

PROFESSIONAL MILITARY COMPTROLLER SCHOOL

# IDEA PAPER

TITLE

AVDLR'S AND THE MOI DILEMMA AT NAVAL DEPOTS

AUTHOR

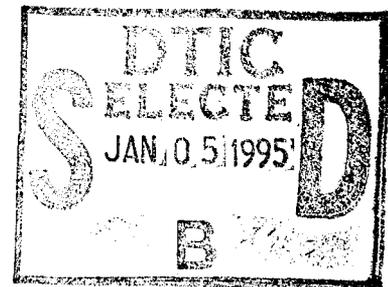
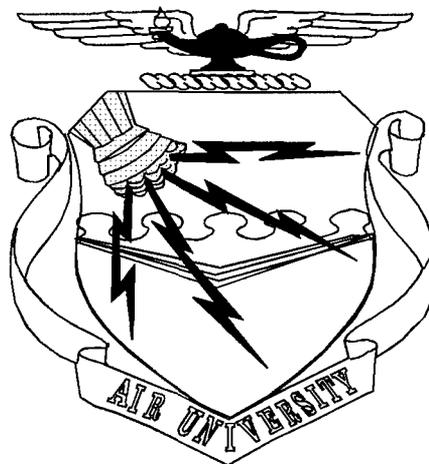
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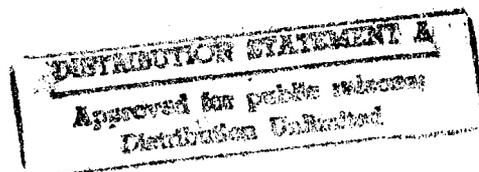
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PMCS IDEA PAPER

TITLE: AVIATION DEPOT REPAIRABLES (AVDLR) AND THE MISSING ON INDUCTION  
(MOI) DILEMMA AT NAVAL DEPOTS

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EXECUTIVE SUMMARY

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This paper will depict in generic terms, the current process for applying costs and processing paper work upon the discovery of missing on induction (MOI) repairable components or subassemblies of an Aviation Depot Level Repairable (AVDLR) upon its induction for repair. Fleet maintenance is removing subcomponents out of AVDLR's declining inventory of subcomponents. Maintenance could use these uncertified subassemblies causing possible loss of property and or life. When NADEPs replace missing components, they are unable to charge back costs to the fleet or unit. I also considered "Safety of Flight" a possible side effect. Some current procedures are being suspended by Aviation Supply Office (ASO) and not communicated to the fleet. Listed are proposals for changes to these procedures. Some changes will be needed at the depot level, while others will require a change in higher level directives. Many of the proposals are from my experiences as an Aviation Supply Officer.

In the light of pressures from Congress and the Pentagon to privatize depot level work, change will come. These proposed changes have the potential to significantly decrease the cost of production, lower billing rates, and reduce the cost of "G" condition materials. In addition, these lower rates will increase the competitive posture of the depot in acquiring new business and maintaining production of strategic requirements at the lowest possible costs as required by Defense Management Report Decisions (DMRD) 908 and 909. This paper recommends charging the full cost of MOIs to AIRPAC and AIRLANT directly, when requisitioned by the depots. In addition, the Type Commanders will take action to assure "Safety of Flight" problems are not the results of unauthorized maintenance or use of components from AVDLRs. All of the above will reduce the costs of the Revolving Fund and ultimately affect the amount of resources required in the Defense budget.



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## INTRODUCTION

What is an Aviation Depot Level Repairable (AVDLR)? To the Navy it is any aviation part that has a Source, Maintenance, or Recovery (SM&R) code designating depot level. With this designation, the depot is the only one authorized to repair, replace, or condemn this particular part or assembly. Usually AVDLRs are parts made up of large numbers of assemblies and consumable parts joined together in a particular array requiring precision calibration or manufacture. This array, or AVDLR, often looks similar to a component of your entertainment center and is referred to as a black box or Weapons Repairable Assembly (WRA). Each WRA is quickly replaceable from the aircraft with another ready for issue (RFI) component. Visualize an aircraft as a combination of multiple WRAs inside of an airframe. This type of manufacturing makes for efficient repairs, allowing quick removal of components from aircraft during combat operations.

There are three levels of maintenance: Organizational (O Level or the squadron), Intermediate (I Level or AIMD), and Depot (D Level). Each AVDLR proceeds through each of these levels to determine if the item is working. If not working, it continues on to the next required level of maintenance for further processing. At each of these levels, it is possible that maintenance, at that level, needs an repairable subassembly (SRA) that is a part of a particular WRA. If that SRA is hard to acquire from the supply system, its removal from another WRA may permit a fix. Maintenance may perform this action without considering "Safety of Flight." This now creates a missing component in this WRA, which might go unnoticed by maintenance processing for shipment to the depot. It is much as if you picked up a computer and someone had

removed a circuit card from inside the case. You could not tell exactly what was missing until you took it apart and checked every item. That is the same for AVDLR's received at the Naval Aviation Depots (NADEPs).

Each WRA or AVDLR, upon induction to the depot, will receive an inspection and evaluation listing all missing subassemblies and parts. It is here that the technician documents that someone has removed a component part. This WRA now has an SRA "missing on induction." The technician lists the National Stock Number (NSN) and requisitions through production control parts needed to replace those missing. The NADEP is presently paying all costs of these requisitions and is the focus for this paper.

Current procedures ordering the missing SRA use a code to signify no available carcass for turn-in. The WRA turn-in document or supply maintenance action form (SMAF) will show the Unit Identification Code (UIC) identifying which base, ship, or squadron shipped the unit to the depot. Using the UIC of the unit to charge the additional cost difference from the standard and net costs, the depot will pay only the standard cost from the supply system. The Aviation Supply Office (ASO) will receive a monthly variance listing to reconcile and bill the particular units for those additional costs. The unit then adjusts its records, obligates additional funds, and matches charges from the supply system. This process generally takes longer than a fiscal year. I will show that the best solution is to directly charge AIRPAC and AIRLANT upon requisitioning of the missing repairable.

### DISCUSSION

In 1989, the Secretary of Defense established the Defense Management Review (DMR) process in order to implement efficiencies and cost reduction measures throughout the Department of Defense (DoD). Final decisions from the DMR process are Defense Management Report Decisions (DMRDs). One decision, DMRD 904, directs all services to join the Navy in the stock funding of all DLRs. This initiative requires that all costs for, or directly related to, stock funded items be included in the price paid by customers; those costs include personnel, transportation, repair, washout, storage, and other associated costs.

Revolving funds were established many years ago to satisfy recurring requirements using a business-like buyer-and-seller approach. Beginning October 1, 1991, the Defense Business Operations Fund (DBOF) combined five industrial funds and four stock funds into a single revolving fund to reduce support costs. These activities have a mission: they are to provide goods and services to DoD customers at the lowest price possible. The NADEPs are DBOF activities.

NADEPs take all the cost data available from the previous years and the expected inductions to establish stabilized billing rates. These rates are available to all customers, who can then determine and plan their financial resources. If the current year costs are higher than the billing rate, the NADEP loses money. Losses continually increase the next year's costs as the fund must obtain replenishment. As prices increase, there is a tendency to have a reduction in the workload. Lack of work develops an increase in excess manufacturing capacity, increasing labor costs in the workforce. This excess translates into

highly skilled workers being idle and yet still on the payroll. This also adds losses to the next year rates, needing replenishment. This is a vicious repair cycle requiring additional general and administrative expenses.

The end of May 1994, the ASO suspended billing to the offending UICs from the variance listings sent monthly from the NADEPs for MOIs. NADEP has received no notice of a change. The situation became apparent only when interviewing an ASO representative at one of the depots in October 1994. This action has quietly placed all the additional costs squarely on the depots, increasing their losses and relieving the operating units from costs that they control. It allows for widespread abuse of cannibalization of repair parts, increased rates for component repair, excess inductions, an increase in the size of material awaiting re-induction ("G" condition assets), and lack of repair parts in the supply system.

Why did ASO suspend billing? I do not know, and intend to investigate upon my return to the depot. However, my observation easily suggests that the cause may be due to the reduction of staff. Possibly the ASO's staff could no longer do all the necessary paperwork required to bill each of the units. These actions or decisions will place all repair charges back to the NADEP in a period of time. In effect, this would give additional Operations and Maintenance (O&M) funds this year to the fleet. Depots will increase their rates next Fiscal Year (FY) to compensate for these current losses. If the ASO does not publish a change regarding billing, there will not be a significant increase in the number of MOIs to the depot. This would be a good deal for the

operators in FY 95, but not visible in the depots until FY 96, after all BRAC decisions and elections.

What we all must recognize is the impact that this will eventually have on the stable pricing of products from the depots and possible safety implications. Take for example a AVDLR or WRA, ABCD+9C, where ABCD are repairable parts of a single WRA, and 9C represents a consumable part. The Squadron pulls the WRA (ABCD+9C) out of an aircraft and sends to the AIMD. The AIMD determines that they cannot fix the unit, and must send it to the depot for repairs. However, one technician knows that B and C are probably good and he can use them to fix a different piece of equipment or use them for a test and check on his work bench. He pulls B and C out of the WRA and turns the unit in to supply to ship to the depot. He has just saved the AIMD/Squadron \$1,500 in parts and knows that there is a long lead time before anyone gets the charges for the missing parts. Anyway, the Squadron is grateful, as they are back up to 95% FMC on their readiness. How will anyone know if he has authorization to do the removal or repair? Lets look at the situation financially.

| <u>UNIT</u>   | <u>COSTS FOR WRA REPAIR</u> | <u>CHARGES SAVED</u> | <u>TOTAL COSTS</u> |
|---------------|-----------------------------|----------------------|--------------------|
| SQUADRON/AIMD | \$800                       | \$1,500              | (\$700)            |
| DEPOT         | \$1,500 + \$800             |                      | \$2,300            |

That's not too bad, but let's look at what happened when the WRA, without B&C, was in repair. NADEP ordered and received B&C and now has ABCD+9C ready to test. NADEP tests the WRA and finds they now need a new 9C, and there aren't any 9Cs in supply. It will be six months before we can get another. What happens now? ASO says this is a high priority requisition. Therefore, NADEP places the incomplete unit in

AWP (AWAITING PARTS DUE TO SUPPLY). However, since we have a high priority requisition from ASO, we must induct another WRA (ABCD+9C). Guess what? This unit is missing B, requiring the NADEP to order B. SRA B is available and arrives to the technician, who assembles ABCD+9C and sends it to test and check. It passes! NADEP has the ASO's requisition filled, and the fleet is happy. Let's see where we stand now!

| <u>UNIT</u>   | <u>COSTS FOR WRA REPAIR</u> | <u>CHARGES SAVED</u> | <u>TOTAL COSTS</u> |
|---------------|-----------------------------|----------------------|--------------------|
| SQUADRON/AIMD | \$800                       | \$1,500              | (\$700)            |
| DEPOT         | \$1,500 + \$800             |                      | \$3,800            |
|               | \$800 + \$700               |                      |                    |

The depot has now invested \$3,800 for an item that only cost the squadron \$800. In addition, the other item still requiring a part, if not received, goes into storage, and if held over 180 days, goes into "G" condition awaiting possible future use. Re-inducting for repair is the only method to recover value in the future. Presently these "G" condition materials are continually growing and need better control. Remember, the depot's mission is to make repairs at the lowest possible cost. In addition, we have to wonder where all those missing parts are? Is there possibly a safety problem waiting to occur? Maybe those parts in the "Ditty Box" came from a WRA and were installed in an aircraft causing an "Air Mishap."

Who has the ability to change the costs? Both sides! The NADEP may reduce costs by making efficiencies in work and material ordering. Additionally, the operators can insure that nothing is missing from the AVDLRs/WRA's when shipped for repairs. We are now entering a very austere era for all DoD activities, and every activity will be looking

at ways to cut costs and do more with less, in order to complete mission assignments. All personnel, both military and civilian, will be under pressure to complete the mission with the resources at hand. If there are no controls to curb maintenance actions, or hold them accountable, they will do whatever is necessary to fix their aircraft, especially if someone else receives the costs. With the animosity between appropriated activities and DBOF activities, we must get control of all cost centers, putting responsibility and accountability where changes are possible. If DoD is going to get the most bang for the taxpayer's buck, NADEP must control expenses and be able to accurately forecast costs to provide stable prices for customers.

In the writer's opinion, the following situations now exist:

- NADEP PAYS FOR ANY MISSING COMPONENTS -- increasing losses
- NADEP PAYS ALL HOLDING COSTS FOR EXCESS INDUCTIONS -- "G" condition material
- NADEP RATES INCREASE
- SUPPLY SYSTEM NEEDS MORE PARTS
- ASO SAVES MONEY, REDUCES PERSONNEL COSTS, AND STOPS CHARGING USERS FOR MISSING COMPONENTS
- SQUADRONS/AIMD'S SAVE MONEY -- readiness will decrease soon due to lack of parts in inventory

As a DBOF activity, NADEP is responsible for producing services and material at the lowest possible price. In addition, they must comply with all DMRDs. The NADEP cannot continue to lose money, and therefore, must bill those costs to someone else. Billing to someone who has the ability to change the situation quickly is the least expensive method to the government, that means billing to the Type Commanders, AIRPAC and

AIRLANT. They are also the ones who can insure that maintenance is being done in accordance with directives and that "Safety of Flight" is not in jeopardy.

#### CONCLUSIONS

The reason for writing this paper is because this is a current problem for me. NADEPs are now in position to continually lose money on every AVDLR with a MOI. In addition there could be parts that are in some maintenance "Ditty Box" that need repair, but might be used, resulting in an accident. Unofficial cannabilizations keep the supply and repair cycle short of critical repair assets increasing carrying costs for DoD. I feel that senior managers do not realize or even know the scope of this particular NADEP problem. Therefore, changes are needed, whether it is those proposed, or some other. The problem needs fixing.

#### RECOMMENDATIONS

##### **SHORT TERM:**

1. ASO should return to the present written policy in force to keep from having excess requisitions being placed on the system and bill the offending units.
2. NADEPs should insure that trained, knowledgeable personnel are assigned and doing initial inspections and evaluations upon induction, documenting all MOIs.
3. AIRPAC/AIRLANT should review maintenance procedures to insure there are no safety problems with MOIs. They will then publish new procedures informing all units that NADEP will bill total costs for all MOIs directly to the major claimants, via ASO, beginning in FY 96.

**LONG TERM:**

1. ASO should establish directives with procedures to have NADEPs, upon requisitioning MOIs, to charge materials directly to the major claimants.
2. NADEPs should order requisitions promptly, and with proper coding, bill the Type Commanders. In addition, NADEPs should send a monthly list of those MOIs billed directly to AIRPAC/AIRLANT.
3. Type Commanders should pay for all costs of MOIs, with the option to reconcile charges with individual units.
4. NADEPs should publish and maintain records showing the status of inductions with MOIs and the effect they have on the status of "G" condition material.

Taking these recommendations for action will significantly decrease costs to the NADEPs, improve material availability to the fleet, and provide materials and services at the lowest possible costs. The NADEPs will then have complied with the Defense Management Report Decisions, while remaining in a competitive posture, which hopefully will keep them off BRAC closure lists.

**APPENDIX A**

**LIST OF ACRONYMS**

|       |  |
|-------|--|
| AIMD  | AVIATION INTERMEDIATE MAINTENANCE DEPARTMENT |
| ASO   | AVIATION SUPPLY OFFICE                       |
| AVDLR | AVIATION DEPOT LEVEL REPAIRABLE              |
| BRAC  | BASE REALIGNMENT AND CLOSURE                 |
| DBOF  | DEFENSE BUSINESS OPERATING FUND              |
| DMRD  | DEFENSE MANAGEMENT REPORT DECISIONS          |
| DoD   | DEPARTMENT OF DEFENSE                        |
| FMC   | FULL MISSION CAPABLE                         |
| MOI   | MISSING ON INDUCTION                         |
| NADEP | NAVAL AVIATION DEPOT                         |
| SRA   | SELECTED REPAIRABLE ASSEMBLY                 |
| UIC   | UNIT IDENTIFICATION CODE                     |
| WRA   | WEAPONS REPAIRABLE ASSEMBLY                  |

APPENDIX B

**SOURCES**

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