

Thank you for purchasing HoBao Racing products. We appreciate your choice.

Fuel Recommendations:

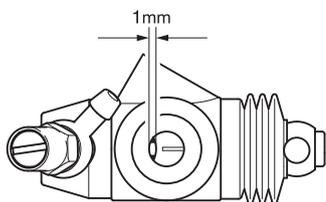
We recommend using 20% Hobby Grade Nitro Fuel for 1/10th scale (.12-.18 Engine) and 30% for 1/8th scale (.21 and up). Other types of break-in additives are NOT required.

Engine Needle Settings:

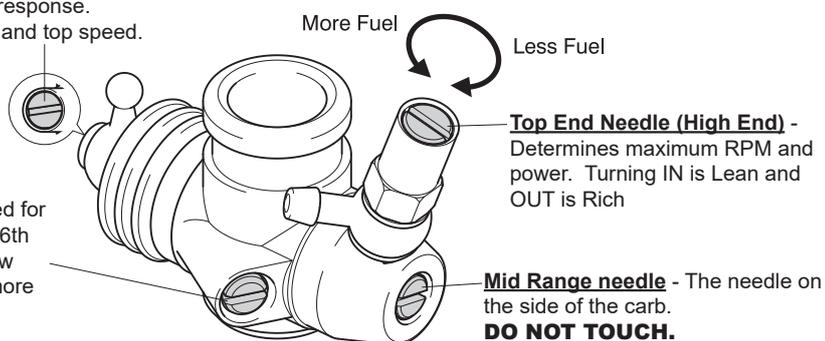
	Factory Default	After Break-in
Top End (High Speed)	4 turns out	3 to 3 ½ turns out
Bottom End (Low Speed)	Flush	Flush with ball collar
Mid Range	Do not Touch	Do not Touch
Idle Screw	1mm (1/16 inch)	1mm (1/16 inch)

Bottom End Needle (Low Speed) - This needle provides throttle response.

Do not adjust this needle until the Top end Needle is set for power and top speed.
Turning IN is Lean and OUT is Rich



Idle / Stop Screws - Used for adjusting Idle: Set for 1/16th inch/1mm gap to start new engines. You can open more for higher idle.



New Engine Break-In:

1. A brand new HoBao Racing engine is extremely tight due to high compression. This is normal for a new ABC piston/sleeve engine. The piston and sleeve are matched for fit and the top of the sleeve is tapered for a tight compression fit. Your engine is pre-set out of box. You will not need to adjust anything during break in. If you have adjusted the needles prematurely, please refer to the engine setting above for details. (Do NOT over rev the engine without breaking it in first.)

2. First, please make sure the carburetor is closed to only 1mm opening. To start the engine, prime fuel by placing finger over exhaust pipe outlet and pulling the starter several times. This will push fuel to the carburetor. Then, place glow starter on the glow plug (located in the center of the cooling head), pull the starter handle with short quick pulls. Engine should start immediately. If not, check fuel line for fuel movement. Do not over prime your engine as it will cause engine flooding. Only prime the engine until fuel just enters the carburetor.

3. Once the engine starts, heat cycle the engine during break-in procedure. Let the engine idle without the car moving for 3 full tanks of fuel. Allow the engine to cool down for 5 minutes in-between each tank. If the engine's RPM is too high or stalling out, please refer to the engine setting above and confirm the needles have been set correctly. Engine temperature should be in-between 100-150F degrees (37-65 degree Celsius).

4. After completing the first 3 tanks, you can now adjust the top end needle IN 1/4 turn to improve performance. Continue to let engine idle or drive around slowly without over revving the engine for 2 additional tanks of fuel. Allow the engine to cool down for 5 minutes in-between each tank.

5. Break-in procedure is now completed. You can now begin to adjust it for maximum performance. The first thing you should check is to make sure the carburetor is fully opened when you full throttle. Keep adjusting needle until engine is running at a good speed without being too hot. Remember to always check engine temperature. It should NEVER exceed 250F degrees (120 degree Celsius). The optimum temperature for best engine life is 180-220F degrees (82-104 degree Celsius).

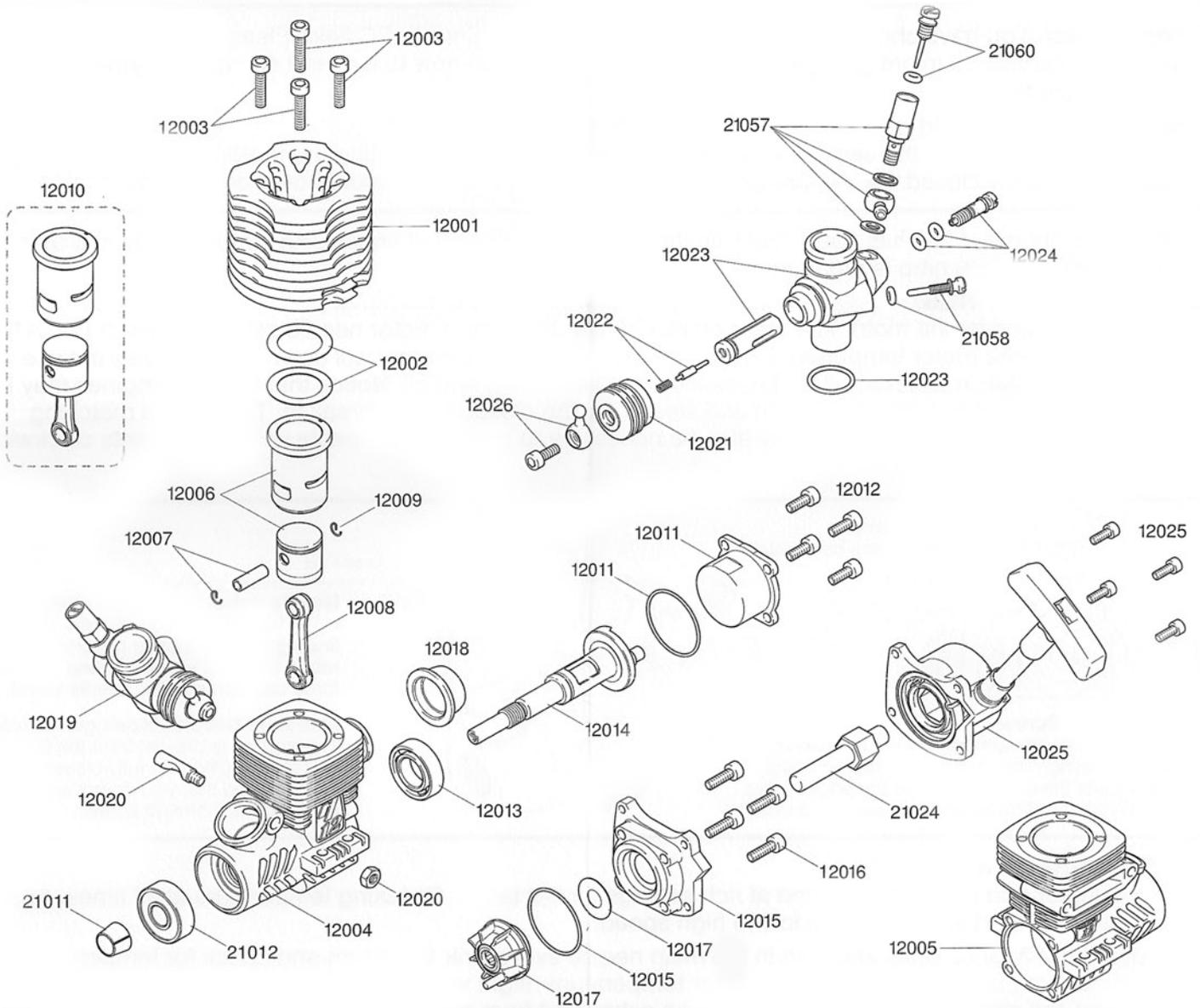
HYPER12

PURE COMPETITION

Nitro Engine Instruction

HIGH POWERFUL ENGINE

>>> Professional Best



HYPER-12 Engine Parts List

Part #	Name	Part #	Name	Part #	Name
12001	Cylinder Head	12013	Ball Bearing 10x19x5mm	12025	Pull Starter Complete Set
12002	Head Gasket (2pcs)	12014	SG Crankshaft	12026	Throttle Rod Unit
12003	Cap Screw for Head 3x14mm (4pcs)	12015	Pull Rear Cover & O-ring	12027	O-ring Completely Set
12004	Crankcase-Rear Exhaust	12016	Cap Screw 3x10mm (4pcs)	21011	Brass Cone (2pcs)
12005	Crankcase-Side Exhaust	12017	Turbo Fan & One Way Bearing	21012	Ball Bearing 7x19x6mm
12006	Cylinder Sleeve & Piston	12018	Silicone Manifold Seal	21024	Hex Axle
12007	Pinston Pin & "G" Clips	12019	Carburetor Complete Set	21057	Main Needle Hub Valve Set
12008	Connecting Rod	12020	Carburetor Bolt Setting Pin	21058	Throttle Adjustable Screw
12009	"G" Clips (5pcs)	12021	Throttle Rubber Cover	21060	Main Needle Valve & O-ring
12010	Cylinder Completely Set	12022	Sub Throttle Needle Valve		
12011	Rear Back Cover & O-ring	12023	Carburetor Body / Throttle		
12012	Cap Screw 3x16mm (4pcs)	12024	Supply Fuel Nozzle & O-ring		

>> HIGH QUALITY RADIO CONTROL MODEL

Hobao Racing

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