

AIDKA Homologation No: 00X / XX

Note: Registration does not imply or guarantee use in a class or classes. Application for use in a class or classes must be applied for after Homologation and Registration approvals

ENGINE						
ManufacturerIAME S.P.A - ZINGONIACategory125cc TaG						
Make <u>IAME</u>		Homologation Period	9 years			
Model, Type X30 125cc RL - TAG Pages 61						

This homologation form reproduces description, illustrations and dimensions of the engine at the time that the Australian Independent Dirt Kart Association conducted the Homologation. All motors must be manufactured within these dimensions.

ENGINE PHOTO - DRIVE SIDE

ENGINE PHOTO - OPPOSITE SIDE





SIGNATURE AND STAMP OF AUSTRALIAN INDEPENDENT DIRT KART ASSOCIATION



PHOTO OF THE ENGINE FROM THE BACK







PHOTO OF THE ENGINE FROM ABOVE

PHOTO OF THE ENGINE FROM BELOW







AIDKA Homologation No: 00X / XX

TECHNICAL INFORMATION

А	A CHARACTERISTICS				
The nu	The number of decimal places must be 2 or comply with the relevant tolerance.				
	Cylinder				
-	ne of cylinder	123.67 cm ³	<125.00 cm ³		
	nal bore	<u>54.00 mm</u>			
Theo	ritical maximum bore	<u>54.28 mm</u>			
Origin	nal Stroke	<u>54.40 mm</u>			
Numl	per of transfer ducts, cylinder / sump	3/3			
Numl	per of exhaust ports / ducts	3/3			
Volur	ne of the combustion chamber (with AUS insert)	10.3 cm ³	minimum		
Volur	Volume of the combustion chamber (with Volumeter & AUS insert)		minimum		
	Crankshaft				
Numl	per of bearings	<u>2</u>			
Diam	Diameter of bearings		±0.1mm		
Minin	Minimum weight of crankshaft		minimum		
All par	ts represented on page 12 technical drawing				
	Balance shaft				
Minin	num weight of balance shaft	315 g	minimum		
Perce	Percentage of balancing		minimum		
	Connecting rod				
Conn	ecting rod centreline	102 mm	±0.1mm		
	Diameter of big end		±0.05mm		
	eter of small end	26 mm 18 mm	±0.05mm		
Min. \	veight of the connecting rod	<u>110 g</u>	minimum		



AIDKA Homologation No: 00X / XX

Piston		
Number of piston rings	1	
Min. weight of the bare piston (ring incuded)	<u>128 g</u>	minimum
Gudgeon pin		
Diameter	<u>14 mm</u>	±0.05mm
Length	<u>44 mm</u>	±0.15mm
Minimum weight	<u>28.0 g</u>	Minimum
Clutch		
Minimum weight	<u>950 g</u>	minimum
All the parts represented on the page 15 technical drawing		

В	OPENING ANGLES			
Of the	Of the inlet (main transfer ports) ±2°			
Of the	Of the inlet (3 th transfer duct engine) ±2° ±2°			
Of the	e exhaust	177.5°	MAX.	
Of the boosters		<u>177.5°</u>	MAX.	

С	MATERIAL	
Cylinde	er head	<u>ALUMINIUM</u>
Cylinde	er	<u>ALUMINIUM</u>
Cylinde	er wall	CAST IRON
Sump		ALUMINIUM
Cranks	shaft	STEEL
Connec	cting rod	STEEL
Piston		<u>ALUMINIUM</u>

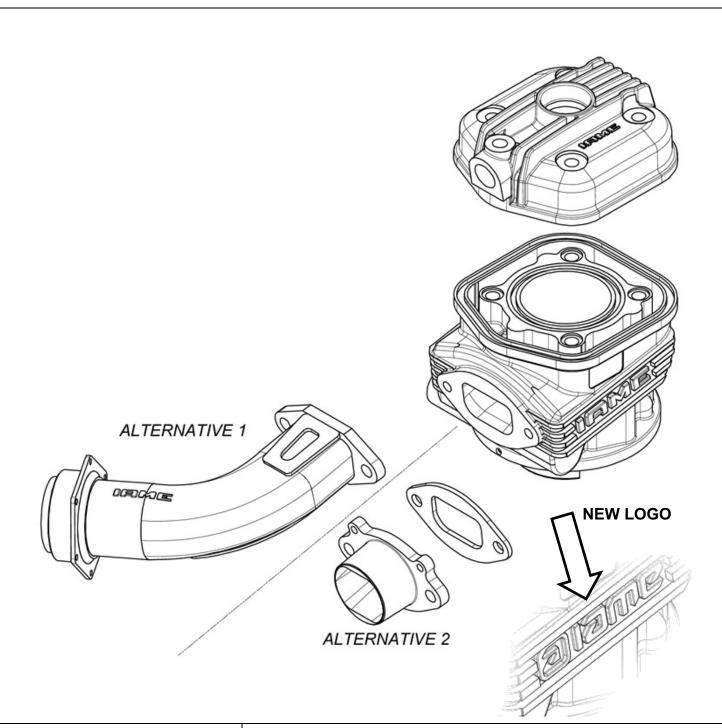


D

PHOTOS, DRAWINGS & GRAPHS

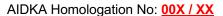
D.1 CYLINDER UNIT

EXPLODED DRAWING OF THE CYLINDER, CYLINDER HEAD AND EXHAUST MANIFOLD UNIT



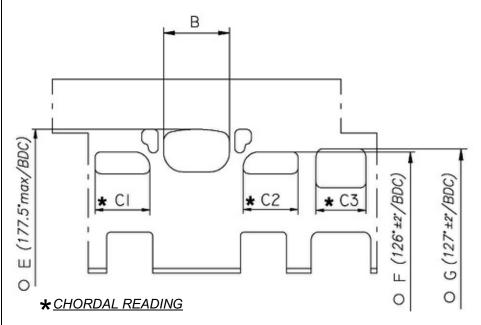
Without screws or gaskets.

The aim of the exploded drawings is to identify the principles, the functioning and the whole mechanical unit





DRAWING OF THE CYLINDER DEVELOPMENT



В	≤ 36.5 mm
CI = C2	≤ 30 mm
C3	≤ 28.5 mm
Е	177.5° max
F	126° ± 2°
G	127° ± 2°

O ANGULAR READING BY INSERTING A 0.2x5 mm GAUGE

DRAWING OF THE CYLINDER BASE without dimensions

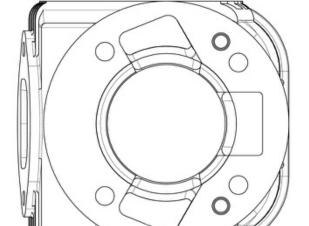
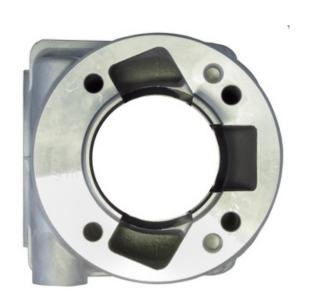
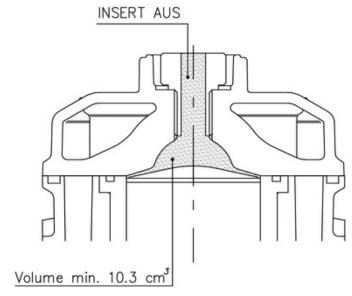


PHOTO OF THE CYLINDER BASE





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



COMBUSTION CHAMBER VOLUME TOT. = 10.3 cm³ min.

ATT: SQUISH MIN. = 0.90 mm (measured with Ø2.0mm TIN)

Combustion chamber volume in the cylinder head (with Volumeter and Insert):

12.8 cm³ min

PHOTO OF THE CYLINDER HEAD



NEW LOGO



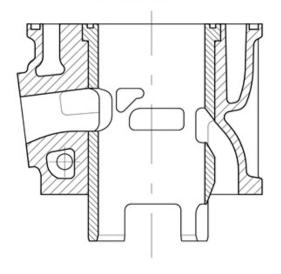
PHOTO OF THE COMBUSTION CHAMBER IN THE CYLINDER HEAD





VERTICAL CROSS SECTION VIEW OF CYLINDER WITH LINER, without dimensions

OLD TYPE



CURRENT TYPE

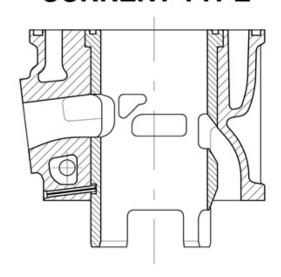
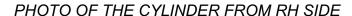


PHOTO OF THE CYLINDER FROM ABOVE





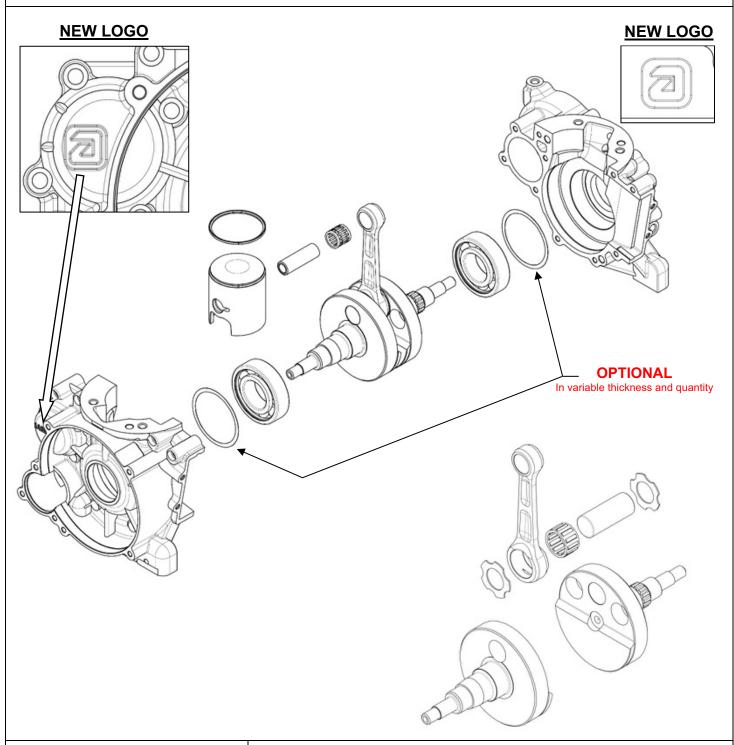


a lame



D.2 CONROD, CRANKCASE, CRANKSHAFT & PISTON

EXPLODED DRAWING OF THE PISTON, CRANKSHAFT, CONNECTING ROD AND CRANKCASES UNIT (exploded crankshaft)



Without screws or gaskets.

The aim of the exploded drawings is to identify the principles, the functioning and the whole mechanical unit



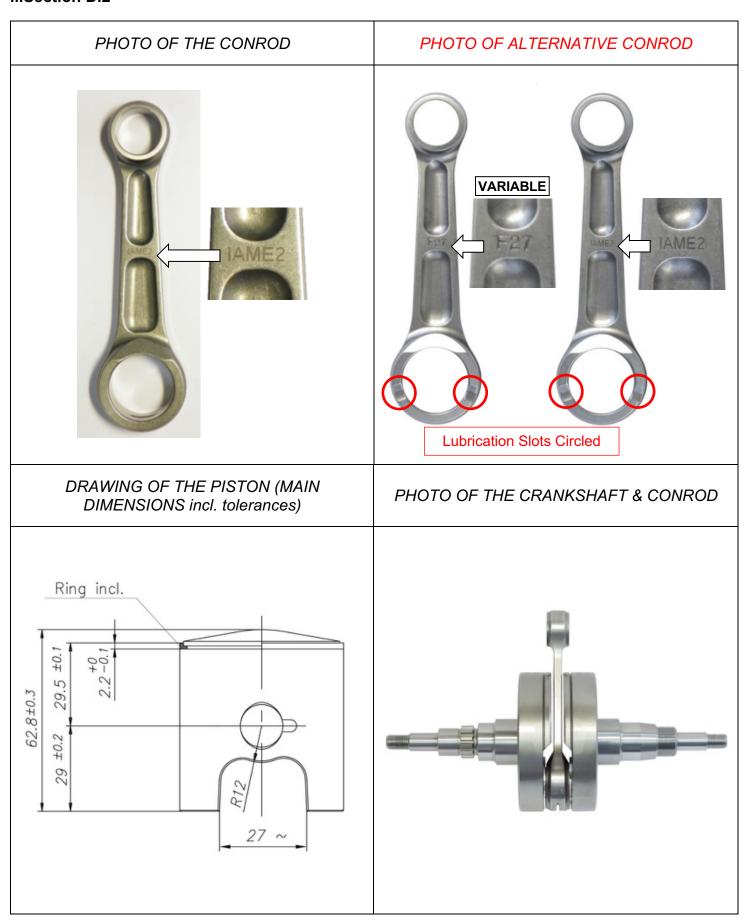




PHOTO IDENTIFICATION OF SMALL END CONROD BEARING – TYPES ALTERNATIVE

TYPE 1



TYPE 2



PHOTO IDENTIFICATION OF SILVER CONROD WASHER – TYPES ALTERNATIVE

TYPE 1



TYPE 2

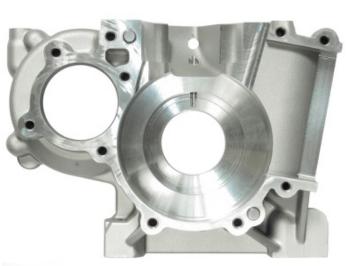




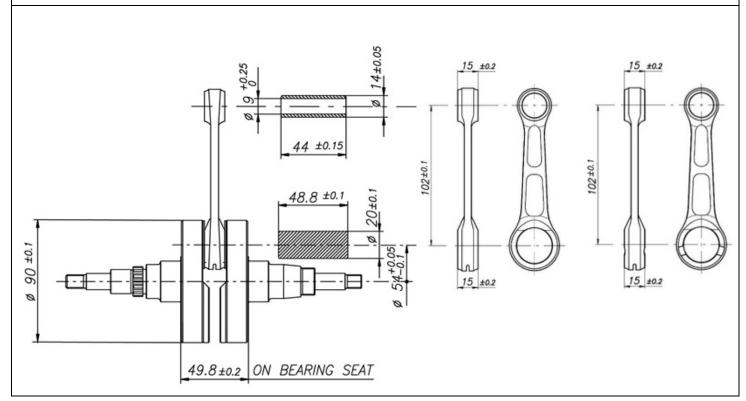
PHOTO OF THE INSIDE OF THE RH CRANKCASE

PHOTO OF THE INSIDE OF THE LH CRANKCASE



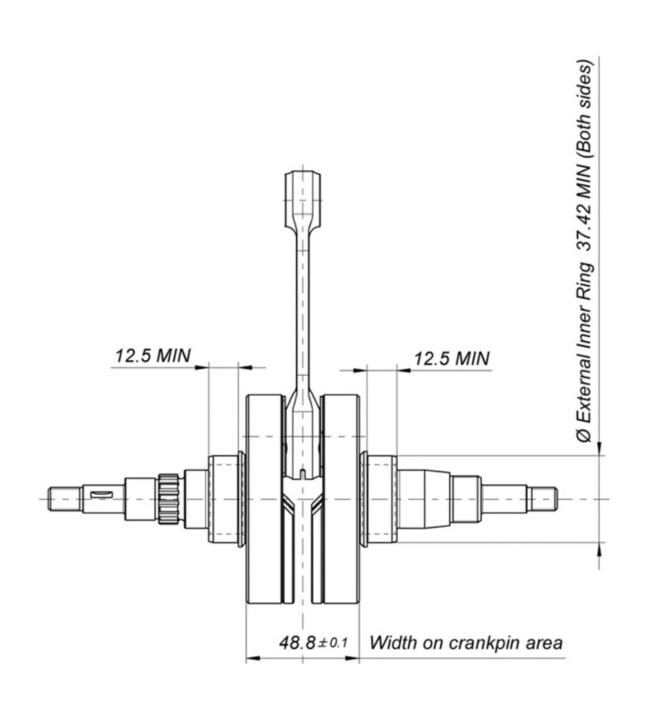


DRAWING OF THE CRANKSHAFT - CON ROD UNIT (DIMENSIONS incl. tolerances, big & small ends thickness, crank mass thickness & diameter)





CRANKSHAFT DIMENSIONS WITH ALTERNATIVE ROLLER MAIN BEARINGS

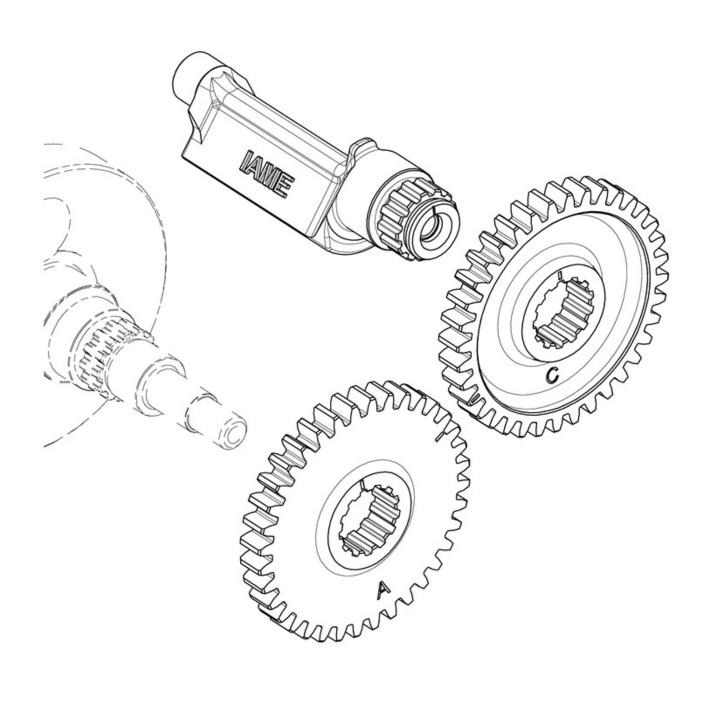


Crankshaft complete as pictured min. Weight 2220 g



D.3 BALANCE SHAFT

EXPLODED DRAWING OF THE BALANCE SHAFT



Without screws or gaskets.

The aim of the exploded drawings is to identify the principles, the functioning and the whole mechanical unit

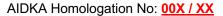




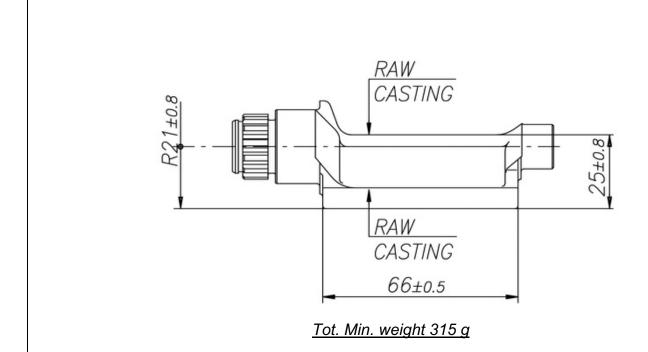
PHOTO OF THE BALANCE SHAFT VARIABLE VARIABLE X30125750

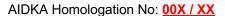
PHOTO IDENTIFICATION OF ALTERNATIVE ROLLER BEARING

Alternative bearing to 6206 type Part No: BC1-3342 B



DRAWING OF THE BALANCE SHAFT (DIMENSIONS incl. tolerances)

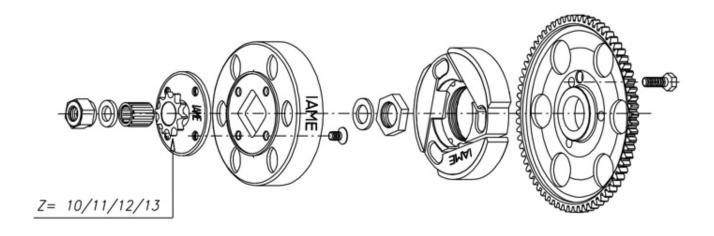




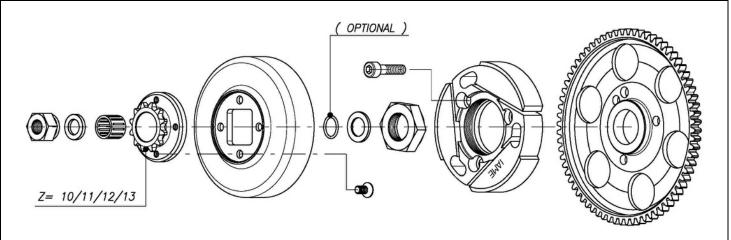


D.4 REED VALVE & CLUTCH

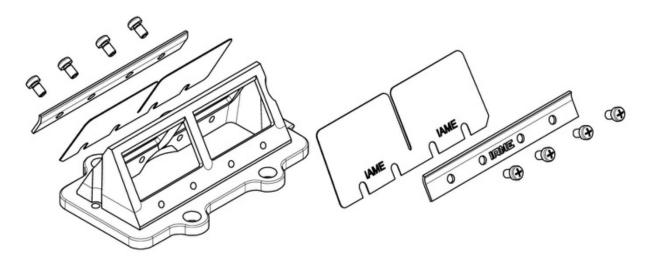
TECHNICAL DRAWING (exploded view) OF THE CLUTCH ASSEMBLY



TECHNICAL DRAWING (exploded view) OF THE CLUTCH ASSEMBLY - ALTERNATIVE



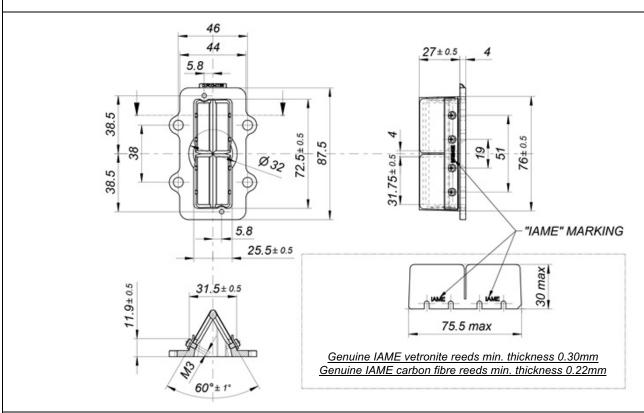
TECHNICAL DRAWING (exploded view) OF THE REED VALVE



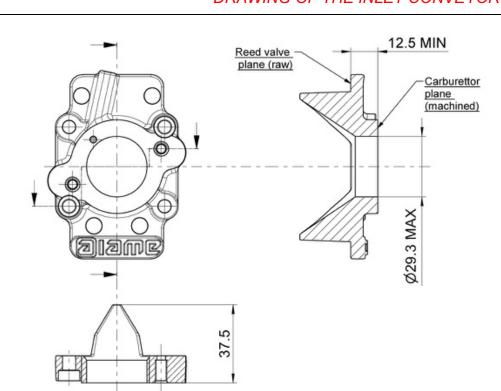
The aim of the exploded drawings is to identify the principles, the functioning and the whole mechanical unit



DRAWING OF THE REED VALVE (DIMENSIONS incl. tolerances)



DRAWING OF THE INLET CONVEYOR

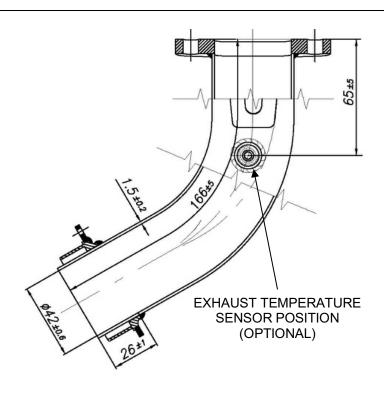


GENERAL TOLERANCES		
Dimensions Machined parts		
< 25 mm	±0.5	
25÷60	±0.8	
> 60 mm	±1.5	



D.5 EXHAUST SYSTEM

TYPE 1 - EXHAUST HEADER DRAWING



TYPE 1 - EXHAUST HEADER ASSEMBLY AND MARKING

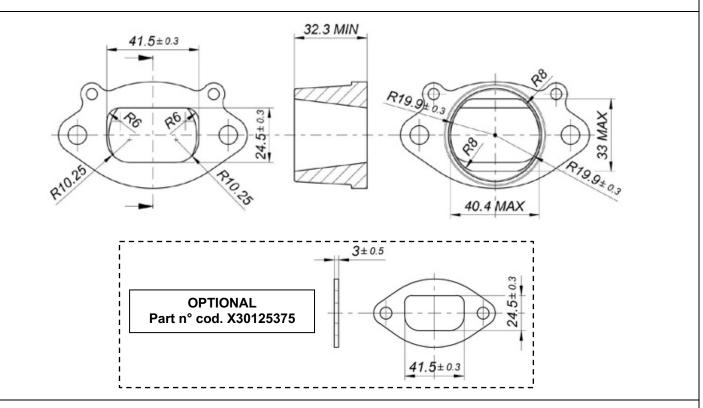




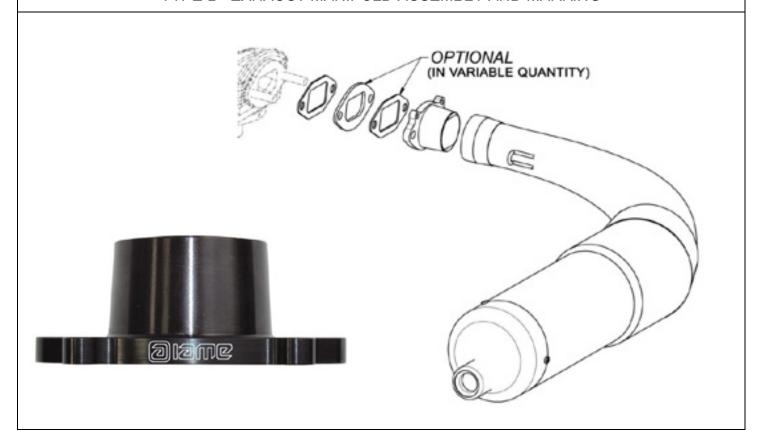


D.5 EXHAUST SYSTEM

TYPE 2 - EXHAUST MANIFOLD DRAWING



TYPE 2 - EXHAUST MANIFOLD ASSEMBLY AND MARKING





D.5 EXHAUST SYSTEM

PHOTO OF THE EXHAUST – TYPE 1

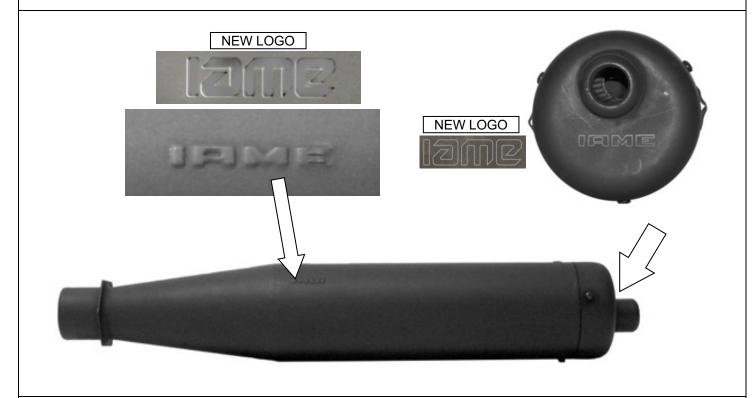
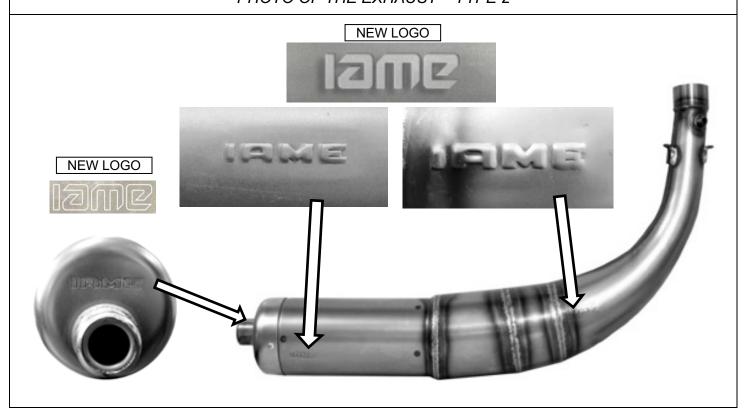
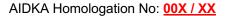


PHOTO OF THE EXHAUST – TYPE 2



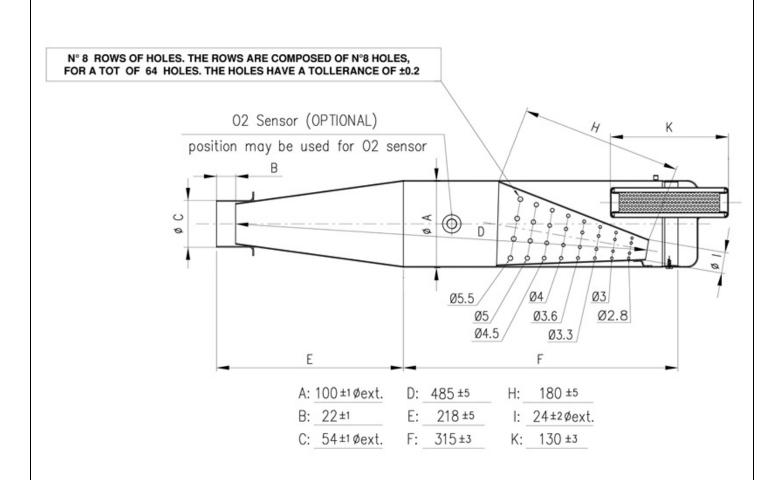


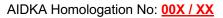


TECHNICAL DESCRIPTIONS OF THE EXHAUST (Art. 8.9.3 of HR) – TYPE 1		
Weight in g	1390	Minimum
Volume in cc	<u>3330</u>	+/-5 %

TECHNICAL DRAWING – TYPE 1

It must include all the information necessary to build this exhaust







TECHNICAL DESCRIPTIONS OF THE EXHAUST (Art. 8.9.3 of HR) – TYPE 2			
Weight in g 1780 Minimum			
Volume in cc	<u>4250</u>	+/-5 %	

It must include all the information necessary to build this exhaust

ØA1: <u>110 ±1.5 Øext</u>	C : <u>219 ±3</u>	ØG: <u>35 ±1 Øext.</u>	M: <u>439 ±3</u>	T: <u>690 ±3</u>
ØA2: <u>102 ±1.5</u> <u>Øext.</u>	D1: <u>90 ±3</u>	H: <u>132 ±3</u>	N : <u>341 ±3</u>	W : <u>170 ±3</u>
ØA3: 100 ±1.5 Øext.	D2 : <u>109 ±3</u>	ØI: <u>21 ±1 Øint.</u>	ØO: <u>21 ±1 Øint.</u>	Q : <u>182 ±3</u>
B1 : <u>60 ±3</u>	ØE: 23.5 ±2 Øext.	K : <u>170 ±3</u>	P : <u>50 ±10</u>	Z : <u>120 ±10</u>
B2: <u>60 ±3</u>	F: <u>36 ±2</u>	ØL: 42.5 ±1.5 Øext.	S : <u>29 ±1.5</u>	R : <u>270 ±10</u>

THE TAPE MUST FOLLOW THE CENTRELINE OF THE WELD AT ALL POINTS

The dimensions "M", "N" and "T" must be taken by steel tape measure 6mm wide.

The dimensions "M" and "N" must be taken on the weld centerline.

02 Sensor (OPTIONAL)

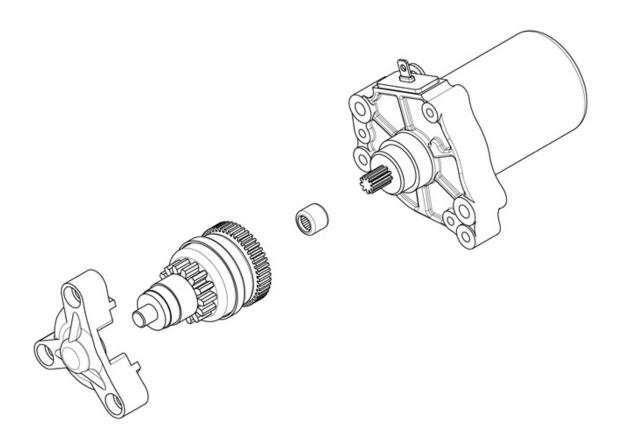
Either one or the other position may be used for O2 sensor, not both

The dimensions "Q" and "W" must be taken by steel tape measure 12mm wide.



D.6 STARTER

EXPLODED DRAWING OF THE STARTING UNIT AND OF ITS HOUSING



Without screws or gaskets.

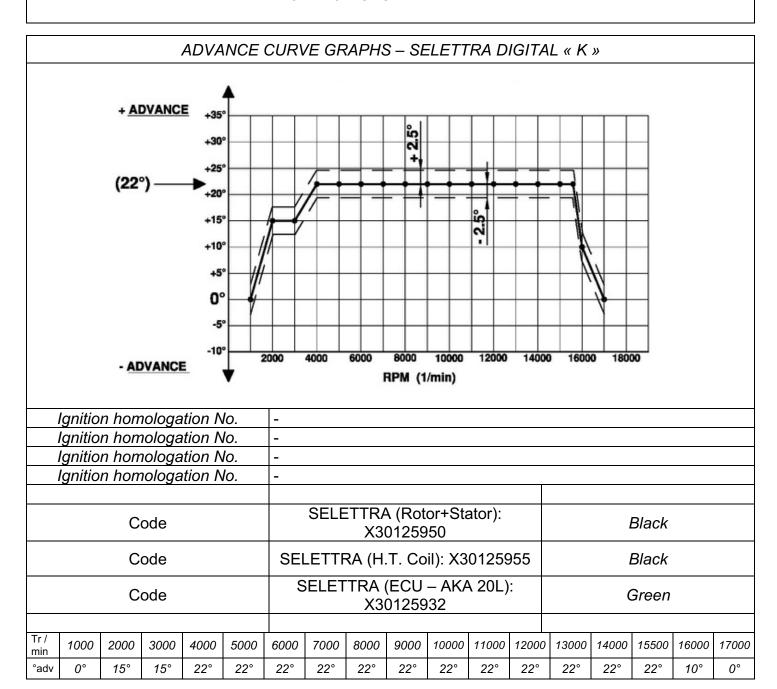
The aim of the exploded drawings is to identify the principles, the functioning and the whole mechanical unit





D.8 ELECTRICAL SYSTEM

IGNITION SYSTEM – TYPE 1





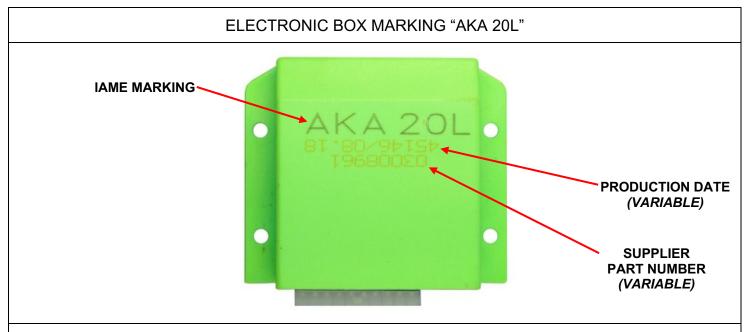
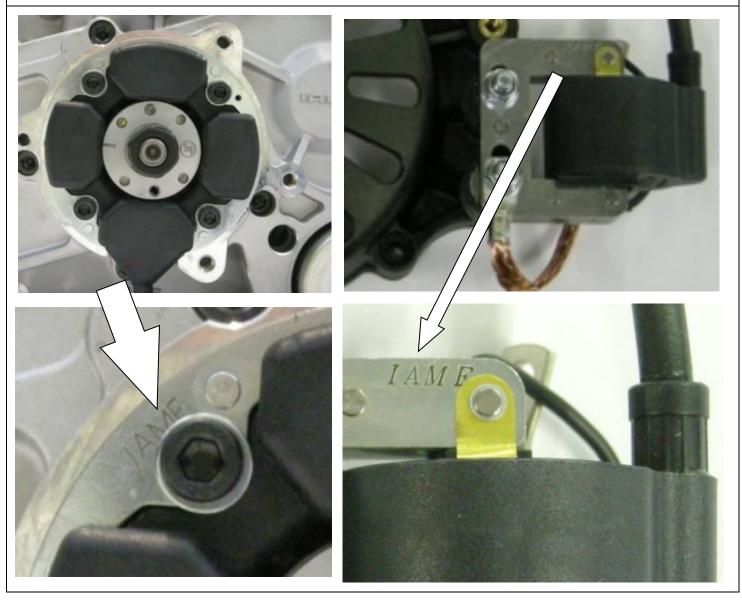
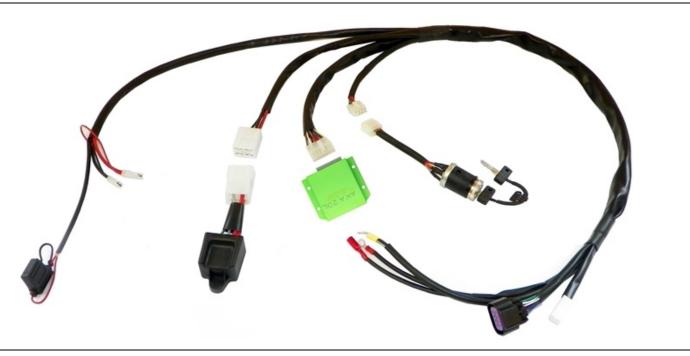


PHOTO OF SELETTRA DIGITAL "K" IGNITION WITH "IAME" MARKING









ALTERNATIVE STARTER KEY

It is permitted to use either the "Original Starter Switch (Key) or the "Alternative Starter Switch" detailed herein.

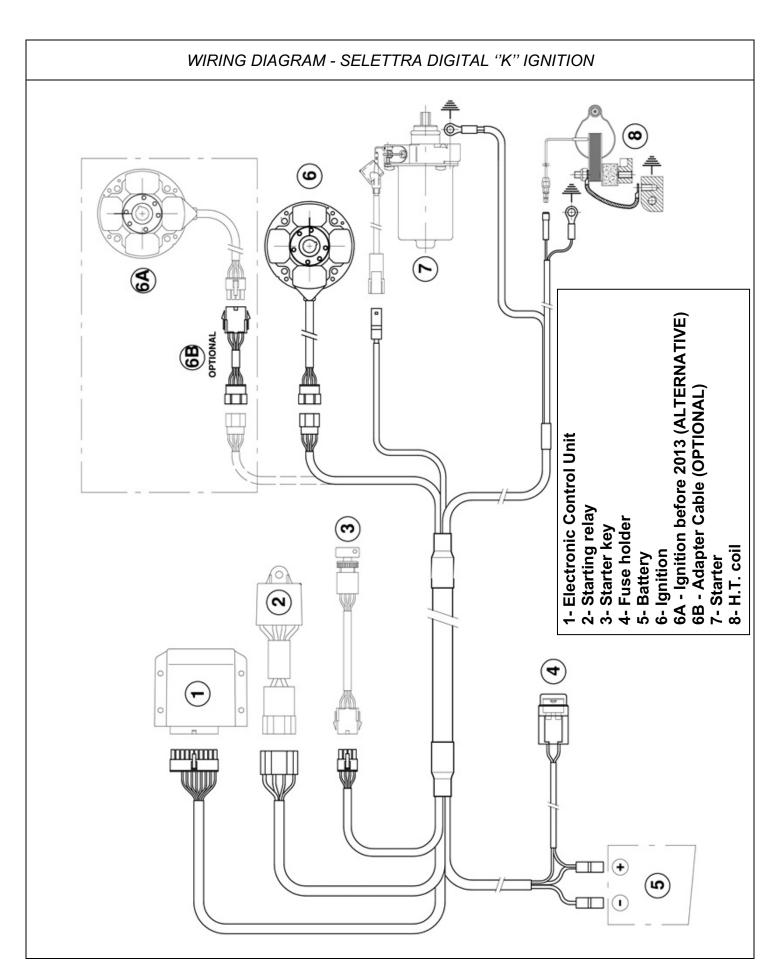
ORIGINAL STARTER KEY

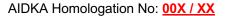


ALTERNATIVE STARTER KEY











ELECTRICAL SYSTEM

ALTERNATIVE IGNITION SYSTEM - TYPE 2

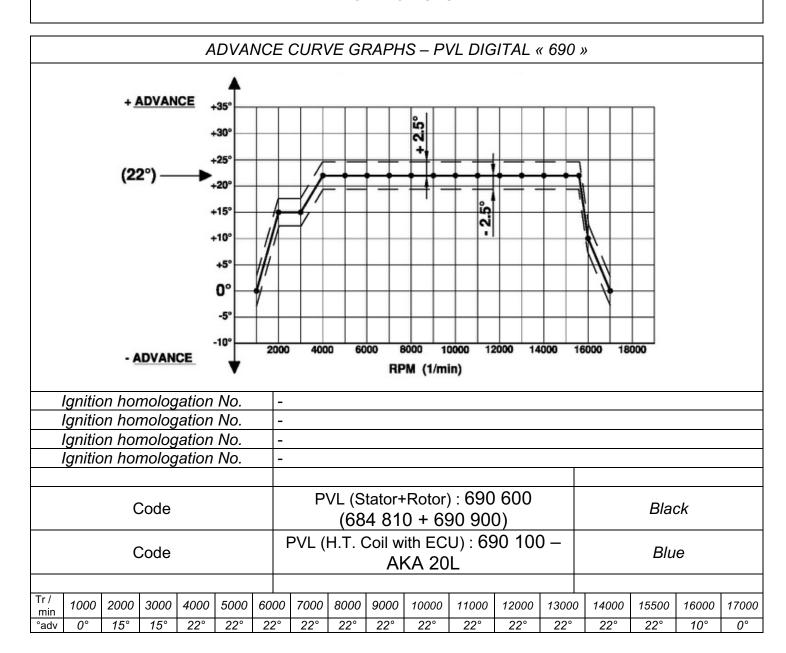


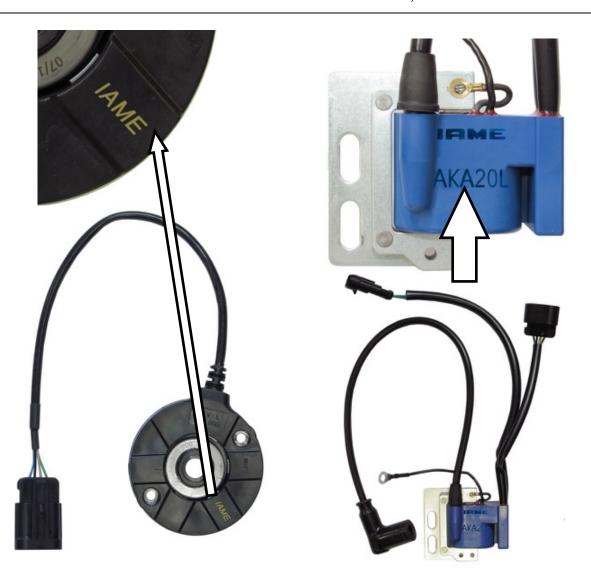




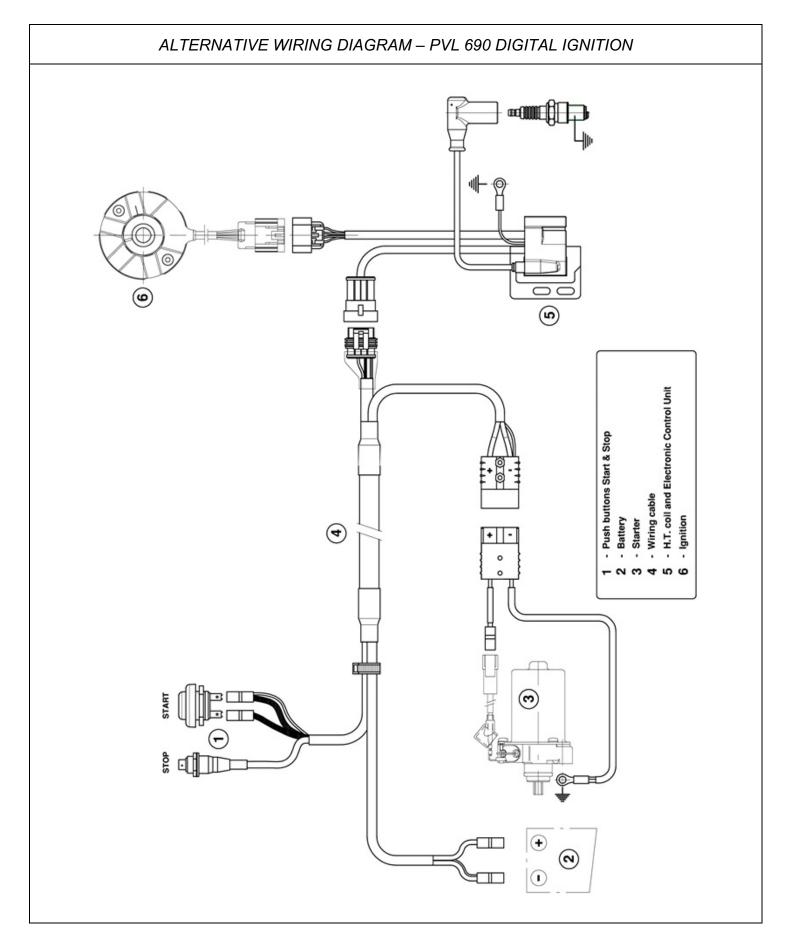
PHOTO COMPLETE ALTERNATIVE WIRING LOOM



PHOTO OF ALTERNATIVE DIGITAL IGNITION PVL 690, WITH IAME MARKING





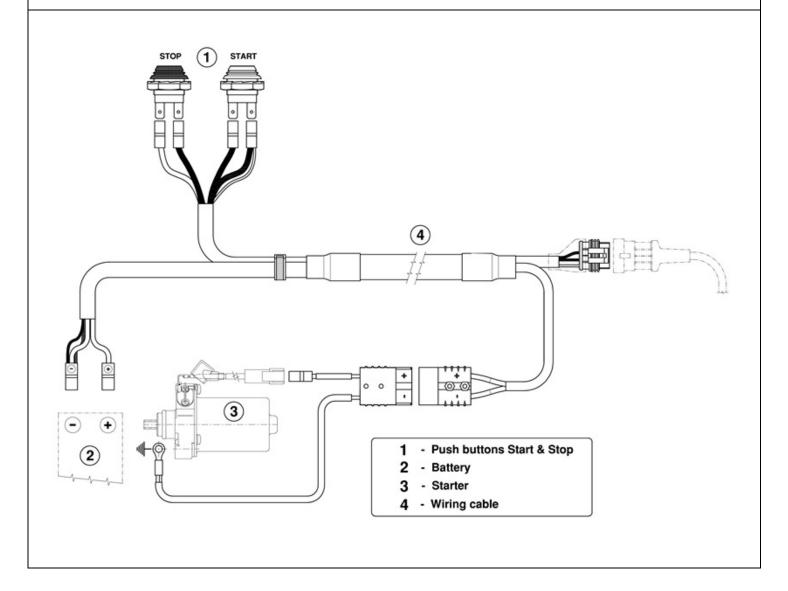


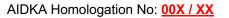






ALTERNATIVE WIRING LOOM DIAGRAM







ELECTRICAL SYSTEM

IGNITION SYSTEM – TYPE 3

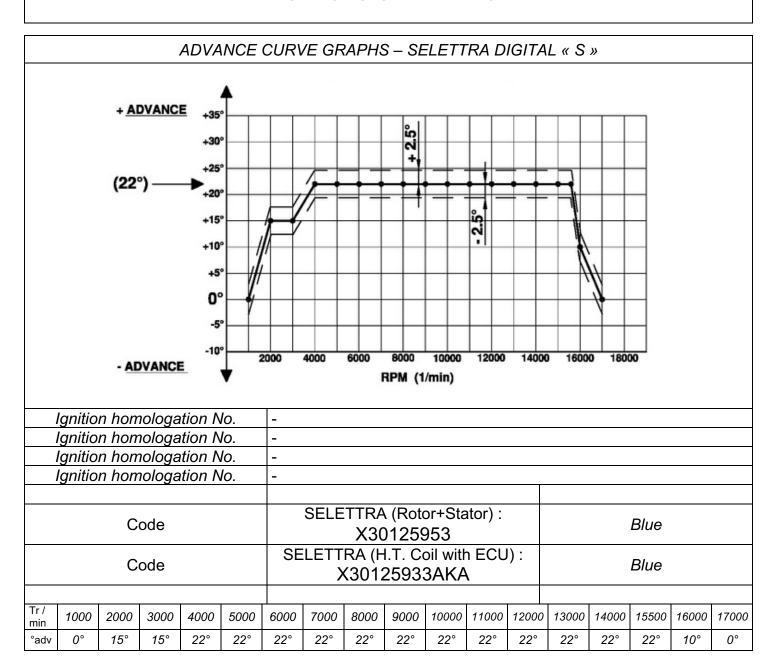
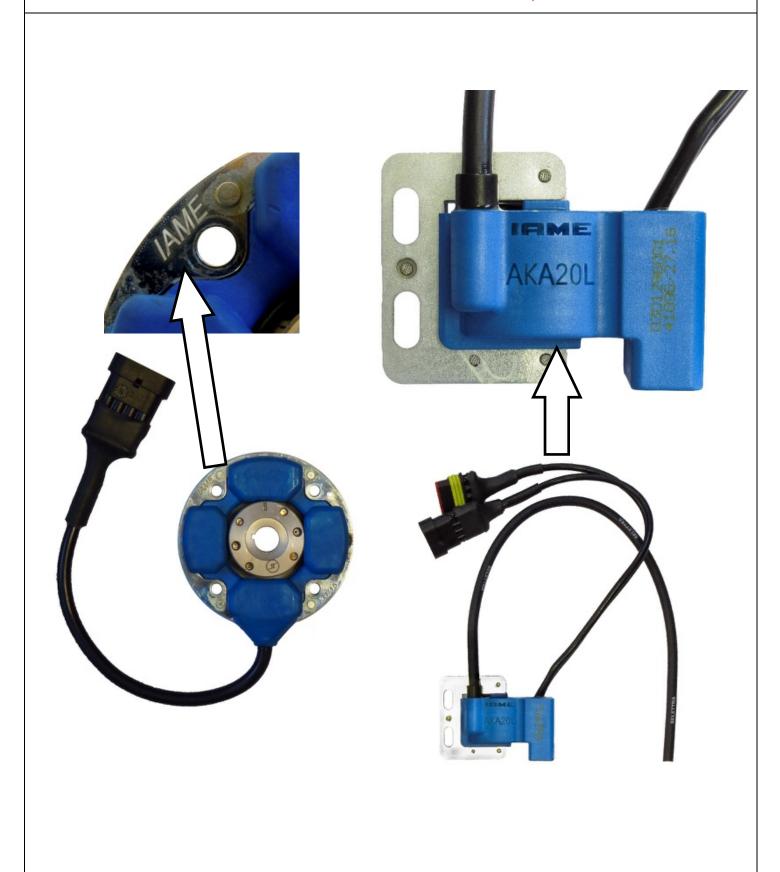
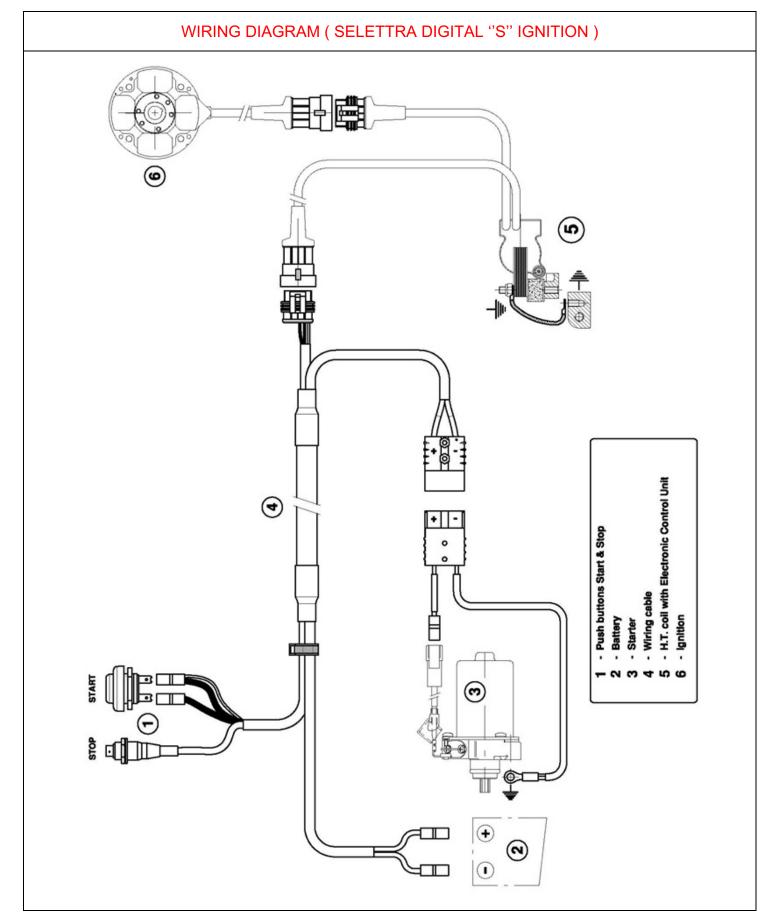




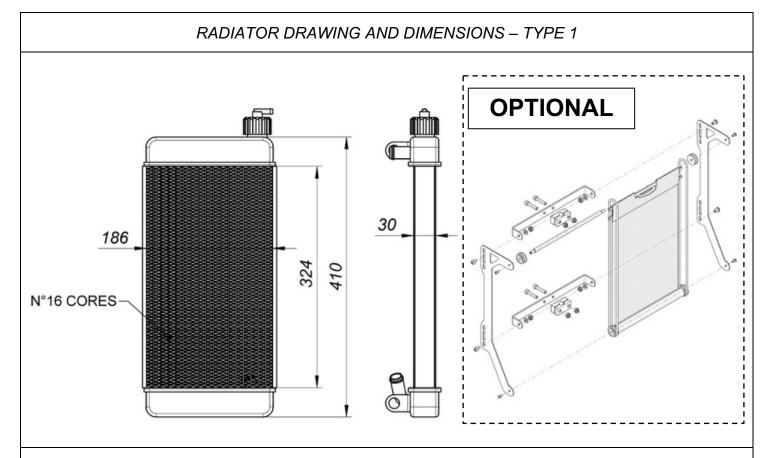
PHOTO OF SELETTRA ALTERNATIVE DIGITAL "S" IGNITION, WITH IAME MARKING



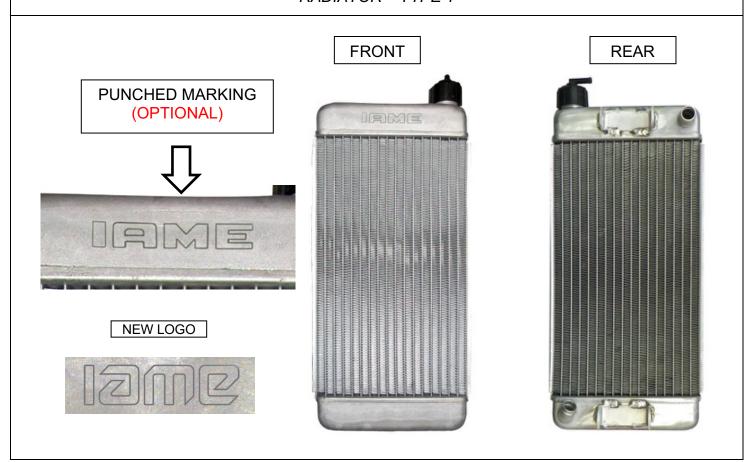




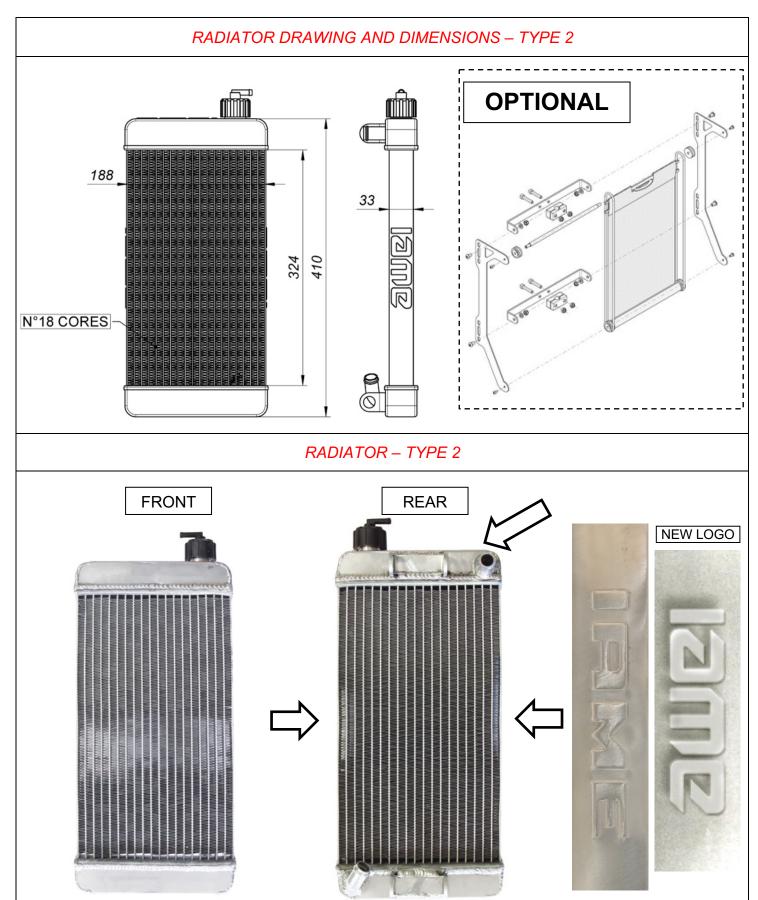




RADIATOR - TYPE 1

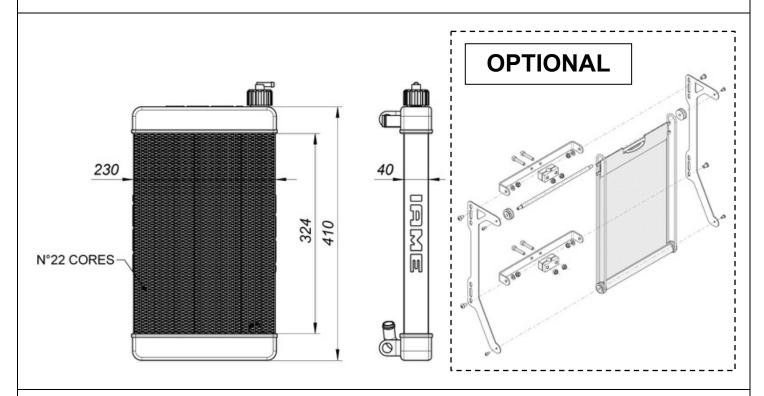




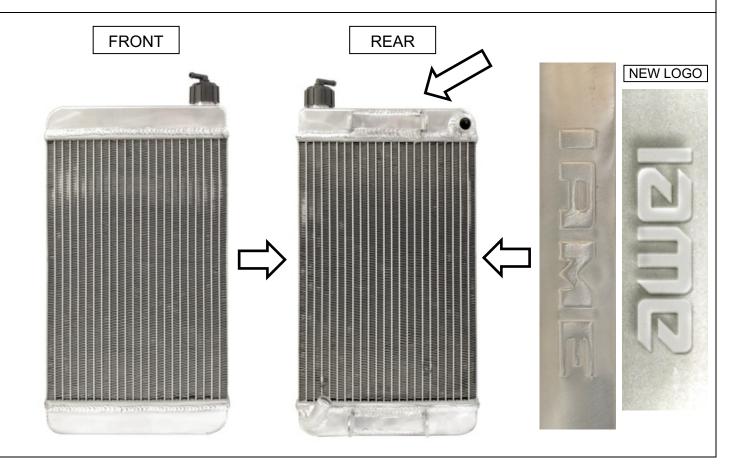




RADIATOR DRAWING AND DIMENSIONS - TYPE 3



RADIATOR - TYPE 3

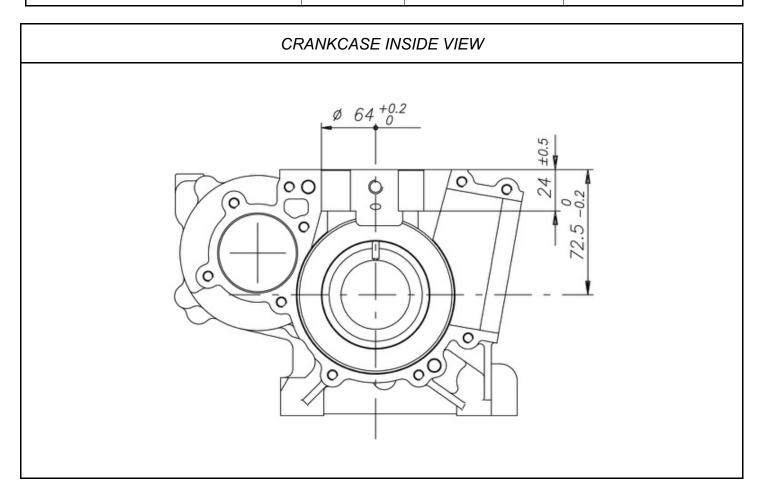




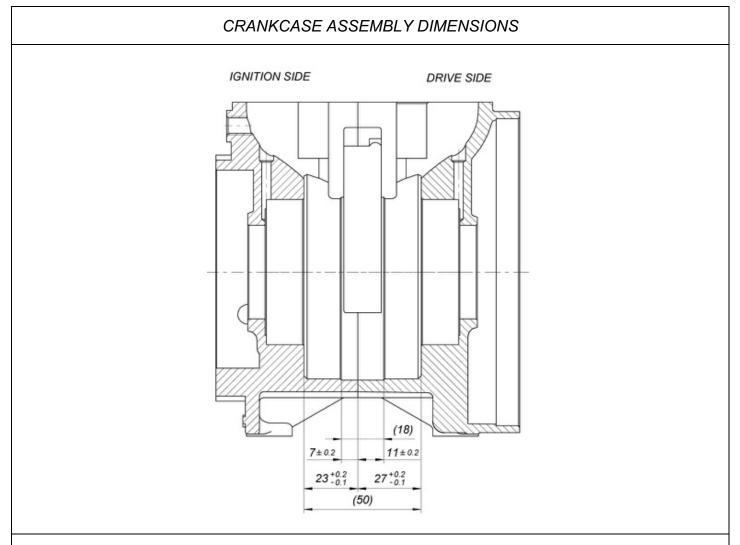


ADDITIONAL INFORMATION, DRAWING AND PHOTO IDENTIFICATION

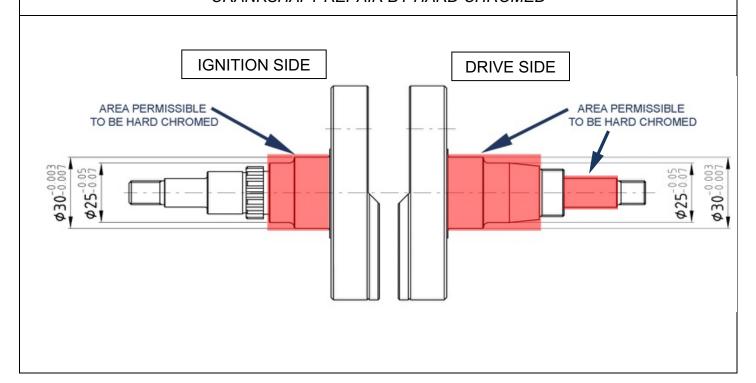
ADDITIONAL TECHNICAL INFORMATION						
DESCRIPTION	QUANTITY	MATERIAL	NOTES / DIMENSIONS			
Piston Rings	1	Iron	-			
Balancing shaft	1	Steel	-			
Exhaust muffler	1	Sheet-steel	-			
Gears	-	Steel	-			
Starter Ring	1	Steel	-			
Big end conrod bearing diameters	1	-	20x26x15			
Crankshaft bearing diameters	2	-	30x62x16			
Small end conrod bearing diameters	1	-	14x18x17.5			
Cooling System	-	-	Water			
Inlet System	-	-	Reed Valve			
Combustion chamber shape	-	-	Spherical			
Centrifugal Clutch	-	-	Yes			
Electric Starter	-	-	Yes			





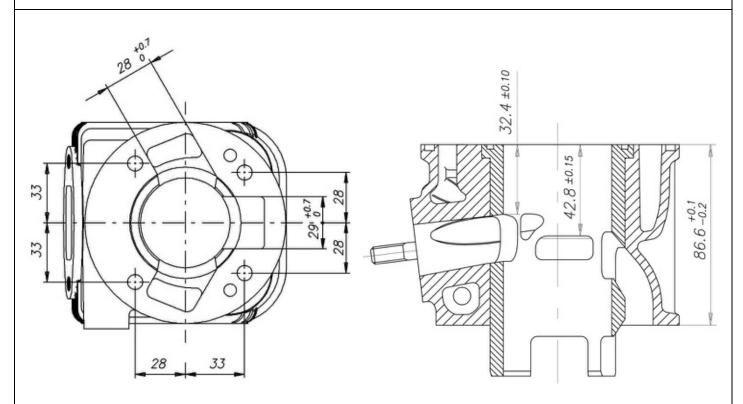


CRANKSHAFT REPAIR BY HARD CHROMED

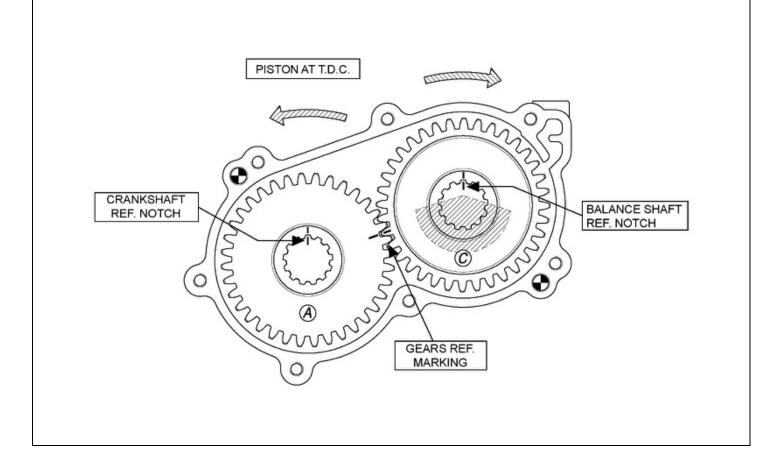


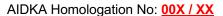


CYLINDER BASE HOLES AND CROSS SECTION (with dimensions)



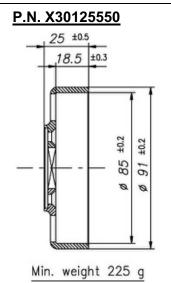
GEARS TIMING COMMAND BALANCING SHAFT

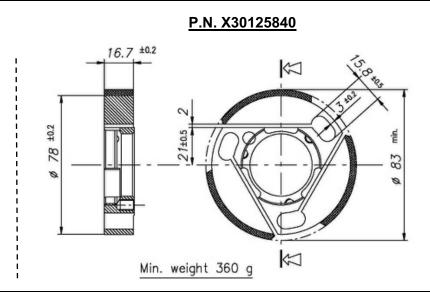


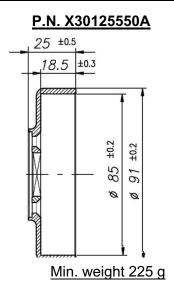


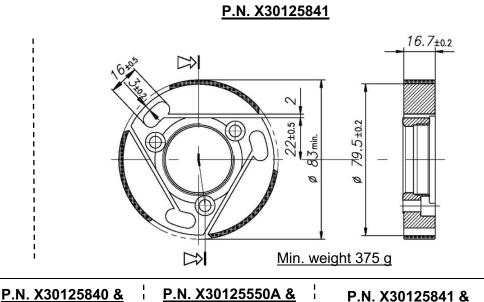


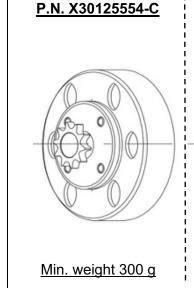
CLUTCH GROUP DRAWING AND ASSEMBLY - ALL TYPES



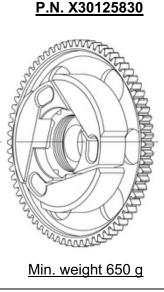


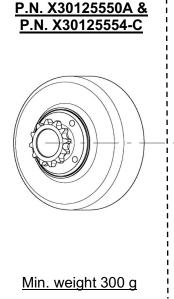


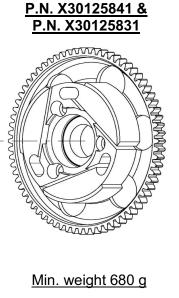




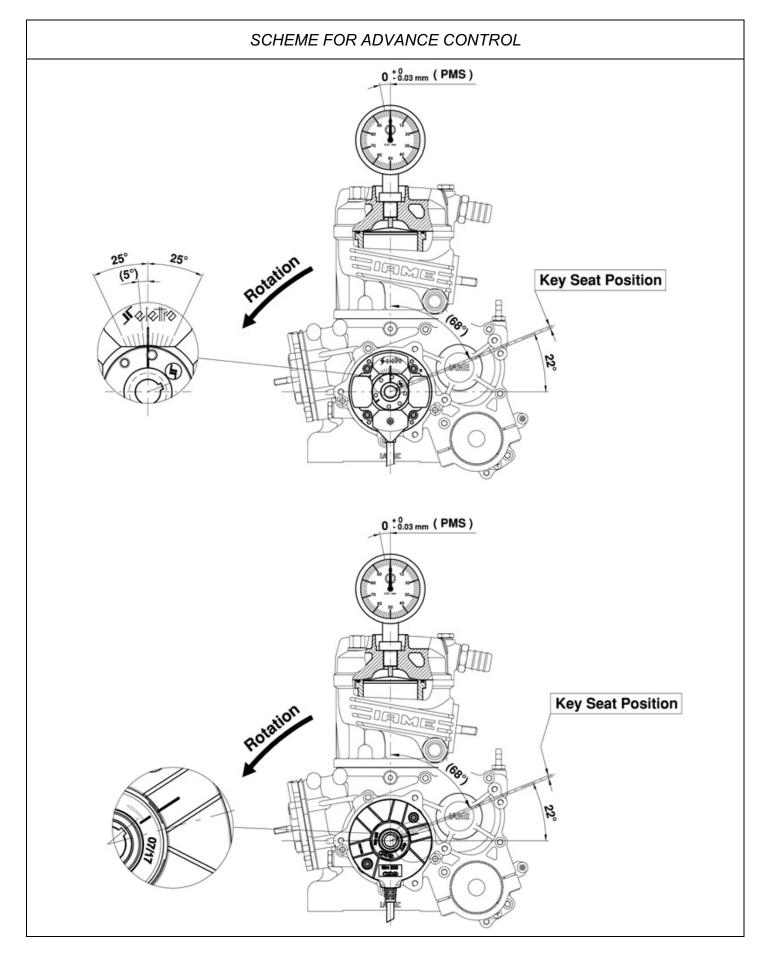
P.N. X30125550 &





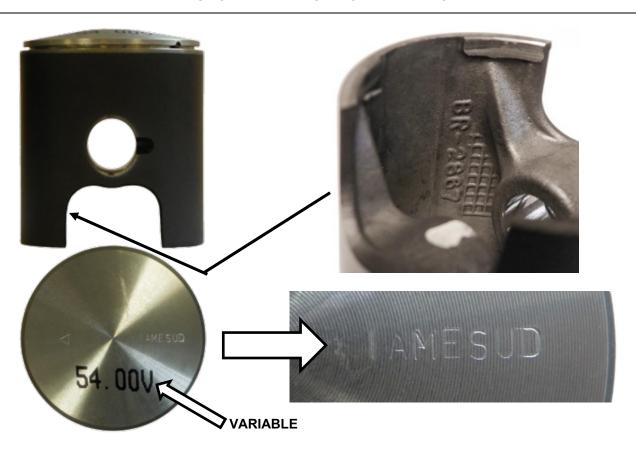




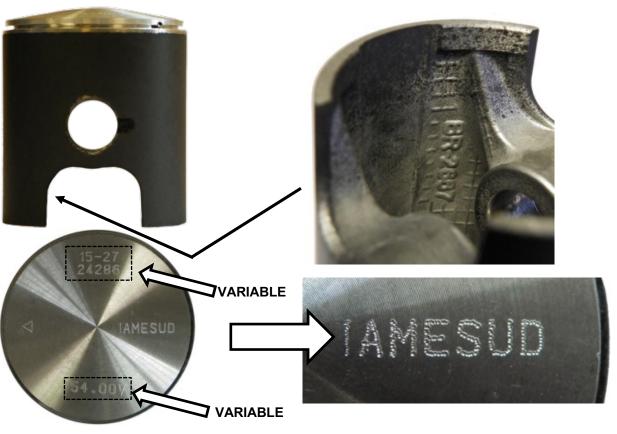




PISTON IDENTIFICATION MARKING



ALTERNATIVE







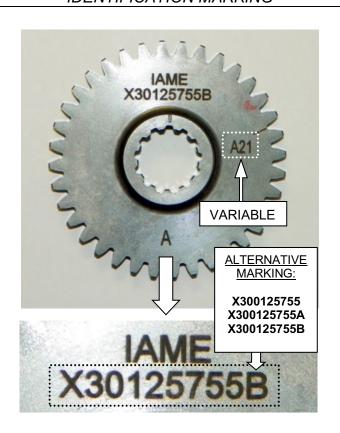
CRANKSHAFT IDENTIFICATION MARKING



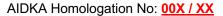


DRIVE GEAR FOR BALANCE SHAFT IDENTIFICATION MARKING

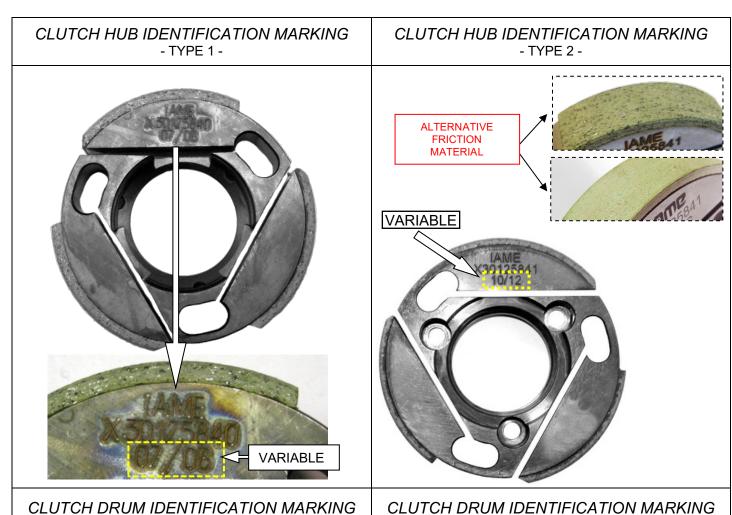
STARTER IDENTIFICATION MARKING





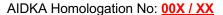




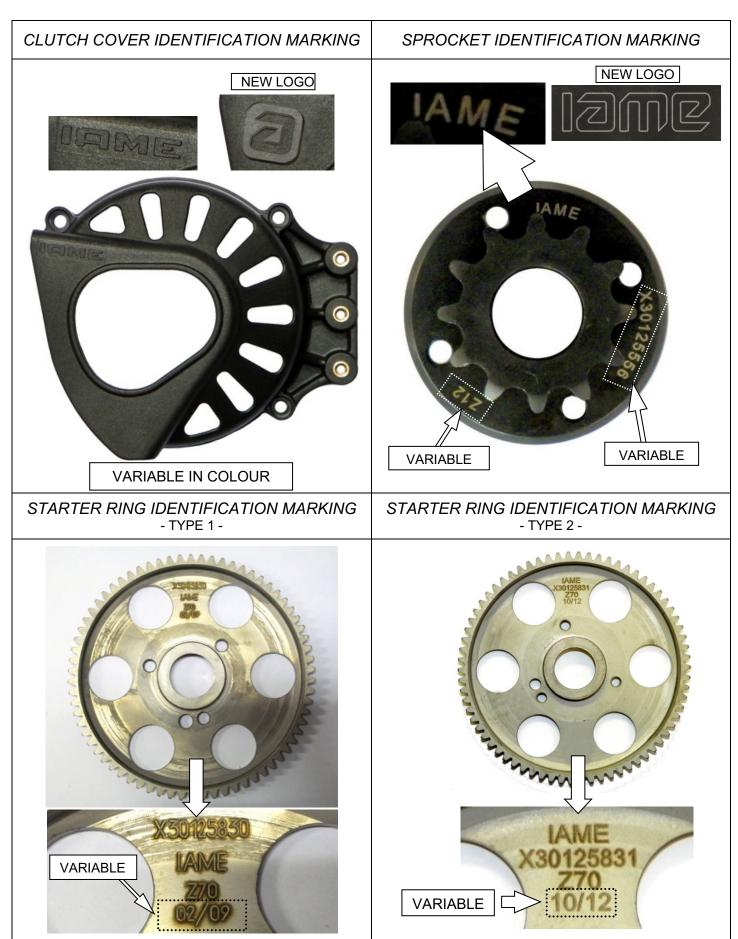










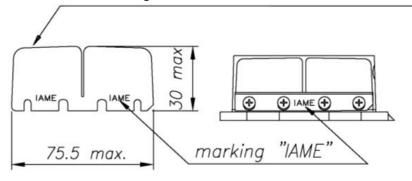




REED PETALS DIMENSIONS

It is permitted to use either Carbon Fibre or Fibreglass Reed Petals

IAME Carbon Fibre Reed Petals min. thickness = 0.22mm IAME Fibreglass Reed Petals min. thickness = 0.30mm



REED PETALS - IMAGES AND IDENTIFICATION MARKS

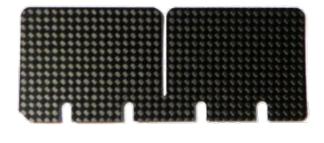
CARBON FIBRE

FIBREGLASS

Front Side



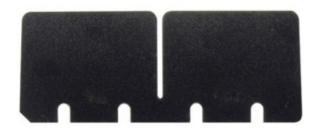
Rear Side



Front Side



Rear Side







BENDIX COVER IDENTIFICATION MARKING





ALTERNATIVE

VARIABLE IN COLOUR

STICKER APPLICATION AREA





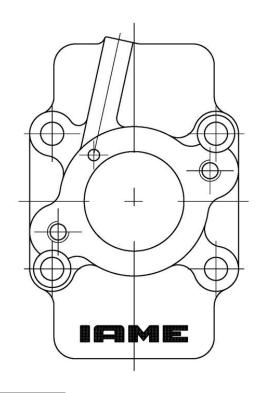




PHOTO IDENTIFICATION CARBURETTOR INLET CONVEYOR

Old version





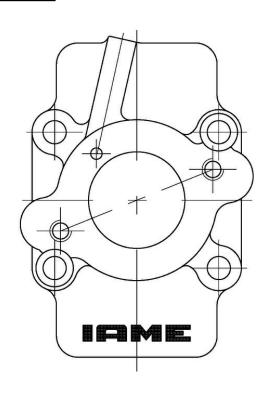
ALTERNATIVE

New version

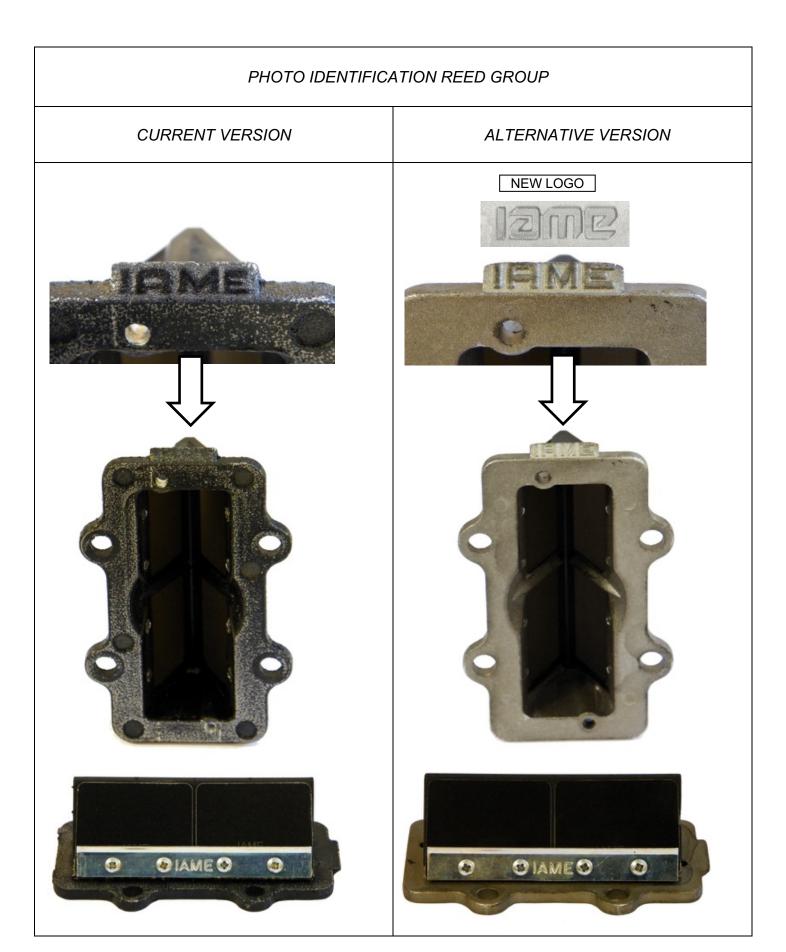


NEW LOGO



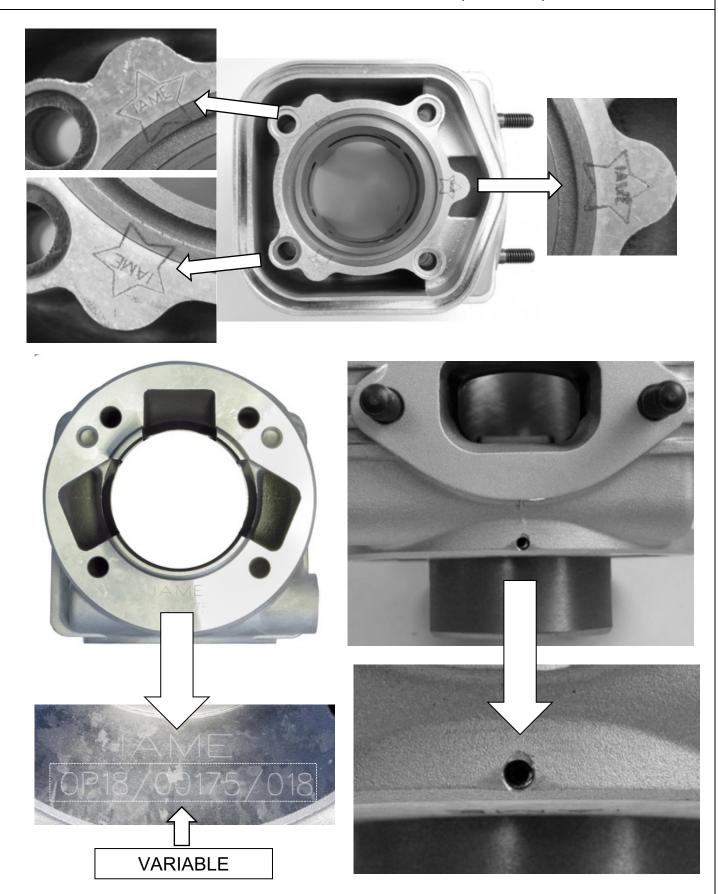








CYLINDER IDENTIFICATION MARKING (since 2014)







CARBURETTOR - Tillotson HW-27A

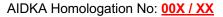




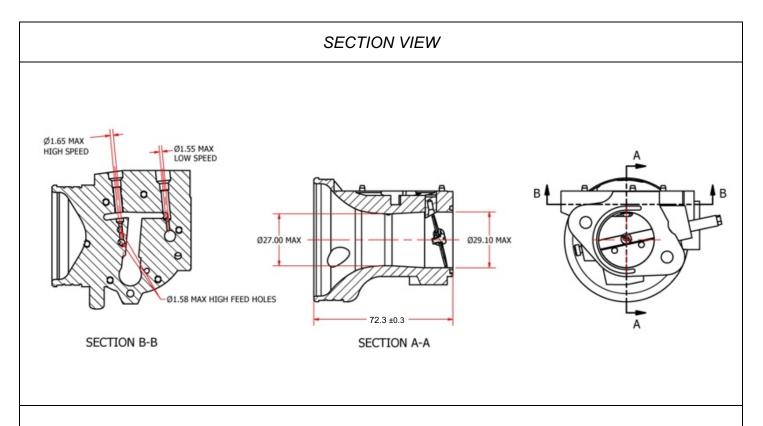
PHOTO OF ADJUSTING SIDE

PHOTO OF INLET SIDE

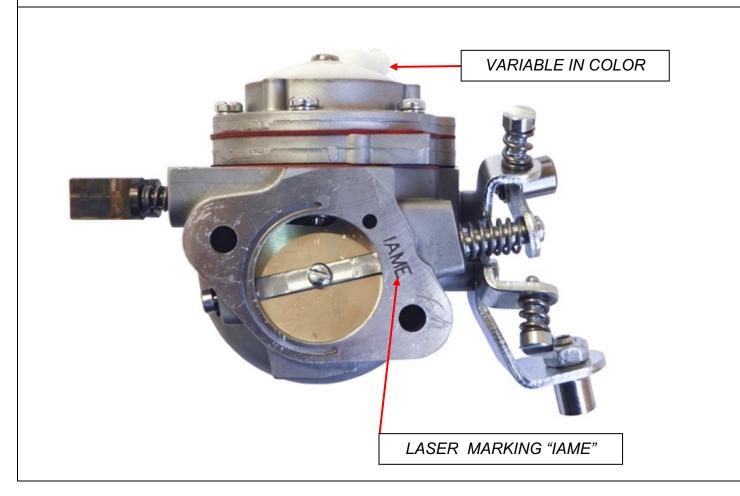
Manufacturer	TILLOTSON LTD.
Make	TILLOTSON
Model	HW-27A

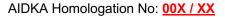






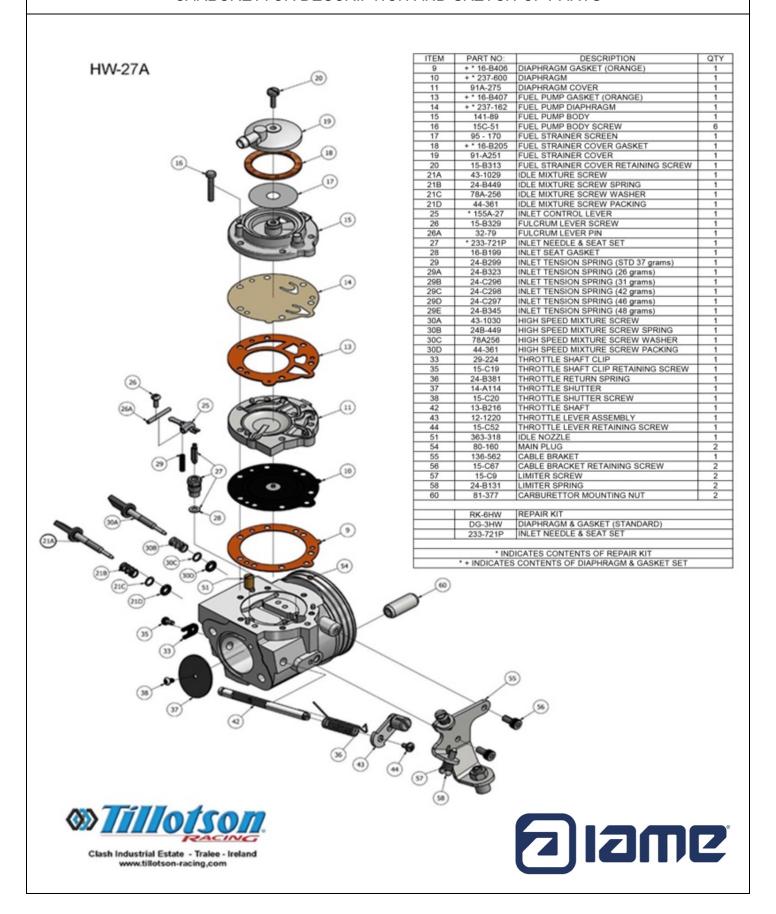
MARKING

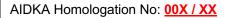






CARBURETTOR DESCRIPTION AND SKETCH OF PARTS







PARTS OF CARBURETTOR

REF.9 - P. N°16-B406 DIAPHRAGM GASKET (ORANGE COLOR)



Thickness = $0.5 \pm 0.1 \text{ mm}$

REF.13 - P. N° 16-B407 PUMP DIAPHRAGM GASKET (ORANGE COLOR)



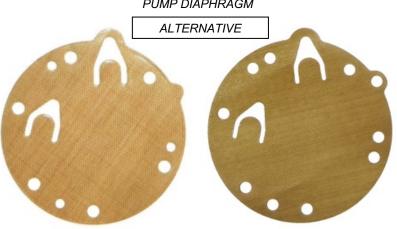
Thickness = $0.8 \pm 0.1 \text{ mm}$

REF.10 - P. N°237-600 DIAPHRAGM



Thickness = $0.13 \pm 0.07 \text{ mm}$

REF.14 - P. N°237-162 PUMP DIAPHRAGM



Thickness = 0.10 ± 0.063 mm

REF.11 - P. N° 91-A275 DIAPHRAGM COVER



Thickness = 6.75 ± 0.15 mm

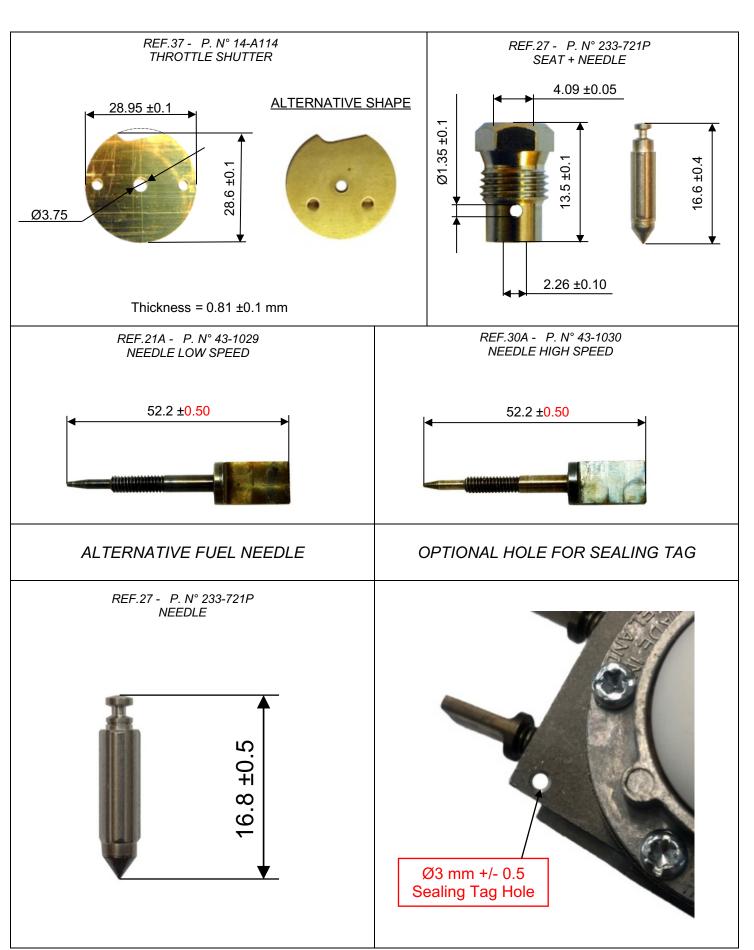
REF.15 - P. N° 141-89 PUMP COVER



Thickness = 12.5 ± 0.15 mm



AIDKA Homologation No: 00X / XX









CARBURETTOR - TRYTON HB 27-C





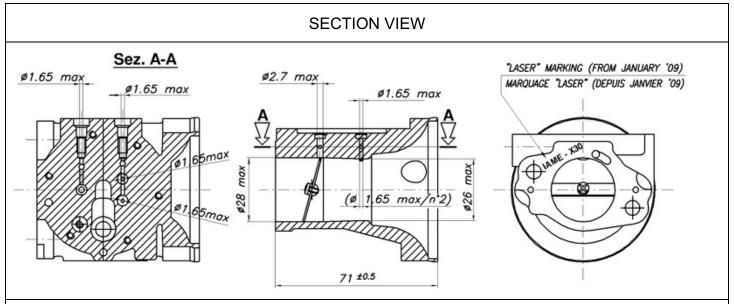


PHOTO OF ADJUSTING SIDE

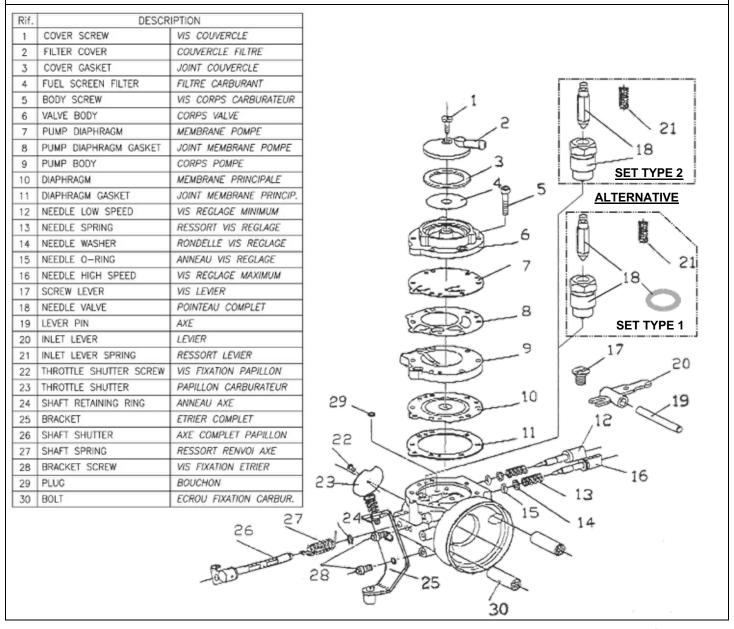
Manufacturer	VAMEC SRL
Make	TRYTON
Model	HB 27-C



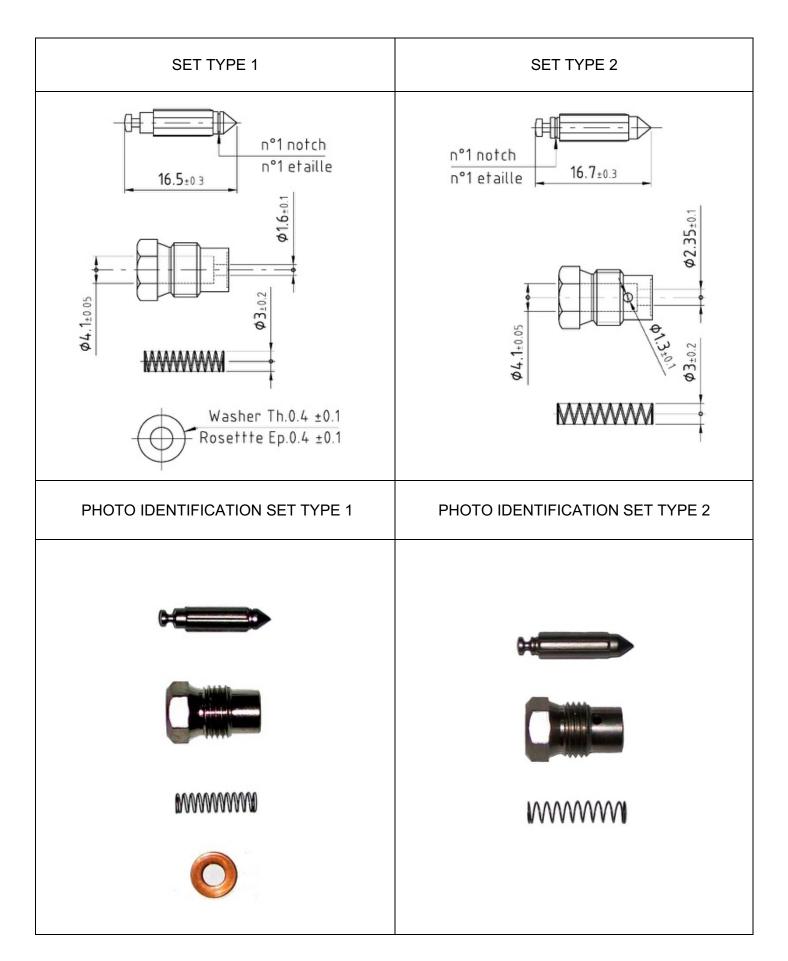




CARBURETTOR DESCRIPTION AND SKETCH OF PARTS









BRACKET CABLE & LIMITER



ALTERNATIVE





AIDKA Homologation No: 00X / XX

UPDATE LOG

Date	Section	Page
1 January 2024	Clarification of CC measurement with volumeter	3, 7
1 January 2024	Main Bearing Shims	9
1 January 2024	Alternative Con-rod with Lubricating slots	10, 12
1 January 2024	Added crankshaft dimensions with roller bearings fitted	13
1 January 2024	Alternative Roller Main Bearing	15
1 January 2024	Updated Drawing Of Inlet Conveyor	17
1 January 2024	Additional/Clarified Muffler Dimensions	22
1 January 2024	Selettra Digital "S" Ignition	32-34
1 January 2024	Type 1 Radiator punch mark "optional"	35
1 January 2024	Added Alternative Radiator Type 2	36
1 January 2024	Re-Named Type 2 Radiator to Type 3	37
1 January 2024	Crankshaft clutch bearing surface hard chroming	39
1 January 2024	Alternative Clutch Hub Friction Material	45
1 January 2024	Carbon Fibre Reed Petals Thickness	47
1 January 2024	Updated tolerance on carburettor jet length	56
1 January 2024	Carburettor Hole – For sealing/tagging	56