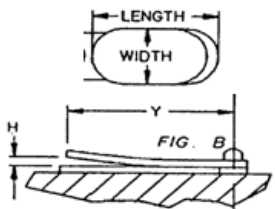
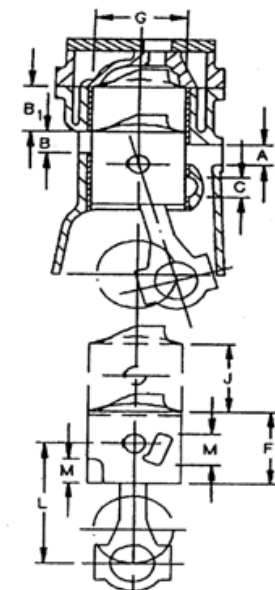


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### RACE CLASS: SST-45



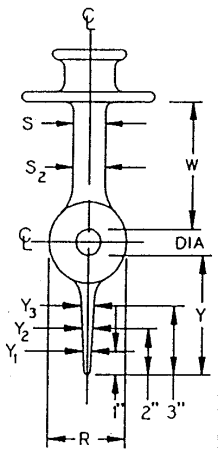
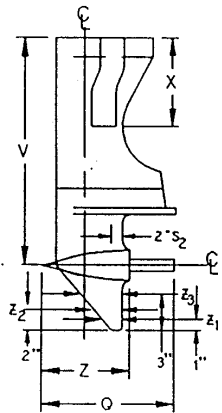
|   |                             |   |                 |                         |                 |                      |                     |                     |  |
|---|-----------------------------|---|-----------------|-------------------------|-----------------|----------------------|---------------------|---------------------|--|
| MANUFACTURER  |                             |   |                 | OMC                     |                 |                      |                     |                     |  |
| ADVERTISED SALES NAME                                     |                             |   |                 | JOHNSON / EVINRUDE 45SS |                 |                      |                     |                     |  |
| CLASS; DISPLACEMENT MAX                                   |                             |   | in <sup>3</sup> | SST-45; 44.9            |                 |                      |                     |                     |  |
| NUMBER OF CYLINDERS                                       |                             |   |                 | 2                       |                 |                      |                     |                     |  |
| MIN. VOLUME OF COMBUSTION CHAMBER (INC'L SPARK PLUG HOLE) |                             |   | cm <sup>3</sup> | 35.0                    |                 |                      |                     |                     |  |
| CARBURETOR  | VENTURI                     | ±.015   | in              | 1.250                   |                 |                      |                     |                     |  |
|   | BORE                        | ±.015   | in              | 1.500                   |                 |                      |                     |                     |  |
|   | QUANTITY PER ENGINE         |   |                 | 2                       |                 |                      |                     |                     |  |
| POWERHEAD SPECIFICATIONS                                  | G                           | CYLINDER BORE                                     | ±.005           | in                      | 3.187 +.035     |                      | OEM +.030 psiton is | Approved            |  |
|   | J                           | PISTON STROKE                                     | ±.011           | in                      | 2.820           |                      |                     |                     |  |
|   | L                           | ROD LENGTH  | ±.006           | in                      | 4.750           |                      |                     |                     |  |
|   | K                           | DECK HEIGHT                                       | ±.012           | in                      | 7.575           |                      | 7.563 Min.          |                     |  |
|   | F                           | PISTON LENGTH                                     | ±.030           | in                      | 2.973           |                      |                     |                     |  |
|   | M                           | PORT HEIGHT                                       | ±.030           | in                      | 2 @ .615        |                      |                     |                     |  |
|   | NUMBER OF PORTS PER CYLINER | A   | TRANSFER        |                         | 3               |                      |                     |                     |  |
|   |                             | B   | EXHAUST         |                         | 1               |                      |                     |                     |  |
|   |                             | C   | PISTON          |                         | --              |                      |                     |                     |  |
|   | PORT HEIGHT                 | A   | TRANSFER        | ±.035                   | in              | 2 @ 0.584; 1 @ .546  |                     |                     |  |
|   |                             | B   | EXHAUST         | ±.035                   | in              | 1.107 (plus chamfer) |                     | See note #2         |  |
|   |                             | B <sub>1</sub>                                    | EXHAUST         | ±.035                   | in              |                      |                     | See Table in Notes  |  |
|   |                             | C   | PISTON          | ±.035                   | in              | --                   |                     |                     |  |
|   | PORT TIMING                 | A   | TRANSFER        | ±2°                     | ATC             | 2 @ 118°; 1 @ 120°   |                     |                     |  |
|   |                             | B   | EXHAUST         | ±2°                     | ATC             | 92°                  |                     |                     |  |
|   |                             | C   | PISTON          | ±2°                     | ATC             | --                   |                     |                     |  |
|   | REED BLOCK (ONE CYLINDER)   | # OF PORTS  |                 |                         | 8               |                      |                     |                     |  |
|   |                             | LENGTH x WIDTH SIZE OF PORTS                      |                 |                         | MAX             | in                   | 1.41x0.675          |                     |  |
|   |                             | REED MAT'L  |                 |                         | STAINLESS STEEL |                      | See Note # 3        |                     |  |
|   |                             | REED THICKNESS                                    |                 |                         | ±.001           | in                   | .010                |                     |  |
|   |                             | H   | REED STOP HGT.  | MAX                     | in              | .268                 |                     | See Notes # 1 & # 3 |  |
|   | Y                           | CHECKING DIS.                                     | ±.030           | in                      | 1.427           |                      |                     |                     |  |
|   | WEIGHT (ONE SET)            | FLYWHEEL  |                 | MIN                     | lbs             | 9.1                  |                     |                     |  |
|   |                             | PISTONS, RINGS, ROD, WRIST PIN, SPACERS, BEARINGS |                 | MIN                     | lbs             | 1.7                  |                     |                     |  |

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### RACE CLASS: SST-45

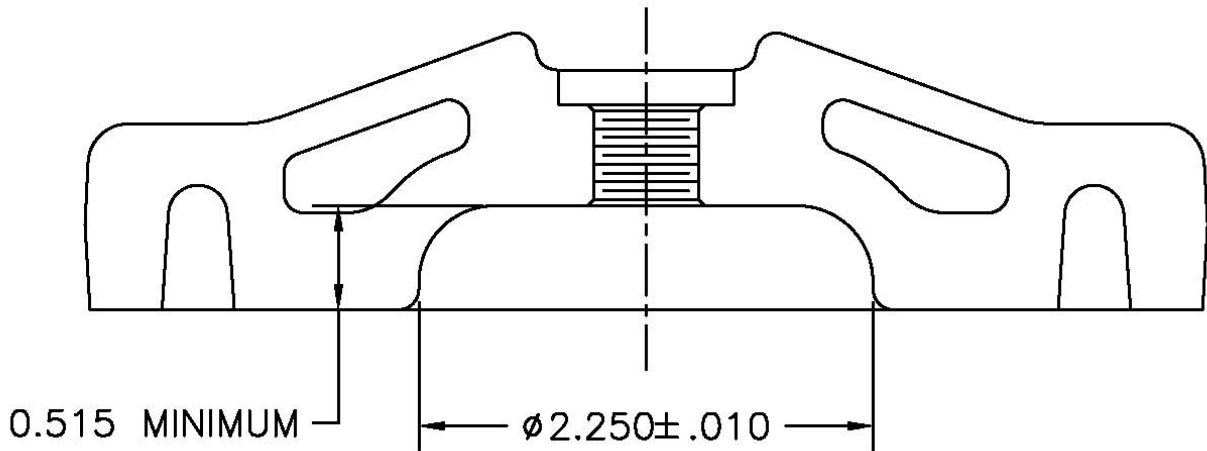


|                               |                |   |                |                               |       |   |  |  |
|-------------------------------|----------------|---|----------------|-------------------------------|-------|---|--|--|
| MANUFACTURER                  |                |   |                | OMC                           |       |   |  |  |
| GEARCASE MODEL IDENTIFICATION |                |   |                | DR-39M                        |       |   |  |  |
| ADVERTISED SALES NAME         |                |   |                | JOHNSON /<br>EVINRUDE<br>45SS |       |   |  |  |
| GEAR RATIO                    |                |   |                | 18:18                         |       |   |  |  |
| GEARCASE SPECIFICATIONS       | X              | EXHAUST TUBE LENGTH-<br>POWERHEAD BASE TO PRIMARY<br>TUBE END | ±.25           | in                            | 9.37  | Measurement does not<br>include 3/8 plate.<br>Pipe only |  |  |
|                               | Q              | TORPEDO LENGTH (W/ PROPSHAFT)                                 | MAX            | in                            | 16.3  |   |  |  |
|                               | R              | TORPEDO WIDTH   | MIN            | in                            | 2.35  |   |  |  |
|                               | S              | STRUT WIDTH   | MIN            | in                            | 1.40  |   |  |  |
|                               | S <sub>2</sub> | STRUT WIDTH (2" FORWARD OF<br>TRAILING EDGE)                  | MIN            | in                            | --    |   |  |  |
|                               | W              | DIS. FROM PROPSHAFT TO<br>CAVITATION PLATE                    | ±.2            | in                            | 4.16  |   |  |  |
|                               | Y              | LENGTH OF SKEG FROM<br>PROPSHAFT                              | ±.2            | in                            | 4.54  |   |  |  |
|                               | Z              | TORPEDO LENGTH  | ±.2            | in                            | 13.7  |   |  |  |
|                               | V              | PROPSHAFT CENTERLINE<br>TO POWERHEAD BASE                     | LONG<br>SHAFT  | ±.2                           | in    | --  |  |  |
|                               |                |   | SHORT<br>SHAFT | ±.2                           | in    | 17.1  |  |  |
|                               | Y <sub>1</sub> | SKEG THICKNESS  | MIN            | in                            | .21   | See note # 4  |  |  |
|                               | Y <sub>2</sub> | SKEG THICKNESS  | MIN            | in                            | --    |   |  |  |
|                               | Y <sub>3</sub> | SKEG THICKNESS  | MIN            | in                            | .34   | See note # 4  |  |  |
|                               | Z <sub>1</sub> | SKEG CORD LENGTH  | ±.2            | in                            | 3.950 | See note # 4  |  |  |
|                               | Z <sub>2</sub> | SKEG CORD LENGTH  | ±.2            | in                            | --    |   |  |  |
|                               | Z <sub>3</sub> | SKEG CORD LENGTH  | ±.2            | in                            | 5.700 | See note # 4  |  |  |
|                               | DIA            | PROPSHAFT DIA   | ±.01           | in                            | .685  |   |  |  |
|                               |                | Adaptor Plate Water Outlet Hole (DIA)                         | ±.01           | In                            | .190  |   |  |  |

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## SST-45 NOTES

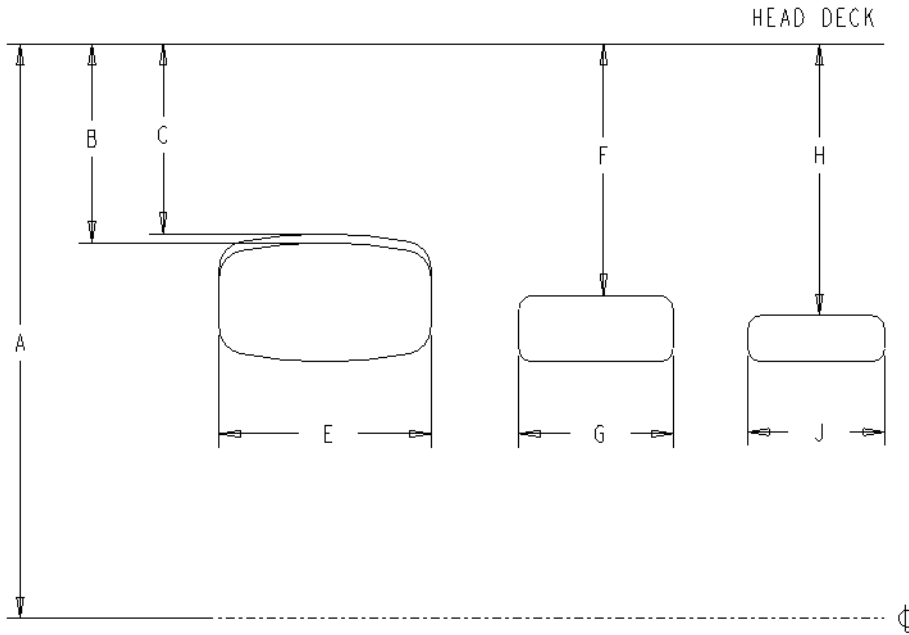


1. Incorporates .012 shims under one or both reed stops.
2.  $B_1$  dimension to top of chamfer = 1.624 minimum.
3. Standard SST 45 reed material is Steel .010 thick.  $H = .268$  maximum.  
Alternate reed for SST-45 may be used: OMC P/N 568427, bottom reed =  $.028 \pm .003$ ; top reed  $.017 \pm .003$ ,  $H = .290$  maximum.
4. Or per OMC P/N 561086 template, included in Kit P/N 568053.
5. Crankcase thickness (split line to reed gasket surface) 4.355" minimum.
6. Approve Replacement Ignition parts are: Rapair Parts, Stator **173-2926K1**, Charging Coil **173-1670**, Power Pack 113-2285, Rectifier 153-1778, Coil 183-2508, **Trigger** 133-3387
7. The Compression Volume is 35cc installed to top of plug hole.
8. The only legal Cylinder heads have casting numbers of 325602 or 325603
9. Head Gasket minimum thickness is .042
10. Standard SST 45 connecting rod has no oiling hole in the rod cap.  
Alternate connecting rod (fishing motor rod) for SST 45 may be used: this rod has an oiling hole in the rod cap. It is permissible to chamfer (radius) the edges of the oiling hole. (See Photo's Below)
11. The use of new larger spine cranks and Drive Shafts is permitted.
12. Port Measurements from Block Deck to top to Port. (See Table Below)
13. New design Upper Cowling, Lower Pan and Throttle Bracket as supplied by Sea-Way Marine are approved replacements. Throttle bracket may used with any cover/pan.
14. The electric start flywheel is the only legal flywheel, min. weight 9.1 lbs.
15. Brass bushings for the midsection as supplied by Sea-Way Marine are approved replacements. The bushing used in the top and bottom of the swivel bracket may be plastic (OMC) OR brass (Sea-Way Marine).
16. **Carburetor throttle shaft bore may be repaired by sleeving.**

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### SST 45 Ports



| Port Measurements from Block Top Deck down to Top of Port |                      |         |         |  |
|---|----------------------|---------|---------|--|
|   | SST 45               | Minimum | Maximum |  |
|   |                      | Inches  | Inches  |  |
| A   | Deck Height          | 7.563   | 7.587   |  |
| B   | Exhaust Port         | 1.730   | 1.765   |  |
| C   | Exhaust Port Chamfer | 1.624   | 1.720   |  |
| E   | Exhaust Port Width   |         | 1.910   |  |
| F   | Transfer Port        | 2.228   | 2.280   |  |
| G   | Transfer Width       |         | 1.470   |  |
| H   | Boost Port           | 2.250   | 2.325   |  |
| J   | Boost Port Width     |         | 1.210   |  |

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Standard SST45 Connecting Rod:



Alternate (fishing motor rod) Connecting Rod:

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Model Year:

Lower Pan PN 560500\*

Lower pan is completely sealed at base and has three opening's.

Outlet Water Hose from PH – 13/16" (Note Sealed by outlet hose -reference)

3/8" Drain hole in back of pan. (Reference)

Opening for cable in front of pan (Approximately 1.4" – but may vary - reference)

\*These parts supplied by Sea-Way Marine, Inc.



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Upper cowling PN 560500\*

Vent in back of cover top - PN 560401\* (Hole Diameter 2" reference)

Vent in front of cover - PN 560402\* (Vented opening 3.55" x 2.4" reference)

Total size of vent plate 4.55" H x 5" W (Reference)

Opening for Throttle Cable (Approximately 1" W x 2.5" H reference)

Opening for Cables (Approximately 1.4" - But may vary - reference)

\*These parts supplied by Sea-Way Marine, Inc.



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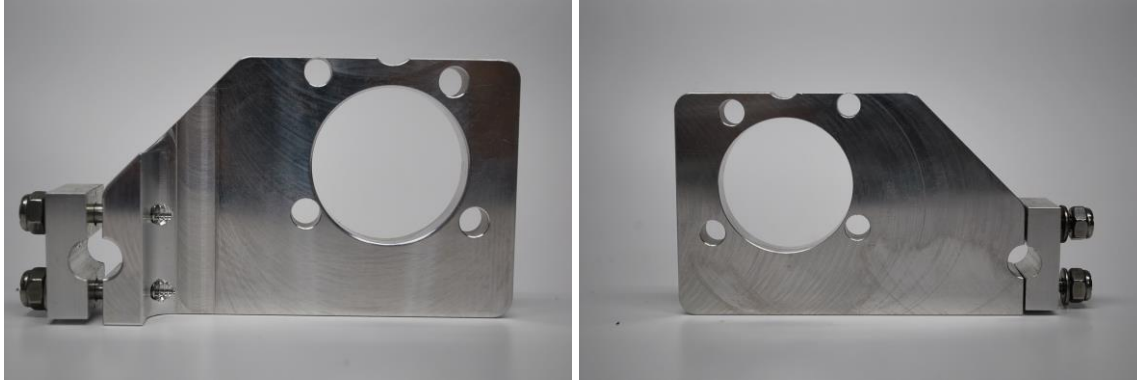
Throttle Bracket PN 560330\*

Thickness – 3.75" +/- .005" (Reference)

Opening – 1.500" +/- .010" (Reference)

(Note: 1/32 Edge on opening – otherwise straight in - reference)

\*These parts supplied by Sea-Way Marine, Inc.



| <u>Midsection Bushings</u>       | <u>Current PN</u> | <u>New PN</u> | (NO Photograph of bushing) |
|----------------------------------|-------------------|---------------|----------------------------|
| Upper Bushing                    | 309967            | 560100*       |                            |
| Lower Bushing (Lg)               | 332663            | 560101*       |                            |
| Upper Cover                      | 309966            | 309966        |                            |
| Lower Cover                      | 397736            | 560102*       |                            |
| Upper O'Ring                     | 301917            | 201875        |                            |
| Complete Bushing Replacement Kit |                   | 560202*       |                            |

\*These parts supplied by Sea-Way Marine, Inc.



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Rev:04-10-13 Note #10 revised to allow use of alternate connecting rod (fishing motor rod).

Rev:02.25.15 Note #6 revised to correct terminology and part numbers.

Note #13 added to allow new style upper cowling, lower pan and throttle bracket as supplied by Sea-Way Marine and approved by MTC & Commission April 1, 2014. Photo's included.

Note #14 added to update/correct specification: rope flywheel 8.1 lbs reference removed from chart. Only the electric start flywheel is allowed.

Note #15 added to allow use of brass bushings as supplied by Sea-Way Marine and approved by MTC in top and bottom location of swivel bracket. The OMC plastic parts are no longer available, this is a replacement. Either type or combination may be used.

**Rev:01.26.18 Note#16 added to allow SST45 carburetor throttle shaft bore to be repaired by sleeving.**