



Australian Government
Department of Defence
Capability Acquisition and
Sustainment Group

2016 Ageing Aircraft & Sustainment

RAAF P3 Orion Corrosion Management Outcomes

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Scope

- Situation
- Task
- Action
- Results
- Outcomes



P3 EDM Responsibilities

- Assess ED Condition Data
 - Trends (Good & Bad)
 - Engineering Processes
 - EMS
 - Training
 - Maintenance
 - Processes
 - Facilities
 - Procedures
 - Materials
 - Advice



Situation

09/10 Annual ED Assessment (EDA)

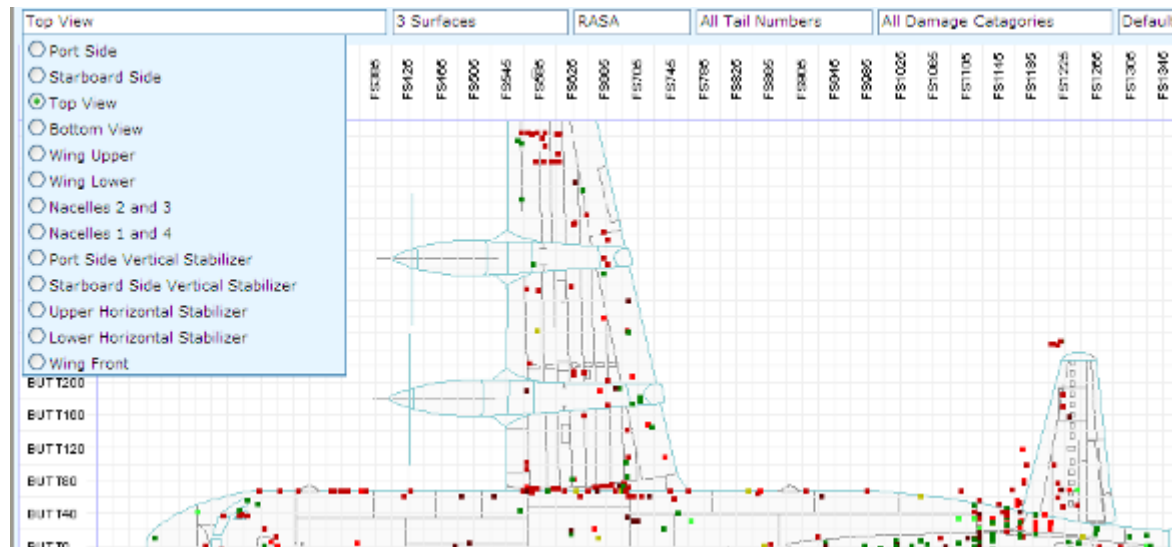
- Surface Finishing (SURFIN)
 - CCF Venue closure
 - Paint supplier (Valspar) withdrawal
 - DM schedule slip (SBI #1)
- Corrosion expected to be #1 issue to PWD
- OPS Normal
 - Maintain 'Flog Rate'



ASD 'Lifeline' – ED Support tasking

ED Support Task #1

- Targeted Strip & Repaint
 - Looking at the typical 'problem areas'
 - Strip and repaint at local venue
- Not utilised as yet



ASD 'Lifeline' – ED Support tasking

ED Support Task #2

- Wide Area CIC Application
 - 'Dip the aircraft in CIC'
- Resulted in the S99



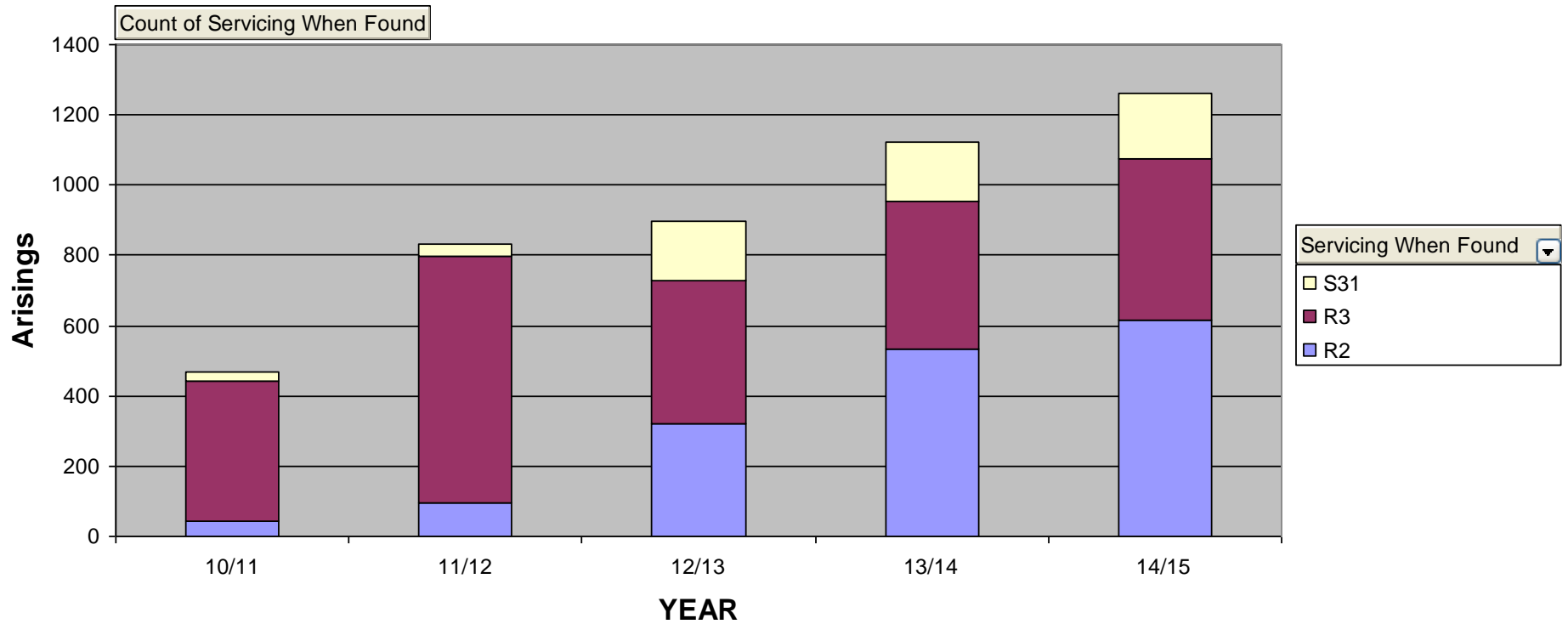
Task #2

Reduce the Cost of Corrosion

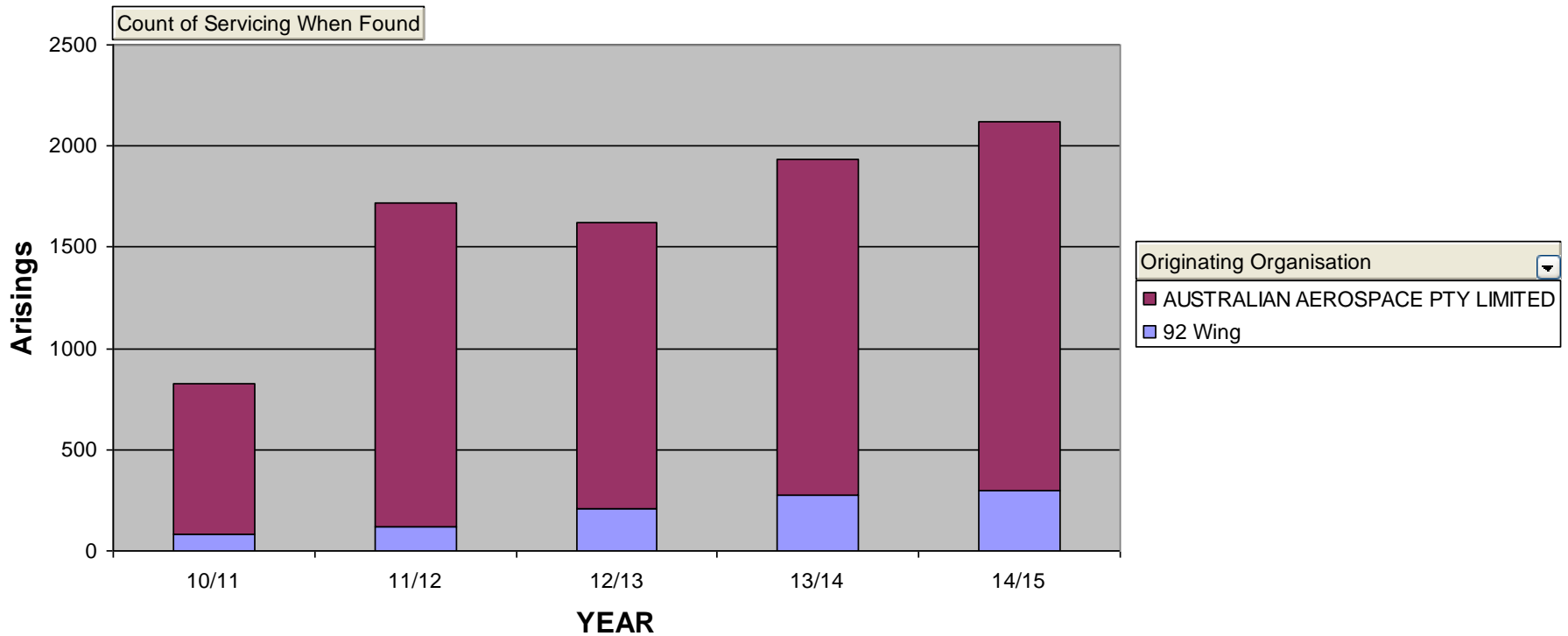
- Policy
 - Manpower
 - Facilities
 - Availability
 - Capability
- Training
- S99
 - Increased maintenance
 - Manpower
- Benefits?
 - Increased maintenance impost



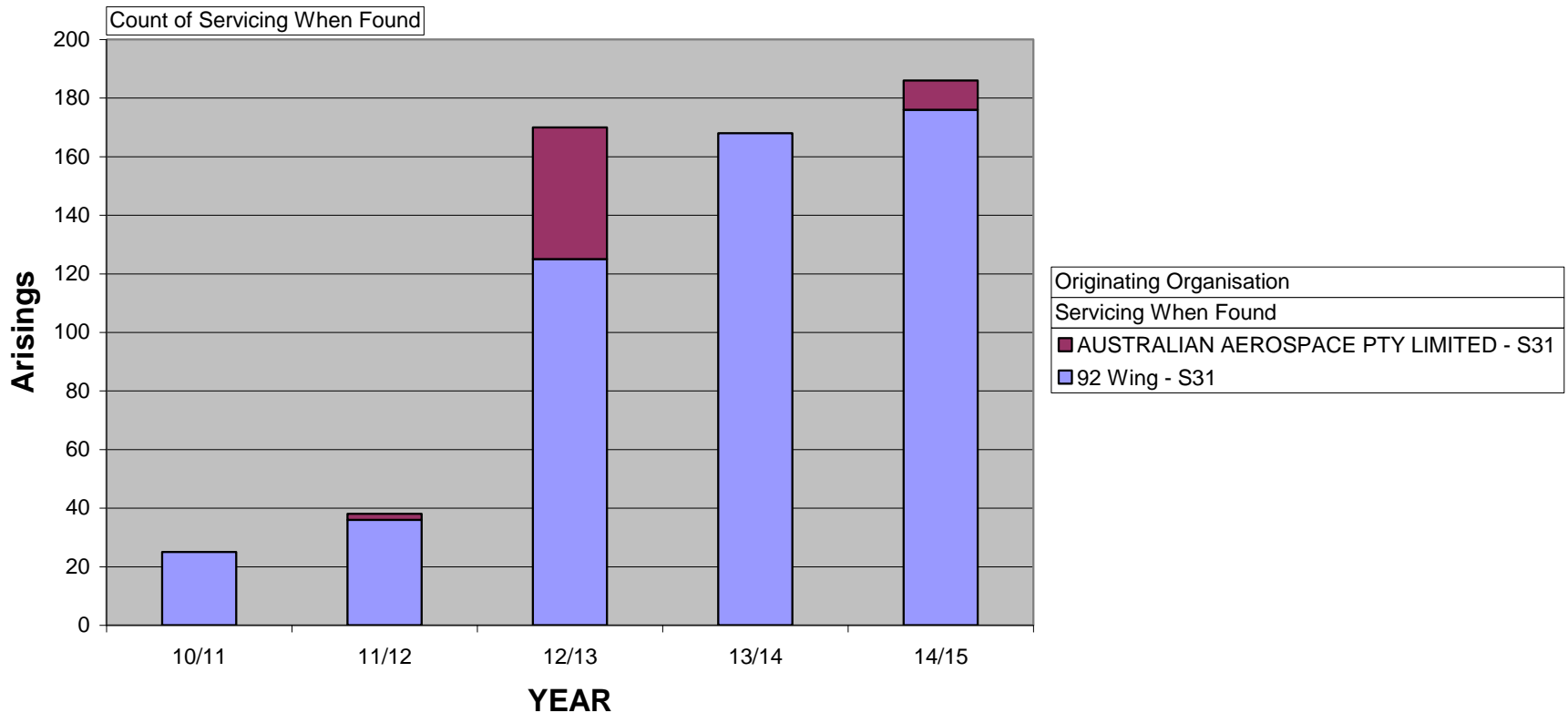
Corrosion - Servicing when found



Corrosion - Originating organisation



Corrosion - Originating organisation



- 92WG corrosion arisings – **Undesirable** (OLM)
- Australian Aerospace (AGAP) arisings – **Desirable** (ILM)
 - S23 S31 findings included (May12 – Apr14)

S31 External Corrosion Inspection

Introduced 1997

- Intended to take 4 days
- Record of 47 minutes...
- Now averaging 4 weeks
- Consolidation of inspections
- Half R2 interval (30 weeks)
- Treatment of corrosion to reduce R2 TMS
- Intended to prevent a reoccurrence of the Corrosion Recovery Program (90-96)

PWD approaching but....

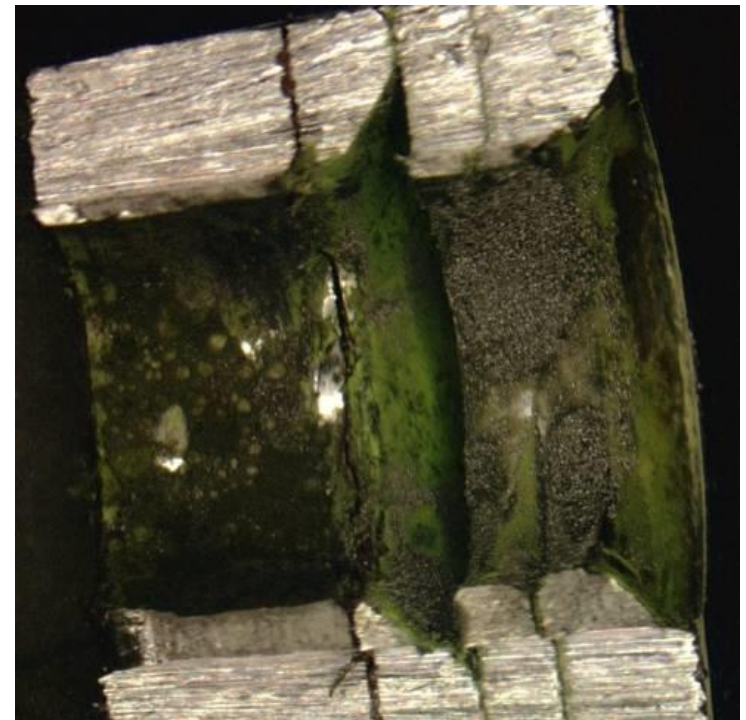
- Resolute, Solania, Gateway etc
- Various Exercises

Action

P3 EDM requests to 'stop' looking for corrosion...

WHY?

- Significant arisings @ R2 (ILM)
- Minor arisings at S31 (OLM)
 - Same management impost
 - Minimal (If any) repairs
 - Reporting and recording activity
 - Diminishing returns
- Corrosion awareness is good
 - SURFIN is effective*
 - S99 is working



* SURFIN tooling and materials optimised under earlier EDM 'Projects'.

Action

P3 EDM Projects identified and implemented via EDA:

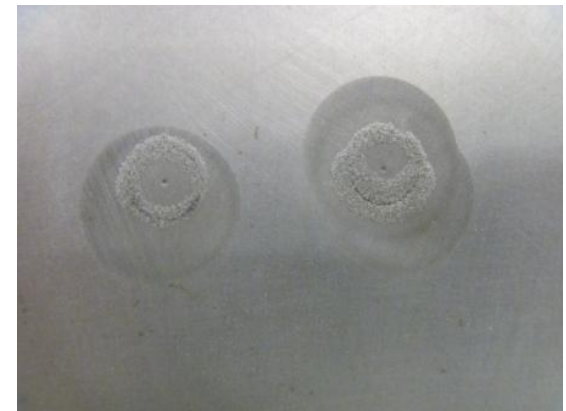
- SURFIN WKSHP GSE
 - HVLP spray guns
 - Tooling/spares
 - ‘Becca’ gun wash station
 - Clayton Hornet vacuum sander
- Structures WKSHP GSE
 - All folder blades ‘dressed’
 - All guillotine blades sharpened
 - Corrosion removal tooling
- NDT Tooling/procedures
 - Cost Vs Benefit



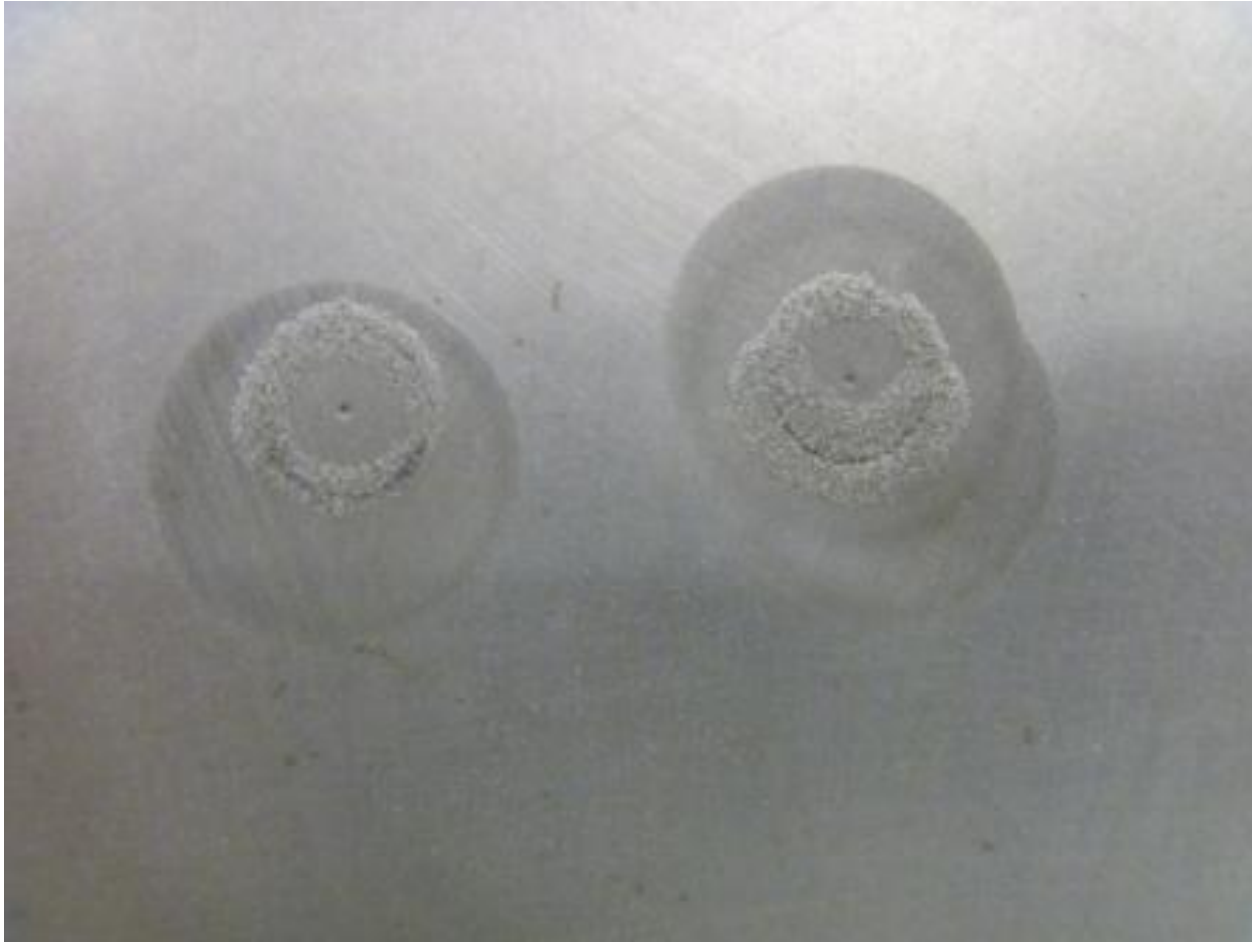
Result

S31 findings post ED Improvement tasks

- Fleet arisings post S99 introduction
- 292 arisings reported
 - 190 (65%) spot blasted
 - 73 (25%) spot blasted & blended
 - 263 (90%) 'Negligible Damage'
 - 23 (8%) RFD events (Neg Damage limits)
 - 2 rectified @ next R2
 - LoT extensions (Not repaired)
- 6 (2%) resulted in mechanical repair
 - Left unrepaired
 - No impact TMS
 - No impact to airworthiness



Result



Result

S31 findings post ED Improvement tasks

- Inspection and reporting process
 - No Fault Found (NFF)
 - Request for Deviation (RFD)
 - ❖ = Same recording impost
- Impact on TMS
- Impact on availability & capability

The servicing is becoming a recording exercise impacting TMS

Findings

Data fidelity

- Results due to S23 or S99?
 - 2 aircraft did not undergo S23
 - 10yr & 6yr between S23
 - 0 & 17 arisings - spurious data?
 - 17 arisings accrued 560hrs in one S31 (=15 man weeks)
- 1st S99 aircraft (May 12) was also the 1st S23 aircraft
 - 50 arisings since S99 inception
- 2nd S23 aircraft (Aug 12)
 - 0 arisings since S99 inception
- Last 2 S23 aircraft (Jan & Apr 14) have had 0 arisings since S99 inception
- Plenty of anecdotal evidence not yet analysed – Army, Navy etc.

Benefits

S31 Interval extended from 30wks to 60wks

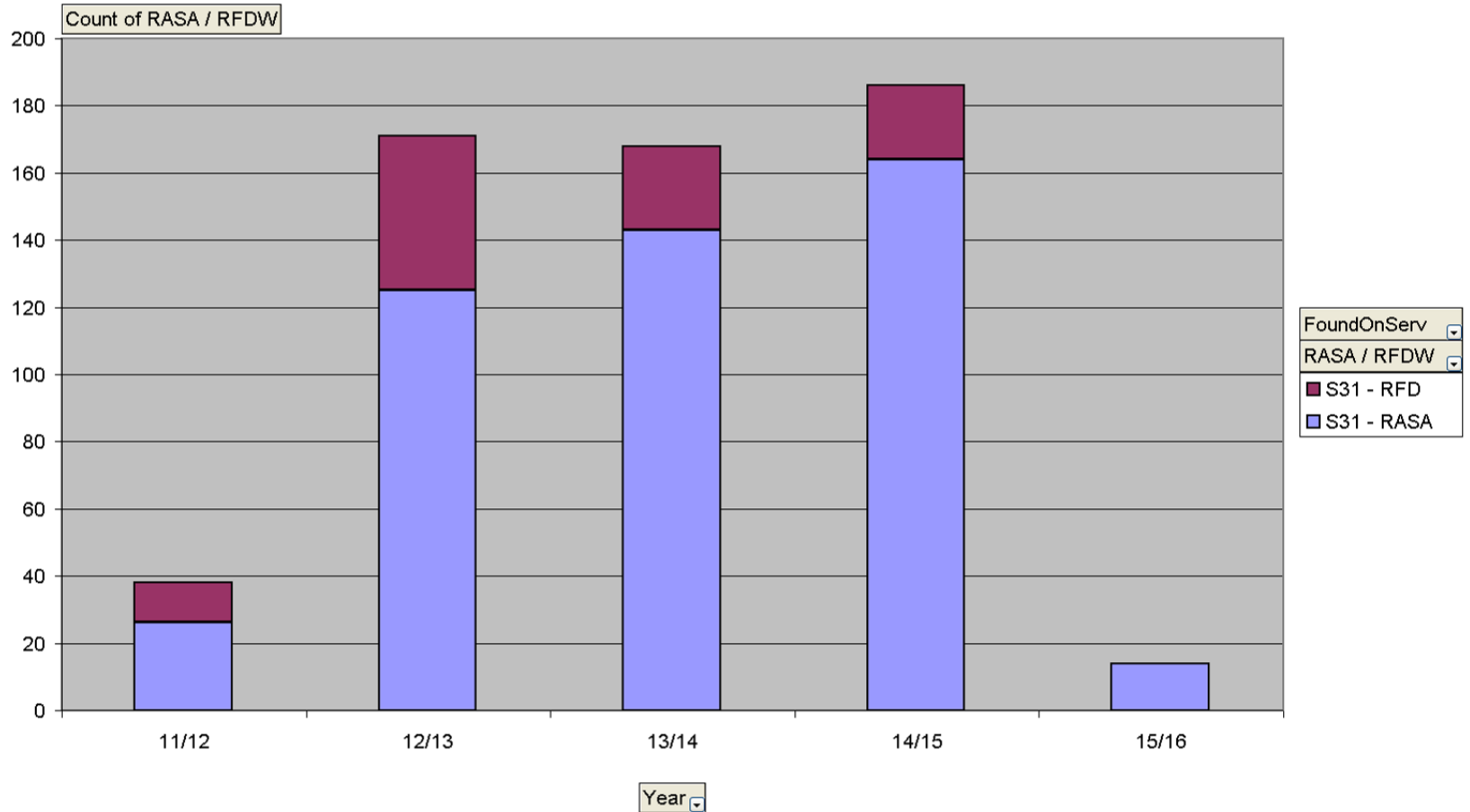
92WG benefits:

- Most man-hours of any 92WG servicing
- S31 requirement removed for 92WG
- 10 people for 2.5 weeks per year
- 10% improvement in daily aircraft serviceability (MPIP figures)

S31 inspection content performed at R2 by AGAP

- No impact to TMS (Monitored by MPSPO EDM)
- Better utilisation of existing ILM capability
- 92WG exposure through MRU portion

RAAF P3 Corrosion Management Outcomes



Questions?

