TC 3-04.12

Aviation Mission Planning Forms

DECEMBER 2022

This publication supersedes TC 3-04.12, dated 3 August 2016.

Headquarters, Department of the Army

Training Circular
No. 3-04.12

Headquarters
Department of the Army
Washington, D.C., 22 December 2022

Aviation Mission Planning Forms

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***This publication supersedes TC 3-04.12, dated 3 August 2016.**

Preface

TC 3-04.12, in conjunction with TC 3-04.11 and AR 95-1, establishes the forms and documents utilized in support of aircrew mission planning and the aircrew training program (ATP). The aircrew training manuals (ATMs) are published on the Directorate of Training and Doctrine (DOTD) webpage. Due to the removal of the ATMs from the APD queue, this TC is designated as the prescribing publication for the required performance planning cards (PPCs).

The principal audience for TC 3-04.12 is all Army aircrew members and flight personnel.

Commanders, staffs, and subordinates ensure that their decisions and actions comply with applicable United States, international, and in some cases host-nation laws and regulations. Commanders at all levels ensure that their Soldiers operate according to the law of war and the rules of engagement. (See FM 6-27/MCTP 11-10C.)

TC 3-04.12 uses joint terms where applicable. Selected joint and Army terms and definitions appear in both the glossary and the text. For definitions shown in the text, the term is italicized and the number of the proponent publication follows the definition. This publication is not the proponent for any Army terms.

This TC applies to Active Army, Army National Guard/Army National Guard of the United States, United States Army Reserve, and all other individuals flying Army aircraft unless otherwise stated.

The proponent for this publication is the United States Army Training and Doctrine Command. The preparing agency is the DOTD, United States Army Aviation Center of Excellence (USAACE). Send comments and recommendations on DA Form 2028 (*Recommended Changes to Publications and Blank Forms*) to Commander, USAACE, ATTN: ATZQ-TDT-F, Fort Rucker, Alabama 36362-5000, or by email to usarmy.rucker.avncoe.mbx.atzq-tdt-f@mail.mil.

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Introduction

TC 3-04.12 provides rated aviators and unmanned aircraft crewmembers with the required and optional forms that assist in the mission planning process. The instructions for the forms located within this publication are meant to serve as general guidelines for completing the forms. This document does not include the in-depth instructions for all forms, as that information is still located within the individual tasks located on the DOTD website. The individual tasks include detailed information and in-depth procedures to obtain the information required on the forms.

As stated in AR 95-1, TC 3-04.11 prescribes the ATP. TC 3-04.11 states that the ATM is the primary publication used to train aircrews per established standards. This document precedes the ATM in its administration of forms. If a conflict exists between this publication and any other aviation training publication (excepting ARs and TC 3-04.11), this publication takes precedence.

Waiver authority for items other than those listed in AR 95-1 and contained in this publication, individual tasks, or documents resides with the Directors of the DOTD and Directorate of Evaluation and Standardization. All waiver requests must be endorsed by the commander or senior leader of the requesting activity and forwarded to usarmy.rucker.avncoe.mbx.atzq-tdt- f@mail.mil for disposition.

This revision includes numerous changes and additions:

- Removes PPCs for TH-67, MI-17, and OH-58.
- DA Form 7748 (*Army Instrument Flight Log*) was also removed due to standards nonconformance prescribed by the ATMs.
- DA Form 7749 (*Army Aviation Instrument Flight Log, Alternate*) was modified to better align with the ATMs and is now the primary Army Aviation instrument flight log.
- Minor changes to DA Form 5701-47 (*CH-47 Performance Planning Card*). Center of gravity operative and inoperative airspeed sections were added to enhance performance planning.
- DA Form 7916 (*Army Aviation Time Distance and Heading Card*) has been added to this publication to standardize forms for future mission planning software.

TC 3-04.12 contains ten chapters:

- Chapter 1 provides the emergency global positioning system approach card and abbreviated instructions.
- Chapters 2 through 8 contain the performance planning cards for Army aircraft currently in the regular Army inventory.
- Chapter 9 contains the standardized time distance and heading card that should be utilized for tactical flight.
- Chapter 10 references the new instrument flight log.

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Chapter 1
Department of the Army Form 7750

1-1. DA Form 7750 (*Emergency Global Positioning System Approach Card*), page 1, is depicted in figure 1-1.

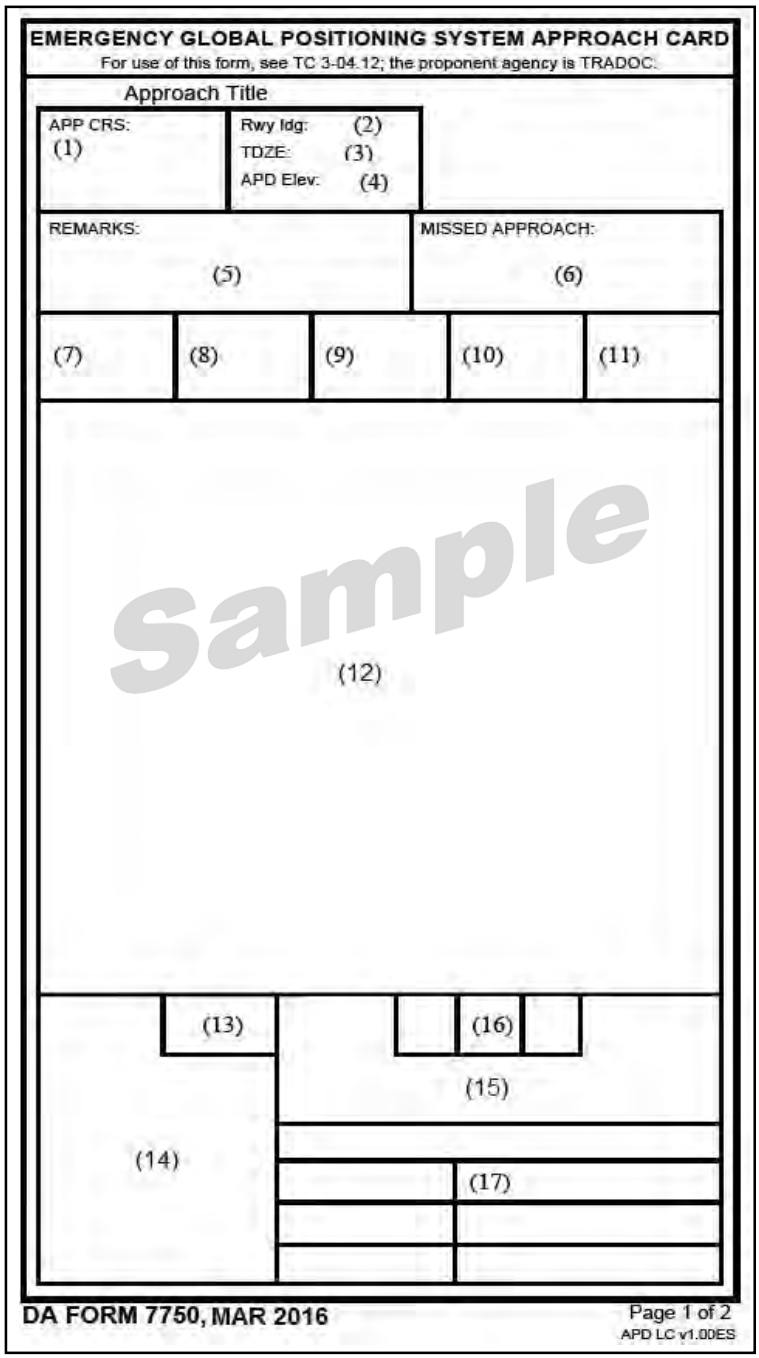

Figure 1-1. Sample of DA Army Form 7750 (page 1)

1-2. Top Portion (Approach Title). Figure 1-2 provides an example of the top portion of the form:

- Top Left. Record city, state, and country or area and country.
- Top Center. Record unit.
- Top Right. Record approach information or airport/location information.

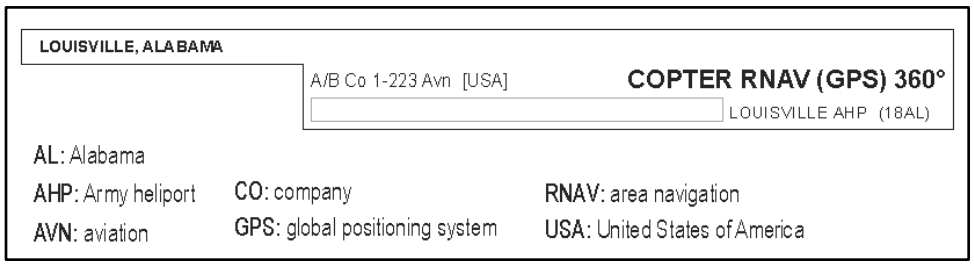

Figure 1-2. Top margin information

1-3. Pilot Briefing Information. The pilot briefing information format consists of three horizontal rows of boxed procedure-specific information along the top edge of the chart. Altitudes, frequencies/channel, and course and elevation values (except height above touchdowns and height above airports) are charted in bold type. The top row contains the primary procedure navigation information, final approach course, landing distance available, touchdown zone, and airport elevations. The middle row contains procedure notes and limitations, icons indicating if nonstandard alternate and/or take-off minimums apply, approach lighting symbology, and the full text description of the missed approach procedure. The bottom row contains air to ground communication facilities and frequencies in the order in which they are used during an approach with the tower frequency box bolded.

- Item 1: Enter the approach course.
- Item 2: Enter the length of the runway or landing area.
- Item 3: Enter the touchdown zone elevation.
- Item 4: Enter airport/landing area elevation.
- Item 5: Enter any special instructions or remarks (figure 1-3).
- Item 6: Enter missed approach instructions (figure 1-3).

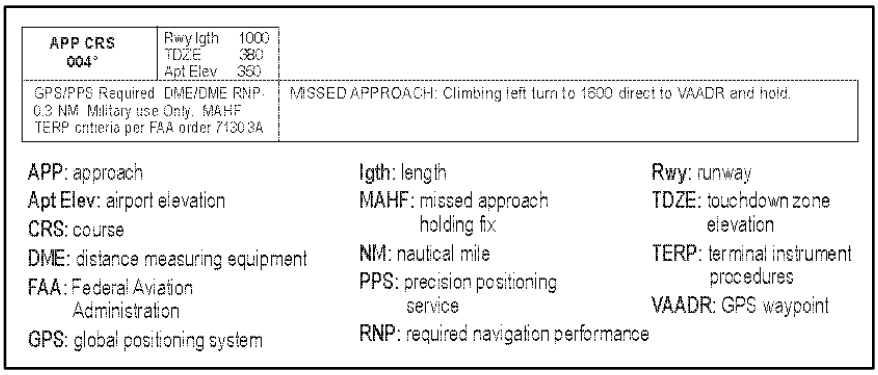

Figure 1-3. Special instructions and missed approach

- Items 7 through 11: Enter agency and frequency as required.
- Item 12: Create plan view diagram according to appropriate task. This section provides the plan view of the approach, along with navigation aids, heading, altitudes, radials, radar required, holding, distances, and/or obstacles (figure 1-4, page 1-3).

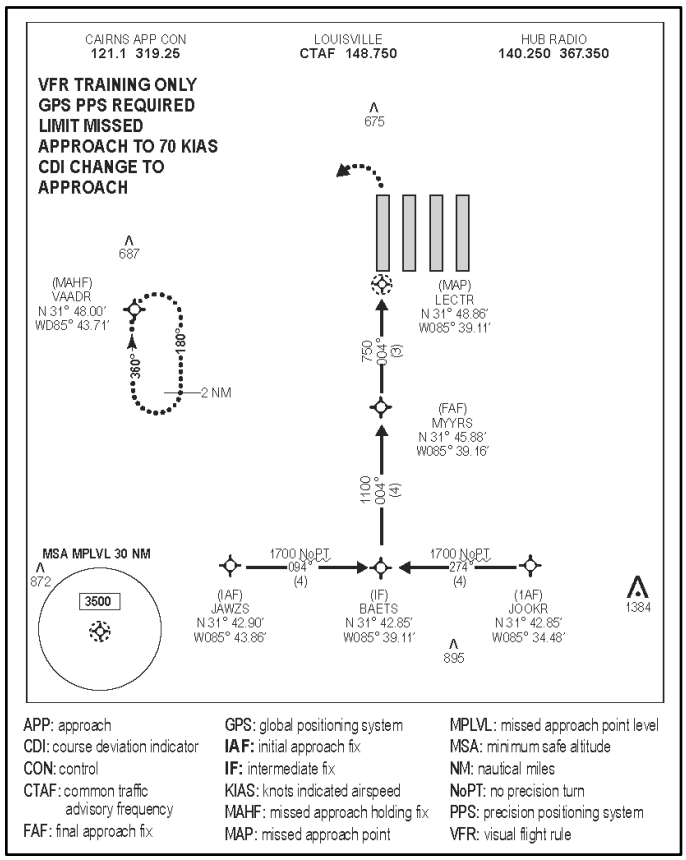

Figure 1-4. Plan view

1-4. Airport Diagram. The objective of the airport diagram is to provide a seamless transition from the en route structure to the terminal environment for arriving aircraft equipped with flight management system and/or global positioning system (GPS) navigational equipment.

- Item 13: The highest point of elevation on the airport.
- Item 14: Location for airport diagram.

1-5. Profile View. The following items aid in the completion of the profile view section:

- Item 15: Create profile view according to appropriate task (figure 1-5).

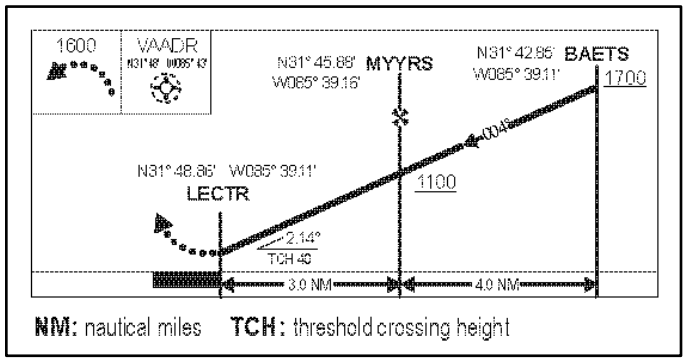

Figure 1-5. Profile view

- Item 16: Enter missed approach icons.
- Item 17: In the top row enter aircraft category as applicable for the approach flown. The left column will contain the type of approach being flown. In the center, and separated into columns as applicable will be the decision height or minimum descend altitude (as applicable) (figure 1-6).

CATEGORY	COPTER
H-360	750 ½ 400 (1000-3)

Figure 1-6. Category and approach sample

1-6. DA Form 7750, page 2, is depicted in figure 1-7.

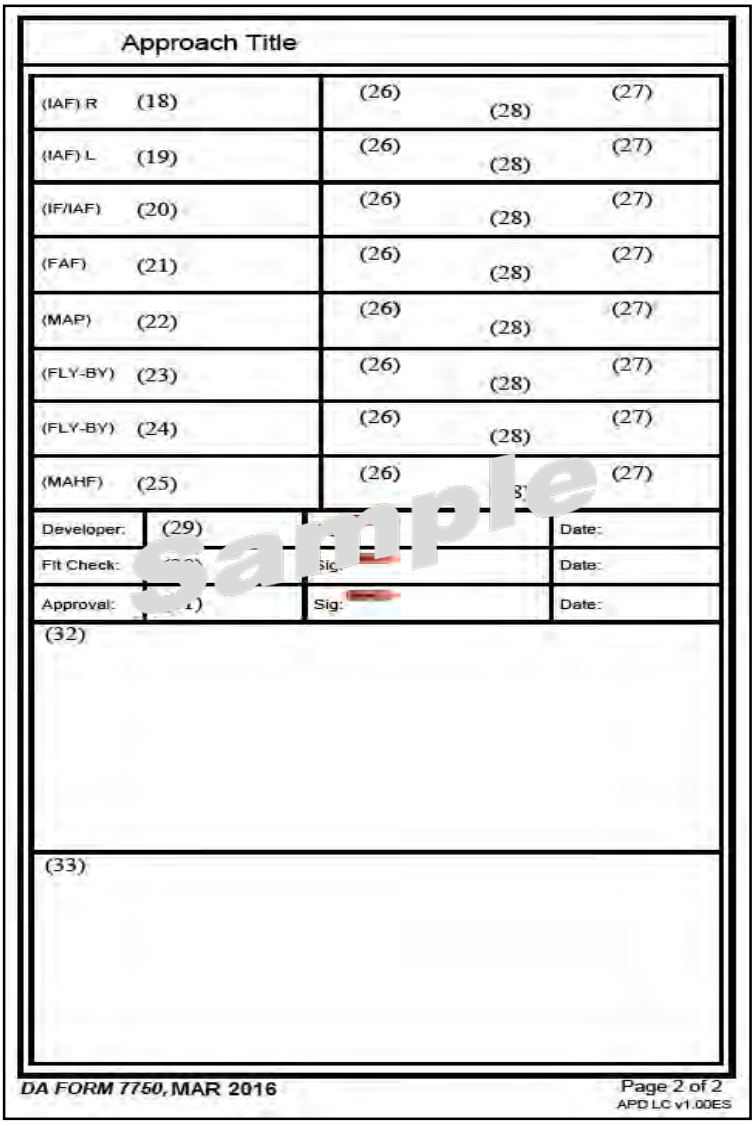

Figure 1-7. Department of the Army Form 7750 (page 2)

1-7. Course information. The following items aid in the completion of course information:

- Item 18: Enter initial approach fix-right waypoint name.
- Item 19: Enter initial approach fix-left waypoint name.
- Item 20: Enter intermediate fix/initial approach fix waypoint name.
- Item 21: Enter final approach fix waypoint name.
- Item 22: Enter missed approach point waypoint name.
- Item 23: Enter fly-by waypoint name.
- Item 24: Enter fly-by waypoint name.
- Item 25: Enter missed approach holding fix waypoint name.
- Item 26: Enter latitude coordinates.
- Item 27: Enter longitude coordinates.
- Item 28: Enter military grid reference system (MGRS) coordinates.

1-8. Area Navigation (RNAV) (GPS) Developer, Flight Check, and Approval. The following items aid in the completion of RNAV developer, flight check, and approval:

- Item 29: Enter developer name, signature, and date.
- Item 30: Enter flight checked by name, signature, and date.
- Item 31: Enter approval authority name, signature, and date.
- Item 32: Enter appropriate warnings, or other applicable information.
- Item 33: Enter notes, remarks, or other pertinent information regarding this approach.

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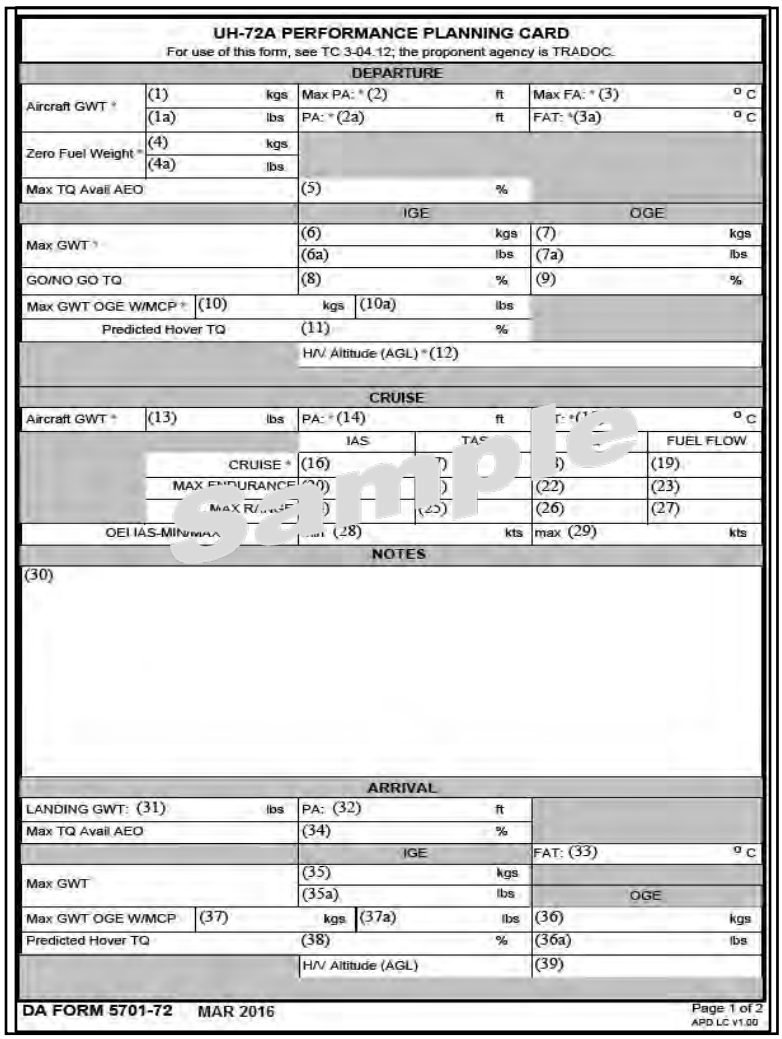
Chapter 2

Department of the Army Form 5701-72

2-1. Figures 2-1 and 2-2 (page 2-2) provide a sample of DA Form 5701-72 (*UH-72A Performance Planning Card*). This form is used to accomplish pre-mission planning requirements according to AR 95-1.



UH-72A PERFORMANCE PLANNING CARD

For use of this form, see TC 3-04.12; the proponent agency is TRADOC.

DEPARTURE

Aircraft GWT *	(1)	kgs	Max PA: * (2)	ft	Max FA: * (3)	°C
	(1a)	lbs	PA: * (2a)	ft	FAT: * (3a)	°C
Zero Fuel Weight *	(4)	kgs				
	(4a)	lbs				
Max TQ Avail AEO			(5)	%		
			IGE		OGE	
Max GWT *			(6)	kgs	(7)	kgs
			(6a)	lbs	(7a)	lbs
GO/NO GO TQ			(8)	%	(9)	%
Max GWT OGE W/MCP *	(10)	kgs	(10a)	lbs		
Predicted Hover TQ			(11)	%		
			H/V Altitude (AGL) * (12)			

CRUISE

Aircraft GWT *	(13)	lbs	PA: * (14)	ft	[illegible]	°C
			IAS	TAS		FUEL FLOW
CRUISE *			(16)	[illegible]		(19)
MAX ENDURANCE			(20)	[illegible]	(22)	(23)
MAX R/[illegible]			[illegible]	(25)	(26)	(27)
OEI IAS-MIN/MAX			[illegible] (28)	kts	max (29)	kts

NOTES

(30)

ARRIVAL

LANDING GWT: (31)	lbs	PA: (32)	ft		
Max TQ Avail AEO		(34)	%		
		IGE		FAT: (33)	°C
Max GWT		(35)	kgs		
		(35a)	lbs	OGE	
Max GWT OGE W/MCP	(37) kgs	(37a)	lbs	(36)	kgs
Predicted Hover TQ		(38)	%	(36a)	lbs
		H/V Altitude (AGL)		(39)	

DA FORM 5701-72 MAR 2016 Page 1 of 2 APD LC v1.00

Figure 2-1. Sample DA Form 5701-72 (page 1)

Figure 2-2. Sample DA Form 5701-72 (page 2)

2-2. Departure/Maximum Data. The current aircraft training manual (ATM) for detailed step-by-step instructions can be found at the DOTD Flight Training Branch (FTB) website located in the references section. The following items aid in the completion of departure data:

- Item 1: Record total planning aircraft gross weight (GWT) at takeoff.
- Item 1a: Record total planning aircraft GWT at takeoff in pounds (lbs).
- Item 2: Record forecast maximum pressure altitude (PA).
- Item 2a: Record forecasted PA for time of departure (TOD).
- Item 3: Record forecast maximum free air temperature (FAT) for TOD.
- Item 3a: Record forecast FAT for time of departure.
- Item 4: Record zero fuel weight.
- Item 4a: Record zero fuel weight.
- Item 5: Record the maximum torque (TQ) available with all engines operating.
- Item 6: Record maximum GWT (in ground effect [IGE]) in kilograms (kgs).
- Item 6a: Record maximum GWT (IGE) in lbs.
- Item 7: Record maximum GWT (out of ground effect [OGE]) in kgs.
- Item 7a: Record maximum GWT (OGE) in lbs.
- Item 8: Record Go NO/GO TQ value (IGE).
- Item 9: Record Go NO/GO TQ value (OGE).
- Item 10: Record maximum GWT OGE w/maximum continuous power in kgs.
- Item 10a: Record maximum GWT OGE w/maximum continuous power in lbs.

- Item 11: Record the torque value.
- Item 12: Enter the minimum altitude at a stationary hover from which a safe landing can be expected after a single engine failure. Enter “NONE” to indicate no avoidance area.

2-3. Cruise Data. The following items aid in the completion of cruise data:

- Item 13: Record cruise aircraft GWT.
- Item 14: Record the planned cruise PA.
- Item 15: Record forecast FAT at cruise altitude.
- Item 16: Record cruise indicated airspeed (IAS).
- Item 17: Record true airspeed (TAS).
- Item 18: Record cruise TQ.
- Item 19: Record cruise fuel flow.
- Item 20: Record maximum endurance IAS.
- Item 21: Record maximum endurance TAS.
- Item 22: Record maximum endurance TQ.
- Item 23: Record maximum endurance fuel flow.
- Item 24: Record maximum range IAS.
- Item 25: Record maximum range TAS.
- Item 26: Record the maximum range TQ.
- Item 27: Record the maximum range fuel flow.
- Item 28: Record minimum one engine inoperative IAS.
- Item 29: Record maximum one engine inoperative IAS.
- Item 30: Provides an area for pertinent notes on information found within the form, and is continued on page 2 of the form.

2-4. Arrival data. Item 31 through 39: Fill out with the appropriate information for the destination conditions.

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Chapter 3

Department of the Army Form 5701-47

3-1. Figure 3-1 provides an example of DA Form 5701-47. This form is used to accomplish pre-mission planning requirements according to AR 95-1.

CH-47 PERFORMANCE PLANNING CARD

For use of this form, see TC 3-04.12; the proponent agency is TRADOC.

DEPARTURE DATA

OPERATING WT: (1) T/O FUEL WT: (2) LOAD: (3)

PRESSURE ALT: (4) FAT: (5) TAKEOFF GWT: (6) / (7)

FUEL MANAGEMENT

TIME: (8) QTY: (8) PPH (8) BURNOUT: (8) RSV (8)

	DUAL ENGINE				SINGLE ENGINE			
	NO LOAD		WITH LOAD		NO LOAD		WITH LOAD	
MAX TQ AVAIL - 10 MIN. / S/E	(9)				(10)			
MAX TORQUE AVAIL - 30 MIN	(11)							
CONTINUOUS TORQUE AVAIL	(12)				(13)			
MAX GWT TO HVR 10 MIN./SE IGE/OGE	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
MAX GWT TO HVR 30 MIN. IGE/OGE	(22)	(23)	(24)	(25)				
MAX GWT TO HOVER CONT IGE/OGE	(26)	(27)	(28)	(29)				
PREDICTED HVR TQ - IGE/OGE	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)
GO / NO GO TQ	(38)		(39)					
MAX MSN PROFILE GWT / VALIDATION	(40)	(41)	(42)	(43)				

CRUISE

CGI OPERATIVE LIMIT: ( ) / ( ) CGI ENGINE: (48) / (49) DRAG FACTOR: (50) / (51)

CGI INOP LIMIT: (46) / ( )

PRESSURE ALT: (52) FAT: (53)	DUAL ENGINE		SINGLE ENGINE	
	NO LOAD	WITH LOAD	NO LOAD	WITH LOAD
MAX TQ AVAIL - 10 MIN / S/E	(54)		(55)	
CONTINUOUS TORQUE AVAIL	(56)		(57)	
MAX GWT CONT PWR	(58)	(59)		
MAX R/C AND ENDURANCE IAS	(60)	(61)		
MAX RANGE IAS	(62)	(63)		
CRUISE SPEED - IAS	(64)	(65)	(66)	(67)
CRUISE TQ (+ DRAG FACTOR)	(68)	(69)	(70)	(71)
CRUISE FUEL FLOW	(72)	(73)	(74)	(75)
MINIMUM SINGLE ENGINE IAS			(76)	(77)
MAXIMUM SINGLE ENGINE IAS			(78)	(79)
MAX GWT S/E / SESC		(80)	(81)	(82)

ARRIVAL DATA

LANDING GWT: (83) / (84)

PRESSURE ALT: (85) FAT: (86)	DUAL ENGINE				SINGLE ENGINE			
	NO LOAD		WITH LOAD		NO LOAD		WITH LOAD	
MAX TQ AVAIL - 10 MIN./ S/E	(87)				(88)			
MAX TQ AVAIL - 30 MIN.	(89)							
CONTINUOUS TORQUE AVAIL	(90)				(91)			
MAX GWT TO HVR 10 MIN./SE IGE/OGE	(92)	(93)	(94)	(95)	(96)	(97)	(98)	(99)
MAX GWT TO HVR 30 MIN. IGE/OGE	(100)	(101)	(102)	(103)				
MAX GWT TO HOVER CONT IGE/OGE	(104)	(105)	(106)	(107)				
PREDICTED HVR TQ - IGE / OGE	(108)	(109)	(110)	(111)	(112)	(113)	(114)	(115)

DA FORM 5701-47, OCT 2022 PREVIOUS EDITION IS OBSOLETE. APD AEM v1.00

Figure 3-1. Sample DA Form 5701-47

Note. If any computed value exceeds operating limitations, enter "UA" (unable). Additionally, enter "N/A" (not applicable) when it does not apply.

3-2. Departure data. The current ATM for detailed step-by-step instructions can be found at the DOTD FTB website located in the references section. The following items aid in the completion of departure data:

- Item 1: Record the operating weight of the aircraft.
- Item 2: Record the takeoff fuel weight.
- Item 3: Record the maximum anticipated weight of the load(s) during the mission profile.
- Item 4: Record the pressure altitude forecast for the time of departure.
- Item 5: Record the FAT forecast for the time of departure.
- Item 6: Record the takeoff GWT.
- Item 7: Record the takeoff GWT.
- Item 8: Use this space to record the inflight fuel consumption check.
  - Time.
  - Quantity.
  - Rate.
  - Burnout.
  - Reserve.
- Item 9: Record the maximum 10 minute TQ limit available for dual engine operation.
- Item 10: Record the maximum TQ available for single engine operation.
- Item 11: Record the maximum 30 minute TQ limit available for dual engine operation.
- Item 12: Record continuous TQ available for dual engine operation.
- Item 13: Record continuous TQ available for single engine operation.

Note. The procedure for calculating items 14 thru 29 apply to both "NO LOAD" and "WITH LOAD."

- Items 14 and 15: Record the maximum IGE/OGE GWT for the desired wheel height without a load.
- Items 16 and 17: Record the maximum IGE/OGE GWT for the desired wheel height with a load.
- Items 18 and 19: Record the maximum GWT to hover single-engine IGE/OGE.
- Items 20 and 21: Record the maximum allowable GWT to hover for single-engine operation IGE/OGE for forecast conditions.
- Items 22 and 23: Record the maximum GWT to hover IGE/OGE.
- Items 24 and 25: Record the maximum GWT to hover IGE/OGE.
- Items 26 and 27: Record the maximum GWT to hover IGE/OGE.
- Items 28 and 29: Record the maximum GWT to hover IGE/OGE.
- Item 30: Record the TQ required to hover at the desired wheel height IGE.
- Item 31: Record the TQ required to hover at the desired wheel height OGE.
- Item 32: Record the TQ required to hover at the desired wheel height IGE.
- Item 33: Record the TQ required to hover at the desired wheel height OGE.
- Item 34: Record the TQ required to hover at the desired wheel height IGE.
- Item 35: Record the TQ required to hover at the desired wheel height OGE.
- Item 36: Record the TQ required to hover at the desired wheel height IGE.
- Item 37: Record the TQ required to hover at the desired wheel height OGE.
- Item 38: Record the GO/NO-GO TQ value.
- Item 39: Refer to item 38 for definition.
- Item 40: Record the maximum allowable GWT for mission profile.
- Item 41: Record the validation factor.
- Item 42: Record the maximum allowable GWT for the entire mission profile at the appropriate hover altitude.

- Item 43: Record the predicted TQ required to hover at the appropriate hover altitude and at the maximum allowable GWT for the mission profile.

3-3. Cruise data. The following items aid in the completion of cruise data:

- Item 44: Record the maximum airspeed for forecast cruise conditions.
- Item 45: Record the maximum airspeed for forecast cruise conditions.
- Item 46: Record the maximum airspeed for forecast cruise conditions.
- Item 47: Record the maximum airspeed for forecast cruise conditions.
- Item 48: Record the maximum airspeed for forecast cruise conditions with longitudinal cyclic trims (LCTs) retracted with velocity never exceed (V_{ne}).
- Item 49: Record the maximum airspeed for forecast cruise conditions with LCTs retracted.
- Items 50 and 51: Record the drag factor value.
- Item 52: Record the planned cruise or highest pressure altitude along the route.
- Item 53: Record the forecast FAT at cruise or at the highest PA.
- Item 54: Record the maximum 10 minute TQ limit available for dual-engine operation.
- Item 55: Record the maximum TQ available for single-engine operation.
- Item 56: Record continuous TQ available for dual-engine operation.
- Item 57: Record continuous TQ available for single-engine operation.
- Item 58: Record maximum GWT for continuous power.
- Item 59: Record maximum GWT for continuous power.
- Item 60: Record the maximum rate of climb and endurance airspeed for the aircraft weight.
- Item 61: Record the maximum rate of climb and endurance airspeed for the aircraft weight.
- Item 62: Record the maximum range airspeed for the aircraft weight.
- Item 63: Record the maximum range airspeed for the aircraft weight.
- Item 64: Record the desired cruise speed.
- Item 65: Record the desired cruise speed.
- Item 66: Record the desired cruise speed.
- Item 67: Record the desired cruise speed.
- Item 68: Record the TQ required to maintain the cruise airspeed listed in item 62.
- Item 69: Record the TQ required to maintain the cruise airspeed listed in item 63.
- Item 70: Record the TQ required to attain the single-engine cruise airspeed listed in item 64.
- Item 71: Record the TQ required to attain the single-engine cruise airspeed listed in item 65.
- Item 72: Record the predicted fuel flow.
- Item 73: Record the predicted fuel flow.
- Item 74: Record the predicted fuel flow.
- Item 75: Record the predicted fuel flow.
- Item 76: Record the airspeed that allows continued single-engine operation.
- Item 77: Record the airspeed that allows continued single-engine operation.
- Item 78: Record the maximum airspeed wills allow continued single-engine operation.
- Item 79: Record the maximum airspeed wills allow continued single-engine operation.
- Item 80: Record the maximum allowable gross weight that allows sustained single-engine flight.
- Item 81: Record the maximum altitude attainable that allows sustained single-engine flight.
- Item 82: Record the maximum altitude attainable that allows sustained single-engine flight.

3-4. Arrival data. The following items aid in the completion of arrival data.

- Item 83: Record the estimated landing GWT.
- Item 84: Record the estimated landing GWT.
- Item 85: Record the forecast PA at destination at estimated time of arrival.
- Item 86: Record the forecast FAT at destination at estimated time of arrival.

- Item 87: Record the maximum TQ available for dual-engine operation.
- Item 88: Record the maximum TQ available for single-engine operation.
- Item 89: Record the maximum TQ available (30 minutes) for dual-engine operation.
- Item 90: Record continuous TQ available for dual-engine operation.
- Item 91: Record continuous TQ available for single-engine operation.
- Items 92 and 93: Record the maximum GWT to hover IGE/OGE.
- Items 94 and 95: Record the maximum GWT to hover OGE.
- Item 96 and 97: Record the maximum allowable GWT to hover for single-engine operation at the desired wheel height IGE/OGE.
- Item 99 and 99: Record the maximum allowable GWT to hover for single-engine operation IGE/OGE.
- Item 100 and 101: Record the maximum gross weight to hover IGE/OGE.
- Item 102 and 103: Record the maximum GWT to hover IGE/OGE.
- Item 104 and 105: Record the maximum GWT to hover IGE/OGE.
- Item 106 and 107: Record the maximum GWT to hover IGE/OGE.
- Item 108: Record the TQ required to hover at the desired wheel height IGE for forecast arrival conditions.
- Item 109: Record the TQ required to hover at the desired wheel height OGE.
- Item 110: Record the predicted TQ required to hover at a height that will place the load(s) approximately 10 feet above ground level (AGL) and IGE.
- Item 111: Record the predicted TQ required to hover OGE.
- Item 112: Record the TQ required to hover at the desired wheel height IGE.
- Item 113: Record the predicted TQ required to hover OGE.
- Item 114: Record the predicted TQ required to hover at a height that will place the load(s) approximately 10 feet AGL and IGE.
- Item 115: Record the predicted TQ required to hover single engine OGE.

Chapter 4

Department of the Army Form 5701-64

4-1. Figures 4-1 and 4-2 (page 4-2) provide examples of DA Form 5701-64 (*AH-64 Performance Planning Card*). This form is used to accomplish pre-mission planning requirements according to AR 95-1.

AH-64 PERFORMANCE PLANNING CARD
For use of this form, see TC 3-04.12; the proponent agency is TRADOC.

DEPARTURE

PA (1)	FAT (2)	TAKEOFF GWT (3)
LOAD (4) lb		
FUEL MSN (5) lb		

	DUAL ENG	SINGLE ENG #1	SINGLE ENG #2
	ATF: (6)	ETF: (7)	ETF: (7)
	TR (8)	TR (8)	TR (8)
MAX TORQUE AVAILABLE	(9)	(10)	(10)
MAX ALLOWABLE GWT *(OGE/IGE)*	(11) / (12)	n/a	n/a
GO/NO-GO TORQUE *(OGE/IGE)*	(13) / (14)		
PREDICTED HOVER TORQUE *(OGE/IGE)*	(15) / (16)		

REMARKS:
(45)

CRUISE DATA

PA (17)	AT (18)	Vne (19)	Vh (20)

	DUAL ENG	SINGLE ENG #1	SINGLE ENG #2
	TR (21)	TR (21)	TR (21)
MAX TORQUE AVAILABLE	(22)	(23)	(23)
CRUISE SPEED TAS	(24)	n/a	
CRUISE TORQUE	(25)	n/a	
CRUISE FUEL FLOW	(26)	n/a	
CONT TORQUE AVAILABLE	(27)	n/a	
MAX R/C OR ENDURANCE TAS	(28)		
MAX RANGE TAS	(29)		
SINGLE-ENG CAPABILITY TAS *(MIN/MAX)*		(30) / (31)	
MAX ALLOWANCE GWT - SINGLE ENG		(32)	
SINGLE-ENG MAX R/C TAS *(MAX GWT)*		(33)	

DA FORM 5701-64 MAR 2016 PREVIOUS EDITIONS ARE OBSOLETE. Page 1 of 2
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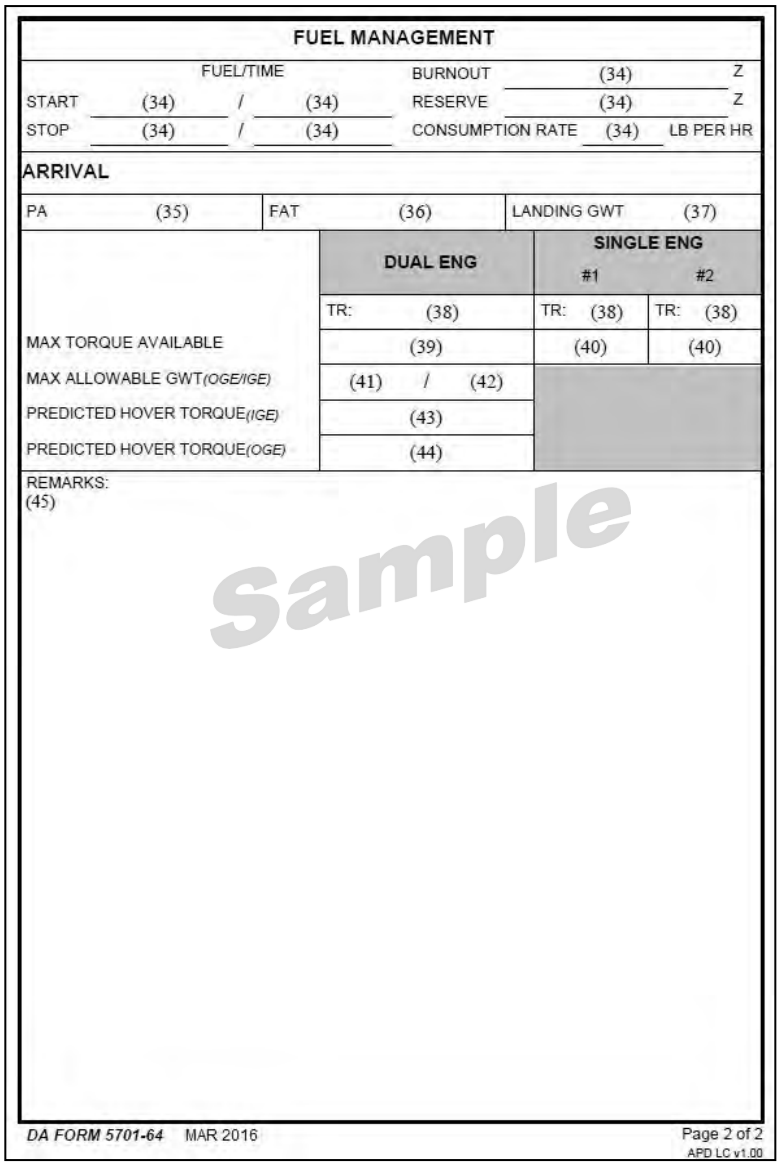
Figure 4-1. Sample DA Form 5701-64 (page 1)



FUEL MANAGEMENT

	FUEL/TIME		BURNOUT	(34)	Z
START	(34) / (34)		RESERVE	(34)	Z
STOP	(34) / (34)		CONSUMPTION RATE	(34)	LB PER HR

ARRIVAL

PA (35)	FAT (36)	LANDING GWT (37)

	DUAL ENG	SINGLE ENG #1	SINGLE ENG #2
	TR: (38)	TR: (38)	TR: (38)
MAX TORQUE AVAILABLE	(39)	(40)	(40)
MAX ALLOWABLE GWT *(OGE/IGE)*	(41) / (42)		
PREDICTED HOVER TORQUE *(IGE)*	(43)		
PREDICTED HOVER TORQUE *(OGE)*	(44)		

REMARKS:
(45)

Sample

DA FORM 5701-64 MAR 2016 Page 2 of 2
APD LC v1.00

Figure 4-2. Sample DA Form 5701-64 (page 2)

4-2. Departure data. The following items aid in the completion of departure data:

- Item 1: Record the PA at the departure point at the estimated time of departure.
- Item 2: Record the FAT at the departure point at the estimated time of departure.
- Item 3: Record takeoff GWT.
- Item 4: Record the weight of the external stores during the mission profile that can be jettisoned.
- Item 5: Record fuel weight with reserve required at takeoff to complete the mission.
- Item 6: Record the aircraft torque factors (ATFs).
- Item 7: Record the individual engine TQ factors.
- Item 8: Record the TQ ratio.
- Items 9 and 10: Record the maximum TQ available for a dual engine and a single engine).
- Items 11 and 12: Record the maximum allowable GWT (OGE/IGE).
- Items 15 and 16: Record the predicted hover TQ (OGE/IGE).

4-3. Cruise data.

- Item 17: Record the maximum PA.

- Item 18: Record the maximum FAT.
- Item 19: Record the V_{ne} true airspeed.
- Item 20: Record the horizontal velocity true airspeed.
- Item 21: Record the TQ ratio.
- Items 22 and 23: Record the maximum TQ available for a dual engine and a single engine).
- Item 24: Record the cruise speed.
- Item 25: Record the cruise torque.
- Item 26: Record the predicted dual engine fuel flow.
- Item 27: Record the continuous TQ available.
- Item 28: Record the maximum rate of climb or endurance TAS.
- Item 29: Record the maximum range TAS.
- Items 30 and 31: Record the minimum and maximum single-engine capability TAS.
- Item 32: Record the maximum allowable GWT (single engine).
- Item 33: Record the single-engine maximum rate of climb true airspeed at maximum GWT.
- Item 34: Use this space to record the in-flight fuel consumption check, to include fuel burnout and appropriate visual flight rules or instrument flight rule reserve.

4-4. Arrival.

- Item 35: Record the forecast pressure altitude at the destination at the estimated time of arrival.
- Item 36: Record the forecast free air temperature at the destination at the estimated time of arrival.
- Item 37: Record the estimated landing GWT.
- Item 38: Record the TQ ratio for both dual engine and single engine.
- Item 39: Record the maximum dual-engine TQ available.
- Item 40: Record the maximum single-engine TQ available.
- Items 41 and 42: Record the maximum allowable GWT (OGE/IGE).
- Item 43 and 44: Record the predicted hover TQ (IGE/OGE).
- Item 45: Use this area to record various pertinent performance planning remarks.

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Chapter 5

Department of the Army Form 5701-60

5-1. Figures 5-1 and 5-2 (page 5-2) provide samples of DA Form 5701-60 (*H-60 Performance Planning Card*). This form is used to accomplish pre-mission planning requirements according to AR 95-1.

H-60 PERFORMANCE PLANNING CARD

For use of this form, see TC 3-04.12; the proponent agency is TRADOC.

DEPARTURE

AIRCRAFT GWT: (3) lb	PA: (1) ft / (1) ft	FAT: (2) ◦C/ (2) ◦C				
STORES WEIGHT: (4) lb	DUAL ENGINE			SINGLE ENGINE		
FUEL WEIGHT: (5) lb				# 1		# 2
ZERO FUEL WEIGHT: (14) lb						
	ATF: (6)			ETF: (6)		ETF: (6)
TORQUE RATIO	(7)			(7)		(7)
MAX TORQUE AVAILABLE	(8) %			(8) %		(8) %
MAX ALLOWABLE GWT OGE/ IGE	(9) lb	(9) lb				
GO/NO GO TORQUE OGE/ IGE	(10) %	(10) %				
MAX HOVER HEIGHT IGE	(11) ft					
PREDICTED HOVER TORQUE	(12) %			(12) %		(12) %
MIN SE AIRSPEED - IAS- WO/W STORES				[illegible] kts		(13) kts

REMARKS:
(15)

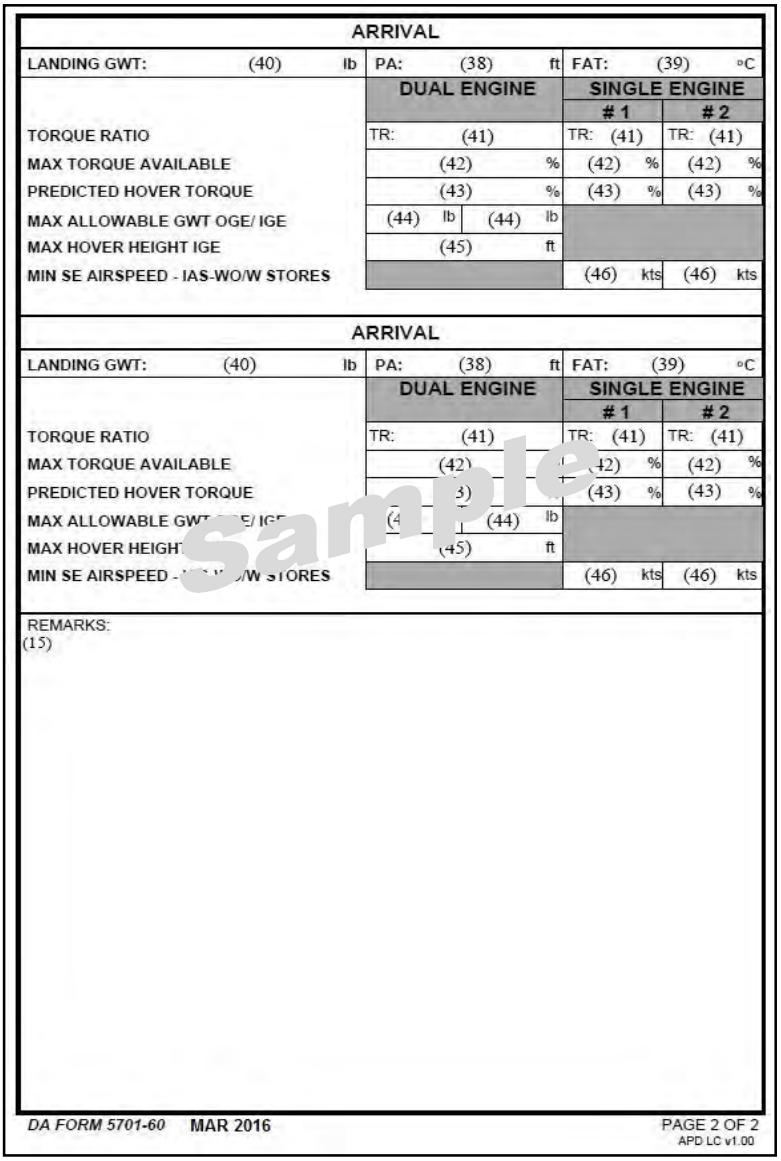
EMER SE IAS:

CRUISE

PA: (16) ft	FAT: (17) ◦C	MAX ANGLE: (36) ◦		Vne-IAS: (37) kts		
		DUAL ENGINE		SINGLE ENGINE		
				# 1		# 2
MAX TORQUE AVAILABLE		(20) %		(31) %		(31) %
MIN / MAX - IAS		(18) kts	(18) kts	(29) kts		(29) kts
CRUISE SPEED - IAS / TAS		(19) kts	(19) kts	(30) kts		(30) kts
CRUISE TORQUE / CONT TORQUE AVAILABLE		(21) %	(21) %	(32) %		(32) %
CRUISE FUEL FLOW		(22) pph		(33) pph		
MAX RANGE - IAS / TORQUE		(23) kts	(23) %			
MAX ENDURANCE - IAS / TORQUE		(24) kts	(24) %			
CRITICAL TORQUE		(25) %				
MAX ALLOWABLE GWT		(26) lb		(34) lb		
OPTIMUM IAS AT MAX ALLOWABLE GWT		(26) kts		(34) kts		
MAX R/C - IAS / TORQUE		(27) kts	(27) %			
MAX ALTITUDE - MSL/MAX ENDURANCE-IAS		(28) ft	(28) kts	(35) ft		(35) kts

DA FORM 5701-60 MAR 2016 PREVIOUS EDITION IS OBSOLETE. PAGE 1 OF 2
APD LC v1.00

Figure 5-1. Sample DA Form 5701-60 (page 1)



ARRIVAL

LANDING GWT: (40) lb	PA: (38) ft	FAT: (39) °C	
	DUAL ENGINE	SINGLE ENGINE # 1	SINGLE ENGINE # 2
TORQUE RATIO	TR: (41)	TR: (41)	TR: (41)
MAX TORQUE AVAILABLE	(42) %	(42) %	(42) %
PREDICTED HOVER TORQUE	(43) %	(43) %	(43) %
MAX ALLOWABLE GWT OGE/ IGE	(44) lb / (44) lb		
MAX HOVER HEIGHT IGE	(45) ft		
MIN SE AIRSPEED - IAS-WO/W STORES		(46) kts	(46) kts

ARRIVAL

LANDING GWT: (40) lb	PA: (38) ft	FAT: (39) °C	
	DUAL ENGINE	SINGLE ENGINE # 1	SINGLE ENGINE # 2
TORQUE RATIO	TR: (41)	TR: (41)	TR: (41)
MAX TORQUE AVAILABLE	(42)	(42) %	(42) %
PREDICTED HOVER TORQUE	(43)	(43) %	(43) %
MAX ALLOWABLE GWT OGE/ IGE	(44) lb		
MAX HOVER HEIGHT	(45) ft		
MIN SE AIRSPEED - W STORES		(46) kts	(46) kts

REMARKS:
(15)

DA FORM 5701-60 MAR 2016 PAGE 2 OF 2
APD LC v1.00

Figure 5-2. Sample DA Form 5701-60 (page 2)

5-2. Departure data.

- Item 1: Record the forecast maximum PA for the mission and current PA for time and location of departure.
- Item 2: Record the forecast maximum FAT for the mission and free air temperature for time and location of departure.
- Item 3: Record the total planned aircraft GWT at takeoff.
- Item 4: Record the planned weight of any jettisonable items.
- Item 5: Record the total planned fuel weight (internal and external) at takeoff.
- Item 6: Record the ATF and engine torque factor.
- Item 7: Record the torque ratio.
- Item 8: Record the maximum TQ available.
- Item 9: Record the maximum allowable GWT (OGE/IGE).
- Item 10: Record the GO/NO GO TQ.
- Item 11: Record the maximum hover height IGE.
- Item 12: Record the estimated TQ required for a stationary hover.

- Item 13: Record the minimum airspeed to sustain level flight single engine without or with stores.
- Item 14: Record the zero fuel weight.
- Item 15: Enter any applicable remarks.

5-3. Cruise data.

- Item 16: Record the planned cruise PA.
- Item 17: Record the forecast FAT at the planned cruise PA.
- Item 18: Record the minimum and maximum airspeeds.
- Item 19: Record the selected IAS/TAS.
- Item 20: Record the maximum TQ available.
- Item 21: Record the continuous TQ available.
- Item 22: Record the fuel flow.
- Item 23: Record the maximum range IAS and TQ.
- Item 24: Record the maximum endurance IAS and TQ.
- Item 25: Record the critical torque.
- Item 26: Record the maximum allowable GWT the aircraft can fly at cruise conditions and the associated maximum endurance airspeed.
- Item 27: Record the maximum rate of climb IAS and TQ.
- Item 28: Record the maximum altitude the aircraft can fly at maximum endurance airspeed.
- Item 29: Record the minimum and maximum airspeeds.
- Item 30: Record the selected cruise speed.
- Item 31: Record the maximum TQ available.
- Item 32: Record the continuous TQ available.
- Item 33: Record the fuel flow.
- Item 34: Record the maximum allowable GWT the aircraft can fly at maximum endurance airspeed.
- Item 35: Record the maximum altitude the aircraft can fly at maximum endurance airspeed single engine.
- Item 36: Record the level flight angle of bank at which blade stall will begin to occur.
- Item 37: Record the V_{ne}.

5-4. Arrival data.

- Item 38: Record the forecast PA for time of arrival.
- Item 39: Record the forecast FAT for time of arrival.
- Item 40: Record the estimated GWT for arrival.
- Item 41: Record the TQ ratios for dual and single engine.
- Item 42: Record the maximum TQ available for dual and single engine.
- Item 43: Record the predicted hover torque.
- Item 44: Record the maximum allowable GWT.
- Item 45: Record the maximum hover height.
- Item 46: Record the minimum single-engine airspeed.

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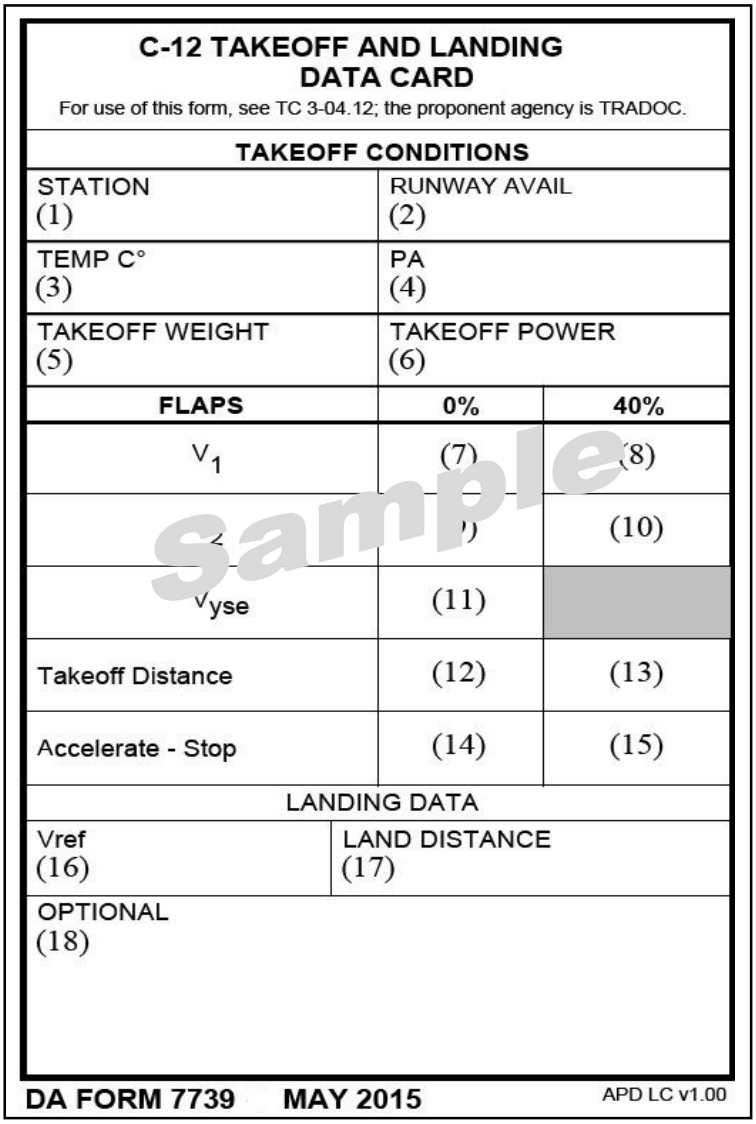
Chapter 6

Department of the Army Form 7739

6-1. Figures 6-1 and 6-2 (page 6-2) provide samples of DA Form 7739 (*C-12 Takeoff and Landing Data Card*). This form is used to accomplish pre-mission planning requirements according to AR 95-1.

6-2. DA Form 7739, page 1, covers items 1 through 18 (figure 6-1).



C-12 TAKEOFF AND LANDING DATA CARD

For use of this form, see TC 3-04.12; the proponent agency is TRADOC.

TAKEOFF CONDITIONS		
STATION (1)	RUNWAY AVAIL (2)	
TEMP C° (3)	PA (4)	
TAKEOFF WEIGHT (5)	TAKEOFF POWER (6)	
FLAPS	**0%**	**40%**
V_1	(7)	(8)
V_2	(9)	(10)
V_{yse}	(11)	
Takeoff Distance	(12)	(13)
Accelerate - Stop	(14)	(15)

LANDING DATA	
Vref (16)	LAND DISTANCE (17)
OPTIONAL (18)	

Sample

DA FORM 7739 MAY 2015 APD LC v1.00

Figure 6-1. Sample DA Form 7739 (page 1)

- Item 1: Record the three-letter or International Civil Aviation Organization identifier for the departure airport.
- Item 2: Record the runway length of the planned departure runway.
- Item 3: Record the temperature in degrees Celsius forecast for the time of departure.
- Item 4: Record the PA forecast for the time of departure.
- Item 5: Record the takeoff weight.

- Item 6: Record the takeoff power.
- Item 7: Record the flaps up or the maximum speed in the takeoff at which the pilot must take the first action (V_1) speed.
- Item 8: Record the flaps 40 percent V_1 speed.
- Item 9: Record the flaps up or takeoff safety speed (V_2).
- Item 10: Record the flaps 40 percent V_2.
- Item 11: Record best rate of climb speed with a single operating engine (V_{yse}).
- Item 12: Record the runway distance required for takeoff.
- Item 13: Record the runway distance required for takeoff.
- Item 14: Record the accelerate-stop distance.
- Item 15: Record the accelerate-stop distance.
- Item 16: Record the landing reference speed (V_{ref}).
- Item 17: Record the runway distance required for a landing at the destination.
- Item 18: Use this area as desired.

6-3. DA Form 7739, page 2, covers items 1 through 13 (figure 6-2).

ONE ENGINE INOPERATIVE TAKEOFF CONDITIONS

FLAPS	0%	40%
Positive Climb at Lift-off	(4)	(9)
Accelerate - Go ((1))	(5)	(10)
Single Engine Gradient of Climb (V_2) (2) %	(6)	(11)
Climb One Engine Inoperative (V_{yse}) (3) %	(7)	
Adjusted Takeoff Weight	(8)	(12)

REMARKS
(13)

PAGE 2, DA FORM 7739 MAY 2015 APD LC v1.00

Figure 6-2. Sample DA Form 7739 (page 2)

- Item 1: Record the accelerate-go distance.
- Item 2: Record the minimum gradient of climb for the segment.
- Item 3: Record the minimum gradient of climb for the segment.
- Item 4: Record the takeoff weight.
- Item 5: Record the distance.
- Item 6: Record the climb gradient.
- Item 7: Record the V_{yse} climb gradient.
- Item 8: Record the takeoff weight.
- Item 9: Record the takeoff weight.
- Item 10: Record the distance.
- Item 11: Record the climb gradient.
- Item 12: Record the planned departure weight.
- Item 13: Space available for crewmember entries.

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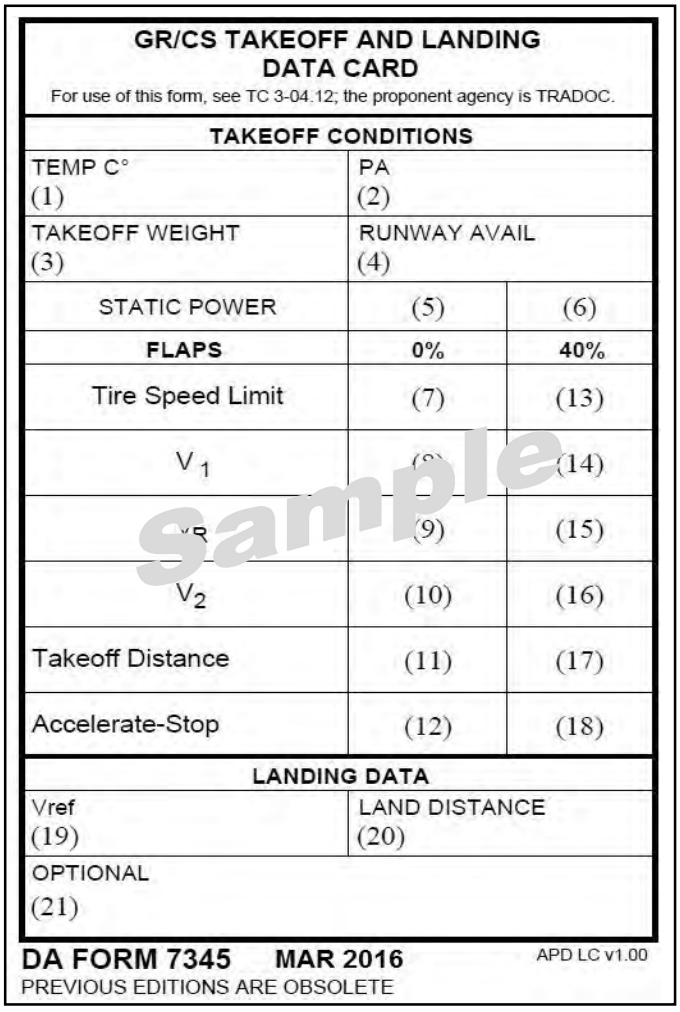
Chapter 7

Department of the Army Form 7345

7-1. Figures 7-1 and 7-2 (page 7-2) provide examples of DA Form 7345 (*GR/CS Takeoff and Landing Data Card*). This form is used to accomplish pre-mission planning requirements according to AR 95-1.

7-2. DA Form 7345, page 1, covers items 1 through 21 (figure 7-1).



GR/CS TAKEOFF AND LANDING DATA CARD

For use of this form, see TC 3-04.12; the proponent agency is TRADOC.

TAKEOFF CONDITIONS		
TEMP C° (1)	PA (2)	
TAKEOFF WEIGHT (3)	RUNWAY AVAIL (4)	
STATIC POWER	(5)	(6)
FLAPS	**0%**	**40%**
Tire Speed Limit	(7)	(13)
V_1	(8)	(14)
V_R	(9)	(15)
V_2	(10)	(16)
Takeoff Distance	(11)	(17)
Accelerate-Stop	(12)	(18)
LANDING DATA		
Vref (19)	LAND DISTANCE (20)	
OPTIONAL (21)		

DA FORM 7345 MAR 2016 APD LC v1.00

PREVIOUS EDITIONS ARE OBSOLETE

Figure 7-1. Sample DA Form 7345 (page 1)

- Item 1: Record the temperature in degrees Celsius forecast for the time of departure.
- Item 2: Record the pressure altitude forecast for the time of departure.
- Item 3: Record the takeoff weight.
- Item 4: Record runway length.
- Items 5 and 6: Record the engine TQ in percent.
- Item 7: Record the tire speed limit.
- Item 8: Record the flaps up V_1 for the takeoff GWT.
- Item 9: Record the flaps up rotation speed (V_R) for the takeoff weight.

- Item 10: Record the flaps up V_2 for the takeoff weight.
- Item 11: Record the distance required for takeoff.
- Item 12: Record the accelerate–stop distance.
- Item 13: Record the tire speed limit.
- Item 14: Record the Flaps-Approach V_1 for the takeoff GWT.
- Item 15: Record the Flaps-Approach V_R for the takeoff weight.
- Item 16: Record the Flaps-Approach V_2 for the takeoff weight.
- Item 17: Record the runway distance required for takeoff.
- Item 18: Record the accelerate-stop distance.
- Item 19: Record the V_{ref} as required.
- Item 20: Record the runway distance required for landing at the destination.
- Item 21: Use this area as desired.

7-3. DA Form 7345, page 2, covers items 1 through 16 (figure 7-2).

ONE ENGINE INOPERATIVE TAKEOFF CONDITIONS

FLAPS	0%	40%
Max Takeoff Weight for One Engine Climb at Lift-off	(6)	(12)
Accelerate - Go ((2))	(7)	(13)
Net Takeoff Flight Path First Segment (3) %	(8)	(14)
Net Takeoff Flight Path Second Segment (V2) (4) %	(9)	(15)
Net Takeoff Flight Path Third Segment (Ven) (5) %	(10)	
Adjusted Takeoff Weight	(11)	(16)

REMARKS
(1)

PAGE 2, DA FORM 7345 **MAR 2016** APD LC v1.00

Figure 7-2. Sample DA Form 7345 (page 2)

- Item 1: Remarks continued from page 1.
- Item 2: Record the maximum distance of accelerate-go allowed if required by the commander's policy.
- Item 3: Record the gradient of climb.
- Item 4: Record the gradient of climb.
- Item 5: Record the gradient of climb.

- Item 6: Record the maximum weight.
- Item 7: Record the total takeoff distance.
- Item8: Record the gradient of climb.
- Item 9: Record the gradient of climb.
- Item 10: Record the gradient of climb.
- Item 11: Record the adjusted takeoff weight.
- Item 12: Record the weight.
- Item 13: Record the distance.
- Item 14: Record the gradient of climb.
- Item 15: Record the gradient of climb.
- Item 16: Record the adjusted takeoff weight.

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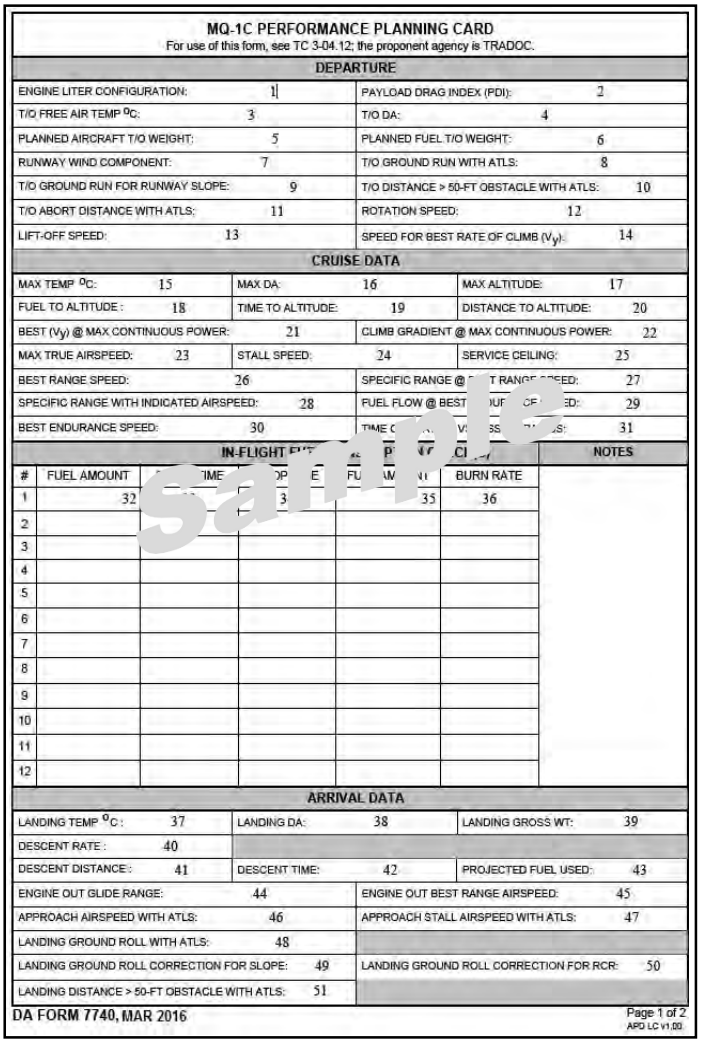
Chapter 8
Department of the Army Form 7740

8-1. Figures 8-1 provides a sample of DA Form 7740 (*MQ-1C Performance Planning Card*). This form is used to accomplish pre-mission planning requirements according to AR 95-1.



MQ-1C PERFORMANCE PLANNING CARD
For use of this form, see TC 3-04.12; the proponent agency is TRADOC.

DEPARTURE

ENGINE LITER CONFIGURATION: 1		PAYLOAD DRAG INDEX (PDI): 2	
T/O FREE AIR TEMP °C: 3		T/O DA: 4	
PLANNED AIRCRAFT T/O WEIGHT: 5		PLANNED FUEL T/O WEIGHT: 6	
RUNWAY WIND COMPONENT: 7		T/O GROUND RUN WITH ATLS: 8	
T/O GROUND RUN FOR RUNWAY SLOPE: 9		T/O DISTANCE > 50-FT OBSTACLE WITH ATLS: 10	
T/O ABORT DISTANCE WITH ATLS: 11		ROTATION SPEED: 12	
LIFT-OFF SPEED: 13		SPEED FOR BEST RATE OF CLIMB (V_Y): 14	

CRUISE DATA

MAX TEMP °C: 15	MAX DA: 16	MAX ALTITUDE: 17
FUEL TO ALTITUDE : 18	TIME TO ALTITUDE: 19	DISTANCE TO ALTITUDE: 20
BEST (V_Y) @ MAX CONTINUOUS POWER: 21		CLIMB GRADIENT @ MAX CONTINUOUS POWER: 22
MAX TRUE AIRSPEED: 23	STALL SPEED: 24	SERVICE CEILING: 25
BEST RANGE SPEED: 26		SPECIFIC RANGE @ [illegible]: 27
SPECIFIC RANGE WITH INDICATED AIRSPEED: 28		FUEL FLOW @ BEST [illegible]: 29
BEST ENDURANCE SPEED: 30		TIME [illegible]: 31

IN-FLIGHT [illegible]

#	FUEL AMOUNT	[illegible]	[illegible]	[illegible]	BURN RATE	NOTES
1	32		3	35	36	
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						

ARRIVAL DATA

LANDING TEMP °C : 37	LANDING DA: 38	LANDING GROSS WT: 39
DESCENT RATE : 40		
DESCENT DISTANCE : 41	DESCENT TIME: 42	PROJECTED FUEL USED: 43
ENGINE OUT GLIDE RANGE: 44		ENGINE OUT BEST RANGE AIRSPEED: 45
APPROACH AIRSPEED WITH ATLS: 46		APPROACH STALL AIRSPEED WITH ATLS: 47
LANDING GROUND ROLL WITH ATLS: 48		
LANDING GROUND ROLL CORRECTION FOR SLOPE: 49		LANDING GROUND ROLL CORRECTION FOR RCR: 50
LANDING DISTANCE > 50-FT OBSTACLE WITH ATLS: 51		

DA FORM 7740, MAR 2016 Page 1 of 2
APD LC v1.00

Figure 8-1. Sample DA Form 7740 (page 1)

8-2. Departure data.

- Item 1: Record aircraft engine type (liter size).
- Item 2: Record the payload drag index of the current aircraft configuration.
- Item 3: Record the takeoff FAT at the departure point.
- Item 4: Record the takeoff density altitude at the departure point.
- Item 5: Record the GWT of the aircraft at departure.
- Item 6: Record the estimated fuel required (including reserved) at takeoff to complete the mission.
- Item 7: Record the predicted runway wind component.

- Item 8: Record the predicted length of runway required for takeoff.
- Item 9: Record the predicted takeoff ground run correction.
- Item 10: Record the predicted takeoff distance.
- Item 11: Record the predicted distance the aircraft will need to accelerate to rotational speed.
- Item 12: Record the predicted rotation speed.
- Item 13: Record the predicted lift off speed for takeoff.
- Item 14: Record the predicted best rate of climb speed (V^y).

8-3. Cruise data.

- Item 15: Record the maximum FAT for the duration of the mission.
- Item 16: Record the forecasted max density altitude for the duration of the mission.
- Item 17: Record the maximum altitude for the duration of the mission.
- Item 18: Record the predicted fuel needed to reach the desired mission altitude.
- Item 19: Record the estimated time needed to reach the desired mission altitude.
- Item 20: Record the predicted distance needed to reach the desired mission altitude.
- Item 21: Record the predicted V^y.
- Item 22: Record the predicted climb gradient at maximum continuous power.
- Item 23: Record the predicted maximum true airspeed.
- Item 24: Record the predicted maximum stall speed.
- Item 25: Record the predicted maximum service ceiling.
- Item 26: Record the predicted best range speed.
- Item 27: Record the predicted specific range (nautical miles per pound of fuel burned) at best range speed.
- Item 28: Record the predicted specific range for a given IAS.
- Item 29: Record the predicted fuel flow at best endurance speed.
- Item 30: Record the predicted best endurance speed.
- Item 31: Record the predicted time on station.

8-4. Inflight fuel consumption check.

- Item 32: Record the amount of fuel in the aircraft at the start of the fuel consumption check.
- Item 33: Record the start time the fuel consumption check was initiated.
- Item 34: Record the stop time the fuel consumption check was completed.
- Item 35: Record the amount of fuel remaining at the completion of the fuel consumption check.
- Item 36: Use this space to determine and record the in-flight fuel consumption rate (pounds per hour) results.

8-5. Arrival data.

- Item 37: Record the forecast FAT at the destination point.
- Item 38: Record the forecast density altitude at the destination point.
- Item 39: Record the estimated landing GWT.
- Item 40: Record the predicted rate of descent.
- Item 41: Record the predicted descent distance.
- Item 42: Record the predicted descent time.
- Item 43: Record the projected fuel used.
- Item 44: Record the predicted engine out glide range.
- Item 45: Record the predicted engine out glide best range IAS.
- Item 46: Record the predicted approach airspeed with automatic take-off/landing system (ATLS).
- Item 47: Record the predicted approach stall airspeed with ATLS.
- Item 48: Record the predicted length of runway required for ATLS.
- Item 49: Record the predicted landing ground roll corrections for slopes.
- Item 50: Record the predicted landing ground roll.
- Item 51: Record the predicted landing distance.
- Item 52: Area for additional information as needed (figure 8-2, page 8-3).

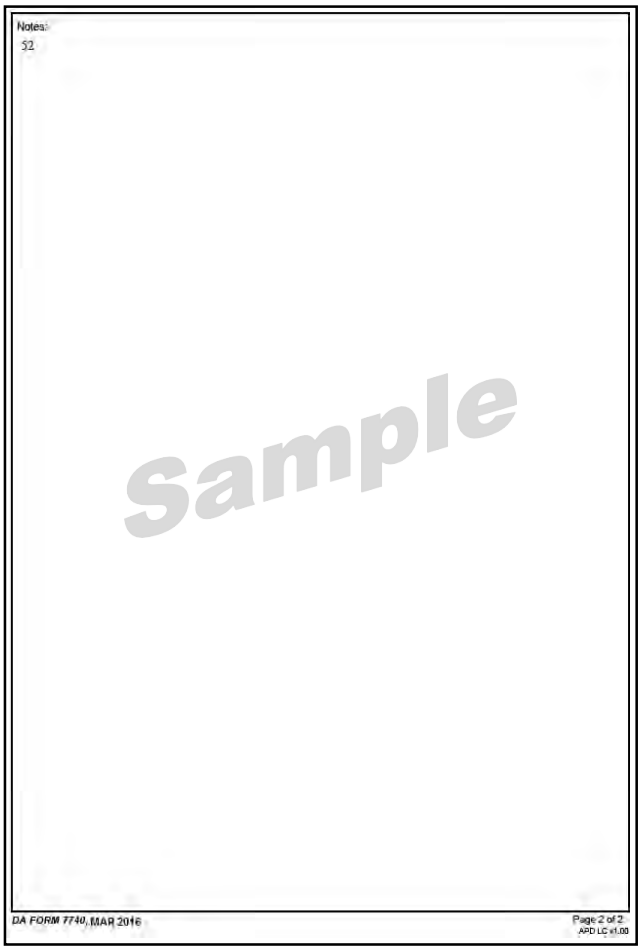


Figure 8-2. Sample DA Form 7740 (page 2)

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Chapter 9
Department of the Army Form 7916

9-1. Figure 9-1 provides a sample of DA Form 7916. This form is used to accomplish pre-mission planning requirements according to AR 95-1.

ARMY AVIATION TIME DISTANCE AND HEADING CARD
For use of this form, see TC 3-04.12; the proponent agency is TRADOC.

OPERATION: (1)	AIRCRAFT FUEL (3)	REQ (4)	BURN (5)	BINGO (6)
ROUTE: (2)				

FROM (7)	TO (8)	TIME ENROUTE (9)	TOTAL DISTANCE (10)

WP	ALT	TANK FUEL	ETE	LEG DIST	IAS	MGRS GRID
DTD ID	TCA	MIN FUEL	ELAPSED	REM	GS	LAT LONG
MC	DESCRIPTION / REMARKS					CLOCK
(11)	(12)	(13)	(14)	(15)	(16)	(17)
(18)	(19)	(20)	(21)	(22)	(23)	(24)
(25)	(26)					(27)

ROUTE: (28) V: (29) # ___ OF ___

DA FORM 7916, DEC 2022 PREVIOUS EDITIONS ARE OBSOLETE

Figure 9-1. Sample DA Form 7916

9-2. Instructions for completing DA Form 7916 are as follows:

- Item 1: Record name of operation.
- Item 2: Record the route name.
- Item 3: Record the amount of fuel in the aircraft.
- Item 4: Record the required fuel for the mission.
- Item 5: Record the planned burn rate from pre-mission performance planning.
- Item 6: Record the reserve fuel amount from pre-mission planning.

Note. Per AR 95-1, items 4 and 6 may be adjusted based on risk but must not be adjusted below minimum standards.

- Item 7: Record start location for the route.
- Item 8: Record the location where the route ends.
- Item 9: Record the total time of the flight.
- Item 10: Record the total distance of the flight.
- Item 11: Record the waypoint.
- Item 12: Record the altitude to be flown.
- Item 13: Record the fuel remaining in the tank at the start of the leg.
- Item 14: Record the estimated time en route.
- Item 15: Record leg distance.
- Item 16: Record IAS.
- Item 17: Record MGRS point.
- Item 18: Record the DTD ID from mission planning.
- Item 19: Record the terrain clearance altitude.
- Item 20: Record the minimum fuel needed.
- Item 21: Record the time since takeoff.
- Item 22: Record the time remaining to the end point.
- Item 23: Record the ground speed.
- Item 24: Record the latitude and longitude point.
- Item 25: Record magnetic course.
- Item 26: Used to record any desired remarks; may be continued on page two of form (not illustrated).
- Item 27: Record running clock time.
- Item 28. Record the route name.
- Item 29: V. Record the version number.

Chapter 10

Department of the Army Form 7749

10-1. Figure 10-1 provides a sample of DA Form 7749. This form is used to accomplish pre-mission planning requirements according to AR 95-1.

ARMY AVIATION INSTRUMENT FLIGHT LOG

For use of this form, see TC 3-04.12; the proponent agency is TRADOC.

(1)

TIME		DISTANCE	TIME	FUEL
TAKEOFF **(2)**	LANDING **(3)**	TOTAL **(4)**	TOTAL **(5)**	TOTAL **(6)**

ROUTE *(Check Point)*	IDENT	MAG CRS	LEG	ETE	ATA	LEG FUEL	TAS	REMARKS
	FREQ	ALT	REMAINING	REMAINING		REMAINING	GS	
(7)	**(8)**	**(10)**	**(12)**	**(14)**	**(15)**	**(17)**	**(19)**	**(21)**
	(9)	**(11)**	**(13)**	**(16)**		**(18)**	**(20)**	

DA FORM 7749, NOV 2022 PREVIOUS EDITIONS ARE OBSOLETE. APD AEM v1.00 PAGE 1 OF 2

Figure 10-1. Sample DA Form 7749 (page 1)

10-2. Instructions for completing DA Form 7749 are as follows:

- Item 1: Used to record any desired remarks.
- Item 2: Record the takeoff time.
- Item 3: Record the landing time.
- Item 4: Record the total distance.
- Item 5: Record the total time to fly the route.
- Item 6: Record the required fuel needed to fly the route.
- Item 7: Record checkpoints or identifiers.
- Item 8: Record navigational aid identifier.
- Item 9: Record frequency as required.
- Item 10: Record leg magnetic course.
- Item 11: Record the altitude to be flown.
- Item 12: Record the distance of the leg.
- Item 13: Record the distance remaining.
- Item 14: Record estimated time enroute.
- Item 15: Record actual time of arrival.
- Item 16: Record time remaining.
- Item 17: Record the fuel needed for the leg.
- Item 18: Record the fuel remaining.
- Item 19: Record the TAS.
- Item 20: Record the ground speed.
- Item 21: Record any needed remarks.

Glossary

AGL	above ground level
AR	Army regulation
ATF	aircraft torque factor
ATLS	automatic take-off/landing system
ATM	aircrew training manual
ATP	aircrew training program
DA	Department of the Army
DOD	Department of Defense
DOTD	Directorate of Training and Doctrine
DTD ID	data transfer devices identification
FAT	free air temperature
FM	field manual
FTB	Flight Training Branch
GPS	global positioning system
GWT	gross weight
IAS	indicated airspeed
IGE	in-ground effect
kg	kilogram
lb	pound
LCT	longitudinal cyclic trim
MGRS	military grid reference system
OGE	out of ground effect
PA	pressure altitude
PPC	performance planning card
RNAV	area navigation
TAS	true airspeed
TC	training circular
TOD	time of departure
TQ	torque
USAACE	United States Army Aviation Center of Excellence
V_1	the maximum speed in the takeoff at which the pilot must take the first action
V_2	takeoff safety speed
V_{ne}	velocity never exceed
V_R	rotation speed
V_{ref}	landing reference speed
V^y	best rate of climb speed
V_{yse}	best rate of climb speed with a single operating engine

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References

All websites accessed on 10 October 2022.

REQUIRED PUBLICATIONS

These documents must be available to the intended users of this publication.

DOD Dictionary of Military and Associated Terms. October 2022.

FM 1-02.1 *Operational Terms.* 09 March 2021.

FM 1-02.2 *Military Symbols* 18 May 2022.

RELATED PUBLICATIONS

These documents contain relevant supplemental information.

Unless otherwise indicated, Army publications are available online at https://armypubs.army.mil.

AR 95-1. *Flight Regulations*. 22 March 2018.

FM 6-27/MCTP 11-10C. *The Commander's Handbook on the Law of Land Warfare*. 07 August 2019.

TC 3-04.11. *Commander's Aviation Training and Standardization Program*. 14 April 2022.

WEBSITES

DOTD Doctrine: https://intranet.tradoc.army.mil/sites/usaacedotd/SitePages/Home.aspx

DOTD FTB:
https://intranet.tradoc.army.mil/sites/usaacedotd/TrainingDivision/FlightTrainingBranch/SitePages/Home.aspx

PRESCRIBED FORMS

Unless otherwise indicated, DA forms are available at the Army Publishing Directorate https://armypubs.army.mil.

DA Form 5701-47. *CH-47 Performance Planning Card.*

DA Form 5701-60. *H-60 Performance Planning Card.*

DA Form 5701-64. *AH-64 Performance Planning Card.*

DA Form 5701-72. *UH-72A Performance Planning Card.*

DA Form 7345. *GR/CS Takeoff and Landing Data Card.*

DA Form 7739. *C-12 Takeoff and Landing Data Card.*

DA Form 7740. *MQ-1C Performance Planning Card.*

DA Form 7749. *Army Aviation Instrument Flight Log, Alternate.*

DA Form 7750. *Emergency Global Positioning System Approach Card.*

DA Form 7916. *Army Aviation Time, Distance, and Heading Card.*

REFERENCED FORMS

Unless otherwise indicated, DA forms are available on the Army Publishing Directorate website at https://armypubs.army.mil.

DA Form 2028. *Recommended Changes to Publications and Blank Forms.*

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22 December 2022

By Order of the Secretary of the Army:

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