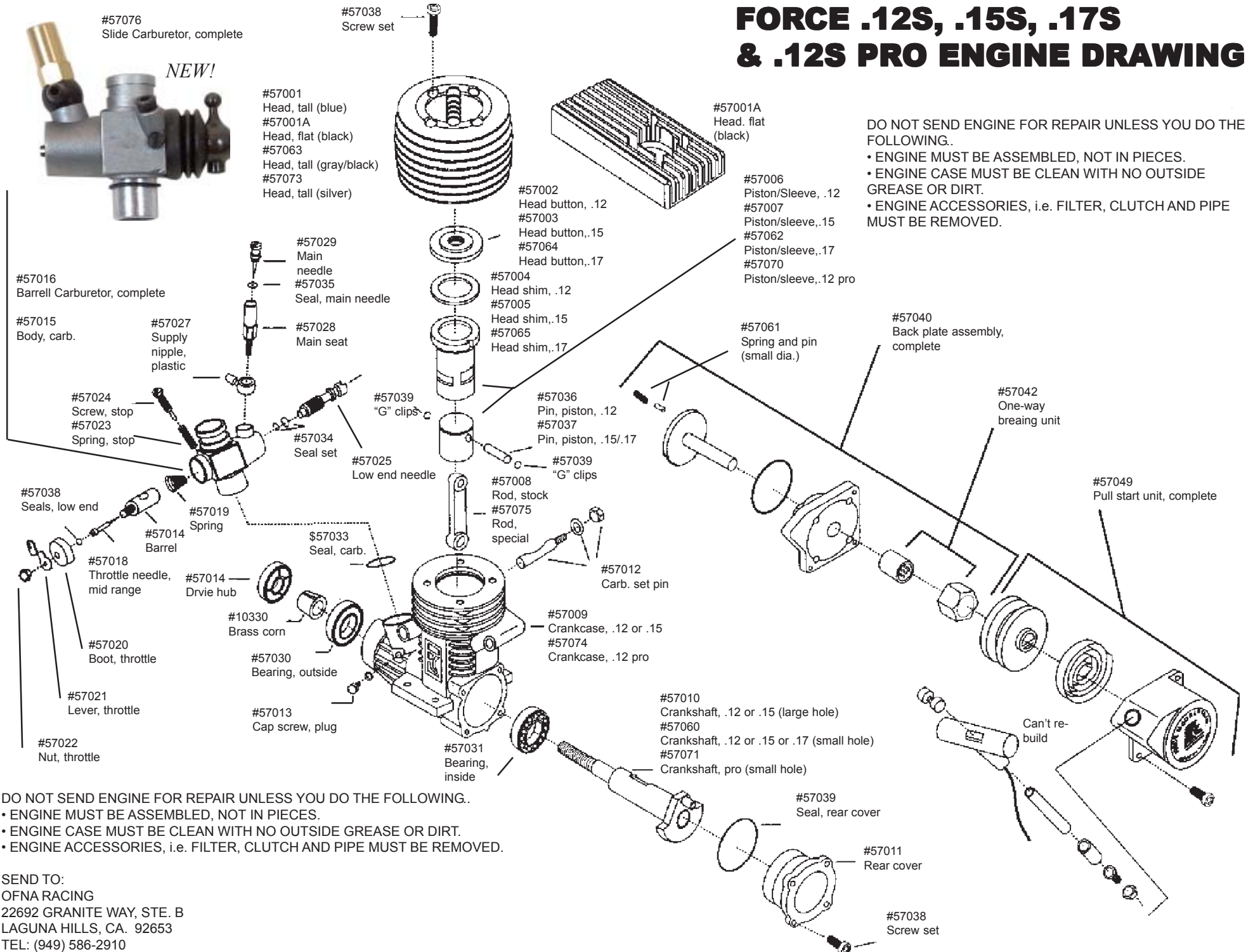


# FORCE .12S, .15S, .17S & .12S PRO ENGINE DRAWING



DO NOT SEND ENGINE FOR REPAIR UNLESS YOU DO THE FOLLOWING.

- ENGINE MUST BE ASSEMBLED, NOT IN PIECES.
- ENGINE CASE MUST BE CLEAN WITH NO OUTSIDE GREASE OR DIRT.
- ENGINE ACCESSORIES, i.e. FILTER, CLUTCH AND PIPE MUST BE REMOVED.

DO NOT SEND ENGINE FOR REPAIR UNLESS YOU DO THE FOLLOWING.

- ENGINE MUST BE ASSEMBLED, NOT IN PIECES.
- ENGINE CASE MUST BE CLEAN WITH NO OUTSIDE GREASE OR DIRT.
- ENGINE ACCESSORIES, i.e. FILTER, CLUTCH AND PIPE MUST BE REMOVED.

SEND TO:  
OFNA RACING  
22692 GRANITE WAY, STE. B  
LAGUNA HILLS, CA. 92653  
TEL: (949) 586-2910

# FORCE .12S, .15S CARBURETOR SETTING

**THE CARBURETOR IS FACTORY SET FOR THE LOW END NEEDLE, SO DO NOT ADJUST UNTIL BREAK-IN IS COMPLETED. BUT YOU MUST ADJUST THE MASTER NEEDLE BEFORE STARTING.**

## ADJUSTMENTS

1) MASTER OR HIGH END NEEDLE - THIS ADJUSTS THE MAXIMUM SPEED OF THE CAR WHEN THE CARB IS FULLY OPEN. AFTER BREAK-IN IS COMPLETED, THE NEEDLE SHOULD BE 1.5 TO 2.5 TURNS OUT. TURNING THE NEEDLE IN (CLOCKWISE) IS LEANING OUT FUEL MIXTURE AND INCREASES HEAT. SO, TURNING OUT NEEDLE ( COUNTER CLOCKWISE) WILL RICHEN THE MIXTURE AND REDUCE HEAT. THE HEAT OF THE ENGINE SHOULD BE AROUND 250 DEGREES, LOWER IS BETTER, BUT HOTTER IS BAD.

FOR BREAK-IN, TURN MASTER NEEDLE OUT 2 TO 3+ TURNS TO KEEP FUEL MIXTURE RICH AND KEEPING ENGINE RPM LOW. LET THE ENGINE FAST IDLE, CAR AND WHEEL OFF THE GROUND, FOR AT LEAST ONE TANK OF FUEL. RUN THE CAR ON THE GROUND AT A SLOW/MEDIUM UP AND DOWN SPEED FOR ANOTHER FEW TANKS. AFTER RUNNING THE ENGINE FOR A FEW TANKS OF FUEL, TURN NEEDLE SLOW IN (1/4 TO 1/2 TURNS) FOR EACH PROCEEDING TANK.

2) LOW END NEEDLE (JET) - THE LOW END NEEDLE CONTROLS THROTTLE RESPONSE. AFTER BREAK-IN, IF THE ENGINE THROTTLE RESPONDS WITH SLIGHT A DELAY, TURN THE LOW END NEEDLE CLOCKWISE (1/8 TO 1/4) TO LEAN OUT MIXTURE. TRY TO USE SMALL 1/8 TURNS. FACTORY SETTING IS FLUSH, SEE FIGURE.

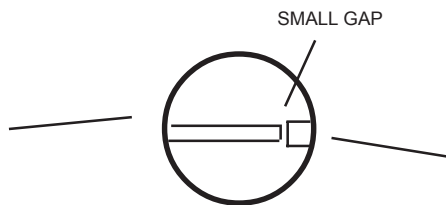
3) BARREL STOP / IDLE SCREW - THE SCREW MUST ALWAYS BE SET SO THE BARRELS DOES NOT FULLY CLOSE. LEAVE A SLIGHT GAP, THIS IS YOUR ENGINE IDLE. A LARGER GAP WILL INCREASE IDLE, BUT ALSO, CHANGE LOW END SETTING. THEREFORE, YOU MUST WORK BACK AND FORTH WITH BOTH NEEDLE.

GLOW PLUG: ENGINE IS DESIGNED FOR A SHORT STYLE GLOW PLUG, SO USE **O.S. 8 GLOW PLUGS**. IF YOU WANT TO USE McCOY PLUGS, USE AN MC-59 WITH TWO COPPER WASHERS TO PREVENT DAMAGE. IF THE MC-59 IS NOT RIGHT FOR YOUR AREA, MC-8 OR MC-9 CAN BE USED ALSO BUT WITH TWO COPPER WASHERS.

FUEL: 20% FUEL IS RECOMMENDED, i.e. BYRONS; BLUE THUNDER, O'DONNELL. OTHER FUEL MAY CAUSE VARIOUS PROBLEMS SO BE CAREFUL WHEN BUYING FUELS OTHER THAN MENTIONED..

## NEW! EASY TUNE TWO NEEDLE CARB.

LOW END NEEDLE IS ON OTHER SIDE OF CARB BODY.



Carb. barrel picture, showing low end needle setting in a fully open position.

Factory setting



MASTER NEEDLE -  
STARTING = 2.5 TURNS  
BREAK-IN = 2.5 to 3.5 TURNS  
WORKING = 1.5 to 2.5 TURNS

LOW END NEEDLE (JET)  
PRESET = FLUSH