


Table of Capture Method by Aircraft Type

MAKE	MODEL	M.T.O.W. (LBS) TYPICAL	O.E.W. (LBS) TYPICAL	TUG MODEL CAPABLE OF CRADLE TOW								CAPTURE METHOD	SPECIAL ATTENTION / REMARKS	
				84	86	87	87	87	88	88	89			89
						5	5AL				5			5
Champion Aircraft / Bellanca	7ECA Citabria (108) / (115)	1,650	980/1,060	●	●	●	●	●	●	●			I	Use small rear gate to clear rudder.
Champion Aircraft / Bellanca	7GCAA / 7KCAB / 7GCBC Citabria (150)	1,650	1,150	●	●	●	●	●	●	●			I	Use small rear gate to clear rudder.
Champion Aircraft / Bellanca	8KCAB Decathlon / Super Decathlon	1,800	1,260-1,315	●	●	●	●	●	●	●			I	Use small rear gate to clear rudder.
Champion Aircraft / Bellanca	8GCBC / 7GCBC Scout	2,150/1,650	1,315/1,037	●	●	●	●	●	●	●			I	Use small rear gate to clear rudder.
Champion Aircraft	Lancer High -Wing Twin	2,450	1,790	●	●	●	●	●	●	●			B	
Chance - Vought	F4U Corsair	12,309	8,694	●	●	●	●	●	●	●			I or L	Long Reach adapter req'd on AP86. AP84 no go. Others use rear gate.
Christen Industries / Aviat	Pitts Special S-1 / S-1T Bi-plane	1,150	720/830	●	●	●	●	●	●	●			I	Use of small rear gate not essential but maximizes rudder clearance.
Christen Industries / Aviat	Pitts Special S-2A / S-2B Bi-plane	1,575/1,625	1,000/1,150	●	●	●	●	●	●	●			I	Use of small rear gate not essential but maximizes rudder clearance.
Christen Industries / Aviat	Pitts Special S-2S Bi-plane	1,500	1,100	●	●	●	●	●	●	●			I	Use of small rear gate not essential but maximizes rudder clearance.
Christen Industries / Aviat	Husky A - 1	1,800	1,190	●	●	●	●	●	●	●			I	Easy reach tailwheel. Use small rear gate for extra rudder clearance.
Christen Industries	Eagle II Aerobatic Kit Bi-plane	1,600	1,025	●	●	●	●	●	●	●			I	Use of small rear gate not essential but maximizes rudder clearance.
Cirrus Design Corp.	Cirrus SR20 Composite / 4-Place	3,000	2,050	●	●	●	●	●	●	●			O & H	Sloping Strut/Wheelpant.Use SR/AA Adapter & Front PintleHook.
Cirrus Design Corp.	Cirrus SR22 Composite / 4-Place	3,400	2,250	●	●	●	●	●	●	●			O & H	Sloping Strut/Wheelpant.Use SR/AA Adapter & Front PintleHook.
Commander / Gulfstream **	Commander 112 / Alpine.	2,550/2,950	1,5/2,035	●	●	●	●	●	●	●			B & H	Set 3 - bladed prop. ** also see "Aero Commander" / "Gulfstream"
Commander / Gulfstream	Commander 114 Gran Turismo A/ B / TC / AT	3,260	2,070	●	●	●	●	●	●	●			B & H	Set 3 - bladed prop.
Conair	Firecat (S-2A/CS2F Tracker Conversion)	26,000	15,200	●	●	●	●	●	●	●			E	Nosewheel door fwd-panel protrudes in front. Raise cradle to clear.
Conair	Turbo Firecat	27,500	15,177	●	●	●	●	●	●	●			E	Nosewheel door fwd-panel protrudes in front. Raise cradle to clear.
Conair	F - 27 (-500C) Firefighter	45,000	23,471	▶	●	●	●	●	●	●			B	
Conair	DC - 6 Water Bomber	120,000	56,000						▶	●	●	●	B	Heavy nose weight ratio.
Consolidated / Vultee	PBY - 5A Catalina	34,000	17,564	●	●	●	●	●	●	●			D	Offset strut strap attachment point due high wish-bone strut.
Convair	CV - 240	41,790	27,600	▶	●	●	●	●	●	●	●		B	Abnormally heavy nose weight ratio. AP8700B light only.
Convair	CV - 340	47,000	29,486	▶	●	●	●	●	●	●	●		B	Abnormally heavy nose weight ratio. AP8700B 3/4 weight only.
Convair	CV - 440	49,100	31,305	▶	●	●	●	●	●	●	●		B	Abnormally heavy nose weight ratio. AP8700B 3/4 weight only.
Convair	CV - 580 / CC - 109 "Cosmopolitan"	58,000	30,740						●	●	●	●	B	Abnormally heavy nose weight ratio. Precludes AP87 series.
Curtis - Wright	C - 46 Commando	45,000	29,483			●	●	●	●	●			L	Use Long Reach adapter to clear empennage.
Dassault	Mirage III / 5 D / E / R / R2Z / RD	30,200	15,5-14,550						●	●			B	Long extra-low nose restricts to AP88 / AP89 series.
Dassault	Mirage 50	30,200	15,765						●	●			B	Long extra-low nose restricts to AP88 / AP89 series.
Dassault	Mirage IV Bomber	73,800	31,965	▶	●	●	●	●	●	●			B	
Dassault	Mirage F1 B / C / D / E / R	35,715	16,314	●	●	●	●	●	●	●			B	
Dassault	Mirage 2000	23,940	16,775	●	●	●	●	●	●	●			B	
Dassault	Rafale B / C / D / M	47,399	21,319	●	●	●	●	●	●	●			B	Carrier M version launch arm clears tug OK.

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Grumman	C -2A Greyhound	54,354	39,373			●	●	●	●	●		F	Low launch arm and front nosewheel door dictates large rear gate.
Grumman	S -2 Tracker	29,000	13,840			●	●	●	●	●		E	Use rear gate. Watch front door on bounce. Raise cradle.
Grumman / IMP / Bedek	S -2T Turbo Tracker	29,000	13,840			●	●	●	●	●		E	Use rear gate. Watch front door on bounce. Raise cradle.
Grumman	A - 6E Intruder	60,400	27,613			●	●	●	●	●		F	Front launch arm. Use large rear gate.
Grumman	EA - 6B Prowler	65,000	31,572			●	●	●	●	●		F	Front launch arm. Use large rear gate.
Grumman	F - 14 "Tomcat"	74,349	40,104			●	●	●	●	●		B	
Grumman	TBM - 3E Avenger	18,250	TBD			●	●	●	●	●		I or L	Long Reach adapter req'r's with AP/8700 series. Watch tailhook.
Grumman/Schweizer	G-164 Ag-Cat	4,200	2,600			●	●	●	●	●		I	Easy access tailwheel. Place strut strap below strut arm.
Grumman/Gulfstrm American	Super Ag-Cat	4,500	2,690			●	●	●	●	●		I	Easy access tailwheel. Place strut strap below strut arm.
Grumman/Gulfstrm American	Gulfstream I Turbo-prop /VC-4A /TC-4C	35,100	21,900			●	●	●	●	●		B	
Grumman/Gulfstrm American	AA -1 Yankee /AA -1A/B Trainer /TR -2	1,500-1,560	963-1,039			●	●	●	●	●		O	Sloping Strut/Wheelant.Use SR/AA Adapter with Front PintleHook.
Grumman/Gulfstrm American	AA -1C T-Cat / Lynx	1,600	1,066			●	●	●	●	●		O	Sloping Strut/Wheelant.Use SR/AA Adapter with Front PintleHook.
Grumman/Gulfstrm American	AA5 / A Traveler / Cheeta	2,200	1,200			●	●	●	●	●		O	Sloping Strut/Wheelant.Use SR/AA Adapter with Front PintleHook.
Grumman/Gulfstrm American	AA5 / B Tiger	2,400	1,285			●	●	●	●	●		O	Sloping Strut/Wheelant.Use SR/AA Adapter with Front PintleHook.
Grumman/Gulfstrm American	GA-7 Cougar Light Twin (*see Socata Tangara)	3,800	2,588			●	●	●	●	●		B	
Gulfstream / Rockwell	Commander 112 / 112TC	2,800/2,950	1,173/1,834			●	●	●	●	●		B & H	Set 3 - bladed prop.
Gulfstream / Rockwell	Commander 114	3,140-3,260	1,790-2,070			●	●	●	●	●		B & H	Set 3 - bladed prop.
Gulfstream / Rockwell	Commander Alpine	2,950	2,035			●	●	●	●	●		B & H	Set 3 - bladed prop.
Gulfstream / Rockwell	Commander Gran Turismo	3,272	2,070			●	●	●	●	●		B & H	Set 3 - bladed prop.
Gulfstream / Rockwell / Twin **>	Commander Jetprop 690 / 840 / 980	10,325	6,195/6,702			●	●	●	●	●		C.1 or C.2	Nose light. Use Holddown adapter and side-gates. **also see "Aero
Gulfstream / Rockwell / Twin	Commander Jetprop 900	10,700	7,079			●	●	●	●	●		C.1 or C.2	Nose light. Use Holddown adapter and side-gates. ** Commander"
Gulfstream / Rockwell / Twin	Commander Jetprop 1000	11,200	7,289			●	●	●	●	●		C.1 or C.2	Nose light. Use Holddown adapter and side-gates.
Gulfstream / Rockwell / Twin	Commander Jetprop 1200	11,750	7,475			●	●	●	●	●		C.1 or C.2	Nose light. Use Holddown adapter and side-gates.
Gulfstream Aerospace	G- II (*see Grumman for G-1)	65,500	36,000			●	●	●	●	●		B or N	Underbelly tow or push permitted with AP88/AP88.5 tug models.
Gulfstream Aerospace	G-III / C - 20A	69,700	38,000			●	●	●	●	●		B or N	Underbelly tow or push permitted with AP88/AP88.5 tug models.
Gulfstream Aerospace	G-IV / IV SP / C - 20 (SR4A)	74,600	42,500			●	●	●	●	●		B or N	Underbelly tow or push permitted with AP88/AP88.5 tug models.
Gulfstream Aerospace	G-V	85,100	45,500			●	●	●	●	●		B or N	Underbelly tow or push permitted with AP88/AP88.5 tug models.
Gulfstream Aerospace	G-350	71,300	42,700			●	●	●	●	●		B or N	Underbelly tow or push permitted with AP88/AP88.5 tug models.
Gulfstream Aerospace	G-450)	74,300	43,000			●	●	●	●	●		B or N	Underbelly tow or push permitted with AP88/AP88.5 tug models.
Gulfstream Aerospace	G-500	85,500	48,000			●	●	●	●	●		B or N	Underbelly tow or push permitted with AP88/AP88.5 tug models.
Gulfstream Aerospace	G-550	91,400	48,300			●	●	●	●	●		B or N	Underbelly tow or push permitted with AP88/AP88.5 tug models.

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## Cirrus SR & Grumman AA/AG Aircraft Adapter Capture and Disconnect Instructions

**Caution:** Read, understand, and become familiar with your applicable Lektro operators manual before attempting to move any aircraft.

When attempting to tow a Cirrus SR20, 22, SRV or Grumman AA/AG series of aircraft with attached wheel fairing, by utilizing the Redfab adapter and Lektro tug, the following procedure must be applied:

- Whenever possible, capture on level ground with the nose wheel straight
- Position the Lektro directly in front, approximately 3ft from the aircraft with the cradle parallel and centered to the aircrafts nose wheel
- Position the adapter for installation on the aircraft nose wheel. Take note of the “THIS SIDE UP” or “THIS SIDE DOWN” marking
- Remove the locking pin by depressing the release button and pulling
- Extend the adapter towing lug pin
- Install the adapter on the nose wheel towing lugs, being careful not to contact the wheel pant with any part of the adapter
- Close adapter pin (insert fully for use with SR models and partially for use with Grumman models as seen on the affixed usage marking
- Insert the locking pin into the adapter pin hole
- If necessary use the adapter to turn the aircraft nose wheel straight
- Move the Lektro side gates to the furthest outside position, with lock pins in side detents.
- Install the rear gate so that it rests horizontally on the cradle floor. Ensure it is locked in place with both end tabs inserted in the appropriate side gate slots.
- Loosen the locking screw on the back of the pintle hook.
- Unlock and lower the upper jaw, so that the **pintle hook is closed**
- Install the pintle hook onto the attachment hitch by inserting the hitch into the attachment sleeve and aligning the locking screw with the lock anchor hole.
- Secure the pintle hook by threading the locking screw into the lock anchor hole.
- Remove the strut strap portion, from the winch hook
- Free spool the winch or spool out to the appropriate position
- Insert the hook, untwisted into the exposed larger master link in the chain portion of the adapter
- Position the winch strap over top of the pintle hook
- Winch the aircraft nose wheel onto the cradle as close to the cradle's centerline as possible using the sequence detailed in Section 4.03 until the bar lightly contacts the pintle hook
- Unlock and raise the upper jaw to its "full open" and locked position so that the **pintle hook is open**
- Turn the A/C nose wheel with the adapter so that it is centered between the inner adapter torsional limiter tabs

(continued)

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## OPERATING PROCEDURES - CIRRUS / GRUMMAN ADAPTER

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- Continue winching, the adapter bar will contact just below the pintle hook crest, raise up slightly and drop into the pintle hook jaw.
- Depending on terrain it may be necessary to slightly lift or lower the adapter to fit into the pintle hook
- Unlock and lower the upper jaw, ensuring it locks in place, Install the safety pin.
- Secure the aircraft and raise the cradle according to section 4.03a. (Cont.) of your lektro manual
- Continue winching the aircraft until there is minor tension on the winch strap, the adapter should be tight in the pintle hook.
- Do not turn past aircraft manufacturer's recommended turning limits
- Check the aircraft nose wheel immediately before entering a turn, at regular intervals while turning and immediately after completing the turn to ensure the wheel fairing remains clear of the tug's structure.
- Install chocks and secure aircraft.
- Lower the cradle entirely
- unlock and raise the upper jaw to its "full open" and locked position
- Lift the adapter from the pintle hook jaw,
- Raise the cradle approximately two inches from the ground, this will bring the pintle hook back slightly
- unlock and lower the upper jaw, Install the safety pin.
- rest the adapter on top of the closed pintle hook, ensure the chain is clear of the cradle
- **Lower the cradle entirely**
- **Caution:** backing out with the cradle raised may damage the aircraft wheel pant
- Back away from the aircraft, use caution when doing so, ensure no part of the adapter becomes caught on any part of the cradle
- **Remove the adapter** by following initial instructions in reverse order
- **DO NOT** leave the adapter attached to the towing lugs of the aircraft

If the adapter markings become worn or damaged to the extent where one or more is indecipherable, or you have questions or comments relating to the SR/AA adapter, please contact us via e-mail: [info@redfab.com](mailto:info@redfab.com). For all other inquiries contact Lektro Inc.

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