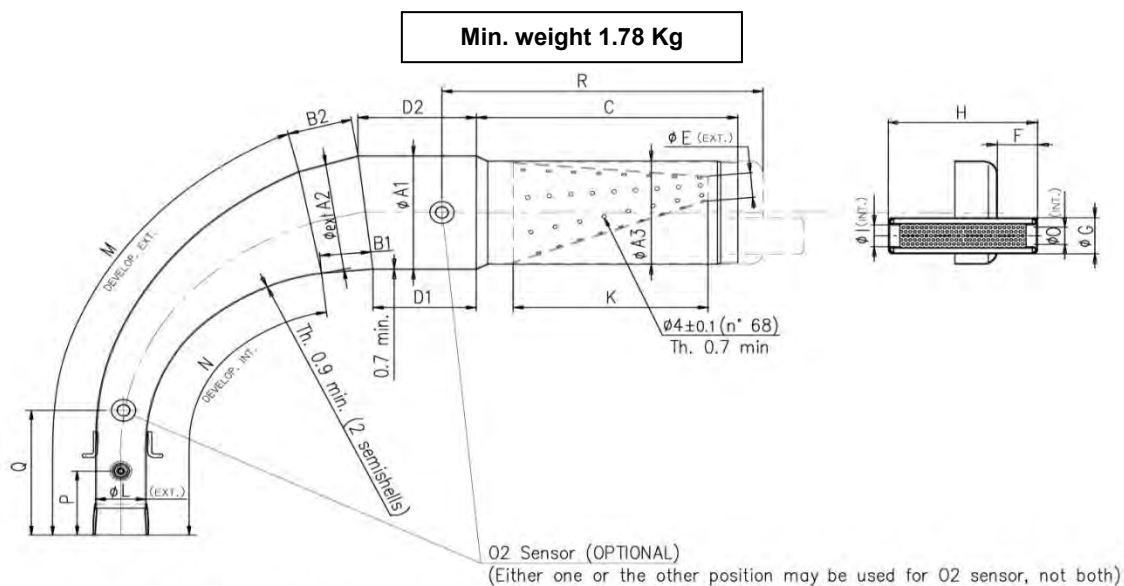


HOMOLOGATION AND TECHNICAL SPECIFICATION UPDATE BULLETIN

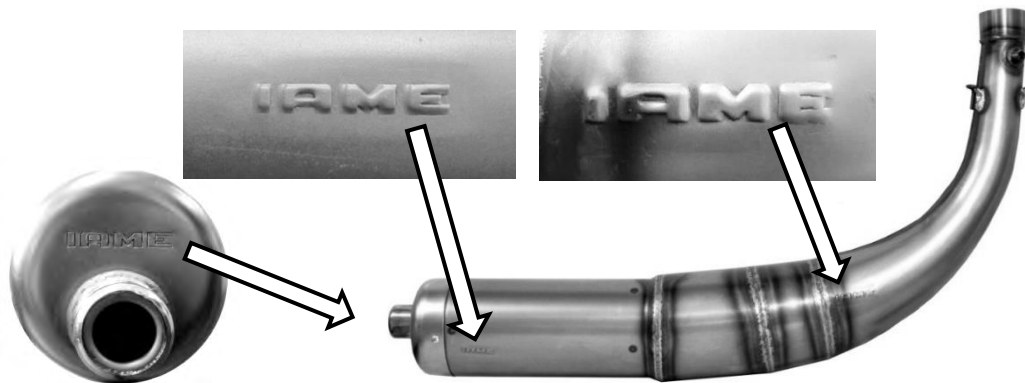
HOMOLOGATION	IAME X30	HOMOLOGATION NO.	78H
BULLETIN NO.	78H – 4	BULLETIN DATE	30 November 2017
SUBJECT:	ALTERNATIVE EXHAUST MUFFLER, ALTERNATIVE EXHAUST MANIFOLD (STD AND RESTRICTED), ALTERNATIVE MUFFLER INSTALLATION, ALTERNATIVE RADIATOR AND COMPONENTS, PVL IGNITION, ALTERNATIVE WIRING LOOMS, TILLOTSON HW-27A CARBURETTOR AND HIS INLET CONVEYOR.		

The information and specifications contained in this Homologation and Technical Specification Update Bulletin are to be read in conjunction with and form part of the homologation detailed herein. **The manufacturer has advised that the X30 engine its self remains unchanged. The new accessories and components detailed in this Bulletin are designed to achieve the same performance level as the original X30 engine – Homologation Number 78H.**

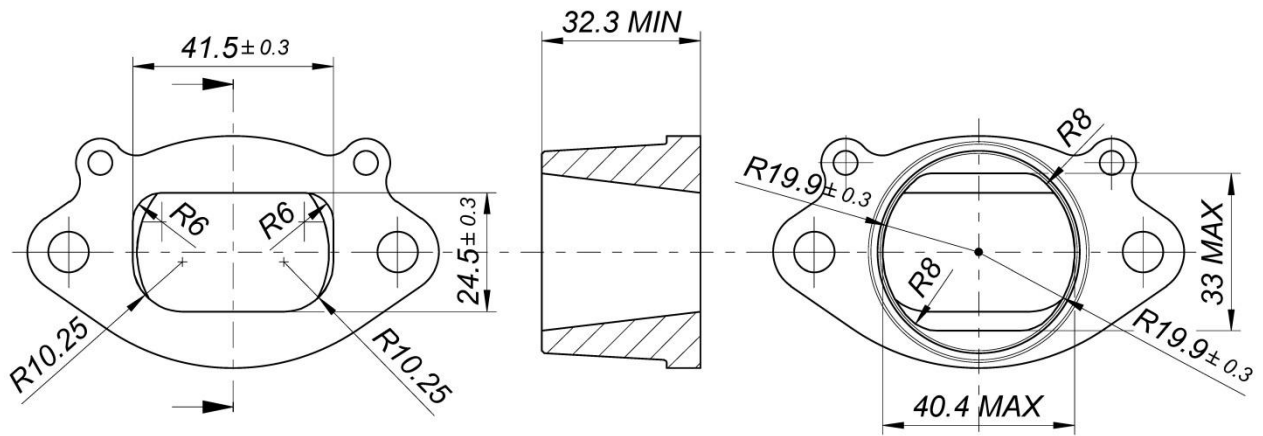
4.1 - ALTERNATIVE EXHAUST MUFFLER VIEW AND DIMENSIONS



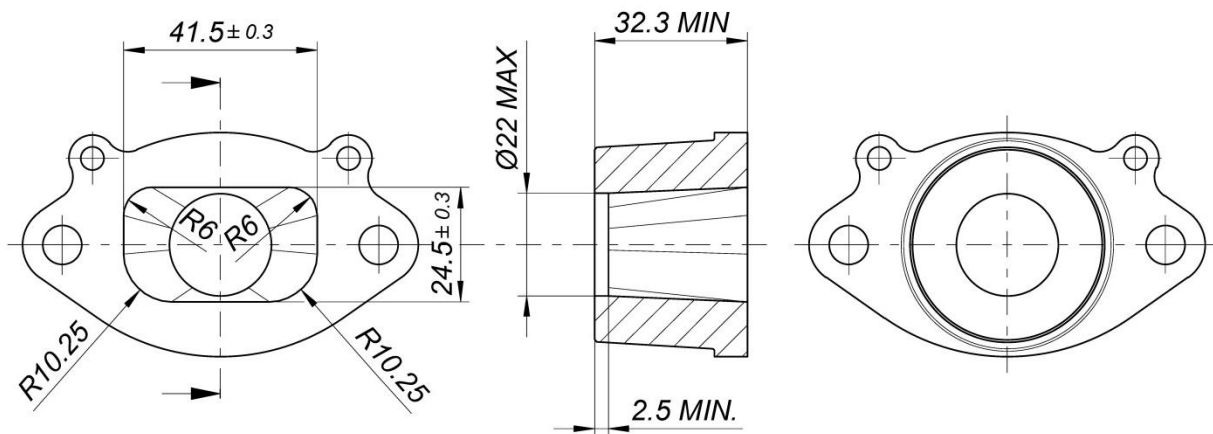
A1: 110 ± 1.5	B1: 59 ± 3	D1: 89.5 ± 3	F: 36 ± 2	I: 21 ± 1	M: 435 ± 3	P: 50 ± 10
A2: 102 ± 1.5	B2: 59 ± 3	D2: 109 ± 3	G: 35 ± 1	K: 170 ± 3	N: 340 ± 3	Q: 120 ± 10
A3: 100 ± 1.5	C: 219 ± 3	E: 23 ± 2	H: 132 ± 2	L: 42.5 ± 1.5	O: 21 ± 1	R: 270 ± 10



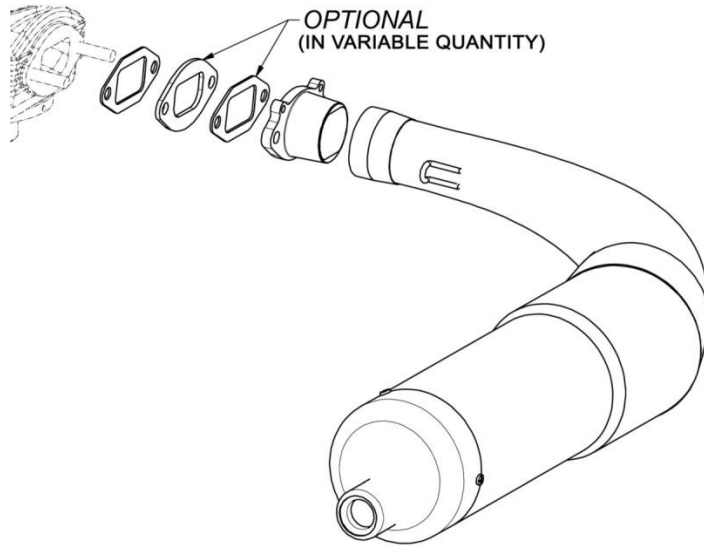
4.2 - ALTERNATIVE EXHAUST FITTING



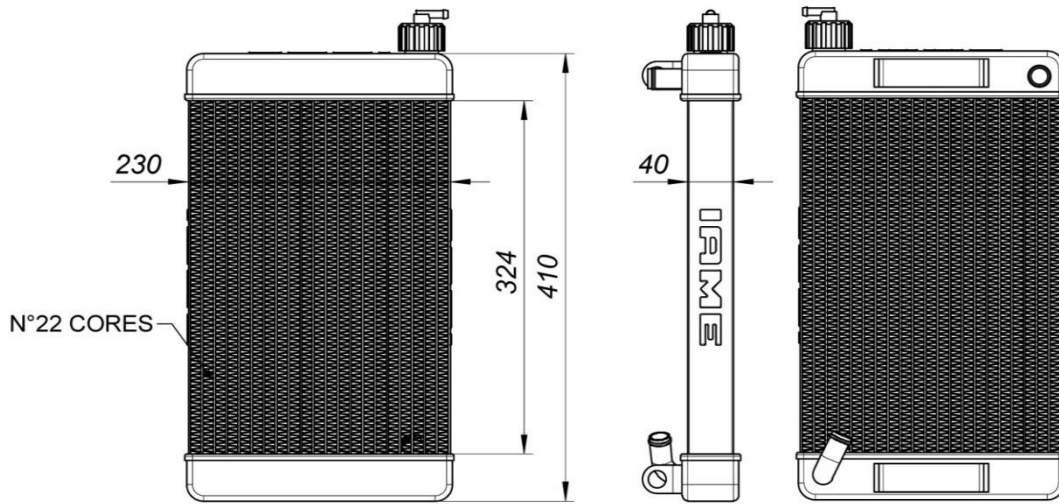
4.3 - ALTERNATIVE EXHAUST FITTING WITH RESTRICTOR



4.4 - ALTERNATIVE MUFFLER INSTALLATION

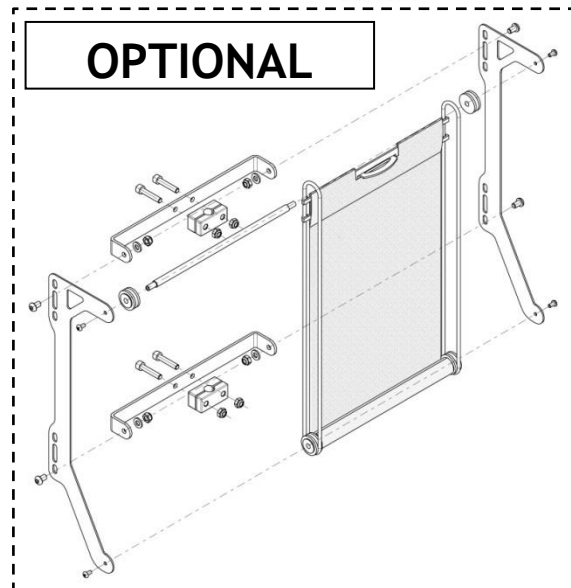
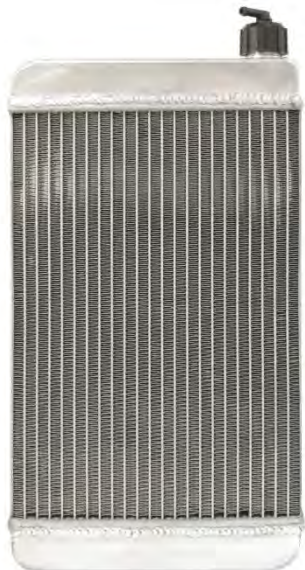


4.5 - RADIATOR ALTERNATIVE SKETCH AND PHOTOS IDENTIFICATION COMPONENTS

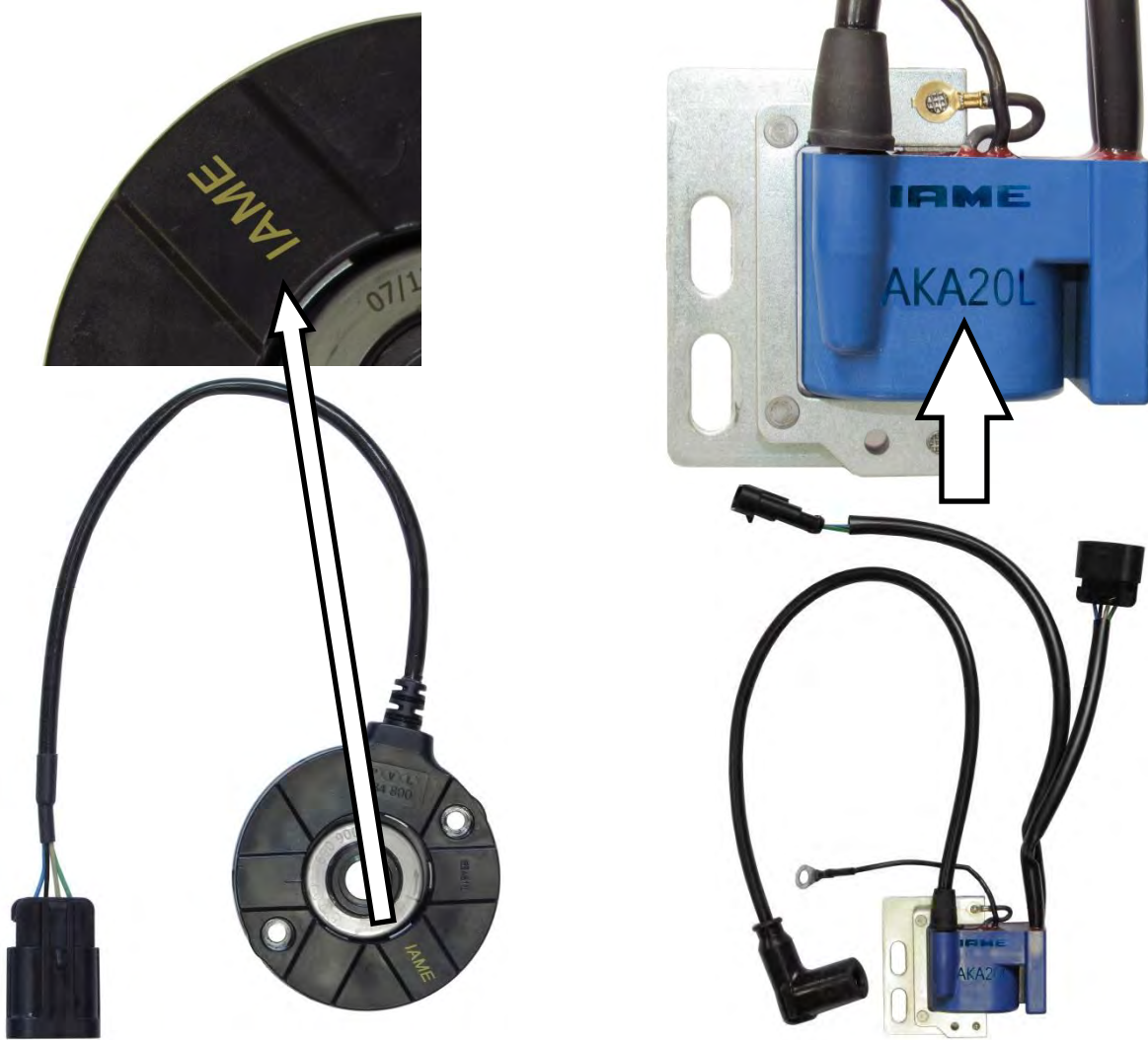


FRONT

REAR



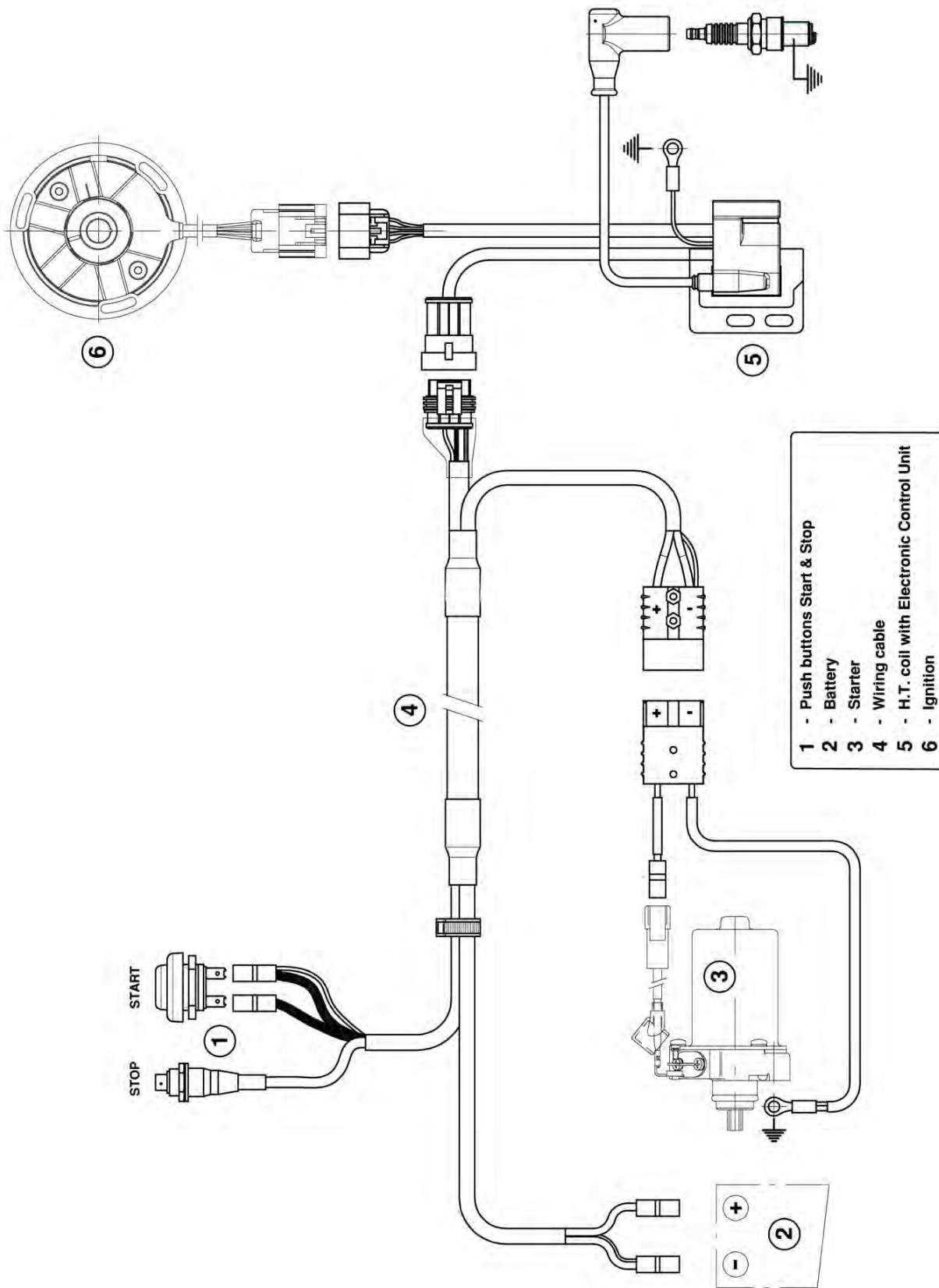
4.6 - PHOTO OF ALTERNATIVE DIGITAL IGNITION PVL 690, WITH IAME MARKING



4.7 - PHOTO COMPLETE ALTERNATIVE WIRING LOOM - TYPE 1



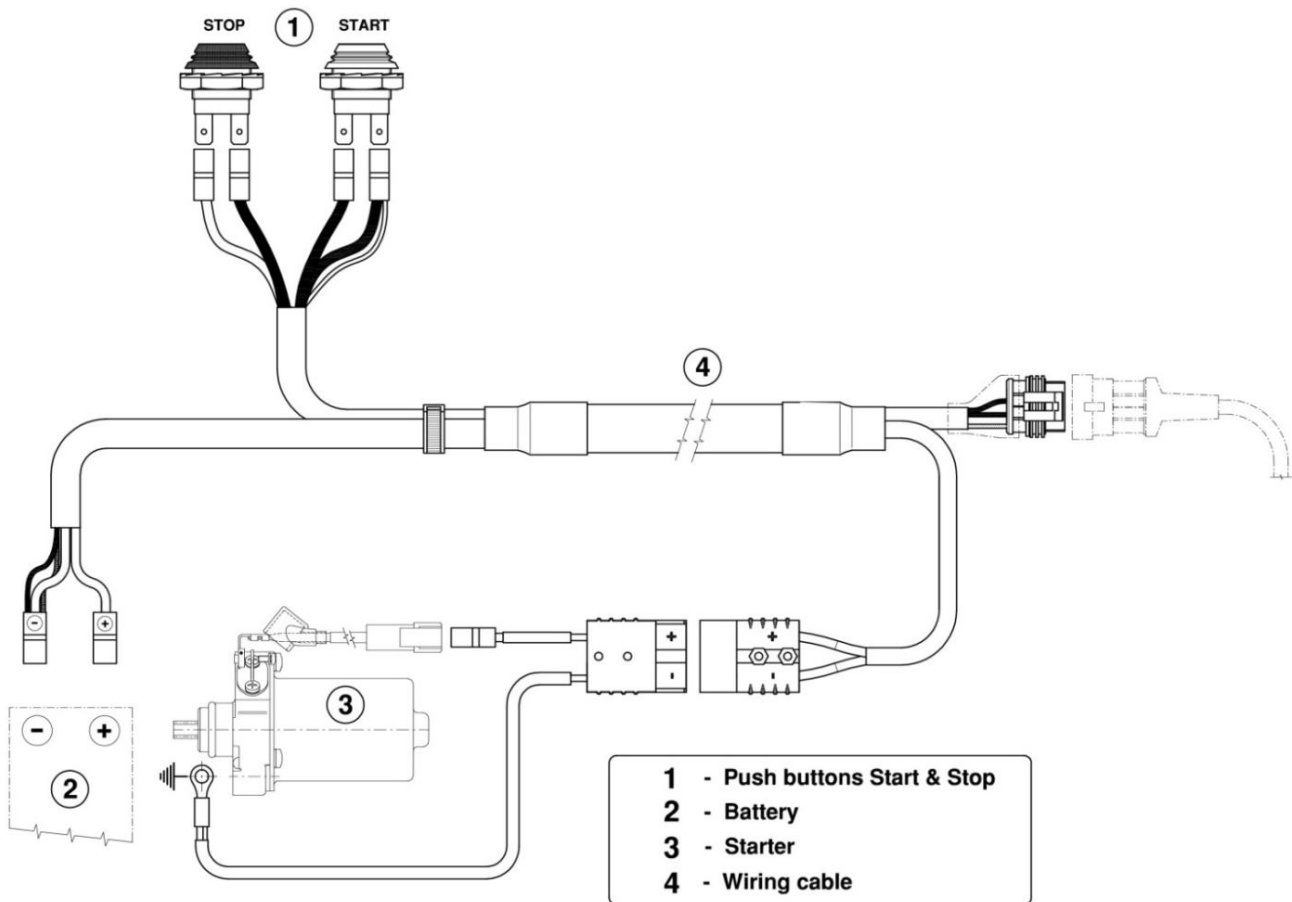
4.8 - ALTERNATIVE WIRING DIAGRAM WITH PVL 690 DIGITAL IGNITION TYPE 1



4.9 - ALTERNATIVE WIRING LOOM - TYPE 2



4.10 - ALTERNATIVE WIRING LOOM DIAGRAM - TYPE 2





4.11 - CARBURETTOR - Tillotson HW-27A



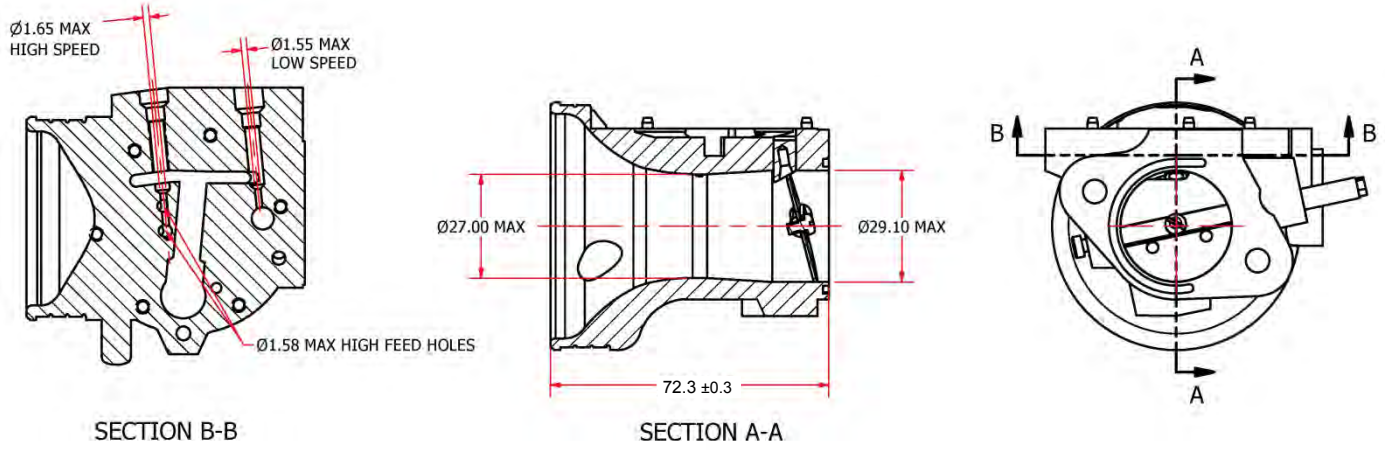
PHOTO OF ADJUSTING SIDE



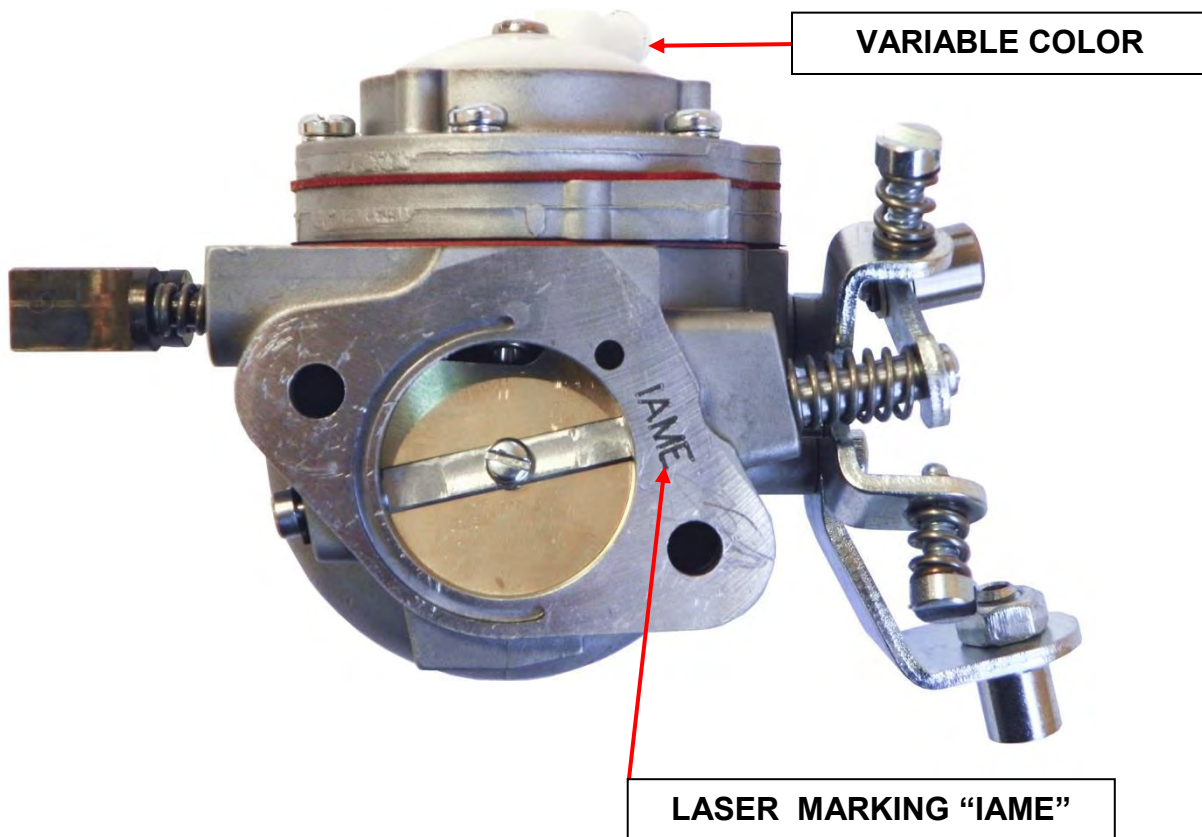
PHOTO OF INLET SIDE

Manufacturer	TILLOTSON LTD.
Make	TILLOTSON
Model	HW-27A

SECTION VIEW

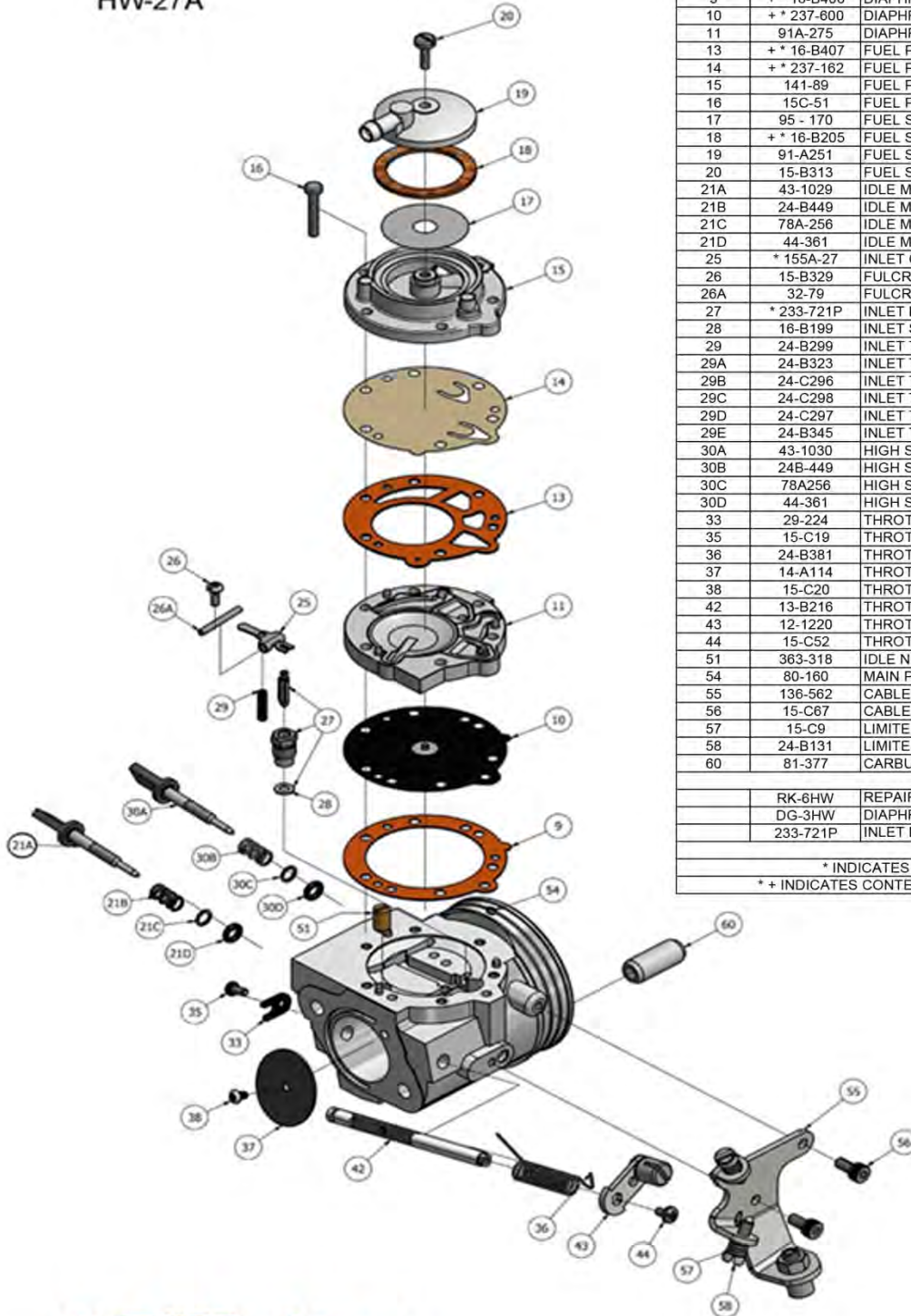


MARKING



CARBURETTOR DESCRIPTION AND SKETCH OF PARTS

HW-27A



ITEM	PART NO:	DESCRIPTION	QTY
9	+ * 16-B406	DIAPHRAGM GASKET (ORANGE)	1
10	+ * 237-600	DIAPHRAGM	1
11	91A-275	DIAPHRAGM COVER	1
13	+ * 16-B407	FUEL PUMP GASKET (ORANGE)	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-B299	INLET TENSION SPRING (STD 37 grams)	1
29A	24-B323	INLET TENSION SPRING (26 grams)	1
29B	24-C296	INLET TENSION SPRING (31 grams)	1
29C	24-C298	INLET TENSION SPRING (42 grams)	1
29D	24-C297	INLET TENSION SPRING (46 grams)	1
29E	24-B345	INLET TENSION SPRING (48 grams)	1
30A	43-1030	HIGH SPEED MIXTURE SCREW	1
30B	24B-449	HIGH SPEED MIXTURE SCREW SPRING	1
30C	78A256	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-A114	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 BRACKET	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
		REPAIR KIT	
		DIAPHRAGM & GASKET (STANDARD)	
		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

IAME

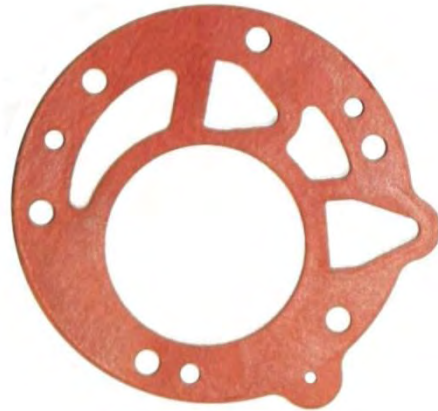
PARTS OF CARBURETTOR

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

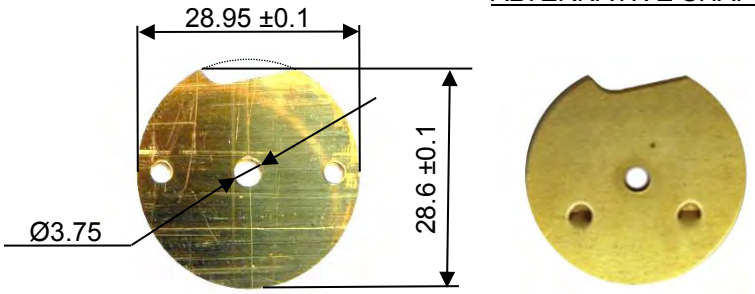
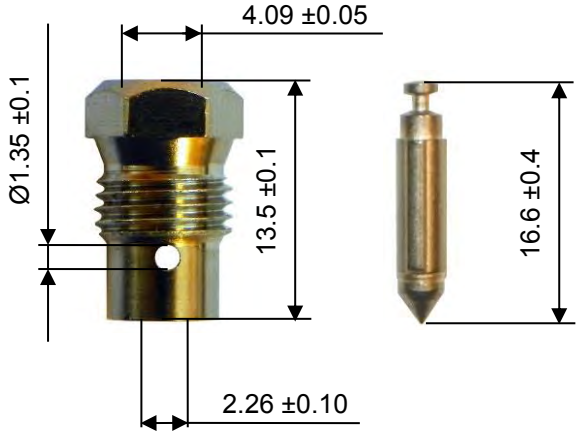



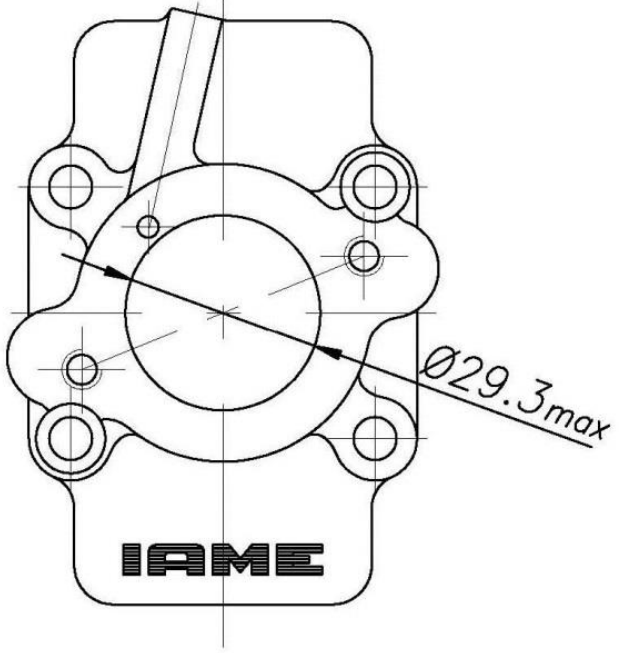


Thickness = 6.75 ± 0.15 mm

REF.15 - P. N° 141-89
PUMP COVER

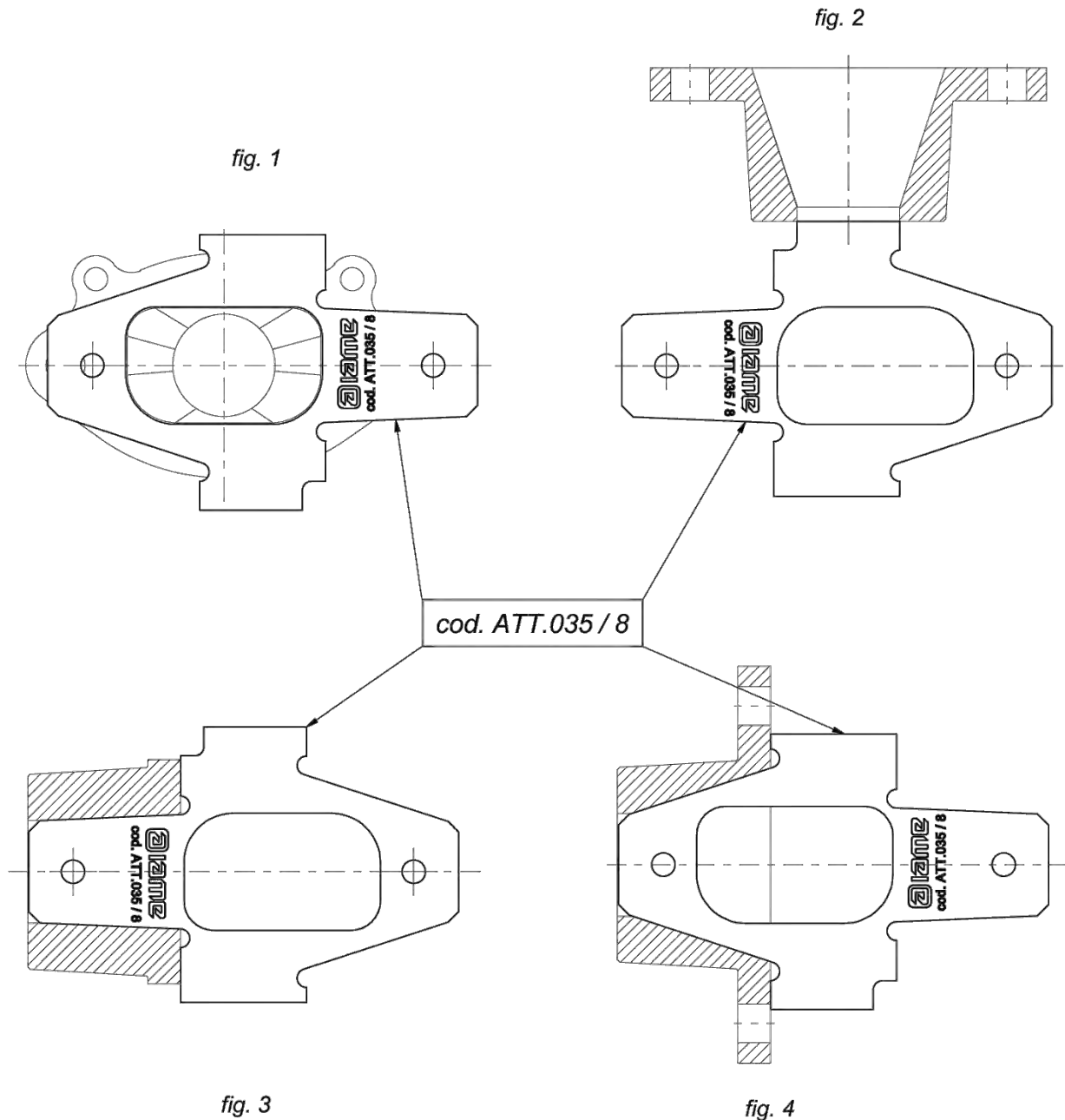


Thickness = 12.5 ± 0.15 mm

<p>REF.37 - P. N° 14-A114 THROTTLE SHUTTER</p> <p><u>ALTERNATIVE SHAPE</u></p>  <p>Thickness = 0.81 ± 0.1 mm</p>	<p>REF.27 - P. N° 233-721P SEAT + NEEDLE</p> 
<p>REF.21A - P. N° 43-1029 NEEDLE LOW SPEED</p> 	<p>REF.30A - P. N° 43-1030 NEEDLE HIGH SPEED</p> 
<p>ALTERNATIVE FUEL NEEDLE</p>	<p>4.12 - INLET CONVEYOR DIMENSIONS</p>
<p>REF.27 - P. N° 233-721P NEEDLE</p> 	

“NO GO” GAUGE & PROFILE CHECKING TOOL

EXHAUST MANIFOLD WITH RESTRICTOR Ø22mm



The National Technical Commissioner and State Technical Commissioners/State Scrutineer's are supplied with a “No Go” Gauge & Profile Checking Tool that is manufactured by IAME. They are to be used as indicated herein.

1. CHECK THAT THE NO-GO GAUGE DOES NOT ENTER INTO THE EXHAUST RESTRICTOR (fig.2).
2. CHECK THAT THE TOOL MATCHES THE SHAPE OF THE EXHAUST MANIFOLD (fig.1,3 and 4)

NOTES SUPPLIED BY THE MANUFACTURER'S REPRESENTATIVE.

All of the following points mentioned are solutions introduced by IAME to improve the engine's quality, longevity and ease of use. This is the first major accessory upgrade the X30 engine has received since its inception in Australia back in 2009, the actual engine specifications and performance outcomes remain unchanged.

These revised components come as a result of improved manufacturing techniques and ideas combined with customers' feedback and suggestions to further refine an already reliable engine package.

Exhaust System

- Reduced maintenance due to the omission of the exhaust flex.
- Reduction of noise by preventing exhaust gasses leaking past the exhaust flex.
- Pipe length can be more easily adjusted by varying the quantity of spacers and/or gaskets placed before the exhaust manifold (open or restricted) to achieve optimum engine performance.
- Improved reliability of the header by replacing it with a single piece fully machined manifold, eliminating weak points due to welding.

Larger Radiator

- Together with improved quality and appearance, the alternative radiator allows for a reduction in water temperature by an average of 10°C in comparison to the previous radiator.
- This reduction in temperature results in more consistent functioning of the engine while extending component lifetime in areas of Australia subject to a hot climate.
- The alternative radiator can also be easily equipped with an optional blind for controlling engine temperature therefore eliminating the need for messy race tape.

Simplified Ignition System

- The alternative ignition system has been introduced to simplify the installation on the chassis by reducing the amount of components required to be installed.
- The wiring loom has been greatly simplified by reducing the quantity of wires and connections resulting in reduced cost and much easier diagnosis if an issue should arise.
- The CDI box is integrated into the ignition coil mounted onto the engine while the starter relay has been omitted and the key switch has been replaced by two strong waterproof pushbuttons.
- The new electrics and wiring loom are manufactured by a different supplier therefore achieving the target of having alternative sources for key engine components, much like we did for pistons and reed blocks in a recent past.
- The critical electrical specifications remain identical between the new and previous system to ensure engine performance is unchanged.

Tillotson HW-27A Carburettor

- The Tillotson HW-27A carburettor was designed specifically for the X30 five years ago with the purpose to improve ease of use, it has been extensively tested as it has been equipped as standard on the X30 in the UK and USA since 2014.
- Reduced service cost due to the cheaper price of spare parts in comparison to the previous carburettor; all spare parts must be genuine Tillotson.
- Increased parity as the only permissible carburettor kits allowed for use are the DG-3HW Diaphragm and Gasket Kit and the RK-6HW Repair Kit.
- As the throttle bore on the rear of the carburettor is a larger diameter a revised inlet conveyor has been produced to match. This revised inlet conveyor will be available as a spare part; it is also permissible to alter an existing inlet conveyor to conform to the dimension detailed in this homologation bulletin.