

SECTION 2 – LIMITATIONS

PLACARDS

1. In full view of pilot:

WARNING
THE DISABLING OF A
FUNCTIONING GEAR
ADVISORY SYSTEM FOR
ANY PURPOSE, WHEN
FLOATS ARE INSTALLED,
IS PROHIBITED

2. Next to circuit breaker:

GEAR
ADV

SECTION 3 – EMERGENCY PROCEDURES

There are no changes to the emergency procedures when the gear advisory system is installed.

SECTION 4 – NORMAL PROCEDURES

WARNING!!

The system is advisory in nature and does not replace a visual check of the gear position. Failure to ensure proper gear position could result in serious or fatal injury in the event of an accident.

WARNING!!

Any time annunciation occurs below 50 ft AGL, the pilot should abort the landing and initiate an immediate go-around regardless of the alert, and only then attempt to determine the cause of the annunciation. After go-around, at safe altitude, gear position can be confirmed by visual means. Only if the gear position is absolutely confirmed should the landing be continued.

NOTE

Aircraft audio must be on to hear advisories.

NOTE

LGAS may alert even though the gear is correctly configured for the intended landing surface. An example is an approach crossing a shoreline below 50ft AGL. Landing gear may be in the correct position for the intended landing surface but not for the terrain at the time of the alert. LGAS has no ability to react to terrain ahead of the aircraft, only the terrain that is directly below the aircraft compared to the current gear position.

Altitudes less than 30ft AGL may exhibit error due to relative speed effects and other factors. Shallow or muddy water, water with heavy wind-streaks, foam, or floating debris can distort the surface reflectivity of water. Rubber buildup or standing water on a runway can distort the surface reflectivity of land. These conditions can prompt the illuminated switch to alternate between WATER and LAND. Proceed only once the correct landing gear position has been confirmed.

The laser may detect an unsafe landing condition. It is possible to get an alert during a water landing if the laser detects something for a second or more with the same reflectivity as land (such as items listed above). In these instances, an immediate go-around is advisable to assess the intended landing area and to confirm gear position.

The illuminated switch indicates LAND or WATER when operating within 400ft of a reflected surface. LGAS alerts are active below the threshold airspeed. This reduces erroneous alerts that may occur due to precipitation or when passing through or within 400ft of clouds or fog in normal flight.

SECTION 5 – PERFORMANCE

There are no changes to performance when the gear advisory system is installed.

SECTION 6 – WEIGHT AND BALANCE

AGAS Controller	0.90 lb, arm determined on installation
AGAS MKII / LGAS Controller	0.45 lb, arm determined on installation
Laser Array	1.65 lb, arm determined on installation

**MAXIMUM RATE OF CLIMB
MAXIMUM WEIGHT 2200 LBS
76 INCH PROPELLER**

CONDITIONS:

Flaps Up

Landing Gear Retracted

2700 RPM, Full Throttle, Mixture Rich

- Notes:
1. Mixture may be leaned above 3000 feet if necessary for smooth engine operation.
 2. Reduce rate of climb by 10% when 72 inch propeller is installed.
 3. Reduce rate of climb by 3% for A-1B/A-1C at 2250 lbs.

				ISA -60°F	ISA -40°F	ISA -20°F	ISA	ISA +20°F	ISA +40°F
Pressure	ISA	Climb	Climb	Rate of	Rate of	Rate of	Rate of	Rate of	Rate of
Altitude	Temp	Speed	Speed	Climb	Climb	Climb	Climb	Climb	Climb
ft.	°F	MIAS	KIAS	fpm	fpm	fpm	fpm	fpm	fpm
SL	59	73	63	1042	1010	980	953	926	901
2000	52	72	62	923	894	866	840	816	793
4000	45	70	61	805	777	752	728	706	685
6000	38	70	61	685	661	637	616	596	577
8000	31	69	60	566	544	523	504	485	469

**TAKEOFF AND BALKED LANDING RATE OF CLIMB
MAXIMUM WEIGHT 2200 LBS
76 INCH PROPELLER**

CONDITIONS:

Flaps Up

Landing Gear Retracted

2700 RPM, Full Throttle, Mixture Rich

- Notes:
1. Mixture may be leaned above 3000 feet if necessary for smooth engine operation.
 2. Reduce rate of climb by 10% when 72 inch propeller is installed.
 3. Increase rate of climb by approximately 125 fpm when landing gear is retracted.
 4. Reduce rate of climb by 3% for A-1B/A-1C at 2250 lbs.

				ISA -60°F	ISA -40°F	ISA -20°F	ISA	ISA +20°F	ISA +40°F
Pressure	ISA	Climb	Climb	Rate of	Rate of	Rate of	Rate of	Rate of	Rate of
Altitude	Temp	Speed	Speed	Climb	Climb	Climb	Climb	Climb	Climb
ft.	°F	MIAS	KIAS	fpm	fpm	fpm	fpm	fpm	fpm
SL	59	62	54	735	713	693	674	657	641
2000	52	62	54	630	610	593	576	561	546
4000	45	62	54	525	508	492	478	464	452
6000	38	61	53	419	405	391	379	368	357
8000	31	61	53	314	302	291	281	271	263

LANDING DISTANCE OVER 50 FOOT OBSTACLE
MAXIMUM WEIGHT 2200 LBS

WATER LANDING

CONDITIONS:

Flaps 30°

Throttle Idle

Obstacle Clearance Speed 64 MIAS / 55 KIAS

No Wind

Rippled Water

- Notes:
1. Shaded area of chart denotes possible frozen water. Distances are provided to allow interpolation.
 2. Water distance is estimated to be approximately 35% of total landing distance from 50' obstacle height.
 3. Increase total distance by 1% for A-1B/A-1C at 2250 lbs.

		ISA - 60°F	ISA - 40°F	ISA - 20°F	ISA	ISA + 20°F	ISA + 40°F
Pressure	ISA	Distance to Clear	Distance to Clear	Distance to Clear	Distance to Clear	Distance to Clear	Distance to Clear
Altitude	Temp	50' Obstacle	50' Obstacle	50' Obstacle	50' Obstacle	50' Obstacle	50' Obstacle
ft.	°F	ft.	ft.	ft.	ft.	ft.	ft.
SL	59	1245	1274	1305	1336	1368	1401
2000	52	1285	1318	1352	1387	1423	1459
4000	45	1330	1367	1405	1443	1482	1522
6000	38	1380	1421	1463	1505	1548	1592
8000	31	1435	1480	1528	1573	1620	1668

GROUND LANDING – SHORT FIELD

CONDITIONS:

Flaps 30°

Throttle Idle

Obstacle Clearance Speed 64 MIAS / 55 KIAS

No Wind

Paved, Level, Dry Runway

- Notes:
1. Ground distance is estimated to be approximately 45% of total landing distance from 50' obstacle height.
 2. Increase total distance by 1% for A-1B/A-1C at 2250 lbs.

		ISA - 60°F	ISA - 40°F	ISA - 20°F	ISA	ISA + 20°F	ISA + 40°F
Pressure	ISA	Distance to Clear	Distance to Clear	Distance to Clear	Distance to Clear	Distance to Clear	Distance to Clear
Altitude	Temp	50' Obstacle	50' Obstacle	50' Obstacle	50' Obstacle	50' Obstacle	50' Obstacle
ft.	°F	ft.	ft.	ft.	ft.	ft.	ft.
SL	59	890	908	928	948	968	990
2000	52	915	936	958	981	1004	1027
4000	45	944	967	992	1017	1043	1069
6000	38	976	1003	1030	1058	1086	1115
8000	31	1012	1042	1072	1103	1134	1165