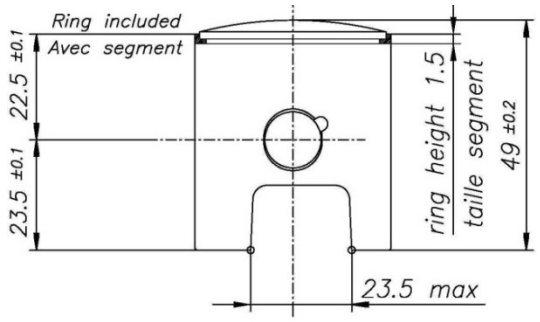
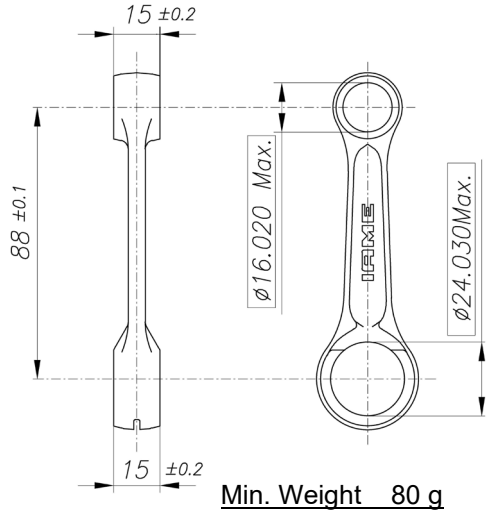
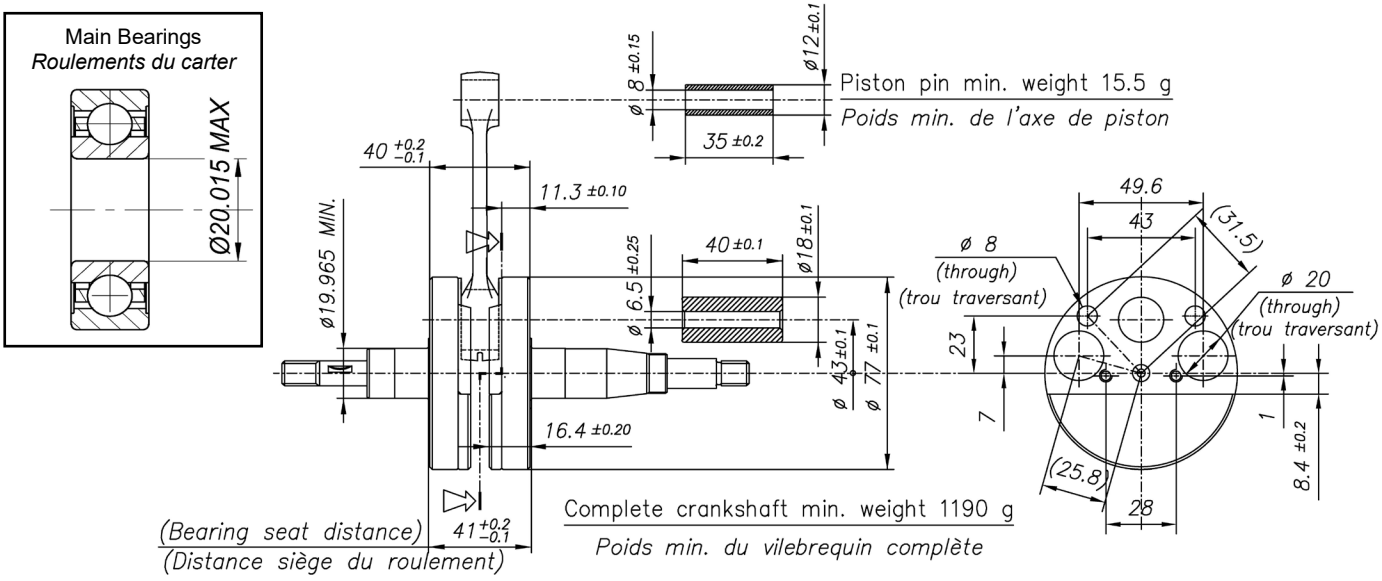
X30 WATERSWIFT 60cc TaG UK RESTRICTED

FEATURES - *CARACTERISTIQUES*	
Cylinder volume *Volume du cylindre*	59.17 cm³ (60.00 cm³ max)
Bore *Alésage*	41.81 mm
Max. bore *Alésage max.*	42.10 mm
Stroke *Course*	43 mm
Cooling system *Système de refroidissement*	Water *Eau*
Inlet system *Système d'admission*	Piston valve *Jupe de piston*
Number of carbs *Nombre de carburateurs*	1
Cylinder / crankcase transfers n° *N° de canaux cylindre / carter*	2
Inlet / exhaust ports number *N° lumières admiss / échapp.*	1 / 1
Combustion chamber shape Forme chambre de combustion	Spherical *Sphérique*
Selettra ignition (adjustable) *Allumage Selettra (réglable)*	2 poles *2 pôles*
Distance between Conrod centres *Longueur (entre axe) de la bielle*	88 mm

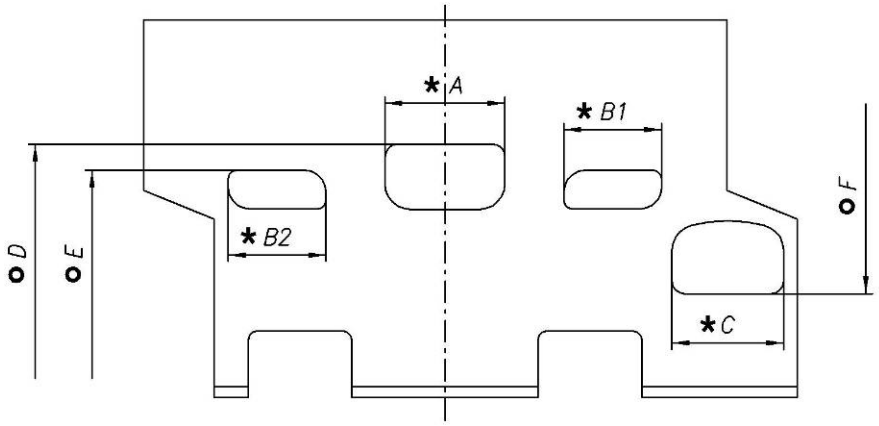
Tillotson Carburettor *Carburateur Tillotson*	HW-47A (15 mm)
Number of piston rings *Nombre de segments*	1
Big end conrod bearing diam. *Diamètre palier tête de bielle*	18x24x15
Crankshaft ball-bearing diam. *Diamètre palier du vilebrequin*	20x47x14
Small end conr. bearing diam. *Diamètre palier pied de bielle*	12x16x16

DESCRIPTION OF THE MATERIAL *DESCRIPTION DES MATERIAUX*		PISTON
Conrod material *Matériel de la bielle*	Steel *Acier*	
Crankshaft material *Matériel du vilebrequin*	Steel *Acier*	
Head Material *Matériel de la culasse*	Aluminium	
Cylinder material *Matériel du cylindre*	Aluminium	Min. Weight Piston included ring = 60 g *Poids Min. Piston avec segment = 60 g*
Liner material *Matériel de la chemise*	Cast Iron *Fonte*	DISTANCE BETWEEN CONROD CENTERS *ENTRE AXE DE LA BIELLE*
Crankcase material *Matériel du carter*	Aluminium	
Piston material *Matériel du piston*	Aluminium	
Piston rings material *Matériel des segments*	Cast Iron *Fonte*	
Exhaust muffler material *Matériel du pot d'échappement*	Sheet-steel *Tôle acier*	
Ball-bearings *Roulements*	6204 type	Min. Weight 80 g *Poids min.*

CRANKSHAFT - *VILEBREQUIN*



CYLINDER DEVELOPMENT – *DEVELOPPEMENT DU CYLINDRE*

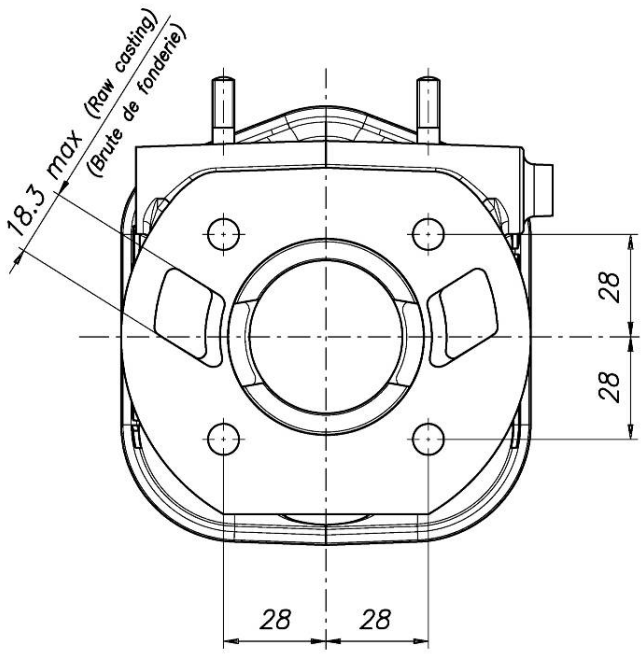
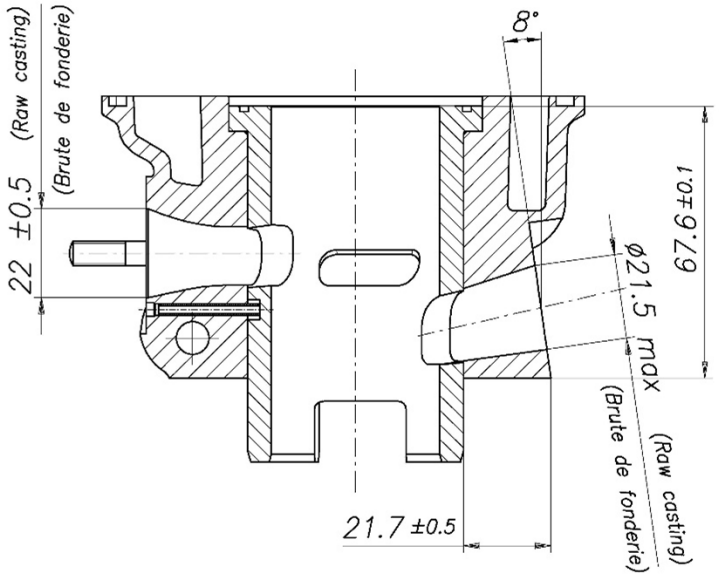


A	28±0.2 mm
B1 = B2	21.8±0.2 mm
C	26±0.2 mm
D	157° max
E	116° ±2°
F	145° max

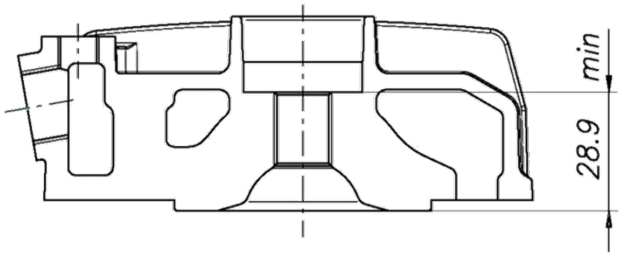
CHORDAL READING - *LECTURE CORDALE*

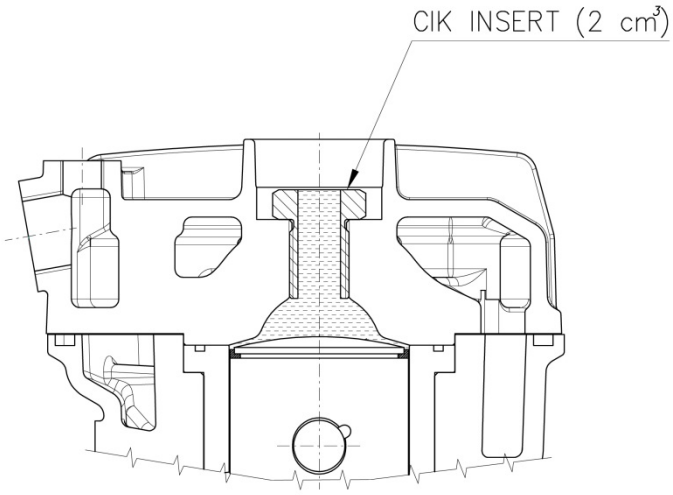
ANGULAR READING BY INSERT A 0.2 mm x 5 mm GAUGE -
LECTURE ANGULAIRE PAR INSERTION D'UNE CALE DE 0.2 mm x 5 mm

USING IAME TOOL Cod. 10194 – *UTILISER OUTIL*

CYLINDER BASE VIEW *VUE DE LA BASE DU CYLINDRE*	CYLINDER SECTION VIEW *VUE EN SECTION DU CYLINDRE*
	

COMBUSTION CHAMBER VIEW
VUE DE LA CHAMBRE DE COMBUSTION



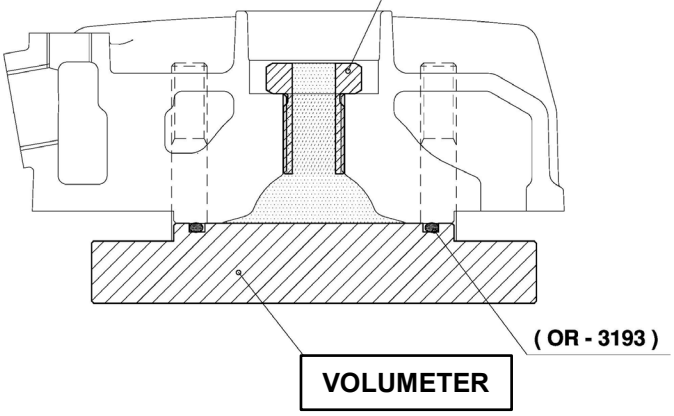


COMBUSTION CHAMBER VOLUME = 6.5 cm³ min.
VOLUME CHAMBRE COMBUSTION

CIK INSERT

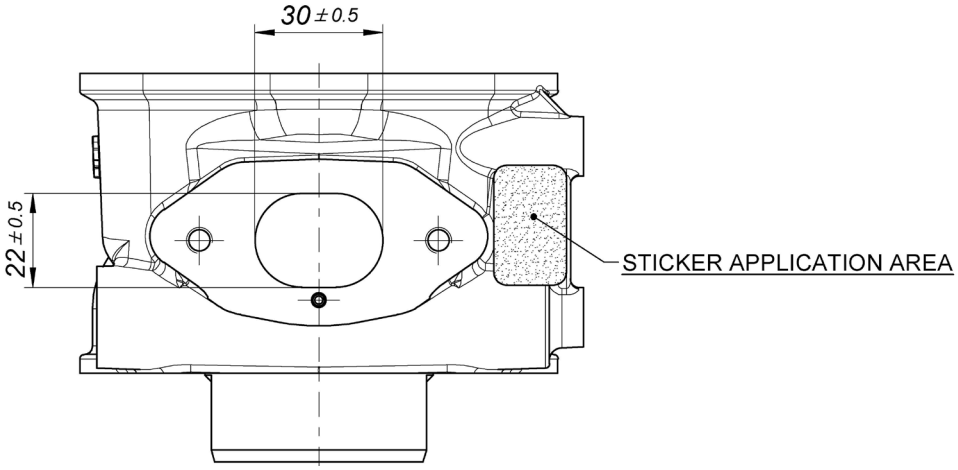
SQUISH MIN. = 0.75 mm

measured with Ø1.5mm TIN
mesurée avec de l'étain Ø1.5mm



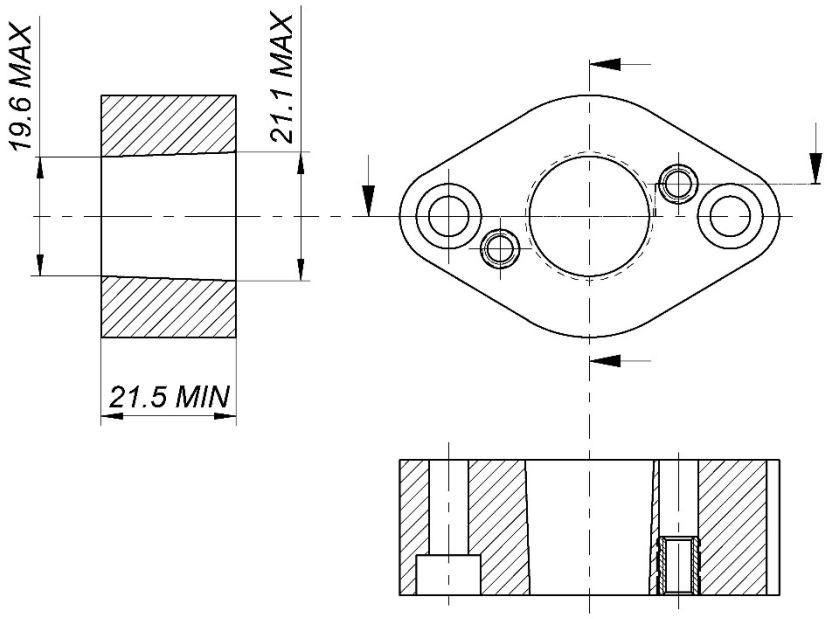
MIN. TOT. VOLUME OF CHAMBER IN THE CYLINDER HEAD = 7,4 cm³
VOLUME MIN. CHAMBRE DE COMBUSTION DANS LA CULASSE

REAR VIEW AND DIMENSION
ARRIERE VUE ET DIMENSION

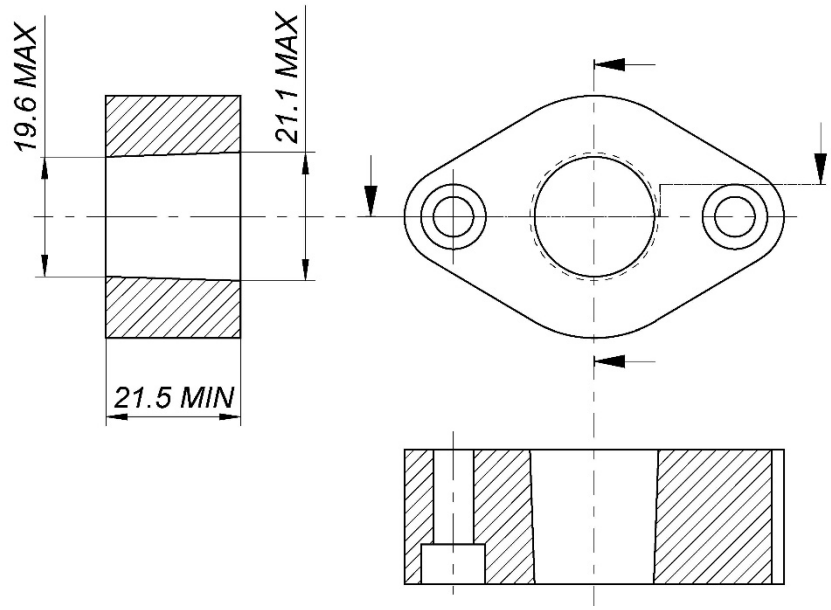


To be used together with the HW-47A Carburettor

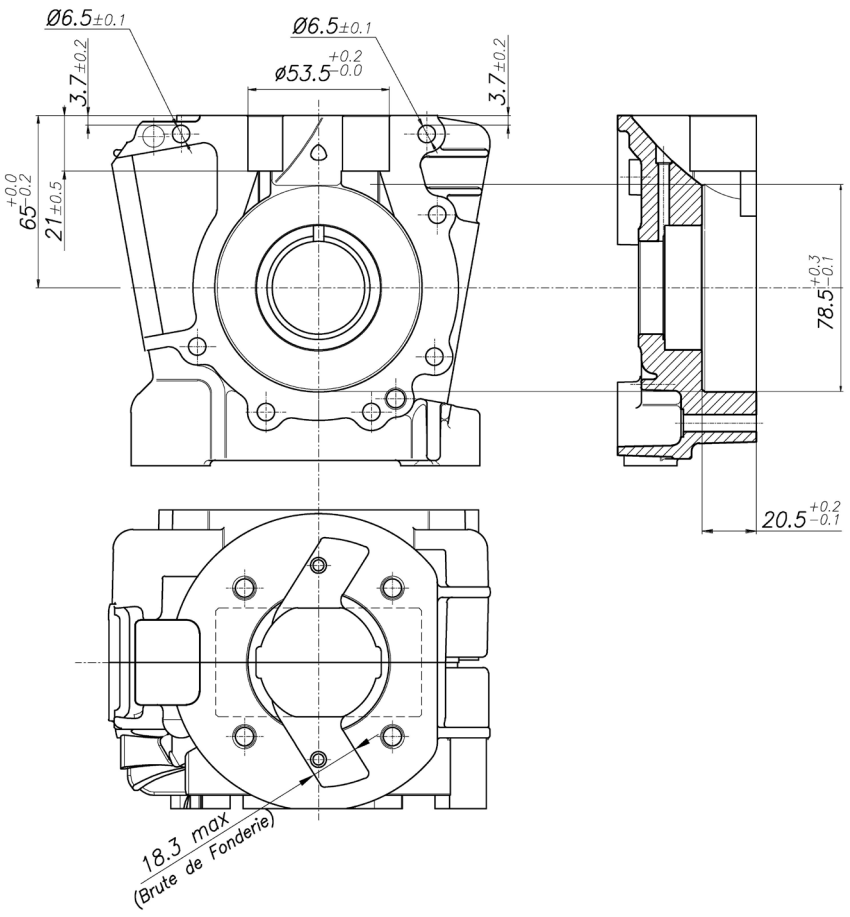
TYPE 1



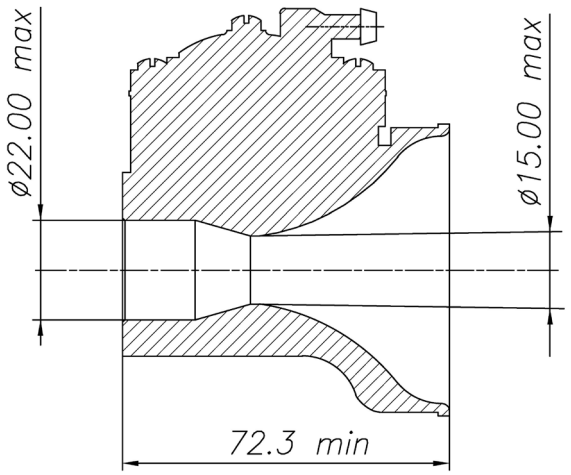
TYPE 2



CRANKCASE INSIDE VIEW
VUE A' L'INTERIEUR DU CARTER

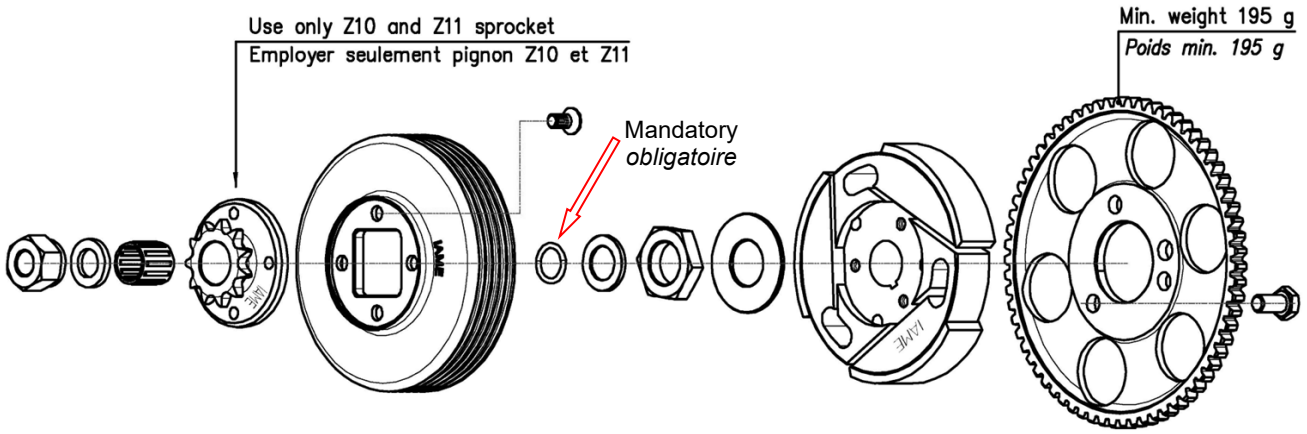


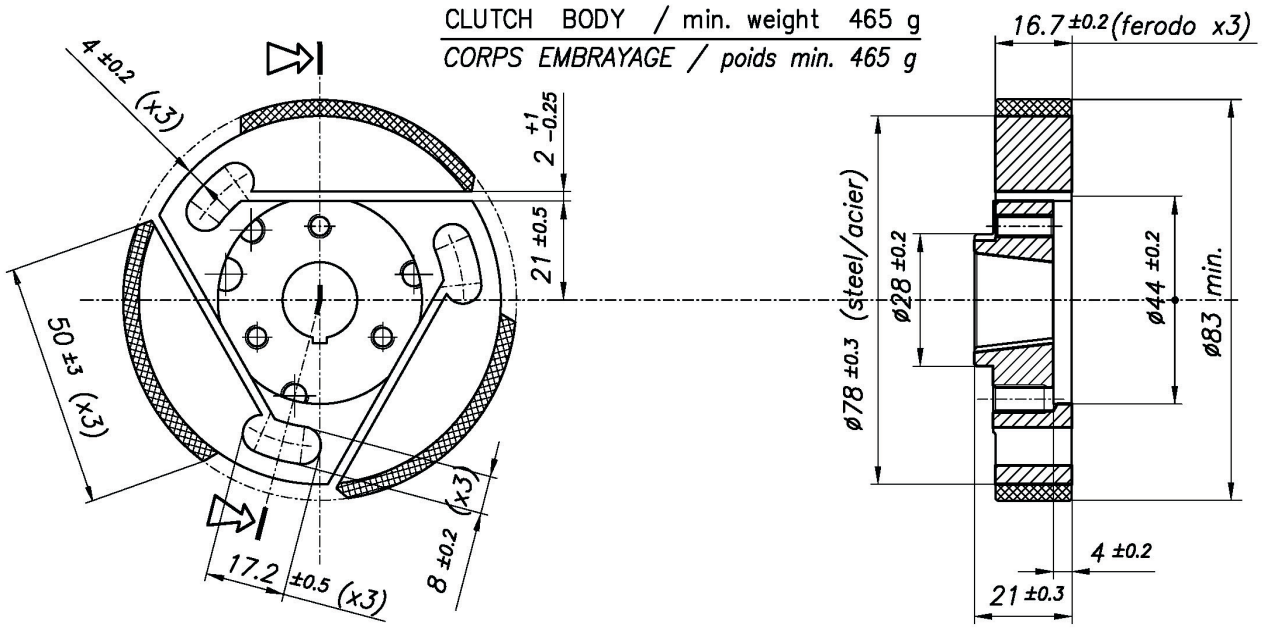
VENTURI CARB. DIMENSIONS
CARBURATEUR

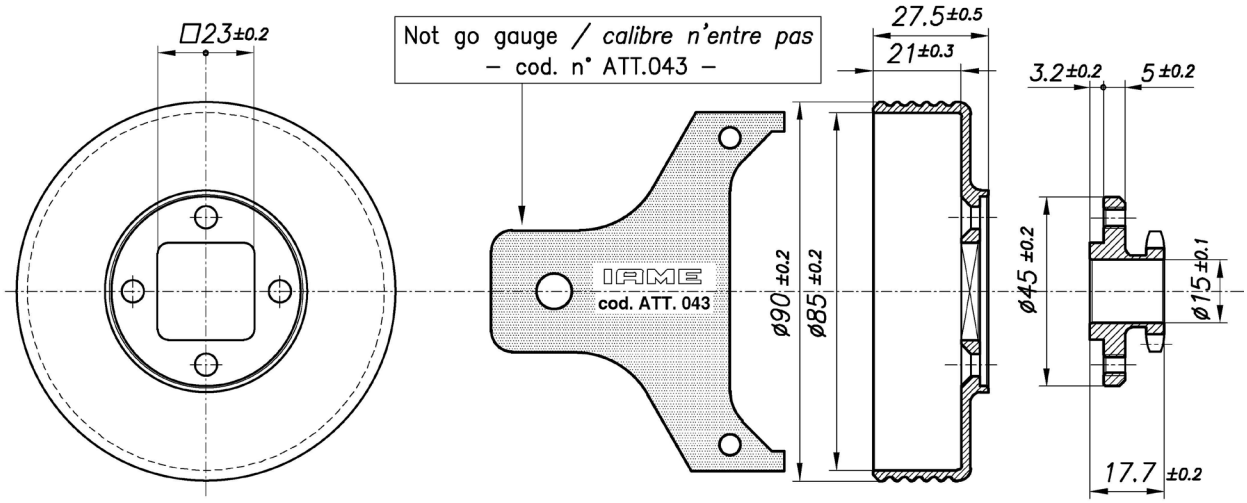


TILLOTSON MOD. HW-47A

DESCRIPTION OF THE CLUTCH – *DESCRIPTION DE L'EMBRAYAGE*



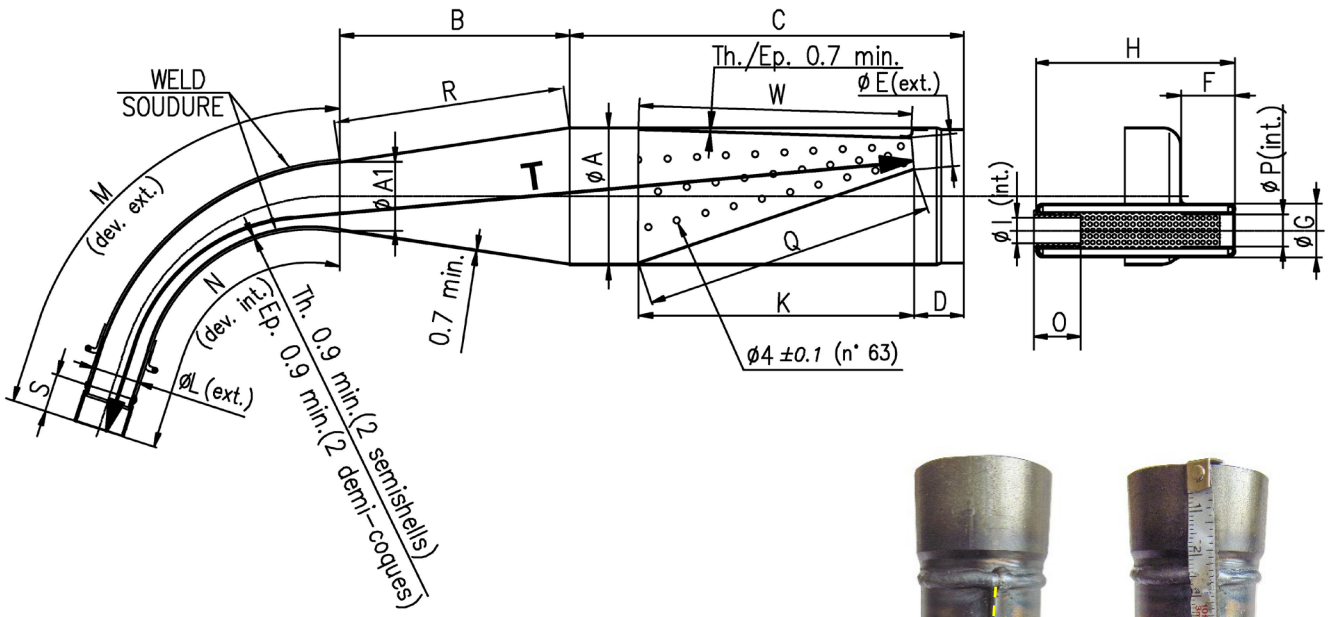




CLUTCH DRUM / min. weight 175 g
CLOCHE D'EMBRAYAGE / poids min. 175 g

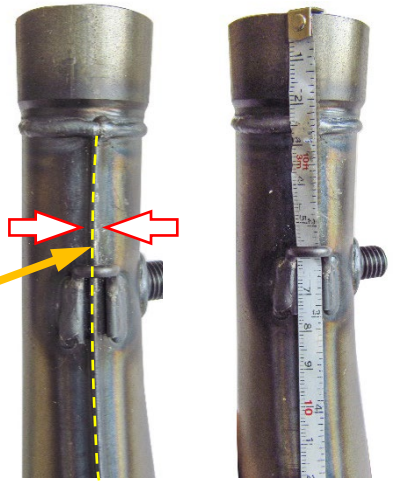
DRIVE SPROCKET / min. weight 68 g
PIGNON / poids min. 68 g

EXHAUST MUFFLER VIEW AND DIMENSIONS with and without embossed logo
VUE ET DIMENSIONS DE L'ECHAPPEMENT avec et sans logo en relief



The tape must follow the centerline of the weld at all points

Le ruban doit suivre l'axe de la soudure en tous points



Min. weight 1250 g
Poids min.

ØA: 90 ±1.5 Øext.	**D:** 30 ±2	**H:** 132 ±2	**M:** 265 ±3	**R:** 152 ±3	**T:** 601 ±3
ØA1: 45 ±1 Øext.	**ØE:** 20 ±1 Øext.	**ØI:** 17 max Øint.	**N:** 215 ±3	**S:** 25 ±1	
B: 150 ±3	**F:** 35 ±2	**K:** 181 ±3	**O:** 30 min.	**Q:** 192 ±3	
C: 260 ±3	**ØG:** 35 ±1 Øext.	**ØL:** 31 ±1.5 Øext.	**ØP:** 21 ±1 Øint.	**W:** 181 ±3	

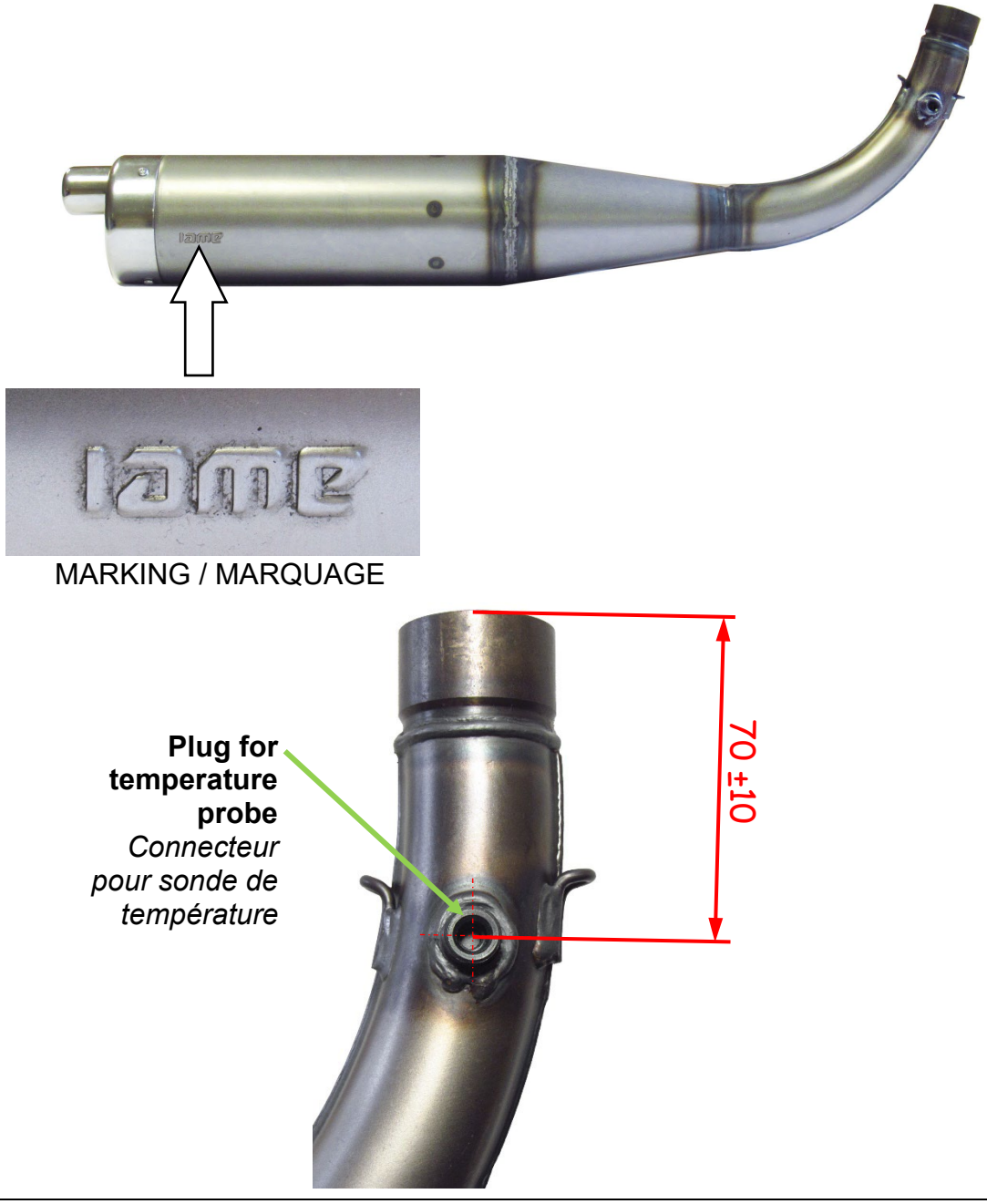
WARNING / ATTENTION:

The dimensions "**M**", "**N**" and "**T**" must be taken by steel tape measure 6mm wide.
*Les dimensions « **M** », « **N** » et « **T** » doivent être à l'aide d'un ruban à mesurer en acier 6 mm de large.*

The dimensions "**M**" and "**N**" must be taken on the weld centerline.
*Les dimensions « **M** », « **N** » doivent être prises sur l'axe de la soudure.*

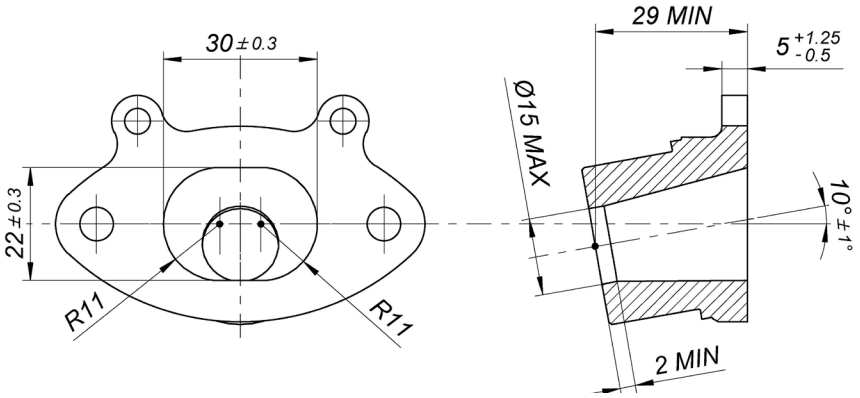
The dimensions "**Q**" and "**W**" must be taken by steel tape measure 12mm wide.
*Les dimensions « **Q** » et « **W** » doivent être prises à l'aide d'un ruban à mesurer en acier 12 mm de large.*

ALTERNATIVE EXHAUST with embossed logo
ECHAPPEMENT ALTERNATIVE avec logo en relief

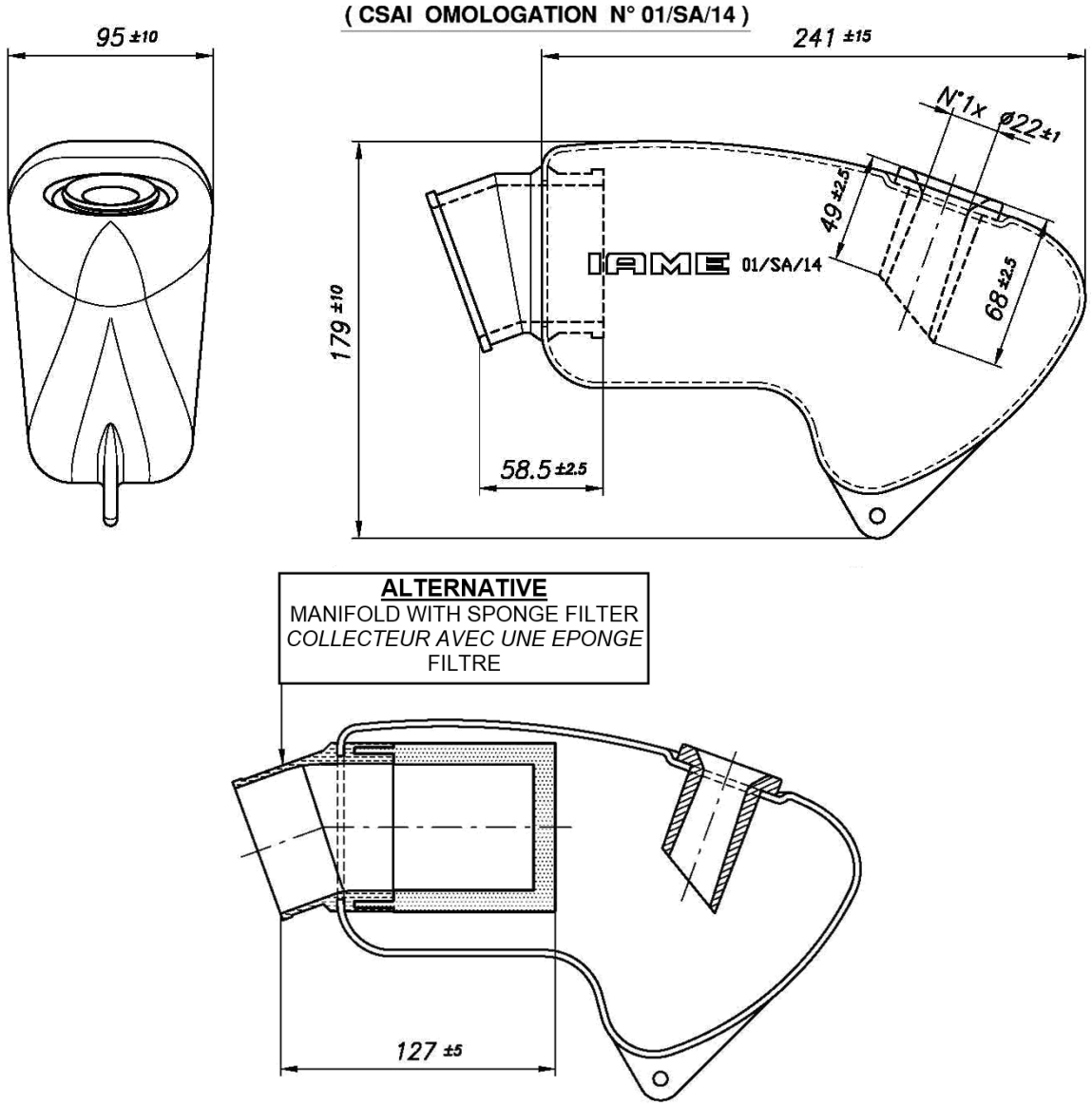


MARKING / MARQUAGE

EXHAUST MANIFOLD
RACCORD D'ÉCHAPPEMENT



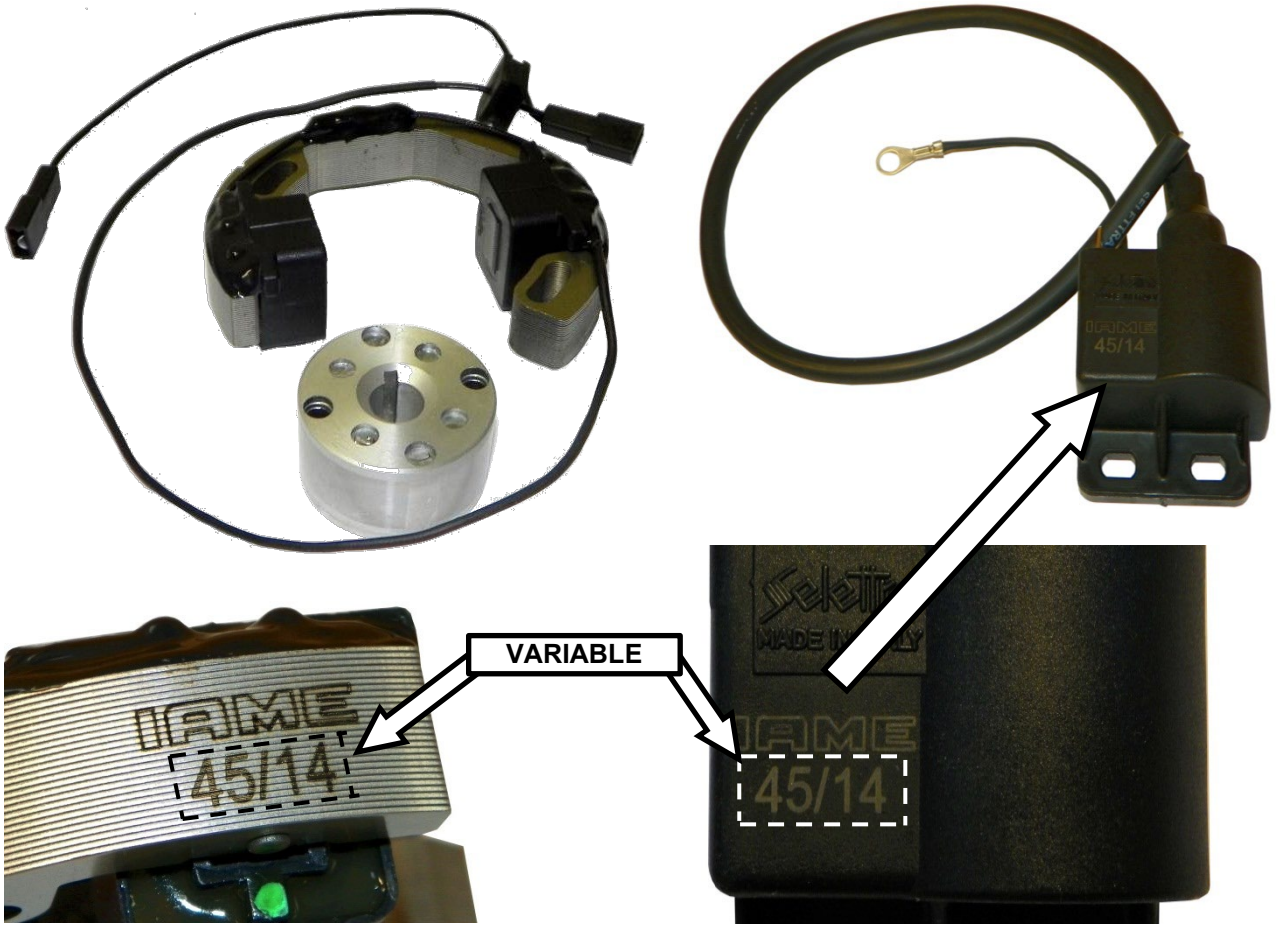
INLET SILENCER – *SILENCIEUX D'ASPIRATION*



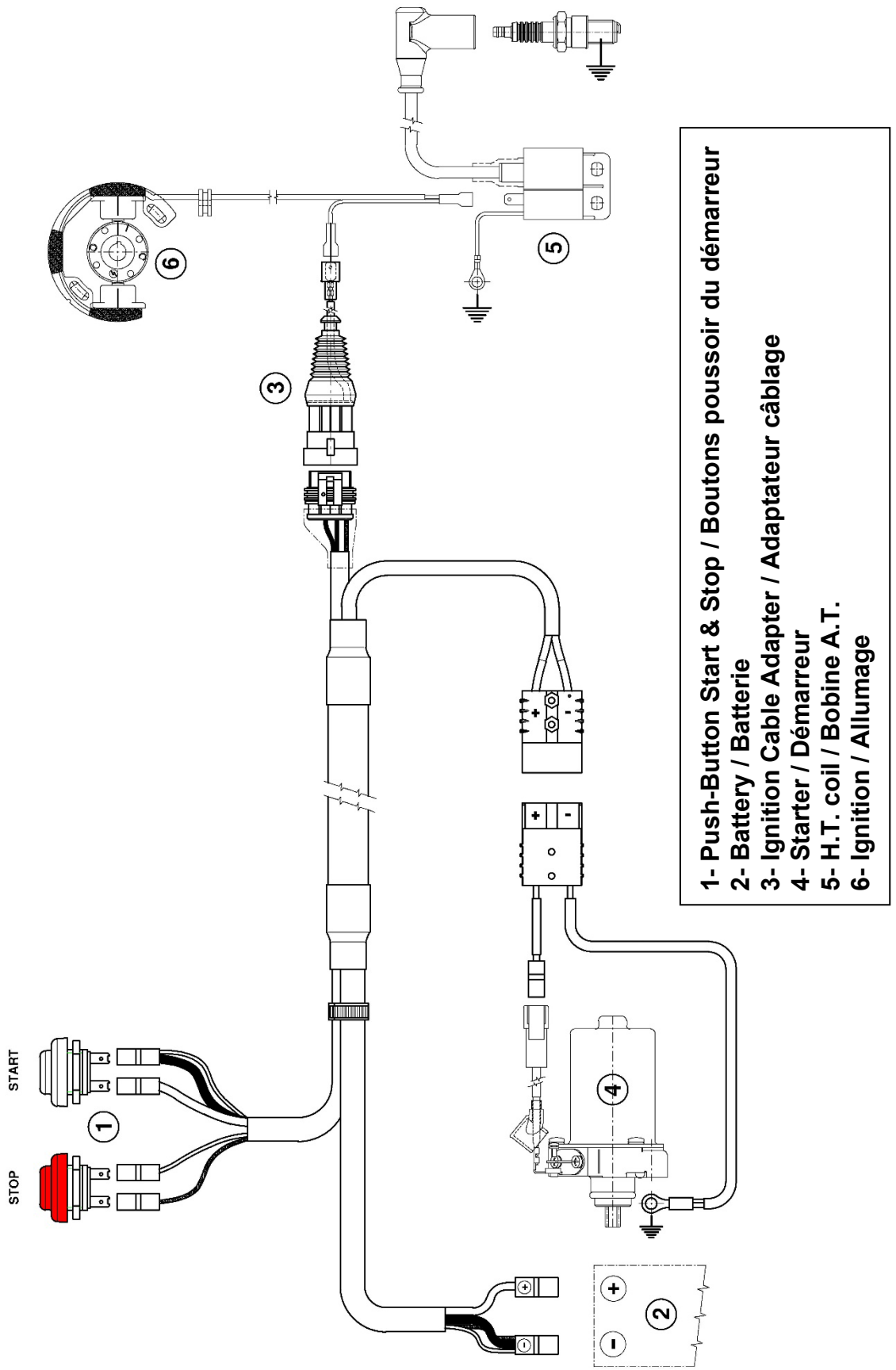
INLET SILENCER - PHOTO
PHOTO - SILENCIEUX D'ASPIRATION

PHOTO COMPLETE WIRING
PHOTO DU CÂBLAGE ÉLECTRIQUE COMPLÈTE

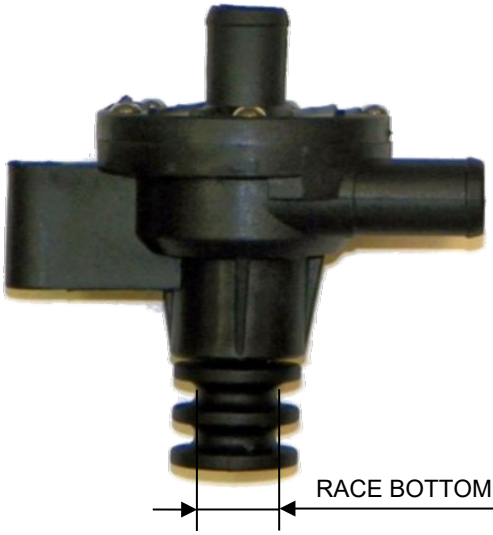
PHOTO IGNITION / PHOTO H.T. COIL (SELETTRA ANALOGUE 2 POLES)
PHOTO ALLUMAGE / PHOTO BOBINE (SELETTRA ANALOGIQUE 2 POLES)



ALTERNATIVE WIRING LOOM DIAGRAM
SCHÉMA CIRCUIT ÉLECTRIQUE ALTERNATIF

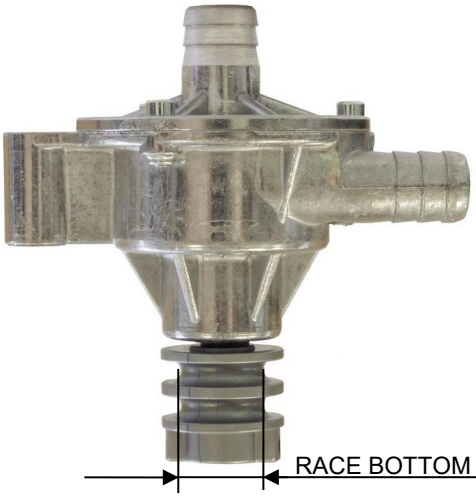


WATER PUMP ALTERNATIVES – ALTERNATIVES DU POMPE A' EAU



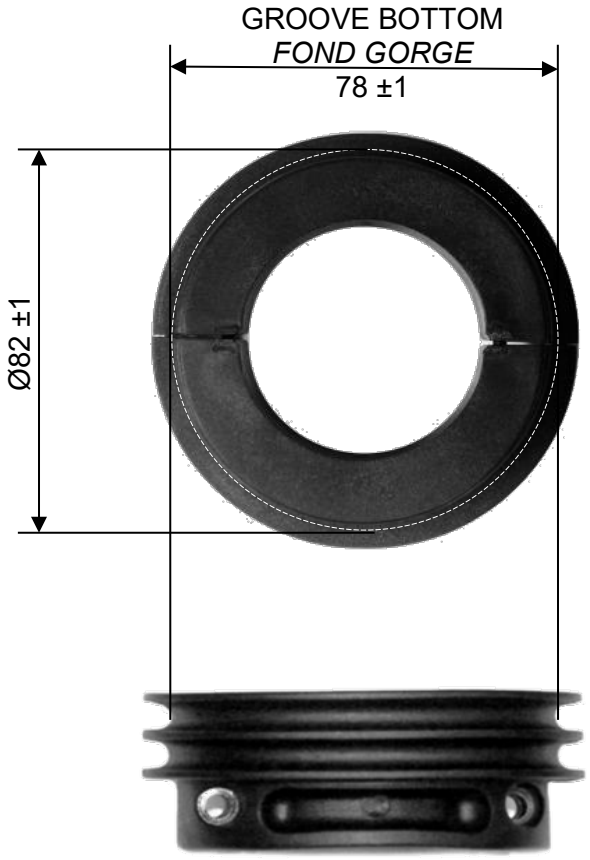
PLASTIC

ALTERNATIVE



ALUMINUM

PULLEY ALTERNATIVE – ALTERNATIVE DU POULIE

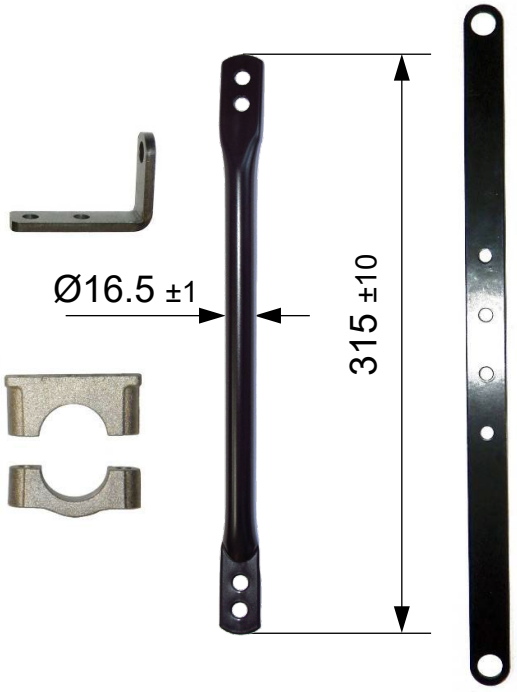


PLASTIC

ALTERNATIVE

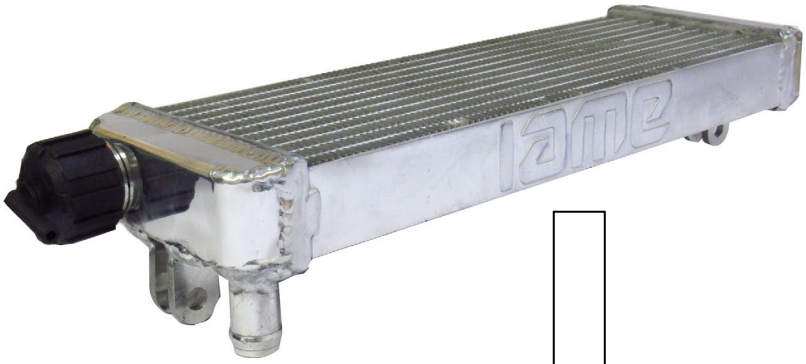
ALUMINUM

RADIATOR AND ITS SUPPORTS
RADIATEUR ET SES SUITIEN

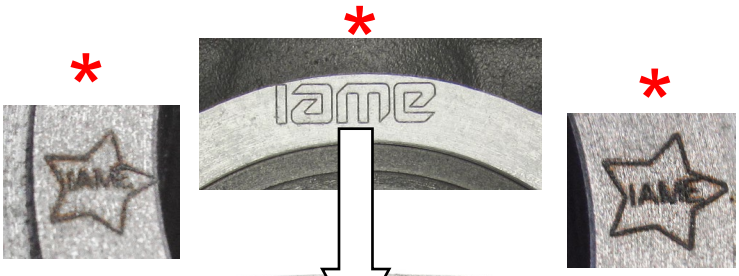


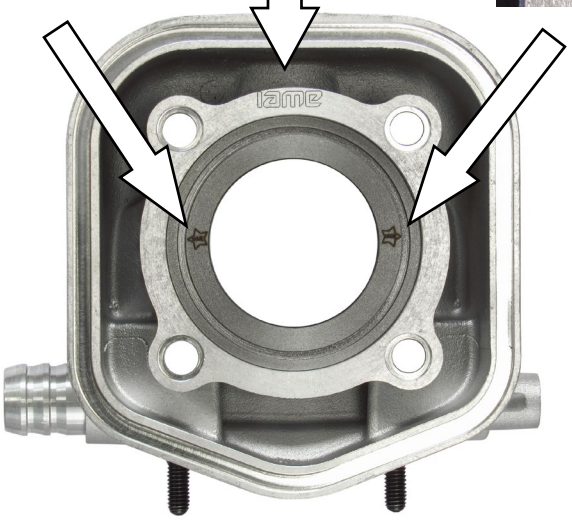
PAINTED AND NOT PAINTED
PEINT ET PAS PEINT

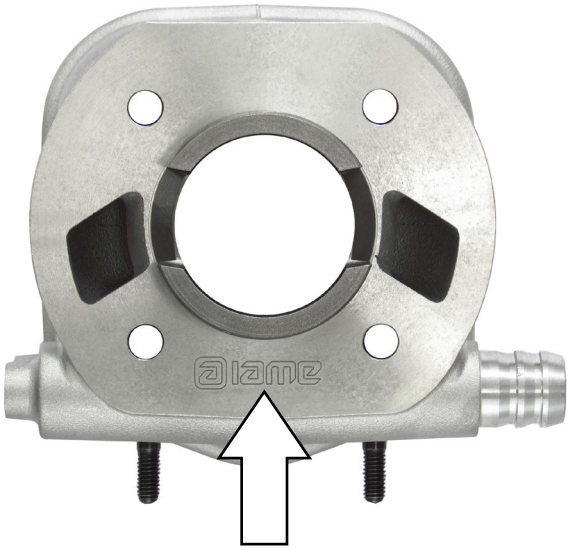
ALTERNATIVE RADIATOR
RADIATEUR ALTERNATIF



CYLINDER IDENTIFICATION MARKING
MARQUAGE D'IDENTIFICATION DU CYLINDRE

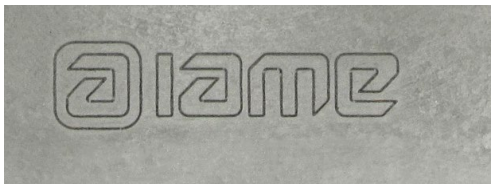






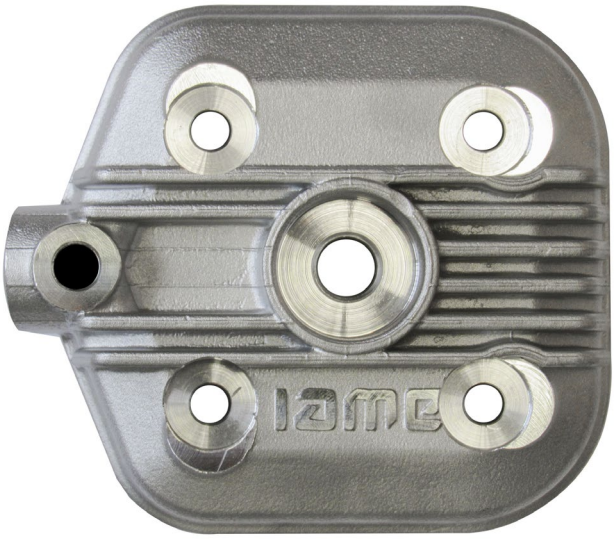
OR

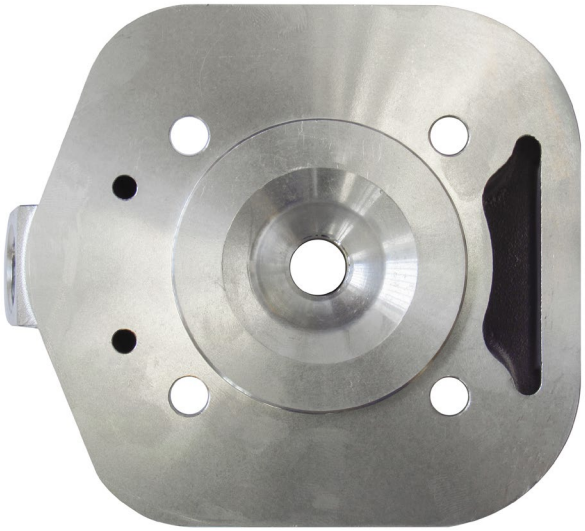
*



* Compulsory from engine n. 011150
Obligatoire à partir du moteur no. 011150

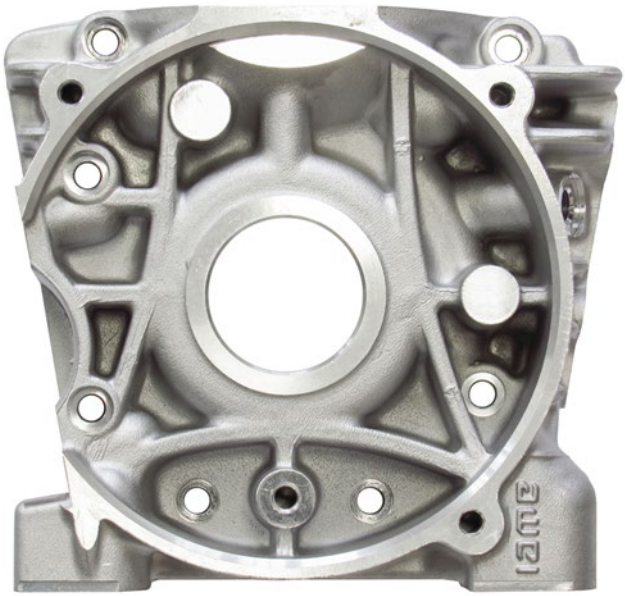
CYLINDER HEAD MARKING
MARQUAGE D'IDENTIFICATION DU CULASSE





OR

SEMICARTER TRANSMISSION SIDE
SEMICARTER CÔTÉ PIGNON



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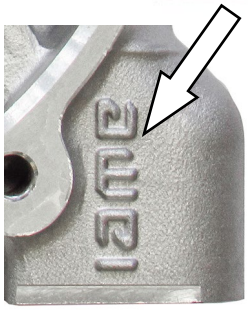
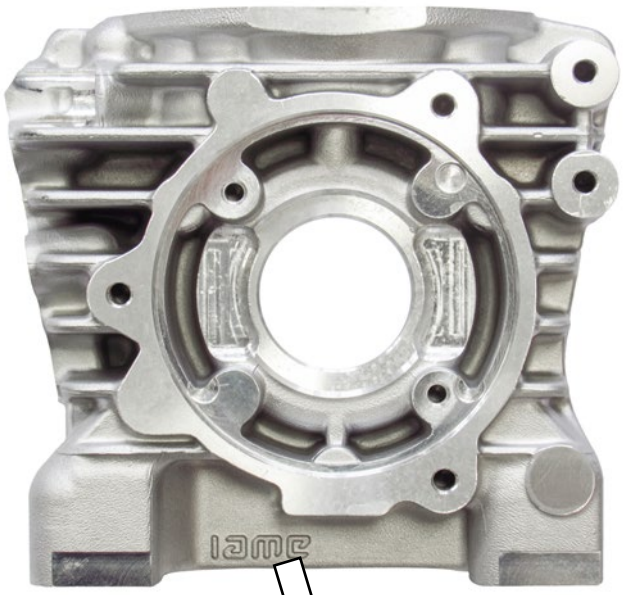
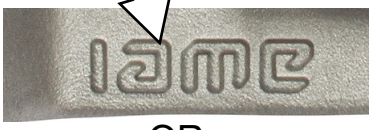


SEMICARTER IGNITION SIDE
SEMICARTER CÔTÉ ALLUMAGE





OR

PISTON IDENTIFICATION MARKING
MARQUAGE D'IDENTIFICATION PISTON

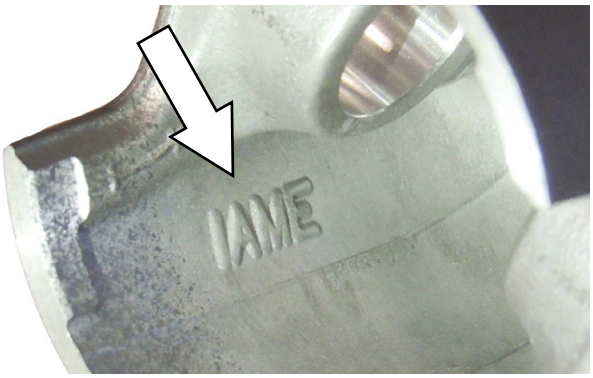
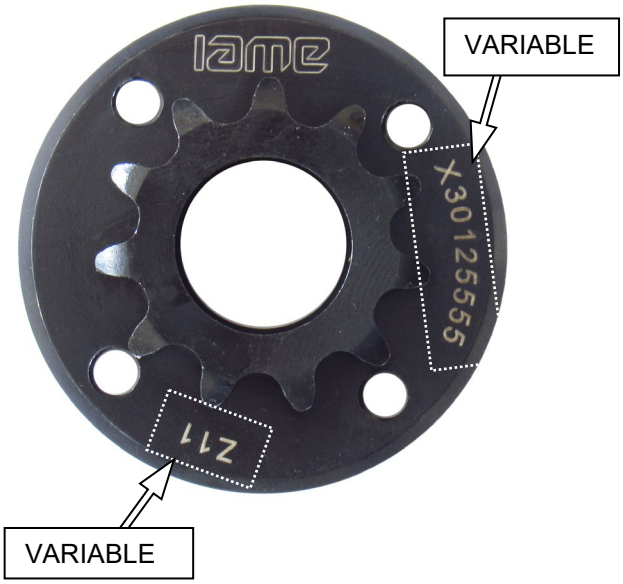
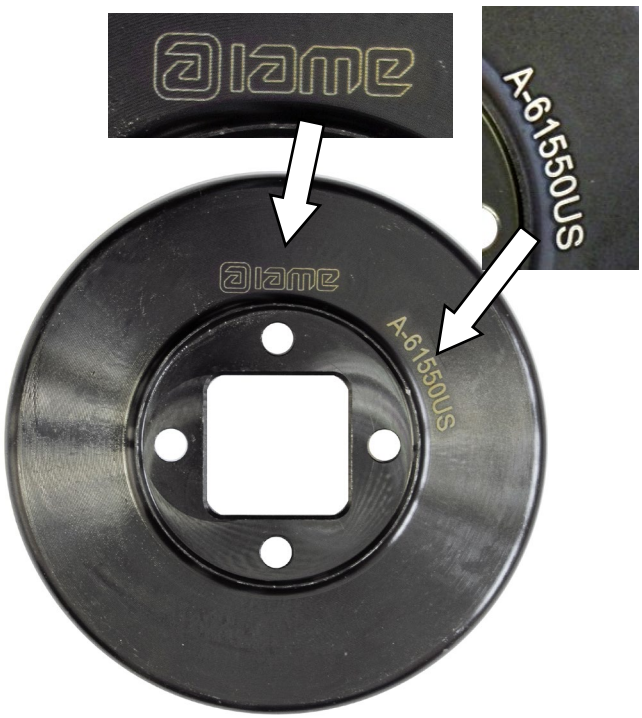
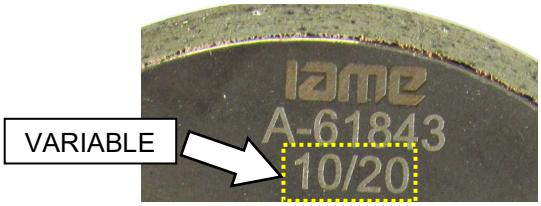
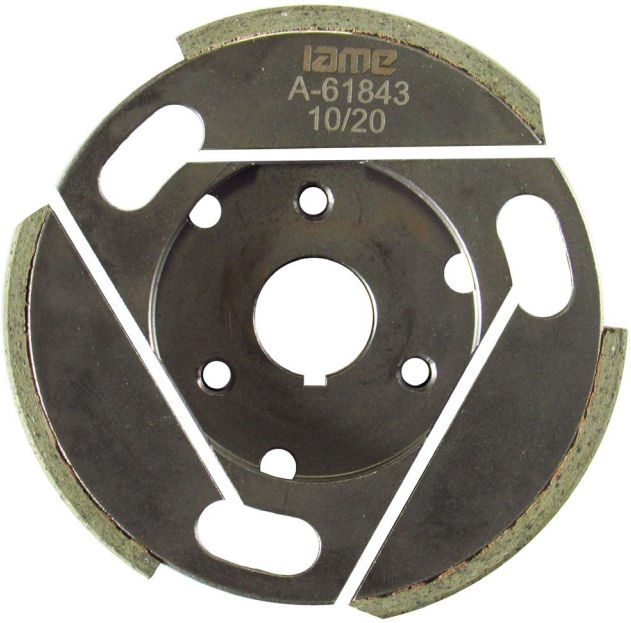
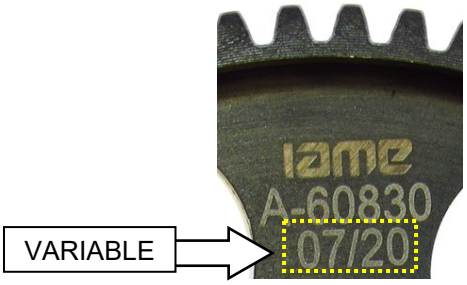


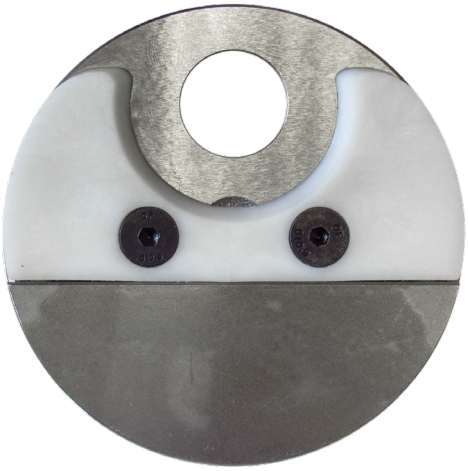
PHOTO IDENTIFICATION OF CONROD – TYPES ALTERNATIVE
PHOTO D' IDENTIFICATION DE LA BIELLE – TYPES ALTERNATIFS

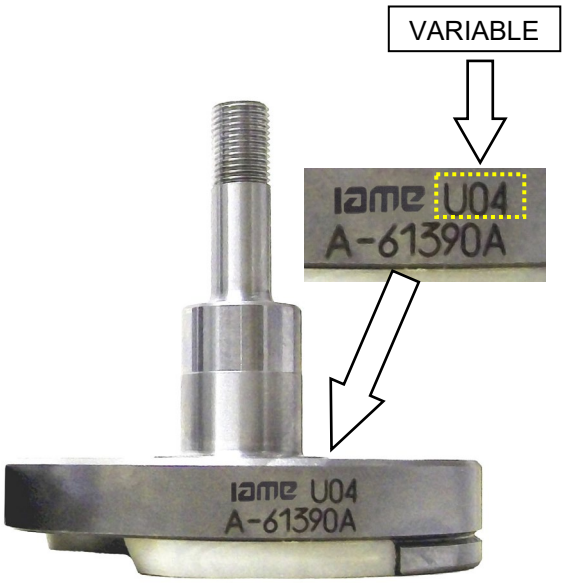
TYPE 1

TYPE 2

SPROCKET IDENTIFICATION MARKING *MARQUAGE D'IDENTIFICATION DU PIGNON*	CLUTCH DRUM IDENTIFICATION MARKING *MARQUAGE D'IDENTIFICATION DE LA CALOTTE*
	
CLUTCH BODY IDENTIFICATION MARKING *MARQUAGE D'IDENTIFICATION DU CORPS DE L'EMBRAYAGE*	STARTER RING IDENTIFICATION MARKING *MARQUAGE D'IDENTIFICATION DE LA COURONNE DE DEMARRAGE*
 	 

CRANKSHAFT AND HIS COMPONENTS IDENTIFICATION MARKING
MARQUAGE D'IDENTIFICATION DU VILEBREQUIN ET SES COMPOSANTS





BENDIX COVER IDENTIFICATION MARKING
MARQUAGE D'IDENTIFICATION DU COUVERCLE DU CONTRE-ARBRE DE DEMARRAGE

STARTER IDENTIFICATION MARKING
MARQUAGE D'IDENTIFICATION DU DEMARREUR

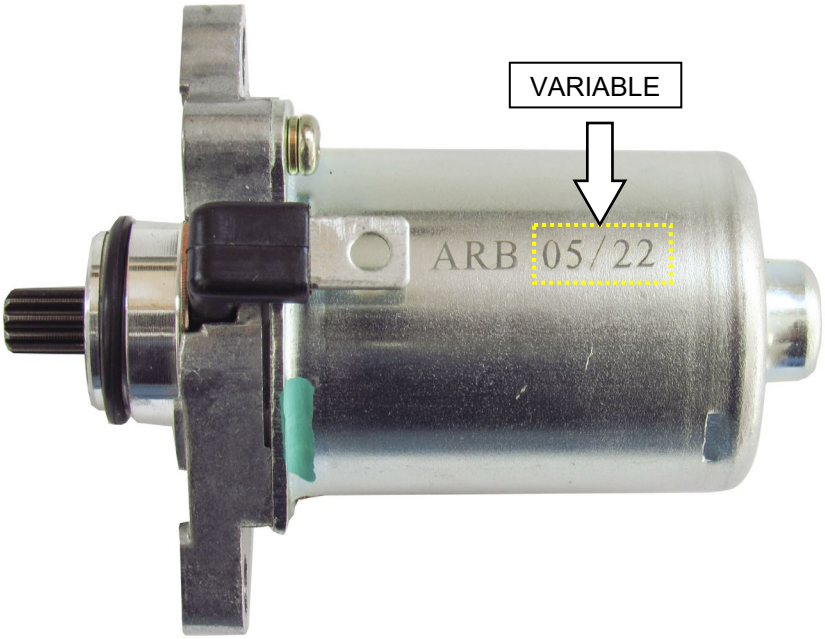
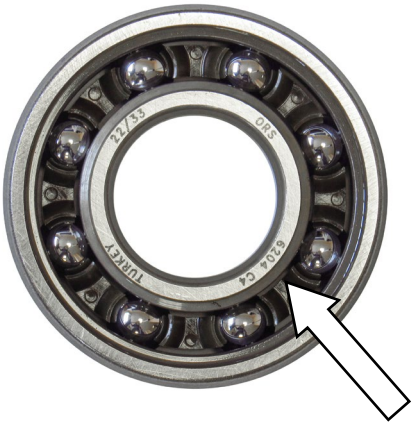


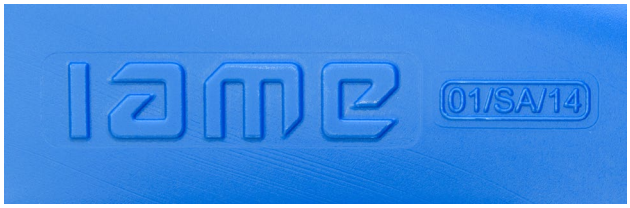
PHOTO IDENTIFICATION: SMALL & BIG END CONROD BEARING AND MAIN BEARING
PHOTO D'IDENTIFICATION DU ROULEMENT PIED/TÊTE DE BIELLE ET PRINCIPAUX



EXHAUST IDENTIFICATION MARKING without embossed logo
MARQUAGE D'IDENTIFICATION ECHAPPEMENT sans logo en relief

IGNITION COVER *COUVERCLE DU ALLUMAGE*	CLUTCH COVER *COUVERCLE D'EMBRAYAGE*
  OR 	 OR  

INLET FILTER
SILENCIEUX D'ASPIRATION


OR


THE OTHERS COMPONENTS OF ENGINE THAT ARE MARKED (LASER OR PUNCHING) UNTIL TODAY WITH LOGO OR WRITTEN "IAME"

LES AUTRES COMPOSANTS DU MOTEUR AVEC MARQUAGE (LASER OU POINÇONNEUSE) AUJOURD'HUI AVEC LE LOGO OU ÉCRIT «IAME»

or

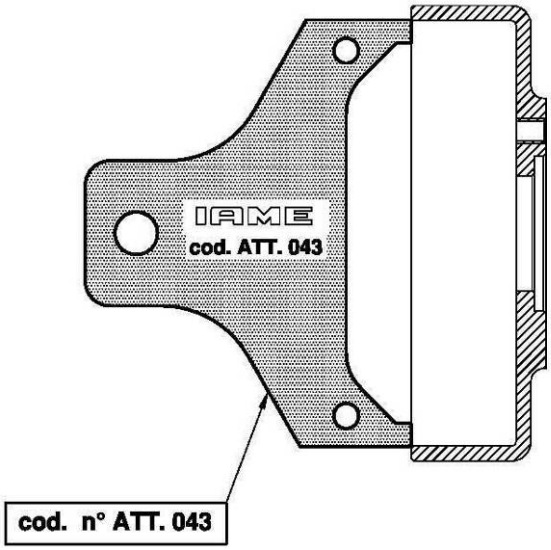
IAME

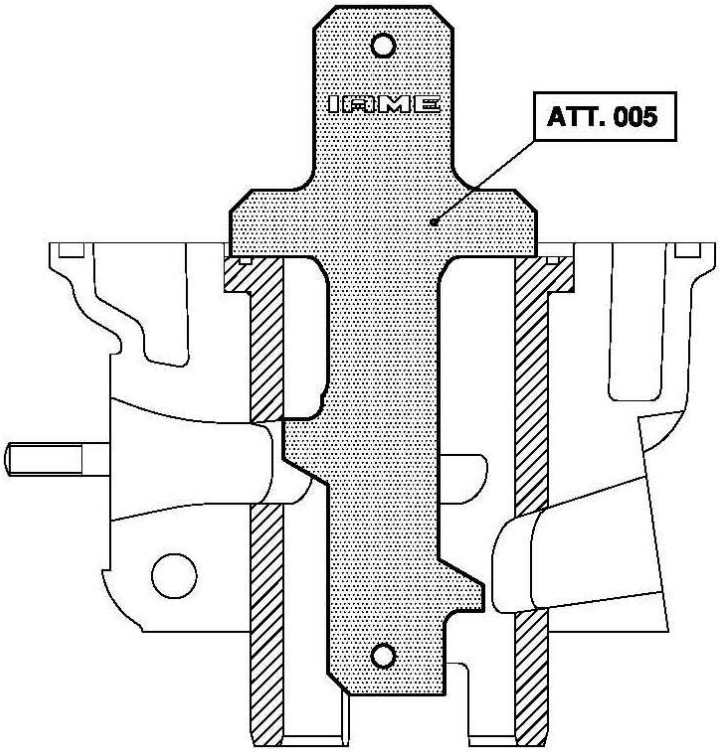
NOW COULD BE MARKED WITH NEW LOGO "IAME"
MAINTENANT POURRAIT EST MARQUAGE AVEC UN NOUVEAU LOGO "IAME"

or

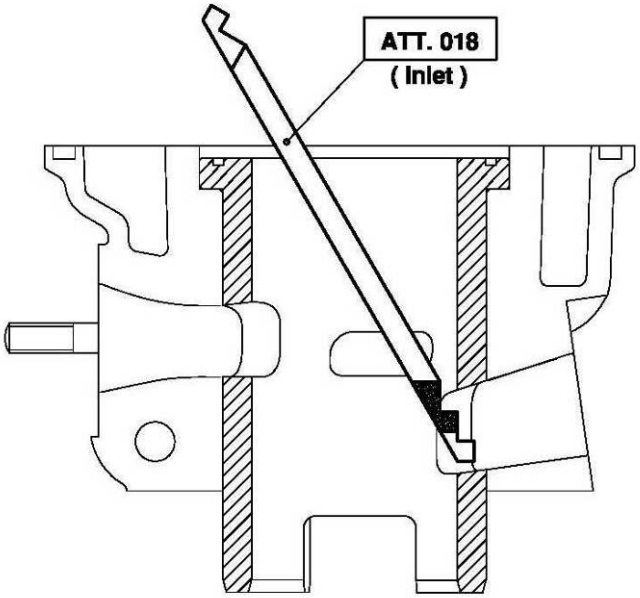
or

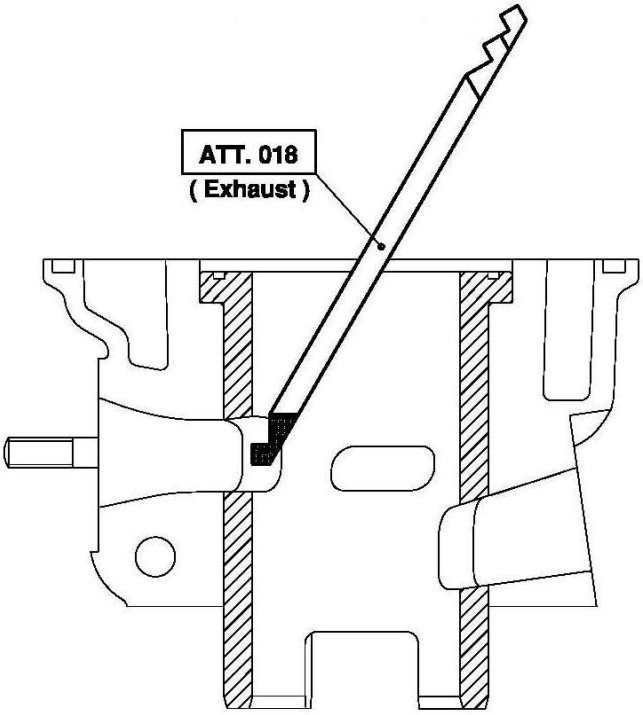
NO GO GAUGES
OUTILS N'ENTRE PAS DANS

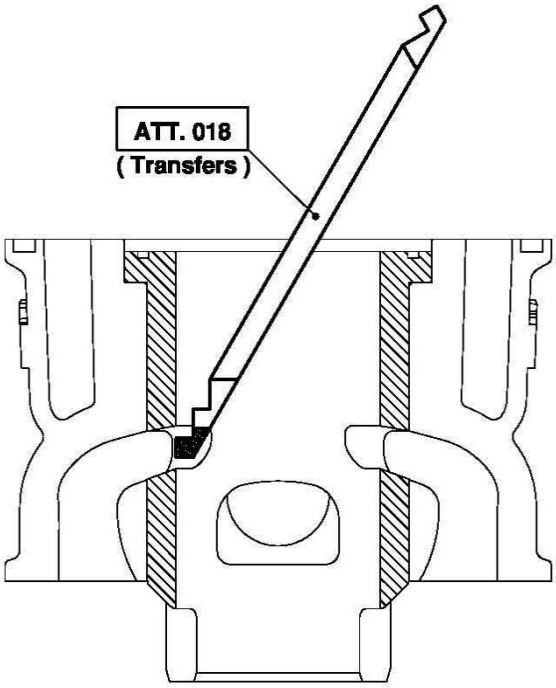




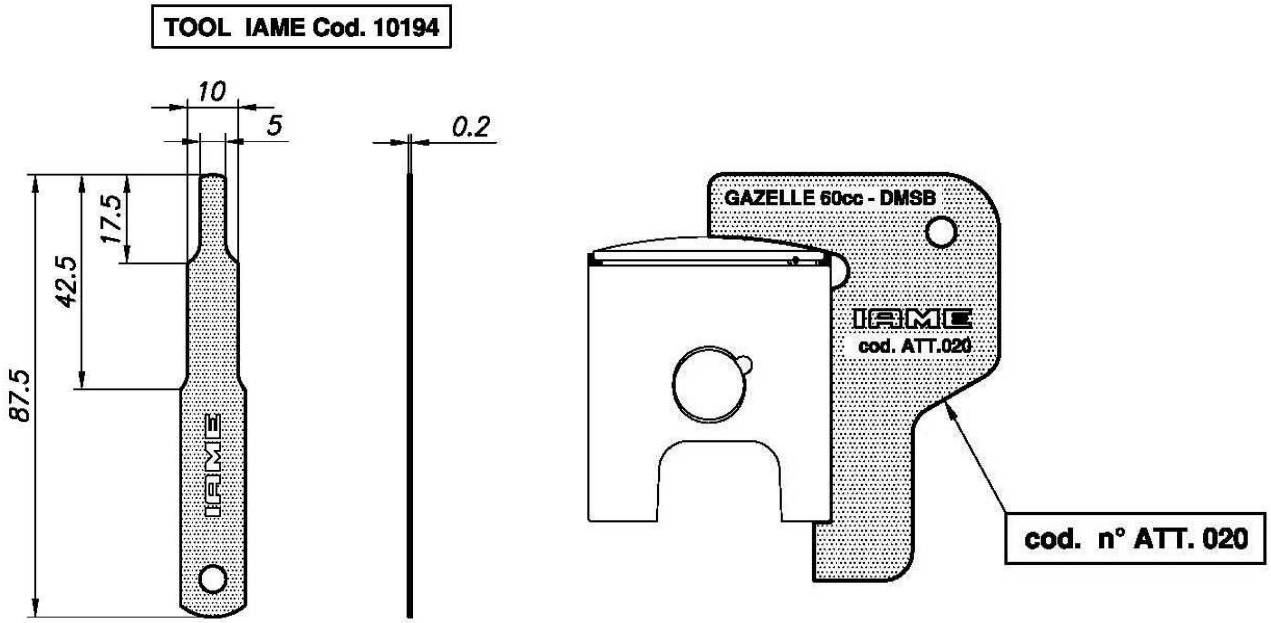
NO GO GAUGES
OUTILS N'ENTRE PAS DANS

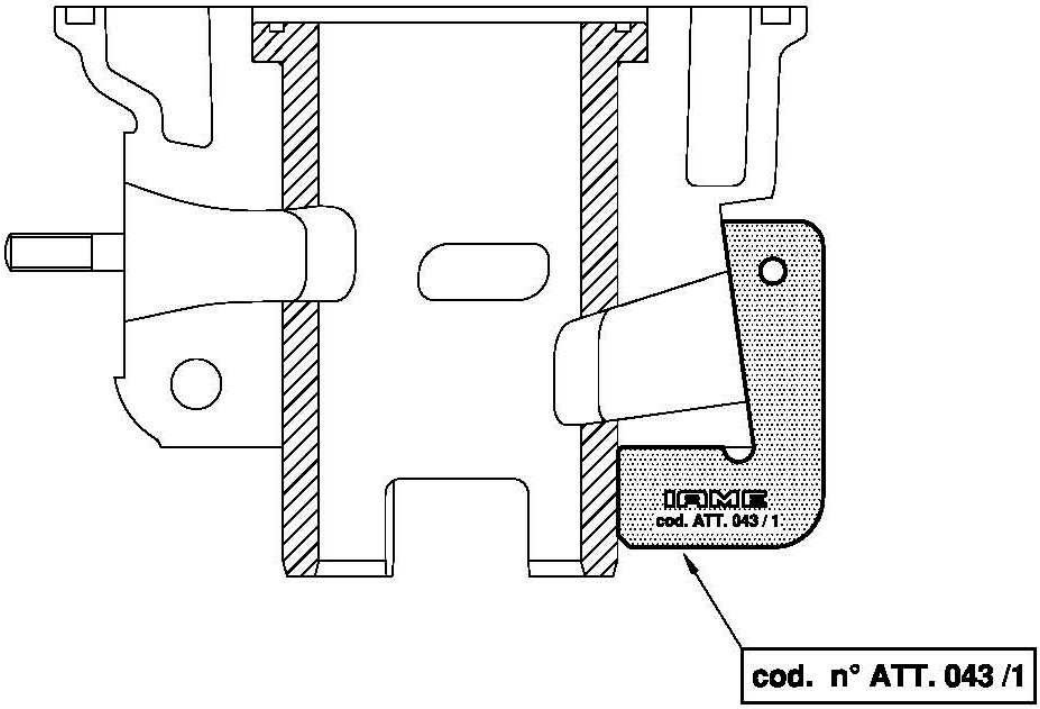




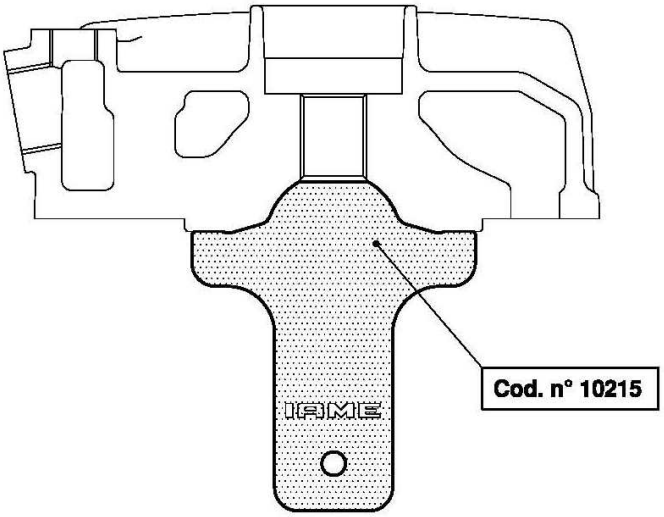


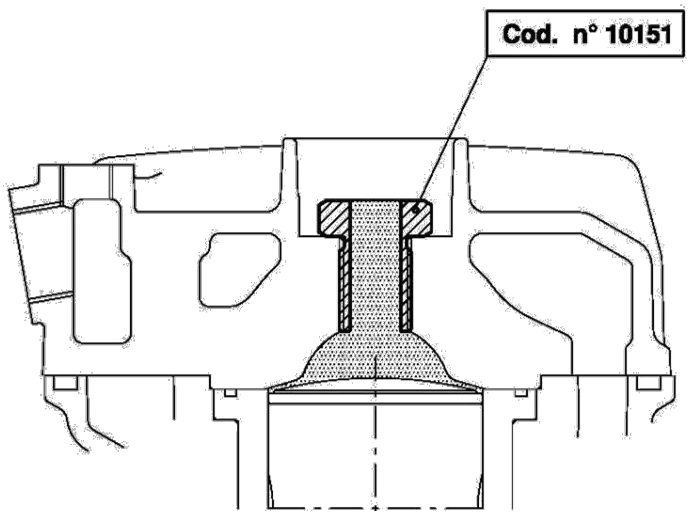
CONTROL GAUGES
OUTILS DE CONTROLL

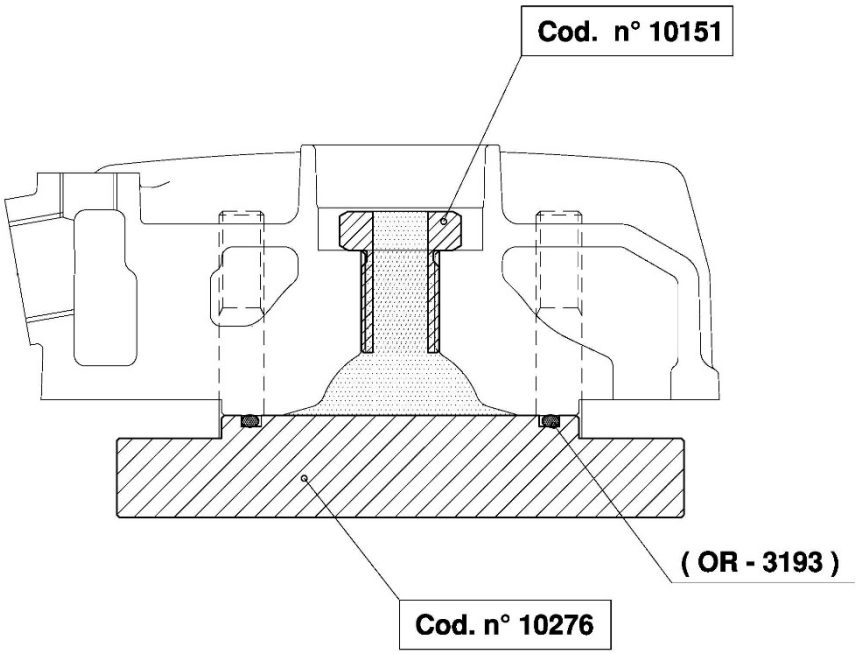




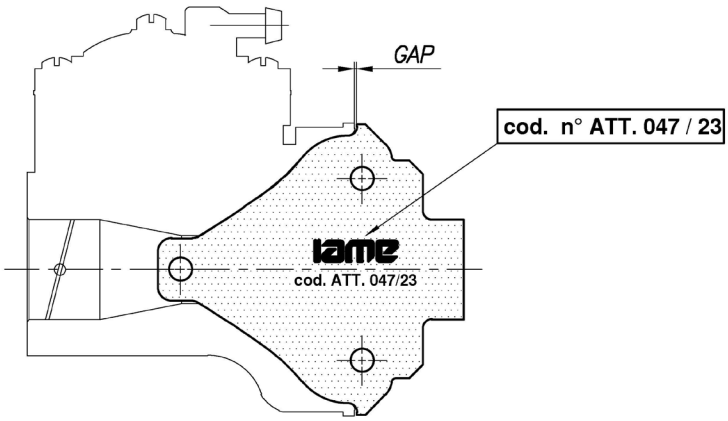
CONTROL GAUGES
OUTILS DE CONTROLL



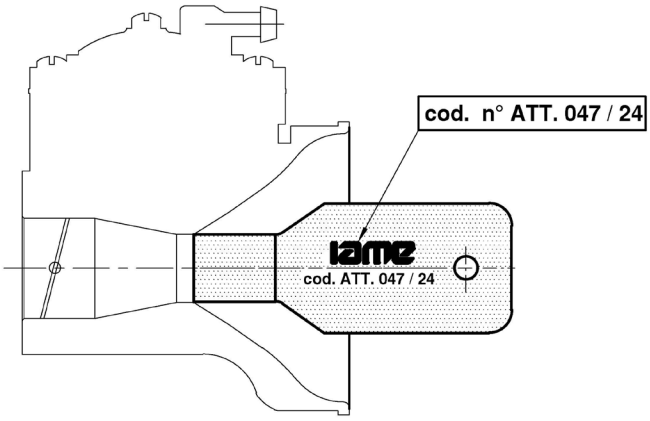




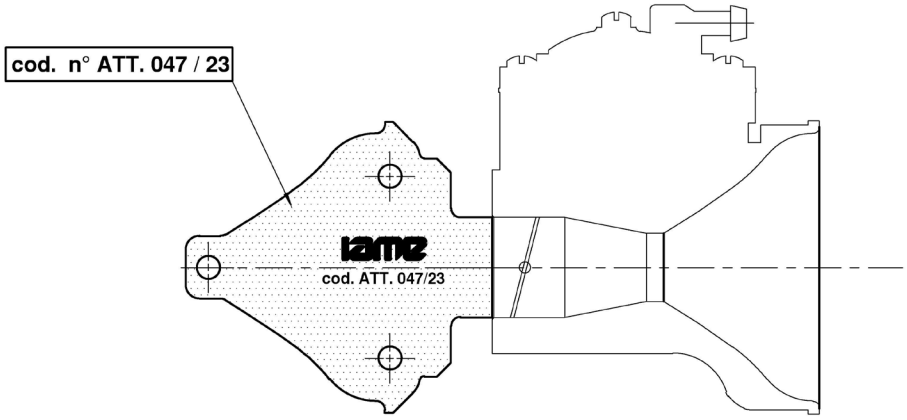
CONTROL GAUGES
OUTILS DE CONTROLL



Check that the tool must be the same shape of the inlet carburettor.
Vérifier que l'outil doit avoir la même forme que l'admission du carburateur.

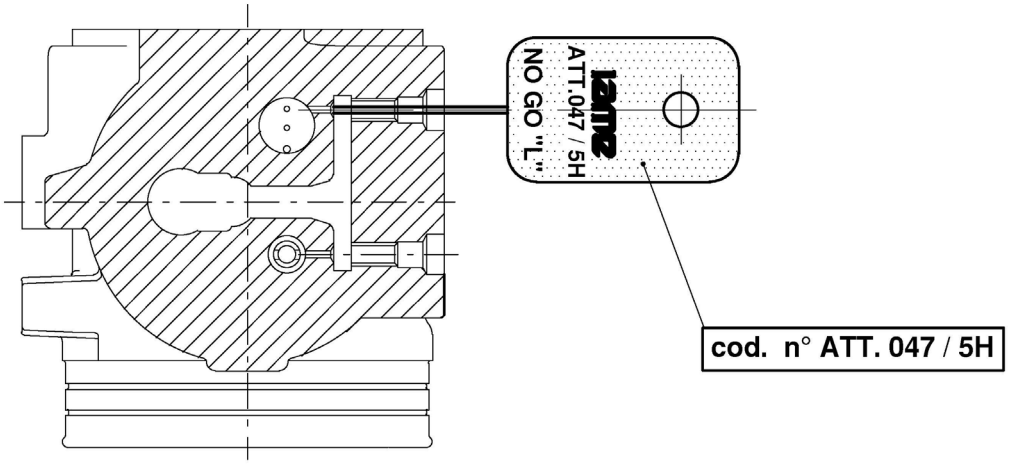


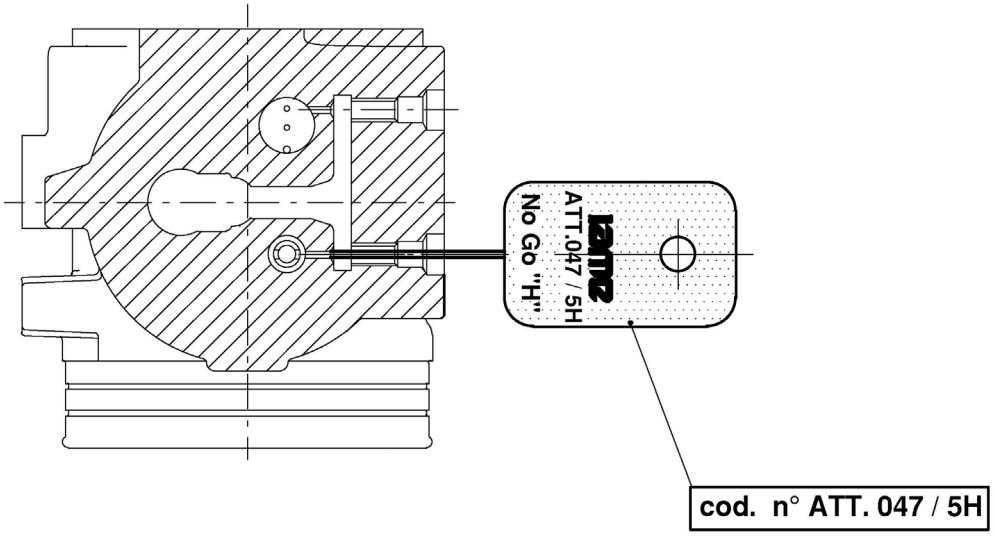
Check that the tool does not enter into the venture duct inlet of carburettor.
Vérifier que l'outil n'entre pas dans l'entrée du conduit Venturi du carburateur.



Check that the tool does not enter into the venture duct outlet of carburettor.
Vérifier que l'outil n'entre pas dans la sortie du conduit Venturi du carburateur.

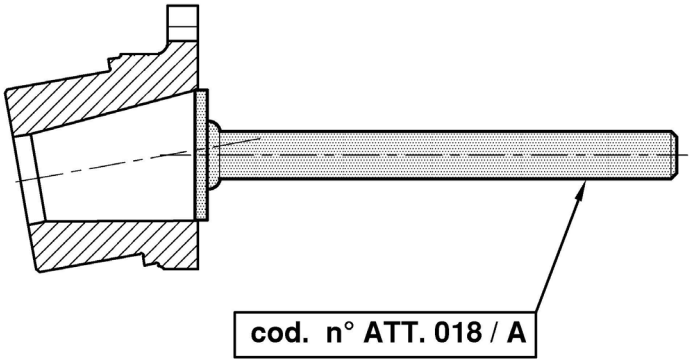
CONTROL GAUGES
OUTILS DE CONTROLL

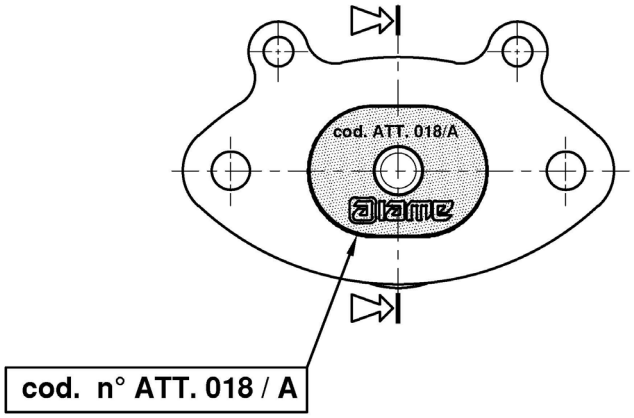




Check that the spikes does not enter into the holes.
Vérifiez que les pointes n'entrent pas dans les trous.

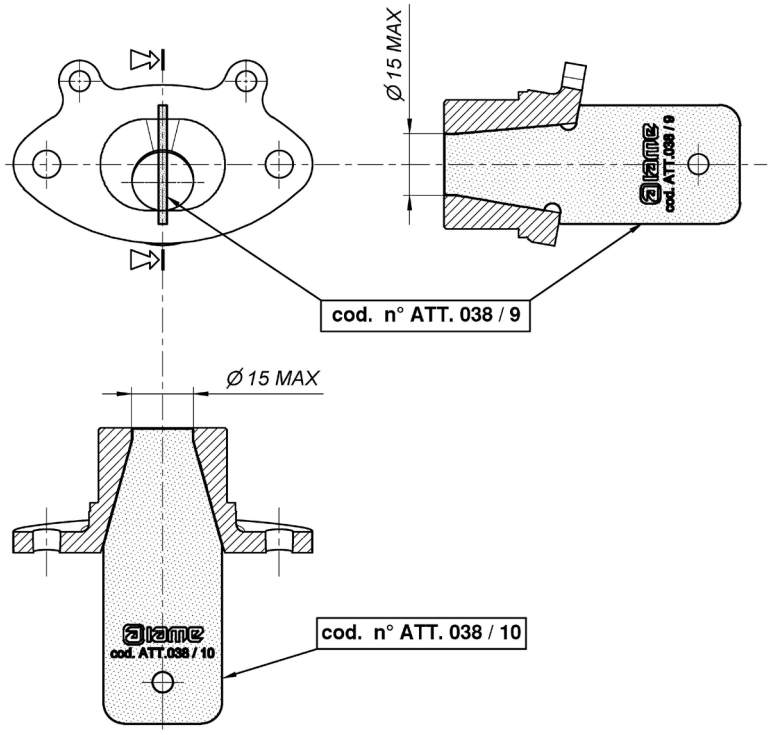
CONTROL GAUGES
OUTILS DE CONTROLL



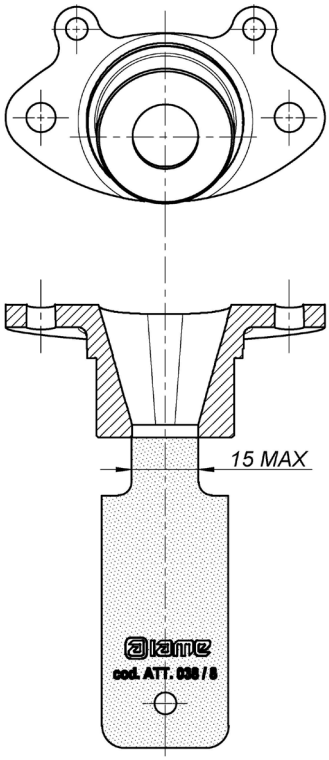


Check that the tool must be the same shape of the exhaust manifold.
Vérifiez que l'outil doit être de la même forme du collecteur d'échappement

CONTROL GUGES
OUTILS DE CONTROLL



Check that the tool must be the same shape of the inlet carburettor.
Vérifier que l'outil doit avoir la même forme que l'admission du carburateur.



Check that the tool does not enter into the exhaust restrictor.
Vérifier que l'outil n'entre pas dans le restricteur d'échappement

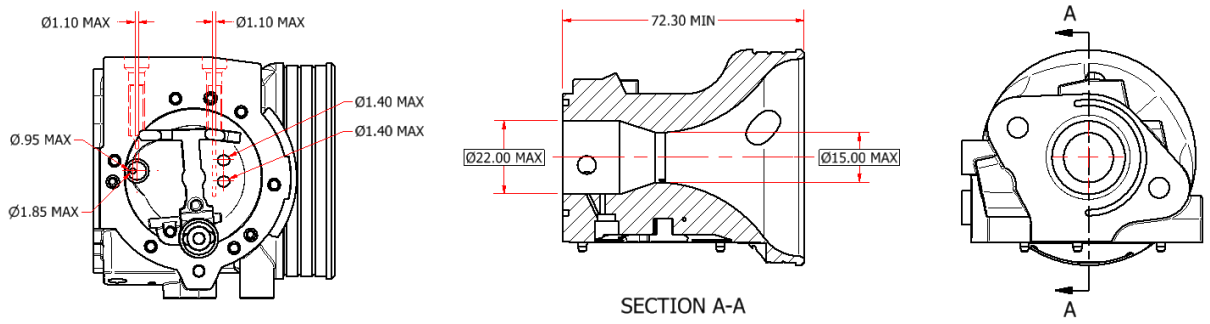
CARBURETTOR / *CARBURATEUR*

Tillotson HW-47A

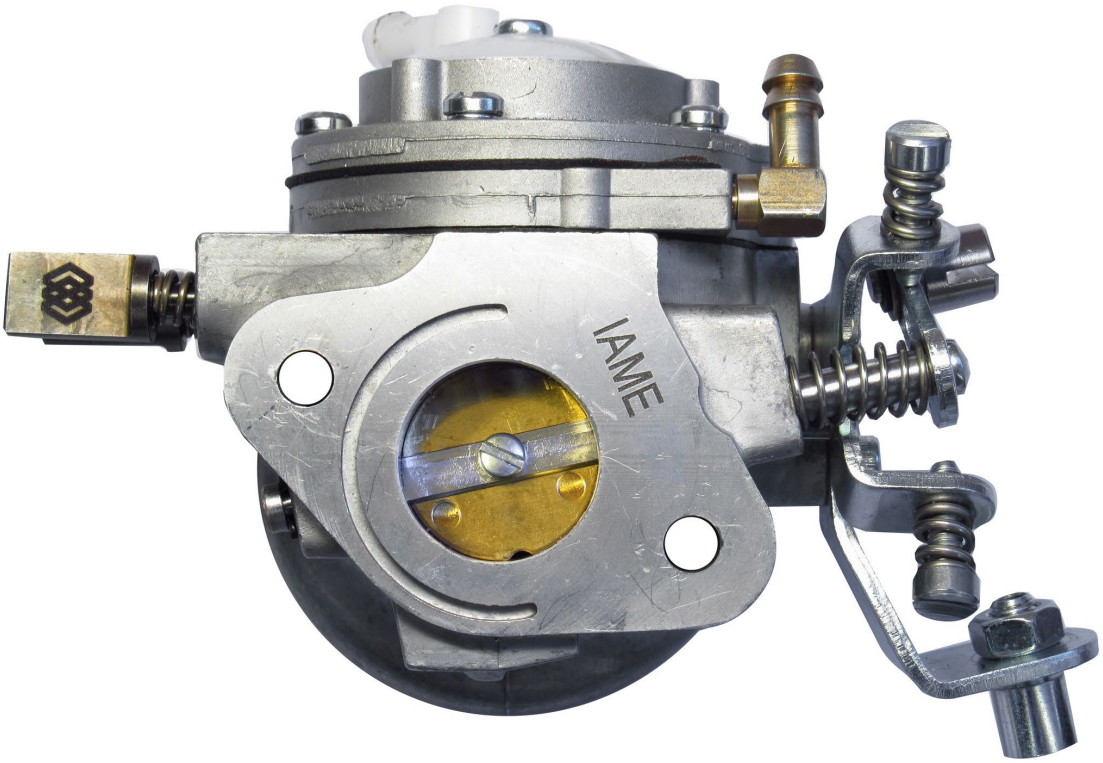
	
PHOTO OF ADJUSTING SIDE *PHOTO CÔTÉ RÉGLAGE*	PHOTO OF INLET SIDE *PHOTO CÔTÉ ASPIRATION*

Manufacturer - *Constructeur*	**TILLOTSON LTD.**
Make - *Marque*	**TILLOTSON**
Model - Modèle	**HW-47A**

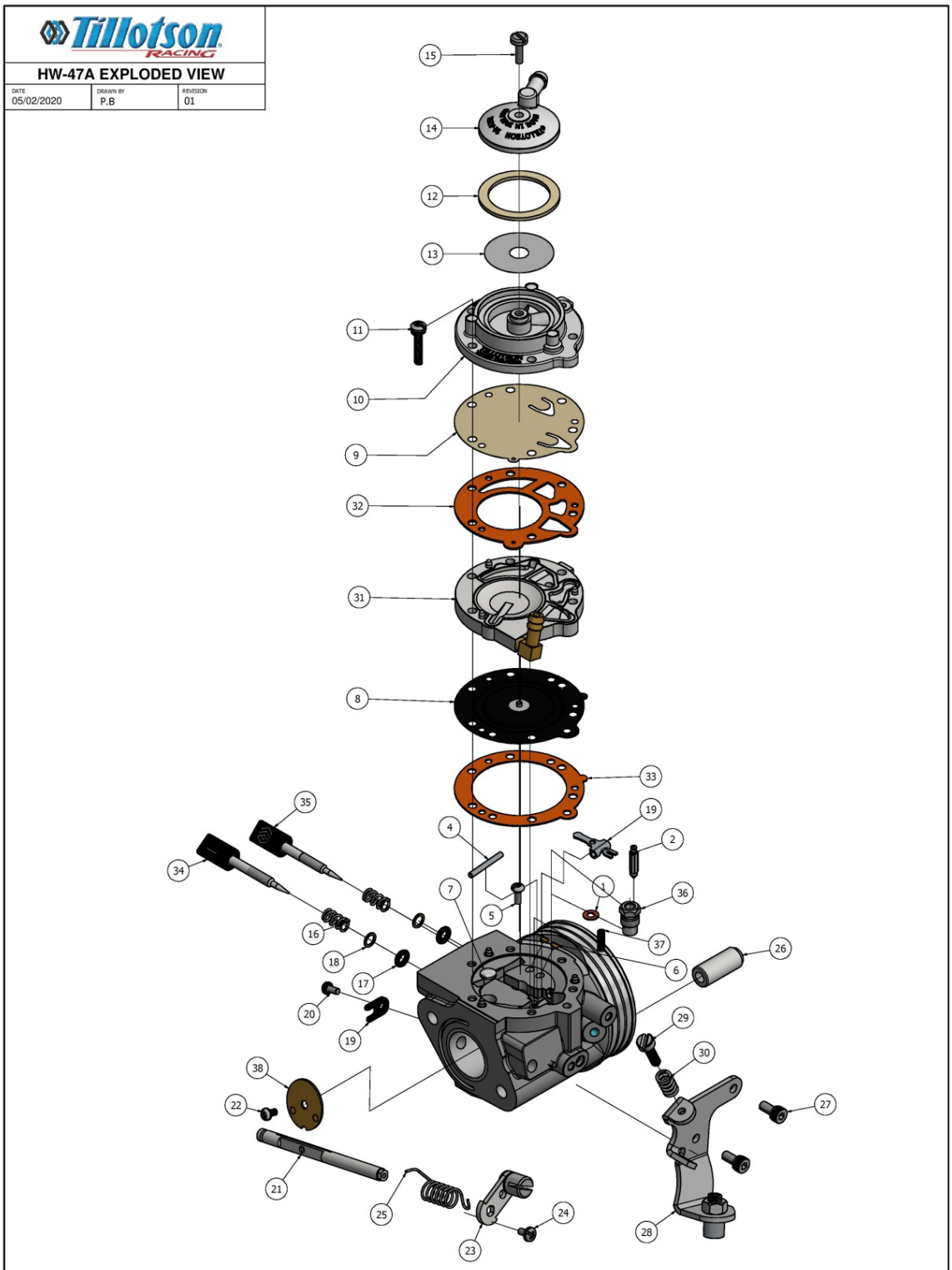
SECTION VIEW – *VUE DE SECTION AVEC DIMENSIONS*



“IAME” MARKING – *MARQUAGE “IAME”*



CARBURETTOR DESCRIPTION AND SKETCH OF PARTS
CARBURATEUR - DESCRIPTION ET DESSIN DES PIÈCES



ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	16-B199	+* INLET SEAT GASKET	16	2	24-B449	ADJUSTMENT SCREW SPRING	31	1	91-1031	METERING COVER ASSEMBLY
2	1	34-216	+ INLET NEEDLE	17	2	44-361	ADJUSTMENT SCREW O-RING	32	1	16-B407	+* FUEL PUMP GASKET (ORANGE)
3	1	155-A27	+ INLET CONTROL LEVER	18	2	78A-256	ADJUSTMENT SCREW WASHER	33	1	16-B406	+* DIAPHRAGM GASKET (ORANGE)
4	1	32-79	FULCRUM LEVER PIN	19	1	29-224	THROTTLE SHAFT CLIP	34	1	43-1046	8-32 UNC ADJUSTMENT SCREW L
5	1	15-B329	FULCRUM LEVER SCREW	20	1	15-C19	4-40 UNC SCREW	35	1	43-1045	M4 X 0.5 ADJUSTMENT SCREW H
6	2	80-160	BRASS PLUG	21	1	13-B215	THROTTLE SHAFT	36	1	36-A42	+ INLET SEAT
7	1	179-62	WELCH PLUG	22	1	15-C20	4-40 UNC SCREW	37	1	24-C297	INLET TENSION SPRING 46g
8	1	237-600	+* DIAPHRAGM ASSEMBLY	23	1	12-1218	THROTTLE LEVER ASSEMBLY	38	1	14-A137	THROTTLE SHUTTER
9	1	237-162	+* FUEL PUMP DIAPHRAGM	24	1	15-C52	4-40 UNC SCREW				
10	1	141-89	FUEL PUMP BODY	25	1	24-B381	THROTTLE RETURN SPRING			*	REPAIR KIT CONTENTS
11	6	15-C51	6 - 32 UNC SCREW WITH L/W	26	2	81-377	CARBURETTOR MOUNTING NUT			+	DIAPHRAGM & GASKET KIT CONTENTS
12	1	16-B205	+* FUEL STRAINER COVER GASKET	27	2	15-C67	M4 X 0.7 SOCKET CAP SCREW				
13	1	95 - 170	FUEL STRAINER SCREEN	28	1	136-A51	CABLE BRACKET			RK-6HW	REPAIR KIT
14	1	91-A251	FUEL STRAINER COVER	29	1	15-C9	LIMITER SCREW			DG-3HW	DG KIT
15	1	15-B313	5-40 UNC SCREW	30	1	24-B131	SPEED CREW SPRING				

PARTS OF CARBURETTOR

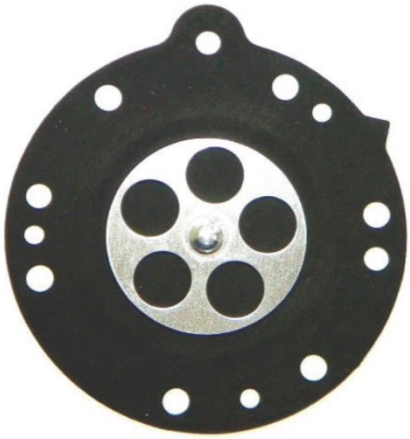
REF.33 - P. N°16-B406
DIAPHRAGM GASKET (ORANGE COLOR)
JOINT DE DIAPHRAGME (COULEUR ORANGE)

Thickness / *Epaisseur* = 0.5 ±0.1 mm

REF.32 - P. N° 16-B407
PUMP DIAPHRAGM GASKET (ORANGE COLOR)
JOINT DE POMPE A ESSENCE (COULEUR ORANGE)

Thickness / *Epaisseur* = 0.8 ±0.1 mm

REF.8 - P. N°237-600
DIAPHRAGM
DIAPHRAGME ASSEMBLE



Thickness / *Epaisseur* = 0.13 ±0.07 mm

REF.9 - P . N°237-162
PUMP DIAPHRAGM
MEMBRANE DE POMPE A ESSENCE

REF.10 - P. N° 141-89
PUMP COVER
CORPS DE POMPE A ESSENCE

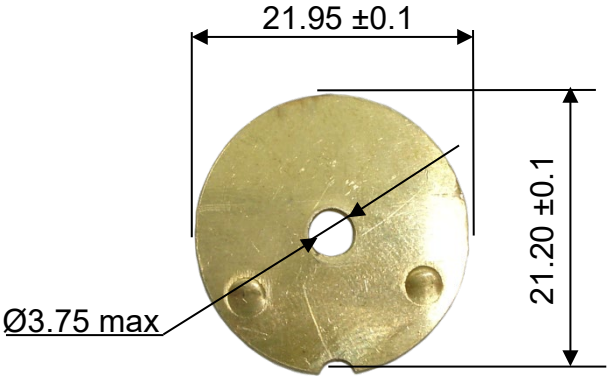
Thickness / *Epaisseur* = 0.10 ±0.063 mm

REF.31 - P. N° 91-1031
DIAPHRAG M COVER
COUVERCLE DE DIAPHRAGME

Thickness / *Epaisseur* = 6.75 ±0.15 mm

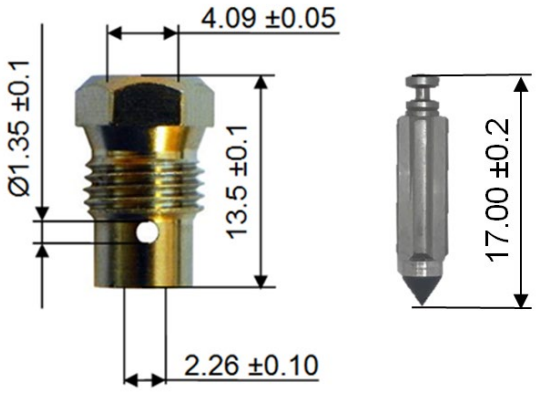
Thickness / *Epaisseur* = 12.5 ±0.15 mm

REF.33 - P . N° 14-A96
THROTTLE SHUTTER
PAPILLON

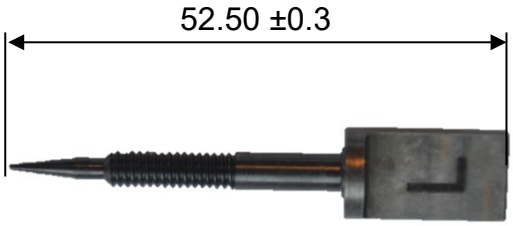


Thickness / *Epaisseur* = 0.81 ±0.1 mm

REF.36 / 2 - P. N° 36-A42 / 34-216
SEAT + NEEDLE
SIEGE + POINTEAU



REF.34 - P. N° 43-1046
NEEDLE LOW SPEED
VIS DE RAGLAGE BAS-REGIME



REF.35 - P. N° 43-1045
NEEDLE HIGH SPEED
VIS DE RAGLAGE HAUT-REGIME

THE CARBURETTOR CAN HAVE THIS HOLE FOR SEALING.
LE CARBURATEUR PEUT AVOIR CE TROU POUR LE PLOMBAGE.

The carburettor can have this hole for sealing.
Le carburateur peut avoir ce trou pour le plombage