

TECHNICAL BULLETIN

Ref Document No.	TB15008	Issue No.	1
Subject	Throttle Pedal Spring		
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Purpose – Advise COALTRAM® owners/operators of a change to the torsion spring used to return the throttle pedal to idle.

Applicability – All in service COALTRAM® models CT08, CT10, CT10LP and CT13.

Background

During March 2015, PPK replaced the throttle pedals in all Coaltrams after documented issues with uninitiated engine revving caused by the throttle pedal sensor. PPK has recently been receiving throttle pedals for repair that have had the pedal torsion spring broken.

The Coaltram service sheets currently recommend replacing the spring at 1,000 hours, however, some of the pedals returned with failed springs have not reached this milestone.

Investigations/Findings

A new spring has been designed and cycle tested to replace the existing spring. The cycle testing of the new torsion spring has demonstrated a lifecycle of more than 80 times that of the existing spring without failure.

If a throttle spring fails, the pedal can drop under gravity causing unintended engine revs.

The new springs are manufactured from a spring material with increased strength, has an increased coil diameter and increased number of coils to manage the stresses induced. The new springs are zinc plated for corrosion resistance and then painted red for initial identification purposes. As it is a spring the paint will crack and peel off over time. Other identifying features of the new spring are shown in the figures below and are; 3 coils instead of 2 and a larger diameter of coil. The coils of the new spring are set at a pitch to allow the plating to cover all areas of the spring.



Figure 1: Old spring with 2 full coils (3 visible strands)



Figure 2: New spring with 3 coils (4 visible strands)



Figure 3: Old spring - small diameter coil (does not extend out to edge of pedal)



Figure 4: New spring larger coil diameter (almost lines up with edge of pedal)

Recommendations

PPK recommends:

1. Visually inspecting throttle pedal springs for cracks and breakage as part of the daily statutory checks until the original spring has been replaced. It is typical during failures that one side of the torsion spring will fail first, leaving the throttle pedal operational whilst the other side is still intact.
2. Coaltram owners put a replacement program in place to change out all throttle pedal springs across their fleet. Existing throttle pedals are compatible with the

new replacement spring, however, the pedal assembly requires returning to PPK for the replacement as the sensor requires recalibration upon reassembly. PPK has service exchange pedals available for \$582.

3. With the successful cycle testing of the newly designed torsion spring the recommendation to replace the spring after 1,000 hours of service is revoked once the new spring is installed. The new recommendations are as below:
 - 1,000 and 2,000 hour service – Visually inspect the throttle pedal torsion spring for evidence of corrosion, pitting, damage or cracking. If evident, return pedal assembly to PPK for torsion spring replacement.
 - 4,000 and 8,000 hour service – Unbolt pedal assembly from floor plate, clean and inspect throttle pedal torsion spring for evidence of corrosion, pitting, damage or cracking. If evident, return pedal assembly to PPK for torsion spring replacement.

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