

Chapter 12
(Completely revised)
SWIVEL PIPE UNITS
Type No. 100603001
100618001

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Introduction

1. These swivel pipe units are attached to a specific nose undercarriage jack to carry a normal or emergency supply of fluid for the extension of the jack and allow for movement of the jack during operation. The units differ from each other at the airframe attachment points. Type No. 100603001 has a swivel connection formed with lugs and tapped to receive a banjo bolt securing a banjo connection (fig. 1). Type No. 100618001 has a swivel

connection post formed with a block and an integral pipe adapter (fig. 2). Holes in the block and slots in the swivel connection provide for attachment purposes.

Description

2. Each unit comprises two pipe assemblies joined at a centre swivel joint and having fixed connections at the outer ends for attachment to the jack and airframe respectively. The swivel joints each consist of a coupling post rotating in a coupling body

and retained by a collar and split pin. The pipes are soldered into the relevant posts and coupling bodies.

3. Each tubular coupling post, sealed by a screwed plug soldered in position, is linked by radial holes to an annular groove in the post, which coincides with an annular groove in the coupling body (fig. 3). Additional grooves in the body house sealing rings and backing rings to prevent the leakage of fluid. The jack attachment point of each unit consists of a flanged coupling post from which a

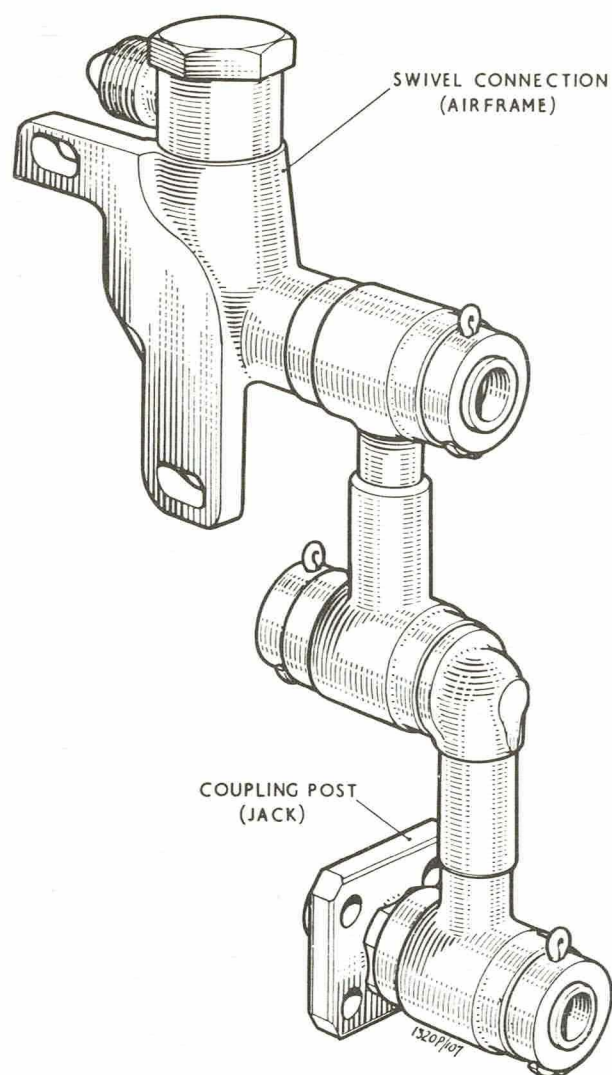


Fig. 1 Swivel pipe unit 100603001

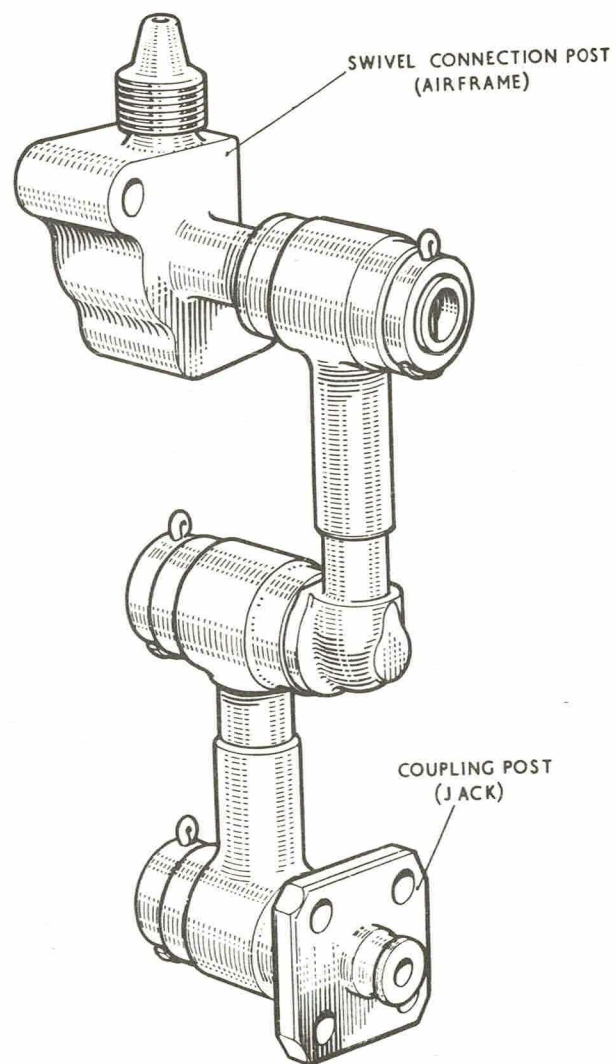


Fig. 2 Swivel pipe unit 100618001

hollow spigot projects. The spigot is grooved for a sealing ring and backing ring and provides for the passage of fluid to the jack.

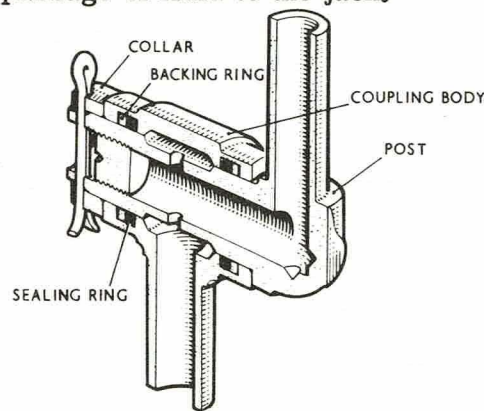


Fig. 3 Section through coupling

TABLE 1
Special tool

Ref. No.	Part No.	Description
27Q/24921	460001252	Test adapter

SERVICING

Leakage

4. Leakage past the sealing rings will be indicated by external seepage or loss of pressure under test. The appropriate sealing ring must be renewed.

Dismantling

5. (1) Remove the split pins and collars from the swivel coupling assemblies and withdraw the coupling posts from the coupling bodies.

(2) Remove the sealing rings and the backing rings from the bodies.

Note . . .

The screwed plugs are soldered in position and must not be removed.

(3) For Type No. 100603001, remove the banjo bolt, the banjo connection and the sealing rings from the swivel connection.

Assembling

6. All sealing rings are to be lightly coated with Grease XG-315 (34B/9100519) before being assembled in the unit.

(1) Fit the sealing rings and the backing rings to the coupling bodies, with the rough faces of the backing rings adjacent to the sealing rings.

(2) Slide the coupling bodies over the relevant coupling posts and secure the assemblies with the collars and split pins.

(3) For Type No. 100603001, fit the sealing rings to the banjo connection and secure the connections to the swivel connection with the banjo bolt.

Testing

7. A static hydraulic test rig is required, together with the test adapter quoted in Table 1, one sealing ring Part No. SP900B-6 and one backing ring Part No. SP905-6. Each unit is to be tested separately at room temperature.

(1) Fit the sealing ring and the backing ring to the spigot of the coupling post, with the rough face of the backing ring adjacent to the sealing ring. Bolt the test adapter over the spigot of the coupling post.

(2) Connect the supply line of the static hydraulic test rig to the airframe connection and apply pressure. Fluid should flow freely from the jack connection.

(3) Blank off the test adapter at the jack connection and gradually apply a pressure of 6000 lbf/in² with the unit remaining static. Leakage is not permissible. Release the pressure.

(4) With the jack connection still blanked off, apply a pressure of 100 lbf/in² at the airframe connection. Rotate each swivel joint through an angle of 180 degrees and back ten times, and through 360 degrees ten times (five clockwise and five anti-clockwise). If a swivel joint is prevented from moving through 360 degrees by the obstruction of other pipes etc., it should be moved as far as possible. Leakage is not permissible.

(5) Repeat test (4), applying a pressure of 4000 lbf/in² and check that the torque required to rotate each swivel joint at this pressure does not exceed 25 lb in. Release the pressure and disconnect the supply line.

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