



## **Swift to Fly Small Heavy Fuel Engine in KillerBee**

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Swift Engineering will fly an XRDi 15hp (11kW) heavy fuel engine on a KillerBee unmanned air vehicle by mid-to-late May, with the effort aligned with the US military's "one fuel mandate", aimed in part at replacing gasoline-powered UAV engines in war zones with powerplants that can run on diesel.

Andy Allen, chief technology officer for XRDi, says the logistics of carrying specialised fuel, as well as problematic fuel quality and contamination, have been the topics of much concern among UAV operators in Afghanistan and Iraq. Contamination can occur as trucks that typically haul diesel fuel are then tapped as 100LL aviation fuel tankers, he says. Efforts to use Iraqi-produced aircraft fuel have not been successful, he adds, in part because octane levels are too variable.

Swift's KB4 UAV currently uses a German-made 3W Engineering Systems 15hp two-stroke gasoline-powered engine. The company is teamed with Raytheon on the US Navy and Marine Corps' small tactical unmanned aircraft system/tier II programme, a request for proposals for which is expected to be issued in August.

Allen says XRDi has successfully tested two of its heavy fuel twin-cylinder two-stroke engines to US Federal Aviation Administration Part 33 engine airworthiness standards, including a 150h accelerated life test, in advance of forthcoming formal FAA tests.

Other companies working on small heavy fuel engines include UK-based Cosworth and UAV Engines.