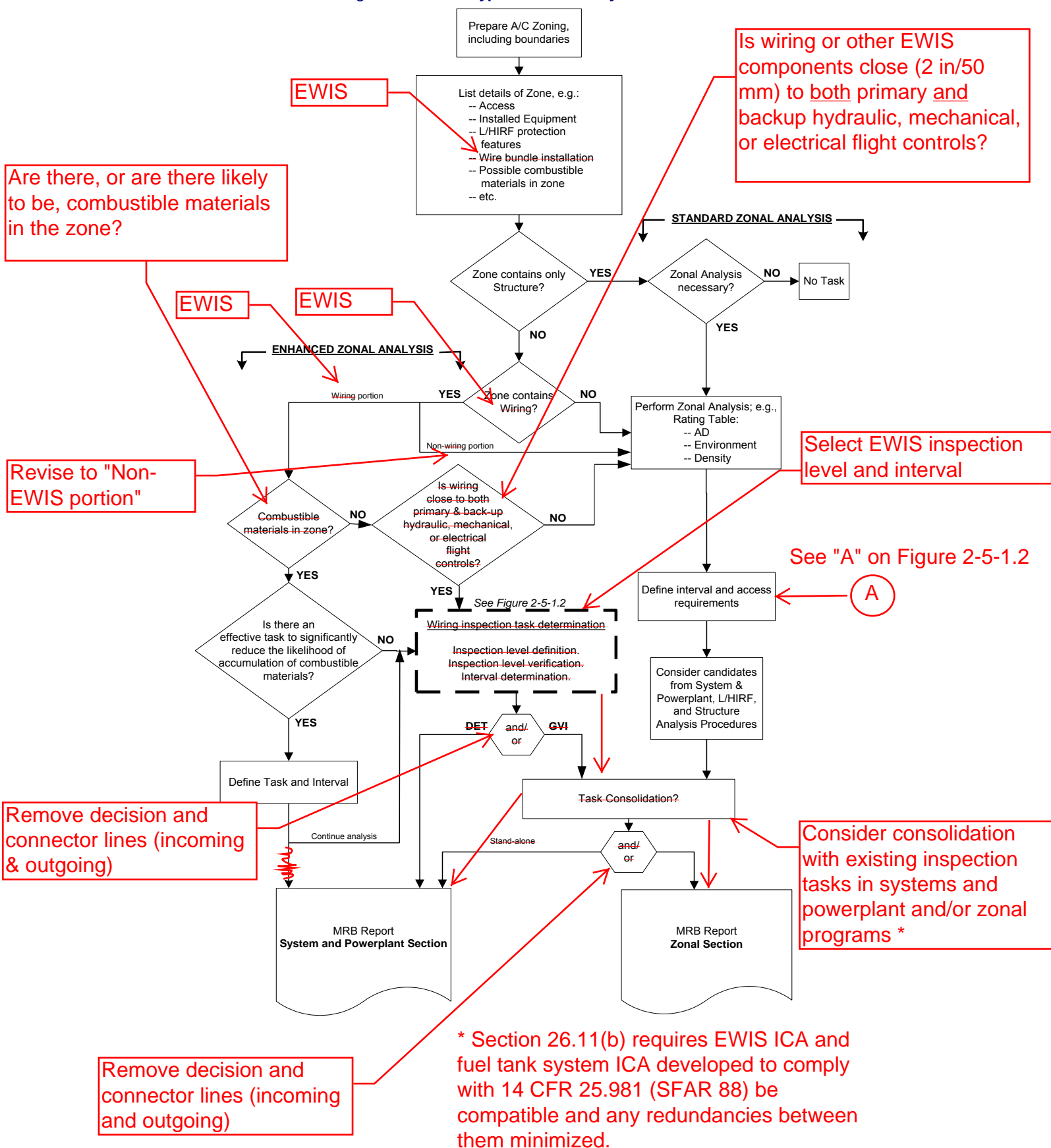


Detailed Inspections may be found applicable and effective for specific items in a zone. Interval determination may be accomplished using rating tables that consider accidental damage and environment.

- f. Detailed Inspections, stand-alone GVIs, and tasks to minimize contamination, arising from paragraph "e" should be included in the Systems and Powerplant tasks. Since these tasks are not specific to the routine ATA-defined systems and do not have a Failure Effect Category, introduction in a dedicated section is suggested, for example, under ATA 20.
- g. General Visual Inspections arising from the enhanced zonal analysis (paragraph e.) may be compared with the Zonal Inspections determined from the standard zonal analysis (paragraph d.). The former may be considered fully covered by the zonal inspection if the access requirement is the same and the proposed interval is at least as frequent. Otherwise, a stand-alone GVI should be included with the tasks identified in paragraph (f.).
- h. Except as noted in paragraph 2-3-7.3, General Visual Inspections arising from the systems, powerplants and structures may be compared with the Zonal Inspections determined from the standard zonal analysis (paragraph d.). Work sheets should record the interval proposed in the originating analysis. These GVIs may be considered fully covered by the zonal inspection if the access requirement is the same and the proposed interval is at least as frequent. Otherwise, a stand-alone GVI should be included within the MSI or SSI from which it was identified.
- i. General Visual Inspections arising from the analysis of L/HIRF may be compared with the Zonal Inspections determined from the standard zonal analysis (paragraph d.). These GVIs may be considered fully covered by the zonal inspection if the access requirement is the same and the proposed interval is at least as frequent. Otherwise, a stand-alone GVI should be included within the Systems and Powerplants tasks as described in [Subject 2-6-1].
- j. Visual Checks may be considered covered by the Zonal Inspections provided that the Systems Working Group that identified them consider that the failure would be noted and addressed during a zonal inspection. Otherwise, the task should remain in the Systems and Powerplants tasks where specific attention can be drawn to the item.
- k. All tasks developed through application of the standard zonal analysis (paragraph d.) should be included in the Zonal Inspections. For accountability purposes, any General Visual Inspection or Visual Check originating from application of systems, powerplant or structures analyses should be referenced in the MRB Report zonal task. To avoid giving unjustified attention to these items, this should not be indicated on task/work cards. Enhanced Zonal Analysis Procedure (EZAP) - derived
- l. All ~~EZAP-derived~~ stand-alone tasks (GVI or DER) should be uniquely identified in the data documentation for traceability during future changes. This is intended to prevent the inadvertent deletion or escalation of an EZAP-derived stand-alone task without proper consideration of the risk basis for the task and its interval.

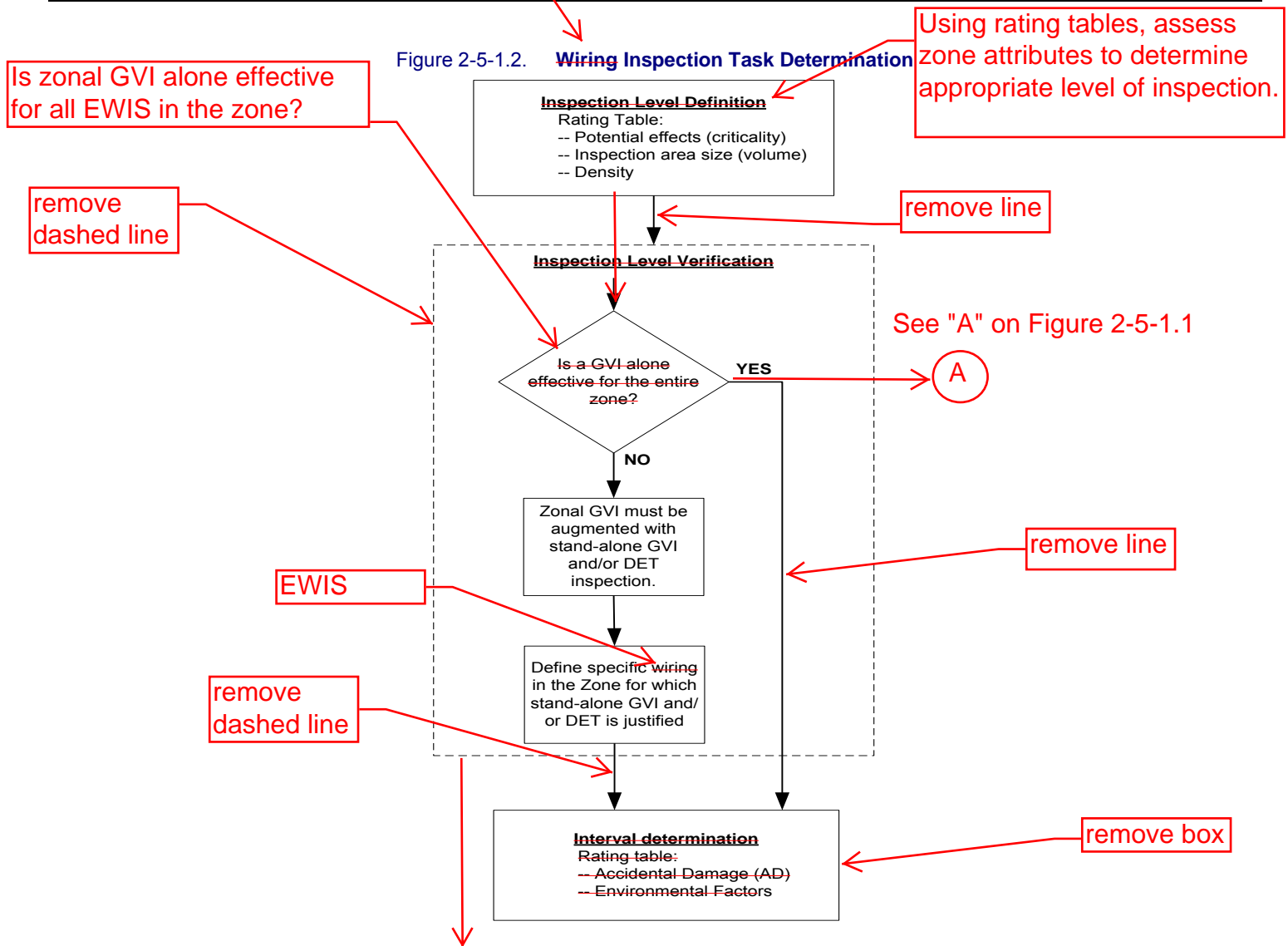
A typical logic diagram is depicted in [\[Figure 2-5-1.1\]](#) and [\[Figure 2-5-1.2\]](#). This is provided as a guide and may be customized to reflect individual company policies and procedures.

Figure 2-5-1.1. Typical Zonal Analysis Procedure



EWIS

Figure 2-5-1.2. Wiring Inspection Task Determination



2-5-2. Zonal Inspection

Accomplishment interval for each task is determined by the amount of activity in the zone, and operator and aircraft configuration. When possible, intervals should correspond to those selected for targeted scheduled maintenance checks.

For a given zone, more than one task may be identified. In this case, the frequency of inspection is inversely proportional to the amount of access required; i.e., the more access required, the less the frequency of inspection.

Using rating tables, assess likelihood of damage to EWIS in the zone to determine an appropriate interval for each inspection task identified.

Rating table:

- Accidental Damage (AD)
- Environmental Factors

Appendix A. Glossary

Accidental Damage (AD)

Physical deterioration of an item caused by contact or impact with an object or influence which is not a part of the aircraft, or by human error during manufacturing, operation of the aircraft, or maintenance practices.

Age Exploration

A systematic evaluation of an item based on analysis of collected information from in-service experience. It verifies the item's resistance to a deterioration process with respect to increasing age.

Airworthiness Limitations

A section of the Instructions for Continued Airworthiness that contains each mandatory replacement time, structural inspection interval, and related structural inspection task. This section may also be used to define a threshold for the fatigue related inspections and the need to control corrosion to Level 1 or better. The information contained in the Airworthiness Limitations section may be changed to reflect service and/or test experience or new analysis methods.

Conditional Probability of Failure

The probability that a failure will occur in a specific period provided that the item concerned has survived to the beginning of that period.

Corrosion Level 1

Corrosion damage that does not require structural reinforcement or replacement.

Or

Corrosion occurring between successive inspections exceeds allowable limit but is local and can be attributed to an event not typical of operator usage of other aircraft in the same fleet (e.g. Mercury spill).

Corrosion Prevention and Control Program (CPCP)

A program of maintenance tasks implemented at a threshold designed to control an aircraft structure to Corrosion Level 1 or better.

Damage Tolerant

A qualification standard for aircraft structure. An item is judged to be damage tolerant if it can sustain damage and the remaining structure can withstand reasonable loads without structural failure or excessive structural deformation until the

Delamination/Disbond

damage is detected.

Structural separation or cracking that occurs at or in the bond plane of a structural element, within a structural assembly, caused by in service accidental damage, environmental effects and/or cyclic loading.

Direct Adverse Effect on Operating Safety

Any wire, wiring device, or combination of these, including termination devices, installed in any area of the aircraft for the purpose of transmitting electrical energy between two or more intended termination points. Refer to governing regulations for a specific definition.

To be direct, the functional failure or resulting secondary damage must achieve its effect by itself, not in combination with other functional failures (no redundancy exists and it is a primary dispatch item).

Safety shall be considered as adversely affected if the consequences of the failure condition would prevent the continued safe flight and landing of the aircraft and/or might cause serious or fatal injury to human occupants.

Operating

This is defined as the time interval during which passengers and crew are on board for the purpose of flight.

Discard

The removal from service of an item at a specified life limit.

Economic Effects

Failure effects which do not prevent aircraft operation, but are economically undesirable due to added labor and material cost for aircraft or shop repair.

Electrical Wiring Interconnection System (EWIS)

~~An electrical connection between two or more points including the associated terminal devices (e.g., connectors, terminal blocks, splices) and the necessary means for its installation and identification.~~

Environmental Deterioration (ED)

Physical deterioration of an item or resistance to failure as a result of chemical interaction with environment.

Enhanced Zonal Analysis Procedure (EZAP)

Failure

The inability of an item to function within previously specified limits.

Failure Cause

Why the functional failure occurred.

Failure Condition

The effect on the aircraft and its occupants, both direct and consequential, caused or contributed to by one or more failures, considering relevant adverse operational or

A logical procedure to identify tasks to (1) minimize accumulation of combustible materials, (2) detect EWIS component defects, and (3) detect EWIS installation discrepancies that may not be reliably detected by standard zonal inspections.

can be expected from a unit, system, or aircraft if it receives effective maintenance to achieve higher levels of reliability generally requires modification or redesign.

Inspection - Detailed (DET)

An intensive examination of a specific item, installation or assembly to detect damage, failure or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirrors, magnifying lenses, etc. may be necessary. Surface cleaning and elaborate access procedures may be required.

Inspection - General Visual (GVI)

A visual examination of an interior or exterior area, installation or assembly to detect obvious damage, failure or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight or drop-light and may require removal or opening of access panels or doors. Stands, ladders or platforms may be required to gain proximity to the area being checked.

A general visual inspection that is not performed as part of a zonal inspection. Even in cases where the interval coincides with the zonal inspection, the stand-alone GVI remains an independent step on the work card.

Inspection - General Visual (GVI) - Stand-Alone

Inspection - Special Detailed (SDI)

An intensive examination of a specific item, installation, or assembly to detect damage, failure or irregularity. The examination is likely to make extensive use of specialized Inspection Techniques and/or equipment. Intricate cleaning and substantial access or disassembly procedure may be required.

Inspection - Zonal

A collective term comprising selected general visual inspections and visual checks that is applied to each zone, defined by access and area, to check system and powerplant installations and structure for security and general condition.

Interval (Initial - Repeat)

Initial Interval - Interval between the start of service-life and the first task accomplishment.

Repeat Interval - The interval (after the initial interval) between successive accomplishments of a specific maintenance task.