

RANS S-12S AIRAILE

PARTS MANUAL PAGES

TABLE OF CONTENTS

SECTION 0 - GENERAL INFORMATION

SECTION 1 - FUSELAGE & LANDING GEAR

SECTION 2 - INTERNAL SYSTEMS

SECTION 3 - ENCLOSURES

SECTION 4 - 912 ENGINE

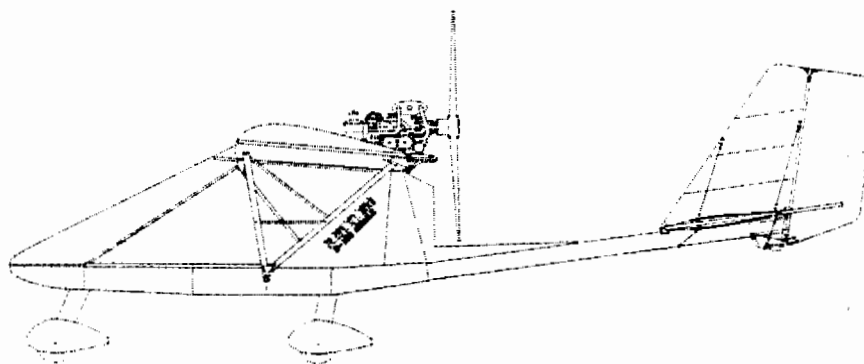
SECTION 5 - 912 INSTRUMENTS & ELECTRICAL

SECTION 6 - WING FRAME ASSEMBLY

SECTION 7 - TAIL GROUP FRAME ASSEMBLY

SECTION 8 - COVERING

SECTION 9 - OPTIONS

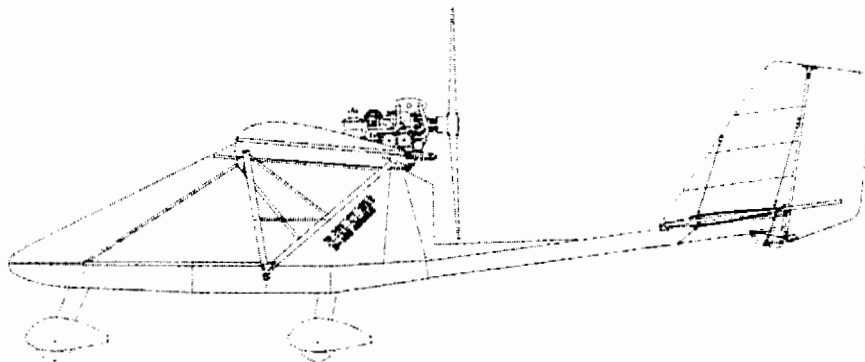
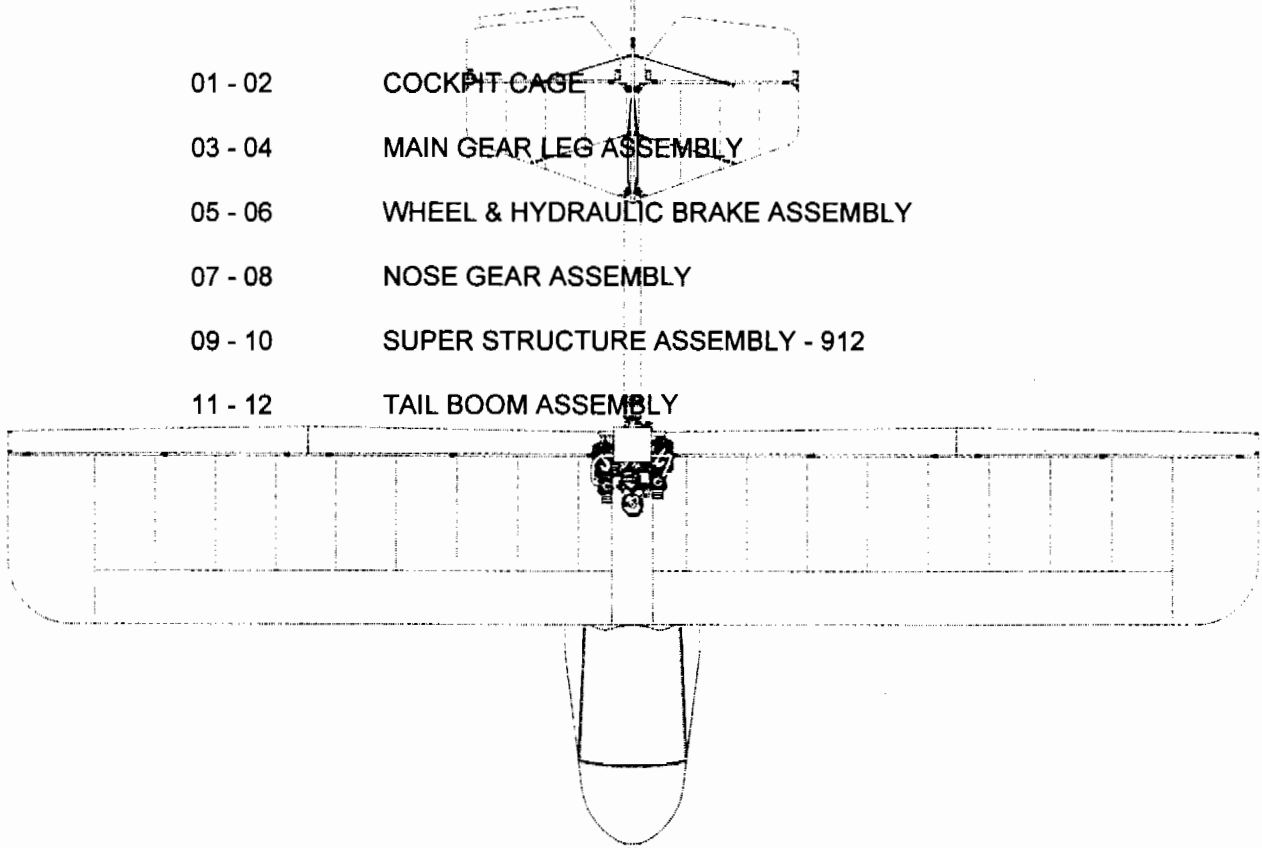


RANS S-12S AIRAILE

PARTS MANUAL PAGES

SECTION 1 - FUSELAGE & LANDING GEAR

- | | |
|---------|----------------------------------|
| 01 - 02 | COCKPIT CAGE |
| 03 - 04 | MAIN GEAR LEG ASSEMBLY |
| 05 - 06 | WHEEL & HYDRAULIC BRAKE ASSEMBLY |
| 07 - 08 | NOSE GEAR ASSEMBLY |
| 09 - 10 | SUPER STRUCTURE ASSEMBLY - 912 |
| 11 - 12 | TAIL BOOM ASSEMBLY |

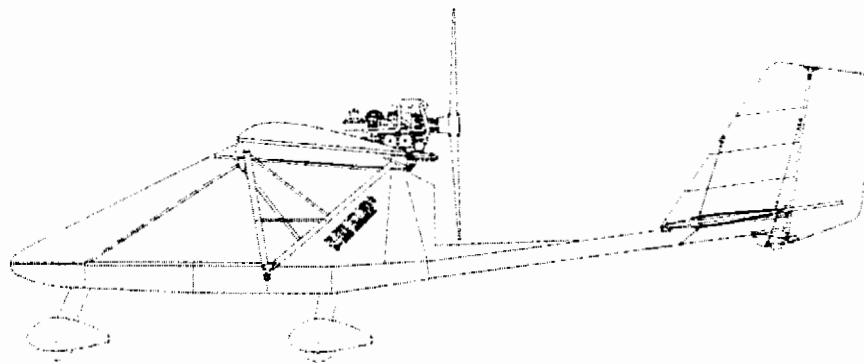
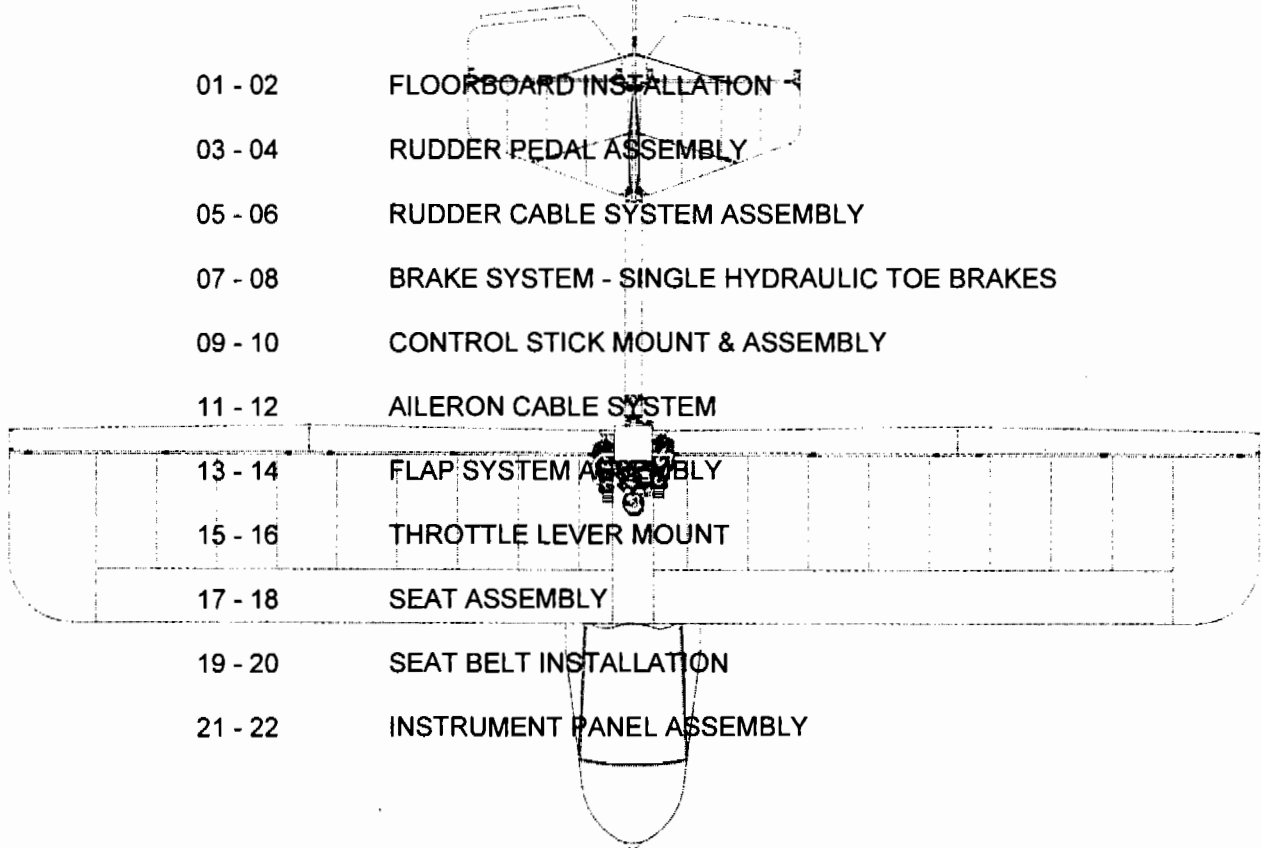


RANS S-12S AIRAILE

PARTS MANUAL PAGES

SECTION 2 - INTERNAL SYSTEMS

01 - 02	FLOORBOARD INSTALLATION
03 - 04	RUDDER PEDAL ASSEMBLY
05 - 06	RUDDER CABLE SYSTEM ASSEMBLY
07 - 08	BRAKE SYSTEM - SINGLE HYDRAULIC TOE BRAKES
09 - 10	CONTROL STICK MOUNT & ASSEMBLY
11 - 12	AILERON CABLE SYSTEM
13 - 14	FLAP SYSTEM ASSEMBLY
15 - 16	THROTTLE LEVER MOUNT
17 - 18	SEAT ASSEMBLY
19 - 20	SEAT BELT INSTALLATION
21 - 22	INSTRUMENT PANEL ASSEMBLY



RANS S-12S AIRRAIL

PARTS MANUAL PAGES

SECTION 3 - ENCLOSURES

01 - 02 NOSE POD ASSEMBLY

03 - 04 #4 BELLY PAN INSTALLATION

05 - 06 #3 BELLY PAN INSTALLATION

07 - 08 #2 BELLY PAN INSTALLATION

09 - 10 #1 BELLY PAN INSTALLATION

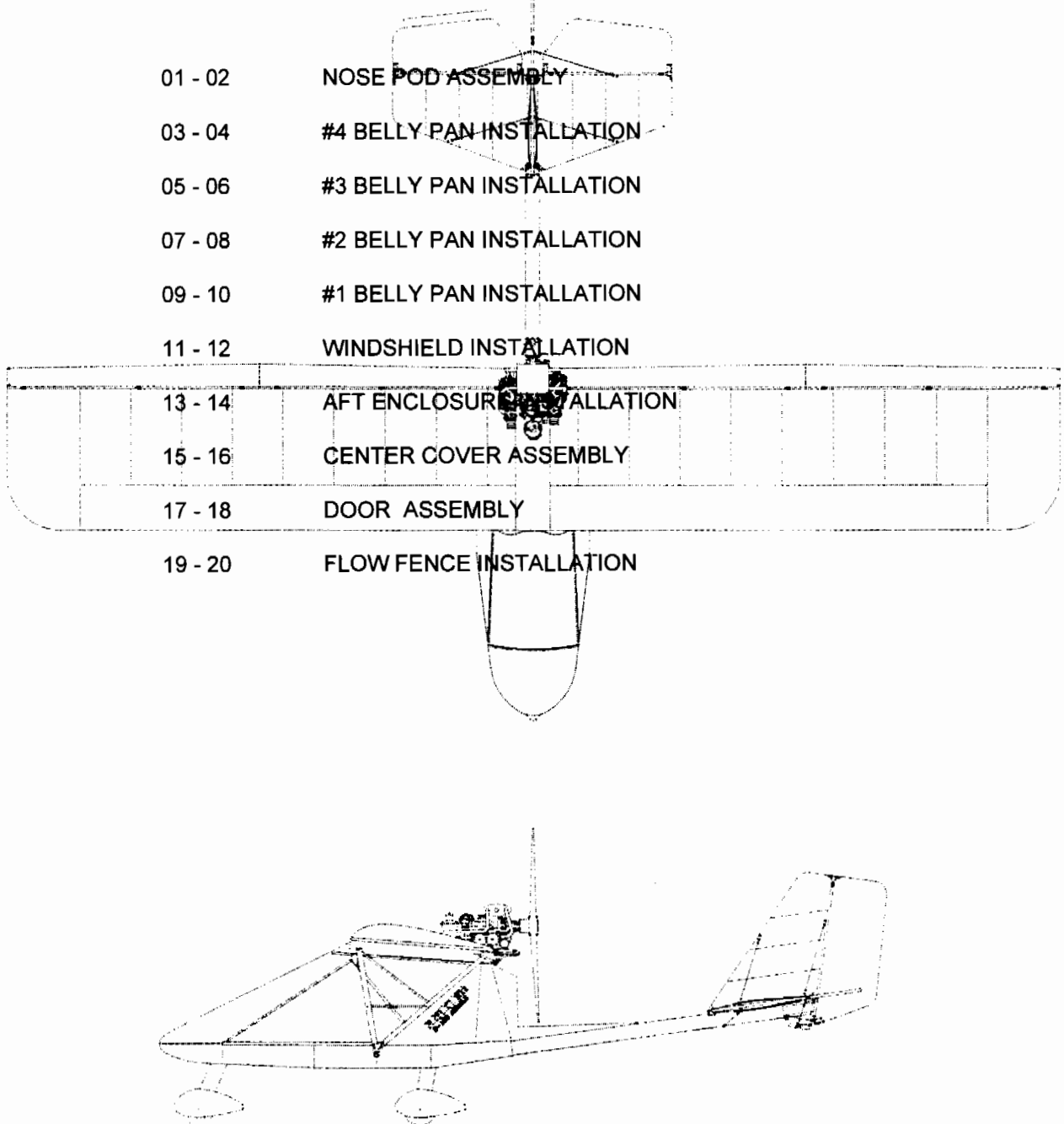
11 - 12 WINDSHIELD INSTALLATION

13 - 14 AFT ENCLOSURE INSTALLATION

15 - 16 CENTER COVER ASSEMBLY

17 - 18 DOOR ASSEMBLY

19 - 20 FLOW FENCE INSTALLATION

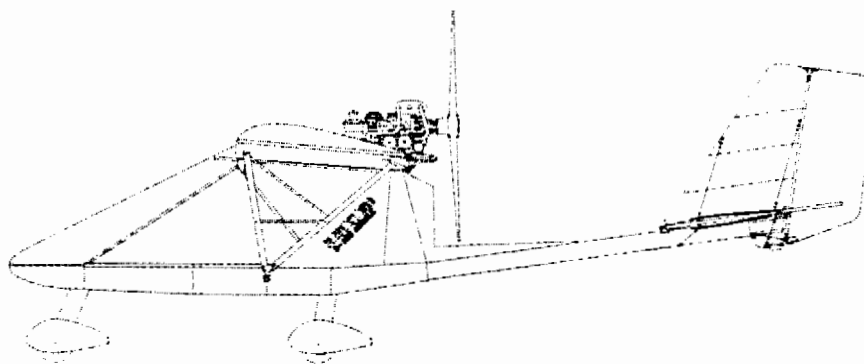
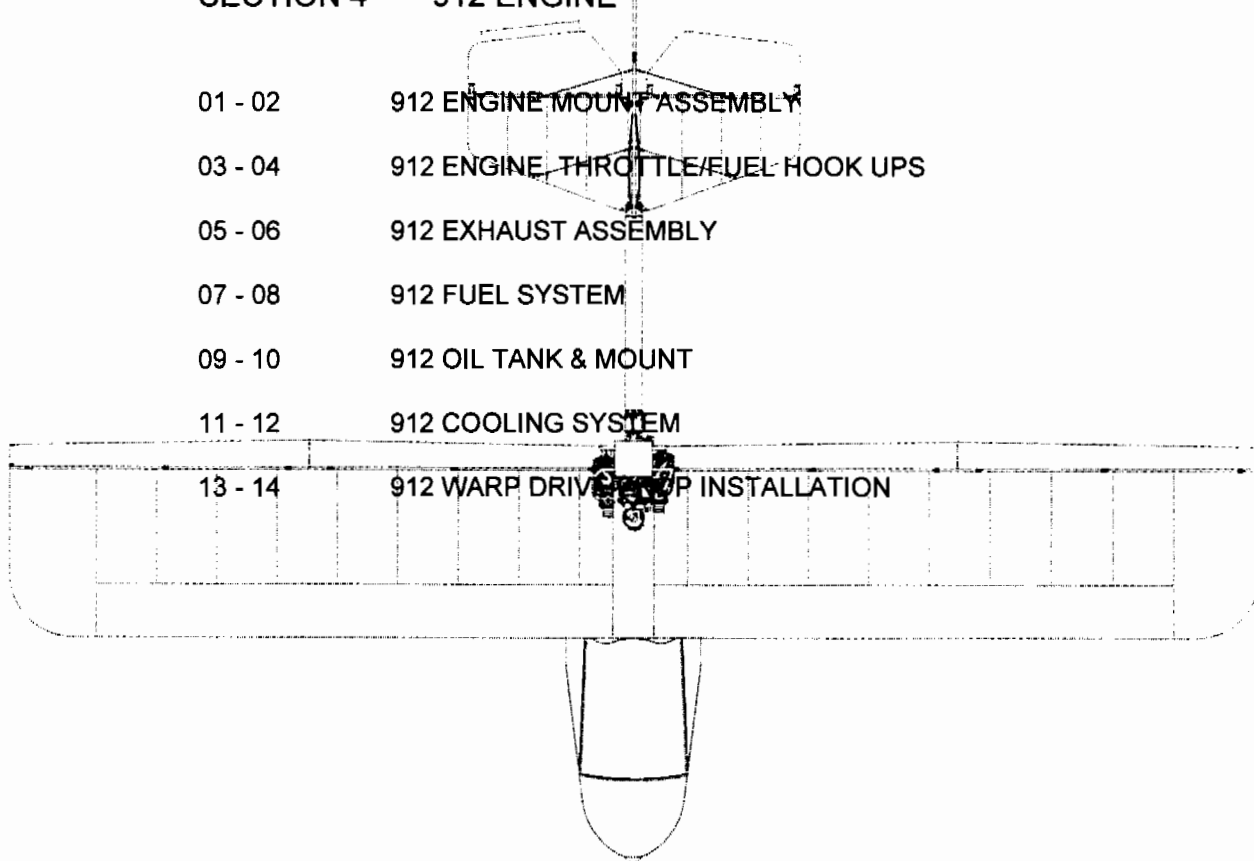


RANS S-12S AIRAILE

PARTS MANUAL PAGES

SECTION 4 - 912 ENGINE

01 - 02	912 ENGINE MOUNT ASSEMBLY
03 - 04	912 ENGINE THROTTLE/FUEL HOOK UPS
05 - 06	912 EXHAUST ASSEMBLY
07 - 08	912 FUEL SYSTEM
09 - 10	912 OIL TANK & MOUNT
11 - 12	912 COOLING SYSTEM
13 - 14	912 WARP DRIVE UP INSTALLATION



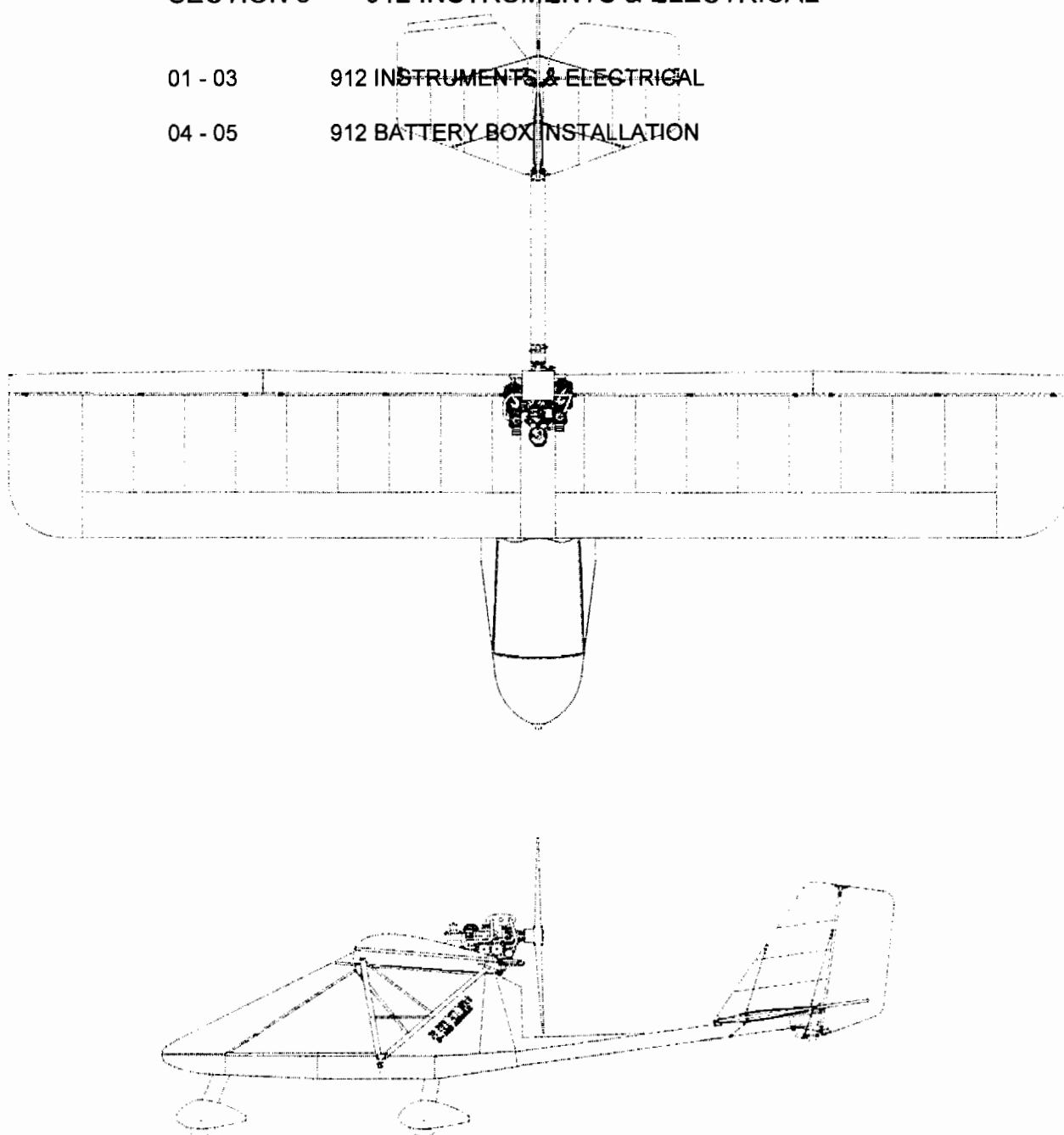
RANS S-12S AIRAILE

PARTS MANUAL PAGES

SECTION 5 - 912 INSTRUMENTS & ELECTRICAL

01 - 03 912 INSTRUMENTS & ELECTRICAL

04 - 05 912 BATTERY BOX INSTALLATION

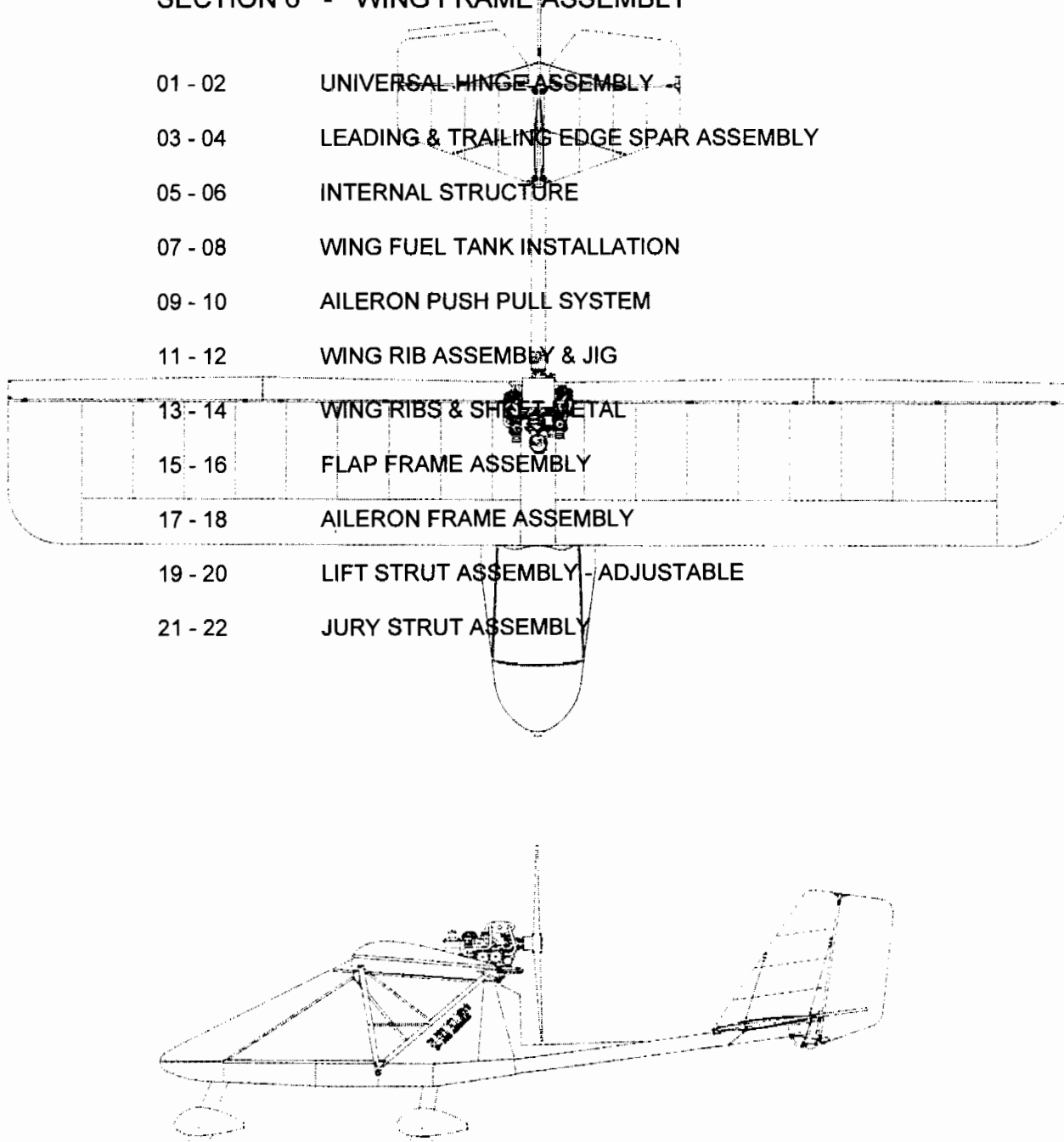


RANS S-12S AIRAILE

PARTS MANUAL PAGES

SECTION 6 - WING FRAME ASSEMBLY

01 - 02	UNIVERSAL HINGE ASSEMBLY
03 - 04	LEADING & TRAILING EDGE SPAR ASSEMBLY
05 - 06	INTERNAL STRUCTURE
07 - 08	WING FUEL TANK INSTALLATION
09 - 10	AILERON PUSH PULL SYSTEM
11 - 12	WING RIB ASSEMBLY & JIG
13 - 14	WING RIBS & SHEET METAL
15 - 16	FLAP FRAME ASSEMBLY
17 - 18	AILERON FRAME ASSEMBLY
19 - 20	LIFT STRUT ASSEMBLY - ADJUSTABLE
21 - 22	JURY STRUT ASSEMBLY

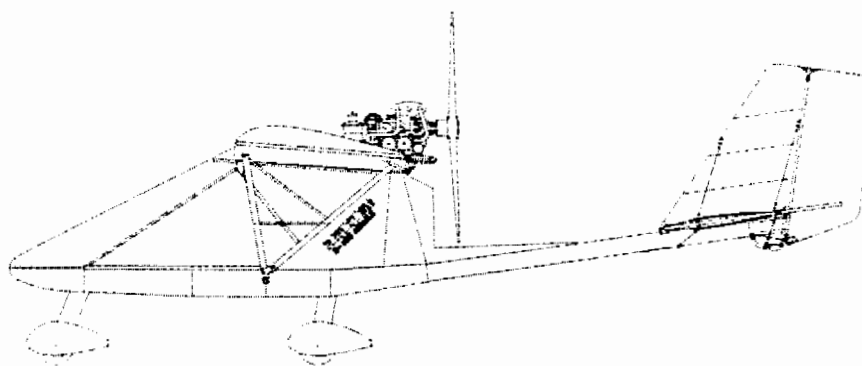
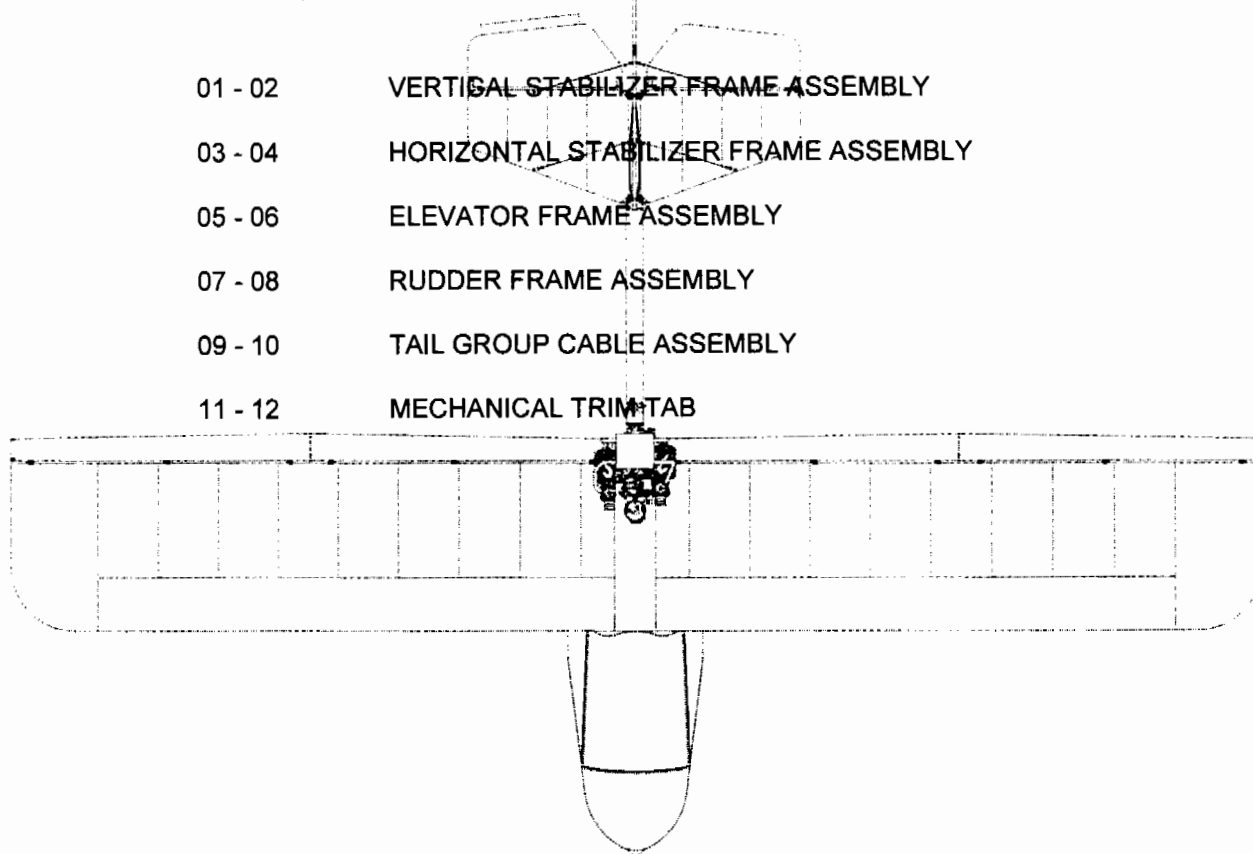


RANS S-12S AIRAILE

PARTS MANUAL PAGES

SECTION 7 - TAIL GROUP FRAME ASSEMBLY

- 01 - 02 VERTICAL STABILIZER FRAME ASSEMBLY
- 03 - 04 HORIZONTAL STABILIZER FRAME ASSEMBLY
- 05 - 06 ELEVATOR FRAME ASSEMBLY
- 07 - 08 RUDDER FRAME ASSEMBLY
- 09 - 10 TAIL GROUP CABLE ASSEMBLY
- 11 - 12 MECHANICAL TRIM TAB



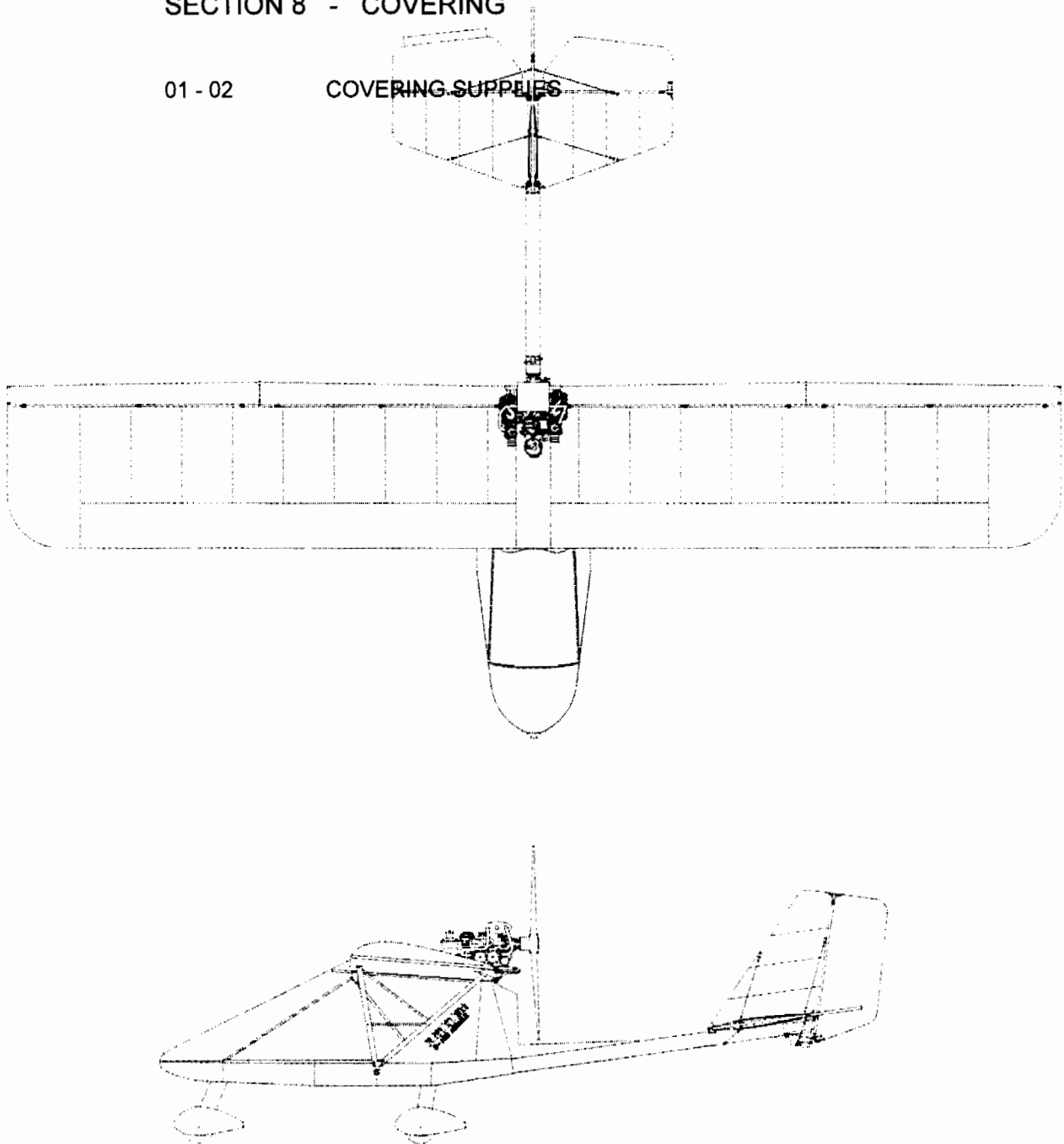
RANS S-12S AIRAILE

PARTS MANUAL PAGES

SECTION 8 - COVERING

01 - 02

COVERING SUPPLIES

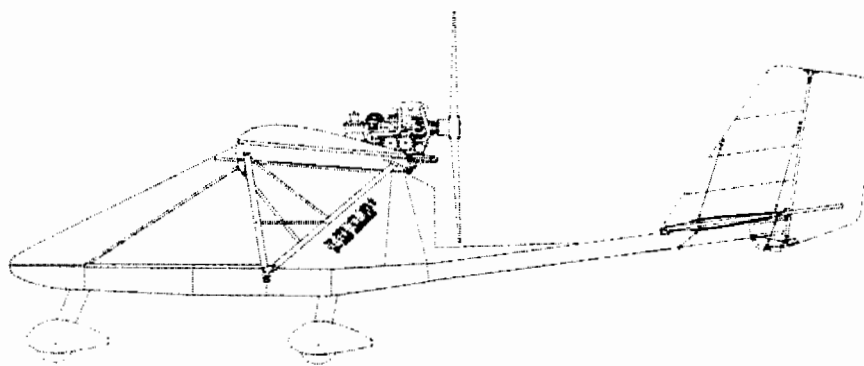


RANS S-12S AIRAILE

PARTS MANUAL PAGES

SECTION 9 - OPTIONS

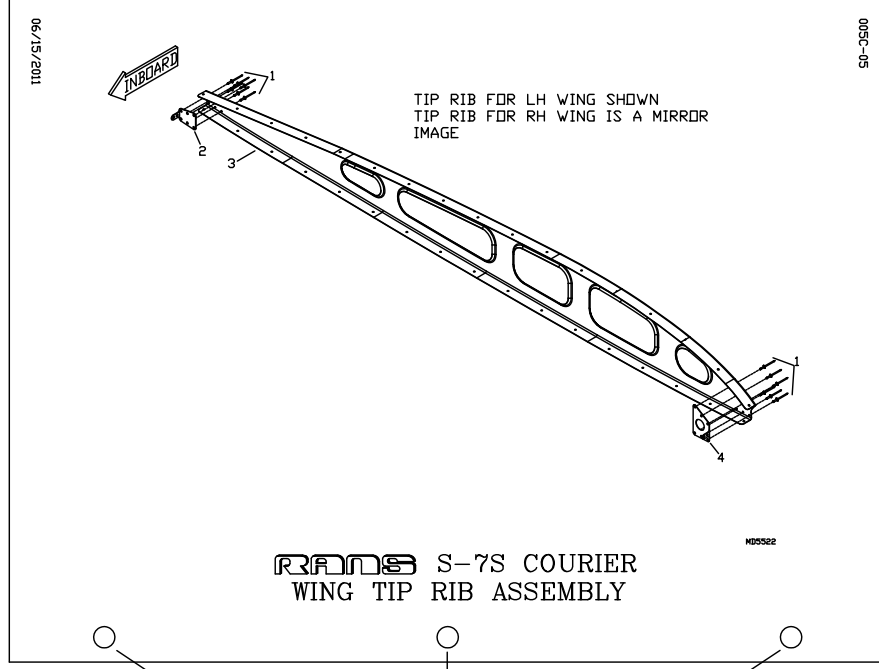
01 - 02	OPTIONAL WHEEL PAINT INSTALLATION
03 - 04	OPTIONAL STROBES
05 - 06	OPTIONAL TAILWHEEL INSTALLATION
07 - 08	BRAKE SYSTEM - OPTIONAL DUAL HYDRAULIC TOE BRAKES
09 - 10	OPTIONAL PUDDLE JUMPER FLOATS
11 - 12	OPTIONAL PUDDLE JUMPER FLOATS - MAIN GEAR RETRACTION SYSTEM
13 - 14	OPTIONAL PUDDLE JUMPER FLOATS - NOSE GEAR
15 - 16	OPTIONAL PUDDLE JUMPER FLOATS - FLOAT BOX ASSEMBLY
17 - 18	OPTIONAL PUDDLE JUMPER FLOATS - STEER CONTROL SYSTEM
19 - 20	OPTIONAL PUDDLE JUMPER FLOATS - NOSE GEAR RETRACTION SYSTEM
21 - 22	OPT PUDDLE JUMPER FLOATS - VALVE, TANK & COMPRESSOR INSTALLATION
23 - 24	OPTIONAL PUDDLE JUMPER FLOATS - RETRACTION SYSTEM SCHEMATIC
25 - 26	OPTIONAL COMPASS MOUNT ASSEMBLY



STEP 1:

PARTS MANUAL AS SHIPPED or PRINTED.
PLACE IN 3-RING BINDER TO SECURE.

PARTS DRAWING PAGE



3-HOLE PUNCH

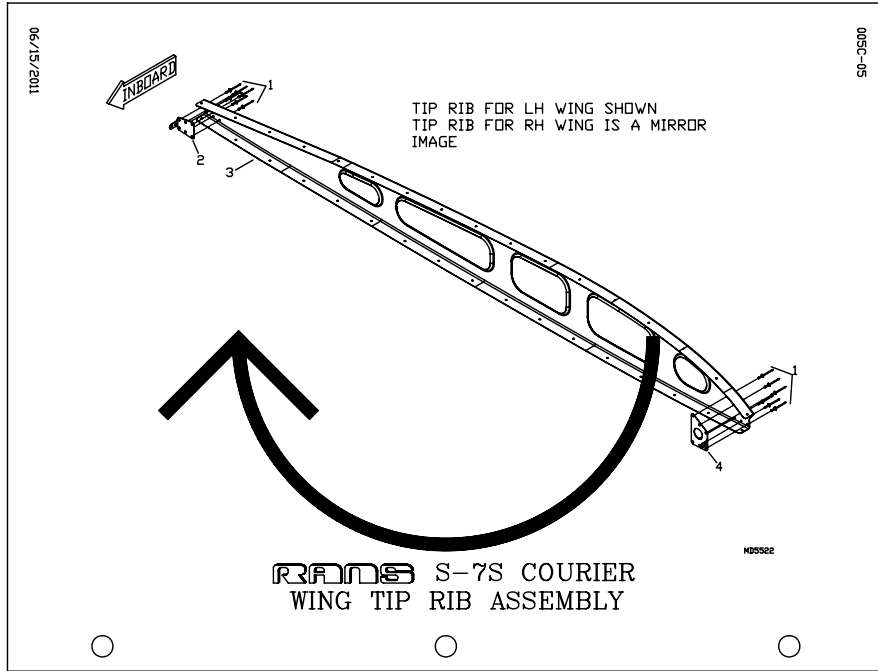
EXAMPLE ONLY.
MAY NOT REPRESENT ACTUAL PAGES
FROM YOUR MANUAL.

SEE NEXT PAGE

STEP 2:

OPEN 3-RING BINDER.
REMOVE PARTS DRAWING PAGE AND
ROTATE 180° TO FACE
CORRESPONDING
PARTS DESCRIPTION PAGE.
REPEAT FOR REMAINING PAGES

PARTS DRAWING PAGE



PARTS DESCRIPTION PAGE

S-7S COURIER - WING - TIP RIB ASSEMBLY				PAGE 005C-06
#	DESCRIPTION	PART NUMBER	QUANTITY	
1.	1/8" ALUMINUM RIVET	AAQ-41	24	
2.	RIB CLIP TRAILING EDGE - LH	KPW0372-L	4	
2.	RIB CLIP TRAILING EDGE - RH	KPW0372-R	1	
3.	WING TIP RIB - LH	KPW0544-L	1	
3.	WING TIP RIB - RH	KPW0544-R	1	
4.	RIB CLIP LEADING EDGE - LH	KPW0373-L	1	
4.	RIB CLIP LEADING EDGE - RH	KPW0373-R	1	

6/15/2011

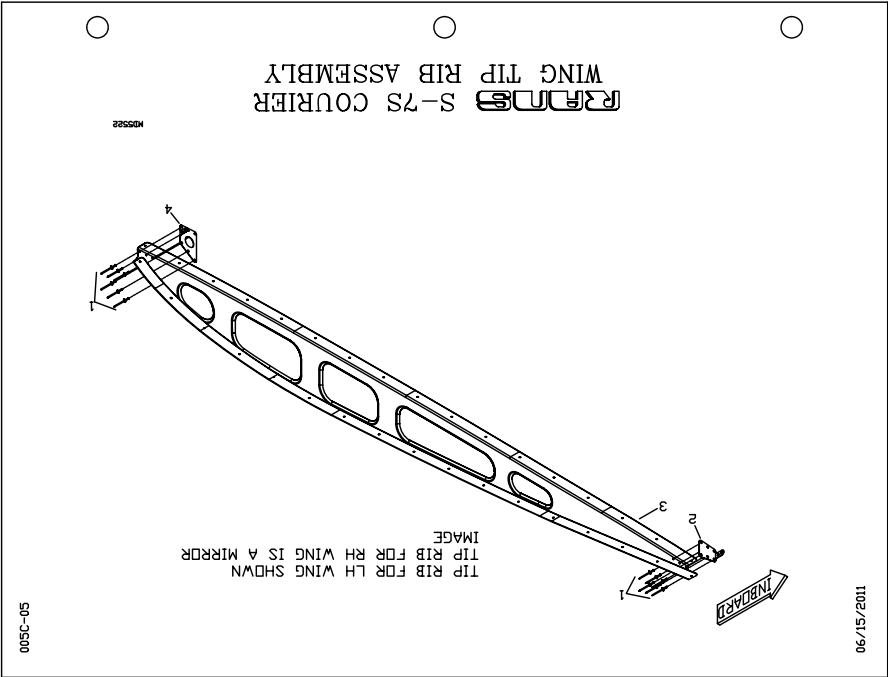
EXAMPLE ONLY.
MAY NOT REPRESENT ACTUAL PAGES
FROM YOUR MANUAL.

SEE NEXT PAGE

STEP 3:

PARTS DRAWING PAGE
FACES CORRESPONDING
PARTS DESCRIPTION PAGE
WHEN FINAL SECURED IN
BINDER

PARTS DRAWING PAGE



PARTS DESCRIPTION PAGE

S-7S COURIER - WING - TIP RIB ASSEMBLY			
#	DESCRIPTION	PART NUMBER	QUANTITY
1.	1/8" ALUMINUM RIVET	AAQ41	24
2.	RIB CLIP TRAILING EDGE - LH	KPW0372-L	4
2.	RIB CLIP TRAILING EDGE - RH	KPW0372-R	1
3.	WING TIP RIB - LH	KPW0544-L	1
3.	WING TIP RIB - RH	KPW0544-R	1
4.	RIB CLIP LEADING EDGE - LH	KPW0373-L	1
4.	RIB CLIP LEADING EDGE - RH	KPW0373-R	1

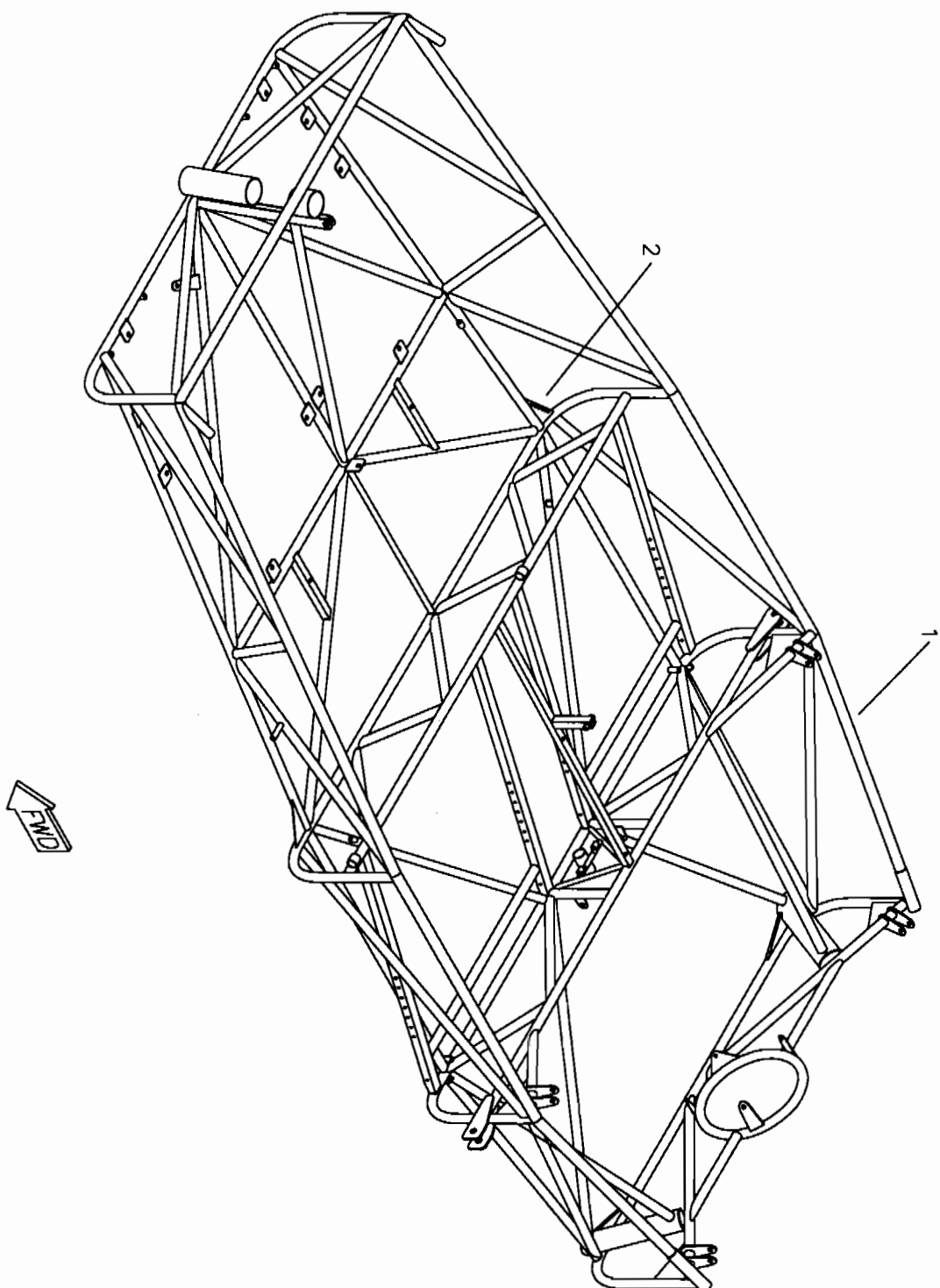
EXAMPLE ONLY.
MAY NOT REPRESENT ACTUAL PAGES
FROM YOUR MANUAL.

S-12S AIRAILE - GENERAL INFORMATION

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Flight Log Book	FLIGHT LOG	1
2.	Maintenance Log Book	MAINTENANCE LOG	1
3.	Assembly Manual	ASSEMBLY MANUAL	1
4.	Raw Stock Kit	KAAC0026	1
4.	1/4" x .028 x 24" Anodized Aluminum Tubing *	KAAC0026-1	1
4.	1/2" x .035 x 12' Anodized Aluminum Tubing *	KAAC0026-2	1 stk
4.	1/2" x .035 x 6' Anodized Aluminum Tubing *	KAAC0026-2	1
4.	3/8" x .058 x 4" Anodized Aluminum Tubing *	KAAC0026-3	1
4.	3/4" x .058 x 11" Anodized Aluminum Tubing *	KAAC0026-4	1
4.	1/2" x .083 x 3" Anodized Aluminum Tubing *	KAAC0026-5	1
4.	7/8" x .058 x 6' Anodized Aluminum Tubing *	KAAC0026-6	1
4.	1" x .032 x 8" Aluminum Strip *	KAAC0026-8	1
4.	1/8" x 3' Stainless Steel Rod *	KAAC0026-9	1
4.	1/2" x .028 x 12' Anodized Aluminum Tubing *	KAAC0026-10	2 stk
4.	1/2" x .028 x 6' Anodized Aluminum Tubing *	KAAC0026-10	1
4.	1" x .049 x 9' Anodized Aluminum Tubing *	KAAC0026-11	1
4.	3/8" x .095 x 8" Anodized Aluminum Tubing *	KAAC0026-12	1
5.	Experimental Decal Sheets	EXPER-DECAL	1
6.	Range Decal	RANGE DECAL	1
7.	#40 Silver Clecos	#40CLECOS	6
8.	#30 Copper Clecos	#30CLECOS	12
9.	#11 Gold Clecos	#11CLECOS	6
10.	Fuselage Decal Set - "Super" - Black **	PP-DECAL-SUPER-B	0
10.	Fuselage Decal Set - "Super" - White **	PP-DECAL-SUPER-W	0
11.	Safety Wire	SAFETY WIRE	1 ft
12.	Loctite Blue	LOC-TITE	1
13.	Epoxy	EPOXY	1
14.	Cleco Pliers	CLECO PLIERS	1
15.	1/4" Clear Fuel Line, 2'	KSFS0008	2 ft
16.	Warning Label	KPPL0001	1
17.	J&B Weld Epoxy	J & B	2
18.	Foam Rubber Strip, 3/8" x 3/16" x 17'	WS-FS	1 rls

*Supplied in Raw Stock Kit.

**May be purchased separately, call the Parts Dept for pricing.



REAR S-12S AIRAILE COCKPIT CAGE

MD3492

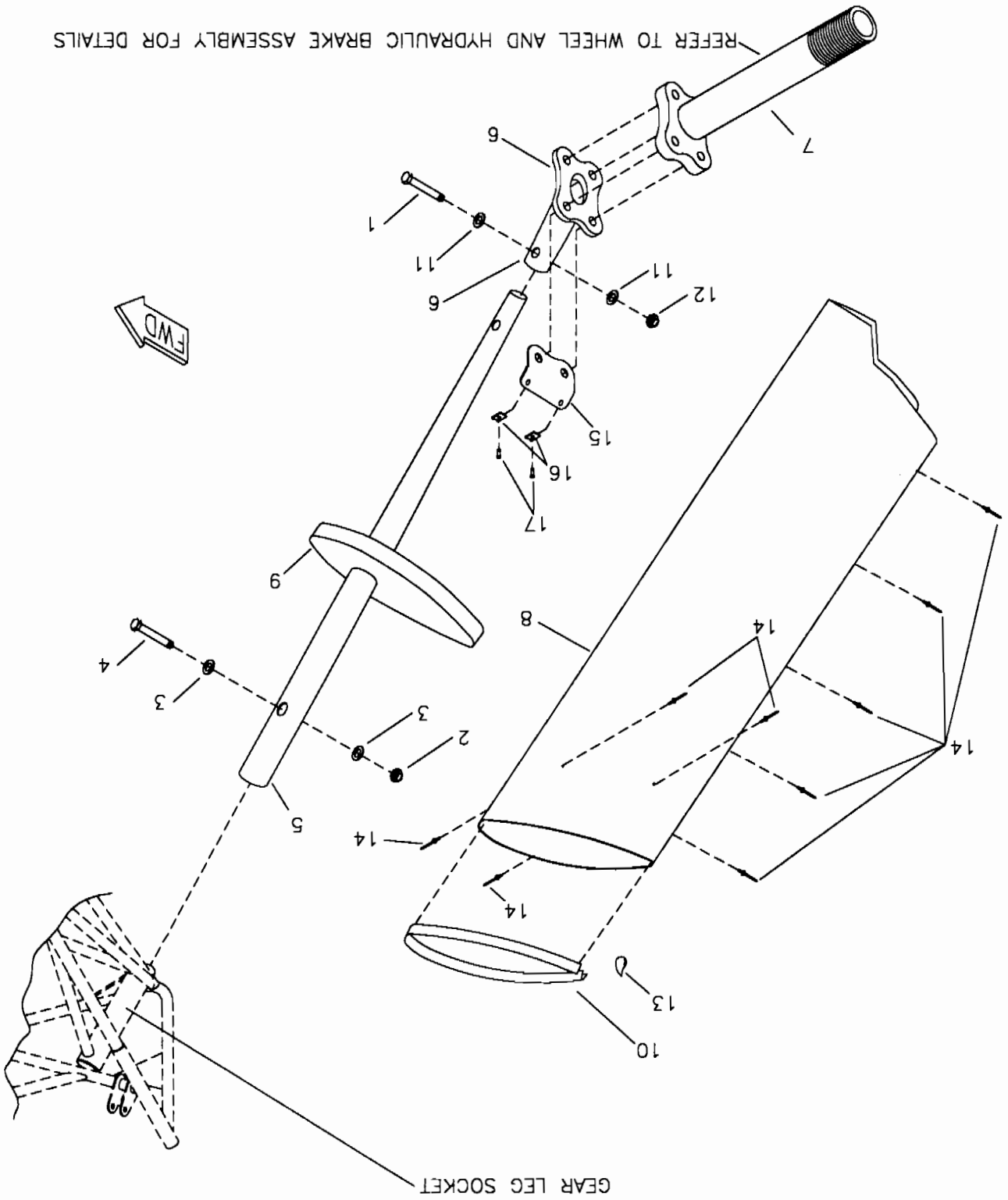
S-12S AIRAILE - COCKPIT CAGE

# DESCRIPTION	PART NUMBER	QUANTITY
1. Cockpit Cage	KAFU0015	1
2. Serial Number Location	-----	0

RRMS S-12S AIRAILE MAIN GEAR LEG ASSEMBLY

MD3495

REFER TO WHEEL AND HYDRAULIC BRAKE ASSEMBLY FOR DETAILS

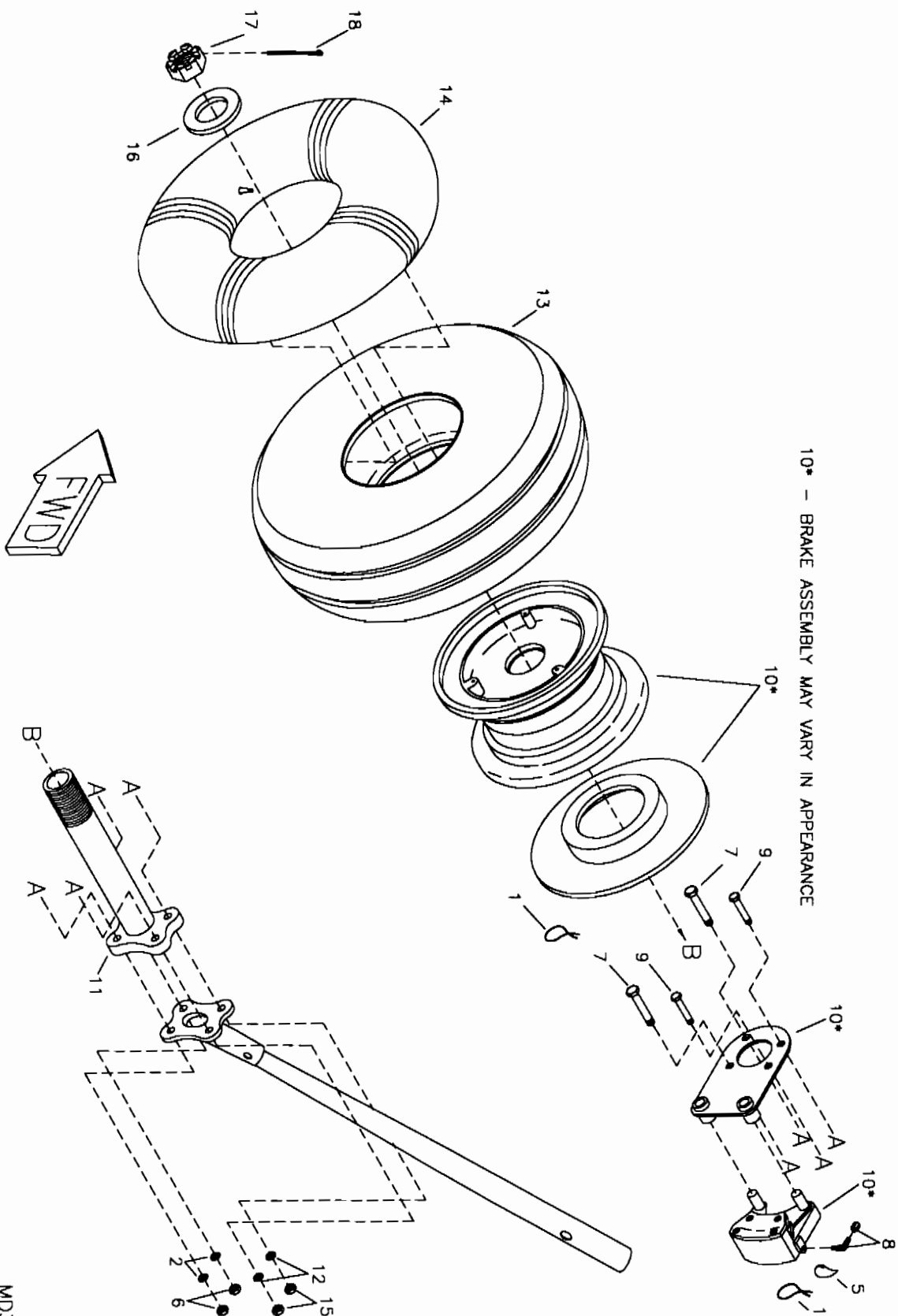


#	DESCRIPTION	PART NUMBER	QUANTITY
1.	1/4" Bolt	AN4-14A	2
2.	5/16" Shear Nut	AN364-524A	2
3.	5/16" Thin Washer	AN960-516L	4
4.	5/16" Bolt	AN5-16A	2
5.	Gear Leg	KPMG0064	2
6.	Axle Mount Socket	KPMG0168	2
7.	Axle *	----	0
8.	Gear Leg Fairing, RH	KPMG0170-RH	1
8.	Gear Leg Fairing, LH	KPMG0170-LH	1
9.	Fairing Rib - Main Gear	KPMG0091	2
10.	Rubber Edging	X1011	36 in
11.	1/4" Thin Washer	AN960-416L	4
12.	1/4" Shear Nut	AN364-428A	2
13.	Adhesive Super Glue **	-----	0
14.	3/32" Aluminum Pop Rivet	40APR1/8	18
15.	Main Gear Fairing Lower Bracket-LH	KPMG0127-L	1
15.	Main Gear Fairing Lower Bracket-RH	KPMG0127-R	1
16.	Tinnerman	A1789-8Z-1	4
17.	#8 Pan Head Screw	8X1/2 PHS	4

*See wheel and hydraulic brake assembly for part number.

**Builder Supplied.

6/23/2003



MD3494

RA-108 S-12S AIRAIL WHEEL AND HYDRAULIC BRAKE ASSEMBLY

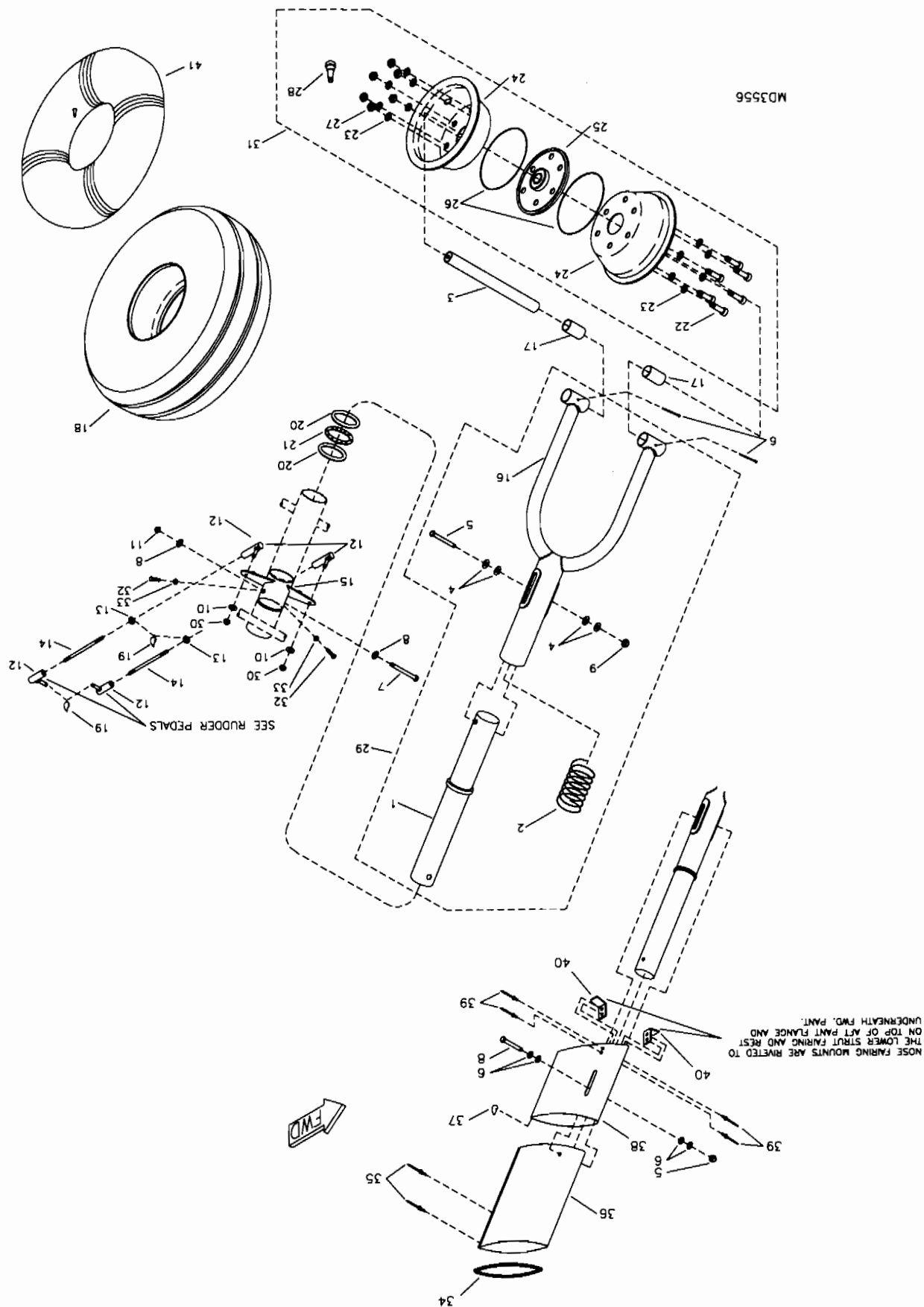
#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Safety Wire **	----	0
2.	3/8" Thick Washer	AN960-616	4
3.	5/16" Thick Washer	AN960-516	4
4.	5/16" Shear Nut	AN364-524A	2
5.	Thread Sealant **	----	0
6.	3/8" Tensile Nut	AN365-624A	4
7.	3/8" Bolt	AN6-17A	4
8.	90 Fitting	KSBS0001	2
9.	5/16" Bolt	AN5-16A	4
10.	Hydraulic Brake Assembly, 6"	KSBS0030	2
11.	Axle *	----	0
12.	5/16" Thin Washer	AN960-516L	4
13.	Tire, 6"	KSMG0013	2
14.	Tire Tube, 6"	KSMG0016	2
15.	5/16" Tensile Nut	AN365-524A	4
16.	Washer *	----	0
17.	Castle Nut *	----	0
18.	Cotter Pin *	----	0

*Supplied pre-assembled to KSBS0030.

**Builder Supplied

6/30/2003

R-12S AIRRALE NOSE GEAR ASSEMBLY



S-12S AIRAILE - NOSE GEAR ASSEMBLY

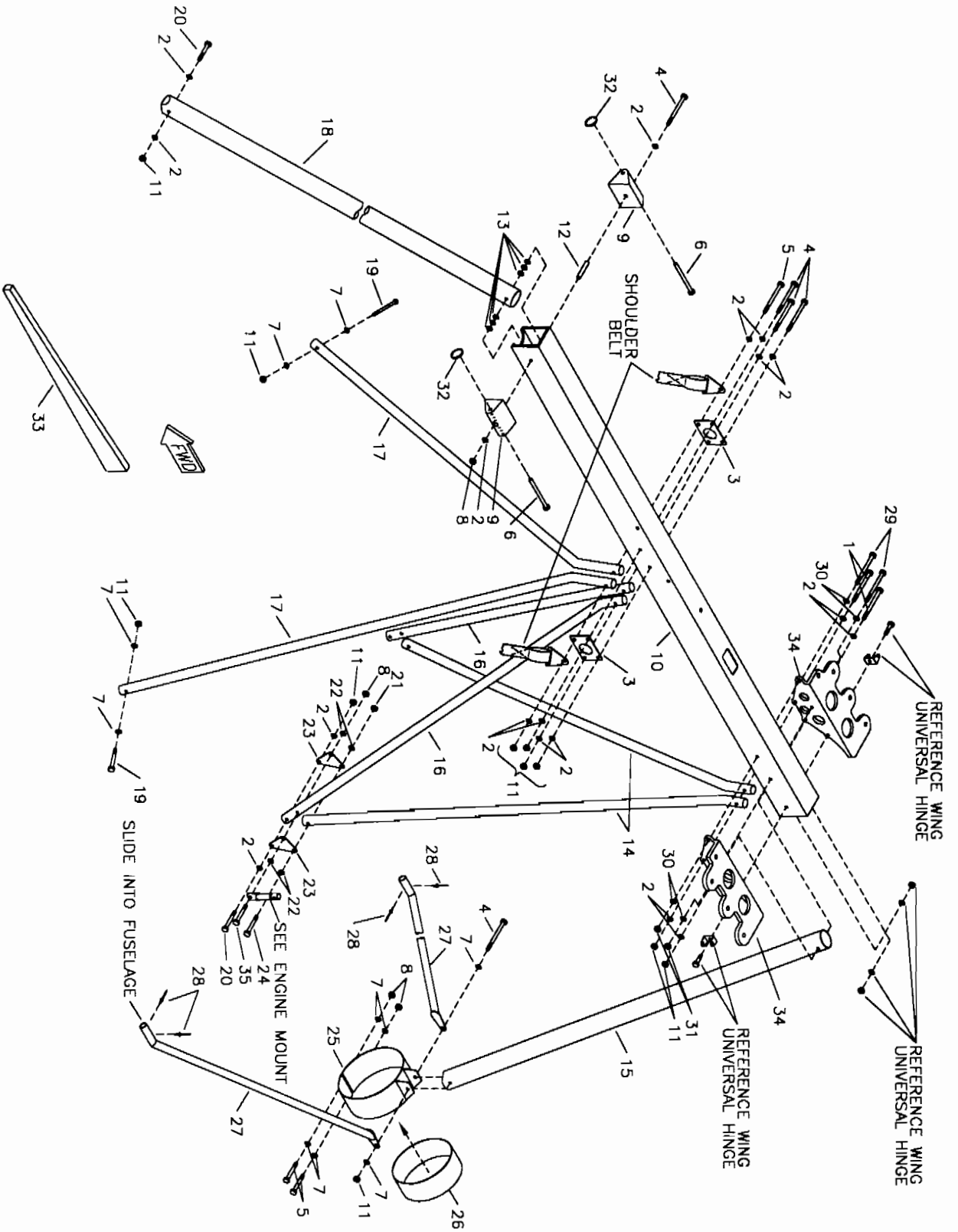
#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Nose Gear Strut *	NG-STRUT	0
2.	Spring *	10372	0
3.	Nose Gear Axle	KPNG0074	1
4.	1/4" Plastic Washer *	PW-4	0
5.	1/4" Bolt *	AN4-24A	0
6.	Large Cotter Pin	MS24665-285	2
7.	3/16" Bolt	AN3-20A	1
8.	3/16" Thin Washer	AN960-10L	2
9.	1/4" Shear Nut *	AN364-428A	0
10.	1/4" Thin Washer	AN960-416L	2
11.	3/16" Shear Nut	AN364-1032A	1
12.	Steering Linkage	NG-SL	4
13.	1/4" Plain Nut	AN345-416	2
14.	Steer Rod	KPNG0039	2
15.	Steer Horn	KPNG0035	1
16.	Fork *	KPNG0073	0
17.	Aluminum Bushing, 3/4" x .058 x X ***	KAAC0026-4	0
18.	Tire, 5"	KSMG0005	1
19.	Loctite Blue	LOC-TITE	0
20.	Bearing Washer	TRA2435	2
21.	Thrust Bearing	NTA2435	1
22.	Socket Head Cap Screw **	LG-NW-HUB-1	6
23.	Washer **	LG-NW-HUB-2	12
24.	5" Hegar Nosewheel Rim Set	LG-NW-RIM	1
25.	Seal Plate **	LG-NW-HUB-3	1
26.	O Ring **	LG-NW-HUB-4	2
27.	Loc Nut **	LG-NW-HUB-5	6
28.	Valve Stem **	LG-NW-HUB-6	1
29.	Nose Gear Assembly	KANG0012	1
30.	1/4" Shear Nut	AN364-428A	2
31.	Hegar Nosewheel Hub Kit	LG-NW-HUB	1
32.	1/4" Plain Bolt	1/4X1 BOLT	2
33.	1/4" Plain Nut	AN345-416	2
34.	Small Rubber Edging	8510K11	12 in
35.	3/32" Aluminum Pop Rivet	40APR1/8	2
36.	Upper Fairing	12-LG-UN-FAIR	1
37.	J & B Weld Epoxy *	J & B	0
38.	Lower Fairing	LG-LN-FAIR	1
39.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-41	4
40.	Nose Fairing Mount, RH	LG-NFMNT-R	1
40.	Nose Fairing Mount, LH	LG-NFMNT-L	1
41.	Tire Tube, 5"	KSMG0007	1

*Supplied pre-assembled to KANG0012.

**Supplied in hub kit (LG-NW-HUB).

***Builder must fabricate from raw stock.

RRRMM S-12S AIRRAIL SUPER STRUCTURE ASSEMBLY

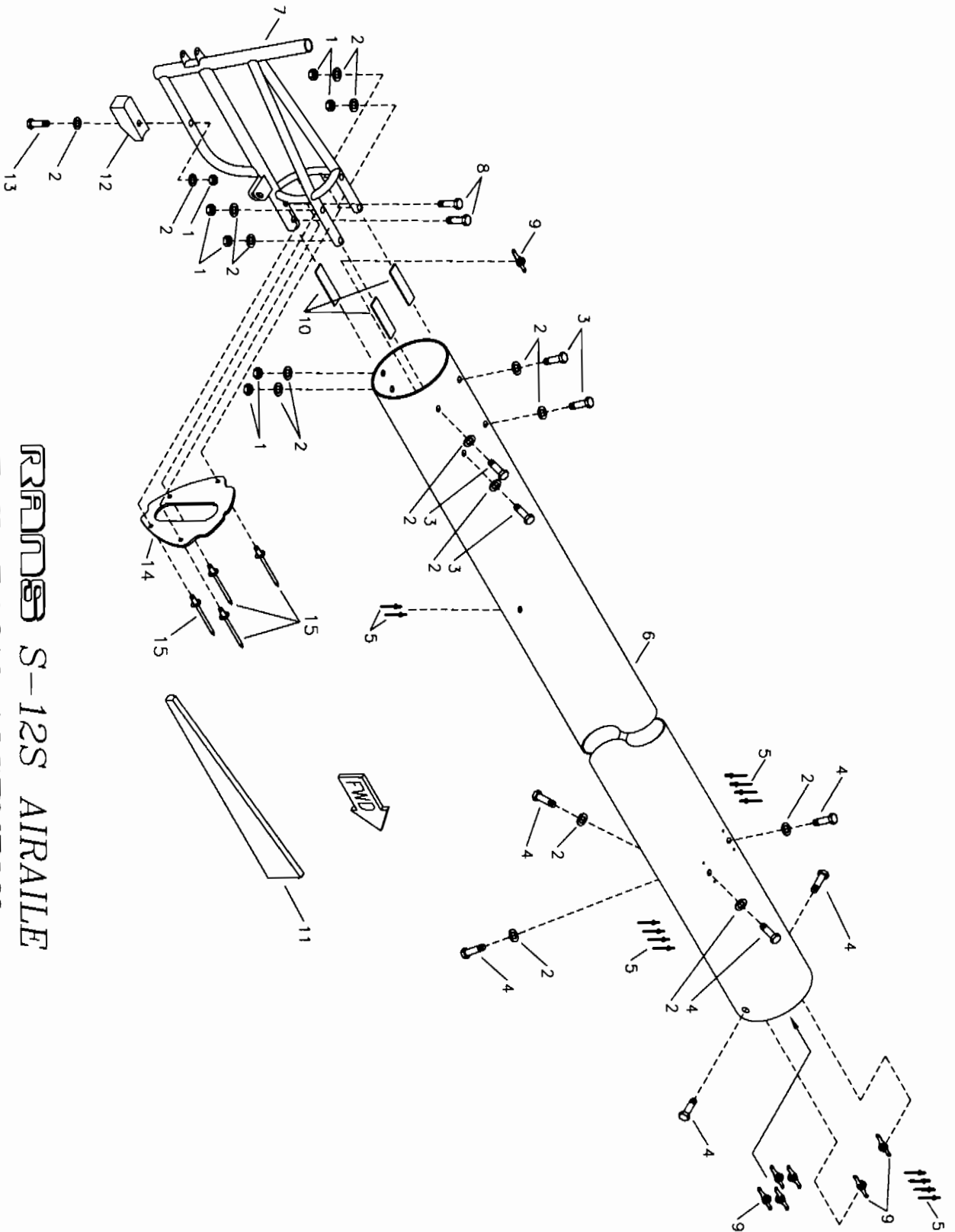


MD3496

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	1/4" Bolt	AN4-32A	2
2.	1/4" Thick Washer	AN960-416	20
3.	Keel Plate	K-KP	2
4.	1/4" Bolt	AN4-26A	5
5.	1/4" Bolt	AN4-27A	3
6.	3/8" Clevis Pin	MS20392-5C97	2
7.	1/4" Thin Washer	AN960-416L	12
8.	1/4" Tensile Nut	AN365-428A	5
9.	Bracket	W-BRKT	2
10.	Keel	KPFU0268	1
11.	1/4" Shear Nut	AN364-428A	13
12.	3/8" x .058 x 2" Bushing	SB-3/8X2	1
13.	3/8" Thick Washer	AN960-616	6
14.	AFT Cabane, LH	KPFU0269-L	1
14.	AFT Cabane, RH	KPFU0269-R	1
15.	AFT Strut	KPFU0270	1
16.	Middle Cabane, LH	KPFU0237-L	1
16.	Middle Cabane, RH	KPFU0237-R	1
17.	Forward Cabane, RH	KPFU0236-R	1
17.	Forward Cabane, LH	KPFU0236-L	1
18.	Forward Strut	KPFU0235	1
19.	1/4" Bolt	AN4-15A	2
20.	1/4" Bolt	AN4-17A	3
21.	3/16" Shear Nut	AN364-1032A	2
22.	3/16" Thin Washer	AN960-10L	8
23.	Triangle Plate	AUF-13	4
24.	3/16" Bolt	AN3-15A	2
25.	Tail Boom Bracket	KPFU0035	1
26.	Plastic Strip	K-PS	1
27.	Tail Boom - Brace Tube	KPFU0049	2
28.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-42	4
29.	5/16" Bolt	AN5-32A	2
30.	5/16" Thin Washer	AN960-516L	4
31.	5/16" Tensile Nut	AN365-524A	2
32.	Loc Ring	RL 27 1/4	2
33.	Keel Template	KPFU0070	1
34.	912 Engine Mount Angle, RH	KPPW0146-R	1
34.	912 Engine Mount Angle, LH	KPPW0146-L	1
35.	3/16" Bolt	AN3-16A	2

RRR S-12S AIRAILE TAIL BOOM ASSEMBLY

MD3497

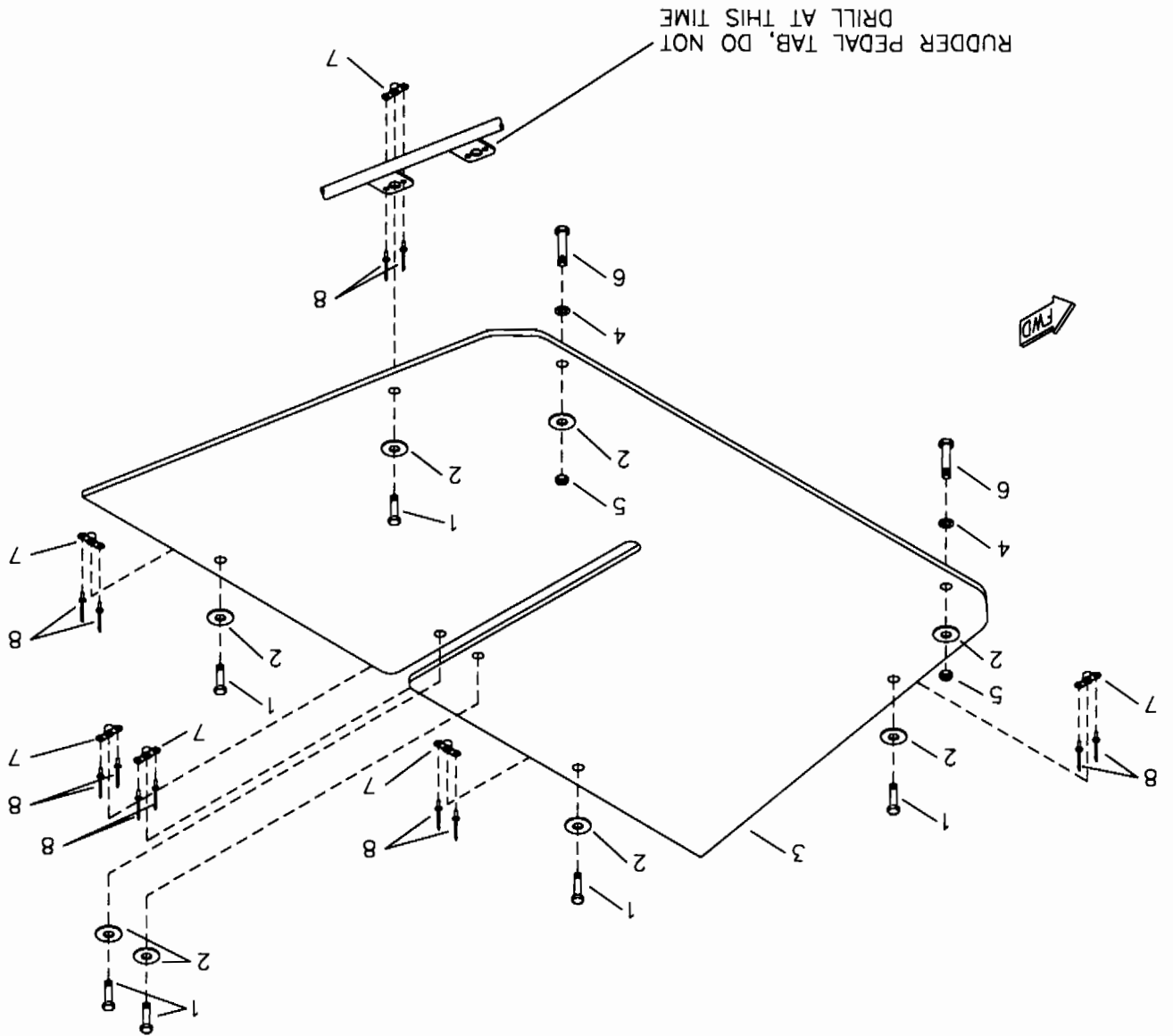


S-12S AIRAILE - TAIL BOOM ASSEMBLY

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	3/16" Shear Nut	AN364-1032A	7
2.	3/16" Thin Washer	AN960-10L	16
3.	3/16" Bolt	AN3-10A	4
4.	3/16" Bolt	AN3-4A	6
5.	3/32" Aluminum Pop Rivet	40APR1/8	14
6.	Tail Boom	KAFU0016	1
7.	Tail Boom Extension	TB-EXT	1
8.	3/16" Bolt	AN3-12A	2
9.	3/16" Nut Plate	K-1000-3	7
10.	Tape	KSAC0003	12 in
11.	Boom Template	KPFU0069	1
12.	Skid Block	TB-SB	1
13.	3/16" Bolt	AN3-20A	1
14.	Elevator Push Pull Tube Guide	KPFU0329	1
15.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-44	4

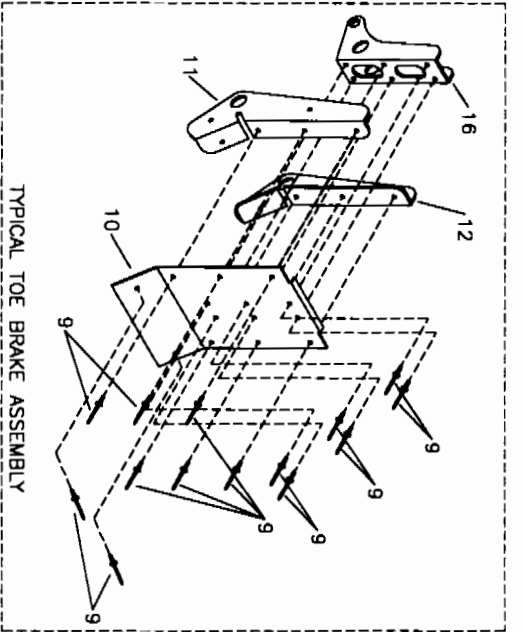
MD3498

RPN S-12S AIRALE FLOORBOARD INSTALLATION



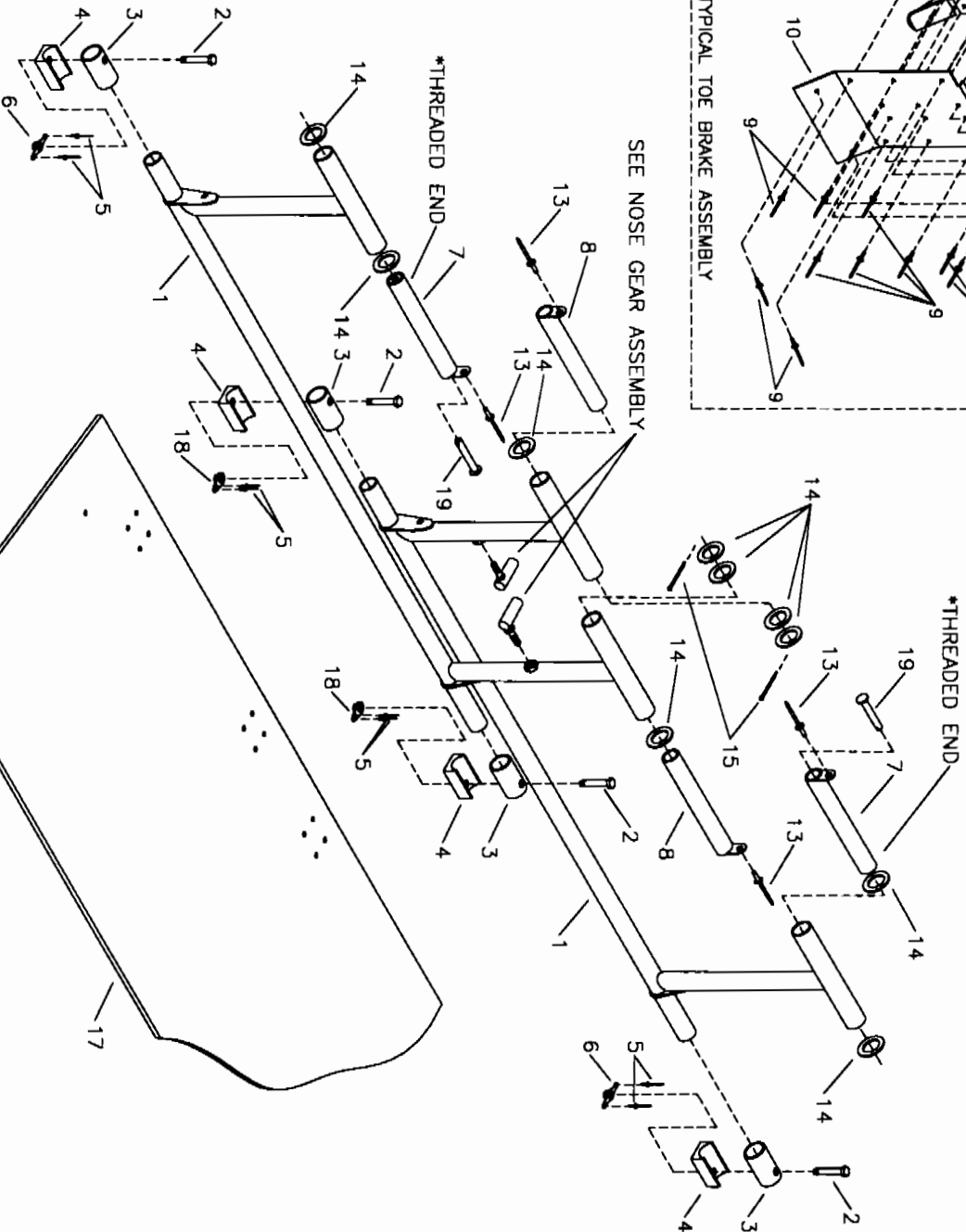
S-12S AIRAILE - FLOORBOARD INSTALLATION

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	3/16" Bolt	AN3-5A	6
2.	3/16" Large Washer	AN970-3	8
3.	Floorboard	KPFU0058	1
4.	3/16" Thick Washer	AN960-10	2
5.	3/16" Shear Nut	AN364-1032A	2
6.	3/16" Bolt	AN3-12A	2
7.	3/16" Nut Plate	K-1000-3	6
8.	3/32" Aluminum Pop Rivet	40APR1/8	12



TYPICAL TOE BRAKE ASSEMBLY

SEE NOSE GEAR ASSEMBLY



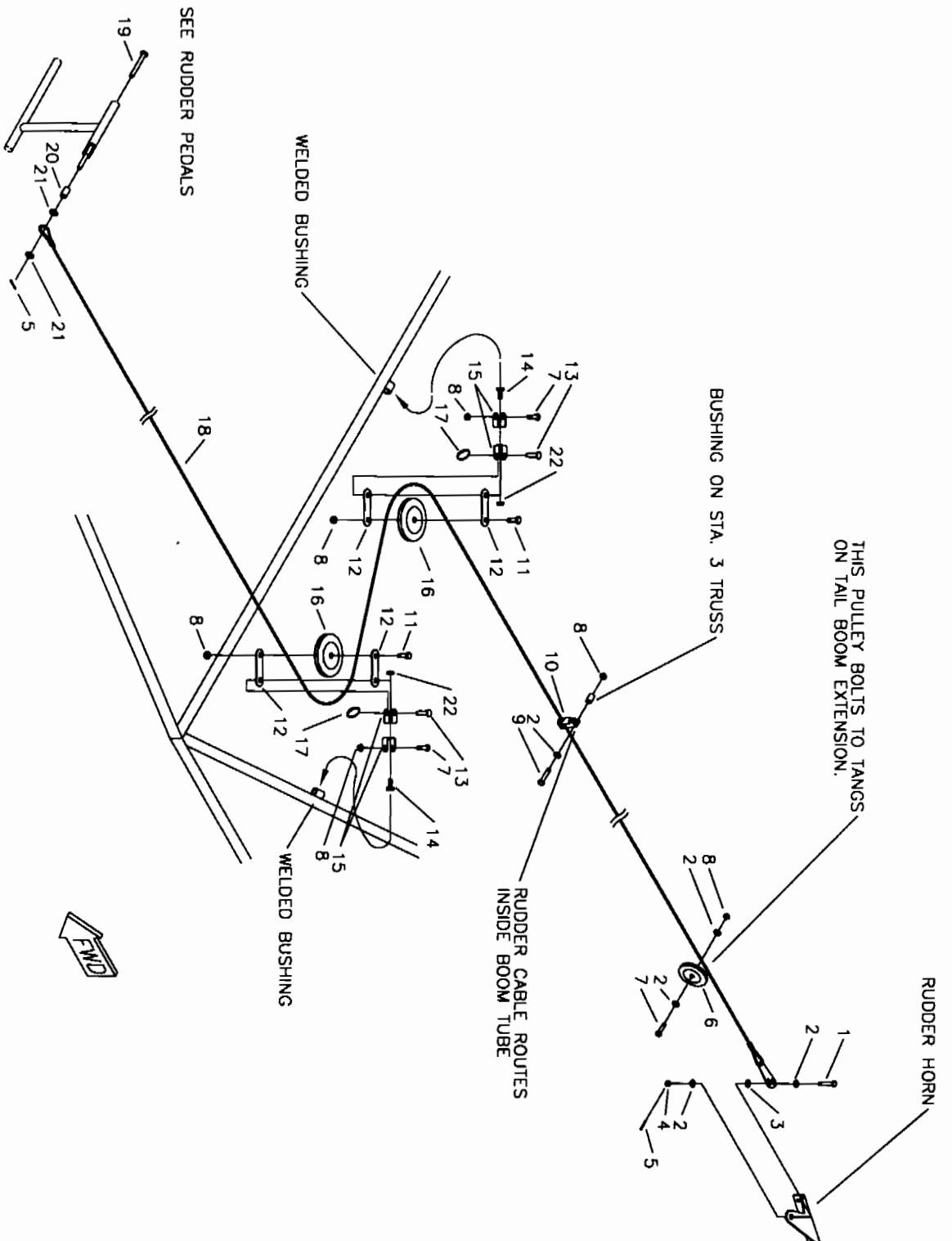
*NOTE: THREADED END OF SWIVEL BUSHING NEEDS TO BE DRILLED OUT TO 5/16" AND CLEVIS PIN INSERTED BEFORE FINAL INSTALLATION.



S-12S AIRFRAME RUDDER PEDALS

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Rudder Pedal	KPCS0066	2
2.	3/16" Bolt	AN3-13A	4
3.	Rudder Pedal Bushing	KPCS0017	4
4.	Brake Saddle	KPCS0024	4
5.	3/32" Aluminum Pop Rivet	40APR1/8	8
6.	3/16" Nut Plate	K-1000-3	2
7.	Swivel Bushing	KPCS0055	2
8.	Swivel Bushing	KPCS0056	2
9.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	56
10.	Rudder Pedal - Web	KPCS0063	4
11.	Rudder Pedal - Hinge Plate, LH	KPCS0064-L	4
12.	Rudder Pedal - Hinge Plate, RH	KPCS0064-R	4
13.	3/16" Stainless Steel Pop Rivet - Cherry Q	CCPQ-62	4
14.	1/2" Plastic Washer	KSAC0005	10
15.	Large Cotter Pin	MS24665-285	2
17.	Wear Plate	KPFU0382	1
18.	3/16" Single Ear Nut Plate	MS21051-L3	2
19.	5/16" Clevis Pin *	MS20392-4C65	0

*Referenced from rudder cable system.

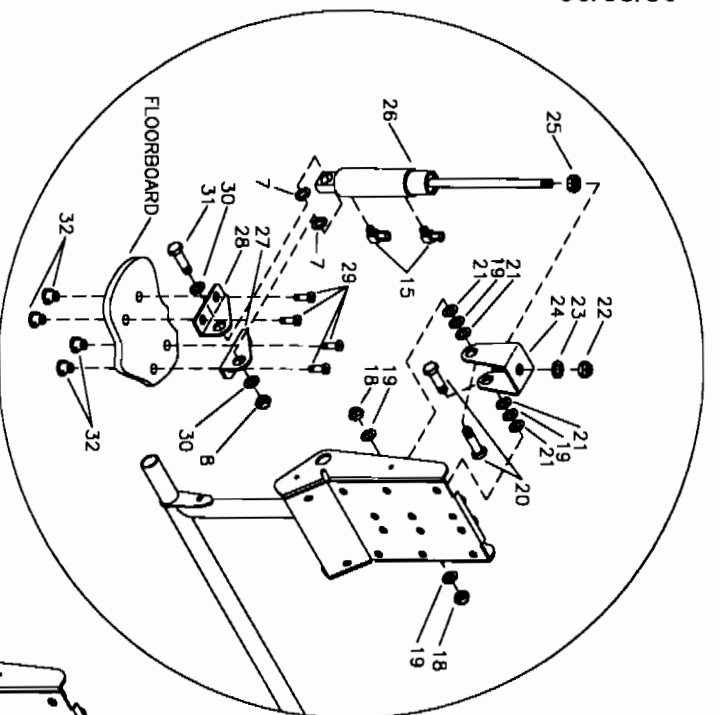


S-12S AIRFRAME RUDDER CABLE SYSTEM

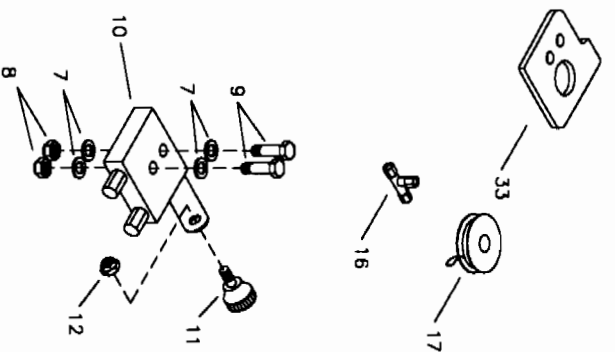
S-12S AIRAILE - RUDDER CABLE SYSTEM ASSEMBLY

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	3/16" Bolt	AN3-5	2
2.	3/16" Thin Washer	AN960-10L	10
3.	3/16" Thick Washer	AN960-10	2
4.	3/16" Castle Nut	AN310-3	2
5.	Small Cotter Pin	MS24665-134	4
6.	Small Pulley	AN210-1A	2
7.	3/16" Bolt	AN3-7A	4
8.	3/16" Shear Nut	AN364-1032A	12
9.	3/16" Bolt	AN3-13A	2
10.	Cable Guide	HA-144	2
11.	3/16" Bolt	AN3-6A	4
12.	Hummertang	T12-HT6	8
13.	3/16" Clevis Pin	MS20392-2C17	4
14.	3/16" Bolt	AN3-3A	4
15.	Shackle	RL-205-T	8
16.	Pulley	AN210-2A	4
17.	Loc Ring	RL 27 1/4	4
18.	Rudder Cable	KARD0002	2
19.	5/16" Clevis Pin	MS20392-4C65	2
20.	Aluminum Bushing, 1/2" x .083 x 1" *	KAAC0026-5	0
21.	5/16" Thick Washer	AN960-516	4
22.	3/16" Tensile Nut	AN365-1032A	4

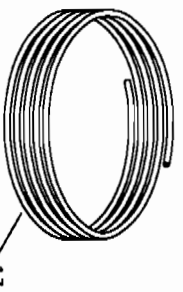
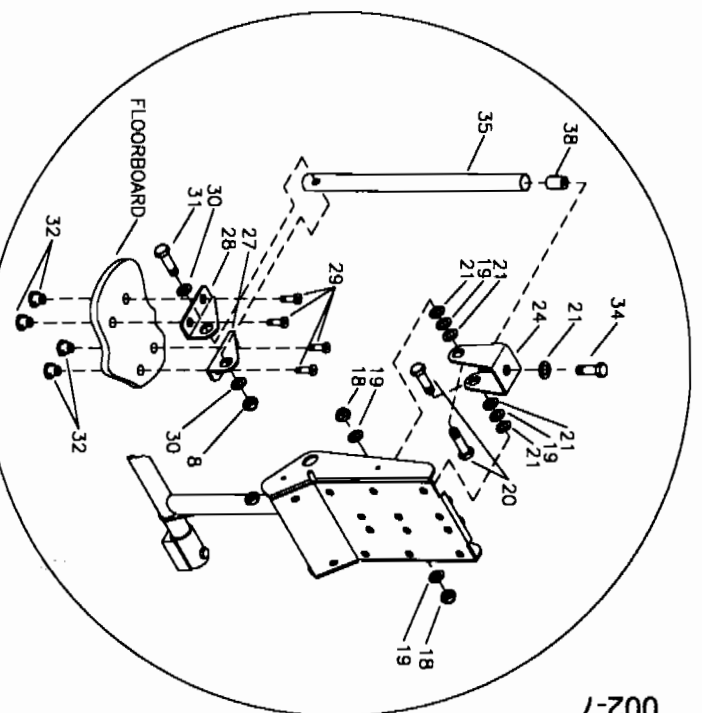
*Builder must fabricate from raw stock.



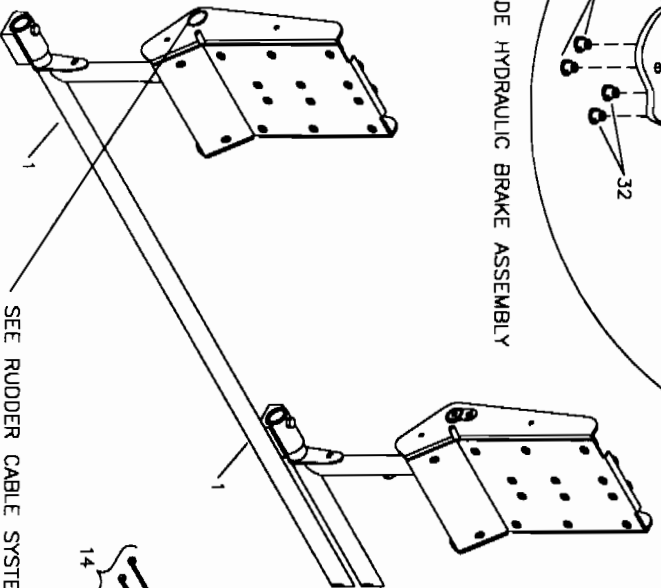
PILOT'S SIDE HYDRAULIC BRAKE ASSEMBLY



PASSENGER'S SIDE TOE PEDAL ASSEMBLY

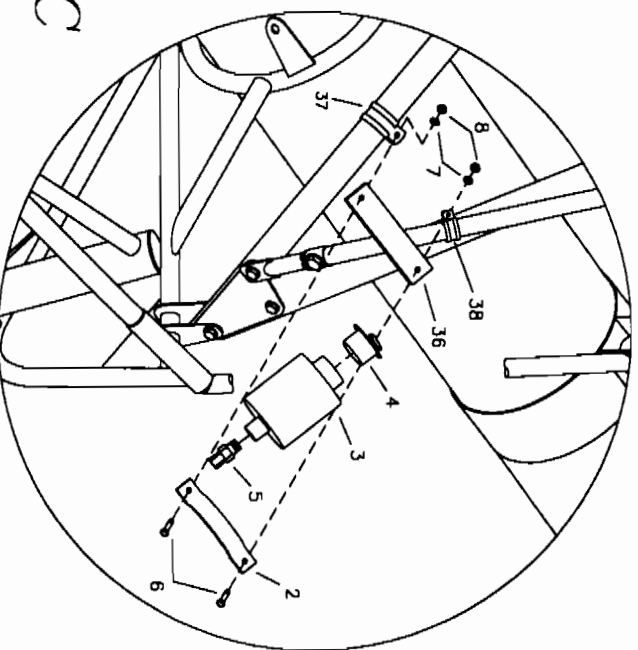


MD3551



SEE RUDDER CABLE SYSTEM FOR DETAILS

RR-12S AIRRAIL BRAKE SYSTEM SINGLE HYDRAULIC TOE BRAKES



S-12S AIRAILE - BRAKE SYSTEM

PAGE 002-8

SINGLE HYDRAULIC TOE BRAKES

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Rudder Pedal *	KPCS0066	0
2.	Hydraulic Reservoir Clamp	FS-HS	1
3.	Hydraulic Brake Reservoir	KPBS0007	1
4.	7/8" Expansion Cap	2598K29	1
5.	Straight Fitting	KSBS0002	3
6.	3/16" Bolt	AN3-3A	3
7.	3/16" Thin Washer (+4 Dual Hyd Brakes)	AN960-10L	10
8.	3/16" Shear Nut	AN364-1032A	8
9.	3/16" Bolt	AN3-15A	2
10.	Parking Brake	KSBS0007	1
11.	Knob	KSAC0012	1
12.	3/16" Shear Acorn Nut	22NKM02	1
13.	Hydraulic Brake Line (+40 ft Dual Hyd Brks)	KSBS0004	34 ft
14.	Zip Ties	ZIP TIES	10
15.	90 Fitting (+4 Dual Hyd Brks)	KSBS0001	6
16.	Tee Fitting	KSBS0003	1
17.	Teflon Tape **	TEFLON TAPE	0
18.	1/4" Shear Nut	AN364-428A	8
19.	1/4" Thick Washer	AN960-416	16
20.	1/4" Bolt	AN4-5A	8
21.	1/4" Thin Washer (-2 Dual Hyd Brks)	AN960-416L	18
22.	5/16" Shear Nut	AN364-524A	4
23.	5/16" Thin Washer	AN960-516L	4
24.	Stainless Steel U Bracket	SU-118	4
25.	5/16" Plain Nut ***	----	0
26.	Master Cylinder - Brake (+2 Dual Hyd Brks)	KSBS0031	2
27.	Brake Mount Bracket, LH	B-MBRKT-L	4
28.	Brake Mount Bracket, RH	B-MBRKT-R	4
29.	8-32 Pan Head Machine Screw	KSHW0008	16
30.	3/16" Thick Washer	AN960-10	8
31.	3/16" Bolt	AN3-12A	4
32.	8-32 Tee Nut	KSHW0007	16
33.	Parking Brake Stop Plate	KPBS0018	1
34.	1/4" Bolt (-2 Dual Hyd Brks)	AN4-4A	2
35.	Aluminum Tube, 1/2" x .035 x 7" ****	KAAC0026-2	0
36.	Aluminum Strap, 1" x .032 x X ****	KAAC0026-8	0
37.	Cushioned Clamp	MS21919-DG18	1
38.	3/16" Insert Nut (-2 Dual Hyd Brks)	I-NUT	2
39.	Cushion Clamp, 5/8"	MS21919-DG10	1

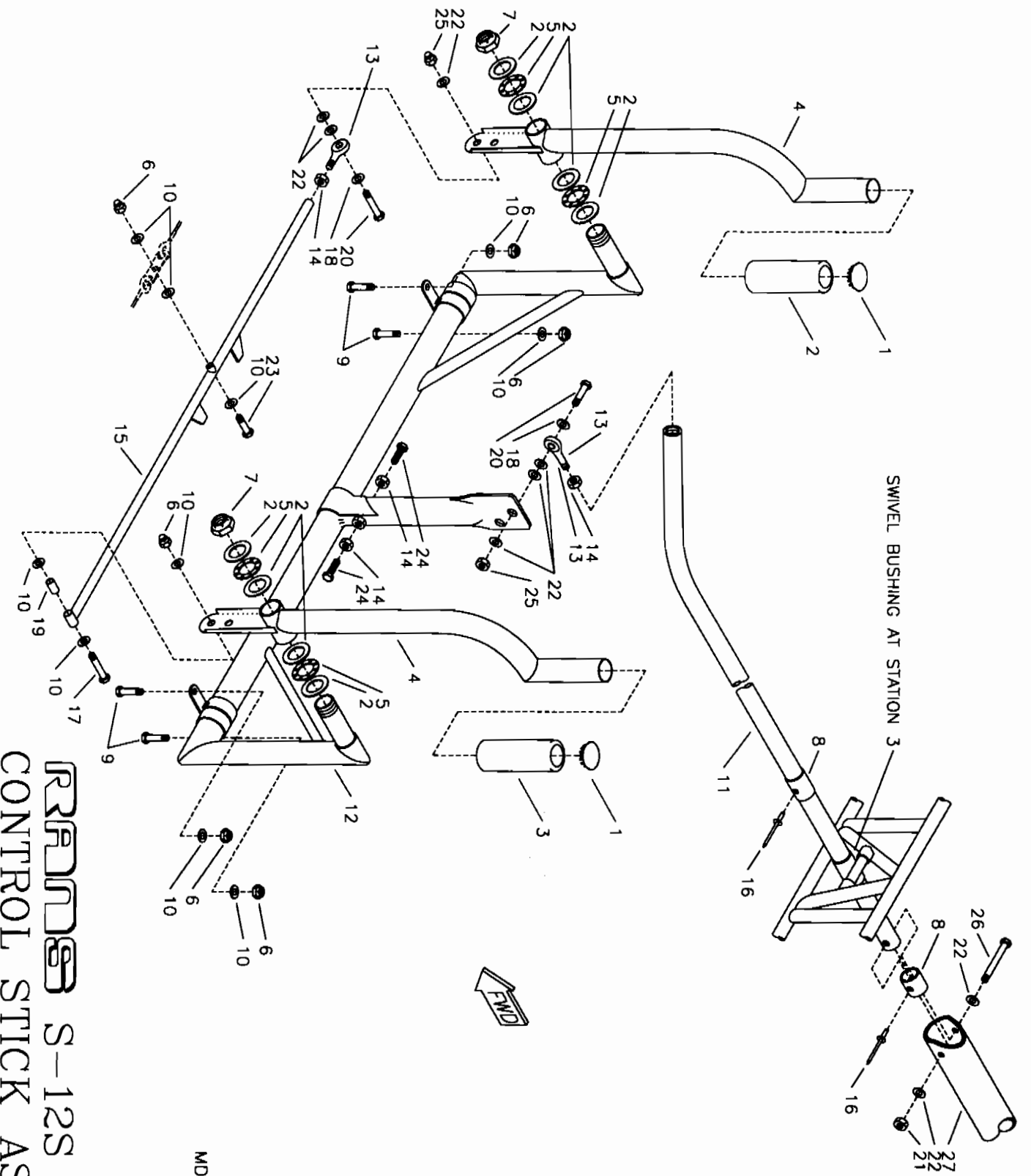
*Referenced from rudder pedals.

**Builder provides.

***Supplied with Master Cylinder.

****Builder must fabricate from raw stock.

6/23/2003



MD3506

RRM S-12S AIRRAILE
CONTROL STICK ASSEMBLY

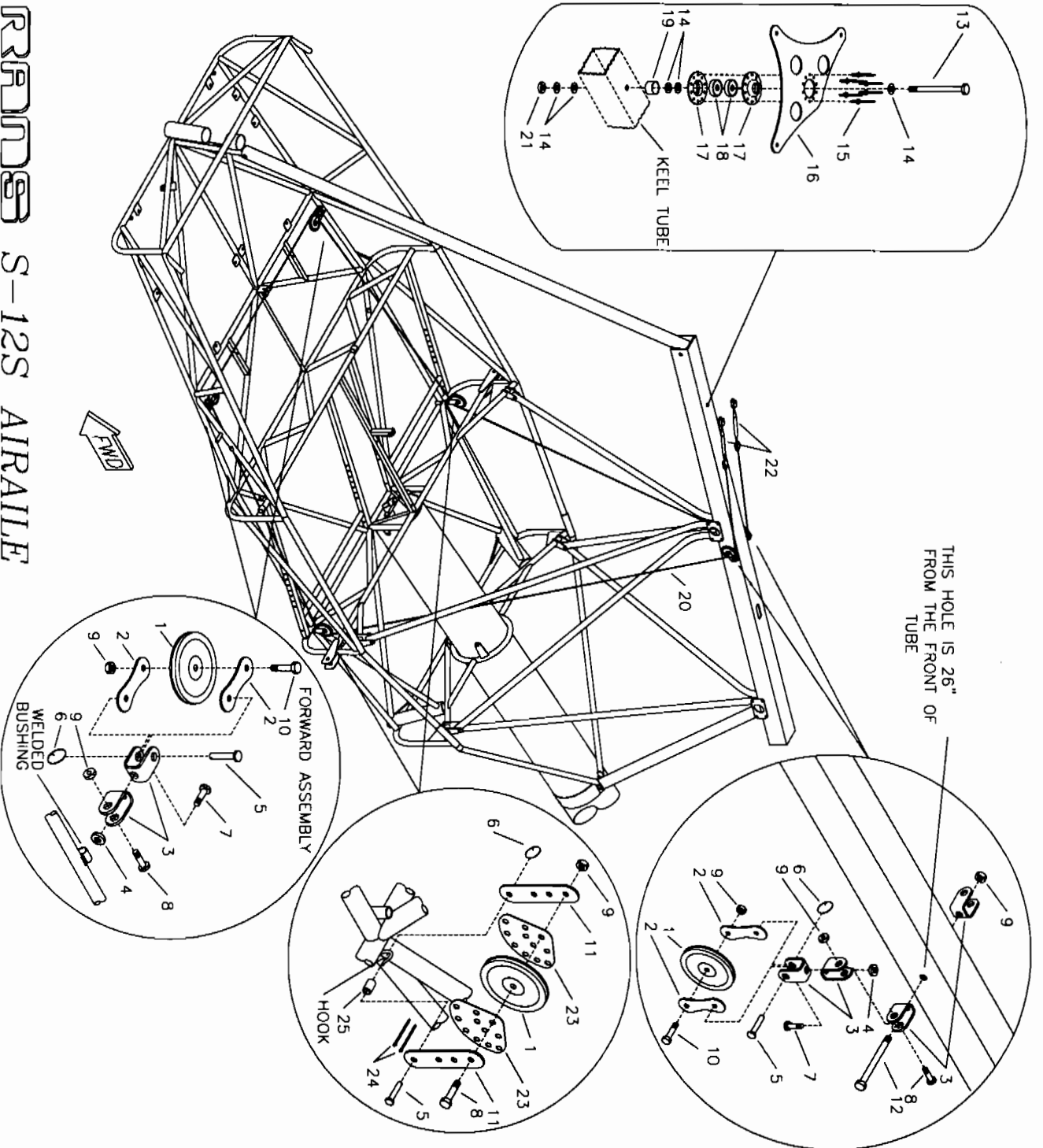
S-12S AIRAILE - CONTROL STICK MOUNT & ASSEMBLY

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	7/8" End Cap	CS-EC	2
2.	Bearing Washer	CS-BW	8
3.	Control Stick Grip	CS-G	2
4.	Control Stick	KPCS0072	2
5.	Thrust Bearing	CS-TB	4
6.	3/16" Shear Nut	AN364-1032A	6
7.	3/4" Nyloc Nut	CS-3/4LOCNUT	2
8.	Aluminum Bushing, 3/4" x .058 x 3/4" *	KAAC0026-4	0
9.	3/16" Bolt	AN3-10A	4
10.	3/16" Thin Washer	AN960-10L	10
11.	5/8" Push Pull Tube	CS-5/8PPT(12)	1
12.	Control Stick Torque Tube	CS-TT-A	1
13.	Male Rod End, 1/4" X 1/4"	NM-4	2
14.	1/4" Plain Nut	AN345-416	4
15.	Control Stick Link Tube	CS-CSLT-3	1
16.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-41	2
17.	3/16" Bolt	AN3-10A	1
18.	1/4" Plastic Washer	PW-4	2
19.	Aluminum Bushing, 1/4" x .028 x 17/32" *	KAAC0026-1	0
20.	1/4" Bolt	AN4-10A	2
21.	1/4" Shear Nut	AN364-428A	1
22.	1/4" Thick Washer	AN960-416	8
23.	3/16" Bolt	AN3-12A	1
24.	1/4" Plain Bolt	1/4X1 BOLT	2
25.	1/4" Shear Acorn Nut	52NKTE-048	2
26.	1/4" Bolt	AN4-15A	1
27.	1 1/4" Push Pull Tube **	TG 1 1/4PPT-141 5/8	0

*Builder must fabricate from raw stock.

**Referenced from elevator assembly.

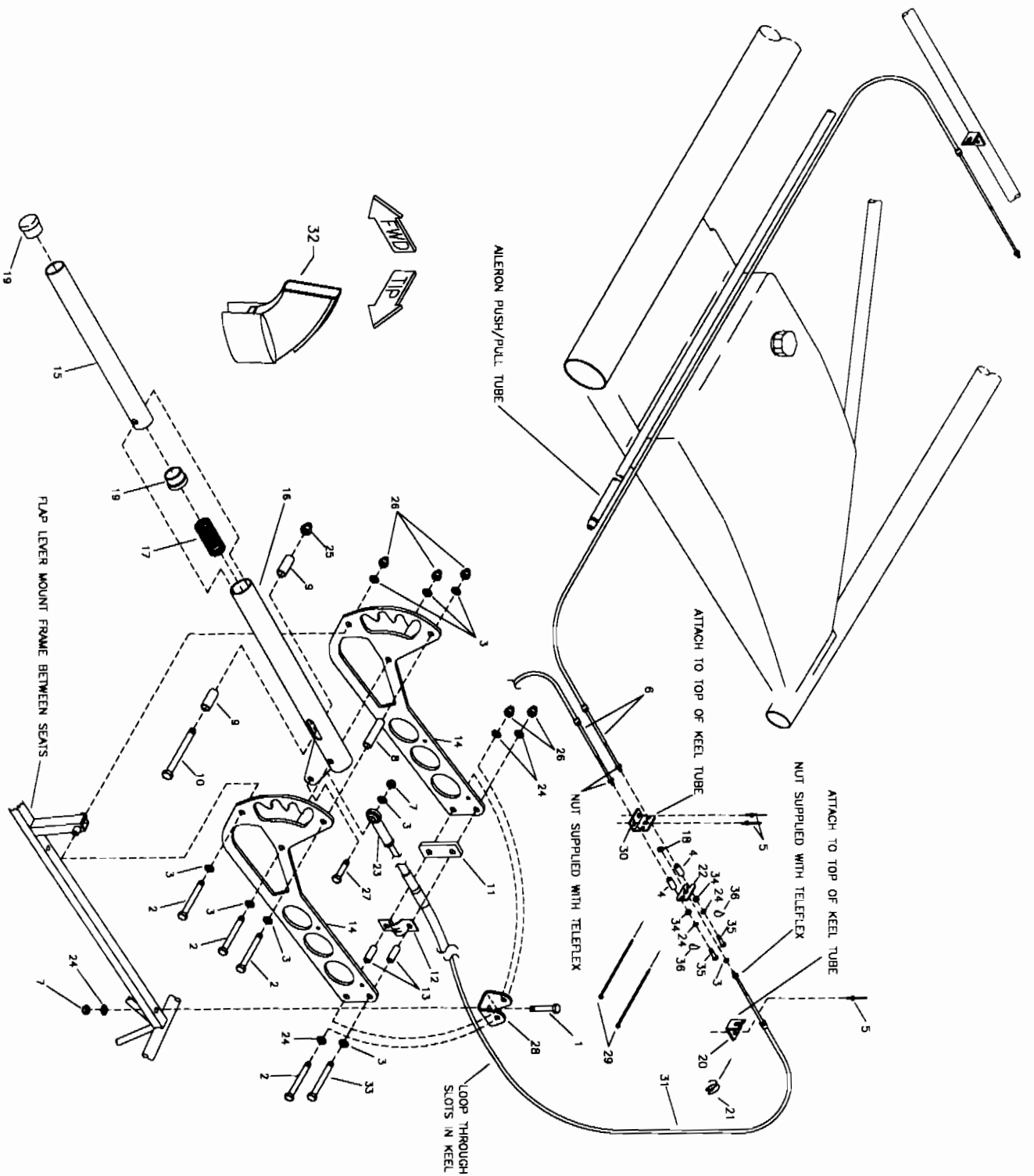
RRM8 S-12S AIRAILE AILERON CABLE SYSTEM



S-12S AIRAILE - AILERON CABLE SYSTEM

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Pulley	AN210-2A	6
2.	Hummertang	T12-HT6	8
3.	Shackle	RL-205-T	10
4.	3/16" Tensile Nut	AN365-1032A	4
5.	3/16" Clevis Pin	MS20392-2C17	6
6.	Loc Ring	RL 27 1/4	6
7.	3/16" Bolt	AN3-3A	4
8.	3/16" Bolt	AN3-7A	6
9.	3/16" Shear Nut	AN364-1032A	12
10.	3/16" Bolt	AN3-6A	4
11.	Tang	ST-16	4
12.	3/16" Bolt	AN3-24A	1
13.	1/4" Bolt	AN4-37A	1
14.	1/4" Thick Washer	AN960-416	5
15.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-44	6
16.	Control Stick Tee	CS-TEE14	1
17.	Bearing Flange	BR-FLNG	2
18.	Bearing	SR4APP	2
19.	Stand Off, 3/4" x 3/4"	SO-3/4X3/4	1
20.	Aileron Cable	KACS0009	1
21.	1/4" Shear Acorn Nut	52NKTE-048	1
22.	Turnbuckle (W/Pins & Loc Rings)	RL-335-AT	2
23.	Small Pulley Cable Keeper	SP-CK	4
24.	Small Cotter Pin	MS24665-134	4
25.	Bushing, 1/4" x .028 x 3/8" *	KAAC0026-1	2

*Builder must fabricate from raw stock.



RRR S-12S AIRAILLE FLAP SYSTEM ASSEMBLY

MD3510

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	3/16" Bolt	AN3-7A	1
2.	3/16" Bolt	AN3-14A	4
3.	3/16" Thick Washer	AN960-10	9
4.	Insert Nut	KPAC0012	2
5.	3/16" Stainless Steel Pop Rivet - Cherry Q	CCPQ-64	3
6.	Flap Teleflex, 8' **	W-F-TELFEX-8	0
7.	3/16" Shear Nut	AN364-1032A	2
8.	Aluminum Bushing, 1/4" x .028 x 7/8" *	KAAC0026-1	0
9.	Aluminum Bushing, 3/8" x .058 x 3/8" *	KAAC0026-3	0
10.	1/4" Bolt	AN4-20A	1
11.	Plastic Shim	KPAC0121	1
12.	Teleflex Retainer Bracket	KSCS0001	1
13.	Aluminum Bushing, 1/4" x .028 x 9/16" *	KAAC0026-1	0
14.	Flap Lever Side Plate	KPFL0046	2
15.	Flap Trip Release Tube	KPFL0045	1
16.	Flap Lever	KPFL0044	1
17.	Spring	C-21	1
18.	3/16" Tensile Nut	AN365-1032A	1
19.	3/4" Endcap	3/4 ENDCAP	2
20.	Teleflex Retainer	W-TEL-R	1
21.	Safety Wire	SAFETY WIRE	0 ft
22.	Flap Dual Teleflex Retainer, AFT	FL-DTR-AFT	1
23.	Female Rod End	NF-3	1
24.	3/16" Thin Washer	AN960-10L	6
25.	1/4" Shear Acorn Nut	52NKTE-048	1
26.	3/16" Shear Acorn Nut	22NKM02	5
27.	3/16" Bolt	AN3-6A	1
28.	Horizontal Stabilizer Attach Bracket	S2-SAB	1
29.	Zip Ties	ZIP TIES	2
30.	Flap Dual Teleflex Retainer (FWD S-12 Style)	FL-DTR-FWD	1
31.	Flap Teleflex, 7'	W-F-TELFEX-7	1
32.	Flap Lever Cover	KAFL0004	1
33.	3/16" Bolt	AN3-13A	1
34.	Aluminum Bushing, 1/4" X .028 X 1/8" *	KAAC0026-1	0
35.	3/16" Bolt	AN3-3A	2
36.	Loctite Blue	LOC-TITE	0

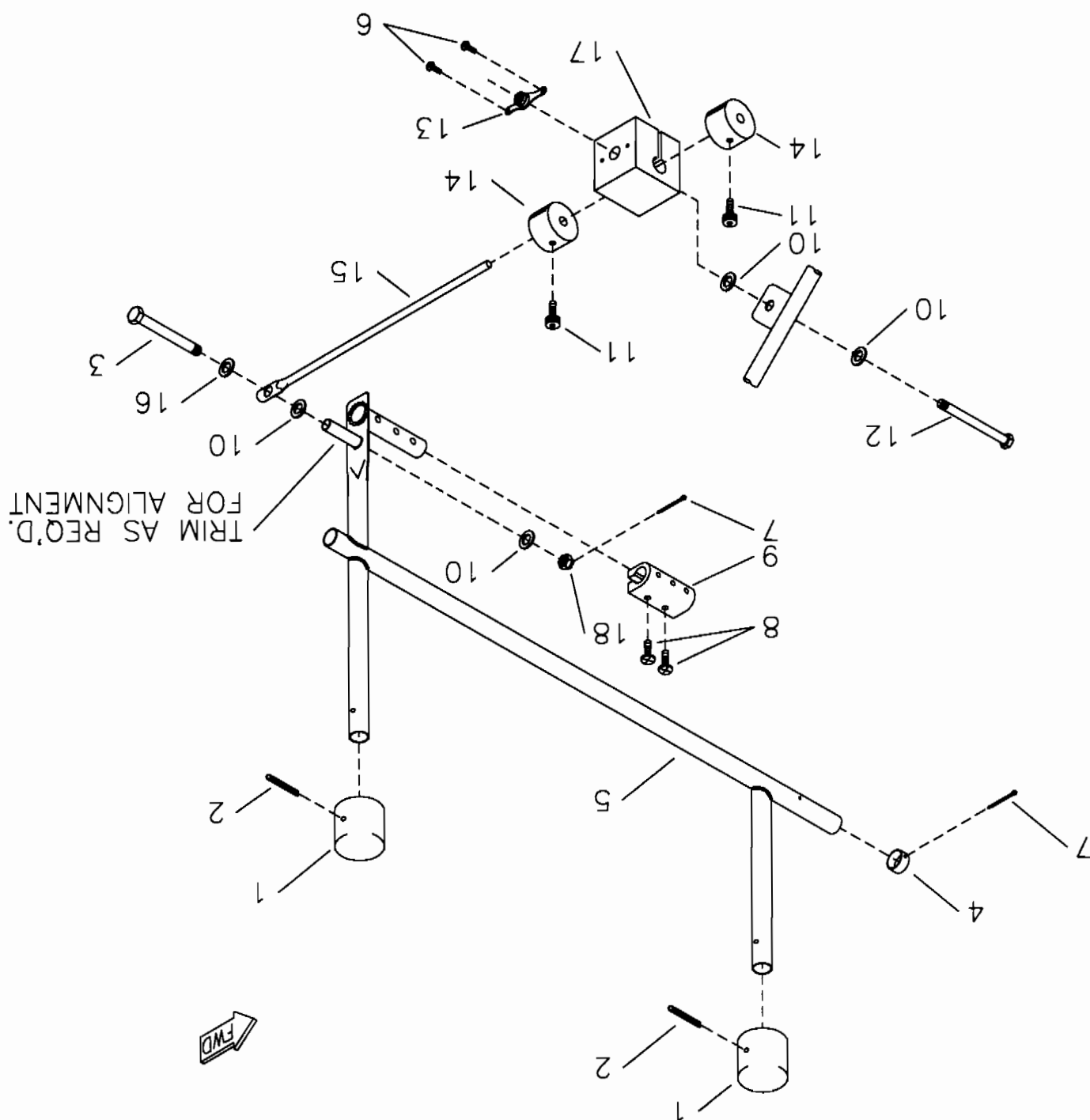
*Builder must fabricate from raw stock.

**Referenced from wing section.

2/27/04

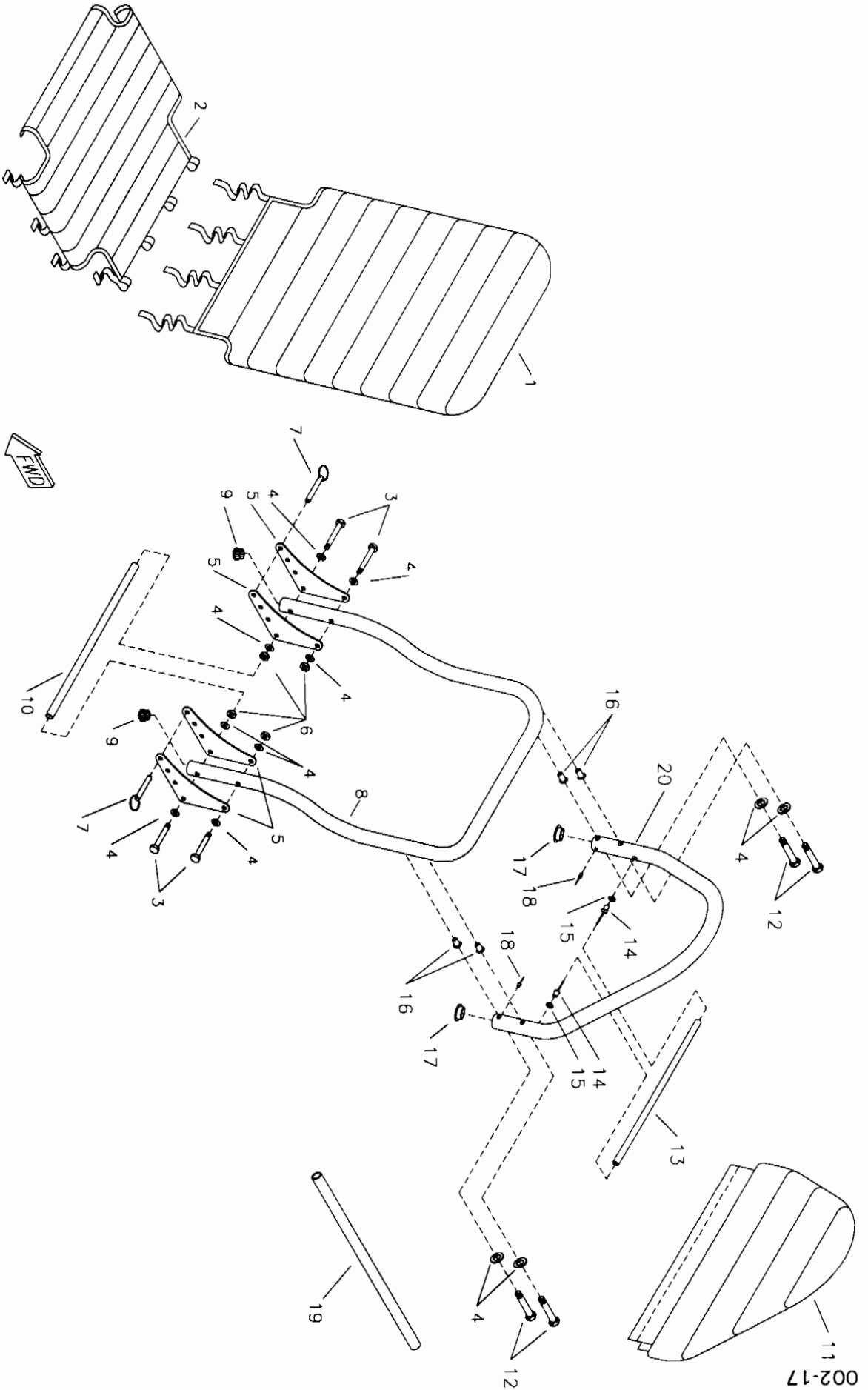
RMS S-12S AIRAILE THROTTLE LEVER MOUNT

MD3505



S-12S AIRAILE - THROTTLE LEVER MOUNT

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Throttle Knob	T-KNOB	2
2.	1/8" Roll Pin, 1"	20032446	2
3.	3/16" Bolt	AN3-6	1
4.	Stop Ring, 5/8" x .058 x 1/2"	T-SR-5/8	1
5.	Throttle Lever	T-TL	1
6.	#4 Small Pan Head Screw	4X1/4 PHS	2
7.	Small Cotter Pin	MS24665-134	2
8.	Machine Screw	MS35206-218	2
9.	Throttle Retension Block	T-RB	1
10.	3/16" Thick Washer	AN960-10	3
11.	Set Screw	T-SC	2
12.	3/16" Bolt	AN3-14A	1
13.	3/16" Nut Plate	K-1000-3	1
14.	Throttle Stop	T-STOP	2
15.	Friction Rod	T-FR	1
16.	3/16" Thin Washer	AN960-10L	2
17.	Friction Block	T-FB	1
18.	3/16" Castle Nut	AN310-3	1



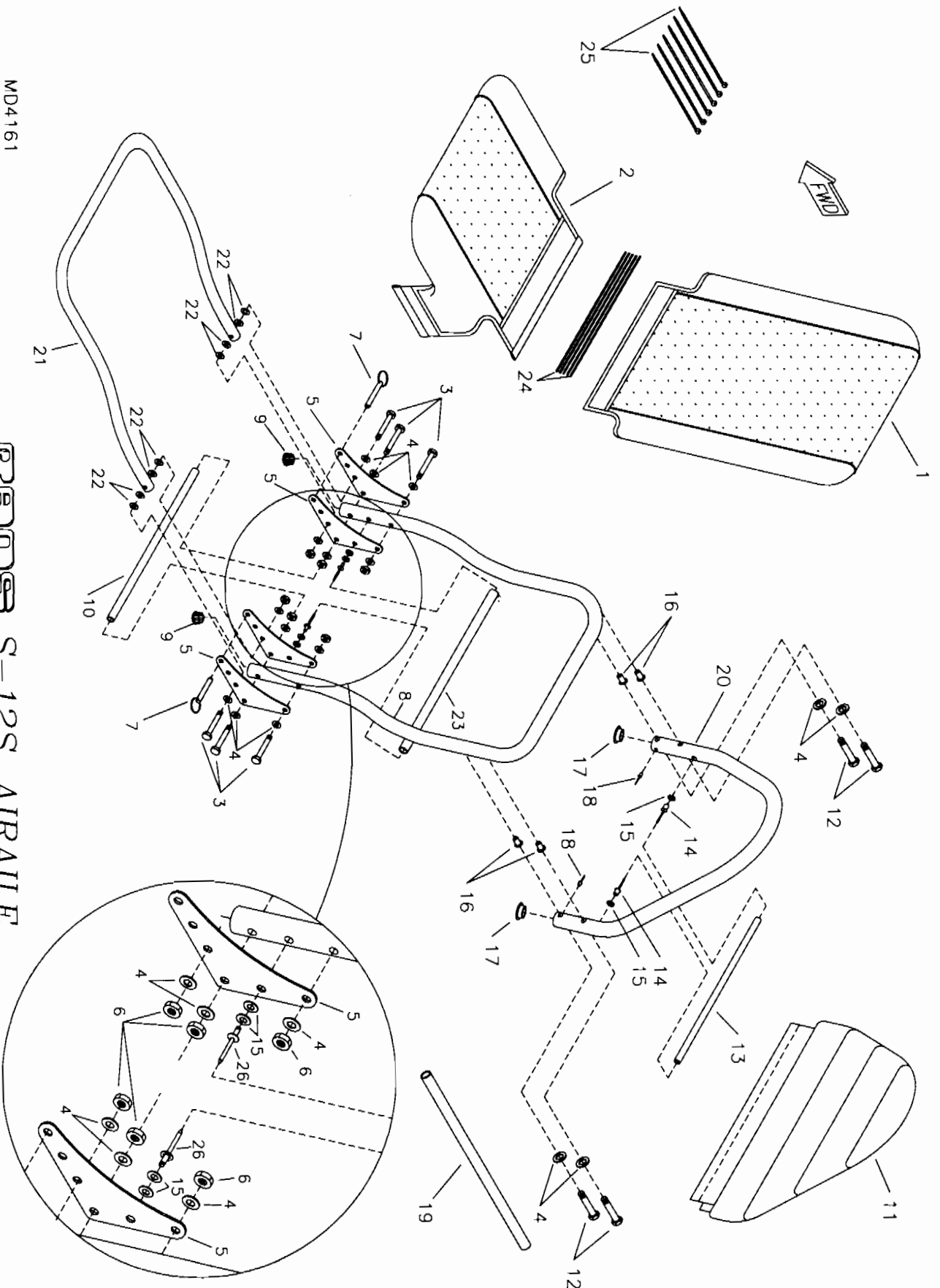
RR-12S AIRAILLE SEAT ASSEMBLY

MD3504

S-12S AIRAILE - SEAT ASSEMBLY

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Seat Back Cover	KPST0048	2
2.	Seat Bottom Cover	KPST0049	2
3.	3/16" Bolt	AN3-14A	8
4.	3/16" Thin Washer	AN960-10L	26
5.	Seat Back Gusset	ST-GUS	8
6.	3/16" Shear Nut	AN364-1032A	8
7.	1/4" Quick Pin	PIN 1/4X1.2	4
8.	Seat Back Frame	ST-SBF	2
9.	7/8" End Cap	CS-EC	4
10.	Aluminum Tube, 1/2" x .035 x X *	KAAC0026-2	0
11.	Headrest Cover	KPST0050	2
12.	3/16" Bolt	AN3-13A	8
13.	Aluminum Internal Brace, 1/2" .035 x X *	KAAC0014-1	0
14.	3/16" Aluminum Pop Rivet - Cherry Q	AAPQ-62	4
15.	3/16" Thick Washer	AN960-10	4
16.	3/16" Rivet Nut	MS27130-A25K	8
17.	1" End Cap	1 CAP	4
18.	3/32" Aluminum Pop Rivet	40APR1/8	4
19.	Headrest - Raw Stock Kit	KAAC0014	1
20.	Headrest Frame	ST-HRF(6/12)	2

*Builder must fabricate from raw stock (KAAC0026).



MD4161

RRR S-12S AIRRAIL OPTIONAL FLIP-UP SEAT ASSEMBLY

S-12S AIRAILE - OPTIONAL FLIP-UP SEAT ASSEMBLY

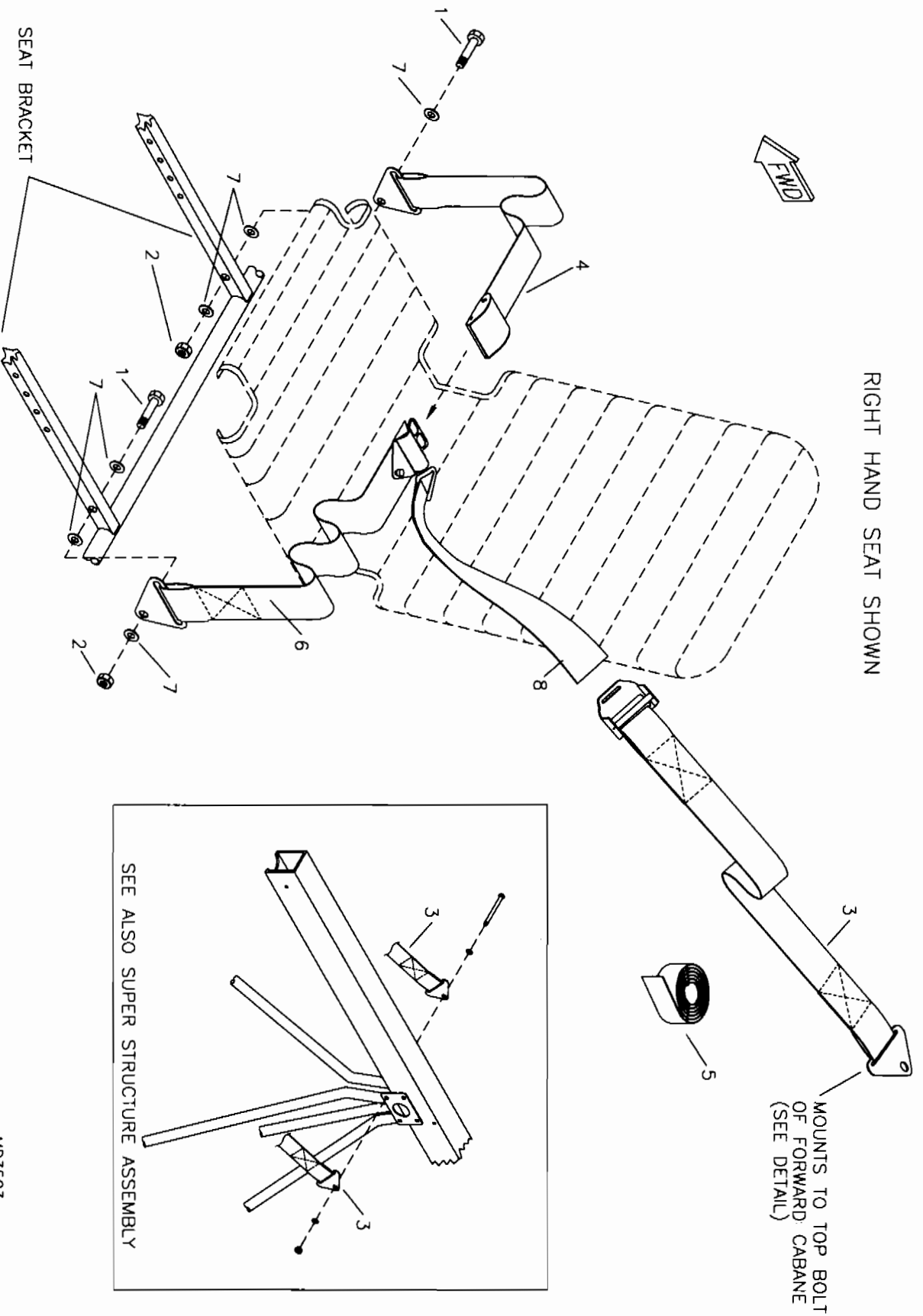
PAGE 002-18A

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Seat Back Cover	ST-SBC-A	2
2.	Seat Bottom Cover, LH/RH	ST-SBTC-A	2
3.	3/16" Bolt	AN3-14A	12
4.	3/16" Thin Washer	AN960-10L	34
5.	Seat Back Gusset	ST-GUS	8
6.	3/16" Shear Nut	AN364-1032A	12
7.	1/4" Quick Pin	PIN 1/4X1.2	4
8.	Seat Back Frame	ST-SBF	2
9.	7/8" End Cap	CS-EC	4
10.	Aluminum Tube, 1/2" x .035 x X *	KAAC0026-2	0
11.	Headrest Cover	KPST0050	2
12.	3/16" Bolt	AN3-13A	8
13.	Aluminum Internal Brace, 1/2" .035 x X *	KAAC0014-1	0
14.	3/16" Aluminum Pop Rivet - Cherry Q	AAPQ-62	4
15.	3/16" Thick Washer	AN960-10	12
16.	3/16" Rivet Nut	MS27130-A25K	8
17.	1" End Cap	1 CAP	4
18.	3/32" Aluminum Pop Rivet	40APR1/8	4
19.	Headrest - Raw Stock Kit	KAAC0014	1
20.	Headrest Frame	ST-HRF(6/12)	2
21.	Seat Bottom Frame	KPST0001	2
22.	3/16" Plastic Washer	PW-3	16
23.	Aluminum Tube	KAAC0014	2
24.	Lacing Wire (Stick) 36" x 1/16"	TG-LW-1/16	5
25.	Long Zip Ties	LONG ZIP TIES	40
26.	3/16" Aluminum Rivet - Cherry Q	AAPQ-64	4

*Builder must fabricate from raw stock (KAAC026).

11/29/2001

RIGHT HAND SEAT SHOWN



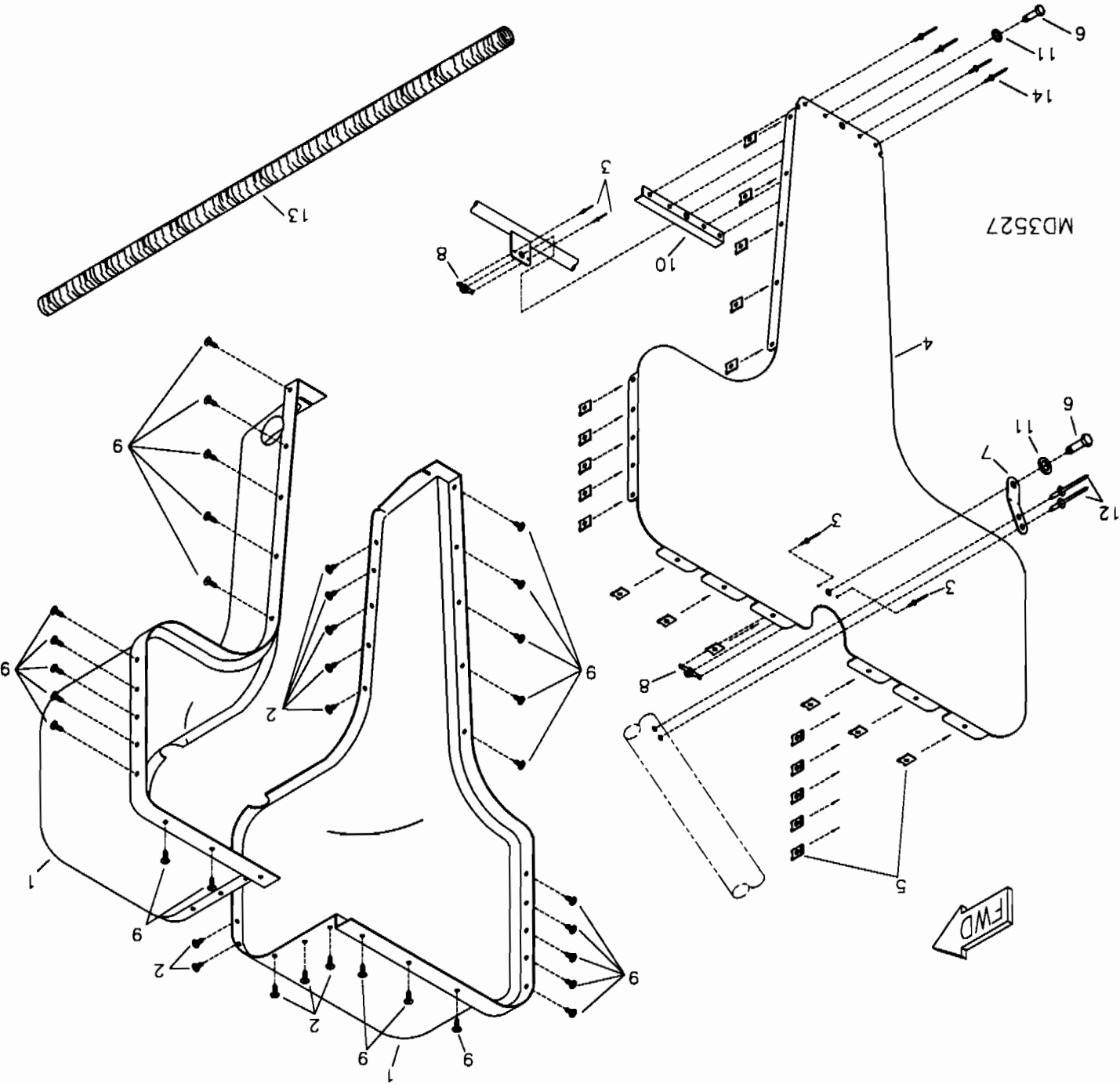
RA-119S-12S AIRAIL SEAT BELT INSTALLATION

MD3503

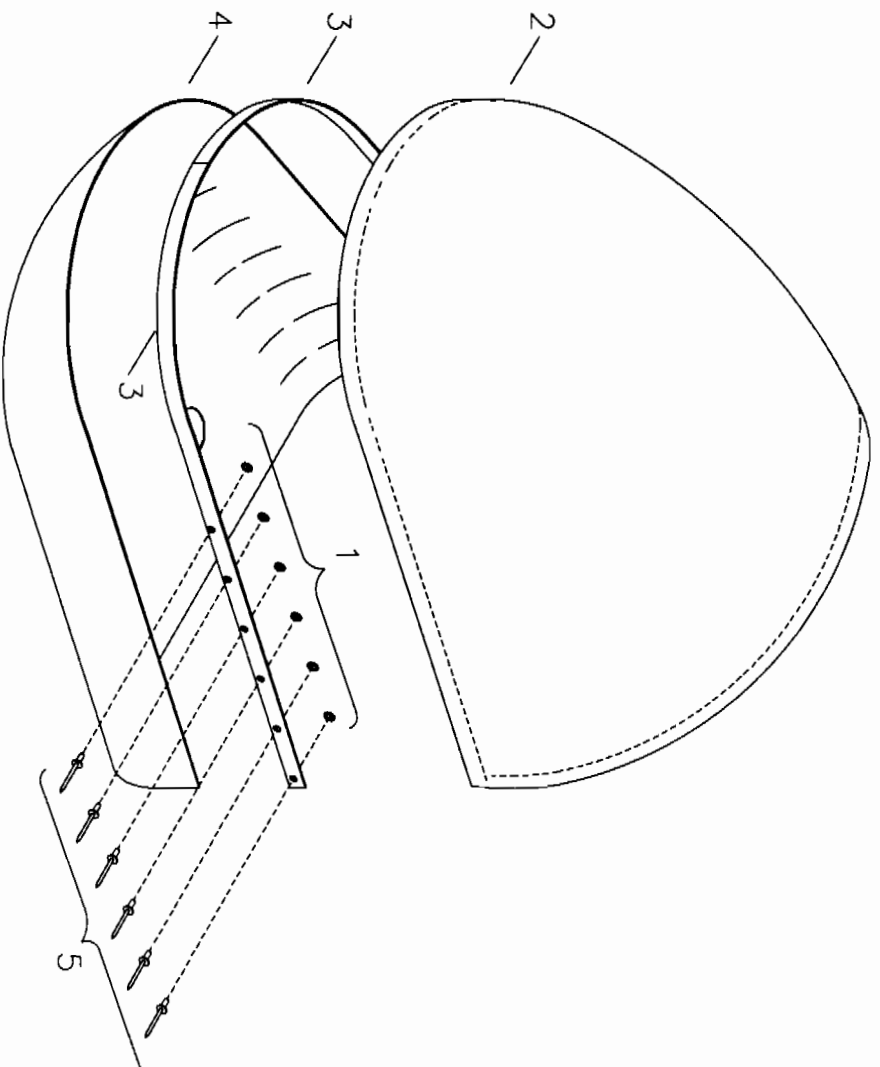
#	DESCRIPTION	PART NUMBER	QUANTITY
1.	1/4" Bolt	AN4-12A	4
2.	1/4" Shear Nut	AN364-428A	4
3.	Shoulder Belt - Slider End	KAST0025-4	0
4.	Lap Belt - Clip Side *	KAST0025-1	0
5.	Seat Belt Kit	KAST0025	1
6.	Lap Belt - Buckle Side *	KAST0025-2	0
7.	1/4" Thick Washer	AN960-416	12
8.	Shoulder Belt - Swivel Clip End *	KAST0025-3	0

*Supplied in seat belt kit.

RMS S-12S AIRAILE INSTRUMENT PANEL ASSEMBLY



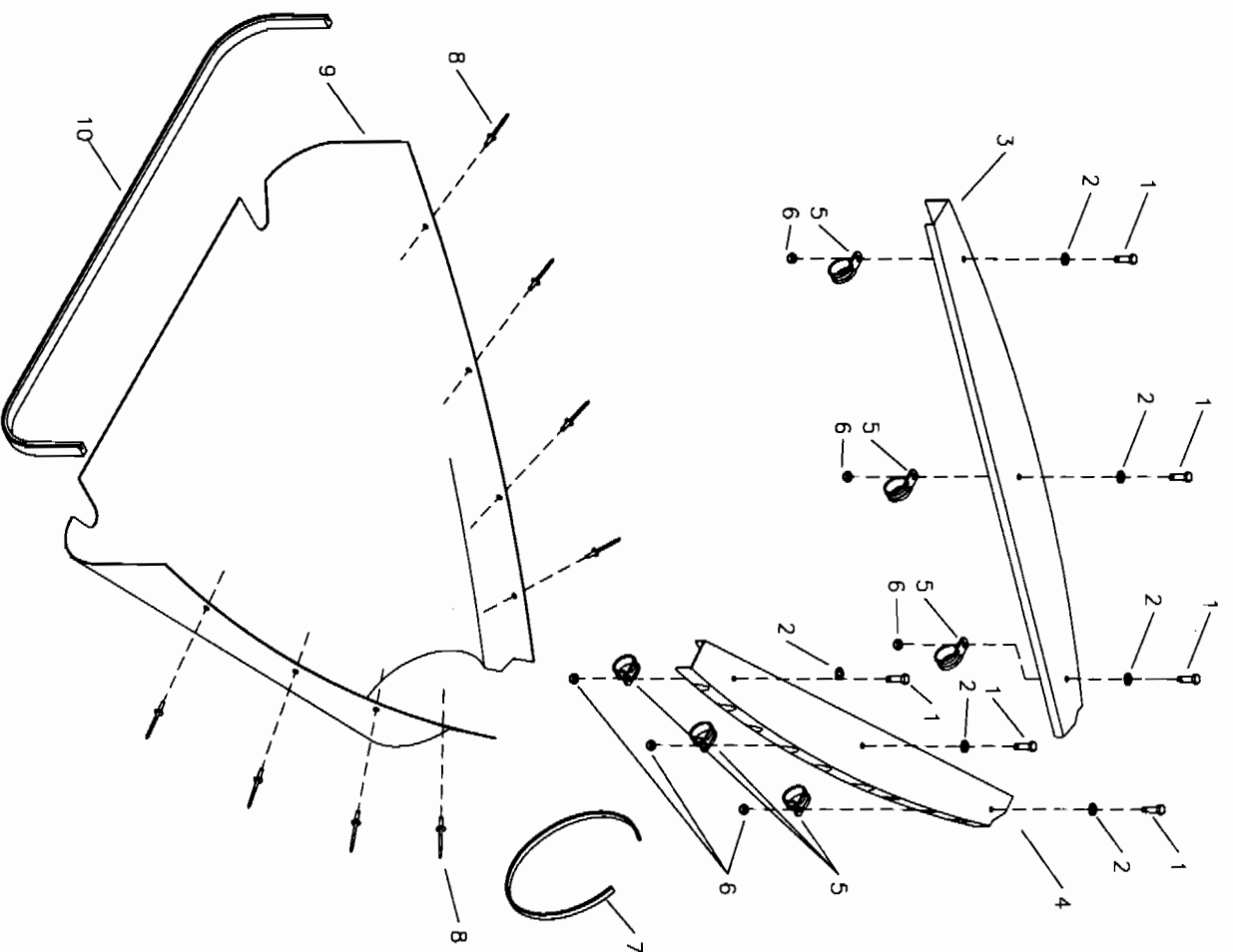
#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Instrument Panel Housing	KPIP0032	1
2.	#6 Small Pan Head Screw	6RX1/2 PHS	15
3.	3/32" Aluminum Pop Rivet	40APR1/8	4
4.	Instrument Panel - Optional Blank	KPIP0030	1
4.	Instrument Panel - Standard Pre-Cut	KPIP0035	1
5.	Tinnerman	A1789-8Z-1	30
6.	3/16" Bolt	AN3-3A	2
7.	Mount Tang	ST-16	1
8.	3/16" Nut Plate	K-1000-3	2
9.	#8 Pan Head Screw	8X1/2 PHS	30
10.	Attach Angle	KPIP0031	1
11.	3/16" Thin Washer	AN960-10L	2
12.	3/16" Stainless Steel Pop Rivet - Cherry Q	CCPQ-62	2
13.	Wire Casing	IP-WCASE	13 ft
14.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	4



RRAD S-12S AIRAILE **NOSE POD ASSEMBLY**

S-12S AIRAILE - NOSE POD ASSEMBLY

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	1/8" Small Brass Washer	AN960-B4	24
2.	Nose Cone Top	KPFU0107	1
3.	Nose Cone Mating Strip	PP-NCMS	2
4.	Nose Cone Bottom	PP-NCBOT	1
5.	1/8" Aluminum Pop Rivet - Avex	1691-0410	24



RA-108 S-12S AIRPLANE
#4 BELLY PAN INSTALLATION

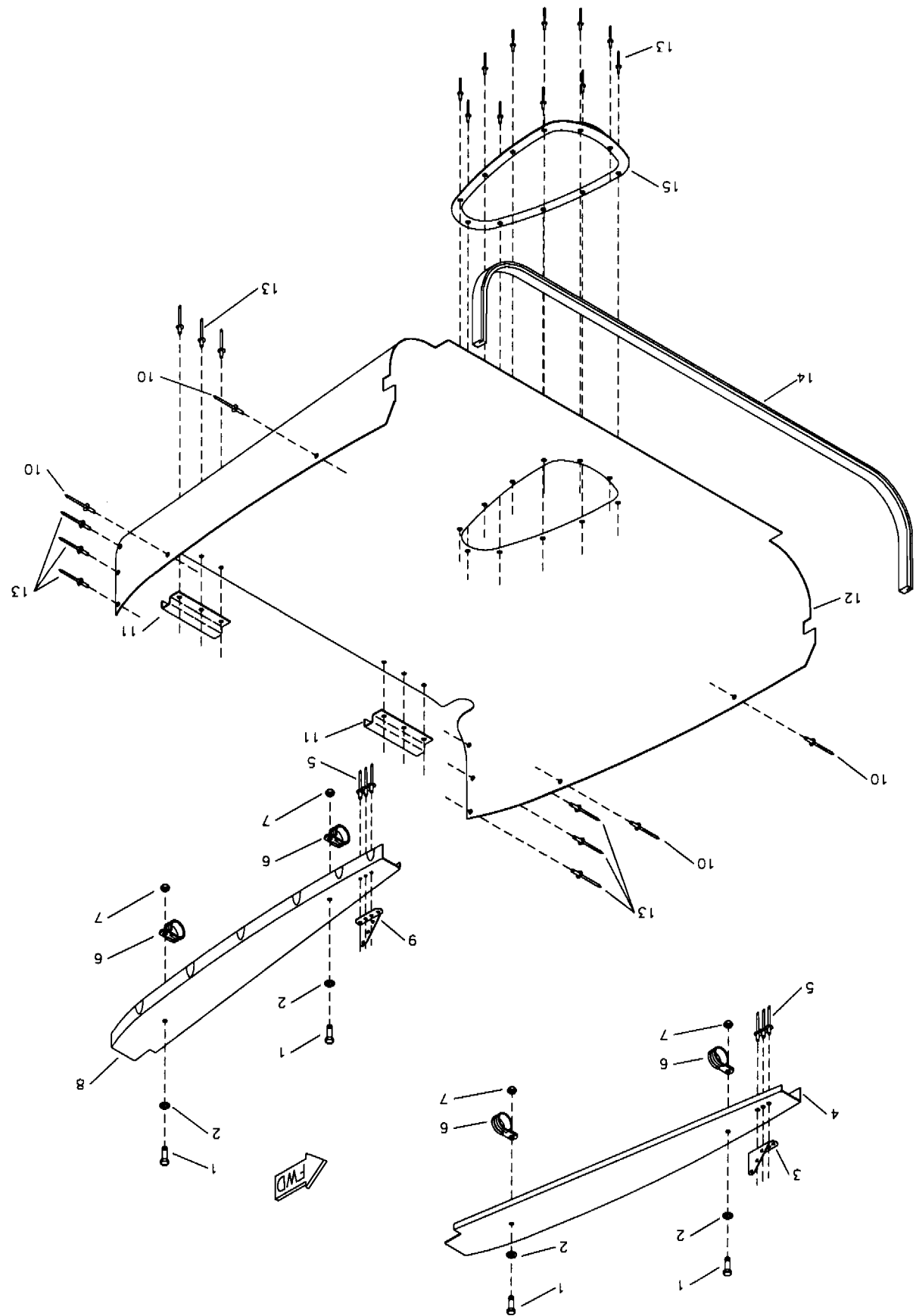
S-12S AIRAILE - #4 BELLY PAN INSTALLATION

# DESCRIPTION	PART NUMBER	QUANTITY
1. 3/16" Bolt	AN3-3A	6
2. 3/16" Thick Washer	AN960-10	6
3. #4 Belly Pan Former - RH	KPFU0085-R	1
4. #4 Belly Pan Former - LH	KPFU0085-L	1
5. 5/8" Cushioned Tube Clamp	MS21919-DG10	6
6. 3/16" Shear Nut	AN364-1032A	6
7. Rubber Edging	X1011	13 in
8. 3/32" Aluminum Pop Rivet	40APR1/8	8
9. #4 Belly Pan	KPFU0095	1
10. Foam Strip, 3/16" x 3/8" x X *	KAAC0026-7	0

*Builder cuts from raw stock.

RPM S-12S AIRALE #3 BELLY PAN INSTALLATION

MD3513



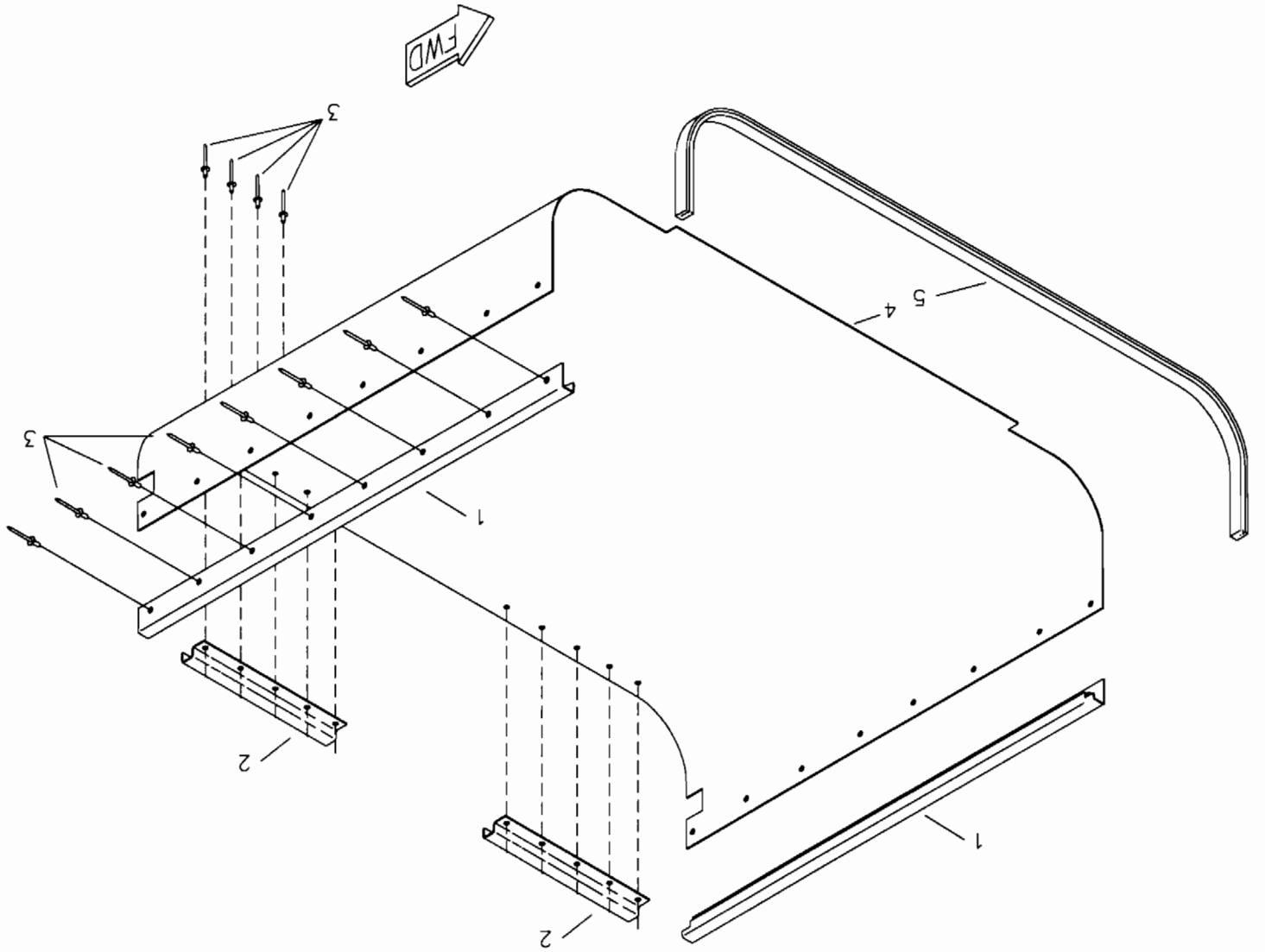
S-12S AIRAILE - #3 BELLY PAN INSTALLATION

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	3/16" Bolt	AN3-3A	4
2.	3/16" Thick Washer	AN960-10	4
3.	Gusset - RH	KPAC0065-R	1
4.	#3 Belly Pan Former - RH	KPFU0084-R	1
5.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-41	6
6.	5/8" Cushioned Tube Clamp	MS21919-DG10	4
7.	3/16" Shear Nut	AN364-1032A	4
8.	#3 Belly Pan Former - LH	KPFU0084-L	1
9.	Gusset - LH	KPAC0065-L	1
10.	3/32" Aluminum Pop Rivet	40APR1/8	4
11.	Z Strip	KPAC0067	2
12.	#3 Belly Pan	KPFU0096	1
13.	1/8" Aluminum Pop Rivet - Avex	1691-0410	28
14.	Foam Strip, 3/16" x 3/8" x X *	KAAC0026-7	0
15.	Radiator Boom Seal	KPPW0049	1

*Builder cuts from raw stock.

RMS S-12S AIRAILE #2 BELLY PAN INSTALLATION

MD3507



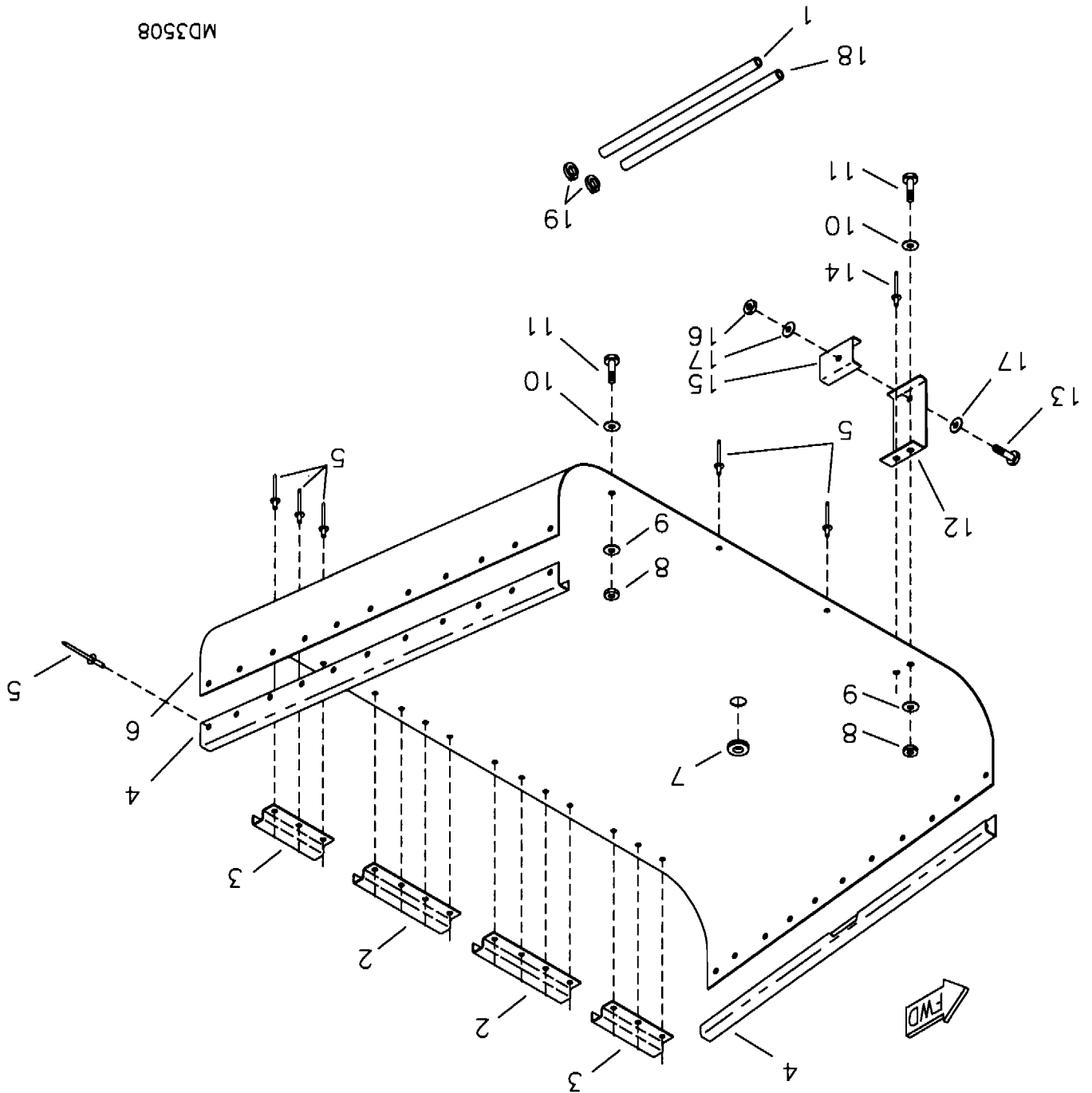
S-12S AIRAILE - #2 BELLY PAN INSTALLATION

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Top Channel, LH	KPFU0060-LH	1
1.	Top Channel, RH	KPFU0060-RH	1
2.	Z Strip	KPAC0039	2
3.	1/8" Aluminum Pop Rivet - Avex	1691-0410	26
4.	#2 Belly Pan	KPFU0061	1
5.	Foam Strip, 3/16" *	KAAC0026-7	0

*Builder cuts from raw stock.

RANDS S-12S AIRRALE #1 BELLY PAN INSTALLATION

MD3508



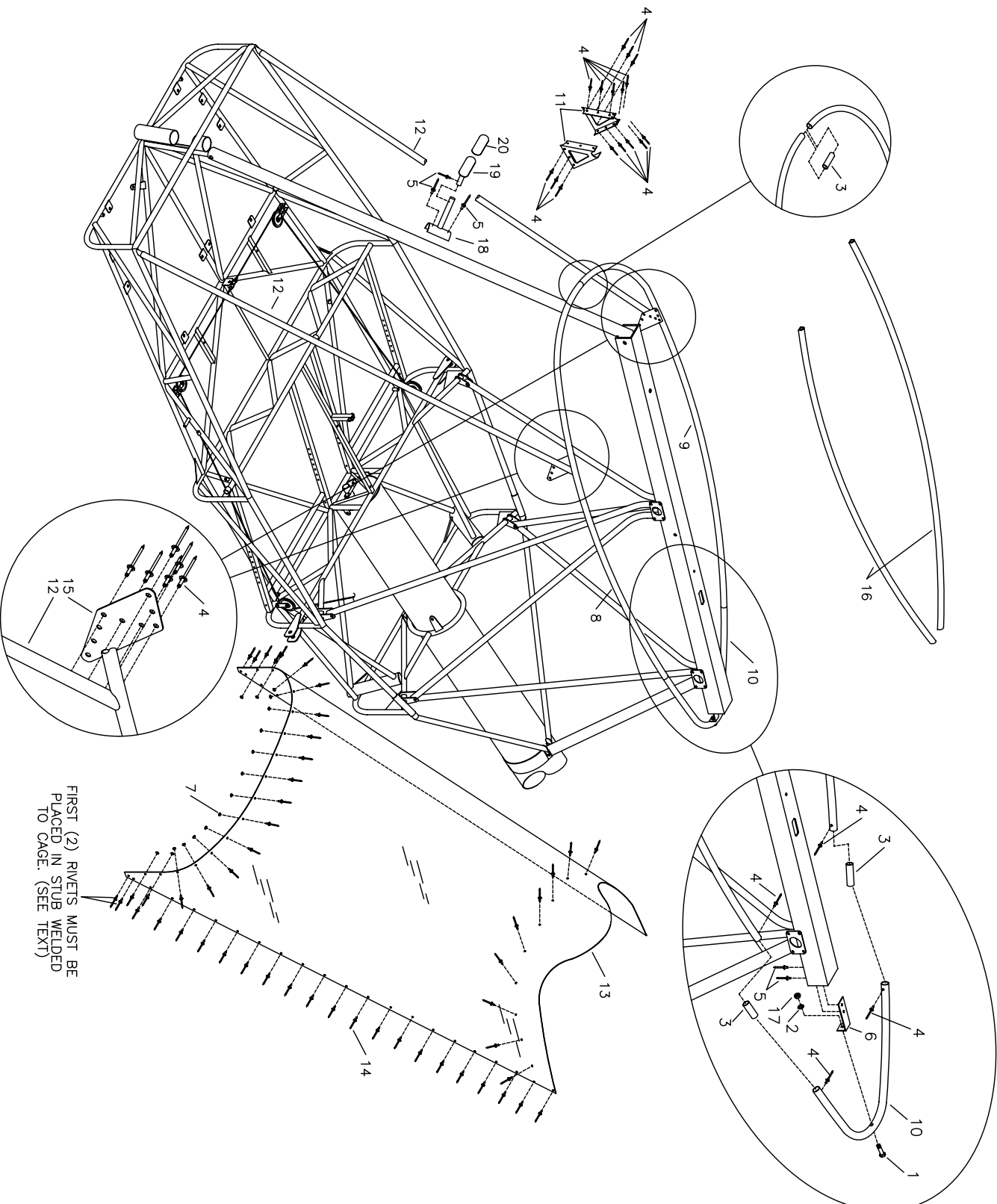
S-12S AIRAILE - #1 BELLY PAN INSTALLATION

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Pitot Tube ***	PITOT TUBE	0
2.	8" Z Strip	PP-8Z	2
3.	Z Strip	KPAC0040	2
4.	Top Channel, LH	KPFU0062-LH	1
4.	Top Channel, RH	KPFU0062-RH	1
5.	1/8" Aluminum Pop Rivet - Avex	1691-0410	38
6.	#1 Belly Pan	KPFU0063	1
7.	Rubber Grommet	MS35489-17	1
8.	3/16" Shear Nut **	AN364-1032A	0
9.	3/16" Large Washer **	AN970-3	0
10.	3/16" Thick Washer **	AN960-10	0
11.	3/16" Bolt **	AN3-12A	0
12.	Static/Pitot Mount	IP-SPM	1
13.	3/16" Bolt	AN3-5A	1
14.	3/16" Aluminum Pop Rivet - Cherry Q	AAPQ-62	1
15.	Static/Pitot Mount Clamp	IP-SPMC	1
16.	3/16" Shear Nut	AN364-1032A	1
17.	3/16" Thick Washer	AN960-10	2
18.	Static Tube	W-ST	1
19.	Line Clamp, 3/8"	FS-LCL 3/8	2

*Builder cuts from raw stock.

**Referenced from floorboard assembly.

***Builder makes pitot tube by cutting static tube in half.



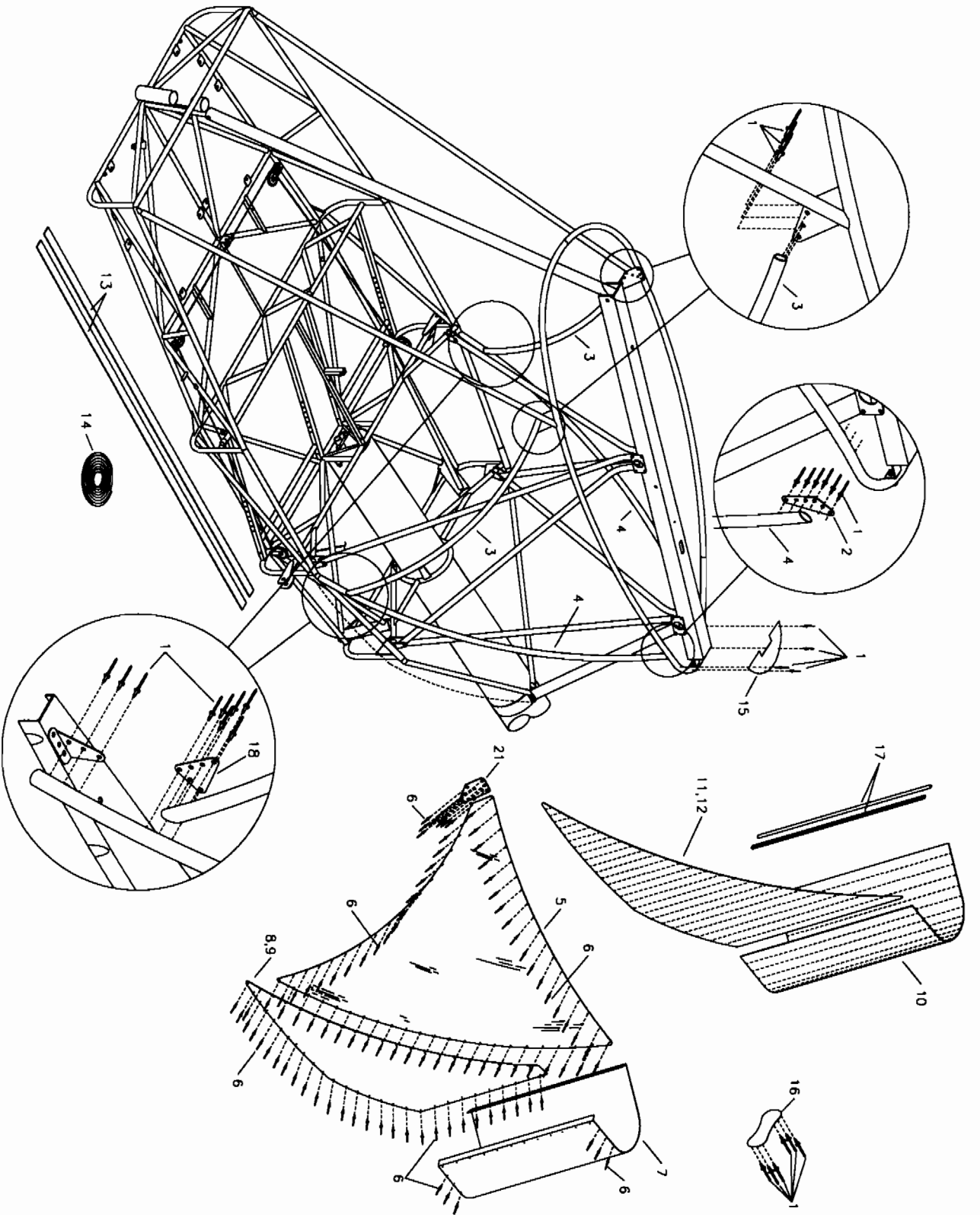
FIRST (2) RIVETS MUST BE
PLACED IN STUB WELDED
TO GAGE. (SEE TEXT)

RR-12S AIRAILE WINDSHIELD INSTALLATION

S-12S AIRAILE - WINDSHIELD INSTALLATION

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	3/16" Bolt	AN3-12A	1
2.	3/16" Thick Washer	AN960-10	1
3.	Splice Tube *	KPFU0110	1
4.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	32
5.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-44	5
6.	Attach Angle	KPFU0271	1
7.	1/8" Small Brass Washer	AN960-B4	17
8.	Top Former, LH	KPFU0108-L	1
9.	Top Former, RH	KPFU0108-R	1
10.	Top Former - AFT	KPFU0272	1
11.	Top Former Support	KPFU0242	2
12.	Windshield Side Tube	KPFU0111	2
13.	Windshield (Tinted or Clear)	KPFU0278	1
14.	1/8" Aluminum Pop Rivet - Avex	1691-0410	65
15.	Gusset	FE-DF-ST-GUS	4
16.	Foam Seal	KSAC0013	9 ft
17.	3/16" Shear Nut	AN364-1032A	1
18.	Attach Bracket - Windshield Support	KPWS0016	1
19.	Windshield Support	KPWS0017	1
20.	1" Black Foam Tape	KSAC0011	4 in

*Builder cuts into (3) equal pieces, see text.



RRR S-12S AIRRAIL
AFT ENCLOSURE INSTALLATION

MD3549

S-12S AIRAILE - AFT ENCLOSURE INSTALLATION

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	48
2.	Gusset	FE-WF-TF-GUS	2
3.	Door Former	KPFU0112	2
4.	AFT Window Former	KPFU0274	2
5.	AFT Window (Tinted or Clear)	KPFU0104	2
6.	1/8" Aluminum Pop Rivet - Avex	1691-0410	192
7.	AFT Enclosure	KPFU0273	1
8.	Upper Panel, LH	KPFU0101-L	1
9.	Upper Panel, RH	KPFU0101-R	1
10.	Soundproofing - AFT	KPFU0276	1
11.	Soundproofing - LH	KPFU0277-L	1
12.	Soundproofing - RH	KPFU0277-R	1
13.	Seal Strip	KPAC0070	2
14.	Small Rubber Edging	8510K11	120 in
15.	Top Former Closeout	KPFU0275	1
16.	Tail Boom Access Panel	KPFU0106	1
17.	Rubber Edging	X1011	60 in
18.	Gusset	D-CG	2

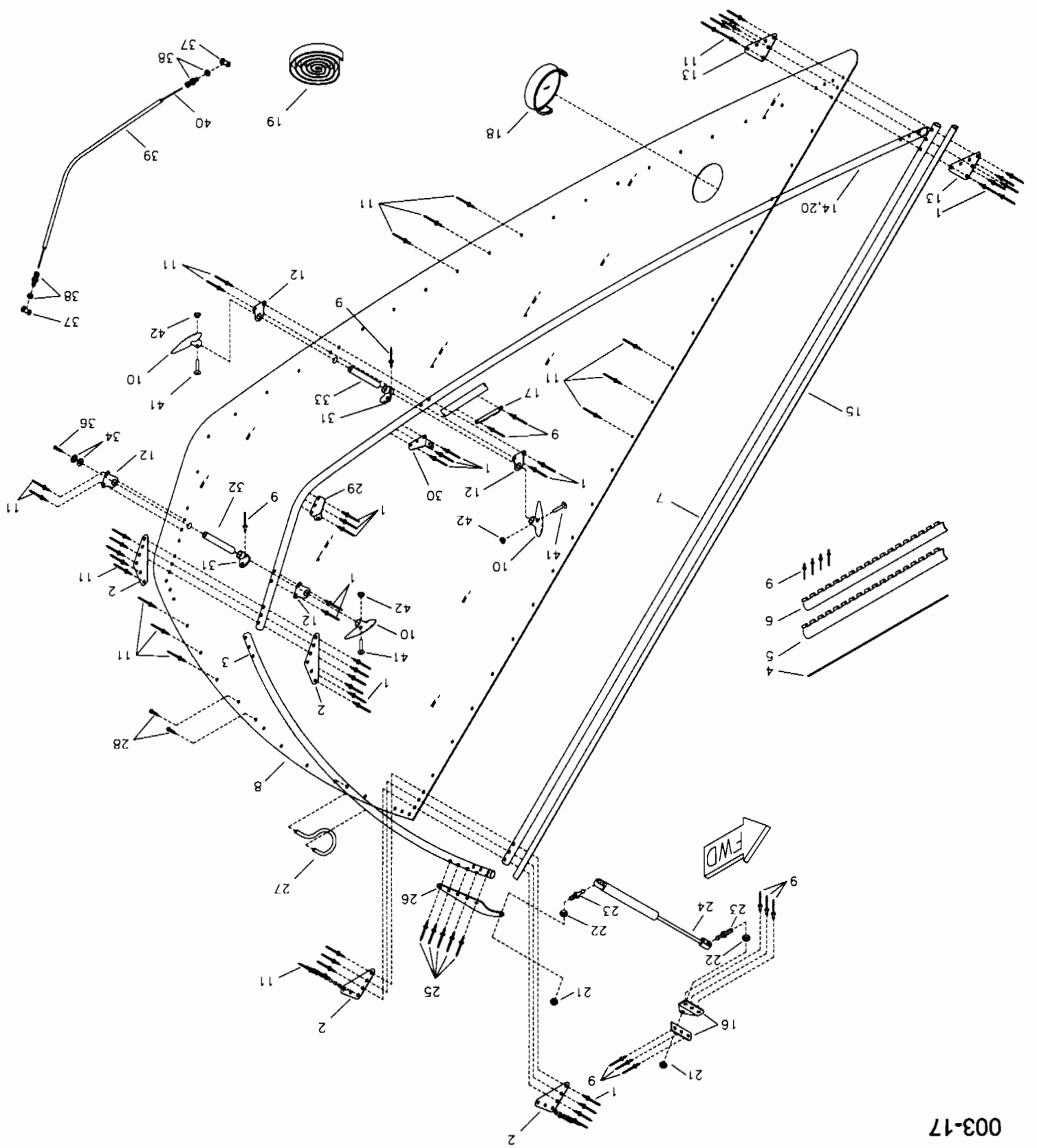
S-12S AIRAILE - CENTER COVER ASSEMBLY

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	1/8" Aluminum Pop Rivet - Avex	1691-0410	23
2.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-44	18
3.	Rubber Edging	X1011	120 in
4.	Center Cover - AFT Wrap	KPFU0262	1
5.	Center Cover - FWD Enclosure	KPFU0267	1
6.	1/4 Turn Stud	#200	3
7.	Rubber Washer	#201	3
8.	Wear Washer Nylon	#103	3
9.	1/8" Small Brass Washer	AN960-B4	11
10.	Snap Ring	#101	3
11.	3/32" Aluminum Pop Rivet	40APR1/4	6
12.	Receptacle	#302	3
13.	Center Cover AFT Mount, RH	KPFU0261-R	1
14.	Center Cover - FWD Mount	KPFU0260	1
15.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-42	8
16.	Center Cover AFT Mount, LH	KPFU0261-L	1
17.	Reinforcement Tang	KPAC0041	2

RMS S-12S AIRAILE FULL DOOR ASSEMBLY

03/6/01

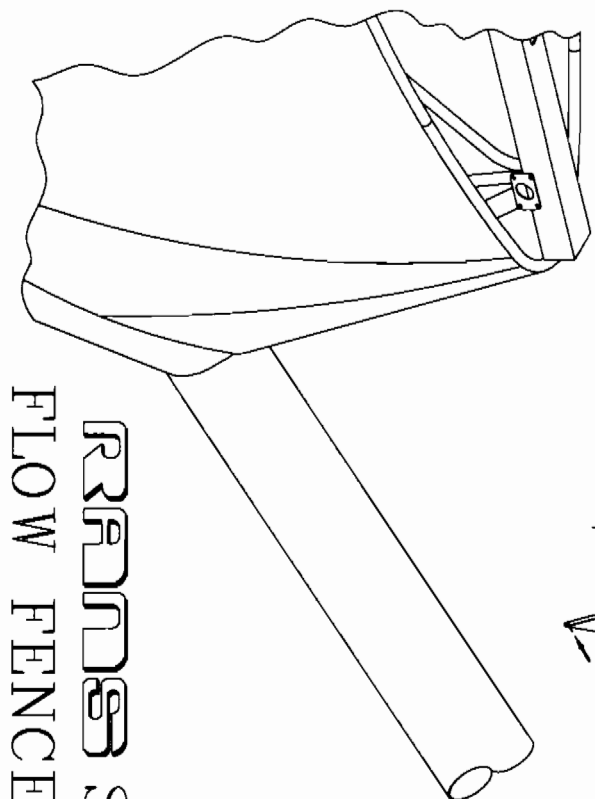
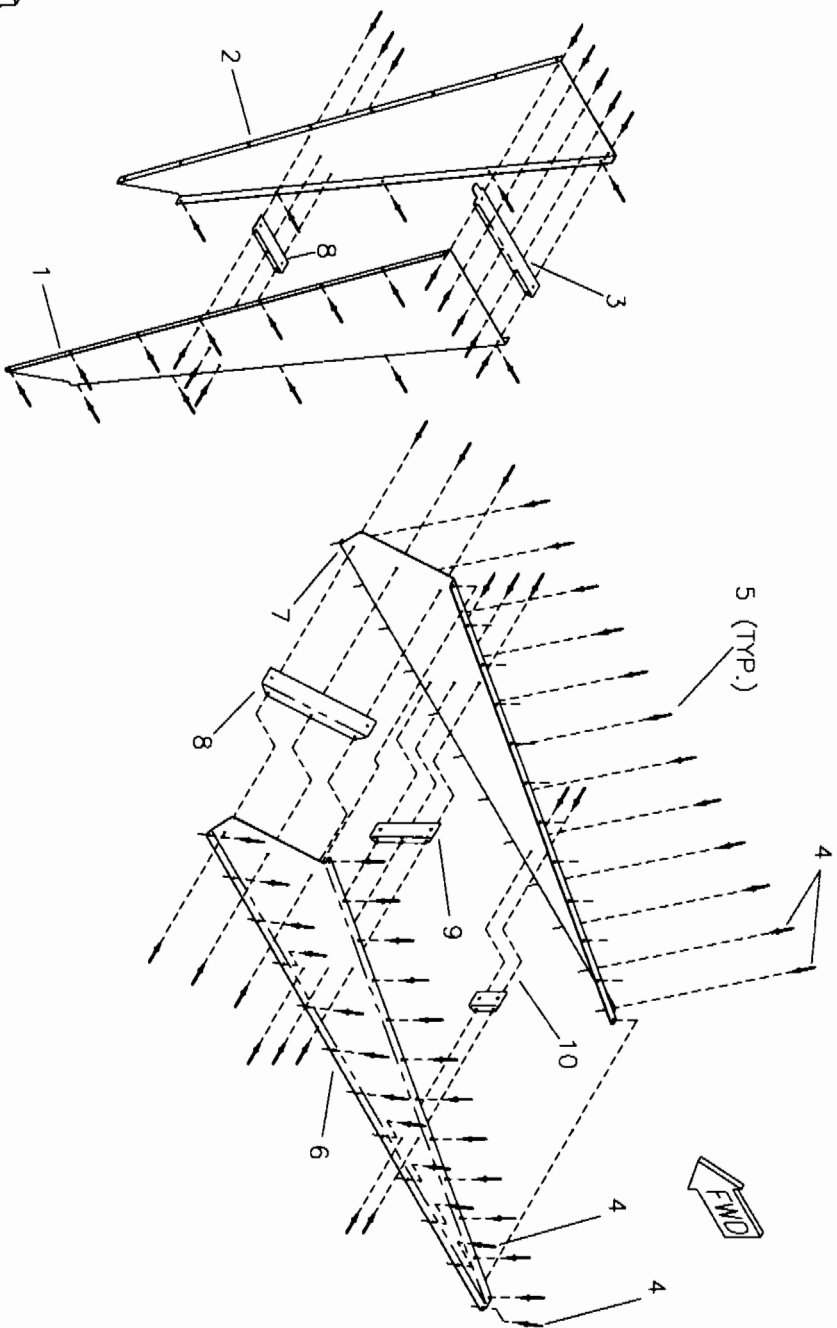
MD3530



003-17

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	52
2.	Gusset	D-CG	8
3.	Door - Upper Frame Tube	KPDR0033	2
4.	1/8" Stainless Wire Hinge Pin	D-HP	1
5.	Formed Hinge - 3/4"	KPDR0032	1
6.	Formed Hinge - 1/2"	KPDR0031	1
7.	Door Hinge - Tube	KPDR0034	2
8.	Door - Lexan (Tinted or Clear)	KPFU0105	2
9.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-42	52
10.	Door Handle	KPDR0026	6
11.	1/8" Aluminum Pop Rivet - Avex	1691-0410	128
12.	Door Handle Gusset	D-DHG	8
13.	Gusset	KPAC0064	4
14.	Door - Lower Frame Tube, LH	KPDR0066-L	1
15.	Foam Seal	KSAC0013	9 ft
16.	Mount Bracket	KPFU0026	4
17.	Door Rub Block	D-RB	2
18.	Air Vent	AIR-VENT	2
19.	1" Black Foam Tape	KSAC0011	120 in
20.	Door - Lower Frame Tube, RH	KPDR0066-R	1
21.	5/16" Loc Nut - Coarse	KSHW0022	4
22.	5/16" Thick Washer	AN960-516	4
23.	Ball Stud	KSHW0021	4
24.	Gas Strut	KSHW0023	2
25.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-44	10
26.	Lift Bracket	KPDR0036	2
27.	Upper Door Handle	D-UDH	2
28.	3/16" Countersunk Machine Bolt	AN509-1032R14	4
29.	Housing Mount Bracket	KPAC0072	2
30.	Housing Mount Bracket	KPAC0075	2
31.	Pivot Arm	KPAC0071	4
32.	Aluminum Bushing, 3/8" x .095 x 1 1/4" *	KAAC0026-12	0
33.	Aluminum Bushing, 3/8" x .095 x 2" *	KAAC0026-12	0
34.	1/4" Plastic Washer	PW-4	2
35.	3/16" Thin Washer	AN960-10L	2
36.	Button Head Cap Screw	BSHW0010	2
37.	Wire Swivel/Screw Stop	2361	4
38.	Adjustable Cable Ferrule/Nut	12553	4
39.	Door Handle - Link Tube	KPDR0067	2
40.	Stainless Steel Rod, 3/32"	TG-SSW3/32	2
41.	Button Head Screw	KSHW0024	6
42.	Brass Flange Nut	KSHW0025	6

*Builder must fabricate from raw stock.



R3FMD S-12S AIRAILLE FLOW FENCE INSTALLATION

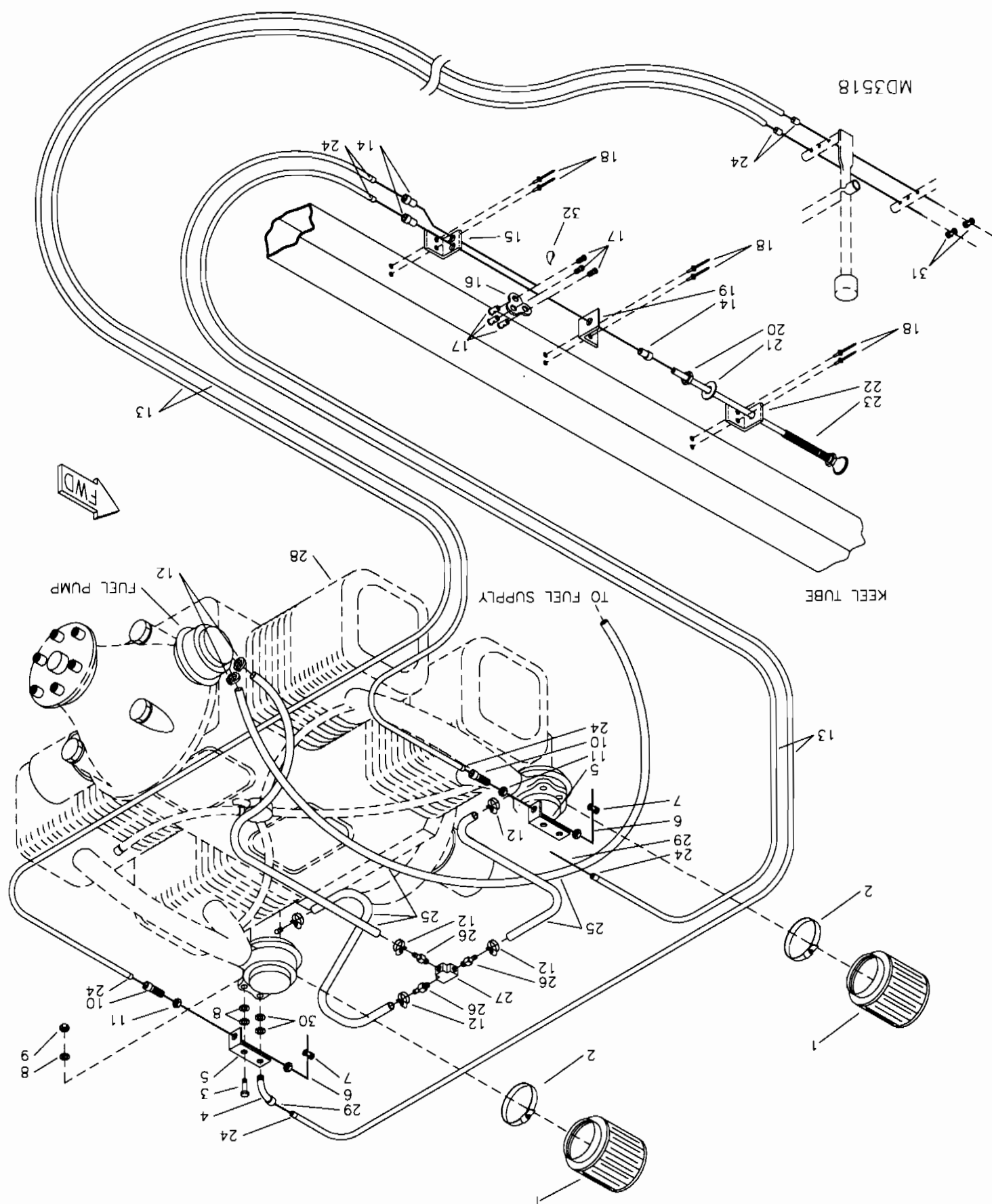
S-12S AIRAILE - FLOW FENCE INSTALLATION

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Vertical Fence - LH	KPFU0263-L	1
2.	Vertical Fence - RH	KPFU0263-R	1
3.	Vertical Fence - Top Rib	KPFU0265	1
4.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-42	4
5.	1/8" Aluminum Pop Rivet - Avex	1691-0410	85
6.	Horizontal Fence - LH	KPFU0264-L	1
7.	Horizontal Fence - RH	KPFU0264-R	1
8.	Horizontal Fence-FWD Rib, Vertical Fence-Lower Rib	KPFU0119	2
9.	Horizontal Fence - Middle Rib	KPFU0118	1
10.	Horizontal Fence - AFT Rib	KPFU0117	1

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	3/8" Bolt	AN6-23A	6
2.	1/8" Aluminum Washer	EG-AW	10
3.	Barry Mount	22001	6
4.	10MM Bolt	M10 X 35	4
5.	10MM Loc Washer	945-753	4
6.	912 Mount Angle	KPPW0057	2
7.	1/4" Bolt	AN4-24A	2
8.	1/4" Thin Washer	AN960-416L	4
9.	AFT Mount Strap	EG-912-AMS	1
10.	Forward Mount Strap	KPPW0210	1
11.	912 Engine Mount Angle, RH *	KPPW0146-R	0
11.	912 Engine Mount Angle, LH *	KPPW0146-L	0
12.	1/4" Tensile Nut	AN365-428A	2
13.	Torsion Strut End Fitting	EG-912-TSFF	2
14.	3/16" Thin Washer	AN960-10L	2
15.	3/16" Shear Nut	AN364-1032A	2
16.	3/16" Bolt	AN3-10A	2
17.	3/8" Tensile Nut	AN363-624A	6
18.	Torsion Strut	KPPW0044	2

*Reference super structure.

RRMS S-12S AIRAILE ENGINE



S-12S AIRAILE - 912 ENGINE, THROTTLE/FUEL HOOK UPS

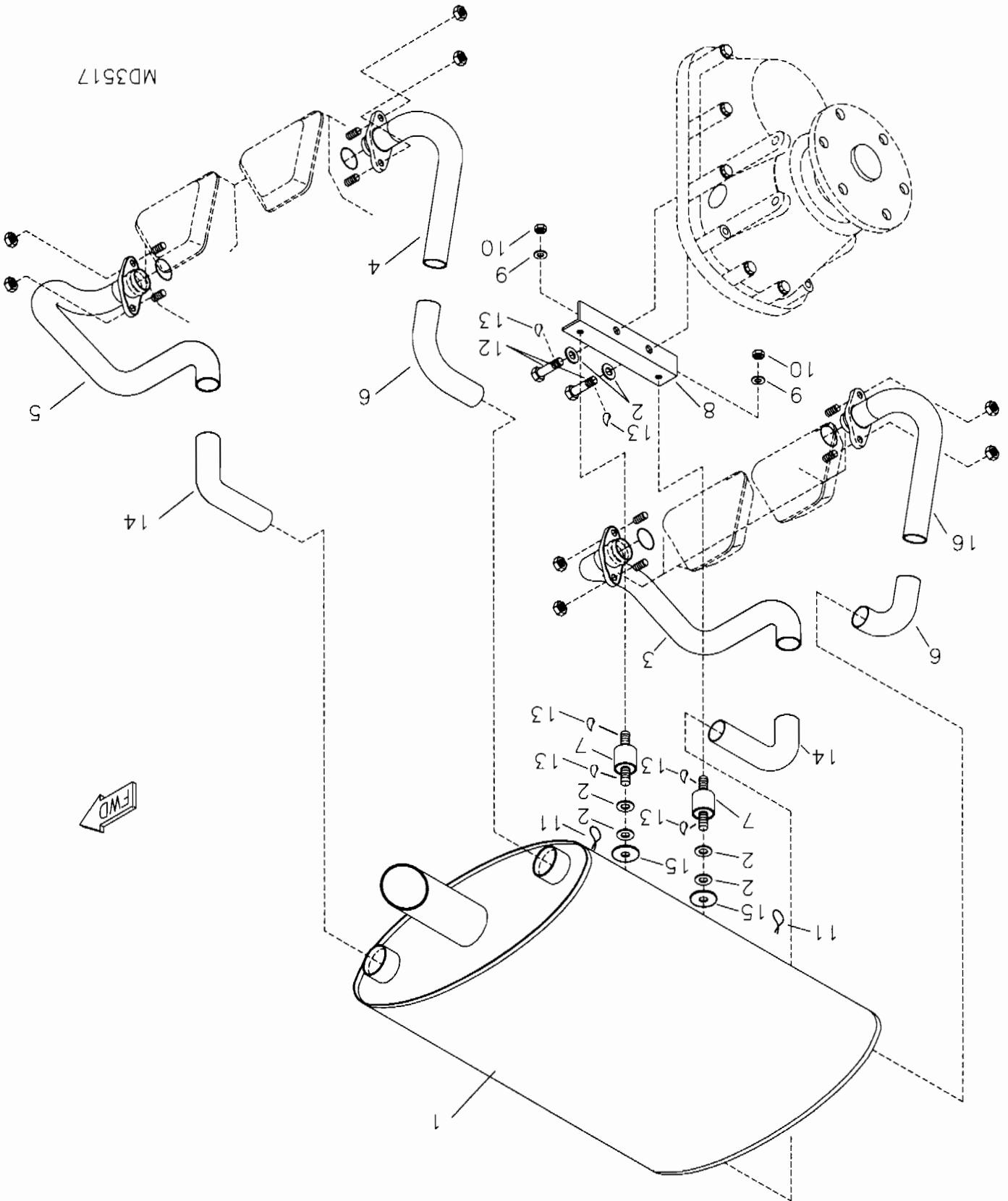
#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Air Filter, K & N (503/582 filter)	EG-AF	2
2.	63MM Clamp *	EG-AF-CLAMP	2
3.	3/16" Bolt	AN3-7A	2
4.	Choke Cable Guide **	EG-EG-912-1	2
5.	Throttle Cable Mount, 912, L	EG-TCM-L	1
5.	Throttle Cable Mount, 912, R	EG-TCM-R	1
6.	Throttle Cable	EG-CAB-12	2
7.	Wire Stop Screw **	EG-EG-912-2	2
8.	3/16" Thick Washer	AN960-10	6
9.	3/16" Shear Nut	AN364-1032A	2
10.	Throttle Adjust Ferrule **	EG-EG-912-3	2
11.	1/8" Ferrule Nut **	EG-EG-912-4	0
12.	Small Hose Clamp	5-6202	7
13.	Cable Housing	EG-T-CAB-H	28 ft
14.	Cable Conduit Ferrule	2394	3
15.	Double Choke Cable Stop	CK-DCS	1
16.	Mixer Plate	KPPW0076	1
17.	Wire Swivel Screw Stop	2361	3
18.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-44	6
19.	Choke Cable Stop	CK-CS	1
20.	Choke Assembly Nut ***	4-336-1	0
21.	Choke Assembly Washer ***	4-336-2	0
22.	Pull Choke Mount	CK-MT	1
23.	Choke Assembly	4-336	1
24.	Cable Ferrule Cap	ENDCAP-12000	8
25.	1/4" Black Fuel Line	27002A	13 ft
26.	Straight Withdrawal Fitting	8330	3
27.	1/8" Brass Tee Fitting	3-20120	1
28.	912 Engine	EG-EG-912	1
29.	Choke Cable	BC-105	2
30.	1/4" Thick Washer	AN960-416	4
31.	Wire Swivel/Screw Stop	2361	2

*Supplied with air filter.

**Supplied with engine.

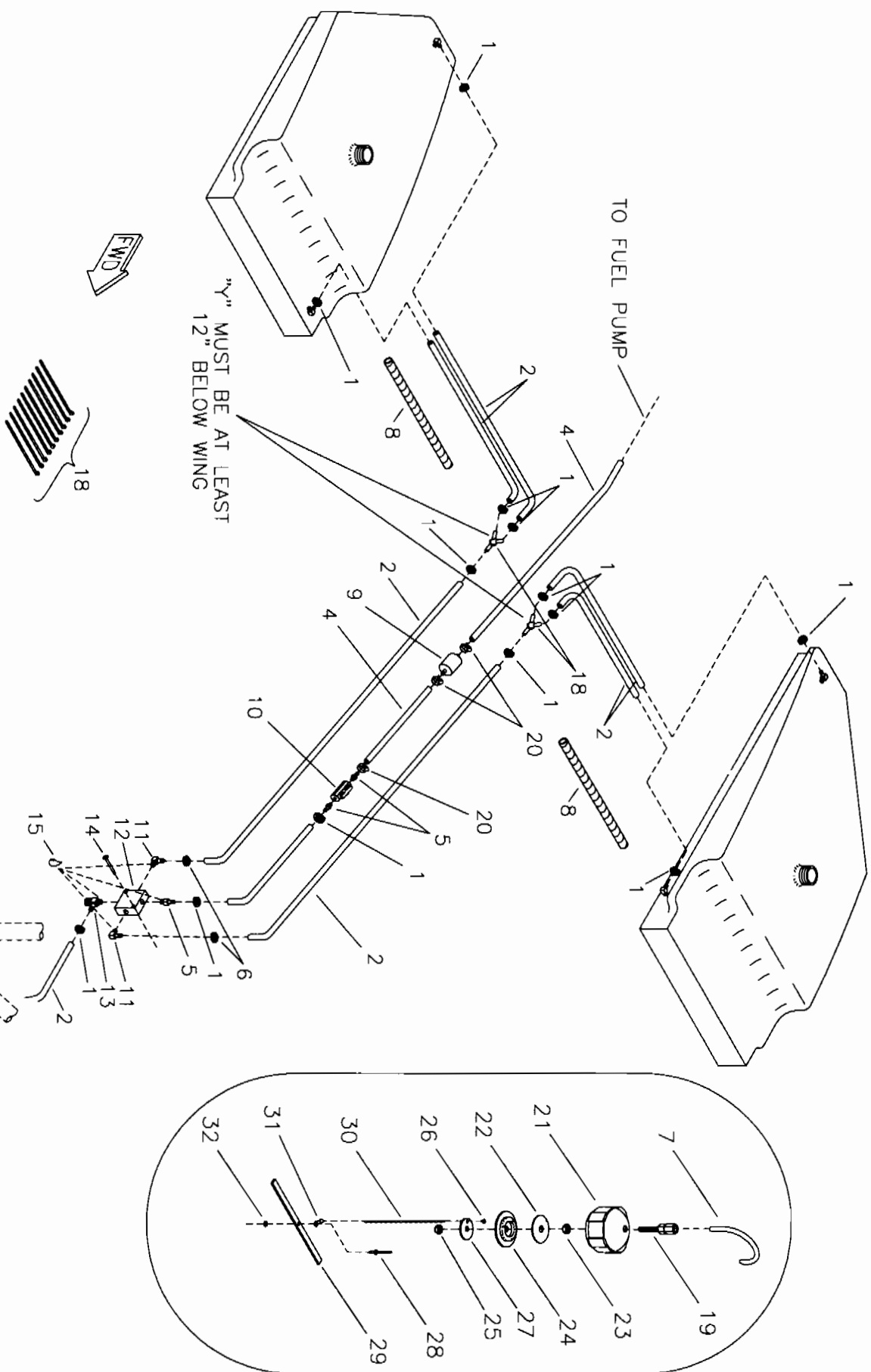
***Supplied with choke assembly

RMS S-12S AIRAILE EXHAUST ASSEMBLY



#	DESCRIPTION	PART NUMBER	QUANTITY
1.	912 Muffler, S-12, S-18	KPEX0058	1
2.	1/4" Thick Washer	AN960-416	6
3.	S-12, S-18 Forward Lower Manifold, LH	KPEX0059	1
4.	S-12, S-18 AFT Lower Manifold	KPEX0061	1
5.	S-12, S-18 Forward Lower Manifold, RH	KPEX0060	1
6.	S-12, S-18 AFT Upper Manifold, RH	KPEX0062	2
7.	Rubber Isolator	EG-RI	2
8.	Muffler Mount Angle	KPEX0010	1
9.	6 MM Loc Washer *	AN935-416L	0
10.	6 MM Nut *	6MM NUT	0
11.	Safety Wire	SAFETY WIRE	0 ft
12.	6MM x 16MM Bolt	M6X16 BOLT	2
13.	Loctite Blue	LOC-TITE	0
14.	S-12, S-18 Forward Upper Manifold	KPEX0063	2
15.	1/8" Aluminum Washer	EG-AW	2
16.	S-12, S-18 AFT Lower Manifold, LH	KPEX0066	1

*Supplied with rubber isolator.



912 FUEL SYSTEM

S-12S AIRAILE - 912 FUEL SYSTEM

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Line Clamp, 3/8"	FS-LCL 3/8	15
2.	1/4" Blue Fuel Line (feet)	FS-FL	50 ft
3.	Zip Ties	ZIP TIES	10
4.	1/4" Black Fuel Line *	27002A	0 ft
5.	Straight Withdrawal Fitting	8330	3
6.	Line Clamp, 5/16" ID	FS-LCL 5/16	2
7.	Vent Tube	KPFS0020	2
8.	Coil Wrap (feet)	1/2 SPIRAL LOOM	1 ft
9.	Fuel Filter	33031	1
10.	Fuel Shut Off Valve	FS-S-OFF	1
11.	90 Withdrawal Fitting	8342	2
12.	Fuel Mixer Block	FS-FMB	1
13.	Sump Drain Valve	8336	1
14.	8 x 32 Bolt	AN526-832R16	1
15.	Loctite Blue	LOC-TITE	0
16.	8 x 32 Nut	AN364-832A	1
17.	1" Cushioned Tube Clamp	MS21919-DG16	1
18.	Fuel Line "Y" Connector	8345	2
19.	Conduit Adjuster Assembly	KSFS0014	2
20.	Small Hose Clamp	5-6202	3
21.	Fuel Cap	KSFS0007	2
22.	Plastic Baffle **	KSFS0012	0
23.	1/4" Plain Nut	AN345-416	2
24.	Rubber Gasket **	KSFS0013	0
25.	1/4" Shear Nut	AN364-428C	2
26.	Bead Chain - Retainer Sleeve	KSHW0014	2
27.	1/4" Large Washer	AN970-4	2
28.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-44	2
29.	Plastic Retainer	KPFS0012	2
30.	#3 Bead Chain (inches)	KSHW0012	14 in
31.	Bead Chain - End Coupling	KSHW0013	2
32.	1/8" Small Brass Washer	AN960-B4	2

*Referenced from 912 engine.

**Supplied with Fuel Cap.

IF NOT INSTALLING OIL COOLER
ROUTE DIRECTLY TO OIL PUMP

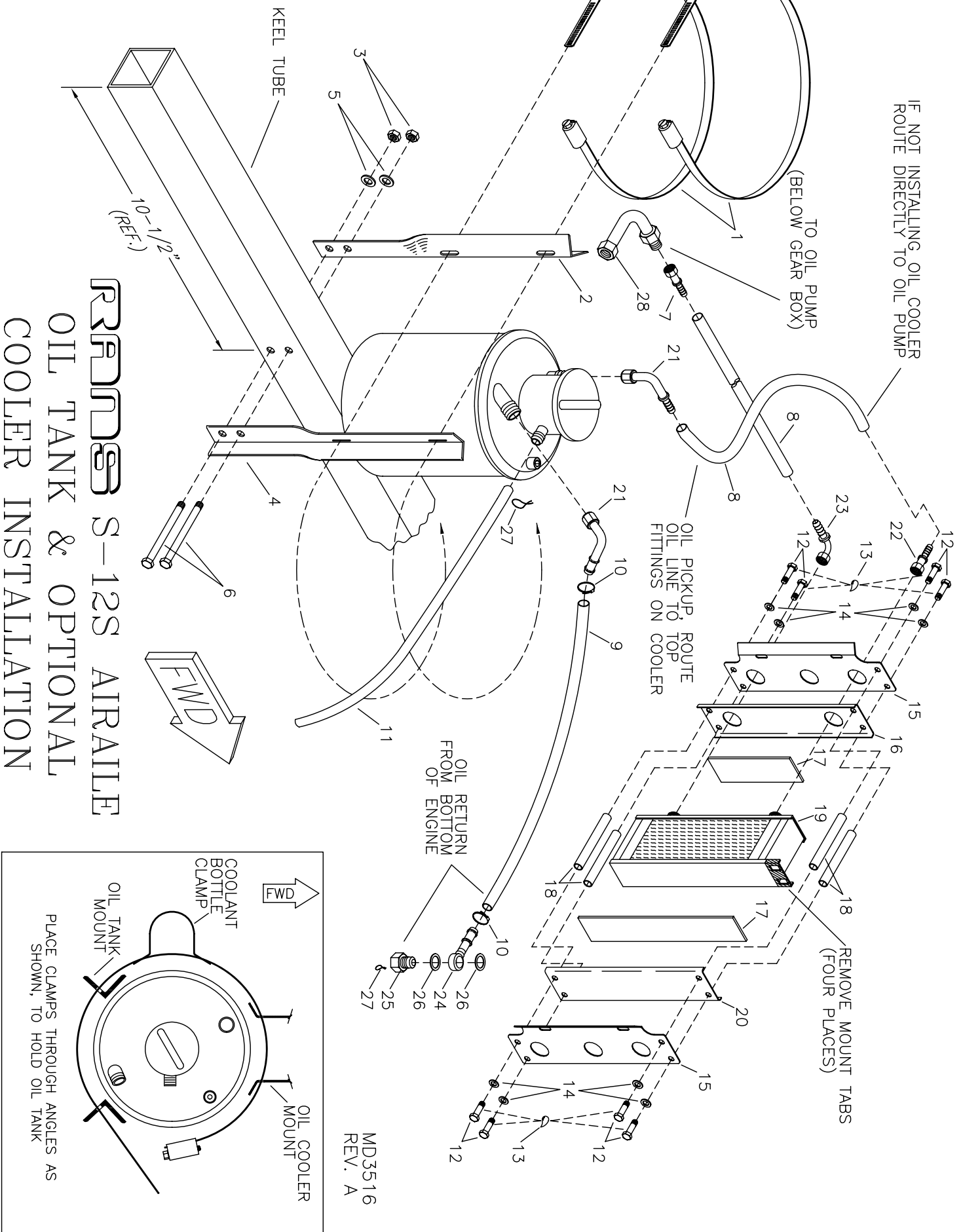
TO OIL PUMP
(BELOW GEAR BOX)

OIL PICKUP ROUTE
OIL LINE TO TOP
FITTINGS ON COOLER

REMOVE MOUNT TABS
(FOUR PLACES)

OIL RETURN
FROM BOTTOM
OF ENGINE

MD3516
REV. A



R300 S-12S AIRFRAME OIL TANK & OPTIONAL COOLER INSTALLATION

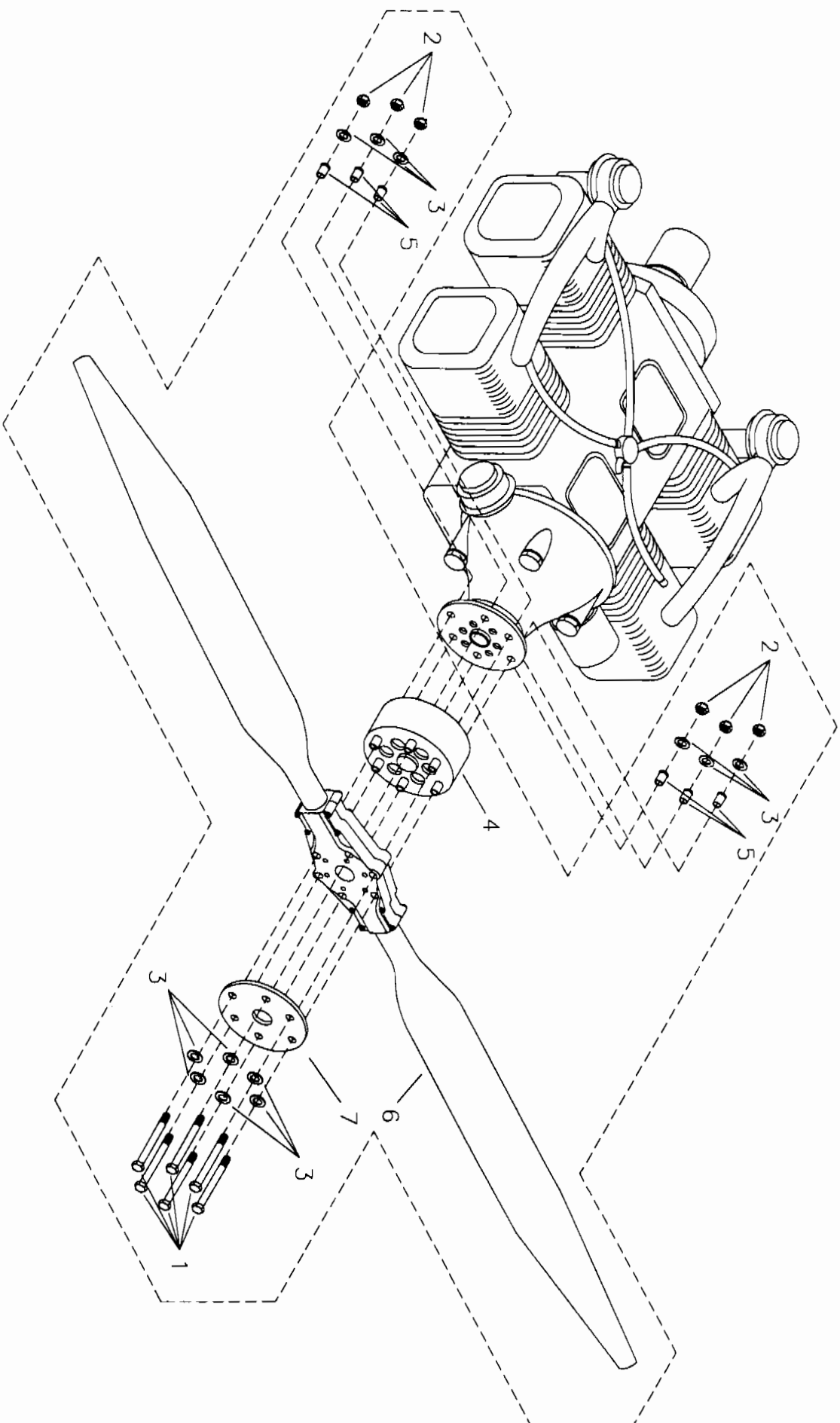
#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Hose Clamp	5-5288	2
2.	Oil Tank Mount, RH	KPPW0147-R	1
3.	3/16" Shear Nut	AN364-1032A	2
4.	Oil Tank Mount, LH	KPPW0147-L	1
5.	3/16" Thick Washer	AN960-10	2
6.	3/16" Bolt	AN3-25A	2
7.	Straight Fitting	KSPW0026	1
8.	Oil Line - Suction	KSPW0080	3 ft
9.	Oil Line - Return	KSPW0031	2 ft
10.	Hose Clamp	5-6203	2
11.	5/16" Overflow Hose	EGCS-OFH	72 in
12.	3/16" Bolt*	AN3-4A	8
13.	Loctite Blue	LOC-TITE	0
14.	3/16" Thin Washer*	AN960-10L	8
15.	Oil Cooler Mount Bracket*	KPPW0191	2
16.	Upper Bracket Mount - Oil Cooler*	KPPW0071	1
17.	.093 Silicone Sheet*	KPPW0254	2
18.	Threaded Bushing-Oil Cooler*	KPPW0192	4
19.	Small Oil Cooler*	20708	1
20.	Lower Bracket Mount - Oil Cooler*	KPPW0072	1
21.	90 Degree Fitting	KSPW0002	2
22.	Straight Fitting*	KSPW0026	1
23.	90 Degree Fitting*	KSPW0002	1
24.	Banjo Fitting	956-315	1
25.	Banjo Bolt - M16 x 1.5 x 28	940-878	1
26.	Gasket Ring - 16 x 22	430-622	2
27.	Safety Wire	-----	0
28.	90 Degree Fitting - Long	KSPW0082	1

* Optional

S-12S AIRAILE - 912 COOLING SYSTEM

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Zip Ties	ZIP TIES	8
2.	Line Clamp, 1/2"	FS-LCL 1/2	2
3.	5/16" Overflow Hose	EGCS-OFH	24 in
4.	1/4" Blue Fuel Line	FS-FL	6 ft
5.	Line Clamp, 3/8"	FS-LCL 3/8	1
6.	Hose Clamp, 1 1/2"	5-5216	10
7.	Pre-Formed Radiator "S" Hose	KSPW0025	2
8.	1" Radiator Hose	RADIATOR HOSE	5 ft
9.	Coolant Recovery Bottle	EGCS-CRB	1
10.	Oil Bottle *	-----	0
11.	Coolant Recovery Clamp	KPPW0058	1
12.	3/16" Shear Nut	AN364-1032A	6
13.	1" Cushioned Tube Clamp	MS21919-DG16	4
14.	3/16" Bolt	AN3-5A	2
15.	1" Coolant Tube	EGCS-32	2
16.	1" Black Foam Tape	KSAC0011	1 ft
17.	Radiator	EGCS-RAD	1
18.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-41	19
19.	Radiator Scoop - Bottom Panel	KPPW0069	1
20.	3/16" Bolt	AN3-6A	4
21.	Reducer Coupler	EGCS-RC	2
22.	Hose Clamp, 1 3/4"	5-5220	4
23.	1 1/4" Radiator Hose	EGCS-RHOSE	2
24.	90 Aluminum Elbow	EGCS-ALUM-90	1
25.	3/16" Thin Washer	AN960-10L	6
26.	3/16" Nut Plate	K-1000-3	4
27.	3/16" Plastic Washer	PW-3	20
28.	3/16" Bolt	AN3-4A	4
29.	3/32" Aluminum Pop Rivet	40APR1/8	8
30.	Radiator Scoop - Side Panel - LH	KPPW0070-L	1
30.	Radiator Scoop - Side Panel - RH	KPPW0070-R	1
31.	Rubber Edging	X1011	48 in

*Referenced from 912 engine.



RS-12S AIRAILLE

WARP DRIVE PROP INSTALLATION

MD3535

S-12S AIRAILE - 912 WARP DRIVE PROP INSTALLATION

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	5/16" Bolt	AN5-52A	6
2.	5/16" Tensile Steel Loc Nut	AN365-524C	6
3.	5/16" Thin Washer	AN960-516L	12
4.	2" Prop Extension - 912	KAPW0021	1
5.	Flange Bushing - 912	KPPW0038	6
6.	Warp Drive Propeller, 68"	WARP	1
7.	Crush Plate *	----	0

*Supplied with Engine.



S-12S AIRAILE - 912/912S INSTRUMENTS & ELECTRICAL

NOTE: Gauges may vary, consult directions provided with gauge for wiring diagram.

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Hour Meter	KSPW0022	1
2.	Vertical Speed Indicator - Feet per Minute	KSAV0008	1
3.	Altimeter	KSAV0002	1
4.	Air Speed Indicator, 0-120	KSAV0004	1
5.	Ignition Switch	MS35058-22	2
6.	Oil Pressure Gauge	KSPW0019	1
7.	Oil Temperature Gauge *	KSPW0017	1
8.	RPM Gauge	KSPW0028	1
9.	Cylinder Head Temperature Gauge *	KSPW0017	1
10.	14 Gauge Male Spade Terminal, Blue	IP-7126	1
11.	Teflon Tape ****	TEFLON TAPE	0
12.	14 Gauge Female Spade Terminal, Blue	IP-7128	16
13.	90 Withdrawal Fitting	8342	1
14.	Line Clamp, 3/8"	FS-LCL 3/8	8
15.	Straight Withdrawal Fitting	8330	2
16.	Line Tee	8338	1
17.	1/4" Blue Fuel Line	FS-FL	8 ft
18.	14 Gauge Eye Terminal, Blue 3/16"	IP-7102	8
19.	14 Gauge Black Wire	14 GA WIRE/BLACK	31 ft
20.	14 Gauge Eye Terminal, Blue 5/32"	KSES0003	4
21.	14 Gauge Red Wire	14 GA WIRE/RED	50 ft
22.	Terminal Y Connector, Brass	IP-YC	1
23.	Key Start Switch	25-6	1
24.	14 Gauge Yellow Wire	14 GA WIRE/YELLOW	26 ft
25.	14 Gauge White Wire	14 GA WIRE/WHITE	13 ft
26.	2 Plex 20 Gauge Wire	62181-DELL	12 ft
27.	3/16" Rivet Nut	MS27130-A25K	2
28.	Steel Nipple Fitting	KSPW0062	1
29.	550B Spade Terminal	550B SPADE TERM	4
30.	14 Gauge Green Wire	14 GA WIRE/GREEN	15 ft
31.	Battery - 912 **	PS12150-NB	0
32.	4 Gauge Eye Cable Terminal	4 GA CABLE LUG	8
33.	4 Gauge Battery Cable, Black Wire	4 GA WIRE/BLACK	16 ft
34.	14 Gauge Eye Terminal, Blue 1/4"	1/4 EYE 14 GA	2
35.	3/16" Aluminum Pop Rivet - Cherry Q	AAPQ-64	2
36.	14 Gauge Splice, Butt Connector	IP-7132	4
37.	14 Gauge, In Line Fuse Holder	KSES0019	2
38.	25 AMP Fuse	KSES0020-25	1
39.	Oil Pressure Switch	KSES0004	1
40.	30 AMP Fuse	KSES0020-30	1
41.	Regulator/Rectifier ****	EG-EG-912-5	0
42.	3/16" Bolt	AN3-5A	2
43.	3/16" Thin Washer	AN960-10L	2

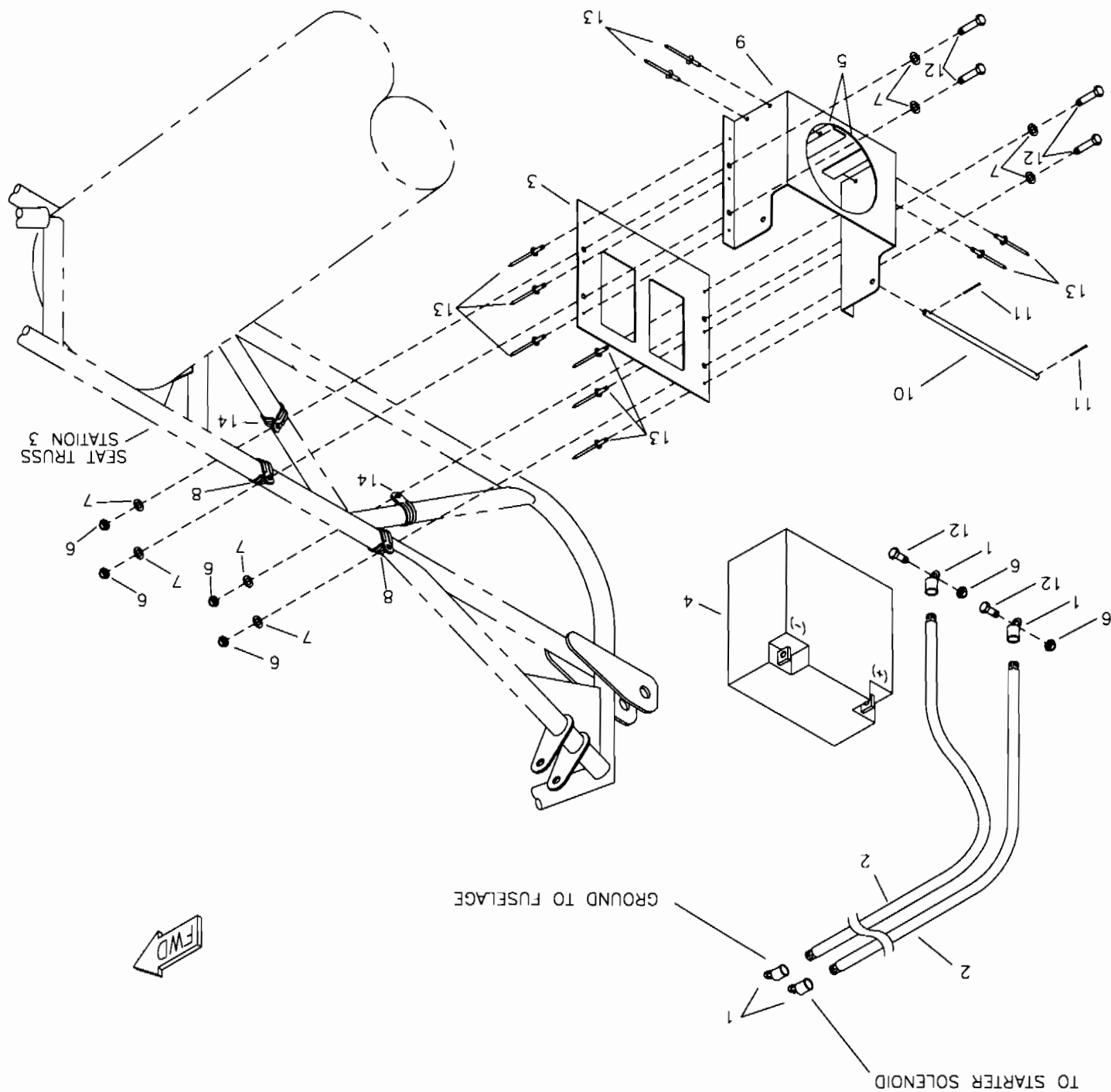
*Oil Temperature and CHT use the same type of gauge.

**Referenced from 912 battery box installation.

Supplied with engine. *Builder Provides.

RRMS S-12S AIRAILE 912 BATTERY BOX INSTALLATION

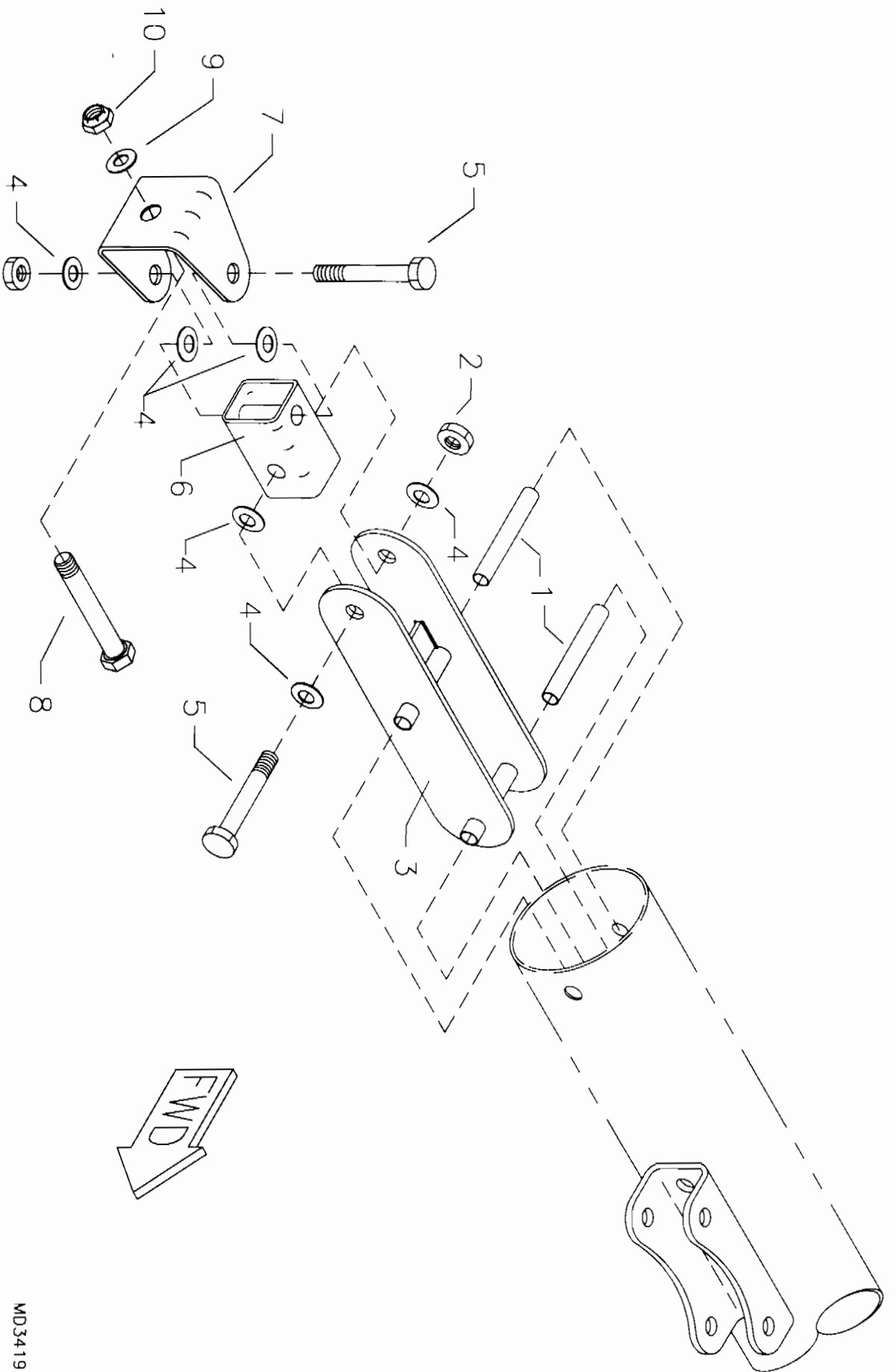
MD3553
REV. A



#	DESCRIPTION	PART NUMBER	QUANTITY
1.	4 Gauge Eye Cable Terminal *	4 GA CABLE LUG	0
2.	4 Gauge Battery Cable, Black Wire *	4 GA WIRE/BLACK	0 ft
3.	Battery Box Mount Plate	BAT-BOX-2	1
4.	Battery	PS12150-NB	1
5.	Battery Box Support Angle	BAT-BOX-3	2
6.	3/16" Shear Nut	AN364-1032A	6
7.	3/16" Thick Washer	AN960-10	8
8.	3/4" Cushioned Tube Clamp	MS21919-DG12	2
9.	Battery Box Front Plate	BAT-BOX-1	1
10.	Battery Bar	BAT-BAR-503/582	1
11.	Small Cotter Pin	MS24665-134	2
12.	3/16" Bolt	AN3-3A	6
13.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	11
14.	5/8" Cushion Tube Clamp	MS21919-DG10	2

*Referenced from 912 Instruments & Electrical.

RRM S-12S AIRAILE WING: UNIVERSAL HINGE



MD3419

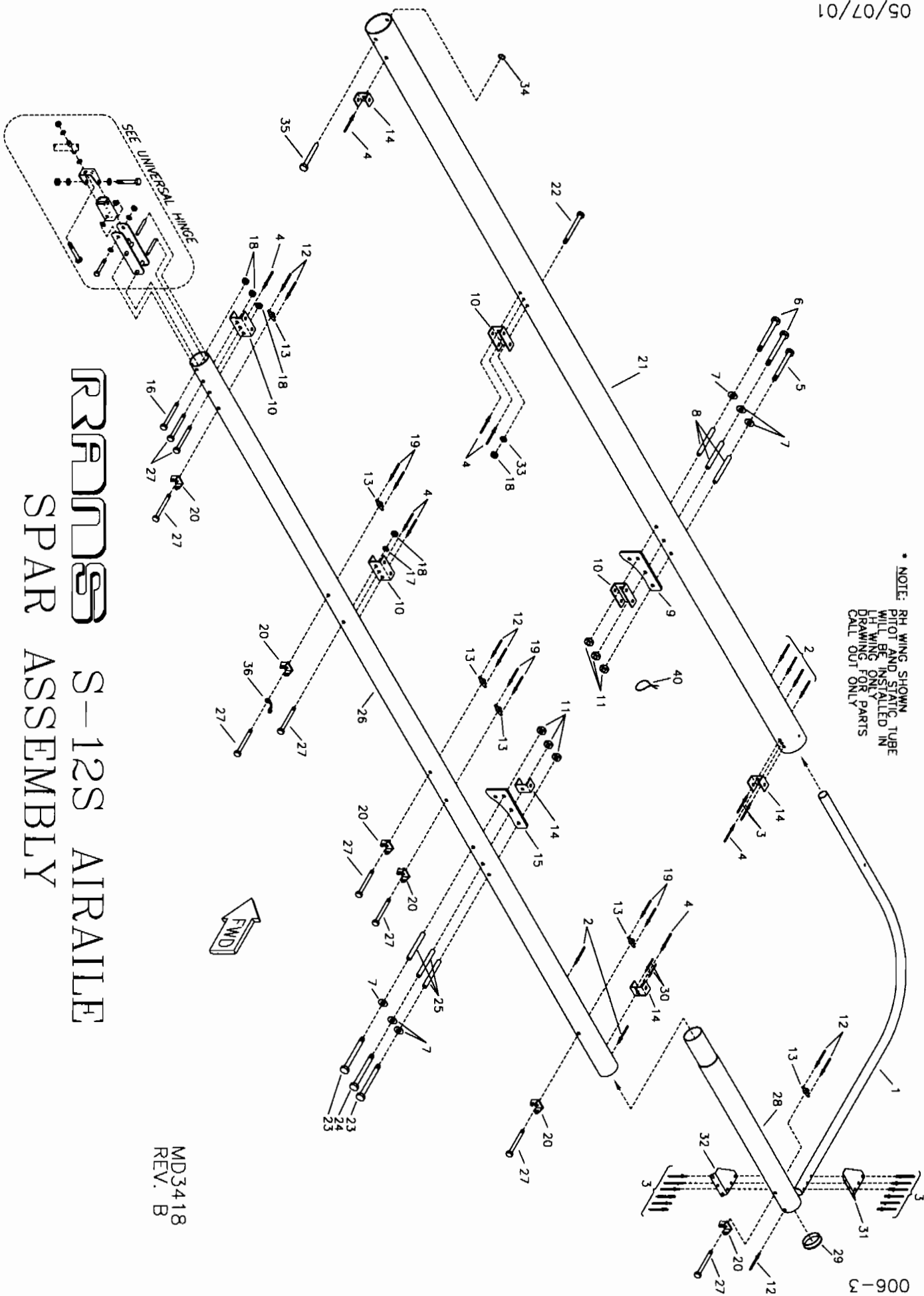
#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Aluminum Bushing, 1/4" x .028 x X *	KAAC0026-1	0
2.	1/4" Shear Nut	AN364-428A	4
3.	Trailing Edge Spar Root Fitting	W-TES-RF	2
4.	1/4" Thick Washer	AN960-416	12
5.	1/4" Bolt	AN4-16A	4
6.	Hinge Cube	W-H-CUBE	2
7.	Stainless Steel U Bracket **	SU-118	2
8.	5/16" Bolt	AN5-10A	2
9.	5/16" Thin Washer	AN960-516L	2
10.	5/16" Tensile Nut	AN365-524A	2

*Builder must fabricate from raw stock.

**Referenced from 912 super structure.

11/26/2001

• NOTE: RH WING SHOWN
PITOT AND STATIC TUBE
WILL BE INSTALLED IN
LH WING ONLY
DRAWING FOR PARTS
CALL OUT ONLY



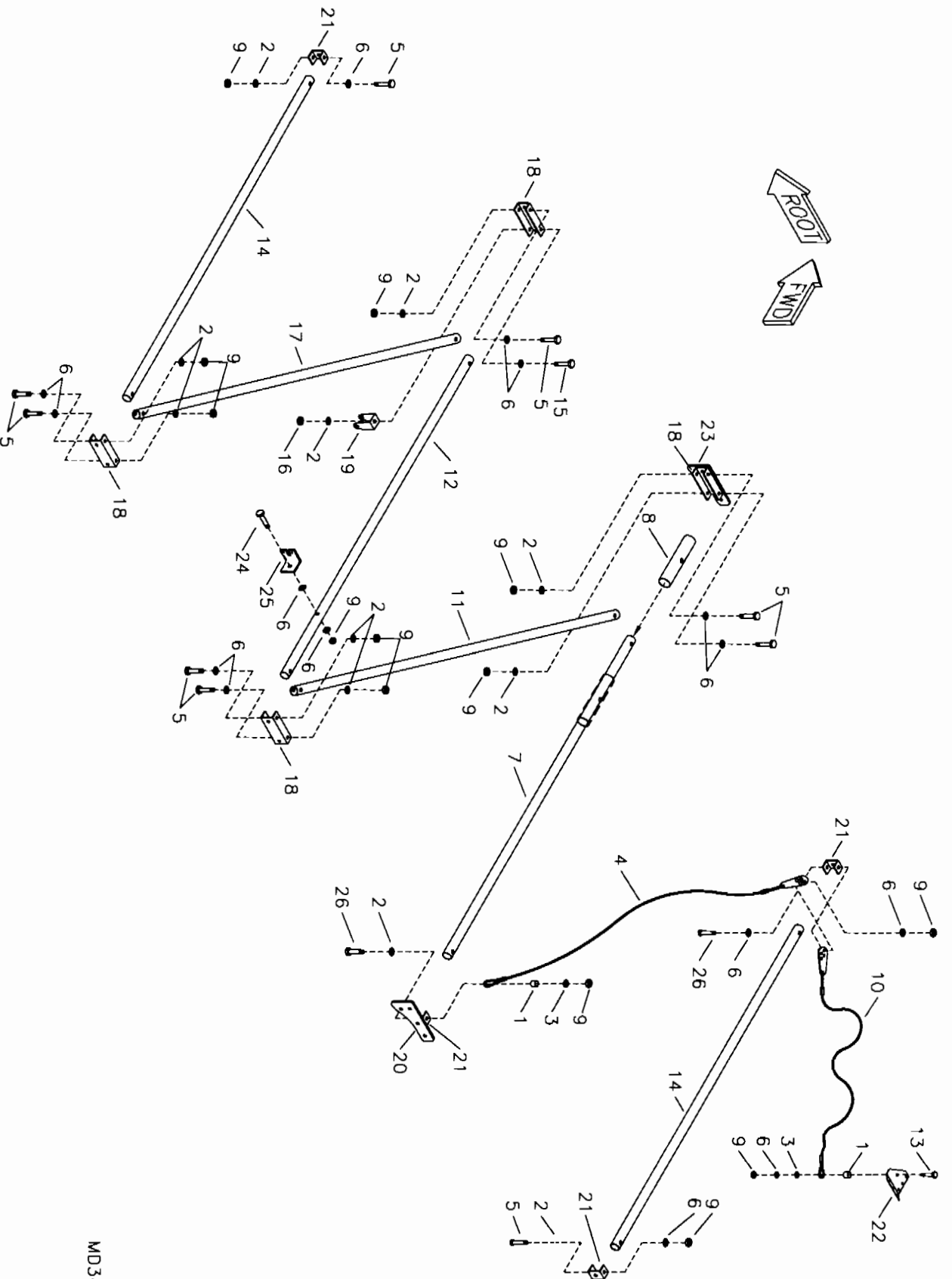
R-12S AIRPLANE SPAR ASSEMBLY

MD3418
REV. B

S-12S AIRAILE - LEADING & TRAILING EDGE SPAR ASSEMBLY

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Tip Bow	W-TIP(12)	2
2.	3/16" Stainless Steel Pop Rivet - Cherry Q	CCPQ-62	12
3.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-42	36
4.	3/16" Stainless Steel Pop Rivet - Cherry Q	CCPQ-64	16
5.	1/4" Bolt	AN4-35ALP	2
6.	1/4" Bolt	AN4-36ALP	4
7.	1/4" Thin Washer	AN960-416L	12
8.	Spacer Bushing, 3/8" x 3"	SB-3/8X3	6
9.	FWD Strut Plate	W-SAP-LE	2
10.	Long Wing Channel	W-WCL	8
11.	1/4" Shear Nut	AN364-428A	12
12.	3/32" Aluminum Pop Rivet	40APR1/8	14
13.	3/16" Nut Plate	K-1000-3	12
14.	Horizontal Stabilizer Attach Bracket	S2-SAB	8
15.	AFT Strut Plate	W-SAP-TE	2
16.	3/16" Bolt	AN3-22A	2
17.	3/16" Thin Washer	AN960-10L	2
18.	3/16" Tensile Nut	AN365-1032A	10
19.	3/32" Aluminum Pop Rivet	40APR1/4	12
20.	Stainless Steel Hinge	W-HB	12
21.	Leading Edge Spar	W-LES	2
22.	3/16" Bolt	AN3-34ALP	2
23.	1/4" Bolt	AN4-25ALP	4
24.	1/4" Bolt	AN4-26ALP	2
25.	Spacer Bushing, 3/8" x 2"	SB-3/8X2	6
26.	Trailing Edge Spar	KPW10139	2
27.	3/16" Bolt	AN3-23A	18
28.	Trailing Edge Spar Tip	KPW10140	2
29.	2" End Cap	EC-10	2
30.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-45	4
31.	Tip Gusset Top	W-TG-T	2
32.	Tip Gusset Bottom	W-TG-B	2
33.	3/16" Thick Washer	AN960-10	2
34.	Loc Ring *	RL 27 1/4	0
35.	3/8" Clevis Pin *	MS20392-5C97	0
36.	Hummertang	T12-HT6	2

*Referenced from Super Structure Assembly.



MD3420

RRM S-12S AIRAILLE WING FRAME ASSEMBLY INTERNAL STRUCTURE

S-12S AIRAILE - INTERNAL STRUCTURE

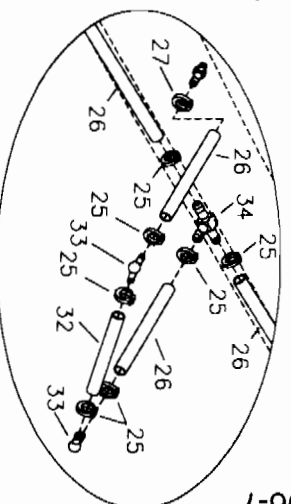
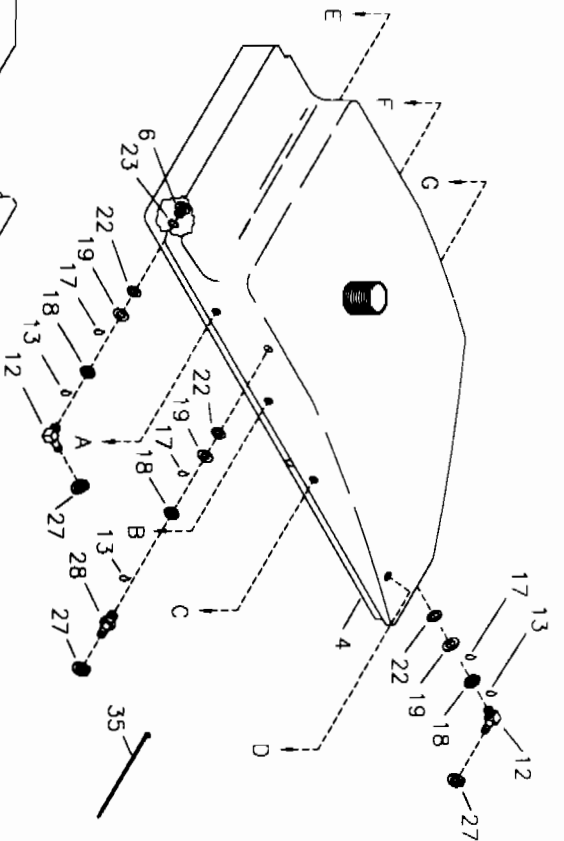
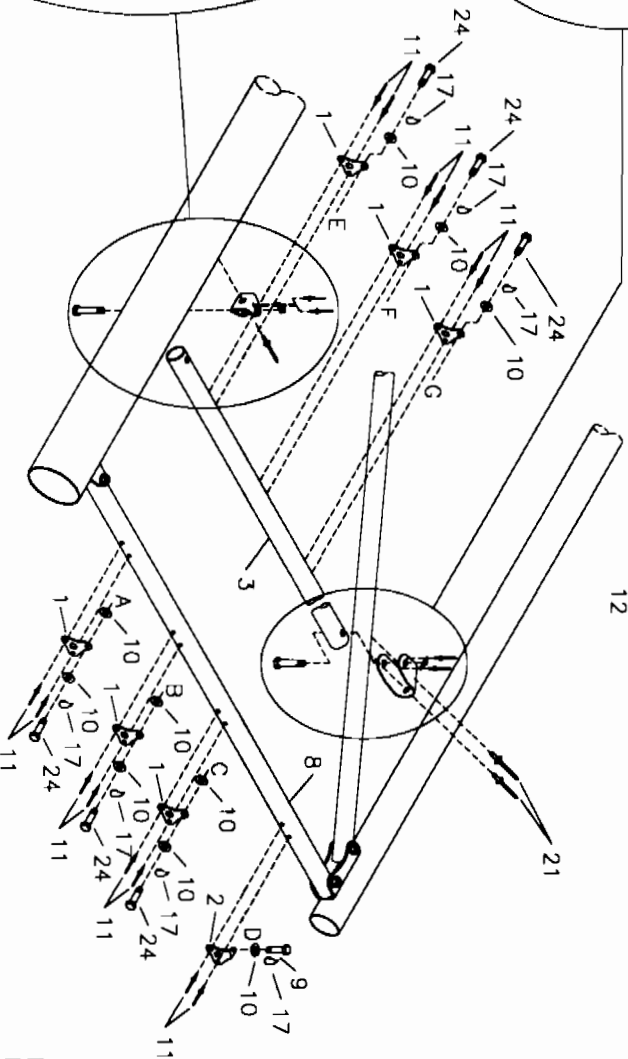
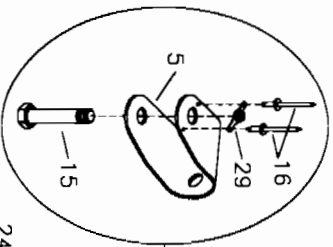
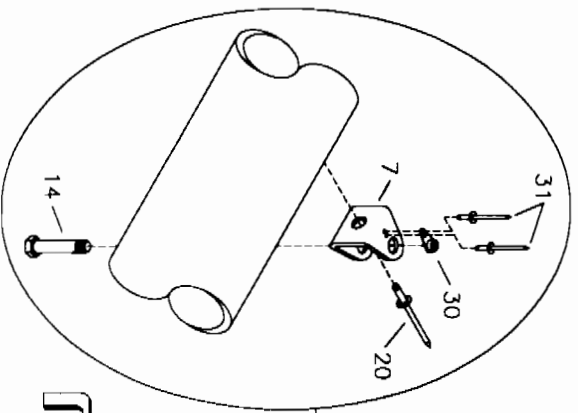
#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Aluminum Bushing, 1/4" x .028 x 1/4" *	KAAC0026-1	0
2.	3/16" Thick Washer	AN960-10	22
3.	3/16" Plastic Washer	PW-3	4
4.	Wing Cable, 51"	W-WC-51	2
5.	3/16" Bolt	AN3-15A	18
6.	3/16" Thin Washer	AN960-10L	32
7.	Middle Compression Tube	W-MC-151	2
8.	Compression Tube Doubler	CS-CTD	2
9.	3/16" Shear Nut	AN364-1032A	26
10.	Wing Cable, 61"	W-WC-59	2
11.	Drag Brace	W-DB-151	2
12.	Flap Compression Tube	W-FCT-151	2
13.	3/16" Bolt	AN3-4A	2
14.	Inner Compression Tube	W-IO-151	4
15.	3/16" Bolt	AN3-16A	2
16.	3/16" Tensile Nut	AN365-1032A	2
17.	Drag Brace Root	W-DBR-151	2
18.	Long Wing Channel **	W-WCL	0
19.	Jury Strut Bracket	JS-BK	2
20.	AFT Strut Plate **	W-SAP-TE	0
21.	Attach Bracket **	S2-SAB	0
22.	Tip Gusset Top **	W-TG-T	0
23.	FWD Strut Plate **	W-SAP-LE	0
24.	3/16" Bolt	AN3-14A	2
25.	Teleflex Retainer	W-TEL-R	2
26.	3/16" Bolt	AN3-17A	4

*Builder must fabricate from raw stock.

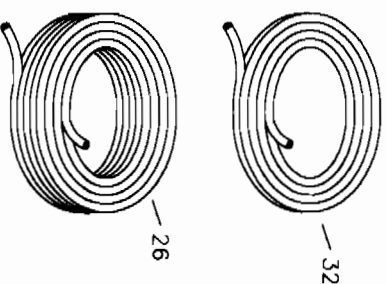
**Referenced from leading and trailing edge spar assembly.

RRRMMSS S-12S AIRAILE - WING FUEL TANK INSTALLATION

MD3474
REV. A



FUEL SIGHT
GAUGE DETAIL

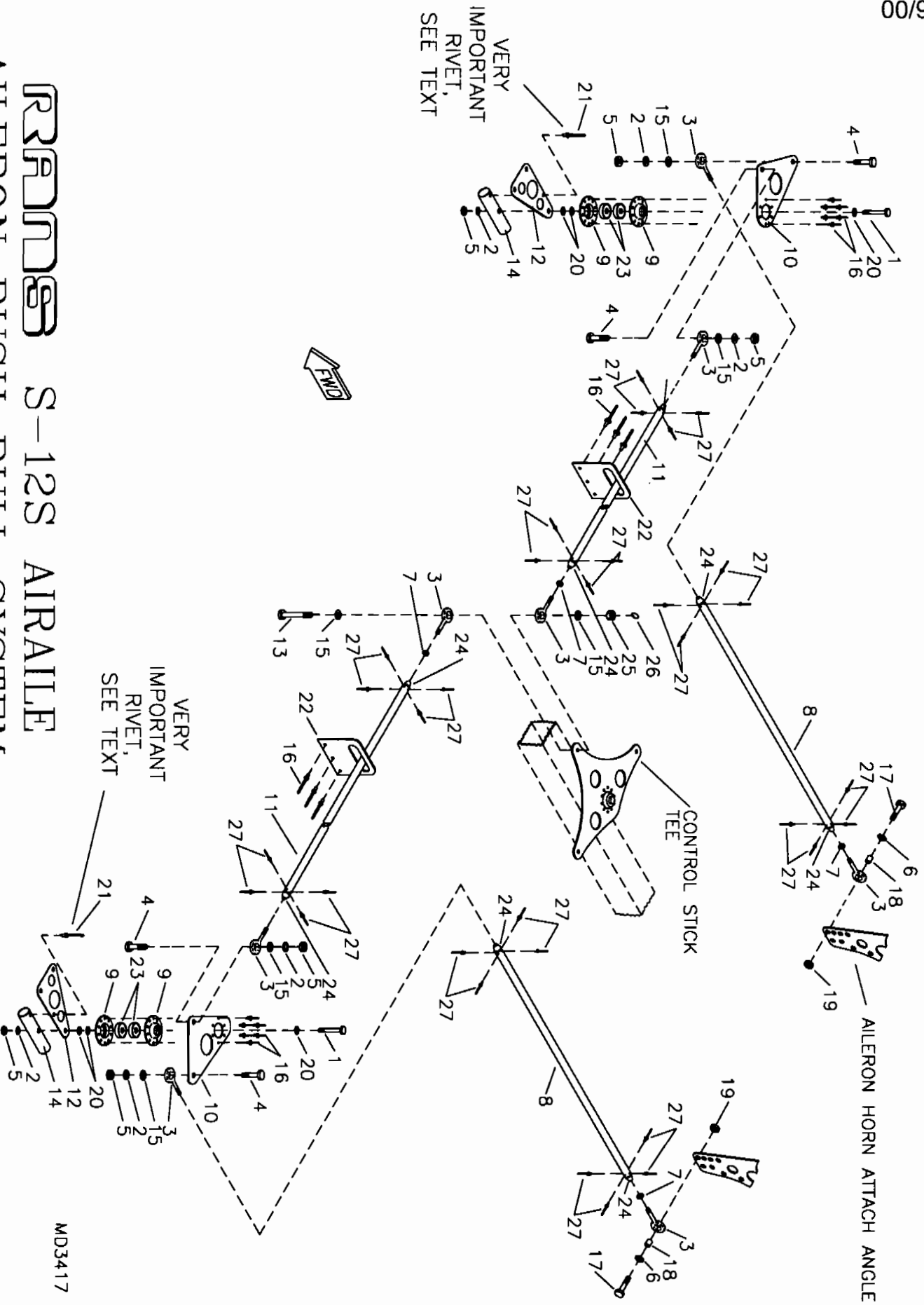


#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Wing Tank-Mount Bracket	KPFS0007	12
2.	Wing Tank-AFT Mount Bracket, LH	KPFS0011-L	1
2.	Wing Tank-AFT Mount Bracket, RH	KPFS0011-R	1
3.	Outer Tank Support	KPFS0043	2
4.	Fuel Tank, LH	KPFS0005-L	1
4.	Fuel Tank, RH	KPFS0005-R	1
5.	U-Bracket	KPAC0055	2
6.	Tank Withdrawal Fitting	KPFS0017	6
7.	Attach Bracket	S2-SAB	2
8.	Inner Compression Tube *	WC-IO	0
9.	3/16" Bolt	AN3-3A	2
10.	3/16" Thick Washer	AN960-10	22
11.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-42	28
12.	90 Withdrawal Fitting	8342	4
13.	Thread Sealant **	KSAC0014	0
14.	3/16" Bolt	AN3-14A	2
15.	3/16" Bolt	AN3-13A	2
16.	3/32" Aluminum Pop Rivet	40APR1/8	4
17.	Loctite Blue	LOC-TITE	0
18.	Nut-Flared Tube Bulkhead	AN924-5D	6
19.	1/2" Thick Washer	AN960-816	6
20.	3/16" Stainless Steel Pop Rivet - Cherry Q	CCPQ-64	2
21.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-42	4
22.	Rubber Washer	KSFS0010	6
23.	O-Ring	KSFS0009	6
24.	3/16" Bolt	AN3-4A	12
25.	Fuel Line Hose Clamp, 5/16"	FS-LCL 5/16	14
26.	1/4" Blue Fuel Line	FS-FL	13 ft
27.	Fuel Line Hose Clamp, 3/8"	FS-LCL 3/8	8
28.	Straight Withdrawal Fitting	8330	2
29.	3/16" Nut Plate	K-1000-3	2
30.	3/16" Single Ear Nut Plate	MS21051-L3	2
31.	3/32" Aluminum Pop Rivet	40APR1/4	4
32.	1/4" Clear Fuel Line	KSFS0008	3 ft
33.	1/4" x 1/4" 90 Fitting	7-11044	4
34.	1/4" Tee	8338	2
35.	Long Nylon Tie	LG-N-TIE	2

*Referenced from Wing - Main Structure.

**Thread Sealant (builder provided) is recommended but Loctite Blue can also be used.

12/24/2004



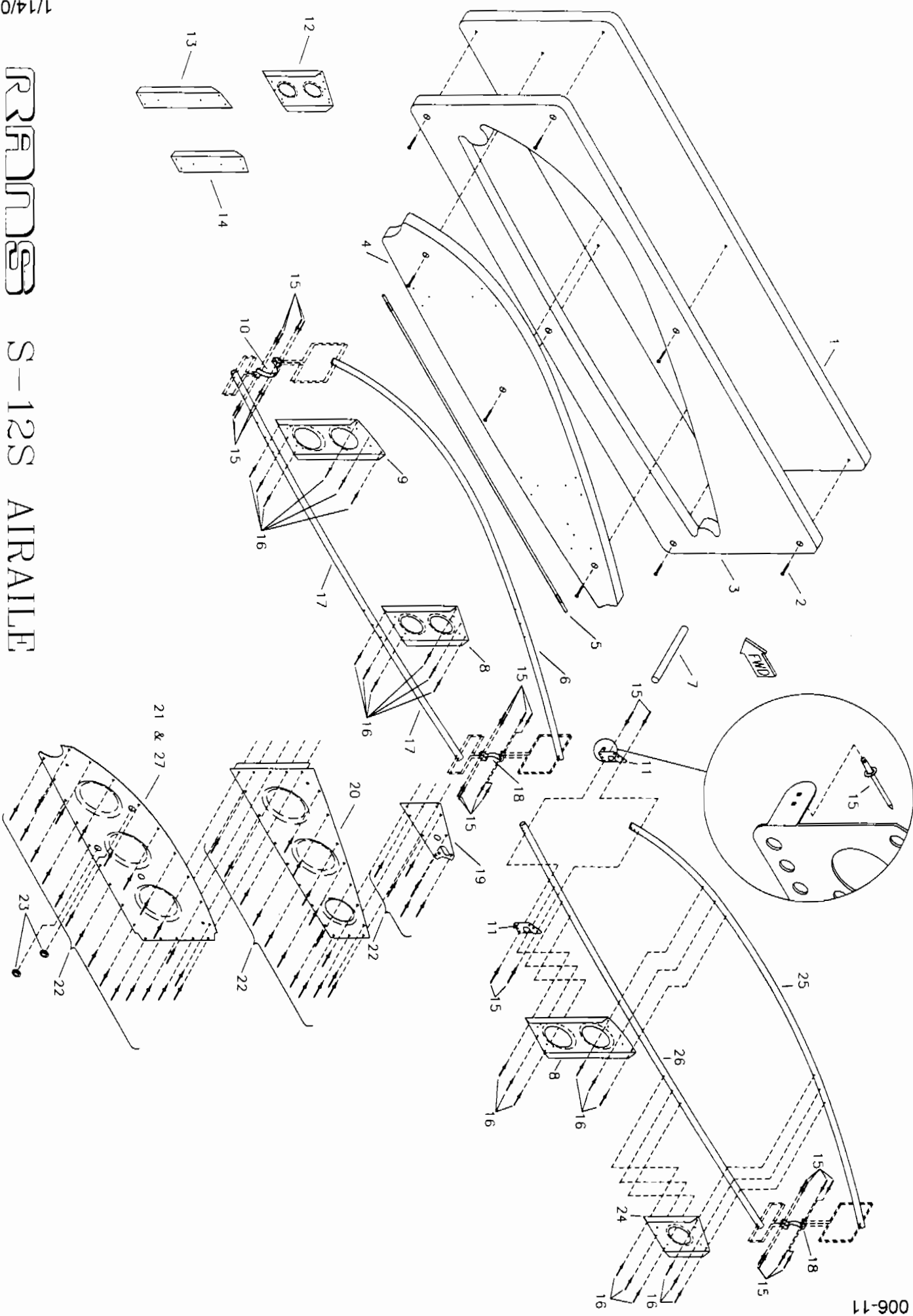
S-12S AIRLIFT AILERON PUSH PULL SYSTEM

S-12S AIRAILE - AILERON PUSH PULL SYSTEM

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	1/4" Bolt	AN4-22A	2
2.	1/4" Thin Washer	AN960-416L	4
3.	Male Rod End, 1/4" X 1/4"	NM-4	8
4.	1/4" Bolt	AN4-7A	4
5.	1/4" Shear Nut	AN364-428A	8
6.	3/16" Plastic Washer	PW-3	2
7.	1/4" Plain Nut	AN345-416	4
8.	Aileron Push Pull Tube, 42 1/8"	CS-42PPT	2
9.	Bearing Flange	BR-FLNG	4
10.	Bell Crank	AIL-2/1BC	2
11.	Aileron Push Pull Tube, 109"	CS-109PPT	2
12.	Bell Crank Gusset, RH	CS-BELGU-RH	1
12.	Bell Crank Gusset, LH	CS-BELGU-LH	1
13.	1/4" Bolt	AN4-13	1
14.	Compression Tube Doubler *	CS-CTD	0
15.	1/4" Plastic Washer	PW-4	6
16.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-44	18
17.	3/16" Bolt	AN3-7A	2
18.	Aluminum Bushing, 1/4" x .028 x 3/8" **	KAAC0026-1	0
19.	3/16" Shear Acorn Nut	22NKM02	2
20.	1/4" Thick Washer	AN960-416	6
21.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-44	4
22.	Push Pull Tube Guide	KPCS0150	2
23.	Bearing	SR4APP	4
24.	Push Pull Tube End Fitting	CS-3/4PTEF	8
25.	1/4" Castle Nut	AN310-4	1
26.	Loc Ring	RL 27 1/4	1
27.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-42	32

*Referenced from internal structure.

**Builder must fabricate from raw stock.



REM S-12S AIRFRAME WING RIB ASSEMBLY AND JIG

1/14/00

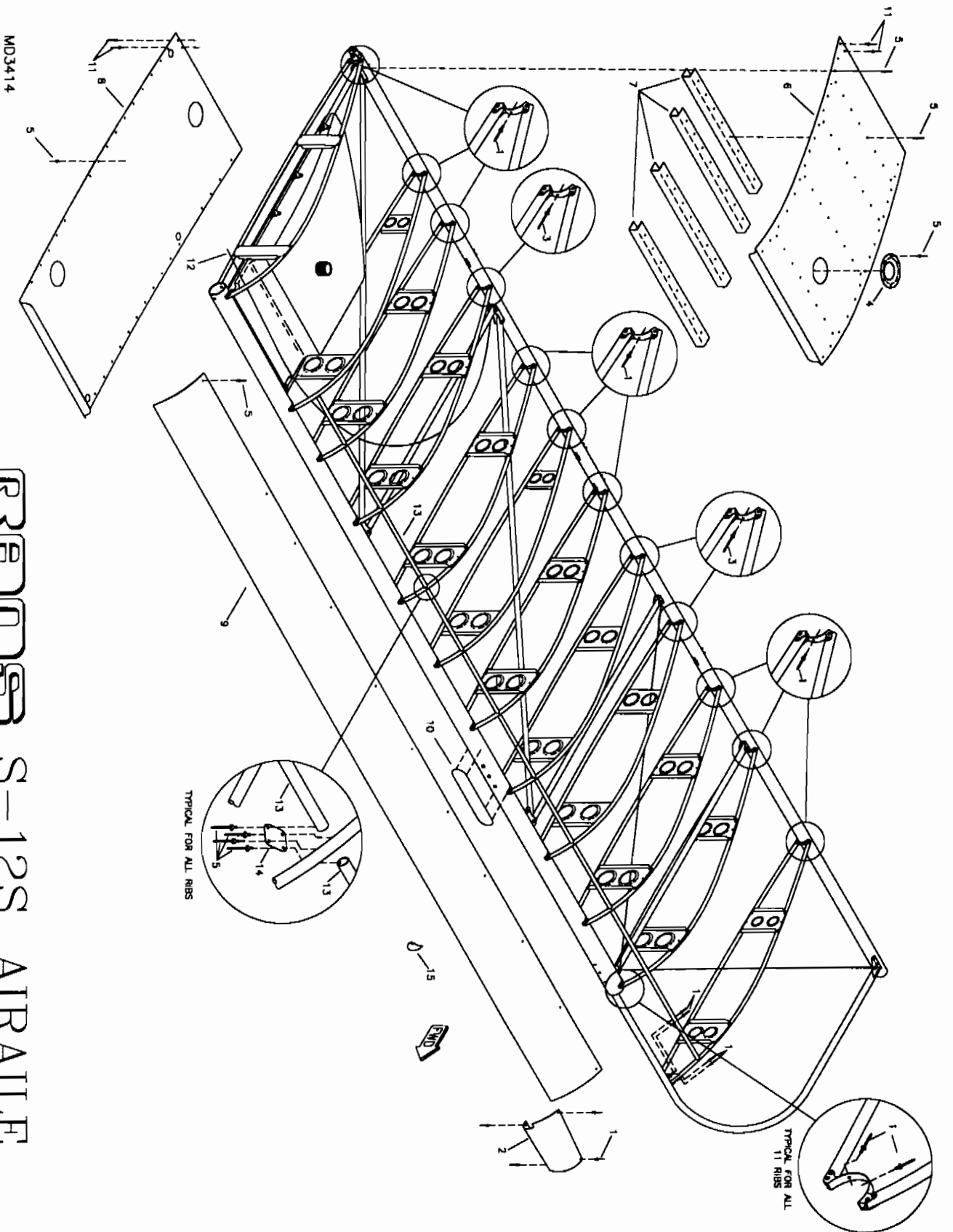
MD3416

S-12S AIRAILE - WING RIB ASSEMBLY & JIG

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Jig Backing Plate *	JIG PLATE	0
2.	Wood Screw	KSHW0046	9
3.	Outer Jig - Wing Rib	KPWI0289	1
4.	Inner Jig - Wing Rib	KPWI0313	1
5.	1/8" Stainless Steel Wire	KAAC0026-9	0
6.	Upper Rib - Wing	KPWI0287	22
7.	Wooden Dowel **	DOWEL	0
8.	AFT Channel - Wing Rib - RH	KPWI0211-R	9
8.	AFT Channel - Wing Rib - LH	KPWI0211-L	9
9.	Forward Channel - Wing Rib - RH	KPWI0210-R	10
9.	Forward Channel - Wing Rib - LH	KPWI0210-L	10
10.	Rib Clip - Leading Edge	KPWI0214	22
11.	Rib Clip - Leading Edge - RH	KPWI0292-R	2
11.	Rib Clip - Leading Edge - LH	KPWI0292-L	2
12.	AFT Channel - Wing Rib #2 - RH	KPWI0222-R	2
12.	AFT Channel - Wing Rib #2 - LH	KPWI0222-L	2
13.	Forward Channel - Root Rib - RH	KPWI0216-R	1
13.	Forward Channel - Root Rib - LH	KPWI0216-L	1
14.	AFT Channel - Root Rib - RH	KPWI0218-R	1
14.	AFT Channel - Root Rib - LH	KPWI0218-L	1
15.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	402
16.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-41	300
17.	Lower Rib - Wing	KPWI0288	22
18.	Rib Clip - Trailing Edge	KPWI0215	24
19.	Root Rib Access Panel - Wing - RH	KPWI0291-R	1
19.	Root Rib Access Panel - Wing - LH	KPWI0291-L	1
20.	AFT Root Rib Skin - Wing - RH	KPWI0220-R	1
20.	AFT Root Rib Skin - Wing - LH	KPWI0220-L	1
21.	Forward Root Rib Skin - Wing - RH	KPWI0290	1
22.	1/8" Aluminum Pop Rivet - Avex	1691-0410	100
23.	Rubber Grommet	MS35489-11	6
24.	Compression Channel - Wing Tip - RH	KPWI0293-R	1
24.	Compression Channel - Wing Tip - LH	KPWI0293-L	1
25.	Tip Rib - Upper	KPWI0294	2
26.	Tip Rib - Lower	KPWI0295	2
27.	FWD Root Rib Skin - Wing - LH	KPWI0297	1

*Builder fabricates from 3/8" crate material. Refer to text for instructions.

**Builder provides.

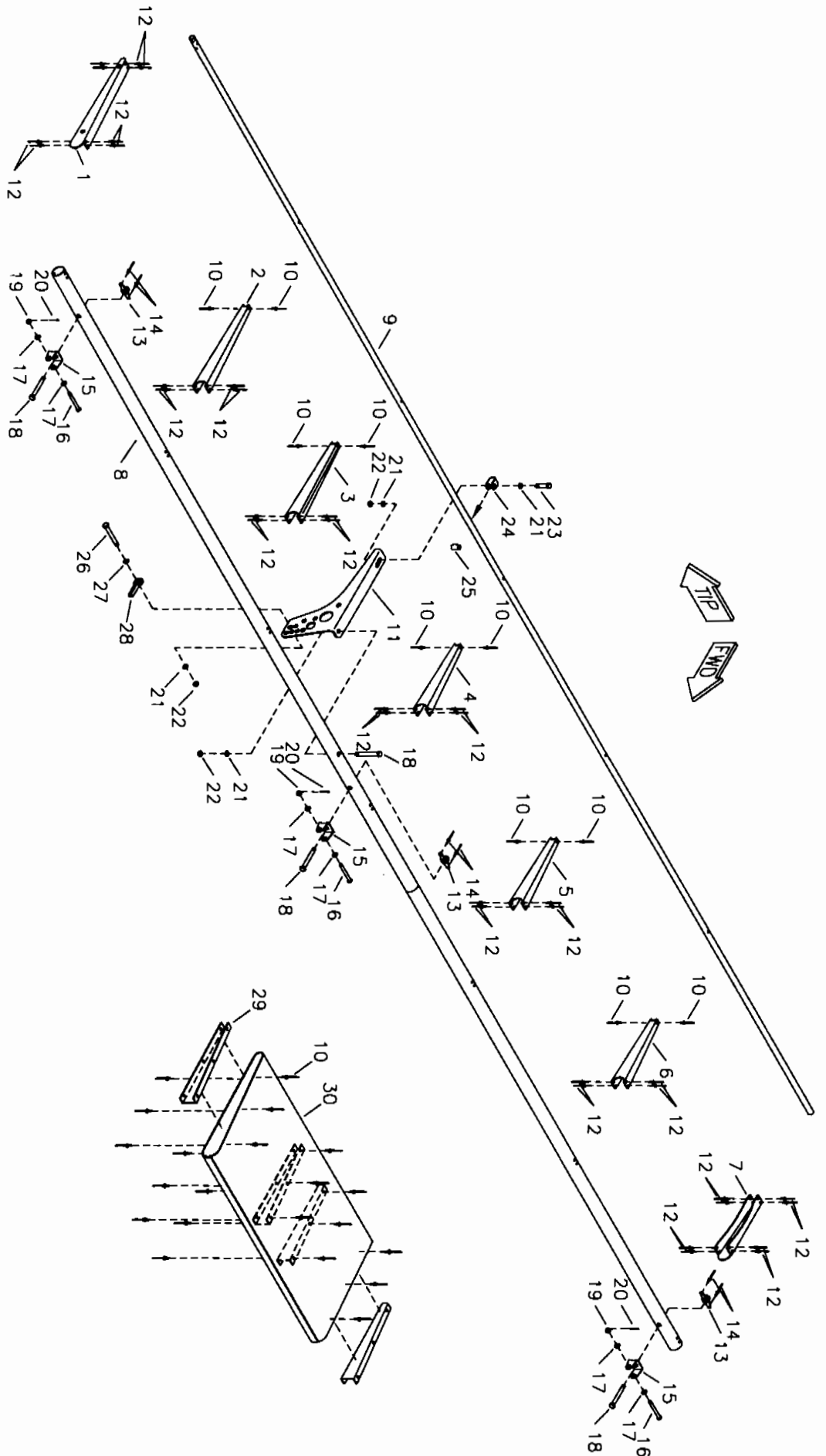


REFINISHED S-12S AIRRAIL WING RIBS AND SHEET METAL

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	80
2.	Leading Edge Tip Wrap - RH	KPWI0296-R	1
2.	Leading Edge Tip Wrap - LH	KPWI0296-L	1
3.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-44	10
4.	Upper Root Skin Scupper - Wing	KPWI0206	2
5.	1/8" Aluminum Pop Rivet - Avex	1691-0410	250
6.	Upper Root Skin - Wing - LH	KPWI0203-L	1
6.	Upper Root Skin - Wing - RH	KPWI0203-R	1
7.	Root Skin Stiffener - Wing	KPWI0207	8
8.	Lower Root Skin - Wing - LH	KPWI0204-L	1
8.	Lower Root Skin - Wing - RH	KPWI0204-R	1
9.	Leading Edge Wrap	W-LE-W	2
10.	Bolt Cover	KPWI0208	2
11.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-42	8
12.	Flap Teleflex	W-F-TELFX-8	2
13.	Aluminum Support Tubes, 1/2" x .028 x X *	KAAC0026-10	0
14.	Gusset	KPWI0255	22
15.	J&B Weld Epoxy	J & B	0

*Builder must fabricate from raw stock.

6/2/2003



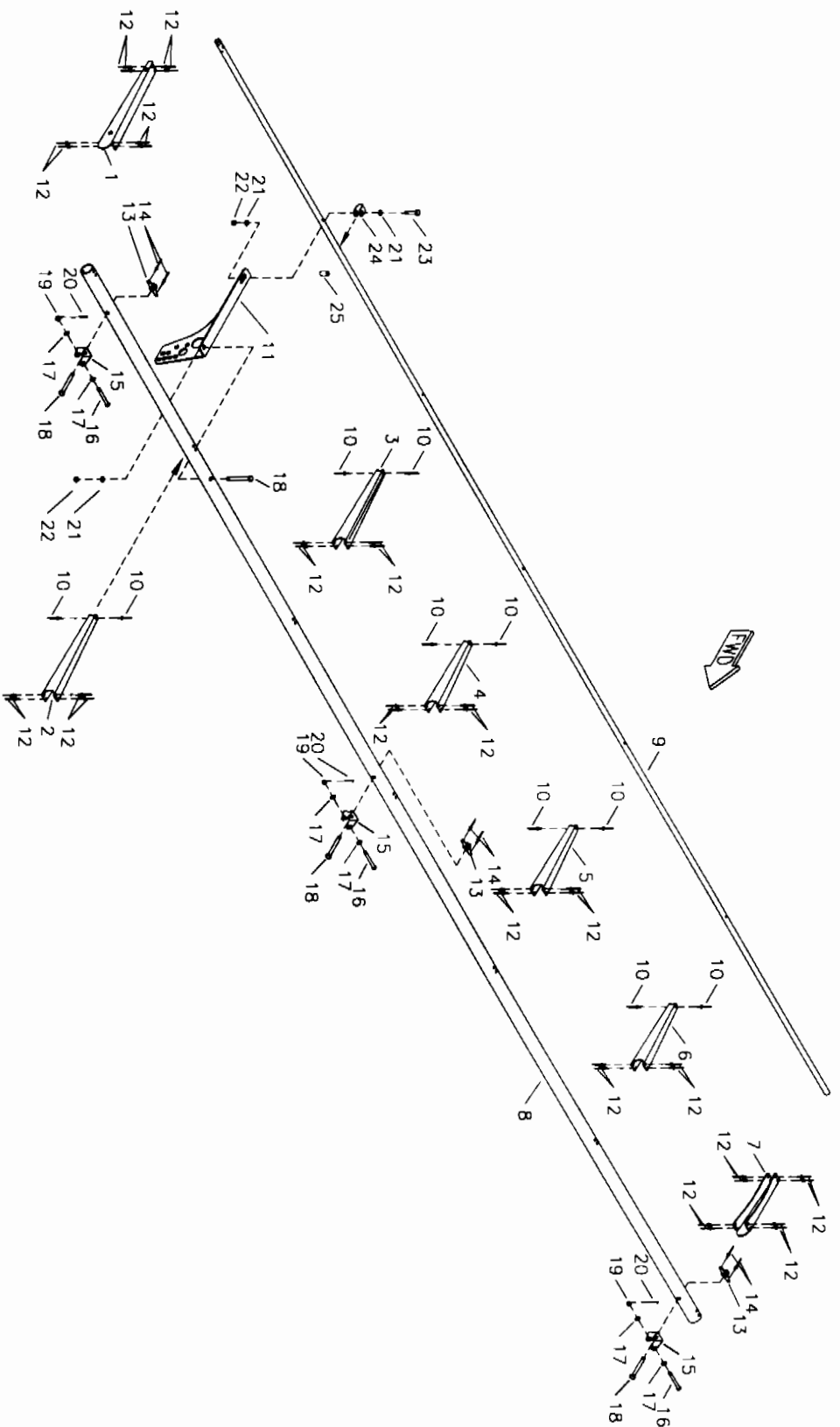
RR-12S AIRAILLE FLAP FRAME ASSEMBLY

MD3521

S-12S AIRAILE - FLAP FRAME ASSEMBLY

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Flap/Aileron Rib #1	KPAL0006	2
2.	Flap/Aileron Rib #2	KPAL0007	2
3.	Flap/Aileron Rib #3	KPAL0008	2
4.	Flap/Aileron Rib #4	KPAL0009	2
5.	Flap/Aileron Rib #5	KPAL0010	2
6.	Flap/Aileron Rib #6	KPAL0011	2
7.	Flap/Aileron Rib #7	KPAL0012	2
8.	Flap Spar Assembly	KPFL0030	2
9.	Flap/Aileron Trailing Edge Spar	KPAL0014	2
10.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-41	50
11.	Flap/Aileron Horn Attach Angle, LH	KPAL0015-L	2
12.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	92
13.	3/16" Nut Plate	K-1000-3	6
14.	3/32" Aluminum Pop Rivet	40APR1/8	12
15.	Hinge Bracket	W-HB	6
16.	3/16" Bolt	AN3-15	6
17.	3/16" Thick Washer	AN960-10	12
18.	3/16" Bolt	AN3-14A	8
19.	3/16" Castle Nut	AN310-3	6
20.	Small Cotter Pin	MS24665-134	6
21.	3/16" Thin Washer	AN960-10L	8
22.	3/16" Shear Acorn Nut	22NKM02	4
23.	3/16" Bolt	AN3-10A	2
24.	Aileron Clip	W-A-CLIP	2
25.	Aluminum Bushing, 1/4" x .028 x 1/2" *	KAAC0026-1	0
26.	3/16" Bolt	AN3-7A	2
27.	3/16" Plastic Washer	PW-3	2
28.	Female Rod End	NF-3	2
29.	Flap Fillet-Rib	KPFL0029	2
30.	Flap Fillet-Outer Wrap	KPFL0028	1

*Builder must fabricate from raw stock.



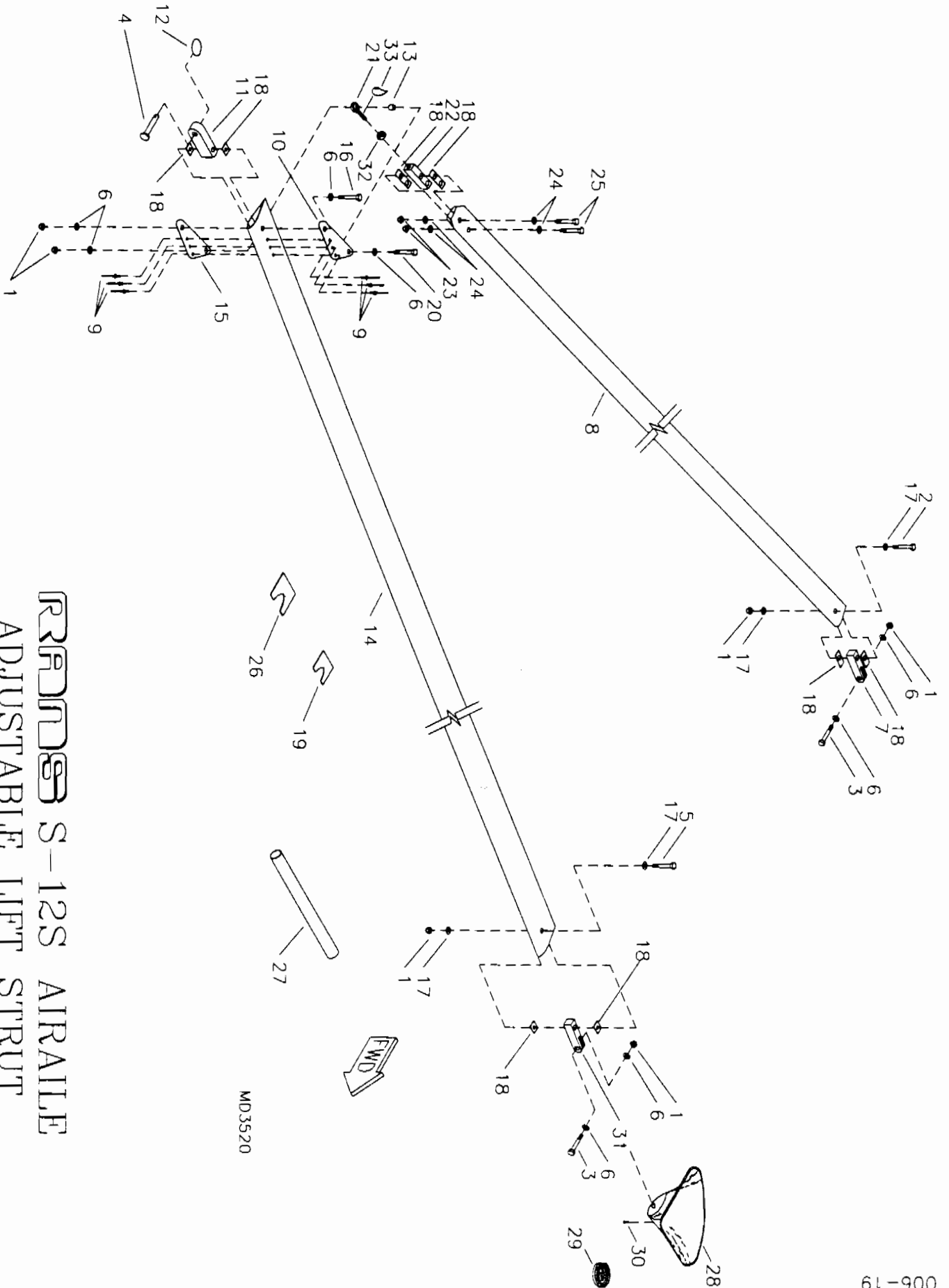
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MD3523

S-12S AIRAILE - AILERON FRAME ASSEMBLY

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Flap/Aileron Rib #1	KPAL0006	2
2.	Flap/Aileron Rib #2	KPAL0007	2
3.	Flap/Aileron Rib #3	KPAL0008	2
4.	Flap/Aileron Rib #4	KPAL0009	2
5.	Flap/Aileron Rib #5	KPAL0010	2
6.	Flap/Aileron Rib #6	KPAL0011	2
7.	Flap/Aileron Rib #7	KPAL0012	2
8.	Aileron Spar	KPAL0005	2
9.	Flap/Aileron Trailing Edge Spar	KPAL0014	2
10.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-41	20
11.	Flap/Aileron Horn Attach Angle, RH	KPAL0015-R	2
12.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	92
13.	3/16" Nut Plate	K-1000-3	6
14.	3/32" Aluminum Pop Rivet	40APR1/8	12
15.	Hinge Bracket	W-HB	6
16.	3/16" Bolt	AN3-15	6
17.	3/16" Thick Washer	AN960-10	12
18.	3/16" Bolt	AN3-14A	8
19.	3/16" Castle Nut	AN310-3	6
20.	Small Cotter Pin	MS24665-134	6
21.	3/16" Thin Washer	AN960-10L	8
22.	3/16" Shear Acorn Nut	22NKM02	4
23.	3/16" Bolt	AN3-10A	2
24.	Aileron Clip	W-A-CLIP	2
25.	Aluminum Bushing, 1/4" x .028 x 1/2" *	KAAC0026-1	0

*Builder must fabricate from raw stock.



REFUND S-12S AIRRAILE ADJUSTABLE LIFT STRUT

MD3520

S-12S AIRAILE - LIFT STRUT ASSEMBLY

PAGE 006-20

ADJUSTABLE

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	5/16" Shear Nut	AN364-524A	12
2.	5/16" Bolt	AN5-13A	2
3.	5/16" Bolt	AN5-12A	4
4.	5/16" Clevis Pin	MS20392-4C33	2
5.	5/16" Bolt	AN5-15A	2
6.	5/16" Thick Washer	AN960-516	16
7.	AFT Upper Lift Strut Connector	LS-ACU-2	2
8.	AFT Lift Strut	KPWI0144	2
9.	3/16" Stainless Steel Pop Rivet - Cherry Q	CCPQ-64	12
10.	AFT Lift Strut Gusset	116-S-GUSS-A	2
11.	Lower Strut Fitting - FWD - LH	KPLS0013-L	1
11.	Lower Strut Fitting - FWD - RH	KPLS0013-R	1
12.	Loc Ring	RL 27 5/16	2
13.	Aluminum Bushing, 3/8" x .035 x 1/2" **	KAAC0020-1	0
14.	FWD Lift Strut	KPWI0308	2
15.	AFT Lift Strut Gusset	116-S-GUSS-B	2
16.	5/16" Bolt	AN5-17A	2
17.	5/16" Thin Washer	AN960-516L	8
18.	Shim *	UNV-SHIM	4
19.	Small Lift Strut Chord Template	KPLS0004	1
20.	5/16" Bolt	AN5-11A	2
21.	Rod End	3/8X24 ROD END	2
22.	Adjustor End	S-AE-3/4	2
23.	3/16" Shear Acorn Nut	22NKM02	4
24.	3/16" Thick Washer	AN960-10	8
25.	3/16" Bolt	AN3-13A	4
26.	Large Lift Strut Chord Template	KPLS0003	1
27.	Adjustable Lift Strut - Raw Stock Kit	KAAC0020	1
28.	Forward Strut Fairing, RH	W-FSFF-RH	1
28.	Forward Strut Fairing, LH	W-FSFF-LH	1
29.	Acrylic Foam Tape	4929	2 ft
30.	#4 Small Pan Head Screw	4X1/4 PHS	2
31.	Upper Strut Fitting - FWD	KPLS0012	2
32.	3/8" Plain Nut	MS35650-3382	2
33.	Loctite Blue	LOC-TITE	0

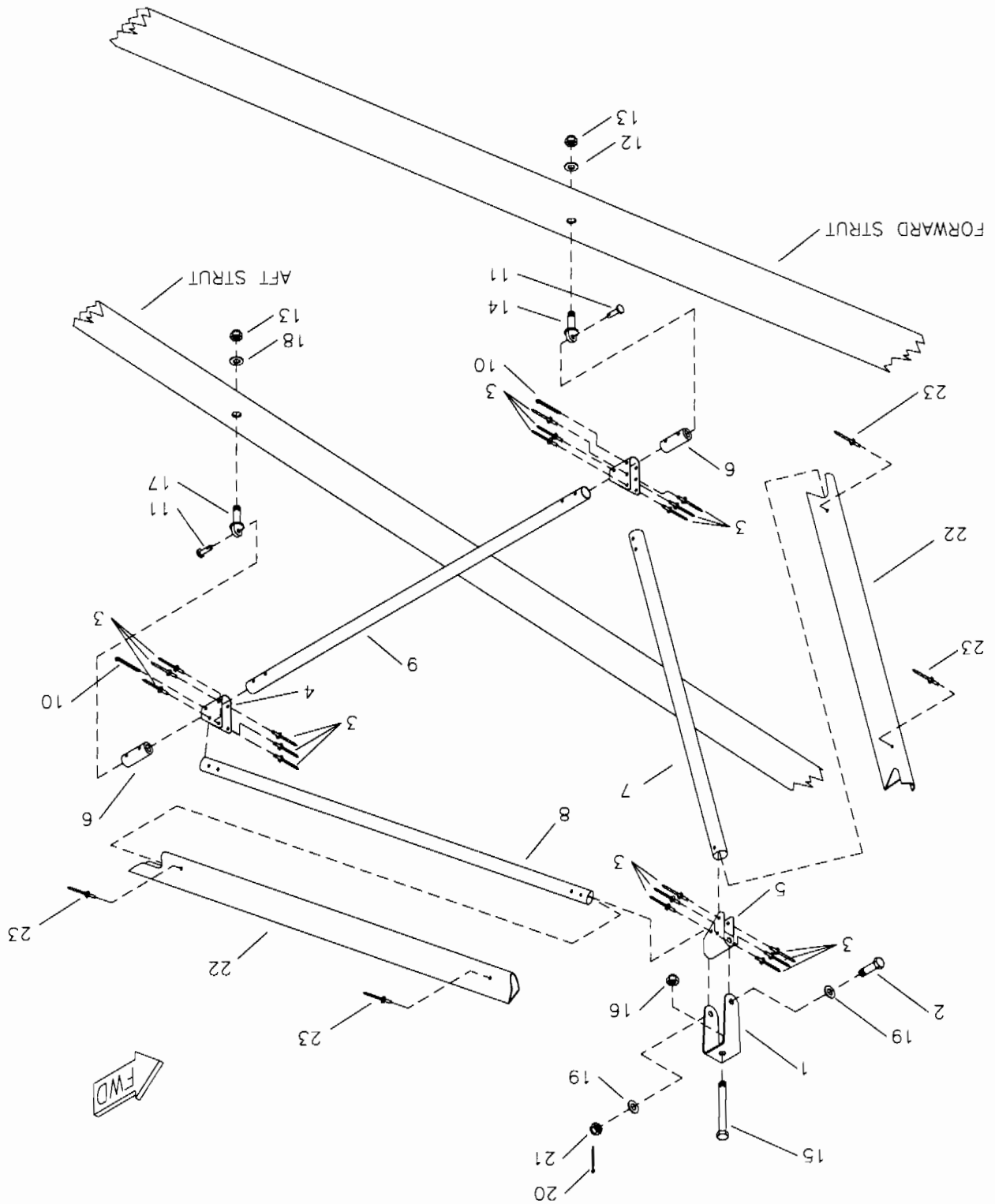
*Fabricate shim from .020 blank provided if necessary.

**Builder fabricates from 3/8X.058. Drill out bushing to 5/16".

1/9/04

RMS S-12S AIRAILE JURY STRUT ASSEMBLY

MD3528



S-12S AIRAILE - JURY STRUT ASSEMBLY

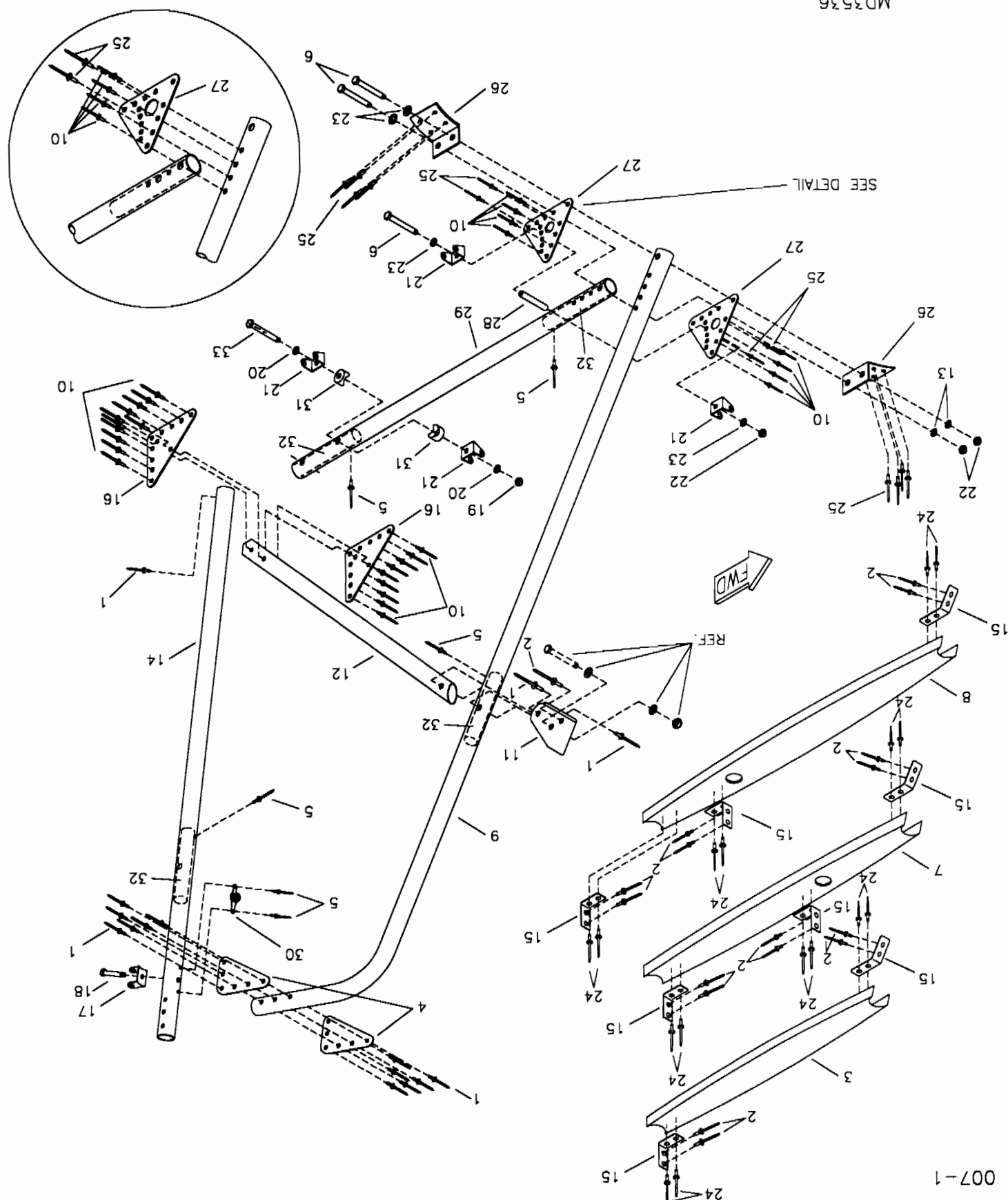
#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Jury Strut Bracket **	JS-BK	0
2.	3/16" Bolt	AN3-15	2
3.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-42	36
4.	Gusset	JS-JGN	4
5.	Gusset	JS-JGNW	2
6.	Drilled Bushing Aluminum Insert	JS-BUC-B	4
7.	Forward Jury Strut, 1/2" x .035 x X *	KAAC0026-2	0
8.	Diagonal Jury Strut, 1/2" x .035 x X *	KAAC0026-2	0
9.	Cross Strut, 1/2" x .035 x X *	KAAC0026-2	0
10.	Small Cotter Pin	MS24665-134	4
11.	3/16" Clevis Pin	MS20392-2C17	4
12.	1/4" Thin Washer	AN960-416L	2
13.	1/4" Tensile Acorn Nut	42NKE-048	4
14.	1/4" Eye Bolt	AN43B-15A	2
15.	3/16" Bolt **	AN3-16A	0
16.	3/16" Tensile Nut **	AN365-1032A	0
17.	1/4" Eye Bolt	AN43B-14A	2
18.	1/4" Thick Washer	AN960-416	2
19.	3/16" Thick Washer	AN960-10	4
20.	Small Cotter Pin	MS24665-134	2
21.	3/16" Castle Nut	AN310-3	2
22.	Jury Strut Fairing	JS-FAIR	2
23.	3/32" Aluminum Pop Rivet	40APR1/8	8

*Builder must fabricate from raw stock.

**Referenced from internal structure.

RRMS S-12S AIRAILE VERTICAL STABILIZER FRAME ASSEMBLY

MD3536

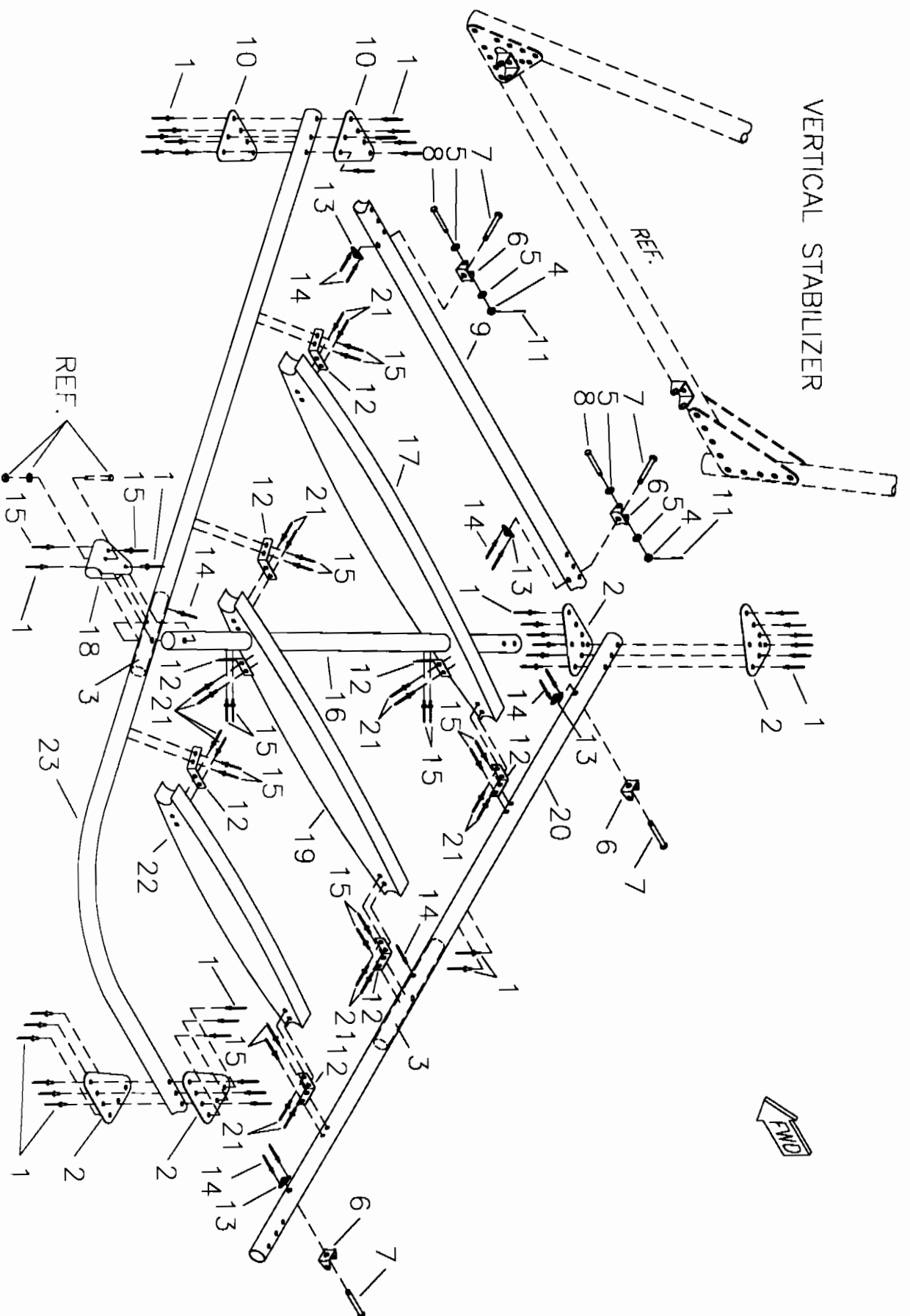


#	DESCRIPTION	PART NUMBER	QUANTITY
1.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-42	18
2.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	18
3.	Vertical Stabilizer - Top Rib	KPVS0035	1
4.	Gusset	KPAC0044	2
5.	3/32" Aluminum Pop Rivet	40APR1/8	6
6.	3/16" Bolt	AN3-16A	3
7.	Vertical Stabilizer - Middle Rib	KPVS0040	1
8.	Vertical Stabilizer - Bottom Rib	KPVS0039	1
9.	Vertical Stabilizer - Leading Edge	KPVS0042	1
10.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-44	28
11.	U-Bracket	KPAC0055	1
12.	Aluminum Brace, 1" x .049 x X *	KAAC0026-11	0
13.	3/16" Thick Washer	AN960-10	2
14.	Vertical Stabilizer - Trailing Edge	KPVS0043	1
15.	Attach Tang	U-ST001	8
16.	Gusset	KPAC0149	2
17.	Hinge Bracket	W-HB	1
18.	3/16" Bolt	AN3-13A	1
19.	1/4" Shear Nut	AN364-428A	1
20.	1/4" Thin Washer	AN960-416L	2
21.	U Bracket	KPAC0036	4
22.	3/16" Shear Nut	AN364-1032A	3
23.	3/16" Thin Washer	AN960-10L	9
24.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-41	16
25.	3/16" Stainless Steel Pop Rivet - Cherry Q	CCPQ-64	12
26.	Horizontal Stabilizer - Boom Bracket	KPHS0008	2
27.	Horizontal Stabilizer - Adjust Bracket	KPHS0010	2
28.	Aluminum Bushing, 1/4" x .028 x 1 3/16" *	KAAC0026-1	0
29.	Vertical Stabilizer Spreader Tube	KPVS0038	1
30.	3/16" Nut Plate	K-1000-3	1
31.	1" Saddle	1-NS	2
32.	Aluminum Doubler, 7/8" x .058 x 6" *	KAAC0026-6	0
33.	1/4" Bolt	AN4-17A	1

*Builder must fabricate from raw stock.

5/2/2003

VERTICAL STABILIZER

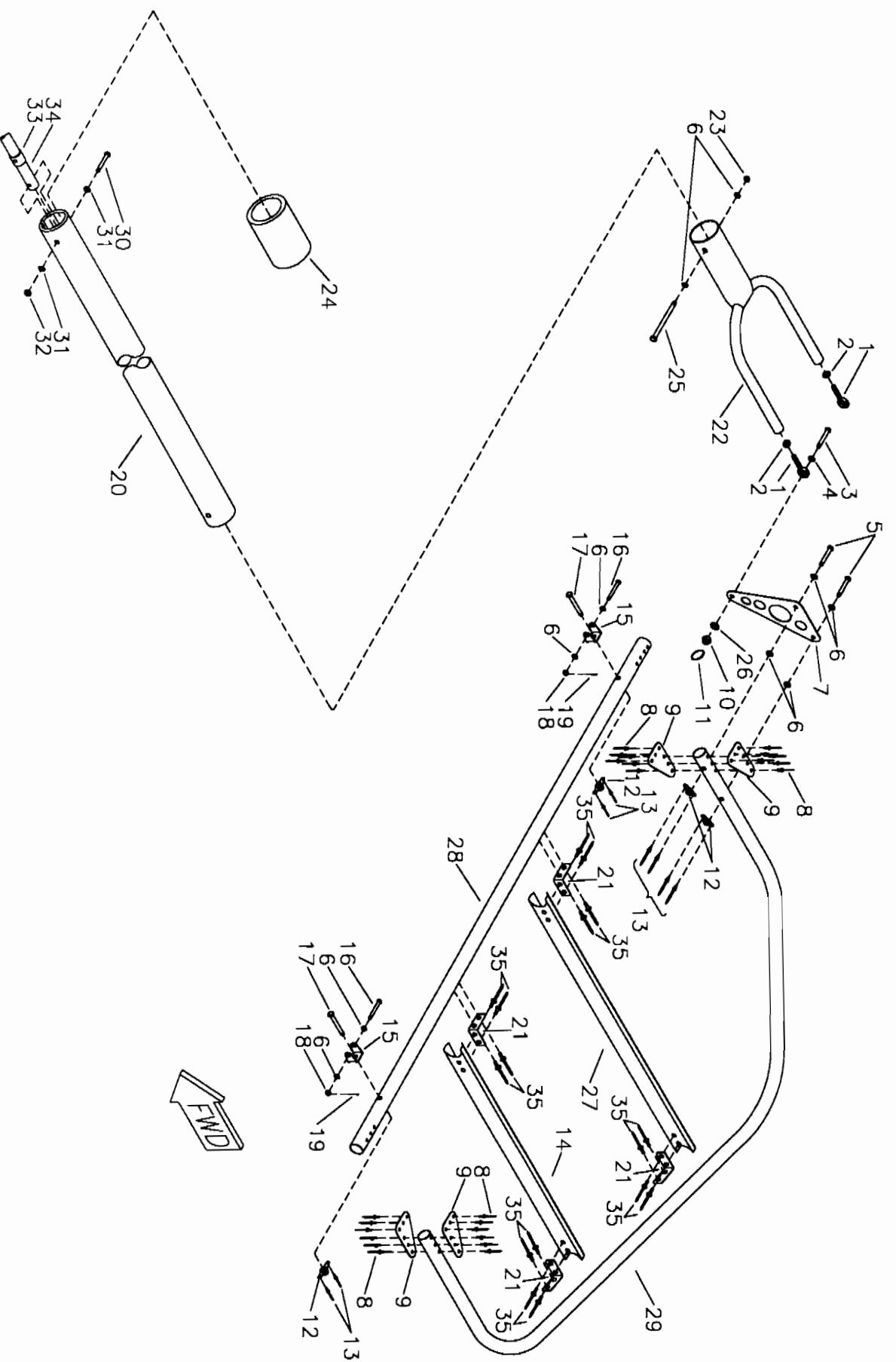


RADM S-12S AIRAILE HORIZONTAL STABILIZER ASSEMBLY

MD3538

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-42	84
2.	Gusset	KPAC0044	8
3.	Aluminum Doubler, 7/8" x .058 x 6" & 10" *	KAAC0026-6	0
4.	3/16" Castle Nut	AN310-3	4
5.	3/16" Thin Washer	AN960-10L	8
6.	Stainless Steel Hinge	W-HB	8
7.	3/16" Bolt	AN3-13A	8
8.	3/16" Bolt	AN3-15	4
9.	Horizontal Stabilizer Spreader Tube, LH	KPHS0031-LH	1
9.	Horizontal Stabilizer Spreader Tube, RH	KPHS0031-RH	1
10.	Gusset	KPAC0045	4
11.	Small Cotter Pin	MS24665-134	4
12.	Attach Tang	U-ST001	16
13.	3/16" Nut Plate	K-1000-3	8
14.	3/32" Aluminum Pop Rivet	40APR1/8	20
15.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	36
16.	Aluminum Brace, 1" x .049 x X *	KAAC0026-11	0
17.	Horizontal Stabilizer - Inboard Rib	KPHS0028	2
18.	U-Bracket	KPAC0055	2
19.	Horizontal Stabilizer - Middle Rib	KPHS0029	2
20.	Horizontal Stabilizer - Trailing Edge	KPHS0032	2
21.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-41	32
22.	Vertical Stabilizer - Top Rib	KPVS0035	2
23.	Horizontal Stabilizer - Leading Edge	KPHS0033	2

*Builder must fabricate from raw stock.



RA-105 S-12S AIRRAIL ELEVATOR FRAME ASSEMBLY

MD3539

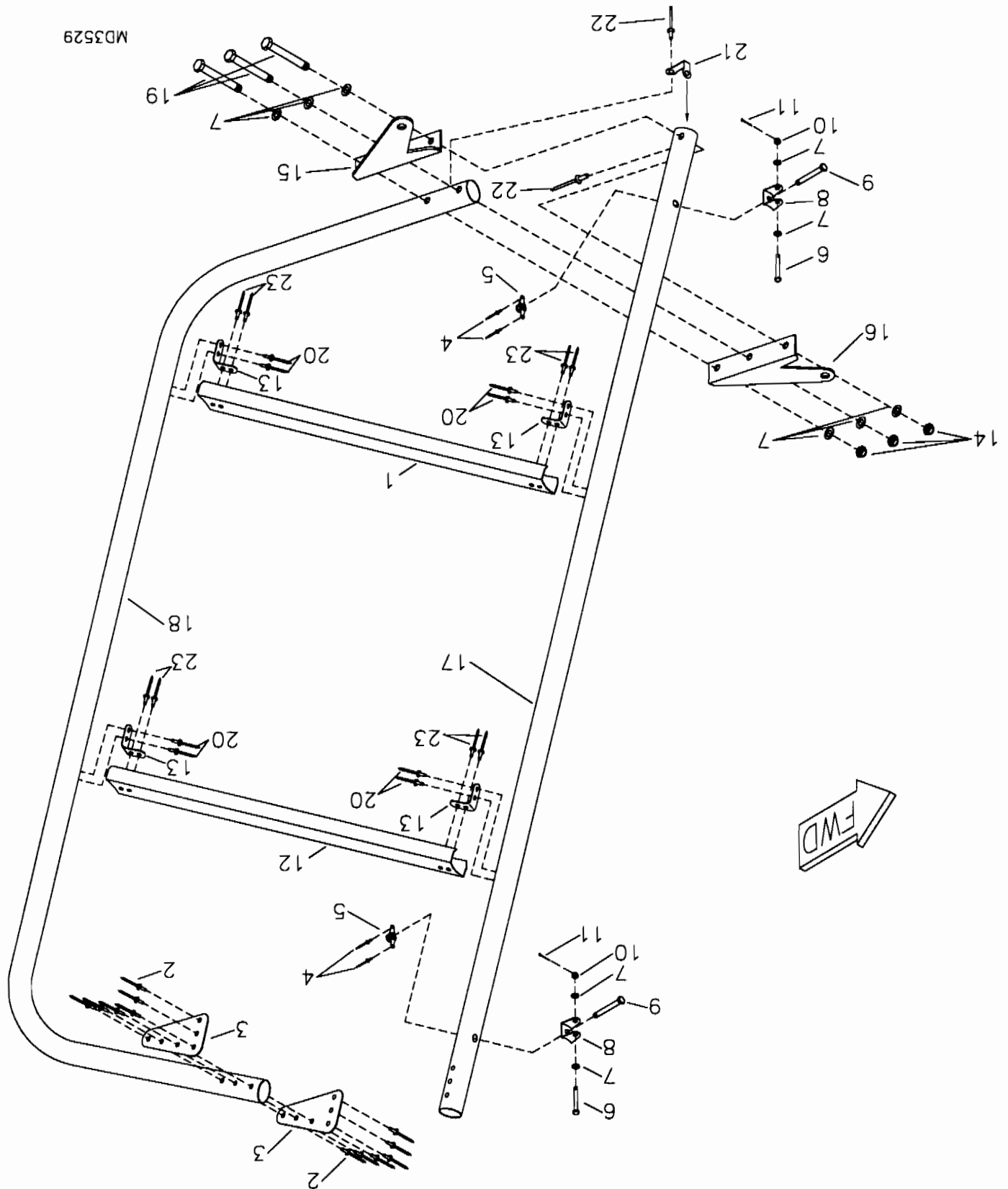
#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Male Rod End, 1/4" X 1/4"	NM-4	2
2.	1/4" Plain Nut	AN345-416	2
3.	1/4" Bolt	AN4-7	2
4.	1/4" Plastic Washer	PW-4	2
5.	3/16" Bolt	AN3-14A	4
6.	3/16" Thick Washer	AN960-10	21
7.	Elevator Horn	TG-EH-A	2
8.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-42	48
9.	Gusset	KPAC0044	8
10.	1/4" Castle Nut	AN310-4	2
11.	Loc Ring	RL 27 5/16	2
12.	3/16" Nut Plate	K-1000-3	8
13.	3/32" Aluminum Pop Rivet	40APR1/8	16
14.	Elevator Rib-Outboard	KPEL0031	2
15.	Stainless Steel Hinge	W-HB	4
16.	3/16" Bolt	AN3-15	4
17.	3/16" Bolt	AN3-13A	4
18.	3/16" Castle Nut	AN310-3	4
19.	Small Cotter Pin	MS24665-134	4
20.	1 1/4" Push Pull Tube	TG 1 1/4PPT-141 5/8	1
21.	Attach Tang	U-ST001	8
22.	Elevator Yoke	KPEL0015	1
23.	3/16" Shear Nut	AN364-1032A	1
24.	Foam Rubber Insulator	TG-FRI	1
25.	3/16" Bolt	AN3-15A	1
26.	1/4" Thin Washer	AN960-416L	2
27.	Elevator Rib-Inboard	KPEL0030	2
28.	Elevator-Leading Edge	KPEL0012	2
29.	Elevator-Trailing Edge	KPEL0013	2
30.	1/4" Bolt **	AN4-17A	0
31.	1/4" Thick Washer **	AN960-416	0
32.	1/4" Shear Nut **	AN364-428A	0
33.	Forward Elevator Stop Bushing **	KAAC0026-4	0
34.	5/8" Push Pull Tube **	CS-5/8PPT(12)	0
35.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	32

*Builder must fabricate from raw stock.

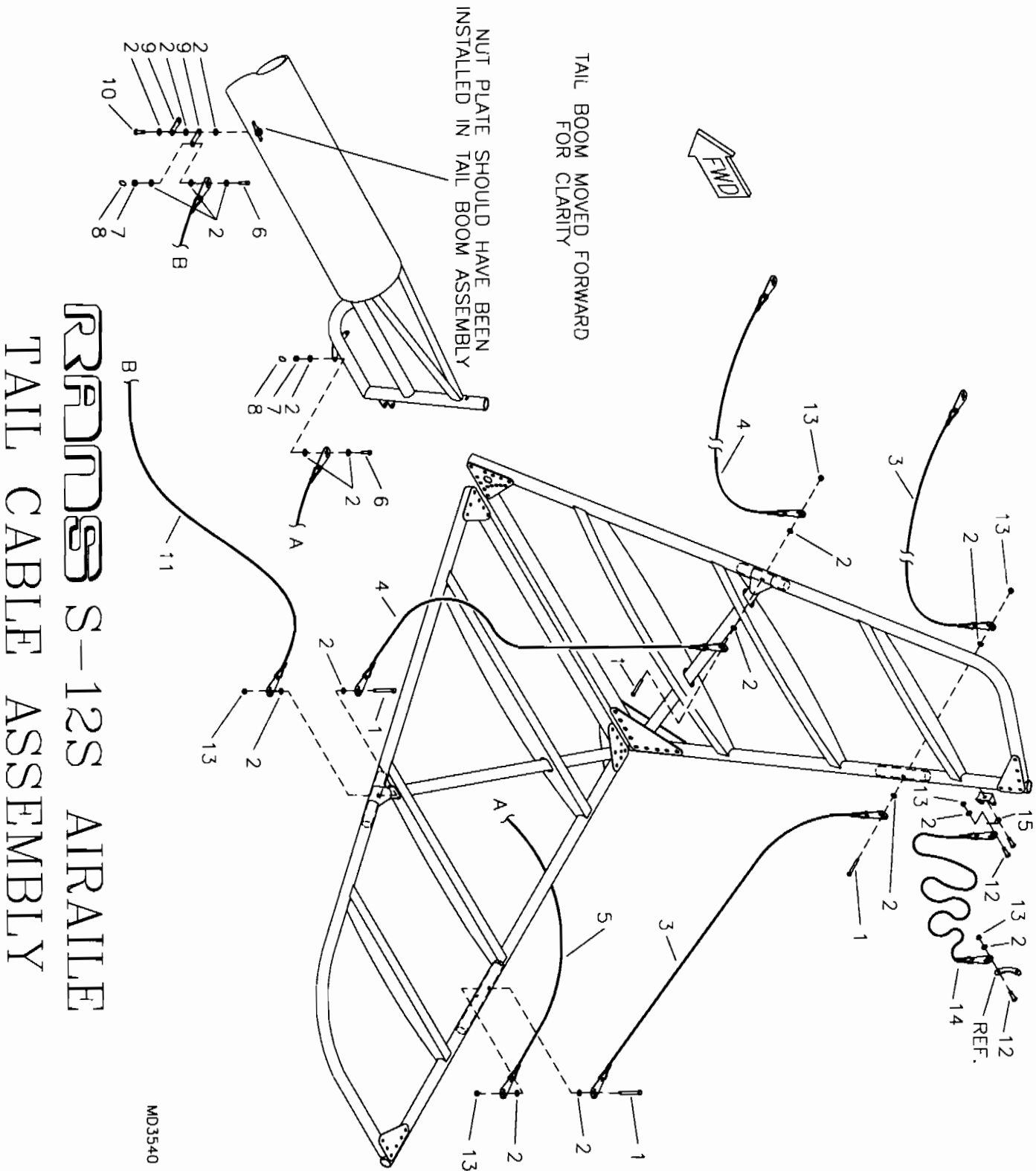
**Referenced from control stick assembly.

5/2/2003

RMS S-12S AIRAILE RUDDER FRAME ASSEMBLY



#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Rudder Rib - Lower	KPRD0062	1
2.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-42	12
3.	Gusset	KPAC0044	2
4.	3/32" Aluminum Pop Rivet	40APR1/8	4
5.	3/16" Nut Plate	K-1000-3	2
6.	3/16" Bolt	AN3-15	2
7.	3/16" Thick Washer	AN960-10	14
8.	Stainless Steel Hinge	W-HB	2
9.	3/16" Bolt	AN3-13A	2
10.	3/16" Castle Nut	AN310-3	2
11.	Small Cotter Pin	MS24665-134	2
12.	Rudder Rib-Upper	KPRD0061	1
13.	Attach Tang	U-ST001	4
14.	3/16" Shear Nut	AN364-1032A	3
15.	Rudder Horn, LH	TG-RHL	1
16.	Rudder Horn, RH	TG-RHR	1
17.	Rudder-Leading Edge	KPRD0016	1
18.	Rudder-Trailing Edge	KPRD0017	1
19.	3/16" Bolt	AN3-15A	3
20.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	8
21.	90 Hummertang	T12-HT6 BENT	1
22.	3/16" Stainless Steel Pop Rivet - Cherry Q	CCPQ-64	2
23.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-41	8

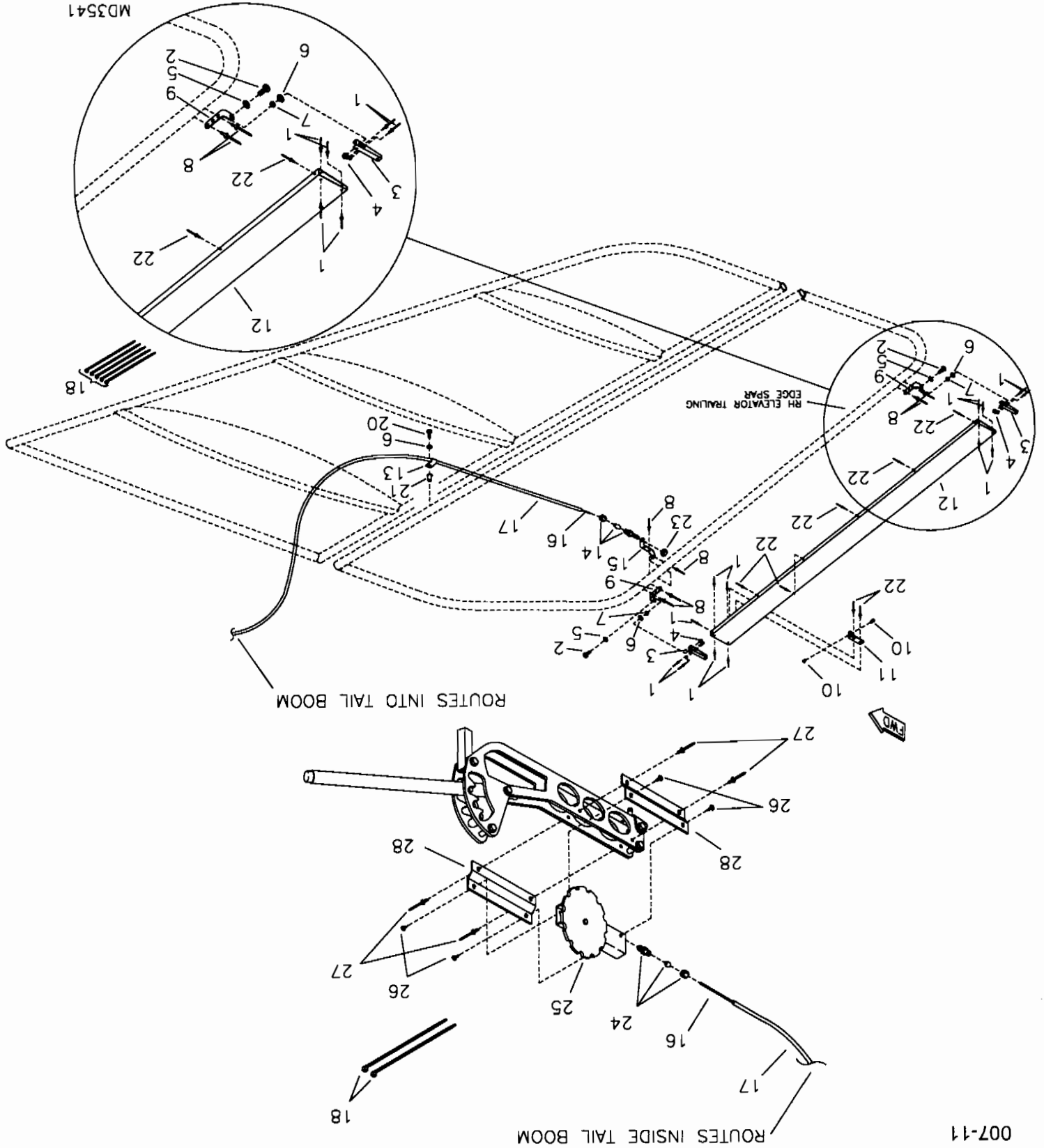


S-12S AIRAILE - TAIL GROUP CABLE ASSEMBLY

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	3/16" Bolt	AN3-15A	6
2.	3/16" Thick Washer	AN960-10	31
3.	Top AFT Cable	KAHS0011	2
4.	Top FWD Cable (4, 5, 6)	KAHS0013	2
5.	Lower AFT Cable	KAHS0014	2
6.	3/16" Bolt	AN3-5	4
7.	3/16" Castle Nut	AN310-3	4
8.	Loc Ring	RL 27 1/4	4
9.	Tang	KPAC0038	2
10.	3/16" Bolt	AN3-6A	1
11.	Lower FWD Cable	KAHS0015	2
12.	3/16" Bolt	AN3-4A	4
13.	3/16" Tensile Nut	AN365-1032A	10
14.	Tail Cable	KPTG0029	2
15.	Hummertang	T12-HT6	2

RMS S-12S AIRAILE MECHANICAL TRIM TAB

MD3541



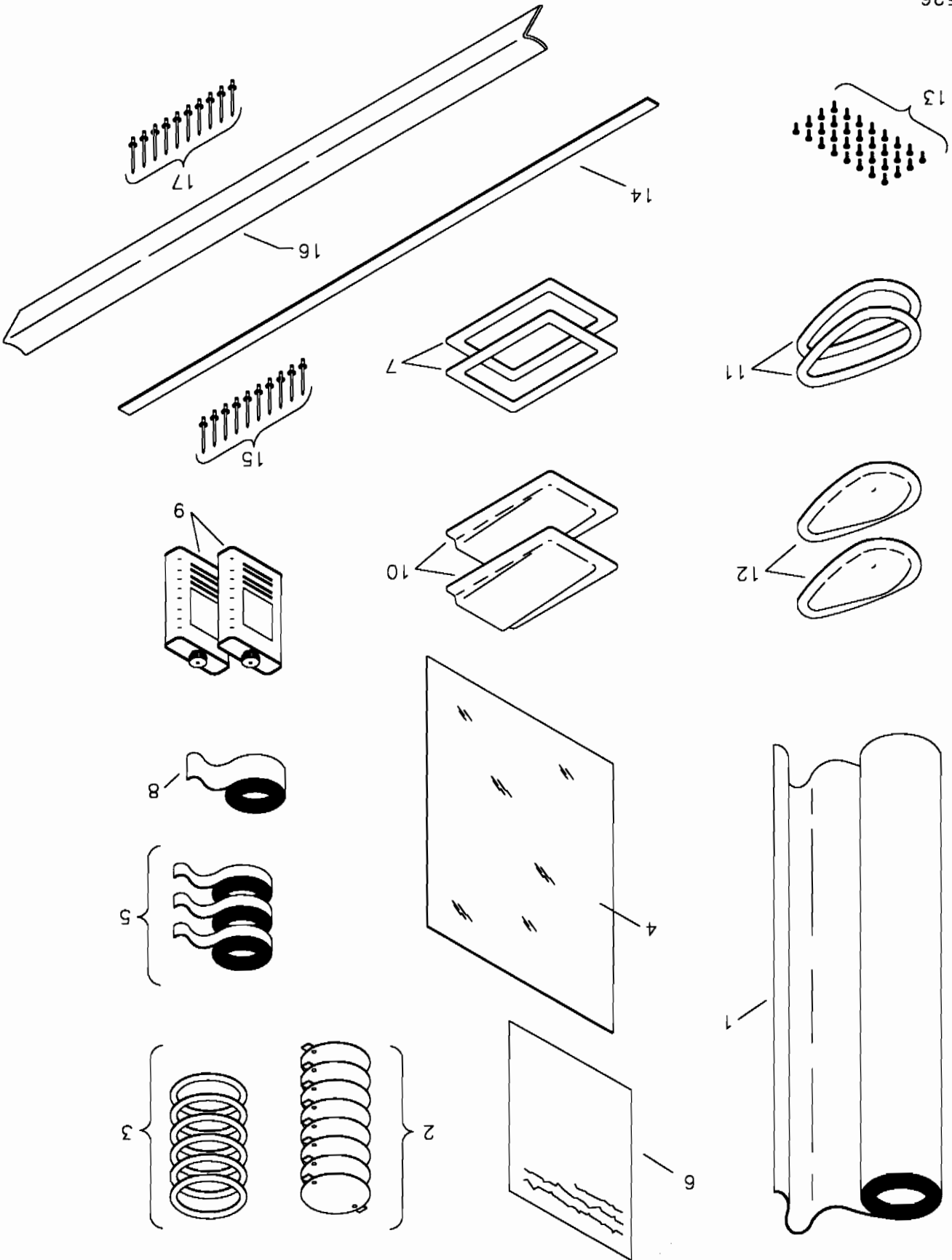
S-12S AIRAILE - MECHANICAL TRIM TAB

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	3/32" Aluminum Pop Rivet	40APR1/8	13
2.	3/16" Truss Head Bolt	AN526-C1032R12	2
3.	Trim Tab End Rib	KPTR0007	2
4.	3/16" Single Ear Nut Plate	MS21051-L3	2
5.	3/16" Thin Washer	AN960-10L	2
6.	3/16" Thick Washer	AN960-10	4
7.	Aluminum Bushing, 1/4" x .028 x 1/16" *	KAAC0026-1	0
8.	3/16" Aluminum Pop Rivet - Cherry Q	AAPQ-62	6
9.	Trim Tab Hinge	ST-16-BENT	2
10.	Wire Swivel/Screw Stop	2361	1
11.	Trim Tab Horn	KPTR0008	1
12.	Trim Tab	KPTR0009	1
13.	Cushioned Tube Clamp	MS21919WDG3	1
14.	Conduit Adjuster Assembly	KSFS0014	1
15.	Cable Housing Stop Bracket	KPTR0005	1
16.	Trim Push Wire	TR-PW	22 ft
17.	Trim Cable Housing	KSAC0008	22 ft
18.	Zip Ties	ZIP TIES	7
19.	Cushioned Tube Clamp	MS21919WDG6	1
20.	3/16" Bolt	AN3-3A	1
21.	3/16" Rivet Nut	MS27130-A25K	1
22.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-41	7
23.	1/4" Plain Nut	AN345-416	1
24.	Fitting	IMP68-3/16X1/8	1
25.	Trim Wheel Assembly	TR-WA	1
26.	#4 Small Pan Head Screw	4X1/4 PHS	4
27.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-44	4
28.	Attach Angle - Trim Wheel	KPTR0025	2

*Builder must fabricate from raw stock.

RPM S-12S AIRAILE COVERING SUPPLIES

MD3526

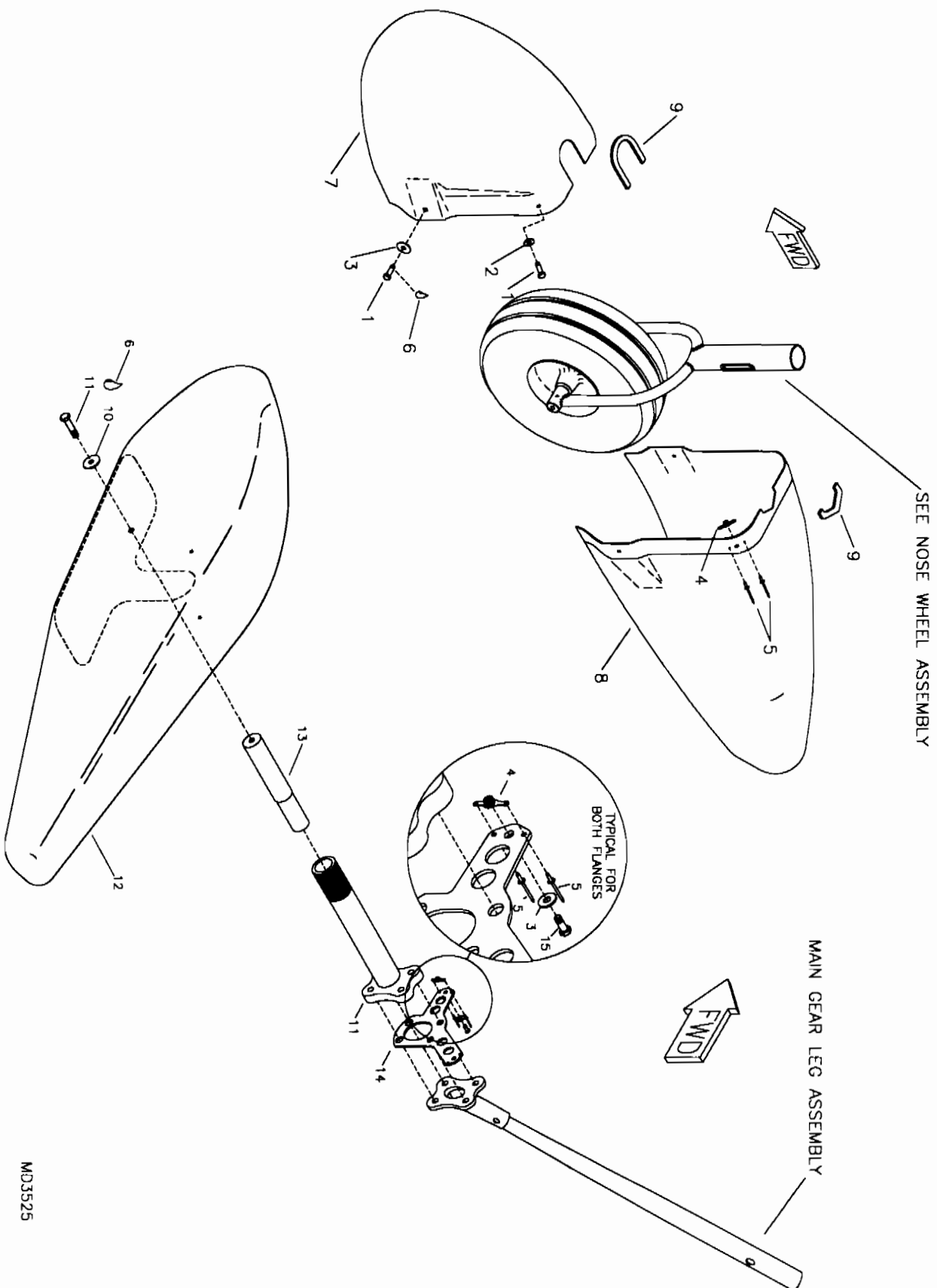


#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Aircraft Fabric	CV-S6S-116	28 yds
2.	Inspection Plate	CV-IP	8
3.	Inspection Ring	CV-IR	6
4.	.020 Lexan 24" x 24"	LEX-24X24	1
5.	2" Surface Tape	2 TAPE	3 rls
6.	Super Flight Covering Manual	KSCV0002	1
7.	Aileron Exit Ring	KPCV0005	2
8.	4" Surface Tape	4 TAPE	10 yds
9.	Aircraft Fabric Adhesive *	KSCV0001	0 qts
10.	Aileron Exit	CV-AX	2
11.	Flap Exit Rings	KPCV0006	2
12.	Flap Exit Fairings	CV-FX	2
13.	#4 Small Pan Head Screw **	4X1/4 PHS	40
14.	Cover Strap - Top	KPCV0012	70
15.	1/8" Aluminum Pop Rivet - Avex	1691-0410	850
16.	Gap Seal	GAP-2	7 pcs
17.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-44	52

* Builder Supplied. May be ordered from RANS Parts Department.

** Use to mount removable Exit Fairings and Covers

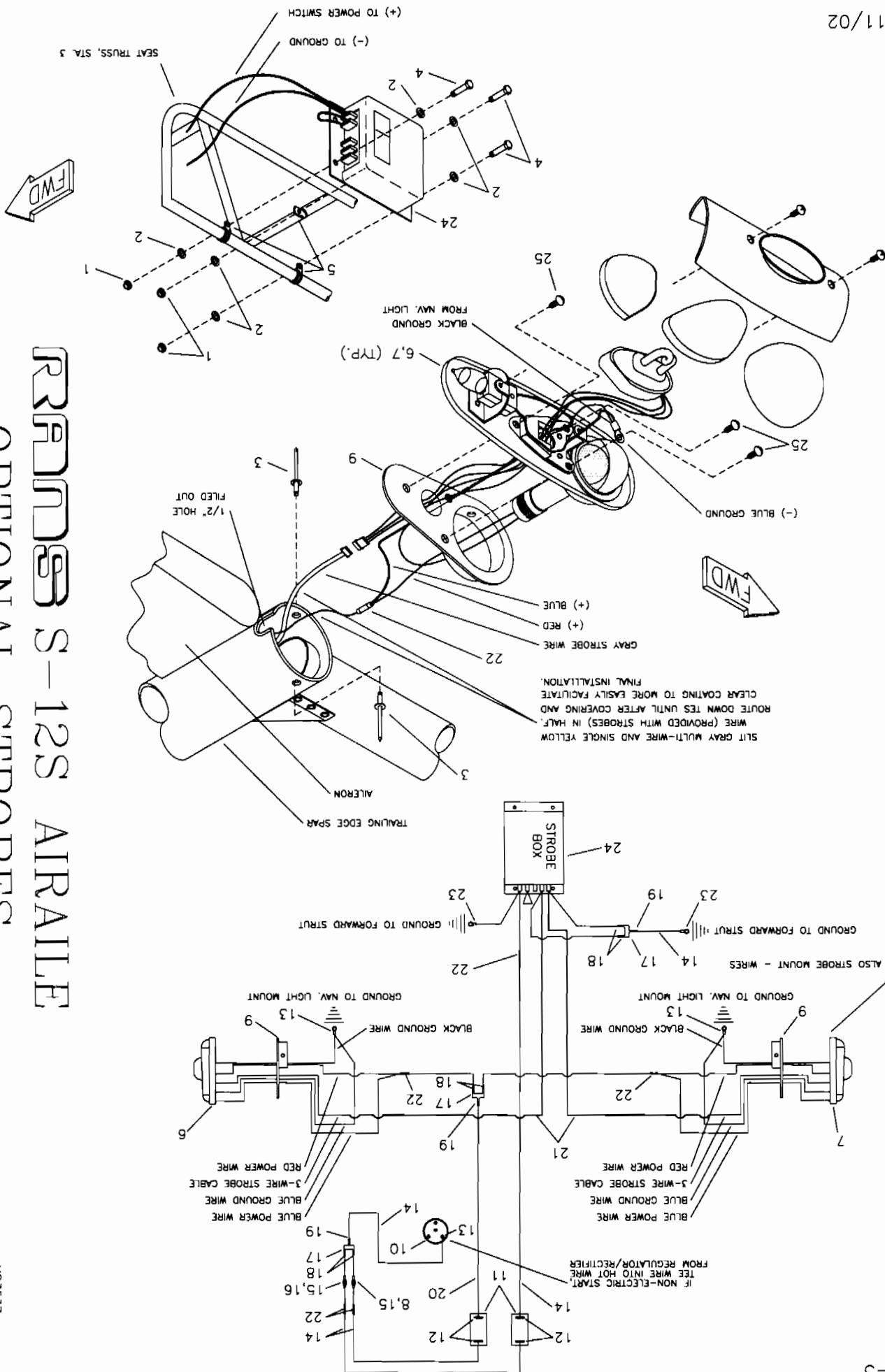
5/2/2003



#	DESCRIPTION	PART NUMBER	QUANTITY
1.	3/16" Bolt	AN3-5A	4
2.	3/16" Thick Washer	AN960-10	2
3.	3/16" Large Washer	AN970-3	2
4.	3/16" Nut Plate	K-1000-3	6
5.	3/32" Aluminum Pop Rivet	40APR1/8	4
6.	Loctite Blue	LOC-TITE	0
7.	Nose Wheel Pant, FWD	NWP-FWD	1
8.	Nose Wheel Pant, AFT	NWP-AFT	1
9.	Rubber Edging	X1011	12 in
10.	1/4" Large Washer	AN970-4	2
11.	1/4" Bolt	AN4-4A	2
12.	Main Wheel Pant, 6"	KPMG0105	2
13.	Wheel Axle Extender, 6"	KPMG0171	2
14.	Wheel Pant Mount Plate	KPMG0162	2
15.	3/16" Bolt	AN3-3A	4

*Builder must fabricate from raw stock.

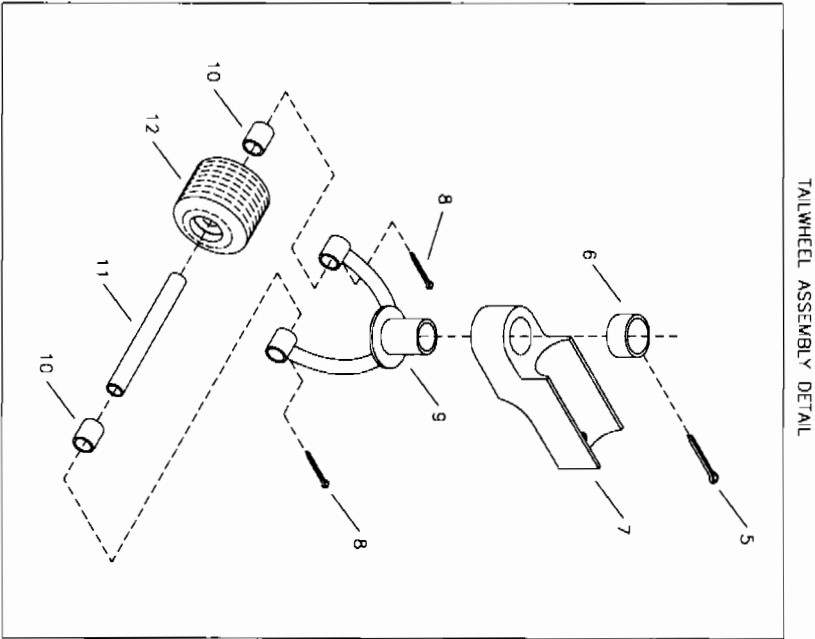
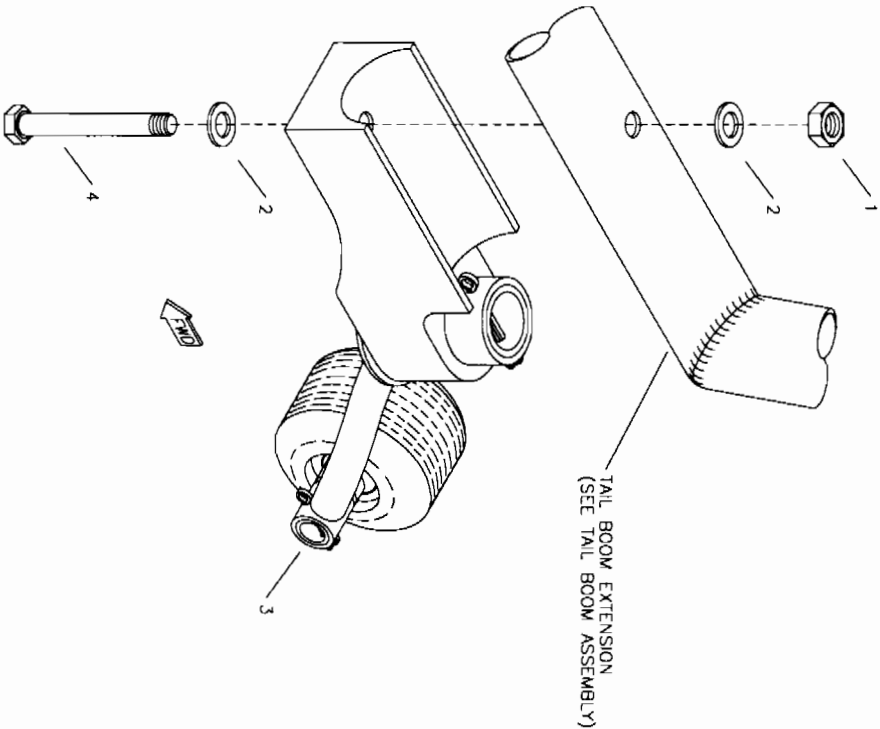
RR-12S AIRRAIL OPTIONAL STROBES



MO3537

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	3/16" Shear Nut	AN364-1032A	3
2.	3/16" Thick Washer	AN960-10	6
3.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	4
4.	3/16" Bolt	AN3-5A	3
5.	1/2" Cushioned Tube Clamp	MS21919-DG8	3
6.	Whelen Left Strobe Light	A600-PR	1
7.	Whelen Right Strobe Light	A600-PG	1
8.	10 AMP Fuse	KSES0020-10	1
9.	Navigation Light Tip Mount	NAV-TIP-MT	2
10.	Key Start Switch *	25-6	0
11.	Switch	MS35058-22	2
12.	14 Gauge Eye Terminal, Blue 5/32"	KSES0003	4
13.	14 Gauge Eye Terminal, Blue 3/16"	IP-7102	3
14.	14 Gauge Red Wire	14 GA WIRE/RED	8 ft
15.	14 Gauge, In Line Fuse Holder	KSES0019	2
16.	15 AMP Fuse	KSES0020-15	1
17.	Terminal Y Connector, Brass	IP-YC	1
18.	14 Gauge Female Spade Terminal, Blue	IP-7128	6
19.	14 Gauge Male Spade Terminal, Blue	IP-7126	3
20.	14 Gauge Yellow Wire	14 GA WIRE/YELLOW	50 ft
21.	Whelen Installation & Cable	HD-60	1
22.	14 Gauge Splice, Butt Connector	IP-7132	4
23.	14 Gauge Eye Terminal, Blue 1/4"	1/4 EYE 14 GA	2
24.	Whelen Strobe Light Power Supply	A413A, HDA-DF	1
25.	8/32" Truss Head Bolt	AN515-8R7	6

*Referenced from S-12S Electrical Schematics.

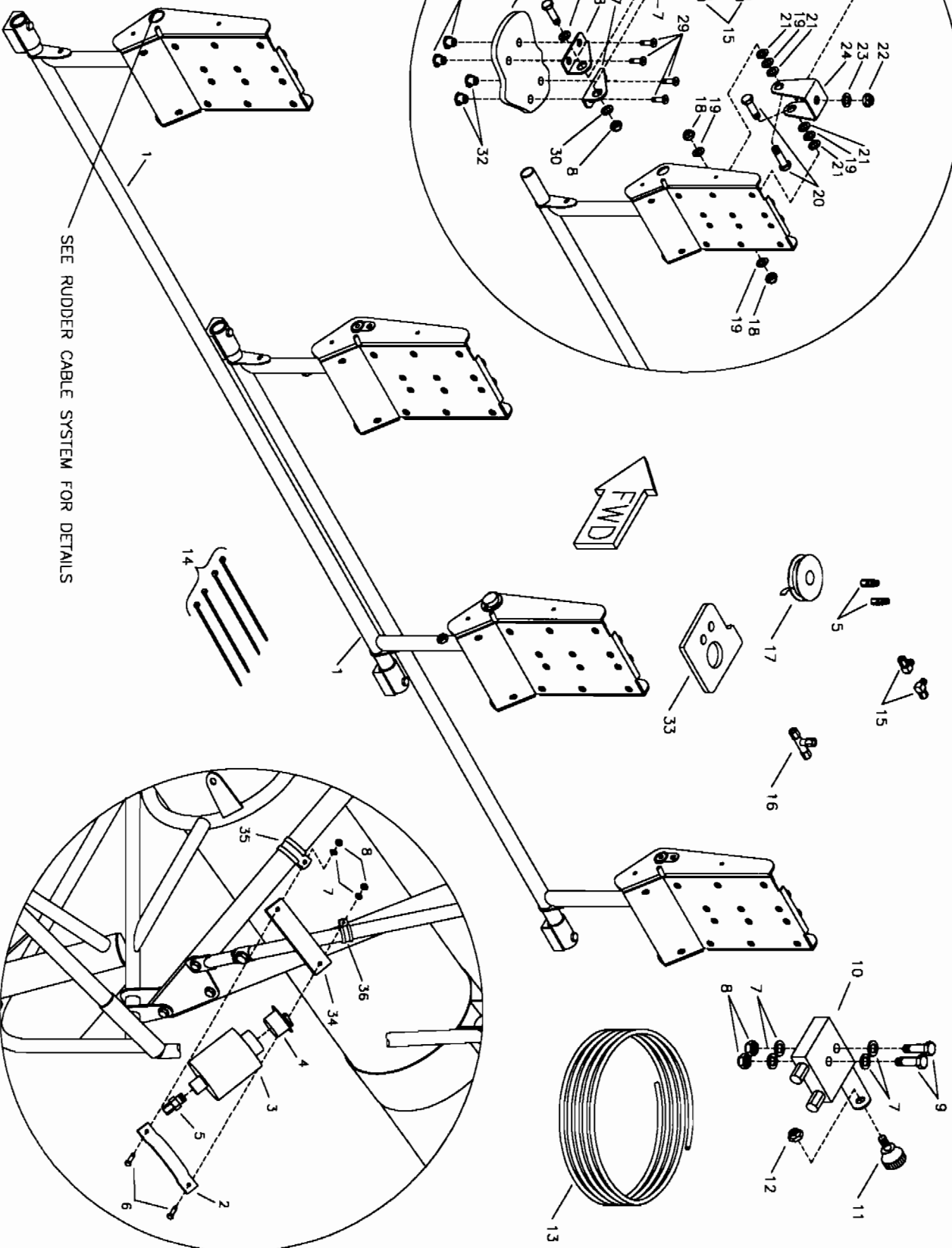
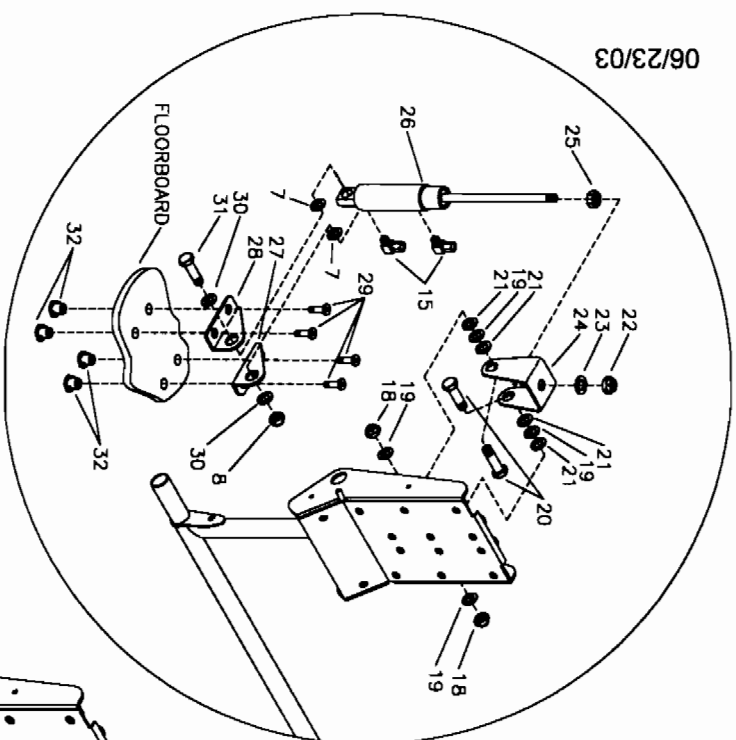


RRM8 S-12S AIRRAILE
OPTIONAL TAILWHEEL INSTALLATION

S-12S AIRAILE - OPTIONAL TAILWHEEL INSTALLATION

# DESCRIPTION	PART NUMBER	QUANTITY
1. 3/16" Shear Nut	AN364-1032A	1
2. 3/16" Thin Washer	AN960-10L	2
3. Tailwheel Assembly	KATG0003	1
4. 3/16" Bolt	AN3-17A	1
5. Large Cotter Pin *	MS24665-287	0
6. Bushing *	KPAC0035	0
7. Tailwheel Swivel Block *	KPTG0002	0
8. Small Cotter Pin *	MS24665-134	0
9. Tailwheel Fork *	KPTG0001	0
10. Bushing *	KPAC0034	0
11. Tailwheel - Axle *	KPTG0008	0
12. Tailwheel *	KSTG0001	0

*Supplied pre-assembled to KATG0003.



REDUCED S-12S AIRPLANE BRAKE SYSTEM OPTIONAL DUAL HYDRAULIC TOE BRAKES

S-12S AIRAILE - BRAKE SYSTEM

PAGE 009-8

OPTIONAL DUAL HYDRAULIC TOE BRAKES

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Rudder Pedal *	KPCS0066	0
2.	Hydraulic Reservoir Clamp	FS-HS	1
3.	Hydraulic Brake Reservoir	KPBS0007	1
4.	7/8" Expansion Cap	2598K29	1
5.	Straight Fitting	KSBS0002	3
6.	3/16" Bolt	AN3-3A	3
7.	3/16" Thin Washer	AN960-10L	14
8.	3/16" Shear Nut	AN364-1032A	8
9.	3/16" Bolt	AN3-15A	2
10.	Parking Brake	KSBS0007	1
11.	Knob	KSAC0012	1
12.	3/16" Shear Acorn Nut	22NKM02	1
13.	Hydraulic Brake Line	KSBS0004	40 ft
14.	Zip Ties	ZIP TIES	10
15.	90 Fitting	KSBS0001	10
16.	Tee Fitting	KSBS0003	1
17.	Teflon Tape **	TEFLON TAPE	0
18.	1/4" Shear Nut	AN364-428A	8
19.	1/4" Thick Washer	AN960-416	16
20.	1/4" Bolt	AN4-5A	8
21.	1/4" Thin Washer	AN960-416L	16
22.	5/16" Shear Nut	AN364-524A	4
23.	5/16" Thin Washer	AN960-516L	4
24.	Stainless Steel U Bracket	SU-118	4
25.	5/16" Plain Nut ***	-----	0
26.	Master Cylinder - Brake	KSBS0031	4
27.	Brake Mount Bracket, LH	B-MBRKT-L	4
28.	Brake Mount Bracket, RH	B-MBRKT-R	4
29.	8-32 Pan Head Machine Screw	KSHW0008	16
30.	3/16" Thick Washer	AN960-10	8
31.	3/16" Bolt	AN3-12A	4
32.	8-32 Tee Nut	KSHW0007	16
33.	Parking Brake Stop Plate	KPBS0018	1
34.	Aluminum Strap, 1" x .032 x X ****	KSAC0026	0
35.	Cushioned Clamp, 1 1/8"	MS21919-DG18	1
36.	Cushioned Clamp, 5/8"	MS21919-DG10	1

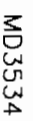
*Referenced from rudder pedals.

**Builder provides.

***Supplied with Master Cylinder.

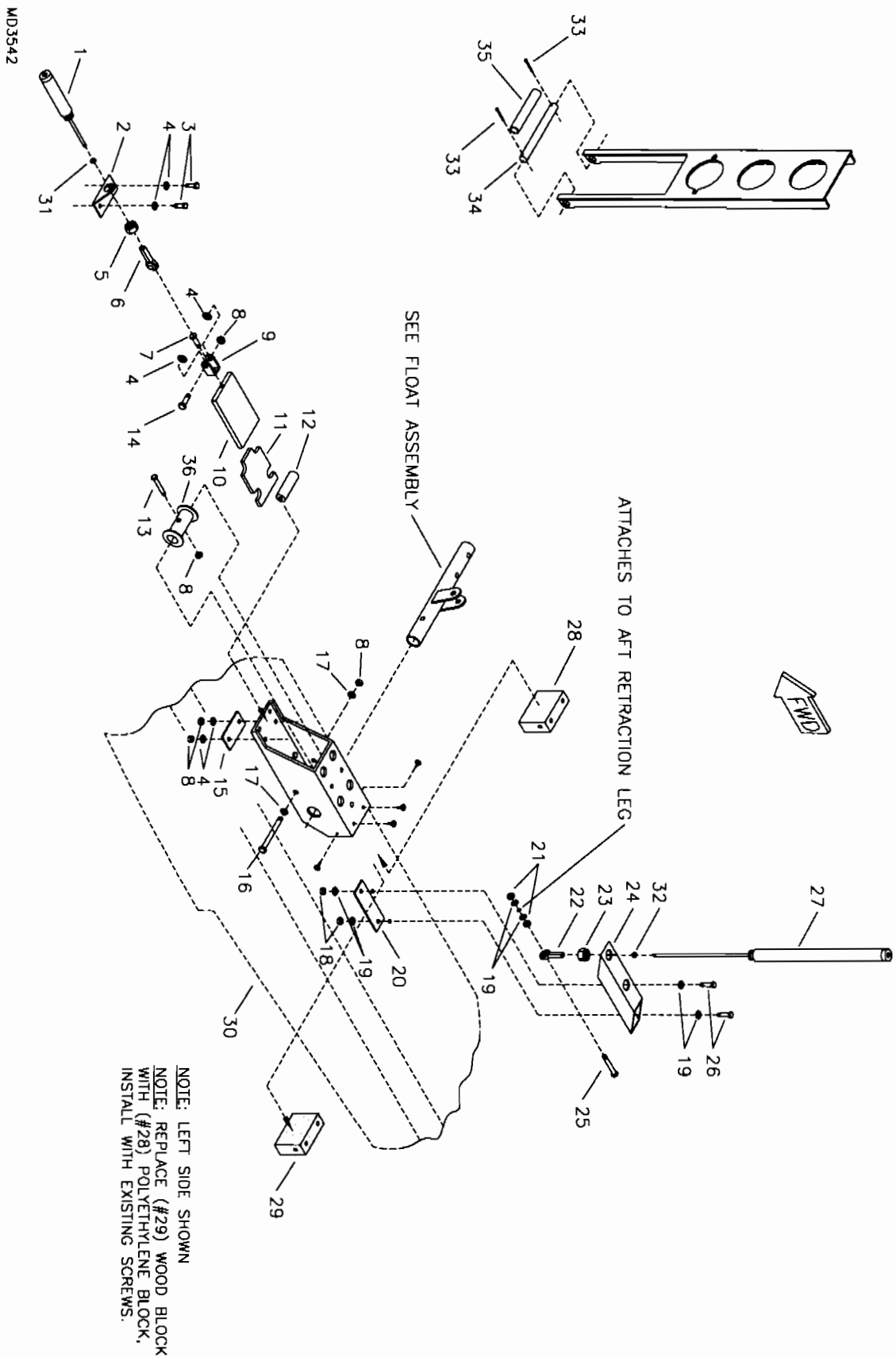
****Builder must fabricate from raw stock.

6/23/2003



RRM-3 S-12S AIRRAIL
OPTIONAL FLOAT MOUNT ASSEMBLY

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Float - Main Gear Leg	KPMG0073	2
2.	1/4" Shear Nut	AN364-428A	12
3.	1/4" Thick Washer	AN960-416	22
4.	1/4" Bolt	AN4-20A	4
5.	Float - Main Gear Socket	KPMG0074	2
6.	3/16" Bolt	AN3-15A	4
7.	1/4" Tensile Nut	AN365-428A	24
8.	1/4" Bolt	AN4-12A	2
9.	FWD Attach Channel	KPMG0098	2
10.	1/4" Bolt	AN4-11A	4
11.	3/16" Thick Washer	AN960-10	4
12.	3/16" Shear Nut	AN364-1032A	12
13.	Float - Mounting Bracket	KPMG0075	4
14.	PVC Insert - Inner	KPMG0044	1
15.	Float - Cross Brace	KPMG0077	1
16.	1/4" Bolt	AN4-13A	8
17.	Float - Strut Attach Block	KPMG0004	4
18.	PVC Insert - Outer	KPMG0045	2
19.	1/4" Bolt	AN4-24A	2
20.	1/4" Bolt	AN4-33A	2
21.	1/4" Bolt	AN4-32A	2
22.	3/16" Bolt	AN3-13A	8
23.	Float - Fuselage Support	KPMG0076	2
24.	1/4" Bolt	AN4-12A	8
25.	Forward Cross Brace Saddle	KPNG0032	2
26.	Float Doubler Plate	KPNG0033	2
27.	Forward Fuselage Support - Inner LH	KPNG0029-L	1
28.	1/8" Aluminum Washer	EG-AW	8
29.	Forward Cross Brace	KPNG0031	1
30.	Forward Fuselage Support - Outer LH	KPNG0030-L	1
31.	Forward Fuselage Support - Inner RH	KPNG0029-R	1
32.	Forward Fuselage Support - Outer RH	KPNG0030-R	1
33.	Float Attach Bracket - RH	KPMG0095	1
34.	Float Attach Bracket Top - RH	KPMG0097	1
35.	Float Attach Bracket - LH	KPMG0094	1
36.	Float Attach Bracket Top - LH	KPMG0096	1
37.	1/4" Bolt	KSHW0050	6
38.	Loctite Blue	LOC-TITE	0
39.	Large Lift Strut Chord Template	KPLS0003	1
40.	1/4" Bolt	AN4-17A	2



OPTIONAL MAIN GEAR RETRACTION SYSTEM

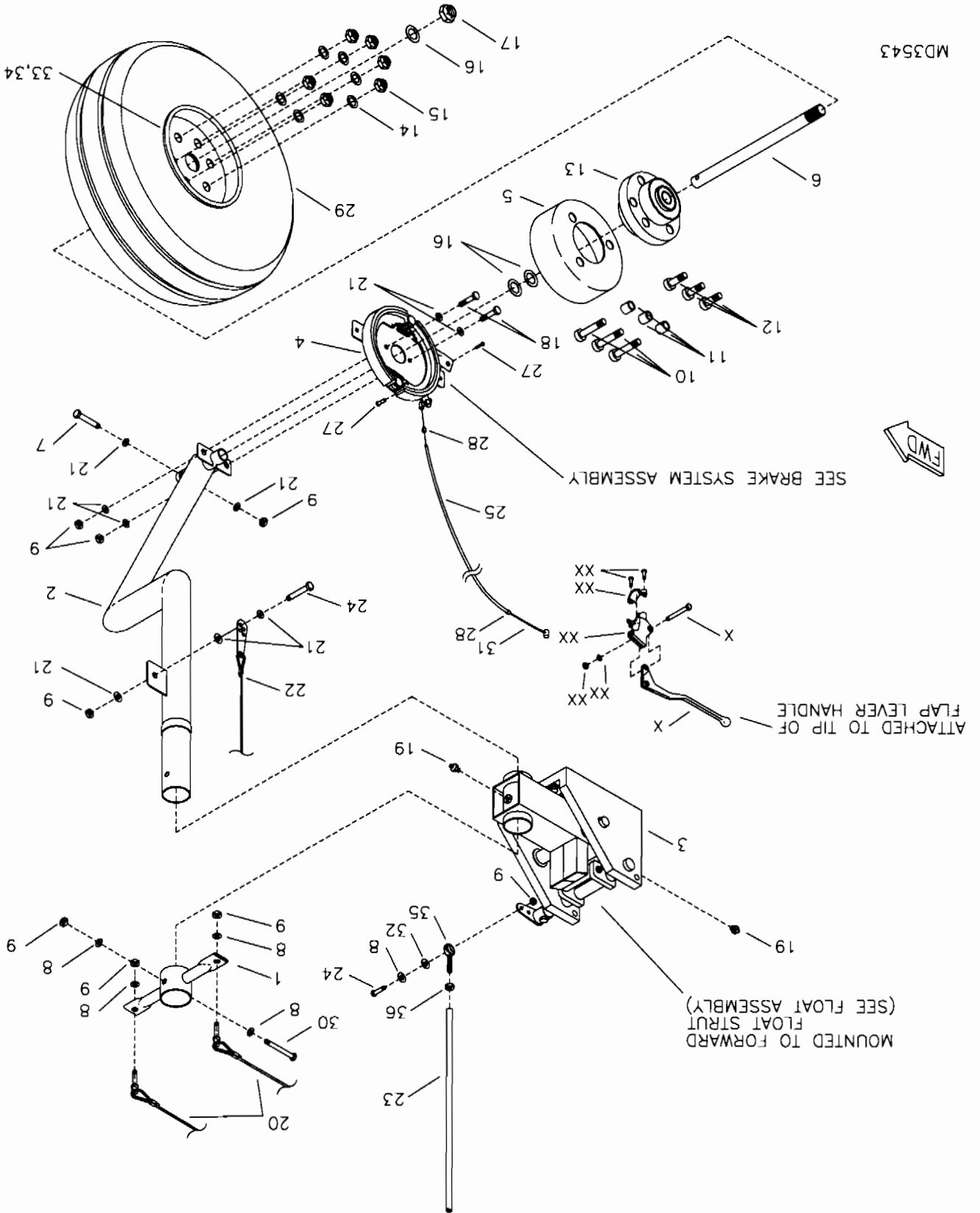
MAIN GEAR RETRACTION SYSTEM

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Air Cylinder	KSHW0029	2
2.	Cylinder Mount Angle	KPMG0040	2
3.	3/16" Bolt	AN3-12A	4
4.	3/16" Thick Washer	AN960-10	12
5.	7/16" Stainless Steel Nut *	KSHW0028	2
6.	Female Rod End	NF-3	2
7.	3/16" Bolt	AN3-3A	2
8.	3/16" Shear Nut	AN364-1032A	10
9.	Shackle	RL-205-T	2
10.	Main Gear Lock Plate **	KAMG0004-1	2
11.	Lower Guide	KPMG0032	2
12.	Upper Guide	KPMG0036	2
13.	3/16" Bolt	AN3-13A	2
14.	3/16" Bolt	AN3-7A	2
15.	Cylinder Mount Backing Plate	KPMG0038	2
16.	3/16" Bolt	AN3-32A	2
17.	3/16" Thin Washer	AN960-10L	4
18.	1/4" Tensile Nut	AN365-428A	4
19.	1/4" Thick Washer	AN960-416	12
20.	Cylinder Mount Backing Plate	KPMG0035	2
21.	1/4" Tensile Nut - Stainless	KSHW0001	4
22.	Female Rod End - Stainless Steel	KSHW0035	2
23.	5/8" Stainless Steel Nut	KSHW0027	2
24.	Main Cylinder Mount	KPMG0034	2
25.	1/4" Bolt - Stainless	KSHW0002	2
26.	1/4" Bolt	AN4-10A	4
27.	Air Cylinder	KSHW0030	2
28.	Main Gear Guide Block	KPMG0033	2
29.	Wood Block **	KAMG0004-2	2
30.	Puddle Jumper Float Container	KAMG0004	1
31.	3/16" Stainless Steel Nut	KSHW0033	2
32.	1/4" Stainless Steel Nut	KSHW0034	2
33.	Cotter Pin **	KAMG0004-3	4
34.	Axle **	KAMG0004-4	2
35.	Spacer Bushing **	KAMG0004-5	2
36.	Float - Socket Clamp	KPMG0029	2

*Replaces steel nut that comes with cylinder.

**Supplied with Float Assembly.

RMS S-12S AIRAILE OPTIONAL NOSE GEAR

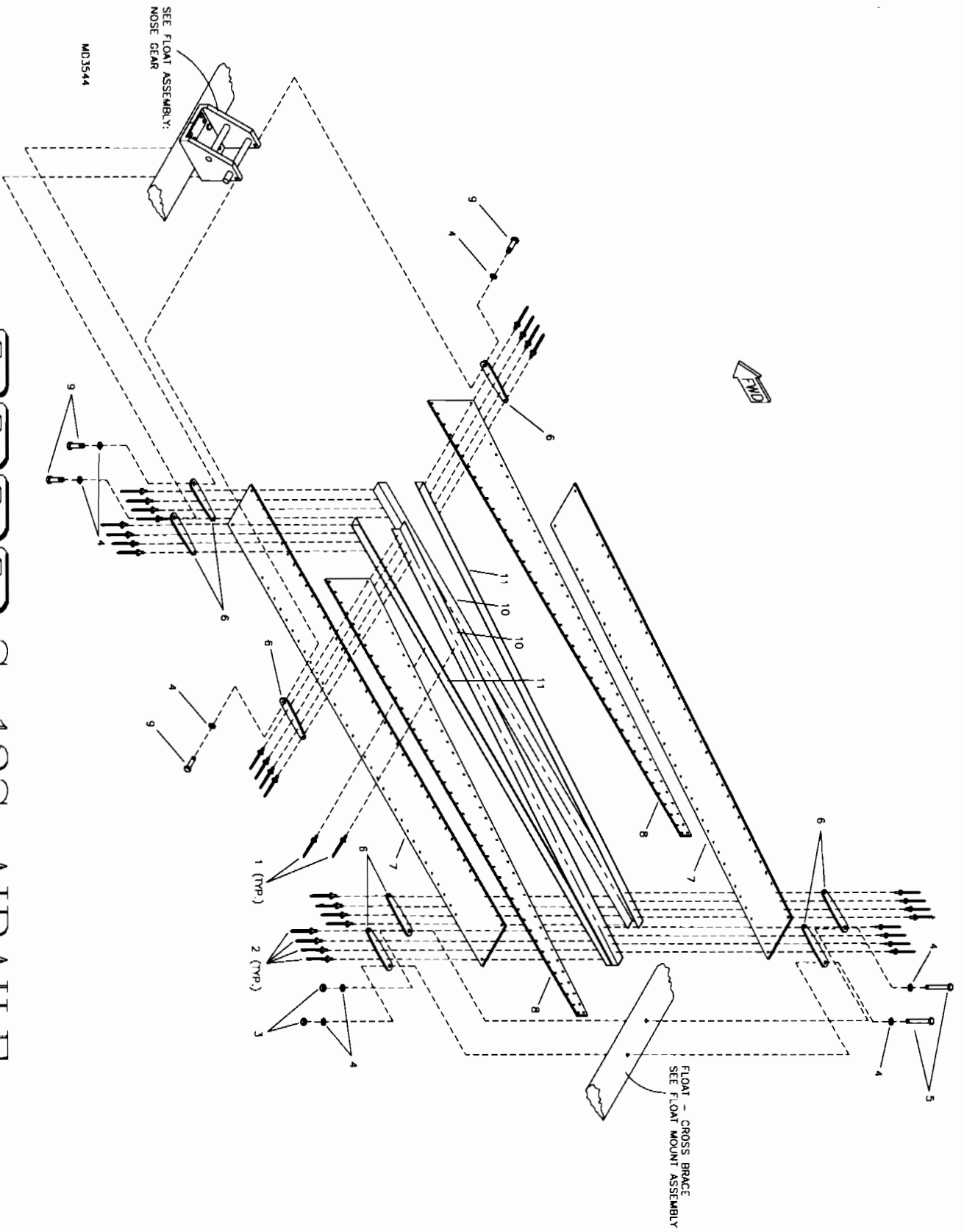


S-12S AIRAILE - OPTIONAL PUDDLE JUMPER FLOATS
NOSE GEAR

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Steer Horn	KPNG0025	1
2.	Nose Gear Strut	KPNG0022	1
3.	Nose Gear - Retract Assembly	KANG0001	1
4.	4 1/2" Brake - RH	2269	1
5.	4 1/2" Brake Drum	2211	1
6.	Axle	LG-AXLE	1
7.	3/16" Bolt	AN3-12A	1
8.	3/16" Thin Washer	AN960-10L	5
9.	3/16" Shear Nut	AN364-1032A	7
10.	Socket Head Cap Screw, 1 3/4" *	LG-MW-HUB-1	3
11.	Spacer Bushing	SB-1/2X5/16	3
12.	Socket Head Cap Screw, 1" *	LG-MW-HUB-2	3
13.	Wheel Hub *	LG-MW-HUB-3	1
14.	Washer *	LG-MW-HUB-6	6
15.	Nut *	LG-MW-HUB-7	6
16.	5/8" Shim	5/8 SHIM	3
17.	5/8" Loc Nut	5/8 LOC NUT	1
18.	3/16" Bolt	AN3-5A	2
19.	Grease Fitting	11-101	2
20.	Float - Steering Cable **	KANG0008	0
21.	3/16" Thick Washer	AN960-10	9
22.	Nose Wheel Retracting Cable **	KANG0009	0
23.	Nose Wheel Lock Rod **	KANG0010	0
24.	3/16" Bolt	AN3-6A	1
25.	Large Cable Housing	B-CH	9 ft
26.	Brake Lever	KSBS0009	1
27.	Wire Swivel/Screw Stop	2361	1
28.	Cable Conduit Ferrule End Cap	80-0002-01	2
29.	6" Tire	LG-T	1
30.	3/16" Bolt	AN3-20A	1
31.	Wire	TR-PW	9 ft
32.	3/16" Plastic Washer	PW-3	1
33.	6" Hegar Main Gear Rim Kit	LG-MW-RIM	1
34.	6" Hegar Main Gear Hub Kit	LG-MW-HUB	1
35.	3/16" Rod End	MM-3	1
36.	3/16" Stainless Steel Nut	KSHW0033	1

*Supplied in Hub Kit.

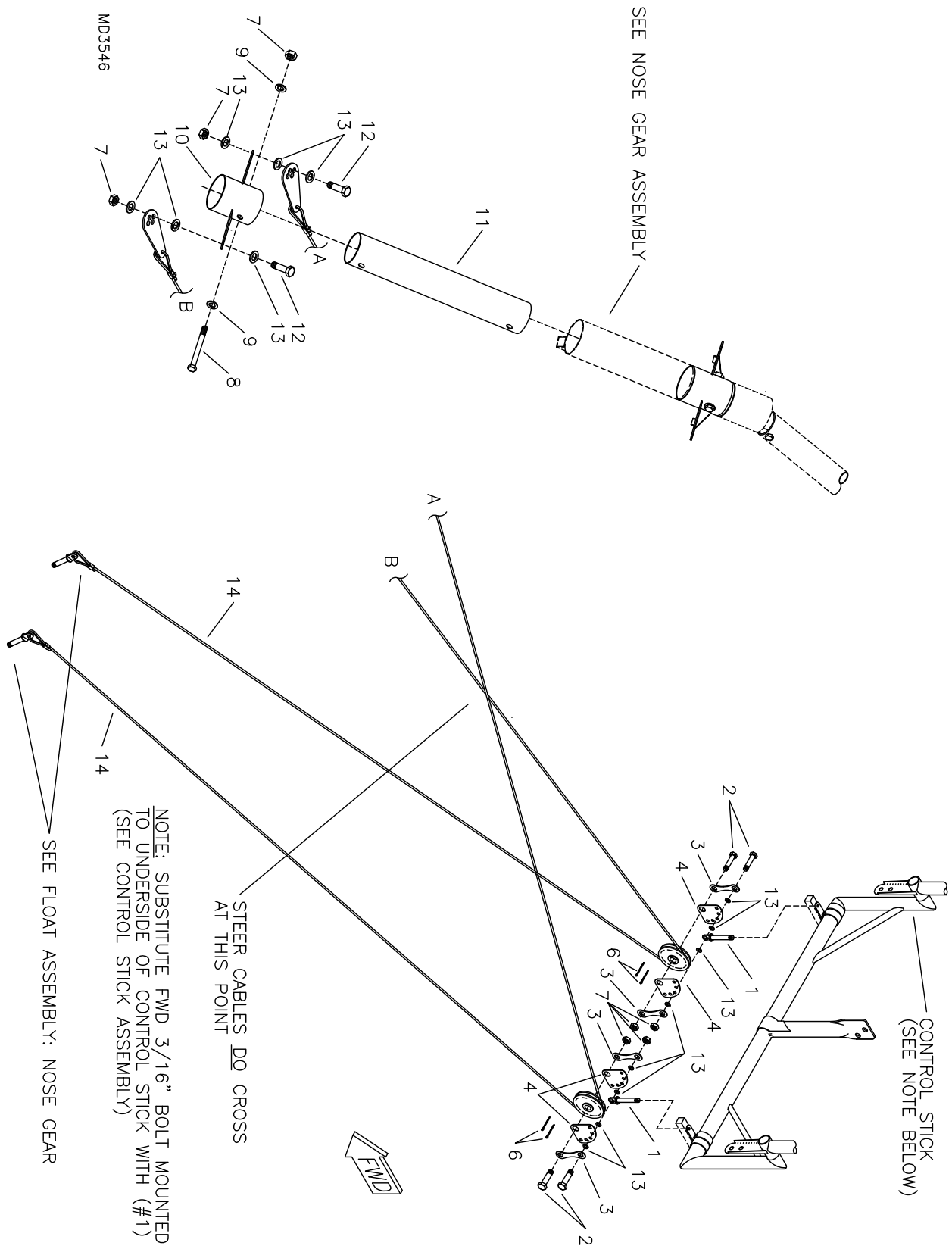
**Referenced from Steer Control System.



REPINS S-12S AIRRAILIE OPTIONAL FLOAT BOX ASSEMBLY

S-12S AIRAILE - OPTIONAL PUDDLE JUMPER FLOATS
FLOAT BOX ASSEMBLY

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	1/8" Aluminum Pop Rivet - Avex	1691-0410	284
2.	1/8" Stainless Steel Pop Rivet - Cherry Q	CCPQ-44	32
3.	1/4" Tensile Nut	AN365-428A	2
4.	1/4" Thin Washer	AN960-416L	8
5.	1/4" Bolt	AN4-17A	2
6.	Float Box Attach Lug	KPMG0089	8
7.	Float Box Horizontal Panel	KPMG0087	2
8.	Float Box Vertical Panel	KPMG0086	2
9.	1/4" Bolt	AN4-4A	4
10.	Float Box Panel Angle - RH	KPMG0088-R	2
11.	Float Box Panel Angle - LH	KPMG0088-L	2

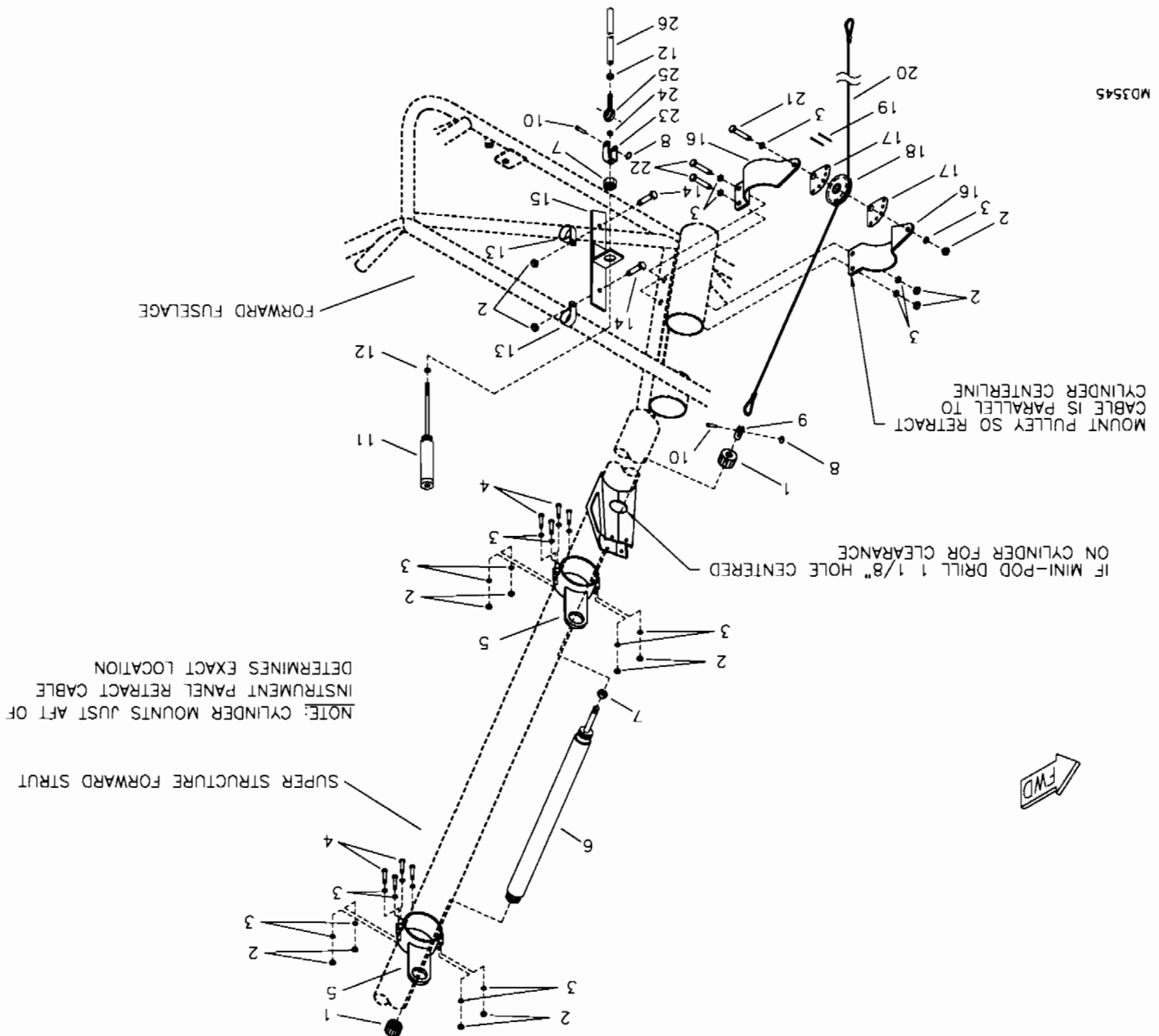


R3000 S-12S AIRFRAME
OPTIONAL FLOAT ASSEMBLY:
STEER CONTROL SYSTEM

S-12S AIRAILE - OPTIONAL PUDDLE JUMPER FLOATS
STEER CONTROL SYSTEM

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	3/16" Eyebolt	AN42B-10A	2
2.	3/16" Bolt	AN3-6A	4
3.	Hummertang	T12-HT6	4
4.	Small Pulley Cable Keeper	SP-CK	4
5.	Small Pulley	AN210-1A	2
6.	Small Cotter Pin	MS24665-134	4
7.	3/16" Shear Nut	AN364-1032A	7
8.	3/16" Bolt	AN3-20A	1
9.	3/16" Thin Washer	AN960-10L	2
10.	Steer Horn	KPNG0051	1
11.	Float - Nose Gear Insert	KPNG0034	1
12.	3/16" Bolt	AN3-5A	2
13.	3/16" Thick Washer	AN960-10	14
14.	Float - Steering Cable	KANG0008	2

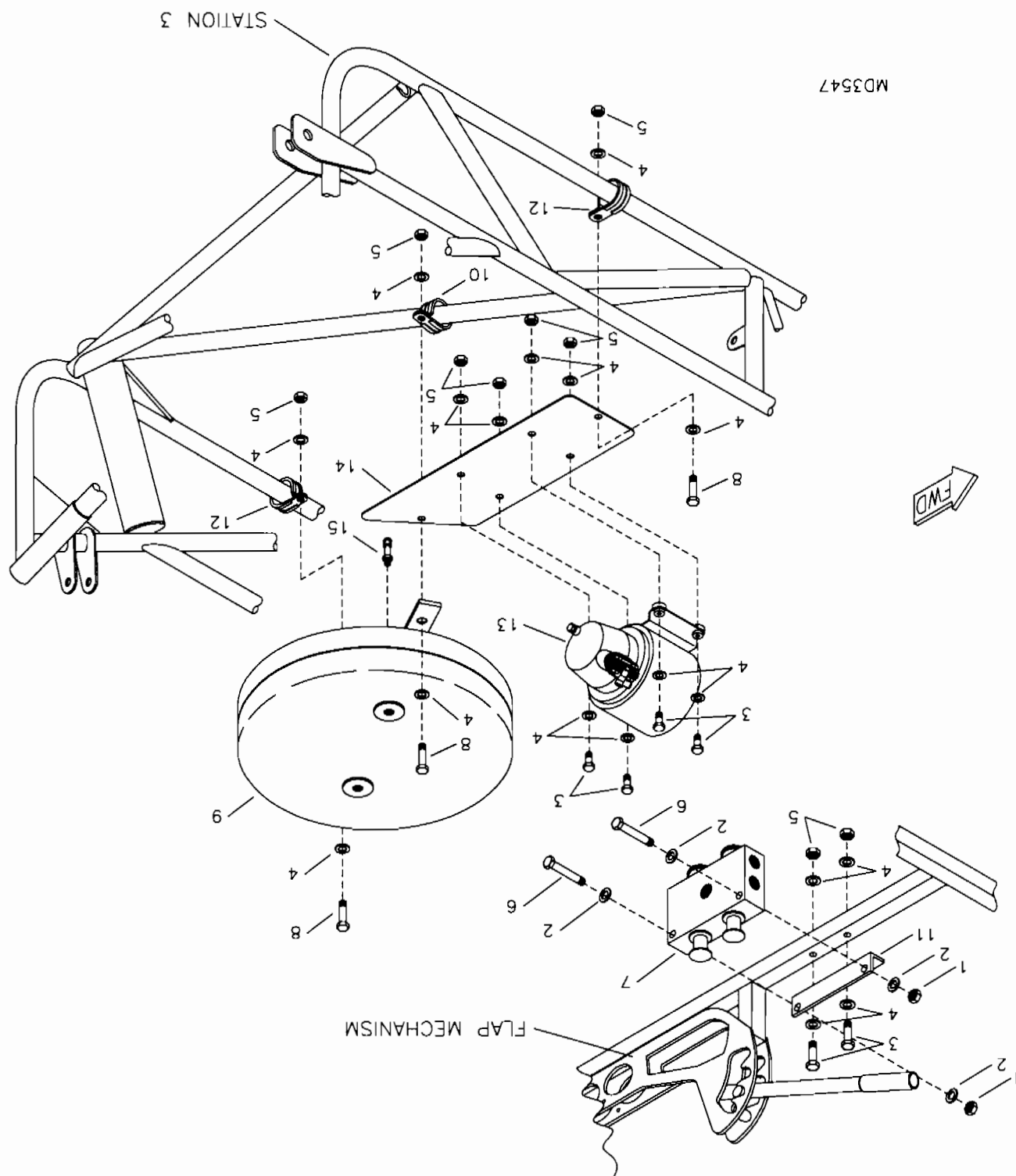
RRMS S-12S AIRAILE OPTIONAL FLOAT ASSEMBLY: NOSE GEAR RETRACTION SYSTEM



S-12S AIRAILE - OPTIONAL PUDDLE JUMPER FLOATS
NOSE GEAR RETRACTION SYSTEM

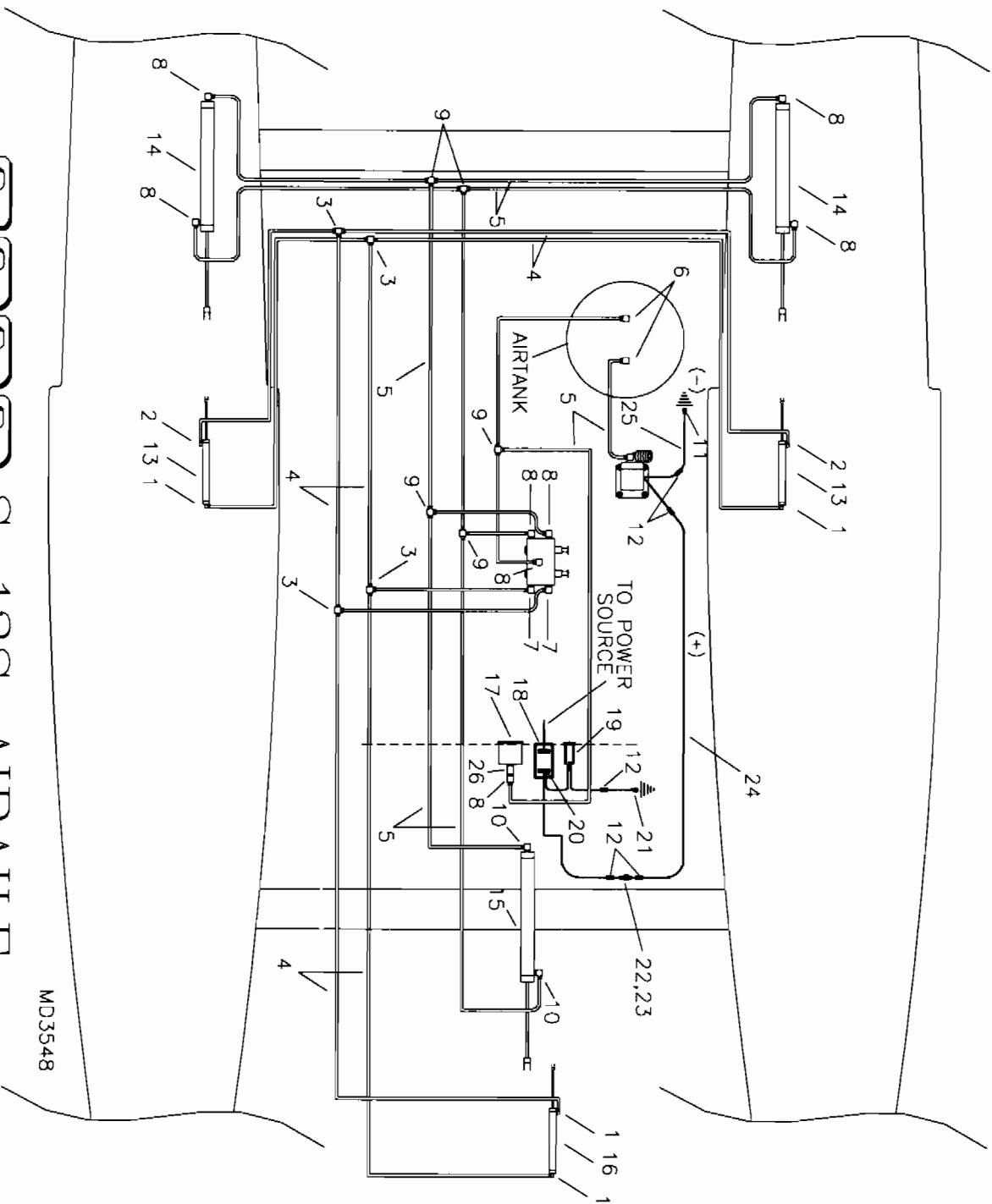
#	DESCRIPTION	PART NUMBER	QUANTITY
1.	3/4" Stainless Steel Nut	KSHW0026	2
2.	3/16" Shear Nut	AN364-1032A	13
3.	3/16" Thin Washer	AN960-10L	14
4.	3/16" Bolt	AN3-13A	8
5.	Cylinder Clamp	KPMG0026	2
6.	Air Cylinder	KSHW0031	1
7.	7/16" Stainless Steel Nut	KSHW0028	2
8.	Loc Ring	RL 27 1/4	2
9.	Clevis Kit	KSAC0025	1
10.	3/16" Clevis Pin	MS20392-2C17	2
11.	Air Cylinder	KSHW0032	1
12.	3/16" Stainless Steel Nut	KSHW0033	2
13.	1/2" Non-Cushioned Tube Clamp	AN742-D8	2
14.	3/16" Bolt	AN3-4A	2
15.	Cylinder Mount Bracket	KPNG0026	1
16.	Pulley Mount Bracket	KPNG0049	2
17.	Small Pulley Cable Keeper	SP-CK	2
18.	Pulley	AN210-2A	1
19.	Small Cotter Pin	MS24665-134	2
20.	Nose Wheel Retracting Cable	KANG0009	1
21.	3/16" Bolt	AN3-6A	1
22.	3/16" Bolt	AN3-12A	2
23.	Shackle	RL-205-T	1
24.	3/16" Tensile Nut	AN365-1032A	1
25.	3/16" Rod End	MM-3	1
26.	Nose Wheel Lock Rod	KANG0010	1

RMS S-12S AIRAILE OPTIONAL VALVE TANK AND COMPRESSOR INSTALLATION



S-12S AIRAILE - OPTIONAL PUDDLE JUMPER FLOATS
VALVE, TANK AND COMPRESSOR INSTALLATION

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	1/4" Shear Nut	AN364-428A	2
2.	1/4" Thick Washer	AN960-416	4
3.	3/16" Bolt	AN3-7A	6
4.	3/16" Thick Washer	AN960-10	18
5.	3/16" Shear Nut	AN364-1032A	9
6.	1/4" Bolt	AN4-14A	2
7.	Air Control Valve	V-88	1
8.	3/16" Bolt	AN3-5A	3
9.	Air Tank	1143	1
10.	1/2" Cushioned Tube Clamp	MS21919-DG8	1
11.	Float - Air Valve Bracket	KPMG0046	1
12.	5/8" Cushioned Tube Clamp	MS21919-DG10	2
13.	Compressor	KSHW0036	1
14.	Compressor Mount Plate	KPAC0078	1
15.	Valve Stem Fitting	KSHW0037	1



MD3548

OPTIONAL VALVE TANK AND COMPRESSOR INSTALLTION

S-12S AIRAILE - OPTIONAL PUDDLE JUMPER FLOATS
RETRACTION SYSTEM SCHEMATIC

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Air Fitting - Male Elbow	KQL-01-32	4
2.	Air Fitting - Male Connector	KQH-01-32	2
3.	Air Fitting - Union Tee	KQT-01-00	4
4.	1/8" Air Line	KSAC0015	33 ft
5.	1/4" Air Line	KSAC0016	50 ft
6.	Air Fitting - Male Elbow	KQL-07-35S	2
7.	Air Fitting - Male Elbow	KQL-01-34S	2
8.	Air Fitting - Male Elbow	KQL-07-34S	8
9.	Air Fitting - Union Tee	KQT-07-00	5
10.	Air Fitting - Male Elbow - Regulated	NAS2211F-N01-07S	2
11.	14 Gauge Eye Terminal, Blue 1/4"	1/4 EYE 14 GA	1
12.	14 Gauge Splice, Butt Connector	IP-7132	5
13.	Air Cylinder *	KSHW0029	0
14.	Air Cylinder *	KSHW0030	0
15.	Air Cylinder **	KSHW0031	0
16.	Air Cylinder **	KSHW0032	0
17.	Pressure Gauge	KSIP0004	1
18.	Switch	MS35058-22	1
19.	Indicator Light	KSIP0005	1
20.	14 Gauge Eye Terminal, Blue 5/32"	KSES0003	2
21.	14 Gauge Eye Terminal, Blue 3/16"	IP-7102	1
22.	14 Gauge, In Line Fuse Holder	KSES0019	1
23.	7.5 AMP Fuse	KSES0020-7.5	1
24.	14 Gauge Red Wire	14 GA WIRE/RED	10 ft
25.	14 Gauge Black Wire	14 GA WIRE/BLACK	2 ft
26.	1/8" Union	3-20320	1

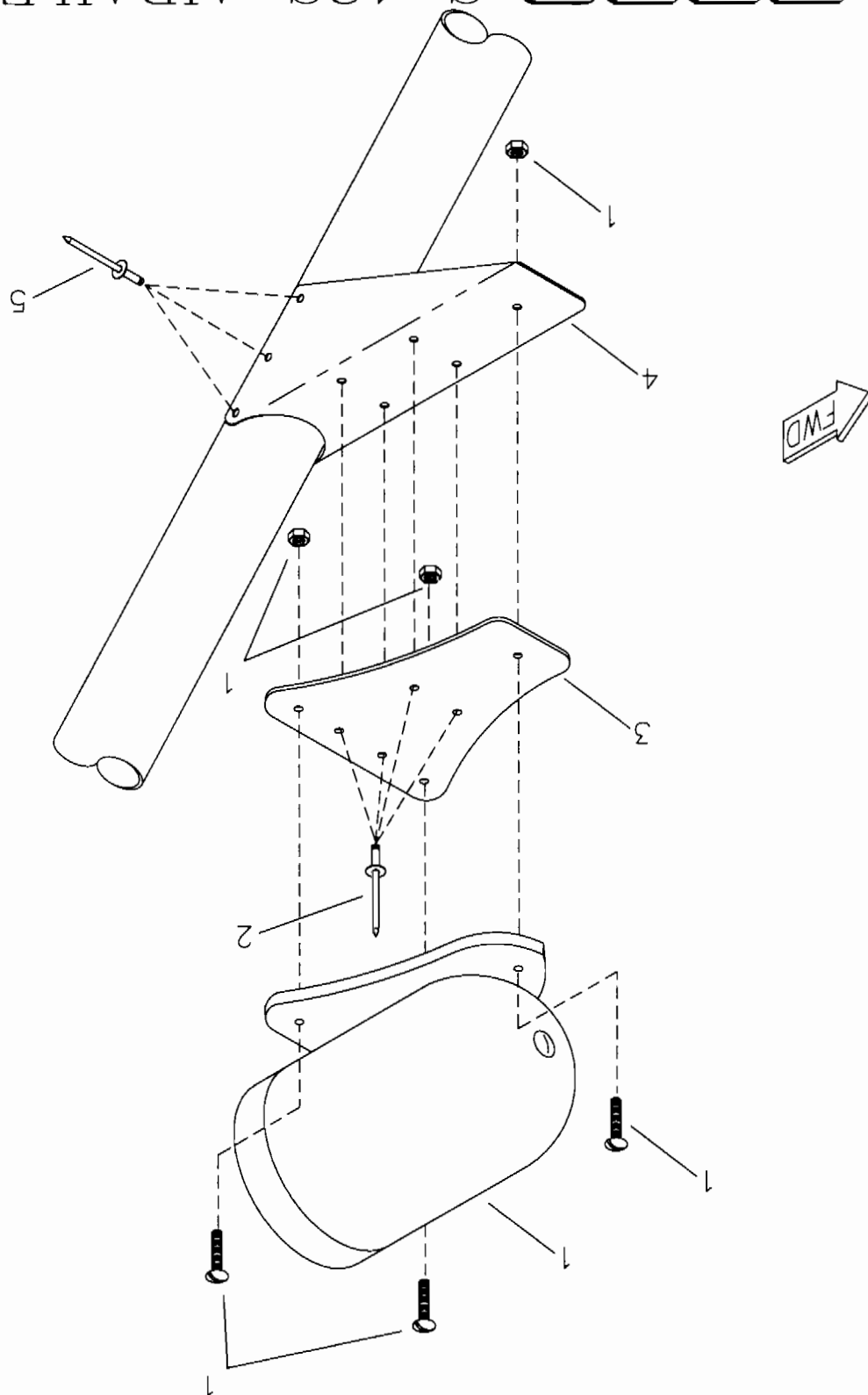
*Referenced from Main Gear Retraction System.

**Referenced from Nose Gear Retraction System.

OPTIONAL COMPASS MOUNT ASSEMBLY

MD3621

RMS S-12S AIRAILE



S-12S AIRAILE - OPTIONAL COMPASS MOUNT ASSEMBLY

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Pedestal Mount Compass & Hardware	KSAV0011	1
2.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-44	4
3.	Compass Mount - Base	KPIP0034	1
4.	Compass Mount	KPIP0033	1
5.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	6