CHAPTER

07

LIFTING AND SHORING

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CHAPTER 07 - LIFTING & SHORING
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JACKING AND LIFTING - DESCRIPTION AND OPERATION

1. General

A. Jacking is accomplished by using conventional tripod jacks to raise the airplane at three points. The nose or fuselage jackpoint is located just aft of the nose wheel well. The wing jackpoints are located just outboard of the engine nacelles. Holes are provided in the airplane structure at the jackpoints for installation of the jack pads. The jack pads are secured to these points after existing screws are removed (Ref. to 07-10-00, Fig. 201).

B. Lifting is accomplished by two hoisting slings and two lifting pads which are attached by steel cables to a lifting beam assembly. The hoisting slings are nylon straps, with a steel attachment ring at each end, which are positioned on either side of the airplane entrance door to support the airplane nose during lifting. The lifting pads are eye-brackets which attach to lifting points provided on the wing upper structure.(Ref. to 07-10-00, Fig. 202 and 203).

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JACKING AND LIFTING - MAINTENANCE PRACTICES

1. General

A. The entire airplane may be lifted by wing and fuselage jack points to perform landing gear tests, removal and installation of nose and main landing gear, leveling and for other major repairs. The airplane should be on a level surface and protected from wind gusts, preferably in a hangar.

B. An aircraft that has belly-landed or one with collapsed landing gear can be lifted using the sling method detailed below.

2. Jacking the Airplane (Ref. to Fig. 201)

A. Tools and equipment

NOMENCLATURE	PART NUMBER	MANUFACTURER
Jack Pad (Nose)	80-909157	Piaggio
Jack Pads (Wings)	80-909101	Piaggio
Nose Tripod Jack	02-0517-0132	Tronair
Wing Tripod Jacks	02-7812-0100	Tronair

B. Procedures

CAUTION: MAKE SURE THAT THE JACKING PAD SECURING SCREWS ARE OF THE CORRECT LENGTH. SERIOUS DAMAGE CAN RESULT IF THE SCREWS USED ARE TOO LONG.

NOTE: To avoid invalid ADAS data acquisition, pull out both ADAS and ADAS1 circuit breakers before jacking ar lifting airplane (if installed).

NOTE: Do not raise the airplane more than required to perform maintenance.

(1) Attach electrical grounds to airplane.
(2) Remove the fuse (6.25 amp) mounted on the face of the emergency power unit located forward of the instrument panel.
(3) Remove the four screws that cap the jack pad holes on the wing.

NOMENCLATURE	PART NUMBER
Forward (Fligh Direction) Wing Pads Screws	NAS 8804A8
Rear (Fligh Direction) Wing Pads Screws	NAS 8804A5
Nose Wing Pad Screws	MS 35206-244

(4) Secure jack pads to wings with the four bolts.

NOMENCLATURE	PART NUMBER
Forward (Fligh Direction) Wing Pads Bolts	NAS 6604-11 or NAS 6404-11
Rear (Fligh Direction) Wing Pads Bolts	NAS 6604-09 or NAS 6404-09
Nose Wing Pad Bolts	NAS 6403A8

(5) Place jacks at jack pad locations.
(6) Simultaneously operate wing and fuselage jacks (to prevent side load loads on structure and jacks) until wheels are clear of ground.

3. Removing Airplane from Jacks

A. Procedures

CAUTION: MAKE SURE THE STRUCTURAL PANELS 251A AND 252A ARE INSTALLED CORRECTLY BEFORE YOU LOWER THE AIRPLANE AND REMOVE THE JACKS.

(1) Simultaneously lower wing and fuselage jacks until airplane rests on gear and jacks can be removed.
(2) Remove jack pads from airplane.
(3) Install previously removed screws at the jack pad locations.

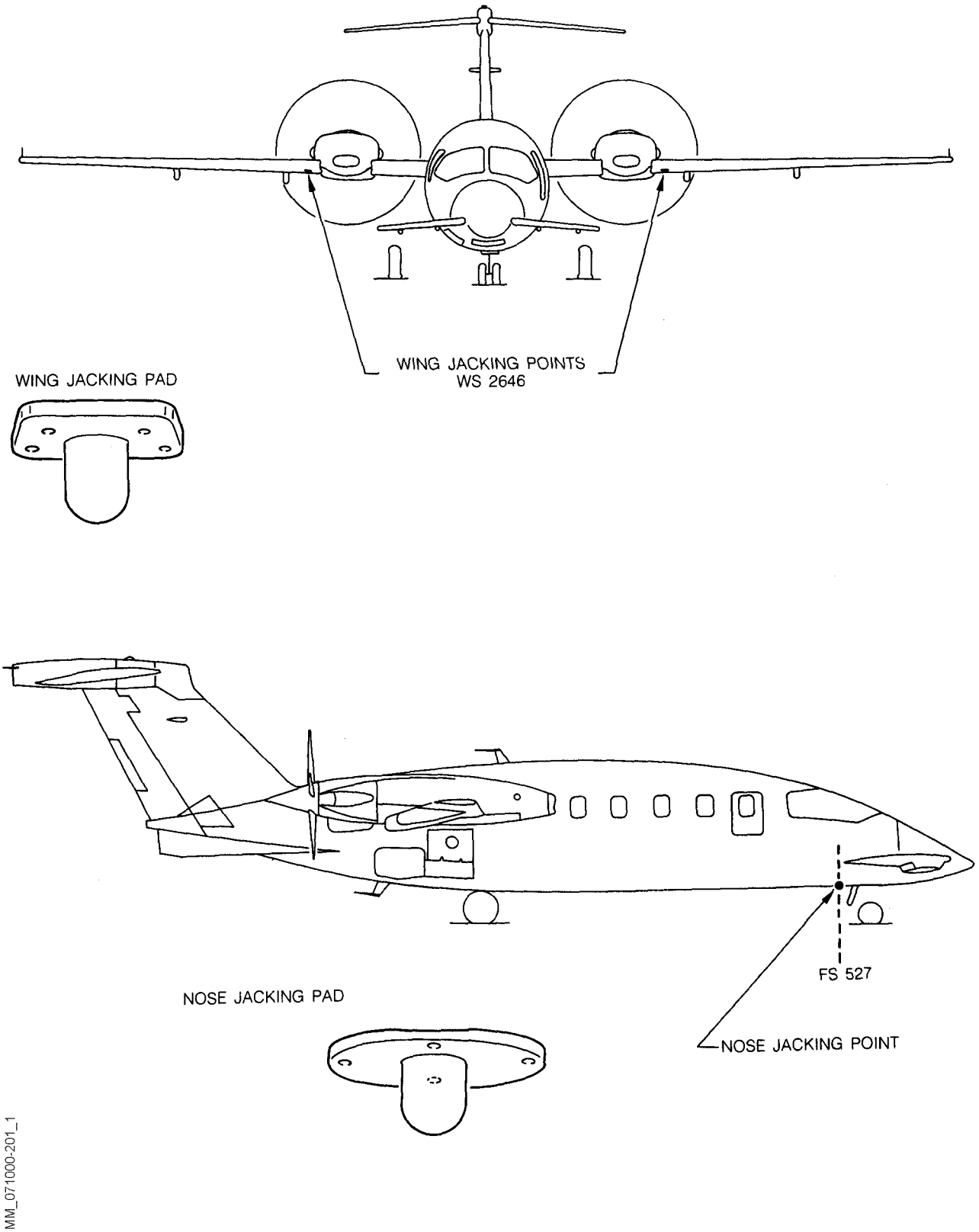
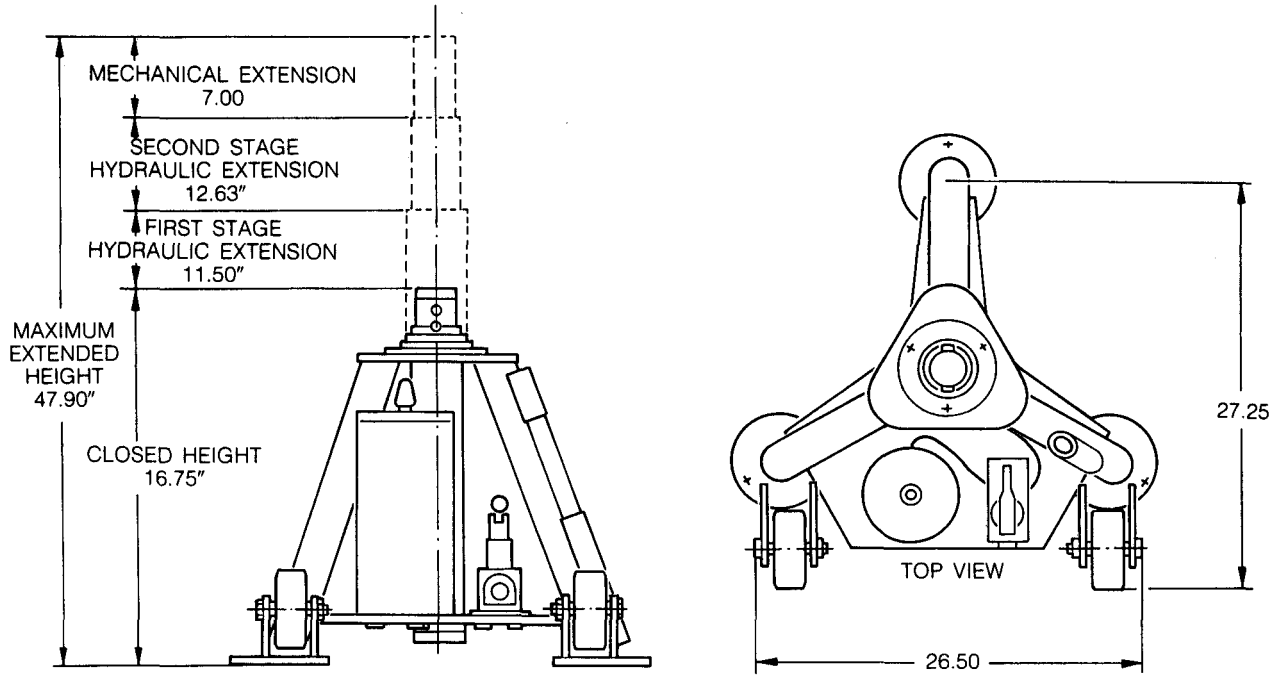
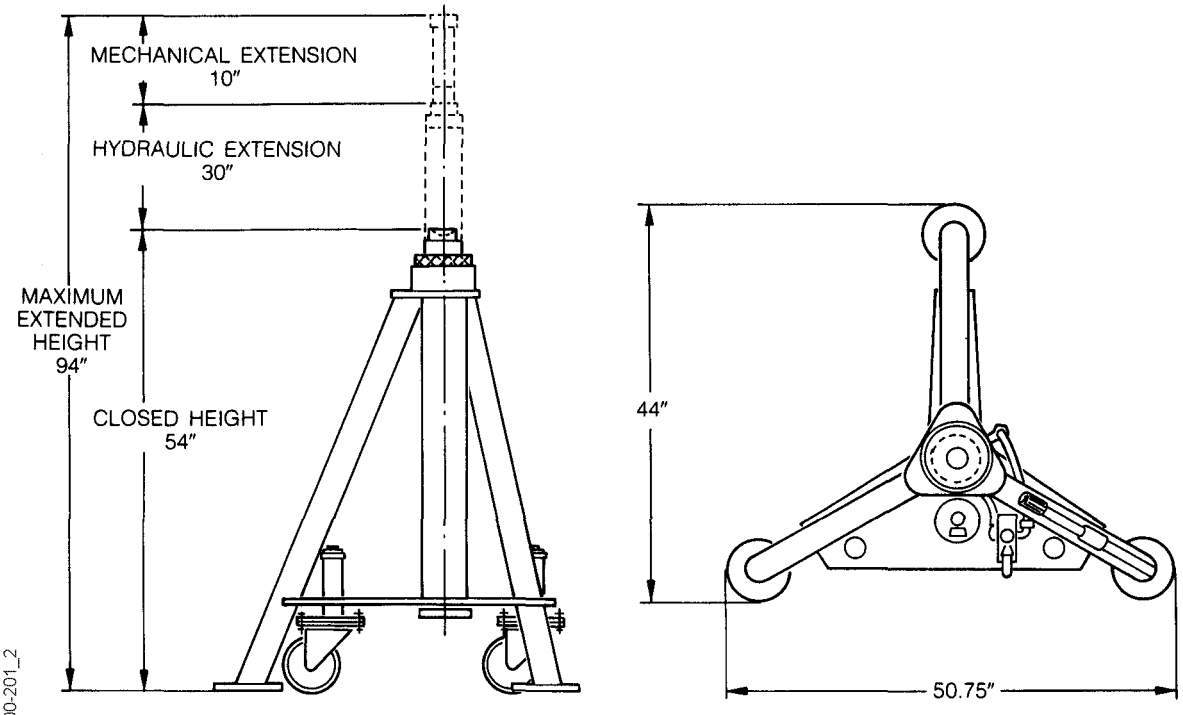


Fig. 201 - Airplane Jacking Provisions (Sheet 1 of 2)



NOSE TRIPOD JACK



WING TRIPOD JACK

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Fig. 201 - Airplane Jacking Provisions (Sheet 2 of 2)

4. Lifting Airplane

A. Tools and Equipment

NOMENCLATURE	PART NUMBER	MANUFACTURER
Lifting Beam	80-909190-401	Piaggio
Hoisting Sling (Fuselage)	80-909190-401	Piaggio
Lifting Bracket	80-909169-801	Piaggio
Hoisting Sling (Wings)	80-909190-401	Piaggio

B. Procedure (Ref. to Fig. 204)

WARNING: THE CRANE OR HOIST MUST BE ABLE TO LIFT A WEIGHT OF 22,050 LB. (10,000 KG.) SAFELY.

WARNING: THE MINIMUM WIDTH OF THE SLINGS MUST BE 11.81 in. (0.3 m).

NOTE: To avoid invalid ADAS data acquisition, pull out both ADAS and ADAS1 circuit breakers before jacking ar lifting airplane (if installed).

(1) Defuel airplane (Refer to Chapter 12)
(2) Ensure that all luggage has been removed from the airplane and that all passengers, crew members, and maintenance personnel have disembarked.
(3) Ensure that the entrance door, emergency exit door and all access doors are secure.
(4) Remove screws from lifting pad locations and secure lifting brackets to structure at WS 1094
(5) Attach the hoisting sling (wings) to the lifting brackets and to the lifting beam.
(6) Position the hoisting sling (fuselage) under the airplane and center the sling between FS 2159.6 and FS 2290 as shown and attach both ends to the forward part of the lifting beam.
(7) Adjust cable ends to align lifting beam parallel with the airplane WL.

CAUTION: AVOID IMPACT LOADING DURING LIFTING.

(8) As the airplane is lifted, watch center of balance. The cable adjuster may have to be repositioned to keep the airplane from tipping.
(9) Stabilization ropes should be attached to each wing tip and either the nose or tailcone for guidance.
(10) The airplane should be transported as smoothly as possible to prevent further damage.

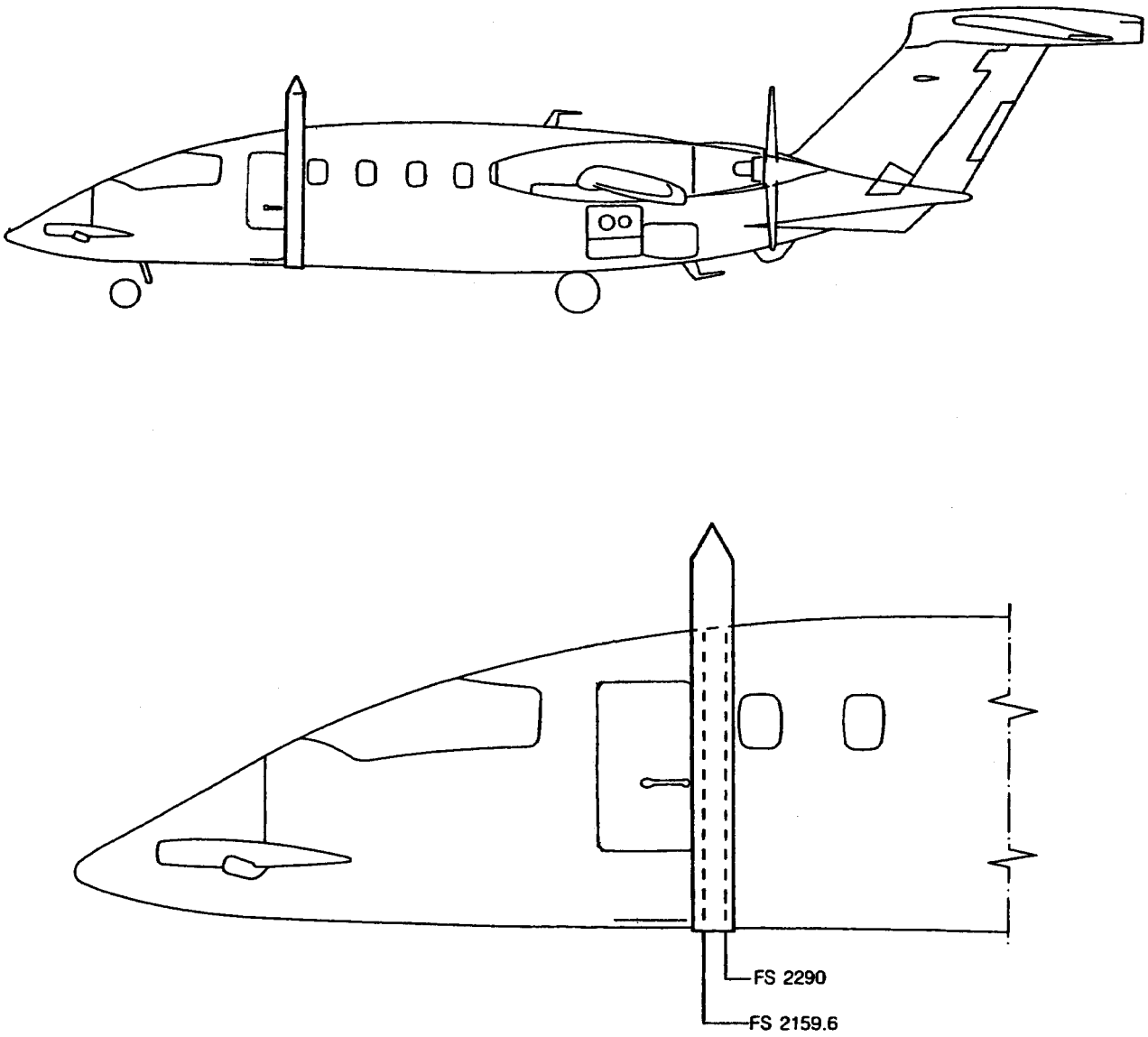

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Fig. 202 - Airplane Hoisting Slings Location

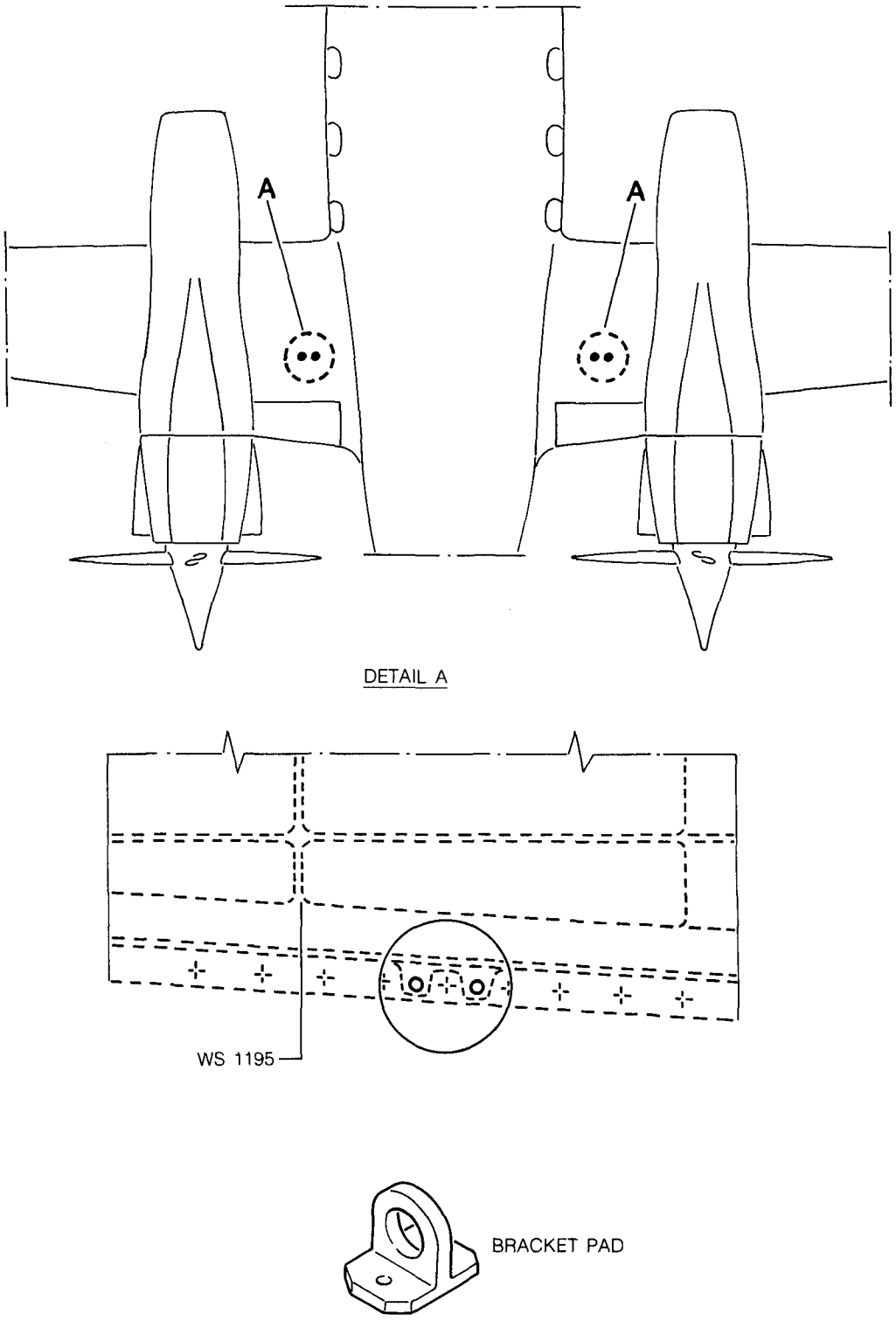

Fig. 203 - Airplane Lifting Bracket Location

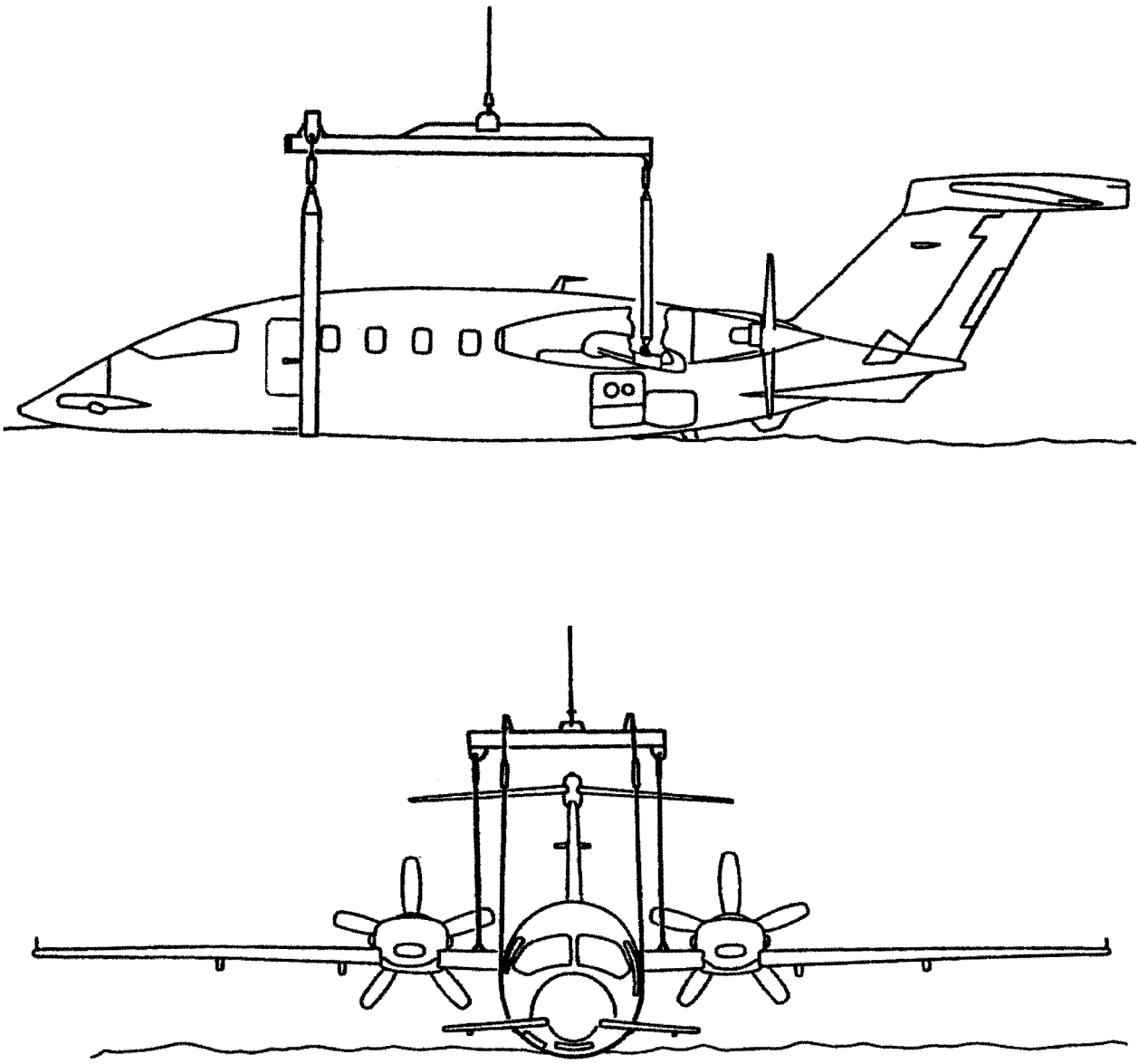

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Fig. 204 - Lifting Airplane