



Grumman Owners & Pilots Association

Building on our proud AYA heritage.
GrummanPilots.org

Grumman Owners & Pilots Association AA1 Series Grumman Tips

Flight Operations:

1. Do not allow the flap selector switch to spring back to neutral following flap deployment. It will may overshoot, enter the retract position, and retract the flaps.
2. Also, while braking effectiveness may be increased by raising flaps after touchdown, attention must not be diverted unnecessarily from control of the aircraft during rollout. When runway length permits, leaving the flaps down and holding the nose up during rollout provides significant aerodynamic braking and reduces brake and tire wear.
3. Airspeed control is of utmost importance, especially in the original AA-1 with the “slick” wing. Flying characteristics of these aircraft are substantially different from a Cessna 150/152. If you participate in our Pilot Familiarization Program (strongly recommended), you will see first hand the problems that can develop on final approach with too little or too much speed. Flying characteristics of these aircraft are substantially different from a Cessna 150 or 152. Proper arrival planning to ensure pattern entry at the right speed is essential. Several hours of instruction from a GRUMMAN PROFICIENT FLIGHT INSTRUCTOR should be considered mandatory.
4. Flaps are of little use except to change pitch attitude and increase drag, and to improve short field landing performance. Slipping the aircraft, however, with or without flaps, has been found to be very effective for losing altitude without increasing airspeed. The use of full flaps on all landings is recommended by the POH except in the most extreme wind conditions. Failure to use full flaps increases the chance of “skagging” the tail on landing.
5. Do not turn base to final with full flaps. If you need flaps, set them as needed on final.
6. The AA-1 wing stalls sooner at a higher speed, and more sharply, and with less warning than the AA-1A/B/C’s cuffed wing. Pilots experienced only in the later versions should obtain transition training before flying an AA-1.
7. During landings, it is extremely important to keep the nose wheel off the ground as long as possible and control the lowering of the nose wheel to the runway. Keep the nose wheel off the ground as long as possible. Landing nose wheel first, or even on all three wheels at the same time, is virtually guaranteed to cause a porpoise situation, from which recovery is very difficult. A go-around is the only sure cure for porpoising. Proper airspeed control on final approach is the best way to avoid this situation. Think of it this way, in a Grumman, the only purpose of the nose wheel is to keep the propeller from striking the ground during taxi. It is not intended to absorb landing loads.
8. The stock 108 HP models should not be pulled into the air prematurely or abruptly, as they easily get behind the power curve.

Ground Operations:

1. Do not maneuver the aircraft on the ground with the wing tips. Use the propeller or towbar. Use of the wing tips is believed to create a torque which causes fuel tank sealant leaks, although this point is debatable. Also, when using the propeller to push or pull the aircraft, hold it as near as possible to the spinner but do not apply pressure to the spinner.
2. Do not steer the aircraft when backing by kicking or pushing the nose wheel fairing. If you have not developed the skill to push the aircraft backwards, use a towbar.
3. Don't chock a Grumman by the nose wheel alone. Chocking the nose wheel in Cessnas, Pipers, and Beeches works fine. With the Grumman nose wheel, however, a gust of wind will can spin the nose assembly 90 degrees, and very rapidly rotate the aircraft into the wind. The solution is to chock both main wheels, front and rear. Do not chock the nose wheel if you have only one set of chocks, pull the nose to the side to rotate the nose wheel 90 degrees (i.e., parallel to the prop) and then chock it.
4. Be careful that the dome light switch is off when you leave your aircraft. This circuit is wired directly to the battery, not through the master switch. Leaving it on has the same effect as leaving the master on--a dead battery. Some owners recommend leaving the strobe or flashing beacon switch on all the time. This serves as a reminder that your master switch is still on.
5. When stopping the aircraft during taxi, be sure to straighten the nose wheel before you stop. If you stop with the nose wheel in a turn, it takes a great deal of power to get it straightened out again when you resume taxi.
6. Because of our differential braking steering method, the aircraft will not steer on ice. Also, caution is advised following installation of new brake pads, since initial braking action may be poor. Be sure to "set" the pads by hard application of brakes on the first taxi test after brake pad installation.
7. CAUTION WARNING: -- AA-1x's generally have little more than 350 lb cabin load available with full fuel and the aircraft is easily overloaded. Loaded aft of allowable CG, takeoff and climb performance suffer dramatically if that happens. Proper W&B computations should be performed. An Excel™-based W&B computation and equipment list program is available from the AYA Safety Director to help in this area.
8. Be aware of which antenna is connected to which com radio in dual installations. Ground communications can be impaired if using an antenna mounted on the bottom of the aircraft.

Maintenance:

1. During preflight, check the cotter pins in the elevator trim linkage, as well as those in the nose wheel axle and nose strut nut. Should the latter cotter pin shear off, the entire nose wheel, fairing and fork assembly will fall off the aircraft! Stainless steel pins are highly recommended. Also, make sure the roller is free and there are no loose rivets in the elevator trim tab control arm.
2. When your brake discs require replacement and become so rusted and pitted that they rapidly wear out the brake pads, consider going to chrome discs.
3. If the elevator trim wheel seems difficult to turn, try removing the tail cone and lubricating the trim jackscrew.
4. Fuel gauges (glass tubes) should have red float balls installed.
5. When removing the nose wheel assembly, remove the nose wheel first, the fairing/fork assembly second, and then separate the fork from the fairing. If you follow the service manual procedure, you will gouge the V shaped aerodynamic fairing at the rear of the nose strut.
6. It is possible for the bolt holes in the elevator torque tube to elongate, allowing the left and right elevators to become misaligned with each other. Check this periodically by having one individual hold one elevator firmly while you try to move the other. If it moves, you have an elongated bolt hole in the torque tube, and must have it repaired.

7. Pledge furniture wax is useful for cleaning plastic windows, and aids in removing bugs if applied to the leading edges and the windshield.
8. Working on the lower spark plugs without removing the lower cowl is facilitated by removing all of the machine screws on both aft sides of the lower cowl, and an equal number on the forward sides. This allows the sides of the cowl to fold out, giving ready access to the lower plugs.
9. REM 37 BY long-reach spark plugs are approved for all of the engines in our two seat aircraft except for the O 235 C, F, G and J models. These plugs are considerably less prone to lead fouling than are others.
10. Fuel spilled around the filler caps should drain out through the bottom of the wing via the scupper drains. If it does not, you should clean the drains with a small wire so they work properly.
11. For ease in sliding the canopy, many suggestions are offered. WD 40, silicone spray, and alum-a-tube are some that have been recommended. We know of some owners who say that WD 40 collects dirt and causes sticking. Others, however, say that WD 40 is the only thing that works. Try them until you find something satisfactory.
10. Many owners have had the nose bowl split to allow easier access to the alternator without having to remove the propeller. Any mechanic can do it with a Form 337. STC's are available including the necessary hardware. If you want to pursue this, write to the AYA contact and we can put you in touch with one of the individual STC holders involved.
11. As soon as practical after landing, the oil access door should be opened and (if applicable) the cowl latches released (wind conditions notwithstanding) to allow heat to escape the engine compartment. This prolongs the life of wiring and hoses in the engine compartment and reduces the chance of vapor lock on a "quick turn," especially for aircraft using auto gas.
13. Users of auto gas might try opening the oil access door while the airplane is sitting on the ground prior to a quick turn-around. This allows hot air to escape, causing a chimney effect which pulls cool air into the engine and helps the vapor lock problem.
14. Engine baffle seals (the black, fabric-like material under the cowl) are very important for proper engine and oil cooling. Experience has demonstrated that many A&Ps do not fully understand their significance. Be sure YOU do, and keep them properly maintained, which is to say flexible and pointed inward. They are supposed to duct incoming cooling air downward through the cylinders. If they leak, your engine suffers from lost cooling.
15. Be sure to periodically check the trim tab arm for loose rivets.
16. If your canopy cannot be easily pulled open using one finger on the back edge, the tracks need to be cleaned and lubricated.
17. The fuel tanks are inside the spar and the ends are sealed with a large "O" ring. When the inboard seal leaks, fuel runs down to the center of the spar where it exits a small drain hole under the console inside the cabin. If fuel smell is detected in the cabin, this may be the cause.