

GCKI "Chonda" Class

The Chonda (or Clone Honda) class is intended to be a low cost, minimal maintenance racing class. This is a spec racing class designed to equalize the power plants of all participants in the class. The engines are affordable and intended to give life to older chassis that may be hidden deep in your garages; however they must be racing karts with nose and side pods and must have some type of rear bumper. There are no specs for the chassis make or model, however if you are converting a chassis with front brakes they must be disconnected. All Chonda class karts must pass tech, so make sure they are safe and have all the pins, clips, etc. installed. If you are unsure if your chassis will pass inspection, please email or ask on the forum before converting it for the class.

We have set the following rules for preparing your engine. (See parts list for prices and where to order)

GCKI "Chonda" Engine Requirements

1. Harbor Freight (Blue Greyhound, part 66015-0VGA) 2009 or newer. Do not buy the California version, part 66014-1VGA. No Yellow engines allowed.
2. Governor and oil sensor must be removed. No other modifications, aftermarket parts or adjustments are allowed to the internals of the engine. There are different methods for removing the governor and oil sensor. See <http://arc racing.blogspot.com/> for a good video. There is also another method that does not require special tools on you tube in 4 parts. <http://www.youtube.com/watch?v=FTNbDvflHoo>
3. Install race prep parts kit, DJ-1014 from www.arc racing.com. This includes the following additional or replacement parts to prepare your engine for the class. Select kit **1147** for the HF Blue '09 engine.
 - DJ-1138 ARC Header and muffler kit
 - DJ-114X ARC top plate/throttle hookup (1147 for HF Blue '09)
 - 6931 ARC billet air filter adaptor
 - DJ-1257 Choke hold
 - Fuel Pump (Mikuni or Walbro)
 - 6877 Pulse inlet fitting
 - 6899 Angled air filter
 - 5' fuel hose
 - DJ-1415 Chain guard/heat shield
4. The DJ-1415 may not fit on all karts due to seat size and/or seat stays without modification. A chain guard is required, so if the kit supplied guard will not fit you must fabricate one.
5. Carburetor jet may be drilled or replaced to a no-go setting of .042 max. (.037 -.038 is suggested for GCKI) Stock emulsion tube is required and must not be altered.
6. Clutch is limited to the Max Torque STK (or Clone) clutch with 15 tooth driver. This clutch must remain stock with the black spring that engages in the 2900-3000 range. The 15 tooth driver has proven to be the best size of front driver at GCKI. (Suggested rear gear is 58-60)

GCKI "Chonda" Class Rules

1. The Chonda class will be run as a single race group.
2. Minimum age is 12. Driver must be 12 on January 1st of the calendar year.
3. Tires are Spec Bridgestone YHC or YKC. Tires must be scrubbed-in. New tires or tires that have not been scrubbed in are not allowed
4. Fuel is 87 octane pump gas only. Fuel will be teched with a digitron meter.

5. Clutch (see above) must have a 15 tooth driver.
6. Rear gearing is open.
7. The 320 weight class must have a .500 intake restrictor. (PURPLE ARC restrictor)
8. The 360 weight class must have a .550 intake restrictor. (BLUE ARC restrictor)
9. The 405 weight class is not required to have an intake restrictor.
10. All karts must pass safety tech.
11. All karts are subject to same post-race inspections as other GCKI classes.
12. If motor does not pass tech and is determined to be altered to unfairly enhance performance, the motor will be stamped with an xxx on the base plate and will not be allowed to compete at GCKI.
13. Winner's engine may be claimed by anyone finishing in the top 5 positions at a cost of \$160 less add on parts. (Clutch, above mentioned ARC kit, and mount) Claimed engines will be impounded by tech and thoroughly inspected for performance enhancing modifications. Claimed engine must pass tech. If engine does not pass tech, the claimer does not have to purchase the engine. Refusing to cooperate with the claiming process will result in immediate disqualification of competitor along with forfeiture of any points earned to date in the class. Engine will be stamped with an xxx on the base plate and will not be allowed to compete at GCKI. Competitor will also not be allowed to compete any longer in the class.

The following engine specific rules will be used during tech:

ENGINE SPECIFIC TECH SHEET FOR: Harbor Freight Blue 6.5 OVH

Description: Single cylinder, 2 valve, OHV 4 cycle. No machining or alteration of parts is allowed unless specifically noted. All parts will be subject to a comparison to a known HF Blue part (when performing a comparison check it is recommended to use a +/- .005" tolerance).

Combustion chamber volume: 27.5 cubic centimeter minimum, with piston at TDC, using prescribed procedure.

Cylinder Head Requirements: Must be OEM casting only. Porting and / or grinding are not permitted. Valve seats are two angles 45 degrees valve face and 30 degrees top relief. Stock head bolts only, must have four. Head gasket maybe after market, must be of stock configuration. No copper or aluminum gaskets allowed. Any stock configuration gasket allowed no other sealer. Bore and Stroke: Stock cylinder bore is 2.685" max. Stroke is 2.123" +/- .005".

Carburetor requirements: Huayi OR Jing Ke OR Ru X ing model carb only. Carb to intake sealer is gasket only no other sealer allowed. Choke must be as supplied from factory, but may be fixed to stay in open position. Choke bore .810" NO-GO. Venturi .615" NO-GO. Rear carb bore .751" NO-GO. Main fuel jet .042" NO-GO. Carbs with restrictor plates must have a gasket on each side of the restrictor plate.

Valve Train: Stock valve cover only with any stock configuration gasket, no sealer. Factory stock rocker arms and push rods only. Stock valves only 45 degree angle only both valves, no modifications allowed. Stock valve springs only. Max wire diameter on spring wire is .0698" with a maximum tension of 10.8 lbs. at a height of .850".

Ignition system: Stock system only and must be unaltered. Kill switch and low oil sensor may be disabled and removed.

Flywheel: Stock flywheel only with plastic fins. No alterations of any type allowed. Must also run stock flywheel key no alterations to advance timing are allowed.

Piston and Rings: Must be unaltered stock only. No machining of piston and rings allowed.

Connecting Rod: Stock rod only. No machining of any type allowed. Stock rod bolts only.

Crankshaft Requirements: Stock crankshaft required. Machining, polishing, addition of material or other alteration of crankshaft is prohibited. Stock factory timing gear mandatory and must be installed in original location. Crankshaft journal diameter is 1.180"- 1.175" min.

Camshaft Requirements: Stock as cast camshaft only.

Max Intake lift on cam .225" taken at the pushrod.

Max Intake lift at the valve .238" Taken on valve spring retainer with zero lash.

Max Exhaust lift on cam .232" taken at the pushrod.

Max Exhaust Lift at the valve .242" Taken on valve spring retainer with zero lash.
(Additional cam checks will likely be added later)

Special note. Valve guide wear can give false valve lift readings when checking off the front of the valve spring retainer. It is advised to take readings at several other points around the retainer (back, and both sides) if wear is suspected of giving a false, unfavorable reading.

Block Requirements: Block must remain stock as produced. Stub for governor may be removed and hole plugged. No machining of block allowed. Welding to the block shall be for rod damage repair only and may not constitute a functional modification.

Part	Part Number	Price	Where	Notes
Engine				
Harbor Freight Greyhound (Blue) 6.5 Engine	66015-0VGA	\$ 139.99	In Stores or harborfreight.com	Can be purchased for \$119 or even \$99 with coupon from newspaper.
Race Prep Kit				
ARC Box Stock Parts Kit	DJ-1014 (1147 for HF Blue '09)	114.95	arcracing.com	Price of 114.95 good until 12/31/09! Make sure to get the 1147 kit for HF Blue
Clutch				
Max Torque Box Stock Class Clutch	MT-SS1X34LK (15 tooth)	55.00	arcracing.com	You can order the clutch when you order the race prep kit.
Max Torque STK Clone Clutch 15T #35	AP529015 (15 tooth)	52.50	apskarting.com	I purchased all my additional parts from apskarting. Everything was in stock!
Engine Mount				
Burris 4 Cycle 15 Deg Mount Kit (Inter-wide)	BMC544	85.94	apskarting.com	The Burris mount is very nice, comes in black, and has good adjustability. If you have an american spaced frame you might need the BMC543.
Billet aluminum mount system 15 degree	AP4223	74.95	apskarting.com	This mount looked nice, but I decided to go with the Burris. This one has a 2 inch offset vs 1.5 inch with the Burris.
Other misc parts you will need are listed below and are available from arcracing.com or apskarting.com.				
Carb Jets				I bought an assortment from apskarting. .035 to .042, you can drill this too.
#35 Chain				I bought the cheapest chain they had.
#35 Master links				I got one of these and it works great.
#35 Chain Rings				On sale at arcracing.com for \$12! I've tried 58, 60, 62. 58 is the best so far!
#35 chain tool				Gonna need this or you can bum mine!
Throttle cable				Get one long enough for your kart. Attaches with set screw on top plate.