## FLIGHT CONTROLS - GENERAL

## 1. Scope

A. This chapter provides maintenance of components which furnish a means of manually controlling the flight attitude characteristics of the airplane, including flaps and spoilers.

## 2. Tools, Equipment and Materials

NOTE: Equivalent substitutes may be used for the following items:

NAME	NUMBER	MANUFACTURER	USE
Digital Inclinometer	PRO 360	Kell-Strom Tool Co. Inc. 214 Church Street Wethersfield, CT 06109	To measure angle of control surface deflection.
Rig Pin Tool		Locally fabricate (NOTE 1)	To secure control surfaces in a fixed position.
Elevator Rigging Protractor		Locally fabricate (NOTE 1)	To measure angle of elevator.
Rudder Rigging Protractor		Locally fabricate (NOTE 1)	To measure angle of rudder.
Elevator Neutral Rigging Tool	SE1511	Cessna Aircraft Company Cessna Parts Distribution Department 701, CPD 2 5800 East Pawnee Road Wichita, KS 67218-5590 P.O. Box 7704 Wichita, KS 67277-7704	To rig elevator.
Tensiometer	T52002101	Pacific Scientific Electro Kinetics Div. 402 E. Guitierrez St. Santa Barbara, CA 93102	To measure and obtain cable tension.
Hunter Spring Gage	Type L-30	Ametek U.S. Gauge 900 Clymer Ave. Sellersville, PA 18960	To measure friction forces.
Dial Indicator (0 to 1.00 inch)		Commercially Available	To check trim tab free play.
Grease	B100-24	Commercial Aircraft Products Inc. 2633 West Pawnee Wichita, KS 67213	To lubricate flap actuator.
Molykote Bonded Lubricant Spray	DC 321R	Cessna Aircraft Company	To lubricate aileron trim system cables.
Light Consistency Silicone Grease	5565450-28	Cessna Aircraft Company	To lubricate aileron trim tab actuator components.
Iridate	Type 14-2 Powder	Witco Allied-Kelite Div. of Witco Chemical Corp. 400 Midland Avenue Highland Park, MI 48203	To finish elevator trim tab actuator housing.
Non-Chromated Primer	Type I-P, E9191	Sterling Lacquer Mfg. 3150 Brannon Ave St. Louis, MO 63139	To prime elevator trim tab actuator housing.

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Vivid Orange	Sherwin-Williams Number 17H54958 335-566	Commercially available	To paint elevator trim tab actuator
Vesatal White Lacquer	Sherwin-Williams Number 27H511	Commercially available	To paint elevator trim tab actuator
Flap Switch Actuator Rigging Fixture		Locally fabricate	To check flap switch actuation.

NOTE 1: Refer to Figure 1 for fabrication details.

## 3. Definition

- A. This chapter is divided into sections and subsections to assist maintenance personnel in locating specific systems and information. The following is a brief description of each section. For locating information within the chapter, refer to the Table of Contents at the beginning of the chapter.
  - (1) The aileron section provides information on control wheels, cables, linkage and aileron assemblies.
  - (2) The rudder section provides information on rudder pedals, cables, linkage and rudder assembly.
  - (3) The elevator section provides information on control column, cables, linkage and elevator assemblies.
  - (4) The stall warning section provides information on mechanical and electrical components used in the stall warning system.
  - (5) The flap section provides information on the flap actuator, cables, linkage, and the flap assemblies.
  - (6) The rudder gust lock section provides information on components used in the gust lock system.

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A22507 0.09 INCH **RADIUS** 3.00 INCHES (TYPICAL) 1.00 INCH **AILERON** 0.50 INCH **RIGGING PIN RADIUS** MATERIAL: 0.188 INCH COLD ROLLED BAR 4130 STEEL FINISH: **CADMIUM PLATE** SCRIBE LINE (TYPICAL) 2.25 0.50 INCH **INCHES** (TYPICAL) 3° 08' 25° +2° OR -2° 14.75 4° 37 **INCHES RADIUS** 2.49 1.91 20° +2° OR -2° **3.49 INCHES INCHES INCHES** 18.21 INCHES **CENTER** LINE SPAR 20.70 INCHES **CENTER** LINE SPAR **ELEVATOR RIGGING PROTRACTOR** 2624T1001 26241002

Figure 1: Sheet 1: Rigging Tools Fabrication

A22508 SCRIBE LINE (TYPICAL) 2.25 **INCHES** 0.50 INCH -(TYPICAL) 25° +2° OR -2° 2° 53' 4° 12' 19.50 INCHES **RADIUS** 25° +2° OR -2° 2.40 3.16 4.15 INCHES **INCHES INCHES** 22.94 INCHES **CENTER** LINE SPAR 25.07 INCHES **CENTER** LINE SPAR RUDDER RIGGING PROTRACTOR (ONLY USED ON ALL 208 SERIES LAND PLANES WITH THE STANDARD OR OPTIONAL LONG CHORD RUDDER) SCRIBE LINE (TYPICAL) 2.25 **INCHES** 0.50 INCH -(TYPICAL) 23° +2° OR -2° 53' 4° 12' 25.55 15° **INCHES RADIUS** 23° +2° OR -2° 2.40 3.16 4.15 INCHES **INCHES INCHES** 22.94 INCHES **CENTER** LINE SPAR 25.07 INCHES **CENTER** LINE SPAR RUDDER RIGGING PROTRACTOR (FLOAT PLANE) 2624T1001 26241002

Figure 1: Sheet 2: Rigging Tools Fabrication

A22509 0.50 INCH NOTE: FABRICATE NEUTRAL RIGGING TOOL FROM 0.125 INCH STEEL PLATE AND, 0.188 INCH AND 0.125 0.209 INCH DIAMETER DRILL 0.209 INCH INCH **RODS ACCORDING TO DIAMETER** DIMENSIONS SHOWN. 2.25 **INCH** 0.188 INCH **DIAMETER** -1.50 INCHES -0.18 0.35 RADIUS **INCH** (TYPICAL) **ELEVATOR NEUTRAL RIGGING TOOL RUDDER OR ELEVATOR** RIGGING PROTRACTOR **RUDDER OR VERTICAL OR ELEVATOR** HORIZONTAL STABILIZER 2624C1003 2624C1004

Figure 1: Sheet 3: Rigging Tools Fabrication