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BEGIN INFORMATION

1. INTRODUCTION

a. For the purposes of this attachment, the flight conditions specified in the Flight Conditions Column of Table A2A of this appendix, are defined as follows:

- (1) Ground—on ground, independent of airplane configuration;
- (2) Take-off—gear down with flaps/slats in any certified takeoff position;
- (3) First segment climb—gear down with flaps/slats in any certified takeoff position (normally not above 50 ft AGL);
- (4) Second segment climb—gear up with flaps/slats in any certified takeoff position (normally between 50 ft and 400 ft AGL);
- (5) Clean—flaps/slats retracted and gear up;
- (6) Cruise—clean configuration at cruise altitude and airspeed;
- (7) Approach—gear up or down with flaps/slats at any normal approach position as recommended by the airplane manufacturer; and
- (8) Landing—gear down with flaps/slats in any certified landing position.

b. The format for numbering the objective tests in Appendix A, Attachment 2, Table A2A, and the objective tests in Appendix B, Attachment 2, Table B2A, is identical. However, each test required for FFSs is not necessarily required for FTDs. Also, each test

required for FTDs is not necessarily required for FFSs. Therefore, when a test number (or series of numbers) is not required, the term “Reserved” is used in the table at that location. Following this numbering format provides a degree of commonality between the two tables and substantially reduces the potential for confusion when referring to objective test numbers for either FFSs or FTDs.

c. The reader is encouraged to review the Airplane Flight Simulator Evaluation Handbook, Volumes I and II, published by the Royal Aeronautical Society, London, UK, and AC 25-7, as amended, Flight Test Guide for Certification of Transport Category Airplanes, and AC 23-8, as amended, Flight Test Guide for Certification of Part 23 Airplanes, for references and examples regarding flight testing requirements and techniques.

d. If relevant winds are present in the objective data, the wind vector should be clearly noted as part of the data presentation, expressed in conventional terminology, and related to the runway being used for the test.

END INFORMATION

BEGIN QPS REQUIREMENTS

2. TEST REQUIREMENTS

a. The ground and flight tests required for qualification are listed in Table A2A, FFS Objective Tests. Computer generated simulator test results must be provided for each test except where an alternative test is specifically authorized by the NSPM. If a flight condition or operating condition is required for the test but does not apply to the airplane being simulated or to the qualification level sought, it may be disregarded (e.g., an engine out missed approach for a single-engine airplane or a maneuver using reverse thrust for an airplane without reverse thrust capability). Each test result is compared against the validation data described in §60.13 and in this appendix. Although use of a driver program designed to automatically accomplish the tests is encouraged for all simulators and required for Level C and Level D simulators, it must be possible to conduct each test manually while recording all appropriate parameters. The results must be produced on an appropriate recording device acceptable to the NSPM and must include simulator number, date, time, conditions, tolerances, and appropriate dependent variables portrayed in comparison to the validation data. Time histories are required unless otherwise indicated in Table A2A. All results must be labeled using the tolerances and units given.

b. Table A2A in this attachment sets out the test results required, including the parameters, tolerances, and flight conditions