



T4 Senior/Senior 168

T4 Series Global Regulations 2025



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Section A: Chassis

1. Tillotson T4 chassis: P/N: T-CHS-CS1

- 1.1. No upgrades or after-market components are permitted to install on the chassis.
- 1.2. No modifications or structural changes can be made to either the chassis or any related components.
- 1.3. All components must comply with diagram of T-CHS-CS1 (Ref: Appendix 1)
- 1.4. The chassis colour must remain as originally supplied. Tillotson Blue (RAL5015).
- 1.5. All original Tillotson chassis BOM components since 2019 are permitted for use unless otherwise stated.

2. Rear Axle: P/N: T-AXL-50A1030M

- 2.1. Tillotson laser marked axle is mandatory to use as originally supplied.
- 2.2. Dimensions: Ø50X2X1030MM
- 2.3. No shortening of the axle is allowed. Total Length 1030mm.
- 2.4. Axle ride height can be adjusted between the three pre-set positions of Standard/High/Low. No additional machining can be made to alter the position of axle.
- 2.5. Overall maximum rear width of 140CM may not be exceeded. Measurement is taken from outside point of both rear rims.
- 2.6. In Wet weather conditions the Minimum Rear Width permitted is 1330mm. Measurement is made from the edge of rim on both sides.

3. Rear Axle Bearings: P/N: T-BRG-5080

- 3.1. Dimensions Ø50X80MM with pins for Ø50mm axle.

4. Rear Axle Bearing Carrier: P/N: T-SUP-BB80

- 4.1. Dimensions: Ø80MM for Ø50mm axle.
- 4.2. ANODIZED- TILLOTSON laser marked part is mandatory.
- 4.3. All mounting bolts must be installed in bearing carrier.
- 4.4. Bearing carrier mounting position can be adjusted between three pre-set positions to achieve Axle running position of Low/Standard/High. No additional machining can be made to change the mounting position of bearing carriers.

5. Sprocket Carrier: P/N: T-SUP-SPT50

- 5.1. ANODIZED- TILLOTSON laser marked part is mandatory.
- 5.2. The Sprocket size is free, unless otherwise stated, for mounting onto the carrier.
- 5.3. A sprocket protector is recommended but optional.

6. Hubs

- 6.1. Rear Hubs T-HUB-RR5095 / T-HUB-RR5090
- 6.2. Front Hubs T-HUB-FRT2590.
- 6.3. TILLOTSON HUB ANODIZED laser marked part is mandatory.
- 6.4. No alternative Hub lengths are permitted.

7. Brake System: P/N: T-BRK-SYS50

- 7.1. Brake system ANODIZED with Tillotson Laser Marking along with all original related components is mandatory. (Ref: Appendix 1)
- 7.2. Brake Safety cable must be installed: P/N: T-BRK-SFT350
- 7.3. Ø50MM Brake disc Carrier: P/N: T-BRK-DISCSUP
- 7.4. BLACK LINE REAR BRAKE DISC: P/N: T-BRK-DISC
- 7.5. TILLOTSON BRAKE PUMP Ø19MM ANODIZED: P/N: T-BRK-PUMP
- 7.6. R1 REAR BRAKE PAD BLUE: P/N: T-BRK-PADB

8. Steering System and Components:

- 8.1. Only original supplied material is permitted as per T-CHS-CS1 (Ref: Appendix 1)
- 8.2. TILLOTSON LEFT SPINDLE MOD. R Ø25MM 10° CHROMED: P/N: T-SPD-LFT25
- 8.3. TILLOTSON RIGHT SPINDLE MOD. R Ø25MM 10° CHROMED: P/N: T-SPD-RGH25
- 8.4. Front Ride Height can be adjusted by changing the configuration of the spacers provided. There are three optional positions Low/Standard/High
- 8.5. STEERING COLUMN SUPPORT 2 HOLES: P/N: T-STR-COLSUP1
- 8.6. TIE ROD L270MM ANODIZED TILLOTSON: P/N: T-TIE-ROD270
- 8.7. Tie rods can be installed in any of the available mounting positions on both steering columns and left/right spindles.
- 8.8. UPPER HEAD ECCENTRIC 2MM Ø10MM
- 8.9. LOWER HEAD ECCENTRIC 2MM Ø10MM
- 8.10. Only Caster / Camber Pills provided as standard are permitted for use. Any configuration within these perimeters is allowed.
- 8.11. TILLOTSON KART STEERING WHEEL OPTIONS: P/N: T-STR-WHL1
- 8.12. TILLOTSON STEERING WHEEL SLANTING HUB ANOD: P/N: T-STR-HUB1
- 8.13. Only original steering wheels and steering boss can be used with the exception of one optional part which is an angled steering plate (T-STR-7SLPL), of which a maximum of 2pcs can be mounted. The steering boss has two optional mounting positions of High/Low. No alternative mounting positions are permitted.
- 8.14. Data Acquisition / Lap timer / RPM counter permitted to be installed.

9. Seats & Supports:

- 9.1. Only original Tillotson Silver Line Racing Seats are permitted for use.
- 9.2. Seat P/N: T-SE-RS1 / T-SE-RS2 / T-SE-RS3 / T-SE-RS4 / T-SE-RS5.
- 9.3. At least 1 x Seat support MUST be installed on the left side.
- 9.4. One seat support must be installed but limited to Qty 1pc only - a second seat support is not permitted. Options P/N: T-SE- SUP280 / T-SESUP300 / T-SE-SUP320 / T-SE-SUP340 / T-SE- SUP360 / T-SE-SUP400.
- 9.5. No additional bars or extension bars are permitted for use to alter the mounting position of seats. Seats must be mounted to chassis seat support points.

10. Rims: Specific Regulations for T4 Nations Cup 2025

- 10.1. Tillotson original T4 DWT Rims only are mandatory
- 10.2. Slick Rims options must comply as follow:
 - 10.2.1. T4 DWT Rim: T-RIM-FR130-DWT and T-RIM-RR212-DWT
 - 10.2.2. It is not permitted to use any other model or size Rim for use with slick tyres.
- 10.3. Wet Rims options must comply as follows:
 - 10.3.1. T4 Aluminum Rim: 2 x T-RIM-FRT130 and 2 x T-RIM-RR180.

- 10.3.2. It is not permitted to use any other size Rim for use with wet tyres.
- 10.4. It is permitted to use alternative beads and O-rings in the Rims.

11. Bodywork: KG-506 and KG507

- 11.1. Only KG506 and KG507 bodywork is permitted for use.
- 11.2. CIK 2015 Front Spoiler Mounted Blocks are mandatory: P/N: T-SPO-PLATE.
- 11.3. It is mandatory to run only the KG RRC3 Rear Bumper as per current FIA Technical Homologation. P/N: T-SPO-RRC3.

12. Body Work Supports:

- 12.1. Its mandatory to use the CIK stamped Bodywork supports as supplied.

13. Engine Mount:

- 13.1. Engine mount P/N: T-ENG-MNT1 / T-ENG-MNT2 or T-ENG-MNT3

14. Fuel Tanks:

- 14.1. Fuel tanks must be secured with supplied mounting kits.
- 14.2. Fuel tanks must have breather pipe/overflow bottle.
- 14.3. Two fuel tanks are permitted for use:
- P/N: T-TNK-8L: Standard 8LTR fuel tank as supplied.
 - P/N: T-TNK-3L: Optional 3LTR fuel tank to reduce weight.

15. Chain Guard:

- 15.1. Only one version of Chain Guard is permitted, which is the original version supplied with the T4 Kart Package – P/N: T-CHN-GUARD2.
- 15.2. The Chain Guard is to be mounted using only the original chain guard mounting bracket and support kit – P/N: T-CHN-GRDSUPP

16. Permitted Optional Extras:

- 16.1. P/N: T-PLT-FR01: TILLOTSON FOOTREST PLATE CHROMED
- 16.2. P/N: T-PLT-FR02: Tillotson Footrest Plate Type 2
- 16.3. P/N: T-PED-FTSY-01: Tillotson footrest system 4-5mm
- 16.4. P/N: T-PEDAL-EXT-SET-01: Pedal Extenders Set PDL-ADP
- 16.5. P/N: T-FRA-PR01: CHASSIS PROTECTION KIT
- 16.6. P/N: T-SPR-PROT: SPROCKET PROTECTION KIT
- 16.7. P/N: T-STR-7SLPL: STEERING WHEEL PLATE – 7 DEG SLANTING
- 16.8. All optional extras must be used as originally supplied by Tillotson, except 16.5 and 16.6

17. Telemetry Systems:

- 17.1. It is permitted to install onto the kart a telemetry system/data logger of any brand which must be securely mounted to the Steering wheel.
- 17.2. Telemetry system/data loggers can only be used for Lap times, RPM, GPS Data.
- 17.3. It is not permitted to install expansion packs for additional sensors such O2, EGT or CO2
- 17.4. No modification of any kart components is permitted to fit sensors.

Section B: Engine

1. Tillotson TPP225RS-02 Engine:

- 1.1 The engine must remain as original from factory.
- 1.2 No after-market parts are permitted unless stated in TPP225RS-02 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.
- 1.6 Engine fairings / covers must remain as original with no aftermarket stickers permitted. It is allowed to run without the original stickers if removed for any reason.

2. Sealing:

- 2.1 TPP225RS-02 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 are the only sealing agent permitted to open the engines and re-seal as necessary unless there is an appointed sealing agent in the designated country.
- 2.3 Sealing agent must notify Tillotson immediately after changes are made to any engine seal numbers.
- 2.4 Two seal types which are currently in use:

2021 onwards Production



2020 Production



- 2.5 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. Re-surfacing of the valve seat is permitted but it must remain as per the original valve seat angles. 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 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 mandatory to use the original Air filter, P/N: T-AIRFILTER-01. No modification to the filter element is permitted.
- 4.3 The rain sock or rain shield is only permitted to be used when the track is declared wet or open. It is not permitted to be used when the track is declared as a dry race.
- 4.4 Oil breather valve cover: It is recommended 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). A minimum of two bolts must be used to mount the supplied chain guard.
- 4.8 A maximum of one in-line fuel filter is mandatory to ensure that dirt and contamination within the fuel system does not affect engine performance. We recommended the supplied FS-1P.
- 4.9 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.
- 4.10 No aftermarket kill switch may be allowed and the OEM kill switch must be as supplied by manufacture.
- 4.11 No modifications are allowed to be made to the crankshaft, or crankshaft gear which includes twisting or manipulation.
- 4.12 Only one version of the Intake Manifold is now allowed which is 138220034. The previous model 138220034-PLATE with the machined adapter plate is no longer permitted. No modifications to the intake manifold is permitted.
- 4.13 There are two versions of Cylinder Head permitted – 138220094 and 138220098
- 4.14 There are two versions of Inlet Valve and Exhaust Valve permitted:
 - Inlet Valves: 138210101 / 138210144
 - Exhaust Valves: 138210102 / 138210145
- 4.15 Only one Head Gasket is now permitted which is the Copper Head Gasket 138220101
- 4.16 For mounting the cylinder head it is heavily recommended to use the new Stud and Nut system but it is permitted to also fix using the previous cylinder head bolt.
- 4.17 The PVL Ignition Coil must be fitted with only spark plug cap which is compatible to run with the Brisk D08IR Spark Plug
- 4.18 There are two types of Valve Cover Gasket permitted which are the existing part 138220038 and upgraded optional gasket 138220103.
- 4.19 It is mandatory to run with the Air Duct System from the 2025 T4 Nations Cup onwards. No modifications are permitted and only the original part / fixing is permitted to be used (T-COOLDUCT-ASY-01).

5. Exhaust System:

- 5.1 The Exhaust System is mandatory as supplied by Tillotson with the engine.
- 5.2 Exhaust System comprises of the following three parts:
 - Manifold - P/N: T-EXH-MAN-01
 - Silencer – P/N: T-EXH-SIL-01
 - Flex – P/N: T-FLEX-01

- 5.3 All parts must remain as originally supplied. No tuning, modification or manipulating of material is permitted.
- 5.4 Exhaust gasket must be original Tillotson P/N 138190058, and one and only one piece must be used. Use of silicone is permitted with gasket to aid sealing.
- 5.5 Use of an O2, EGT or CO2 sensor is NOT permitted.
- 5.6 Exhaust protection is recommended. The Manifold should be completely wrapped with a non- asbestos insulation material or sleeve.
- 5.7 It is not grounds for disqualification if the exhaust nuts loosen during a race so long as the exhaust remains attached to the head with at least two nuts.
- 5.8 It is recommended to use at least three springs to secure the Silencer to the Manifold. It is permitted to install one additional safety cable between the exhaust manifold and silencer to secure in case of spring breakage.
- 5.9 The Exhaust Flex must be supplied as original from Tillotson with no modification allowed or shortening of the length permitted.
- 5.10 It is permitted to mount an additional jubilee clip around the 3 exhaust springs to secure them from springing off on track.

6. Clutch:

- 6.1 The following clutch model is supplied as standard.
 - T-CLU-NS-19T-01 (ONLY OPTION PERMITTED FOR T4 NATIONS CUP)
- 6.2 No tuning, modification or manipulating of material of the clutch is permitted.
- 6.3 The following front sprockets can be allowed, if permitted, in competition including 18T (T-CLU-NS SPK-18T), 19T (T-CLU-NS-SPK-19T), 20T (T-CLU-NS SPK-20T) and 21T (T-CLU-NS-SPK-21T).
 - T4 Nations Cup only permits use of T-CLU-NS-19T-01
- 6.4 There are two types of original Noram Stinger Clutch Spring allowed for use in competition which are Blue (T-CLU-NS-SPR-01) or Orange (T-CLU-NS-SPR-02).

7. Spark Plugs:

- 7.1 Only one Spark Plug is now permitted for use:
 - BRISK D08IR T-SPK-PLUG-01
- 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.

During technical inspections, a new stock part can be used as reference to compare a competitor's part for legality.

Section C: Carburettor

1. Tillotson FM22-1A/ FM22-2A/ FM22-4A
 - 1.1 The carburettor must remain as originally supplied from Tillotson.
 - 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 Carburettor and all components must comply with carburettor fiche.

Section D: Tyres

1. Maxxis T4 Tyres are mandatory for T4 Series:
 - 1.1. Only the following Maxxis tyres supplied by Tillotson are permitted for use.
 - Slick Tyre: P/N: T-MAX-DRY3
 - Wet Tyre: P/N: T-MAX-WET1

Section E: Oil

1. Tillotson Racing Xeramic Oil: P/N: T-OIL-001
 - 1.1. Tillotson Racing Xeramic Oil is the only oil permitted for use in the TPP-225RS engine.
 - 1.2. Minimum volume of oil to be filled is 500ml. On technical inspection a minimum quantity of 400ml of Oil must be present in each engine if drained.
 - 1.3. No oil additives or foreign substances are permitted to use along with the oil.
 - 1.4. Xeramic have developed with Tillotson a DYE test which can be carried out during technical inspection on race day.
 - 1.5. Failure of the DYE test will result in exclusion and/or other penalties issued by the event organisers.

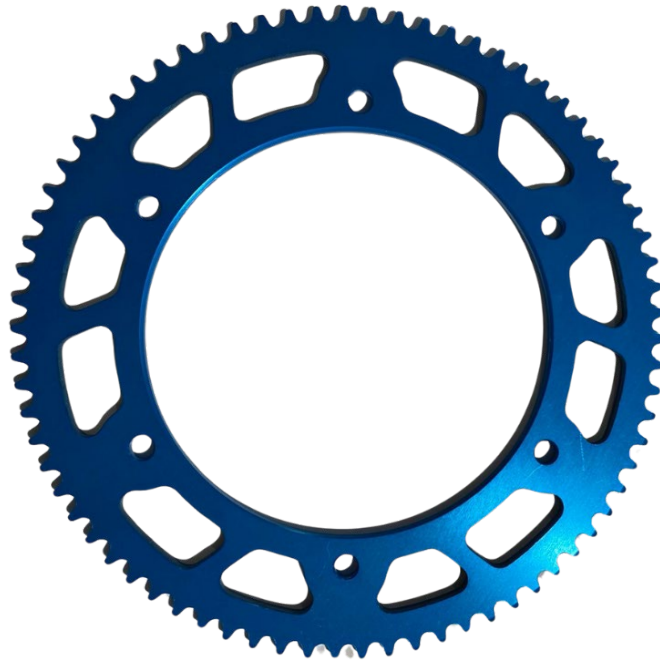
Section F: General Rules

1. Weight

- 1.1. Minimum Total Weights (Kart and Driver combined):
 - Senior: 158KG
 - Senior 168: 168KG
- 1.2. All weight needs to be secured with minimum of two bolts including suitable counter sunk / disc washers of minimum Ø20MM.

2. Rear Sprockets

- 2.1. Sprockets are open unless specified for a certain event like T4 Nations Cup or if local rules specify a set range.
- 2.2. T4 Nations Cup 2025 permitted sprockets
 - Senior: 70T – 71T – 72T
 - Senior 168: 71T – 72T – 73T
- 2.3. The teeth structure on the rear sprocket must be manufactured in the same shape and tooth profile as the originally Tillotson supplied sprocket, as shown in image below.
- 2.4. Only full teeth sprockets are permitted for use in the T4 Series events. 0.5T sprockets are not permitted in competition.



3. Numbers

- 3.1. Only original Tillotson supplied numbers are permitted for use at T4 Nations Cup event.
- 3.2. It is mandatory to fit numbers to front Nassau panel, rear bumper, and both side pods.

4. Tyre Changing During T4 Nations Cup 2025 Event

- 4.1. In the case of unrepairable damage to a tyre mid event it is permitted to swap the tyre for a new or used tyre once inspected and approved by the technical control team.

5. Engine Replacement During T4 Nations Cup 2025 Event

- 5.1. In the event of an engine issue or failure beyond repair mid event, it is permitted to change the engine but only if authorised by Tillotson staff.
- 5.2. It is mandatory that the replacement engine serial number is obtained from technical control official, and this seal is added to the drivers scrutiny card.
- 5.3. Failure to change the serial number on the scrutiny sheet will be cause for disqualification for the following races.
- 5.4. Once an engine has been changed it is not permitted to use the original engine for the remainder of the event.

6. Sticker Kits (updated for T4 Nations Cup 2025)

- 6.1. T4 Series Regional & National race events must use original Tillotson T4 Series Sticker Kits.
- 6.2. T4 Nations Cup 25 regulations only permits the use of Tillotson T4 Original 2025, 2024 & 2023 sticker kits. Both options are shown below, labelled as 2024 & 2023.
- 6.3. Tillotson T4 stickers must be complete with Front bumper, Side Pods, Nassau Panel, floor tray

- and Fuel tank. If stickers are missing drivers
- 6.4. NO ADDITIONAL STICKERS, BRANDING OR OVERLAYS ARE ALLOWED except in the Green highlighted areas dedicated to driver sponsors, areas displayed in picture below.
 - 6.5. In each of these four (4) Green highlighted areas it is permitted to place one (1) driver sponsor sticker. Maximum Size per sticker :140mm x 40mm
 - 6.6. Driver sponsor logos cannot be placed within 20mm of any official Tillotson Sponsor logos.
 - 6.7. Tillotson reserves the right to request any driver to remove stickers that may be considered misplaced, unsuitable, offensive, political, or not in line with Tillotson brand values.
 - 6.8. Tillotson reserves the right to refuse any driver access to the track for T4 Nations Cup event if the listed regulations are not met from first practice session at T4 Nations Cup 2024.
 - 6.9. Driver name and country flag stickers as supplied by Tillotson at T4 Nations Cup 2024 are mandatory and only permitted to use on side pods as highlighted below in YELLOW.
 - 6.10. Tillotson T4 Nations cup helmet visors are mandatory for all drivers.

2025 Tillotson T4 Junior/Senior 2024 Sticker kit



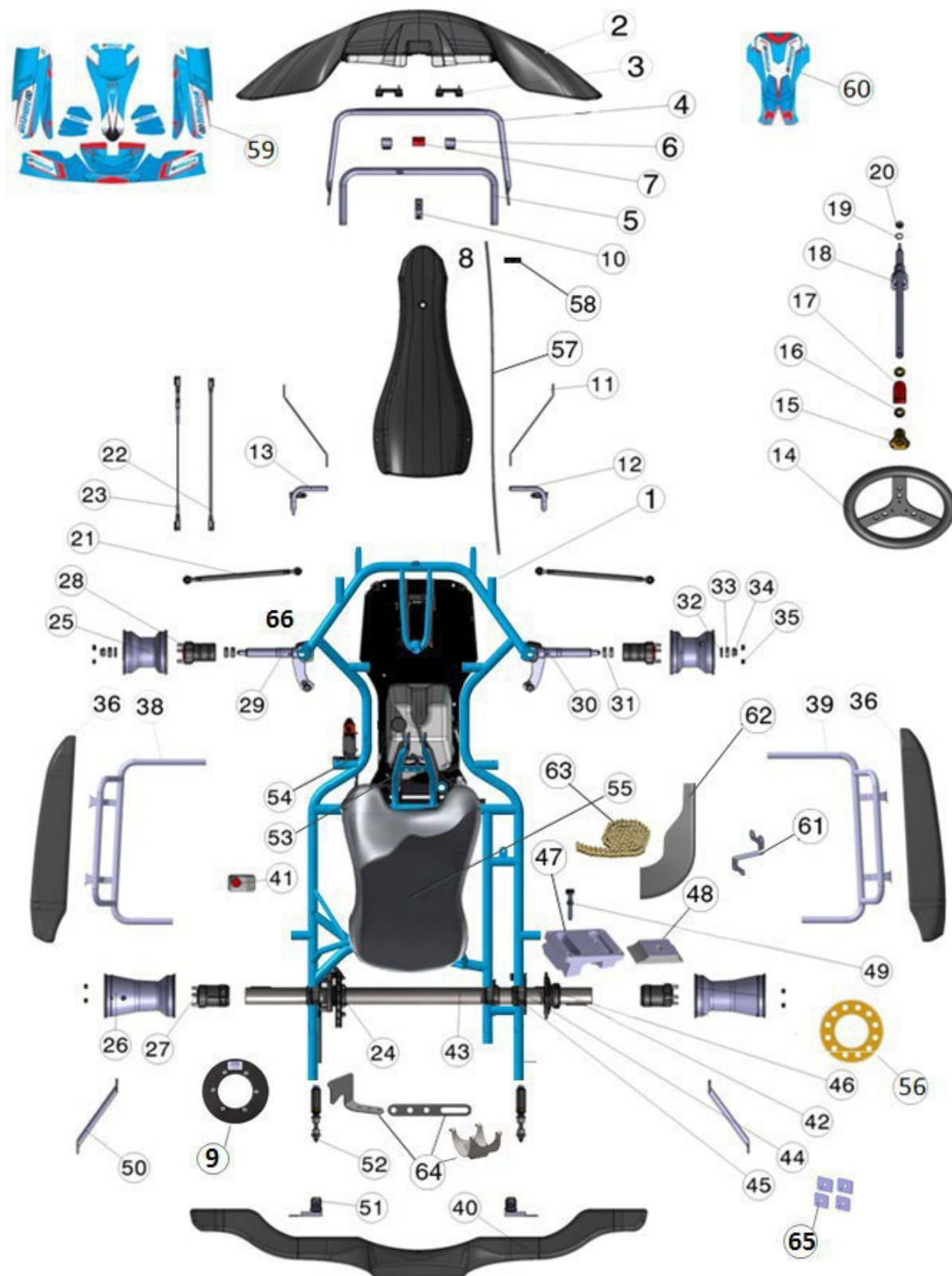
2023 Tillotson T4 Junior/Senior Sticker kit



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 result

APPENDIX 1

T-CHS-CS1 Exploded View



APPENDIX 1

T-CHS-CS1 Parts List



1.1 Chassis BOM

ITEM	TILLOTSON P/N	DESCRIPTION
1	T-CHS-FRA1	TILLOTSON T4C1 FRAME
2	T-SPO-FRO1	FRONT SPOILER MOD.506 BLACKWITH DEFLECTORS (003-BF-45)
3	T-SPO-PLATE	2015 CIK-FIA FRONT SPOILER PLATE (2 pieces)
4	T-SPO-FHS1	HIGH FRONT SPOILER SUPPORT CHROMED
5	T-SPO-FLS1	LOW FRONT SPOILER SUPPORT CHROMED DRILLED
6	T-BMR-FCL1	FRONT BUMPER CLIP (2 pieces)
7	T-SPO-FFAS1	FRONT SPOILER FASTENING
8	T-NAS-PAN1	NASSAU PANEL MOD.506 BLACK
9	T-SPR-PROT	TEFLON CHAIN PROTECTION
10	T-NAS-LSPAN1	LOW NASSAU PANEL SUPPORT CHROMED
11	T-NAS-HSPAN1	MOD. 506 HIGH NASSAU PANEL SUPPORT KIT CHROMED (R+L)
12	T-PED-ACC1	ACCELERATOR PEDAL CHROMED
13	T-PED-BRK1	BRAKE PEDAL CHROMED
14	T-STR-WHL1	TILLOTSON DIESIS KART STEERING WHEEL
15	T-STR-HUB1	STEERING WHEEL SLANTING HUB KF INOX ANODIZED- TILLOTSON
16	T-STR-LOC1-1PC	STEERING LOCKING COLUMN BUSH TITAN GOLD ANODIZED (1 piece)
17	T-STR-COLSUP1	STEERING COLUMN SUPPORT 2HOLES
18	T-STR-COL490	R MOD.STEERING COLUMNS L490MM CHROMED
19	T-STR-WAS23.5-1PC	SEEGER Ø23.5MM (1 piece)
20	T-STR-RUB8-1PC	RADIAL UNIBALL Ø8 (1 piece)
21	T-TIE-ROD270	TIE ROD L270MM INOX ANODIZED- TILLOTSON
22	T-BRK-TIE410	BRAKE PUMP TIE ROD M6X410MM CHROMED
23	T-BRK-SFT350	BRAKE SAFETY CABLE L350MM
24	T-BRK-SYS50	TILLOTSON REAR BRAKE SYSTEM INOX ANODIZED(with 50mm brake disc support)
25	T-RIM-FRT130	TILLOTSON VENTED ALUMINIUM FRONT RIM L130MM (VALVE - BEADLOCK SC.)
26	T-RIM-RR210	TILLOTSON VENTED REAR RIM L210MM BLACK LINE
27	T-HUB-RR5095	TILLOTSON REAR HUB Ø50XL95MM INOX ANODIZED with screw
28	T-HUB-FRT2595	TILLOTSON FRONT HUB Ø25XL95MM INOX ANODIZED with bearings
29	T-SPD-LFT25	LEFT SPINDLE Ø25MM - TILLOTSON
30	T-SPD-RGH25	RIGHT SPINDLE Ø25MM - TILLOTSON
31	T-SPD-SP10-1PC	Ø25 SPINDLE SPACER H10MM ALUMINIUM (1 piece)
32	T-SPD-SP5-1PC	Ø25 SPINDLE SPACER H5MM ALUMINIUM (1 piece)
33	T-HUB-LW1430-1PC	HUB LOCKING WASHER Ø14xØ30xH9MM GALVANIZED WHITE (1 piece)
34	T-NUT-SLL14-1PC	NUT SELFLOCK LOW M14 (1 pieces)
35	T-NUT-COPM8-1PC	NUT FLANGED METALBLOCK COPPER M8 (1 pieces)
36	T-POD-S506	SIDE BODYWORK MOD.506 BLACK (003-BS-54)
38	T-POD-SUPLFT506	LEFT 506 / DUO EVO BODYWORK SUPPORT CHROMED DRILLED

ITEM	TILLOTSON P/N	DESCRIPTION
39	T-POD-SUPRGH506	RIGHT 506 / DUO EVO BODYWORK SUPPORT CHROMED DRILLED
40	T-SPOILER-RR1	REAR SPOILER MOD.CLOB BLACK
41	T-REC-TNK1	RECOVERY TANK
42	T-AXL-KEYS2P-1PC	AXLE KEY 2 PIVOT (1 pieces)
43	T-AXL-50A1030M	TILLOTSON AXLE Ø50X2X1030MM
44	T-SUP-BB80	BEARING BUSH SUPPORT Ø80MM for Ø50mm axle INOX ANODIZED- TILLOTSON
45	T-BRG-5080	BEARING Ø50X80MM with pins for Ø50mm axle
46	T-SUP-SPT50	SPROCKET SUPPORT FOR Ø50MM AXLE with screws INOX ANODIZED- TILLOTSON
47	T-ENG-MNT1	TILLOTSON ALUMINIUM ENGINE MOUNT with screws
48	T-ENG-CLAMP	UNIVERSAL ENGINE BRACKET 92MM
49	T-CHN-SCR1	CHAIN STRETCHER SCREW WITH NUT AND NYLON CAP
50	T-SE-SUP300	SEAT SUPPORT L300MM CHROMED
50/A	T-SE-SUP320	SEAT SUPPORT L320MM CHROMED
51	T-RRSPO-SUP1	REAR SPOILER SUPPORT KIT
52	T-RRSPO-SCR30	REAR SPOILER MOUNTING SCREWS KIT (Ø30MM) (RIGHT + LEFT)
53	T-RFP-001	RACING EVO FLOOR PLATE
54	T-TNK-8L	FUEL TANK 8.5L
55	T-SE-RS3	RACING SEAT SIZE 3 FLAT (without logo)
56		SPROCKET LIMITED AS PER GENERAL RULES 4.1
57	T-ACC-WIRE	ACCELERATOR WIRE 1.2X2000MM SWEDISH TYPE
58	T-ACC-CLAMP-1PC	2 SCREWS CLAMP ACCELERATOR WIRE (1 piece)
59	T-STK-KIT506	TILLOTSON STICKERS KIT 506 + TANK
60	T-STK-FLOOR	TILLOTSON FLOOR PLATE STICKER
61	T-CHN-GRDSUPP	TILLOTSON CHAINGUARD SUPPORT KIT with screws
62	T-CHN-GUARD2	TILLOTSON CHAINGUARD
63	T-CHA-114	CHAIN CZ 219 GOLD - 114 LINKS
64	T-EXT-SILHLD	TILLOTSON EXHAUST SUPPORT KIT with screws
65	T-SE-RSPLT-1PC	REINFORCEMENT SEAT PLATE (1 piece)
66/A	T-SPD-UECC-1PC	UPPER HEAD ECCENTRIC 2MM Ø10MM WHITE GALVANIZED (1 piece)
66/B	T-SPD-LECC-1PC	LOWER HEAD ECCENTRIC 2MM Ø10MM WHITE GALVANIZED (1 piece)

Contact Information and Resources

Email: sales@tillotson.ie

Website: www.tillotson.ie

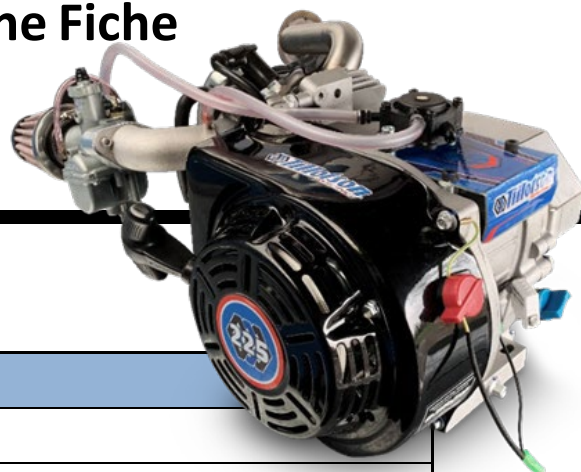
YouTube Page: <https://youtube.com/channel/UCZgldHZl8EBj93WnvcKFRHA>






Tillotson TPP-225RS-02 Engine Fiche

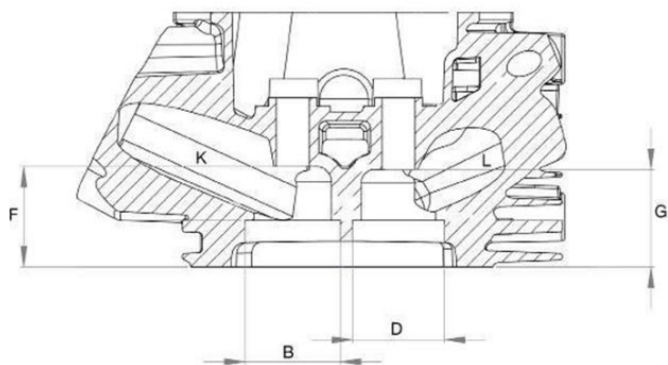
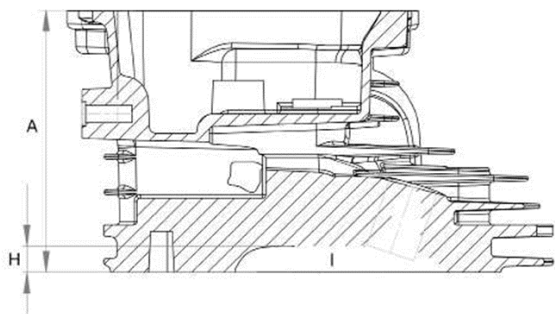
T4 Series Global Rules 2025






FEATURE	SPECIFICATIONS
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/2.84in maximum
Stroke	55 mm/2.165in maximum
Piston – Deck Clearance	0.25mm +/- 0.23mm (0.00984" +/- 0.00905")
Cooling System	Air
Carburetor	FM22-1A / FM22-2A / FM22-4A
Cylinder Head	Aluminum Alloy 2-Valve Over Head Valve
Ignition	PVL Digital Built in Limiter 7,500rpm
Flywheel	Billet Aluminium
Connecting Rod	Race Spec w/Bearing Inserts
Rod Length	88 mm/3.4646 in
Camshaft	Race Cam with Built-in Compression Release
Engine Oil	Tillotson T4 Racing Oil

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 138220094 / 138220098			Tillotson Tech Tool
	A.	Overall Height	72.98mm min	T-TT-TE73
	B.	Intake Seat ID	24.9mm max	T-TT-TE7
	C.	Intake Seat Angle	60-45-30	
	D.	Exhaust Seat ID	22.8mm max	T-TT-TE3
	E.	Exhaust Seat Angle	60-45-30	
	F.	Bowl Depth Intake	28.3mm \pm 0.2mm	T-TT-TE50
	G.	Bowl Depth Exhaust	27.4mm \pm 0.2mm	T-TT-TE60
	H.	Combustion Chamber Depth	5.5mm \pm 0.3mm	
	I.	Valve Head Height from Gasket Surface	6.5mm \pm 0.3mm	
	J.	Intake Port Volume	30cc maximum	
	K.	Exhaust Port Volume	24cc maximum	



					
Cylinder Head Gasket PN138220101		Rocker Arm PN138190033		Guide Plate PN138190031	
Material	Copper	Material	Steel	Material	Steel
Thickness	1.1 mm min	Ratio	1:1 max		
		Length	54.9 mm minimum		
		Tip Shape	Rectangular		
		Weight	16.5g \pm .5g		

					
Valve Lifter / Tappet PN138190013		Valve Spring PN138220029		Guide Plate PN138190031	
Material	Mild Steel	Material	Steel	Material	Steel
Overall Length	34.7 mm \pm 0.2mm	Relaxed Height	Max 26.2mm / Min 25.2mm	Overall Height	7.9 mm min
\varnothing Stem	8 mm \pm 0.2mm	Wire \varnothing	2.5 mm \pm 0.2mm	Overall O.D	20.7 mm \pm 0.2mm
\varnothing Head	23.6 mm \pm 0.2mm	Overall O.D	21.1 mm \pm 0.2mm	Retainer Weight	6.4 g min
Weight	19.5 g \pm 1 g	Spring Force	26 lbs max @0.815 in (20.7mm) height		

					
Push Rod PN 138190032		Intake Valve PN 138210101 / 138210144		Exhaust Valve PN 138210102	
Material	Steel	Material	Steel	Material	Aloy Steel
Overall Length	134 mm \pm 0.25 mm	Overall Length	663.8 mm min	Overall Length	63.8 mm min
Ball End \varnothing	5 mm \pm 0.2mm	\varnothing Stem	4.8 mm min	\varnothing Stem	4.8mm min
Rod \varnothing	4 mm \pm 0.2mm	\varnothing Head	27 mm \pm 0.2mm	\varnothing Head	25 mm \pm 0.2mm
Weight	11 g \pm 1 g	Valve Margin	2.3 mm \pm 0.5mm	Valve Margin	2.3 mm \pm 0.5mm
		Valve Angle	45°	Valve Angle	45°
		Weight	21 g \pm 0.25 g	Weight	19.5 g \pm 0.5 g



Camshaft Lift Table



STANDARD VALUE					
EXHAUST			INTAKE		
Lift (mm)	Phase position (°)		Lift (mm)	Phase position (°)	
0.15	BBDC	83 +/- 4°	0.15	BTDC	45 +/- 4°
1.27	BBDC	52 +/- 4°	1.27	BTDC	16 +/- 4°
2.54	BBDC	33 +/- 4°	2.54	ATDC	3 +/- 4°
3.81	ABDC	15 +/- 4°	3.81	ATDC	21 +/- 4°
5.08	ABDC	5.5 +/- 4°	5.08	ATDC	42 +/- 4°
6.35	ABDC	36 +/- 4°	6.35	ATDC	74 +/- 4°

6.85	Running Lift @ Retainer with zero valve lash				6.85
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6.35	BTDC	85 +/- 4°	6.35	BBDC	50 +/- 4°
5.08	BTDC	54 +/- 4°	5.08	BBDC	17.5 +/- 4°
3.81	BTDC	33 +/- 4°	3.81	BBDC	3.5 +/- 4°
2.54	BTDC	15 +/- 4°	2.54	ABDC	19 +/- 4°
1.27	ATDC	3.5 +/- 4°	1.27	ABDC	40 +/- 4°
0.15	ATDC	32.5 +/- 4°	0.15	ABDC	68 +/- 4°

236 +/- 4°	Duration @1.27				236 +/- 4°
103 +/- 2°	Centreline				114.5 +/- 2°

	<p>Ignition Coil 138220095</p> <p>RPM Limit 7500</p> <p>Brand PVL</p> <p>Type Digital</p>
	<p>Flywheel PN:138220018</p> <p>Material Billet Aluminum</p> <p>Diameter 165mm ± .2mm</p> <p>Weight 1.43 kg ± .1 kg</p>

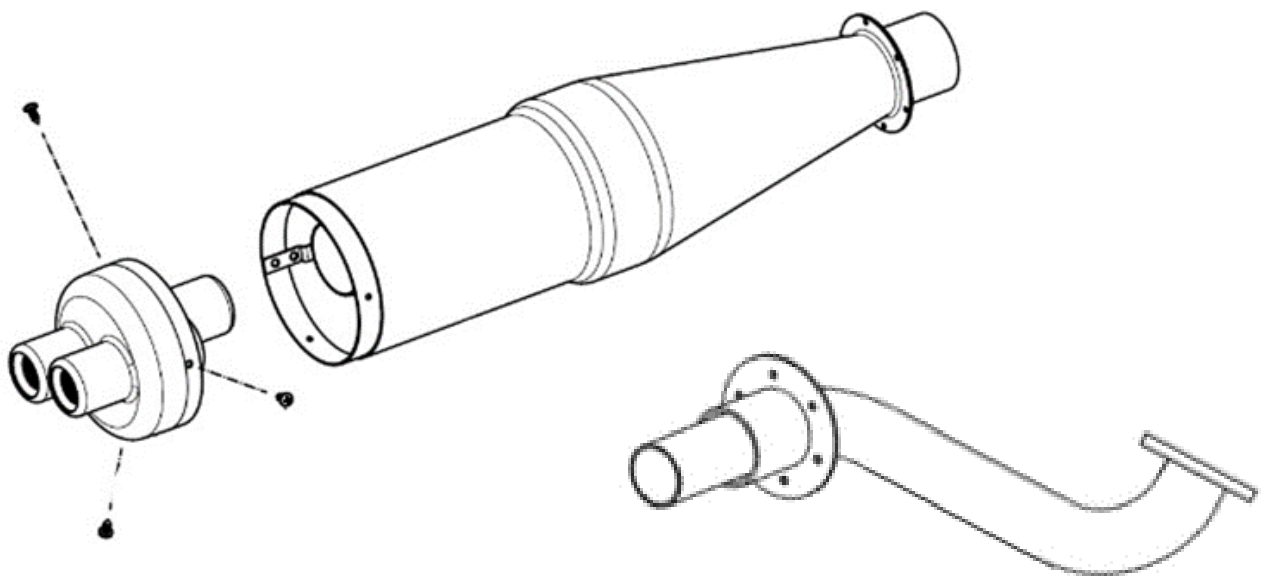
Flywheel Keyway PN: T-FLY-KEY-01	Exhaust Flex
	
Max Height: 5.45mm Max Length: 18mm Width: 4mm ± 0.2mm	Length: 65mm min

Exhaust

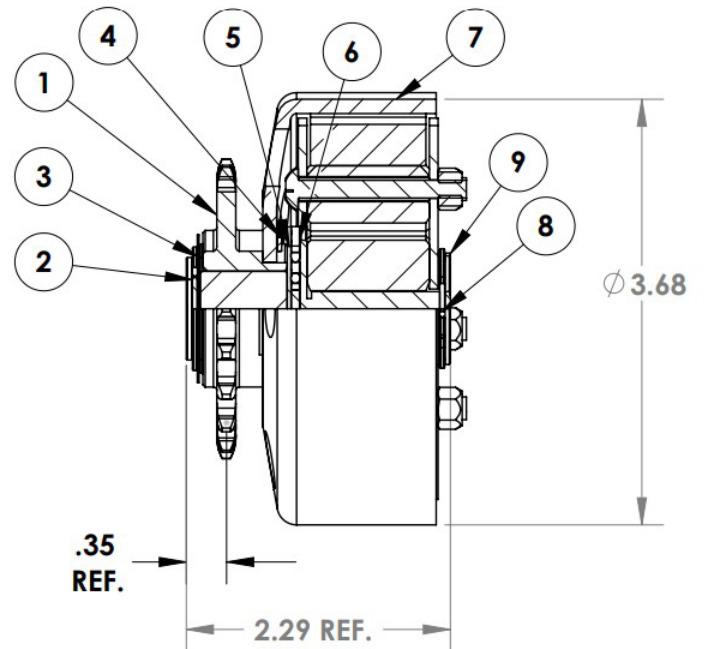
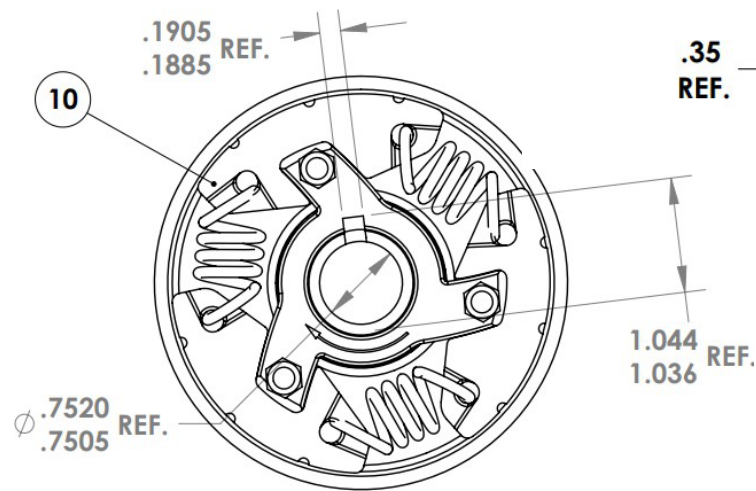
Manifold - P/N: T-EXH-MAN-01

Silencer – P/N: T-EXH-SIL-01

Flex – P/N: T-FLEX-01



Noram Stinger Clutch



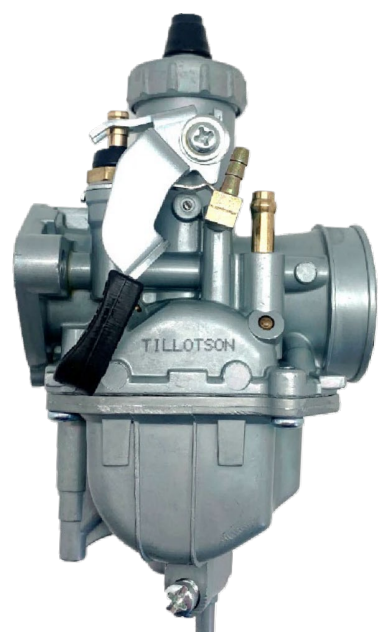
Item No.	Tillotson PN	Description
	T-CLU-NS-19T-01	Stinger clutch 19T
1	T-CLU-NS-SPK-18T	18T 219 F. Sprocket with bearing
1	T-CLU-NS-SPK-19T	19T 219 F. Sprocket with bearing
1	T-CLU-NS-SPK-20T	20T 219 F. Sprocket with bearing
1	T-CLU-NS-SPK-21T	21T 219 F. Sprocket with bearing
4	T-CLU-NS-SPK-CLIP-01	Sprocket circlip
5	T-CLU-NS-SPK-WAS-01	Sprocket washer
2	T-CLU-NS-RING-HUB-01	Retaining ring hub
3	T-CLU-NS-HUB-WAS-01	Hub washer
6	T-CLU-NS-HUB-BRG-01	Thrust bearing hub
7	T-CLU-NS-DRUM-01	Drum
8	T-CLU-NS-CLIP-01	Retaining circlip
9	T-CLU-NS-SHAFT-01	Shaft
10	T-CLU-NS-SPR-02	Stinger clutch spring ORANGE
	T-CLU-NS-BOLT-04	Bolt (Phillips head)
	T-CLU-NS-NUT-01	Bolt (Allen key head)

Recommended Torque Values

Description	Socket Size	Torque (Nm)
Cylinder Head	13mm	30Nm
Flywheel	21mm	70Nm
Rocker Arm Support	12mm	24Nm
Valve Locking Nut	10mm	10Nm
Spark Plug	21mm	24Nm
Crankcase Side Cover	10mm	33Nm
Blower Housing	8mm	10Nm
Carburetor to Manifold	10mm	10Nm
Connecting Rod	10mm	19Nm
Exhaust to Engine	13mm	28Nm
Intake Manifold to Engine	10mm	10Nm
Oil Drain Plug	10mm	22Nm
Valve Cover	8mm	7Nm



CARBURETOR
Tillotson FM22-1A



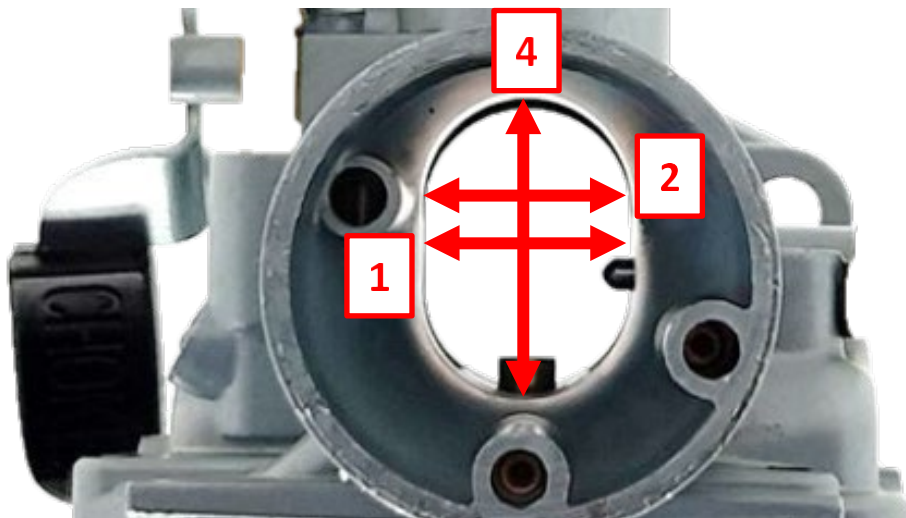
Manufacturer	TILLOTSON LTD.
Make	TILLOTSON
Model	FM22-1A

Measurements & Tolerance Index

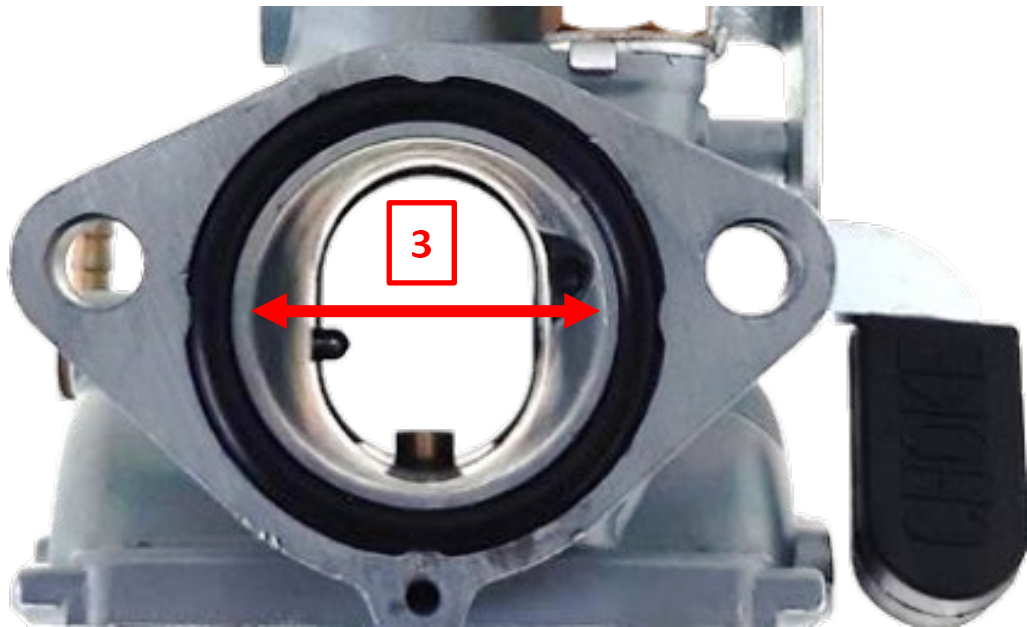
ITEM	DESCRIPTION	TOLERANCE	Tillotson Tech Tool
1	Venturi Horizontal Measurement Centre	18.22mm Max (0.717")	T-TT-TC1
2	Venturi Horizontal Measurement Max	18.72mm Max (0.737")	T-TT-TC2
3	Throttle Bore Diameter	26.25mm Max (1.034")	T-TT-TC3
4	Venturi Vertical Measurement	25.05mm Max (0.986")	T-TT-TC4
5	Air Pick Off Hole	1.9mm +/- 0.1mm (0.075" +/- 0.004")	T-TT-TC5 / T-TT-TC6
6	Venturi Idle Air Hole	1.9mm +/- 0.1mm (0.075" +/- 0.004")	T-TT-TC5 / T-TT-TC6
7	Fuel In	1.65mm Max (0.065")	T-TT-TC7
8	Main Feed Hole	2.65mm Max (0.104")	T-TT-TC8
9	Pilot Feed Hole	0.97mm +/- 0.06mm (0.038" +/- 0.002")	T-TT-TC9 / T-TT-TC9-1
10	Idle Feed Hole	0.80mm +/- 0.05mm (0.32" +/- 0.002")	T-TT-TC10 / T-TT-TC10-1
11	Choke Feed Hole	0.65mm Max (0.26")	T-TT-TC11
12	Emulsion Tube & Main Jet Length	39.0mm +/- 0.15mm (1.536" +/- 0.007")	
13	Main Jet Orifice	1.20mm +/- 0.03mm (0.046" +/- 0.0015")	T-TT-TC13 / T-TT-TC13-1
14	Main Jet Emulsion Orifice x12	0.86mm Max (0.034")	T-TT-TC14
15	Pilot Jet Length	29.05 +/- 0.15mm (1.144" +/- 0.007")	
16	Pilot Jet Orifice	0.36mm +/- 0.04mm (0.014" +/- 0.0015")	T-TT-TC18 / T-TT-TC18-1
17	Pilot Jet Emulsion x6	0.73mm Max (0.029")	T-TT-TC17
18	Slide Length Max	37mm +/- 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

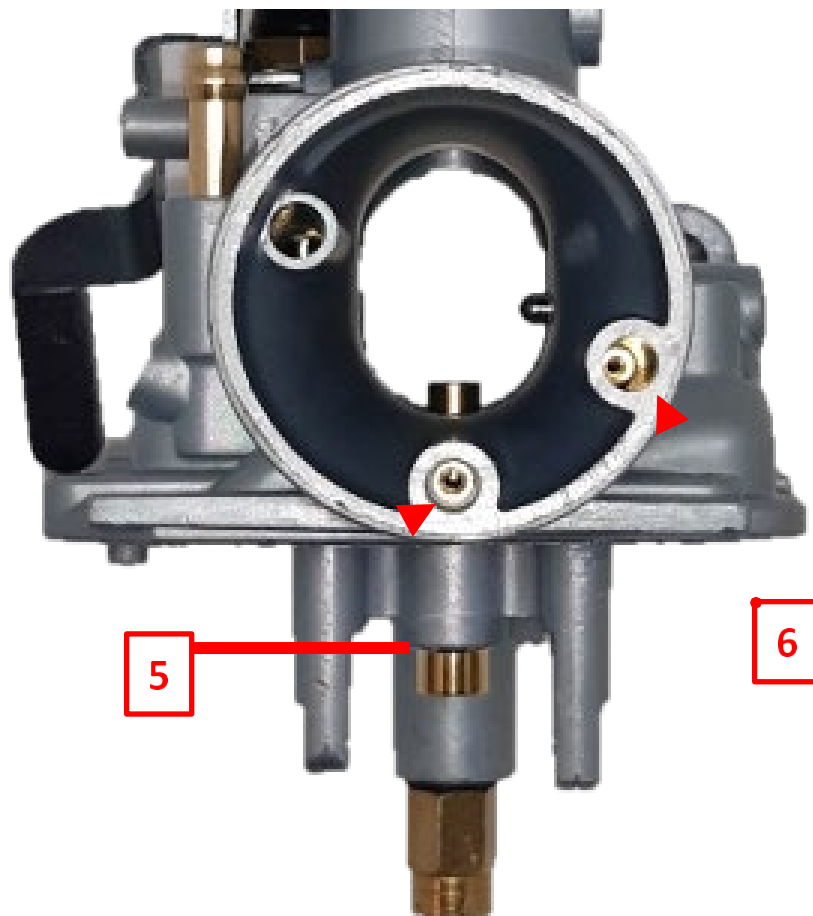


3. Throttle Bore Diameter

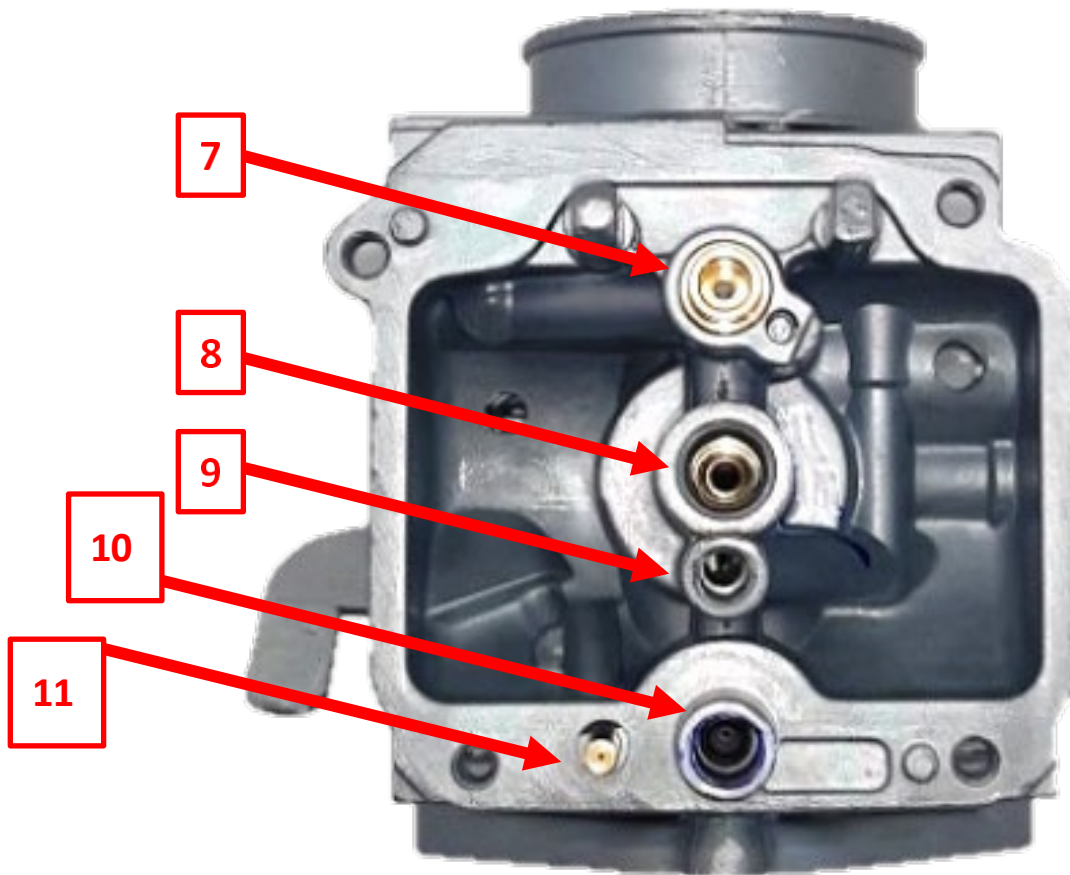


5. Air Pick Off Hole

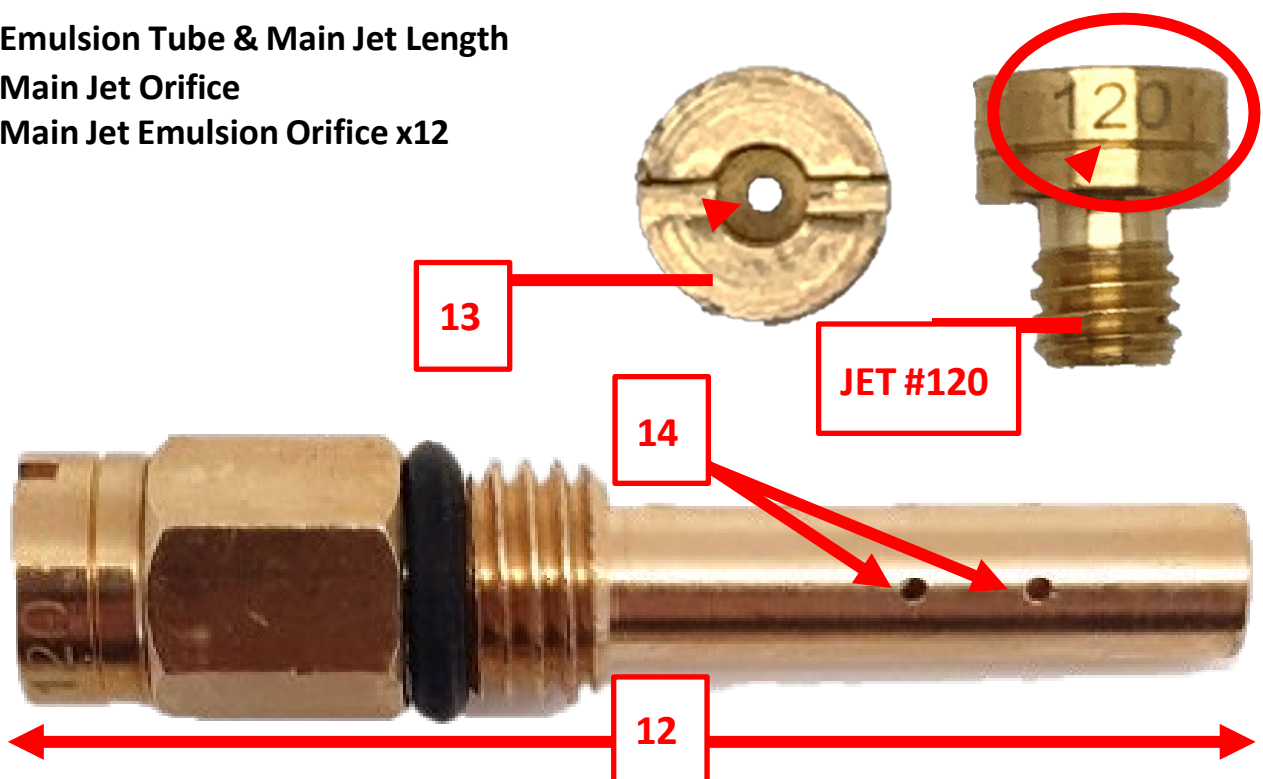
6. Venturi Idle Air Hole



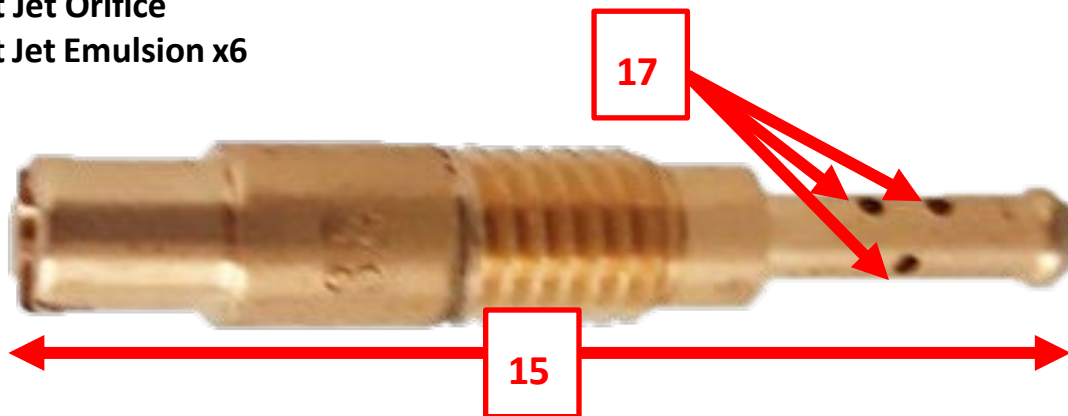
- 7. Fuel In
- 8. Main Feed Hole
- 9. Pilot Hole
- 10. Idle Hole
- 11. Choke Feed Hole



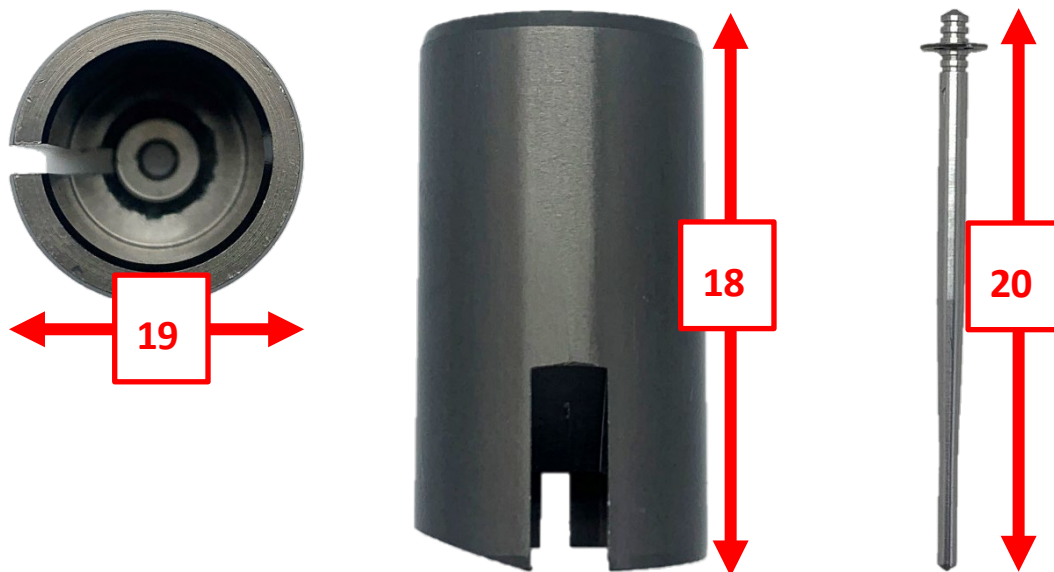
- 12. Emulsion Tube & Main Jet Length
- 13. Main Jet Orifice
- 14. Main Jet Emulsion Orifice x12



- 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

Website: www.tillotson.ie

YouTube Page: <https://youtube.com/channel/UCZgldHZl8EBj93WnvcKFRHA>

