

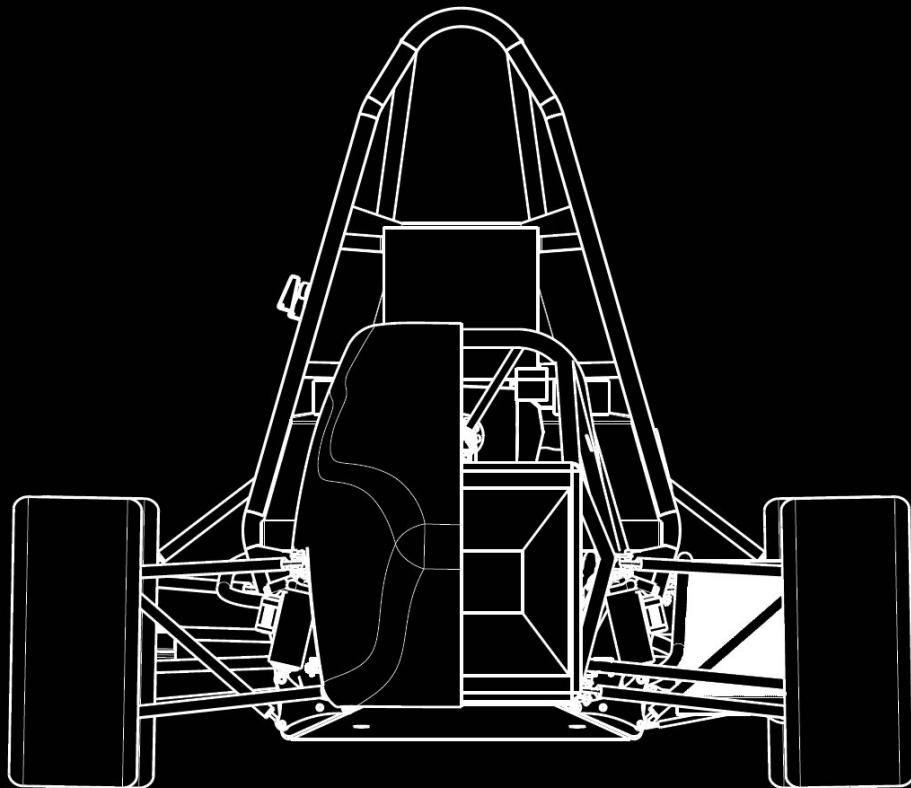


ÉCOLE  
CENTRALE LYON

# COST REPORT

SUPPORTING MATERIAL FILE

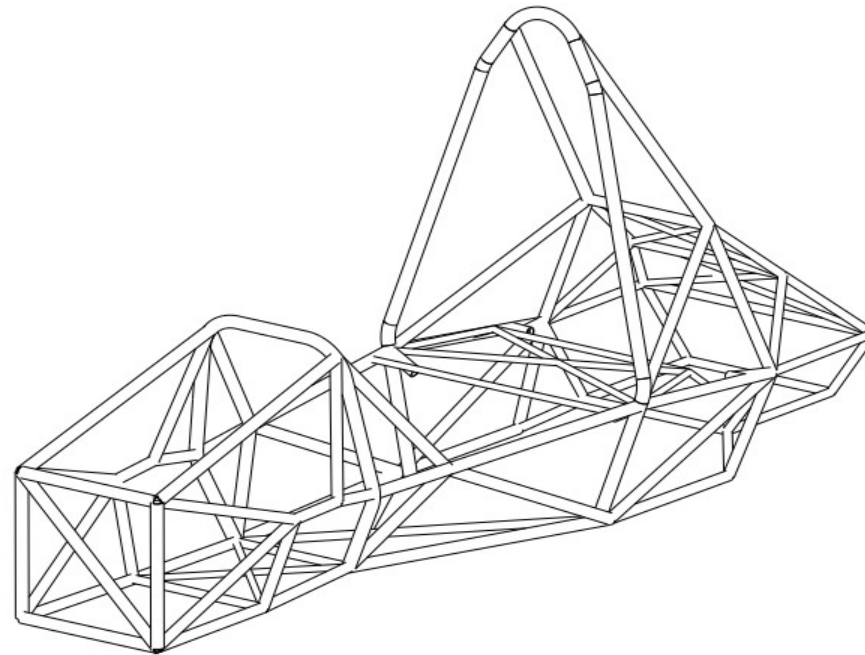
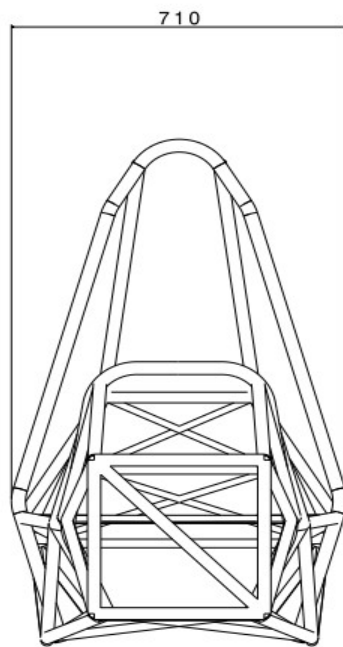
**EPSA**  
Ecurie PISTON SPORT AUTO



system	assembly	sub_assembly	assembly_no	part	part_comments	makebuy	part_quantity	part_no
FR	Frame / Frame Tubes	<a href="#">FR_A0100</a>						
FR	Frame / Frame Tubes		FR_A0100	Frame	25CrMo4 ; 30*1,5, 25*1,5, 20*15, 15*1,5	m	1	<a href="#">FR_01001</a>
FR	Bodywork	<a href="#">FR_A0200</a>						
FR	Bodywork		FR_A0200	Nose	Nose of the bodywork	b	1	<a href="#">FR_02001</a>
FR	Bodywork		FR_A0200	Side plates	Side plate from the front hoop to main	b	2	<a href="#">FR_02002</a>
FR	Bodywork		FR_A0200	Additional plates	Lower side plate with holes	b	2	<a href="#">FR_02003</a>
FR	Bodywork		FR_A0200	Push-clips	Attachement of the nose to the frame	b	4	<a href="#">FR_02004</a>
FR	Bodywork		FR_A0200	Hook and loop belts	Attachement of the bodywork to the frame	b	20	<a href="#">FR_02005</a>
FR	Pedals (Accelerator)	<a href="#">FR_A0300</a>						
FR	Pedals (Accelerator)		FR_A0300	Frame throttle	laser cut and soldered	m	1	<a href="#">FR_03001</a>
FR	Pedals (Accelerator)		FR_A0300	Footrest	laser cut and bended	m	1	<a href="#">FR_03002</a>
FR	Pedals (Accelerator)		FR_A0300	Throttle pedal stick	link frame and footrest	m	1	<a href="#">FR_03003</a>
FR	Pedals (Accelerator)		FR_A0300	Throttle fixing rail	allow position adjustment	m	2	<a href="#">FR_03004</a>
FR	Pedals (Accelerator)		FR_A0300	Throttle rail wedge	laser cut	m	2	<a href="#">FR_03005</a>
FR	Pedals (Accelerator)		FR_A0300	Throttle Threated Rod	to position rails	m	2	<a href="#">FR_03006</a>
FR	Pedals (Accelerator)		FR_A0300	Throttle Front Rail Wedge	laser cut	m	2	<a href="#">FR_03007</a>
FR	Pedals (Accelerator)		FR_A0300	Negative Mechanical Stop	to protect potentiometers	m	1	<a href="#">FR_03008</a>
FR	Pedals (Accelerator)		FR_A0300	Positive Mechanical Stop	to protect potentiometers	m	1	<a href="#">FR_03009</a>
FR	Pedals (Accelerator)		FR_A0300	Throttle pedal bearing	allow soft rotation	b	2	<a href="#">FR_03010</a>
FR	Pedals (Accelerator)		FR_A0300	Springs	bring back the pedal	b	2	<a href="#">FR_03011</a>
FR	Pedals (Accelerator)		FR_A0300	Potentiometer	Detects pedal postition	b	2	<a href="#">FR_03012</a>
FR	Pedals (Accelerator)		FR_A0300	Throttle R Threaded rods	to position frame	b	1	<a href="#">FR_03013</a>
FR	Pedals (Accelerator)		FR_A0300	Throttle F Threaded rods	to position frame	b	1	<a href="#">FR_03014</a>
FR	Pedals (Accelerator)		FR_A0300	Axle Spacer	allow good position	m	1	<a href="#">FR_03015</a>
FR	Pedals (Accelerator)		FR_A0300	Potentiom R Threaded Rod	Fix potentiom to frame	b	1	<a href="#">FR_03016</a>
FR	Pedals (Brake)	<a href="#">FR_A0400</a>						
FR	Pedals (Brake)		FR_A0400	Frame brake	laser cut and solded	m	1	<a href="#">FR_04001</a>
FR	Pedals (Brake)		FR_A0400	Brake pedal Stick	link frame and footrest	m	1	<a href="#">FR_04002</a>
FR	Pedals (Brake)		FR_A0400	Footrest	laser cut and bended	m	1	<a href="#">FR_04003</a>
FR	Pedals (Brake)		FR_A0400	Master cylinder	pressurize brake liquid	b		<a href="#">FR_04004</a>
FR	Pedals (Brake)		FR_A0400	Master cylinder wedge	link master cylinder and stick	m	2	<a href="#">FR_04005</a>
FR	Pedals (Brake)		FR_A0400	Brake fixing rail	allow position adjustment	m	2	<a href="#">FR_04006</a>
FR	Pedals (Brake)		FR_A0400	Brake R Fixing Rail Wedge	rear wedges	m	2	<a href="#">FR_04007</a>
FR	Pedals (Brake)		FR_A0400	Brake F Fixing Rail Wedge	front wedges	m	2	<a href="#">FR_04008</a>
FR	Pedals (Brake)		FR_A0400	Distribution Brake Axle	link cylinder to ball joint	b	1	<a href="#">FR_04009</a>
FR	Pedals (Brake)		FR_A0400	Distribution Axle Tread	maintain Brake Axle	b	2	<a href="#">FR_04010</a>
FR	Pedals (Brake)		FR_A0400	Distribution Cylinder	support for ball joint	b	1	<a href="#">FR_04011</a>
FR	Pedals (Brake)		FR_A0400	Distribution Ball Joint	allows rotation	b	1	<a href="#">FR_04012</a>
FR	Pedals (Brake)		FR_A0400	BOTS Support	support the BOTS	m	1	<a href="#">FR_04013</a>
FR	Pedals (Brake)		FR_A0400	BOTS	security if brakes don't work	b	1	<a href="#">FR_04014</a>
FR	Pedals (Brake)		FR_A0400	Brake Pedal Hose Wedge	to maintain brake hose	m	1	<a href="#">FR_04015</a>

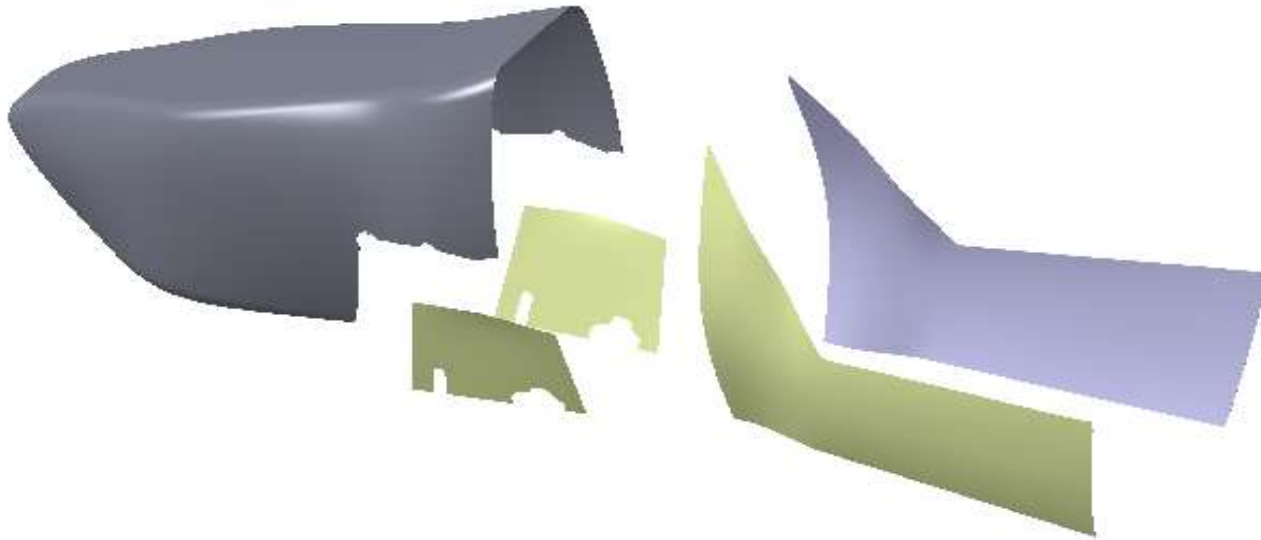
FR	Pedals (Brake)	FR_A0400	Distribution Cylinder	link axle and axle thread	b	2 <a href="#">FR_04016</a>
FR	Pedals (Brake)	FR_A0400	Brake Pedale Bearing	allow soft rotation	b	2 <a href="#">FR_04017</a>
FR	Pedals (Brake)	FR_A0400	Brake Threated Rod	to position frame	b	2 <a href="#">FR_04018</a>
FR	Impact Attenuator	<a href="#">FR_A0500</a>				
FR	Impact Attenuator	FR_A0500	Impact Attenuator	Approved by event	b	1 <a href="#">FR_05001</a>
FR	Impact Attenuator	FR_A0500	Anti-intrusion Plate	Steel, (thickness 1.5mm)	m	1 <a href="#">FR_05002</a>
FR	Floor Pan	<a href="#">FR_A0600</a>				
FR	Floor Pan	FR_A0600	Front plate	Floor pan from front hoop to front car	m	1 <a href="#">FR_06001</a>
FR	Floor Pan	FR_A0600	Cockpit plate	Floor pan from front hoop to main hoop	m	1 <a href="#">FR_06002</a>

FR	Frame / Fram	FR_A0100				<a href="#">Retour</a>
FR	Frame / Frame Tubes	FR_A0100	Frame	25CrMo4 ; 30 m	1 FR_01001	





FR	Bodywork	FR_A0200					<a href="#">Retour</a>
FR	Bodywork	FR_A0200	Nose	Nose of the b	b	1 FR_02001	
FR	Bodywork	FR_A0200	Side plates	Side plate fro	b	2 FR_02002	
FR	Bodywork	FR_A0200	Additional pla	Lower side pl	b	2 FR_02003	
FR	Bodywork	FR_A0200	Push-clips	Attachement	b	4 FR_02004	
FR	Bodywork	FR_A0200	Hook and loop	Attachement	b	20 FR_02005	

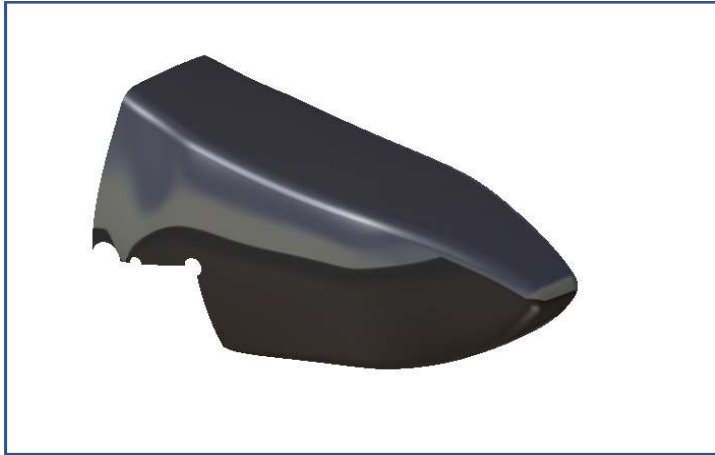


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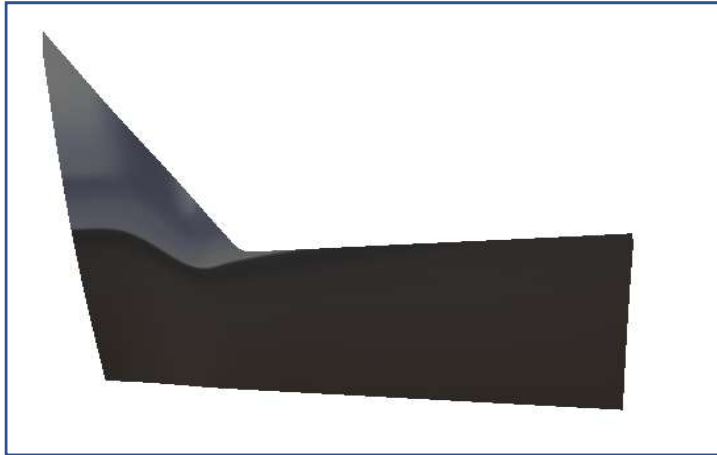
FR\_A0200

Nose

FR\_02001



FR FR\_A0200 Side plates FR\_02002

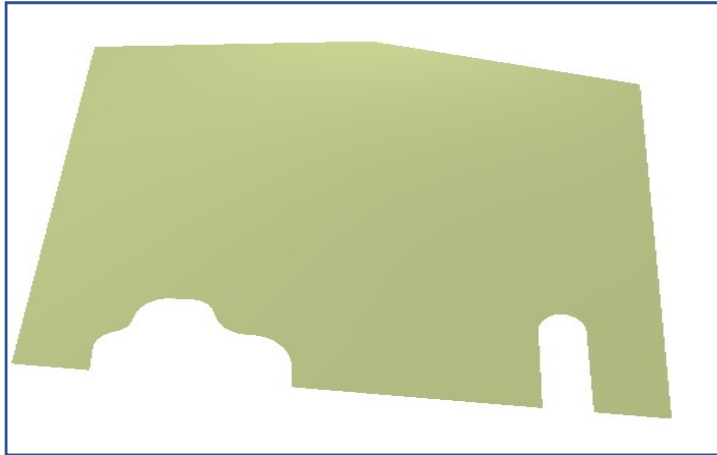




FR

FR\_A0200

Additional pla FR\_02003



FR FR\_A0200 Push-clips FR\_02004

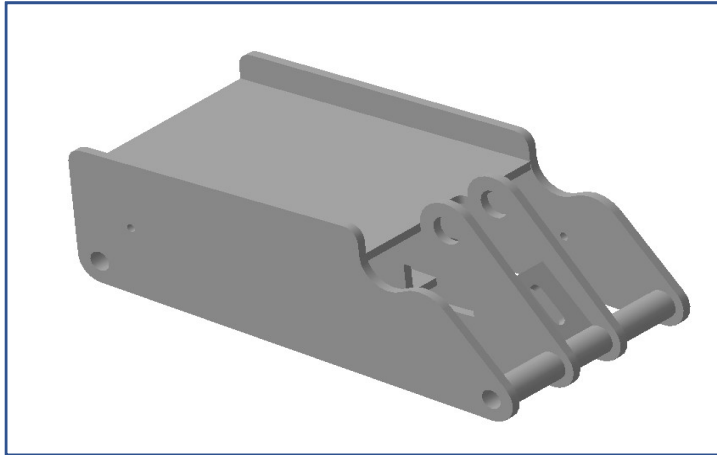


FR FR\_A0200 Hook and loop FR\_02005



FR	Pedals (Accelerator) FR_A0300			<a href="#">Retour</a>
FR	Pedals (Accelerator)	FR_A0300	Frame throttle laser cut and s m	1 FR_03001
FR	Pedals (Accelerator)	FR_A0300	Footrest laser cut and l m	1 FR_03002
FR	Pedals (Accelerator)	FR_A0300	Throttle pedal link frame anc m	1 FR_03003
FR	Pedals (Accelerator)	FR_A0300	Throttle fixing allow position m	2 FR_03004
FR	Pedals (Accelerator)	FR_A0300	Throttle rail w laser cut m	2 FR_03005
FR	Pedals (Accelerator)	FR_A0300	Throttle Thre: to position rai m	2 FR_03006
FR	Pedals (Accelerator)	FR_A0300	Throttle Front laser cut m	2 FR_03007
FR	Pedals (Accelerator)	FR_A0300	Negative Mec to protect pot m	1 FR_03008
FR	Pedals (Accelerator)	FR_A0300	Positive Mech to protect pot m	1 FR_03009
FR	Pedals (Accelerator)	FR_A0300	Throttle pedal allow soft rot: b	2 FR_03010
FR	Pedals (Accelerator)	FR_A0300	Springs bring back the b	2 FR_03011
FR	Pedals (Accelerator)	FR_A0300	Potentiomete Detects pedal b	2 FR_03012
FR	Pedals (Accelerator)	FR_A0300	Throttle R Thr to position fra b	1 FR_03013
FR	Pedals (Accelerator)	FR_A0300	Throttle F Thr to position fra b	1 FR_03014
FR	Pedals (Accelerator)	FR_A0300	Axle Spacer allow good po m	1 FR_03015
FR	Pedals (Accelerator)	FR_A0300	Potentiom R T Fix potentiom b	1 FR_03016

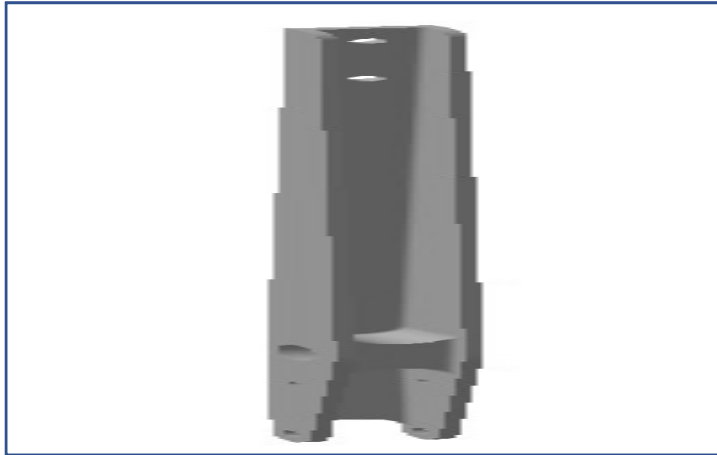
FR FR\_A0300 Frame throttle FR\_03001



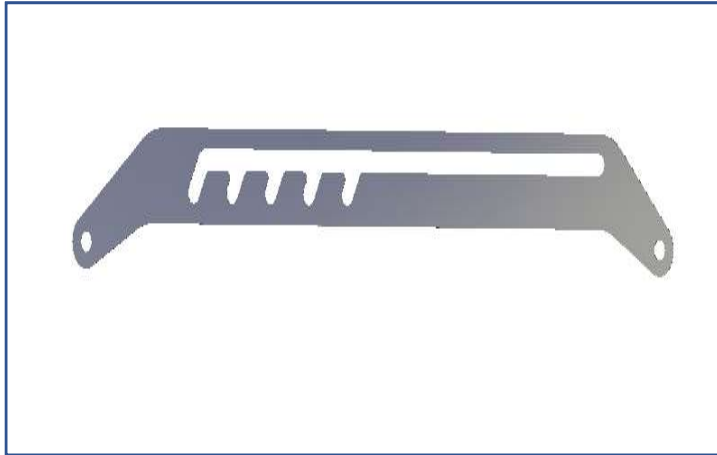
FR FR\_A0300 Footrest FR\_03002



FR FR\_A0300 Throttle pedal FR\_03003



FR FR\_A0300 Throttle fixing FR\_03004

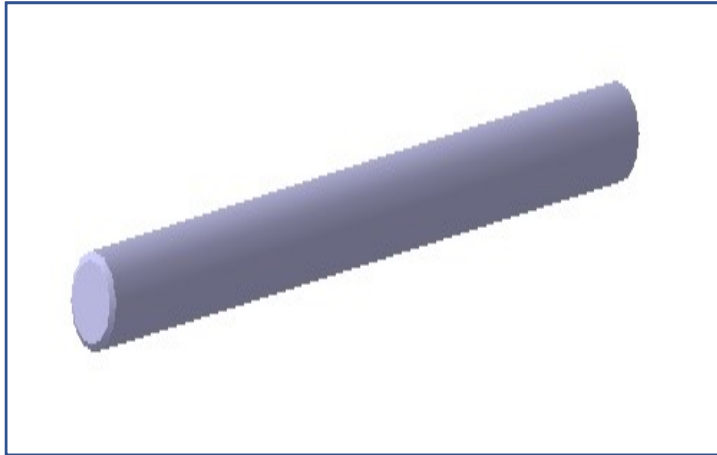




FR FR\_A0300 Throttle rail wFR\_03005



FR FR\_A0300 Throttle Thre:FR\_03006



FR

FR\_A0300 Throttle Front FR\_03007



FR

FR\_A0300

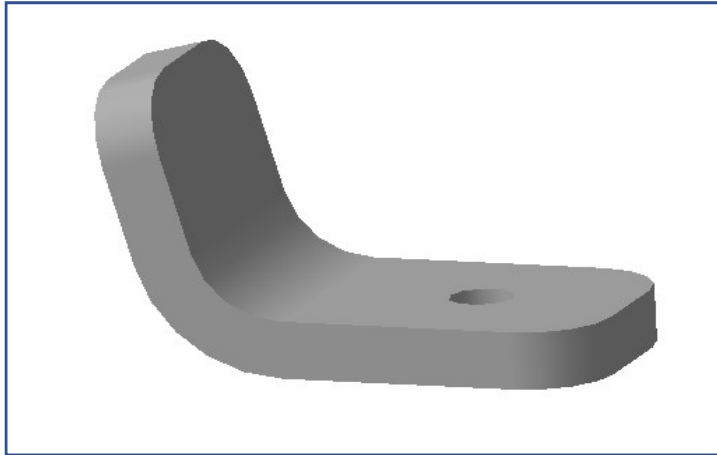
Negative Mec FR\_03008



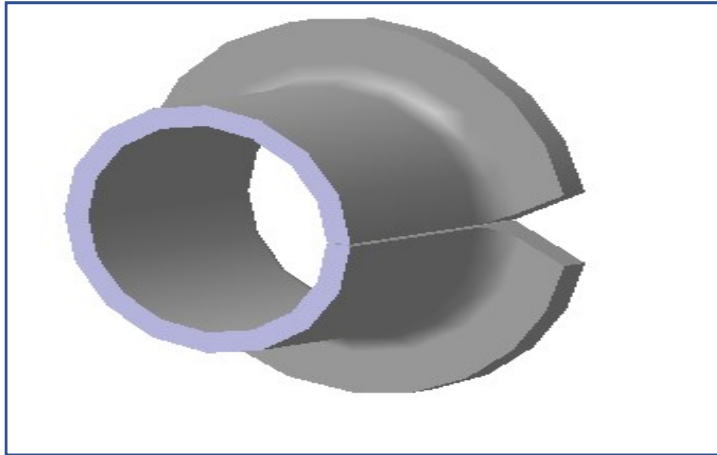
FR

FR\_A0300

Positive MechFR\_03009



FR FR\_A0300 Throttle pedal FR\_03010



FR

FR\_A0300

Springs

FR\_03011

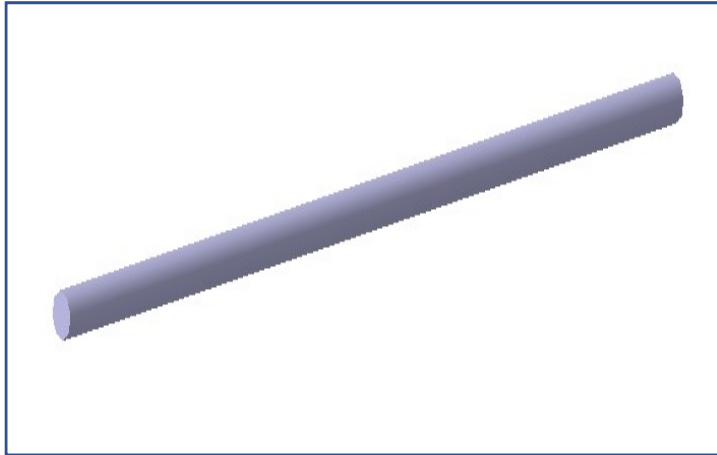


FR      FR\_A0300      Potentiomete FR\_03012

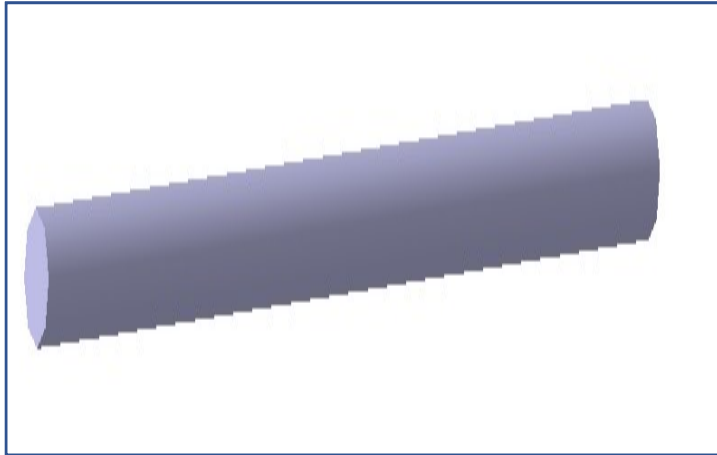




FR FR\_A0300 Throttle R Thr FR\_03013



FR FR\_A0300 Throttle F Thn FR\_03014



FR FR\_A0300 Axle Spacer FR\_03015

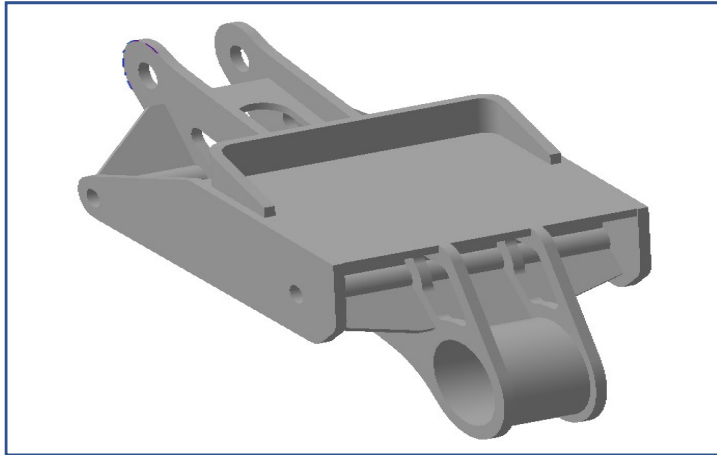


FR FR\_A0300 Potentiom R TFR\_03016

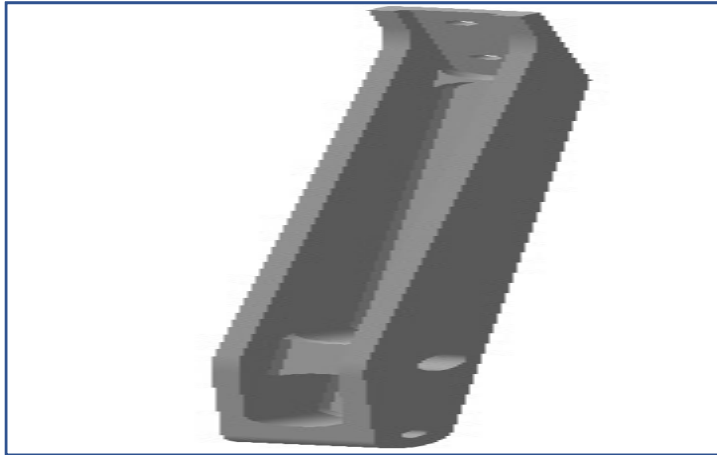


FR	Pedals (Brake) FR_A0400			<a href="#">Retour</a>
FR	Pedals (Brake)	FR_A0400	Frame brake laser cut and s m	1 FR_04001
FR	Pedals (Brake)	FR_A0400	Brake pedal S link frame anc m	1 FR_04002
FR	Pedals (Brake)	FR_A0400	Footrest laser cut and l m	1 FR_04003
FR	Pedals (Brake)	FR_A0400	Master cylind pressurize bra b	FR_04004
FR	Pedals (Brake)	FR_A0400	Master cylind link master cy m	2 FR_04005
FR	Pedals (Brake)	FR_A0400	Brake fixing r allow position m	2 FR_04006
FR	Pedals (Brake)	FR_A0400	Brake R Fixing rear wedges m	2 FR_04007
FR	Pedals (Brake)	FR_A0400	Brake F Fixing front wedges m	2 FR_04008
FR	Pedals (Brake)	FR_A0400	Distribution B link cylinder t b	1 FR_04009
FR	Pedals (Brake)	FR_A0400	Distribution A maintain Brak b	2 FR_04010
FR	Pedals (Brake)	FR_A0400	Distribution C support for b a b	1 FR_04011
FR	Pedals (Brake)	FR_A0400	Distribution B allows rotatio b	1 FR_04012
FR	Pedals (Brake)	FR_A0400	BOTS Support support the B m	1 FR_04013
FR	Pedals (Brake)	FR_A0400	BOTS security if bra b	1 FR_04014
FR	Pedals (Brake)	FR_A0400	Brake Pedal H to maintain br m	1 FR_04015
FR	Pedals (Brake)	FR_A0400	Distribution C link axle and a b	2 FR_04016
FR	Pedals (Brake)	FR_A0400	Brake Pedale allow soft rot b	2 FR_04017
FR	Pedals (Brake)	FR_A0400	Brake Threate to position fra b	2 FR_04018

FR      FR\_A0400    Frame brake   FR\_04001



FR FR\_A0400 Brake pedal SIFR\_04002

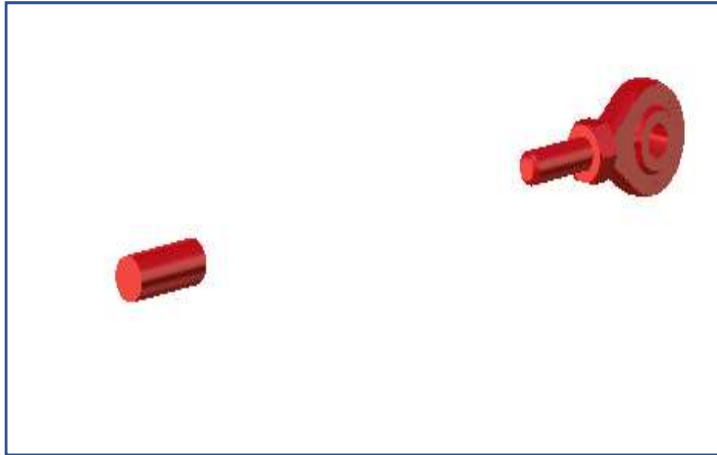


FR FR\_A0400 Footrest FR\_04003

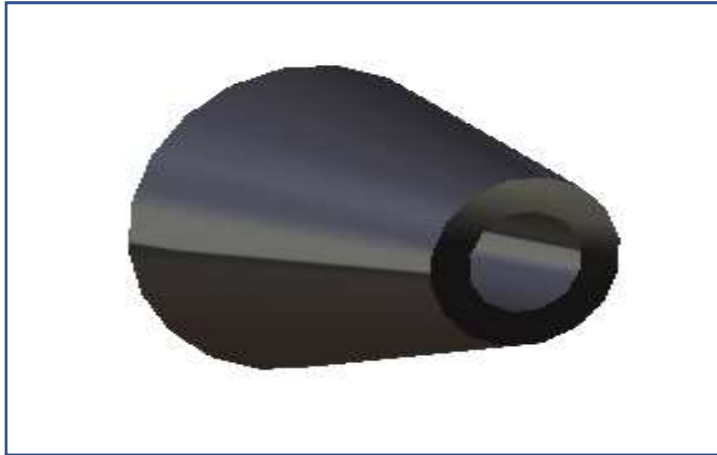




FR FR\_A0400 Master cylinder FR\_04004

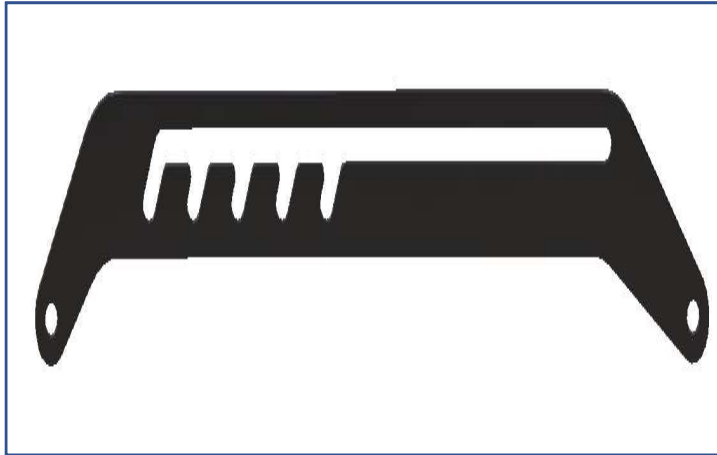


FR FR\_A0400 Master cylinder FR\_04005



FR

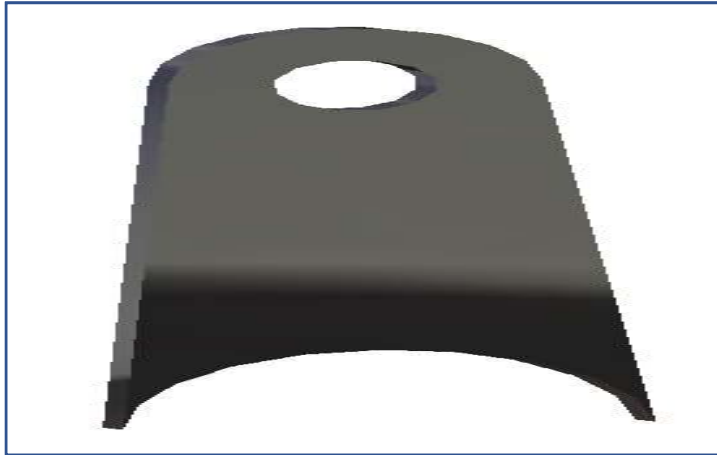
FR\_A0400 Brake fixing rāFR\_04006



FR

FR\_A0400

Brake R Fixing FR\_04007



FR

FR\_A0400

Brake F Fixing FR\_04008

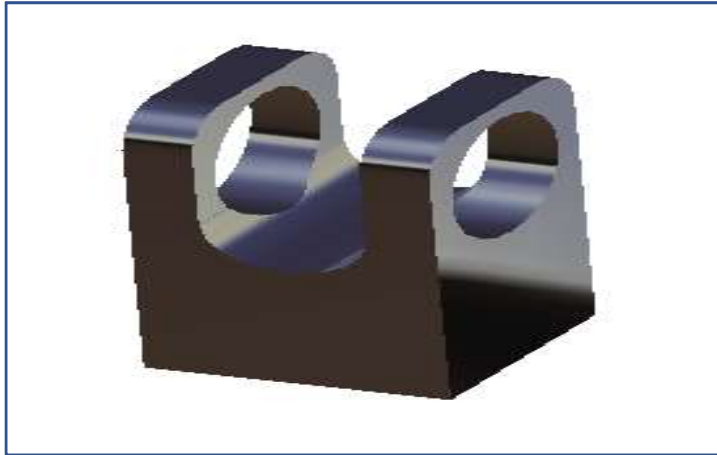


FR FR\_A0400 Distribution B FR\_04009



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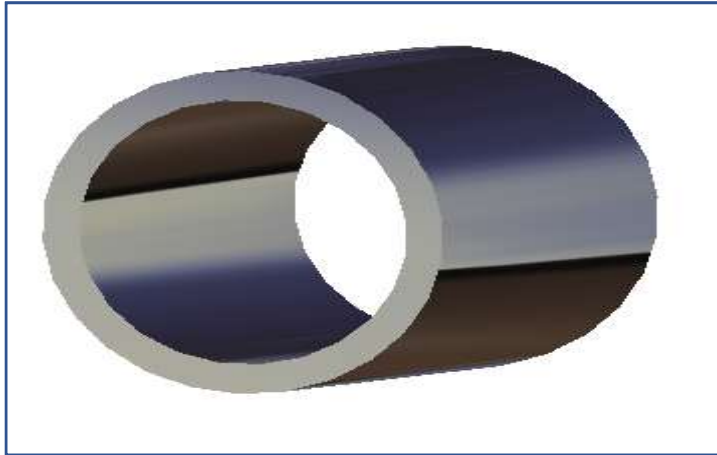
FR\_A0400    Distribution A FR\_04010



FR

FR\_A0400

Distribution C FR\_04011

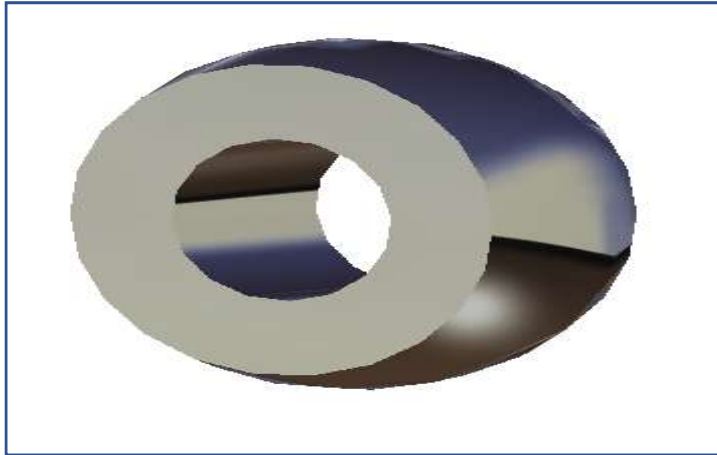




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FR\_A0400

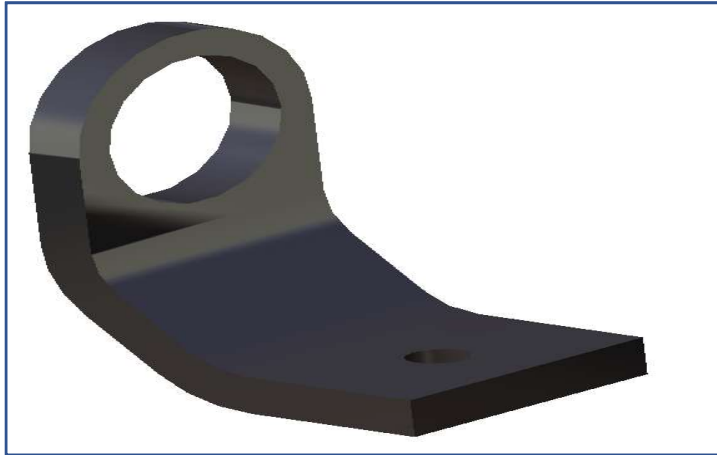
Distribution B FR\_04012



FR

FR\_A0400

BOTS Support FR\_04013



FR

FR\_A0400

BOTS

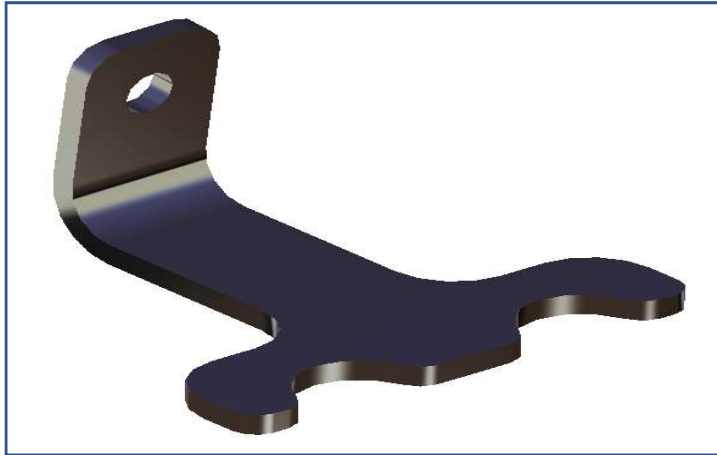
FR\_04014



FR

FR\_A0400

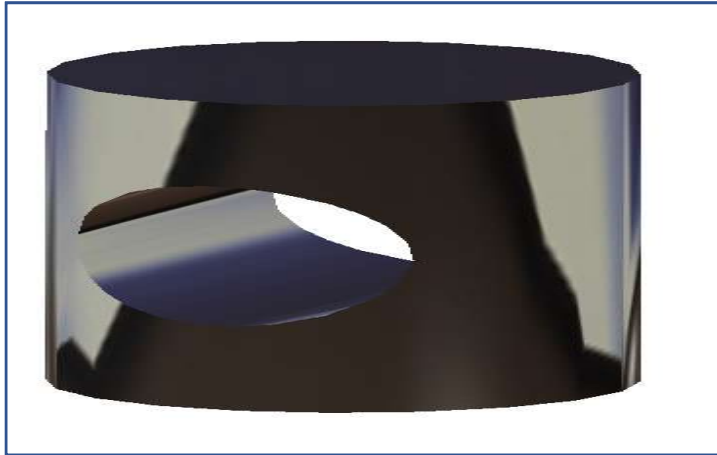
Brake Pedal H FR\_04015



FR

FR\_A0400

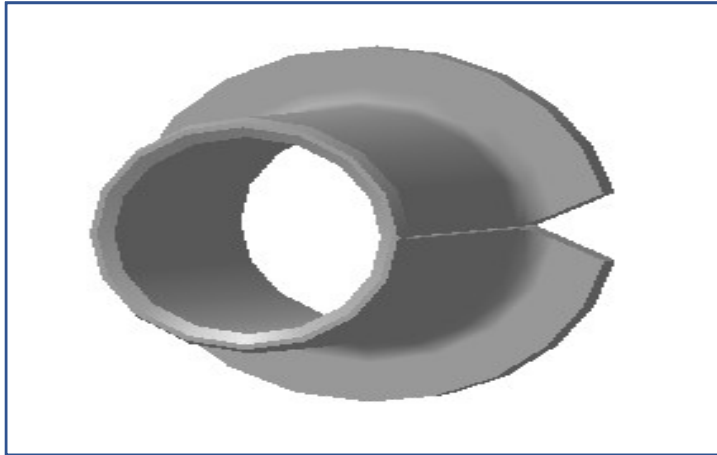
Distribution C FR\_04016



FR

FR\_A0400

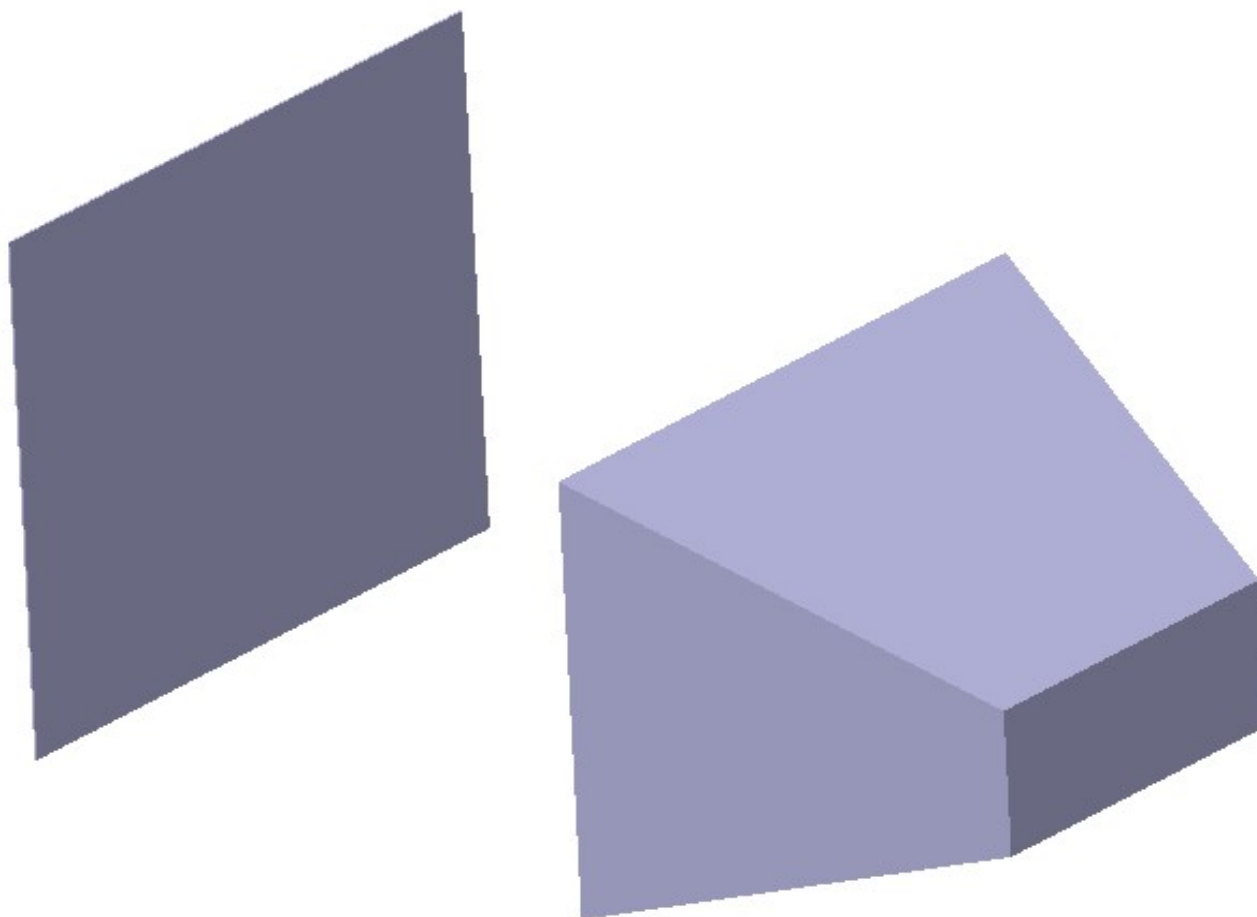
Brake Pedale | FR\_04017



FR FR\_A0400 Brake ThreateFR\_04018

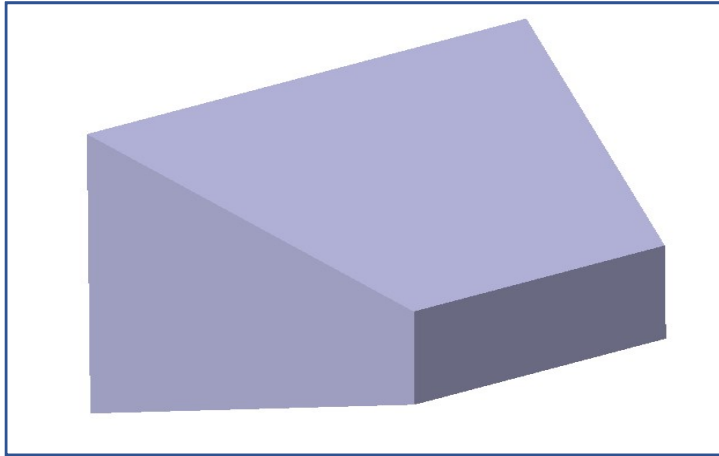


FR	Impact Atenu: FR_A0600					<a href="#">Retour</a>
FR	Impact Attenuator	FR_A0500	Front plate	Floor pan fror m	1 FR_05001	
FR	Impact Attenuator	FR_A0500	Cockpit plate	Floor pan fror m	1 FR_05002	

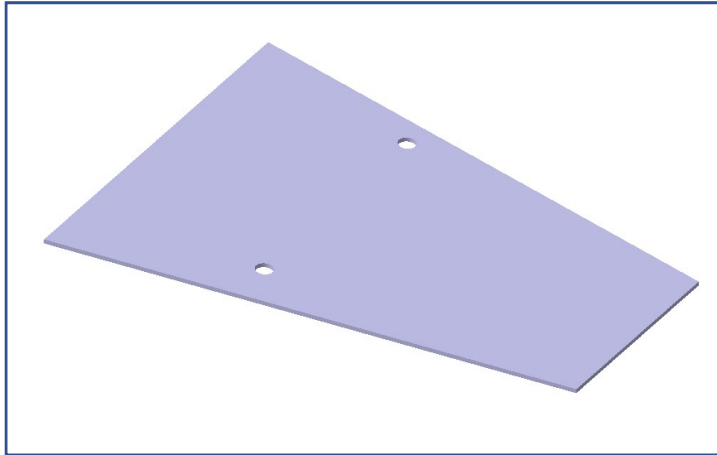




FR FR\_A0500 Impact Attenu FR\_05001

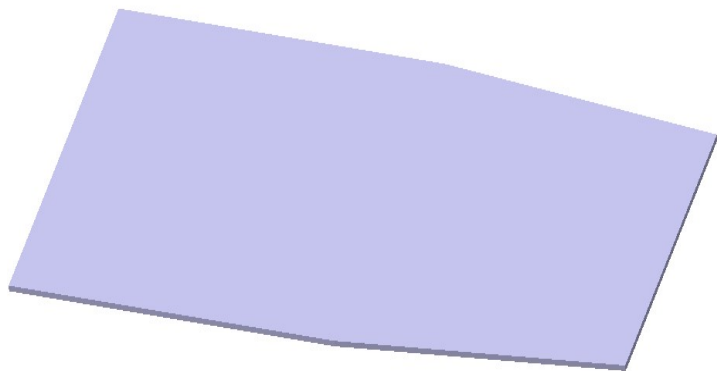


FR FR\_A0500 Anti intrusion FR\_05002





FR      FR\_A0600    Front plate    FR\_06001



FR FR\_A0600 Cockpit plate FR\_06002

