

Coast Guard is not increasing the amount of buoyancy for adult recreational hybrid Type V PFDs. Thus the presently approved recreational hybrid PFDs with a minimum buoyancy of 33 N (7.5 lb) will still be an available option. Under this rulemaking, these devices can maintain their 33 N minimum inherent buoyancy and remain approved as Type V—“REQUIRED TO BE WORN.”

3. The PFD manufacturer also asserted that one of the currently approved hybrid devices has proven to be a reliable lifesaving device, and that therefore, the currently approved device should be acceptable as a Type II hybrid. In addition, the device should no longer be “REQUIRED TO BE WORN.”

The Coast Guard does not object to reclassifying an approved device's Type. However, limited retesting must be conducted to demonstrate that all of the necessary criteria have been met. To qualify for limited testing, the minimum deflated and inflated buoyancies must meet those given in Table § 160.077–15(b)(13) and buoyancy distribution must remain the same as when the device was originally tested.

UL's Comments

4. UL asserted that the Coast Guard NPRM justified its proposal to increase the buoyancy standards by stating that the proposed standard would be closer to the buoyancy requirements of the International Standards Organization (ISO). UL then stated that the proposed Coast Guard standard is nearly twice as stringent as the ISO standards which UL cited as 50 N (11.1 lb) of buoyancy for inherently buoyant, fully inflatable, and inflated hybrid PFDs.

Although there are no ISO standards at present, the European Committee for Standardization (CEN) standards have been proposed for ISO discussion. The Coast Guard assumes the comment refers to the CEN standards. The CEN standards are for voluntary carriage and use, and are intended for selective use according to local conditions. The CEN standards assume that an inflatable PFD and the inflatable portion of a hybrid PFD will work. However, a study by Boat/U.S. Foundation for Boating Safety, a non-profit organization for boating safety, education and research, demonstrates that there is a nearly 20% failure rate on inflatable PFDs due to boaters not rearming the inflation mechanisms or the malfunctioning of the inflation mechanisms. A copy of this study is available in the rulemaking docket. Under this final rule, Type I, II, and III hybrid PFDs may be carried to meet PFD carriage requirements without

restriction. To ensure a sufficient level of safety without including a carriage restriction, the required level of inherent buoyancy is based on the performance provided by the PFD if the inflatable portion of the PFD were to fail or if the user is not able to inflate the PFD. The Coast Guard selected the minimum buoyancy that would provide the safety necessary for authorizing unrestricted use of hybrid PFDs, while maintaining the attractiveness of hybrid PFDs that the Coast Guard hopes will lead to wider PFD use.

5. UL stated that it would be impossible to make the insert pad covers for the reference vests to meet the requirements of § 160.077–2(j) without adversely affecting the performance or comfort of the devices and that the revisions do not allow for changes in the collar buoyant inserts or fabric patterns.

The Coast Guard agrees that changes are needed regarding the collar buoyant inserts and back/collar fabric envelope. Accordingly, the final rule is revised to allow the collar inserts and fabric envelopes to be enlarged to accommodate the required youth and child-size device buoyancies. In § 160.077–2(j), the SNPRM proposed to require higher kapok weights and displacements than prescribed by existing § 160.047–1(b) for both front and back inserts. It also proposed to allow the front pad insert coverings to be larger than the dimensions prescribed by existing § 160.047–1(b). Allowances for outer fabric envelope changes to make the fronts larger also were addressed in the SNPRM. Although it proposed to require higher back volume displacements, the SNPRM neglected to allow a commensurately larger back outer fabric envelope specification to allow for an increased back insert pad size. Accordingly, this final rule adopts changes to both the front and back fabric envelope requirements to correct this error.

The Coast Guard has in fact constructed vests meeting the requirements in this rule using inserts meeting the kapok weight and volume displacement values given in § 160.077–2(j). During performance tests conducted at UL, using these prototype reference vests made with envelopes modified as allowed in § 160.077–2(j) of this rule, superior results were obtained compared to existing standard designs. In these tests, foam inserts of the same general shape were tested with similar results, and therefore this final rule adopts a modification to § 160.077–2(j) from that proposed in the SNPRM to permit foam inserts as an option to kapok inserts.

6. UL also indicates that there are some inconsistencies between the buoyancies of the new small child reference vests compared to the existing standard child life preserver design.

The Coast Guard acknowledges the difference between the required buoyancy of the small child reference vest and the standard child life preserver and has determined that these differences are unavoidable. Of the four new reference vests adopted, three have equal or greater buoyancy than those presently required. Only the new small child, Type I reference vest has less buoyancy. The Coast Guard has recognized that the smaller size and disproportionate anatomy of the intended users results in marginal performance of the existing subpart 160.002 vest on small children. Even though its overall buoyancy is less, tests have demonstrated that, as a result of its distribution, the new reference vest is far superior to the subpart 160.002 vest.

To obtain buoyancy distributions similar to the requirements of § 160.47–4(c)(2) for youths, and the reference vests for the small child-size PFDs, this final rule adopts modifications to the displacements (buoyancies) proposed in Table 160.077–2(j) by the SNPRM. The changes in the front and back insert displacements result in a total displacement decrease for the small child Type II reference vest of 1 N (.25 lb) and an increase for both youth-size devices of 4.5 N (1 lb) total.

7. UL also suggested that existing reference vests constructed directly in accordance with published Coast Guard regulations should be used rather than inventing new, unproven designs as proposed in the SNPRM. UL supports its suggestion by noting that the proposed new reference vests have not been manufactured and consequently have not been subjected to preliminary tests to determine if they provide the level of performance warranted for hybrid PFDs.

The Coast Guard's objective in approving hybrid PFDs with increased buoyancy is to provide boaters with the option of choosing PFDs that perform at an enhanced level. While the performance provided by existing child-size vests described in subparts 160.002 and 160.047–4(c)(2) is adequate, they do not perform to the enhanced level of inflated hybrid PFDs described by this final rule.

As discussed above in paragraph 5, using these prototype reference vests, made with envelopes modified as allowed in § 160.077–2(j) of this rule, superior results were obtained during performance tests conducted at UL.