

AVIASTAR®

Av-46R/C

Thank you for purchasing AVIASTAR model engine. Our engines utilized the finest material and workmanship to ensure maximum performance and trouble free operation. We recommend that you read the warning and operating instructions carefully before the actual operation of your engine.

WARNING !

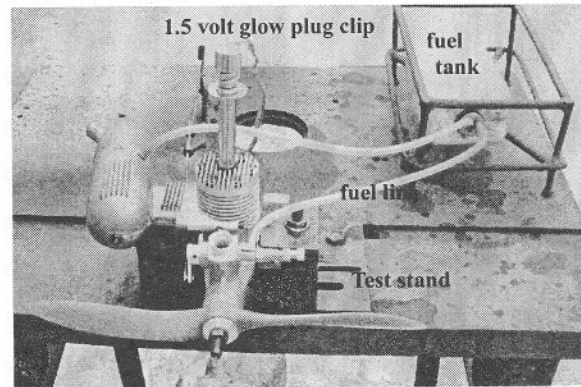
MODEL ENGINES ARE NOT TOYS !

Model engines are precision instrument which can develop very high power output. All model engines should be handled with extreme care. **Mishandling will result in serious bodily injury or property damage.** Please read the operating instruction carefully! Always seek help and advice from experienced modelers if you are new to the hobby.

PREPARING YOUR ENGINE

Minimum running in is necessary for AVIASTAR engine , however , it is beneficial to bench run your engine so as to run in and get yourself familiarize with the characteristic of the engine.

1. Mount your engine rigidly on a proper test bench mount (available from your hobby dealer).
2. Install the carburetor onto the engine. Do not over tighten the lock pin nut otherwise you might crush the carburetor neck.



3. Install a proper size propeller on to the propeller shaft. (10x 7 ;10 x 8;11x6;11x5 etc.). Position the propeller on the 2 and 8 o'clock position when viewing from the front. Do not over tighten the propeller nut.
4. Install a suitable glow plug on the cylinder head. (any glow plug of medium heat range should work)
5. Connect the fuel nipple to the fuel tank with a suitable size fuel line.

6. Muffler pressure is always recommended .

7. Any good commercial fuel containing 18~20% castor oil (measured by volume) and with no more than 15% nitromethane is recommended. If more nitro is used, please add one cylinder head gasket (Optional item). Use of incorrect fuel or unsuitable can damage your AviaStar engine and void the warranty of the engine.

8. Make sure that the fuel level is not higher than the carburetor.

9. Connect the throttle lever with a suitable linkage (available from your hobby dealer) and secure the throttle rotor on the full open position.

STARTING YOUR ENGINE

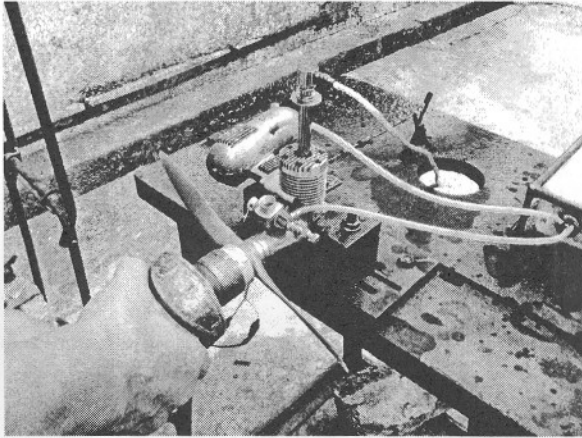
10. Open the needle valve anti-clockwise for about 2.5 turns.
11. Prime the engine by plugging up the carburetor air intake venturi with you thumb and at the same time turning the propeller three to four turns
12. Connect the glow plug to a 1.2 volt power source.
13. Make sure that nothing is in the way of the propeller arc. Start your engine with an electric starter (always recommended for safety reason).

RUNNING (BREAKING) IN

14. After the engine is running, adjust the needle valve further slowly until the RPM drops and set the engine runs on the rich side. (around 7,500 ~ 8,500 RPM)

15. Run the engine for about 5 minutes. Stop the engine by closing the throttle valve and let the engine cool down

16. Accumulate the total running in time to about 20 minutes.



INITIAL SET UP

17. If the engine starts to pick up speed when running with the throttle valve wide open while the high speed needle is on the rich side, this is an indication that the engine parts are beginning to seat in.

18. Gradually turn the high speed needle clockwise to increase the RPM to maximum. It is best to back off the needle and set the needle slightly on the rich side.

If the needle is set too lean, the engine will be overheated which may result in damaging the inside parts.

19. Gradually close the throttle. RPM should slow down gradually.

20. The idle needle has been pre adjusted and does not require major adjustment. Should adjustment is needed, only turn the idle needle 1/8 turn clockwise or counter clockwise at any one time (turn the needle counterclockwise will richen the mixture and visa versa)

21. In the event you need to reset the idle needle to the original factory setting. Please hold the carburetor up side down with your left hand. Take a close look at the orifice near the tip of the spray bar. With the throttle barrel wide open, the tip of the idle needle can be seen on the left side of the orifice at a position about 1mm from the edge of the orifice. This is the initial setting of the idle needle.

SPECIFICATIONS (subject to change without notice)

Displacement	7.53 CC
Bore	22.5 mm
Stroke	19.2 mm
Practical R.P.M.	1,900 ~ 16,000
Weight	485 grams

Manufacturer & Exporter : Aviatronics Ltd. Hong Kong

Web site : www.aviatronics.com

PARTS LIST

AV-46 CARBURETTOR PARTS

	PART NO.	DESCRIPTION
1	AVP 467018	Av-46 CARBURETOR. - COMPLETE
2	AVP 467002	HIGH SPEED NEEDLE WITH O RING
3	AVP 467003	NEEDLE HOUSING
4	AVP 467006	SPRAY BAR WITH O RING
5	AVP 467007	THROTTLE SPRING
6	AVP 467008	CARB. O RING
7	AVP 467009	IDLE NEEDLE WITH O RING
8	AVP 467011	THROTTLE ARM
9	AVP 467013	THROTTLE BERREL
10	AVP 467015	CARBURETOR BODY
11	AVP 007017	SPRING CLIP
12	AVP 467019	SET SCREW WITH NUT
13	AVP 007020	FUEL NIPPLE WITH GASKET

AV-46 ENGINE PARTS

	PART NO.	DESCRIPTION
1	AVP 460102	PROP NUT / WASHER
2	AVP 460304	DRIVE WASHER & LOCK CONE
3	AVP 460005	FRONT BEARING
4	AVP 460006	CRANKSHAFT
5	AVP 460007	REAR BEARING
6	AVP 460008	CRANKCASE
7	AVP 460009	REAR COVER WITH O RING
8	AVP 460011	REAR COVER HEX NUT (4 pcs.)
9	AVP 460120	CYLINDER HEAD
10	AVP 460121	CYLINDER HEAD GASKET
11	AVP 461415	PISTON PIN & PISTON PIN RETAINER
12	AVP 460016	CYLINDER & PISTON
13	AVP 460017	CONNECTING ROD
14	AVP 460019	LOCK BAR WITH NUT
15	AVP 460021	CYLINDER HEAD HEX NUT (6 pcs.)
16	AVP 469001	MUFFLER
17	AVP 469002	MUFFLER BOLTS (2pcs.)
18	AVP 469003	MUFFLER LONG BOLT WITH NUT

Note

Please note that your new Aviastar Av-46 / Av-53 is ABC construction, that is aluminum piston with chrome plated brass cylinder. It is normal for a new ABC engine to feel tight when turning the crankshaft to the piston top dead center. The cylinder of an ABC engine is tapered in the internal wall. It is also normal, when turn the crankshaft over by hand, you will hear a clunk as the crankshaft past top dead center. This does not indicate that the engine is defective.

Please use correct fuel as recommened. Use of incorrect fuel oil can damage your Aviastar engine and void the warranty of the engine.