

## NRI Flying Club

Updated 11 Mar 08	updated 11 Mar 2008	updated 25 Sep 2007	updated 20 Oct 2007	updated 25 Sep 2007
<b>General</b>	<b>N1407U</b>	<b>N9556K</b>	<b>N111GG</b>	<b>N7561X</b>
Year	1976	1976	1972	1978
Type	C-172M	PA28-181	C-182P Skylane	C-R182 Skylane RG
Engine	Lyc 0-320-D2J	Lyc 0-360-A4M	Cont. O-470-R	Lyc 0-540-J3C5D
Propeller	75" Fixed	76" Fixed	82" Constant Speed	82" Const-Speed
HP @ RPM	160 @ 2700	180 @ 2700	230 @ 2600	235 @ 2400
Fuel Octane Grade Minimum	100	100	100	100
Fuel Usable	38	48 (34 @ 17g tabs)	79	75
Fuel Unusable Gal	4	2	5	5
Fuel Consumption at 75% Power (GPH)	8.3	10.5	14.0	13.5
Endurance (75% pwr, less 45' reserve)	3 hrs, 50 min	3 hrs, 49 min	4 hrs, 54 min	4 hrs, 48 min
Oil (quarts) Min / Max - Preferred	5 / 7 - 6	5.5 / 8 - 6	9 / 12 - 10	6 / 9 - 6
Air Pressure PSI (Nose / Mains)	31 / 29	18 / 24	49 / 42	50 / 68
Positive Load:	+ 3.80g @ 2300 lbs + 4.40g @ 2000 lbs	+ 3.80g @ 2550 lbs + 4.40g @ 1950 lbs	+ 3.80g (no flaps) + 2.00g (full flaps)	+ 3.80g (no flaps) + 2.00g (full flaps)
Negative Load	- 1.52g @ 2300 lbs - 1.76g @ 2000 lbs	Not Approved	- 1.52g	- 1.52g
<b>Weights (Lbs)</b>				
Basic Empty Weight	1495.65	1560.00	1850.00	1852.80
Useful Load:	804.35	990.00	1100.00	1247.20
Fuel Weight.	228.00	288.00	474.00	450.00
Cabin Load w/ Full Fuel and Oil/ No bags	576.35	702.00	626.00	797.20
Max Baggage:	120.00	200.00	200.00	200.00
Max Gross Weight:	2300.00	2550.00	2950.00	3100.00
CG (empty)	37.94	86.99	32.64	34.58
Empty moment	56741.45	135700.80	60388.00	64075.80
Gear retraction moment change	n/a	n/a	n/a	3052.00
Date of last Weight and Balance	24-Mar-2006	2-Feb-1996	5-Oct-2007	14-May-2004
<b>Speeds</b>				
	<b>KIAS</b>	<b>KIAS</b>	<b>MPH IAS</b>	<b>KIAS</b>
Vr- Rotate / init climb @ Flaps (Normal)	55 / 70-80 @ 0 deg	52-65 / 76 @ 0 deg	60 / 90 @ 0-20 deg	50 / 70-80 @ 0-20 deg
Vr- Rotate / init climb @ Flaps (Short Fld)	55 / 59 @ 0 deg	41-49 / 64 @ 25 deg	60 / 63 @ 20 deg	50 / 55 @ 20 deg
Vr- Rotate / init climb @ Flaps (Soft Fld)	55 / 55 @ 10 deg	41-49 / 76 @ 25 deg	60 / 63 @ 20 deg	45 / 55 @ 20 deg
Normal climb speed	70 - 80	76	89	88
Vx - Best Angle of Climb	64 (62 @ 10,000)	64	70	64 (66 @ 10,000)
Vy - Best Rate of Climb	78 (68 @ 10,000)	76	89 (85 @ 10,000)	88 (74 @ 10,000)
Vcc - Best Enroute Climb	70 - 90	87	100-110 @ 23/2450	90-100 @ 23/2400
Vno - Normal Operating Speed	128	121	160	143
Vne - Never Exceed	160	148	198	182
Va - Manuvering Speed	97 @ 2300 lbs 89 @ 1950 lbs 80 @ 1600 lbs	108	126	112 @ 3100 lbs 101 @ 2550 lbs 89 @ 2000 lbs
Vfe - Flap Extension (1-10 degree)	85	100	160 ( 1-10 deg)	140 ( 1-10 deg)
Vfe - Flap Extension (11-max deg)	85	100	110 (11-40 deg)	95 (11-40 deg)
Vlo / Vle - Max landing gear op/extend	n/a	n/a	n/a	140
Vs - Stall Speed (Clean - 0 deg flaps)	47	54	64	42
Vso - Stall Speed (Dirty - max flaps)	41	48	51	37
Normal Approach Downwind	80	75	80 - 90	80 - 90
Normal Approach Base	60 - 70	70	70 - 80	70 - 80
Normal Approach Final (Full Flaps)	55 - 65	66	70 - 80	65 - 75
Short Field Approach (Full Flaps)	60	66	69	63
Best Glide Speed / Engine Out	65	76	80	80 @ 3100 lbs 72 @ 2550 lbs 64 @ 2000 lbs
Max Crosswind	15	17	18	18
Maximum Open Speed	160 (window)	87 (door)		182 (window)
White Arch (full flap operating range)	41 - 85	53 - 100	63 - 110	37 - 95
Green Arch (normal operating range)	47 - 128	59 - 121	68 - 160	42 - 143
Yellow Arch (caution, only in smooth air)	128 - 160	121 - 148	160 - 198	143 - 182
Red Line (max speed all operations)	160	148	198	182
Changes from 20 Oct 07 distribution				
* typo in Vno description				
* corrected W&B for N1407U				

These are estimates only.  
Please check the POH  
to be sure.