

GROUP . . . Fuel System Units

Detail Unit . . . Motor—Electric Driven Fuel Pump

Constellation

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
117 - 1	A7046		Motor Assembly - Fuel pumps (Delco Products) (633324) (See figure 116 for using assembly)						all	Ref
	5364841		Case Assembly - Gear						all	1
2	5364842		Case - Gear						all	1
3	1063998		Stud - Gear case						all	4
4	5365250		Wick - Gear case						all	1
5	5364857		Bearing - Sleeve						all	1
6	5364856		Thrower - Oil						all	1
7	5344306		Gear - Pump drive						all	1
8	5364859		Bearing - Pump drive gear thrust						all	1
9	5364858		Gasket - Gear case						all	1
10	5364843		Frame - Drive end						all	1
11	5344308		Screw - Fillister head fine thread (AN501A10-12)						all	4
12	042663		Washer - Plain (AN960-10L)						all	6
13	5365199		Screw - Fillister head fine thread (AN501A416-5)						all	1
14	1062495		Washer - Oil plug screw						all	1
15	049681		Nut - Drive end bearing						all	1
16	5364945		Washer - Drive and bearing nut lock						all	1
17	5379379		Key - Pinion gear						all	1
18	5364948		Gear - Pinion						all	1
19	5378727		Bearing - Drive end ball						all	1
20	5364946		Gasket - Drive end bearing						all	1
21	5344307		Washer - Plain (AN960-516L)						all	1
22	5364846		Armature						all	1
23	5360769		Frame and Coil Assembly						all	1
24	5343464		Washer - Commutator end bearing						all	1
25	5343536		Bearing - Commutation end						all	1
26	1063966		Nut - Self-locking (AN365D428)						all	1
27	5360739		Nut - Bearing outer race retaining						all	1
28	1071535		Brush Assembly						all	4
29	5343971		Screw - Holder cap						all	4
30	5368691		Nut Assembly - Brush cover						all	4
	5368690		Frame Assembly - Commutator end						all	1
31	5360381		Frame - Commutator end						all	1
32	5361498		Brush Holder - Insulated						all	2
33	5361781		Brush Holder - Grounded						all	2
34	5348851		Washer - Insulation						all	2
	5360512		Lead - Brush to receptacle						all	1
	5348853		Lead - Brush to brush						all	1
35	5344309		Stud - Thru						all	2
36	5343974		Nut - Aircraft (Castle) (AN310-3)						all	1
37	1063999		Receptacle (AND1066-18-4P)						all	1
38	131825		Screw - Receptacle fillister head coarse thread (AN500-4-4)						all	4
39	138522		Washer - Receptacle lock						all	4
40	5361296		Plug - $\frac{1}{8}$ Inch pipe square head pipe thread (AN913-1)						all	2
41	1063997		Base						all	1
42	1066034		U-Bolt						all	2
43	1064016		Nut - U-Bolt self locking						all	4
	5317847		Nameplate						all	1
	33979		Screw - Round head drive (AN365-0-3)						all	4
44	5368698		Plug Assembly - Vent						all	1

FUEL

GROUP . . . Fuel System Units

Detail Unit . . . Valves and Filter — Fuel Shut-off

Constellation

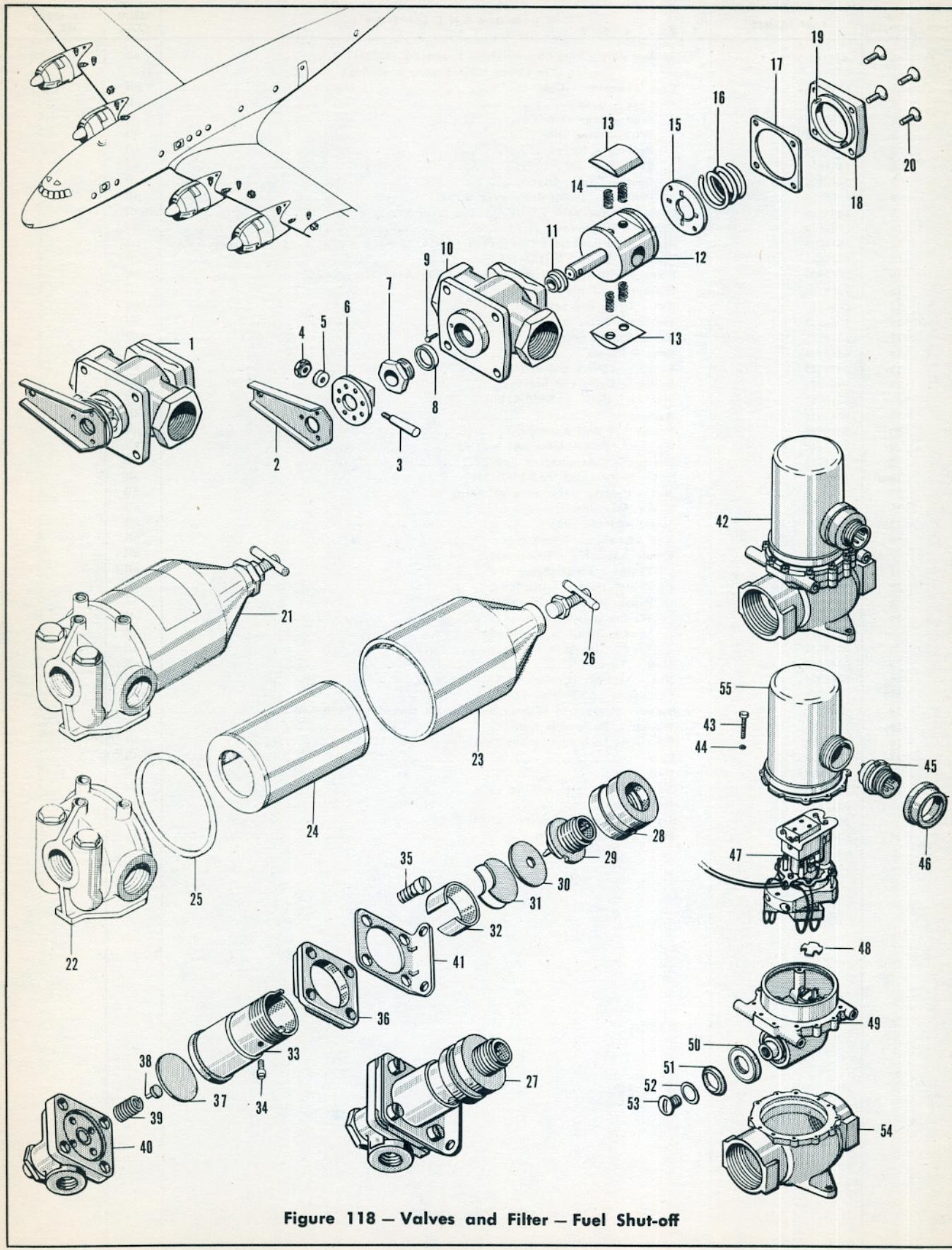


Figure 118 — Valves and Filter — Fuel Shut-off

GROUP . . . Fuel System Units

Constellation

Detail Unit . . . Valves and Filter—Fuel Shut-off

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6	N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
118 - 1	259898-2		Valve Assembly - Fuel shut-off (See figure 114 for using assembly) . . .						all	Ref
	259898-3		Valve Assembly - Fuel shut-off (See figure 114 for using assembly) . . .						all	Ref
	259898-4		Valve Assembly - Fuel shut-off (See figure 114 for using assembly) . . .						all	Ref
	259898-5		Valve Assembly - Fuel shut-off (See figure 114 for using assembly) . . .						all	Ref
			NOTE: 259898-2, -3, -4 and -5 valves are identical except for lever setting.							
2	280264		Lever Assembly - Fuel shut-off valve . . .						all	1
	280343		Valve Assembly - Fuel shut-off . . .						all	1
3	386-1-10A		Pin - Taper . . .						all	1
4	AN364-1032		Nut - Self-locking thin . . .						all	1
5	AN975-3		Washer - Taper thin . . .						all	1
6	280265		Hub - Cross feed and shut-off valve . . .						all	1
	4-1042-11-2		Valve - Shut-off (1 Inch pipe taps, No. 16 cylinder plug) (Parker) (633161-2)						all	1
7	*1-1142-2SS1		Cap + Packing . . .						all	1
8	*2-745-1		Ring - Sealing . . .						all	1
9	3-2841-16-4-5B1		Screw . . .						all	1
10	3-840-12-3D5		Body . . .						all	1
11	1-2740-2SS10		Washer + Thrust . . .						all	1
12	11-1742-10		Plug Assembly . . .						all	1
13	3-840-15GR1		Disc - Sealing (Graphitar No. 35) . . .						all	2
14	1-2141-12SS8		Spring - Sealing disc . . .						all	4
15	3-840-17-2SS11		Plate - Sealing disc . . .						all	1
16	7-1240-1SS8		Spring - Indicator . . .						all	1
17	*5-340-1		Gasket . . .						all	1
18	*3-840-14		Cap . . .						all	1
19	1-2740-14SS10		Pin - Ratchet plate set . . .						all	1
20	3-2841-11-10-10B1		Screw . . .						all	4
21	*34103		Filter - Fuel (Purolator) (633418) (See figure 114 for using assembly) . . .						all	Ref
22	34104		Head Assembly - Filter . . .						all	1
23	30854		Case & Bar Assembly . . .						all	1
24	30868		Element Assembly . . .						all	1
25	30873		Case - Gasket . . .						all	1
26	AN771-2		Cock - Screw type drain (See figure 114 for using assembly) . . .						all	Ref
27	40R249H		Valve Assembly - Magnetic shut-off (General Controls) (633259) . . .	(See figure 114 for using assembly)					all	Ref
28	4913A		Nut + Connector union . . .						all	1
29	100371-10S21		Connector - Cable . . .						all	1
30	4944B		Washer - Terminal insulation . . .						all	1
31	4944A		Washer - Terminal insulation . . .						all	1
32	5132A		Insulation - Wall . . .						all	1
33	100541B33		Magnet Assembly - Electro . . .						all	1
	4959B		Housing - Coil . . .						all	1
	100499D33		Coil Assembly . . .						all	1
34	4942		Screw - Safety wire retaining . . .						all	1
35	4996		Screw - Flange retaining . . .						all	4
36	4968A		Flange - Housing . . .						all	1
37	4967		Diaphragm . . .						all	1
38	4938B		Guide - Spring . . .						all	1
39	5854		Spring - Upper valve . . .						all	1
40	100750		Body Assembly and Internal Valve . . .						all	1
	4975B		Armature . . .						all	1
	5669B		Seat and Guide - Valve . . .						all	1
	5666B		Retainer - Spring . . .						all	1
	3135A-250		Ball . . .						all	1
	5667		Retainer - Lower spring . . .						all	1
	5852		Spring - Valve lower . . .						all	1
41	5252		Bracket - Mounting . . .						all	1
42	44R128C		Valve - Fuel shut-off (General Controls) (633259) . . .	(See figure 114 for using assembly)					all	Ref
43	4872-A6		Screw - Cover retaining . . .						all	11
	4872-A6D		Screw - Cover retaining . . .						all	1
44	3090-8		Washer . . .						all	12
45	6837-16S		Body - Electrical connector . . .						all	1
46	6624C		Nut - Union connector . . .						all	1
47	191007C		Motor Operator Assembly . . .						all	1
48	6836		Coupling - Drive member . . .						all	1
49	101214B		Bonnet Assembly - Valve . . .						all	1
50	101171		Disc Assembly - Valve . . .						all	1
51	6503		Washer - Disc retaining . . .						all	1
52	6502		Seal - Valve head . . .						all	1
53	6501		Head - Valve . . .						all	1
54	6400B		Body - Valve . . .						all	1
55	101179A		Cover Assembly - Valve . . .						all	1

* Replaces standard part per Service Bulletin 49/SB-14 and Service Instruction 49/SI-74.

GROUP Fuel System Units

Detail Unit Carburetor Air Induction System

Constellation

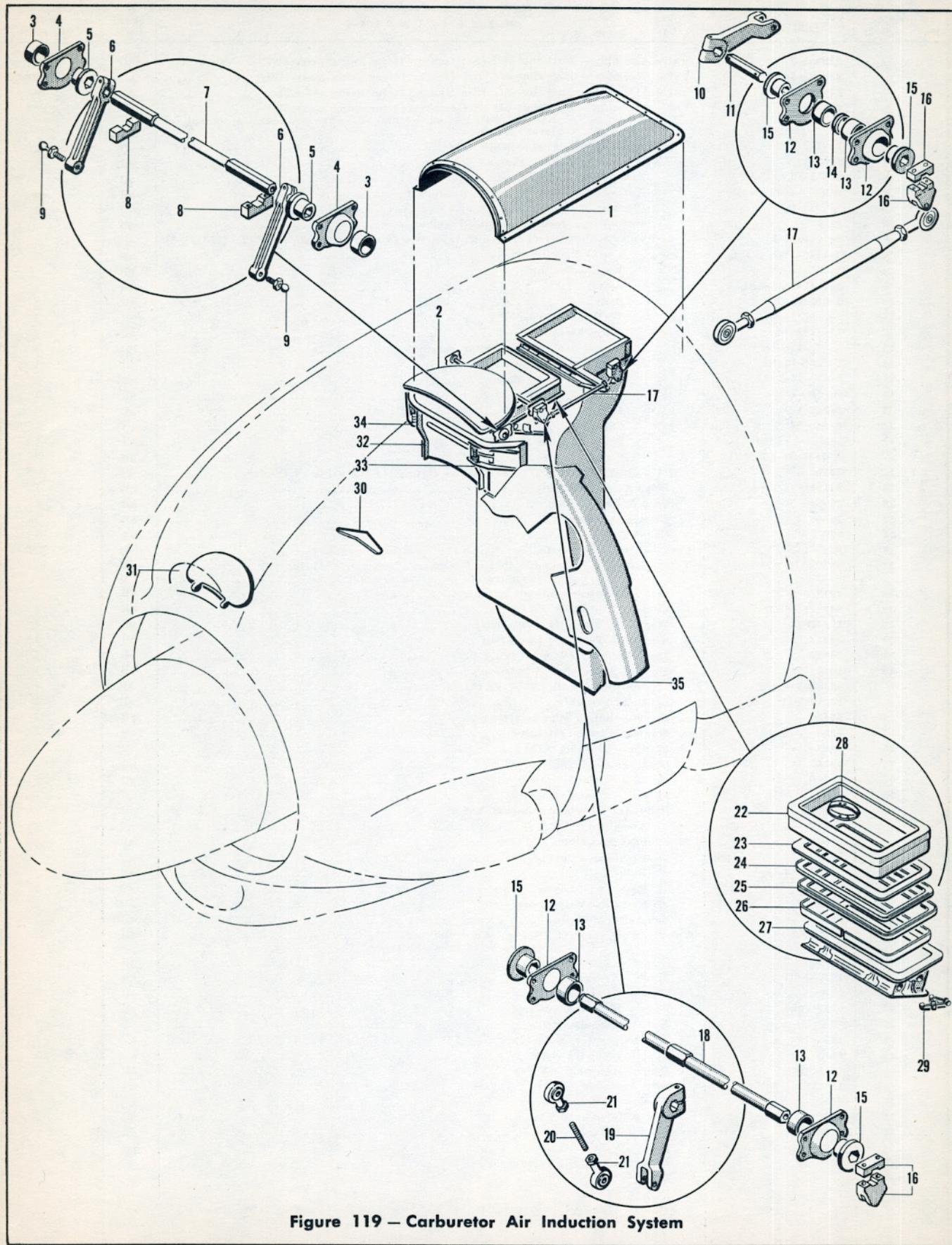


Figure 119 — Carburetor Air Induction System

Reissued July 1947

GROUP . . . Fuel System Units

Detail Unit . . . Carburetor Air Induction System

Constellation

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6	N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
119 - 1	276172		Installation - Air induction system (NP) (See figure 67 for using assembly)						all	Ref
	277282		Scoop Assembly - Air induction inner						all	1
2	276586		Valve Assembly - Carburetor preheat						all	1
	263182		Housing Assembly - Air induction forward lever						all	2
3	B128		Bearing (Torrington)						all	1
4	263182-2		Housing - Air induction forward lever						all	1
5	263069		Spacer - Air induction forward shaft						all	2
6	276333		Lever - Preheat duct vent door operating						all	2
7	276518		Shaft - Preheat valve						all	1
8	277178		Cap - Carburetor preheat valve						all	2
9	263086		Knob - Air induction forward lever						all	2
10	276278		Lever - Preheat valve control						all	1
11	261446		Shaft - Air induction lever						all	1
	261302		Housing Assembly - Air induction aft bearing						all	2
12	261302-2		Housing - Air induction aft bearing						all	1
13	B148		Bearing (Torrington)						all	1
14	263639		Ring - Air induction aft bearing alignment						all	1
15	261444		Spacer - Air induction aft bearing						all	2
16	261396-3		Lever - Air induction control						all	2
17	270845-20		Rod Assembly - Engine control						n	1
	LS506-13-QQ		Rod Assembly - Engine control						t	1
	FRE4-5		Bearing - Rod end (Shafter)						all	2
18	277225		Shaft - Preheat valve actuating						all	1
19	276277		Lever - Preheat valve actuating						all	1
20	276528-2		Rod Assembly - Carburetor preheat valve control						all	1
21	276528-4		Stud						all	1
	RE4F5		Bearing - Rod end (Fafnir)						all	2
22	262383		Coupling Assembly - Carburetor flexible						all	1
23	262300		Seal Assembly - Carburetor flexible coupling						all	1
24	263572		Gasket - Carburetor flexible coupling						all	6
25	262134		Packing - Carburetor flexible coupling						all	1
26	262135		Expander - Carburetor flexible coupling upper						all	1
27	262280		Stop - Carburetor flexible coupling seal						all	1
	262213		Throat Assembly - Carburetor flexible coupling						all	1
	263548		Boss - Carburetor temperature						all	1
	262213-12		Flange - Carburetor flexible coupling throat						all	3
28	255418		Spring Assembly - Carburetor flexible coupling						all	6
29	283471		Bracket Assembly - Mixture balance rod						all	1
30	277008		Bracket - Nose cowl leading edge valve control cylinder						all	1
31	276963-2		Valve - Nose cowl leading edge						all	Ref
			(See figure 69 for using assembly and detailed illustration)							
	262749		Installation - Carburetor preheat duct (NP) (See figure 70 for using assembly)						y	Ref
	287092		Installation - Carburetor preheat duct (NP) (See figure 70 for using assembly)						z	Ref
32	262333		Duct Assembly - Carburetor preheat duct						y	1
	287092-2		Duct Assembly - Carburetor preheat duct						z	1
	263132		Hinge Assembly - Carburetor preheat duct						z	2
33	263131L		Door Assembly - Carburetor preheat duct						all	1
34	263131R		Door Assembly - Carburetor preheat duct						all	1
	263133		Bushing - Carburetor preheat duct door						all	2
	263130L		Spring - Carburetor preheat duct door hinge						all	2
	263130R		Spring - Carburetor preheat duct door hinge						all	2
	263098		Installation - Carburetor preheat shroud (NP) (See figure 67 for using assembly)						y	Ref
	287093		Installation - Carburetor preheat shroud (NP) (See figure 67 for using assembly)						z	Ref
35	262073		Panel Assembly - Carburetor preheat shroud left						y	1
	287090		Panel Assembly - Carburetor preheat shroud left						z	1
	262072		Panel Assembly - Carburetor preheat shroud right						z	1
	287091		Panel Assembly - Carburetor preheat shroud right						z	1
	262074		Spring - Carburetor preheat shroud						all	4

Notes

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GROUP . . . Engine Oil System

Detail Unit . . . Engine Oil System Complete

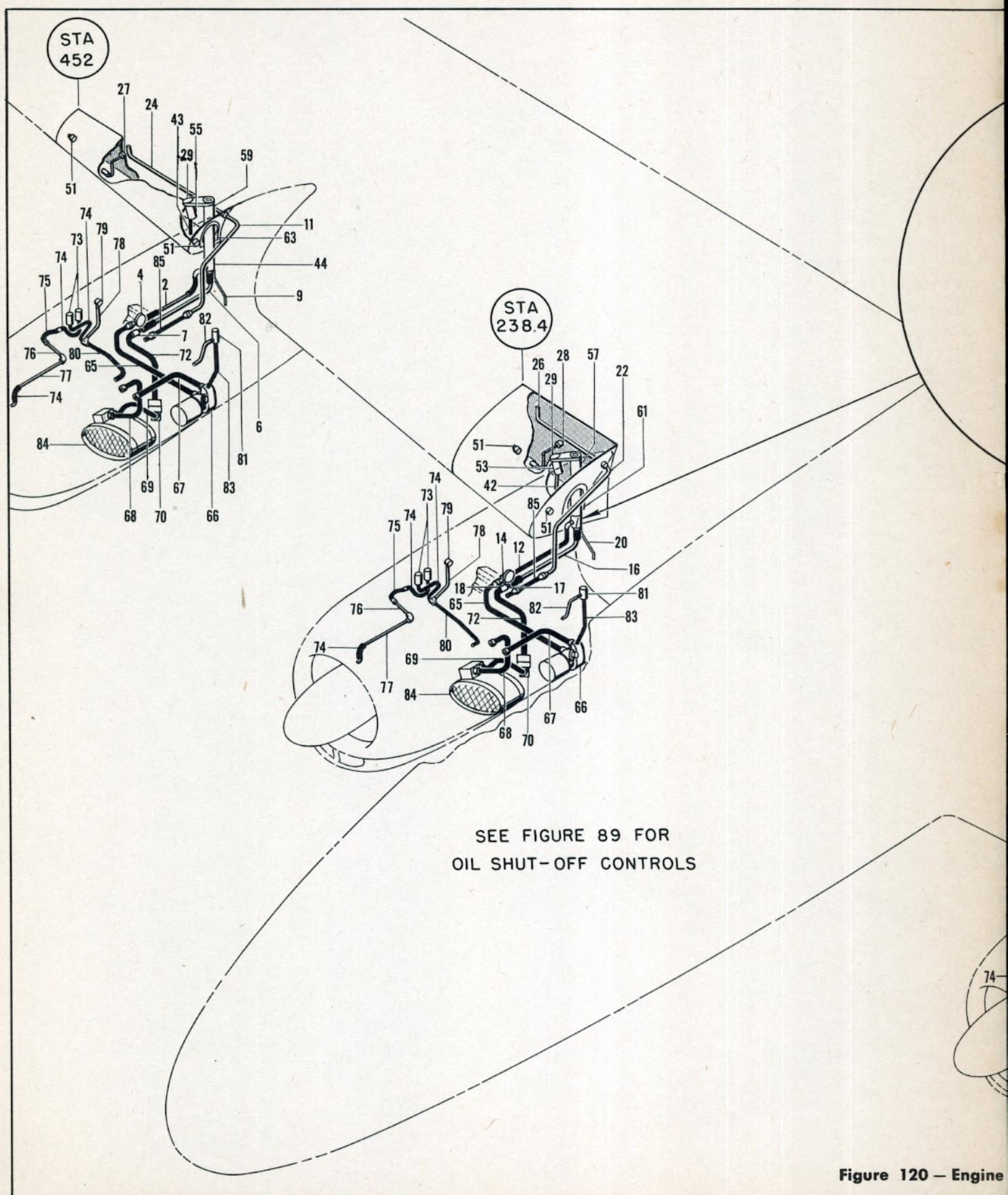
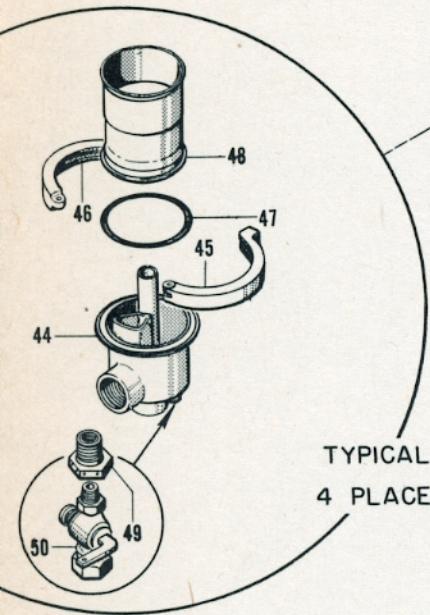
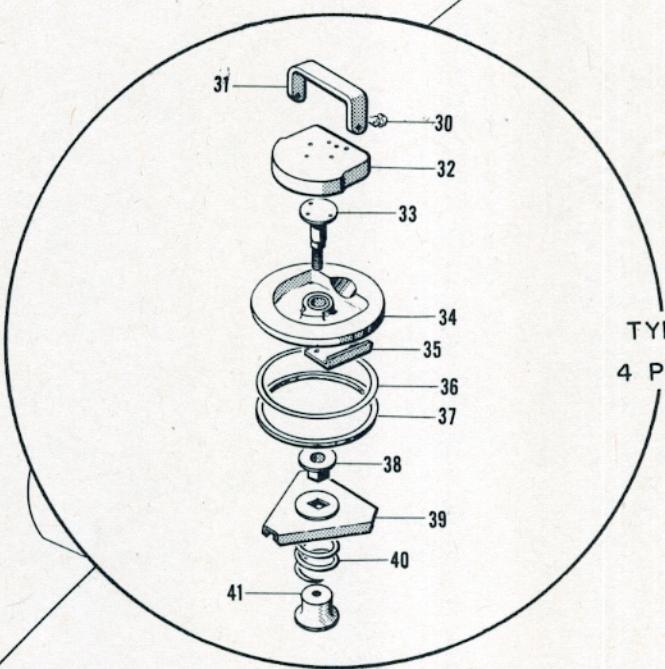


Figure 120 – Engine

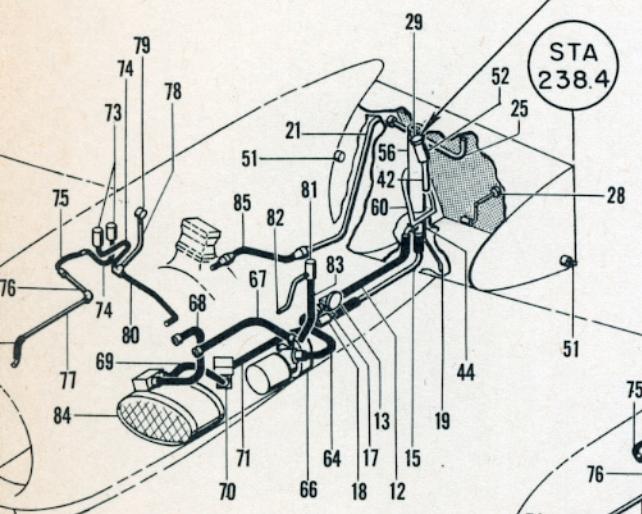
Constellation



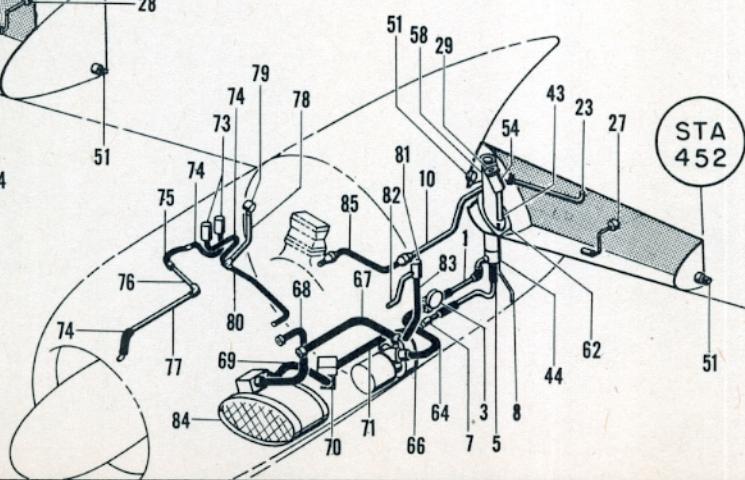
SEE FIGURE 3 FOR RIBS AND
FORMERS THAT FORM THE OIL
TANKS



TYPICAL
4 PLACES



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450

Oil System Complete

GROUP . . . Engine Oil System

Detail Unit . . . Engine Oil System Complete

Constellation

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6	N O M E N C L A T U R E			SERIAL CODE	UNITS PER ASSY.
	251000L		Wing Assembly - Inner section (See figure 2 for using assembly)			all	Ref
	251000R		Wing Assembly - Inner section (See figure 2 for using assembly)			all	Ref
	269400		Installation - Outboard nacelle piping, LH			all	Ref
	261213		Installation - Outboard nacelle piping, RH			all	Ref
120 - 1	*295605-4		Tube Assembly - Engine oil supply (LH only)			all	1
2	*295605-8		Tube Assembly - Engine oil supply (RH only)			all	1
3	261356-2		Valve Assembly - Engine oil shut-off (LH only)	(See figure 124 for detailed illustration)		all	1
4	261356-3		Valve Assembly - Engine oil shut-off (RH only)	(See figure 124 for detailed illustration)		all	1
5	*295605-3		Tube Assembly - Engine oil return (LH only)			all	1
6	*295605-7		Tube Assembly - Engine oil return (RH only)			all	1
7	525GG1½D		Valve - Check (Parker) (633071)			all	1
8	291198-9		Tube Assembly - Oil hopper sump drain (LH only)			an	1
9	291198-12		Tube Assembly - Oil hopper sump drain (RH only)			an	1
10	254027-12		Tube Assembly - Oil tank vent (LH only)			all	1
11	264033-18		Tube Assembly - Oil tank vent (RH only)			all	1
	281027		Installation - Inboard nacelle piping, LH (See figure 2 for using assembly)			all	Ref
	281029		Installation - Inboard nacelle piping, RH (See figure 2 for using assembly)			all	Ref
12	89507		Hose - Engine oil supply (Weatherhead)			all	1
13	261356-2		Valve Assembly - Engine oil shut-off (LH only)	(See figure 124 for detailed illustration)		all	1
14	261356-3		Valve Assembly - Engine oil shut-off (RH only)	(See figure 124 for detailed illustration)		all	1
15	*295605-2		Tube Assembly - Engine oil return (LH only)			all	1
16	*295605-11		Tube Assembly - Engine oil return (RH only)			all	1
17	254027-22		Tube Assembly - Engine oil return (RH all serials) (LH serial c)			all	1
	287878-14		Tube Assembly - Engine oil return (LH only)			et	1
	286450-77		Tube Assembly - Engine oil return (LH only)			eu	1
18	525GG1½D		Valve - Check (Parker) (633071)			all	1
19	291198-10		Tube Assembly - Oil hopper sump drain (LH only)			an	1
20	291198-11		Tube Assembly - Oil hopper sump drain (RH only)			an	1
21	254027-18		Tube Assembly - Oil tank vent (LH only)			all	1
22	264033-21		Tube Assembly - Oil tank vent (RH only)			all	1
	270255L		Installation - Outboard oil tank fittings (See figure 2 for using assembly)			all	Ref
	270255R		Installation - Outboard oil tank fittings (See figure 2 for using assembly)			all	Ref
	269438L		Installation - Inboard oil tank fittings (See figure 2 for using assembly)			all	Ref
	269438R		Installation - Inboard oil tank fittings (See figure 2 for using assembly)	(Components of 4 preceding installations are identical except as noted below)		all	Ref
23	284131-67		Tube Assembly - Oil tank vent (LH Outboard only)			all	1
24	284131-69		Tube Assembly - Oil tank vent (RH Outboard only)			all	1
25	254027-4		Tube Assembly - Oil tank vent (LH Inboard only)			all	1
26	254027-5		Tube Assembly - Oil tank vent (RH Inboard only)			all	1
27	EA65A628033		Transmitter - Oil quantity (Outboard tanks only) (Liquidometer) (628033)			all	1
28	EA65A628013		Transmitter - Oil quantity (Inboard tanks only) (Liquidometer) (628013)			all	1
29	255869		Cap Assembly - Oil tank fillerwell			all	1
30	261792		Spring - Fillerwell cap			all	1
31	254098-2		Handle - Fillerwell cap			all	1
32	254076-2		Retainer - Fillerwell cap handle			all	1
33	278854		Pin - Fillerwell cap			all	1
34	254087-2		Body Assembly - Fillerwell cap			all	1
35	278410-5		Positioner Assembly - Fillerwell cap			all	1
36	261791		Shim - Fillerwell cap			all	AR
37	254157		Gasket - Fillerwell cap			c	1
38	278379		Bushing - Fillerwell cap			all	1
39	278269-5		Traveler Assembly - Fillerwell cap			all	1

Reissued July, 1947

GROUP . . . Engine Oil System

Constellation

Detail Unit . . . Engine Oil System Complete (Continued)

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
120 - 40	278853		Spring - Fillerwell cap						all	1
41	278380		Retainer - Fillerwell cap						all	1
42	279624-3		Gauge - Inboard oil tank stick						all	1
43	279624-2		Gauge - Outboard oil tank stick						all	1
44	254105		Sump Assembly - Oil hopper						all	1
45	254104-2		Clamp - Oil hopper sump						all	1
46	254104-3		Clamp - Oil hopper sump						all	1
47	254126		Seal - Oil hopper sump						all	1
48	254121		Tube Assembly - Oil hopper						all	1
49	282976		Plug - Oil hopper sump drain						all	1
50	765-2		Cock - Oil hopper sump drain shut-off						all	1
51	AN913-10D		Plug - Square head, pipe thread						all	2
	286259-2L		Cover Assembly - Inboard oil tank						all	1
	286259-2R		Cover Assembly - Inboard oil tank						all	1
	286259-3L		Cover Assembly - Outboard oil tank						all	1
	286259-3R		Cover Assembly - Outboard oil tank						all	1
52	254173-3L		Fillerwell Assembly - Inboard oil tank						all	1
53	254173-3R		Fillerwell Assembly - Inboard oil tank						all	1
54	254173-2L		Fillerwell Assembly - Outboard oil tank						all	1
55	254173-2R		Fillerwell Assembly - Outboard oil tank						all	1
	289854		Seal - Fillerwell cap (Replaces 254157)						d	1
56	262563-2		Tube Assembly - Inboard oil hopper (LH only)						all	1
57	262563-3		Tube Assembly - Inboard oil hopper (RH only)						all	1
58	262563-4		Tube Assembly - Outboard oil hopper (LH only)						all	1
59	262563-5		Tube Assembly - Outboard oil hopper (RH only)						all	1
60	254502-2L		Housing Assembly - Inboard oil tank hopper					(See figures 13 and 14 for using assembly)	all	Ref
61	254502-2R		Housing Assembly - Inboard oil tank hopper					(See figures 13 and 14 for using assembly)	all	Ref
62	254502-3L		Housing Assembly - Outboard oil tank hopper (See figure 15 for using assembly)						all	Ref
63	254502-3R		Housing Assembly - Outboard oil tank hopper (See figure 15 for using assembly)						all	Ref
	282867-2		Installation - LH Inboard engine compartment plumbing (NP)					(See figure 67 for using assembly)	y	Ref
	282867-3		Installation - LH Outboard engine compartment plumbing (NP)					(See figure 67 for using assembly)	y	Ref
	282868-2		Installation - RH Inboard engine compartment plumbing (NP)					(See figure 67 for using assembly)	y	Ref
	282868-3		Installation - RH Outboard engine compartment plumbing (NP)					(See figure 67 for using assembly)	y	Ref
	288147-2		Installation - Engine oil system, LH (NP) (See figure 67 for using assembly)						dv	Ref
	288147-3		Installation - Engine oil system, RH (NP) (See figure 67 for using assembly)						dv	Ref
	292510-2		Installation - Engine oil system, LH (NP) (See figure 67 for using assembly)						ccc	Ref
	292510-3		Installation - Engine oil system, RH (NP) (See figure 67 for using assembly)						ccc	Ref
	288148-2		Installation - Engine instrument pressure transmission system, LH (NP)					(See figure 67 for using assembly)	z	Ref
	288148-3		Installation - Engine instrument pressure transmission system, RH (NP)					(See figure 67 for using assembly)	z	Ref
64	*340A24D11		Hose Assembly - Oil intake, firewall to sump tank, LH (Aeroquip)						all	1
65	*340A24D36½		Hose Assembly - Oil intake, firewall to sump tank, RH (Aeroquip)						all	1
66	279694		Installation - Oil system sump tank (NP)					(See figure 124 for detailed illustration)	all	1
67	*340A24D18.00		Hose Assembly - Oil intake, sump tank to engine (Aeroquip)						all	1
	279267		Flange - Oil intake						all	1
	262808		Gasket - Oil lines						all	4
	279115		Elbow - Oil outlet						ddd	1
	292538		Elbow - Oil outlet						ccc	1

GROUP . . . Engine Oil System

Constellation

Detail Unit . . . Engine Oil System Complete (Continued)

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
120 - 68	*340A20D25.25		Hose Assembly - Oil outlet, engine to cooler (Aeroquip)						all	1
	279190		Elbow - Oil cooler connection						ddd	1
	278749		Elbow - Oil cooler outlet (LH only)						ddd	1
	262777		Flange - Oil cooler outlet (RH only)						ddd	1
	262825		Cover - Oil cooler outlet						ddd	1
	292508		Fitting - Oil cooler and thermostat connections						ccc	4
	266298		Gasket - Oil cooler and thermostat connections						ccc	4
	*SK530-20D32		Hose Assembly - Oil outlet, cooler to firewall (LH only)						ddd	1
	*SK527-20D34		Hose Assembly - Oil outlet, cooler to firewall (RH only)						ddd	1
69	*340-20D9		Hose Assembly - Oil outlet, cooler to thermostat (Aeroquip)						ccc	1
70	*11359-3		Thermostat Assembly - Oil temperature control (Airesearch) (633328-3)						ccc	1
			(Interchangeable with 12212-3) (See figure 122 for detailed illustration)							
71	*SK530-20D24½		Hose Assembly - Oil outlet, thermostat to firewall (LH only)						ccc	1
72	*340A20D38½		Hose Assembly - Oil outlet, thermostat to firewall (RH only)						ccc	1
	282525-5		Installation - Engine instrument autosyn transmitter (NP)						all	1
	282525-9		Transmitter Assembly - Autosyn						all	1
73	4150-3		Transmitter - Autosyn oil pressure (Pioneer) (628050)						all	2
	AN5832-2		Valve - Pressure gauge filler check						all	2
74	*318-4W17½		Hose Assembly - Nose and rear oil pressure						all	3
75	*318-4W16½		Hose Assembly - Nose oil pressure						all	1
76	284131-51		Tube Assembly - Nose oil pressure						all	1
77	*295291-11		Tube Assembly - Nose oil pressure						all	1
78	282855-16		Tube Assembly - Rear oil pressure, tee to warning unit						all	1
	Fig. 2111 (50 PSI)		Warning Unit - Oil pressure (U. S. Gauge)						fa	1
79	555-549 (42 PSI)		Warning Unit - Oil pressure (Cook Electric) (624036-4)						cw	1
80	*318-4W36		Hose Assembly - Rear oil pressure						all	1
	270085		Restrictor - Rear oil pressure line						all	1
	274956		Installation - Oil dilution system (NP)						all	1
81	AN4078-1		Valve - Oil dilution solenoid						all	1
			(Interchangeable alternates: S100, UC1070E, 37D6210E)							
82	287795-4		Tube Assembly - Solenoid to oil tank vent line						all	1
83	*318-4W25		Hose Assembly - Solenoid to sump tank						all	1
	261041		Installation - Oil cooler and flap (NP) (See figure 121 for detailed illustration)						ddd	Ref
84	289355		Installation - Oil cooler and flap (NP) (See figure 121 for detailed illustration)						ccc	Ref
85	3706A12QA-01120112-28		Hose Assembly - Oil tank vent						all	1

* Replaces Standard Part, added or serialized per one or more of the following:
Service Bulletins 49/SB-14, 49/SB-103, 49/SB-108, 49/SB-121, 49/SB-230, 49/SB-231; Service Instructions 49/SI-22, 49/SI-129; Mod. Prints 295277, 295291, 295606.

OIL

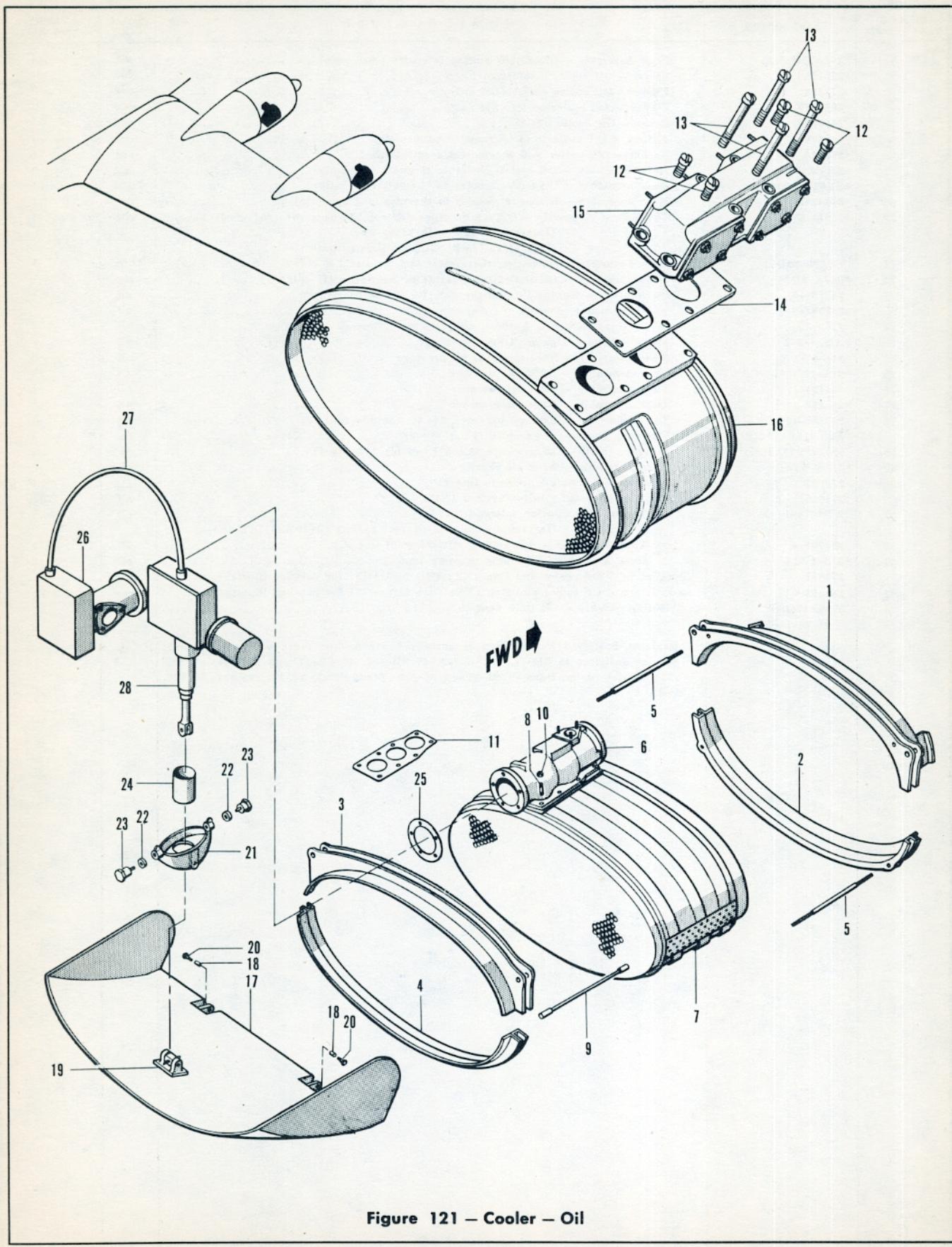


Figure 121 — Cooler — Oil

GROUP . . . Engine Oil System Units

Constellation

Detail Unit . . . Cooler—Oil

FIGURE & INDEX NUMBER	PART NUMBER	N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
		1	2	3	4	5	6		
	261041	Installation - Oil cooler and flap (NP) (See figure 67 for using assembly)						ddd	Ref
	289355	Installation - Oil cooler and flap (NP) (See figure 67 for using assembly)						ccc	Ref
	261040	Cooler Assembly - Oil.....						ddd	1
	289542	Cooler Assembly - Oil.....						ccc	1
121 - 1	261626	Support Assembly - Oil cooler front upper.....						ddd	1
	261626-500	Support Assembly - Oil cooler front upper.....						ccc	1
2	261517	Support Assembly - Oil cooler front lower.....						ddd	1
	261517-500	Support Assembly - Oil cooler front lower.....						ccc	1
3	261627	Support Assembly - Oil cooler rear upper.....						ddd	1
	261627-500	Support Assembly - Oil cooler rear upper.....						ccc	1
4	261516	Support Assembly - Oil cooler rear lower.....						ddd	1
	261516-500	Support Assembly - Oil cooler rear lower.....						ccc	1
5	271473	Support Assembly - Oil cooler rear lower.....						all	4
	261745	Rod + Oil cooler support.....						all	2
	8505910	Pad - Cooler support.....						ddd	1
6	8505005	Cooley - Elliptical oil (Harrison Radiator) (633112) (Alternate 8505004).....						ddd	1
		Valve Assembly - Rotary temperature control.....							
		(See figure 122 for detailed illustration)							
7	8505911	Regulator Assembly - Oil temperature (Alternate 8505006).....						ddd	1
	AN900-16	Gasket						ddd	1
	AN909-16	Plug						ddd	1
8	8504379	Stud - Short mounting.....						ddd	10
	8505916	Core Assembly - Left hand end						ddd	1
	8505701	Core Assembly - Center left hand						ddd	1
	8505699	Core Assembly - Center right hand						ddd	1
	8505697	Core Assembly - Right hand end						ddd	1
9	8503003	Tube - Oil cooler (Type A)						ddd	1485
		(Item 29 required on all core assemblies)							
10	AN364-524	Nut - Self locking						ddd	10
11	8504403	Gasket - Valve flange						ddd	1
	18244	Cooler - 175 Square inch elliptical (Airesearch) (633433)						ccc	1
12	2A5754-16	Screw - Fillister head						ccc	4
13	2A5754-49	Screw - Fillister head						ccc	4
14	16844	Gasket - Valve to cooler						ccc	1
15	19469	Valve Assembly - 4 Port, spring-loaded common outlet						ccc	1
	S8057-22	Packing						ccc	1
	S8057-25	Gasket						ccc	1
	16301	Valve						ccc	1
	16599	Gasket						ccc	2
	17341-2	Valve - Check						ccc	1
	17897	Gasket						ccc	1
	19730	Valve						ccc	1
	25164	"O" Ring						ccc	1
	2A5761	Spring - Surge valve						ccc	1
	19505	Spring						ccc	1
	17313	Cap + Surge valve						ccc	1
	19152	Nut + Castle						ccc	1
	19504	Guide - Bypass valve						ccc	1
	19363	Housing						ccc	1
	17896-2	Washer						ccc	1
	17896-1	Washer						ccc	1
	17895	Tube - Spacer						ccc	1
	16599	Gasket						ccc	1
16	18243	Cooler Assembly - Oil						ccc	1
	2A4633-16	Gasket						ccc	1
	SA8019B16	Plug - Drain						ccc	1
	S8099-1-0803	Tube						ccc	2886
	17392-1	Ferrule						ccc	5772
17	261991	Flap Assembly - Oil cooler exit						all	1
	261658	Hinge Assembly - Oil cooler						all	1
18	261662	Bushing - Oil cooler exit flap hinge						all	2
19	273179	Lug Assembly - Flap drive universal						all	1
20	262151	Bolt - Oil cooler flap hinge						all	2
21	273153	Cradle Assembly - Cowl flap drive large						all	1
	202929	Bushing - Cowl and oil cooler flap jack						all	2
22	273264	Bushing - Flap drive cradle						all	2
23	273446	Nut - Flap drive cradle						all	2
24	273537-3	Seal - Flap drive						all	2
25	274063	Gasket - Automatic flap control						ddd	1
26	629092	Control Assembly - Automatic flap (See figure 122 for detailed illustration)						ddd	1
27	3201Y-1610	Shaft Assembly - Oil cooler flap control (S. S. White) (639010)						ddd	1
		(Alternate - Charles Fischer No. 1069)							
28	D11301	Gear Box - Oil cooler flap (Foote Bros.) (633232)						all	1
		(See figure 123 for detailed illustration)							

Reissued July, 1947

GROUP . . . Engine Oil System Units
Detail Unit . . . Regulators — Temperature

Constellation

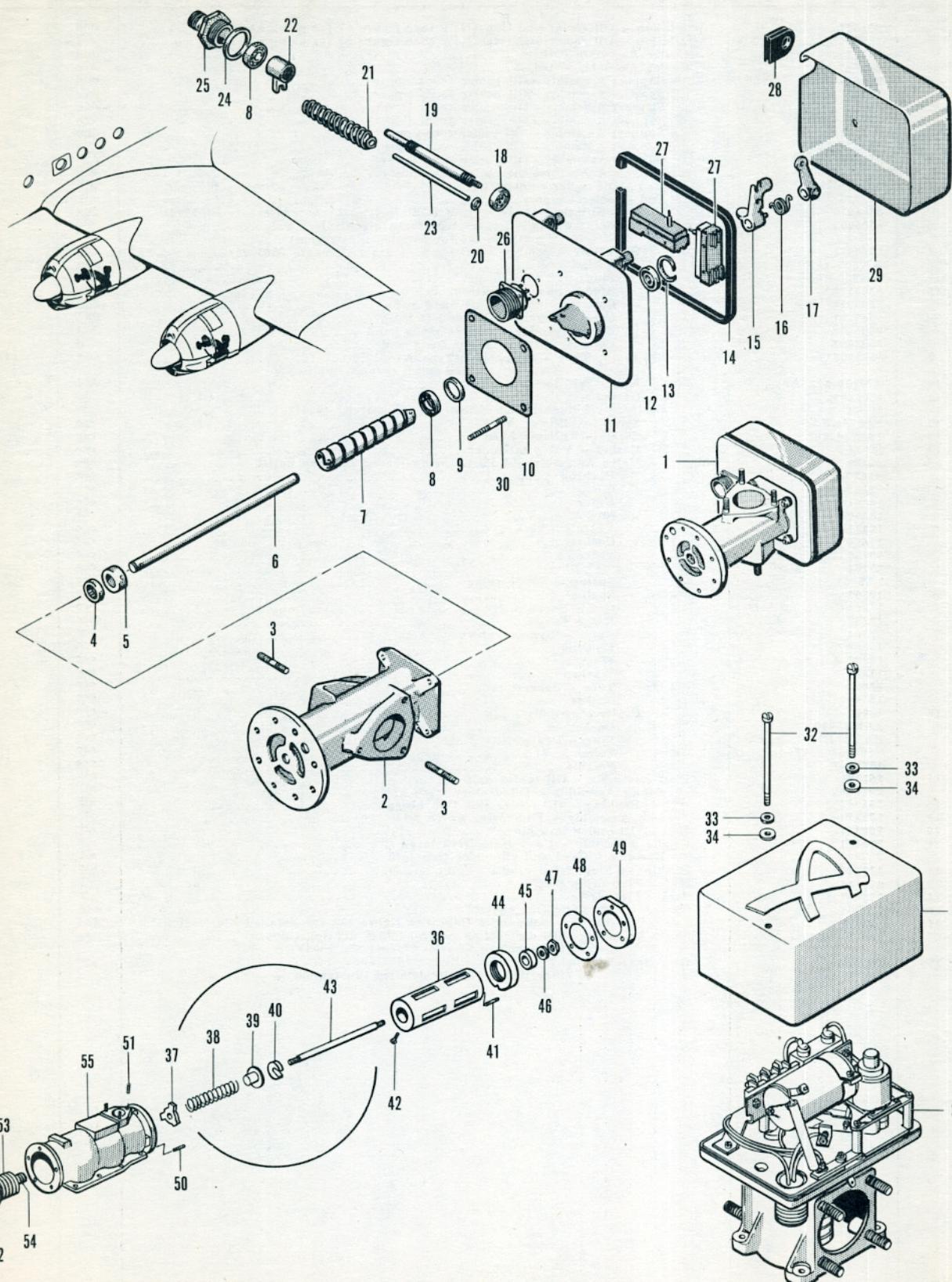


Figure 122 — Regulators — Temperature

GROUP . . . Engine Oil System Units

Detail Unit . . . Regulators—Temperature

Constellation

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6	N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.	
			Automatic Flap Control (Recalibrated to 153° F-163° F per 49/SB-230) (See figure 121 for using assembly)	Adapter - Automatic flap control	Stud - Automatic flap control adapter	Bearing (Torrington Co.)	Shaft Assembly - Automatic flap control drive	Collar	Shaft		
122 - 1	629092									ddd	Ref
2	262374									ddd	1
3	262537									ddd	6
4	B45									ddd	1
5	262461									ddd	1
6	262461-3									ddd	1
6	262461-2									ddd	1
7	262438									ddd	1
8	K4A									ddd	2
9	262946									ddd	1
10	262948									ddd	1
11	262373									ddd	1
12	1X									ddd	1
13	262506									ddd	1
14	262508									ddd	1
15	262436									ddd	1
16	262478									ddd	1
17	262437									ddd	1
18	K3A									ddd	1
19	262444									ddd	1
20	AN960A6									ddd	A.R.
21	262479									ddd	1
22	262435									ddd	1
23	262462									ddd	1
24	262947-3									ddd	1
25	262510									ddd	1
26	WK4-32S									ddd	1
27	G-RS									ddd	2
28	262518									ddd	1
29	262509-2									ddd	1
30	262519									ddd	4
	12212-3									ccc	Ref
31	10663-3									ccc	1
32	11264-1									ccc	2
33	11207									ccc	2
34	AN960-8									ccc	2
35	11352									ccc	1
	26650									ccc	1
	11286-2									ccc	1
	8505005									ddd	1
	8504422									ddd	1
	8504400									ddd	1
	8504614									ddd	1
36	8504402									ddd	1
37	8503714									ddd	1
38	8504428									ddd	1
39	8503716									ddd	1
40	8503718									ddd	1
41	8503121									ddd	1
42	155886									ddd	1
43	8503721									ddd	1
	8503720									ddd	1
44	8503430									ddd	1
45	8503124									ddd	1
46	8503184									ddd	1
47	AN320-5									ddd	1
48	8503071									ddd	1
49	8503609									ddd	1
50	8503081									ddd	12
51	8505222									ddd	3
	8503723									ddd	1
52	8503418									ddd	1
53	8503079									ddd	1
54	8503725									ddd	1
55	8504392									ddd	1
	Body - Valve										

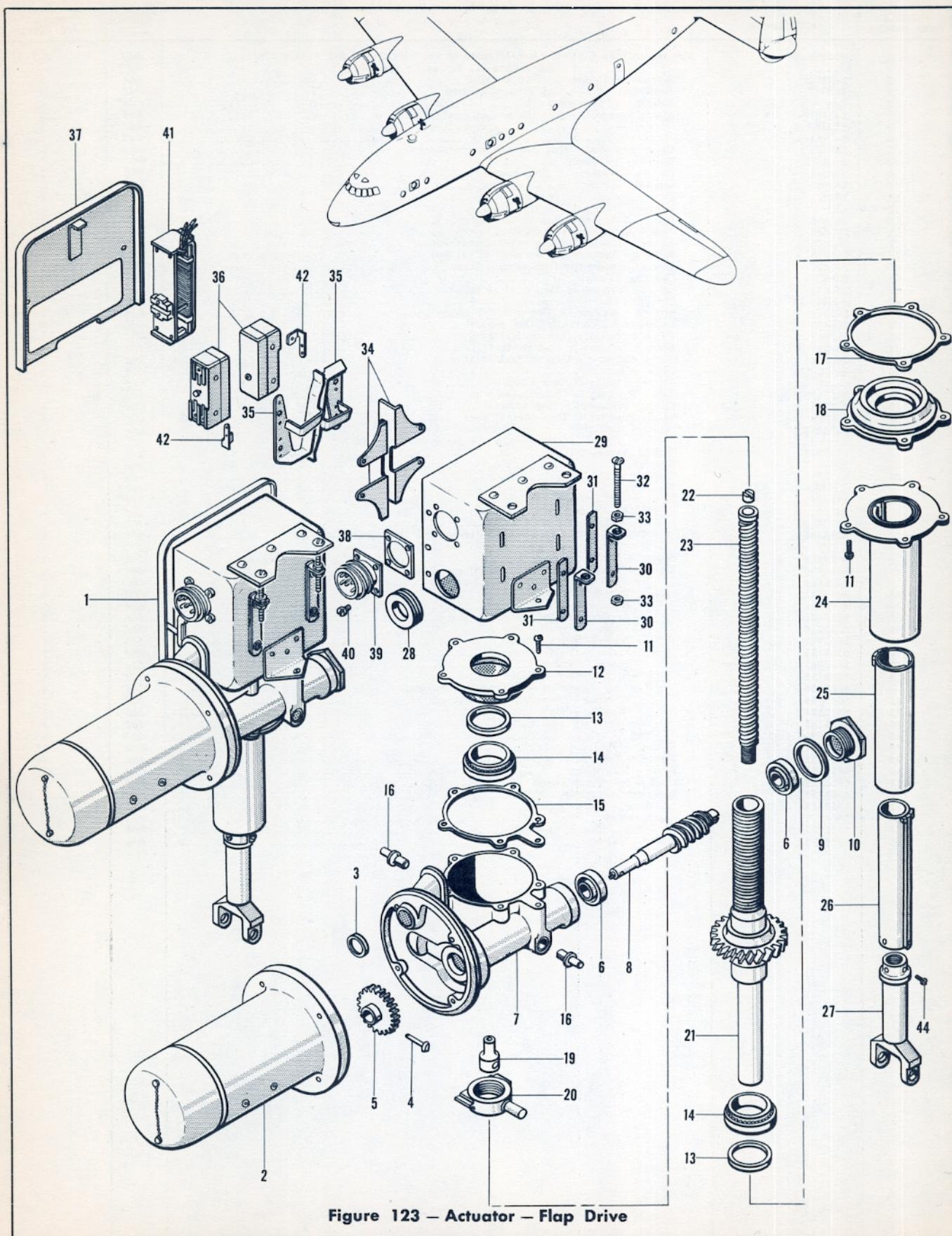


Figure 123 — Actuator — Flap Drive

GROUP . . . Engine Oil System Units

Detail Unit . . . Actuator—Flap Drive

Constellation

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
123 - 1	D11301	Actuator Assembly -	Oil cooler flap drive (Foote Bros.) (633232)	(See figure 121 for using assembly)					all	Ref
2	11D100	Motor - Electric	box oil cooler flap (O. B. McClintock) (635062)	(Foote Bros. No. 109007)					all	1
			Alternates:							
	7213		(U. S. Electric Motor Co.) (635062)							
	5BA25HJ16C		(General Electric) (635062)							
	5BA25HJ16B		(General Electric) (635062)							
	EE1690		(Aireon) (635062)							
3	108028	Gasket - Motor flap drive							all	1
4	108018	Pin - Flap drive spur gear							all	1
5	108019	Gear - Spur motor							all	1
6	KP5A	Bearing (Fafnir) (Foote Bros. No. 107002)							all	2
7	108022	Housing - Main gear							all	1
8	108020	Worm - Oil cooler flap drive							all	1
9	108021	Shim - Automatic control							all	1
10	107030	Plug Fitting							all	1
	107029	Fitting - Grease							all	1
11	107015	Screw - Drilled fillister head coarse thread							all	13
12	107023	Housing - Upper bearing							all	1
13	107004	Packing - Housing							all	2
14	B540	Bearing (Fafnir) (Foote Bros. No. 107014)							all	2
15	108027	Shim - Upper							all	1
16	107006	Fulcrum - Flap actuator							all	2
17	107019	Shim - Lower							all	1
18	107016	Housing - Lower bearing							all	1
19	113003	Plug - Oil cooler flap drive							all	1
20	109005	Nut - Flap drive limit switch							all	1
21	113002	Gear and Nut - Flap drive worm							all	1
22	107026	Plug - Flap drive							all	1
23	107011	Screw - Flap drive							all	1
24	11106	Shield - Outer							all	1
25	11105	Shield - Center							all	1
26	11104	Shield - Inner							all	1
27	113001	Piece - Flap drive end							all	1
28	108025	Grommet - Limit switch box							all	1
29	11304	Box Assembly - Limit switch							all	1
30	112032	Seal - Flap drive limit switch							all	2
31	108005	Gasket - Box seal							all	2
32	112033	Screw							all	2
33	112034	Nut							all	2
34	108015	Guide - Limit switch							all	2
35	115004	Spring Assembly - Limit switch							all	2
36	WZTRTC	Switch (Microswitch) (Foote Bros.) (115002)							all	2
37	112028	Cover Assembly - Limit switch box							all	1
38	112014	Spacer - Plug							all	1
39	WK6-32S	Plug (Cannon) (Foote Bros. No. 112011)							all	1
40	112010	Screw							all	4
41	112038	Transmitter - Assembly box (500 ohm)							all	1
42	112035	Terminal - Flap drive							all	2
43	113006	Fitting - Assembly box							all	1
44	107021	Screw							all	1

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GROUP . . . Engine Oil System Units

Detail Unit . . . Shut-off Valve, Sump Tank and Prop. Feathering

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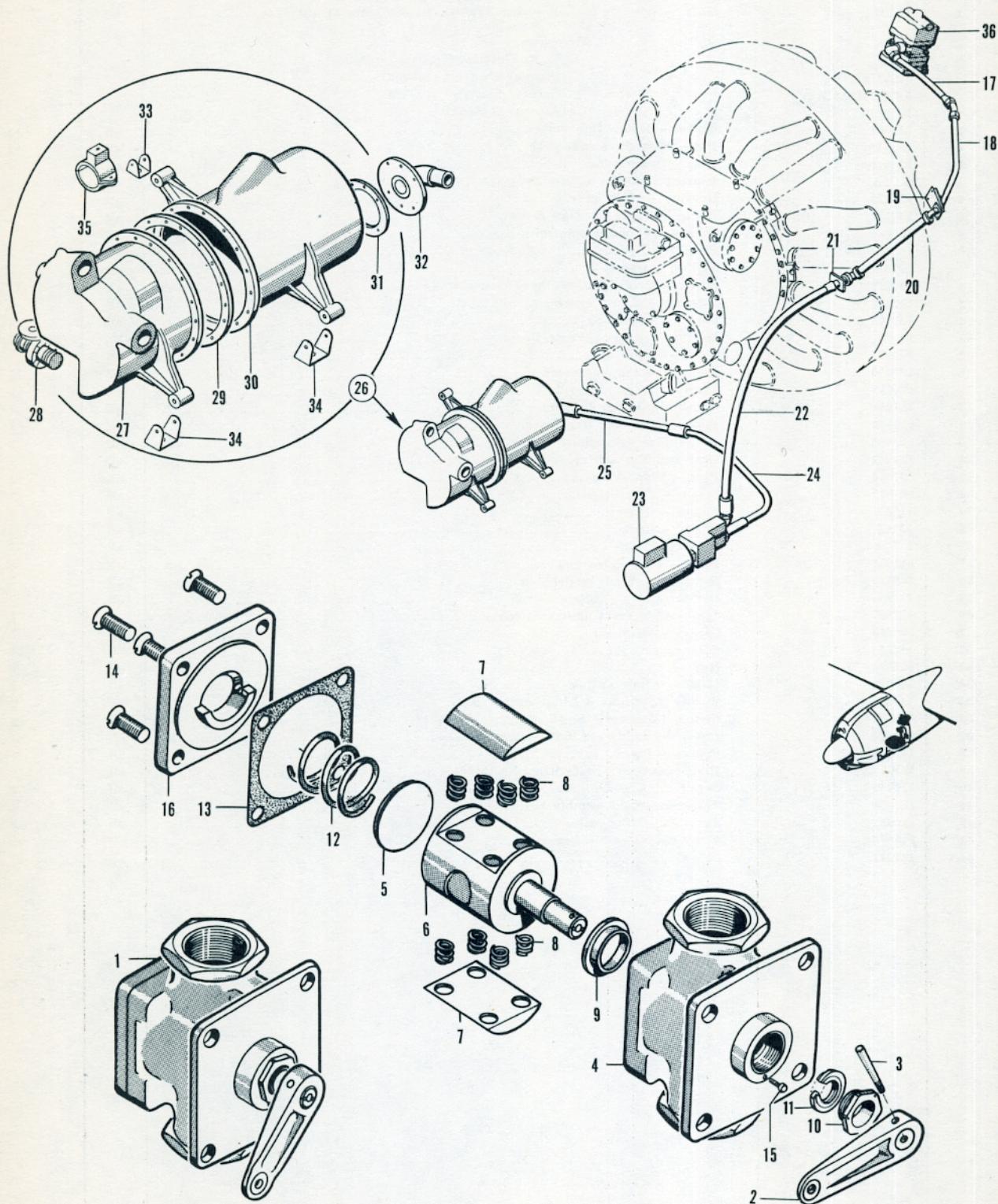


Figure 124 — Shut-off Valve, Sump Tank and Prop. Feathering

GROUP . . . Engine Oil System Units

Detail Unit . . . Shut-Off Valve, Sump Tank and Propeller Feathering

Constellation

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
124 - 1	261356-2	Valve Assembly	- Engine shutoff (See figure 120 for using assembly)						all	Ref
	261356-3	Valve Assembly	- Engine shutoff (See figure 120 for using assembly)						all	Ref
		(NOTE: Identical except position of lever)								
2	258441	Lever							all	1
3	386-1-7A	Pin (Parker)							all	1
	6-1941-45-2	Valve - Cylinder plug (Size 24) (Parker) (633079-2)							all	1
4	A4-240-9-3	Body							all	1
5	B5-2942-22	Cap							all	1
6	A5-1743-5	Plug - Sub-assembly							all	1
	B5-2542-21	Plug							all	1
	A4-240-15	Ring Assembly - Ratchet							all	1
7	A9-441-25	Disc - Sealing							all	2
8	A9-641-3	Spring - Sealing disc							all	8
9	A4-240-14	Washer - Thrust							all	1
10	A4-240-12	Cap - Packing							all	1
11	A4-240-13	Packing							all	1
12	A1-1040-11	Spring							all	1
13	A5-440-6	Gasket							all	1
14	7X296	Screw - Flat head							all	4
15	9-601	Screw							all	1
16	A12-1836-2-16	Spring - Button							all	1
	274986	Installation - Propeller feathering system (NP) (See figure 67 for using assembly)							all	Ref
17	70099-10-01100110-11S	Hose Assembly - Feathering pump pressure (Weatherhead)							all	1
18	*295291-13	Tube Assembly - Feathering pump pressure							all	1
19	*295291-4	Bracket - Pump pressure line							all	1
20	70099-10-01100110-15S	Hose Assembly - Feathering pump pressure (Weatherhead)							all	1
21	286526	Fitting - Propeller feathering line							all	1
22	70099-10-01100110-33S	Hose Assembly - Feathering pump pressure (Weatherhead)							all	1
23	287966	Pump Assembly - Motor driven feathering (Made from IE5210C) (Pesco)							all	1
24	*295279-3	Tube Assembly - Oil tank pressure							all	1
	K1700B2	Drain Cock Assembly (Koehler) (667457-2)							all	1
25	*295279-2	Tube - Oil tank pressure							all	1
	279694	Installation - Oil system sump tank (NP) (See figure 120 for using assembly)							all	Ref
26	279694-2	Tank Assembly							all	1
27	278729	Section Assembly - Sump tank aft							all	1
28	K1625B	Valve - Oil drain (Koehler) (633261)							all	1
29	278759	Gasket - Sump tank							all	1
30	278728	Section Assembly - Sump tank forward							all	1
31	278758	Gasket - Propeller feathering outlet							all	1
32	278742	Outlet - Propeller feathering							all	1
33	287732	Bracket - Sump tank							all	1
34	287734-2	Bracket - Sump tank							all	2
35	278751	Clamp Assembly - Sump tank							all	1
36	3G8A36M	Governor - Propeller (632066) (See figure 67 for using assembly)							bb	Ref
	3G8C67M	Governor - Propeller (632043) (Hamilton Standard) (See figure 67 for using assy.)							aa	Ref
		*	Replaces standard part per Service Bulletin 49/SB-133, Service Information 49/SI-22 and Mod. Prints M295279 and M295291.							

Notes

Constellation

GROUP . . . Hydraulic System

Detail Unit . . . Primary Hydraulic System

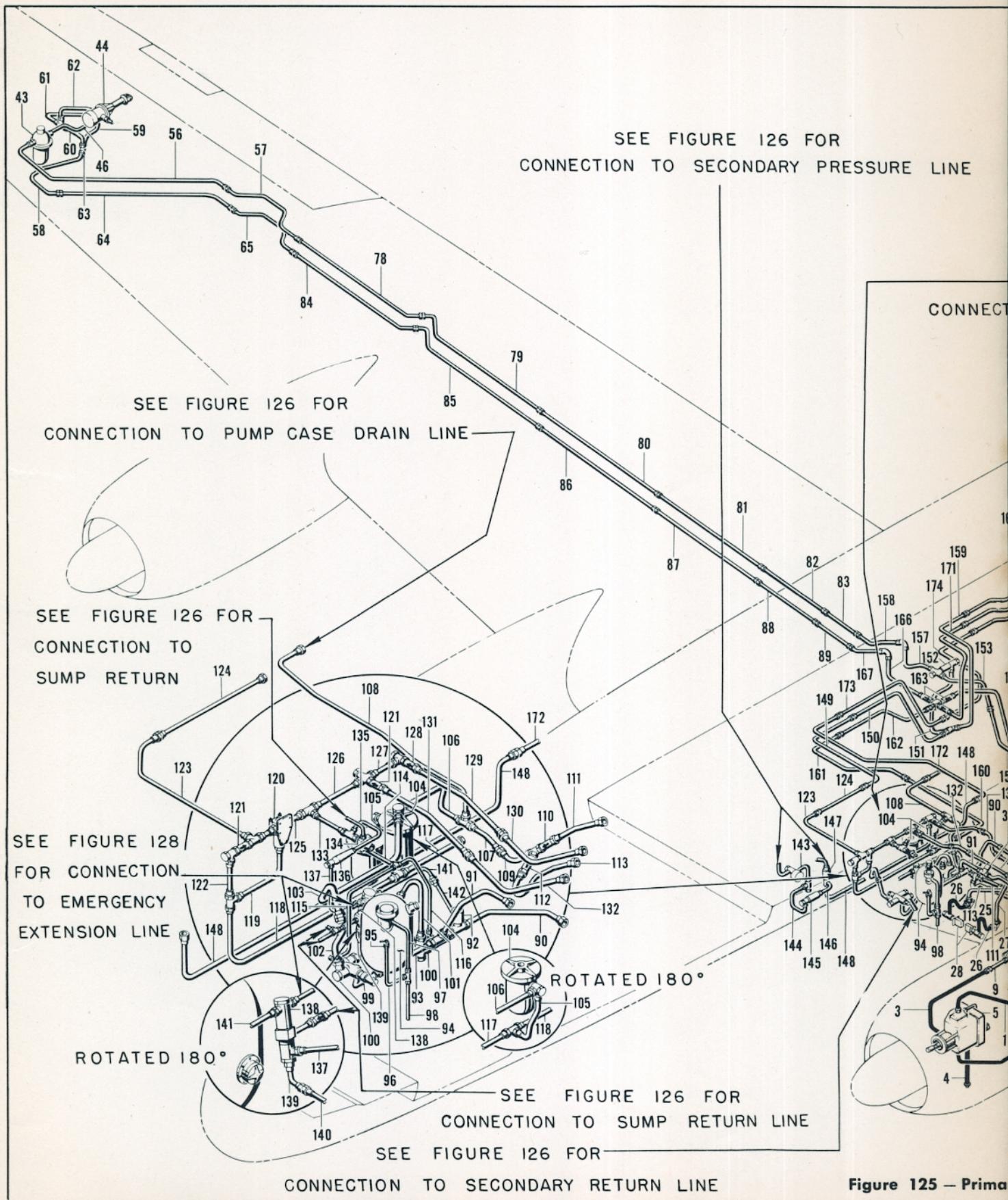
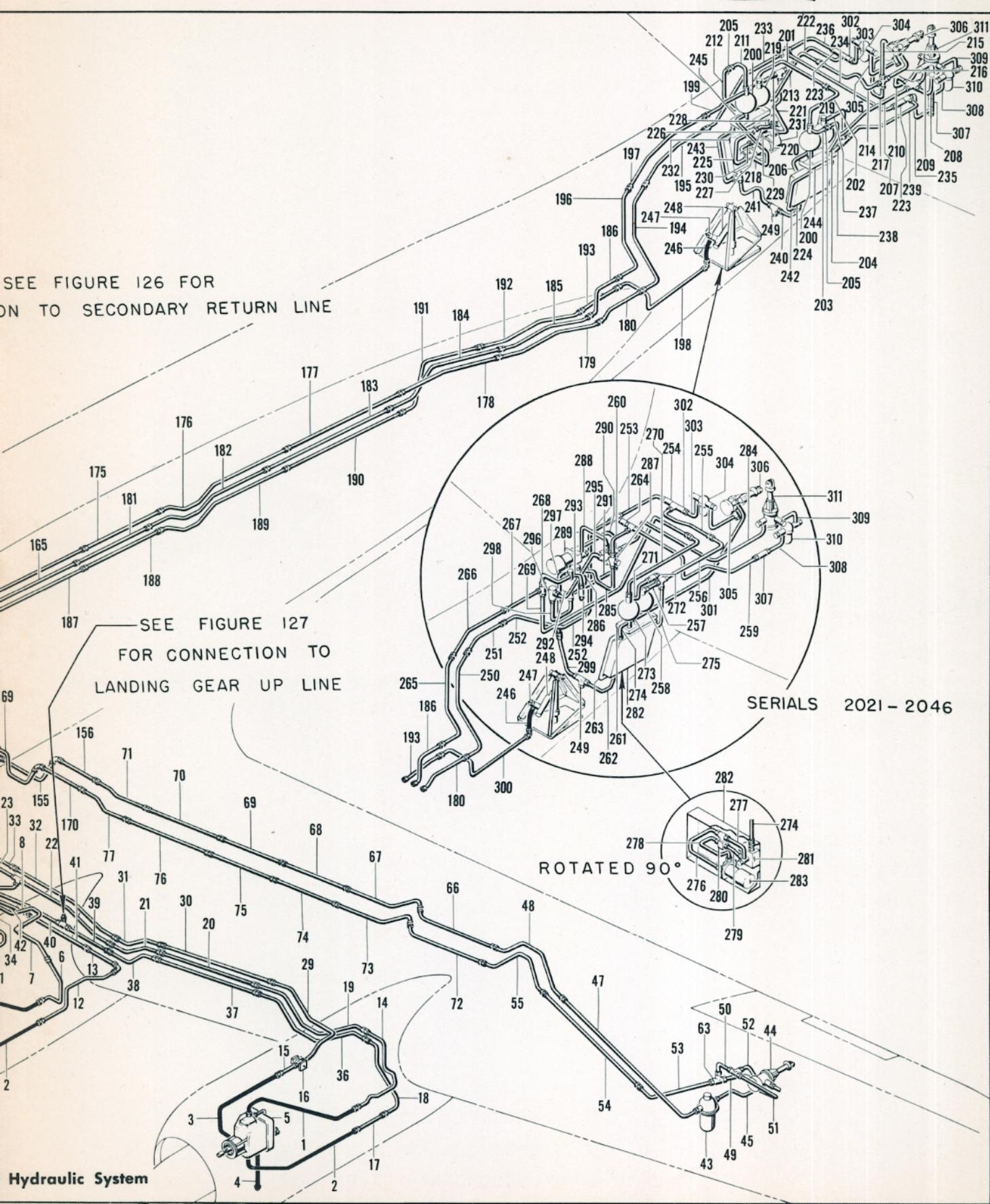


Figure 125 — Primary

Constellation



GROUP . . . Hydraulic System

Constellation

Detail Unit . . . Primary Hydraulic System

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6	N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
	282867-2		Installation - LH Inboard engine compartment plumbing (NP)						y	Ref
	282867-3		Installation - LH Outboard engine compartment plumbing (NP)						y	Ref
	288150		Installation - Engine section hydraulic and vacuum systems (NP)						z	Ref
125 - 1	*RU400A12-31½		(See figure 67 for using assembly)							
2	318-4W-32½		Hose Assembly - Hydraulic pressure (Acroquip)						all	1
3	340-20D32		Hose Assembly - Hydraulic pump by-pass (Aeroquip)						all	1
4	318-4W-23½		Hose Assembly - Hydraulic suction (Aeroquip)						all	1
	263063		Hose Assembly - Hydraulic pump drain (Aeroquip)						all	1
	262666		Stub - Drain						all	1
5	AA20500		Flange - Drain tube (See figure 70 for using assembly)						all	Ref
			Pump - Hydraulic (Vickers) (667243) (See figure 67 for using assembly)						all	Ref
			(Pump serials must bear suffix letter "H" per 49/SB-92)							
	281027		Installation - Inboard nacelle piping, LH (NP) (See figure 2 for using assembly)						all	Ref
6	278433-436		Tube Assembly - No. 2 Engine pressure						all	1
7	278433-8		Tube Assembly - No. 2 Engine pressure						all	1
8	278433-435		Tube Assembly - No. 2 Engine pressure						all	1
9	256342-445		Tube Assembly - No. 2 Engine suction						all	1
10	266879-2		Valve Assembly - Hydraulic shut-off (See figure 142 for detailed illustration)						all	1
11	256342-446		Tube Assembly - No. 2 Engine suction						all	1
12	*295527-14		Tube Assembly - No. 2 Engine pump drain						all	1
13	*295527-13		Tube Assembly - No. 2 Engine pump drain						all	1
	269400		Installation - Left outboard engine nacelle piping (NP)						all	Ref
			(See figure 2 for using assembly)							
14	284349-334		Tube Assembly - No. 1 Engine pressure						all	1
15	256342-287		Tube Assembly - No. 1 Engine suction						all	1
16	266879-2		Valve Assembly - Hydraulic shut-off (See figure 142 for detailed illustration)						all	1
17	*295527-15		Tube Assembly - No. 1 Engine pump drain						all	1
18	284349-338		Tube Assembly - No. 1 Engine pump drain						all	1
	267177		Installation - Front beam piping left wing (NP) (See figure 2 for using assembly)						all	Ref
19	278433-31		Tube Assembly - No. 1 Engine pressure						all	1
20	256342-321		Tube Assembly - No. 1 Engine pressure						all	1
21	272239-27		Tube Assembly - No. 1 Engine pressure						all	1
22	272239-23		Tube Assembly - No. 1 Engine pressure						all	1
	271214		Tee						all	1
23	256342-308		Tube Assembly - No. 1 Engine pressure						all	1
24	256342-300		Tube Assembly - No. 2 Engine pressure						all	1
	271122		Tee						all	1
25	284349-316		Tube Assembly - No. 1 Engine pressure warning unit						b	1
	43D2474-4-122		Hose Assembly - No. 1 Engine pressure warning unit						an	1
26	43D2474-4-122		Hose Assembly - Warning unit to pressure lines						b	1
27	284349-348		Tube Assembly - No. 2 Engine pressure warning unit						ai	2
	43D2474-4-174		Hose Assembly - No. 2 Engine pressure warning unit						b	2
28	1510		Unit - Hydraulic pressure warning (Starbird) (626077)						a	2
	154		Unit - Hydraulic pressure warning (Starbird) (626073)						c	1
29	256342-326		Tube Assembly - No. 1 Engine suction						all	1
30	256342-324		Tube Assembly - No. 1 Engine suction						all	1
31	272239-28		Tube Assembly - No. 1 Engine suction						all	1
32	272239-24		Tube Assembly - No. 1 Engine suction						all	1
33	256342-285		Tube Assembly - No. 1 Engine suction						all	1
34	256342-488		Tube Assembly - No. 2 Engine suction						all	1
35	44R142		Valve - Solenoid (General Controls) (667500)						d	1
	40R521D		Valve - Solenoid (General Controls) (667337)						c	1
36	278433-33		Tube Assembly - No. 1 Engine pump drain						all	1
37	256342-322		Tube Assembly - No. 1 Engine pump drain						all	1
38	272239-26		Tube Assembly - No. 1 Engine pump drain						all	1
39	*295527-2		Tube Assembly - No. 1 Engine pump drain						all	1
40	272239-20		Tube Assembly - No. 1 Engine pump drain						all	1
41	256342-311		Tube Assembly - No. 2 Engine pump drain						all	1
42	256342-306		Tube Assembly - No. 2 Engine pump drain						all	1
43	28946		Filter - Aileron differential and booster (Purulator Co.) (667251)						all	Ref
			(See figure 130 for using assembly)							
44	667581		Valve Assembly - Aileron booster control (See figure 130 for using assembly)						dd	Ref
	667561		Valve Assembly - Aileron booster control (See figure 130 for using assembly)						gg	Ref
45	264843-363		Tube Assembly - Filter to valve (LH only)						all	1
46	264843-364		Tube Assembly - Filter to valve (RH only)						all	1
	251003L		Wing Assembly - Outer wing (See figure 2 for using assembly)						all	Ref
	251003R		Wing Assembly - Outer wing (See figure 2 for using assembly)						all	Ref
	260620L		Installation - Wing outer section aileron booster (NP)						all	1
	260620R		Installation - Wing outer section aileron booster (NP)						all	1
47	256342-121		Tube Assembly - Aileron booster pressure						all	1
48	256342-117		Tube Assembly - Aileron booster pressure						all	1
49	289342-6		Tube Assembly - Aileron booster return						gg	1
50	289342-8		Tube Assembly - Aileron booster return						gg	1
51	289342-9		Tube Assembly - Aileron booster return						gg	1
52	289342-10		Tube Assembly - Aileron booster return						gg	1
53	289342-4		Tube Assembly - Aileron booster return						gg	1
	256342-125		Tube Assembly - Aileron booster return						dd	1
54	256342-123		Tube Assembly - Aileron booster return						all	1
55	256342-119		Tube Assembly - Aileron booster return						all	1
56	256342-122		Tube Assembly - Aileron booster pressure						all	1
57	256342-118		Tube Assembly - Aileron booster pressure						all	1
58	289342-5		Tube Assembly - Aileron booster return						gg	1
	256342-126		Tube Assembly - Aileron booster return						dd	1
59	289342-7		Tube Assembly - Aileron booster return						gg	1
60	289342-11		Tube Assembly - Aileron booster return						gg	1
61	289342-12		Tube Assembly - Aileron booster return						gg	1
62	289342-13		Tube Assembly - Aileron booster return						gg	1
63	8-8-4JT-D		Tee (Parker)						gg	1
64	256342-124		Tube Assembly - Aileron booster return						all	1
65	256342-120		Tube Assembly - Aileron booster return						all	1

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GROUP Hydraulic System
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FIGURE & INDEX NUMBER	PART NUMBER	N O M E N C L A T U R E						SERIAL CODE	U N I T S P E R A S S Y.
		1	2	3	4	5	6		
	269992L	Installation - Wing inner section aileron booster hydraulic lines						all	Ref
	269992R	Installation - Wing inner section aileron booster hydraulic lines	(See figure 2 for using assembly)					all	Ref
	272239-384	Tube Assembly - Aileron booster pressure						all	1
125 - 66	272239-383	Tube Assembly - Aileron booster pressure						all	1
67	272239-382	Tube Assembly - Aileron booster pressure						all	1
68	272239-381	Tube Assembly - Aileron booster pressure						all	1
69	272239-381	Tube Assembly - Aileron booster pressure						all	1
70	272239-380	Tube Assembly - Aileron booster pressure						all	1
71	272239-378	Tube Assembly - Aileron booster pressure						all	1
72	272239-391	Tube Assembly - Aileron booster pressure						all	1
73	272239-390	Tube Assembly - Aileron booster return						all	1
74	272239-389	Tube Assembly - Aileron booster return						all	1
75	272239-388	Tube Assembly - Aileron booster return						all	1
76	272239-387	Tube Assembly - Aileron booster return						all	1
77	272239-385	Tube Assembly - Aileron booster return						all	1
78	278433-307	Tube Assembly - Aileron booster pressure						all	1
79	278433-299	Tube Assembly - Aileron booster pressure						all	1
80	278433-298	Tube Assembly - Aileron booster pressure						all	1
81	278433-297	Tube Assembly - Aileron booster pressure						all	1
82	278433-296	Tube Assembly - Aileron booster pressure						all	1
83	272239-379	Tube Assembly - Aileron booster pressure						all	1
84	278433-308	Tube Assembly - Aileron booster return						all	1
85	278433-303	Tube Assembly - Aileron booster return						all	1
86	278433-302	Tube Assembly - Aileron booster return						all	1
87	278433-301	Tube Assembly - Aileron booster return						all	1
88	278433-300	Tube Assembly - Aileron booster return						all	1
89	272239-386	Tube Assembly - Aileron booster return						all	1
	281028	Installation - Fuselage stub wing piping (NP) (See figure 1 for using assembly)						all	Ref
90	278433-207	Tube Assembly - No. 1 Engine suction						all	1
91	278433-26	Tube Assembly - No. 2 engine suction						all	1
92	44R142	Valve - Suction shut-off (Motor) (General Controls) (667500)					d	1	
	40R521D	Valve - Suction shut-off (Solenoid) (General Controls) (667337)					c	1	
	280900	Elbow - Hydraulic swivel 20°					all	1	
93	256342-423	Tube Assembly - Primary suction, shut-off valve to reservoir					all	1	
94	274836-500	Reservoir Assembly - Hydraulic pressure (See figure 144 for detailed illustration)					all	1	
	EA15A628039A	Transmitter (U. S. Gauge Co.) (628039) (See figure 144 for detailed illustration)					all	1	
95	715FT4D	Valve - Two-way plug (Parker) (633103)					all	1	
96	285106-80	Tube Assembly - Tank drain					all	1	
97	285106-82	Tube Assembly - Fillerwell drain					all	1	
98	263368	Tube - Tank overflow, wing station 78					all	1	
	261618	Plate Assembly - Pressure transmitter mounting					all	1	
	4154-10	Transmitter - Hydraulic pressure (Pioneer) (628020)					all	1	
	100PD1	Mount (Lord Manufacturing Co.)					all	4	
	70099-4-014014-16½S	Hose - Pressure transmitter line (Weatherhead)					all	1	
99	278433-209	Tube Assembly - Booster return, reservoir to by-pass valve					all	1	
100	D32-14-001	Valve - Booster return by-pass & return changeover (Interstate) (667063)	(See figure 149 for detailed illustration)					all	2
101	272239-245	Tube Assembly - Change-over valve to primary reservoir					all	1	
102	278433-276	Tube Assembly - Booster return, by-pass valve to union					all	1	
103	278433-223	Tube Assembly - Booster return, union to filter					all	1	
104	278994	Filter Assembly - Hydraulic (See figure 144 for detailed illustration)					all	1	
	280900	Elbow - Hydraulic swivel, 12-8 special					all	1	
105	278433-115	Tube Assembly - Booster return, filter to tee					all	1	
106	*296404-8	Tube Assembly - Hydraulic pump drain					all	1	
107	*296404-6	Tube Assembly - Hydraulic pump drain					all	1	
108	*296404-7	Tube Assembly - Flap & fan motor drain (See figure 126 for continuation of line)					all	1	
109	*295527-9	Tube Assembly - Hydraulic pump drain					all	1	
	*295529	Fee - Swivel					all	1	
110	*PL8-2743-3	Valve - Cone check (Parker) (667097-3)					all	1	
	*295527-3	Tube Assembly - No. 1 Engine pump drain					all	1	
112	*475HT8D	Valve - Cone check (Parker) (667100-3)					all	1	
113	*295527-4	Tube Assembly - No. 2 Engine pump drain					all	1	
114	272239-10	Tube Assembly - Cross-over valve to tee					all	1	
115	278433-274	Tube Assembly - Tee to booster return by-pass valve					all	1	
116	278433-295	Tube Assembly - Tee to return change-over valve					all	1	
117	256342-386	Tube Assembly - Booster return, auxiliary reservoir line					all	1	
118	264843-126	Tube Assembly - Booster return					all	1	
119	256342-415	Tube Assembly - Booster return					all	1	
120	AA11600	Valve - Hydraulic relief (Vickers) (667075)					all	1	
	190574	Bolt - Hydraulic swivel					all	2	
121	PL8-2743-1	Valve - Check (Parker) (667096)					all	2	
122	264843-127	Tube Assembly - Booster return					all	1	
123	278433-62	Tube Assembly - Booster pressure					all	1	
124	272239-12	Tube Assembly - Booster pressure					all	1	
125	256342-411	Tube Assembly - Engine pressure					all	1	
126	264843-93	Tube Assembly - Engine pressure					all	1	

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GROUP . . . Hydraulic System

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Detail Unit . . . Primary Hydraulic System (Continued)

FIGURE & INDEX NUMBER	PART NUMBER	1	2	3	4	5	6	N O M E N C L A T U R E		SERIAL CODE	UNITS PER ASSY.
125-127	264843-91							Tube Assembly - No. 1 Engine pressure		all	1
128	PL8-2743-4							Valve - Check (Parker) (667097-5)		all	3
129	272239-38							Tube Assembly - No. 1 Engine pressure		all	1
130	256342-489							Tube Assembly - No. 1 Engine pressure		all	1
131	272239-39							Tube Assembly - No. 2 Engine pressure		all	1
132	264843-117							Tube Assembly - No. 2 Engine pressure		all	1
133	256342-92							Tube Assembly - Pressure line to cross-over check valve		all	1
	278180							Elbow - Hydraulic swivel, $\frac{1}{2}$ " to $\frac{3}{4}$ " tube		all	1
134	667558							Valve Assembly - Cross-over check		all	1
	278556							Valve Assembly - Body - Check valve		www	1
	278554							Piston - Check valve (278553 Piston & 278554 body sold only as matched pair)		vvv	1
	278553							Cap + Check valve		all	1
	278555							Washer - Check valve		all	1
	279265							Packing - "O" Ring hydraulic		all	1
	AN6227-15							Tube Assembly - Cross-over check valve to aspirator filter		all	1
135	272239-147							Filter - Hydraulic (Purolator) (667218)		all	1
136	28161							Head - Filter		all	1
	26882							Packing - Filter		all	1
	25429							Element - Filter		all	1
	26435							Case - Filter		all	1
137	26883							Tube Assembly - Aspirator filter to aspirator		all	1
	272239-397							Elbow - Hydraulic swivel, 8-10		all	1
	277820							Bolt - Hydraulic swivel		all	1
	267789							Aspirator Assembly - Hydraulic reservoir		all	1
138	273470							Body - Aspirator		all	1
	274594							Venturi - Aspirator		all	1
	274592							Nozzle - Aspirator		all	1
	274591							Tee - Hydraulic swivel $\frac{3}{4}$ " - $\frac{5}{8}$ " - $\frac{5}{8}$ "		all	1
	273369							Bolt - Hydraulic swivel $\frac{5}{8}$ "		all	1
	273868							Bolt - Hydraulic swivel $\frac{7}{16}$ " - $\frac{7}{8}$ "		all	1
	267789							Tube Assembly - Pressure transmitter line		all	1
139	26843-54							Tube Assembly - Pressure transmitter line		all	1
140	278433-437							Hose Assembly - Pressure transmitter line (Weatherhead)		all	1
	70099-4-014014-16 $\frac{1}{2}$							Tube Assembly - Return line, aspirator to union		all	1
141	272239-146							Tube Assembly - Return line, union to change-over valve		all	1
142	278433-294							Elbow - Hydraulic swivel 1" to $\frac{1}{4}$ " tube		all	1
	273925							Tube Assembly - System return, landing gear up line to selector valve		all	1
143	278433-253							Tube Assembly - System return, tee to tail bumper shut-off valve		all	1
144	278433-251							Valve Assembly - Tail bumper shut-off		all	1
145	280014							Tube Assembly - System return, compensator to shut-off valve		all	1
146	278433-252							Compensator - Tail bumper (Hoof Products) (667404)		all	1
147	HL762							(See figure 142 for detailed illustration)			
148	278433-250							Tube Assembly - Pressure line to tail bumper		all	1
	272203							Installation - Fuselage piping stations 527-678 (NP)		all	Ref
								(See figure 1 for using assembly)			
149	272239-353							Tube Assembly - Booster pressure		all	1
150	272239-73							Tube Assembly - Booster pressure		all	1
151	272239-90							Tube Assembly - Aileron booster pressure		all	1
152	275499							Valve Assembly - Aileron booster shut-off		all	1
	273961							Lever - Aileron cut-off valve		all	1
	282696							Nameplate - Booster shut-off valve		all	1
	29041							Valve - $\frac{3}{4}$ " Line poppet cut-off (Aircraft Accessories) (667257)		all	1
	270520							(See figure 137 for detailed illustration)			
153	272239-91							Tee - Hydraulic swivel		all	1
154	272239-366							Tube Assembly - LH Aileron booster pressure		all	1
155	272239-189							Tube Assembly - LH Aileron booster pressure		all	1
156	272239-188							Tube Assembly - LH Aileron booster pressure		all	1
157	272239-183							Tube Assembly - RH Aileron booster pressure		all	1
158	272239-184							Tube Assembly - RH Aileron booster pressure		all	1
159	272239-360							Tube Assembly - Rudder and elevator booster pressure		all	1
160	256342-177							Tube Assembly - Booster return		all	1
161	256342-178							Tube Assembly - Booster return		all	1
162	272239-74							Tube Assembly - Booster return		all	1
	261417							Cross - Booster return $\frac{3}{4}$ " bulkhead		all	1
163	PL8-2743-3							Valve - Check (Parker) (667097-3)		all	2
	PL8-2743-5							Valve - Check (Parker) (667097-4)		all	1
164	278433-232							Tube Assembly - Rudder and elevator booster pressure		all	1
165	278433-233							Tube Assembly - Rudder and elevator booster return		all	1
166	272239-182							Tube Assembly - RH Aileron booster return		all	1
167	272239-185							Tube Assembly - RH Aileron booster return		all	1
168	272239-365							Tube Assembly - LH Aileron booster return		all	1
169	272239-187							Tube Assembly - LH Aileron booster return		all	1
170	272239-92							Tube Assembly - LH Aileron booster return		all	1
171	272239-355							Rudder and elevator booster return		all	1
172	272239-468							Tail bumper pressure		all	1
173	272239-72							Tail bumper pressure		all	1
174	272239-359							Tail bumper pressure		all	1

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FIGURE & INDEX NUMBER	PART NUMBER	N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
		1	2	3	4	5	6		
	270209	Installation - Fuselage tubing station 676.8-1037 (NP)						all	Ref
		(See figure 1 for using assembly)							
125-175	256342-393	Tube Assembly - Rudder and elevator booster pressure						all	1
176	256342-248	Tube Assembly - Rudder and elevator booster pressure						all	1
177	256342-339	Tube Assembly - Rudder and elevator booster pressure						all	1
178	272239-481	Tube Assembly - Rudder and elevator booster pressure						all	1
179	272239-486	Tube Assembly - Rudder and elevator booster pressure						all	1
180	272239-479	Tube Assembly - Rudder and elevator booster pressure						all	1
181	256342-394	Tube Assembly - Rudder and elevator booster return						all	1
182	256342-337	Tube Assembly - Rudder and elevator booster return						all	1
183	278433-432	Tube Assembly - Rudder and elevator booster return						all	1
184	272239-483	Tube Assembly - Rudder and elevator booster return						all	1
185	272239-485	Tube Assembly - Rudder and elevator booster return						all	1
186	272239-475	Tube Assembly - Rudder and elevator booster return						all	1
187	256342-231	Tube Assembly - Tail bumper pressure						all	1
188	256342-395	Tube Assembly - Tail bumper pressure						all	1
189	256342-338	Tube Assembly - Tail bumper pressure						all	1
190	256342-348	Tube Assembly - Tail bumper pressure						all	1
191	272239-482	Tube Assembly - Tail bumper pressure						all	1
192	285106-216	Tube Assembly - Tail bumper pressure						all	1
193	285106-214	Tube Assembly - Tail bumper pressure						all	1
	285012	Installation - Fuselage piping station 1037-1210.7 (NP)						b	Ref
		(See figure 1 for using assembly)							
194	278433-14	Tube Assembly - Elevator and rudder booster pressure						b	1
195	284349-204	Tube Assembly - Elevator and rudder booster pressure						b	1
196	278433-39	Tube Assembly - Elevator and rudder booster return						b	1
197	284349-206	Tube Assembly - Elevator and rudder booster return						b	1
198	285106-112	Tube Assembly - Tail bumper pressure						b	1
	284600	Installation - Rudder and elevator auxiliary booster supply (NP)						b	1
199	284599-2	Tube Assembly - Hydraulic booster return						b	1
200	405090	Reservoir - Spherical pressure (Bendix) (667460)						b	2
	284156	(See figure 143 for detailed illustration)							
	267015	Clamp Block - No. 16						b	8
	266758	Tee - Hydraulic swivel						b	3
	284617	Bolt - Hydraulic swivel						b	2
201	284599-6	Bolt - Hydraulic swivel size reducing						b	1
202	284599-50	Tube Assembly - Elevator booster return						b	1
	284523	Tube Assembly - Elevator booster return						b	1
	270122	Elbow - Hydraulic swivel						b	1
	285287	Bolt - Hydraulic swivel						b	1
	285289	Nameplate + Auxiliary elevator reservoir						b	1
203	284599-40	Nameplate + Auxiliary elevator booster accumulator						b	1
204	284599-88	Tube Assembly - Hydraulic emergency tank vent						b	1
205	475HT-4D	Tube Assembly - Hydraulic tank drain						b	2
	284606	Valve - Check (Parker) (667100-5)						b	2
206	284599-30	Fairlead - Special mounting						b	1
207	284599-62	Tube Assembly - Auxiliary elevator booster return						gg	1
	284599-24	Tube Assembly - Elevator booster return						hh	1
208	284599-82	Tube Assembly - Elevator booster return						gg	1
209	284599-84	Tube Assembly - Elevator booster return						gg	1
210	284599-86	Tube Assembly - Elevator booster return						gg	1
211	284599-20	Tube Assembly - Hydraulic emergency tank vent						b	1
212	284599-90	Tube Assembly - Hydraulic tank drain						b	1
213	284599-10	Tube Assembly - Auxiliary rudder booster return						b	1
214	284599-66	Tube Assembly - Rudder booster return						gg	1
	284599-72	Tube Assembly - Rudder booster return						hh	1
215	284599-76	Tube Assembly - Rudder booster return						gg	1
216	284599-78	Tube Assembly - Rudder booster return						gg	1
217	284599-80	Tube Assembly - Rudder booster return						gg	1
218	284599-12	Tube Assembly - Auxiliary rudder booster return						b	1
219	401531	Accumulator - Hydraulic (Bendix) (667382)						b	2
	220	(See figure 143 for detailed illustration)							
	284599-14	Tube Assembly - Auxiliary rudder booster pressure						b	1
	284599-60	Tube Assembly - Auxiliary rudder booster pressure						b	1
	284599-18	Tube Assembly - Auxiliary rudder booster pressure						b	1
222	PL8-2743-5	Valve - Check (Parker) (667097-4)						b	2
	278180	Elbow - Hydraulic swivel						b	1
	284522	Bolt - Hydraulic swivel						b	2
224	284605	Panel Assembly - Auxiliary booster supply						b	2
225	284599-46	Tube Assembly - Auxiliary booster return						b	1
226	AA11501	Valve - Relief (Vickers) (667169) (See figure 147 for detailed illustration)						b	1
227	284599-42	Tube Assembly - Auxiliary booster return						b	1
228	AA14522	Valve - Unloading (Vickers) (667421)						b	1
	229	(See figure 148 for detailed illustration)							
	284599-44	Tube Assembly - Auxiliary booster pressure						b	1
	284599-48	Tube Assembly - Auxiliary booster pressure						b	1
231	1E620F1	Pump Assembly (Engineering Service) (667414)						b	1
	284525	(See figure 146 for detailed illustration)							
	277820	Bolt - Hydraulic swivel						b	1
232	284604	Elbow - Hydraulic swivel						b	1
		Pan Assembly - Auxiliary booster supply drip							1

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Detail Unit . . . Primary Hydraulic System (Continued)

FIGURE & INDEX NUMBER	PART NUMBER		NOMENCLATURE						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
125-233	284599-4		Tube Assembly - Hydraulic booster pressure						b	1
234	284599-8		Tube Assembly - Elevator booster pressure						b	1
	277820		Elbow - Hydraulic swivel						b	1
	276034		Bolt - Hydraulic swivel						b	1
235	284599-64		Tube Assembly - Elevator booster pressure						b	1
236	284599-22		Tube Assembly - Rudder booster pressure						b	1
	279344		Clamp Block						b	1
	285286		Nameplate - Auxiliary rudder booster reservoir						b	1
	285288		Nameplate - Auxiliary rudder booster accumulator						b	1
237	284599-38		Tube Assembly - Auxiliary elevator booster pressure						b	1
238	284599-34		Tube Assembly - Auxiliary elevator booster pressure						b	1
239	284599-36		Tube Assembly - Auxiliary elevator booster pressure						b	1
240	284599-54		Tube Assembly - Hydraulic tank drain						b	1
241	284599-58		Tube Assembly - Hydraulic tank drain						b	1
242	284599-52		Tube Assembly - Hydraulic tank drain						b	1
243	284599-56		Tube Assembly - Hydraulic tank drain						b	1
244	291469L		Pan Assembly - Drip						b	1
245	291469R		Pan Assembly - Drip						b	1
	255632		Installation - Tail bumper cylinder (NP) (See figure 1 for using assembly)						all	Ref
246	70099-4-014014-16½S		Hose Assembly (Weatherhead)						all	1
247	284872		Orifice - Tail bumper						all	1
248	41216		Cylinder Assembly - Tail bumper retracting (United Aircraft) (663007) (See figure 141 for detailed illustration)						all	1
	267448		Structure Assembly - Fuselage, rear (See figure 1 for using assembly)						all	Ref
249	2CD5160		Outlet - Gauge (American La France) (644034)						all	Ref
	261214		Installation - Fuselage station 1037-1210 piping (NP) (See figure 1 for using assembly)						a	Ref
250	278433-14		Tube Assembly - Booster pressure						a	1
251	284349-436		Tube Assembly - Booster pressure						a	1
252	284349-440		Tube Assembly - Booster pressure						a	1
253	285397-22		Tube Assembly - Rudder booster pressure						a	1
254	PL8-2743-5		Valve - Cone check (Parker) (667097-4)						a	1
	278180		Elbow - Hydraulic swivel						a	1
	284522		Bolt - Hydraulic swivel						a	1
255	285397-16		Tube Assembly - Auxiliary rudder booster pressure						a	1
256	285397-2		Tube Assembly - Auxiliary rudder booster pressure						a	1
257	285397-4		Tube Assembly - Auxiliary rudder booster pressure						a	1
258	401531		Accumulator Assembly (Bendix) (667382) (See figure 143 for detailed illustration)						a	1
259	278433-205		Tube Assembly - Elevator booster pressure						a	1
260	278433-203		Tube Assembly - Auxiliary pressure						a	1
261	291469L		Pan Assembly - Drip						a	1
262	284349-454		Tube Assembly - Drain						a	1
263	284349-456		Tube Assembly - Drain						a	1
264	PL9-2043-3D		Valve - Cone check (Parker) (667161)						a	1
	276034		Bolt - Hydraulic swivel						a	1
265	278433-39		Tube Assembly - Booster return						a	1
266	284349-438		Tube Assembly - Booster return						a	1
267	284349-442		Tube Assembly - Booster return						a	1
268	284349-446		Tube Assembly - Booster return						a	1
269	284349-444		Tube Assembly - Booster return						a	1
270	285397-20		Tube Assembly - Rudder booster return						a	1
271	285397-10		Tube Assembly - Auxiliary rudder reservoir vent						a	1
272	475HT4D		Valve - Check (Parker) (667100-5)						a	1
273	405090		Reservoir - Spherical pressure (Bendix) (667460) (See figure 143 for detailed illustration)						a	1
274	285397-12		Tube Assembly - Auxiliary rudder booster suction						a	1
275	284349-448		Tube Assembly - Auxiliary rudder booster pressure						a	1
	284605		Panel Assembly - Auxiliary booster supply						a	1
276	284599-46		Tube Assembly - Emergency booster return						a	1
277	284599-42		Tube Assembly - Emergency booster return						a	1
278	284599-48		Tube Assembly - Emergency booster pressure						a	1
279	284599-44		Tube Assembly - Emergency booster pressure						a	1
280	AA11501		Valve - Relief (Vickers) (667169) (See figure 147 for detailed illustration)						a	1
281	AA14522		Valve - Unloading (Vickers) (667421)						a	1
282	284604		Pan Assembly						a	1
283	1E620C		Pump Assembly (Engineering Service) (667414)						a	1
	284525		Bolt - Hydraulic swivel						a	1
	277820		Elbow - Hydraulic swivel						a	1
284	278433-201		Tube Assembly - Elevator booster return						a	1
	261214-2		Panel Assembly						a	1
	267015		Tee - Hydraulic swivel 10-10-8						a	2
	266758		Bolt - Hydraulic swivel ½						a	1
285	278433-195		Tube Assembly - Accumulator pressure						a	1
	270687		Elbow - Hydraulic swivel 10-8						a	2
286	AA14002A		Accumulator - 5" Hydraulic (Vickers) (667125) (See figure 143 for detailed illustration)						a	1
287	AA14522		Valve - Hydraulic unloading (Vickers) (667421) (See figure 148 for detailed illustration)						a	1
	270122		Bolt - Hydraulic swivel 5/8-1/2						a	1
288	278433-197		Tube Assembly - Pump pressure						a	1
289	1E620F1		Pump Assembly - Electric driven hydraulic (Pesco) (667414) (See figure 146 for detailed illustration)						a	1

(Continued on next page)

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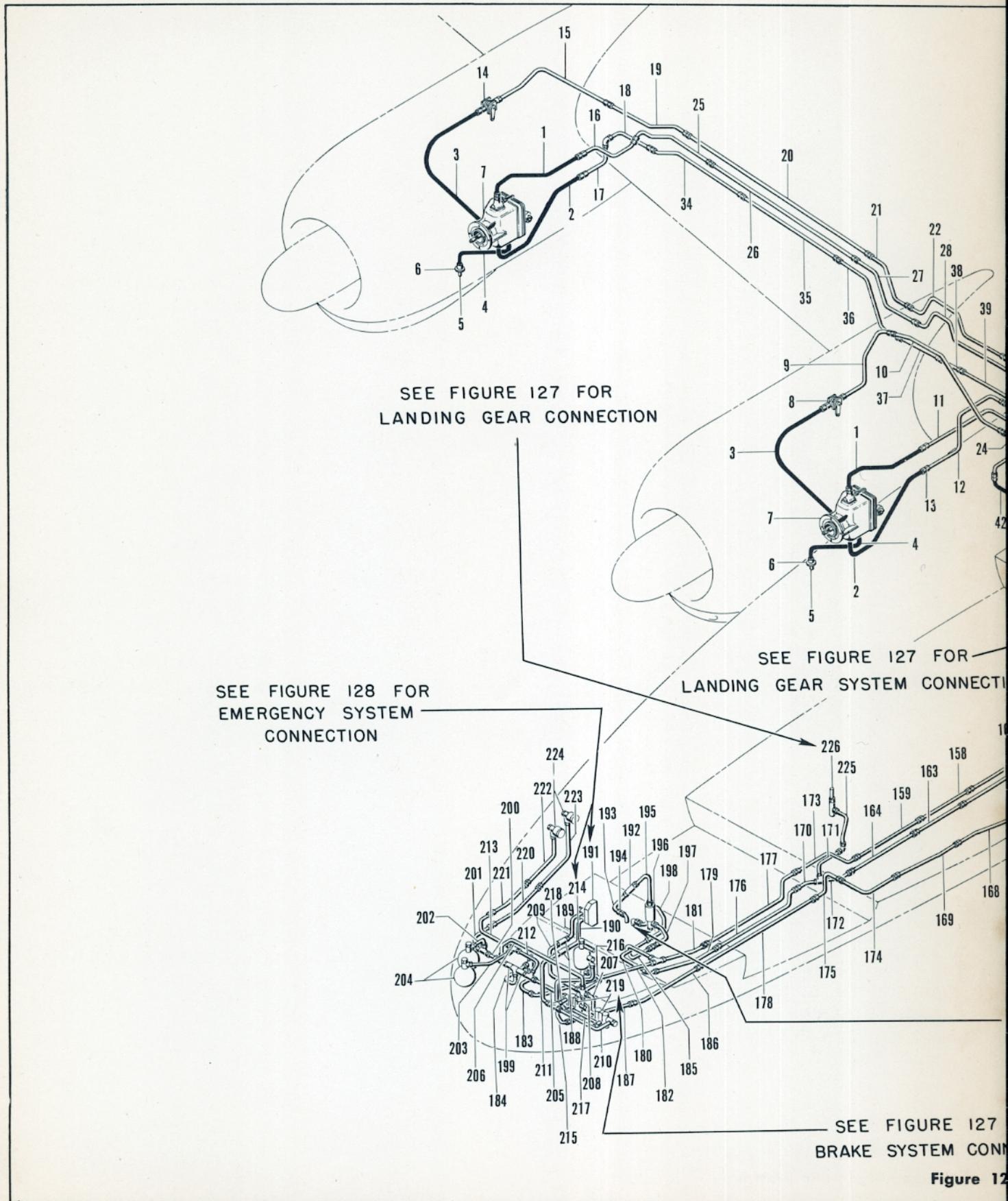
GROUP . . . Hydraulic System
Detail Unit . . . Primary Hydraulic System (Continued)

FIGURE & INDEX NUMBER	PART NUMBER	N O M E N C L A T U R E						SERIAL CODE	U N I T S P E R A S S Y.
		1	2	3	4	5	6		
125-290	278433-200							a	1
	281107	Tube Assembly - Pump suction						a	1
291	278433-194	Bolt - Hydraulic swivel						a	1
292	IA530	Tube Assembly - Elevator booster return line						a	1
	270118	Tank - Hydraulic oil reserve (Pesco) (667128)						a	1
293	278433-193	Tee + Hydraulic swivel $\frac{5}{8}$, $\frac{1}{4}$ - $\frac{3}{8}$						a	1
294	475HT4D	Tube Assembly - Filler line						a	1
295	278433-376	Valve - Cone check (Parker) (667100-5)						a	1
296	AA11501	Tube Assembly - Elevator relief valve pressure						a	1
	281578	Valve - Relief (Vickers) (667169) (See figure 147 for detailed illustration)						a	1
297	278433-191	Plug - Hydraulic						a	1
	276942	Tube Assembly - Pump drain						a	1
	276034	Nameplate - Emergency booster accumulator						a	1
298	284349-452	Bolt - Hydraulic swivel $\frac{5}{8}$						a	1
299	278433-227	Tube Assembly - Pump drain						a	1
300	278433-43	Tube Assembly - Tail bumper pressure						a	1
301	284349-450	Tube Assembly - Auxiliary rudder booster return						a	1
*268913-502		Booster Assembly + Rudder (See figure 135 for detailed illustration)						dd	Ref
*268913-501		Booster Assembly + Rudder (See figure 135 for detailed illustration)						gg	Ref
302	282862-2	Valve Assembly - Booster shut-off						all	1
303	256342-17	Tube Assembly - Rudder booster pressure						all	1
304	28946	Filter - Hydraulic (Purolator) (667251) (See figure 130 for detailed illustration)						all	1
305	264843-362	Tube Assembly - Rudder booster pressure						all	1
306	667581	Valve Assembly - Booster control (See figure 137 for detailed illustration)						dd	1
	667561	Valve Assembly - Booster control (See figure 137 for detailed illustration)						gg	1
*291024-500		Mechanism Assembly - Elevator booster (See figure 131 for using assembly)						dd	Ref
*291024		Mechanism Assembly - Elevator booster (See figure 131 for using assembly)						gg	Ref
	282862-3	Valve Assembly - Booster shut-off						all	1
307	29041	Valve Assembly - $\frac{3}{4}$ Inch line shut-off (Aircraft Accessories) (667257) (See figure 137 for detailed illustration)						all	1
308	278433-229	Tube Assembly - Elevator booster pressure						dd	1
	284349-349	Tube Assembly - Elevator booster pressure						gg	1
309	278433-327	Tube Assembly - Elevator booster pressure						dd	1
	284349-398	Tube Assembly - Elevator booster pressure						gg	1
310	28946	Filter - Hydraulic (Purolator) (667251) (See figure 130 for detailed illustration)						all	1
311	667581	Valve Assembly - Booster control (See figure 137 for detailed illustration)						dd	1
	667561	Valve Assembly - Booster control (See figure 137 for detailed illustration)						gg	1

* Replaces Standard Part, added or serialized per one or more of the following:
 Service Bulletins 49/SB-98, 49/SB-101, 49/SB-108, 49/SB-129, 49/SB-134, 49/SB-169 and 49/SB-291; Service Instructions 49/SI-13; and Modification prints 290664 and 295528.

GROUP . . . Hydraulic System

Detail Unit . . . Secondary Hydraulic System



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SEE FIGURE 125 FOR
PRIMARY SYSTEM CONNECTIONS

SEE FIGURE 125 FOR
CONTINUATION TO FILTER

SEE FIGURE 125 FOR
PRIMARY SYSTEM CONNECTION

SEE FIGURE 125 FOR
PRIMARY SYSTEM CONNECTIONS

SEE FIGURES 159 & 160 FOR
OSE GEAR STEERING & SHIMMY
DAMPENER CONNECTION

TOR
ECTIONS

— Secondary Hydraulic System

GROUP . . . Hydraulic System

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Detail Unit . . . Secondary Hydraulic System

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6	N O M E N C L A T U R E			SERIAL CODE	UNITS PER ASSY.
	282868-2		Installation - RH Inboard engine compartment plumbing (NP)			y	Ref
	282868-3		(See figure 67 for using assembly)			y	Ref
	288150		Installation - RH Outboard engine compartment plumbing (NP)			z	Ref
			(See figure 67 for using assembly)				
126 - 1	*RU400A12-31½		Installation - Engine section hydraulic and vacuum systems (NP)				
2	*318-4W-32½		(See figure 67 for using assembly)			all	1
3	340-20D32		Hose Assembly - Hydraulic pressure (Aeroquip)			all	1
4	*318-4W-23½		Hose Assembly - Hydraulic pump by-pass (Aeroquip)			all	1
5	263063		Hose Assembly - Hydraulic suction (Aeroquip)			all	1
6	262666		Hose Assembly - Hydraulic pump drain (Aeroquip)			all	1
7	AA20500		Stub - Drain			all	1
			Flange - Drain tube (See figure 70 for using assembly)			all	Ref
			Pump - Hydraulic (Vickers) (667243) (See figure 67 for using assembly)			all	Ref
			(Pump serials must bear suffix letter "H" per 49/SB-92)				
	281029		Installation - Inboard nacelle piping, RH (NP) (See figure 2 for using assembly)			all	Ref
8	266879-3		Valve Assembly - Hydraulic shut-off (See figure 142 for detailed illustration)			all	1
9	264843-94		Tube Assembly - No. 3 Engine suction			all	1
10	264843-95		Tube Assembly - No. 3 Engine suction			all	1
11	278433-385		Tube Assembly - No. 3 Engine pressure			all	1
12	278433-386		Tube Assembly - No. 3 Engine pump drain			all	1
13	*811F76D		Nipple - Pump drain			all	1
	261213		Installation - RH Outboard engine nacelle piping (NP)			all	Ref
			(See figure 114 for using assembly)			all	1
14	266879-3		Valve Assembly - Hydraulic shut-off (See figure 142 for detailed illustration)			all	1
15	256342-451		Tube Assembly - No. 4 Engine suction			all	1
16	284349-332		Tube Assembly - No. 4 Engine pressure			all	1
17	*295527-12		Tube Assembly - No. 4 Engine pump drain			all	1
18	284349-29		Tube Assembly - No. 4 Engine pump drain			all	1
	267178		Installation - Front beam piping right wing (NP) (See figure 2 for using assembly)			all	Ref
19	256342-359		Tube Assembly - No. 4 Engine suction			all	1
20	256342-324		Tube Assembly - No. 4 Engine suction			all	1
21	261843-331		Tube Assembly - No. 4 Engine suction			all	1
22	264843-328		Tube Assembly - No. 4 Engine suction			all	1
23	264843-74		Tube Assembly - No. 4 Engine suction			all	1
24	264843-67		Tube Assembly - No. 3 Engine suction			all	1
25	256342-360		Tube Assembly - No. 4 Engine pressure			all	1
26	256324-321		Tube Assembly - No. 4 Engine pressure			all	1
27	264843-330		Tube Assembly - No. 4 Engine pressure			all	1
28	264843-327		Tube Assembly - No. 4 Engine pressure			all	1
29	272239-71		Tube Assembly - No. 4 Engine pressure			all	1
30	272239-77		Tube Assembly - No. 3 Engine pressure			all	1
31	284349-424		Tube Assembly - No. 3 Engine pressure			all	1
32	*295527-6		Tube Assembly - No. 3 Engine pump drain			all	1
33	264843-71		Tube Assembly - No. 3 Engine pump drain			all	1
34	278433-88		Tube Assembly - No. 4 Engine pump drain			all	1
35	256342-322		Tube Assembly - No. 4 Engine pump drain			all	1
36	264843-329		Tube Assembly - No. 4 Engine pump drain			all	1
37	*295527-5		Tube Assembly - No. 4 Engine pump drain			all	1
38	*295527-11		Tube Assembly - No. 4 Engine pump drain			all	1
39	264843-375		Tube Assembly - No. 4 Engine pump drain			all	1
40	264843-72		Tube Assembly - No. 4 Engine pump drain			all	1
41	284349-352		Tube Assembly - Hydraulic system warning unit			b	1
	43D2474-4-174		Hose Assembly - Hydraulic system warning unit			ai	2
42	43D2474-4-122		Hose Assembly - Hydraulic system warning unit			b-ah	2
43	284349-350		Tube Assembly - Hydraulic system warning unit			b	1
	267178-2		Tube Assembly - Hydraulic system warning unit			ah	1
	43D2474-4-106		Hose Assembly - Hydraulic system warning unit			ai	1
44	1510		Unit - Hydraulic pressure warning (Starbird) (626077)			b	2
	154		Unit - Hydraulic pressure warning (Starbird) (626077)			a	2
	261282		Installation - Right wing stub piping (NP) (See figure 1 for using assembly)			all	Ref
45	264843-12		Tube Assembly - No. 4 Engine suction			all	1
46	264843-9		Tube Assembly - No. 3 Engine suction			all	1
47	278433-11		Tube Assembly - No. 4 Engine pressure			all	1
48	264843-10		Tube Assembly - No. 3 Engine pressure			all	1
49	*295527-7		Tube Assembly - No. 3 Engine pump drain			all	1
50	*295527-8		Tube Assembly - No. 4 Engine pump drain			all	1
51	*295527-10		Tube Assembly - RH Engine hydraulic pump drain			all	1
	*190530		Bolt - Hydraulic swivel			all	1
	*295529		Tee - Swivel			all	1
52	*PLK-2743-3		Valve - Cone check (Parker) (667097-3)			all	1
53	*475HTSD		Valve - Cone check (Parker) (667100-3)			all	1
	281028		Installation - Fuselage stub wing piping (NP) (See figure 1 for using assembly)			all	Ref
54	274S36-500		Reservoir Assembly - Hydraulic (See figure 125 for requirements)			all	Ref
55	264843-37		Tube Assembly - No. 4 Engine suction			all	1
56	44R142		Valve - Suction shut-off (Motor) (General Controls) (667500)			d	2
	40R521D		Valve - Suction shut-off (Solenoid) (General Controls) (667337)			c	2
57	272239-368		Tube Assembly - No. 4 Engine suction			all	1
58	264843-266		Tube Assembly - No. 3 Engine suction			all	1
59	272239-371		Tube Assembly - No. 3 Engine suction			all	1
60	264843-60		Tube Assembly - RH Engine suction			all	1

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GROUP Hydraulic System

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Detail Unit . . . Secondary Hydraulic System (Continued)

FIGURE & INDEX NUMBER	PART NUMBER	NOMENCLATURE						SERIAL CODE	UNITS PER ASSY.
		1	2	3	4	5	6		
126 - 61	264843-81	Tube Assembly	- RH Engine suction					all	1
62	264843-26	Tube Assembly	- RH Engine suction					all	1
63	274531	Valve Assembly	- Ground test suction					all	1
	274532	Nameplate +	Ground test suction valve					all	1
	271735	Cap Assembly +	Ground test pressure and suction valves					all	2
64	272239-257	Tube Assembly	- RH Engine suction					all	1
65	264843-5	Tube Assembly	- No. 4 Engine pressure					all	1
66	264843-55	Tube Assembly	No. 4 Engine pressure					all	1
67	272239-47	Tube Assembly	- No. 4 Engine pressure					all	1
68	284349-426	Tube Assembly	- No. 3 Engine pressure					all	1
69	272239-99	Tube Assembly	No. 3 Engine pressure					all	1
70	278433-285	Tube Assembly	- No. 3 Engine pressure					all	1
71	278433-287	Tube Assembly	- No. 3 Engine pressure					all	1
72	PL8-2743-4	Valve - Check	(Parker) (667097-5)					all	1
73	256342-496	Tube Assembly	- Ground test pressure					all	1
74	256342-164	Tube Assembly	- Ground test pressure					all	1
75	264843-90	Tube Assembly	- No. 3 Engine pressure					all	1
76	PL8-2743-1	Valve - Check	(Parker) (667096)					all	3
77	264843-22	Tube Assembly	- RH Engine pressure					all	1
78	667558	Valve Assembly	- Cross-over check (See figure 125 for detailed breakdown)					www	Ref
	278556	Valve Assembly	- Cross-over check (See figure 125 for detailed breakdown)					vvv	Ref
79	272239-46	Tube Assembly	- RH Engine pressure					all	1
80	272239-45	Tube Assembly	Engine pressure line to flight station					all	1
81	278433-215	Tube Assembly	Engine pressure line to relief valve					all	1
82	AA11600	Valve - Hydraulic relief (Vickers) (667075)	(See figure 147 for detailed illustration)					all	1
83	272239-81	Tube Assembly	Engine pressure line, relief valve to restriction valve					all	1
84	1V459 Lot 1	Valve - Restriction (Pesco) (667519)	(See figure 149 for detailed illustration)					gg	1
	1V459	Valve - Restriction (Pesco) (667065)	(See figure 149 for detailed illustration)					dd	1
85	193141	Bolt - Hydraulic swivel, $\frac{1}{2}$ " to $\frac{3}{4}$ "						all	1
86	256342-408	Tube Assembly	Engine pressure line, restriction valve to cabin fan shut-off valve					all	1
	278153	Valve Assembly	- Cabin fan shut-off					all	1
	29041	Valve - Cut-off (Aircraft Accessories) (667257)	(See figure 137 for detailed illustration)					all	1
	278180	Elbow - Hydraulic swivel, $\frac{1}{2}$ " to $\frac{3}{4}$ "						all	2
87	272239-289	Tube Assembly	Cabin fan pressure					all	1
88	278433-213	Tube Assembly	Cabin fan pressure					all	1
89	278433-284	Tube Assembly	Engine pressure line, restriction valve to tee					all	1
90	264843-334	Tube Assembly	Engine pressure line, tee to selector valve					all	1
	280271	Tube Assembly	Hydraulic swivel, 12-4-12					all	1
91	272048	Valve Assembly	- Landing gear selector (See figure 150 for detailed illustration)					all	1
92	278433-268	Tube Assembly	Pressure line, selector valve to tail bumper compensator					all	1
93	HL762	Compensator - Tail bumper (Hoof Products) (667404)	(See figure 142 for detailed illustration)					all	1
	280928	Nameplate + Tail bumper compensator						all	1
94	270120	Holt - Hydraulic swivel, $\frac{1}{4}$ "						all	1
95	278433-225	Tube Assembly	Flap pressure line					all	1
96	278433-35	Tube Assembly	Flap pressure line					all	1
	*295552-2	Tube Assembly	Flap pressure line					all	1
97	278433-262	Tube Assembly	RH Engine hydraulic pump drain					all	1
98	272239-67	Tube Assembly	Flap & fan motor pump return					all	1
99	278433-248	Tube Assembly	System return, pump drain line to filter					all	1
100	278433-254	Tube Assembly	System return, selector valve to tee					all	1
101	278433-249	Tube Assembly	System return from flight station					all	1
102	278433-270	Tube Assembly	System return, relief valve to tee					all	1
103	278433-269	Tube Assembly	System return, tee to filter					all	1
104	190574	Holt - Hydraulic swivel, $\frac{3}{8}$ "						all	1
	278994	Filter Assembly	- Hydraulic (See figure 125 for requirements)					all	Ref
105	278433-444	Tube Assembly	System return, filter to union					all	1
106	278433-443	Tube Assembly	System return, union to booster return by-pass valve					all	1
107	D32-14-001	Valve - Booster	return by-pass & return change-over (Interstate) (667063)	(See figure 125 for requirements)				all	Ref
108	272239-210	Tube Assembly	System return, by-pass valve to reservoir					all	1
109	272239-246	Tube Assembly	System return, change-over valve to reservoir					all	1
110	273470	Aspirator Assembly	- Hydraulic reservoir (See figure 125 for detailed breakdown)					all	Ref
111	272239-179	Tube Assembly	Sump return line					all	1
112	525HT10D	Valve - Check	(Parker) (663010)					all	1
113	272239-220	Tube Assembly	Sump return line					all	1
114	264843-43	Tube Assembly	Sump return line					all	1
115	*296404-5	Tube Assembly	Flap motor & cross-over valve drain					all	1
116	*296404-4	Tube Assembly	Cross-over valve drain					all	1
	272203	Installation - Fuselage piping stations 527-676 (NP)	(See figure 1 for using assembly)					all	Ref
117	256342-222	Tube Assembly	- Flap pressure line					all	1
118	272239-54	Tube Assembly	- Flap pressure line					all	1
119	272239-413	Tube Assembly	- Flap pressure line					all	1
120	256342-192	Tube Assembly	Cabin fan pressure					all	1
121	256342-194	Tube Assembly	Cabin fan pressure					all	1
122	272239-60	Tube Assembly	Cabin fan pressure					all	1
	270515	Elbow - Hydraulic swivel ($\frac{1}{2}$ " - $\frac{3}{4}$ " Tube size)						all	1
	270544	Bolt - Hydraulic swivel ($\frac{3}{8}$ " Tube size)						all	1

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GROUP . . . Hydraulic System

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Detail Unit . . . Secondary Hydraulic System (Continued)

FIGURE & INDEX NUMBER	PART NUMBER	N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
		1	2	3	4	5	6		
126-123	400525	Valve - Restrictor (Bendix) (667070)						all	1
124	272239-62	Tube Assembly - Cabin fan pressure						all	1
125	272239-352	Tube Assembly - Cabin fan pressure						all	1
126	272239-357	Tube Assembly - Flap & fan motor return						all	1
127	256342-209	Tube Assembly - Flap & fan motor return						all	1
128	272239-367	Tube Assembly - Flap & fan motor return						all	1
129	272239-420	Tube Assembly - Flap motor return						all	1
130	272239-424	Tube Assembly - Fan motor return						all	1
131	PL8-2743-2	Valve - Check (Parker) (667150)						all	1
	190530	Bolt - Hydraulic swivel (1/2" tube size)						all	5
132	272239-351	Tube Assembly - Fan motor return						all	1
133	272239-394	Tube Assembly - Flap & fan motor drain						all	1
134	272239-55	Tube Assembly - Flap & fan motor drain						all	1
135	*4751H76D	Valve - Cone check (Parker) (667100-2)						all	2
	*4256	Tee - Fan & flap motor drain line (I. W. Masters)						all	1
136	*296404-3	Tube Assembly - Fan motor drain						all	1
137	*296404-2	Tube Assembly - Flap motor drain						all	1
138	272239-412	Tube Assembly - Flap motor drain						all	2
	278083	Elbow - Hydraulic swivel						all	2
139	278433-439	Tube Assembly - Flap motor by-pass						all	1
140	272239-422	Tube Assembly - Flap motor by-pass						all	1
141	CE2-680	Valve - "Y" Globe (Collins) (667210)						all	1
142	272239-421	Tube Assembly - Flap motor by-pass						all	1
143	278433-440	Tube Assembly - Flap motor by-pass						all	1
144	272239-415	Tube Assembly - Valve to motor pressure						all	1
145	272239-416	Tube Assembly - Motor connector pressure						all	1
146	272239-417	Tube Assembly - Motor connector return						all	1
147	272239-418	Tube Assembly - Motor to valve return						all	1
	*295859	Installation - Fan motor hose (NP) (Replaces 282973 per 49/SB-50)						all	1
148	70099-8-018148-275	Hose Assembly - Fan motor pressure (Weatherhead)						all	1
149	332-8-25D	Hose Assembly - Fan motor return (Aeroquip)						all	1
150	324-6-25	Hose Assembly - Fan motor drain (Aeroquip)						all	1
151	667429	Valve Assembly - Hydraulic 4-way flap selector						all	Ref
152	MF8-713-30BC	(See figure 139 for detailed illustration)						all	Ref
	Motor - Hydraulic flap drive (Vickers) (667227)	(See figure 140 for detailed illustration)						all	Ref
153	*296102	Installation - Fan motor drive (NP) (See figure 179 for detailed illustration)						all	Ref
154	*296404-7	Tube Assembly - Flap & fan motor drain (See figure 125 for detailed illustration)						all	Ref
	280927	Installation - Fuselage piping station 278-456, LH (NP)						all	Ref
	(See figure 1 for using assembly)								
155	256342-65	Tube Assembly - Hydraulic system pressure to flight station						all	1
156	256342-286	Tube Assembly - Hydraulic secondary pressure						all	1
157	256342-73	Tube Assembly - Hydraulic secondary pressure						all	1
158	256342-149	Tube Assembly - Hydraulic secondary pressure						all	1
159	256342-136	Tube Assembly - Hydraulic secondary pressure						all	1
160	256342-143	Tube Assembly - Hydraulic system return from flight station						all	1
161	256342-66	Tube Assembly - Hydraulic secondary return						all	1
162	256342-74	Tube Assembly - Hydraulic secondary return						all	1
163	256342-150	Tube Assembly - Hydraulic secondary return						all	1
164	256342-137	Tube Assembly - Hydraulic secondary return						all	1
165	272239-454	Tube Assembly - Sump tank return						all	1
166	272239-440	Tube Assembly - Sump tank return						all	1
167	272239-437	Tube Assembly - Sump tank return						all	1
168	256342-145	Tube Assembly - Sump tank return						all	1
169	256342-132	Tube Assembly - Sump tank return						all	1
	272198	Installation - Station 278-4 to 260 fuselage piping (NP)						all	Ref
	(See figure 1 for using assembly)								
170	264843-360	Tube Assembly - Hydraulic secondary return						all	1
171	272239-134	Tube Assembly - Hydraulic secondary return						all	1
172	256342-173	Tube Assembly - Hydraulic secondary return						all	1
173	256342-172	Tube Assembly - Hydraulic secondary pressure						all	1
174	285106-282	Tube Assembly - Sump tank return						all	1
175	285106-284	Tube Assembly - Sump tank return						all	1
	283676	Installation - Fuselage piping, LH station 212-260 (NP)						all	Ref
	(See figure 1 for using assembly)								
176	278433-108	Tube Assembly - Hydraulic secondary return						all	1
177	278433-109	Tube Assembly - Hydraulic secondary pressure						all	1
178	278433-267	Tube Assembly - Hydraulie aspirator return						all	1
	288285	Installation - LH Fuselage piping station 130-212 (NP)						ccc	Ref
	(See figure 1 for using assembly)								
281593	Installation - Fuselage piping, LH station 150-212 (NP)							ddd	Ref
	(See figure 1 for using assembly)								
281591	Installation - Keelson piping station 150-195 (NP)							all	Ref
	(See figure 1 for using assembly)								
179	288284-28	Tube Assembly - Hydraulic secondary return						ccc	1
	285106-30	Tube Assembly - Hydraulic secondary return						ddd	1
180	288284-30	Tube Assembly - Hydraulic secondary return						ccc	1
	285106-26	Tube Assembly - Hydraulic secondary return						ddd	1
181	288284-32	Tube Assembly - Hydraulic secondary pressure						ccc	1
	264843-150	Tube Assembly - Hydraulic secondary pressure						ddd	1
182	288284-36	Tube Assembly - Hydraulic secondary pressure						ccc	1
	264843-158	Tube Assembly - Hydraulic secondary pressure						ddd	1
	(Continued on next page)								

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GROUP Hydraulic System
Detail Unit . . . Secondary Hydraulic System (Continued)

FIGURE & INDEX NUMBER	PART NUMBER	NOMENCLATURE						SERIAL CODE	UNITS PER ASSY.
		1	2	3	4	5	6		
126-183	278433-321	Tube Assembly	- Hydraulic secondary pressure					all	1
	285106-176	Tube Assembly	- Hydraulic secondary pressure					all	1
184	FNT-10D	Cap (Parker)						all	1
185	288284-34	Tube Assembly	- Hydraulic secondary pressure					ccc	1
186	264843-156	Tube Assembly	- Hydraulic sump return					all	1
187	288284-40	Tube Assembly	- Hydraulic sump return					ccc	1
	278433-402	Tube Assembly	- Hydraulic sump return					ddd	1
188	PL9-2043-4	Valve - Check (Parker) (667097-2)						all	2
189	285106-172	Tube Assembly	- Hydraulic brake pressure					all	1
190	285106-174	Tube Assembly	- Hydraulic brake pressure					all	1
191	271745	Valve Assembly	- Brake selector (See figure 171 for detailed illustration)					all	1
	270594	Bolt - Hydraulic swivel						all	2
	273906	Elbow - Hydraulic swivel						all	2
	281035	Installation - Fuselage piping (NP) (See figure 1 for using assembly)						all	Ref
	287541	Valves - Steering shut-off and restrictor						ccc	1
192	400525	Valve - Restrictor (Bendix) (667070)						ccc	1
193	285106-90	Tube Assembly	- Hydraulic secondary pressure					ccc	1
	3174HT8-6D	Union (Parker)						ccc	1
194	R251-D8	Joint - Swing (Chiksan) (667571)						ccc	2
	40D373-6D	Union						ccc	2
195	285106-92	Tube Assembly	- Hydraulic secondary pressure					ccc	1
196	287543	Valve Assembly	- Steering shut-off					ccc	1
	29033-5L	Valve - Single poppet shut-off (Aircraft Accessories) (667375)						ccc	1
	287539	Lever - Steering shut-off valve						ccc	1
	287540	Link Assembly	- Steering shut-off valve					ccc	1
	283908	Arm - Steering bracket carrier radius						ccc	1
	283906-4	Bushing - Steering shut-off valve link						ccc	2
	277128	Nameplate - Restriction valve adjusting						ccc	1
197	285106-94	Tube Assembly	- Hydraulic secondary pressure					ccc	1
198	285106-96	Tube Assembly	- Hydraulic secondary return					ccc	1
	281505	Installation - Fuselage piping pressure bulkhead (NP) (See figure 1 for using assembly)						all	Ref
	288601	Tee - Special 6-6-6						all	1
	190531	Bolt						all	2
199	PL9-2043-4	Valve - Check (Parker) (667097-2)						all	2
200	285106-154	Tube Assembly	- Accumulator brake pressure					all	1
201	285106-158	Tube Assembly	- Accumulator to brake pressure gage					all	1
202	285106-152	Tube Assembly	- Accumulator brake pressure					all	1
	271072	Elbow - Accumulator						all	2
203	285106-156	Tube Assembly	- Accumulator brake pressure					all	1
204	401531	Accumulator (Bendix) (667382) (See figure 143 for detailed illustration)						all	2
	279120	Nameplate - Brake accumulator						all	1
	279120-2	Nameplate - Brake accumulator						all	1
	288751-2	Nameplate - Brake accumulator						all	1
	288751-3	Nameplate - Brake accumulator						all	1
	284156	Clamp Block - No. 16						all	4
205	285106-166	Tube Assembly	- Hydraulic brake pressure					all	1
206	285106-160	Tube Assembly	- Hydraulic brake pressure					all	1
207	264843-470	Tube Assembly	- Hydraulic brake pressure					all	1
208	285106-188	Tube Assembly	- Hydraulic brake pressure					all	1
209	264843-216	Tube Assembly	- Hydraulic brake pressure					all	1
210	264843-467	Tube Assembly	- Hydraulic brake pressure					all	1
211	264843-458	Tube Assembly	- Hydraulic brake pressure					all	1
212	285106-164	Tube Assembly	- Accumulator brake pressure					all	1
213	285106-162	Tube Assembly	- Hydraulic brake pressure					all	1
214	283042	Tank Assembly	- Sump					all	1
215	278433-403	Tube Assembly	- Sump tank drain					all	1
216	278433-404	Tube Assembly	- Sump tank return					all	1
217	264843-478	Tube Assembly	- Sump tank return					all	1
218	264843-481	Tube Assembly	- Hydraulic brake pressure					all	1
219	36083A	Valve Assembly	- Brake (Aircraft Accessories) (662055) (See figure 107 for using assembly)					all	Ref
	283186	Installation - Fuselage piping station 150-212 (NP) (See figure 1 for using assembly)						all	Ref
220	285106-178	Tube Assembly	- Hydraulic brake pressure					all	1
221	264843-486	Tube Assembly	- Hydraulic brake pressure					all	2
	279877	Clamp Block						all	1
222	285106-180	Tube Assembly	- Hydraulic brake pressure					all	1
223	285106-182	Tube Assembly	- Hydraulic brake pressure					all	1
224	289992	Gauge Assembly	- Brake pressure					all	2
	AN5771-4A	Gauge	- Brake pressure (626075)					all	1
	288753	Bracket Assembly	- Hydraulic brake gauge					all	1
	289219	Brace Assembly	- Hydraulic brake gauge bracket					all	1
	266994	Installation - Nose landing gear wheel well hydraulics (NP) (See figure 124 for using assembly)						mmm	Ref
	288771	Installation - Nose landing gear hydraulic system (NP) (See figure 127 for using assembly)						nnn	Ref
225	285106-114	Tube Assembly	- Hydraulic secondary return					ii	1
	272239-155	Tube Assembly	- Hydraulic secondary return					n	1
226	11146-3	Valve	- Thermal relief (United Aircraft) (667077-3) (See figure 127 for detailed breakdown)					all	1

* Replaces Standard Part, added or serialized per one or more of the following:
Service Bulletins 49/SB-50, 49/SB-98, 49/SB-101, 49/SB-129, 49/SB-134 and
49/SB-169; Service Instruction 49/SI-13 and Modification Prints M295291,
M295528, M295859, M296102 and M296404.

GROUP . . . Hydraulic System

Detail Unit . . . Landing Gear and Brakes Hydraulic System

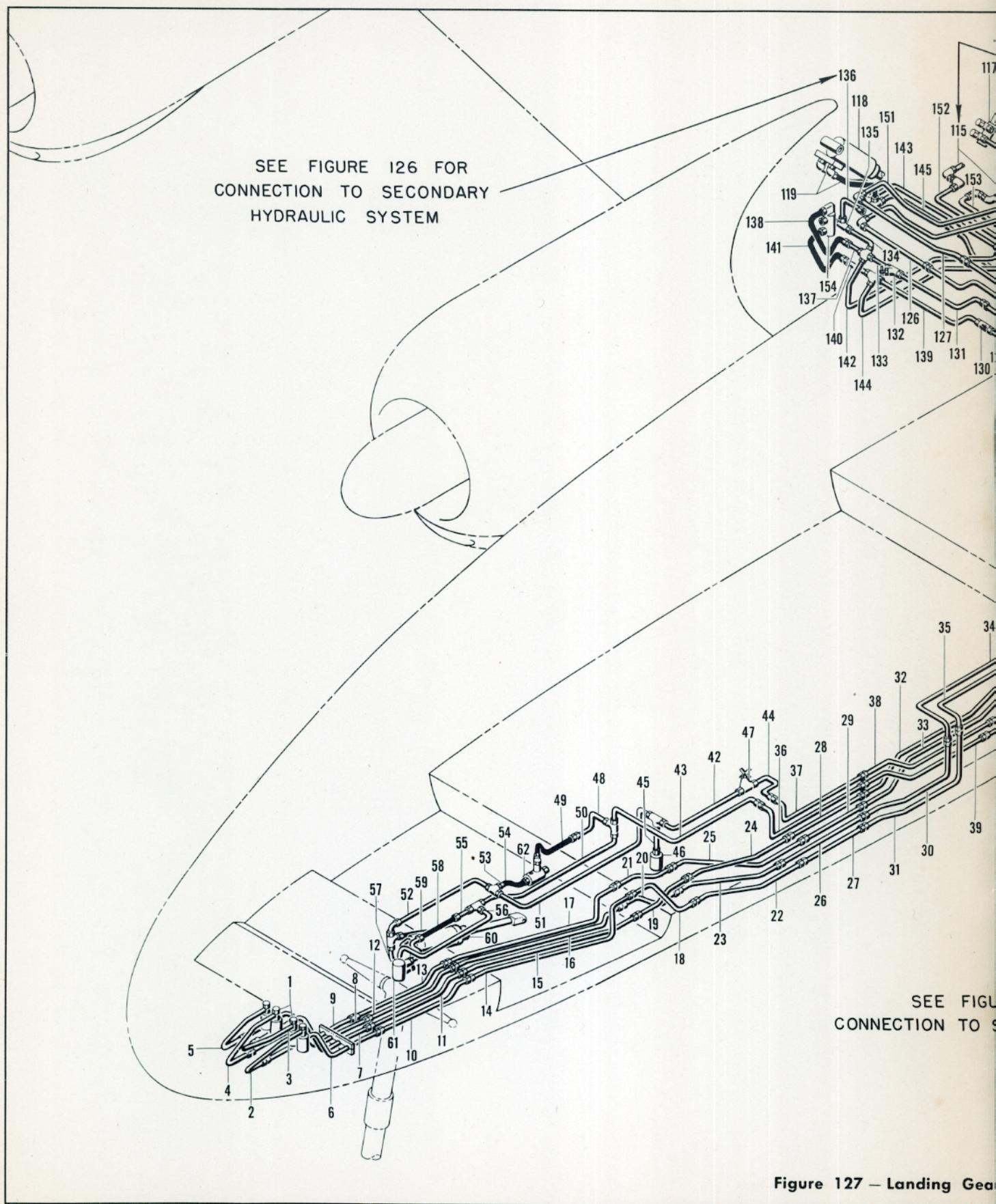
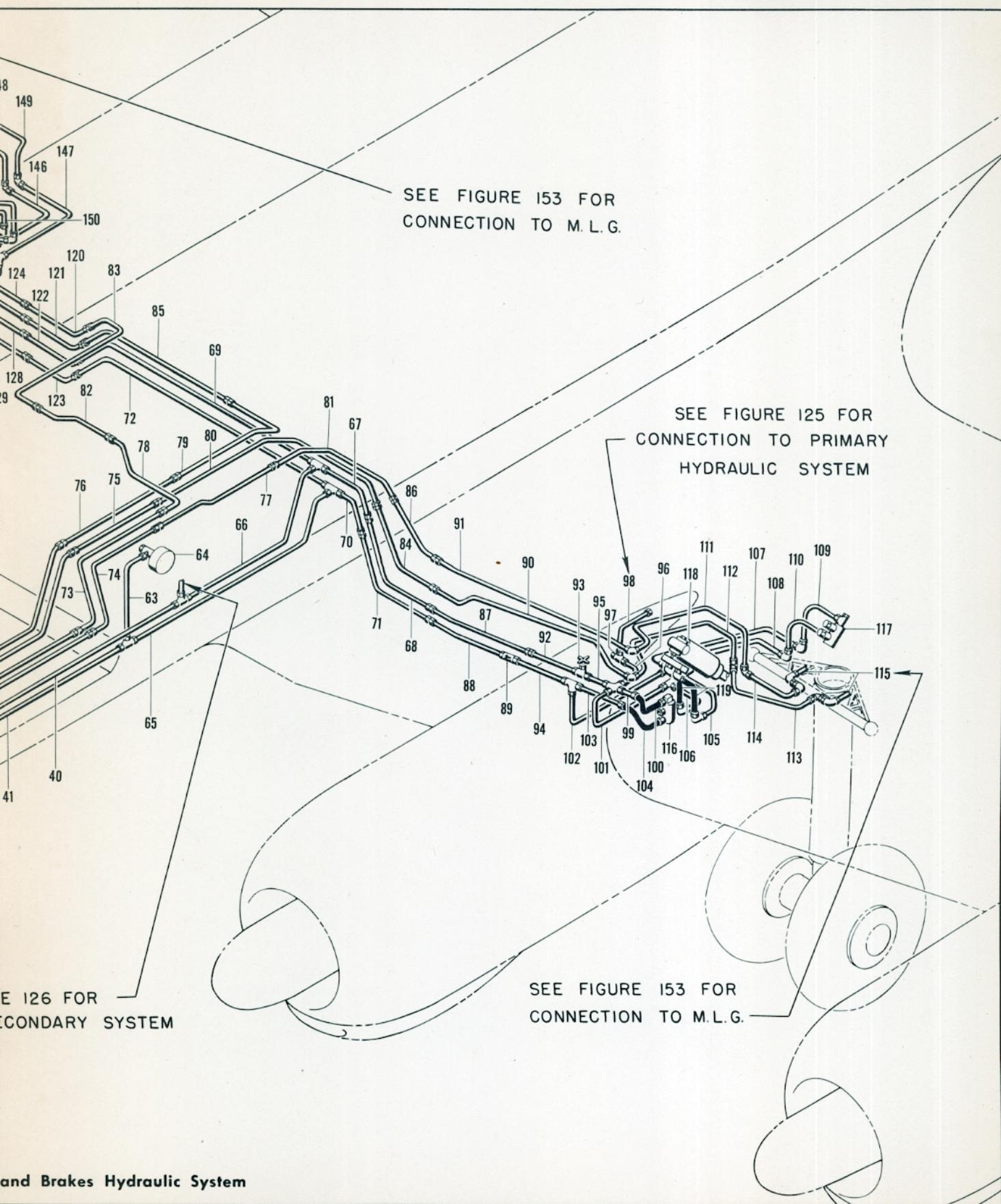


Figure 127 – Landing Gear

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GROUP . . . Hydraulic System

Detail Unit . . . Landing Gear and Brakes Hydraulic System

Constellation

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6	N O M E N C L A T U R E	SERIAL CODE	U N I T S P E R A S S Y.	
					Ref	Ref
127 - 1	36083A		Valve Assembly - Brake (Aircraft Accessories) (662055) (See figure 107 for using assembly)	all		Ref
	281505		Installation - Fuselage piping pressure bulkhead (NP) (See figure 1 for using assembly)	all		Ref
2	264843-469		Tube Assembly - Left inboard hydraulic brake	all		1
3	264843-468		Tube Assembly - Left outboard hydraulic brake	all		1
4	264843-477		Tube Assembly - Right outboard hydraulic brake	all		1
5	264843-479		Tube Assembly - Right inboard hydraulic brake	all		1
	281593		Installation - LH Fuselage piping station 150-212 (NP) (See figure 1 for using assembly)	ddd		Ref
	288285		Installation - LH Fuselage piping station 150-212 (NP) (See figure 1 for using assembly)	ccc		Ref
6	288284-44		Tube Assembly - Left inboard hydraulic brake	ccc		1
	264843-485		Tube Assembly - Left inboard hydraulic brake	ddd		1
7	288284-42		Tube Assembly - Left outboard hydraulic brake	ccc		1
	264843-163		Tube Assembly - Left outboard hydraulic brake	ddd		1
8	288284-22		Tube Assembly - Right outboard hydraulic brake	ccc		1
	264843-162		Tube Assembly - Right outboard hydraulic brake	ddd		1
9	288284-24		Tube Assembly - Right inboard hydraulic brake	ccc		1
	264843-483		Tube Assembly - Right inboard hydraulic brake	ddd		1
10	264843-495		Tube Assembly - Left inboard hydraulic brake	all		1
11	264843-155		Tube Assembly - Left outboard hydraulic brake	all		1
12	264843-154		Tube Assembly - Right outboard hydraulic brake	all		1
13	264843-494		Tube Assembly - Right inboard hydraulic brake	all		1
	283676		Installation - LH Fuselage piping station 212-260 (NP) (See figure 1 for using assembly)	all		Ref
14	278433-114		Tube Assembly - Left inboard hydraulic brake	all		1
15	278433-113		Tube Assembly - Left outboard hydraulic brake	all		1
16	278433-112		Tube Assembly - Right outboard hydraulic brake	all		1
17	278433-111		Tube Assembly - Right inboard hydraulic brake	all		1
	272198		Installation - Station 278.4 to 260 fuselage piping (NP) (See figure 1 for using assembly)	all		Ref
18	256342-175		Tube Assembly - Left outboard hydraulic brake	all		1
19	264843-407		Tube Assembly - Left inboard hydraulic brake	all		1
20	256342-174		Tube Assembly - Right outboard hydraulic brake	all		1
21	264843-406		Tube Assembly - Right inboard hydraulic brake	all		1
	280927		Installation - Fuselage piping station 278-456, LH (NP) (See figure 1 for using assembly)	all		Ref
22	272239-446		Tube Assembly - Left outboard hydraulic brake	all		1
23	272239-447		Tube Assembly - Right outboard hydraulic brake	all		1
24	272239-456		Tube Assembly - Left inboard hydraulic brake	all		1
25	272239-457		Tube Assembly - Right inboard hydraulic brake	all		1
26	272239-452		Tube Assembly - Right outboard hydraulic brake	all		1
27	272239-453		Tube Assembly - Left outboard hydraulic brake	all		1
28	272239-458		Tube Assembly - Left inboard hydraulic brake	all		1
29	272239-459		Tube Assembly - Right inboard hydraulic brake	all		1
30	272239-441		Tube Assembly - Right outboard hydraulic brake	all		1
31	272239-442		Tube Assembly - Left outboard hydraulic brake	all		1
32	272239-460		Tube Assembly - Left inboard hydraulic brake	all		1
33	272239-461		Tube Assembly - Right inboard hydraulic brake	all		1
34	272239-432		Tube Assembly - Right outboard hydraulic brake	all		1
35	272239-434		Tube Assembly - Left outboard hydraulic brake	all		1
36	272239-449		Tube Assembly - Nose landing gear, down	all		1
37	272239-450		Tube Assembly - Nose landing gear, up	all		1
38	256342-70		Tube Assembly - Nose landing gear, up	all		1
39	256342-71		Tube Assembly - Nose landing gear, down	all		1
40	256342-67		Tube Assembly - Nose landing gear, up	all		1
41	278433-13		Tube Assembly - Nose landing gear, down	all		1
	281035		Installation - Fuselage piping (NP) (See figure 1 for using assembly)	all		Ref
	288771		Installation - Nose landing gear hydraulic system (NP)	nnn		1
	266994		Installation - Nose landing gear wheel well hydraulics (NP)	mmm		1
42	285106-122		Tube Assembly - Nose landing gear, up	ii		1
	272239-153		Tube Assembly - Nose landing gear, up	n		1
43	285106-124		Tube Assembly - Nose landing gear, down	ii		1
	272239-152		Tube Assembly - Nose landing gear, down	n		1
44	285106-120		Tube Assembly - Nose landing gear, up	ii		1
	272239-156		Tube Assembly - Nose landing gear, up	n		1
45	272239-154		Tube Assembly - Nose landing gear, up	all		1
46	11146-3		Valve Assembly - Thermal relief (United Aircraft) (667077-3) (See figure 49 for using assembly)	all		Ref
47	CE2-680		Valve - "Y" Globe (Collins) (667210)	all		1
48	272239-157		Tube Assembly - Nose landing gear, down	all		1
49	83710-6-13		Hose Assembly - Downline (Weatherhead)	all		1
50	272239-165		Tube Assembly - Nose landing gear, down	all		1

(Continued on next page)

GROUP . . . Hydraulic System

Detail Unit . . . Landing Gear and Brakes Hydraulic System (Continued)

Constellation

FIGURE & INDEX NUMBER	PART NUMBER	NOMENCLATURE						SERIAL CODE	UNITS PER ASSY.
		1	2	3	4	5	6		
127 - 51	272239-166	Tube Assembly	- Nose landing gear, up					all	1
52	272239-163	Tube Assembly	- Nose landing gear, up					all	1
53	272239-173	Tube Assembly	- Nose landing gear, up					all	1
54	83710-4-14	Hose Assembly	- Nose landing gear, up (Weatherhead)					all	1
55	272239-162	Tube Assembly	- Nose landing gear, down					all	1
56	272239-159	Tube Assembly	- Nose landing gear, down					all	1
57	272239-161	Tube Assembly	- Nose landing gear, up					all	1
	279391	Installation	- Nose landing gear actuating cylinder (NP)					all	Ref
			(See figure 158 for using assembly)						
58	83710-6-21	Hose Assembly	- Nose landing gear, down (Weatherhead)					all	Ref
59	70099-6-016016-21S	Hose Assembly	- Nose landing gear, up (Weatherhead)					all	Ref
60	403904-0-2	Cylinder Assembly	- Nose landing gear (See figure 167 for detailed illustration)					all	Ref
61	210621	Cylinder Assembly	- Nose landing gear downlock actuating (Gladden Products)					all	Ref
			(663059) (See figure 158 for using assembly)						
62	272681	Installation	- Nose landing gear uplock (NP) (See figure 158 for using assembly)					all	Ref
	281028	Installation	- Fuselage stub wing piping (NP) (See figure 1 for using assembly)					all	Ref
63	278433-393	Tube Assembly	- Nose landing gear, down					all	1
64	272048	Valve Assembly	- Landing gear selector (See figure 150 for detailed illustration)					all	1
65	278433-216	Tube Assembly	- Landing gear, down					all	1
66	278433-217	Tube Assembly	- Landing gear, up					all	1
67	264843-23	Tube Assembly	- Landing gear, up					all	1
68	278433-22	Tube Assembly	- Landing gear, up					all	1
69	278433-263	Tube Assembly	- Landing gear, up					all	1
70	264843-25	Tube Assembly	- Landing gear, down					all	1
71	278433-24	Tube Assembly	- Landing gear, down					all	1
72	264843-13	Tube Assembly	- Landing gear, down					all	1
73	264843-418	Tube Assembly	- Right inboard hydraulic brake					all	1
74	278433-288	Tube Assembly	- Left inboard hydraulic brake					all	1
75	264843-56	Tube Assembly	- Left outboard hydraulic brake					all	1
76	264843-57	Tube Assembly	- Right outboard hydraulic brake					all	1
77	278433-286	Tube Assembly	- Left inboard hydraulic brake					all	1
78	272239-266	Tube Assembly	- Right inboard hydraulic brake					all	1
79	264843-78	Tube Assembly	- Right outboard hydraulic brake					all	1
80	264843-79	Tube Assembly	- Left outboard hydraulic brake					all	1
81	264843-420	Tube Assembly	- Left inboard hydraulic brake					all	1
82	272239-102	Tube Assembly	- Right inboard hydraulic brake					all	1
83	284349-428	Tube Assembly	- Right inboard hydraulic brake					all	1
84	278433-16	Tube Assembly	- Left outboard hydraulic brake					all	1
85	264843-34	Tube Assembly	- Right outboard hydraulic brake					all	1
86	264843-369	Tube Assembly	- Left inboard hydraulic brake					all	1
	267177	Installation	- Left wing front beam piping (NP) (See figure 2 for using assembly)					all	Ref
	256342-305	Tube Assembly	- Landing gear, up					all	1
88	*288722-83	Tube Assembly	- Landing gear, down					all	1
89	*1466	Valve Assembly	- Main landing gear restrictor (Hydro-Aire) (667489)					all	1
	146712	Pepper Assembly	- Restrictor valve					all	1
90	272239-30	Tube Assembly	- Left outboard hydraulic brake					all	1
91	272239-29	Tube Assembly	- Left inboard hydraulic brake					all	1
	281027	Installation	- Inboard nacelle piping, LH (NP) (See figure 2 for using assembly)					all	Ref
92	272239-203	Tube Assembly	- Landing gear, down					all	1
93	CE2-590	Valve - "Y" Globe	(Collins) (667209)					all	1
94	278433-337	Tube Assembly	- Landing gear, down					all	1
95	278433-339	Tube Assembly	- Landing gear, up					b	1
96	284349-464	Tube Assembly	- Landing gear, up					a	1
	278433-350	Tube Assembly	- Landing gear, up					all	1
97	11146-3	Valve - Thermal relief	(United Aircraft) (667077-3)					all	1
	11538	Seal - Relief valve	. . . . .					all	1
	20300-012C018-025	Washer - Relief valve	. . . . .					all	1
	11351	Body - Relief valve	. . . . .					all	1
	No Number	Ball - Steel	. . . . .					all	1
	13915	Stem - Relief valve	. . . . .					all	1
	11350	Spring - Relief valve	. . . . .					all	1
	11346	Screw - Relief valve	. . . . .					all	1
	20300-012SR016-062	Washer - Relief valve	. . . . .					all	1
	11348	Nut - Relief valve	. . . . .					all	1
98	284349-462	Tube Assembly	- Landing gear up to No. 1 engine pump drain					b	1
	278433-348	Tube Assembly	- Landing gear up to No. 1 engine pump drain					a	1
99	278433-354	Tube Assembly	- Landing gear, up					all	1
100	70099-4-014144-12½S	Hose Assembly	- Landing gear, up (Weatherhead)					all	1
101	284349-382	Tube Assembly	- Landing gear, up					d	1
	278433-341	Tube Assembly	- Landing gear, up					c	1
102	284349-384	Tube Assembly	- Landing gear, down					d	1
	278433-340	Tube Assembly	- Landing gear, down					c	1
103	278433-347	Tube Assembly	- Landing gear, down					all	i

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GROUP . . . Hydraulic System

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Detail Unit . . . Landing Gear and Brakes Hydraulic System (Continued)

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
127-104	70099-6-016146-11½S	Hose Assembly	Landing gear, down (Weatherhead)						all	1
105	284349-388	Tube Assembly	Landing gear, down						d	1
106	278433-342	Tube Assembly	Landing gear, down						c	1
	284349-392	Tube Assembly	Landing gear, up						d	1
	278433-343	Tube Assembly	Landing gear, up						c	1
107	284349-376	Tube Assembly	Landing gear, down						d	1
	278433-454	Tube Assembly	Landing gear, down						c	1
108	284349-380	Tube Assembly	Landing gear, up						d	1
	278433-458	Tube Assembly	Landing gear, up						c	1
109	278433-466	Tube Assembly	Landing gear, down						all	1
110	278433-464	Tube Assembly	Landing gear, up						all	1
111	278433-450	Tube Assembly	Left inboard hydraulic brake						all	1
112	278433-452	Tube Assembly	Left outboard hydraulic brake						all	1
113	278433-460	Tube Assembly	Left inboard hydraulic brake						all	1
114	278433-462	Tube Assembly	Left outboard hydraulic brake						all	1
115	288471	Installation - Main	landing gear brake lines (NP) (See figure 153 for using assembly)						all	Ref
116	272551L	Uplock Assembly	Main landing gear (NP) (See figure 152 for using assembly)						all	Ref
117	210599	Cylinder Assembly	Main landing gear downlock (Gladden Products) (663064) (See figure 156 for using assembly)						all	Ref
118	280860	Installation - Main	landing gear actuating cylinder (NP) (See figure 155 for using assembly)						all	Ref
119	70099-10-01100210-27S	Hose Assembly	(Weatherhead)						all	Ref
	261282	Installation - Right	stub wing piping (NP) (See figure 1 for using assembly)						all	Ref
120	272239-133	Tube Assembly	Right inboard hydraulic brake						all	1
121	278433-12	Tube Assembly	Right outboard hydraulic brake						all	1
122	264843-15	Tube Assembly	Landing gear, up						all	1
123	264843-17	Tube Assembly	Landing gear, down						all	1
	267178	Installation - Right	wing front beam piping (NP) (See figure 2 for using assembly)						all	Ref
124	264843-372	Tube Assembly	Right inboard hydraulic brake						all	1
125	272239-497	Tube Assembly	Right outboard hydraulic brake						all	1
126	264843-333	Tube Assembly	Right outboard hydraulic brake						all	1
127	272239-5	Tube Assembly	Right inboard hydraulic brake						all	1
128	264843-70	Tube Assembly	Landing gear, up						all	1
129	*295459-19	Tube Assembly	Landing gear, down						all	1
130	*1466	Valve Assembly	Main landing gear restrictor (Hydro-Aire) (667489)						all	1
	281029	Installation - RH	Inboard nacelle piping (NP) (See figure 2 for using assembly)						all	Ref
131	272239-115	Tube Assembly	Landing gear, up						all	1
132	CE2-590	Valve - "Y" Globe	(Collins) (667209)						all	1
133	272239-120	Tube Assembly	Landing gear, up						all	1
134	284349-458	Tube Assembly	Landing gear, up						all	1
135	11146-3	Valve - Thermal	relief (United Aircraft) (667077-3) (See index number 97 for breakdown)						all	1
136	284349-460	Tube Assembly	Landing gear, up						all	1
137	278433-365	Tube Assembly	Landing gear, up						all	1
138	70099-4-014144-12½S	Hose Assembly	Landing gear, up (Weatherhead)						all	1
139	278433-357	Tube Assembly	Landing gear, down						all	1
140	278433-364	Tube Assembly	Landing gear, down						all	1
141	70099-6-016146-11½S	Hose Assembly	Landing gear, down (Weatherhead)						all	1
142	278433-355	Tube Assembly	Landing gear, up						all	1
143	278433-235	Tube Assembly	Landing gear, up						all	1
144	278433-359	Tube Assembly	Landing gear, down						all	1
145	278433-360	Tube Assembly	Landing gear, down						all	1
146	284349-370	Tube Assembly	Landing gear, up						d	1
	278433-453	Tube Assembly	Landing gear, up						c	1
147	284349-374	Tube Assembly	Landing gear, down						d	1
	278433-457	Tube Assembly	Landing gear, down						c	1
148	278433-463	Tube Assembly	Landing gear, up						all	1
149	278433-467	Tube Assembly	Landing gear, down						all	1
150	278433-451	Tube Assembly	Right outboard hydraulic brake						all	1
151	278433-449	Tube Assembly	Right inboard hydraulic brake						all	1
152	278433-459	Tube Assembly	Right inboard hydraulic brake						all	1
153	278433-461	Tube Assembly	Right outboard hydraulic brake						all	1
154	272551R	Uplock Assembly	Main landing gear (NP) (See figure 152 for using assembly)						all	Ref

* Replaces standard part per Service Instruction 49/SI-75.

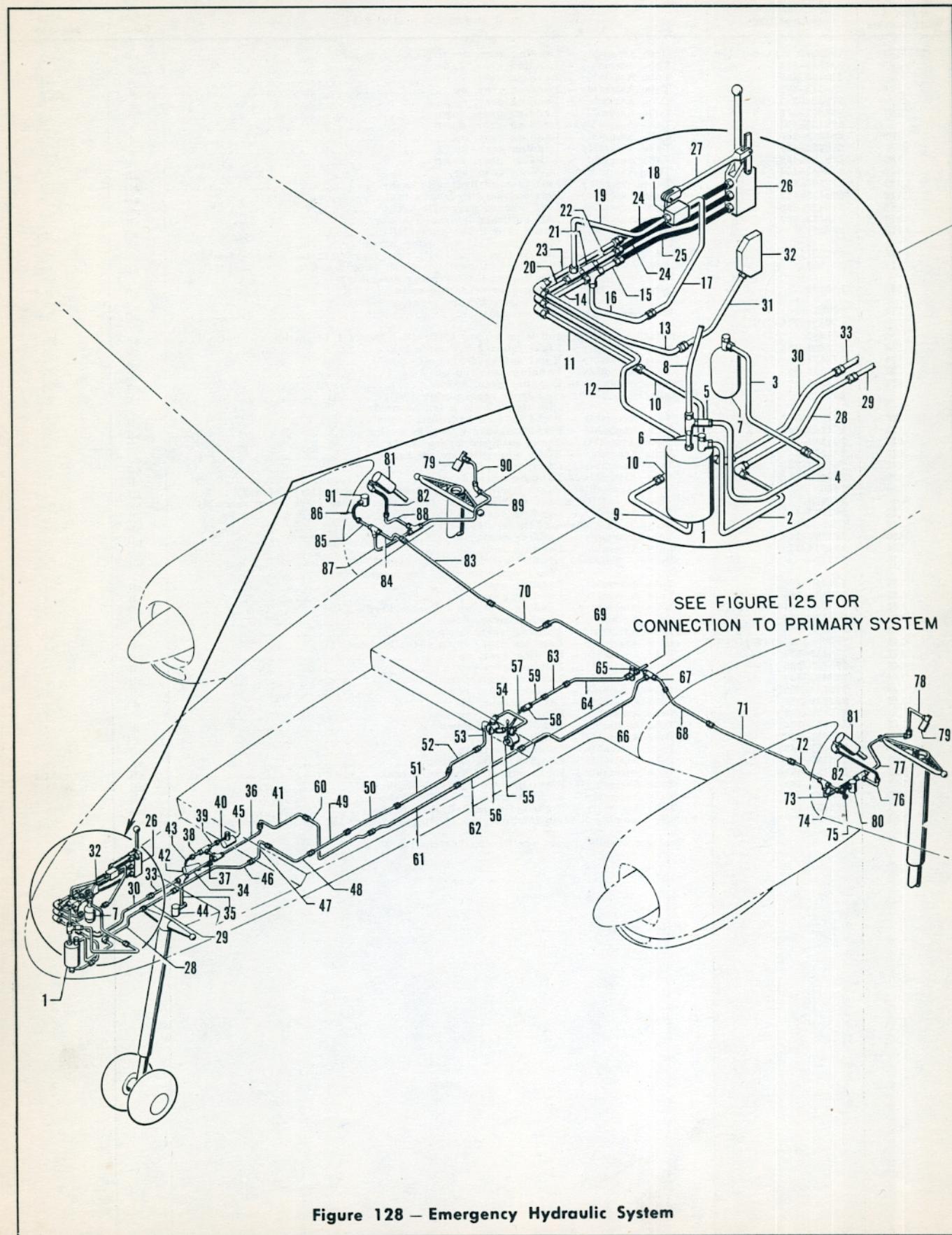


Figure 128 – Emergency Hydraulic System

GROUP . . . Hydraulic System

Detail Unit . . . Emergency Hydraulic System

Constellation

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
	281505	Installation - Fuselage piping pressure bulkhead (NP)							all	Ref
		(See figure 1 for using assembly)								
128 - 1	280711	Tank Assembly - Emergency extension auto pilot and brake hydraulic							all	1
2	285106-56	Tube Assembly - Emergency supply							all	1
3	285106-168	Tube Assembly - Sump tank drain							all	1
4	285106-186	Tube Assembly - Sump tank drain							all	1
5	525-GT-6D	Valve - Check (Parker) (644033)							all	1
6	285106-66	Tube Assembly - Sump tank to emergency tank drain							all	1
7	278829	Bolt - Hydraulic swivel							all	1
8	283042	Tank Assembly - Sump (See figure 125 for using assembly)							all	Ref
9	285106-64	Tube Assembly - Emergency tank vent							all	1
10	285106-184	Tube Assembly - Hand pump suction							all	1
11	285106-60	Tube Assembly - Hand pump suction							all	1
12	272239-122	Tube Assembly - Hand pump suction							all	1
13	264843-208	Tube Assembly - Landing gear emergency extension							all	1
14	264843-217	Tube Assembly - Hand pump brake pressure							all	1
15	283186	Installation - Station 150-212 RH fuselage piping (NP)							all	Ref
		(See figure 1 for using assembly)								
16	278433-378	Tube Assembly - Hand pump suction							all	1
17	278433-380	Tube Assembly - Hand pump suction							all	1
18	278433-379	Tube Assembly - Hand pump suction							all	1
19	278433-381	Tube Assembly - Landing gear emergency extension bleeder							all	1
20	29033-6-220C	Valve Assembly - Emergency extension shut-off (Aircraft Accessories) (667420)							all	1
		(See figure 142 for detailed illustration)								
21	278433-320	Tube Assembly - Landing gear emergency extension bleeder							all	1
22	278433-99	Tube Assembly - Nose landing gear emergency extension							all	1
23	PL9-2043-4	Valve - Check (Parker) (667097-2)							all	1
24	190531	Bolt - Hydraulic swivel							all	1
25	272239-324	Tube Assembly - Nose landing gear emergency extension							all	1
26	264843-238	Tube Assembly - Hand pump brake pressure							all	1
27	70099-6-026146-10%S	Hose Assembly (Weatherhead)							all	2
28	43D2475-8D-080	Hose Assembly							all	1
29	402695-0-1	Pump - Emergency hydraulic hand (Bendix) (667253)							all	1
		(See figure 145 for detailed illustration)								
30	277279	Rod - Push							all	1
31	281591	Installation - Station 150-195 Keelson piping (NP)							ddd	1
		(See figure 1 for using assembly)								
32	281593	Installation - Station 150-212 LH fuselage piping (NP)							ddd	Ref
		(See figure 1 for using assembly)								
33	288285	Installation - Station 150-212 LH fuselage piping (NP)							eee	Ref
		(See figure 1 for using assembly)								
34	288284-26	Tube Assembly - Emergency supply							eee	1
35	264843-161	Tube Assembly - Emergency supply							ddd	1
36	264843-153	Tube Assembly - Emergency supply							all	1
37	288284-38	Tube Assembly - Nose landing gear emergency extension							ccc	1
38	288648-8	Tube Assembly - Nose landing gear emergency extension							ff	1
39	285106-28	Tube Assembly - Nose landing gear emergency extension							mmm	1
40	285106-170	Tube Assembly - Hand pump brake pressure							all	1
41	271745	Valve Assembly - Brake selector (See figure 148 for detailed illustration)							all	Ref
42	266994	Installation - Nose landing gear hydraulic system (NP)							mmm	Ref
		(See figure 2 for using assembly)								
43	288771	Installation - Nose landing gear hydraulic system (NP)							nnn	Ref
		(See figure 50 for using assembly)								
44	272239-158	Tube Assembly - Nose landing gear emergency extension							all	1
45	272239-175	Tube Assembly - Nose landing gear emergency extension							all	1
46	272239-160	Tube Assembly - Nose landing gear emergency extension							all	1
47	272239-167	Tube Assembly - Landing gear emergency extension							all	1

(Continued on next page)

GROUP . . . Hydraulic System

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Detail Unit . . . Emergency Hydraulic System (Continued)

FIGURE & INDEX NUMBER	PART NUMBER	1	2	3	4	5	6	NOMENCLATURE	SERIAL CODE	UNITS PER ASSY.
128 - 37	272239-164							Tube Assembly - Landing gear emergency extension	all	1
38	272239-171							Tube Assembly - Landing gear emergency extension	all	1
39	272239-172							Tube Assembly - Landing gear emergency extension	all	1
40	83710-4-14							Tube Assembly - Landing gear emergency extension	all	1
41	285106-126							Tube Assembly - Landing gear emergency extension	ii	1
	272239-151							Tube Assembly - Landing gear emergency extension	jj	1
42	279391							Installation - Nose landing gear actuating cylinder (NP)	all	Ref
								(See figure 158 for using assembly)		
43	83710-4-21							Hose Assembly - Landing gear emergency extension (Weatherhead)	all	Ref
								(See figure 167 for detailed illustration)		
44	210621							Cylinder Assembly - Nose landing gear downlock actuating (Gladden Products)	all	Ref
								(663059) (See figure 158 for using assembly)		
45	272681							Installation - Nose landing gear uplock (NP) (See figure 158 for using assembly) ..	all	Ref
	283676							Installation - Station 212-260 LH fuselage piping (NP)	all	Ref
								(See figure 1 for using assembly)		
46	278433-110							Tube Assembly - Emergency supply	all	1
	272198							Installation - Station 278.4 to 260 fuselage piping (NP)	all	Ref
								(See figure 1 for using assembly)		
47	278433-81							Tube Assembly - Emergency supply	all	1
48	272239-393							Tube Assembly - Emergency supply	all	1
	280927							Installation - Station 278-456 LH fuselage piping (NP)	all	1
								(See figure 1 for using assembly)		
49	278433-106							Tube Assembly - Emergency supply	all	1
50	278433-107							Tube Assembly - Emergency supply	all	1
51	272239-438							Tube Assembly - Emergency supply	all	1
52	272239-439							Tube Assembly - Emergency supply	all	1
53	278433-336							Tube Assembly - Emergency supply	all	1
54	278433-334							Tube Assembly - Emergency supply	all	1
55	24451							Pump - Emergency filler (Aero Supply) (633250)	all	1
								(See figure 146 for detailed illustration)		
	48182							Plug - Filler pump (United-Carr Co.)	all	1
	W7600-1/2B							Cock - Drain (Whittaker) (633422)	all	1
56	4-344-1							Valve - 3-way hydraulic selector (Parker) (667419)	all	1
	10-243-16							Cap - Selector valve bottom	all	1
57	278433-335							Tube Assembly - Emergency supply	all	1
58	525HT-10D							Valve - Check (Parker) (633010)	all	1
59	264843-321							Tube Assembly - Emergency supply	all	1
60	272239-448							Tube Assembly - Emergency extension	all	1
61	256342-72							Tube Assembly - Emergency extension	all	1
62	256342-69							Tube Assembly - Emergency extension	all	1
	281028							Installation - Stub wing fuselage piping (NP) (See figure 1 for using assembly) ..	all	Ref
63	264843-40							Tube Assembly - Emergency supply	all	1
64	264843-39							Tube Assembly - Emergency supply	all	1
65	273470							Aspirator Assembly - Hydraulic reservoir (See figure 49 for using assembly) ..	all	Ref
66	278433-9							Tube Assembly - Emergency extension	all	1
67	264843-24							Tube Assembly - Emergency extension	all	1
68	278433-23							Tube Assembly - Emergency extension	all	1
69	264843-14							Tube Assembly - Emergency extension	all	1
	261282							Installation - Right stub wing piping (NP) (See figure 1 for using assembly) ..	all	Ref
70	264843-16							Tube Assembly - Right stub wing piping (NP) (See figure 1 for using assembly) ..	all	1
	267177							Installation - Left wing front beam piping (NP) (See figure 2 for using assembly) ..	all	Ref
71	256342-304							Tube Assembly - Emergency extension	all	1
	281027							Installation - Inboard nacelle piping, LH (NP) (See figure 2 for using assembly) ..	all	Ref
72	278433-349							Tube Assembly - Emergency extension	all	1
73	284349-386							Tube Assembly - Emergency extension	d	1
	278433-351							Tube Assembly - Emergency extension	c	1
74	278433-352							Tube Assembly - Emergency extension	all	1

(Continued on next page)

GROUP . . . Hydraulic System

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Detail Unit . . . Emergency Hydraulic System (Continued)

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6	N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			Hose Assembly	Tube Assembly	Tube Assembly	Tube Assembly	Tube Assembly	Cylinder Assembly		
128 - 75	70099-4-014144-11 $\frac{3}{4}$ S		Hose Assembly	Emergency extension (Weatherhead)					all	1
76	284349-390		Tube Assembly	Emergency extension					d	1
	278433-353		Tube Assembly	Emergency extension					e	1
77	284349-378		Tube Assembly	Emergency extension					d	1
	278433-456		Tube Assembly	Emergency extension					e	1
78	278433-468		Tube Assembly	Emergency extension					all	1
79	210599		Cylinder Assembly	Main landing gear downlock (Gladden Products) (663064) (See figure 156 for using assembly)					all	Ref
80	272551L		Uplock Assembly	Main landing gear (NP) (See figure 152 for using assembly)					all	Ref
81	280860		Installation	Main landing gear actuating cylinder (NP) (See figure 155 for using assembly)					all	Ref
82	70099-4-014024-27 $\frac{1}{2}$ S		Hose Assembly (Weatherhead)	Emergency extension					all	Ref
	267178		Installation	Right wing front beam piping (NP) (See figure 2 for using assembly)					all	Ref
83	278433-492		Tube Assembly	Emergency extension					all	1
	281029		Installation	RH Nacelle inboard piping (NP) (See figure 2 for using assembly)					all	Ref
84	278433-369		Tube Assembly	Emergency extension					all	1
85	278433-366		Tube Assembly	Emergency extension					all	1
86	70099-4-014144-11 $\frac{3}{4}$ S		Hose Assembly (Weatherhead)	Emergency extension					all	1
87	278433-370		Tube Assembly	Emergency extension					all	1
88	272239-132		Tube Assembly	Emergency extension					all	1
89	284349-372		Tube Assembly	Emergency extension					d	1
	278433-455		Tube Assembly	Emergency extension					e	1
90	278433-465		Tube Assembly	Emergency extension					all	1
91	272551R		Uplock Assembly	Main landing gear (NP) (See figure 152 for using assembly)					all	Ref
	214069		Installation	Auxiliary hydraulic fluid stowage station 330 LH (NP) (See figure 1 for using assembly)					du	Ref
214068			Strap Assembly	Hydraulic fluid stowage					du	2
214070			Plate	Hydraulic fluid stowage					du	1
214067			Nameplate	Auxiliary hydraulic fluid stowage					du	1
292292			Installation	Hydraulic hand wobble pump (NP) (See figure 1 for using assembly)					bu	1
292292-9			Tube Assembly	Hand wobble pump					bu	1
292292-8			Tube Assembly	Hand wobble pump					bu	1
292292-7			Tube Assembly	Hand wobble pump					bu	1
292292-11			Strap Assembly	Hand wobble pump					bu	1
281672				Naméplate - Emergency tank hydraulic selector valve					bu	1
281673				Nameplate - Main tank hydraulic selector valve					bu	1
4-344-1				Valve - 3-way Hydraulic selector (Parker) (667419)					bu	1
292292-6			Tube Assembly	Hand wobble pump					bu	1
276142			Bracket	Hydraulic reservoir emergency filler pump					bu	1
24451			Pump	Modified D-2 hand fuel (Aero) (633250) (See figure 146 for detailed illustration)					bu	1
48182			Plug (United-Carr)						bu	1
W7600-1 $\frac{1}{2}$ B			Valve	Slide drain (Whittaker) (633422)					bu	1
290868			Nameplate	Hand wobble pump priming instructions					bu	1
292292-5			Tube Assembly	Hand wobble pump					bu	1
292292-10			Tube Assembly	Hand wobble pump					bu	1
292292-4			Tube Assembly	Hand wobble pump					bu	1
292292-3			Tube Assembly	Hand wobble pump					bu	1
292292-2			Tube Assembly	Hand wobble pump					bu	1

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GROUP . . . Hydraulic System

Detail Unit . . . Automatic Pilot Hydraulic System

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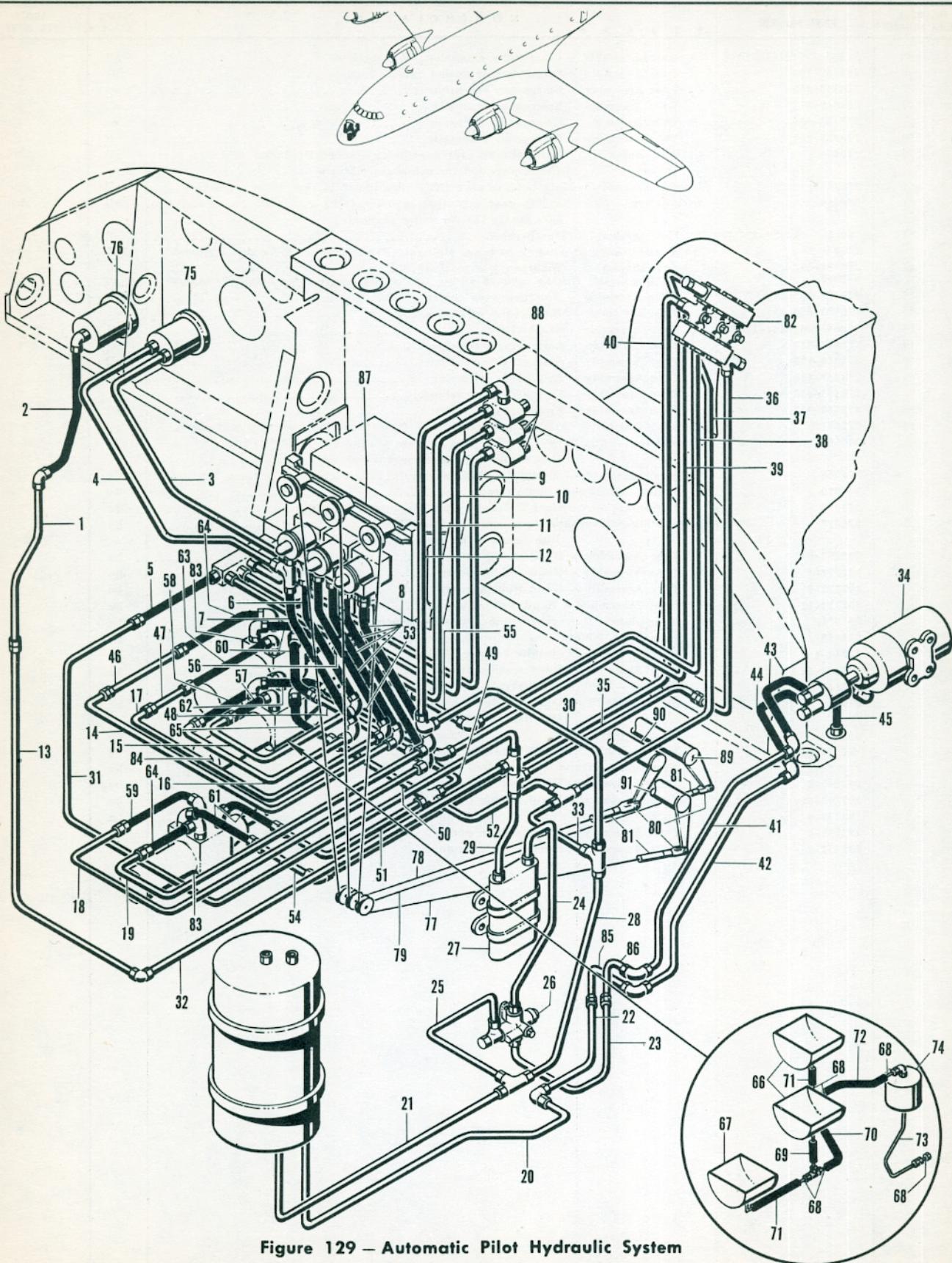


Figure 129 — Automatic Pilot Hydraulic System

GROUP . . . Hydraulic System

Constellation

Detail Unit . . . Automatic Pilot Hydraulic System

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
	281592	Installation - Fuselage piping station 135-165 upper (NP)							all	Ref
		(See figure 1 for using assembly)								
129 - 1	264843-220	Tube Assembly	Hydraulic pressure line to gyro gauge						all	1
2	318-4-14½	Hose Assembly	Hydraulic pressure line to gyro gauge						all	1
3	278433-433	Tube Assembly	Elevator servo up						all	1
4	278433-434	Tube Assembly	Elevator servo down						all	1
5	318-6-15	Hose Assembly	Hydraulic gyro-pilot pressure (Aeroquip)						all	1
6	318-4-14	Hose Assembly	Elevator servo up (Aeroquip)						all	1
7	318-4-12½	Hose Assembly	Elevator servo down (Aeroquip)						all	1
8	318-4-15	Hose Assembly	Right aileron up & down and rudder servo left and right (Aeroquip)						all	4
9	264843-241	Tube Assembly	Elevator servo speed control						all	1
10	264843-242	Tube Assembly	Aileron servo speed control						all	1
11	264843-243	Tube Assembly	Rudder servo speed control						all	1
12	318-6-21	Hose Assembly	Hydraulic servo return (Aeroquip)						all	1
	281505	Installation - Fuselage piping pressure bulkhead (NP)	(See figure 1 for using assembly)						all	Ref
13	264843-219	Tube Assembly	Hydraulic pressure line to gyro gauge						all	1
14	264843-223	Tube Assembly	Right aileron down; mount unit to servo						all	1
15	264843-226	Tube Assembly	Elevator servo up; mount unit to servo						all	1
16	264843-225	Tube Assembly	Elevator servo down; mount unit to servo						all	1
17	264843-224	Tube Assembly	Right aileron up; mount unit to servo						all	1
18	278433-416	Tube Assembly	Rudder servo right; mount unit to servo						all	1
19	278433-417	Tube Assembly	Rudder servo left; mount unit to servo						all	1
20	288720-2	Tube Assembly	Gyro pilot suction						all	1
21	285106-62	Tube Assembly	Servo return						all	1
	281591	Installation - Keelson piping station 150-195 (NP) (See figure 1 for using assembly)							all	Ref
22	288648-4	Tube Assembly	Hydraulic gyro pilot suction						nnn	1
23	288648-6	Tube Assembly	Hydraulic gyro pilot pressure						nnn	1
24	278433-289	Tube Assembly	Hydraulic gyro pilot pressure						all	1
25	278433-322	Tube Assembly	Relief valve return						mmm	1
	288648-2	Tube Assembly	Gyro pilot return						nnn	1
26	AA11507	Valve - Hydraulic relief (Vickers) (667415)	(See figure 147 for detailed illustration)						all	1
	271072	Elbow - Hydraulic relief valve							all	2
27	648039	Filter - Gyro oil (Sperry) (665013)							all	1
28	285106-78	Tube Assembly	Hydraulic servo return						all	1
29	264843-184	Tube Assembly	Hydraulic gyro pilot pressure from oil filter						all	1
30	278433-325	Tube Assembly	Hydraulic servo return						all	1
31	278433-371	Tube Assembly	Hydraulic pressure to mount unit						all	1
32	264843-194	Tube Assembly	Hydraulic pressure to gyro gauge						all	1
33	278433-324	Tube Assembly	Hydraulic servo return						all	1
34	1E768A	Pump - Gyro electric (Pesco) (667464)	(Located left side fuselage station 160 on serials MMM)						all	1
	1P769A	Pump - Gyro (Pesco)							all	1
	678-1D	Motor - Electric (Pesco)							all	1

(Continued on next page)

GROUP . . . Hydraulic System

Detail Unit . . . Automatic Pilot Hydraulic System (Continued)

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FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	U N I T S P E R A S S Y.
			1	2	3	4	5	6		
	43D2474-8D-080	Hose Assembly	- Hydraulic gyro pilot suction						mmm	1
	43D2474-6-114	Hose Assembly	- Hydraulic gyro pilot pressure						mmm	1
	43D2474-4-114	Hose Assembly	- Hydraulic gyro pilot pressure						mmm	1
129 - 35	264843-338	Tube Assembly	- Hydraulic pressure to servo on-off valve						all	1
36	278433-94	Tube Assembly	- Hydraulic pressure to servo on-off valve						all	1
37	278433-93	Tube Assembly	- Hydraulic servo return						all	1
38	278433-95	Tube Assembly	- Elevator servo by-pass; on-off valve to servo						all	1
39	278433-96	Tube Assembly	- Rudder servo by-pass; on-off valve to servo						all	1
40	278433-97	Tube Assembly	- Aileron servo by-pass; on-off valve to servo						all	1
	288771	Installation + Nose landing gear hydraulic system (NP)	(See figure 50 for using assembly)						nnn	Ref
41	288733-2	Tube Assembly	- Hydraulic gyro pilot pressure						nnn	1
42	288733-4	Tube Assembly	- Hydraulic gyro pilot suction						nnn	1
43	43D2474-6-126	Hose Assembly	- Hydraulic gyro pilot pressure						nnn	1
44	43D2474-8-126	Hose Assembly	- Hydraulic gyro pilot pressure						nnn	1
	288614	Clamp Block							nnn	1
45	3752A-4-QA-014014-16D	Hose Assembly	- Gyro pilot pump drain (Weatherhead)						nnn	1
	288613-2	Mount Assembly	- Gyro pilot motor						nnn	2
	288613-3	Mount Assembly	- Gyro pilot motor						nnn	2
	283186	Installation + RH Fuselage Piping station 150-212 (NP)	(See figure 1 for using assembly)						all	Ref
46	264843-221	Tube Assembly	- Right aileron down; mount unit to servo						all	1
47	264843-222	Tube Assembly	- Right aileron up; mount unit to servo						dd	1
	285106-150	Tube Assembly	- Right aileron up; mount unit to servo						gg	1
48	264843-236	Tube Assembly	- Aileron servo return						all	1
49	264843-232	Tube Assembly	- Aileron servo return						all	1
50	264843-233	Tube Assembly	- Elevator servo return						all	1
51	264843-235	Tube Assembly	- Rudder servo return						all	1
52	264843-234	Tube Assembly	- Hydraulic servo return						all	1
53	264843-231	Tube Assembly	- Elevator servo by-pass; on-off valve to servo						all	1
54	264843-229	Tube Assembly	- Rudder servo by-pass; on-off valve to servo						all	1
55	264843-230	Tube Assembly	- Aileron servo by-pass; on-off valve to servo						all	1
56	264843-237	Tube Assembly	- Aileron servo by-pass; on-off valve to servo						yyy	2
57	43D2475-4-170	Hose Assembly	- Elevator servo up						dd	1
58	43D2475-4-194	Hose Assembly	- Elevator servo down						all	1
59	43D2474-4-130	Hose Assembly	- Rudder servo right						all	1
60	43D2474-4-094	Hose Assembly	- Hydraulic servo return and aileron servo by-pass						all	2
61	43D2474-4-114	Hose Assembly	- Rudder and aileron servo by-pass						all	2
62	43D2475-4-094	Hose Assembly	- Elevator servo by-pass						all	1
63	43D2474-4-144	Hose Assembly	- Right aileron up						all	1
64	43D2474-4-124	Hose Assembly	- Right aileron down and rudder servo left						all	2
65	43D2475-4-086	Hose Assembly	- Hydraulic servo return						all	1
66	283186-50	Pan Assembly	- Servo unit						dh	2
67	283186-51	Pan Assembly	- Servo unit						dh	1

(Continued on next page)

GROUP . . . Hydraulic System

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Detail Unit . . . Automatic Pilot Hydraulic System (Continued)

FIGURE & INDEX NUMBER	PART NUMBER	N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
		1	2	3	4	5	6		
129 - 68	283186-53	Tube Assembly	-	Servo unit drain	.	.	.	dh	7
69	283186-54	Hose	-	Rubber	.	.	.	dh	1
70	283186-55	Hose	-	Rubber	.	.	.	dh	1
71	283186-56	Hose	-	Rubber	.	.	.	dh	2
72	283186-57	Hose	-	Rubber	.	.	.	dh	1
73	283186-58	Hose	-	Rubber	.	.	.	dh	1
	AN771-1	Cock	-	Screw drain	.	.	.	dh	1
74	42402-500	Reservoir Assembly	-	Servo unit drip	.	.	.	dh	1
75	AW1 1/2-28A	Gauge Assembly	-	Elevator trim (U. S. Gauge) (See figure 191 for using assembly)	.	.	.	all	Ref
76	5950-53B1	Indicator	-	Gyro hydraulic pressure (Pioneer) (626044) (See figure 191 for using assembly)	.	.	.	all	Ref
	280351	Installation	-	Gyro pilot follow-up cables (See figure 1 for using assembly)	.	.	.	all	Ref
77	282452-5	Cable	-	Rudder gyro pilot follow-up	.	.	.	all	1
78	282452-6	Cable	-	Elevator gyro pilot follow-up	.	.	.	all	1
79	282452-7	Cable	-	Aileron gyro pilot follow-up	.	.	.	all	1
80	282322	Fitting Assembly	-	Gyro pilot follow-up disconnect	.	.	.	all	3
81	A2	Snaps	-	Follow-up cable disconnect (Sperti)	.	.	.	all	3
82	12-340-32	Valve Assembly	-	Servo on-off (Parker) (629089) (See figure 95 for using assembly)	.	.	.	all	Ref
83	645218 (115 PSI)	Servo Assembly	-	Aileron and Rudder (Sperry) (629020-3) (See figures 99 and 107 for using assembly)	.	.	.	all	Ref
84	645218 (140 PSI)	Servo Assembly	-	Elevator (Sperry) (629020-4) (See figures 99 and 107 for using assembly)	.	.	.	all	Ref
	281593	Installation	-	LH Fuselage piping station 150-212 (NP) (See figure 1 for using assembly)	.	.	.	all	Ref
85	288746-2	Tube Assembly	-	Hydraulic gyro pilot pressure	.	.	.	nnn	1
86	288746-4	Tube Assembly	-	Hydraulic gyro pilot suction	.	.	.	nnn	1
87	281168	Unit Assembly	-	Gyro pilot mounting (See figure 191 for using assembly)	.	.	.	all	Ref
88	644424	Valve	-	Speed control (Sperry) (629018) (See figure 191 for using assembly)	.	.	.	all	Ref
89	256026	Tube Assembly	-	RH Aileron torque (See figure 99 for using assembly)	.	.	.	all	Ref
90	256028	Tube Assembly	-	RH Elevator torque (See figure 99 for using assembly)	.	.	.	all	Ref
91	256030	Tube Assembly	-	RH Rudder torque (See figure 107 for using assembly)	.	.	.	all	Ref

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GROUP . . . Hydraulic System Units

Detail Unit . . . Differential and Booster—Aileron

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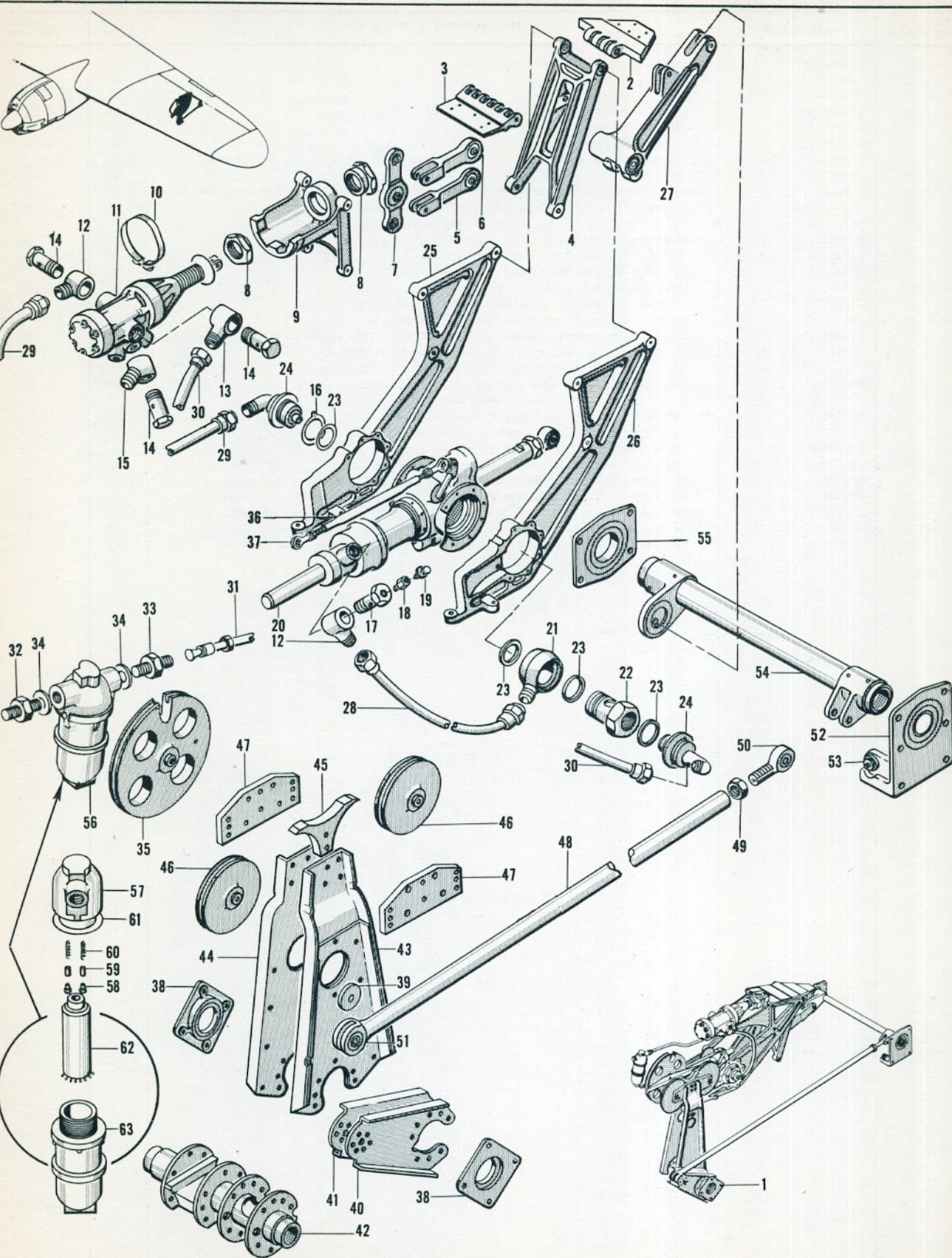


Figure 130 — Differential and Booster — Aileron

GROUP . . . Hydraulic System Units
Detail Unit . . . Differential and Booster—Aileron

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FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
	268969L	Installation	Differential and booster — Aileron (NP) . . .						all	Ref
	268969R	Installation	Differential and booster — Aileron (NP) . . .						all	Ref
130 - 1	*282744-502L	Booster Assembly — Aileron . . .							dd	1
	*282744-502R	Booster Assembly — Aileron . . .							dd	1
	282744-501L	Booster Assembly — Aileron . . .							gg	1
	282744-501R	Booster Assembly — Aileron . . .							gg	1
2	285884	Hinge Assembly — Half — Aileron booster aft. . .							all	1
3	268857	Hinge Assembly — Half — Aileron booster forward. . .							all	1
4	286931	Link Assembly — Aileron bellcrank support . . .							all	1
5	280375	Link Assembly — Control valve . . .							all	1
6	290824	Link Assembly — Control valve . . .							all	1
7	290823	Beam Assembly — Control valve . . .							all	1
8	256805-2	Nut — Booster actuating valve mounting. . .							all	2
9	268360-2	Support + Booster valve . . .							all	1
10	254717	Strap Assembly — Booster valve support. . .							all	1
11	667581	Valve Assembly — Booster control aileron . . .							dd	1
	667561	(See figure 137 for detailed illustration)							gg	1
		Valve Assembly — Booster control aileron . . .								
		(See figure 137 for detailed illustration)								
12	3175-4-10D	Swivel — Straight (Parker) . . .							all	2
13	277520	Elbow — Hydraulic swivel . . .							all	1
14	3175-11-10D	Bolt (Parker) . . .							all	3
15	3175-6-10D	Swivel (Parker) . . .							all	1
16	259560	Washer Assembly — Booster cylinder elbow lock. . .							all	1
17	278002	Bolt + 5/8" Hydraulic swivel bleeder screw. . .							all	1
18	277401	Seat + Bleeddr valve . . .							all	1
19	277400	Valve — Bleeder . . .							all	1
20	*663164-2	Cylinder Assembly — Aileron booster LH . . .							all	1
	*663164-3	(See figure 136 for detailed illustration)							all	1
		Cylinder Assembly — Aileron booster RH . . .								
		(See figure 136 for detailed illustration)								
21	256741	Elbow — Cylinder swivel . . .							all	1
22	256775	Adapter — Elbow swing joint . . .							all	1
23	260562	Gasket — Booster mechanism fitting . . .							all	4
24	R83-D4	Joint — Swing (Chicksan Tool) (667582) . . .							all	1
25	268374-2L	Support — Aileron cylinder booster (Used on RH only) . . .							all	1
	268374-2R	Support — Aileron cylinder booster (Used on LH only) . . .							all	1
26	268374-3L	Support — Aileron cylinder booster . . .							all	1
	268374-3R	Support — Aileron cylinder booster . . .							all	1
27	286932	Lever Assembly — Aileron booster . . .							all	1
28	278433-396	Tube Assembly — Hydraulic system . . .							all	1
29	256342-12	Tube Assembly — Hydraulic system (LH only) . . .							all	1
	256342-16	Tube Assembly — Hydraulic system (RH only) . . .							all	1
30	256342-13	Tube Assembly — Hydraulic system (LH only) . . .							all	1
	256342-15	Tube Assembly — Hydraulic system (RH only) . . .							all	1
31	264843-363	Tube Assembly — Hydraulic system (LH only) . . .							all	1
	264843-364	Tube Assembly — Hydraulic system (RH only) . . .							all	1
32	3175-3-10-8D	Union (Parker) . . .							all	1
33	3175-3-10D	Union (Parker) . . .							all	1
34	3175-2-10D	Gasket (Parker) . . .							all	2
35	256823	Pulley — Release valve actuating . . .							all	1
36	256574	Rod Assembly — Booster release . . .							all	1
37	REB3N2	Bearing (Fafnir) . . .							all	2
38	268632	Housing Assembly — Aileron differential torque tube . . .							all	1
	AN202K25B	Bearing + Extra light duty ball deep groove metal shield . . .							all	1
39	270213	Spacer — Manual — Push rod . . .							all	Ref
	01-281049L	Service Assembly — Lever assembly — Aileron walking beam and manual . . .							all	Ref
	01-281049R	Service Assembly — Lever assembly — Aileron walking beam and manual . . .							all	1
	281049L	Lever Assembly — Aileron walking beam and manual . . .							all	1
	281049R	Lever Assembly — Aileron walking beam and manual . . .							all	1
	281049-5	Arm Assembly — Aileron walking beam . . .							all	1
40	268377-6L	Arm . . .							all	1
41	268377-6R	Arm . . .							all	1
42	281050L	Tube — Aileron differential torque . . .							all	1
	281050R	Tube — Aileron differential torque . . .							all	1
43	281049-4	Arm Assembly — Walking beam LH . . .							all	1
44	281049-6	Arm Assembly — Walking beam RH . . .							all	1
45	282141	Guard — Walking beam pulley . . .							all	1
46	AN210-4A	Pulley — Anti-friction bearing control . . .							all	2
	281056	Spacer Assembly — Aileron beam pulley . . .							all	1
47	281056-2	Spacer . . .							all	1
48	268482	Rod Assembly — Manual push . . .							all	1
49	256716	Nut — Piston rod eye . . .							all	1
50	256268	Eye Assembly — Piston rod . . .							all	1
	NR6L12	Bearing (Fafnir) . . .							all	1
51	AN200K6	Bearing + Heavy duty metal shield . . .							all	2
52	268483	Housing Assembly — Manual torque tube . . .							all	1
	AN202K3B	Bearing + Extra light duty ball deep groove metal shield . . .							all	1
53	226063	Bolt + Elevator bellcrank stop . . .							all	2
54	268484L	Tube Assembly + Manual torque . . .							all	1
	268484R	Tube Assembly + Manual torque . . .							all	1
	268394	Lever Assembly — Aileron booster inboard torque . . .							all	1
	268394-3	Plug . . .							all	1
55	166083	Housing — Control column torque tube bearing . . .							all	1
	K33B	Bearing (Fafnir) . . .							all	1
56	28946	Filter (Purolator Co.) (667251) (Alternate 133448) . . .							all	1
	29184	Head: Assembly . . .							all	1
57	29013	Head . . .							all	1
58	30446	Seat + Relief valve . . .							all	2
	30122	Packing + "O" Ring . . .							all	2
59	30445	Piston — Relief valve . . .							all	2
60	30444	Spring — Relief valve . . .							all	2
	25660	Guide — Spring . . .							all	2
61	25666	Gasket — Case . . .							all	1
62	29669	Element Assembly . . .							all	1
63	29026	Case . . .							all	1

* Replaces standard part per Service Bulletin 49/SB-291.

GROUP . . . Hydraulic System Units
Detail Unit . . . Booster—Elevator

Constellation

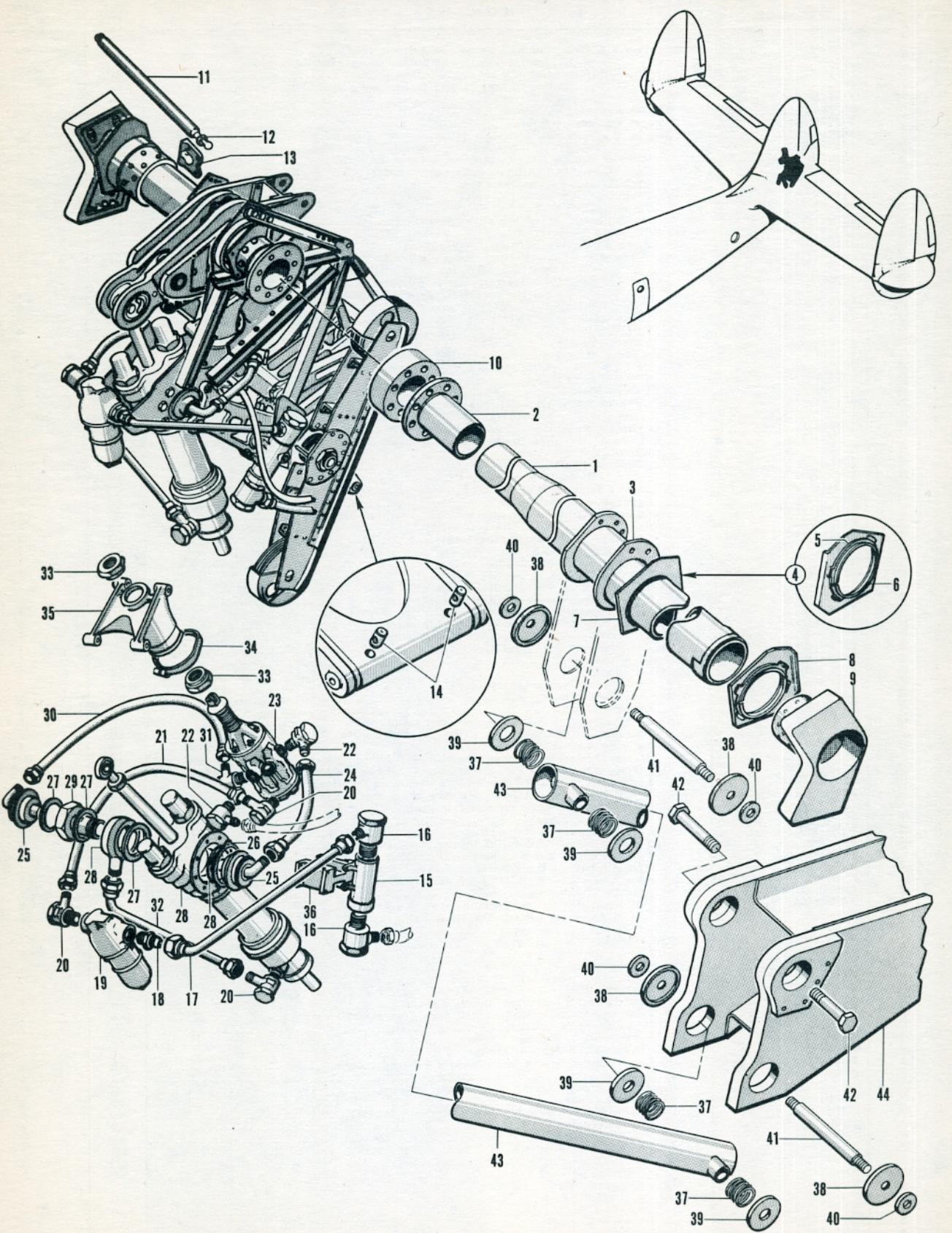


Figure 131 — Booster — Elevator

GROUP . . . Hydraulic System Units

Detail Unit . . . Booster—Elevator

Constellation

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
	185525	Service Assembly -	Elevator booster complete						all	Ref
			(Consists of 291024 with the following deviations: add - 291081-500, 297851, 284599-82, 284599-84, 284599-86 and 294504; Delete 290833 and 291089.)							
	262995	Installation -	Elevator booster assembly (See figure 79 for using assembly)						all	Ref
	256990	Tube Assembly -	Elevator coupling						dd	1
	256990-500	Tube Assembly -	Elevator coupling						gg	1
	256990-2	Tube Assembly -	Elevator coupling						all	1
131 - 1	256991	Tube -	Elevator coupling						all	1
2	256968-3	Flange -	Elevator booster armature						all	1
3	280660	Sleeve -	Elevator counterbalance						e	1
4	255559-6	Plate Assembly -	Tail cone flap bearing						dd	1
5	270263-2	Bearing Assembly -	Tail cone flap (half of bearing)						dd	2
6	270263-3	Bearing Assembly -	Tail cone flap (half of bearing)						dd	2
7	270658	Ring -	Tail cone flap bearing						dd	2
8	255567-4R	Plate Assembly -	Tail cone flap bearing						dd	1
9	254718	Flange Assembly -	Elevator torque tube						all	1
10	284270	Spacer -	Elevator torque tube						all	1
11	274843	Ball End Assembly -	Diagonal						all	1
12	274850	End -	Diagonal ball						all	1
13	275986	Socket -	Diagonal attachment ball						all	1
14	271342	Trunnion -	Rudder torque tube middle bearing cap						all	2
	*291024-500	Mechanism Assembly -	Elevator booster						dd	1
	*291024	Mechanism Assembly -	Elevator booster						gg	1
15	282862-3	Valve Assembly -	Booster shut-off						all	1
	29041	Valve Assembly -	3/4 In. line shut-off (Aircraft Accessories) (667257)						all	1
			(See figure 137 for detailed illustration)							
16	278092	Elbow -	Hydraulic swivel 5/8 to 3/4 tube						all	2
	3175-2-12D	Gasket (Parker)							all	4
	3175-11-12D	Bolt (Parker)							all	2
17	278433-329	Tube Assembly -	Steel (shut-off valve to filter)						dd	1
	284349-349	Tube Assembly -	Steel (shut-off valve to filter)						gg	1
18	3175-3-10D	Union (Parker)							all	1
19	28946	Filter -	Hydraulic system (Purolator) (667251)						all	1
			(See figure 130 for detailed illustration)							
20	3175-5-10D	Swivel (Parker)							all	3
	3175-2-10D	Gasket (Parker)							all	13
	3175-11-10D	Bolt (Parker)							all	6
21	278433-327	Tube Assembly -	Steel (filter to control valve)						dd	1
	284349-398	Tube Assembly -	Steel (filter to control valve)						gg	1
22	3175-4-10D	Swivel (Parker)							all	2
23	667581	Valve Assembly -	Booster control (See figure 137 for detailed illustration)						dd	1
	667561	Valve Assembly -	Booster control (See figure 137 for detailed illustration)						gg	1
24	278433-330	Tube Assembly -	Steel (control valve to cylinder top port)						dd	1
	284349-396	Tube Assembly -	Steel (control valve to cylinder top port)						gg	1
25	R83D4	Swing Joint -	Style 30 (Chiksan) (667582)						all	2
26	259560	Washer Assembly -	Booster cylinder elbow lock						all	1
27	260562	Gasket -	Booster mechanism fitting						all	4
	*6683165	Cylinder Assembly -	Elevator booster (See figure 136 for detailed illustration)						all	1
28	256741	Elbow -	Booster cylinder swivel						all	1
29	256775	Adapter -	Swing joint elbow						all	1
30	278433-326	Tube Assembly -	Steel (control valve to cylinder bottom port)						all	1
31	3175-6-10D	Swivel (Parker)							all	1
32	278433-328	Tube Assembly -	Steel (cylinder top to bottom)						all	1
33	256805-2	Nut -	Booster valve mounting						all	2
34	254717	Strap Assembly -	Booster valve support						all	1
35	268360-4	Support -	Elevator booster valve						all	1
36	282004	Block -	Shut-off valve spacer						all	1
37	286586	Spring -	Elevator counterweight						d	4
38	286587	Seal Assembly -	Elevator counterweight						d	4
39	256588	Seal Assembly -	Elevator counterweight						d	4
40	284113	Retainer -	Elevator counterweight Model 49						d	4
41	284114	Shaft -	Elevator counterweight Model 49						d	2
42	284118	Bolt +	Elevator counterweight fulcrum Model 49						d	2
43	284123	Pushrod Assembly -	Elevator counterweight						d	1
44	284121	Bellcrank Assembly -	Elevator counterweight						d	1
	01-284398	Service Assembly -	Torque tube bearing housing						all	Ref
			(Consists of 284398-2 fitting and 284398-3 cap)							
	284398-2	Fitting -	Torque tube housing						d	1
	284398-3	Cap -	Torque tube housing						d	1

* Replaces standard part per Service Bulletin 49/SB-291.

GROUP Hydraulic System Units

Detail Unit . . . Booster Mechanism—Elevator

Constellation

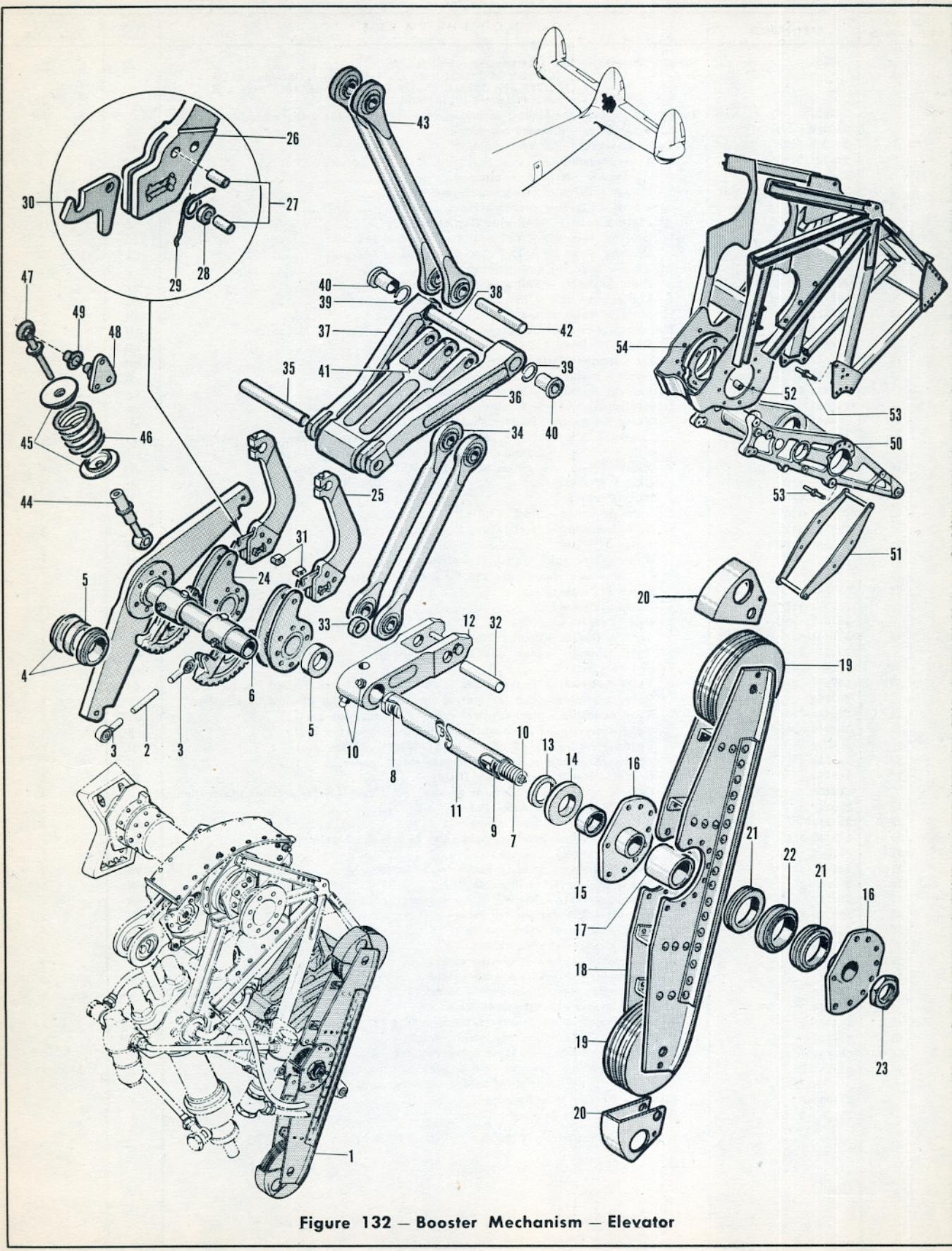


Figure 132 — Booster Mechanism — Elevator

GROUP . . . Hydraulic System Units

Detail Unit . . . Booster Mechanism—Elevator

Constellation

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
132 - 1	*291024	Mechanism Assembly - Elevator booster (See figure 131 for using assembly)							gg	Ref
	*291024-500	Mechanism Assembly - Elevator booster (See figure 131 for using assembly)							dd	Ref
2	278639	Rod - Booster by-pass link							all	1
3	REB3N2	End - Rod (Fafnir)							all	2
4	278482	Collar							all	2
5	B2012	Bearing + Needle (Torrington)							all	3
6	278503	Tube Assembly - Shifter walking beam torque elevator booster							all	3
	278489	Sector - Elevator booster shifter gear							all	2
	278517	Tube Assembly - Elevator booster shifter torque							all	1
	278524	Hub - Elevator booster shifter walking beam							all	1
	281832	Tube Assembly - Elevator booster main torque							all	1
7	286018	Shaft - Elevator booster torque							all	1
8	AN6227-17	"O" Ring							all	1
9	AN6227-18	"O" Ring							all	1
10	NAS2-101	Grease Fitting							all	3
11	281833	Tube - Walking beam torque							all	1
	278367	Horn Assembly - Walking beam torque tube							all	1
12	278367-2	Horn							all	1
13	278515	Spacer - Main torque tube							all	1
14	AN202K21B	Bearing - Extra light duty ball deep groove metal shield							all	1
15	281728	Spacer - Walking beam torque tube							all	1
16	289039	Hub - Walking beam							aj	2
	281680	Hub - Walking beam							ak	2
17	281682	Bearing - Tension governor pulley							aj	1
	289040	Bearing + Pulley tension governor							ak	1
	282287	Beam Assembly - Elevator control aft							all	1
18	282287-2	Beam							all	2
19	AN210-5A	Pulley - Anti-friction bearing							all	4
20	282360	Shield Assembly - Elevator control aft							all	2
21	281855	Pulley - Tension Governor Outer							aj	2
	289041	Pulley Assembly - Walking beam, outer							ak	2
	B342	Bearing (Fafnir)							ak	2
22	281684	Pulley - Tension Governor Inner							aj	1
	289042	Pulley Assembly - Walking beam, inner							ak	1
	B542	Bearing (Fafnir)							ak	1
23	281727	Nut - Walking beam torque tube							all	1
24	278502	Horn Assembly + Elevator booster shift							all	2
	B2012	Bearing + Needle (Torrington)							all	1
	278502-2	Arm Assembly - Elevator booster shift							all	1
	278488	Gear - Elevator booster shift arm							all	1
25	278501	Link Assembly - Elevator booster shifter							all	2
26	278415	Link + Shifter							all	1
27	278485	Pin - Shifter latch pivot							all	2
28	278597	Spacer - Latch spring							all	1
29	278516	Spring - Latch							all	1
30	278416	Latch - Shifter							all	1
31	278483	Block - Latch slide							all	2
32	278487-2	Pin - Elevator booster							all	1
33	278486	Retainer - Elevator booster pin							all	1
34	278305-6	Rod Assembly - Elevator booster push							all	2
	AN201K10A	Bearing - Intermediate duty ball deep groove metal shield							all	1
35	278316	Pin - Elevator booster idler							all	1
	278347	Stirrup Assembly - Elevator booster							all	1
36	278347-2L	Arm							all	1
37	278347-2R	Arm							all	1
38	278347-3	Sleeve							all	1
39	278525	Retainer - Elevator booster stirrup							all	2
40	278371	Bushing + Stirrup							all	1
41	278325	Lever Assembly - Idler							all	1
	AN201K10A	Bearing + Intermediate duty ball deep groove metal shield							all	2
42	278487-3	Pin - Elevator booster							all	2
43	278305-5	Rod Assembly - Elevator booster push							all	2
	AN201K10A	Bearing - Intermediate duty ball deep groove metal shield							all	2
44	281115	Link - Over center spring female							all	1
45	280185	Retainer - Over center spring							all	2
46	280219	Spring - Over center							all	1
47	281018	Link - Over center spring male							all	1
	281017	Support Assembly - Over center spring pivot							all	1
48	281017-2	Support							all	1
49	281019	Bushing + Over center spring pivot							all	1
	278767	Frame Assembly - Elevator booster							all	1
50	279188	Beam - Elevator booster frame							all	1
51	278481	Stop Assembly - Elevator booster							all	1
52	285968	Roller - Elevator booster bypass lever							all	1
53	278484	Pin - Elevator booster shifter latch anchor							all	4
54	279932	Shim - Cylinder bearing housing							all	4
	290835-500	Lever Assembly - Elevator booster torque tube (See figure 133 for detailed illustration)							dd	1
	290835	Lever Assembly - Elevator booster torque tube (See figure 133 for detailed illustration)							gg	1

* Replaces standard part per Service Bulletin 49/SB-291.

GROUP Hydraulic System Units

Detail Unit . . . Lever—Elevator Booster

Constellation

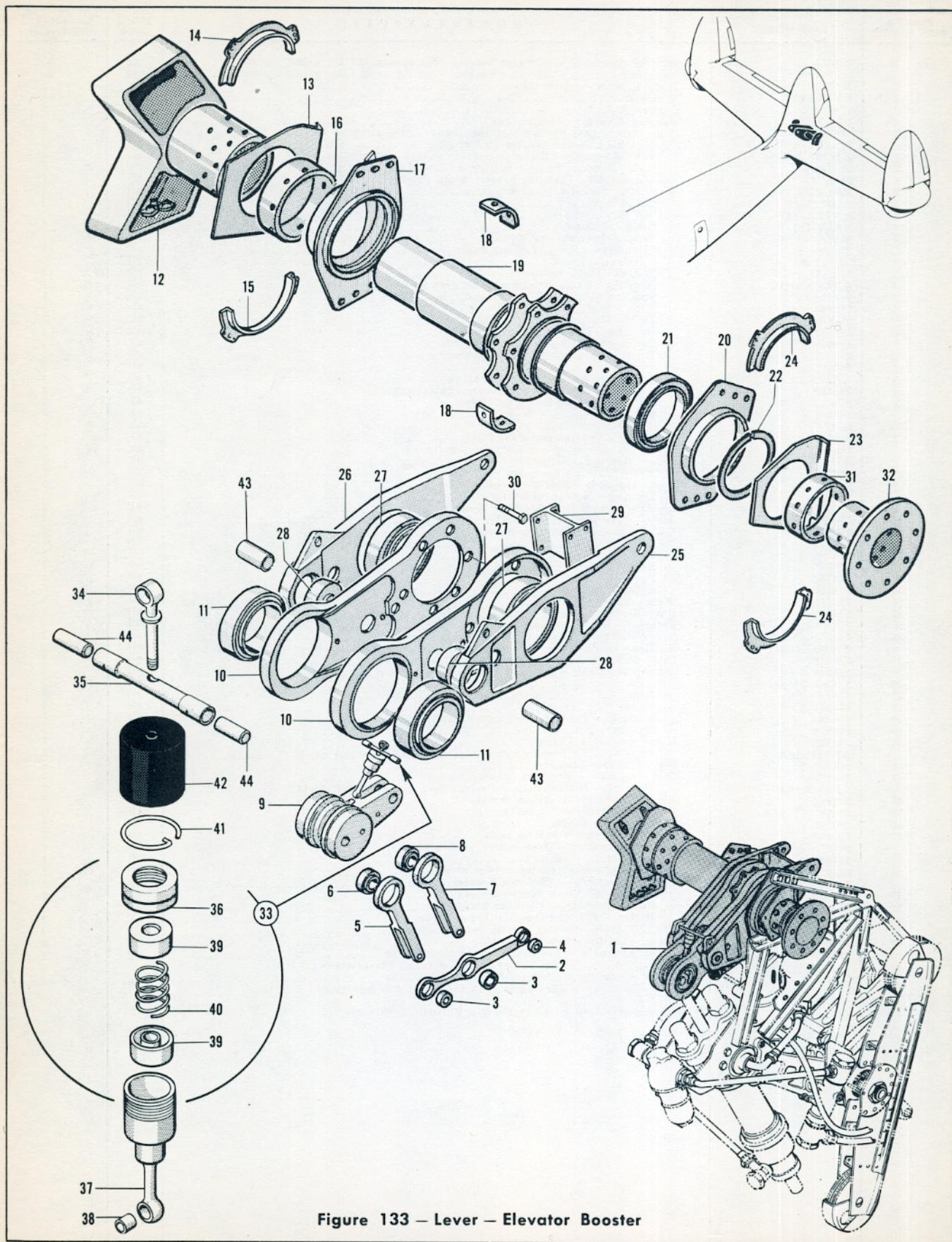


Figure 133 — Lever — Elevator Booster

GROUP . . . Hydraulic System Units

Detail Unit . . . Lever—Elevator Booster

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
133 - 1	290835	Lever Assembly	- Elevator booster torque (See figure 132 for using assembly)						dd	1
	290835-500	Lever Assembly	- Elevator booster torque (See figure 132 for using assembly)						gg	1
	290791	Beam Assembly	- Elevator booster control valve						all	1
2	290791-2	Beam	. . . . .						all	1
3	AN200K4	Bearing	- Heavy duty metal shield						all	2
4	AN201K4A	Bearing	- Heavy duty metal shield						all	1
	290789	Link Assembly	- Elevator manifold control valve						all	1
5	290789-2	Link	. . . . .						all	1
6	AN201K8A	Bearing	. . . . .						all	1
	290790	Link Assembly	- Elevator booster control valve						all	1
7	290790-2	Link	. . . . .						all	1
8	AN201K5A	Bearing	- Intermediate duty ball deep groove metal shield						all	1
9	291362	Lever Assembly	- Elevator booster feel						bb	1
	290833	Lever Assembly	- Elevator booster feel						aa	1
	291089	Arm Assembly	+ Elevator booster						all	1
	291089-4L	Arm Assembly	- Elevator booster						all	1
	291089-4R	Arm Assembly	- Elevator booster						all	1
10	291089-2L	Horn	. . . . .						all	1
	291089-2R	Horn	. . . . .						all	1
11	K49B	Bearing (Fafnir)	. . . . .						all	2
12	254718	Flange Assembly	- Elevator torque tube						all	1
13	255567-4L	Plate Assembly	- Tail cone flap bearing						dd	1
14	270263-4	Bearing Assembly	- Tail cone flap						dd	1
15	270263-5	Bearing Assembly	- Tail cone flap						dd	1
16	253106	Ring	- Tail cone flap bearing						dd	1
17	268636	Bracket Assembly	- Diagonal brace attachment elevator						all	1
	K49B	Bearing (Fafnir)	. . . . .						all	1
	270205	Ring	- Bearing retainer snap						all	1
18	270442	Ring	- Bearing lock						all	2
19	268400	Tube	- Elevator booster torque						all	1
	268402	Housing Assembly	- Elevator booster arm bearing						all	1
20	268402-2	Housing	. . . . .						all	1
21	K49B	Bearing (Fafnir)	. . . . .						all	1
22	270694	Ring	- Tail cone flap bearing snap						dd	1
23	255568-7	Plate Assembly	. . . . .						dd	1
24	270321	Bearing Assembly	- Tail cone flap LH inboard						dd	1
	291358L	Lever Assembly	- Elevator booster floating						ppp	1
	291358R	Lever Assembly	- Elevator booster floating						ppp	1
	290864L	Lever Assembly	- Elevator booster floating						qqq	1
	290864R	Lever Assembly	- Elevator booster floating						qqq	1
25	286377-2L	Lever	. . . . .						ppp	1
26	286377-2R	Lever	. . . . .						ppp	1
	290864-2L	Lever	. . . . .						qqq	1
	290864-2R	Lever	. . . . .						qqq	1
27	K49B	Bearing (Fafnir)	. . . . .						all	1
28	291360	Bushing	- Elevator booster slotted						ppp	1
29	286378	Spacer	- Elevator booster floating lever						all	1
30	280112	Bolt	- Elevator torque tube bellcrank						all	1
31	270695	Ring	- Tail cone flap bearing						dd	1
32	283729	Flange	- Elevator booster arm						all	1
33	291088	Spring Assembly	- Elevator booster						all	1
34	291361	Eyebolt	- Spring pre-loading						bb	1
	290827	Bolt	- Spring pre-loading						aa	1
35	291363	Beam	- Elevator booster attaching						af	1
	291087	Beam	- Elevator booster attaching						ag	1
36	290829	Cap	- Spring housing						all	1
37	290830	Housing Assembly	- Spring						all	1
38	290830-3	Bushing	. . . . .						all	1
39	290834	Slide	- Spring						all	2
40	290831	Spring	- Debooster						all	1
41	271088-2	Lock Ring	- Elevator de-booster						all	1
42	292673	Deflector	- Elevator de-booster spring moisture						cr	1
43	290832	Sleeve	- Elevator de-booster fuel lever bolt						all	2
44	291086	Journal	- Spring						all	2

Reissued July, 1947

GROUP . . . Hydraulic System Units

Detail Unit . . . Booster—Rudder

Constellation

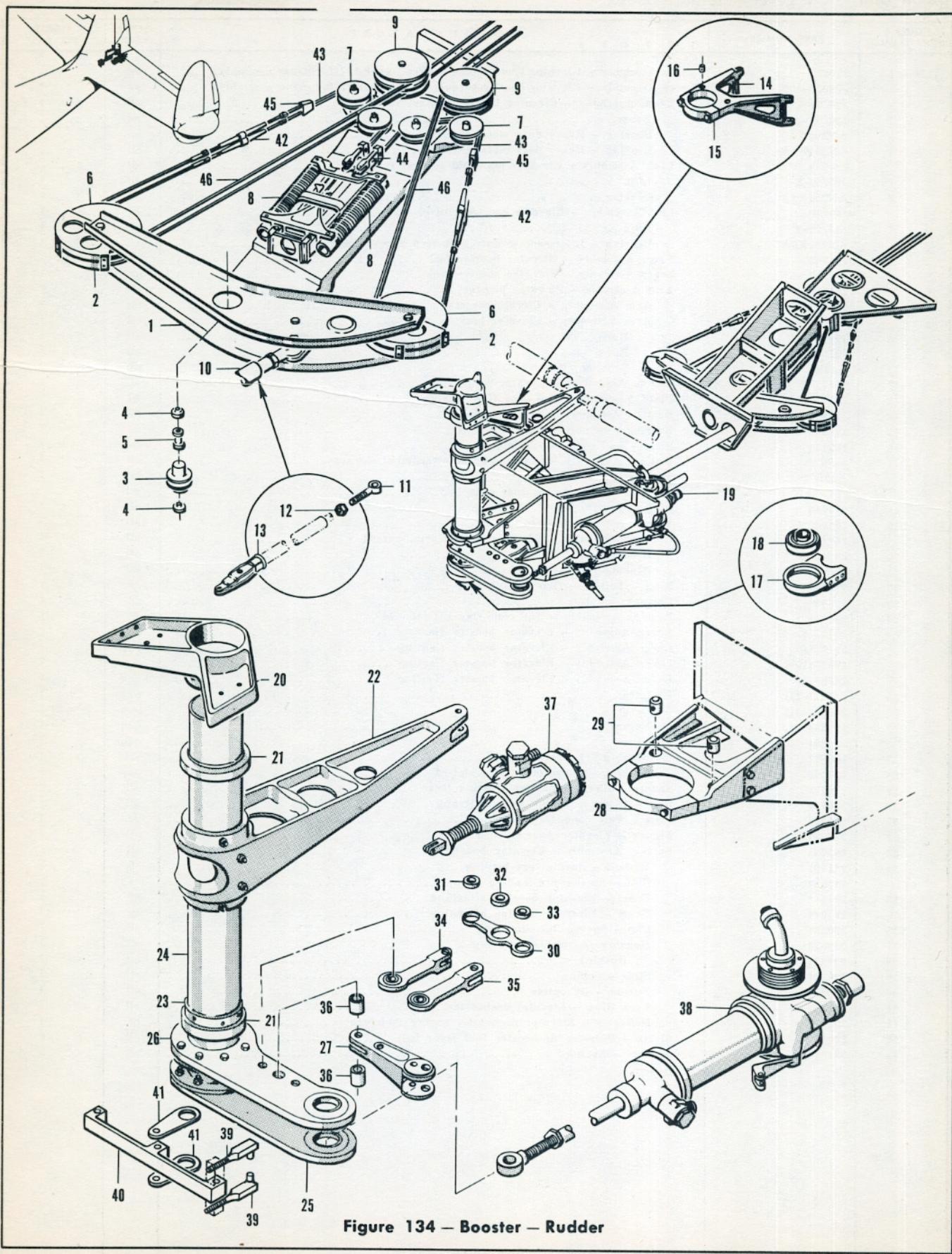


Figure 134 — Booster — Rudder

Reissued July 1947

GROUP . . . Hydraulic System Units

Constellation

Detail Unit . . . Booster—Rudder

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
	256998		Installation	— Rudder booster (NP) (See figure 80 for using assembly)					all	Ref
	268912		Bracket Assembly	— Rudder booster tension governor					all	1
134 - 1	268914-3		Beam Assembly	— Walking					all	1
2	256311		Shield Assembly	— Walking beam pulley					all	2
	268550		Hub Assembly	— Walking beam					all	1
3	268550-2		Hub						all	1
4	AN201K6A		Bearing	— Intermediate duty ball deep groove metal shield					all	2
5	268551		Sleeve	— Walking beam hub					all	1
6	AN210-5A		Pulley	— New type					all	4
7	258832		Pulley	— Cable tension governor idler					all	4
8	R66-4		Regulator Assembly	— Cable tension (Pacific Scientific) (649006-4)					c	1
				(See figure 105 for detailed illustration)						
	R66A40-2		Regulator Assembly	— Cable tension (Pacific Scientific) (649019-2)					d	1
				(See figure 105 for detailed illustration)						
9	AN210-4A		Pulley	— Anti-friction bearing control					all	4
10	268447-500		Rod Assembly	— Rudder booster push					all	1
11	256268		Eye Assembly	— Booster push rod					all	1
	NR6L12		Bearing	— Needle (Fafnir)					all	1
12	256716		Nut + Booster cylinder piston rod eye						all	1
13	288492		Yoke Assembly	— Push rod					all	1
	288495		Bushing	— Push rod yoke					all	2
14	276078-2		Bracket	+ Center rudder torque tube bearing					all	1
15	276078-3		Cap	— Center rudder torque tube bearing (Bracket and cap not sold separately)					all	1
16	274636		Trunnion	— Booster horn					all	2
17	271349		Bracket Assembly	— Center rudder lower bearing					all	1
18	K49B		Bearing	(Fafnir)					all	1
19	*268913-502		Booster Assembly	— Rudder					dd	1
	*268913-501		Booster Assembly	— Rudder					gg	1
	271209		Tube Assembly	— Center rudder torque					all	1
20	253146		Flange						all	1
21	K49B		Bearing	(Fafnir)					all	2
22	253152-3		Horn	— Outboard rudder center control					all	1
23	275438		Nut	+ Rudder torque tube retainer					all	1
24	275439		Hub Assembly	— Center rudder torque					all	1
25	262674L		Horn Assembly	— Center rudder booster					all	1
26	262674R		Horn Assembly	— Center rudder booster					all	1
	AN202K29B		Bearing	— Extra light duty ball deep groove metal shield					all	1
27	288639		Lever Assembly	— Rudder booster feel					all	1
	275824-2		Bracket Assembly	— Rudder booster support					all	1
28	275947		Housing Assembly	— Center rudder middle bearing					all	1
				(Bearing, bracket and cap sold together as one unit)						
29	271342		Trunnion	— Rudder torque tube middle bearing cap					all	2
	280376		Beam Assembly	— Booster control valve					all	1
30	280376-2		Beam						all	1
31	AN201K4A		Bearing	— Intermediate duty ball deep groove metal shield					all	1
32	AN200K5		Bearing	— Heavy duty metal shield					all	1
33	AN200K4		Bearing	— Heavy duty metal shield					all	1
34	280377		Link Assembly	— Booster control valve					all	1
	AN200K5		Bearing						all	1
35	280375		Link Assembly	— Booster control valve					all	1
	AN201K6A		Bearing	— Intermediate duty ball deep groove metal shield					all	1
36	288493		Spacer	— Rudder booster valve limit stop					all	2
37	667581		Valve Assembly	— Booster control (See figure 137 for detailed illustration)					dd	1
	667561		Valve Assembly	— Booster control (See figure 137 for detailed illustration)					gg	1
38	663166		Cylinder Assembly	— Rudder booster (See figure 136 for detailed illustration)					all	1
				(Alternate: 663160)						
39	288620		Link	— Rudder booster ratio adjusting					rrr	2
	293878		Link	— Rudder booster ratio adjusting					sss	2
40	288498		Spring	— Rudder booster ratio adjusting					rrr	1
	292163		Cartridge Assembly	— Rudder booster ratio adjusting					sss	1
41	288497		Link	— Rudder booster ratio reducer spring					rrr	2
	292252		Link	— Rudder booster ratio reducer spring					sss	2
	288494		Collar	— Rudder booster ratio reducer spring					rrr	2
	288619		Pin	— Rudder booster ratio reducer spring					all	1
	256897		Installation	+ Fuselage aft section control (NP) (See figure 80 for using assembly)						
42	AN155-21L		Barrel	— Turnbuckle					all	Ref
43	279170		Cable Assembly	— Rudder cable tension governor					all	Ref
44	272839		Spreader	— Tension governor cable					all	Ref
45	254662		Deflector	— Tension governor					all	Ref
46	279167-26		Cable Assembly	— Surface controls					all	Ref

* Replaces standard part per Service Bulletin 49/SB-291.

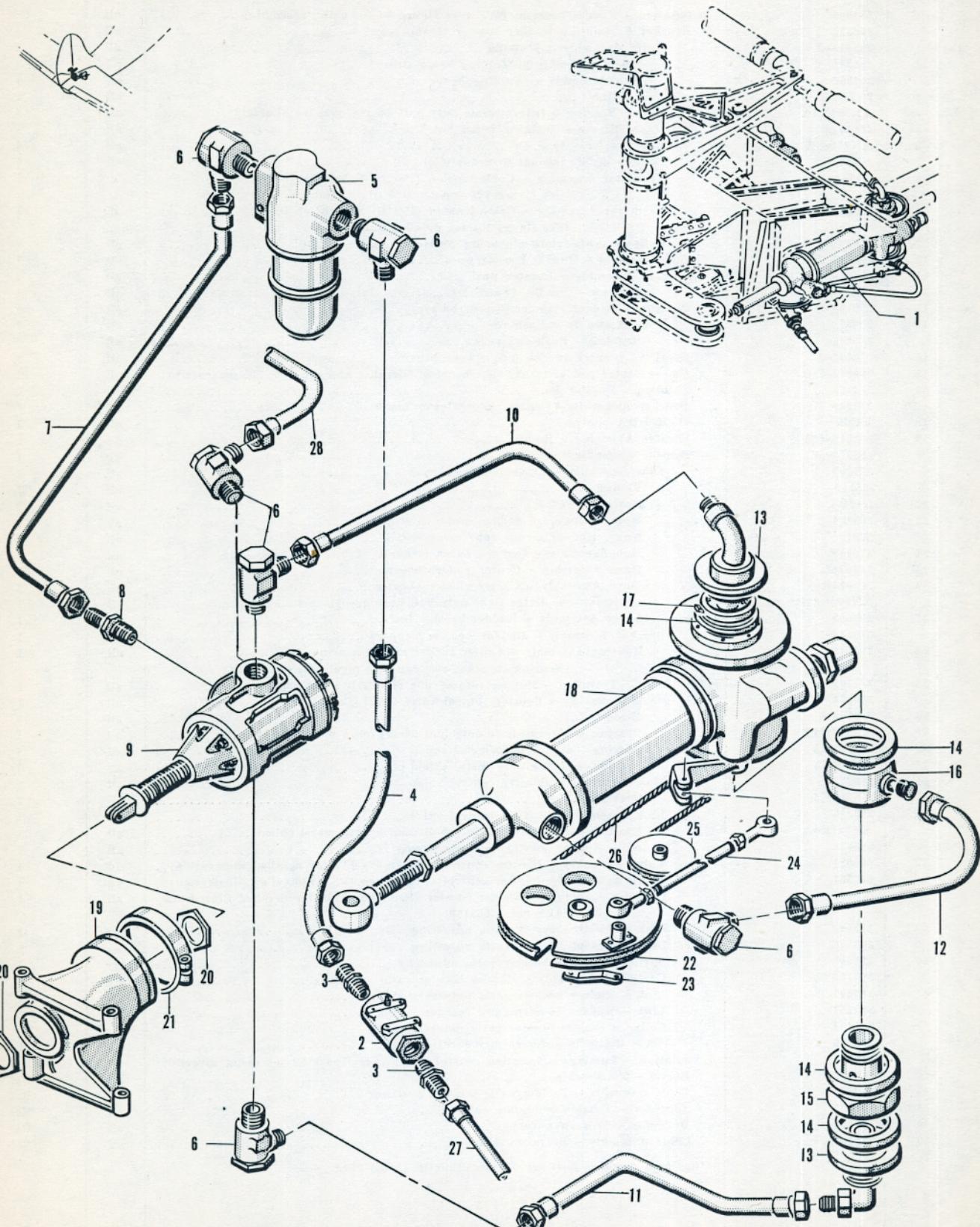


Figure 135 — Hydraulics — Rudder Booster

GROUP Hydraulic System Units

Detail Unit . . . Hydraulics—Rudder Booster

Constellation

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
135 - 1	268913-502	Booster Assembly	Rudder (See figure 134 for using assembly)						dd	Ref
	268913-501	Booster Assembly	Rudder (See figure 134 for using assembly)						gg	Ref
2	282862-2	Valve Assembly	Booster shut-off						all	1
	29041	Valve Assembly	3/4 line poppet cutoff (Aircraft Accessories) (667257) (See figure 137 for detailed illustration)						all	1
3	3175-3-12-10D	Union (Parker)							all	2
	3175-2-12D	Gasket (Parker)							all	2
4	256342-17	Tube Assembly	Shut-off valve to filter						all	1
5	28946	Filter	Hydraulic system (Purolator) (667251) (See figure 130 for detailed illustration)						all	1
6	3175-4-10D	Swivel (Parker)							all	6
	3175-11-10D	Bolt (Parker)							all	6
	3175-2-10D	Gasket (Parker)							all	13
7	264843-362	Tube Assembly	Filter to control valve						all	1
8	3175-3-10D	Union (Parker)							all	1
	3175-2-10D	Gasket (Parker)							all	7
9	667581	Valve Assembly	Booster control (See figure 137 for detailed illustration)						dd	Ref
	667561	Valve Assembly	Booster control (See figure 137 for detailed illustration)						gg	Ref
10	256342-20	Tube Assembly	Control valve to cylinder top						all	1
11	256342-21	Tube Assembly	Control valve to cylinder bottom						all	1
12	256342-22	Tube Assembly	Cylinder top to bottom						all	1
13	R-83-D4	Joint	Swing style 30 (Chiksan) (667582)						all	2
14	260562	Gasket	Booster mechanism fitting						all	4
15	256775	Adapter	Booster cylinder swing joint						all	1
16	256741	Elbow	Booster cylinder swivel						all	1
17	259560	Washer Assembly	Elbow lock						all	1
18	663166	Cylinder Assembly	Rudder booster (See figure 136 for detailed illustration)						all	Ref
19	268360-5	Support	Rudder booster valve						all	1
20	256805-2	Nut	Booster valve mounting						all	2
21	275805	Strap Assembly	Booster valve support						all	1
22	268911	Pulley Assembly	Rudder booster shut-off						all	1
23	275806	Handle	Rudder booster shut-off valve						all	1
24	70256-14	Rod Assembly							all	1
	REB3N-2	Bearing	Ball (Fafnir)						all	2
25	AN210-2A	Pulley	New type						all	1
26	256424-32	Cable Assembly	Booster by-pass (See figure 80 for using assembly)						all	Ref
27	285397-22	Tube Assembly	Pressure to shut-off valve (See figure 125 for using assembly)						a	Ref
28	285397-20	Tube Assembly	Return from control valve (See figure 125 for using assembly)						a	Ref

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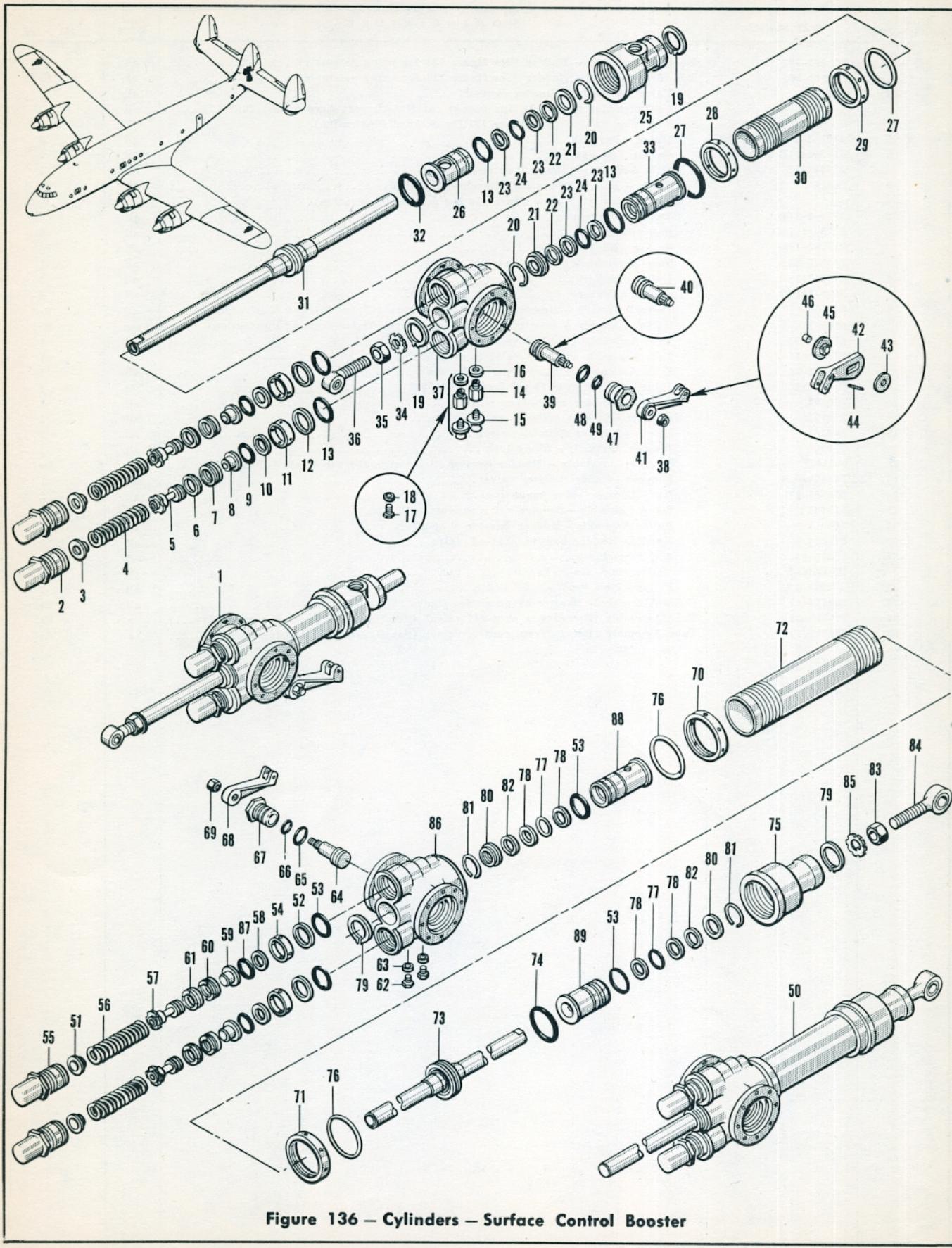


Figure 136 — Cylinders — Surface Control Booster

GROUP . . . Hydraulic System Units

Detail Unit . . . Cylinders—Surface Control Booster

Constellation

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
136 - 1	*663164-2	Cylinder Assembly	- Aileron booster (Used on LH) (See fig. 130 for using assembly)						all	Ref
	*663164-3	Cylinder Assembly	- Aileron booster (Used on RH) (See fig. 130 for using assembly)						all	Ref
	*663165	Cylinder Assembly	- Elevator booster (See figure 134 for using assembly)						all	Ref
2	290765	Cap - Valve spring adjusting							all	2
3	285338	Washer - Valve cap							all	2
4	256266	Spring - Adjusting							all	2
5	256267	Valve - Booster cylinder relief							all	2
6	256256	Nut - Relief valve							all	2
7	289092	Nut - Relief valve							all	2
8	289093	Seat - Relief valve							all	2
9	AN6227-16	Packing - "O" Ring hydraulic							all	2
10	258902	Gasket - Relief valve							all	2
11	290766	Nut - Relief valve							all	2
12	290767	Packing - Relief valve							all	2
13	AN6227-23	Packing - Relief valve							all	4
14	277401	Seat - Valve (Used on aileron booster cylinder only)							all	2
15	277400	Valve (Used on aileron booster cylinder only)							all	2
16	AN960D416	Washer (Used on aileron booster cylinder only)							all	2
17	256148	Bolt (Used on elevator booster cylinder only)							all	3
18	AN960D10	Washer (Used on elevator booster cylinder only)							all	3
19	NASS1-150	Ring							all	2
20	277323	Ring - Snap							all	2
21	AN6231-9	Ring - Scraper							all	2
22	AN6231-1	Felt - Piston							all	2
23	AN6246-19	Ring							all	4
24	AN6227A19	Packing							all	2
25	*298219	Cap (Used on aileron booster cylinder only) (298217 used on elevator)							all	1
26	*298145	Bushing - Booster cylinder cap							all	1
27	AN6230-5	Packing (Used on aileron booster cylinder only) (AN6230-9 used on elevator)							all	2
28	256272L	Nut (Used on aileron booster cylinder only) (256084L used on elevator)							all	1
29	256272R	Nut (Used on aileron booster cylinder only) (256084R used on elevator)							all	1
30	290645	Cylinder (Used on aileron booster cylinder only) (290647 used on elevator)							all	1
31	290644	Piston Rod Assembly (Used on aileron booster cylinder only)							all	1
	290643	Piston Rod Assembly (Used on elevator booster cylinder only)							all	1
32	AN6227-29	Packing (Used on aileron booster cylinder only) (AN6227-33 used on elevator)							all	1
33	*298146	Bushing (Used on aileron booster cylinder only) (298147 used on elevator)							all	1
34	281211	Washer - Booster cylinder eye retaining							all	1
35	256716	Nut - Booster cylinder piston rod eye							all	1
36	256268	Eye (Used on aileron booster cylinder only)							all	1
	256085	Eye (Used on elevator booster cylinder only)							all	1
37	*298214	Housing Assembly (Required on -2 only)							all	1
	*298212	Housing Assembly (Required on -3 only)							all	1
	*298213	Housing Assembly (Used on elevator booster cylinder only)							all	1
38	AN364-428	Nut							all	1
39	256252	Cam (Used on aileron booster cylinder only)							all	1
40	290802	Cam (Used on elevator booster cylinder only)							all	1
41	289346L	Lever Assembly (Required on -2 only)							all	1
	289346R	Lever Assembly (Required on -3 only)							all	1
42	285966	Lever (Used on elevator booster cylinder only)							all	1
43	290549	Washer (Used on elevator booster cylinder only)							all	1
44	290547	Spring (Used on elevator booster cylinder only)							all	1
45	290548	Guide (Used on elevator booster cylinder only)							all	1
46	290803	Spacer (Used on elevator booster cylinder only)							all	1
47	256254	Nut - Booster cylinder valve release packing							all	1
48	AN6227-11	Packing - "O" Ring							all	1
49	AN6227-9	Packing - "O" Ring							all	1
50	*663166	Cylinder Assembly + Rudder booster (See figure 131 for using assembly)							all	Ref
51	285338	Washer - Valve cap							all	2
52	290767	Ring - Relief valve							all	4
53	AN6227-23	Packing							all	2
54	290766	Nut - Check valve spring adjusting							all	2
55	290765	Cap - Spring adjusting valve							all	2
56	256266	Spring - Adjusting							all	2
57	256267	Valve - Booster cylinder relief							all	2
58	258902	Gasket - Relief valve							all	2
59	289093	Seat - Relief valve							all	2
60	289092	Nut - Bypass valve							all	2
61	256256	Nut - Relief valve							all	2
62	256148	Bolt + Power booster bleeder							all	2
63	AN960D10	Washer							all	2
64	256252	Cam							all	1
65	AN6227-11	Packing - "O" Ring hydraulic							all	1
66	AN6227-9	Packing - "O" Ring hydraulic							all	1
67	256254	Nut - Valve relief packing							all	1
68	289346L	Lever Assembly - Relief valve							all	1
69	AN364-428	Nut							all	1
70	256084L	Nut - Elevator and Booster cylinder packing							all	1
71	256084R	Nut - Elevator and Booster cylinder packing							all	1
72	290642	Cylinder							all	1
73	290646	Piston Rod Assembly - Rudder booster cylinder							all	1
74	AN6227-33	Packing							all	1
75	*298217	Cap - Elevator and rudder booster							all	1
76	AN6230-9	Packing							all	2
77	AN6227A19	Packing							all	2
78	AN6246-19	Ring							all	4
79	NASS1-150	Ring							all	2
80	AN6231-9	Ring - Scraper							all	2
81	277323	Ring - Snap							all	2
82	AN6231-1	Felt - Piston							all	1
83	256716	Nut - Booster cylinder piston rod eye							all	2
84	256085	Eye Assembly - Elevator booster cylinder piston rod							all	1
85	281211	Washer - Booster cylinder eye retaining							all	1
86	*298218	Housing Assembly							all	1
87	AN6227-16	Packing - "O" Ring							all	2
88	*298147	Bushing - Rudder and elevator cylinder housing							all	1
89	*298145	Bushing - Booster cylinder cap							all	1

*Replaces standard part per Service Bulletin 49/SB-291.

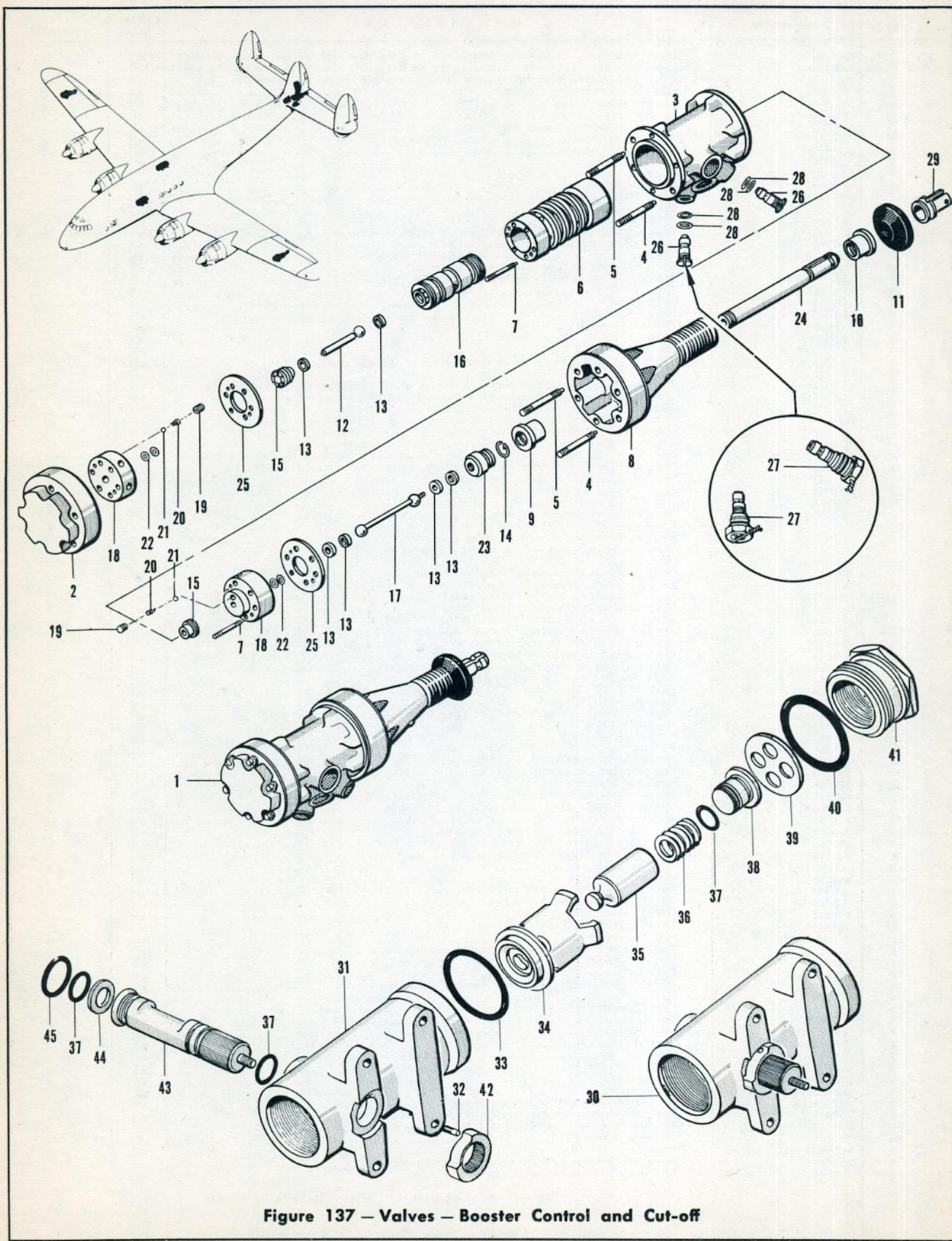


Figure 137 — Valves — Booster Control and Cut-off

GROUP . . . Hydraulic System Units

Constellation

Detail Unit . . . Valves—Booster Control and Cut-off

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6	N O M E N C L A T U R E	SERIAL CODE	U N I T S P E R A S S Y .	
					1	2
137 - 1	667581		Valve Assembly - Booster control (See figures 130, 131, 134 and 135 for using assembly)	dd	Ref	
	667561		Valve Assembly - Booster control (See figures 130, 131, 134 and 135 for using assembly)	gg	Ref	
2	282411		Cap - Booster control valve	all	1	
	283226		Body Assembly - Booster control valve	all	1	
3	283109		Body - Booster control valve	all	1	
4	266140-2		Stud - Booster control valve	all	10	
5	266140-4		Stud - Booster control valve	all	2	
6	283108		Sleeve - Booster control valve piston	all	1	
7	196235		Stud - Booster control valve	all	12	
	293228		Pin - Booster control valve	all	2	
	266150		Cap - Booster control valve cross head	all	1	
8	266147		Cap - Booster control valve cross head	all	1	
9	266146-2		Bushing - Booster control valve drive rod	all	1	
10	266146-3		Bushing - Booster control valve drive rod	all	1	
11	279299		Boot - Booster control valve dust shield	all	1	
12	282413		Shaft - Booster control valve	all	1	
13	266141		Washer - Booster control valve ball seat	all	6	
14	266155		Ring - Booster control snap	all	3	
15	266137		Nut - Booster control valve shaft	all	2	
16	282412		Piston - Booster control valve	all	1	
17	285430		Shaft Assembly - Booster control valve ball	all	1	
	283110		Block Assembly - Booster control valve	all	1	
18	283111		Block - Booster control valve head	all	1	
19	266138		Retainer - Booster control valve ball check spring	all	1	
20	266153		Spring - Booster control check valve	all	1	
21	5 ₃₂		Ball - 5 ₃₂ Commercial ground steel	all	1	
22	AN6227-5		Packing - "O" Ring hydraulic	all	2	
23	266143		Nut - Booster control valve drive rod	all	1	
24	291211		Rod - Booster control valve drive	all	1	
25	284303		Gasket	all	2	
26	283144		Cartridge Assembly - Booster control valve	dd	2	
27	287532-2		Cartridge Assembly - Booster control valve	gg	2	
28	AN6227-10		Packing - "O" Ring hydraulic	all	4	
	287533		Swivel - Booster control valve	gg	2	
29	291212		Sleeve - Booster control valve	all	1	
30	29041		Valve Assembly - 3/4 Line poppet cut-off (Aircraft Accessories) (667257) (See figures 125, 131 and 135 for using assembly)	all	Ref	
	29319		Housing Assembly - 3/4 Line cut-off valve	all	1	
31	29320		Housing - 3/4 Line cut-off valve	all	1	
32	2020-4-6-5		Pin - Groove type 4 3 ₃₂ diameter x 5 ₁₆	all	1	
33	AN6227-19		Packing - "O" Ring hydraulic	all	1	
	29329		Valve Assembly - 3/4 Line cut-off valve	all	1	
34	29325		Seat - 3/4 Line cut-off valve	all	1	
35	29324		Poppet - 3/4 Line cut-off valve (Poppet and seat are not sold separately)	all	1	
36	29326		Spring - 3/4 Line cut-off valve	all	1	
37	AN6227-7		Packing - "O" Ring hydraulic	all	3	
38	29343		Button - 3/4 Line cut-off valve	all	1	
39	29344		Stop - 3/4 Line cut-off valve	all	1	
40	AN6227-23		Packing - "O" Ring hydraulic	all	1	
41	29321		Retainer - 3/4 Line cut-off valve	all	1	
42	29327		Stop - Handle 3/4 line cut-off valve	all	1	
43	29322		Shaft - Cam 3/4 line cut-off valve	all	1	
44	29345		Washer - Cam 3/4 line cut-off valve	all	1	
45	AN996-10		Ring - Lock	all	1	

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GROUP Hydraulic System Units

Detail Unit . . . Valve and Follow-up—Wing Flap

Constellation

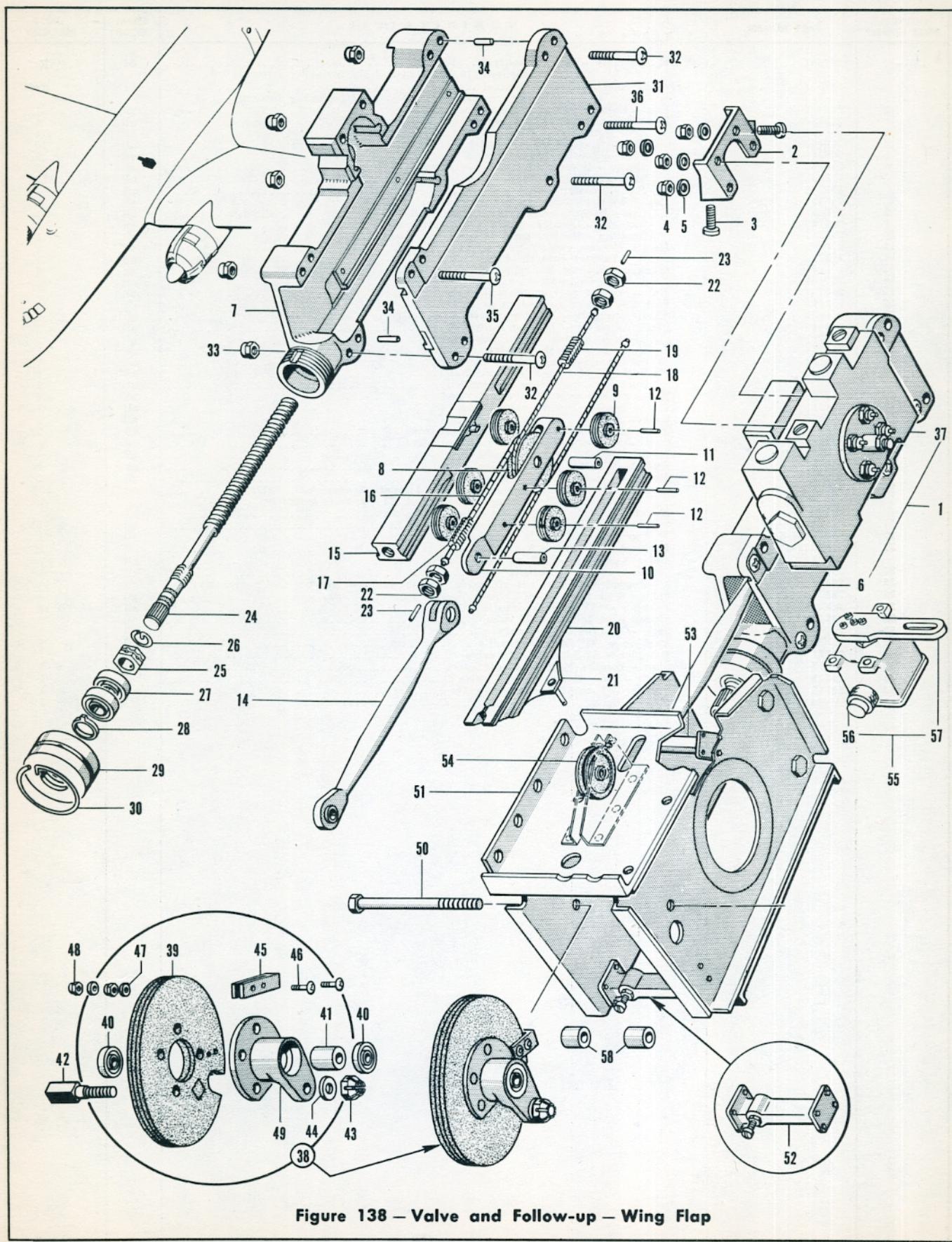


Figure 138 — Valve and Follow-up — Wing Flap

GROUP Hydraulic System Units

Detail Unit . . . Valve and Follow-up—Wing Flap

Constellation

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6	N O M E N C L A T U R E	SERIAL CODE	U N I T S P E R A S S Y.
	282033		Wing Flap Mechanism and Control Valve - Installation (See figure 110 for using assembly)	all	Ref
138 - 1	282034		Valve and Follow Up Assembly - Wing flap control	all	1
2	282037		Lock - Wing flap control valve	all	1
3	282052		Screw - Wing flap valve adjusting	all	2
4	AN365-428		Nut - Self-locking	all	4
5	AN960-416L		Washer - Plain	all	4
6	669064		Follow Up Assembly - Wing flap control valve	all	1
7	282036		Body Assembly - Wing flap follow up	all	1
8	282051		Pulley Assembly - Wing flap follow up	all	1
	AN201K4A		Bearing - Intermediate duty ball deep groove metal shield	all	1
9	282048		Roller Assembly - Wing flap follow up	all	6
10	282050		Link - Wing flap follow up	all	1
11	282055-3		Shaft - Wing flap follow up	all	1
12	282055-2		Shaft - Wing flap follow up	all	3
13	282055-4		Shaft - Wing flap follow up	all	1
14	282065		Rod Assembly - Wing flap follow up control	all	1
15	282040		Slide Assembly - Wing flap follow up upper	all	1
16	282053-2		Cable Assembly - Wing flap follow up	all	1
17	282054		Screw - Wing flap follow up cable adjusting	all	1
18	282053-4		Cable Assembly - Wing flap follow up	all	1
19	282054		Screw	all	1
20	282045		Slide Assembly - Wing flap follow up lower	all	1
21	282046		Nut Assembly - Wing flap follow up	all	1
22	AN316-5R		Nut - Aircraft check	all	4
23	LS500-62-8		Pin - Drive	all	2
24	282056		Screw - Wing flap - follow up drive	all	1
25	282057		Nut - Wing flap - follow up screw	all	1
26	AN996-12		Ring - Lock	all	1
27	AN201K8A		Bearing - Intermediate duty ball deep groove metal shield	all	2
28	NAS51-50		Ring - Retainer external type for bearings and shafting	all	1
29	282058		Cap - Wing flap follow up screw	all	1
30	AN996-26		Ring - Lock	all	1
31	282039		Cover Assembly - Wing flap follow up	all	1
32	LS2507-30		Screw - 3/4-28 Phillips binding head	all	1
33	AN364-428		Nut - Self-locking thin	all	3
34	LS500-187-18		Pin - Drive	all	2
35	LS2507-32		Screw - 3/4-28 Phillips binding head	all	1
36	LS2507-28		Screw - 3/4-28 Phillips binding head	all	1
37	667429		Valve Assembly - Hydraulic 4 way selector (See figure 139 for detailed illustration)	all	1
38	282061		Pulley Assembly - Wing flap follow up control	all	1
39	282062		Pulley - Wing flap follow up control	all	1
40	AN201K6A		Bearing - Intermediate duty ball deep groove metal shield (leave in place)	all	2
41	282068		Spacer - Wing flap follow up control	all	1
42	282067		Shaft - Wing flap - follow up control	all	1
43	AN310-4		Nut - Aircraft castle	all	1
44	AN960-416		Washer - Plain	all	1
45	282063		Bumper - Wing flap follow up control	all	1
46	LS560-12		Screw - Square head set	all	2
47	AN960-10L		Washer - Plain	all	2
48	AN365-1032		Nut - Self-locking	all	2
49	282064		Lever - Wing flap follow up control	all	1
50	AN6H-31A		Bolt - 3/4-24	all	1
	AN960-616		Washer - Plain	all	1
51	282066		Bracket Assembly - Wing flap follow up control	all	1
52	282060-3		Stop - Wing flap follow up control	all	2
53	282060-2		Stop - Wing flap follow up control	all	1
54	AN210-1A		Pulley	all	1
55	282047		Transmitter Assembly - Wing flap position	c	1
56	6615-2A		Transmitter - Wing flap position (Pioneer) (628038)	c	1
57	282070		Lever - Wing flap position transmitter	c	1
	AN5785-1		Transmitter Assembly - Wing flap position	d	1
	286363		Lever - Wing flap position transmitter	d	1
58	LS632-8-15		Spacer - Aluminum alloy	all	2

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GROUP . . . Hydraulic System Units

Detail Unit . . . Valve—Wing Flap Mechanism Selector

Constellation

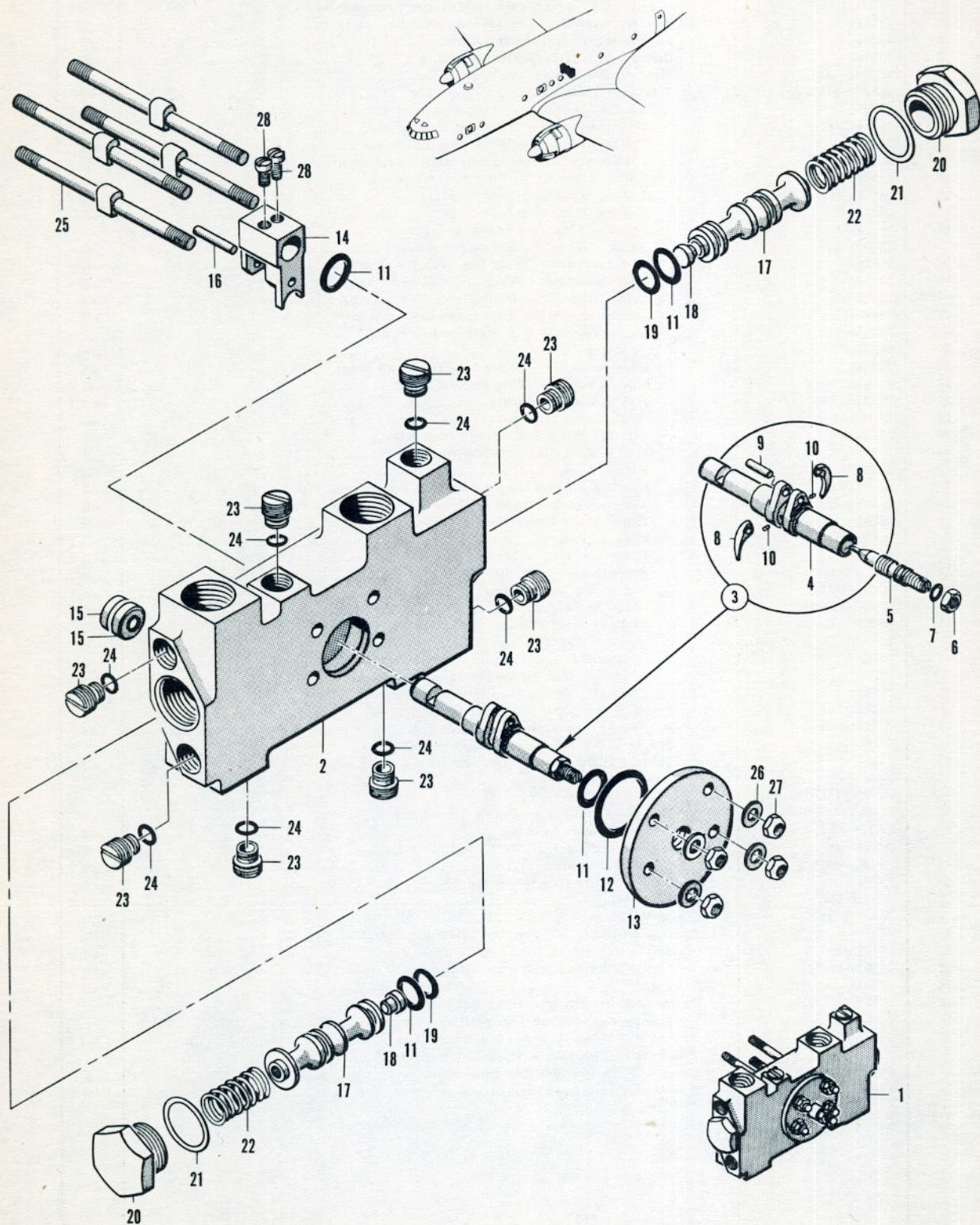


Figure 139 — Valve — Wing Flap Mechanism Selector

GROUP . . . Hydraulic System Units

Detail Unit . . . Valve—Wing Flap Mechanism Selector

Constellation

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	U N I T S P E R A S S Y.
			1	2	3	4	5	6		
139 - 1	667429		Valve - Hydraulic 4 way selector (See figure 138 for using assembly)						all	Ref
2	281548		Body - Hydraulic 4 way selector valve						dd	1
	288183		Body - Hydraulic 4 way selector valve						gg	1
3	281575		Cam Assembly - Hydraulic 4 way selector valve						all	1
4	281555		Shaft - Hydraulic 4 way selector valve cam						all	1
5	281572		Screw - Hydraulic 4 way selector valve cam adjusting						all	1
6	AN316-4R		Nut - Aircraft check						all	1
7	AN6227-4		Packing - "O" Ring hydraulic						all	1
8	281580		Cam - Hydraulic 4 way selector valve						all	2
9	281574		Pin - Hydraulic 4 way selector valve cam hinge						all	1
10	281579		Pin - Hydraulic 4 way selector valve cam adjusting						all	2
11	AN6227-10		Packing - "O" Ring hydraulic						all	4
12	AN6227-21		Packing - "O" Ring hydraulic						all	1
13	281571		Cap - Hydraulic 4 way selector valve cam locating						all	1
	281556		Lever Assembly - Hydraulic 4 way selector valve						all	1
14	281566		Lever - Hydraulic 4 way selector valve						all	1
15	K3L3		Bearing (Fafnir)						all	2
16	281573		Pin - Hydraulic 4 way selector valve lever						all	1
	281554		Poppet Assembly - Hydraulic 4 way selector valve						dd	2
	288184		Poppet Assembly - Hydraulic 4 way selector valve						gg	1
17	281554-2		Valve - Poppet						dd	1
	288184-2		Valve - Poppet						gg	1
18	281565		Tappet - Hydraulic 4 way selector valve						all	1
19	AN6227-9		Packing - "O" Ring hydraulic						all	2
20	281581		Cap - Hydraulic 4 way selector valve poppet						all	2
21	AN902-12		Gasket - Flared tube universal fitting						all	2
22	281552		Spring - Hydraulic 4 way selector valve poppet						all	2
23	281553		Plug - Hydraulic 4 way selector valve						all	8
24	AN6227-6		Packing - "O" Ring hydraulic						all	8
25	281557		Bolt - Hydraulic 4 way selector valve mounting						all	4
26	AN960D416		Washer - Plain						all	4
27	AN365-428		Nut - Self-locking						all	4
28	281549		Screw - 4 Way hydraulic selector valve lever						all	2
	285311		Washer - 4 Way hydraulic selector valve spring seat						all	4

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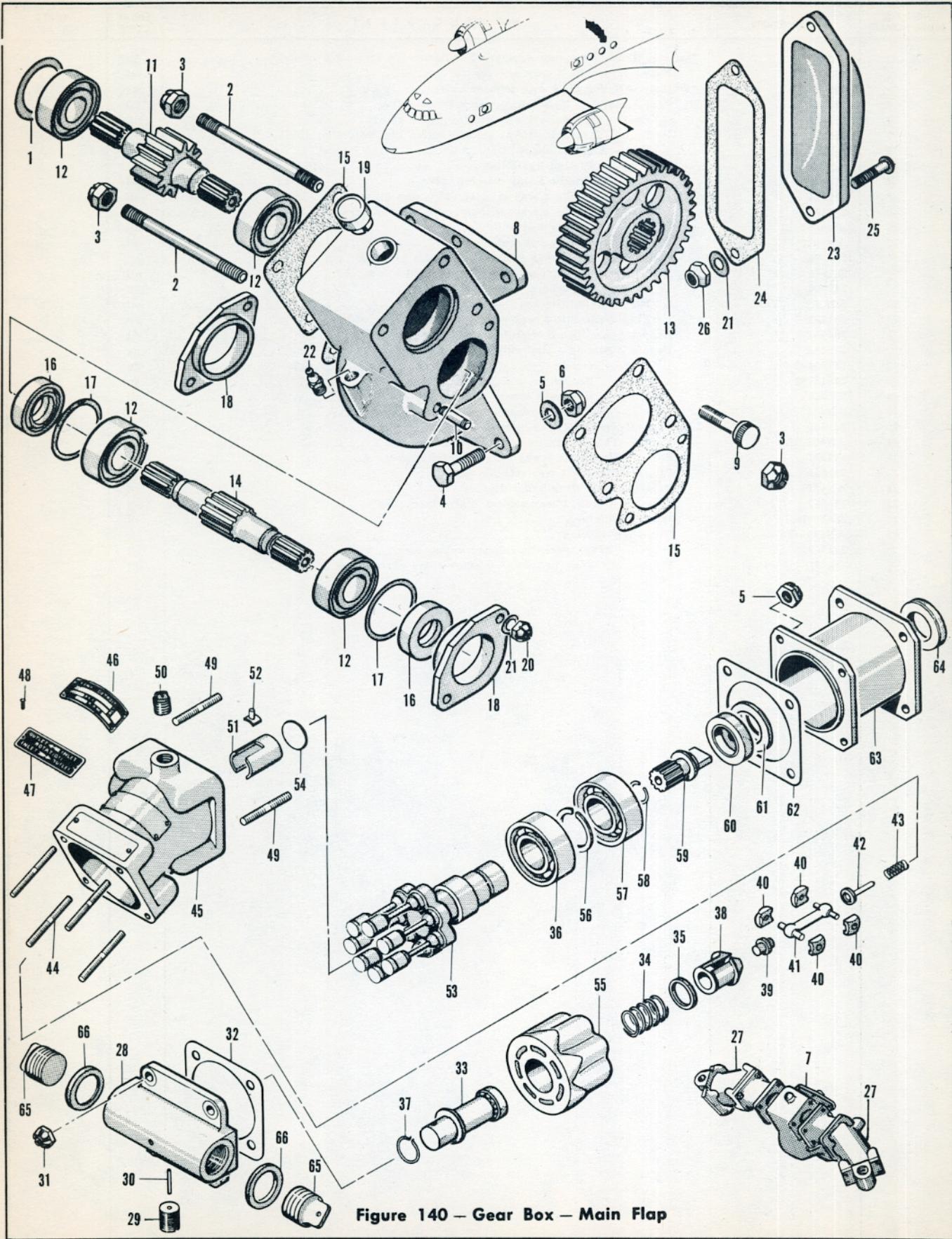


Figure 140 – Gear Box – Main Flap

GROUP . . . Hydraulic System Units

Detail Unit . . . Gear Box—Main Flap

Constellation

FIGURE & INDEX NUMBER	PART NUMBER		NOMENCLATURE						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
	01-281366		Service Assembly	— Main flap gear box (Consists of 281366 less index Nos. 4, 5 and 6)					all	Ref
	281366		Main Flap Gear Box	— Installation (See figure 110 for using assembly)					all	Ref
140 - 1	277337-3		Shim	— Main drive					all	14
2	277368		Stud	— Motor mounting					all	2
3	AN310-4		Nut	— Aircraft castle					all	4
4	AN4-6A		Bolt	— Aircraft 3/4-28					all	4
5	AN960-416L		Washer	— Plain					all	4
6	AN365-428		Nut	— Self-locking					all	4
7	669061		Gear Box Assembly	— Main wing flap					all	1
	281294		Housing Assembly	— Main wing flap gear					all	1
8	281294-2		Housing	— Main wing flap gear					all	1
9	277356		Screw	— Motor mounting					all	4
10	277424-2		Stud	— Transmission case					all	4
11	277371		Pinion	— Main drive					all	1
12	202KD		Bearing	(Fafnir)					all	4
	01-277369		Service Assembly	— Gear and shaft						
				(Consists of 277370 and 277369, sold only as matched pair under this service assembly)						
13	277370		Gear	— Main drive					all	1
14	277369		Shaft	— Main drive gear					all	1
15	277417		Gasket	— Hydraulic motor					all	2
16	77		Bearing	— Klozure (Garlock Packing Co.)					all	2
17	277337-2		Shim	— Main drive					all	8
18	277367		Retainer	— Drive gear bearing					all	2
19	278197		Plug	— Breather					all	1
20	AN310-3		Nut	— Aircraft Castle					all	4
21	AN960-10L		Washer	— Plain					all	6
22	NAS2-101		Fitting	— Lubrication					all	1
23	277373		Cover	— Main gear					all	1
24	277423		Gasket	— Main gear cover					all	1
25	LS560-13		Screw	— No. 10-32 Phillips binding head					all	2
26	AN365-1032		Nut	— Self-locking					all	2
27	MF8-713-30BC		Motor	— 7 Cylinder reversible hydraulic (Vickers) (667227)					all	2
28	48077		Plate	— Valve					all	1
29	41369		PPlug	— Locking pin retainer					all	1
30	2464		Pin	— Cylinder bearing pin locking					all	1
31	AN310-4		Nut	(Vickers No. 34567)					all	8
32	46701		Gasket	— Valve plate					all	1
33	64465		Bearing Assembly	— Cylinder bearing pin					all	1
34	46750		Spring	— Cylinder bearing					all	1
35	46264		Retainer	— Cylinder bearing spring					all	1
36	3L05		Bearing	— Radial drive shaft (New Departure) (Vickers No. 43626)					all	1
37	52951		Washer	— "C" Cylinder bearing pin					all	1
38	46261		Retainer	— Universal link fixed					all	1
39	43601		Bearing	— Universal link fixed					all	1
40	43599		Knuckle	— Universal link					all	4
41	43585		Universal Link and Pin Assembly						all	1
42	43600		Bearing	— Universal link flexible					all	1
43	49431		Spring	— Universal link					all	1
	73982		Cylinder Housing Assembly	— Motor					all	1
44	46698		Stud	— Valve plate					all	4
45	48665		Housing	— Cylinder					all	1
46	38508		Nameplate	— Title					all	1
47	38448		Nameplate	— Rotation					all	1
48	AN535-0-2		Screw	(Vickers No. 44689)					all	8
49	46699		Stud	— Bearing housing					all	4
50	61525		Plug	— Drain					all	1
	61636		Washer						all	1
51	46702		Retainer	— Universal link flexible					all	1
52	42864		Key	— Universal link retainer					all	1
53	73782		Sub-assembly	— Shaft, pistons and cylinder block					all	1
54	41814		Plug	— Expansion					all	1
55	46260		Block	— Cylinder					all	1
56	43603		Ring	— Bearing snap					all	1
57	30204		Bearing	— Drive shaft radax thrust (New Departure) (Vickers No. 38571)					all	1
58	52989		Ring	— Coupling shaft snap					all	1
59	44537		Shaft	— Coupling					all	1
60	48637		Seal	— Shaft oil					all	1
61	76043		Gasket	— Oil seal (Used only when oil seal has been replaced)					all	1
62	46707		Gasket	— Bearing housing					all	1
63	48079		Housing	— Bearing					all	1
64	42974		Ring	— Pilot					all	1
65	61529		Plug	(For storing purposes only)					all	1
66	61635		Washer	— Shipping plug					all	2

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GROUP Hydraulic System Units

Detail Unit Bumper—Tail

Constellation

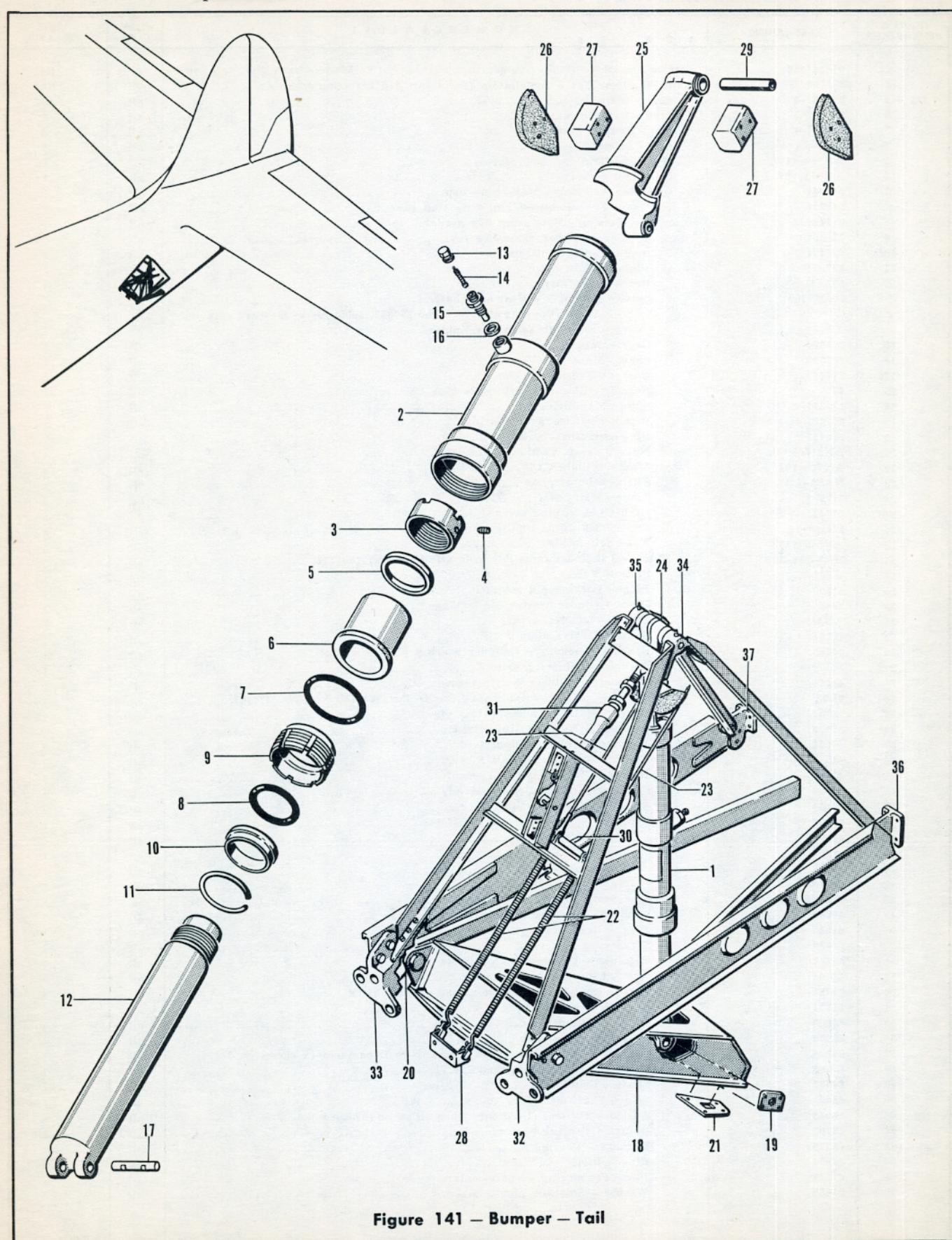


Figure 141 — Bumper — Tail

GROUP . . . Hydraulic System Units

Constellation

Detail Unit . . . Bumper—Tail

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
141 - 1	255004		Installation - Tail bumper (N.P.) (See figure 1 for using assembly)						all	Ref
	52500		Absorber Assembly - Tail bumper shock (United Aircraft Products) (661003)						all	1
2	52512		Cylinder						all	1
3	22515		Bearing - Piston head						all	1
4	10324-343-125		Screw - Dog point set						all	1
5	12513		Ring - Snubber						all	1
6	22514		Stop - Piston						all	1
7	AN6227-34		Packing - "O" Ring hydraulic						all	1
8	AN6230-9		Packing - "O" Ring hydraulic						all	1
9	22517		Bearing - Piston rod						all	1
10	AN6231-23		Wiper - Packing gland ring						all	1
11	12516		Ring - Retainer snap						all	1
12	43469		Piston						all	1
13	AN813-1		Cap - High pressure air valve						all	1
14	AN809-1		Core - High pressure air valve						all	1
15	ANS12-1		Body - High pressure air valve						all	1
16	AN901-5C		Gasket - Metal tube connection seal						all	1
	286734		Nameplate - Tail bumper shock strut						all	1
17	255193		Pin - Shock strut lower						all	1
18	255041		Skid Assembly - Tail bumper						all	1
19	255143		Bearing Assembly - Tail bumper skid						all	2
	255144-2		Bushing - Tail bumper skid bearing						all	1
20	255145		Terminal Assembly - Tail bumper skid						all	2
	255146		Bushing - Tail bumper skid terminal						all	1
21	255147		Shoe - Tail bumper skid						all	1
22	282854-2		Spring (May be purchased from California Spring Company No. 235)						all	2
23	281465		Cable Assembly - Tail bumper						all	2
24	255148		Link Assembly - Shock strut						all	1
25	255148-2		Link						all	1
	255144-3		Bushing (Large)						all	2
	255159		Bushing (Small)						all	2
26	281467		Quadrant - Tail bumper						all	2
27	281690		Block - Shock strut						all	2
28	281466		Channel - Tail bumper spring						all	1
29	255194		Pin - Shock strut upper						all	1
30	281468		Spacer - Tail bumper spring						all	1
31	41216		Cylinder Assembly (United Aircraft Products) (663007)						all	1
	21435		(See figure 125 for using assembly)							
	11437		Body Assembly - Tail bumper retracting cylinder						all	1
AN6227-11			Bushing - Tail bumper retracting cylinder						all	2
21436			Packing - "O" Ring						all	1
11439			Piston Rod Assembly - Tail bumper retracting cylinder						all	1
AN6231-1			Bearing - Tail bumper retracting cylinder						all	1
12339			Wiper - Packing gland ring						all	1
AN316-6R			Ring - Lock						all	1
11443			Nut - Aircraft check						all	1
267448			Eye Bolt Assembly - Tail bumper retracting cylinder						all	1
250502			Structure Assembly - Fuselage rear (See figure 1 for using assembly).						all	Ref
32	250504L		Installation - Tail skid support structure (N.P.)						all	1
33	250504R		Fitting - Tail skid hinge						all	1
	267920		Fitting - Tail skid hinge						all	1
34	255149L		Support Assembly - Tail bumper forward						all	1
35	255149R		Terminal - Tail bumper support						all	1
36	252007L		Terminal - Tail bumper support						all	1
37	252007R		Fitting - Tail skid aft support						all	1
			Fitting - Tail skid aft support						all	1

GROUP Hydraulic System Units

Detail Unit . . . Tail Bumper Compensator and Shut-off Valve

Constellation

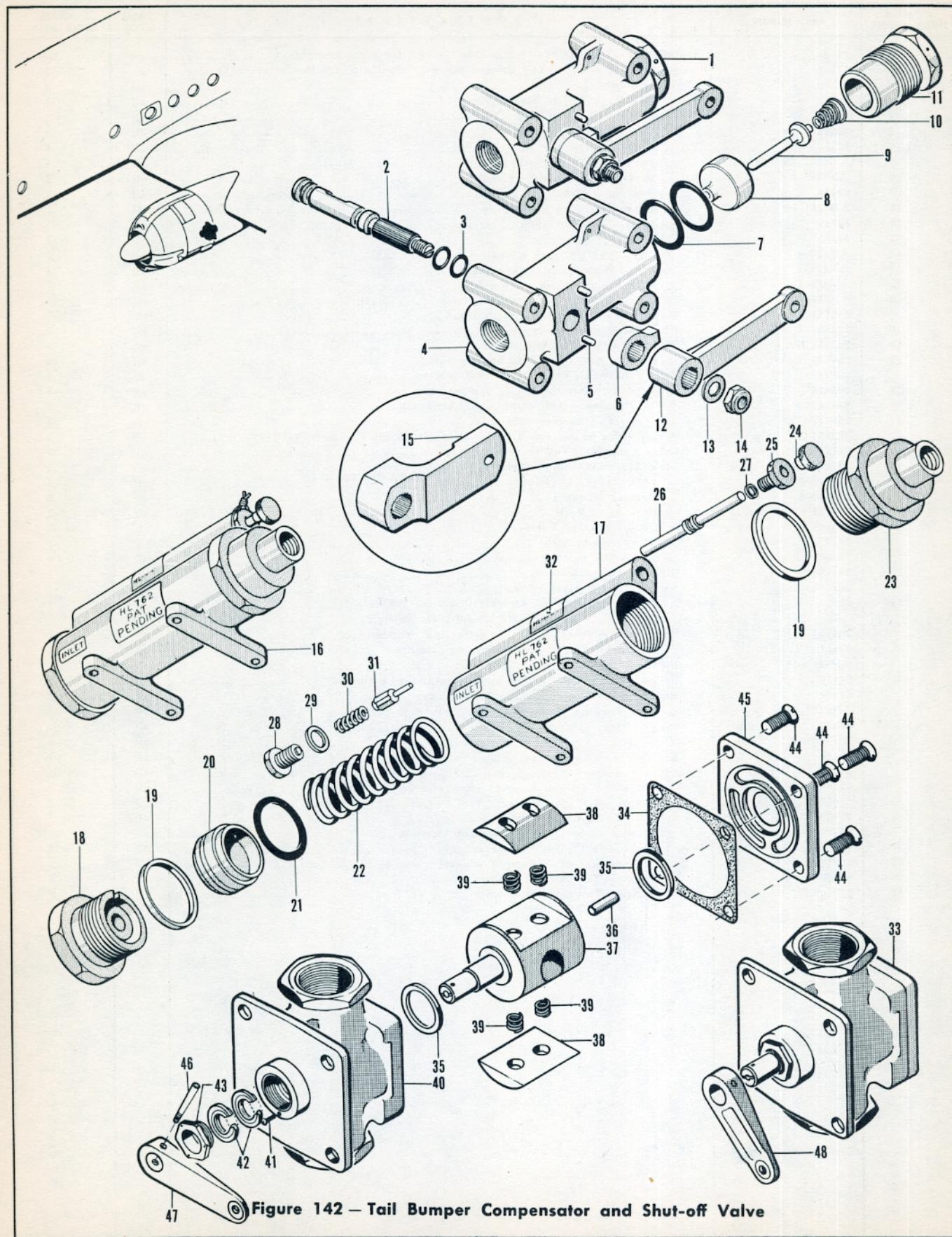


Figure 142 — Tail Bumper Compensator and Shut-off Valve

GROUP . . . Hydraulic System Units

Detail Unit . . . Tail Bumper Compensator and Shut-off Valve

Constellation

FIGURE & INDEX NUMBER	PART NUMBER		NOMENCLATURE						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
142 - 1	29033-6-220C	Valve Assembly - Single poppet shut-off (Aircor) (667420) (See figure 128 for using assembly)							all	Ref
2	29203	Shaft - Shut-off valve							all	1
3	AN6227-5	Packing - "O" Ring hydraulic							all	2
4	29198	Housing Assembly - Shut-off valve							all	1
5	29360	Housing - Shut-off valve							all	1
6	Type 4	Pin - Groove (.032 diameter x .060)							all	2
7	29204	Stop - Shut-off valve							all	1
8	AN6227-14	Packing - "O" Ring hydraulic							all	2
9	29355	Seat - Shut-off valve							all	1
10	29202	Poppet - Shut-off valve							all	1
11	29201	Spring - Shut-off valve							all	1
12	29354	Nut - Seat retainer shut-off valve							all	1
13	29367	Handle - Shut-off valve							all	1
14	AN960C416L	Washer - Plain							all	1
15	AN364-428	Nut - Self-locking, thin							all	1
16	280014	Valve Assembly - Tail gear shut-off (See figure 125 for using assembly)							all	Ref
	29033-5L	Valve - Single poppet shut-off (Aircor)							all	1
		NOTE: Composed of items 2 through 11.								
17	279527	Lever - Tail bumper valve							all	1
18	HL762	Compensator - Tail gear (Hoof Products) (667404) (See figure 125 for using assembly)							all	Ref
19	HL219	Body							all	1
20	HL225	Cap - Inlet							all	1
21	HL234	Gasket							all	2
22	HL227	Piston							all	1
23	HL446	Ring - Packing							all	1
24	HL759	Spring							all	1
25	HL752	Seat - Cap and spring							all	1
26	HL229	Knob - Bleeder							all	1
27	HL236	Cap - Bleeder							all	1
28	HL220	Piston - Bleeder							all	1
29	HL27	Packing - "O" Ring							all	1
30	HL214	Plug - Bleeder							all	1
31	HL232	Gasket - Bleeder							all	1
32	HL233	Spring - Bleeder							all	1
	HL231	Valve - Needle piston							all	1
	HL240	Nameplate - Decal							all	1
	HL593	Valve Assembly - Hydraulic shut-off (LH Inboard and outboard nacelles) (See figure 125 for using assembly)							all	Ref
	266879-2	Valve Assembly - Hydraulic shut-off (RH Inboard and outboard nacelles) (See figure 126 for using assembly)							all	Ref
33	10-1845-75	Valve - Cylinder plug shut-off (Parker Appliance) (667229) (Alternate - Collins No. CE8-218)							all	1
34	10-1845-84	Gasket							all	1
35	10-1845-79-1	Ring - Bearing							all	2
36	10-1845-83T14	Pin - Stop							all	1
37	10-1845-78D1	Plug							all	1
38	10-1845-80	Disc							all	2
39	4-2646-75	Spring							all	4
40	10-1845-76D13	Body							all	1
41	201-317-9-210	Screw							all	1
42	10-1845-82-1	Packing							all	2
43	10-1845-81B1	Nut - Packing							all	1
44	201-330-7X295	Screw							all	4
45	10-1845-77D13	Cap							all	1
46	386-1-7A	Pin - Taper							all	1
47	258441	Lever - Shut-off valve (Used on 266879-2)							all	1
48	267960	Lever - Shut-off valve (Used on 266879-3)							all	1

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GROUP . . . Hydraulic System Units

Detail Unit . . . Accumulators

Constellation

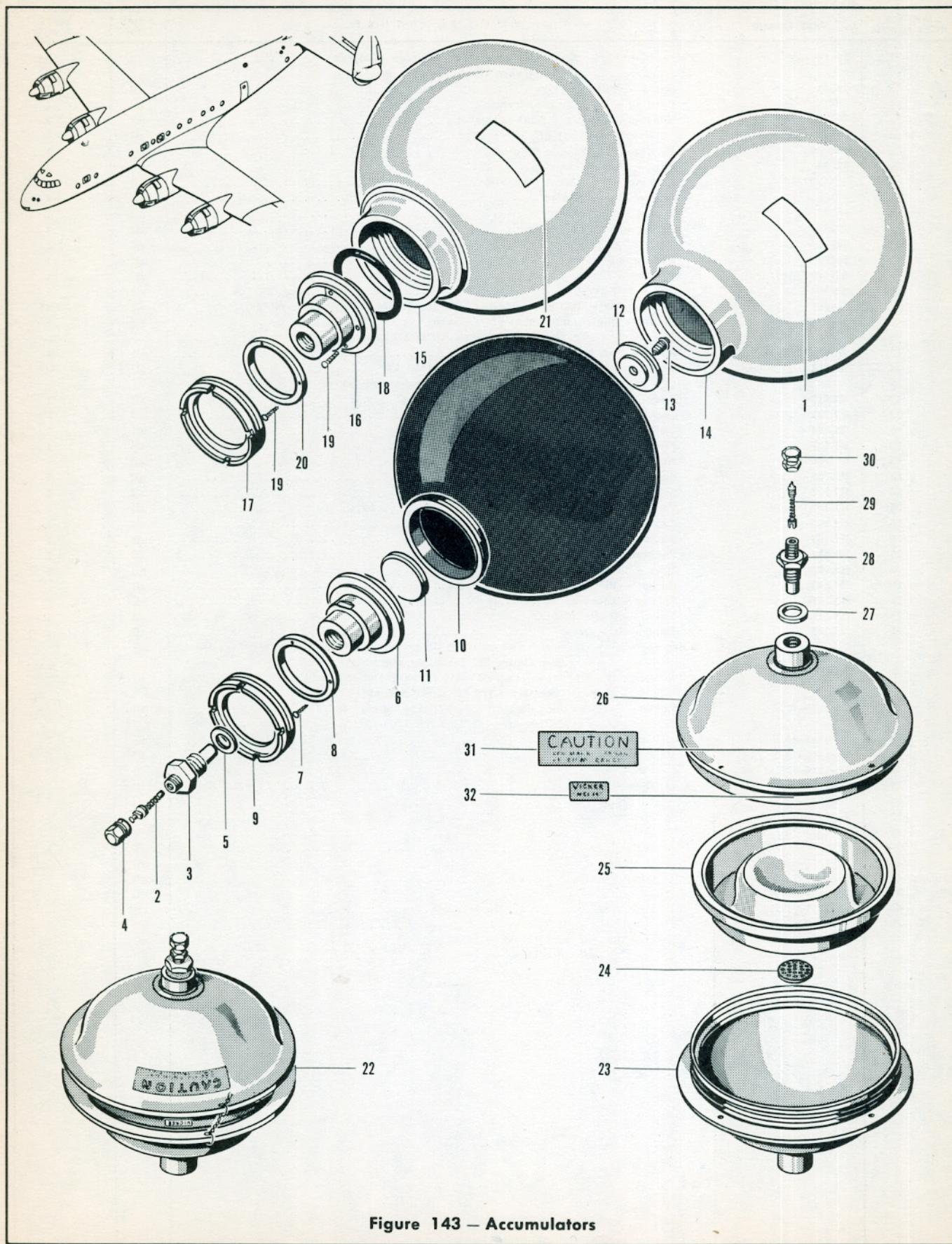


Figure 143 — Accumulators

GROUP Hydraulic System Units

Detail Unit . . . Accumulators

Constellation

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
	401531	Accumulator Assembly - 7½ Size (Bendix) (667382)							all	Ref
		(See figure 125 for using assembly)								
143 - 1	408256	Decal							all	1
	452796	Valve Assembly - Air pressure							all	1
2	AN809-1	Core - High pressure air valve							all	1
3	AN812-1	Body - High pressure air valve							all	1
4	AN813-1	Cap - High pressure air valve							all	1
5	AN901-5A	Gasket - Metal tube connection seal							all	1
6	403138	Cap - Accumulator							all	1
7	AN535-00-2	Screw - Round head drive							all	4
8	403032	Nameplate							all	1
9	402994	Retainer							all	1
	402986	Bladder Assembly							all	1
10	402856	Bladder							all	1
11	402987	Washer							all	1
12	402988	Stop							all	1
13	61	Screw (Shakeproof)							all	1
14	403129-3	Shell Assembly							all	1
	405090	Reservoir Assembly - 7½ Size (Bendix) (667460)							all	Ref
		(See figure 125 for using assembly)								
15	405218	Shell							all	1
16	405219	Cap							all	1
17	402994	Retainer							all	1
18	AN6230-11	Gasket - "O" Ring hydraulic							all	1
19	AN535-00-2	Screw - Round head drive							all	3
20	405220	Nameplate							all	1
21	541-2	Decal							all	1
22	AA14002A	Accumulator - 5" Hydraulic brake (Vickers 667125)							all	Ref
		(See figure 125 for using assembly)							all	1
23	3X59358	Chamber - 5" Hydraulic accumulator oil								
24	58557	Screen - 5" Hydraulic accumulator							all	1
25	59359	Diaphragm - 5" Hydraulic accumulator							all	1
26	3X59360	Chamber - 5" Hydraulic accumulator air							all	1
27	AN901-5C	Gasket - Metal tube connection seal (Vickers No. 75352)							all	1
28	AN812-1	Body - High pressure air valve (Vickers No. 75486)							all	1
29	AN809-1	Core - High pressure air valve (Vickers No. 60093)							all	1
30	AN813-1	Cap - High pressure air valve (Vickers No. 68751)							all	1
31	74686	Transfer - Caution							all	2
32	47188	Nameplate							all	1
	AN535-00-2	Screw - Round head drive (Vickers No. 46351)							all	2

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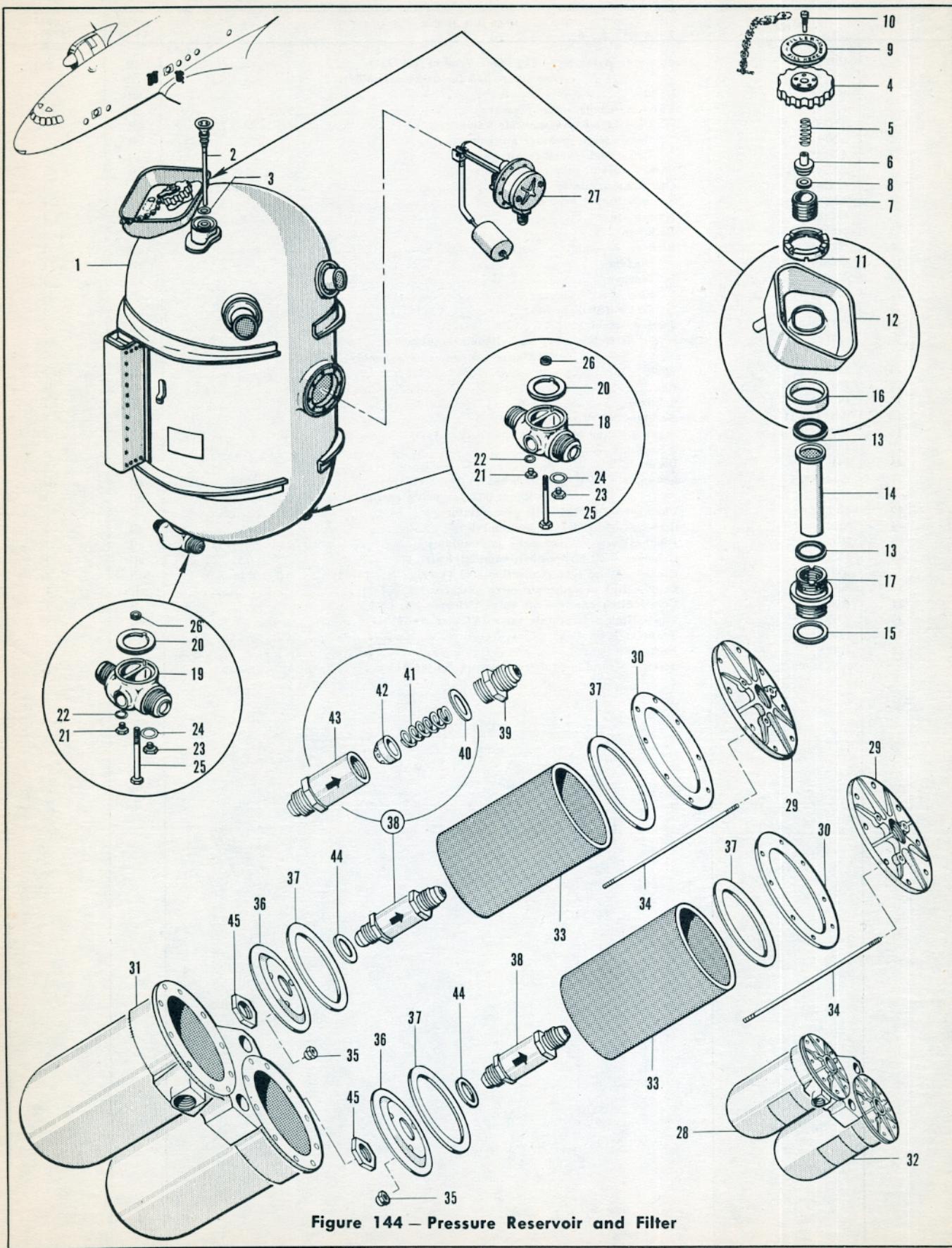


Figure 144 — Pressure Reservoir and Filter

GROUP . . . Hydraulic System Units

Detail Unit . . . Pressure Reservoir and Filter

Constellation

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
144 - 1	274836-500	Reservoir Assembly - Hydraulic pressure (See figures 125 and 126 for using assembly)							all	Ref
2	280874	Stick Assembly - Pressurized hydraulic reservoir dip							all	1
3	255291-3	Gasket - Hydraulic fluid reserve tank dip stick							all	1
	255290	Cap Assembly - Hydraulic fluid reserve tank filler							all	1
4	255289-3	Cap - Hydraulic fluid reserve tank							all	1
5	255293	Spring - Hydraulic fluid reserve tank filler cap							all	1
6	255292	Valve - Hydraulic fluid reserve tank filler cap							all	1
7	255282	Sleeve - Hydraulic fluid reserve tank filler cap							all	1
8	ANG6227-13	Packing - "O" Ring hydraulic							all	1
9	255312	Nameplate-Hydraulic fluid reserve tank filler cap							all	1
10	255271	Screw - Hydraulic fluid reserve tank filler cap							all	1
11	255295	Nut - Hydraulic fluid reserve tank drip pan							all	1
12	274845	Pan Assembly - Hydraulic fluid reservoir scupper							all	1
13	255291-2	Gasket - Hydraulic fluid reservoir							all	2
14	255261-2	Screen Assembly - Hydraulic fluid reserve tank							all	1
15	262464	Gasket - Hydraulic fluid reserve tank filler bushing							all	1
16	255296	Gasket - Hydraulic fluid reserve tank drip pan							all	1
17	255260	Filler - Hydraulic fluid reserve tank							all	1
18	255268-6	Fitting Assembly - Hydraulic fluid reserve tank outlet							all	1
19	255268-3	Fitting Assembly - Hydraulic fluid reserve tank outlet							all	1
20	255273	Gasket - Hydraulic fluid tank outlet							all	2
21	905-6	Plug - Hex drilled for locking							all	2
22	LS1805-6	Gasket - Aluminum - Asbestos							all	2
23	905-8	Plug - Hex drilled for locking							all	2
24	LS1805-8	Gasket - Aluminum - Asbestos							all	2
25	280995	Bolt - Hydraulic fluid reserve tank outlet							all	2
26	280994	Washer - Hydraulic fluid reserve tank outlet							all	2
27	EA15A-628039A	Transmitter - Hydraulic tank unit (628039) (Liquidometer) (See figure 125 for using assembly)							all	Ref
28	278994	Filter Hydraulic (See figures 165 and 164 for using assembly)							all	Ref
29	279001	Cover - Hydraulic filter							all	2
30	278996	Gasket - Hydraulic filter cap							a	2
	AN6230-39	Gasket - Hydraulic filter cap							b	2
31	278995	Support Assembly - Hydraulic filter							all	1
32	283263	Nameplate - Main hydraulic filter							all	2
33	AN6236-3	Element - Filter - Hydraulic replaceable micronic line type (Purolator No. 30316)							all	2
34	278999	Stud - Hydraulic filter							all	6
35	AN365-428	Nut - Plate							all	6
36	278998	Plate - Hydraulic filter end							all	2
37	AN6238-1	Gasket - Hydraulic replaceable reservoir type filter (Purolator No. 30102)							all	4
38	278946	Valve Assembly - Hydraulic filter relief							f	2
	W520-12D	Wave Assembly - Hydraulic filter relief (W. R. Whittaker Co.) (667468)							g	2
39	278947	Cap - Hydraulic filter relief valve							f	1
40	284507	Washer - Filter relief valve							f	1
41	278949	Spring - Hydraulic filter relief valve							f	1
42	278948	Piston - Hydraulic filter relief valve							f	1
43	278950	Body - Male							g	1
	W520-12D2	Body - Female							g	1
	W520-12D3	Poppet							g	1
	W520-12D4	Tube							g	1
	W520-12D5	Ring							g	1
	W520-12D6	Spring							g	1
	W520-12D7	Washer							g	1
	W520-12D8	Gasket (Parker Appliance Co.)							all	2
44	3175-2-12D	Nut - Flared tube bulkhead and universal fitting							all	1
45	AN924-12D								all	2

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GROUP Hydraulic System Units

Detail Unit . . . Pump—Emergency Hand

Constellation

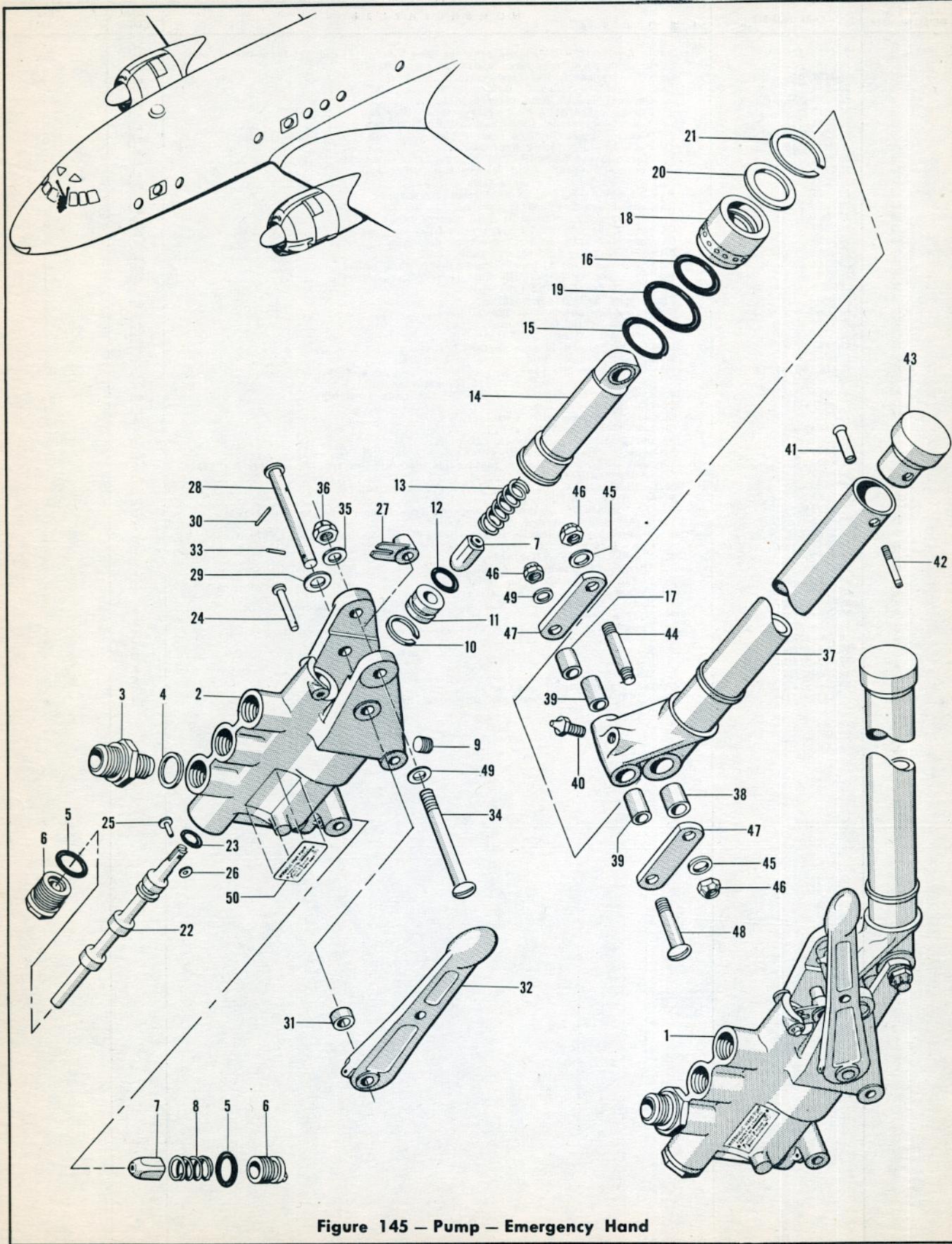


Figure 145 — Pump — Emergency Hand

GROUP . . . Hydraulic System Units

Detail Unit . . . Pump—Emergency Hand

Constellation

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
145 - 1	402695-0-1	Pump - Hydraulic hand (Bendix Aviation) (667253)							all	Ref
2	404907	(See figure 128 for using assembly)							all	1
3	404928	Body Assembly - Hydraulic hand pump							all	1
4	AN901-6C	Union							all	1
5	AN6227-10	Gasket - Metal tube connection seal							all	2
6	404718	Packing - "O" Ring hydraulic							all	2
7	404903	Plug - Hydraulic hand pump							all	2
8	404902	Poppet - Hydraulic hand pump							all	1
9	401036	Spring - Check valve hydraulic hand pump							all	1
10	402715	Plug - Hydraulic hand pump							all	1
11	402713	Ring - Hydraulic hand pump snap							all	1
12	AN6227-11	Seat - Hydraulic hand pump valve							all	1
13	402716	Packing - "O" Ring hydraulic							all	1
14	405290	Spring - Hydraulic pump hand pump check valve							all	1
	BS68X	Piston Assembly - Hydraulic hand pump							all	1
15	AN6227-19	Bearing - Needle (Torrington) (Bendix Aviation No. 404908)							all	1
16	AN6227-17	Packing - "O" Ring hydraulic							all	1
17	403110	Packing - "O" Ring hydraulic							all	1
18	405289	Race - Piston Assembly bearing							all	1
19	AN6227-26	Sleeve - Hydraulic hand pump piston							all	1
20	403291	Packing - "O" Ring hydraulic							all	1
21	402721	Washer - Hydraulic hand pump sleeve							all	1
22	404599	Ring - Hydraulic hand pump sleeve, outer snap							all	1
23	AN6227-8	Piston - Hydraulic hand pump valve							all	1
24	AN392-33	Packing - "O" Ring hydraulic							all	1
25	AN392-11	Pin - Flat head $\frac{3}{16}$							all	1
26	AN960-4	Pin - Flat head $\frac{1}{8}$							all	1
27	404193	Washer - Plain							all	1
28	404064	Lever - Hydraulic hand pump valve (Alternate 404196)							all	1
29	401291	Shaft - Hydraulic hand pump							all	1
30	401034-5	Washer (Laminated) (Hydraulic hand pump)							all	1
31	401070	Pin - Hydraulic hand pump lever							all	1
32	404159	Spacer - Hydraulic hand pump lever							all	1
33	401034-6	Handle - Hydraulic hand pump valve							all	1
34	BS0103	Pin - Hydraulic hand pump							all	1
35	AN960-416	Screw - Hydraulic hand pump							all	1
36	AN310-4	Washer - Plain							all	1
	403233	Nut - Aircraft castle							all	1
	403233-2	Handle Assembly - Hydraulic hand pump							all	1
38	400550	Handle							all	1
39	400537	Bushing - Hydraulic hand pump							all	2
40	1641	Bushing - Hydraulic hand pump							all	1
41	404926	Fitting (Alemite) (Bendix Aviation No. 404925)							all	1
42	404927	Nut - Long barrel							all	1
43	403234	Screw							all	1
44	405020	Knob - Hydraulic hand pump handle							all	1
45	BS3125	Stud - Hydraulic hand pump							all	1
46	AN364-428	Washer - Hydraulic hand pump							all	2
47	404900	Nut - Self-locking thin							all	3
48	AN24-19A	Link - Hydraulic hand pump							all	2
49	BS0102	Bolt - Clevis $\frac{1}{4}$ -28							all	1
50	405532	Washer							all	2
		Nameplate							all	1

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GROUP . . . Hydraulic System Units

Detail Unit . . . Pumps—Electric and Emergency Filler

Constellation

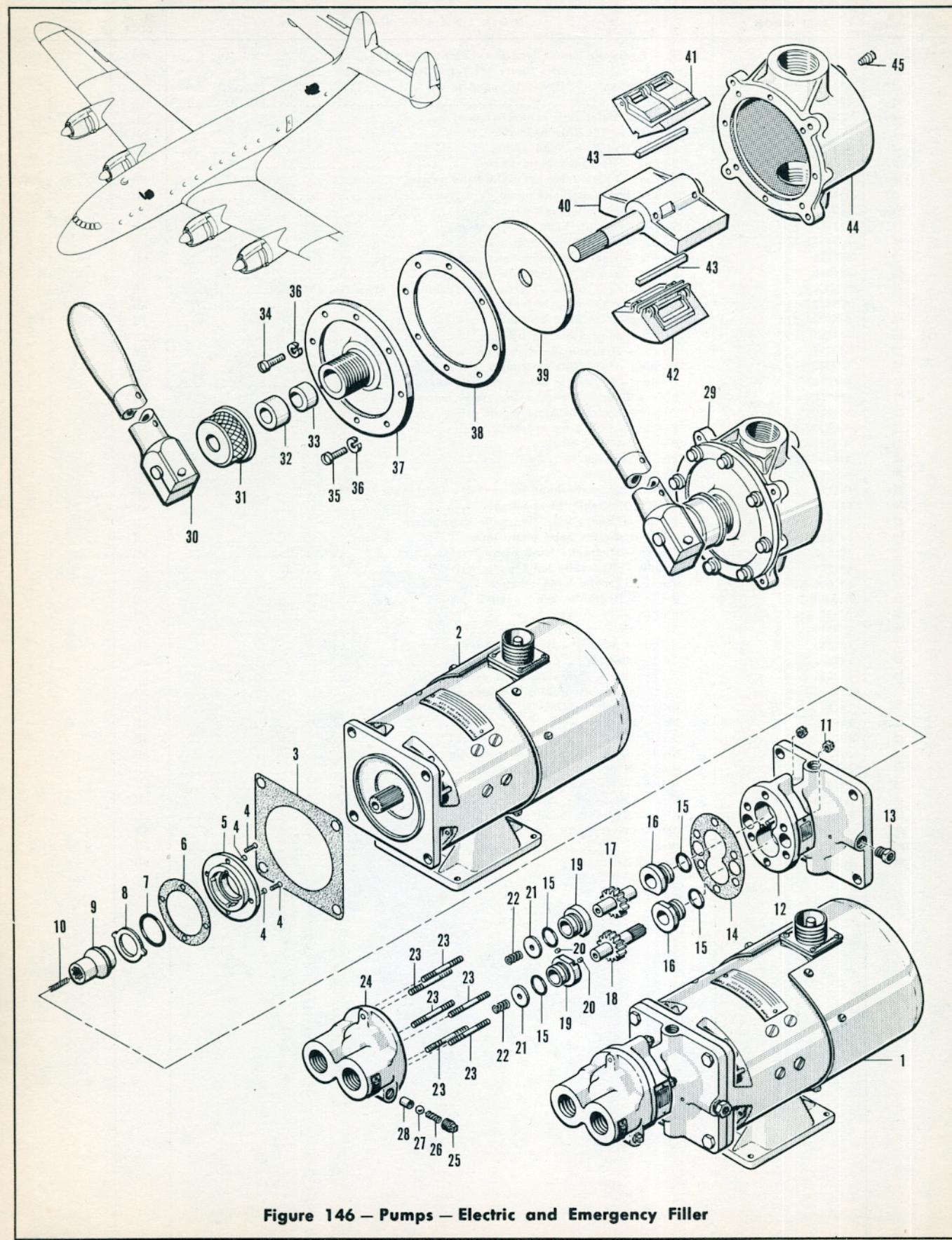


Figure 146 — Pumps — Electric and Emergency Filler

GROUP . . . Hydraulic System Units

Detail Unit . . . Pumps—Electric and Emergency Filler

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	U N I T S P E R A S S Y.
			1	2	3	4	5	6		
146 - 1	1E620F1	Pump Assembly— Electric driven hydraulic (Pesco) (667414) (See figure 125 for using assembly)							all	Ref
2	22002-020-01	Motor — Electric							all	1
	EE439-1	Brush — Motor							all	4
	EE444	Armature Assembly							all	1
	202LD	Bearing + Commutator cover ball							all	1
	203LLS	Bearing + Pulley cover ball							all	1
	AN3102-20-2P	Receptacles — Electric connector box mounting type RB							all	1
	1P737A1	Pump Assembly — High pressure gear							all	1
3	AN4044-1	Gasket							all	1
4	14-400-15E	Screw							all	4
5	395-5	Retainer							all	1
6	382-16	Gasket							all	1
7	AN6227-19	Packing — "O" Ring hydraulic							all	1
8	281-16	Disc							all	1
9	398-8	Coupling Assembly							all	1
10	R600-111	Spring							all	1
11	AN330-4	Nut — Castle							all	6
	AN960-416L	Washer — Plain							all	6
12	398-5	Body							all	1
13	R400-71	Plug — Vent							all	1
14	349-27	Gasket							all	1
15	349-14	Ring — "O" Seal bearing							all	4
16	349-24A	Bearing — Body							all	2
17	349-23A	Gear — Drive							all	1
18	349-22A	Gear — Drive							all	1
19	349-24E	Bearing — Cover							all	2
20	466-12A	Pin							all	2
21	320-17	Spacer							all	2
22	320-18	Spring							all	2
23	203-12	Stud							all	6
24	349-10B	Cover							all	1
25	252-6A	Plug — Valve relief							all	1
26	252-7B	Spring — Valve relief							all	1
27	R400B21	Ball — Valve relief							all	1
28	252-5	Seat — Valve relief							all	1
29	24451	Pump Assembly — Emergency filler type D2 (Aero Supply) (633250) (See figure 128 for using assembly)							all	Ref
30	32920-1	Handle							all	1
31	564	Nut — Packing							all	1
32	566	Gland — Packing							all	1
33	565	Packing							all	1
34	AN500-10-10	Screw — Fillister head coarse thread							all	4
35	AN500A10-10	Screw — Fillister head coarse thread							all	4
36	AN935-10	Washer — Medium spring lock							all	8
37	562-2	Cover Assembly							all	1
38	5612	Gasket — Head							all	1
39	5611	Plate — Bearing							all	1
40	567-1	Rotor Assembly							all	1
41	570	Valve Assembly — Outlet							all	1
42	574	Valve Assembly — Inlet							all	1
43	5731	Strip — Packing							all	2
44	561	Housing — Packing							all	1
45	895-70	Plug							all	1

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LOCKHEED AIRCRAFT CORPORATION

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GROUP Hydraulic System Units

Detail Unit . . . Valves—Relief

Constellation

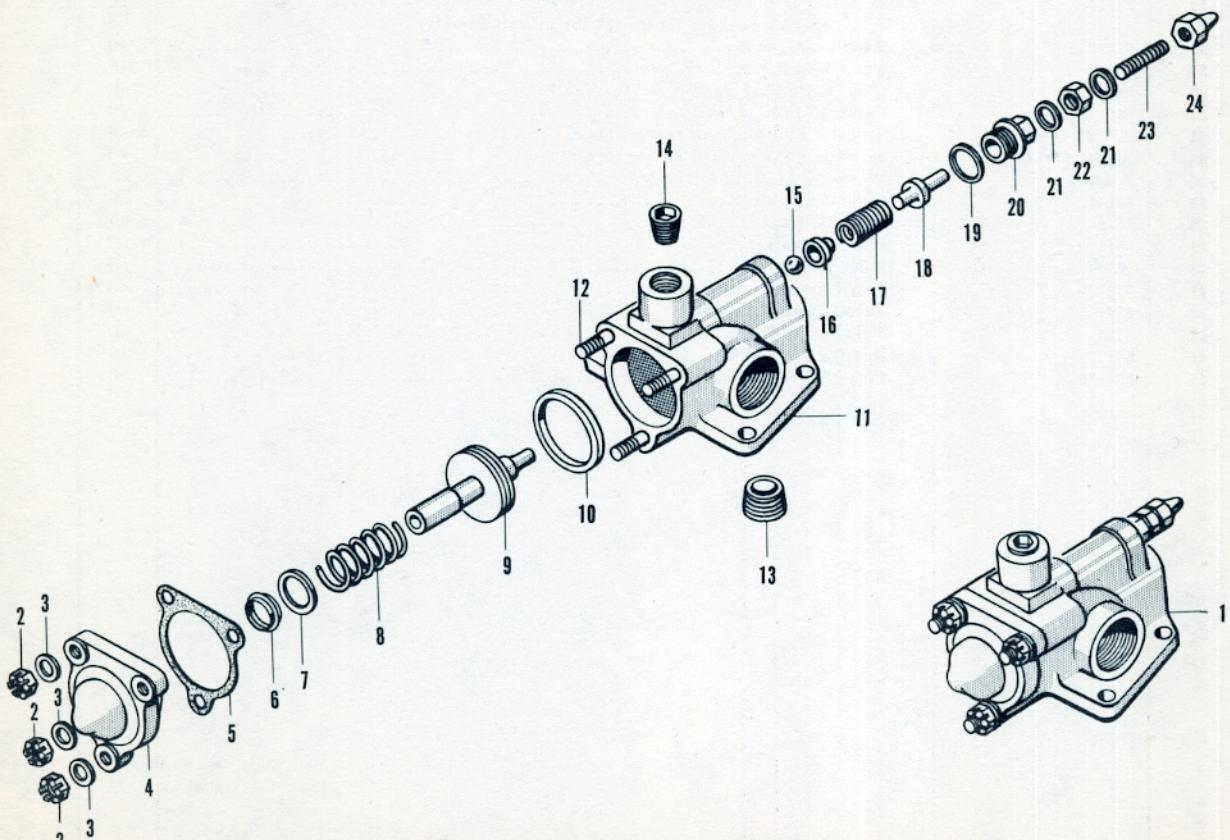
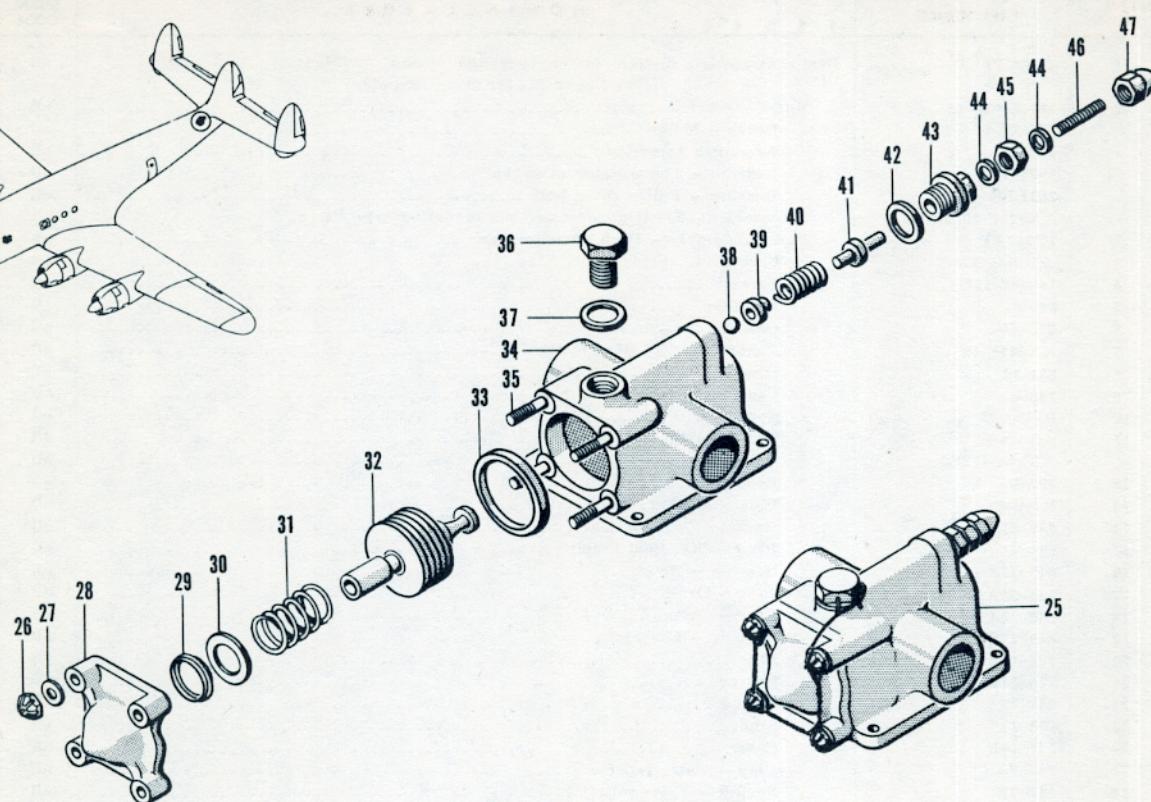
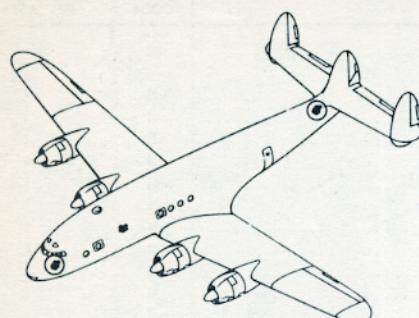


Figure 147 — Valves — Relief

GROUP . . . Hydraulic System Units

Detail Unit . . . Valves—Relief

FIGURE & INDEX NUMBER	PART NUMBER	1	2	3	4	5	6	N O M E N C L A T U R E		SERIAL CODE	UNITS PER ASSY.
147 - 1	AA11501		Valve - Hydraulic relief (Vickers) (667169) (See figure 125 for using assembly)					all		Ref	
	AA11507		Valve - Hydraulic relief (Vickers) (667415) (See figure 129 for using assembly)					all		Ref	
2	AN310-4		Nut + Aircraft castle					all		3	
3	AN960-416L		Washer - Plain					all		3	
4	59701		Cover - Relief valve					all		1	
5	61391		Gasket - Cover					all		1	
6	50790		Seal + Piston					all		1	
7	50791		Washer - Piston					all		1	
8	58299		Spring - Piston (Used on AA11501)					all		1	
	85098		Spring - Piston (Used on AA11507)					all		1	
9	43688		Piston					all		1	
10	43697		Ring - Cover sealing					all		1	
11	72744		Sub-assembly - Body, seats, studs, and plugs					all		1	
12	59159		Stud - Body					all		3	
13	64014		Plug - Body $\frac{3}{16}$ " pipe					all		1	
14	37829		Plug - Body $\frac{1}{4}$ " pipe					all		1	
15	1650		Ball - Control valve (Used on AA11501)					all		1	
	1651		Ball - Control valve (Used on AA11507)					all		1	
16	54939		Retainer - Control valve spring					all		1	
17	54982		Spring - Control valve (Used on AA11501)					all		1	
	17081		Spring - Control valve (Used on AA11507)					all		1	
18	51667		Seat - Control valve spring					all		1	
19	42548		Gasket - Adjusting screw retainer					all		1	
20	46234		Retainer - Adjusting screw					all		1	
21	48946		Gasket - Adjusting screw					all		2	
22	49264		Nut - Adjusting screw					all		1	
23	51656		Screw - Adjusting screw					all		1	
24	46246		Nut - Adjusting screw - Acorn					all		1	
25	AA11600		Valve - Hydraulic relief (Vickers Inc.) (667075) (See figures 125 and 126 for using assembly)					all		Ref	
26	AN310-5		Nut - Aircraft castle					all		4	
27	49110		Washer					all		4	
28	53002		Cover - Relief valve					all		1	
29	53004		Seal - Piston					all		1	
30	53005		Washer - Piston seal					all		1	
31	52983		Spring - Piston					all		1	
32	52999		Piston					all		1	
33	53003		Ring - Cover sealing					all		1	
34	74851		Sub-assembly - Body, seats, studs and plugs					all		1	
35	53001		Stud - Body $\frac{7}{16}$ x 1 $\frac{1}{8}$					all		4	
36	50045		Plug - Body $\frac{7}{16}$ x 20 Hexagon cap					all		1	
37	61105		Washer - $\frac{7}{16}$ Body plug					all		1	
38	14371		Ball - Control valve					all		1	
39	54939		Retainer - Control valve spring					all		1	
40	54982		Spring - Control valve					all		1	
41	51667		Seat - Control valve spring					all		1	
42	42548		Gasket - Adjusting screw retainer					all		1	
43	46234		Retainer - Adjustment screw					all		1	
44	48946		Gasket - Adjustment screw					all		2	
45	49264		Nut + Adjusting screw $\frac{1}{4}$ " x 28 hexagon					all		1	
46	51656		Screw - Adjusting $\frac{1}{4}$ ", 28 x $\frac{3}{4}$					all		1	
47	46246		Nut - Adjusting screw, acorn					all		1	

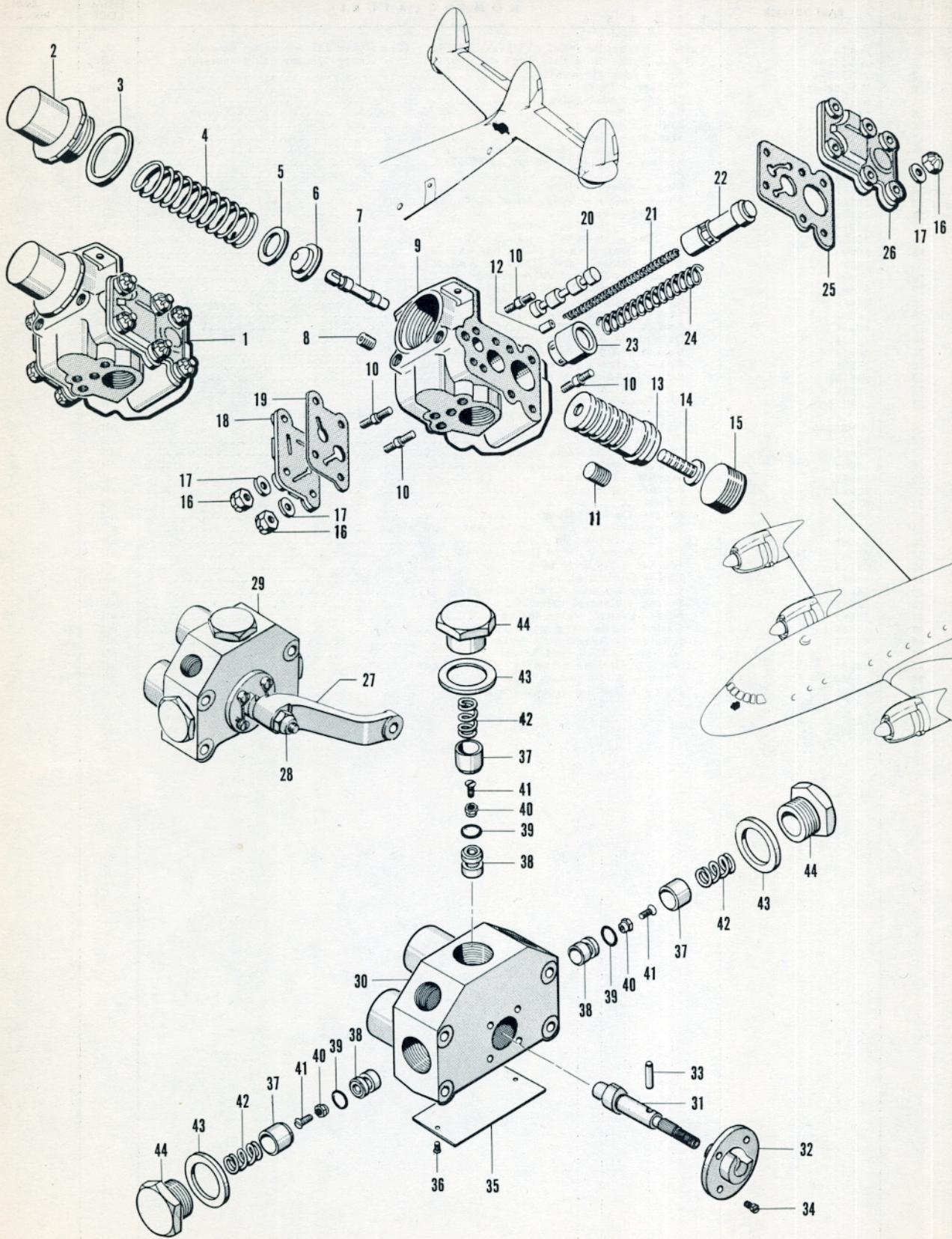


Figure 148 — Valves — Brake Selector and Unloading

GROUP . . . Hydraulic System Units

Detail Unit . . . Valves—Brake Selector and Unloading

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6	N O M E N C L A T U R E	SERIAL CODE	UNITS PER ASSY.
148 - 1	AA14522		Valve - Hydraulic unloading (Vickers) (667421) (See figure 125 for using assembly)	all	Ref
2	46142		Housing - Pilot spool spring	all	1
3	46125		Gasket - Spring housing	all	1
4	67043		Spring - Pilot spool	all	1
5	54950		Washer - Spring guide	all	1
6	46130		Guide - Pilot spool spring	all	1
7	63574		Spool - Pilot	all	1
	72855		Sub-assembly - Body, sleeve, seat plunger, studs and plugs	all	1
8	41323		Plug - 332-28 Pipe	all	7
9	59375		Body - Unloading valve	all	1
10	46698		Stud - Body	all	10
11	38131		Plug - 1/4" Pipe	all	1
12	49300		Plug - Restriction	all	2
13	49554		Sleeve - Pilot spool	all	1
14	49556		Plunger - Pilot spool	all	1
15	39463		Plug - 5/8" Pipe	all	1
16	AN310-4		Nut - Aircraft castle (Vickers No. 34567)	all	10
17	AN960-416L		Washer - Plain (Vickers No. 49072)	all	10
18	49483		Cover - Body LH	all	1
19	46138		Gasket - Cover LH	all	1
20	46126		Spool - Directional	all	1
21	50066		Spring - By-pass spool	all	1
22	49709		Spool - By-pass	all	1
23	38778		Valve - Check	all	1
24	38792		Spring - Check valve	all	1
25	46137		Gasket - Cover RH	all	1
26	46135		Cover - Body RH	all	1
	271745		Valve Assembly - Brake selector (See figure 126 for using assembly)	all	Ref
27	271757		Lever - Brake selector valve	all	1
28	AN365-1032		Nut - Self locking	all	1
29	403172		Valve Assembly - Brake selector (662037) (Bendix Aviation)	all	1
30	403242		Body - Brake system selector valve	all	1
31	403238		Cam - Brake system selector valve	all	1
32	403240		Bearing - Brake system selector valve	all	1
33	403111		Pin - Brake system selector valve	all	1
34	AN500A6-4		Screw - Fillister head coarse thread	all	4
35	403243		Nameplate - Selector valve	all	1
36	AN535-00-2		Screw - Round head drive	all	2
37	400636		Valve - Brake system selector	all	3
	401122		Piston Assembly - Brake system selector valve	all	3
38	404253		Piston - 1/4 TS four way valve	all	1
39	AN6227-4		Packing - "O" ring hydraulic	all	1
40	401193		Nut - Selector valve	all	3
41	402579		Screw - Set	all	3
42	406371		Spring - Selector valve	all	3
43	404609		Gasket - Selector valve	all	3
44	404422		Cap - Selector valve	all	3

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GROUP Hydraulic System Units

Detail Unit Valves—Restriction Control and Booster Return Bypass

Constellation

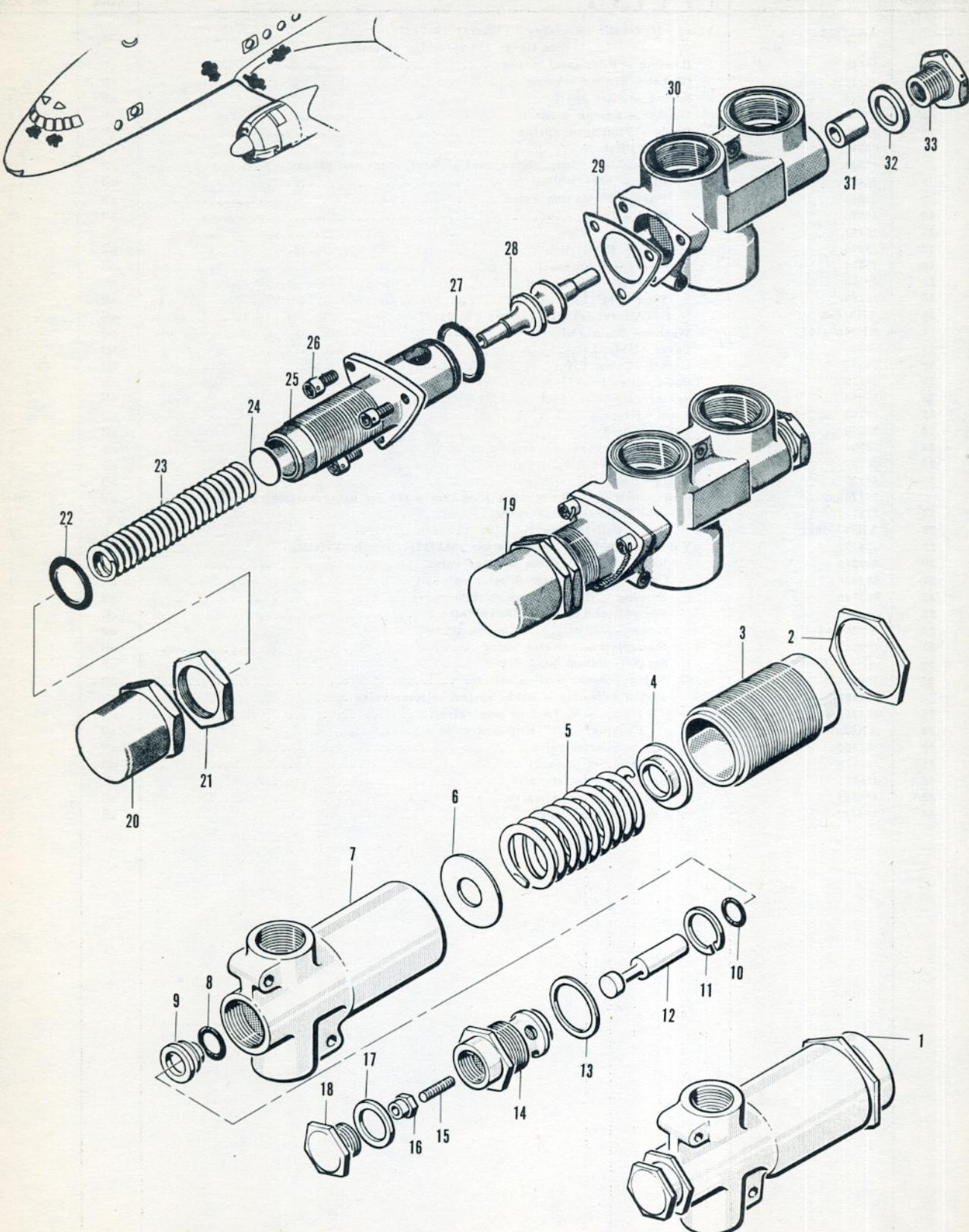


Figure 149 — Valves — Restriction Control and Booster Return Bypass

GROUP . . . Hydraulic System Units

Detail Unit . . . Valves—Restriction Control and Booster Return By-pass

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
149 - 1	1V459	Valve - Restriction control (Pesco) (667065) (See figure 126 for using assembly)							dd	Ref
	1V459 (Lot 1)	Valve - Restriction control (Pesco) (667519) (See figure 126 for using assembly)							gg	Ref
2	459-5	Nut + Restriction control valve lock							all	1
3	459-2	Rétaîner - Restriction control valve							all	1
4	459-6	Guide - Restriction control valve							all	1
5	459-8	Spring - Restriction control valve							all	1
6	459-15	Guide - Restriction control valve							all	1
7	459-1	Body - Restriction control valve							dd	1
	459-1B	Body - Restriction control valve							gg	1
8	AN6227-14	Packing - "O" Ring hydraulic							all	1
9	459-19	Adapter - Restriction control valve							dd	1
10	AN6227-11	Packing - "O" Ring hydraulic							dd	1
	AN6227-8	Packing - "O" Ring hydraulic							gg	1
11	459-20	Ring - Restriction control valve snap							dd	1
12	459-3	Valve - Restriction control							dd	1
	459-3A	Valve - Restriction control							gg	1
13	429-21A	Gasket - Restriction control valve							all	1
14	459-4	Seat - Restriction control valve							dd	1
	459-4A	Seat - Restriction control valve							gg	1
15	459-10	Screw - Restriction control valve							dd	1
	AN565A4-14	Screw - Restriction control valve							gg	1
16	459-9	Nut + Restriction control valve							all	1
17	459-16	Gasket - Restriction control valve							all	1
18	459-7	Cover - Restriction control valve							all	1
	172-32	Nameplate - Restriction control valve							dd	1
	172-32BA	Nameplate - Restriction control valve							gg	1
19	D32-14-001	Valve - Booster return by-pass (Interstate) (667063) (See figures 125 and 126 for using assembly)							all	Ref
20	A32-14-004	Nut - Cap booster return by-pass valve							all	1
21	A32-14-010	Locknut - Booster return by-pass valve							all	1
22	AN6227-21	Seal - Booster return by-pass valve							all	1
23	A32-14-008	Spring - Booster return by-pass valve							all	1
24	A32-14-011	Washer - Booster return by-pass valve							all	1
25	D32-14-003	Housing - Booster return by-pass valve							all	1
26	A32-14-013	Screw - Cap booster return by-pass valve							all	3
27	AN6227-18	Seal - Booster return by-pass valve							all	1
28	A32-14-006	Popper - Booster return by-pass valve							all	1
29	A32-14-012	Gasket - Booster return by-pass valve							all	1
30	G32-14-002	Body Assembly - Booster return by-pass valve							all	1
31	A32-14-007	Piston - Booster return by-pass valve							all	1
32	AN902-8	Gasket - Booster return by-pass valve							all	1
33	A32-14-009	Bushing - Booster return by-pass valve							all	1
	A32-14-015	Bushing - Booster return by-pass valve							all	1

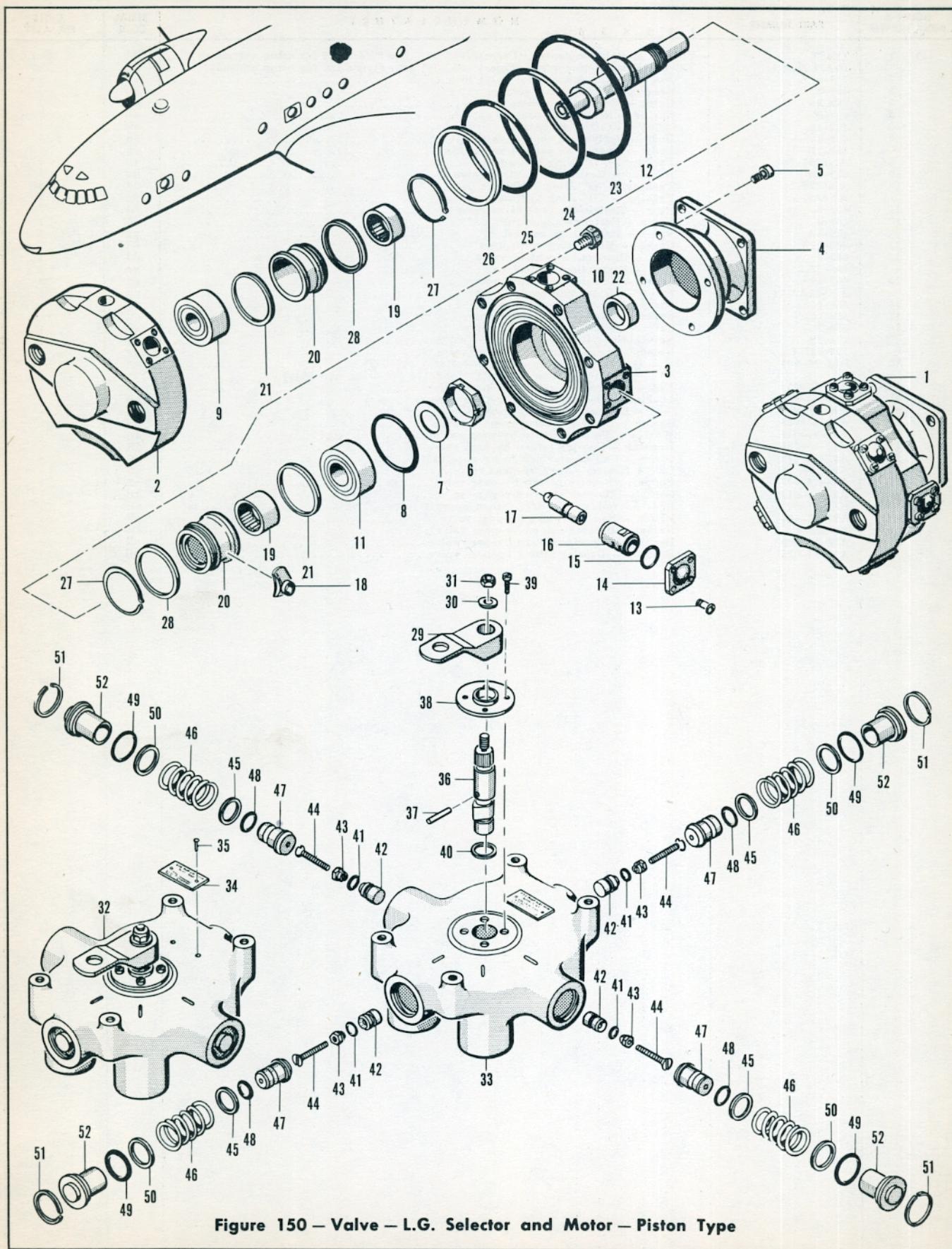


Figure 150 — Valve — L.G. Selector and Motor — Piston Type

GROUP . . . Hydraulic System Units

Constellation

Detail Unit . . . Valve—Landing Gear Selector and Motor—Piston Type

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
150 - 1	EB83-1		Motor - Piston type hydraulic (8 cylinder) (667444) (R. A. Hawks)						all	Ref
2	EB8302		(See figure 179 for using assembly)						all	1
3	EB8301		Housing - Rear bank						all	1
4	EB8303		Housing - Front bank						all	1
5	AN502-10-8		Plate - Mounting						all	4
6	N02		Screw - Drilled; fillister head machine (Fine thread)						all	1
7	W02		Nut - Bearing lock						all	1
8	AN6227-25		Washer - Bearing lock						all	1
9	5200		Packing - "O" Ring hydraulic						all	1
10	AN74-11		Bearing - Ball						all	1
11	5202		Bolt - Aircraft drilled head $\frac{3}{4}$						all	8
12	EB8305		Bearing - Ball						all	1
13	AN503-8-6		Crankshaft						all	1
14	EB8304		Screw - Drilled; fillister head machine coarse thread						all	32
15	AN6227-8		Cap - Cylinder						all	8
16	EB8310		Packing - "O" Ring hydraulic						all	8
17	EB8312		Liner						all	4
18	EB8313		Piston						all	8
19	GM48X		Shoe						all	8
EB8317			Bearing - Roller (Torrington)						all	2
20	EB8306		Bearing Ring and Retainer Ring Assembly						all	2
21	EB8307		Ring - Bearing						all	1
22	437-9-28		Ring - Retainer						all	1
Seal (Bennett)			Seal (Bennett)						all	1
23	AN6230-15		Gasket - "O" Ring hydraulic						all	1
24	AN6230-11		Gasket - "O" Ring hydraulic						all	1
25	AN6230-6		Gasket - "O" Ring hydraulic						all	1
26	EB8316		Ring - Locating						all	1
27	NAS51-125		Ring - Truarc snap						all	2
28	EB8308		Ring - Slip						all	2
272048			Valve - Landing gear selector (See figures 126 and 127 for using assembly)						all	Ref
29	272049-2		Lever - Landing gear valve controls						all	1
30	LS881-6		Washer - Alclad plain						all	1
31	AN365-1032		Nut						all	1
32	403875-0-1		Valve Assembly - $\frac{3}{4}$ Tube size hydraulic four way (Bendix Aviation) (667276)						all	1
33	403887		Body - $\frac{3}{4}$ Tube size hydraulic four way valve						all	1
34	405114		Nameplate - Hydraulic four way valve						all	1
35	AN535-00-2		Screw - Round head drive						all	2
36	404189		Cam - $\frac{3}{4}$ Tube size four way valve						all	1
37	404243		Pin - $\frac{3}{4}$ Tube size four way valve						all	1
38	404329		Bearing - $\frac{3}{4}$ Tube size four way valve						all	1
39	AN500A8-6		Screw - Fillister head coarse thread						all	4
40	403953		Spacer - $\frac{3}{4}$ Tube size four way valve						all	1
41	AN6227-4		Packing - "O" Ring hydraulic						all	4
42	404331		Piston - $\frac{3}{4}$ Tube size four way valve						all	4
43	401175		Nut - $\frac{3}{8}$ Tube size four way valve						all	4
44	AN505-6-16		Screw - 82° Flat head machine (Fine thread)						all	4
45	403738		Washer - $\frac{3}{4}$ Tube size four way valve						all	4
46	403735		Spring - $\frac{3}{4}$ Tube size four way valve						all	4
47	403733		Poppet - $\frac{3}{4}$ Tube size four way valve						all	4
48	AN6227-8		Packing - "O" Ring hydraulic						all	4
49	AN6227-13		Packing - "O" Ring hydraulic						all	4
50	403948		Retainer - $\frac{3}{4}$ Tube size four way valve						all	4
51	404349		Ring - $\frac{3}{4}$ Tube size four way valve snap						all	4
52	403955		Guide - $\frac{3}{4}$ Tube size hydraulic four way valve						all	4

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GROUP . . . Main Landing Gear
Detail Unit . . . Main Landing Gear Index

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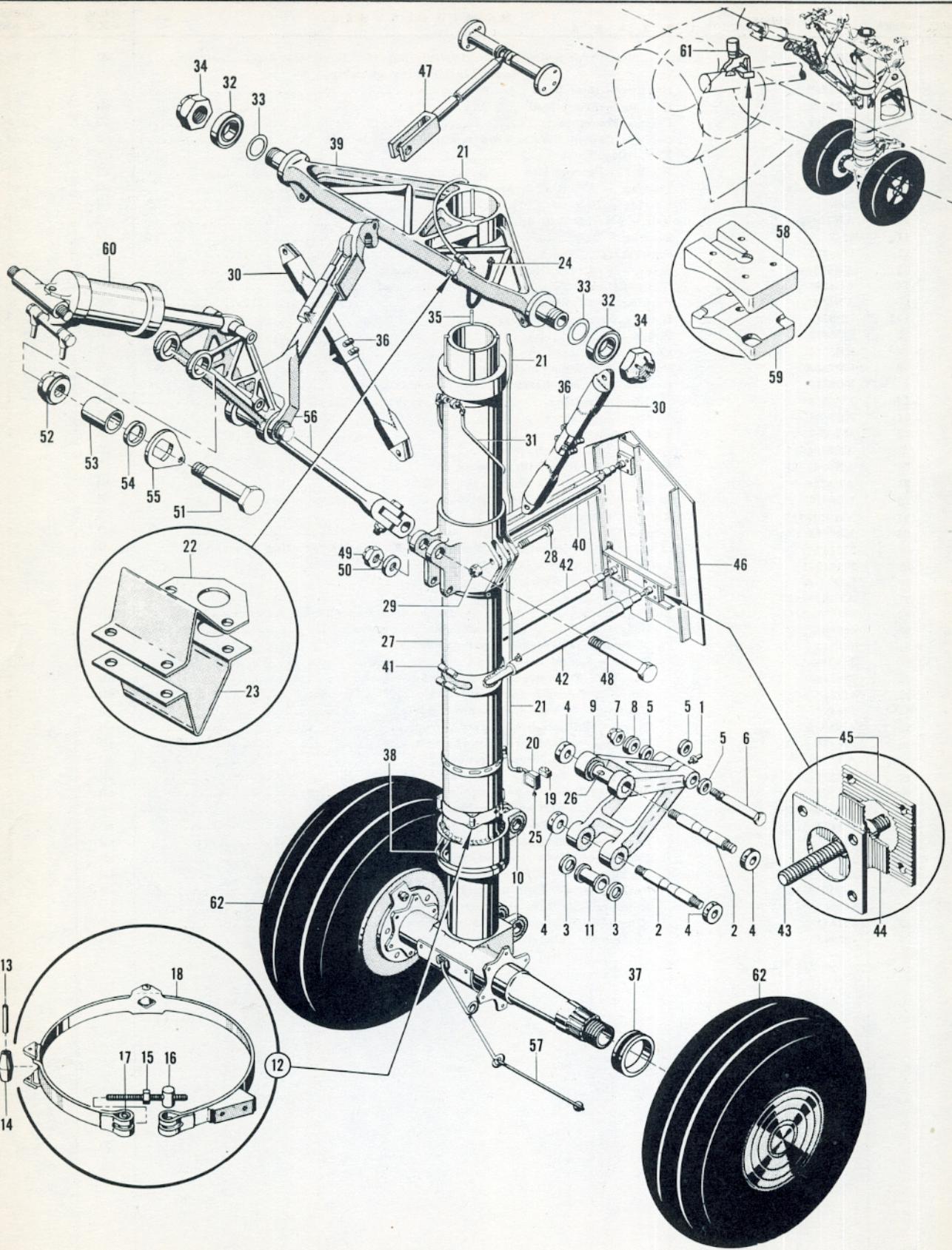


Figure 151 — Main Landing Gear Index

GROUP . . . Main Landing Gear

Detail Unit . . . Main Landing Gear Index

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6	N O M E N C L A T U R E	SERIAL CODE	U N I T S
					P E R A S S Y .
	283478-2		Main Landing Gear LH Installation (NP) (See figure 1 for using assembly)	all	Ref
	283478-3		Main Landing Gear RH Installation (NP)	all	Ref
	283335-2		Gear Assembly - LH	c	1
	283335-3		Gear Assembly - RH	c	1
	287718-2		Gear Assembly - LH	rr	1
	287718-3		Gear Assembly - RH	rr	1
	287718-500		Gear Assembly - LH	gg	1
	287718-501		Gear Assembly - RH	gg	1
	*LS575-3-211		Bolt	all	4
	*LS881-2		Washer	all	4
151 - 1	*NAS2-101		Lubricator	all	2
2	*294080		Shaft - Main landing gear arm attaching	all	2
3	*255248-2		Washer - Main landing gear torque arm attaching thrust	all	4
4	*294119		Nut - Main landing gear, torque arm attaching bolt	all	4
5	*294081		Washer - Main landing gear torque arm	all	3
6	*294079-2		Bolt - Main landing gear torque arm	all	1
7	*FSHT1414		Nut (Standard Pressed Steel)	all	1
8	*294082		Washer - Main landing gear torque arm	all	1
9	*293882		Arm - Main landing gear torque (Sold only as matched pair)	all	2
10	RBC74163		Bearing - Main landing gear torque	all	4
11	268368		Spacer - Main landing gear torque arm	all	2
12	282754		Strap Assembly - Main landing gear door mechanism strut	all	1
13	281778		Spacer - Main landing gear door actuating roller	all	2
	AN24-38		Bolt	all	2
	AN320-4		Nut	all	2
14	281070		Roller Assembly - Main landing gear door actuating	all	2
	281070-2		Roller - Main landing gear door	all	1
	281676		Bushing - Main landing gear actuating roller	all	2
15	NAS27-5		Turnbuckle	all	1
16	282752L		Trunion - Landing gear door mechanism strap	all	1
17	282752R		Trunion - Landing gear door mechanism strap	all	1
18	282754-2		Strap Assembly - Main landing gear door	all	1
	282753		Terminal - Main landing gear door mechanism strap	all	2
01-270834			Service Installation Kit - Main landing gear scissors switch	all	Ref
270834			Installation - Scissor switch LH main landing gear (NP)	all	1
19	YZR31		Switch - Single throw single pole (Micro) (612311) (Component of 01-270834)	all	1
20	LNN11 (Type H1N)		Housing - Switch (Micro-Switch Corp.) (619051-4) (Component of 01-270834)	all	1
21	271031-13		Conduit - Main landing gear scissor switch (Component of 01-270834)	all	1
	LS2551-26		Screw (Component of 01-270834)	all	1
	AN755-6		Clip (Component of 01-270834)	all	1
	LS606-32		Spacer (Component of 01-270834)	all	1
	AN365-832		Nut (Component of 01-270834)	all	1
	AN3062-6		Coupling (Component of 01-270834)	all	1
	AN3053-6		Ferrule (Component of 01-270834)	all	1
	AN3054-6		Nut (Component of 01-270834)	all	1
	271085		Support + Scissor switch	dd	1
22	292250-2		Clamp - Main landing gear wiring (Component of 01-270834)	gg	1
23	292250-3		Clamp - Main landing gear wiring (Component of 01-270834)	gg	1
	AN515-10R10		Screw (Component of 01-270834)	all	4
24	265366-58		Conduit Assembly - Main landing gear scissor switch (Component of 01-270834)	all	1
25	259405-2		Screw - Switch adjusting (Component of 01-270834)	all	1
	AN315-3R		Nut (Component of 01-270834)	all	1
26	259506		Lever Assembly - Main landing gear scissor switch (Component of 01-270834)	all	1
	259506-2		Stud - Lever assembly	all	1
	259506-3		Lever	all	1
27	8298B		Strut - Main landing gear shock (Cleveland Pneumatic Tool) (661037) (See figure 152 for detailed illustration)	dd	1
	8298D		Strut - Main landing gear shock (Cleveland Pneumatic Tool) (661049) (See figure 152 for detailed illustration)	gg	1
28	283329		Bolt - Main landing gear side brace	all	4
	AN320-14		Nut	all	4
29	290751		Nut - Main landing gear upper sway brace attaching	all	2
30	283331		Strut Assembly - Main landing gear side	c	2
	289200		Strut Assembly - Main landing gear side	d	2
31	288471		Installation - Main landing gear brake lines (NP) (See figure 153 for detailed illustration)	all	1
	255200		Washer Assembly - Main landing gear fulcrum thrust	c	2
	255043		Washer - Main landing gear fulcrum	c	2
	74162		Bearing (Roller Bearing Co.)	c	2

(Continued on Next Page)

GROUP . . . Main Landing Gear

Constellation

Detail Unit . . . Main Landing Gear Index (Continued)

FIGURE & INDEX NUMBER	PART NUMBER		NOMENCLATURE						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
151 - 32	4022		Bearing (Torrington) . . .						a	2
	286323		Nut - Main landing gear fulcrum . . .						c	2
	AN3-33A		Bolt . . .						c	2
	AN364-1032		Nut . . .						all	2
33	286639		Washer - Main landing gear fulcrum . . .						d	2
34	287386		Nut - Main landing gear fulcrum . . .						d	2
	AN3-31A		Bolt . . .						d	2
35	255132		Key - Main landing gear fulcrum . . .						all	4
36	288370		Fitting Assembly - Aft landing gear door to strut . . .						d	2
	NAS221-24		Screw . . .						d	8
37	255039		Spacer - Main landing gear wheel bearing . . .						all	2
38	271438		Sleeve - Main landing gear assembly uplock pin . . .						all	1
	AN320-8		Nut . . .						all	1
	AN28-48		Bolt . . .						all	1
39	283332		Fulcrum - Main landing gear shock strut . . .						all	1
			(See figure 12 for main landing gear fulcrum fittings)							
	287661-3		Installation - Fairing Assembly main landing gear (NP) . . .						c	1
	AN6-14		Bolt . . .						c	1
	AN364-624		Nut . . .						c	1
40	287661-6		Strut Assembly - Main landing gear fairing . . .						c	1
	AN4-17A		Bolt . . .						c	4
41	287661-17		Collar Assembly - Main landing gear fairing . . .						c	1
	AN4-12A		Bolt . . .						c	2
	AN364-428		Nut . . .						c	2
42	287661-13		Strut Assembly - Main landing gear fairing . . .						c	2
43	281890		Screw - Strut door adjusting . . .						c	3
44	281888		Plate - Strut door serrated . . .						c	3
45	281892		Plate - Strut door . . .						c	6
	AN502-10-14		Screw . . .						c	12
46	287661-16		Fairing Assembly - Main landing gear . . .						c	1
	AN366F1032		Nut - Stop . . .						c	4
	287661-21		Strip - Fairing assembly . . .						c	2
	AN10-17		Bolt - Main landing gear brake cover (12 req. inner flange, serial DD; 12 req. outer flange, serial DD; 12 req. inner flange, serial GG) . . .						AR	
	AN10-16		Bolt - Main landing gear brake cover . . .						gg	12
	AN310-10		Nut - Main landing gear brake cover (12 req. inner flange, serial DD; 12 req. outer flange, serial DD; 12 req. inner flange, serial GG; 12 req. outer flange, serial GG) . . .						all	AR
	334078-33		Washer - Main landing gear brake cover (24 req. inner flange, serial DD; 24 req. outer flange, serial DD; 28 req. inner flange, serial GG; 28 req. outer flange, serial GG) . . .						all	AR
	AN526-1032R18		Screw - Main landing gear brake cover (12 req. inner flange, serial DD; 12 req. outer flange, serial DD; 2 req. inner flange, serial GG; 2 req. outer flange, serial GG) . . .						all	AR
	AN526-1032R20		Screw - Main landing gear brake cover . . .						gg	12
	AN526-1032R22		Screw - Main landing gear brake cover . . .						gg	12
	AN363C1032		Nut - Main landing gear brake cover (12 req. inner flange, serial DD; 12 req. outer flange, serial DD; 14 req. inner flange, serial GG; 14 req. outer flange, serial GG) . . .						all	AR
	268225-3		Spacer - Main landing gear downlock . . .						all	1
	AN4-17		Bolt . . .						all	1
	AN310-4		Nut . . .						all	1
47	283710L		Installation - Main landing gear downlock release mechanism (NP) . . .						all	1
	283710R		(See figure 156 for detailed illustration)							
			Installation - Main landing gear downlock release mechanism (NP) . . .						all	1
			(See figure 156 for detailed illustration)							
			(See figure 5 for downlock attachment towing)							
48	283409-3		Bolt - Main landing gear drag strut . . .						all	1
49	283410		Nut - Main landing gear drag strut . . .						all	1
50	283414		Plate - Main landing gear drag strut . . .						all	1
	AN4-14A		Bolt - Main landing gear drag strut . . .						all	1
51	283411		Bolt - Main landing gear drag link pivot . . .						all	1
52	283412		Nut - Main landing gear drag link pivot . . .						all	1
53	255185		Spacer - Main landing gear drag link pivot . . .						all	1
54	255230		Washer - Main landing gear drag link . . .						all	1
55	283704		Plate - Main landing gear drag link pivot . . .						all	1
	AN4-22A		Bolt . . .						all	1

(Continued on Next Page)

GROUP . . . Main Landing Gear

Detail Unit . . . Main Landing Gear Index (Continued)

Constellation

FIGURE & INDEX NUMBER	PART NUMBER	1	2	3	4	5	6	N O M E N C L A T U R E	SERIAL CODE	U N I T S P E R A S S Y.
151 - 56	*294808							Link Assembly - Main landing gear (See figure 216 for detailed illustration) (See figure 5 for drag link pivot fittings)	all	1
	LS560-10	Screw							all	1
	LS881-4	Washer							all	2
	AN25-9	Bolt							all	1
	AN320-5	Nut							all	1
57	284021	Wire Assembly - Static ground RH only							all	1
	194310-7	Link Assembly - Static ground							all	1
	LS2507-18	Screw							all	2
	AN520-10R8	Screw							all	1
	LS2507-13	Screw							all	2
	283803L	Installation - Main landing gear upper bumper (NP)							all	1
	283803R	Installation - Main landing gear upper bumper (NP)							all	1
	283802L	Bumper Assembly - Main landing gear							c	
	283802R	Bumper Assembly - Main landing gear							c	1
	283800	Pad Assembly - Upper bumper (Same as index 59)							c	1
58	283801L	Housing Assembly - Upper bumper							d	1
	283801R	Housing Assembly - Upper bumper							d	1
59	283800	Pad Assembly - Upper bumper							d	1
60	280860	Installation - Main landing gear actuating cylinder (NP) (See figure 155 for detailed illustration)							all	1
61	272551L	Installation - Main landing gear uplock (NP) (See figure 152 for detailed illustration)							all	1
	272551R	Installation - Main landing gear uplock (NP) (See figure 152 for detailed illustration) (See figure 5 for uplock supports)							all	1
62	275826	Wheel Assembly - Main landing gear (See figure 157 for detailed illustration) ...							all	1
		* Replaces standard part per Service Instruction 49/SI-100A and Service Bulletin 49/SB-53.								

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GROUP . . . Main Landing Gear

Detail Unit . . . Uplode and Shock Strut—M.L.G.

Constellation

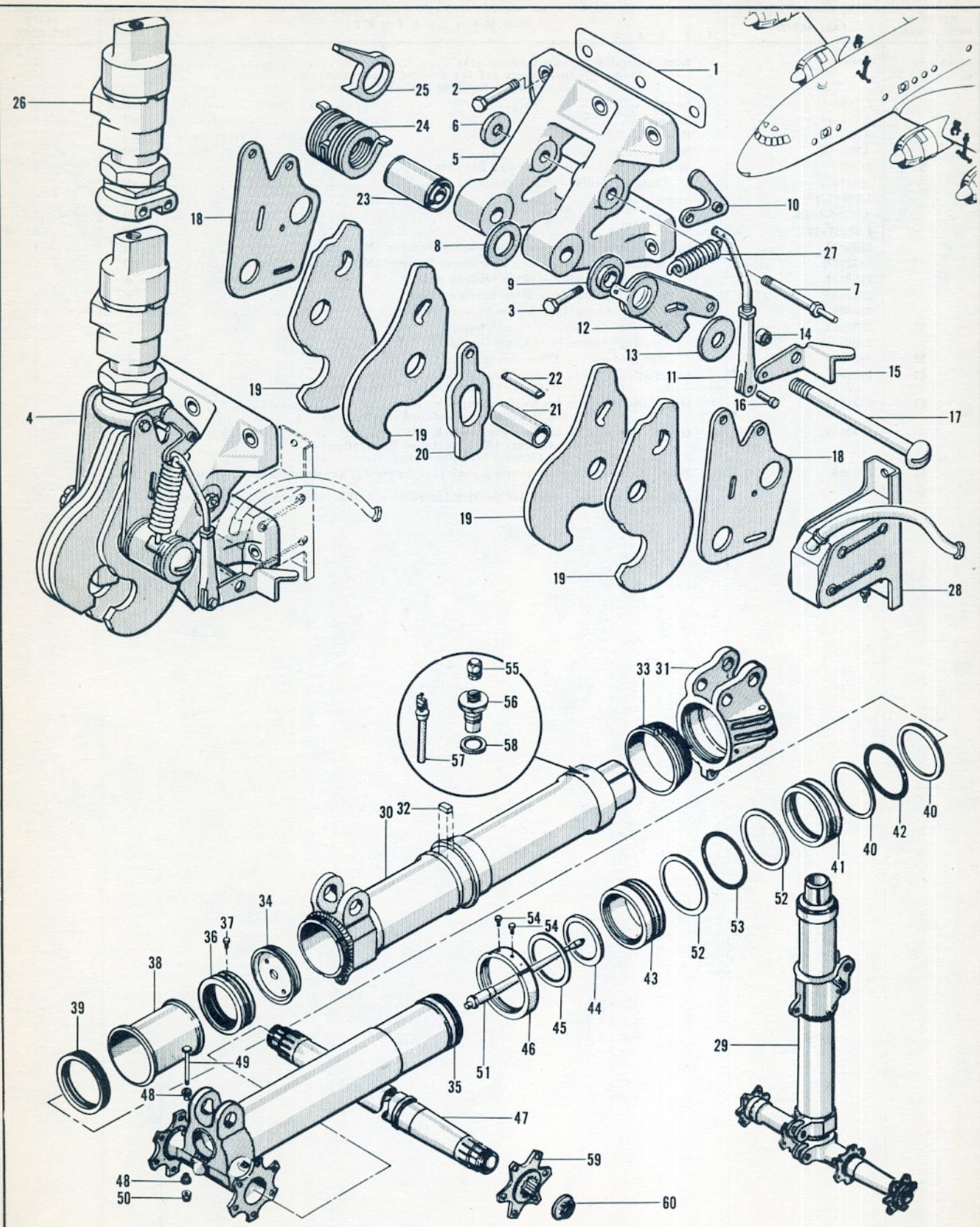


Figure 152 – Uplode and Shock Strut – M.L.G.

GROUP . . . Main Landing Gear

Detail Unit . . . Uplock and Shock Strut—M.L.G.

Constellation

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
	272551L	Installation - Main landing gear uplock (NP) (See figure 151 for using assembly) . . .							all	Ref
	272551R	Installation - Main landing gear uplock (See figure 151 for using assembly) . . . (See figure 7 for attaching supports on wing rib) . . .							all	Ref
152 - 1	272561	Shim - Uplock bracket lower (Use as necessary to align with shock strut lug) . . .							all	8
2	AN6-15A	Bolt - Aircraft $\frac{3}{16}$ -24 . . .							all	3
3	AN5-15A	Bolt - Aircraft $\frac{1}{16}$ -24 . . .							all	3
4	272550L	Uplock Assembly - Main landing gear . . .							all	1
	272550R	Uplock Assembly - Main landing gear . . .							all	1
5	272422	Bracket - Main landing gear . . .							all	1
6	272557-4	Washer - Main landing gear uplock . . .							all	4
7	272569	Shaft - Main landing gear uplock rocker arm . . .							all	1
8	272557-3	Washer - Main landing gear uplock . . .							all	2
9	272566	Spacer - Main landing gear uplock main pin . . .							all	1
10	272560	Rocker - Arm assembly - Main landing gear uplock switch . . .							all	1
11	272548	Rod - Main landing gear uplock switch . . .							all	1
	AN815-3R	Nut - Aircraft plain . . .							all	1
	AN665-21R	Terminal - Threaded clevis type tie rod . . .							all	1
12	272567L	Plate - Uplock switch . . .							o	1
	272567R	Plate - Uplock switch . . .							uuu	1
	272550-51L	Plate Assembly - Uplock switch . . .							uuu	1
	272550-51R	Plate Assembly - Uplock switch . . .							uuu	1
	272567L	Plate - Uplock switch . . .							uuu	1
	272567R	Plate - Uplock switch . . .							uuu	1
13	272557-2	Washer - Main landing gear uplock . . .							all	6
14	272568	Spacer - Main landing gear uplock switch lever . . .							all	1
15	272591L	Lever - Main landing gear uplock switch lever . . .							all	1
	272591R	Lever - Main landing gear uplock switch lever . . .							all	1
16	AN393-11	Pin - Main landing gear uplock switch . . .							all	1
17	AN28-66	Bolt - Clevis $\frac{1}{2}$ -20 . . .							all	1
	AN24-27A	Bolt + Plate attaching . . .							uuu	1
18	272552	Plate - Landing gear uplock side . . .							all	2
19	272553	Latch - Main landing gear uplock . . .							all	4
20	272558	Guide - Landing gear uplock latch . . .							all	1
21	272556	Bushing - Landing gear uplock main pin . . .							all	1
22	272562	Pin - Landing gear uplock latch guide . . .							all	1
23	272555	Shaft Assembly - Landing gear uplock spring . . .							all	1
	AN24-56	Bolt . . .							all	1
24	272563	Spring - Landing gear uplock . . .							all	1
25	272554	Lever - Landing gear uplock spring . . .							all	1
26	H2754	Cylinder - Main landing gear uplock (Pacific Aviation) (663061) . . . (See figure 166 for detailed illustration)							all	1
27	282854-13	Spring . . .							cu	1
28	283809-2	Equipment Assembly - Main landing gear uplock switch LH . . . (See figure 196 for using assembly)							all	Ref
	283809-3	Equipment Assembly - Main landing gear uplock switch RH . . . (See figure 196 for using assembly)							all	Ref
29	8298B	Shock Strut Assembly - Main landing gear (Cleveland Pneumatic Tool) (661037) . . . (See figure 151 for using assembly)							dd	Ref
	8298D	Shock Strut Assembly - Main landing gear (Cleveland Pneumatic Tool) (661049) . . . (See figure 151 for using assembly)							gg	Ref
	8298B102	Cylinder Assembly - Shock strut . . .							all	1
30	8298B2	Cylinder - Shock strut . . .							all	1
31	8298B45	Fitting - Cylinder drag brace . . .							all	1
32	8298B68	Key + Cylinder fitting . . .							all	1
33	8298B55	Nut - Split . . .							all	1
34	8298B23	Plate - Orifice . . .							all	1
	8298B104	Piston Assembly - Shock strut . . .							dd	1
	8298D104	Piston Assembly - Shock strut . . .							gg	1
35	8298B4	Piston - Shock strut . . .							dd	1
	8298C4	Piston - Shock strut . . .							dd	1
36	7970-3	Head - Piston . . .							gg	1
37	8298B53	Pin - Piston head . . .							all	1
38	8298A10	Follower - Piston . . .							all	1
39	7970-69	Nut - Follower . . .							all	1
40	8298B64	Ring - Leather wiper . . .							all	2
41	8298B54A	Adapter - Packing . . .							all	1
42	AN6227-68	Packing - "O" Ring hydraulic . . .							all	1
43	8298B9	Bearing - Piston . . .							dd	1
	8298B9A	Bearing - Piston . . .							gg	1
44	AN6231-57	Wiper - Packing gland ring . . .							all	1
45	8298-91	Ring - Wiper lock . . .							all	1
46	8298B48	Nut - Gland . . .							all	1
47	7970-85	Axle . . .							all	1
48	8298B59	Bushing - Piston to axle . . .							all	4
49	AN6-54	Bolt - Piston to axle . . .							all	2
50	AN310-6	Nut - Aircraft castle . . .							all	2
51	8298B13	Pin - Metering . . .							all	1
52	8298B65	Ring - Leather wiper . . .							all	2
53	AN6227-70	Packing - "O" Ring hydraulic . . .							all	1
54	AN501AA16-8	Screw - Fillister head fine thread . . .							dd	2
	AN501AA16-7	Screw - Fillister head fine thread . . .							gg	2
55	ANS13-1	Cap - High pressure air valve . . .							all	1
56	ANS12-1	Body - High pressure air valve . . .							all	1
57	AN809-1	Core - High pressure air valve . . .							all	1
58	AN9015C	Gasket - High pressure air valve . . .							all	1
59	8298C61	Flange - Outboard brake (Interchangeable with 8298B61) . . .							all	2
60	8298B70	Nut - Axle . . .							all	2

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LOCKHEED AIRCRAFT CORPORATION

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GROUP Main Landing Gear
Detail Unit Brake Hydraulics—M.L.G.

Constellation

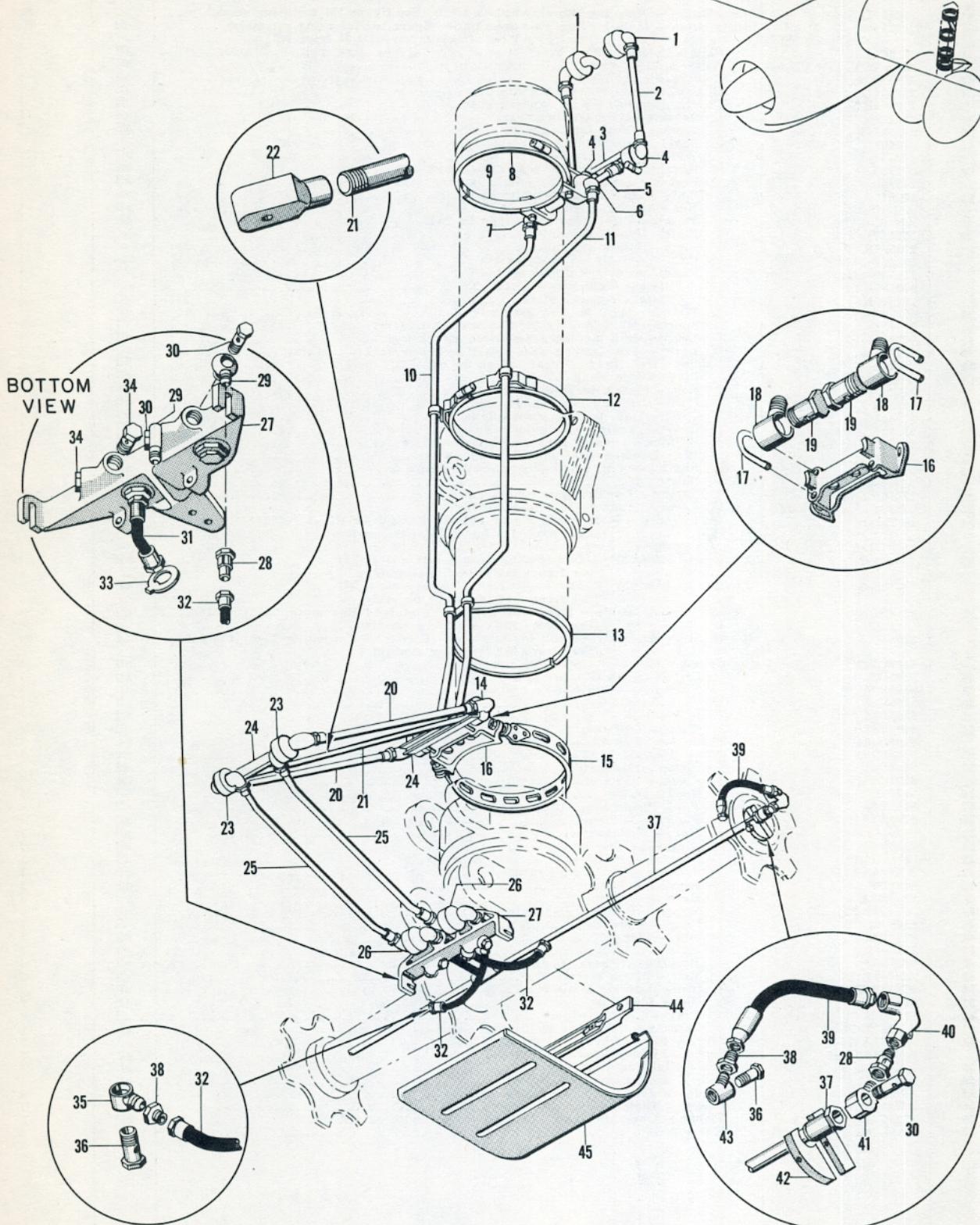


Figure 153 — Brake Hydraulics — M.L.G.

GROUP . . . Main Landing Gear

Detail Unit . . . Brake Hydraulics—M.L.G.

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
	288471	Installation - Hydraulic brakes (NP) (See figure 151 for using assembly) (See figure 127 for connection with brake hydraulic system)							all	Ref
153 - 1	41207	Joint - Swing (Chiksan Tool Co.) (667477)							dd	1
	R251D7	Joint - Swing (Chiksan Tool Co.) (667570)							gg	1
2	254900-9	Tube Assembly - Landing gear							all	2
	LS560-20	Screw							all	6
	AN365-1032	Nut							all	2
3	272859-3	Clamp Assembly - Swing joint							all	1
4	41208	Joint - Swing (Chiksan Tool Co.) (667478)							dd	1
	R251D6	Joint - Swing (Chiksan Tool Co.) (667569)							gg	1
5	254900-12	Tube Assembly - Landing gear							all	2
6	21206	Joint - Swing (Chiksan Tool Co.) (667476)							dd	1
	R251D2	Joint - Swing (Chiksan Tool Co.) (667565)							gg	1
	AN4-20A	Bolt							all	2
	AN365-428	Nut							all	2
7	21205	Joint - Swing (Chiksan Tool Co.) (667475)							dd	1
	R251D5	Joint - Swing (Chiksan Tool Co.) (667568)							gg	1
	AN5-16A	Bolt							all	3
	AN365-524	Nut							all	3
8	255402	Clamp Assembly - Brake line upper swing joint							all	1
9	255324	Clamp Assembly - Brake line upper swing joint							all	1
10	254900-46	Tube Assembly - Landing gear							all	1
11	254900-47	Tube Assembly - Landing gear							all	1
	LS560-8	Screw							all	4
12	284514	Strap Assembly - Brake line							all	1
	LS560-7	Screw							all	2
13	255322-4	Strap Assembly - Brake line							all	1
14	21210	Joint - Swing (Chiksan Tool Co.) (667480)							dd	2
	R251D3	Joint - Swing (Chiksan Tool Co.) (667566)							gg	2
	LS881-2	Washter							all	6
15	255323	Strap Assembly - Brake safety valve							all	1
	255323-5	Strap - Brake safety valve terminal							all	2
16	255320	Bracket - Brake safety valve							all	1
17	255325	Bolt - Brake safety valve							all	2
18	40D370-8D	Swivel - Hydraulic							all	2
	AN901-8A	Gasket							all	6
19	40B374-8D	Bolt - Hydraulic swivel							all	2
20	254900-7	Tube Assembly - Landing gear							all	2
21	277466	Rod - Brake line brace							all	1
	AN316-4R	Nut							all	2
	LS560-18	Screw							all	2
22	277465	Terminal - Brake line brace rod							all	2
23	21209	Joint - Swing (Chiksan Tool Co.) (667479)							dd	2
	R251D4	Joint - Swing (Chiksan Tool Co.) (667567)							gg	2
24	272859-4	Clamp Assembly - Swing joint							all	2
25	254900-35	Tube Assembly - Landing gear							all	2
26	21211	Joint - Swing (Chiksan Tool Co.) (667481)							dd	2
	R251D1	Joint - Swing (Chiksan Tool Co.) (667564)							gg	2
	AN4-11A	Bolt							all	2
	AN901-10A	Gasket							all	2
27	280831	Manifold - Hydraulic brake							all	1
	285277	Nipple - Hydraulic brake manifold							all	2
	AN901-6A	Gasket							all	8
	41B25-6D	Plug - Straight thread hydraulic							all	1
28	160S1-5	Coupling - Half (Aeroquip) (667459-5)							all	4
29	142S2-5	Coupling - Half (Aeroquip) (667352-5) (Replaces AN6222-5)							all	2
	AN6224-5	Union Nut							all	4
30	40B374-5D	Bolt - Hydraulic swivel coupling							all	4
31	312-6W5%	Hose Assembly (Aeroquip) (Replaces and is interchangeable with 43D2477-6-051 and 312-6-5%)							all	1
32	43B2583-065	Hose Assembly (Replaces and is interchangeable with 43D2474-5-065)							all	2
33	271569	Lockwasher - Brake tube fitting							all	2
34	41B25-5D	Plug - Straight thread hydraulic							all	2
35	40D371-6D	Coupling - Hydraulic Swivel 15°							all	2
36	40B374-6NS	Bolt - Hydraulic swivel coupling							all	4
37	285244	Tube Assembly - Axle main and emergency							all	1
38	288504	Adapter - Brake line fitting							all	4
39	43B2507-083	Hose Assembly (Replaces and is interchangeable with 43D2477-5-083)							all	2
	AN901-5A	Gasket							all	10
40	280126	Elbow - Brake line							all	2
41	143S2-5	Coupling - Half (Aeroquip) (667458-5)							all	2
42	288503	Fairlead - Brake line outer							all	2
43	40D372-6D	Swivel - Hydraulic 45°							all	2
44	277448	Support Assembly - Brake line shield							all	1
45	277467	Shield Assembly - Brake line							all	1

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GROUP Main Landing Gear
Detail Unit . . . Link—M.L.G. Retracting

Constellation

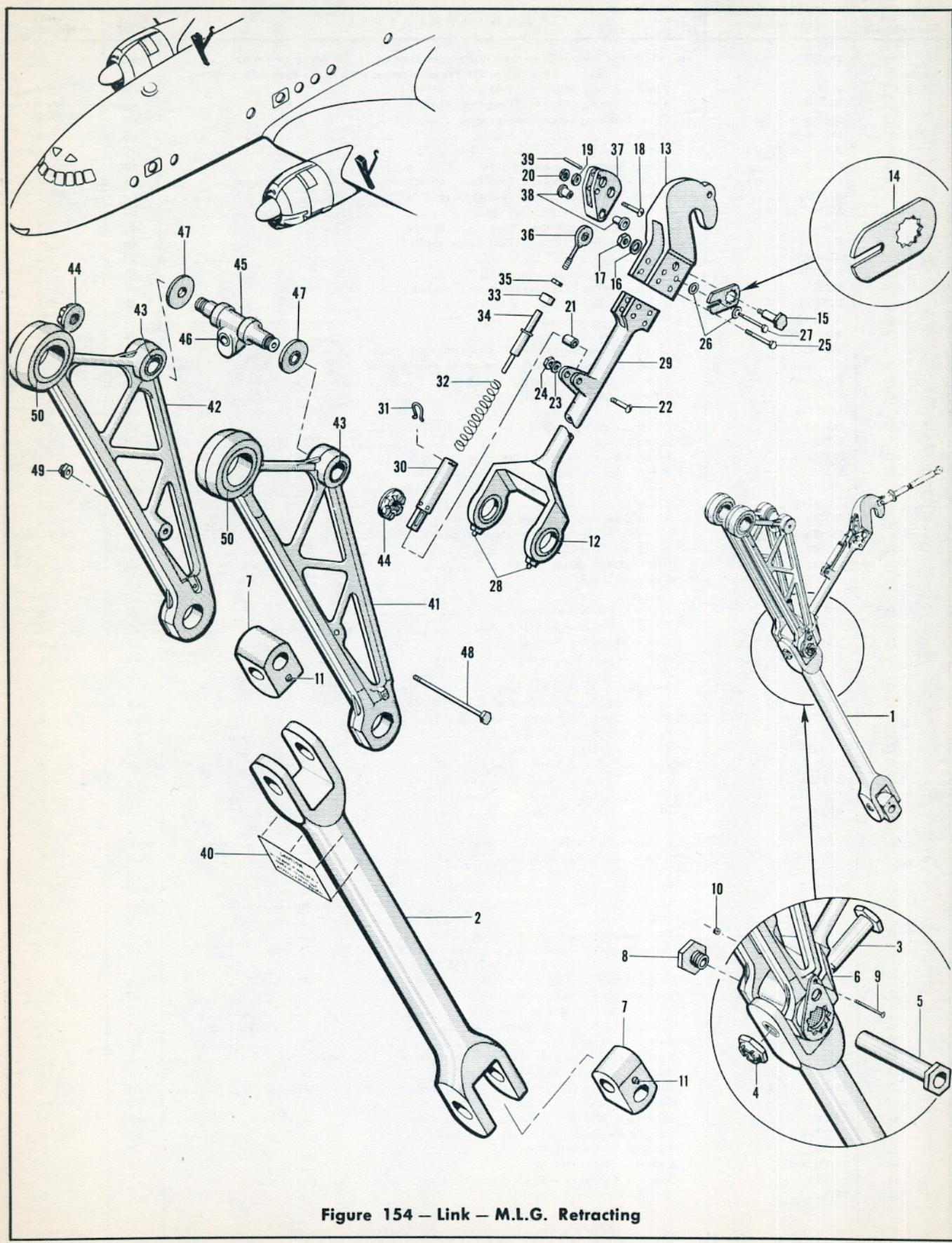


Figure 154 — Link — M.L.G. Retracting

GROUP . . . Main Landing Gear

Detail Unit . . . Link—M.L.G. Retracting

Constellation

FIGURE & INDEX NUMBER	PART NUMBER		N O M E N C L A T U R E						SERIAL CODE	UNITS PER ASSY.
			1	2	3	4	5	6		
154 - 1	*294808		Link Assembly - Main landing gear retracting						all	Ref
			(See figure 151 for using assembly)							
2	283417		Strut Assembly - Main landing gear lower drag						all	1
3	283409-2		Bolt - Main landing gear drag strut						all	2
4	283410		Nut - Main landing gear drag strut						all	2
5	283415		Pin - Main landing gear drag strut knee						all	1
6	283414		Plate - Main landing gear drag strut						all	2
7	283408		Universal - Main landing gear drag strut						all	2
8	283416		Cap - Main landing gear drag strut knee						all	1
9	AN24-25A		Bolt - Clevis $\frac{5}{16}$ - 24 - Main landing gear drag strut						all	2
10	AN364-428		Nut - Main landing gear drag strut						all	2
11	NAS2-101		Fitting - Lubrication						all	2
	*294809		Strut Assembly - Main landing gear downlock						all	1
12	283697		Bushing - Main landing gear downlock strut						all	2
13	268936		Hook - Main landing gear downlock						all	1
14	283696		Plate - Main landing gear downlock wrench						all	1
15	270379		Bolt - Main landing gear downlock latch pivot						all	1
16	AN960-616		Washer - Burr						all	1
17	AN320-6		Nut - Aircraft shear						all	1
18	AN25-21		Bolt - Clevis 1- $\frac{2}{3}$ %4						all	1
19	AN960-516L		Washer - Plain						all	1
20	AN320-5		Nut - Aircraft shear						all	6
21	268225-2		Spacer - Main landing gear downlock						all	1
22	AN24-21		Bolt - Clevis 1- $\frac{11}{32}$						all	1
23	AN960-416L		Washer - Plain						all	1
24	AN320-4		Nut - Aircraft shear						all	1
25	LS580-5-52		Bolt - Ball bearing ground						all	3
26	AN960-516		Washer - Plain						all	5
27	LS580-5-55		Bolt - Ball bearing ground						all	1
28	NAS2-101		Fitting - Grease						all	2
29	*294809-2		Tube Assembly - Downlock strut						all	1
	270104		Cylinder Assembly - Main landing gear downlock spring						all	1
30	268944		Housing Assembly - Main landing gear downlock spring						all	1
31	270129		Ring - Main landing gear snap downlock spring						all	1
32	268941		Spring - Main landing gear downlock latch						all	1
33	268939		Cap - Main landing gear downlock spring housing						all	1
	270106		Guide Assembly - Main landing gear downlock spring						all	1
34	270106-2		Shaft						all	1
35	AN316-5R		Nut + Aircraft - Check						all	1
36	*295168		Rod Assembly - Main landing gear downlock spring						all	1
	*HSB-5		Bearing (Halfco Co.)						all	1
	268938		Latch Assembly - Main landing gear downlock						all	1
37	268938-2		Latch						all	1
38	268976		Bushing - Main landing gear downlock latch						all	2
39	270128		Stop - Main landing gear downlock latch						all	1
40	284087		Nameplate - Main landing gear drag link knee bolt						all	1
	*288983		Link Assembly - Main landing gear upper drag						all	1
			(See figure 7 for attachment to wing ribs)							
41	*288983-2L		Link - Main landing gear upper drag						all	1
42	*288983-2R		Link - Main landing gear upper drag						all	1
			(Index Nos. 41 and 42 sold only as matched pairs)							
43	*E7245		Roller Bushing (Orange Bearing Co.)						all	2
44	293629		Nut - Main landing gear upper drag strut crosshead						all	2
45	*288982		Crosshead Assembly - Main landing gear lower drag link						all	1
46	255176-3		Bushing - Cylinder universal						all	1
47	*288980		Washer - Main landing gear crosshead inner						all	2
48	NASS8A65		Bolt - Close tolerance						all	1
49	AN364-820		Nut - Self-locking thin						all	1
50	RBC74162		Bearing (Roller Bearing Co. of America)						all	4
			* Replaces standard part per Service Bulletin 49/SB-53 and Service Instruction 49/SI-27.							

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GROUP Main Landing Gear
 Detail Unit . . . Cylinder—M.L.G. Actuating

Constellation

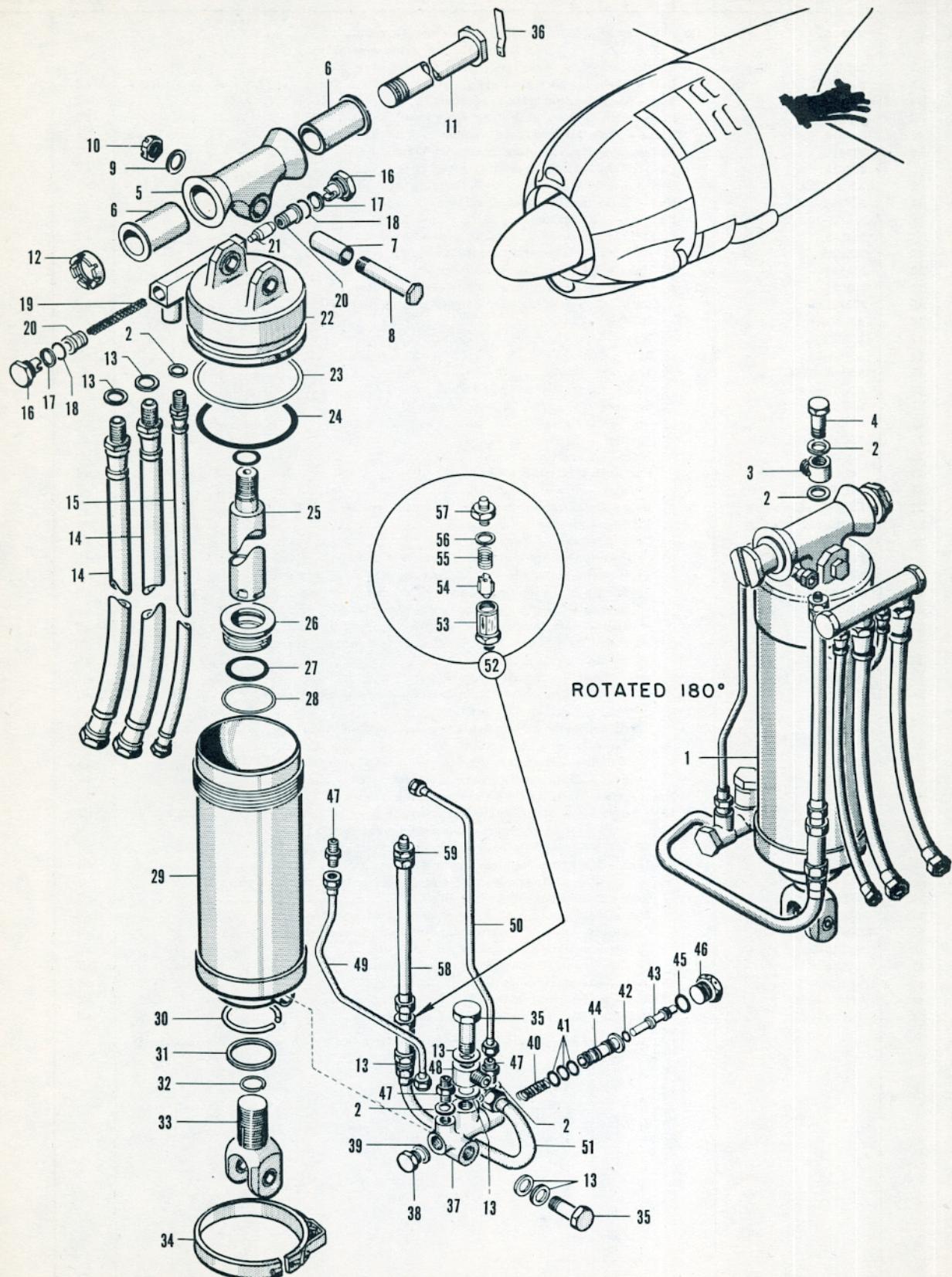


Figure 155 – Cylinder – M.L.G. Actuating