HVOF as a Hard Chrome Replacement

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**Abstract**:

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Current Status of P-3 Main Landing Gear

HVOF MLG Piston installed 26 April 99 on VP-30 Aircraft BuNo 156522

Aircraft completed PDM at NADEP JAX on 5 Dec 99

PDM extended due to multiple spar cap insertions

850 Landings on HVOF coated MLG Piston (Aug 00)

HVOF Coated Piston removed from service Aug 00 due to internal oil leak on ID-2 (NOT HVOF COATED)

HVOF Coated Strut repaired, sent back to VP-30

Installed on Aircraft 160284 STBD April 25, 2001

1,078 Total Landings on HVOF coated strut (8/23/01)
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Buno-156522
VP-30 Aircraft
Installed 4/26/99
HVOF as a Hard Chrome Replacement

Buno-156522
VP-30 Aircraft-Installed – 4/26/99
Second P-3 MLG Piston HVOF coated

- Second P-3 MLG Piston coated with WC/Co 83/17 HVOF coating
- To be used in $2M P-3 aircraft SLAP/SLEP - Full Scale Fatigue Test
- R/H MLG chrome plated
- L/H MLG HVOF coated
- HVOF coating, grinding & processing of gear funded by Naval Research Lab (NRL)
- HVOF coated MLG Assy. installed on A/C
- Testing to begin September 2001 (24 month test)
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Current Status and Recent Accomplishments

- P-3 Bomb Bay Door Actuator Pistons coated, ground, & superfinished

- Four HVOF coated P-3 Bomb Bay Door Actuator Assemblies RFI and installed on VP-30 Aircraft BuNo 156510 July 2001

- Aircraft currently undergoing PDM at JAX

- A/C scheduled for delivery back to VP-30 on 7 Sept 01
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Current Status of HVOF Coated EA-6B Main Landing Gear Flight Clearance

MLG Collar and Piston coated Oct. 99
Components completed depot processing Dec. 99
Flight clearance requested Jan 00
Meeting at NAVAIR/Pax River 13 April 00
 Obtained NAVAIR approval of data May 00
Flight clearance at AIR 4.3.3 waiting final approval
“NAVAIR ONLY” HVOF L.G. meeting 16 Nov 00
Flight clearance on-hold
NAVAIR presented 240KSI requirement for all landing gear fatigue tests at Dec HCAT mtg.
NAVAIR & NRL meeting 29 Jan 01
Large sample (2”-3” dia) testing discussed
NAVAIR (Eui Lee) to conduct testing
Flight clearance at AIR 4.3.3 waiting final approval
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Current Status of E-6A Main Landing Gear

Two HVOF coated E-6A MLG Uplock Hook Shafts installed 10 March 99 on A/C 164388

1,750 Flight Hours (8/02/01) A/C completed
1,524 Landings (8/02/01) Mod in Waco, TX

One HVOF coated E-6A MLG Uplock Hook Shaft installed on Aircraft 162784 in Feb. 2000

2,172 Flight Hours (7/31/01)
1,752 Landings (7/31/01)
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E-6A MLG Lock Hook Shaft  P/N 9-45196
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Status of New HVOF Cell at NADEP JAX

Specification for HVOF Cell complete

Contract Award - March 29, 2000

Cell to be completed July 2001

Natural Gas Line completed to Cell

Blast cabinets for Cell #7 operational Jan 01

Sound-proof enclosed room installed

Exhaust plenum & Air Handling System installed

FANUC 5-Axis Robot System for Cell #7 installed

Multi-Coat Process Control Unit Installed

Awaiting Filters for Natural Gas Line