

Ducati Multistrada 1000DS (2006) – Ethanol Fuel Tank and Fuel Pump Sealing Notes

The 2006 Ducati Multistrada 1000DS is known for ethanol-related fuel tank issues. The original tank is made from nylon/polyamide plastic, which can absorb ethanol-blended fuel and swell over time.

Common symptoms include:

- Fuel pump flange sealing problems
- Tank swelling and distortion
- Mounting-hole misalignment
- Difficulty refitting body panels or tank fasteners

Recommended fuel pump sealing approach:

1. Install a new Viton (FKM) O-ring for the fuel pump flange.
2. Ensure the pump mounting surface is as flat as possible.
3. Tighten mounting screws gradually in a crisscross pattern.
4. Avoid excessive sealant; the O-ring should provide the primary seal.

If the flange area has warped:

A machined aluminum reinforcement or backing plate can help distribute clamping force and reduce leakage caused by slight distortion around the pump opening.

Internal tank sealers:

Internal coatings for nylon motorcycle tanks have mixed results. A failed coating can contaminate the fuel system and create additional problems. Caution is advised.

Preventive measures:

- Use ethanol-free fuel whenever available.
- Choose fuel with the lowest ethanol content possible.
- Keep the tank full during storage to reduce moisture absorption.
- Replace deteriorated seals with ethanol-resistant Viton components.

Diagnostic check:

Remove the fuel pump plate and check the tank sealing surface with a straightedge. Visible gaps or measurable distortion may indicate that tank deformation, rather than the gasket, is the root cause of leakage.