RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE: June 2001

BUDGET ACTIVITY: 07 - Operational System Development

PE NUMBER AND TITLE: 0207268F Aircraft Engine Component Improvement Program (CIP)

PROJECT: 1012

COST ($ in Thousands)		FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
1012	Aircraft Engine Component Improvement Program	151,546	165,395	175,101	187,414	212,626	170,050	173,633	177,323	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

FY03-FY07 budget numbers do not reflect the DoD strategic review results.

(U) A. Mission Description

The Aircraft Engine Component Improvement Program (CIP) provides critical sustaining engineering support (only source) for in-service Air Force engines throughout their service life. Aircraft Engine CIP corrects service revealed deficiencies and reduces total ownership costs (RTOC). The program's highest priority is to maintain flight safety, but also improves system Operational Readiness (OR) and Reliability and Maintainability (R&M). Historically, aircraft systems change missions, tactics, and environments to meet changing threats throughout their lives. Numerous new problems can develop in the engines through actual use during deployment, production, and service. Engine CIP provides the only funds to develop fixes for these field problems. Engine CIP funding is driven by field events and types/maturity of engines, not by the total engine quantity. Engine CIP starts with delivery of the first production engine purchased with procurement funds, and continues over the engine's life, gradually decreasing to a minimum level (safety/depot repairs) sufficient to keep older inventory engines operational. Engine CIP addresses out-of-warranty usage and life and enables the Air Force to obtain additional warranties when manufacturers incorporate Engine CIP improvements into production engines. Since operational and safety problems arise throughout a system's service life, Engine CIP must be maintained at a level to provide the engineering support to make the changes essential for continued satisfactory system performance at affordable costs. Engine CIP ensures continued improvements in engine R&M factors, which reduce outyear support costs. Historically, R&M related Engine CIP efforts reduce outyear Operations and Maintenance (O&M) and spares costs by a ratio greater than 21 to 1. MAJCOMs assume a viable Engine CIP effort is in place when submitting their budget requests for O&M and engine spares. Without the outyear cost avoidance provided by Engine CIP, outyear support funding would have to be increased drastically.

(U) FY 2000 ($ in Thousands)

(U)	$118,504	Continuing CIP tasks (such as, but not limited to, improvement, support equipment, and repair tasks)
(U)	$29,389	Continuing engine testing (such as, but not limited to, altitude, sea level, and flight tests)
(U)	$1,821	Continuing petroleum, oil, lubricants
(U)	$1,832	Continuing mission support
(U)	$151,546	Total

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(U) A. Mission Description Continued

(U) FY 2001 ($ in Thousands)

(U)	$137,113	Continuing CIP tasks (such as, but not limited to, improvement, support equipment, and repair tasks)
(U)	$21,702	Continuing engine testing (such as, but not limited to, altitude, sea level, and flight tests)
(U)	$3,000	Continuing petroleum, oil, lubricants
(U)	$3,580	Continuing mission support
(U)	$165,395	Total

Note: The following net transactions are not reflected in the FY01 total: BTR = -3.020M and SBIR = -5.992M. These transactions are not reflected in other sections of the R-Docs where an FY01 total is shown.

(U) FY 2002 ($ in Thousands)

(U)	$137,401	Continuing CIP tasks (such as, but not limited to, improvement, support equipment, and repair tasks)
(U)	$27,700	Continuing engine testing (such as, but not limited to, altitude, sea level, and flight tests)
(U)	$6,500	Continuing petroleum, oil, lubricants
(U)	$3,500	Continuing mission support
(U)	$175,101	Total

(U) B. Budget Activity Justification

This program is in budget activity 7 - Operational System Development, Research Category 6.6 because all efforts support fielded systems.

(U) C. Program Change Summary ($ in Thousands)

		FY 2000	FY 2001	FY 2002	Total Cost
(U)	Previous President's Budget (FY 2001 PBR)	158,329	166,926	174,127	TBD
(U)	Appropriated Value	160,212	166,926		
(U)	Adjustments to Appropriated Value				
	a. Congressional/General Reductions	-1,013	-1,168		
	b. Small Business Innovative Research	-4,574			
	c. Omnibus or Other Above Threshold Reprogram	0			
	d. Below Threshold Reprogram	-1,028			
	e. Rescissions	-2,051	-363		

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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
07 - Operational System Development	0207268F Aircraft Engine Component Improvement Program (CIP)	1012

(U) C. Program Change Summary ($ in Thousands) Continued

		FY 2000	FY 2001	FY 2002	Total Cost
(U)	Adjustments to Budget Years Since FY 2001 PBR			974	
(U)	Current Budget Submit/FY 2002 PBR	151,546	165,395	175,101	TBD

(U) Significant Program Changes:
Funding increases starting in FY01 are primarily due to F119 Engine (F-22) CIP work which commenced in FY01.

(U) D. Other Program Funding Summary ($ in Thousands)

	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E										
(U) Other APPN										

RELATED ACTIVITIES:
(U) - PEs # 0604268A and #0604268N, Army/Navy Aircraft Engine CIPs for prior years
(U) - PEs # 0203752A and #0205633N, Army/Navy Aircraft Engine CIPs for FY 1996 and following years

(U) E. Acquisition Strategy

Contracts within this Program Element are awarded sole source to engine manufacturers. CIP tasks are generally assigned to original engine manufacturers. Tasks are assigned based on available funding and prioritization of candidate tasks.

(U) F. Schedule Profile

	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
(U)												

Not applicable. CIP is a level of effort program that funds 700+ separate engineering tasks per year.

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE: June 2001

BUDGET ACTIVITY: 07 - Operational System Development

PE NUMBER AND TITLE: 0207268F Aircraft Engine Component Improvement Program (CIP)

PROJECT: 1012

(U) A. Project Cost Breakdown ($ in Thousands)

		FY 2000	FY 2001	FY 2002
(U)	Contracted Tasks	118,504	137,113	137,401
(U)	AFFTC Flight Tests	2,044	4,637	6,000
(U)	AEDC Altitude Tests	27,345	17,065	21,700
(U)	Petroleum/Oil/Lubricants	1,821	3,000	6,500
(U)	Mission Support	1,832	3,580	3,500
(U)	Total	151,546	165,395	175,101

(U) B. Budget Acquisition History and Planning Information ($ in Thousands)

(U) Performing Organizations:

Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 2000	Budget FY 2000	Budget FY 2001	Budget FY 2002	Budget to Complete	Total Program
Product Development Organizations										
GE-Evandale, OH	CPAF	Dec 99	N/A	N/A		60,225	58,485	53,532	Continuing	TBD
Pratt & Whitney	CPAF	Dec 99	N/A	N/A		47,144	68,095	75,019	Continuing	TBD
GE-Lynn, MA	CPFF	Dec 99	N/A	N/A		4,657	5,544	3,900	Continuing	TBD
Rolls Royce/Allison	CPFF	Jan 98	N/A	N/A		1,237	1,190	1,400	Continuing	TBD
Teledyne	CPFF	Dec 99	N/A	N/A		4,061	2,500	1,800	Continuing	TBD
Allied Signal/Honeywell	CPFF	Jan 98	N/A	N/A		241	677	800	Continuing	TBD
Williams International	CPFF	Jan 98	N/A	N/A		0	340	450	Continuing	TBD
Sundstrand	CPFF	Jan 98	N/A	N/A		939	282	500	Continuing	TBD
Support and Management Organizations										
In House Support/ Misc Studies						1,832	3,580	3,500	Continuing	TBD
Petroleum/Oil/ Lubricants						1,821	3,000	6,500	Continuing	TBD

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE: June 2001
BUDGET ACTIVITY: 07 - Operational System Development	PE NUMBER AND TITLE: 0207268F Aircraft Engine Component Improvement Program (CIP) — PROJECT: 1012

(U) Performing Organizations Continued:

Test and Evaluation Organizations						
AFFTC-Edwards AFB, CA		2,044	4,637	6,000	Continuing	TBD
AEDC-Arnold AFB, TN		27,345	17,065	21,700	Continuing	TBD
Subtotals	Total Prior to FY 2000	Budget FY 2000	Budget FY 2001	Budget FY 2002	Budget to Complete	Total Program
Subtotal Product Development		118,504	137,113	137,401	TBD	TBD
Subtotal Support and Management		3,653	6,580	10,000	TBD	TBD
Subtotal Test and Evaluation		29,389	21,702	27,700	TBD	TBD
Total Project		151,546	165,395	175,101	TBD	TBD

Footnote: Total prior to FY 2000 is not reflected above because the program was funded in procurement through FY 1979. RDT&E funding began in FY 1980.