Homologation N°

30/M/24

FICHE D'HOMOLOGATION
HOMOLOGATION FORM

COMMISSION INTERNATIONALE DE KARTING - FIA

MOTEUR / *ENGINE*

OK

Constructeur	*Manufacturer*	**TM RACING S.P.A.**
Marque	*Make*	**TM RACING**
Modèle	*Model*	**S-SENIOR**
Type d'admission	*Inlet type*	**REED VALVE**
Durée de l'homologation	*Validity of the homologation*	9 ans / *9 years*
Nombre de pages	*Number of pages*	**19**

La présente Fiche d'Homologation reproduit descriptions, illustrations et dimensions du moteur au moment de l'homologation par la CIK-FIA. La hauteur du moteur complet sur les photos doit être de 7 cm minimum.

This Homologation Form reproduces descriptions, illustrations and dimensions of the engine at the time the CIK-FIA conducted the homologation. The height of the complete engine on all photographs must be as a minimum 7 cm.

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

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PHOTO DU MOTEUR COMPLET COTÉ PIGNON	***PHOTO OF DRIVE SIDE OF THE COMPLETE ENGINE***

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PHOTO DU MOTEUR COMPLET COTÉ OPPOSÉ AU PIGNON	***PHOTO OF OPPOSITE DRIVE SIDE OF THE COMPLETE ENGINE***

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PHOTO DE L'ARRIÈRE DU MOTEUR COMPLET	***PHOTO OF THE REAR OF THE COMPLETE ENGINE***

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PHOTO DE L'AVANT DU MOTEUR COMPLET	***PHOTO OF THE FRONT OF THE COMPLETE ENGINE***

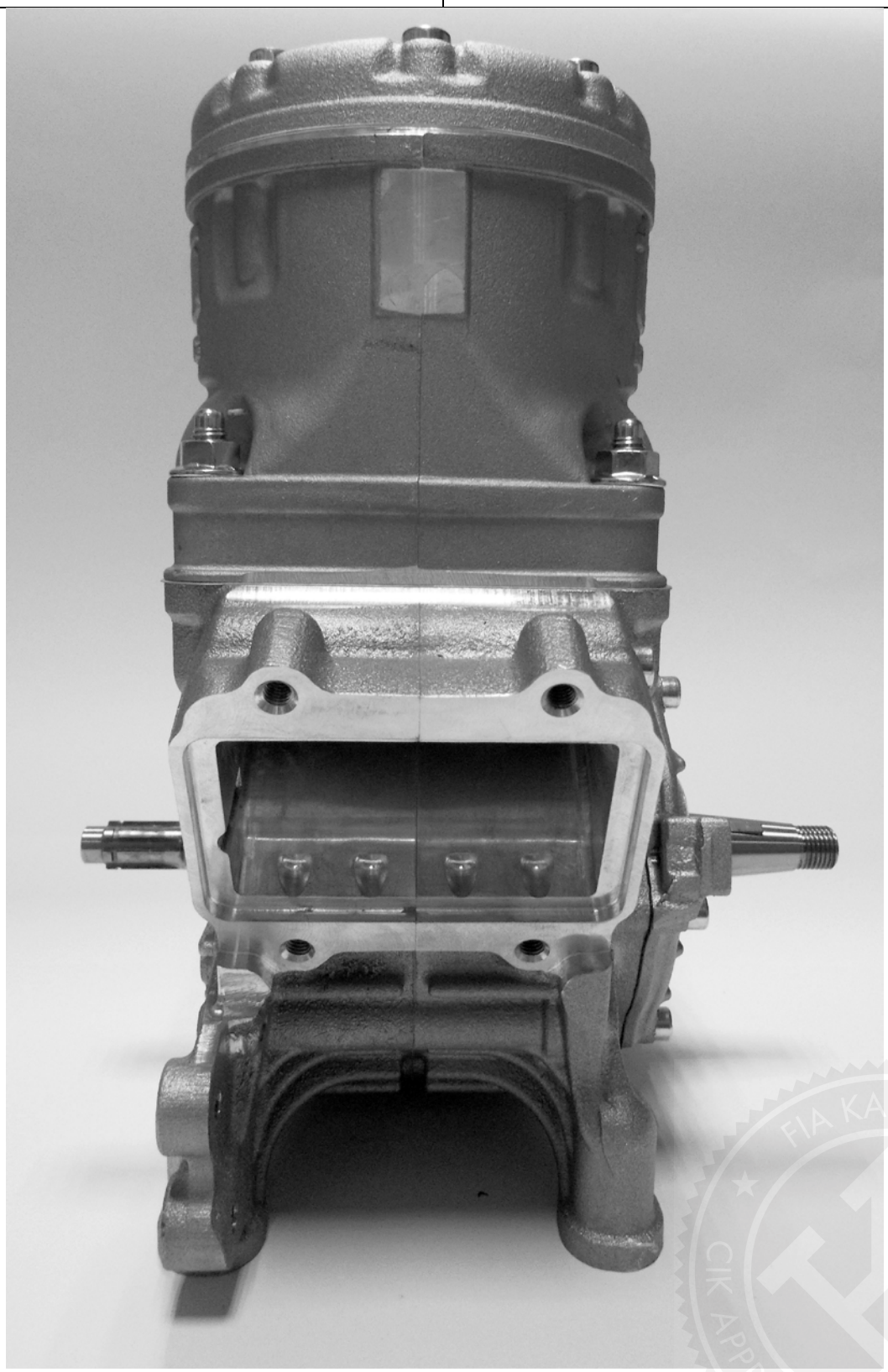

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PHOTO DU MOTEUR COMPLET VU DU HAUT	***PHOTO OF THE COMPLETE ENGINE TAKEN FROM ABOVE***

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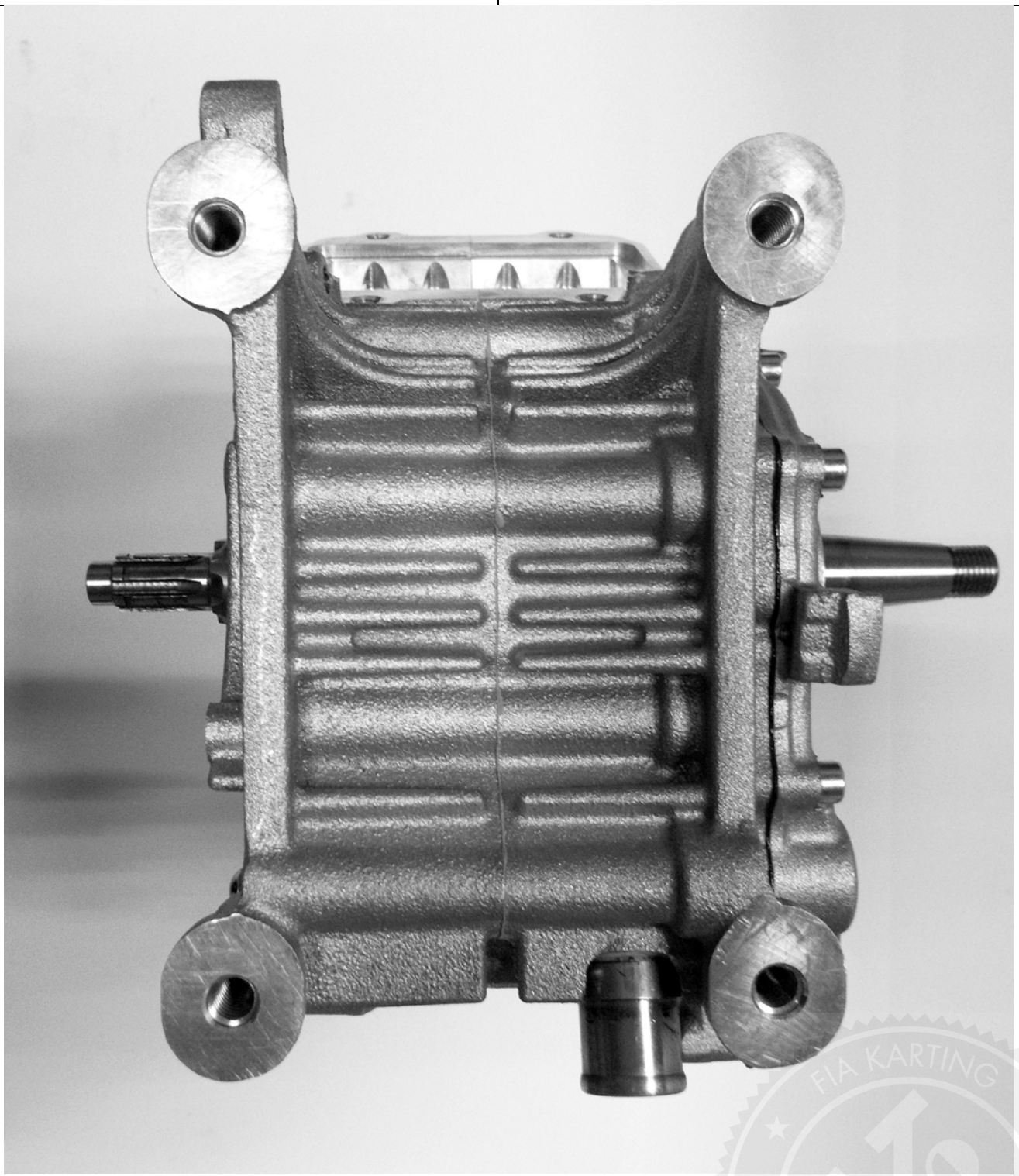
PHOTO DU MOTEUR COMPLET VU DU DESSOUS	***PHOTO OF THE COMPLETE ENGINE TAKEN FROM BELOW***



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Homologation N °

30/M/24

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 & remarks*
Cylindre	***Cylinder***		
Volume du cylindre	*Volume of cylinder*	**124.36 cm³**	≤125cm³
Alésage d'origine	*Original bore*	**53.95 mm**	--
Alésage théorique maximum	*Theoritical maximum bore*	**54.08 mm**	--
Course	*Stroke*	**54.40 mm**	--
Nombre de canaux de transfert, cylindre/carter	*Number of transfer ducts, cylinder/sump*	**5 / 3**	--
Nombre de lumières / canaux d'échappement	*Number of exhaust ports / ducts*	**3**	--
Forme de la chambre de combustion	*Shape of the combustion chamber*	**SPHERIC WITH VARIABLE RADIUS+SQUISH**	
Vilebrequin	***Crankshaft***		
Nombre de paliers	*Number of bearings*	**2**	--
Diamètre des paliers	*Diameter of bearings*	**25**	±0.1mm
Poids minimum du vilebrequin	*Minimum weight of crankshaft*	**1753 g**	minimum
Arbre d'équilibrage	***Balance shaft***		
Poids minimum de l'arbre d'équilibrage	*Minimum weight of balance shaft*	**332 g**	minimum
Pourcentage d'Equilibrage	*Percentage of balancing*	**25 %**	minimum
Bielle	***Connecting rod***		
Longueur (entre-axe) de la bielle	*Connecting rod centreline*	**104 mm**	±0.2mm
Diamètre de la tête de bielle	*Diameter of big end*	**26 mm**	±0.05mm
Diamètre du pied de bielle	*Diameter of small end*	**19 mm**	±0.05mm
Poids minimum de la bielle	*Min. weight of the connecting rod*	**86 g**	minimum

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Piston	***Piston***		
Nombre de ségments du piston	*Number of piston rings*	**1 OR 2**	
Poids minimum du piston nu ségments du piston inclus	*Min. weight of the bare piston including piston rings*	**104 g**	minimum
Axe du piston	***Gudgeon pin***		
Poids minimum	*Minimum weight*	**26 g**	Minimum

B	ANGLES D'OUVERTURE	*B*	*OPENING ANGLES*

De l'échappement	*Of the exhaust*	According to the regulations	

C	MATÉRIAU	*C*	*MATERIAL*

Culasse	*Cylinder head*	**ALUMINIUM ALLOY**
Cylindre	*Cylinder*	**ALUMINIUM ALLOY**
Carter	*Sump*	**ALUMINIUM ALLOY**
Vilebrequin	*Crankshaft*	**STEEL**
Bielle	*Connecting rod*	**STEEL**
Piston	*Piston*	**ALUMINIUM ALLOY**

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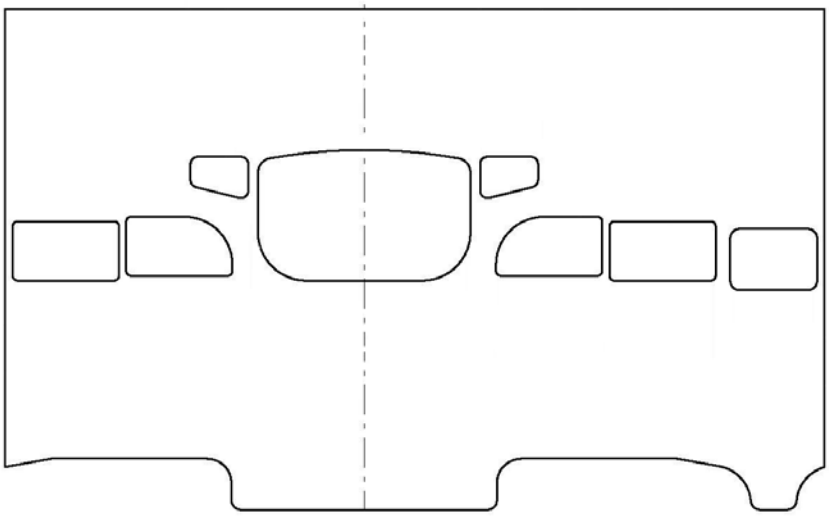
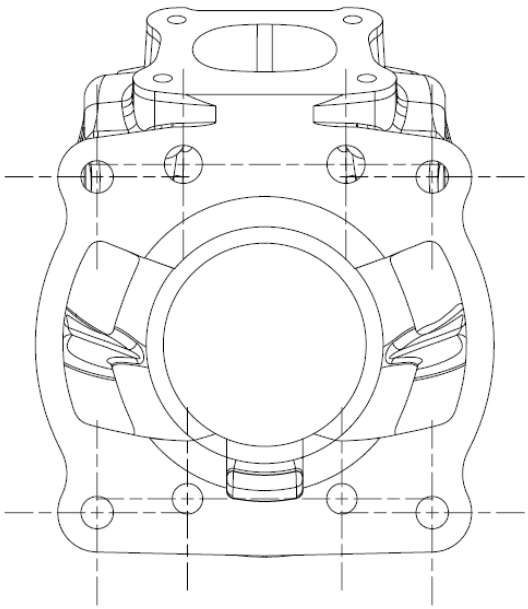
D	PHOTOS, DESSINS & GRAPHIQUES	*D*	*PHOTOS, DRAWINGS & GRAPHS*

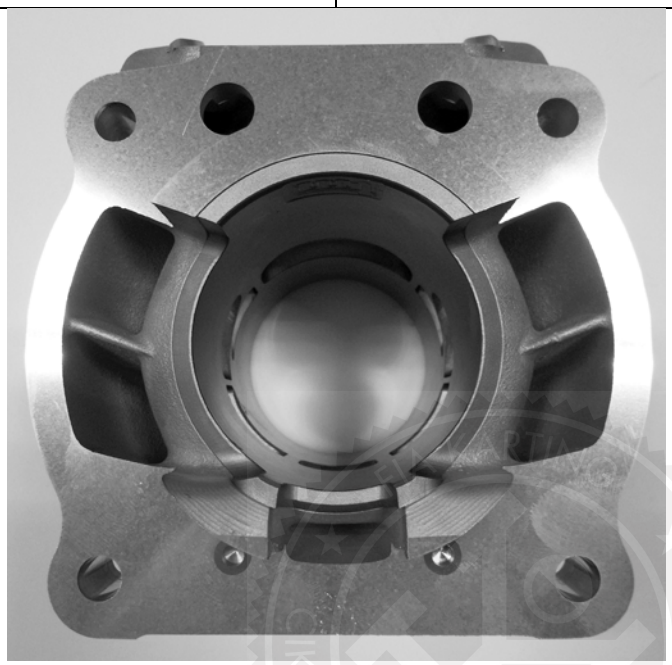
D.1 CYLINDRE / *CYLINDER UNIT*

DESSIN DU DÉVELOPPEMENT DU CYLINDRE sans dimensions	*DRAWING OF THE CYLINDER DEVELOPMENT without dimensions*



DESSIN DU PIED DU CYLINDRE sans dimensions	*DRAWING OF THE CYLINDER BASE without dimensions*	PHOTO DU PIED DU CYLINDRE	*PHOTO OF THE CYLINDER BASE*





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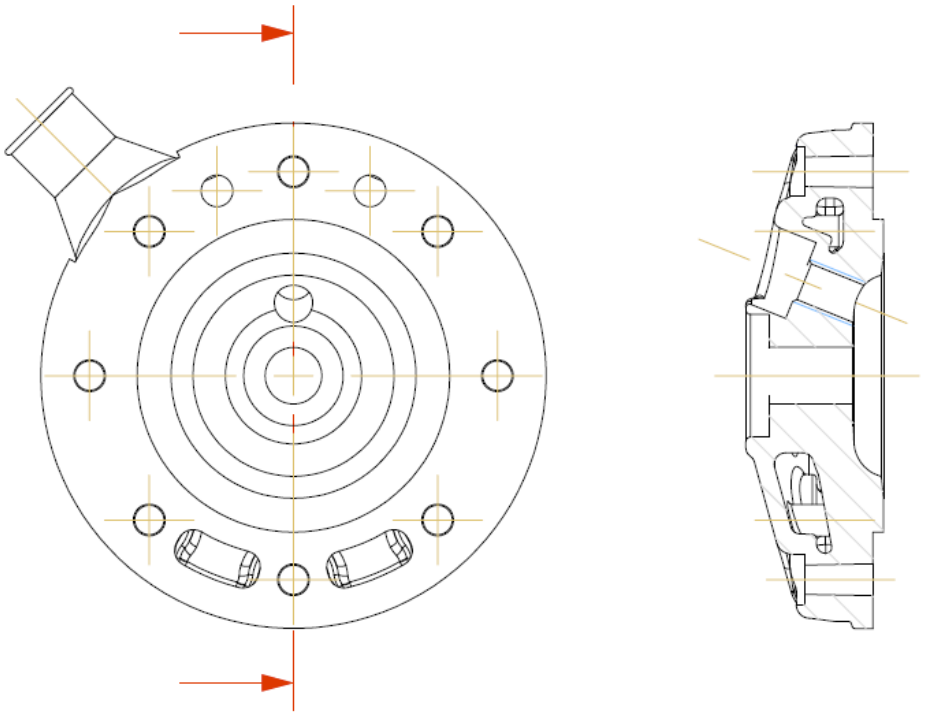
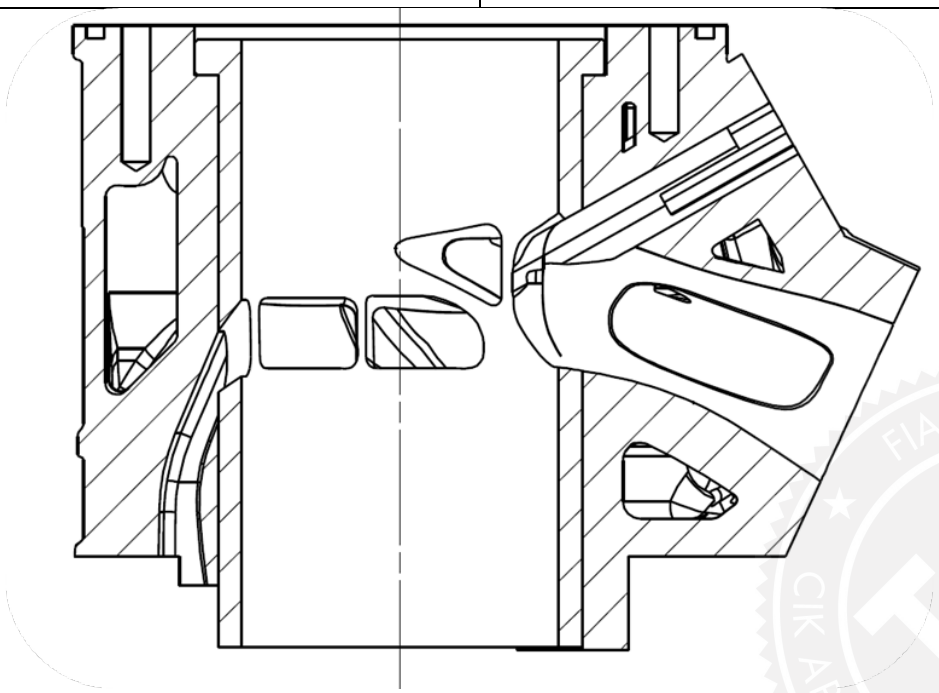
... Section D.1

DESSIN DE LA CULASSE ET DE LA CHAMBRE DE COMBUSTION sans dimensions	*DRAWING OF THE CYLINDER HEAD AND OF THE COMBUSTION CHAMBER without dimensions*



VUE EN COUPE VERTICALE DU CYLINDRE AVEC LA CHEMISE, sans dimensions	*VERTICAL CROSS SECTION VIEW OF CYLINDER WITH LINER, without dimensions*



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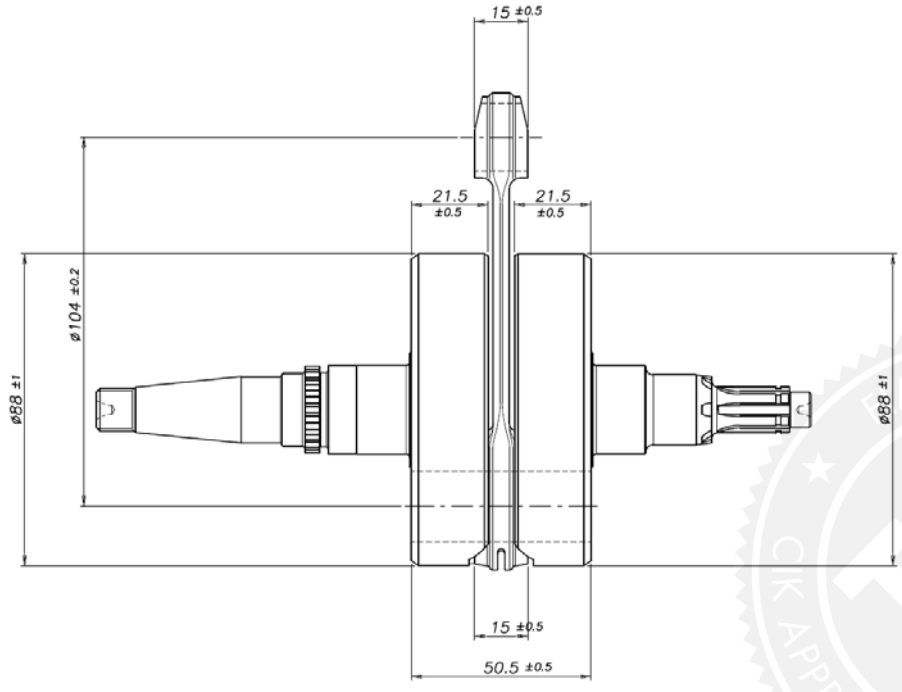
D.2 BIELLE, CARTERS, VILEBREQUIN & PISTON / *CONROD, CRANKCASE, CRANKSHAFT & PISTON*

PHOTO DE L'EMBIELLAGE *PHOTO OF THE CRANKSHAFT & CONROD*	PHOTO DE LA BIELLE *PHOTO OF THE CONROD*
DESSIN DE L'ENSEMBLE VILEBREQUIN - BIELLE (DIMENSIONS avec tolérances, largeurs pied & tête de bielle, largeur & diamètre des contrepoids)	*DRAWING OF THE CRANKSHAFT - CON ROD UNIT (DIMENSIONS incl. tolerances, big & small ends thickness, crank mass thickness & diameter)*



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...Section D.2

DESSIN DU PISTON (DIMENSIONS PRINCIPALES avec tolérances)	*DRAWING OF THE PISTON (MAIN DIMENSIONS incl. tolerances)*

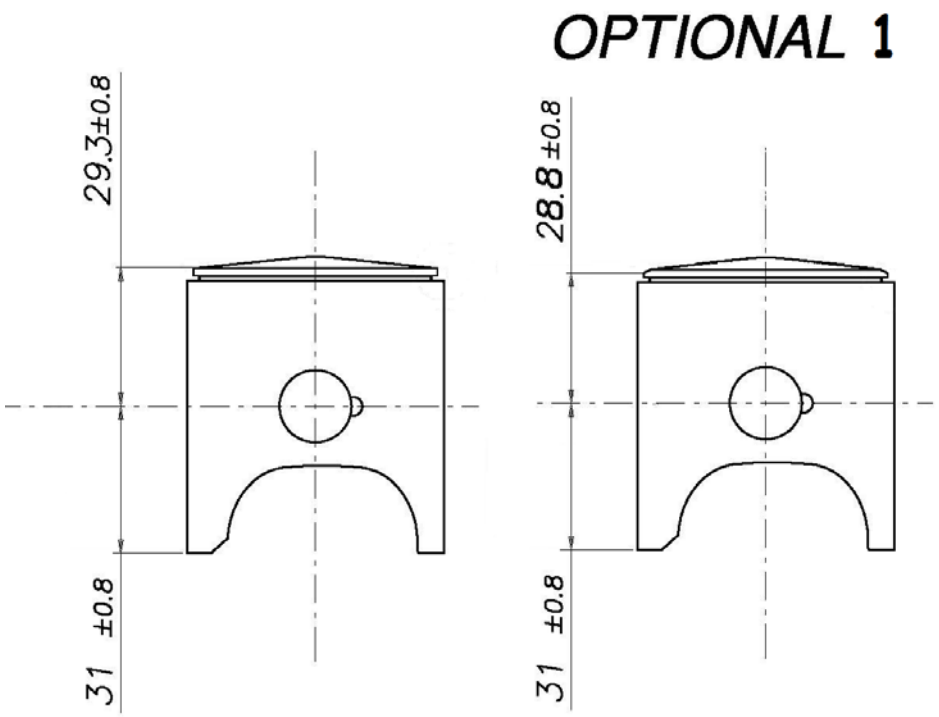
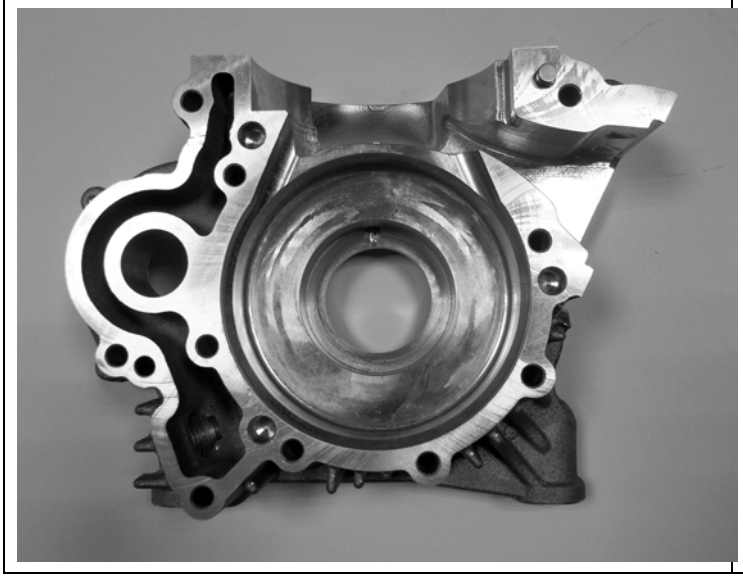


PHOTO INTÉRIEURE DU CARTER DROIT	*PHOTO OF THE INSIDE OF THE RH CRANKCASE*	PHOTO INTÉRIEURE DU CARTER GAUCHE	*PHOTO OF THE INSIDE OF THE LH CRANKCASE*



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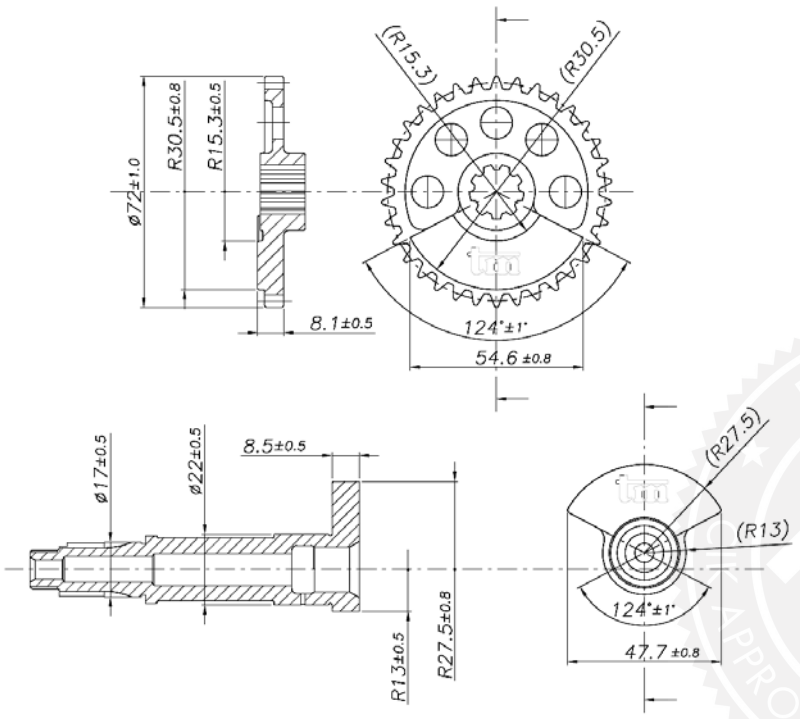
D.3 ARBRE D'ÉQUILIBRAGE / *BALANCE SHAFT*

PHOTO DE L'ARBRE D'ÉQUILIBRAGE	*PHOTO OF THE BALANCE SHAFT*

DESSIN DE L'ARBRE D'ÉQUILIBRAGE (DIMENSIONS avec tolérances)	*DRAWING OF THE BALANCE SHAFT (DIMENSIONS incl. tolerances)*



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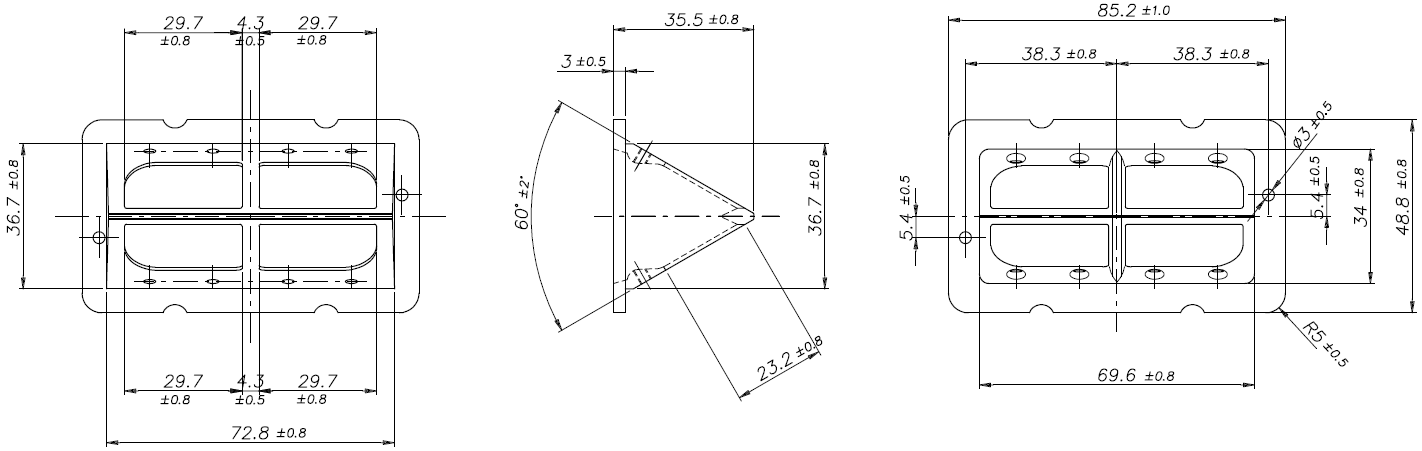
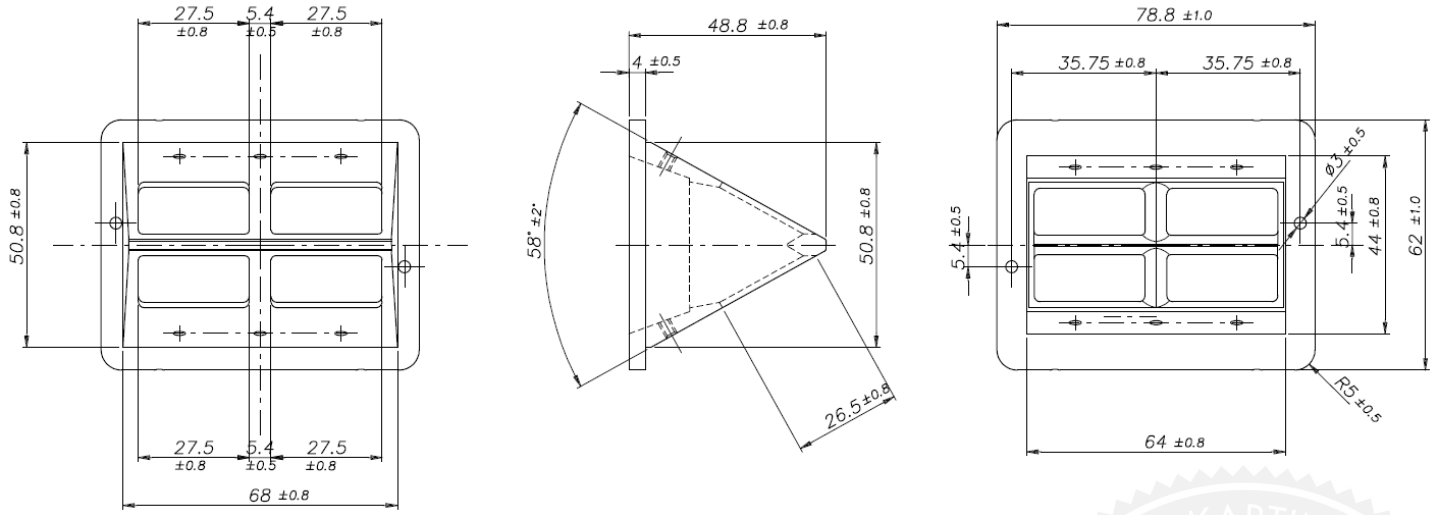
D.4 CLAPETS & POWER VALVE / *REED VALVE & POWER VALVE*

DESSIN DE LA BOÎTE À CLAPETS (DIMENSIONS avec **tolérances**)	*DRAWING OF THE REED VALVE (DIMENSIONS incl. **tolerances**)*



OPTIONS :



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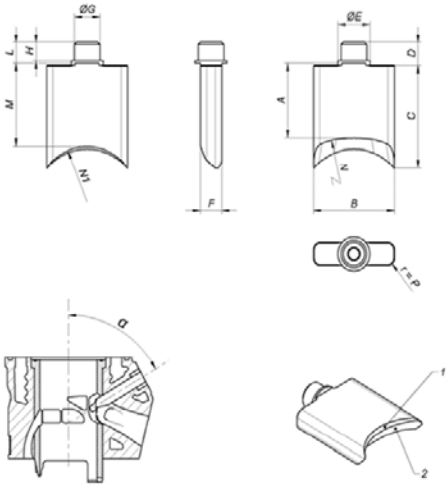
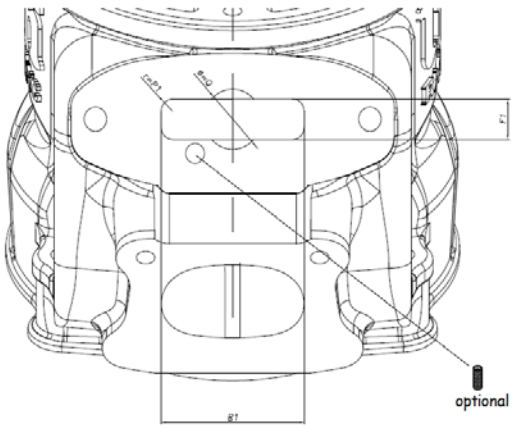
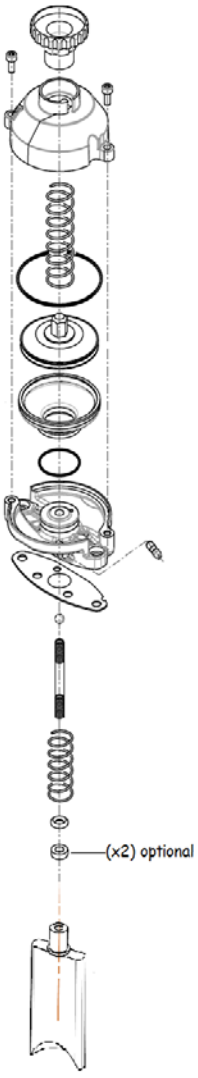
... Section D.4

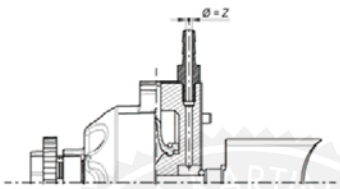
DESSIN EXPLOSÉ ET DÉNOMINATION DES ÉLÉMENTS DE LA POWER VALVE	*EXPLODED DRAWING AND DESIGNATION OF THE POWER VALVE COMPONENTS*







Parameter	Dimensions	Tolerance
	in mm (or ° if angle)	in mm (or ° if angle)
A	33	±0,5
B	38	±0,1
C	45	±0,5
D	10	±0,1
E	15	±0,1
F	10	±0,1
G	12	±0,1
H	8	±0,1
L	9	±0,1
M	35.1	±0,5
N (3D surface n°2)	36	±0,5
N1 (3D Surface n°1)	27.1	±0,5
P	3	±0,1
Q	15	±0,1
α	62	±2°
B1	38.2	±0,2
F1	10.2	±0,2
P1	3	±0,2
Z	4	Maximum



Le dessin explosé de la power valve devra comprendre le tableau indiquant toutes les dimensions indiquées sur le dessin technique n° 22, y compris celles marquées « free ».
The exploded view of the power valve shall include the table indicating all the measurements shown on the technical drawing No. 22, including those marked "free".

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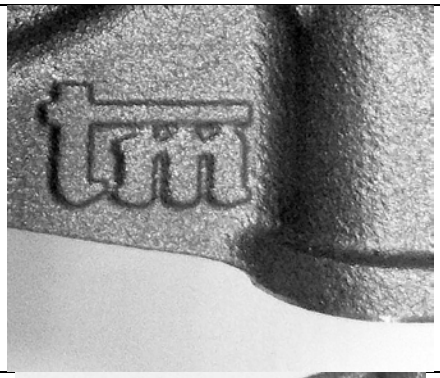
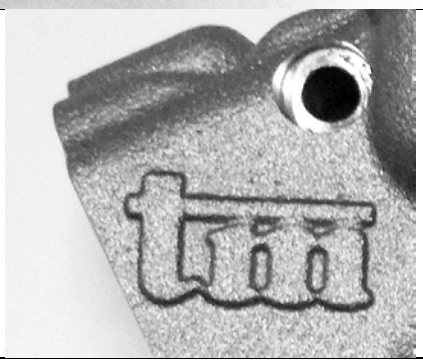
D.5 MARQUAGE PIECES PRINCIPALES / *MAIN PARTS MARKING*

Pour chaque piéce, 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, couvercle d'engrenages, cylindre, culasse	*1. Castings of crankcase, gears cover, cylinder, cylinder head*
2. Chemise en fonte	*2. Cast iron liner*
3. Demi-vilebrequins	*3. Half-crankshafts*
4. Bielle	*4. Conrod*
5. Arbre d'équilibrage	*5. Balancer shaft*
6. Engrenages	*6. Gears*
7. Couvercle (plastique) de la power valve	*7. Power valve (plastic) cover*
8. Guillotine de la power valve	*8. Power valve slide*
9. Piston	*9. Piston*

Piéces N° / *Parts no.*	Photo globale / *global picture*	*Zoom*
1		
1		
1		
1		

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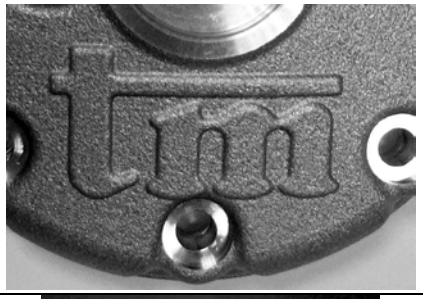
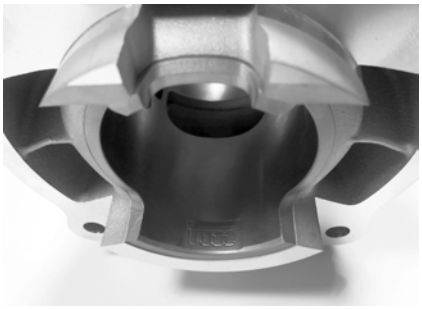
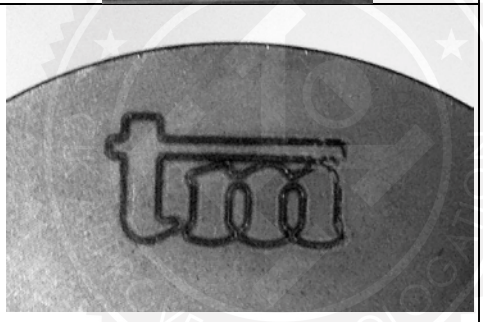
1		
2		
3		
3		
4		
5		

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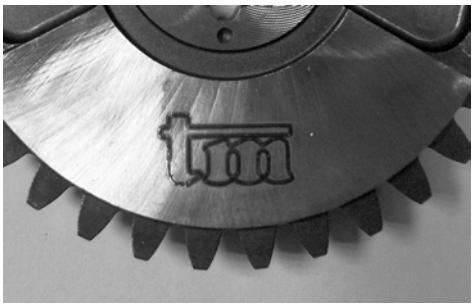
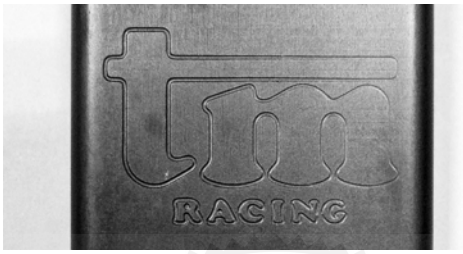
6		
6		
7		
8		
9		

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