

15

TRAM 800A/SL MODULE PN 411080/411024

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General

Circuit Boards

Details about the circuit boards contained in the Tram 800A/SL are discussed in later chapters arranged by part number.

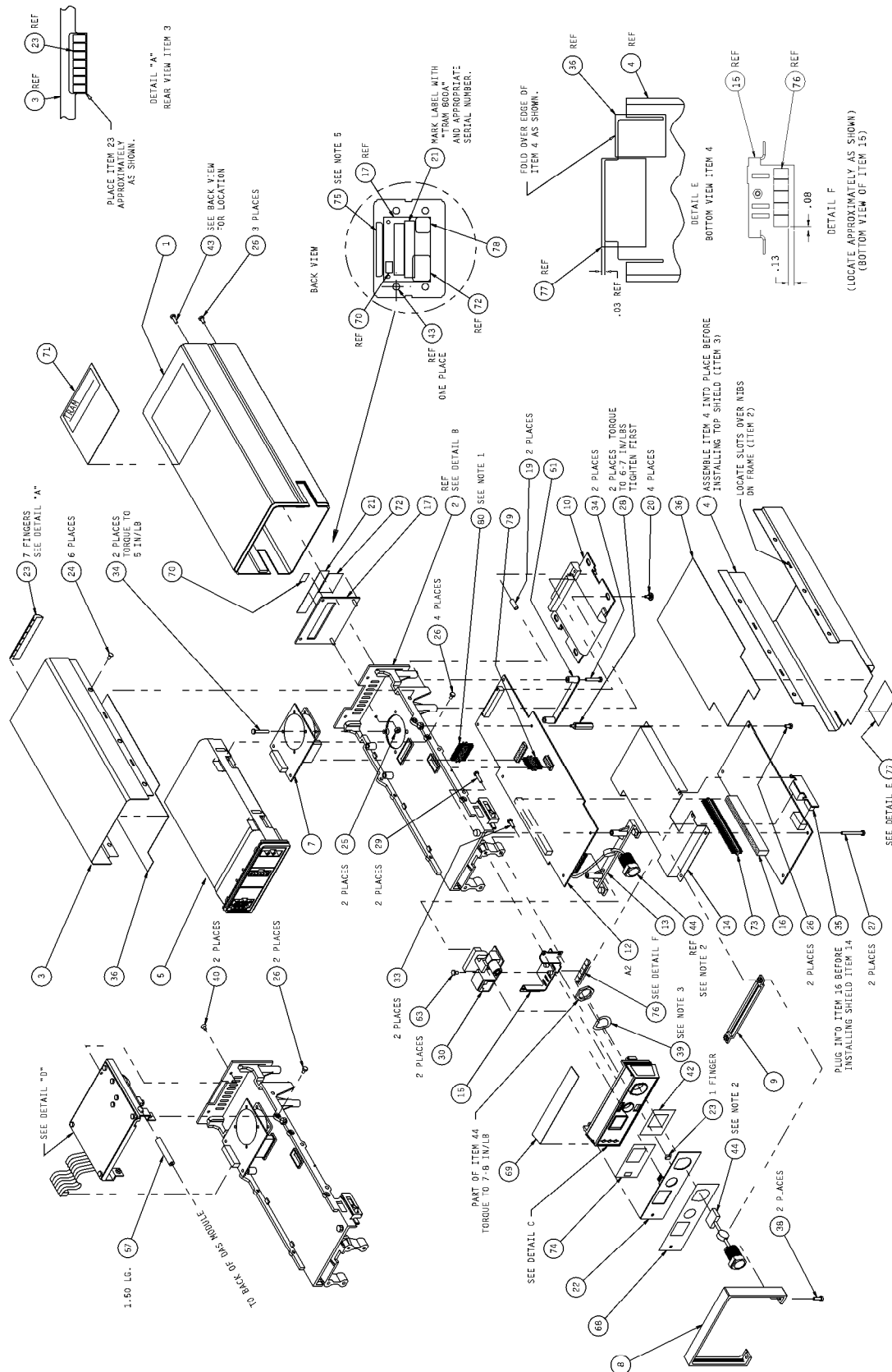
Table 15-1. Circuit Board Overview

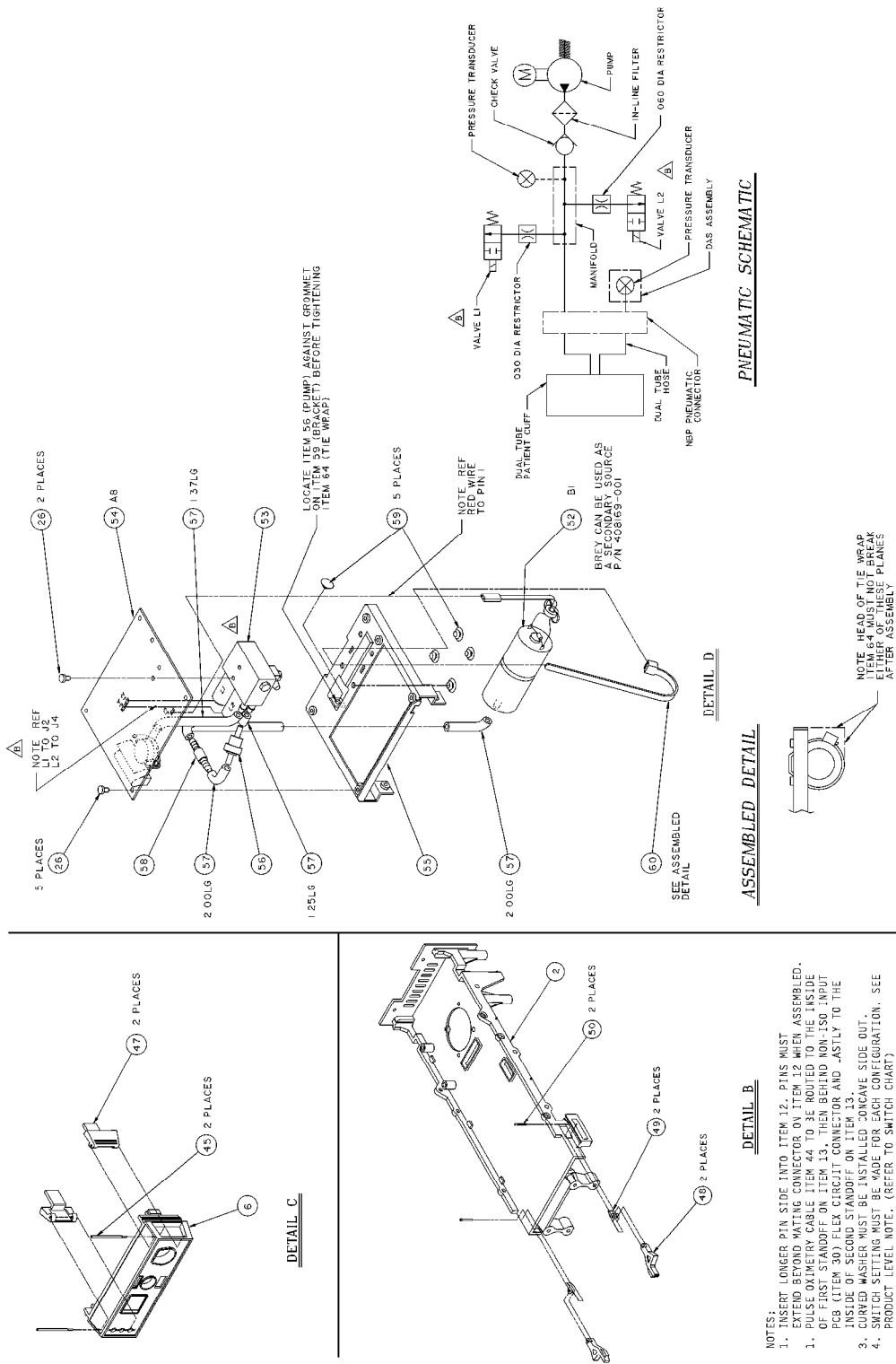
Module Type	Upper Level	Leadwire Configuration	DAS Module	Acquisition Processor PCB	Module Processor PCB
Tram 800A	411080-001A-H	5-Leadwire	411068-001	800330-011	800210-005
Tram 800A	411080-001J	5-Leadwire	417124-001 (Replaced 411068-001)	801040-002	800210-005
Tram 800SL	411024-001A-H	10-Leadwire	411025-001	800330-012	800210-005
Tram 800SL	411024-001J	10-Leadwire	417123-001 (Replaced 411025-001)	801040-001	800210-005

Exploded View

PN 411080-001J

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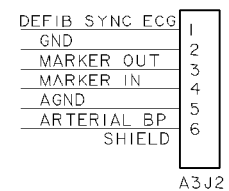
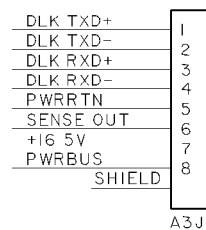
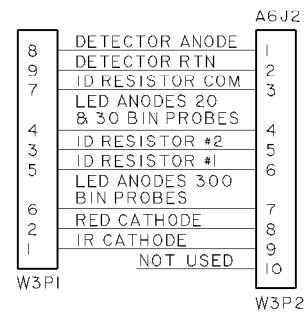
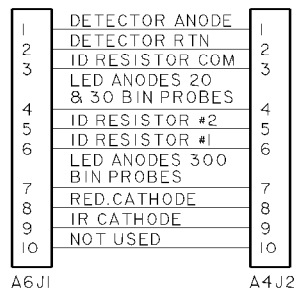
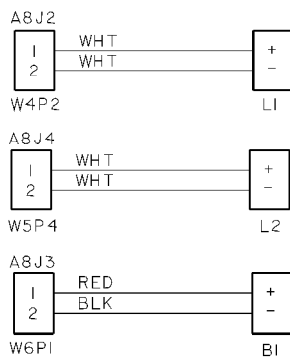
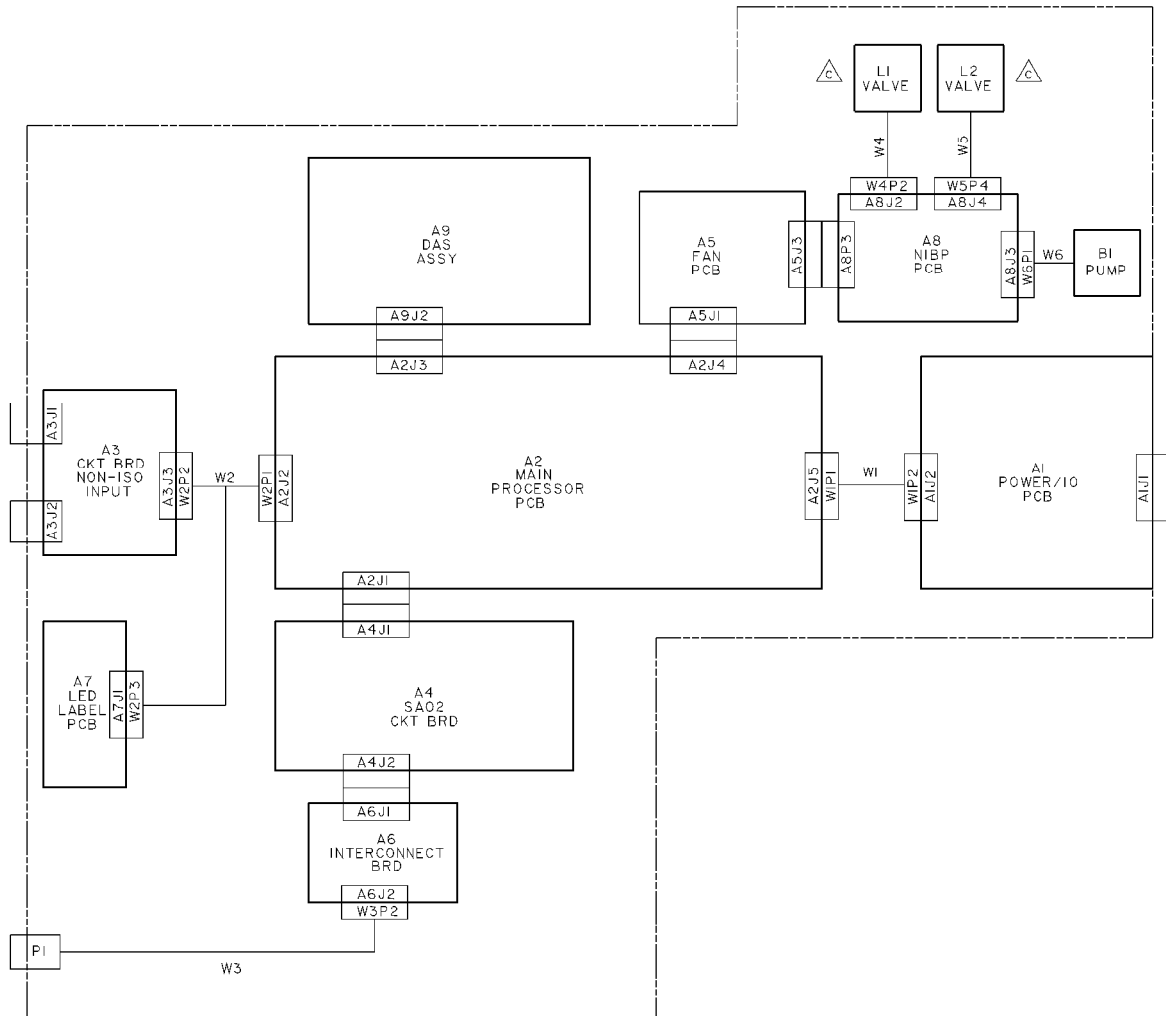




Schematic Diagram

PN 411080-001J

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Parts List

PN 411080-001J

Item	Reference Designation	Parts List	Part Number	Qty
1		Cover, Module	400895-001	1
2		Frame	400982-001	1
3		Shield, Top	401679-001	1
4		Shield, Bottom	401679-002	1
5	A9	800 Acquisition Module, 5-Lead	417124-001	1
6		Front Bezel, Lower	401105-004	1
7	A5	Fan PCB	403549-002	1
8		Trim, Rubber, Front Bezel	404620-001	1
9		Mounting Strap, Trim	404621-001	1
10	A1	Power Supply PCB	401309-002	1
12	A2	Module Processor PCB	800210-005	1
13		Circuit Board/Bezel Mount	404762-001	1
14		Shield, Pulse Oximetry PCB	401680-001	1
15		Plate, Chassis Ground, Bottom/Front	402317-001	1
16	A4	Pulse Oximetry PCB	401189-001	1
17		Plate, Chassis Ground, Rear	404680-002	1
19		Spring, Compression	402315-001	2
20		Screw, Power Supply PCB Mounting, SST, 4-40	402214-001	4
21		Label, Model/Serial Number	404525-006	1
22	A7	Power Indicator PCB	403170-008	1
23		Spring, Chassis Ground, Rear	403741-001	AR
24		Screw, FLH, 100°, Phillips, SST, 4-40 x 3/16	4505-406	6
25		Nut, Hex, 4-40	4521-304	2
26		Screw, BDGH, Phillips, 4-40 x 3/16	45074-406	18
27		Screw, BDGH, Phillips, 4-40 x 1-3/8	45074-438	2
28		Spacer, Male/Female, 4-40 x 0.875	4656-414	2
29		Screw, 4-40 x 7/8	404069-001	2
30	A3	Non-Isolated Input PCB	401315-002	1
31		Carton, Shipping	404211-003	1
32		Foam Insert	404211-004	2
33		Screw, BDGH, Phillips, 4-40 x 5/8	45074-420	2
34		Screw, BDGH, Phillips, 4-40 x 3/4	45074-424	4
35	A6	Interconnect PCB	800006-001	1
36		Insulator, Bottom Shield	404188-001	2
38		Screw, BDGH, Phillips, 4-40 x 3/8	45074-412	2
39		Washer, Pulse Oximetry Connector	4550-250	1
40		Screw, FLH, Phillips, SST, 4-40 x 3/8	4505-412	2
41		Tram 100 - 850 A and SL Modules Service Manual	404422-065	1
42		Adhesive, Diecut, Front Right	415098-001	1
43		Screw, PHD, 4-40 x 0.188, Modified (Determined by Destination)	409009-001	1

Item	Reference Designation	Parts List	Part Number	Qty
43	W3	Screw, PHD, 4-40 x 0.188, (Determined by Destination)	45074-406	1
44		Harness Assembly, SpO2 – w/Choke	700091-004	1
45		Pin, Latch	402806-001	2
46		Spring, Flat, SST	405041-001	2
47		Button, Latch	402106-001	1
48		Latch	401682-001	1
49		Spring, Latch	406019-001	2
50		Pin, Latch	406037-001	2
51	B1 A10 A8	Bracket, Power Supply PCB	406254-001	1
52		Pump Assembly, NBP, w/Harness	408169-002	1
53		NBP Valve Assembly	416153-001	1
54		NBP PCB	800316-002	1
55		Bracket, NBP Mounting	404296-001	1
56		Check Valve, 0.125 ID	404675-001	1
57		Tubing, Silastic	401582-001	AR
58		Filter, 43 Micron	404679-001	1
59		Grommet, 1/4 Dia, 1/8 High, 1/16 Panel Thickness	404749-001	5
60		Tie Wrap	4535-002	1
63		Screw, PNH, Phillips, SST, 4-40 x 3/16	4502-406	2
67		SpO2 Sensor, Adult, Finger, Package of 6	411667-001	1
68		Label, Front, 800SL, English (Determined by Destination)	411043-002	1
68		Label, Front, 800A, German (Determined by Destination)	411043-003	1
68		Label, Front, 800A, French (Determined by Destination)	411043-004	1
68		Label, Front, 800A, Swedish (Determined by Destination)	411043-005	1
68		Label, Front, 800A, Spanish (Determined by Destination)	411043-006	1
68		Label, Front, 800A, Italian (Determined by Destination)	411043-007	1
68		Label, Front, 800A, Dutch (Determined by Destination)	411043-008	1
69		Label, Top, English (Determined by Destination)	411091-009	1
69		Label, Top, German (Determined by Destination)	411091-010	1
69		Label, Top, French (Determined by Destination)	411091-011	1
69		Label, Top, Swedish (Determined by Destination)	411091-012	1
69		Label, Top, Spanish (Determined by Destination)	411091-013	1
69		Label, Top, Italian (Determined by Destination)	411091-014	1
69		Label, Top, Dutch (Determined by Destination)	411091-015	1
70		Label, 60 Hertz (Determined by Destination)	411091-018	1
70		Label, 50 Hertz (Determined by Destination)	411091-019	1
71		Label, Cover, English (Determined by Destination)	411043-016	1

Item	Reference Designation	Parts List	Part Number	Qty
71		Label, Cover, German (Determined by Destination)	411043-020	1
71		Label, Cover, French (Determined by Destination)	411043-021	1
71		Label, Cover, Swedish (Determined by Destination)	411043-022	1
71		Label, Cover, Spanish (Determined by Destination)	411043-023	1
71		Label, Cover, Italian (Determined by Destination)	411043-024	1
71		Label, Cover, International (Determined by Destination)	411043-025	1
72		Label, TUV (Determined by Destination)	408103-003	1
72	P1	Label, UL Listed (Determined by Destination)	408230-002	1
73		Connector, Header, 64-Pin, w/Ferrites	409203-001	1
74		Adhesive, Diecut, Front Left	415098-002	1
76		Spring, Chassis Ground, Small	414610-001	AR
77		Adhesive, Mylar	415316-001	1
78		Label, CE Mark	408230-008	1
79		PC Post, 2 x 7	412062-004	1
80		PC Post, 2 x 11	412062-005	1

Assembly Revisions

PN 411080

The baseline revision for this assembly is pn 411080-001J. To convert the parts list back to a previous revision, change all part numbers, descriptions, and quantities as indicated in the revision tables given below.

PN 411080-001C					
Item	Reference Designation	Description	Revision's Part Number	Baseline Part Number	Qty
5	A9	DAS 800A Module, 10-Lead	411068-001	417124-001	1
11		Label Set, Tram 800A	411043-001	Not Used	1
12		Module Processor PCB	800210-002	800210-005	1
42		Adhesive, Loctite Prism 411	4851-082	415098-001	AR
53	A6	NBP Valve Assembly	413021-001	416153-001	1
54	A8	NBP PCB	800316-001	800316-002	1
63		Screw, Phillips, STT, 4-40 x 3/16	Not Used	4502-406	2
73		Connector, Header 64-pin w/Ferrites	Not Used	409203-001	1
74		Adhesive, Diecut Front Left	Not Used	415098-002	1
76		Spring, Chassis Ground, Small	Not Used	414610-001	AR
77		Adhesive, Mylar	Not Used	415316-001	1
78		Label, CE Mark	Not Used	408230-008	1
79		PC Post, 2 x 7	Not Used	412062-004	1
80		PC Post, 2 x 11	Not Used	412062-005	1

PN 411080-001D					
Item	Reference Designation	Description	Revision's Part Number	Baseline Part Number	Qty
5	A9	DAS 800A Module, 10-Lead	411068-001	417124-001	1
12		Module Processor PCB	800210-002	800210-005	1
42		Adhesive, Loctite Prism 411	4851-082	415098-001	AR
53	A6	NBP Valve Assembly	413021-001	416153-001	1
54	A8	NBP PCB	800316-001	800316-002	1
74		Adhesive, Diecut Front Left	Not Used	415098-002	1
76		Spring, Chassis Ground, Small	Not Used	414610-001	AR
77		Adhesive, Mylar	Not Used	415316-001	1
78		Label, CE Mark	Not Used	408230-008	1
79		PC Post, 2 x 7	Not Used	412062-004	1
80		PC Post, 2 x 11	Not Used	412062-005	1

PN 411080-001E

This revision was a documentation change that does not affect this manual.
Refer to pn 411080-001D for changes to the parts list.

PN 411080-001F

Item	Reference Designation	Description	Revision's Part Number	Baseline Part Number	Qty
5	A9	DAS 800A Module, 10-Lead	411068-001	417124-001	1
12		Module Processor PCB	800210-002	800210-005	1
53	A6	NBP Valve Assembly	413021-001	416153-001	1
54	A8	NBP PCB	800316-001	800316-002	1
76		Spring, Chassis Ground, Small	Not Used	414610-001	AR
77		Adhesive, Mylar	Not Used	415316-001	1
78		Label, CE Mark	Not Used	408230-008	1
79		PC Post, 2 x 7	Not Used	412062-004	1
80		PC Post, 2 x 11	Not Used	412062-005	1

PN 411080-001G

This revision was a documentation change that does not affect this manual.
Refer to pn 411080-001F for changes to the parts list.

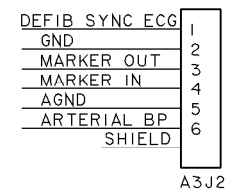
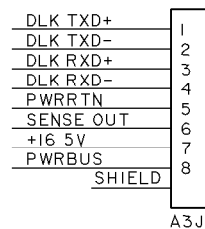
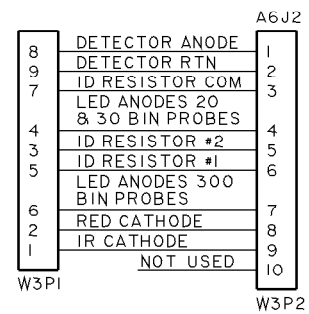
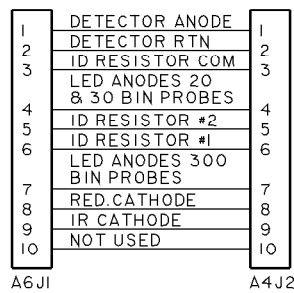
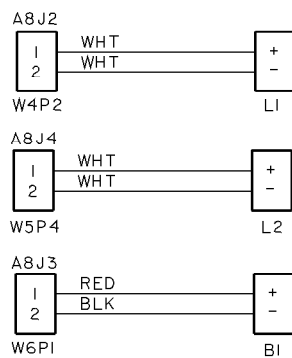
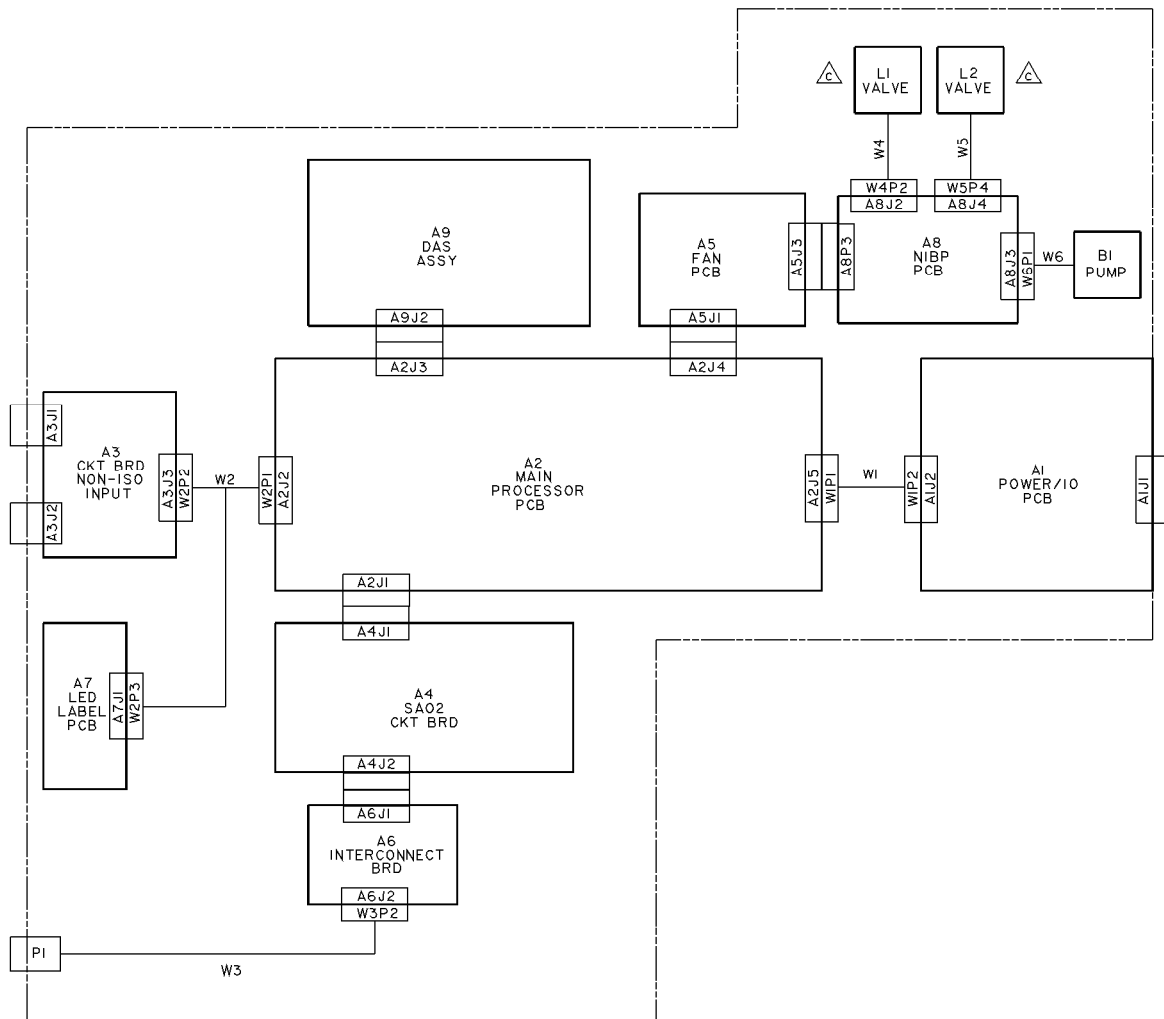
PN 411080-001H

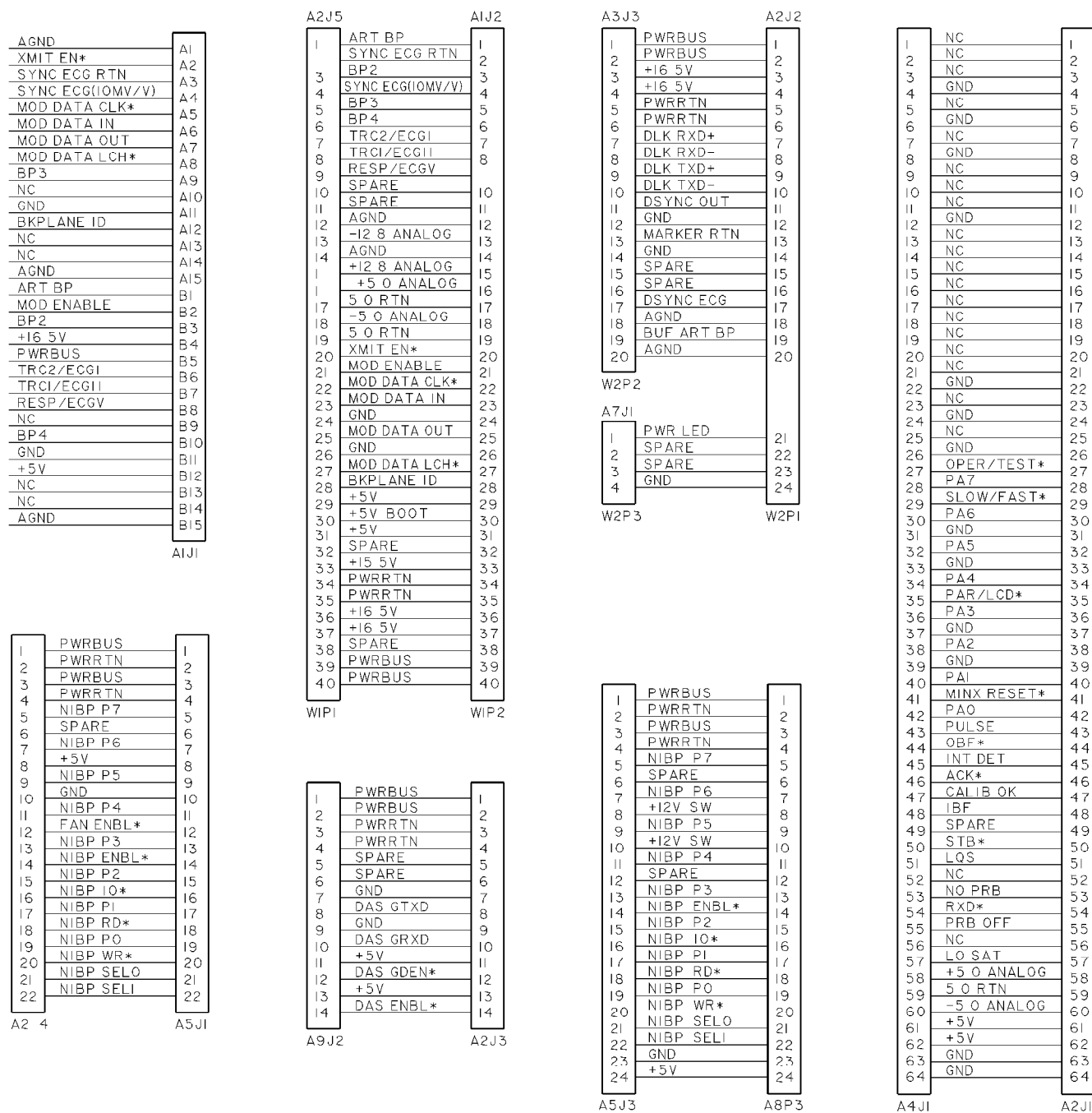
Item	Reference Designation	Description	Revision's Part Number	Baseline Part Number	Qty
5	A9	DAS 800A Module, 10-Lead	411068-001	417124-001	1
53	A6	NBP Valve Assembly	413021-001	416153-001	1
54	A8	NBP PCB	800316-001	800316-002	1

Schematic Diagram

PN 411024-001J

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Parts List

PN 411024-001J

Item	Reference Designation	Parts List	Part Number	Qty
1		Cover, Module	400895-001	1
2		Frame	400982-001	1
3		Shield, Top	401679-001	1
4		Shield, Bottom	401679-002	1
5	A9	800 Acquisition Module, 10-Lead	417123-001	1
6		Front Bezel, Lower	401105-004	1
7	A5	Fan PCB	403549-002	1
8		Trim, Rubber, Front Bezel	404620-001	1
9		Mounting Strap, Trim	404621-001	1
10	A1	Power Supply PCB	401309-002	1
12	A2	Module Processor PCB	800210-005	1
13		Circuit Board/Bezel Mount	404762-001	1
14		Shield, Pulse Oximetry PCB	401680-001	1
15		Plate, Chassis Ground, Bottom/Front	402317-001	1
16	A4	Pulse Oximetry PCB	401189-001	1
17		Plate, Chassis Ground, Rear	404680-002	1
19		Spring, Compression	402315-001	2
20		Screw, Power Supply PCB Mounting, SST, 4-40	402214-001	4
21		Label, Model/Serial Number	404525-006	1
22	A7	Power Indicator PCB	403170-008	1
23		Spring, Chassis Ground, Rear	403741-001	AR
24		Screw, FLH, 100°, Phillips, SST, 4-40 x 3/16	4505-406	6
25		Nut, Hex, 4-40	4521-304	2
26		Screw, BDGH, Phillips, 4-40 x 3/16	45074-406	17
27		Screw, BDGH, Phillips, 4-40 x 1-3/8	45074-438	2
28		Spacer, Male/Female, 4-40 x 0.875	4656-414	2
29		Screw, 4-40 x 7/8	404069-001	2
30	A3	Non-Isolated Input PCB	401315-002	1
31		Carton, Shipping	404211-003	1
32		Foam Insert	404211-004	2
33		Screw, BDGH, Phillips, 4-40 x 5/8	45074-420	2
34		Screw, BDGH, Phillips, 4-40 x 3/4	45074-424	4
35	A6	Interconnect PCB	800006-001	1
36		Insulator, Bottom Shield	404188-001	2
38		Screw, BDGH, Phillips, 4-40 x 3/8	45074-412	2
39		Washer, Pulse Oximetry Connector	4550-250	1
40		Screw, FLH, Phillips, SST, 4-40 x 3/8	4505-412	2
41		Tram 100 - 850 A and SL Modules Service Manual	404422-065	AR
42		Adhesive, Diecut, Front Right	415098-010	1

Item	Reference Designation	Parts List	Part Number	Qty
43		Screw, PHD, 4-40 x 0.188, Modified (Determined by Destination)	409009-001	1
43		Screw, PHD, 4-40 x 0.188, (Determined by Destination)	45074-406	1
44		Harness Assembly, SpO2 – w/Choke	700091-004	1
45		Pin, Latch	402806-001	0
47		Button, Latch	402106-001	2
48		Latch	401682-001	2
49		Spring, Latch	406019-001	2
50		Pin, Latch	406037-001	2
51		Bracket, Power Supply PCB	406254-001	1
52	B1	Pump Assembly, NBP, w/Harness	408169-002	1
53	A10	NBP Valve Assembly	416153-001	1
54	A8	NBP PCB	800316-002	1
55		Bracket, NBP Mounting	404296-001	1
56		Check Valve, 0.125 ID	404675-001	1
57		Tubing, Silastic	401582-001	AR
58		Filter, 43 Micron	404679-001	1
59		Grommet, 1/4 Dia, 1/8 High, 1/16 Panel Thickness	404749-001	5
60		Tie Wrap	4535-002	1
63		Screw, PNH, Phillips, SST, 4-40 x 3/16	4502-406	2
67		SpO2 Sensor, Adult, Finger, Package of 6	411667-001	1
68		Label, Front, 800SL, English (Determined by Destination)	411091-002	1
68		Label, Front, 800SL, German (Determined by Destination)	411091-003	1
68		Label, Front, 800SL, French (Determined by Destination)	411091-004	1
68		Label, Front, 800SL Swedish (Determined by Destination)	411091-005	1
68		Label, Front, 800SL, Spanish (Determined by Destination)	411091-006	1
68		Label, Front, 800SL, Italian (Determined by Destination)	411091-007	1
68		Label, Front, 800SL, Dutch (Determined by Destination)	411091-008	1
69		Label, Top, English (Determined by Destination)	411091-009	1
69		Label, Top, German (Determined by Destination)	411091-010	1
69		Label, Top, French (Determined by Destination)	411091-011	1
69		Label, Top, Swedish (Determined by Destination)	411091-012	1
69		Label, Top, Spanish (Determined by Destination)	411091-013	1
69		Label, Top, Italian (Determined by Destination)	411091-014	1
69		Label, Top, Dutch (Determined by Destination)	411091-015	1
70		Label, 60 Hertz (Determined by Destination)	411091-018	1
70		Label, 50 Hertz (Determined by Destination)	411091-019	1
71		Label, Cover, English (Determined by Destination)	411091-016	1

Item	Reference Designation	Parts List	Part Number	Qty
71		Label, Cover, German (Determined by Destination)	411091-020	1
71		Label, Cover, French (Determined by Destination)	411091-021	1
71		Label, Cover, Swedish (Determined by Destination)	411091-022	1
71		Label, Cover, Spanish (Determined by Destination)	411091-023	1
71		Label, Cover, Italian (Determined by Destination)	411091-024	1
71		Label, Cover, International (Determined by Destination)	411091-025	1
72		Label, TUV (Determined by Destination)	408103-003	1
72	P1	Label, UL Listed (Determined by Destination)	408230-002	1
73		Connector, Header, 64-Pin, w/Ferrites	409203-001	1
74		Adhesive, Diecut, Front Left	415098-002	1
76		Spring, Chassis Ground, Small	414610-001	AR
77		Adhesive, Mylar	415316-001	1
78		Label, CE Mark	408230-008	1
79		PC Post, 2 x 7	412062-004	1
80		PC Post, 2 x 11	412062-005	1

Assembly Revisions

PN 411024

The baseline revision for this assembly is pn 411024-001J. To convert the parts list back to a previous revision, change all part numbers, descriptions, and quantities as indicated in the revision tables given below.

PN 411024-001B					
Item	Reference Designation	Description	Revision's Part Number	Baseline Part Number	Qty
5	A9	DAS 800SL Module, 10-Lead	411025-001	417123-001	1
11		Label Set, Tram 800SL	411091-001	Not Used	1
12		Module Processor PCB	800210-002	800210-005	1
42		Adhesive, Loctite Prism 411	4851-082	415098-001	AR
53	A6	NBP Valve Assembly	413021-001	416153-001	1
54	A8	NBP PCB	800316-001	800316-002	1
63		Screw, Phillips, STT, 4-40 x 3/16	Not Used	4502-406	2
73		Connector, Header 64-pin w/Ferrites	Not Used	409203-001	1
74		Adhesive, Diecut Front Left	Not Used	415098-002	1
76		Spring, Chassis Ground, Small	Not Used	414610-001	AR
77		Adhesive, Mylar	Not Used	415316-001	1
78		Label, CE Mark	Not Used	408230-008	1
79		PC Post, 2 x 7	Not Used	412062-004	1
80		PC Post, 2 x 11	Not Used	412062-005	1

PN 411024-001C					
Item	Reference Designation	Description	Revision's Part Number	Baseline Part Number	Qty
5	A9	DAS 800SL Module, 10-Lead	411025-001	417123-001	1
12		Module Processor PCB	800210-002	800210-005	1
53	A6	NBP Valve Assembly	413021-001	416153-001	1
54	A8	NBP PCB	800316-001	800316-002	1
42		Adhesive, Loctite Prism 411	4851-082	415098-001	AR
74		Adhesive, Diecut Front Left	Not Used	415098-002	1
76		Spring, Chassis Ground, Small	Not Used	414610-001	AR
77		Adhesive, Mylar	Not Used	415316-001	1
78		Label, CE Mark	Not Used	408230-008	1
79		PC Post, 2 x 7	Not Used	412062-004	1
80		PC Post, 2 x 11	Not Used	412062-005	1

PN 411024-001D

This revision was a documentation change that does not affect this manual.
Refer to pn 411024-001C for changes to the parts list.

PN 411024-001E

Item	Reference Designation	Description	Revision's Part Number	Baseline Part Number	Qty
5	A9	DAS 800SL Module, 10-Lead	411025-001	417123-001	1
12		Module Processor PCB	800210-002	800210-005	1
53	A6	NBP Valve Assembly	413021-001	416153-001	1
54	A8	NBP PCB	800316-001	800316-002	1
76		Spring, Chassis Ground, Small	Not Used	414610-001	AR
77		Adhesive, Mylar	Not Used	415316-001	1
78		Label, CE Mark	Not Used	408230-008	1
79		PC Post, 2 x 7	Not Used	412062-004	1
80		PC Post, 2 x 11	Not Used	412062-005	1

PN 411024-001F

This revision was a documentation change that does not affect this manual.
Refer to pn 411024-001E for changes to the parts list.

PN 411024-001G

Item	Reference Designation	Description	Revision's Part Number	Baseline Part Number	Qty
5	A9	DAS 800SL Module, 10-Lead	411025-001	417123-001	1
53	A6	NBP Valve Assembly	413021-001	416153-001	1
54	A8	NBP PCB	800316-001	800316-002	1

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Item	Reference Designation	Description	Revision's Part Number	Baseline Part Number	Qty
5	A9	DAS 800SL Module, 10-Lead	411025-001	417123-001	1
54	A8	NBP PCB	800316-001	800316-002	1