
Service Bulletin

March 10, 1995

SEB95-3

TITLE

FLAP SUPPORT INSPECTION AND ROLLER WASHER INSTALLATION

EFFECTIVITY

<u>Model Series</u>	<u>Year</u>	<u>Serial Numbers</u>
150	1959 thru 1960	17001 thru 17999
150	1960	59001 thru 59018
150	1961 thru 1967	15059019 thru 15064969
150	1967 thru 1977	15064971 thru 15079405
150		617, 628, 644, 649
A150	1970 thru 1974	A1500001 thru A1500432
A150	1975	15064970
A150	1974 thru 1977	A1500434 thru A1500734
A-150	1972 thru 1973	A-1501001 thru A-1501039
A-A150	1972 thru 1973	A-A1500001 thru A-A1500009
F150	1966 thru 1969	F150-0001 thru F150-0529
F150	1970 thru 1977	F15000530 thru F15001428
FA150	1970 thru 1971	FA1500001 thru FA1500120
FRA150	1972 thru 1977	FRA1500121 thru FRA1500336
152	1978 thru 1985	15279406 thru 15286033
A152	1978	A1500433
A152	1978 thru 1985	A1520735 thru A1521049
A152		681
F152	1978 thru 1986	F15201429 thru F15201980
FA152	1978 thru 1986	FA1520337 thru FA1520425
170	1952	19401
170	1952 thru 1956	20267 thru 27169
170		609
172	1956 thru 1960	28000 thru 47746
172 (T41A)	1965 thru 1969	17251947 thru 17259015
172	1961 thru 1986	17247747 thru 17276654
172		610, 612, 615, 622, 625, 630, 638, 639
172RG	1980 thru 1985	172RG0001 thru 172RG1191
172RG		691
F172	1963 thru 1969	F172-0001 thru F172-0654
F172	1970 thru 1986	F17200655 thru F17202254

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To obtain satisfactory results, procedures specified in this publication must be accomplished in accordance with accepted methods and prevailing government regulations. The Cessna Aircraft Company cannot be responsible for the quality of work performed in accomplishing the requirements of this publication.

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<u>Model Series</u>	<u>Year</u>	<u>Serial Numbers</u>
R172 (T41B)	1967	R172-0001 thru R172-0255
R172 (T41C)	1968	R172-0257 thru R172-0301
R172 (T41C)	1969	R1720426 thru R1720432
R172 (T41D)	1968 thru 1969	R172-0302 thru R172-0409
R172 (T41D)	1970	R1720410 thru R1720425
R172 (T41D)	1970 thru 1976	R1720433 thru R1720620
R172		P17257189
R172	1977 thru 1981	R1722000 thru R1723454
FR172	1968 thru 1981	FR17200001 thru FR17200675
P172	1963	P17257120 thru P17257188
FP172	1963	FP172-0001 thru FP172-0003
175	1958 thru 1960	55001 thru 56777
175	1961 thru 1962	17556778 thru 17557119
175		28700A, 619
180	1953 thru 1960	30000 thru 50911
180	1961 thru 1981	18050912 thru 18053203
180		604, 614, 624, 645
182	1956 thru 1960	33000 thru 53007
182/T182	1961 thru 1986	18253008 thru 18268586
182//T182		613, 631, 634, 675
A182	1966 thru 1976	A182-0001 thru A182-0148
F182	1976 thru 1980	F18200001 thru F18200169
R182/TR182	1978 thru 1986	R18200001 thru R18202039
FR182	1978 thru 1980	FR18200001 thru FR18200070
185	1961 thru 1969	185-0001 thru 185-1599
185	1970 thru 1985	18501600 thru 18504448
185		632, 652
A-A188	1972 thru 1976	A-A1880001 thru A-A1880034
188/A188	1966 thru 1969	188-0001 thru 188-0572
188/A188	1970 thru 1983	18800573 thru 18803873
188/A188		653, 678T
A188	1972 thru 1983	18800967T thru 18803973T
T188	1979 thru 1983	T18803307T thru T18803974T
210-5 (205)	1963 thru 1964	205-0001 thru 205-0577
210-5 (205)		641
206	1964	206-0001 thru 206-0275
P206/TP206	1965 thru 1969	P206-0001 thru P206-0603
P206/TP206	1970	P20600604 thru P20600647
U206/TU206	1965 thru 1969	U206-0276 thru U206-1444
U206/TU206	1970 thru 1986	U20601445 thru U20607020
U206/TU206		676
207/T207	1969 thru 1984	20700001 thru 20700788
210	1960	57001 thru 57575
210	1961 thru 1963	21057576 thru 21058139
210	1961 thru 1963	21058141 thru 21058220
210		616, 618

PURPOSE

Service experience indicates the potential for wearing of the flap supports by the flap rollers. To assist in preventing this condition from occurring, an inspection of the flap supports and rollers along with a modification to install stainless steel washers on each side of the forward rollers shall be accomplished. Failure to accomplish this inspection and modification could result in damage to the flap supports and/or loss of flap control.

COMPLIANCE

Recommended; should be accomplished within the next 100 hours of operation or 12 months, whichever occurs first.

APPROVAL

FAA approval has been obtained on technical data in this publication that affects airplane type design.

For Reims Aviation airplanes, DGAC approval has been obtained on technical data in this publication that affects airplane type design.

MAN-HOURS

Approximately 0.7 man-hours per flap to inspect and install the stainless steel washers.

Approximately 4.0 man-hours to install SK180-44 at one flap attach station.

MATERIAL

The following parts are available from Cessna Parts Distribution thru an appropriate Cessna Service Station for the suggested list price shown.

<u>Part Number</u>	<u>Description</u>	<u>Qty./Flap Attach Station</u>	<u>Price</u>
AN3-11A	Bolt	1	\$ 0.23 (PS) ea.
MS21044N3	Nut	2	\$ 0.15 (PS) ea. MQ25
S1450-3S10-032	Washer	2	\$ 2.17 (S) ea.
SK180-44-1 (See Note 1)	Flap Support Rib Assembly And Roller Bearing Replacement Kit	1 (If Required)	\$ 59.00 (A) ea.
SK180-44-2 (See Note 2)	Left Flap Outboard Support Riders Replacement Kit	1 (If Required)	\$ 171.00 (A) ea.
SK180-44-3 (See Note 3)	Right Flap Outboard Support Riders Replacement Kit	1 (If Required)	\$ 171.00 (A) ea.
0523919 (See Note 4)	Bushing	1 (If Required)	\$ 5.41 (S) ea.
0523920 (See Note 4)	Roller Assembly	1 (If Required)	\$ 24.00 (S) ea.
0523921 (See Note 4)	Roller Assembly	1 (If Required)	\$ 22.80 (S) ea.
S1450-5N12-050 (See Note 4)	Spacer	2 (If Required)	\$ 2.99 (S) ea.
1220114-1 (See Note 4)	Spacer	2 (If Required)	\$ 4.17 (S) ea.
1220114-2 (See Note 4)	Spacer	1 (If Required)	\$ 1.59 (S) ea.

NOTE 1: This service kit will be required if the inspection reveals non-repairable damage to the flap supports. Each SK180-44-1 contains replacement left and right flap supports for one flap attach location, attaching hardware and the hardware required to accomplish the initial modification of installing the S1450-3S10-032 washers. This service kit is applicable for all flap attach stations except the outboard flap attach station for airplanes that are equipped with extended length flaps that have three flap attach stations.

NOTE 2: This service kit will be required if the inspection reveals non-repairable damage to the left flap outboard attach station for airplanes equipped with extended length flaps that have three flap attach stations. Each SK180-44-2 contains replacement inboard and outboard flap rider assemblies, attaching hardware and the hardware required to accomplish the initial modification of installing the S1450-3S10-032 washers.

NOTE 3: This service kit will be required if the inspection reveals non-repairable damage to the right flap outboard attach station for airplanes equipped with extended length flaps that have three flap attach stations. Each SK180-44-3 contains replacement inboard and outboard flap rider assemblies, attaching hardware and the hardware required to accomplish the initial modification of installing the S1450-3S10-032 washers.

NOTE 4: Refer to the appropriate Illustrated Parts Catalog to determine part applicability.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

ACCOMPLISHMENT INSTRUCTIONS

Flap Support And Roller Bearing Inspection/Flap Roller Washer Installation Accomplishment Instructions and Service Kit SK180-44, Flap Support And Flap Roller Washer Installation instructions are attached.

CREDIT

Not applicable.

OWNER NOTIFICATION

On March 24, 1995, the following Owner Advisory message will be sent to applicable owners of record in SEB95-3A.

Dear Cessna Owner,

Service experience indicates the potential for wearing of the flap supports by the flap rollers. To assist in preventing this condition from occurring, an inspection of the flap supports and rollers along with a modification to install stainless steel washers on each side of the forward rollers shall be accomplished. Failure to accomplish this inspection and modification could result in damage to the flap supports and/or loss of flap control.

Compliance is recommended; should be accomplished within the next 100 hours of operation or 12 months, whichever occurs first.

Please contact a Cessna Single Engine Service Station for detailed information regarding the accomplishment of this service bulletin on your airplane.

* * * * *

TITLE FLAP SUPPORT AND ROLLER BEARING INSPECTION/FLAP ROLLER WASHER
INSTALLATION

EFFECTIVITY

MODEL(S)	SERIAL NUMBERS
150	617, 628, 644, 649, 17001 thru 15064969 15064971 thru 15079405
A150	A1500001 thru A1500432
A150	A1500434 thru A1500734
A150	15064970
A-150	A-1501001 thru A-1501039
A-A150	A-A1500001 thru A-A1500009
F150	F150-0001 thru F15001428
FA150	FA1500001 thru FA1500120
FRA152	FRA1500121 thru FRA1500336
152	15279406 thru 15286033
A152	681, A1520735 thru A1521049
A152	A1500433
F152	F15201429 thru F15201980
FA152	FA1520337 thru FA1520425
170	609, 19401, 20267 thru 27169
172	610, 612, 615, 622, 625, 630, 639, 638, 28000 thru 17276654
F172	F172-0001 thru F17202254
R172	R1722000 thru R1723454
R172	P17257189
FR172	FR17200001 thru FR17200675
172RG	691, 172RG0001 thru 172RG1191
P172	P17257120 thru P17257188
FP172	FP172-0001 thru FP172-0003
R172 (T41B/C/D)	R172-0001 thru R172-0409
R172 (T41D)	R1720410 thru R1720620
175	28700A, 55001 thru 17557119, 619
180	604, 614, 624, 645, 30000 thru 18053203
182/T182	613, 631, 634, 675, 33000 thru 18268586
A182	A182-0001 thru A182-0148
R182/TR182	R18200001 thru R18202039
F182	F18200001 thru F18200169
FR182	FR18200001 thru FR18200070
185	632, 652, 185-0001 thru 18504448
188/A188	653, 188-0001 thru 188-0572
188/A188	18800573 thru 18800832
188	18800833 thru 18802348
A188	678T, 18800833 thru 18803973
A188	18800967T thru 18803973T
T188	T18803307T thru T18803974T
A-A188	A-A1880001 thru A-A1880034

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To obtain satisfactory results, procedures specified in this publication must be accomplished in accordance with accepted methods and prevailing government regulations. The Cessna Aircraft Company cannot be responsible for the quality of work performed in accomplishing the requirements of this publication.

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ACCOMPLISHMENT INSTRUCTIONS

SEB95-3

EFFECTIVITY (Continued)

MODEL(S)	SERIAL NUMBERS
210-5 (205)	641, 205-0001 thru 205-0480
210-5A (205A)	205-0481 thru 205-0577
206/U206	206-0001 thru 206-0275
U206/TU206	676, U206-0276 thru U20607020
P206/TP206	P206-0001 thru P20600647
207/T207	20700001 thru 20700788
210	616, 618, 57001 thru 21058139
210	21058141 thru 21058220

DESCRIPTION

This document provides instructions to inspect the flap supports for damage such as wear, gouges and cracks.

APPROVAL

FAA approval has been obtained on technical data in this publication that affects airplane type design.

For Reims Aviation airplanes: DGAC approval has been obtained on technical data in this publication that affects airplane type design.

REFERENCE

SEB95-3

CHANGE IN WEIGHT AND BALANCE

WEIGHT INCREASE Negligible.

ACCOMPLISHMENT INSTRUCTIONS

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MATERIAL INFORMATION

NOTE: The following components will be required to complete this inspection procedure. *Quantities are for each affected flap attach station:*

PART NUMBER	QUANTITY	DESCRIPTION
AN3-11A	1	Bolt-Forward
MS21044N3	2	Nut
S1450-3S10-032	2	Washer

NOTE: The following kit may be required if the inspection reveals damage to the flap support arm assembly. This kit is not to be installed at the outboard flap attach station for airplanes equipped with extended length flaps (three attach stations). *Quantities are for each affected flap station:*

PART NUMBER	QUANTITY	DESCRIPTION
SK180-44-1	1	Kit, Flap Support and Flap Roller Washer Installation

NOTE: The following parts may be required if the inspection reveals wear or damage to the flap attaching parts, rollers or bushings. Refer to the applicable airplane Illustrated Parts Catalog for part applicability, quantity required and location of installation.

PART NUMBER	QUANTITY	DESCRIPTION
0523919	1	Bushing
0523920	1	Roller Assembly
0523921	1	Roller assembly
S1450-5N12-050	2	Spacer
1220114-1	1	Spacer
1220114-2	1	Spacer

NOTE: The following kits may also be required if the inspection reveals wear or damage to the flap outboard support riders for airplanes with extended length flaps:

PART NUMBER	QUANTITY	DESCRIPTION
SK180-44-2	1	Kit, Left Flap Outboard Support Riders Replacement
SK180-44-3	1	Kit, Right Flap Outboard Support Riders Replacement

ACCOMPLISHMENT INSTRUCTIONS

1. Attach maintenance warning tags to the cockpit controls within clear view stating:

WARNING: MAINTENANCE IN PROGRESS

2. Fully extend the wing flaps.
3. Remove the flaps from the airplane. (Refer to the appropriate airplane Service Manual.) Retain washers, bearings, rollers and aft bolt. Discard forward bolt, aft and forward nut.

ACCOMPLISHMENT INSTRUCTIONS

SEB95-3

4. (Refer to Figure 1, Sheet 4 View A-A, View B-B, and View C-C and Sheet 5 View E-E.) Use a rag damp with Stoddard solvent (or equivalent) and a nonmetallic abrasive pad such as Scotch Brite, clean the flap support arms.

NOTE: Complete one flap attach station at a time before moving on to the next.

5. (Refer to Figure 1, Sheet 6, Detail Y.) Using a dye penetrant, inspect each flap support arm or rider at the forward and aft roller assembly mounting points for grooves and/or cracks.

NOTE: Circular grooves may have developed from the roller assembly rubbing on the flap support arm or rider. If this condition is present, use an optical or mechanical depth micrometer and measure the depth of the grooves.

CAUTION: DO NOT USE POWERED GRINDING DISC OR HAND FILE FOR BLENDING GROOVES. USE CARE WHEN BLENDING GROOVES NOT TO EXCEED 0.020 INCH TOTAL MATERIAL REMOVED.

- A. If no cracks are present and if any grooves are present, use 400 grit Emory cloth and blend out the grooves using care not to remove excessive material; blending to remove grooves shall not exceed the maximum depth of 0.020 inch.

NOTE: Maximum wear and clean-up shall not exceed 0.020 inch material loss. If cracks are present or grooves exceeds a 0.020 inch depth, replace the flap support arms by installing one SK180-44-1 per affected flap station. For airplanes equipped with extended length flaps (refer to Figure 1, Sheet 3) at the outboard flap attach station, install SK180-44-2 or SK180-44-3 as required.

- B. Apply primer to bare metal and allow one hour to cure. Paint the area to match the flap if desired.

6. (Refer to Figure 1, Sheet 4, View D-D and Sheet 5, View F-F.) Reassemble and install the roller and roller bushing, at both the forward and aft locations, on the flap tracks.

NOTE: Before reinstallation of the flaps, inspect the existing attaching parts in all attach locations for wear or damage. If the hardware is worn or damaged, refer to the appropriate airplane Illustrated Parts Catalog and order new attaching parts. Refer to appropriate airplane service manual for flap installation.

- A. Install the two (2) new S1450-3S10-032 washers on the forward roller assembly only, one on each side of the roller bushings, with the square-edge side facing the flap roller assembly, (1) AN3-11A bolt and (1) MS21044N3 nut. Install retained hardware in the aft location using the existing bearing retained in step 3.

- B. Torque the MS21044N3 nut to 20 inch-pounds. Check the two (2) S1450-3S10-032 washers with finger pressure to assure they will NOT rotate. If rotation is felt, loosen the nut, retorque to 25 inch-pounds and verify the washer cannot be turned with finger pressure.

- C. Verify the flap roller is free to rotate.

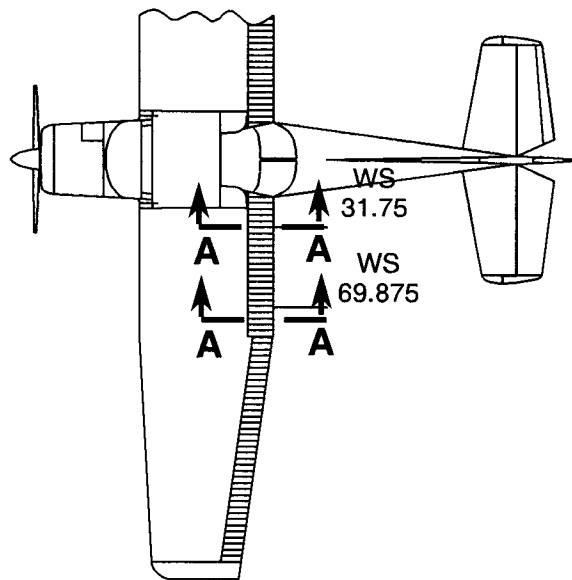
7. Repeat steps 3 thru 6 until all flap supports have been inspected.

8. Operate the flaps full up and full down 3 times. Assure no binding exists in flap movement. Return flaps to the full up position. Remove maintenance tags.

9. Make an entry in the airplane logbook stating compliance with this service bulletin and method of compliance.

ACCOMPLISHMENT INSTRUCTIONS

SEB95-3



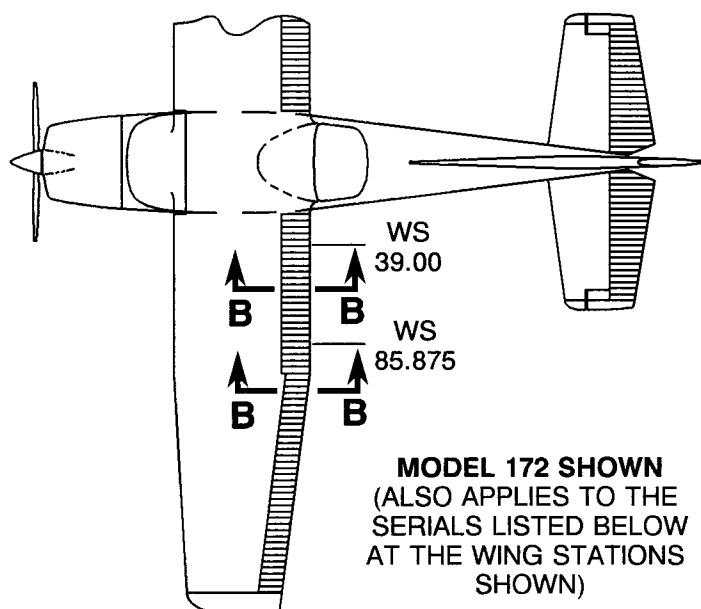
MODEL 152 SHOWN
(ALSO APPLIES TO THE
SERIALS LISTED BELOW
AT THE WING STATIONS
SHOWN)

150	617, 628, 644, 649, 17001 Thru 15064969, 15064971 Thru 15079405
A150	A1500001 Thru A1500432
A150	A1500434 Thru A1500734, 15064970
A-150	A-1501001 Thru A-1501039
A-A150	A-A1500001 Thru A-A1500009
F150	F150-0001 Thru F15001428
FA150	FA1500001 Thru FA1500120
FRA150	FRA1500121 Thru FRA1500336
152	15279406 Thru 15286033
A152	681, A1520735 Thru A1521049, A1500433
F152	F15201429 Thru F15201980
FA152	FA1520337 Thru FA1520425

Figure 1. Flap Support Rib Assembly and Roller Bearing Inspection (Sheet 1 of 6)

ACCOMPLISHMENT INSTRUCTIONS

SEB95-3

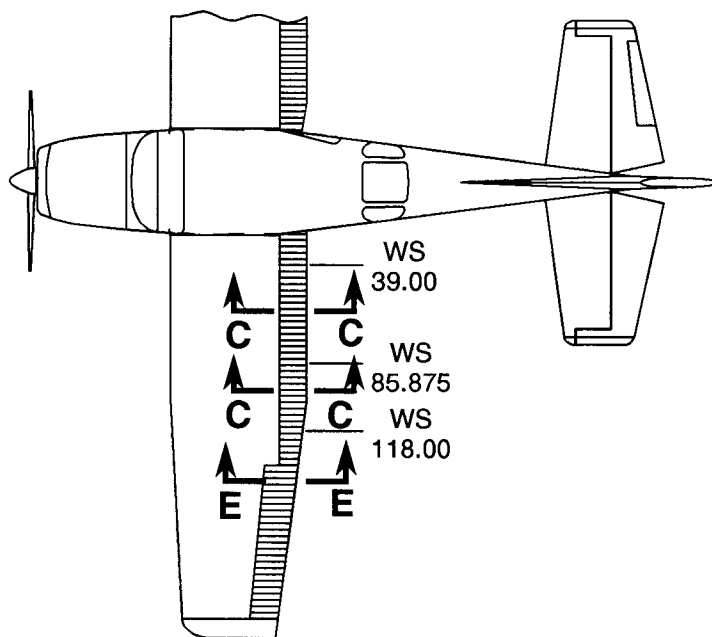


170	609, 19401, 20267 Thru 27169	R182/ TR182	R18200001 Thru R18202039
172	610, 612, 615, 622, 625, 630, 638, 639, 28000 Thru 17276654	A182	A182-0001 Thru A182-0148
F172	F172-0001 Thru F17202254	F182	F18200001 Thru F18200169
P172	P17257120 Thru P17257188	FR182	FR18200001 Thru FR18200070
R172 (T41B/C/D)	R172-0001 Thru R172-0409	185	632, 652, 185-0001 Thru 18504448
R172 (T41D)	R1720410 Thru R1720620	188/A188 188/A188 188	653, 188-0001 Thru 188-0572 18800573 Thru 18800832 18800833 Thru 18802348
R172	R1722000 Thru R1723454, P17257189	A188 A188 T188	678T, 18800833 Thru 18803973 18800967T Thru 18803973T T18803307T Thru T 803974T
172RG	691, 172RG0001 Thru 172RG1191	A-A188	A-A1880001 Thru A-A1880034
FP172	FP172-0001 Thru FP172-0003	210-5 (205) 210-5A	641, 205-0001 Thru 205-0480 205-0481 Thru 205-0577
FR172	FR17200001 Thru FR17200675	(205A)	
175	28700A, 55001 Thru 17557119, 619	U206 / TU206	U20601569 Thru U20607020
180	604, 614, 624, 645, 30000 Thru 18053203	207/ T207	20700191 Thru 20700788
182/ T182	613, 631, 634, 675, 33000 Thru 18268586	210	616, 618, 57001 Thru 57575 and 21057576 Thru 21058139 21058141 Thru 21058220

Figure 1. Flap Support Rib Assembly and Roller Bearing Inspection (Sheet 2)

ACCOMPLISHMENT INSTRUCTIONS

SEB95-3



MODEL 206 SHOWN
(ALSO APPLIES TO THE
SERIALS LISTED BELOW
AT THE WING STATIONS
SHOWN)

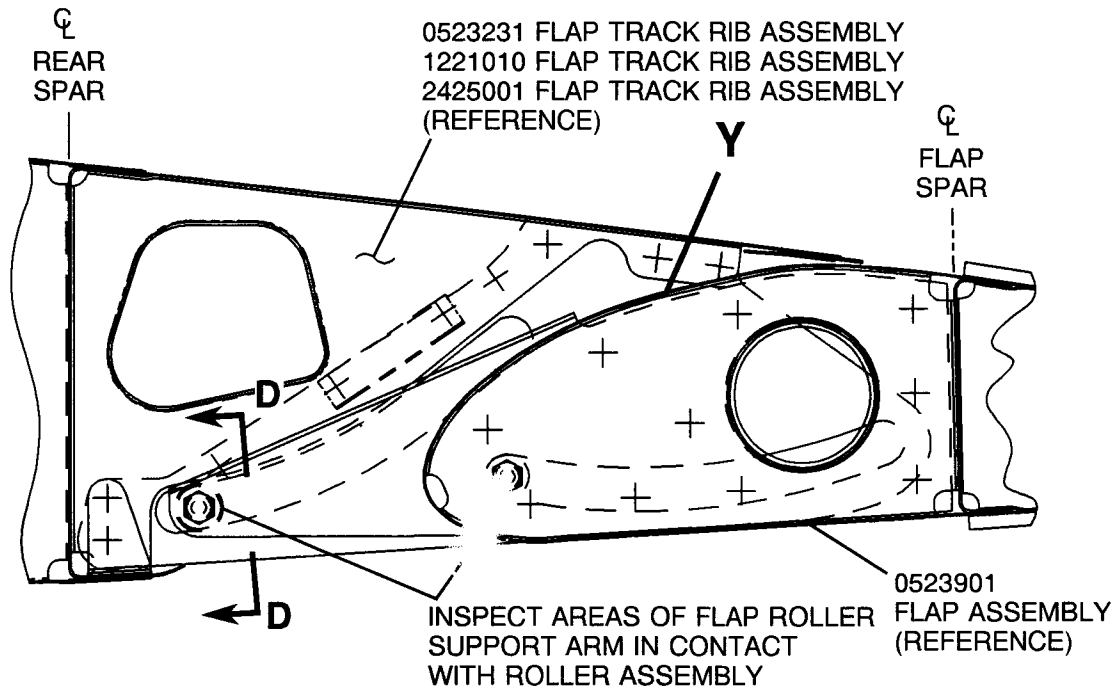
206/U206	206-0001 Thru 206-0275
U206 / TU206	676, U206-0276 Thru U206-1444 and U20601445 Thru U20601568
P206 / TP206	P206-0001 Thru P206-0603 and P20600604 Thru P20600647
207 / T207	20700001 Thru 20700190

AIRPLANES WITH EXTENDED FLAPS

Figure 1. Flap Support Rib Assembly and Roller Bearing Inspection (Sheet 3)

ACCOMPLISHMENT INSTRUCTIONS

SEB95-3

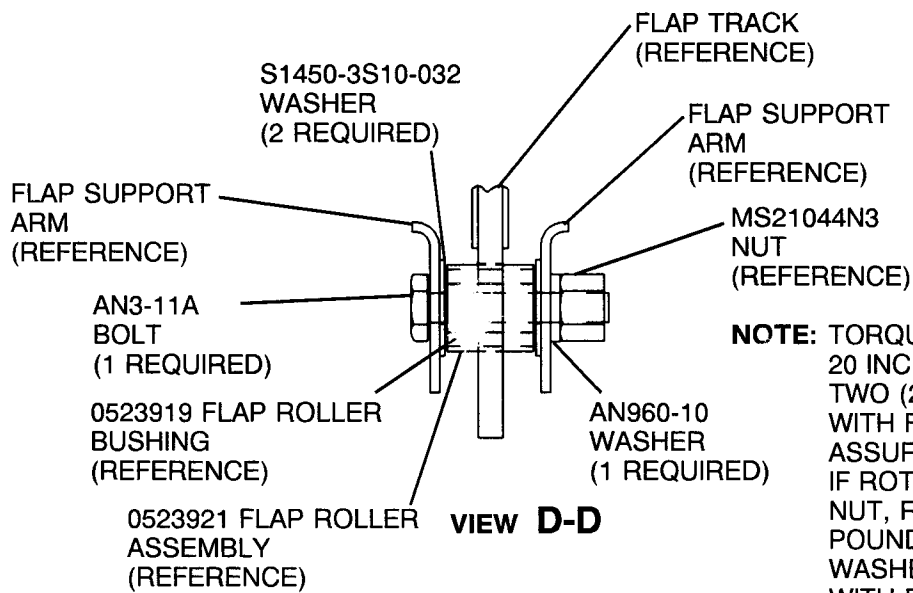


VIEW A-A

VIEW B-B

VIEW C-C

NOTE: DO NOT INSTALL S1450-3S10-032 WASHERS ON THE AFT ROLLER ASSEMBLY

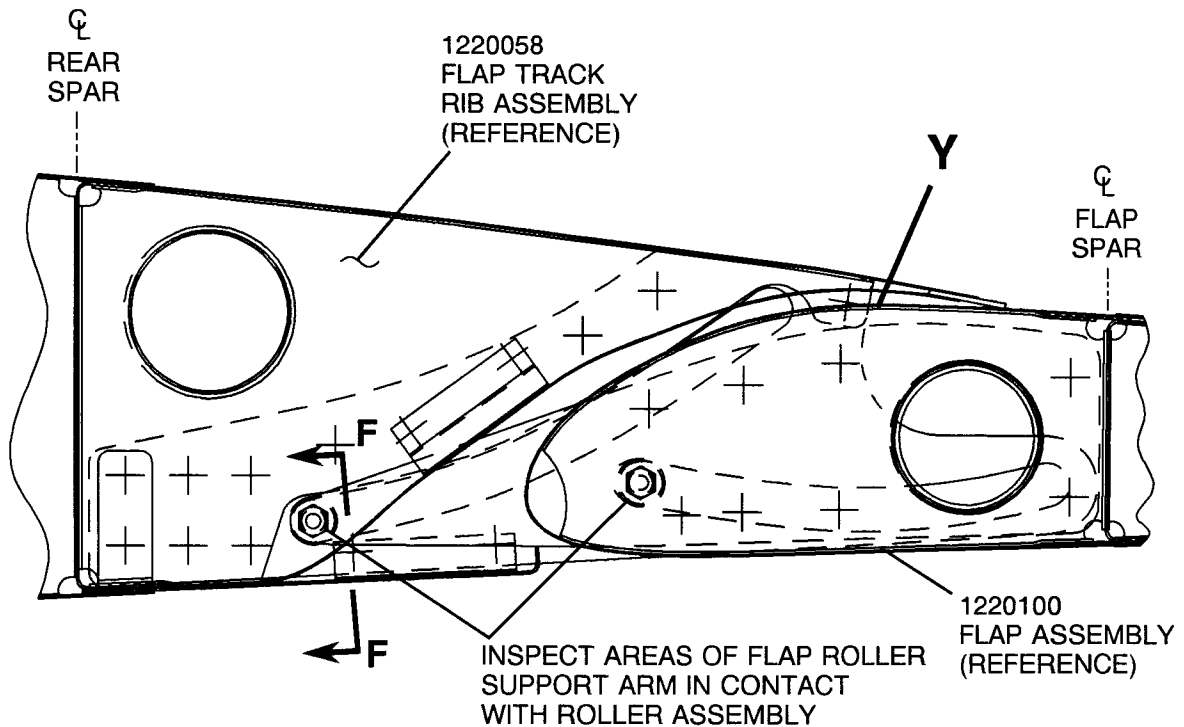


NOTE: TORQUE THE MS21044N3 NUT TO 20 INCH-POUNDS. CHECK THE TWO (2) S1450-3S10-032 WASHERS WITH FINGER PRESSURE TO ASSURE THEY WILL NOT ROTATE. IF ROTATION IS FELT, LOOSEN THE NUT, RETORQUE TO 25 INCH-POUNDS, AND VERIFY THE WASHER CANNOT BE TURNED WITH FINGER PRESSURE

Figure 1. Flap Support Rib Assembly and Roller Bearing Inspection (Sheet 4)

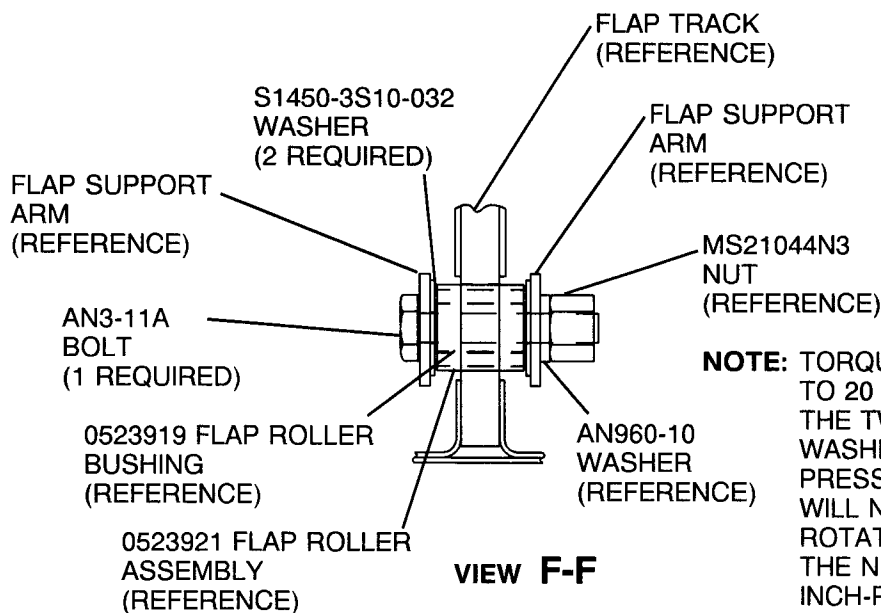
ACCOMPLISHMENT INSTRUCTIONS

SEB95-3



VIEW E-E

NOTE: DO NOT INSTALL S1450-3S10-032 WASHERS ON THE AFT ROLLER ASSEMBLY



VIEW F-F

NOTE: TORQUE THE MS21044N3 NUT TO 20 INCH-POUNDS. CHECK THE TWO (2) S1450-3S10-032 WASHERS WITH FINGER PRESSURE TO ASSURE THEY WILL NOT ROTATE. IF ROTATION IS FELT, LOOSEN THE NUT, RETORQUE TO 25 INCH-POUNDS, AND VERIFY THE WASHER CANNOT BE TURNED WITH FINGER PRESSURE

Figure 1. Flap Support Rib Assembly and Roller Bearing Inspection (Sheet 5)

ACCOMPLISHMENT INSTRUCTIONS

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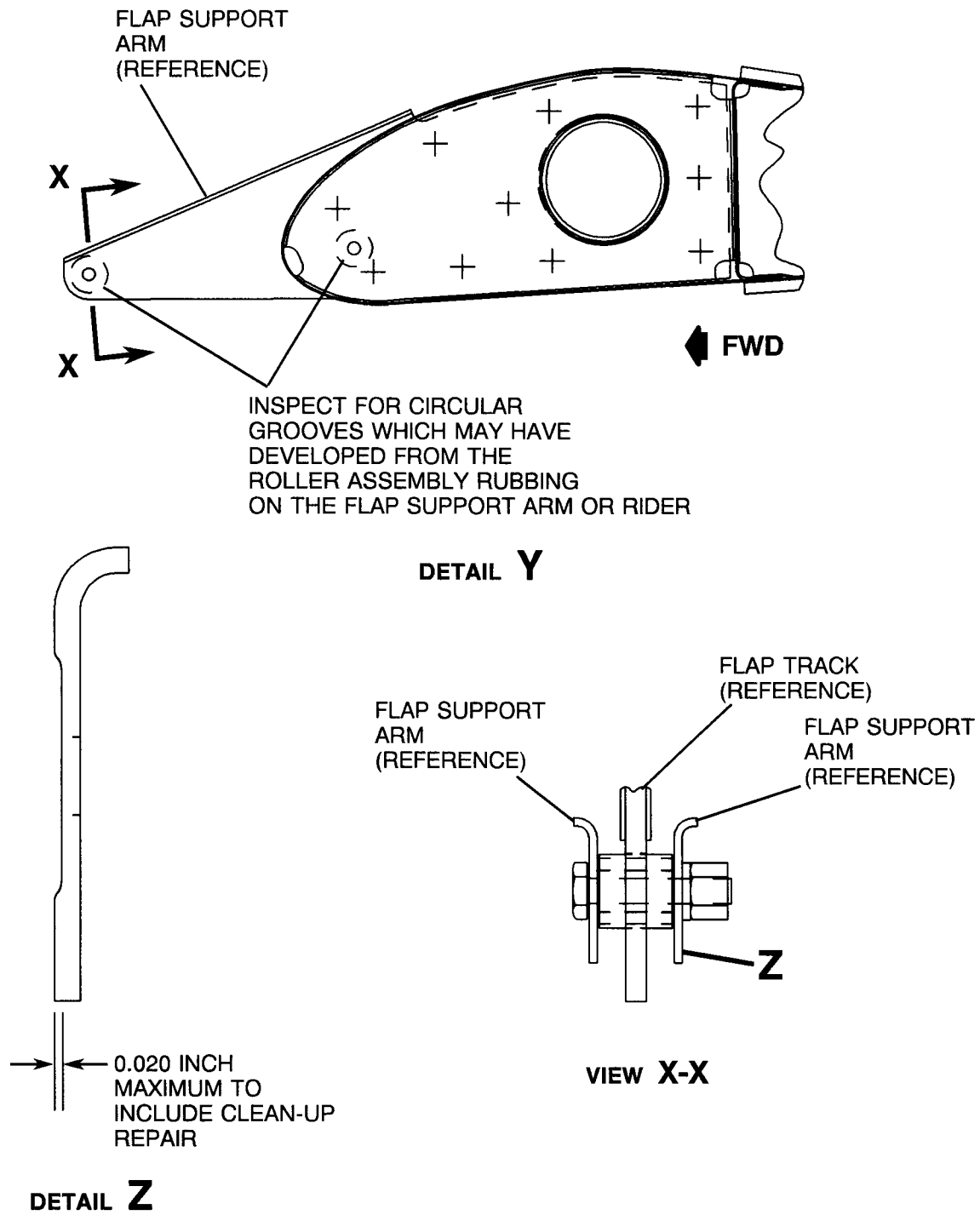


Figure 1. Flap Support Rib Assembly and Roller Bearing Inspection (Sheet 6)

TITLE FLAP SUPPORT AND FLAP ROLLER WASHER INSTALLATION

EFFECTIVITY

MODEL(S)	SERIAL NUMBERS
150	617, 628, 644, 649, 17001 thru 15064969
150	15064971 thru 15079405
A150	A1500001 thru A1500432
A150	A1500434 thru A1500734
A150	15064970
A-150	A-1501001 thru A-1501039
A-A150	A-A1500001 thru A-A1500009
F150	F150-0001 thru F15001428
FA150	FA1500001 thru FA1500120
FRA152	FRA1500121 thru FRA1500336
152	15279406 thru 15286033
A152	681, A1520735 thru A1521049
A152	A1500433
F152	F15201429 thru F15201980
FA152	FA1520337 thru FA1520425
170	609, 19401, 20267 thru 27169
172	610, 612, 615, 622, 625, 630, 639, 638, 28000 thru 17276654
F172	F172-0001 thru F17202254
R172	R1722000 thru R1723454
R172	P17257189
FR172	FR17200001 thru FR17200675
172RG	691, 172RG0001 thru 172RG1191
P172	P17257120 thru P17257188
FP172	FP172-0001 thru FP172-0003
R172 (T41B/C/D)	R172-0001 thru R172-0409
R172 (T41D)	R1720410 thru R1720620
175	28700A, 55001 thru 17557119, 619
180	604, 614, 624, 645, 30000 thru 18053203
182/T182	613, 631, 634, 675, 33000 thru 18268586
A182	A182-0001 thru A182-0148
R182/TR182	R18200001 thru R18202039
F182	F18200001 thru F18200169
FR182	FR18200001 thru FR18200070
185	632, 652, 185-0001 thru 18504448
188/A188	653, 188-0001 thru 188-0572
188/A188	18800573 thru 18800832
188	18800833 thru 18802348
A188	678T, 18800833 thru 18803973
A188	18800967T thru 18803973T
T188	T18803307T thru T18803974T
A-A188	A-A1880001 thru A-A1880034

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SERVICE KIT

SK180-44

EFFECTIVITY (Continued)

MODEL(S)	SERIAL NUMBERS
210-5 (205)	641, 205-0001 thru 205-0480
210-5A (205A)	205-0481 thru 205-0577
206/U206	206-0001 thru 206-0275
U206/TU206	676, U206-0276 thru U20607020
P206/TP206	P206-0001 thru P20600647
207/T207	20700001 thru 20700788
210	616, 618, 57001 thru 21058139
210	21058141 thru 21058220

DESCRIPTION

This service kit provides parts and instructions for the removal and installation of the flap support arm rib assembly.

APPROVAL

FAA approval has been obtained on technical data in this publication that affects airplane type design.

For Reims Aviation airplanes: DGAC approval has been obtained on technical data in this publication that affects airplane type design.

REFERENCE

SEB95-3

CHANGE IN WEIGHT AND BALANCE

MODEL All
WEIGHT INCREASE Negligible.

SERVICE KIT

SK180-44

MATERIAL INFORMATION

Order one (1) SK180-44-1 Kit per flap attach location **except** the outboard location of airplanes with extended length flaps (certain Models 206 and 207, refer to Figure 1, Sheet 6 for extended flaps):

PART NUMBER	QUANTITY	DESCRIPTION
SK180-44-1	1	Kit , consisting of the following parts:
AN3-11A	2	Bolt
NAS1149F0363P	1	Washer
MS20470AD3-3	50	Rivet
MS20470AD3-4	50	Rivet
MS20470AD3-5	25	Rivet
MS20470AD4-3.5	6	Rivet
MS20470AD4-4	6	Rivet
MS20470AD4-5	1	Rivet
MS21044N3	2	Nut
NAS1738B4-1	10	Rivet
S1450-3S10-032	2	Washer
0523901-13	1	Rib Assembly-Flap Support Arm Left
0523901-14	1	Rib Assembly-Flap Support Arm Right
	1	Instructions

Airplanes with extended length flaps order the following kit if required to replace the left flap outboard support riders:

PART NUMBER	QUANTITY	DESCRIPTION
SK180-44-2	1	Kit , consisting of the following parts:
AN3-11A	1	Bolt
MS20470AD4-3.5	6	Rivet
MS20470AD4-4	6	Rivet
NAS1149F0363P	1	Washer
MS21044N3	1	Nut
S1450-3S10-032	2	Washer
1220109-1	1	Rider Assembly-Inboard LH
1220109-3	1	Rider Assembly-Outboard LH
	1	Instructions

SERVICE KIT

SK180-44

MATERIAL INFORMATION (Continued)

Airplanes with extended length flaps order the following kit if required to replace the right flap outboard support riders:

PART NUMBER	QUANTITY	DESCRIPTION
SK180-44-3	1	Kit, consisting of the following parts:
AN3-11A	1	Bolt
MS20470AD4-3.5	6	Rivet
MS20470AD4-4	6	Rivet
MS21044N3	1	Nut
NAS1149F0363P	1	Washer
S1450-3S10-032	2	Washer
1220109-2	1	Rider Assembly-Inboard RH
1220109-4	1	Rider Assembly-Outboard RH
	1	Instructions

ACCOMPLISHMENT INSTRUCTIONS

1. Lower the flaps to the full down position and disconnect battery cable and all external power to the airplane. Attach maintenance warning tags, to the battery connector and external power receptacle, stating:

WARNING: DO NOT CONNECT ELECTRICAL POWER - MAINTENANCE IN PROGRESS

2. Remove the flaps from the wing. (Refer to the appropriate Service Manual, Flaps - Removal and Installation.)

NOTE: As each flap is removed from the wing, all rollers, bushings and spacers will fall free. Retain the forward and aft bearing and bushing and the aft washers for reinstallation. Discard the forward attach bolt, nut and washers and the aft bolt and nut.

3. Drill out rivets securing the upper corrugated flap skin forward edge across the flap spar edge 4 or 5 rivets past the affected flap support station. (Refer to Figure 1, Sheet 1, Detail A.)

NOTE: The outboard flap rider assembly replacement on airplanes with three (3) attach point flaps are similar procedures as the inboard and center flap support arm. Refer to Figure 1, Sheet 6, for serial numbers of those airplanes.

4. Drill out rivets securing the upper corrugated flap skin to the flap outboard rib and those rivets securing the trailing edges together enough to be equal to that of step 3. Drill out the rivets securing the flap trailing edge rib from the upper skin, but do not remove the flap trailing edge rib from the lower skin.

5. Roll the corrugated flap skin out of the way toward the center of the flap and secure with a strong reinforced tape.

CAUTION: DRILL OFF ONLY ONE FLAP SUPPORT ARM AT A TIME USING THE REMAINING SUPPORT ARM AS A LOCATOR FOR THE NEW SUPPORT ARM INSTALLATION.

6. Drill out the rivets securing the existing left flap support arm to the leading edge skin and the flap spar. Pull the flap support arm through the hole in the leading edge skin and discard the existing flap support arm. (Refer to Figure 1, Sheet 2, Detail B and Sheet 3, Detail C.)

SERVICE KIT

SK180-44

CAUTION: IT MAY BE REQUIRED TO TRIM THE LEADING EDGE SKIN AROUND THE FLAP SUPPORT ARMS TO ALLOW CLEARANCE FOR THE FLAP SUPPORT ARMS TO BE REMOVED FROM THE FLAP ASSEMBLY. USE CARE WHEN TRIMMING THE SKIN TO MAINTAIN A MINIMUM OF 0.25 INCH EDGE DISTANCE FROM THE EDGE OF THE SKIN TO THE EDGE OF THE ATTACHING RIVETS.

7. Mark a line down the center of the new 0523901-13 left and 0523901-14 right flap support arm rib flange to aid in aligning the rib with the existing rivet holes of the leading edge skin.
8. Insert the new 0523901-13 left flap support arm in the existing flap support location. Align the aft rivet holes in the flap support arm to the corresponding holes in the flap spar. Secure in position using two temporary metal fasteners. (Refer to Figure 1, Sheet 7, Views A-A, B-B, C-C and Sheet 8, E-E.)
9. Drill the aft holes in the rib assemblies with the holes in the spar using a Number 30 (0.128 inch diameter) drill. Secure each with a temporary metal fastener.
10. Fabricate a spacer using materials on hand (wood, metal, phenolic) that is 2 inches × 5 inches × 0.60 (+0.00/-0.01) inch. Lay the removed flap support on the spacer and mark the existing locations of the bolt holes onto the block using a scribe or a pencil. Using a drill press which has been positioned 90° perpendicular to the surface of the spacer, drill two (2) Number 10 (0.193 inch diameter) holes in the spacer at the marked locations.
11. Place the spacer between the two flap support arms. Insert an AN3-11A bolt at the forward hole thru the remaining flap support, the new spacer and the new flap support. Insert another AN3-11A bolt thru the aft position in the same manner. Clamp the spacer and supports midpoint between the bolts with a C-clamp. (Refer to Figure 1, Sheet 9, Detail E, View G-G and Detail D.)
12. Using a 3/32 (0.093 inch diameter) drill, drill eight holes in the rib flange of the flap support rib to the existing rivet locations in the leading edge skin. Use the line made in step 7 to assure alignment. (Refer to Figure 1, Sheet 3, View A-A.)
13. Remove the clamp and spacer. Remove support temporarily and deburr all holes. Touch up parts with primer and allow to cure.
14. Drill out the rivets securing the existing right flap support arm to the leading edge skin and the flap spar. Pull the flap support arm through the hole in the leading edge skin and discard. (Refer to Figure 1, Sheet 2, Detail B and Sheet 3, Detail C.)
15. Insert a new 0523901-14 flap support arm in the existing flap support location. Install the 0523901-13 flap support arm using temporary sheet metal fasteners. Align the aft rivet holes in the 0523901-14 flap support arm to those corresponding holes in the flap spar. Secure into position using a temporary metal fastener. Place the spacer between the two flap support arms and clamp in place with a C-clamp.
16. Using a 3/32 (0.093 inch diameter) drill, drill eight holes into the 0523901-14 rib flange of the flap support rib to the existing rivet locations in the leading edge skin. (Refer to Figure 1, Sheet 3, View A-A.)
17. Remove the C-Clamp and the spacer (retain for other installations if necessary). Remove all temporarily installed parts and deburr all holes. Touch up parts with primer and allow to cure.
18. Secure the new 0523901-13 flap support arm to the leading edge of the flap using MS20470AD3-3 rivets, removing the temporary metal fasteners as required. (Refer to Figure 1, Sheet 2, Detail B, and Sheet 3, Detail C.)
19. Insert the 0523901-14 flap support arm again in the existing flap support location and secure in position using a temporary metal fastener. Secure the aft 3 holes of the rib to the flap spar using MS20470AD4-4 rivets.
20. Secure the rib to the leading edge of the flap using MS20470AD3-4 rivets removing the temporary metal fasteners as required. (Refer to Figure 1, Sheet 2, Detail B, and Sheet 3, Detail C.)

SERVICE KIT

SK180-44

21. Reinstall the upper flap skin using MS20470AD3-4 rivets as required, except for the forward position on the aft rib which uses a MS20470AD4-5 rivet. Blind fasteners may be used in the last two positions of the flap ribs if necessary. (Refer to Figure 1, Sheet 2, Detail B and Sheet 3, Detail C.)
22. Reinstall the flap:
 - A. (Refer to Figure 1, Sheet 7, View D-D and Sheet 8, View F-F.) Reassemble and install the roller and roller bushing, at both the forward and aft locations, on the flap tracks.
 - B. Install the two (2) new S1450-3S10-032 washers on the forward roller assembly only, one on each side of the roller bushing, with the square-edge side facing the flap roller assembly, (1) AN3-11A bolt , (1) NAS1149F0363P washer and (1) MS21044N3 nut at each location.

NOTE: Install S1450-3S10-032 washers on the forward roller assembly only. Do not install S1450-3S10-032 washers on the aft roller assembly.
 - C. Torque the MS21044N3 nut to 20 inch-pounds. Check the two (2) S1450-3S10-032 washers with finger pressure to assure they will NOT rotate. If rotation is felt, loosen the nut. Retorque to 25 inch-pounds and verify the washer can not be turned with finger pressure.
 - D. Verify the flap roller is free to rotate.
 - E. Remove maintenance warning tags and reconnect battery cable.
23. Operate the flaps full up and full down 3 times. Assure no binding exists in flap movement. Return the flaps to the full up position.
24. Make an entry in the airplane logbook stating this service kit has been installed and the location of the flap attach station that was modified.

SERVICE KIT

SK180-44

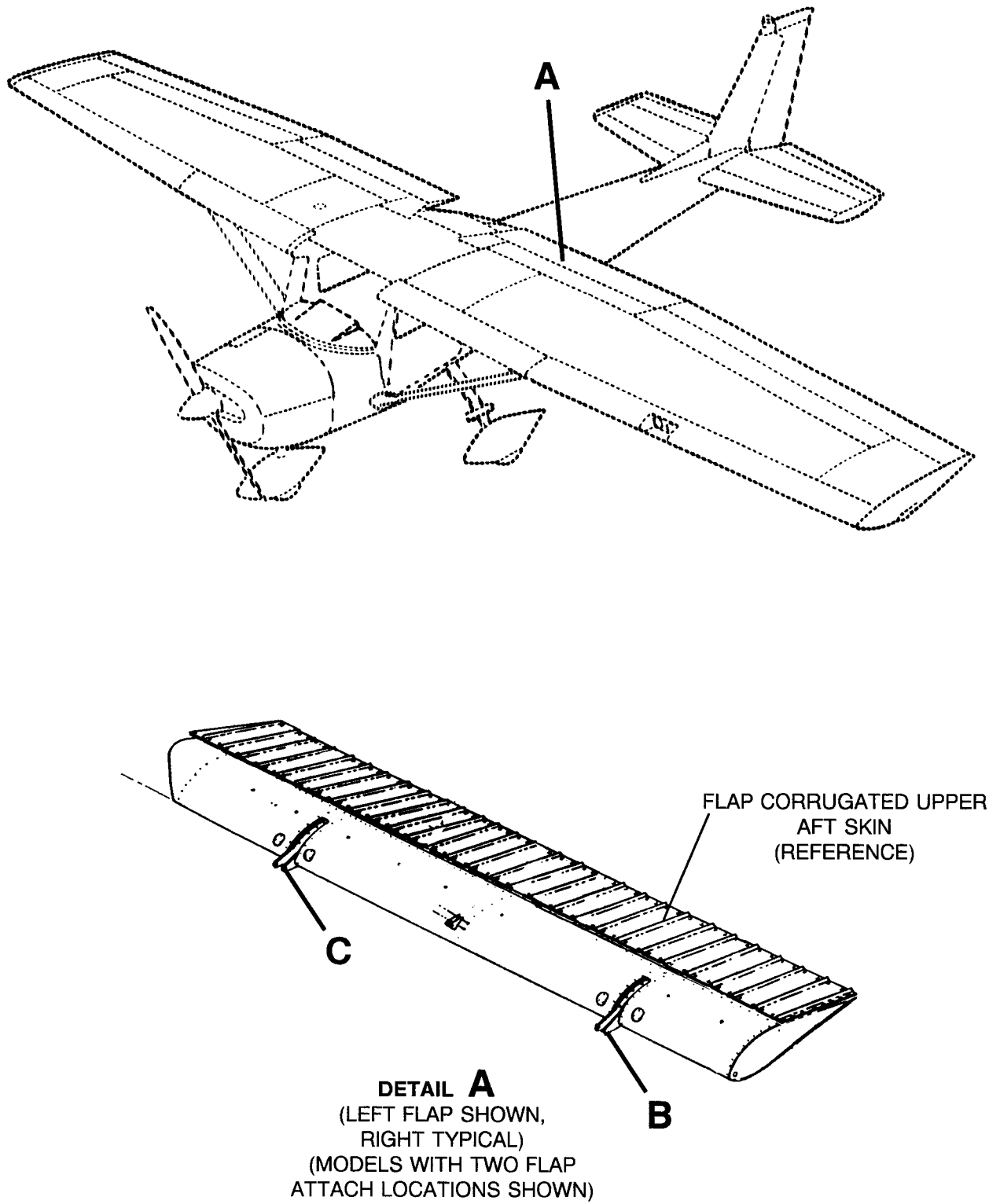


Figure 1. Flap Support Rib Assembly and Roller Bearing Replacement (Sheet 1 of 9)

SERVICE KIT

SK180-44

NOTE: DO NOT INSTALL
S1450-3S10-032 WASHERS ON
THE AFT ROLLER ASSEMBLY

MS20470AD3-4 RIVET
(AS REQUIRED TO SECURE
RIB TO THE LEADING EDGE
SKIN)

MS20470AD4-5
RIVET
(1 REQUIRED)

NAS1738B4-1 RIVET
(IF REQUIRED TO SECURE
MOST AFT TWO POSITIONS
RIB TO THE CORRUGATED
SKIN)

ACCESS PLATE
(REFERENCE)

S1450-3S10-032
WASHER
(2 REQUIRED)
FORWARD ROLLER
ASSEMBLY ONLY

FLAP ROLLER
BUSHING
(REFERENCE)

FLAP ROLLER
ASSEMBLY
(REFERENCE)

MS21044N3
NUT
(1 REQUIRED)

AN3-11A
BOLT
(1 REQUIRED)

0523901-14
RIGHT FLAP
SUPPORT
RIB ASSEMBLY
(1 REQUIRED)

0523901-13 LEFT
FLAP SUPPORT
RIB ASSEMBLY
(1 REQUIRED)

AFT ROLLER
ATTACH BOLT
REFER TO STEP 22.
(REFERENCE)

MS20470AD3-4
RIVET
(AS REQUIRED TO
SECURE THE SKIN TO
THE FLAP STRUCTURE)

FLAP SPAR
(REFERENCE)

DETAIL B

(OUTBOARD ATTACH POSITION)

Figure 1. Flap Support Rib Assembly and Roller Bearing Replacement (Sheet 2)

SERVICE KIT

SK180-44

NOTE:

DO NOT INSTALL
S1450-3S10-032 WASHERS ON
THE AFT ROLLER ASSEMBLY

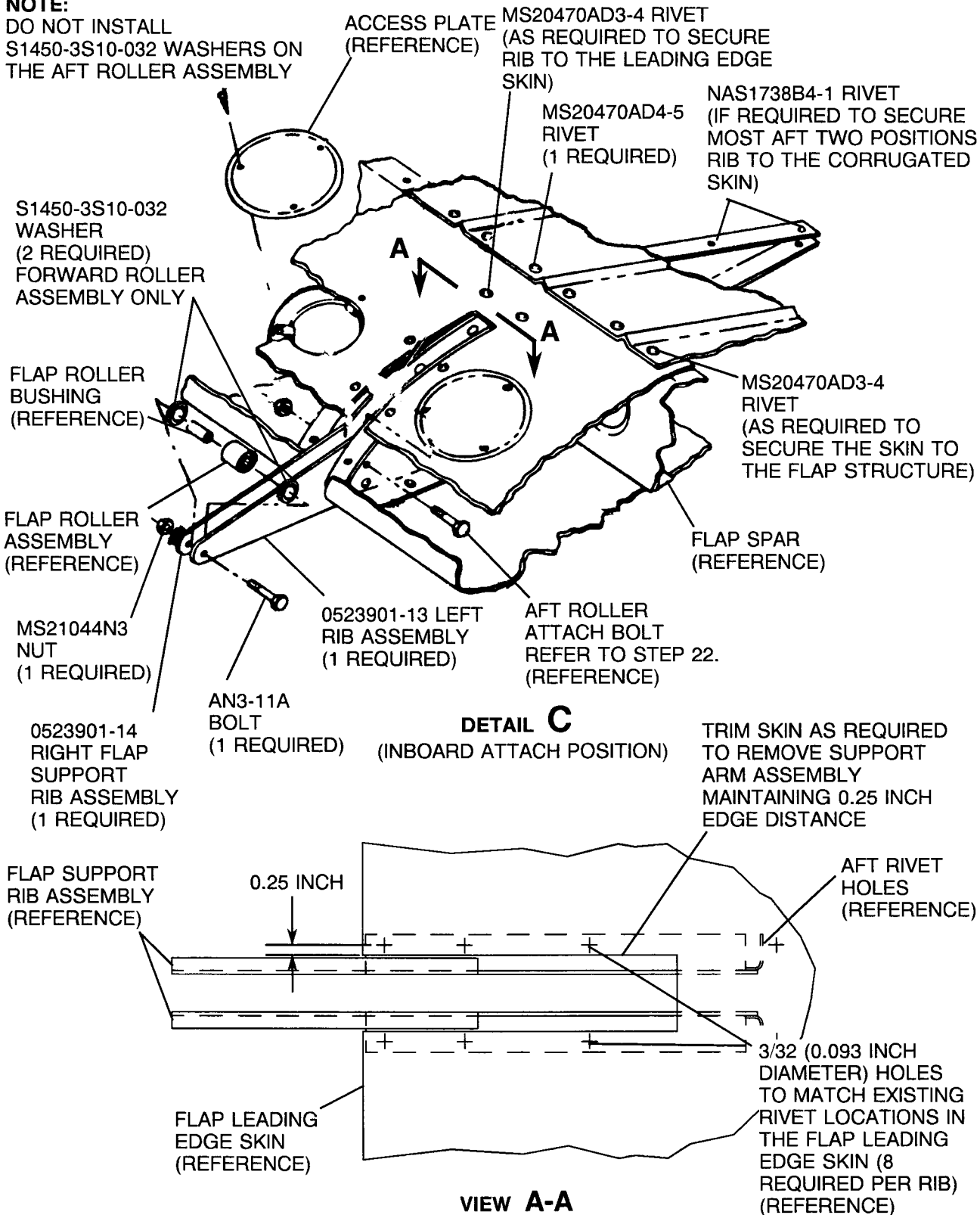
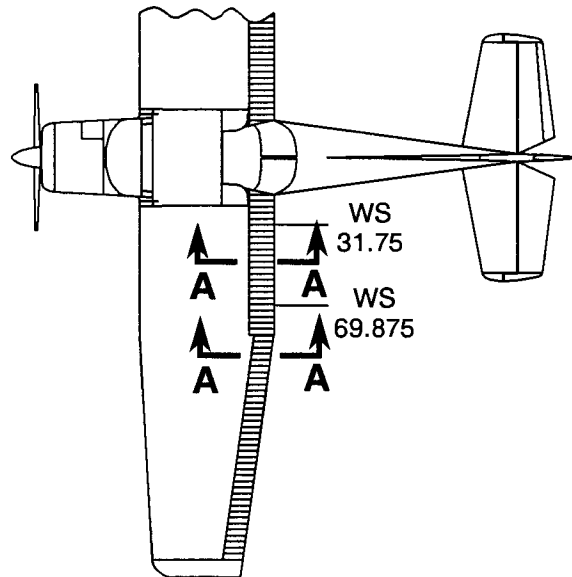


Figure 1. Flap Support Rib Assembly and Roller Bearing Replacement (Sheet 3)

SERVICE KIT

SK180-44



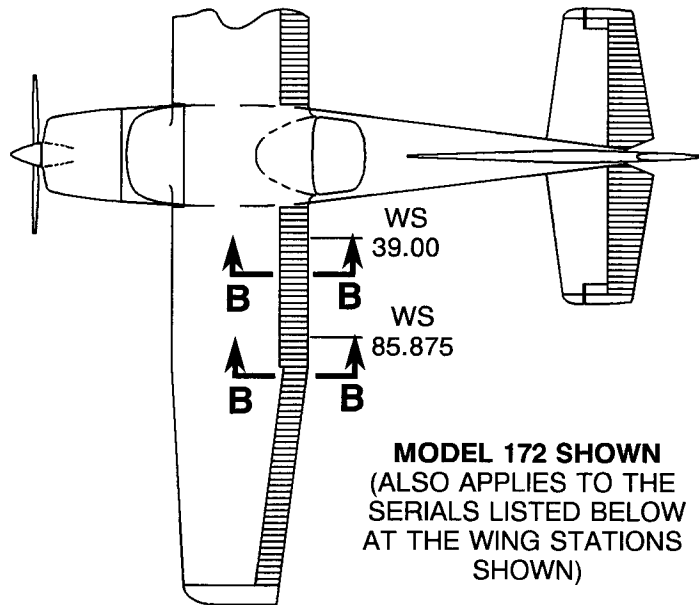
MODEL 152 SHOWN
(ALSO APPLIES TO THE
SERIALS LISTED BELOW
AT THE WING STATIONS
SHOWN)

- 150 617, 628, 644, 649, 17001 Thru 15064969,
15064971 Thru 15079405
- A150 A1500001 Thru A1500432
- A150 A1500434 Thru A1500734, 15064970
- A-150 A-1501001 Thru A-1501039
- A-A150 A-A1500001 Thru A-A1500009
- F150 F150-0001 Thru F15001428
- FA150 FA1500001 Thru FA1500120
- FRA150 FRA1500121 Thru FRA1500336
- 152 15279406 Thru 15286033
- A152 681, A1520735 Thru A1521049, A1500433
- F152 F15201429 Thru F15201980
- FA152 FA1520337 Thru FA1520425

Figure 1. Flap Support Rib Assembly and Roller Bearing Replacement (Sheet 4)

SERVICE KIT

SK180-44

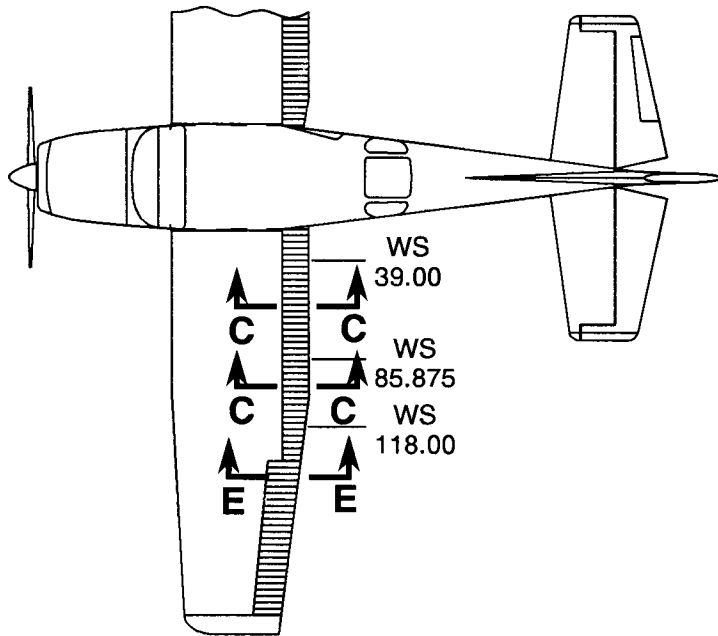


170	609, 19401, 20267 Thru 27169	R182/ TR182	R18200001 Thru R18202039
172	610, 612, 615, 622, 625, 630, 638, 639, 28000 Thru 17276654	A182	A182-0001 Thru A182-0148
F172	F172-0001 Thru F17202254	F182	F18200001 Thru F18200169
P172	P17257120 Thru P17257188	FR182	FR18200001 Thru FR18200070
R172 (T41B/C/D)	R172-0001 Thru R172-0409	185	632, 652, 185-0001 Thru 18504448
R172 (T41D)	R1720410 Thru R1720620	188/A188 188/A188 188	653, 188-0001 Thru 188-0572 18800573 Thru 18800832 18800833 Thru 18802348
R172	R1722000 Thru R1723454, P17257189	A188 A188 T188	678T, 18800833 Thru 18803973 18800967T Thru 18803973T T18803307T Thru T18803974T
172RG	691, 172RG0001 Thru 172RG1191	A-A188	A-A1880001 Thru A-A1880034
FP172	FP172-0001 Thru FP172-0003	210-5 (205) 210-5A	641, 205-0001 Thru 205-0480 205-0481 Thru 205-0577
FR172	FR17200001 Thru FR17200675	(205A)	
175	28700A, 55001 Thru 17557119, 619	U206 / TU206	U20601569 Thru U20607020
180	604, 614, 624, 645, 30000 Thru 18053203	207/ T207	20700191 Thru 20700788
182/ T182	613, 631, 634, 675, 33000 Thru 18268586	210	616, 618, 57001 Thru 57575 and 21057576 Thru 21058139 21058141 Thru 21058220

Figure 1. Flap Support Rib Assembly and Roller Bearing Replacement (Sheet 5)

SERVICE KIT

SK180-44



MODEL 206 SHOWN
(ALSO APPLIES TO THE
SERIALS LISTED BELOW
AT THE WING STATIONS
SHOWN)

206/U206	206-0001 Thru 206-0275
U206 / TU206	676, U206-0276 Thru U206-1444 and U20601445 Thru U20601568
P206 / TP206	P206-0001 Thru P206-0603 and P20600604 Thru P20600647
207 / T207	20700001 Thru 20700190

AIRPLANES WITH EXTENDED FLAPS

Figure 1. Flap Support Rib Assembly and Roller Bearing Replacement (Sheet 6)

SERVICE KIT

SK180-44

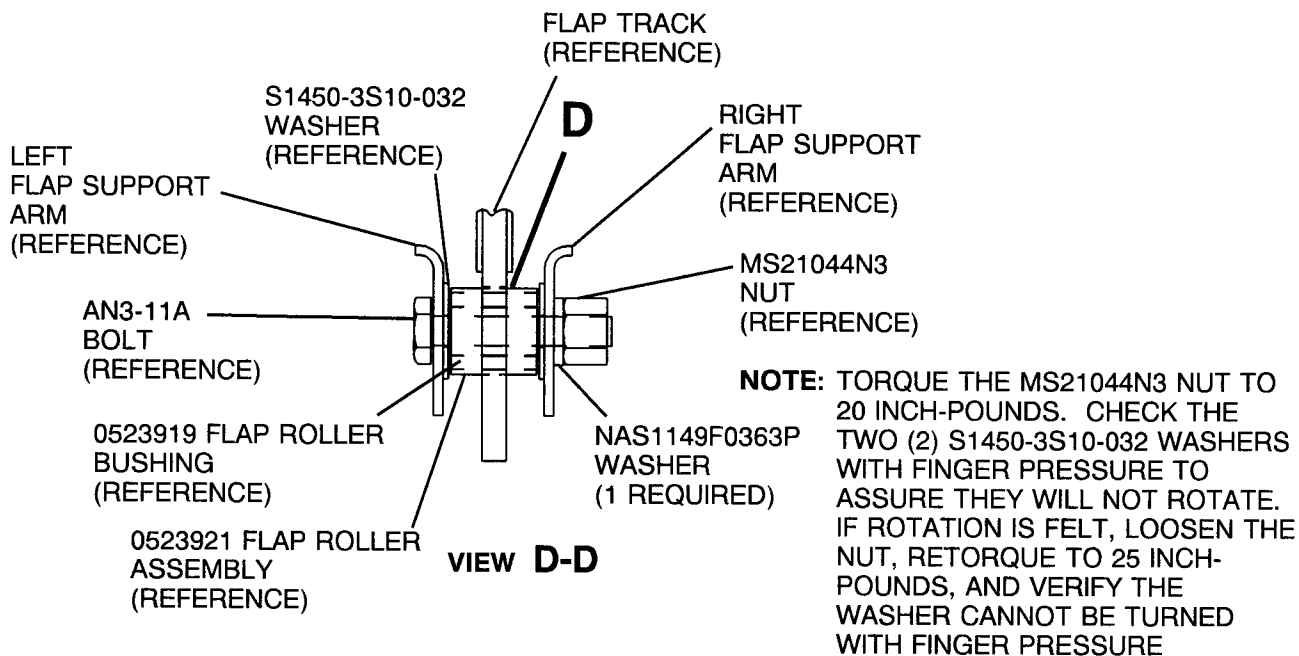
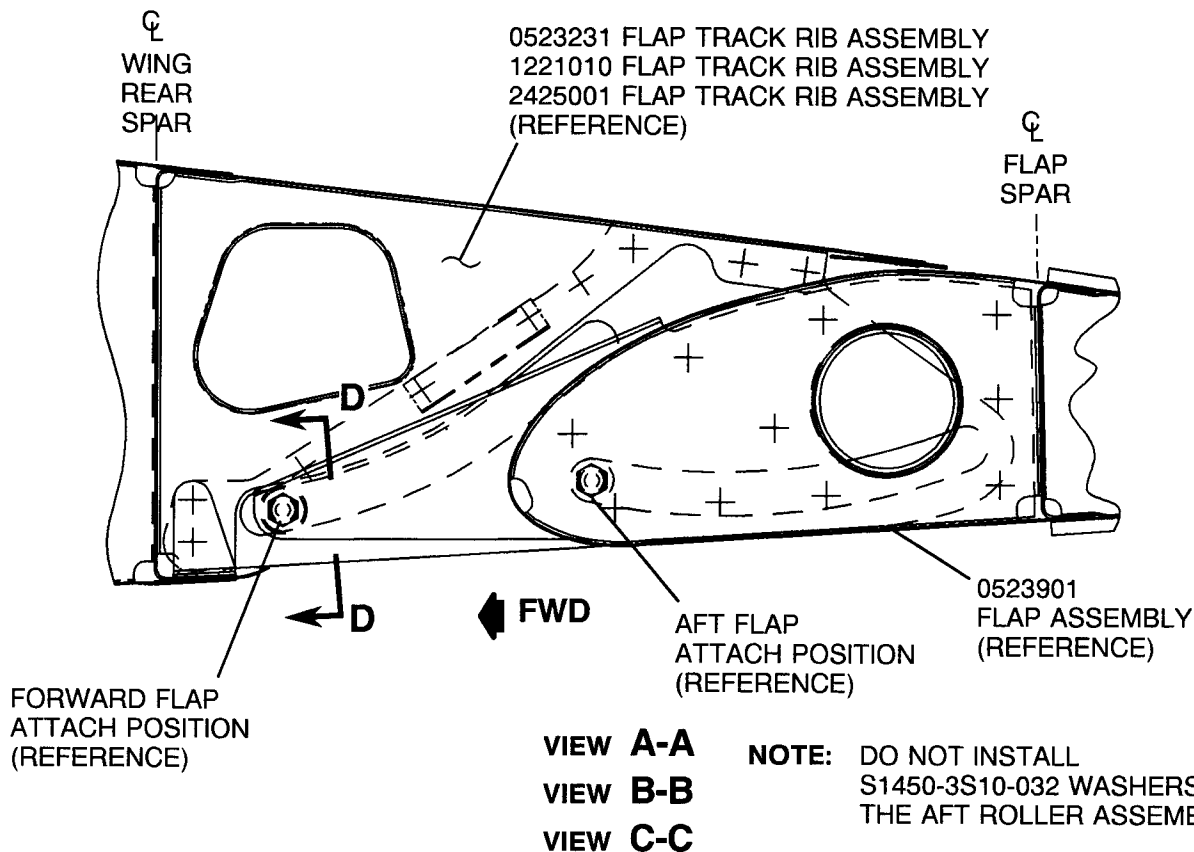
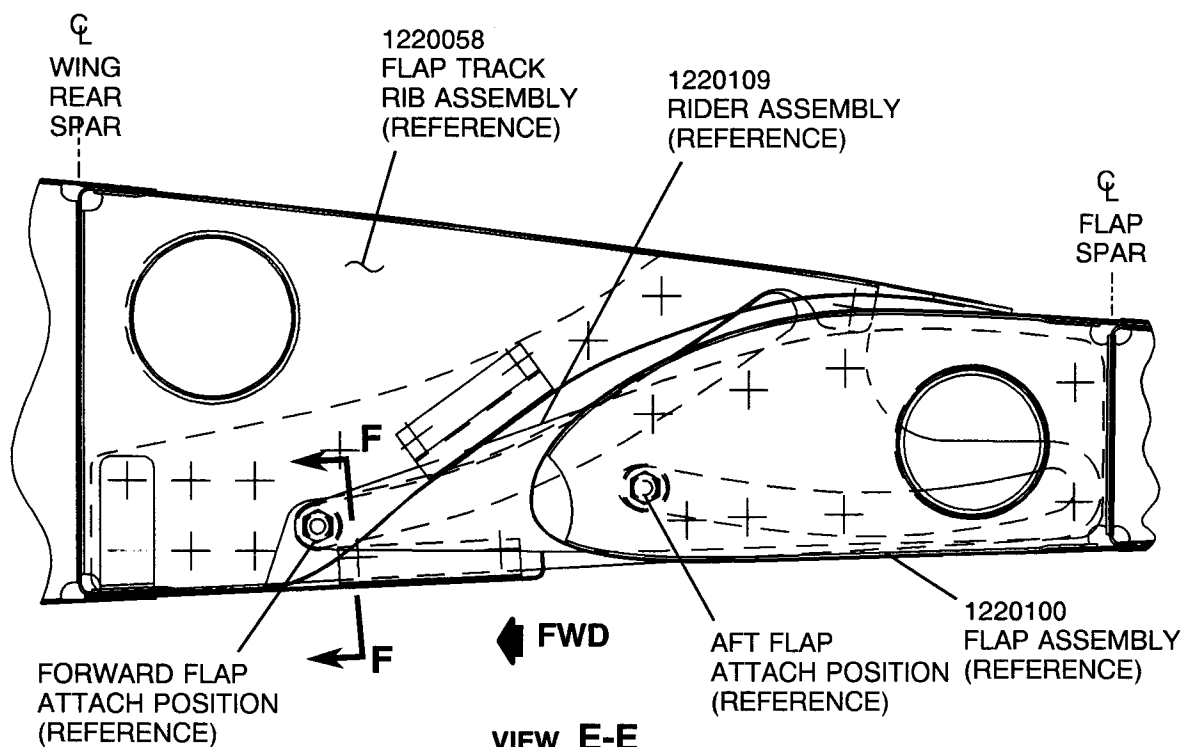


Figure 1. Flap Support Rib Assembly and Roller Bearing Replacement (Sheet 7)

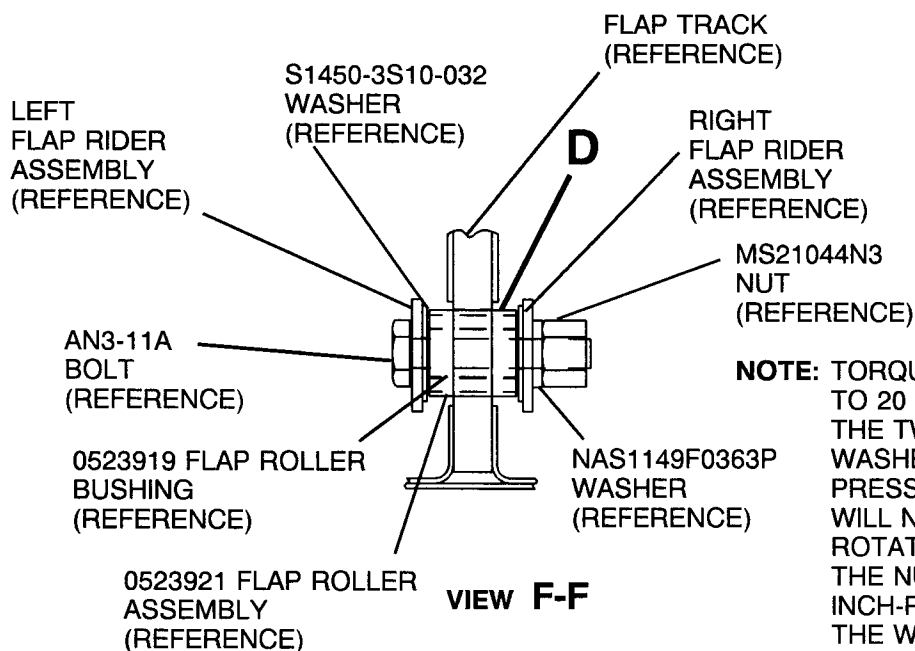
SERVICE KIT

SK180-44



VIEW E-E
AIRPLANES WITH
EXTENDED FLAPS

NOTE: DO NOT INSTALL
 S1450-3S10-032 WASHERS ON
 THE AFT ROLLER ASSEMBLY



NOTE: TORQUE THE MS21044N3 NUT
 TO 20 INCH-POUNDS. CHECK
 THE TWO (2) S1450-3S10-032
 WASHERS WITH FINGER
 PRESSURE TO ASSURE THEY
 WILL NOT ROTATE. IF
 ROTATION IS FELT, LOOSEN
 THE NUT, RETORQUE TO 25
 INCH-POUNDS, AND VERIFY
 THE WASHER CANNOT BE
 TURNED WITH FINGER
 PRESSURE

Figure 1. Flap Support Rib Assembly and Roller Bearing Replacement (Sheet 8)

SERVICE KIT

SK180-44

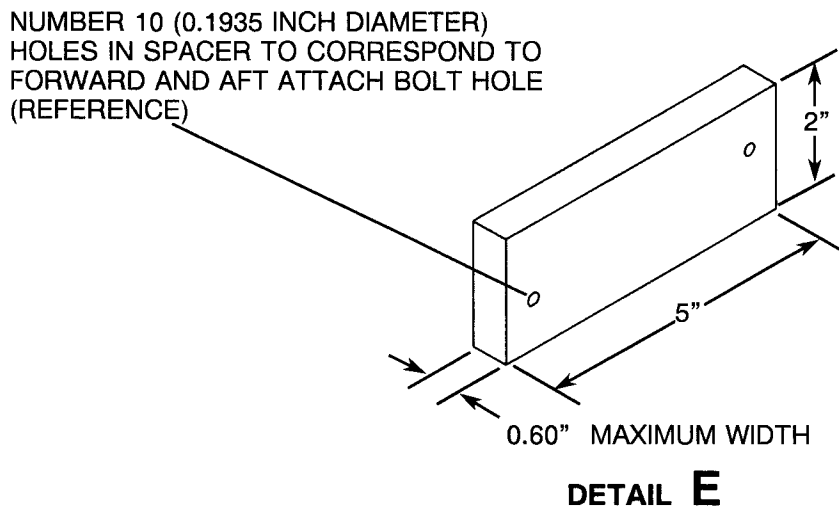
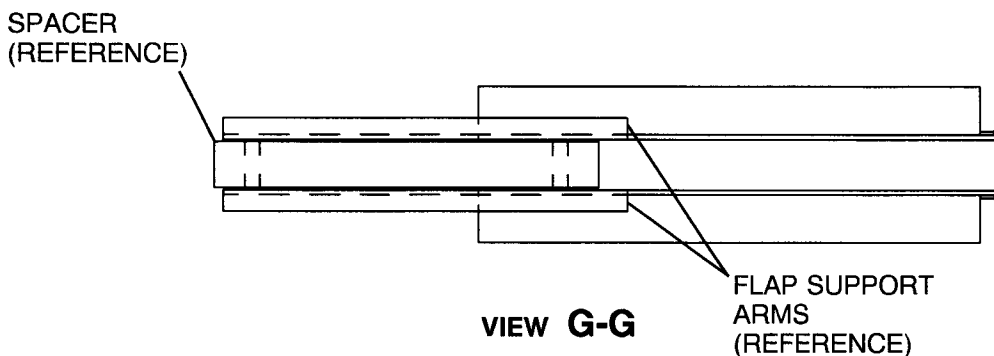
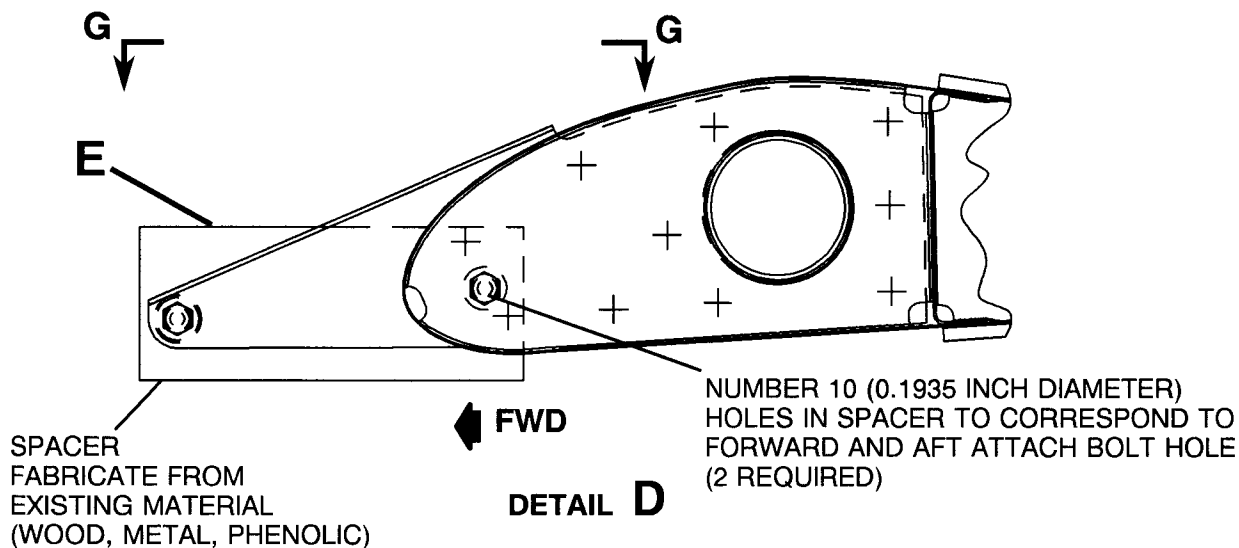


Figure 1. Flap Support Rib Assembly and Roller Bearing Replacement (Sheet 9)