
Adaptor 937B

Annex 9.1

This adaptor is a carbon fibre structure in the form of a truncated cone, with a diameter of 937 mm at the level of the spacecraft separation plane. It is attached to the reference plane (\varnothing 1920) by a bolted connector frame, and also provides for spacecraft separation.

The 937 B adaptor has a mass of 60 kg.

The actual spacecraft pair of values (M_{cu} , X_G) must remain within admissible limits as [defined in figure A9.1.1.](#)

The spacecraft is secured to the adaptor interface frame by a clampband. This comprises a metal strip applying a series of clamps to the payload and adaptor frames. The clampband assembly comprises two half clampbands, connected by bolts which are cut pyrotechnically to release the clampband, which is then held captive by the adaptor assembly.

The clampband tension does not exceed 27 700 N at any time, it is defined to ensure no gapping between the spacecraft and adaptor interface frames in ground and flight environment.

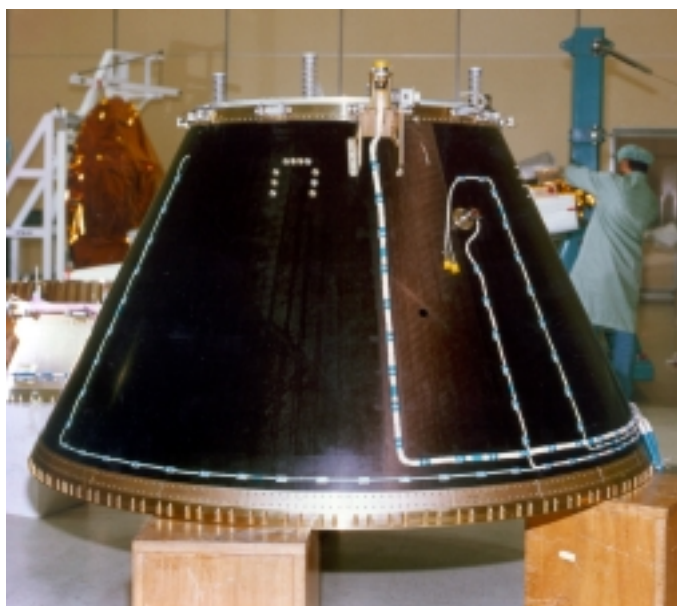
The spacecraft is forced away from the launch vehicle by 4 springs part of the adaptor and bearing on supports fixed to the spacecraft rear frame. The relative velocity between the adaptor and the spacecraft is about 0.5 m/s.

The force exerted on the spacecraft by each spring does not exceed: 1 500 N.

Adaptor is equipped either with external or internal springs on user request.

The figures A9.1.3 and A9.1.7 define the location and the design of L/V microswitches.

Umbilical connectors brackets: on the spacecraft side, the connectors brackets must be stiff enough to prevent any deformation greater than 0.5 mm under the maximum force of the connector spring.



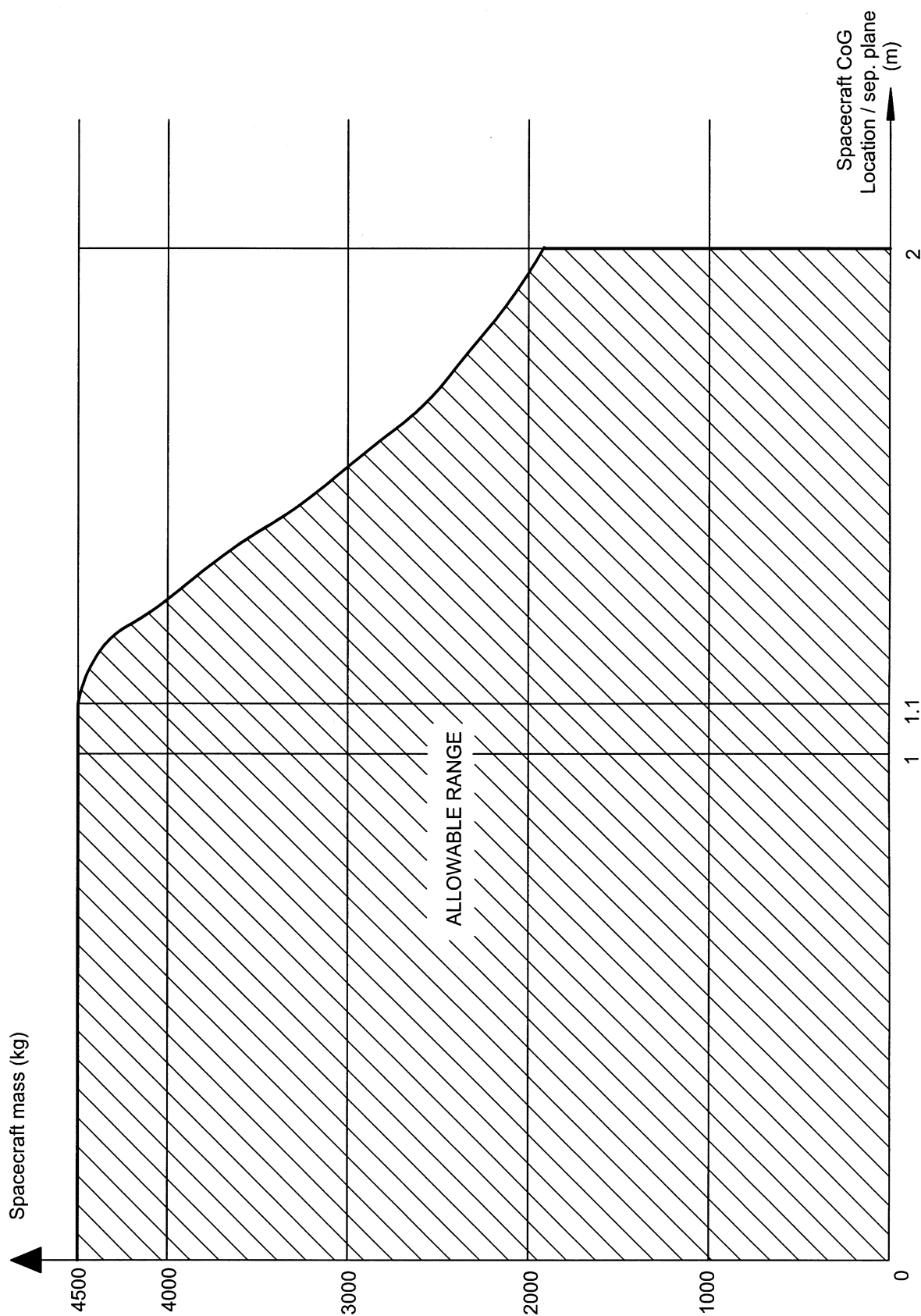


Fig. A9.1.1. – Limit loads of adaptor 937B at separation plane

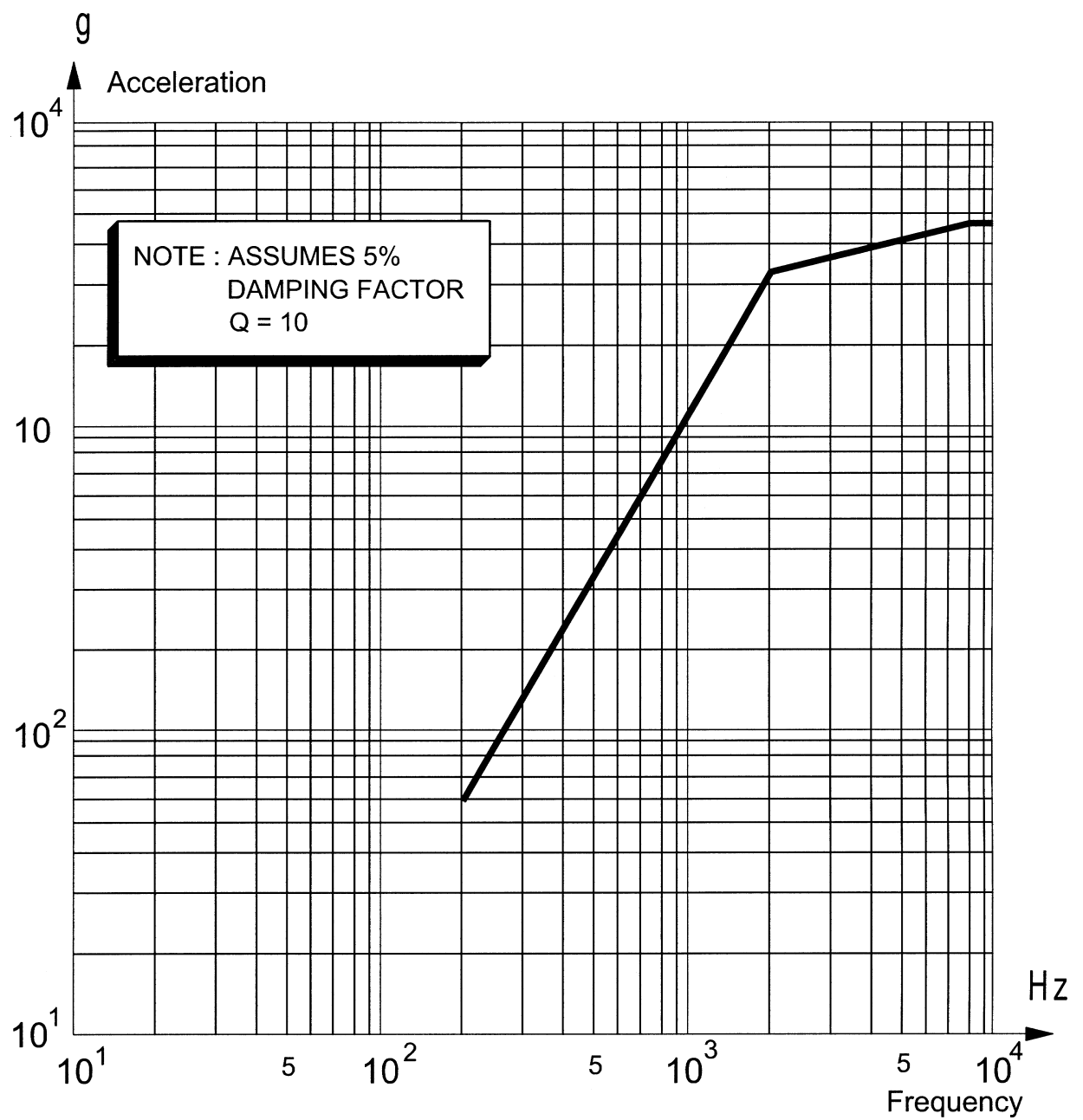


Fig. A9.1.2. – Adaptor 937B

Shock spectrum at separation plane

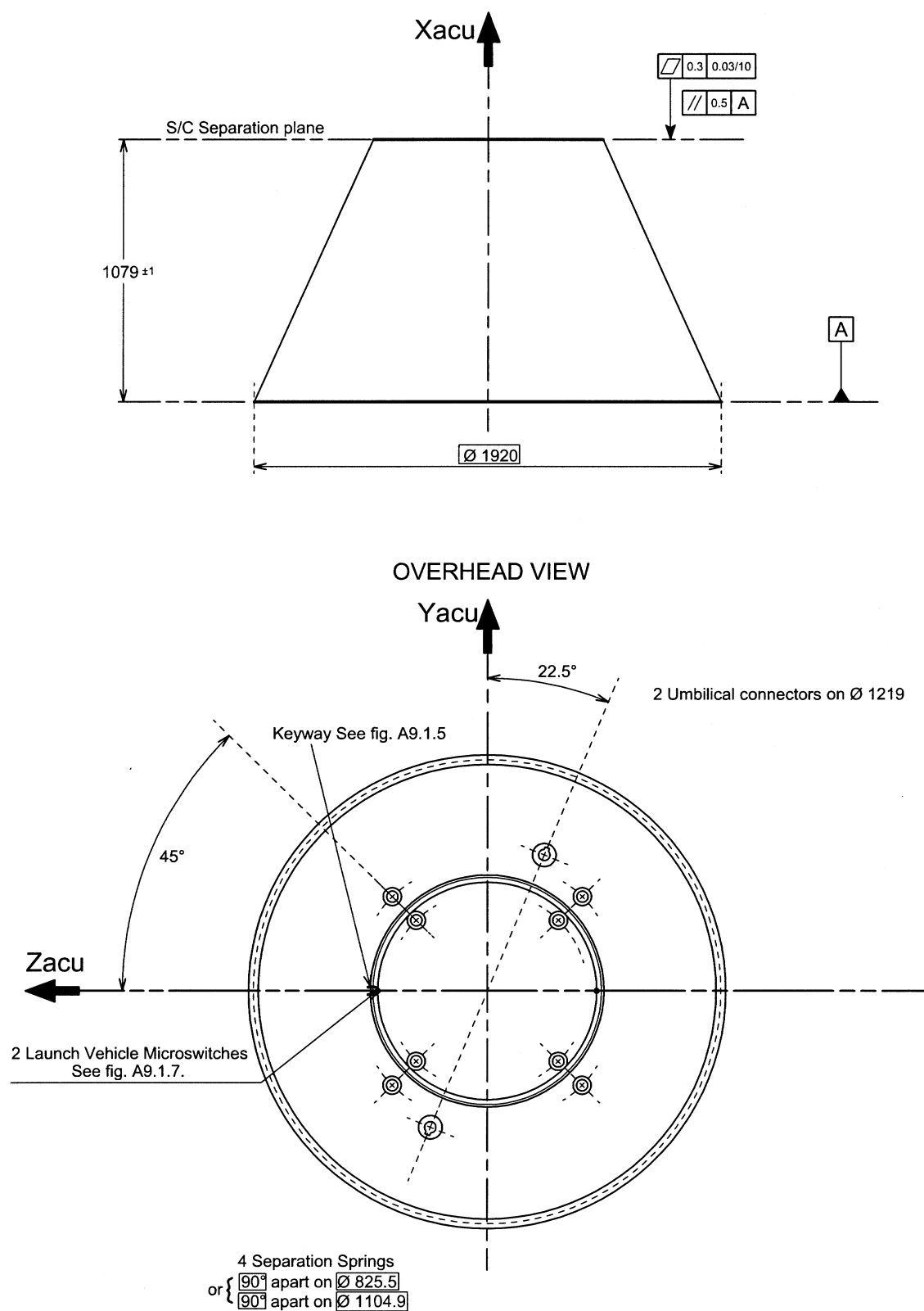


Fig. A9.1.3. – Adaptor 937B

General view and main characteristics

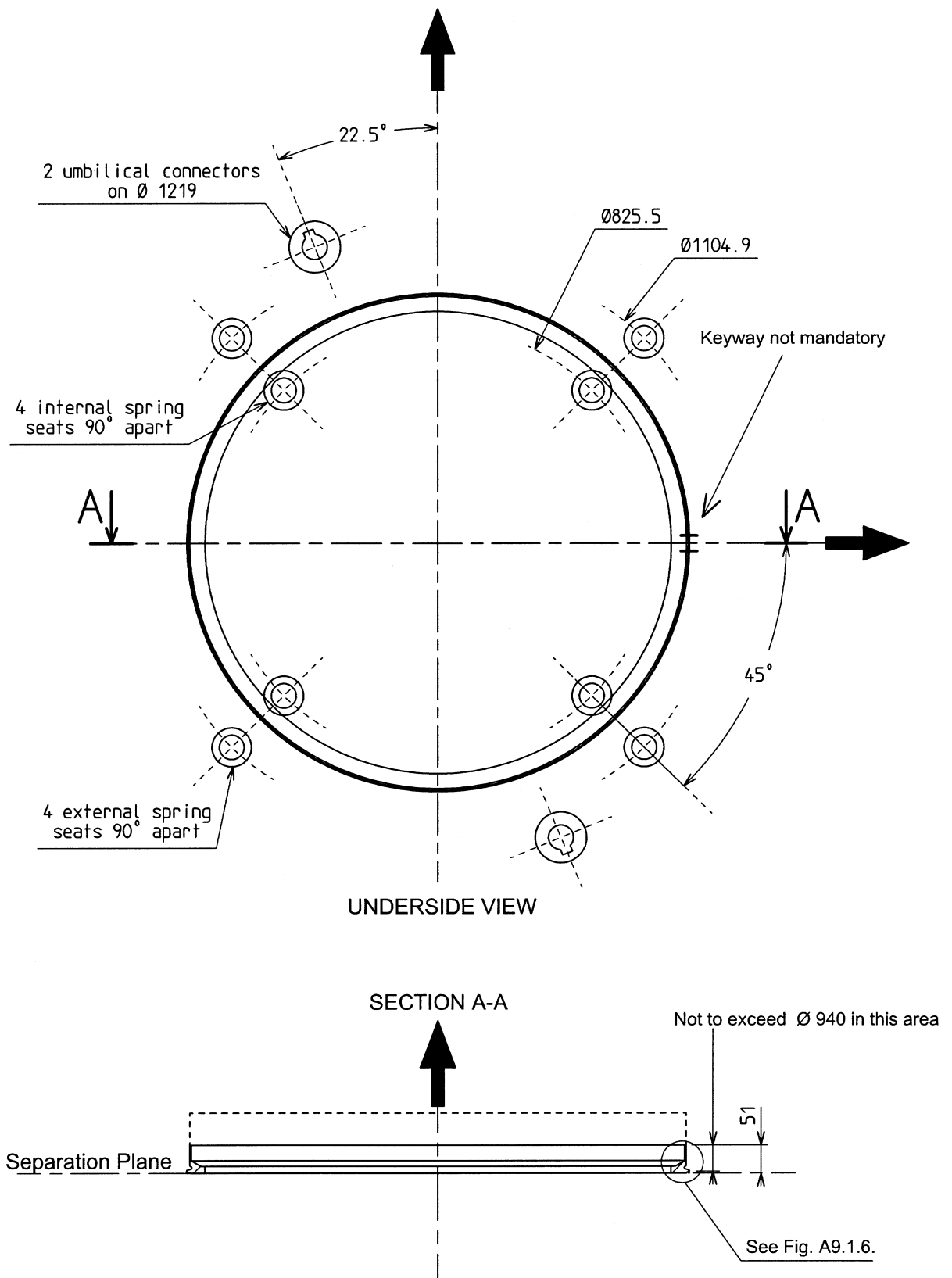


Fig. A9.1.4. – 937B spacecraft configuration

General view and main characteristics

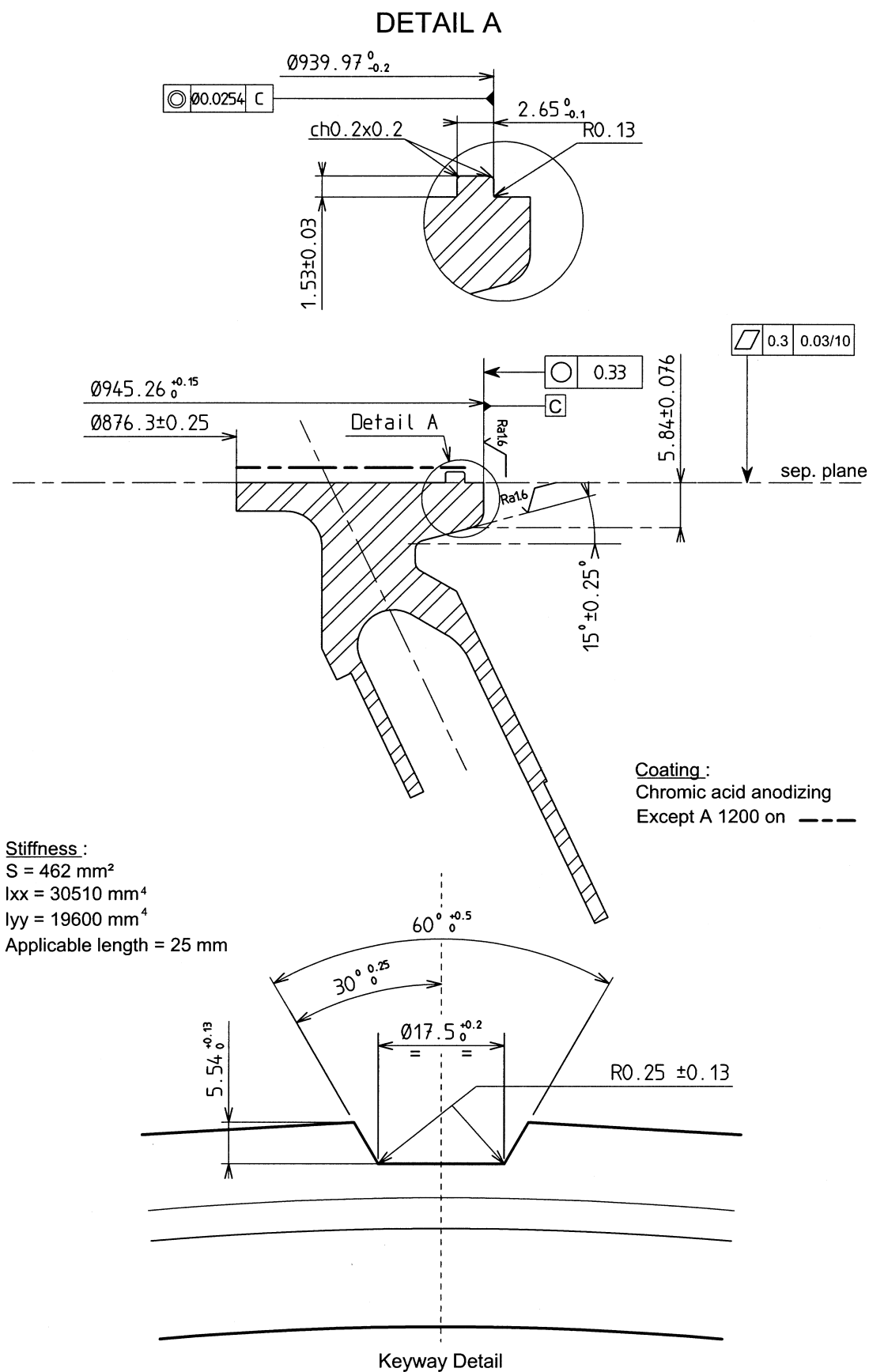


Fig. A9.1.5. – 937B adaptor interface frame (details)

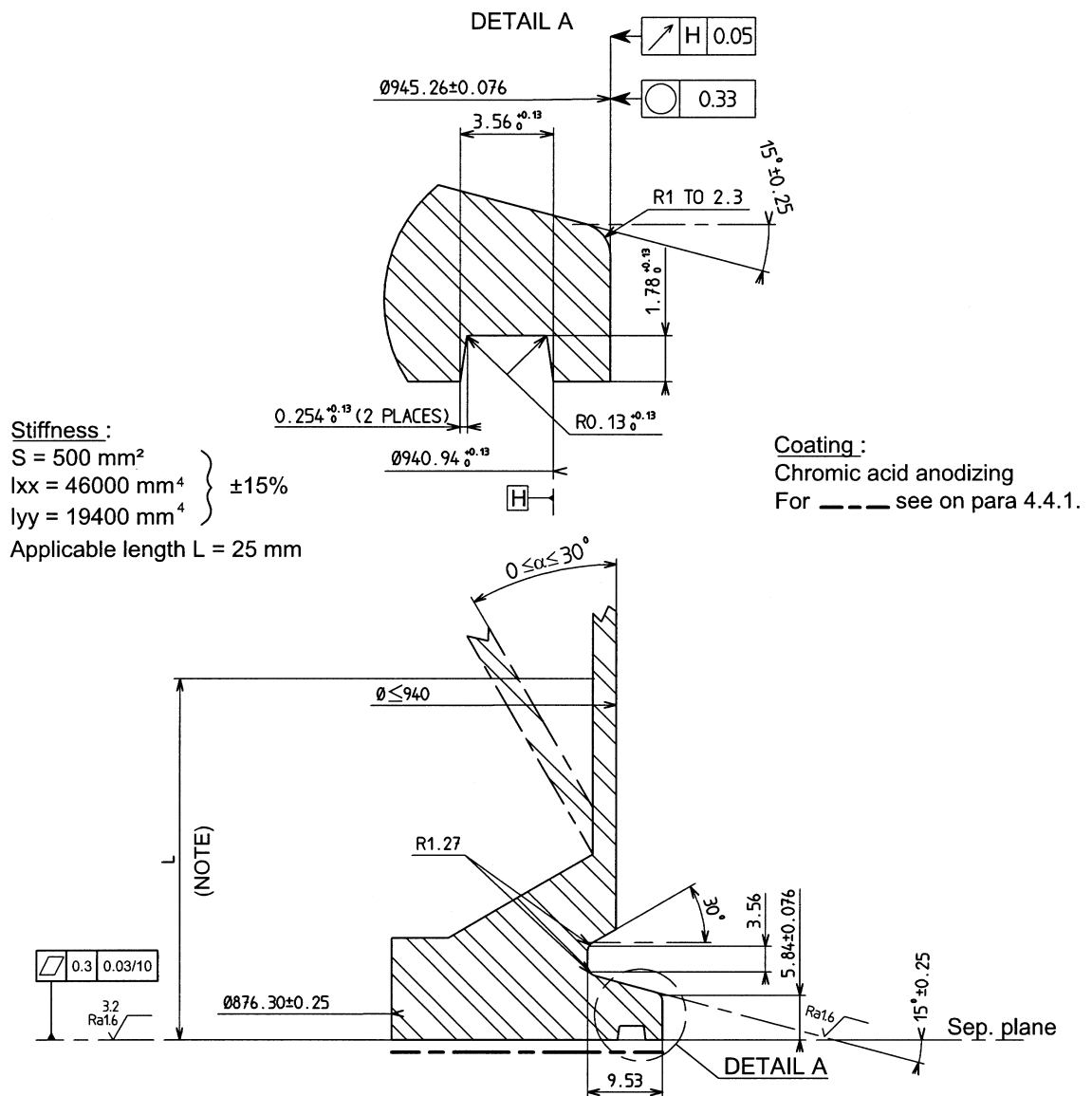
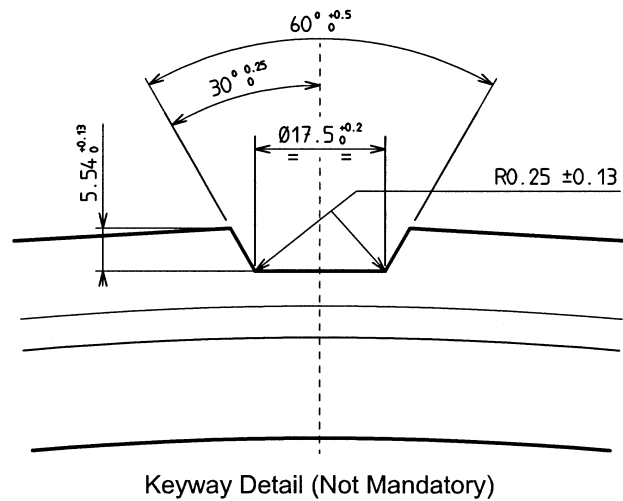


Fig. A9.1.6. – 937B spacecraft interface frame (details)

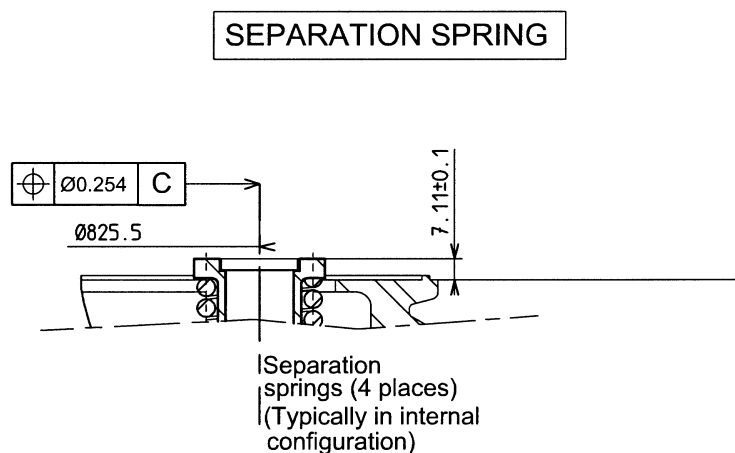
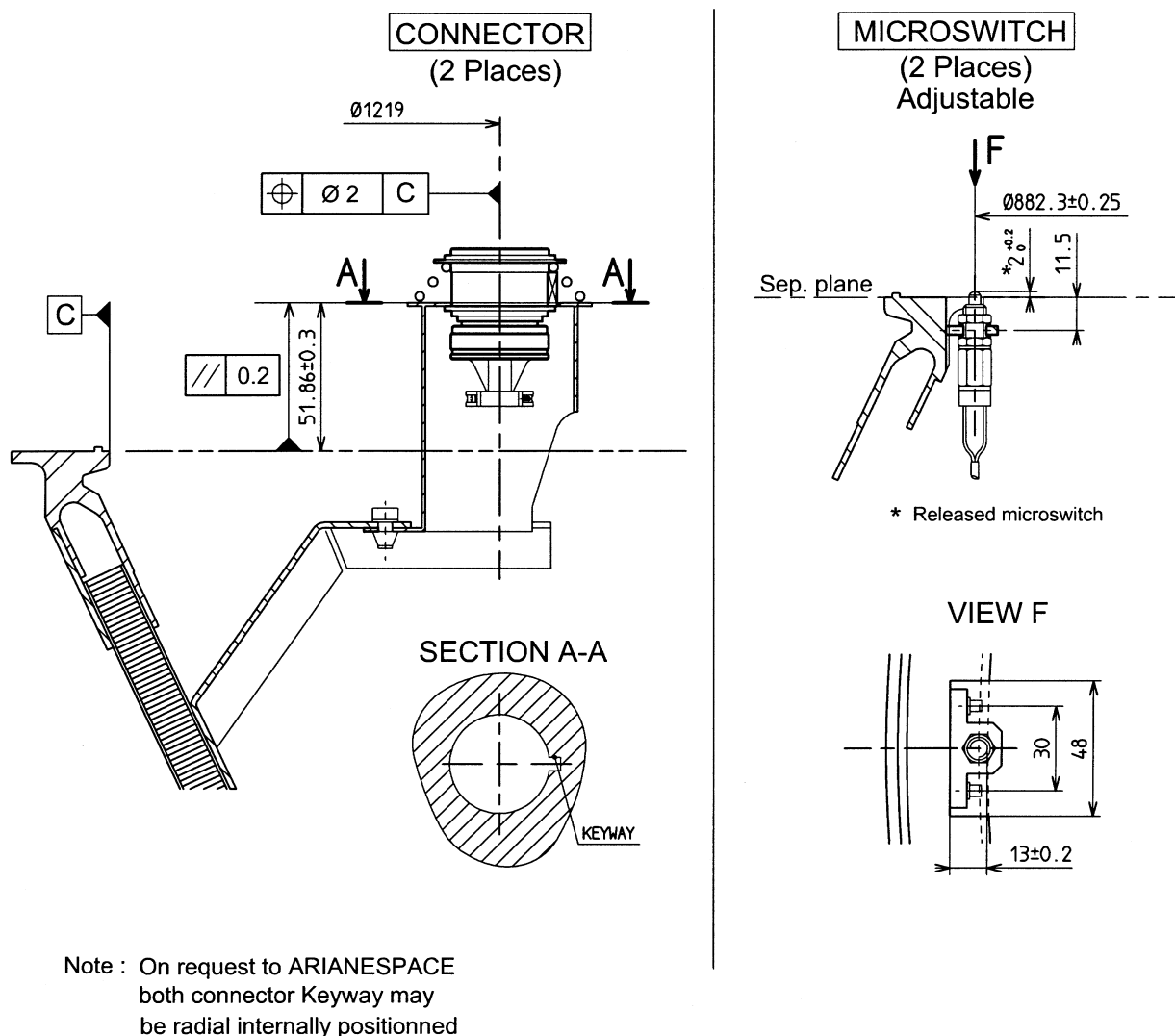


Fig. A9.1.7. – Adaptor 937B mechanical interfaces (details)

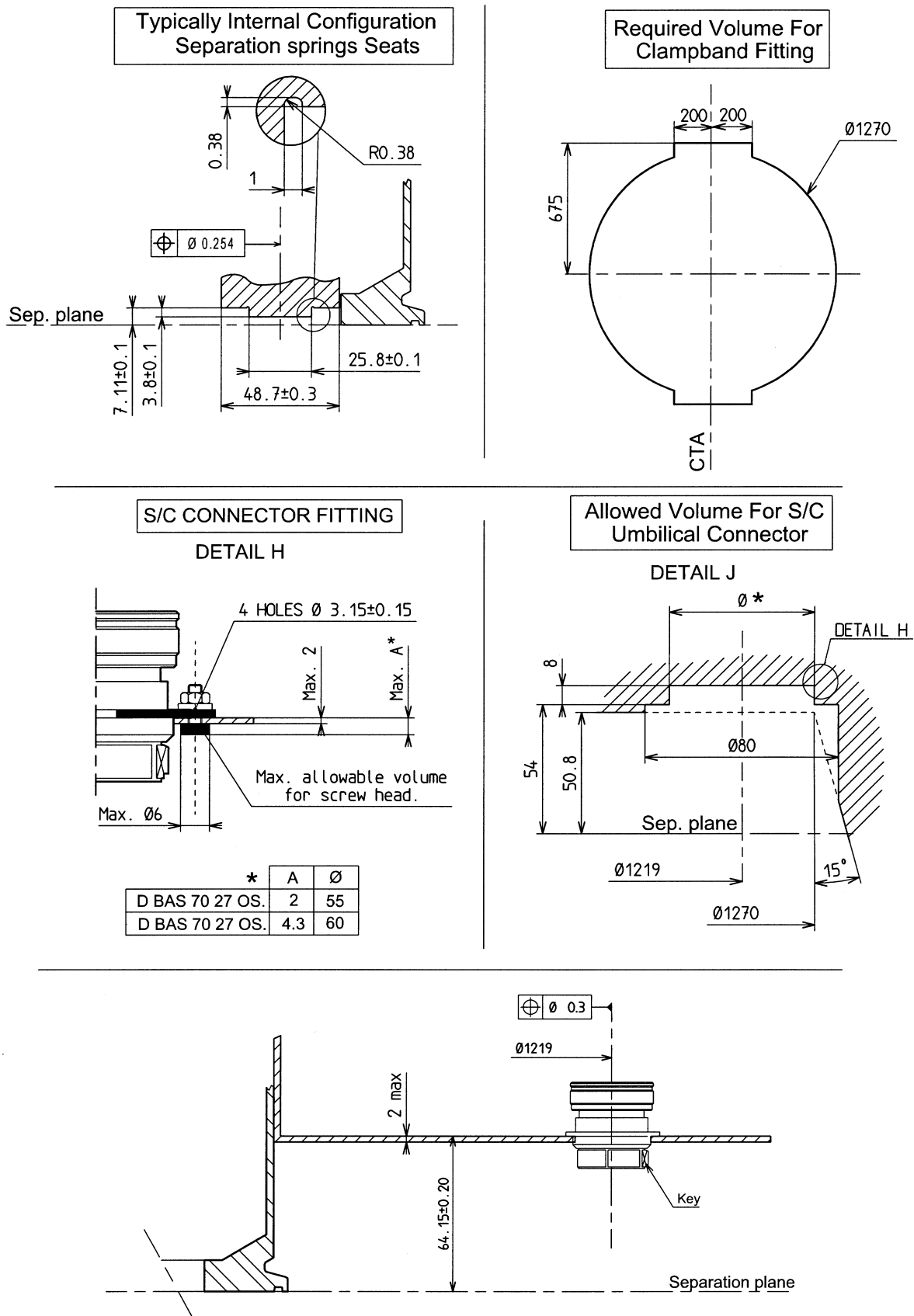


Fig. A9.1.8. – 937B spacecraft mechanical interface (details)

DUAL LAUNCH-UPPER POSITION Adaptor 937B

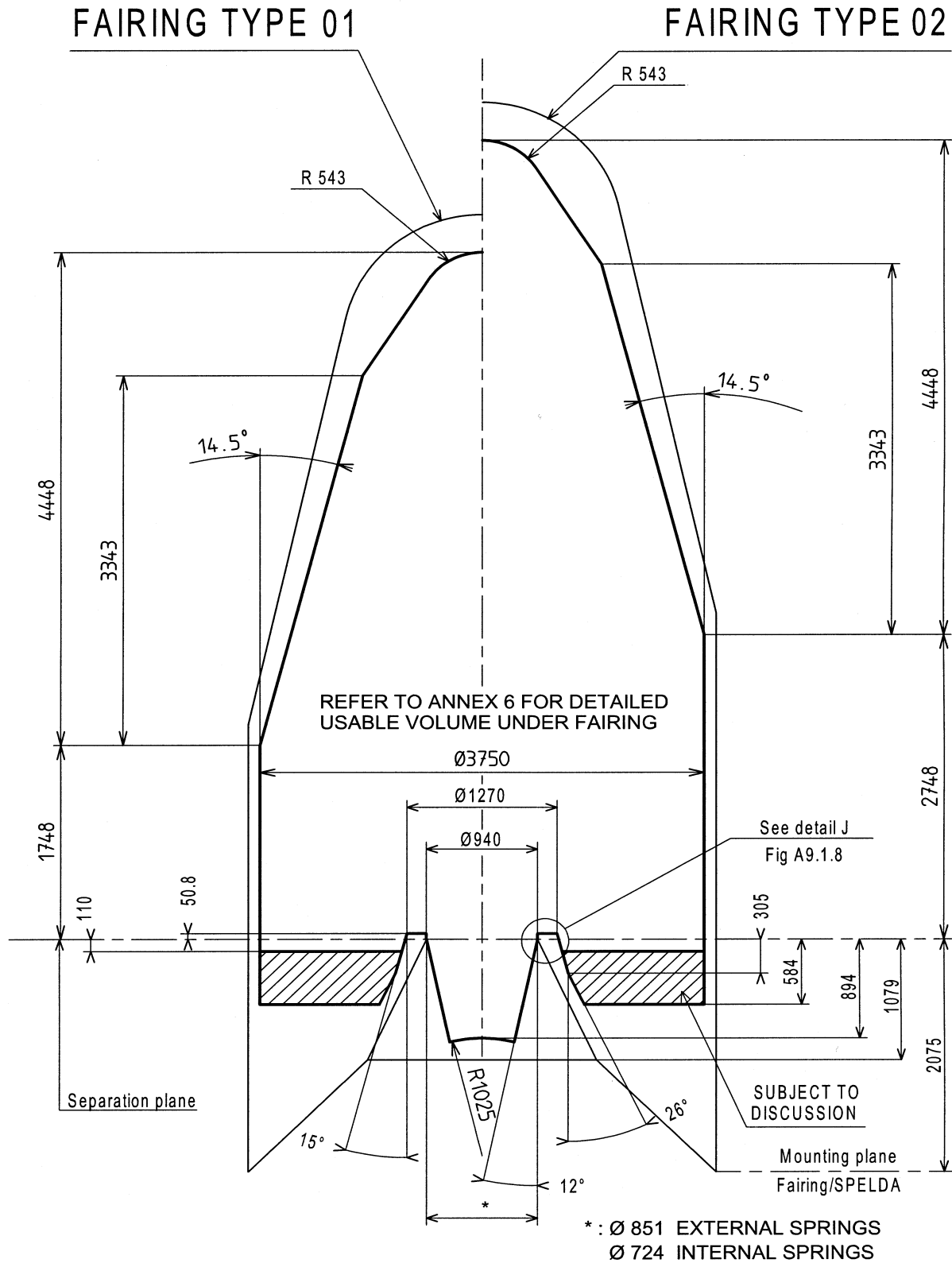


Fig. A9.1.9. – Usable volumes beneath fairings 01 and 02

DUAL LAUNCH-INNER POSITION

Adaptor 937B

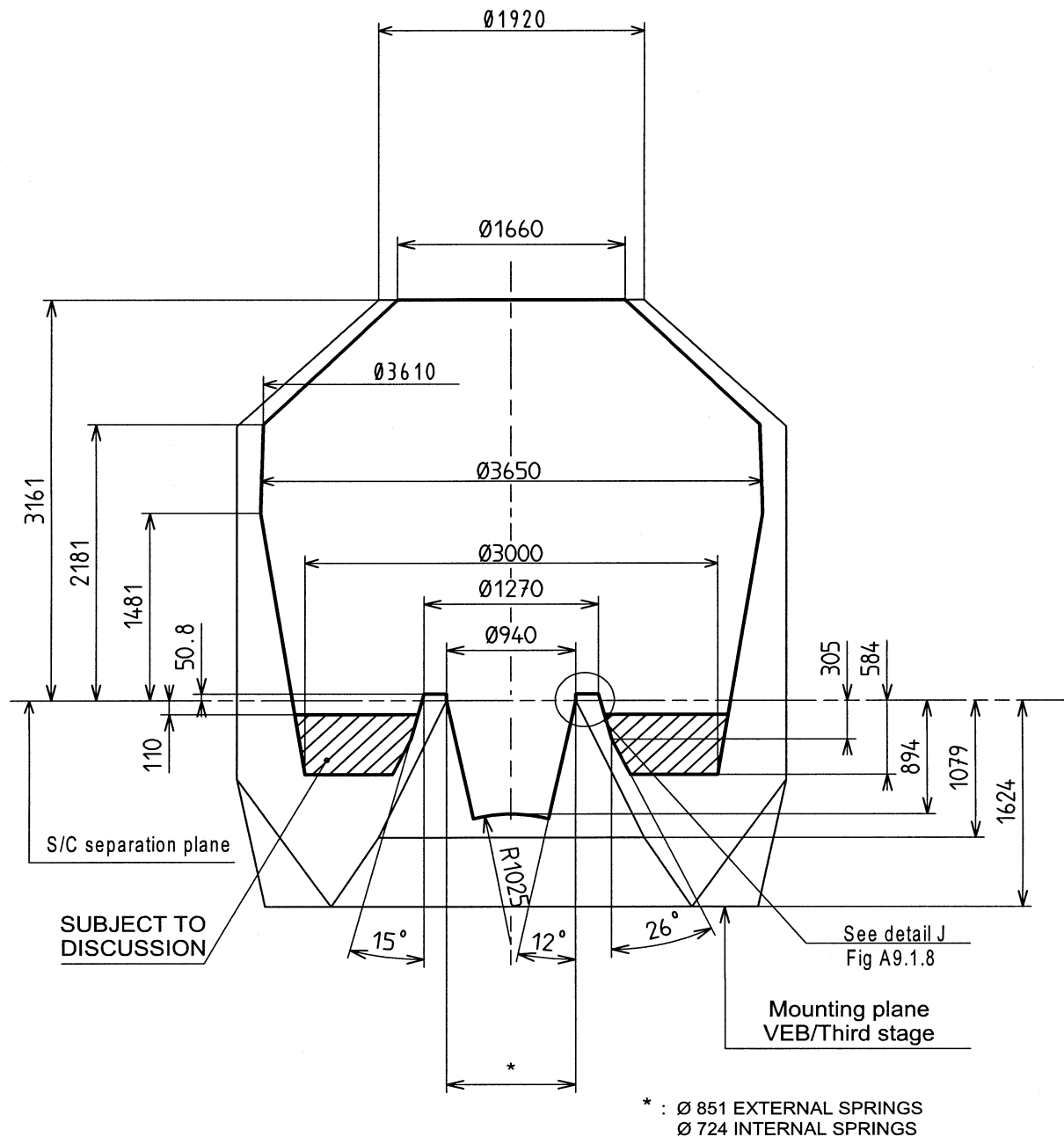


Fig. A9.1.10. – Usable volume beneath short SPELDA (type 10)