

# COMANCHE LANDING GEAR RETRACTION SYSTEM. MAIN LANDING GEAR PUSH-PULL CABLES.

## PREFACE AND COMMENTARY

FIRST ALLOW ME TO THANK YOU FOR PURCHASING THIS MANUAL. **ALSO I THANK THE INSTALLER[S] FOR TAKING THE TIME TO READ AND UNDERSTAND THIS MANUAL WHICH WILL BENEFIT THE INSTALLATION WITH MULTIPLE TIME SAVINGS; THAT'S WHY YOU BOUGHT IT.** I GUARANTEE THIS MANUAL WILL SAVE YOU TIME, FRUSTRATION, AND WILL LEAD YOU DOWN THE RIGHT PATH; UNLIKE THE COMANCHE SERVICE MANUALS' R&R PROCEDURE. IF YOU DON'T READ THIS MANUAL IN ITS ENTIRETY THEN YOU ARE SHORTING YOURSELF. BE PATIENT, IT LOOKS LIKE A LOT OF STUFF; YOU'LL SEE IT ISN'T SO BAD AFTER ALL IS DONE. WITH PREVIOUS EXPERIENCE THIS IS A 2-DAY PROCEDURE IF YOU ARE PREPARED; OTHERWISE A STEEPER LEARNING CURVE.

I MAKE REFERENCE TO SECTIONS IN THE SINGLE AND TWIN PIPER COMANCHE SERVICE MANUALS; SINGLES [USED MOSTLY AS REFERENCE IN THESE INSTRUCTIONS] SEE SECTION 6, AND TWINS SEE SECTION 7. SOME OF THESE NOTES DIFFER WITH THE MANUAL FOR YOUR AIRCRAFT TYPE, THESE COME FROM EXPERIENCE. THE COMANCHE SERVICE MANUALS ARE TOO VAGUE; THIS MANUAL LEADS YOU THROUGH THE FINER POINTS. AFTER YOU HAVE PERFORMED AN INSTALLATION IF YOU GO BACK AND READ THE SM PROCEDURE YOU MAY LIKewise JUDGE IT CUMBERSOME; IN SOME AREAS IT JUST DOESN'T MAKE SENSE TO DO IT THE WAY THE SM OUTLINES. THIS MANUAL OFFERS A FAR BETTER AND MORE DETAILED METHOD; HOWEVER IT DOES NOT OFFER **SPECIFICATIONS** DIFFERING FROM THE SERVICE MANUALS.

THE FOLLOWING HIGHLIGHT CONVENTION IS USED IN THIS MANUAL TO ILLUSTRATE A **TIME-SAVER HINT**. USE YOUR [SUPPLIED] *Comanche Gear* HIGH-LIGHT PEN TO MARK ANY AREAS YOU LIKE FOR REFERENCE WHICH WILL ALSO MAKE THIS EFFORT EASIER FOR YOU.

## INITIAL CONSIDERATIONS

- ✱ REMOVING THE DOOR HOLDER AND EXTENDING THE DOOR FORWARD [THIS WORKS FOR THE SINGLES ONLY] MAKES THE JOB JUST A BIT EASIER BECAUSE YOU WILL BE USING THE RIGHT WING AS A "DEPOSITORY" FOR TOOLS, PARTS, AND THIS REFERENCE; WITH THE DOOR OUT OF THE WAY THINGS ARE JUST MORE EFFICIENT. DON'T LET THE DOOR RETAINER SCRATCH THE PAINT. KEEP THE AREA AROUND THE RIGHT WING TIP CLEAR; YOU WILL BE MAKING MANY TRIPS WALKING AROUND THE RIGHT WING.
- ✱ REMOVE THE FRONT SEATS, INBOARD SEAT BELTS, CARPET, AND INBOARD SEAT TRACKS [REMOVE ALL 4 SEAT TRACKS IF THEY ARE ON TOP OF THE CARPET]. THE REAR BENCH-TYPE SEAT SHOULD EITHER BE REMOVED OR MOVED INTO THE BAGGAGE AREA.
- ✱ MODELS WITH INDIVIDUAL REAR SEATS; THEY WILL NEED TO BE REMOVED. THE PANS BELOW THE SEATS NEED TO BE REMOVED ALSO. REMOVING THESE PANS CAN BE A BIT OF A CHALLENGE IF ALL THE SECURING SCREWS ARE STILL INSTALLED [AS THEY SHOULD BE]; SOME WILL BE HIDDEN BY THE SIDE PANELS AT THE OUTBOARD EDGES. THERE ARE SHARP CORNERS IN THE SEAT BRACING AFT OF THE MAIN SPAR [INDIVIDUAL SEAT MODELS]; TRIM AND FILE THESE CORNERS TO AVOID BLEEDING – PHOTO PAGE 23.
- ✱ THE CENTER FLOOR PANELS NEED TO BE REMOVED FROM THE WHEEL WELL BACK TO THE SPAR; THE SPAR KICK-PLATE AND THE LEFT AND RIGHT SIDE FLOOR PANELS STAY IN PLACE. A GOOD IDEA HERE IS TO ANTICIPATE A COUPLE THINGS. THESE FLOOR PANELS WEREN'T DESIGNED TO BE USED AS A DANCE FLOOR; YOU CAN DAMAGE THE THIN PANELS AND POSSIBLY THEIR SUPPORTS. CUT A THIN [1/4" MAXIMUM] APPROPRIATELY-SIZED PLYWOOD PANEL AND USE TO PROTECT THE FLOORING, AND GET SOMETHING PADDING TOO, YOU WILL BE ON YOUR KNEES A LOT. WHEN YOU STEP INTO THE AIRPLANE, AIM FOR THE PLYWOOD PANEL OR ADEQUATE SUPPORT STRUCTURE – PHOTO PAGE 23. MAKE HOLES FOR THE FUEL SELECTOR[S] AND THE SEAT BELT ANCHORS.
- ✱ AFTER THE INTERIOR REMOVAL PHASE HAS BEEN COMPLETED, PLACE THE AIRPLANE ON JACKS AS OUTLINED IN THE COMANCHE SERVICE MANUAL SECTION APPROPRIATE FOR YOUR TYPE; DO NOT FAIL TO TIE THE TAIL TO AN ADEQUATE WEIGHT. RAISE THE AIRPLANE ENOUGH TO CLEAR THE TIRES BY ABOUT 2"; THIS MAKES ENOUGH CLEARANCE UNDERNEATH TO MANEUVER IN THE WHEEL WELLS [MAYBE A BIT MORE FOR A REALLY TALL TECHNICIAN]. DON'T TIE THE TAIL SO SHORT AS TO MAKE A TOO NOSE-HIGH ATTITUDE.