

VDKA Clone Engine Technical Specifications (Jimmy Sims/WKA/AKRA)

Description of component being checked	Measurement/Gauge
Recoil Starter	
1. Pull starter must be present and remain stock. Crank angle of starter can be rotated	
Exhaust System	
1. Single Stage, One Piece Non-Coated Header With Threaded Nipple	
Total Length With Muffler minimum/ maximum	10" – 15"
2. Muffler/silencer baffle holes (RLV # 4117), (brace reqd.) maximum	.1285 rear & .0965 inner
3. Muffler must be screwed on & tight	
4. Header diameter minimum/ maximum	.635 - .750
5. Threaded Nipple ID Maximum (Internal raised weld seam must be present)	.690
Restrictor Plate	
1. Restrictor plate, Blue No-Go	.551
Fuel	
1. Gasoline only - maximum octane	87 - 93
2. Fuel tank must be removed from engine	
3. Fuel pump non tech but must be pulsed from crankcase or valve cover	
Carb (Huayi or Rui-ing)	
1. Choke assembly must be in place and functional	
2. Choke bore must be cast finish	
3. Venturi No-Go	.615
4. Rear carb bore no-go	.751
5. Emulsion Tube No-Go (must be stock & unaltered)	.066
6. Low speed idle jet No-Go	.019
7. Air Filter adapter length maximum	1.375
8. Throttle shaft thickness minimum	.115
9. Butterfly thickness minimum	.037
Block	
1. Block may be welded for repairs, below cooling fins only	
2. Stock bore only – maximum	2.685
3. Stroke minimum/maximum	2.118 – 2.133
4. Piston popup maximum	Zero

Ports	
1. Ports must remain stock, no grinding or modifications	
Rocker Arms	
1. Rocker arms must be stock 1 -1 ratio	
Valve Train	
1. Valve spring wire diameter maximum	.071
2. Valve spring pressure maximum	10.8 lbs. at installed height of .850
3. Lash cap on exhaust only & valve stem seal allowed under intake spring only	
4. Lip thickness on valve stem seal under intake spring maximum	.027
5. Intake valve diameter minimum/maximum	.980 - .990
6. Exhaust valve diameter minimum/maximum	.943 - .953
7. Exhaust valve spring retainer thickness maximum	.250
8. Intake valve spring retainer thickness maximum	.230
Head	
1. Combustion chamber C.C.'s with piston at TDC minimum	26.5
Head Gasket	
1. Head Gasket must be stock configuration (2 permitted) minimum thickness	.008
Valve Seats	
1. Both seats must have two angles, 45 degree bottom and 30 degree top	
2. Exhaust valve seat diameter no-go maximum	.862
3. Intake valve seat diameter no-go maximum	.897
Camshaft	
1. Exhaust running lift, on retainer with zero lash maximum	.242
2. Intake running lift, on retainer with zero lash maximum	.238
3. Camshaft base circle minimum/maximum	.860 - .875
4. Intake duration degrees at .050 lift maximum	218.5 degrees
5. Intake duration degrees at .200 lift maximum	85.5 degrees
6. Exhaust duration degrees at .050 lift maximum	221.5 degrees
7. Exhaust duration degrees at .200 lift maximum	95.5 degrees
8. All cam measurements are + 2 degrees	
Ignition	
1. Flywheel, ignition coil and plastic fins must be stock & unaltered	
2. Flywheel & plastic fins weight minimum	5lbs 4oz
3. Ignition Timing Advance Maximum	18* BTDC
Clutch	
Stamped steel drum shoe type clutches only, No machined Billet drums Allowed	
No Disc clutches Allowed	

ALL PARTS MUST BE BOX STOCK FACTORY PRODUCTION PARTS UNLESS OTHERWISE SPECIFIED....NO MACHINING OR ALTERATION OF PARTS ALLOWED UNLESS SPECIFICALLY NOTED...ALL PARTS WILL BE SUBJECT TO COMPARISON TO A KNOWN BOX STOCK PART