

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

### Fuel Recommendations:

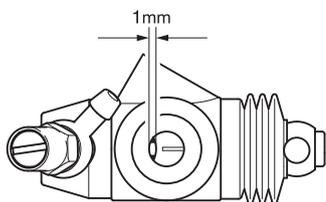
We recommend using 20% Hobby Grade Nitro Fuel for 1/10th scale (.12-.18 Engine) and 30% for 1/8th scale (.21 and up). Other types of break-in additives are NOT required.

### Engine Needle Settings:

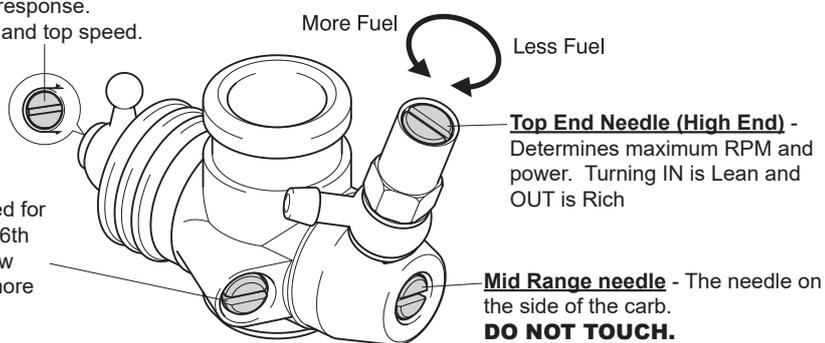
	Factory Default	After Break-in
Top End (High Speed)	4 turns out	3 to 3 ½ turns out
Bottom End (Low Speed)	Flush	Flush with ball collar
Mid Range	Do not Touch	Do not Touch
Idle Screw	1mm (1/16 inch)	1mm (1/16 inch)

**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).

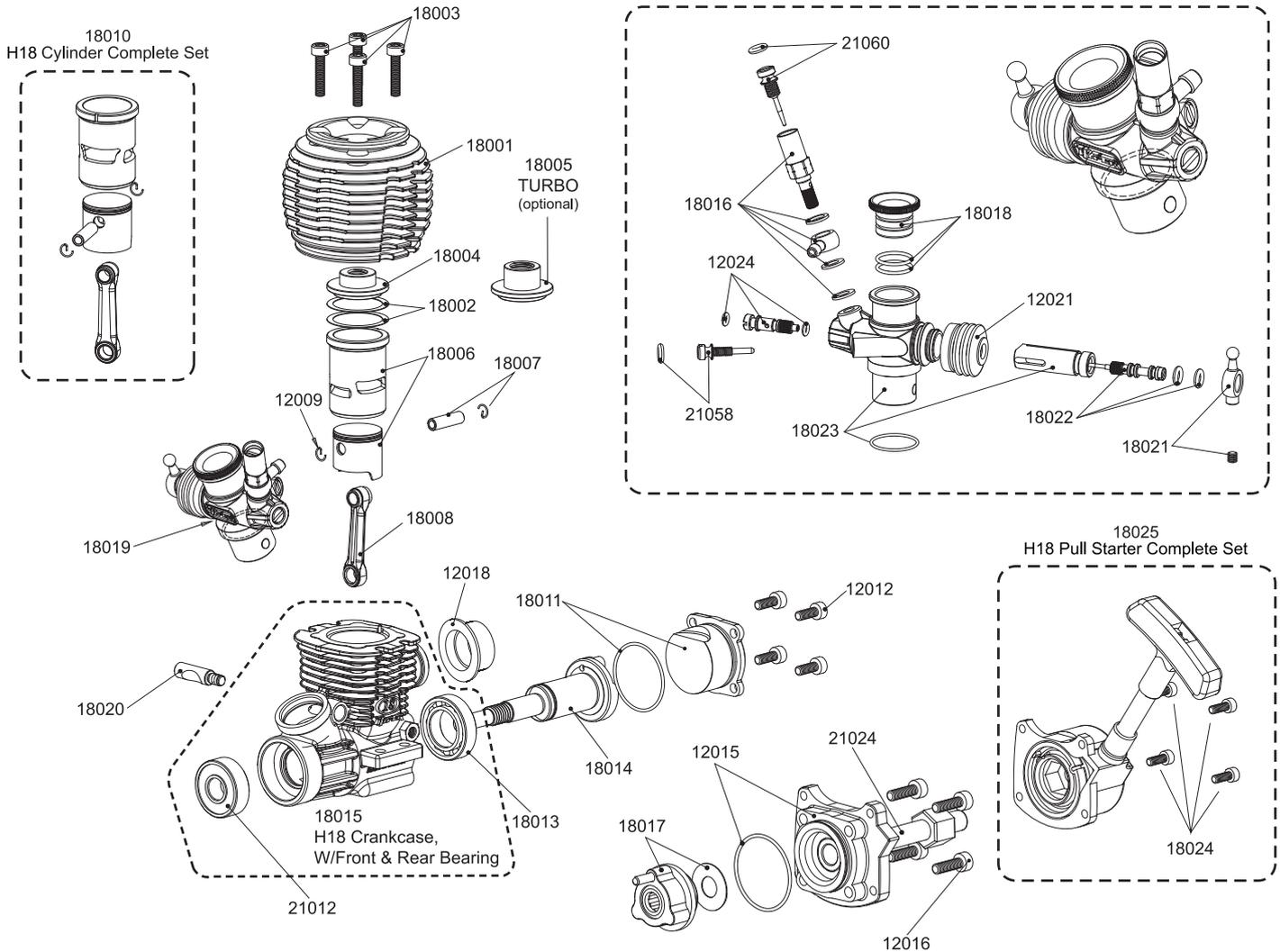
# HYPER18

PURE COMPETITION

Nitro Engine Instruction

HIGH POWERFUL ENGINE

>>> Professional Best



## HYPER 18 ENGINE PARTS LIST

ITEM NO.	DESCRIPTION	ITEM NO.	DESCRIPTION	ITEM NO.	DESCRIPTION
18001	H18 Cylinder Head	18013	H18 Rear Ball Bearing 12 x 21 x 5mm	18025	H18 Pull Starter Complete Set
18002	H18 Head Gasket	18014	H18 Crankshaft	12009	"G" Clips, 5 Pcs.
18003	H18 Cap Screws 3 x 12mm for Head	18015	H18 Crankcase, W/Front & Rear Bearing	12012	Cap Screws 3 x 6mm for Rear Back Cover
18004	H18 Alum Comb. Chamber - Standard	18016	H18 Main Needle Hub Valve Set	12015	Pull Rear Cover & O-ring
18005	H18 Alum Comb. Chamber - Turbo (Optional)	18017	H18 Turbo Fan & One Way Bearing	12016	Cap Screws 3 x 10mm for Pull Rear Cover
18006	H18 Cylinder Sleeve & Piston	18018	H18 Carburetor Restrictor - Alum body	12018	Silicone Manifold Seal
18007	H18 Piston Pin & "G" Clips	18019	H18 Carburetor Complete Set	12021	Throttle Silicone Cover
18008	H18 Connecting Rod	18020	H18 Carburetor Bolt Setting Pin	12024	Supply Fuel Nozzle & o-ring
18009	H18 Screws Complete set	18021	H18 Throttle Rod Unit	21012	Front Ball Bearing 7 x 19 x 6mm
18010	H18 Cylinder Complete Set	18022	H18 Sub Throttle Needle Valve	21024	Hex Axle
18011	H18 Rear Back Cover & O-ring	18023	H18 Carburetor Body / Throttle	21058	Throttle Adjustable Screws
18012	H18 O-ring Complete set	18024	Cap Screws 2.6 x 7mm for Pull Starter	21060	Main Needle Valve & O-ring

>> HIGH QUALITY RADIO CONTROL MODELS

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