

# Air Tractor 402 (AT-402B) Airplane Flight Manual Excerpts

NTSB Investigation: ERA21FA257

AIR TRACTOR, INC.  
Olney, Texas

2.4 PLACARDS AND MARKINGS (Continued):

(b) Attached to outside of aircraft:

- (1) Next to fuel filler caps:  
FUEL 63\* U.S. GAL. [238\* LITERS] JET A. FUEL TANKS ARE INTERCONNECTED. ALLOW SUFFICIENT TIME FOR FUEL LEVEL TO EQUALIZE BEFORE TOP-OFF OF TANK.  
\*85 [\*322] (When standard 85 gallon (322 liter) tanks are installed)  
\*108 [\*409] (When optional 108 gallon (409 liter) tanks are installed)  
\*117 [\*443] (When optional 117 gallon (443 liter) tanks are installed)
- (2) Next to Oil Filler Cap: OIL TANK 9.2 QT. [8.7 LITER] CAP.
- (3) Next to pitot static buttons: STATIC AIR – KEEP CLEAN
- (4) Below Hopper Rinse Fill: HOPPER RINSE TANK FILL
- (5) Below Windshield Washer Fill: WINDSHIELD WASHER FILL
- (6) In loader seat compartment (if installed): OCCUPANT MUST ATTACH SEATBELT AND SHOULDER HARNESS AND WEAR A D.O.T. APPROVED OR MIL-SPEC CRASH HELMET.
- (7) On Hopper Lid: FOR AGRICULTURAL PURPOSES:  
MAX HOPPER LOAD 3,250 LBS.  
MAX AIRCRAFT GROSS WT. 9,170 LBS
- (8) On top of left hand gear leg: LEVELING POINT
- (9) On baggage door: 60 POUNDS MAXIMUM BAGGAGE.
- (10) On Canopy Doors: EMERGENCY EXIT OPEN
- (11) On Canopy Doors: RESCUE

(c) In full view of pilot:

- (1) THIS AIRPLANE MUST BE OPERATED IN RESTRICTED CATEGORY IN ACCORDANCE WITH PLACARDS AND MARKINGS DISPLAYED IN THE COCKPIT. NO ACROBATIC MANEUVERS, INCLUDING SPINS. DESIGN MANEUVERING SPEED 140 MPH [122 KNOTS, 225 KM/H]. MAX FLAP DOWN SPEED 115 MPH [100 KNOTS, 185 KM/H]. MAX CROSSWIND VELOCITY LANDING 15 MPH [13 KNOTS, 24 KM/H]. ALT. LOSS FROM STALL 220 FT (67 M).
- (2) THE OPERATION OF THIS AIRPLANE IS LIMITED TO DAY AND NIGHT\* VFR CONDITIONS. FLIGHT INTO KNOWN ICING CONDITIONS IS PROHIBITED.  
\*Delete the words AND NIGHT unless aircraft is equipped with operable lighting package. (see page 6)
- (3) PUSH STICK FORWARD TO UNLOCK TAILWHEEL.
- (4) PARK BRAKE OPERATION: ON: DEPRESS PEDALS AND PULL LEVER  
OFF: DEPRESS PEDALS.
- (5) DO NOT OPERATE ENGINE ABOVE 800 FT-LBS TORQUE ON GROUND RUN-UP OR TAIL WILL COME UP.  
FLIGHT IN VICINITY OF THUNDERSTORMS PROHIBITED.  
FLIGHT IN VISIBLE MOISTURE BELOW 40°F [4.4°C] PROHIBITED.  
FLIGHT BELOW 5°F [-15°C] PROHIBITED.  
USE FSII WHEN OPERATING BELOW 40°F [4.4°C].  
MAXIMUM OPERATIONAL ALTITUDE 12,500 FT MSL. [3811 M]
- (6) WARNING DO NOT MOVE POWER LEVER INTO REVERSE POSITION WITH ENGINE STOPPED OR CONTROLS WILL BE DAMAGED.
- (7) DO NOT OPERATE PUMP ABOVE 140 MPH. [122 KNOTS, 225 KM/H]
- (8) WARNING: SULFUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES ARE INCORPORATED IN AIRCRAFT.

**PLACARDS AND MARKINGS (Continued):**

- (9) On engine Control Quadrant at respective HI and LO Idle positions:  
FLIGHT IDLE and RUN.  
On Start Control Lever: S.
- (10) On aft end of Engine Control Quadrant next to Power Lever: REV.  
At the stop detent: IDLE.  
On Power Control Lever: POWER.
- (11) On Prop Control Lever: P and on aft end of travel: F
- (12) On Canopy Doors: DO NOT OPEN DOOR IN FLIGHT  
IF DOORS WILL NOT OPEN AFTER OVERTURN,  
KICK OUT WINDOW WITH KNEES OR FEET.
- (13) Above Caution Lights on Upper Panel: LOW FUEL, FUEL FILTER, CHIP DETECT, AIR FILTER,  
PROP IN BETA, RINSE PUMP, GENERATOR OUT.
- (14) Emergency Power Lever (If Installed):  
On top of Lever:  
CAUTION FCU OVERRIDE  
UNLOCK - PUSH FOR POWER
- (15) On instrument panel if loader seat is installed:  
WHEN OPTIONAL LOADER SEAT IS OCCUPIED THE HOPPER RINSE TANK MUST BE  
FILLED WITH WATER AND/OR FUEL QUANTITY MUST BE ADJUSTED TO PREVENT  
EXCEEDING THE AFT C.G. LIMIT OR WEIGHT LIMIT. LOADER SEAT MUST NOT BE  
OCCUPIED DURING CHEMICAL APPLICATION
- (16) On instrument panel: A STALL DURING SKIDDING TURNS WILL CAUSE THE NOSE TO  
PITCH DOWN SHARPLY AND RESULT IN SIGNIFICANT LOSS OF ALTITUDE.  
MAINTAIN COORDINATED FLIGHT AT ALL TIMES
- (17) WARNING: TURN OFF STROBE LIGHTS WHEN TAXIING IN VICINITY OF OTHER  
AIRCRAFT, OR DURING FLIGHT THROUGH CLOUD, FOG, OR HAZE. STANDARD  
POSITION LIGHTS TO BE ON FOR ALL NIGHT OPERATIONS.
- (18) On instrument panel: AVOID SKIDDING TURNS WHICH MAY RESULT IN FUEL MIGRATION  
FROM ONE TANK TO THE OTHER. THE ENGINE MAY QUIT WHEN EITHER TANK  
BECOMES EMPTY. MONITOR THE FUEL LEVEL IN EACH TANK FREQUENTLY WHEN  
FUEL LEVEL IS LESS THAN 1/2 TANK.
- (19) On floor next to Emergency Engine Induction door cable: TURN TO UNLOCK PULL UP FOR  
EMERGENCY ENGINE INDUCTION SYSTEM
- (20) On Fire Extinguisher (Dry chemical only):  
DO NOT USE IN FLIGHT. MAY CAUSE TEMPORARY BLINDNESS AND DIFFICULTY  
BREATHING IF INHALED.

**AIR TRACTOR, INC.**

**Olney, Texas**

**STALL SPEEDS**

Stall Speeds at 7,000 lbs. (3175 kg.) gross weight, power off are as follows:

<u>Angle of Bank (Degrees)</u>	<u>0</u>	<u>15</u>	<u>30</u>	<u>45</u>	<u>60</u>
Stall speed (MPH-CAS) Flaps Up	73	74	78	87	103
Stall Speed (MPH-CAS) Flaps Down	63	64	68	75	89
Stall Speed (KNOTS-CAS) Flaps Up	63	64	68	76	89
Stall Speed (KNOTS-CAS) Flaps Down	55	56	59	65	77
Stall Speed (KM/H-CAS) Flaps Up	121	122	130	143	171
Stall Speed (KM/H-CAS) Flaps Down	106	108	114	126	150

**ALTITUDE LOSS DURING STALL RECOVERY:**

The maximum altitude lost in the wings level stall recovery is 220 ft.(67m) for the AT-402B at gross weight of 6,000 pounds (2722kg.).