2023 Wakefield Special Events

Mercury 20H Rules

BSH Hydroplanes

Minimum weight: 385 lbs.

Engine mounting heights: Center of prop shaft 1/2” below bottom

Hydros to meet current SO safety rules.

Using 1987 SO Inspection Manual specs for 20H

BSR Runabouts

Minimum weight: 395 lbs.

Engine mounting heights: Center of prop shaft 3/4” below bottom

Runabouts to be roll up only with fin on planning surface

Using 1987 SO Inspection Manual specs for 20H

15SSR Jimmy Hagerl Memorial Race

Hot Rod “A” 15 cubic inch on roll up runabout

Minimum weight: 360 lbs.

Engine mounting heights: Center of prop shaft 1-3/8” below bottom

Current Hot Rod “A” specs 15 cubic inch

CLASS B

Legal motors for Class B are: Mercury MARK 20-H,
American Hot Rod 6MMHR, 6NHR

Age Requirements: Minimum 16 yrs. - Maximum None

Minimum Overall Weights: BSR 380 lbs. BSH 370 lbs.

INSPECTION PROCEDURES

Mercury

A Class "I" Inspection shall consist of the following:

1) Measure lower unit dimensions.
2) Measure to tip of skeg bottom of prop shaft - 3¼" minimum.
3) Measure carburetor venturi diameter and throat diameter.
4) Have spark plugs removed and check compression volume in cc's.
5) Have intake deflector cover removed and measure port (dim. A-dim. A1). Inspect ports for signs of tampering. Check for proper number of piston rings.

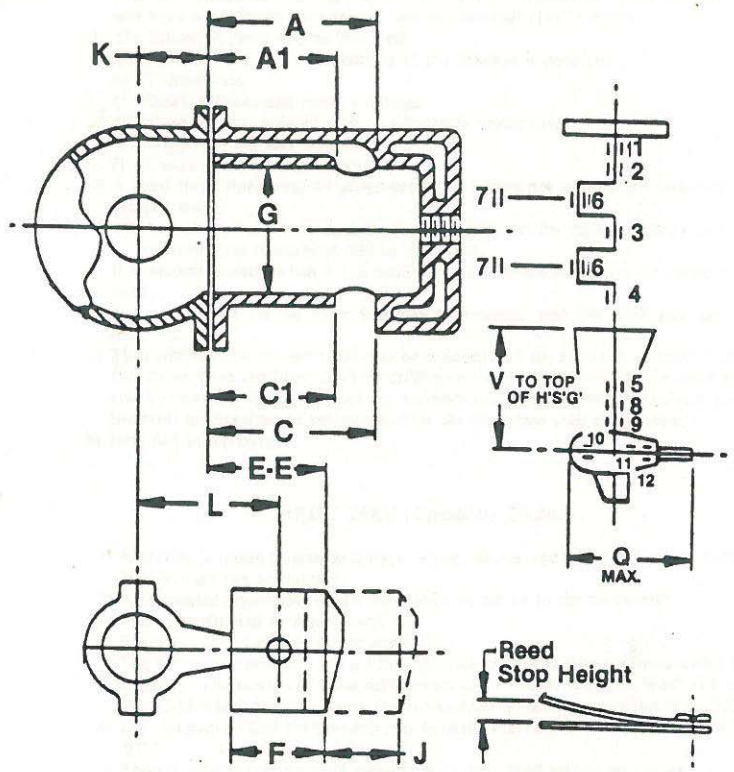
A Class "II" Inspection shall consist of the following:

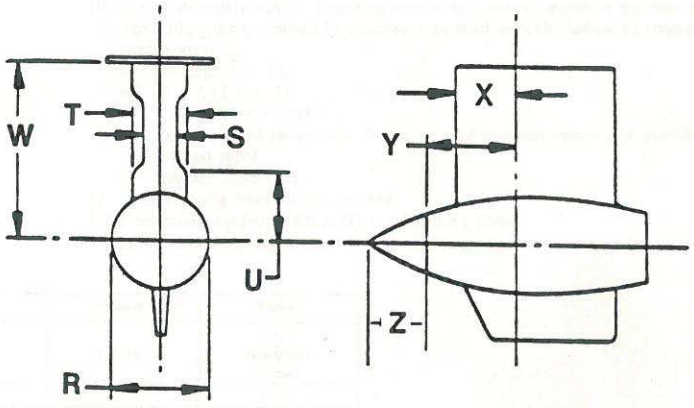
1) Have powerhead removed from lower unit housing.
2) Have tail cone nut removed. Check water pump impeller for cut-off blades and "feathered" blades.
3) Measure lower unit dimensions.
4) Have crankcase and cylinder block separated. Measure gasket thickness. Use this dimension in computing all dimensions involving gasket thickness.
5) Measure bore (Dimension G).
6) Have intake deflector covers removed and measure A and A1 dimensions.
7) Have exhaust cover removed. Measure C and C1 dimensions.
8) Measure reed stop height. Measure N dimensions of reed block. Check for illegal filing or polishing.
9) Have piston and rod assembly removed and disassembled. Measure F dimension of piston.
10) Check piston top shape, number of piston rings.
11) Weigh piston assembly.
12) Measure L dimension of rod.
13) Weigh rod assembly.
14) Check bearings.
15) Have carburetor removed. Measure venturi diameter and throat diameter. Check crankcase opening for illegality.
16) Weigh flywheel.

1) No polishing or balancing is permitted.
2) The rewind starter must be in place. It shall be permissible to use a MARK 25 rewind assembly and related parts. Any type bracket is permissible to attch rewind assembly to powerhead assembly.
3) The Mark 25 & Mark 25 electric crankcase, crankshaft, reed block (with 1" x 5/8" holes) and cylinder block may be used interchangeably with Mark 20H parts. No modification of the Mark 25 cylinder block is permitted. The crankcase and reed block carburetor opening may be machined to duplicate the Mark 20H or Mark 55-H crankcase opening dimension. (See D Specs.) An adaptor may be added to the front of the Mark 25 crankcase to facilitate the installation of a 20H carburetor. The distance from the carburetor mounting surface to the inside of the crankcase shall be no greater than the corresponding distance on the Mark 20H crankcase.
4) The reed blocks with the 5/8" x 1 7/32" openings are not allowed. The only reed blocks allowed have 5/8" x 1" openings. It is allowable to machine the sandcase C & D and Mark 25 reed blocks with the 1" x 5/8" openings to receive the 20H centermain bearing race. The reed block may be drilled and tapped for the reed block bolt in another location other than the original location. The crankcase may be drilled for a reed block bolt through the fuel pump boss.
5) The "stuffed" crankcases are not permissible.
6) All A, B & 25SS gearcases are legal if they meet specifications.
7) Any KA series carburetor can be used as long as the venturi stays at one inch and the throat diameter at one and one-eighth inches. This includes the KA-3A, KA-2A, and KA-1A, any needle and seat from the KA-7A is legal. Any model N carter carburetor is legal with 15/16 in. venturi and 1 5/16 in. throat.
8) It is permissible to put a new keyway in the flywheel for repair. It must be 180° opposite the existing keyway. The flywheel must meet specifications.
9) It is permissible to mill or file the exhaust filler block for a good fit to the block. It is permissible to seat the filler block in a sealing or bedding compound to seal it to the block. The "Fickett" filler block is a legal replacement part.
10) For purposes of repair of welded blocks and crankcases only the following will be allowed:
    a) A metal shimm and appropriate gaskets may be added to the crankcase to bring the K dimension of the repaired crankcase within specification.
    b) A metal shim and appropriate gaskets may be added to the repaired block to bring the port dimensions within specifications. All shims and gaskets must duplicate the dimensions of the block to crankcase gasket except thickness. The 1/32" gasket must be retained.
11) Any rod of the same manufacturer is permissible that meets the L dimension and minimum weight.
12) Curved port covers are not allowed.
13) Units to be painted.

CLASS B

	ENGINE MODEL		MARK 20-H	HOT ROD	MARK 25
	Displacement		19.8	19.94	19.8
1	Number of cylinders		2	2	2
2	Gear ratio		15-15, 16-21	14-15, 14-19	15-15, 16-21
3	Minimum compression vol. in c.c. of one cyl. to top of spark plug hole		17	17	17
4	Carburetor: Model No. Tillotson unless otherwise specified		Any "KA" Series Carter Any "N"	HR-16B Lectron 34	Same as 20-H
5	Type of lubrication		GAS & OIL MIXED		
6		A	2.256 ± .010	2.280 +.005 −.020	2.196 ± .010
		A1	1.531 ± .015	—	1.530 ± .010
		C	2.471 ± .010	2.498 +.020 −.020	2.411 ± .010
		C1	1.750 ± .015	—	1.733 ± .010
		E-E	1.720 ± .020	1.890 ± 0.15	
		F	2-13/16 ± 1/32	2.062 ± .015	
		G	2.440 ± .002	2.500 ± .010	
		J	2.125 +.004 −.010	2.031 ± .005	
		K	1.814 ± .005	1.843 ± .005	
		L	3.719 ± .006	3.462 ± .004	
	Number and size of openings in reed block	N	8 Oval Ports 1x5/8	Rotary Valve	
	Reed Thickness .012 ± 1/32	Q	11 1/4	12 Max.	
		R	2 1/8	2 1/16	
		S	1	3/4	
		T	—	—	
		U	—	—	
	Lower unit specifications (Minimums)	V	19 3/32, 21 3/32 or 24 3/32 ± 1/16	19 5/16	
		W	4 1/2	—	
		X	2 23/32	—	
		Y	2 31/32	—	
		Z	4 3/4	3.905 MAX.	
7	Piston material		ALUMINUM		
	Piston weight with rings, wrist pins and fastenings		7.5 oz. MIN.	7.0 oz. MIN.	
	Weight of conn. rod with bearings in both ends and with thrust washers		6 3/4 oz. MIN.	5 oz. MIN.	
	Weight of flywheel		4 1/2 lbs. MIN.	4 lbs. MIN.	
	Bearing specifications	1	R.B.C.-SJ-7183	3205 BALL	
		2	205 K	3205 BALL	
		3	ROLLERS	ROLLER	
		4	205 K	3205 BALL	
		5	—	ROLLER	
	Note:	6	ROLLERS	ROLLER	
	Other standard makes of bearings of equal	7	ROLLERS	ROLLER	
	size and equal quality may be substituted	8	5-7	ROLLER	
		9	GB-912	BALL	
		10	GB-98	—	
		11	9104-K	BALL	
		12	—	BALL	
8	No. and size of exhaust relief holes		10-4/32 dia.	2-.201 dia. ±4½"	
9	Reed stop height		5/32 ± 1/32	—	





Carburetor Model No.	Venturi	Throat
KA-1A, KA-2A, KA-3A & KA-7A	1	1 1/8
CARTER: N-21505, N-22735, N-24395	15/16	1 5/16
HR-16B	1 9/32	1 3/8"
Lectron 34	—	1.338"

Tolerances on Carb Dimensions are ±1/64"