



## FORCE 28 PULL START ENGINES

Thank you for purchasing a OFNA engine. We appreciate your choice and know you will enjoy running it. Please note that the Force information in engine box is subject to change with not notice.

Carburetor Low end and barrel stop screws are pre-set by factory.... Do not change until break-in is done.

### 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 freer.

As with any new engine, there are many high spots and tight fits in the matching process. High spots create hot spots that must be broke-in. Therefore, the break-in process is very important to provide good service by the OFNA engine. So, you must run the engine rich (COOL) for the first three tanks of fuel. We recommend using one gallon of 20% 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 sleeve. Let engine run at low RPM for one tank to break-in connecting rod bearing before starting full break-in.

Break-in the engine in the car, by running the engine at a rich setting. Run the car from a slow to fast speed with short bursts of speed. You need to buildup a little heat in the engine, but not too hot. In a rich setting, the engine will run cold. In the leaner setting the engine run hot, this is not good yet. Do not heat up the engine too much at this time. 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 in which the engine runs at high RPM and power, but still keep max temp. of 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 220 to 250 Deg. Temperatures of 300 Deg. and above will damage engine and shorten life.

### NEEDLE SETTINGS

Master Needle Valve - main control for fuel mixture. Set at 3 to 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!!

Side Carburetor Needle (Low Speed) - This needle is in the center side of the carburetor and provide throttle response. It is not the idle adjustment. Set FLUSH with ball end. Turning in is Lean and Out is Rich. Do not adjust this needle until the Master Needle is set for power and top speed. This will only effect throttle response.

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

**USE LONG GLOW PLUG WITHOUT IDLE BAR,  
OFNA/PICCO #51007 OR 51008 IS RECOMMENDED**

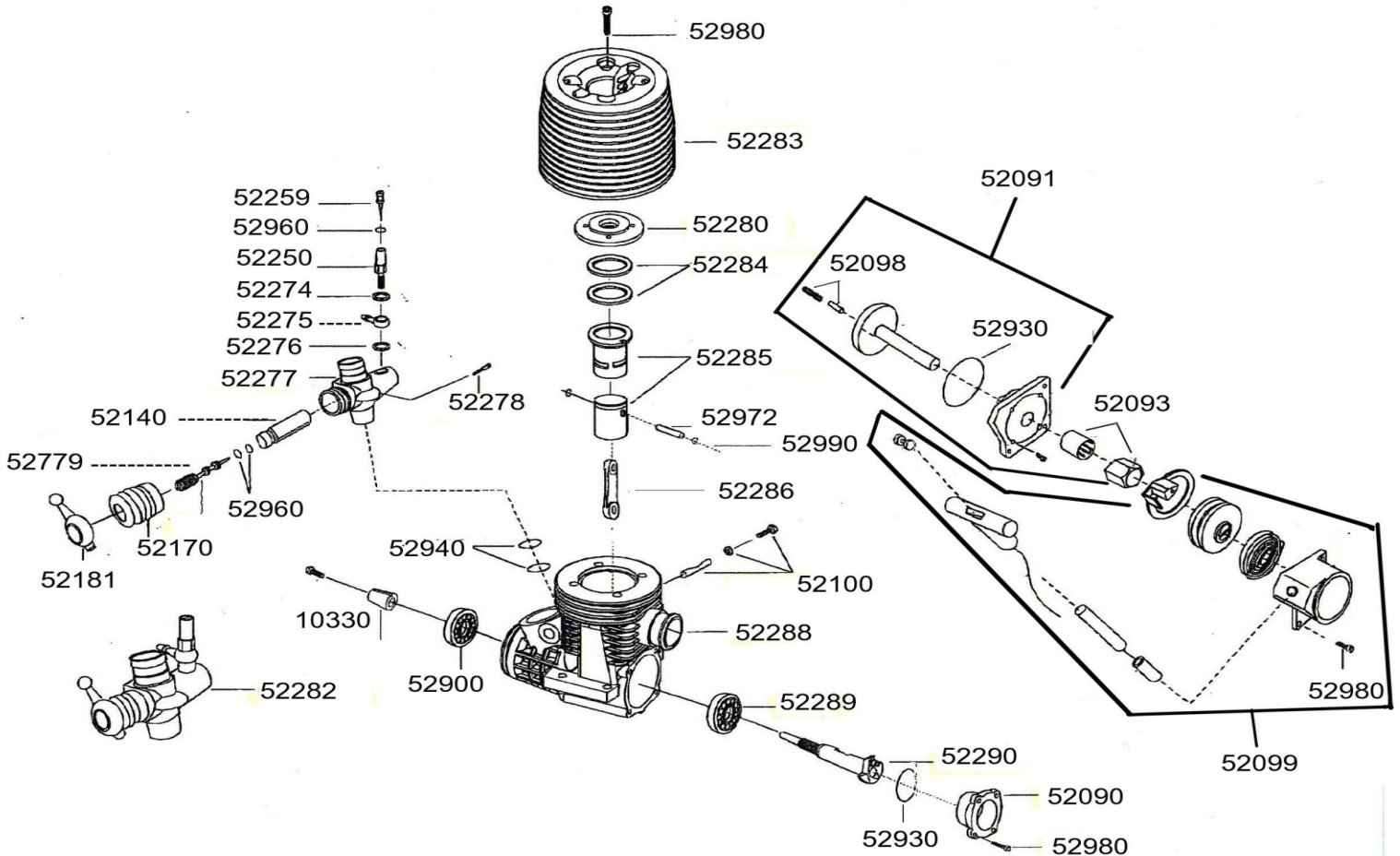


# FORCE 28 PULLSTART ENGINES

PART #52217 w/PULLSTART

## TECHNICAL DATA

- Cubic Capacity.....4.66cc
- Rpm.....38000
- Stroke.....16.8mm
- Hp.....2.7
- Bore.....19.0mm
- Weight.....330gr



## 52217 .28 FORCE PARTS LIST

OFNA	DESCRIPTION	RETAIL	OFNA	DESCRIPTION	RETAIL
10330	COLLET, FLYWHEEL INSERT.12/.21	2.95	52279	LOW END NEEDLE .28-.32	4.95
52090	REAR BACK COVER, FORCE .28-.32	6.95	52280	BUTTON, HEAD INSERT FORCE .28	29.95
52091	PULL ST BACKPLT, .21-.32	24.95	52282	CARB. COMPLETE .28 & .32	59.95
52098	PIN & SPRING- .26-.32	3.95	52283	HEAD GRAY .28	34.95
52099	PULL START, ASSEMBLY 21-32 ENG	24.95	52284	SHIM, HEAD .28	1.95
52100	CARB SET PIN (FORCE) .28-.32	3.95	52285	PISTON / SLEEVE .28	108.95
52140	THROTTLE BARREL	8.95	52286	CONNECTING ROD .28-.32	22.95
52170	BOOT, THROTTLE	2.95	52288	CRANKCASE .28	39.95
52180	CAP, THROTTLE NEEDLE (OLD)	2.95	52289	BEARING INSIDE 14mm .28	24.95
52181	BALL CAP, THROTTLE	5.95	52290	CRANKSHAFT 14mm .28	79.95
52250	MAIN NEEDLE SEAT	4.95	52900	BEARING, FRONT .21-.32	5.95
52259	MAIN NEEDLE ASSEMBLY	14.95	52930	SEAL, REAR COVER	1.95
52274	WASHER, MAIN NEEDLE SEAT UPPER	1.95	52940	SEAL, CARB. upper/lower	1.95
52275	NIPPLE FUEL SUPPLY BRASS	7.95	52960	SEAL, MAIN NEEDLE	0.95
52276	WASHER, MAIN NEEDLE SEAT LOWER	1.95	52972	.25/.26/.28/.32, WRIST PIN	2.95
52277	CARB. BODY, .28 & 32	16.95	52980	SCREW SET, 8 PCS	2.5
52278	BARREL STOP SCREW .28-.32	2.95	52990	G-CLIPS, 2 PCS.	1.95