

## ANEXO 1 CAT. TILLOTSON



### Lista de piezas del TPP-225RS

#### 1.1 MOTORES TPP-225RS

| TILLOTSON P/N    | DESCRIPCIÓN                                                           |
|------------------|-----------------------------------------------------------------------|
| TPP225RS-PKG-EUR | 225RS VERSIÓN COMPLETA USA                                            |
| TPP225RS-SB2     | LONG BLOCK DE 225RS (MENOS VOLANTE DE INERCIA, ENCENDIDO YAUXILIARES) |

#### 1.2 CÁRTER Y ACCESORIOS

| TILLOTSON P/N | DESCRIPCIÓN                                               |
|---------------|-----------------------------------------------------------|
| 138220002     | CONJUNTO DEL CÁRTER-S                                     |
| 138190002     | RODAMIENTO, CÁRTER-S                                      |
| 138220075     | MONTANTE SUPERIOR DE LA PLACA DE MONTANTE                 |
| 138220026     | TORNILLO DE TAPA DE CABEZA HEXAGONAL DEL ZÓCALO M6 * 20-S |
| 138220025     | PLACA DE MONTANTE SPACER-TOP                              |
| 138190004     | ARANDELA, TAPÓN DE DRENAJE-S                              |
| 138190005     | TORNILLO, TAPÓN DE DRENAJE-S                              |
| 138190003     | ACEITE SEAL-S                                             |
| 138220053     | PEGATINA, PLACA DE MONTANTE SUPERIOR-S                    |
| 138220082     | ESPACIADOR DE NYLON                                       |
| 138220085     | MEDIDOR DE HORAS                                          |
| 138220083     | MANGA DE ESCUDO DEL MEDIDOR DE HORAS                      |
| 138220084     | MANGA CONTRACCIÓN TÉRMICA                                 |

#### 1.3 CIGÜEÑAL, BIELA Y PISTÓN

| TILLOTSON P/N | DESCRIPCIÓN                               |
|---------------|-------------------------------------------|
| 138210107     | MONTANTE DEL CIGÜEÑAL-S                   |
| 138220074     | CONJUNTO DE BIELAS FORJADO                |
| 138220017     | COJINETE DE MEDIA MANGA-S                 |
| 138220016     | TORNILLO, BIELA-S                         |
| 138220004     | PISTÓN-S                                  |
| 138220006     | PISTÓN PIN-S                              |
| 138220008     | CIRCLIP, PIN-S DE PISTÓN                  |
| 138220005     | JUEGO DE ANILLOS, PISTON-S                |
| 138190007     | PISTÓN, PASADOR, ANILLO, CONJUNTO DE CLIP |

#### 1.4 CUBIERTA DEL CÁRTER, EMBRAGUE Y PROTECTORES DE CADENA

| <b>TILLOTSON P/N</b> | <b>DESCRIPCIÓN</b>                   |
|----------------------|--------------------------------------|
| 138190017            | EMPAQUE, CÁRTER-S                    |
| 138190016            | BUJE DE PASADOR DE CLAVIJA, CÁRTER-S |
| 138190002            | RODAMIENTO, CÁRTER-S                 |
| 138190018            | CUBIERTA DEL CÁRTER-S                |
| 138190020            | DIPSTICK ASSEMBLY-S                  |
| 138190019            | CONJUNTO DE TAPÓN DE ACEITE-S        |
| 138190003            | ACEITE SEAL-S                        |
| 138190015            | TORNILLO DE BRIDA M8 * 30-S          |
| 138190060            | TORNILLO DE BRIDA 5/16 * 20-S        |
| T-CLU-GRD-01         | PROTECTOR DE EMBRAGUE 2021           |

#### 1.5 CLUTCH Y COMPONENTES

| <b>TILLOTSON P/N</b>   | <b>DESCRIPCIÓN</b>                                  |
|------------------------|-----------------------------------------------------|
| T-HILLARD IF-CLU-21T   | EMBRAGUE HILLARD INFERNO FLAME, 21T-S               |
| T-HILLARD IF-KEY-01    | HILLARD INFERNO FLAME KEYWAY                        |
| T-CLU-HIF-SPC-01       | ESPACIADOR DE CIGUEÑAL HILLARD INFERNO FLAME        |
| T-CLU-S-WASHER-02      | ARANDELA DE HIERRO                                  |
| T-CLU-HUB              | HUB                                                 |
| T-CLU-SHOE-HIF         | ZAPATAS DE CLUTCH HILLARD INFERNO FLAME             |
| T-CLU-SPRINGS-BLK-04   | RESORTES DE CLUTCH NEGROS                           |
| T-CLU-SPRINGS-SIL-04   | RESORTES DE CLUTCH PLATEADOS                        |
| T-CLU-SHOE-RET-WAS     | ARANDELA RETENDORA DE ZAPATAS HILLARD INFERNO FLAME |
| T-CLU-OLI-GRS-TRAP     | PLATO TRAMPA DE ACEITE Y GRASA                      |
| T-CLU-T-BOWED-RET-RING | SEGURO RETENEDOR T                                  |
| T-CLU-DRUM-HIF         | TAMBOR DE CLUTCH HILLARD INFERNO FLAME              |
| T-CLU-DRI-SPR          | PIÑÓN 21T-S                                         |
| T-CLU-BEA-RAC-ASSY     | BEARING & BUSHING                                   |
| T-CLU-MOU-WASHER       | ARANDELA GRUESA DE SUJECION                         |
| T-CLU-T-LOCK-WASHER    | ARANDELA DE PRESIÓN DE SUJECION                     |
| T-CLU-T-BOLT           | TORNILLO DE SUJECIÓN DEL CLUTH                      |

#### 1.6 CABEZOTE Y COMPONENTES

| <b>TILLOTSON P/N</b> | <b>DESCRIPCIÓN</b>            |
|----------------------|-------------------------------|
| 138190037            | TORNILLO DE FLANGER M6 * 12-S |
| 138190088            | CUBIERTA DE VÁLVULA-S         |
| 138190096            | TUBO, RESPIRADERO-S           |
| 138190038            | EMPAQUE, TAPA DE VÁLVULA-S    |
| 138190021            | TORNILLO DE FLANGER M8 * 60-S |
| T-E3-106             | BUJÍA, E3                     |
| 138220013            | BUJÍA NGK BPR6ES-S            |

|           |                                                                       |
|-----------|-----------------------------------------------------------------------|
| 138210100 | CONJUNTO DE CABEZOTE-S                                                |
| 138190056 | TORNILLO, MANIFOLD DE ESCAPE-S                                        |
| 138220033 | STUD, MANIFOLD DE ADMISIÓN-S                                          |
| 138220030 | EMPAQUE DE CULATA-S                                                   |
| 138190022 | PASADOR, CLAVIJA, CULATA-S                                            |
| 138220014 | TORNILLO DE FLANGER M6 * 16-S                                         |
| 138210125 | CUBIERTAS DE AIRE-S                                                   |
| 138220050 | CONJUNTO COMPLETO DE CABEZOTE (VÁLVULAS INC ,<br>MUELLES ,RETENEDORES |

## 1.7 CONJUNTO DE TREN DE VÁLVULAS Y ÁRBOL DE LEVAS

| <b>TILLOTSON P/N</b> | <b>DESCRIPCIÓN</b>               |
|----------------------|----------------------------------|
| 138190035            | TUERCA DE BLOQUEO DE VÁLVULAS-S  |
| 138190034            | TUERCA DE AJUSTE DE VÁLVULAS     |
| 138190033            | BALANCÍN ARM-S                   |
| 138190030            | BALANCÍN DE APOYO-S              |
| 138190031            | PLACA, VARILLA DE EMPUJE GUIDE-S |
| 138190032            | VARILLA DE EMPUJE-S              |
| 138190013            | TAPPET, VÁLVULA-S                |
| 138220012            | CONJUNTO DEL ÁRBOL DE LEVAS-S    |
| 138210101            | VÁLVULA, INTAKE-S                |
| 138210102            | VÁLVULA, ESCAPE-S                |
| 138210112            | SELLO DE VÁLVULA-S               |
| 138220029            | RESORTE DE VÁLVULA (26LBS)-S     |
| 138210103            | RETENEDOR, RESORTE DE VÁLVULA-S  |
| 138210104            | VÁLVULA COLLET-S                 |

## 1.8 CARBURADOR, FILTRO DE AIRE, BOMBA DE COMBUSTIBLE Y ACCESORIOS

| <b>TILLOTSON P/N</b> | <b>DESCRIPCIÓN</b>                                     |
|----------------------|--------------------------------------------------------|
| 138190050            | EMPAQUE, MANIFOLD DE ADMISIÓN-S                        |
| 138220034-PLACA      | CONJUNTO DEL MANIFOLD DE ADMISIÓN CON PLACA ADAPTADORA |
| 138220073            | ARANDELA DE MUELLES, TORNILLO DE ADMISIÓN M6           |
| 138220020            | ESTILO 1 TUERCA HEXAGONAL, M6 TORNILLO DE ADMISIÓN     |
| FP-10A               | BOMBA DE COMBUSTIBLE                                   |
| FM22-1A              | CARBURADOR, FM22-1A                                    |
| 306222598            | TORNILLOS DE MONTANTE DEL CARBURADOR, M6 x 16 mm       |
| T-FILTRO DE AIRE-01  | FILTRO DE AIRE-S                                       |
| 138190055            | LÍNEA DE COMBUSTIBLE CLIP-S                            |
| 138190092            | CONEXIÓN DE PULSO DE LA LÍNEA DE COMBUSTIBLE           |
| 138190093            | FUNDA PROTECTORA PULSO DE LA LÍNEA DE COMBUSTIBLE-S    |
| 138220078            | ABRAZADERA DE LÍNEA DE COMBUSTIBLE TIPO R 25MM         |
| 138220081            | ABRAZADERA DE LÍNEA DE COMBUSTIBLE TIPO R 20MM         |
| FS-1P                | FILTRO DE COMBUSTIBLE PCK.                             |

## 1.9 ARRANCADOR, RETROCESO, VOLANTE DE INERCIA Y BOBINA DE ENCENDIDO

| <b>TILLOTSON P/N</b> | <b>DESCRIPCIÓN</b>                             |
|----------------------|------------------------------------------------|
| 138220024            | ADAPTADOR DE VOLANTE DE INERCIA-2019           |
| 138220063            | ADAPTADOR DE VOLANTE DE INERCIA-2020           |
| 138220022            | TORNILLO DE TAPA DE CABEZA HEXAGONAL M6 * 12-S |
| 138220007            | BOBINA DE ENCENDIDO PVL , 6500rpm.-S           |
| 138220019            | BOBINA DE ENCENDIDO STOP WIRE-S                |

|           |                                                  |
|-----------|--------------------------------------------------|
| 138220023 | TORNILLO DE TAPA DE CABEZA HEXAGONAL 3/16 * 20-S |
| 138220018 | CONJUNTO DE VOLANTE DE INERCIA-S                 |
| 138220040 | TAZA DE POLEA DE ARRANQUE (47 mm)-S              |

|           |                                       |
|-----------|---------------------------------------|
| 138190042 | TUERCA, M14-S                         |
| 138220069 | ARRANCADOR ASSY, PULL(negro)-S        |
| 138190047 | KILL SWITCH-S                         |
| 138220061 | SOLO CARCASA DEL SOPLADOR (NEGRO)     |
| 138220066 | SOLO RETROCESO DEL ARRANCADOR (NEGRO) |
| 138190037 | TORNILLO DE BRIDA M6 * 12-S           |
| 138220058 | MANGO DE ARRANQUE                     |

#### 1.10 OPCIONES Y COMPONENTES DE ESCAPE

| <u>TILLOTSON P/N</u> | <u>DESCRIPCIÓN</u>                         |
|----------------------|--------------------------------------------|
| 138190058            | EMPAQUE, ESCAPE-S                          |
| T-EXH-001            | SILENCIADOR DE ESCAPE-VERSIÓN USA          |
| 138220021            | ARANDELA DE MUELLES GB 93-87 8-S           |
| 138190057            | TUERCA DE ESCAPE-S                         |
| 138220027            | ESPACIADOR, SILENCIADOR BRACKET-S          |
| 138220014            | TORNILLO DE BRIDA M6 * 16-S                |
| T-EXH-SIL-01         | SILENCIADOR DE ESCAPE-VERSIÓN EUR          |
| T-EXH-MAN-01         | MANIFOLD DE ESCAPE                         |
| T-FLEX-01            | FLEX DE ESCAPE                             |
| T-EXH-PRIMAVERA-01   | MUELLE DE ESCAPE                           |
| 138220077            | ENVOLTURA DE ESCAPE-S                      |
| 138220055            | ABRAZADERA DE MANGUERA (21-38)-S           |
| T-EXH-MANBKT-01      | MONTANTE DEL SOPORTE DEL MANIFOLD EXHUAUST |

#### 1.11 PIEZAS AUXILIARES

| <u>TILLOTSON P/N</u> | <u>DESCRIPCIÓN</u> |
|----------------------|--------------------|
| 138220046            | JUEGO DE EMPAQUES  |
| T-OIL-01             | ACEITE DE MOTOR T4 |

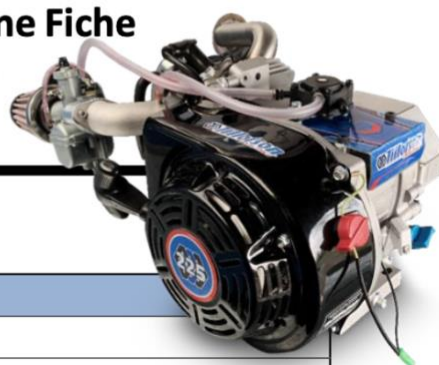
## APPENDIX 2

### Engine Fiche



## Tillotson TPP-225RS-02 Engine Fiche

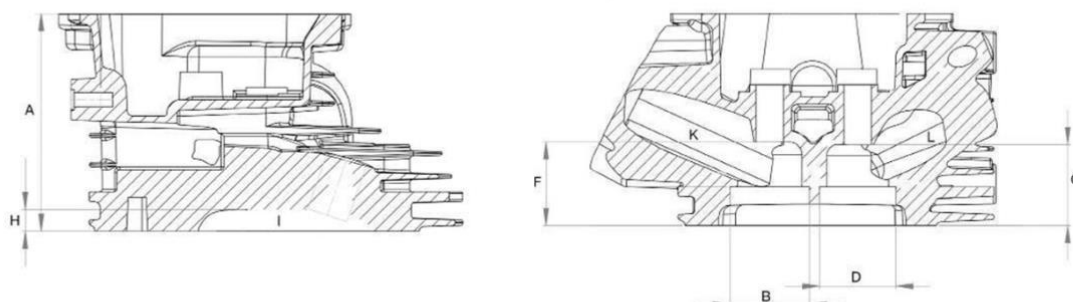
### T4 Series Global Rules 2025



| 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<br>PN138220101                                                 |            | Rocker Arm<br>PN138190033                                                           |                 | Guide Plate<br>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 |                                                                                      |       |

|                                                                                   |                     |                                                                                   |                                      |                                                                                     |                     |
|-----------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------------------|---------------------|
|  |                     |  |                                      |  |                     |
| <b>Valve Lifter / Tappet PN138190013</b>                                          |                     | <b>Valve Spring PN138220029</b>                                                   |                                      | <b>Guide Plate PN138190031</b>                                                      |                     |
| 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 |                                                                                     |                     |

|                                                                                     |                      |                                                                                     |                    |                                                                                       |                    |
|-------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------|--------------------|
|  |                      |  |                    |  |                    |
| <b>Push Rod PN 138190032</b>                                                        |                      | <b>Intake Valve PN 138210101 / 138210144</b>                                        |                    | <b>Exhaust Valve PN 138210102</b>                                                     |                    |
| 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° |

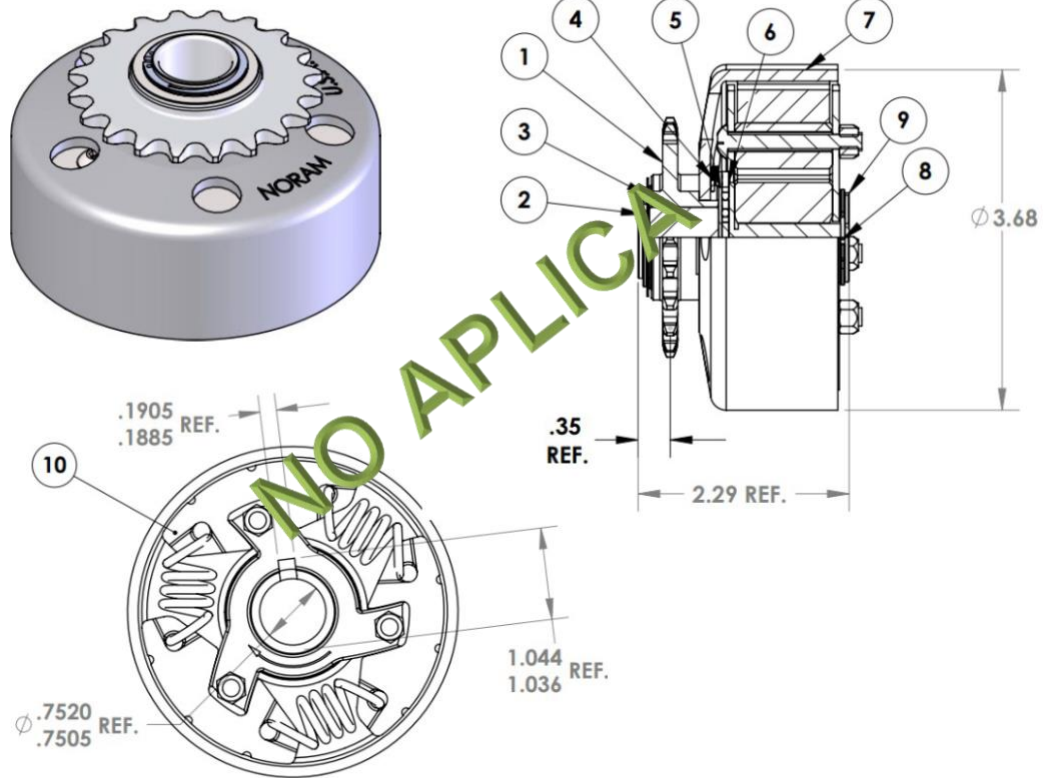
|      |                                              |  |  |  |      |
|------|----------------------------------------------|--|--|--|------|
| 6.85 | Running Lift @ Retainer with zero valve lash |  |  |  | 6.85 |
|------|----------------------------------------------|--|--|--|------|

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

## 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         |



APPENDIX 3  
Carburetor Fiche



CARBURETOR  
Tillotson FM22-1A



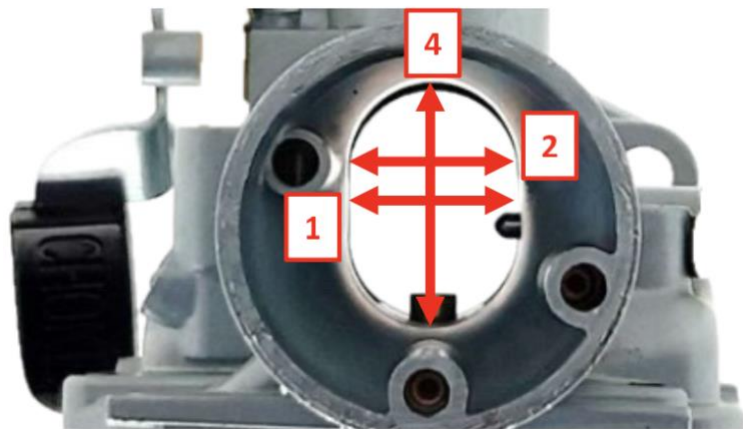
|              |                |
|--------------|----------------|
| Manufacturer | TILLOTSON LTD. |
| Make         | TILLOTSON      |
| Model        | FM22-1A        |

## Measurements & Tolerance Index

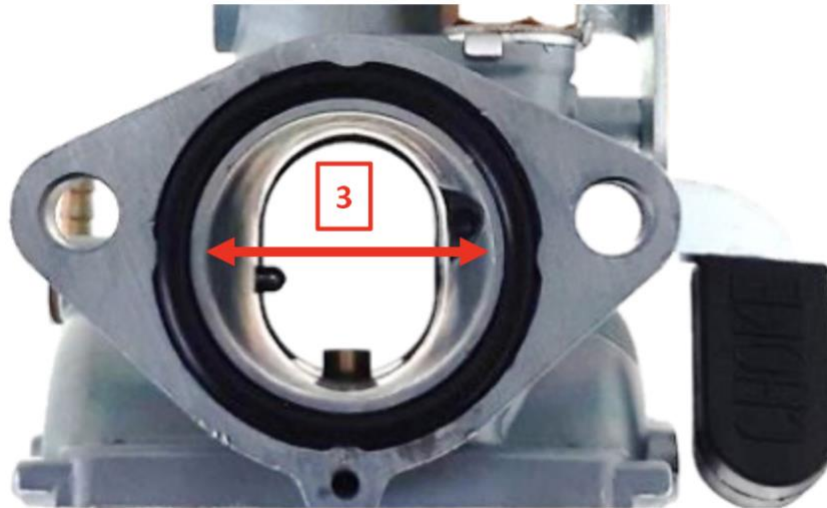
| ITEM | DESCRIPTION                           | TOLERANCE                             | Tillotson Tech Tool     |
|------|---------------------------------------|---------------------------------------|-------------------------|
| 1    | Venturi Horizontal Measurement Centre | 18.22mm Max (0.717")                  | 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                      | 0.0445" pasa / 0.048" no pasa         | 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                     | 0.016" no pasa / 0.0125" pasa         | 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                         | 49.75 mm min / 50.20 mm maximo        |                         |

## Measurement Diagrams

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

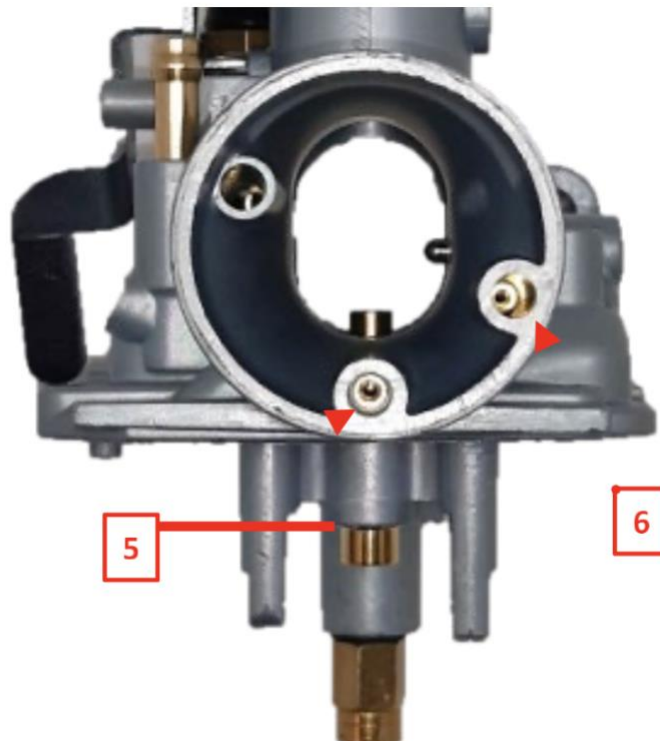


### 3. Throttle Bore Diameter

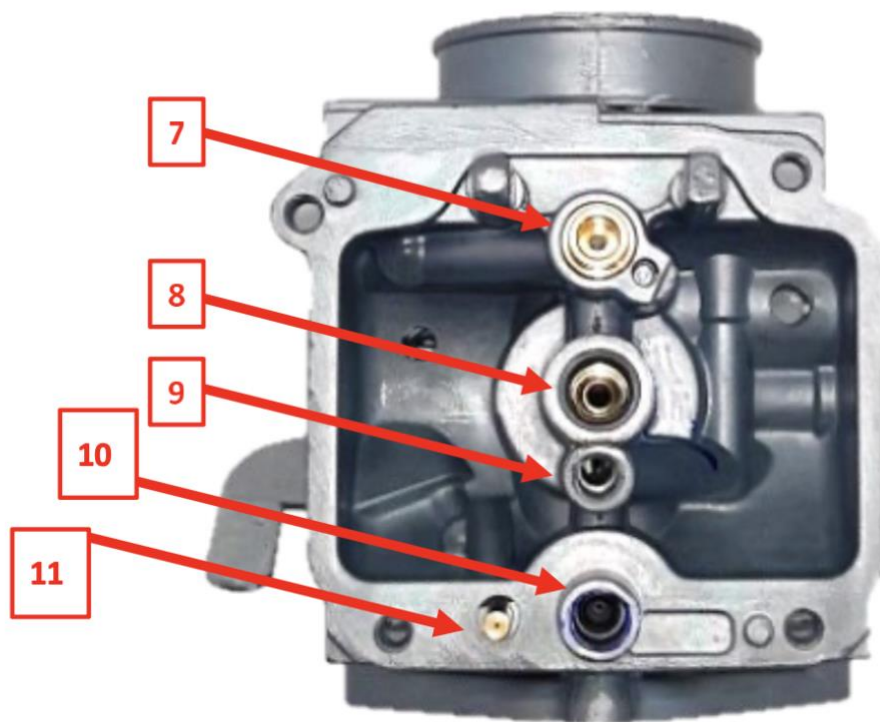


### 5. Air Pick Off Hole

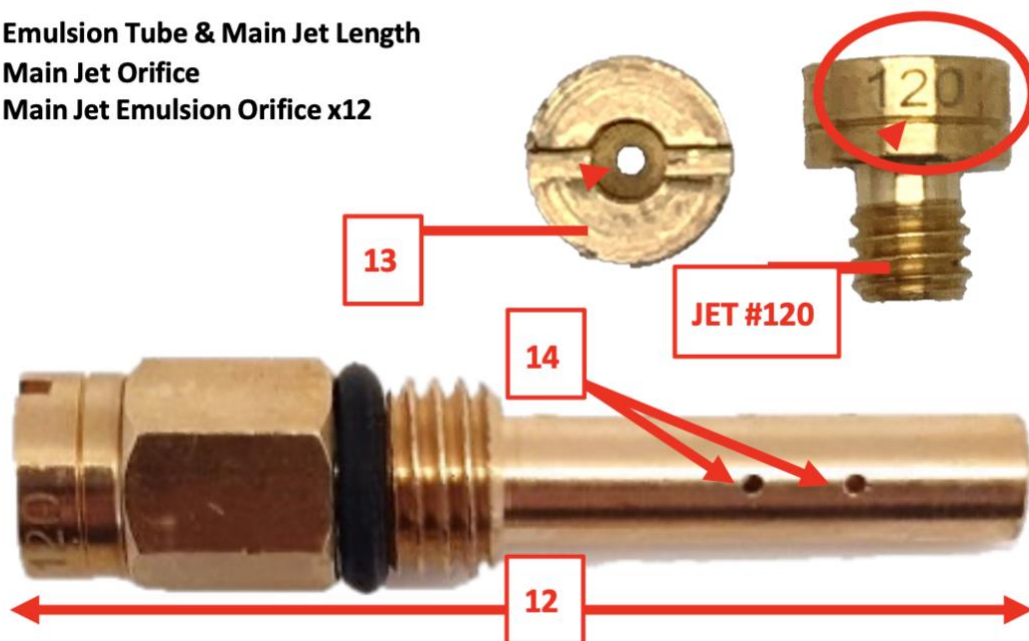
### 6. Venturi Idle Air Hole



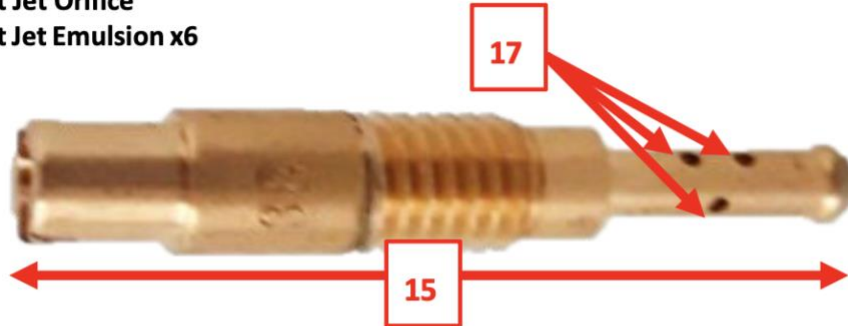
- 7. Fuel In
- 8. Main Feed Hole
- 9. Pilot Hole
- 10. Idle Hole
- 11. Choke Feed Hole



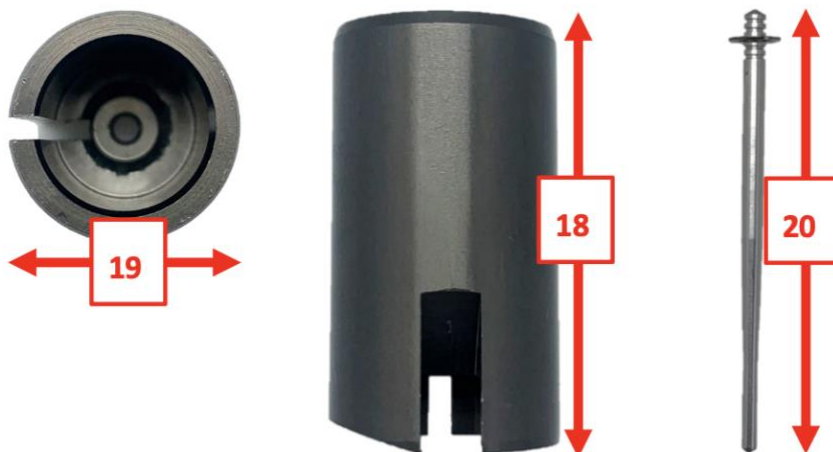
- 12. Emulsion Tube & Main Jet Length
- 13. Main Jet Orifice
- 14. Main Jet Emulsion Orifice x12



- 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

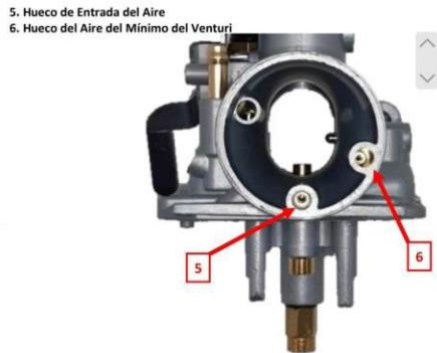
Email: [sales@tillotson.ie](mailto:sales@tillotson.ie)

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

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



**Hueco del Aire del Mínimo del Venturi:** El hueco que indica la flecha #6 en la siguiente ilustración, no se mide en el área grande, se debe medir en el oficio pequeño central y debe ser de 0.053" Máx / 0.048"min:



**ARANDELA PLASTICA AGUJA DEL CARBURADOR:** es obligatorio portar la arandela plástica en la aguja del carburador, independientemente de su posición.

**Lo que no está específicamente permitido en este reglamento, está PROHIBIDO. Cualquier acción con ó sin dolo que dé una ventaja competitiva dará como resultado la descalificación.**

**Todas las piezas están sujetas a comparación visual con piezas stock de fábrica, esto incluye piezas stock y piezas autorizadas por ACEK en este reglamento.**