

D400
Stealth Gen



Eclectic Energy Limited



Trouble-shooting continued - Poor Yaw Action:

- Stiffness in yaw; the D400 will not rotate to face the wind
 - check for any physical obstructions and the action of the yaw shaft. If the yaw shaft does not rotate freely, suspect damaged or corroded yaw bearings, damaged or corroded slip rings/brush assembly or possibly a bent yaw shaft.
- Erratic yaw action; the D400 turns off the wind and is unstable
 - the D400 is normally very stable in yaw. If the turbine appears to 'hunt around' its axis, this could be due to turbulence in the airflow. If so, the problem should disappear when the wind changes direction or the yacht is in a different location. Check that the D400 is properly secured to the mount tower. There should be no undue play between the turbine and the tower. Also, ensure that the tower is vertical and sufficiently rigid. If the tower is too flexible and bends excessively under wind loading, it should be braced or guyed to stiffen it.
- Open Circuit; this is a major cause of poor yaw action, indicating that the turbine is not properly connected to the batteries.
 - in this open circuit condition, the air rotor will over speed and the air blades will become uncharacteristically noisy, emitting a whistling noise. The D400 will frequently turn off the wind, rotating through 360 ° on occasion. Check all wiring, looking for poor or broken connections. Also check fuses. If the fault remains, bypass the regulator to rule out regulator malfunction as the cause of the problem.
- Intermittent or occasional erratic yaw action
 - this could be due to an intermittent electrical fault. If you observe turbine output abruptly dropping out and then suddenly returning, this could indicate a poor connection between the brushes and slip rings.
 - To service, remove the four self-tapping screws that secure the black brush-holder plate. Remove the brush-holder plate, taking care not to displace the brushes or brush springs.
 - The slip rings and contact faces of the brushes can then be cleaned with a solvent- soaked cloth or fine, wet and dry paper.
- Squeaking or grating noises audible in yaw
 - this could be caused by damaged yaw bearings. More typically, it is caused by dirt or corrosion on the slip rings/ brushes.
 - Remove the brush-plate as above. If noise is still present with the brush-plate clear of the housing, suspect yaw bearings. If the squeak has gone, it confirms the noise emanates from the brush and slip ring assembly. Clean these parts as in the last section. Also, using a fine file, remove any sharp edges from the contact surfaces of the brushes.
 - On re-assembly, the yaw shaft should rotate silently. If a squeak is still evident, remove the brush plate again and spray the slip rings and brushes with an electrical lubricant (WD40 or similar) or smear a little silver-loaded grease on the slip rings.