BEFORE STARTING ENGINE
1. Brakes............................SET
2. Circuit breakers.................CHECK IN
3. Alternate air........................OFF
4. Propeller ........................full INCREASE rpm
5. Avionics............................OFF
6. Fuel selector........................desired tank
7. Passenger Briefing...............complete

NORMAL START- COLD ENGINE
1. Throttle............................1/2 in. open
2. Battery master switch............ON
3. Alternator switch................ON
4. Magneto............................ON
5. Electric fuel pump...............ON
6. Mixture..........................prime – then idle cut-off
7. Propeller..........................clear
8. Starter............................engage
9. Mixture............................full RICH
10. Throttle...........................adjust
11. Oil pressure....................CHECK

NORMAL START- HOT ENGINE
1. Throttle............................1/2 in. open
2. Battery master switch............ON
3. Alternator switch................ON
4. Magneto............................ON
5. Electric fuel pump...............ON
6. Mixture............................idle cut-off
7. Propeller..........................clear
8. Starter............................engage
9. Mixture............................full RICH
10. Throttle...........................adjust
11. Oil pressure....................CHECK

ENGINE START WHEN FLOODED
1. Throttle............................open full
2. Battery master switch............ON
3. Alternator switch................ON
4. Magneto............................ON
5. Electric fuel pump...............OFF
6. Mixture............................idle cut-off
7. Propeller..........................clear
8. Starter............................engage
9. Mixture............................advance
10. Throttle...........................retard
11. Oil pressure....................CHECK

STARTING WITH EXTERNAL POWER SOURCE
1. Battery master switch............OFF
2. Alternator switch................OFF
3. Magneto............................ON
4. All electrical equipment.........OFF
5. Terminals........................connect
6. External power plug............Insert

Proceed with normal start
7. Throttle..................lowest possible RPM
8. External power plug...........disconnect from fuselage
9. Battery master switch............ON
10. Alternator switch...ON–check ammeter
11. Oil pressure....................check

WARM-UP
1. Throttle.................1000 to 1200 RPM

TAXIING
1. Taxi area..........................clear
2. Parking brake..................released
3. Prop.................................high RPM
4. Mixture..........................SET
5. Throttle..........................apply slowly
6. Brakes.............................check
7. Steering.........................check

GROUND CHECK (RUN-UP)
1. Parking brake..................set
2. Propeller........................full INCREASE
3. Throttle..........................2000 RPM
4. Mixture..........................SET
5. Magneto..........................max. drop 175 RPM
   max. diff. 50 RPM

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**PIPER SARATOGA II HP**
**PA-32R-301**

**NORMAL PROCEDURES CHECKLIST**

*This is to be used as a REFERENCE ONLY, it is not a substitute for the Airplane Flight Manual.*
*Refer to AFM/POH for amplified procedures. User assumes all risk of use in using this product. User consents to and understands that American Flight Schools bears no liability for the use of this product.*

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## Aircraft Specifications

### Normal Procedures

- **Vr**: 84-88
- **Vy (SL)**: 93
- **Vso**: 63
- **Vs**: 67
- **Vfe**: 132
- **Vfe**: 110
- **Va**: 134-105
- **Max Xwind**: 17
- **Max T/O**: 3600 lbs
- **Max LND**: 3300 lbs

### KAPA - Tower: 118.9
- KAPA - Ground: 121.8
- KAPA - ATIS: 120.3
- KAPA - Approach: 132.75
- KBJC - Tower: 118.6
- KBJC - Ground: 121.7
- KBJC - ATIS: 126.25
- KBJC - Approach: 126.1
- KFTG - Tower: 120.2
- KFTG - Ground: 124.7
- KFTG - ATIS: 119.25
- FSS: 122.2
BEFORE TAKEOFF (RUN-UP)

1. Battery master switch............verify ON
2. Alternator switch............verify ON
3. Magnetos............verify ON
4. Flight instruments............check
5. Fuel selector............fullest tank
6. Electric fuel pump............ON
7. Engine gauges............check
8. Alternate air ............CLOSED
9. Seat backs............erect
10. Seats............adjusted and locked in position
11. Belts/harness............fastened/check
12. Empty seats............securely fastened
13. Mixture............set
14. Propeller............set
15. Flaps............set
16. Trim............free
17. Controls............free
18. Door............latched
19. Air conditioner............OFF

TAKEOFF

NORMAL TECHNIQUE
1. Flaps............retracted
2. Trim............set
3. Accelerate to 84 to 88 KIAS depending on weight
4. Control wheel............back pressure...to smoothly rotate to climb attitude

SHORT FIELD OBSTACLE CLEARANCE
1. Flaps............25
2. Trim............slightly aft of neutral
3. Throttle............full power prior to brake release
4. Accelerate to 69 to 72 KIAS...(depending on aircraft weight)
5. Control wheel............back pressure......to rotate to climb attitude
6. After breaking ground.....accel to 74 to 77 KIAS....(depending on aircraft weight)
7. Accelerate to climb speed
8. Flaps............retract slowly

CLIMB
1. Best rate (3600lb, gear-down, flaps up) 85KIAS
2. Best rate (3600lb, gear-up, flaps up) .... 93KIAS
3. En route............103 KIAS
4. Electric fuel pump............OFF

CRUISING
1. Power............set per power table
2. Mixture............adjust
3. Fuel Tank............proper tank

APPROACH AND LANDING
1. Fuel selector............proper tank
2. Seat backs............erect
3. Seats............adjust and locked in position
4. Belts/harness............fasten/adjust
5. Electric fuel pump............ON
6. Mixture............OFF
7. Propeller............full increase
8. Gear............Down – 132 KIAS
9. Flaps............set – 110 KIAS max
10. Air conditioner............OFF

STopping ENGINE
1. Flaps............OFF
2. Trim............as required
3. Throttle............as required

NORMAL TECHNIQUE
1. Flaps............as required
2. Trim............95 KIAS
3. Throttle............as required

SHORT FIELD TECHNIQUE
4. Flaps............40
5. Trim............80 KIAS
6. Throttle............as required

AFTER LANDING
1. Flaps............retract
2. Air conditioner............as required
3. Electric fuel pump............OFF
4. Mixture............lean for taxi back
5. Lights............as needed

STopping ENGINE
1. Air conditioner............OFF
2. Avionics master switch............OFF
3. Electrical switches............OFF
4. Throttle............closed
5. Mixture............idle cut-off
6. Magneto switches............OFF
7. Alternator switch............OFF
8. Battery master switch............OFF

PARKING
1. Parking Brake............SET
2. Flaps............full up
3. Control Wheel............secured with seat belts
4. HOBBs & TACH............record
5. Doors............locked
6. Wheel chocks............in place
7. Tie downs............secure