



Figure 6-13. Tanker Rendezvous Pattern

6.10 TANKER OPERATIONS

Tankers assigned duties in support of the recovery of aircraft shall use the following procedures:

1. Only those tankers that have a known good store and sufficient fuel to meet receiver fuel requirements shall display the flashing green light.
2. For optimum utilization of tankers, single-cycle operation is recommended.
3. A specific existing agency (i.e., departure control) shall be designated tanker control with the responsibility to monitor:
 - a. Tanker give-away fuel status
 - b. Tanker location
 - c. Location and fuel requirements of the low state aircraft
 - d. Coordination of the tanker and receiver rendezvous.

6.10.1 Recovery Tanker Procedures

6.10.1.1 CASE I/II

After launch, the oncoming recovery tanker shall switch to departure control for assignment. All tanker packages should be checked as soon as possible after launch. When it has been determined that the new tanker store is operational, departure control should be advised immediately. The recovery tanker shall maintain a rendezvous circle oriented on the CV (Figure 6-13). The rendezvous circle shall contain four reference points. Minimum pattern altitude shall be 1,500 feet. This pattern is a left-hand circle within 5 nm of the CV during launch and recovery operations. When the last jet is aboard, the tanker shall climb to prebriefed altitude and switch to assigned frequency for control.

<http://info.publicintelligence.net/CV-NATOPS-JUL09.pdf>

TANKER
OPS

6.10.1.2 Case III

The recovery tanker pattern shall be assigned by departure control. It shall be at least 1,000 feet above the overcast or VMC between layers, but not less than 2,500 feet MSL. The tanker pilot shall advise departure control of the best altitude and position to conduct emergency tanking. Positive control shall be provided for tanker overcast penetrations. Departure control shall assist in positioning the tanker near a potential receiver and shall keep the tanker informed of the potential receiver's position.

Note

Tanking shall not be attempted below 1,500 feet during Case I/II and 2,500 feet during Case III.

6.10.2 Rendezvous Procedures

6.10.2.1 Rendezvous Low (Day and Night)

When directed to "hawk" (closely monitor) a particular aircraft that is a potential receiver, the tanker pilot shall position the tanker to be at the 2-o'clock position of the low-state aircraft as it bolters or waves off. The minimum altitude for rendezvous shall be 1,500 feet day, 2,500 feet night, ensuring a minimum of 500 feet vertical separation between receiver and tanker aircraft until visual separation can be maintained. When directed, the tanker shall switch to the potential receiver aircraft's frequency. If visual contact is not acquired, the controlling agency shall provide assistance until visual contact is established. The receiver should generally make the final rendezvous on the tanker. Positive radio communications must be established if the tanker will be rendezvousing on the receiver at night. The tanker should stream the drogue as the receiver joins, thus expediting plug-in. The tanker pilot shall report to tanker control the following:

1. When the receiver is taking on fuel
2. When refueling has been completed, the amount of fuel transferred, and update give-away.

6.10.2.2 Rendezvous High/On Top (Day and Night)

Departure control shall provide positive control until visual contact is established. The receiver shall make the final rendezvous on the tanker and report as previously described.

6.10.3 Recovery Tanking Pattern

After the receiver is engaged, the tanker aircraft shall establish a racetrack pattern in the vicinity of the ship. Unless special circumstances exist, the tanker should not proceed more than 10 miles ahead of the ship. The downwind leg should be 3 to 5 miles abeam and tanking should be completed prior to reaching a point 6 miles astern to allow for proper pattern entry. If tanking is done above an overcast, departure control may direct adjustment of the pattern so as to allow for normal descent and CCA pickup.

6.10.4 Recovery (Case III)

The desire to expedite tanker recovery must not jeopardize flight safety. The recovery tanker shall be given positive control unless executing an instrument approach procedure published in this section or operating under night EMCON conditions. The aircraft shall be level during the turn to final bearing and given sufficient clearance to pass through 6 miles at 1,200 feet.

Note

If recovery tanker is established 1,200 feet abeam, the six mile gate is not required.

6.10.5 Fuel Transfer and Dump Control

Each ship/air wing shall promulgate supplementary instructions that shall include the following instructions.

1. Bingo data for all embarked aircraft.
2. Low state figures (i.e., state at which aircraft will normally be ordered to tank) and amount of fuel to be transferred to each type aircraft when no divert field is available.
3. Procedures for control of tanker fuel by CATCC.
4. Minimum fuel for barricade engagement.

Except in an emergency, tankers shall obtain clearance from departure control before transferring or dumping fuel. Departure control shall be advised of any changes of tanker fuel state and give-away as appropriate.

WARNING

- Shipboard recovery of a tanker aircraft with an extended hose presents a missile hazard that may be caused by shattering of the drogue/basket as it strikes the ramp area. Prior to recovery, the flight deck should be cleared of all but required recovery personnel. Only the controlling LSO should remain on the platform, and he should utilize the safety net as the aircraft crosses the ramp. If possible, aircraft adjacent to the landing area should be respotted forward or struck below to the hangar deck.
- Even though the probability of damage to the aircraft by drogue/basket slap during a bolter is slight, the pilot should be aware of this possibility.

6.11 DIVERSION OF AIRCRAFT

The air operations officer or the air officer shall normally be responsible for making the recommendation to the commanding officer as to which aircraft should be diverted in the interest of flight safety. The air operations officer shall, if practicable, determine the condition of the navigation, communication, and lighting facilities of divert field prior to the first Case III recovery. The following factors shall be considered when anticipating a divert:

1. Aircraft fuel state
2. Bearing and distance of field
3. Weather at divert field, current and forecast
4. En route upper level winds
5. Suitability of field for type of aircraft
6. Navigational assistance available
7. Aircraft mechanical condition
8. Ordnance restrictions

9. Condition of carrier deck

10. Availability of tankers

11. Pilot performance.

CATCC/CDC shall be alerted to the impending divert of an aircraft or group of aircraft and shall take control of the aircraft when diverted. CDC shall also ensure the ship's lookouts are alerted to the forthcoming divert, model aircraft, side number, and on what relative bearing the aircraft is expected to depart the ship.

If the tanker refueling hose cannot be retracted, the hose shall be guillotined prior to recovery. If the hose fails to separate, the aircraft shall be diverted to a suitable landing field. When the situation prevents an aircraft divert and it is equipped with an external refueling store, the store shall be jettisoned prior to attempting a carrier landing. If the hose cannot be guillotined and/or the refueling store jettisoned, normal arrested landing procedures shall be utilized.

When it is determined to divert an aircraft, approach control shall notify the pilot by passing the following information only: "(call sign) signal divert/bingo, (name of field) passing angles 2.5 go button (XX)." After the switch to departure control once above 2,500 feet, the pilot shall be advised to check gear up/hook up and also have information relayed regarding the magnetic heading and the distance to the divert field. A readback of diverting instructions from the pilot or flight leader is mandatory on departure frequency. While under positive control and en route to the divert airfield, any additional information available shall be provided the pilot concerning latest en route and field weather, squawk, altimeter setting, and position from which divert is being initiated. If operating outside an ADIZ boundary, the CDC controller shall provide the pilot with the necessary ADIZ information. The appropriate Air Defense Sector shall be advised of the diverted aircraft's departure point, ADIZ penetration point, time of penetration, altitude, ETE, destination, and any additional information that may be pertinent to safety of flight. The CDC controller shall maintain a radar plot and radio monitor on all diverted aircraft as long as possible and retain responsibility for the aircraft until positive radar handoff to FACSAC/ARTCC or other appropriate controlling agency.

Under IMC, the aircraft shall be instructed to shift to the appropriate airspace controlling agency (FAA or other) frequency after the additional divert information has been received. Once communications have been established with this controlling agency, the flight plan particulars shall be furnished, including the ADIZ penetration information for relay to an air defense sector. The aircraft will receive a clearance. If communications cannot be established, as is often the case, the pilot should file using GCI Common.

The air operations officer shall ensure a divert flight plan is transmitted to the appropriate divert airfield and similar information to the pertinent air defense system agency should an ADIZ penetration be involved; he is also responsible for receipt of an arrival report on the diverted aircraft. The pilot shall ensure an arrival report is transmitted immediately upon landing via the most expeditious means (i.e., POTS, HF/UHF radio, INMARSAT, immediate message, etc.).

Squadron or unit commanders and the air operations officer are jointly responsible for ensure aircraft performance data pertinent to divert is available to and understood by air control personnel.

CV NATOPS MANUAL

31 JULY 2009 NAVAIR 00-80T-105

<http://info.publicintelligence.net/CV-NATOPS-JUL09.pdf>