

# PIPER PA23 AIRCRAFT

## Three Point Torso Restraint System Installations

PA-23, PA23-160, PA-23-235, PA-23-250, PA-23-E250

Model PA23-114FS

**PHOTO  
UNAVAILABLE  
AT THIS TIME**

Model PA23-114IR



Model Number	Product Description
PA23-114FS	Three-point restraint system, TSO-C114, Fixed torso strap
PA23-114IR	Three-point restraint system, TSO-C114, Inertial reel torso strap

### **Product Description**

STC SA02298CH authorizes the installation of a vendor supplied, FAA approved, TSO-C114 restraint system, at each pilot position. The restraint system incorporates a traditional pelvic restraint strap (lap belt) provided with the provision to attach, as needed, a single diagonal upper torso (shoulder) restraint strap. The upper end of the shoulder strap is hard mounted to the airframe at a location aft and above the pilot position. The free end of the shoulder strap is attached to the pelvic restraint strap at the buckle location and adjusted, as necessary, by use of the cinch strap or inertial reel.

The attachment of the fixed end of the shoulder strap or inertial reel is completed by the installation of hard points, left and right, at fuselage station 65.33.

The establishment of the hard points is accomplished by the removal of the existing rear passenger assist strap on each side. The assist strap gusset is then reused in combination with the outer fuselage skin and spacers to create a structural attachment that has been proven to exceed FAA; CAR 3 requirements.

### **Weight and Balance**

Model PA23-114FS has a location of station 65.33 and a net weight change of 1.75 pounds per installation; two pilot positions.

Model PA23-114IR has a location of station 66.35 and a net weight change of 3.50 pounds per installation; two pilot positions.

## **Installation**

**Note - The right and left side upper attach point installations are identical.**

The rear passenger assist strap, rear window trim and air vent cover is removed on each side of the cabin ceiling.

The headliner is carefully loosened from the window channel and using clamps, positioned to provide access to the cabin structure. Note The use of a heat gun or hair dryer to aid the release of the headliner adhesive can reduce the risk of damage to the headliner material.

The cabin assist strap nut plate is removed and the center hole upsized to .250.

The .250 hole is completed through the outer cabin skin.

The bushing, spacer and bolts are installed as called out in the drawing.

The cabin headliner and trim are re-installed.

Attachment of the shoulder belt end fitting or inertial reel is completed.

The installation is completed with the installation of the new lap belts, which are installed using the existing hardware and mounts.

The aircraft is returned to service following the completion of the required FAA paper work.

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