

Fitting a PT-35 to a small boat.

Here's our project, fit a trim and tilt system to a Quintrex 4.2 fitted with a DT30 Suzuki



These instructions can also be seen at

<http://www.cmcsales.com.au/pages/documents/FittingaPT-35.pdf>

Start by removing the engine from the transom, in this case a 1 inch block was spacing the outboard up, remove this at the same time. Use 2 "G" clamps to position the PT-35 using the transom as a guide. Mark off where you want the unit to be fitted. Mark the centre of the transom as a guide, small adjustments can be made later.



Here's a shot of the PT-35 being held in place by the clamps, and in the position it needs to be mounted.



Whilst the clamps hold the unit in place, mark the hole positions with a cut off pencil

The holes in the plate are half inch , although I generally only fit 10 mm bolts through these holes. That gives you some room to play with



This is the easiest hole to drill



Followed by this one, although you may only be able to mark the hole position with the drill as the chuck may strike the actuator if you have a short drill.



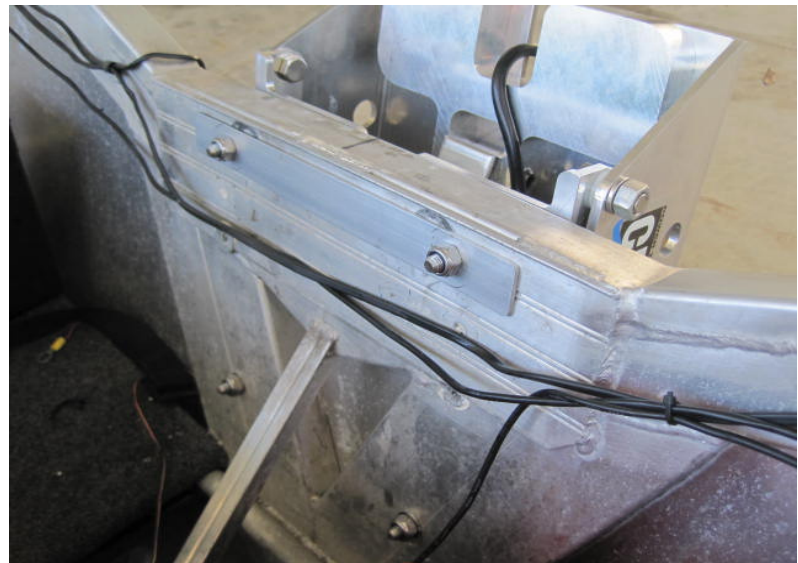
Here's the plastic plate on the back of the boat, one hole drilled another bottom hole marked and the 2 top holes marked with round pencil circles.

Another way to position the top holes, is to mark and drill the bottom holes, then take the PT-35 off the transom, turn it upside down and position the "top" holes of the unit over the bottom bolt holes, slip the bolts in for support and line the unit up before clamping it to the transom.

This allows you to easily mark the top holes, because no part of the unit gets in your way.

Once you have your bolt holes drilled, fit the bolts, place the unit into its correct position, tighten the bolts using nylocks or stainless spring washers. I used a strap washer with nylocks for the top fasteners in this case, it lends support and makes a neat job.

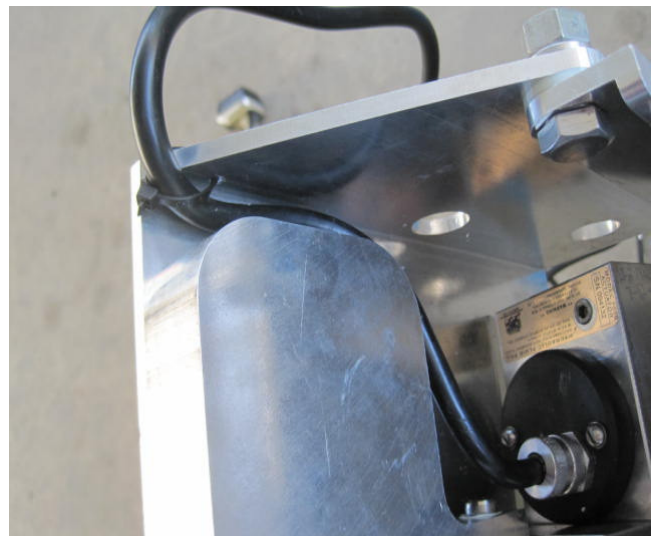
This is what it looks like from the outside, notice the pedestals protruding above the transom. Generally, this is where we aim to place the unit, some customers have elected to run the plate both higher and lower.



At this stage I like to drill a 3-4 mm hole in the plate so that a zip tie can be used to hold the electrical lead in position.



Like so



A good place to put the relays is in the battery box, but we have had several customers drown the relays when the box has filled up with rain water. Drill 2 small holes in the side of the box, an inch above the bottom, this will allow any water to drain away.



Next operation is to fit the up/down switch. I make up a bracket when we fit this switch to a tinny, that attaches to the side of the boat

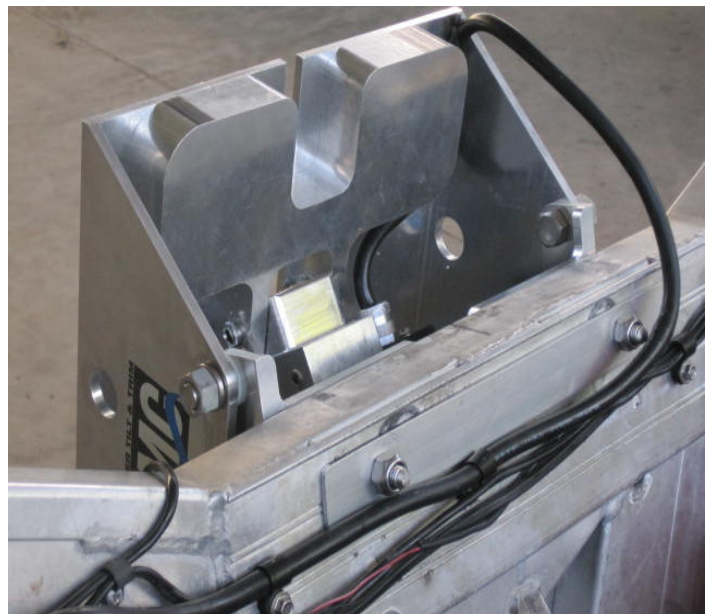


It puts it neatly under your thumb when hanging on to the side of the boat.



Now your PT-35 is all mounted up and ready to have the outboard fitted. At this stage you would have finished mounting the switch, positioned the relays and extra wiring in the battery box, or where-ever you decide to place it.

Test the unit to full up position and back down again, making sure that there is no interference to the movement of the plate from anything surrounding it.



Mount the outboard, position it evenly on the plate and do the clamps up.

Note the position of the screw clamp toggles in this photo, they are facing each other, so that they can easily be zippy clipped together.



WHY, ???

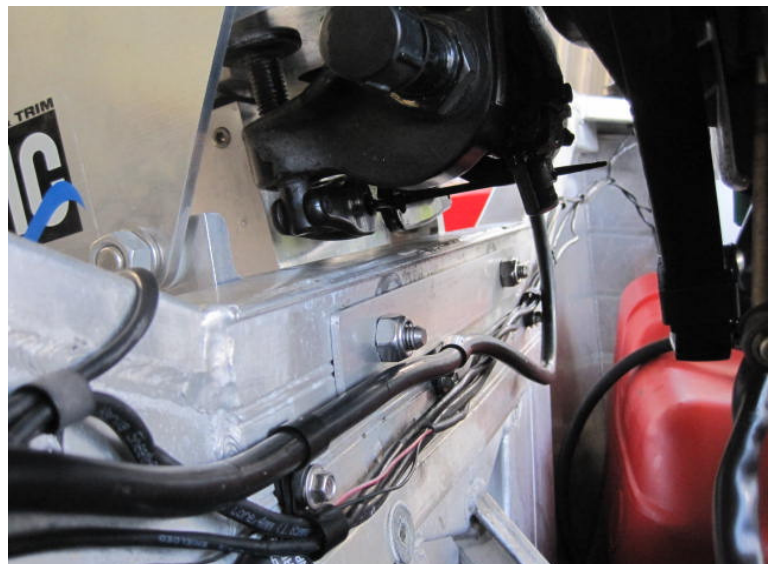
Because if they are left to swing, they will swivel down as you see in this picture and interfere with the upwards movement of the trim and tilt unit.

The actuator in these units is very powerful, and if you still have your thumb on the up switch, when the unit strikes interference, the unit will do what you ask, until something breaks.



This is what you want to achieve. FULL TILT with NO INTERFERENCE

This is a very important step to check.



You may never need to tilt your outboard to this degree, BUT, if you make sure that it can go this far with no problems, then you will never need to ring me about a problem you have.



Now tilt the outboard back down again so that you can easily drill through the trim and tilt plate, using the outboard as a template. These will be the holes for the bottom bolts on your outboard, locking it into place.

NOTE

These bolts are not essential on the smaller motors, and they are not always provided by the manufacturer on the mounting bracket as you see here.

We have several solutions to different manufacturers mounting plate assembly, don't hesitate to ring me or send photos if yours is different.



Below are several photos of the finished job.

We have discovered that there are many different combinations of boat, motor and type of transom.

Your set-up may be different from what you see here.

Don't worry, follow the mounting instructions and this photo guide and adjust things later .

You will find that after this major modification, you may have to redistribute weight within your boat, to suit the setback of motor weight ,and the different start and planing characteristics the set back trim and tilt will give you.

