VS redlines (Attachment 1)

The Boeing Company
Space Exploration

ENGINEERING ORDER

EAS

MODEL	EFFECT ON	AUTHORITY	PARTS MADE	SHEET 1 OF 2
MV0072A	RELEASE TO FILES	MCR: 8853 PCI SPC WBS 2.2.1.1	☐ MAY BE RWKD NOTED ☐	VS72-200214 / B / 01 DOCUMENT NUMBER / REV / SEQ

SUBJECT: CHANGE

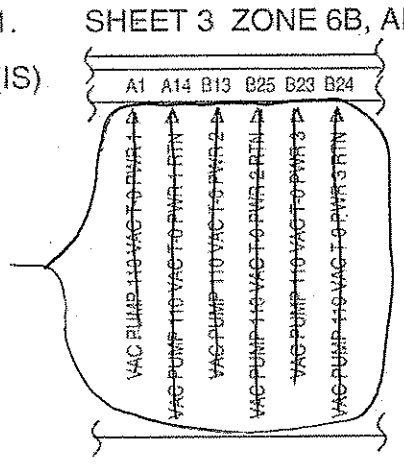
EO BY & DATE ZIP HZ1-10
Yvonne Jaurigue 02/26/10
DEPT/ORG EXT
AE-H4-R300 281-853-1519
DESIGN SUPRVSR DATE
O'NEILL, J.(OJ08) 03/01/10
DEPT/ORG AE-H4-R300
CHECK/PEER REVIEW
IRVIN, D.(ID01) 03/01/10
STRESS
NOT REQUIRED
M&PE
NOT REQUIRED
THERMAL ANLYS
NOT REQUIRED
MANUFACTURING
NOT REQUIRED
MASS PROPERTIES
NOT REQUIRED
PROJECT ENGR
REICHERT, L.(RL14) 03/01/10

RELEASE STAMP
2010 MAR -1 PM 2:34
RELEASED

~~REVISE INTEGRATED SCHEMATIC AS FOLLOWS:~~

1. SHEET 3 ZONE 6B, ADD SAFETY CRITICAL MARKING TO THE FOLLOWING PINS

(IS)



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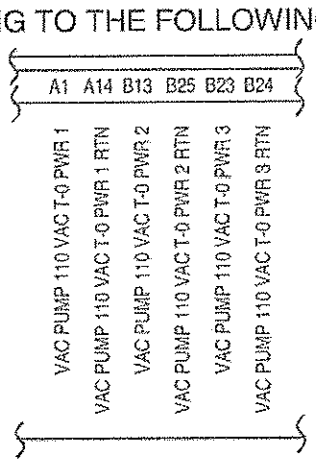
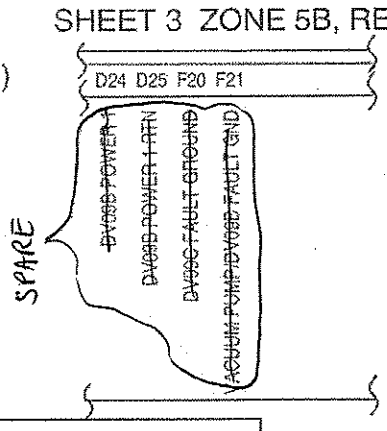


2. SHEET 3 ZONE 5B, REVISE THE FOLLOWING AMS-02 NOMENCLATURES

(IS)



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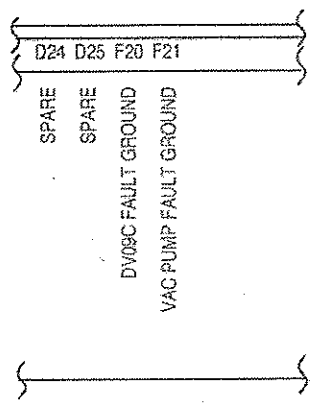


CHS

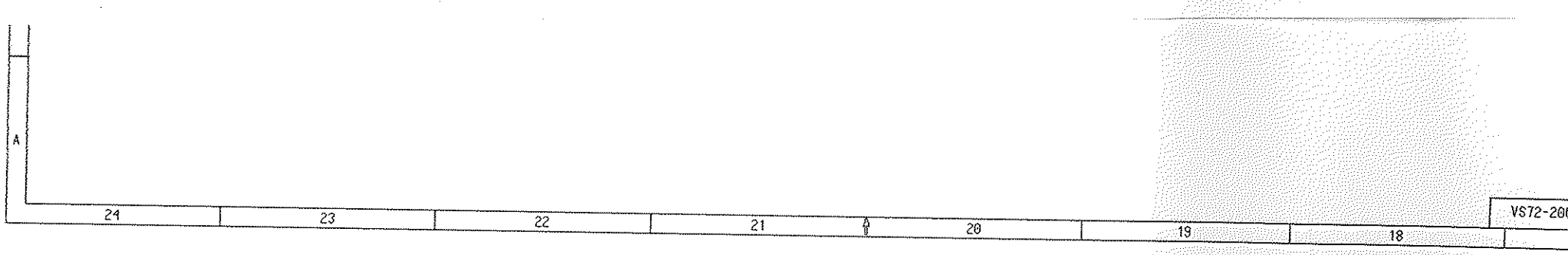
EOCN: ~~155549~~

MAC PAC	LINE CHANGE POINT	CONFIG VERIFICATION
☐ NOT REQD REQD ☐	☐ YES NO ☐ B ☐ D ☐	☐ NOT REQD REQD ☐

REF DOCUMENTS 08853, CCP# 10242, 10246, 10247, 10248

REASONS INCORPORATE CHANGES PER APPROVED PIRN A05815 (ELC-3), A05826 (AMS-02), A05828 (AMS-02), A05834 (ELC-3) — STS-134

FORM M153-K-10 REV 11-90 (EO_SEQUENCE.PPT REV 01-01)



VS Sheet 1

NO.

VPU PATCHING
LTVCU & AUDIO CONN I/F PANEL) (ALL VEHICLES)
- P101, P311 AND P1413 I/F

ODS PRIMARY C/L CAMERA

ODS SECONDARY C/L CAMERA

SPARE
- MDM PF2 (SIO'S)

PU
- J110 (WVS)
- J201 (ODS PRI C/L CAM I/F)
- J202 (ODS SEC C/L CAM I/F)

M PF1 (SPARES) (ALL VEHICLES)
- P311, P329, P331, P1315
- Xo603 J1311, J1313, J1315, J1319 I/F
- Xo603 J1325, J1329, J1331 AND J1337 I/F

SS (ALL VEHICLES)
- SPASP
- OBSS SWITCH CMDS/POWER SOURCE
- RSC CAM VIDEO TO WIB
- OPP (J1, J2, & J105)

- J1 (PWR)
- J108 (VIDEO)

- GMT 7

E T-0 UMBILICALS (ALL VEHICLES)
- J55, J58, J59, J67, AND J69 I/F

ALL VEHICLES)
J3, J4, J5, J6 (MUX)
J1, J2, J3 (DTV CONTAINER)

INTERFACE

CAUTION & WARNING ELECT

BC-LCS & 28 VDC LORI - OBSS (ALL VEHICLES)

OBSS/RSC CAMERA INTERFACE

PU
- J108 (VIDEO, SYNC)

MS SPEE
- J410, J402

F6 (ALL VEHICLES)

3 CONNECTOR (SPARES)

1 CONNECTOR (SPARES)

IRES (ALL VEHICLES)

DP J12, J14 AND J36 I/F

DP J1317 AND J1319 I/F

603 J1304, J1306, J1317 AND J1319 I/F

RES (ALL VEHICLES)

DP J48, J57 AND J59 I/F

P J28 I/F

P J51 I/F

2 (ALL VEHICLES)

M AVIONICS BOX

3 (ALL VEHICLES)

(PDI AND PDSC)

C AND PDIP2 (J101)

ES

3 J1301 AND J1305

E2 AND E3

SHEET NO.

32 MISC INTERFACES (OV-103 AND OV-104)
- DATA BUS COUPLERS
- PANEL A1A2 AND A1A3
- NSP 1 AND 2
- PANEL C3A5
- PANEL R12A2
- LCA 2 AND 3

33 MISC INTERFACES (OV-105)
- DATA BUS COUPLERS
- PANEL A1A2 AND A1A3
- NSP 1 AND 2
- PANEL C3A5
- PANEL R12A2
- LCA 2 AND 3

34 ISS-ULF6 (OV-103)
- ODS X1, X2 CONN MATE VERIFICATION
- X3, X4 (SPARE)
- MDM PF1 AND PF2
  - Xo603 J1308 AND J1328 I/F

35 ISS-ULF6 (OV-104)
- ODS X1, X2 CONN MATE VERIFICATION
- X3, X4 (SPARE)
- MDM PF1 AND PF2
  - Xo603 J1308 AND J1328 I/F

36 ISS-ULF6 (OV-105)
- ODS X1, X2 CONN MATE VERIFICATION
- X3, X4 (SPARE)
- MDM PF1 AND PF2
  - Xo603 J1308 AND J1328 I/F

37 MDM PF2 (ALL VEHICLES)
- SPARES
  - Xo603 J1312 AND J1316 I/F

38 MDM PF1 AND MDM PF2 (OV-103 & OV-105)

SPARES
- Xo603 J1314, J1318, J1320, J1322

MDCA #3

39 APCU1 AND APCU2 (OV-104)
- J2

MDM PF1 AND MDM PF2

SPARES
- Xo603 J1318, J1320, J1322 I/F

40 OPTIONAL SERVICES (ALL VEHICLES)
- MDM PF1 (SIO)
- MTU (1024 KHZ)
- MMU 1 (RCD B)
- NSP 1 AND 2

41 AMS-02 T-0 UMBILICAL J59

AMS-02 (RS-422)

PDIP1 (PS)
- J101, J105

PDIP2 (PS)
- J105

ROEU I/F
- J5

STORRM (RS-422)

SHEET NO.

42 ISS-ULF6 (OV-103)
- PTU 1 APCU MEASUREMENTS
- PTU 2 APCU MEASUREMENTS
  - X3 (PASSIVE MECH)
  - X4 (PASSIVE MECH)

43 ISS-ULF6 (OV-104)
- X3 (PASSIVE MECH)
- X4 (PASSIVE MECH)

44 ISS-ULF6 (OV-105)
- PTU 1 APCU MEASUREMENTS
- PTU 2 APCU MEASUREMENTS
  - X3 (PASSIVE MECH)
  - X4 (PASSIVE MECH)

45 SPARE WIRES (OV-103)
- MSDP J38 I/F
- MSDP J24 I/F
  - Xo603 J1308 AND J1318 I/F

46 SPARE WIRES (OV-104)
- MSDP J38 I/F
- MSDP J24 I/F
  - Xo603 J1308, J1318 AND J1328 I/F

47 SPARE WIRES (OV-105)
- MSDP J38 I/F
- MSDP J24 I/F
  - Xo603 J1308, J1318 AND J1328 I/F

48 ROEU I/F
- J1, J2, J3

PPSU - ELC3
- HEATERS

49 ELC3
- LATCHES
- CONNECTOR MATE
- ROEU I/F

50 ELC3 - ROEU I/F
- SPARES

51 AMS-02 - ROEU I/F
- LATCHES
- CONNECTOR MATE

52 AMS-02 - ROEU I/F
- SPARES
- J7

AMS-02 ~~BAROSWITCH ELECTRONIC~~

53 AMS-02 ~~BAROSWITCH ELECTRONIC~~

ROEU I/F
- J6

STANDARD SERVICES (ALL VEHICLES)
- RF (P303 I/F)
- MDM PF1 J2, J4 AND J8 I/F
- Xo603 J1303, J1309, J1327 AND J1337

54 FOR REFERENCE ONLY

STORRM INTERCONNECT CABLING
- STORRM AVIONICS BOX
- STORRM SENSOR BOX

41 57. SIGNALS ACTUALLY WIRED TO TWO DUAL INPUT RS-422 CARDS

40 56. AMS-02 SAFETY CRITICAL SIGNAL ROUTED TO RETURN, MAKING IT SAFETY CRITICAL. RESERVED

39 55. THIS HARNESS IS BEING USED AS AN "EO" EHC FUNCTION AND IS ACCEPTABLE TO BE ROUTED WITH "HO" HARNESSES.

38 54. ORBITER CABLES INSTALLED BY SHUTTLE CARGO INTEGRATION TECH ORDER.

37 53. PAYLOAD PROVIDED CABLE, INSTALLED BY SHUTTLE CARGO INTEGRATION TECH ORDER.

36 52. REFERENCE ICD-A-21587-AMS-02 TABLE 13.9.2.1-1 AND 13.9.2.1-2

35 51. PAYLOAD PROVIDED CABLE FOR ON-ORBIT CONFIGURATION ONLY AND CONNECTS TO OCA CABLE SED1610342-301.

34 50. PAYLOAD PROVIDED CABLE SED39136112-302 INSTALLED FOR PRELAUNCH CONFIGURATION AT J105 AND J101. PAYLOAD PROVIDED DDRS AND CABLE SED39136111-301 INSTALLED ON-ORBIT AT J195.

33 49. IF ON APCU FLIGHT AND THEY ARE INTERCONNECTED, THE P/L BAY TECH ORDER FOR THAT FLIGHT INSTALLS CABLE. IF PTUS ARE INTERCONNECTED, THEN JUMPER CABLE WILL BE INSTALLED BY ORBITER TECH ORDER M072-794090. CABLE P/N IS 1F67745-1 AND REF DES IS W8080.

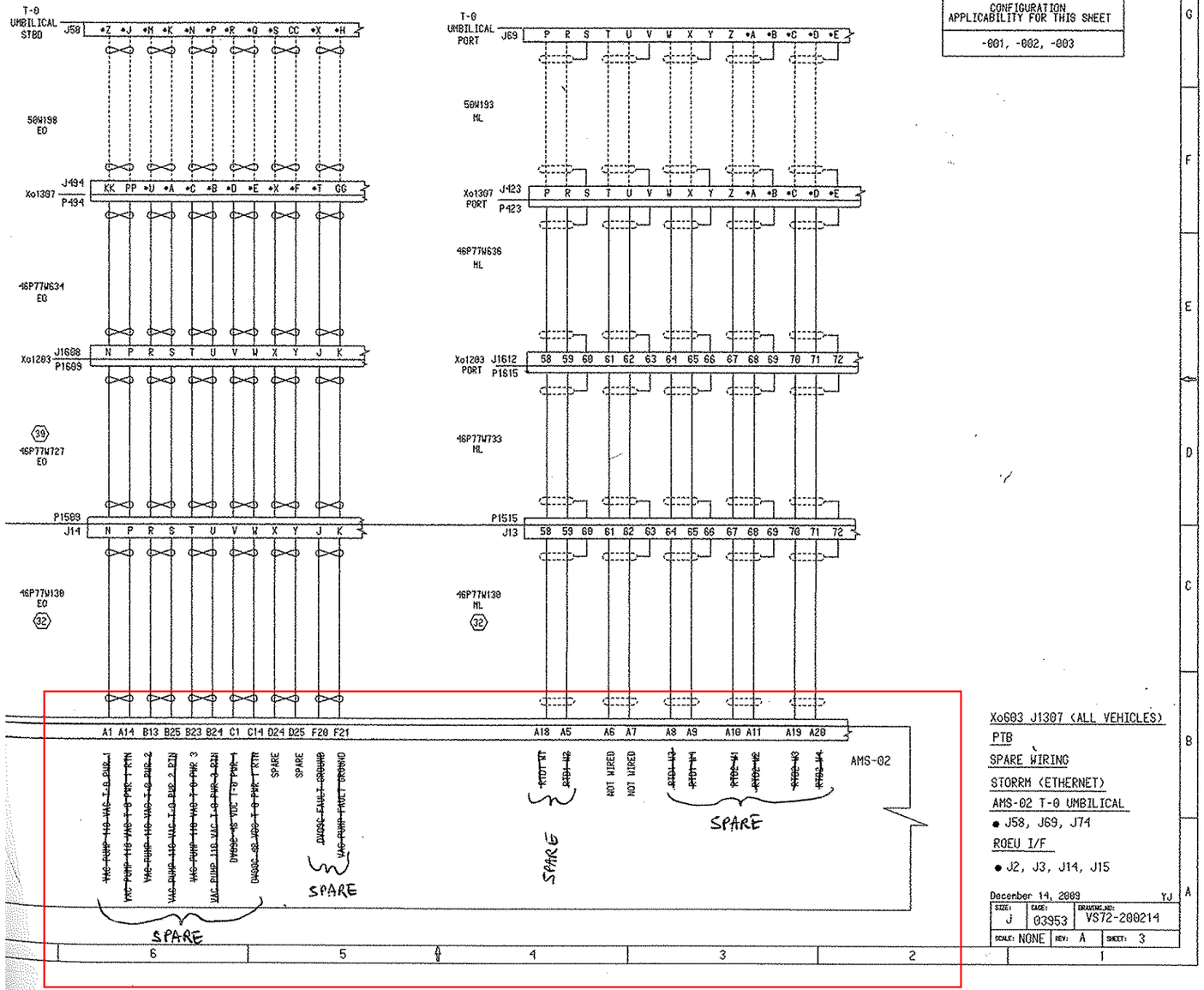
48. RESERVED

47. IN-LINE ISS 1553B DATA BUS COUPLER
(a) IN-LINE BUS COUPLER TWO STUBS WITH TERMINATOR
(b) IN-LINE BUS COUPLER THREE STUBS WITH TERMINATOR
(c) ORBITER BUS COUPLER
(d) ORBITER BUS COUPLER WITH TERMINATOR

VS Sheet 3

REVISION			
ZONE	LTR	DESCRIPTION	DATE / APPRVD
	A	REPLACES REVISION "NEW" WITH CHANGES 1. SEE EO 401- DIRECT DRAWING CHANGES INCORPORATED AND RELEASED AT "A" REVISION.	

CONFIGURATION APPLICABILITY FOR THIS SHEET
-001, -002, -003



Xo603 J1307 (ALL VEHICLES)

PTB

SPARE WIRING

STORRM (ETHERNET)

AMS-02 T-0 UMBILICAL

- J58, J69, J74

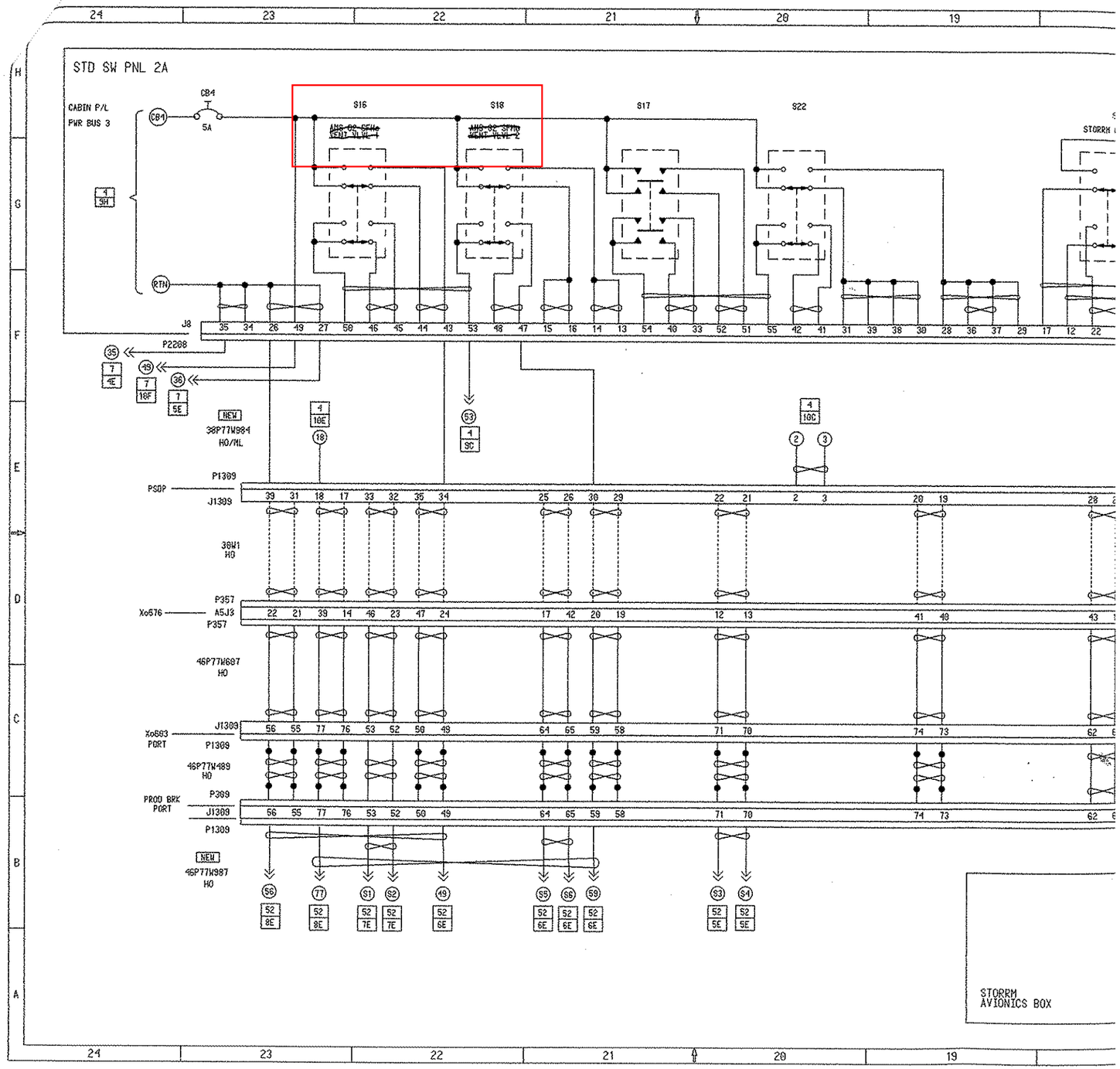
ROEU I/F

- J2, J3, J14, J15

December 14, 2009 YJ

SIZE:	CAGE:	DRAWING NO:
J	03953	VS72-200214
SCALE: NONE	REV: A	SHEET: 3

VS Sheet 7 (Part 1)



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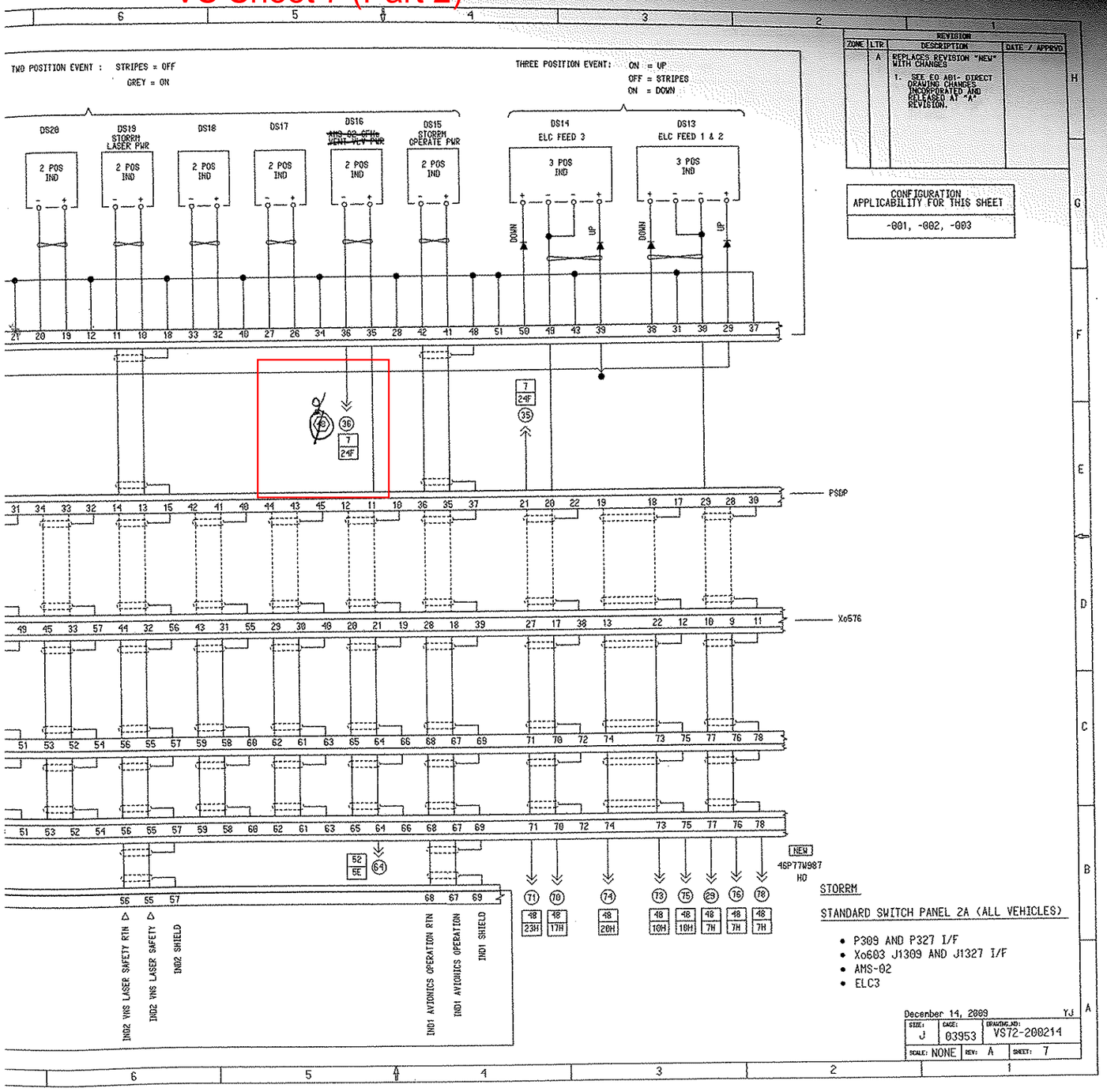


REVISION			
ZONE	LTR	DESCRIPTION	DATE / APPRVD
	A	REPLACES REVISION "NEW" WITH CHANGES 1. SEE EO A01- DIRECT DRAWING CHANGES INCORPORATED AND RELEASED AT "A" REVISION.	

CONFIGURATION APPLICABILITY FOR THIS SHEET

-001, -002, -003

STORRM

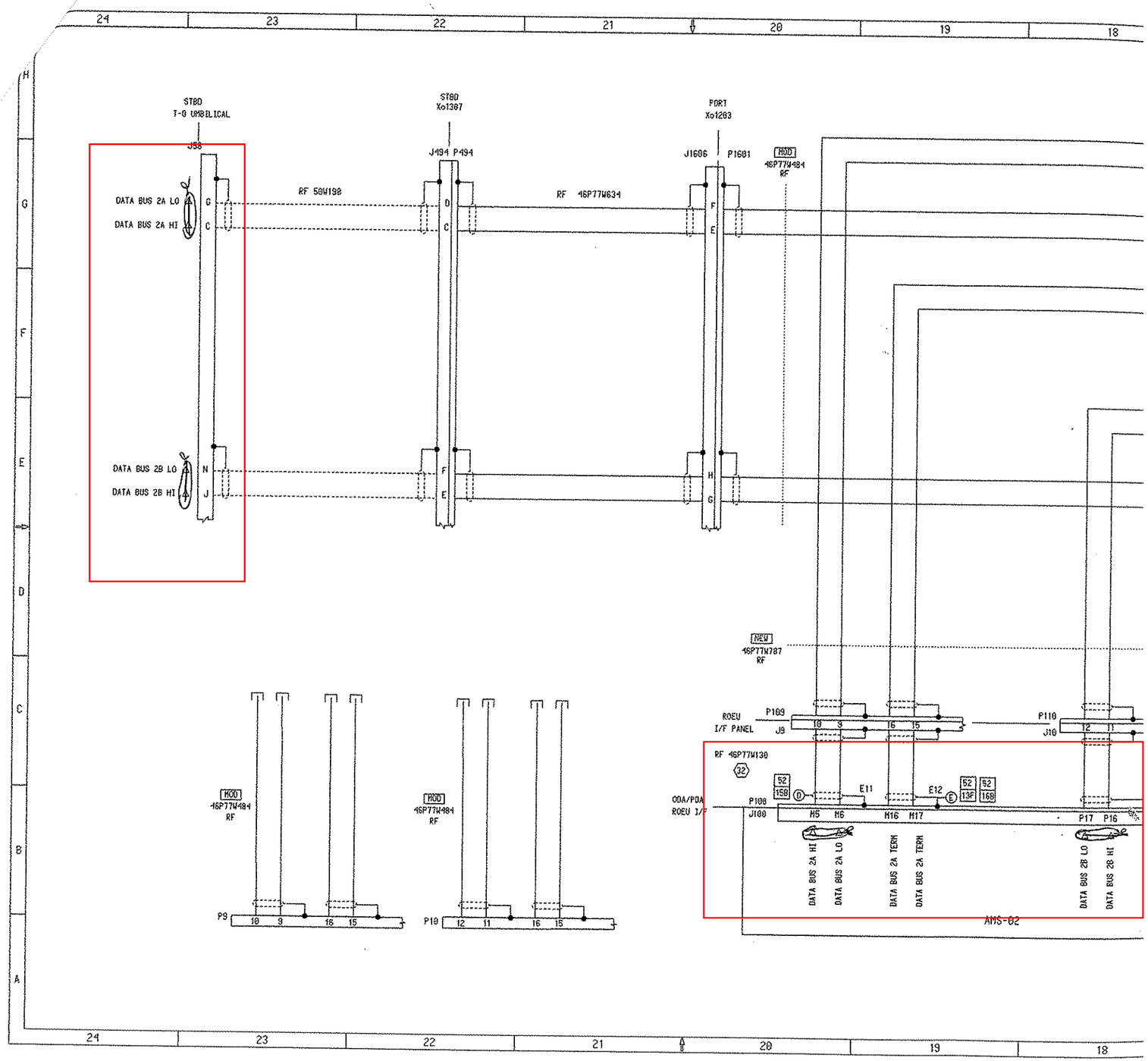
STANDARD SWITCH PANEL 2A (ALL VEHICLES)

- P309 AND P327 I/F
- Xo603 J1309 AND J1327 I/F
- AMS-02
- ELC3

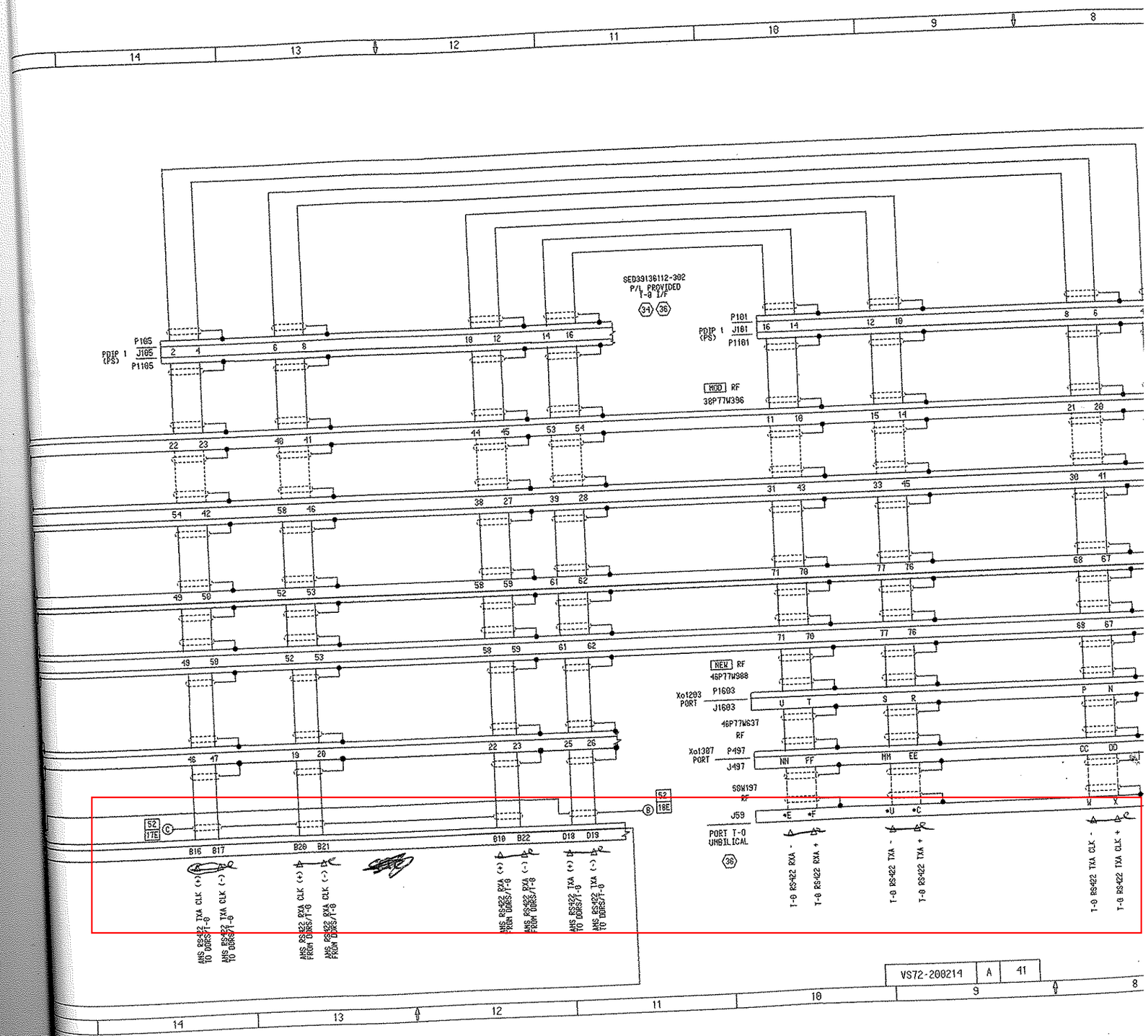
December 14, 2009 YJ

SIZE:	CAGE:	DRAWING NO:
J	03953	VS72-200214
SCALE: NONE	REV: A	SHEET: 7

VS Sheet 19 (delete Safety Critical designation)



VS Sheet 41 (delete Safety Critical designation)



VS Sheet 52

REVISION			
ZONE	LTR	DESCRIPTION	DATE / APPRVD
	A	REPLACES REVISION "NEW" WITH CHANGES 1. SEE EO A01- DIRECT DRAWING CHANGES INCORPORATED AND RELEASED AT "A" REVISION.	

CONFIGURATION APPLICABILITY FOR THIS SHEET
-001, -002, -003

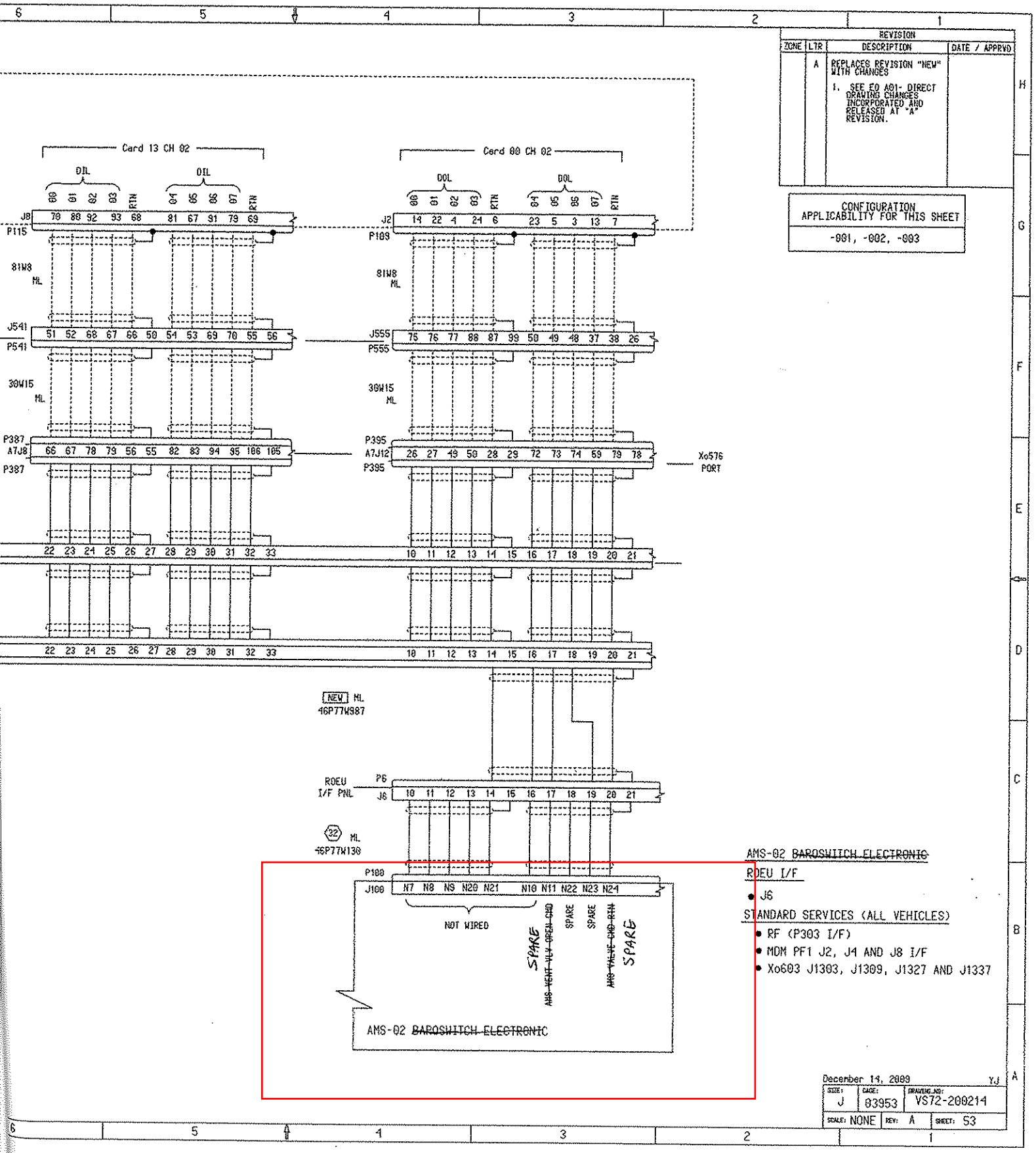
AMS-02 - ROEU I/F
- SPARES
- J7

AMS-02 ~~BAROSWITCH ELECTRONICS~~

December 22, 2009 YJ

SIZE: J	CAGE: 03953	DRAWING NO: VS72-200214
SCALE: NONE	REV: A	SHEET: 52

VS Sheet 53


REVISION
ZONE | LTR | DESCRIPTION | DATE / APPRVD
A
REPLACES REVISION "NEW" WITH CHANGES
1. SEE ED A01- DIRECT DRAWING CHANGES INCORPORATED AND RELEASED AT "A" REVISION.
CONFIGURATION APPLICABILITY FOR THIS SHEET
-001, -002, -003
Card 13 CH 02
Card 00 CH 02
DIL
DOL
J8
P115
J541
P541
P387
A7J8
J2
P103
J555
P555
P395
A7J12
Xo576 PORT
81W8 ML
30W15 ML
NEW ML 46P77W987
ROEU I/F PNL
P6
J6
ML 46P77W130
P100
J100
NOT WIRED
SPARE
AMS VENT VLV OPEN CMD
SPARE
SPARE
AMS VALVE CMD RTN
SPARE
AMS-02 BAROSWITCH ELECTRONIC
AMS-02 BAROSWITCH ELECTRONIC ROEU I/F
• J6
STANDARD SERVICES (ALL VEHICLES)
• RF (P303 I/F)
• MDM PF1 J2, J4 AND J8 I/F
• Xo603 J1303, J1309, J1327 AND J1337
December 14, 2009 YJ
SIZE: J
CAGE: 03953
DRAWING NO: VS72-200214
SCALE: NONE
REV: A
SHEET: 53