REQUEST FOR INFORMATION (RFI) #1
FA8224-17-R-RFI-MMXG

METAL PLATING MAC IDIQ
Vandenberg AFB
309th Missile Maintenance Group (309 MMXG)

DRAFT SAMPLE INDIVIDUAL TASK ORDER

The sample task order provided represents potential work that could be performed under this proposed MAC IDIQ contract. This list or quantity does not imply and guarantee of type or volume of work. It is used to allow potential contractors to validate that they can perform the types of work required on typical part sizes and weights. It also represents a cross section of the various work types being requested.

Part/Drawing Number	Part Name	Qty	Approximate Dimensions	Approximate Weight (lbs)	General Work Required
25-66903	Cylinder, Ballistic Actuator	15	9' by 14" cylinder	1100	Clean, blast exterior, strip chrome from interior, hone, re-chrome, hone to dimensions, cad plate
25-66905	Rod, Piston, Ballistic Actuator	15	8' Long 5" Dia.	400	Clean, strip chrome from exterior, grind re-chrome, hone to dimensions
25-66921	End Cap, Ballistic Actuator	15	21" Dia. 8" Thk.	400	Clean, blast exterior, strip chrome from interior, hone, re-chrome, hone to dimensions, cad plate
N/A	Piston Carousel, Ballistic Actuator	15	6" Long 8" Dia.	8	Re-activate cad plate
25-66905	NDI, Rod, Ballistic Actuator	15	8' Long 5" Dia.	400	NDI prior to re-chrome
29-46627	Keeper Ring, Ballistic Actuator	15	2" Long 7" Dia.	1	Clean, Blast, cad plate
25-66903	NDI Cylinder, Ballistic Actuator	15	9' by 14" cylinder	1100	NDI after cleaning and chrome stripping
25-73665	Housing, Multiplying Linkage	15	21" Long 11" wide 16" High	400	Clean, blast exterior removing nickle and cad, strip chrome from interior, hone, re-chrome, hone to dimensions, cad plate
25-66910	Piston, Multiplying Linkage	15	15" Long 4" Dia.	25	Clean, strip chrome, grind, re-chrome, grind to tolerance
25-73667	Rocker Arm, Multiplying Linkage	15	15" Long 8" wide 6"Thk	100	Clean, blast nickel plating off, strip chrome, grind, re-chrome, nickel plate all non chromed areas
29-46656	Cable Pin Lock, Multiplying Linkage	15	6" Long 3" Wide 1" Thk	.5	Clean, grind, re-chrome
25-73665	NDI Housing, Multiplying Linkage	15	21" Long 11" wide 16" High	400	NDI housing once all blasting and stripping is complete
25-23716	Lock, Lock Pin	15	20" Long 18" Dia.	1000	Clean, Blast to bare metal, strip chrome, grind exterior and interior bores, re-chrome, line bore and grind exterior, cad plate all remaining surfaces
29-46660	Tension Rod Barrel, Lock Pin	30	13" Long 6" Dia	10	Clean, blast, re cad plate
29-46632	Upper Tension Rod, Lock Pin	15	14" Long 4" Dia.	5	Clean, blast, re cad plate
29-49007	Lower Tension Rod, Lock Pin	15	35" Long 5" Dia.	15	Clean, blast, re cad plate
25-66923	Bell Crank Link, Lock Pin	15	4" Long 3" High 3" Wide	.5	Clean, blast, strip chrome, grind, re-chrome, grind to final tolerance
26-13781	Bell Crank Shaft, Lock Pin	15	9" Long 1" Dia.	.5	Clean, blast, strip chrome, grind, re-chrome, grind to final tolerance

1. TRACKING

The contractor shall track all reconditioned and repaired assets on a Data Management report. The report shall contain, but is not limited to, information such as:

a. Date that VAFB requested contractor to pick up part
b. Date part was actually picked up at VAFB by contractor
c. Asset description - nomenclature, part number, serial number, stock number
d. Statement verifying asset meets government specifications
e. Type of repair to include details of repair
f. Any issues that caused part to fail to meet required specifications
g. For any part that fails to meet specifications, the percentage of total repair cost incurred up to the point the part failed to meet specifications
h. Date part was returned to VAFB

2. PLATING PROCESSES

2.1. The contractor shall provide all services required for Cleaning, Chromium Plating, Cadmium Plating, Electro-less Nickel Plating, Temper Etch Testing, Non-destructive Inspection, Residual Mechanical Cleaning Mechanical Cleaning, Returned Items, and.

2.1.1 **Cleaning**: Prior to the plating process all items will be cleaned and/or stripped of all existing coatings and plating to include any remaining corrosion either by chemical stripping in accordance with MIL-STD-871 Electro-Chemical Stripping of Inorganic Finishes or by grinding in accordance with MIL-STD-866 Grinding of Chrome Plated Steel and Steel Parts Heat Treated to 180,000 PSI or Over except for Cadmium plated surfaces. A maximum of .040 inches on the diameter/.020 per face may be removed from the components original manufactured base material dimension to surfaces being Chrome plated if needed. While Cadmium or Nickel stripping, care will be taken to not damage the previously accomplished chrome plating. Additional stripping not required unless to facilitate plating operations.

2.1.2 **Non-destructive Inspection ASTM E-1444:** All items will be magnetic particle inspected in their entirety per ASTM E-1444 to determine if cracks have developed. Inspection will be accomplished after plating is stripped and base metal can be examined thoroughly. If cracks are identified these units will be condemned after government concurrence is obtained and no further processing will be required. A written document certifying accept/reject in accordance with MIL-STD-1907 Grade A will be delivered to the government with the processed components and shall contain the serial number of each item processed. The following items require magnetic particle inspection:

	Item	**Part/Drawing Number**
1.	Ballistic Actuator Rod	25-66905
2.	Ballistic Actuator Cylinder	25-66903
3.	Multiplying Linkage Housing	25-73666/25-78598

A written document certifying completion of the Non-Destructive Inspection process in accordance with the standards and specifications prescribed above will be delivered to the government with the processed components and shall contain the serial number of each processed component.

2.1.3 **Chromium Plating Process SAE-AMS-2460, Class II**: All items being chrome plated will be ground/honed to drawing size specifications. During grinding/honing all concentricity, alignment, and hole diameter requirements must be critically maintained in accordance with the drawing. All items plated will be baked for hydrogen embrittlement relief at 375 (+/-25) degrees for 23 hours. The following items will be Chrome plated to a minimum thickness of 0.002 inches:

	Item	**Part/Drawing Number**
1.	Lock Pin	25-23716 (Fig. 2 Zones A, B, and C)
2.	Multiplying Linkage Housing	25-73666/25-78598 (Fig 7 Zones B and C)
3.	Multiplying Linkage Rocker Arm	25-73667 (Fig. 3 Zones A, B, and C)
4.	Multiplying Linkage Piston	25-66910
5.	Multiplying Linkage Cable Pin Lock	29-46656 (Fig. 6 Zones A and B)
6.	Ballistic Actuator Cylinder	25-66903 (Fig 4. Zone H)
7.	Ballistic Actuator End Cap	25-66921 (Fig 1 Zones F and E)
8.	Ballistic Actuator Piston	25-66904 (Fig 5 Zones G and D)
9.	Ballistic Actuator Rod	25-66905

A written document certifying completion of the Chromium Plating Process in accordance with the standards and specifications prescribed above will be delivered to the government with the processed components and shall contain the serial number of each processed component.

2.1.4 **Cadmium Plating Process SAE AMS-QQ-P-416, Type II Class II**: The ballistic actuator end cap only, cadmium overlap of the chrome area is allowed to a minimum of 0.005 inches and maximum of 0.020 inches. All items plated will be baked for hydrogen embrittlement relief if required by specification for high strength steels 180,000 PSI or greater except the Keeper Ring. While Cadmium plating care will be taken to not damage the previously accomplished chrome plating. The following items will be Cadmium plated to a minimum thickness of 0.00030 inch:

	Item	**Part/Drawing Number**
1.	Ballistic Actuator End Cap	25-66921 (Fig 1 All Zones including exterior except E and F)
2.	Lock Pin Bell Crank link	25-66923
3.	Lock Pin Bell Crank Shaft	26-13781
4.	Lock Pin Tension Rod Barrel	29-46660
5.	Multiplying Linkage Cable Pin Locks	29-46656 (Fig 6 all areas except B and C)
6.	Keeper Ring	29-46627

A written document certifying completion of the Cadmium Plating Process in accordance with the standards and specifications prescribed above will be delivered to the government with the processed components and shall contain the serial number of each processed component. All items after plating will be wrapped to prevent damage during transport.

2.1.5 **Cadmium Plating Process SAE AMS-QQ-P-416, Type II Class III**: All items plated will be baked for hydrogen embrittlement relief if required by specification for high strength steels 180,000 PSI or greater. While Cadmium plating, care will be taken to not damage the previously accomplished chrome plating. The following items will be Cadmium plated to a minimum thickness of 0.00020 inch with no overlap of the chrome:

Item	Part/Drawing Number
1. Ballistic Actuator Cylinder	25-66903 (Fig 4 Zones A thru F, J)
2. Ballistic Actuator Piston	25-66904 (Fig 5 All areas not chrome except B and K)
3. Multiplying Linkage Housing	25-73666/25-78598 (Fig 7 Zones A and D)
4. Lock Pin Upper Tension Rod	29-46632
5. Lock Pin Lower Tension Rod	29-49007
6. Ballistic Actuator Carousel (OB Only Conversion Coating)	Not Stock Listed

A written document certifying completion of the Cadmium Plating Process in accordance with the standards and specifications prescribed above will be delivered to the government with the processed components and shall contain the serial number of each processed component. All items after plating will be wrapped to prevent damage during transport.

2.1.6 **Cadmium Plating Process Fed Spec SAE AMS-QQ-P-416, Type III Class II:** All items plated will be baked for hydrogen embrittlement relief if required by specification for high strength steels 180,000 PSI or greater. While Cadmium plating, care will be taken to not damage the previously accomplished chrome plating. The following items will be Cadmium plated to a minimum thickness of 0.00030 inch with no overlap of the chrome:

Item	Part/Drawing Number
1. Lock Pin	25-23716 (Fig.2 Zones E, and D)

A written document certifying completion of the Cadmium Plating Process in accordance with the standards and specifications prescribed above will be delivered to the government with the processed components and shall contain the serial number of each processed component. All items after plating will be wrapped to prevent damage during transport.

2.1.7 **Electro-less Nickel Plating AMS-2404, Class II:** All items Nickel plated will be baked for hydrogen embrittlement at 375 (+/-25) degrees for 23 hours. While Nickel plating, care will be taken to not damage the previously accomplished chrome plating. The following items will be Electro-less Nickel plated to a maximum thickness of 0.0015 inches:

Item	**Part/Drawing Number**
1. Multiplying Linkage Rocker Arm (All areas except Fig 3 Zones A, B, and Zone C if Chrome Plated.)	25-73667

A written document certifying completion of the Electro-less Nickel Plating Process in accordance with the standards and specifications prescribed above will be delivered to the government with the processed components and shall contain the serial number of each processed component. All items after plating will be wrapped to prevent damage during transport.

2.1.8 **Temper Etch Testing MIL-STD 867A Table 1 Group A:** All items involved in grinding or other machining processes that may cause overheating of the base material will be temper etch tested per MIL-STD 867A Table 1 Group A. The government will be immediately notified of any items failing this process. The contractor will hold these items separate from other items being processed until the government determines final disposition. A written document certifying completion of the Temper Etch Testing Process in accordance with the standards and specifications prescribed above will be delivered to the government with the processed components and shall contain the serial number of each processed component.

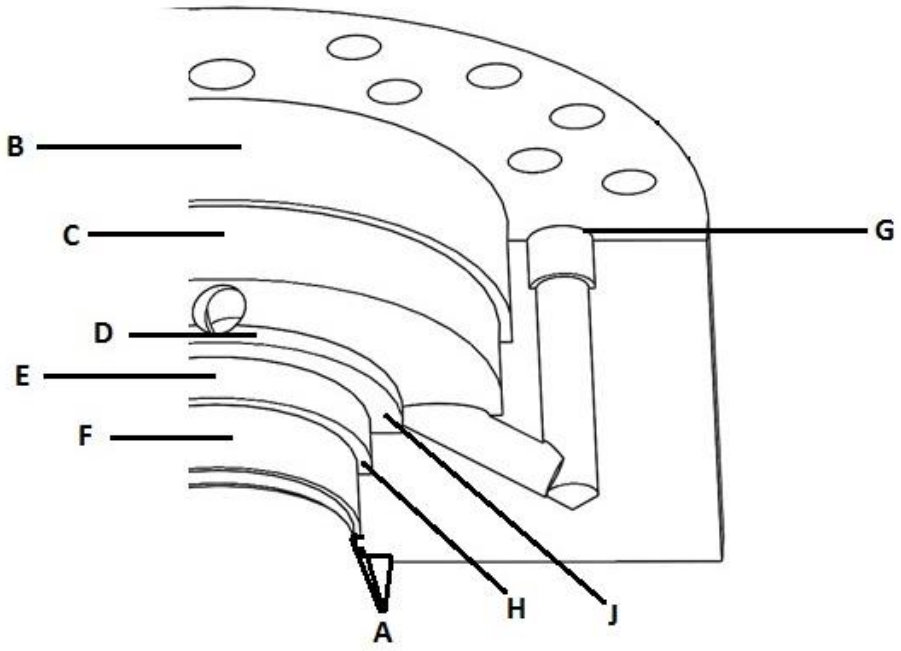

Figure 1
Ballistic Actuator End Cap

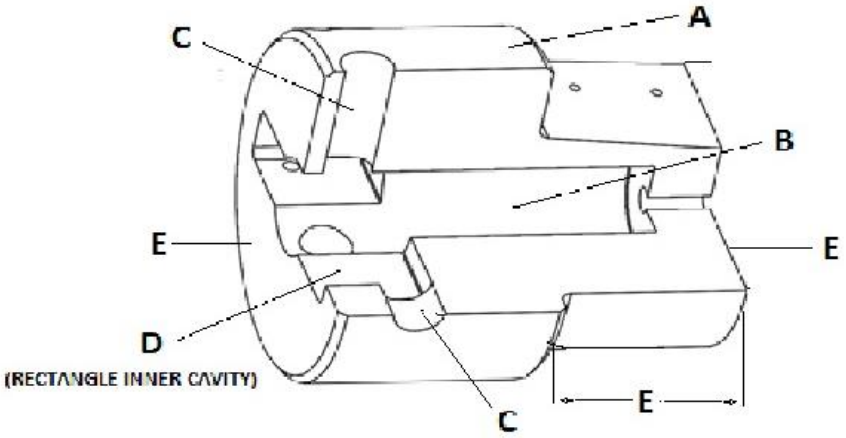

Figure 2
Lock Pin

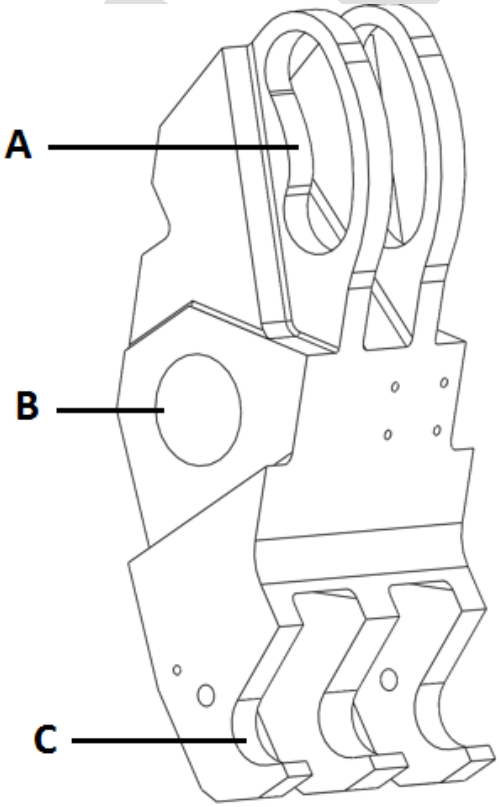

Figure 3
Multiplying Linkage Rocker Arm

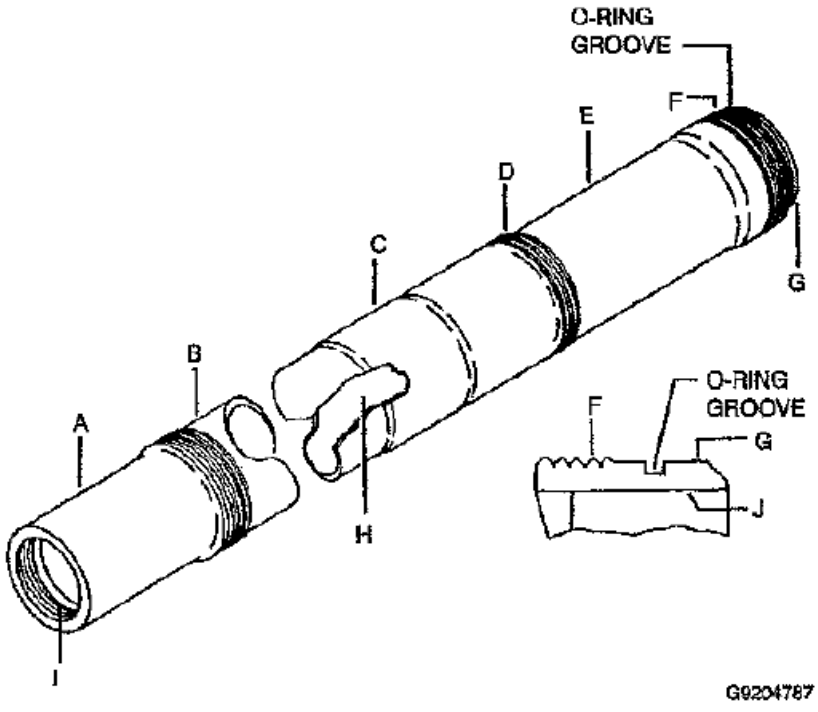

Figure 4
Ballistic Actuator Cylinder

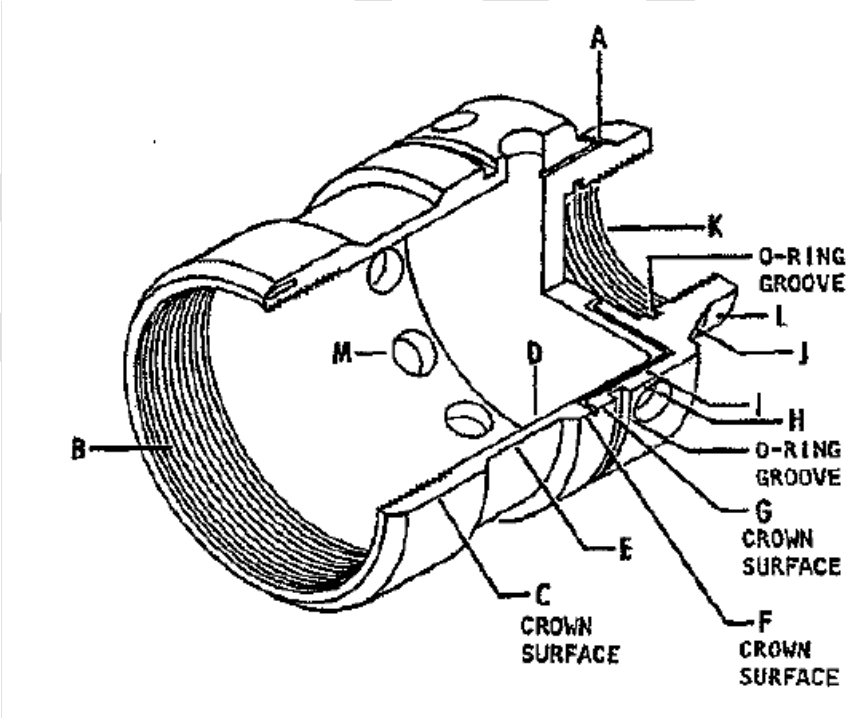

Figure 5
Ballistic Actuator Piston

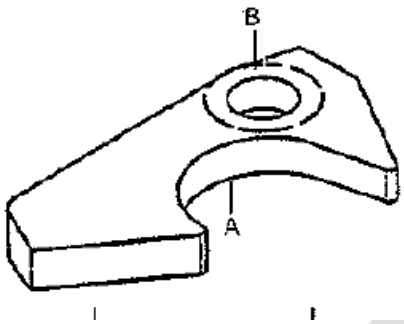

Figure 6
Multiplying Linkage Cable Pin Lock

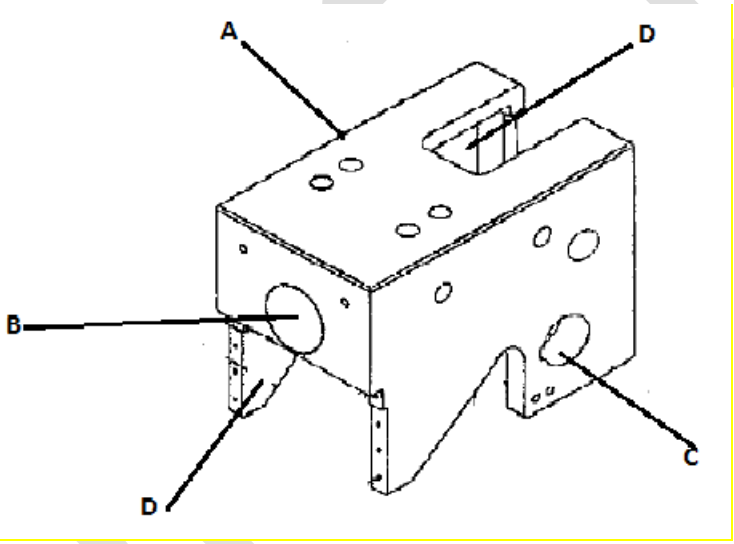

Figure 7
Multiplying Linkage Housing

Applicable Documents

IAW BASIC IDIQ PWS, Section 2.0