### 4.2.14 Fire Fighting

It is recommended that 10° of flap be used during the approach and load release phase. This improves control and creates a very stable approach condition. Note that 10° is the first mark seen on the flap leading edge as the flaps are being lowered.

On approaching the target area:

- 1. Slow the aircraft to 125 MPH (109 KTS) and lower the flaps to 10 degrees, and re-trim.
- 2. Unlock dump handle stop in preparation for dump.
- 3. Line up the aircraft for the load drop.
- 4. Be aware that during the load release there will be a sudden pitch-up of the nose of the aircraft.
- 5. Approximately 18 pounds (8 kg) of forward pressure will be required to offset the pitch-up tendency.
- 6. Apply forward motion on the control stick as soon as the dump handle is moved forward.
- 7. Keep the aircraft relatively level during the drop phase.
- 8. After the drop is completed, pull back on the dump handle to lock the hopper door if possible.
- 9. Retract the flaps and re-trim the aircraft for normal flight.

### 4.2.15 Before Landing

PROP LEVER (P)	FULL FORWARD
CONDITION LEVER (S)	FLIGHT IDLE POSITION
POWER LEVER	AS REQUIRED FOR DESCENT RATE
PROP IN BETA LIGHT	OUT (Ensure prop is not in Beta)
FLAPS	AS DESIRED
TAIL WHEEL LOCK LEVER (If equipped)	LOCKED
BRAKE SYSTEM	DEPRESS BOTH BRAKES FIRMLY
(to confirm brake functi	on and ensure parking brakes released)
CONTROL QUADRANT FRICTION	ADJUST (TIGHTEN)

### 4.2.16 Approach and Landing (Normal - Empty Hopper)

The landing procedure for any aircraft, especially a tail wheel airplane, is highly dependent on pilot preference. Below are some general guidelines and warnings for the landing sequence.

APPROACH SPEED	
CONDITION LEVER (S)	FLIGHT IDLE POSITION
POWER LEVER	IDLE (Add power if required)
PROP IN BETA LIGHT	CONFIRM OUT

Avoid full rudder side slips when the flaps are extended. The possibility for loss of aircraft control is more likely in this configuration.



Although placing the condition lever in the RUN position (Ground Idle) may result in a shorter landing distance, Air Tractor does not recommend this practice. In the event that a Go-Around is necessary, the engine will take significantly more time to spool up with the condition lever in the Ground Idle position. The condition lever should be placed in the FLIGHT IDLE position for landing.

After landing and after tail wheel is on the ground:

CONTROL STICK	FULL AFT
POWER LEVER	CONSIDER REVERSE THRUST (See note)
BRAKES	AS REQUIRED
CONDITION LEVER (S)	RUN (After leaving active runway)

Brakes and reverse thrust may be used to shorten the landing rollout. Heavy use of brakes should be applied with caution to prevent the aircraft nosing over.

**NOTE:** If reverse thrust is required, the thumb latch on top of the power lever must be pushed forward and the power lever moved slowly aft until the Prop in Beta light is observed ON. Reverse thrust may be selected as necessary by continued aft movement of the power lever. Ensure torque and ITT limits are not exceeded.

### 4.2.17 Approach and Landing (8,000 LBS. (3629 KG.) Gross Weight)

The landing procedure for any aircraft, especially a tail wheel airplane, is highly dependent on pilot preference. Below are some general guidelines and warnings for the landing sequence.

APPROACH SPEED	100-105 MPH (87-91 KTS) with FLAPS UP
	85-90 MPH (74-78 KTS) with FLAPS DOWN
CONDITION LEVER (S)	FLIGHT IDLE POSITION
POWER LEVER	
PROP IN BETA LIGHT	

Avoid full rudder side slips when the flaps are extended. The possibility for loss of aircraft control is more likely in this configuration.



Although placing the condition lever in the RUN position (Ground Idle) may result in a shorter landing distance, Air Tractor does not recommend this practice. In the event that a Go-Around is necessary, the engine will take significantly more time to spool up with the condition lever in the Ground Idle position. The condition lever should be placed in the FLIGHT IDLE position for landing.

After all wheels are on the ground:

CONTROL STICK	FULL AFT
RUDDER PEDALS	MAINTAIN DIRECTIONAL CONTROL
POWER LEVER	CONSIDER REVERSE THRUST (See note)
BRAKES	AS REQUIRED
CONDITION LEVER (S)	

Brakes and reverse thrust may be used to shorten the landing rollout. Heavy use of brakes should be applied with caution to prevent the aircraft nosing over.

**<u>NOTE:</u>** If reverse thrust is required, the thumb latch on top of the power lever must be pushed forward and the power lever moved slowly aft until the Prop in Beta light is observed ON. Reverse thrust may be selected as necessary by continued aft movement of the power lever. Ensure torque and ITT limits are not exceeded.

### 4.2.18 Cross Wind Landing Technique

- 1. Establish crab angle to line up with runway.
- Leave flaps retracted unless strip is very short and cross-wind does not exceed 15 MPH (13 KTS).
- 3. During final stages of flare-out apply necessary rudder to straighten aircraft with runway. In strong cross-winds it will be necessary to lower the up-wind wing.
- 4. Touch down should be in tail-low attitude and on up-wind wheel. Allow downwind wheel to touch, then tail wheel.
- 5. Remain alert during roll-out. Steer with rudder and use brakes only if necessary.

### 4.2.19 Balked Landing/Go-Around

POWER LEVER	
ATTITUDE	APPROXIMATELY 7° NOSE UP
FLAPS	
CLIMB	
	Until obstacles are cleared
FLAPS	
	After safe altitude and 106 mph (92 kts) IAS climb speed

#### 4.2.20 Engine Shut-Down Procedure

POWER LEVER	IDLE
CONDITION LEVER (S)	RUN
PROP LEVER (P)	Full aft to FEATHER (F)
ITT INDICATION	ALLOW TO STABILIZE FOR 1 MINUTE
AVIONICS MASTER SWITCH	I (If installed)OFF
CONDITION LEVER (S)	Full aft to FUEL CUT-OFF-(C)
ALL SWITCHES	OFF
MASTER "BATT" SWITCH	OFF
PARKING BRAKE	AS REQUIRED
PROP	TETHER to prevent windmilling with no oil pressure
EXHAUST PIPES	COVER when cool



If there is any evidence of fire within the engine after shut-down, proceed immediately as described under the procedures for DRY MOTORING RUN.

WARNING:

### NOTE:

During the shutdown, ensure that the compressor decelerates freely. Keep a record of coast-down time (in seconds) for trending.

## Fly Safe Campaign



## MAINTAIN ACCIDENT AWARENESS

Don't become a statistic!

NTSB has reported 8 ag accidents including 2 fatal accidents so far this year. There has been 1 fatal accident not yet reported by NTSB bringing the total to 3 fatal accidents.

## LANDING WITH A LOAD SAFELY

Once an ag aircraft has been loaded with product and water, the goal is to apply that load to the target field. Sometimes however, weather or other factors such as equipment malfunctions can lead to the need to abort the application after the aircraft has already taken off. This requires the aircraft to be landed fully loaded which can be more difficult to accomplish. There is an excellent video available with tips on how to safely land with a load on the NAAREF Safety and Education Videos website. The video features Fran de Kock of Battlefords Airspray in Canada in both classroom and dual cockpit settings.

Fran advises that when you must land with a load, everything has to be done correctly. Control inputs must be perfect with no overreaction. You need to be aware of the difference in the required airspeed because you can get behind the power curve quickly. No matter what type of aircraft, about 20% additional airspeed needs to be added during the approach when landing with a load. It is better to approach a little too fast rather than a little bit too slow. Most aircraft should have a recommended speed in the handbook for landing loaded.

The angle of your approach needs to be reduced and you need to give yourself extra room on the approach as well. If you don't make a good approach, you're not going to make a good landing. If something gets a little off during the approach, go around for another attempt. You also want to make sure your tailwheel lock is functioning properly. Fran recommends raising the flaps once the main gear is firmly on the ground to prevent the wing from flying again. If your normal landing strip is shorter of rougher than what you feel comfortable with for landing a loaded aircraft or has a crosswind component at the time you need to return with a load, consider using an alternative strip that is longer and smoother and doesn't have a crosswind that increases the difficulty of the landing.

## **Check Temporary Flight Restrictions (TFRs)**

Always check TFR NOTAMs before flying! Make sure you have proof of a preflight TFR briefing from sources such as FSS or <u>https://www.1800wxbrief.com</u>.

## Make a "Fly Safe" Resolution Now!

Watch your fax or e-mail every other Monday in April, May, June and August and every Monday in July for scheduled issues. Supplemental messages may be sent when increased flight activity warrants additional safety awareness. To be removed from the "Fly Safe" fax list, please call 202-546-5722 or e-mail information@agaviation.org. Let us know if you wish to be removed only from these Fly Safe messages or all faxes or e-mails from the NAAA.

# Advice for Ag Pilots, From Ag Pilots

### Spirit of AG Aviation

Educating for safety in our industry. Advice from 2006-2007 PAASS attendees.

### GENERAL - DUMPING

Practice dumping water - simultaneously add forward pressure. —LORI LOVE OF WICHITA, KS, 30 YEARS

Load your airplane full of water and practice landing with a full load. That way you will not be afraid to bring back a full load. If things don't look right when you go out to spray, bring the load back. (Note: Check the landing weight in your POH first.) —BRIAN BIRD OF NICKERSON, KS, 7 YEARS

BRAN BIRD OF HURRENSON, NO, 7 12103

Practice dumping clear water occasionally. —Bert Bruton of Garden City, TX, 36 years

### GENERAL - MAINTENANCE

Never hand-over-hand a prop through on a radial engine, even if the mags are off. Always pull it through as if it will start. I had an engine start with the mags off and nearly take my left hand off. The engine had not been started in 3 months. It ran for 10 seconds with the mixture in the idle cutoff.

-KENNY CRIDER OF SWIFTON, AR, 18 YEARS

A good way to find damage on your aircraft is to wash/pressurewash the aircraft yourself instead of having your ground crew do it. They may not know what to look for or recognize a broken or problem-part on your aircraft.

-DAIN GUETERSLOH OF LUBBOCK, TX, 16 YEARS

Replace worn bushings and tie rod ends on rudder boost tab. Ensure plane is in trim. For a few dollars in hardware, it means the difference between a good flying plane and a bad flying plane.

-Alan East of Wichita Falls, TX, 10 years