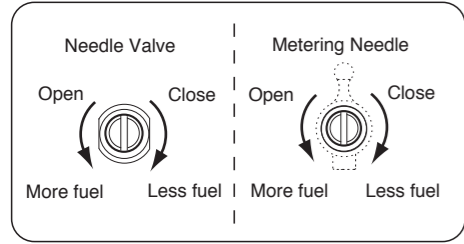


FINAL ADJUSTMENT

Final adjustment should be carried out only after the running-in has been completed.



Run the vehicle (with throttle fully open) over the longest available straight course, in order to observe the model's speed. Next return the car to the starting point, close the Needle-Valve 15° and repeat the run, taking note of the improvement in performance.

Continue with further runs, gradually reducing the Needle-Valve setting and aiming to achieve the highest straight-line speed. Remember, however, that, if the Needle-Valve is shut down too far, the engine will overheat and, accompanied by visibly diminished exhaust smoke, the model will lose speed. At this point, throttle down immediately, stop the vehicle and reopen the Needle-Valve 15°.

With the engine running, close the throttle and allow it to idle for about five seconds, then reopen the throttle fully. If, at this point, the engine puffs out an excessive amount of smoke and the vehicle does not accelerate smoothly and rapidly, it is probable that the idle mixture is too rich.

In this case, turn the Metering Needle clockwise 15°. If, on the other hand, the engine tends to speed up momentarily and then cut out abruptly when the throttle is opened, the idle mixture is too lean. Correct this by turning the Metering Needle counter-clockwise 15°.

Carry out adjustments patiently, under actual running conditions, until the engine responds quickly and positively to the throttle control.

Warning!

Mixture adjustments (whether via the Metering Needle, or the Needle-Valve) cannot be made accurately under 'no-load' conditions, which, in any case, are not advised, since such operation carries the risk of seriously damaging the engine through over-revving and overheating.

With the optimum mixture control position, light smoke is visible during high speed running, and the engine rpm increases smoothly during acceleration. Remember that, if the engine is operated with the fuel/air mixture slightly too lean, it will overheat and run unevenly. As with all engines, it is advisable to set both the needle-valve and metering needle slightly on the rich side of the best rpm setting, as a safety measure.

If the engine runs too fast with the throttle closed, the throttle stop screw should be turned counter-clockwise to allow the throttle opening to be reduced.

Finally, beyond the nominal break-in period, a slight readjustment toward a leaner needle setting may be required to maintain maximum performance.

CARE AND MAINTENANCE

The minute particles of foreign matter, that are present in any fuel may, by accumulating and partially obstructing fuel flow, cause engine performance to become erratic and unreliable. O.S. 'Super-Filters' (large and small) are available, as optional extras, to deal with this problem. One of these filters installed to the pickup tube inside your refueling container, will prevent the entry of foreign material into the fuel tank. It is also recommended that a good in-line filter be installed between the tank and carburetor.

Do not forget to clean the filters regularly to remove dirt and lint that accumulate on the filter screens. Also, clean the carburetor itself occasionally.

At the end of each operating session, drain out any fuel that may remain in the fuel tank. Afterwards, energize the glow-plug and try to restart the engine, to burn off any fuel that may remain inside the engine. Repeat this procedure until the engine fails to fire. Do this while the engine is still warm.

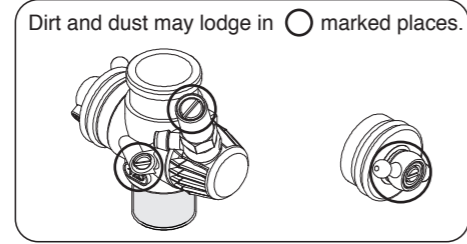
Then, inject some after-run oil into the engine, and rotate the engine with an electric starter for 4 to 5 seconds to distribute the oil to all the working parts.

Note:

Do not inject after-run oil into the carburetor as this can cause the O rings inside the carburetor to deteriorate.

Add the oil through the glowplug hole and turn the engine over several times by hand.

Finally, when cleaning the exterior of the engine, use methanol or a household cleaning agent. Do not use gasoline, kerosene, or any petroleum based chemical which can damage silicone fuel tubing.



CHECKING THE ENGINE

If the engine will not develop normal performance after long time running due to wearing of parts. It is suggested to replace necessary parts when the following symptoms are detected.

- Engine sound changes and easily overheats.
- Power has dropped extremely.
- Idle is unstable and/or engine tends to stop at idle.

In most cases, ball bearings, cylinder & piston assembly, connecting rod and/or crankcase have become worn. Check the parts carefully and replace them if necessary.

O.S. GENUINE PARTS & ACCESSORIES

- O.S. GLOW PLUG** (T-type head)
 - P3 (71641300) • P4 (71641400) • P5 (71641500)
- O.S. GLOW PLUG** (Normal type head)
 - No.7 (71607100) • No.8 (71608001) • No.10 (Former A5) (71605100)
- FOR NORMAL PLUG INNER HEAD** (21414120)
- TT02II EFRA2690 (T-1080SC L52) COMPLETE SET** (72106980)
 - TT02 EFRA2690 (T-1080SC L52) Tuned Silencer Assembly (72150010)
 - Exhaust Seal Ring (2pcs.) (22826140)
 - Joint Spring (3pcs.) (72106042)
 - MT02(M1007SC) Exhaust Manifold ASSEMBLY (72150020)
 - Exhaust Manifold Spring (2pcs.) (72106172)
 - Adapter Seal Ring (2pcs.) (21427200)
- TT01 EFRA2672 (T-1070SC L52) COMPLETE SET** (72107600)
 - TT01 EFRA2672 (T-1070SC L52) Tuned Silencer Assembly (72107610)
 - Joint Spring (3pcs.) (72106042)
 - Exhaust Seal Ring (2pcs.) (22826140)
 - MT01(M1006SC) Exhaust Header Pipe Assembly (72107620)
 - Header Pipe Spring (2pcs.) (72106172)
 - Exhaust Seal Ring (2pcs.) (21427200)
- MT03 Exhaust Manifold ASSEMBLY** (72150020)
 - Exhaust Manifold Spring (2pcs.) (72106172)
 - Adapter Seal Ring (2pcs.) (21427200)
- SUPER AIR CLEANER 202 ASSEMBLY** (72412000) On-road Type
 - 202 Cleaner Body (72412100)
 - 202 Filter Element (4pcs.) (72412200)
- PRESSURE CHAMBER SET** (71550000)
- INDUCTION SILENCER** (72414000)
 - Induction Silencer Filter (3pcs.) (72414100)
- ON-ROAD FILTER OIL (20ml)** (72414200)
- O.S. SPEED CLUTCH BEARING (1050ZZ)**
 - (71550001) (4pcs.)
 - (71550002) (10pcs.)

- O.S. SPEED SILICONE TUBE** (72506100) 2.5mm x 1000mm
- O.S. SPEED EXHAUST SEAL RING 12** (2pcs.) (21427200)
- O.S. SPEED FLYWHEEL COLETE** (2pcs.) (71801110)
- O.S. SPEED DUST CAP SET 3mm** (73300305) (5pcs.)
- O.S. SPEED DUST CAP SET 16mm** (73301612) (3pcs.)
- O.S. SPEED DUST CAP SET 18mm** (73301812) (3pcs.)
- O.S. SPEED PISTON PIN RETAINER PLIERS** (71492000)
- O.S. SPEED CLUTCH WRENCH & ADJUSTER** (71415300)
- O.S. SPEED FLYWHEEL KEY** (71415200)
- O.S. SPEED FLYWHEEL PULLER** (71415100)
- O.S. SPEED PLUG WRENCH** (71520100)
- O.S. SPEED SPRING REMOVER** (71415500)
- O.S. SPEED BODY REAMER** (71415400)
- O.S. SPEED PHILLIPS SCREW DRIVER No.1** (71417100)
- O.S. SPEED PHILLIPS SCREW DRIVER No.2** (71417200)

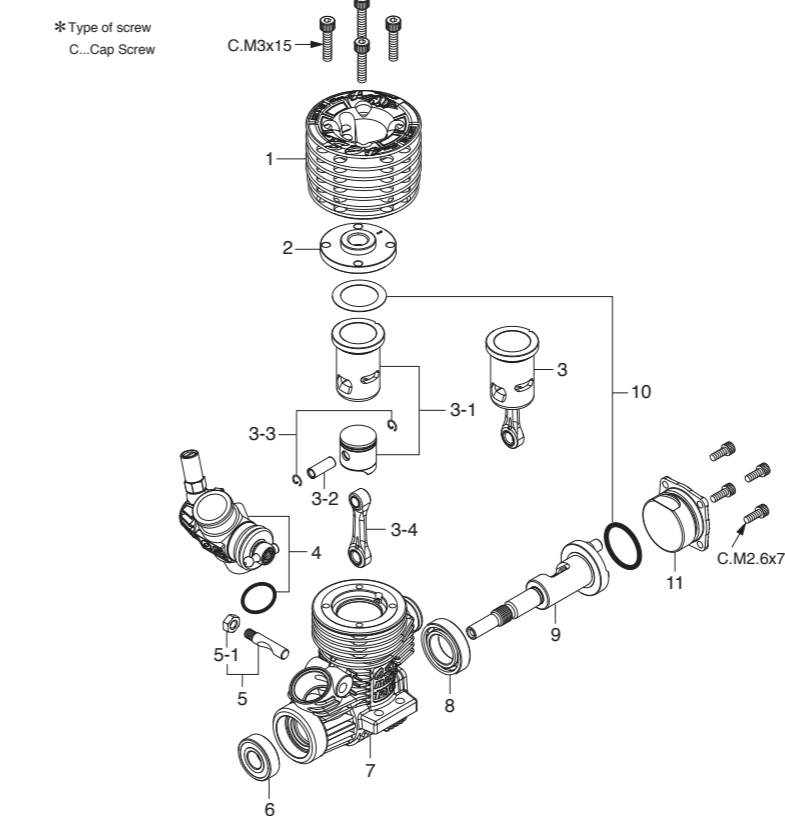
O.S. SPEED DRIVER TOOLS

Code No.	Description
71410150	O.S. SPEED HEX WRENCH DRIVER 1.5
71410200	O.S. SPEED HEX WRENCH DRIVER 2.0
71410250	O.S. SPEED HEX WRENCH DRIVER 2.5
71410300	O.S. SPEED HEX WRENCH DRIVER 3.0
71411200	O.S. SPEED HEX BALL WRENCH DRIVER 2.0
71411250	O.S. SPEED HEX BALL WRENCH DRIVER 2.5
71412300	O.S. SPEED FLAT HEAD SCREWDRIVER 3.0
71413550	O.S. SPEED NUT DRIVER 5.5
71413600	O.S. SPEED NUT DRIVER 6.0
71413700	O.S. SPEED NUT DRIVER 7.0

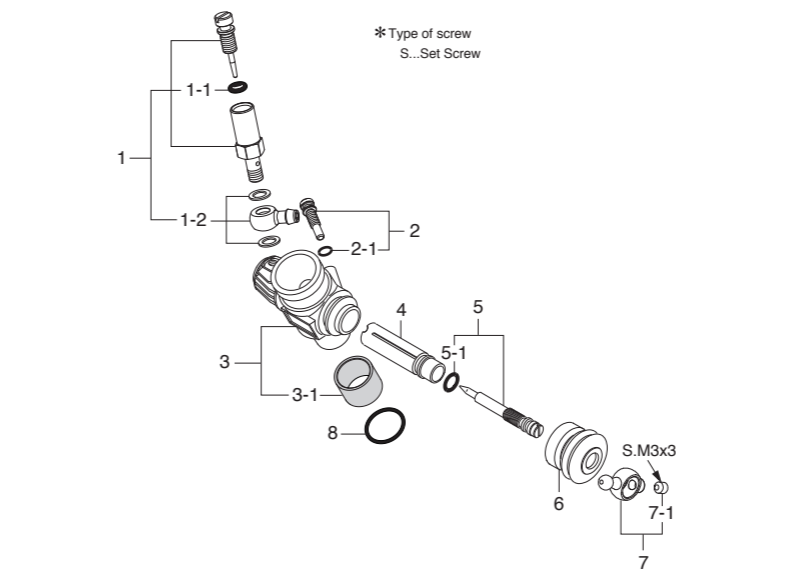
Code No.	Description
71414015	O.S. SPEED HEX WRENCH TIP ONLY 1.5
71414020	O.S. SPEED HEX WRENCH TIP ONLY 2.0
71414025	O.S. SPEED HEX WRENCH TIP ONLY 2.5
71414030	O.S. SPEED HEX WRENCH TIP ONLY 3.0
71414120	O.S. SPEED HEX BALL WRENCH TIP ONLY 2.0
71414125	O.S. SPEED HEX BALL WRENCH TIP ONLY 2.5
71414230	O.S. SPEED FLAT HEAD SCREWDRIVER TIP 3.0
71414355	O.S. SPEED NUT DRIVER TIP ONLY 5.5
71414360	O.S. SPEED NUT DRIVER TIP ONLY 6.0
71414370	O.S. SPEED NUT DRIVER TIP ONLY 7.0

The specifications are subject to alteration for improvement without notice.

ENGINE EXPLODED VIEW



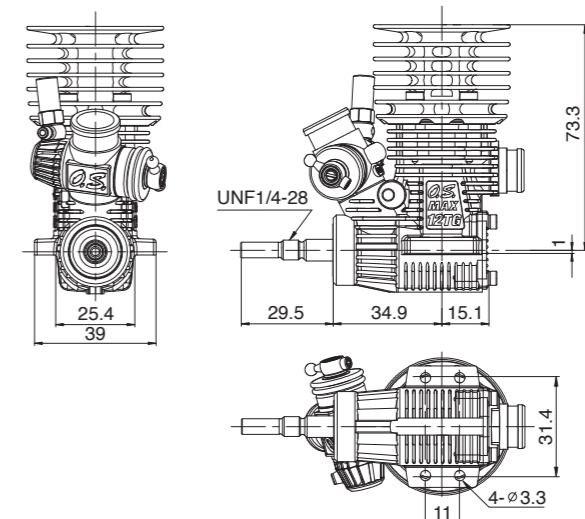
CARBURETOR EXPLODED VIEW



THREE VIEW DRAWING Dimensions (mm)

SPECIFICATIONS

Displacement	2.10 cc / 0.128 cu.in.
Bore	13.8 mm / 0.543 in.
Stroke	14.0 mm / 0.551 in.
Output	0.9 ps / 0.88 hp / 30,000 r.p.m.
Practical R.P.M.	5,000-32,000 r.p.m.
Weight	216 g / 7.62 oz. (Engine)



ENGINE PARTS LIST

No.	Code No.	Description
1	2D204000	Outer Head
2	21674100	Inner Head
3	2D203100	Built-Up Parts Set
3-1	2D203000	Cylinder & Piston Assembly
3-2	21656000	Piston Pin
3-3	2AP17000	O.S. SPEED Piston Pin Retainer 2 (6pcs.)
4	21418010	Carburetor Complete (Type 12D2)
5	25381701	Carburetor Retainer Assembly
5-1	23325340	M3.5x0.60 Nut (2pcs.)
6	21630500	Crankshaft Ball Bearing (Front)
7	2D201000	Crankcase
8	21931010	Crankshaft Ball Bearing (Rear)
9	21412000	Crankshaft
10	21411400	Gasket Set
11	21417000	Cover Plate
	71641400	Glow Plug T-P4
	21427210	O.S. SPEED Exhaust Seal Ring 12 (10pcs.)
	22884254	O.S. SPEED Dust Cap Set For 12-30 Class 3mm (2pcs.)/16mm (2pcs.)/18mm (1pc)

CAP SCREW SETS (10pcs./set)

Code No.	Size	Pcs. used in an engine
79871020	M2.6x7	Cover Plate Retaining Screw (4pcs.)
79871150	M3x15	Cylinder Head Retaining Screw (4pcs.)

CARBURETOR PARTS LIST

No.	Code No.	Description
1	21681900	Needle Valve Assembly
1-1	27881820	"O" Ring (2pcs.)
1-2	2AP81950	No.21 Universal Nipple Assembly
2	21982620	Throttle Stop Screw
2-1	22781800	"O" Ring (S) (2pcs.)
3	21418110	Carburetor Body
3-1	21982900	Thermo Insulator
4	21682200	Slide Valve
5	21538500	Metering Needle Assembly
5-1	22781800	"O" Ring (S) (2pcs.)
6	21982520	Dust Cover
7	23818430	Ball Link No.5
7-1	26381501	Set Screw
8	22615000	Carburetor Rubber Gasket