Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force

**DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

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

BA 7: Operational Systems Development

COST (\$ in Millions)			FY 2012	FY 2012	FY 2012					Cost To	
COST (\$ III WIIIIONS)	FY 2010	FY 2011	Base	oco	Total	FY 2013	FY 2014	FY 2015	FY 2016	Complete	Total Cost
Total Program Element	147.200	147.396	182.967	-	182.967	180.546	186.703	153.752	161.319	Continuing	Continuing
671012: Aircraft Engine	147.200	120.626	151.093	-	151.093	148.857	155.171	122.392	129.406	Continuing	Continuing
Component Improvement Program											
675365: <i>F-35</i>	-	26.770	31.874	-	31.874	31.689	31.532	31.360	31.913	Continuing	Continuing

### 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 to maintain flight safety (highest priority), to correct service revealed deficiencies, to improve system operational readiness (OR) and reliability & maintainability (R&M), to reduce engine Life Cycle Cost (LCC), and to sustain engines throughout their service life. Historically, aircraft systems change missions, tactics, and environments (including new fuels) to meet changing threats throughout their lives. New technical problems can develop in the engines through actual use and Engine CIP provides the means 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. The program starts with government acceptance of the first procurement-funded engine 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, through "Lead the Fleet" operational use and accelerated mission testing, identifies and fixes engine-related problems ahead of operational impacts. 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. Engine CIP ensures continued improvements in engine R&M, which reduce out year support costs. Historically, R&M related Engine CIP efforts significantly reduce out year Operations and Maintenance (O&M) and spares costs. Without Engine CIP, out year support funding would have to be significantly increased. This program is in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	156.963	147.396	144.306	-	144.306
Current President's Budget	147.200	147.396	182.967	-	182.967
Total Adjustments	-9.763	-	38.661	-	38.661
<ul> <li>Congressional General Reductions</li> </ul>		-			
<ul> <li>Congressional Directed Reductions</li> </ul>		-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
<ul> <li>Congressional Adds</li> </ul>		-			
<ul> <li>Congressional Directed Transfers</li> </ul>		-			
Reprogrammings	-4.400	-			
SBIR/STTR Transfer	-4.708	-			
Other Adjustments	-0.655	-	38.661	-	38.661

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
3600: Research, Development, Test & Evaluation, Air Force	PE 0207268F: Aircraft Engine Component Improvement P	rogram (CIP)
BA 7: Operational Systems Development		
Change Summary Explanation		
FY 2010 - reprogramming for higher AF priorities.		
FY 2012 - increase addresses additional Engine CIP R&M tasks	8	

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Exhibit R-2A, RDT&E Project Just	ification: PB	3 2012 Air Fo	orce						<b>DATE:</b> February 2011			
APPROPRIATION/BUDGET ACTIV 3600: Research, Development, Test BA 7: Operational Systems Develop		R-1 ITEM N PE 0207268 Improvemen	BF: Aircraft E	ngine Comp	onent	PROJECT 671012: Air Improvemen						
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost	
671012: Aircraft Engine Component Improvement Program	147.200	120.626	151.093	-	151.093	148.857	155.171	122.392	129.406	Continuing	Continuing	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0			

### 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 to maintain flight safety (highest priority), to correct service revealed deficiencies, to improve system operational readiness (OR) and reliability & maintainability (R&M), to reduce engine Life Cycle Cost (LCC), and to sustain engines throughout their service life. Historically, aircraft systems change missions, tactics, and environments (including new fuels) to meet changing threats throughout their lives. New technical problems can develop in the engines through actual use and Engine CIP provides the means 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. The program starts with government acceptance of the first procurement-funded engine 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, through "Lead the Fleet" operational use and accelerated mission testing, identifies and fixes engine-related problems ahead of operational impacts. 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. Engine CIP ensures continued improvements in engine R&M, which reduce out year support costs. Historically, R&M related Engine CIP efforts significantly reduce out year Operations and Maintenance (O&M) and spares costs. Without Engine CIP, out year support funding would have to be significantly increased.

This program is in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)			FY 2012	FY 2012	FY 2012
	FY 2010	FY 2011	Base	OCO	Total
Title: Aircraft Engine Component Improvement Program	147.200	120.626	151.093	-	151.093
<b>Description:</b> Aircraft Engine Component Improvement Program (CIP) provides critical sustaining engineering support for approximately 22,500 in-service Air Force engines to maintain flight safety (highest priority), to address parts obsolescence, to improve system operational readiness (OR) and reliability & maintainability (R&M), to reduce engine Life Cycle Cost (LCC), and to sustain engines throughout their service life.					
FY 2010 Accomplishments: Funding enables Engine CIP to execute 250+ tasks across 13+ engine types. Majority of the budget addresses engine issues associated with the A-10, B-1, B-2, C-130, F-15, F-16, and F-22 aircraft. Engine CIP work effort addresses safety of flight, engine component redesign, repair/rework procedures, engine maturation					

Air Force Page 3 of 15 R-1 Line Item #139

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			D	ATE: Febru	ary 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0207268F: Aircraft Engine Componer Improvement Program (CIP)	nt 67	ROJECT 1012: Aircra provement	•	Component	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
and life limit/mission analysis. In addition to engine maturation, ground a validate redesigned parts and new repair procedures. Engine CIP maint priority), addresses obsolescence deficiencies, improves system operat maintainability (R&M), reduces engine life cycle costs (LCC), and sustain	tains engine flight safety (highest ional readiness (OR) and reliability &					
FY 2011 Plans: Funding enables Engine CIP to execute 200+ tasks across 13+ engine engine issues associated with the A-10, B-1, B-2, C-130, F-15, F-16, an effort addresses safety of flight, engine component redesign, repair/rew and life limit/mission analysis. In addition to engine maturation, ground a validate redesigned parts and new repair procedures. Engine CIP maint priority), addresses obsolescence deficiencies, improves system operat maintainability (R&M), reduces engine life cycle costs (LCC), and sustain	d F-22 aircraft. Engine CIP work ork procedures, engine maturation and flight engine testing is used to tains engine flight safety (highest ional readiness (OR) and reliability &					
FY 2012 Base Plans: Funding enables Engine CIP to execute 250+ tasks across 13+ engine engine issues associated with the A-10, B-1, B-2, C-130, F-15, F-16, an effort addresses safety of flight, engine component redesign, repair/rew and life limit/mission analysis. In addition to engine maturation, ground a validate redesigned parts and new repair procedures. Engine CIP maint priority), addresses obsolescence deficiencies, improves system operat maintainability (R&M), reduces engine life cycle costs (LCC), and sustain	d F-22 aircraft. Engine CIP work ork procedures, engine maturation and flight engine testing is used to tains engine flight safety (highest ional readiness (OR) and reliability &					
FY 2012 OCO Plans: In FY 2012 OCO: Not Applicable.	-					
Accompl	ishments/Planned Programs Subtotals	147.200	120.626	151.093	-	151.093

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Air Force Page 4 of 15 R-1 Line Item #139

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
3600: Research, Development, Test & Evaluation, Air Force	PE 0207268F: Aircraft Engine Component	671012: Aircraft Engine Component
BA 7: Operational Systems Development	Improvement Program (CIP)	Improvement Program

## C. Other Program Funding Summary (\$ in Millions)

			FY 2012	FY 2012	FY 2012					Cost To	
<u>Line Item</u>	FY 2010	FY 2011	<u>Base</u>	OCO	<u>Total</u>	FY 2013	FY 2014	FY 2015	FY 2016	<b>Complete</b>	<b>Total Cost</b>
N/A: Other APPN's	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

## D. Acquisition Strategy

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

## **E. Performance Metrics**

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0207268F: Aircraft Engine Component

Improvement Program (CIP)

**PROJECT** 671012: Aircraft Engine Component

**DATE:** February 2011

Improvement Program

Product Development (	\$ in Millio	ns)		FY 2	2011	FY 2 Ba		FY 2		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Develop General Electric aircraft engine improvements	SS/Various	GE:Evendale, OH	40.510	39.259	Jul 2011	46.023	Jan 2012	-		46.023	Continuing	Continuing	0.000
Develop Pratt & Whitney aircraft engine improvements	SS/Various	Pratt & Whitney:Hartford, CT	66.488	55.057	Apr 2011	67.371	Jan 2012	-		67.371	Continuing	Continuing	0.000
Develop GE aircraft engine improvements	SS/CPFF	GE:Lynn, MA	16.825	10.833	Jan 2011	13.012	Jan 2012	-		13.012	Continuing	Continuing	0.000
Develop Rolls Royce aircraft engine improvements	SS/CPFF	Rolls Royce:Indianapolis, IN	4.652	2.504	Jan 2011	3.008	Jan 2012	-		3.008	Continuing	Continuing	0.000
Develop aircraft auxiliary power unit improvements	SS/CPFF	Honeywell:Phoenix, AZ	1.107	0.847	Jan 2011	1.018	Jan 2012	-		1.018	Continuing	Continuing	0.000
Develop cruise missile engine improvements	SS/CPFF	Williams:Walled Lake, MI	0.056	0.061	Jan 2011	0.074	Jan 2012	-		0.074	Continuing	Continuing	0.000
	•	Subtotal	129.638	108.561		130.506		-		130.506			0.000

#### Remarks

Contract Type for GE-Evendale and Pratt & Whitney are Hybrid contracts, which include CPAF and FFP portions.

Support (\$ in Millions)			FY	2011		2012 ise	FY 2	2012 CO	FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$	Test and Evaluation (\$ in Millions)					FY 2 Ba	2012 se	FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Ground test and validate engine improvements	TBD	AEDC:Arnold AFB, TN	14.048	7.000	Oct 2010	12.500	Oct 2011	-		12.500	Continuing	Continuing	0.000
Fuel	TBD	TBD:TBD,	1.119	3.000	Oct 2010	5.500	Oct 2011	-		5.500	Continuing	Continuing	0.000
	•	Subtotal	15.167	10.000		18.000		-		18.000			0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0207268F: Aircraft Engine Component

Improvement Program (CIP)

PROJECT

671012: Aircraft Engine Component

**DATE:** February 2011

Improvement Program

Test and Evaluation (\$	in Millions	)		FY	2011		2012 ase		2012 CO	FY 2012 Total			
	Contract		Total Prior										Target
	Method	Performing	Years		Award		Award		Award		Cost To		Value of
Cost Category Item	& Type	Activity & Location	Cost	Cost	Date	Cost	Date	Cost	Date	Cost	Complete	Total Cost	Contract

#### Remarks

Fuel cost includes only government-procured fuel for Test and Evaluation (T&E). Additional fuel costs for contractor-performed T&E are included in the applicable contract.

Management Services (\$ in Millions)		FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total					
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
In House Support/Misc	TBD	TBD:TBD,	2.395	2.065	Oct 2010	2.587	Oct 2011	-		2.587	Continuing	Continuing	0.000
		Subtotal	2.395	2.065		2.587		-		2.587			0.000

	Total Prior Years Cost	FY 2	2011	FY 2 Ba		2012 CO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	147.200	120.626		151.093	-		151.093			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force	DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0207268F: Aircraft Engine Component Improvement Program (CIP)	PROJECT 671012: Aircraft Engine Component Improvement Program

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force

R-1 ITEM NOMENCLATURE

**DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development

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

671012: Aircraft Engine Component

Improvement Program

PROJECT

## Schedule Details

	St	art	E	nd
Events	Quarter	Year	Quarter	Year
Engine CIP activities	1	2010	4	2016

Exhibit R-2A, RD1&E Project Ju	stification: Pl	3 2012 Air F	orce						DAIE: Feb	ruary 2011			
APPROPRIATION/BUDGET ACT		R-1 ITEM N	IOMENCLA <sup>*</sup>	TURE		PROJECT							
3600: Research, Development, Test & Evaluation, Air Force					PE 0207268F: Aircraft Engine Component 675365: F-					F-35			
BA 7: Operational Systems Development					Improvement Program (CIP)								
COST (\$ in Millions)			FY 2012	FY 2012	FY 2012					Cost To			
COST (\$ in Millions)	FY 2010	FY 2011	Base	осо	Total	FY 2013	FY 2014	FY 2015	FY 2016	Complete	Total Cost		
675365: <i>F-35</i>	-	26.770	31.874	_	31.874	31.689	31.532	31.360	31.913	Continuing	Continuing		
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0				

### A. Mission Description and Budget Item Justification

The F135 Aircraft Engine Component Improvement Program (CIP) supports F-35 propulsion systems. It provides the only source of critical sustaining engineering support for in-service Air Force propulsion systems. Engine CIP maintains flight safety (highest priority), to correct service revealed deficiencies, to improve system Operational Readiness (OR) and Reliability & Maintainability (R&M), to reduce propulsion system Life Cycle Cost (LCC), and sustain the propulsion systems throughout the service life. Historically, aircraft systems change missions, tactics, and environment (including new fuels) and meet changing threats throughout their lives. New technical problems can develop in the propulsion system through actual use and the Engine CIP provides the means to develop fixes for these field problems. Engine CIP funding is driven by field events and type/maturity of the propulsion systems, not by the total quantity. The program starts with government acceptance of the first procurement-funded engine and continues over the propulsion system's life, gradually decreasing to a minimum level (safety/depot repairs) sufficient to keep older inventory propulsion systems operational. Engine CIP, through "Lead the Fleet" operational use and accelerated mission testing, identifies and fixes propulsion-related problems ahead of operational impacts. 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 propulsion systems. Engine CIP ensures continued improvements in propulsion systems R&M, which reduce out year support costs. Historically, R&M related Engine CIP efforts significantly reduce out year O&M and spares costs. Without Engine CIP, out year support funding would have to be significantly increased. This program is in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Aircraft Engine Component Improvement Program (F-135)	-	26.770	31.874	-	31.874
<b>Description:</b> The Aircraft Engine Component Improvement Program (CIP) provides the only source of critical sustaining engineering support for F-35 propulsion systems to maintain flight safety (highest priority), to correct service revealed deficiencies, to improve system operational readiness (OR) and reliability & maintainability (R&M), to reduce engine Life Cycle Cost (LCC), and to sustain engines throughout their service life.					
FY 2010 Accomplishments: Not Applicable					
FY 2011 Plans: Initial priority will be to procure representative test engines and begin planning for engine maturation testing.  JSF CIP will advance engine maturity 2x hours ahead of the fleet to identify any major safety or reliability issues					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force	DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
3600: Research, Development, Test & Evaluation, Air Force	PE 0207268F: Aircraft Engine Component	675365: <i>F-</i> -	35
BA 7: Operational Systems Development	Improvement Program (CIP)		

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
before they can affect the field. In addition to accelerated maturation testing, several reliability degraders will also be addressed, including sensors, seals, disk life, and other component deficiencies. Funding to correct service revealed deficiencies, to improve system operational readiness (OR) and reliability & maintainability (R&M), to reduce engine life cycle cost (LCC), and to sustain engines throughout their service life.					
FY 2012 Base Plans: Funding enables JSF Engine CIP to execute approximately 30 tasks on F135. Engine CIP work effort addresses safety of flight, engine component redesign, repair/rework procedures, accelerated maturation testing and life limit/mission analysis. In addition, ground and flight engine testing will be used to validate redesigned parts and new repair procedures. Funding will enable JSF CIP to maintain/improve engine flight safety, address parts obsolescence, improve system operational readiness and reliability & maintainability, reduce engine life cycle cost, and sustain engines throughout their service life.					
FY 2012 OCO Plans: Not Applicable					
Accomplishments/Planned Programs Subtotals	-	26.770	31.874	-	31.874

## C. Other Program Funding Summary (\$ in Millions)

			FY 2012	<u>FY 2012</u>	FY 2012					Cost To	
<u>Line Item</u>	FY 2010	FY 2011	<u>Base</u>	OCO	<u>Total</u>	FY 2013	FY 2014	FY 2015	FY 2016	<b>Complete</b>	<b>Total Cost</b>
• PE 0205633N: <i>OTHER APPN</i>	0.000	27.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

# D. Acquisition Strategy

Contracts within this Program Element are awarded sole source to engine manufacturers. F-35 Engine CIP tasks are generally assigned to original engine manufacturers based on available funding and prioritization of candidate tasks.

### **E. Performance Metrics**

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Pro	ject Cost	Analysis: PB 2012 A	ir Force							DATI	E: Februar	y 2011	
APPROPRIATION/BUDG 3600: Research, Develop BA 7: Operational Systen	ment, Tes	t & Evaluation, Air Fo	rce	PE 0	)207268F:	MENCLAT Aircraft Ei Program (C	ngine Com	ponent	<b>PROJ</b> 67536	<b>ECT</b> 5: <i>F-35</i>			
Product Development (	in Millio	ns)		FY 2011		FY 2012 Base		FY 2		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Develop Pratt & Whitney F-35 engine improvements	SS/CPAF	Pratt & Whitney:Hartford, CT	-	26.370		26.456	Jan 2012	-		26.456	Continuing	Continuing	0.000
		Subtotal	-	26.370		26.456		-		26.456			0.000
Support (\$ in Millions)				FY 2	011	FY 2 Ba	-	FY 2		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000
Test and Evaluation (\$ i	n Millions	5)		FY 2	011	FY 2 Ba	-	FY 2		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Ground test and validate engine improvements	TBD	AEDC:Arnold AFB, TN	-	-		4.685	Oct 2011	-		4.685	Continuing	Continuing	0.000
Fuel	TBD	Not specified.:,	-	-		0.255	Oct 2011	-		0.255	Continuing	Continuing	0.000
		Subtotal	-	-		4.940		-		4.940			0.000
Management Services (	\$ in Millic	ons)		FY 2	011	FY 2 Ba		FY 2		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
In House Support/Misc	TBD	TBD:TBD,	-	0.400		0.478	Oct 2011	-		0.478	Continuing	Continuing	0.000
		Subtotal	-	0.400		0.478		-		0.478			0.000
			Total Prior Years Cost	FY 2	011	FY 2 Ba	-	FY 2		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	-	26.770		31.874		-		31.874			0.000

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		UNCLASS	SIFIED					
Exhibit R-3, RDT&E Project Cost Analysis	: PB 2012 Air Force				DAT	<b>E:</b> Februar	y 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evalua BA 7: Operational Systems Development	ation, Air Force	PE 0207268F	<b>MENCLATURE</b> : Aircraft Engine Con Program (CIP)	nponent	<b>PROJECT</b> 675365: <i>F-35</i>			
	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 201 OCO		Cost To	Total Cost	Target Value of Contract
<u>Remarks</u>								

Air Force Page 13 of 15 R-1 Line Item #139

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force	DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0207268F: Aircraft Engine Component Improvement Program (CIP)	<b>PROJECT</b> 675365: <i>F-</i> 35

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force

**DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0207268F: Aircraft Engine Component

Improvement Program (CIP)

**PROJECT** 675365: *F-35* 

## Schedule Details

	Start		End	
Events	Quarter	Year	Quarter	Year
F-35 Engine CIP Tasks	3	2011	4	2016