ACATS Modification List for ACATS 4.1
Version 4.1U
December 31, 2020

What is this?

This is the ACATS modification list for ACATS 4.1. This document includes test corrections, test removals, and new tests for ACATS 4.1. ACATS 4.1 is the current test suite for Ada, covering the third edition of Ada, ISO/IEC 8652:2012 (usually known as "Ada 2012").

ACATS Modification List version 3.1BB for ACATS 3.1 is the current list for that test suite. ACATS 3.1 should be used for testing implementations that support Amendment 1 (ISO/IEC 8652:1995/AMD 1:2007, often known as "Ada 2005"), and will continue to be maintained as necessary for the foreseeable future.

ACATS Modification List version 2.6H for ACATS 2.6 is the current list for that test suite. ACATS 2.6 should be used for testing implementations of the second edition of Ada, ISO/IEC 8652:1995 (usually known as "Ada 95"); it also will continue to be maintained as necessary for the foreseeable future.

Changes from the last list:

Tests CXAIB01, CXAIB02, CXAIB03, and CXAIB04 had an error corrected – some of the Insert calls had a parameter with the wrong instance prefixing No_Element.

Note: Some Allowed Modification tests have a required date of "ACATS 4.2". These are tests that don't have substantive changes, but rather change comments (including error locations for B-Tests). For ACATS users that are using traditional results comparison rather than the ACATS grading tools, changing these tests may cause work without benefit (since the tests don't have significant changes). As such, we're allowing the use of the old versions of the tests until the time when the next ACATS version (ACATS 4.2) is issued (not likely before winter 2021; it will be announced at least 90 days in advance of issuance).

New tests posted between October 1, 2020 and December 31, 2020 will become required for conformity assessments on July 1, 2021. New tests posted between July 1, 2020 and September 30, 2020 will become required for conformity assessments on April 1, 2021. New tests posted between April 1, 2020 and June 30, 2020 will become required for conformity assessments on January 1, 2021. New tests posted before April 1, 2020 are required for conformity assessments. The effective dates of tests are marked in the lists.

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

ACATS 4.1 includes optional Test Grading tools

ACATS 4.1 introduces new test grading tools.

When the ACATS was designed (as the ACVC in the early 1980s), the intention always was that running it would give a simple and clear Pass or Fail result. However, grading of tests (particularly of B and L Tests) is somewhat subjective and very time-consuming. (Test grading typically involved poring over compiler listings of the entire ACATS with a large highlighter.) The subjectivity was acceptable in the days of common formal testing, as the formal testers would enforce a common grading standard (even if no one could describe what that was), but in an age of self-testing, it reduces the value of the ACATS.

As such, we're introducing a long-overdue set of automated grading tools. These tools are intended to:
- Greatly reduce the effort to grade an ACATS test run (and, hopefully to reduce the cost of formal testing to make it a more practical option);
- Ensure that all users of the ACATS grade tests in the same way, thus making it more valid to compare ACATS results between different implementations and different testers;

- Give implementers certainty as to whether a particular test result is passing (whether the location of an error is "close enough" to the canonical position);
- Be able to detect process errors (especially errors of omission) – that is, tests improperly run (for instance, files compiled in the wrong order where the ACATS requires an order), or not run at all (if one is checking off lines in a listing, it's hard to notice that some test or portion of a test is missing).

The tools also will optionally give feedback to implementers about quality of error message positioning and of error cascades (does one error generate multiple messages?). (Since "goodness of an implementation" is not something that the ACATS tests for, this is not an official goal for the tools.)

This is an ambitious set of goals. It's unlikely that they'll be completely met by the initial versions of the tools. As such, their use will be completely optional (but encouraged!) for ACATS 4.1. The tools will be updated periodically by the normal process for updating the ACATS – an ACATS Modification List like this one.

Details on the operation of the tools can be found in the ACATS 4.1 documentation (that documentation can be found at http://www.ada-auth.org/acats-files/4.1/docs/UG-6.HTM). As always, if you have questions, contact the ACAA Technical Agent at agent@ada-auth.org.

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.ada-auth.org/standards/rm12_w_tc1/html/RM-TOC.html.

Main list:

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

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

B32201A [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
               Required in ACATS 4.2
      Added error location indicators.

B33001A [Modified] VCS Label: A4_1P
      Added error location indicators, added additional possible error
      locations, restored likely intended test for Set2.

B33101A [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
               Required in ACATS 4.2
      Added error location indicators.

B350001 [New] VCS Label: A4_1Q
      Check that the requirements on the specification of the
      Default_Value aspect are enforced.

C350001 [New] VCS Label: A4_1D
      Check that the object form of the Image attribute is implemented.

C350A01 [Pending New] VCS Label: A4_1R
               Required after 2021-01-01
      Check that objects of types with specified Default_Values are
      properly initialized. Part 1: Normal discrete types.

C350A02 [Pending New] VCS Label: A4_1R
               Required after 2021-01-01
      Check that objects of types with specified Default_Values are
      properly initialized. Part 2: Generic discrete types.

C350B01 [Pending New] VCS Label: A4_1R
               Required after 2021-01-01
      Check that objects of types with specified Default_Values are
      properly initialized. Part 3: Normal real types.

C350B02 [Pending New] VCS Label: A4_1R
               Required after 2021-01-01
      Check that objects of types with specified Default_Values are
      properly initialized. Part 4: Generic real types.

C352001 [Modified] VCS Label: A4_1D
      Corrected Failed message @267 to reflect intended result.

B354002 [New] VCS Label: A4_1D
      Test basic requirements for the Mod attribute.

C354004 [New] VCS Label: A4_1D
      Test basic operation of the Mod attribute.

B35A001 [New] VCS Label: A4_1D
      Check Legality Rules are enforced when Small is specified by an
      aspect specification.

C35A001 [New] VCS Label: A4_1D
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Check that Small can be specified by an aspect specification.

B360001 [New] VCS Label: A4_1Q
        Check that the requirements on the specification of the
        Default_Component_Value aspect are enforced.

C360A01 [Pending New] VCS Label: A4_1S
                    Required after 2021-04-01
        Check that objects of types with specified
        Default_Component_Values are properly initialized. Part 1: Arrays
        of discrete types.

C360A02 [Pending New] VCS Label: A4_1S
                    Required after 2021-04-01
        Check that objects of types with specified
        Default_Component_Values are properly initialized. Part 2: Generic
        arrays of discrete types.

C360B01 [Pending New] VCS Label: A4_1S
                    Required after 2021-04-01
        Check that objects of types with specified
        Default_Component_Values are properly initialized. Part 3: Arrays
        of real types.

C360B02 [Pending New] VCS Label: A4_1S
                    Required after 2021-04-01
        Check that objects of types with specified
        Default_Component_Values are properly initialized. Part 4: Generic
        arrays of real types.

B37309B [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B37310B [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B37311A [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B38003D [Modified] VCS Label: A4_1A
        Corrected error tags @70,76,82,88 so "optional" and "error" are
        on the same line, as required by the test standards.

B38103A [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
                    Required in ACATS 4.2
        Added error location indicators.

B38103B [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
                    Required in ACATS 4.2
        Added error location indicators.

B38103C [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
                    Required in ACATS 4.2
        Added error location indicators.

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B38103D [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
                Required in ACATS 4.2
     Added error location indicators.

B38103E [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
                Required in ACATS 4.2
     Added error location indicators.

B392002 [Modified] VCS Label: A4_1G
     Revised to use Possible Error tags, and added error location
     indicators.

B392003 [Modified] VCS Label: A4_1G
     Added additional error locations to directly support common error
     reporting strategies.

B392004 [Modified] VCS Label: A4_1G
     Added additional error locations to directly support common error
     reporting strategies.

B392005 [Modified] VCS Label: A4_1G
     Revised to use Possible Error tags, and added error location
     indicators.

B393001 [Modified] VCS Label: A4_1G
     Added additional error locations to directly support common error
     reporting strategies.

B393007 [Modified] VCS Label: A4_1G
     Added additional error locations to directly support common error
     reporting strategies. Fixed overlong lines.

B393010 [Modified] VCS Label: A4_1G
     Added additional error locations to directly support common error
     reporting strategies. Fixed overlong lines.

B393012 [Pending New] New VCS Label: A4_1P
                Required after 2020-07-01
     Check that abstract types cannot be used in additional
     contexts that do not allow abstract types.

B393013 [Pending New] New VCS Label: A4_1P
                Required after 2020-07-01
     Check that interface types cannot be used in additional contexts
     that do not allow abstract types.

C3A0030 [New] VCS Label: A4_1A
     Check that an access discriminant is only null excluding if it
     includes a null exclusion.

B3A1001 [Modified] VCS Label: A4_1A
     Split Pack6 so possible error sets don't intersect; fixed
     overlong lines.

B3A1002 [Modified] VCS Label: A4_1A
     Split Pack6 so possible error sets don't intersect; fixed
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overlong lines.

B3A2007 [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B3A2008 [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B3A2009 [Modified] VCS Label: A4_1G
        Removed tabs to meet test format standards; added error location
        indicators.

B3A2011 [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B3A2012 [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B3A2016 [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B3A2018 [New] VCS Label: A4_1H
        Check that an explicitly aliased parameter has the same
        accessibility level as a normal parameter unless compared to the
        return object. Check that master of the function call is properly
        determined statically.

B3A2018 [Allowed Modification] New VCS Label: A4_1T Org VCS Label: A4_1H
                    Required after 2021-04-01
        Corrected so that it is not affected by whether AI12-0345-1,
        AI12-0402-1, and AI12-0390-1 are implemented.

B413004 [Modified] VCS Label: A4_1J
        PPA and PFA trigger the issue of AI12-0289-1; explicit null
        exclusions were added to the parameters to avoid it.

C415001 [Modified] VCS Label: A4_1P
        [VCS Label A4_1N] Return @119 fails an accessibility check
        unless C is aliased.
        [VCS Label A4_1P] The subtype of My_Colln @125 needs to be either
        discriminated or to statically match that of the formal types of
        the parameters.

B431007 [Pending New] New VCS Label: A4_1P
                    Required after 2020-07-01
        Check that record aggregates are not allowed for types whose
        components aren't visible.

B432002 [Pending New] New VCS Label: A4_1P
                    Required after 2020-07-01
        Check that all of the extensions of an extension aggregate are
        record extensions.

B432003 [Pending New] New VCS Label: A4_1P
                Required after 2020-07-01
    Check that the ancestor subtype_mark of an extension aggregate
    does not denote a view with unknown discriminants.

B452001 [New] VCS Label: A4_1K
    Check that a membership that contains choice expressions is
    illegal for a limited type that does not have equality.

B452002 [New] VCS Label: A4_1L
    Check that Resolution and Legality Rules for the universal access
    equality operator are enforced.

C452002 [New] VCS Label: A4_1F
    [VCS Label A4_1D] Check that overloading resolution of Ada 2012
    membership operations works as intended.
    [VCS Label A4_1F] Fixed incorrect test number passed to Report.

C452003 [New] VCS Label: A4_1R
    [VCS Label A4_1K] Check that memberships of general access-to-
    object types work as defined.
    [VCS Label A4_1R] Corrected Force_Save and Force_Op.

C452004 [New] VCS Label: A4_1Q
    [VCS Label A4_1L] Check that memberships with multiple choices are
    evaluated as required, and that the correct equality operation is
    called for untagged record types.
    [VCS Label A4_1Q] LTemp and RTemp @ 136 and 164 should be declared
    Integer rather than Natural, as the numerators are of type Integer
    and can be negative.

C452005 [New] VCS Label: A4_1L
    Check that memberships with multiple choices call the correct
    equality operation for array types.

C452006 [New] VCS Label: A4_1M
    [VCS Label A4_1L] Check that memberships with multiple choices
    call the correct equality operation for access types.
    [VCS Label A4_1M] Corrected to remove cases made illegal by
    AI12-0328-1.

C452A01 [New] VCS Label: A4_1K
    Check that "=" for language-defined private types behaves as if it
    is predefined. Part 1: core types.

C452A02 [New] VCS Label: A4_1K
    Check that "=" for language-defined private types behaves as if it
    is predefined. Part 2: types of the Ada.Strings subsystem.

C452A03 [New] VCS Label: A4_1K
    Check that "=" for language-defined private types behaves as if it
    is predefined. Part 3: Annex C types.

C453001 [New] VCS Label: A4_1D
    Check that modular adding operators wrap around rather than
    raising Constraint_Error.

B455002 [Modified] VCS Label: A4_1A
     Corrected casing of error tags and fixed overlong lines.

B457001 [Modified] VCS Label: A4_1F
     Fixed overlong lines. Added location indicators.

B457004 [Modified] VCS Label: A4_1F
     There should not be an ERROR tag @282; Single_Highest @290 should
     be Single_High. Added location indicators.

B458001 [New] VCS Label: A4_1F
     Check that a quantified expression has to be surrounded in
     parentheses if it is not already surrounded by them.

C460014 [New] VCS Label: A4_1C
     Check that Constraint_Error is raised appropriately when
     converting access-to-classwide to another access type.

C460015 [New] VCS Label: A4_1C
     Check that Constraint_Error is raised appropriately when
     converting access-to-limited-classwide to another access type.

B470001 [New] VCS Label: A4_1D
     Check that qualified expressions are a constant view of the
     expression, even if the expression is a variable object.

C470001 [New] VCS Label: A4_1D
     Check that qualified expressions are a name, and thus can be used
     as a prefix and other places a name is required.

C480001 [New] VCS Label: A4_1D
     [VCS Label A4_1A] Check that an initialized allocator for a
     class-wide type does an accessibility check on the tag of the
     initializing object.
     [VCS Label A4_1D] 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.

B480004 [New] VCS Label: A4_1G
     Check that an allocator is illegal if the access type has a
     Storage_Size that is statically zero.

B48002A [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
               Required in ACATS 4.2
     Added error location indicators.

B48002G [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
               Required in ACATS 4.2
     Added error location indicators.

B48003B [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
               Required in ACATS 4.2
     Added error location indicators.

B48003E [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
               Required in ACATS 4.2

Added error location indicators.

B490003 [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
                Required in ACATS 4.2
        Moved error tags to more usual locations, added error location
        indicators.

B4A010C [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

C52101A [Modified] VCS Label: A4_1A
        Corrected comment @49 not to have the form of an error tag.

B540001 [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B540002 [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B54B01B [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B54B01C [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B54B02B [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B54B02C [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B54B02D [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B54B04A [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B54B04B [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B54B05A [Modified] VCS Label: A4_1G
        Added additional error locations to directly support common error
        reporting strategies.

B551002 [Modified] VCS Label: A4_1N
        Revised test to remove dependence on Ada.Iterator_Interfaces.

B552A01 [Modified] VCS Label: A4_1G
     Added additional error locations to directly support common error
     reporting strategies. Fixed an overlong line.

B55B12B [Modified] VCS Label: A4_1G
     Added additional error locations to directly support common error
     reporting strategies.

B55B12C [Modified] VCS Label: A4_1G
     Added additional error locations to directly support common error
     reporting strategies.

B56001A [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
               Required in ACATS 4.2
     Added error location indicators.

B57001B [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
               Required in ACATS 4.2
     Added error location indicators.

B611001 [New] VCS Label: A4_1A
     Check that Pre and Post are only allowed on
     subprograms and entries (and not on subprogram instances).

B611002 [New] VCS Label: A4_1C
     [VCS Label A4_1A] Check that Pre and Post are not allowed on
     subprograms acting as completions.
     [VCS Label A4_1C] Corrected several error location codes.

B611003 [New] VCS Label: A4_1A
     Check that Pre'Class and Post'Class are only allowed on primitive
     subprograms of tagged types. (Normal tagged types and interfaces.)

B611004 [New] VCS Label: A4_1A
     Check that Pre'Class and Post'Class are not
     allowed on subprograms acting as completions.

B611005 [New] VCS Label: A4_1A
     Check that Pre and Post are not allowed on
     abstract subprograms and null procedures.

B611006 [New] VCS Label: A4_1C
     [VCS Label A4_1A] Check that the restrictions on Pre'Class and
     Post'Class expressions added by AI12-0113-1 are enforced.
     [VCS Label A4_1C] Clarified error @208; changed error @233 & @247
     to OK (as the inherited Proc4 routine is abstract and thus is not
     subject to the new rule).

B611007 [New] VCS Label: A4_1F
     [VCS Label A4_1A] Check that Pre'Class and Post'Class are not
     allowed on entries and protected subprograms of untagged task and
     protected types.
     [VCS Label A4_1F] Corrected preconditions @77 and @110 not to
     violate the new rule added by Binding Interpretation AI12-0166-1.

B611008 [New] VCS Label: A4_1A
     Check various rules about the use of the Result attribute.

B611009 [New] VCS Label: A4_1A
      Check that F'Result is not allowed in the body of F.

B611010 [New] VCS Label: A4_1A
      Check that the Old attribute is not allowed in a subprogram or
      entry body, or in an accept statement.

B611011 [New] VCS Label: A4_1A
      Check the Old attribute cannot be used within a precondition
      expression nor in a generic specification outside of a
      postcondition expression.

B611012 [New] VCS Label: A4_1A
      Check that the prefix of an Old attribute cannot contain the
      Result attribute, another Old attribute, nor the index of a
      quantified expression.

B611013 [New] VCS Label: A4_1A
      For a discrete X, check that X'Old has the nominal subtype of X.

B611014 [New] VCS Label: A4_1C
      [VCS Label A4_1B] If an Old attribute reference occurs at a
      place where it is potentially unevaluated, check that the prefix
      must statically denote an object.
      [VCS Label A4_1C] Corrected error location codes @240 and @252.

B611015 [New] VCS Label: A4_1B
      Check that the prefix of an Old attribute cannot have a limited
      type.

B611016 [New] VCS Label: A4_1B
      Check that tagged task and tagged protected types do not allow
      Pre'Class and Post'Class, nor are they allowed on operations of
      those types.

B611017 [New] VCS Label: A4_1C
      [VCS Label A4_1B] Check that Pre'Class cannot be specified for
      an overriding of a subprogram that does not specify Pre'Class.
      [VCS Label A4_1C] Declaration of New_Proc @358 is not overriding
      and thus not subject to the rule. The declaration of Shine @149
      never overrides primitives of the actual type by 12.3(18), thus
      this rule does not apply to instances of Gen2. Added an example
      using a generic derived type.

B611018 [New] VCS Label: A4_1C
      [VCS Label A4_1B] Check 6.1.1(10-16/3).
      [VCS Label A4_1C] Type T08 @230 and @241 needs to be declared
      abstract.

B611019 [New] VCS Label: A4_1C
      [VCS Label A4_1B] Check 6.1.1(17/3).
      [VCS Label A4_1C] The declaration of Get_Count @112
      never overrides primitives of the actual type by 12.3(18), thus
      this rule does not apply to instances of Gen2. Added examples
      using generic derived types.

C611A01 [New] VCS Label: A4_1A
     Check that preconditions and postconditions where both specific
     and class-wide contracts apply are checked properly.

C611A02 [New] VCS Label: A4_1C
     [VCS Label A4_1A] Check that the correct expressions are evaluated
     for specific preconditions and postconditions, and that they are
     evaluated at the correct point.
     [VCS Label A4_1C] The main subprogram name was corrected to follow
     the rules of the ACATS User's Guide, clause 4.3.3.

C611A03 [New] VCS Label: A4_1C
     [VCS Label A4_1A] Check that the correct expressions are evaluated
     for class-wide preconditions and postconditions, and that they are
     evaluated at the correct point.
     [VCS Label A4_1C] The main subprogram name was corrected to follow
     the rules of the ACATS User's Guide, clause 4.3.3.

C611A04 [New] VCS Label: A4_1D
     [VCS Label A4_1C] Check that the correct expressions are evaluated
     for class-wide preconditions and postconditions of an interface
     type, and that they are evaluated at the correct point.
     [VCS Label A4_1D] Fixed overlong lines.

C611B01 [New] VCS Label: A4_1C
     [VCS Label A4_1A] Check that X'Old has the tag of X and not the
     tag of the nominal subtype of X (for Post).
     [VCS Label A4_1C] The main subprogram name was corrected to follow
     the rules of the ACATS User's Guide, clause 4.3.3.

C611B02 [New] VCS Label: A4_1C
     [VCS Label A4_1A] Check that X'Old has the tag of X and not the
     tag of the nominal subtype of X (for Post'Class).
     [VCS Label A4_1C] The main subprogram name was corrected to follow
     the rules of the ACATS User's Guide, clause 4.3.3.

C611B03 [New] VCS Label: A4_1D
     [VCS Label A4_1C] Check that X'Old has the tag of X and not the
     tag of the nominal subtype of X (for Post'Class of an interface
     type).
     [VCS Label A4_1D] Fixed overlong lines.

C620002 [Pending New] New VCS Label: A4_1R
                 Required after 2021-01-01
     Modernizes, adds test cases to, and eliminates illegal calls from
     legacy test C95072A.

B62001C [Modified] VCS Label: A4_1A
     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: A4_1A
     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).

B631001 [New] VCS Label: A4_1N
     Check that a prefixed view is intrinsic.

B65005A [Modified] VCS Label: A4_1D
     Added additional error locations to directly support common error
     reporting strategies.

B65005B [Modified] VCS Label: A4_1D
     Added additional error locations to directly support common error
     reporting strategies.

C650B04 [New] VCS Label: A4_1A
     Check that the result of a function that returns a class-wide
     tagged type does an accessibility check on the tag of the result
     object when the result expression is class-wide.

B651001 [New] VCS Label: A4_1D
     [VCS Label A4_1D] 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).

B651001 [Allowed Modification] New VCS Label: A4_1S Org VCS Label: A4_1D
                 Required after 2021-01-01
     [VCS Label A4_1S] Corrected pragmas @176 and @179 to refer to the
     immediately preceding procedures.

C651001 [New] VCS Label: A4_1D
     Check that a nonreturning procedure can raise an exception and
     raises Program_Error otherwise (pragma No_Return version).

B651002 [New] VCS Label: A4_1D
     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 (aspect No_Return version).

C651002 [New] VCS Label: A4_1D
     Check that a nonreturning procedure can raise an exception and
     raises Program_Error otherwise (aspect No_Return version).

B651003 [New] VCS Label: A4_1D
     Check that an aspect No_Return can only be given on a procedure or
     generic procedure, that the expression has to be nonstatic, and
     that the aspect is not given on an instance or null procedure.

B660002 [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
                 Required in ACATS 4.2
     Added error location indicators.

B660003 [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
                 Required in ACATS 4.2
     Fixed overlong lines, added error location indicators.

B66001A [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
                 Required in ACATS 4.2
     Added error location indicators.

B66001B [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
                Required in ACATS 4.2
     Added error location indicators.

B680001 [Modified] VCS Label: A4_1F
     The immediately enclosing expression function @140 does not
     declare a parameter A, but A is used @141. Added location
     indicators.

B730006 [Modified] VCS Label: A4_1C
     Corrected format of error tags; added location indicators.

B730011 [New] VCS Label: A4_1C
     Test various rules about completions of private types and
     extensions; replaces test B74001A.

B730012 [New] VCS Label: A4_1C
     Test various rules about completions of private types and
     extensions in generic units; replaces test B74001B.

B730013 [New] VCS Label: A4_1D
     Test operations available for a private type; replaces test
     B74203E.

B73001A [Modified] VCS Label: A4_1C
     Added additional error locations to directly support common error
     reporting strategies.

B73001B [Modified] VCS Label: A4_1C
     Added additional error locations to directly support common error
     reporting strategies.

B73001C [Modified] VCS Label: A4_1C
     Added additional error locations to directly support common error
     reporting strategies.

B73001D [Modified] VCS Label: A4_1C
     Added additional error locations to directly support common error
     reporting strategies.

B73001E [Modified] VCS Label: A4_1C
     Added additional error locations to directly support common error
     reporting strategies.

B73001F [Modified] VCS Label: A4_1C
     Added additional error locations to directly support common error
     reporting strategies.

B73001G [Modified] VCS Label: A4_1C
     Added additional error locations to directly support common error
     reporting strategies.

B73001H [Modified] VCS Label: A4_1C
     Added additional error locations to directly support common error
     reporting strategies.

B740003 [Modified] VCS Label: A4_1H

[VCS Label A4_1A] Modified criteria @75 so that it doesn't look
        like an error tag to the grading tools; also fixed an overlong
        line.
        [VCS Label A4_1H] Modified grading to document that processing the
        main is optional. Added error location indicators.

B74001A [Withdrawn] VCS Label: A4_1C
        Replaced by B730011.

B74001B [Withdrawn] VCS Label: A4_1C
        Replaced by B730012.

B74203E [Withdrawn] VCS Label: A4_1D
        Replaced by B730013.

B750A07 [New] VCS Label: A4_1G
        [VCS Label A4_1A] Check that only legal expressions are allowed
        in the return expression of an expression function that returns a
        limited type.
        [VCS Label A1_1G] Adjusted error indicators to allow the error to
        be reported anywhere in a multi-line expression.

C760A02 [New] VCS Label: A4_1G
        Checks that functions that return immutably limited types are
        built-in-place.

C760A03 [New] VCS Label: A4_1G
        Checks that expression functions that return immutably limited
        types are built-in-place.

B83027B [Modified] VCS Label: A4_1G
        The discriminant @90 needs a default expression as all or none of
        the discriminants of a type need defaults. Also added error
        location indicators.

B83027D [Modified] VCS Label: A4_1G
        Corrected bad error tag, and added error location indicators.

B831006 [New] VCS Label: A4_1K
        Checks that overriding indicators cannot be given on any
        subprogram declaration in a protected body.

B83E01B [Modified] VCS Label: A4_1G
        Removed possible error cascades, reformatted some error tags, and
        added error location indicators.

B83F02C [Modified] VCS Label: A4_1A
        Updated many optional error markers to match ACATS standards.

B85002A [Withdrawn] VCS Label: A4_1H
        Replaced by B851005.

B85003A [Withdrawn] VCS Label: A4_1H
        Replaced by B851007.

B85003B [Withdrawn] VCS Label: A4_1H
        Replaced by B851007.

B851004 [Modified] VCS Label: A4_1J
     Revised test to eliminate cases whose result would be
     changed by pending AI12-0287-1, and added cases to preserve
     complete testing.

B851005 [New] VCS Label: A4_1H
     Checks that "known to be constrained" is properly enforced for
     renames. Part 1: "Normal" cases (no generics or access cases).

B851006 [New] VCS Label: A4_1H
     Checks that "known to be constrained" is properly enforced for
     renames. Part 2: Access cases.

B851007 [New] VCS Label: A4_1K
     [VCS Label A4_1H] Checks that "known to be constrained" is
     properly enforced for renames. Part 3: Generic cases.
     [VCS Label A4_1K] Corrected types of declaration @198 and @214,
     and mode @328.

B853001 [New] VCS Label: A4_1H
     Checks that a renamed limited view cannot be used where there is
     not a with for the original package.

B854002 [New] VCS Label: A4_1J
     [VCS Label A4_1H] When parameter or result has a null exclusion
     for a subprogram rename, check that the subtype of the
     corresponding parameter or result of the renamed subprogram must
     exclude null.
     [VCS Label A4_1J] Corrected wording of the second test objective.
     [VCS Label A4_1R] Corrected error markers on RenG51, RenG61,
     RenGF51, and RenGF61. Corrected renaming @412 to rename the
     correct function.

B854003 [New] VCS Label: A4_1J
     Check various rules about renames as body: conformance of both the
     renaming and renamed entity, and renaming of abstract and
     intrinsic subprograms.

B854004 [New] VCS Label: A4_1J
     Check that renaming a subprogram that requires overriding is
     illegal.

B854005 [New] VCS Label: A4_1J
     Check that a renaming of a prefixed view is illegal if renaming
     the prefix as an object is illegal.

B860002 [New] VCS Label: A4_1Q
     Check that implicit conversions of access types don't allow too
     much.

B91003A [Modified] VCS Label: A4_1C
     Added additional error locations to directly support common error
     reporting strategies.

B91003B [Modified] VCS Label: A4_1C
     Added additional error locations to directly support common error

reporting strategies.

B91003C [Modified] VCS Label: A4_1C
        Added additional error locations to directly support common error
        reporting strategies.

B91003D [Modified] VCS Label: A4_1C
        Added additional error locations to directly support common error
        reporting strategies.

B940003 [Modified] VCS Label: A4_1C
        Added additional error locations to directly support common error
        reporting strategies.

B940004 [Modified] VCS Label: A4_1C
        Split into 8 files; added location indicators.

B940008 [New] VCS Label: A4_1M
        Check the overriding indicators work properly on protected
        subprograms.

B940009 [New] VCS Label: A4_1M
        Check that the mode and type of the first parameter of protected
        operations that implement inherited subprograms is correct.

B940010 [New] VCS Label: A4_1M
        Check that a protected operation and a primitive subprogram of a
        tagged protected type cannot have the same profile.

B940011 [New] VCS Label: A4_1M
        Check that an protected operation and the associated inherited
        operation must subtype conform. Check that inherited operations
        must be implemented, overridden, or be a null procedure.

C940017 [New] VCS Label: A4_1M
        Check that dispatching calls can be made through a protected
        interface and that they can be implemented with protected
        subprograms and entries.

C94001A [Modified] VCS Label: A4_1M
        Revised test to replace excessive delays with Impdef constants.

C94001B [Modified] VCS Label: A4_1M
        Revised test to replace excessive delays with Impdef constants.

C94001C [Modified] VCS Label: A4_1M
        Revised test to replace excessive delays with Impdef constants.

C94002A [Modified] VCS Label: A4_1M
        Revised test to replace excessive delays with Impdef constants.

C94004A [Modified] VCS Label: A4_1M
        Revised test to replace excessive delays with Impdef constants.

C94004B [Modified] VCS Label: A4_1M
        Revised test to replace excessive delays with Impdef constants.

C94004C [Modified] VCS Label: A4_1M
     Revised test to replace excessive delays with Impdef constants.

C94005A [Modified] VCS Label: A4_1M
     Revised test to replace excessive delays with Impdef constants.

C94005B [Modified] VCS Label: A4_1M
     Revised test to replace excessive delays with Impdef constants.

C94007A [Modified] VCS Label: A4_1M
     Revised test to replace excessive delays with Impdef constants.

C94010A [Modified] VCS Label: A4_1M
     Revised test to replace excessive delays with Impdef constants.

B95007B [Modified] VCS Label: A4_1A
     Fixed error markers @62,66,70 to match ACATS standards.

C95012A [Modified] VCS Label: A4_1M
     Revised test to replace excessive delays with Impdef constants.

C95072A [Withdrawn] VCS Label: A4_1R
     Replaced by C620002; it violated the anti-order dependence
     rules of 6.4.1.

B952005 [New] VCS Label: A4_1M
     Check the overriding indicators work properly on task and
     protected entries.

C97307A [Modified] VCS Label: A4_1M
     Revised test to replace excessive delays with Impdef constants.

BA1001D [Modified] VCS Label: A4_1G
     Revised to mark the main subprogram as optional, as it is not
     necessary to check the test objective. Added error location
     indicators.

BA1020F [Modified] VCS Label: A4_1G
     Revised to mark the main subprogram as optional, as it is not
     necessary to check the test objective. Added error location
     indicators.

BA11007 [Modified] VCS Label: A4_1G
     Split into six test files to avoid requiring error recovery.

BA11013 [Modified] VCS Label: A4_1G
     Revised to make processing the last compilation unit optional,
     as it is not necessary to check the test objective. Added error
     location indicators.

BA1101E [Withdrawn] Org VCS Label: A4_1G
     Replaced by test BA14001.

BA12010 [Modified] VCS Label: A4_1G
     Revised to use Possible Error tags, and added error location
     indicators.

BA12018 [New] VCS Label: A4_1H
      Check that names mentioned but not named in a private with are
      also treated as privately withed.

BA14001 [New] VCS Label: A4_1G
      Replaces test BA1101E with modern format and additional test cases
      for Ada 95 compilation units.

BA14002 [New] VCS Label: A4_1G
      Similar to BA14001, testing private with.

BA14003 [New] VCS Label: A4_1G
      Checks that a unit is illegal if it depends on two versions of the
      same unit.

BA21005 [New] VCS Label: A4_1D
      Test that Pure and Preelaborate aspects cannot be specified late,
      with a nonstatic expression, or an expression of a type other than
      Boolean.

BB42001 [New] VCS Label: A4_1C
      [VCS Label A4_1A] Check that the arguments of a pragma Assert
      have to have the correct types.
      [VCS Label A4_1C] Corrected two incorrect error location codes.

CB42001 [New] VCS Label: A4_1A
      Check the usual operation of pragma Assert, including the optional
      message.

BB42002 [New] New VCS Label: A4_1A
      Check that the arguments of a pragma Assert cannot be reordered
      even if named notation is used.

CB42002 [New] New VCS Label: A4_1A
      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: A4_1A
      Check that a pragma Assertion_Policy is illegal
      if the policy is not recognized.

CB42003 [New] VCS Label: A4_1A
      Check that procedure Ada.Assertions.Assert evaluates its arguments
      and raises Assertion_Error regardless of the assertion policy.

CC3601C [Modified] VCS Label: A4_1E
      Moved "=" for type Rec in order that it not violate 4.5.2(9.8/4).

BC40003 [Pending New] VCS Label: A4_1J
      [VCS A4_1H] Checks that the subtype of the actual for a generic
      formal object with a null exclusion must exclude null.
      [VCS A4_1J] Revised test to eliminate cases whose result would be
      changed by pending AI12-0287-1, and to preserve complete testing.

CC51010 [Modified] VCS Label: A4_1F
      The main subprogram name was corrected to follow the rules of the

ACATS User's Guide, clause 4.3.3.

BC51016 [Modified] VCS Label: A4_1G
        Corrected bad error tag, and added error location indicators.

BC51019 [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
                    Required in ACATS 4.2
        Added error location indicators.

BC51020 [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
                    Required in ACATS 4.2
        Added error location indicators.

BC51B02 [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
                    Required in ACATS 4.2
        Added error location indicators.

BC51C01 [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
                    Required in ACATS 4.2
        Added error location indicators.

BC51C02 [Allowed Modification] New VCS Label: A4_1P Org VCS Label: A4_1
                    Required in ACATS 4.2
        Added error location indicators.

BC54004 [New] VCS Label: A4_1H
        Checks that the null exclusion of the formal type and of the
        actual subtype for a generic formal access type must match.

BC55001 [Pending New] New VCS Label: A4_1P
                    Required after 2020-07-01
        Check that formal interface types cannot be used in contexts that
        do not allow abstract types.

BC60005 [New] VCS Label: A4_1J
        [VCS Label A4_1H] Checks that the subtype of a parameter or result
        of the actual subprogram for a generic formal subprogram where the
        corresponding parameter or result has a null exclusion must
        exclude null.
        [VCS Label A4_1J] Corrected wording of the second test objective.
        [VCS Label A4_1Q] Corrected error markers on InstG51, InstG61,
        InstGF51, and InstGF61.
        [VCS Label A4_1R] Corrected instance @437 to use correct actual
        parameter.

BD10001 [Pending New] VCS Label: A4_1R
                    Required after 2021-01-01
        Check that an aspect cannot be specified in multiple ways for a
        single entity.

CD1009A [Withdrawn] VCS Label: A4_1D
        Has one of the objectives of, and thus redundant with, test
        CD2A31C (now CD30012).

CD1009B [Withdrawn] VCS Label: A4_1D
        Has one of the objectives of, and thus redundant with, test
        CD2A21C (now CD30011).

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CD1009L [Withdrawn] VCS Label: A4_1D
      Virtually identical to, and thus redundant with, test CD2D13A.

CD1009M [Withdrawn] VCS Label: A4_1D
      Virtually identical to, and thus redundant with, test CD3014C.

CD11001 [New] VCS Label: A4_1A
      Check that appropriate entities are visible in an aspect
      specification.

CD2A21C [Withdrawn] VCS Label: A4_1D
      Replaced by CD30011.

CD2A31C [Withdrawn] VCS Label: A4_1D
      Replaced by CD30012.

BD30001 [New] VCS Label: A4_1D
      Check Legality Rules are enforced when Size is specified by an
      aspect specification for a type.

BD30002 [New] VCS Label: A4_1D
      Check Legality Rules are enforced when Alignment is specified by
      an aspect specification for a type.

BD30003 [New] VCS Label: A4_1D
      Check Legality Rules are enforced when Component_Size is specified
      by an aspect specification.

CD30010 [New] VCS Label: A4_1D
      Check that Component_Size can be specified via an aspect
      specification.

CD30011 [New] VCS Label: A4_1D
      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 [New] VCS Label: A4_1D
      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.

BD4003A [Modified] VCS Label: A4_1A
      Moved error marker from @66 to @67 so it is on the incorrect
      construct.

BDB0A01 [Modified] VCS Label: A4_1G
      Revised to use Possible Error tags, and added error location
      indicators.

BDB2001 [New] VCS Label: A4_1G
      Check that a call on an instance of Unchecked_Deallocation is
      illegal if the access type has a Storage_Size that is statically
      zero.
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BDB4001 [Pending New] New VCS Label: A4_1P
                  Required after 2020-07-01
      Check that the object for a pool that supports subpools is
      declared in the same scope as the access type that uses it.

BDD2003 [Modified] VCS Label: A4_1G
      Added additional error locations to directly support common error
      reporting strategies.

BDD2006 [New] VCS Label: A4_1Q
      Check that the requirements for specifying the Stream_Size
      attribute are enforced.

BDD2007 [New] VCS Label: A4_1Q
      Check that the requirements for specifying the Stream_Size
      aspect are enforced.

CDD2B01 [New] VCS Label: A4_1Q
      Check that confirming Stream_Size attributes work as expected.

CDD2B02 [New] VCS Label: A4_1Q
      Check that confirming Stream_Size aspects work as expected.

CDD2B03 [New] VCS Label: A4_1Q
      Check that non-confirming Stream_Size attributes work as expected.

CDD2B04 [New] VCS Label: A4_1Q
      Check that non-confirming Stream_Size aspects work as expected.

CDE0002 [Modified] VCS Label: A4_1E
      Changed to use Storage_Size rather than Size so that the static
      expression rule of 13.14(7.2/3) is not triggered.

CXAC009 [New] VCS Label: A4_1D
      Check that Stream_IO.File_Type has Preelaborable_Initialization.

CXAG003 [New] VCS Label: A4_1H
      [VCS Label A4_1G] Check that function
      Ada.Directories.Name_Case_Equivalence exists and that it
      reflects the handling of file names.
      [VCS Label A4_1H] Added "return;" @171; if the file can't be
      opened, the Read_File trial is complete.

CXAIB01 [Pending New] VCS Label: A4_1U
                  Required after 2021-07-01
      [VCS Label A4_1T] Check that Ada.Containers.Vectors is
      preelaborated, and it and types declared in it can be used in
      preelaborated packages.
      [VCS Label A4_1U] Corrected instance prefix of No_Element in
      some Insert calls. Qualified aggregates to avoid issues for Ada
      202x.

CXAIB02 [Pending New] VCS Label: A4_1U
                  Required after 2021-07-01
      [VCS Label A4_1T] Check that Ada.Containers.Bounded_Vectors is
      preelaborated, and it and types declared in it can be used in

preelaborated packages.
[VCS Label A4_1U] Corrected instance prefix of No_Element in
some Insert calls. Qualified aggregates to avoid issues for Ada
202x.

CXAIB03 [Pending New] VCS Label: A4_1U
                Required after 2021-07-01
    [VCS Label A4_1T] Check that Ada.Containers.Doubly_Linked_Lists is
    preelaborated, and it and types declared in it can be used in
    preelaborated packages.
    [VCS Label A4_1U] Corrected instance prefix of No_Element in
    some Insert calls.

CXAIB04 [Pending New] VCS Label: A4_1U
                Required after 2021-07-01
    [VCS Label A4_1T] Check that
    Ada.Containers.Bounded_Doubly_Linked_Lists is preelaborated, and
    it and types declared in it can be used in preelaborated packages.
    [VCS Label A4_1U] Corrected instance prefix of No_Element in
    some Insert calls.

CXAIB05 [Pending New] VCS Label: A4_1T
                Required after 2021-07-01
    Check that Ada.Containers.Ordered_Maps is preelaborated,
    and it and types declared in it can be used in preelaborated
    packages.

CXAIB06 [Pending New] VCS Label: A4_1T
                Required after 2021-07-01
    Check that Ada.Containers.Bounded_Ordered_Maps is preelaborated,
    and it and types declared in it can be used in preelaborated
    packages.

CXAIB07 [Pending New] VCS Label: A4_1T
                Required after 2021-07-01
    Check that Ada.Containers.Hashed_Maps is preelaborated,
    and it and types declared in it can be used in preelaborated
    packages.

CXAIB08 [Pending New] VCS Label: A4_1T
                Required after 2021-07-01
    Check that Ada.Containers.Bounded_Hashed_Maps is preelaborated,
    and it and types declared in it can be used in preelaborated
    packages.

CXB3019 [Allowed Modification] New VCS Label: A4_1S Org VCS Label: A4_1
                Required after 2021-01-01
    Added missing failures if Program_Error is not raised when
    expected.

CXB3020 [Allowed Modification] New VCS Label: A4_1S Org VCS Label: A4_1
                Required after 2021-01-01
    Added missing failures if Program_Error is not raised when
    expected.

CXB3021 [Allowed Modification] New VCS Label: A4_1S Org VCS Label: A4_1
                Required after 2021-01-01

Added missing failures if Program_Error is not raised when
         expected.

CXB3022 [Allowed Modification] New VCS Label: A4_1S Org VCS Label: A4_1
                 Required after 2021-01-01
         Added missing failures if Program_Error is not raised when
         expected.

CXB3023 [New] VCS Label: A4_1A
         Check that a value of an unchecked union type (defined with
         pragma Unchecked_Union) can be passed to a C function.

CXB3024 [New] VCS Label: A4_1A
         Check that a value of an unchecked union type (defined with
         aspect Unchecked_Union) can be passed to a C function.

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

BXC6A03 [Modified] VCS Label: A4_1G
         Changed subtest result to require the changes of AI05-0218-1.

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

CXD2007 [Modified] VCS Label: A4_1C
         Added missing N/A => Error tag.

LXD7001 [Modified] VCS Label: A4_1C
         Added missing error tag.

LXD7003 [Modified] VCS Label: A4_1C
         Added missing error tag.

LXD7004 [Modified] VCS Label: A4_1C
         Added missing error tag.

LXD7005 [Modified] VCS Label: A4_1C
         Added missing error tag.

LXD7006 [Modified] VCS Label: A4_1C
         Added missing error tag.

LXD7007 [Modified] VCS Label: A4_1C
         Added missing error tag.

LXD7008 [Modified] VCS Label: A4_1C
         Added missing error tag.

LXD7009 [Modified] VCS Label: A4_1C
         Added location indicators.

CXDB001 [Modified] VCS Label: A4_1C
         Added missing N/A => Error tag.

CXDB002 [Modified] VCS Label: A4_1C
         Added missing N/A => Error tag.

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CXDB003 [Modified] VCS Label: A4_1C
      Added missing N/A => Error tag.

CXDB004 [Modified] VCS Label: A4_1C
      Added missing N/A => Error tag.


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

[None.]

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

[None.]

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

[None.]

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

LXH4001 [Modified] VCS Label: A4_1C
      Corrected format of error tag; added location indicators.

LXH4003 [Modified] VCS Label: A4_1C
      Corrected format of error tag; added location indicators.

LXH4006 [Modified] VCS Label: A4_1C
      Added missing error tags.

LXH4009 [Modified] VCS Label: A4_1C
      Added missing error tags.

LXH4013 [Modified] VCS Label: A4_1C
      Added missing error tags.

LXH4014 [Modified] VCS Label: A4_1C
      Added missing error tags.

===== Support =====

F350A00 [Pending New] New VCS Label: A4_1R
                Required after 2021-01-01
      A foundation for discrete specified Default_Value tests.

F350B00 [Pending New] New VCS Label: A4_1R
                Required after 2021-01-01
      A foundation for real specified Default_Value tests.

F360A00 [Pending New] New VCS Label: A4_1S
                Required after 2021-04-01
      A foundation for discrete specified Default_Component_Value tests.

F360B00 [Pending New] New VCS Label: A4_1S
                Required after 2021-04-01
      A foundation for real specified Default_Component_Value tests.

F611A00 [New] VCS Label: A4_1C
```

[VCS Label A4_1A] Foundation for tests C611A01, C611A02, and
        C611A03.
        [VCS Label A4_1C] Added additional data for test C611A04. The
        changes are only needed for that test.

F611B00 [New] VCS Label: A4_1A
        Foundation for tests C611B01, C611B02, and C611B03.

FDD2B00 [New] VCS Label: A4_1Q
        A foundation for Stream_Size aspect tests.

FXAIB00 [Pending New] VCS Label: A4_1T
                    Required after 2021-07-01
        A foundation for container preelaboration tests.

GRADE.A [Modified] VCS Label: A4_1G
        [VCS Label A4_1C] Allowed manual grading for tests that are
        missing execution or linking (with no earlier errors). Corrected
        the result for binder crashes. Added category totals to the
        summary.
        [VCS Label A4_1D] Corrected so that Annex C RQMT failures are
        properly counted in their own category.
        [VCS Label A4_1G] Corrected call @1578 so that the special
        handling flag rather than the failed flag is used with a manual
        grading message for a missing error set. (The actual grade was
        correct, only the message was wrong.)

GRD_DATA.A [Modified] VCS Label: A4_1P
        [VCS Label A4_1D] Increased table sizes as the new tests have
        caused grading the entire ACATS to exceed the old limits.
        [VCS Label A4_1M] Generalized reading of white space in order to
        be more resilient, especially on Unix-like systems.
        [VCS Label A4_1P] MAX_SUMMARY_ITEMS @66 was increased to 40_000
        as the ACATS has grown to exceed the old limit.

SPECIAL.A [Modified] VCS Label: A4_1J
        [VCS Label A4_1C] Added test BA21005 to the list of optional main
        subprograms.
        [VCS Label A4_1H] Added seven tests to the list of optional main
        subprograms.
        [VCS Label A4_1J Added more tests to the list of optional main
        subprograms.

SUMMARY.A [Modified] VCS Label: A4_1C
        Corrected identification of main subprograms in modern tests.
        Changed the unit name for subunits to be the full expanded name
        including the parent name.

TCTOUCH.ADA [Modified] VCS Label: A4_1H
        Added code so that Touch only reports buffer overflow once. Fixed
        the Id string.

How to get new and modified tests:

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

The complete set of official new and modified tests are available in the Mod_4_1U.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 4.1 is available in various formats on the ACAA web site.

Summary lists:

Withdrawn Tests

(Refer to the main list for details)

```
B74001A
B74001B
B74203E
B85002A
B85003A
B85003B
BA1101E
C95072A
CD1009A
CD1009B
CD1009L
CD1009M
CD2A21C
CD2A31C
```

Allowed Modification Tests

(Refer to the main list for details)

```
B32201A     ACATS 4.2
B33101A     ACATS 4.2
B38103A     ACATS 4.2
B38103B     ACATS 4.2
B38103C     ACATS 4.2
B38103D     ACATS 4.2
B38103E     ACATS 4.2
B3A2018     2021-04-01 [VCS Label A4_1T]
B48002A     ACATS 4.2
B48002G     ACATS 4.2
```

```
B48003B     ACATS 4.2
B48003E     ACATS 4.2
B490003     ACATS 4.2
B56001A     ACATS 4.2
B57001B     ACATS 4.2
B651001     2021-01-01 [VCS Label A4_1S]
B660002     ACATS 4.2
B660003     ACATS 4.2
B66001A     ACATS 4.2
B66001B     ACATS 4.2
BC51019     ACATS 4.2
BC51020     ACATS 4.2
BC51B02     ACATS 4.2
BC51C01     ACATS 4.2
BC51C02     ACATS 4.2
CXB3019     2021-01-01
CXB3020     2021-01-01
CXB3021     2021-01-01
CXB3022     2021-01-01
```

Modified Tests

(Refer to the main list for details)

```
B33001A
B37309B
B37310B
B37311A
B38003D
B392002
B392003
B392004
B392005
B393001
B393007
B393010
B3A1001
B3A1002
B3A2007
B3A2008
B3A2009
B3A2011
B3A2012
B3A2016
B413004
B455002
B457001
B457004
B4A010C
B540001
B540002
B54B01B
B54B01C
B54B02B
B54B02C
B54B02D
```

```
B54B04A
B54B04B
B54B05A
B551002
B552A01
B55B12B
B55B12C
B62001C
B62001D
B63005A
B65005B
B680001
B730006
B73001A
B73001B
B73001C
B73001D
B73001E
B73001F
B73001G
B73001H
B732C02
B740003
B83027B
B83027D
B83E01B
B83F02C
B851004
B95007B
B91003A
B91003B
B91003C
B91003D
B940003
B940004
BA1001D
BA1020F
BA11007
BA11013
BA12010
BC51016
BB42001
BD4003A
BDB0A01
BDD2003
BXC6A03
C352001
C415001
C52101A
C94001A
C94001B
C94001C
C94002A
C94004A
C94004B
C94004C
C94005A
```

```
C94005B
C94007A
C94010A
C95012A
C97307A
CC3601C
CC51010
CDE0002
CXD2007
CXDB001
CXDB002
CXDB003
CXDB004
LXD7001
LXD7003
LXD7004
LXD7005
LXD7006
LXD7007
LXD7008
LXD7009
LXH4001
LXH4003
LXH4006
LXH4009
LXH4013
LXH4014
GRADE
GRD_DATA
SPECIAL
SUMMARY
TCTOUCH.ADA
```

New Tests

(Refer to the main list for details)

```
B350001
B354002
B35A001
B360001
B393012
B393013
B3A2018 [VCS Label A4_1H]
B431007
B432002
B432003
B452001
B452002
B458001
B480004
B611001
B611002
B611003
B611004
```

B611005
B611006
B611007
B611008
B611009
B611010
B611011
B611012
B611013
B611014
B611015
B611016
B611017
B611018
B611019
B631001
B651001 [VCS Label A4_1D]
B651002
B641003
B730011
B730012
B730013
B750A07
B831006
B851005
B851006
B851007
B853001
B854002
B854003
B854004
B860002
B940008
B940009
B940010
B940011
B952005
BA12018
BA14001
BA14002
BA14003
BA21005
BB42001
BB42002
BB42003
BC40003
BC54004
BC55001
BC60005
BD30001
BD30002
BD30003
BDB2001
BDB4001
BDD2006
BDD2007
C350001

```
C354004
C35A001
C3A0030
C452002
C452003
C452004
C452005
C452006
C452A01
C452A02
C452A03
C453001
C460014
C460015
C470001
C480001
C611A01
C611A02
C611A03
C611A04
C611B01
C611B02
C611B03
C650B04
C651001
C651002
C760A02
C760A03
C940017
CB42001
CB42002
CB42003
CD11001
CD30010
CD30011
CD30012
CDD2B01
CDD2B02
CDD2B03
CDD2B04
CXAC009
CXAG003
CXB3023
CXB3024
F611A00
F611B00
FDD2B00
```

Pending New Tests

(Refer to the main list for details)

```
BD10001      2021-01-01
C350A01      2021-01-01
C350A02      2021-01-01
C350B01      2021-01-01
C350B02      2021-01-01
```

```
C360A01     2021-04-01
C360A02     2021-04-01
C360B01     2021-04-01
C360B02     2021-04-01
C620002     2021-01-01
CXAIB01     2021-07-01
CXAIB02     2021-07-01
CXAIB03     2021-07-01
CXAIB04     2021-07-01
CXAIB05     2021-07-01
CXAIB06     2021-07-01
CXAIB07     2021-07-01
CXAIB08     2021-07-01
F350A00     2021-01-01
F350B00     2021-01-01
F360A00     2021-04-01
F360B00     2021-04-01
FXAIB00     2021-07-01
```