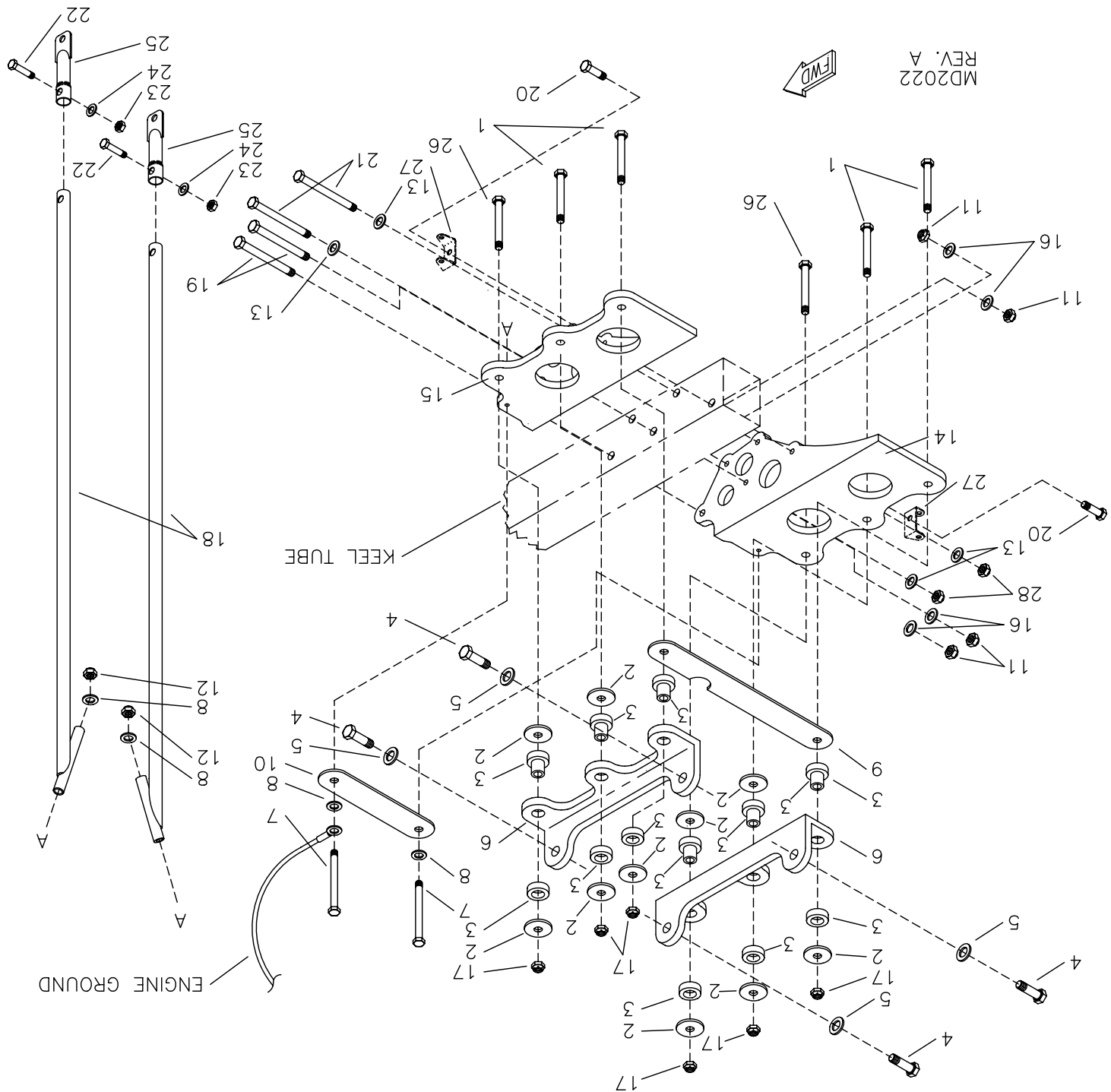


RPMBS S-12XL AIRAILE 912/912S ENGINE MOUNT ASSEMBLY

MD2022
REV. A



S-12XL AIRAILE - 912/912S ENGINE MOUNT ASSEMBLY

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	3/8" Bolt	AN6-23A	4
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.	5/16" Tensile Nut *	AN365-524A	0
12.	1/4" Tensile Nut	AN365-428A	2
13.	1/4" Thick Washer *	AN960-416	0
14.	912 Mount Angle, LH *	KPPW0035-L	0
15.	912 Mount Angle, RH *	KPPW0035-R	0
16.	5/16" Thin Washer *	AN960-516L	0
17.	3/8" Tensile Nut	AN363-624A	6
18.	Torsion Strut	KPPW0044	2
19.	5/16" Bolt *	AN5-32A	0
20.	5/16" Bolt *	AN5-10A	0
21.	1/4" Bolt *	AN4-32A	0
22.	3/16" Bolt	AN3-10A	2
23.	3/16" Shear Nut	AN364-1032A	2
24.	3/16" Thin Washer	AN960-10L	2
25.	Torsion Strut End Fitting	EG-912-TSFF	2
26.	Low Profile Bolt	AN6-23ALP	2
27.	Stainless Steel U Bracket *	SU-118	0
28.	1/4" Shear Nut	AN364-428A	2

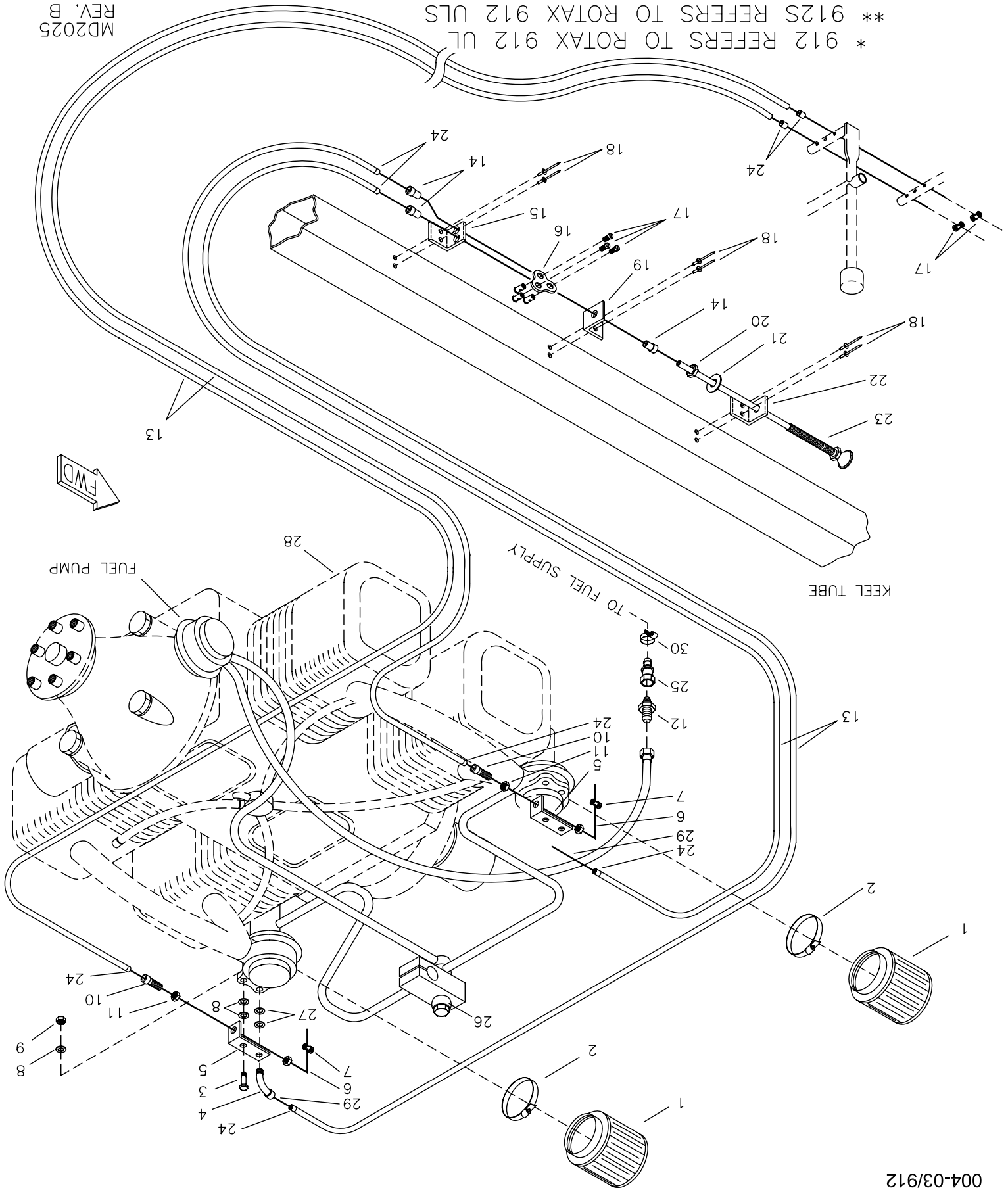
*Referenced from 912 Super Structure.

RRMS S-12XL AIRAILE / 912UL / 912 ULS ENGINE

11/15/2011

MD2025
REV. B

* 912 REFERS TO ROTAX 912 UL
** 912S REFERS TO ROTAX 912 ULS



004-03/912

S-12XL AIRAILE - 912/912S 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	0
3.	3/16" Bolt	AN3-7A	2
4.	Choke Cable Guide **	EG-EG-912-1	0
5.	Throttle Cable Mount, 912, LH	EG-TCM-L	1
5.	Throttle Cable Mount, 912, RH	EG-TCM-R	1
6.	Throttle Cable	EG-CAB-12	2
7.	Wire Stop Screw **	EG-EG-912-2	0
8.	3/16" Thick Washer	AN960-10	6
9.	3/16" Shear Nut	AN364-1032A	2
10.	Throttle Adjust Ferrule **	EG-EG-912-3	0
11.	1/8" Ferrule Nut **	EG-EG-912-4	0
12.	Reducer	AN919-6D	1
13.	Cable Housing	EG-T-CAB-H	28 ft
14.	Cable Conduit Ferrule	2394	3
15.	Double Choke Cable Stop	CK-DCS	1
16.	Choke Mixer Plate	KPPW0076	1
17.	Wire Swivel/Screw Stop	2361	5
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" Hose Fitting	30682-4-4	1
26.	Bushing	BPBK0018	1
27.	1/4" Thick Washer	AN960-416	4
28.	912 Engine ****	EG-EG-912	0
29.	Choke Cable	BC-105	2
30.	Small Hose Clamp	5-6202	1

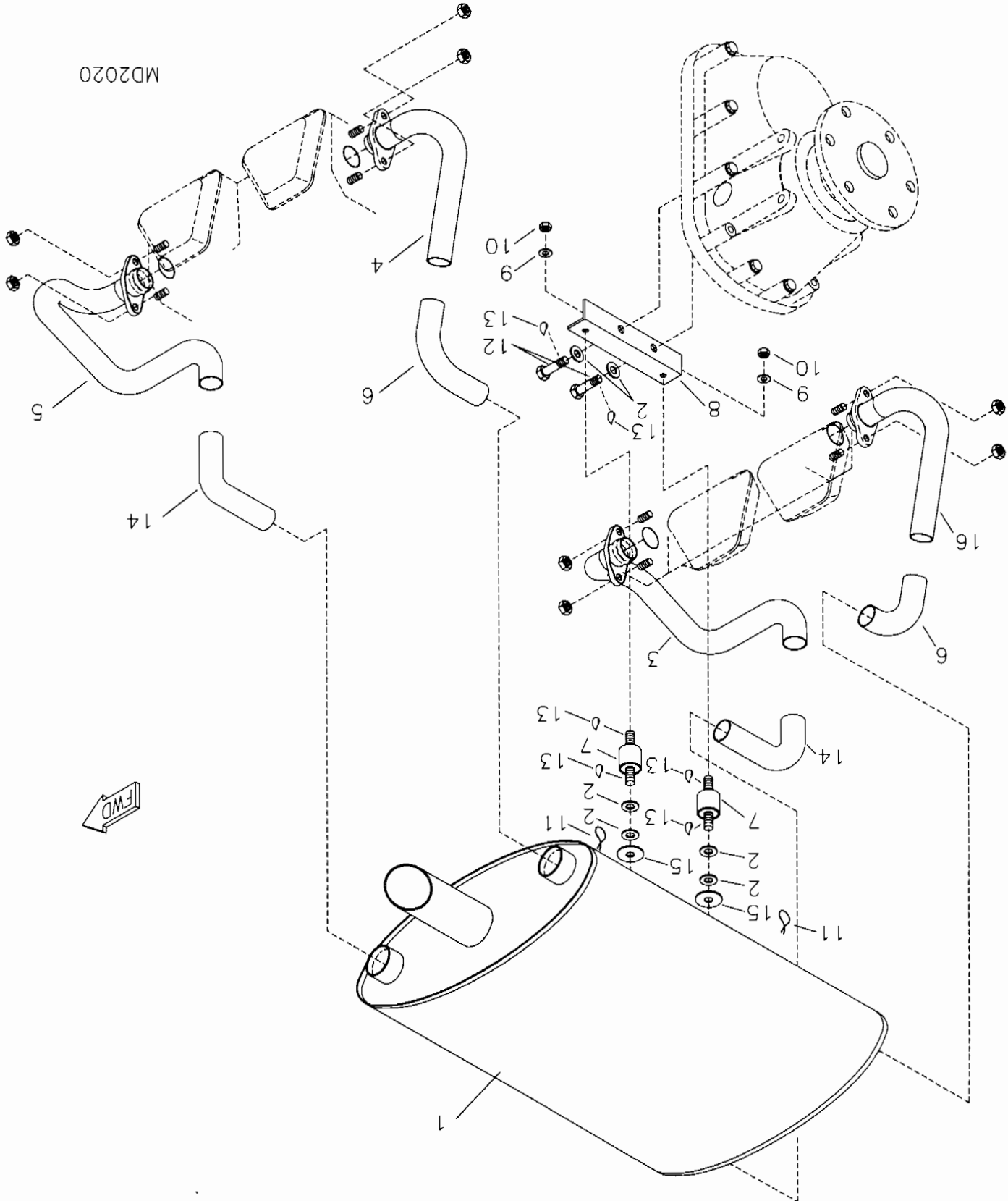
*Supplied with air filter.

**Supplied with engine.

***Supplied with choke assembly

RPM S-12XL AIRAILE EXHAUST ASSEMBLY - 912

MD2020



S-12XL AIRAILE - 912/912S 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, S18 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	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.

RPM9 S-12 AIRALE

Made in the USA

912 FUEL SYSTEM - DUAL WING TANKS

DETAIL:

912 ENGINE, INSTRUMENTATION, AND ELECTRICAL

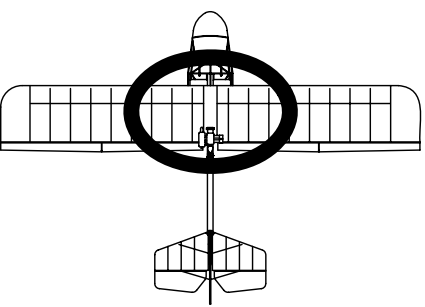
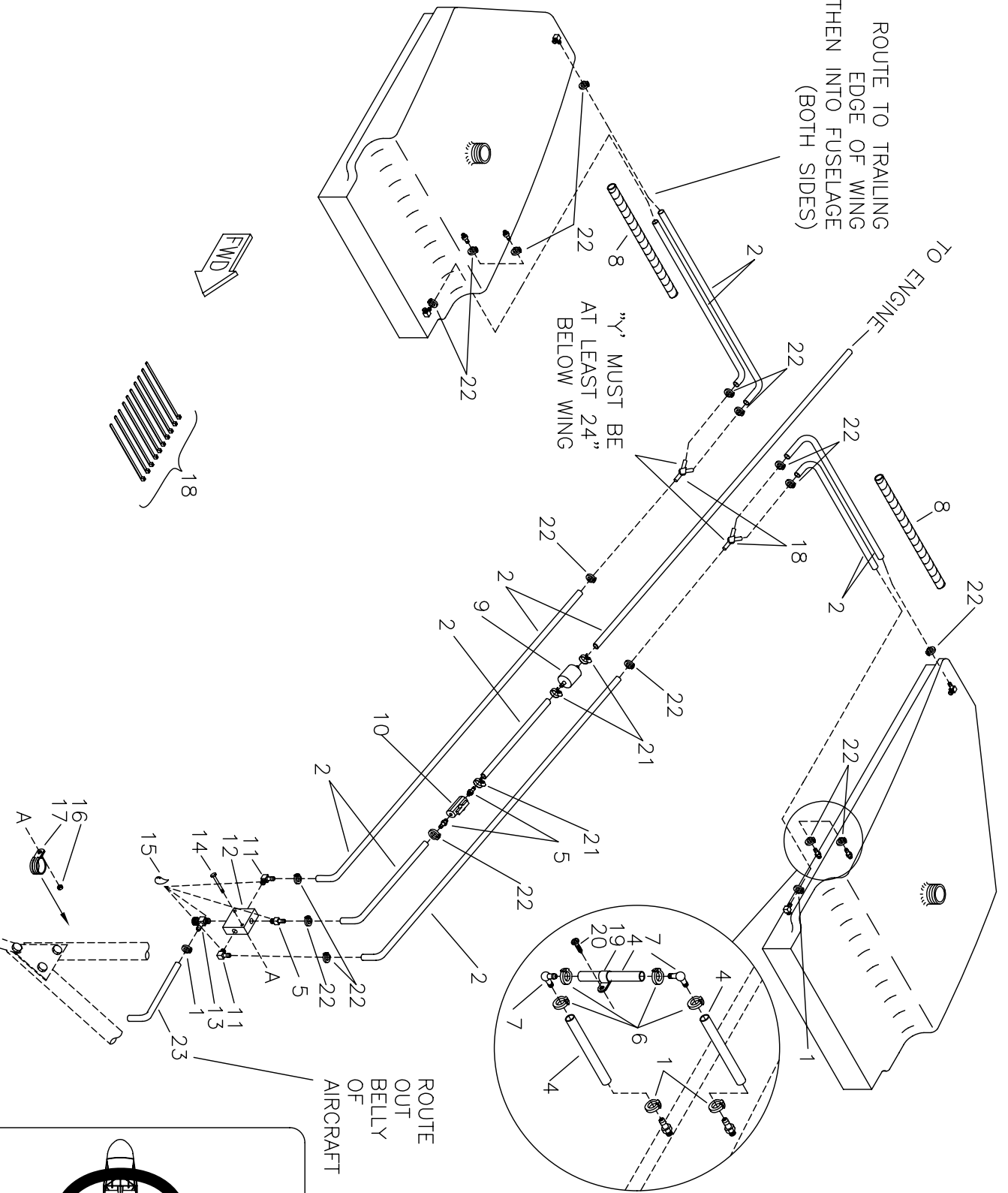
SECTION:

ROUTE TO TRAILING
EDGE OF WING
THEN INTO FUSELAGE
(BOTH SIDES)

"Y" MUST BE
AT LEAST 24"
BELOW WING

ROUTE
OUT
BELLY
OF
AIRCRAFT

FUEL MIXER BLOCK MOUNTS
OUTSIDE LOWER CABANE



S-12XL AIRAILE - 912/912S FUEL SYSTEM**DUAL WING TANKS**

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Line Clamp, 3/8"	FS-LCL 3/8	5
2.	1/4" Black Fuel Line	KSFS0002	50 ft
3.	Zip Ties	ZIP TIES	10
4.	1/4" Clear Fuel Line	KSFS0008	3 ft
5.	Straight Withdrawal Fitting	8330	3
6.	Line Clamp, 5/16" ID	FS-LCL 5/16ID	8
7.	1/4" x 1/4" 90 Fitting	7-11044	2
8.	Coil Wrap	1/2 SPIRAL LOOM	1 ft
9.	Fuel Filter *	-----	0
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.	3/8" Loop Clamp	KSHW0015	2
20.	#6 Small Pan Head Screw	6RX1/2 PHS	2
21.	Small Hose Clamp	5-6202	3
22.	Line Clamp, 1/2"	FS-LCL 1/2	14
23.	1/4" Blue Fuel Line	FS-FL	1 ft

* Refer to ROTAX for recommended part

** Builder Provided

IF NOT INSTALLING OIL COOLER
ROUTE DIRECTLY TO OIL PUMP

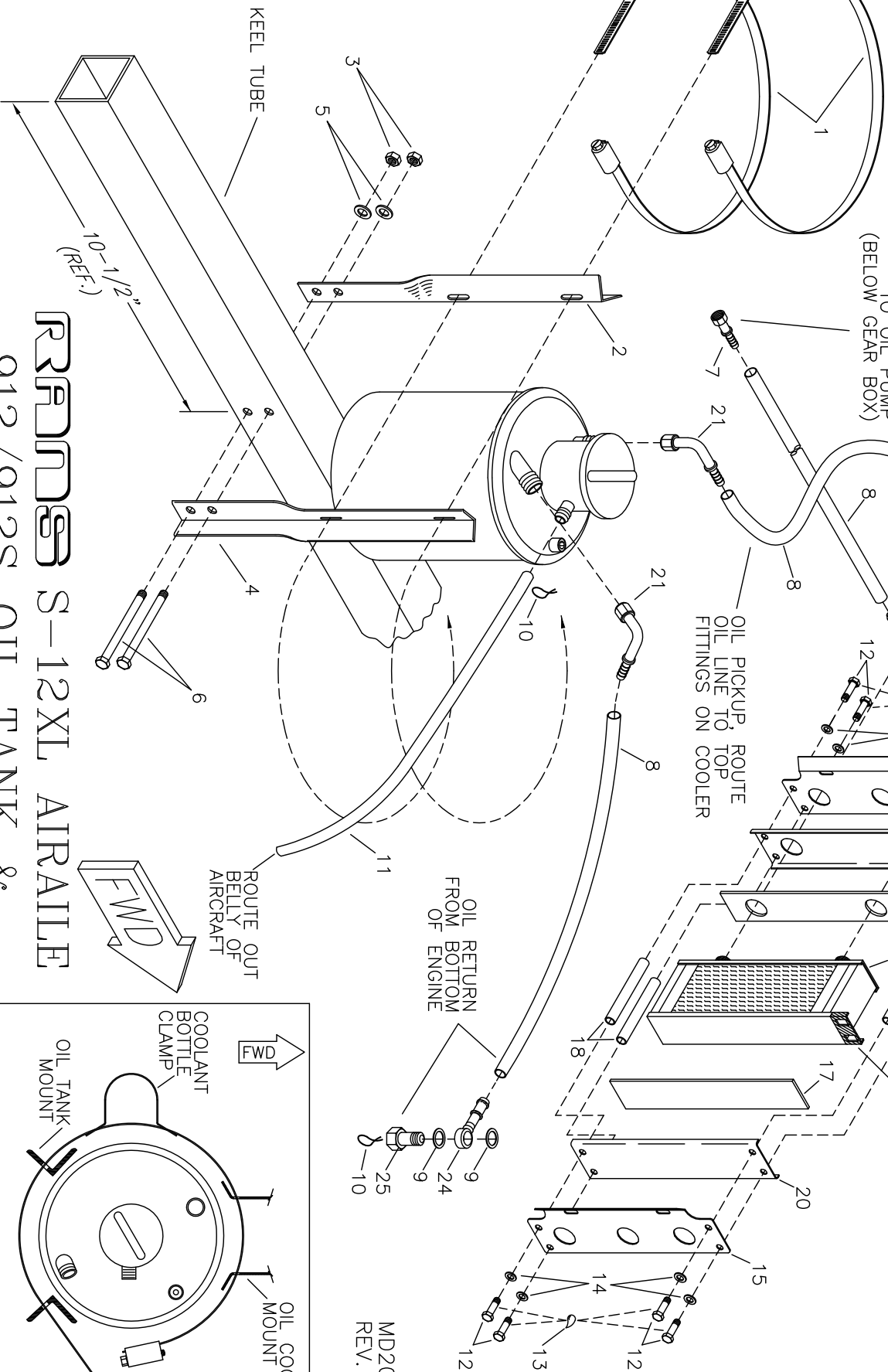
TO OIL PUMP
(BELOW GEAR BOX)

OIL PICKUP, ROUTE
OIL LINE TO TOP
FITTINGS ON COOLER

REMOVE MOUNT TABS
(FOUR PLACES)

OIL RETURN
FROM BOTTOM
OF ENGINE

ROUTE OUT
BELLY OF
AIRCRAFT



RRAND S-12XL AIRRALE

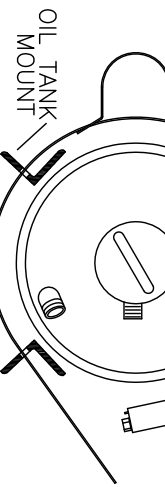
912/912S OIL TANK &

OPTIONAL COOLER INSTALLATION

10-1/2"
(REF.)



COOLANT
BOTTLE
CLAMP



PLACE CLAMPS THROUGH ANGLES AS
SHOWN, TO HOLD OIL TANK

MD2021
REV. B

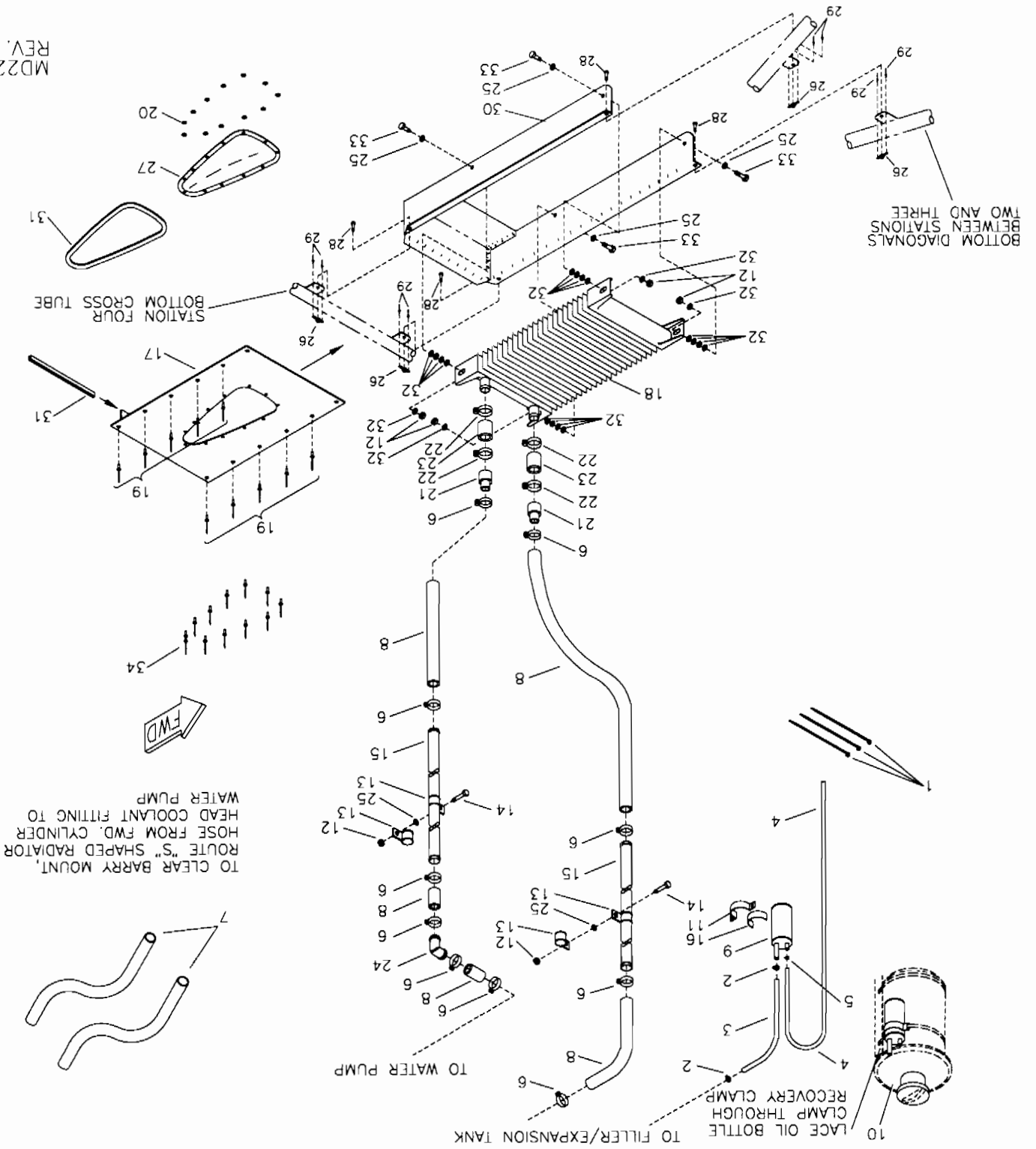
S-12XL AIRAILE - 912/912S OIL TANK & MOUNT**Oil Tank and Optional Cooler Installation**

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Hose Clamp	5-5288	2
2.	Oil Tank Mount, RH	KPPW0047-R	1
3.	3/16" Shear Nut	AN364-1032A	2
4.	Oil Tank Mount, LH	KPPW0047-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	KSPW0080	6 ft
9.	90 Degree Fitting - Long	KSPW0082	1
10.	Safety Wire	-----	0
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	KSPW0083	1
25.	Banjo Bolt - M16 x 1.5 x 28	940-878	1
26.	Gasket Ring - 16 x 22	430-622	2

*Optional.

RRMS S-12 AIRAILE 912 COOLING SYSTEM MINI-POD OR PARTIAL ENCLOSURE

MD2232
REV. A



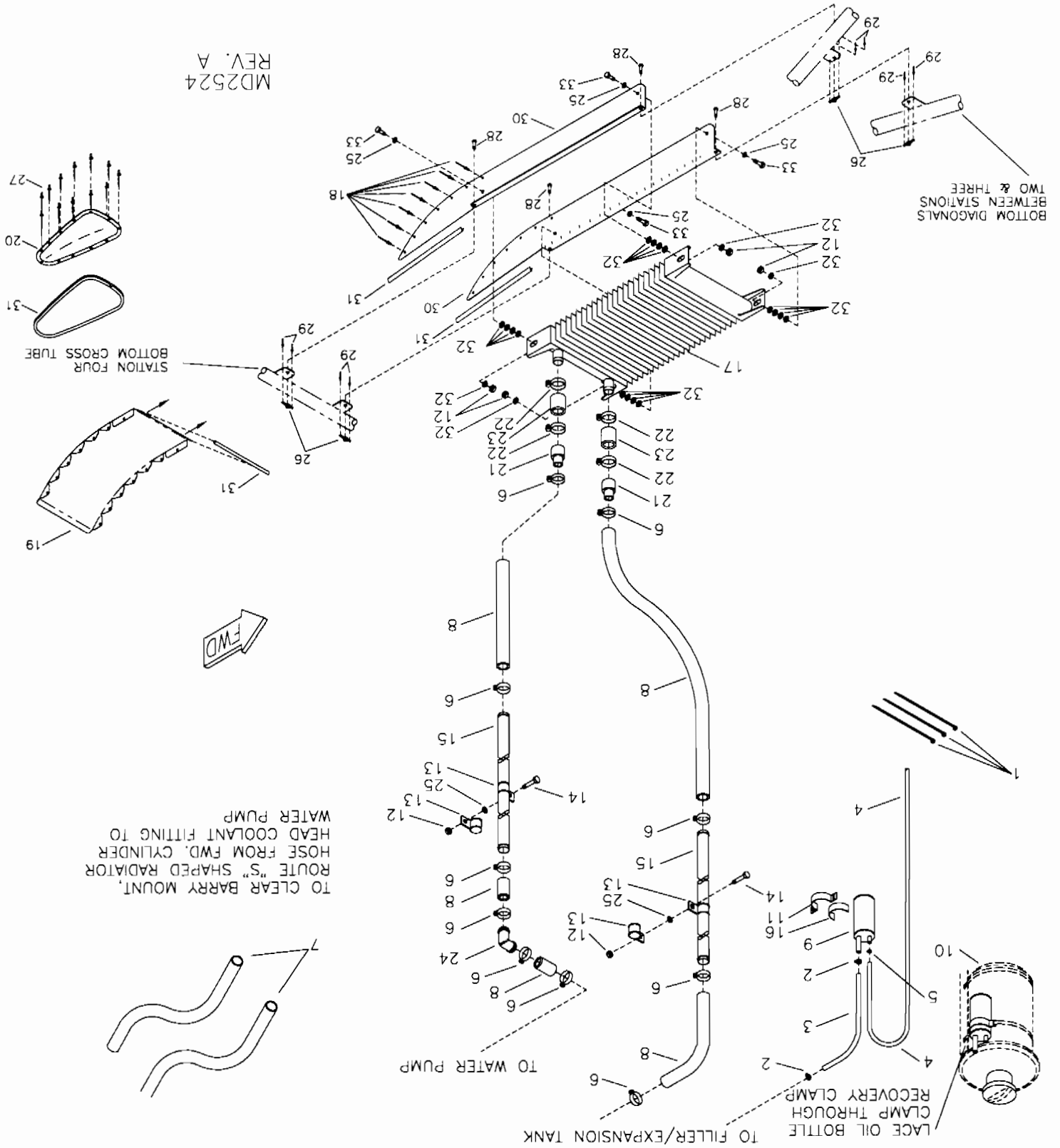
S-12XL AIRAILE - 912 COOLING SYSTEM
MINI-POD OR PARTIAL ENCLOSURE

#	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 *	EG-EG-912-5	1
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 Top Panel	KPPW0048	1
18.	Radiator	EGCS-RAD	1
19.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-41	10
20.	1/8" Small Brass Washer	AN960-B4	12
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.	Radiator/Boom Seal	KPPW0049	1
28.	3/16" Bolt	AN3-4A	4
29.	3/32" Aluminum Pop Rivet	40APR1/8	8
30.	Short Style Cooling Scoop	EGCS-SSCOOP	1
31.	Rubber Edging	X1011	36 in
32.	3/16" Plastic Washer	PW-3	20
33.	3/16" Bolt	AN3-6A	4
34.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	12

*Referenced from 912 engine.

RMS S-12 AIRAILE 912 COOLING SYSTEM FULL ENCLOSURE

MD2524
REV. A



S-12XL AIRAILE - 912 COOLING SYSTEM
FULL ENCLOSURE

#	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 *	EG-EG-912-5	1
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.	Radiator/Boom Seal	KPPW0049	1
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.	1/8" Aluminum Pop Rivet - Cherry Q	AAPQ-42	12
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
32.	3/16" Plastic Washer	PW-3	20
33.	3/16" Bolt	AN3-6A	4

*Referenced from 912 engine.

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

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

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Hour Meter - VDO *	KSPW0022	0
2.	Vertical Speed Indicator - Feet per Minute *	KSAV0008	0
2.	Vertical Speed Indicator - Meters per Second *	KSAV0009	0
3.	Altimeter with Window *	KSAV0002	0
3.	Altimeter with Millibar - Metric *	KSAV0003	0
3.	Altimeter *	KSAV0001	0
4.	Air Speed Indicator, 0-120 *	KSAV0004	0
5.	4 Gauge Eye Cable Terminal	4 GA CABLE LUG	8
6.	Oil Pressure Gauge *	----	0
7.	Oil Temperature Gauge - VDO * **	KSPW0017	0
8.	RPM Gauge - VDO *	KSPW0028	0
9.	Cylinder Head Temperature Gauge * **	KSPW0017	0
12.	4 Gauge Battery Cable, Black Wire	4 GA WIRE/BLACK	16 ft
13.	12 Gauge Wire *	----	0
14.	Line Clamp, 3/8"	FS-LCL 3/8	2
15.	1/4" Blue Fuel Line	FS-FL	8 ft
17.	Solenoid ****	----	0
18.	Regulator/Rectifier ****	----	0
19.	14 Gauge Wire	----	0
20.	Outside Air Temp Gauge Kit - VDO *	KSIP0009	0
21.	Voltmeter - VDO *	KSES0009	0
22.	Battery ***	----	0
23.	Ignition Switch	KSES0027	1
24.	2 Plex 20 Gauge Wire *	----	0
25.	Master Switch *	----	0
26.	1/4" Bolt	AN4-10A	1
27.	1/4" Steel Shear Nut	AN364-428C	1
28.	3/16" Aluminum Pop Rivet - Cherry Q	AAPQ-64	3
29.	3/16" Bolt	AN3-5A	2
30.	3/16" Thin Washer	AN960-10L	2
31.	3/16" Rivet Nut	MS27130-A25K	2
32.	Buss Bar *	AMW 636	0
33.	Hour Meter Relay Assembly	KAES0016	1
34.	Capacitor - 22,000 microFarad / 25V*	IP-7132	0

*Optional or builder supplied **Oil Temperature and CHT use the same type of gauge.

***Referenced from 912 battery box installation.

****Supplied with engine.

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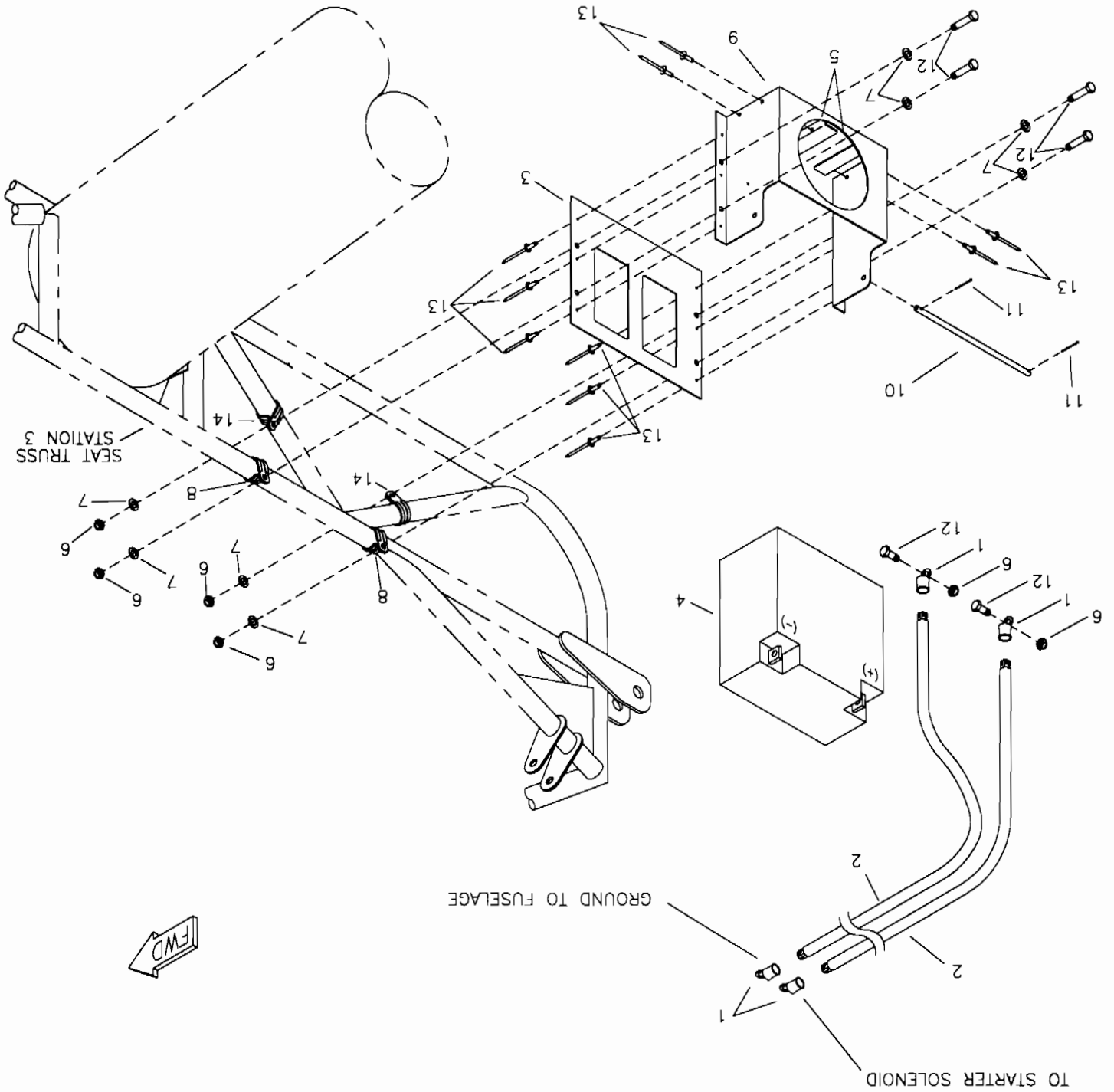
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#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Intentionally Blank	-----	0

RRMS S-12 AIRAILE 912 BATTERY BOX INSTALLATION

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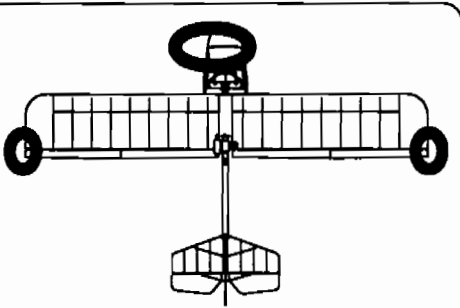
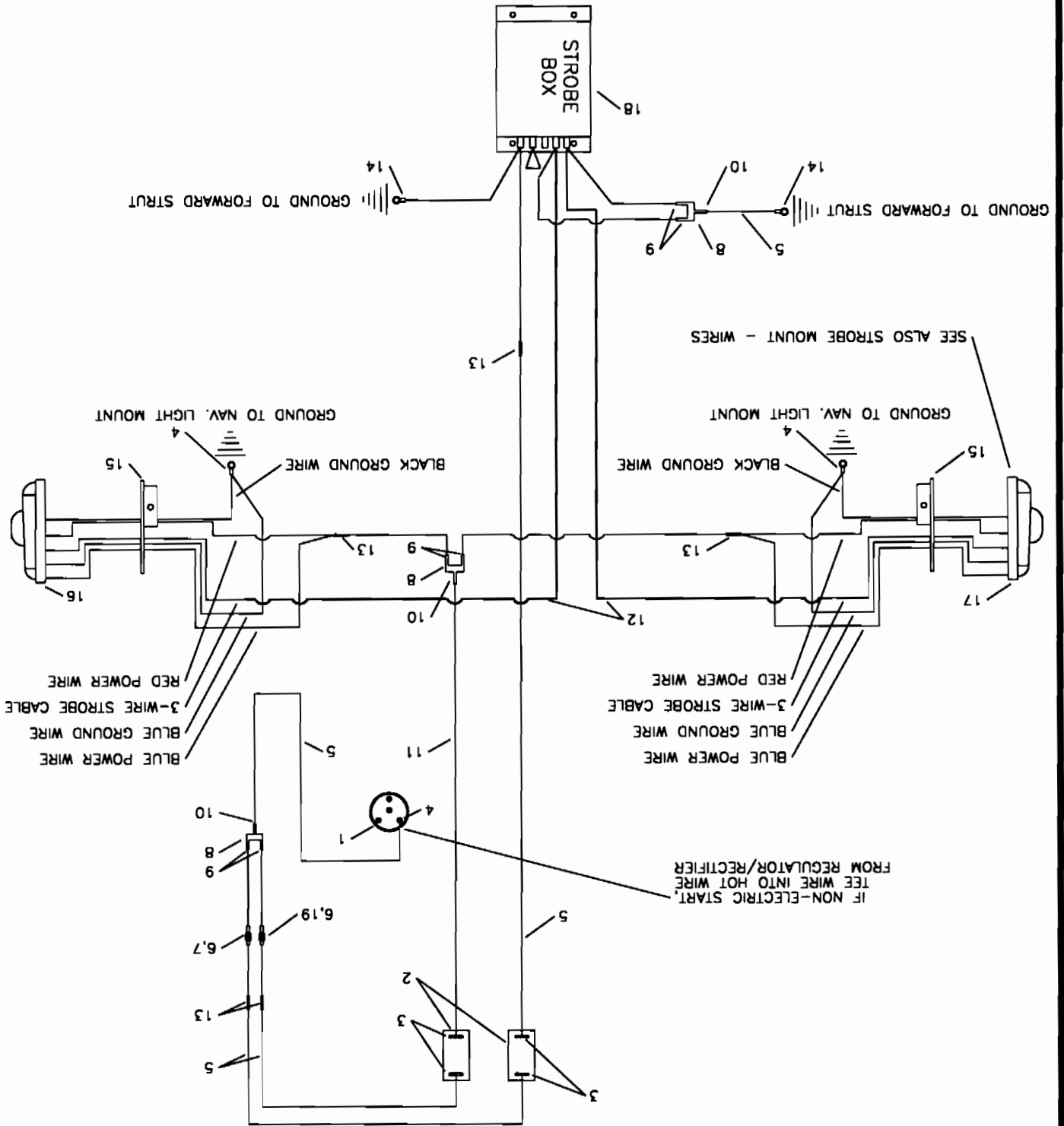
MD2001
REV. A



S-12XL AIRAILE - 912/912S BATTERY BOX INSTALLATION

#	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" Cushioned Tube Clamp	MS21919-DG10	2

*Referenced from 912 Instruments & Electrical.



SECTION: 912 ENGINE, INSTRUMENTATION, AND ELECTRICAL

DETAIL: STROBE SYSTEM SCHEMATIC

S-12XL AIRAILE - 912 STROBE SYSTEM SCHEMATIC

#	DESCRIPTION	PART NUMBER	QUANTITY
1.	Key Start Switch *	25-6	0
2.	Switch	MS35058-22	2
3.	14 Gauge Eye Terminal, Blue 5/32"	KSES0003	4
4.	14 Gauge Eye Terminal, Blue 3/16"	IP-7102	3
5.	14 Gauge Red Wire	14 GA WIRE/RED	8 ft
6.	14 Gauge, In Line Fuse Holder	KSES0019	2
7.	15 AMP Fuse	KSES0020-15	1
8.	Terminal Y Connector, Brass	IP-YC	1
9.	14 Gauge Female Spade Terminal, Blue	IP-7128	6
10.	14 Gauge Male Spade Terminal, Blue	IP-7126	3
11.	14 Gauge Yellow Wire	14 GA WIRE/YELLOW	50 ft
12.	Whelen Installation & Cable	HD-60	1
13.	14 Gauge Splice, Butt Connector	IP-7132	4
14.	14 Gauge Eye Terminal, Blue 1/4"	1/4 EYE 14 GA	2
15.	Navigation Light Tip Mount **	NAV-TIP-MT	0
16.	Whelen Left Strobe Light **	A600-PR	0
17.	Whelen Right Strobe Light **	A600-PG	0
18.	Whelen Strobe Light Power Supply	A413A, HDA-DF	1
19.	10 AMP Fuse	KSES0020-10	1

*Referenced from Instruments & Electrical.

**Referenced from Strobe Mount.