# ACATS Modification List for ACATS 3.1

Version 3.1Q
March 31, 2017

**What is this?**

This is the ACATS modification list for ACATS 3.1. This document includes test corrections, test removals, and new tests for ACATS 3.1. ACATS 3.1 is the current test suite for the version of Ada that became current with the approval and publication of Amendment 1 by ISO as ISO/IEC 8652:1995/AMD 1:2007 (often known as "Ada 2005").

ACATS Modification List version 2.6E for ACATS 2.6 is the current list for that test suite. ACATS 2.6 should be used for testing Ada 95 implementations, and will continue to be maintained as necessary for the foreseeable future.

ACATS Modification List version 4.1D is the current list for ACATS 4.1. ACATS 4.1 should be used for testing the third edition of Ada, ISO/IEC 8652:2012 (usually known as "Ada 2012").

**Changes from the last list:**

Test C352001 had a Failed message that reflected Ada 95 requirements rather than the Ada 2005 requirements that are tested for. This is confusing, so it was corrected.

New tests B354002 and C354004 test the basic requirements for the Mod attribute.

New test C453001 checks that modular adding operators wrap around for various user-defined and language-defined types.

Modified test C480001 so that it didn't have any **in out** parameters in functions, as it is supposed to be valid for both Ada 2005 and Ada 2012.

New tests B651001 and C651001 check pragma No_Return.

Test B74203E used a number of attributes that are not defined in Ada 95, thus failing to test the objective. It was replaced by test B730013, which tests additional cases including attributes added by Ada 95.

A number of (very old) tests were withdrawn as their objectives and code are nearly identical to other tests. Such tests serve no purpose other than making the ACATS take longer to process. The tests in question are:

 CD1009A has the same objective as one of the objectives of CD2A31C.
 CD1009B has the same objective as one of the objectives of CD2A21C.
 CD1009L has the same objective as CD2D13A.
 CD1009M has the same objective and code layout as CD3014C.

Tests CD2A21C and CD2A31C were also withdrawn to be replaced by new tests CD30011 and CD30012, respectively. The new tests ensure that none of the checks of the withdrawn tests are lost, while adding applicability criteria and modern formatting.

New tests posted between January 1, 2017 and March 31, 2017 will become required for conformity assessments on October 1, 2017. New tests posted between October 1, 2016 and December 31, 2016 will become required for conformity assessments on July 1, 2017. New tests posted between July 1, 2016 and September 30, 2016 will become required for conformity assessments on April 1, 2017. New tests inserted between October 1, 2013 and June 30, 2016 are now required for conformity assessments. All other tests previously inserted into ACATS 3.0 are part of ACATS 3.1 and are required for conformity assessment. The effective dates of tests are marked in the lists.

Questions about this document? Contact the ACAA Technical Agent at agent@ada-auth.org.

**Ada 2012 compatibility:**

This test suite is designed for Ada 2005. ACATS 4.1 should be used to test Ada 2012 implementations. There are a significant number of tests in ACATS 3.1 that are incompatible with the requirements of Ada 2012.

**Notice:**

The ACAA has created and maintains the Ada Conformity Assessment Test Suite for the purpose of conformity assessments conducted in accordance with the International Standard ISO/IEC 18009 - Ada: Conformity assessment of a language processor. This test suite should not be used to make claims of conformance unless used in accordance with ISO/IEC 18009 and any applicable ACAA procedures.

**List explanation:**

Test numbers given are for the basic test. Categories are "Withdrawn" (the test should not be processed for Ada conformity assessments); "Allowed Modification" (either the original test or the modified one should be processed for Ada conformity assessments); "Modified" (the modified test must be processed for Ada conformity assessments); "Pending New" (the test does not need to be processed for Ada conformity assessments, but will be added in the future); "New" (the test is processed for Ada conformity assessments).

ACATS version labels are provided with all new and modified tests. Use this label to retrieve the test from the ACATS VCS. See "How to get new and modified tests".

In citations, line numbers are given relative to the start of a test file in the format of '@<line#,line#,...>'; if a test program comprises more than one file, then the particular file will be indicated by "fn", where "n" is the test-program name's file-designator numeral. E.g., "B38103E : @f1-31, ... " denotes test file b38103e1.ada. In cases where there are two or more rationales for different errors in a test program, these different rationales with their respective line citations are listed on separate lines. References to the Ada standards are given in the format:

        <section|chapter>.<clause>[.<subclause>]:<paragraph>

These references are to the consolidated Ada standard as available at http://www.adaic.org/resources/add-contentstandards/05rm/html/RM-TOC.html.

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**Main list:**

===== Core Language =====

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Name      Category  Version label  (effective date; old version label)
      Short description.

C352001 [Allowed Modification] New VCS Label: A3_1Q Org VCS Label: A3_1
                Required after 2017-07-01
      Corrected Failed message @267 to reflect intended result.

B354002 [Pending New] New VCS Label: A3_1Q
                Required after 2017-10-01
      Test basic requirements for the Mod attribute.
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C354004 [Pending New] New VCS Label: A3_1Q
               Required after 2017-10-01
      Test basic operation of the Mod attribute.

B38003D [Modified] VCS Label: A3_1M
      Corrected error tags @70,76,82,88 so "optional" and "error" are
      on the same line, as required by the test standards.

B38105A [Withdrawn] Org VCS Label: A3_1B
      Replaced by tests B3A1007 and B3A1A05 (and existing tests B3A1A01
      and B3A1A02).

C390012 [New] VCS Label: A3_1J
      Check the operation of Ada.Tags.Generic_Dispatching_Constructor.

C391003 [New] VCS Label: A3_1F
      [VCS Label A3_1E] Check that a type extension can be declared in
      a more nested scope than its parent type, and that overridden
      subprograms of that extension can be dispatched to.
      [VCS Label A3_1F] Eliminated an overlong line.

B393005 [Modified] VCS Label: A3_1B
      Declaration @114 is illegal because it inherits an abstract
      function that is not overridden, as described in AI05-0097-1.

B393011 [New] VCS Label: A3_1E
      Check that an abstract routine of an abstract partial view
      overridden by a non-abstract routine in the private part requires
      overriding when it is inherited if the private part is not visible
      where it is inherited.

C3A0030 [New] VCS Label: A3_1L
      Check that an access discriminant is only null excluding if it
      includes a null exclusion.

B3A1001 [Modified] VCS Label: A3_1M
      [VCS Label A3_1B] Type UT1 @78 is supposed to be tagged
      incomplete, else it's the same as type U1.
      [VCS Label A3_1M] Split Pack6 so possible error sets don't
      intersect; fixed overlong lines.

B3A1002 [Modified] VCS Label: A3_1M
      [VCS Label A3_1B] Type UT1 @77 is supposed to be tagged
      incomplete, else it's the same as type U1.
      [VCS Label A3_1M] Split Pack6 so possible error sets don't
      intersect; fixed overlong lines.

C3A1003 [New] VCS Label: A3_1E
      Check that a dereference of an access-to-tagged-incomplete type
      can be passed as a parameter.

C3A1004 [New] VCS Label: A3_1E
      Check that a parameter of a tagged incomplete type can be passed
      as a parameter.

B3A1007 [New] VCS Label: A3_1B
      Check that constraints and exclusions aren't allowed on an
      incomplete type in access type and subtype declarations.

B3A1008 [New] VCS Label: A3_1F

[VCS Label A3_1E] Check that a dereference of an
        access-to-incomplete type cannot be used as a prefix.
        [VCS Label A3_1F] Eliminated overlong lines.

B3A1009 [New] VCS Label: A3_1F
        [VCS Label A3_1E] Check that a dereference of an
        access-to-incomplete view cannot be used as a prefix. Check that
        a parameter of an incomplete view cannot be used as a prefix.
        [VCS Label A3_1F] Eliminated overlong lines.

B3A1A05 [New] VCS Label: A3_1B
        Check that generic formal objects cannot be declared with an
        incomplete view.

C3A2004 [New] VCS Label: A3_1D
        Check that the type of the prefix of 'Access is used to resolve
        the expected type of the use of the attribute.

B3A2017 [New] VCS Label: A3_1F
        [VCS Label A3_1D] Check P'Access is not allowed in a generic body
        if P is declared in the generic (including in the parent of a
        child or in a formal package) and the access type is a formal type
        or outside of the generic.
        [VCS Label A3_1F] Eliminated overlong lines.

B431006 [New] VCS Label: A3_1D
        Check that if a variant part is not nested in an unselected
        variant, the value of the governing discriminant of a variant in
        a record aggregate cannot be non-static.

B43102A [Withdrawn] VCS Label: A3_1D
        Replaced by B431006.

C453001 [Pending New] New VCS Label: A3_1Q
                    Required after 2017-10-01
        Check that modular adding operators wrap around rather than
        raising Constraint_Error.

B455002 [Modified] VCS Label: A3_1M
        Corrected casing of error tags and fixed overlong lines.

C460014 [Pending New] New VCS Label: A3_1P
                    Required after 2017-10-01
        Check that Constraint_Error is raised appropriately when
        converting access-to-classwide to another access type.

C460015 [Pending New] New VCS Label: A3_1P
                    Required after 2017-10-01
        Check that Constraint_Error is raised appropriately when
        converting access-to-limited-classwide to another access type.

C480001 [New] VCS Label: A3_1L
        Check that an initialized allocator for a class-wide type does
        an accessibility check on the tag of the initializing object.

C480001 [Allowed Modification] New VCS Label: A3_1Q Org VCS Label: A3_1L
                    Required after 2017-07-01
        Changed mode to "in" (instead of "in out") @103 & 144 as those
        parameters are used in functions, making that an Ada 2012 feature,
        and this is an Ada 2005 test.

B480002 [New] VCS Label: A3_1F
     [VCS Label A3_1E] Check that an initialized allocator for an
     access type with a class-wide designated type does not create an
     object whose type is more local than the access type.
     [VCS Label A3_1F] Eliminate overlong lines and tab characters.

B480003 [New] VCS Label: A3_1L
     [VCS Label A3_1E] Check that an uninitialized allocator for an
     access type with a class-wide designated type does not create an
     object whose type is more local than the access type.
     [VCS Label A3_1F] Eliminate overlong lines and tab characters.
     [VCS Label A3_1L] Corrected test objective and test description;
     the test code is unmodified.

C52101A [Modified] VCS Label: A3_1M
     Corrected comment @49 not to have the form of an error tag.

B540002 [New] VCS Label: A3_1B
     Check that case statement coverage rules are enforced for
     modular types.

C540002 [New] VCS Label: A3_1B
     Check that the selecting_expression of a case statement can be
     resolved using the requirement that it be any discrete type.

C540002 [Modified] VCS Label: A3_1F
     Eliminated overlong lines.

C620001 [New] VCS Label: A3_1B
     Check that elementary types are passed by-copy.

B62001C [Modified] VCS Label: A3_1M
     Changed error @35 to be optional, as the syntax error @33 is
     required (and the comment that only one error need be detected is
     bogus).

B62001D [Modified] VCS Label: A3_1M
     Changed error @41 to be optional, as the syntax error @33 is
     required (and the comment that only one error need be detected is
     bogus).

C62003A [Withdrawn] Org VCS Label: A3_1B
     Replaced by test C620001.

B640001 [New] VCS Label: A3_1F
     [VCS Label A3_1D] Check that abstract nondispatching operations
     do not participate in resolution.
     [VCS Label A3_1F] Eliminate overlong lines and tab characters.

C640002 [New] VCS Label: A3_1F
     [VCS Label A3_1D] Check that an abstract nondispatching operator
     provides a way to eliminate an unwanted predefined operator.
     [VCS Label A3_1F] Eliminate overlong lines.

B65005A [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                    Required after 2017-07-01
     Added additional error locations to directly support common error
     reporting strategies.

B65005B [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                    Required after 2017-07-01

Added additional error locations to directly support common error
        reporting strategies.

B651001 [Pending New] New VCS Label: A3_1Q
                 Required after 2017-10-01
        Check that a return statement cannot apply to a nonreturning
        procedure, and that a renames-as-body of a nonreturning procedure
        has to be a nonreturning procedure (pragma No_Return version).

C651001 [Pending New] New VCS Label: A3_1Q
                 Required after 2017-10-01
        Check that a nonreturning procedure can raise an exception and
        raises Program_Error otherwise (pragma No_Return version).

C660001 [New] VCS Label: A3_1B
        Check that a matching "/=" is defined for an explicitly declared
        "=" operator with a result of Boolean.

B730006 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                 Required after 2017-07-01
        Corrected format of error tags; added location indicators.

B730008 [New] VCS Label: A3_1A
        Check that a tagged partial view and its completion must have the
        same set of interfaces.

B730009 [New] VCS Label: A3_1F
        [VCS_Label A3_1A] Check that a tagged partial view can be
        synchronized if and only if the completion is a synchronized type.
        [VCS Label A3_1F] Completion of Priv12 @131 violates 7.3(10.1/3).

B730010 [New] VCS Label: A3_1F
        Check 7.3(10.1/3).

B730011 [Pending New] New VCS Label: A3_1P
                 Required after 2017-10-01
        Test various rules about completions of private types and
        extensions; replaces test B74001A.

B730012 [Pending New] New VCS Label: A3_1P
                 Required after 2017-10-01
        Test various rules about completions of private types and
        extensions in generic units; replaces test B74001B.

B730013 [Pending New] New VCS Label: A3_1Q
                 Required after 2017-10-01
        Test operations available for a private type; replaces test
        B74203E.

B73001A [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                 Required after 2017-07-01
        Added additional error locations to directly support common error
        reporting strategies.

B73001B [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                 Required after 2017-07-01
        Added additional error locations to directly support common error
        reporting strategies.

B73001C [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                 Required after 2017-07-01

Added additional error locations to directly support common error
        reporting strategies.

B73001D [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                Required after 2017-07-01
        Added additional error locations to directly support common error
        reporting strategies.

B73001E [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                Required after 2017-07-01
        Added additional error locations to directly support common error
        reporting strategies.

B73001F [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                Required after 2017-07-01
        Added additional error locations to directly support common error
        reporting strategies.

B73001G [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                Required after 2017-07-01
        Added additional error locations to directly support common error
        reporting strategies.

B73001H [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                Required after 2017-07-01
        Added additional error locations to directly support common error
        reporting strategies.

B740003 [Modified] VCS Label: A3_1M
        Modified criteria @75 so that it doesn't look like an error tag to
        the grading tools; also fixed an overlong line.

B74001A [Withdrawn] VCS Label: A3_1P
        Replaced by B730011.

B74001B [Withdrawn] VCS Label: A3_1P
        Replaced by B730012.

B74203E [Withdrawn] VCS Label: A3_1Q
        Replaced by B730013.

B750A01 [Modified] VCS Label: A3_1J
        The qualification @129 should be for Lim_Ext, not Lim_Rec.

B750A02 [Modified] VCS Label: A3_1J
        The qualification @131 should be for Lim_Ext, not Lim_Rec.

B750A04 [New] VCS Label: A3_1J
        Check that only legal expressions are allowed in the qualified
        expression of an allocator for a limited object.

B750A06 [New] VCS Label: A3_1J
        Check that only legal expressions are allowed in the expression
        of a simple return statement for a function that returns a
        limited type.

C760015 [New] VCS Label: A3_1L
        [VCS Label A3_1E] Check that a controlled type can be declared
        within a subprogram.
        [VCS Label A3_1F] Eliminated overlong lines.
        [VCS Label A3_1L] Corrected one of the potential results for

Subtest2(4) to be "Iafcf", not "IafcF".

B831004 [New] VCS Label: A3_1G
        Check that overriding indicators are properly enforced for types
        derived from a generic formal type. (Nested generic specification
        cases.)

B83F02C [Modified] VCS Label: A3_1M
        Updated many optional error markers to match ACATS standards.

B840002 [New] VCS Label: A3_1G
        Check a package use clause cannot denote a limited view or a
        non-package.

C920001 [New] VCS Label: A3_1B
        Check activation (and non-activation) of tasks declared as (part
        of) return objects in extended return statements.

B91003A [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                 Required after 2017-07-01
        Added additional error locations to directly support common error
        reporting strategies.

B91003B [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                 Required after 2017-07-01
        Added additional error locations to directly support common error
        reporting strategies.

B91003C [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                 Required after 2017-07-01
        Added additional error locations to directly support common error
        reporting strategies.

B91003D [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                 Required after 2017-07-01
        Added additional error locations to directly support common error
        reporting strategies.

B940003 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                 Required after 2017-07-01
        Added additional error locations to directly support common error
        reporting strategies.

B940004 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                 Required after 2017-07-01
        Split into 8 files; added location indicators.

B95007B [Modified] VCS Label: A3_1M
        Fixed error markers @62,66,70 to match ACATS standards.

BA12017 [New] VCS Label: A3_1F
        [VCS Label A3_1D] Check that a limited with clause is not allowed
        on a descendant of the named package.
        [VCS Label A3_1F] Eliminated overlong line.

BA15003 [New] VCS Label: A3_1D
        Check that a library unit pragma must apply to a library unit.

CB30001 [New] VCS Label: A3_1C
        Check that the optional message parameter is supported in a raise
        statement, and that the message can be retrieved with

Exception_Message.

BB42001 [New] VCS Label: A3_1L
        Check that the arguments of a pragma Assert have to have the
        correct types.

CB42001 [New] VCS Label: A3_1L
        Check the usual operation of pragma Assert, including the optional
        message.

BB42002 [New] VCS Label: A3_1L
        Check that the arguments of a pragma Assert cannot be reordered
        even if named notation is used.

CB42002 [New] VCS Label: A3_1L
        Check that if the assertion policy is Ignore, none of the
        expressions of a pragma Assert are evaluated and no exception is
        raised by the pragma.

BB42003 [New] VCS Label: A3_1L
        Check that a pragma Assertion_Policy is illegal if the policy is
        not recognized.

CB42003 [New] VCS Label: A3_1L
        Check that procedure Ada.Assertions.Assert evaluates its arguments
        and raises Assertion_Error regardless of the assertion policy.

CC30003 [Modified] VCS Label: A3_1F
        Eliminated overlong lines.

CC30004 [New] VCS Label: A3_1F
        [VCS Label A3_1B] Check that if a generic actual type is
        elementary, it is passed by copy within an instance.
        [VCS Label A3_1F] Eliminated overlong lines and tab characters.

CC3017C [Withdrawn] Org VCS Label: A3_1B
        Replaced by test CC30004.

BC60001 [New] VCS Label: A3_1D
        Test rules associated with formal subprogram defaults of null.

CC60001 [New] VCS Label: A3_1H
        Check that calls on a formal abstract subprogram are dispatching.

BC60002 [New] VCS Label: A3_1H
        Test rules associated with the controlling type of a formal
        abstract subprogram.

BC60004 [New] VCS Label: A3_1H
        Check that a call on a formal abstract subprogram must be
        dispatching.

CD1009A [Withdrawn] VCS Label: A3_1Q
        Has one of the objectives of, and thus redundant with, test
        CD2A31C (now CD30012).

CD1009B [Withdrawn] VCS Label: A3_1Q
        Has one of the objectives of, and thus redundant with, test
        CD2A21C (now CD30011).

CD1009L [Withdrawn] VCS Label: A3_1Q

Virtually identical to, and thus redundant with, test CD2D13A.

CD1009M [Withdrawn] VCS Label: A3_1Q
         Virtually identical to, and thus redundant with, test CD3014C.

CD2A21C [Withdrawn] VCS Label: A3_1Q
         Replaced by CD30011.

CD2A31C [Withdrawn] VCS Label: A3_1Q
         Replaced by CD30012.

CD30008 [New] VCS Label: A3_1K
         Renaming of previous test CD33001 (there is no subclause 13.3.3).
         The test is unchanged other than renaming the units involved
         and fixing an overlong line.

CD30009 [New] VCS Label: A3_1K
         Renaming of previous test CD33002 (there is no subclause 13.3.3).
         The test is unchanged other than renaming the units involved
         and fixing an overlong line.

CD30011 [Pending New] New VCS Label: A3_1Q
                     Required after 2017-10-01
         Merges legacy tests CD1009B and CD2A21C to eliminate duplication
         (CD1009B has the same objective as one of the objectives of
         CD2A21C) while adding modern formatting and applicability
         criteria.

CD30012 [Pending New] New VCS Label: A3_1Q
                     Required after 2017-10-01
         Merges legacy tests CD1009A and CD2A31C to eliminate duplication
         (CD1009A has the same objective as one of the objectives of
         CD2A31C) while adding modern formatting and applicability
         criteria.

CD33001 [Withdrawn] VCS Label: A3_1K
         Renamed to CD30008, as there is no subclause 13.3.3.

CD33002 [Withdrawn] VCS Label: A3_1K
         Renamed to CD30009, as there is no subclause 13.3.3.

BD4003A [Modified] VCS Label: A3_1M
         Moved error marker from @66 to @67 so it is on the incorrect
         construct.

BDD2004 [New] VCS Label: A3_1A
         Check that subprograms specified for stream attributes meet the
         requirements for such subprograms. This version corrects the
         location of 'Class @230, 235, 240.

BDD2004 [Modified] VCS Label: A3_1F
         [VCS Label A3_1C] Error @232 is legal by AI12-0121-1.
         [VCS Label A3_1F] Eliminated overlong lines.

CXA4037 [New] VCS Label: A3_1G
         Check Ada.Strings.Fixed.Find_Token against rule from 2001
         Corrigendum.

CXA5016 [New] VCS Label: A3_1F
         [VCS Label A3_1D] Check operation of attribute Machine_Rounding.
         [VCS Label A3_1F] Eliminated overlong lines.

CXAA021 [New] VCS Label: A3_1D
      Check file operations of Text_IO.Bounded_IO.

CXAA022 [New] VCS Label: A3_1D
      Check file operations of Text_IO.Unbounded_IO.

CXAB002 [New] VCS Label: A3_1D
      Check file operations of Wide_Text_IO.Wide_Bounded_IO.

CXAB003 [New] VCS Label: A3_1D
      Check file operations of Wide_Wide_Text_IO.Wide_Wide_Bounded_IO.

CXAB004 [New] VCS Label: A3_1D
      Check file operations of Wide_Text_IO.Wide_Unbounded_IO.

CXAB005 [New] VCS Label: A3_1D
      Check file operations of Wide_Wide_Text_IO.Wide_Wide_Unbounded_IO.

CXAC008 [New] VCS Label: A3_1J
      [VCS Label A3_1D] Check that Stream_IO files opened with mode
      Out_File are not truncated by Close or Reset.
      [VCS Label A3_1E] Corrected required file size in subtest 8, and
      various failure messages.
      [VCS Label A3_1F] Eliminated overlong lines.
      [VCS Label A3_1J] Corrected a failure message.

CXAG001 [New] VCS Label: A3_1F
      Check that Ada.Directories can be used to create and delete
      directories.

CXAH001 [New] VCS Label: A3_1F
      [VCS Label A3_1E] Test that package Environment_Variables can be
      used to read environment variables.
      [VCS Label A3_1F] Added missing Applicability Criteria.

CXAH002 [New] VCS Label: A3_1F
      [VCS Label A3_1E] Test that package Environment_Variables can be
      used to modify environment variables.
      [VCS Label A3_1F] Added missing Applicability Criteria.

CXAI001 [New] VCS Label: A3_1A
      Check the functionality defined in package Ada.Containers.Vectors.

CXAI002 [New] VCS Label: A3_1A
      Check the functionality defined in package
      Ada.Containers.Doubly_Linked_Lists.

CXAI003 [New] VCS Label: A3_1A
      Check the functionality defined in package
      Ada.Containers.Hashed_Maps.

CXAI004 [New] VCS Label: A3_1A
      Check the functionality defined in package
      Ada.Containers.Ordered_Maps.

CXAI005 [New] VCS Label: A3_1A
      Check the functionality defined in package
      Ada.Containers.Hashed_Sets.

CXAI006 [New] VCS Label: A3_1A

Check the functionality defined in package
        Ada.Containers.Ordered_Sets.

FXAIA00 [New] VCS Label: A3_1A
        Foundation containing types and values to be used to check the
        functionality of the indefinite containers.

CXAIA01 [New] VCS Label: A3_1A
        Check the functionality defined in package
        Ada.Containers.Indefinite_Vectors.

CXAIA02 [New] VCS Label: A3_1A
        Check the functionality defined in package
        Ada.Containers.Indefinite_Doubly_Linked_Lists.

CXAIA03 [New] VCS Label: A3_1A
        Check the functionality defined in package
        Ada.Containers.Indefinite_Hashed_Maps.

CXAIA04 [New] VCS Label: A3_1A
        Check the functionality defined in package
        Ada.Containers.Indefinite_Ordered_Maps.

CXAIA05 [New] VCS Label: A3_1A
        Check the functionality defined in package
        Ada.Containers.Indefinite_Hashed_Sets.

CXAIA06 [New] VCS Label: A3_1A
        Check the functionality defined in package
        Ada.Containers.Indefinite_Ordered_Sets.

CXB3017 [New] VCS Label: A3_1B
        Check that pragma Export can be used on subprograms and objects.

CXB3023 [New] VCS Label: A3_1M
        [VCS Label A3_1K] Check that a value of an unchecked union type
        (defined with pragma Unchecked_Union) can be passed to a C
        function.
        [VCS Label A3_1M] Added missing N/A => ERROR markers.

===== Annex C =====

[None.]

===== Annex D =====

CXD2007 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                  Required after 2017-07-01
        Added missing N/A => Error tag.

LXD7001 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                  Required after 2017-07-01
        Added missing error tag.

LXD7003 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                  Required after 2017-07-01
        Added missing error tag.

LXD7004 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                  Required after 2017-07-01
        Added missing error tag.

LXD7005 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                Required after 2017-07-01
     Added missing error tag.

LXD7006 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                Required after 2017-07-01
     Added missing error tag.

LXD7007 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                Required after 2017-07-01
     Added missing error tag.

LXD7008 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                Required after 2017-07-01
     Added missing error tag.

LXD7009 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                Required after 2017-07-01
     Added location indicators.

CXDB001 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                Required after 2017-07-01
     Added missing N/A => Error tag.

CXDB002 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                Required after 2017-07-01
     Added missing N/A => Error tag.

CXDB003 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                Required after 2017-07-01
     Added missing N/A => Error tag.

CXDB004 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                Required after 2017-07-01
     Added missing N/A => Error tag.

===== Annex E =====

[None.]

===== Annex F =====

[None.]

===== Annex G =====

CXG2001 [Modified] VCS Label: A3_1B
     Formula for Model_Mantissa was replaced in Ada 2005 (and really in
     the Corrigendum), but was never updated in this test. This only
     affects machines with decimal floating point.

===== Annex H =====

LXH4001 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                Required after 2017-07-01
     Corrected format of error tag; added location indicators.

LXH4003 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                Required after 2017-07-01
     Corrected format of error tag; added location indicators.

```
LXH4006 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                    Required after 2017-07-01
        Added missing error tags.

LXH4009 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                    Required after 2017-07-01
        Added missing error tags.

LXH4013 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                    Required after 2017-07-01
        Added missing error tags.

LXH4014 [Allowed Modification] New VCS Label: A3_1P Org VCS Label: A3_1
                    Required after 2017-07-01
        Added missing error tags.

===== Support =====

IMPDEF [Modified] VCS Label: A3_1K
        [VCS Label A3_1B] Added constants for the external names for the
        imported and exported routines in test CXB3017. The change is only
        needed for that test, it has no effect on any other test.
        [VCS Label A3_1E] Added constants for the names of environment
        variables used by tests CXAH001 and CXAH002. Also removed obsolete
        .AW file constants (these are not used as test source has been
        provided in UTF-8 format since the release of ACATS 3.0). The
        change is only needed for those tests, it has no effect on any
        other tests.
        [VCS Label A3_1F] Added a constant and function used by test
        CXAG001. The change is only needed for that test, it has no
        effect on any other tests.
        [VCS Label A3_1K] Added constants for the external name for the
        imported routine in test CXB3023. The change is only
        needed for that test, it has no effect on any other test.
```

---

**How to get new and modified tests:**

The official home of the ACATS test suite is the ACAA web site. It also can be accessed at www.ada-auth.org.

The complete set of official new and modified tests are available in the Mod_3_1Q.Zip and Tar files on the ACAA web site. As always, when a multi-file test is modified, we provide all of the files, including the unmodified files.

Individual new and modified tests can be retrieved from the ACATS VCS. Simply navigate to the appropriate directory (folder), and select the test you want. Select the revision you want (usually the most recent) and it will be retrieved for you. Tests are stored in directories that correspond to the test's prefix. For instance, the test CD92001.A will be found in the CD directory. You can also browse the differences between versions of a test. [In case of a conflict, the files in the ACATS VCS should be considered the 'official' versions.]

If you cannot get the files from the official site or you cannot get the files in a format appropriate for your processor, please contact your ACAL.

The baseline ACATS 3.1 is available in various formats on the ACAA web site.

**Summary lists:**

**Withdrawn Tests**

(Refer to the main list for details)

```
B38105A
B43102A
B74001A
B74001B
B74203E
C62003A
CC3017C
CD1009A
CD1009B
CD1009L
CD1009M
CD2A21C
CD2A31C
CD33001
CD33002
```

---

**Allowed Modification Tests**

(Refer to the main list for details)

```
B63005A      2017-07-01
B65005B      2017-07-01
B730006      2017-07-01
B73001A      2017-07-01
B73001B      2017-07-01
B73001C      2017-07-01
B73001D      2017-07-01
B73001E      2017-07-01
B73001F      2017-07-01
B73001G      2017-07-01
B73001H      2017-07-01
B91003A      2017-07-01
B91003B      2017-07-01
B91003C      2017-07-01
B91003D      2017-07-01
B940003      2017-07-01
B940004      2017-07-01
C352001      2017-07-01
C480001      2017-07-01
CXD2007      2017-07-01
CXDB001      2017-07-01
CXDB002      2017-07-01
CXDB003      2017-07-01
CXDB004      2017-07-01
LXD7001      2017-07-01
LXD7003      2017-07-01
LXD7004      2017-07-01
LXD7005      2017-07-01
```

```
LXD7006      2017-07-01
LXD7007      2017-07-01
LXD7008      2017-07-01
LXD7009      2017-07-01
LXH4001      2017-07-01
LXH4003      2017-07-01
LXH4006      2017-07-01
LXH4009      2017-07-01
LXH4013      2017-07-01
LXH4014      2017-07-01
```

---

## Modified Tests

(Refer to the main list for details)

```
B38003D
B393005
B3A1001 [VCS A3_1M]
B3A1002 [VCS A3_1M]
B455002
B62001C
B62001D
B740003
B750A01
B750A02
B83F02C
B95007B
BD4003A
BDD2004
C52101A
C540002
CC30003
CXG2001
IMPDEF [VCS A3_1K]
```

---

## New Tests

(Refer to the main list for details)

```
B393011
B3A1007
B3A1008
B3A1009
B3A1A05
B3A2017
B431006
B480002
B480003
B540002
B640001
B730008
B730009
B730010
```

```
B750A04
B750A06
B831004
B840002
BA12017
BA15003
BB42001
BB42002
BB42003
BC60001
BC60002
BC60004
BDD2004
C390012
C391003
C3A0030
C3A1003
C3A1004
C3A2004
C480001
C540001
C620001
C640002
C660001
C760015
C920001
CB30001
CB42001
CB42002
CB42003
CC30004  [VCS Label A3_1F]
CC60001
CD30008
CD30009
CXA4037
CXA5016
CXAA021
CXAA022
CXAB002
CXAB003
CXAB004
CXAB005
CXAC008
CXAG001
CXAH001
CXAH002
CXAI001
CXAI002
CXAI003
CXAI004
CXAI005
CXAI006
CXAIA01
CXAIA02
CXAIA03
CXAIA04
CXAIA05
CXAIA06
CXB3017
CXB3023
FXAIA00
```

**Pending New Tests**

(Refer to the main list for details)

```
B354002      2017-10-01
B651001      2017-10-01
B730011      2017-10-01
B730012      2017-10-01
B730013      2017-10-01
C354004      2017-10-01
C453001      2017-10-01
C460014      2017-10-01
C460015      2017-10-01
C651001      2017-10-01
CD30011      2017-10-01
CD30012      2017-10-01
```