



Installation Instructions for

Form 12.439

99188 Sport/Diver Breakaway Hinge

for use with Model 19802, 19803, 19804 and 19812 Ladders

The Breakaway feature helps protect against damage if the ladder is inadvertently left in the down position while underway. It is designed to shear the Nylon Bolt at an approximate force of 400 ft.-lbs. of pressure and then swing up to the water surface. One replacement Nylon Bolt and Nut are included.

ASSEMBLY INFORMATION

Please read the instructions completely before starting assembly.

Hardware Required

Note: The following parts are not included due to the variety of possible installations.

- (4) 5/16 - 18 Stainless Steel Bolts, of suitable length
Note: Bolts should be at least 3/4" longer than transom and backing plate thickness.
- (4) Stainless Steel Locknuts
- (4) Stainless Steel Washers
- Marine Adhesive/Sealant and Anti-Seize Compound
- Backing Plate of suitable material, minimum size 5"x6"

MOUNTING INSTRUCTIONS

1. Choose the most suitable side of transom for mounting ladder.
2. Locate a place on the transom where the ladder will mount and not interfere with the turning and lowering operation of your motor. Determine the actual water line when the boat is at rest. Mark this location in both the horizontal and vertical direction.
3. Locate the ladder on this mark and slide it up to the desired mounting height. Keep in mind that it is optimal to have at least two steps in the water for ease of boarding. Mark the ladder's position at the top mounting bolt.

NOTE: This line will locate the top two holes for the mounting plate.

4. Check the inside of the transom where the mounting is proposed. Verify that there is ample space to install a backing plate (minimum size 5" x 6") that will support the ladder installation. A 5" x 6" minimum flat area or the size of your backing plate is required for a secure installation. The backing plate should be made of either aluminum, marine plywood, or some other suitable non-compressive material.

(over)

Parts List

Refer to Fig. 1

Qty.	Factory Part No.	Description
1	03.339	5/16-18 Locknut
2	03.568	5/16-18 x 3 1/2 Nylon Shear Bolt
2	03.569	5/16-18 Nylon Nut
1	03.570	5/16-18 x 3 1/2 S.S. Bolt
4	03.576	5/16-18 x 5/8 S.S. Cap Screw
1	08.136	Outside Bracket
1	08.137	Inside Bracket

Parts Required from Your Sport/Diver Ladder

Qty.	Factory Part No.	Description
1	03.393	Roll Pin
1	08.086	Stainless Steel Ladder Mounting Plate
1	50.805	Slide Lock

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5. Mark four mounting plate hole locations on your transom or transom extension bracket using the plate as your template.

NOTE: It may be necessary to make an external shim to achieve the proper ascent angle (5 to 10 degrees) for your ladder. Drill one 11/32" or 3/8" hole through your transom, noting the angle of the mounting bracket or mounting substrate hole angle. These holes are perpendicular to the mounting face plate, not the transom. When drilling this hole should be used to insure a proper installation. Place the mounting substrate and/or the outside bracket against the boat and loosely mount it with the hardware that you have selected for proper installation.

6. Level the bracket, mark and drill the next hole. Check the ladder for level, make adjustments if necessary and then drill the other two holes.

7. Put a bead of caulk around the perimeter of the four mounting holes. Coat your selected 5/16 18 SIS mounting bolts with anti-seize compound and secure outside mounting bracket with or without external shim to transom with four selected washers and locknuts.

Refer to Fig. 1.

8. Tap Roll Pin (03.393) into receiving hole in swing bracket (08.136). Insert slide lock (50.805) into swing bracket with round notch facing down. Fasten mounting plate (08.086) to swing bracket using four cap screws (03.576).
9. Insert swing bracket into outside bracket and through fasten with 5/16-18 x 3½ S/S bolt (03.570) and locknut (03.339). Push in on bottom of swing bracket and insert Nylon Bolt (03.568) through outside bracket. Secure with nylon nut (03.569).

LADDER OPERATION INSTRUCTIONS

1. Always lock the ladder then it is in use with the lock bar.
2. Never operate your boat with the ladder in the "down" position. Serious injury, or damage to your boat or ladder may result.

SAFETY GUIDELINES

- No jumping or diving!
- Do not use when motor is running.
- This ladder is designed for boat use only.
- Face ladder when entering boat or water.
- Only one person on the ladder at a time.

