undertaken in the near future. The Insurance Institute for Highway Safety (IIHS) concurred with the agency's tentative decision that incorporating a six-year-old dummy into Standard 213 should not wait for the Hybrid III six-year-old dummy.

The CRABI 12-month-old dummy appears to have a number of advantages over the nine-month-old part 572 dummy. Problems instrumenting the nine-month-old dummy arose during the course of the dummy's development. Those problems, relating to the repeatability and reproducibility of the head and chest accelerometer measurements, led the agency to decide the dummy could not be instrumented at the time. By contrast, the CRABI 12-month-old dummy has accelerometers to measure head, chest and pelvic acceleration and head angular acceleration. Preliminary indications from tests performed on the dummy by members of the Infant Dummy Task Group of the Society of Automotive Engineers (SAE) show that the CRABI dummy has good potential as a Standard 213 test device.

However, the CRABI 12-month dummy is not ready for use as a Standard 213 compliance instrument. Its evaluation by industry and users has identified possible problems with the dummy. For example, the dummy systematically vibrated during dynamic testing, and its neck did not appear to have adequate rotational capability. In February 1995, the dummy was finalized by the manufacturer and evaluated by the SAE Infant Dummy Task Force. NHTSA is in the process of procuring the dummy and instrumentation for evaluation. Transport Canada believes that, until the one-year-old dummy is ready, the proposed nine-month-old is appropriate for testing.

Commenters seeking to have NHTSA adopt dummies that are more advanced than the proposed dummies did not show that the latter dummies have limitations warranting their exclusion from use in Standard 213 testing. Information on the performance of the dummies in tests conducted subsequent to their incorporation into Part 572 did not indicate any problems with their performance. Recently, these dummies were used along with the Part 572 three-year-old in a large number of sled tests that NHTSA conducted as part of its child safety research program that was described in the agency's 1991 planning document to upgrade Standard 213. These dummies appeared to perform satisfactorily. The findings of this research program were summarized in a series of reports that were published in October 1992, under project VRTC–82–0236 ''Child Restraint Testing (Rulemaking Support).'' These reports are available from the National Technical Information Service, Springfield, Virginia, 22161.

In the event NHTSA decides that it would be desirable to undertake rulemaking to adopt newer, more advanced test dummies, it would be prudent for the agency also to consider the availability of child dummies other than the CRABI dummies as possible Standard 213 test devices. For example, the Institute Voor Wegtransportmiddelen (TNO) of the Netherlands is developing the TNO P1–1/2 dummy to represent an 18-month-old child. NHTSA cannot ascertain the suitability of the Hybrid-III six-year-old and the CRABI 12-month-old dummies as Standard 213 test devices, nor their superiority over alternative test dummies, without taking appropriate steps to evaluate their relative performance.

Ford raised an issue about the suitability of the 6-year-old dummy based on a film of the 6-year old dummy in a dynamic test. The commenter said that on the film, the dummy seemed to have an unusual, unrealistic abdominal design that prevents the dummy from submarining (i.e., sliding too far forward and downward, legs first) during the test. Ford said that this feature will result in the dummy ''passing'' the knee excursion limit of FMVSS 213, when in an actual crash, a child could submarine and thus be ejected.

NHTSA does not believe the design of the dummy results in the test problems Ford identified. In the final rule that adopted the 6-year-old dummy into Part 572 (56 FR 57830; November 14, 1991), NHTSA acknowledged there is a gap at the pelvis-femur juncture of the dummy, and that it seemed plausible that it could interfere with the dummy's ability to assess the submarining potential of a restraint system. In the rule, NHTSA said an apron-like shield could be used to cover the gap, if tests with the 6-year-old dummy showed the gap to be a problem. 56 FR at 57835. NHTSA has not found any such problem. Over the last several years, the agency extensively used the 6-year-old dummy in tests of booster seats with lap or lap/shoulder belt systems. Films of the tests do not show lap belts catching in the gap at the dummy's abdomen. Accordingly, NHTSA concludes the dummy is suitable for measuring submarining potential without the need for an apron. (Examples of such testing are described in the following reports, which are available from the National Technical Information Service, Springfield, Virginia, 22161: ''Evaluation of Belt-Positioning Booster Seats and Lap/Shoulder Belt Test Procedures,'' DOT-HS–808–005, October 1992; and ''Booster Seat Evaluation, Belt Anchorage Location Effect and Performance in Rear-Facing Seats,'' DOT-HS–808–092, September 1993.)

b. Specific Issues

This section discusses provisions for determining which dummy or dummies are to be used for testing a particular child restraint, a provision that allows booster seats to be certified without meeting the seat back height requirement, injury criteria, buckle release requirements and other amendments, and leadtime. In addition, this section discusses metrication, an issue which seemed minor at the time of the NPRM, but generated a number of comments.

1. Metrication

In accordance with its plan to convert its standards to the metric system, NHTSA used metric and English units in the preamble of the NPRM to describe the criteria (child's mass/weight and height) that would determine which dummy or dummies would be used to test a child restraint. The preamble stated that English units that are in sections of Standard 213 affected by the NPRM would be converted to metric (SI, The International System of Units) units in the rule. The preamble stated, by way of example, that references to ''20 pounds'' would be replaced by ''nine kilograms.'' The proposed regulatory text of the NPRM used only metric units for most of the proposed amendments. However, the proposed regulatory text showed only English units on the restraint label that informs the consumer of the manufacturer's recommendations for the maximum mass/weight and height of children who can safely occupy the system.

Several commenters asked for clarification of the metrication of the standard. The main concern of some commenters concerned the exactness of the metric conversion. UM–CPP said that the use of SI units in the standard and all English units in the labeling will cause confusion. That commenter and AAMA suggested the labeling have SI units for the primary units with reasonable English equivalents in parentheses. Cosco suggested English units be used as the standard, with approximate kilogram conversions.

The significance of these comments relates to Standard 213's procedure for determining which test dummy is used to test a restraint. Under the standard's