



Louis Schreiner Field
Kerrville, Texas 78028

THIS BULLETIN IS FAA APPROVED FOR ENGINEERING DESIGN

SERVICE BULLETIN M20-284

Date: September, 2004

SUBJECT: ELEVATOR TRIM WHEEL SPROCKET STAKING FOR ROLL PIN RETENTION

MODELS/ S/N AFFECTED: M20M: 27-0280 THRU 27-0317, 27-0320 THRU 27-0325, 27-0327; M20R: 29-0200 THRU 29-0332; M20S: 30-0040 THRU 30-0065.

TIME OF COMPLIANCE: AT NEXT MAINTENANCE ACTION

INTRODUCTION: IN APRIL, 2000 AN EO WAS ISSUED FOR MOONEY PRODUCTION TO APPLY POSITIVE SECURITY FOR THE TWO ROLL PINS SECURING THE MANUAL TRIM WHEEL SPROCKETS TO THE UPPER AND LOWER DRIVE SHAFTS BY INSERTING MS20995C41 SAFETY WIRE THROUGH THE CENTER OF THE ROLL PINS, LOOP WIRE AROUND HUB, AND TWIST ENDS TO FORM A PIGTAIL OF 3-5 TWISTS. ANY TWISTS IN EXCESS OF 3-5 TWISTS SHOULD BE CUT OFF AND THE REMAINING PIGTAIL BENT IN TOWARDS THE HUB TO PREVENT ANY INTERFERENCE DURING TRIM OPERATION, EITHER MANUALLY OR ELECTRICALLY. THERE HAS BEEN ONE INCIDENT OF AN IMPROPER PIGTAIL, LONGER THAN 3-5 TWISTS, CAUSING BINDING DURING NORMAL TRIM OPERATIONS. TO PREVENT THIS POSSIBLE INTERFERENCE, A DIFFERENT METHOD OF SECURING THE ROLL PINS IS NECESSARY.

INSTRUCTIONS:

1. REMOVE FLOORBOARD, CENTER COVER TO GAIN ACCESS TO UPPER TRIM WHEEL SPROCKET.
2. REMOVE APPROPRIATE BELLY SKIN TO GAIN ACCESS TO LOWER TRIM WHEEL SPROCKET.
3. CHECK BOTH TRIM WHEEL SPROCKETS TO SEE IF THERE IS SAFETY WIRE INSERTED THROUGH THE CENTER OF EITHER ROLL PIN ON THE UPPER WHEEL/SHAFT OR LOWER SPROCKET/SHAFT INSTALLATION. IF NO SAFETY WIRE IS FOUND OR HOLES ARE NOT STAKED, GO TO STEP 5.
4. IF EITHER OR BOTH HAVE SAFETY WIRE, CUT SAFETY WIRE AND REMOVE COMPLETELY FROM AIRCRAFT.
5. STAKE THE EDGE OF BOTH HOLES, IN TWO PLACES, 180° APART, ON BOTH SPROCKETS, WITH A SHARP CENTER PUNCH ON THE STEEL SPROCKET.
6. PUNCH MARK IS TO BE WITHIN .020 IN. OF EDGE OF HOLE AND .020 TO .030 IN. DEEP. ENSURE THAT EACH HOLE'S EDGE, STAKED AREA WILL STOP THE ROLL PIN FROM MIGRATING OUT OF THE HOLE.
7. RUN TRIM SYSTEM ELECTRICALLY TO VERIFY NORMAL OPERATION.
8. RUN TRIM WHEEL MANUALLY TO VERIFY THAT THERE IS NO SLACK AT EITHER SPROCKET/SHAFT CONNECTION.
9. COMPLETE LOG BOOK ENTRY. RETURN AIRCRAFT TO SERVICE.

WARRANTY: WARRANTY FOR LABOR UP TO 1.0 HOUR WILL BE CREDITED TO THE OWNER IF AIRCRAFT IS WITHIN THE INITIAL, STANDARD WARRANTY TIME FRAME.

REFERENCE DATA: N/A

PARTS LIST: N/A

FIGURE/TABLES: N/A