



**M1051**



Thank you for purchasing an AVIASTAR® model engine. Our engines use the finest material and workmanship to ensure maximum performance and trouble free operation. We recommend that you read the warnings and operating instructions carefully before you actually operate your engine.

### **WARNING ! A MODEL ENGINE IS NOT A TOY !**

They are precision instruments which can develop very high power output. All model engines should be handled with extreme care. Abuse will result in serious bodily injuries or property damages. Please read the operation instructions carefully! Always ask help and advice from experienced modelers if you are new to the hobby.

### **Preparing your engine**

Minimum running-in is required for AVIASTAR® engines. However, it is beneficial to bench run and run-in your engine so you get familiarized with the characteristics of the engine.

1. Mount your engine rigidly on a proper test bench mount (Available in your local dealer).
2. Install the carburettor onto the engine. Do not overtighten the lock pin nut, otherwise you might damage the carburettors neck.
3. Install a proper size propeller onto the propeller shaft. (18x8 ; 18x10 ; 20x8 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 recommended even though not necessary.
7. Any good commercial fuel containing 18-20% castor oil (measure by volume) and 10% nitromethane is recommended.
8. Make sure that the fuel level in the fuel tank is not higher than the position of the carburettor.
9. Connect the throttle lever with a suitable linkage (Available in your local dealer) and secure the throttle rotor on the full open position. Never attempt to remove the throttle from the carburettor body for adjustment. Adjust the throttle by adjusting the throttle lever. Use the supplied allen wrench for untightening or tightening the set screws on the throttle lever.

### **Starting your engine**

10. Screw the needle valve completely in, then open the needle valve anti-clockwise for about 4 to 5 turns.
11. Prime the engine by plugging up the carburettor air intake venturi with your thumb and the same time turning the propeller four to five 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 reasons).

### **Running (breaking) in**

14. After the engine is running, open the needle valve further slowly until the RPM drops and set the engine runs on the rich side. (at around 5,000 ~ 6,000 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 about one hour.

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## Initial set up

17. If the engine starts to pick up speed when running with the throttle valve wide open and the high speed needle on the rich side, this is an indication that the engine parts are beginning to mesh.
18. Gradually turn the high speed needle clockwise to increase the RPM to maximum. It is best to 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 internal parts.
19. Gradually close the throttle. RPM should come down gradually.
20. Adjust the idle needle for a smooth idle.
21. The initial setting of the idle needle: tip of the needle is about 1.5 ~ 1.8mm away from the tip of the spray bar.

## Parts list

<b>PART No.</b>	<b>DESCRIPTION</b>
M1051	AVIASTAR 150 ENGINE - COMPLETE
M1051.001	PROP NUT / WASHER
M1051.002	DRIVE WASHER
M1051.003	FRONT BALL BEARING
M1051.004	CRANK SHAFT
M1051.005	REAR (MAIN) BALL BEARING
M1051.006	CRANKCASE
M1051.007	REAR COVER
M1051.008	REAR COVER O-RING
M1051.009	REAR COVER HEX NUT
M1051.010	CYLINDER HEAD
M1051.011	CYLINDER HEAD GASKET
M1051.012	PISTON
M1051.013	PISTON RING
M1051.014	PISTON PIN & PISTON PIN RETAINER
M1051.015	CYLINDER
M1051.016	CONNECTING ROD
M1051.017	LOCK BAR WITH NUT
M1051.018	CYLINDER HEAD HEX NUT

<b>PART No.</b>	<b>DESCRIPTION</b>
M1051.019	CARBURETTOR - COMPLETE
M1051.020	HI SPEED NEEDLE WITH O-RING
M1051.021	NEEDLE HOUSING
M1051.022	SPRAY BAR WITH O-RING
M1051.023	THROTTLE SPRING
M1051.024	CARBURETTOR O-RING - LOWER
M1051.025	IDLE NEEDLE WITH O-RING
M1051.026	THROTTLE ARM
M1051.027	THROTTLE BARREL
M1051.028	THROTTLE BARREL O-RING
M1051.029	CARBURETTOR BODY
M1051.030	NEEDLE HOUSING BASE
M1051.031	NEEDLE HOUSING BASE O-RING
M1051.032	SPRING CLIP
M1051.033	CARBURETTOR O-RING - UPPER
M1051.034	SET SCREW WITH NUT
M1051.035	FUEL NIPPLE WITH GASKET

## Specifications (subject to change without notice)

Displacement	32.50 cc
Bore	36 mm
Stroke	32 mm
Powerband	1,800 ~ 10,000 rpm
Weight	1,280 g



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