Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force											Date: March 2014	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0207268F / *Aircraft Engine Component Improvement Program*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	114.802	89.369	109.664	-	109.664	148.286	151.187	154.141	157.076	Continuing	Continuing
671012: *Aircraft Engine Component Improvement Program*	-	113.829	70.069	78.690	-	78.690	116.738	119.053	121.379	123.690	Continuing	Continuing
675365: *F-35*	-	0.973	19.300	30.974	-	30.974	31.548	32.134	32.762	33.386	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

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.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force					Date: March 2014
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*			**R-1 Program Element (Number/Name)** PE 0207268F / *Aircraft Engine Component Improvement Program*		
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	187.984	139.369	139.810	-	139.810
Current President's Budget	114.802	89.369	109.664	-	109.664
Total Adjustments	-73.182	-50.000	-30.146	-	-30.146
• Congressional General Reductions	-0.248	-			
• Congressional Directed Reductions	-	-50.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-49.449	-			
• SBIR/STTR Transfer	-5.133	-			
• Other Adjustments	-18.352	-	-30.146	-	-30.146

Change Summary Explanation

FY2013 adjustments are Sequestration $-18.352M, Reprogrammings $-49.449M, and Small Business Innovative Research (SBIR) Reduction -$5.133M

FY2014 -Congressional Directed Reduction $-50.000M "Program Decrease"

FY2015 - Reduction - $30.146M due to higher Air Force Priorities

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207268F / *Aircraft Engine Component Improvement Program*	Project (Number/Name) 671012 / *Aircraft Engine Component Improvement Program*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
671012: *Aircraft Engine Component Improvement Program*	-	113.829	70.069	78.690	-	78.690	116.738	119.053	121.379	123.690	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

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 for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Aircraft Engine Component Improvement Program	113.829	70.069	78.690
Description: Aircraft Engine Component Improvement Program (CIP) provides critical sustainment engineering support for approximately 20,300 engines (including foreign military sales (FMS)) 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 2013 Accomplishments: Funding enabled Engine CIP to continue to execute 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,			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0207268F / *Aircraft Engine Component Improvement Program*	**Project (Number/Name)** 671012 / *Aircraft Engine Component Improvement Program*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
engine component redesign, repair/rework procedures, engine maturation and life limit/mission analysis. In addition to engine maturation, ground and flight engine testing was used to validate redesigned parts and new repair procedures. Engine CIP maintained engine flight safety, addressed obsolescence deficiencies, improved system operational readiness (OR) and reliability & maintainability (R&M), reduced engine life cycle costs (LCC), and sustained engines throughout their service life. ***FY 2014 Plans:*** Funding enables Engine CIP to execute 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 and life limit/mission analysis. In addition to engine maturation, ground and flight engine testing is used to validate redesigned parts and new repair procedures. Engine CIP maintains engine flight safety, addresses obsolescence deficiencies, improves system operational readiness (OR) and reliability & maintainability (R&M), reduces engine life cycle costs (LCC), and sustains engines throughout their service life. ***FY 2015 Plans:*** Funding will enable Engine CIP to execute 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 and life limit/mission analysis. In addition to engine maturation, ground and flight engine testing is used to validate redesigned parts and new repair procedures. Engine CIP maintains engine flight safety, addresses obsolescence deficiencies, improves system operational readiness (OR) and reliability & maintainability (R&M), reduces engine life cycle costs (LCC), and sustains engines throughout their service life.			
Accomplishments/Planned Programs Subtotals	113.829	70.069	78.690

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• None: *N/A*	-	-	-	-	-	-	-	-	-	-	-

Remarks

Other APPN RELATED ACTIVITIES
(U) - PEs 0604268A and 0604268N, Army/Navy Aircraft Engine CIPs, prior to FY1996
(U) - PEs 0203752A and 0205633N, Army/Navy Aircraft Engine CIPs, FY1996-present

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0207268F / *Aircraft Engine Component Improvement Program*	**Project (Number/Name)** 671012 / *Aircraft Engine Component Improvement Program*

D. Acquisition Strategy

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

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-4, RDT&E Schedule Profile: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0207268F / *Aircraft Engine Component Improvement Program*	**Project (Number/Name)** 671012 / *Aircraft Engine Component Improvement Program*

Not applicable. Engine CIP is a continuing sustaining engineering support program that annually funds 200+ separate tasks.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207268F / *Aircraft Engine Component Improvement Program*	Project (Number/Name) 675365 / *F-35*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
675365: *F-35*	-	0.973	19.300	30.974	-	30.974	31.548	32.134	32.762	33.386	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The F135 Aircraft Engine Component Improvement Program (CIP) supports F-35 single-engine fighter 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 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 full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Aircraft Engine Component Improvement Program (F135)	0.973	19.300	30.974
Description: The Aircraft Engine Component Improvement Program (CIP) provides the only source of critical sustainment engineering support for F-35 propulsion systems to maintain flight safety for this single-engine fighter (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 2013 Accomplishments: FY13 allocated funding was used to assess and plan 2014 Joint Strike Fighter (JSF) Engine CIP requirements.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0207268F / *Aircraft Engine Component Improvement Program*	**Project (Number/Name)** 675365 / *F-35*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Funding enables JSF Engine CIP to execute approximately 8 tasks supporting initial flying operations 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 is used to validate redesigned parts and new repair procedures. Funding enables 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 2015 Plans:*** Funding will enable JSF Engine CIP to execute approximately 25 tasks supporting initial flying operations on F135. Engine CIP work effort will address 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.			
Accomplishments/Planned Programs Subtotals	0.973	19.300	30.974

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• None: *N/A*	-	-	-	-	-	-	-	-	-	-	-

Remarks

Program Element 0205633N provides US Navy funding support for F-35 propulsion system

D. Acquisition Strategy

Contracts within this program are projected to be awarded sole source to engine manufacturer. F-35 Engine CIP tasks are generally assigned to the original engine manufacturer based on available funding and prioritization of candidates.

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-4, RDT&E Schedule Profile: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0207268F / *Aircraft Engine Component Improvement Program*	**Project (Number/Name)** 675365 / *F-35*

Not Applicable. F-35 engine CIP is a continuing sustaining engineering support program that will fund 8 engine accelerated mission test tasks in FY14 with increasing F135 engine unique tasks over the FYDP.