OBJECTIVE
Qualify a wipe-on adhesion promoter system to replace the current material and labor-intensive F-35 aged primer reactivation process.

PROCESS
The Wipe Reactivation of Aged Primer (WRAP) process developed in Phase I will be qualified for production implementation through the development and execution of an appropriate test plan. Other material systems that can benefit from the WRAP process will be identified and verified through testing.

CURRENT STATUS

Phase 1
- Requirements, material formulation, lab-scale testing, material down-select. Status: COMPLETE

Phase 2
- Pre-qualification & qualification of adhesion promoter formulation, field service evaluation on F-16. Status: In-Work

Phase 3
- Expansion of WRAP process to fastener fills, flex primer, chromated primer, and alternate LVOC solvents. Status: In-Work

WRAP PHASE 2 & 3 TESTING
Qualification Test Series
- Test two WRAP suppliers against topcoat adhesion specification
- Various environments and potential surface contaminants – Walking floor panel – Hydraulic Fluid – Hydraulic fluid + heat cycling

WRAP QUALIFICATION – FLOOR PANEL TEST
- Tape down two test panels in high traffic area for approximately six months
- Treated with WRAP process and tested adhesion performance
- WRAP performance exceeds scuff and reactivate adhesion performance

WRAP IMPLEMENTATION STRATEGY
Task 1: Triage
- Gather Manufacturing and SCM Data
- Prepare and hold Triage meeting

Task 2: ARB 1 & 2
- Prepare and hold ARB1
- Prepare and hold ARB2

Task 3: Begin Production Implementation
- Coordinate with SCM and Suppliers
- Production trials in AFF
- Production Implementation

Task 4: Management and Support

Reduced Environmental Impact
- Primer reduction – 30 gal/aircraft
- VOC reduction of 78 lbs/aircraft
- Spray gun solvent reduction – 7 gal/aircraft

Improved Occupational Safety
- Robust Procedure
- No need for strict environmental controls (humidity, spray booth, etc.)
- Reactivation can take place outside of paint booth or in the field
- Reduced Rework
- Painting primer can induce damage costing expensive rework operations
- Accidental damage during scuff-sanding can release hazardous dust

Transferable Technology
- Methodology can be conferred to other aircraft at depots and bases
- Transferable to other material systems

Span Time Reduction
- One day reduction on critical path
- Generates significant program cost savings

POTENTIAL VOC SAVINGS OF WRAP PHASE 2 TREATMENT

WRAP COULD REDUCE PRIMER USE BY NEXT YEAR