

## Cessna 182Q AIRCRAFT PERFORMANCE

N \_\_\_\_\_ Cessna 182Q \_\_\_\_\_ Year: \_\_\_\_\_ HP: \_\_\_\_\_

<b>Inspections</b>	<b>Weight Limits</b>
Annual _____ ELT Batt _____	Gross Wt. _____
100 Hr. _____ Xpndr _____	Useful Load _____
(tach) _____	Max Baggage _____
AD Cur yes / no      Squawk go / nogo	

<b>Weight and Balance Calculation</b>			
<i>ITEM</i>	<i>WEIGHT</i>	<i>ARM</i>	<i>MOMENT</i>
EMPTY WEIGHT	_____	---.---	_____
Pilot & Co-Pilot	_____	37.0	_____
Rear Seat Passengers	_____	74.0	_____
Baggage Area A (120 lbs.)	_____	97.0	_____
Baggage Area B (80 lbs.)	_____	115.0	_____
Hatshelf (25 lbs.)	_____	130.0	_____
Fuel (74-75-88 gal usable)	_____	46.0	_____
Ramp Wt (2950-3100 lbs.)	_____		_____
Start, Taxi, & Runup	_____	46.0	_____
Takeoff Wt (2950-3100 lbs.)	_____		_____
Takeoff C.G. (see chart)	_____		_____
Estimated Fuel Burn	_____	46.0	_____
Landing Weight	_____		_____
Landing C.G. (see chart)	_____		_____

<b>Performance Calculation</b>	
ATIS wind: _____@_____ ?C/dew: _____/_____ Alt: _____ Rwy: _____	
Press Alt: _____ Density Alt: _____ X-Wind: _____ H-Wind: _____	
Takeoff Distance – Short Field (Ground Run)	_____
Takeoff Distance – Short Field (50' Obstacle)	_____
Landing Distance – Short Field (50' Obstacle)	_____
<b>Headwind – less 10% for each 9 kts    Tailwind – add 10% for each 2 kts</b>	

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100 Hr. _____ Xpndr _____	Useful Load _____
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AD Cur yes / no      Squawk go / nogo	

<b>Weight and Balance Calculation</b>			
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EMPTY WEIGHT	_____	---.---	_____
Pilot & Co-Pilot	_____	37.0	_____
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Ramp Wt (2950-3100 lbs.)	_____		_____
Start, Taxi, & Runup	_____	46.0	_____
Takeoff Wt (2950-3100 lbs.)	_____		_____
Takeoff C.G. (see chart)	_____		_____
Estimated Fuel Burn	_____	46.0	_____
Landing Weight	_____		_____
Landing C.G. (see chart)	_____		_____

<b>Performance Calculation</b>	
ATIS wind: _____@_____ ?C/dew: _____/_____ Alt: _____ Rwy: _____	
Press Alt: _____ Density Alt: _____ X-Wind: _____ H-Wind: _____	
Takeoff Distance – Short Field (Ground Run)	_____
Takeoff Distance – Short Field (50' Obstacle)	_____
Landing Distance – Short Field (50' Obstacle)	_____
<b>Headwind – less 10% for each 9 kts    Tailwind – add 10% for each 2 kts</b>	

# CESSNA 182Q PRE-FLIGHT CHECKLIST

## FLIGHT PLANNING

Airplane ..... CHECK MAINTENANCE RECORDS  
Route & Navigation Planning ..... COMPLETE  
Weather ..... BRIEFING COMPLETE  
Baggage ..... WEIGHED  
Weight & Balance / CG ..... CALCULATED / WITHIN LIMITS  
Performance Planning ..... COMPLETE  
Flight Plan ..... FILED

## INSIDE CABIN

Aircraft Papers ..... ARROW  
Aircraft Hobbs & Tachometer ..... VERIFY  
Fire Extinguisher (if aboard) ..... CHECK  
Headset, Charts, Lapboard ..... ON BOARD  
Baggage ..... STOWED & SECURE  
Control Lock ..... REMOVE & STOW  
Ignition Switch ..... OFF  
Avionics Power Switch ..... OFF  
Circuit Breakers ..... IN  
Compass Deviation Card ..... CHECKED  
Master Switch ..... ON  
Fuel Quantity Indicators ..... CHECK QUANTITY  
Avionics Cooling Fan (if installed) ..... CHECK AUDIBLY FOR OPERATION  
Wing Flaps ..... DOWN  
External Lights / Pitot Heat ..... CHECKED  
Master Switch ..... OFF  
Alternate Static Valve (if installed) ..... CHECK OPERATION (then closed)

## EMPENNAGE – LEFT SIDE

Side and Rear Windows ..... CHECK / CLEAN  
Baggage Door ..... CHECK  
Empennage ..... CHECK FOR DAMAGE  
Horizontal Stabilizer – Leading Edge ..... CHECK  
Elevator – Left Side ..... CHECK MOVEMENT / COUNTER-WEIGHT  
Tail Tie Down / Rudder Gust Lock ..... REMOVE  
Rudder ..... CHECK MOVEMENT / COUNTER-WEIGHT

## EMPENNAGE – RIGHT SIDE

Elevator – Right Side ..... CHECK MOVEMENT / COUNTER-WEIGHT  
Elevator Trim Tab ..... CHECK  
Horizontal Stabilizer – Leading Edge ..... CHECK  
Empennage ..... CHECK FOR DAMAGE  
ELT Antenna ..... CHECK SECURITY  
Side and Rear Windows ..... CHECK / CLEAN

# CESSNA 182Q PRE-FLIGHT CHECKLIST

## RIGHT WING – TRAILING EDGE

Wing Flap ..... CHECK SECURITY / FLAP TRACKS  
Aileron ..... CHECK MOVEMENT / COUNTER-WEIGHT  
Wing Tip and Lights ..... CHECK

## RIGHT WING – LEADING EDGE

Leading Edge ..... CHECK  
Wing Tie Down / Chocks ..... REMOVE  
Right Main Tire, Brakes, Hyd. Line ..... CHECK  
Fuel Drain ..... DRAIN / SAMPLE  
Air Inlets ..... CHECK  
Fuel Tank ..... CHECK QUANTITY / SECURE CAP (vented)

## NOSE

Windshield ..... CHECK / CLEAN  
Engine Oil Level ..... CHECK (9 - 12 quarts)  
Fuel Strainer Knob ..... PULL / DRAIN 4 sec / CHECK CLOSED  
Cowling ..... CHECK SECURE  
Propeller & Spinner ..... CHECK FOR NICKS & SECURITY  
Alternator Belt ..... CHECK TENSION  
Landing Light(s) ..... CHECK  
Carburetor Air Filter ..... CHECK CLEAR  
Nose Wheel Strut & Tire ..... CHECK  
Nose Wheel Damper ..... CHECK SECURE  
Exhaust ..... CHECK  
Static Source Opening (both sides) ..... CHECK FOR STOPPAGE

## LEFT WING – LEADING EDGE

Air Inlets ..... CHECK  
Fuel Tank ..... CHECK QUANTITY / SECURE CAP  
Pitot Cover (if installed) ..... REMOVE / CHECK FOR STOPPAGE  
Fuel Tank Vent Opening ..... CHECK FOR STOPPAGE  
Stall Warning Opening ..... CHECK FOR STOPPAGE  
Leading Edge ..... CHECK  
Wing Tip and Lights ..... CHECK

## LEFT WING – TRAILING EDGE

Aileron ..... CHECK MOVEMENT / COUNTER-WEIGHTS  
Wing Flap ..... CHECK SECURITY / FLAP TRACKS  
Wing Tie Down / Chocks ..... REMOVE  
Left Main Tire, Brakes, Hyd. Line ..... CHECK  
Fuel Drain ..... DRAIN / SAMPLE

\*\*\* Push aircraft across **tie-down cable** if applicable \*\*\*

**CESSNA 182Q****Start / Takeoff / Cruise****BEFORE ENGINE START**

Preflight Inspection  
 Cell Phones OFF  
 Seat Belts & Harnesses  
 Passenger Briefing  
 Fuel Selector BOTH  
 Avionics Power OFF  
 Autopilot OFF  
 Circuit Breakers  
 Parking Brake SET  
 Cowl Flaps OPEN  
 ATIS / SET ALTIMETER

**STARTING ENGINE**

Mixture RICH  
 Throttle OPEN 1/2 INCH  
 Propeller HIGH RPM  
 Carburetor Heat COLD  
 Master Switch ON  
 Rotating Beacon / NAV Lights  
 Ignition Key IN  
 Prime  
 Propeller Area "CLEAR"  
 Ignition Switch START  
 Mixture ADJUST  
 Oil Pressure  
 Ammeter  
 Suction Gauge  
 Wing Flaps UP

**NAV/COMM**

Avionics Power ON  
 Intercom CHECK  
 Marker Beacon TEST  
 Com 1 SET  
 Com 2 SET  
 Nav 1 TEST / SET  
 Nav 2 TEST / SET  
 GPS SET  
 DME SET  
 ADF SET

**BEFORE TAXI**

Flight Instruments  
 Transponder 1200 SBY  
 Taxi Light ON  
 Parking Brake OFF  
 Permission to Taxi

**RUNUP CHECK**

Parking Brake SET  
 Flight Controls & Trim  
 Fuel Selector BOTH  
 Fuel Quantity  
 Fuel Primer LOCKED  
 Autopilot / Air Cond OFF

Throttle 1700  
 Mixture  
 Carburetor Heat  
 Magnetos  
 Propeller CYCLE  
 Oil Pressure  
 Oil Temperature  
 Ammeter  
 Suction Gauge  
 Throttle IDLE  
 Throttle 1000

Circuit Breakers  
 Flight Instruments  
 Radios  
 Transponder ALT  
 Landing Light / Strobes  
 Cabin Doors & Windows  
 Takeoff Briefing  
 Wing Flaps SET  
 Parking Brake OFF  
 Permission to Take Off

**NORMAL TAKEOFF**

Throttle FULL  
 Rotate 50 KIAS  
 Trim for 70-80 KIAS  
 Prop 2400 RPM at 500 AGL

**CRUISE CLIMB**

Airspeed 85-95 KIAS  
 Power 23 INCHES / 2400 RPM  
 Mixture Adjust

**CRUISE**

Power / Prop / Mixture  
 Elevator & Rudder Trim  
 Cowl Flaps CLOSED  
 Engine Instruments  
 Landing Light OFF

**CESSNA 182Q****Descent / Landing / Shutdown****DESCENT**

Fuel Selector Valve BOTH  
 Power / Mixture  
 Carburetor Heat AS REQUIRED  
 Cowl Flaps CLOSED  
 Landing Light ON

**PATTERN ENTRY**

Power 15 INCHES  
 Carburetor Heat ON  
 Flaps 10°

**BASE LEG** (Trim for 75 KIAS)

Flaps 20°

**APPROACH**

Gas BOTH  
 Undercarriage  
 Mixture  
 Propeller HIGH RPM  
 Safety SECURE  
 Autopilot OFF

**AFTER LANDING CHECK**

Wing Flaps UP  
 Carburetor Heat COLD  
 Cowl Flaps OPEN  
 Mixture Adjust  
 Landing Lights / Strobes OFF  
 Taxi Lights ON  
 Transponder STANDBY

**SHUTDOWN**

Throttle 1000 RPM  
 Magneto Safety Check  
 Throttle 1700 RPM  
 Mixture LEAN MAX RPM  
 Avionics Power Switch OFF  
 Electrical Equipment OFF  
 External Lights (except Beacon) OFF  
 Throttle 1200 RPM  
 Mixture IDLE CUTOFF  
 Ignition Switch OFF  
 Beacon Light OFF  
 Master Switch OFF  
 Cowl Flaps CLOSED  
 Fuel Selector RIGHT or LEFT

**SECURING AIRCRAFT**

Chocks & Tie-downs  
 Control Lock INSTALL  
 Aircraft Hobbs & Tachometer RECORD  
 Master Switch VERIFY OFF  
 Doors and Baggage Door LOCK  
 Post Flight Inspection

**AIRSPEDS FOR SAFE OPERATION****Takeoff** – Flaps Up

Rotation .....55 KIAS  
 Short Field ..... 57 KIAS

**Enroute Climb** – Flaps Up

Normal Climbout ..... 85-95 KIAS  
 Best Rate ( $V_y$ ) ..... 75 KIAS  
 Best Angle ( $V_x$ ) ..... 60 KIAS

**Landing Approach**

Normal – Flaps Up ..... 75 KIAS  
 Normal – Flaps 40° ..... 65 KIAS  
 Short Field – Flaps 40° ..... 60 KIAS

**Balked Landing**

Max Pwr – Flaps 20° ..... 55 KIAS

**Maximum Maneuvering Speeds**

2950 lbs. .... 111 KIAS  
 2450 lbs. .... 100 KIAS  
 1950 lbs. .... 89 KIAS

**Best Glide**

Flaps UP ..... 70 KIAS  
 Flaps DOWN ..... 65 KIAS

**Max Xwind** (TO / LDG) .... 20 / 15 KIAS

# CESSNA 182S PRE-FLIGHT CHECKLIST

## FLIGHT PLANNING

Airplane ..... CHECK MAINTENANCE RECORDS  
Route & Navigation Planning ..... COMPLETE  
Weather ..... BRIEFING COMPLETE  
Baggage ..... WEIGHED  
Weight & Balance / CG ..... CALCULATED / WITHIN LIMITS  
Performance Planning ..... COMPLETE  
Flight Plan ..... FILED

## INSIDE CABIN

Aircraft Papers ..... ARROW  
Aircraft Hobbs & Tachometer ..... VERIFY  
Fire Extinguisher (if aboard) ..... CHECK  
Headset, Charts, Lapboard ..... ON BOARD  
Baggage ..... STOWED & SECURE  
Control Lock ..... REMOVE & STOW  
Ignition Switch ..... OFF  
Avionics Power Switch ..... OFF  
Circuit Breakers ..... IN  
Compass Deviation Card ..... CHECKED  
Master Switch ..... ON  
Fuel Quantity Indicators ..... CHECK QUANTITY (low fuel annunciators OFF)  
Avionics Cooling Fan ..... AVIONICS PWR ON – CHECK FAN – PWR OFF  
Wing Flaps ..... DOWN  
External Lights / Pitot Heat ..... CHECKED  
Annunciator Panel Test ..... TST then RELEASE  
Master Switch ..... OFF  
Alternate Static Valve ..... CHECK OPERATION (then closed)

## EMPENNAGE – LEFT SIDE

Side and Rear Windows ..... CHECK / CLEAN  
Baggage Door ..... CHECK  
Empennage ..... CHECK FOR DAMAGE  
Horizontal Stabilizer – Leading Edge ..... CHECK  
Elevator – Left Side ..... CHECK MOVEMENT / COUNTER-WEIGHT  
Tail Tie Down / Rudder Gust Lock ..... REMOVE  
Rudder ..... CHECK MOVEMENT / COUNTER-WEIGHT

## EMPENNAGE – RIGHT SIDE

Elevator – Right Side ..... CHECK MOVEMENT / COUNTER-WEIGHT  
Elevator Trim Tab ..... CHECK  
Horizontal Stabilizer – Leading Edge ..... CHECK  
Empennage ..... CHECK FOR DAMAGE  
ELT Antenna ..... CHECK SECURITY  
Side and Rear Windows ..... CHECK / CLEAN

# CESSNA 182S PRE-FLIGHT CHECKLIST

## RIGHT WING – TRAILING EDGE

Wing Flap ..... CHECK SECURITY / FLAP TRACKS  
Aileron ..... CHECK MOVEMENT / COUNTER-WEIGHT  
Wing Tip and Lights ..... CHECK

## RIGHT WING – LEADING EDGE

Leading Edge ..... CHECK  
Wing Tie Down / Chocks ..... REMOVE  
Right Main Tire, Brakes, Hyd. Line ..... CHECK  
Fuel Drain (5 Sumps) ..... DRAIN / SAMPLE  
Air Inlets ..... CHECK  
Fuel Tank ..... CHECK QUANTITY / SECURE CAP (vented)

## NOSE

Windshield ..... CHECK / CLEAN  
Engine Oil Level ..... CHECK (4 – 9 quarts)  
Fuel Drain (3 Sumps) ..... DRAIN / SAMPLE  
Cowling ..... CHECK SECURE  
Propeller & Spinner ..... CHECK FOR NICKS & SECURITY  
Carburetor Air Filter ..... CHECK CLEAR  
Nose Wheel Strut & Tire ..... CHECK  
Nose Wheel Damper ..... CHECK SECURE  
Exhaust ..... CHECK  
Static Source Opening (left side) ..... CHECK FOR STOPPAGE

## LEFT WING – LEADING EDGE

Air Inlets ..... CHECK  
Fuel Tank ..... CHECK QUANTITY / SECURE CAP  
Pitot Cover (if installed) ..... REMOVE / CHECK FOR STOPPAGE  
Fuel Tank Vent Opening ..... CHECK FOR STOPPAGE  
Stall Warning Opening ..... CHECK FOR STOPPAGE  
Landing Light(s) ..... CHECK  
Leading Edge ..... CHECK  
Wing Tip and Lights ..... CHECK

## LEFT WING – TRAILING EDGE

Aileron ..... CHECK MOVEMENT / COUNTER-WEIGHTS  
Wing Flap ..... CHECK SECURITY / FLAP TRACKS  
Wing Tie Down / Chocks ..... REMOVE  
Left Main Tire, Brakes, Hyd. Line ..... CHECK  
Fuel Drain (5 Sumps) ..... DRAIN / SAMPLE

\*\*\* Push aircraft across **tie-down cable** if applicable \*\*\*

**CESSNA 182S****Start / Takeoff / Cruise****BEFORE ENGINE START**

Preflight Inspection  
 Cell Phones OFF  
 Seat Belts & Harnesses  
 Passenger Briefing  
 Fuel Selector BOTH  
 Avionics Power OFF  
 Autopilot OFF  
 Circuit Breakers  
 Parking Brake SET  
 Cowl Flaps OPEN  
 ATIS / SET ALTIMETER

**STARTING ENGINE**

Mixture IDLE CUTOFF  
 Throttle OPEN 1/4 INCH  
 Propeller HIGH RPM  
 Master Switch ON  
 Rotating Beacon / NAV Lights  
 Ignition Key IN  
 Propeller Area "CLEAR"  
 Aux Fuel Pump ON  
 Mixture Adv 3-5 sec then IDLE CUTOFF  
 Aux Fuel Pump OFF  
 Ignition Switch START  
 Mixture Adv to RICH then LEAN as req.  
 Oil Pressure  
 Ammeter  
 Suction Gauge  
 Wing Flaps UP

**NAV/COMM**

Avionics Power ON  
 Intercom CHECK  
 Marker Beacon TEST  
 Com 1 SET  
 Com 2 SET  
 Nav 1 TEST / SET  
 Nav 2 TEST / SET  
 GPS SET  
 DME SET  
 ADF SET

**BEFORE TAXI**

Flight Instruments  
 Transponder 1200 SBY  
 Taxi Light ON  
 Parking Brake OFF  
 Permission to Taxi

**RUNUP CHECK**

Parking Brake SET  
 Flight Controls & Trim  
 Fuel Selector BOTH  
 Fuel Quantity  
 Autopilot / Air Cond OFF

Throttle 1800  
 Mixture ADJUST  
 Magnetos  
 Propeller CYCLE  
 Oil Pressure  
 Oil Temperature  
 Ammeter  
 Suction Gauge  
 Annunciator Panel  
 Throttle IDLE  
 Throttle 1000

Circuit Breakers  
 Flight Instruments  
 Radios  
 Transponder ALT  
 Landing Light / Strobes  
 Cabin Doors & Windows  
 Takeoff Briefing  
 Wing Flaps SET  
 Parking Brake OFF  
 Permission to Take Off

**NORMAL TAKEOFF**

Throttle FULL  
 Rotate 50 KIAS  
 Trim for 70-80 KIAS  
 Prop 2400 RPM at 500 AGL

**CRUISE CLIMB**

Airspeed 85-95 KIAS  
 Power 23 INCHES / 2400 RPM  
 Mixture Adjust

**CRUISE**

Power / Prop / Mixture  
 Elevator & Rudder Trim  
 Cowl Flaps CLOSED  
 Engine Instruments  
 Landing Light OFF

**CESSNA 182S****Descent / Landing / Shutdown****DESCENT**

Fuel Selector Valve BOTH  
 Power / Mixture  
 Cowl Flaps CLOSED  
 Landing Light ON

**PATTERN ENTRY**

Power 15 INCHES  
 Flaps 10°

**BASE LEG** (Trim for 75 KIAS)

Flaps 20°

**APPROACH**

Gas BOTH  
 Undercarriage  
 Mixture  
 Propeller HIGH RPM  
 Safety SECURE  
 Autopilot OFF

**AFTER LANDING CHECK**

Wing Flaps UP  
 Cowl Flaps OPEN  
 Mixture Adjust  
 Landing Lights / Strobes OFF  
 Taxi Lights ON  
 Transponder STANDBY

**SHUTDOWN**

Throttle 1000 RPM  
 Magneto Safety Check  
 Throttle 1700 RPM  
 Mixture LEAN MAX RPM  
 Avionics Power Switch OFF  
 Electrical Equipment OFF  
 External Lights (except Beacon) OFF  
 Throttle 1200 RPM  
 Mixture IDLE CUTOFF  
 Ignition Switch OFF  
 Beacon Light OFF  
 Master Switch OFF  
 Cowl Flaps CLOSED  
 Fuel Selector RIGHT or LEFT

**SECURING AIRCRAFT**

Chocks & Tie-downs  
 Control Lock INSTALL  
 Aircraft Hobbs & Tachometer RECORD  
 Master Switch VERIFY OFF  
 Doors and Baggage Door LOCK  
 Post Flight Inspection

**AIRSPEDS FOR SAFE OPERATION****Takeoff** – Flaps Up

Rotation ..... 55 KIAS  
 Short Field ..... 57 KIAS

**Enroute Climb** – Flaps Up

Normal Climbout ..... 85-95 KIAS  
 Best Rate ( $V_y$ ) ..... 75 KIAS  
 Best Angle ( $V_x$ ) ..... 60 KIAS

**Landing Approach**

Normal – Flaps Up ..... 75 KIAS  
 Normal – Flaps 40° ..... 65 KIAS  
 Short Field – Flaps 40° ..... 60 KIAS

**Balked Landing**

Max Pwr – Flaps 20° ..... 55 KIAS

**Maximum Maneuvering Speeds**

3100 lbs. .... 110 KIAS  
 2600 lbs. .... 101 KIAS  
 2000 lbs. .... 88 KIAS

**Best Glide**

Flaps UP ..... 75 KIAS  
 Flaps DOWN ..... 70 KIAS

**Max Xwind** ..... 15 KIAS