**206 SUPER STOCK RULES**

The spirit and intent of this engine package is designed to make use of LO 206 cc Briggs engines that have become tired, worn or in any other way un-useable for the LO 206 class.

It is also an inexpensive way to go faster than a stock LO 206.

It makes about 40% more Horsepower than a senior LO 206.

These changes will allow you to inexpensively convert a tired engine that you already have sitting on the shelf into an engine with more power and give you several more years of use.

Examples of salvageable engines would include engines that were run without oil or engines that have other worn internal parts. Engines that have worn piston or rings make excellent candidates for these modifications.

The only changes you will be allowed to make to the block will be to hone the cylinder slightly and use a standard bore, a .005”, a .010” or a.020” oversize specified domed piston. If you can’t hone the cylinder yourself there are lots of kart shops or automotive machine shops that can do this for you inexpensively.

Faster motors will gladly hone your worn cylinder as well.

All parts are to be original equipment Briggs & Stratton parts unless otherwise specifically noted.

YOU ARE ALLOWED TO HONE THE BORE AREA OF THE CYLINDER TO FIT A NEW APPROVED DOMED PISTON. YOU ARE NOT ALLOWED TO MACHINE THE CYLINDER BLOCK IN ANY OTHER WAY! YOU ARE NOT ALLOOWED TO MACHINE THE CYLINDER HEAD, CARB, FLYWHEEL, OR ANY OTHER PART OF THE ENGINE .

**IF IT DOESN’T SPECIFICALLY SAY YOU CAN DO IT THEN YOU CAN’T.**

**Starting** Must be pull start. Must use the OEM Briggs recoil starter!! No electric starters Allowed!!

**Block**

LO 206 blocks are the only block permitted. They can be identified by the appropriate numbering on the front of the block adjacent to the drain plug. The crankcase cover dowel pins must also have been drilled for the seals.

 Decking of the block is not permitted and the factory machining marks must be present on the deck surface. Must be part number 555705 or equivalent. No Intek blocks allowed. Absolutely no welding of the block. If you need to repair a hole in the block from a broken rod you must use Epoxy. No welding of the internal or external cylinder area is allowed. Replacing the cylinder sleeve is not legal. The cam bearings must remain original. No other bearing design is legal. Welding anywhere inside the block is illegal. The crankshaft bearing pocket must remain in factory condition. No Modification of the bearing pocket is allowed.

The oil return hole between the lifter bores must not be larger than .2055”

Any bolt hole may be repaired with a helicoil of original size. The repair must not create a performance advantage. Holes for the air shield may use the next size larger bolt.

Holes for the blower housing may be repaired with a helicoil of the original size.

Magnetic drain plugs are legal. A cracked block in the drain plug area may be repaired by epoxy and by installing a short piece of ¼” pipe 1” long.

No block supports of any kind are allowed.

The camshaft bearing must remain completely stock. No welding.

No painting of the block or head allowed.

**Gaskets and Seals** All gaskets and seals must be OEM Briggs parts.

 Briggs fire ring head gasket Part number 555698 is required. Minimum thickness is .042”

**CAMSHAFT** The only legal camshaft is the AN Mod 1 Dyno cam. It must be the cast welded version with the compression release !! The Tool Steel Billet version is not allowed !! The lift must be between .307” and .311” when measured at the push rod. The lift at the valve retainer must be between .305” and .313” when measured at the valve retainer with negative .002 valve clearance.

Profile

|  |  |  |
| --- | --- | --- |
|  | **Intake** | **Exhaust** |
| **Open:** | 57.15 BTDC | 96.10 BBDC |
| **Close:** | 95.30 ABDC | 57.95 ATDC |
| **Lift:** | .309" | .309" |
| **C/L:** | 108.0 ATDC | 108.0 BTDC |
| **DUR @ 50:** | 255.00 Deg | 259.95 Deg |

**Valves Springs** Must be single coil available from Faster Motors.

**Crankshaft** must be Briggs part number 557137. It must be in completely original condition. No modifications allowed. It may not be lightened in any way. No grinding of any kind is allowed. No clearancing of any of the bearing surfaces is allowed.

The bearing surface of the crankshaft for the flywheel side bearing must be no smaller than .873”

The bearing surface of the crankshaft for the PTO side must not be any smaller than 1.061”

The crankshaft connecting rod journal must not be any smaller than 1.096”

**Crankshaft Bearings** must be OEM Briggs part number 798538 for the PTO side and 690824 for the flywheel side. If the bearing numbers are superseded to a different number that will be acceptable.

No Aftermarket or ceramic bearings allowed.

The OD of the PTO bearing must be 2.046 Minimum

The ID of the PTO bearing must be 1.063 Max

**Crankshaft Keys** must be OEM Briggs part number 798972 for the PTO side and 690959 or the flywheel side. See the LO 206 rule book for more specifications on the flywheel key.

No offset keys allowed. The ignition timing must be between 26 and 30 degrees. It will be measured using a piston stop and a degree wheel.

**Crankshaft gear** must be OEM Briggs part number 695087

**Cylinder Bore** for any engine cannot exceed 2.710” at any point.

The bore must have conventional hone marks and cannot have any circular grooving at any point in the cylinder. No plating such as Nickosil or anti friction coatings of any kind will be allowed.

**Side cover**

The stock side cover is required. Part number 555706 is the only legal part.

No billet side covers are allowed. The crankshaft bearing and bearing pocket must remain stock. No welding or epoxy of the side cover is allowed

Mo machining or grinding of either the bearing or bearing pocket is allowed. The crankshaft ball bearing must be a press fit into the side cover.

The oil fill caps must be original equipment. No aluminum oil fill caps allowed.

The cam bearing must remain stock. No welding of the side cover is allowed.

Stripped bolt holes may be repaired with a helicoil of original size.

**PTO bearing pocket** cannot be machined in any way and must not be larger than 2.048”

**Flywheel side** bearing pocket cannot be machined in any way and must not be larger than 1.855”

**Connecting Rod** must be the Briggs World Formula rod part number 557117 or ARC 6249 rod.

The length of the rod from the bottom of the wristpin hole to the top of the connecting rod hole is 2.419” to 2.429”

The oil hole in the rod cannot exceed 0.185”

**Lifters**

Must be OEM Briggs part number 690977. No aftermarket lifters allowed.

The head diameter must be between .820” and .860”

The length must be 1.515” and 1.525”

**Cylinder Stroke** may not exceed 2.204”

**Piston**

The specified Domed pistons are the only pistons allowed.

The piston sizes allowed are Standard, .005”, .010” and .020”oversize.

The pistons are available from Faster Motors

**Piston Rings** You must use all three rings. They must be OEM Briggs part number 555664 (std) or 555665 (.010” oversize) or 555666 (.020” oversize)

No modifications to the rings allowed except filing for end gap. Recommended end gap by Briggs for the top ring is .004”

All the rings must be intact when the piston is removed from the engine. An engine with a broken ring will be disqualified.

The rings cannot be heat treated or shrunk in any way.

When rings are removed from the piston they must be self supporting in the cylinder.

The dot on the top two rings must be facing up.

The chamfer on the ID of the second ring must be facing down.

Minimum width of the top two rings is 0.096”

The thickness of the top two rings must be between 0.060” to 0.062”

The oil ring expander cannot be shortened.

The length of the oil ring expander for the std piston must not be less than 8.200”

The oil ring expander for the .010” oversize piston may not be less than 8.250”

**Piston Pin** must be OEM wrist pin part number 499423. The dimensions for the wrist pin must be as follows:

Outside diameter must be between .624” and .626”

Inside diameter at the outer ends must not be larger than .414”

The length must not exceed 1.762” It must not be shorter than 1.903”

The distance from the top of the piston to the top of the wrist pin must be between ?????? and ??????

The PTO bearing inside diameter must not be larger than 1.064”

The PTO crankshaft bearing must be a press fit into the side cover.

**Carburetor Methanol** The PZ carburetor is the only legal carb. All LO 206 rules apply except for the main jet , the idle jet and the main nozzle.

Main Nozzle size:.  .104” gauge must go but a .107" gauge must not go.

Main jet size: .054” gauge must go but a .057” gauge must not go.

Idle Jet size:   .014” gauge must go but a .017’ gauge must not go.

You may use the appropriate parts from the Briggs methanol jet kit 555537.

You can make your own jets but they must conform to the rules!

The .602” carb measurement is of particular importance and will be checked frequently!!

All other carb rules are the same as the current LO 206 rules.

You must use pure methanol for fuel. It will be tested according to existing kart racing standards and procedures. NO additives will be allowed.

**Carburetor Gasoline** Must follow the existing LO 206 rules.

Suggested fuel is 93 octane pump gas. Hint if the fuel is red or blue or any other color than normal pump gas it is probably higher octane and oxygen enriched fuel and is illegal.

**Ignition Coil** Must be the Briggs Blue colored PVL ignition coil Pate Number 555681.

**Flywheel** You must use the Briggs PVL flywheel Part Number 555683 and plastic flywheel fan part number 692592

**Spark Plug** Must be Champion RC9YC with the OEM sealing washer / gasket installed.

**Air Filter** The unaltered LO 206 air filter is legal as well as a less expensive unaltered aftermarket air filter with the following dimensions   [3" x 4" (1.25" I.D.)](https://www.smkart.com/dealers/product_info.php?cPath=788_690_63&products_id=52&osCsid=9dd8929bef2fbd185798e56f2e730076) A nylon or foam pre-filter is legal and encouraged. Oiling the filter is also legal and also encouraged.

The use of filters of any kind that have the internal portion machined, ground, radiused or chamfered is illegal. Anything that resembles modification internally will be illegal.

Below is an example of an inexpensive legal air filter.



**Cylinder Head** The RT 1 cylinder head is the only legal head. The use of the Briggs heat disperser is allowed Part number 555690. It may be added to older production RT 1 heads.

The heat disperser is not required but is definitely encouraged!!

See LO 206 rules for additional specifications.

**Briggs & Stratton 4T Racing oil is highly recommended**

**Fuel** Methanol is the only fuel allowed. It must be pure methanol with **NO** additives. No top engine lube will be allowed.

To be legal fuel must pass a hydrometer test and or Digitron test.

**Other engine parts such as the exhaust pipe and muffler will follow the existing LO 206 rules!**

**Other examples are the ignition timing, flywheel weight and fuel pump etc will follow the existing LO 206 rules!**

**Any part numbers given herein that is superseded by Briggs & Stratton in the future will be acceptable.**

**11/17/19**