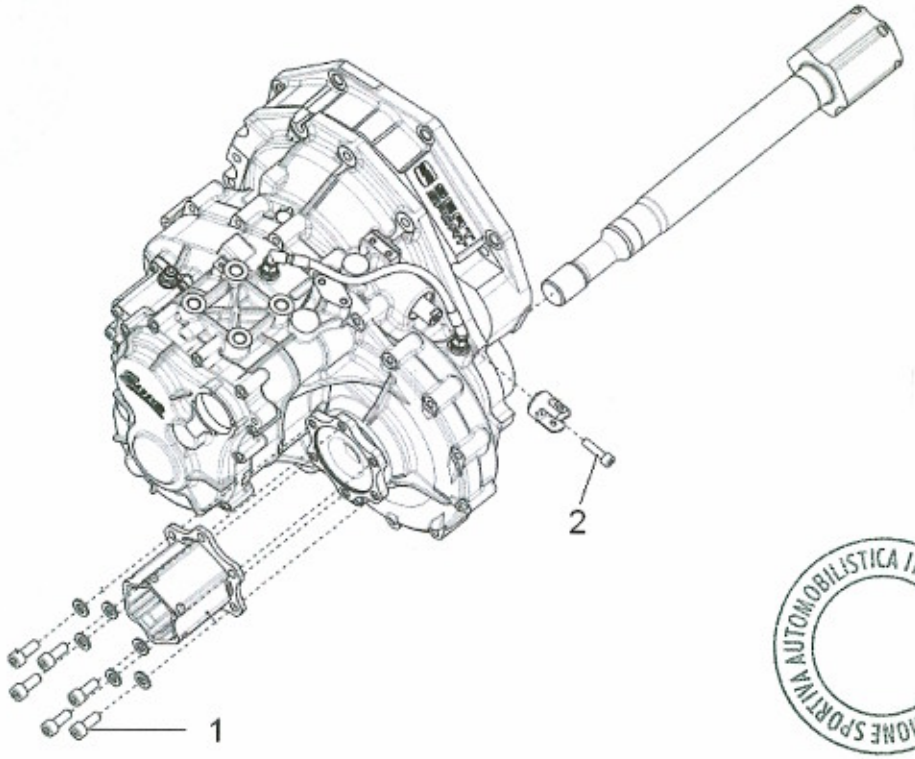
Part n°: 3-4-8-10 → 60 Nm

Supercopa LR 2010
Sequential Kit: Adaptation on a Supercopa Leon car

SEAT SPORT

Assembling articulated joints

- Fit the articulated joints
- App the specific torque



App the specific torque indicates

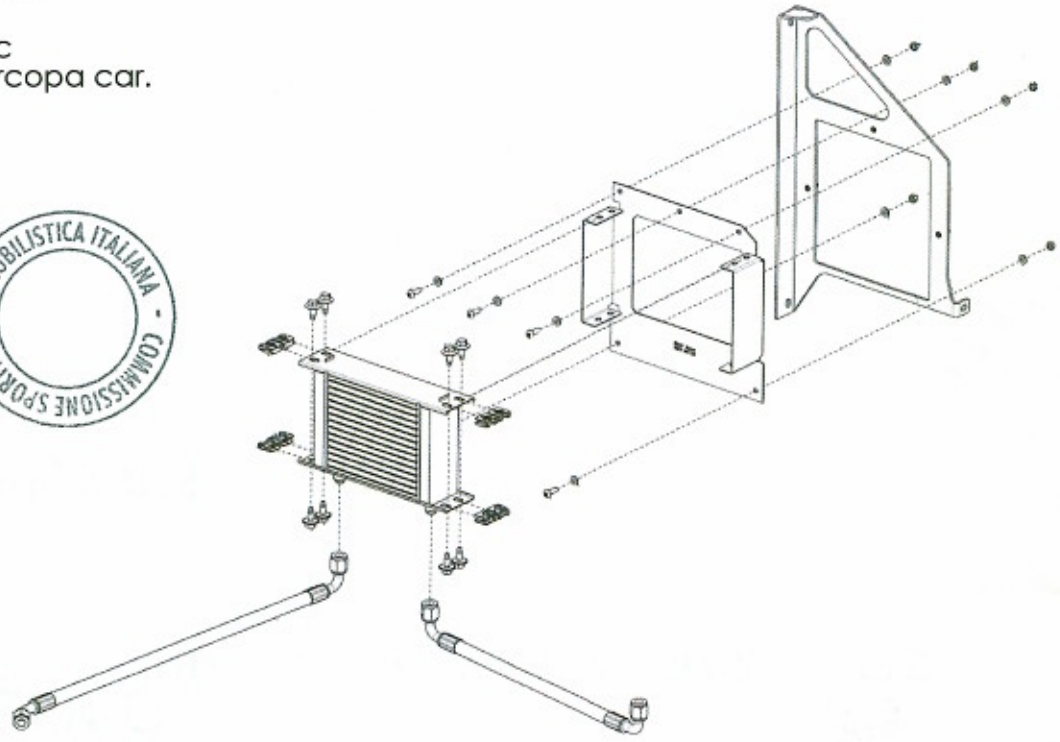
Part n°: 1 → 80 Nm loctite 270

Part n°: 2→ 18 Nm locktite 242

Supercopa LR 2010
Sequential Kit: Adaptation on a Supercopa Leon car

Assembling gear box radiator

- Fix the oil radiator on the left side, following the scheme. For the countries with hot temperatures there is possible to have in the right side the water auxiliary radiator . See the LR parts catalogue to know the necessary parts.
- Fix over the oil radiator the plastic canalization as a standard Supercopa car.

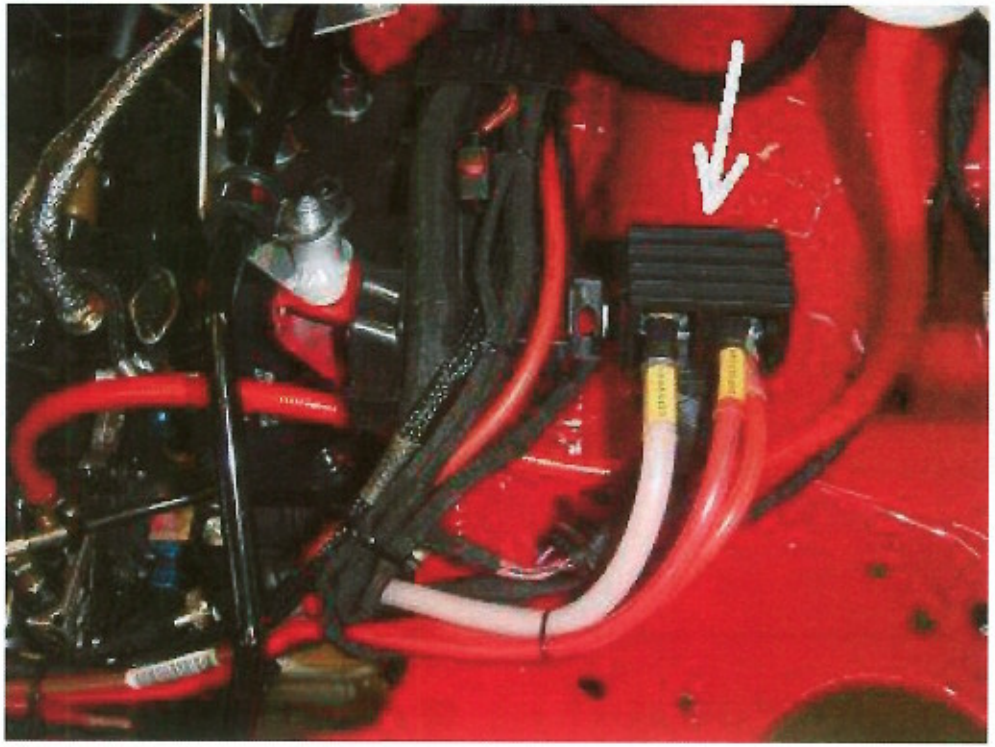


Supercopa LR 2010
Sequential Kit: Adaptation on a Supercopa Leon car

SEAT SPORT

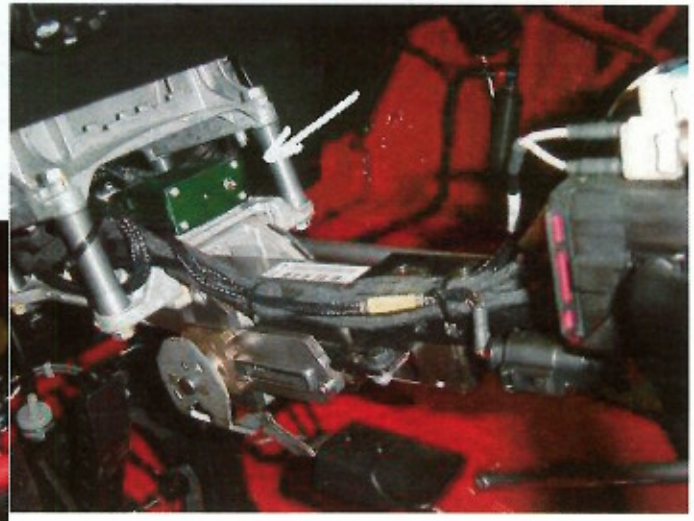
12v connexion

- Place the 12v main connexion for the starter and generator. Them main 12v wiring loom from battery share the connexion for the generator and starter



GSM : Gear Shift Module

- Place the GSM module on the steering column bracket and connect the GSM wiring loom. This wiring it connect the Gear box barrel, coils wirings to the GSM.



Supercopa LR 2010
Sequential Kit: Adaptation on a Supercopa Leon car

ECU upgrade

- Update the ECU adapted at the DSG system from a manual gear box. There are two ways for do it:

  A) Send to SSp the engine ECU to be upgraded. (free of charge)

  B) Using the VAS tool, change the following value:

  Go in "01" ENGINE

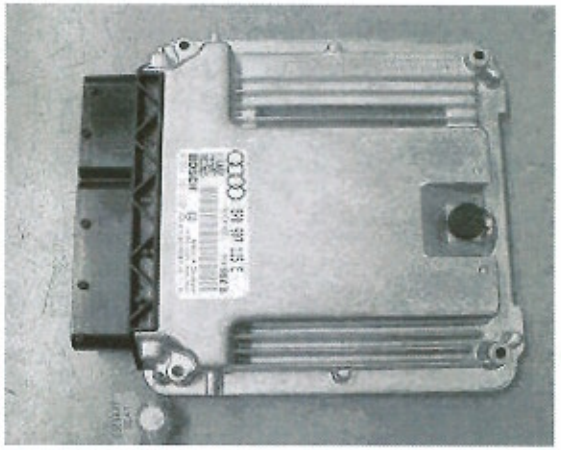
  "08" WRITE LARGE CODE

  VALUE (1C000000) MARK IT

  EXAGESIMAL

  NEW VALUE 18

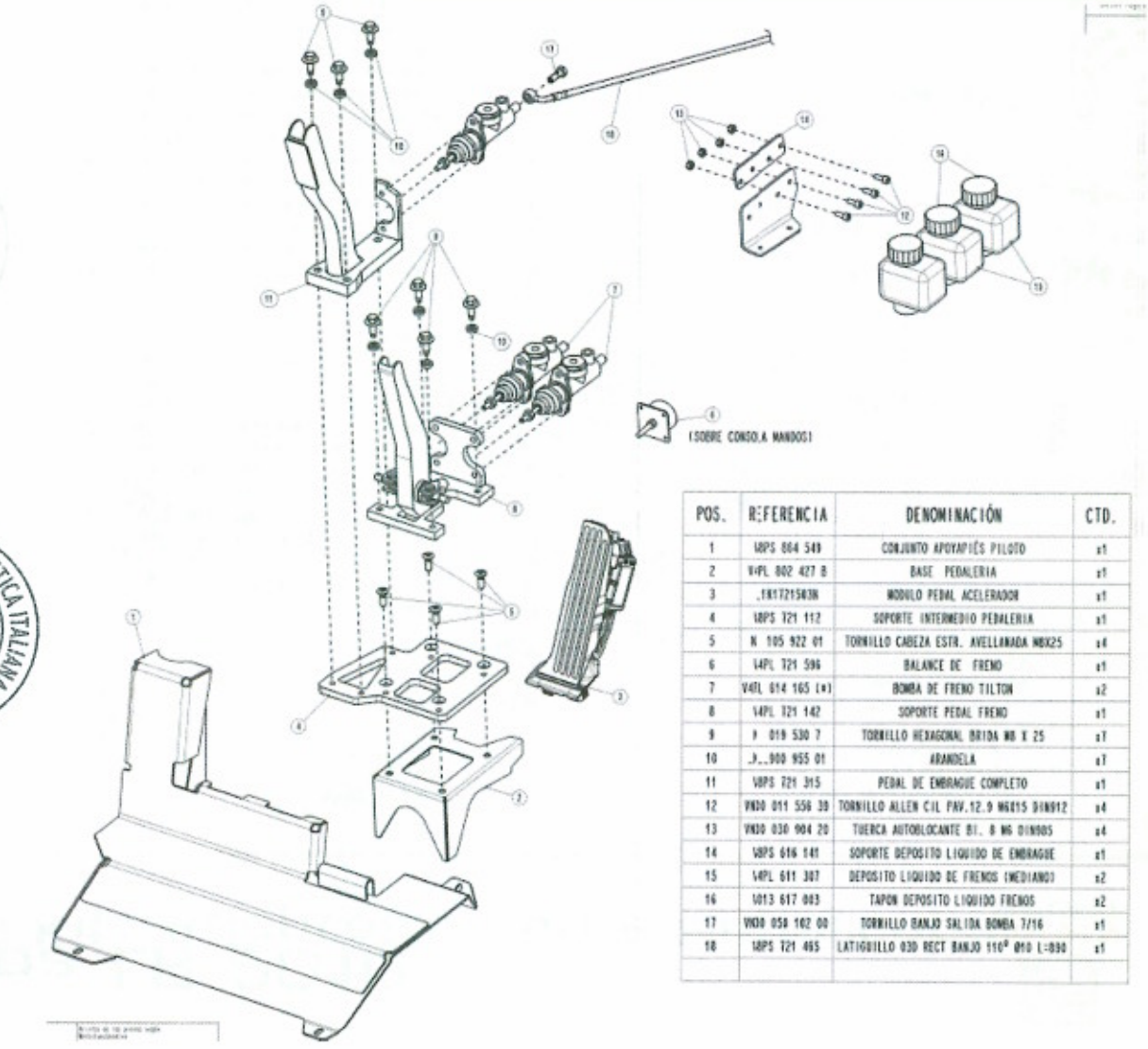
(if this process is not complete, the engine will not overtake more than 4000 rpm)



Supercopa LR 2010

Sequential Kit: Adaptation on a Supercopa Leon car

Mounting schemes



POS.	REFERENCIA	DENOMINACIÓN	CTD.
1	V8PS 864 549	CONJUNTO APOYAPIÉS PILOTO	x1
2	V4PL 802 427 B	BASE PEDALERIA	x1
3	.FA17215A3A	MODULO PEDAL ACELERADOR	x1
4	V8PS 721 112	SOPORTE INTERMEDIO PEDALERIA	x1
5	N 105 922 01	TORNILLO CABEZA ESTR. AVELLANADA M8X25	x4
6	V4PL 721 596	BALANCE DE FRENO	x1
7	V4DL 614 165 (*)	BOMBA DE FRENO TILTON	x2
8	V4PL 721 142	SOPORTE PEDAL FRENO	x1
9	N 019 530 7	TORNILLO HEXAGONAL BRIDA M8 X 25	x7
10	.N...900 955 01	ARANDELA	x7
11	V8PS 721 315	PEDAL DE EMBRAGUE COMPLETO	x1
12	VN30 011 556 30	TORNILLO ALLEN CIL PAV.12.9 M6X15 DIN912	x4
13	VN30 030 904 20	TUERCA AUTOBLOCANTE BI. 8 M6 DIN985	x4
14	V8PS 616 141	SOPORTE DEPOSITO LIQUIDO DE EMBRAGUE	x1
15	V4PL 611 307	DEPOSITO LIQUIDO DE FRENOS (MEDIANO)	x2
16	V013 617 003	TAPON DEPOSITO LIQUIDO FRENOS	x2
17	VN30 050 102 00	TORNILLO BANJO SALIDA BOMBA 7/16	x1
18	V8PS 721 465	LATIGUILLO 030 RECT BANJO 110° Ø10 L=830	x1

Supercopa LR 2010

Technical data SEAT León SC 2009