

C-20 T&R MANUAL

CHAPTER 3

C-20 LOADMASTER

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*** * N O T E * ***

Aircrew coordination will be briefed for all flights and aircrew positions.

CHAPTER 3

C-20 LOADMASTER

300. POI FOR BASIC, CONVERSION AND REFRESHER LOADMASTER

1. Prerequisite. Completion of an aviation flight physical and Aircrew Candidate School.

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
4	Aircrew Candidate School	Pensacola, FL
2	C-20G Loadmaster School	NAS Ft Worth, TX
1	Ground Training	MCAF/VR-51
8	Flight Training	MCAF/VR-51

310. GROUND TRAINING

1. General. The trainee will attend the C-20G Loadmaster Course prior to completion of training.

2. TrainingWeek 1

Math Test. Introduction to Weight and Balance. WAM Formula for aircraft. Percent of MAC formula. Adding and Removing Cargo. Aircraft A, B, and C Charts. Aircraft E Charts. SECO codes and configurations. Form F Intro (DD-365-4). Form F practice. Form F correction Block/Practice. Loadshift Formula. Load planning. Support Equipment/Hand Signals and Cargo Loading System. Cargo Door Operation. Week One Test.

Week 2

HAZMAT. Cargo restraint. Area PSI and Shoring. Cargo Pallets and Nets (build-up). Oversize and Penetrating Cargo. Cargo/Pax Manifest. Logistics Flight Record (LFR). Border Clearance. Practical Loadmaster Application. Review. Final Exam. Course Critique. Graduation.

311. COURSES OF INSTRUCTION

<u>COURSE</u>	<u>ACTIVITY</u>
Aircrew Candidate School	Pensacola, FL
C-20G Loadmaster School	NAS Ft Worth, TX

312. SQUADRON LEVEL TRAINING

General Aircraft Description
 Aircraft Systems
 Aircraft Emergency Equipment and Systems
 Emergency Procedures
 Loadmaster Equipment
 Cargo Restraint Equipment
 Weight and Balance Planning
 Personal Flying Equipment Requirements
 Phase Examinations

Aircraft Mission
 NATOPS Open and Closed Book Examinations

320. FLIGHT TRAINING FOR BASIC, CONVERSION, AND REFRESHER1. Mission Capable Training

<u>STAGE</u>	<u>SORTIES</u>	<u>HOURS</u>	<u>PERCENT</u>
Basic Qualification	-	-	25.0
Familiarization	1	2.0	5.0
Cargo and Passenger Loading	8	16.0	25.0
NATOPS Evaluation Flight	1	2.0	5.0
Total for Phase	10	20.0	60.0

2. Mission Ready Training

<u>STAGE</u>	<u>SORTIES</u>	<u>HOURS</u>	<u>PERCENT</u>
Overwater Procedures	2	12.0	15.0
Total for Phase	2	12.0	15.0
Accumulation	12	32.0	75.0

3. Mission Qualification Training

<u>STAGE</u>	<u>SORTIES</u>	<u>HOURS</u>	<u>PERCENT</u>
VIP Procedures	2	12.0	20.0
Total for Phase	2	12.0	20.0
Accumulation	14	44.0	95.0

4. Full-Mission Qualification Training

<u>STAGE</u>	<u>SORTIES</u>	<u>HOURS</u>	<u>PERCENT</u>
Maximum/Hazardous Cargo	2	12.0	5.0
Total for Phase	2	12.0	5.0
Accumulation Total for			
Basic and Conversion Loadmaster	16	*56.0	100.0

NOTE: * Indicates estimated flight hours to completion.

321. IUT

<u>STAGE</u>	<u>SORTIES</u>	<u>HOURS</u>
IUT	2	9.0
Instructor Check Flight	1	3.0
	3	12.0

330. SIMULATOR TRAINING. Not Applicable.

340. FLIGHT/SIMULATOR PERFORMANCE REQUIREMENTS

1. The time to qualify a C-20G Loadmaster will vary depending on previous experience, flight time, and aircraft availability. Training will generally be accomplished in conjunction with operational flights. A Basic Loadmaster shall be defined as a designated Flight Attendant, who has completed training and has been subsequently designated as a Loadmaster on the C-20G aircraft. A Refresher Loadmaster shall be defined as a C-20G Loadmaster who has been

assigned to other duty preventing currency in the C-20G aircraft for a period exceeding 12 months. Basic Loadmasters will complete all stages of training.

2. All of the duties will be performed IAW OPNAVINST 3710.7, current squadron directives, and the C-20G NATOPS Manual.

3. Aircrew Coordination. Aircrew coordination shall be briefed for all flights and/or events.

341. MISSION CAPABLE TRAINING

1. Familiarization

a. Purpose. To familiarize the Loadmaster Under Instruction (LUI) with the C-20G aircraft and the duties and responsibilities of the Loadmaster during preflight, flight, Emergency/Abnormal flight and postflight.

b. Crew Requirement. TAC/T2P-T3P/CC/LI/LUI.

c. Flight Training. (1 Flight, 2.0 Hours).

FAM-100 2.0 C, R 1 ACFT

Goal. Introduce the LUI to the C-20G aircraft and introduce responses/action required during each airborne/ground emergency.

Requirements. Preflight Preparation. Preflight Inspection. Thru Flight Inspection. Posflight Inspection. Emergency/Abnormal Procedures: Fuselage Fire, Smoke/Fume Elimination, Door Warning in Flight, Rapid Decompression, Crash Landing/Ditch on Takeoff, Abnormal Landing, Ditching, APU Fire. Primary/Secondary Exits for Ditch and Ground Evacuation. Identify Aircraft Riggs A,B,C,D,K.

2. Cargo and Passenger Loading

a. Purpose. To instruct and qualify the LUI in the performance of the duties required to load cargo and passengers. Emphasis will be placed on adherence to NATOPS procedures, operation of aircraft equipment and all duties and procedures required of a qualified C-20G loadmaster.

b. Crew Requirement. TAC/T2P-T3P/CC/LI/LUI.

c. Flight Training. (8 Flights, 16.0 Hours).

CPL-110 2.0 C, R 1 ACFT

Goal. Introduce the LUI to passenger/VIP/baggage loading and briefing procedures. Additionally, the LUI will be instructed on the proper preflight and post flight procedures.

Requirement. Preflight Inspection. Thru Flight Inspection. Postflight Inspection. Departure Brief. Thru Brief. Landing Brief. Abnormal Landing Brief. Ditching Brief. Passenger Handling. Passenger Identification. Passenger Attire. VIP and Dependent Handling. Baggage Handling.

- CPL-111 2.0 C, R 1 ACFT
- Goal. Continuation of passenger and baggage loading procedures, emergency and abnormal procedures training and Weight and Balance form computation.
- Requirement. Preflight Inspection. Thru Flight Inspection. Postflight Inspection. Passenger Briefings. Rapid Decompression. Emergency Procedures. Primary/Secondary Exits for Ditching and Ground evacuation. Weight and Balance Related Publications. Weight and Balance Charts and Forms. Weight and Balance Terminology.
- CPL-112 2.0 C, R 1 ACFT
- Goal. Introduce the LUI to the different types of cargo, hazardous cargo, U.S. Customs and Agriculture, mail and classified material handling, air terminal procedures and cargo inspections.
- Requirement. Preflight Inspection. Thru Flight Inspection. Postflight Inspection. Load Planning. Emergency Procedures. Form F. Logistics Flight Record. Customs. Agriculture. Mail Handling. Classified Material Handling. Arms and Ammunition. Hazardous Cargo. Cargo Inspection. Cargo Loading/Unloading. Passenger Handling. Air Terminal Procedures. Baggage Handling. Crew Coordination. Oversized Cargo. Piercing/Penetrating Cargo. Shoring. Restraint Requirements. Live Animals.
- CPL-113 2.0 C, R 1 ACFT
- Goal. Introduction to Emergency Exits, Escape Routes, and Emergency/Survival Equipment.
- Requirement. Preflight Inspection. Thru Flight Inspection. Post Flight Inspection. Forward Entrance Door. Service Door/Slide. Aft Baggage Door. Cargo Door. Operation of Forward Air Stair Door with/without Aircraft Power. Emergency Exits. Overwing Exits and Escape Routes. Emergency and Survival Equipment (lifevests, liferafts, survival kits, first-aid kits, blankets, crash axe, portable fire extinguisher).
- CPL-114 2.0 C, R 1 ACFT
- Goal. Introduce the oxygen systems and masks and the emergency lighting system.
- Requirement. Preflight Inspection. Thru Flight Inspection. Postflight Inspection. Automatic Mask Deployment. Manual Mask Deployment. First Aid Oxygen System. Portable Oxygen Cylinders. Passenger/Crew Oxygen Masks. Normal Lighting. Evacuation lights. Standby Lighting. Public and Priority Address System. Chimes and Call Lights.
- CPL-115 2.0 C, R 1 ACFT
- Goal. Introduce the water system, galley, and lavatory servicing.

Requirement. Preflight Inspection. Thru Flight Inspection. Postflight Inspection. Emergency procedures. Potable Water System and Tank Capacity. Filters and Shutoff. Servicing Panel. Maximum Servicing Pressure. Cold Weather Servicing. Waste Tank and Water Tank Capacities. Minimum/Maximum Servicing Pressure. Toilet Pump Motor Flushing Cycle. Toilet Servicing/Panel. Lavatory Cold Weather Servicing. Lavatory Water Shutoff. Ovens/Hot Cups. Refrigerator. Galley Electrical Control Panel. Galley Water Shutoff.

CPL-116 2.0 C, R 1 ACFT

Goal. Introduce First Aid.

Requirement. Preflight Inspection. Thru Flight inspection. Postflight Inspection. Bleeding (Direct pressure, pressure points, tourniquet). Shock (symptoms and treatment). Hyperventilation (symptoms and treatment). Fainting (symptoms and treatment). Broken Bones (types and treatment). Burns (types). Artificial Respiration. Emergency Procedures.

CPL-117 2.0 C, R 1 ACFT

Goal. Cargo Loading.

Requirement. Preflight Inspection. Thru Flight Inspection. Postflight Inspection. Cargo Loading System. Cargo Loading Equipment: Forklift, K-Loader, High Lift Truck, Roller tongs, Pallets, Nets. Cargo Restraining. Doors.

3. NATOPS Check Flight

a. Purpose. To qualify an LUI as a Mission Capable Loadmaster on the C-20G aircraft. Individual may fly as a qualified loadmaster, after completing flight CK-130, while completing the remainder of the flight syllabus.

b. Crew Requirement. TAC/T2P-T3P/CC/LI/LUI.

c. Prerequisite. NATOPS open and closed book exams.

d. Flight Training. (1 Flight, 2.0 Hours).

CK-130 2.0 C, R E 1 ACFT

Goal. Evaluation flight.

Requirement. The LUI will successfully complete a flight evaluation administered by a designated NATOPS Loadmaster Evaluator. All phases of Mission Capable training will be reviewed with emphasis on NATOPS procedures, squadron procedures and accurate and timely Weight and Balance Form computation. All emergency procedures will be conducted or simulated per current NATOPS directives. Egress procedures, with and without passengers, will be conducted and/or simulated.

342. MISSION READY TRAINING

1. Overwater Procedures

- a. Purpose. To qualify the Mission Capable Loadmaster in overwater procedures with cargo and/or passengers aboard the aircraft.
- b. Crew Requirement. TAC/T2P-T3P/CC/LI/LUI.
- c. Flight Training. (2 Flights, 12.0 Hours).

CPL-200 6.0 C, R 1 ACFT

Goal. The LUI observes and assists a qualified loadmaster during an overwater flight with passengers and/or cargo aboard.

Requirement. The LUI will observe and assist the loadmaster during preflight, in-flight and post flight duties. Emphasis will be placed on maximum passenger loads for overwater/overland flights, proper baggage handling, accurate passenger manifests, Weight and Balance Form, legloads, required Customs/Agriculture procedures, appropriate emergency equipment usage and required briefings.

CPL-201 6.0 C, R 1 ACFT

Goal. Stage Check. The LUI will perform all duties required of a loadmaster on an overwater flight with passengers and/or cargo aboard while under the supervision of a NATOPS Evaluator. Successful accomplishment of this flight will result in the LUI being designated as a Mission Ready Loadmaster on the C-20G aircraft.

Requirement. The LUI will maintain accurate Weight and Balance Forms, Customs/Agriculture Inspection Documents, passenger manifests and legload information. The LUI will conduct the appropriate preflight, in-flight and post flight duties.

343. MISSION QUALIFICATION TRAINING

1. VIP Procedures

- a. Purpose. To qualify a LUI in the proper procedures when carrying passengers who are Code 7 or above.
- b. Crew Requirement. TAC/T2P-T3P/CC/LI/LUI.
- c. Flight Training. (2 Flights, 12.0 Hours).

VIP-300 6.0 C, R 1 ACFT

Goal. The LUI will observe a qualified loadmaster on a flight carrying a passenger that is Code 7 or above.

Requirement. Emphasis will be placed on passenger comfort, VIP baggage handling, configuration of the aircraft, and the installation of the appropriate VIP placard. Weight and Balance Form computation will be accomplished by the LI.

VIP-301 6.0 C, R 1 ACFT

Goal. Progress check.

Requirement. The LUI will perform all duties of a loadmaster on a flight carrying a passenger who is a Code 7 and/or above. Emphasis will be placed on passenger comfort, VIP baggage handling, aircraft preparation, and an accurate Weight and Balance Form.

344. FULL-MISSION QUALIFICATION TRAINING

1. Hazardous Cargo Familiarization

a. Purpose. To familiarize and qualify the mission qualified loadmaster in the proper procedures when carrying hazardous cargo.

b. Crew Requirement. TAC/T2P-T3P/CC/LI/LUI.

c. Flight Training. (1 Flight, 6.0 Hours).

CPL-400 6.0 C, R 1 ACFT

Goal. The LUI will observe a qualified loadmaster on a flight involving hazardous cargo.

Requirement. The LI will observe a qualified loadmaster in the placing of hazardous cargo aboard the aircraft. The LUI will demonstrate a thorough knowledge and understanding of all restrictions concerning passengers while transporting hazardous cargo per MCO P4030.19.

2. Maximum Cargo Procedures

a. Purpose. To familiarize and qualify the mission qualified loadmaster in procedures when carrying maximum cargo.

b. Crew Requirement. TAC/T2P-T3P/CC/LI/LUI.

c. Flight Training. (1 Flight, 6.0 Hours).

CPL-401 6.0 C, R 1 ACFT

Goal. The LUI will observe and assist a qualified loadmaster on a flight carrying maximum cargo.

Requirement. Emphasis will be placed on the reconfiguration of the aircraft, if required. The LUI will compute the primary Weight and Balance Form. The loading of the aircraft must be accomplished to allow the minimum amount of interference at intermediate stops with due consideration to center of gravity limits. The LUI will ensure the cargo is properly restrained to the pallet and that no pallet exceeds the appropriate "G" factor limitation.

350. INSTRUCTOR AND SPECIAL FLIGHT/SIMULATOR PERFORMANCE REQUIREMENTS

1. Instructor Under Training (IUT)

a. Purpose. To qualify a loadmaster as a Loadmaster Instructor (LI) in the C-20G aircraft.

b. Crew Requirement. TAC/T2P-T3P/CC/LI/LIUT.

- c. Prerequisite. Pilot Standardization Board Recommendation.
- d. Flight Training. (3 Flights, 6.0 Hours).

IUT-500 2.0 C, R 1 ACFT

Goal. The student Instructor Loadmaster will observe a LI train a LUI.

Requirement. The student Instructor Loadmaster will observe a LI train a LUI on a syllabus flight required by MCO P5300.17. The LI will emphasize the LUI's accuracy of Weight and Balance Forms, center of gravity limits, knowledge of aircraft, emergency procedures and proper cargo restraint.

IUT-501 2.0 C, R 1 ACFT

Goal. The student Loadmaster Instructor will demonstrate his ability to instruct a LUI, while under the supervision of a LI.

Requirement. The student Loadmaster Instructor will instruct a LUI in all areas of safety and crew position responsibilities. Accuracy of all paperwork, Weight and Balance Forms, "legload" entries, center of gravity restrictions, and required tie down procedures according to "G" factor restrictions will be emphasized.

IUT-502 2.0 C, R E 1 ACFT

Goal. Student Loadmaster Instructor Check Flight.

Requirement. The student Loadmaster Instructor will perform all duties required of a LI on a flight with a LUI.

351. SPECIAL TRAINING

1. Annual NATOPS Evaluation

a. Purpose. To conduct annual NATOPS evaluation. Flights flown in this stage are evaluation flights and MRP is not awarded.

b. Crew Requirement. TAC/T2P-T3P/CC/LI/LUI.

c. Prerequisite. Reference the C-20G NATOPS Flight Manual, OPNAVINST 3710.7_, and applicable publications.

2. Flight Training. (1 Flight, 2.0 Hours).

RQD-600 2.0 E 1 ACFT

Goal. Annual NATOPS Evaluation.

Requirement. Proficiency as a C-20G loadmaster in all aspects of the aircraft and its mission.

360. ORDNANCE REQUIREMENTS. Not applicable.

C-20 T&R MANUAL

AIRCRAFT: C-20

CREW POSITION: LOADMASTER

STAGE	FLIGHT/ TRAINING CODE	REFLY HRS	INTERVAL	MRP	C	R	E	REMARKS
MISSION CAPABLE TRAINING								
FAM	100	2.0	*	6.0	X	X		1 ACFT
CPL	110	2.0	*	5.0				1 ACFT
	111	2.0	*	5.0				1 ACFT
	112	2.0	*	5.0				1 ACFT
	113	2.0	*	5.0	X	X		1 ACFT
	114	2.0	*	5.0		X		1 ACFT
	115	2.0	*	5.0		X		1 ACFT
	116	2.0	*	5.0		X		1 ACFT
	117	2.0	*	5.0		X		1 ACFT
NATOPS CK	130	2.0	C	14.0	X	X	X	1 ACFT
MISSION READY TRAINING								
CPL	200	6.0	C	7.5	X	X		1 ACFT
	201	6.0	C	7.5	X	X		1 ACFT
MISSION QUALIFICATION TRAINING								
VIP	300	6.0	C	10.0	X	X		1 ACFT
	301	6.0	C	10.0	X	X		1 ACFT
FULL-MISSION QUALIFICATION TRAINING								
CPL	400	6.0	C	2.5	X	X		1 ACFT
	401	6.0	C	2.5	X	X		1 ACFT
INSTRUCTOR UNDER TRAINING								
IUT	500	3.0	C	---	X	X		1 ACFT
	501	3.0	C	---	X	X		1 ACFT
	502	3.0	C	---	X	X	X	1 ACFT

Figure 3-1.--Loadmaster Refly Interval, Mission Readiness Percentage.

LOADMASTER FLIGHT UPDATE CHAINING

<u>STAGE</u>	<u>FLIGHT</u>	<u>FLIGHTS UPDATED</u>
CK	130	100,110,111,112,113,114,115,116,117
VIP	301	300
CPL	401	400
IUT	502	500,501

Figure 3-2.--Loadmaster Flight Update Chaining.