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

Exhibit R-2, RDT&E Budget Item Justification

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	141.803	151.082	154.319	157.816	161.304	166.129	171.265	Continuing	TBD
1012	Aircraft Engine Component Improvement Program	141.803	151.082	154.319	157.816	161.304	166.129	171.265	Continuing	TBD

The FY03 National Defense Authorization Act (NDAA) language directed T&E centers to charge only direct costs beginning in FY06; this resulted in a zero-balance (ZBT) of funding over the FYDP from the customer accounts (for indirect test costs) to T&E support, PE 65807F.

(U) A. Mission Description and Budget Item Justification

The Aircraft Engine Component Improvement Program (CIP) provides the only source of critical sustaining engineering support for in-service Air Force engines throughout their service life. The program's highest priority is to maintain flight safety. Engine CIP corrects service revealed deficiencies and reduces total ownership costs (RTOC). Additional goals include improved 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 and 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/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 significantly reduce outyear Operations and Maintenance (O&M) and spares costs. Air Force Major Commands 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 significantly increased.

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207268F Aircraft Engine Component Improvement Program (CIP)

(U) B. Program Change Summary ($ in Millions)

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	164.150	153.265	151.722
(U)	Current PBR/President's Budget	141.803	151.082	154.319
(U)	Total Adjustments	-22.347	-2.183	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.126	-2.183	
	Congressional Increases			
	Reprogrammings	-17.704		
	SBIR/STTR Transfer	-4.517		

(U) Significant Program Changes:

FY2005-FY2006 decreased to support higher Air Force priorities.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

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

PROJECT NUMBER AND TITLE: 1012 Aircraft Engine Component Improvement Program

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
1012	Aircraft Engine Component Improvement Program	141.803	151.082	154.319	157.816	161.304	166.129	171.265	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Aircraft Engine Component Improvement Program (CIP) provides the only source of critical sustaining engineering support for in-service Air Force engines throughout their service life. The program's highest priority is to maintain flight safety. Engine CIP corrects service revealed deficiencies and reduces total ownership costs (RTOC). Additional goals include improved 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 and 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/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 significantly reduce outyear Operations and Maintenance (O&M) and spares costs. Air Force Major Commands 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 significantly increased.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continuing CIP tasks (such as, but not limited to, improvement, support equipment, and repair tasks)	112.693	137.872	138.609
(U) Continuing engine testing (such as, but not limited to, altitude, sea level, and flight tests) NOTE: FY06/07 test dollars decreased due to Test & Eval (T&E) Funding Realignment Policy (e.g. reduced FY06 $13.2M and FY07 $10.5M).	24.400	8.500	11.000
(U) Continuing mission support	4.710	4.710	4.710
(U) Total Cost	141.803	151.082	154.319

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN									

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207268F Aircraft Engine Component Improvement Program (CIP)**	PROJECT NUMBER AND TITLE **1012 Aircraft Engine Component Improvement Program**

(U) C. Other Program Funding Summary ($ in Millions)

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) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

PROJECT NUMBER AND TITLE: **1012 Aircraft Engine Component Improvement Program**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
GE-Evandale, OH	CPAF			49.410	Jan-05	49.810	Jan-06	50.020	Jan-07	Continuing	TBD	
Pratt & Whitney	CPAF			54.473	Jan-05	79.032	Jan-06	79.469	Jan-07	Continuing	TBD	
GE-Lynn, MA	CPFF			3.780	Jan-05	3.850	Jan-06	3.890	Jan-07	Continuing	TBD	
Rolls Royce/Allison	CPFF			1.050	Jan-05	1.080	Jan-06	1.100	Jan-07	Continuing	TBD	
Teledyne	CPFF			0.580	Jan-05	0.600	Jan-06	0.610	Jan-07	Continuing	TBD	
Honeywell	CPFF			2.360	Jan-05	2.400	Jan-06	2.410	Jan-07	Continuing	TBD	
Williams International	CPFF			1.040	Jan-05	1.100	Jan-06	1.110	Jan-07	Continuing	TBD	
Subtotal Product Development			0.000	112.693		137.872		138.609		Continuing	TBD	0.000
Remarks:												
(U) Support												
In House Support/ Misc				4.710		4.710		4.710		Continuing	TBD	
Subtotal Support			0.000	4.710		4.710		4.710		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
AFFTC-Edwards AFB, CA				4.600		0.000		0.000		Continuing	TBD	
AEDC-Arnold AFB, TN				19.800		8.500		11.000		Continuing	TBD	
Subtotal Test & Evaluation			0.000	24.400		8.500		11.000		Continuing	TBD	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	141.803		151.082		154.319		Continuing	TBD	0.000

Footnote: Total prior to FY 2005 is not reflected above because the program was funded in procurement through FY 1979 and RDT&E funding began in FY 1980.

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207268F Aircraft Engine Component Improvement Program (CIP)**	PROJECT NUMBER AND TITLE **1012 Aircraft Engine Component Improvement Program**

Not Applicable. Engine CIP is a continuing engineering support program that funds 300-400 separate engineering tasks per year.

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207268F Aircraft Engine Component Improvement Program (CIP)**	PROJECT NUMBER AND TITLE **1012 Aircraft Engine Component Improvement Program**

(U) Schedule Profile

	FY 2005	FY 2006	FY 2007
(U) Not applicable. CIP is a continuing engineering support program that funds 300-400 separate engineering tasks per year.	1-4Q	1-4Q	1-4Q