



Stop!! Carburetor screws are preset by factory.... Do not change until you read break-in instruction.

NEW ENGINE BREAK-IN

Your OFNA engine is extremely tight when the piston is at the top of the stroke and turning the crankshaft by hand. This is normal for a new ABC type engine. The piston and sleeve are matched for fit and the top of the sleeve is tapered for a tight fit. As you run your engine, this tightness should diminish. There is no cause for alarm, because as the engine warms up, the brass sleeve will expand faster than the aluminum piston and the engine will turn freely.

The break-in process is very important to provide good service from your OFNA engine. So, you must run the engine rich or (COOL) for the first three tanks of fuel. We recommend using one gallon of ~~2000~~ MONNELL'S or BYRON'S 2000 as break-in fuel. Other break-in type fuels or added oil is NOT needed. DO NOT OVER REV THE ENGINE WHEN FIRST STARTING, this could break the piston and over heat the sleeve. Let engine run at a fast idle for one tank to break-in the connecting rod before starting full break-in. Let the engine cool down before continuing, piston should always be at bottom dead center or bottom of sleeve. This cool down period is for heat cycling the parts.

Break-in the engine in the car, by running the engine at a rich master needle setting 3 1/2 TO 4 TURN OUT FROM CLOSED Run the car from a slow to fast speed with short bursts ~~of speed~~ to buildup a little heat (warm to the touch) but not too hot. In a rich setting, the engine will run cold. In the leaner setting the engine runs hotter. Do not heat up the engine too much at this time, let it cool down if too hot. After about one (1) tank, turn the Master Needle Valve, clock wise, 1/8 of a turn leaner or clockwise. Keeping the fuel tank full, continue the process until you slowly turn the Master Needle Valve, 1/8 of turn each time, too a leaner point and at which the engine runs at high RPM and power, but still keep max temp. up to 250 deg. F. At this point you must stop, too lean of a setting will heat up engine and damage the piston. A normal operating temperature is around 210 to 250 Deg. Temperatures of 300 Deg. and above will damage engine and shorten the life span of the motor and that will not be under warranty.

STARTING NEEDLE SETTINGS

Master Needle Valve - main control for fuel mixture. Factory Setting at 3 1/2 turns from closed. Adjust this needle for maximum RPM and power without being too lean or too hot. Make sure you start at bottom of needle seat or close!!

Barrel Needle (Low End) - 8mm Carburetor, factory setting is " Turn needle in until it stops, do not over tighten. Now, turn out counter clockwise 4 turns. This needle is in the center of the carburetor barrel and provides throttle response. It is not the idle adjustment. Turning screw "IN" is Lean and "Out" is Rich. Do not adjust this needle until the Master Needle is set for power and best performance. This needle will only affect throttle response, so adjust needle until throttle response is clean. Once set, do not continue to turn clockwise or (lean) the needle any further. This is important since continuing to turn needle will only increase engine temperature.

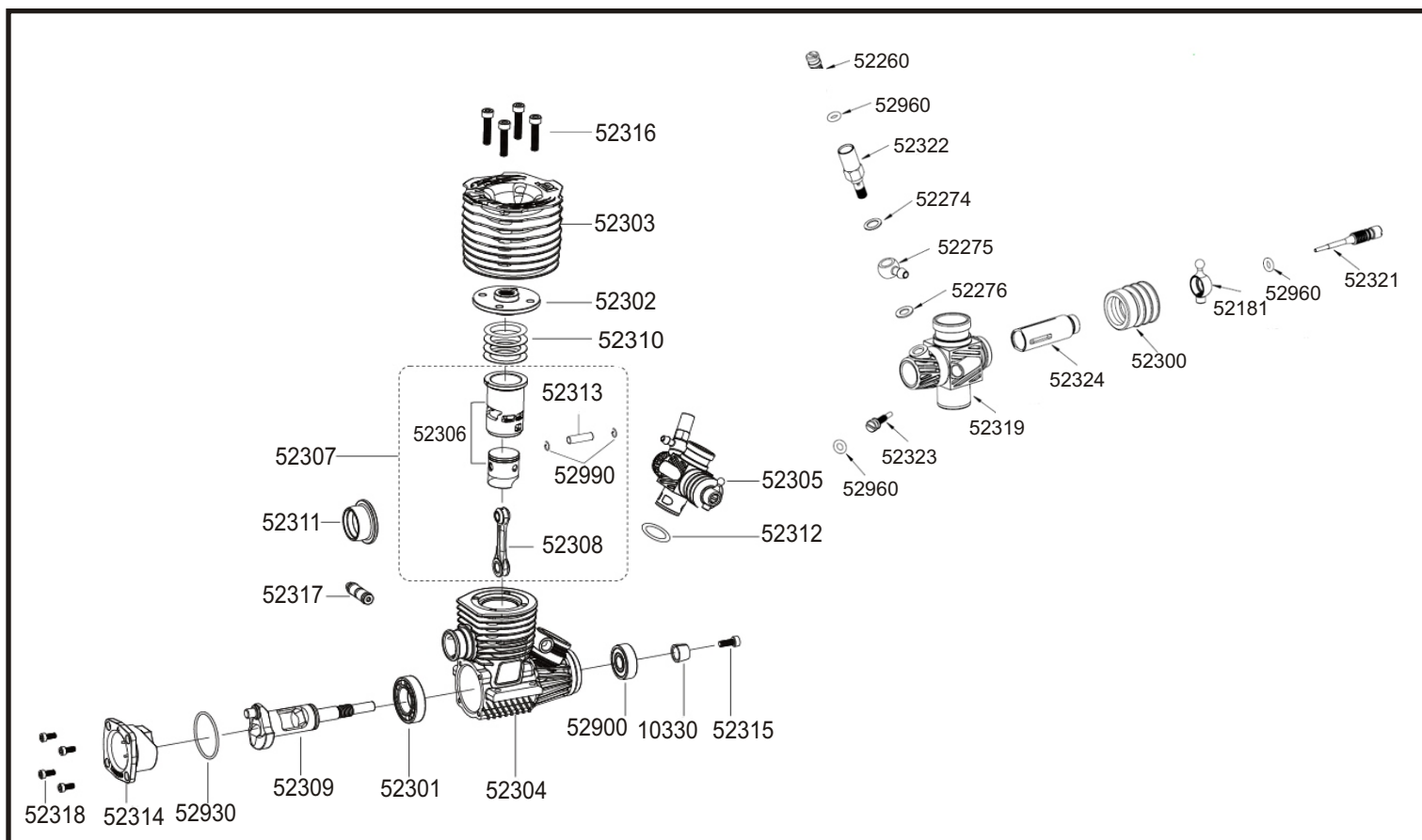
Barrel Stop Screws (Idle Screw) - Used for adjusting Idle. Set for 1/16th inch or 0.5 mm of gap to start new engines. You can open more for faster idle.

#51006 TURBO PLUG HOT
#51005 TURBO PLUG MEDIUM



TECHNICAL DATA

- Cubic Capacity.....3.49cc
- Stroke.....16.26mm
- Bore.....16.80mm
- Rpm.....37000
- Hp.....3.4
- Weight.....300gr



52207 JL 21 PRO PARTS LIST

OFNA	DESCRIPTION	RETAIL	OFNA	DESCRIPTION	RETAIL
10330	COLLET, FLYWHEEL INSERT.12/.21	2.95	52310	HEAD SHIM JL .21 0.2mm	1.95
52181	BALL CAP, THROTTLE	5.95	52311	SEALS,SILICONE MANIFOLD JL .21	9.95
52259	MAIN NEEDLE ASSEMBLY	14.95	52312	O RING CARB BODY JL .21	1.95
52260	MAIN NEEDLE	3.95	52313	WRIST PIN JL .21	2.95
52274	WASHER, MAIN NEEDLE SEAT UPPER	1.95	52314	REAR BACK PLATE JL .21 BLACK	7.95
52275	NIPPLE FUEL SUPPLY BRASS	7.95	52315	SCREW, REAR COVER 3x8mm JL .21	1.95
52276	WASHER, MAIN NEEDLE SEAT LOWER	1.95	52316	SCREW, HEAD 3.5x16mm JL .21 4PC	2.95
52300	THROTTLE BOOT .21-32 FORCE	2.95	52317	CARB LOCKING PIN JL .21	3.95
52301	BALL BEARING, REAR JL .21	24.95	52319	CARB BODY FOR JL .21 PRO	34.95
52302	HEAD BUTTON JL .21 TURBO	34.95	52321	LOW END NEEDLE FOR JL .21 PRO	4.95
52303	HEAD, JL .21 PRO BLACK	71.95	52322	MAIN NEEDLE HOUSING JL .21	5.95
52304	CRANKCASE JL .21	59.95	52322	MAIN NEEDLE HOUSING JL .21	5.95
52305	CARBURETOR COMPLETE JL .21	89.95	52323	IDLE SCREW JL .21 PRO	2.95
52306	PISTON/SLEEVE JL .21 PRO	149.95	52324	DRUM BARREL JL .21 PRO	9.95
52307	PISTON/SLEEVE COMPLETE JL .21	179.95	52900	BEARING, FRONT FORCE .21-32	5.95
52308	CONNECTING ROD JL .21	27.95	52930	SEAL, REAR COVER	1.95
52309	CRANKSHAFT SG JL .21	89.95	52960	SEAL, MAIN NEEDLE	0.95
			52990	G-CLIPS, 2 PCS.	1.95



JL .21 PRO ENGINE

8MM CARBURETOR ADJUSTMENTS

This special carburetor has the high heat nylon body to counter act heat from the engine that may boil the fuel before entering the engine. Over heated fuel causes tuning problems that are hard to resolve. This new design will give you much better performance.



FIG 1

IDLE GAP - fig.1, Adjust idle screw to increase or lower engine idle. Never let barrel fully close or adjust idle from only radio.
FACTORY SETTING - .5mm (.20)

IDLE SCREW



Low end needle

Master Needle
FACTORY SETTING
3.5 turn out from close.

MASTER NEEDLE - Adjust this needle for best power and temp. The preset setting should be 3 ½ TURN OUT. It is recommended to turn this needle "OUT" during break-in (richer mixture) if engine is too hot.



fig. 2

LOW END NEEDLE - Shown fig. 2 is the Low End Needle, which is preset by **OFNA**. You can adjust this needle after break-in if needed. When turning this needle, make only small 1/16 turns.
FACTORY SETTING - TURN IN UNTIL STOPS, DO NOT OVER TIGHTEN. TURN COUNTER CLOCKWISE 4 TURNS.