100cc REEDJET USA – TaG

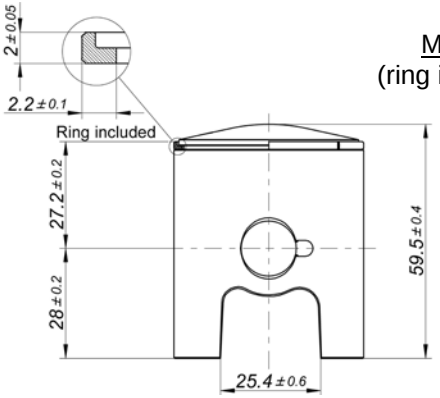
FEATURES

Cylinder Volume	100 cm³ max
Bore	48.20 mm
Max. bore	48.55 mm
Stroke	54.05 mm max
Cooling system	Air
Inlet system	Reed valve
Number of carbs	1

Tillotson Carburettor	HW-33A Ø24mm	Cylinder / crankcase transfers n°	3 / 3
Number of piston rings	1	Transfers / Exhaust ports number	3 / 3
Big end conr. ball-bearing diam.	20x26x15	Combustion chamber shape	Spherical
Crankshaft ball-bearing diam.	25x52x15	Selettra ignition (adjustable)	Analogue 2 Poles
Small end conr. ball-bearing diam.	14x18x18	Distance between Conrod centres	102 mm

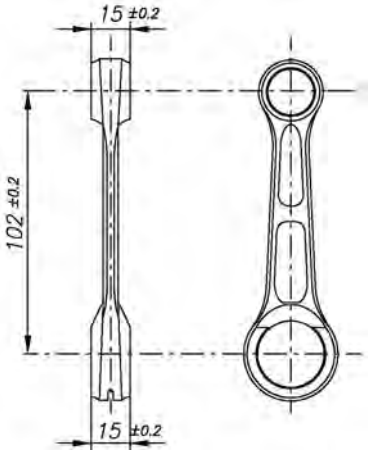
DESCRIPTION OF THE MATERIAL	
Conrod material	Steel
Crankshaft material	Steel
Head material	Aluminium
Cylinder material	Aluminium
Liner material	Cast Iron
Crankcase material	Aluminium
Piston material	Aluminium
Piston rings material	Cast Iron
Exhaust muffler material	Sheet-steel
Bearings	6205 type or BC1-1442D

PISTON



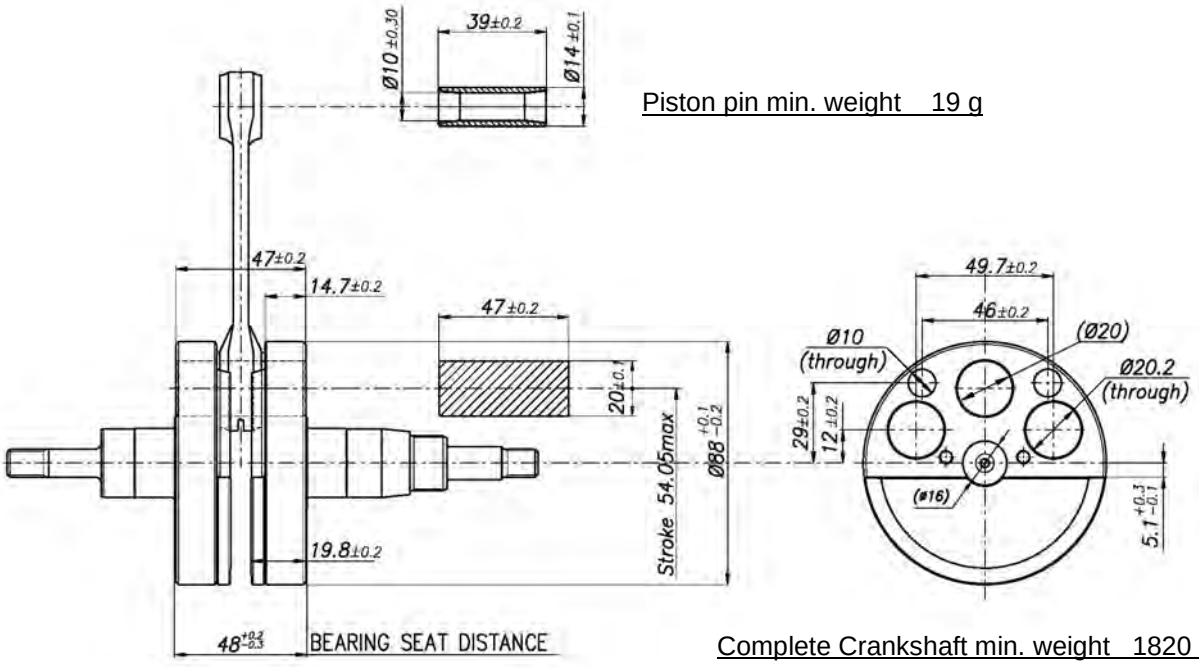
Min. Weight
(ring included) 95 g

DISTANCE BETWEEN CONROD CENTERS



Min. Weight 110 g

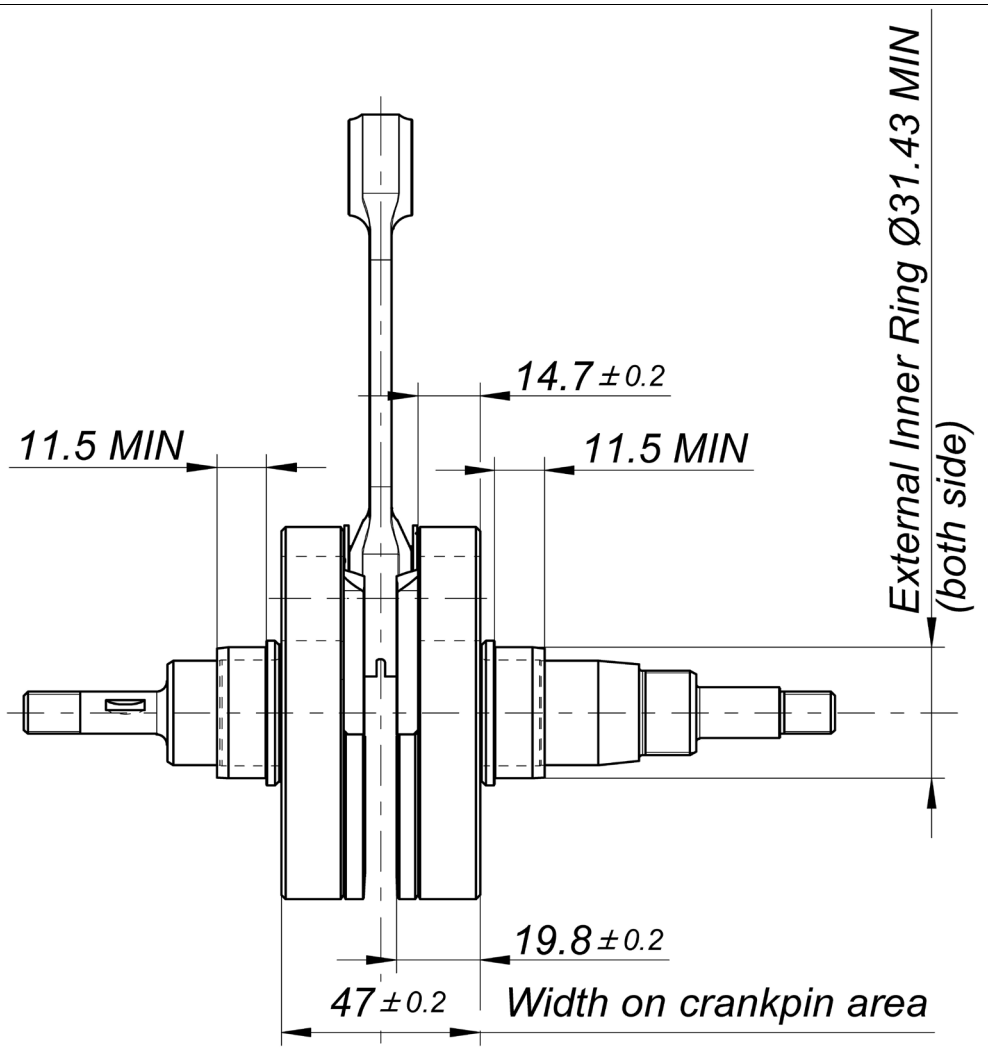
CRANKSHAFT



Piston pin min. weight 19 g

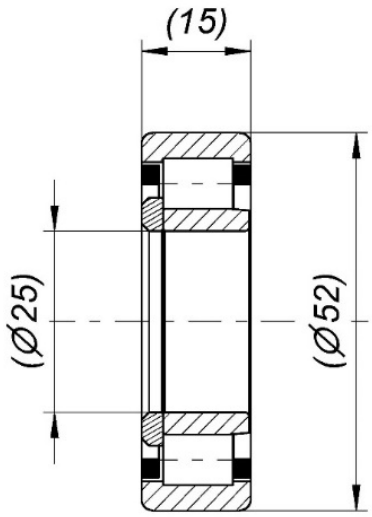
Complete Crankshaft min. weight 1820 g

DIMENSIONS OF ALTERNATIVE CRANKSHAFT WITH ROLLER MAIN BEARING

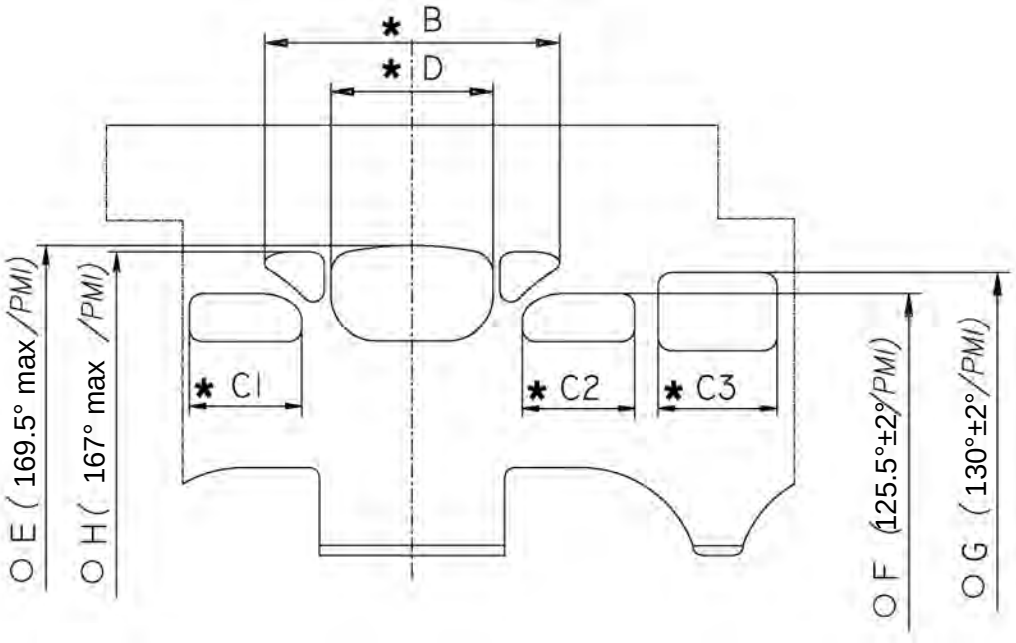


Complete crankshaft min. weight 1880 g

ROLLER MAIN BEARING



CYLINDER DEVELOPMENT

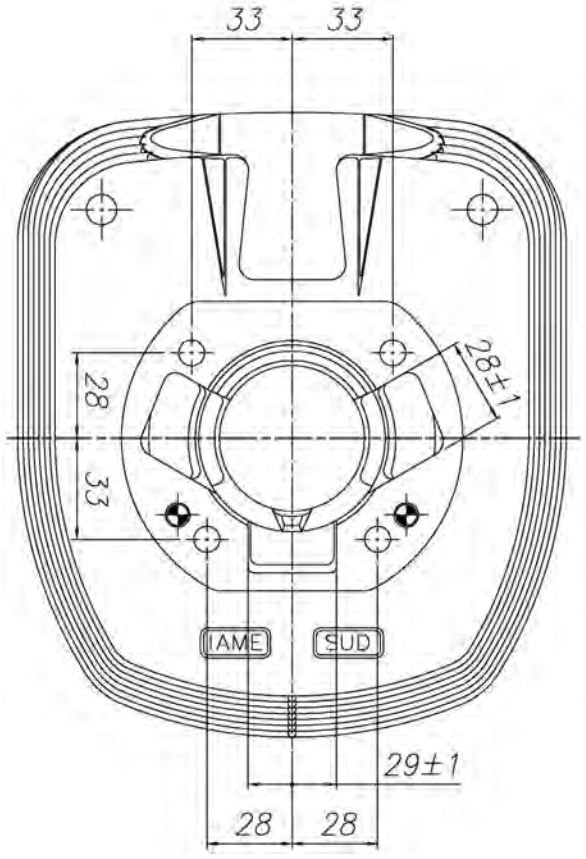


B	≤ 48.2 mm
C1 = C2	≤ 27.2 mm
C3	≤ 27 mm
D	≤ 34 mm
E	169.5° max
F	125.5° ±2°
G	130° ±2°
H	167° max

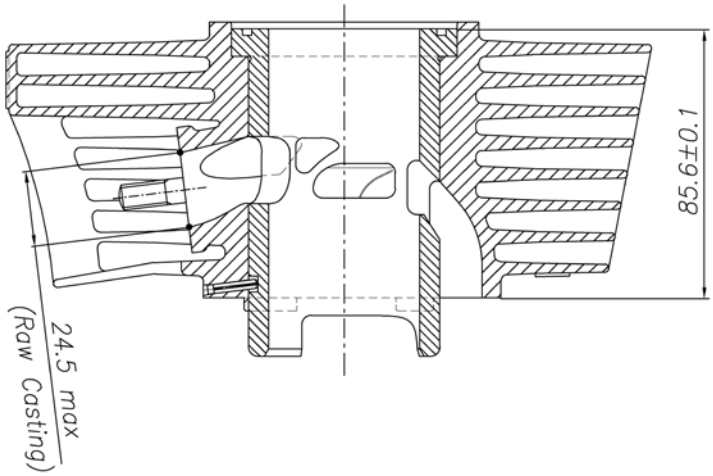
* *CHORDAL READING*

O *ANGULAR READING BY INSERTING A 0.2x5 mm GAUGE*

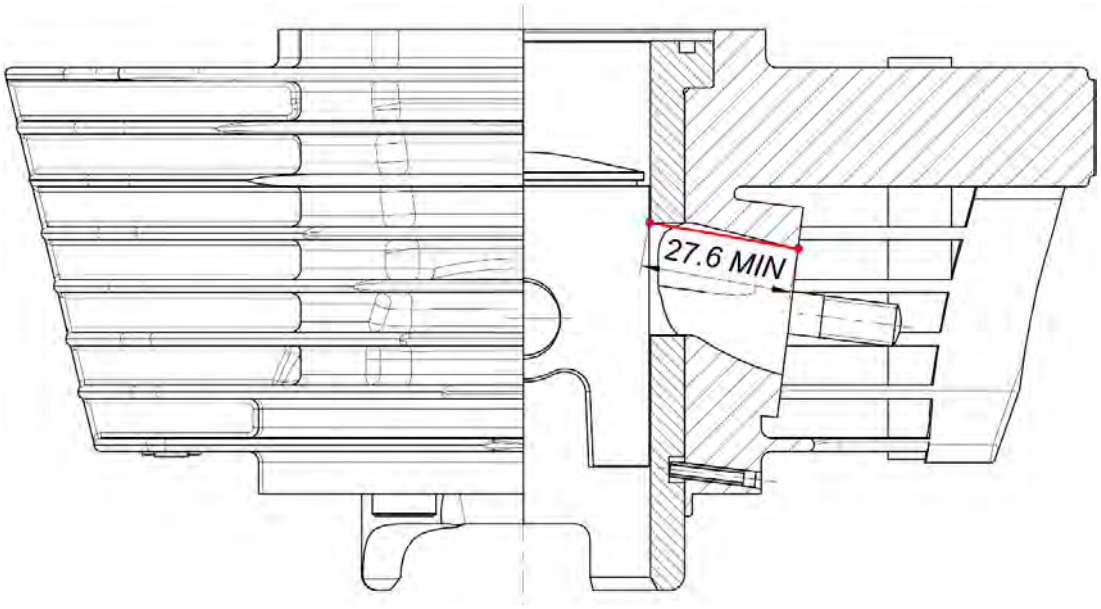
CYLINDER BASE VIEW



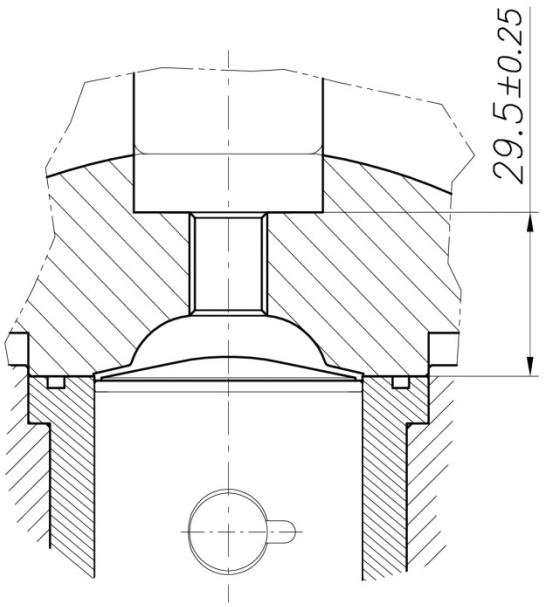
CYLINDER CROSS SECTION VIEW



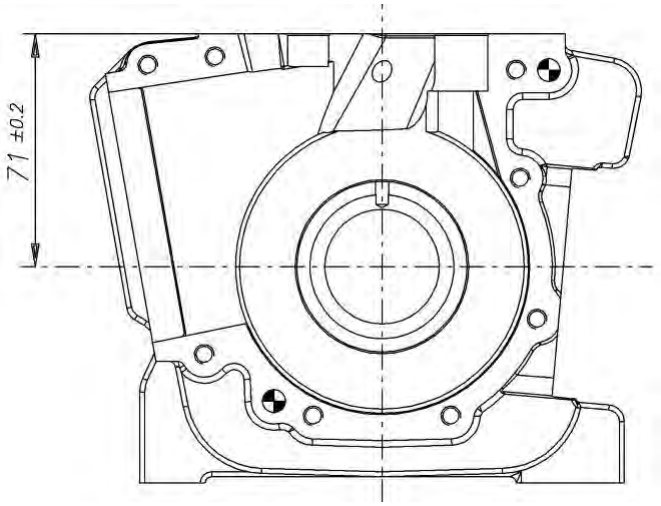
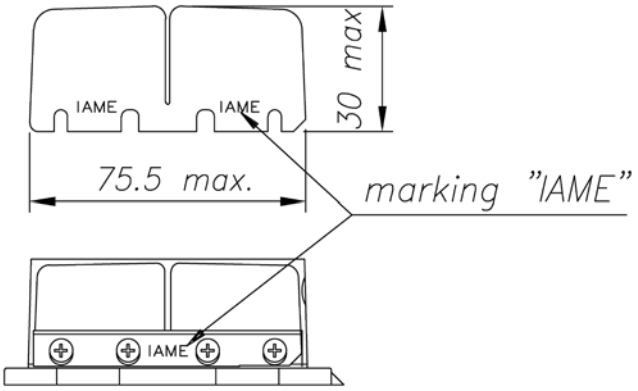
DISTANCE FROM EXHAUST FLANGE TO PISTON



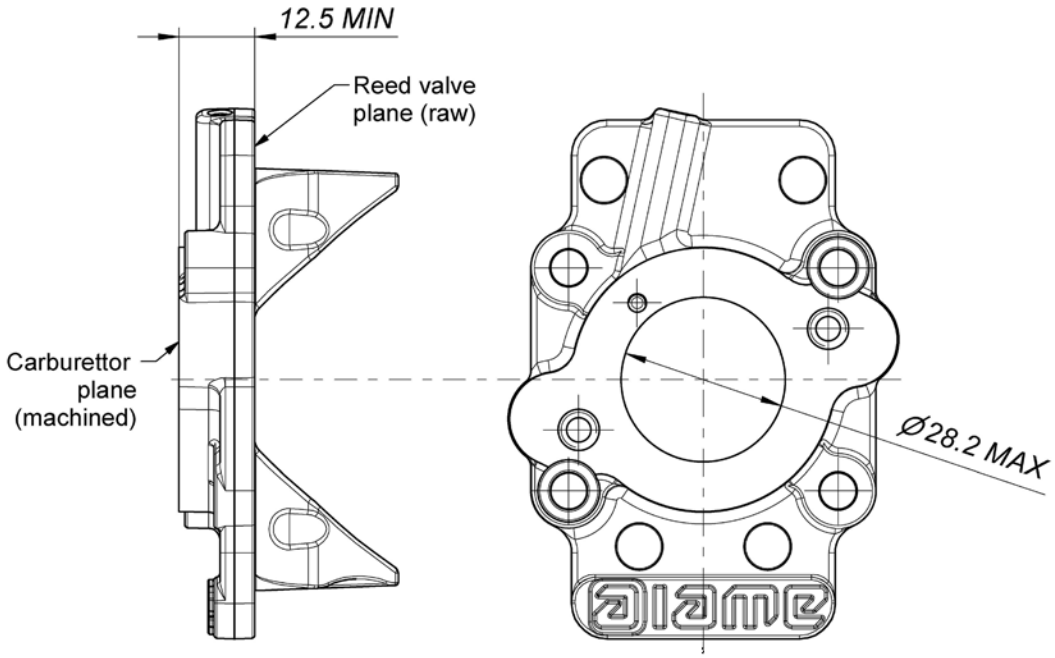
COMBUSTION CHAMBER VIEW



SQUISH MIN.= 0.0413" (1.05 mm)
(measured with 0.0625" (1/16") / Ø1.58mm solder)

CRANKCASE INSIDE VIEW	REEDS DIMENSIONS
	 **<u>Genuine IAME fiber glass reeds min. thickness 0.30mm</u>**

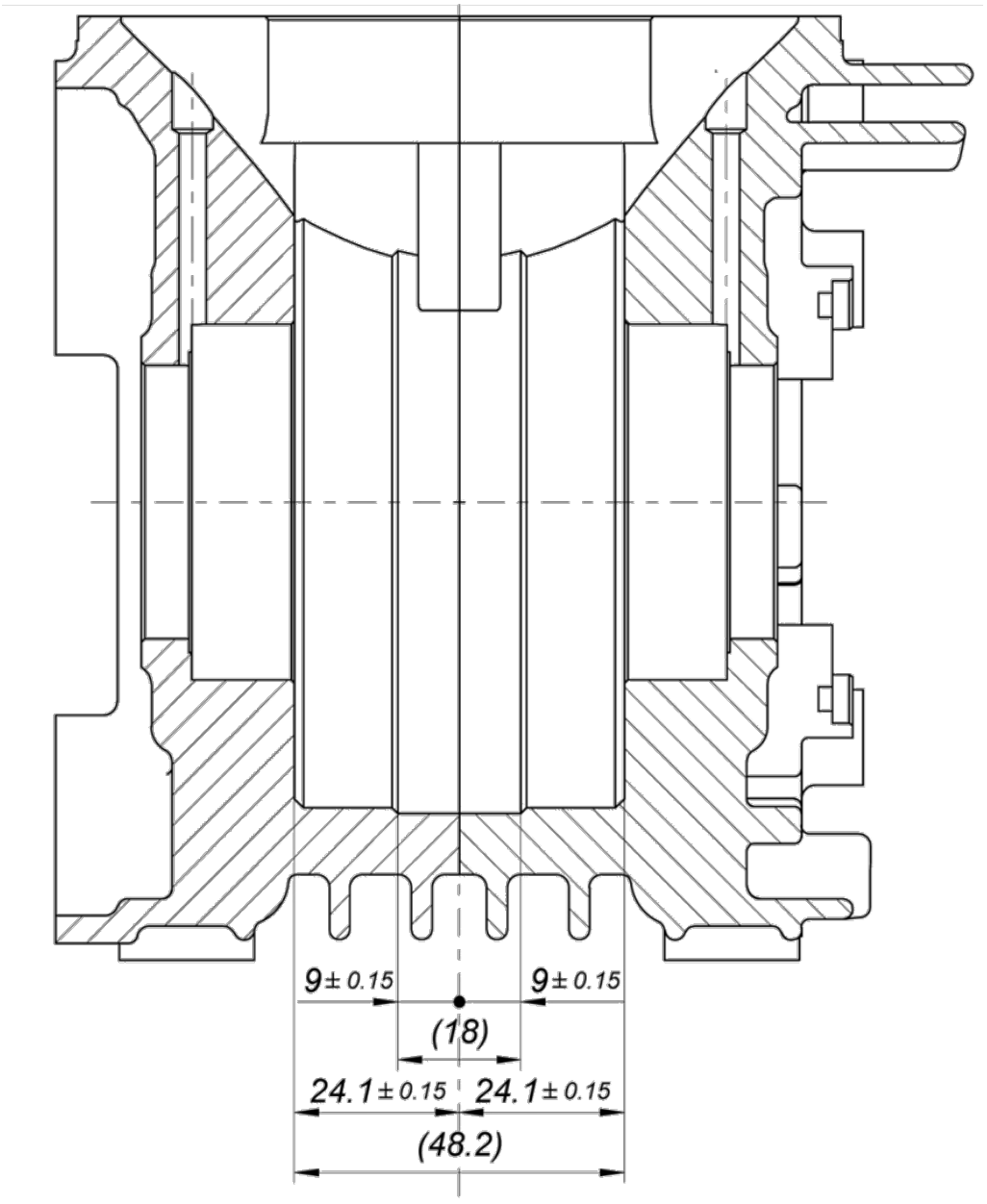
INLET CONVERYOR DIMENSIONS



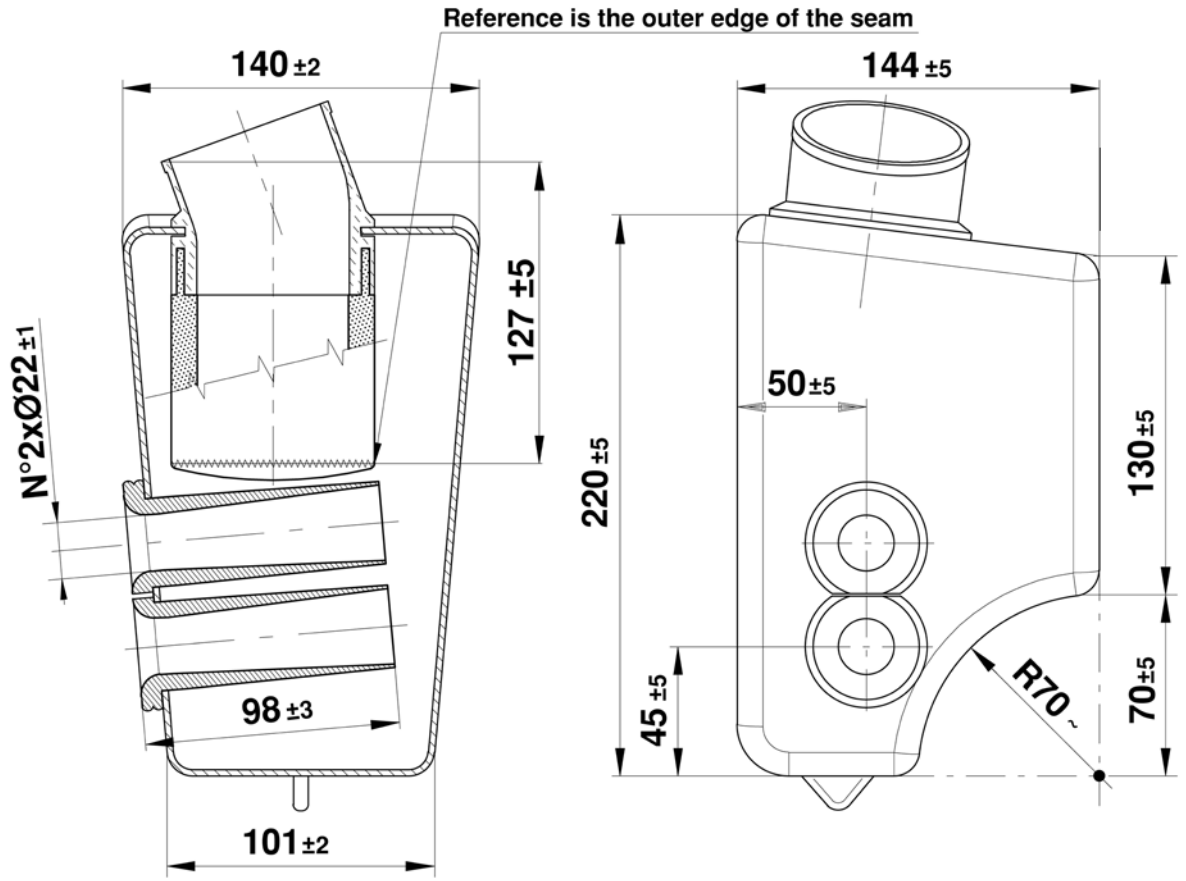
CRANKCASE WIDTH DIMENSIONS

DRIVE SIDE

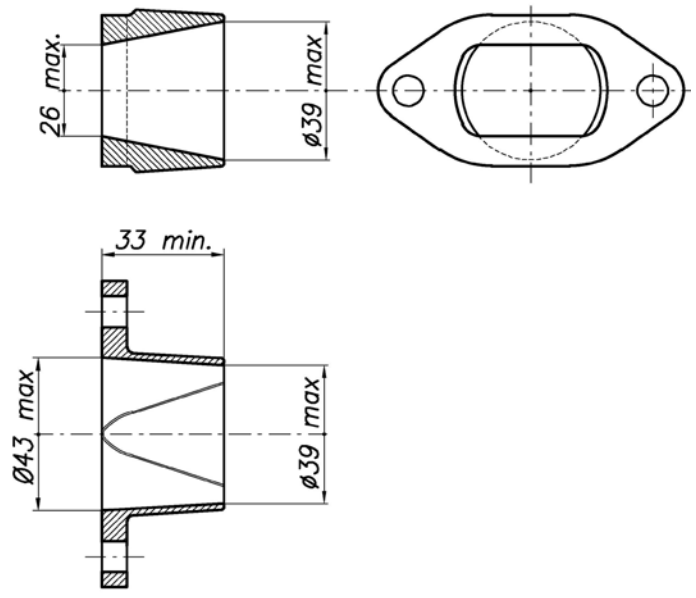
IGNITION SIDE



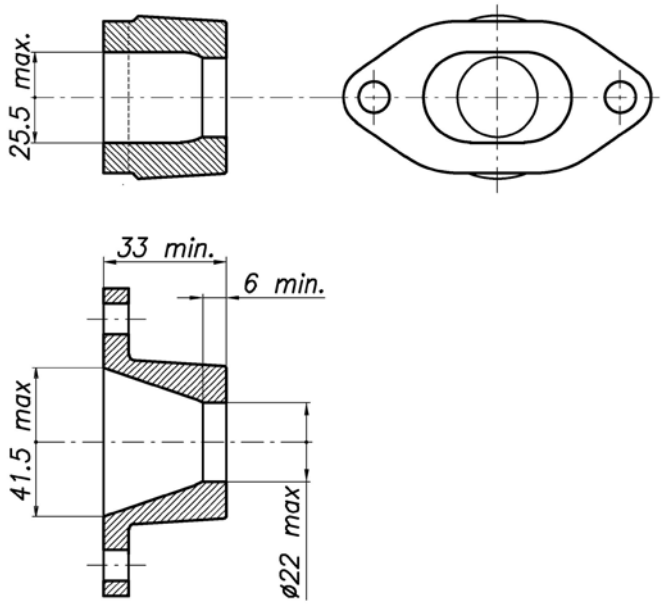
INLET SILENCERWITH SPONGE FILTER



EXHAUST MANIFOLD



EXHAUST MANIFOLD RESTRICTED



INLET SILENCER TUBES NEW TYPE

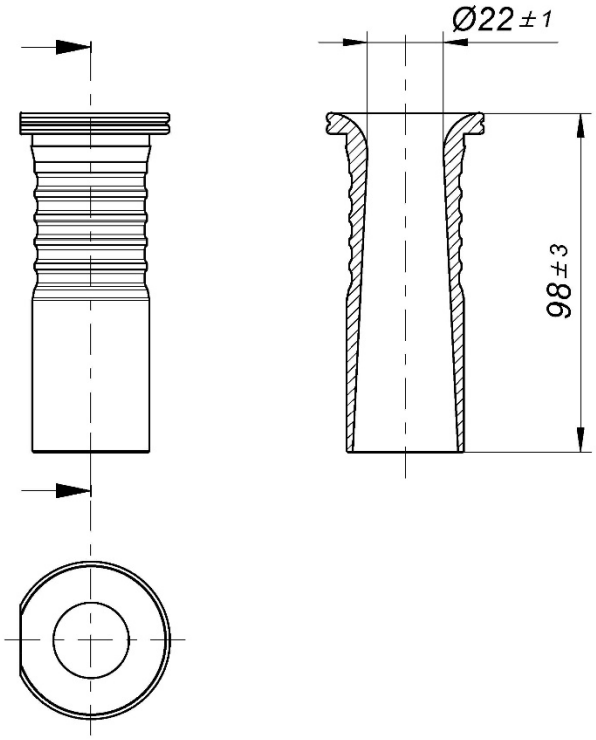


PHOTO IDENTIFICATION OF PERMISSIBLE INLET SILENCER TUBES

OLD TYPE

NEW TYPE

RAIN COVER INLET SILENCER – DRAWING

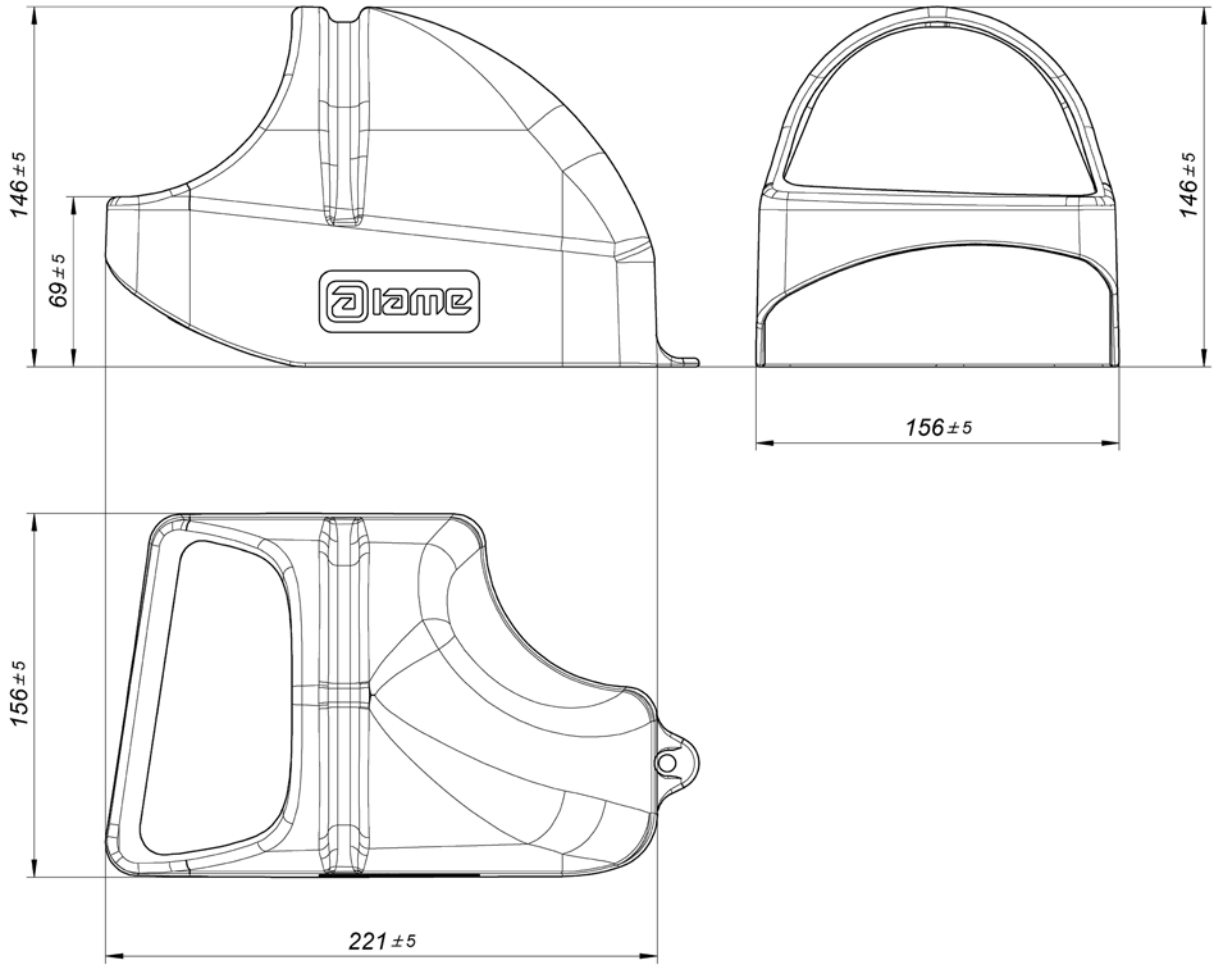
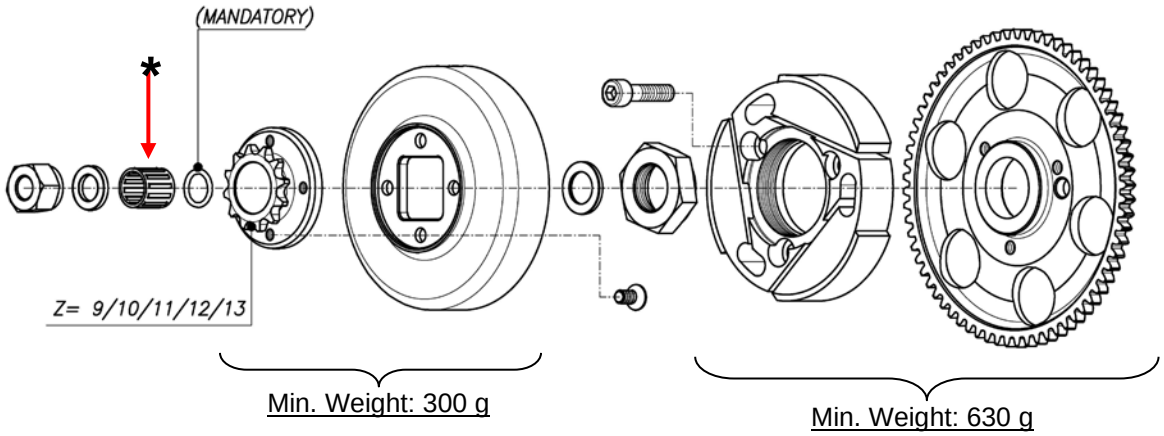
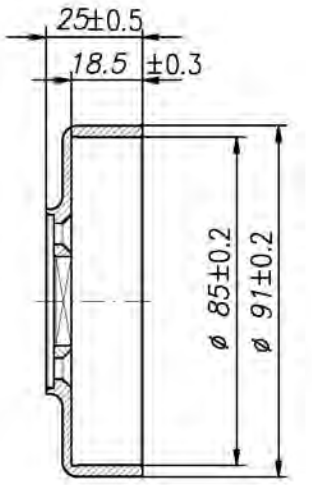


PHOTO IDENTIFICATION OF RAIN COVER INLET SILENCER

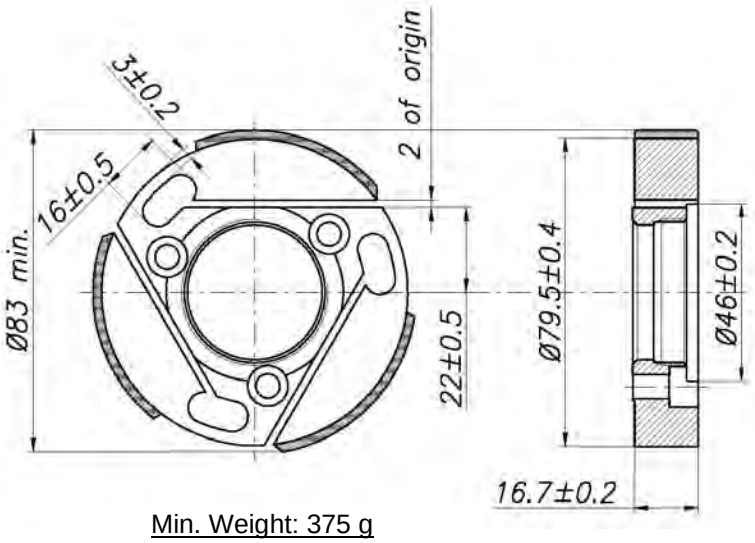
DESCRIPTION OF THE CLUTCH



***** When using the Z9, the roller cage is replaced by a bronze bushing, pressed into the sprocket

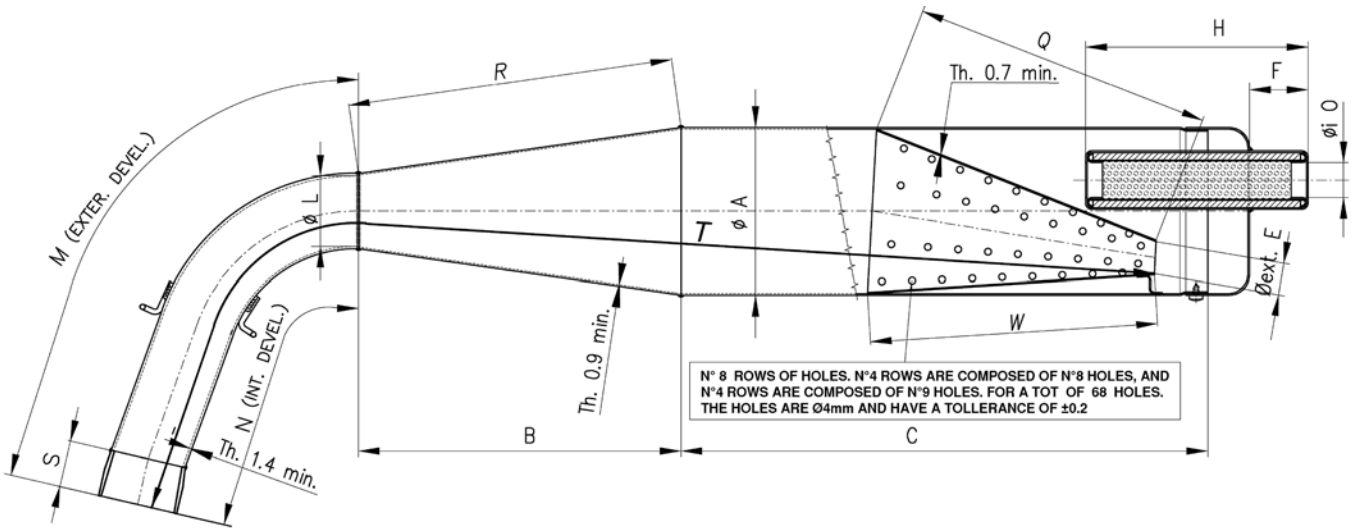


Min. Weight: 225g



Min. Weight: 375 g

EXHAUST VIEW AND DIMENSIONS
(valid also for alternative exhaust type)



Min. Weight: 1.905 g

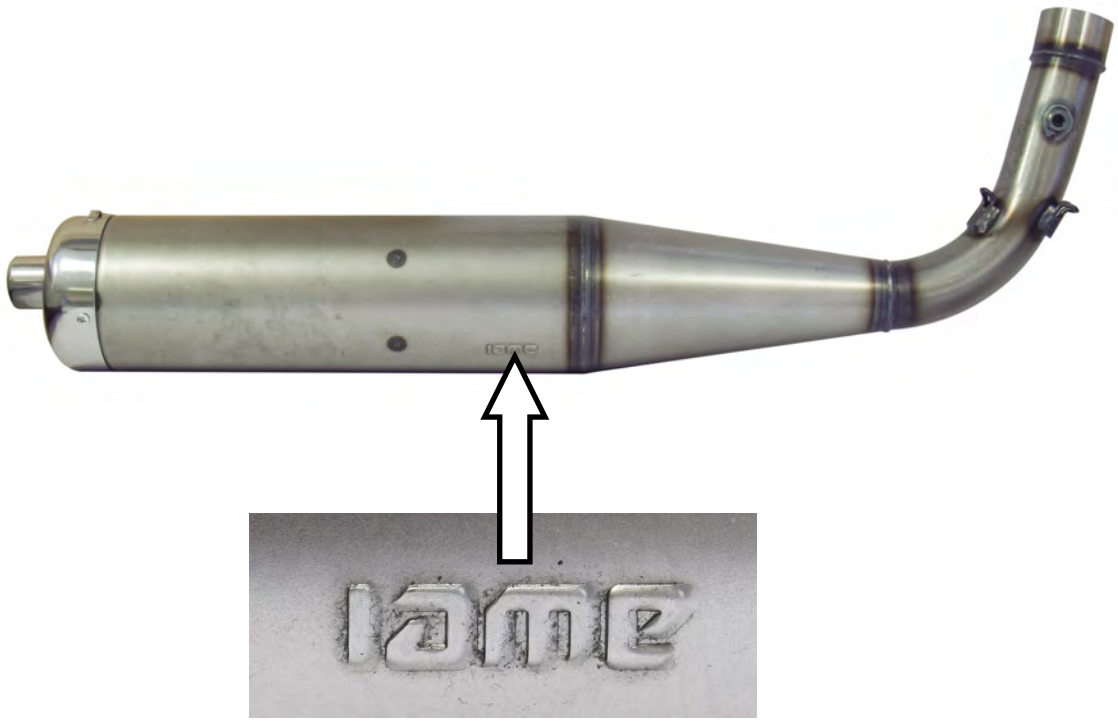
ØA: 100 ±1 Øext.	**C:** 315 ±3	**H:** 132 ±3	**ØiO:** 21 ±1 Øint.	**S:** 29 ±1.5
ØL: 45 ±1 Øext.	**ØE:** 23.5 ±2 Øext.	**M:** 270 ±3 ext.	**R:** 194.5 ±3	**T:** 692 ±3
B: 193 ±3	**F:** 36 ±2	**N:** 210 ±3 ext.	**Q:** 182 ±3	**W:** 170 ±3

ATTENTION:

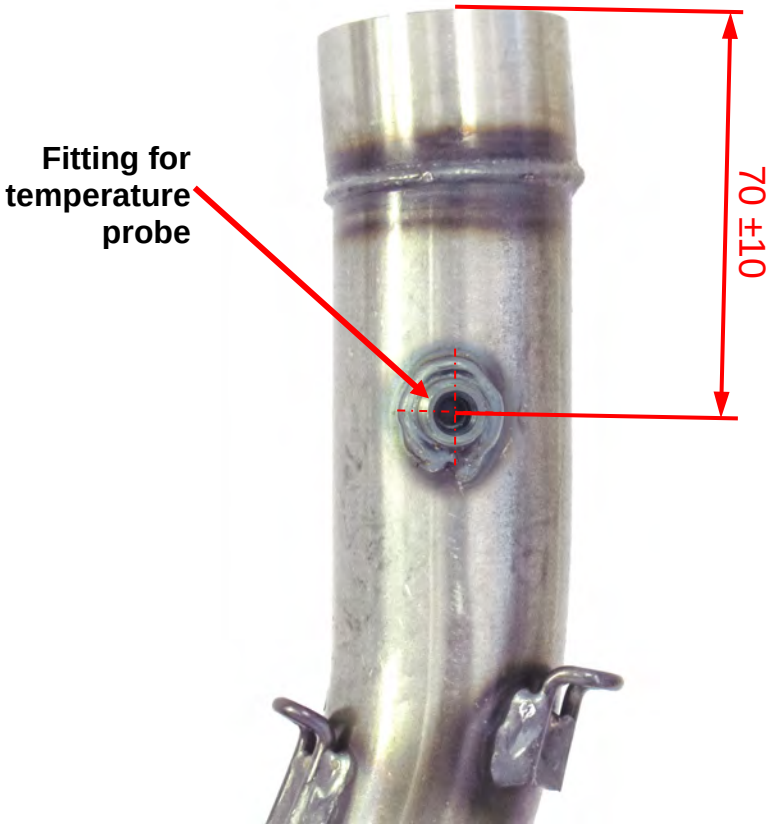
The dimensions "**M**", "**N**" and "**T**" must be taken by steel tape measure 6mm wide.

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

ALTERNATIVE EXHAUST



MARKING



WIRING DIAGRAM

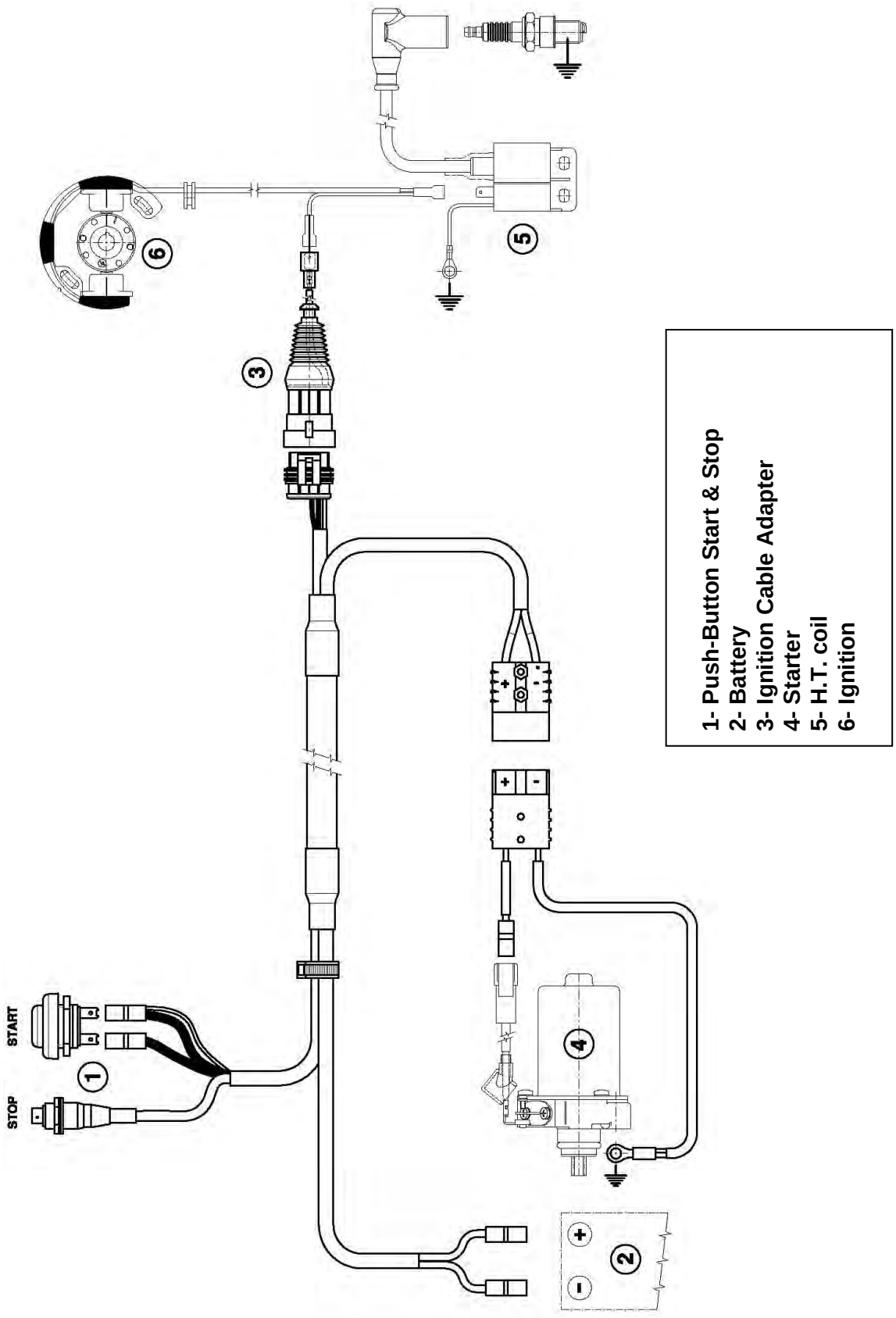
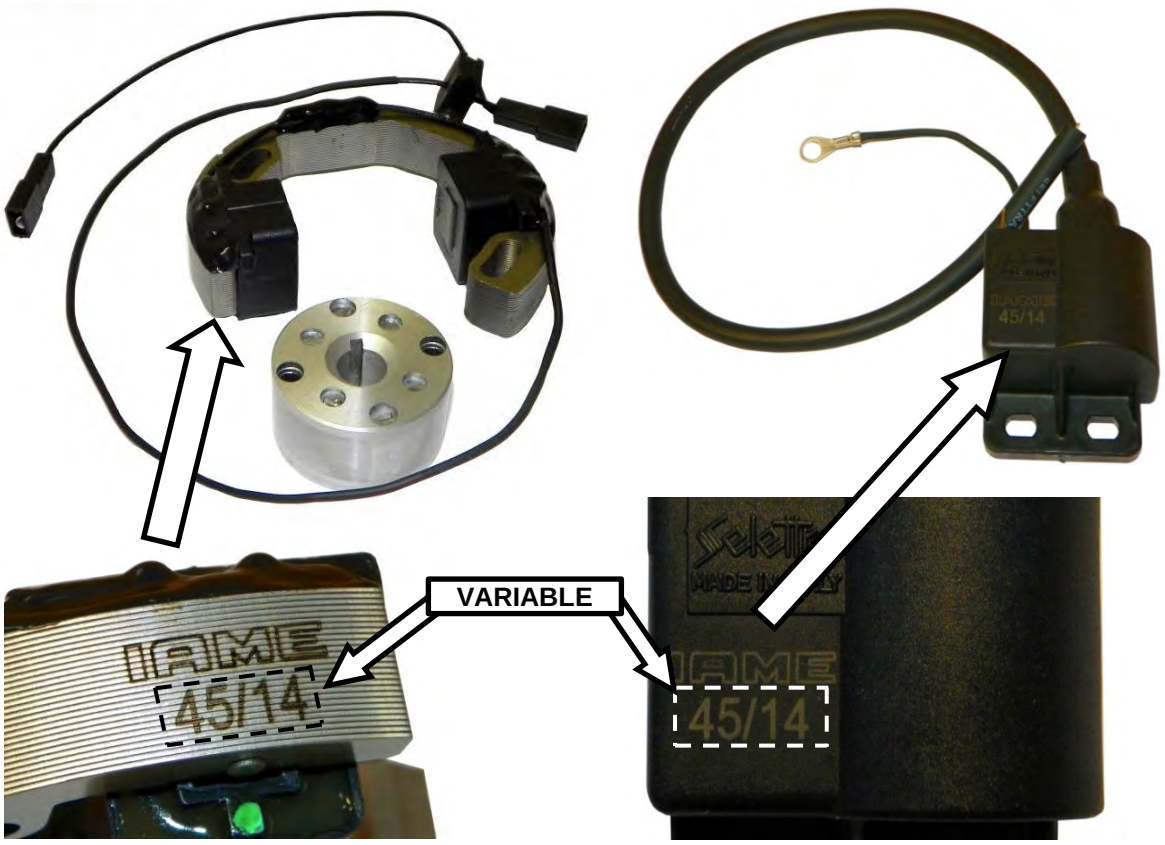


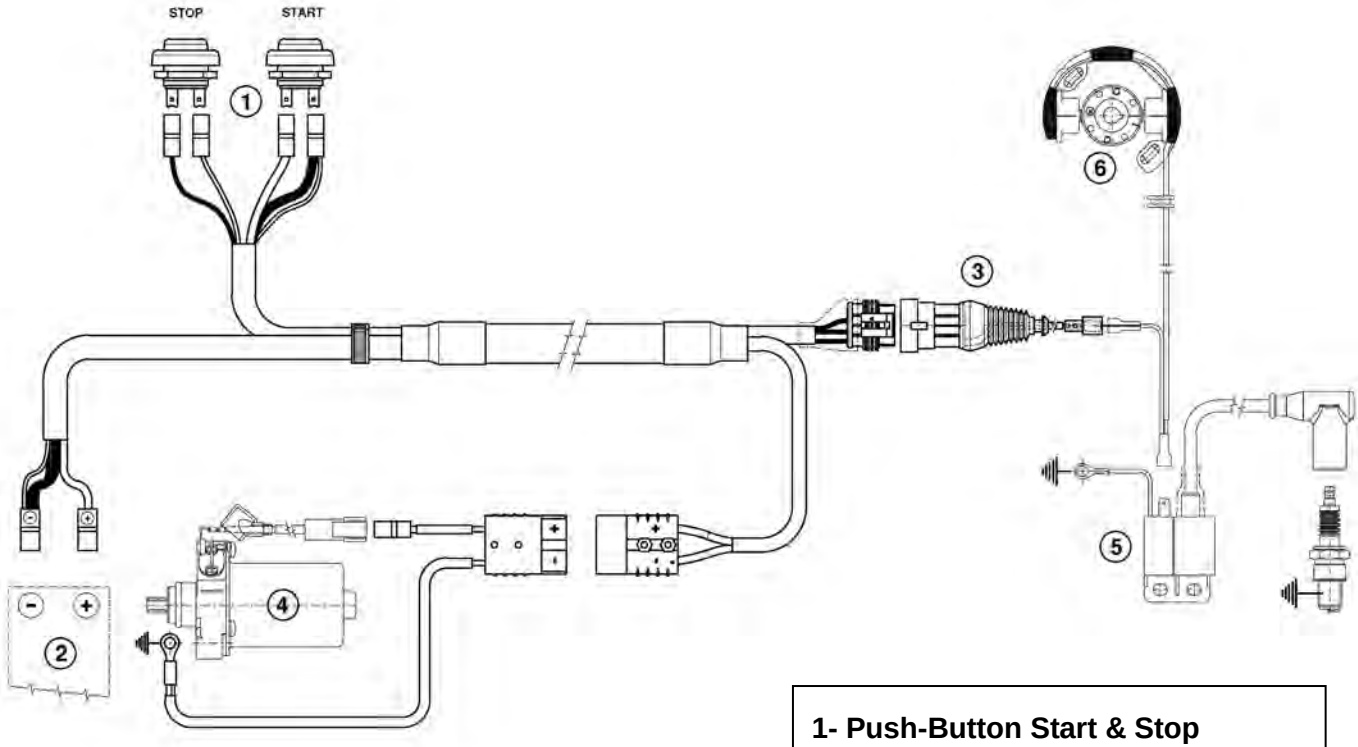
PHOTO COMPLETE WIRING

PHOTO OF IGNITION / PHOTO OF H.T. COIL (SELETTRA ANALOGUE 2 POLES)



ALTERNATIVE WIRING LOOM

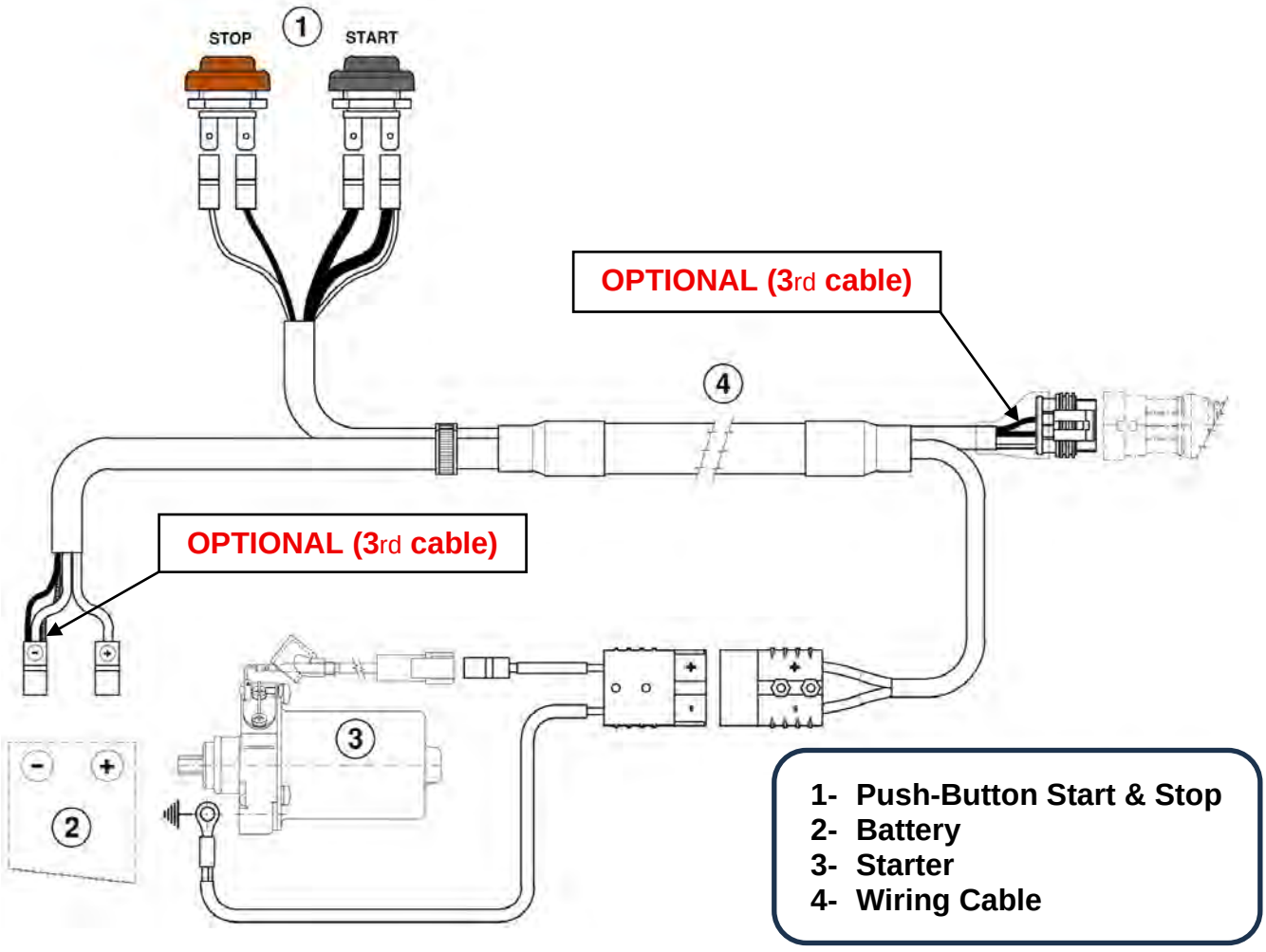
ALTERNATIVE WIRING LOOM DIAGRAM



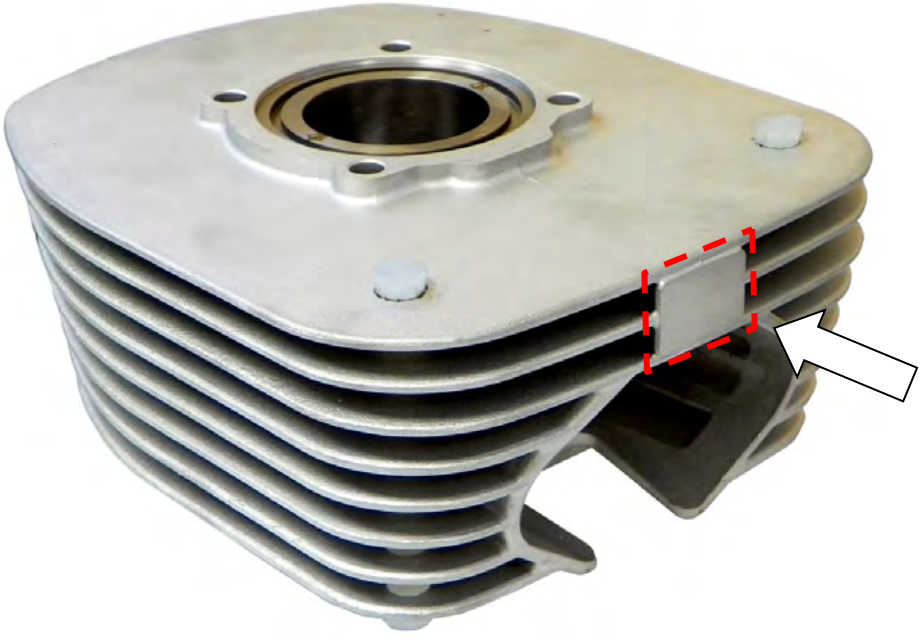
1- Push-Button Start & Stop
2- Battery
3- Ignition Cable Adapter
4- Starter
5- H.T. coil
6- Ignition

ALTERNATIVE WIRING LOOM

ALTERNATIVE WIRING LOOM DIAGRAM

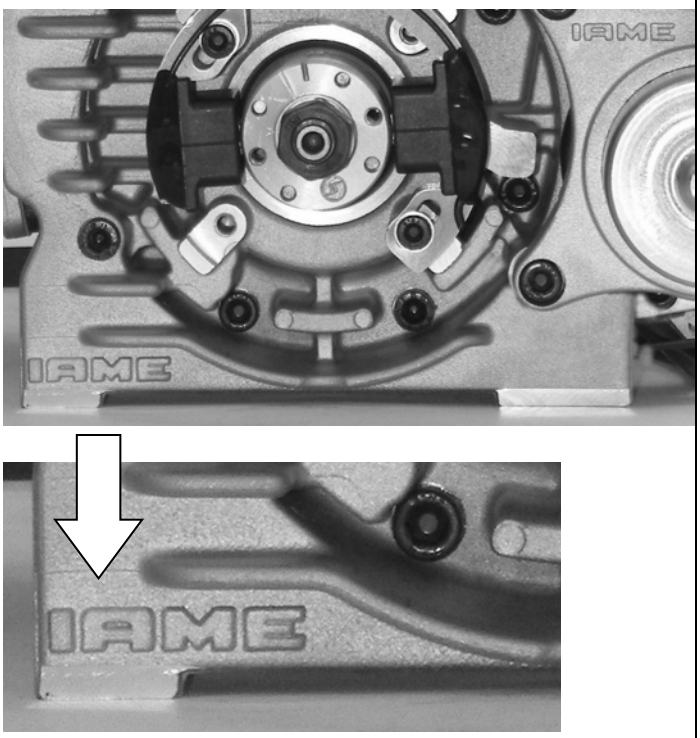


STICKER APPLICATION AREA



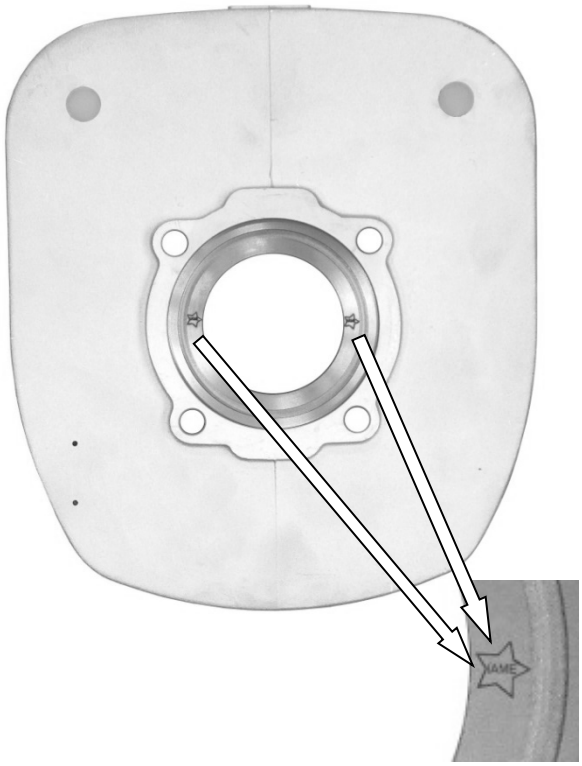
CYLINDER IDENTIFICATION MARKING

CRANKCASE IDENTIFICATION MARKING

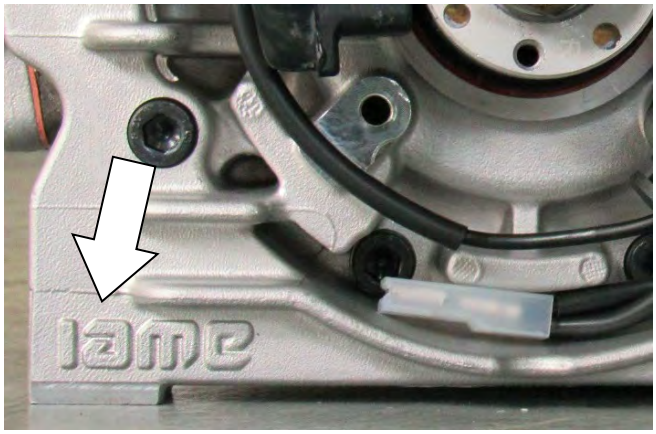


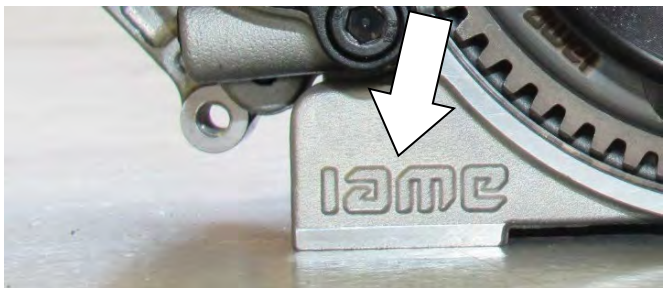
HEAD IDENTIFICATION MARKING

ALTERNATIVE CYLINDER IDENTIFICATION MARKING

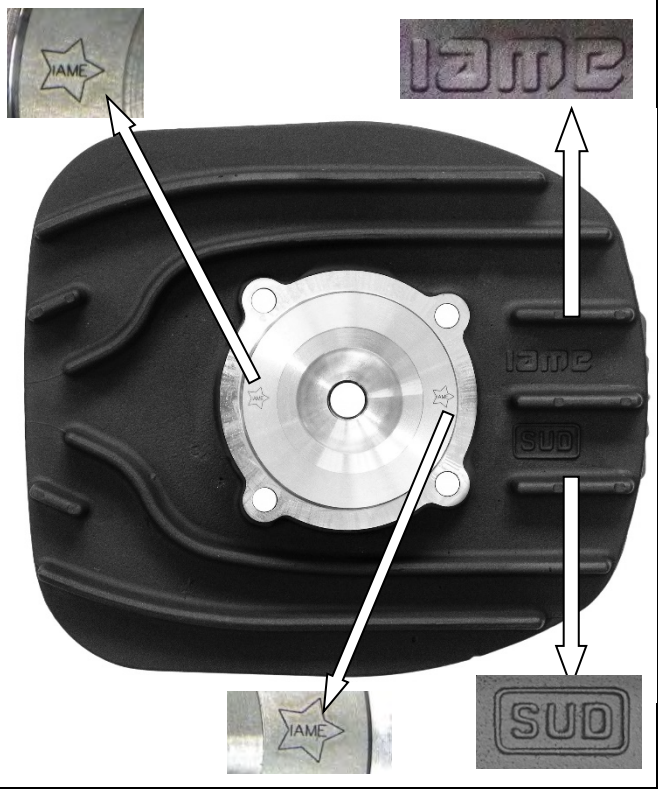


ALTERNATIVE CRANKCASE IDENTIFICATION MARKING





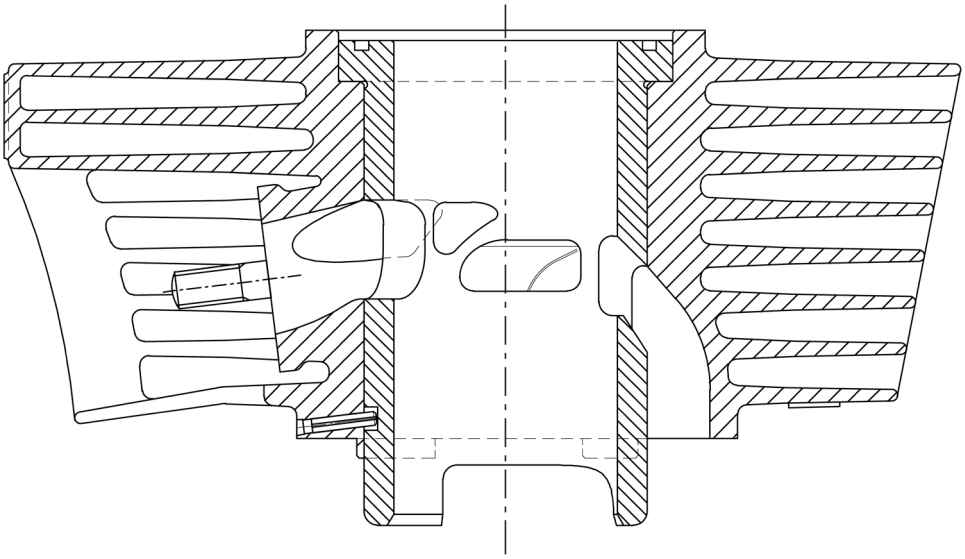
ALTERNATIVE CYLINDER HEAD IDENTIFICATION MARKING



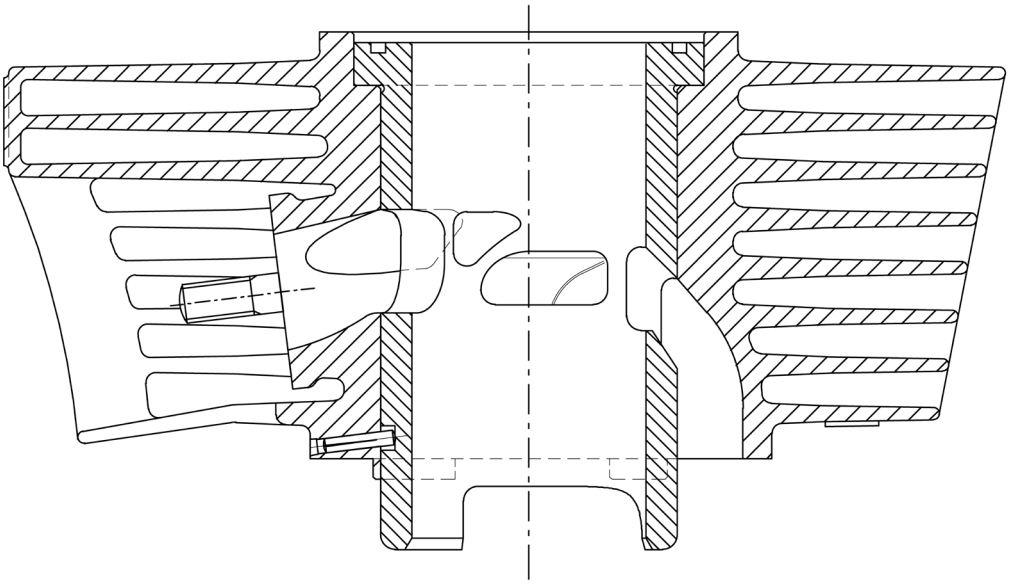
FROM 2025 ON

CYLINDER IDENTIFICATION – ALTERNATIVE CYLINDER LINER LOCK PIN

CURRENT PIN (SPRING PIN)



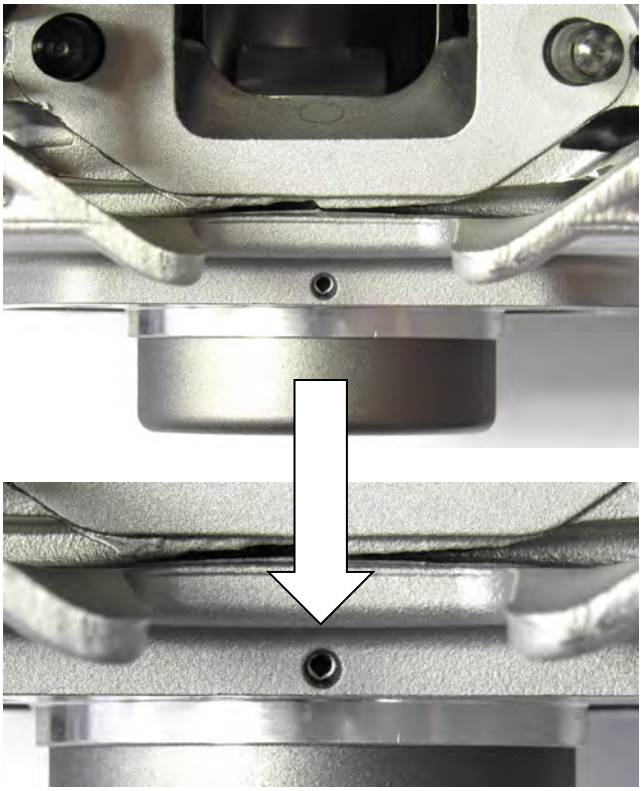
ALTERNATIVE PIN (GROOVED PIN)



FROM 2025 ON

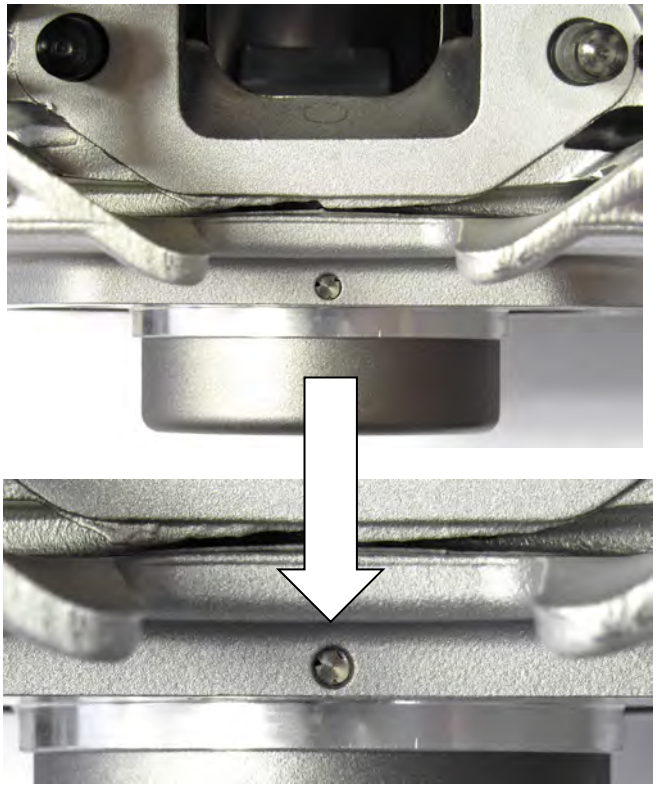
CYLINDER IDENTIFICATION – ALTERNATIVE CYLINDER LINER LOCK PIN

CURRENT PIN



SPRING PIN

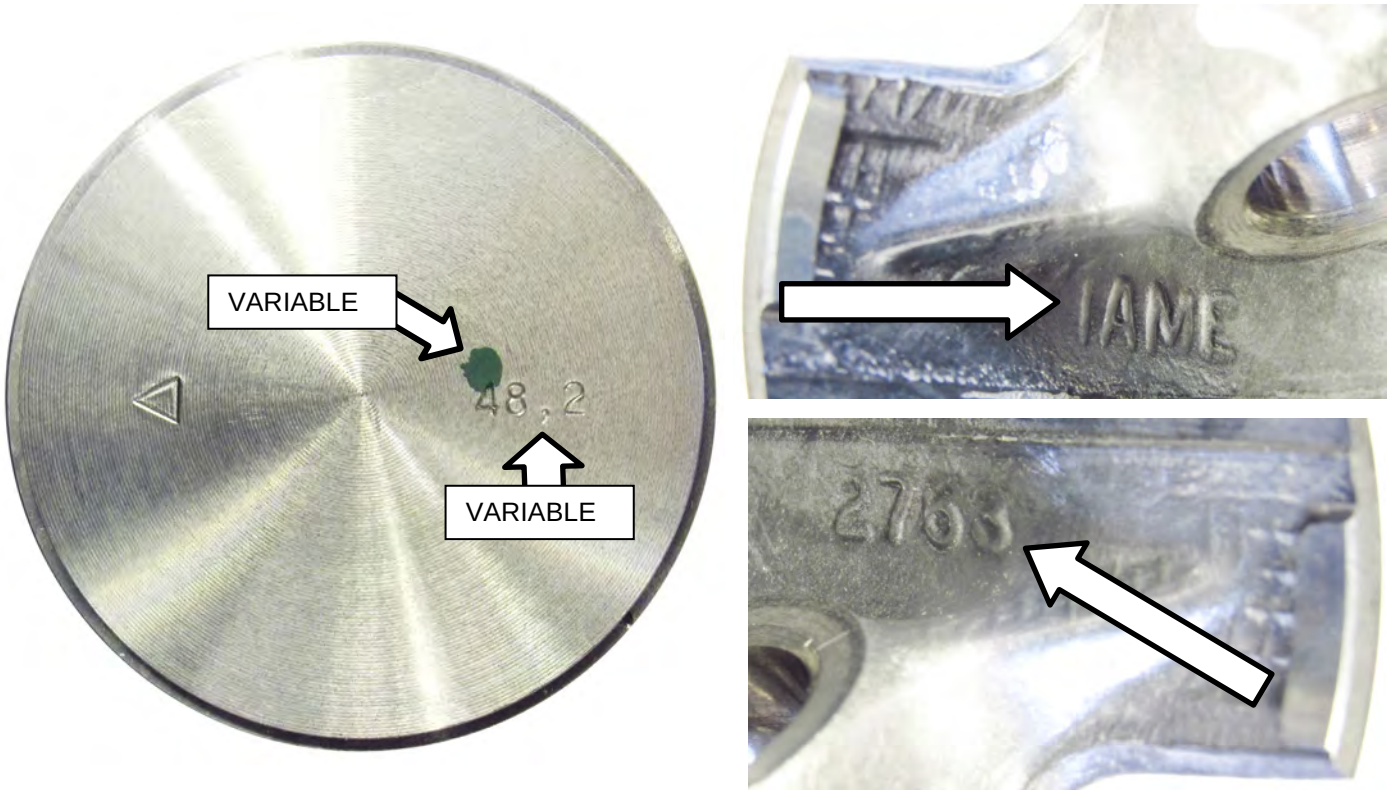
ALTERNATIVE PIN



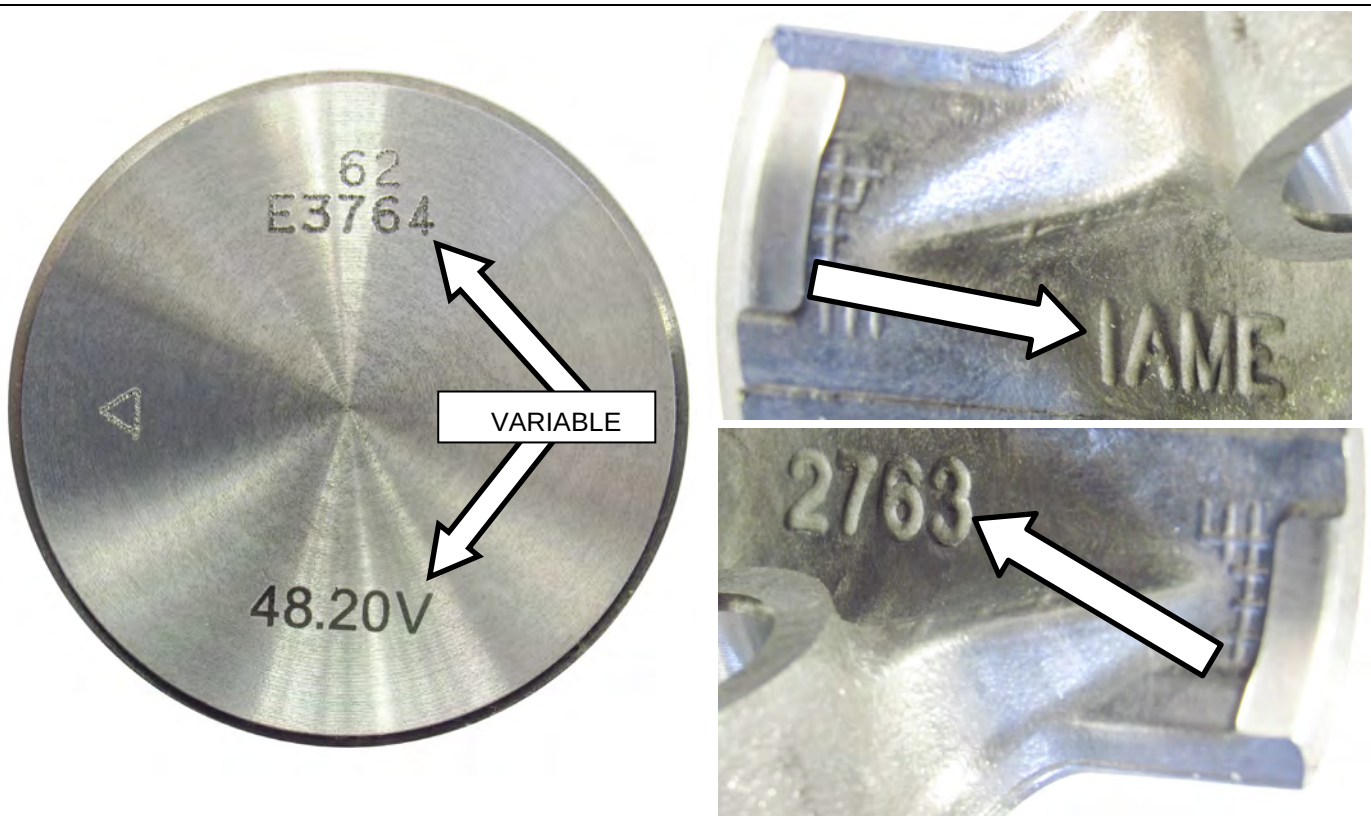
GROOVED PIN

INLET SILENCER - “IAME” IDENTIFICATION MARKING

PISTON IDENTIFICATION MARKING

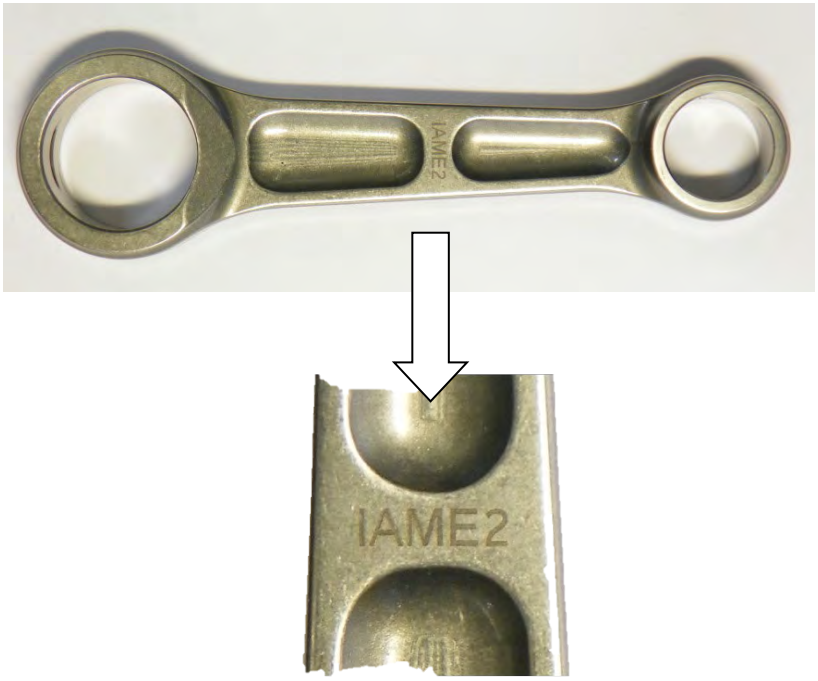


ALTERNATIVE PISTON IDENTIFICATION MARKING



PISTON PHOTO IDENTIFICATION

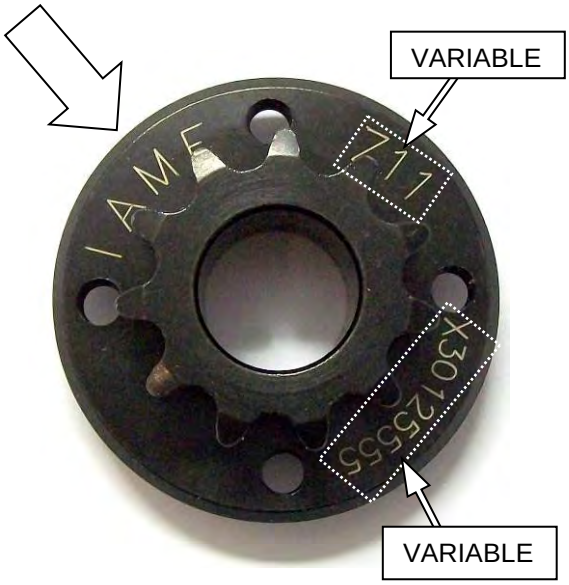
CONROD PHOTO IDENTIFICATION



STARTER IDENTIFICATION MARKING

CRANKSHAFT IDENTIFICATION MARKING

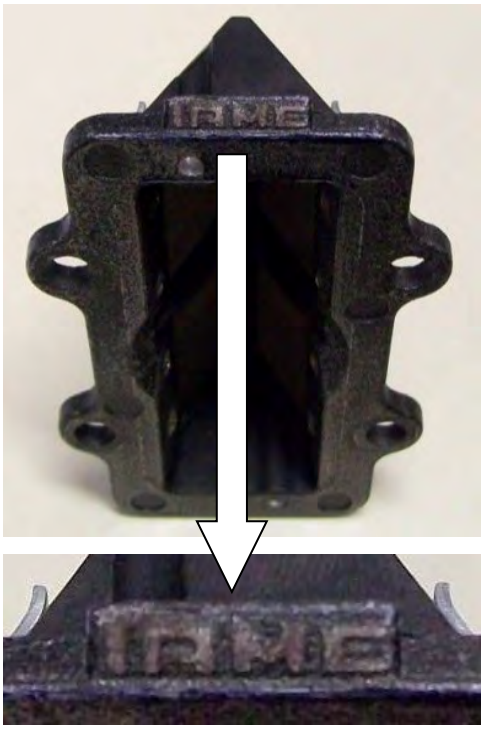
SPROCKET IDENTIFICATION MARKING



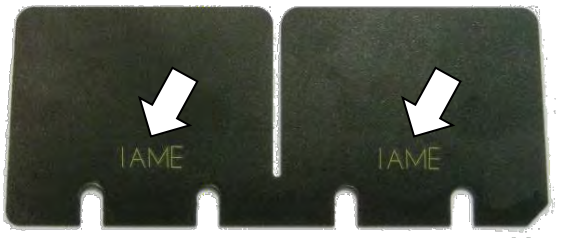
STARTER RING IDENTIFICATION MARKING

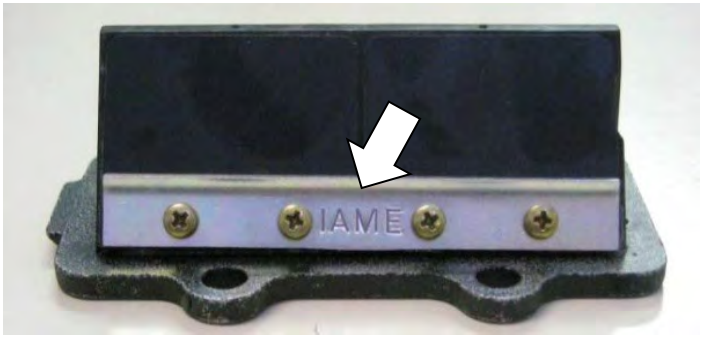
CLUTCH BODY IDENTIFICATION MARKING	CLUTCH DRUM IDENTIFICATION MARKING
 FRICTION MATERIAL  ALTERNATIVE   VARIABLE	
PHOTO IDENTIFICATION CARBURETOR INLET CONVEYOR	BENDIX COVER IDENTIFICATION MARKING
	  REAR SIDE FRONT SIDE 

REED GROUP & PETALS IDENTIFICATION MARKING

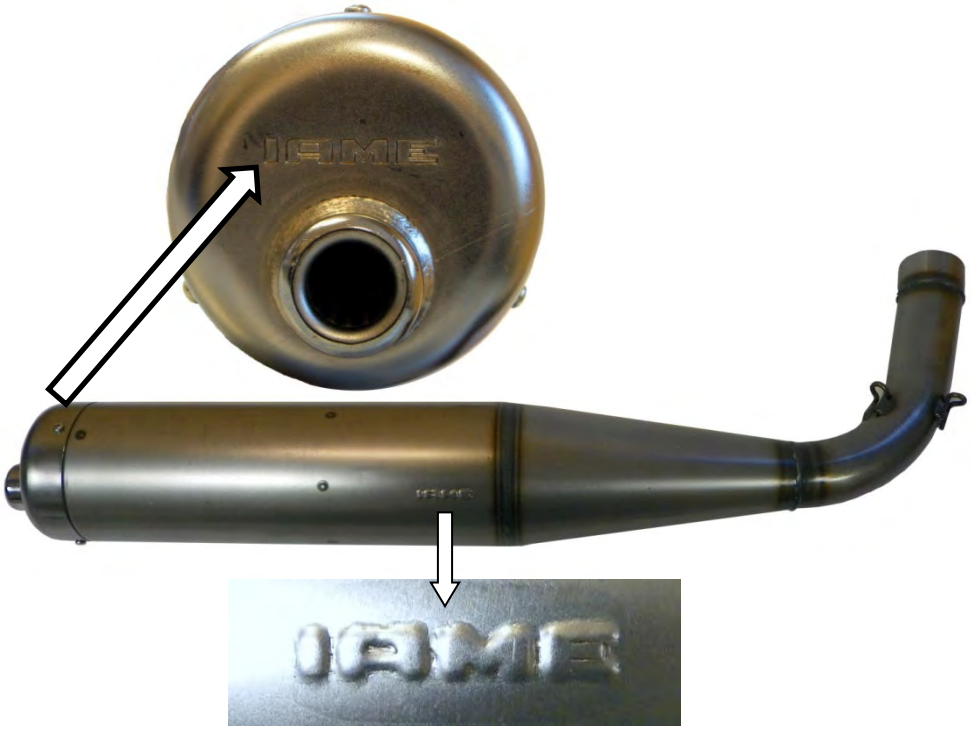


FIBER GLASS

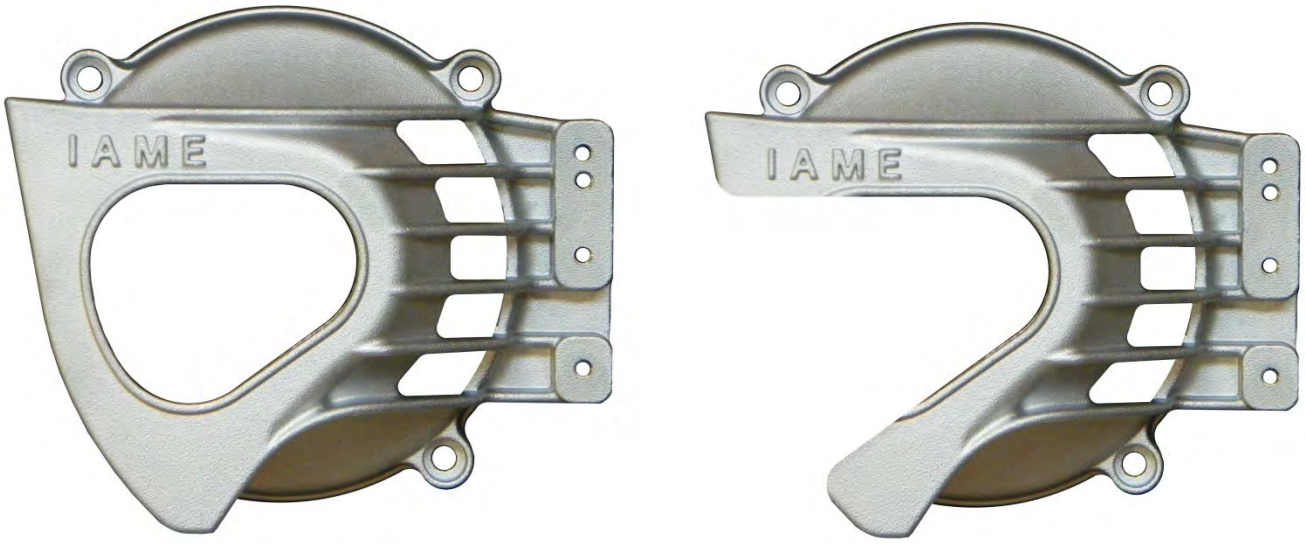




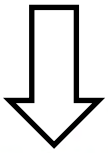
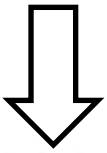
EXHAUST SILENCER IDENTIFICATION MARKING



CLUTCH COVER - ALTERNATIVE SHAPE AND SURFACE FINISHING



ALTERNATIVE

PHOTO IDENTIFICATION REED GROUP	
CURRENT VERSION	ALTERNATIVE VERSION
   	   

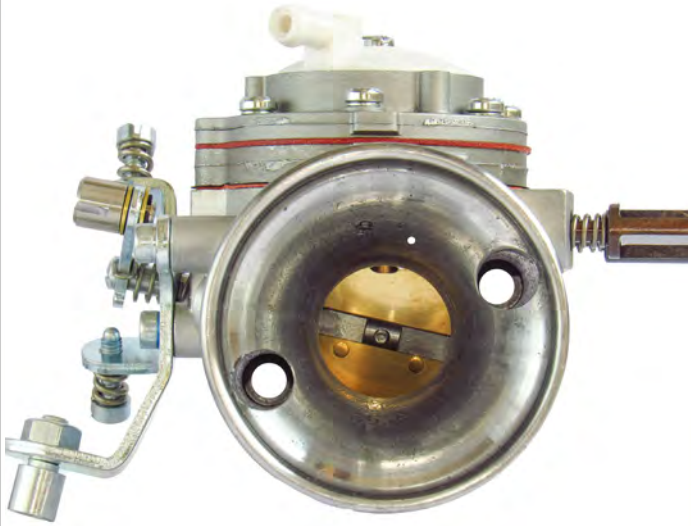
ALTERNATIVE INSTALLATION OF GROUND CABLE ON THE CRANKCASE

STANDARD INSTALLATION

ALTERNATIVE INSTALLATION

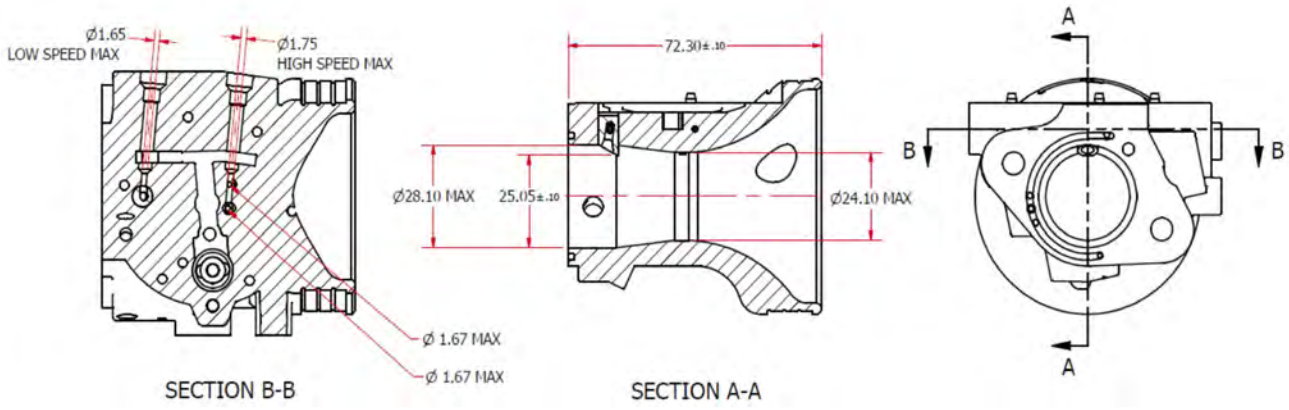
CARBURETTOR

Tillotson HW-33A

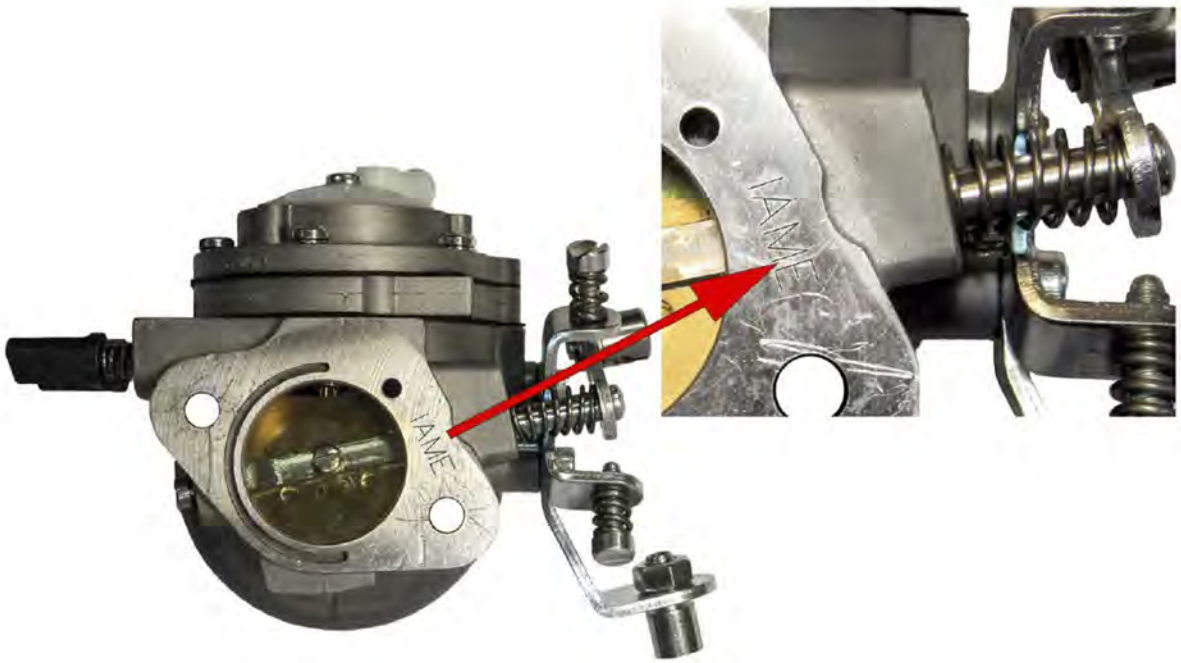
	
PHOTO OF ADJUSTING SIDE	PHOTO OF INLET SIDE

Manufacturer	**TILLOTSON LTD.**
Make	**TILLOTSON**
Model	**HW-33A**

SECTION VIEW

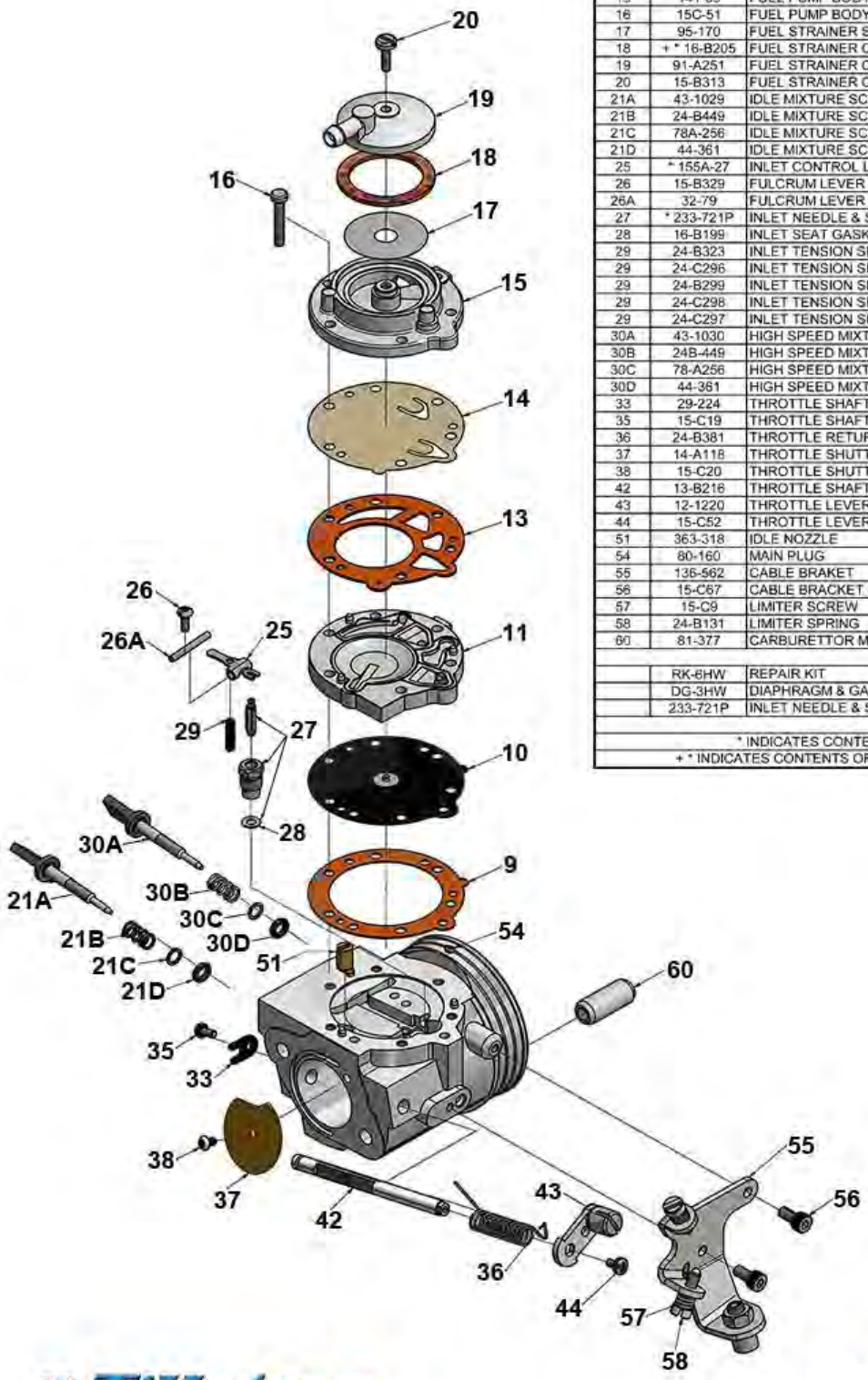


MARKING



CARBURETTOR DESCRIPTION AND SKETCH OF PARTS

HW-33A



HW-33A CARBURETTOR PARTS LIST			
ITEM	PART NO:	DESCRIPTION	QTY
9	+ * 16-B406	DIAPHRAGM GASKET	1
10	+ * 237-600	DIAPHRAGM	1
11	91A-275	DIAPHRAGM COVER	1
13	+ * 16-B407	FUEL PUMP GASKET	1
14	+ * 237-162	FUEL PUMP DIAPHRAGM	1
15	141-89	FUEL PUMP BODY	1
16	15C-51	FUEL PUMP BODY SCREW	6
17	95-170	FUEL STRAINER SCREEN	1
18	+ * 16-B205	FUEL STRAINER COVER GASKET	1
19	91-A251	FUEL STRAINER COVER	1
20	15-B313	FUEL STRAINER COVER RETAINING SCREW	1
21A	43-1029	IDLE MIXTURE SCREW	1
21B	24-B449	IDLE MIXTURE SCREW SPRING	1
21C	78A-256	IDLE MIXTURE SCREW WASHER	1
21D	44-361	IDLE MIXTURE SCREW PACKING	1
25	* 155A-27	INLET CONTROL LEVER	1
26	15-B329	FULCRUM LEVER SCREW	1
26A	32-79	FULCRUM LEVER PIN	1
27	* 233-721P	INLET NEEDLE & SEAT SET	1
28	16-B199	INLET SEAT GASKET	1
29	24-B323	INLET TENSION SPRING 26G	OPTION
29	24-C296	INLET TENSION SPRING 31G	OPTION
29	24-B299	INLET TENSION SPRING 37G	1
29	24-C298	INLET TENSION SPRING 42G	OPTION
29	24-C297	INLET TENSION SPRING 46G	OPTION
30A	43-1030	HIGH SPEED MIXTURE SCREW	1
30B	24B-449	HIGH SPEED MIXTURE SCREW SPRING	1
30C	78-A256	HIGH SPEED MIXTURE SCREW WASHER	1
30D	44-361	HIGH SPEED MIXTURE SCREW PACKING	1
33	29-224	THROTTLE SHAFT CLIP	1
35	15-C19	THROTTLE SHAFT CLIP RETAINING SCREW	1
36	24-B381	THROTTLE RETURN SPRING	1
37	14-A118	THROTTLE SHUTTER	1
38	15-C20	THROTTLE SHUTTER SCREW	1
42	13-B216	THROTTLE SHAFT	1
43	12-1220	THROTTLE LEVER ASSEMBLY	1
44	15-C52	THROTTLE LEVER RETAINING SCREW	1
51	363-318	IDLE NOZZLE	1
54	80-160	MAIN PLUG	2
55	136-562	CABLE BRAKET	1
56	15-C67	CABLE BRACKET RETAINING SCREW	2
57	15-C9	LIMITER SCREW	2
58	24-B131	LIMITER SPRING	2
60	81-377	CARBURETTOR MOUNTING NUT	2
	RK-6HW	REPAIR KIT	
	DG-3HW	DIAPHRAGM & GASKET	
	233-721P	INLET NEEDLE & SEAT SET	
* INDICATES CONTENTS OF REPAIR KIT			
+ * INDICATES CONTENTS OF DIAPHRAGM & GASKET SET			

Tillotson RACING
Clash Industrial Estate - Tralee - Ireland
www.tillotson-racing.com

PARTS OF CARBURETTOR

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

Thickness = 0.5 ±0.1 mm

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

Thickness = 0.8 ±0.1 mm

REF.10 - P. N°237-600
DIAPHRAGM

Thickness = 0.13 ±0.07 mm

REF.14 - P. N°237-162
PUMP DIAPHRAGM

ALTERNATIVE

Thickness = 0.10 ±0.063 mm

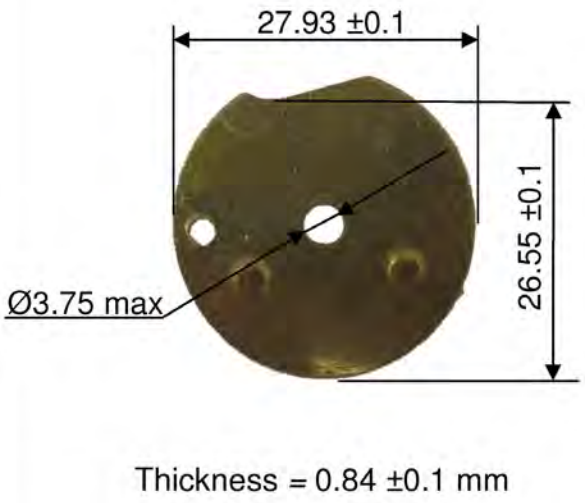
REF.11 - P. N° 91-A275
DIAPHRAGM COVER

Thickness = 6.75 ±0.15 mm

REF.15 - P. N° 141-89
PUMP COVER

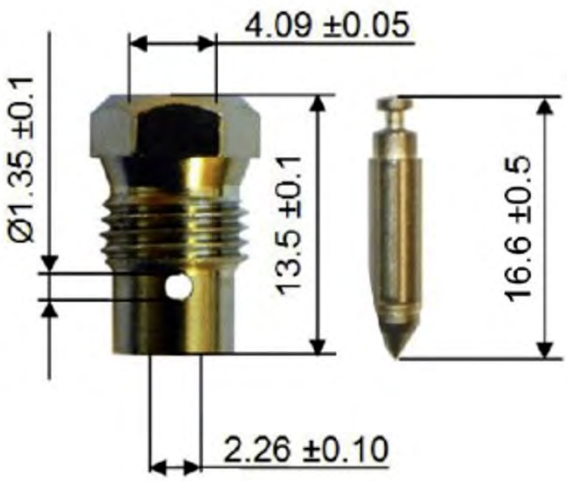
Thickness = 12.5 ±0.15 mm

REF.37 - P. N° 14-A118
THROTTLE SHUTTER

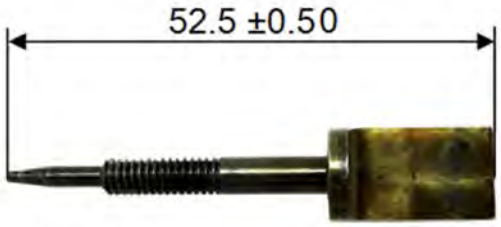


Thickness = 0.84 ±0.1 mm

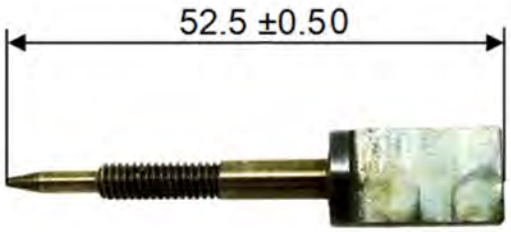
REF.27 - P. N° 233-721P
SEAT + NEEDLE



REF.21A - P. N° 43-1029
NEEDLE LOW SPEED



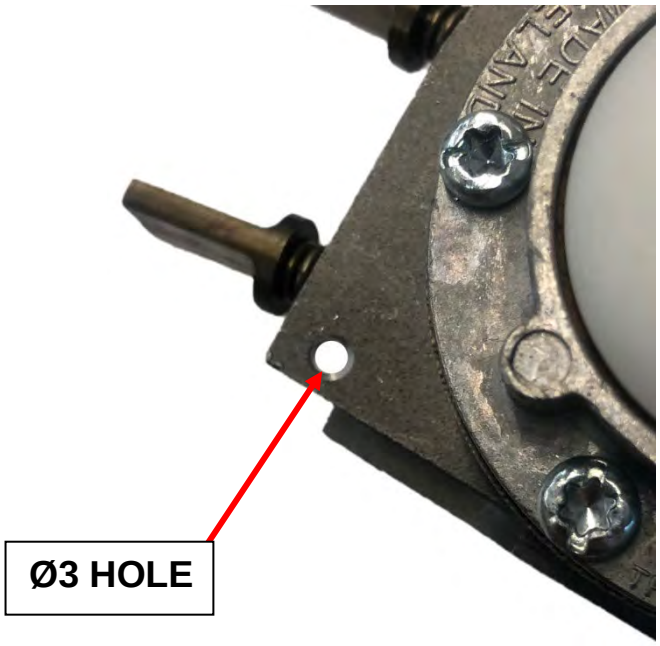
REF.30A - P. N° 43-1030
NEEDLE HIGH SPEED



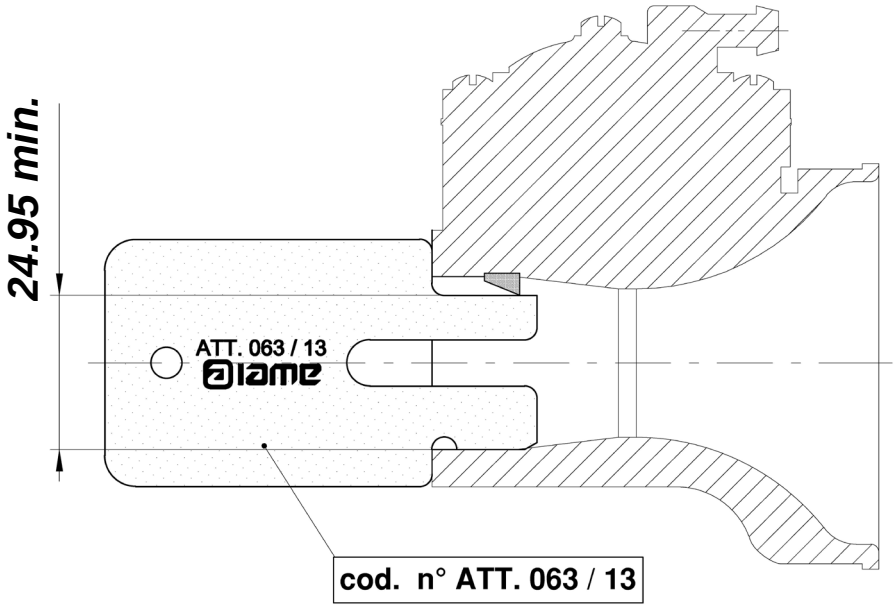
ALTERNATIVE FUEL NEEDLE

HOLE FOR CARBURETTOR SEALING

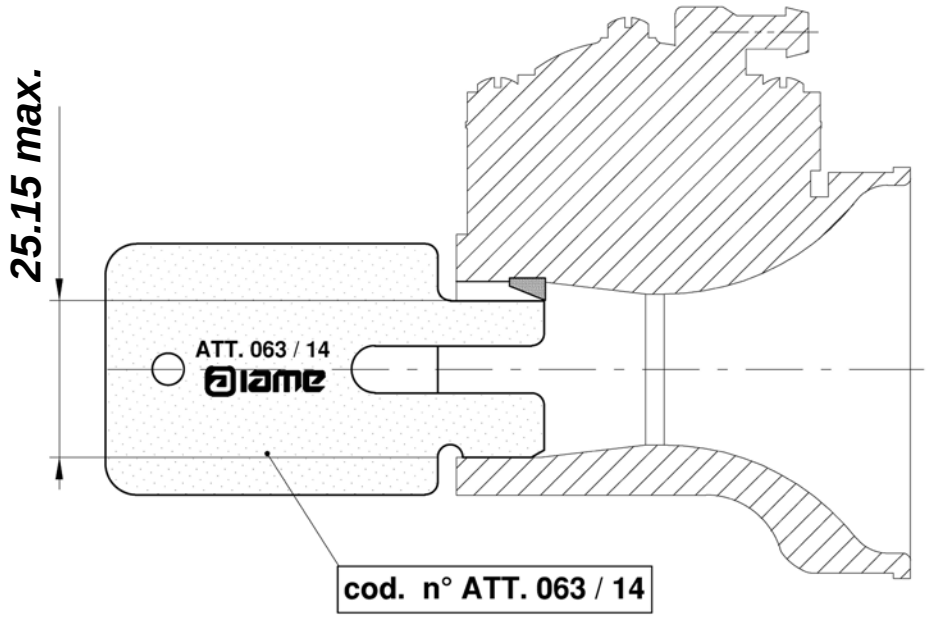
The carburettor can have this hole for sealing



ATOMIZER – HEIGHT MINIMUM AND CHECKING TOOL

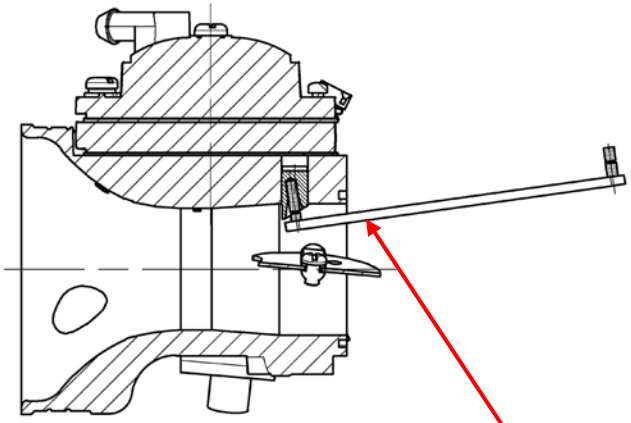


ATOMIZER – HEIGHT MAXIMUM AND CHECKING TOOL



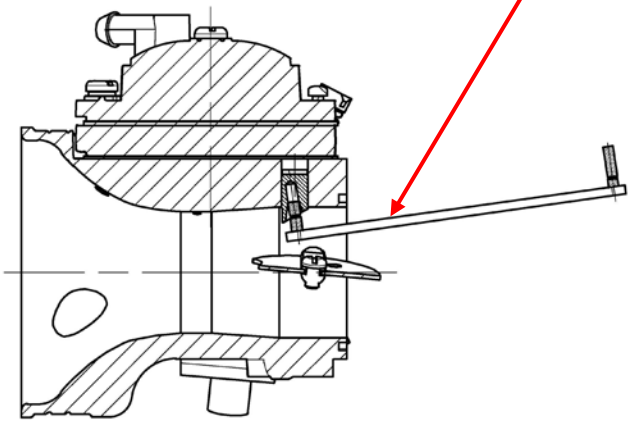
ATOMIZER - CHECKING HOLE DIMENSIONS TOOL

Pass Side - OK

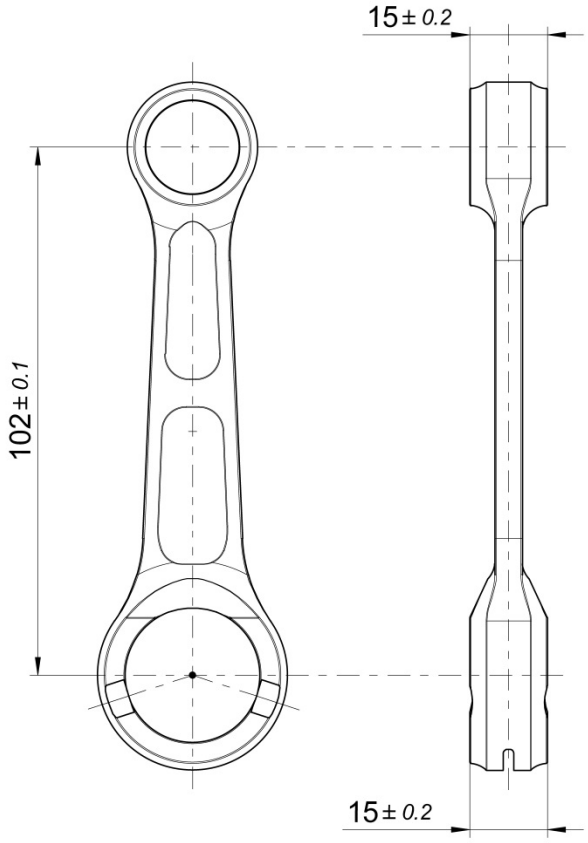


ATT.035 / 19

No Pass Side - OK



ALTERNATIVE CONROD



BOTH TYPES OF CONROD CAN BE USED WITH BOTH TYPES OF WASHERS (IN COUPLE)

PHOTO OF THE CONROD BOTH SIDE – ALTERNATIVE

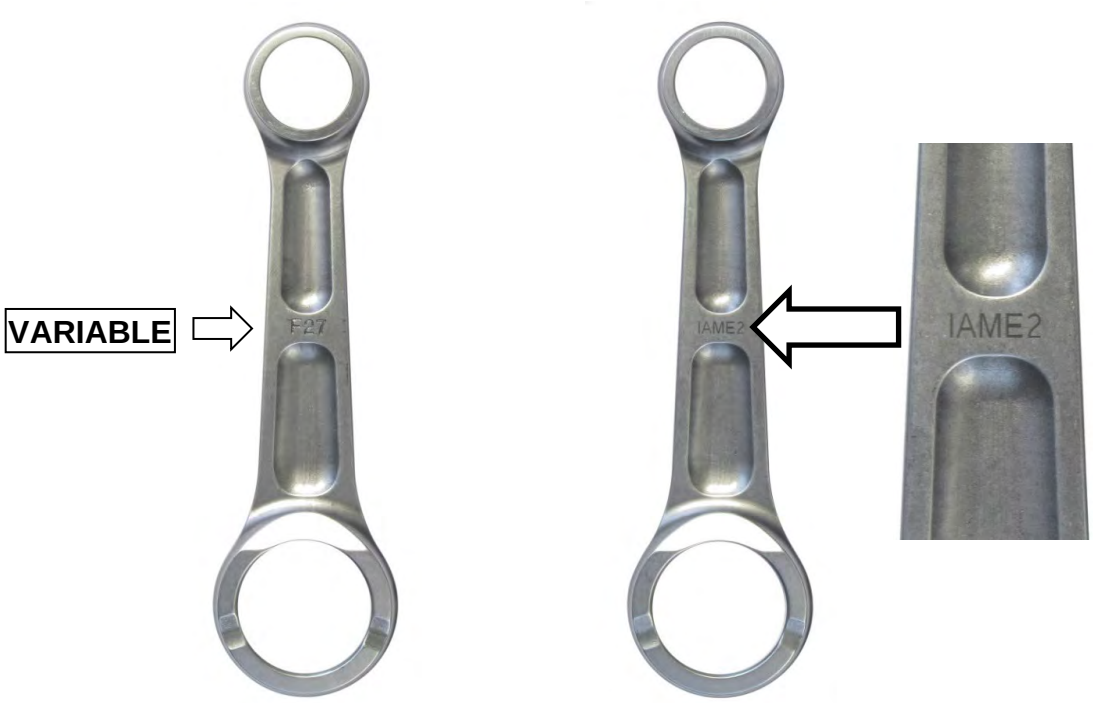


PHOTO IDENTIFICATION OF SMALL END CONROD BEARING – TYPES ALTERNATIVE

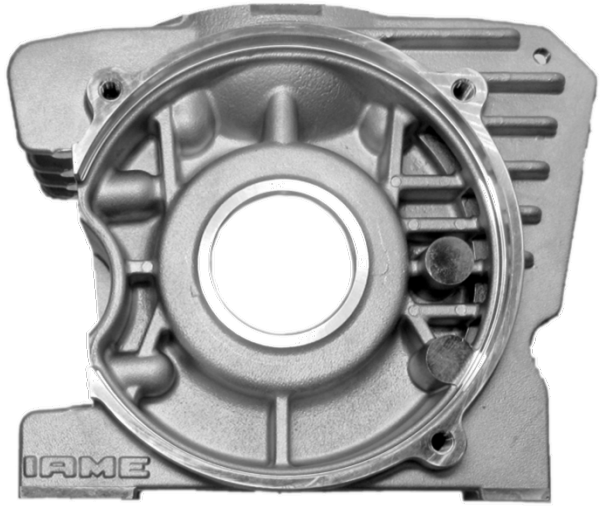
TYPE 1

TYPE 2

PHOTO IDENTIFICATION OF SILVER CONROD WASHER – TYPES ALTERNATIVE

TYPE 1

TYPE 2

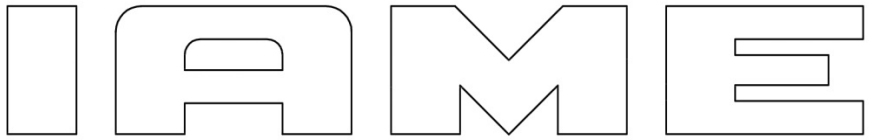
PARTICULARS WITH ALTERNATIVE NEW LOGO "IAME"	
CYLINDER HEAD	CYLINDER
 **NEW LOGO** 	 **NEW LOGO** 
SEMICARTER TRANSMISSION SIDE	SEMICARTER IGNITION SIDE
 **NEW LOGO** 	 **NEW LOGO** 

PARTICULARS WITH ALTERNATIVE NEW LOGO "IAME"	
STARTER SUPPORT	CLUTCH COVER
 **NEW LOGO** 	 **NEW LOGO** 
REED GROUP	CARBURETTOR INLET CONVEYOR
 **NEW LOGO** 	 **NEW LOGO** 

PARTICULARS WITH ALTERNATIVE NEW LOGO "IAME"
EXHAUST
 **NEW LOGO**     **NEW LOGO** 
INLET SILENCER
 **NEW LOGO** 

PARTICULARS WITH ALTERNATIVE NEW LOGO "IAME"

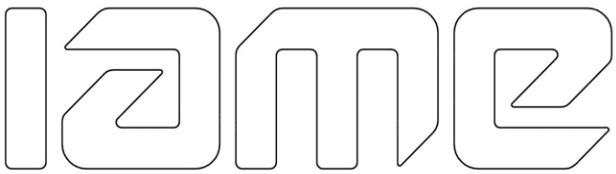
THE OTHERS COMPONENTS OF ENGINE THAT ARE MARKED (LASER OR PUNCHING) UNTIL TODAY WITH LOGO OR WRITTEN "IAME"



or

IAME

NOW COULD BE MARKED WITH NEW LOGO "IAME"



or

or