



To test each garment's resistance to abrasion and wear, testers scooted across a gravel parking lot first on their bellies and then on their backs.

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How We Tested

Field tests were conducted to measure such factors as wind and water resistance, durability of materials, quality of fasteners, functionality of hoods and pockets, and the long-term durability of velcro closures. The tests included:

Abrasion-resistance Test: Testers donned each suit and crawled 100 feet over gravel on both the belly and the back, then examined the garments for wear.

Water-resistance Tests: Testers wore each suit under an outdoor shower for five minutes to determine whether the hood, neck closures, and extremity fasteners would keep out the water. Then testers were sprayed with a firehouse hose for 60 seconds on full stream. The jackets and trousers were examined for leaks. A third water test saw jacket-clad testers immerse a properly adjusted jacket sleeve in a bucket of water for 60 seconds to test the watertightness of the inner cuff.

Wind-resistance Test: Wearing only the foulie jacket and trousers (no shirt, pants, or long johns), testers stood for two minutes before a very powerful fan designed for use by fire departments to eject smoke from buildings. (It's here that having proper waist adjustments came into play.)

Zipper and Fastener Tests: All primary zippers were zipped up and down 40 times each to determine whether they could withstand heavy-duty use and still operate smoothly. The zippers were examined for size (some have small tabs that make handling them with cold fingers or gloved hands a hardship); construction quality, and non-corrosive materials or coatings. Velcro fasteners were opened and closed 200 times each. Testers noted whether the velcro lost its ability to adhere.

Reflectivity Test: Each set was taken into a dark room where a flashlight was used to examine the reflective properties of each manufacturer's hood and reflective tabs, patches, and piping. Reflective devices with prismatic construction showed a tendency to perform better.

Wearability Test: Testers wore each foul-weather suit for a minimum of six hours aboard a boat to assess overall comfort and wearability. This test highlighted such features as narrow shoulder straps that cut into the wearer; jacket zippers that scraped the neck when completely fastened; a need for cargo pockets; and the breathability of construction materials.