

# FICHE D'HOMOLOGATION HOMOLOGATION FORM



## COMMISSION INTERNATIONALE DE KARTING - FIA



### MOTEUR / ENGINE OK-Junior

Constructeur	<i>Manufacturer</i>	TM Racing S.p.A
Marque	<i>Make</i>	<b>TM Racing</b>
Modèle	<i>Model</i>	<b>S2-Junior</b>
Type d'admission	<i>Inlet type</i>	REED VALVE
Durée de l'homologation	<i>Validity of the homologation</i>	3 ans / 3 years
Nombre de pages	<i>Number of pages</i>	18

La présente Fiche d'Homologation reproduit descriptions, illustrations et dimensions du moteur au moment de l'homologation par la CIK-FIA.

*This Homologation Form reproduces descriptions, illustrations and dimensions of the engine at the time the CIK-FIA conducted the homologation.*



PHOTO DU MOTEUR CÔTÉ PIGNON /  
PHOTO OF DRIVE SIDE OF ENGINE

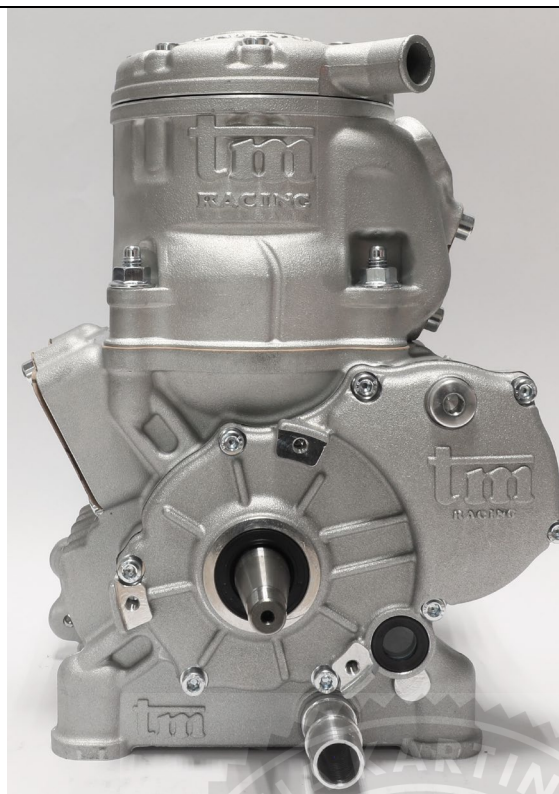


PHOTO DU MOTEUR CÔTÉ OPPOSÉ /  
PHOTO OF OPPOSITE SIDE OF ENGINE

**Signature et tampon de l'ASN**  
**Signature and stamp of the ASN**

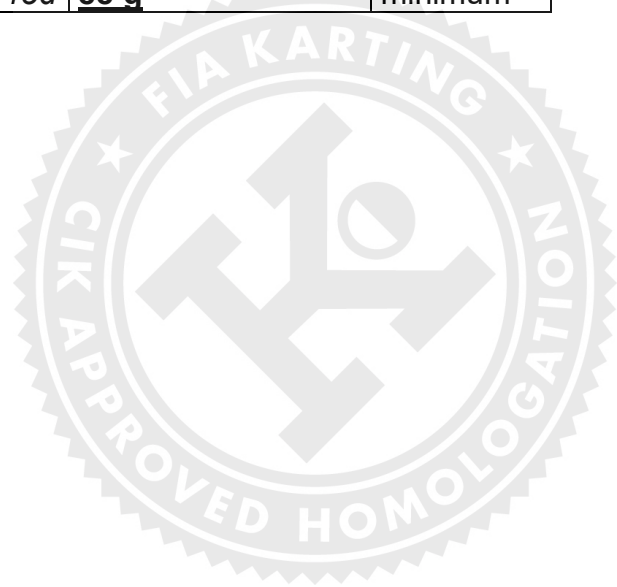
**Signature et tampon de la CIK-FIA /**  
**Signature and stamp of the CIK-FIA**



## INFORMATIONS TECHNIQUES

## TECHNICAL INFORMATION

A	CARACTÉRISTIQUES	A	CHARACTERISTICS
	Le nombre de décimales doit être de 2 ou en accord avec la tolérance appliquée.		The number of decimal places must be 2 or comply with the relevant tolerance.
			Tolérances / remarques Tolerances and remarks
	<b>Cylindre</b>		<b>Cylinder</b>
	Volume du cylindre		Volume of cylinder
			<b>124.36 cm<sup>3</sup></b>
	Alésage d'origine		Original bore
			<b>53.95 mm</b>
	Alésage théorique maximum		Theoretical maximum bore
			<b>54.08 mm</b>
	Course		Stroke
			<b>54.40 mm</b>
			±0.1 mm
	Nombre de canaux de transfert, cylindre/carter		Number of transfer ducts, cylinder/sump
			<b>5 / 3</b>
	Nombre de lumières / canaux d'échappement		Number of exhaust ports / ducts
			<b>3</b>
	Forme de la chambre de combustion		Shape of the combustion chamber
			<b>SPHERIC WITH VARIABLE RADIUS+SQUISH</b>
	<b>Vilebrequin</b>		<b>Crankshaft</b>
	Nombre de paliers		Number of bearings
			<b>2</b>
	Diamètre des paliers		Diameter of bearings
			<b>25</b>
	Poids minimum du vilebrequin		Minimum weight of crankshaft
			<b>1715 g</b>
			minimum
	<b>Arbre d'équilibrage</b>		<b>Balance shaft</b>
	Poids minimum de l'arbre d'équilibrage		Minimum weight of balance shaft
			<b>327 g</b>
	Pourcentage d'Equilibrage		Percentage of balancing
			<b>25 %</b>
			minimum
	<b>Bielle</b>		<b>Connecting rod</b>
	Longueur (entre-axe) de la bielle		Length between the axes of the connecting rod
			<b>104 mm</b>
	Diamètre de la tête de bielle		Diameter of big end
			<b>26 mm</b>
	Diamètre du pied de bielle		Diameter of small end
			<b>19 mm</b>
	Poids minimum de la bielle		Min. weight of the connecting rod
			<b>88 g</b>
			minimum



<b>Piston</b>	<b>Piston</b>		
Nombre de ségments du piston	<i>Number of piston rings</i>	<b>1</b>	
Poids du piston nu ségments du piston inclus	<i>Weight of the bare piston including piston rings</i>	<b>107 g</b>	minimum
<b>Axe du piston</b>	<b>Gudgeon pin</b>		
Poids	<i>Weight</i>	<b>26 g</b>	minimum

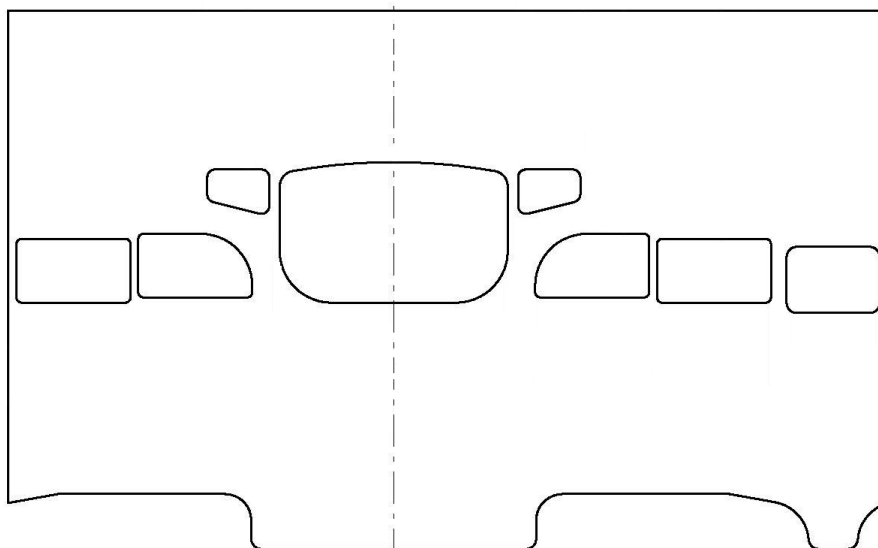
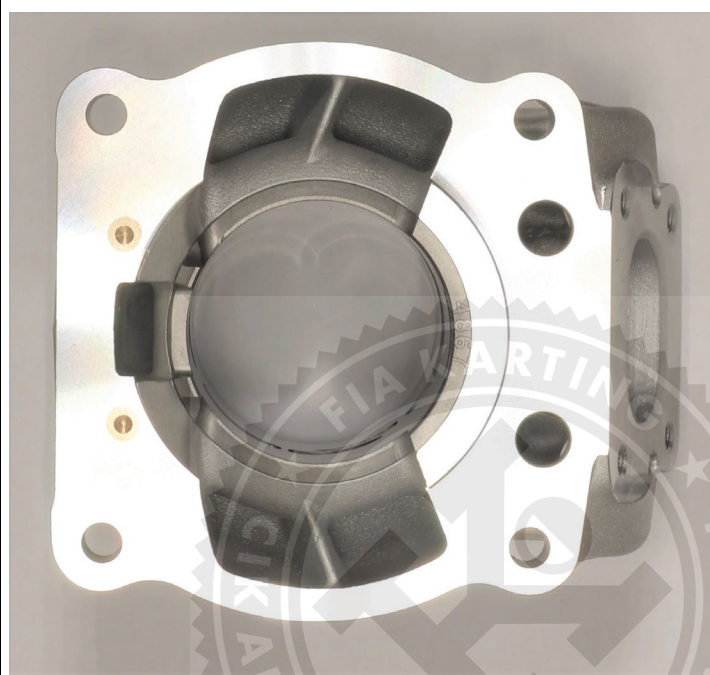
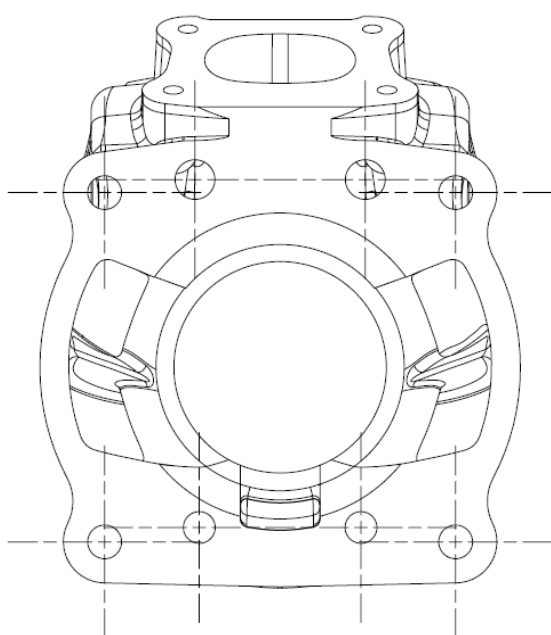
<b>B</b>	<b>ANGLES D'OUVERTURE</b>	<b>B</b>	<b>OPENING ANGLES</b>
de l'échappement	of the exhaust	selon les reglements	<i>according to the regulations</i>

<b>C</b>	<b>MATÉRIAU</b>	<b>C</b>	<b>MATERIAL</b>
Culasse	<i>Cylinder head</i>		ALUMINIUM ALLOY
Cylindre	<i>Cylinder</i>		ALUMINIUM ALLOY
Carter	<i>Sump</i>		ALUMINIUM ALLOY
Vilebrequin	<i>Crankshaft</i>		STEEL
Bielle	<i>Connecting rod</i>		STEEL
Piston	<i>Piston</i>		ALUMINIUM ALLOY



D PHOTOS, DESSINS &amp; GRAPHIQUES

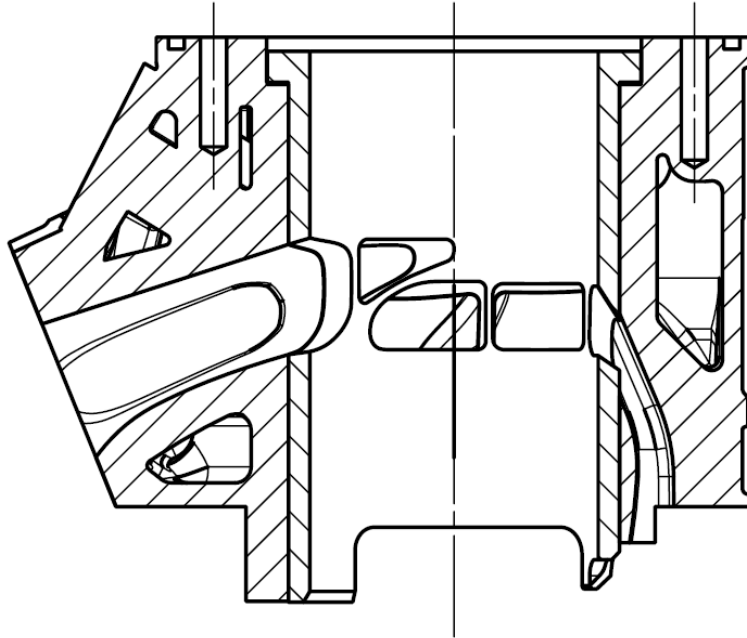
D PHOTOS, DRAWINGS &amp; GRAPHS

**D.1 CYLINDRE / CYLINDER UNIT**DESSIN DU DÉVELOPPEMENT DU CYLINDRE  
sans dimensionsDRAWING OF THE CYLINDER DEVELOPMENT  
without dimensionsDESSIN DU PIED  
DU CYLINDRE  
sans dimensionsDRAWING OF THE  
CYLINDER BASE  
without dimensionsPHOTO DU PIED  
DU CYLINDREPHOTO OF THE  
CYLINDER BASE

## Section D.1

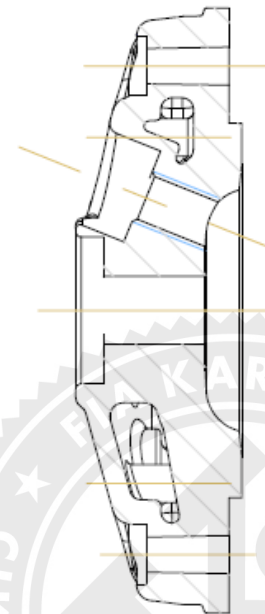
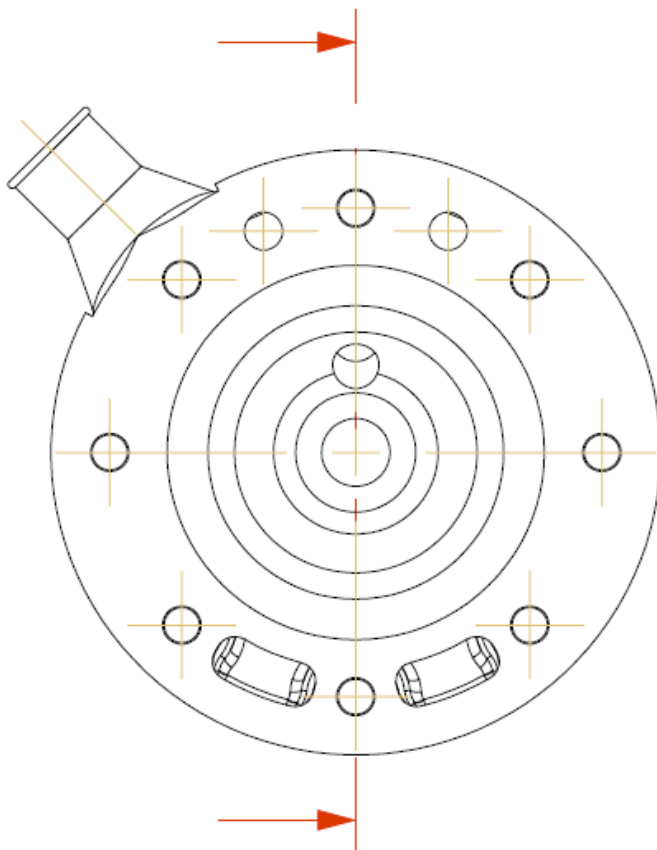
VUE EN COUPE VERTICALE DU CYLINDRE  
AVEC LA CHEMISE, sans dimensions

VERTICAL CROSS SECTION VIEW OF  
CYLINDER WITH LINER, without dimensions



DESSIN DE LA CULASSE ET DE LA CHAMBRE  
DE COMBUSTION, sans dimensions

DRAWING OF THE CYLINDER HEAD AND THE  
COMBUSTION CHAMBER, without dimensions



**D.2 VILEBREQUIN, BIELLE, PISTON & CARTERS /  
CRANKSHAFT, CONROD, PISTON & CRANKCASE**

PHOTO DE L'EMBIELLAGE /  
PHOTO OF THE CRANKSHAFT & CONROD

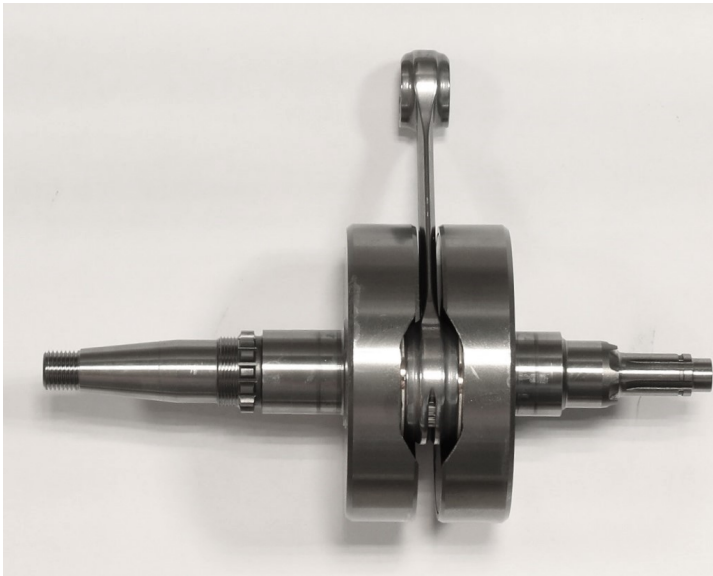
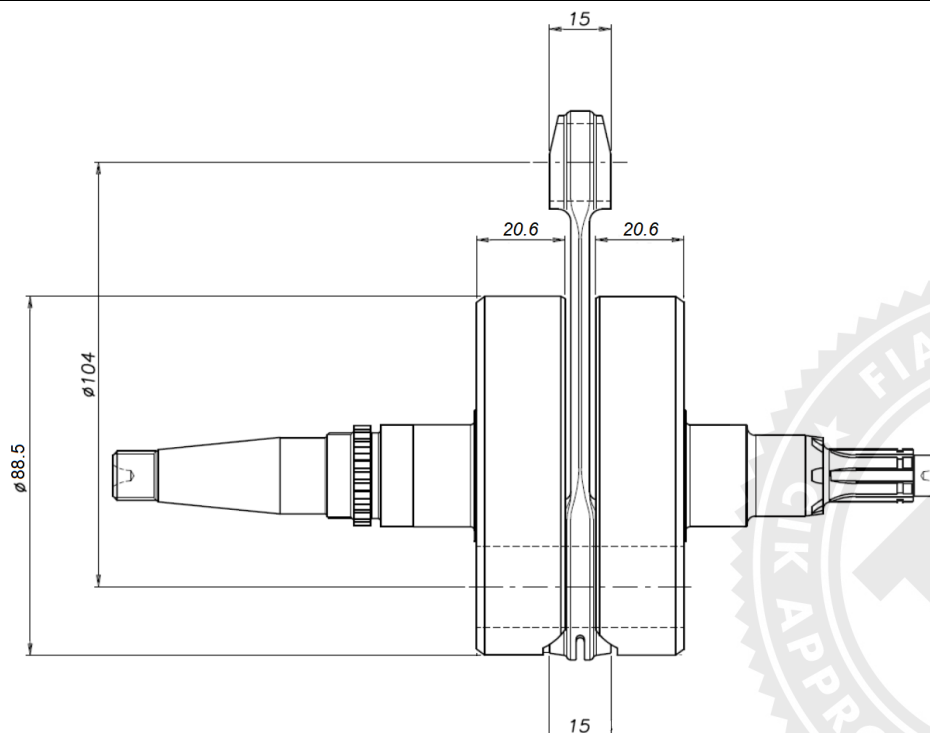


PHOTO DE LA BIELLE /  
PHOTO OF THE CONROD

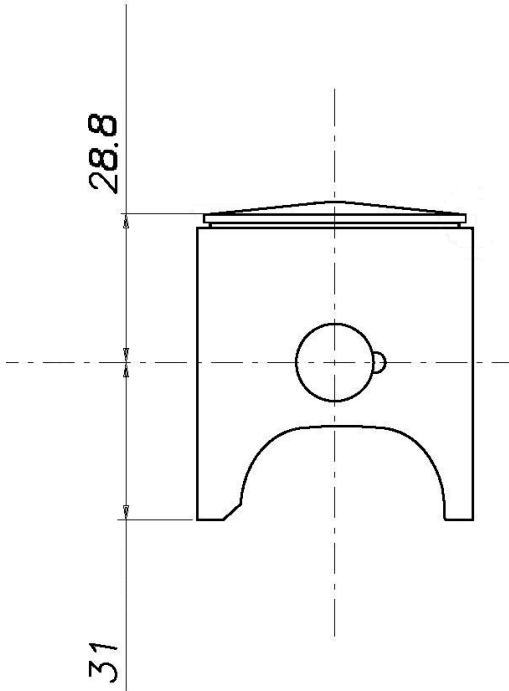
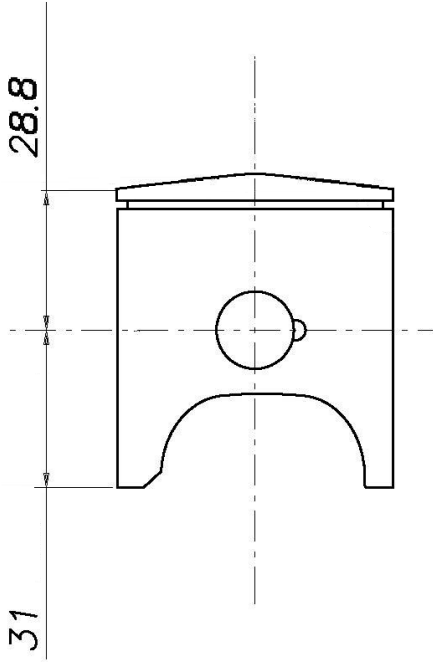

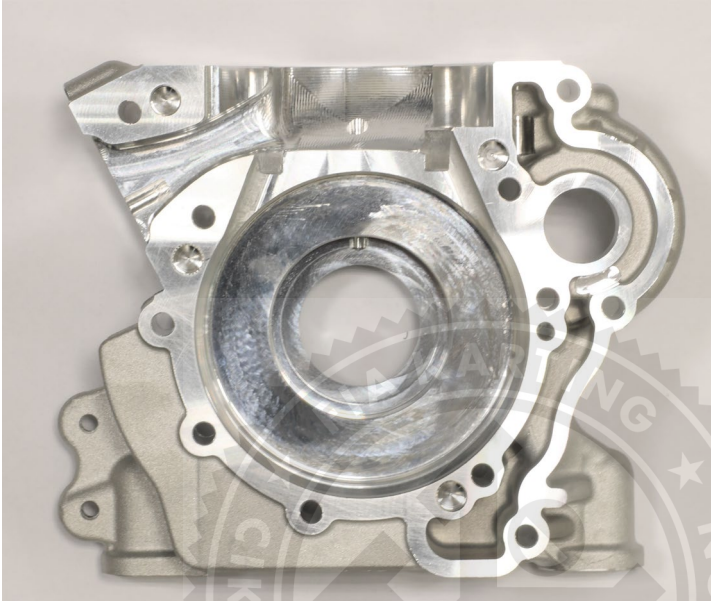


DESSIN DE L'ENSEMBLE VILEBREQUIN -  
BIELLE (dimensions sans tolérances: largeurs  
pied & tête de bielle, largeur & diamètre des  
contrepoids et largeur de vilebrequin)

DRAWING OF THE CRANKSHAFT - CON ROD  
UNIT (dimension without tolerances, big & small  
ends thickness, crank mass thickness & diameter  
and thickness of crankshaft )



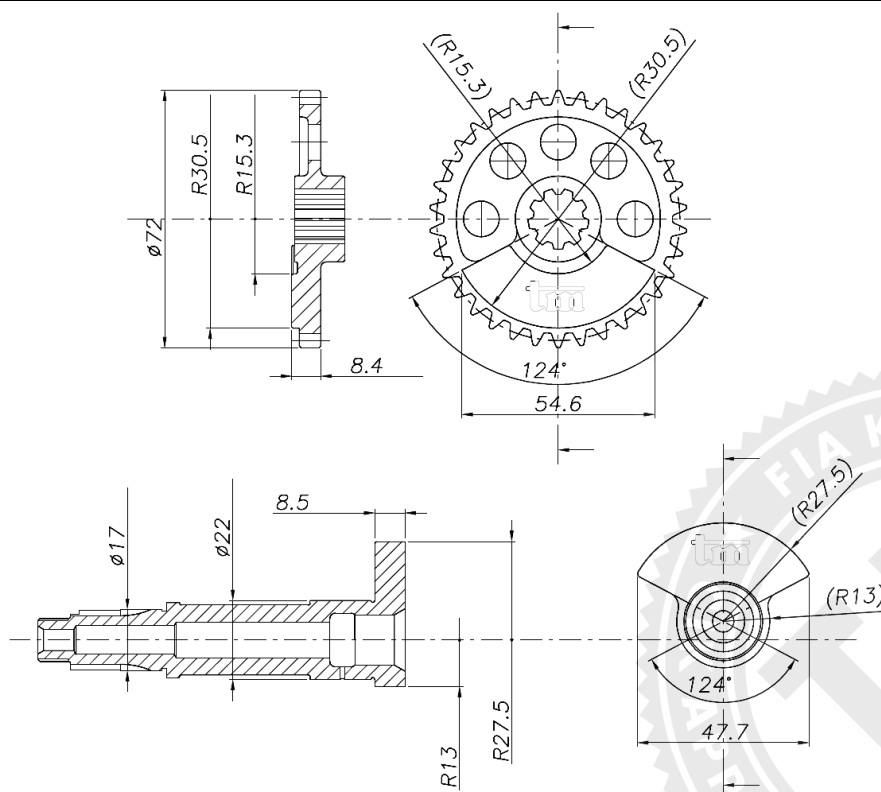
## .Section D.2

DESSIN DU PISTON (dimensions principale sans tolérances)		DRAWING OF THE PISTON (main dimensions without tolerances)	
			
PHOTO DE L'INTÉRIEURE DU CARTER DROIT	PHOTO OF THE INSIDE OF THE RH CRANKCASE	PHOTO DE L'INTÉRIEURE DU CARTER GAUCHE	PHOTO OF THE INSIDE OF THE LH CRANKCASE
			

**D.3 ARBRE D'ÉQUILIBRAGE / BALANCE SHAFT**

PHOTO DE L'ARBRE D'ÉQUILIBRAGE

PHOTO OF THE BALANCE SHAFT

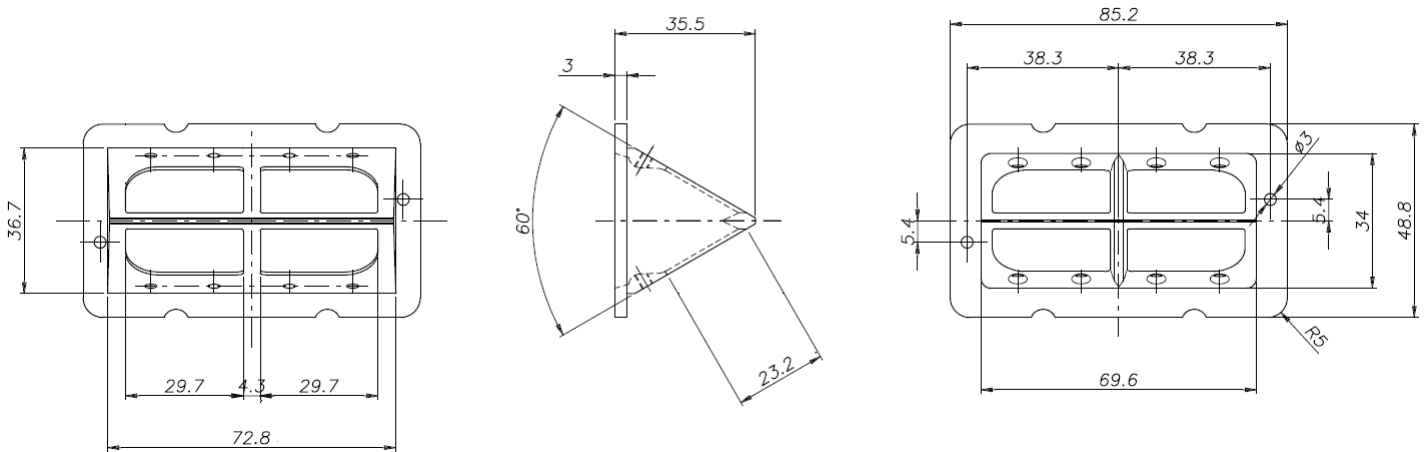
DESSIN DE L'ARBRE D'ÉQUILIBRAGE  
(dimensions sans tolérances)DRAWING OF THE BALANCE SHAFT  
(dimensions without tolerances)



**D.4 CLAPETS / REED VALVE**

DESSIN DE LA BOÎTE À CLAPETS  
(dimensions sans tolérances)

DRAWING OF THE REED VALVE  
(dimensions without tolerances)



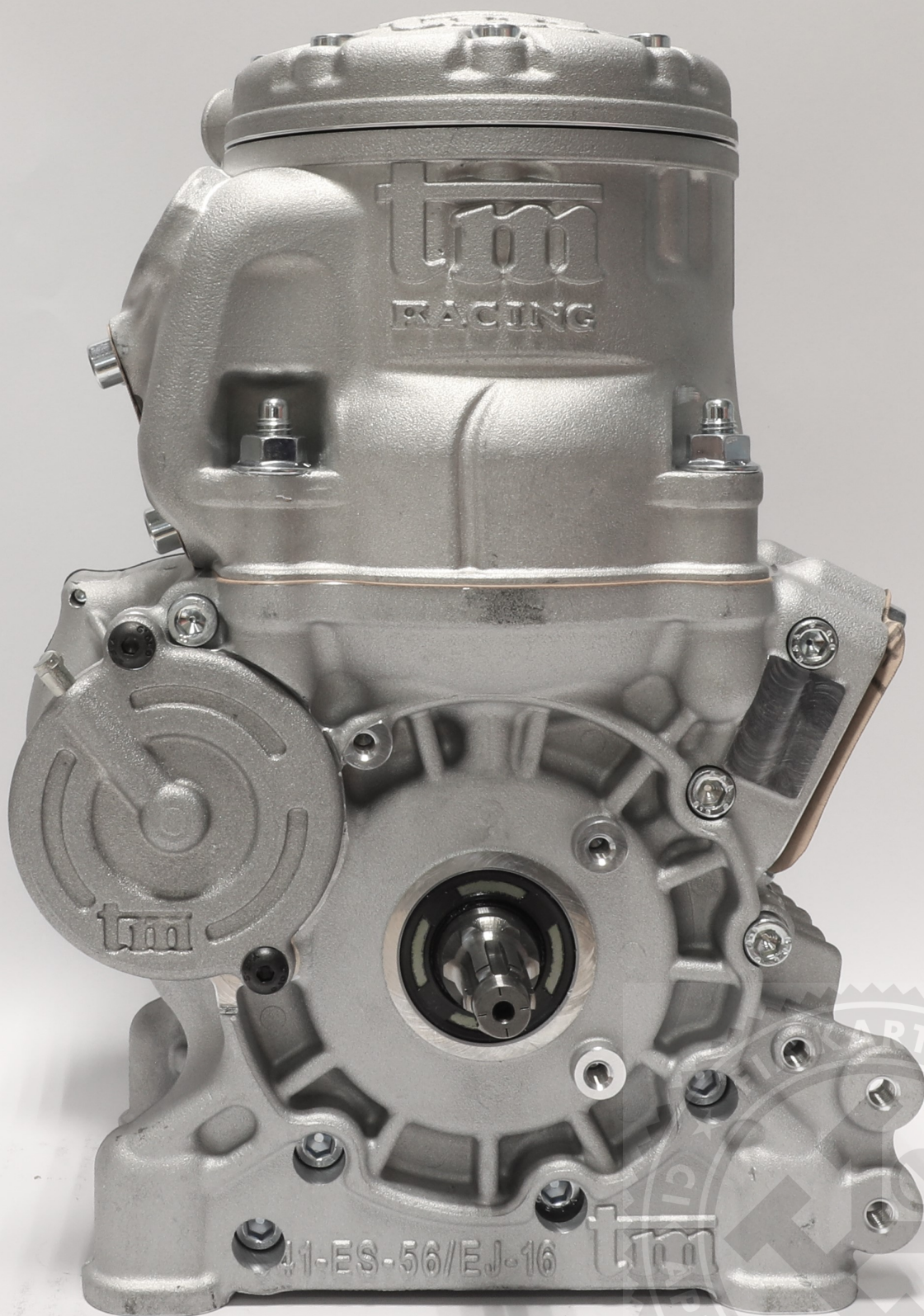
**D.5 MOTEUR / ENGINE**PHOTO DU MOTEUR COMPLET  
COTÉ PIGNONPHOTO OF THE DRIVE SIDE OF THE  
COMPLETE ENGINE

PHOTO DU MOTEUR COMPLET  
COTÉ OPPOSÉ AU PIGNON

PHOTO OF THE OPPOSITE DRIVE SIDE  
OF THE COMPLETE ENGINE



PHOTO DE L'AVANT  
DU MOTEUR COMPLET

*PHOTO OF THE FRONT  
OF THE COMPLETE ENGINE*

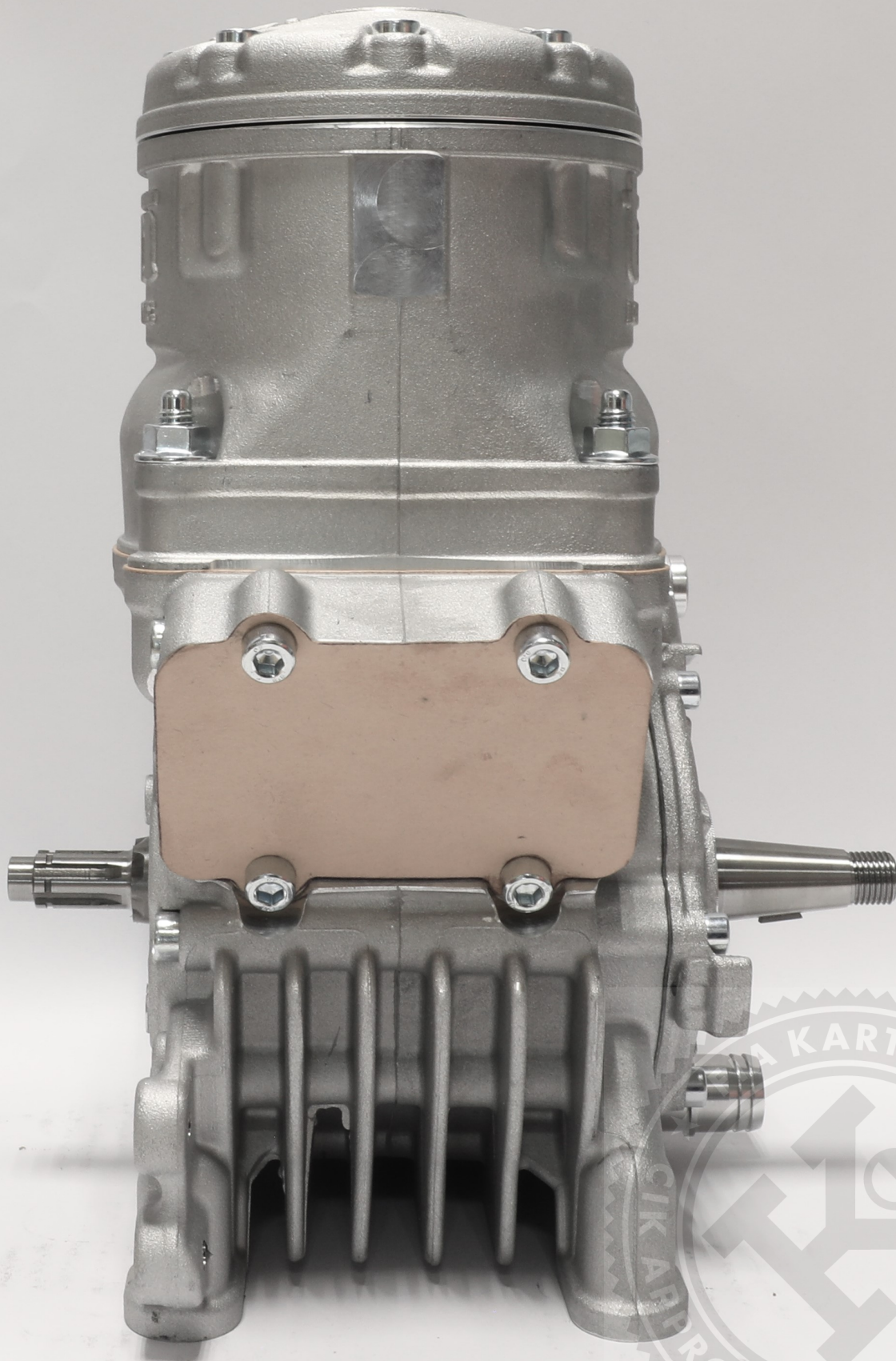
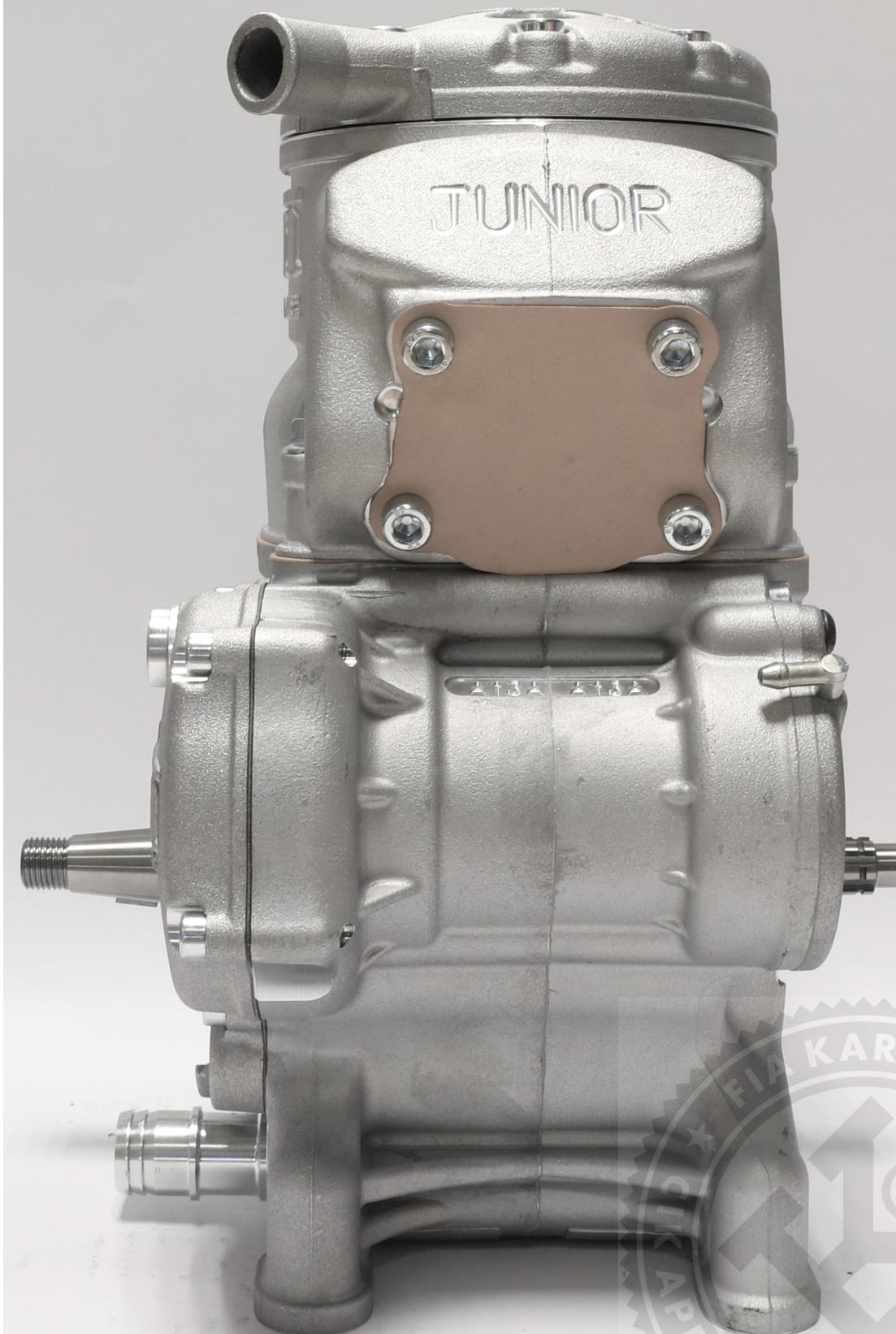


PHOTO DE L'ARRIÈRE  
DU MOTEUR COMPLET

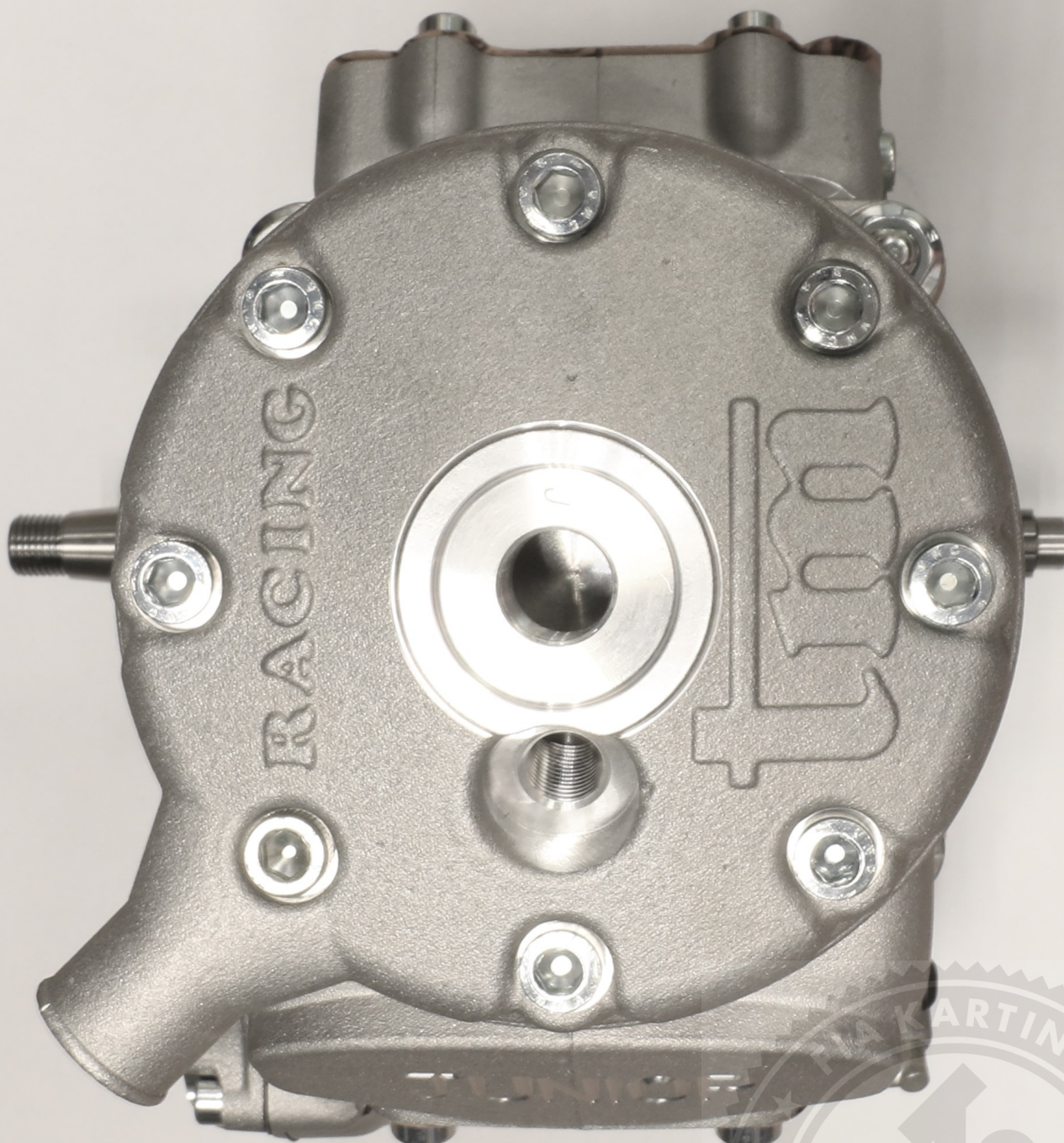
PHOTO OF THE REAR  
OF THE COMPLETE ENGINE



**041-EJ-16**

PHOTO DU MOTEUR COMPLET  
VU DU HAUT

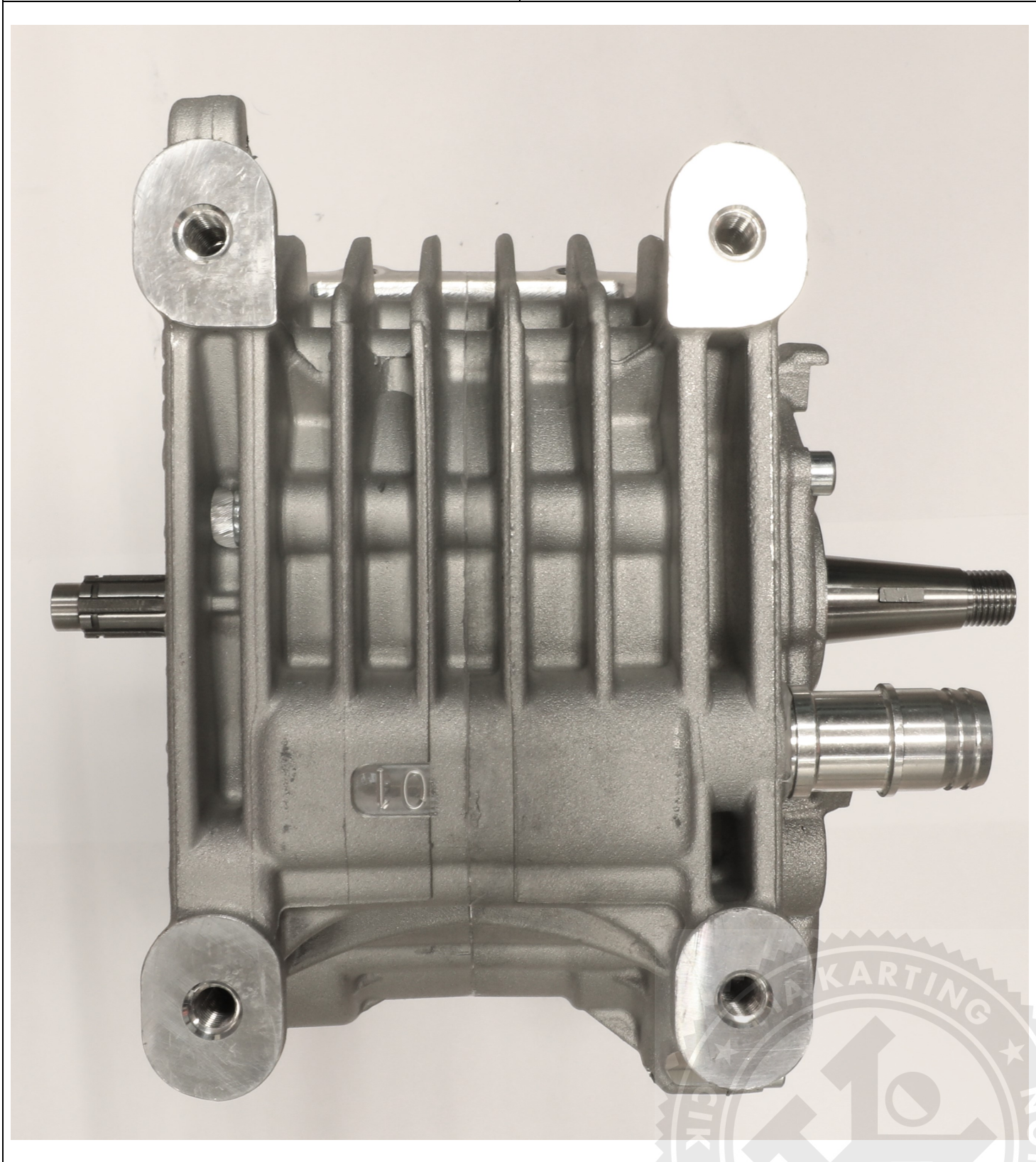
PHOTO OF THE COMPLETE ENGINE  
TAKEN FROM ABOVE



**041-EJ-16**

PHOTO DU MOTEUR COMPLET  
VU DU DESSOUS

PHOTO OF THE COMPLETE ENGINE  
TAKEN FROM BELOW

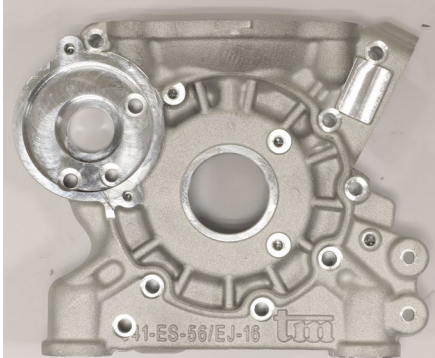

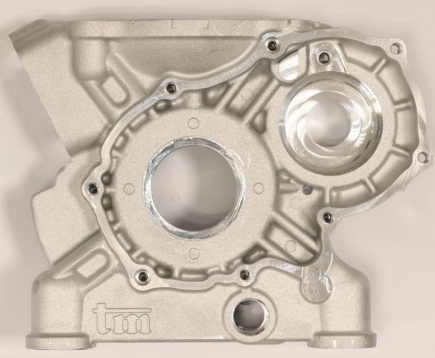





**E. MARQUAGE PIECES PRINCIPALES / MAIN PARTS MARKING**

**Pour chaque pièce, photo globale avec le marquage et photo avec zoom sur le marquage**  
**For each part, global picture with marking and zoom picture on marking**

1. Fonderies de carter droit et gauche
2. Fonderies de cylindre
3. Culasse
4. Chemise en fonte
5. Demi-vilebrequins
6. Bielle
7. Piston
8. Arbre d'équilibrage
9. Engrenages
10. Couvercle d'engrenages



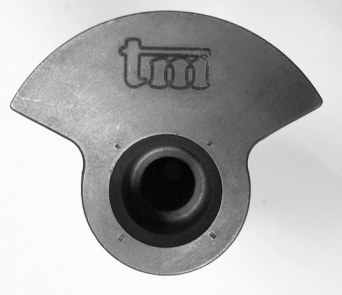
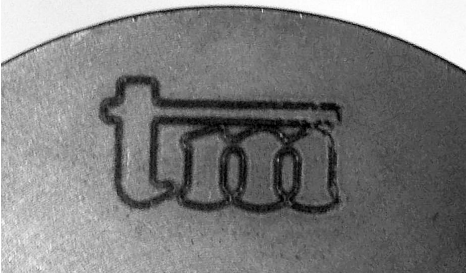

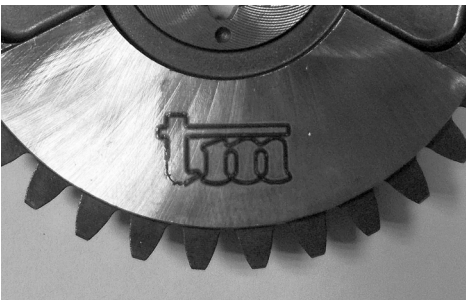


1. Castings of LH & RH crankcase
2. Castings of cylinder
3. Cylinder head
4. Cast iron liner
5. Half-crankshafts
6. Conrod
7. Piston
8. Balancer shaft
9. Gears
10. Gears cover

Pièces N° / Parts no.	Photo d'ensemble / Overall picture		Zoom
<b>1</b>			
<b>1</b>			
<b>2</b>			



3		
4		
5		
5		
6		



7		
8		
9		
9		
10	