

RamAir Assembly Diagrams

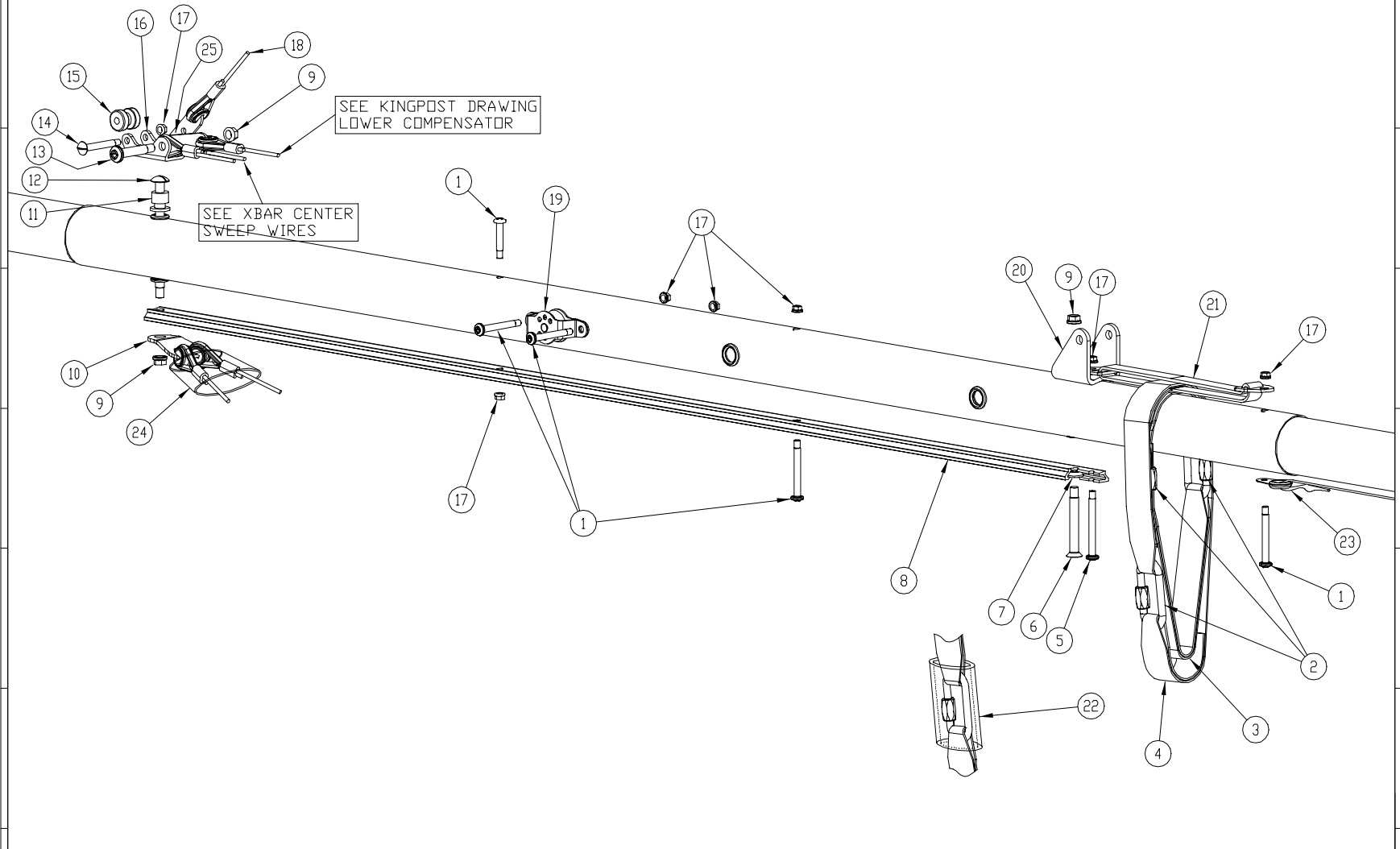
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Drawing 154-E01-2 REV 03-01-96

1	10C-4281	BOLT NAS 623-3-28	5
2	20P-1311	RAPIDLINK - OVAL 5MM 40MM SS	3
3	45J-1801	HANG LOOP RAMAIR MAIN LOWR STK	1
4	45J-1901	HANG LOOP BACK RA 1" TUB STOCK	1
5	10C-4341	BOLT NAS 623-3-34	1
6	10C-2301	BOLT NAS 517-4-30	1
7	20G-3001	DONUT INSERT LAYELT APEX TRACK	1
8	20G-2101	TRACK LAYFLAT CBAR APEX SLIDER	1
9	10N-1740	CLINCH NUT 1/4 MS21042-4	3
10	40P-3301	WIRE SET BOTTOM REAR BALL SWDG	1
11	20G-2901	COLLAR KEYHOLE TANG BOLT	1
12	10B-2464	BOLT AN24-46A GROUND/ KEYHOLE	1
13	10C-5121	BOLT NAS 623-4-12	1
14	10B-1161	BOLT AN23-16A	1
15	15K-1001	PULLEY DELRIN KEYHOLE BRACKET	1
16	20A-1601	BRACKET, KEYHOLE TYPE LAYFLAT	1
17	10N-1730	CLINCH NUT 3/16 MS20142-3	7
18	40P-2401	WIRE TOP REAR BALL SWEDG 3/32	1
19	20P-1231	PULLEY HARKN CHEEK BLOCK VG	1
20	20A-1211	BRACKET, KINGPOST BASE '92 SS	1
21	45J-1800	HANG LOOP RAMAIR MAIN TOP	1
22	15P-1231	VINYL TUBE .75ID * .87500 * 2	3
23	20E-2202	TANG 2 HOLE KEEL POCKET	1
24	15A-1007	FRICITION CAP 7/8	1
25	10U-1140	WASHER STEEL AN960-416	1

REV	DATE	DESCRIPTION
1	11-24-93 sp	Add washer in keyhole bracket assy

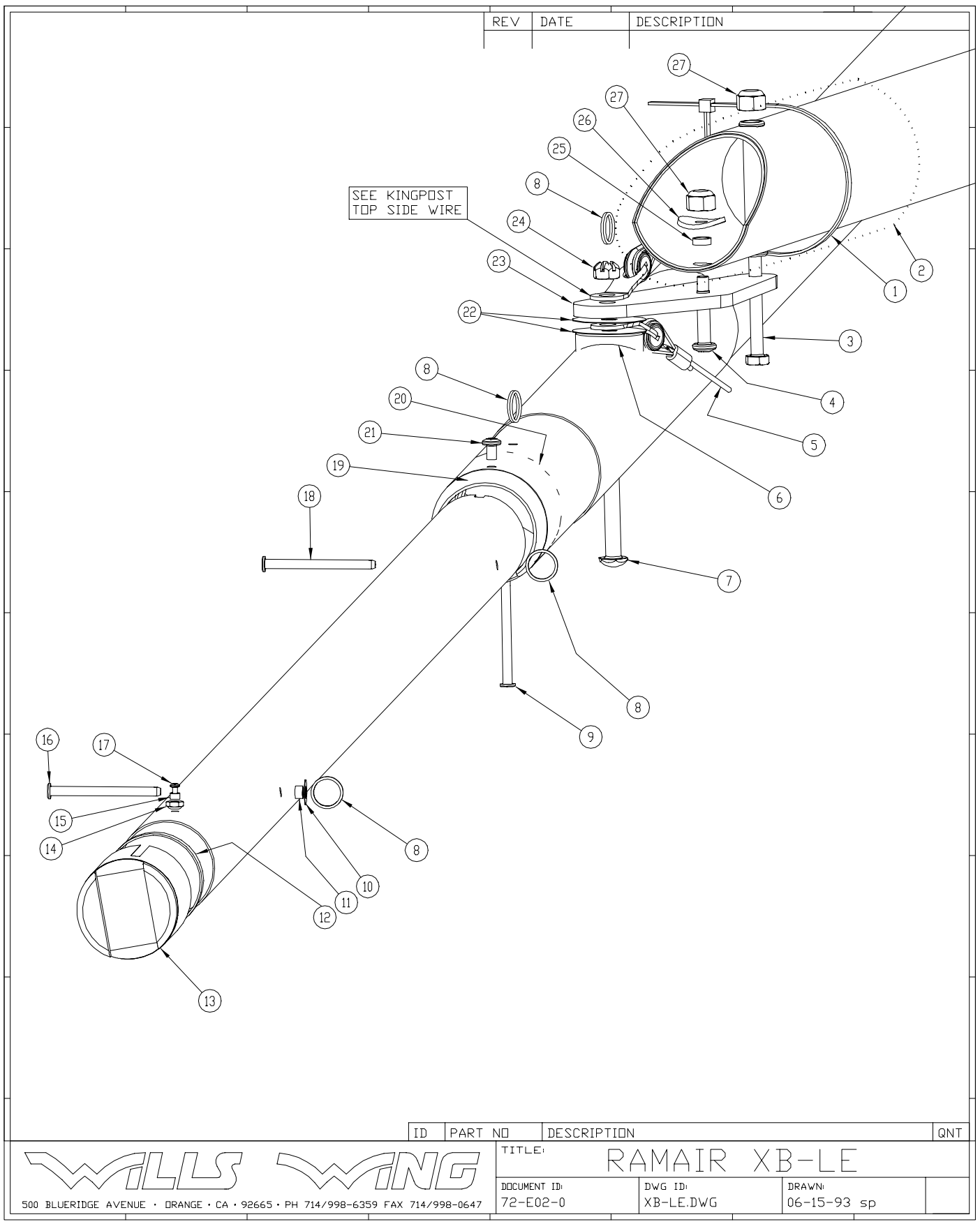


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ID	PART NO	DESCRIPTION	QNT
TITLE: RAMAIR MIDDLE KEEL ASSEMBLY			
DOCUMENT ID:	DWG ID:	DRAWN:	
72-E01-2	KEEL.DWG	6-15-93 sp	

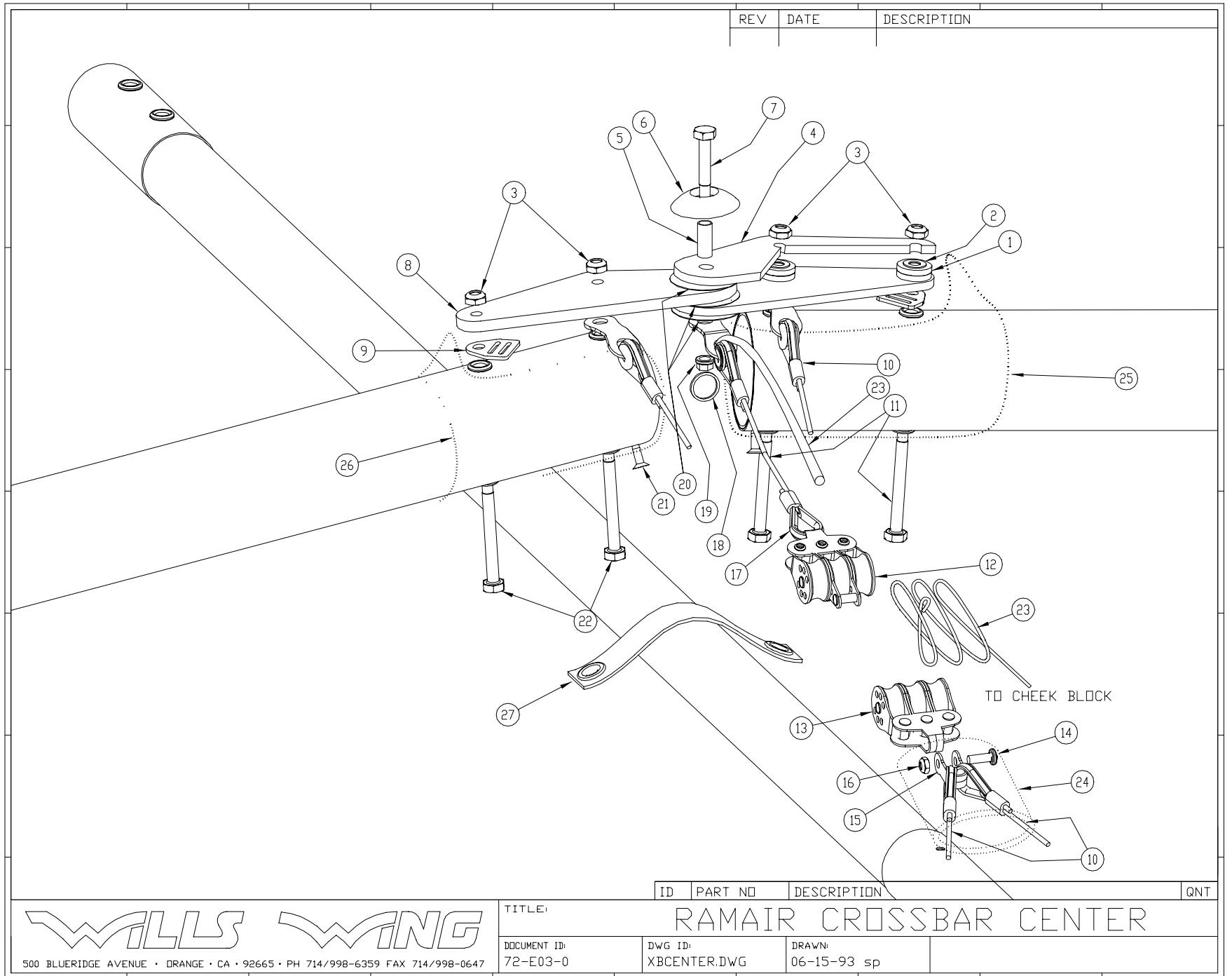
Drawing 154-E02-0 REVISED 03-01-96

1	15N-1501	ZIPTIE	2
2	15A-1312	XBAR BOOT 62 LEFT OUTER	1
	15A-1314	XBAR BOOT 62 RIGHT OUTER	1
3	10A-2301	BOLT AN4-30A (IF 62mm XBAR)	2
	10A-2311	BOLT AN4-31A (IF 66mm XBAR)	
4	10C-5071	BOLT NAS 623-4-7	2
5	40P-3104	WIRE BOTTOM SIDE 1/8 AT STYLE	2
6	15F-6201	SADDLE . 62mm POLYCARB	2
7	10A-3333	BOLT AN5-33 TURNED HEAD	2
8	10P-1100	SAFETY RING AN 9491 SMALL	8
9	10G-1750	CLEVIS PIN MS20392-2C75	2
10	10U-1400	WASHER MS 15795-210	2
11	10T-1111	SPACER AL .375 * .035 * .375	2
12	40M-1321	SHIM KIT ALL 7075 MODELS 50mm	2
13	40M-1211	SAIL PLUG ALL 7075 MODELS 50mm	2
14	10N-1120	NYLOCK LOWPRO 1/8 MS21083-N06	2
15	10T-1101	SPACER AL .187 * .022 * .125	2
16	10G-2770	CLEVIS PIN MS20392-3C77	2
17	10L-1041	SCREW PAN 1/8 MS35206-228	2
18	10G-1650	CLEVIS PIN MS20392-2C65	2
19	15J-1701	CRESCENT REDUCR AFT LEFT 60/50	2
20	15J-1702	CRESCENT REDUCR FWD LEFT 60/50	2
21	10M-1251	SCREW PAN 5*8mm LE CRESCENTS	2
22	10U-5240	WASHER NYLON 1.50 * .250 * .02	4
23	20C-1742	XBAR PLATE RAMAIR .250	2
24	10N-1350	CASTLE NUT 5/16 AN310-5	2
25	10T-1105	SPACER AL .375 * .035 * .090	2
26	10U-1242	WASHER STEEL AN970-4 BENT	2
27	10N-1240	LOCKNUT LOWPRO 1/4 AN364-4	4



Drawing 154-E03-0 REVISED 03-01-96

1	10U-2124	WASHER STEEL .75 * .25 * .125	4
2	10U-1141	WASHER STEEL AN960-416L	2
3	10N-1240	LOCKNUT LOWPRO 1/4 AN364-4	4
4	20C-1740	XBAR PLATE RAMAIR .187	2
5	10T-3101	BUSH 4130 .313 * .028 * .725	1
6	15J-1801	DOME WASHER XBAR CENTER POLYC	1
7	10A-2120	BOLT AN4-12	1
8	20C-1742	XBAR PLATE RAMAIR .250	1
9	45K-1310	XBAR STRAP HOLD DOWN 154	1
10	40P-4203	WIRE XBAR SWEEP SET LEFT & RT	1
11	10A-2341	BOLT AN4-34A (IF 62mm XBAR)	2
	10A-2351	BOLT AN4-35A (IF 66mm XBAR)	
12	20P-1233	PULLEY HARKN TRIPLE BLOCK BCKT	0
13	20P-1232	PULLEY HARKN TRIPLE BLOCK	1
14	10C-4081	BOLT NAS 623-3-8	1
15	20P-1331	SHACKLE - SS HARKN MICRO BLOCK	1
16	10N-1730	CLINCH NUT 3/16 MS20142-3	1
17	40P-5004	WIRE XBAR CENTER VG TRIPLE BLK	1
18	10P-1100	SAFETY RING AN 9491 SMALL	1
19	10N-1740	CLINCH NUT 1/4 MS21042-4	1
20	10U-5240	WASHER NYLON 1.50 * .250 * .02	3
21	10M-1461	SCREW FLAT PHILPS 1024*.5	2
22	10A-2301	BOLT AN4-30A (IF 62mm XBAR)	2
	10A-2310	BOLT AN4-31 (IF 66mm XBAR)	
23	30J-3101	CORD - 4mm ACCESSORY PER FOOT	16
24	15P-1231	VINYL TUBE .75ID *.875OD * 2	1
25	15A-1316	XBAR BOOT 62 RIGHT INNER SPLIT	1
26	15A-1315	XBAR BOOT 62 LEFT INNER SPLIT	1
27	45K-1303	XBAR STRAP-WEBBING W/GROMMETS	1



WILLS WING

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TITLE:

RAMAIR CROSSBAR CENTER

DOCUMENT ID:
72-E03-0

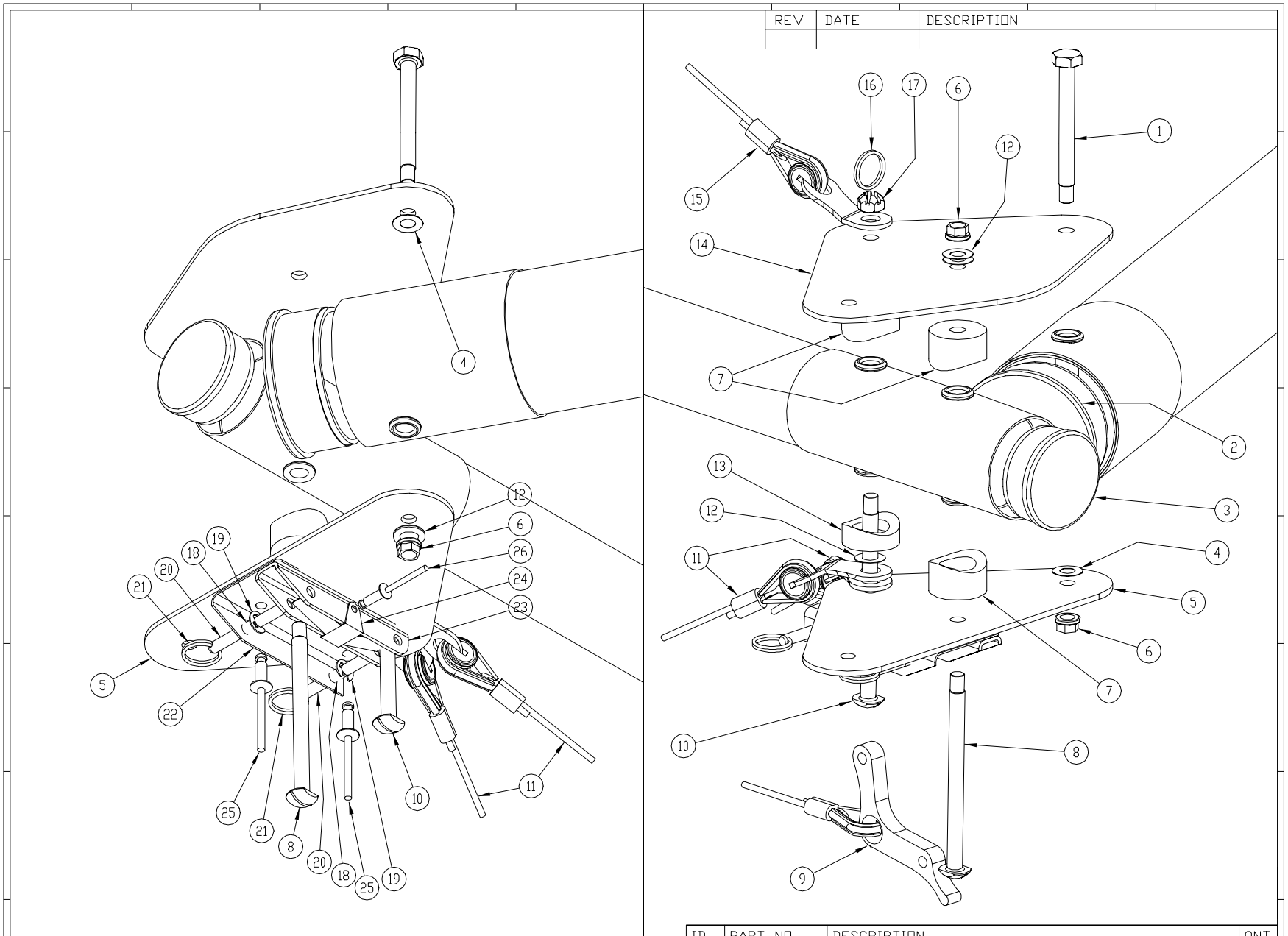
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XBCENTER.DWG

DRAWN:
06-15-93 sp

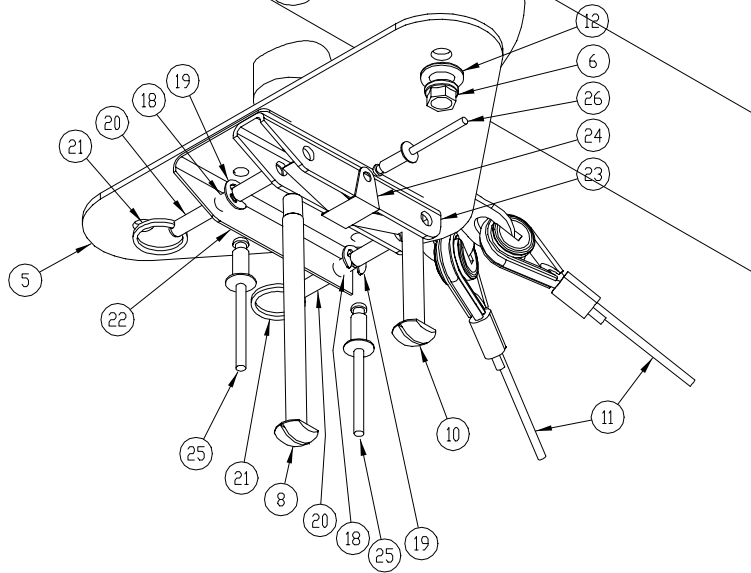
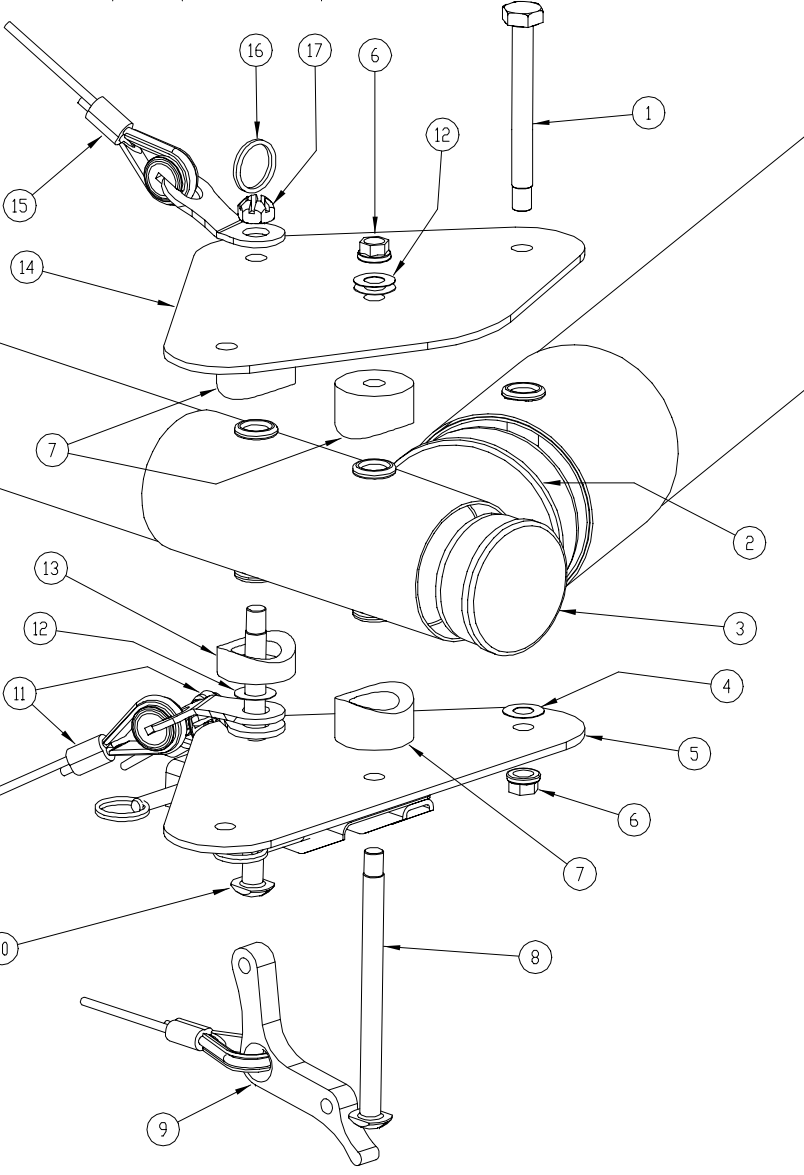
ID	PART NO	DESCRIPTION	QNT

Drawing 154-E04-0 Revised 03-01-96

1	10A-2301	BOLT AN4-30A	2
2	15C-6219	ENDCAP 62mm OD 58.2 ID	2
3	15B-1612	ENDCAP 1 3/4 .049	1
4	10U-1141	WASHER STEEL AN960-416L	4
5	20C-1611	NOSEPLATE HARRIER THRU CURRENT	1
6	10N-1740	CLINCH NUT 1/4 MS21042-4	3
7	15F-1607	STAND-OFF 7/16	3
8	10B-2513	BOLT AN24-51A GROUND W/FLATS	1
9	40P-4301	WIRE SWAN CATCH	1
10	10B-2512	BOLT AN24-51 GROUND W/FLATS	1
11	40P-3202	WIRE SINGLE BOTTOM FRONT BALL	2
12	10U-1140	WASHER STEEL AN960-416	5
13	15F-1404	STAND-OFF 1/4	1
14	20C-1621	NOSEPLATE RAMAIR TOP EXTENDED	1
15	40P-2301	WIRE TOP FRONT BALL SWEDG 3/32	1
16	10P-1100	SAFETY RING AN 9491 SMALL	1
17	10N-1340	CASTLE NUT 1/4 AN310-4	1
18	10S-1100	SPRING HELICAL SWAN PIN EXTEND	2
19	10S-1000	C-CLIP SWAN PIN RETAINING SS	2
20	10K-4030	PIN SWAN BRACKET SPRING SS	2
21	10P-1300	SAFETY RING MEDIUM THICK	2
22	20A-1711	BRACKET, SWAN PIN RETAINING	1
23	20A-1701	BRACKET, SWAN CATCH LEVER	1
24	10S-1200	SPRING FLAT SWAN PIN STOP	1
25	10R-0366	RIVET AL 3/16 * .375 CHAAPQ6-4	2
26	10R-0342	RIVET AL 1/8 * .25	2



REV	DATE	DESCRIPTION
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ID	PART NO	DESCRIPTION	QNT
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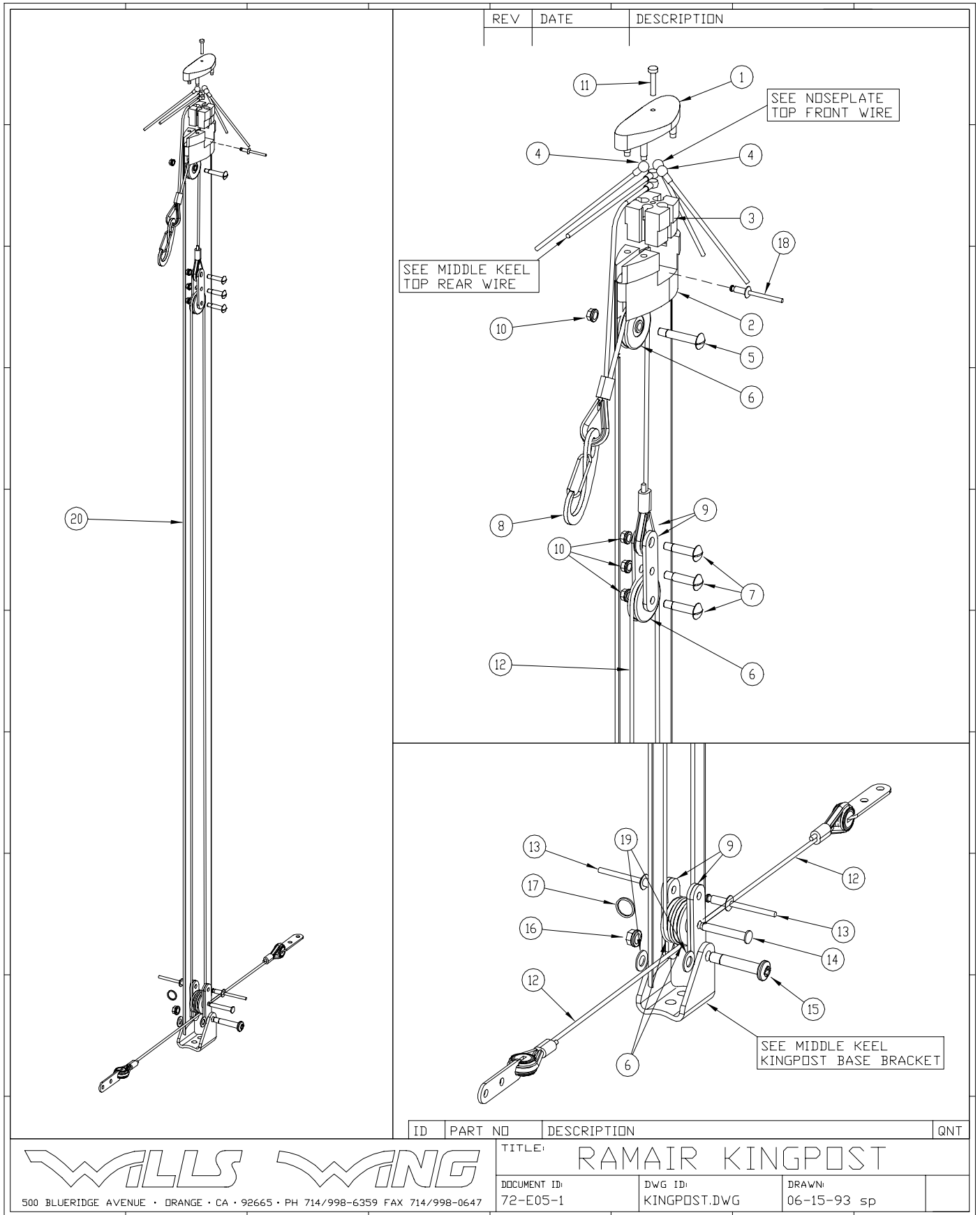
RAMAIR NOSEPLATE ASSY

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TITLE:	RAMAIR NOSEPLATE ASSY	
DOCUMENT ID:	DWG ID:	DRAWN:
72-E04-0	NOSEPLAT.DWG	06-15-93 sp

Drawing 154-E05-1 Revised 03-01-96

1	15J-1501	CAP AT KINGPOST TOP POLYCARB	1
2	15J-1502	TOP AT KINGPOST POLYCARB	1
3	20G-2323	KINGPOST TOP INSERT AT ALUM	1
4	40P-2202	WIRE TOP SIDE BALL SWEDGE 3/32	2
5	10B-1161	BOLT AN23-16A	1
6	20K-5012	PULLEY AN210-1A PHENOLIC - VG	4
6A	15K-1011	PULLEY DELRIN AN210-1A REPLACE	4
	10T-4111	BUSH SS .312 * .058 * .295	4
7	10B-1101	BOLT AN23-10A	3
8	40P-5002	WIRE VG COMPENSATOR UPPER	1
9	20E-2304	TANG 3 HOLE VG 2" LONG	6
10	10N-1730	CLINCH NUT 3/16 MS20142-3	4
11	10M-1361	SCREW 6/32 FLSTR MACH HEAD SS	1
12	40P-5003	WIRE VG COMPENSATOR LOWER	1
13	10R-0366	RIVET AL 3/16 * .375 CHAAPQ6-4	2
14	10G-1330	CLEVIS PIN MS20392-2C33	1
15	10C-5191	BOLT NAS 623-4-19	1
16	10N-1740	CLINCH NUT 1/4 MS21042-4	1
17	10P-1100	SAFETY RING AN 9491 SMALL	1
18	10R-0342	RIVET AL 1/8 * .25	2
19	10U-5124	WASHER NYLON .735 * .250 * .062	2
20	40K-1301	KINGPOST STRM LF VG TUBE ONLY	1



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TITLE: RAMAIR KINGPOST

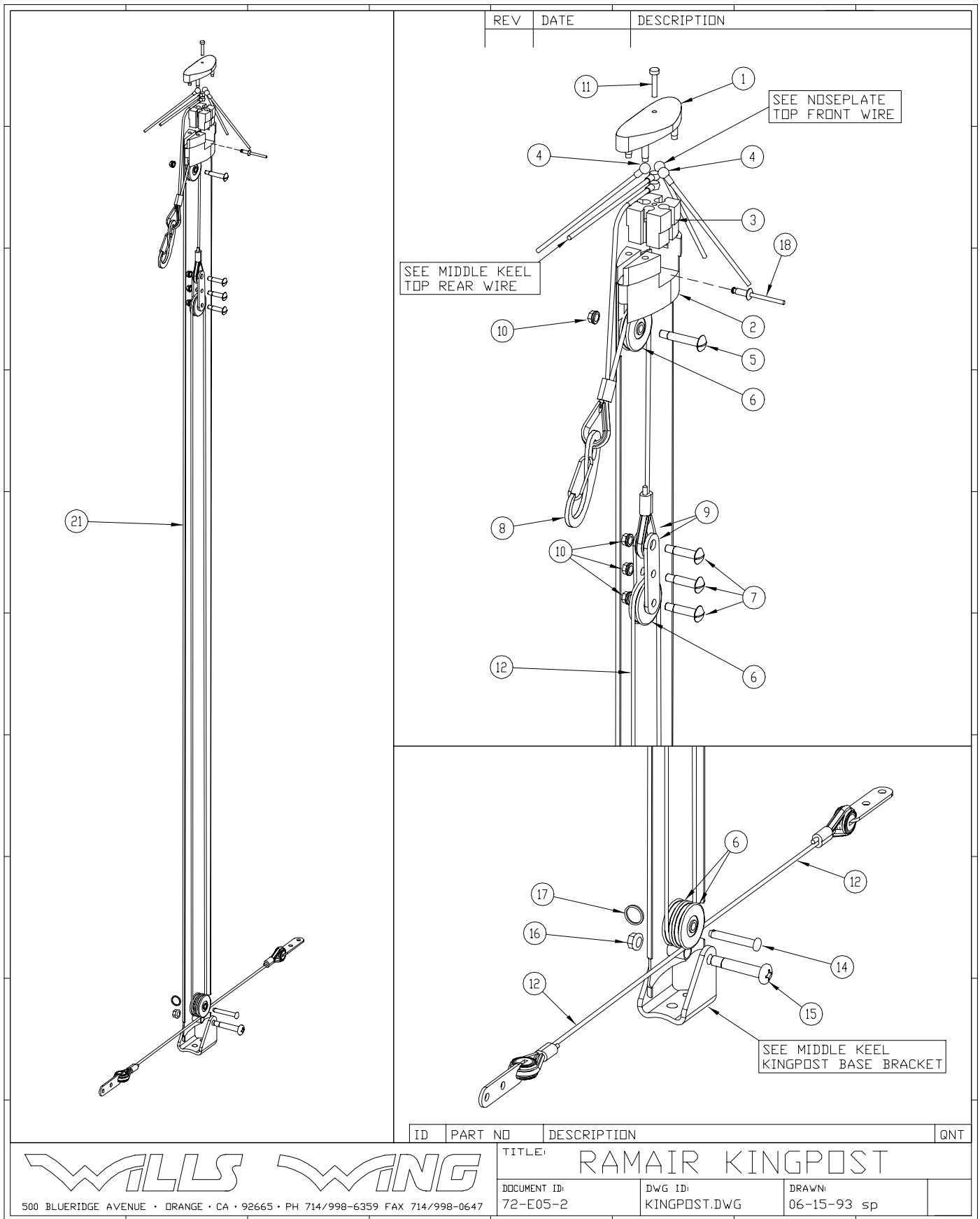
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DRAWN: 06-15-93 sp

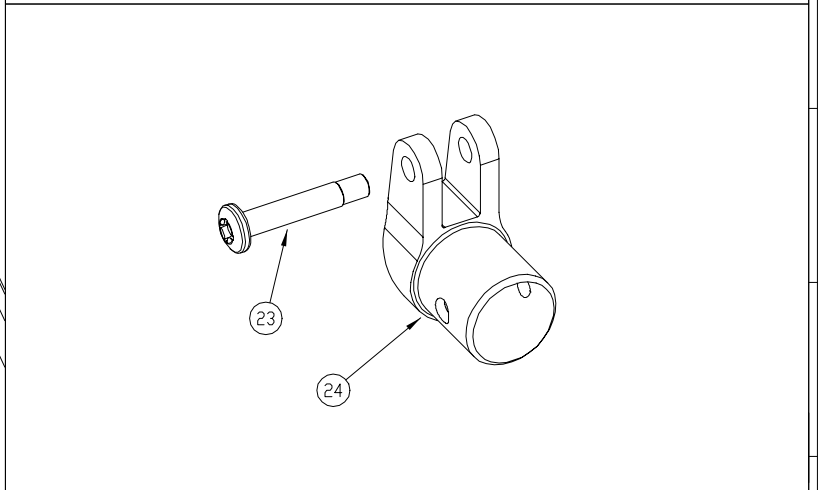
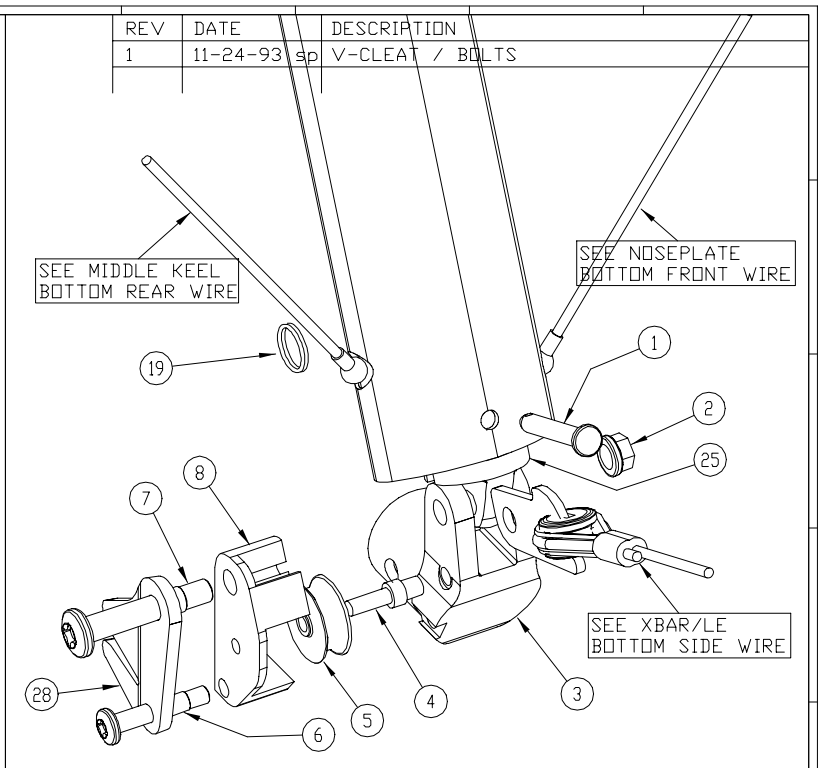
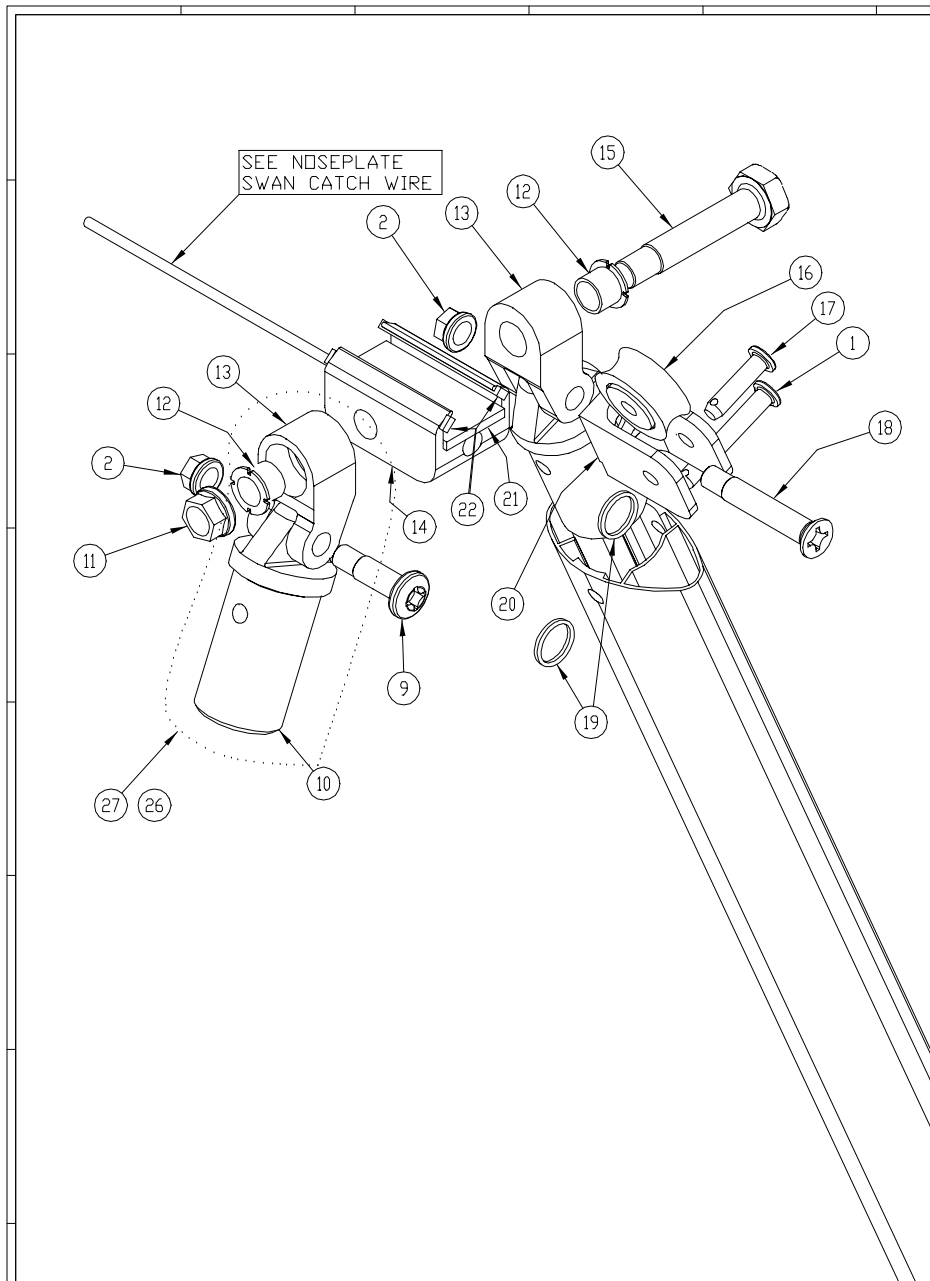
Drawing 154-E05-2 Revised 03-01-96

1	15J-1501	CAP AT KINGPOST TOP POLYCARB	1
2	15J-1502	TOP AT KINGPOST POLYCARB	1
3	20G-2323	KINGPOST TOP INSERT AT ALUM	1
4	40P-2202	WIRE TOP SIDE BALL SWEDGE 3/32	2
5	10B-1161	BOLT AN23-16A	1
6	20K-5012	PULLEY AN210-1A PHENOLIC - VG	4
6A	15K-1011	PULLEY DELRIN AN210-1A REPLACE	4
	10T-4111	BUSH SS .312 * .058 * .295	4
7	10B-1101	BOLT AN23-10A	3
8	40P-5002	WIRE VG COMPENSATOR UPPER	1
9	20E-2304	TANG 3 HOLE VG 2" LONG	6
10	10N-1730	CLINCH NUT 3/16 MS20142-3	4
11	10M-1361	SCREW 6/32 FLSTR MACH HEAD SS	1
12	40P-5003	WIRE VG COMPENSATOR LOWER	1
14	10G-1330	CLEVIS PIN MS20392-2C33	1
15	10C-5191	BOLT NAS 623-4-19	1
16	10N-1740	CLINCH NUT 1/4 MS21042-4	1
17	10P-1100	SAFETY RING AN 9491 SMALL	1
18	10R-0342	RIVET AL 1/8 * .25	2
21	40K-1303	KINGPOST STRM LF VG TUBE ONLY	1



Drawing 154-E06-1 Revised 03-01-96

1	10G-1330	CLEVIS PIN	MS20392-2C33	4
2	10N-1740	CLINCH NUT 1/4	MS21042-4	4
3	20G-1802	CBAR BRACKET	AT BASE END VG	1
4	10K-4040	PIN VG	PULLEY SS MACHINED	1
5	20P-1220	PULLEY ALUM MACH	CBAR BASE VG	1
6	10D-1161	BOLT NAS	603-16P	1
7	10C-5241	BOLT NAS	623-4-24	1
8	20G-1803	BRACKET	BASE PULLEY ROPE VG	1
9	10C-5111	BOLT NAS	623-4-11	1
10	20G-1431	CBAR PLUG	AT LEG TOP STREAM	2
11	10N-1750	CLINCH NUT 5/16	MS21042-5	1
12	10T-5113	BUSH SPLIT HEADED	AT CB SHORT	2
13	20G-1711	CBAR ELBOW	AT TOP STREAM	2
14	20G-2202	SLIDER	LAYFLAT CBAR APEX 2	0
15	10A-3201	BOLT AN5-20A	GROUND & SLOTTED	1
16	20P-1230	PULLEY HARKN SHEAVE	TOP LEG VG	1
17	10G-4201	CLEVIS PIN SS	HARKN 2C20	1
18	10C-2112	BOLT NAS	517-4-11 GROUND	1
19	10P-1100	SAFETY RING AN	9491 SMALL	5
20	20G-1501	BRACKET TOP LEG	PULLEY ROPE VG	1
21	15J-2001	GLIDE	LAYFLT APEX SLIDR BOTM	1
22	15J-2002	GLIDE	LAYFLAT APEX SLIDR SIDE	2
23	10C-5121	BOLT NAS	623-4-12	1
24	20G-1801	CBAR BRACKET	AT BASE TUBE END	1
25	20G-1424	CBAR PLUG	AT LEG BOT STR TOE95	2
26	45G-3064	COVER NEOPRENE	CB APEX RT VG	1
27	45G-3062	COVER NEOPRENE	CBAR APEX LEFT	1
28	20C-1801	JAMCLEAT KNIFE	V-CUT / ROPE VG	1



REV	DATE	DESCRIPTION
1	11-24-93 sp	V-CLEAT / BOLTS

ID	PART NO	DESCRIPTION	QNT
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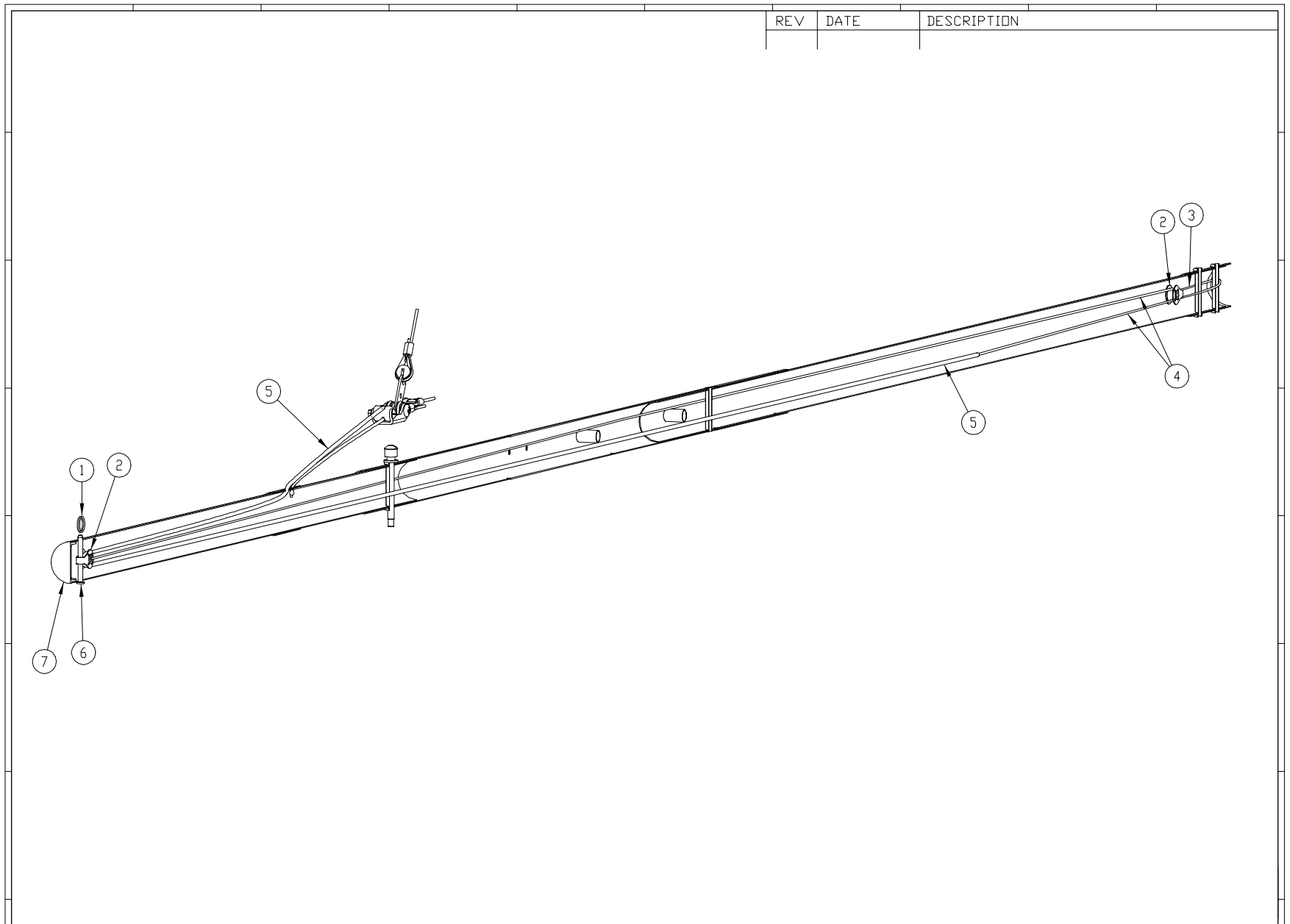
RAMAIR CONTROL BAR

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TITLE:	DOCUMENT ID:	DWG ID:	DRAWN:
	72-E06-1	CBAR.DWG	6-15-93 sp

Drawing 154-E09-0 Revised 03-01-96

1	10P-1100	SAFETY RING AN 9491	SMALL	1
2	20P-1201	PULLEY RONSTAN #666	Z-HARNESS	2
3	30J-1111	LEECHLINE 205	5/64 PER FOOT	1
4	30J-2101	BUNGEE	- 1/8	12
5	30J-3101	CORD	- 4mm ACCESSORY PER FOOT	12
6	10G-1530	CLEVIS PIN	MS20392-2C53	1
7	15C-4209	ENDCAP	42mm OD 40.2 ID	1



REV	DATE	DESCRIPTION

ID	PART NO	DESCRIPTION	QNT

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TITLE: RAMAIR XBAR HAULBACK	
DOCUMENT ID: 72-E09-0	DWG ID: KEELHAUL.DWG
DRAWN: 06-15-93 sp	

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