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E-SERIES SILENT POWER MUFFLERS

Model # ESMSC4 and ESMSC41/2

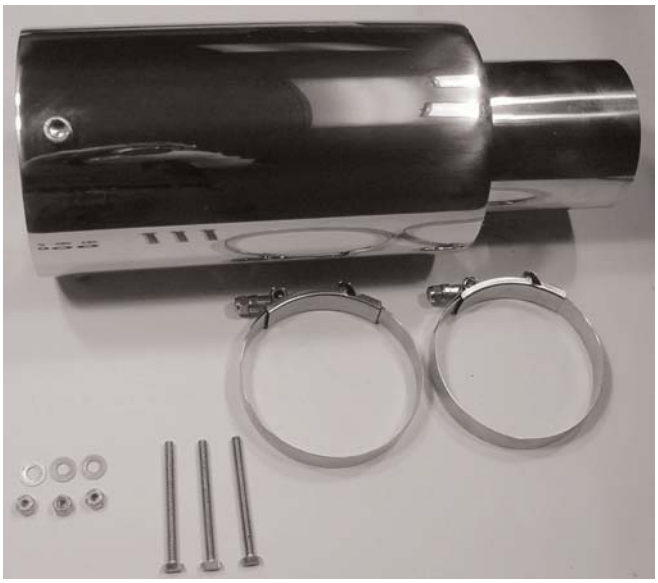
Installation Instructions

IMPORTANT: Review applicable marine engine service manual section for your engine model for muffler installation. Follow all advisements. Also follow advisemantes pertaining to safety and other cautions while performing this installation. This installation should be considered an engine related service procedure. This installation should be performed by a trained, experienced and competent marine engine technician.

Warning: Failure to follow special instructions concerning "SAFTEY ALERTS" and "HAZARD ALERTS" found in the applicable marine engine service manual could result in severe personal injury, death and damage to property.

Read these instructions entirely before starting the installation of the Muffler.

Caution: Consideration should be given so that the mufflers are compatible with existing equipment already in place on the boat. Items such as but not limited to steering cylinders, railings, ladders, platforms, wiring and lines should be checked for interference or other problems.



Each muffler should be accompanied by two band clamps and three flat head retaining pins.

Caution: This muffler is intended to clamp onto the external exhaust tube that passes through the boat transom. This muffler weighs approximately 12 pounds.
The existing external through transom exhaust tube should be checked to insure that it will continually support the weight of the muffler during all running conditions. The muffler and the exhaust tubes leading up to it should be checked for proper condition prior to each time the vessel is used.

Muffler shown with correct installation accessories.

Caution: This marine muffler is designed to be cooled by the sea water that is used to cool the engine. All the cooling sea water for the engine must enter the exhaust stream before each muffler. This muffler needs a minimum sea water flow into the exhaust stream of 21 gallons per minute at engine maximum operating RPM. Failure to provide adequate sea water cooling flow will result in damage to the muffler. 4: Place the two clamps over the muffler attaching tube. Slide muffler onto the through transom exhaust tube to the point that the exhaust tube passes the end of the slots on the muffler attaching tube by 1/8 to 3/16 inch. Install the flat head retaining pins into the three holes that were drilled in the Through Transom Exhaust Tube in step 3. The flat head of the three retaining pins must fit into three of the six holes that occur in the muffler attaching tube. Two pins into the first series of three holes that occur in the muffler attaching tube wall and one pin into the second series of holes that occur in the muffler attaching tube wall. Do not allow the underside of the retaining pin flat head to sit on the muffler attaching tube wall. If this occurs drill new holes using any of the unused holes from step 2. Always spread the 3 required retaining pins between the two series of holes in the muffler attaching tube wall(ie: 2 in the forward set of holes, 1 in the aft set of holes or the reverse).
Caution: Failure to correctly install the three retaining pins could result in the damage and loss of equipment. There will also be the possibility of consequential damage.

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Caution: The muffler inlet end must slide onto the through transom external exhaust tube freely with hand force only. Do not use a hammer or other similar device to force the muffler onto the tube. Using a hammer will distort the muffler body causing the inner sliding mechanism to stick and not slide freely. Stepping on the muffler will also cause distortion. At all times the circular integrity of the muffler body must be maintained. Allowing any portion of the muffler to distort will cause malfunction.

INSTALLATION INSTRUCTIONS:

1. Place one clamp over the muffler attaching tube. Slide muffler onto through transom exhaust tube to the point that the exhaust tube passes the end of the slots on the muffler attaching tube by 1/8 to 3/16 inch.
Caution: The "Through Transom Exhaust Tube" must be completely round and the correct outside diameter. The muffler should slide onto the Through Transom Exhaust Tube with a slight amount of resistance. There should be no more than .01 inch difference between the inside diameter of the muffler attaching tube and the outside diameter of the Through Transom Exhaust Tube. The end of the Through Transom Exhaust Tube should be 90 degrees square to the tube length. Do not attempt to mount the muffler onto a Through Transom Exhaust Tube that has a diagonal cut end.

2. Rotate muffler so that the logo on the inside at the muffler end is correctly orientated. With the muffler in the correct position place the single clamp as far as possible towards the muffler attaching tube end. The clamp should be clear of the six round holes that occur in the wall of the muffler attaching tube. Tighten the clamp so that the muffler can no longer be rotated. With a metal scribe mark two of the first three round holes that occur in the wall of the muffler attaching tube onto the Through Transom Exhaust Tube. Then mark one of the second series of three round holes that occur in the wall of the muffler attaching tube onto the Through Transom Exhaust Tube. The three you choose to mark should be accessible for drilling through the wall of the Through Transom Exhaust Tube.


Holes in muffler attaching tube wall.

3. After accurately marking the three holes onto the Through Transom Exhaust Tube loosen the clamp and remove the muffler. With a center punch suitable for punching 300 series stainless steel, place a punch mark exactly at the center of the three marked holes. Using a new, sharp 3/16 inch (4.5mm) drill bit suitable for drilling 300 series stainless steel, cut an accurately placed hole exactly at the center of each marked hole.


Flat head stainless steel retaining pins

4. Place the two clamps over the muffler attaching tube. Slide muffler onto the through transom exhaust tube to the point that the exhaust tube passes the end of the slots on the muffler attaching tube by 1/8 to 3/16 inch. Install the flat head retaining pins into the three holes that were drilled in the Through Transom Exhaust Tube in step 3. The flat head of the three retaining pins must fit into three of the six holes that occur in the muffler attaching tube. Two pins into the first series of three holes that occur in the muffler attaching tube wall and one pin into the second series of holes that occur in the muffler attaching tube wall. Do not allow the underside of the retaining pin flat head to sit on the muffler attaching tube wall. If this occurs drill new holes using any of the unused holes from step 2. Always spread the 3 required retaining pins between the two series of holes in the muffler attaching tube wall(ie: 2 in the forward set of holes, 1 in the aft set of holes or the reverse).

Caution: Failure to correctly install the three retaining pins could result in the damage and loss of equipment. There will also be the possibility of consequential damage

5. Locate the clamps so the flat heads of the retaining pins occur in the center of the band of the clamp. Tighten the clamps to 18 foot pounds of torque. Alternate between the two clamps, at a rate of 3 foot pounds, gradually bringing the clamping nut up to the required torque amount. Recheck for correct torque amount after boat has been run for one hour. Recheck torque thereafter every 10 hours of boat operation.

Caution: Failure to correctly install and monitor the torque applied to the clamping nut of the two clamps that attach the muffler could result in the damage and loss of equipment. There will also be the possibility of consequential damage and injury or death.