



**NEW FLYER®**

## **VEHICLE SYSTEMS DRAWING MANUAL**



**CONNECT TRANSIT - NORMAL  
SR2035 - XD40 (1601 - 1607)  
2016**

# VEHICLE SYSTEMS DRAWING INDEX

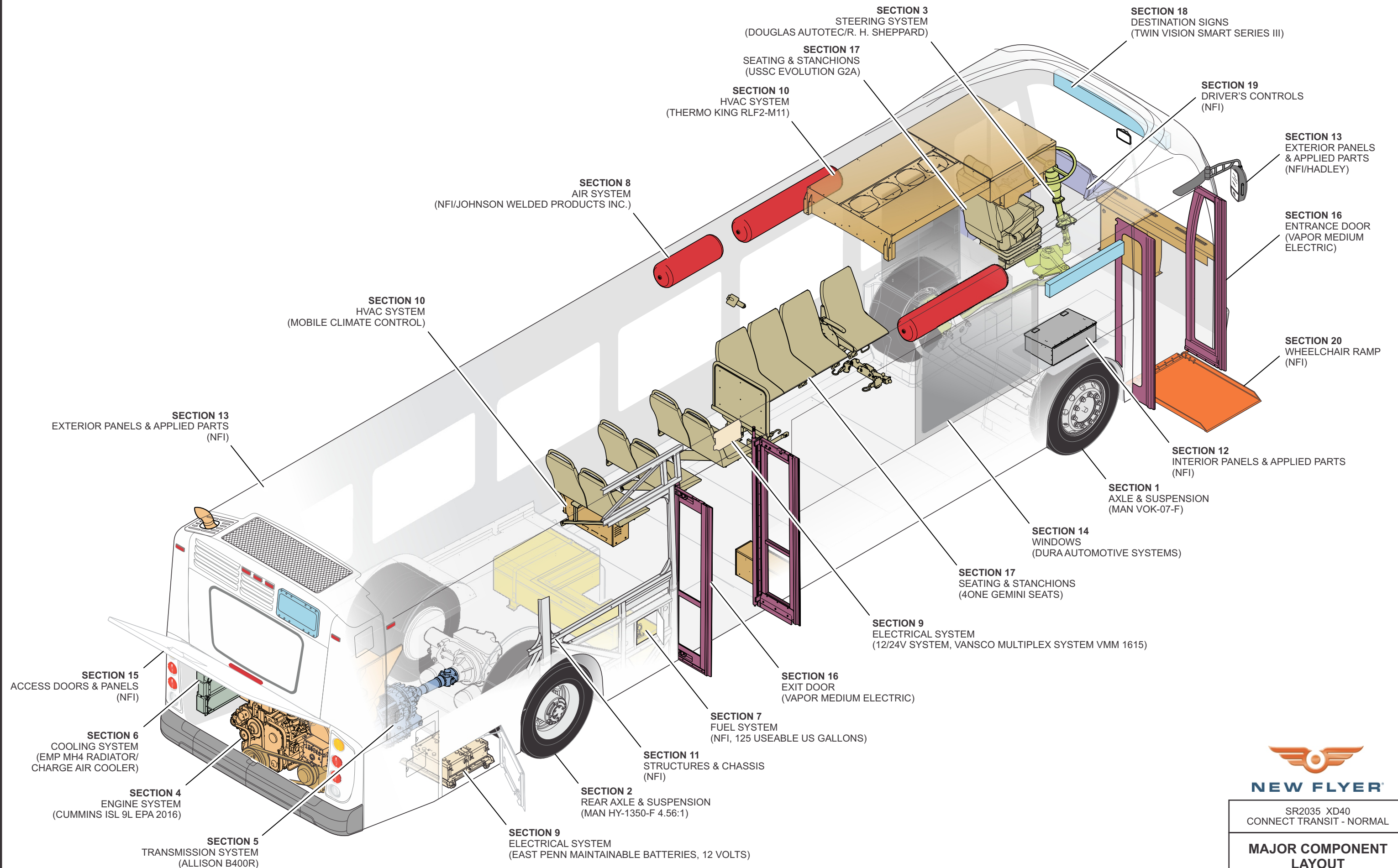
- Major Component Layout
- ABS System Layout
- Power Plant Cooling System Diagram
- Air System Schematics
- Multiplexing System Layout
- HVAC System Layout
- Heating Schematic
- Entrance Door Wheelchair Ramp Hydraulic Schematic
- Electrical System Drawings

SR2035

MANUAL ISSUE DATE: Jul 25 2016

CURRENT REVISION INDICATED BY:





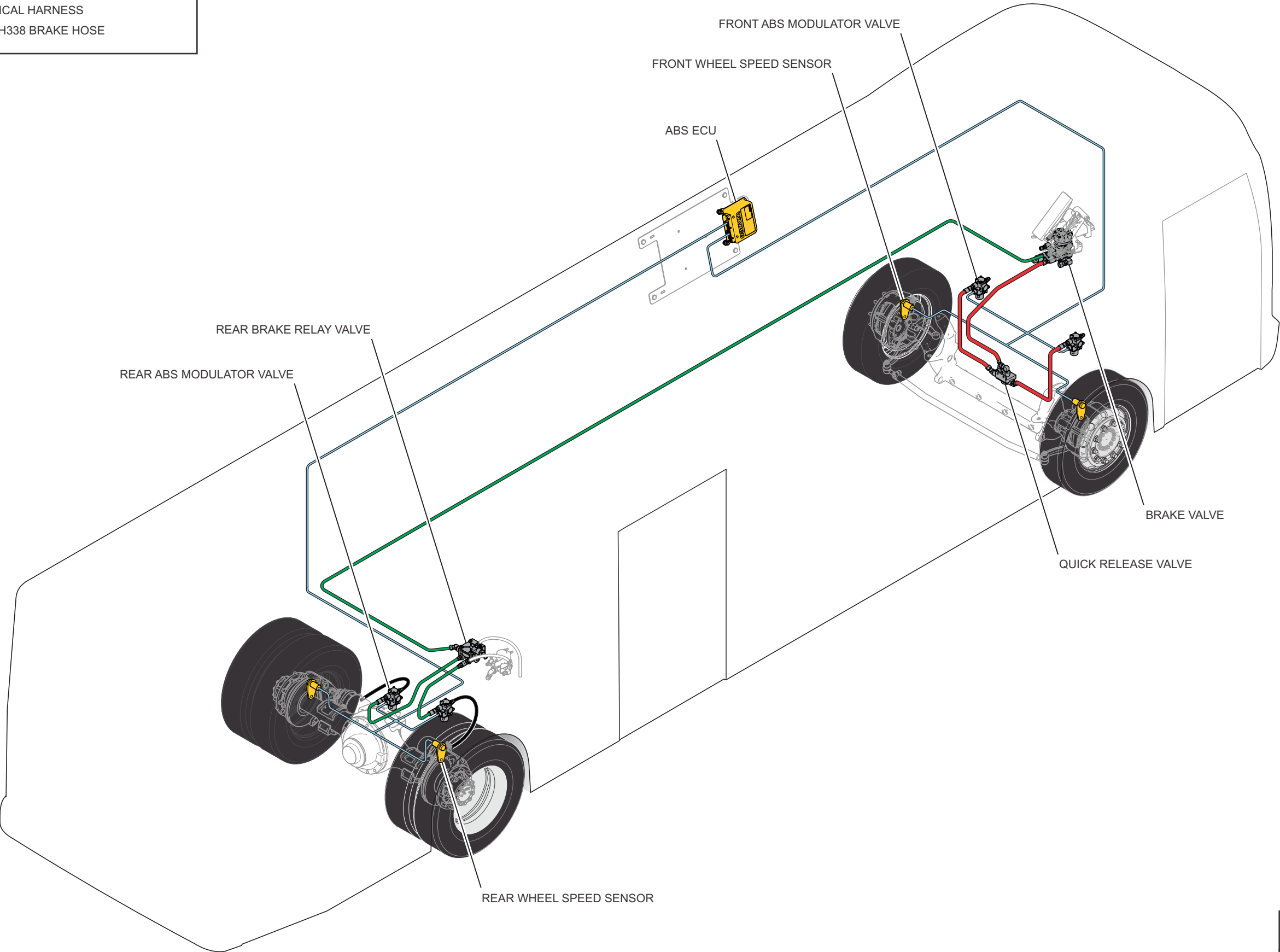
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CONNECT TRANSIT - NORMAL

**MAJOR COMPONENT  
LAYOUT**

LEGEND

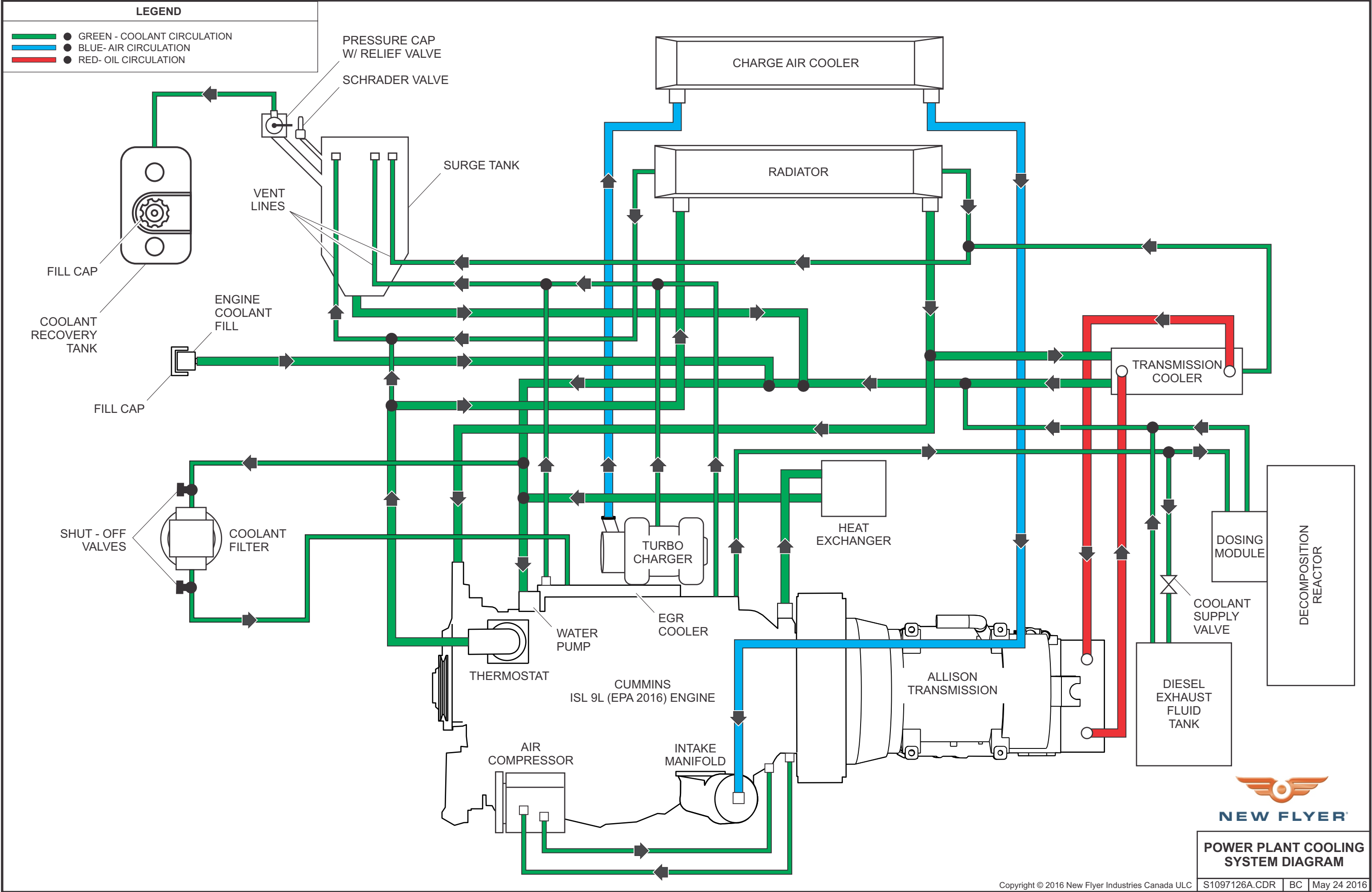
- GREEN - AIR LINE 1/2"
- RED - AIR LINE 5/8"
- BLUE - ELECTRICAL HARNESS
- BLACK - 1/2" ID H338 BRAKE HOSE



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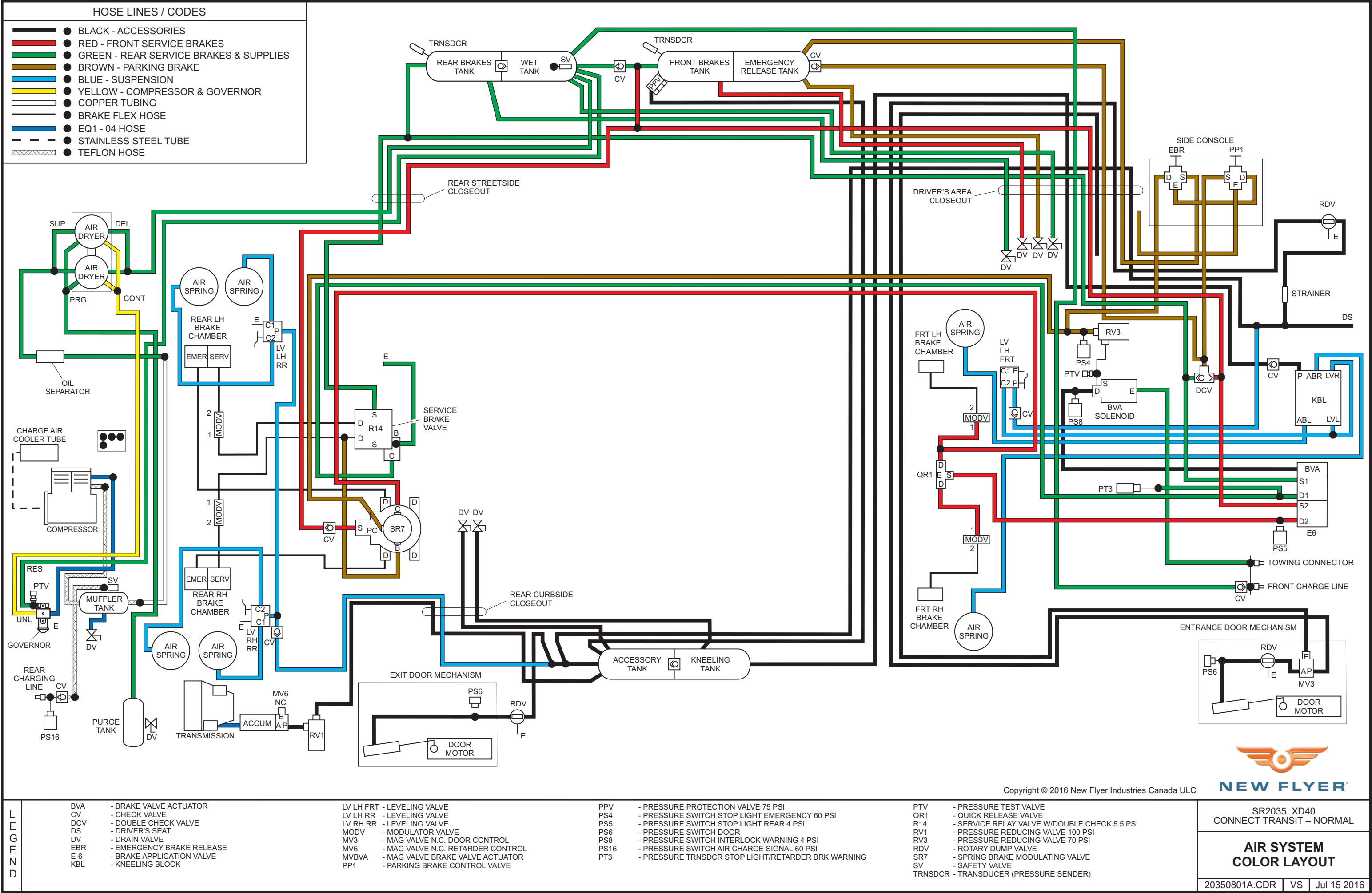
40 FOOT WITHOUT ATC

ABS SYSTEM  
LAYOUT



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POWER PLANT COOLING  
SYSTEM DIAGRAM



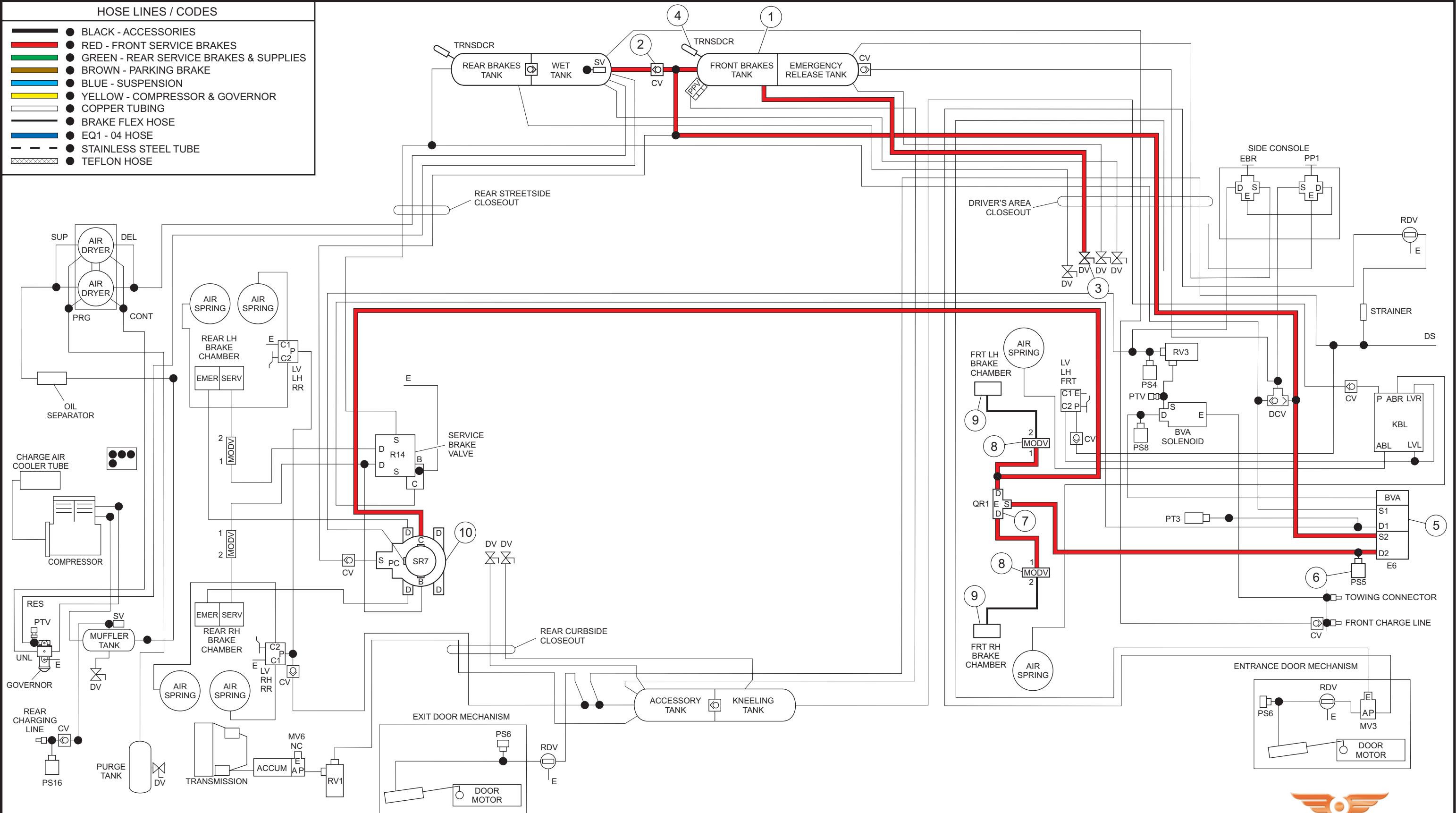


|                                                                                   |                                          |
|-----------------------------------------------------------------------------------|------------------------------------------|
|  | ● BLACK - ACCESSORIES                    |
|  | ● RED - FRONT SERVICE BRAKES             |
|  | ● GREEN - REAR SERVICE BRAKES & SUPPLIES |
|  | ● BROWN - PARKING BRAKE                  |
|  | ● BLUE - SUSPENSION                      |
|  | ● YELLOW - COMPRESSOR & GOVERNOR         |
|  | ● COPPER TUBING                          |
|  | ● BRAKE FLEX HOSE                        |
|  | ● EQ1 - 04 HOSE                          |
|  | ● STAINLESS STEEL TUBE                   |
|  | ● TEFLON HOSE                            |



## MAIN AIR SUPPLY SYSTEM

| HOSE LINES / CODES                                                                |                                          |
|-----------------------------------------------------------------------------------|------------------------------------------|
|  | ● BLACK - ACCESSORIES                    |
|  | ● RED - FRONT SERVICE BRAKES             |
|  | ● GREEN - REAR SERVICE BRAKES & SUPPLIES |
|  | ● BROWN - PARKING BRAKE                  |
|  | ● BLUE - SUSPENSION                      |
|  | ● YELLOW - COMPRESSOR & GOVERNOR         |
|  | ● COPPER TUBING                          |
|  | ● BRAKE FLEX HOSE                        |
|  | ● EQ1 - 04 HOSE                          |
|  | ● STAINLESS STEEL TUBE                   |
|  | ● TEFLON HOSE                            |

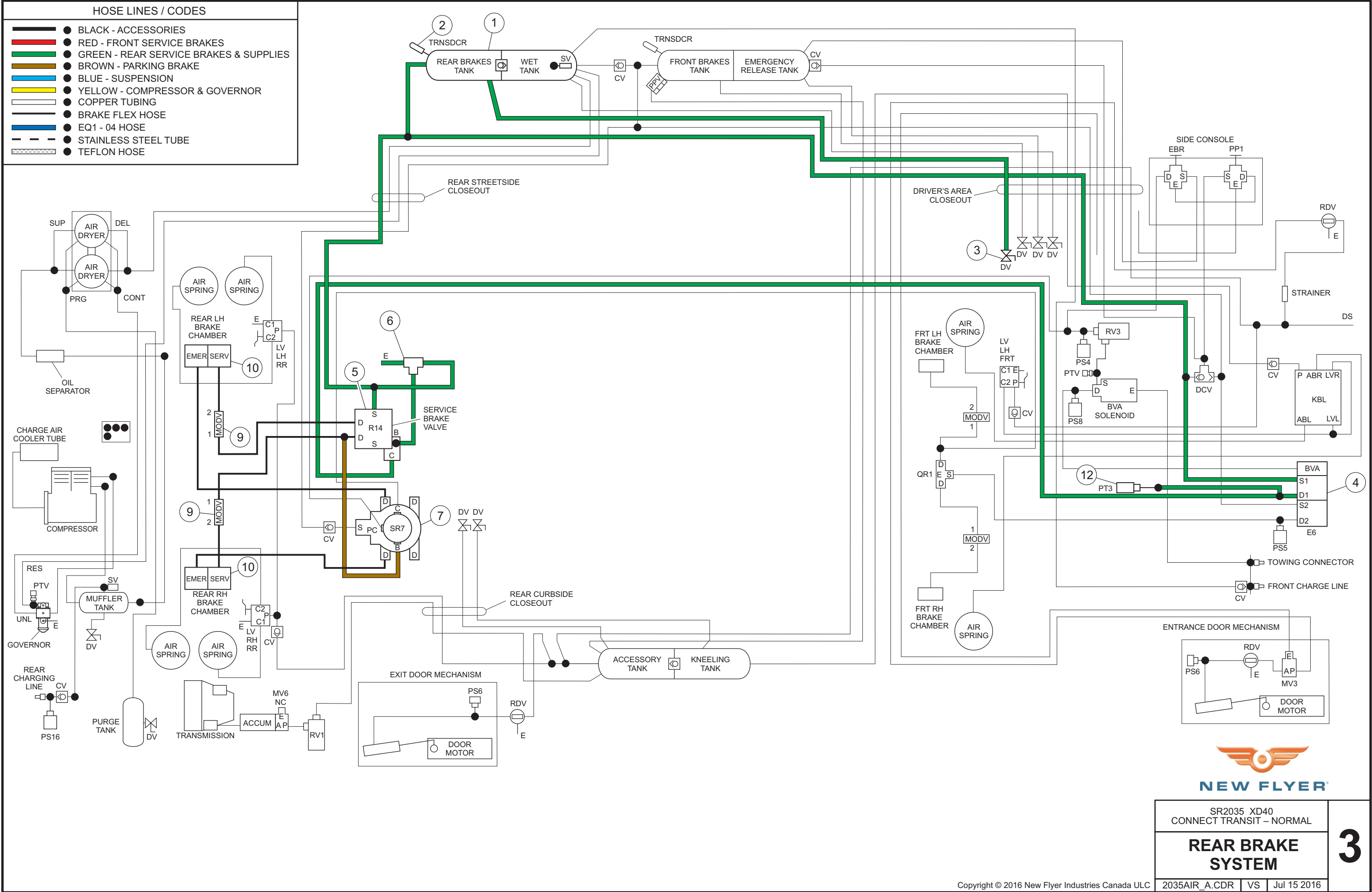


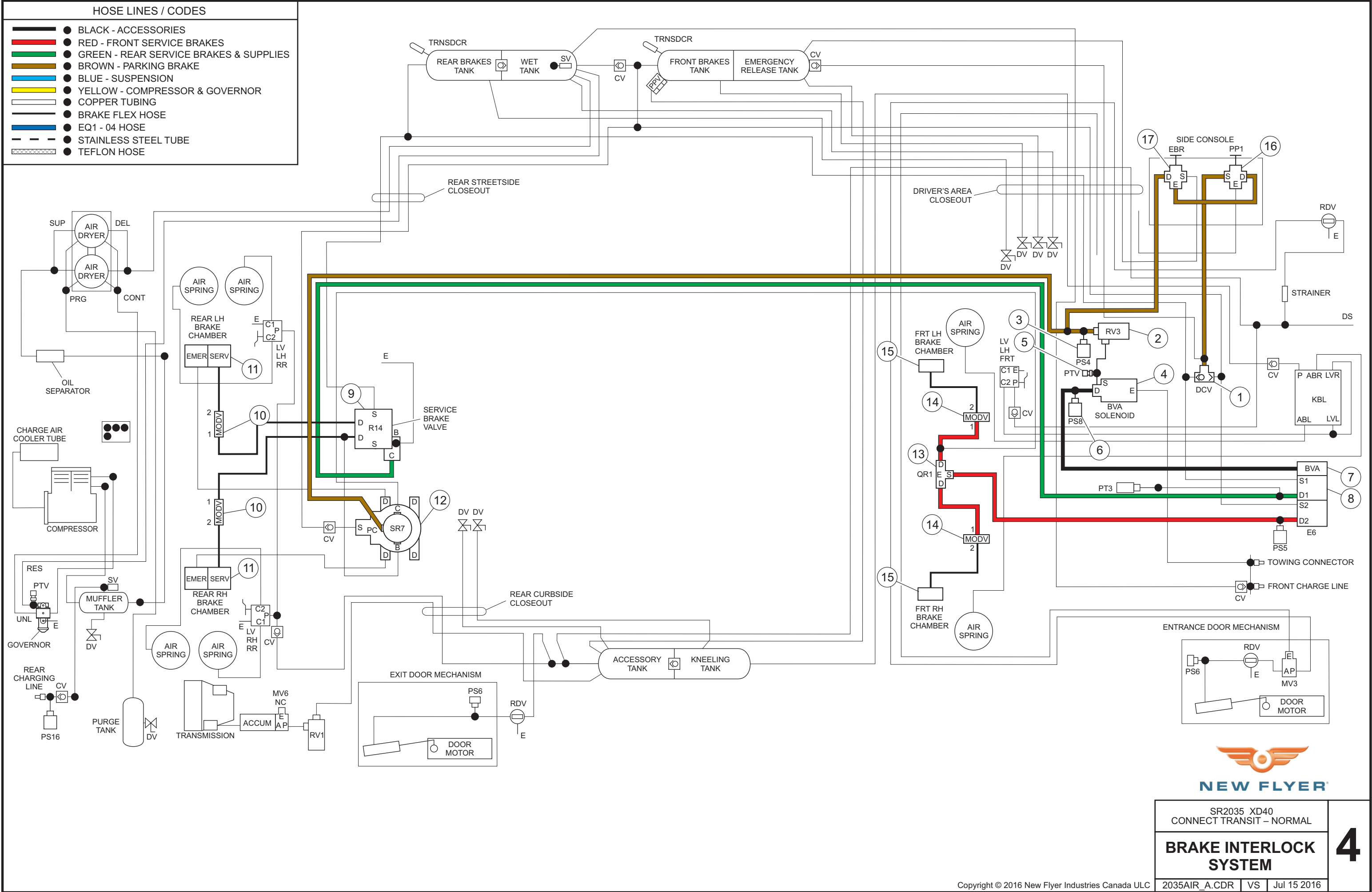
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## FRONT BRAKE SYSTEM

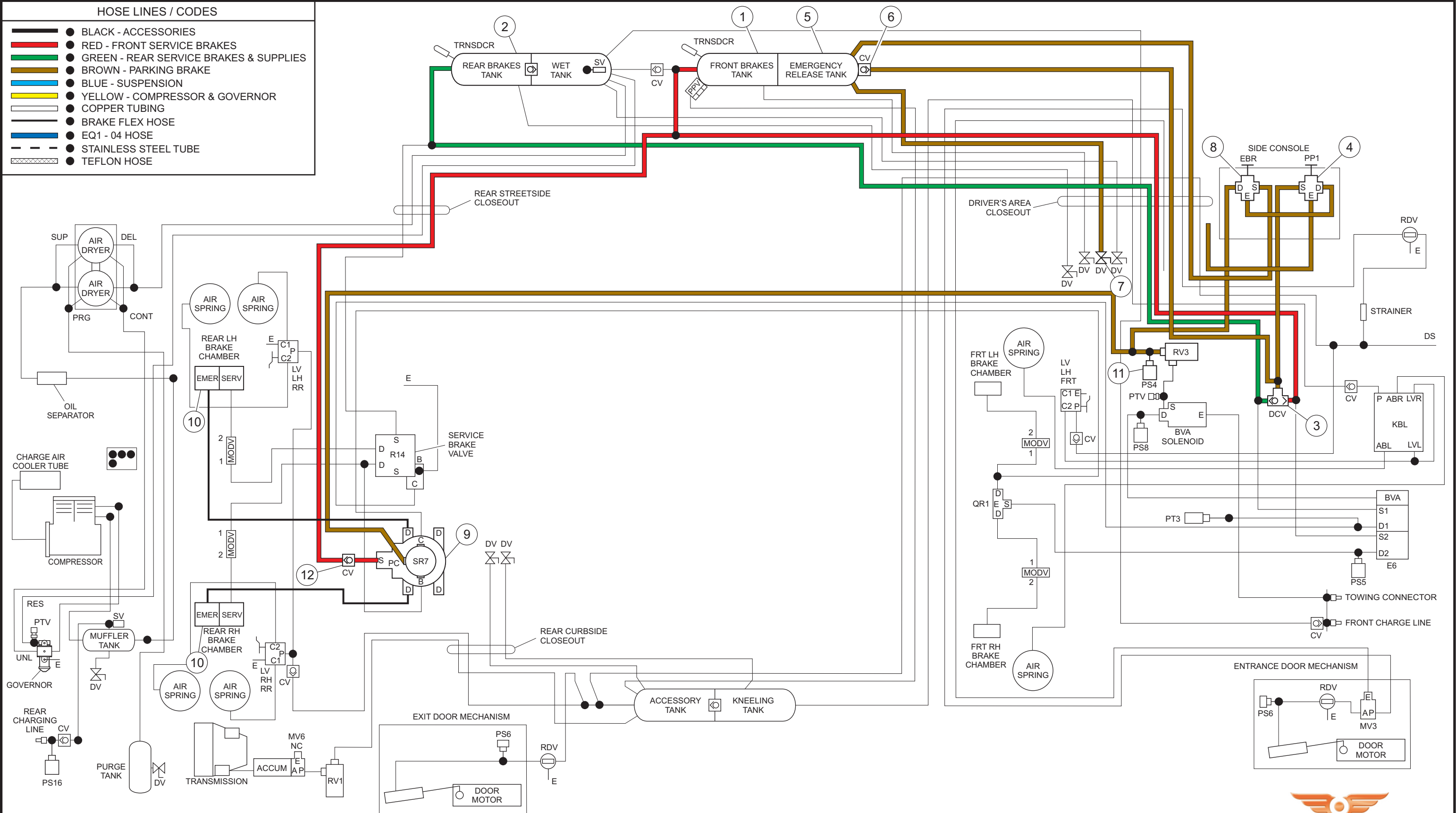
2







| HOSE LINES / CODES                                                                |                                          |
|-----------------------------------------------------------------------------------|------------------------------------------|
|  | ● BLACK - ACCESSORIES                    |
|  | ● RED - FRONT SERVICE BRAKES             |
|  | ● GREEN - REAR SERVICE BRAKES & SUPPLIES |
|  | ● BROWN - PARKING BRAKE                  |
|  | ● BLUE - SUSPENSION                      |
|  | ● YELLOW - COMPRESSOR & GOVERNOR         |
|  | ● COPPER TUBING                          |
|  | ● BRAKE FLEX HOSE                        |
|  | ● EQ1 - 04 HOSE                          |
|  | ● STAINLESS STEEL TUBE                   |
|  | ● TEFLON HOSE                            |

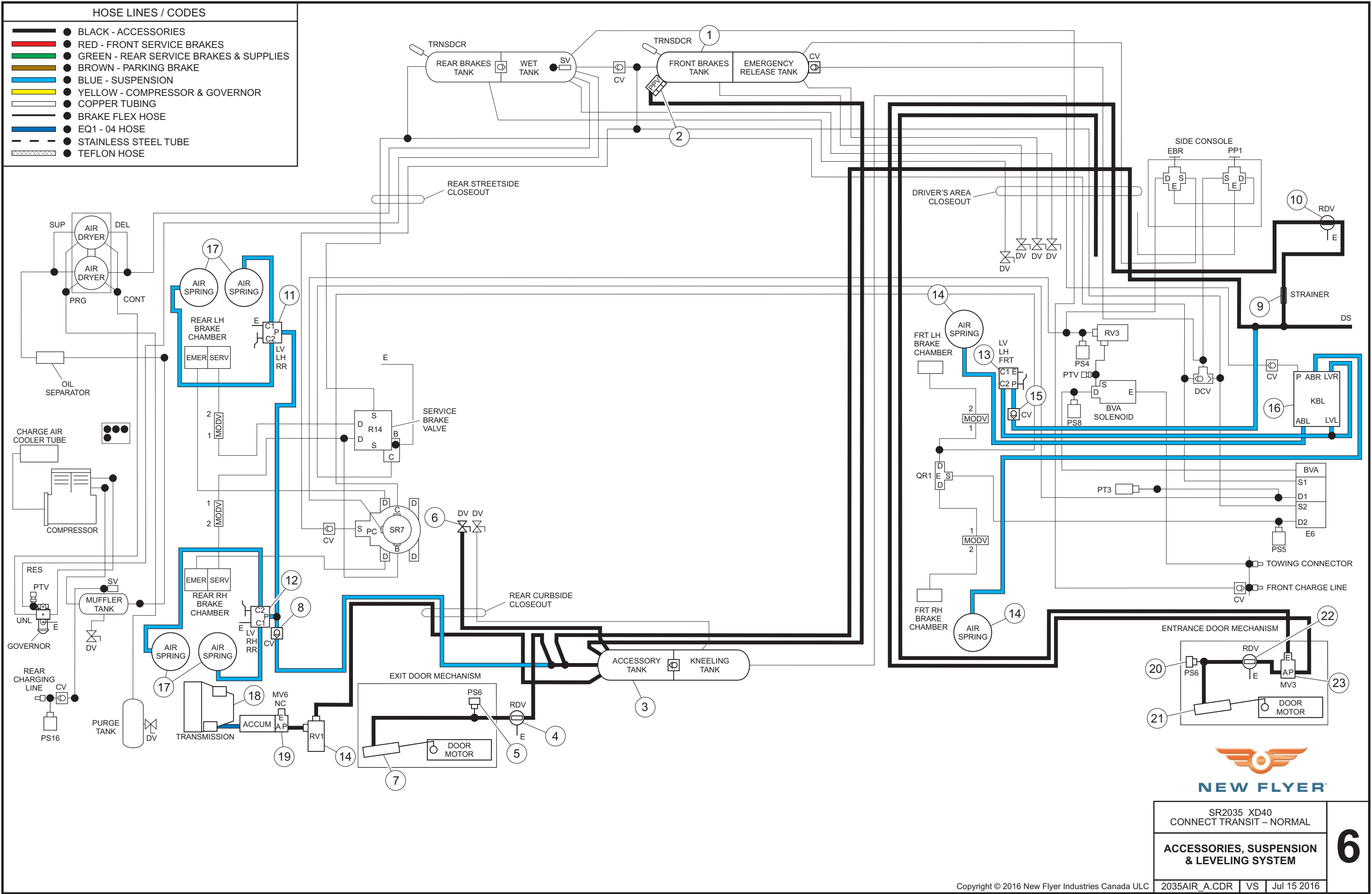


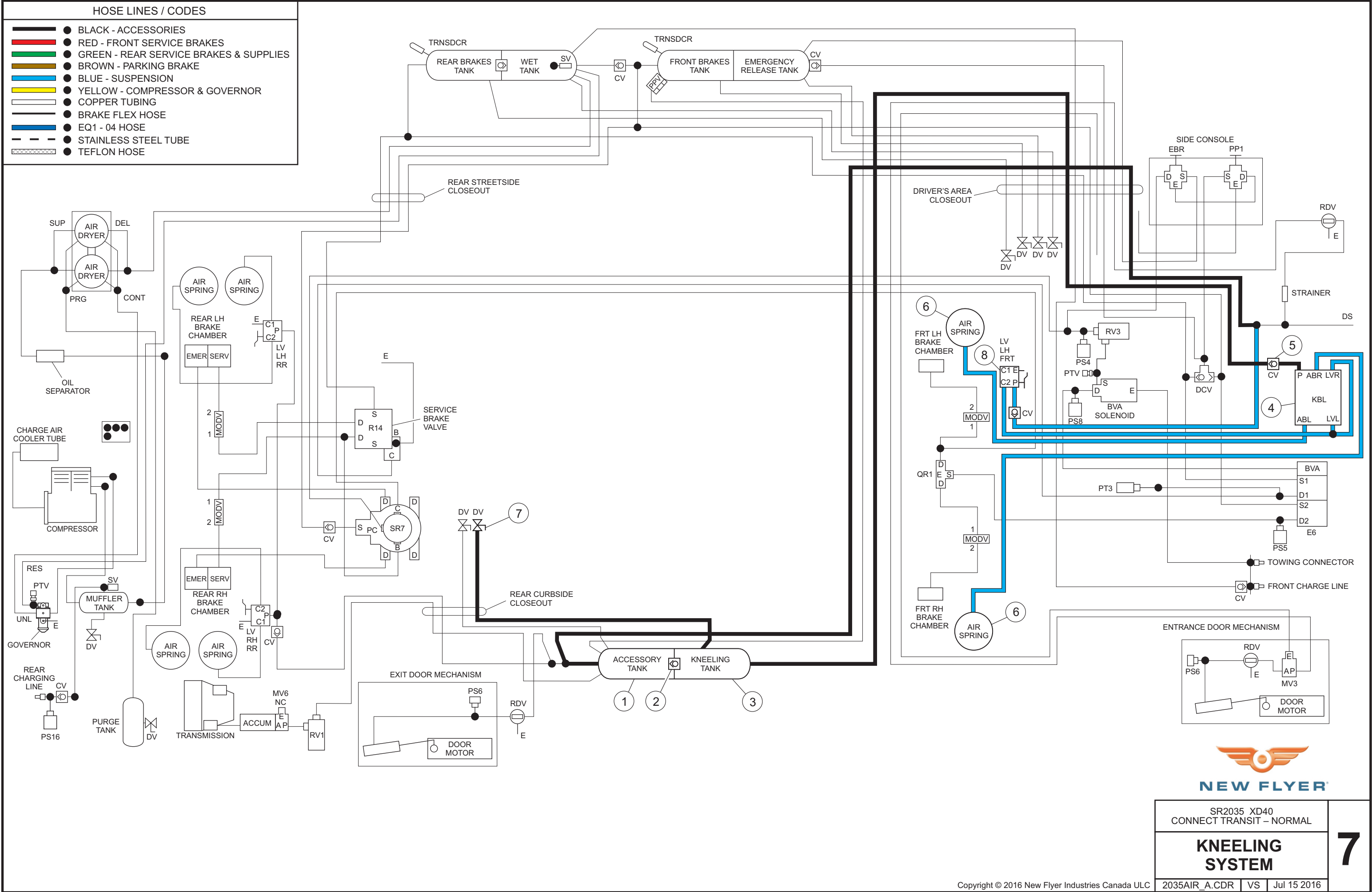
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## EMERGENCY/PARKING BRAKE SYSTEM

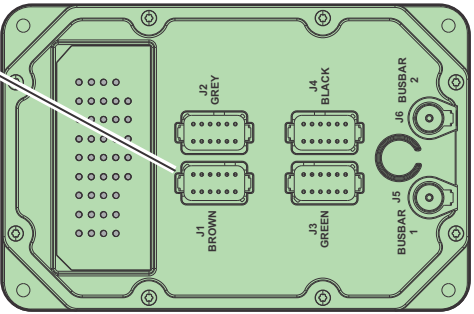
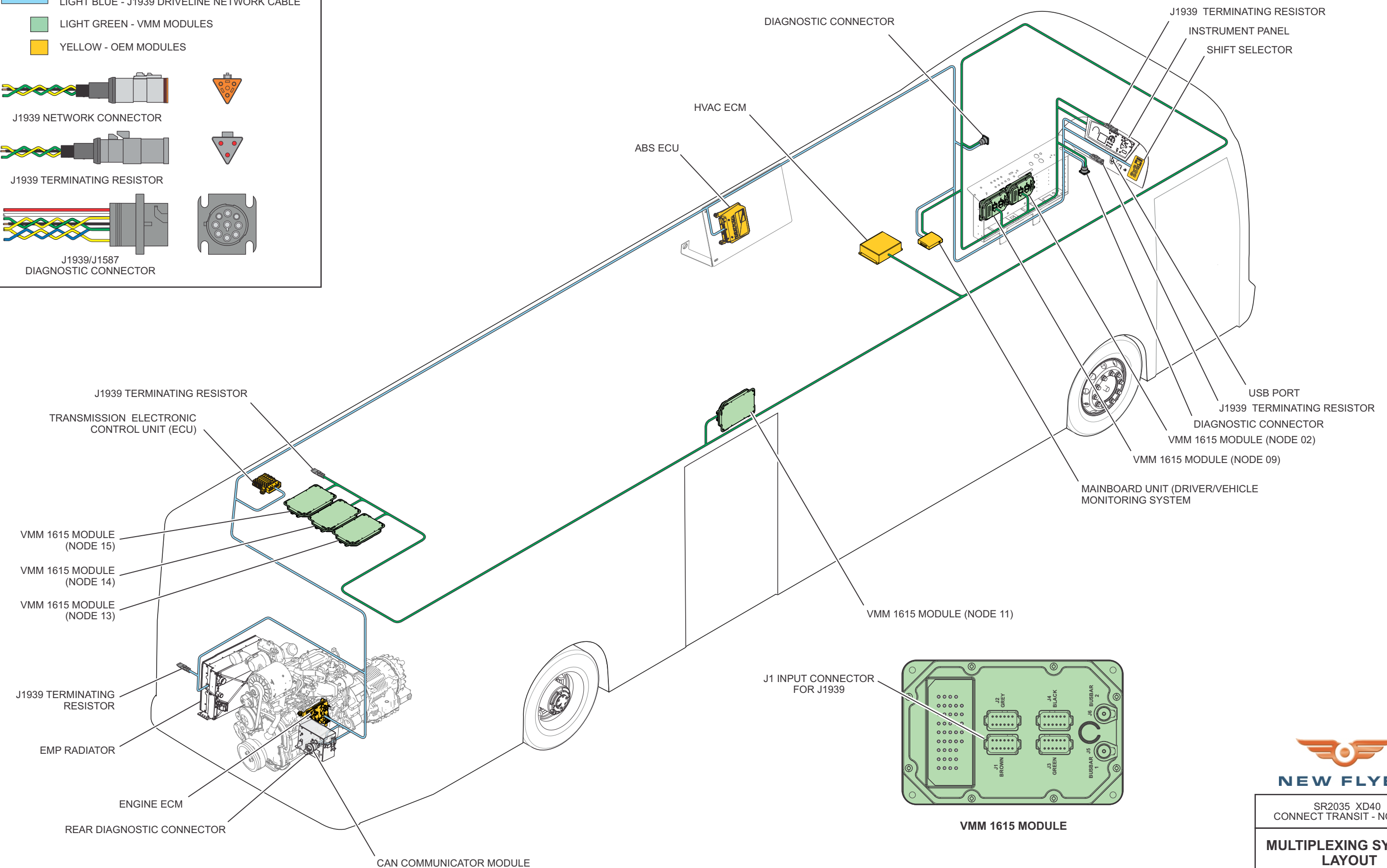
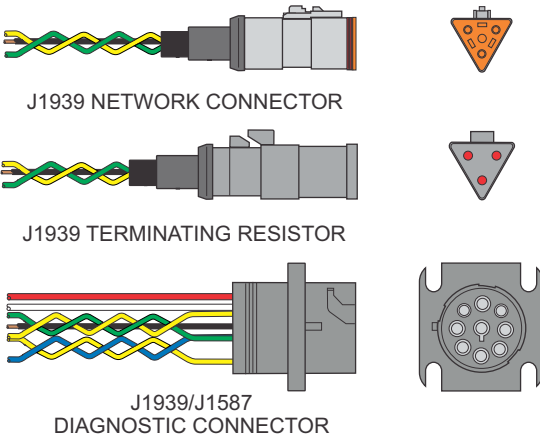
5





LEGEND

- GREEN - J1939 VMM NETWORK CABLE
- LIGHT BLUE - J1939 DRIVELINE NETWORK CABLE
- LIGHT GREEN - VMM MODULES
- YELLOW - OEM MODULES



VMM 1615 MODULE



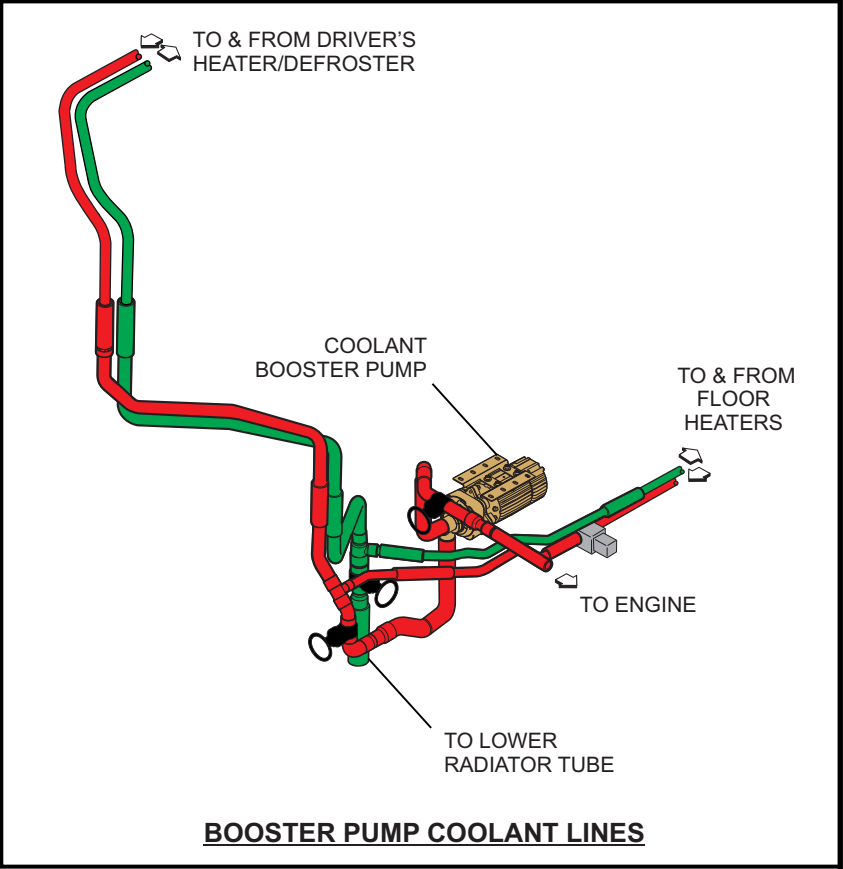
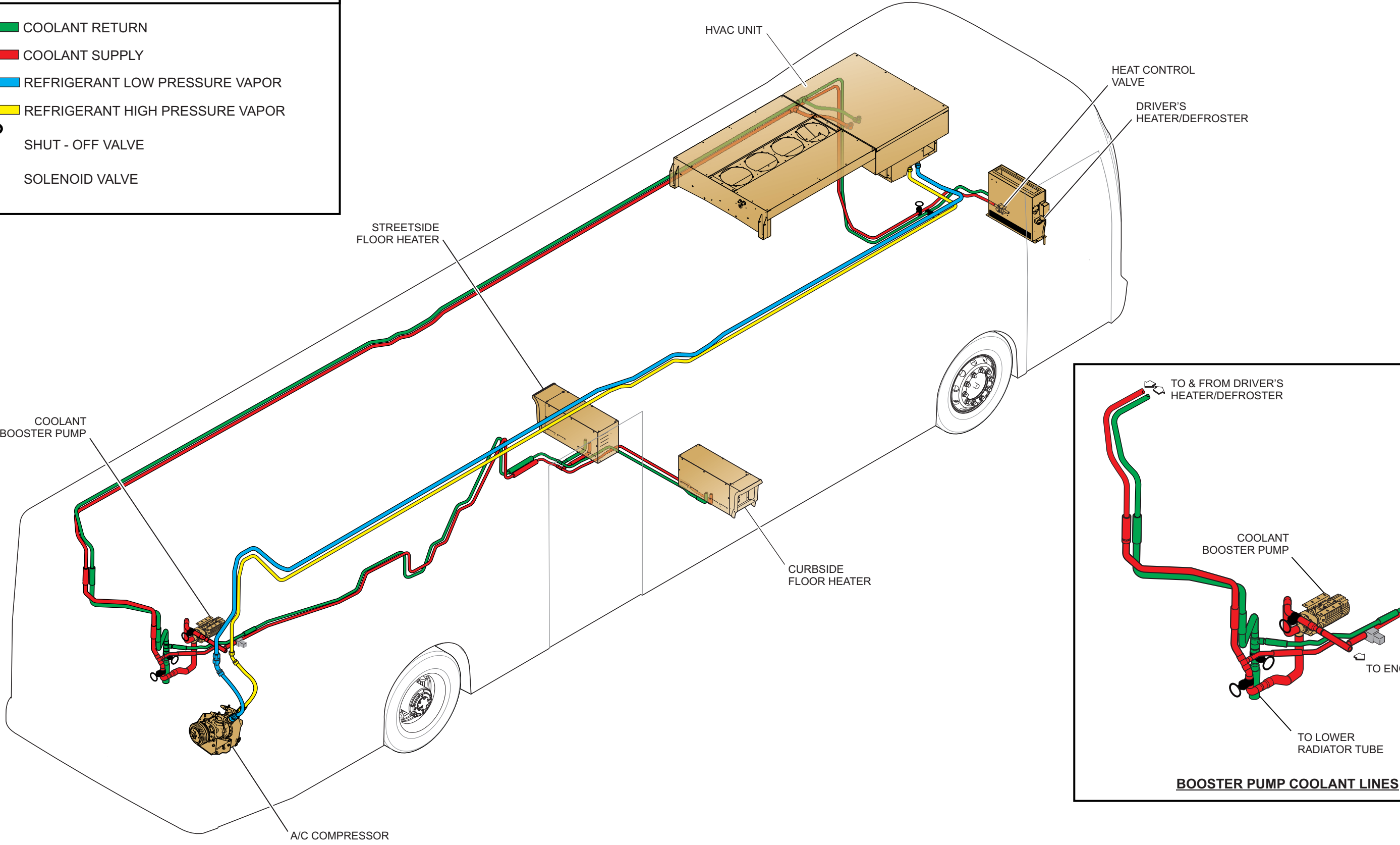
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MULTIPLEXING SYSTEM  
LAYOUT

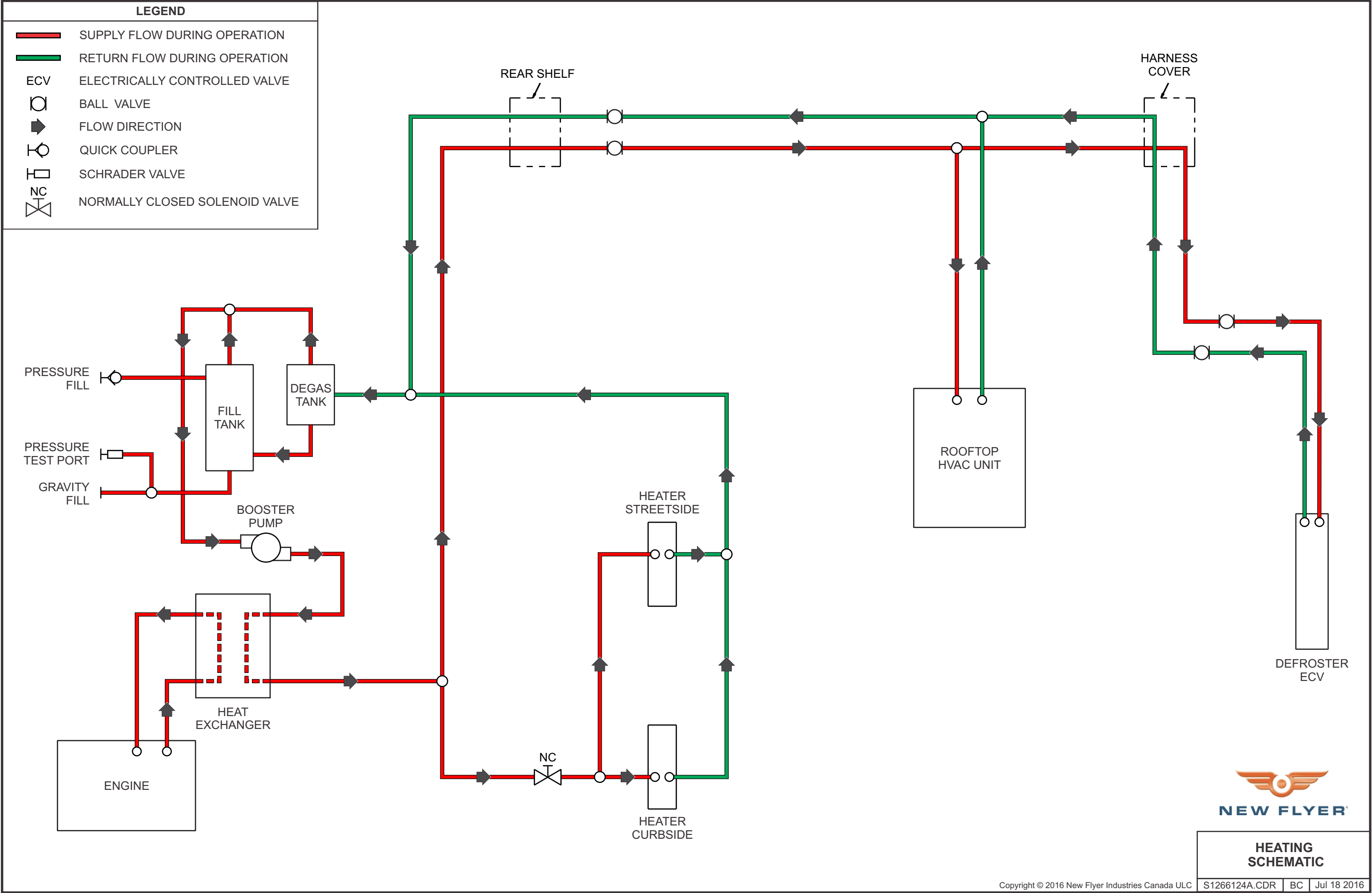
**LEGEND**

- COOLANT RETURN
- COOLANT SUPPLY
- REFRIGERANT LOW PRESSURE VAPOR
- REFRIGERANT HIGH PRESSURE VAPOR
- SHUT - OFF VALVE
- SOLENOID VALVE



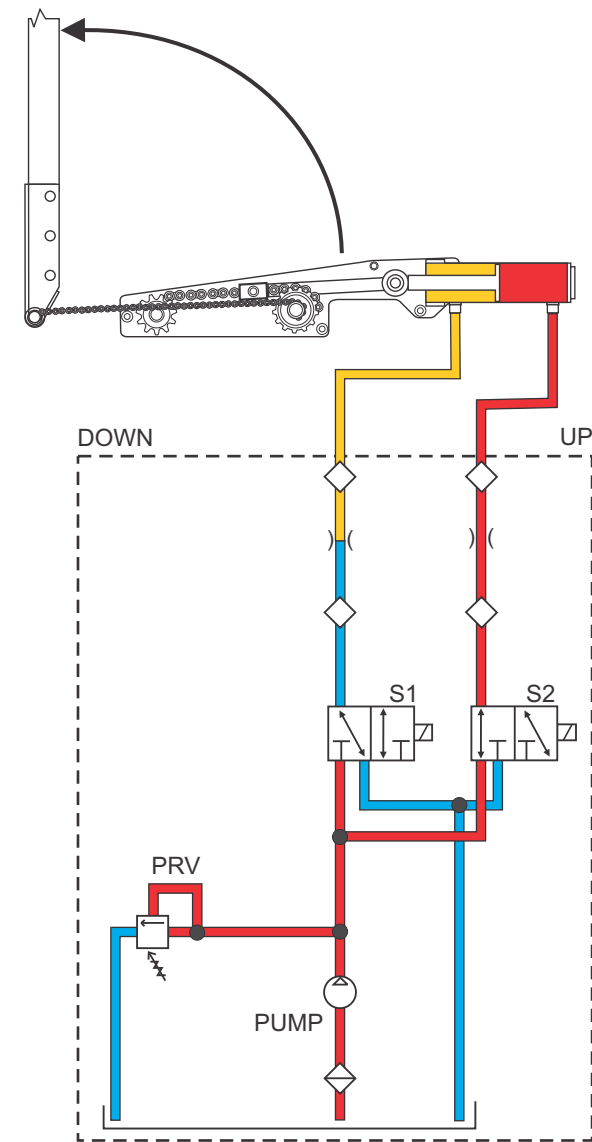
**HVAC SYSTEM  
LAYOUT**



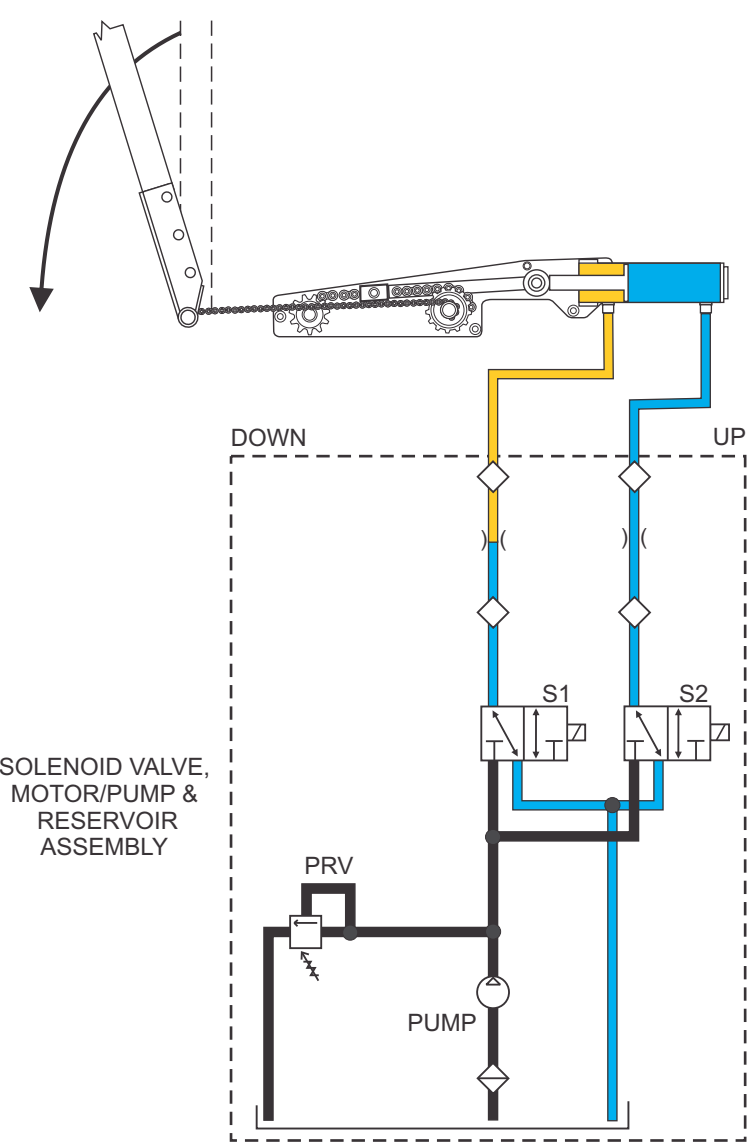


LEGEND

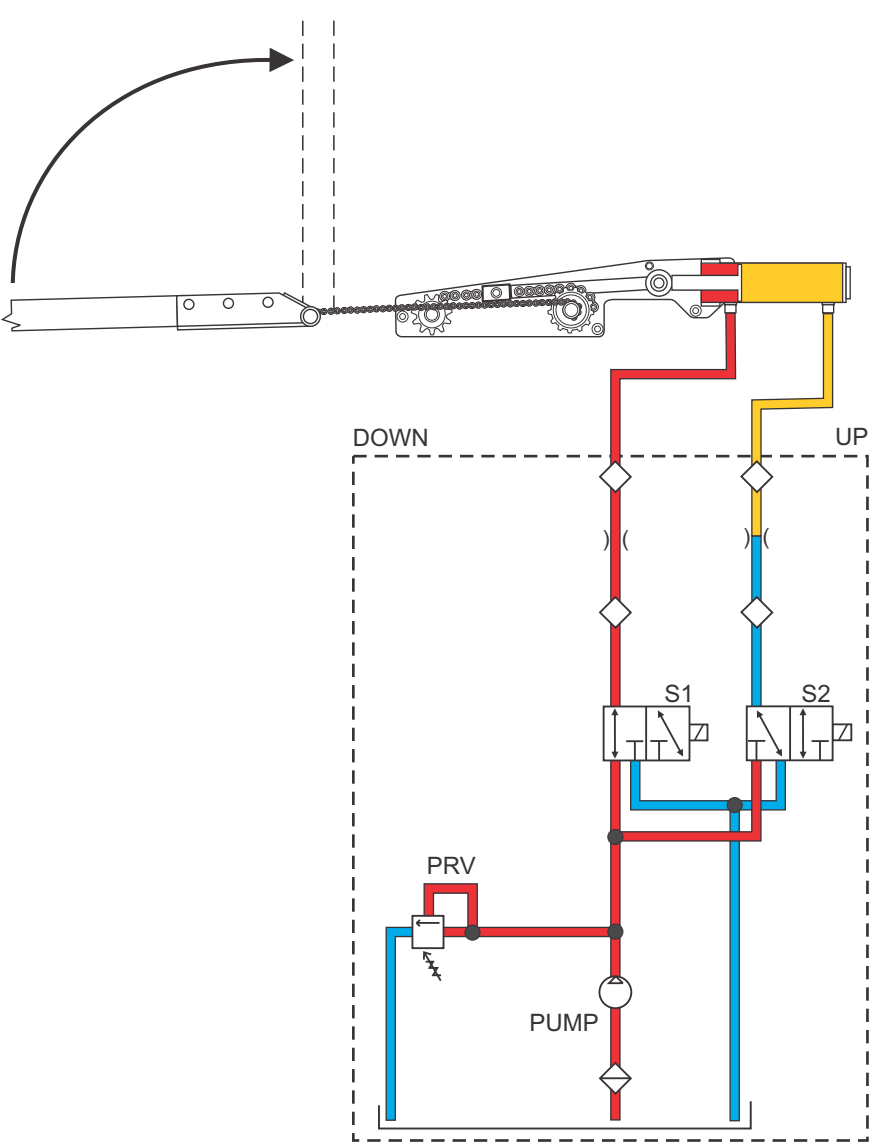
|                                                                                   |                            |                                                                                   |                                |
|-----------------------------------------------------------------------------------|----------------------------|-----------------------------------------------------------------------------------|--------------------------------|
| <span style="color: red;">—</span>                                                | RED - HIGH PRESSURE        |  | SUCTION SCREEN                 |
| <span style="color: blue;">—</span>                                               | BLUE - LOW PRESSURE        | PRV                                                                               | PRESSURE RELIEF VALVE 1750 PSI |
| <span style="color: yellow;">—</span>                                             | YELLOW - RESTRICTED RETURN | S1                                                                                | SOLENOID 1                     |
| <span style="color: black;">—</span>                                              | BLACK - STATIC OIL         | S2                                                                                | SOLENOID 2                     |
|  | FILTER                     | ) (                                                                               | 0.023 RESTRICTOR               |



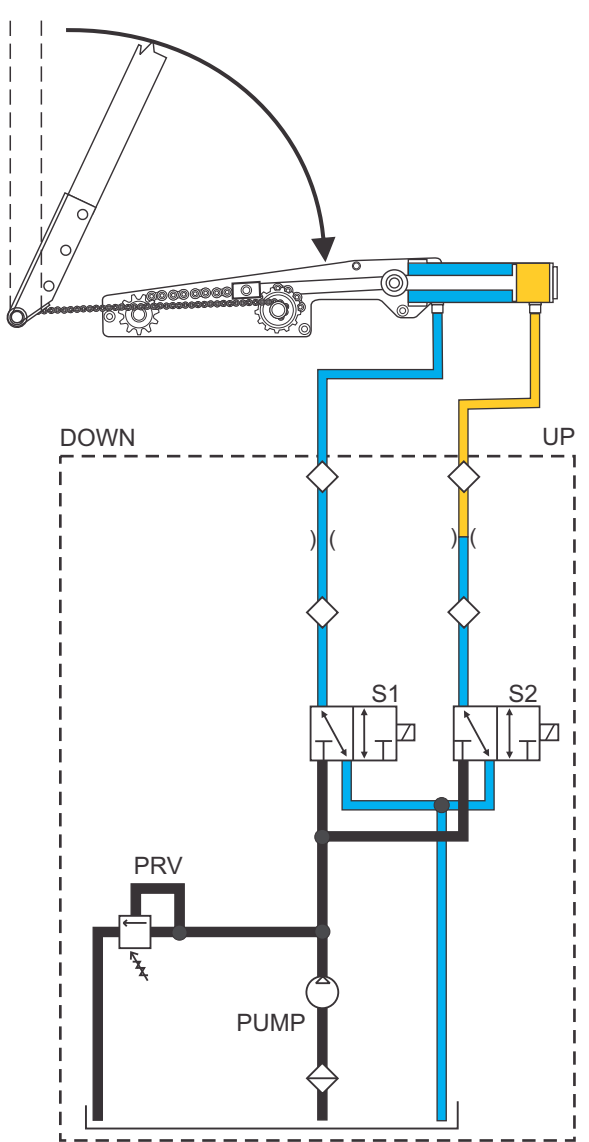
DEPLOY



FLOAT TO DEPLOYED  
POSITION



STOW



FLOAT TO STOWED  
POSITION

SOLENOID VALVE,  
MOTOR/PUMP &  
RESERVOIR  
ASSEMBLY



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ENTRANCE DOOR  
WHEELCHAIR RAMP  
HYDRAULIC SCHEMATIC



## ELECTRICAL SYSTEM DRAWINGS



**CONNECT TRANSIT - NORMAL  
SR2035 - XD40 (1601 - 1607)  
2016**



# ELECTRICAL SYSTEM DRAWINGS INDEX

## SR2035

| Drawing #      | Description                      | Revision | Page # |
|----------------|----------------------------------|----------|--------|
| 437137-1       | ES-GENERAL INFO GI               | V        | 1      |
| 437137-2       | ES-GENERAL INFO GI               | V        | 2      |
| 437137-3       | ES-GENERAL INFO GI               | V        | 3      |
| 633691-1       | ES-I/O ASSIGNMENTS-IO            | B        | 4      |
| 633691-2       | ES-POWER DISTRIBUTION-PD         | B        | 5      |
| 633691-3       | ES-NETWORK TOPOLOGY-NT           | B        | 6      |
| 633691-4       | ES-PRIMARY NETWORKS-PN           | B        | 7      |
| 633691-5       | ES-PRIMARY NETWORKS-PN           | B        | 8      |
| 633691-6       | ES-POWER & STARTING-PS           | B        | 9      |
| 633691-7       | ES-ENGINE-EN                     | B        | 10     |
| 633691-8       | ES-ENGINE-EN                     | B        | 11     |
| 633691-9       | ES-ENGINE-EN                     | B        | 12     |
| 633691-10      | ES-ENGINE-EN                     | B        | 13     |
| 633691-11      | ES-ENGINE-EN                     | B        | 14     |
| 633691-12      | ES-ENGINE-EN                     | B        | 15     |
| 633691-13      | ES-TRANSMISSION-TR               | B        | 16     |
| 633691-14      | ES-CLIMATE CONTROL-CC            | B        | 17     |
| 633691-15      | ES-CLIMATE CONTROL-CC            | B        | 18     |
| 12_70274       | ES-STREETSIDE FLOOR HEATER (MCC) | A        | 19     |
| 12-70260_70262 | ES-CURBSIDE FLOOR HEATER (MCC)   | A        | 20     |
| 12-60076S      | ES-DEFROSTER (MCC)               | 02/2015  | 21     |
| 633691-16      | ES-DOOR CONTROLS-DC              | B        | 22     |
| 633691-17      | ES-DOOR CONTROLS-DC              | B        | 23     |
| 633691-18      | ES-DRIVER'S SIGNAL-DS            | B        | 24     |
| 633691-19      | ES-EXTERIOR LIGHTING-EL          | B        | 25     |
| 633691-20      | ES-INTERIOR LIGHTING-IL          | B        | 26     |
| 633691-21      | ES-LIGHTING-LI                   | B        | 27     |
| 633691-22      | ES-KNEELING-LK                   | B        | 28     |
| 633691-23      | ES-COMMUNICATION PROVISIONS-CP   | B        | 29     |
| 633691-24      | ES-COMMUNICATION PROVISIONS-CP   | B        | 30     |
| 633691-25      | ES-AUXILIARY FUNCTIONS-AF        | B        | 31     |
| 633691-26      | ES-AUXILIARY FUNCTIONS-AF        | B        | 32     |
| 633691-27      | ES-FIRE SUPPRESSION-FS           | B        | 33     |

| Drawing # | Description                | Revision | Page # |
|-----------|----------------------------|----------|--------|
| 633691-28 | ES-ANTI-LOCK BRAKING-AB    | B        | 34     |
| 633691-29 | ES-INSTRUMENT PANEL-IP     | B        | 35     |
| 633691-30 | ES-SPARE WIRES-SP          | B        | 36     |
| 594271    | SD-SYSTEM CAMERA           | D        | 37     |
| 454903    | SD-TELEMATICS SYSTEM       | D        | 38     |
| 557579    | SD-FIRE SUPPRESSION        | A        | 39     |
| 595465    | SD-APC SYSTEM              | B        | 40     |
| 598957    | SD-RADIO SYSTEM            | B        | 41     |
| 628455    | SD-VIDEO SYSTEM            | A        | 42     |
| 595395    | SD-SYSTEM PA               | D        | 43     |
| 451204    | SD-DESTINATION SIGN SYSTEM | C        | 44     |
| 633084    | WD-ENG COMPT SW BOX        | A        | 45     |
| 633085-1  | WD-SIDE CONSOLE PANEL      | A        | 46     |
| 633085-2  | WD-SIDE CONSOLE PANEL      | A        | 47     |
| 633086-1  | WD-REAR PANEL              | A        | 48     |
| 633086-2  | WD-REAR PANEL              | A        | 49     |
| 597068    | WD-DEST SIGN PANEL         | A        | 50     |
| 634770-1  | WD-SDS BOX                 | C        | 51     |
| 634770-2  | WD-SDS BOX                 | C        | 52     |

...Continued on next page

### SR2035

#### SOFTWARE DETAILS

VMM PROGRAM - 628624      IP ROUTING TABLE - 191873  
VMM APP CODE - 587695      IP CLUSTER - 592669  
IP CONFIG - 628623

#### LEGEND

ES = Electrical Schematic      ISSUE DATE: Jul 20 2016  
SD = Supplementary Drawing  
WD = Wiring Diagram      CURRENT REVISION INDICATED BY:   
HRNS = Harness



# ELECTRICAL SYSTEM DRAWINGS INDEX

## SR2035

| Drawing # | Description              | Revision | Page # |
|-----------|--------------------------|----------|--------|
| 633087    | WD-FUSE BOX              | A        | 53     |
| 554148    | WD-2 BAT HOOKUP          | A        | 54     |
| 633088-1  | WD-CONNECTION POINTS     | A        | 55     |
| 633088-2  | WD-CONNECTION POINTS     | A        | 56     |
| 559982    | HRNS-RH CROWN X-40       | A        | 57     |
| 592896-1  | HRNS-LH CROWN X-40       | A        | 58     |
| 592896-2  | HRNS-LH CROWN X-40       | A        | 59     |
| 489274    | HRNS-RR CLR LPS XCELSIOR | E        | 60     |
| 579276    | HRNS-SC TO DASH XCELSIOR | B        | 61     |
| 609076    | INSTL-LOOM ENG HRNS      | C        | 62     |
| 629915    | HRNS-BH TO ENG COMPT     | A        | 63     |
| 629294    | HRNS-SC TO DASH OPTIONS  | A        | 64     |
| 630103    | HRNS-RH OPTIONS X-40     | B        | 65     |
| 629606    | HRNS-LH OPTIONS X-40     | C        | 66     |
| 630131-1  | HRNS-ENG COMPT OPTS      | A        | 67     |
| 630131-2  | HRNS-ENG COMPT OPTS      | A        | 68     |
| 625440-1  | HRNS-STOP REQUEST X-40   | A        | 69     |
| 625440-2  | HRNS-STOP REQUEST X-40   | A        | 70     |
| 625183-1  | HRNS-ENG ISL16 XD40      | A        | 71     |
| 625183-2  | HRNS-ENG ISL16 XD40      | A        | 72     |
| 582177-1  | HRNS-GENIV TRANS X-40    | C        | 73     |
| 582177-2  | HRNS-GENIV TRANS X-40    | C        | 74     |
| 624345-1  | APPROV-DRIVER CONTROLS   | A        | 75     |
| 624345-2  | APPROV-DRIVER CONTROLS   | A        | 76     |
| 624345-3  | APPROV-DRIVER CONTROLS   | A        | 77     |
| 624345-4  | APPROV-DRIVER CONTROLS   | A        | 78     |

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WIRE CODE LIST

**AB: ANTILOCK BRAKING**  
AB09 ABS SENSORS  
AB10 ABS POWER / IGNITION  
AB11 BRAKE DIAGNOSTICS  
AB12 BRAKE WEAR SENSORS  
AB16 ABS FAIL IND/BLINK CODE  
AB30 ABS AUX FUNCTION  
AB40 DRAGGING BRAKE SYSTEM  
ABJ7 J1708 NETWORK  
ABJ9 J1939 NETWORK

**AF: AUX FUNCTIONS**  
AF00 PROVISIONAL WIRING  
AF07 VIU (VEHICLE ID UNIT)  
AF12 APC WIRING  
AF13 AUTO GREASING SYSTEM  
AF17 AUX POWER  
AF18 USB  
AF19 CAMERA SYSTEM  
AF20 DEST SIGN SYSTEM  
AF21 DEST SIGN SYSTEM  
AF22 SILENT ALARM SYSTEM  
AF23 SILENT ALARM SYSTEM  
AF25 MISC. OPTIONAL FEATURES  
AF26 MISC. OPTIONAL FEATURES  
AF31 LH MIRROR  
AF32 RH MIRROR  
AF33 MIRROR HEATER  
AF34 INTERIOR MIRRORS  
AF36 DRIVER'S VISOR  
AF39 MAXI ALARM  
AF40 W/C RESTRAINTS  
AF45 DAB NETWORK (J2496)  
AF48 SDS VENTILLATION  
AF50 INTERIOR SIGNS  
AF51 FRT ROUTE SIGN  
AF52 DRIVER'S SEAT / BELT ALARM  
AF53 DRIVER'S SEAT HEATER  
AF54 DRIVER'S SEAT POWER  
AF55 FIRE SUPPRESSION  
AF60 MEDIA PLAYER  
AF63 ROUTER  
AF69 AUTO LUBE SYSTEM  
AF70 INTERMITTENT WIPERS  
AF71 ELECTRIC WIPERS / WASHER PUMP  
AF72 WIPER HEATER  
AF73 BLACKBOX  
AF74 TIRE MONITORING  
AF80 12V / 24V CONVERTER  
AF83 PARK BRAKE ALARM  
AF85 FAREBOX PWR  
AF88 POWER INVERTER  
AF91 BIKE RACK  
AF92 POWER STEERING  
AF93 DRIVER MONITORING SYSTEM

**CC: CLIMATE CONTROL**  
CC07 AIR COMPRESSOR  
CC08 AIR DRYER / HEATED AUTO DRAIN  
CC09 AIR CONTAMINANT SEPARATOR  
CC10 DASH FAN / OVERHEAD FAN  
CC11 DEST SIGN DEFROSTER  
CC12 FRT DEFROSTER / FRT AC  
CC13 RAMP HEATER  
CC16 OVERHEAD FAN ASSY  
CC17 AUX HEATER / AUX HEATER MV  
CC30 CONVECTOR CONTROL VALVE  
CC31 FORCED AIR CONVECTOR ZONE 1  
CC32 FORCED AIR CONVECTOR ZONE 2  
CC33 FORCED AIR CONVECTOR ZONE 3  
CC34 FORCED AIR CONVECTOR ZONE 4  
CC35 WARMWALL HEATING ZONE 1  
CC36 WARMWALL HEATING ZONE 2  
CC37 WARMWALL HEATING ZONE 3  
CC38 WARMWALL HEATING ZONE 4  
CC39 COOLANT LEVEL SENSORS  
CC40 FLOOR HEATER  
CC41 FRT FLOOR HEATER  
CC42 MAT HEATERS  
CC43 DRIVER HEATER  
CC55 FRT ROOF EVAPORATOR  
CC62 RR MOUNT CONDENSER  
CC66 CC INTERFACE  
CC67 UV LAMP  
CC70 CC COMPRESSOR  
CC71 ROOF BATTERY PACK COOLING  
CC72 CC CONTROL / FAN SPD SW / IND  
CC74 DASH LOUVERS  
CC90 FRT ROOF HATCH  
CC91 RR ROOF HATCH

**CN: CNG**  
CN10 CNG INTERFACE  
CN30 FUEL DOOR PROX SW  
CN31 FUEL RECEPTACLE PROX SWITCH  
CN32 FUEL DOOR ALARM  
CN40 CNG FUEL SENDER / GAUGE  
CN50 CNG TANK CONTROL  
CN60 ROOF DOOR PROX SW

**CP: COMMUNI PROVISION**  
CP00 PROVISIONAL WIRING  
CP12 DIGITAL RECORDER  
CP15 J1708 POWER  
CP16 J2496 POWER  
CP18 INTERNAL SPEAKERS  
CP20 EXTERNAL SPEAKERS  
CP22 SILENT ALARM SWITCH  
CP25 MISC. OPTIONAL FEATURES  
CP26 MISC. OPTIONAL FEATURES  
CP30 P.A. POWER / DVR POWER  
CP35 P.A. SYSTEM  
CP40 12V / 24V CONVERTER  
CP50 ENTERTAINMENT SYSTEMS  
CP60 AVA / AVL / GPS SYSTEMS  
CP61 AVA / AVL / DVR SYSTEMS  
CP62 OBJECT DETECTION SYSTEM  
CP63 APC SYSTEMS  
CP64 TRAFFIC SIGNAL PRIORITY  
CP88 RADIO SYSTEM

**DC: DOOR CONTROLS**  
DC41 STOP REQ SIGN  
DC50 BRAKE I/L MV  
DC51 PASSENGER CHIME  
DC52 RH PASSENGER SIGNALS  
DC53 W/C PASSENGER SIGNALS  
DC54 LH PASSENGER SIGNALS  
DC55 BIKE PASSENGER SIGNALS  
DC60 EXIT DOOR ENABLE LP  
DC61 LH CTR EXIT DOOR CONTROL  
DC62 LH RR EXIT DOOR CONTROL  
DC63 CTR EXIT DOOR CONTROL  
DC70 RR EXIT DOOR CONTROL  
DC71 ENT DOOR CONTROL  
DC73 DOOR ALARM  
DC74 DOOR EXTERIOR SW  
DC80 DOOR CONTROLLER  
DC81 DOOR CONTROL MODULE  
DC82 DOOR CONTROL MODULE  
DC93 BRAKE I/L AIR SENSOR  
DCJ9 J1939 NETWORK

**DS: DRIVER SIGNALS**  
DS10 TURN SW  
DS12 DECEL LIGHT  
DS14 HAZARD SW  
DS20 RH TURN LIGHTS AND IND  
DS21 LH TURN LIGHTS AND IND  
DS22 CORNERING LPS  
DS31 FRT/RR/PRK BRK PS  
DS32 LAYOVER SWITCH  
DS40 HORN ASSY  
DS41 YIELD SIGNAL  
DS46 CLICKER / BEEPER  
DS53 TAIL / LICENCE PLATE LIGHTS  
DS62 BACKUP SYSTEM  
DS72 STOP LIGHTS  
DS83 TOWING CONNECTOR

**EL: EXTERIOR LIGHTING**  
EL10 HEADLIGHTS  
EL40 HAZARD PANEL LIGHT  
EL50 MASTER RUN SWITCH  
EL70 EXTERIOR AD SIGN  
EL79 LAYOVER LIGHTS  
EL80 MARKER / CLEARANCE LIGHTS  
EL85 TWILIGHT SENSOR

**EN: ENGINE**  
EN12 AUTO DRAIN VALVE  
EN23 ETHER INJECTOR  
EN24 WATER TEMP SENDER / GAUGE  
EN25 FUEL SENDER / GAUGE  
EN26 LOW OIL SENDER / GAUGE  
EN27 FAN CONTROL  
EN30 HOURMETER  
EN35 ADJUSTABLE PEDALS  
EN41 IGNITION CONTROL  
EN42 LOW HYDRAULIC OIL  
EN43 ENG FIRE DETECTORS  
EN45 ENG BLOCK HEATER  
EN46 ENG INTERFACE IN RR OF BUS  
EN47 ENG INTERFACE IN FRT OF BUS  
EN48 ENG DIAGNOSTIC  
EN49 EMP RAD FAN  
EN50 EXHAUST SYSTEM MONITOR  
EN51 FUEL HEATING  
EN52 DCU / SCR / NOX SYSTEM  
EN53 DCU SYSTEM  
EN54 DEF SYSTEM  
EN63 ENG SENSORS / INDICATORS  
EN64 DRIVER'S ALARM  
EN70 FUEL DOOR PROX SW  
EN80 ENGINE OIL CONTROL  
EN99 DATALOGGER / ROADRELAY  
ENJ5 J1939 NETWORK 500 KBPS  
ENJ7 J1708 NETWORK  
ENJ9 J1939 NETWORK 250 KBPS

**EP: ELECTRIC PROPULSION**  
EP01 ESS BANK 1  
EP02 ESS BANK 2  
EP03 ESS BANK 3  
EP04 ESS BANK 4  
EP05 ESS BANK 5  
EP06 ESS BANK 6  
EP10 HV CHARGING  
EP11 COOLANT SYSTEM  
EP12 COOLANT SYSTEM  
EP13 CHARGE MODE SW  
EP15 THROTTLE ASSEMBLY  
EP16 SHIFT SELECTOR  
EP17 HVIL SW  
EP18 PANTOGRAPH  
EP19 LIMIT SWITCH  
EP20 CONTACTOR  
EP21 BOOSTER FAN  
EP22 ESS BALANCE SWITCH  
EP35 ADJUSTABLE PEDALS  
EP40 12VBATAB POWER  
EP43 FIRE DETECTORS  
EP48 RR DIAGNOSTIC  
EP57 REGEN BRAKING  
EP87 SPEED SIGNAL  
EP90 NETWORK POWER & CONTROL  
EP99 DATALOGGER / ROADRELAY  
EPJ9 J1939 NETWORK  
EPJD DICO NETWORK  
EPJV ESS BATTERY NETWORK

**FS: FIRE SUPPRESSION**  
FS12 FIRE SUPPRESS PWR  
FS43 PANEL FIRE SENSORS  
FS55 FIRE / GAS SIGNALS  
FS75 FIRE SUPPRESSION JOINT WIRING

**HP: HYBRID PROPULSION**  
HP10 VEHICLE CONTROL MODULE  
HP11 VEHICLE CONTROL MODULE  
HP20 TRACTION CONTROL MODULE  
HP21 TRACTION CONTROL MODULE  
HP30 DRIVE UNIT INTERNAL  
HP31 HIGH VOLTAGE INTERLOCK  
HP40 DUAL POWER INVERTER MODULE  
HP45 ROOF COOLING FANS  
HP50 ENERGY STORAGE SYSTEM  
HP57 REGEN BRAKING  
HP60 HIGH VOLTAGE SENSING  
HP64 HYBRID CONVERTER  
HP70 DRIVE MODE  
HP71 SHIFT SELECTOR  
HP74 DATA LOGGER  
HP87 SPEED SIGNAL  
HPJ9 J1939 NETWORK

**IL: INTERIOR LIGHTING**  
IL40 RR HOOP LP  
IL41 RH AISLE LPS  
IL42 LH AISLE LPS  
IL43 FRT LH READING LAMPS  
IL44 FRT RH READING LAMPS  
IL45 RR LH READING LAMPS  
IL46 RR RH READING LAMPS  
IL50 AISLE LP AUX PWR  
IL56 AISLE LPS SW  
IL57 110V TRANSFORMER  
IL60 FRT HOOP LP  
IL64 FRT AISLE LPS / CTRL SIG  
IL75 AISLE LAMPS CONTROL MODULE  
IL90 READING LIGHTS SW  
IP21 PANEL LIGHTS & DIMMER  
IP22 AUX INDICATOR LPS  
IP23 ALARM  
IP27 FUEL LEVEL SENSOR  
IP30 AIR PRESSURE SENSORS  
IP70 IP CLUSTER  
IPJ7 J1708 NETWORK  
IPJ9 J1939 NETWORK

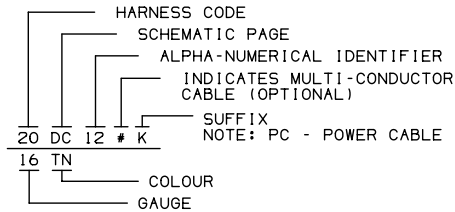
**JC: JOINT CONTROL**  
JC20 JOINT OVERRIDE  
JC95 JOINT CONNECTORS

HARNESS CODE LIST

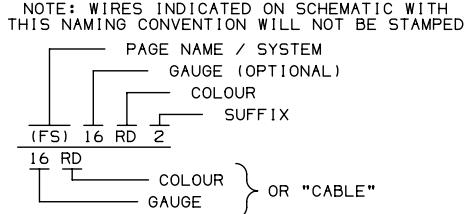
04 : ABS WIRING  
10 : REAR PANEL / CAN REAR PANEL  
11 : SIDE CONSOLE PANEL / CAN SC PANEL  
14 : FUSE BOX  
15 : ENG COMPT SW BOX  
16 : DEST SIGN PANEL  
17 : AIR BOX  
18 : HYBRID PRPLN PANEL  
18 : ABS PANEL  
20 : RH CROWN / RH CROWN FRT  
21 : RH CROWN RR  
22 : LH CROWN / LH CROWN FRT  
23 : LH CROWN RR  
24 : FRT CLEARANCE LPS  
25 : RR CLEARANCE LPS  
26 : LH RR CLEARANCE LPS  
27 : FUSE BOX ROOF  
30 : PRPLN ENGINE  
34 : SC TO DASH  
36 : BLKD TO ENG COMPT  
40 : ENT DOOR PANEL  
42 : CENTRE DOOR PANEL  
44 : HIGH VOLTAGE JUNCTION BOX  
45 : BAT PACK COOL RF  
46 : PRPLN INT / PRPLN INT RR  
47 : PRPLN INT FRT  
48 : PRPLN ROOF  
49 : PRPLN ROOF FRT  
50 : ALLISON HYB EXT  
51 : SC TO DASH OPTIONS  
52 : FLOOR HEATERS FRT  
53 : RH OPTIONS / RH OPTIONS FRT  
54 : RH OPTIONS RR  
55 : LH OPTIONS / LH OPTIONS FRT  
56 : LH OPTIONS RR  
57 : EXIT DOOR PANEL  
58 : FLOOR HEATERS / FLOOR HEATERS RR  
60 : ENG COMPT OPTIONS  
61 : FRT RAMP  
62 : BLOCK HEATER  
63 : ENG SCR  
64 : LICENSE PLATE LPS  
65 : BLOCK HEATER RR  
67 : RAMP  
68 : RAMP PANEL  
70 : RH JOINT  
71 : REAR RAMP  
72 : CENTER RAMP  
73 : CENTER RAMP CONTROL PANEL  
74 : SERVICE LP  
75 : LH JOINT  
76 : AIR COMPRESSOR CNTOR BOX  
79 : DEVICE PIGTAIL  
80 : RR PANEL TO GAS TANKS  
81 : GAS TANKS ROOF  
83 : RADIO BOX / SDS PANEL  
85 : FOOT SW TURN SIG  
87 : FUEL SENDER  
90 : CNG HRNS FRT  
91 : GAS TANKS ROOF FRT  
96 : STOP REQUEST HARNESSSES  
99 : JUMPER HARNESS  
140 : ENGINE HARNESS  
143 : TRANSMISSION HARNESS  
145 : TRANSMISSION INTERIOR HARNESS  
147 : TRANSMISSION INTERIOR HARNESS FRT  
148 : TRANS INT  
152 : ENGINE INTERIOR HARNESS  
157 : ENGINE INTERIOR HARNESS FRT  
201 : ESS RR BANKS  
202 : ESS INT BANK  
203 : ESS RFTOP FRT BANK  
204 : ESS RFTOP MID BANK  
205 : ESS RFTOP RR BANK  
206 : CONTACTOR BOX  
207 : PANTOGRAPH BOX  
208 : HVESSEB ROOF  
209 : CONTACTOR BOX ROOF  
213 : ESS LH RR COMPT  
214 : ESS RH RR COMPT  
215 : ESS LH RR COMPT OPT  
216 : ESS RH RR COMPT OPT  
217 : ESS RF RACK TO XBHRF  
218 : HRNS-ESS INT BANK LH LOWER  
219 : HRNS-ESS INT BANK RH LOWER  
220 : HRNS-ESS INT BANK LH UPPER  
221 : HRNS-ESS INT LH TO RH  
222 : HRNS-HV CURRENT SENSING ESS1  
225 : HRNS-HV CURRENT SENSING ESS2  
226 : HRNS-HV CURRENT SENSING ESS3  
224 : HRNS-ESS INT BANK RH UPPER  
901 : HRNS-INTERLOCK ROOF FRT

NOTES:  
THE G1 PAGE CONTAINS INFORMATION ABOUT VARIOUS  
PROPULSION TYPES AND ACCESSORIES

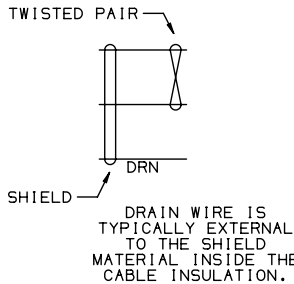
CODE CONFIGURATION



ALTERNATE CODE CONFIGURATION



MULTICONDUCTOR CABLES



COLOR SCHEME

(EXCLUDES MULTI-CONDUCTOR CABLES)  
RED : 24V BATTERY POWER  
BLUE : 12V BATTERY POWER  
LIGHT BLUE: 12V BATTERY POWER  
TAN : SWITCHED POWER / SWITCHED GROUND  
YELLOW : PLC INPUT  
WHITE : GROUND WIRE  
BLACK : GROUND POWER CABLE  
ORANGE : SPARE WIRE (NON-BATTERY BUS)  
ORANGE : HIGH VOLTAGE WIRES (BATTERY BUS)  
PURPLE : SPARE WIRES (BATTERY BUS)

|                  |            |     |  |
|------------------|------------|-----|--|
| DRAWN BY         | TINTU PAUL |     |  |
| DATE (DD-MMM-YY) | 23-MAR-16  | REV |  |
|                  |            |     |  |
|                  |            |     |  |

SHEET AFFECTED (1, 2, 3)  
1) ADDED WIRE CODES AND HARNESS CODES  
2) REORGANIZED THE SHEET FOR BETTER LAYOUT

ECN-064075

DESCRIPTION

ECO

REPORT ALL ERRORS TO ENG. DEPT.

TITLE  
ES-GENERAL INFO G1

SHEET NAME -

SHEET 1 OF 3

SCALE NTS

B



PART N°  
437137

(NX)

THIS INFORMATION CONTAINED IN THIS DRAWING IS PROPRIETARY TO NEW FLYER INDUSTRIES CANADA ULC OR ITS AFFILIATES ("NEW FLYER"). THIS DRAWING AND ALL MATERIAL DELIVERED WITH IT MUST BE RETURNED UPON REQUEST, AND SHALL NOT BE DISCLOSED TO THIRD PARTIES WITHOUT THE PRIOR WRITTEN CONSENT OF NEW FLYER. ONE OR MORE PATENTS MAY BE PENDING FOR THE PRODUCTS DEPICTED HEREIN. (C) 2016 NEW FLYER INDUSTRIES CANADA ULC. ALL RIGHTS RESERVED.

ABBREVIATIONS

LOCATIONS

AB : ABS PANEL  
BC : BATTERY COMPT  
BH : ABOVE REAR SHELF (BULKHEAD)  
CB : CONTRACTOR BOX  
CD : CENTRE DOOR  
CDL : CENTRE DOOR LEFT  
DOP : DRIVER'S OVERHEAD PANEL  
EC : ENGINE COMPARTMENT  
ECSB : ENGINE COMPARTMENT SWITCH BOX  
ED : EXIT DOOR  
EDL : EXIT DOOR LEFT  
ESB : ENGINE FUSEBOX  
ESB : ENGINE SWITCH BOX  
ENT : ENTRANCE  
FD : FRONT DESTINATION SIGN  
FE : FRONT ENTRANCE  
FRT : FRONT  
HP : HYBRID PROPULSION  
HVJB : HIGH VOLTAGE JUNCTION BOX  
IP : INSTRUMENT PANEL  
JF, JFRT : JOINT FRONT  
JR, JRR : JOINT REAR  
LHC : LEFT HAND CROWN  
LHCR : LEFT HAND CROWN REAR  
PGB : PANTOGRAPH BOX  
RB : RADIO BOX  
RH : ROOF  
RHC : RIGHT HAND CROWN  
RHCR : RIGHT HAND CROWN REAR  
RR : REAR / REAR PANEL  
SC : SIDE CONSOLE  
SD : SYSTEM DRAWING  
SDS : SECURE DIAGNOSTIC STATION

MISCELLANEOUS ABBREVIATIONS

BB : BUS BAR  
BHL : BULK HEAD LEFT  
BHR : BULK HEAD RIGHT  
CC : CLIMATE CONTROL  
CHL : CHIME LEFT  
CHR : CHIME RIGHT  
CNTOR : CONTACTOR  
DPIM : DUAL POWER INVERTER MODULE  
ESS : ENERGY STORAGE SYSTEM  
FB : FUSE BOX  
GNDB : GROUND BAR (ISOLATED)  
GNDP : GROUND POINT (CHASSIS)  
HVIL : HIGH VOLTAGE INTER LOCK  
JS : JUMP START  
LP : LAMP  
KNL : KNEEL  
PWR : POWER  
RMP : RAMP  
SW : SWITCH  
USC : UNDER SIDE CONSOLE  
VCAN : J1939 COMMUNICATION  
VR : VOLTAGE REGULATOR  
VTH : VOITH  
VEH : VEHICLE

SHEET NAMES

G1: GENERAL INFO  
PD: POWER DISTRIBUTION  
IO: I/O ASSIGNMENT  
NT: NETWORK TOPOLOGY  
PN: PRIMARY NETWORKS  
PS: POWER & STARTING  
EN: ENGINE  
TR: TRANSMISSION  
HP: HYBRID PROPULSION  
EP: ELECTRIC PROPULSION  
CN: CNG  
LN: LNG  
CC: CLIMATE CONTROL  
DC: DOOR CONTROLS  
DS: DRIVER SIGNALS  
EL: EXTERIOR LIGHTING  
IL: INTERIOR LIGHTING  
LI: LIGHTING  
LK: KNEELING  
CP: COMMUNI PROVISION  
AF: AUX FUNCTIONS  
JC: JOINT CONTROL  
FS: FIRE SUPPRESSION  
AB: ANTILOCK BRAKING  
IP: INSTRUMENT PANEL  
SIG : BATTERY (CONSTANT) FOR INPUTS

POWER SUPPLY TYPES

BAT : BATTERY (CONSTANT)  
DN : DAY/NIGHT (SWITCHED)  
ELE : ELECTRONIC (ISOLATED)  
IGN : IGNITION (SWITCHED)  
SIG : BATTERY (CONSTANT) FOR INPUTS

COLOURS

BK : BLACK  
BL : BLUE  
BN : BROWN  
CLR : CLEAR  
DB : DARK BLUE  
DGN : DARK GREEN  
DRN : DRAIN WIRE  
GN : GREEN  
GY : GRAY  
LB : LIGHT BLUE  
LGN : LIGHT GREEN  
OR : ORANGE  
PK : PINK  
PL : PURPLE  
RD : RED  
SHD : SHIELD  
TN : TAN  
VI : VIOLET  
WH : WHITE  
YL : YELLOW

DEVICE LEGEND

ROTARY SWITCH

TEMPERATURE SWITCH

FLUID LEVEL SWITCH

PRESSURE SWITCH

DIODE

SPLICE

SPLICE/DIODE CODES:

OUTPUT

INPUT

XX : NODE ADDRESS  
YY : NODE LOCATION  
VMM : MODULE TYPE  
PIN : CONNECTOR - TERMINAL  
CUR : CURRENT LIMIT (OUTPUTS)  
V : ANLG, FREQ, BAT, TRI, GND (INPUTS)  
12V, 24V, GND (OUTPUTS)  
WORD : PROGRAM ADDRESS

1 - 09

VMM ADDRESS

I : DISCRETE INPUT  
F : FREQUENCY INPUT  
A : ANALOG INPUT  
O : DISCRETE OUTPUT

RESISTOR

MOTOR

GAUGE

ANTENNA

OFFPAGE REFERENCE

SHEET NUMBER

SHEET NUMBER

LOCATION ON SHEET

VARISTOR

PROXIMITY SWITCH

TOGGLE SWITCH

LIMIT SWITCH

FUSE

THERMAL BREAKER

MAGNETIC BREAKER

CONNECTOR CODES:

X SC 99 -11

PIN NUMBER

CONNECTOR NUMBER

LOCATION / FUNCTION

CONNECTOR

SPEAKER

BRIDGE RECTIFIER

FOOT SWITCH

CHIME SWITCH

SPARE WIRE LOCATION

RING TONGUE CONNECTOR

SINGLE CAVITY OF A CONNECTOR

CONNECTOR

CONNECTIONS SHOWN WITHIN A DEVICE ON SCHEMATICS MAY NOT SHOW ALL DETAILS. REFER TO INDIVIDUAL PART DRAWINGS FOR COMPLETE DETAILED WIRING.

MAG VALVE (WITH EXTERNAL DIODE)

END CAPPED WIRE

NOT REQUIRED

MAG VALVE (WITH BUILT-IN DIODE)

BUS BAR CONNECTOR (INTERNALLY CONNECTED)

CHASSIS GROUND

GROUND

LOCATION

P: POINT  
B: BAR (ISOLATED)

NO SWITCH

NOHC SWITCH

NC SWITCH

NCHO SWITCH

DIODE ASSEMBLY CONNECTOR (INTERNAL CONNECT)

NOTCH (ARROW) INDICATES CONNECTION FOUND ON SD- DRAWING

ASTERISK INDICATES SWITCH IS MOMENTARY  
NO ASTERISK INDICATES SWITCH IS MAINTAINED

NOTES:  
SCHEMATICS SHOW COMPONENTS AND SWITCHES IN A STATE CONSISTENT WITH THE FOLLOWING CONDITIONS:  
(A) THE BUS HAS JUST BEEN DRIVEN, BUT IS NOW PARKED  
(B) THE MASTER RUN SWITCH HAS JUST BEEN TURNED OFF  
(C) ACCESSORIES SHOWN IN COMMON OPERATING STATES

DRAWN BY

TINTU PAUL

DATE (DD-MMM-YY)

23-MAR-16

REV

8

DESCRIPTION

ECO

REPORT ALL ERRORS TO ENG. DEPT.

SHEET NAME -

SHEET 2 OF 3

SCALE NTS

B

NEW FLYER

PART N°

437137

(NX)

2

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G

F

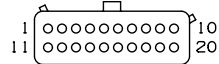
E

D

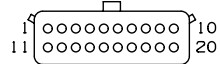
C

B

A



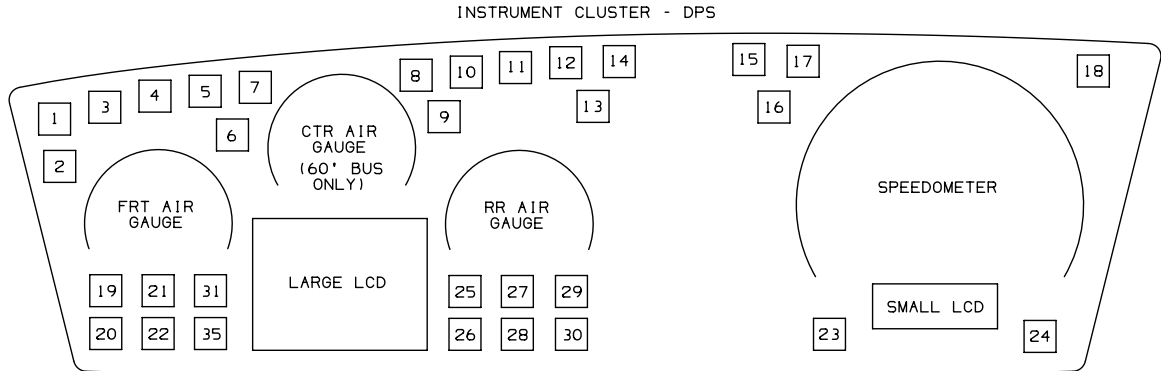
J1 (LT. GRAY)



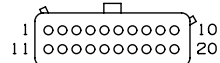
J2 (BLACK)

| IP CLUSTER J1 CONNECTOR |              |           |
|-------------------------|--------------|-----------|
| PIN                     | PIN FUNCTION | S-MESSAGE |
| J1-1                    | DIGITAL_2    | S-50502   |
| J1-2                    | DIGITAL_1    | S-50501   |
| J1-3                    | CAN_SHIELD_2 | N/A       |
| J1-4                    | CANL_2       | N/A       |
| J1-5                    | CANH_2       | N/A       |
| J1-6                    | CAN_SHIELD_1 | N/A       |
| J1-7                    | CANL_1       | N/A       |
| J1-8                    | CANH_1       | N/A       |
| J1-9                    | GND          | N/A       |
| J1-10                   | VBATT        | N/A       |
| J1-11                   | DIGITAL_3    | S-50503   |
| J1-12                   | DIGITAL_4    | S-50504   |
| J1-13                   | DIGITAL_5    | S-50505   |
| J1-14                   | DIGITAL_6    | S-50506   |
| J1-15                   | GND          | N/A       |
| J1-16                   | ANALOG_1     | S-50541   |
| J1-17                   | ANALOG_2     | S-50542   |
| J1-18                   | FREQ_1       | S-50521   |
| J1-19                   | HSO_1        | S-50617   |
| J1-20                   | LIN_BUS_1    | N/A       |

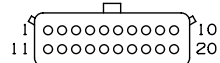
| IP CLUSTER J2 CONNECTOR |            |           |
|-------------------------|------------|-----------|
| PIN                     | I/O NAME   | S-MESSAGE |
| J2-1                    | DIGITAL_17 | S-50517   |
| J2-2                    | DIGITAL_16 | S-50516   |
| J2-3                    | DIGITAL_15 | S-50515   |
| J2-4                    | DIGITAL_14 | S-50514   |
| J2-5                    | DIGITAL_13 | S-50513   |
| J2-6                    | DIGITAL_12 | S-50512   |
| J2-7                    | DIGITAL_11 | S-50511   |
| J2-8                    | DIGITAL_10 | S-50510   |
| J2-9                    | DIGITAL_9  | S-50509   |
| J2-10                   | DIGITAL_8  | S-50508   |
| J2-11                   | ANALOG_3   | S-50543   |
| J2-12                   | ANALOG_4   | S-50544   |
| J2-13                   | FREQ_2     | S-50522   |
| J2-14                   | LSO_1      | S-50616   |
| J2-15                   | HSO_2      | S-50618   |
| J2-16                   | DIGITAL_18 | S-50518   |
| J2-17                   | DIGITAL_19 | S-50519   |
| J2-18                   | DIGITAL_20 | S-50520   |
| J2-19                   | DIGITAL_7  | S-50507   |
| J2-20                   | ANALOG_5   | S-50545   |



NUMBERS GIVEN CORRESPOND TO "T1-" TELLTALE SYMBOLS IN THE VMM PROGRAM.  
SYMBOLS "T2-", "T3-", ETC. CORRESPOND TO INDICATORS DISPLAYED ON THE LARGE LCD SCREEN.



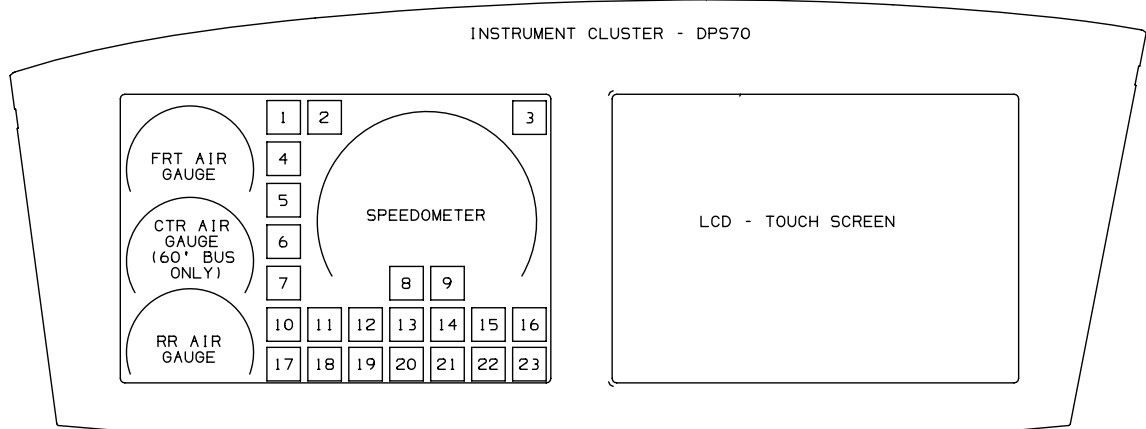
J1 (LT. GRAY)



J2 (BLACK)

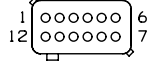
| IP CLUSTER J2 CONNECT |              |
|-----------------------|--------------|
| PIN                   | PIN FUNCTION |
| J1-1                  | DIGITAL_2    |
| J1-2                  | DIGITAL_1    |
| J1-3                  | CAN_SHIELD_2 |
| J1-4                  | CAN_LO_2     |
| J1-5                  | CAN_HI_2     |
| J1-6                  | CAN_SHIELD_1 |
| J1-7                  | CAN_LO_1     |
| J1-8                  | CAN_HI_1     |
| J1-9                  | GND          |
| J1-10                 | VBATT        |
| J1-11                 | DIGITAL_3    |
| J1-12                 | ANALOG_3     |
| J1-13                 | ANALOG_4     |
| J1-14                 | FREQ_1       |
| J1-15                 | GND          |
| J1-16                 | ANALOG_1     |
| J1-17                 | ANALOG_2     |
| J1-18                 | HSO_1        |
| J1-19                 | HSO_2        |
| J1-20                 | VBATT        |

| IP CLUSTER J3 CONNECT |              |
|-----------------------|--------------|
| PIN                   | I/O NAME     |
| J2-1                  | CAN_LO_3     |
| J2-2                  | CAN_HI_3     |
| J2-3                  | CAN_SHIELD_3 |
| J2-4                  | DIGITAL_4    |
| J2-5                  | ANALOG_10    |
| J2-6                  | ANALOG_9     |
| J2-7                  | ANALOG_8     |
| J2-8                  | ANALOG_7     |
| J2-9                  | ANALOG_6     |
| J2-10                 | ANALOG_5     |
| J2-11                 | DIGITAL_5    |
| J2-12                 | DIGITAL_6    |
| J2-13                 | FREQ_2       |
| J2-14                 | DIGITAL_7    |
| J2-15                 | -            |
| J2-16                 | RS232_RX     |
| J2-17                 | RS232_TX     |
| J2-18                 | DIGITAL_8    |
| J2-19                 | DIGITAL_9    |
| J2-20                 | 5V OUT       |



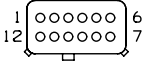
NUMBERS GIVEN CORRESPOND TO "T1-" TELLTALE SYMBOLS IN THE VMM PROGRAM.  
SYMBOLS "T2-", "T3-", ETC. CORRESPOND TO INDICATORS DISPLAYED ON THE LARGE LCD SCREEN.

NOTES:  
CONNECTOR KEYWAYS ARE SHOWN AS "WIRE VIEW" OF NFIL HARNESS



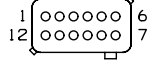
J1 (BROWN)

| 1615 J1 CONNECTOR |                |
|-------------------|----------------|
| PIN               | PIN FUNCTION   |
| J1-1              | OUTPUT1_10_HS  |
| J1-2              | GND            |
| J1-3              | VBATT_LOGIC    |
| J1-4              | INPUT15_AD     |
| J1-5              | INPUT7_D       |
| J1-6              | INPUT8_DF      |
| J1-7              | OUTPUT14_SSR_A |
| J1-8              | CAN2_HI        |
| J1-9              | CAN2_LO        |
| J1-10             | CAN1_HI        |
| J1-11             | CAN1_LO        |
| J1-12             | CAN1_SHLD      |



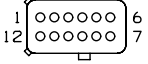
J2 (GREY)

| 1615 J2 CONNECTOR |                 |
|-------------------|-----------------|
| PIN               | PIN FUNCTION    |
| J2-1              | INPUT4_D        |
| J2-2              | INPUT9_AD       |
| J2-3              | INPUT10_AD      |
| J2-4              | INPUT11_AD      |
| J2-5              | INPUT12_AD      |
| J2-6              | GND             |
| J2-7              | OUTPUT14_SSR_B  |
| J2-8              | OUTPUT13_2A5_LS |
| J2-9              | OUTPUT15_SSR_B  |
| J2-10             | OUTPUT15_SSR_A  |
| J2-11             | SENSOR_SUPPLY   |
| J2-12             | OUTPUT2_10A_HS  |



J3 (GREEN)

| 1615 J3 CONNECTOR |                 |
|-------------------|-----------------|
| PIN               | PIN FUNCTION    |
| J3-1              | OUTPUT7_5A_HS   |
| J3-2              | OUTPUT5_10A_HS  |
| J3-3              | INPUT1_D        |
| J3-4              | ADDR5           |
| J3-5              | OUTPUT9_5A_HS   |
| J3-6              | OUTPUT3_10A_HS  |
| J3-7              | INPUT2_D        |
| J3-8              | INPUT13_AD      |
| J3-9              | INPUT14_AD      |
| J3-10             | INPUT5_D        |
| J3-11             | INPUT6_D        |
| J3-12             | OUTPUT11_2A5_HS |



J4 (BLACK)

| 1615 J4 CONNECTOR |                 |
|-------------------|-----------------|
| PIN               | PIN FUNCTION    |
| J4-1              | OUTPUT12_2A5_HS |
| J4-2              | GND             |
| J4-3              | ADDR1           |
| J4-4              | ADDR2           |
| J4-5              | ADDR3           |
| J4-6              | ADDR4           |
| J4-7              | OUTPUT4_10A_HS  |
| J4-8              | OUTPUT10_5A_HS  |
| J4-9              | INPUT16_AD      |
| J4-10             | INPUT3_D        |
| J4-11             | OUTPUT6_10A_HS  |
| J4-12             | OUTPUT8_2A5_HS  |



J5 (BLACK)

| 1615 J5 CONNECTOR |              |
|-------------------|--------------|
| PIN               | PIN FUNCTION |
| J5-1              | BUS BAR 1    |

(SUPPLIES OUTPUTS:  
1, 3, 5, 7, 9, 11)

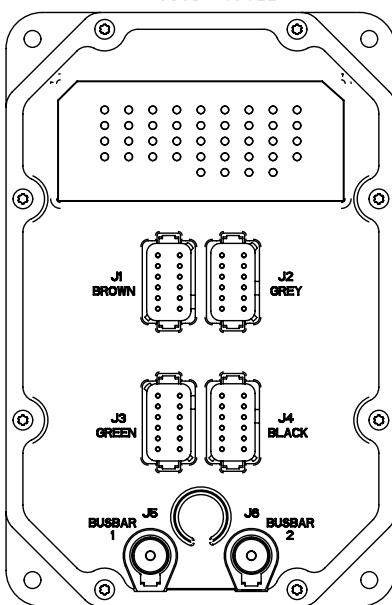


J6 (BLACK)

| 1615 J6 CONNECTOR |              |
|-------------------|--------------|
| PIN               | PIN FUNCTION |
| J6-1              | BUS BAR 2    |

(SUPPLIES OUTPUTS:  
2, 4, 6, 8, 10, 12)

VMM1615 MODULE



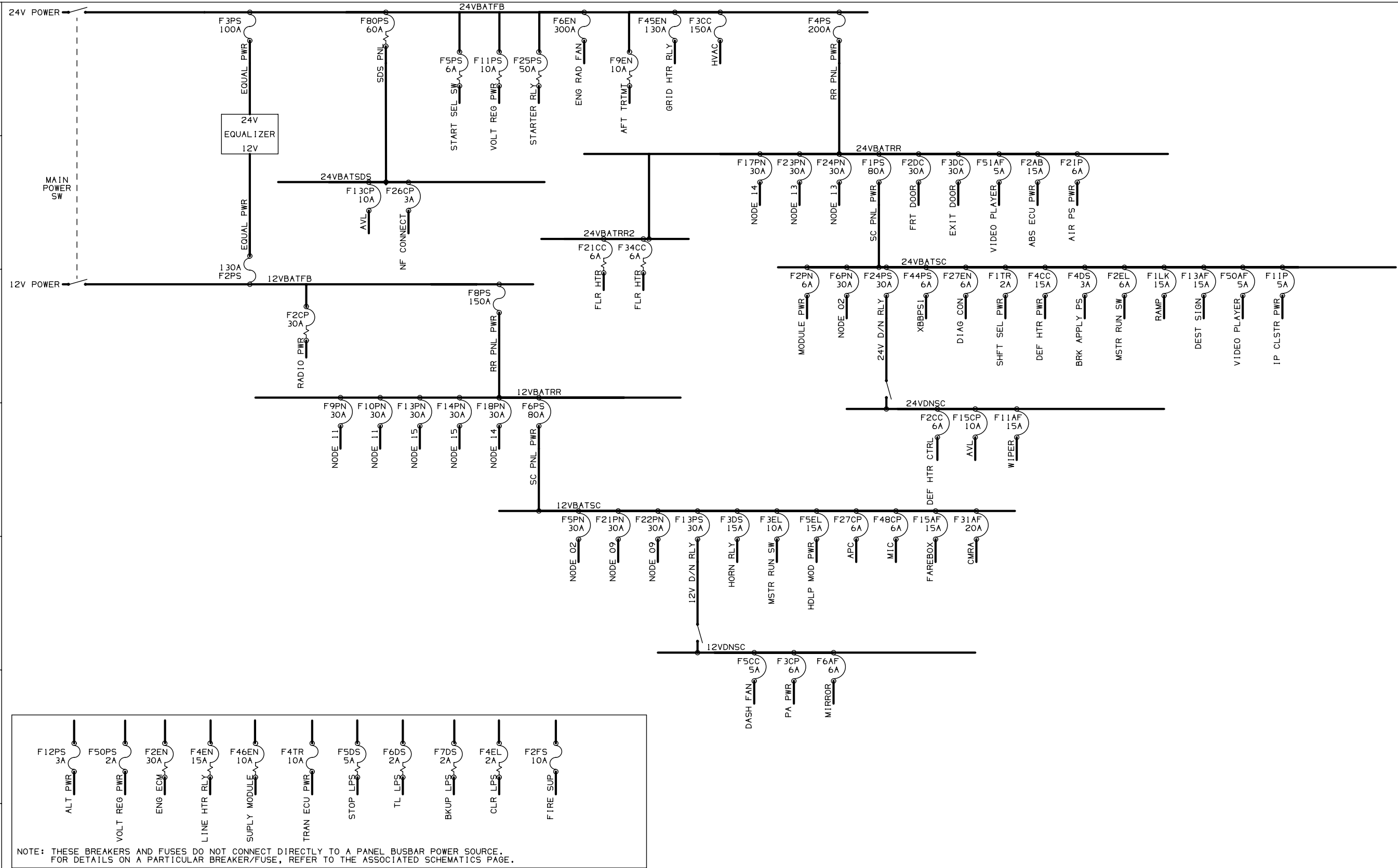
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| DRAWN BY        |     |                                         |            |
| TINTU PAUL      |     |                                         |            |
| DATE (DD-MM-YY) | V   | REORGANIZED THE SHEET FOR BETTER LAYOUT | ECN-064075 |
| 23-MAR-16       | REV | DESCRIPTION                             | ECO        |

|                    |   |              |           |
|--------------------|---|--------------|-----------|
| TITLE              |   |              |           |
| ES-GENERAL INFO G1 |   |              |           |
| SHEET NAME         | - | SHEET 3 OF 3 | SCALE NTS |

|           |  |      |  |
|-----------|--|------|--|
| PART N°   |  |      |  |
| 437137    |  |      |  |
| NEW FLYER |  | (NX) |  |



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| DRAWN BY         |     |                 |            |
| RHEMA PRATHIPATI |     |                 |            |
| DATE (DD-MMM-YY) | B   | SHEET UNCHANGED | ECN-066894 |
| 18-MAY-16        | REV | DESCRIPTION     | ECO        |

|                          |  |  |  |                |  |  |  |       |  |  |  |       |  |  |  |     |  |  |  |   |  |  |  |
|--------------------------|--|--|--|----------------|--|--|--|-------|--|--|--|-------|--|--|--|-----|--|--|--|---|--|--|--|
| TITLE                    |  |  |  | SHEET NAME     |  |  |  | PD    |  |  |  | SCALE |  |  |  | NTS |  |  |  | B |  |  |  |
| ES-ELECTRICAL SCHEMATICS |  |  |  | SHEET 02 OF 30 |  |  |  | SCALE |  |  |  | NTS   |  |  |  | B   |  |  |  |   |  |  |  |



NEW FLYER

PART N°

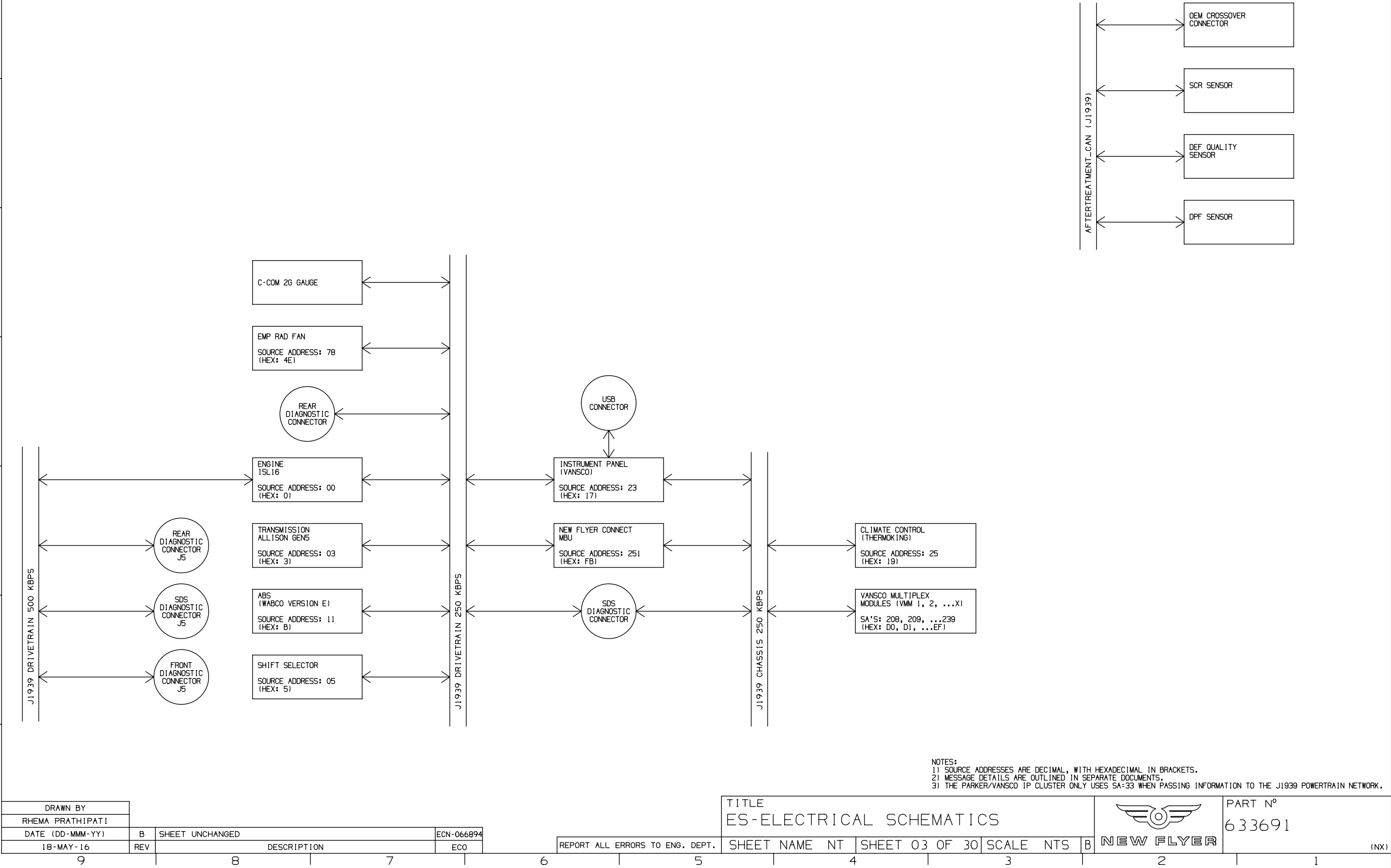
633691

(NX)



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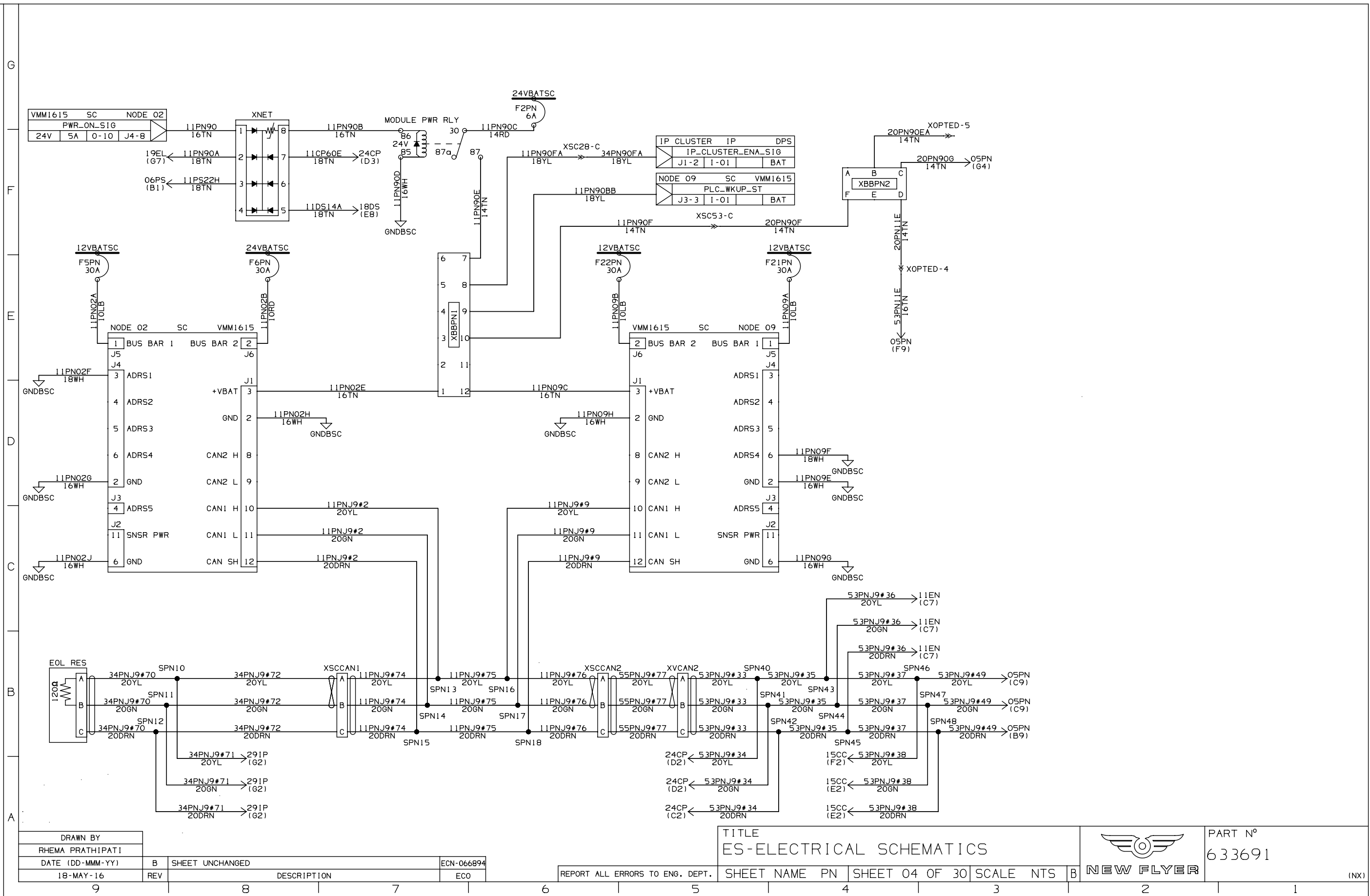
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| DRAWN BY         |     |                 |            |
| RHEMA PRATHIPATI |     |                 |            |
| DATE (DD-MMM-YY) | B   | SHEET UNCHANGED | ECN-066894 |
| 18-MAY-16        | REV | DESCRIPTION     | ECO        |

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| REPORT ALL ERRORS TO ENG. DEPT. |  | SHEET NAME NT                     | SHEET 03 OF 30 | SCALE NTS | B | NEW FLYER                                                                             |  | (NX)              |  |

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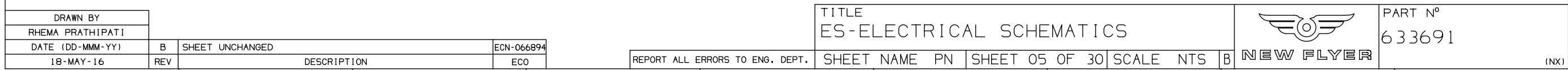


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| DRAWN BY         |  | RHEMA PRATHIPATI |  |
| DATE (DD-MMM-YY) |  | 18-MAY-16        |  |
| REV              |  | B                |  |
| SHEET UNCHANGED  |  | ECO-066894       |  |
| DESCRIPTION      |  | ECO              |  |

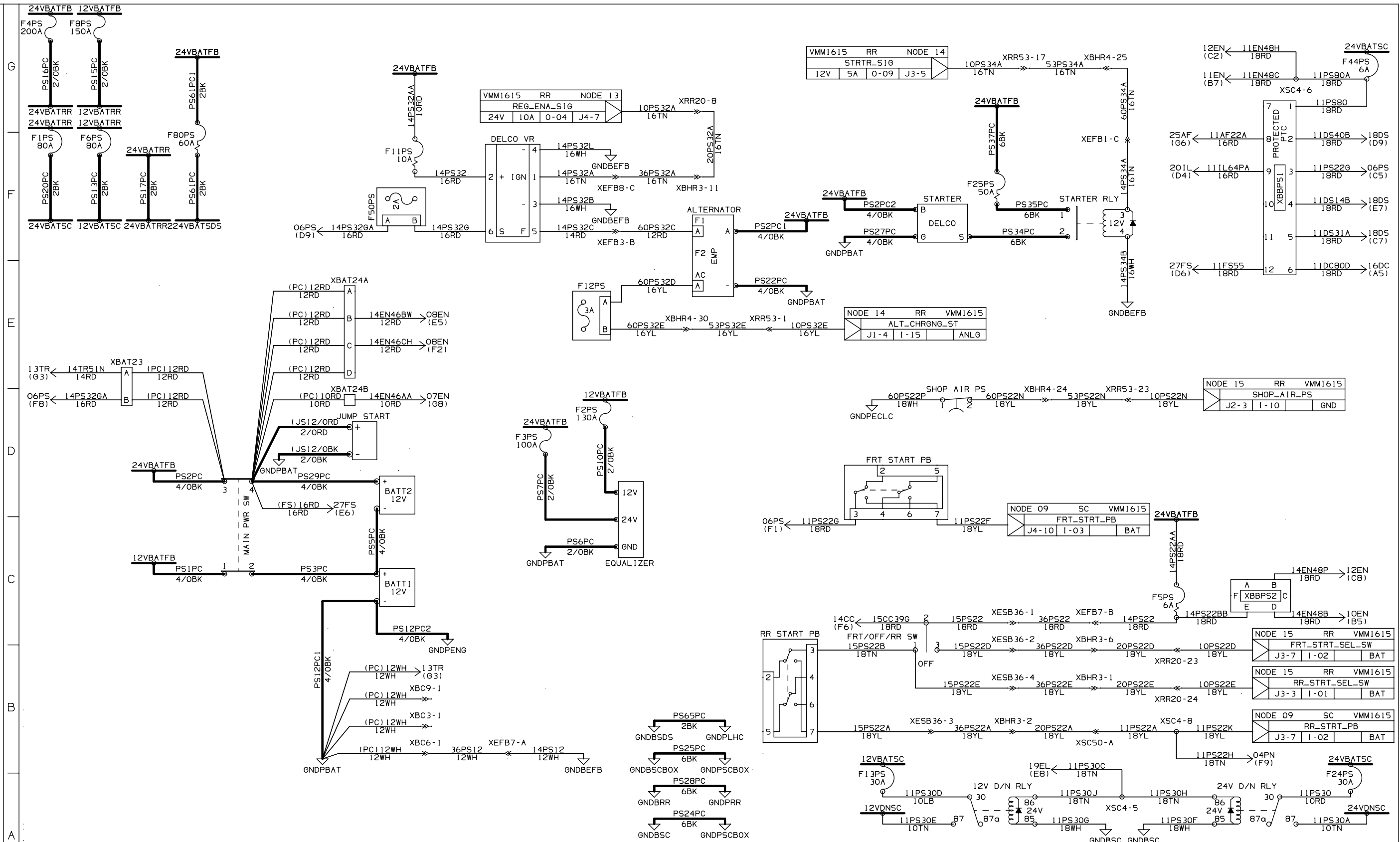
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| SHEET NAME     |  | PN                       |  |
| SHEET 04 OF 30 |  | SCALE NTS                |  |

|           |  |        |  |
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| PART N°   |  | 633691 |  |
| NEW FLYER |  | (NX)   |  |

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|                  |     |                 |   |
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| DRAWN BY         |     |                 |   |
| RHEMA PRATHIPATI |     |                 |   |
| DATE (DD-MMM-YY) | B   | SHEET UNCHANGED |   |
| 18-MAY-16        | REV | ECO             |   |
| 9                | 8   | 7               | 6 |

TITLE  
ES-ELECTRICAL SCHEMATICS

SHEET NAME PS

SHEET 06 OF 30

SCALE NTS

B

NEW FLYER

(NX)

PART N°  
633691

REPORT ALL ERRORS TO ENG. DEPT.

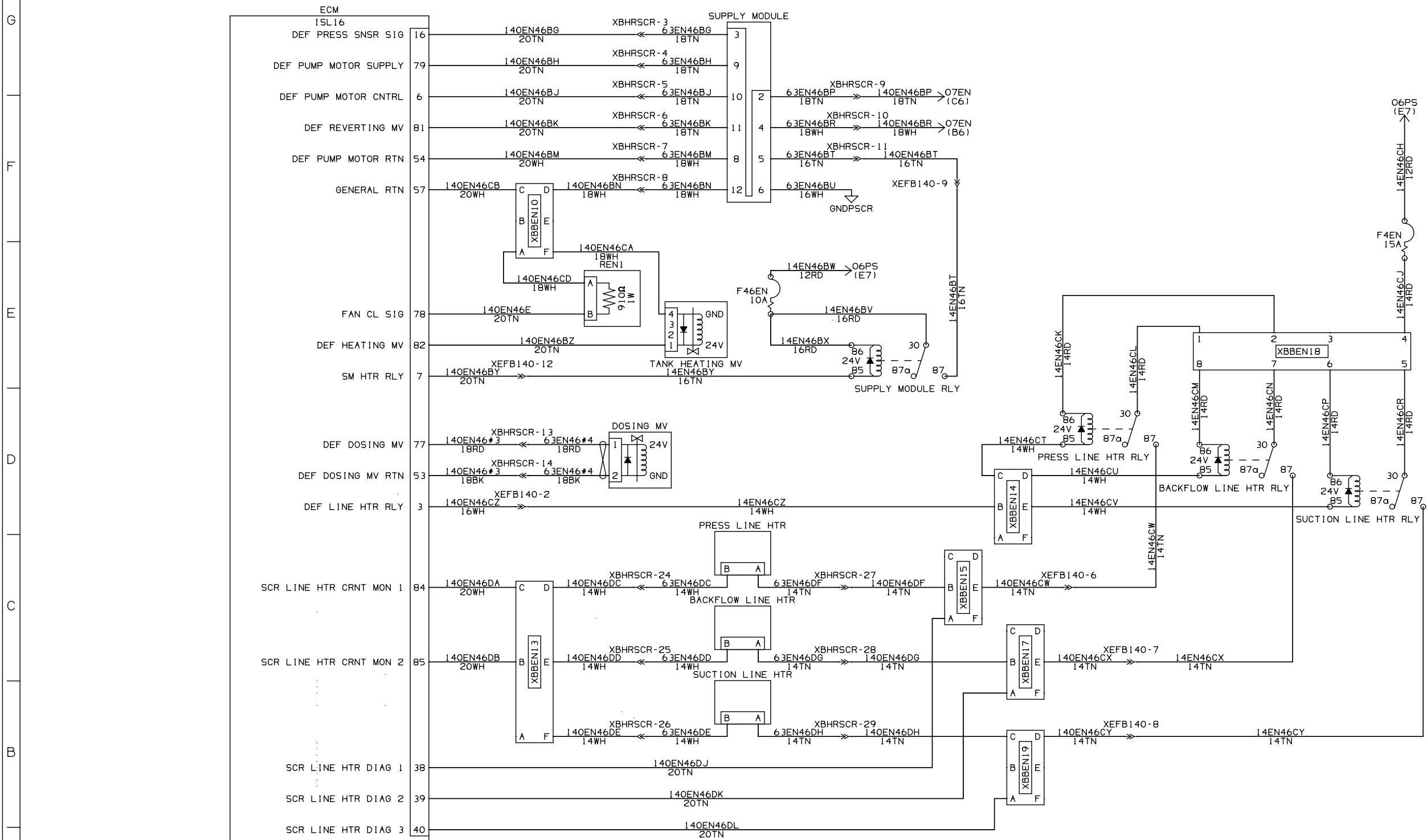
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(NX)

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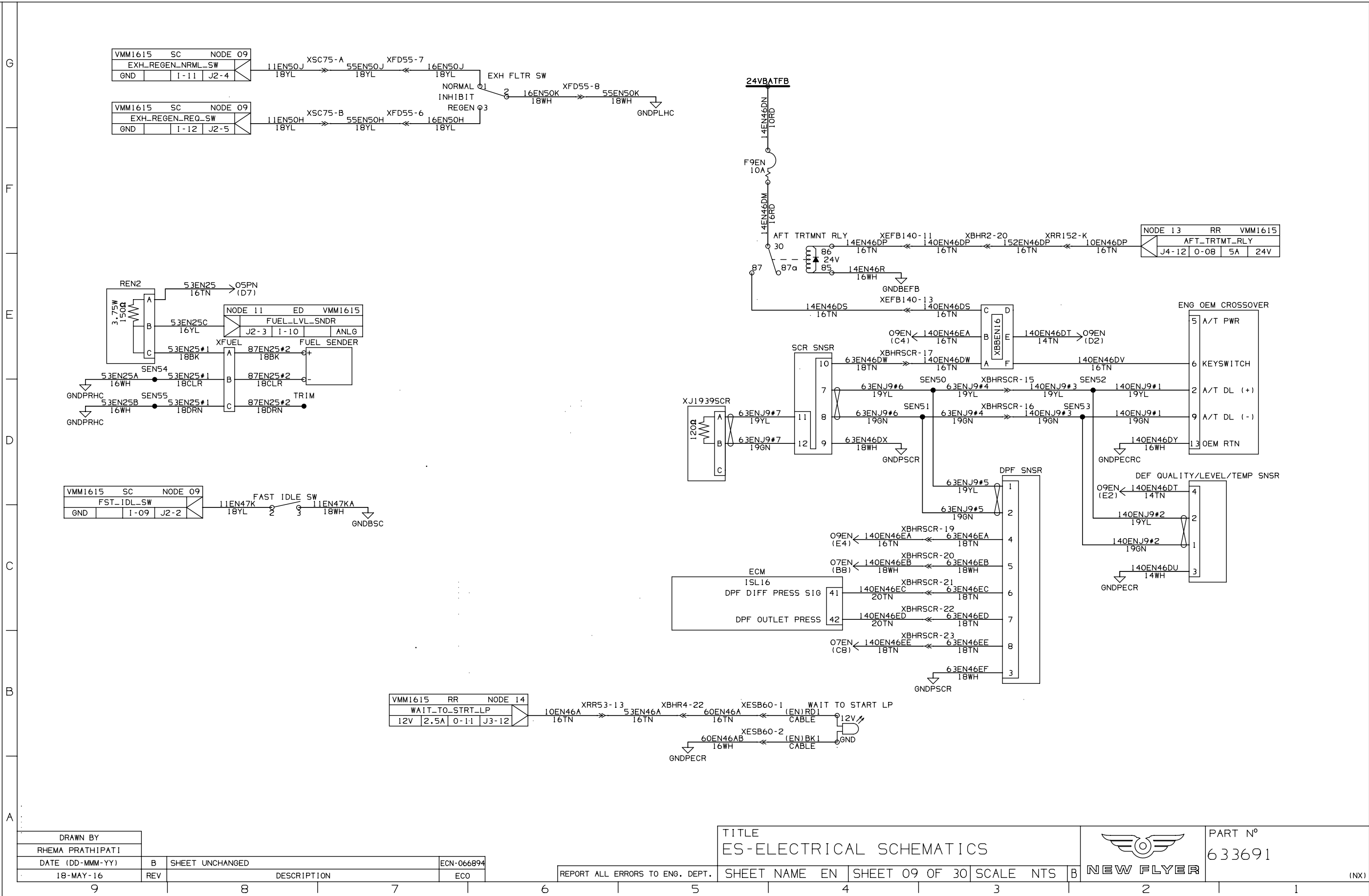
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| DRAWN BY         |     |                 |            |
| RHEMA PRATHIPATI |     |                 |            |
| DATE (DD-MMM-YY) | B   | SHEET UNCHANGED | ECN-066894 |
| 18-MAY-16        | REV | DESCRIPTION     | ECO        |

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|--------------------------|----|----------------|-----------|
| TITLE                    |    |                |           |
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| SHEET NAME               | EN | SHEET 08 OF 30 | SCALE NTS |
| B                        |    |                |           |

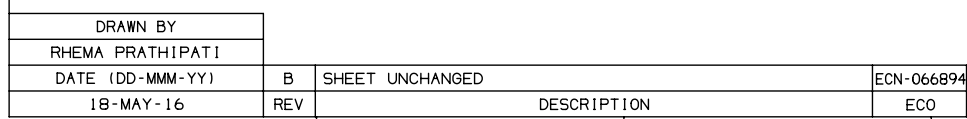
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| <br><b>NEW FLYER</b> | PART N°<br>633691 |
|                                                                                                           | (NX)              |



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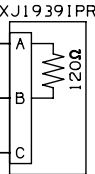


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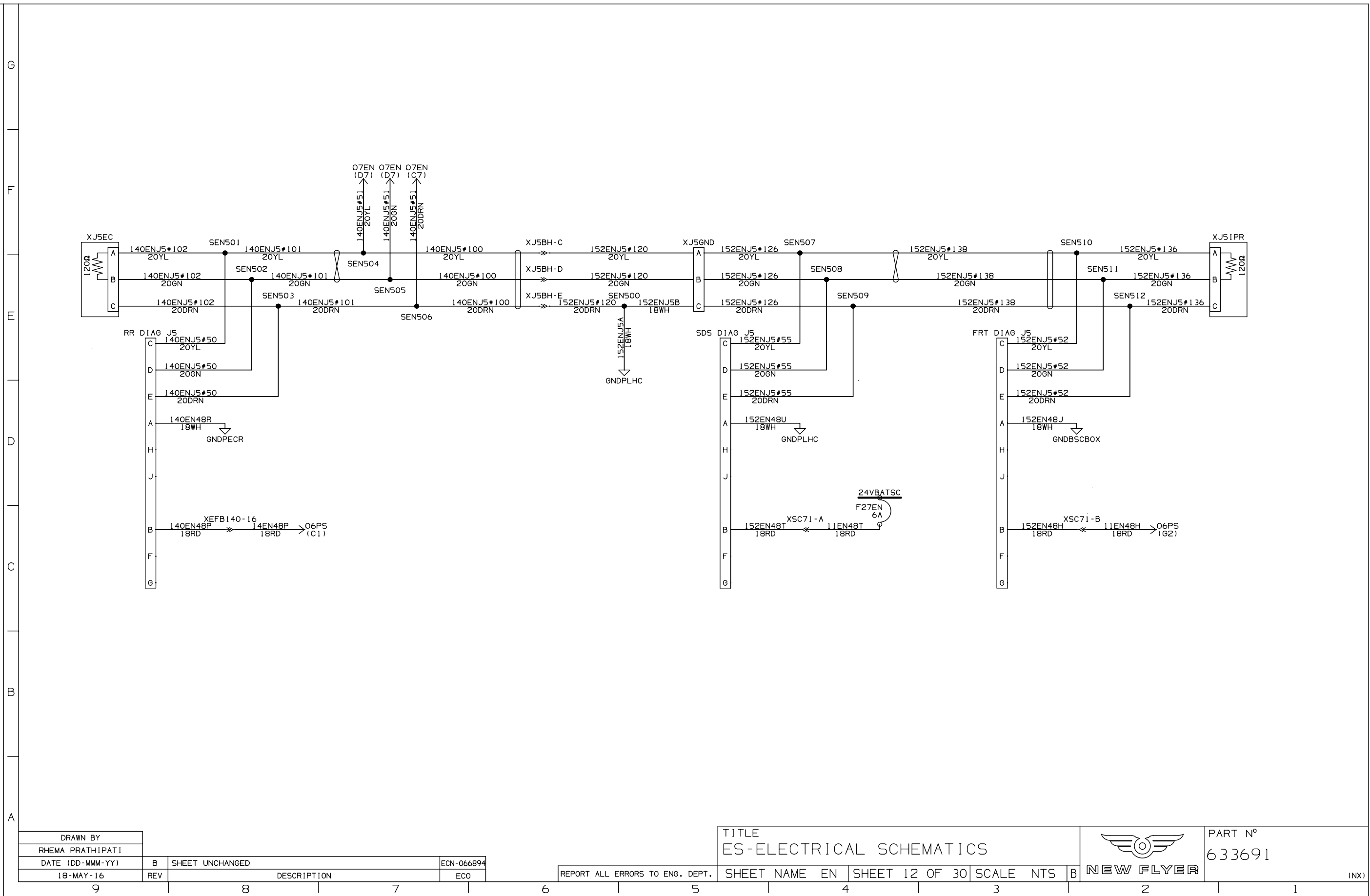


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| REPORT ALL ERRORS TO ENG. DEPT. | SHEET NAME | EN                                | SHEET 10 OF 30 | SCALE | NTS                                                                                   | B | NEW FLYER (NX)         |  |

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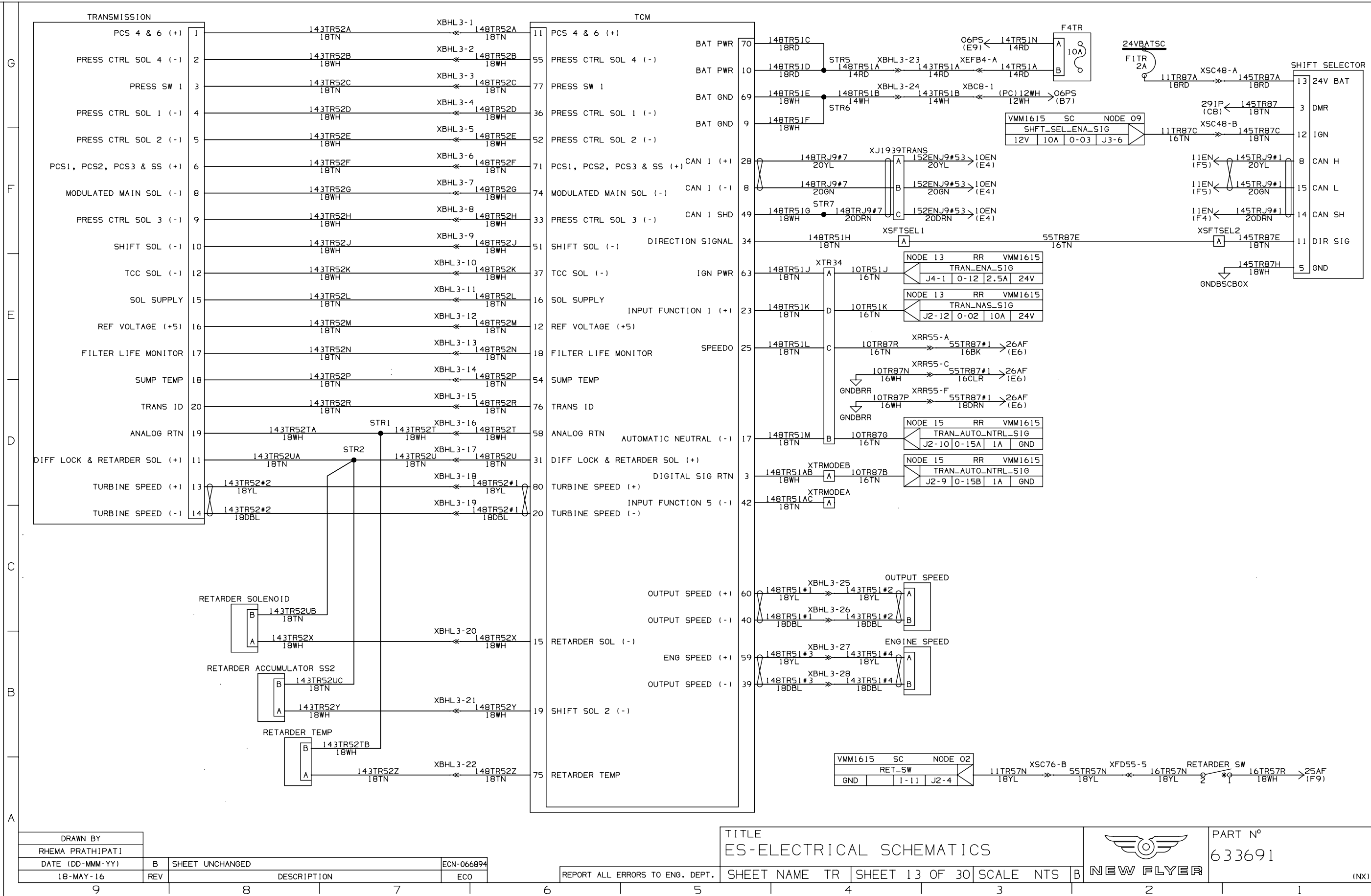


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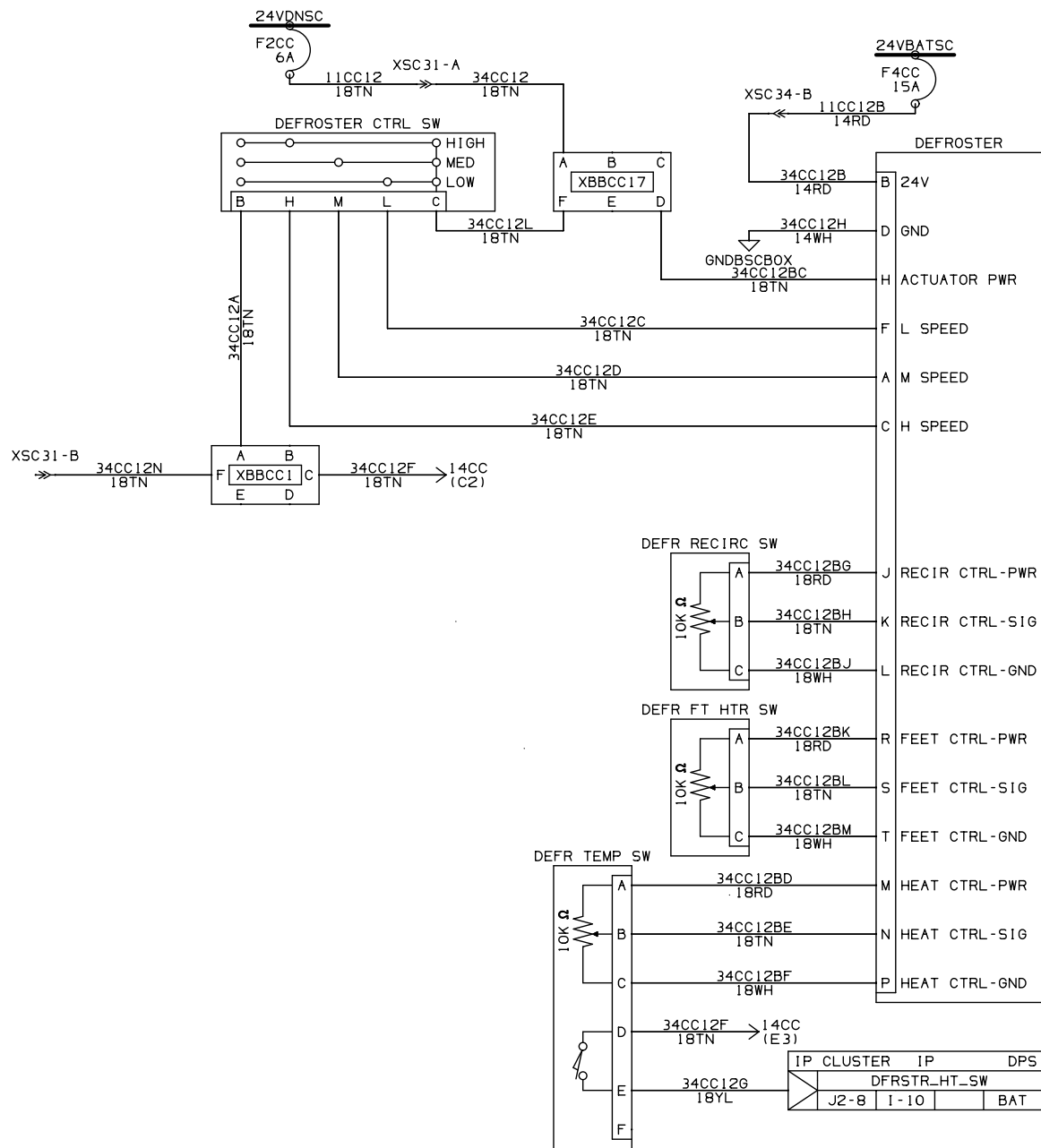
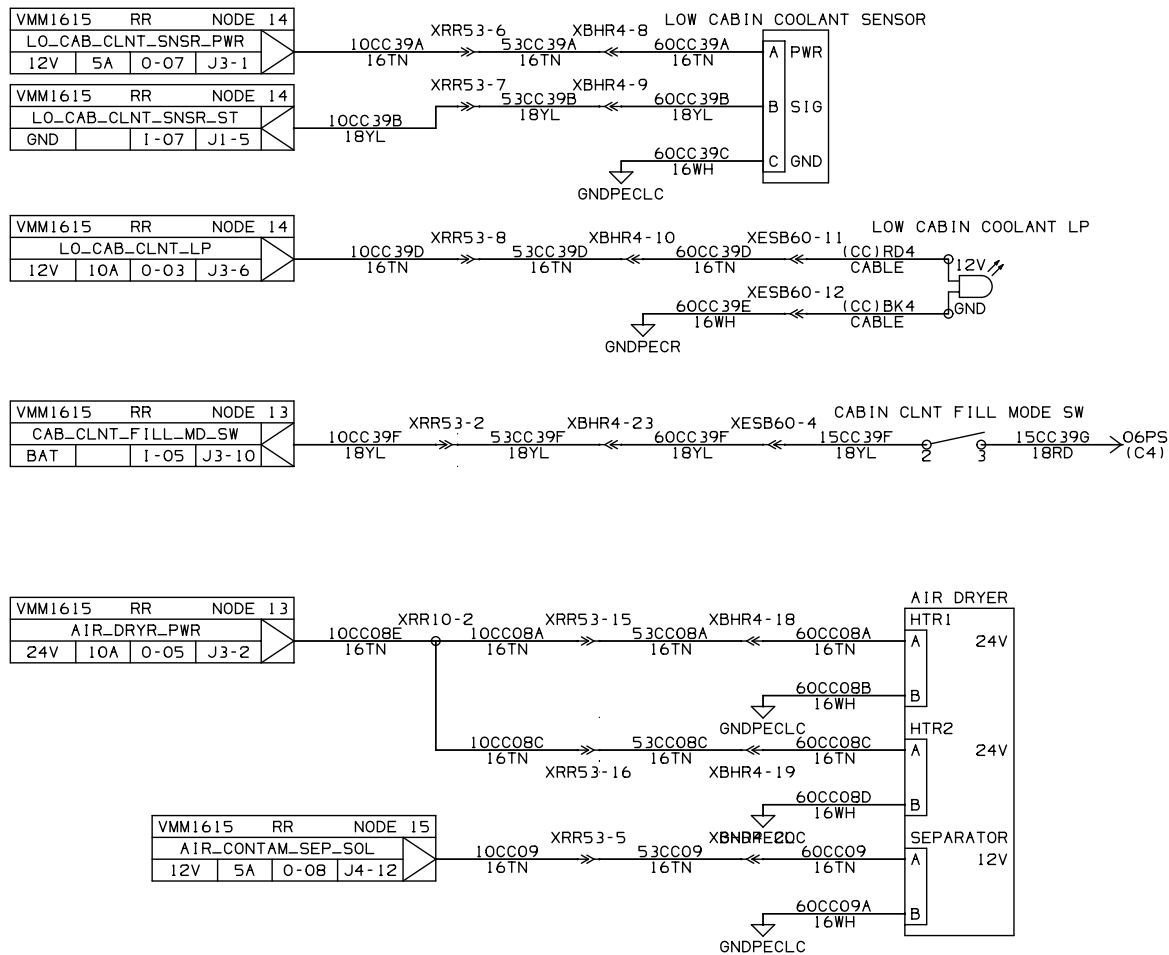
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| DRAWN BY<br>RHEMA PRATHIPATI  |  |  |  | TITLE<br>ES-ELECTRICAL SCHEMATICS |  |  |  | PART N°<br>633691 |  |  |  |
| DATE (DD-MMM-YY)<br>18-MAY-16 |  |  |  | SHEET NAME EN<br>SHEET 12 OF 30   |  |  |  | NEW FLYER         |  |  |  |
| REV<br>B                      |  |  |  | SCALE<br>NTS                      |  |  |  | (NX)              |  |  |  |
| SHEET UNCHANGED               |  |  |  | REPORT ALL ERRORS TO ENG. DEPT.   |  |  |  |                   |  |  |  |
| DESCRIPTION                   |  |  |  | ECO                               |  |  |  |                   |  |  |  |
| ECN-066894                    |  |  |  |                                   |  |  |  |                   |  |  |  |

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| RHEMA PRATHIPATI |     |                 |            |
| DATE (DD-MMM-YY) | B   | SHEET UNCHANGED | ECN-066894 |
| 18-MAY-16        | REV | DESCRIPTION     | ECO        |



TITLE  
ES-ELECTRICAL SCHEMATICS



PART N°  
633691

NEW FLYER

(NX)



The diagram illustrates the electrical architecture of a vehicle's HVAC system. Key components and their connections include:

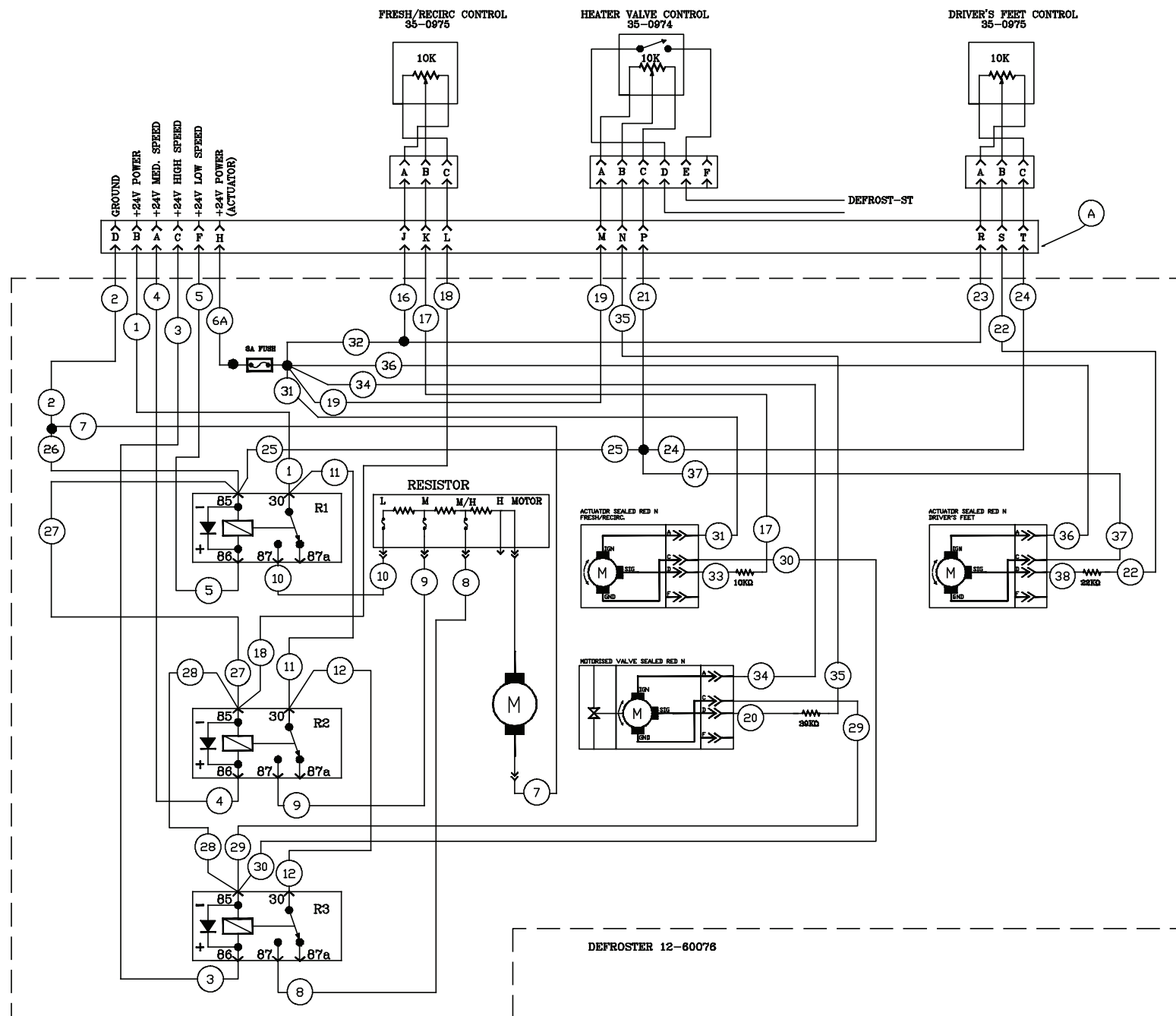
- Climate Control Switch (VMM1615):** Controls various functions via nodes 02 and 13, including cooling, heating, and venting.
- DASH FAN:** Powered by a 12VDC source through a fuse (F5CC) and a switch (DASH FAN SW).
- Zone 1 Heaters (HTR):** Two heaters are shown, each with power, high, and low speed controls, connected to a 24V battery (24VBATRR2).
- COOLANT BOOSTER PUMP:** A 24V pump used to maintain coolant levels, connected to the 24V battery and ground.
- HVAC COMPRESSOR:** The main component for cooling, controlled by a relay (VMM1615) and connected to the 24V battery and ground.
- HVAC UNIT:** The central unit that integrates all components, including the compressor, heaters, and fan.
- HVAC DISPLAY:** A digital display showing system status, connected to the HVAC unit.

The schematic uses standard electrical symbols for switches, relays, fuses, and motors. Wire labels indicate the specific wires and their functions, such as 11CC72B, 11CC72C, 11CC72A, 11CC72D, 11CC72G, 11CC10F, 11CC10A, 11CC10B, 11CC10C, 11CC10D, 11CC10E, 11CC10F, 11CC10G, 11CC10H, 11CC10I, 11CC10J, 11CC10K, 11CC10L, 11CC10M, 11CC10N, 11CC10O, 11CC10P, 11CC10Q, 11CC10R, 11CC10S, 11CC10T, 11CC10U, 11CC10V, 11CC10W, 11CC10X, 11CC10Y, 11CC10Z, 11CC10AA, 11CC10AB, 11CC10AC, 11CC10AD, 11CC10AE, 11CC10AF, 11CC10AG, 11CC10AH, 11CC10AI, 11CC10AJ, 11CC10AK, 11CC10AL, 11CC10AM, 11CC10AN, 11CC10AO, 11CC10AP, 11CC10AQ, 11CC10AR, 11CC10AS, 11CC10AT, 11CC10AU, 11CC10AV, 11CC10AW, 11CC10AX, 11CC10AY, 11CC10AZ, 11CC10BA, 11CC10BB, 11CC10BC, 11CC10BD, 11CC10BE, 11CC10BF, 11CC10BG, 11CC10BH, 11CC10BI, 11CC10BJ, 11CC10BK, 11CC10BL, 11CC10BM, 11CC10BN, 11CC10BO, 11CC10BP, 11CC10BQ, 11CC10BR, 11CC10BS, 11CC10BT, 11CC10BU, 11CC10BV, 11CC10BW, 11CC10BX, 11CC10BY, 11CC10BZ, 11CC10CA, 11CC10CB, 11CC10CC, 11CC10CD, 11CC10CE, 11CC10CF, 11CC10CG, 11CC10CH, 11CC10CI, 11CC10CJ, 11CC10CK, 11CC10CL, 11CC10CM, 11CC10CN, 11CC10CO, 11CC10CP, 11CC10CQ, 11CC10CR, 11CC10CS, 11CC10CT, 11CC10CU, 11CC10CV, 11CC10CW, 11CC10CX, 11CC10CY, 11CC10CZ, 11CC10DA, 11CC10DB, 11CC10DC, 11CC10DD, 11CC10DE, 11CC10DF, 11CC10DG, 11CC10DH, 11CC10DI, 11CC10DJ, 11CC10DK, 11CC10DL, 11CC10DM, 11CC10DN, 11CC10DO, 11CC10DP, 11CC10DQ, 11CC10DR, 11CC10DS, 11CC10DT, 11CC10DU, 11CC10DV, 11CC10DW, 11CC10DX, 11CC10DY, 11CC10DZ, 11CC10EA, 11CC10EB, 11CC10EC, 11CC10ED, 11CC10EE, 11CC10EF, 11CC10EG, 11CC10EH, 11CC10EI, 11CC10EJ, 11CC10EK, 11CC10EL, 11CC10EM, 11CC10EN, 11CC10EO, 11CC10EP, 11CC10EQ, 11CC10ER, 11CC10ES, 11CC10ET, 11CC10EU, 11CC10EV, 11CC10EW, 11CC10EX, 11CC10EY, 11CC10EZ, 11CC10FA, 11CC10FB, 11CC10FC, 11CC10FD, 11CC10FE, 11CC10FF, 11CC10FG, 11CC10FH, 11CC10FI, 11CC10FJ, 11CC10FK, 11CC10FL, 11CC10FM, 11CC10FN, 11CC10FO, 11CC10FP, 11CC10FQ, 11CC10FR, 11CC10FS, 11CC10FT, 11CC10FU, 11CC10FV, 11CC10FW, 11CC10FX, 11CC10FY, 11CC10FZ, 11CC10GA, 11CC10GB, 11CC10GC, 11CC10GD, 11CC10GE, 11CC10GF, 11CC10GG, 11CC10GH, 11CC10GI, 11CC10GJ, 11CC10GK, 11CC10GL, 11CC10GM, 11CC10GN, 11CC10GO, 11CC10GP, 11CC10GQ, 11CC10GR, 11CC10GS, 11CC10GT, 11CC10GU, 11CC10GV, 11CC10GW, 11CC10GX, 11CC10GY, 11CC10GZ, 11CC10HA, 11CC10HB, 11CC10HC, 11CC10HD, 11CC10HE, 11CC10HF, 11CC10HG, 11CC10HH, 11CC10HI, 11CC10HJ, 11CC10HK, 11CC10HL, 11CC10HM, 11CC10HN, 11CC10HO, 11CC10HP, 11CC10HQ, 11CC10HR, 11CC10HS, 11CC10HT, 11CC10HU, 11CC10HV, 11CC10HW, 11CC10HX, 11CC10HY, 11CC10HZ, 11CC10IA, 11CC10IB, 11CC10IC, 11CC10ID, 11CC10IE, 11CC10IF, 11CC10IG, 11CC10IH, 11CC10II, 11CC10IJ, 11CC10IK, 11CC10IL, 11CC10IM, 11CC10IN, 11CC10IO, 11CC10IP, 11CC10IQ, 11CC10IR, 11CC10IS, 11CC10IT, 11CC10IU, 11CC10IV, 11CC10IW, 11CC10IX, 11CC10IY, 11CC10IZ, 11CC10JA, 11CC10JB, 11CC10JC, 11CC10JD, 11CC10JE, 11CC10JF, 11CC10JG, 11CC10JH, 11CC10JI, 11CC10JJ, 11CC10JK, 11CC10JL, 11CC10JM, 11CC10JN, 11CC10JO, 11CC10JP, 11CC10JQ, 11CC10JR, 11CC10JS, 11CC10JT, 11CC10JU, 11CC10JV, 11CC10JW, 11CC10JX, 11CC10JY, 11CC10JZ, 11CC10KA, 11CC10KB, 11CC10KC, 11CC10KD, 11CC10KE, 11CC10KF, 11CC10KG, 11CC10KH, 11CC10KI, 11CC10KJ, 11CC10KK, 11CC10KL, 11CC10KM, 11CC10KN, 11CC10KO, 11CC10KP, 11CC10KQ, 11CC10KR, 11CC10KS, 11CC10KT, 11CC10KU, 11CC10KV, 11CC10KW, 11CC10KX, 11CC10KY, 11CC10KZ, 11CC10LA, 11CC10LB, 11CC10LC, 11CC10LD, 11CC10LE, 11CC10LF, 11CC10LG, 11CC10LH, 11CC10LI, 11CC10LJ, 11CC10LK, 11CC10LL, 11CC10LM, 11CC10LN, 11CC10LO, 11CC10LP, 11CC10LQ, 11CC10LR, 11CC10LS, 11CC10LT, 11CC10LU, 11CC10LV, 11CC10LW, 11CC10LX, 11CC10LY, 11CC10LZ, 11CC10MA, 11CC10MB, 11CC10MC, 11CC10MD, 11CC10ME, 11CC10MF, 11CC10MG, 11CC10MH, 11CC10MI, 11CC10MJ, 11CC10MK, 11CC10ML, 11CC10MM, 11CC10MN, 11CC10MO, 11CC10MP, 11CC10MQ, 11CC10MR, 11CC10MS, 11CC10MT, 11CC10MU, 11CC10MV, 11CC10MW, 11CC10MX, 11CC10MY, 11CC10MZ, 11CC10NA, 11CC10NB, 11CC10NC, 11CC10ND, 11CC10NE, 11CC10NF, 11CC10NG, 11CC10NH, 11CC10NI, 11CC10NJ, 11CC10NK, 11CC10NL, 11CC10NM, 11CC10NN, 11CC10NO, 11CC10NP, 11CC10NQ, 11CC10NR, 11CC10NS, 11CC10NT, 11CC10NU, 11CC10NV, 11CC10NW, 11CC10NX, 11CC10NY, 11CC10NZ, 11CC10OA, 11CC10OB, 11CC10OC, 11CC10OD, 11CC10OE, 11CC10OF, 11CC10OG, 11CC10OH, 11CC10OI, 11CC10OJ, 11CC10OK, 11CC10OL, 11CC10OM, 11CC10ON, 11CC10OO, 11CC10OP, 11CC10OQ, 11CC10OR, 11CC10OS, 11CC10OT, 11CC10OU, 11CC10OV, 11CC10OW, 11CC10OX, 11CC10OY, 11CC10OZ, 11CC10PA, 11CC10PB, 11CC10PC, 11CC10PD, 11CC10PE, 11CC10PF, 11CC10PG, 11CC10PH, 11CC10PI, 11CC10PJ, 11CC10PK, 11CC10PL, 11CC10PM, 11CC10PN, 11CC10PO, 11CC10PP, 11CC10PQ, 11CC10PR, 11CC10PS, 11CC10PT, 11CC10PU, 11CC10PV, 11CC10PW, 11CC10PX, 11CC10PY, 11CC10PZ, 11CC10QA, 11CC10QB, 11CC10QC, 11





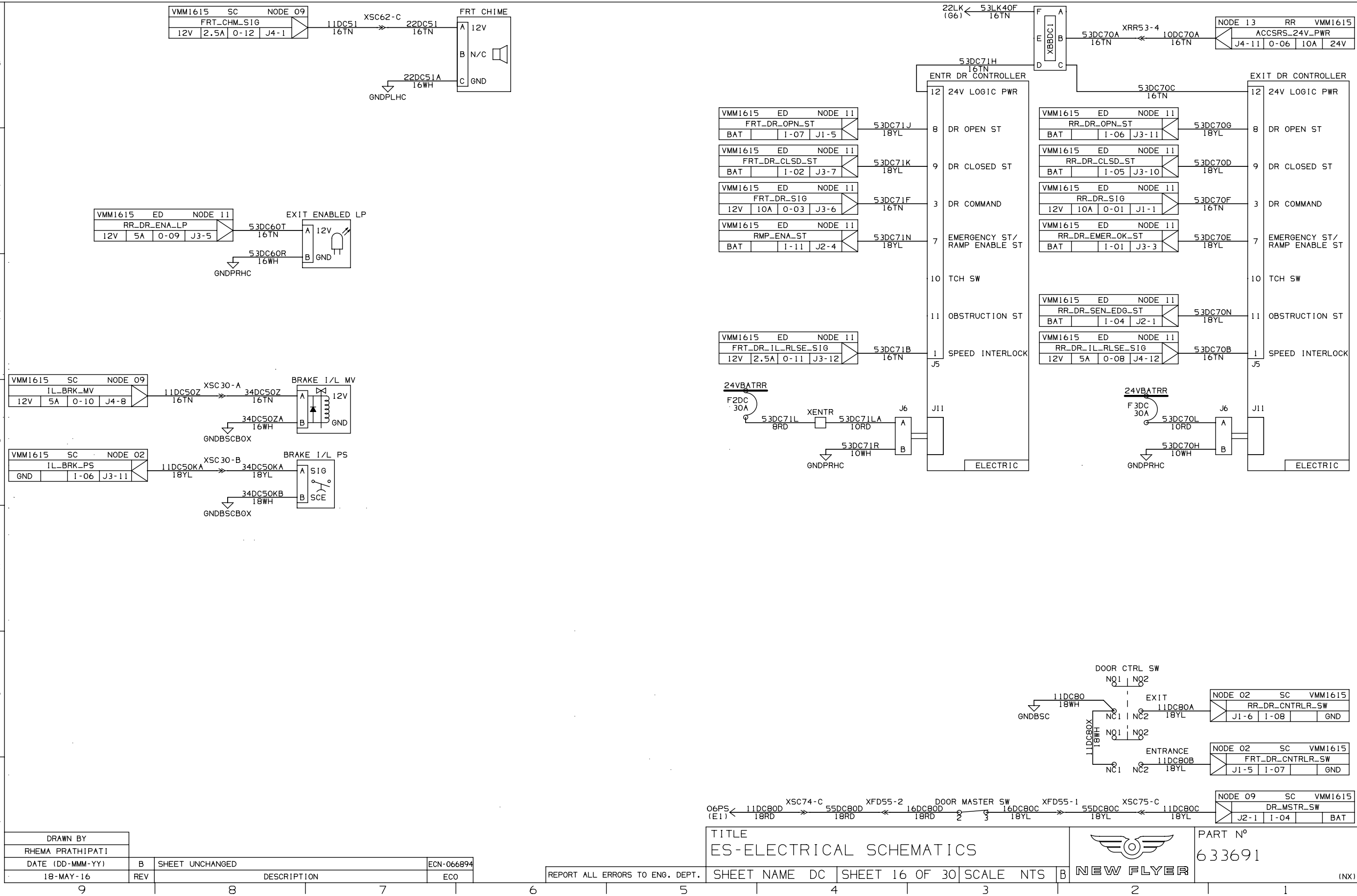




Rev. 02/2015

Schematic 12-60076S

A vertical number line with tick marks labeled A, B, C, D, E, F, and G from bottom to top.



This diagram is a detailed electrical schematic for a chime system, showing the wiring between various components including switches, relays, and control units. The schematic is organized into three main sections: a top section for the main chime system, a middle section for the control unit, and a bottom section for the chime switches.

**Top Section: Main Chime System**

- Control Unit:** A central control unit labeled "VMM1615 RR NODE 13" is connected to a "WC\_STOP\_REQ\_SW" switch. It has multiple output lines labeled "10DC52 18YL" and "20DC52 18YL" that connect to various chime switches.
- Chime Switches:** There are several chime switches, including "LH #26 CHIME SW", "RH #26 CHIME SW", "RH #20 CHIME PB", and "RH #8 CHIME SW". Each switch is connected to a specific output line from the control unit.
- Relays and Transformers:** The schematic includes several relays and transformers, such as "XCHL8", "XCHR8", "XCHL7", "XCHR7", "XCHL3", "XCHR3", "XCHL2", and "XCHR2". These are connected to the control unit and the chime switches.
- Wiring:** The wiring is color-coded and labeled with codes like "10DC52 18YL", "20DC52 18YL", "22DC54 18WH", and "96DC52 18YL".

**Middle Section: Control Unit**

- Control Unit:** A central control unit labeled "VMM1615 RR NODE 13" is connected to a "WC\_STOP\_REQ\_SW" switch. It has multiple output lines labeled "10DC52 18YL" and "20DC52 18YL" that connect to various chime switches.
- Chime Switches:** There are several chime switches, including "LH #26 CHIME SW", "RH #26 CHIME SW", "RH #20 CHIME PB", and "RH #8 CHIME SW". Each switch is connected to a specific output line from the control unit.
- Relays and Transformers:** The schematic includes several relays and transformers, such as "XCHL8", "XCHR8", "XCHL7", "XCHR7", "XCHL3", "XCHR3", "XCHL2", and "XCHR2". These are connected to the control unit and the chime switches.
- Wiring:** The wiring is color-coded and labeled with codes like "10DC52 18YL", "20DC52 18YL", "22DC54 18WH", and "96DC52 18YL".

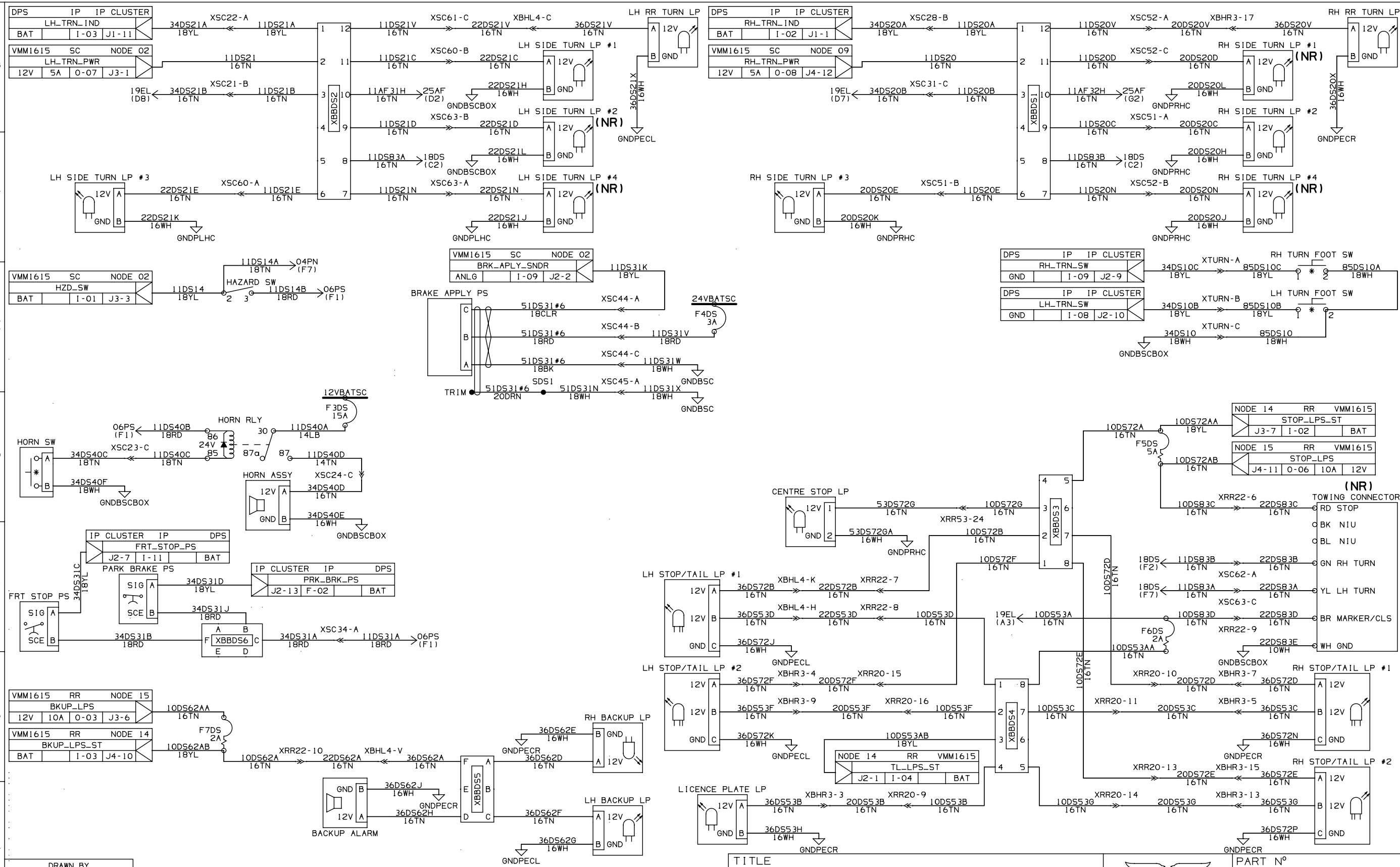
**Bottom Section: Chime Switches**

- Chime Switches:** There are several chime switches, including "LH WC #5 CHIME SW", "RH WC #5 CHIME SW", and "RH WC #8 CHIME SW". Each switch is connected to a specific output line from the control unit.
- Relays and Transformers:** The schematic includes several relays and transformers, such as "XCHL1", "XCHR1", "XCHL2", and "XCHR2". These are connected to the control unit and the chime switches.
- Wiring:** The wiring is color-coded and labeled with codes like "10DC52 18YL", "20DC52 18YL", "22DC54 18WH", and "96DC52 18YL".

**Legend and Notes**

- Legend:** A table at the bottom left defines the symbols used in the schematic, including "DRAWN BY", "RHEMA PRATHIPATI", "DATE (DD-MMM-YY)", "REV", "SHEET UNCHANGED", "DESCRIPTION", and "ECO".
- Notes:** A table at the bottom right provides additional information, including "TITLE", "ES-ELECTRICAL SCHEMATICS", "PART N°", "633691", and "NEW FLYER".

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|                  |  |                  |  |
|------------------|--|------------------|--|
| DRAWN BY         |  | RHEMA PRATHIPATI |  |
| DATE (DD-MMM-YY) |  | 18-MAY-16        |  |
| REV              |  | B                |  |
| SHEET UNCHANGED  |  | ECN-066894       |  |
| DESCRIPTION      |  | ECO              |  |

REPORT ALL ERRORS TO ENG. DEPT.

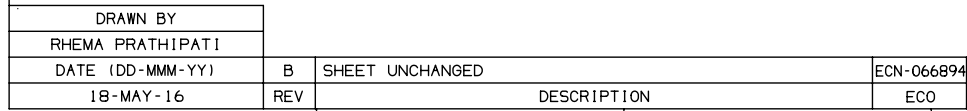
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|----------------|--|--------------------------|--|
| TITLE          |  | ES-ELECTRICAL SCHEMATICS |  |
| SHEET NAME     |  | DS                       |  |
| SHEET 18 OF 30 |  | SCALE NTS                |  |

|           |  |        |  |
|-----------|--|--------|--|
| PART N°   |  | 633691 |  |
| NEW FLYER |  | (NX)   |  |



[illegible][illegible]

A



PART N°  
633691

(NX)



ENT #1 HEADER LP

ENT #2 HEADER LP (NR)

SDS AISLE LP

ENT SVCE LP #1

ENT SVCE LP #2

ENT SVCE LP #3

ENT SVCE LP #4

ENT SVCE LP

DRIVERS LP

SDS SVCE LP SW

RR PLC LP SW

RR PLC SVCE LP

DEST SIGN SVCE LP (NR)

SC SVCE LP SW

SC SVCE LP

ENT SVCE LP SW

EXIT SRVC LP

EXIT SVCE LP SW

EXIT #1 HEADER LP

EXIT #2 HEADER LP (NR)

EXIT EXTERIOR LP (NR)

RH INT STEP LP

LH INT STEP LP

19EL (F5)

10EN (G5)

15EN24A

15L193K

15L193E

15L193F

15L193G

15L193H

15L193J

15L193K

15L193L

15L193M

15L193N

15L193O

15L193P

15L193Q

15L193R

15L193S

15L193T

15L193U

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15L193AL

15L193AM

15L193AN

15L193AO

15L193AP

15L193AQ

15L193AR

15L193AS

15L193AT

15L193AU

15L193AV

15L193AW

15L193AX

15L193AY

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15L193BG

15L193BH

15L193BI

15L193BJ

15L193BK

15L193BL

15L193BM

15L193BN

15L193BO

15L193BP

15L193BQ

15L193BR

15L193BS

15L193BT

15L193BU

15L193BV

15L193BW

15L193BX

15L193BY

15L193BZ

15L193CA

15L193CB

15L193CC

15L193CD

15L193CE

15L193CF

15L193CG

15L193CH

15L193CI

15L193CJ

15L193CK

15L193CL

15L193CM

15L193CN

15L193CO

15L193CP

15L193CQ

15L193CR

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15L193LD

15L193LE

15L193LF

1

This figure is a detailed electrical schematic for a system, likely a vehicle or industrial machine, showing various components and their interconnections. The schematic is organized into several sections, each representing a different functional area.

**Top Section (Nodes 09, 11, 02):** This section includes three main control nodes:

- Node 09 (VMM1615 SC):** Controls the HLD\_KNL\_MV (12V, 5A, 0-07, J3-1) and RAISE\_KNL\_MV (12V, 10A, 0-06, J4-11) signals. It also includes a LOWR\_KNL\_MV (12V, 10A, 0-05, J3-2) signal.
- Node 11 (VMM1615 ED):** Controls the WRN\_LLP (12V, 5A, 0-07, J3-1) signal.
- Node 02 (VMM1615 SC):** Controls the WRN\_ALM (12V, 2.5A, 0-11, J3-12) signal.

**Middle Section (Nodes 02, 02):** This section includes two main control nodes:

- Node 02 (VMM1615 SC):** Controls the HGT\_SNSR\_PWR (24V, 5A, 0-08, J4-12) and HGT\_SNDR (ANLG, 1-12, J2-5) signals.
- Node 02 (VMM1615 SC):** Controls the RMP\_DPLY\_MV (10A, 24V, J4-7, 0-04) and RMP\_STW\_MV (10A, 24V, J2-12, 0-02) signals.

**Bottom Section (Nodes 02, 02):** This section includes two main control nodes:

- Node 02 (VMM1615 SC):** Controls the RMP\_DPLY\_MV (10A, 24V, J4-7, 0-04) and RMP\_STW\_MV (10A, 24V, J2-12, 0-02) signals.
- Node 02 (VMM1615 SC):** Controls the RMP\_DPLY\_MV (10A, 24V, J4-7, 0-04) and RMP\_STW\_MV (10A, 24V, J2-12, 0-02) signals.

**Other Components:**

- KNEELING:** A 12V signal line with multiple relays (34LK56A, 34LK56B, 34LK56C, 34LK56D, 34LK56E, 34LK56N) and ground connections (GND, GNDPRAMP, GNDPRHC).
- WARNING LP:** A 12V signal line with a relay (20LK43M) and ground connections (GND, GNDPRHC).
- WARNING BEEPER:** A 12V signal line with a relay (34LK43P) and ground connections (GND, GNDPRAMP).
- RAMP PUMP:** A 24V signal line with a relay (34LK50C) and ground connections (GND, GNDPRAMP).
- RAMP MV:** A 24V signal line with a relay (34LK50D) and ground connections (GND, GNDPRAMP).
- RAMP STOWED PROX SW:** A 12V signal line with a relay (34LK50E) and ground connections (GND, GNDPRAMP).
- KNEEL SW:** A 12V signal line with a relay (34LK40C) and ground connections (GND, GNDPRAMP).
- RAMP SW:** A 12V signal line with a relay (34LK40E) and ground connections (GND, GNDPRAMP).
- HEIGHT SNSR:** A 24V signal line with a relay (55LK54#1) and ground connections (GND, GNDPRAMP).

**Legend:**

- SC:** Signal Control
- ED:** Emergency Stop
- IP:** Input
- IP CLUSTER:** Input Cluster
- TR1:** Transistor 1
- ANLG:** Analog
- IP CLUSTER:** Input Cluster
- TR1:** Transistor 1
- ANLG:** Analog

**Drawn By:** RHEMA PRATHIPATI

**DATE (DD-MMM-YY):** 18-MAY-16

**SHEET UNCHANGED**

**ECN-066894**

**REPORT ALL ERRORS TO ENG. DEPT.**

**SHEET NAME LK**

**SHEET 22 OF 30**

**SCALE NTS**

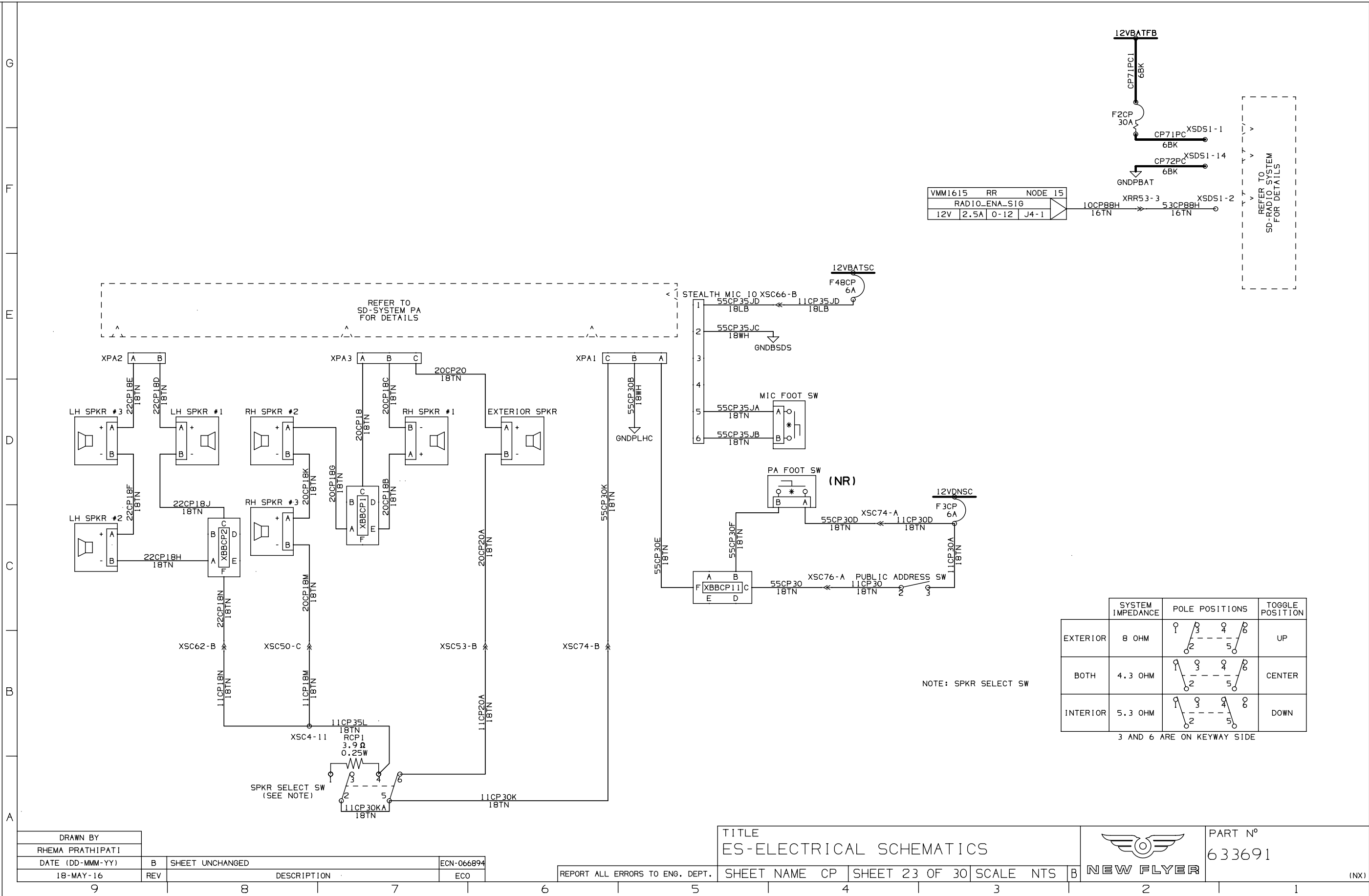
**B**

**NEW FLYING**

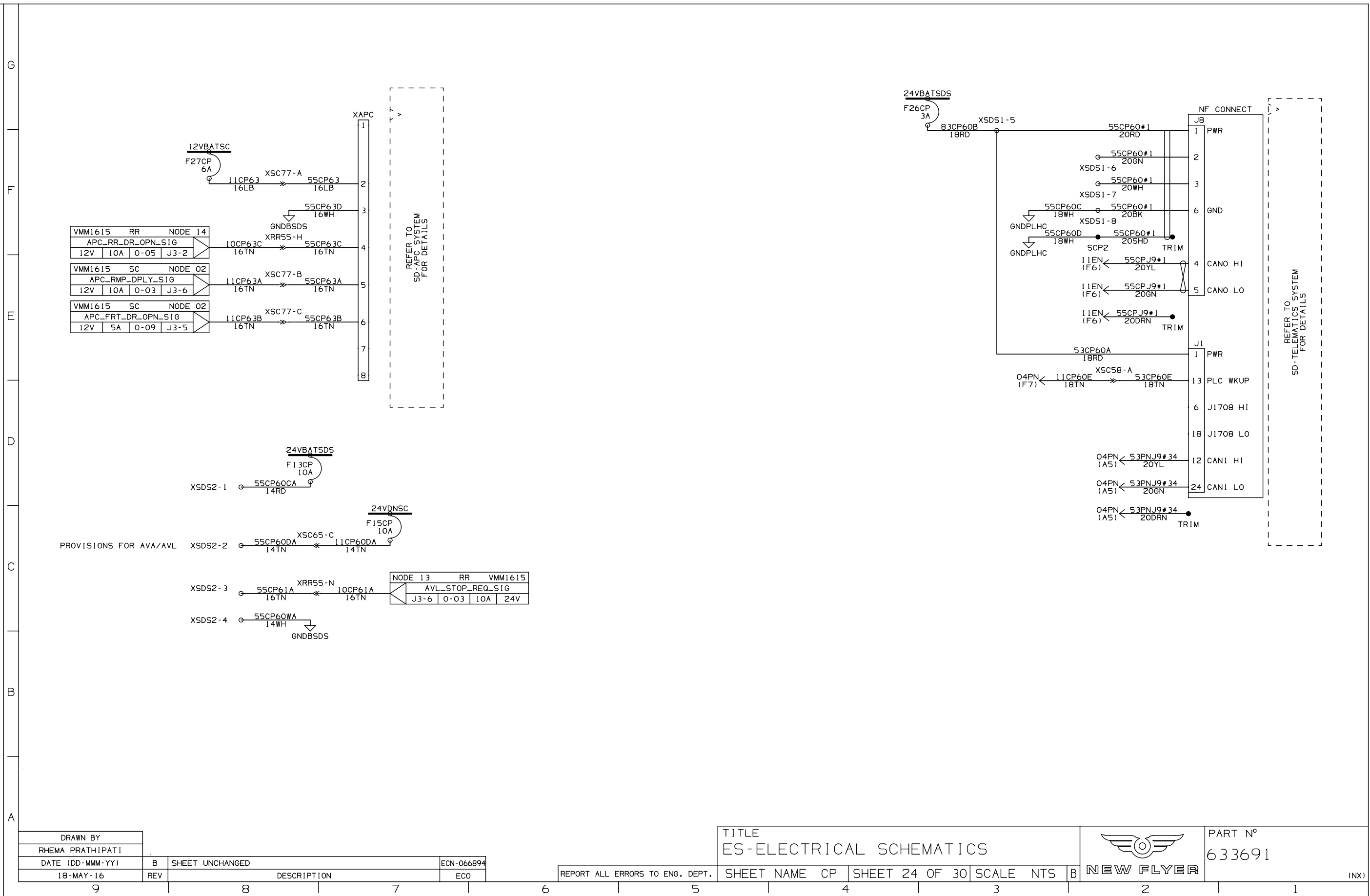
**PART N° 633691**

**(NX)**

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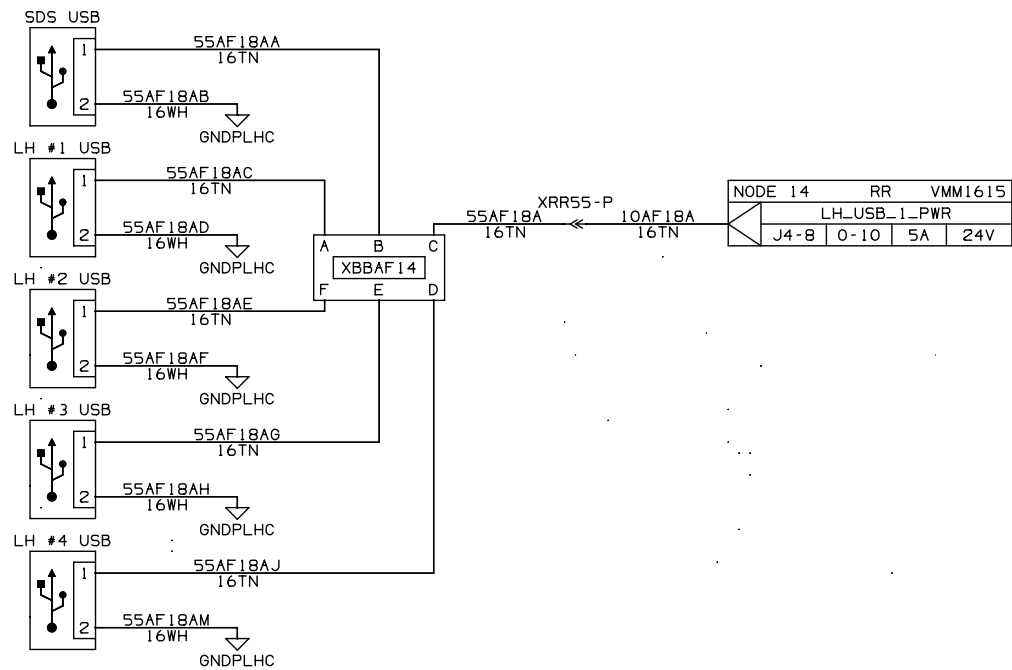
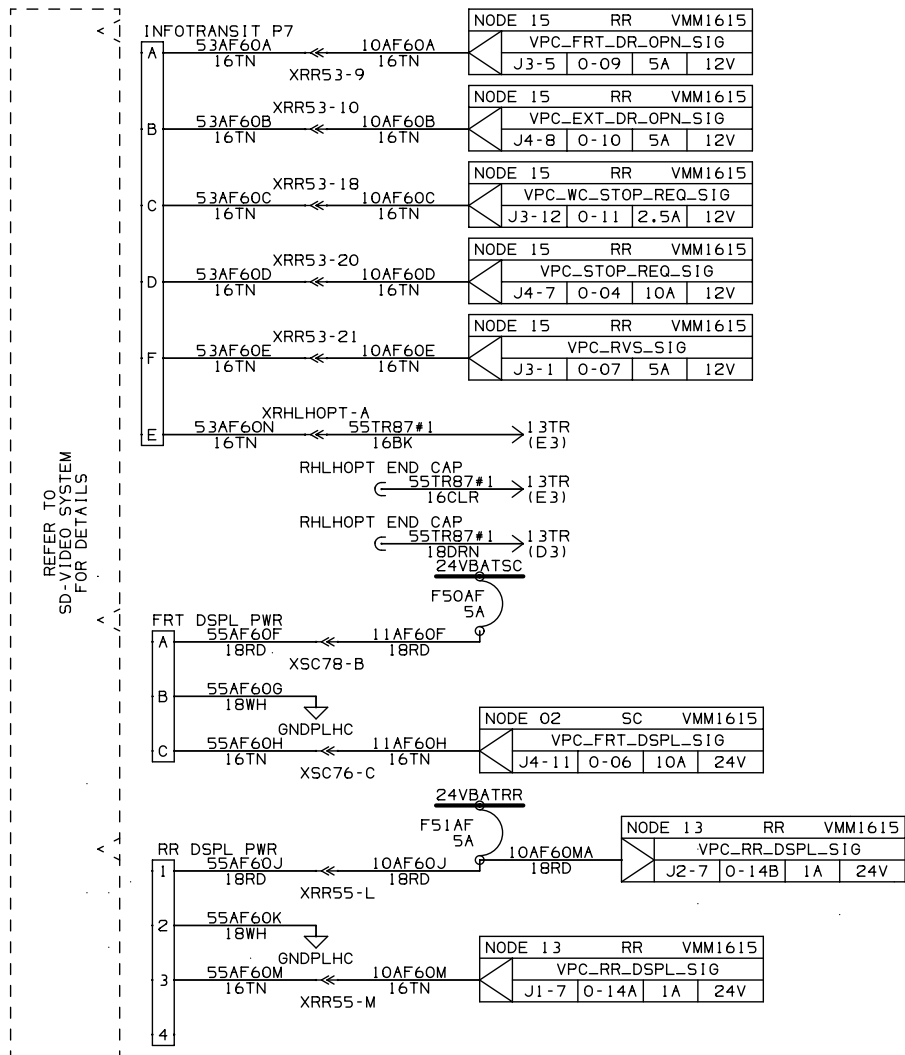
The diagram illustrates the electrical wiring for a vehicle's interior and exterior components. Key sections include:

- Top Section (A-G):** Shows the 24VDC system connected to various relays (XSC61-B, XFD22-10, XFD1-2, XFD22-11, XFD1-3, XFD22-12) and switches (XP11-F, XP11-D, XP11-A, XP11-B, XP11-E). It also includes a SILENT ALARM SW and a DEST SIGN ODK switch.
- Middle Section:** Details the 12VDC system connected to the VMM1615 modules (SC, ED, RR) and their respective outputs (XSDS1-4 to XSDS1-13). It also shows the 12VDC system connected to the RH and LH WIPER MOTORS and the WIPER SW.
- Bottom Section:** Shows the 12VDC system connected to the RH and LH MIRROR SW, the MIRROR HEATER SW, and the DRIVERS SEATBELT SW. It also includes the 12VDC system connected to the FAREBOX and the (INSTALLED BY CUSTOMER) component.

The diagram uses standard electrical symbols for wires, switches, relays, and motors. Wire colors and gauges are indicated throughout the diagram. The VMM1615 modules are shown with their specific pin configurations and node numbers.

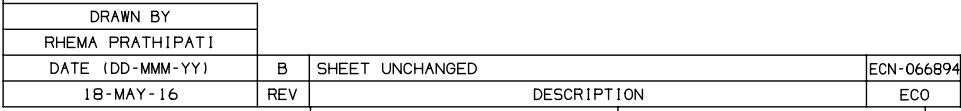
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|--------------------------|----|----------------|-------|-----|
| TITLE                    |    |                |       |     |
| ES-ELECTRICAL SCHEMATICS |    |                |       |     |
| SHEET NAME               | FS | SHEET 27 OF 30 | SCALE | NTS |



(NX)

This diagram is a detailed electrical schematic for the ABS system of a vehicle, specifically for the ECU - 4S/4M (VERSION E BASIC). It illustrates the wiring connections between the ABS ECU and various components, including sensors, solenoids, and control units.

**Key Components and Connections:**

- ABS ECU (ECU - 4S/4M):** The central control unit, connected to the 24V PWR and 24V IGN lines. It controls the LH and RH FRT and RR OUT and INL VLVs, and the LH and RH FRT and RR SNRS.
- Sensors:** LH FRT SNRS, LH FRT INL VLV, RH FRT SNRS, RH FRT INL VLV, LH RR SNRS, LH RR INL VLV, RH RR SNRS, RH RR INL VLV, and RH RR OUT VLV.
- Solenoids:** LH FRT OUT VLV, LH FRT INL VLV, RH FRT OUT VLV, RH FRT INL VLV, LH RR OUT VLV, LH RR INL VLV, RH RR OUT VLV, RH RR INL VLV, and ATC VLV.
- Control Units:** VMM1615 RR NODE 13, ABS\_FLT\_ST, XJ1939ABS, XSC61-A, XRR22-23, XUSC25-B, and XFD22-1.
- Wiring:** The diagram shows various wire types (e.g., 24V, 16V, 18V, 20V, 22V) and their connections to the components. It also includes a table for the ABS\_FLT\_ST and a table for the XJ1939ABS.

**Legend:**

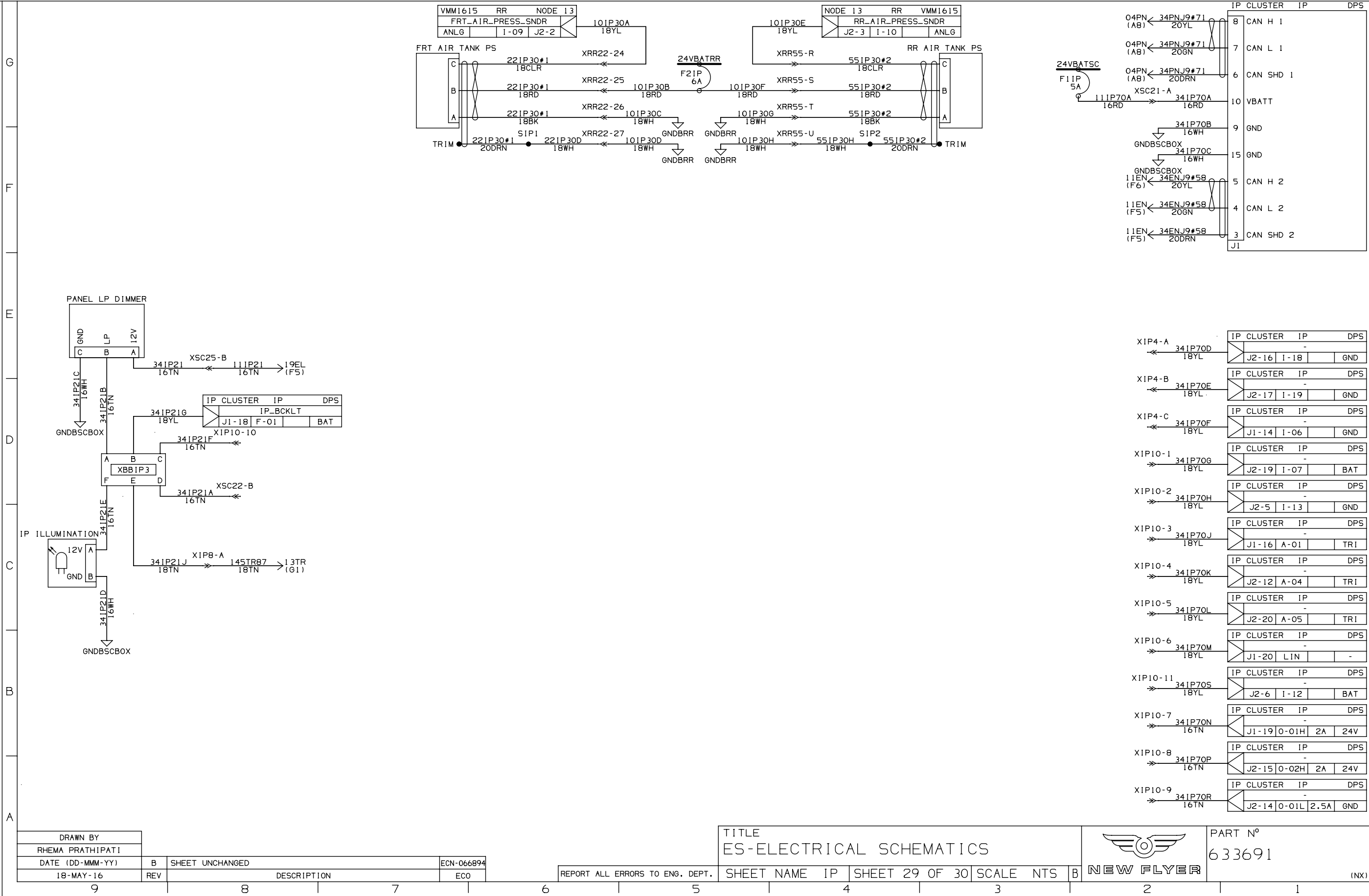
- 24V PWR: 24V Power
- 24V IGN: 24V Ignition
- 16V: 16V Power
- 18V: 18V Power
- 20V: 20V Power
- 22V: 22V Power

**Notes:**

- The diagram is a schematic representation of the ABS system wiring.
- It is intended for use as a reference for troubleshooting and repair.
- The wiring colors and codes are as indicated in the diagram.



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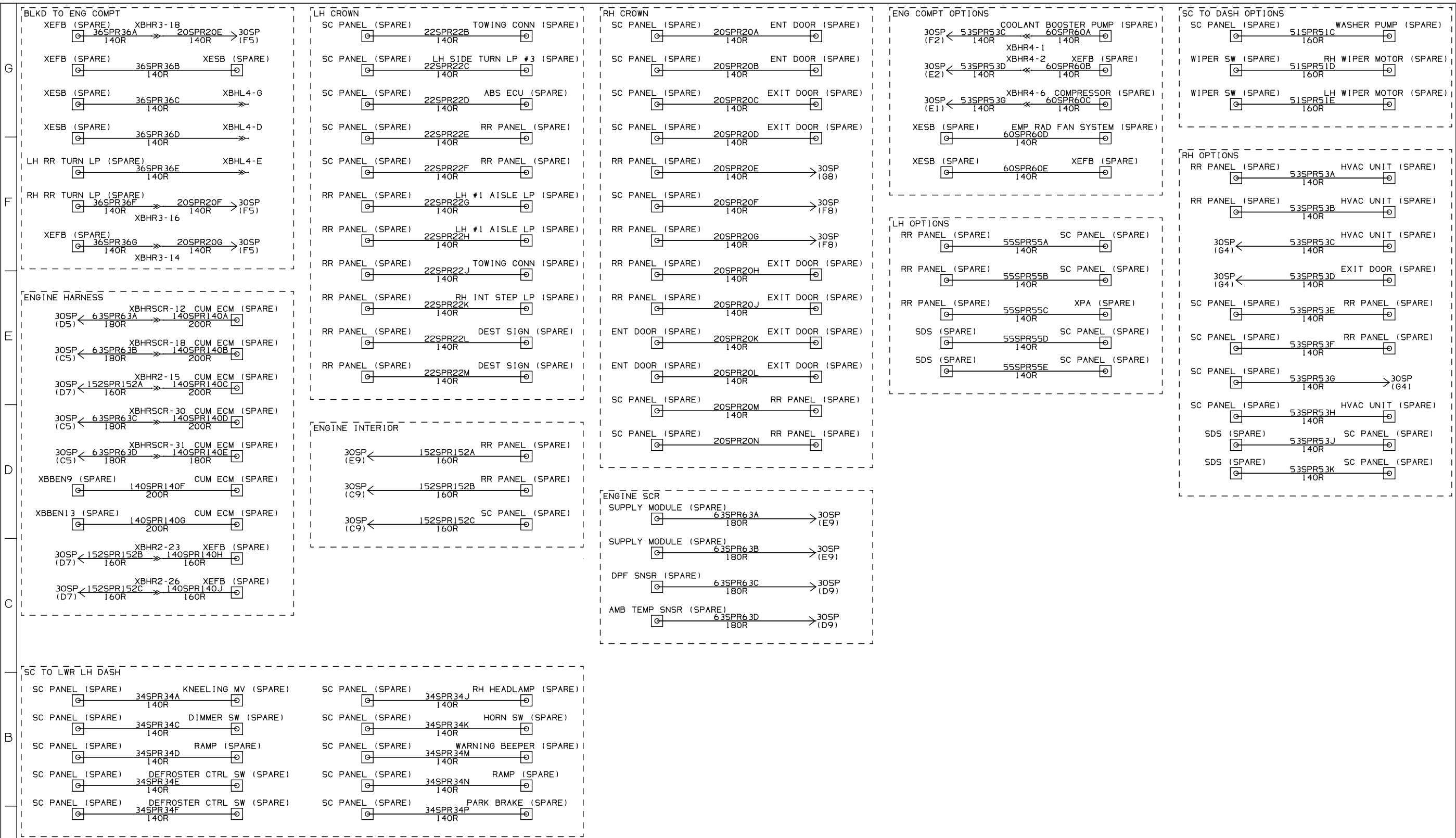


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|------------------|-----|-----------------|------------|
| DRAWN BY         |     |                 |            |
| RHEMA PRATHIPATI |     |                 |            |
| DATE (DD-MMM-YY) | B   | SHEET UNCHANGED | ECN-066894 |
| 18-MAY-16        | REV | DESCRIPTION     | ECO        |

|                          |    |                |           |
|--------------------------|----|----------------|-----------|
| TITLE                    |    |                |           |
| ES-ELECTRICAL SCHEMATICS |    |                |           |
| SHEET NAME               | IP | SHEET 29 OF 30 | SCALE NTS |

|           |  |  |  |
|-----------|--|--|--|
| PART N°   |  |  |  |
| 633691    |  |  |  |
| NEW FLYER |  |  |  |
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|                  |     |                 |            |
|------------------|-----|-----------------|------------|
| DRAWN BY         |     |                 |            |
| RHEMA PRATHIPATI |     |                 |            |
| DATE (DD-MMM-YY) | B   | SHEET UNCHANGED | ECN-066894 |
| 18-MAY-16        | REV | DESCRIPTION     | ECO        |

TITLE  
ES-ELECTRICAL SCHEMATICS



PART N°  
633691

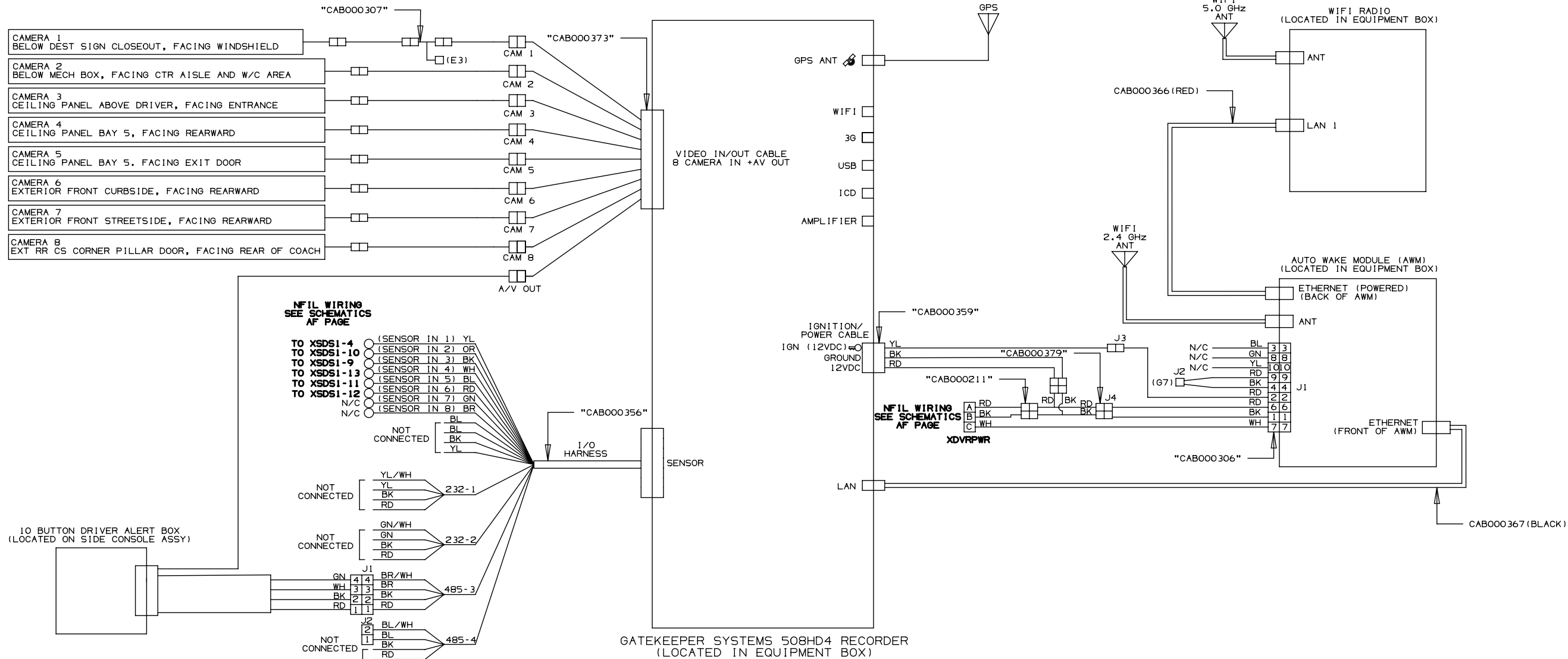
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SHEET NAME SP SHEET 30 OF 30 SCALE NTS B

NEW FLYER

(NX)

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| SIGNAL                     | POWER WHEN ACTIVE | TERMINAL STRIP POSITION | FUNCTION                        |
|----------------------------|-------------------|-------------------------|---------------------------------|
| BRAKES                     | 12VDC             | XSDS1-4                 | WHEN BRAKES ARE APPLIED         |
| WHEELCHAIR RAMP NOT STOWED | 12VDC             | XSDS1-9                 | WHEN WHEELCHAIR RAMP NOT STOWED |
| HAZARD LIGHTS              | 12VDC             | XSDS1-10                | WHEN HAZARD LIGHTS ARE FLASHING |
| LH TURN SIGNAL             | 12VDC             | XSDS1-11                | LH SIGNAL IS ON                 |
| RH TURN SIGNAL             | 12VDC             | XSDS1-12                | RH TURN SIGNAL ON               |
| KNEELING                   | 12VDC             | XSDS1-13                | OUTPUT TO EXTERNAL RELAY COIL   |

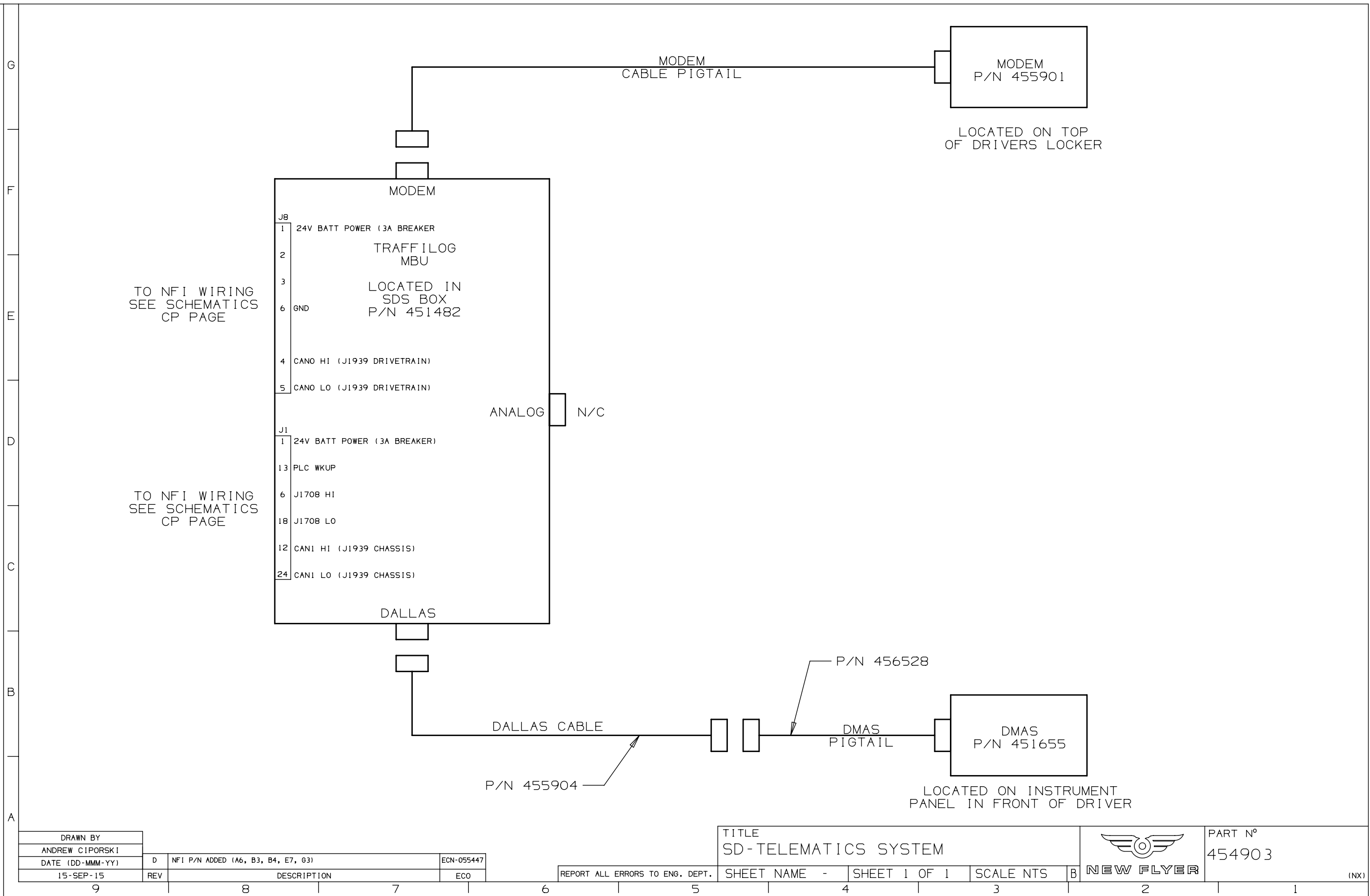
••**BOLD** ITEMS INDICATE NFIL WIRING. REFER TO SCHEMATICS AF PAGE••

|                      |     |                                                   |            |
|----------------------|-----|---------------------------------------------------|------------|
| DRAWN BY             | D   | SENSOR IN (1,2,3,4,5,7,8) WIRE COLOR WAS RED (E7) | ECN-068391 |
| DANIEL PRZYBYTKOWSKI | REV |                                                   | ECO        |
| DATE (DD-MMM-YY)     |     | DESCRIPTION                                       |            |
| 10-JUN-16            |     |                                                   |            |

|                  |            |              |           |   |
|------------------|------------|--------------|-----------|---|
| TITLE            | SHEET NAME | SHEET 1 OF 1 | SCALE NTS | B |
| SD-SYSTEM CAMERA |            |              |           |   |

|           |        |      |
|-----------|--------|------|
| PART N°   | 594271 | (NX) |
| NEW FLYER |        |      |

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A B C D E F G



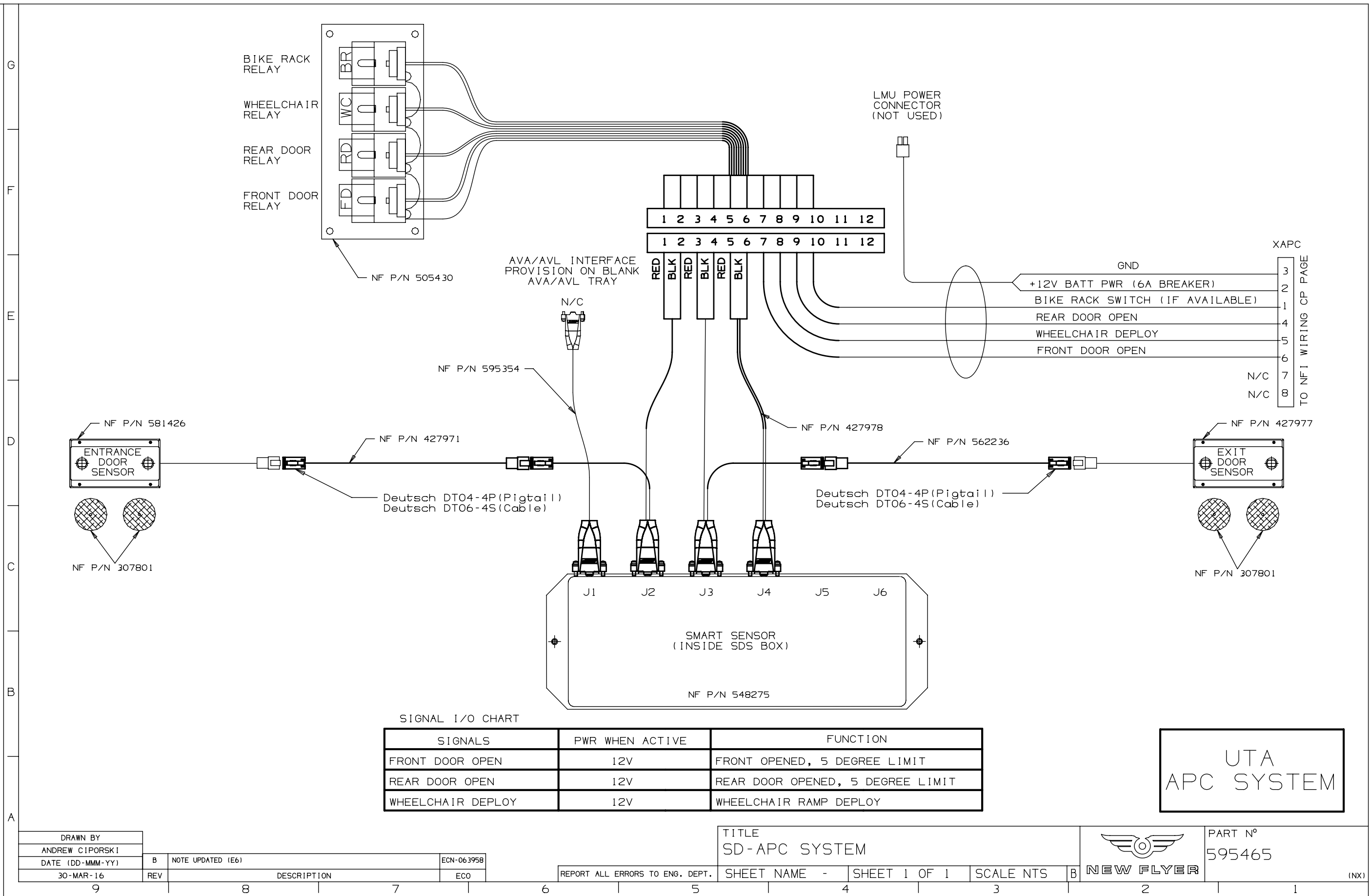
REPORT ALL ERRORS TO ENG. DEPT.



NEW FLYER

(NX)

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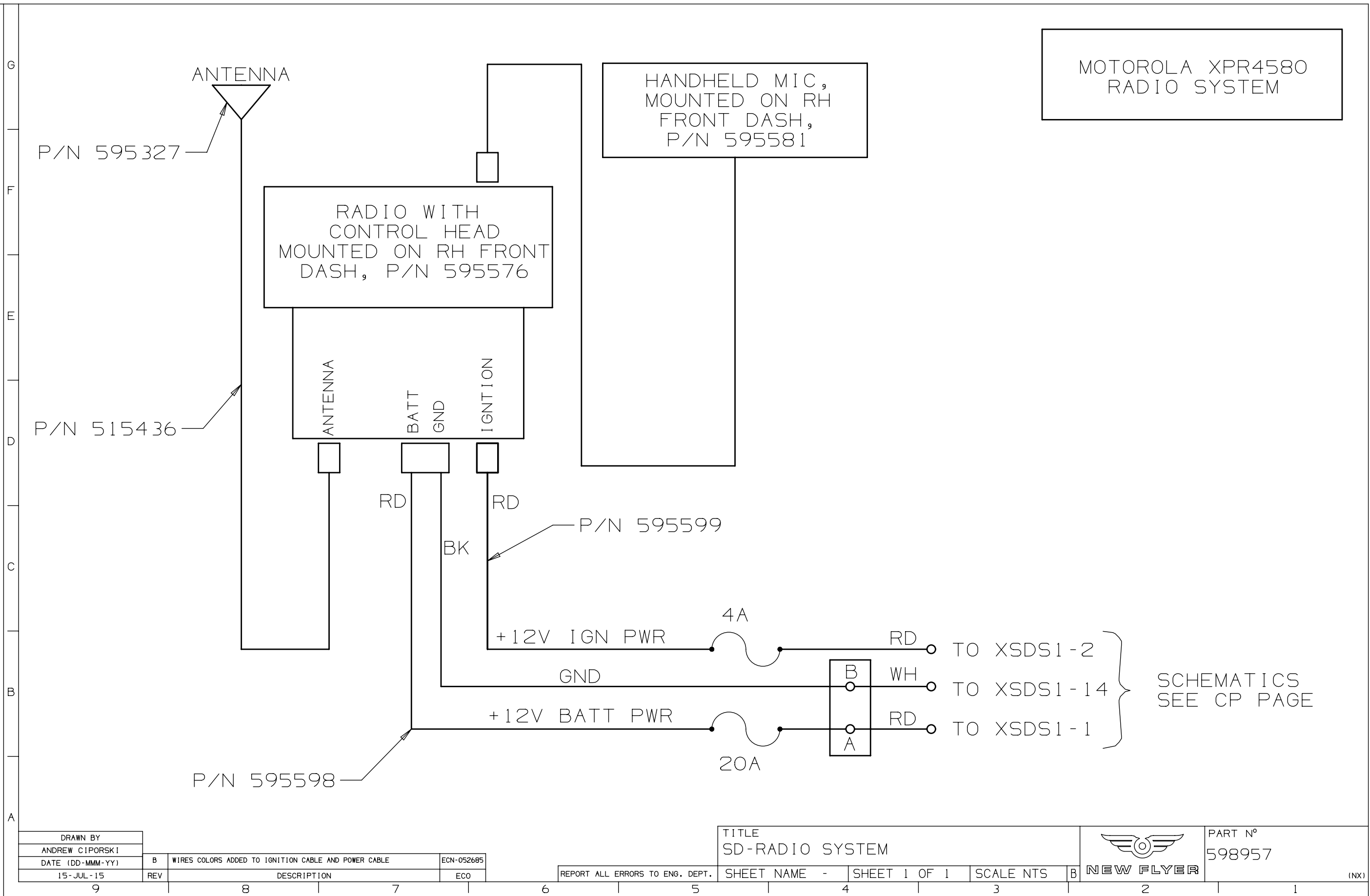


|                   |                 |     |  |
|-------------------|-----------------|-----|--|
| DRAWN BY          | ANDREW CIPORSKI |     |  |
| DATE (DD-MMM-YY)  | 30-MAR-16       | REV |  |
| NOTE UPDATED (E6) |                 | ECO |  |
| DESCRIPTION       |                 |     |  |

|                                 |               |              |           |
|---------------------------------|---------------|--------------|-----------|
| TITLE                           | SD-APC SYSTEM |              |           |
| SHEET NAME                      | -             | SHEET 1 OF 1 | SCALE NTS |
| REPORT ALL ERRORS TO ENG. DEPT. |               |              |           |
| PART N°                         |               | 595465       |           |
| NEW FLYER                       |               | (NX)         |           |



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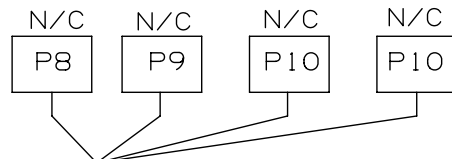
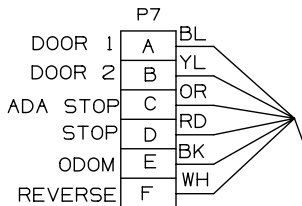
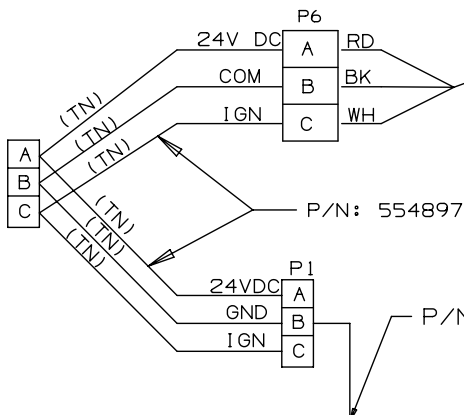
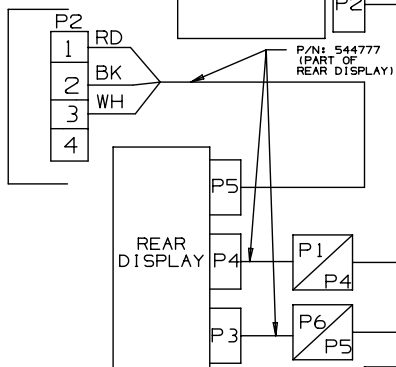
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TO NFI WIRING  
SEE SCHEMATICS  
PAGE AF

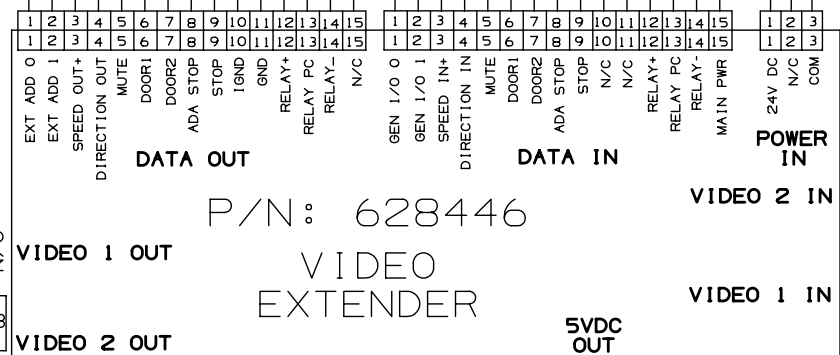
TO NFI WIRING  
SEE SCHEMATICS  
PAGE AF

P/N: 542386

P/N: 542385

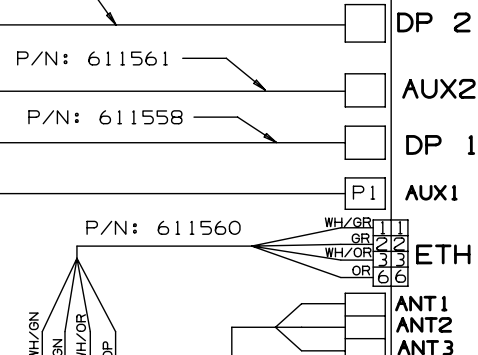
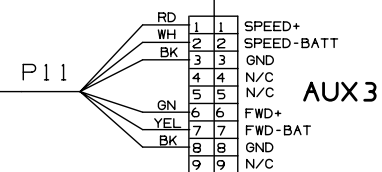
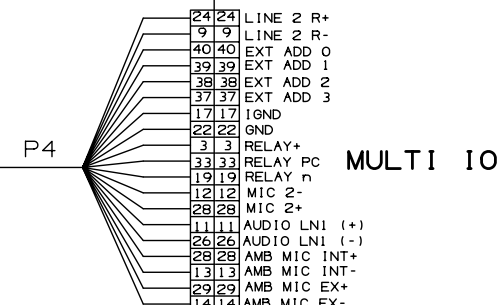
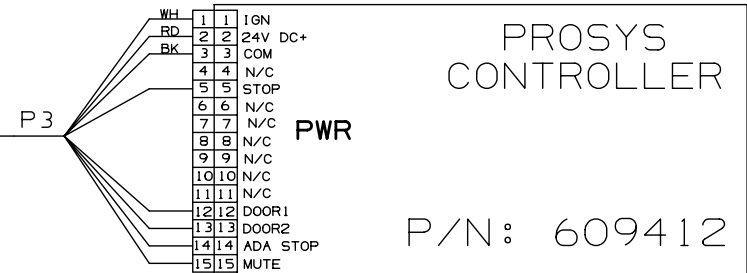


P/N: 618410



P/N: 609514

| SIGNALS              | PWR WHEN ACTIVE | FUNCTION                                      |
|----------------------|-----------------|-----------------------------------------------|
| DOOR 1               | 12V/24V         | FRONT DOOR OPENED, 5 DEGREE LIMIT             |
| DOOR 2               | 12V/24V         | REAR DOOR OPENED, 5 DEGREE LIMIT              |
| ODOMETER             | 12V/24V         | ODOMETER (SPEED SIGNAL), PULSED               |
| REVERSE IND          | 12V/24V         | VEHICLE IN REVERSE, LATCHED                   |
| STOP REQUEST         | 12V/24V         | STOP REQUESTED, LATCHED OR MOMENTARY          |
| W/CHAIR STOP REQUEST | 12V/24V         | W/CHAIR, STOP REQUESTED, LATCHED OR MOMENTARY |



WIFI/GPS  
ANTENNA

P/N: 546049

|                  |              |     |                       |            |
|------------------|--------------|-----|-----------------------|------------|
| DRAWN BY         | STEFAN BALKO | A   | RELEASE TO PRODUCTION | ECN-064242 |
| DATE (DD-MMM-YY) | 28-MAR-16    | REV | DESCRIPTION           | ECO        |

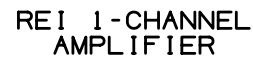
REPORT ALL ERRORS TO ENG. DEPT.

|       |                 |            |   |              |       |     |   |
|-------|-----------------|------------|---|--------------|-------|-----|---|
| TITLE | SD-VIDEO SYSTEM | SHEET NAME | - | SHEET 1 OF 1 | SCALE | NTS | B |
|-------|-----------------|------------|---|--------------|-------|-----|---|

|           |         |        |      |
|-----------|---------|--------|------|
| NEW FLYER | PART N° | 628455 | (NX) |
|-----------|---------|--------|------|



A B C D E F G



REPORT ALL ERRORS TO ENG. DEPT.



NEW FLYER

A B C D E F G



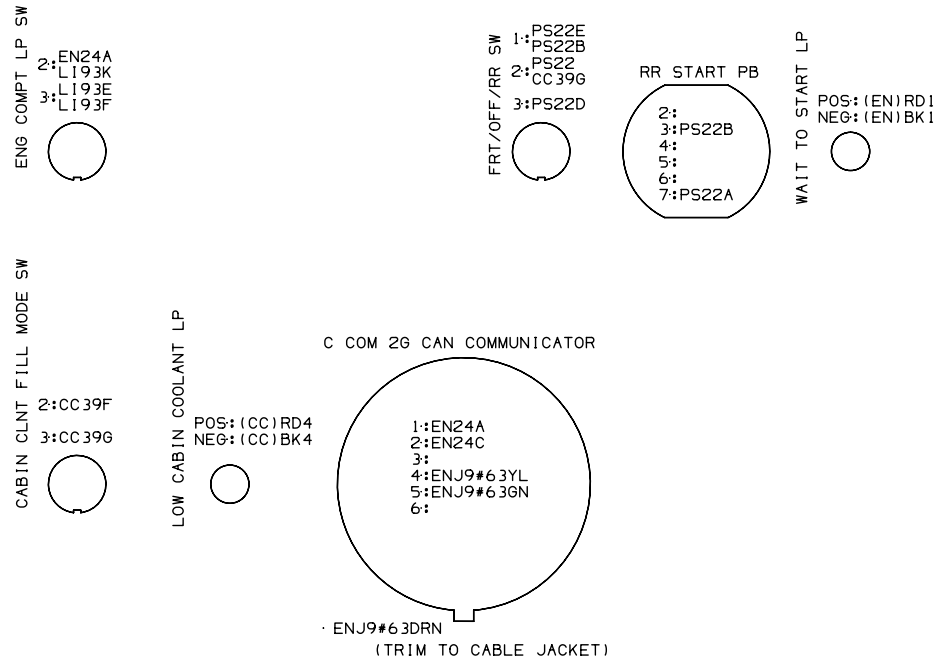
REPORT ALL ERRORS TO ENG. DEPT.

|                                                                                       |                   |
|---------------------------------------------------------------------------------------|-------------------|
|  | PART N°<br>451204 |
| (NX)                                                                                  |                   |

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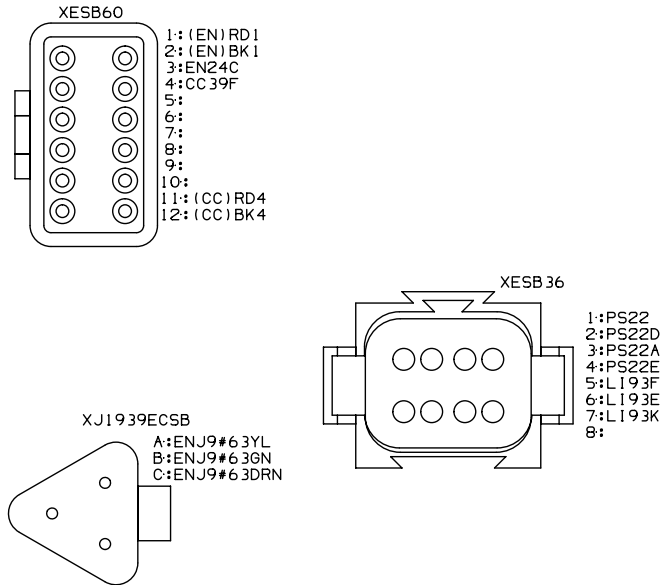
G  
F  
E  
D  
C  
B  
A

FRONT VIEW



NOTE: WIRES ARE STAMPED WITH A HARNESS CODE PREFIX. REFER TO ES-GENERAL INFO G1 FOR DETAILS.

INSIDE SIDE VIEW



WD-ENG COMPT SW BOX

REV: A

633084

NOTE:  
1) SWITCHES ARE WIRED TO THE PINOUT AS SPECIFIED. KEYWAY INFORMATION IS FOR REFERENCE ONLY.  
2) CONNECTOR LOCKING TABS ARE SHOWN FOR ORIENTATION REFERENCE ONLY

|                  |     |                        |            |
|------------------|-----|------------------------|------------|
| DRAWN BY         |     |                        |            |
| DAVID FINLAY     |     |                        |            |
| DATE (DD-MMM-YY) | A   | RELEASED TO PRODUCTION | ECN-065976 |
| 29-APR-16        | REV | DESCRIPTION            | ECO        |

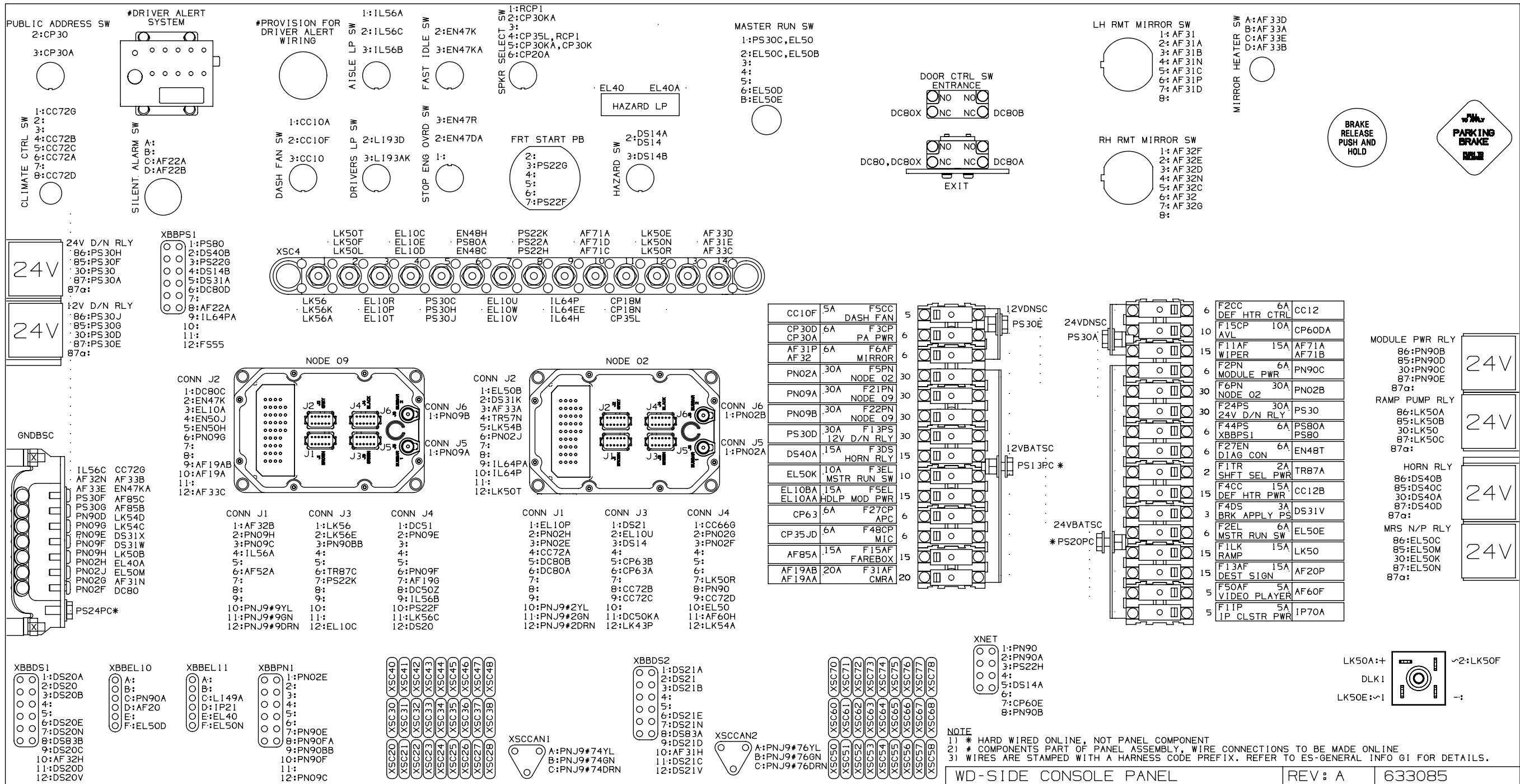
REPORT ALL ERRORS TO ENG. DEPT.

|                     |   |              |           |
|---------------------|---|--------------|-----------|
| TITLE               |   |              |           |
| WD-ENG COMPT SW BOX |   |              |           |
| SHEET NAME          | - | SHEET 1 OF 1 | SCALE NTS |



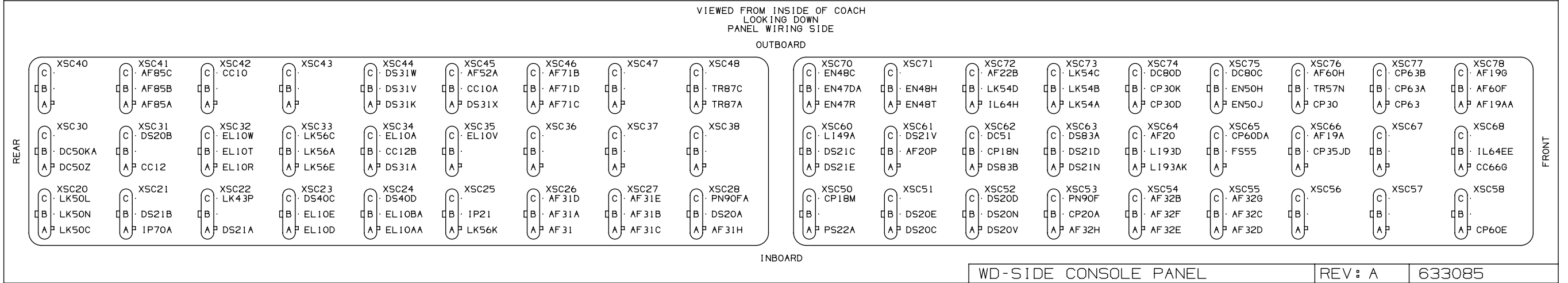
|         |  |  |
|---------|--|--|
| PART N° |  |  |
| 633084  |  |  |
| (NX)    |  |  |

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|                  |  |     |                        |   |  |   |  |            |  |                                 |  |                       |  |              |  |                                                                                       |  |         |  |           |  |      |  |
|------------------|--|-----|------------------------|---|--|---|--|------------|--|---------------------------------|--|-----------------------|--|--------------|--|---------------------------------------------------------------------------------------|--|---------|--|-----------|--|------|--|
| DRAWN BY         |  |     |                        |   |  |   |  |            |  |                                 |  | TITLE                 |  |              |  |  |  | PART N° |  |           |  |      |  |
| DAVID FINLAY     |  |     |                        |   |  |   |  |            |  |                                 |  | WD-SIDE CONSOLE PANEL |  |              |  |                                                                                       |  | 633085  |  |           |  |      |  |
| DATE (DD-MMM-YY) |  | A   | RELEASED TO PRODUCTION |   |  |   |  | ECN-065976 |  |                                 |  |                       |  |              |  |                                                                                       |  |         |  |           |  |      |  |
| 29-APR-16        |  | REV | DESCRIPTION            |   |  |   |  | ECO        |  | REPORT ALL ERRORS TO ENG. DEPT. |  | SHEET NAME -          |  | SHEET 1 OF 2 |  | SCALE NTS                                                                             |  | B       |  | NEW FLYER |  | (NX) |  |
| 9                |  | 8   |                        | 7 |  | 6 |  | 5          |  | 4                               |  | 3                     |  | 2            |  | 1                                                                                     |  |         |  |           |  |      |  |

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|                  |     |                        |            |
|------------------|-----|------------------------|------------|
| DRAWN BY         |     |                        |            |
| DAVID FINLAY     |     |                        |            |
| DATE (DD-MMM-YY) | A   | RELEASED TO PRODUCTION | ECN-065976 |
| 29-APR-16        | REV | DESCRIPTION            | ECO        |

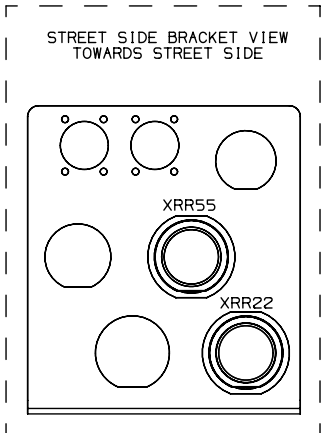
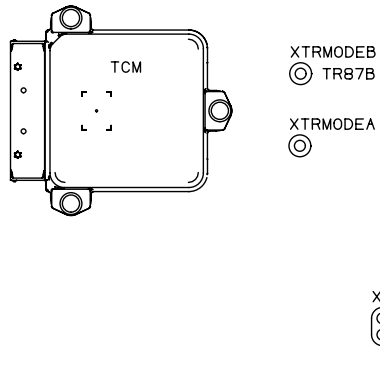
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|-----------------------|--|--------------|-------|-----|
| TITLE                 |  |              |       |     |
| WD-SIDE CONSOLE PANEL |  |              |       |     |
| SHEET NAME -          |  | SHEET 2 OF 2 | SCALE | NTS |



|         |
|---------|
| PART N° |
| 633085  |

x)

A B C D E F G



RR EOL RES  
A:PNJ9#84YL  
B:PNJ9#84GN  
C:PNJ9#84DRN

**NOTE**

- 1) \*HARD WIRED ONLINE, NOT PANEL COMPONENT
- 2) \*\*OPTION NOT USED, PART OF BODY HARNESS
- 3) WIRES ARE STAMPED WITH A HARNESS CODE PREFIX. REFER TO ES-GENERAL INFO G1 FOR DETAILS.

NOTES:

- 1) FOR GROUND BARS, CONNECT ONE WIRE PER POSITION WHEN SPACE AVAILABLE, UP TO A MAXIMUM OF 3 PER POSITION WHEN REQUIRED.
- 2) FOR GROUND BARS, X IN CIRCLE INDICATES POSITION NOT AVAILABLE FOR WIRE TERMINATION.
- 3) SWITCHES ARE WIRED TO THE PINOUT AS SPECIFIED. KEYWAY INFORMATION IS FOR REFERENCE ONLY.

|                                 |              |                        |           |   |
|---------------------------------|--------------|------------------------|-----------|---|
|                                 |              | TITLE<br>WD-REAR PANEL |           |   |
| REPORT ALL ERRORS TO ENG. DEPT. | SHEET NAME - | SHEET 1 OF 2           | SCALE NTS | B |

|         |
|---------|
| PART N° |
| 633086  |

(NX)



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G  
F  
E  
D  
C  
B  
A

CURB SIDE BRACKET VIEW  
TOWARDS CURB SIDE

- 1:PS32E

2:CC39F

3:CP88H

4:DC70A

5:CC09

6:CC39A

7:CC39B

8:CC39D

9:AF60A

10:AF60B

11:

12:

13:EN46A

14:CC31Y

15:CC08A

16:CC08C
- 17:PS34A

18:AF60C

19:EN49

20:AF60D

21:AF60E

22:

23:PS22N

24:DS72G

25:

26:CC31CA

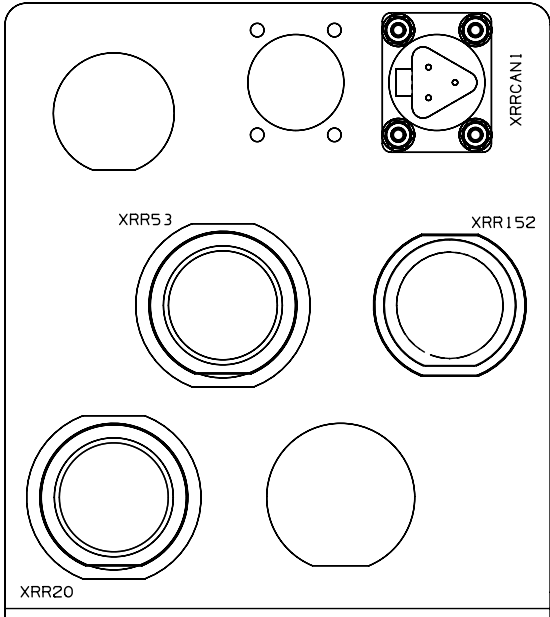
27:

28:CC31C

29:CC31D

30:

31:



- A:PNJ9#81YL
- B:PNJ9#81GN
- C:PNJ9#81DRN

- A:EN46AU
- B:
- C:
- D:
- E:
- F:
- G:
- H:
- J:
- K:EN46DP
- L:
- M:
- N:
- P:

- 1:

2:

3:

4:

5:PN90G

6:

7:

8:PS32A

9:DS53B

10:DS72D

11:DS53C

12:EL80B

13:DS72E

14:DS53G

15:DS72F
- 16:DS53F

17:L193AB

18:DC52X

19:IL64C

20:DC53A

21:IL41A

22:IL41B

23:PS22D

24:PS22E

25:IL41C

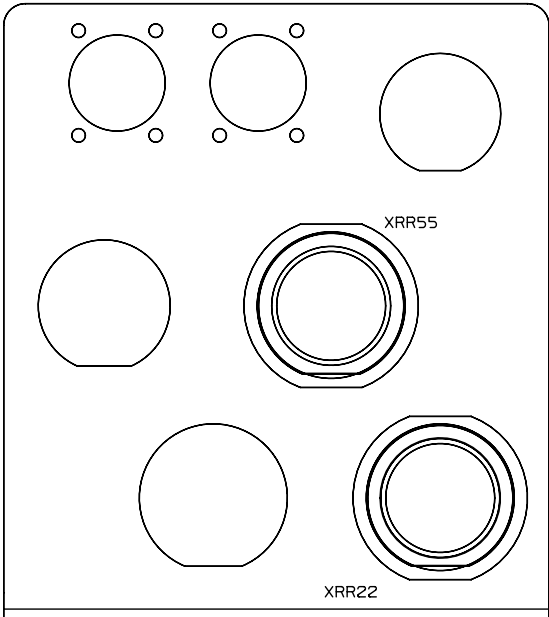
26:

27:

28:

29:

STREET SIDE BRACKET VIEW  
TOWARDS STREET SIDE



- A:TR87R
- B:
- C:TR87N
- D:
- E:
- F:TR87P
- G:
- H:CP63C
- J:FS55A
- K:AF19F
- L:AF60J
- M:AF60M
- N:CP61A
- P:AF18A
- R:IP30E
- S:IP30F
- T:IP30G
- U:IP30H
- V:CC31GA
- W:CC31G
- X:CC31H

- 1:

2:

3:

4:

5:

6:DS83C

7:DS72B

8:DS53D

9:DS83D

10:DS62A

11:EL80S

12:IL64E

13:IL42A

14:IL42B

15:IL42C

16:
- 17:L193E

18:L193BA

19:DC54X

20:DC53C

21:AB10

22:AB10A

23:

24:IP30A

25:IP30B

26:IP30C

27:IP30D

28:

29:

30:

31:

WD-REAR PANEL      REV: A      633086

|                  |     |                        |            |
|------------------|-----|------------------------|------------|
| DRAWN BY         |     |                        |            |
| DAVID FINLAY     |     |                        |            |
| DATE (DD-MMM-YY) | A   | RELEASED TO PRODUCTION | ECN-065976 |
| 29-APR-16        | REV | DESCRIPTION            | ECO        |

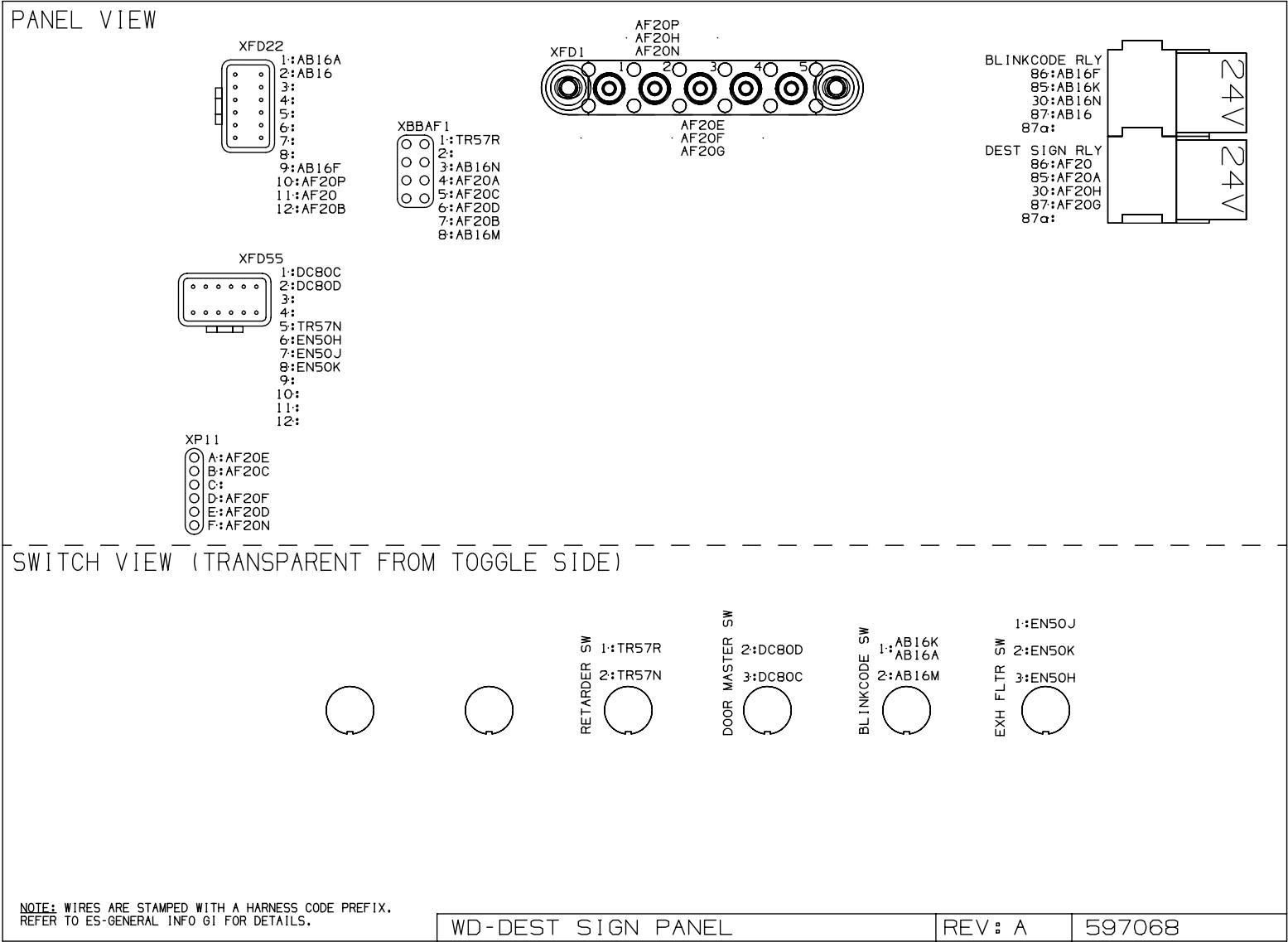
REPORT ALL ERRORS TO ENG. DEPT.

|               |   |              |           |
|---------------|---|--------------|-----------|
| TITLE         |   |              |           |
| WD-REAR PANEL |   |              |           |
| SHEET NAME    | - | SHEET 2 OF 2 | SCALE NTS |
| B             |   |              |           |

|                                                                                       |         |
|---------------------------------------------------------------------------------------|---------|
|  | PART N° |
|                                                                                       | 633086  |
| (NX)                                                                                  |         |

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C  
B  
A



NOTES:  
1) SWITCHES ARE WIRED TO THE PINOUT AS SPECIFIED. KEYWAY INFORMATION IS FOR REFERENCE ONLY.  
2) CONNECTOR LOCKING TABS ARE SHOWN FOR ORIENTATION REFERENCE ONLY.

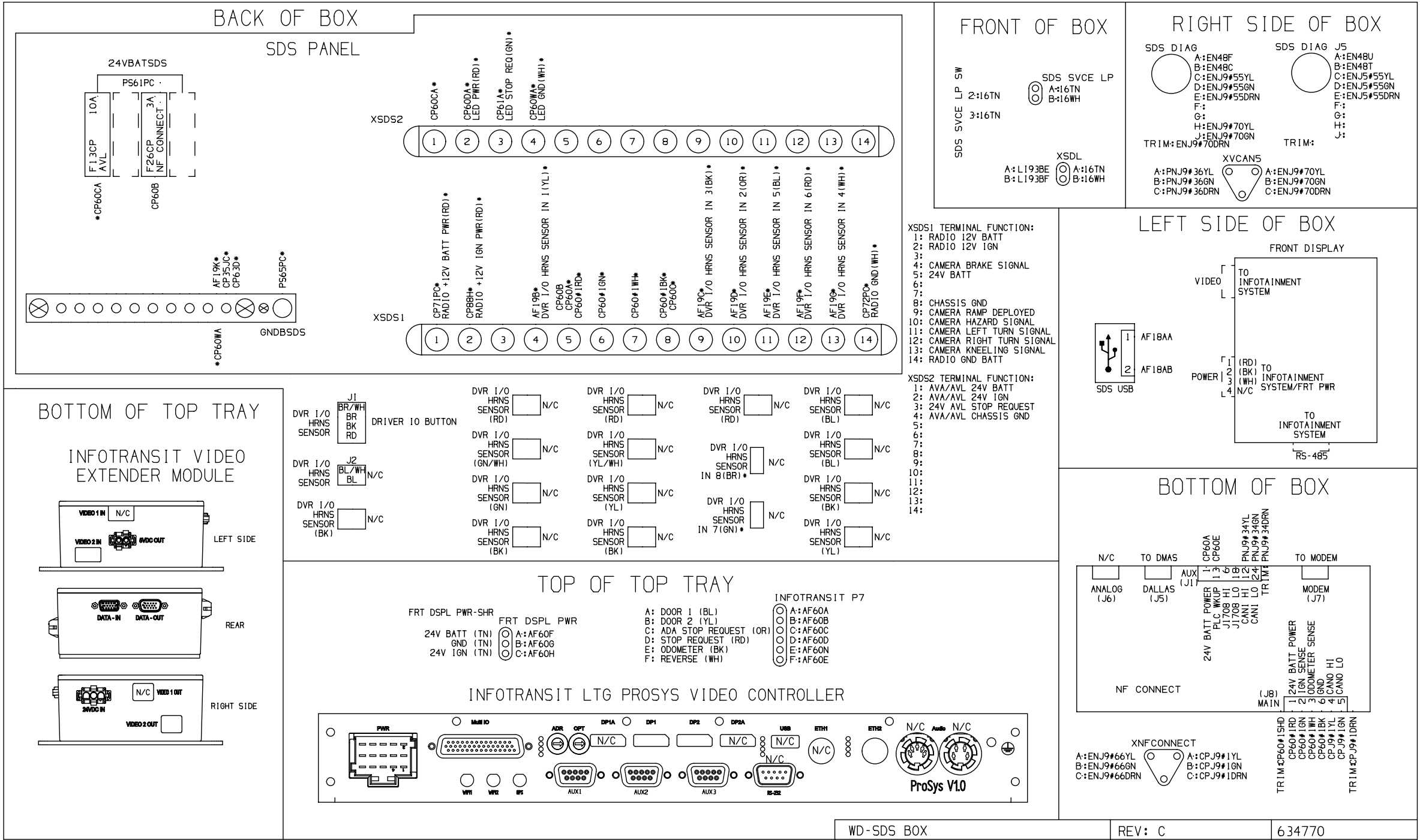
|                  |     |                        |            |
|------------------|-----|------------------------|------------|
| DRAWN BY         |     |                        |            |
| BENILDA SOLA     |     |                        |            |
| DATE (DD-MMM-YY) | A   | RELEASED TO PRODUCTION | ECN-051622 |
| 12-JUN-15        | REV | DESCRIPTION            | ECO        |

|                    |   |              |           |
|--------------------|---|--------------|-----------|
| TITLE              |   |              |           |
| WD-DEST SIGN PANEL |   |              |           |
| SHEET NAME         | - | SHEET 1 OF 1 | SCALE NTS |

|           |  |
|-----------|--|
| PART N°   |  |
| 597068    |  |
| NEW FLYER |  |
| (NX)      |  |



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\*HARDWIRED ONLINE.  
THIS NOTE APPLIES ONLY TO THE SDS BOX PANEL.  
EVERY OTHER CONNECTION NOT ON SDS PANEL IS ASSUMED TO BE HARDWIRED ONLINE.

|                      |     |                                                                     |  |            |
|----------------------|-----|---------------------------------------------------------------------|--|------------|
| DRAWN BY             |     |                                                                     |  |            |
| DANIEL PRZYBYTKOWSKI | C   | 1) SHEETS AFFECTED (1)<br>2) XSDS2-2,3,4 LED WIRES (RD,GN,WH) ADDED |  | ECN-070247 |
| DATE (DD-MMM-YY)     |     |                                                                     |  |            |
| 20-JUL-16            | REV | DESCRIPTION                                                         |  | ECO        |

REPORT ALL ERRORS TO ENG. DEPT.

TITLE  
WD-SDS\_BOX

SHEET NAME

SHEET 1 OF 2

SCALE NTS

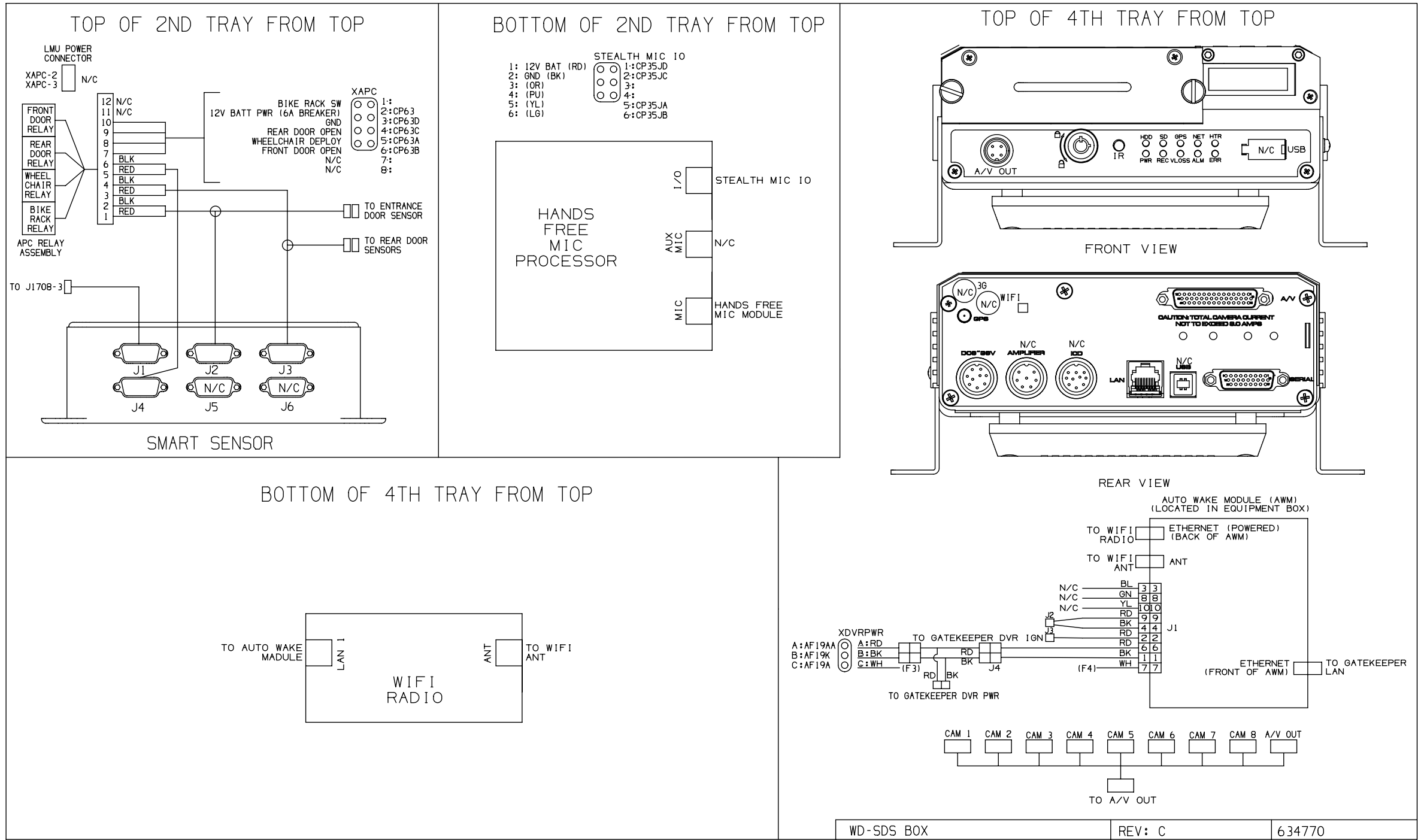


PART N°  
634770

(NX)

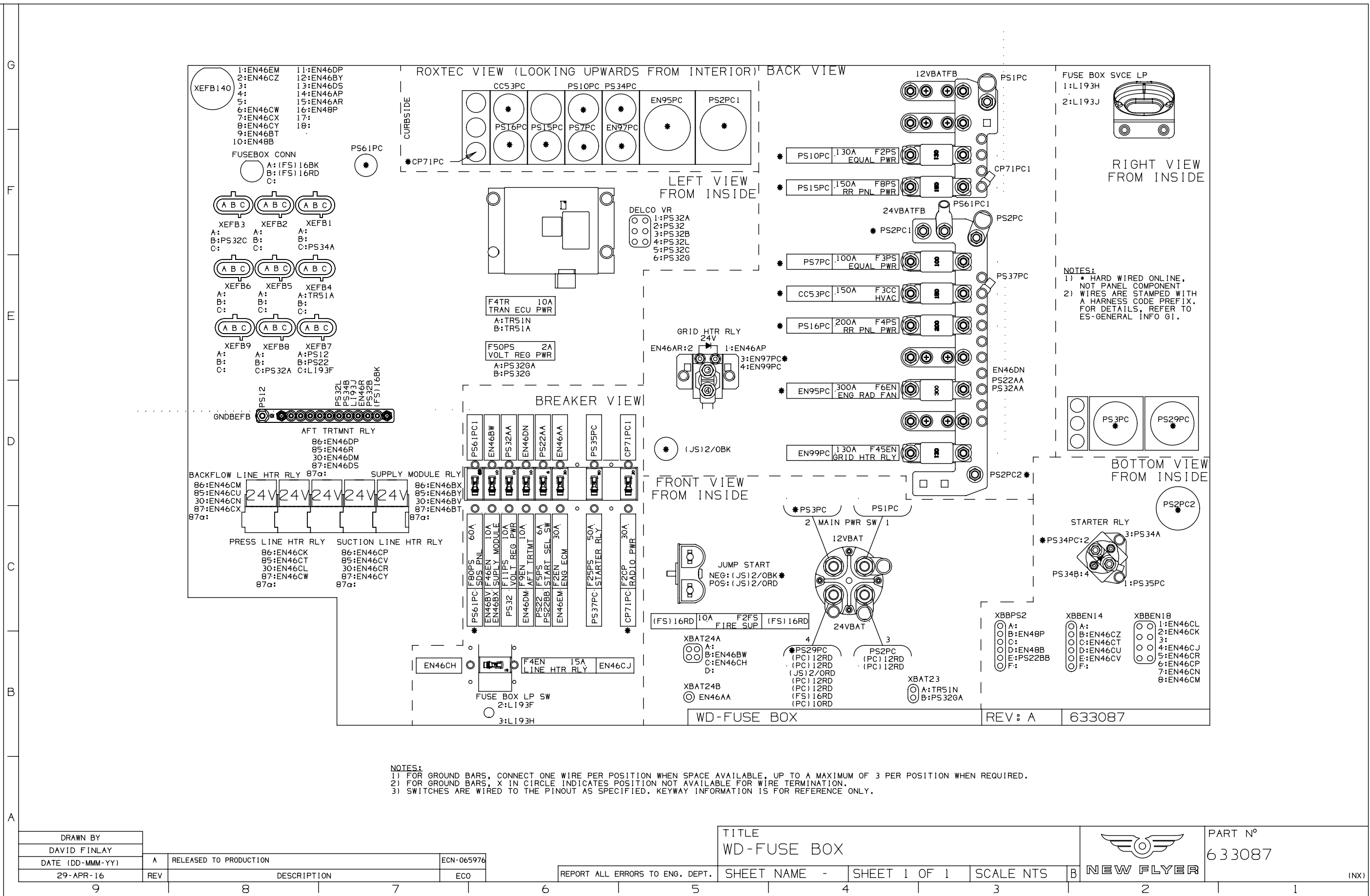
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A



|                      |  |                                 |  |           |  |
|----------------------|--|---------------------------------|--|-----------|--|
| DRAWN BY             |  | TITLE                           |  | PART N°   |  |
| DANIEL PRZYBYTKOWSKI |  | WD-SDS BOX                      |  | 634770    |  |
| DATE (DD-MMM-YY)     |  | SHEET NAME                      |  | NEW FLYER |  |
| 20-JUL-16            |  | SHEET 2 OF 2                    |  | (NX)      |  |
| REV                  |  | SCALE                           |  |           |  |
| C                    |  | NTS                             |  |           |  |
| SHEET UNCHANGED      |  | B                               |  |           |  |
| DESCRIPTION          |  | REPORT ALL ERRORS TO ENG. DEPT. |  |           |  |
| ECO                  |  |                                 |  |           |  |
| ECN-070247           |  |                                 |  |           |  |

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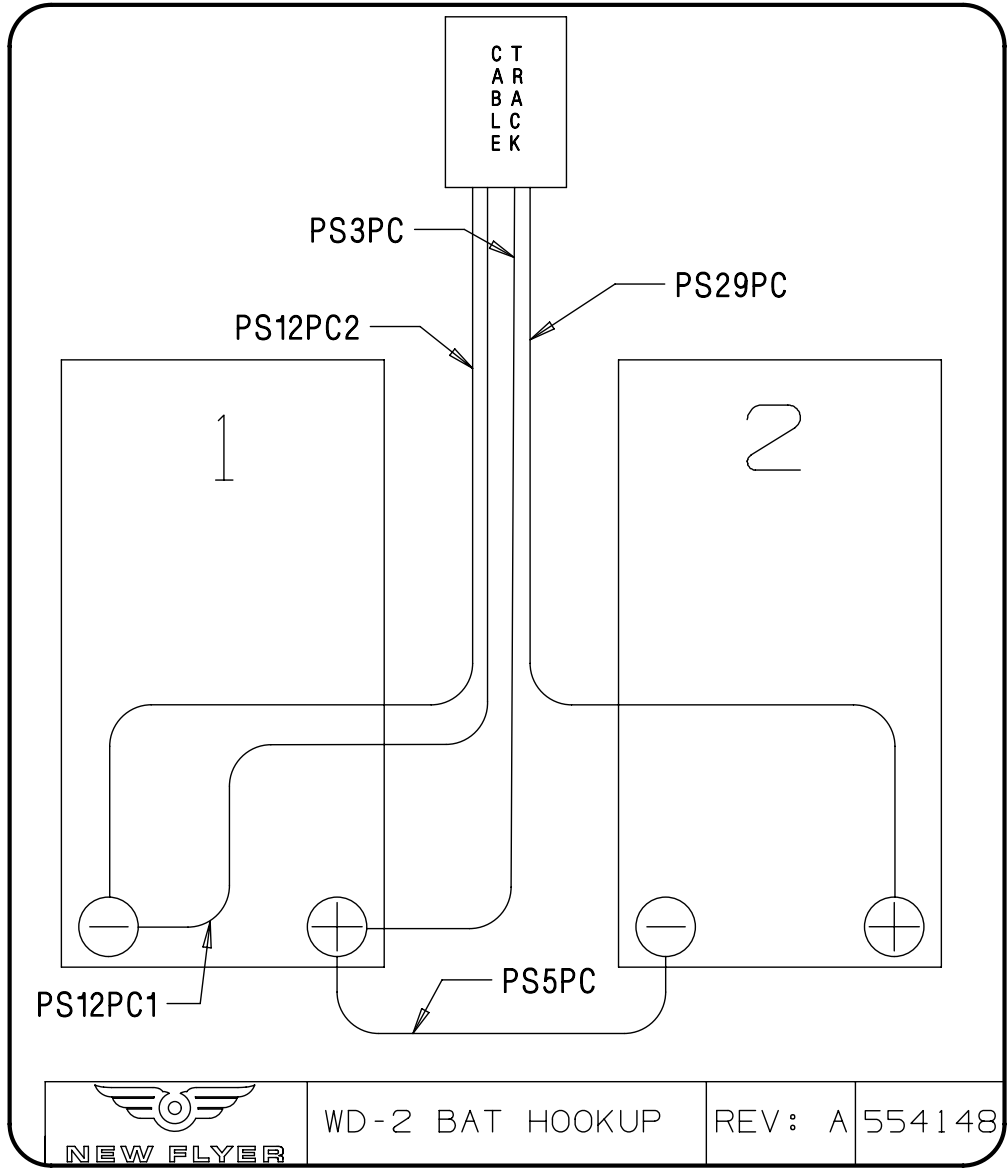


|                  |  |     |                        |   |  |  |  |   |  |   |  |   |            |   |                                 |             |              |   |              |  |           |  |   |                                                                                       |           |         |      |  |
|------------------|--|-----|------------------------|---|--|--|--|---|--|---|--|---|------------|---|---------------------------------|-------------|--------------|---|--------------|--|-----------|--|---|---------------------------------------------------------------------------------------|-----------|---------|------|--|
| DRAWN BY         |  |     |                        |   |  |  |  |   |  |   |  |   |            |   |                                 | TITLE       |              |   |              |  |           |  |   |  |           | PART N° |      |  |
| DAVID FINLAY     |  |     |                        |   |  |  |  |   |  |   |  |   |            |   |                                 | WD-FUSE BOX |              |   |              |  |           |  |   |                                                                                       |           | 633087  |      |  |
| DATE (DD-MMM-YY) |  | A   | RELEASED TO PRODUCTION |   |  |  |  |   |  |   |  |   | ECN-065976 |   |                                 |             |              |   |              |  |           |  |   |                                                                                       |           |         |      |  |
| 29-APR-16        |  | REV | DESCRIPTION            |   |  |  |  |   |  |   |  |   | ECO        |   | REPORT ALL ERRORS TO ENG. DEPT. |             | SHEET NAME - |   | SHEET 1 OF 1 |  | SCALE NTS |  | B |                                                                                       | NEW FLYER |         | (NX) |  |
| 9                |  | 8   |                        | 7 |  |  |  | 6 |  | 5 |  | 4 |            | 3 |                                 | 2           |              | 1 |              |  |           |  |   |                                                                                       |           |         |      |  |

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G  
F  
E  
D  
C  
B  
A

|                  |     |                        |            |
|------------------|-----|------------------------|------------|
| DRAWN BY         |     |                        |            |
| RAMEEZ MANSURI   |     |                        |            |
| DATE (DD-MMM-YY) | A   | RELEASED TO PRODUCTION | ECN-033467 |
| 18-MAR-14        | REV | DESCRIPTION            | ECO        |



|                 |              |           |   |
|-----------------|--------------|-----------|---|
| TITLE           |              |           |   |
| WD-2 BAT HOOKUP |              |           |   |
| SHEET NAME -    | SHEET 1 OF 1 | SCALE 1:1 | B |

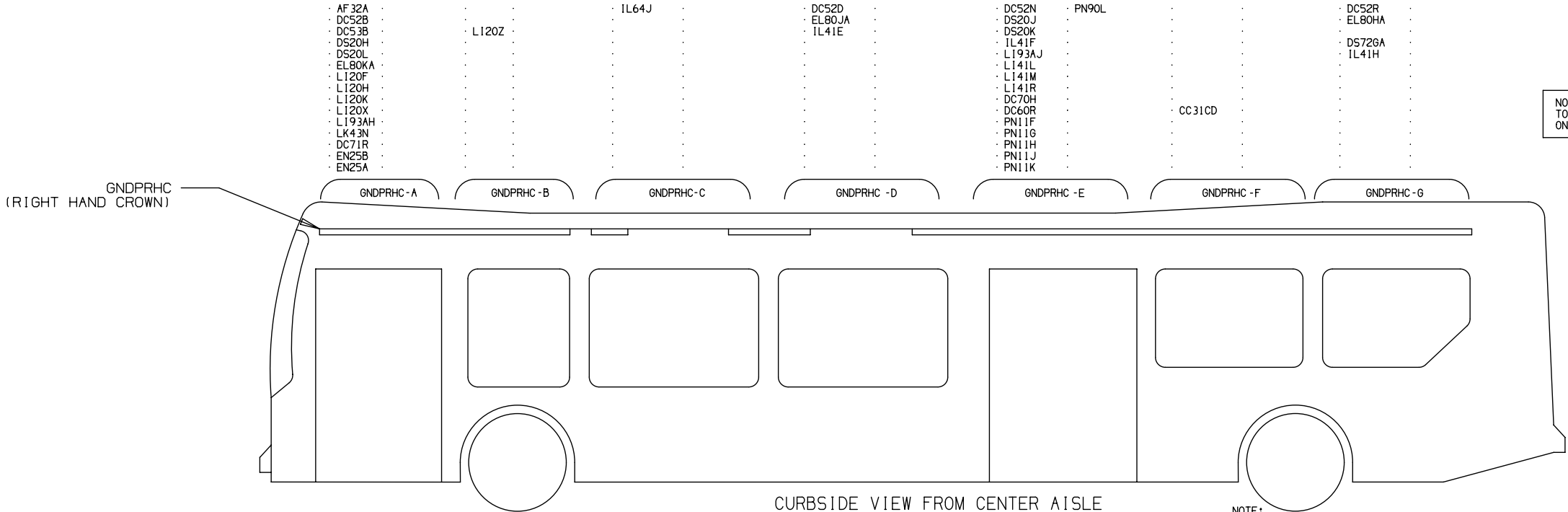
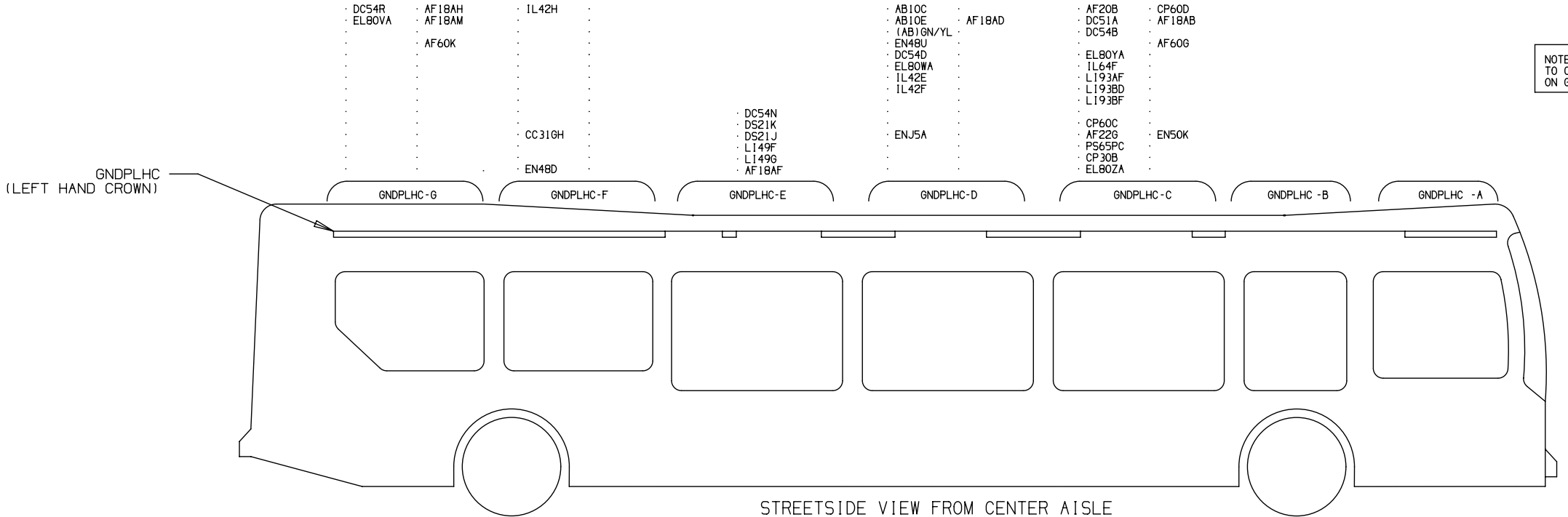


|           |        |      |
|-----------|--------|------|
| PART N°   | 554148 | (NX) |
| NEW FLYER |        |      |

9 8 7 6 5 4 3 2 1

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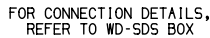
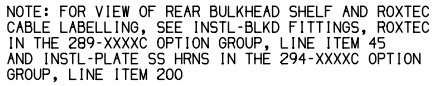
NOTE:  
1) CONNECT 2 GROUND WIRE PER POSITION WHEN SPACE AVAILABLE, UP TO A MAXIMUM OF 3 PER POSITION WHEN REQUIRED.  
WHEN USING DURASEAL TERMINALS (HEAT SHRINKABLE) CONNECT 2 GROUND WIRES PER POSITION.  
2) WIRES ARE STAMPED WITH A HARNESS CODE PREFIX. REFER TO ES-GENERAL INFO 61 FOR DETAILS.

|                  |     |                        |            |
|------------------|-----|------------------------|------------|
| DRAWN BY         |     |                        |            |
| DAVID FINLAY     |     |                        |            |
| DATE (DD-MMM-YY) | A   | RELEASED TO PRODUCTION | ECN-065976 |
| 29-APR-16        | REV | DESCRIPTION            | ECO        |

|                      |   |              |           |
|----------------------|---|--------------|-----------|
| TITLE                |   |              |           |
| WD-CONNECTION POINTS |   |              |           |
| SHEET NAME           | - | SHEET 1 OF 2 | SCALE NTS |

|                                                                                       |         |      |
|---------------------------------------------------------------------------------------|---------|------|
|  | PART N° | (NX) |
|                                                                                       | 633088  |      |

A B C D E F G



NOTE: PRODUCTION TO SECURE GROUND WIRES  
TO CLOSEST GROUND CONNECTION PROVISION  
ON GNDBSCBOX.

- NOTES:**
- 1) CONNECT 2 GROUND WIRE PER POSITION WHEN SPACE AVAILABLE, UP TO A MAXIMUM OF 3 PER POSITION WHEN REQUIRED WHEN USING DURASEAL TERMINALS (HEAT SHRINKABLE) CONNECT 2 GROUND WIRES PER POSITION.
  - 2) MAXIMUM 1 POWER CABLE PER GROUND POINT OR BAR POSITION.
  - 3) FOR GROUND BARS, X IN CIRCLE INDICATES POSITION NOT AVAILABLE FOR WIRE TERMINATION.

NOTE:  
FOR GNDPBAT, REFER TO 290-XXXXC/U  
ELECTRICAL SCHEMATICS AND 294-XXXXC/U  
INSTALL DRAWINGS FOR EXACT CABLE AND  
WIRE LOCATIONS.

REPORT ALL ERRORS TO ENG. DEPT.



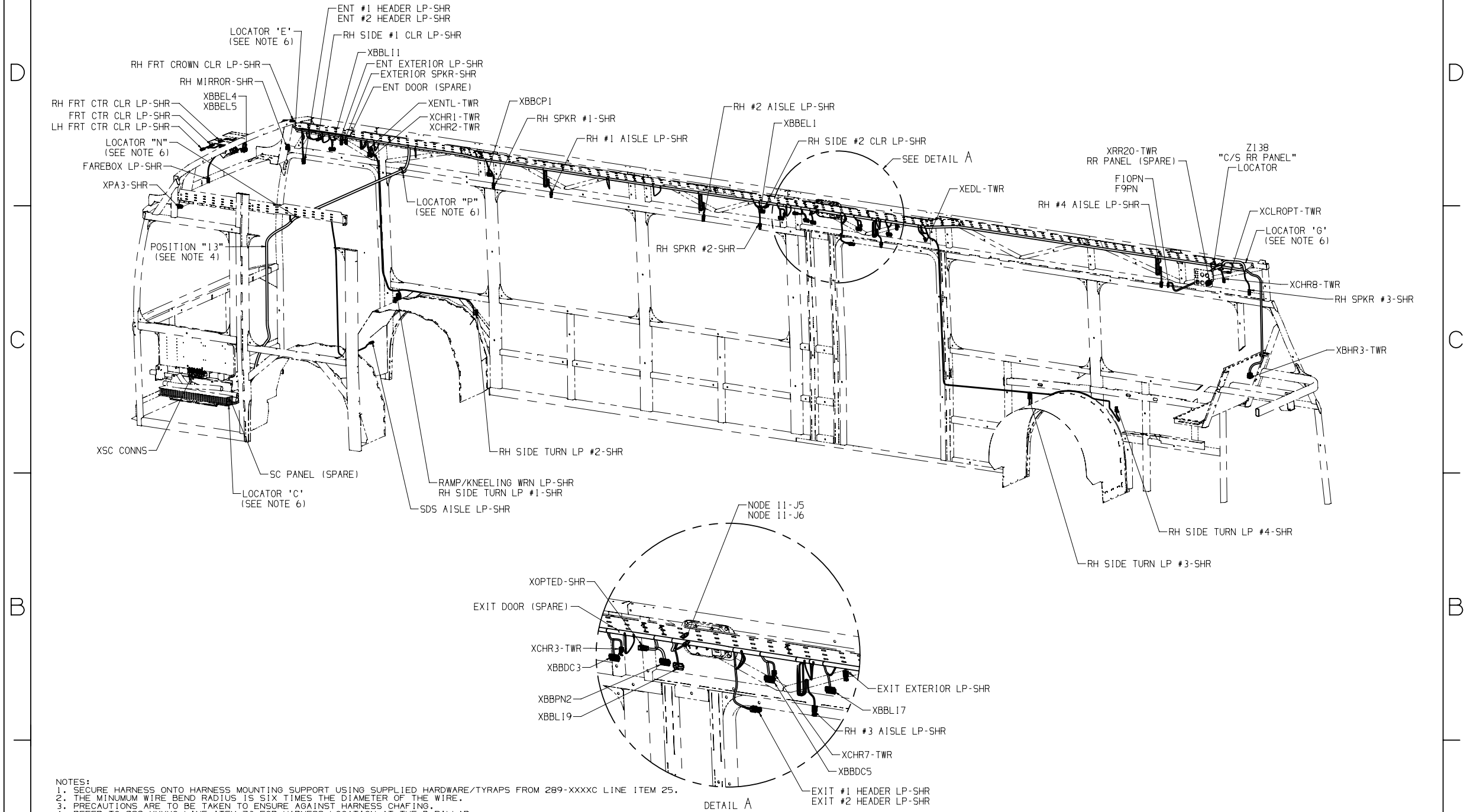
NEW FLYER

|         |      |
|---------|------|
| PART N° |      |
| 633088  |      |
|         | (NX) |



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NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING



- NOTES:
1. SECURE HARNESS ONTO HARNESS MOUNTING SUPPORT USING SUPPLIED HARDWARE/TYRAPS FROM 289-XXXXC LINE ITEM 25.
  2. THE MINIMUM WIRE BEND RADIUS IS SIX TIMES THE DIAMETER OF THE WIRE.
  3. PRECAUTIONS ARE TO BE TAKEN TO ENSURE AGAINST HARNESS CHAFING.
  4. REFER TO 289-XXXXC LINE ITEM 73 FOR HARNESS LOCATION AT THE B-PILLAR.
  5. ENSURE THAT ALL GROUND WIRES ARE SECURED TO NEAREST AVAILABLE GROUND POINT USE HARDWARE FROM INSTL-GROUND HARDWARE. REF 292-XXXXC LINE ITEM 200.
  6. WHITE LOCATOR TAPE SHOULD BE ALIGNED TO THE ENDS OF HARNESS SUPPORT AS SHOWN.

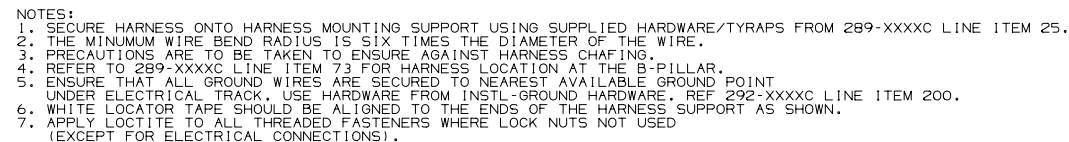
|                                                                                               |     |
|-----------------------------------------------------------------------------------------------|-----|
| DO NOT SCALE DRAWING                                                                          |     |
| DIMENSIONS IN ( ) ARE IN m.m.                                                                 |     |
| THD ANGLE  |     |
| DRAWN BY                                                                                      |     |
| NISHADA MEDAGODA                                                                              |     |
| DATE (DD-MMM-YY)                                                                              | A   |
| 08-MAY-14                                                                                     | REV |

|                        |            |
|------------------------|------------|
| RELEASED TO PRODUCTION | ECO-035752 |
| DESCRIPTION            | ECO        |

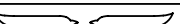
|                        |     |      |                |                    |                                                                                               |
|------------------------|-----|------|----------------|--------------------|-----------------------------------------------------------------------------------------------|
| 1                      | EA  | 1    | 559983         | HRNS-RH CROWN X-40 | -                                                                                             |
| QTY                    | U/M | ITEM | PART NO.       | DESCRIPTION        | WEIGHT                                                                                        |
| MATERIAL               |     |      | UNSPEC'D TOLS. | DEC.IN.            | TITLE                                                                                         |
| -                      |     |      | .X             | ±.12               | INSTL-HRNS RH CROWN X-40                                                                      |
| -                      |     |      | .XX            | ±.06               |                                                                                               |
| -                      |     |      | .XXX           | ±.03               |                                                                                               |
| WEIGHT                 |     |      | HOLE DIA.      | ±.015              |                                                                                               |
| -                      |     |      | BEND RADII     | ±.03               |  PART N° |
| TREATMENT NOT REQUIRED |     |      | ANGLE TOL.     | ±1°                |                                                                                               |
| -                      |     |      | SIMILAR TO     | -                  | 559982                                                                                        |
| -                      |     |      | -              | -                  | (NX)                                                                                          |
| SCALE NTS              |     |      |                | C                  | SHEET 1 OF 1                                                                                  |

REPORT ALL ERRORS TO ENG. DEPT.

NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING



|     |                         |            |
|-----|-------------------------|------------|
| A   | RELEASED TO PRODUCTION. | ECN-049671 |
| REV | DESCRIPTION             | ECO        |

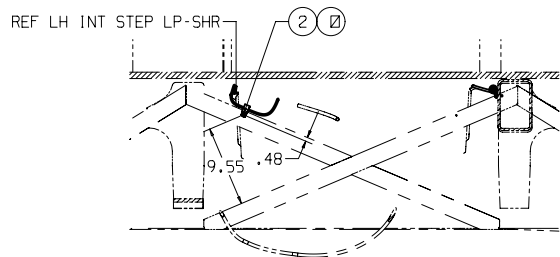
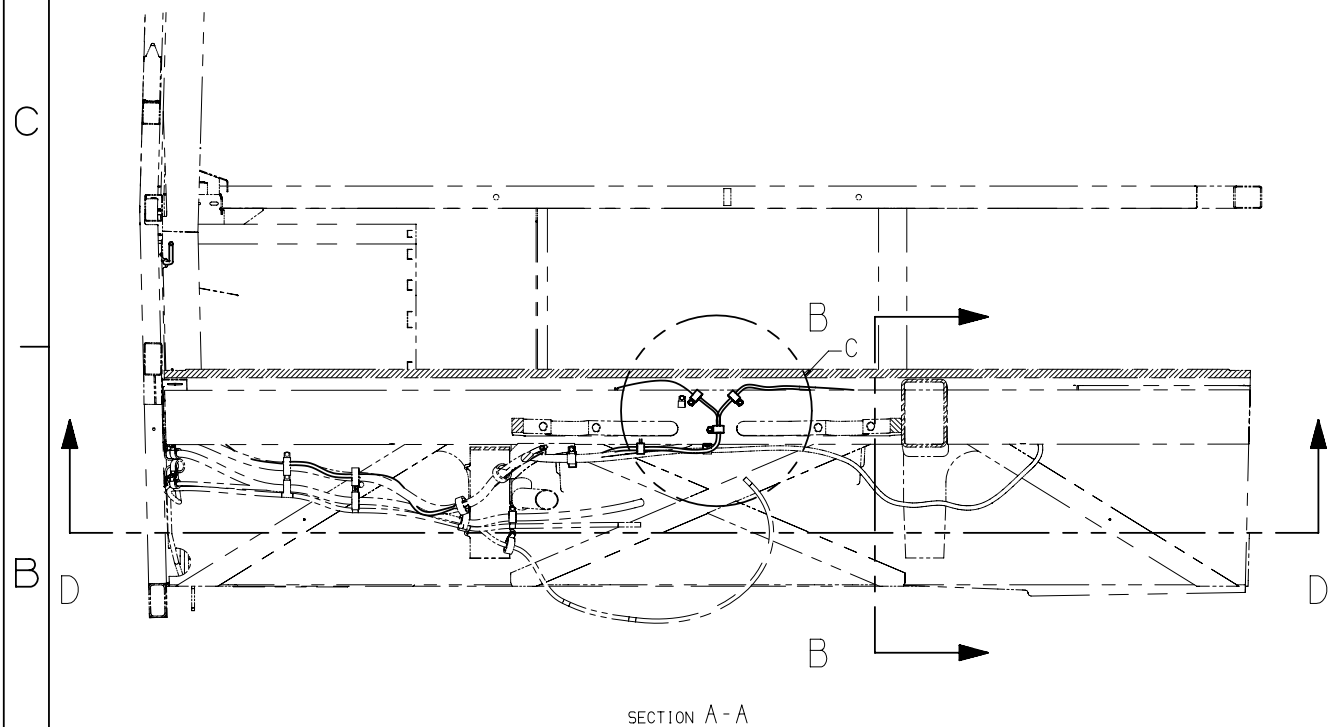
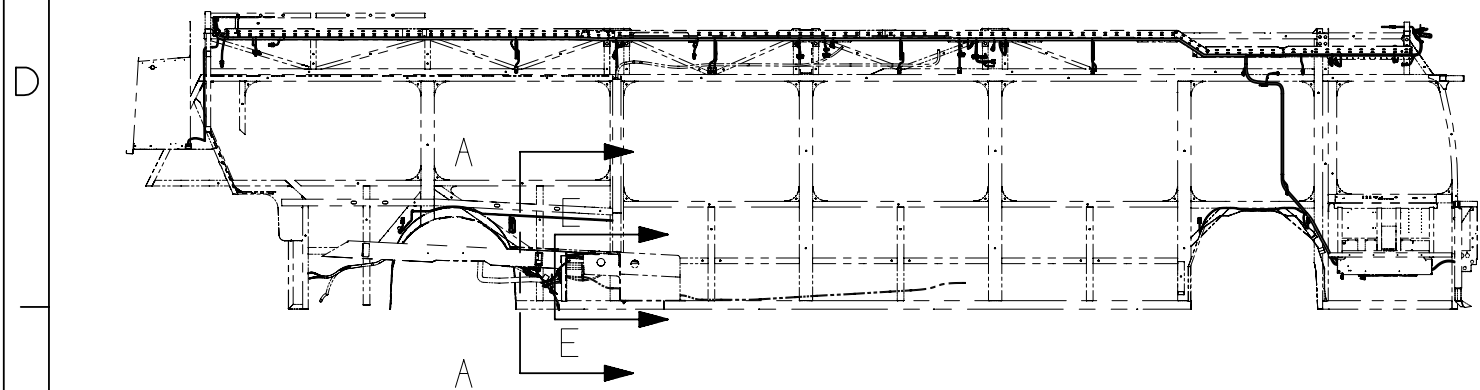
|                                |                                                                                    |                                             |                                                                                                                |
|--------------------------------|------------------------------------------------------------------------------------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| MATERIAL<br>-                  | UNSPEC'D TOLS.<br>.<br>.X<br>.XX<br>.XXX<br>HOLE DIA.<br>BEND RADII.<br>ANGLE TOL. | DEC. IN.<br>.<br>.<br>.<br>.<br>.<br>.<br>. | TITLE<br>INSTL-HRNS LH CROWN X-40                                                                              |
| WEIGHT<br>-                    |                                                                                    |                                             |                           |
| TREATMENT<br>NOT REQUIRED<br>- | SIMILAR TO<br>-                                                                    |                                             | PART N°<br>592896<br><br> |
|                                |                                                                                    |                                             | SCALE NTS<br>C<br>SHEET 1 OF 2                                                                                 |

58

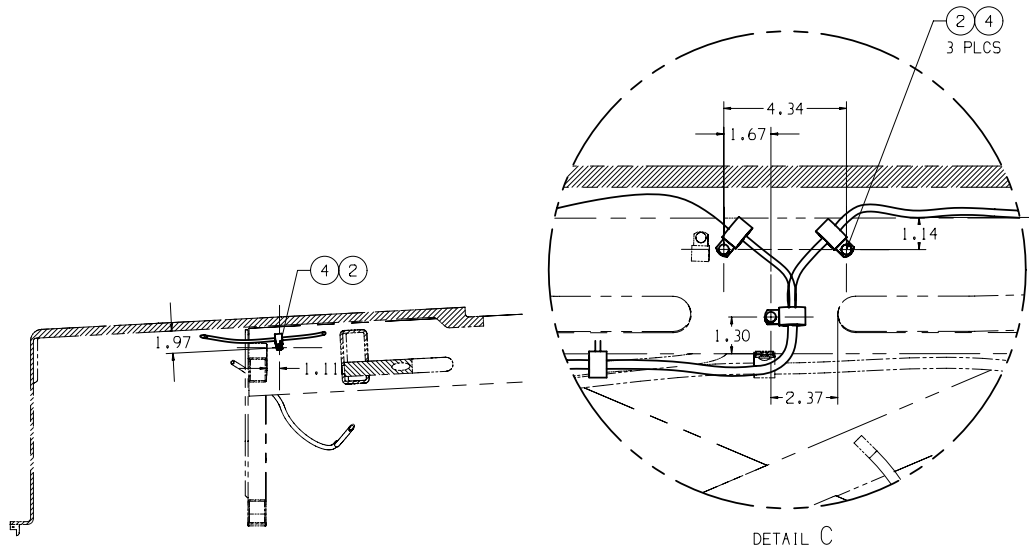


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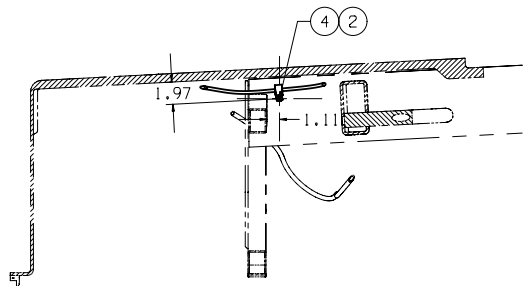
NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING



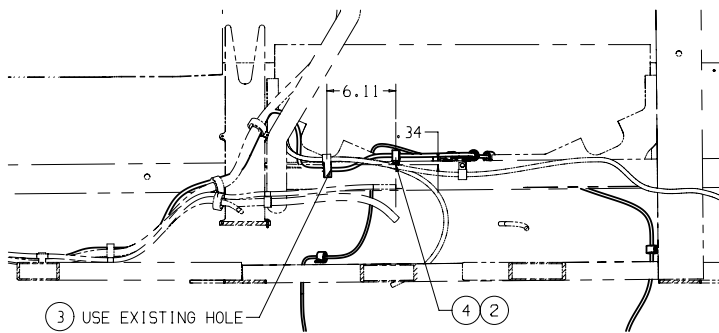
SECTION E-E



DETAIL C



SECTION B-B



SECTION D-D

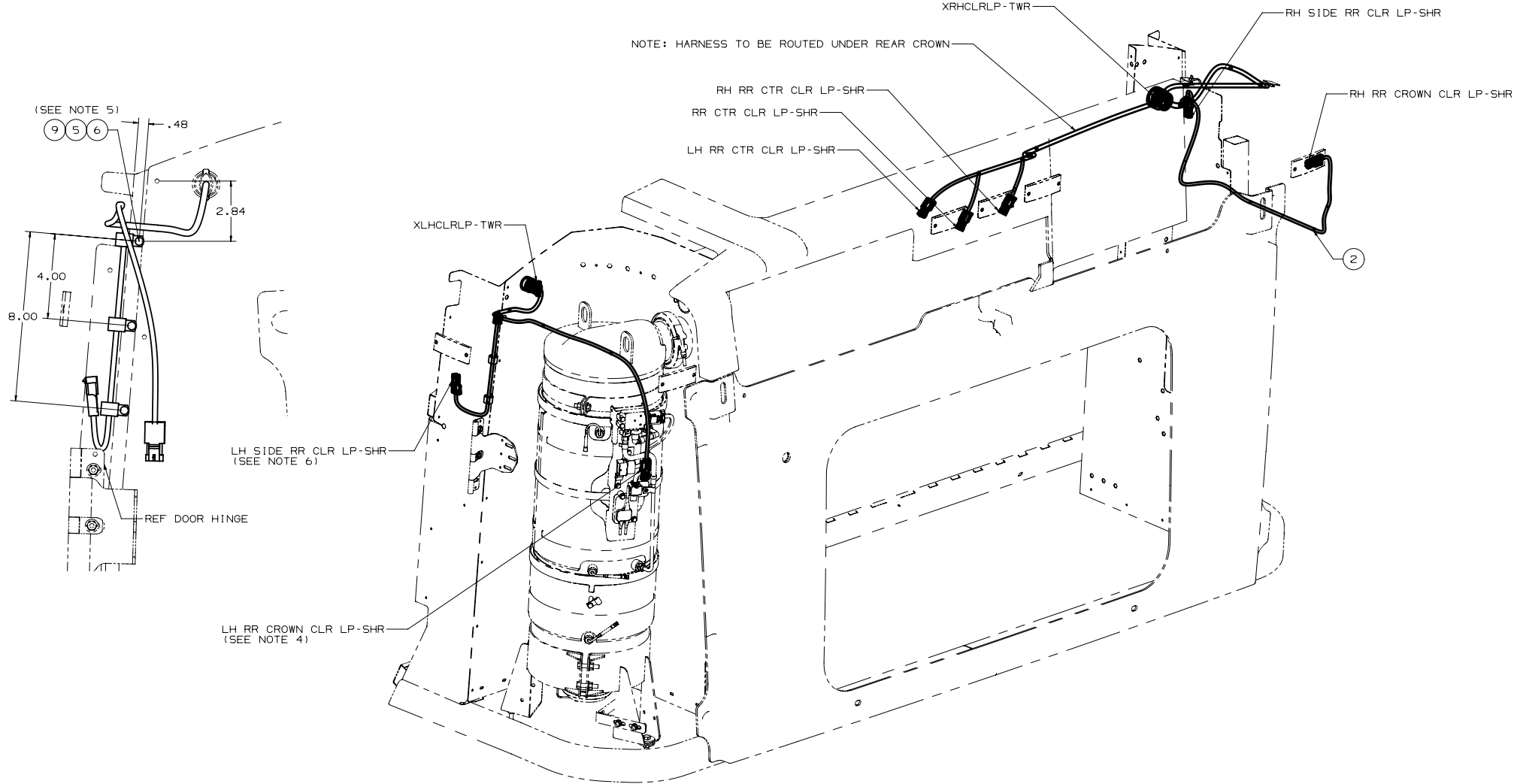
|                                                                                               |     |
|-----------------------------------------------------------------------------------------------|-----|
| DO NOT SCALE DRAWING                                                                          |     |
| DIMENSIONS IN ( ) ARE IN m.m.                                                                 |     |
| THD ANGLE  |     |
| DRAWN BY                                                                                      |     |
| SHANNON TRAYWICK                                                                              |     |
| DATE (DD-MMM-YY)                                                                              | REV |
| 05-MAY-15                                                                                     | A   |

|                         |  |            |
|-------------------------|--|------------|
| RELEASED TO PRODUCTION. |  | ECN-049671 |
| DESCRIPTION             |  | ECO        |

|                                |                                                                                  |                                                              |                                                                                       |  |                       |
|--------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------|--|-----------------------|
| MATERIAL<br>-<br>-             | UNSPEC'D TOLS.<br><br>.X<br>.XX<br>.XXX<br>HOLE DIA.<br>BEND RADII<br>ANGLE TOL. | DEC. IN.<br><br>±.12<br>±.06<br>±.03<br>±.015<br>±.03<br>±1° | TITLE<br><br>INSTL-HRNS LH CROWN X-40                                                 |  |                       |
| WEIGHT<br>-                    |                                                                                  |                                                              |  |  | PART N°<br><br>592896 |
| TREATMENT<br>NOT REQUIRED<br>- | SIMILAR TO<br>-                                                                  |                                                              | NEW FLYER                                                                             |  |                       |
|                                |                                                                                  |                                                              | SCALE 1:10                                                                            |  | C                     |
|                                |                                                                                  |                                                              |                                                                                       |  | SHEET 2 OF 2          |

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NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING



1. SECURE HARNESS MAXIMUM EVERY EIGHT INCHES WITH THE APPROPRIATE HARDWARE.
2. THE MINIMUM WIRE BEND RADIUS IS SIX TIMES THE DIAMETER OF THE WIRE.
3. PRECAUTIONS ARE TO BE TAKEN AGAINST HARNESS CHAFFING.
4. HARNESS TO BE ROUTED BEHIND THE HIGH TEMPERATURE INSULATION ON DOOR TO PROTECT HARNESS FROM EXHAUST HEAT.
5. DRILL .169 DIA. HOLE FOR TAPPING SCREW INTO FIREWALL AND APPLY SIKA ON SCREW PRIOR TO INSTALLATION.
6. ENSURE CONNECTOR AND ANY SLACK IS PLACED FORWARD OF DOOR HINGE, AWAY FROM MUFFLER COMPARTMENT.

|                                                                                               |        |           |
|-----------------------------------------------------------------------------------------------|--------|-----------|
| DO NOT SCALE DRAWING                                                                          |        |           |
| DIMENSIONS IN ( ) ARE IN m.m.                                                                 |        |           |
| THD ANGLE  |        |           |
| BY                                                                                            | NAME   | DD-MMM-YY |
| DRAWN                                                                                         | T.J.M. | 18-APR-13 |
| CHK'D                                                                                         |        |           |
| APP'D                                                                                         |        |           |

|     |                                 |            |
|-----|---------------------------------|------------|
| E   | 1) ITEMS 7 AND 8 REMOVED.       | ECN-019120 |
|     | 2) ITEM 6 WAS QTY 2.            |            |
|     | 3) ITEM 9 WAS QTY 2.            |            |
|     | 4) PICTORIAL UPDATE OF HARNESS. |            |
| REV | DESCRIPTION                     | ECO        |

|                        |     |      |                |                             |                                                                                       |
|------------------------|-----|------|----------------|-----------------------------|---------------------------------------------------------------------------------------|
| 3                      | EA  | 9    | 34500016       | SCREW-NO 10-24 X 1.0        | -                                                                                     |
| 3                      | EA  | 6    | 092582         | CLAMP-P 0.500               | -                                                                                     |
| 0.010                  | ML  | 5    | 242702         | ADHESIVE-SIKA 221 WHITE     | -                                                                                     |
| 1                      | EA  | 2    | 489275         | HRNS-RH RR CLR LPS XCELSIOR | -                                                                                     |
| 1                      | EA  | 1    | 489277         | HRNS-LH RR CLR LPS XCELSIOR | -                                                                                     |
| QTY                    | U/M | ITEM | PART NO.       | DESCRIPTION                 | WEIGHT                                                                                |
| MATERIAL               |     |      | UNSPEC'D TOLS. | DEC.IN.                     | TITLE                                                                                 |
| -                      |     |      | .X             | ±.12                        | INSTL-HRNS RR CLR LPS XCELSIOR                                                        |
| -                      |     |      | .XX            | ±.06                        |                                                                                       |
| -                      |     |      | .XXX           | ±.03                        |                                                                                       |
| WEIGHT                 |     |      | HOLE DIA.      | ±.015                       |                                                                                       |
| -                      |     |      | BEND RADII     | ±.03                        |  |
| -                      |     |      | ANGLE TOL.     | ±1°                         |                                                                                       |
| TREATMENT NOT REQUIRED |     |      | SIMILAR TO     |                             | PART N°                                                                               |
| -                      |     |      | -              |                             | 489274                                                                                |
|                        |     |      |                | SCALE 1:10                  | (NX)                                                                                  |
|                        |     |      |                | C                           | SHEET 1 OF 1                                                                          |

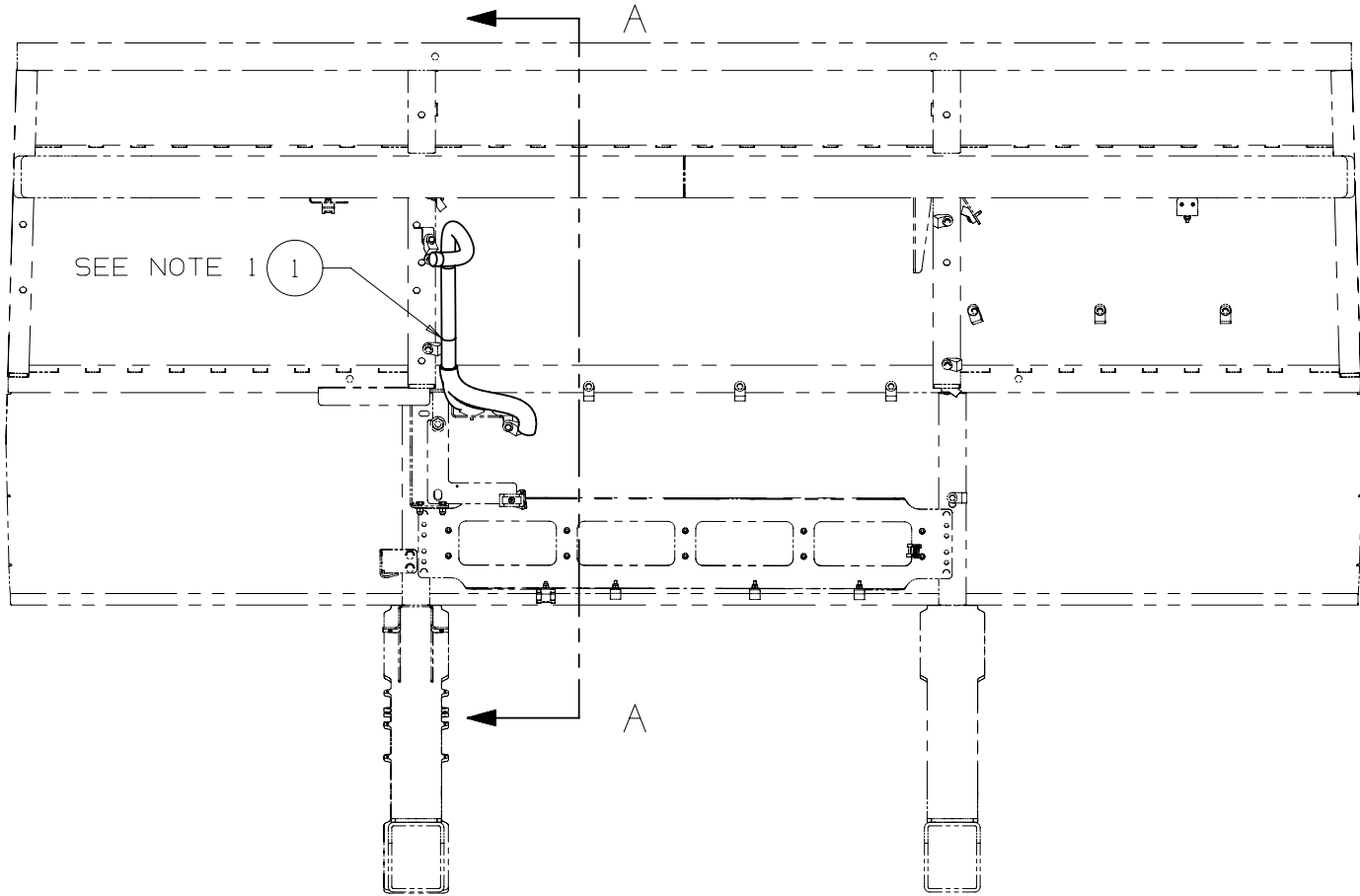
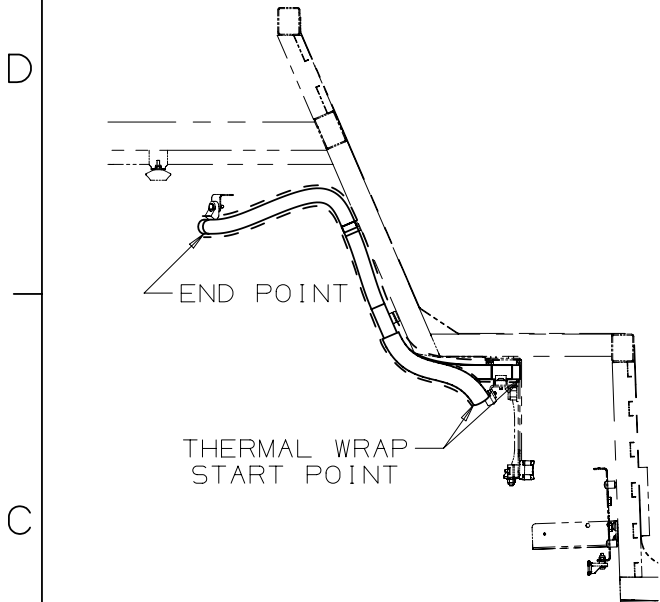
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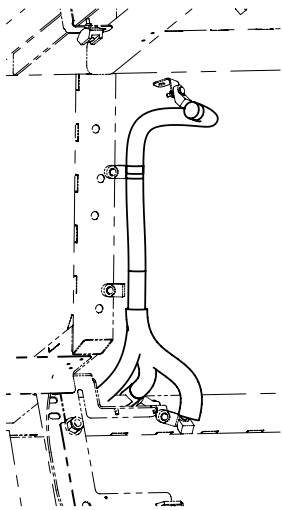
ADDITIONAL INFORMATION CAN BE OBTAINED BY REFERENCING THREE DIMENSIONAL DESIGN DATA. CONTACT YOUR NEW FLYER REPRESENTATIVE AS REQUIRED.

NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING



SECTION A - A  
SCALE 1:8

NOTE:  
1. WRAP ALL HARNESSES IN THE SHOWN AREA WITH ITEM 1



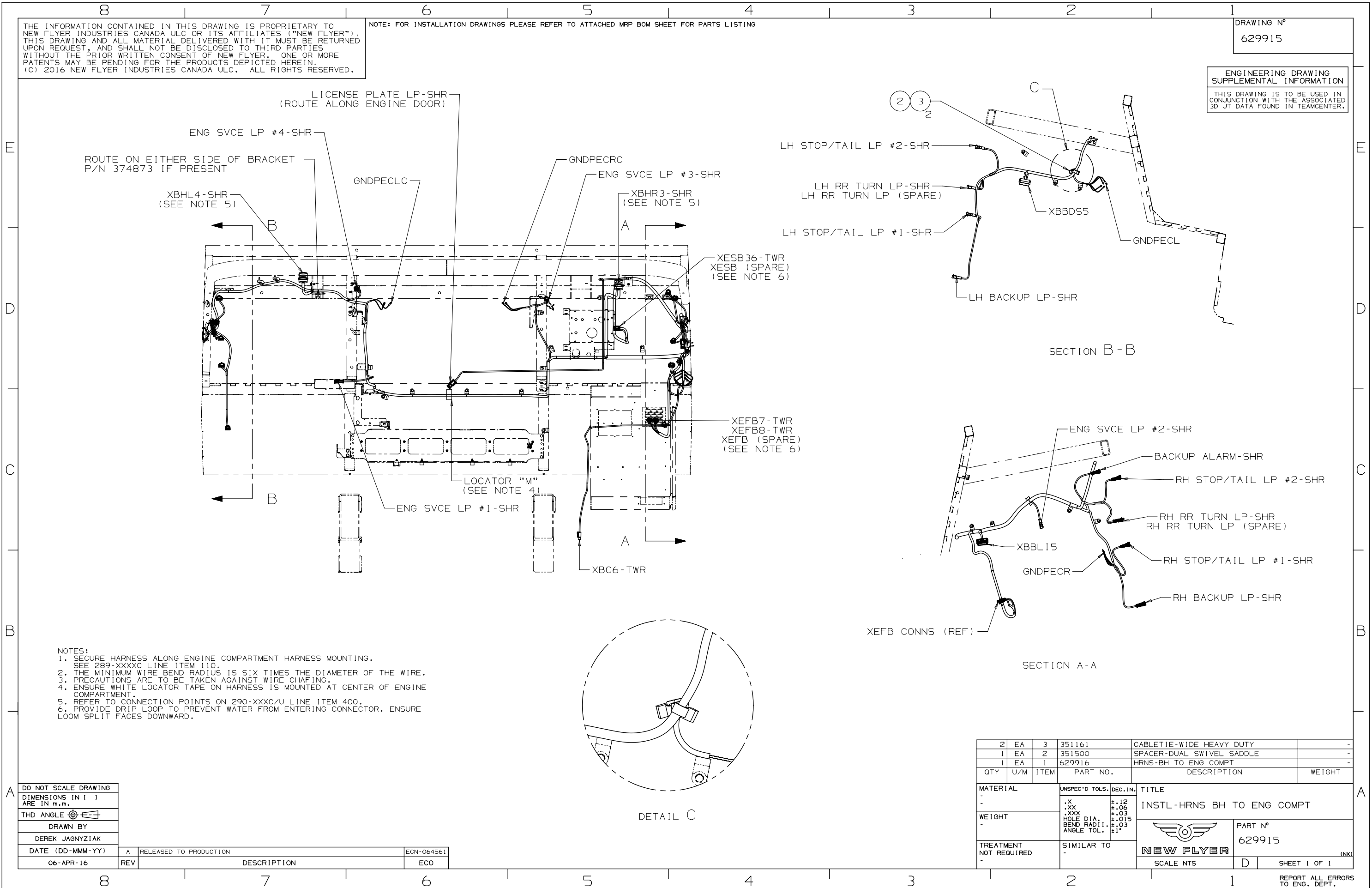
ISO VIEW  
FOR REFERENCE

|                                                                                               |     |
|-----------------------------------------------------------------------------------------------|-----|
| DO NOT SCALE DRAWING                                                                          |     |
| DIMENSIONS IN ( ) ARE IN m.m.                                                                 |     |
| THD ANGLE  |     |
| DRAWN BY                                                                                      |     |
| NISHADA MEDAGODA                                                                              |     |
| DATE (DD-MMM-YY)                                                                              | C   |
| 18-APR-16                                                                                     | REV |

|                                                    |            |
|----------------------------------------------------|------------|
| 1. ITEM 2 ADDED                                    | ECN-065333 |
| 2. LABELS AND DASH LINES ADDED TO SECTION VIEW A-A | ECO        |
| DESCRIPTION                                        |            |

|                        |     |      |                |                              |                                                                                                           |
|------------------------|-----|------|----------------|------------------------------|-----------------------------------------------------------------------------------------------------------|
| 0.250                  | EA  | 2    | 199595         | TAPE-HIGH TEMP ALUMINUM 342C | -                                                                                                         |
| 3.000                  | EA  | 1    | 165544         | LOOM-THERM-L-WRAP 1"         | -                                                                                                         |
| QTY                    | U/M | ITEM | PART NO.       | DESCRIPTION                  | WEIGHT                                                                                                    |
| MATERIAL               |     |      | UNSPEC'D TOLS. | DEC.IN.                      | TITLE                                                                                                     |
| -                      |     |      | .X             | ±.12                         | INSTL-LOOM ENG HRNS                                                                                       |
| -                      |     |      | .XX            | ±.06                         |                                                                                                           |
| -                      |     |      | .XXX           | ±.03                         |                                                                                                           |
| WEIGHT                 |     |      | HOLE DIA.      | ±.015                        |                                                                                                           |
| -                      |     |      | BEND RADII     | ±.03                         |                                                                                                           |
| TREATMENT NOT REQUIRED |     |      | ANGLE TOL.     | ±1°                          |                                                                                                           |
| -                      |     |      | SIMILAR TO     | -                            |  PART N° 609076 (NX) |
| -                      |     |      | -              | -                            |                                                                                                           |
| -                      |     |      | -              | -                            | SCALE NTS C SHEET 1 OF 1                                                                                  |

REPORT ALL ERRORS TO ENG. DEPT.

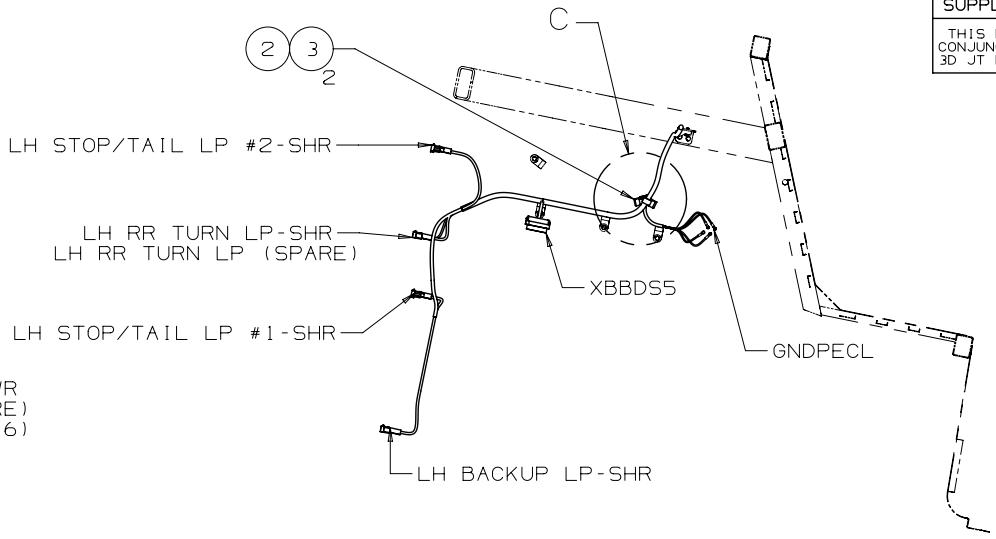
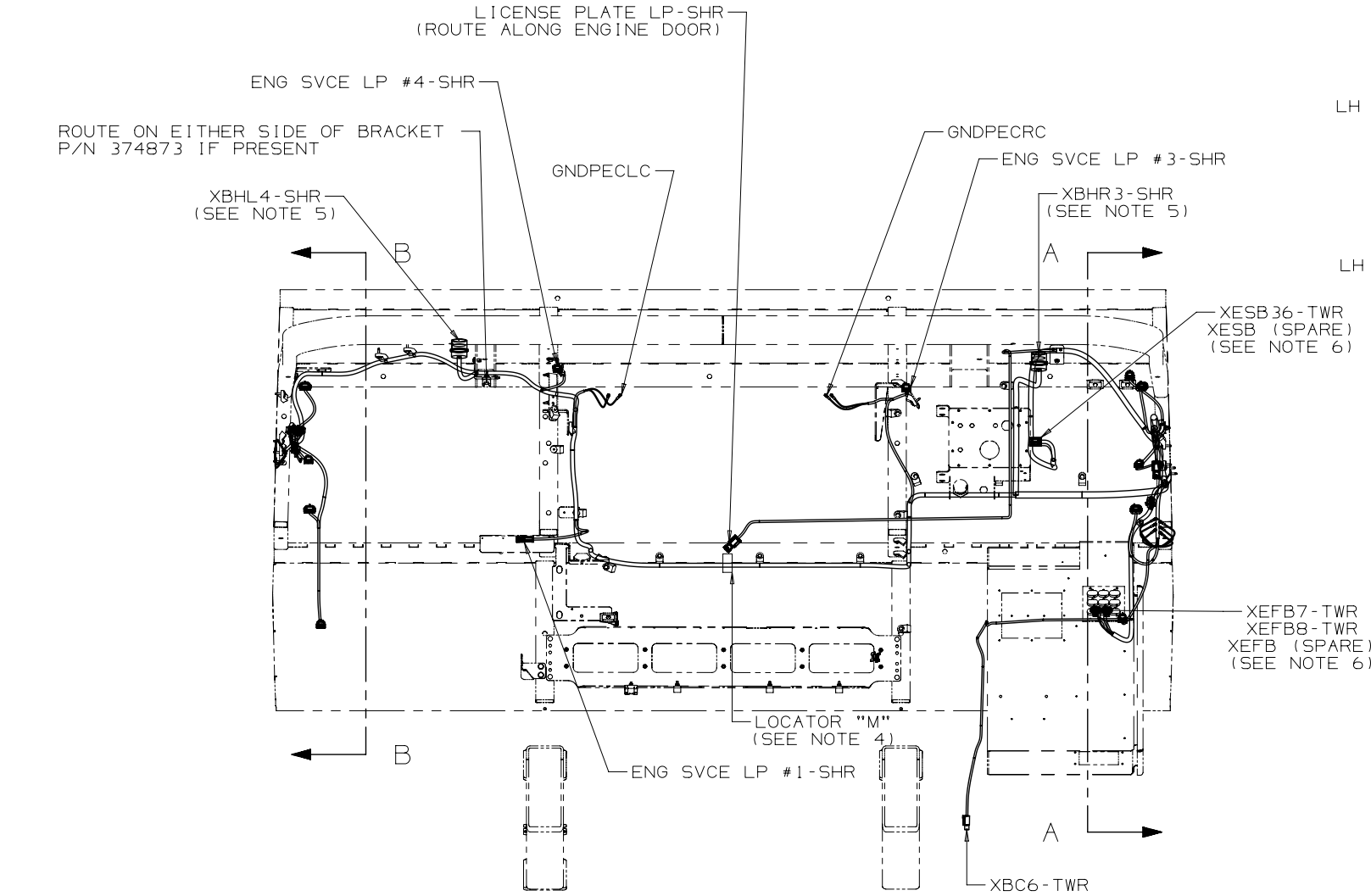


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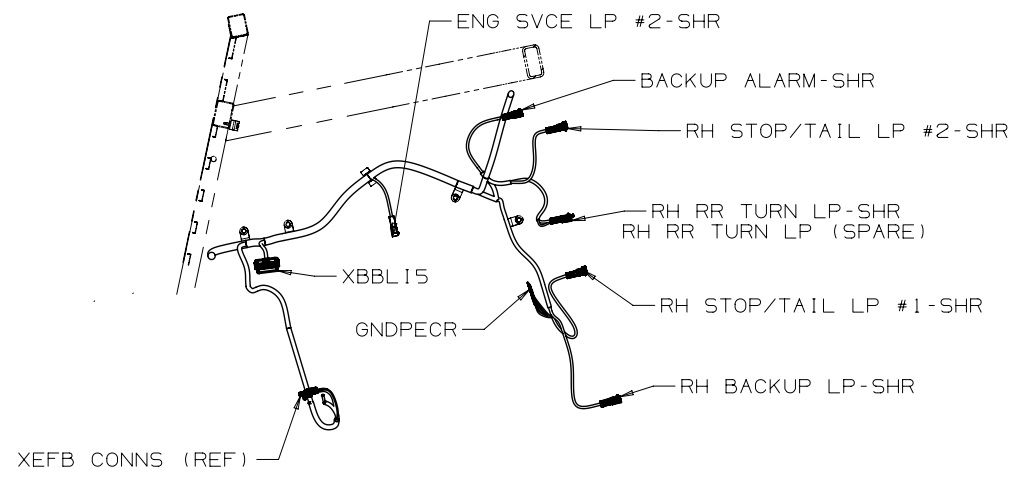
NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING

DRAWING N°  
629915

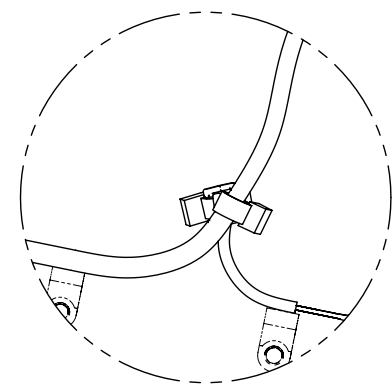
ENGINEERING DRAWING  
SUPPLEMENTAL INFORMATION  
THIS DRAWING IS TO BE USED IN  
CONJUNCTION WITH THE ASSOCIATED  
3D JT DATA FOUND IN TEAMCENTER.



SECTION B-B



SECTION A-A



DETAIL C

- NOTES:
- 1. SECURE HARNESS ALONG ENGINE COMPARTMENT HARNESS MOUNTING. SEE 289-XXXXC LINE ITEM 110.
  - 2. THE MINIMUM WIRE BEND RADIUS IS SIX TIMES THE DIAMETER OF THE WIRE.
  - 3. PRECAUTIONS ARE TO BE TAKEN AGAINST WIRE CHAFING.
  - 4. ENSURE WHITE LOCATOR TAPE ON HARNESS IS MOUNTED AT CENTER OF ENGINE COMPARTMENT.
  - 5. REFER TO CONNECTION POINTS ON 290-XXXXC/U LINE ITEM 400.
  - 6. PROVIDE DRIP LOOP TO PREVENT WATER FROM ENTERING CONNECTOR. ENSURE LOOM SPLIT FACES DOWNWARD.

|                               |     |
|-------------------------------|-----|
| DO NOT SCALE DRAWING          |     |
| DIMENSIONS IN [ ] ARE IN m.m. |     |
| THD ANGLE                     |     |
| DRAWN BY                      |     |
| DEREK JAGNYZIAK               |     |
| DATE (DD-MMM-YY)              | REV |
| 06-APR-16                     |     |

|           |                        |            |
|-----------|------------------------|------------|
| A         | RELEASED TO PRODUCTION | ECN-064561 |
| 06-APR-16 | REV                    | ECO        |

|                        |     |      |                |                           |                                                                                       |                   |
|------------------------|-----|------|----------------|---------------------------|---------------------------------------------------------------------------------------|-------------------|
| 2                      | EA  | 3    | 351161         | CABLETIE-WIDE HEAVY DUTY  | -                                                                                     |                   |
| 1                      | EA  | 2    | 351500         | SPACER-DUAL SWIVEL SADDLE | -                                                                                     |                   |
| 1                      | EA  | 1    | 629916         | HRNS-BH TO ENG COMPT      | -                                                                                     |                   |
| QTY                    | U/M | ITEM | PART NO.       | DESCRIPTION               | WEIGHT                                                                                |                   |
| MATERIAL               |     |      | UNSPEC'D TOLS. | DEC. IN.                  | TITLE                                                                                 |                   |
| -                      |     |      | .X             | ±.12                      | INSTL-HRNS BH TO ENG COMPT                                                            |                   |
|                        |     |      | .XX            | ±.06                      |                                                                                       |                   |
|                        |     |      | .XXX           | ±.03                      |                                                                                       |                   |
| WEIGHT                 |     |      | HOLE DIA.      | ±.015                     |                                                                                       |                   |
| -                      |     |      | BEND RADII.    | ±.03                      |  | PART N°<br>629915 |
|                        |     |      | ANGLE TOL.     | ±1°                       |                                                                                       |                   |
| TREATMENT NOT REQUIRED |     |      | SIMILAR TO     |                           | NEW FLYER                                                                             |                   |
| -                      |     |      | -              |                           |                                                                                       |                   |
|                        |     |      |                | SCALE NTS                 | D                                                                                     | SHEET 1 OF 1      |

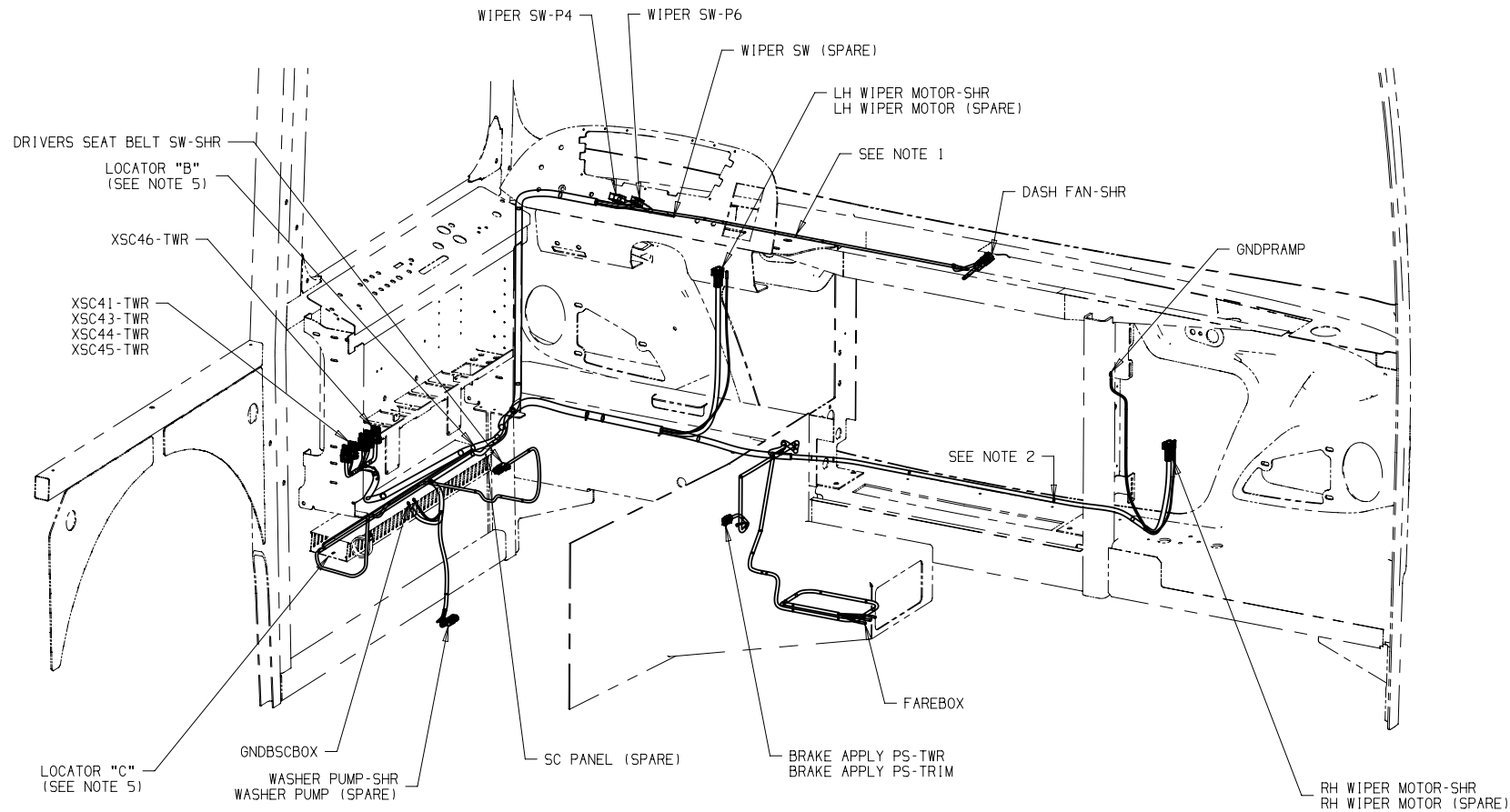
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NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING

ENGINEERING DRAWING  
SUPPLEMENTAL INFORMATION

THIS DRAWING IS TO BE USED IN  
CONJUNCTION WITH THE ASSOCIATED  
3D JT DATA FOUND IN TEAMCENTER.



- NOTES:
1. SECURE HARNESS ALONG INSTL-SADDLE CLAMP DASH. (REF 289-XXXXC LINE ITEM 35)
  2. SECURE HARNESS ALONG INSTL-CLAMP FRONT HARNESS. (REF 289-XXXXC LINE ITEM 100)
  3. THE MINIMUM WIRE BEND RADIUS IS SIX TIMES THE DIAMETER OF THE WIRE.
  4. PRECAUTIONS ARE TO BE TAKEN AGAINST HARNESS CHAFFING.
  5. WHITE LOCATOR TAPE SHOULD BE ALIGNED TO THE ENDS OF THE WIRE DUCT AS SHOWN.

|                                                                                               |     |
|-----------------------------------------------------------------------------------------------|-----|
| DO NOT SCALE DRAWING                                                                          |     |
| DIMENSIONS IN ( )<br>ARE IN m.m.                                                              |     |
| THD ANGLE  |     |
| DRAWN BY                                                                                      |     |
| VER GAMBOA                                                                                    |     |
| DATE (DD-MMM-YY)                                                                              | A   |
| 04-APR-16                                                                                     | REV |

|                        |  |            |
|------------------------|--|------------|
| RELEASED TO PRODUCTION |  | ECN-064573 |
| DESCRIPTION            |  | ECO        |

|                        |     |      |                |                         |                                                                                                    |              |
|------------------------|-----|------|----------------|-------------------------|----------------------------------------------------------------------------------------------------|--------------|
| 1                      | EA  | 1    | 629295         | HRNS-SC TO DASH OPTIONS |                                                                                                    | -            |
| QTY                    | U/M | ITEM | PART NO.       | DESCRIPTION             |                                                                                                    | WEIGHT       |
| MATERIAL               |     |      | UNSPEC'D TOLS. | DEC.IN.                 | TITLE                                                                                              |              |
| -                      |     |      | .X             | ±.12                    | <br>NEW FLYER |              |
| -                      |     |      | .XX            | ±.06                    |                                                                                                    |              |
| -                      |     |      | .XXX           | ±.03                    |                                                                                                    |              |
| WEIGHT                 |     |      | HOLE DIA.      | ±.015                   |                                                                                                    |              |
| -                      |     |      | BEND RADII     | ±.03                    |                                                                                                    |              |
| -                      |     |      | ANGLE TOL.     | ±1°                     |                                                                                                    |              |
| TREATMENT NOT REQUIRED |     |      | SIMILAR TO     |                         | PART N°                                                                                            |              |
| -                      |     |      | -              |                         | 629294                                                                                             |              |
|                        |     |      |                |                         | (NX)                                                                                               |              |
|                        |     |      | SCALE NTS      |                         | C                                                                                                  | SHEET 1 OF 1 |

REPORT ALL ERRORS  
TO ENG. DEPT.

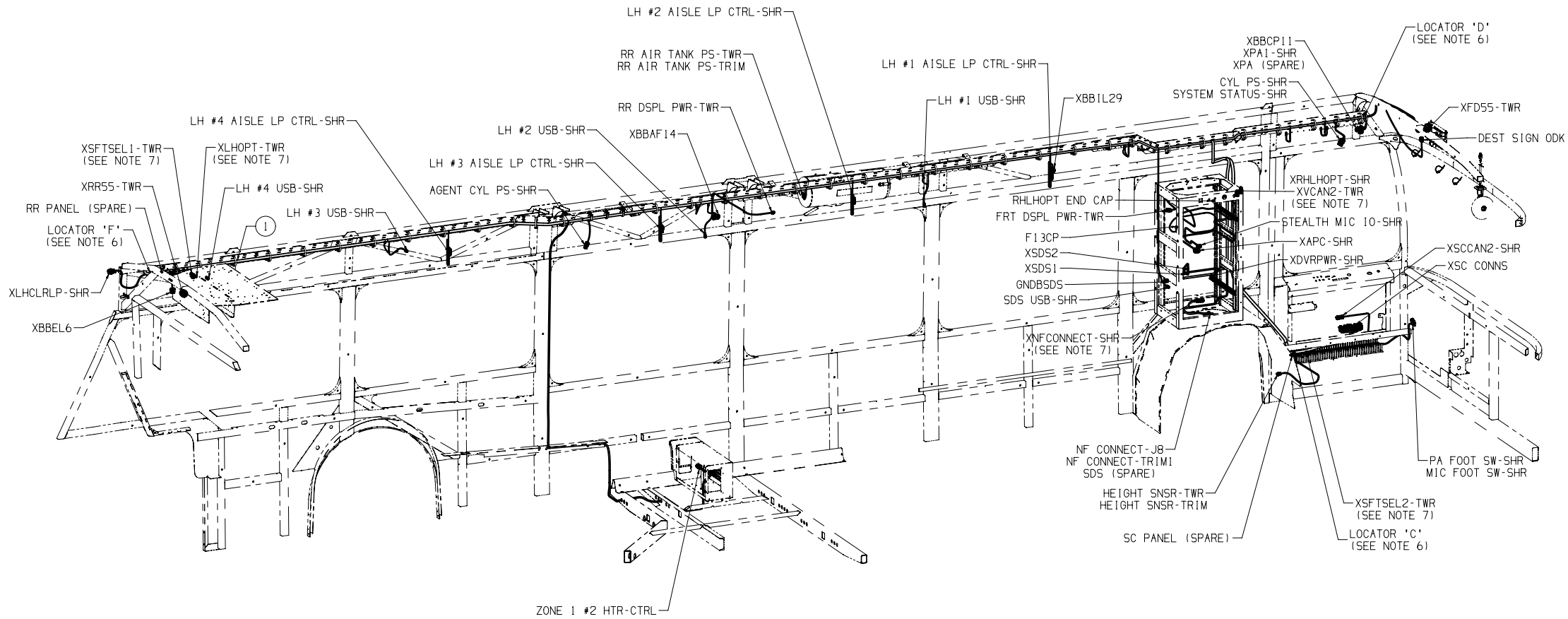




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ADDITIONAL INFORMATION CAN BE OBTAINED BY REFERENCING THREE DIMENSIONAL DESIGN DATA. CONTACT YOUR NEW FLYER REPRESENTATIVE AS REQUIRED.

NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING



- NOTES:
1. SECURE HARNESS ONTO HARNESS SUPPORT USING SUPPLIED HARDWARE/TYRAPS. REF 289-XXXXC LINE ITEM 25.
  2. THE MINIMUM WIRE BEND RADIUS IS SIX TIMES THE DIAMETER OF THE WIRE.
  3. PRECAUTIONS ARE TO BE TAKEN TO ENSURE AGAINST HARNESS CHAFING.
  4. REFER TO 289-XXXXC LINE ITEM 73 FOR HARNESS LOCATION AT THE B-PILLAR.
  5. ENSURE THAT ALL GROUND WIRES ARE SECURED TO NEAREST AVAILABLE GROUND POINT. USE HARDWARE FROM INSTL-GROUND HARDWARE. REF 292-XXXXC LINE ITEM 200.
  6. WHITE LOCATOR TAPE SHOULD BE ALIGNED TO THE ENDS OF THE HARNESS SUPPORT AS SHOWN.
  7. ENSURE XLHOPT-TWR IS MATED TO XLHOPT-SHR FROM HRNS-LH CROWN, REF 292-XXXXC LINE ITEM 22. ENSURE XVCAN2-TWR IS MATED TO XVCAN2-SHR FROM HRNS-RH OPTIONS, REF 292-XXXXC LINE ITEM 53. ENSURE XNFCCONNECT-SHR IS MATED TO XNFCCONNECT-TWR FROM HRNS-CUM ISL INT, REF 219-XXXXC LINE ITEM 140. ENSURE XSFTSEL1-TWR IS MATED TO XSFTSEL1-SHR FROM HRNS-TRANS INT, REF 219-XXXXC LINE ITEM 145. ENSURE XSFTSEL2-TWR IS MATED TO XSFTSEL2-SHR FROM HRNS-TRANS SHIFT, REF 219-XXXXC LINE ITEM 145. ENSURE XRHLHOPT-SHR IS MATED TO XRHLHOPT-TWR FROM HRNS-RH OPTIONS, REF 292-XXXXC LINE ITEM 53.

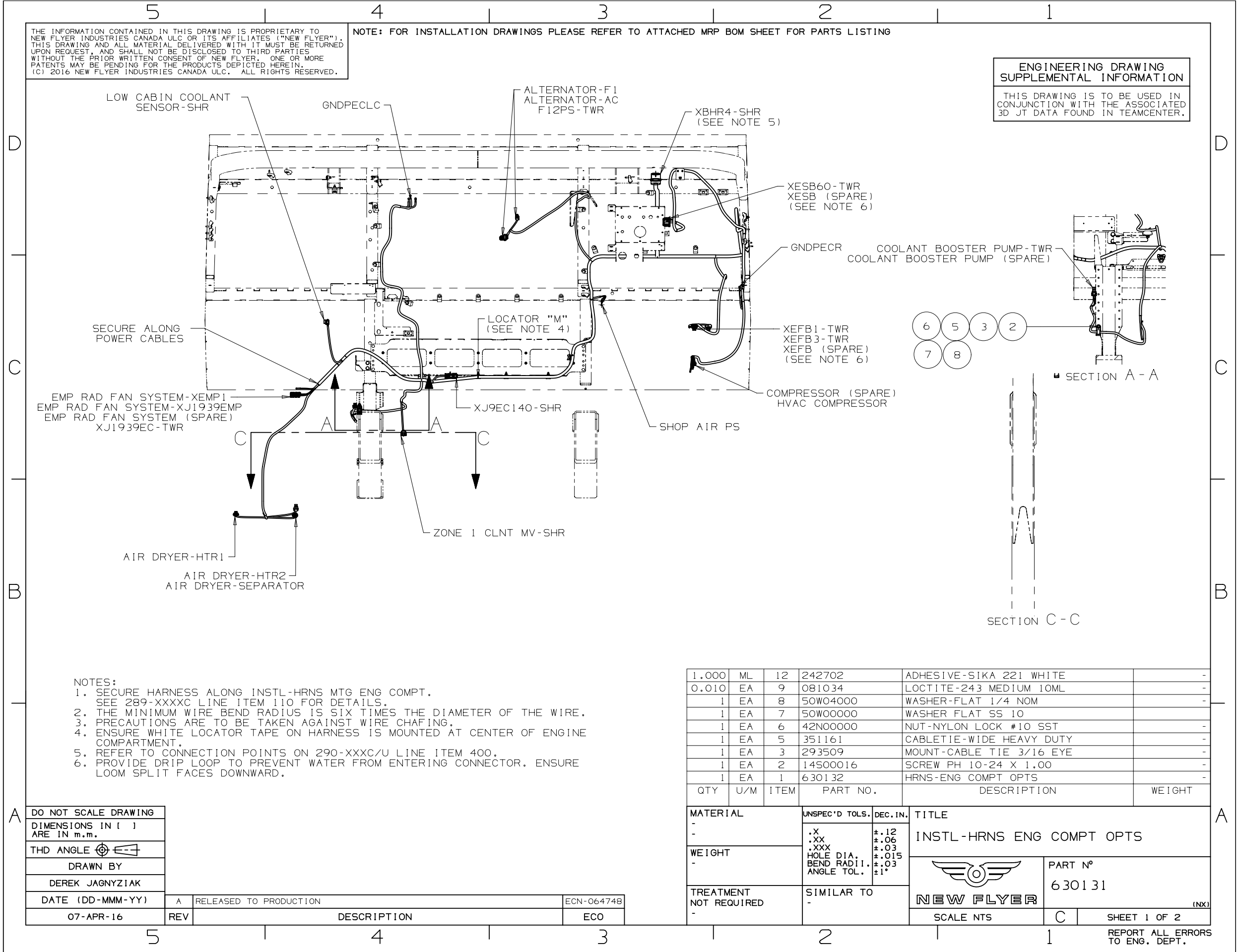
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| DO NOT SCALE DRAWING          |     |
| DIMENSIONS IN ( ) ARE IN m.m. |     |
| THD ANGLE                     |     |
| DRAWN BY                      |     |
| TODD CRIST                    |     |
| DATE (DD-MMM-YY)              | C   |
| 31-MAY-16                     | REV |

|                                                 |            |
|-------------------------------------------------|------------|
| REPLACED SDS END CAP WITH RHLHOPT END CAP (C,2) | ECN-067727 |
| DESCRIPTION                                     | ECO        |

|              |     |      |                |                      |                            |
|--------------|-----|------|----------------|----------------------|----------------------------|
| 1            | EA  | 1    | 629607         | HRNS-LH OPTIONS X-40 | -                          |
| QTY          | U/M | ITEM | PART NO.       | DESCRIPTION          | WEIGHT                     |
| MATERIAL     |     |      | UNSPEC'D TOLS. | DEC.IN.              | TITLE                      |
| -            |     |      | .X             | ±.12                 | INSTL-HRNS LH OPTIONS X-40 |
| -            |     |      | .XX            | ±.06                 |                            |
| WEIGHT       |     |      | .XXX           | ±.03                 | PART N°                    |
| -            |     |      | HOLE DIA.      | ±.015                |                            |
| TREATMENT    |     |      | BEND RADII.    | ±.03                 | 629606                     |
| NOT REQUIRED |     |      | ANGLE TOL.     | ±1°                  |                            |
| -            |     |      | SIMILAR TO     | -                    | NEW FLYER (NX)             |
| SCALE NTS    |     |      |                | C                    | SHEET 1 OF 1               |

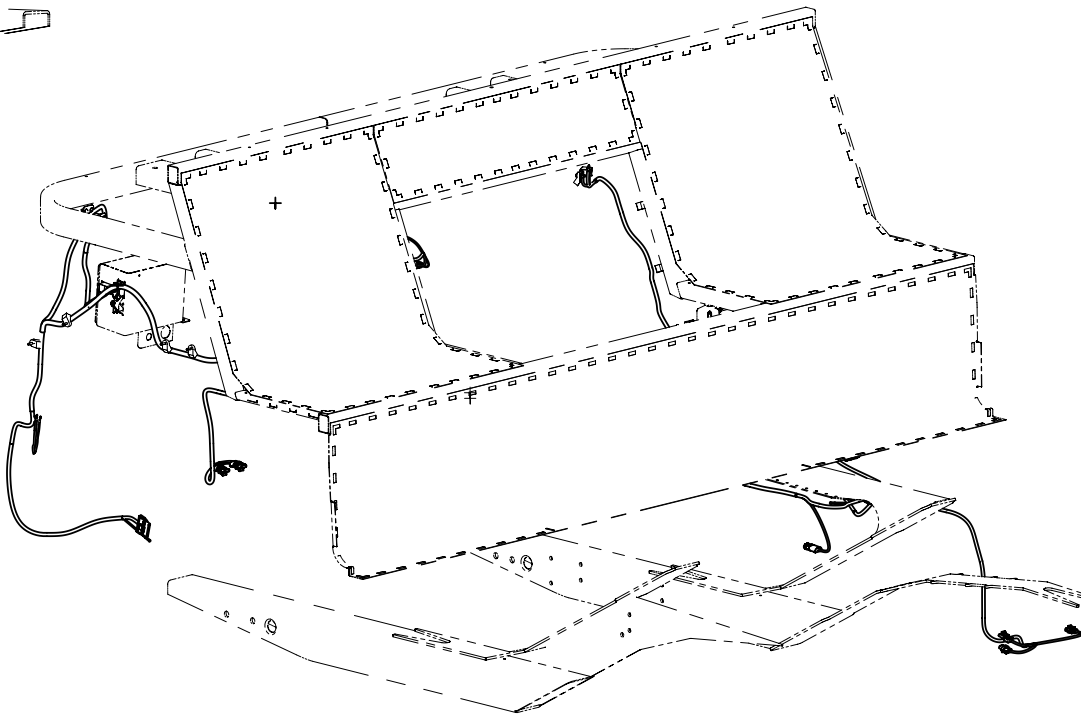
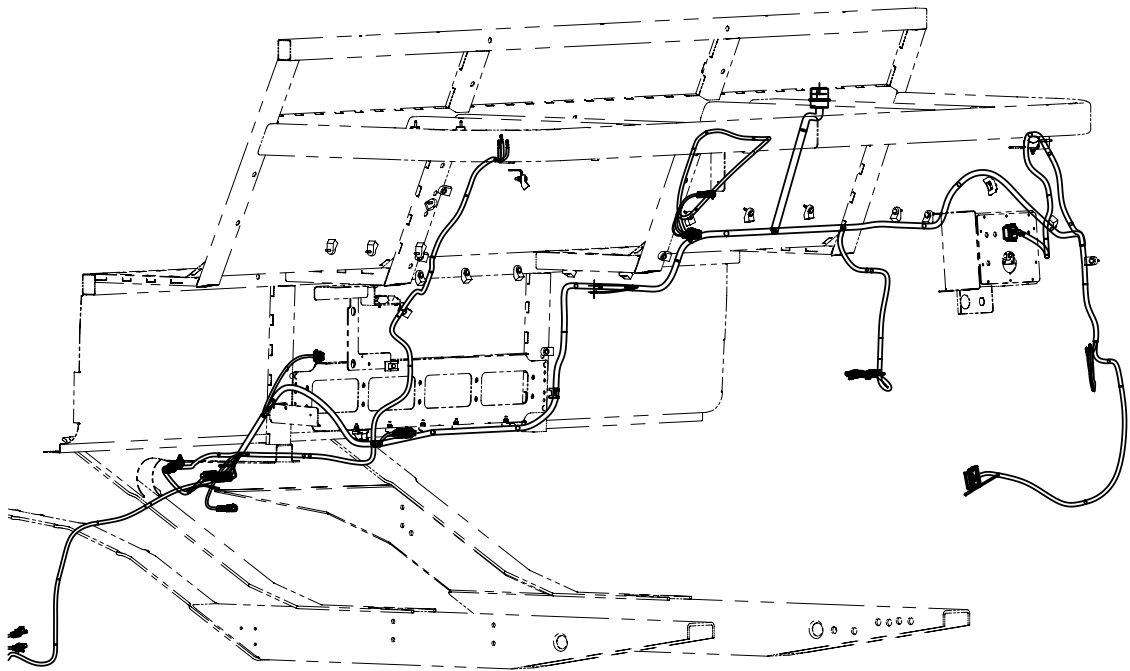
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NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING



|                                                                                               |     |
|-----------------------------------------------------------------------------------------------|-----|
| DO NOT SCALE DRAWING                                                                          |     |
| DIMENSIONS IN ( ) ARE IN m.m.                                                                 |     |
| THD ANGLE  |     |
| DRAWN BY                                                                                      |     |
| DEREK JAGNYZIAK                                                                               |     |
| DATE (DD-MMM-YY)                                                                              | A   |
| 07-APR-16                                                                                     | REV |

|                        |  |            |
|------------------------|--|------------|
| RELEASED TO PRODUCTION |  | ECN-064748 |
| DESCRIPTION            |  | ECO        |

|                        |                         |                      |
|------------------------|-------------------------|----------------------|
| MATERIAL               | UNSPEC'D TOLS.          | DEC.IN.              |
| -                      | .X<br>.XX<br>.XXX       | ±.12<br>±.06<br>±.03 |
| WEIGHT                 | HOLE DIA.<br>BEND RADII | ±.015<br>±.03        |
| -                      | ANGLE TOL.              | ±1°                  |
| TREATMENT NOT REQUIRED | SIMILAR TO              |                      |
| -                      | -                       |                      |

|                                                                                       |     |                           |              |
|---------------------------------------------------------------------------------------|-----|---------------------------|--------------|
| TITLE                                                                                 |     | INSTL-HRNS ENG COMPT OPTS |              |
|  |     | PART N°                   | 630131       |
| NEW FLYER                                                                             |     | (NX)                      |              |
| SCALE                                                                                 | NTS | C                         | SHEET 2 OF 2 |

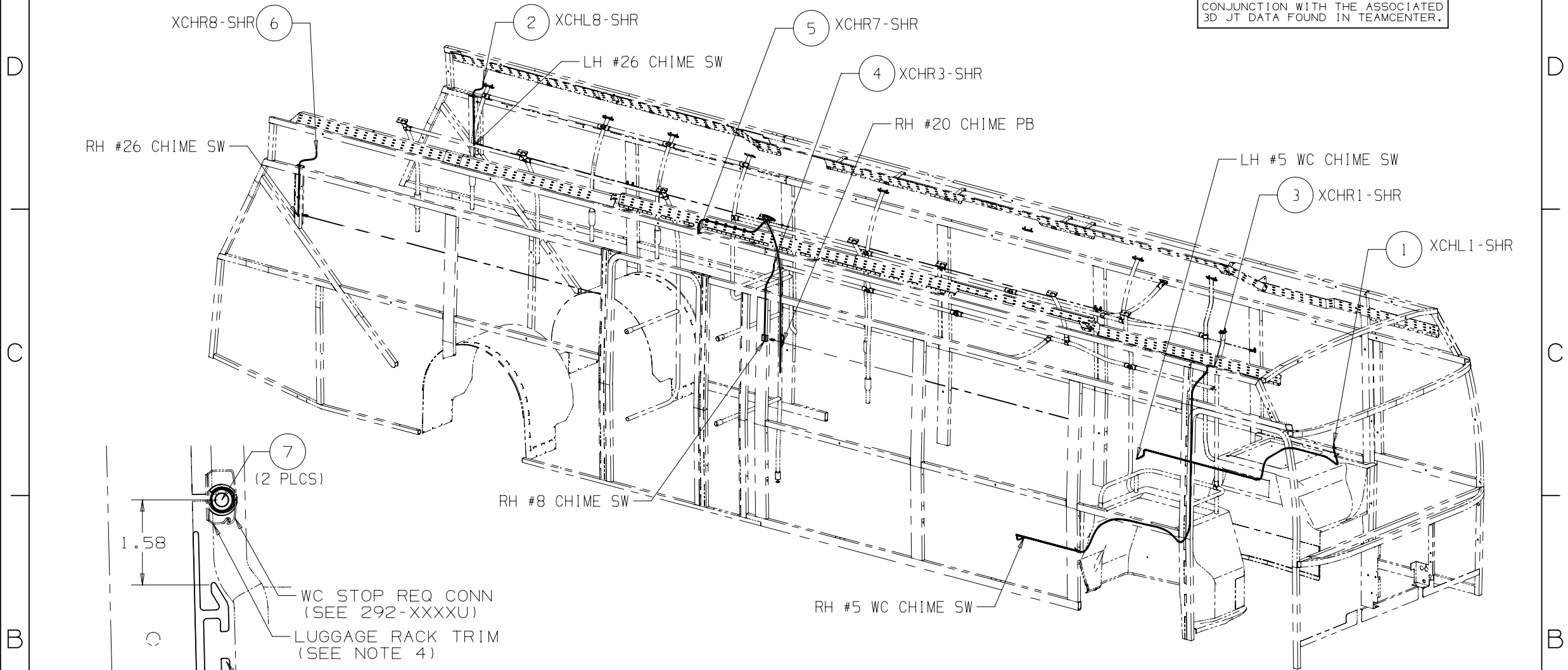
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NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING

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SUPPLEMENTAL INFORMATION

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3D JT DATA FOUND IN TEAMCENTER.



SECTION C - C

| WIRE CODE | LOADING INTO RH WC CHIME SW | COLOR/ GAUGE |
|-----------|-----------------------------|--------------|
| 96DC53A   | RH WC #5 CHIME SW-SHR-A     | 18 YL        |
| 96DC53B   | RH WC #5 CHIME SW-SHR-B     | 18 WH        |
| WIRE CODE | LOADING INTO LH WC CHIME SW | COLOR/ GAUGE |
| 96DC53C   | LH WC #5 CHIME SW-SHR-A     | 18 YL        |
| 96DC53D   | LH WC #5 CHIME SW-SHR-B     | 18 WH        |

TABLE 1

| QTY | U/M | ITEM | PART NO. | DESCRIPTION                     | WEIGHT |
|-----|-----|------|----------|---------------------------------|--------|
| 2   | EA  | 7    | 358865   | BUSHING-SNAP 0.50 THK PANEL     | -      |
| 1   | EA  | 6    | 199005   | HRNS-STOP REQ SW XCHR8 XCELSIOR | -      |
| 1   | EA  | 5    | 555519   | HRNS-STOP REQ SW XCHR7 XCELSIOR | -      |
| 1   | EA  | 4    | 199020   | HRNS-STOP REQ SW XCHR3 XCELSIOR | -      |
| 1   | EA  | 3    | 467580   | HRNS-STOP REQ SW XCHR1 XCELSIOR | -      |
| 1   | EA  | 2    | 199007   | HRNS-STOP REQ SW XCHL8 XCELSIOR | -      |
| 1   | EA  | 1    | 467583   | HRNS-STOP REQ SW XCHL1 XCELSIOR | -      |

|                                  |
|----------------------------------|
| DO NOT SCALE DRAWING             |
| DIMENSIONS IN ( )<br>ARE IN m.m. |
| THD ANGLE                        |
| DRAWN BY                         |
| HIRANIYA ARACHCHIGE              |
| DATE (DD-MMM-YY)                 |
| 03-MAR-16                        |

- NOTES:
1. SECURE HARNESS MAXIMUM EVERY 8 INCHES WITH APPROPRIATE HARDWARE.
  2. THE MINIMUM BEND RADIUS IS SIX TIMES THE DIAMETER OF THE WIRE.
  3. PRECAUTIONS ARE TO BE TAKEN TO ENSURE AGAINST CHAFFING.
  4. CUT AND CREATE A 0.75 OPENING ON LUGGAGE RACK TRIM TO ENABLE INSTALL OF SNAP BUSHING, DRILL 0.50 HOLE AND INSTALL SNAP BUSHING PN 358865. (REFER SECTION C - C FOR DETAILS)
  5. USING HRNS XCHL1, XCHR1 ROUTE BRANCHES THROUGH BUSHING AND LOAD CONNECTORS AS PER TABLE 1.

| REV | DESCRIPTION            | ECO        |
|-----|------------------------|------------|
| A   | RELEASED TO PRODUCTION | ECN-062831 |
|     |                        | ECO        |

| MATERIAL               | UNSPEC'D TOLS.                                              | DEC. IN.                                     | TITLE                        |
|------------------------|-------------------------------------------------------------|----------------------------------------------|------------------------------|
| -                      | .X<br>.XX<br>.XXX<br>HOLE DIA.<br>BEND RADII.<br>ANGLE TOL. | ±.12<br>±.06<br>±.03<br>±.015<br>±.03<br>±1° | INSTL-HRNS STOP REQUEST X-40 |
| WEIGHT                 | -                                                           | -                                            |                              |
| TREATMENT NOT REQUIRED | -                                                           | SIMILAR TO                                   |                              |
|                        |                                                             |                                              |                              |



PART N°  
625440

SCALE NTS

C

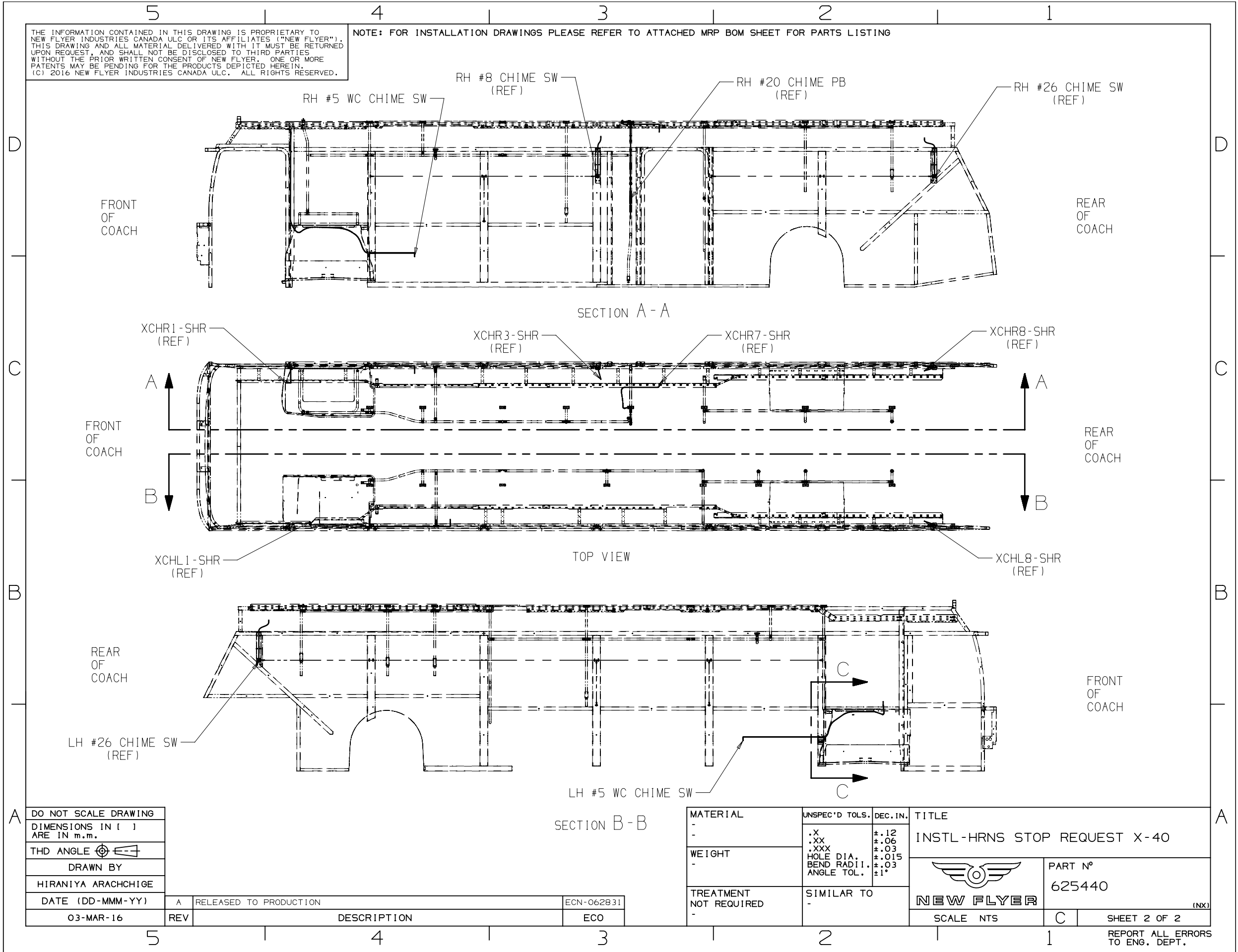
SHEET 1 OF 2

(NX)

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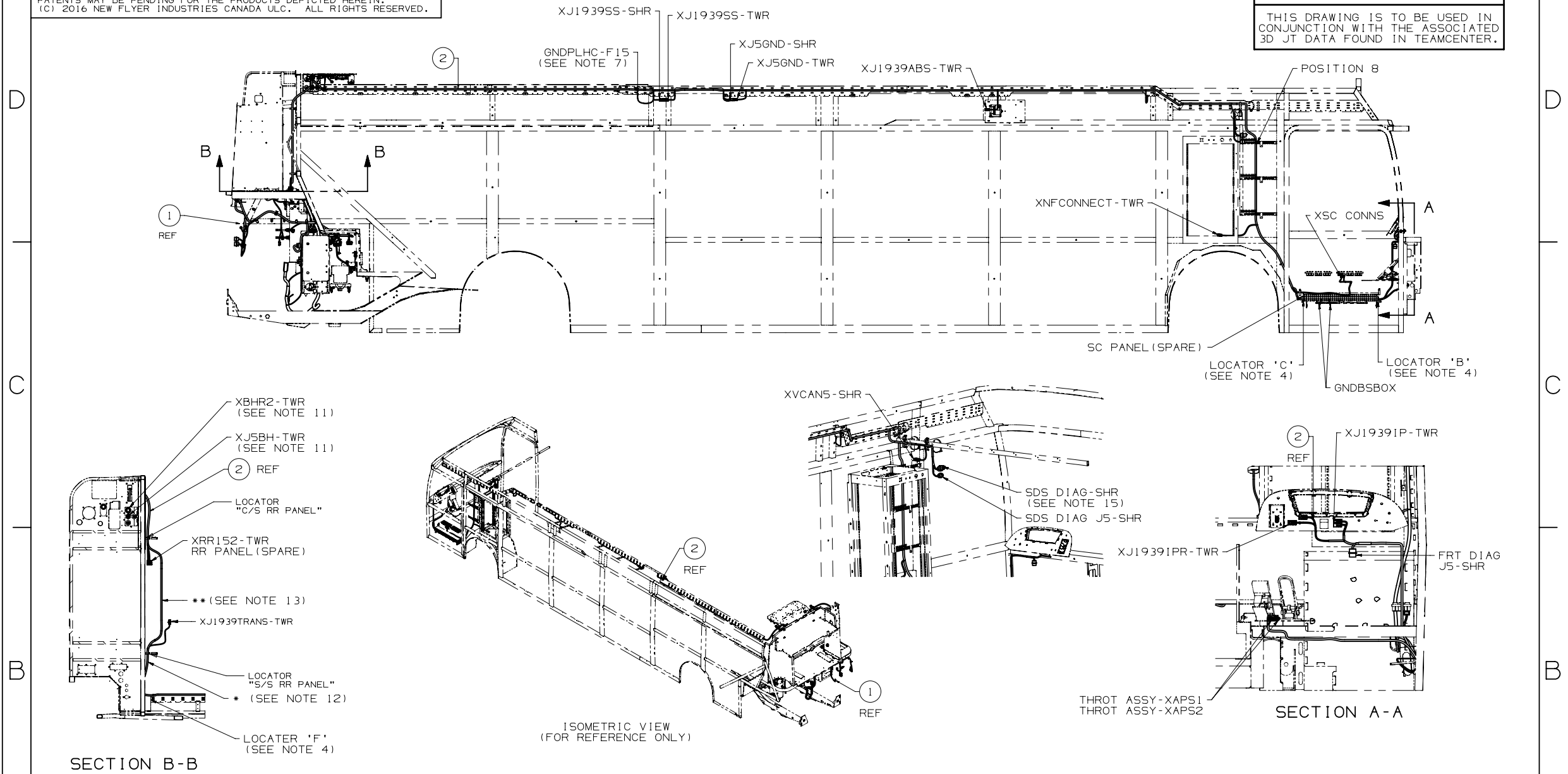


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SUPPLEMENTAL INFORMATION

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3D JT DATA FOUND IN TEAMCENTER.



- NOTES:
1. SECURE HARNESS ONTO CHANNEL HARNESS SUPPORT USING SUPPLIED HARDWARE/TYWRAPS FROM 289-XXXXC LINE ITEM 25.
  2. THE MINIMUM WIRE BEND RADIUS IS SIX TIMES THE DIAMETER OF THE WIRE.
  3. PRECAUTIONS ARE TO BE TAKEN TO ENSURE AGAINST HARNESS CHAFFING.
  4. WHITE LOCATOR TAPE SHOULD BE ALIGNED TO THE ENDS OF WIRE DUCT AS SHOWN.
  5. REFER TO 289-XXXXC LINE ITEM 73 FOR HARNESS LOCATION AT THE "B" PILLAR.
  6. 7. ENSURE THAT ALL GROUND WIRES ARE SECURED TO NEAREST AVAILABLE GROUND POINT. USE HARDWARE FROM 292-XXXXC LINE ITEM 25.
  8. ENSURE THAT ALL GROUND WIRES ARE SECURED TO NEAREST GROUND POINT IN ENGINE COMPARTMENT USE HARDWARE INSTL-GND HWD, ENG COMPT P/N 374793.
  9. TORQUE CUMMINS ECM JACK SCREW TO 25 +/- IN-LBS.
  10. ENSURE XJ1939TRANS-TWR IS MATED TO XJ1939TRANS-SHR FROM HRNS-ENG TRANS X40, REF 292-XXXXC LINE ITEM 145. ENSURE XVCAN3-SHR IS MATED TO XVCAN3-TWR IN HRNS-SC TO DASH, REF 292-XXXXC LINE ITEM 34. ENSURE XJ9EC140-TWR IS MATED TO XJ9EC140-SHR IN HRNS-ENG COMPT, REF 292-XXXXC LINE ITEM 60. ENSURE XVCAN5-SHR IS WITH XVCAN5-TWR FROM HRNS RH OPT, REF 292-XXXXC LINE ITEM 53. ENSURE XNFCONNECT-TWR IS MATED TO XNFCONNECT-SHR OF HRNS-LH OPTIONS, REF 292-XXXXC LINE 55. ENSURE XJ1939ABS-TWR IS MATED TO XJ1939ABS-SHR FROM HRNS-LH CROWN, REF 292-XXXXC LINE 22.
  11. REFER TO CONNECTION POINTS DRAWING IN 290-XXXXC/U LINE ITEM 400
  12. \* PRODUCTION TO ENSURE THIS SECTION OF THE HARNESS TO BE ROUTED INFRONT OF THE RR BULKHEAD STRUCTURE
  13. \*\* PRODUCTION TO SECURE THIS SECTION OF THE HARNESS ONCE INSTL-REAR PANEL IS INSTALLED (284-XXXXU LINE ITEM 21)
  14. LOCATE STATION MARKER HARNESS TO THIS POINT WHICH COINCIDES WITH APPROXIMATELY CENTRE BODY LINE OF COACH, USE THIS LOCATION AS A REF STARTING POINT DURING INSTALL OF HARNESS.
  15. REFER TO 286-XXXXC LINE ITEM 70 FOR THE INSTALLATION OF DIAGNOSTIC CONNECTOR.
  16. PROVIDE DRIP LOOP TO PREVENT WATER FROM ENTERING CONNECTOR. ENSURE THAT THE LOOP SPLIT FACES DOWNWARD.
  17. ENSURE THAT GNDPENG IS PLACED AFTER INSTL-PC PWR TO ENG (REF 294-XXXXU LINE ITEM 101).

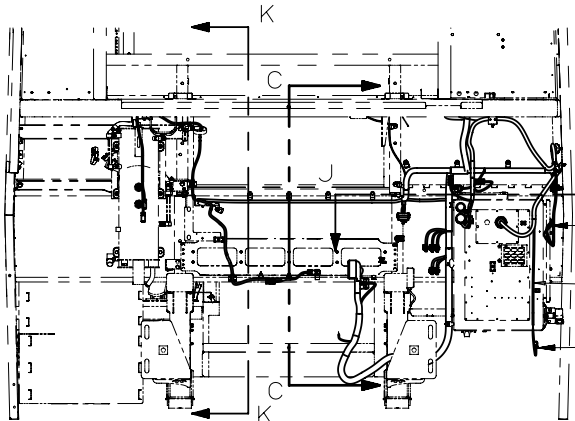
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| DO NOT SCALE DRAWING                                                                          |     |
| DIMENSIONS IN ( ) ARE IN m.m.                                                                 |     |
| THD ANGLE  |     |
| DRAWN BY                                                                                      |     |
| NISHADA MEDAGODA                                                                              |     |
| DATE (DD-MMM-YY)                                                                              | A   |
| 02-MAR-16                                                                                     | REV |

|                        |            |
|------------------------|------------|
| RELEASED TO PRODUCTION | ECN-062902 |
| DESCRIPTION            | ECO        |

|                        |     |      |                                                             |                                              |                           |
|------------------------|-----|------|-------------------------------------------------------------|----------------------------------------------|---------------------------|
| 1                      | EA  | 2    | 625186                                                      | HRNS-ISL16 INT X40                           |                           |
| 1                      | EA  | 1    | 625184                                                      | HRNS-ISL16 ENG XCELSIOR                      | -                         |
| QTY                    | U/M | ITEM | PART NO.                                                    | DESCRIPTION                                  | WEIGHT                    |
| MATERIAL               |     |      | UNSPEC'D TOLS.                                              | DEC.IN.                                      | TITLE                     |
| -                      |     |      | .X<br>.XX<br>.XXX<br>HOLE DIA.<br>BEND RADII.<br>ANGLE TOL. | ±.12<br>±.06<br>±.03<br>±.015<br>±.03<br>±1° | INSTL-HRNS ENG ISL16 XD40 |
| WEIGHT                 |     |      | SIMILAR TO                                                  |                                              |                           |
| -                      |     |      | -                                                           |                                              |                           |
| TREATMENT NOT REQUIRED |     |      | NEW FLYER                                                   |                                              |                           |
| -                      |     |      | SCALE NTS                                                   |                                              |                           |
|                        |     |      | PART N°                                                     |                                              |                           |
|                        |     |      | 625183                                                      |                                              |                           |
|                        |     |      | SHEET 1 OF 2                                                |                                              |                           |
|                        |     |      | REPORT ALL ERRORS TO ENG. DEPT.                             |                                              |                           |

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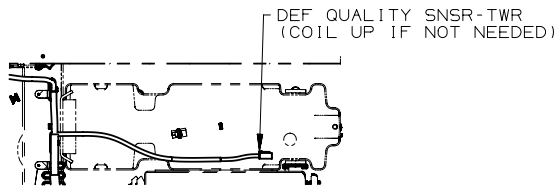
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REAR VIEW

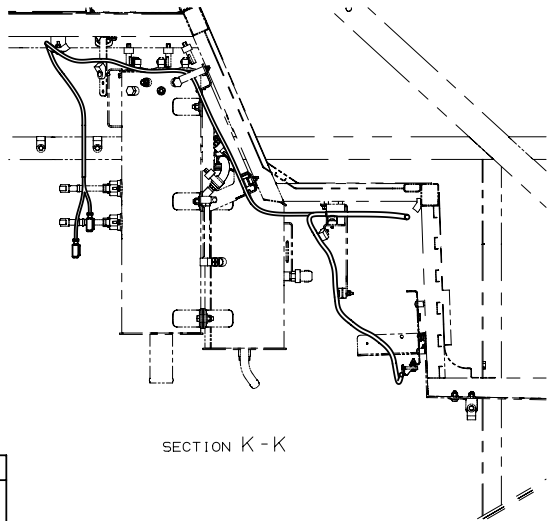
GNDPECR  
(SEE NOTE 8)

WIF SNSR-TWR

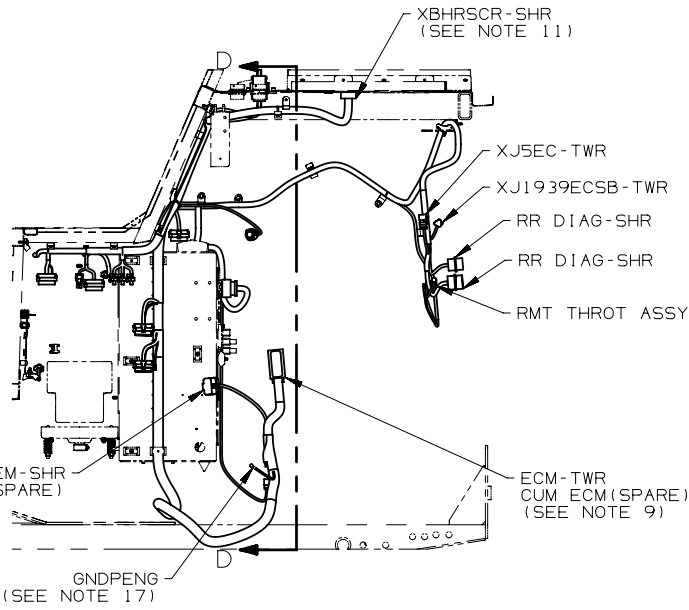


SECTION J-J

DEF QUALITY SNSR-TWR  
(COIL UP IF NOT NEEDED)



SECTION K-K



SECTION C-C

XBHRSCR-SHR  
(SEE NOTE 11)

XJ5EC-TWR

XJ1939ECB-TWR

RR DIAG-SHR

RR DIAG-SHR

RMT THROT ASSY-TWR

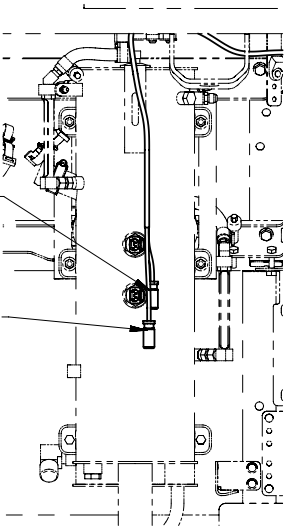
ISL OEM-SHR  
ISL OEM(SPARE)

ECM-TWR  
CUM ECM(SPARE)  
(SEE NOTE 9)

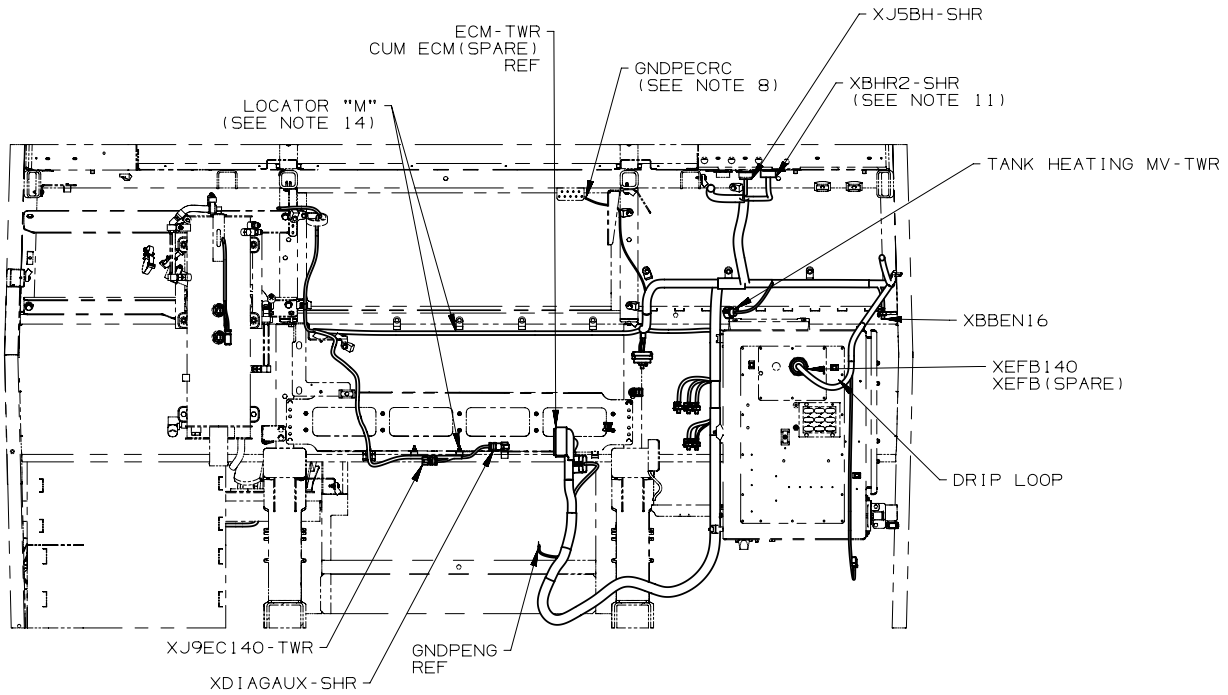
GNDPENG  
(SEE NOTE 17)

COOLANT LVL DERATE  
SNSR-TWR

COOLANT LVL  
MAINT SNSR-SHR



SURGE TANK



SECTION D-D

ECM-TWR  
CUM ECM(SPARE)  
REF

LOCATOR "M"  
(SEE NOTE 14)

GNDPECR  
(SEE NOTE 8)

XJ5BH-SHR

XBHR2-SHR  
(SEE NOTE 11)

TANK HEATING MV-TWR

XBBEN16

XEFB140  
XEFB(SPARE)

DRIP LOOP

XJ9EC140-TWR

XD1AGAU-SHR

GNDPENG  
REF

|                                  |     |
|----------------------------------|-----|
| DO NOT SCALE DRAWING             |     |
| DIMENSIONS IN ( )<br>ARE IN m.m. |     |
| THD ANGLE                        |     |
| DRAWN BY                         |     |
| NISHADA MEDAGODA                 |     |
| DATE (DD-MMM-YY)                 | A   |
| 02-MAR-16                        | REV |

|                        |  |            |
|------------------------|--|------------|
| RELEASED TO PRODUCTION |  | ECN-062902 |
| DESCRIPTION            |  | ECO        |

|                           |                                       |                      |                           |  |
|---------------------------|---------------------------------------|----------------------|---------------------------|--|
| MATERIAL                  | UNSPEC'D TOLS.                        | DEC.IN.              | TITLE                     |  |
| -                         | .X<br>.XX<br>.XXX                     | ±.12<br>±.06<br>±.03 | INSTL-HRNS ENG ISL16 XD40 |  |
| WEIGHT                    | HOLE DIA.<br>BEND RADII<br>ANGLE TOL. | ±.015<br>±.03<br>±1° | PART N°<br>625183         |  |
| TREATMENT<br>NOT REQUIRED | SIMILAR TO                            | -                    | NEW FLYER (NX)            |  |
| SCALE NTS                 |                                       | C                    | SHEET 2 OF 2              |  |

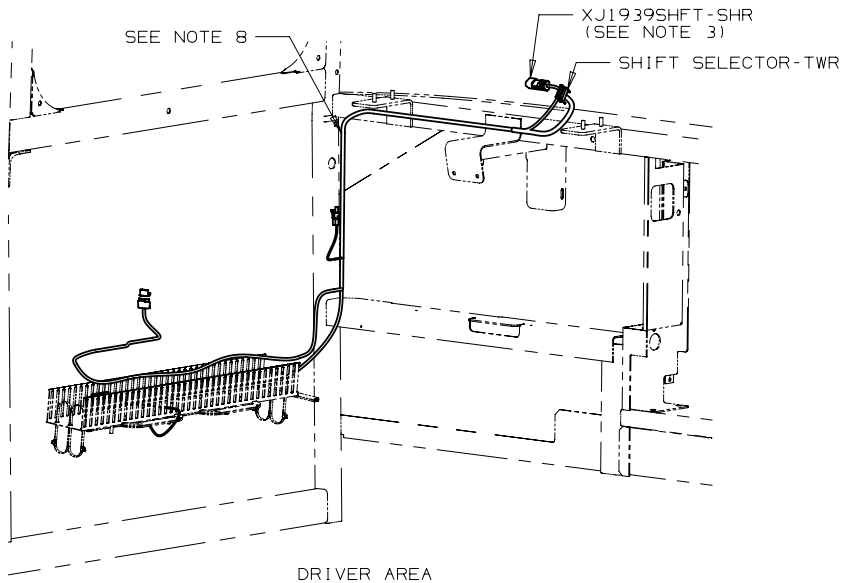
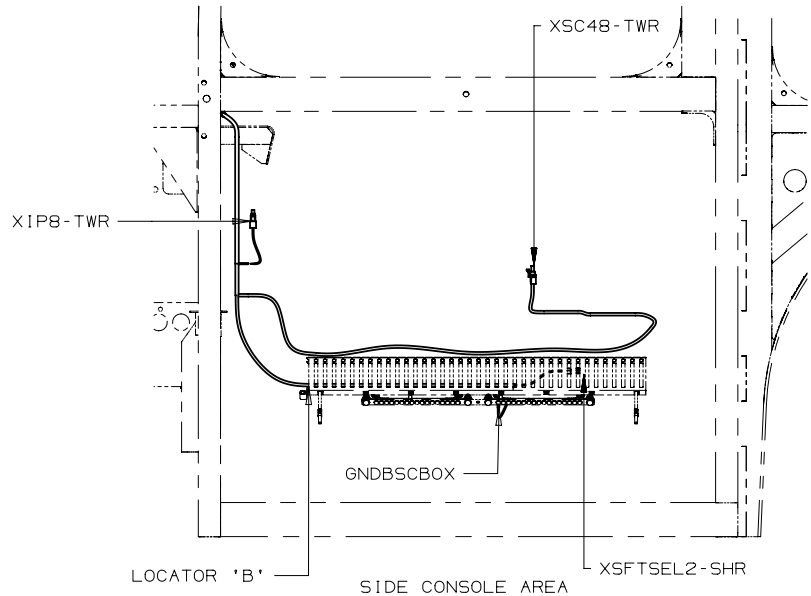
REPORT ALL ERRORS  
TO ENG. DEPT.



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ADDITIONAL INFORMATION CAN BE OBTAINED BY REFERENCING THREE DIMENSIONAL DESIGN DATA. CONTACT YOUR NEW FLYER REPRESENTATIVE AS REQUIRED.

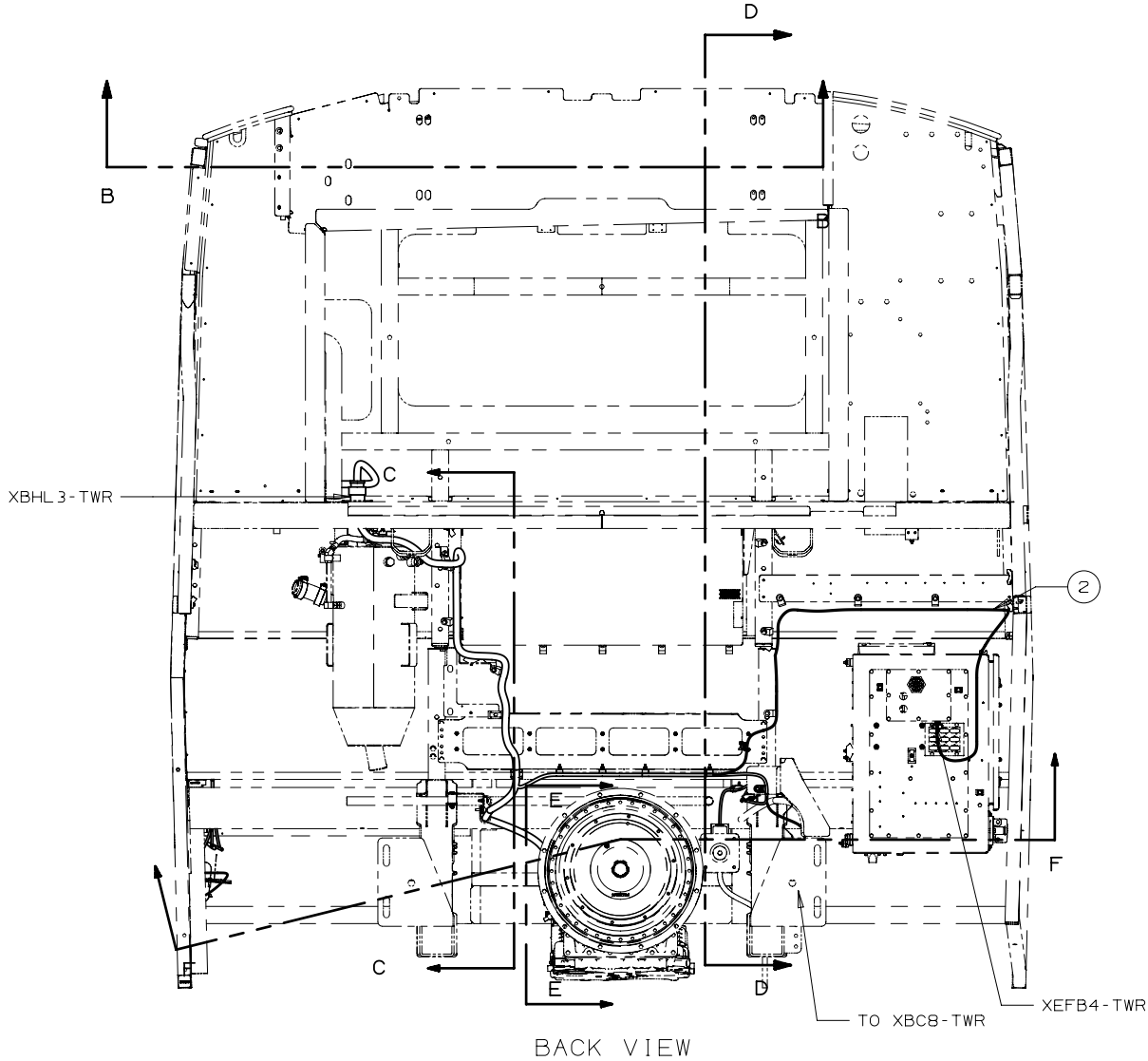
NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING



- NOTES:
1. THE MAXIMUM WIRE BEND RADIUS IS SIX TIMES THE DIAMETER OF THE WIRE.
  2. PRECAUTIONS ARE TO BE TAKEN TO ENSURE AGAINST HARNESS CHAFFING.
  3. CONNECT TO J1939 CONNECTOR FROM ENGINE INTERIOR HARNESS.
  4. DRILL AND TAP 10-24UNC HOLE THRU STRUCTURE AND INSTALL CLAMPS USING HARDWARE.
  5. SECURE TO OTHER HARNESSES USING TYRAPS AS REQUIRED.
  6. SECURE CABLE TO AIR SUPPLY LINE AS REQUIRED.
  7. SEE 219-XXXXU LINE ITEM 145 FOR SUPPORT BRACKET INSTL.
  8. ROUTE HRNS BELOW THE 'BRKT-1P SPRT FRT', REF ITEM XXXXC LINE ITEM 25.

|                                                                                               |     |
|-----------------------------------------------------------------------------------------------|-----|
| DO NOT SCALE DRAWING                                                                          |     |
| DIMENSIONS IN ( ) ARE IN m.m.                                                                 |     |
| THD ANGLE  |     |
| DRAWN BY                                                                                      |     |
| PACIFIQUE MUHIRE                                                                              |     |
| DATE (DD-MMM-YY)                                                                              | C   |
| 06-JUN-16                                                                                     | REV |

|     |                                                                                                   |            |
|-----|---------------------------------------------------------------------------------------------------|------------|
| C   | 1. ITEM 9 WAS QTY 3<br>2. ITEM 7 WAS QTY 3<br>3. ITEM 6 WAS QTY 4<br>4. REMOVED ITEMS 13,14 & 15. | ECN-068054 |
| REV | DESCRIPTION                                                                                       | ECO        |



|     |     |      |          |                             |        |
|-----|-----|------|----------|-----------------------------|--------|
| 1   | EA  | 12   | 5962614  | TYRAP-4.0 BLACK             | -      |
| 4   | EA  | 11   | 5958112  | TYRAP-7.0 BLACK             | -      |
| 4   | EA  | 10   | 293509   | MOUNT-CABLE TIE 3/16 EYE    | -      |
| 2   | EA  | 9    | 14500016 | SCREW PH 10-24 X 1.00       | -      |
| 2   | EA  | 7    | 42N00000 | NUT-NYLON LOCK #10 SST      | -      |
| 2   | EA  | 6    | 50W00000 | WASHER FLAT SS 10           | -      |
| 3   | EA  | 5    | 34500012 | SCREW-NO 10-24 X 0.75       | -      |
| 1   | EA  | 4    | 562668   | MOUNT-CABLE TIE 1/4 EYE     | -      |
| 1   | EA  | 3    | 488465   | HRNS-TRANS SHIFT XCELSIOR   | -      |
| 1   | EA  | 2    | 582178   | HRNS-GENIV TRANS ENGINE     | -      |
| 1   | EA  | 1    | 498838   | HRNS-ALLISON TRANS INTERIOR | -      |
| QTY | U/M | ITEM | PART NO. | DESCRIPTION                 | WEIGHT |

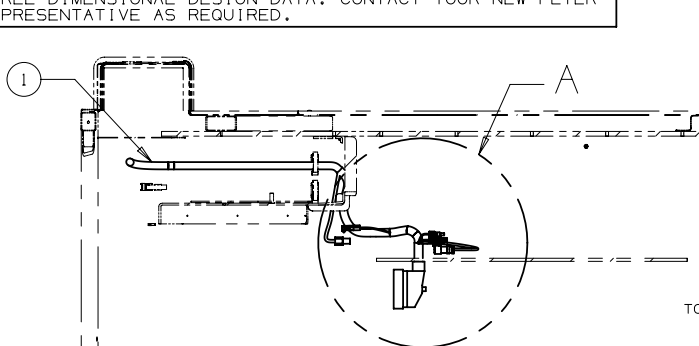
|                                |                                                                               |                                                                                       |                                          |   |              |
|--------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------|---|--------------|
| MATERIAL<br>N/A<br>-           | UNSPEC'D TOLS.<br>.X<br>.XX<br>.XXX<br>HOLE DIA.<br>BEND RADII.<br>ANGLE TOL. | DEC. IN.<br>±.12<br>±.06<br>±.03<br>±.015<br>±.03<br>±1°                              | TITLE<br><br>INSTL-HRNS GENIV TRANS X-40 |   |              |
| WEIGHT<br>-                    | SIMILAR TO<br>491418                                                          |  | PART N°<br><br>582177                    |   |              |
| TREATMENT<br>NOT REQUIRED<br>- |                                                                               |                                                                                       | (NX)                                     |   |              |
|                                |                                                                               |                                                                                       | SCALE NTS                                | C | SHEET 1 OF 2 |

REPORT ALL ERRORS TO ENG. DEPT.

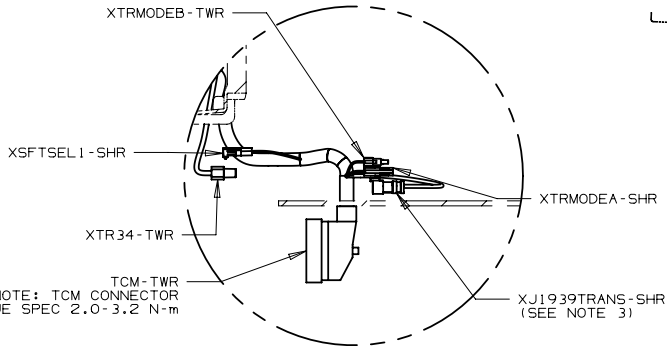
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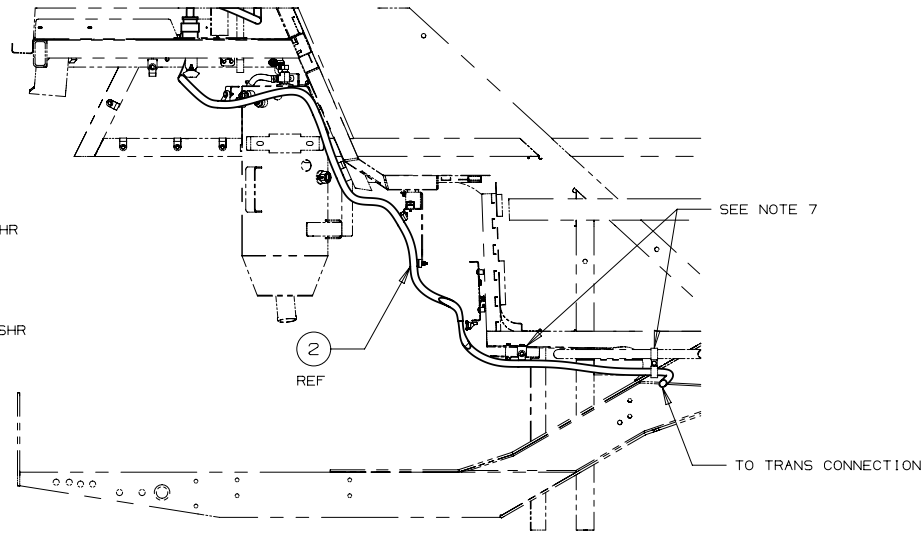
NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING



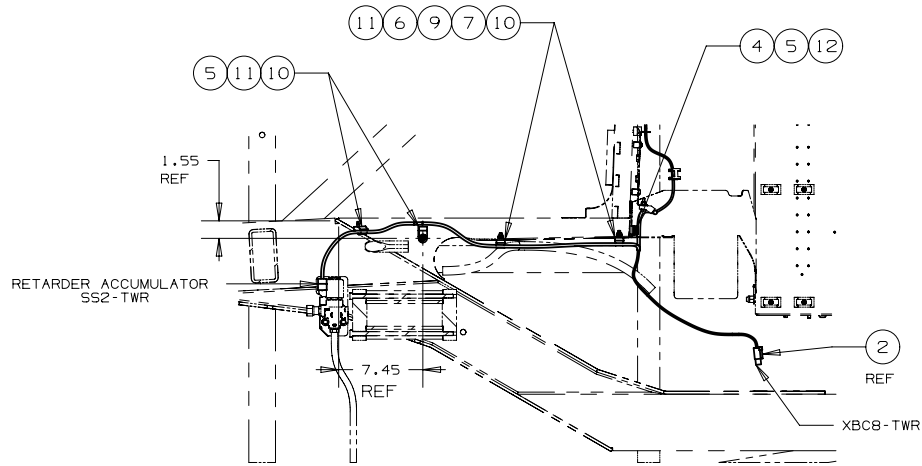
SECTION B-B  
RR PANEL REMOVED FOR CLARITY



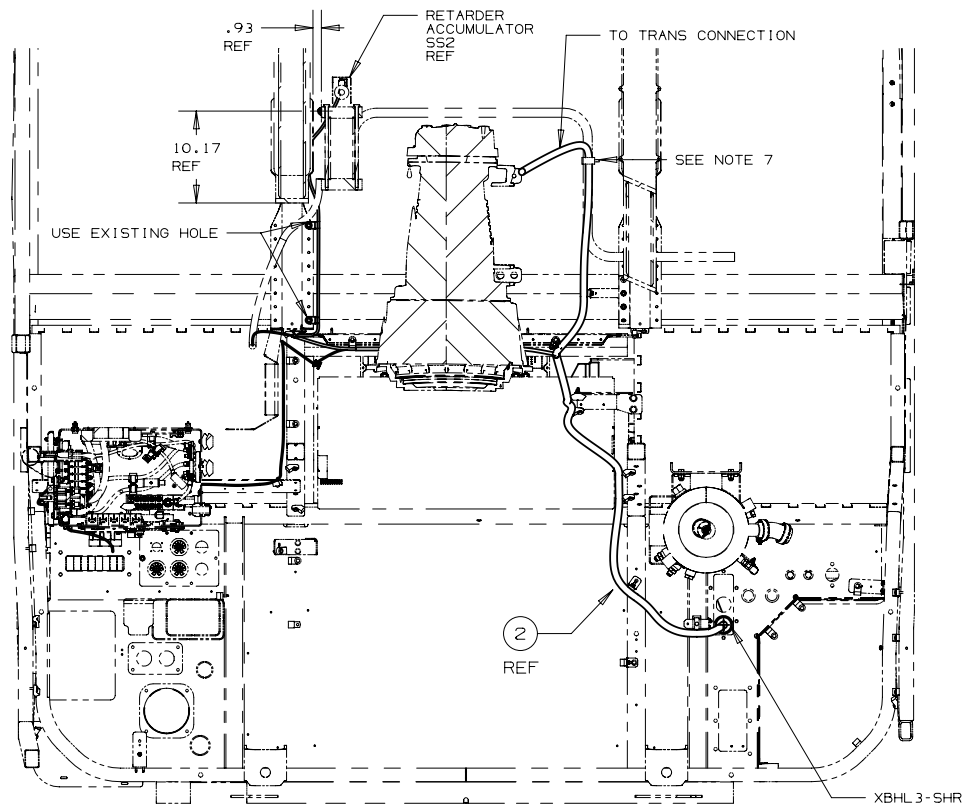
DETAIL A



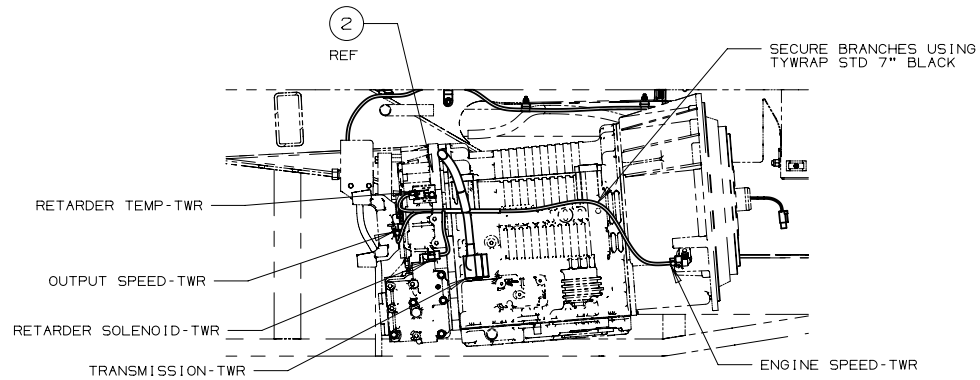
SECTION C-C



SECTION D-D



SECTION F-F



SECTION E-E

|                                                                                               |     |
|-----------------------------------------------------------------------------------------------|-----|
| DO NOT SCALE DRAWING                                                                          |     |
| DIMENSIONS IN ( ) ARE IN m.m.                                                                 |     |
| THD ANGLE  |     |
| DRAWN BY                                                                                      |     |
| PACIFIQUE MUHIRE                                                                              |     |
| DATE (DD-MMM-YY)                                                                              | C   |
| 06-JUN-16                                                                                     | REV |

|                              |            |
|------------------------------|------------|
| 1. ITEM 9 WAS QTY 3          | ECN-068054 |
| 2. ITEM 7 WAS QTY 3          |            |
| 3. ITEM 6 WAS QTY 4          |            |
| 4. REMOVED ITEMS 13,14 & 15. |            |
| DESCRIPTION                  | ECO        |

|                           |                                                                              |                                                         |
|---------------------------|------------------------------------------------------------------------------|---------------------------------------------------------|
| MATERIAL<br>N/A           | UNSPEC'D TOLS.<br>.X<br>.XX<br>.XXX<br>HOLE DIA.<br>BEND RADII<br>ANGLE TOL. | DEC.IN.<br>±.12<br>±.06<br>±.03<br>±.015<br>±.03<br>±1° |
| WEIGHT<br>-               | SIMILAR TO 491418                                                            |                                                         |
| TREATMENT<br>NOT REQUIRED | 491418                                                                       |                                                         |

|                                                                                       |   |                   |
|---------------------------------------------------------------------------------------|---|-------------------|
| TITLE<br>INSTL-HRNS GENIV TRANS X-40                                                  |   |                   |
|  |   | PART N°<br>582177 |
| SCALE NTS                                                                             | C | SHEET 2 OF 2      |

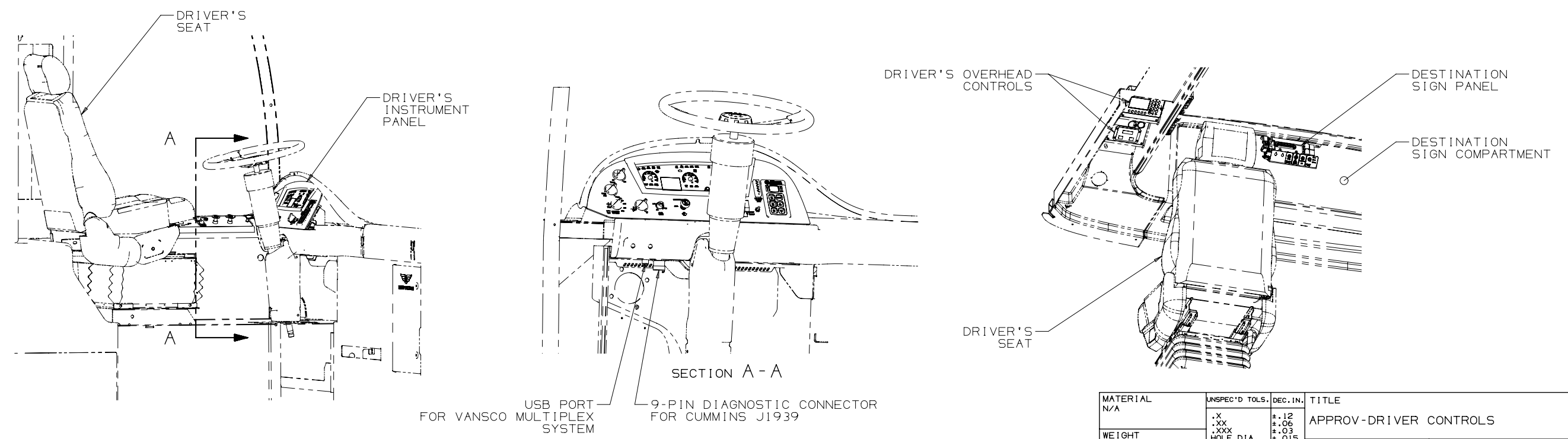
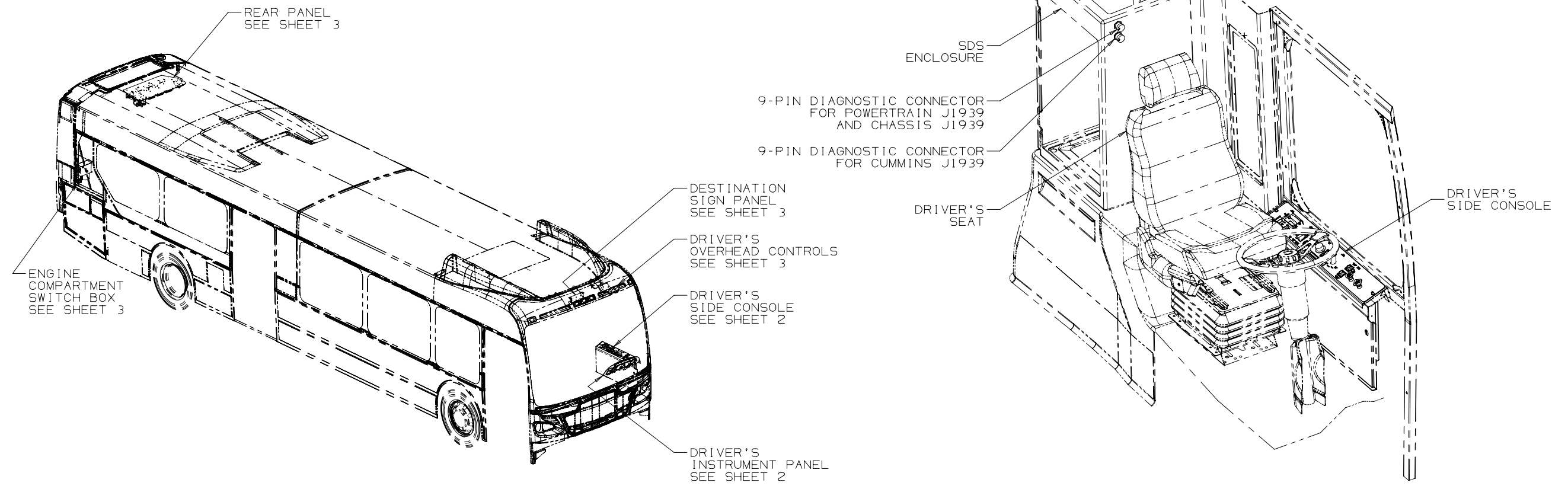
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NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING

DRAWING N°  
624345



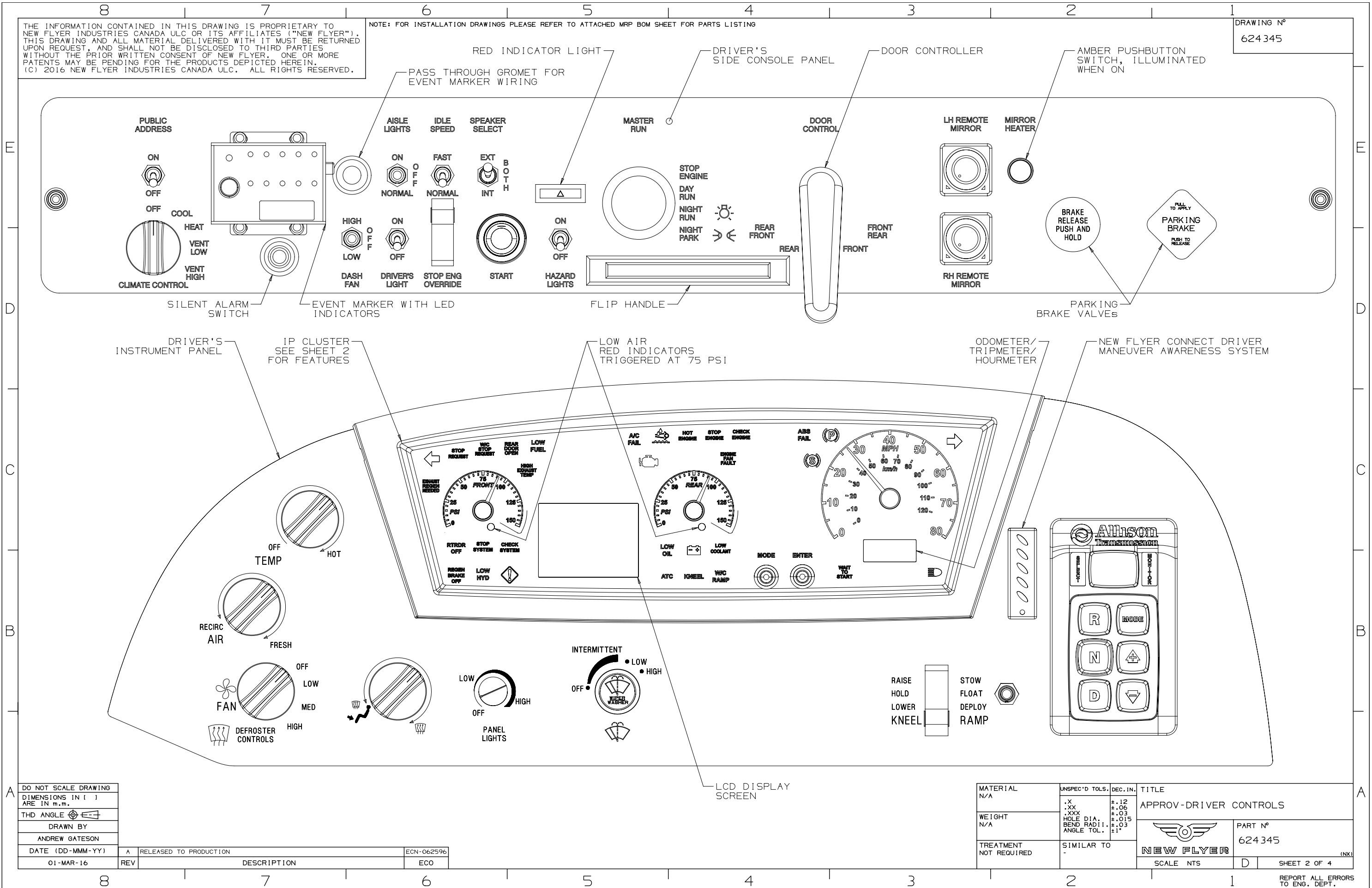
|                               |     |                        |
|-------------------------------|-----|------------------------|
| DO NOT SCALE DRAWING          |     |                        |
| DIMENSIONS IN [ ] ARE IN m.m. |     |                        |
| THD ANGLE                     |     |                        |
| DRAWN BY                      |     |                        |
| ANDREW GATESON                |     |                        |
| DATE (DD-MMM-YY)              | A   | RELEASED TO PRODUCTION |
| 01-MAR-16                     | REV | DESCRIPTION            |

|            |     |
|------------|-----|
| ECO-062596 | ECO |
|------------|-----|

USB PORT FOR VANSO MULTIPLEX SYSTEM  
9-PIN DIAGNOSTIC CONNECTOR FOR CUMMINS J1939

|                           |                                                             |                                 |
|---------------------------|-------------------------------------------------------------|---------------------------------|
| MATERIAL<br>N/A           | UNSPEC'D TOLS.<br>DEC. IN.                                  | TITLE<br>APPROV-DRIVER CONTROLS |
| WEIGHT<br>N/A             | .X<br>.XX<br>.XXX<br>HOLE DIA.<br>BEND RADII.<br>ANGLE TOL. | PART N°<br>624345               |
| TREATMENT<br>NOT REQUIRED | SIMILAR TO                                                  | NEW FLYER                       |
| SCALE NTS                 |                                                             | D SHEET 1 OF 4                  |

REPORT ALL ERRORS TO ENG. DEPT.



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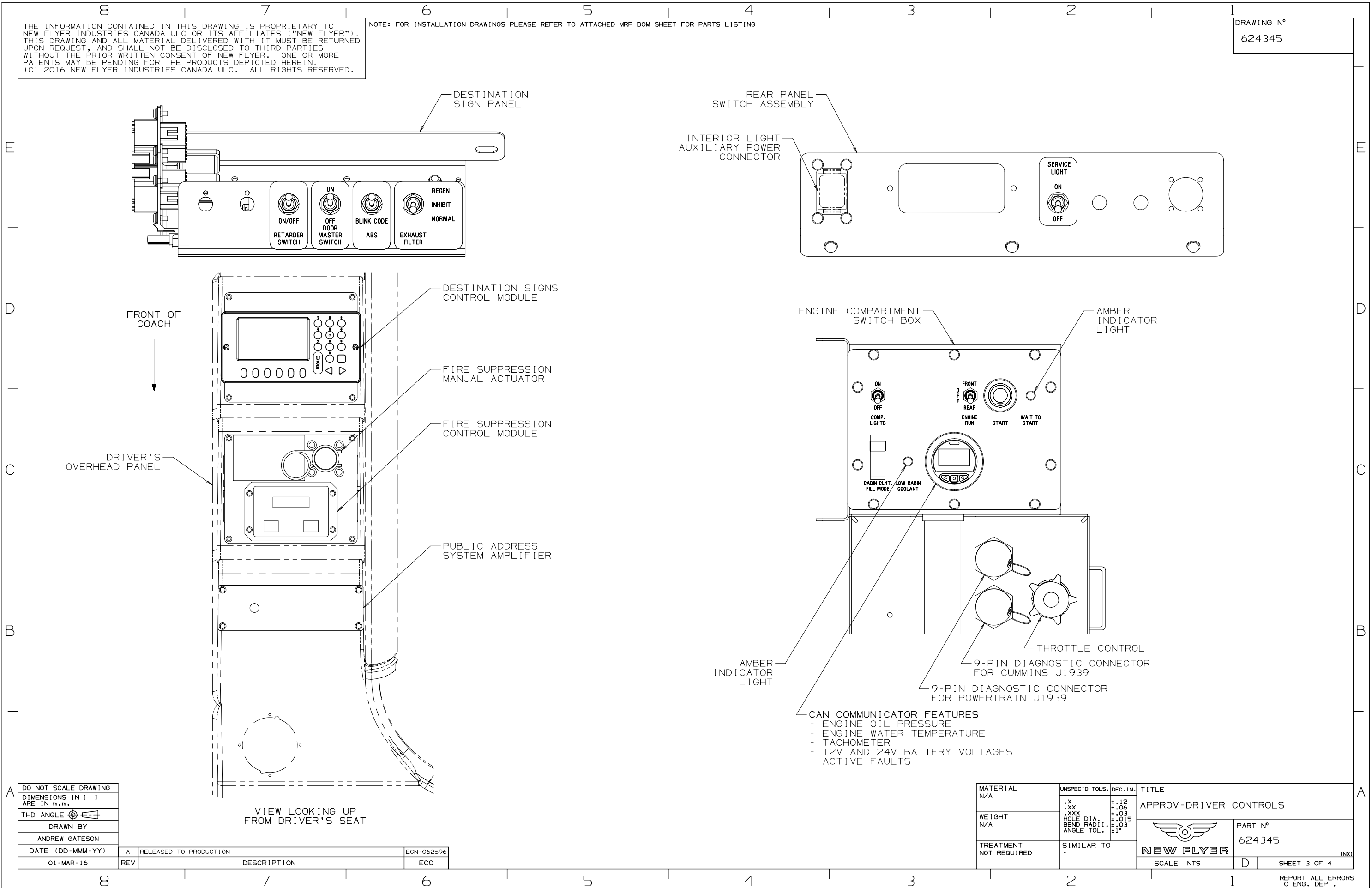
NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING

DRAWING N°  
624345

|                               |     |                        |
|-------------------------------|-----|------------------------|
| DO NOT SCALE DRAWING          |     |                        |
| DIMENSIONS IN [ ] ARE IN m.m. |     |                        |
| THD ANGLE                     |     |                        |
| DRAWN BY                      |     |                        |
| ANDREW GATESON                |     |                        |
| DATE (DD-MMM-YY)              | A   | RELEASED TO PRODUCTION |
| 01-MAR-16                     | REV | DESCRIPTION            |
|                               |     | ECO                    |

|                           |                                        |                                  |                                 |
|---------------------------|----------------------------------------|----------------------------------|---------------------------------|
| MATERIAL<br>N/A           | UNSPEC'D TOLS.<br>• X<br>• XX<br>• XXX | DEC. IN.<br>±.12<br>±.06<br>±.03 | TITLE<br>APPROV-DRIVER CONTROLS |
| WEIGHT<br>N/A             | HOLE DIA.<br>BEND RADII.<br>ANGLE TOL. | ±.015<br>±.03<br>±1°             | PART N°<br>624345               |
| TREATMENT<br>NOT REQUIRED | SIMILAR TO                             |                                  | NEW FLYER                       |
| SCALE NTS                 |                                        |                                  | D SHEET 2 OF 4                  |

REPORT ALL ERRORS TO ENG. DEPT.



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1

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NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING

DRAWING N°  
624345

IP CLUSTER INDICATORS

| INDICATOR NAME       | COLOR                 | BUZZER YES/NO | ENABLE/DISABLE |
|----------------------|-----------------------|---------------|----------------|
| LEFT TURN            | GREEN                 | CLICKER       | ENABLED        |
| EXHAUST REGEN NEEDED | AMBER                 | NO            | ENABLED        |
| STOP REQUEST         | RED                   | NO            | ENABLED        |
| W/C STOP REQUEST     | AMBER                 | NO            | ENABLED        |
| REAR DOOR OPEN       | RED                   | NO            | ENABLED        |
| HIGH EXHAUST TEMP    | AMBER                 | NO            | ENABLED        |
| LOW FUEL             | AMBER                 | NO            | ENABLED        |
| A/C FAIL             | RED                   | NO            | ENABLED        |
| MIL SYMBOL           | AMBER                 | NO            | ENABLED        |
| LOW DEF SYMBOL       | AMBER                 | NO            | ENABLED        |
| HOT ENGINE           | RED                   | YES           | ENABLED        |
| STOP ENGINE          | RED                   | YES           | ENABLED        |
| ENGINE FAN FAULT     | AMBER                 | NO            | ENABLED        |
| CHECK ENGINE         | AMBER                 | NO            | ENABLED        |
| ABS FAIL             | AMBER                 | NO            | ENABLED        |
| STOP LAMPS           | RED                   | NO            | ENABLED        |
| PARKING BRAKE        | RED                   | NO            | ENABLED        |
| RIGHT TURN           | GREEN                 | CLICKER       | ENABLED        |
| RTRDR OFF            | RED                   | NO            | ENABLED        |
| REGEN BRAKE OFF      | RED                   | NO            | DISABLED       |
| STOP SYSTEM          | RED                   | NO            | DISABLED       |
| LOW HYD              | RED                   | NO            | DISABLED       |
| WAIT TO START        | AMBER                 | NO            | ENABLED        |
| HIGH BEAM            | BLUE                  | NO            | ENABLED        |
| LOW OIL              | RED                   | YES           | ENABLED        |
| ATC                  | AMBER                 | NO            | DISABLED       |
| LOW BATTERY          | RED                   | NO            | ENABLED        |
| KNEEL                | AMBER                 | NO            | ENABLED        |
| LOW COOLANT          | AMBER                 | YES           | ENABLED        |
| W/C RAMP             | RED                   | NO            | ENABLED        |
| CHECK SYSTEM         | AMBER                 | NO            | DISABLED       |
| EXCLAMATION SYMBOL   | ON WITH LCD INDICATOR | NO            | ENABLED        |

IP LCD INDICATORS

| INDICATOR NAME   | COLOR | BUZZER YES/NO |
|------------------|-------|---------------|
| RH HDLP FLT      | AMBER | NO            |
| RH TRN FLT       | AMBER | NO            |
| LH HDLP FLT      | AMBER | NO            |
| LH TRN FLT       | AMBER | NO            |
| STRTR LOCK OUT   | AMBER | NO            |
| KNEEL SNSR FAULT | AMBER | NO            |
| HOT TRANS        | RED   | YES           |
| CHECK TRANS      | AMBER | NO            |
| INTER LOCK       | RED   | NO            |
| TAIL LAMPS FAULT | AMBER | NO            |
| STOP LAMPS FAULT | RED   | YES           |
| EXT LAMPS FAULT  | AMBER | NO            |
| CLNT FILL MODE   | RED   | NO            |
| INTER LOCK FAULT | RED   | NO            |
| SEAT BELT        | RED   | YES           |

PRELIMINARY. TO BE REVISED WHEN PLC PROGRAM RELEASED AT APPROXIMATELY 2 WEEKS PRIOR TO LINE ENTRY. IF KNOWN SPECIAL REQUIREMENTS EXIST, FEEDBACK CAN BE COMMUNICATED AT ANY TIME.

IP LCD BAR GRAPHS

| GAUGE NAME    | RANGE | UNIT OF MEASURE | INDICATOR                                                  |
|---------------|-------|-----------------|------------------------------------------------------------|
| DEF GAUGE     | 0-100 | PERCENT         | LOW DEF CLUSTER INDICATOR ACTIVATED AT 10%, FLASHING AT 5% |
| 12V VOLTMETER | 9-18  | VOLTS           | LOW BATTERY CLUSTER INDICATOR ACTIVATED AT 11V             |
| 24V VOLTMETER | 18-36 | VOLTS           | LOW BATTERY CLUSTER INDICATOR ACTIVATED AT 23V             |

DO NOT SCALE DRAWING

DIMENSIONS IN ( ) ARE IN m.m.

THD ANGLE

DRAWN BY

ANDREW GATESON

DATE (DD-MMM-YY)

01-MAR-16

RELEASED TO PRODUCTION

ECO-062596

DESCRIPTION

ECO

MATERIAL  
N/A

WEIGHT  
N/A

TREATMENT  
NOT REQUIRED

UNSPEC'D TOLS.  
•X  
•XX  
•XXX  
HOLE DIA.  
BEND RADII.  
ANGLE TOL.

SIMILAR TO  
-

DEC. IN.  
±.12  
±.06  
±.03  
±.015  
±.03  
±1°

TITLE  
APPROV-DRIVER CONTROLS

PART N°  
624345

SCALE NTS  
D

SHEET 4 OF 4

REPORT ALL ERRORS TO ENG. DEPT.

78