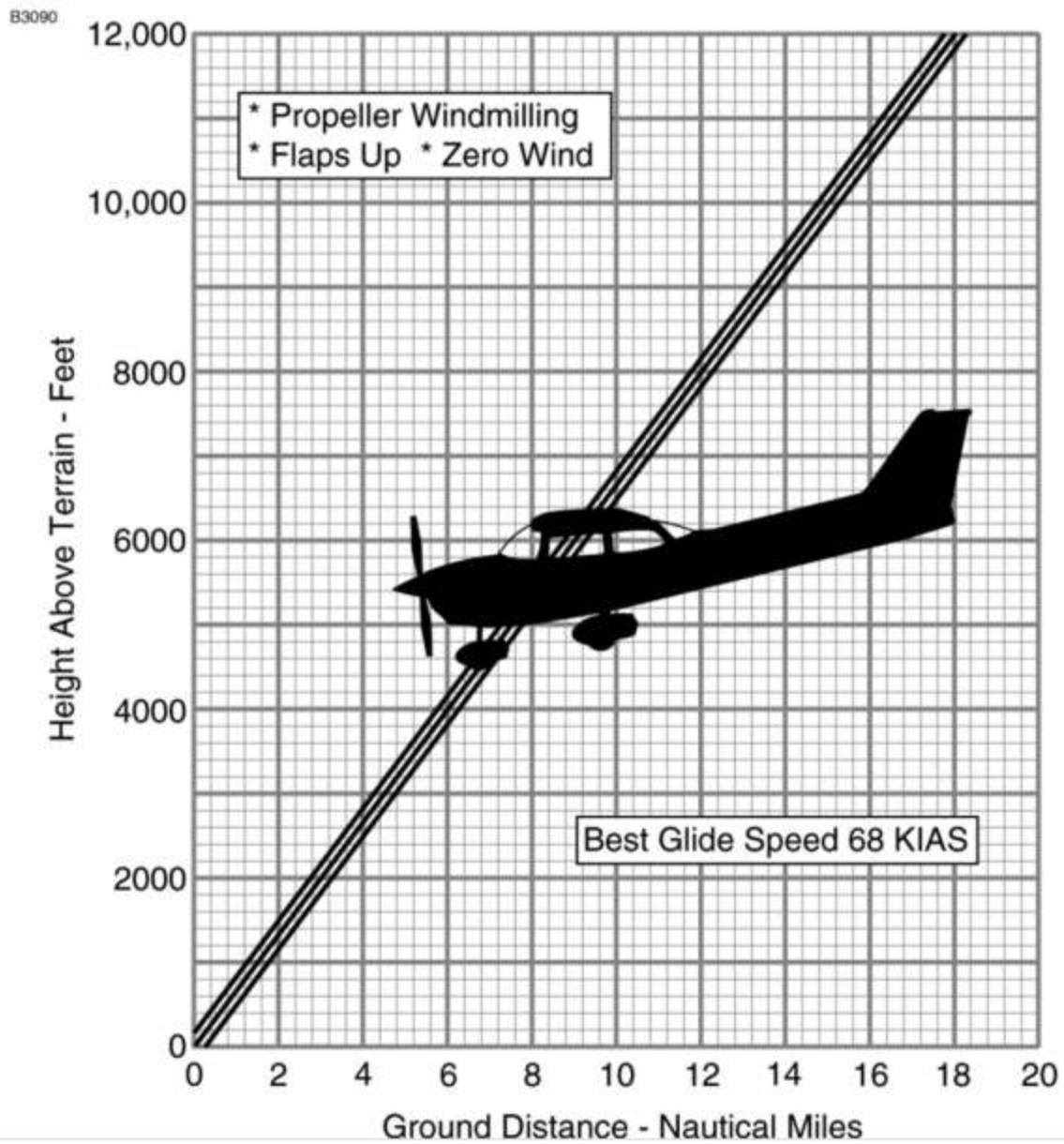


# Cessna 172SP glide

Wednesday, September 7, 2022 2:55 PM

0.0 100.0 200.0

## MAXIMUM GLIDE



Screen clipping taken: 9/7/2022 2:55 PM

# Cessna 172SP KCAS

Wednesday, September 7, 2022

2:56 PM

## NORMAL STATIC SOURCE

### CONDITIONS:

Power required for level flight or maximum power descent.

|                       |    |    |    |    |    |     |     |     |     |     |     |     |  |
|-----------------------|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|--|
| <b>Flaps<br/>UP</b>   |    |    |    |    |    |     |     |     |     |     |     |     |  |
| KIAS                  | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 |  |
| KCAS                  | 56 | 62 | 70 | 78 | 87 | 97  | 107 | 117 | 127 | 137 | 147 | 157 |  |
| <b>Flaps<br/>10°</b>  |    |    |    |    |    |     |     |     |     |     |     |     |  |
| KIAS                  | 40 | 50 | 60 | 70 | 80 | 90  | 100 | 110 | --- | --- | --- | --- |  |
| KCAS                  | 51 | 57 | 63 | 71 | 80 | 89  | 99  | 109 | --- | --- | --- | --- |  |
| <b>Flaps<br/>FULL</b> |    |    |    |    |    |     |     |     |     |     |     |     |  |
| KIAS                  | 40 | 50 | 60 | 70 | 80 | 85  | --- | --- | --- | --- | --- | --- |  |
| KCAS                  | 50 | 56 | 63 | 72 | 81 | 86  | --- | --- | --- | --- | --- | --- |  |

Figure 5-1 (Sheet 1 of 2)

Screen clipping taken: 9/7/2022 2:56 PM

# Cessna 172SP stall

Wednesday, September 7, 2022 2:57 PM

## STALL SPEED AT 2550 POUNDS

CONDITIONS:

Power IDLE

### MOST REARWARD CENTER OF GRAVITY

| FLAP<br>SETTING | ANGLE OF BANK |      |      |      |      |      |      |      |
|-----------------|---------------|------|------|------|------|------|------|------|
|                 | 0°            |      | 30°  |      | 45°  |      | 60°  |      |
|                 | KIAS          | KCAS | KIAS | KCAS | KIAS | KCAS | KIAS | KCAS |
| UP              | 48            | 53   | 52   | 57   | 57   | 63   | 68   | 75   |
| 10°             | 42            | 50   | 45   | 54   | 50   | 59   | 59   | 71   |
| FULL            | 40            | 48   | 43   | 52   | 48   | 57   | 57   | 68   |

### MOST FORWARD CENTER OF GRAVITY

| FLAP<br>SETTING | ANGLE OF BANK |      |      |      |      |      |      |      |
|-----------------|---------------|------|------|------|------|------|------|------|
|                 | 0°            |      | 30°  |      | 45°  |      | 60°  |      |
|                 | KIAS          | KCAS | KIAS | KCAS | KIAS | KCAS | KIAS | KCAS |
| UP              | 48            | 53   | 52   | 57   | 57   | 63   | 68   | 75   |
| 10°             | 43            | 51   | 46   | 55   | 51   | 61   | 61   | 72   |
| FULL            | 40            | 48   | 43   | 52   | 48   | 57   | 57   | 68   |

Screen clipping taken: 9/7/2022 2:58 PM

# Cessna 172SP Take-Off

Wednesday, September 7, 2022 2:58 PM

## SHORT FIELD TAKEOFF DISTANCE AT 2550 POUNDS

### CONDITIONS:

Flaps 10°

Full Throttle prior to brake release.

Paved, Level, Dry Runway

Zero Wind

Lift Off: 51 KIAS

Speed at 50 Feet: 56 KIAS

| Pressure<br>Altitude<br>Feet | 0°C                 |  | 10°C                |  | 20°C                |  | 30°C                |  | 40°C                |  |
|------------------------------|---------------------|--|---------------------|--|---------------------|--|---------------------|--|---------------------|--|
|                              | Gnd<br>Roll<br>Feet | Total<br>Feet<br>To<br>Clear<br>50<br>Foot<br>Obst | Gnd<br>Roll<br>Feet | Total<br>Feet<br>To<br>Clear<br>50<br>Foot<br>Obst | Gnd<br>Roll<br>Feet | Total<br>Feet<br>To<br>Clear<br>50<br>Foot<br>Obst | Gnd<br>Roll<br>Feet | Total<br>Feet<br>To<br>Clear<br>50<br>Foot<br>Obst | Gnd<br>Roll<br>Feet | Total<br>Feet<br>To<br>Clear<br>50<br>Foot<br>Obst |
| Sea Level                    | 860                 | 1465   | 925                 | 1575   | 995                 | 1690   | 1070                | 1810   | 1150                | 1945   |
| 1000                         | 940                 | 1600   | 1010                | 1720   | 1090                | 1850   | 1170                | 1990   | 1260                | 2135   |
| 2000                         | 1025                | 1755   | 1110                | 1890   | 1195                | 2035   | 1285                | 2190   | 1380                | 2355   |
| 3000                         | 1125                | 1925   | 1215                | 2080   | 1310                | 2240   | 1410                | 2420   | 1515                | 2605   |
| 4000                         | 1235                | 2120   | 1335                | 2295   | 1440                | 2480   | 1550                | 2685   | 1660                | 2880   |
| 5000                         | 1355                | 2345   | 1465                | 2545   | 1585                | 2755   | 1705                | 2975   | 1825                | 3205   |
| 6000                         | 1495                | 2605   | 1615                | 2830   | 1745                | 3075   | 1875                | 3320   | 2010                | 3585   |
| 7000                         | 1645                | 2910   | 1785                | 3170   | 1920                | 3440   | 2065                | 3730   | 2215                | 4045   |
| 8000                         | 1820                | 3265   | 1970                | 3575   | 2120                | 3880   | 2280                | 4225   | 2450                | 4615   |

### NOTE

- Short field technique as specified in Section 4.
- Prior to takeoff from fields above 3000 feet pressure altitude, the mixture should be leaned to give maximum RPM in a full throttle, static run-up.
- Decrease distances 10% for each 9 knots head wind. For operation with tail winds up to 10 knots, increase distances by 10% for each 2 knots.
- For operation on dry grass runway, increase distances by 15% of the "ground roll" figure.

Screen clipping taken: 9/7/2022 2:59 PM



# Cessna 172SP climb

Wednesday, September 7, 2022 2:59 PM

## TIME, FUEL AND DISTANCE TO CLIMB AT 2550 POUNDS

### CONDITIONS:

Flaps UP

Full Throttle

Standard Temperature

| Pressure<br>Altitude<br>Feet | Temp<br>°C | Climb<br>Speed<br>KIAS | Rate of<br>Climb<br>FPM | From Sea Level  |                      |                |
|------------------------------|------------|------------------------|-------------------------|-----------------|----------------------|----------------|
|                              |            |                        |                         | Time<br>Minutes | Fuel Used<br>Gallons | Distance<br>NM |
| Sea Level                    | 15         | 74                     | 730                     | 0               | 0.0                  | 0              |
| 1000                         | 13         | 73                     | 695                     | 1               | 0.4                  | 2              |
| 2000                         | 11         | 73                     | 655                     | 3               | 0.8                  | 4              |
| 3000                         | 9          | 73                     | 620                     | 4               | 1.2                  | 6              |
| 4000                         | 7          | 73                     | 600                     | 6               | 1.5                  | 8              |
| 5000                         | 5          | 73                     | 550                     | 8               | 1.9                  | 10             |
| 6000                         | 3          | 73                     | 505                     | 10              | 2.2                  | 13             |
| 7000                         | 1          | 73                     | 455                     | 12              | 2.6                  | 16             |
| 8000                         | -1         | 72                     | 410                     | 14              | 3.0                  | 19             |
| 9000                         | -3         | 72                     | 360                     | 17              | 3.4                  | 22             |
| 10,000                       | -5         | 72                     | 315                     | 20              | 3.9                  | 27             |
| 11,000                       | -7         | 72                     | 265                     | 24              | 4.4                  | 32             |
| 12,000                       | -9         | 72                     | 220                     | 28              | 5.0                  | 38             |

### NOTE

- Add 1.4 gallons of fuel for engine start, taxi and takeoff allowance.
- Mixture leaned above 3000 feet pressure altitude for maximum RPM.
- Increase time, fuel and distance by 10% for each 10°C above standard temperature.
- Distances shown are based on zero wind.

Figure 5-7

Screen clipping taken: 9/7/2022 3:00 PM

# Cessna 172SP cruise

Wednesday, September 7, 2022 3:00 PM

## CRUISE PERFORMANCE

### CONDITIONS:

2550 Pounds

Recommended Lean Mixture

| Pressure<br>Altitude<br>Feet | RPM  | 20°C BELOW<br>STANDARD TEMP |      |      | STANDARD<br>TEMPERATURE |      |      | 20°C ABOVE<br>STANDARD TEMP |      |     |
|------------------------------|------|-----------------------------|------|------|-------------------------|------|------|-----------------------------|------|-----|
|                              |      | %<br>MCP                    | KTAS | GPH  | %<br>MCP                | KTAS | GPH  | %<br>MCP                    | KTAS | GPH |
| 2000                         | 2550 | 83                          | 117  | 11.1 | 77                      | 118  | 10.5 | 72                          | 117  | 9.9 |
|                              | 2500 | 78                          | 115  | 10.6 | 73                      | 115  | 9.9  | 68                          | 115  | 9.4 |
|                              | 2400 | 69                          | 111  | 9.6  | 64                      | 110  | 9.0  | 60                          | 109  | 8.5 |
|                              | 2300 | 61                          | 105  | 8.6  | 57                      | 104  | 8.1  | 53                          | 102  | 7.7 |
|                              | 2200 | 53                          | 99   | 7.7  | 50                      | 97   | 7.3  | 47                          | 95   | 6.9 |
|                              | 2100 | 47                          | 92   | 6.9  | 44                      | 90   | 6.6  | 42                          | 89   | 6.3 |
| 4000                         | 2600 | 83                          | 120  | 11.1 | 77                      | 120  | 10.4 | 72                          | 119  | 9.8 |
|                              | 2550 | 79                          | 118  | 10.6 | 73                      | 117  | 9.9  | 68                          | 117  | 9.4 |
|                              | 2500 | 74                          | 115  | 10.1 | 69                      | 115  | 9.5  | 64                          | 114  | 8.9 |
|                              | 2400 | 65                          | 110  | 9.1  | 61                      | 109  | 8.5  | 57                          | 107  | 8.1 |
|                              | 2300 | 58                          | 104  | 8.2  | 54                      | 102  | 7.7  | 51                          | 101  | 7.3 |
|                              | 2200 | 51                          | 98   | 7.4  | 48                      | 96   | 7.0  | 45                          | 94   | 6.7 |
|                              | 2100 | 45                          | 91   | 6.6  | 42                      | 89   | 6.4  | 40                          | 87   | 6.1 |
| 6000                         | 2650 | 83                          | 122  | 11.1 | 77                      | 122  | 10.4 | 72                          | 121  | 9.8 |
|                              | 2600 | 78                          | 120  | 10.6 | 73                      | 119  | 9.9  | 68                          | 118  | 9.4 |
|                              | 2500 | 70                          | 115  | 9.6  | 65                      | 114  | 9.0  | 60                          | 112  | 8.5 |
|                              | 2400 | 62                          | 109  | 8.6  | 57                      | 108  | 8.2  | 54                          | 106  | 7.7 |
|                              | 2300 | 54                          | 103  | 7.8  | 51                      | 101  | 7.4  | 48                          | 99   | 7.0 |
|                              | 2200 | 48                          | 96   | 7.1  | 45                      | 94   | 6.7  | 43                          | 92   | 6.4 |

### NOTE

- Maximum cruise power using recommended lean mixture is 75% MCP. Power settings above 75% MCP are listed to aid interpolation. Operations above 75% MCP must use full rich mixture.
- Cruise speeds are shown for an airplane equipped with speed fairings. Without speed fairings, decrease speeds shown by 2 knots.

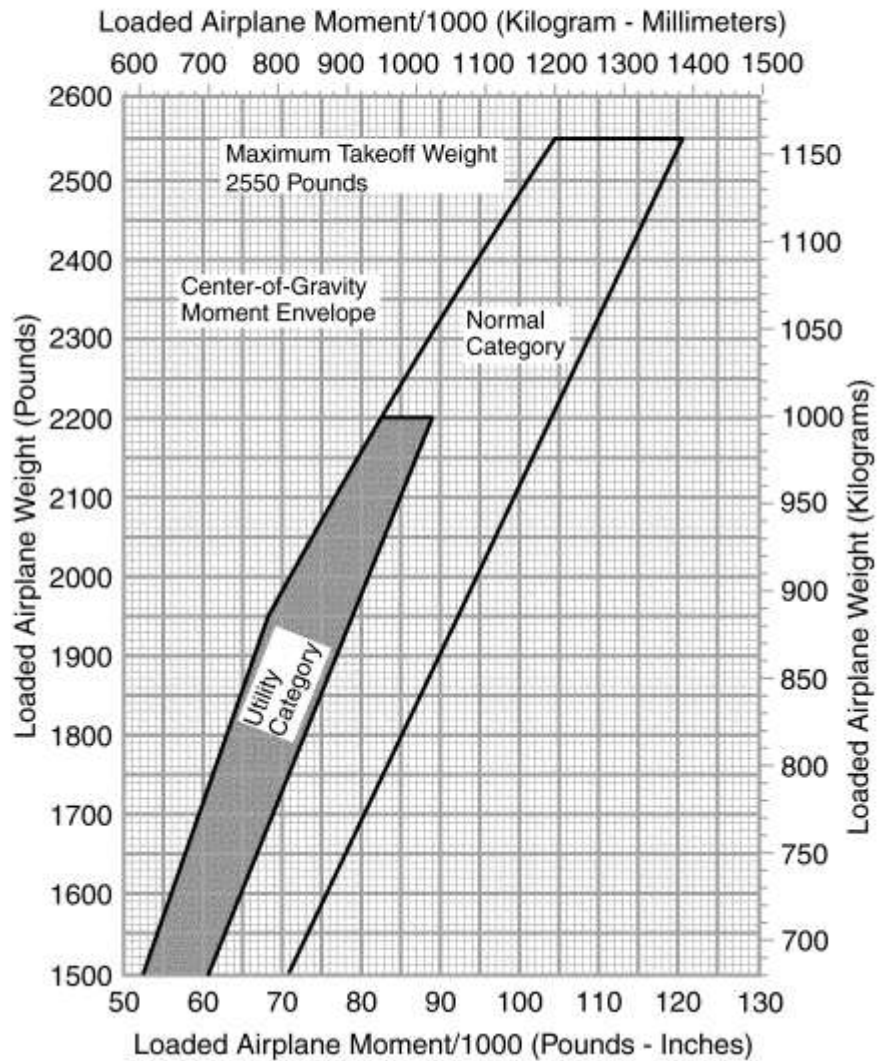
Screen clipping taken: 9/7/2022 3:01 PM

# Cessna 172SP weight and balance

Wednesday, September 7, 2022 3:02 PM

## CENTER OF GRAVITY MOMENT ENVELOPE

B4077



Screen clipping taken: 9/7/2022 3:03 PM