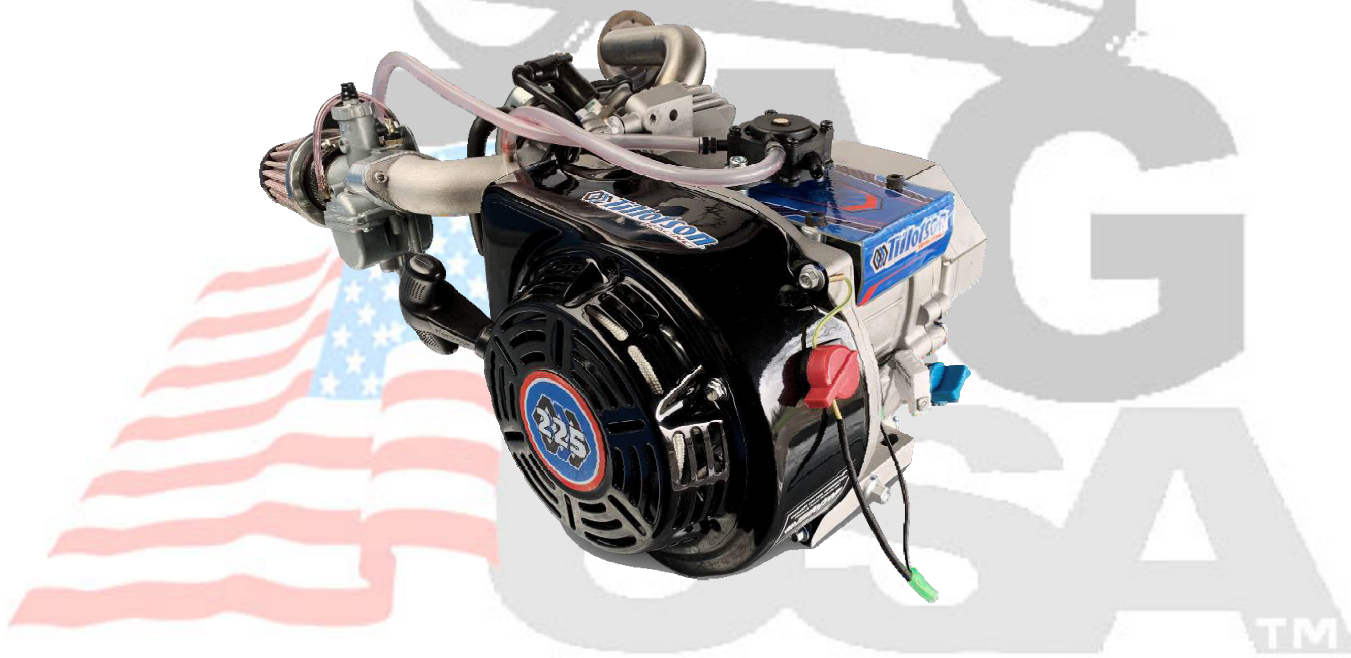


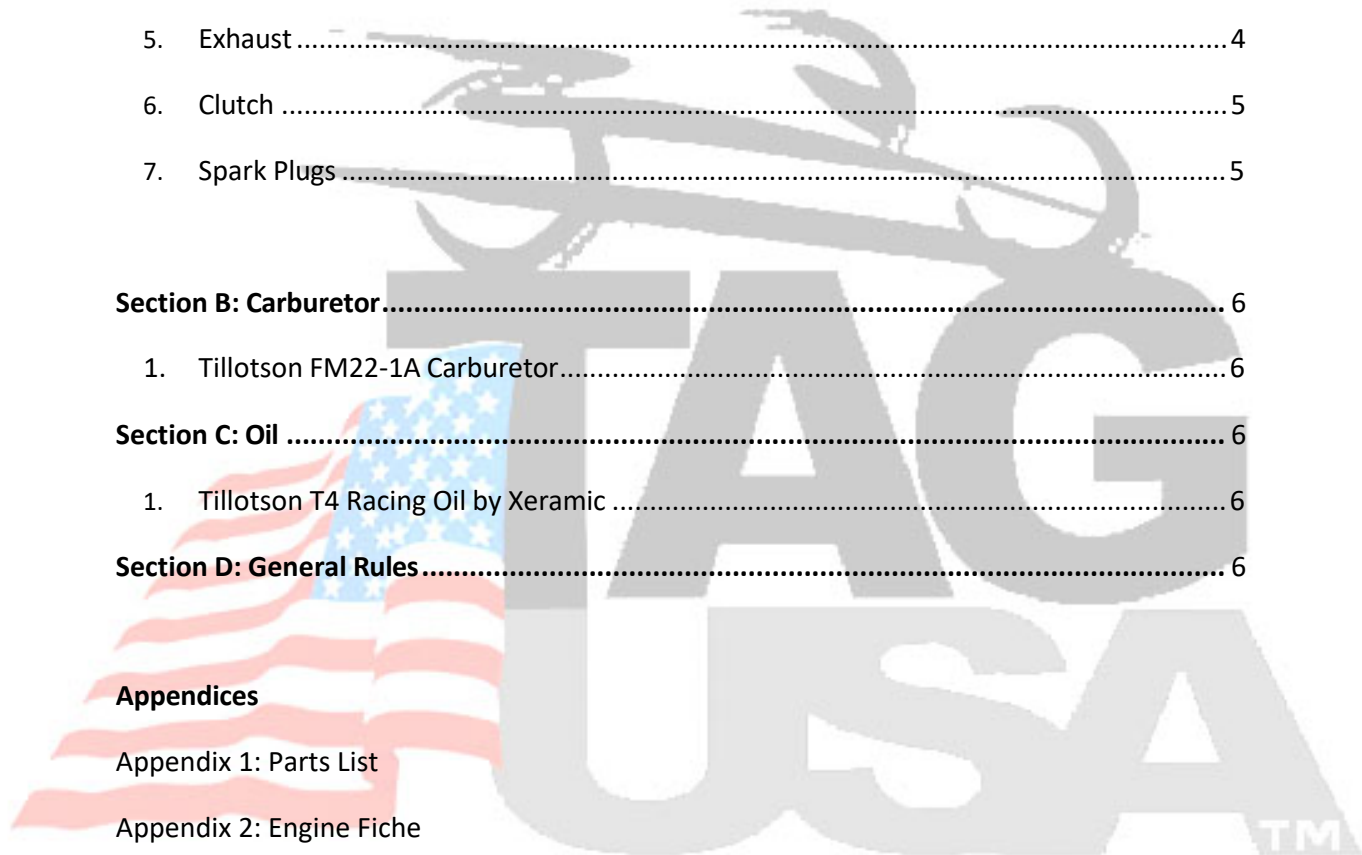


## Tillotson TPP-225RS Engine Rulebook USA 2024



# CONTENTS

<b>Section A: Engine</b> .....	3
1. Tillotson TPP-225RS Engine .....	3
2. Sealing .....	3
3. Material Permitted to Manipulate .....	3
4. Engine Components .....	4
5. Exhaust .....	4
6. Clutch .....	5
7. Spark Plugs .....	5
<b>Section B: Carburetor</b> .....	6
1. Tillotson FM22-1A Carburetor .....	6
<b>Section C: Oil</b> .....	6
1. Tillotson T4 Racing Oil by Xeramic .....	6
<b>Section D: General Rules</b> .....	6
<b>Appendices</b>	
Appendix 1: Parts List	
Appendix 2: Engine Fiche	
Appendix 3: Carburetor Fiche	



## **Section A: Engine**

### **1. Tillotson TPP-225RS Engine:**

- 1.1 The engine must remain as original from factory.
- 1.2 No after-market parts are permitted unless stated in TPP-225RS engine fiche document.
- 1.3 No machining or other modification of interior engine surfaces (deburring, honing, grinding, polishing, sanding, media blasting, heat treatment) is permitted.
- 1.4 All parts are subject to visual comparison and must remain in substantially unaltered form when compared to an original part.
- 1.5 Engine and all components must comply with engine fiche document.

### **2. Sealing:**

- 2.1 TPP-225RS engines must be fitted with the original engine ID Seal correlating with the engine ID number as supplied from the Tillotson factory. If an alternative seal number is identified the engine is not valid for competition.
- 2.2 Tillotson Ltd is the only sealing agent permitted to open the engines and re-seal as necessary.
- 2.3 Two seal types which are currently in use:



- 2.4 Starting from Engine Serial Number 20110001 only the 2021 Production Engine seal is permitted. Any engine from this Serial Number using the previous model engine seal will not be allowed in competition.

### **3. Material Permitted to Manipulate:**

The following areas of adjustment and cleaning are permitted within reason. Any effect that alters the integrity of the components or which in the sole opinion of the scrutineer extends beyond reasonable cleaning is prohibited.

- 3.1 Valve clearances may be adjusted, and valves may be cleaned; however, valves must remain with the factory specification of 45-degree angle only. Valve seats of additional angles and/or angles not comparable to the factory stock of 30-45-60 degrees are not permitted.
- 3.2 Spark plugs may be cleaned to remove carbon.
- 3.3 The piston and combustion chamber may be cleaned to remove carbon.
- 3.4 Damaged thread repair: It is permitted to use Heli-coil or a similar thread repair insert as long as the part, after repair, is within the dimension, weight or measurements set on the engine fiche document.
- 3.5 The inlet manifold gasket can be trimmed to the match the head shape. Use of silicone is permitted with gasket to aid sealing.

#### 4. Engine Components:

- 4.1 Engine ignition switch and wires must remain in original location. It is not permitted to alter the wiring.
- 4.2 It is required to use the original Air filter, P/N: T-AIRFILTER-01. No modification to the filter element is permitted.
- 4.3 A breathable rain sock or protective shield may be attached for wet-weather competition.
- 4.4 Oil breather valve cover: It is required to connect the oil breather pipe to a catch container. The container must be vented to the atmosphere.
- 4.5 Pulse signal from the engine must be taken from the inlet manifold to the fuel pump connection. The length of the pulse hose is recommended not to exceed 28cm.
- 4.6 Only original Fuel Pump is permitted. P/N: FP-10A
- 4.7 It is recommended to use the latest clutch guard as supplied (T-CLU-GRD-01). It is permitted to modify the chain guard if necessary due to chassis design. A minimum of 2 bolts must be used to mount the supplied chain guard. The use of an alternative chain guard is also permitted.
- 4.8 A maximum of one in-line fuel filter is recommended to ensure that dirt and contamination within the fuel system does not affect engine performance. A fuel filter is not mandatory.
- 4.9 Two versions of the inlet manifold are allowed in competition. One earlier version 138220034-PLATE with a machined adapter plate is allowed, as is the 2023 intake manifold supplied with the engine 138220034. No modifications to either intake manifold is permitted.
- 4.10 Blower housing / starter assembly must be original and properly installed. No taping, covering, or restricting of air of any part of this assembly is permitted.
- 4.11 No modifications are allowed to be made to the crankshaft, or crankshaft gear which includes twisting or manipulation.

#### 5. Exhaust:

- 5.1 Exhaust Model EXF5210 or EXF5202 as supplied by RLV will be allowed for competition. It may be specified by the club, track or series organizer if they wish to run one of them only.
- 5.2 2024 EXF5210 Exhaust System one version permitted:  
Pipe: EXF5210, Mount: MNT5210, Silencer: EXF4104.
- 5.3 EXF5202 have two version permitted:  
2020 Version: Silencer Welded to Header Pipe (RLV P/N:TILL4625)  
2021 Version: Silencer (RLV P/N:EXF4125) mounted to Header Pipe (RLV P/N:EXF5200) by T-Bolt Clamp (RLV P/N:FAS6580).
- 5.4 The non-welded silencer must be safety wired to the exhaust header or exhaust header mount.
- 5.5 Exhaust gasket must be original Tillotson PN 138190058, and one and only one piece must be used. Use of silicone is permitted with gasket to aid sealing.
- 5.6 It is grounds for disqualification if the exhaust nuts loosen during a race. It is permitted to use wire on drilled exhaust stud or to replace the studs with bolts drilled for safety wire.
- 5.7 Use of an O2, EGT or CO2 sensor is not permitted.
- 5.8 Exhaust protection is recommended. The exhaust should be completely wrapped with a non-asbestos insulation material or sleeve.

## 6. Clutch:

6.1 The use of one of the following alternative clutches is permitted.

- Noram GE Heavy
- Noram GE Light
- Noram GE Ultimate Heavy
- Noram Ultimate GE Light
- Noram 4000Series
- Max-Torque S-S
- Max-Torque Draggin Skin
- Premier Magnum Heavy
- Premier Magnum Light
- Premier Stinger
- Inferno by Hilliard Fire
- Inferno by Hilliard Flame
- Inferno by Hilliard Blaze
- Inferno by Hilliard Fury

6.2 All clutches must be original as supplied by the manufacturer and no modification or manipulating of material is permitted. The use of either 35 or 219 pitch is allowed for both clutch options.

6.3 It is recommended that the clutch is mounted inboard. It is permitted to mount the clutch outboard if necessary due to chassis design but doing so can put extra stress on the crankshaft.

## 7. Spark Plugs:

7.1 The original spark plug supplied with the engine is recommended. The following spark plugs are permitted for use in unaltered condition:

- NGK BPR6ES
- Autolite AR3910X
- E3-106

7.2 Sealing washer must be in place and remain original on the stock spark plug used. Temperature thermocouple is permitted but the unaltered sealing washer must be in place.



## **Section B: Carburetor**

### **1. Tillotson FM22-1A Carburetor:**

- 1.1 The carburetor must remain as original from the factory.
- 1.2 No after-market parts are permitted.
- 1.3 No machining or other modification of the surface finish is permitted.
- 1.4 Only the Tillotson supplied jets and slides are permitted for use.
- 1.5 All parts are subject to visual comparison and must remain in substantially unaltered form when compared with an original part.
- 1.6 Carburetor and all components must comply with carburetor fiche document.
- 1.7 Air must enter the engine only from the carburetor intake side. Air entering through another opening or method is illegal. A Spray Test method can be used for validation.
- 1.8 Junior engine uses an alternative slide T-CARB-SLIDE-JR2 measuring 47.00mm minimum, and uses size 110 main jet

## **Section C: Oil**

### **1. Tillotson T4 Racing Oil by Xeramic:**

- 1.1 Tillotson T4 Racing Oil by Xeramic is the recommended for use in the T212RS engine for competition.
- 1.2 Recommended volume of oil to be filled is 500ml/17oz.
- 1.3 Any additives or substances mixed with the oil is strictly prohibited.
- 1.4 Failure of the DYE test will result in penalties decided by event organizers.

## **Section D: General Rules**

1. Only Tillotson authorized personnel are permitted to make changes to the rules package, fiche documentation or technical specification.
2. Tillotson distributors and their dealers are not authorised to alter any technical specifications or competition rules relating to the engine.
3. Any alterations, corrections and/or addendums will be submitted to sanctioning bodies and posted at [www.tillotson.ie](http://www.tillotson.ie) and will become effective on the date specified in the posting.
4. Previous mid-season updates are to be considered void upon publication of an annual update.
5. Technical inspection tools are available for the convenience of checking components against the measures set on the fiche document. The tools are available from Tillotson. For further enquiries contact [sales@tillotson.ie](mailto:sales@tillotson.ie).
6. Pump or station fuel / gas is permitted or as set in the supplementary regulations set by the local track, club or race series where competing (recommend not to use anything higher than 93 octane). Use of fuel additives is not permitted.

***Refusal to adhere to any of the rules set out will be investigated by the race officials and may result in disqualification from the race results.***

## APPENDIX 1

### TPP-225RS Parts List



#### 1.1 TPP-225RS ENGINE PACKAGES

<u>TILLOTSON P/N</u>	<u>DESCRIPTION</u>
TPP225RS-PKG-ROWXC	225RS COMPLETE USA VERSION LESS CLUTCH
TPP225RS-SB2	225RS LONG BLOCK ENGINE (LESS FLYWHEEL, IGNITION AND ANCILLARIES)

#### 1.2 CRANKCASE & ACCESSORIES

<u>TILLOTSON P/N</u>	<u>DESCRIPTION</u>
138220002	CRANKCASE ASSEMBLY-S
138190002	BEARING, CRANKCASE-S
138220028	CRANKCASE PLATE-S
138220026	HEXAGON SOCKET HEAD CAP SCREW M6*20-S
138220025	SPACER-TOP MOUNTING PLATE
138190004	WASHER, DRAIN PLUG-S
138190005	BOLT, DRAIN PLUG-S
138190003	OIL SEAL-S
138220053	STICKER, TOP MOUNTING PLATE-S

#### 1.3 CRANKSHAFT, CONNECTING ROD & PISTON

<u>TILLOTSON P/N</u>	<u>DESCRIPTION</u>
138210107	CRANKSHAFT ASSEMBLY-S
138220074	CONNECTING ROD ASSEMBLY-S
138220017	HALF-SLEEVE BEARING-S
138220016	BOLT, CONNECTING ROD-S
138220004	PISTON-S
138220006	PISTON PIN-S
138220008	CIRCLIP, PISTON PIN-S
138220005	RING SET, PISTON-S

#### 1.4 CRANKCASE COVER, CLUTCH & CHAIN GUARDS

<u>TILLOTSON P/N</u>	<u>DESCRIPTION</u>
138190017	GASKET, CRANKCASE-S
138190016	DOWEL PIN BUSHING, CRANKCASE-S
138190002	BEARING, CRANKCASE-S
138190018	CRANKCASE COVER-S
138190020	DIPSTICK ASSEMBLY-S
138190019	OIL PLUG ASSEMBLY-S
138190003	OIL SEAL-S
138190015	FLANGE BOLT M8*30-S
138220032	CHAIN GUARD-S ALUMINIUM TYPE 2020
138190060	FLANGE BOLT 5/16*20-S
T-CLU-GRD-01	CLUTCH GUARD 2021

## 1.5 CYLINDER HEAD &amp; COMPONENTS

<u>TILLOTSON P/N</u>	<u>DESCRIPTION</u>
138190037	FLANGE BOLT M6*12-S
138190088	VALVE COVER-S
138190096	TUBE, BREATHER-S
138190038	GASKET, VALVE COVER-S
138190021	FLANGE BOLT M8*60-S
T-E3-106	SPARK PLUG, E3
138210100	CYLINDER HEAD ASSEMBLY-S
138190056	STUD, EXHAUST MANIFOLD-S
138220033	STUD, INTAKE MANIFOLD-S
138220030	CYLINDER HEAD GASKET-S
138190022	PIN, DOWEL, CYLINDER HEAD-S
138220014	FLANGE BOLT M6*16-S
138210125	AIR LEADING COVER-S

## 1.6 VALVE TRAIN &amp; CAMSHAFT ASSEMBLY

<u>TILLOTSON P/N</u>	<u>DESCRIPTION</u>
138190035	VALVE LOCKING NUT-S
138190034	VALVE ADJUSTING NUT-S
138190033	ROCKER ARM-S
138190030	ROCKER ARM SUPPORT-S
138190031	PLATE, PUSH ROD GUIDE-S
138190032	PUSH ROD-S
138190013	TAPPET, VALVE-S
138220012	CAMSHAFT ASSEMBLY-S
138210101	VALVE, INTAKE-S
138210102	VALVE, EXHAUST-S
138210112	VALVE SEAL-S
138220029	VALVE SPRING (26LBS)-S
138210103	RETAINER, VALVE SPRING-S
138210104	VALVE COLLET-S



## 1.7 CARBURETTOR, AIR FILTER, FUEL PUMP &amp; ACCESSORIES

<u>TILLOTSON P/N</u>	<u>DESCRIPTION</u>
138190050	GASKET, INTAKE MANIFOLD-S
138220034-PLATE	INTAKE MANIFOLD ASSEMBLY WITH ADAPTER PLATE
138220073	SPRING WASHER, M6 INTAKE STUD
138220020	STYLE 1 HEXAGON NUT,M6 INTAKE STUD
FP-10A	FUEL PUMP
138220035	GASKET, CARBURETOR-S
FM22-1A	CARBURETOR, FM22-1A
306222598	CARBURETOR MOUNTING BOLTS, M6 x 16mm
T-AIRFILTER-01	AIR FILTER-S
138190055	FUEL LINE CLIP-S
138190092	FUEL LINE PULSE CONNECTION
138190093	PULSE FUEL LINE PROTECTIVE SLEEVE-S

## 1.8 STARTER, RECOIL, FLYWHEEL &amp; IGNITION COIL

<u>TILLOTSON P/N</u>	<u>DESCRIPTION</u>
138220024	FLYWHEEL ADAPTOR-2019
138220063	FLYWHEEL ADAPTOR-2020
138220022	HEXAGON SOCKET HEAD CAP SCREW M6*12-S
138220007	PVL IGNITION COIL, 6500rpm.-S
138220067	PVL IGNITION COIL, 6000rpm.-S
138220068	PVL IGNITION COIL, 5800rpm.-S
138220019	IGNITION COIL STOP WIRE-S
138220023	HEXAGON SOCKET HEAD CAP SCREW 3/16 *20-S
138220018	FLYWHEEL ASSEMBLY-S
138220040	STARTER PULLEY CUP(47mm)-S
138190042	NUT, M14-S
138220069	STARTER ASSY, PULL(black)-S
138190047	KILL SWITCH-S
138220061	BLOWER HOUSING ONLY (BLACK)
138220066	STARTER RECOIL ONLY (BLACK)
138190037	FLANGE BOLT M6*12-S

## 1.9 EXHAUST OPTIONS &amp; COMPONENTS

<u>TILLOTSON P/N</u>	<u>DESCRIPTION</u>
138190058	GASKET, EXHAUST-S
T-EXH-001/RLV EXF5202	EXHAUST SILENCER-USA VERSION
RLV EXF5207	EXHAUST SILENCER/SOUND ORDINANCE USA VERSION
138220021	SPRING WASHER GB 93-87 8-S
138190057	EXHAUST NUT-S
138220027	SPACER, SILENCER BRACKET-S
138220014	FLANGE BOLT M6*16-S
138220054	EXHAUST WRAP-S
138220055	HOSE CLAMP(21-38)-S

## 1.10 AUXILIARY PARTS

<u>TILLOTSON P/N</u>	<u>DESCRIPTION</u>
138220046	GASKET SET
T-OIL-01	T4 ENGINE OIL



Contact Information and Resources

Email: [sales@tillotson.ie](mailto:sales@tillotson.ie)

Website: [www.tillotson.ie](http://www.tillotson.ie)

YouTube Page: <https://youtube.com/channel/UCZgldHZI8EBj93WnvcKFRHA>

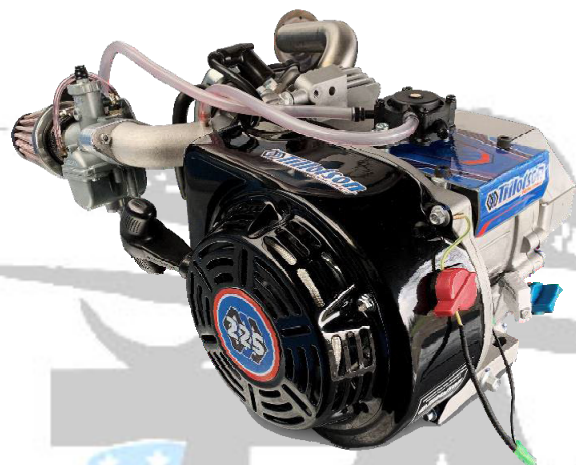


## APPENDIX 2

### Engine Fiche

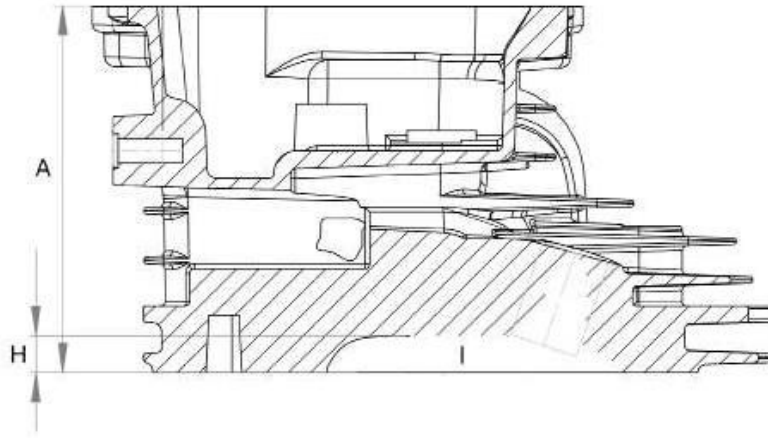
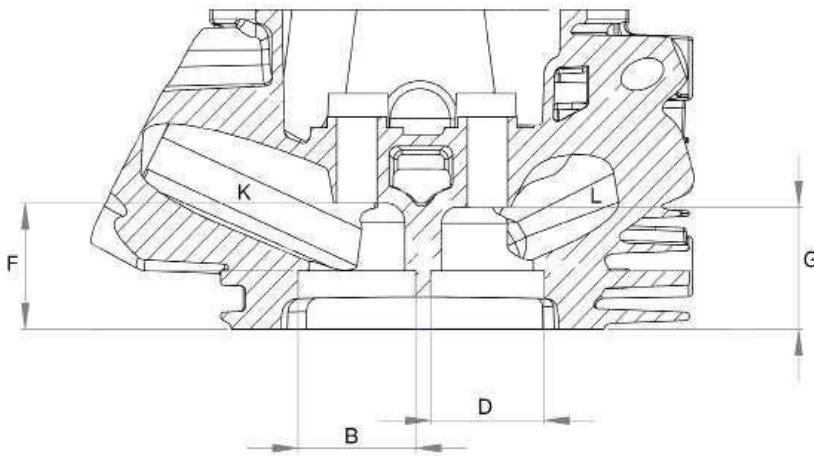


## Tillotson TPP-225RS Engine Fiche USA2023



Feature	Specification
Engine Type	2 Valve 4-Stroke
Fuel Type	Unleaded Petrol
Cylinder	Single/35° Heavy Reinforced Aluminum Block w/Cast Iron Sleeve
Cylinder Volume	225cc
Bore	72 mm/2.834 in maximum
Stroke	55 mm/2.165 in maximum
Piston - Deck Clearance	0.25mm +/- 0.23mm (0.00984" +/- 0.00905")
Cooling System	Air
Carburetor	Tillotson FM22-1A
Cylinder Head	Aluminum Alloy 2-Valve Over Head Valve
Combustion Chamber Shape	26cc Factory Designed
Compression Ratio	9:1
Ignition Coil	PVL/Tillotson 4 Poles Digital Built in Limiter 6500RPMs
Flywheel	Digital Ignition Billet Aluminum 29° Advance Timing
Connecting Rod	Race Spec w/Bearing Inserts
Rod Length	88 mm/3.4646 in
Camshaft	Race Cam with Built in Compression Release
Engine Oil and Volume	Tillotson T4 Racing Oil, 500 ml ± 50 ml

Engines must conform to the technical data provided with no modification or machining allowed. Parts must be original as supplied by the manufacturer.



**Cylinder Head PN:138210100**

A. Overall Height	74.02 mm minimum
B. Intake Seat ID	24.75 mm +.1 mm
C. Intake Seat Angle	60-45-30
D. Exhaust Seat ID	22.6 mm +.1 mm
E. Exhaust Seat Angle	60-45-30
F. Bowl Depth Intake	29.3 mm± .2 mm
G. Bowl Depth Exhaust	28.4 mm ± .2 mm
H. Combustion Chamber Depth	7.0 mm± .2 mm
I. Combustion Chamber Vol	19.4cc minimum
J. Valve Head Height from Gasket Surface	6.5 mm± .3 mm
K. Intake Port Volume	30cc maximum
L. Exhaust Port Volume	24cc maximum



**Cylinder Head Gasket PN:138220030**

Material	Composite
Thickness	1.26 mm ± 0.3 mm
Fire Ring	Steel



**Rocker Arm PN: 138190033**

Material	Steel
Ratio	1:1 max
Length	54.9 mm minimum
Tip Shape	Rectangular
Weight	16.5g ± .5g



**Guide Plate PN 138190031**

Material	Steel
----------	-------



**Valve Lifter/Tappet PN: 138190013**

Material	Mild Steel
Overall Length	34.7 mm ± .2 mm
Stem Diameter	8 mm ± .2 mm
Head Diameter	23.6 mm ± .2 mm
Weight	19.5 g ± 1 g



**Valve Spring PN 138220029**

Material	Steel
Relaxed Height	26mm ± .2 mm
Wire Diameter	2.5 mm ± .2 mm
Overall O.D.	21.1mm ± .2 mm
Spring Force	26 lbs max @ .815 in (20.7mm) height



**Valve Spring Retainer & Lock PN: 138210103**

Material	Steel
Overall Height	7.9 mm min
Overall O.D	20.7 mm ± .2 mm
Retainer Weight	6.4 g min



**Push Rod PN: 138190032**

Material	Steel
Overall Length	134 mm ± .25 mm
Ball End Diameter	5 mm ± .2 mm
Rod Diameter	4 mm ± .2 mm
Weight	11 g ± .5 g



**Intake Valve PN: 138210101**

Material	Alloy Steel
Overall Length	63.8 mm min
Stem Diameter	4.8 mm min
Head Diameter	27 mm ± .2 mm
Valve Margin	2.3 mm ± 0.5 mm
Valve Angle	45°
Weight	21 g ± .25 g
Valve Marking	IN Z81 YF



**Exhaust Valve PN 138210102**

Material	Alloy Steel
Overall Length	63.8 mm min
Stem Diameter	4.8 mm min
Head Diameter	25 mm ± .2 mm
Valve Margin	2.3 mm ± 0.5 mm
Valve Angle	45°
Weight	19.5 g ± .5 g
Valve Marking	EX Z81 YF



**Camshaft Specs PN:138220012**



**Camshaft lift table**

STANDARD VALUE			
EXHAUST		INTAKE	
Lift (inch)	Phase position (°)	Lift (inch)	Phase position (°)
0.006	BBDC 83 +/- 4°	0.006	BTDC 45 +/- 4°
0.05	BBDC 52 +/- 4°	0.05	BTDC 16 +/- 4°
0.1	BBDC 33 +/- 4°	0.1	ATDC 3 +/- 4°
0.15	ABDC 15 +/- 4°	0.15	ATDC 21 +/- 4°
0.2	ABDC 5.5 +/- 4°	0.2	ATDC 42 +/- 4°
0.25	ABDC 36 +/- 4°	0.25	ATDC 73 +/- 4°
0.269		Running Lift @ Retainer with zero valve lash	
0.269		0.269	
0.25	BTDC 85 +/- 4°	0.25	BBDC 51 +/- 4°
0.2	BTDC 54 +/- 4°	0.2	BBDC 18 +/- 4°
0.15	BTDC 33 +/- 4°	0.15	BBDC 3 +/- 4°
0.1	BTDC 15 +/- 4°	0.1	ABDC 21.5 +/- 4°
0.05	ATDC 3.5 +/- 4°	0.05	ABDC 40 +/- 4°
0.006	ATDC 32.5 +/- 4°	0.006	ABDC 67 +/- 4°
236 +/- 4°	Duration @ .050		236 +/- 4°
103 +/- 2°	Centreline		114.5 +/- 2°

Note: Due to wear on the Cam lobes over time it is possible to see an added variation from the tolerances set out in the Cam Lift Table. We can accept an additional 2° for two measurement points but anything beyond this is not permitted.



**Ignition Coil PN:138220007**

RPM Limit 6500  
Brand PVL  
Type Digital



**Ignition Coil Alternative Version**



**Flywheel PN:138220018**

Material Billet Aluminum  
Diameter 165mm ± .2mm  
Weight 1.43 kg ± 0.1 kg  
Timing 29°

**Flywheel Keyway PN: T-FLY-KEY-01**



Max Height: 5.45mm | Max Length: 18mm

**Intake Manifold with Machined Adapter Plate PN: 138220034-PLATE**  
Bore Diameter: 27.8mm Max

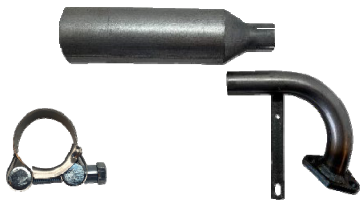


**Intake Manifold 2023 Manifold 2023 PN: 138220034**  
Bore Diameter: 28.8mm Max





**Exhaust Header/Muffler Type B  
(P/N: T-EXH-001)**

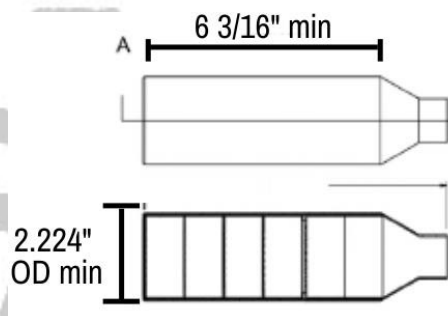


**Exhaust Connector for EXF4110 Silencer (P/N EXF5205):**



**Exhaust Header / Muffler**

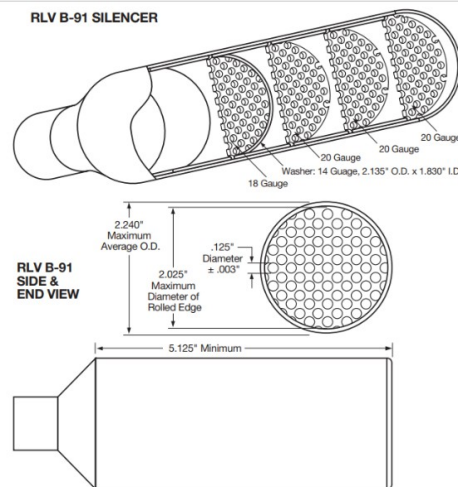
PN: T-EXH-001  
Model TILL 4625  
Brand RLV  
Qty. Baffles 5  
Dia. Holes in baffles 3.17mm +/- 0.5mm



Screens: (4) 20 ga & (1) 18 ga  
Screen Hole Dia: .1285" No Go

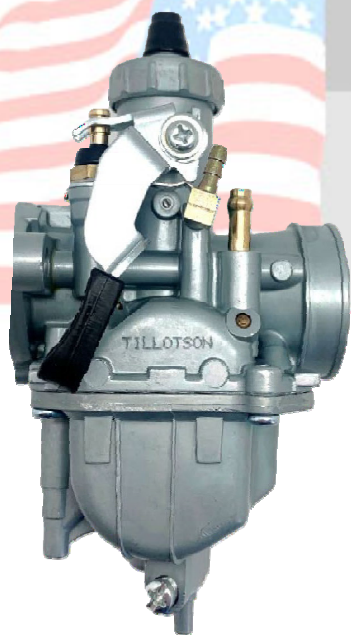
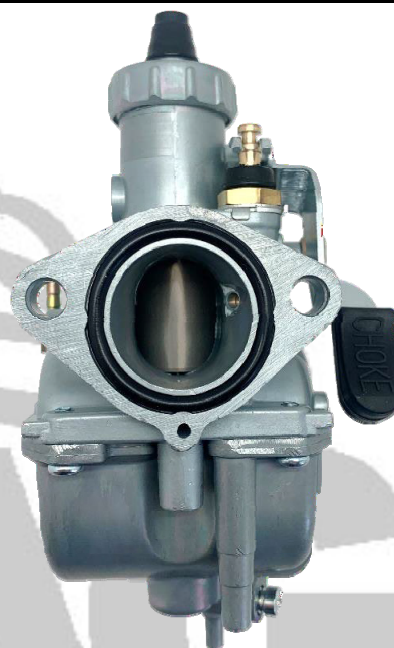
**Exhaust Header / Muffler**

Model EXF5210  
Brand RLV



**APPENDIX 3****Carburetor Fiche**

**CARBURETOR**  
**Tillotson FM22-1A**



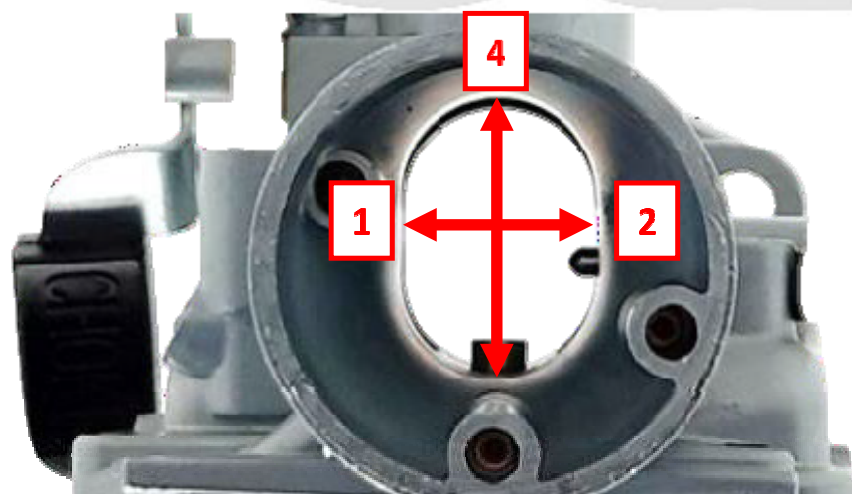
Manufacturer	<b>TILLOTSON LTD.</b>
Make	<b>TILLOTSON</b>
Model	<b>FM22-1A</b>

## Measurements & Tolerance Index

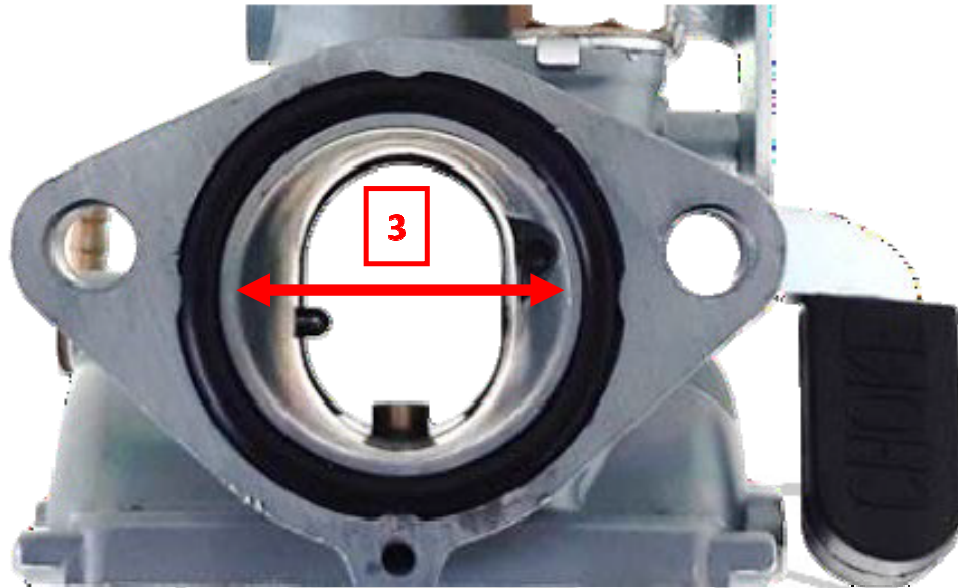
ITEM	DESCRIPTION	TOLERANCE
1	Venturi Horizontal Measurement Centre	18.22mm Max (0.717")
2	Venturi Horizontal Measurement Max	18.72mm Max (0.737")
3	Throttle Bore Diameter	26.25mm Max (1.034")
4	Venturi Vertical Measurement	25.05mm Max (0.986")
5	Air Pick Off Hole	1.9mm +/- 0.1mm (0.075" +/- 0.004")
6	Venturi Idle Air Hole	1.9mm +/- 0.1mm (0.075" +/- 0.004")
7	Fuel In	1.65mm Max (0.065")
8	Main Feed Hole	2.65mm Max (0.104")
9	Pilot Feed Hole	0.97mm +/- 0.06mm (0.038" +/- 0.002")
10	Idle Feed Hole	0.80mm +/- 0.05mm (0.32" +/- 0.002")
11	Choke Feed Hole	0.65mm Max (0.26")
12	Emulsion Tube & Main Jet Length	39.0mm +/- 0.15mm (1.536" +/- 0.007")
13	Main Jet Orifice	1.20mm +/- 0.04mm (0.046" +/- 0.0015")
14	Main Jet Emulsion Orifice x12	0.86mm Max (0.034")
15	Pilot Jet Length	29.05 +/- 0.15mm (1.144" +/- 0.007")
16	Pilot Jet Orifice	0.36mm +/- 0.04mm (0.014" +/- 0.0015")
17	Pilot Jet Emulsion x6	0.73mm Max (0.029")
18	Slide Length Max	37.00mm +/- 0.15mm (1.457" +/- 0.007")
19	Slide Diameter	20.4mm +/- 0.15mm (0.804" +/- 0.007")
20	Needle Length	50.0mm +/- 0.2mm (1.970 +/- 0.01")

## Measurement Diagrams

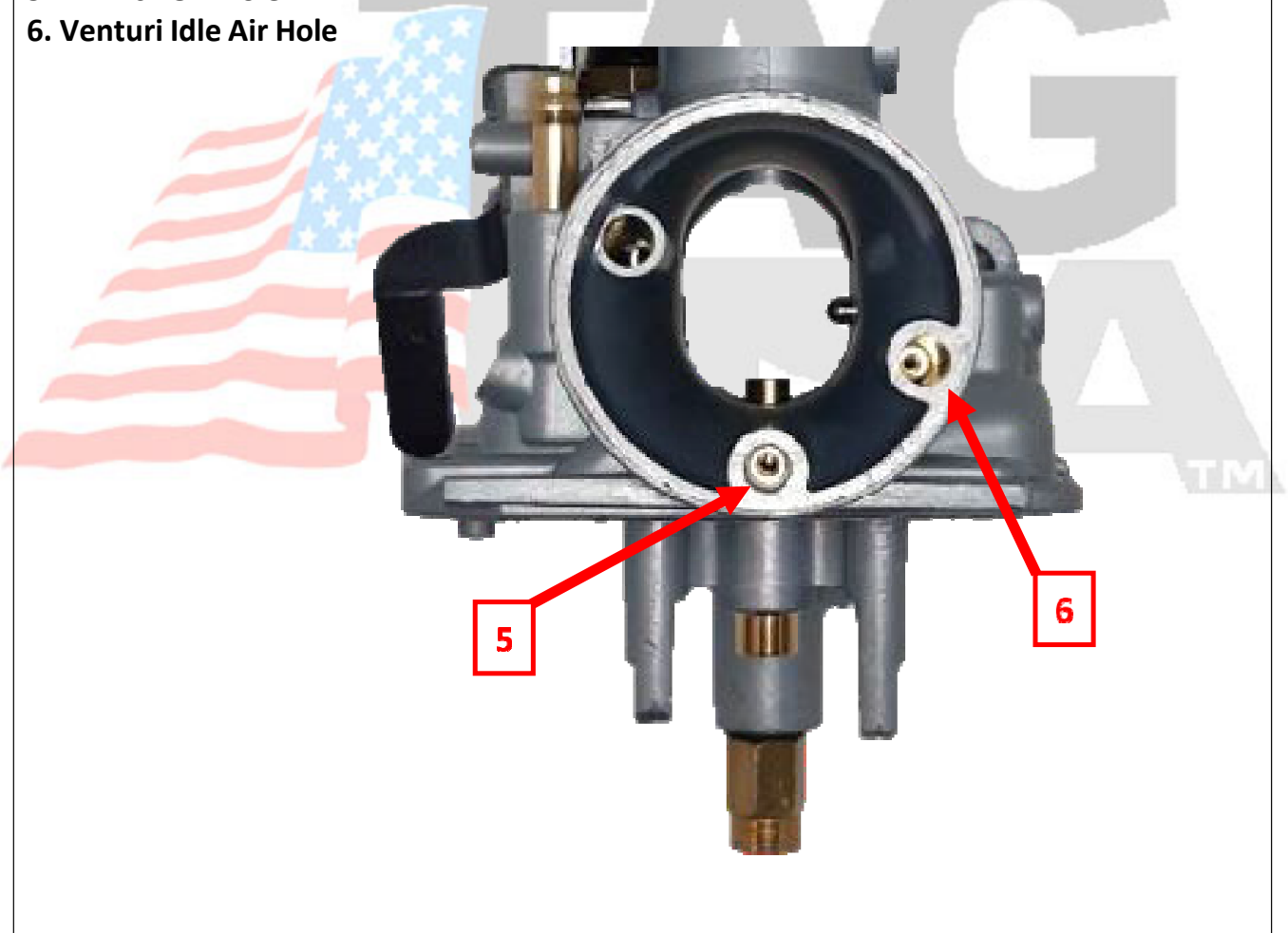
1. Venturi Horizontal Measurement Centre
2. Venturi Horizontal Measurement Max
4. Venturi Vertical Measurement



### 3. Venturi Horizontal Measurement Centre

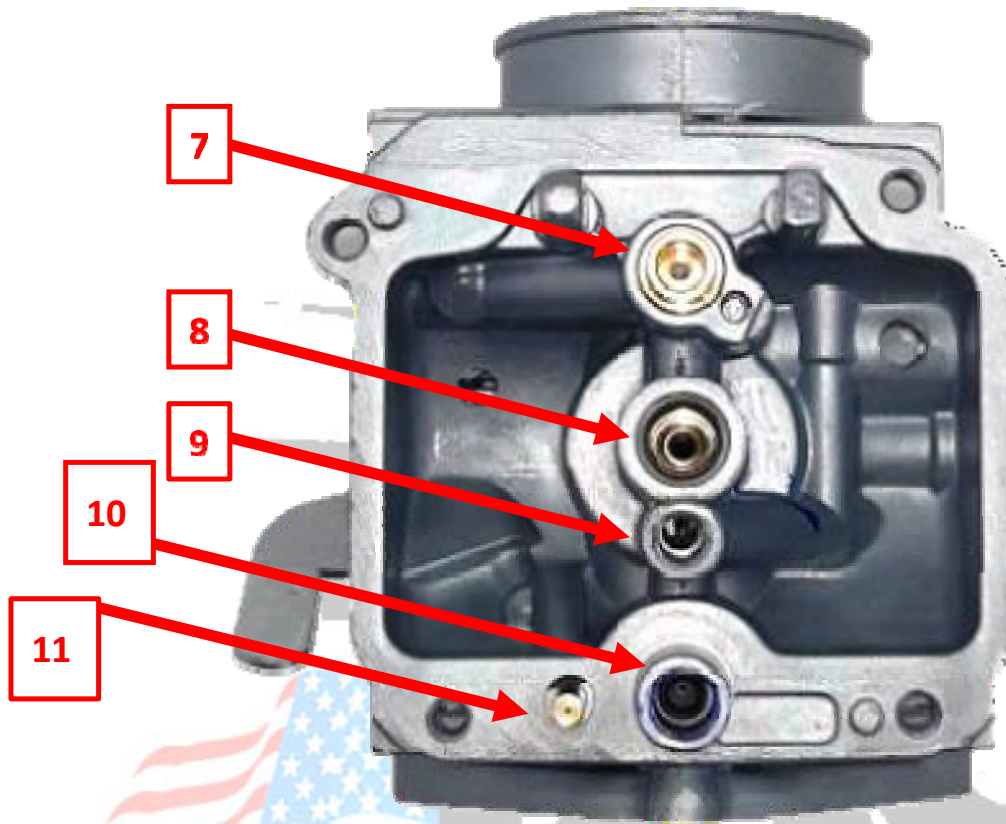


- 5. Air Pick Off Hole
- 6. Venturi Idle Air Hole

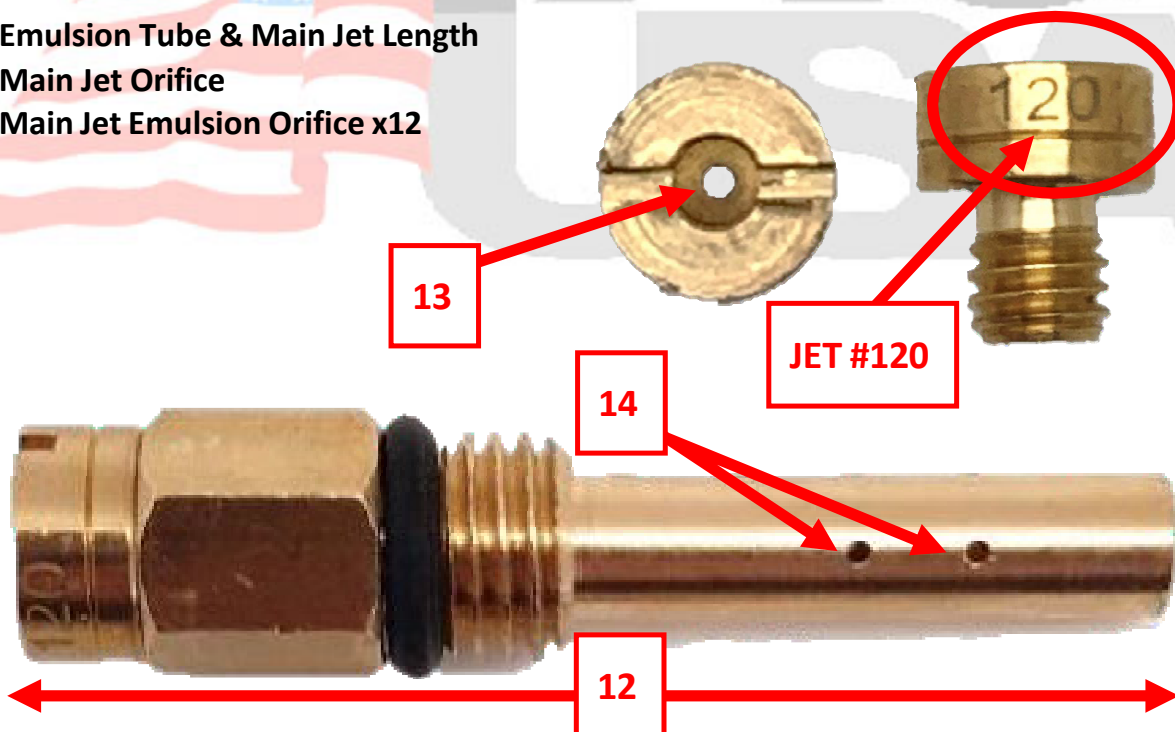




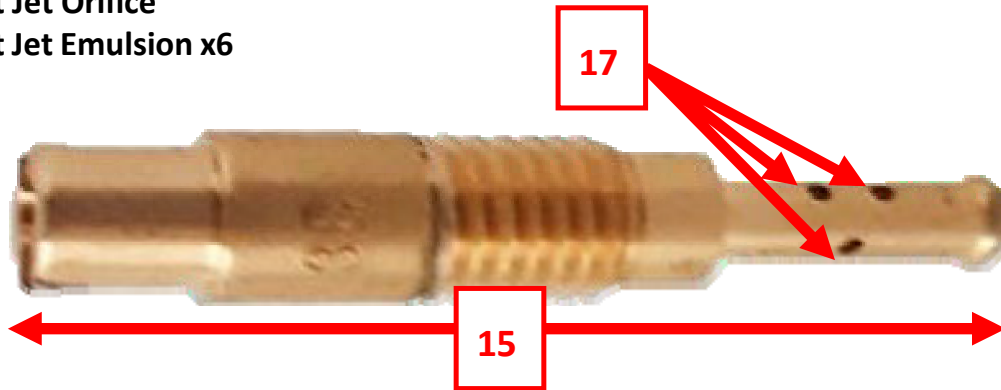
- 7. Fuel In
- 8. Main Feed Hole
- 9. Pilot Hole
- 10. Idle Hole
- 11. Choke Feed Hole



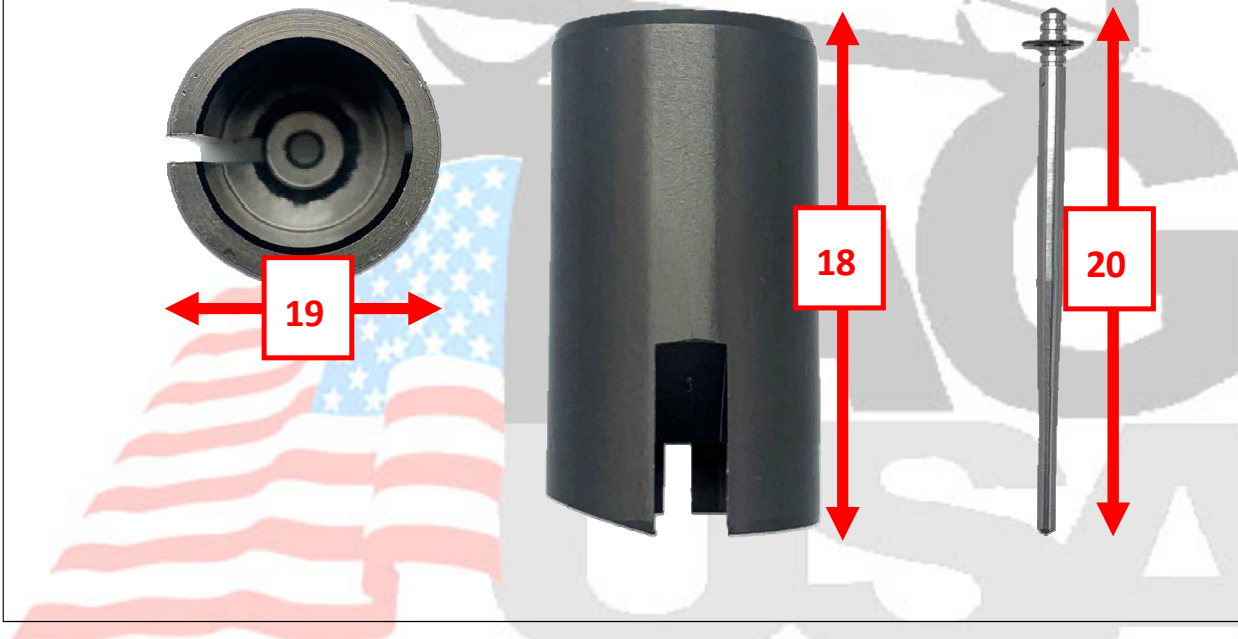
- 12. Emulsion Tube & Main Jet Length
- 13. Main Jet Orifice
- 14. Main Jet Emulsion Orifice x12



- 15. Pilot Jet Length
- 16. Pilot Jet Orifice
- 17. Pilot Jet Emulsion x6



- 18. Slide Length Max
- 19. Slide Diameter
- 20. Needle Length



### Contact Information and Resources

Email: [sales@tillotson.ie](mailto:sales@tillotson.ie)

Website: [www.tillotson.ie](http://www.tillotson.ie)

YouTube Page: <https://youtube.com/channel/UCZgldHZI8EBj93WnvcKFRHA>

