U	MKC CME	Fligh	t Test Card	01	2020-04-02	1
	PROJECT No.	FEE	IAKE AND MODEL	SER No.	REGISTRATIO	ON
Γest 4: A	ircraft Performance	Piper V	Varrior II PA-28	001	N6394	С
	TEST DIRECTOR		CREW CHIEF	RANGE	SAFETY OFFICER	Jane 1 FM
Crew	PILOT	Januar enterpo	FTE - INSTRUMENTATION ADVISOR	FTE-P	ERFORMANCE ADVISOR	
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B     B     B     B     B     B     B     T     5     L	e aircraft performance stic airspeeds, includ est endurance est range est climb rate est climb angle linimum sink rate est glide angle performance: akeoff distance 0 ft obstacle clearance anding distance anding a 50 ft obstacle	ng:	s in level flight, climb,	descent, takeof	f, and landing. Ide	ntify
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Test 4: Aircraft Performance	Piper Warrior II PA-28	001	N6394	С

## Flight Maneuver Assessment Criteria

	Assessment Criteria	
Maneuver	Assessment Criteria	4
Short-Field Takeoff		
Line up aircraft with known point on runway, then extend flaps to 25 degrees (second notch). Apply maximum brake pressure, then full throttle. Release brakes and allow aircraft to accelerate to 52 KIAS, then rotate and maintain 52 KIAS until 50 feet AGL. Accelerate to 79 KIAS, then slowly retract flaps and maintain climb until 1000 ft AGL.	Throttle reaches maximum before brakes released Airspeed at rotation within +5/-2 KIAS of 52 KIAS Initial climb speed remains within +5/-2 KIAS of 52 KIAS Final climb speed remains within +/- 5 KIAS of 79 KIAS Steady climb maintained until above 1000 ft AGL	
Level Acceleration		
Climb to 3000 ft MSL and set flaps to 0 deg. Reduce throttle steadily until aircraft is maintaining altitude at stall speed. Increase throttle to full and allow aircraft to stabilize at maximum speed. Reduce manifold pressure in 2 in. Hg or power in 10% increments. Allow airspeed to stabilize at each condition, record data, then continue reducing throttle until aircraft reaches stall speed.	Airspeed stabilizes at each test point Altitude remains within 100 feet throughout maneuver Bank angle remains within 5 deg of level	15
Steady Climbs	See do Tod given to como at standard.	
Climb to 2500 ft MSL and set flaps to 0 deg. Trim to desired airspeed, then set throttle to full. Climb through 4000 ft MSL or for 3 minutes.  If conducting steady climb in sequence with descent maneuver, set throttle to	Airspeed remains within 5 knots of desired airspeed Climb speed remains within +/- 100 ft/min Bank angle remains within 5 deg of level Aircraft remains clear of clouds Aircraft does not encounter moderate or higher turbulence	
full after descending through 2500 ft.		
Steady Descents  Climb to 4000 ft MSL and set flaps to 0 deg. Trim to desired airspeed, then set throttle to idle. Descend through 2500 ft MSL or for 3 minutes.  If conducting steady descents in sequence with climb maneuver, set throttle to idle after climbing through 4000 ft.	Airspeed remains within 5 knots of desired airspeed Descent speed remains within +/- 100 ft/min Bank angle remains within 5 deg of level Aircraft remains clear of clouds Aircraft does not encounter moderate or higher turbulence	
Short-Field Landing	Aircraft established on 3 deg glide path on final approach	
Establish 3 deg glide path on final approach. Trim airspeed to 63 KIAS and set flaps to 40 degree. Land on runway numbers and apply full brakes after nosewheel touches ground. Slow to complete stop on runway.	Aircraft established on 3 deg glide path on final approach Steady descent rate on final approach Airspeed remains within +/- 5 KIAS of 63 KIAS Aircraft touches down within 100 feet of runway numbers Aircraft comes to complete stop for 5 seconds on runway	

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1651 4. AllClaft F	enormance Piper Warnor II PA-28 001 N6394C
	Checklist and Procedures
Task	Procedures
	☐ Verify doors and windows closed and latched
	☐ Verify all passengers are wearing seat belts
Des Elists Observe	□ Verify intercom communication
Pre-Flight Check	☐ Verify instrumentation recording
	☐ Brief location of air-sickness bags and return-to-base criteria
	☐ TD: Conduct Go/No-Go Poll:
TC1: Short Field	☐ TD: Announce start of test card / Conduct Go/No-Go Poll / Announce test conditions
Takeoff	□ PLT: Taxi aircraft into position on runway and set flaps to 25 deg
	□ PLT: Apply full brake, then full throttle. Release brake for maximum acceleration
	☐ FTE: Call out airspeed every 2 seconds
	☐ PLT: Rotate aircraft at 52 KIAS and maintain airspeed until above 50 ft AGL
	□ PLT: Increase airspeed to 79 KIAS and slowly retract flaps. Climb to 1000 ft AGL
	☐ FTE: Call out airspeed and climb rate every 5 seconds
	☐ TD: Report test card complete when reaching 1000 ft AGL
TC2: Level	☐ TD: Announce start of test card / Conduct Go/No-Go Poll / Announce test conditions
Acceleration	□ PLT: Report on conditions / ready to maneuver
	□ PLT: Reduce throttle and maintain stall speed
	□ FTE: Record flight data
	□ PLT: Increase throttle to maximum, allow airspeed to stabilize
	□ FTE: Record and report flight data
	☐ TD: Continue with subsequent test points by requesting throttle decrease in 10% increment
TC3: Steady	☐ TD: Announce start of test card / Conduct Go/No-Go Poll / Announce airspeed test point
Climbs	□ PLT: Report on conditions / ready to maneuver
	□ PLT: Apply full throttle and maintain steady climb at desired airspeed
	□ PLT: Report maneuver complete after climbing through target altitude
	☐ FTE: Report airspeed tracking and climb rate
	☐ TD: Repeat maneuver at next airspeed test point
TC4: Steady	☐ TD: Announce start of test card / Conduct Go/No-Go Poll / Announce airspeed test point
Descents	□ PLT: Report on conditions / ready to maneuver
	☐ PLT: Reduce throttle to idle and maintain steady descent at desired airspeed
	☐ PLT: Report maneuver complete after descending through target altitude
	☐ FTE: Report airspeed tracking and climb rate
	☐ TD: Repeat maneuver at next airspeed test point
TC5: Short Field	☐ TD: Announce start of test card / Conduct Go/No-Go Poll / Announce test conditions
Landing	☐ PLT: Establish aircraft on final approach and report on conditions
41	☐ FTE: Report airspeed every 3 seconds
	☐ PLT: Touch down on runway numbers, then apply full brake and come to complete stop
	☐ TD: Repeat maneuver complete

TIME CARE		FLT No.	DATE	PAGE No.
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Test 4: Aircraft Performance	Piper Warrior II PA-28	001	N6394C	()

		riigiit lest card	-	2020-04-02 4	
	PROJECT No.  Test 4: Aircraft Performance	MAKE AND MODEL Piper Warrior II PA-28	SER No.	REGISTRATION N6394C	
		1.2	(19)	Loss	
		1 – Short Field Takeoff		ND:	
Flaps: 25 de Start: Full b Ition and initial of Obstacle clear Climb airs	Conditions: Flaps: 25 deg (second notch) Start: Full brake, full throttle Rotation and initial climb airspeed: 52 KIAS Obstacle clearance altitude: 50 ft Climb airspeed: 79 KIAS Target altitude: 1000 ft	Monitor: Airspeed Climb rate Altitude	io basi gampiyasali (n	Recovery: Pitch down Increase throttle Increase airspeed Reduce flap angle Recover to level flight	
Condition	Tan Land	Takeoff	5 / S	Observations / Comments	910
System Boll.	Time:		Runway Position:		E-Nac Di
Flaps: 25 deg (notch 2)			Winds:		1976
Air: Ground level Airspeed: 0 to 52 KIAS	Notes:	2527	Anomalies:		
		>> \	Pilot Comments:		
Obstacle Clearance:	Time:		Airspeed:		2000 2000
Flaps: 25 deg	Velimb:		Climb Rate:		
AIT: U to 5U IT AGL Airspeed: 52 KIAS	Climb rate:		Anomalies:		MELEN
	Notes:		Pilot Comments:		
	Time:AVX:		Airspeed:		Marie Merci
Flaps 25 to 0 deg	Vinitial:		Climb Rate:		
Air: 50 to 1000 it AGL Airspeed: 79 KIAS	Climb rate:		Anomalies:		
	Notes:		Pilot Comments:		100

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Test 4: Aircraft Performance	Piper Warrior II PA-28	100	N6394C	O

				2 – Level A	Piper warrior in PA-20	00	N6394C
Throttle Throttle: 100 Throttle: Airspee	Conditions: Flaps: 0 deg Start at cruise airspeed s: 0%, then slow to stall 0%, then accelerate to s: Decrease in 10% incred: Stabilize at each tes	Conditions: Flaps: 0 deg Start at cruise airspeed Throttle: 0%, then slow to stall speed Throttle: 100%, then accelerate to max speed Throttle: Decrease in 10% increments Airspeed: Stabilize at each test point	pəə	Ai Ai Manife Fuel quant	Monitor: Airspeed Altitude RPM Manifold pressure	0	Recovery: Pitch down Increase throttle Increase airspeed Recover to level flight
				Manifold Pressure /	Fuel		Obcounting / Comments
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		lest 4: Aircraft Performance	Tormance	Piper War	Piper Warrior II PA-28	001	N6394C	
				3 – Climb	3 – Climb Performance			
	Conditions:	ons:		4	Monitor: Airspeed		Recovery:	very:
	Flaps: 0 deg Trim at desired airspeed Altitude: 2500 ft	deg d airspeed 500 ft			Altitude Climb rate RPM		Increase throtte Increase airspeed	throttle
Throttle:	100%, then cli	Throttle: 100%, then climb through 4000	ff	Manif Fuel quan	Manifold pressure Fuel quantity and flow rate	0		ingili level
		Climb Rate		Manifold Pressure /	Climb Rate			
a l	Airspeed	@ 2500 ft	RPM	Throttle	@ 4000 ft	Quantity	Observations / Comments	/ Comments
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	Te	PROJECT NO.  Test 4: Aircraft Performance	rformance	MAKE AN Piper Warr	MAKE AND MODEL Piper Warrior II PA-28	SER No.	REGISTRATION N6394C	
				4 – Glide F	4 – Glide Performance			
<u> </u>	Conditions:	ins:		≥ ∢	Monitor: Airspeed		Recovery: Pitch down	
Throttle:	riaps: 0 deg Trim at desired airspeed Altitude: 4000 ft Throttle: idle, then descend through 2500 ft	deg 1 airspeed 200 ft and through 2500	0 ff	CI CI	Altitude Climb rate RPM Manifold pressure		Increase throttle Increase airspeed Recover to level flight	<b>.</b>
	r	Descent Rate @ .a		Manifold	anifold Descent	h 2		
Time		4000 ft	RPM	Throttle	Kate @ 2500 ft	Fuel Quantity	Observations / Comments	nts
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Test 4. Aircraft Performance   Piper Warrior II PA-28   001   N6394C			UMKC CME	Flight Test Card	FLT No.	DATE 2020-04-02	PAGE No.	
Conditions:			PROJECT No.	MAKE AND MODEL	SER No.	REGISTRATION	7	
Conditions:			lest 4: Aircraft Performance	Piper Warrior II PA-28	001	N6394C		
Conditions:				5 – Short Field Landing				
Established on final approach 3-deg glides Slope to runway Altrapeed: 63 KIAS		Conc	ditions:	Monitor:		Recovery		
Established on final approach 3-deg glide slope to runway		Flaps	: 40 deg	Airspeed		Pitch dow	£ .	
3-deg glide slope to runway   Takeoff		Established o	n final approach	Cillib rate		Increase thro	ottle	
Time:    : 3q		3-deg glide s Airspee	slope to runway d: 63 KIAS	Aititude		Increase airst Reduce flap a Recover to leve	peed angle	
Time:    : 34   AvX:								1
Final Approach:				keoff		Observations / Co	omments	
Flaps: 40 deg   Descent rate:	5.1		7		Airspeed			
Airspeed: 63 KIAS		Flaps: 40 deg	Vapproach: Descent rate:		Winds:			
Touchdown:		Alt: 500 ft AGL Airspeed: 63 KIAS			Anomalies:			
Time:			Notes:		Pilot Comments			
Flaps: 40 deg	5.2		Time: 1/ . 40		Airchood.			
Alt: 0 ft AGL Airspeed: 63 KIAS Full brake Full brake  Roll Out: Flaps 40 deg Alt: ground level Airspeed: 0 KIAS Notes:  Notes:  Notes:  Notes:  Notes:  Notes:		Flaps: 40 deg	AVX:		All shadar.			
Airspeed: 63 KIAS		Alt: 0 ft AGL	Vtouchdown:		Touchdown poi	nt:		
Notes:		Airspeed: 63 KIAS Full brake			Anomalies:			
Roll Out:         AVX:           Flaps 40 deg         Voration:           Alt: ground level         Voration:           Airspeed: 0 KIAS         Climb rate:           Notes:         Ontes:		-	Notes:		Pilot Comments			
Vintai:	5.3		Time: (1:43	The original of the second of	Sactor Dictor			
Vrotation: Climb rate: Notes:		Roll Out:	Vinitial		Landing Distanc			
Climb rate:		Flaps 40 deg	Vrotation:		Runway Conditi	on:		
SET AND THE SET AN		Airspeed: 0 KIAS	Climb rate:		Anomalies:			
			Notes:		Pilot Comments			

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Power Required

		Airspeed (m/s)																								
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## Climb Polar

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## Glide Polar

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