

# **Information for Engines**

## **4 stroke air cooled petrol engines only**

Vanguard 6HP (current standard engine)

Bore - 68mm  
Stroke - 50mm = 181cc  
20 thou oversize for rebuild = 185cc

Vanguard 200cc (current modified engine)

Bore - 71mm  
Stroke - 50mm = 197.96cc  
10 thou oversize for rebuild = 199.35cc

Intec - standard  
6.5 Vanguard - standard  
Bore - 68.28mm  
Stroke - 55.88mm = 204.61cc  
20thou oversize for rebuild = 208cc

Honda GX200

Bore  
Stroke

## **6 Hp Vanguard (115432,117432)**

Vanguard 185cc (Junior & Senior)

Fuel - Unleaded pump fuel only  
- May use 2 stroke tank & pulse pump  
- No electric pumps

Head - Max 20thou off for repairs – no porting

Exhaust - Replaced by approved equivalent  
- Must remain under 70 decibels at 80m and 1.5m high

Carby - Must be factory standard for that series engine  
- Main jet may be changed and relocated  
- Adjustable jet is allowed, but not to be adjusted while kart is in motion  
- No alteration to emulsion tubes and no over sizing of Venturi

Crankshaft - Disc oil pump can be fitted  
- No balancing or knife edging

Con Rod - Billet item may be used (ie. ARC #6264)

Ignition - Timing may be advanced (not cam timing)  
- Coil must be factory standard for that series engine

Camshaft - Standard with series – no changes  
( Inlet valve 9° ATDC open, 29° ABDC at 050° lift)  
( Exhaust valve 33° BBDC. 8° BTDC at 050° lift)  
Max Lift .268"

Governor - May be removed

Valves	- Springs may be changes to prevent bounce ( p/n 14751-459-000 ) - Valves & retainers on the 118 series may be replaced with the 117 series item.
Air Filter	- May be replaced, but intake piping not to be higher that the standard tank height
Piston/Block	- May be rebored to 020'' over for rebuild.
Stroke	- To stay standard
Starter	- Pull start only
Flywheel	- Standard flywheel for that series engines, no balancing or machining or lightening

### **200 Class (Mod 3) 6.5 Hp Briggs & Stratton (new standard engine)**

Intec 208cc (Junior & Senior)

Model No. 1223324200B8

Serial No. 1003138883696

Model No. 13H332

Type No. 0133B8

Fuel	- Unleaded pump fuel only - May use 2 stroke tank & pulse pump - No electric pump
Head	- 20thou off for rebuild – no porting
Exhaust	- Replaced by approved equivalent - Must remain under 70 decibels at 80m and 1.5m high
Carby	- Must be factory standard for that series engine - Main jet may be changed & relocated - Adjustable jets allowed, but not to be adjusted while kart is in motion - Venturi must not be oversized, or alterations to emulsion tubes
Crankshaft	- No oil pump needed - No balancing or knife edging
Con Rod	- Billet item may be used #557117 Briggs
Air Filter	- May be replaced but intake piping not to be higher that standard tank height
Governor	- May be removed
Camshaft	- Standard item – no changes ( Inlet valve 7' ATDC open, 27' ABDC at 050'lift) ( Exhaust valve 37' BBDC. 14' BTDC at 050'lift) Max Lift .244''
Ignition	- Timing may be advanced (not cam timing) - Coil must be factory standard for that series engine
Piston/Block	- 20thou oversize for rebuilds
Stroke	- Stock standard
Valves	- Valves, springs & retainers to be replaced with animal items (due to Intec having slide in collets) #555551 Inlet, #555552 Exhust, 36Lb dual springs #AS0332
Starter	- Pull start only

Flywheel - Standard flywheel for that series engines, no balancing or machining or lightening

### **200 class (Mod 3) Honda GX200 or e Chines Equivalent 196cc** (standard engine)

Fuel - Unleaded pump fuel only  
- May use 2 stroke tank & pulse pump  
- No electric pumps

Head - Max 20thou off for repairs – no porting

Exhaust - Replaced by approved equivalent  
- Must remain under 70 decibels at 80m and 1.5m high

Carby - Must be factory fitted for that series engine, with no over sizing of Venturi, or alterations to emulsion tubes  
- Main jet may be changed and relocated  
- Adjustable jet is allowed, but not to be adjusted while kart is in motion

Crankshaft - Disc oil pump can be fitted  
- No balancing or knife edging

Con Rod - Billet item may be used (ie. ARC #6270 )

Ignition - Timing may be advanced (not cam timing)  
- Coil must be factory standard for that series engine

Camshaft - Standard item – no changes  
( Inlet valve 11' ATDC open, 31' ABDC at 050' lift)  
( Exhaust valve 27' BBDC. 1' BTDC at 050' lift)  
Max Lift .235''

Governor - May be removed

Valves - Springs may be changed to prevent bounce  
- Valve springs & retainers to be replaced with collet retainers (due to Honda having sliding collets) #

Air Filter - May be replaced, but intake piping of filter not to be higher than that of the standard tank height

Piston/Block - May be oversized 20thou for maintenance or rebuilds

Stroke - To stay standard

Starter - Pull start only

Flywheel - To be replaced with ARC aluminium flywheel for safety reasons.  
ARC #6619

### **200 Class (Mod 3) LO206**

Fuel - Unleaded pump fuel only  
- May use 2 stroke tank & pulse pump  
- No electric pump

Head - 20thou off for rebuild – no porting

Exhaust - Replaced by approved equivalent  
- Must remain under 95 decibels

Carby - Must be factory standard for that series engine  
- Main jet may be changed & relocated  
- Adjustable jets allowed, but not to be adjusted while kart is in motion

Crankshaft	- Venturi must not be oversized, or alterations to emulsion tubes - No oil pump needed - No balancing or knife edging
Con Rod	- Billet item may be used # ????
Air Filter	- May be replaced but intake piping not to be higher than standard tank height
Governor	- May be removed
Camshaft	- Standard item – no changes ( Inlet valve ? ATDC open, ?' ABDC at 050'lift) ( Exhaust valve ?' BBDC. ?' BTDC at 050'lift) Max Lift .?''
Ignition	- Timing may be advanced (not cam timing) - Coil must be factory standard for that series engine
Piston/Block	- 20thou oversize for rebuilds
Stroke	- Stock standard
Valves	- Valves, springs & retainers ??????
Starter	- Pull start only
Flywheel	- Standard flywheel for that series engines, no balancing or machining or lightening

## **Modified 1 & 2**

### **Modified 208cc**

Fuel	- No methanol or alcohol - Unleaded fuel only - Can use 2 stroke tank & pulse pump - No electric pumps
Head	- May be welded & ported - Valve/springs no limitations
Exhaust	- May be changed & remain under 95 decibels
Carby/Filters	- No limitations
Cam/Rod	- No limitations
Ignition	- No limitations
Piston, Block & Stroke	- May be changed to obtain 208cc
Starter	- Pull start or electric start
Batteries	- For ignition or otherwise must be dry cell & located in a protective box
Flywheel	- No modifications to standard factory flywheels, for safety reasons - Billet flywheels are available