

May, 1973.

Issue 1.

TECHNICAL INSTRUCTION No. 56

Kestrel Modification No. 17

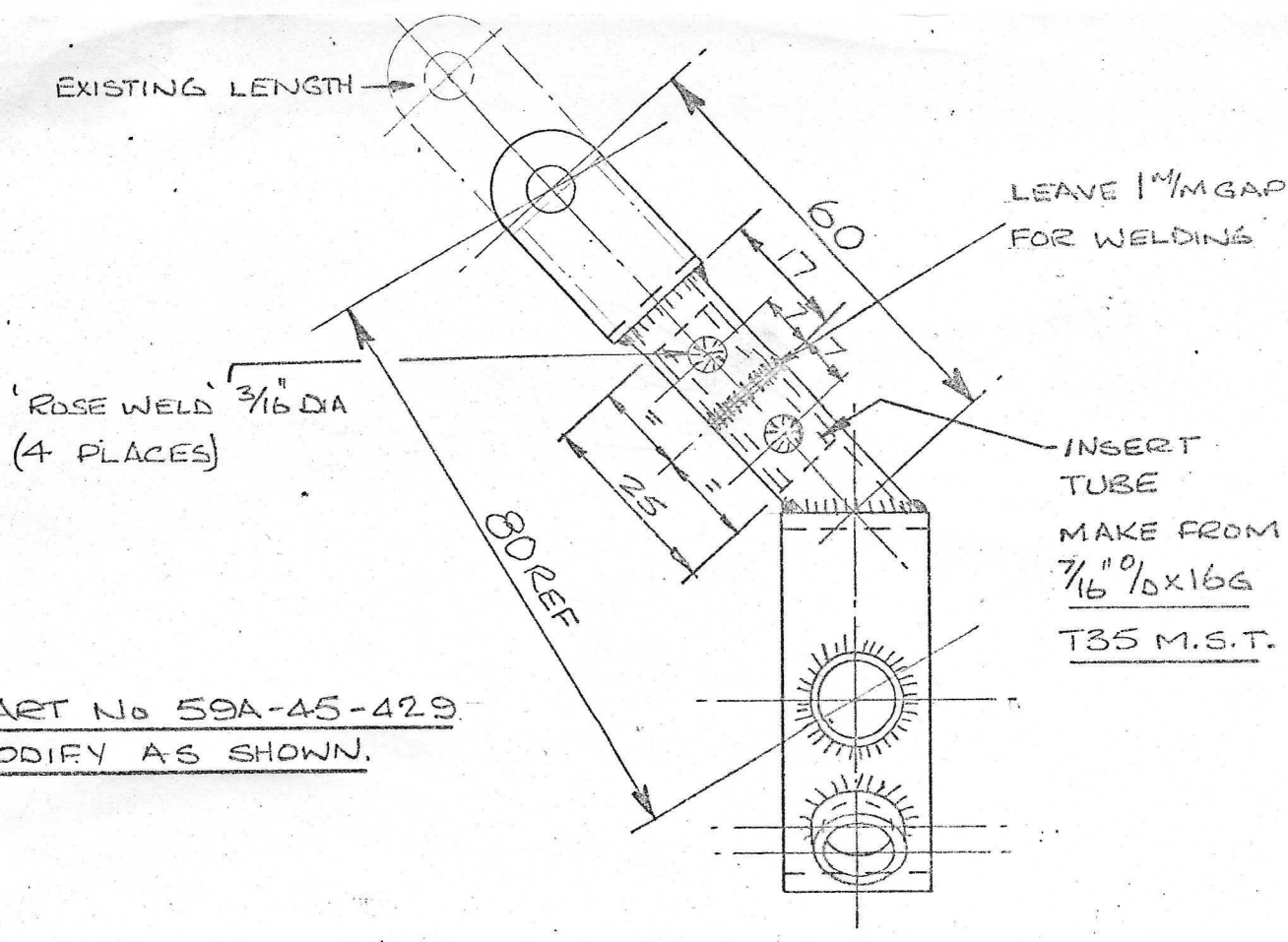
Reduction Of Rudder Pedal Gearing

This modification is optional and is designed to give smaller rudder pedal movement, improving the feel of the aircraft. This modification may be embodied on all marks of the aircraft and involves the fitting of a modified rudder actuator lever.

Procedure

1. Remove the rudder from the aircraft as in sheet A2.2 of the Kestrel Handbook (Copy attached to this Instruction).
2. Disconnect the push rod from the rudder actuator.
3. Remove the actuator from the fin by first removing the transverse bolt through the rudder hinge noting the positions of the various washers on the bolt.
4. Remove the 'Y' fitting from the actuator.
5. Reassemble the rudder actuator and refit it to the aircraft incorporating the modified lever arm as shown in fig.1. or using the new lever part no. T.59A-45-443.

Fig.1.



6. It is now necessary to grind the fibreglass in two places to allow 1/16" clearance around the rear push rod as it passes through the fin root rib and over the base of the hinge. This is done by a trial and error method taking care to check the clearance at all extremes of movement and also taking care not to remove more material than is necessary, or damage any surrounding details.
7. To reset the rudder control set the rear push rod ends until it is just in safety, set the rudder in neutral and the rudder pedals in neutral. Now adjust the push rod end just behind the canopy back frame where the rudder push rod joins the rudder bar. Lock both rod ends and check that they are still in safety.
8. Refit the rudder and finally check the rudder movement.

REMOVAL OF RUDDER

## Sequence of operations:-

1. With someone supporting the tail parachute box to avoid damage, operate the parachute release control in the cockpit. The box will now be only attached to the aircraft by the jettison cable.
2. Operate the parachute jettison control and remove the parachute box from the aircraft, stowing carefully to avoid damage to the parachute.
3. The jettison mechanism must now be disconnected. This is visible on the undersurface of the rudder. Proceed as follows:-

Using a metal bar to prevent damage to one's hands, press the jettison bolt against spring pressure back into the rudder, allowing the  $\frac{1}{8}$ " dia. retaining pin to spring back to its normal locked position.
4. Remove the bolt attaching the  $\frac{1}{8}$ " dia. retaining pin to the front of the rudder thus allowing the release cable to come free.
5. See Fig. 5 at rear of Pilots Notes.  
Remove white plastic patches from each side of rudder in way of rudder attachment.
6. Remove bolt holding collar onto actuating tube in hole exposed in (5) above.
7. Gently pull the rudder aft releasing the rudder from the actuator.
8. Pull the rudder downwards, releasing the pin from the top rudder hinge. The rudder is now free.