

ENYA

40X T.V.

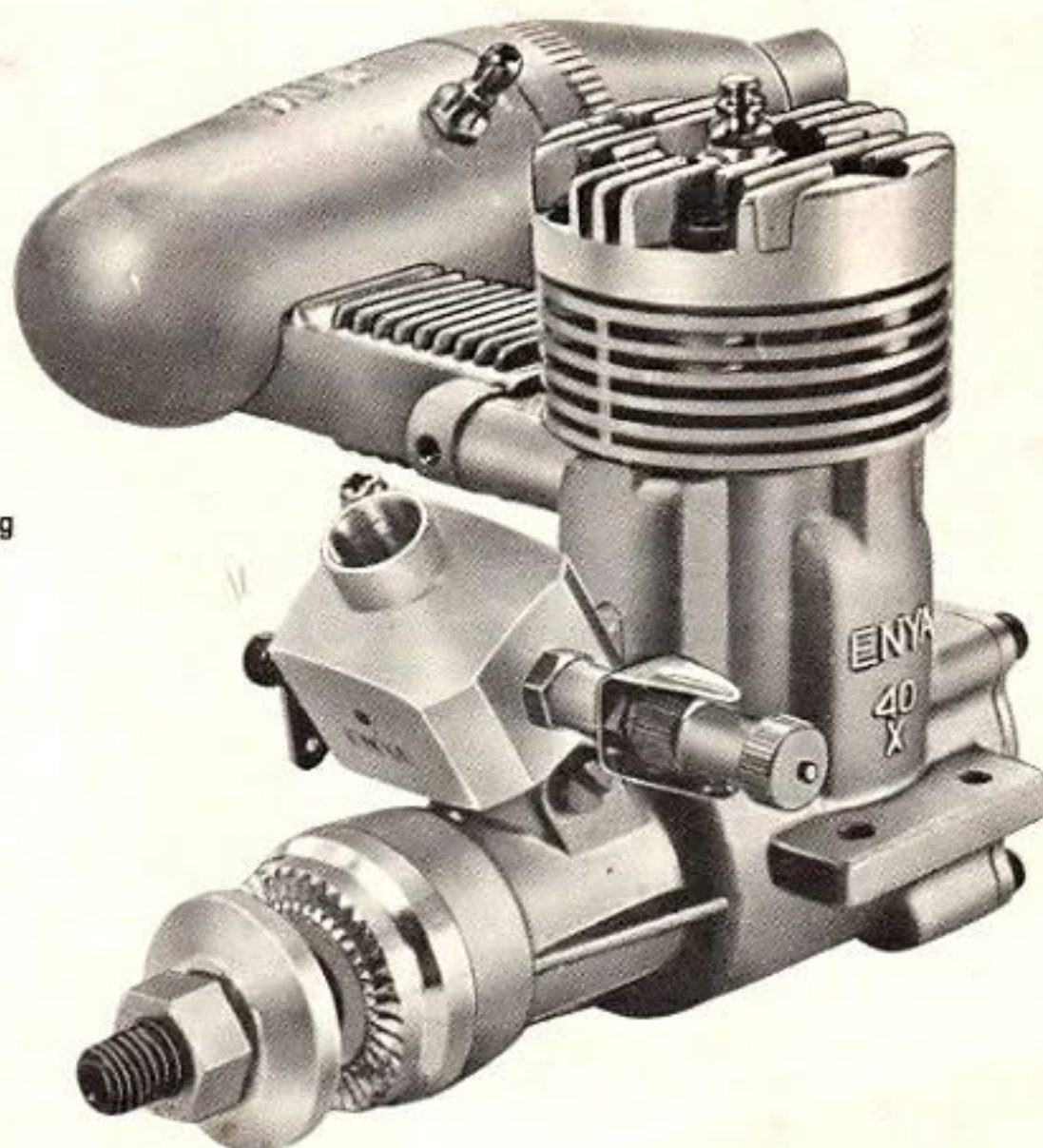
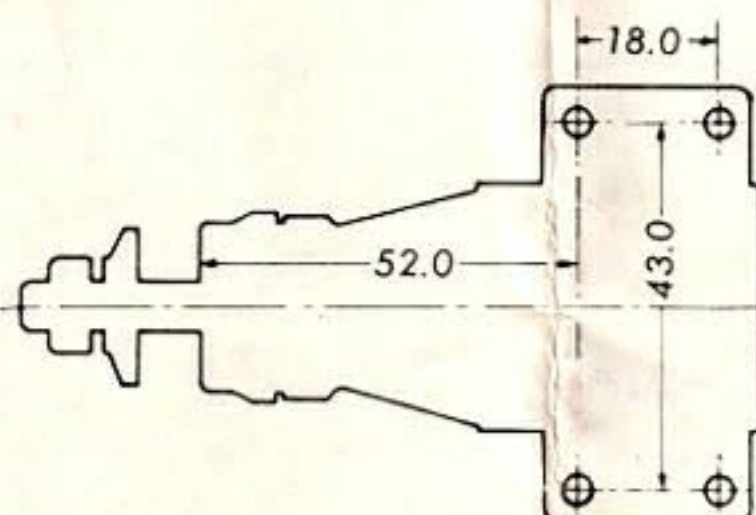
Gas Model Engine

* DISTINCTIVE FEATURES

- Exceptional performance
- Excellent speed control
- Smooth running
- Minimum break-in period
- Long life and great dependability
- Sturdy construction
- Precise workmanship

* SPECIFICATIONS

- Type : 2 stroke cycle glow plug ignition, Schnuerle type scavenging system with booster port.
- Induction : Crank shaft rotary valve
- Displacement : 0.396 cu.in. (6.49 cc)
- Bore x Stroke : 0.823 x 0.744 in. (20.9 x 18.9 mm)
- Cylinder liner : Hardened steel
- Piston : Low expansion aluminum alloy with L type ring.
- Main bearing : 2 ball bearings
- Carburetor : ENYA G-Type throttle valve with 7 mm dia. venturi.
- Weight : 12.5 oz. (350 g)
- Power : 1.0 ~ 1.2 HP (without muffler)
0.8 ~ 1.0 HP (with muffler)
- R.P.M. : 2,500 ~ 17,000 r.p.m.



* BREAKING-IN

Run your ENYA 40X TV with rich mixture during first ½ hour. After this period, you may run it in full power. But it is very important to run the engine always with slightly rich mixture. It will take 2 ~ 3 hours for the engine to reach its peak in power and smoothness.

* FUEL

ENYA 40X TV will operate satisfactorily on most kinds of high quality fuel for model glow plug engines. But it is recommended to use a fuel which contains 20 ~ 22% castor oil.

	Standard mixing ratios of fuel components (volumetric)		
	No. 1	No. 2	No. 3
Methanol alcohol	78%	73 ~ 68%	63 ~ 58%
Nitro-methane	0%	5 ~ 10%	15 ~ 20%
Castor oil	22%	22%	22%

* GLOW PLUG

Almost all the 1/4"-32 thread glow plugs are available for ENYA 40X TV. But as the glow plug has a very delicate nature, it is recommended that you test your engine with different kinds of glow plug to get the best performance.

ENYA glow plug No. 3, No. 4 are most suitable to ENYA 40X TV.

* PROPELLER

10" x 6" • 11" x 5" • 9" x 7"

* PRESSURIZED FUEL TANK

It is indispensable to pressurize the fuel tank by leading the exhaust pressure of the muffler to get the steady running during the maneuvers, because the G-7 mm carburetor has a wider venturi size than average to get bigger power. Connect the fuel tank with the pressure nipple of exhaust muffler by a hose. After filling the tank with fuel, close the filler.

* STARTING AND ADJUSTING OF THE NEEDLE-VALVE

You can start ENYA 40X TV quite easily by proper handling.

The following is one of the typical starting process of ENYA 40X TV.

1. Open the needle-valve 2½ ~ 3 turns. (In case you use an unpressurized fuel tank, the proper opening of needle-valve for starting is 3~4 turns.) Close the air intake port of carburetor with your finger, and turn the propeller 3 or 4 times. Then, the engine is choked and the proper amount of fuel for starting will be sucked into the crankcase.
2. Close nearly 90% of the throttle valve opening, and connect the battery to glow plug.
3. Flip the propeller repeatedly until the engine begin to pop and start. In case all the conditions are good, you can start it by 2 or 3 flips.
4. Once the engine starts, open the throttle-valve fully and detach the battery connection. Then adjust the needle-valve slowly to the best running position.
5. After you find the best running position, open it again about ¼~½ turn. The mixture will become slightly rich. This is the best position of needle-valve to fly your plane. It is most important for the engine to run always with slightly rich mixture.
6. To inject several drops of fuel into the exhaust port is very effective for starting in cold weather.

* OTHER NOTES

1. It is recommended that you check the screws of the engine sometimes. But never screw them up too strongly.
2. Do not disassemble your engine needlessly.

* THE ENYA "G-TYPE" THROTTLE VALVE

The ENYA "G-Type" throttle valve is especially designed and produced to feed the engine constantly with the most suitable (slightly rich) mixture at all speeds.

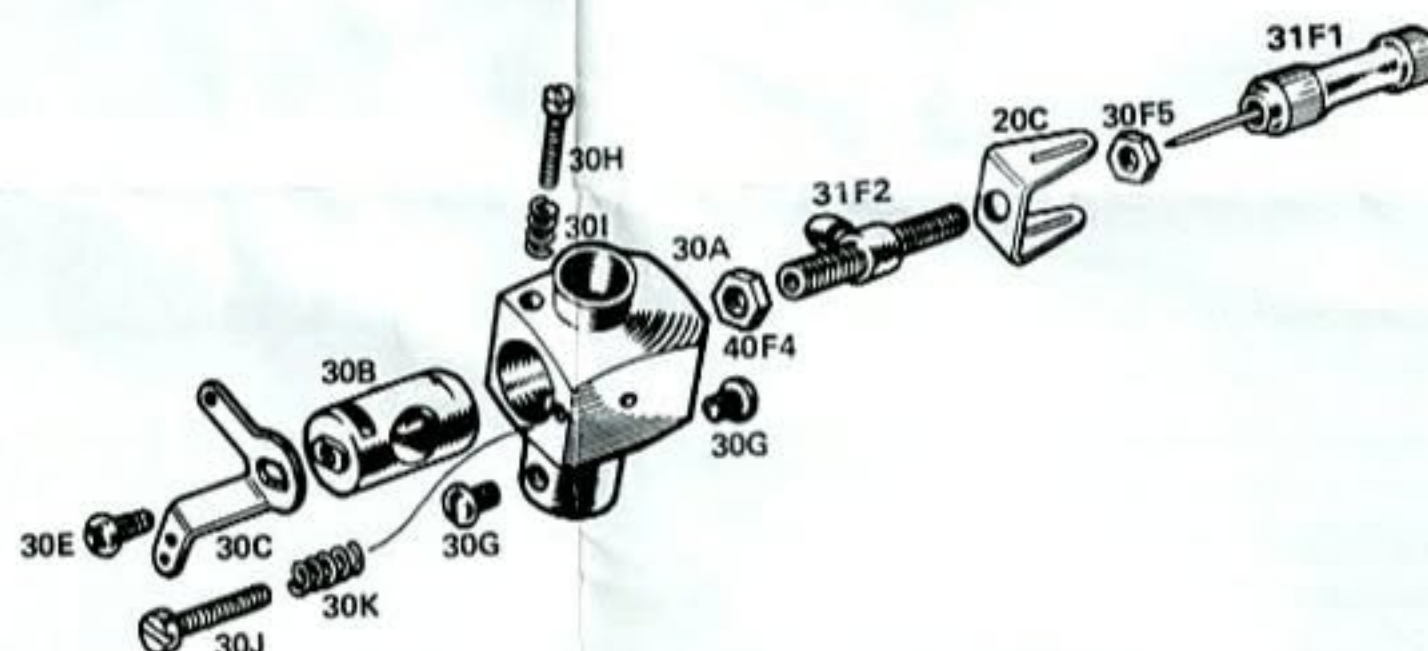
It has a precisely machined, taper fuel-metering groove on the surface of the throttle drum. And the size of the fuel passage changes in accordance with the throttle valve moving so as to feed the engine constantly with a slightly rich mixture at all speeds. Consequently, the response of the engine to the throttle valve moving becomes very quick. And moreover, as the suction of fuel is always strong, the engine has no tendency to stop even if any hard speed controlling be made during the maneuvers.

* ADJUSTMENT OF THE G-TYPE THROTTLE VALVE OF ENYA 40X TV

1. Usually, the best idle running position of the "G-Type" throttle valve of 40X TV is where it is 0.4 ~ 0.5 mm opened. The best possible idling speed is about 2,500 r.p.m. on 10" x 6" propeller. And the safety idling is 2,500 ~ 3,000 r.p.m.
2. Start your 40X TV., and warm it up about 30 seconds at high speed. Then try Hi-Lo and Lo-Hi operations taking an interval of 5 ~ 10 seconds on each side.
3. In case the idling speed is proper and the engine speed raises up smoothly from Lo to Hi within 1 or 2 seconds, it means all the conditions are good.
4. If the idling mixture is too rich and the Lo-Hi response is slow, open the idling mixture adjusting air valve (30J) $\frac{1}{2}$ ~ 1 turn.
5. If the idling is too slow or lean, open the throttle valve 0.2 ~ 0.4 mm by screwing-in the idling speed adjusting screw (30H) a little bit.
6. It is recommended to make the final test before flying. Start your engine and warm it up, and turn your plane over vertically upwards with your both hands. Then repeat Hi-Lo and Lo-Hi operations 2 or 3 times. In case all the adjustments are right, the Lo-Hi response must be quick and the engine will never have any tendency to lean out.

* MAINTENANCE OF THE "G-TYPE" THROTTLE VALVE

1. Make sure that your fuel is clean. Never use a dirty fuel. It is recommended to set a filter between the fuel tank and the engine.
2. If the fuel passage is stopped up by some dirt, remove the needle valve and throttle drum, and clean them with a piece of wire and a brush, washing with gasoline.
3. When you install the spray-bar on the TV body, screw-in it, 3 turns, and never too far.
4. In case you change the throttle lever for some other thick one made of nylon, use a longer throttle lever setting screw, and make sure that the top of the screw reaches to the inner surface of the venturi.



PARTS LIST OF THE "G-TYPE" THROTTLE VALVE FOR ENYA 40X TV

Part No.	Description of Part	Qty.	Part No.	Description of Part	Qty.
40X30	Throttle valve assembly	1 set	29440F4	5 mm nut	1
40X30A	Throttle valve body	1	09230F5	4 mm nut	1
40X30B	Throttle valve	1	60230G	T.V. assembly setting screw	2
40X30C	Throttle lever	1	60X30H	Idling speed adjusting screw	1
60330E	Throttle lever setting screw	1	60X30I	Looking spring A	1
60331F	T.V. needle valve assembly	1	60230J	Idling mixture adjusting air valve	1
60331F1	T.V. needle only	1	60230K	Looking spring B	1
60331F2	T.V. spray bar	1			
15220C	Needle setting spring	1			

ENYA METAL PRODUCTS CO., LTD.
5-11-13 TOYOTAMA-KITA, NERIMAKU, TOKYO, JAPAN.