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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army	Date: March 2019
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Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0203752A / Aircraft Engine Component Improvement Program
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COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	-	0.139	0.146	0.144	-	0.144	0.145	0.145	0.145	0.145	0.000	1.009
106: A/C Compon Improv Prog	-	0.139	0.146	0.144	-	0.144	0.145	0.145	0.145	0.145	0.000	1.009

A. Mission Description and Budget Item Justification

Aircraft Engine Component Improvement Program (CIP) develops, tests, and qualifies improvements to aircraft engine components to correct service-revealed deficiencies, improve flight safety, enhance readiness and reduce operating and support (O&S) costs. In addition, CIP provides the test vehicles for the testing and qualification efforts required as a part of the Army's Critical Safety Item (CSI) program. Non-program specific Auxiliary Power Unit (APU) as well as Unmanned Aerial Vehicle (UAV) safety and readiness issues are also addressed under this Program Element.

B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	0.145	0.146	0.144	-	0.144
Current President's Budget	0.139	0.146	0.144	-	0.144
Total Adjustments	-0.006	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.006	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Army										Date: March 2019		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0203752A / Aircraft Engine Component Improvement Program				Project (Number/Name) 106 / A/C Compon Improv Prog			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
106: A/C Compon Improv Prog	-	0.139	0.146	0.144	-	0.144	0.145	0.145	0.145	0.145	0.000	1.009
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Aircraft Engine Component Improvement Program (CIP) develops, tests, and qualifies improvements to aircraft engine components to correct service-revealed deficiencies, improve flight safety, enhance readiness and reduce operating and support (O&S) costs. In addition, CIP provides the test vehicles for the testing and qualification efforts required as a part of the Army's Critical Safety Item (CSI) program. Non-program specific Auxiliary Power Unit (APU) as well as Unmanned Aerial Vehicle (UAV) safety and readiness issues are also addressed under this Program Element (PE).												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2018	FY 2019	FY 2020	
Title: UAV Engine									0.079	0.086	0.084	
Description: UAV Gray Eagle Engine Investigation at U.S. Army Research Laboratory (ARL) Vehicle Technology Directorate (VTD) at Aberdeen Proving Ground, MD. Provide research to support airworthiness, reliability and performance improvements of UAV engines. Investigate and research the technology challenges (i.e. engine performance, engine durability, engine life, and engine modifications) for reliable engine operation using JP-8 fuel and readily available MIL-spec lubricants.												
FY 2019 Plans:												
Continue to research improvements to address service related deficiencies to improve safety and reduce O&S Costs.												
FY 2020 Plans:												
Will continue to research improvements to address service related deficiencies to improve safety and reduce O&S Costs.												
FY 2019 to FY 2020 Increase/Decrease Statement:												
Decrease to FY 2020 funding due to economic adjustment.												
Title: In-House Support									0.060	0.060	0.060	
Description: In-house support for the CIP engineers. Contracting support for CIP contracts.												
FY 2019 Plans:												
Continue to provide in-house engineering support for engine CIP programs.												
FY 2020 Plans:												
Will continue to provide in-house engineering support for UAV engine CIP programs.												
Accomplishments/Planned Programs Subtotals									0.139	0.146	0.144	

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C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy Improved designs will be implemented via Engineering Change Proposal (ECP) and follow-on procurement or modification to a production contract to introduce the improved hardware.		
E. Performance Metrics N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Army												Date: March 2019			
Appropriation/Budget Activity 2040 / 7						R-1 Program Element (Number/Name) PE 0203752A / Aircraft Engine Component Improvement Program						Project (Number/Name) 106 / A/C Compon Improv Prog			
Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
In-house Engineering	Allot	US Army AMRDEC : Redstone Arsenal, AL	2.890	0.060	Sep 2018	0.060	Oct 2018	0.060	Oct 2019	-		0.060	Continuing	Continuing	Continuing
Subtotal			2.890	0.060		0.060		0.060		-		0.060	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
T700 Engine	SS/IDIQ	GE-Air : Lynn, MA	61.729	-		-		-		-		-	Continuing	Continuing	Continuing
T55 Engine	SS/IDIQ	Honeywell : Phoenix, AZ	30.161	-		-		-		-		-	Continuing	Continuing	Continuing
T62 Auxiliary Power Unit (APU)	C/IDIQ	Redstone Technical Center Redstone Arsenal, AL : ATEC	0.050	-		-		-		-		-	Continuing	Continuing	Continuing
APU's	SS/IDIQ	Air Force : Kelly AFB, TX	13.647	-		-		-		-		-	Continuing	Continuing	Continuing
UAV Engine	Various	ARL-Vehicle Technology Directorate : TBD	0.933	0.079	Sep 2018	0.086	Sep 2019	0.084	Sep 2020	-		0.084	Continuing	Continuing	Continuing
APU's	SS/IDIQ	Air Force : Hill AFB, UT	2.319	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			108.839	0.079		0.086		0.084		-		0.084	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
T-62T-2B Vibration Test	Various	Redstone Technical Text Center : Redstone Arsenal, AL	0.050	-		-		-		-		-	Continuing	Continuing	-

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Appropriation/Budget Activity 2040 / 7						R-1 Program Element (Number/Name) PE 0203752A / Aircraft Engine Component Improvement Program				Project (Number/Name) 106 / A/C Compon Improv Prog				

Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.050	-		-		-		-		-	Continuing	Continuing	N/A

	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	111.779	0.139	0.146	0.144	-	0.144	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Army

Date: March 2019

Appropriation/Budget Activity

2040 / 7

R-1 Program Element (Number/Name)

PE 0203752A / Aircraft Engine Component Improvement Program

Project (Number/Name)

106 / A/C Compon Improv Prog

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Army			Date: March 2019
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203752A / Aircraft Engine Component Improvement Program	Project (Number/Name) 106 / A/C Compon Improv Prog	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
T700 Engine Spit Pit Testing	1	2011	4	2012
T700 Engine Temperature Survey	2	2014	4	2015
T55 Engine 1553 Engine Control Unit (ECU)	2	2012	1	2013
T55 Engine N1 Drive Line Redesign	1	2010	4	2012
T55 Engine ECU Block Upgrade	2	2013	4	2015
Auxiliary Power Units (APUs)	1	2014	4	2015
UAV Shadow Engine	2	2014	4	2024
T700 CSI Update	1	2017	4	2017