

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Overview

ORGANIZATION

The Electrical section of the 2003 & 2004 Medium Duty C Series Body Builder Manual is not split between Family 2 and Family 3 trucks. The Electrical systems are common between the families. Any family specific requirements are called out in the attached documentation. This document is organized as follows:

- Systems Operation – How it works.
- Component Locator – Where it is.
- Connectors & Pinouts – What it looks like, and finally,
- Subsystem Schematics – Detailed wiring and electrical schematic information.

WHAT'S NEW FOR THE MEDIUM DUTY C SERIES

- A Component Locator page has been included to show the location of major electronic modules on the truck.
- Upfitter Provision Subsystem – A dedicated Connector is provided for PTO applications requiring additional equipment installed by the Upfitter.
- Body Builder Connector – A 128k - Pulse Per Mile speed signal has been added for easy interface to equipment requiring this information.
- Detailed System Operation Instructions are provided for the Fast Idle (UF3) and Power Take Off (PTO) options. Note: These instructions assume the option has been ordered with the vehicle and are not retrofit procedures.
- Connector Detail and Location Illustrations are provided for many interfaces. Terminal, Cable Seal, and mating connector information have been added where appropriate.
- Detailed Electrical schematics are provided for many subsystems.
- New LLY 6.6L and LG4 7.8L engine information is added for diesel engines sold after 1/01/2004. (See LLY and LG4 ECM Connectors and Location Drawings.) The new engines require new Engine Control Modules. The LLY ECM changes from a 2-way (on the LB7 ECM) to a 3-way connector, and the new LG4 ECM from a 5-way to a 2-way connector. Revised schematics are included for Power and Ground Distribution, PTO Upfitter, Engine, and Transmission Controls.
- New subsystem schematics have been added for subsystems affected by the new Diesel engines. These subsystems include: Fuel, Heated Fuel/Water in Fuel, Exhaust Brake/Restrictor, Starting & Charging, Cruise Control, Batteries, 2-speed Axle, Serial data, and HVAC.

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2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

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SPECIAL INTEREST TO UPFITTERS

Connectors have been provided to allow easy interface for upfitter equipment rather than splicing into existing harnesses. These subsystems and connectors include:

- Upfitter Provision – PTO related functions
- Trailer Wiring – Class two and three vehicles
- Body Builder Connector – exterior lighting and signaling, power, and VSS
- A Ground Block located next to the Body Builder Connector for easy ground termination

Navigation

The Table of Contents and Index items are linked to the actual page. Click on the item of interest and you'll go to the corresponding page. You can return with the “previous page” arrow in the upper center of the screen. Other links embedded in the document are hi-lighted in blue.

Viewing

The size (%) control is located in the lower left corner of the screen. Click the down arrow and select “fit in window” (62%) or “actual size” (100%) for most viewing applications. You can zoom in schematic detail by selecting a larger percentage.

Printing

Specific pages can be printed out. Be careful to select a print range or “current page” or all 317 pages will try to print out.

Information provided is believed to be accurate at the time of publication. GM reserves the right to change the information at any time.

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System Operating Instructions

UF3 – Fast Idle Option – Electrical Requirements

OUTLINE

- Overview
- Engine/Transmission Variations
- Factory Installed Equipment
- Upfitter Installed Equipment
- Operation
- Appendix
 - Reprogramming the PCM / Using the Tech 2 Scan Tool – ([Attachment 1](#))
 - Illustrations
 - IP Switch Panel ([Figure 1](#))
 - Fast Idle Switch ([Figure 2](#))

OVERVIEW

The UF3 fast idle option allows the operator to push a switch and raise the engine speed to a predetermined Idle RPM value. This feature can only be used when the vehicle is stationary. Examples of Fast Idle applications are battery charging, idle operation of High Electrical Load vehicles, quick warm ups, and improved AC performance.

Scope

The GM (UF3) option described here is the necessary electrical and electronic content to control the engine idle speed. This is not a description of how to install these features if not ordered as part of the option. Base factory settings and procedures to change the factory settings are described here. Responsibility for proper and safe operation for any additional equipment remains with the Upfitter.

(PTO) vs. (UF3) Fast Idle

The (PTO) option allows for increased engine speed operation for increased power output to the PTO unit. The (UF3) fast idle option also allows for increased engine speed but is used for quick warm up, A/C performance, or battery charging. The (PTO) Power Take Off and (UF3) fast idle options are mutually exclusive on the same vehicle with the L18/LB7/LG4 engines.

ENGINE/TRANSMISSION VARIATIONS

The 2003 Medium Duty C Series uses 4 engines as shown below:

Engine	Description	Truck Family Available
L18	8.1 L Gas	2 & 3
LB7	Duramax 6600 Diesel	2
LG4	Duramax 7.8L Diesel	3
LG5	Caterpillar 7.2L Diesel	3

FACTORY INSTALLED EQUIPMENT

The UF3 fast idle option includes the Fast Idle Switch, the Fast Idle Indicator Lamp and necessary wiring to the ECM for operation.

- Fast Idle Switch - Use to increase Engine speed to a preset value.
- Fast Idle Indicator Lamp – ECM turns on light to indicate operation in the Fast Idle Mode. This indicator is in the switch.

UPFITTER INSTALLED EQUIPMENT

No upfitter installed equipment is required to operate the function. Responsibility for proper and safe operation for any additional equipment remains with the Upfitter.

OPERATION

Description

Vehicles ordered with the **UF3 (Fast Idle)** option come with a dash mounted switch which allows the user to increase the engine idle speed to a fixed value. The Fast Idle Switch is located to the right of the steering wheel as shown in the illustration ([Figure 1](#)). An indicator in the switch lights to show Fast Idle mode is active.

How To Operate

To enable the Fast Idle, the following conditions must be met:

1. Engine must be running
2. Transmission must be in Park or Neutral
3. Vehicle speed must be less than 5 mph
4. Brake or Clutch must not be depressed.

When the above conditions are met, the operator can activate the Fast Idle mode by pressing the Fast Idle Switch. If the switch is pressed while the engine is in the Fast Idle mode, the engine will return to normal base idle.

Engine Calibrations

The factory preset and minimum and maximum programmable speeds are shown in the table below for the **L18/LB7/LG4** engines:

PROGRAMMABLE PARAMETERS	DEFAULT SETTINGS (RPM)	MINIMUM VALUE (RPM)	MAXIMUM VALUE (RPM)	ADJUSTMENT RESOLUTION (RPM)
Maximum Fast Idle Speed <i>Accelerator Disables Fast Idle</i>	2500	1000 <i>Can't be set below base Fast Idle Speed Parameters</i>	3800	25
Base Idle Speed	1200	600 <i>Normal engine idle will override if higher than Fast Idle.</i>	1300 <i>Cannot be set above the maximum Fast Idle Speed Parameter</i>	25

Note: The Values shown in the above chart are accurate at the time of publication but may change in time for various reasons including running changes made to the ECM, Calibrations, Tech 2 programming, software. Etc.

Caterpillar LG5 Engine

Base Fast Idle is set at the Factory to **1000 RPM**. Fast Idle can be programmed from **700 to 2640 RPM**.

Adjusting the Factory Preset Engine Speed

The Above parameters can be reprogrammed with a GM Tech 2 Diagnostic scan tool for the L18/LB7/LG4 engines. The Tech 2 connects to the Data Link Connector under the dash. Information regarding reprogramming with the Tech 2 tool can be found in the Appendix ([Attachment 1](#)). Reprogramming the LG5 engine requires a Caterpillar electronic service tool.

APPENDIX

Reprogramming the PCM / Using the Tech 2 Scan Tool
[Attachment 1](#)

Illustrations

Location of Fast Idle Switch and Indicator – ([Figure 1](#))
Switch Detail – ([Figure 2](#))

System Operating Instructions

PTO – Power Take Off Option – Electrical Requirements

OUTLINE

- Overview
- Engine/Transmission Variations
- Vocation/Modes
- Factory Installed Equipment
- Upfitter Installed Equipment
- Operation *
 - Stationary Preset Mode
 - Stationary Variable Mode
 - Mobile Variable Mode
 - PTO Engine Shutdown
 - Remote Operation
- Appendix
 - Reprogramming the PCM / Using the Tech 2 Scan Tool – ([Attachment 1](#))
 - Illustrations
 - Location of PTO Switch and Indicator – ([Figure 1](#))
 - PTO Switch Detail – ([Figure 3](#))

Note: *Caterpillar has different programming capability. See your dealer for more information.

OVERVIEW

A Power Take Off (PTO) is a gearbox or mechanical device used to transmit mechanical power from the powertrain, through gears or a transmission, to another mechanical or hydraulic device. Examples of PTO applications are: salt spreaders, refuse equipment, plows, pumps, drills, lifts, wrecker equipment, dump bodies, fire/rescue equipment, etc.

PTO Advantages

- PTO's are inexpensive, convenient, safe and reliable.
- PTO's bolt on to the transmission, engine, transfer case or can be incorporated into the accessory belt drive system.
- PTO's eliminate the need for a complex array of levers, controllers, electric motors, etc., which would be required to duplicate the operation of a PTO.

Scope

The PTO unit itself is installed by the Upfitter or Specialty Vehicle Assembler on the vehicle. The GM (PTO) option described here is the necessary electrical and electronic content to control the PTO unit. Responsibility for proper and safe operation remains with the Upfitter. Other PTO related RPO's such as V66 (mechanical provisions for Front PTO) are not addressed here.

(PTO) vs. (UF3) Fast Idle

The (PTO) option allows for increased engine speed operation for increased power output to the PTO unit. The (UF3) fast idle option also allows for increased engine speed but is used for quick warm up, A/C performance, or battery charging. The (PTO) Power Take Off and (UF3) fast idle options are mutually exclusive on the same vehicle with the L18/LB7/LG4 engines.

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ENGINE/TRANSMISSION VARIATIONS

The 2003 Medium Duty C Series uses 4 engines as shown below:

Engine	Description	Truck Family Available
L18	8.1 L Gas	2 & 3
LB7	Duramax 6600 Diesel	2
LG4	Duramax 7.8L Diesel	3
LG5	Caterpillar 7.2L Diesel	3

Many transmissions are available on the 2003 Medium Duty C Series. 13 manual and six automatics are available on Family 3 trucks alone. The Caterpillar engine and some Allison transmissions have dedicated PTO connectors that interface with their control modules. The Engine Controller and Transmission Controller communicate with each other on a high-speed serial data link. The PTO functions are interfaced to the ECM on 2003 Medium Duty C Series to reduce variation in wiring and function. The LG5 Caterpillar engine requires different PTO wiring from the other engine applications but functions in a similar manner. Specific wiring is supplied with the PTO option.

VOCATION/MODES

The primary difference in PTO operation is whether the vehicle is stationary or moving. Stationary operation can have either preset or variable PTO speeds. Some examples of modes and vocations are:

- Stationary Preset – Three preset high idle speeds – Refuse & Wrecker equipment, Fire truck pumpers,
- Stationary Variable – Variable high idle speeds - Drills, Lifts,
- Mobile Variable – Allows variable PTO speeds while the vehicle is moving – Salt Spreaders, Plows, Street Cleaners.

Note: The ECM can be programmed to only one of these modes at any given time. Caterpillar has different programming capability. See your dealer for more information.

FACTORY INSTALLED EQUIPMENT

The PTO option includes the PTO Enable Switch, PTO Relay, K34 Cruise Control Switch, Upfitter Connector to allow optional Upfitter installed switches, and necessary wiring.

- PTO Enable Switch – Located on Dash
- PTO Relay – Turned on by ECM, Provides power for Engage Switch and Load Solenoid.
- K34 Cruise Control Switch – Steering column mounted - use to adjust idle speeds under PTO operation.
- Upfitter Connector – allows interconnection of optional Upfitter installed switches.

UPFITTER INSTALLED EQUIPMENT

Optional Upfitter installed equipment includes Remote PTO Up / Down Switches, PTO Load Engage Switch, PTO Load Solenoid, and Remote Kill Switch. All of these devices interface with the Upfitter Connector.

- Remote PTO Up / Down Switches – Same function as Cruise Control Switches, allows operation outside of Cab for Stationary PTO applications.
- PTO Load Engage Switch – Allows for positive action feedback to ECM for before idle speed is increased. A 5 sec (calibrated) delay occurs without this feedback.
Note: The Caterpillar ECM does not provide a feedback for PTO operation.
- PTO Load Solenoid – Causes PTO engagement if so equipped.
- Remote Kill Switch – This Normally Closed Switch allows the operator to stop the engine for remote Applications.

OPERATION

Description

The PTO RPO is an option that allows the user to raise the engine speed through the use of designated switches and ECM programming. The ECM can be programmed to one of the following three PTO modes:

- **Stationary Preset mode** – Three preset high idle speeds. Vehicle must be stationary.
- **Stationary Variable mode** – Variable high idle speeds. Vehicle must be stationary.
- **Mobile Variable mode** – Allows variable PTO speeds while vehicle is moving.

These PTO modes are addressed separately and in detail in the following pages. Please note the ECM can be programmed to only one of the three modes at any one time.

PTO Switches

Vehicles ordered with the **PTO** option come with a IP mounted switch which allows the user to enable the function. The PTO Switch is located to the right of the steering wheel as shown in the illustration ([Figure 1](#) & [Figure 3](#)). An indicator in the switch lights to show PTO mode is active. The engine speed can then be changed with either the cruise control switches or upfitter installed remote PTO switches. Cruise Control Switches come with the PTO option on the 2003 Medium Duty C Series. The following chart shows how the switches operate.

PTO SWITCH CONVERSION CHART		
PTO w/Cruise Switch Operation	Remote PTO Switch Operation	Function
Cruise On/Off	N/A	Cruise Switch Enable
PTO Enable	N/A	PTO Enable
SET	PTO Down	Lower RPM
RES	PTO Up	Raise RPM

Stationary Preset Mode

Description

The Stationary Preset Mode allows the user to select from three high idle speeds which are programmed in the ECM. The user can toggle between three preset speeds using the SET or RES switches or the Remote PTO Switches.

How To Operate

Prior to enabling the Stationary PTO Mode, the following conditions must be met:

1. Engine must be running.
2. Transmission must be in Park or Neutral.
3. Vehicle speed must be less than 5 mph.
4. Brake or Clutch must not be depressed.

When the above conditions are met, the operator can activate the Stationary PTO by the following sequence:

1. Set the Park Brake.
2. Set the Cruise On/Off Switch to the On position – L18 only.
3. Set PTO Enable Switch to On position.

Upon Completion of the above steps, the PTO Stationary Preset Mode will be enabled and the engine speed will increase to the PTO Base Idle Speed. Toggling the SET and RESume switches will cause the engine RPM to change from normal to either the PTO Preset #1 or PTO Preset #2 speed depending on which switch is pressed first.

Note: LB7/LG4 – ECM enables PTO relay with switch activation. Once on, the ECM won't turn the relay off until the switch is turned off.

Any changes in the above conditions, including depressing the brake or clutch pedals or shifting an automatic transmission in gear, will disable the Stationary Preset Mode causing the engine to return to normal base idle.

Note: L18 - Using the Accelerator to raise the engine above the Maximum Fast Idle Speed will result in disabling the PTO Stationary Preset Mode.

LB7/LG4 – Engine will be governed to PTO Max engine speed with throttle activation. Engine speed will return to pre-activation value after the pedal is released.

Engine Calibrations

The factory preset and minimum and maximum programmable speeds are shown in the table below for the **L18/LB7/LG4** engines:

PROGRAMMABLE PARAMETERS	DEFAULT SETTINGS (RPM)	MINIMUM VALUE (RPM)	MAXIMUM VALUE (RPM)	ADJUSTMENT RESOLUTION (RPM)
Maximum Fast Idle Speed <i>Accelerator Disables Fast Idle</i>	2500 – L18 2200 – LB7/LG4	1000 <i>Can't be set below base Fast Idle Speed Parameters</i>	3800 – L18 2200 – LB7/LG4	50
PTO Base Idle Speed	1200 – L18 850 – LB7 1000 – LG4	600 <i>Normal engine idle will override if higher than Fast Idle.</i>	1300 – L18 1400 – LB7/LG4 <i>Cannot be set above the maximum Fast Idle Speed Parameter</i>	50
PTO Preset #1	1200 – L18 1250 – LB7 1400 – LG4	1000 <i>Can't be set below base Fast Idle Speed Parameters</i>	Maximum Fast Idle Speed	50
PTO Preset #2	1800 – L18 1700 1700 – LB7/LG4	1000 <i>Can't be set below base Fast Idle Speed Parameters</i>	Maximum Fast Idle Speed	50
PTO Relay Engage Max Engine Speed	1000 – LB7/LB4	600	Maximum Fast Idle Speed	50

Note: The Values shown in the above chart are accurate at the time of publication but may change in time for various reasons including running changes made to the ECM, Calibrations, Tech 2 programming, software. Etc.

Caterpillar LG5 Engine

PTO Engine RPM Set Speed is factory set at 1200 rpm. PTO Engine RPM Set Speed can be programmed between 700 and 2640 rpm.

Adjusting the Factory Preset Engine Speed

The Above parameters can be reprogrammed with a GM Tech 2 Diagnostic scan tool for the L18/LB7/LG4 engines. The Tech 2 connects to the Data Link Connector under the dash. Information regarding reprogramming with the Tech 2 tool can be found in the Appendix ([Attachment 1](#)). Reprogramming the LG5 engine requires a Caterpillar electronic service tool.

Stationary Variable Mode

Description

The Stationary Variable Mode allows the user to retain the engine speed at a desired value through the use of the accelerator pedal and the SET or RES switch. The engine speed must be greater than the PTO Base Fast Idle Speed and lower than the Maximum Fast Idle Speed.

How To Operate

Prior to enabling the Stationary Variable PTO Mode, the following conditions must be met:

1. Engine must be running
2. Transmission must be in Park or Neutral
3. Vehicle speed must be less than 5 mph
4. Brake or Clutch must not be depressed.

When the above conditions are met, the operator can activate the Stationary Variable PTO by the following sequence:

1. Set the Park Brake.
2. Set the Cruise On/Off Switch to the On position – L18 only.
3. Set PTO Enable Switch to On position.
4. Depress the Accelerator pedal to obtain the desired high idle speed.
5. Press the SET button to hold engine at the desired high idle speed.

The SET and RES switches can then be used to adjust the engine speed within the Maximum and Minimum RPM values shown in the Engine calibration table ([Table A](#)). The adjustment increments are 25 RPM (L18/LG4), 100 RPM (LG7). This function with the remote switches as well as the cruise control switches.

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PTO – STATIONARY VARIABLE MODE FUNCTION CHART		
SWITCH	SET	RES
PRESSING ONCE	Engine speed will decrease by 25 RPM (L18/LG4), 100 RPM (LB7) decrements and will maintain the new engine speed value. Engine speed can be decreased down to the engine base idle speed value. If engine speed is at this value, all SET inputs will be ignored.	Engine speed will increase by 25 RPM (L18/LG4), 100 RPM (LB7) increments and will maintain the new engine speed value. Engine speed can increase up to the maximum fast idle speed value. If engine speed is at this value, all RES inputs will be ignored.
HELD	Decelerates engine down to the engine base idle speed value.	Increases engine speed up to the maximum fast idle speed value.

Note: If the Stationary Variable Mode is disabled (i.e., brake depressed), it may be re-enabled by pressing the RES switch. This will cause the engine to resume the speed it was prior to disabling.

TABLE “A” – Engine Calibrations

The factory preset and minimum and maximum programmable speeds are shown in the table below for the **L18/LB7/LG4 engines**:

PROGRAMMABLE PARAMETERS	DEFAULT SETTINGS (RPM)	MINIMUM VALUE (RPM)	MAXIMUM VALUE (RPM)	ADJUSTMENT RESOLUTION (RPM)
Maximum Fast Idle Speed <i>Accelerator Disables Fast Idle</i>	2500 – L18 2200 – LB7/LG4	1000 <i>Can't be set below base Fast Idle Speed Parameters</i>	3800 – L18 2200 – LB7/LG4	25 – L18/L64 100 – LB7
PTO Base Idle Speed	1200 – L18 850 – LB7 1000 – LG4	600 <i>Normal engine idle will override if higher than Fast Idle.</i>	1300 – L18 1400 – LB7/LG4 <i>Cannot be set above the maximum Fast Idle Speed Parameter</i>	25 – L18/L64 100 – LB7
PTO Relay Engage Max Engine Speed	1000 – LB7/LB4	600	Maximum Fast Idle Speed	50

Note: The Values shown in the above chart are accurate at the time of publication but may change in time for various reasons including running changes made to the ECM, Calibrations, Tech 2 programming, software. Etc.

Caterpillar LG5 Engine

PTO Engine RPM Set Speed is factory set at 1200 rpm. PTO Engine RPM Set Speed can be programmed between 700 and 2640 rpm. The PTO bump rate is 50 RPM.

Adjusting the Factory Preset Engine Speed

The Above parameters can be reprogrammed with a GM Tech 2 Diagnostic scan tool for the L18/LB7/LG4 engines. The Tech 2 connects to the Data Link Connector under the dash. Information regarding reprogramming with the Tech 2 tool can be found in the Appendix ([Attachment 1](#)). Reprogramming the LG5 engine requires a Caterpillar electronic service tool.

Any changes in the above conditions, including depressing the brake or clutch pedals or shifting an automatic transmission in gear, will disable the Stationary Variable Preset Mode causing the engine to return to normal base idle. Using the Accelerator to raise the engine above the Maximum Fast Idle Speed will result in disabling the PTO Stationary Variable Mode.

Mobile Variable Mode

Description

The PTO Mobile Mode allows the driver to maintain a desired engine speed (not vehicle speed) while the vehicle is moving. This feature is available with both manual and automatic transmissions. The engine speed must be greater than the PTO Base Fast Idle Speed and lower than the Maximum Fast Idle Speed. The Vehicle speed must be between the Minimum and Maximum Vehicle Speed Values.

How To Operate

To engage the PTO Mobile Variable Mode, the following conditions must be met in the following order:

1. Engine must be running
2. Transmission must be in gear.
3. Vehicle speed must be between the Minimum and Maximum Vehicle Speeds
4. Brake or Clutch must not be depressed.
5. PTO Enable Switch must be set to the On position

When the above conditions are met, the operator can activate the Mobile Variable mode by the following sequence:

7. Depress the Accelerator Pedal to obtain the desired engine speed.
8. Press the SET button to hold engine at the desired high idle speed.

The SET and RES switches can then be used to adjust the engine speed within the Maximum and Minimum RPM values shown in the Engine calibration table ([Table B](#)). The adjustment increments are 25 RPM (L18/LG4), 100 RPM (LG7).

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PTO – MOBILE VARIABLE MODE FUNCTION CHART		
SWITCH	SET	RES
PRESSING ONCE	Engine speed will decrease by 25 RPM (L18/LG4), 100 RPM (LB7) decrements and will maintain the new engine speed value. Engine speed can be decreased down to the engine base idle speed value. If engine speed is at this value, all SET inputs will be ignored. If the vehicle reaches the Minimum Vehicle Speed Value, PTO mode will be disengaged.	Engine speed will increase by 25 RPM (L18/LG4), 100 RPM (LB7) increments and will maintain the new engine speed value. Engine speed can increase up to the maximum fast idle speed value. If engine speed is at this value, all RES inputs will be ignored. If the vehicle reaches the Maximum Vehicle Speed Value, PTO mode will be disengaged.
HELD	Decelerates engine down to the engine base idle speed. If the vehicle reaches the Minimum Vehicle Speed Value, PTO mode will be disengaged.	Increases engine speed up to the maximum fast idle speed value. If the vehicle reaches the Maximum Vehicle Speed Value, PTO mode will be disengaged.

Note: If the Stationary Variable Mode is disabled (i.e., brake depressed), it may be re-enabled by pressing the RES switch. This will cause the engine to resume the speed it was prior to disabling.

TABLE “B” – Engine Calibrations

The factory preset and minimum and maximum programmable speeds are shown in the table below for the **L18/LB7/LG4 engines**:

PROGRAMMABLE PARAMETERS	DEFAULT SETTINGS (RPM)	MINIMUM VALUE (RPM)	MAXIMUM VALUE (RPM)	ADJUSTMENT RESOLUTION (RPM)
Maximum Fast Idle Speed <i>Accelerator Disables Fast Idle</i>	2500 – L18 2200 – LB7/LG4	1000 <i>Can't be set below base Fast Idle Speed Parameters</i>	3800 – L18 2200 – LB7/LG4	25 – L18/L64 100 – LB7
PTO Base Idle Speed	1200 – L18 1000 – LB7/LG4	600 <i>Normal engine idle will override if higher than Fast Idle.</i>	1300 – L18 1400 – LB7/LG4 <i>Cannot be set above the maximum Fast Idle Speed Parameter</i>	25 – L18/L64 100 – LB7
Maximum Vehicle Speed Governing MPH	20 – L18 80 – LB7 75 – LG4	3 MPH	30 – L18 80 – LB7 255 – LG4	1
PTO Relay Engage Max Engine Speed	1000 – LB7/LB4	600	Maximum Fast Idle Speed	50

Note: The Values shown in the above chart are accurate at the time of publication but may change in time for various reasons including running changes made to the ECM, Calibrations, Tech 2 programming, software. Etc.

Caterpillar LG5 Engine

PTO Engine RPM Set Speed is factory set at 1200 rpm. PTO Engine RPM Set Speed can be programmed between 700 and 2640 rpm. The PTO bump rate is 50 RPM.

Adjusting the Factory Preset Engine Speed

The Above parameters can be reprogrammed with a GM Tech 2 Diagnostic scan tool for the L18/LB7/LG4 engines. The Tech 2 connects to the Data Link Connector under the dash. Information regarding reprogramming with the Tech 2 tool can be found in the Appendix ([Attachment 1](#)). Reprogramming the LG5 engine requires a Caterpillar electronic service tool.

PTO Engine Shutdown

Description

The PTO option includes provisions for PTO engine fault shutdown. This feature allows the operator to stop the engine while in PTO mode with an aftermarket installed switch. **If the truck is not in PTO mode, pressing the switch will have no effect on engine operation.** The PTO Upfitter Connector (located on the right side of the engine compartment near the right wheel) [Component legend](#) has been provided for installation of remote PTO controls. The upfitter can access the PTO engine fault shutdown circuits through this connector. The upfitter must provide the mating connector, wiring, and remoter switches shown on the Upfitter (PTO) Connector. To install this feature see the upfitter provisions schematics. Important. **If the PTO engine shutdown feature is to be used, it must be turned on in the ECM. If this feature is not turned on it will have no effect on the engine.**

The Above parameters can be reprogrammed with a GM Tech 2 Diagnostic scan tool for the L18/LB7/LG4 engines. The Tech 2 connects to the Data Link Connector under the dash. Information regarding reprogramming with the Tech 2 tool can be found in the Appendix ([Attachment 1](#)). Reprogramming the LG5 engine requires a Caterpillar tool or see your Caterpillar Dealer.

Remote Operation

Description

The PTO Upfitter Connector (located on the right side of the engine compartment near the right wheel) [Component legend](#) has been provided for installation of remote PTO idle controls. The upfitter can access the PTO high idle circuits through this connector. The upfitter must provide the mating connector, wiring, and remoter switches shown on the Upfitter (PTO) Connector. Two momentary switched are required to duplicate the operation of the SET and RESume switches in the cab. The schematics showing the switches can be found on the Subsystem Electrical schematics under Upfitter Provisions. PTO UP switches duplicate the RES switch operation and the PTO Down switch duplicates the SET switch operation. **Please note that the PTO high idle must still be enabled from the Cruise On/Off and the PTO enable switches in the cab.**

Separating Stop from Turn Signal Lamps (Amber Turn/Hazard Lamps)

The 2003 Medium Duty C trucks have single red tail lamp assemblies that function as stop/turn/hazard lamps. Many applications call for separating the brake lamps from the Turn/Hazard function or adding additional Amber Turn / Hazard lamps.

The procedure for implementing Amber Turn /Hazard Lamps is outlined below.

1. Remove the CHMSL ISO relay ([Page B6](#)) to eliminate the brake function from the existing lights. Signaling lamps have only the turn/hazard flasher capability. There are no stop lights on the vehicle when the Relay is removed.
2. Stop lights must be added back by wiring to the 1320 (Stop) circuit in the Body Builder or Bus Connectors ([Page C1](#) & [Page C3](#)). Existing Rear Tail Lamp assemblies may be utilized by directly wiring to them. See Exterior Lighting Subsystem Electrical Schematic ([Page D237](#)).
3. Additional Turn lamps can be wired to 318 (Left Turn) and the 319 (Right Turn) circuits in the Body Builder or Bus Connector.

It is the responsibility of the upfitter to meet all FMVSS lighting requirements. The upfitter must also ensure that the combined current of any additional lighting does not exceed the circuit fusing.

Note: This procedure eliminates the Brake Lamp function at the 7-way Family 2 Trailer Connector.

APPENDIX

Reprogramming the PCM / Using the Tech 2 Scan Tool – ([Attachment 1](#))

Illustrations

Location Illustrations

IP Switch Panel ([Figure 1](#))

PTO Enable Switch – See Component Locations – ([Figure 3](#))

Upfitter PTO Connector is shown in the connector and pin-out illustrations

Connector Drawings

Upfitter Provisions Connector are shown in the connector and pin-out illustrations

Circuit Schematic References (*Circuit Schematics are shown in the Subsystem Electrical Schematic portion of the Body Builders Manual*)

Upfitter Provision Connector – L18/LB7/LG4

Upfitter Provision Connector – LG5

L18 Gas Engine

Duramax 6600 and 7.8L Diesel Engines

Caterpillar 7.2L Diesel Engine

PTO Operation w/Duramax 7.4L Diesel Engine

ATTACHMENT 1

REPROGRAMMING THE PCM/ECM FOR FAST IDLE/PTO USING THE TECH 2 SCAN TOOL

The Tech 2 scan tool MUST be used to enable the Fast Idle and PTO options and adjust the factory preset parameters to desired settings. The Tech 2 menu driven device is a hand held scan tool that plugs into the datalink connector located underneath the dash near the driver's seat. Once the Tech 2 is connected, the following chart will guide the user.

STEP	CURRENT MENU	SELECT
1	MAIN	FO: DIAGNOSTICS
2	VEHICLE IDENTIFICATION	YEAR OF VEHICLE
3	VEHICLE IDENTIFICATION	MEDIUM DUTY TRUCK
4	SYSTEM SELECTION	FO: POWERTRAIN
5	VEHICLE IDENTIFICATION	LP4 OR L21
6	VEHICLE IDENTIFICATION	AUTOMATIC OR MANUAL
7	POWERTRAIN	F2: SPECIAL FUNCTIONS
8	SPECIAL FUNCTIONS	F3: PTO OPTIONS
9	CURRENT PTO SETTINGS	CHANGE OPTIONS
10	PTO OPTIONS	SEE PAGE 23

TO ADJUST THE MODE OF OPERATION:

The PTO OPTIONS MENU will appear with the selections:

FO: FAST IDLE

FI: STATIONARY PRESET FAST IDLE

F2: STATIONARY VARIABLE FAST IDLE

F3: MOBILE VARIABLE FAST IDLE

Once the mode of operation is selected the **CURRENT PTO SETTINGS** menu will appear with the adjustable parameters for the current mode.

This screen allows the user to increase or decrease engine RPM values using the **INCREASE** and **DECREASE** buttons. If the Engine Fault Shutdown feature is selected, the **YES** or **NO** buttons will determine if this feature is enabled.

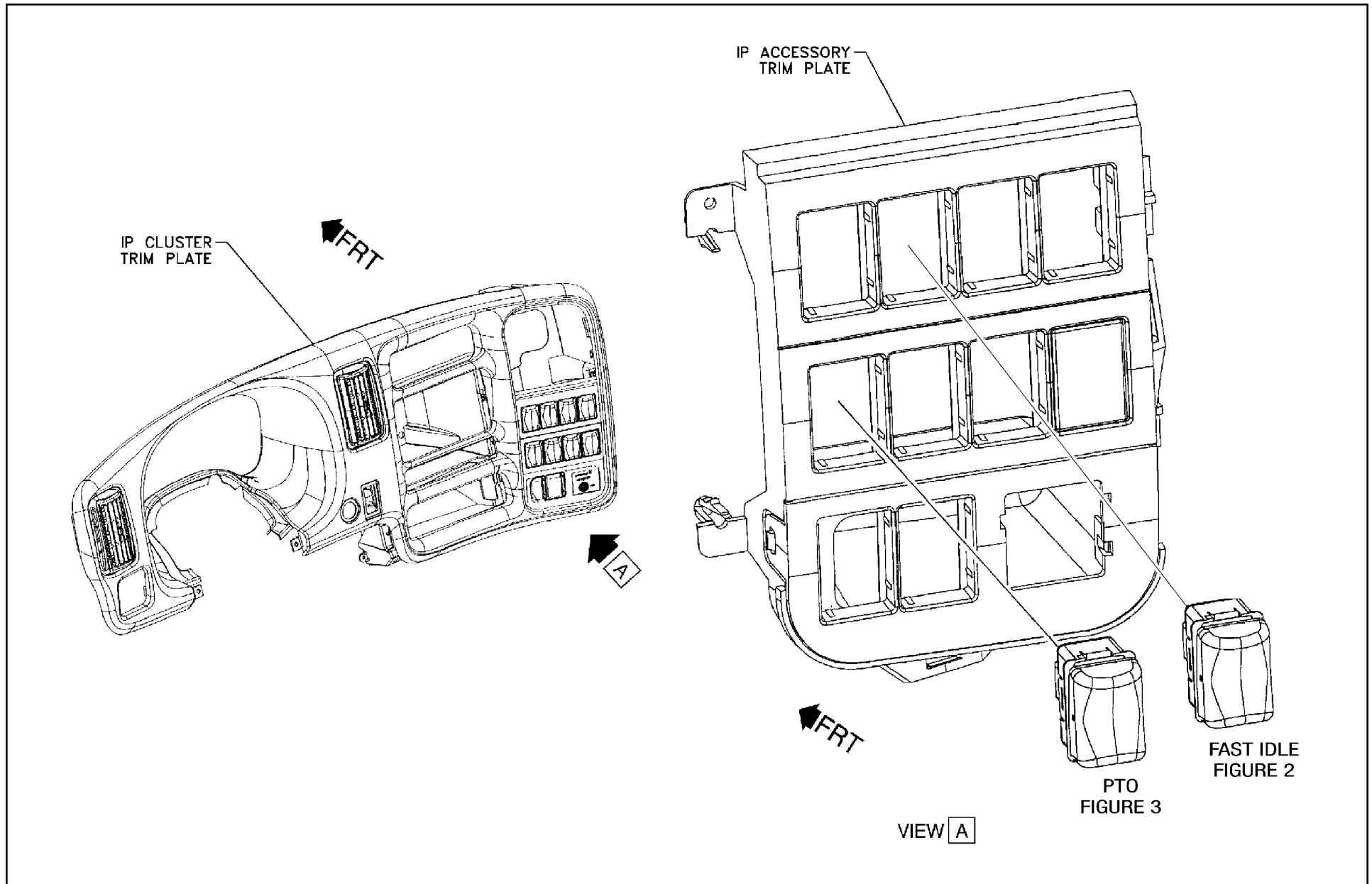
After all the settings are adjusted, the user will press the **REPROGRAM** button and the **CURRENT PTO SETTINGS** menu will appear with the changes. The ignition must be turned off for ten seconds to ensure that the program values are stored in the PCM.

SERVICE CONSIDERATIONS

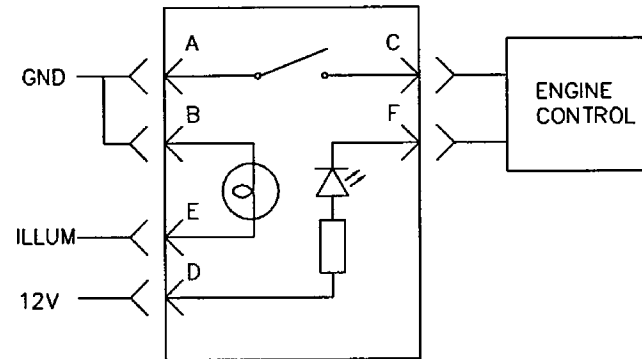
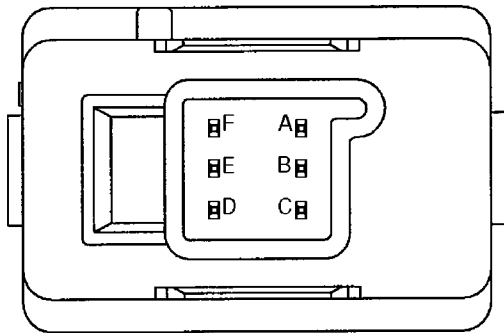
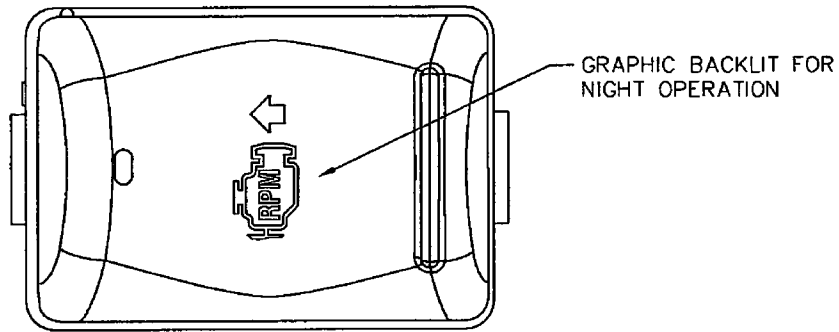
IMPORTANT: Please be aware that UF3 and PTO high idle settings must be reprogrammed in the event that the PCM is replaced. It may be advisable to provide the PCM settings information to the customer in case the PCM requires servicing during some point in the life of the vehicle.

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IP, Switch Trim Plate, Fast Idle and PTO Switch Location (Figure 1)

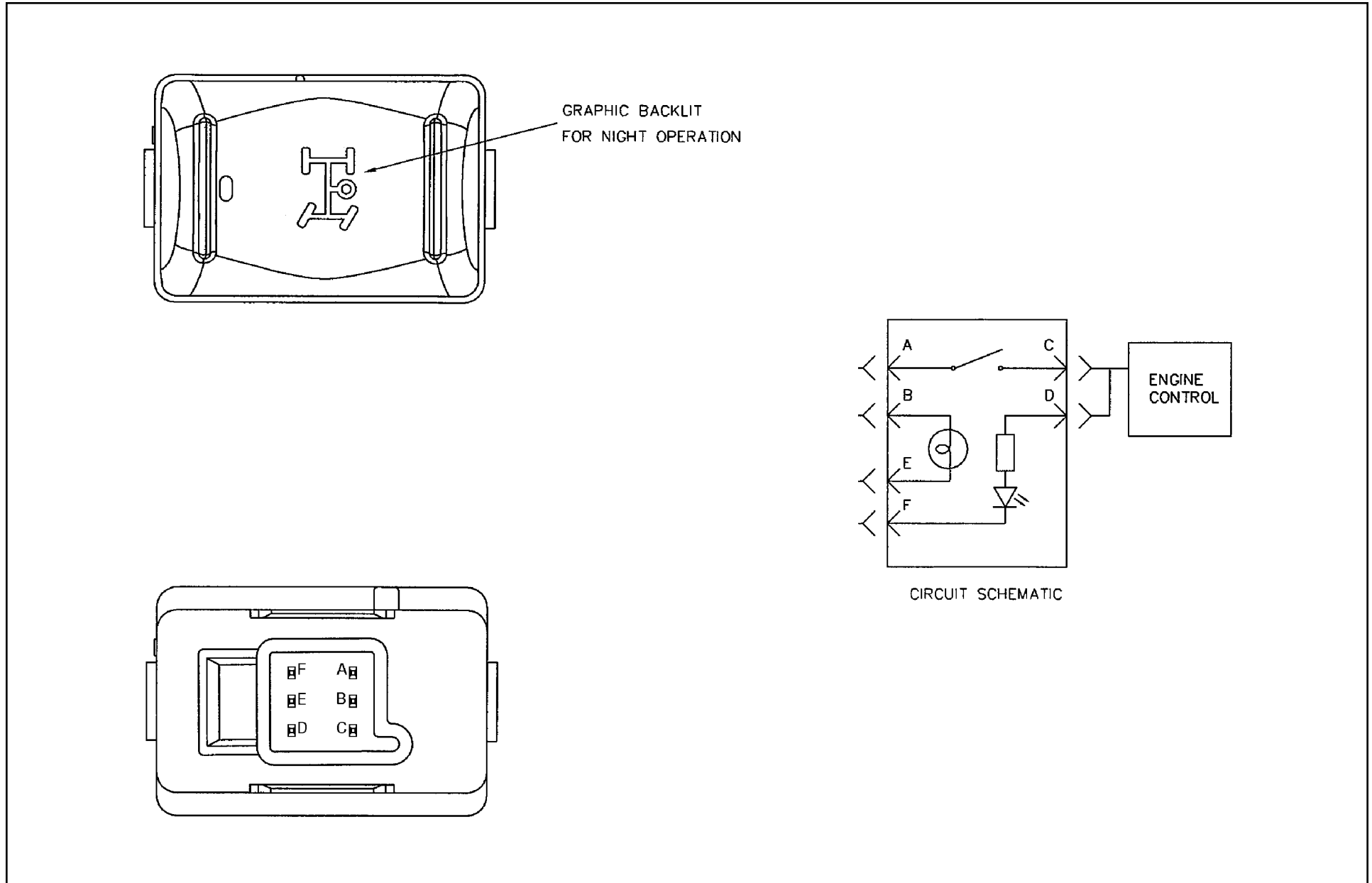


Switch – Fast Idle (Figure 2)



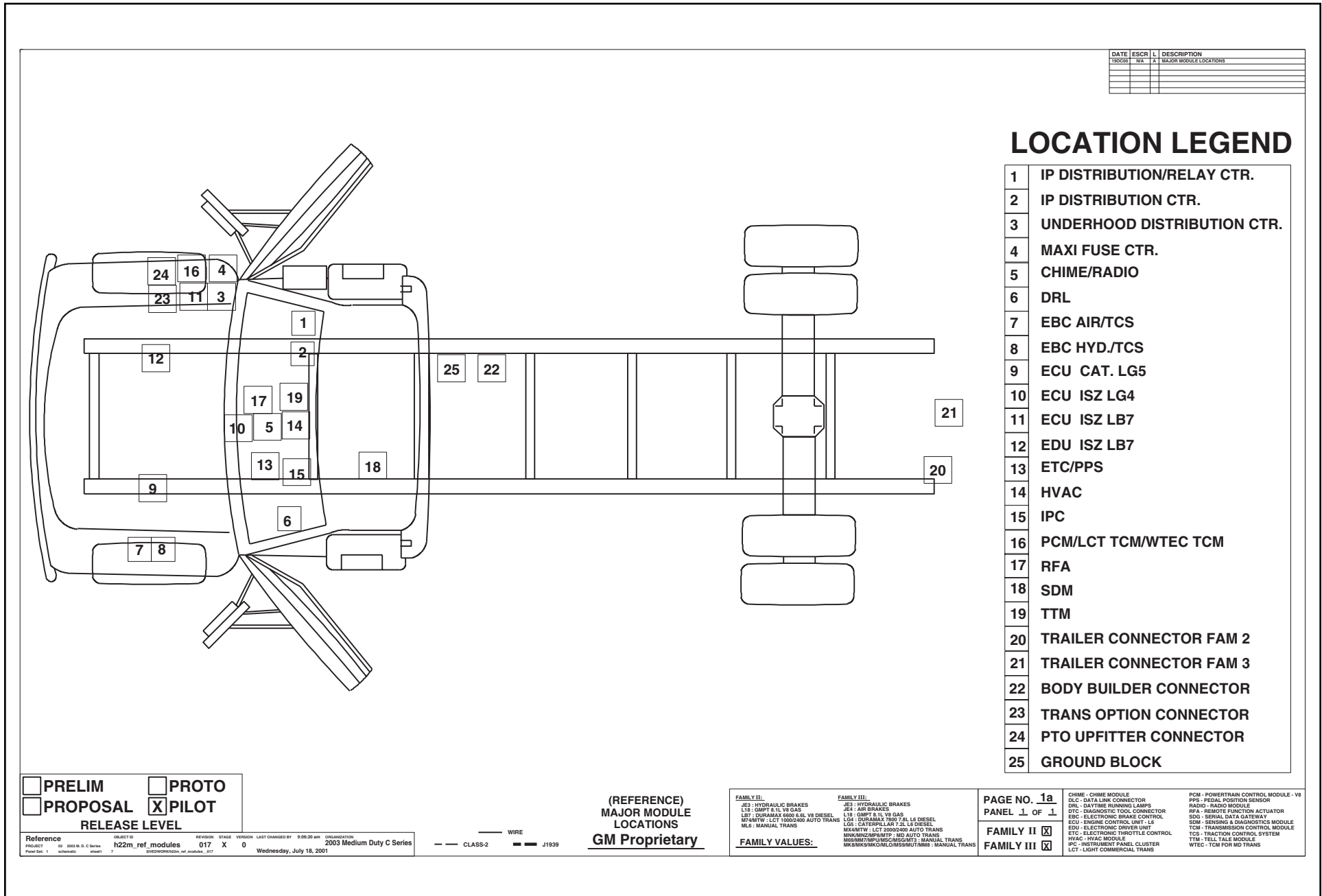
CIRCUIT SCHEMATIC

PTO Enable Switch (Figure 3)



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Electrical Component Legend



DATE	ESCR	L	DESCRIPTION
TRC030	NA	A	MAJOR MODULE LOCATIONS

LOCATION LEGEND

- 1 IP DISTRIBUTION/RELAY CTR.
- 2 IP DISTRIBUTION CTR.
- 3 UNDERHOOD DISTRIBUTION CTR.
- 4 MAXI FUSE CTR.
- 5 CHIME/RADIO
- 6 DRL
- 7 EBC AIR/TCS
- 8 EBC HYD./TCS
- 9 ECU CAT. LG5
- 10 ECU ISZ LG4
- 11 ECU ISZ LB7
- 12 EDU ISZ LB7
- 13 ETC/PPS
- 14 HVAC
- 15 IPC
- 16 PCM/LCT TCM/WTEC TCM
- 17 RFA
- 18 SDM
- 19 TTM
- 20 TRAILER CONNECTOR FAM 2
- 21 TRAILER CONNECTOR FAM 3
- 22 BODY BUILDER CONNECTOR
- 23 TRANS OPTION CONNECTOR
- 24 PTO UPFITTER CONNECTOR
- 25 GROUND BLOCK

PRELIM PROTO
 PROPOSAL PILOT
RELEASE LEVEL

(REFERENCE)
MAJOR MODULE
LOCATIONS
GM Proprietary

FAMILY II:
 JES - HYDRAULIC BRAKES
 LTB - GMPT & TL V8 GAS
 LBT - DURAMAX 6.6L V8 DIESEL
 MFAINTW - LCT 10002400 AUTO TRANS
 MLS - MANUAL TRANS

FAMILY III:
 JES - HYDRAULIC BRAKES
 JEA - AIR BRAKES
 LTB - GMPT & TL V8 GAS
 LBT - DURAMAX 7.80L L6 DIESEL
 LGS - CATAPILLAR 7.3L L6 DIESEL
 MKAINTW - LCT 20002400 AUTO TRANS
 MKNORMINP/SHIFTF - MID AUTO TRANS
 MDSM/M7MP/UM/ECMS/GMTS - MANUAL TRANS
 MDSM/M7MP/UM/ECMS/UM/SHIFTF - MANUAL TRANS

FAMILY VALUES:

PAGE NO. 1a
 PANEL 1 OF 1
 FAMILY II
 FAMILY III

CHIME - CHIME MODULE
 DLC - DATA LINK CONNECTOR
 DRL - DAY TIME RUNNING LAMPS
 DTC - DIAGNOSTIC TOOL CONNECTOR
 EBC - ELECTRONIC BRAKE CONTROL
 ECU - ENGINE CONTROL UNIT - L6
 EDU - ELECTRONIC DRIVER UNIT
 ETC - ELECTRONIC TRIP/TLE CONTROL
 HVAC - HVAC MODULE
 IPC - INSTRUMENT PANEL CLUSTER
 LCT - LIGHT COMMERCIAL TRANS

PCM - POWERTRAIN CONTROL MODULE - V8
 PPS - PEDAL POSITION SENSOR
 RADIO - RADIO MODULE
 RFA - REMOTE FUNCTION ACTUATOR
 SDG - SERIAL DATA GATEWAY
 SOM - SENSING & DIAGNOSTICS MODULE
 TCM - TRANSMISSION CONTROL MODULE
 TCS - TRACTION CONTROL SYSTEM
 TTM - TELL TALE MODULE
 WTEC - TCM FOR MD TRANS

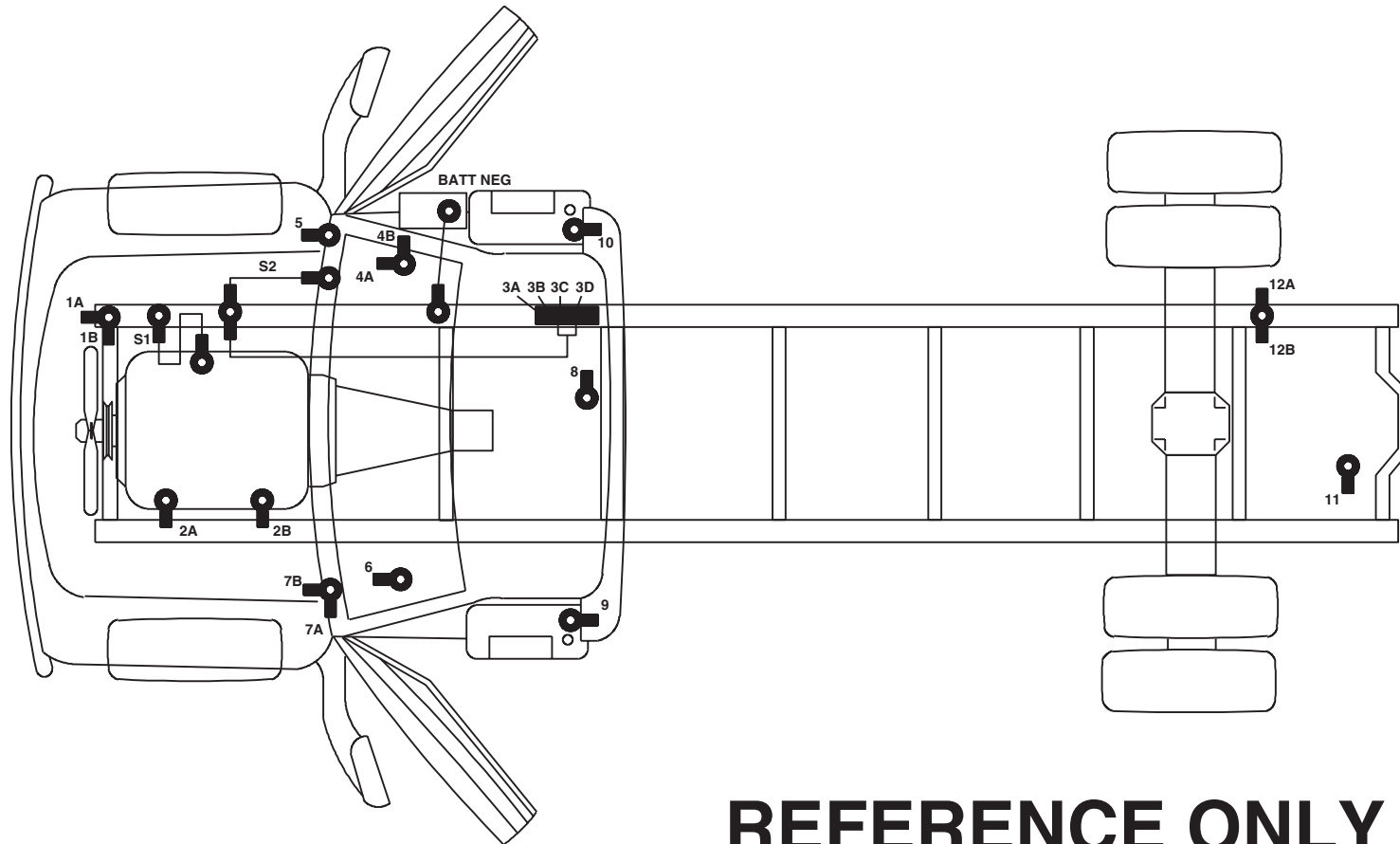
Reference: 02 2003 M. D. C Series h22m_ref_modules 017 X 0
 Project: 02 2003 M. D. C Series h22m_ref_modules 017 X 0
 Schematic: etha11 7 0
 Wednesday, July 18, 2001

WIRE
 CLASS-2
 J1939

Ground Zones

03 560 000	JG	PILOT B - INITIAL CREATION	21SE00	001
03 560 000	JG	Stacked Gnd Block Conn with S2	21SE00	001

Ground Zones



REFERENCE ONLY

Ground Zones
2003 M. D. C Series 03 X
Panel Set: 1 schematic sheet1

OBJECT ID
h22009a

SIVEDWORK/h22009a_003

REVISION STAGE VERSION
003 Pilot B

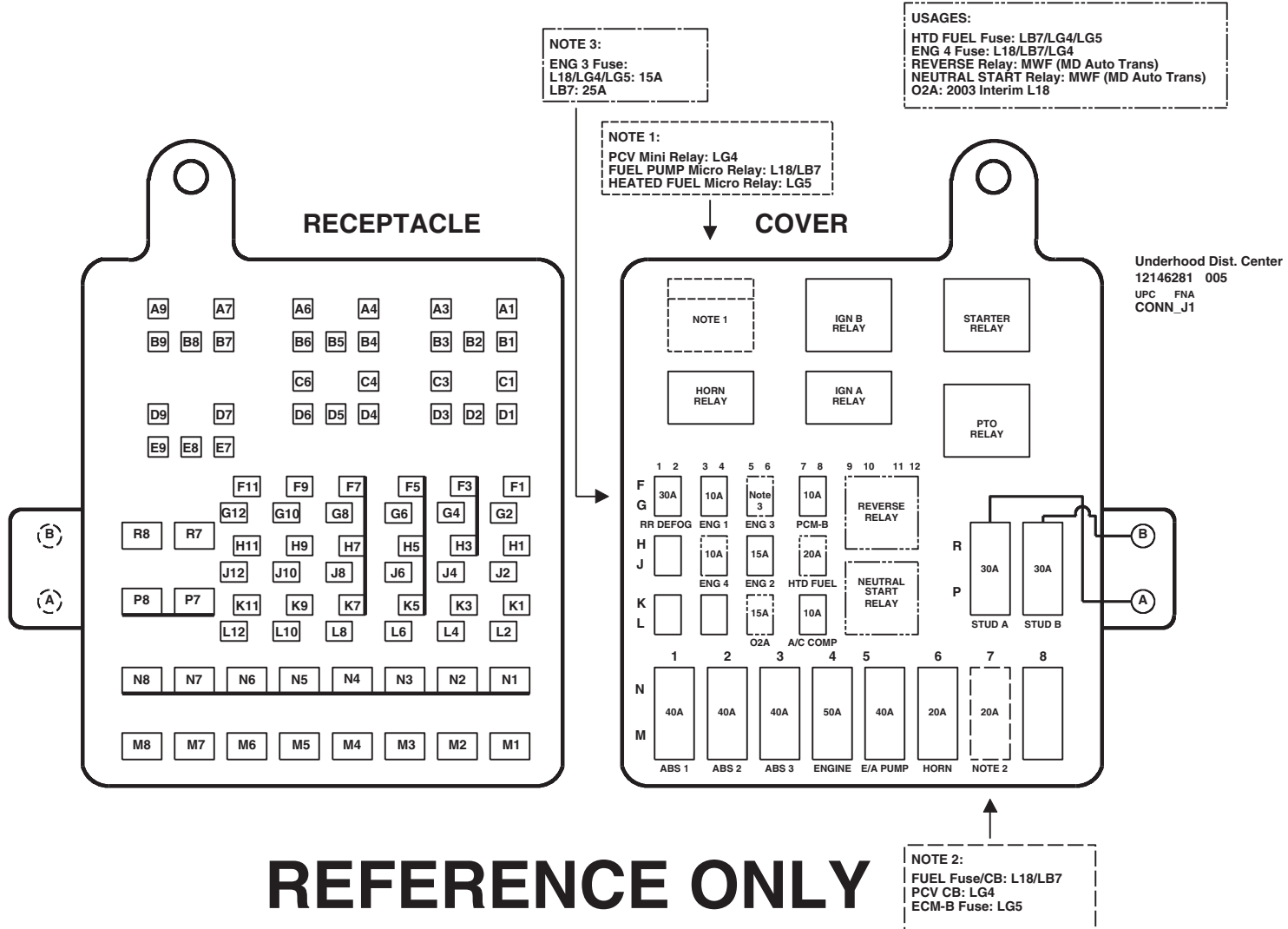
LAST CHANGED BY
Thursday, September 21, 2000

4:14:11 pm

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 1

Underhood Distribution Center

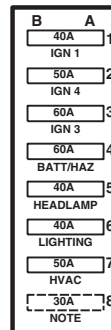
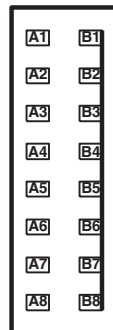
Underhood Distribution Center



Maxi Fuse Center

Maxi Fuse Center

RECEPTACLE COVER



Maxi Fuse Center
12110415 002
UPC, FNA
CONN_J1

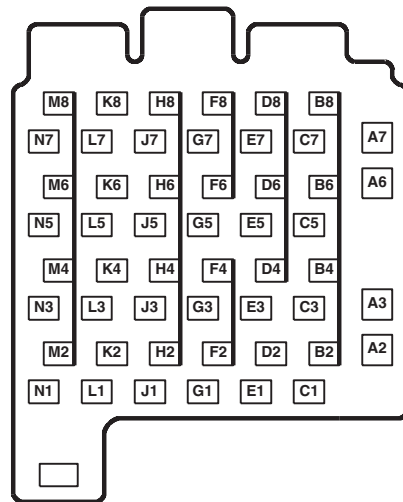
NOTE:
ELECTRIC BRAKE: FAM2
BRAKE LAMP: FAM3

REFERENCE ONLY

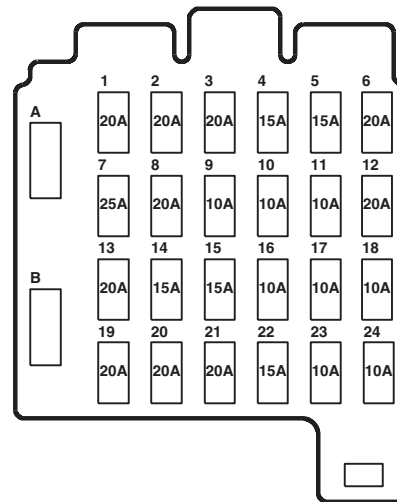
IP Distribution Center

IP Distribution Center

TERMINAL



COMPONENT



NUMBER	CIRCUIT BREAKER
1	STOP
2	CHMSL
3	PARK
4	PCM-I
5	AUX WIRE RLY
6	HTR/AC
7	HAZARD
8	PWR POST
9	COURTESY
10	GAUGES
11	START
12	AXLE/4WD
13	TLR TRN/HAZ
14	RADIO/CHIME
15	DRL
16	SIR
17	ILLUM
18	BRAKE
19	PWR ACCY
20	IGN 4
21	MARKER LAMP
22	TURN/BACKUP
23	TRANS
24	CHASSIS
A	SPARE
B	SPARE

IP Electrical Center
12110746 001
UPC FNA
CONN_J1

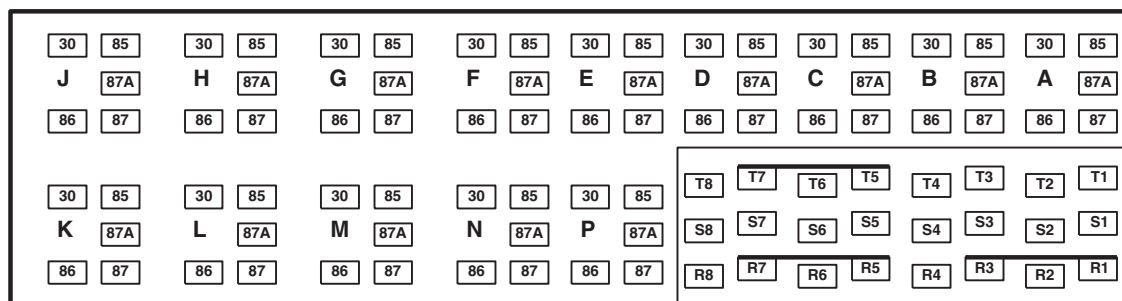
REFERENCE ONLY

IP Distribution/Relay Center

IP Distribution/Relay Center

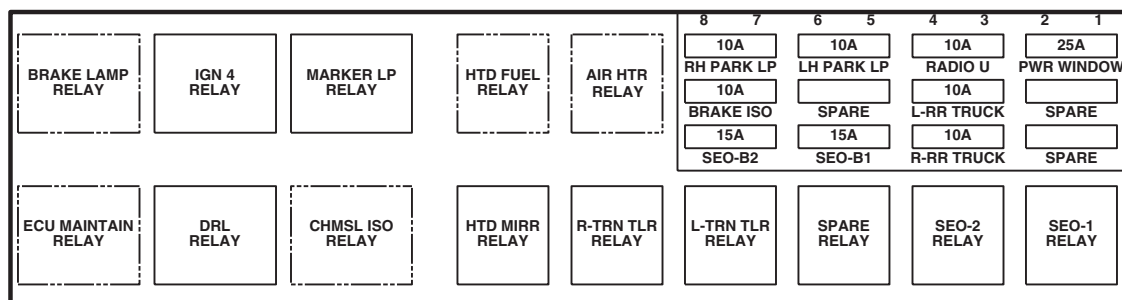
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03 560 803	JG	Underhood Center Label Change	11OC00	001
03 560 839	JG	Headlamp Fuse Rating Change from 50A to 40A	20DE00	001
03 560 854	JG	Add Air Heater Relay	17JA01	001
03 560 000	JG	Updated UH Center	07MR01	001
03 560 981	JG	Family 2 School Bus	03AP01	001
03 560 1056	LR	Remove RPO LC8	17JL01	001
03 560 1118	JG	Add SEO Content	16OC01	001
03 560 899	JG	Merged 2003 & 2003i	19DE01	001

RECEPTACLE



IP Relay Center
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UPC FNA

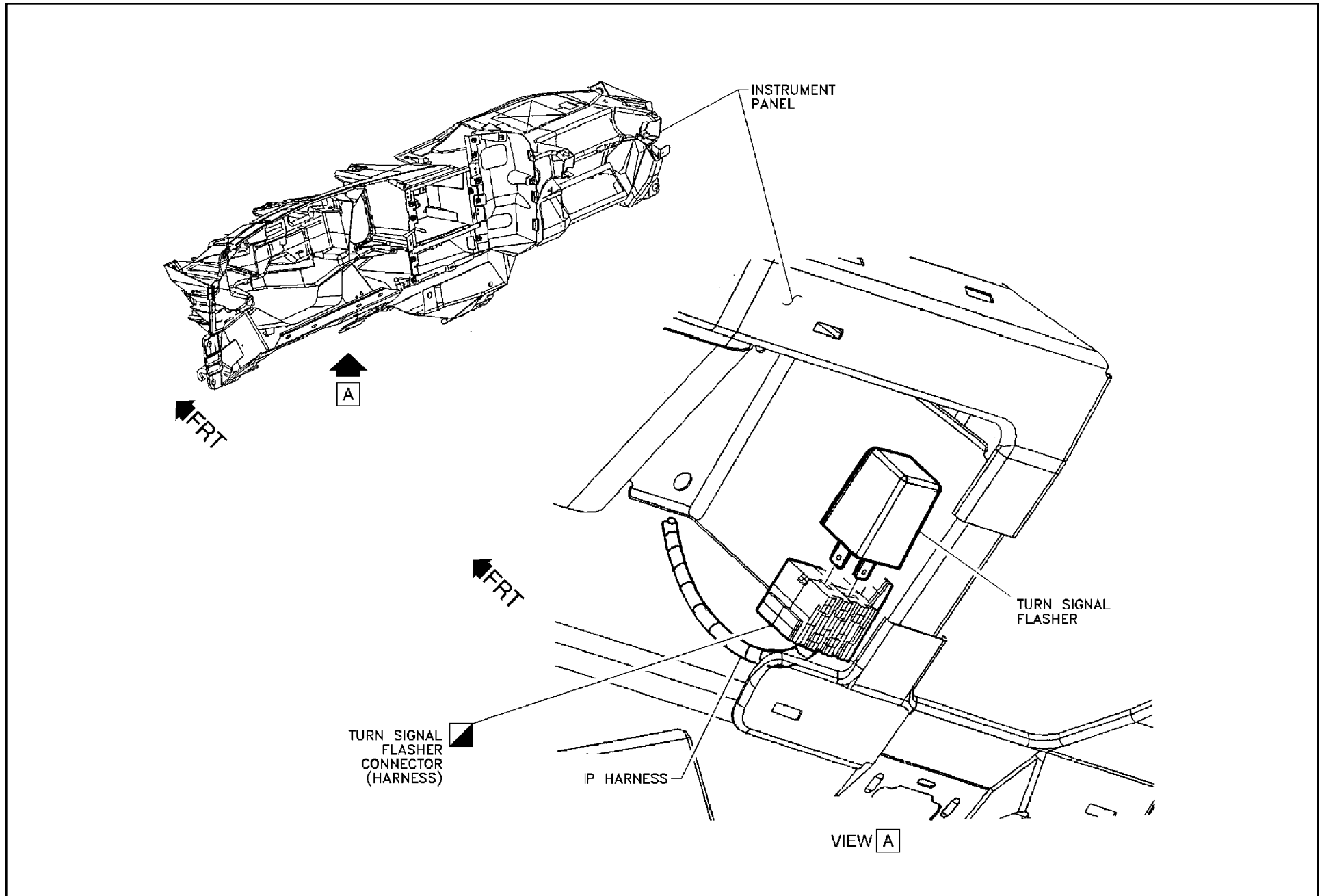
COVER



USAGES:
 BRAKE LAMP RLY: RQ3/U86 (Family 3 Tractor/Trailer Wiring)
 HEATED FUEL RELAY: LB7/LG4
 ECU MAINTAIN RELAY: LG4
 AIR HEATER RELAY: LG4
 CHMSL ISO RELAY: -B3D (School Bus)

REFERENCE ONLY

Turn Signal Flasher

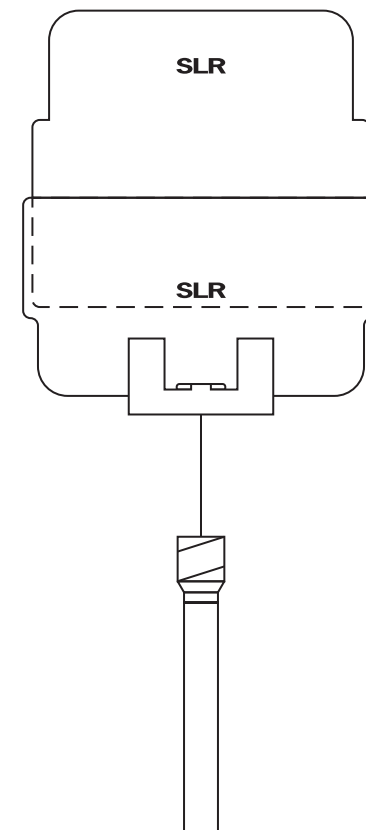
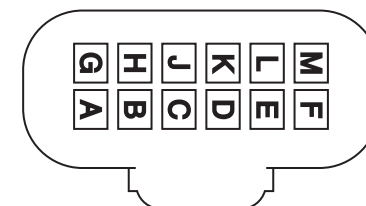


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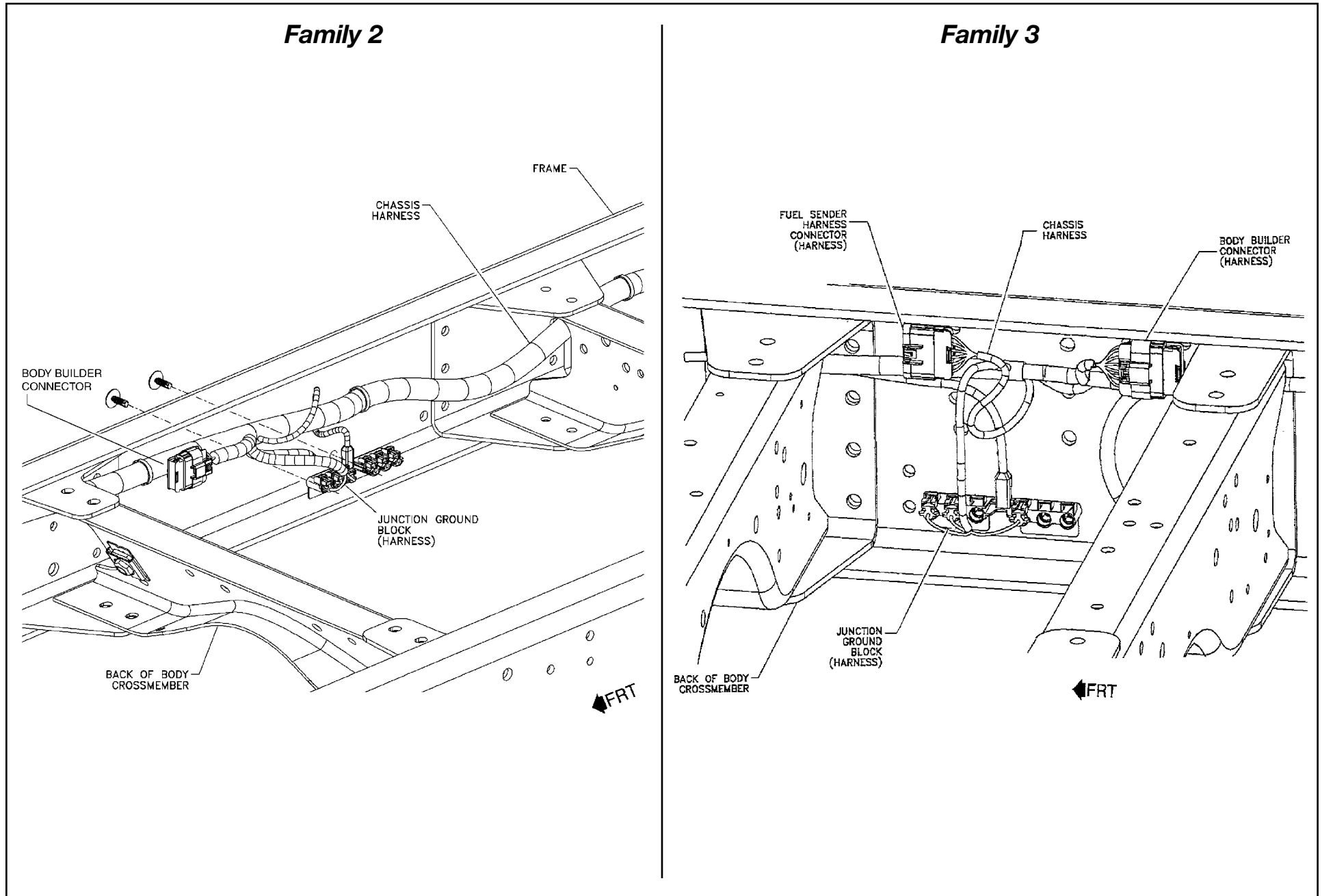
12-Way Body Builder Connector

		TRUCK SIDE	BODY BUILDER SIDE
Connector		Packard 280 Series	
Typical connector		15326910 (F)	15326915 (M)
Typical terminal		15304719	15304731
Typical cable seal		12191221	12191232
Pin	Wire		Function
	Ckt #	Color	
A	1827	YEL/BLK	128,000 Pulses/Mile*
B	2609	BRN/WHT	Right Park Lamp
C	318	YEL	Lt Stop/Turn (Fam2), Lt Turn (Fam3)
D	2509	BRN	Lt Park Lamp
E	1320	BLU LT	Stop
F	641	BRN	IGN 3 15A
G	21	GRN DK	Marker Lamp 20A
H	350	BLK	GND Zone 3B
J	TBD	—	Spare
K	319	GRN DK	Rt Stop/Turn (Fam2), Rt Turn (Fam3)
L	24	GRN LT	Back Up
M	TBD	—	Spare

* 4000 ppm LG5 only



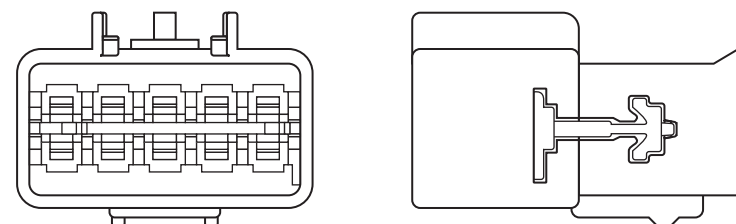
Body Builder Connector Location



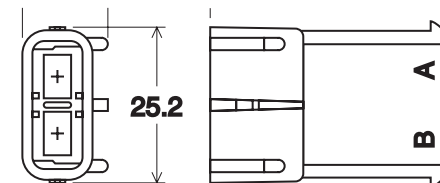
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

10-Way Bus Connector (top) / 2-Way Bus Connector (bottom) – Family 2

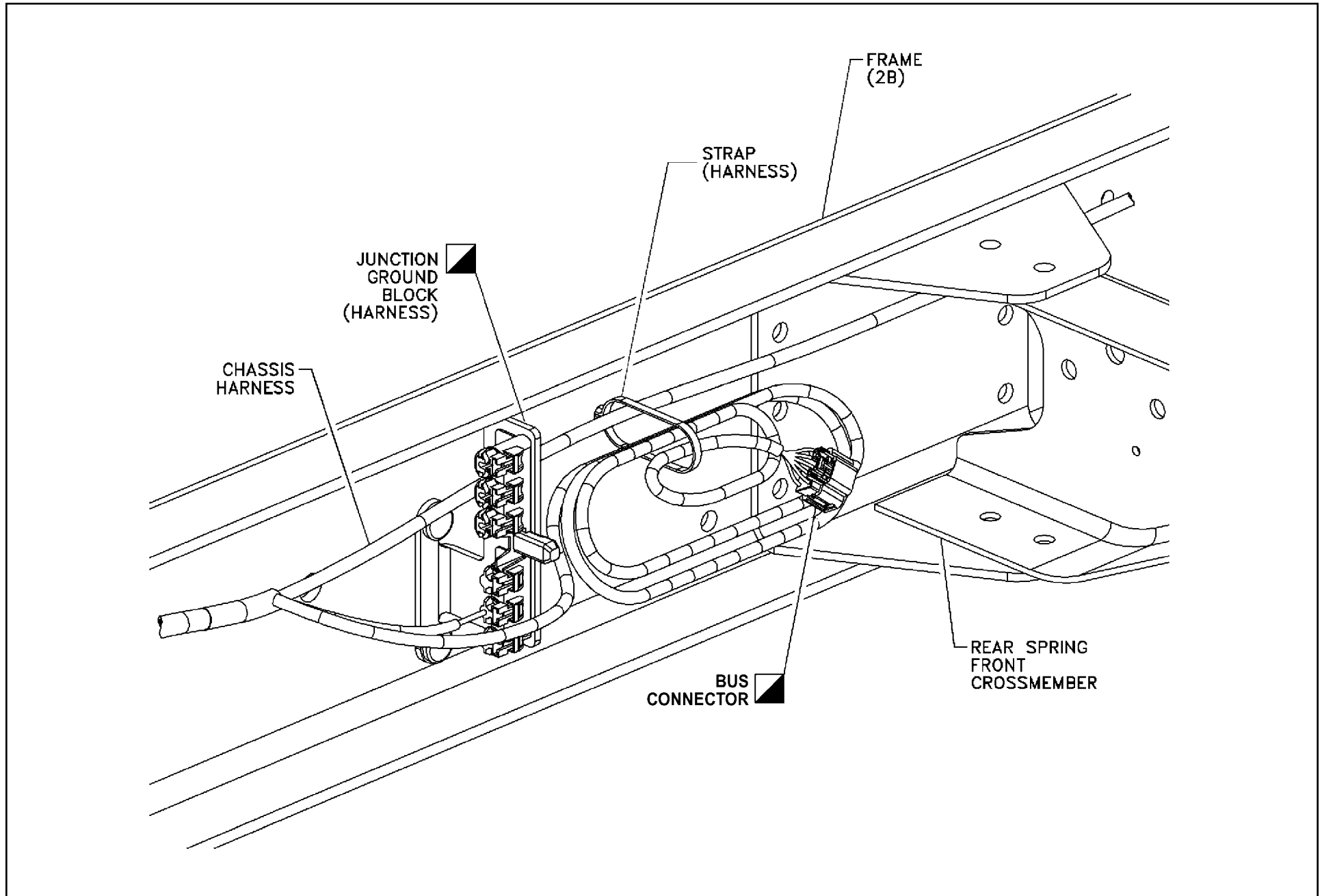
		TRUCK SIDE	BODY BUILDER SIDE
Connector		Packard GT 280 Series	
Typical connector		15326935 (M)	15326931 (F)
Typical terminal		15304722	15304710
Pin	Wire		Function
	Ckt #	Color	
A	24	GRN LT	Back Up
B	2609	BRN/WHT	Right Park
C	318	YEL	Left Turn
D	2509	BRN	Left Park
E	1320	BLU LT	Stop
F	—	—	Spare
G	—	—	Spare
H	350	BLK	Gnd Zone 3B
J	—	—	Spare
K	319	GRN DK	Right Turn



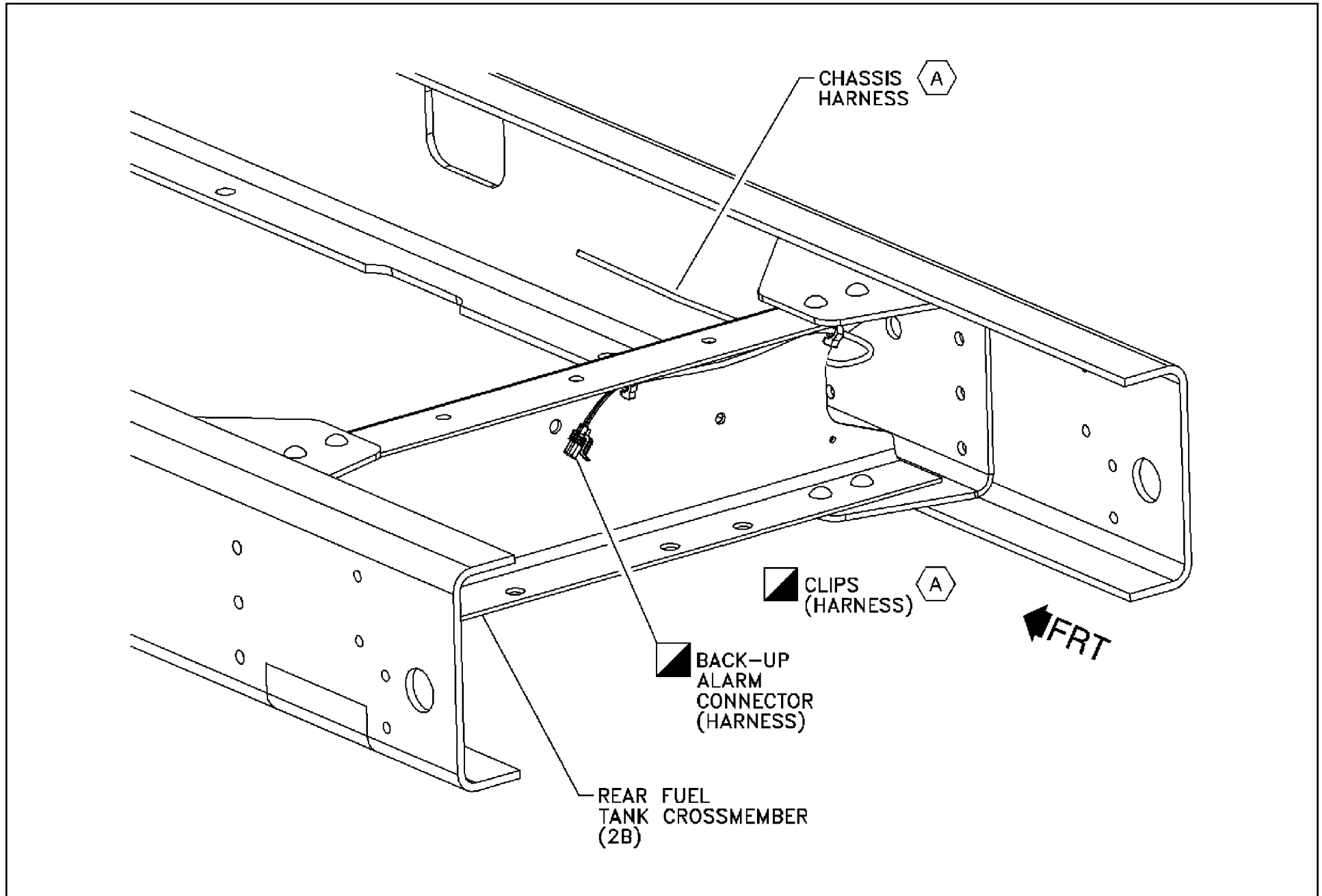
		TRUCK SIDE	BODY BUILDER SIDE
Connector		Packard MP 280 Series	
Typical connector		15300027 (F)	15300002
Typical terminal		12129493	12129497
Typical cable seal		15324980	15324980
Pin	Wire		Function
	Ckt #	Color	
A	24	GRN LT	Back Up
B	350	BLK	Gnd Zone B



Bus Connector Location – Family 2



Bus Connector Location – Family 2

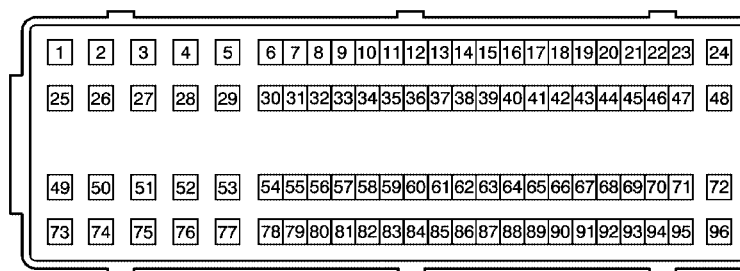


2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

(LG4 '04i) ECE Engine Control Module (ECM) – Connector C-1

Connector	96-Way F Bosch (BK)
Typical connector	1928404781 (F)
Color	BLK
Typical Terminal	---
Typical Cable Seal	---

Pin	Wire Color	Circuit No.	Function
1	BK	CU15	Ground
2	BK	CU09	Ground
3	BK	CU10	Ground
4	BK	CU13	Ground
5	BK	CU14	Ground
6	—	—	Not Used
7	BN	CF13	Low Reference
8	VT	CF16	Low Reference
9	RD	CF19	Low Reference
10	BU/YE	DF24	Low Reference
11	—	—	Not Used
12	BK/YE	CF96	Low Reference
13	—	—	Not Used
14	GY	OA19	Ground (Allison® LCT)
14	BK/YE	DF41	Drain Wire (M/T)
15-16	—	—	Not Used
17	BU/WH	CF36	CAN High
18	BN	CF37	CAN Low
19	—	—	Not Used
20	GN	CF34	ECM Class 2 Serial Data A
21	—	—	Not Used
22	PK	DF55	Ignition 2 Voltage
23	PK	CF10	Ignition 1 Voltage
24-25	—	—	Not Used
26	BK	CU11	Ground
27	BK	CU12	Ground
28	WH	CF22	Engine Speed Signal
29-30	—	—	Not Used



(continued on next page)

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(LG4 '04i) ECE Engine Control Module (ECM) – Connector C-1 (continued)

Pin	Wire Color	Circuit No.	Function
31	BU	CF12	APP Sensor 1 Signal
32	L-GN	CF15	APP Sensor 2 Signal
33	GN	CF18	APP Sensor 3 Signal
34	BU/RD	DF22	PTO Accel Switch Signal
35-36	—	—	Not Used
37	VT	CF97	Fuel Level Signal – Primary
38	BU	CF99	Fuel Level Signal – Secondary
39	WH	OA16	VSS High Signal (Allison® LCT)
39	WH	DF38	VSS High Signal (M/T)
40	BK	DF39	VSS Low Signal (M/T)
41	RD/BK	DF59	Generator Field Duty Cycle Signal
42	—	—	Not Used
43	RD/BU	DF56	Shift – Signal
44-45	—	—	Not Used
46	RD/BK	DF50	Cruise Control On Switch Signal
47	RD	DF48	Cruise Control Res/Acc Switch Signal
48	BU	DF47	Cruise Control Set/Coast Switch Signal
49	BN	CF04	Ignition 1 Voltage
50	BN	CF05	Ignition 1 Voltage
51	BU/OG	CF08	Battery Positive Voltage
52	WH	CF06	ECM Power Enable Signal
53	WH	CF07	ECM Power Enable Signal
54	WH/BK	CF11	5-Volt Reference
55	BK/WH	CF14	5-Volt Reference
56	YE/BK	CF17	5-Volt Reference
57	—	—	Not Used
58	BU/WH	DF22	5-Volt Reference
59-60	—	—	Not Used
61	RD	DF60	Charge Indicator Control
62	WH	DF43	Stop Lamp Switch Signal (JE3)
62	WH	DF46	Stop Lamp Switch Signal (JE4)

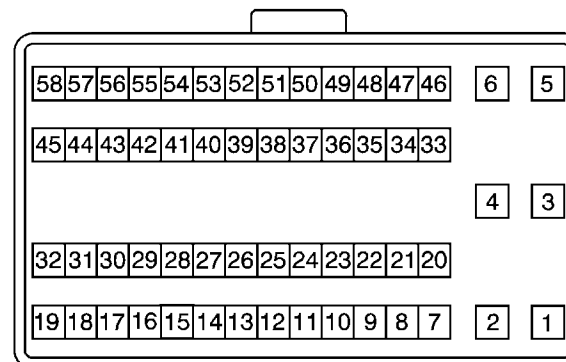
Pin	Wire Color	Circuit No.	Function
63	RD/BU	DF45	Stop Lamp Switch Signal
64	BK/OG	CF29	CPP Switch Signal
65	—	—	Not Used
66	RD/BU	DF12	Diagnostic Clear Switch Signal
67	WH	CF32	Exhaust Brake Request Switch
68	GN	CF24	High Idle Switch Signal
69	—	—	Not Used
70	L-GN	DF61	Low Coolant Level Indicator Control
71	L-GN	BA03	Reverse Switch Signal
72-73	—	—	Not Used
74	YE	HB04	Glow Plug Relay Control
75	VT	WB05	PTO Control
76	YE	DF58	Starter Relay Coil Control
77	VT	DF44	Exhaust Brake Relay Control
78	RD	CF26	High Idle Indicator Control
79	BU	CF21	Wait to Start Indicator Control
80	BK/WH	CF20	MIL Control
81	GN WH	CF23	Vehicle Speed Signal
82	WH/BK	DF57	Vehicle Speed Signal
83-85	—	—	Not Used
86	WH/BK	DF01	Brake/Clutch Switch Override Signal
87	—	—	Not Used
88	RD/BK	DF02	PTO Disable Switch – Signal – Cab
89	BK/WH	DF04	PTO Set Switch Signal A
90	GN/WH	DF03	PTO Set Switch Signal B
91	BK/YE	DF05	PTO Set Switch Signal – Remote
92	WH/RD	DF06	PTO Resume Switch Signal – Remote
93	L-GN	WB09	PTO On Switch – Signal
94	L-GN	WB12	PTO Engine Kill Signal
95	BU/RD	WB11	PTO Status Signal
96	YE	CF35	PNP/Clutch Start Switch Signal

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

(LG4 '04i) ECE Engine Control Module (ECM) – Connector C-2

Connector	58-Way F Bosch (BK)
Typical connector	1928404752 (F)
Color	BLK
Typical Terminal	---
Typical Cable Seal	---
Individual Cable Seal	---

Pin	Wire Color	Circuit No.	Function
1	BK	B1	Turbocharger Vane Position Control Solenoid Valve High Control
2	—	—	Not Used
3	WH	B3	Fuel Injector Supply Voltage 1
4	RD	B4	Fuel Injector Supply Voltage 2
5	WH	B5	Fuel Injector Supply Voltage 1
6	RD	B6	Fuel Injector Supply Voltage 2
7	BK/WH	B7	EGR Motor U Supply Voltage
8	GN	B8	EGR Motor V Supply Voltage
9	RD/YE	B9	EGR Motor W Supply Voltage
10	—	—	Not Used
11	BK	B11	Not Used
12	BK	B12A	Low Reference
13	BK	B13A	Low Reference
14	BK/YE	B14	Low Reference
15	GY	B15A	Low Reference
16	BK	B16A	Low Reference
17	WH/BK	B17	Ground
18	BK	B18A	Drain Wire
19	GY	B19	Drain Wire
20	RD	B20	SCV Low Signal
21	RD	B21	SCV Low Signal
22	—	—	Not Used
23	RD	B23	Not Used
24	WH	B24	MAP Sensor Signal



(continued on next page)

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE

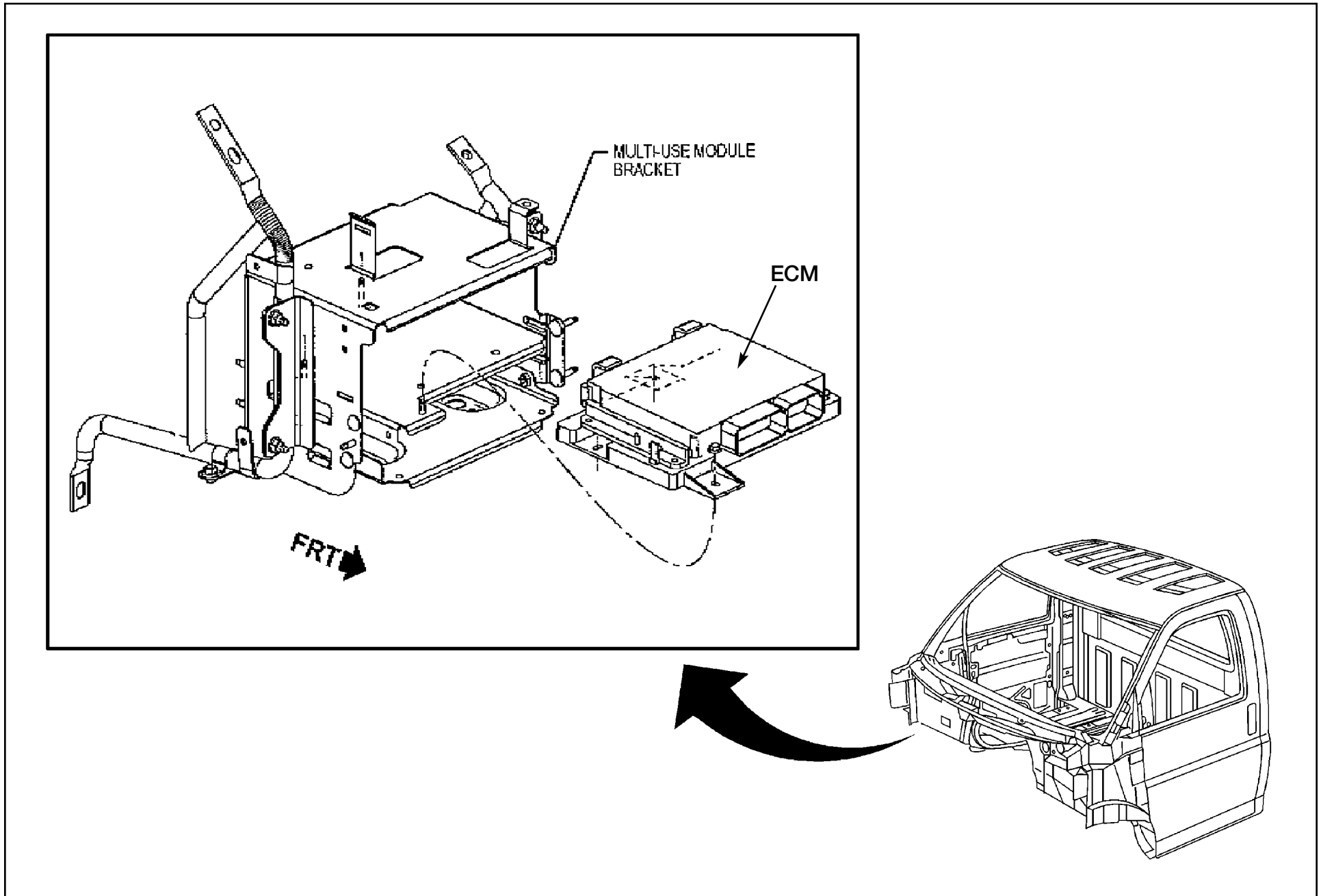
C-9

(LG4 '04i) ECE Engine Control Module (ECM) – Connector C-2 (continued)

Pin	Wire Color	Circuit No.	Function
25	WH	B25A	Fuel Pressure Sensor Signal
26	WH	B26	Fuel Pressure Sensor Signal
27	GY	B27	Oil Pressure Sensor Signal
28	WH	B28	MAF Sensor Signal
29	WH	B29	Turbocharger Vane Position Signal
30	WH	B30	CMP Sensor Low
31	WH	B31	CKP Sensor High
32	BK	B32	CKP Sensor Low
33	WH	B33	SCV High Signal
34	WH	B34	SCV High Signal
35	BU/WH	B35	ECT Sensor Signal
36	—	—	Not Used
37	GN/WH	B37	IAT Sensor Signal
38	BU/RD	B38	EGR Motor Position U Signal
39	WH/RD	B39	EGR Motor Position V Signal
40	YE/RD	B40	EGR Motor Position W Signal

Pin	Wire Color	Circuit No.	Function
41	YE	B41	Fuel Temperature Sensor Signal
42	RD	B42	Low Reference
43	RD	B43	Fuel Injector 6 Control
44	BK	B44	Fuel Injector 4 Control
45	BK/RD	B45	Fuel Injector 5 Control
46	RD	B46	5-Volt Reference
47	RD	B47	5-Volt Reference
48	WH	B48	5-Volt Reference
49	WH	B49	5-Volt Reference
50	RD	B50	5-Volt Reference
51	RD	B51	5-Volt Reference
52	GN	B52	Oil Level Switch Signal
53-55	—	—	Not Used
56	WH	B56	Fuel Injector 3 Control
57	BU	B57	Fuel Injector 2 Control
58	YE	B58	Fuel Injector 1 Control

(LG4 '04i) ECE Engine Control Module (ECM) Location

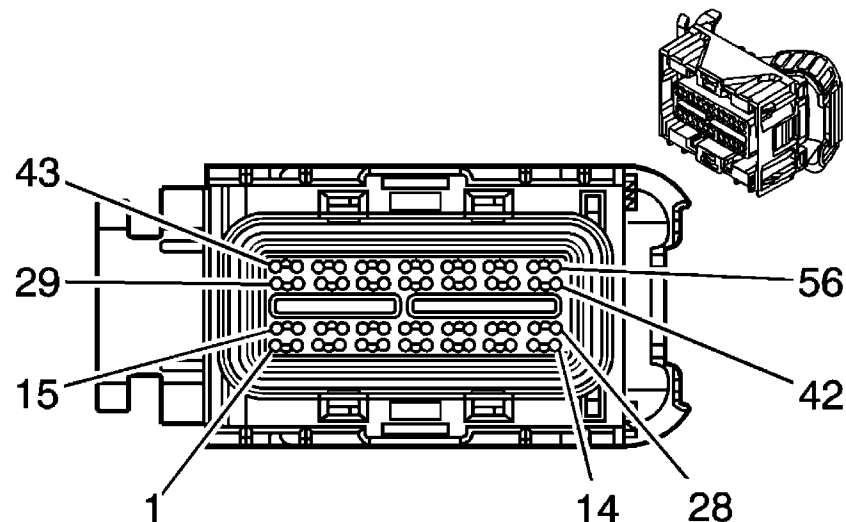


2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

(LLY) Engine Control Module (ECM) – Connector C-1

Connector	56-Way F Micro-Pack 64 Series (BU)
Typical connector	15357147 (F)
Color	BLU
Typical Terminal	---
Typical Cable Seal	---

Pin	Wire Color	Circuit No.	Function
1	YE	2361	SAE J1939 Serial Data Bus+
2	D-GN	2362	SAE J1939 Serial Data Bus-
3-4	—	—	Not Used
5	OG	440	Battery Positive Voltage
6	—	—	Not Used
7	OG/BK	1057	Low Reference
8	PK/BK	632	Low Reference
9	BK/WH	351	Ground
10	PK	439	Ignition 1 Voltage
11	—	—	Not Used
12	D-GN	534	High Idle Switch Signal
13	YE	492	MAF Sensor Signal
14	BN/WH	5763	EGR Sensor Signal
15	D-GN	1049	ECM Class 2 Serial Data
16	—	—	Not Used
17	TN	1274	5-Volt Reference
18	PK	1020	Ignition 0 Voltage
19	PK	439	Ignition 1 Voltage
20	OG	440	Battery Positive Voltage
21-22	—	—	Not Used
23	TN	5928	5-Volt Reference
24-25	—	—	Not Used
26	D-BU	507	Wait to Start Indicator Control
27	—	—	Not Used
28	L-BU	1162	APP Sensor 2 Signal
29	—	—	Not Used



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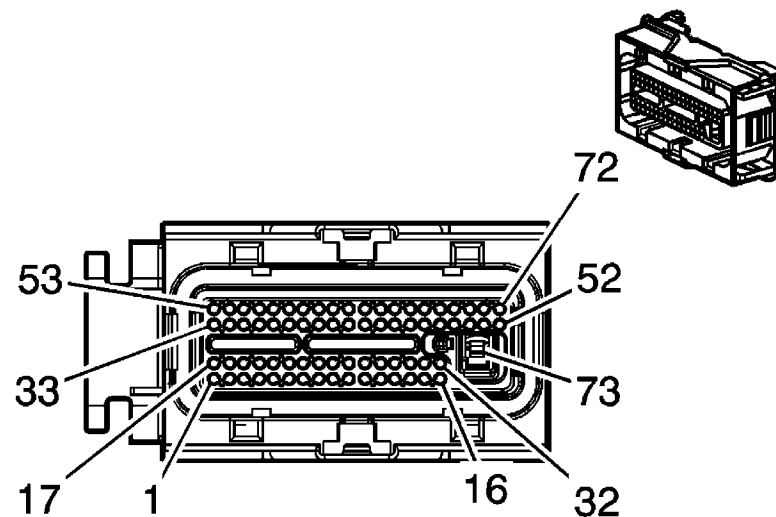
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

(LLY) Engine Control Module (ECM) – Connector C-1 (continued)

Pin	Wire Color	Circuit No.	Function
30	PU	1589	Fuel Level Sensor Signal – Primary
31	WH/BK	2932	5-Volt Reference
32	WH/BK	1164	5-Volt Reference
33	TN	2917	5-Volt Reference
34	GY	2705	5-Volt Reference
35	—	—	Not Used
36	YE/BK	1275	5-Volt Reference
37	YE	2834	Fuel Pressure Regulator Solenoid Control
38	—	—	Not Used
39	GY	597	5-Volt Reference
40	PU/WH	2530	Fuel Pressure Regulator Solenoid Supply Voltage
41	GY	23	Generator Field Duty Cycle Signal
42	PK	339	Ignition 1 Voltage
43	D-BU	1936	Fuel Level Sensor Signal – Secondary
44	D-GN/WH	465	Fuel Pump Relay Control – Primary
45	PU	2656	Engine Exhaust Brake Restore Request (w/o NPE)
46	YE/BK	1827	Vehicle Speed Signal
47	GY	2703	5-Volt Reference
48-49	—	—	Not Used
50	RD	631	12-Volt Reference
51	YE	2834	Fuel Pressure Regulator Solenoid Control
52	GY	2219	IGN B Relay Control
53	D-GN/WH	817	Vehicle Speed Signal
54	PU/WH	2530	Fuel Pressure Regulator Solenoid Supply Voltage
55	—	—	Not Used
56	PK	339	Ignition 1 Voltage

(LLY) Engine Control Module (ECM) – Connector C-2

Connector	73-Way F Micro-Pack 64 Series (BK)		
Typical connector	15357133 (F)		
Color	BLK		
Typical Terminal	---		
Typical Cable Seal	---		
Pin	Wire Color	Circuit No.	Function
1	—	—	Not Used
2	OG/BK	2919	Low Reference
3	—	—	Not Used
4	BN	25	Charge Indicator Control
5-7	—	—	Not Used
8	BK	2754	Low Reference
9-10	—	—	Not Used
11	L-GN	2081	Engine Exhaust Brake Switch Control (K40)
12-13	—	—	Not Used
14	GY	720	Low Reference
15-16	—	—	Not Used
17	YE/BK	508	Water in Fuel Indicator Control
18	—	—	Not Used
19	D-BU	1161	APP Sensor 1 Signal
20-22	—	—	Not Used
23	L-GN	432	MAP Sensor Signal
24	D-GN	1163	APP Sensor 3 Signal
25	TN/WH	332	Oil Pressure Sensor Signal
26	BN	1174	Oil Level Switch Signal
27	YE	1578	Fuel Temperature Signal
28	L-GN	1867	12-Volt Reference
29	GY/BK	2931	Ground
30	OG/BK	469	Low Reference
31	YE	5947	Turbocharger Vane Position Sensor Signal



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2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

(LLY) Engine Control Module (ECM) – Connector C-2 (continued)

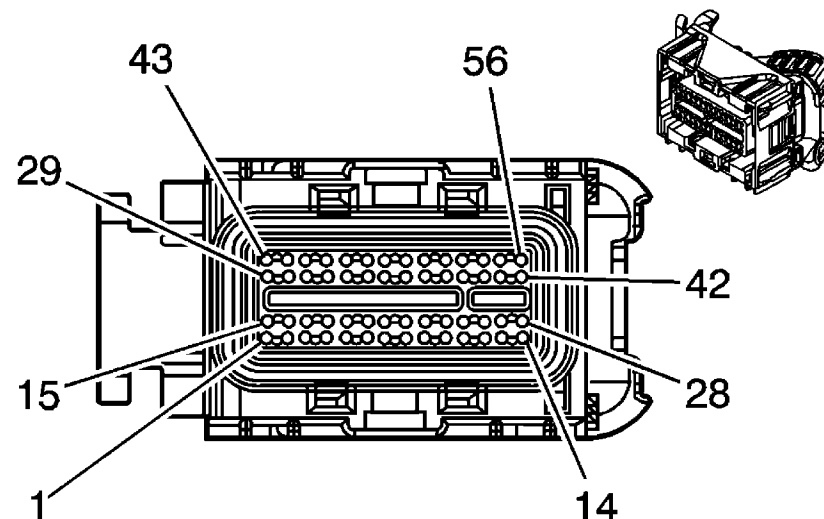
Pin	Wire Color	Circuit No.	Function
32	—	—	Not Used
33	OG/BK	5764	EGR Valve High Control
34	D-GN	603	A/C Low Pressure Switch Signal
35	L-GN/BK	5746	EGR Valve Low Control
36	BK/WH	351	Ground
37	—	—	Not Used
38	L-GN	1478	Coolant Level Switch Signal
39	BK	2755	Low Reference
40	BN	1271	Low Reference
41	—	—	Not Used
42	YE	2918	FRP Sensor Signal
43	—	—	Not Used
44	OG/BK	5929	Low Reference
45	—	—	Not Used
46	GY/BK	433	Baro Sensor Signal
47-48	—	—	Not Used
49	D-BU	5930	Turbocharger Vane Position Control Solenoid Valve Control Circuit
50	WH	5931	Low Reference
51	—	—	Not Used
52	PK/BK	1746	Fuel Injector 3 Control
53	OG/BK	5764	EGR Valve High Control

Pin	Wire Color	Circuit No.	Function
54	PU	1272	Low Reference
55	L-GN/BK	5746	EGR Valve Low Control
56	GY	1273	Low Reference
57	BN	2524	Generator 2 Turn On Signal (K65)
58	BK	552	Low Reference
59	—	—	Not Used
60	L-BU	1320	Stop Lamp Supply Voltage
61	PU	420	TCC Brake Switch/Cruise Control Release Signal
62	—	—	Not Used
63	L-BU	2832	Engine Speed Signal
64	BK	470	Low Reference
65	L-GN/BK	1745	Fuel Injector 2 Control
66	RD/BK	877	Fuel Injector 7 Control
67	YE	410	ECT Sensor Signal
68	D-BU/WH	878	Fuel Injector 8 Control
69	L-BU/BK	844	Fuel Injector 4 Control
70	BK/WH	845	Fuel Injector 5 Control
71	YE/BK	846	Fuel Injector 6 Control
72	BK	1744	Fuel Injector 1 Control
73	BK/WH	351	Ground

(LLY) Engine Control Module (ECM) – Connector C-3

Connector	56-Way F Micro-Pack 64 Series (GY)
Typical connector	15357148 (F)
Color	GRY
Typical Terminal	---
Typical Cable Seal	---

Pin	Wire Color	Circuit No.	Function
1	L-BU	494	Engine Shut Off Signal
2-5	—	—	Not Used
6	L-GN	488	PTO On Switch Signal
7	BK/WH	1962	Exhaust Brake Telltale Switch Signal (K40)
8-9	—	—	Not Used
10	PK	339	Ignition 1 Voltage
11	—	—	Not Used
12	D-BU	2221	VSS High Signal
13	—	—	Not Used
14	PK	339	Ignition 1 Voltage
15-16	—	—	Not Used
17	YE	2522	PTO Engage Signal
18	D-GN	1433	Clutch Start Switch Signal
19	D-BU	84	Cruise Control Set/Coast Switch Signal
20	D-GN/WH	762	A/C Request Signal
21	—	—	Not Used
22	GY/BK	87	Cruise Control Resume/Accel Switch Signal
23	D-GN	2222	VSS Low Signal (M/T)
24	TN	472	IAT Sensor Signal
25-29	—	—	Not Used
30	GY	397	Cruise Control On Switch Signal
31	OG/BK	1786	Park/Neutral Signal (A/T)
32-34	—	—	Not Used
35	YE	447	Starter Relay Coil Control
36	—	—	Not Used



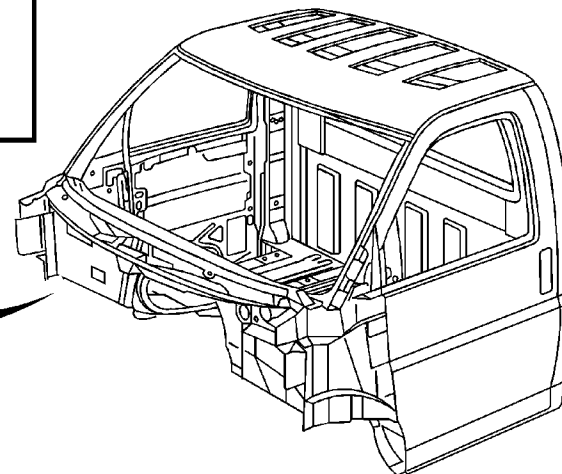
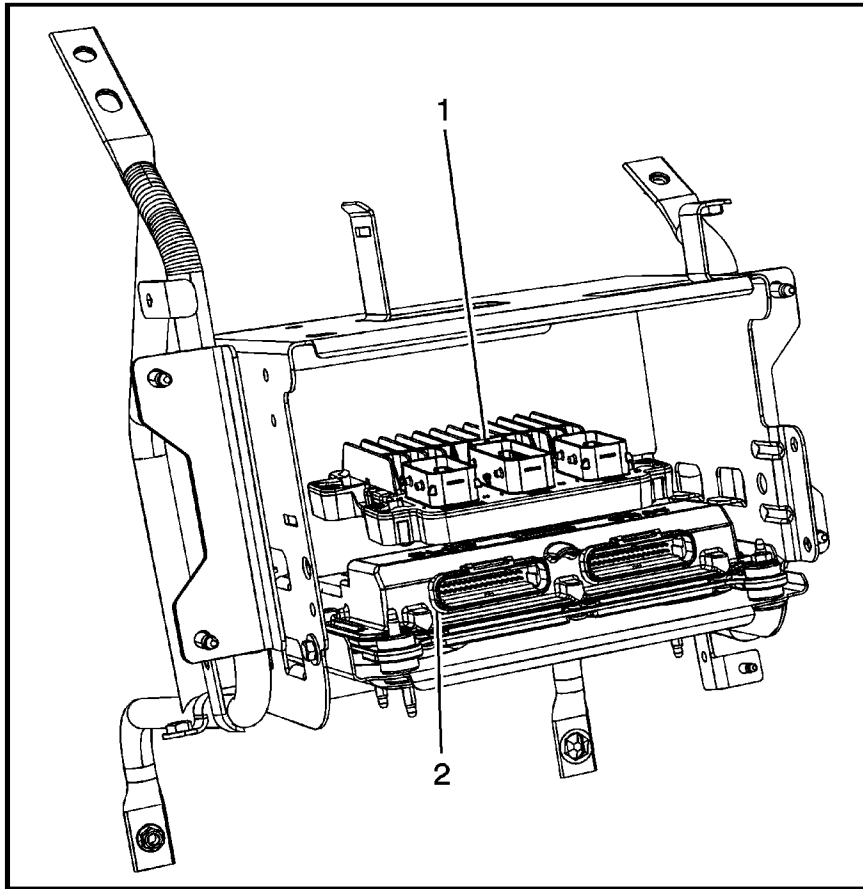
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2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

(LLY) Engine Control Module (ECM) – Connector C-3 (continued)

Pin	Wire Color	Circuit No.	Function
37	WH	121	Engine Speed Signal
38	—	—	Not Used
39	PU	2562	PTO Control
40	BN/WH	419	MIL Control
41	D-GN/WH	459	A/C Compressor Clutch Relay Control
42	—	—	Not Used
43	YE/BK	1868	Low Reference
44	BK/WH	351	Ground
45	L-GN	24	Backup Lamp Supply Voltage
46	—	—	Not Used
47	BN/WH	379	CPP Switch Signal (M/T)
48	BN	718	Low Reference
49-50	—	—	Not Used
51	BN/WH	633	CMP Sensor Signal
52	D-BU/WH	1869	CKP Sensor Signal
53-55	—	—	Not Used
56	RD	2013	High Idle Indicator Control

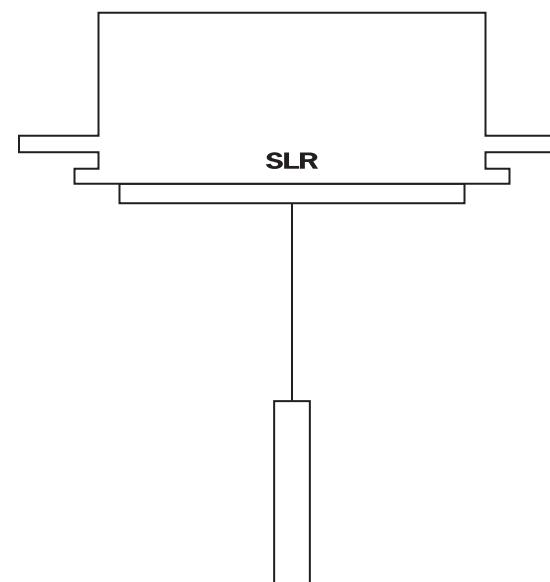
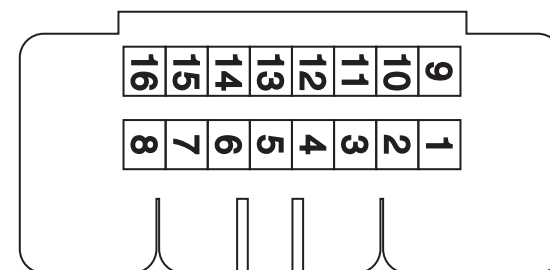
(LLY) Engine Control Module (ECM) Location



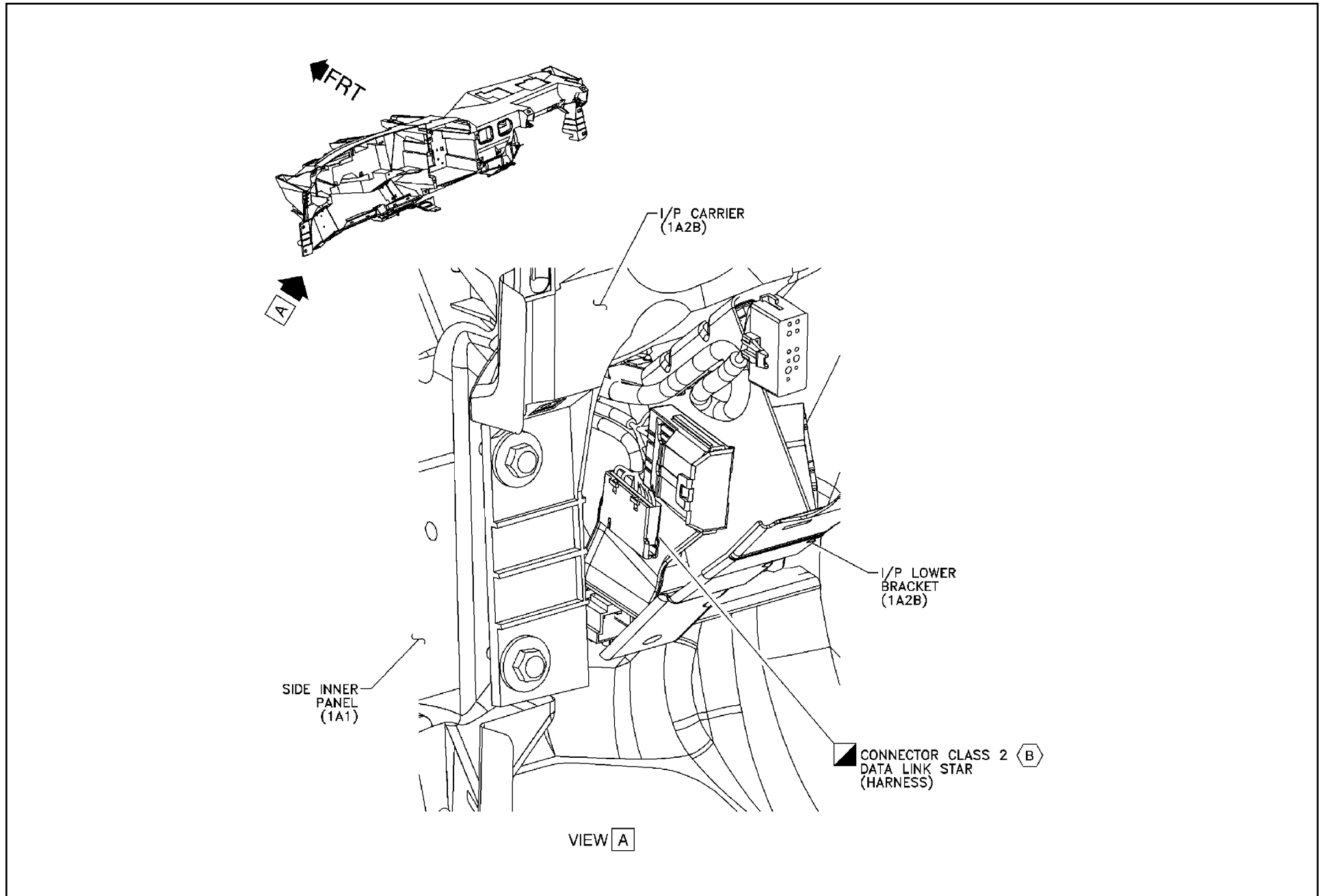
- (1) Engine Control Module (ECM)
- (2) Transmission Control Module (TCM)

16-Way Serial Data Link Connector

Connector	Packard 150 MP Series		
Typical connector	12110256		
Typical terminal	12040993		
Pin	Wire		Function
	Ckt #	Color	
1	—	—	Spare
2	1132	PPL	Right Park
3	—	—	Left Turn
4	750	BLK	Left Park
5	1451	BLK/WHT	Stop
6	—	—	Spare
7	1921	TAN/BLK	Spare
8	1455	BLK/WHT	Gnd Zone 3B
9	—	—	Spare
10	—	—	Spare
11	—	—	Spare
12	—	—	Spare
13	—	—	Spare
14	—	—	Spare
15	1922	WHT/BLK	DTC J1708 / J1587(-)
16	840	ORN	DLC Power



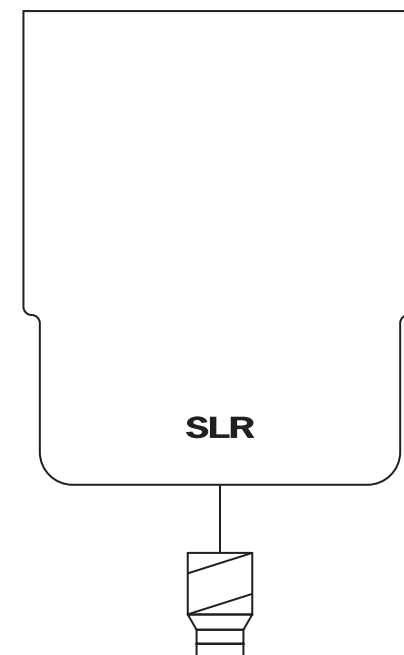
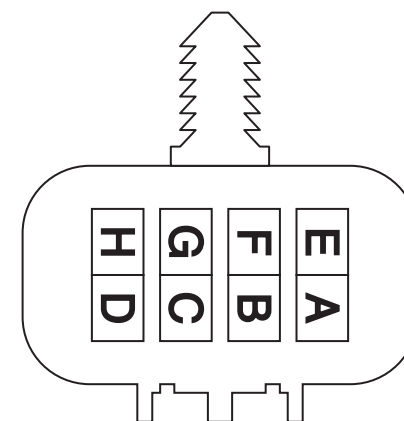
Serial Data Link Connector Location



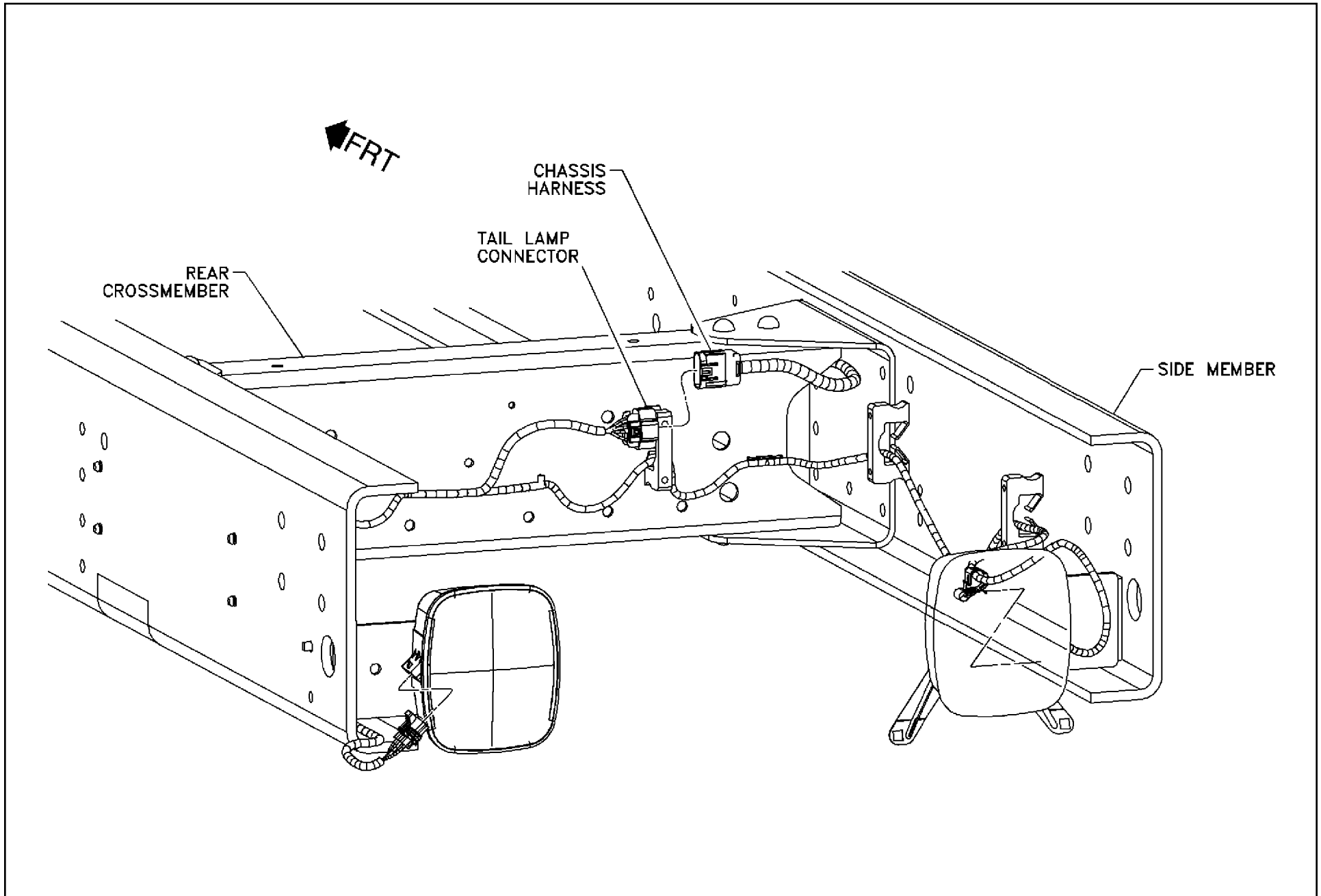
8-Way Tail Lamp Connector

		TRUCK SIDE	BODY BUILDER SIDE
Connector		Packard 280 Series	
Typical connector		15326906 (F)	15326655 (M)
Typical terminal		15304718	15304730
Typical cable seal		12191232	12191232

Pin	Wire		Function
	Ckt #	Color	
A	618	YEL	LR Stop/Turn
B	2609	BRN	Lt Tail / License
C	TBD	—	Spare
D	2609	BRN/WHT	RT Tail
E	619	GRN DK	RR Stop/Turn
F	24	GRN LT	Back Up
G	350	BLK	Gnd Zone 3B
H	TBD	—	Spare



Tail Lamp Connector Location



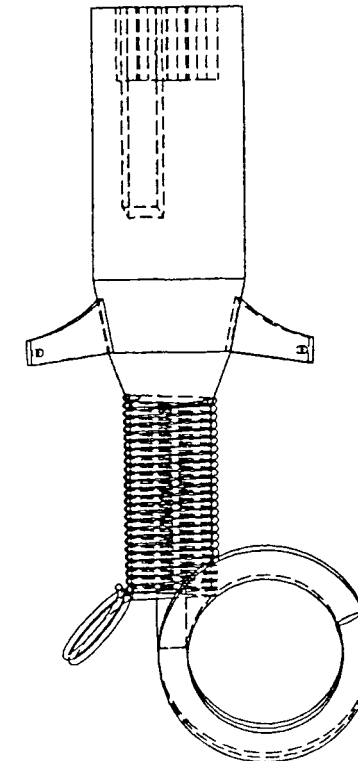
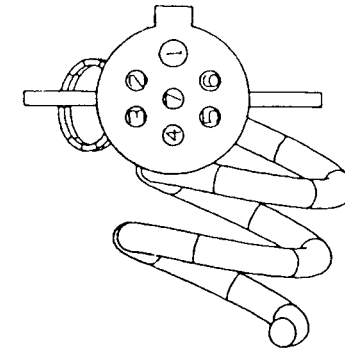
7-Way Tractor Connector – Family 3

Connector	Packard 280/630 Series	
connector	12077629	
terminal	15304720	3mm
seal	15366065	5mm
terminal	15326004	3mm
seal	12191235	5mm

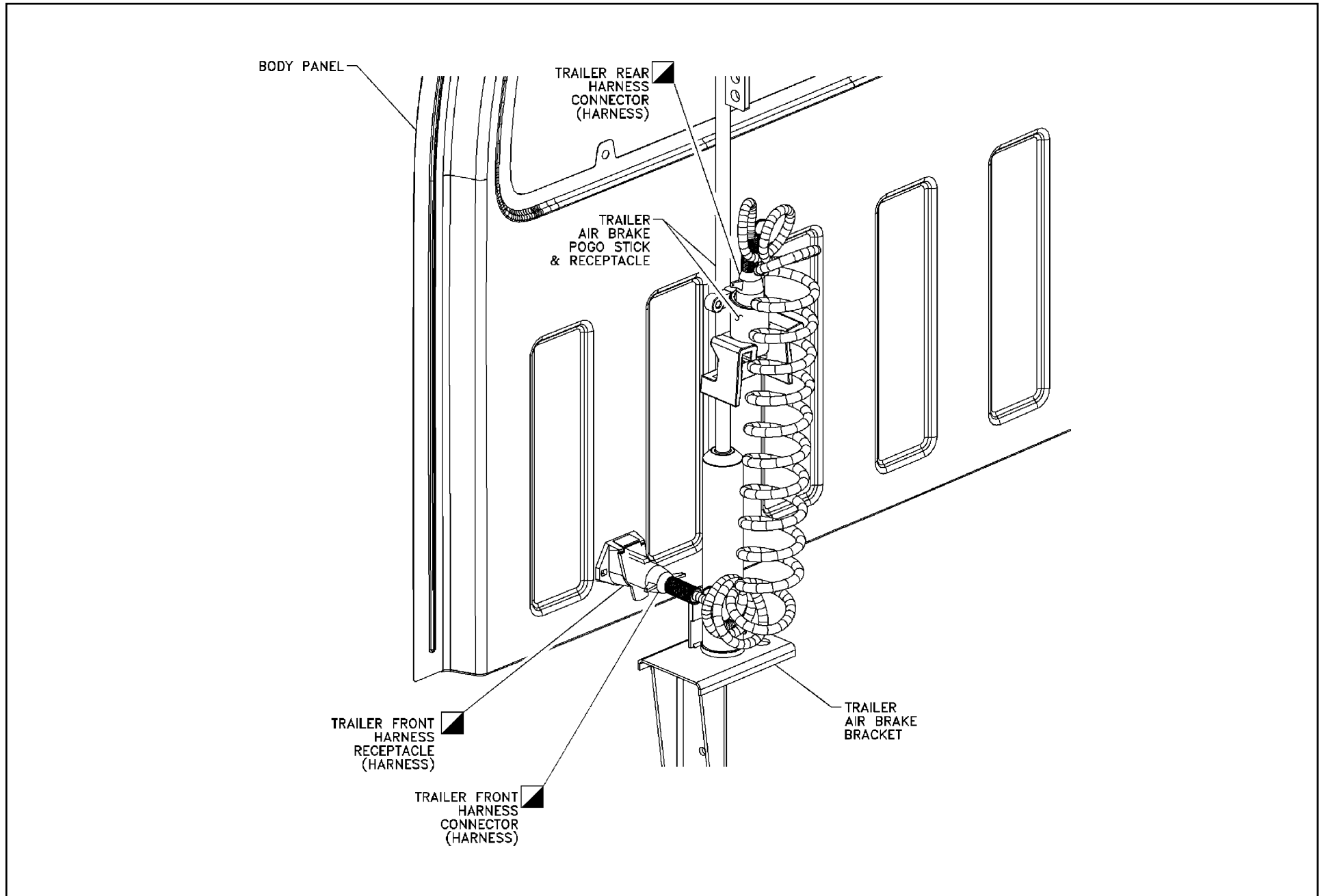
Pin	Wire		Function
	Ckt #	Color	
1	22	WHT	Tractor Gnd Zone 7B
2	1412	BLK	Marker Lamp
3	318	YEL	Lt Turn/Hazard
4	1411	RED	Brake (1)
5	319	GRN DK	Rt Turn/Hazard
6	9	BRN	Park Lamp
7	1413	BLU DK	ABS Power & Multiplexed Signal

NOTES:

(1) 30A maxi fuse. See page B-4.



Tractor Connector – Family 3 Location



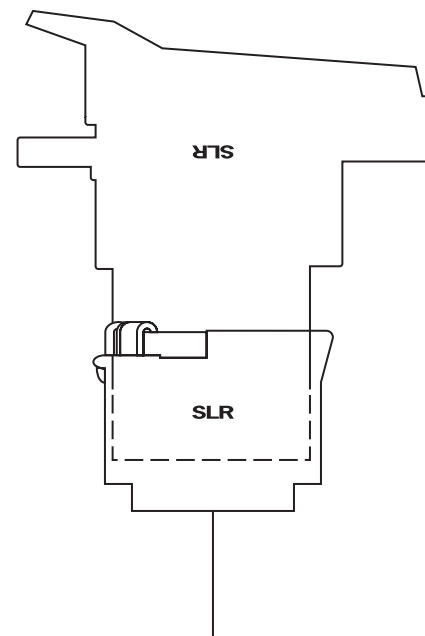
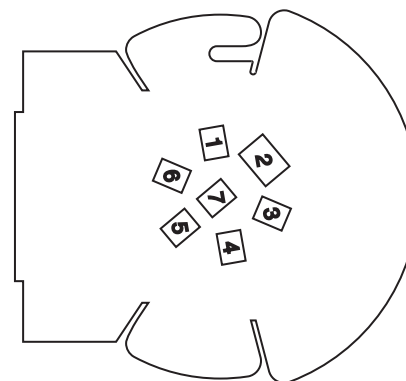
7-Way Trailer Connector – Family 2

Connector	Packard 280/630 Series
connector	15354653
terminal	12119853 3mm
terminal	15317332 5mm
seal	12015323

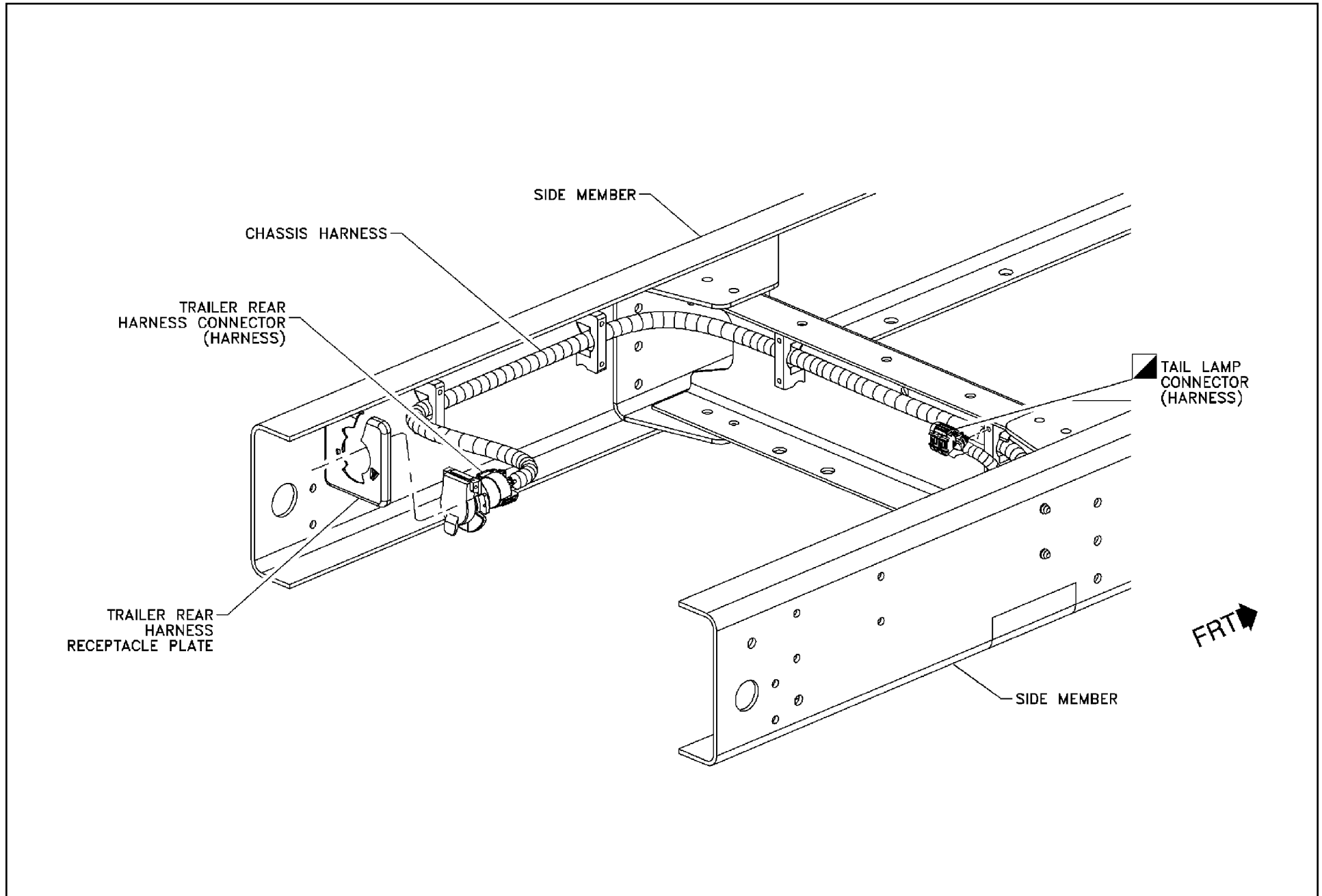
Pin		Wire		Function
		Ckt #	Color	
7	A	24	GRN LT	Back Up
2	B	22	WHT	Tractor Gnd Zone 12A
3	C	47	BLU DK	Aux Elec Brake (1)
4	D	319	GRN DK	Rt Turn/Hazard
5	E	642	RED	Electric Brake Power (2)
6	F	9	BRN	Park Lamp
1	G	318	YEL	Lt Turn/Hazard

NOTES:

- (1) Blunt cut end found under hood. See UI Bulletin #66.
- (2) 30A maxi fuse. See page B-4.



Trailer Connector – Family 2 Location



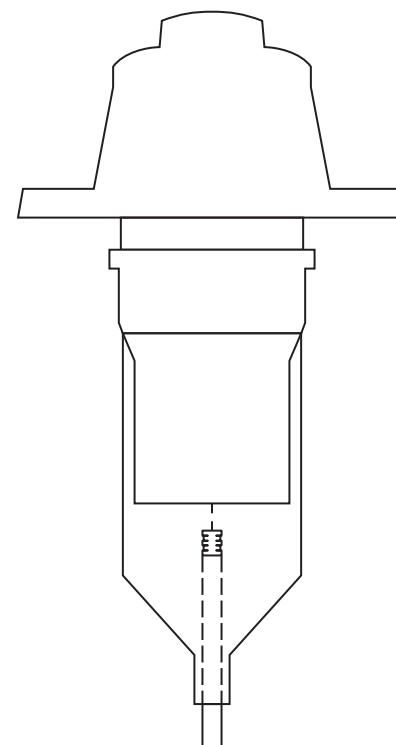
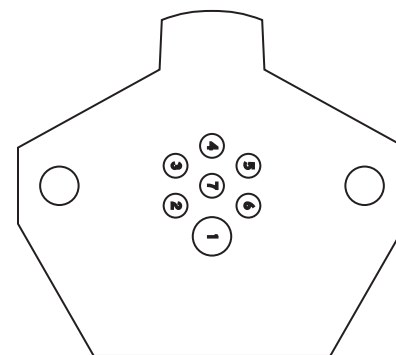
7-Way Trailer Connector – Family 3

Connector	Packard 280/630 Series
connector	12077629
terminal	15304720 3mm
seal	15366065 5mm
terminal	15326004 3mm
seal	12191235 5mm

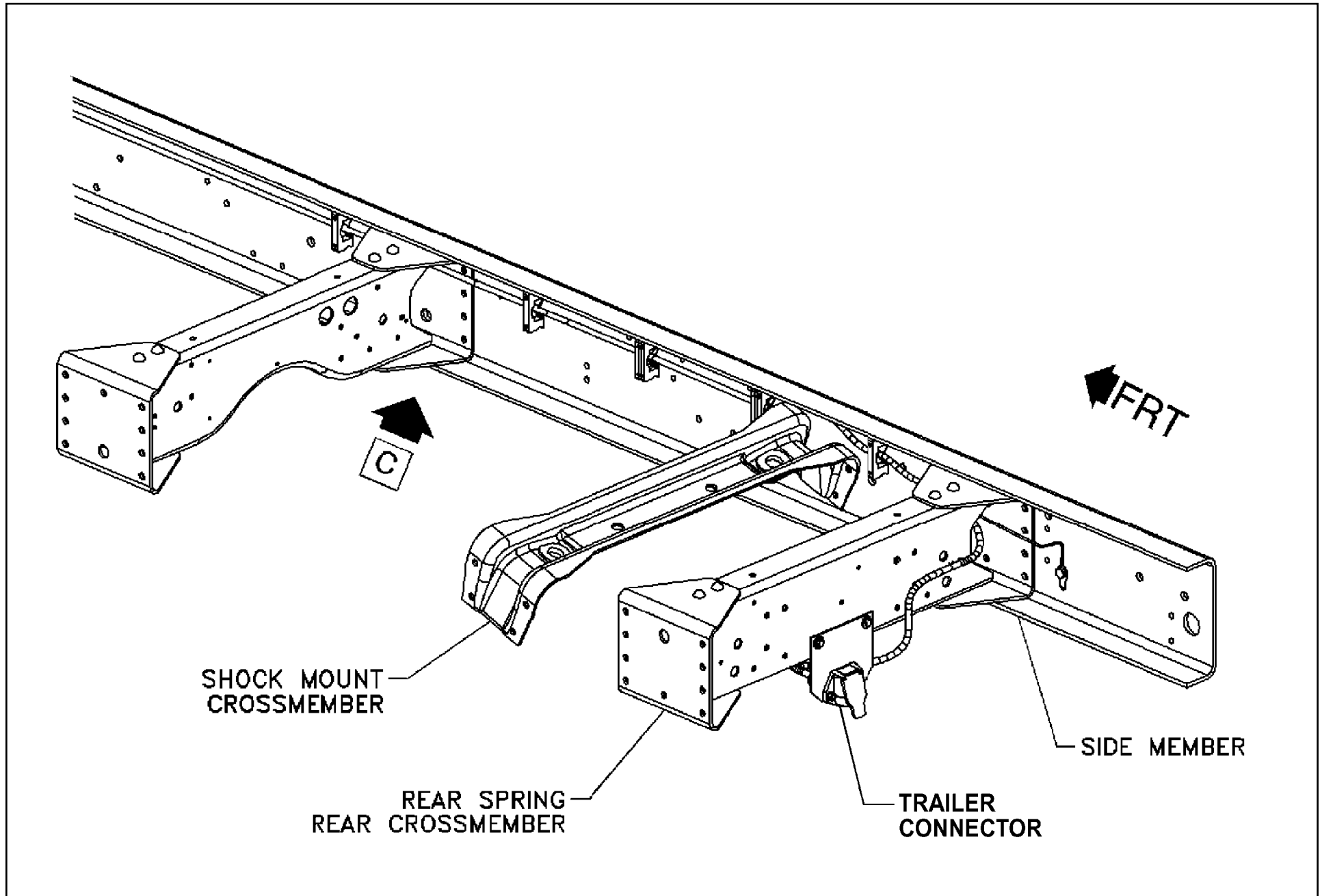
Pin	Wire		Function
	Ckt #	Color	
1	22	WHT	Tractor Gnd Zone 12B
2	1412	BLK	Marker Lamp
3	318	YEL	Lt Turn/Hazard
4	1411	RED	Brake (1)
5	319	GRN DK	Rt Turn/Hazard
6	9	BRN	Park Lamp
7	1413	BLU DK	ABS Power & Multiplexed Signal

NOTES:

(1) 30A maxi fuse. See page B-4.



Trailer Connector – Family 3 Location



10-Way Transmission Optional Connector

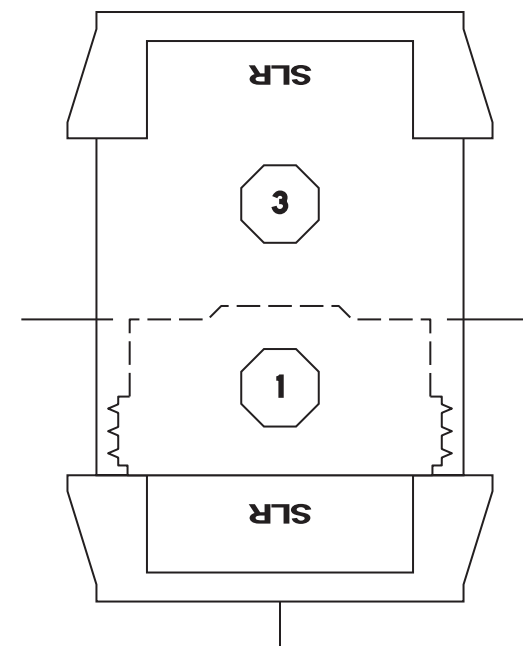
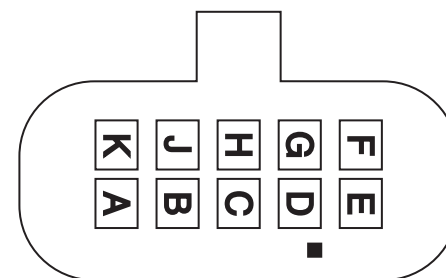
	<u>TRUCK SIDE</u>	<u>BODY BUILDER SIDE</u>
Typical connector	12065425 (F)	12045808 (M)
Typical terminal	12048074	12177150
Typical cable seal	12048086	15324973

ALLISON LCT TRANS

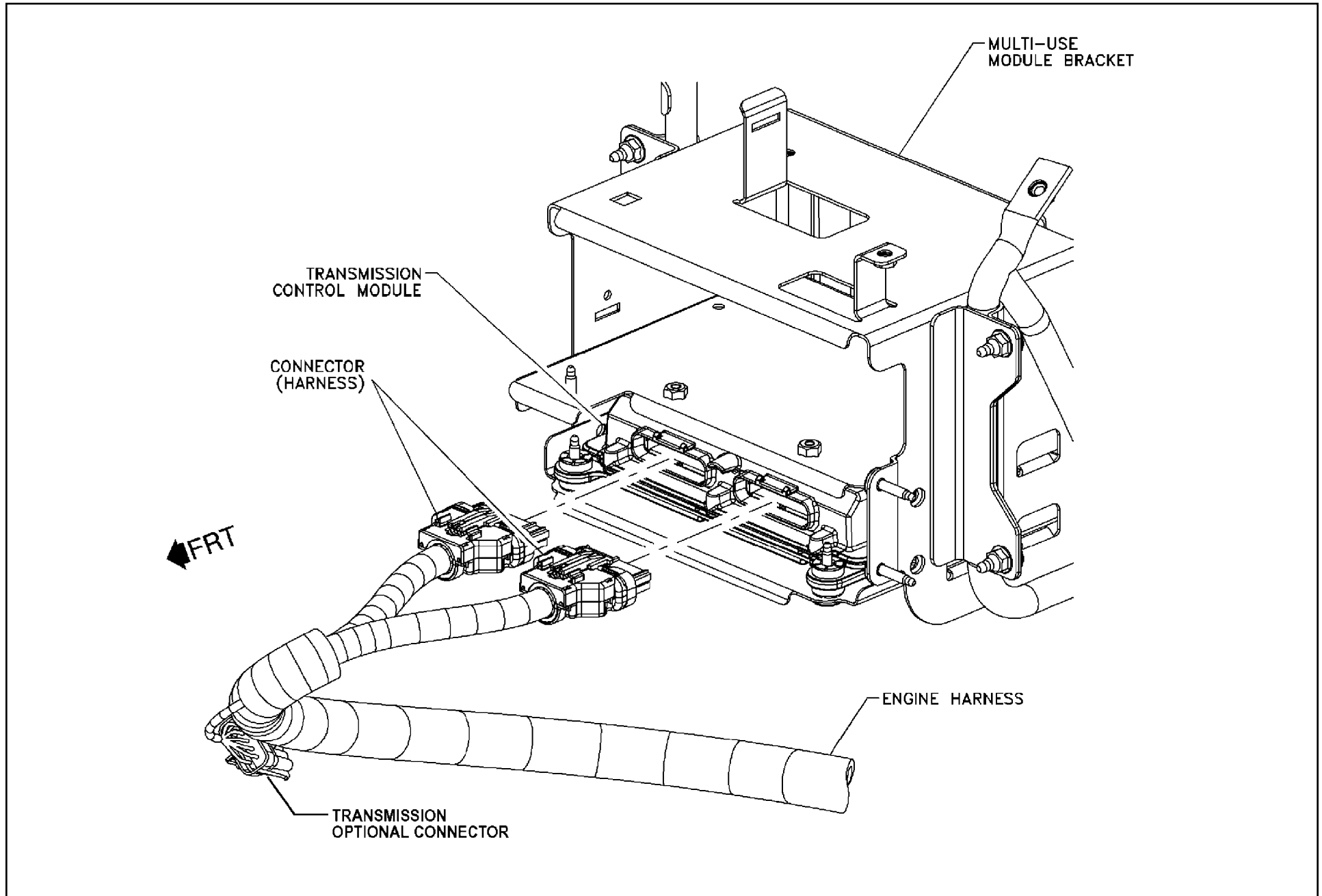
Pin	Wire		Function
	Ckt #	Color	
A	1146	PPL	Range Indicator
B	1479	YEL	Auto Neutral
C	2522	YEL	PTO Status
D	N/C	—	—
E	N/C	—	—
F	1147	TAN	Range Inhibit
G	N/C	—	—
H	407	BLK	Analog Gnd
J	476	BLK	Digital Gnd
K	1480	BLU LT	PTO Output

ALLISON MD TRANS

A	1146	PPL	Range Indicator
B	1479	YEL	Auto Neutral
C	915	YEL	PTO Enable
D	1481	YEL	Aux Hold
E	1148	GRA	Sump Temp
F	1147	TAN	Range Inhibit
G	N/C	—	—
H	407	BLK	Analog Gnd
J	476	BLK	Digital Gnd
K	1480	BLU LT	PTO Engage



Transmission Optional Connector Location



10-Way Upfitter PTO Connector

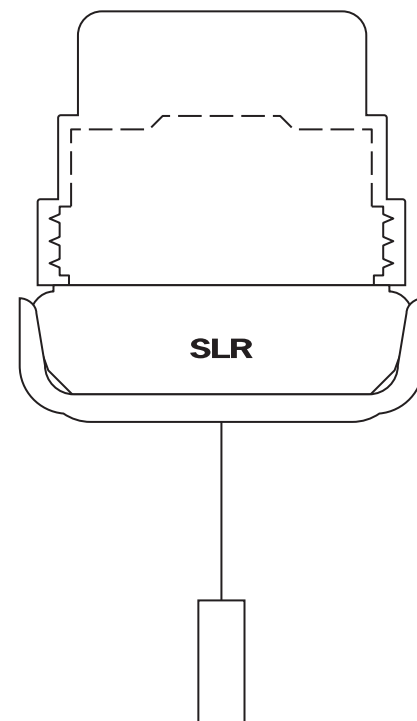
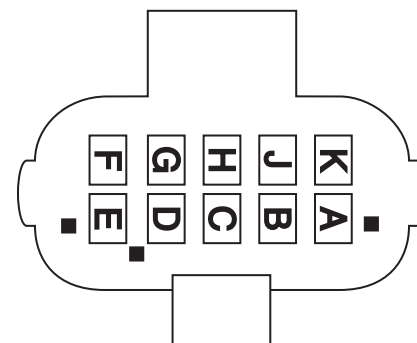
	<u>TRUCK SIDE</u>	<u>BODY BUILDER SIDE</u>
Typical connector	12177081 (F)	12045808 (M)
Typical terminal	15305038	12177150
Typical cable seal	15324976	15324976

L18/LB7/LG4

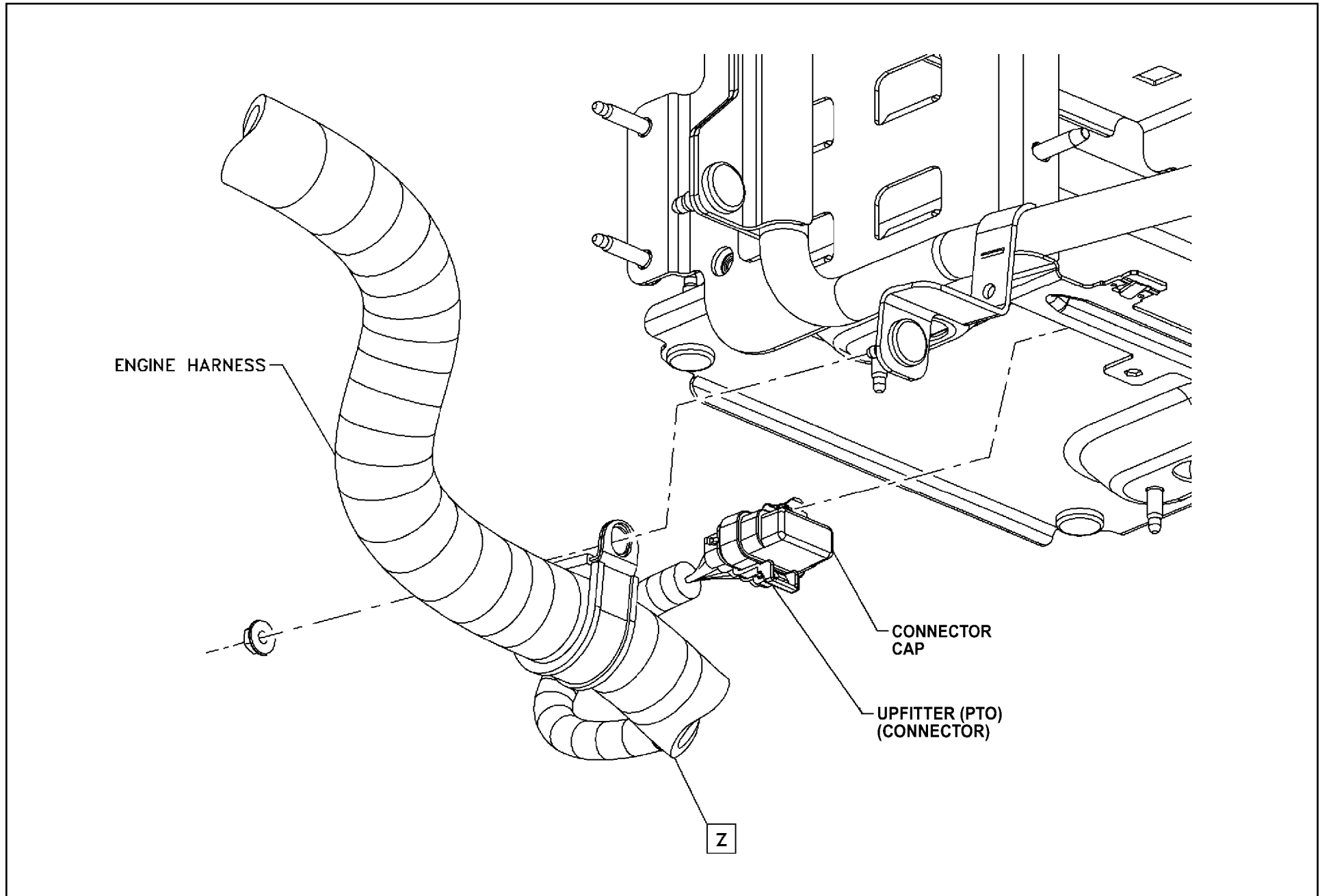
Pin	Wire		Function
	Ckt #	Color	
A	N/C	—	—
B	494	BLU LT	PTO Kill
C	488	GRN LT	PTO Enable
D	250	BLK	GND
E	2663	PPL	Tap Up
F	488	GRN LT	PTO Enable
G	2522	YEL	PTO Feedback
H	2561	WHT	Engage
J	2664	TAN	Tap Down
K	N/C	—	—

LG5

A	250	BLK	GND
B	494	BLU LT	PTO Kill Switch
C	2664	TAN	Tap Down
D	451	BLK/WHT	Engine GND
E	451	BLK/WHT	Engine GND
F	2663	PPL	Tap Up
G	2522	YEL	FEED BACK
H	2561	WHT	Engage
J	451	BLK/WHT	GND
K	N/C	—	—

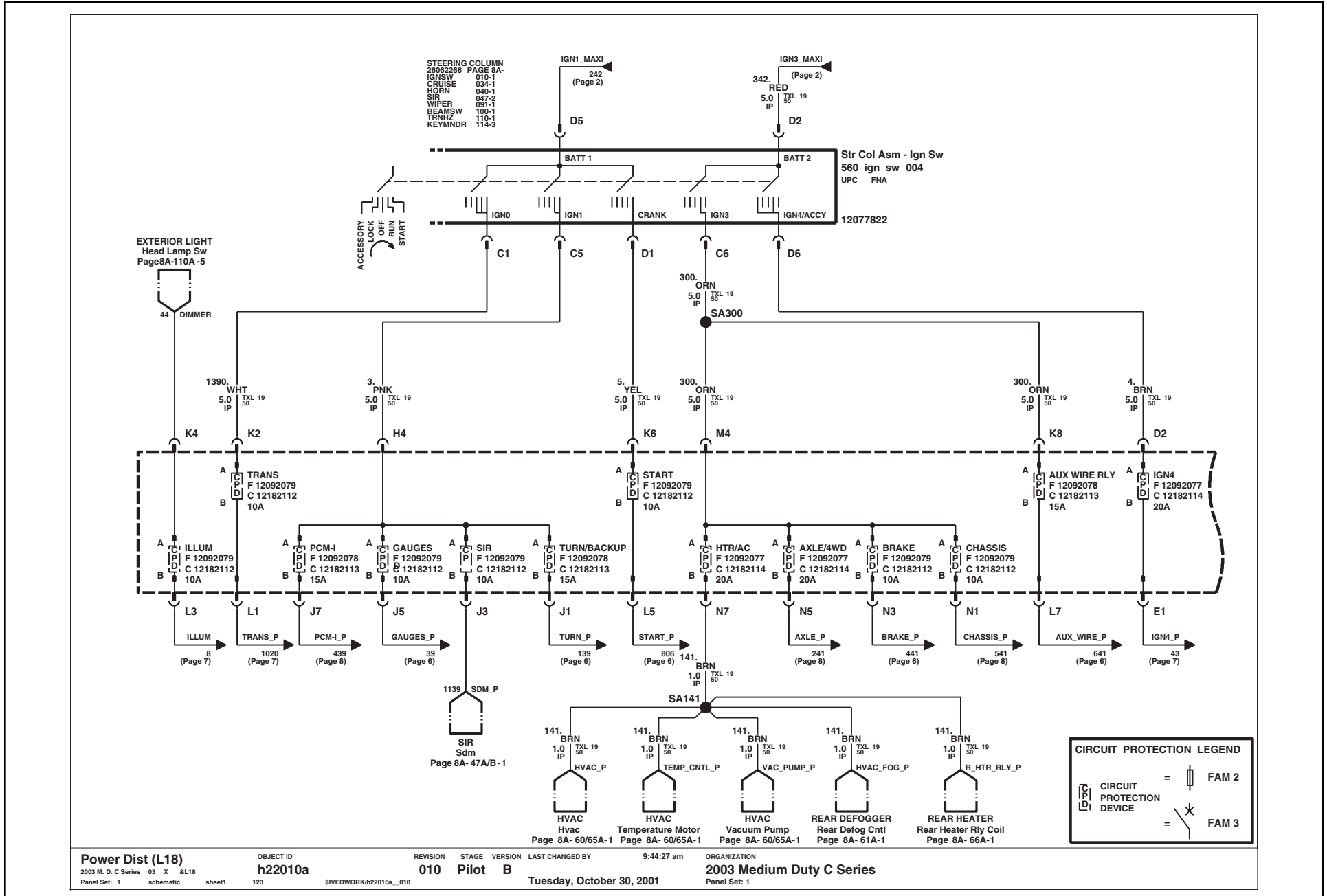


Upfitter PTO Connector Location



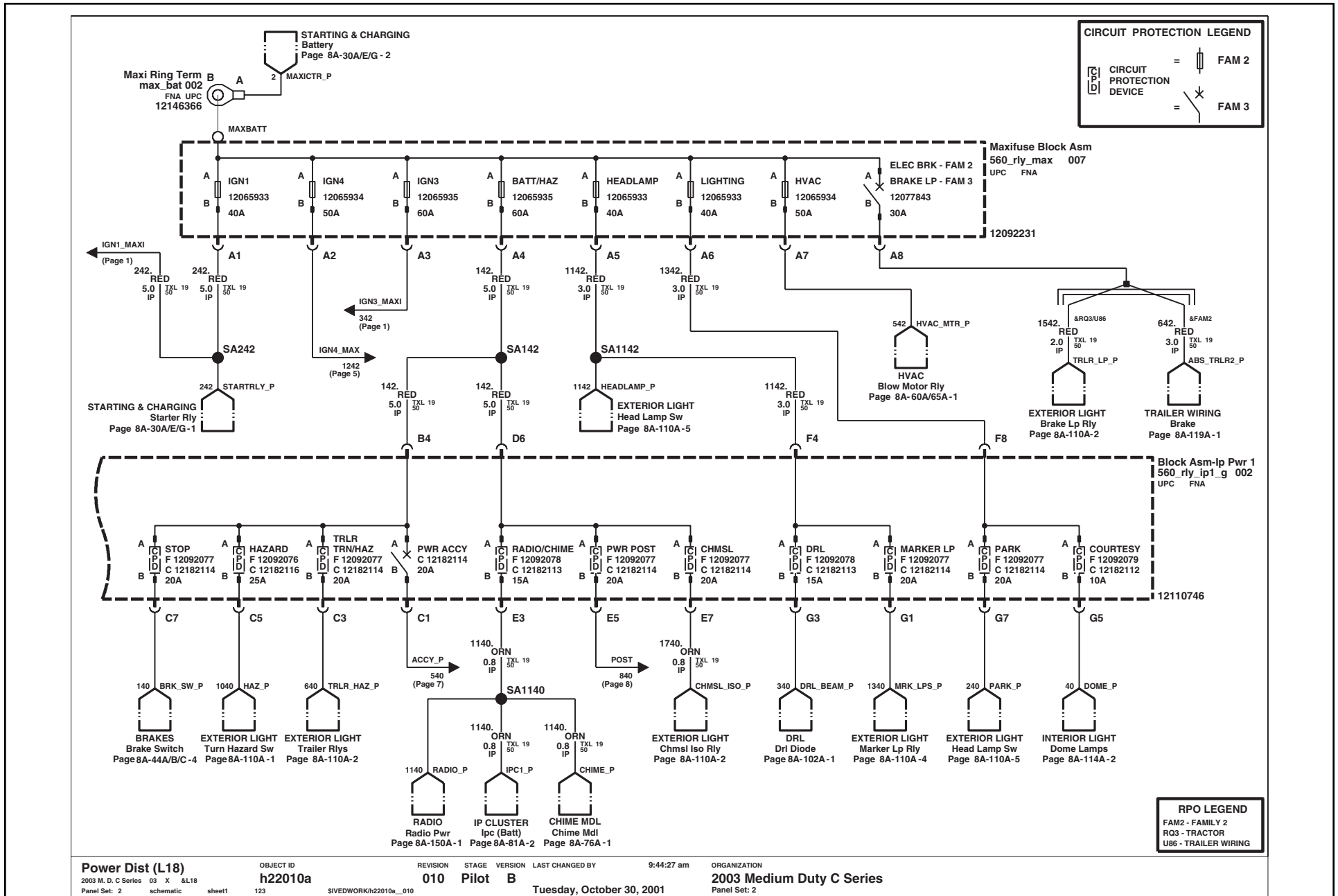
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (L18) 8.1L-Gas/NAPT



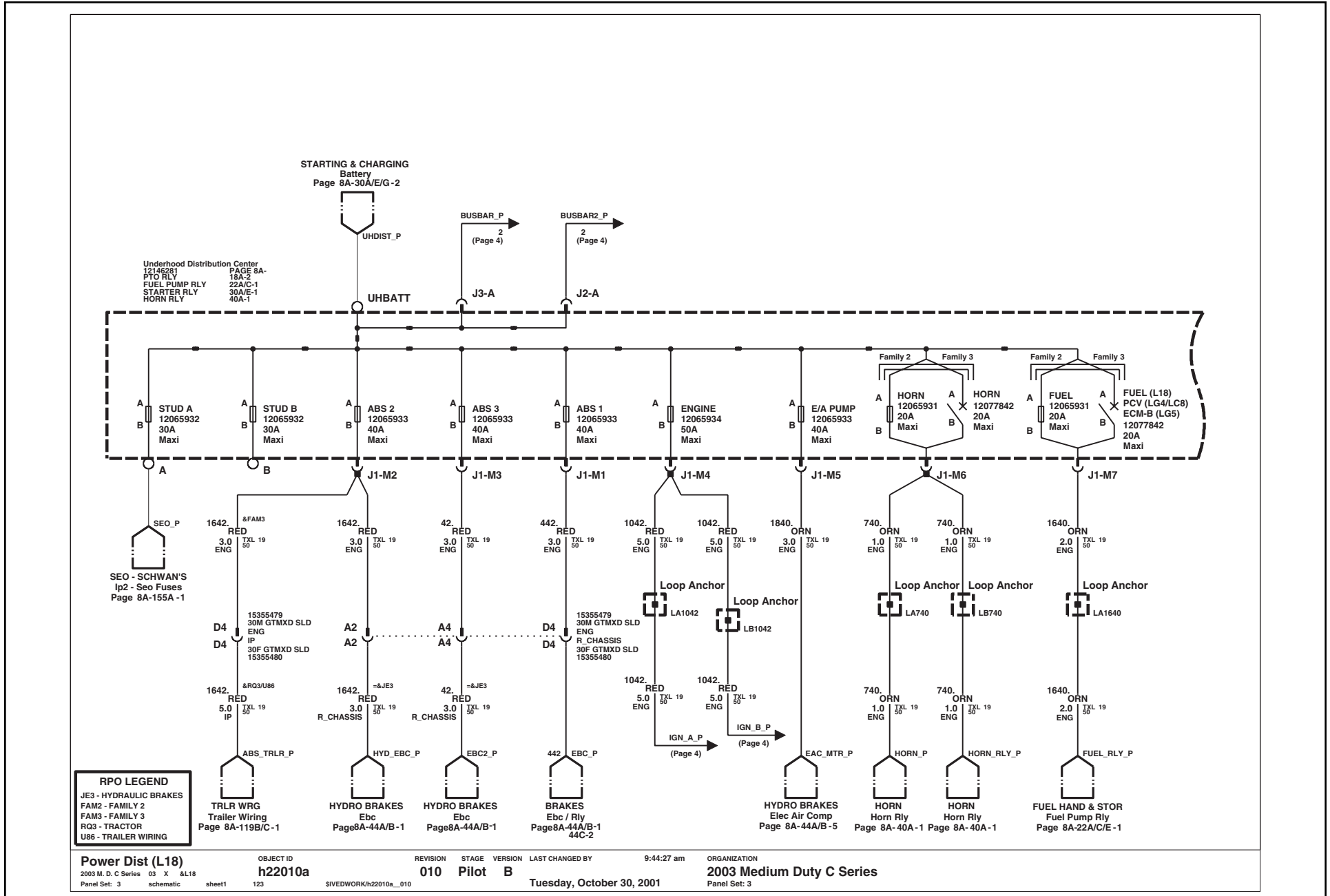
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Power Distribution – (L18) 8.1L-Gas/NAPT



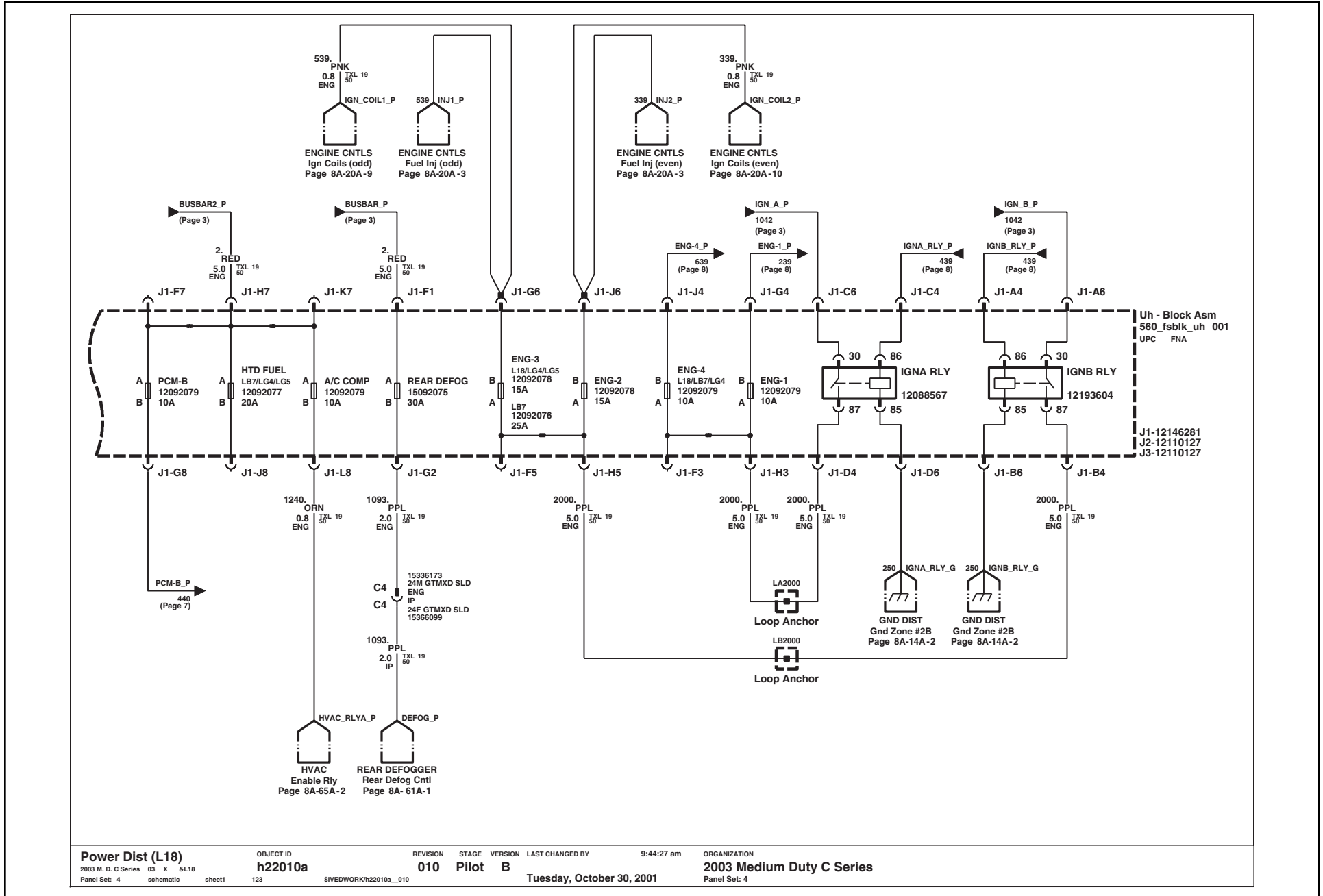
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (L18) 8.1L-Gas/NAPT



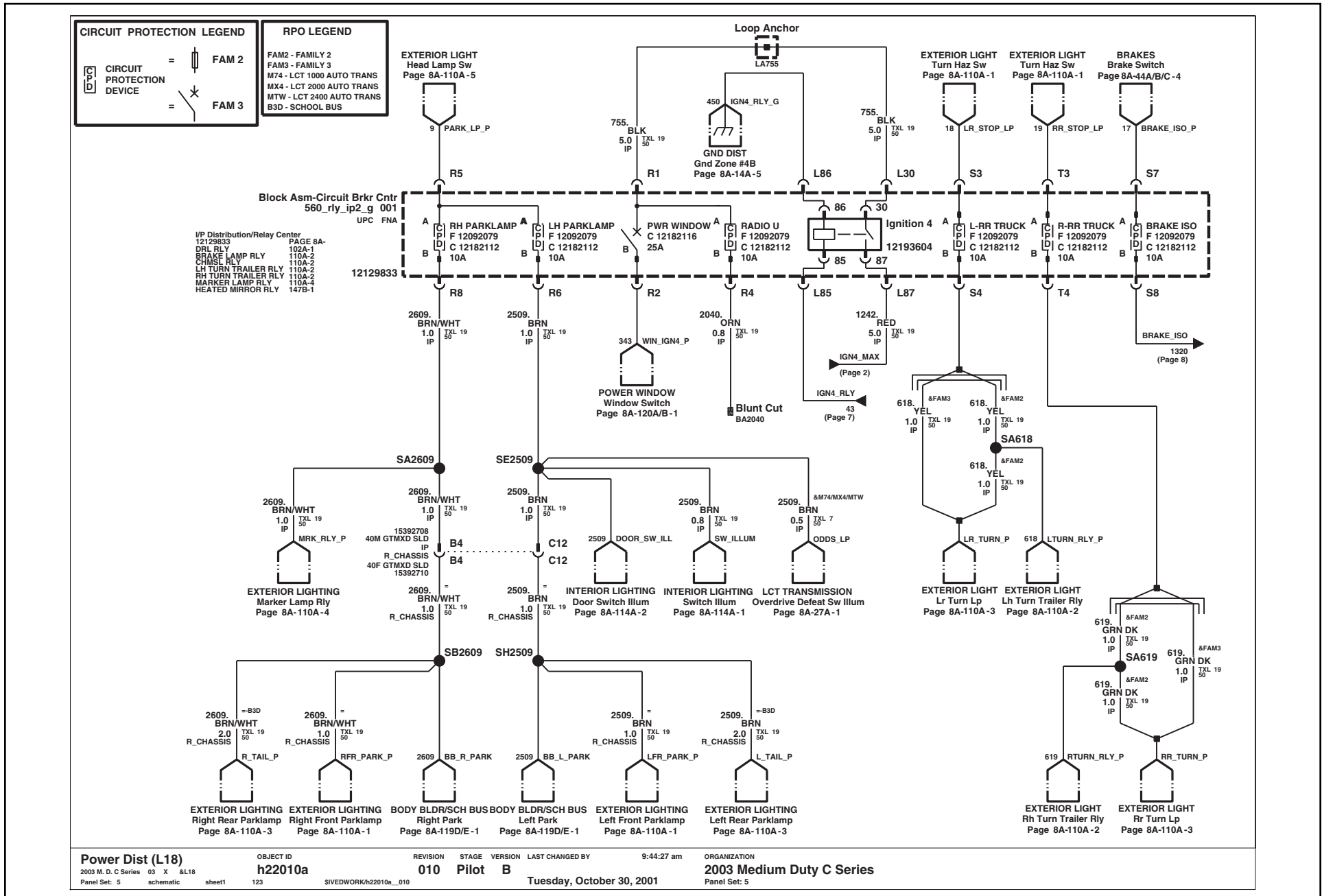
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution — (L18) 8.1L-Gas/NAPT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (L18) 8.1L-Gas/NAPT



Power Dist (L18)
2003 M. D. C Series 03 X &L18
Panel Set: 5 schematic sheet1

OBJECT ID
h22010a

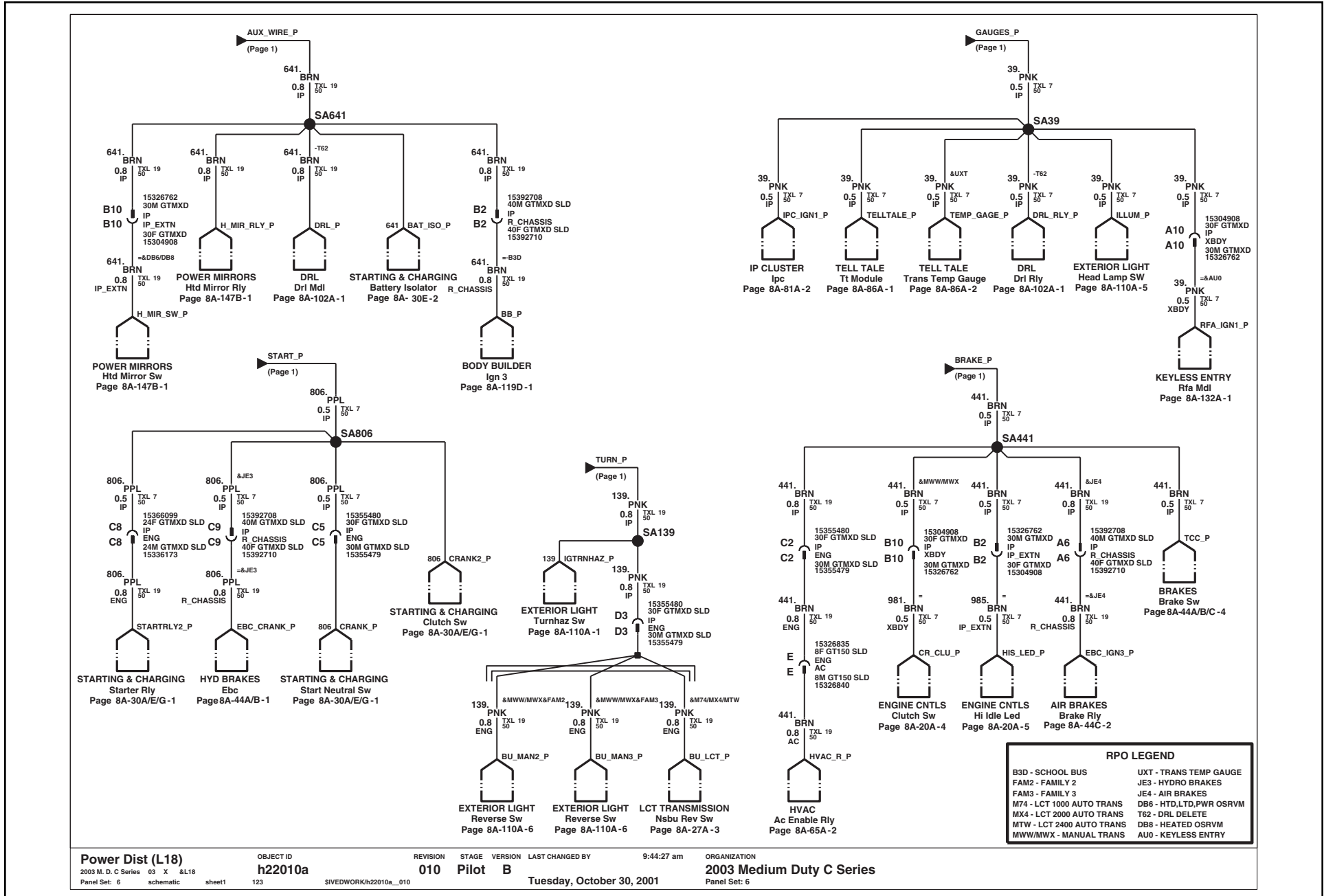
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010 Pilot B Tuesday, October 30, 2001

9:44:27 am

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 5

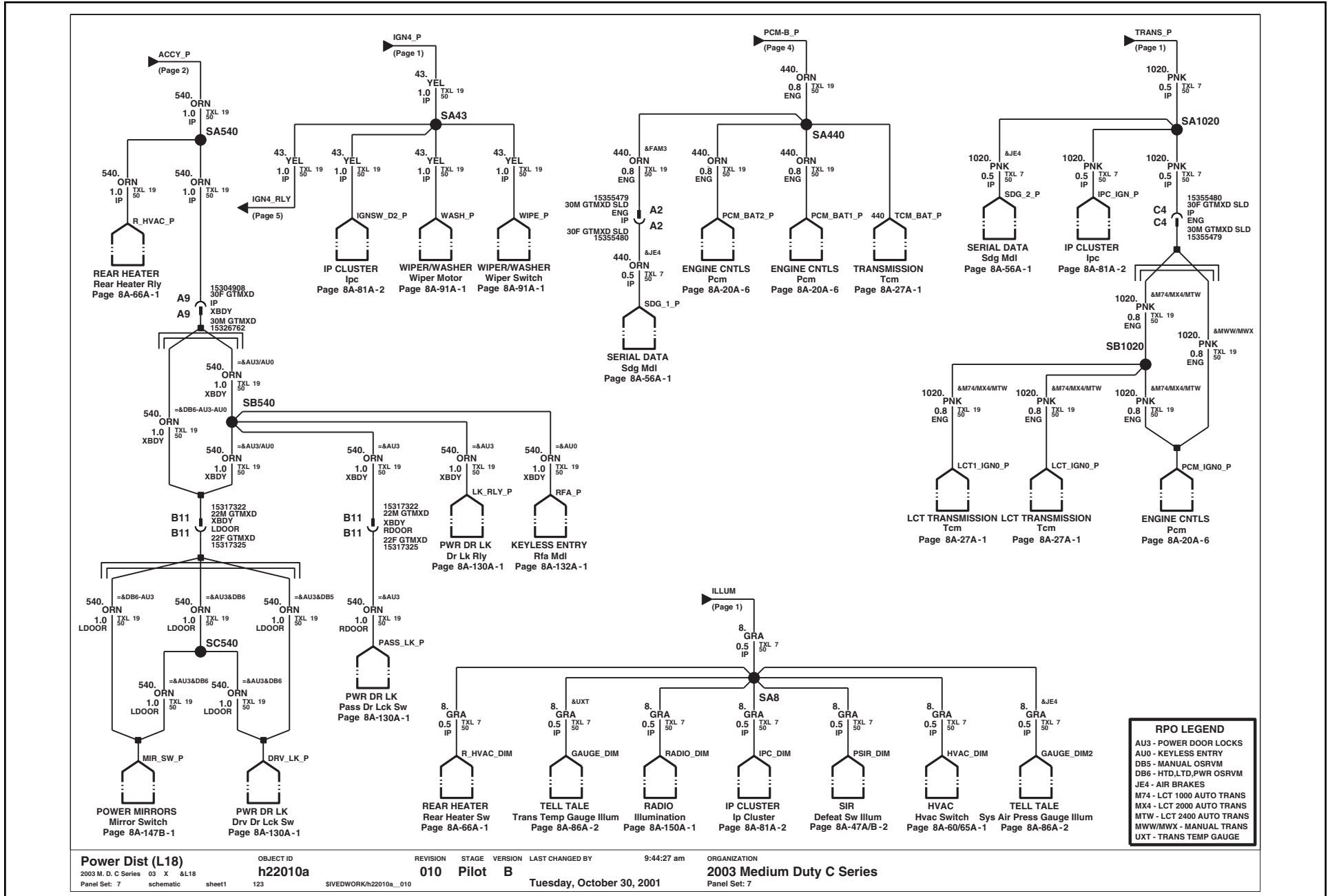
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (L18) 8.1L-Gas/NAPT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (L18) 8.1L-Gas/NAPT



Power Dist (L18)

2003 M. D. C Series 03 X & L18

Panel Set: 7 schematic sheet1

OBJECT ID
h22010a

123

SIVEDWORK/h22010a_010

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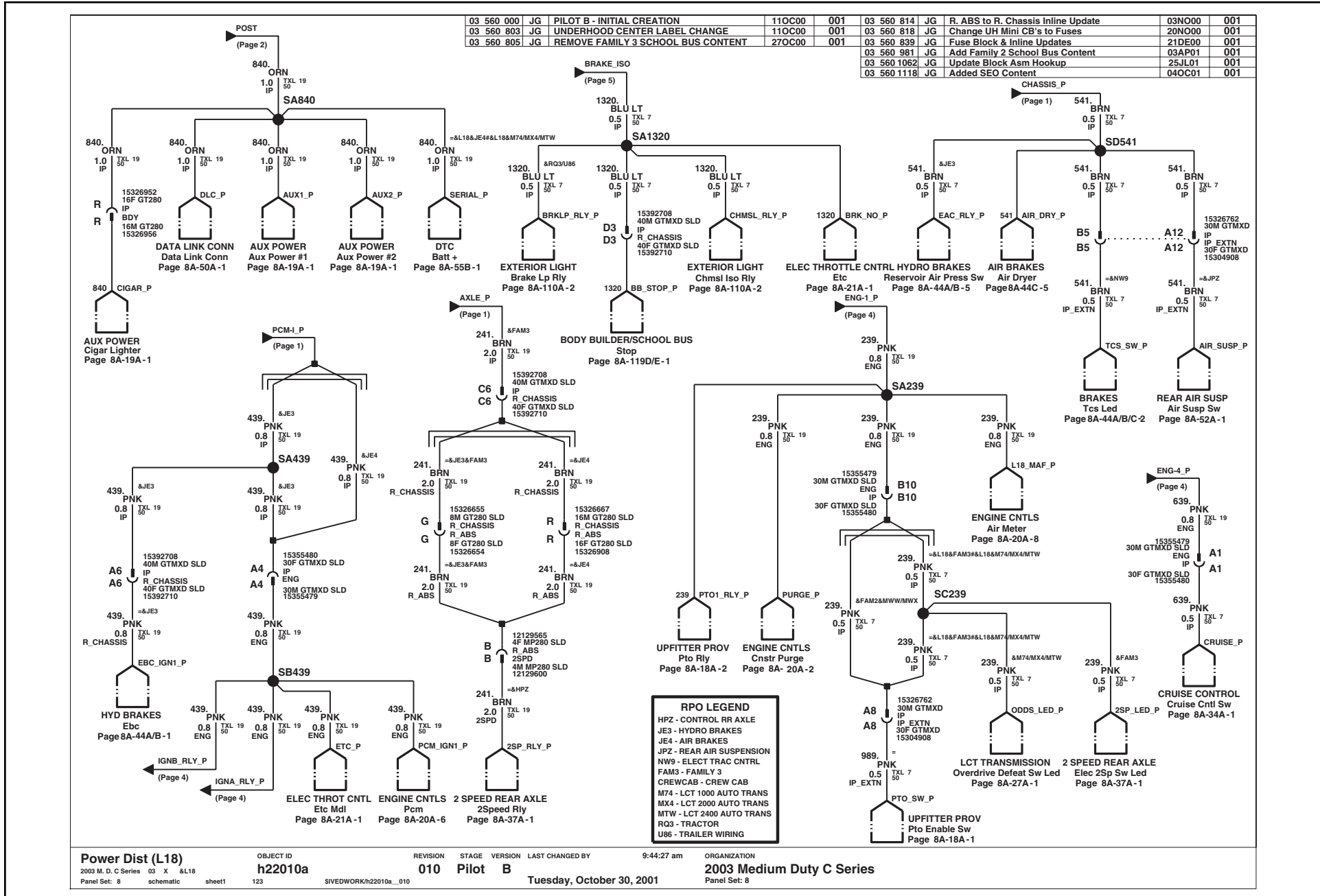
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ORGANIZATION
2003 Medium Duty C Series
Panel Set: 7

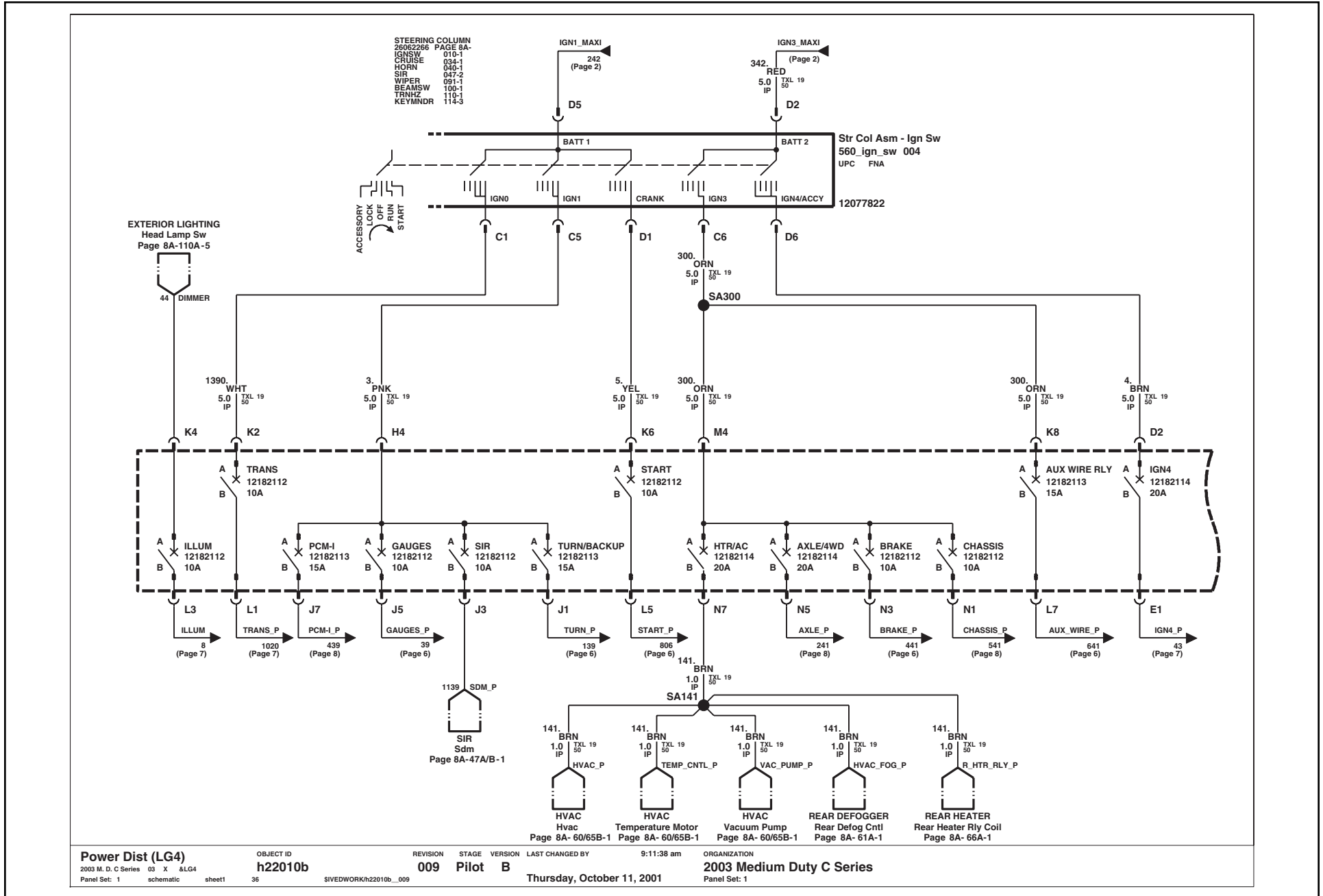
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Power Distribution – (L18) 8.1L-Gas/NAPT



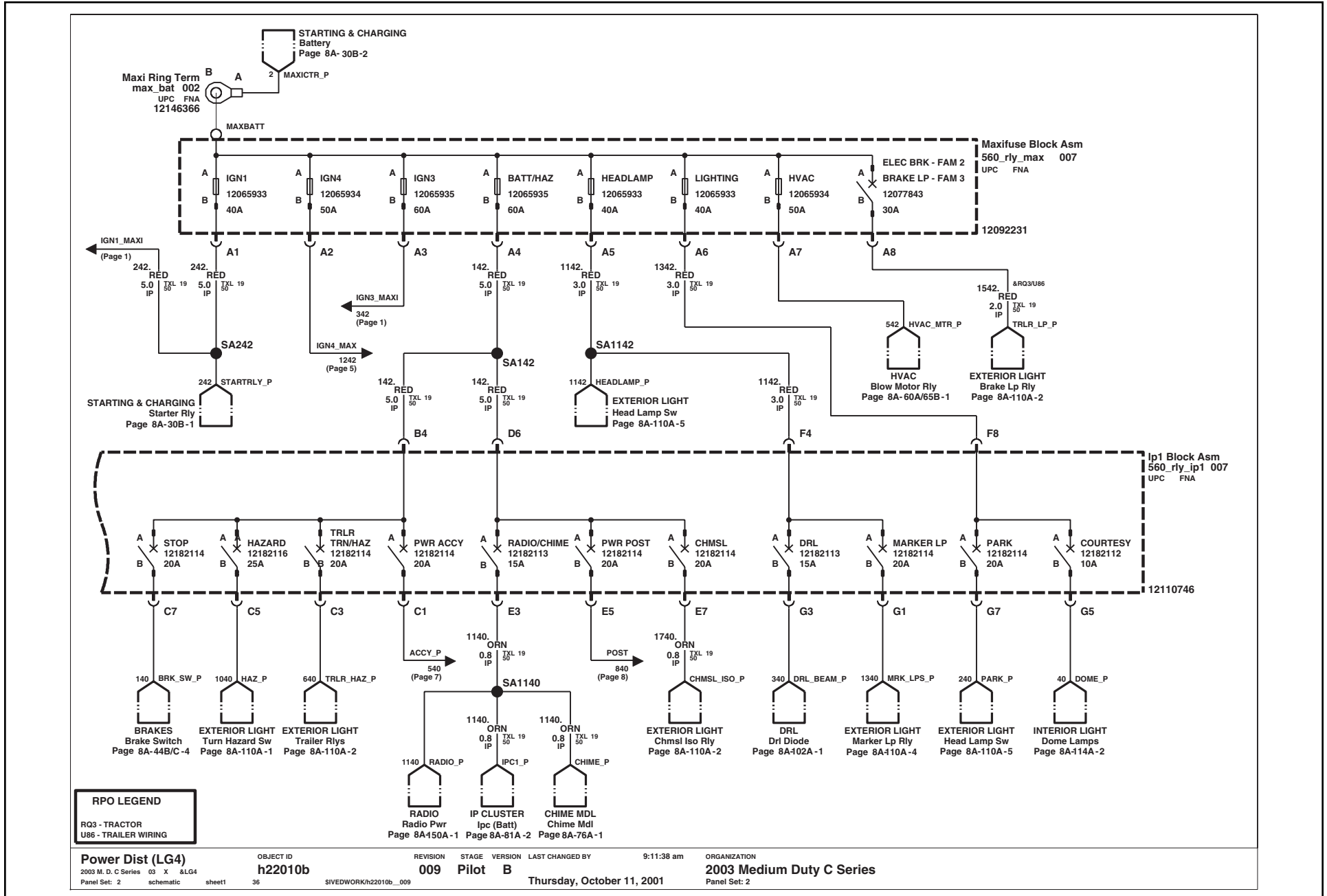
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution — (LG4-'03-'04) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LG4-'03-'04) 7.8L-Diesel/Duramax

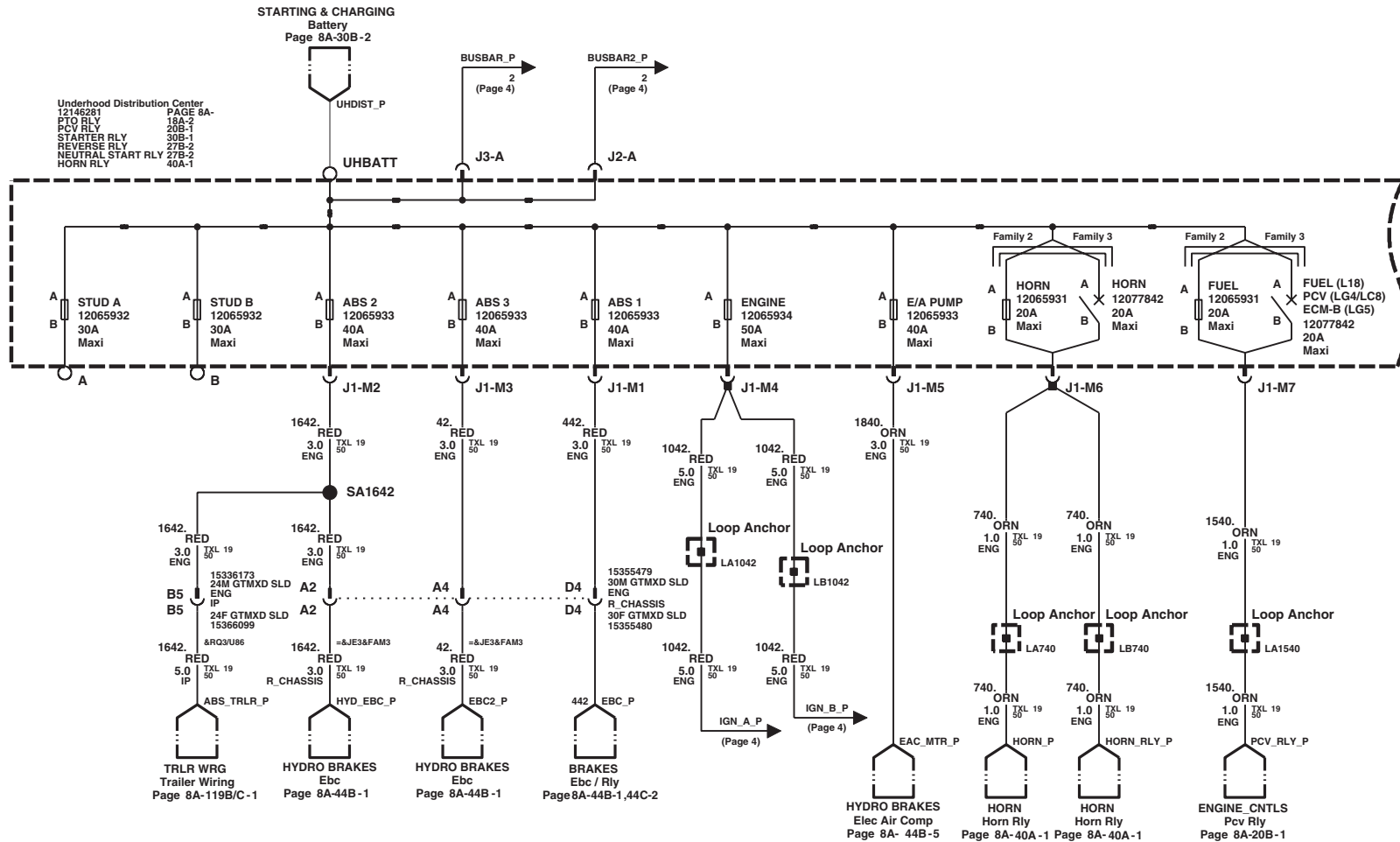


2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LG4-'03-'04) 7.8L-Diesel/Duramax

RPO LEGEND

- K40 - EXHAUST BRAKE
- NPE - EXHAUST RESTRICTOR
- JE3 - HYDRAULIC BRAKES
- RQ3 - TRACTOR WIRING
- U86 - TRAILER WIRING
- FAM3 - FAMILY 3

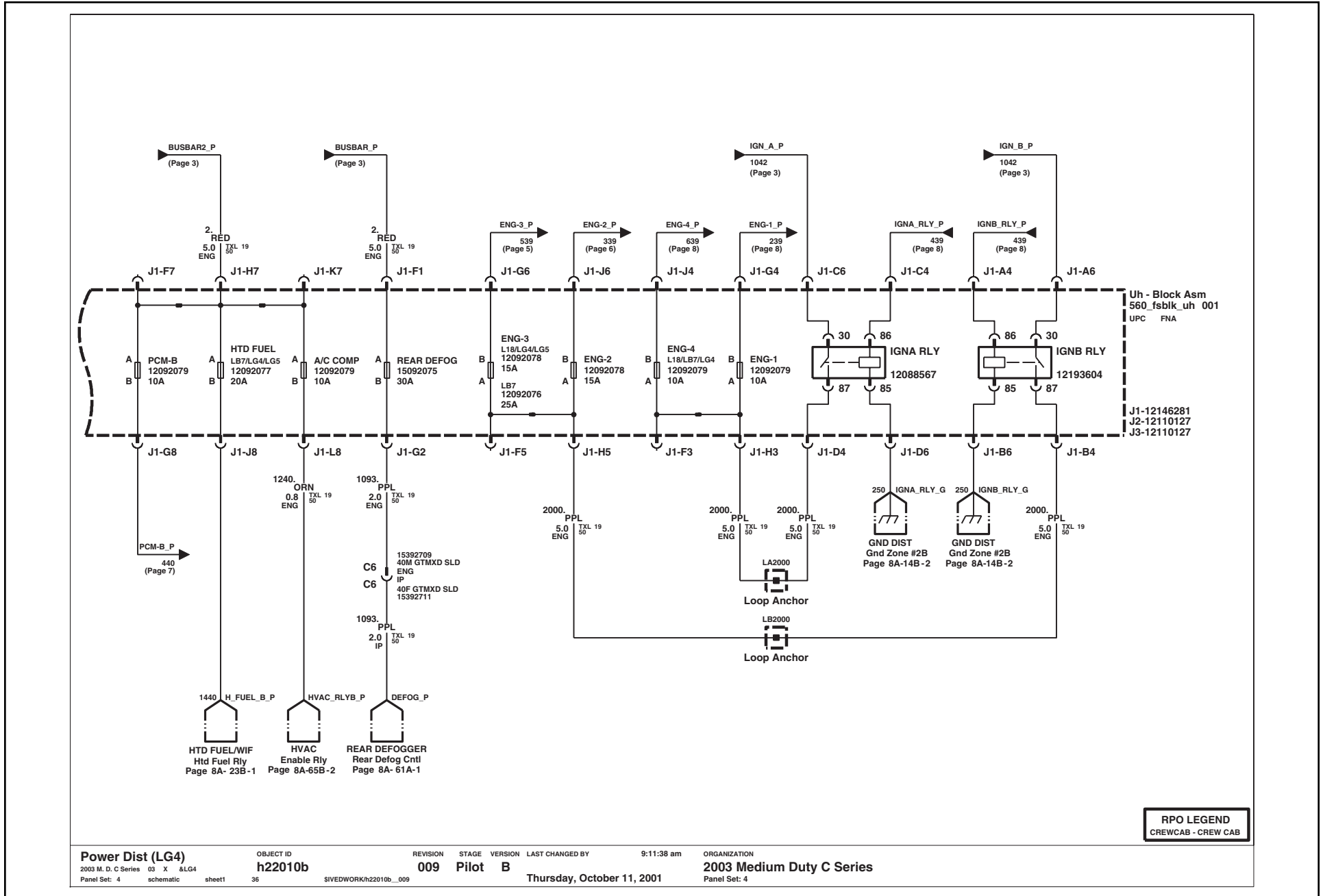


Power Dist (LG4)	OBJECT ID h22010b	REVISION 009	STAGE Pilot	VERSION B	LAST CHANGED BY Thursday, October 11, 2001	9:11:38 am	ORGANIZATION 2003 Medium Duty C Series
2003 M. D. C Series 03 X & LG4 Panel Set: 3 schematic sheet1	36	SIVEDWORK/h22010b_009					Panel Set: 3

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

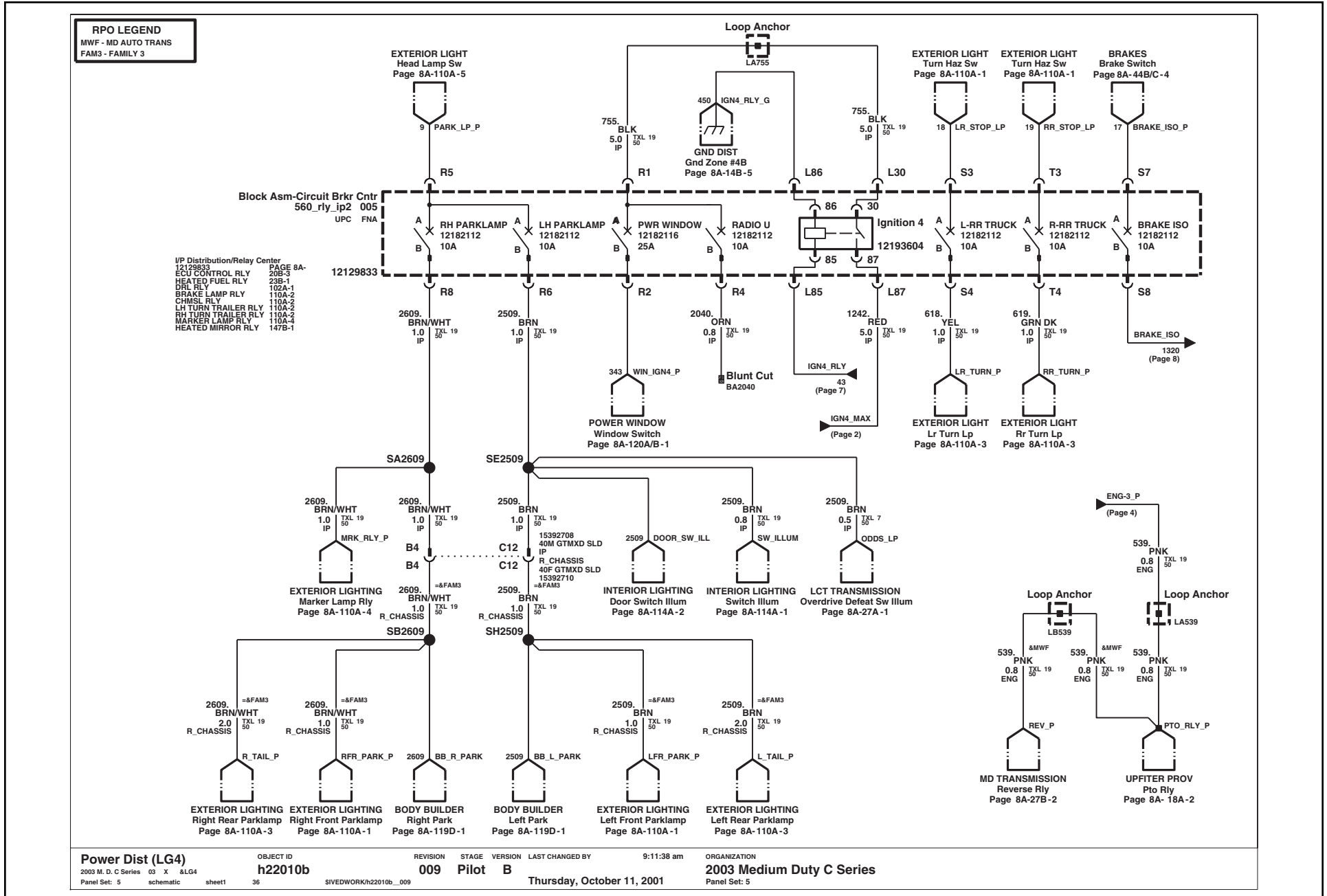
PAGE D-12

Power Distribution — (LG4-'03-'04) 7.8L-Diesel/Duramax



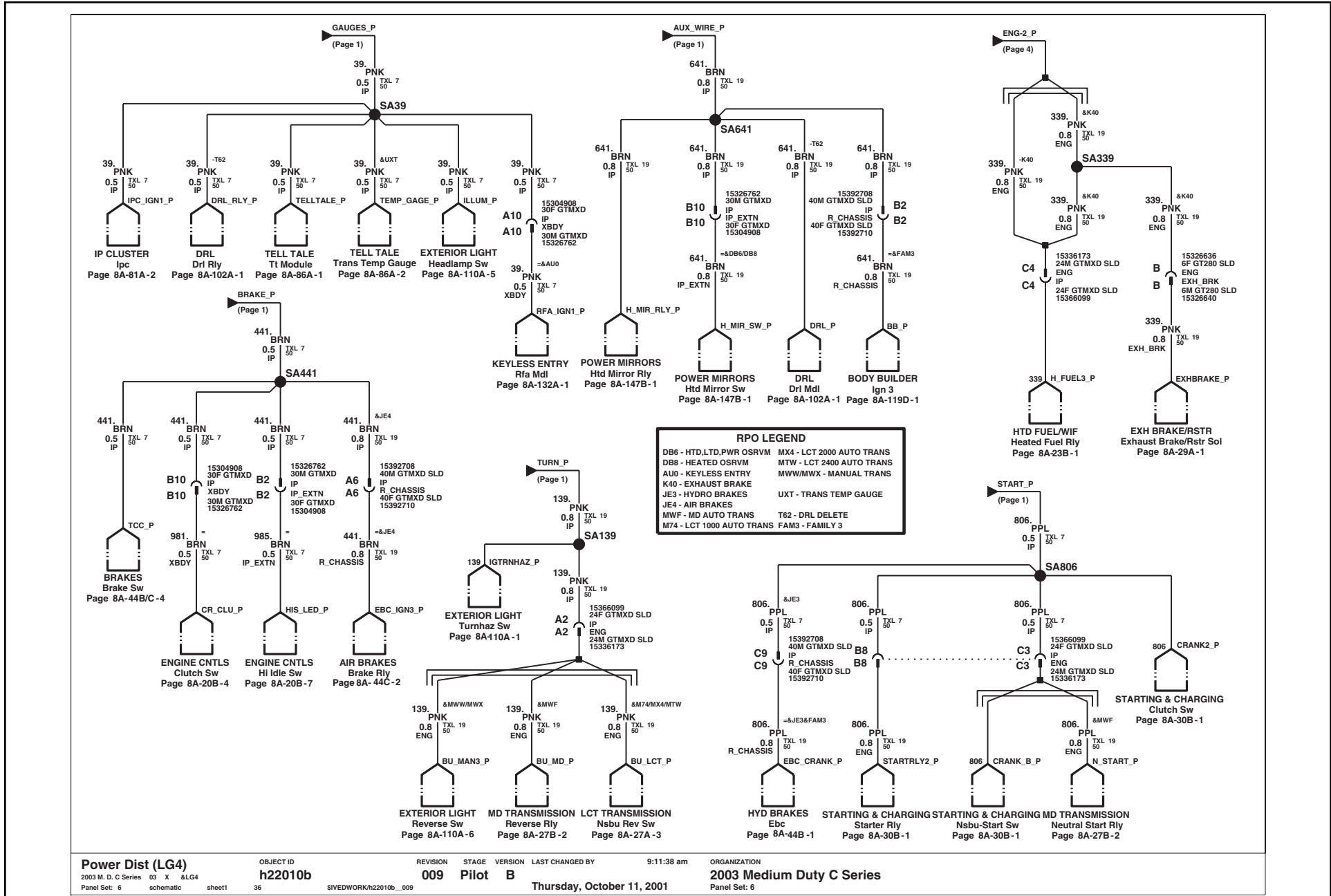
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution — (LG4-'03-'04) 7.8L-Diesel/Duramax



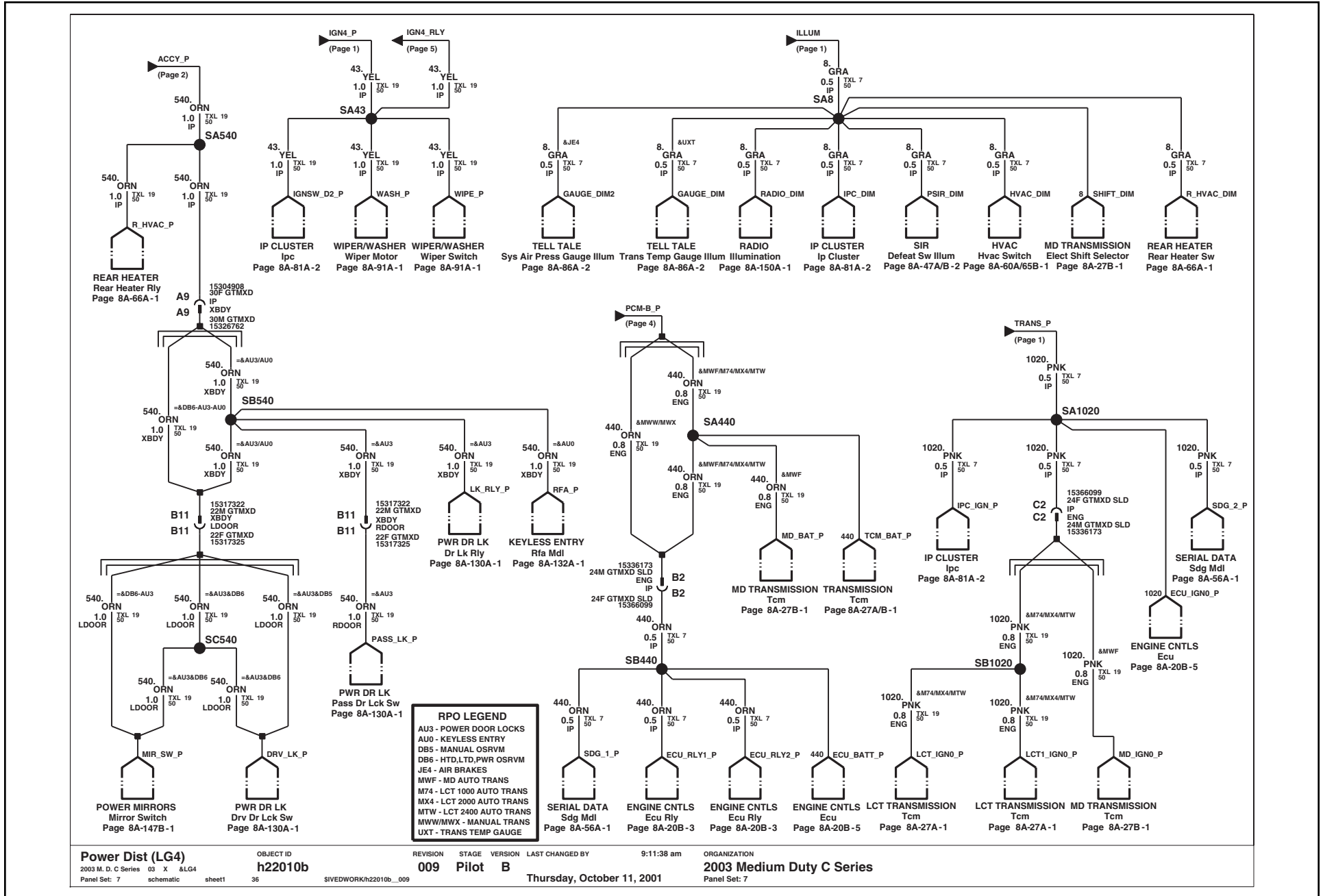
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution — (LG4-'03-'04) 7.8L-Diesel/Duramax



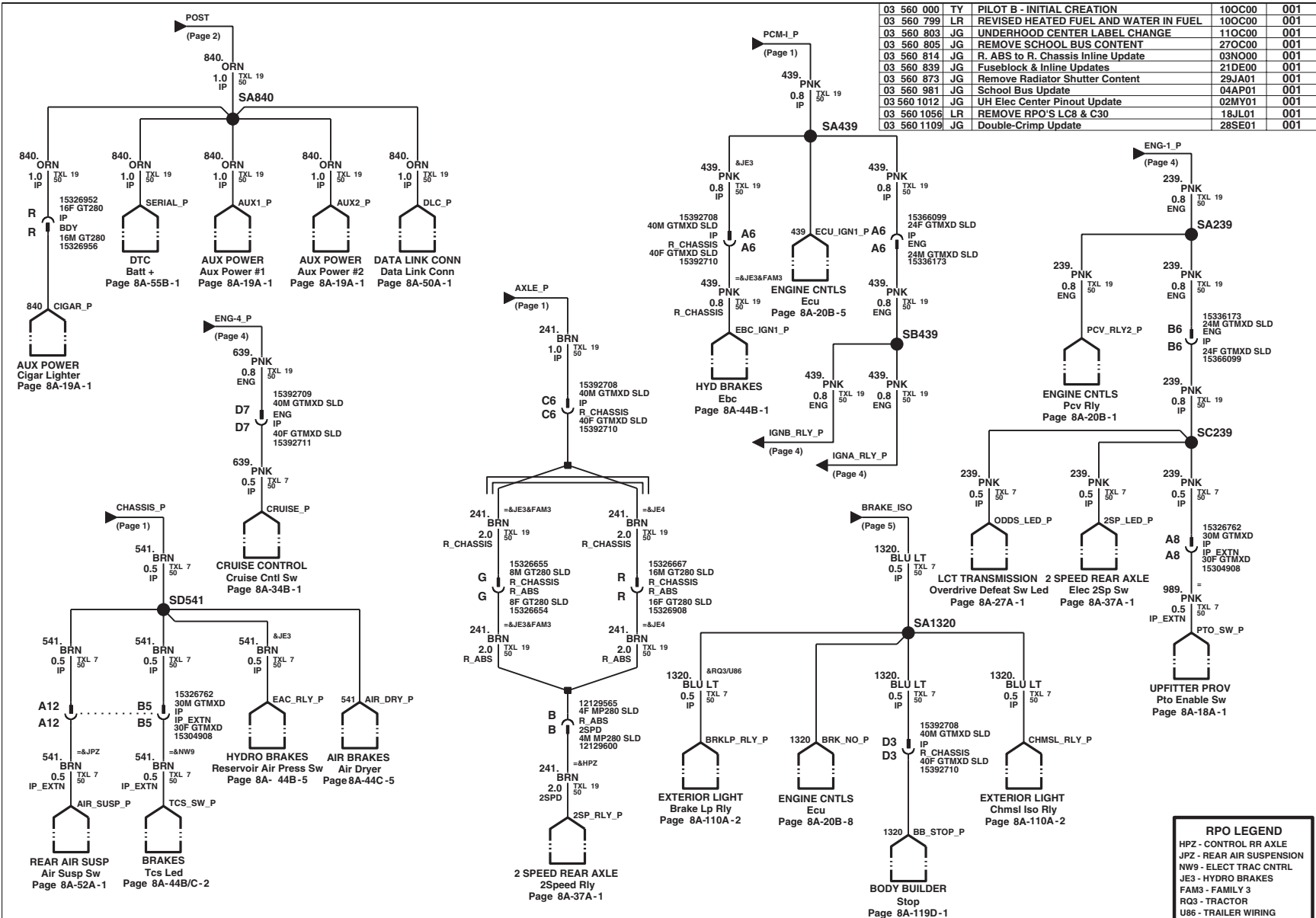
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LG4-'03-'04) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LG4-'03-'04) 7.8L-Diesel/Duramax

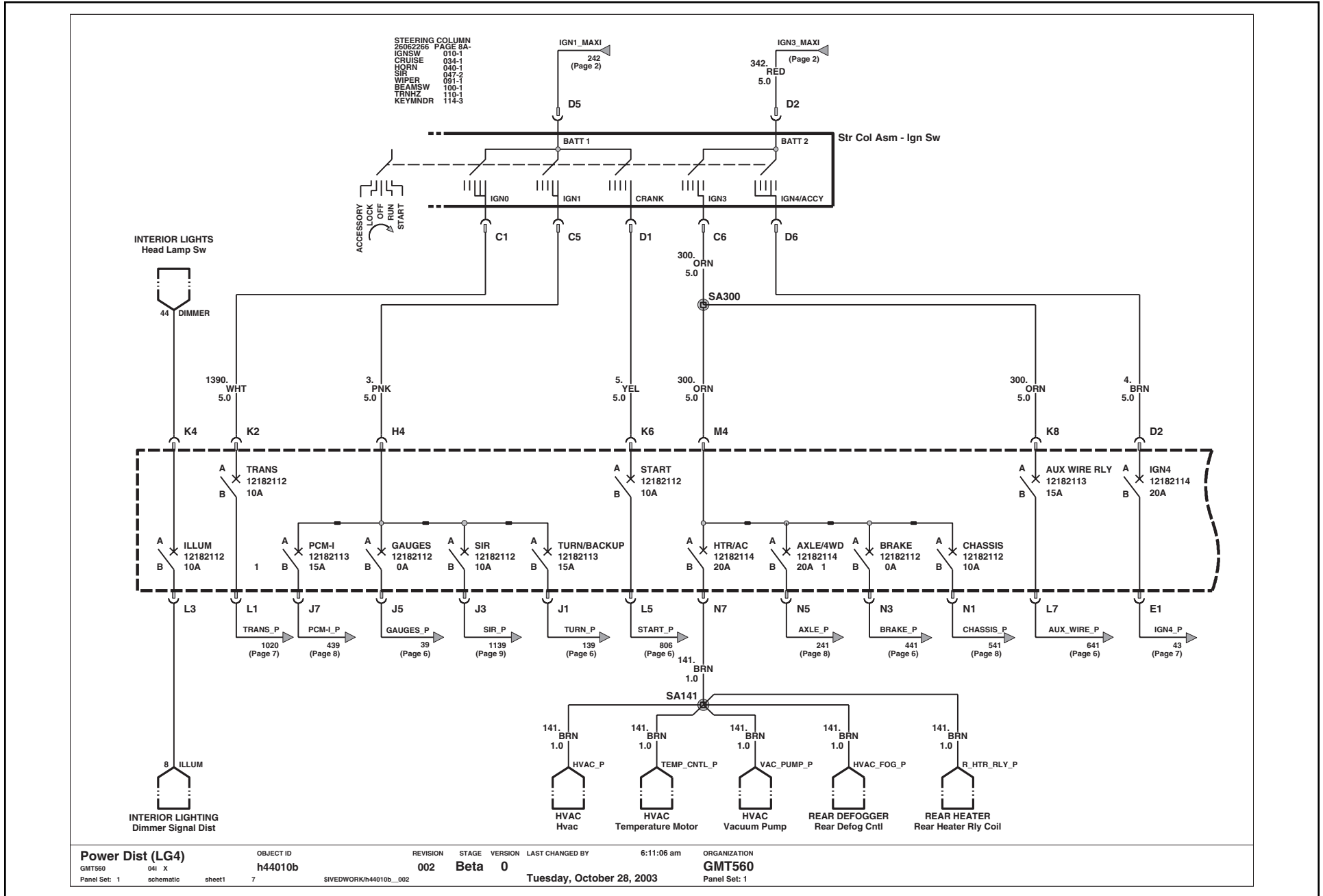


Part No.	Rev	TY	Description	Quantity	Notes
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03 560 799	LR		REVISED HEATED FUEL AND WATER IN FUEL	100C00	001
03 560 803	JG		UNDERHOOD CENTER LABEL CHANGE	110C00	001
03 560 805	JG		REMOVE SCHOOL BUS CONTENT	270C00	001
03 560 814	JG		R. ABS to R. Chassis Inline Update	03NO00	001
03 560 839	JG		Fuseblock & Inline Updates	21DE00	001
03 560 873	JG		Remove Radiator Shutter Content	29JA01	001
03 560 981	JG		School Bus Update	04AP01	001
03 560 1012	JG		UH Elec Center Pinout Update	02MY01	001
03 560 1056	LR		REMOVE RPO'S LC8 & C30	18JL01	001
03 560 1109	JG		Double-Crimp Update	28SE01	001

RPO LEGEND	
HPZ	- CONTROL RR AXLE
JPZ	- REAR AIR SUSPENSION
NW9	- ELECT TRAC CNTRL
JES	- HYDRO BRAKES
FAM3	- FAMILY 3
RQ3	- TRACTOR
U86	- TRAILER WIRING

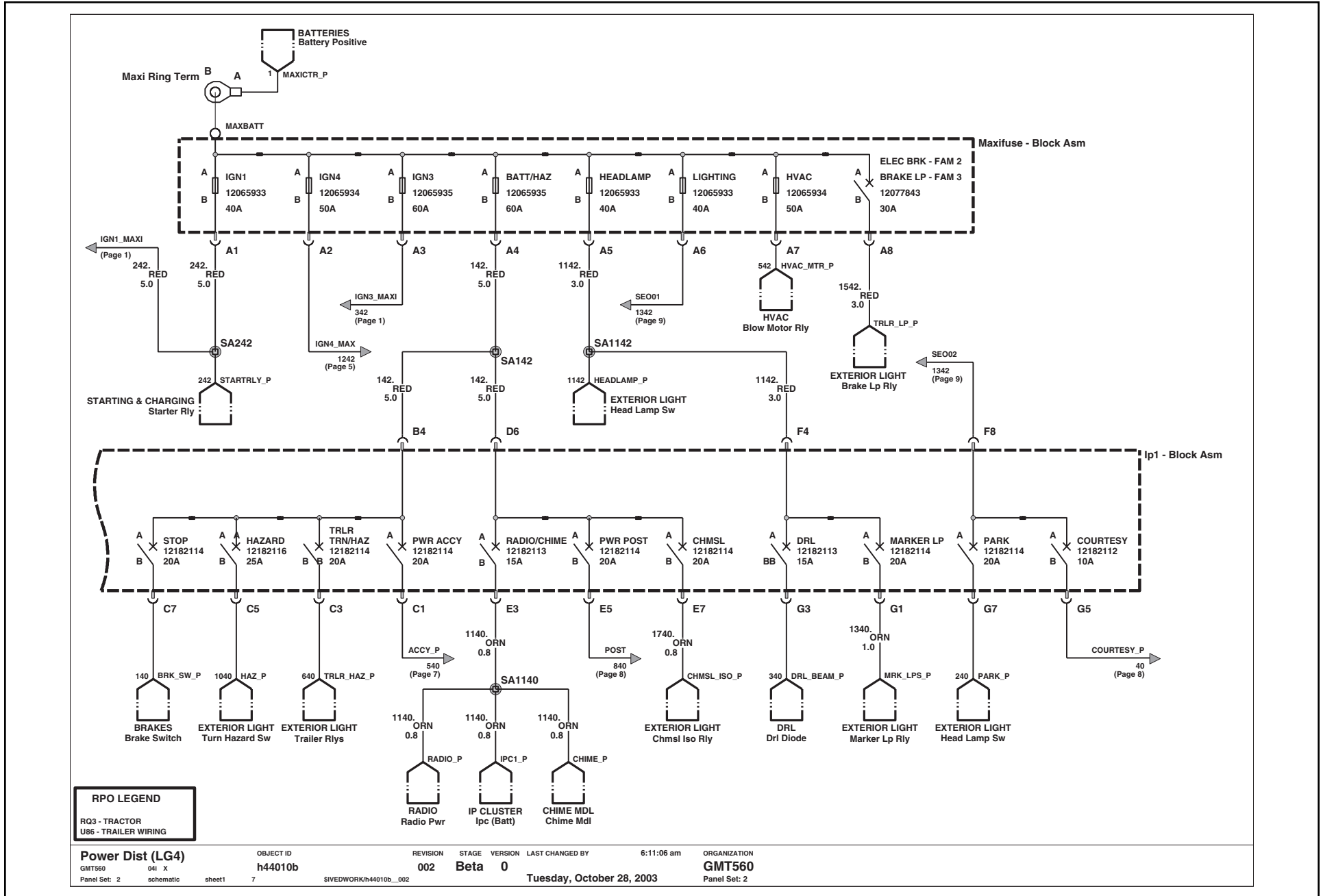
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution — (LG4-'04i) 7.8L-Diesel/Duramax



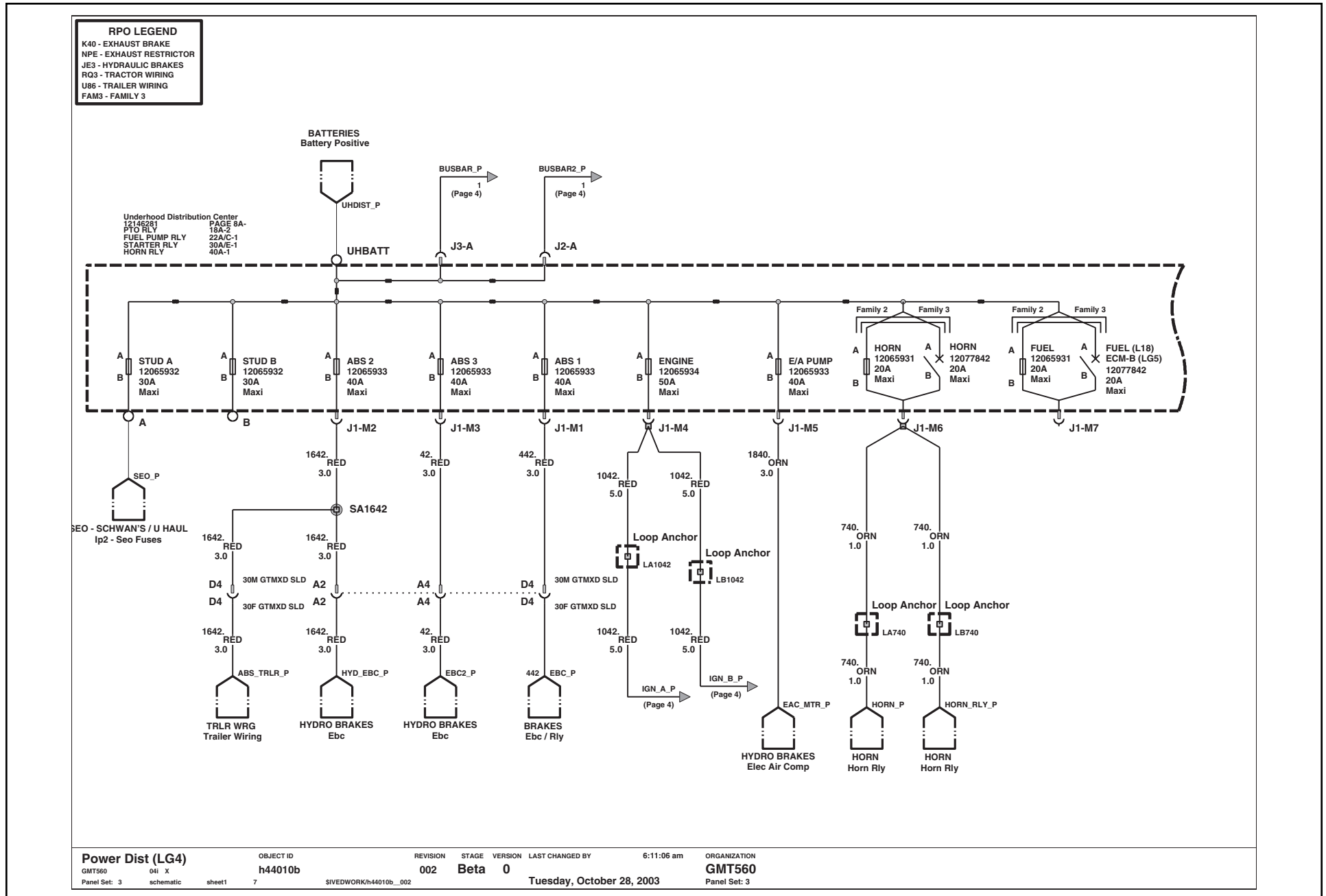
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LG4-'04i) 7.8L-Diesel/Duramax



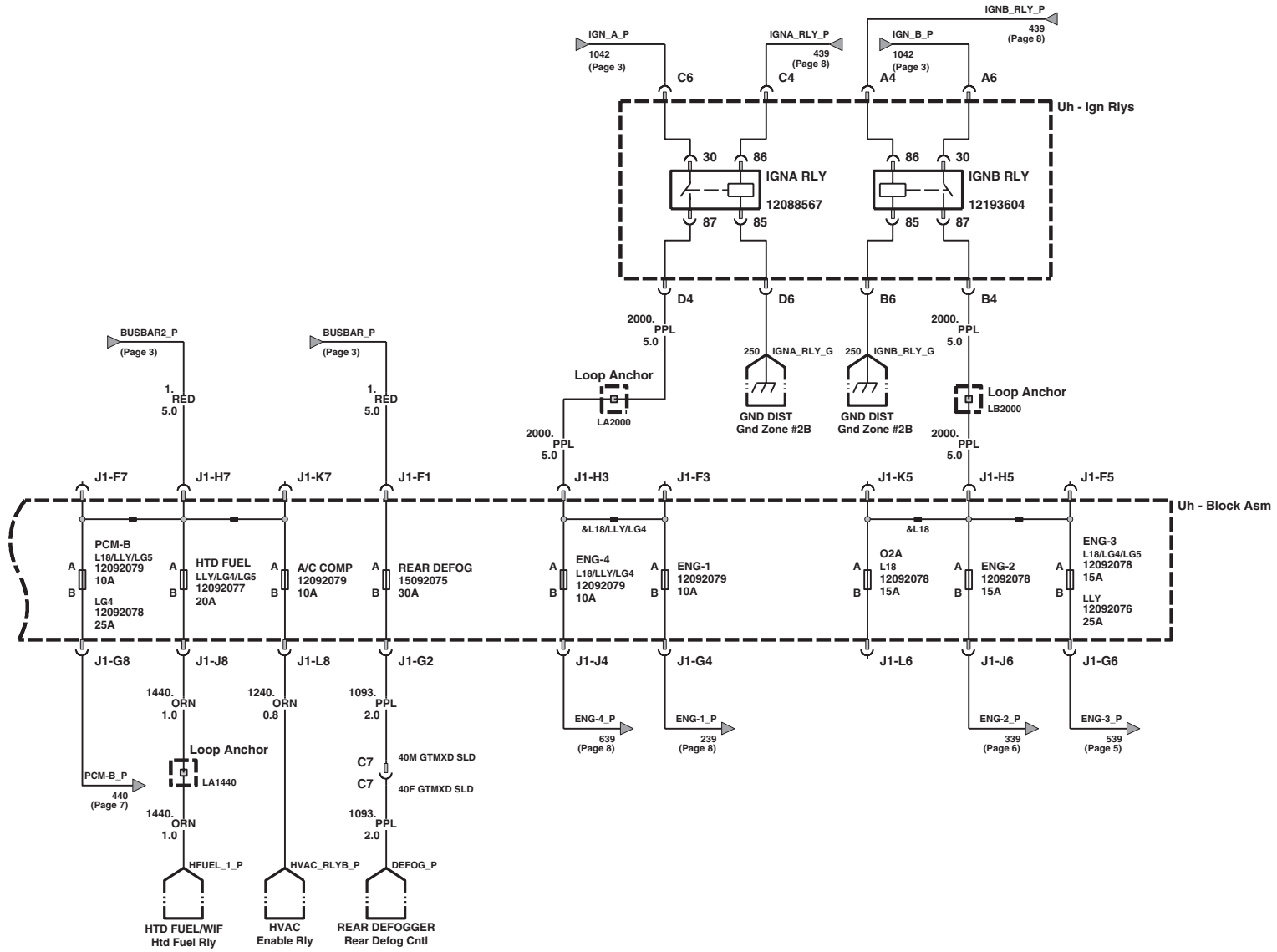
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LG4-'04i) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LG4-'04i) 7.8L-Diesel/Duramax



RPO LEGEND
CREWCAB - CREW CAB

Power Dist (LG4)
GMT560
Panel Set: 4

OBJECT ID
h44010b

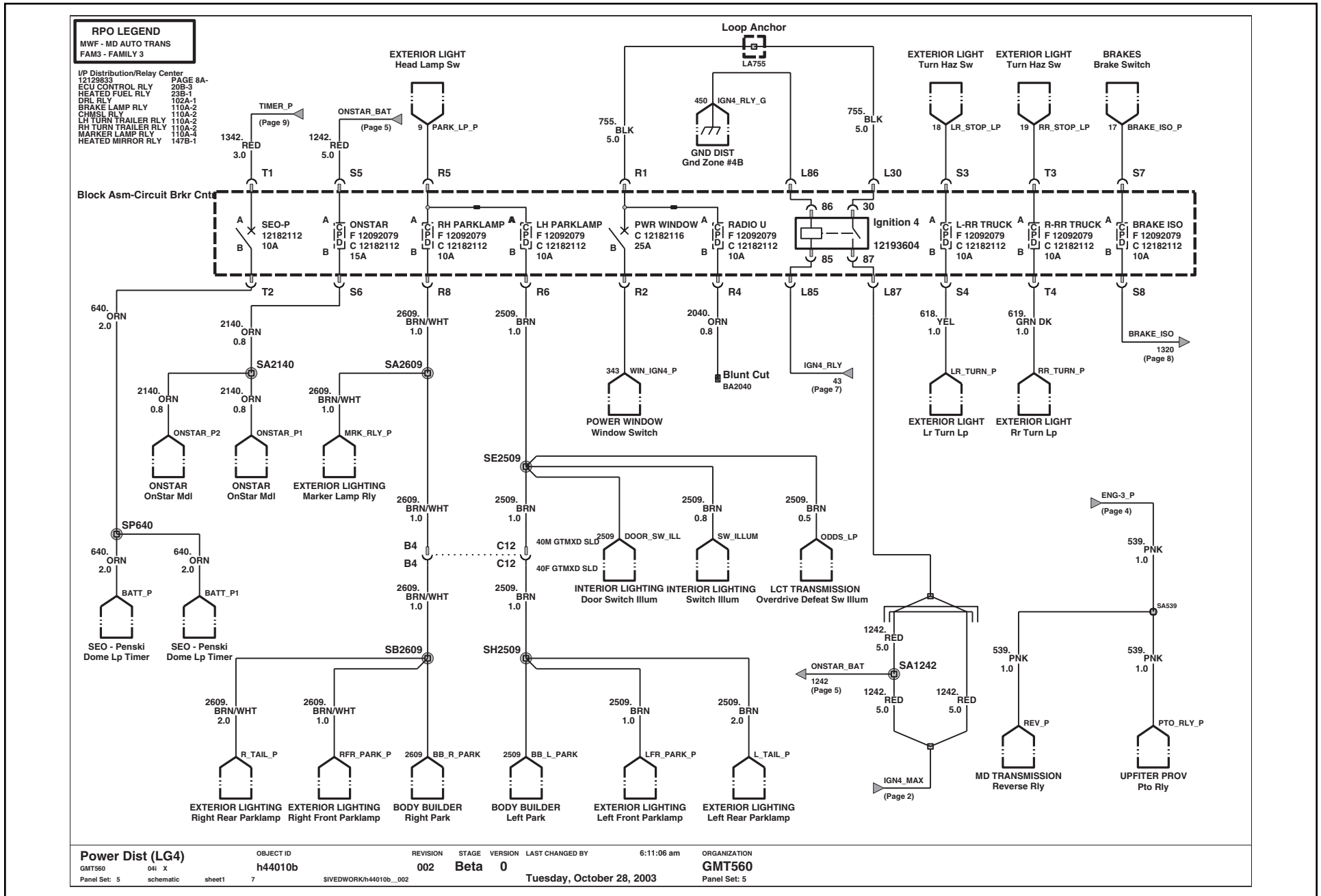
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002 Beta 0
Tuesday, October 28, 2003

6:11:06 am

ORGANIZATION
GMT560
Panel Set: 4

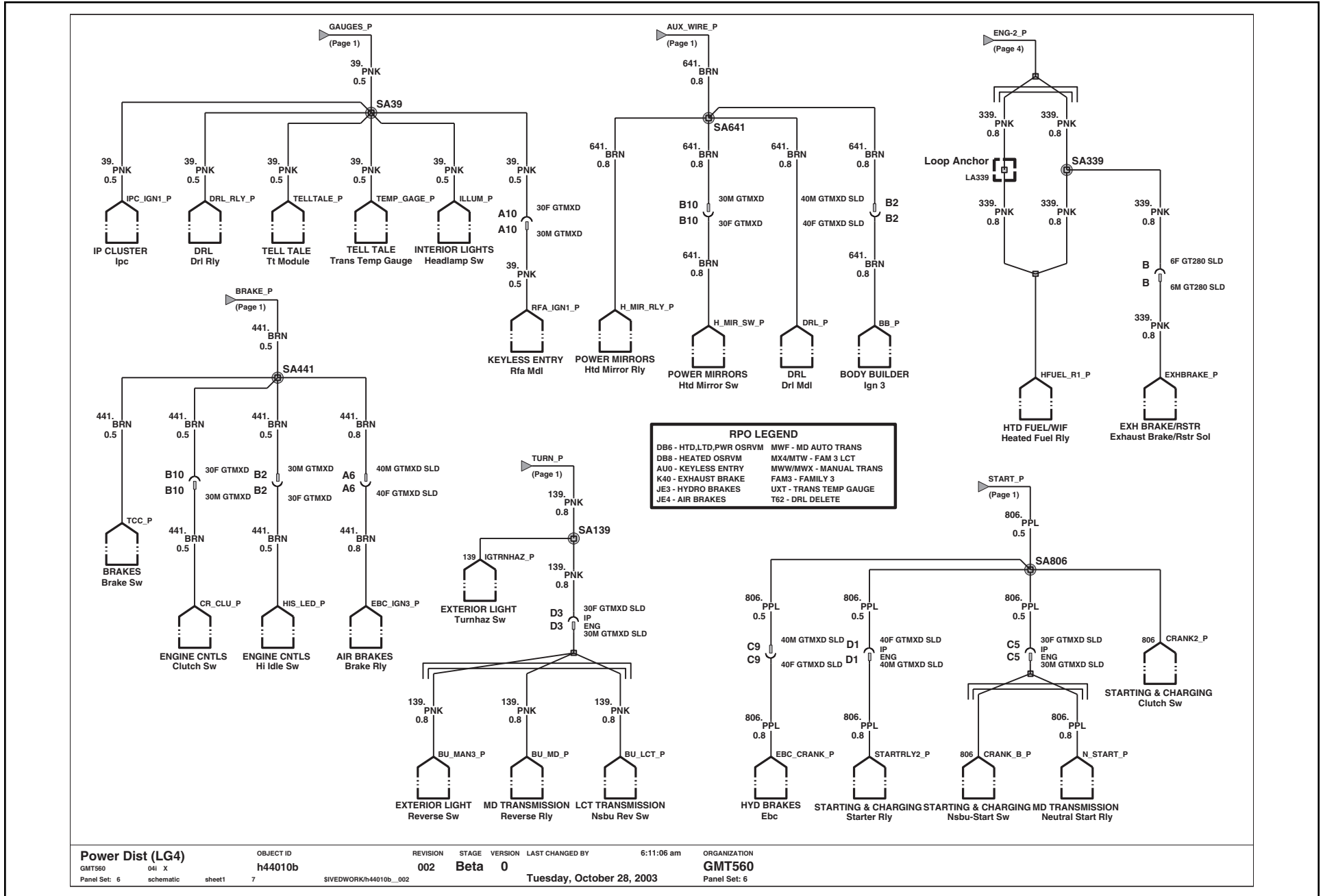
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LG4-'04i) 7.8L-Diesel/Duramax



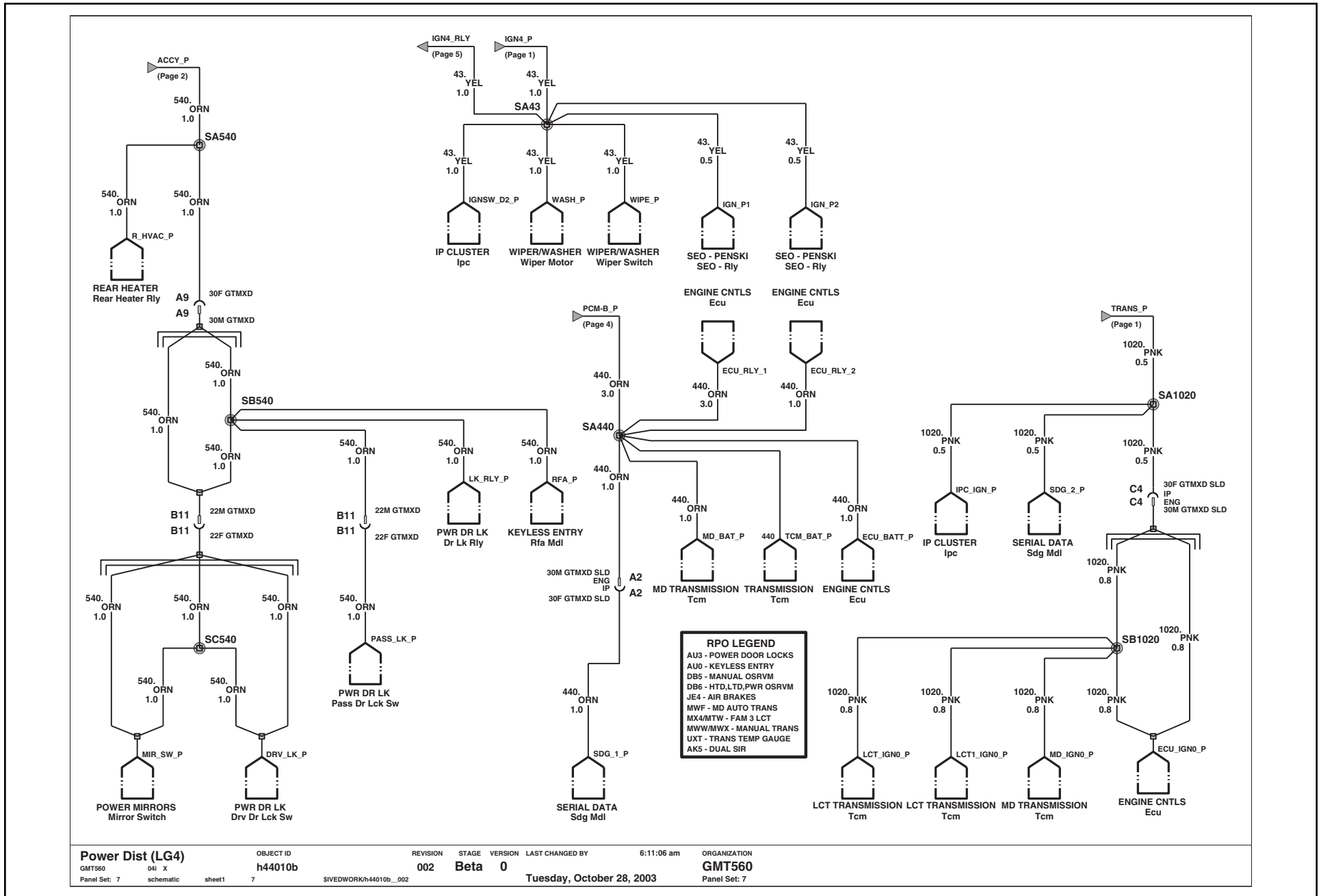
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LG4-'04i) 7.8L-Diesel/Duramax



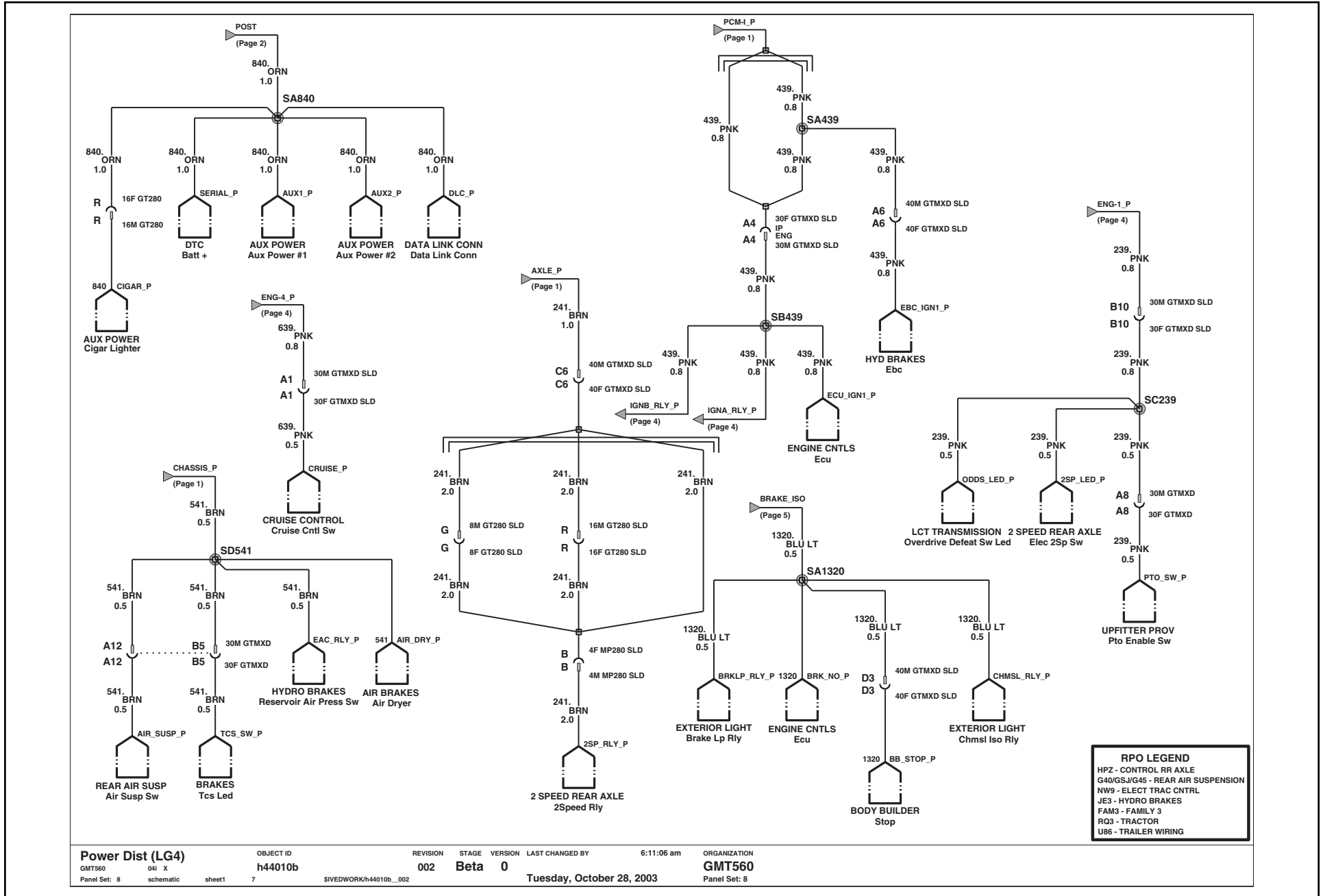
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LG4-'04i) 7.8L-Diesel/Duramax



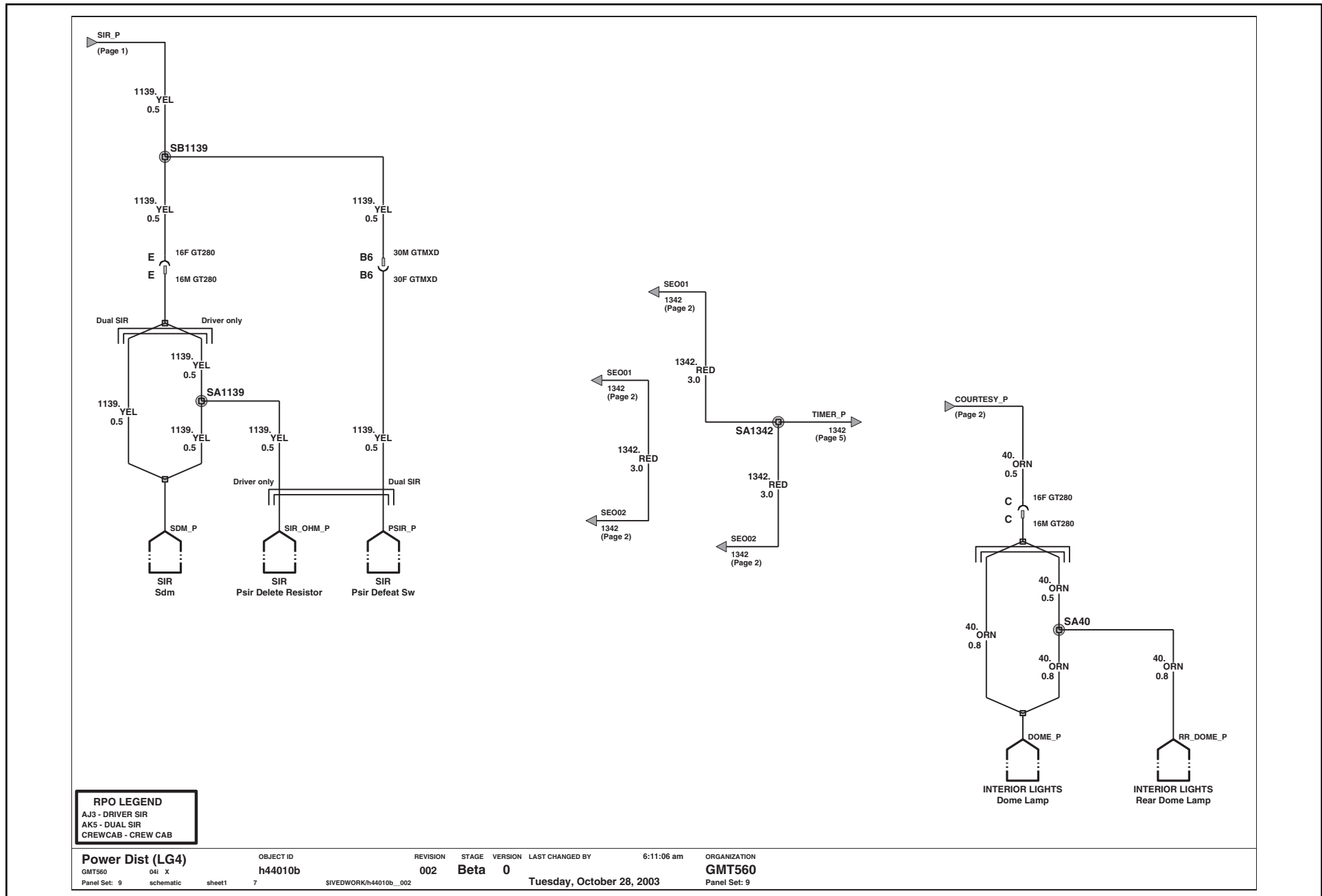
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LG4-'04i) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

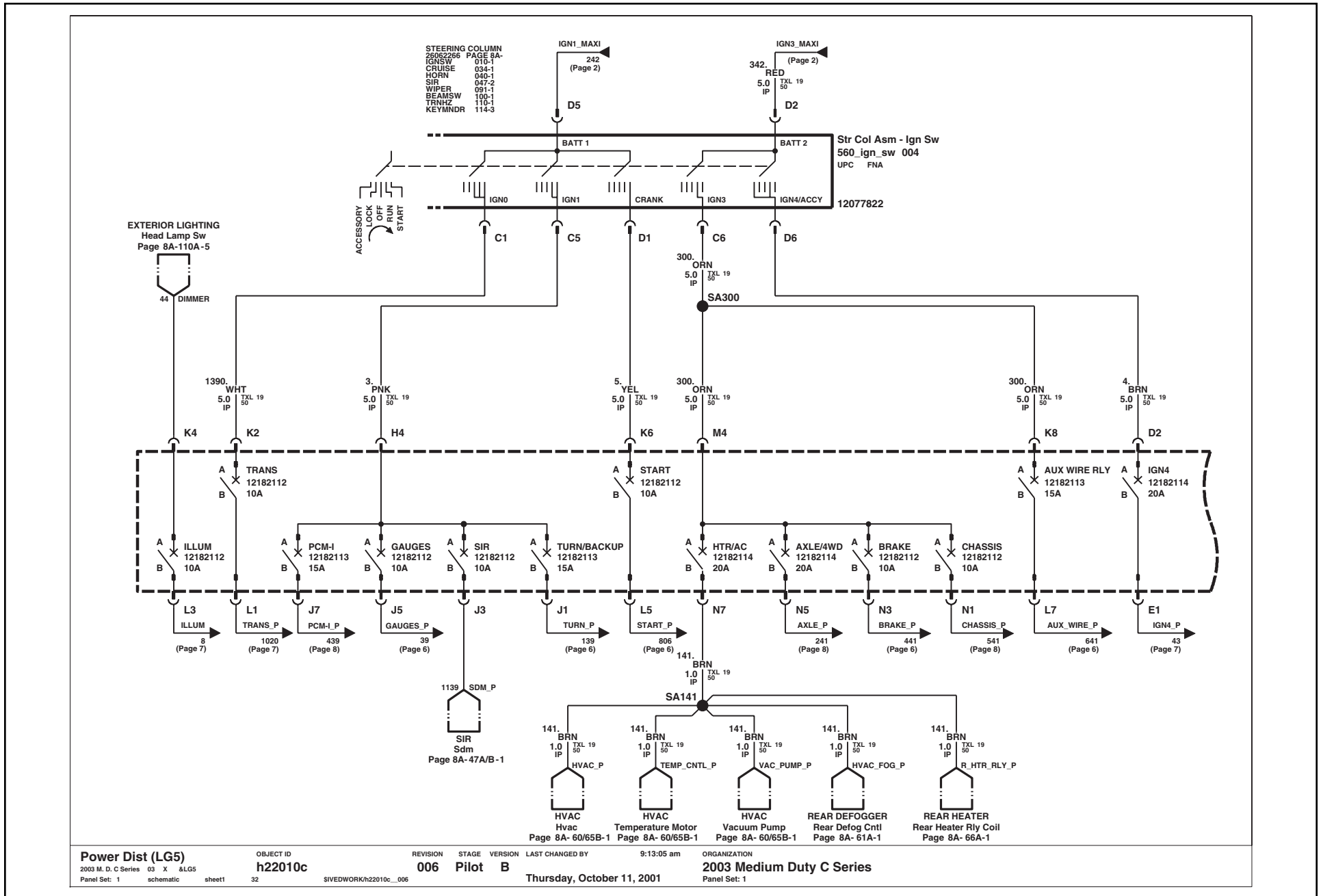
Power Distribution – (LG4-'04i) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE D-26

Power Distribution — (LG5) 7.2L-Diesel/CAT



Power Dist (LG5)

OBJECT ID
h22010c

REVISION STAGE VERSION
006 Pilot B

LAST CHANGED BY 9:13:05 am
Thursday, October 11, 2001

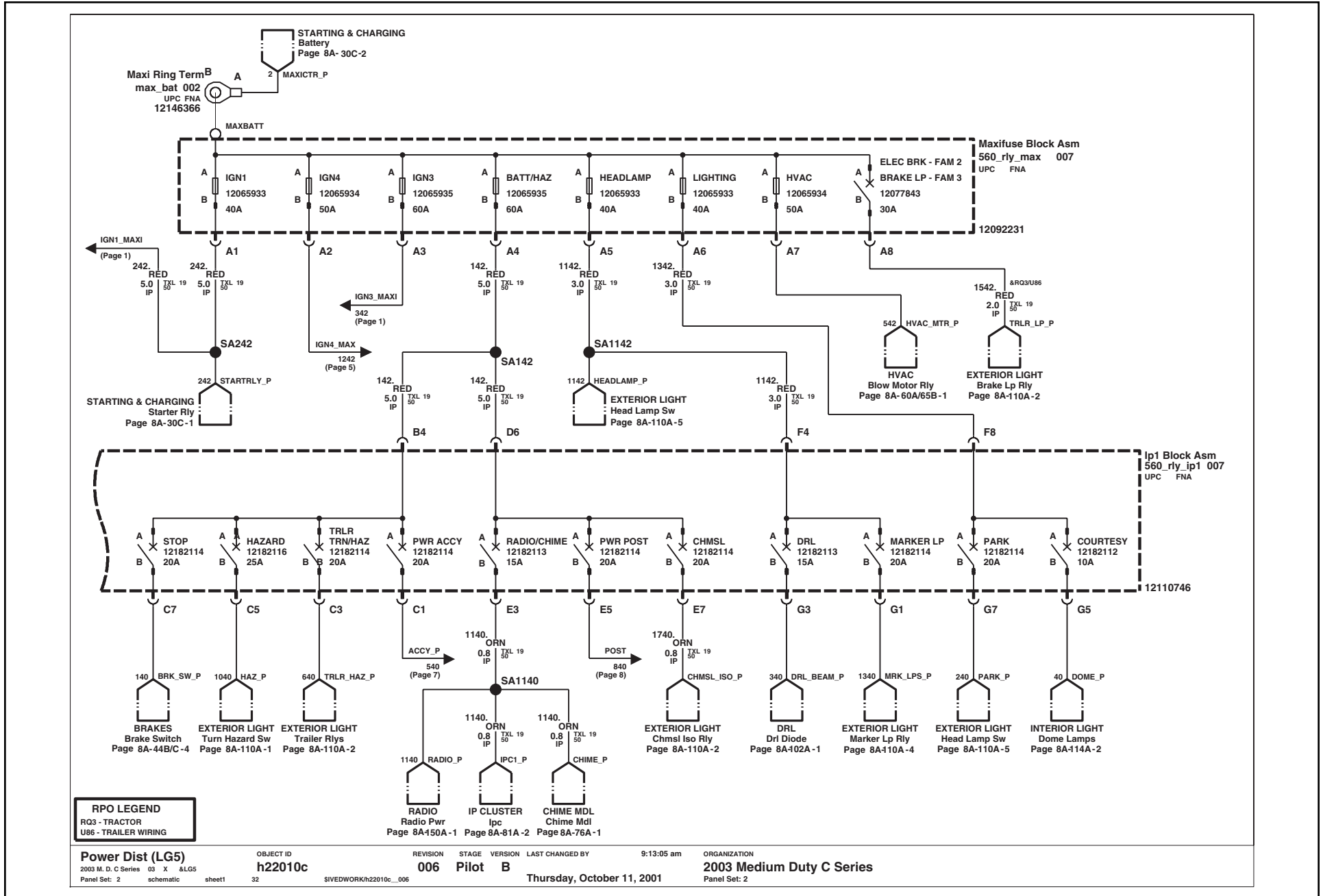
ORGANIZATION
2003 Medium Duty C Series

2003 M. D. C Series 03 X & LG5
Panel Set: 1 schematic sheet1

32 SIVEDWORK/h22010c_006

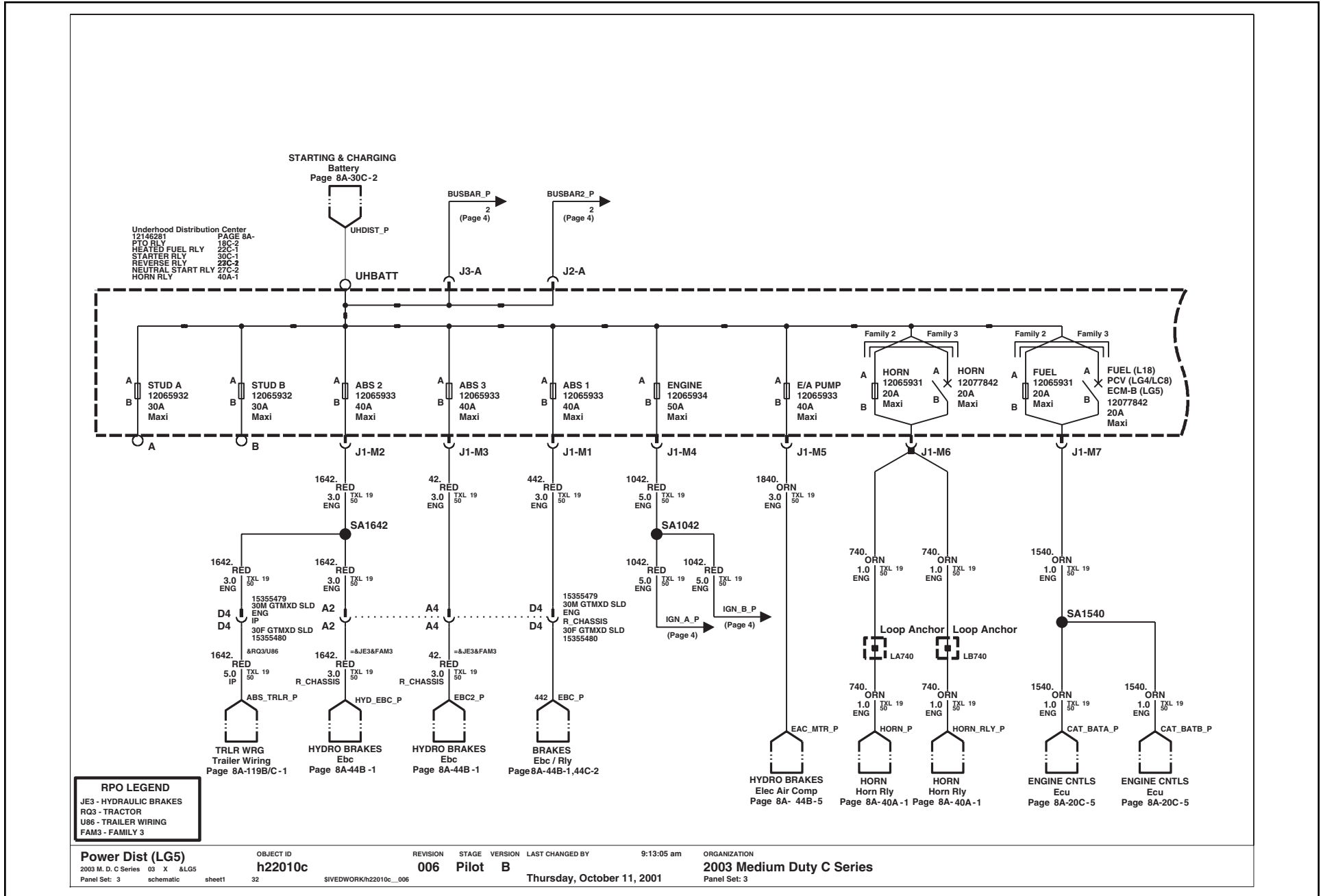
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LG5) 7.2L-Diesel/CAT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

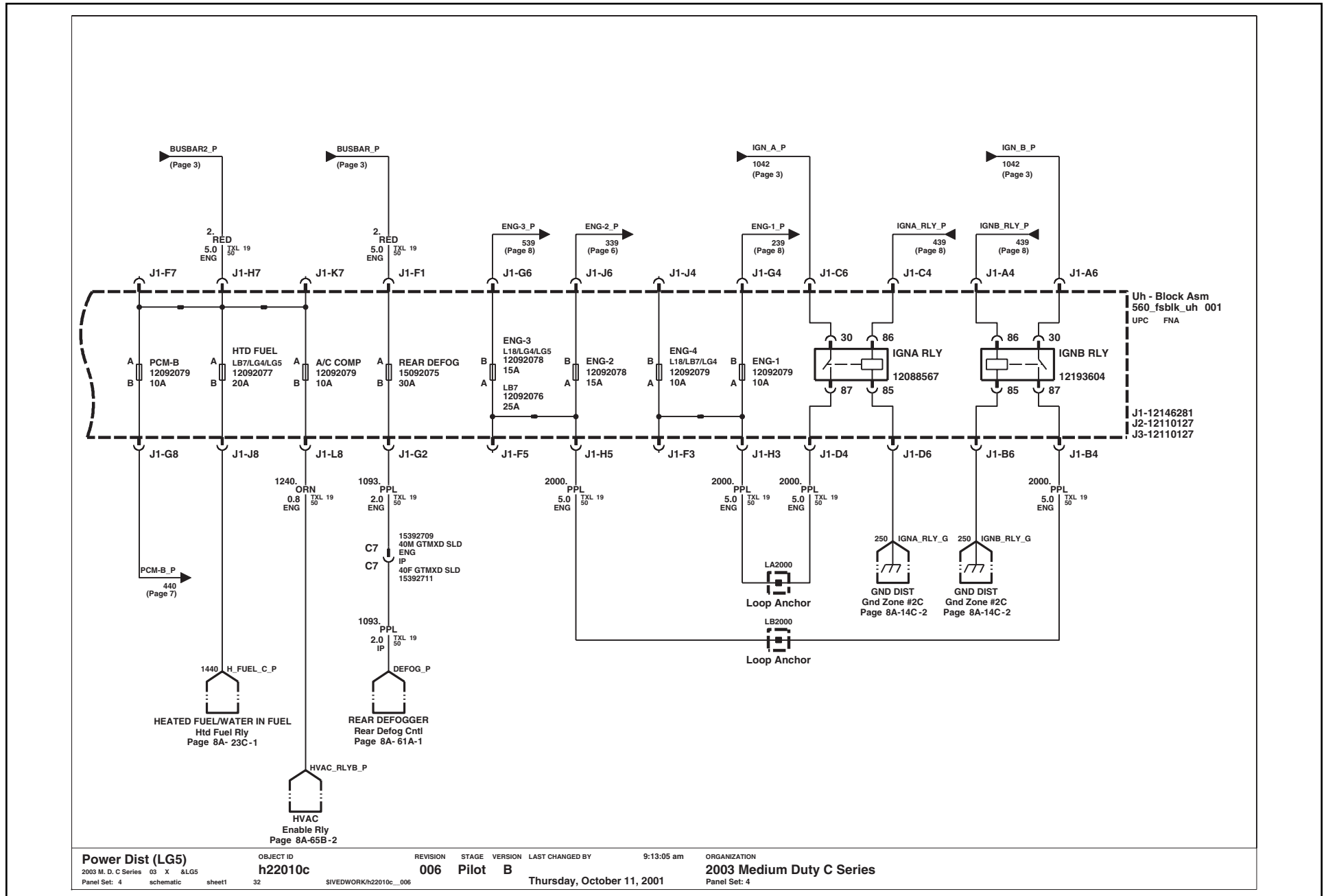
Power Distribution — (LG5) 7.2L-Diesel/CAT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

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Power Distribution — (LG5) 7.2L-Diesel/CAT



Power Dist (LG5)
2003 M. D. C Series 03 X & LG5
Panel Set: 4 schematic sheet1

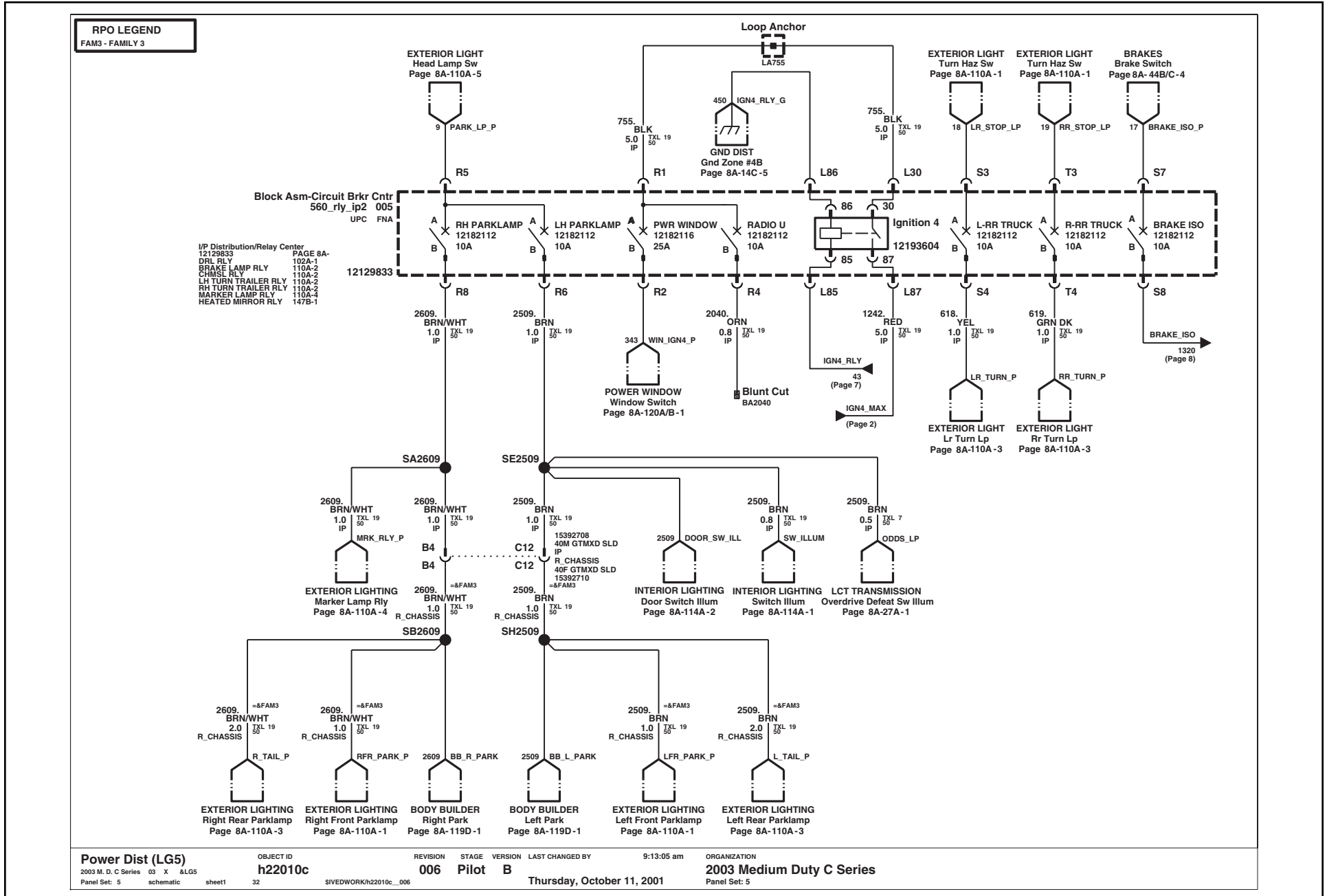
OBJECT ID
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32 SIVEDWORK/h22010c_006

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Thursday, October 11, 2001

9:13:05 am ORGANIZATION
2003 Medium Duty C Series
Panel Set: 4

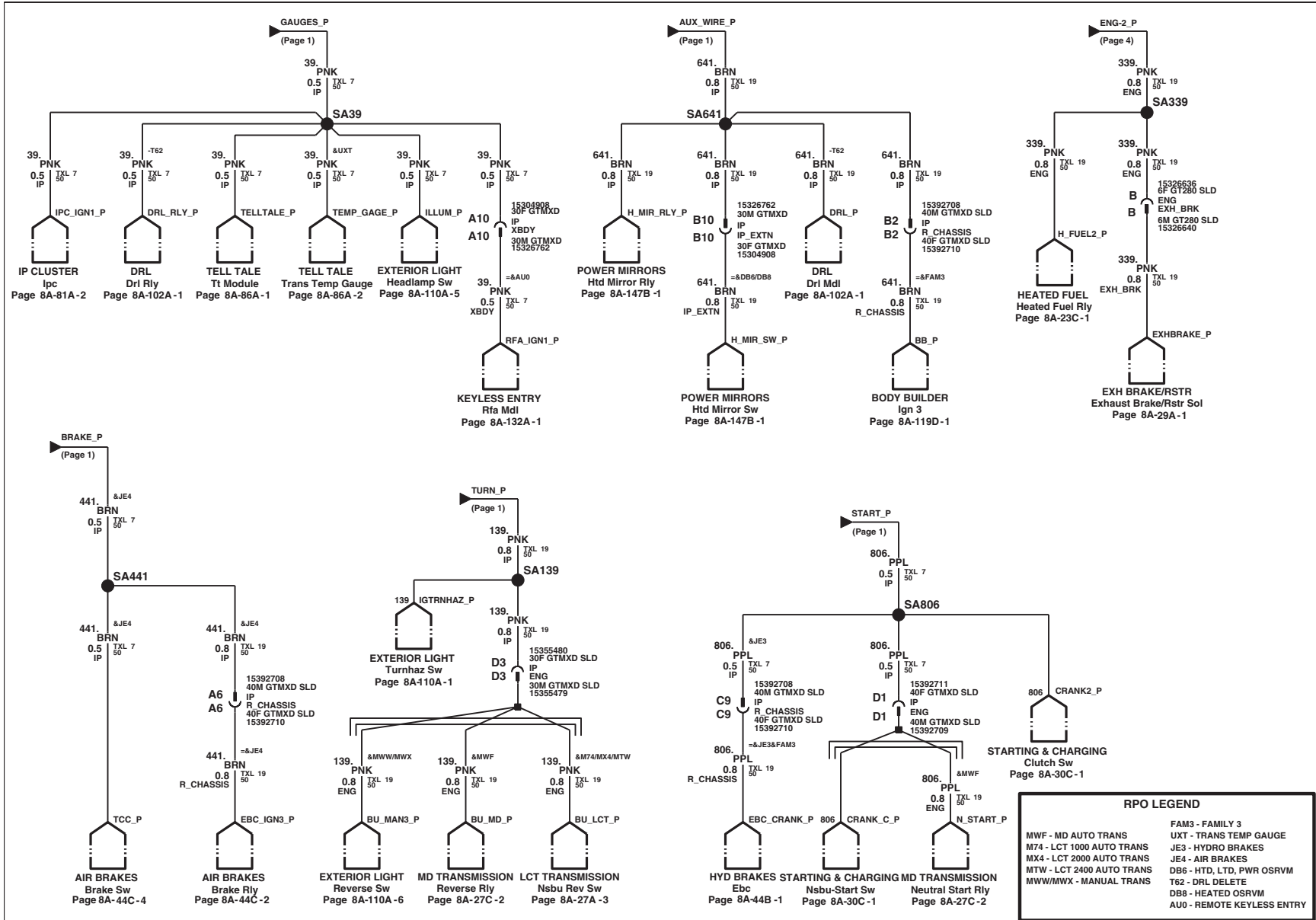
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Power Distribution – (LG5) 7.2L-Diesel/CAT



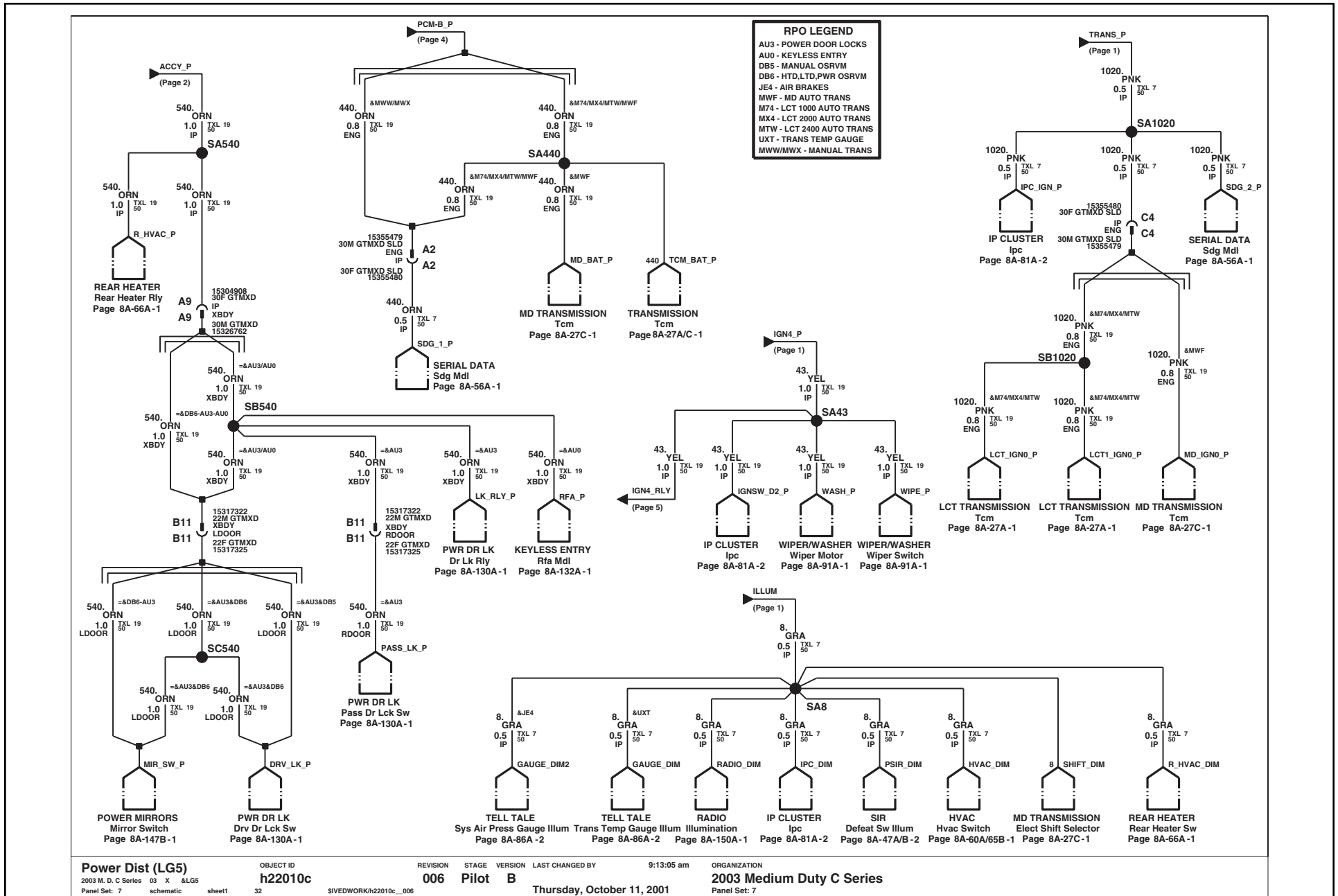
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LG5) 7.2L-Diesel/CAT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

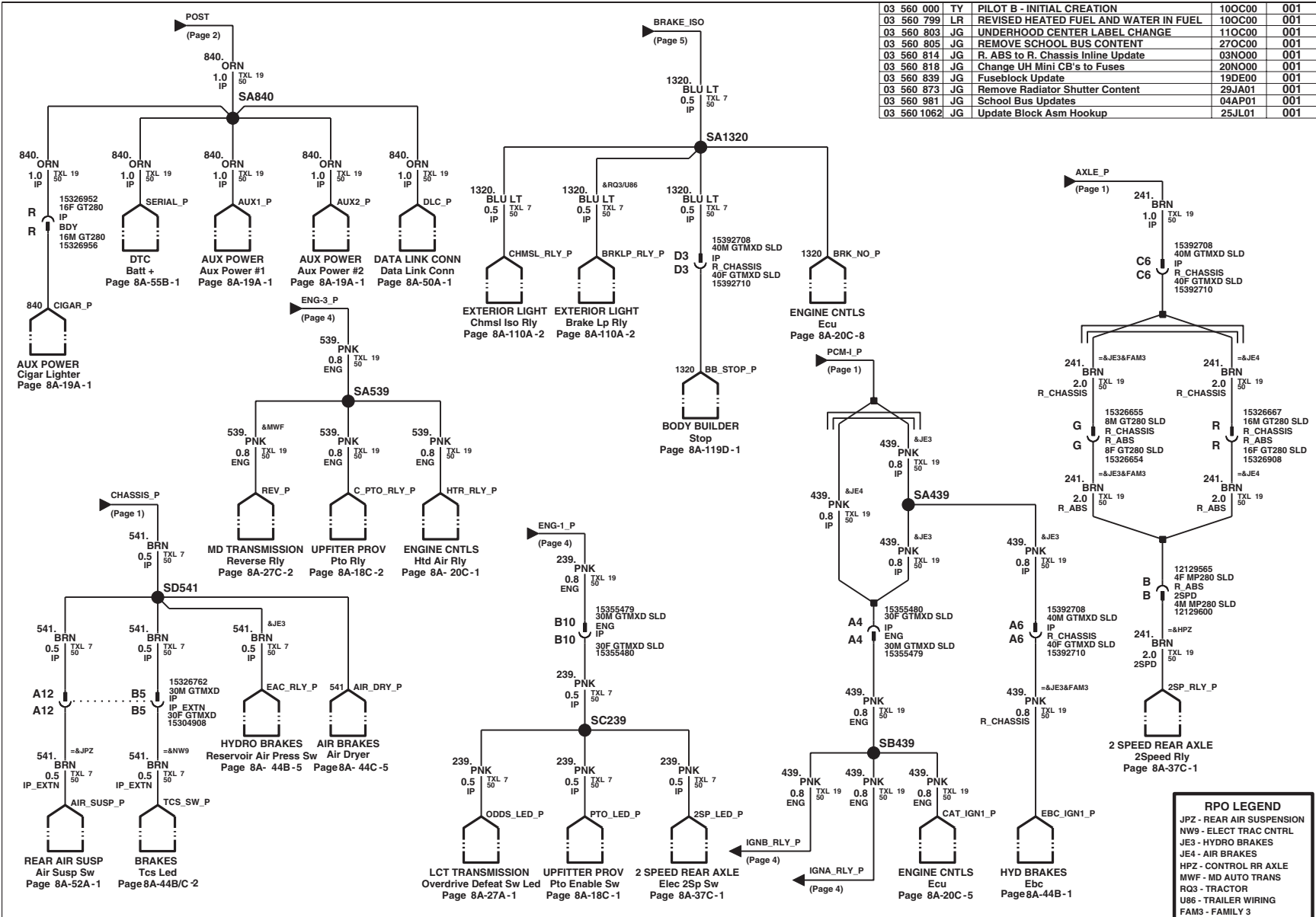
Power Distribution — (LG5) 7.2L-Diesel/CAT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LG5) 7.2L-Diesel/CAT

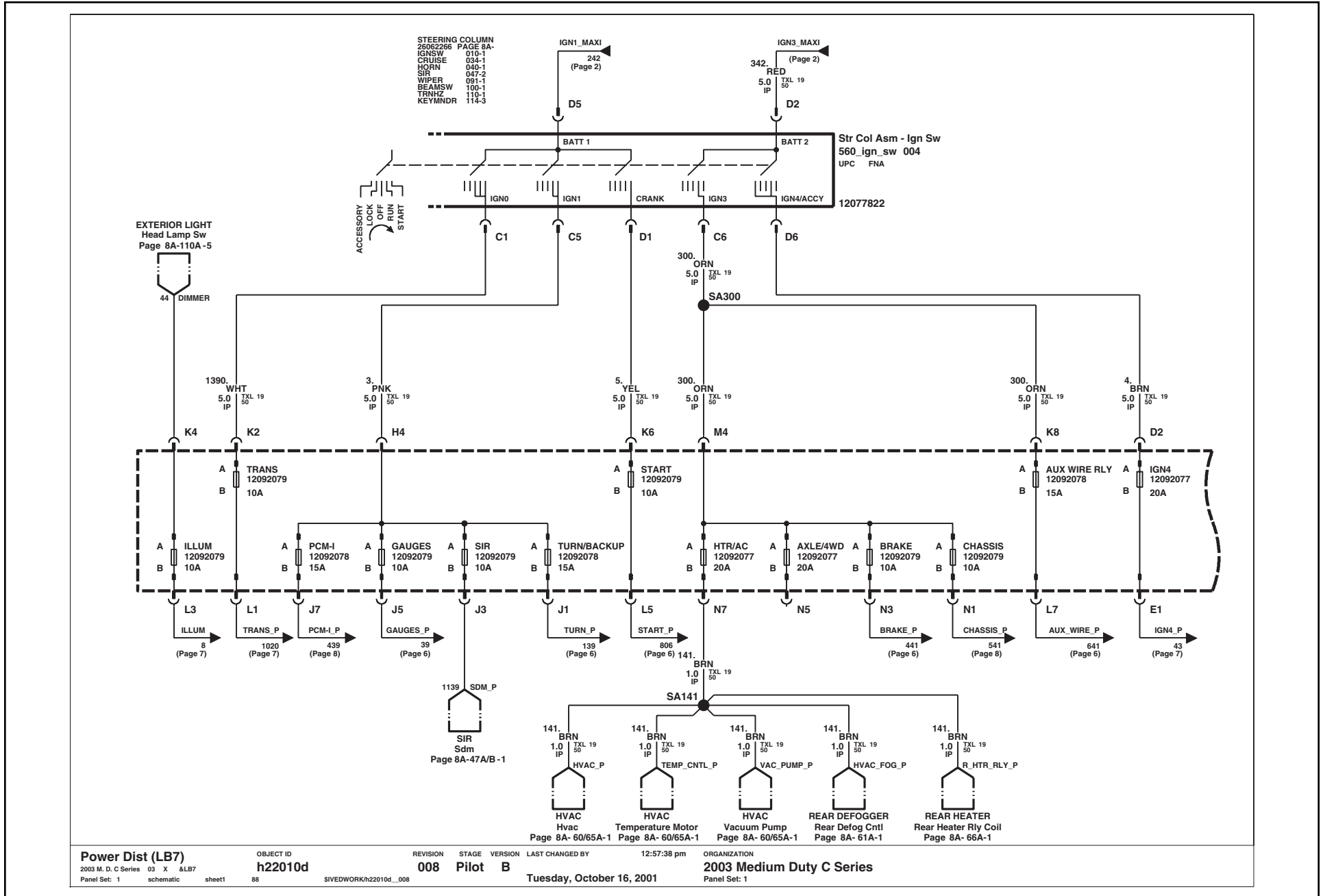
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03 560 803	JG	UNDERHOOD CENTER LABEL CHANGE	11OC00	001
03 560 805	JG	REMOVE SCHOOL BUS CONTENT	27OC00	001
03 560 814	JG	R. ABS to R. Chassis Inline Update	03NO00	001
03 560 818	JG	Change UH Mini CB's to Fuses	20NO00	001
03 560 839	JG	Fuseblock Update	19DE00	001
03 560 873	JG	Remove Radiator Shutter Content	29JA01	001
03 560 981	JG	School Bus Updates	04AP01	001
03 560 1062	JG	Update Block Asm Hookup	25JL01	001



JPZ	- REAR AIR SUSPENSION
NW9	- ELECT TRAC CNTRL
JES	- HYDRO BRAKES
JE4	- AIR BRAKES
HPZ	- CONTROL RR AXLE
MWF	- MD AUTO TRANS
R03	- TRACTOR
U86	- TRAILER WIRING
FAM3	- FAMILY 3

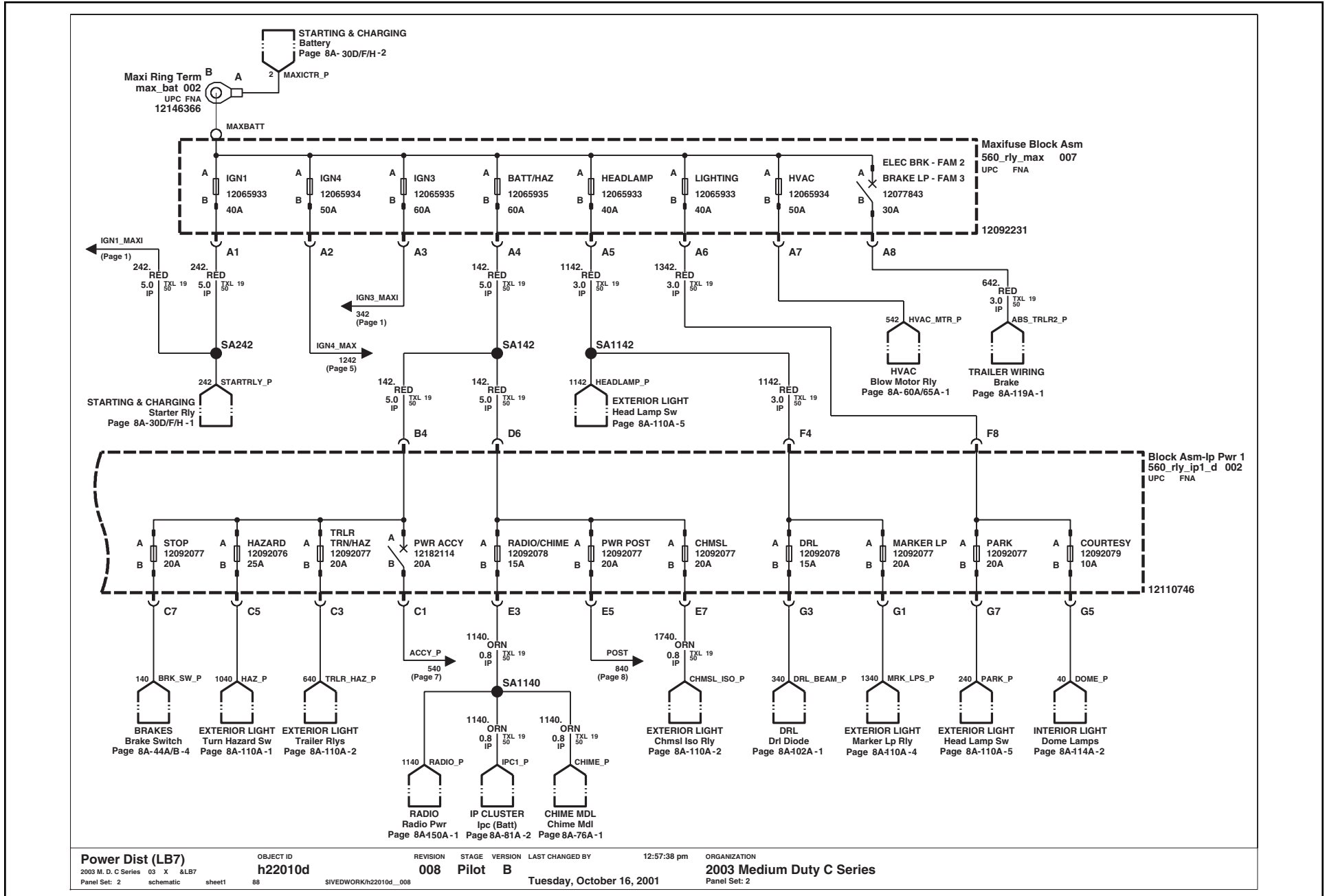
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LB7) 6.6L-Diesel/Duramax



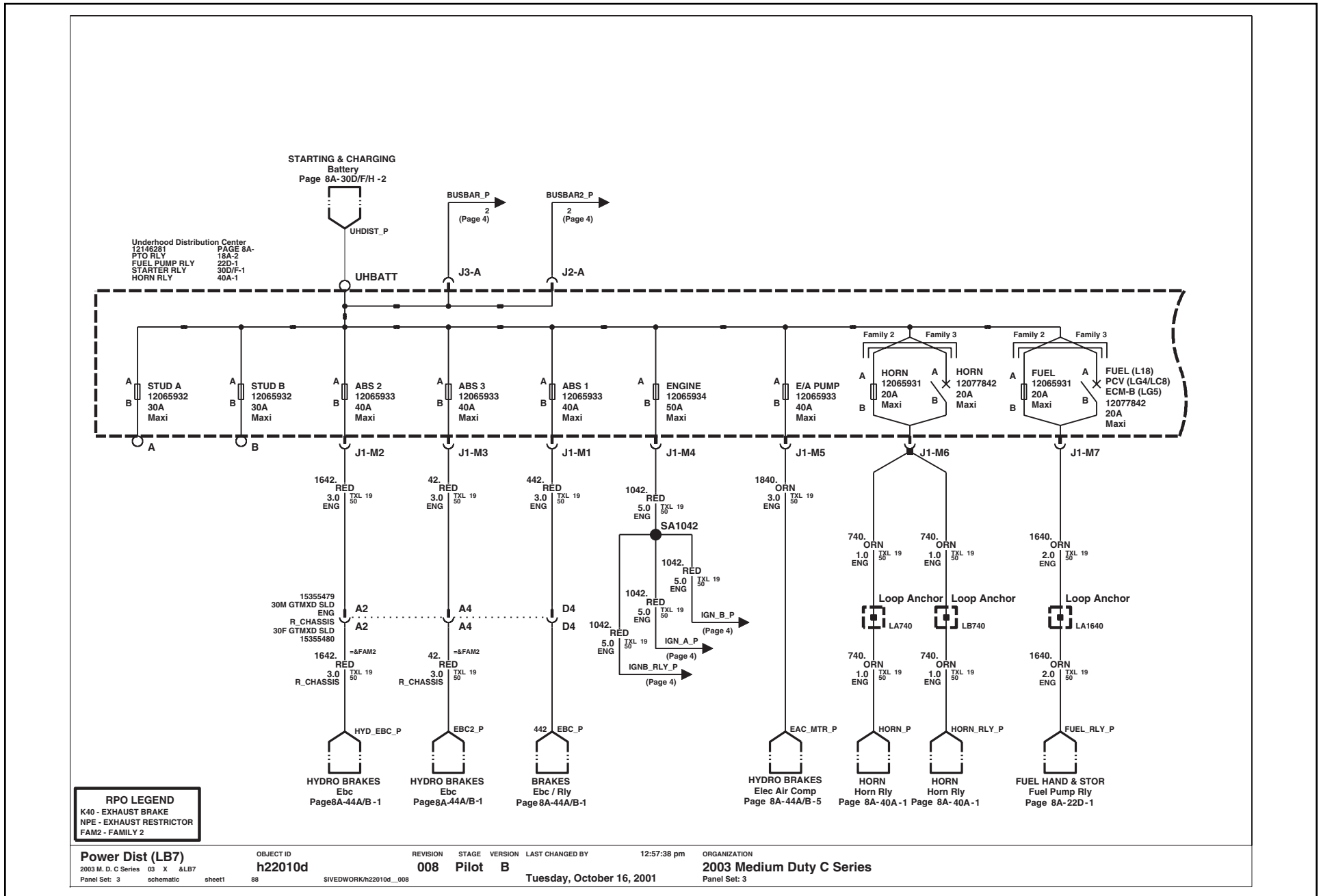
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LB7) 6.6L-Diesel/Duramax



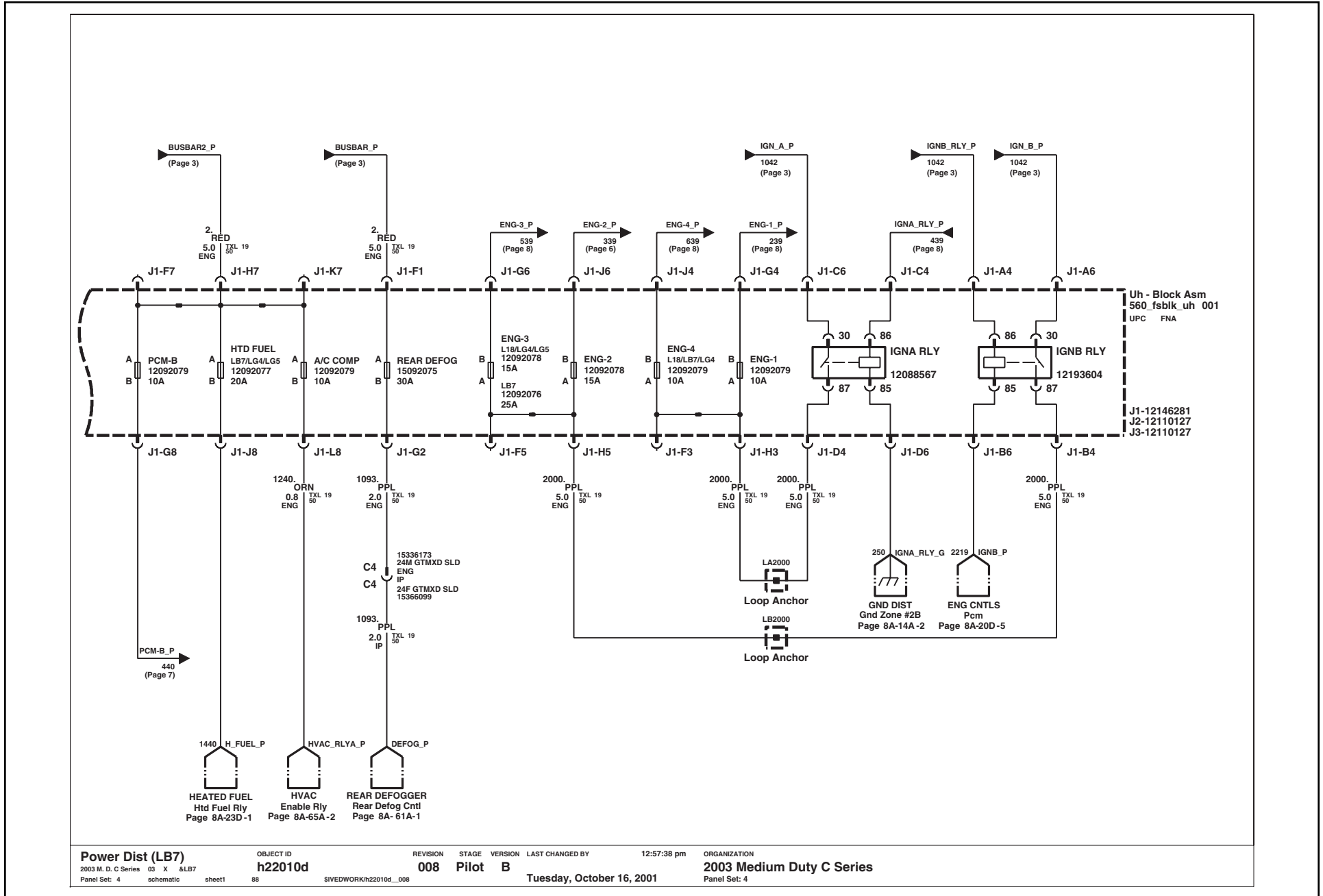
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LB7) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LB7) 6.6L-Diesel/Duramax



Power Dist (LB7)
 2003 M. D. C Series 03 X & LB7
 Panel Set: 4 schematic sheet1

OBJECT ID
h22010d

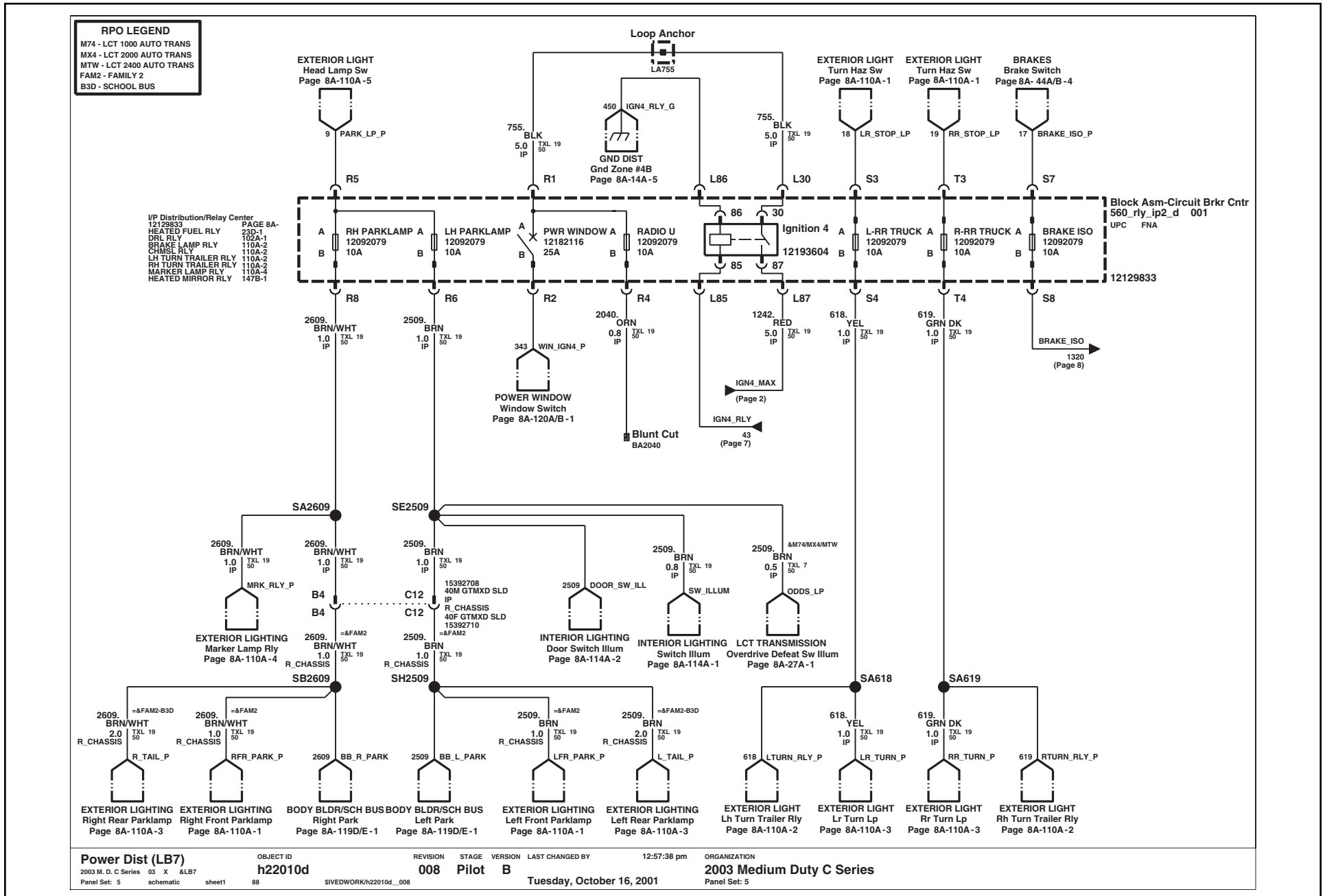
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008 Pilot B
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12:57:38 pm
 Tuesday, October 16, 2001

ORGANIZATION
2003 Medium Duty C Series
 Panel Set: 4

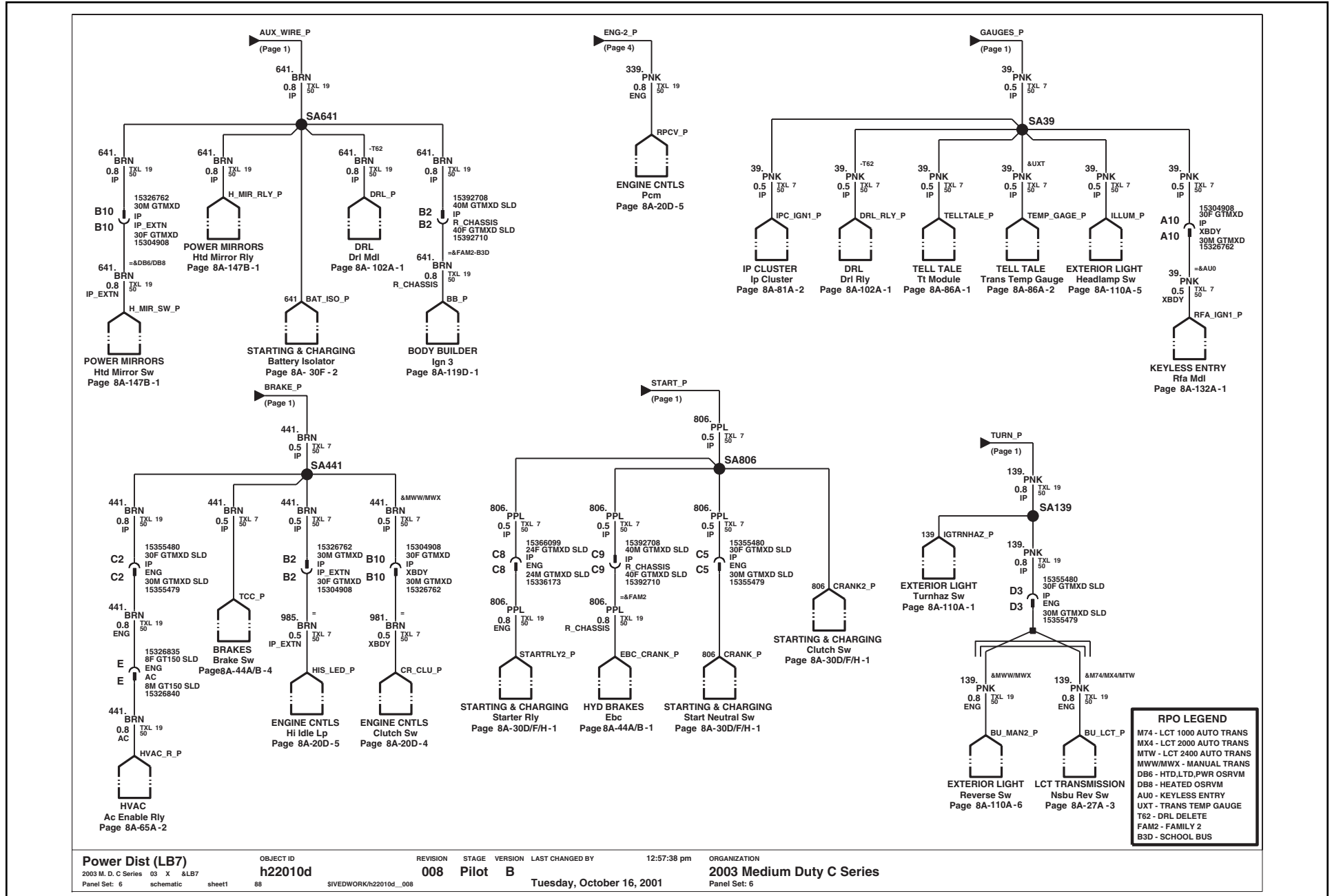
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LB7) 6.6L-Diesel/Duramax



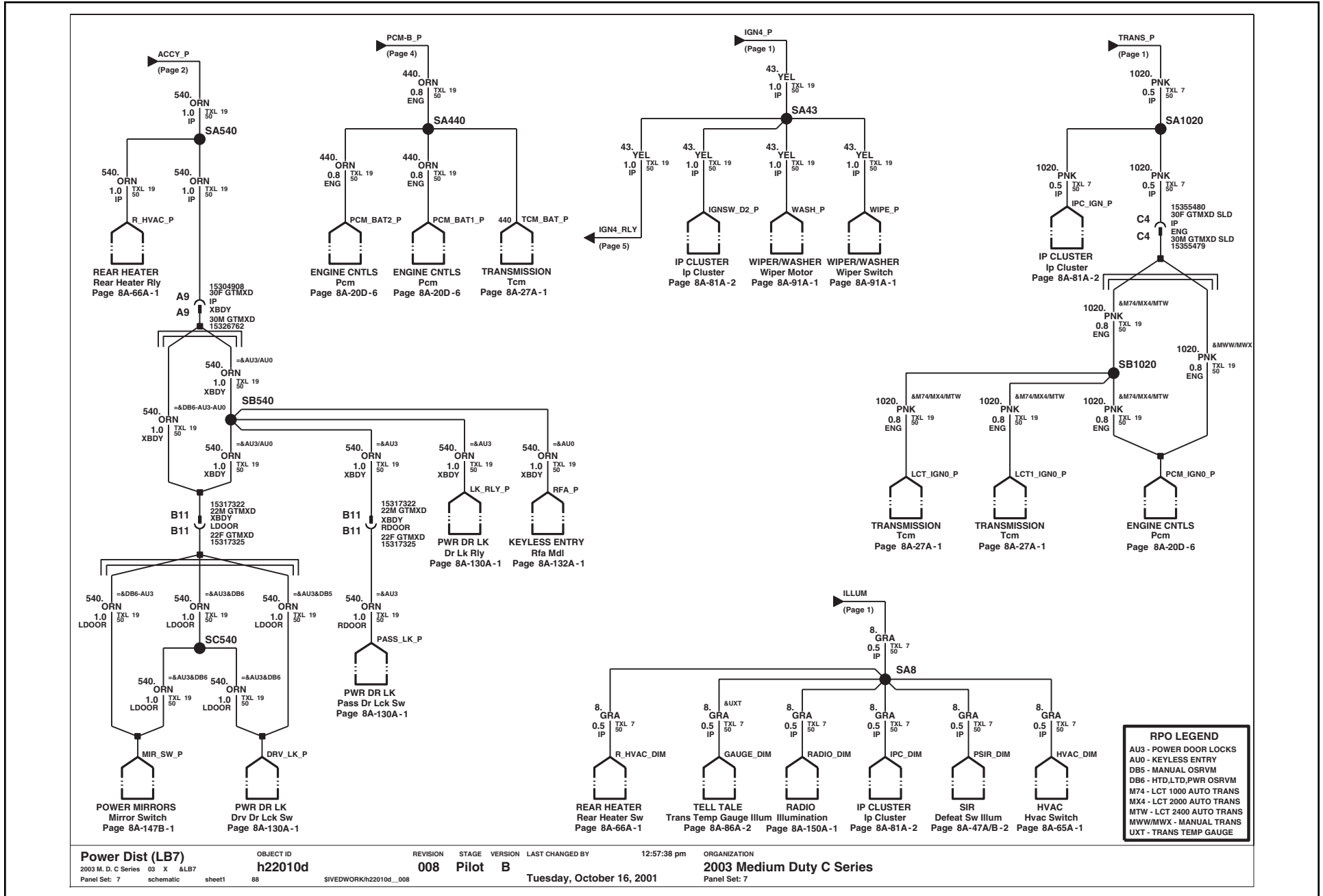
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LB7) 6.6L-Diesel/Duramax



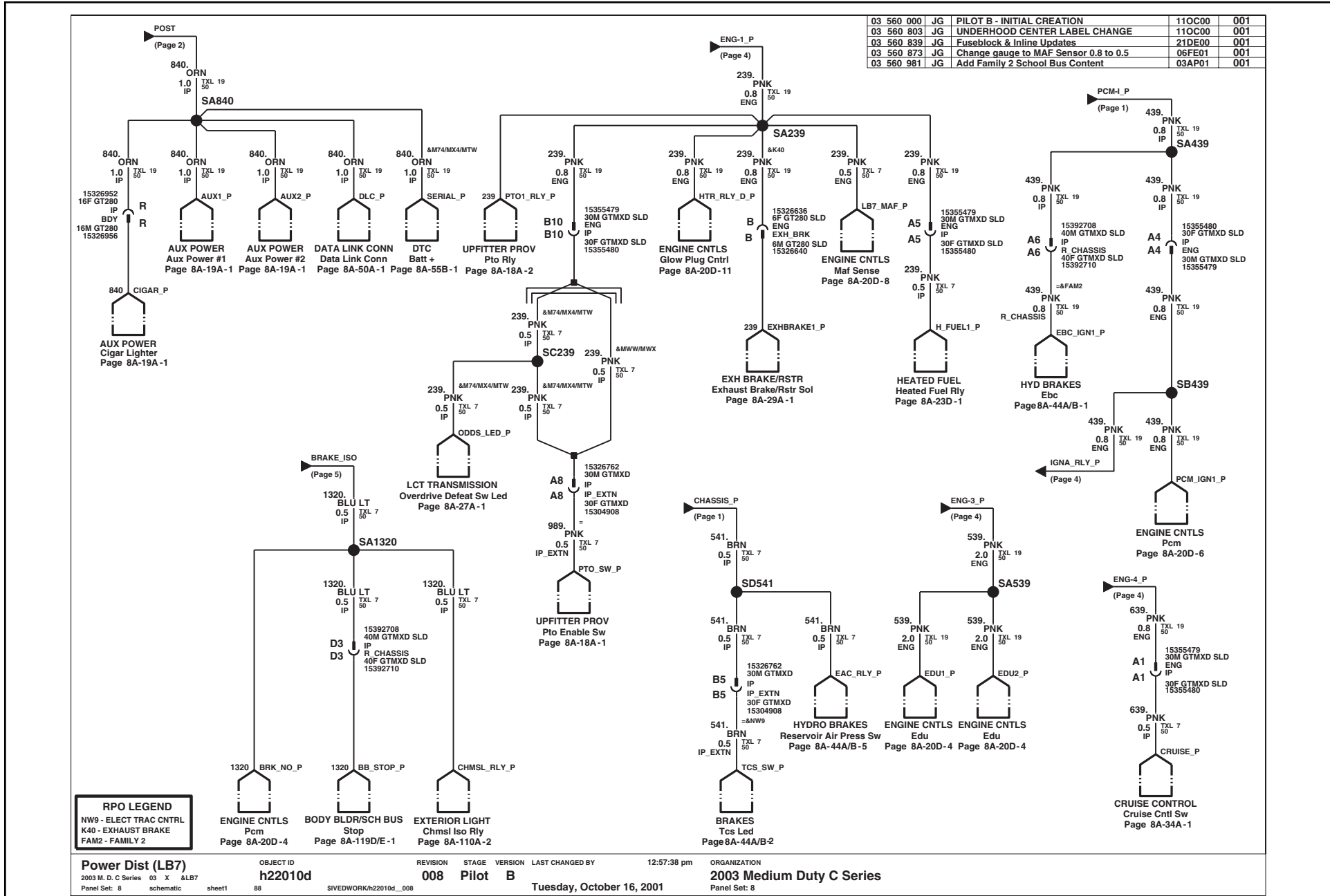
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LB7) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

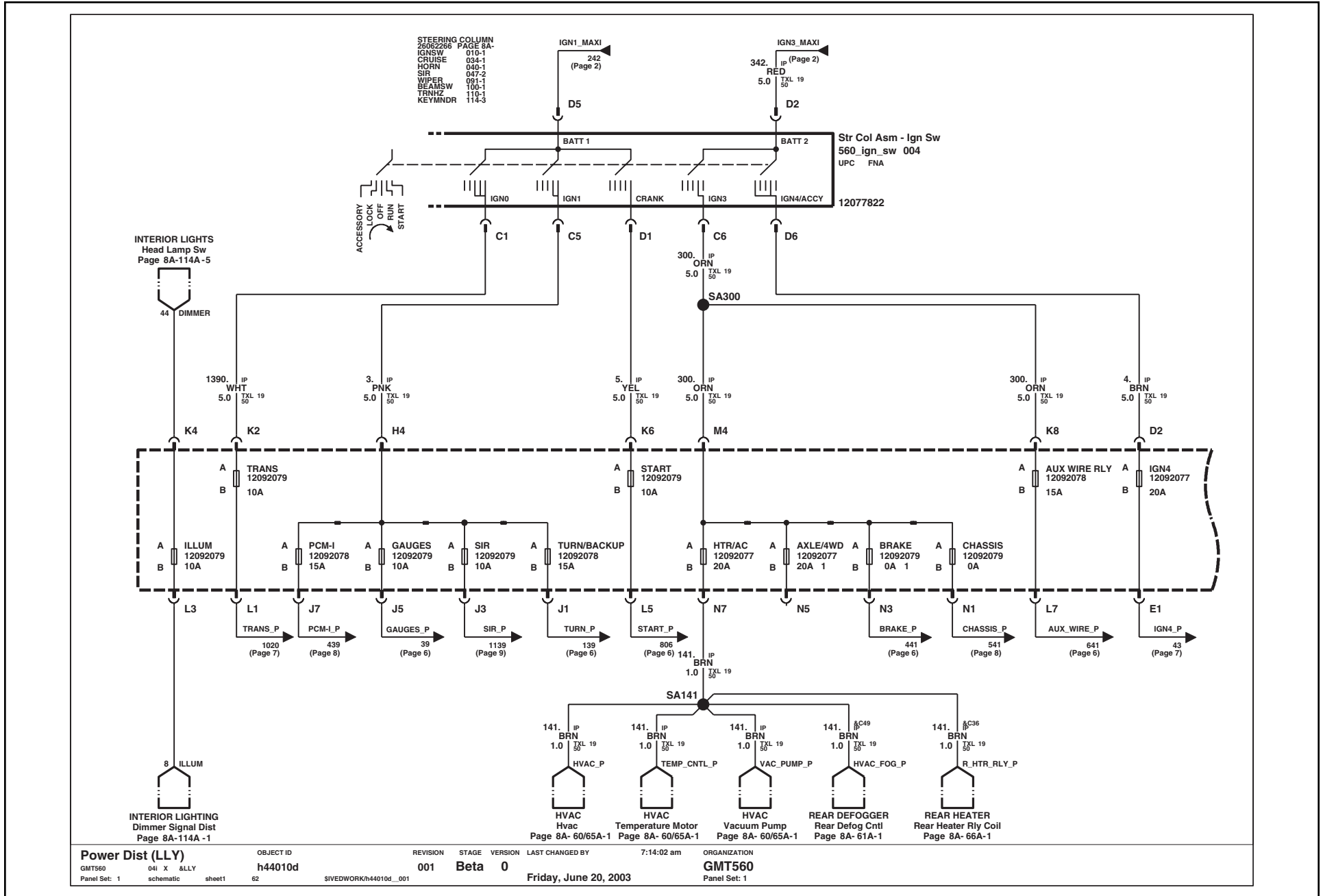
Power Distribution – (LB7) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE D-42

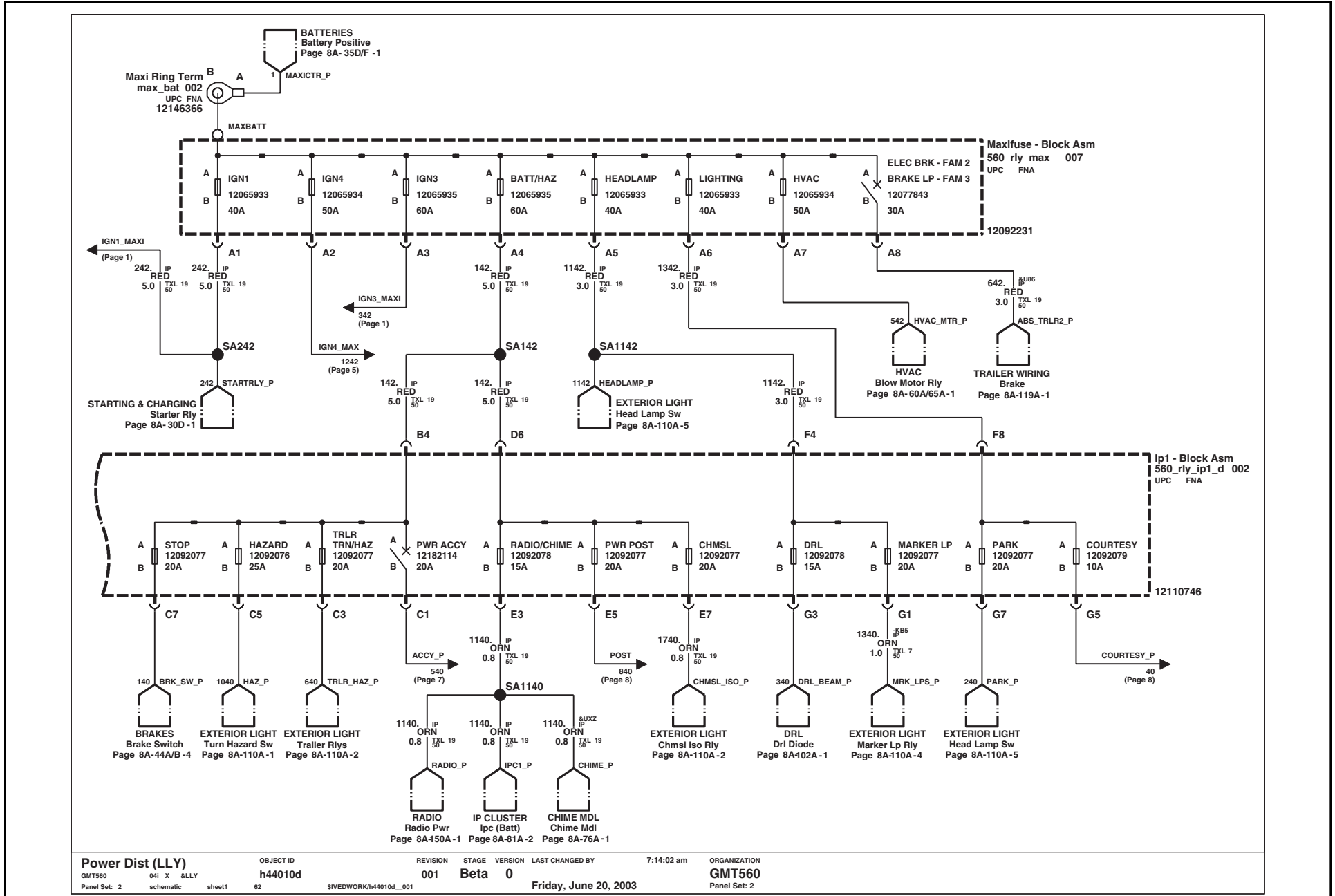
Power Distribution — (LLY) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

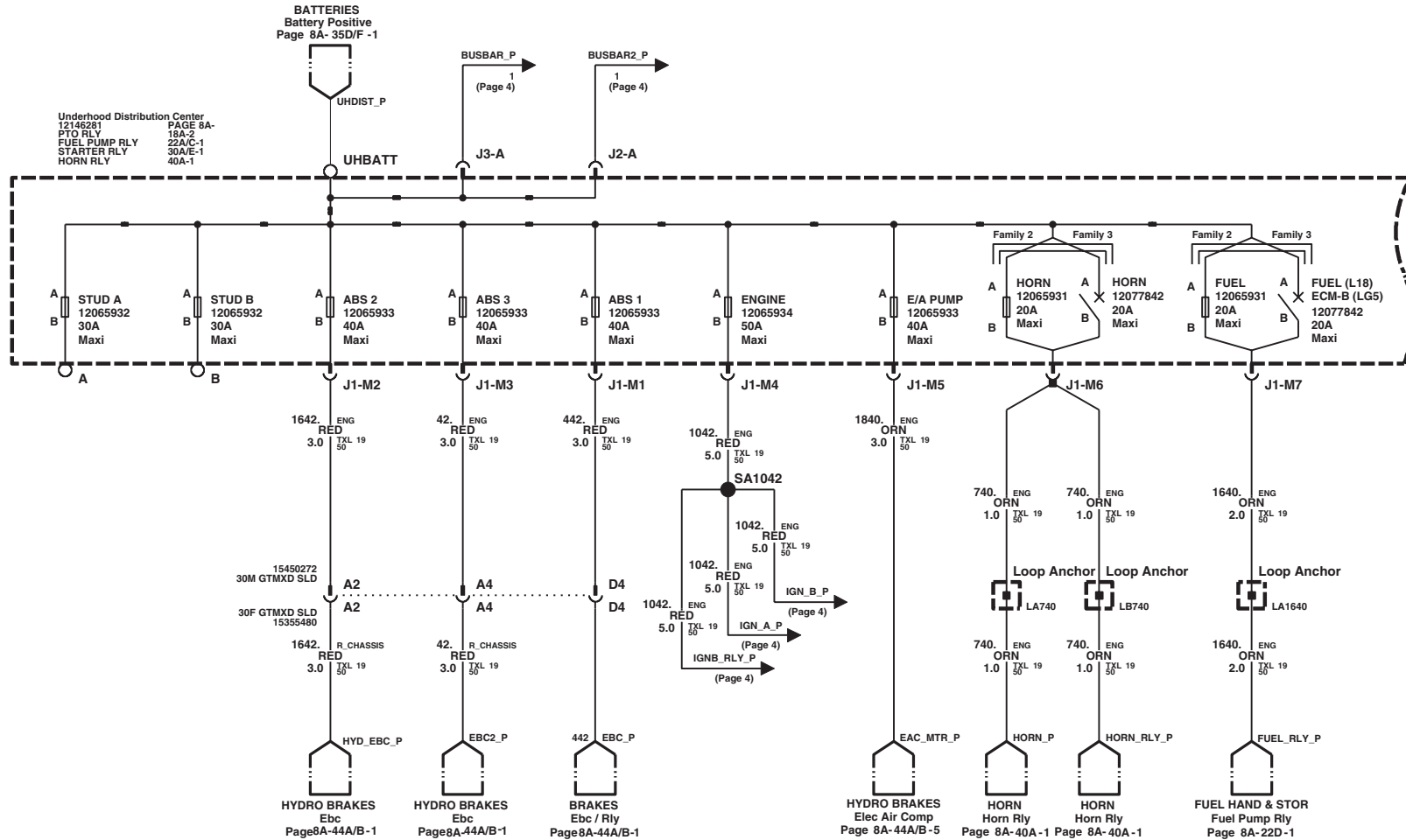
PAGE D-43

Power Distribution — (LLY) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

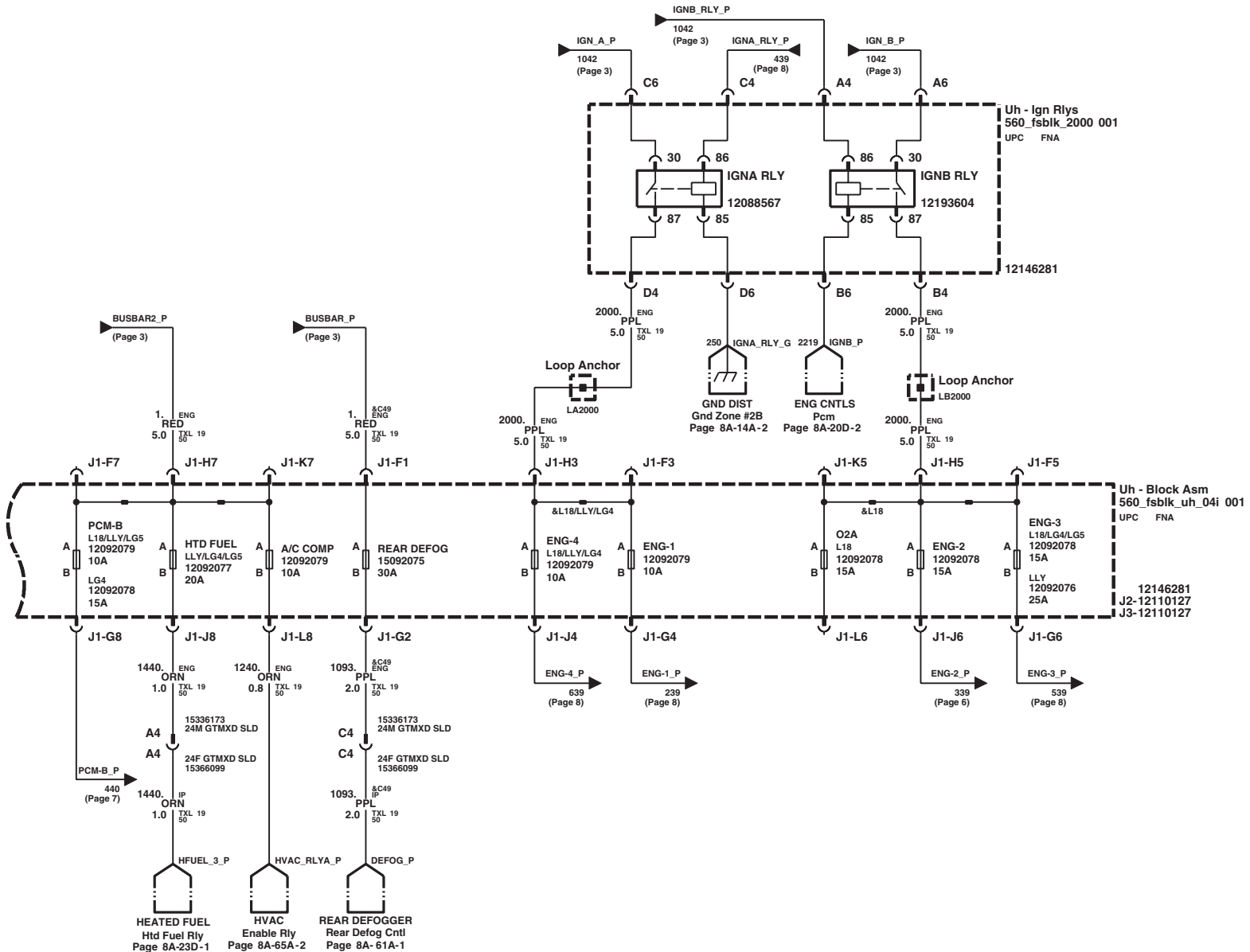
Power Distribution — (LLY) 6.6L-Diesel/Duramax



RPO LEGEND
 K40 - EXHAUST BRAKE
 NPE - EXHAUST RESTRICTOR
 FAM2 - FAMILY 2

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution — (LLY) 6.6L-Diesel/Duramax



Power Dist (LLY)

GMT560 041 X &LLY
Panel Set: 4 schematic sheet1

OBJECT ID
h44010d

62

SIVEDWORK/h44010d_001

REVISION STAGE VERSION LAST CHANGED BY
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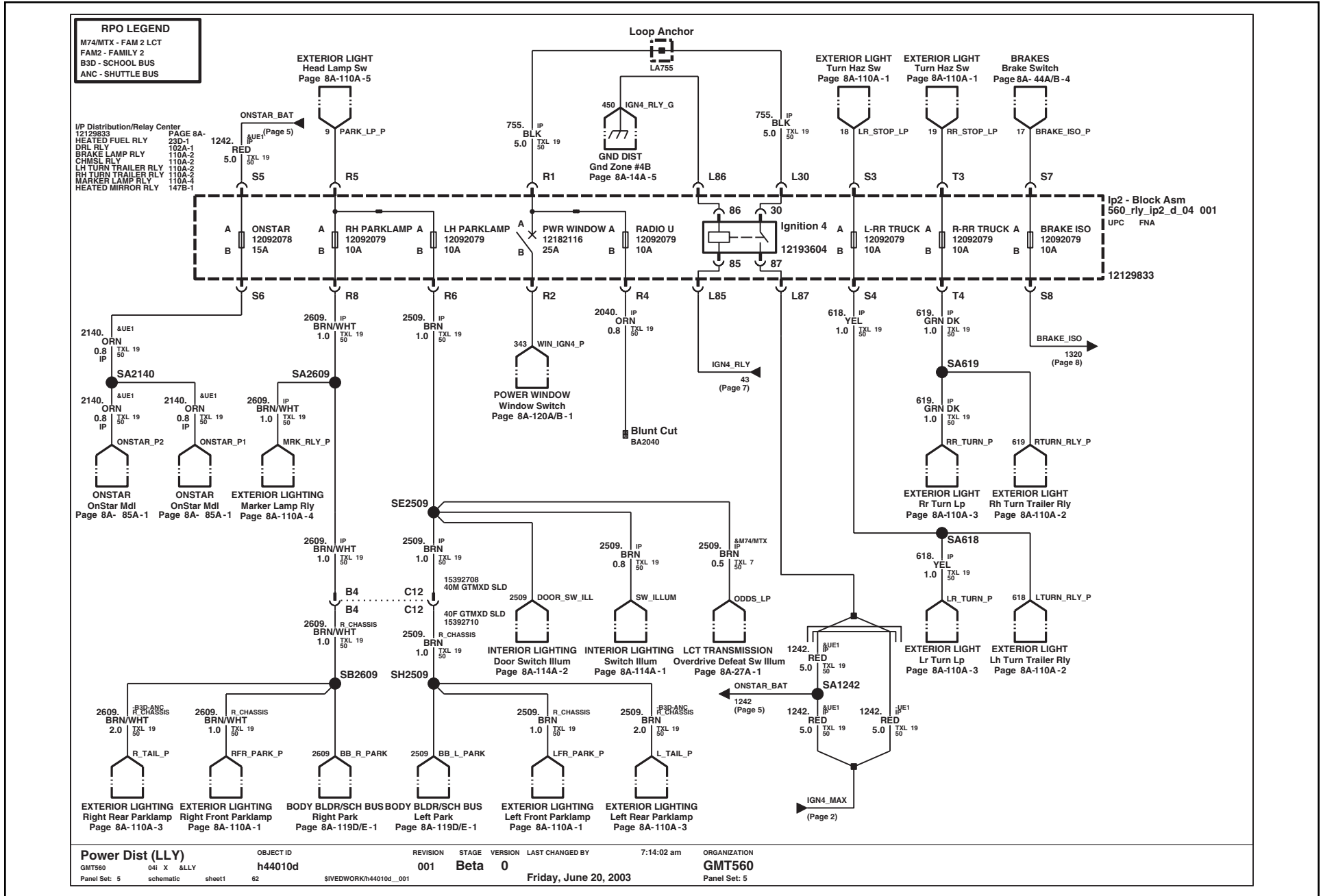
Friday, June 20, 2003

7:14:02 am

ORGANIZATION
GMT560
Panel Set: 4

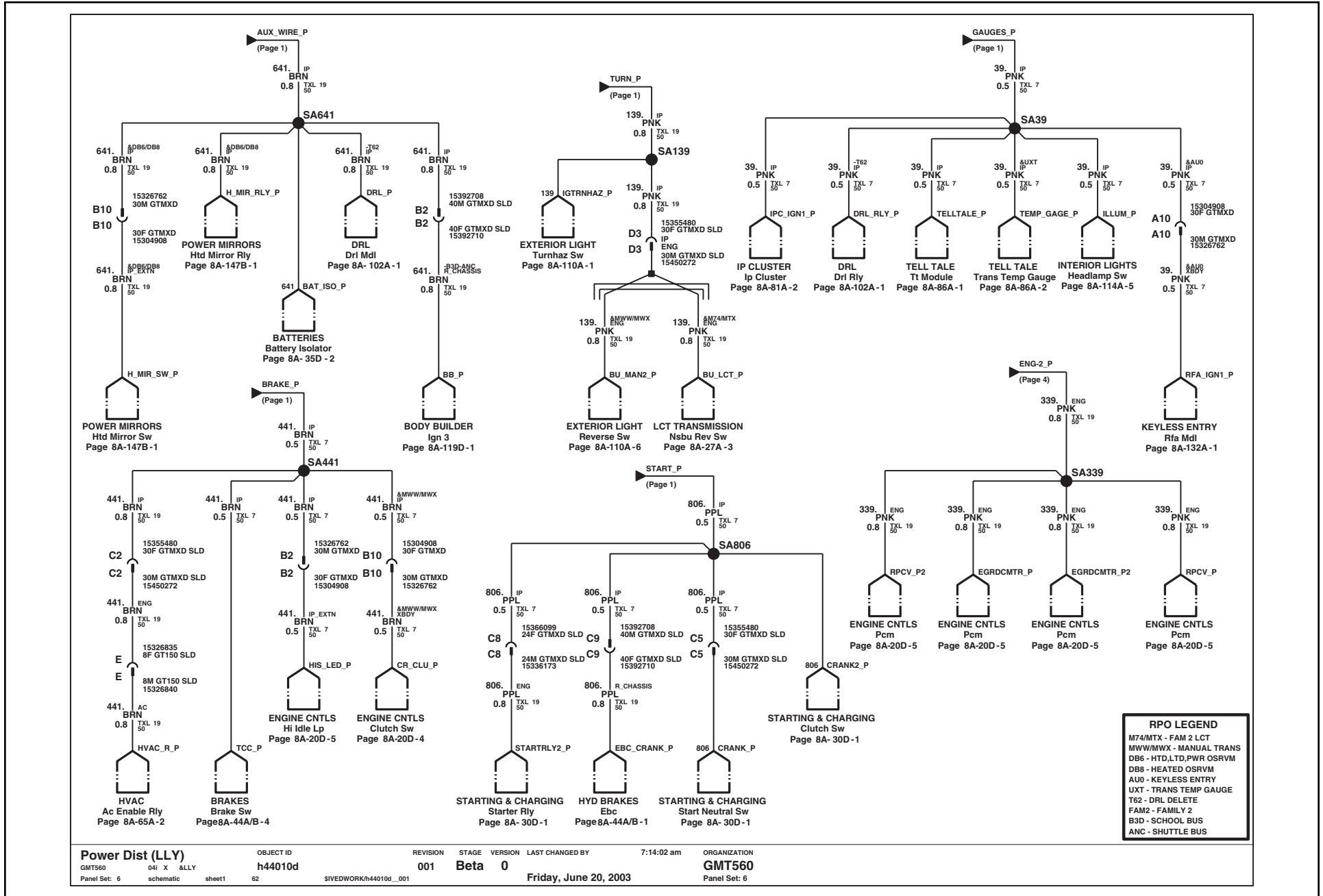
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LLY) 6.6L-Diesel/Duramax



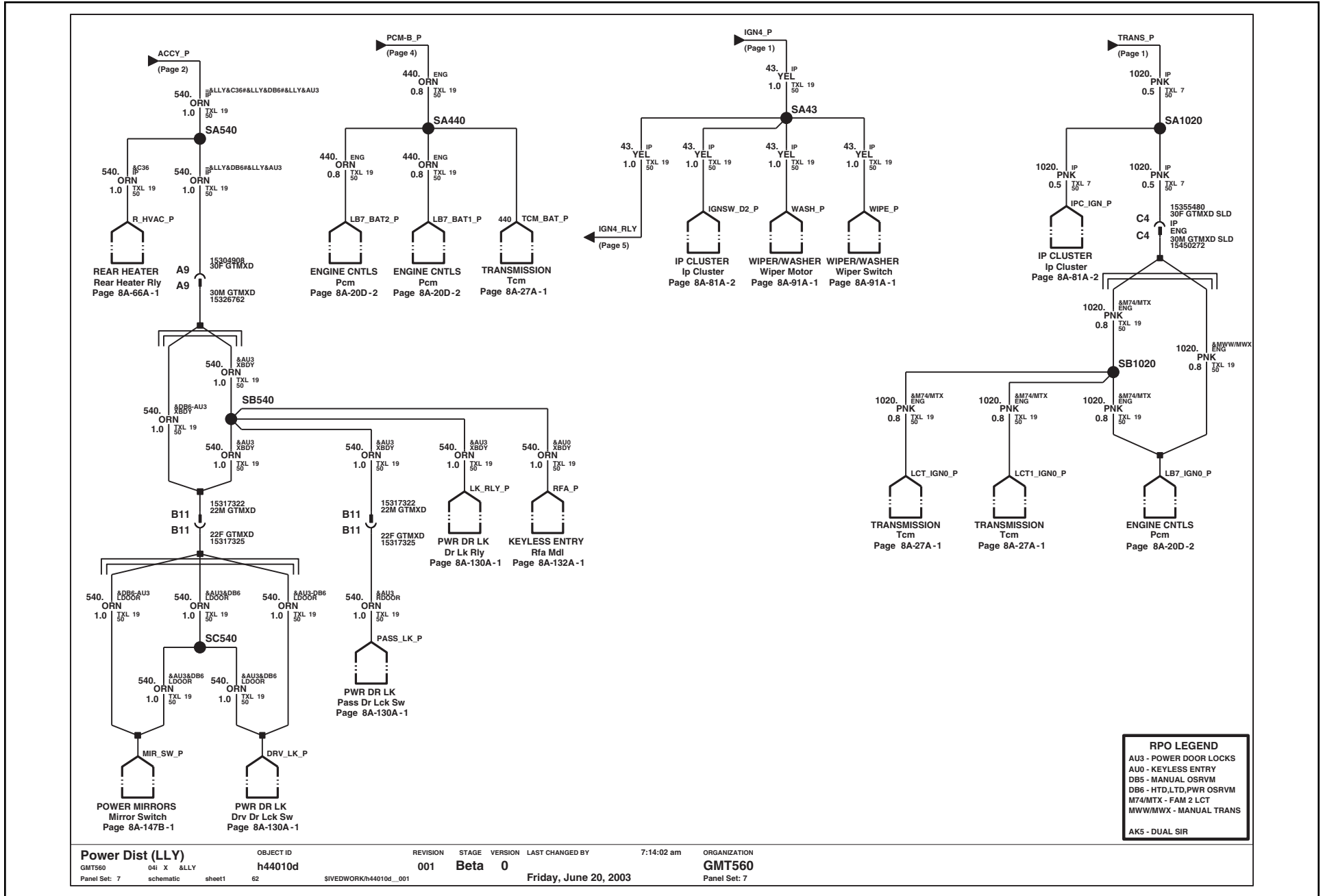
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution — (LLY) 6.6L-Diesel/Duramax



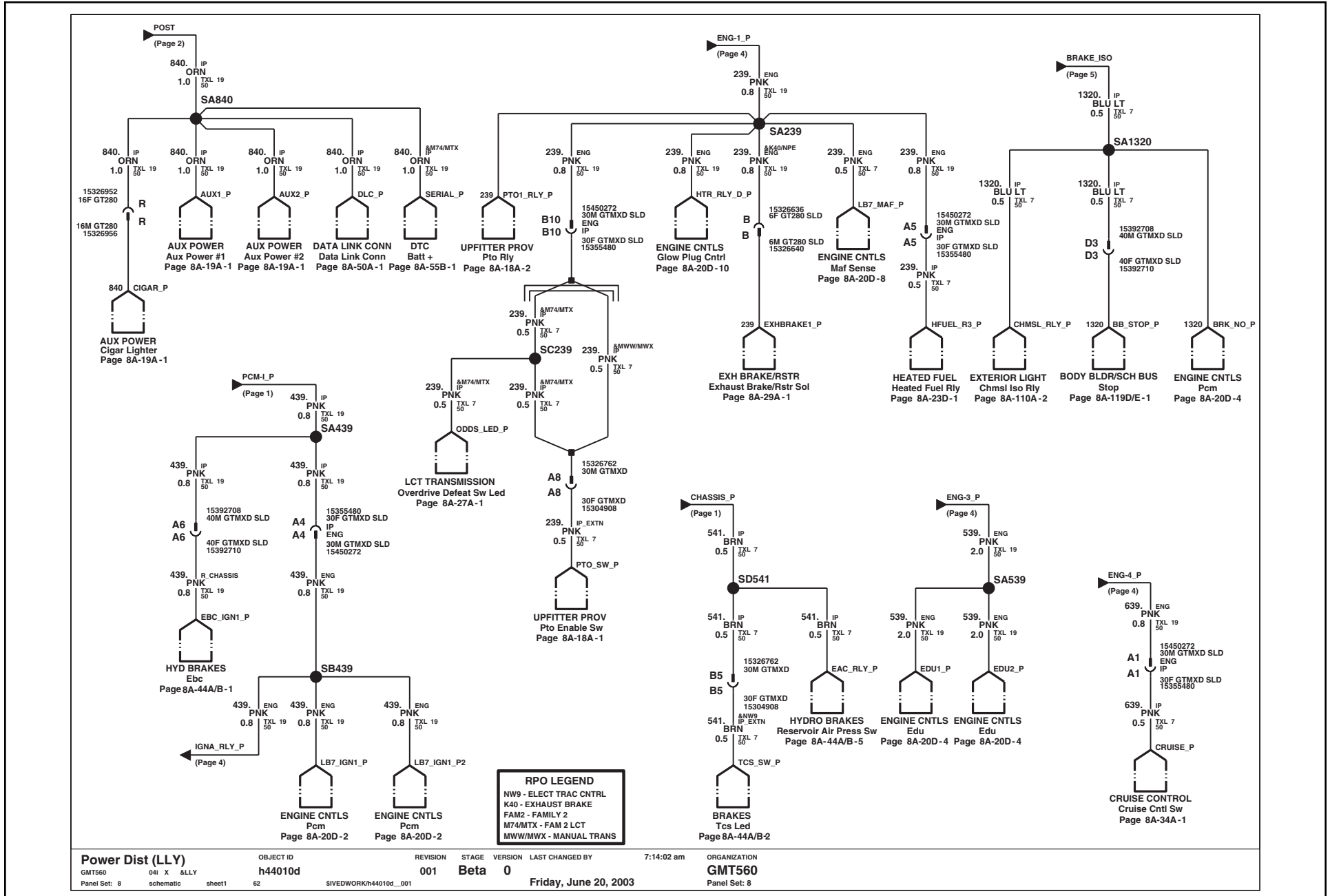
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution – (LLY) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Power Distribution — (LLY) 6.6L-Diesel/Duramax

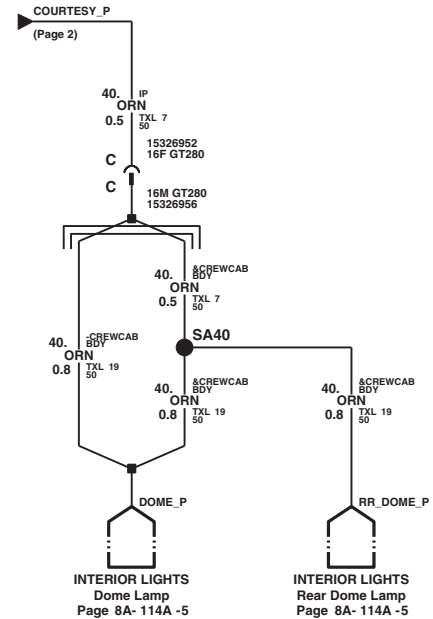
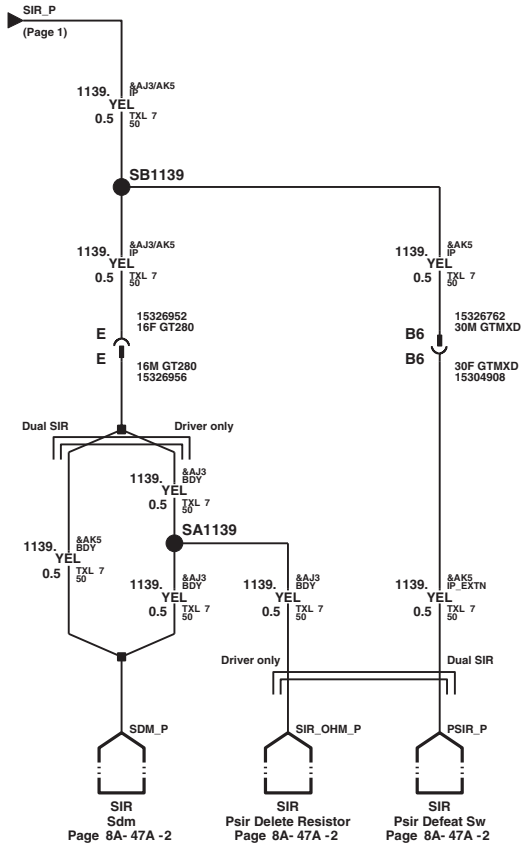


2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE **D-50**

Power Distribution — (LLY) 6.6L-Diesel/Duramax

04 560 000	TY	BETA - INITIAL CREATION	18SE01	001
04 560 1149	JG	TRANS RPO UPDATE	13DE01	001
04 560 1106	JG	Update 900 ckts	08FE02	001
04i 560 1198	JG	Changed LB7 to LLY	26MR02	001
03 560 1228	JG	Added RPO ANC	07MY02	001



RPO LEGEND
 AJ3 - DRIVER SIR
 AK5 - DUAL SIR
 CREWCAB - CREW CAB

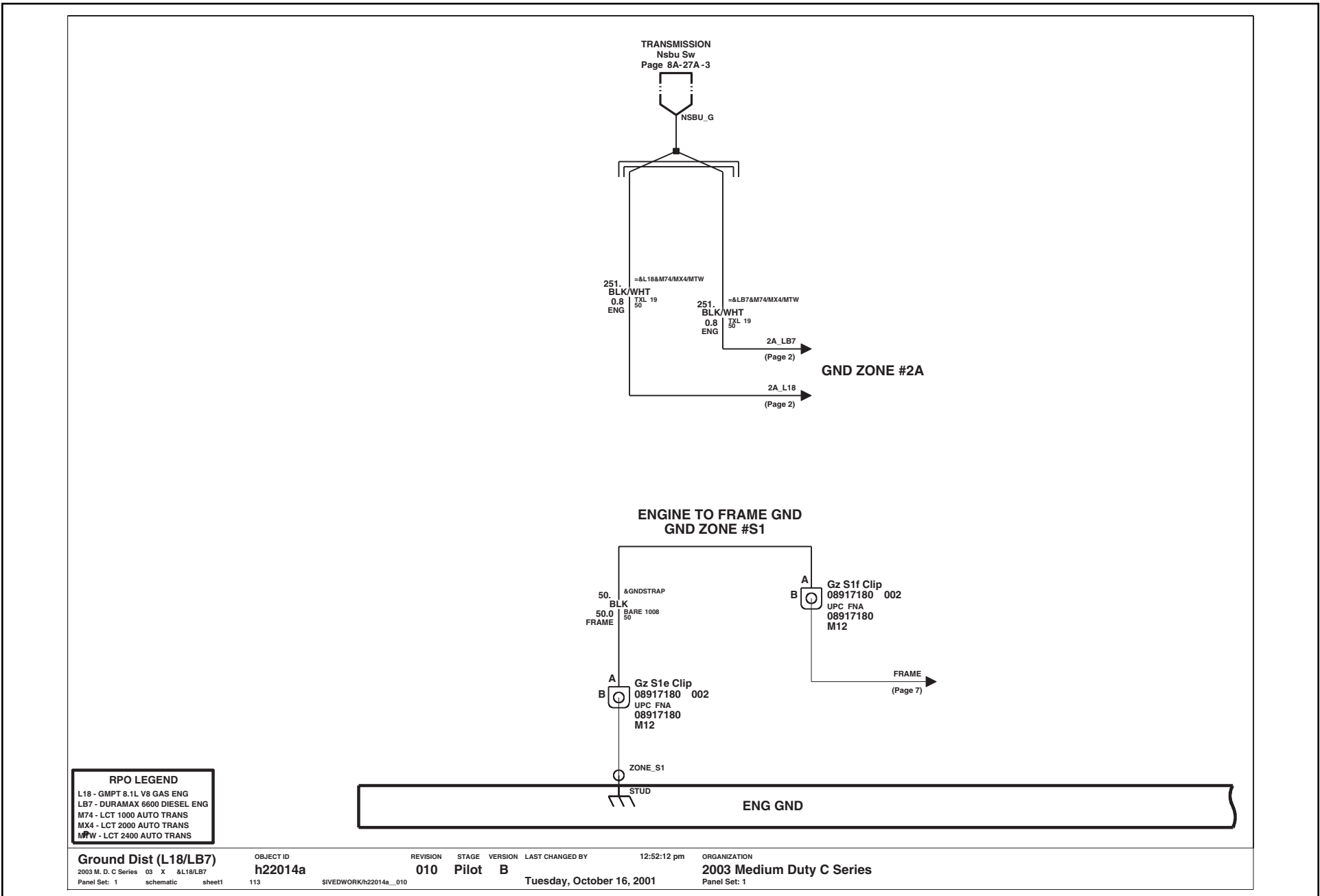
Power Dist (LLY)
 GMT560 04i X &LLY
 Panel Set: 9 schematic sheet1 62 SIVEDWORK/h44010d_001

OBJECT ID: h44010d
 REVISION: 001
 STAGE: Beta
 VERSION: 0
 LAST CHANGED BY: 7:14:02 am
 ORGANIZATION: GMT560
 Panel Set: 9

Friday, June 20, 2003

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (L18) 8.1L-Gas/NAPT – (LB7) 6.6L-Diesel/Duramax



RPO LEGEND	
L18 - GMPT 8.1L V8 GAS ENG	
LB7 - DURAMAX 6600 DIESEL ENG	
M74 - LCT 1000 AUTO TRANS	
MX4 - LCT 2000 AUTO TRANS	
MPW - LCT 2400 AUTO TRANS	

Ground Dist (L18/LB7)
2003 M. D. C Series 03 X &L18/LB7
Panel Set: 1 schematic sheet1

OBJECT ID
h22014a

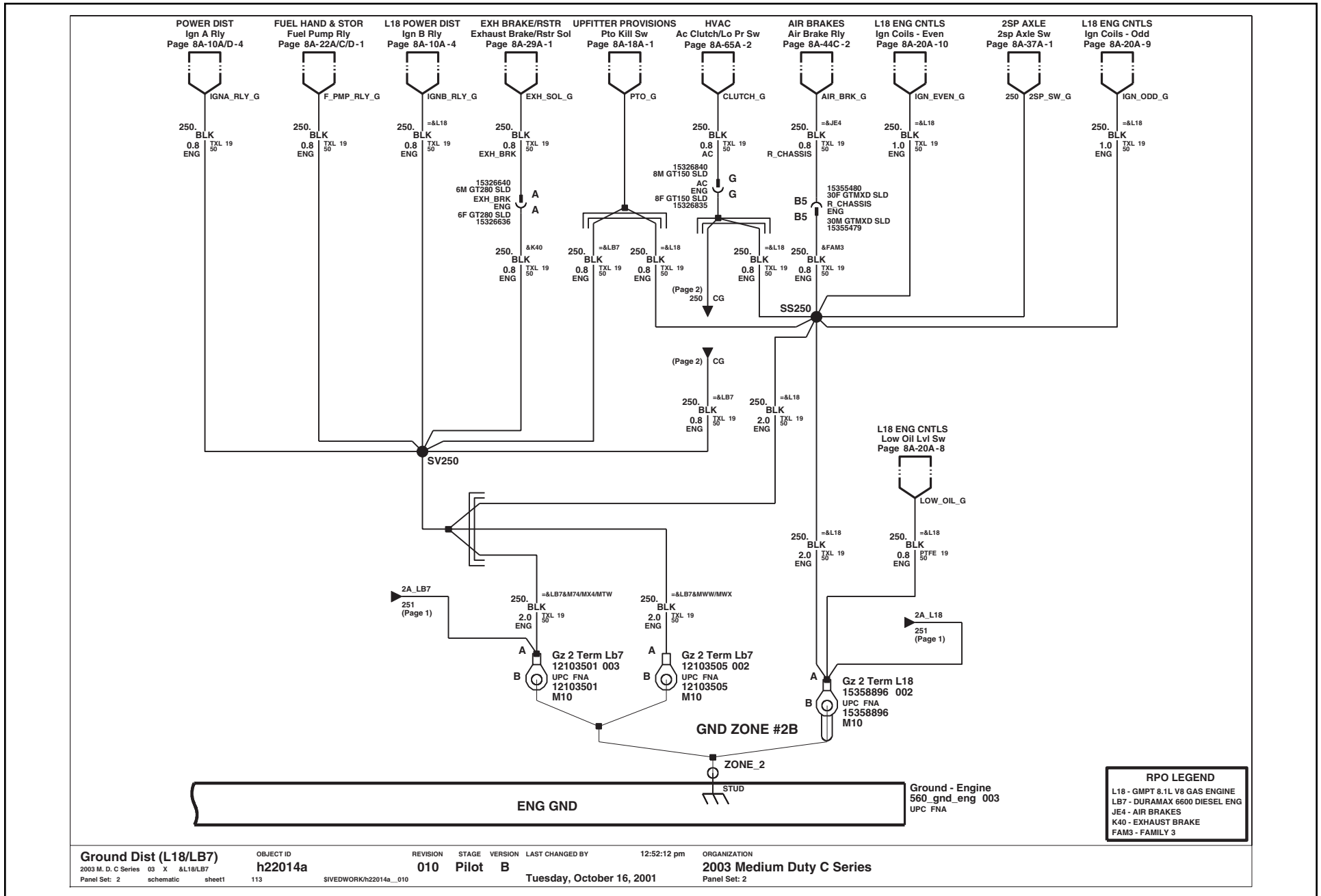
REVISION STAGE VERSION LAST CHANGED BY
010 Pilot B
Tuesday, October 16, 2001

12:52:12 pm

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 1

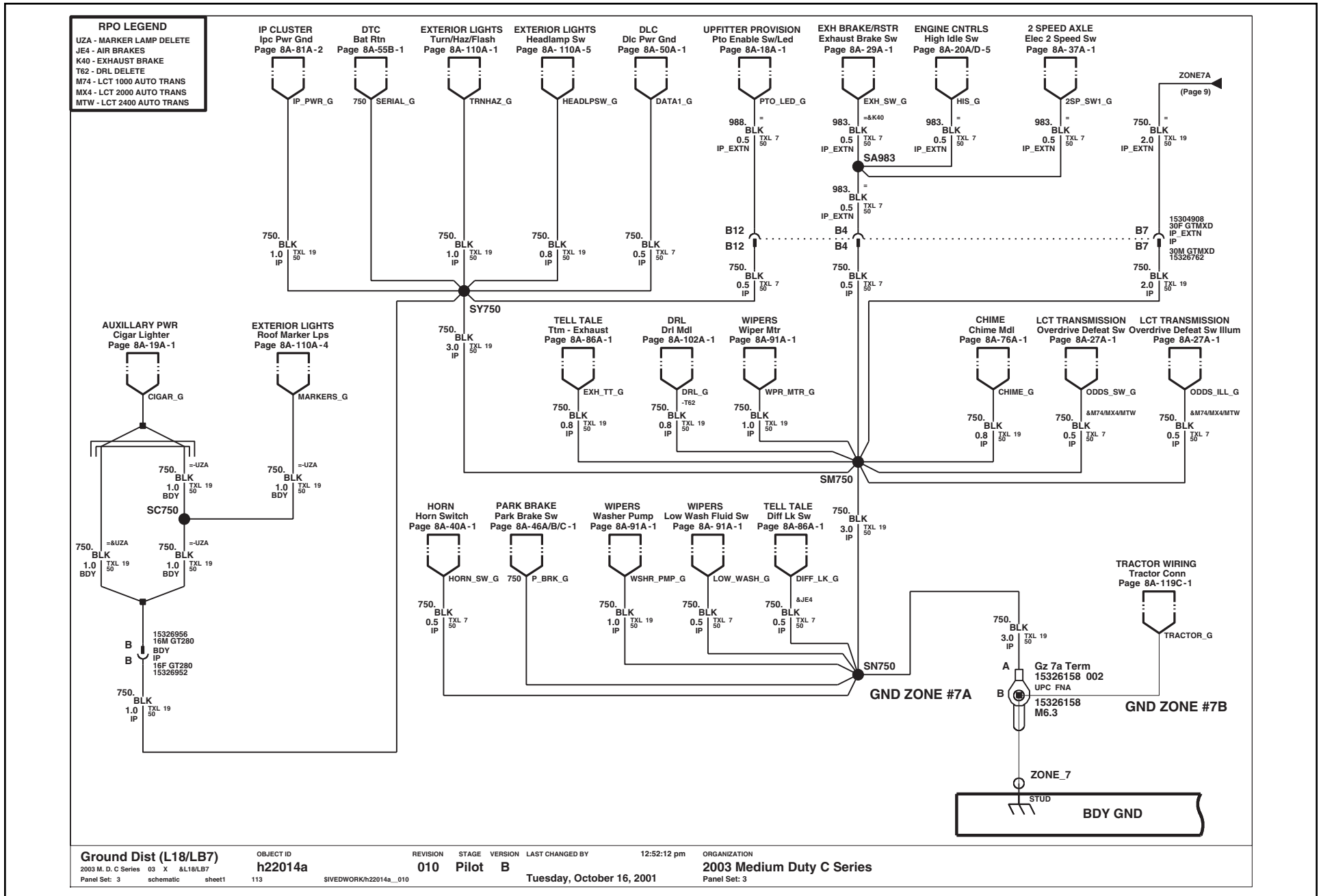
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (L18) 8.1L-Gas/NAPT – (LB7) 6.6L-Diesel/Duramax



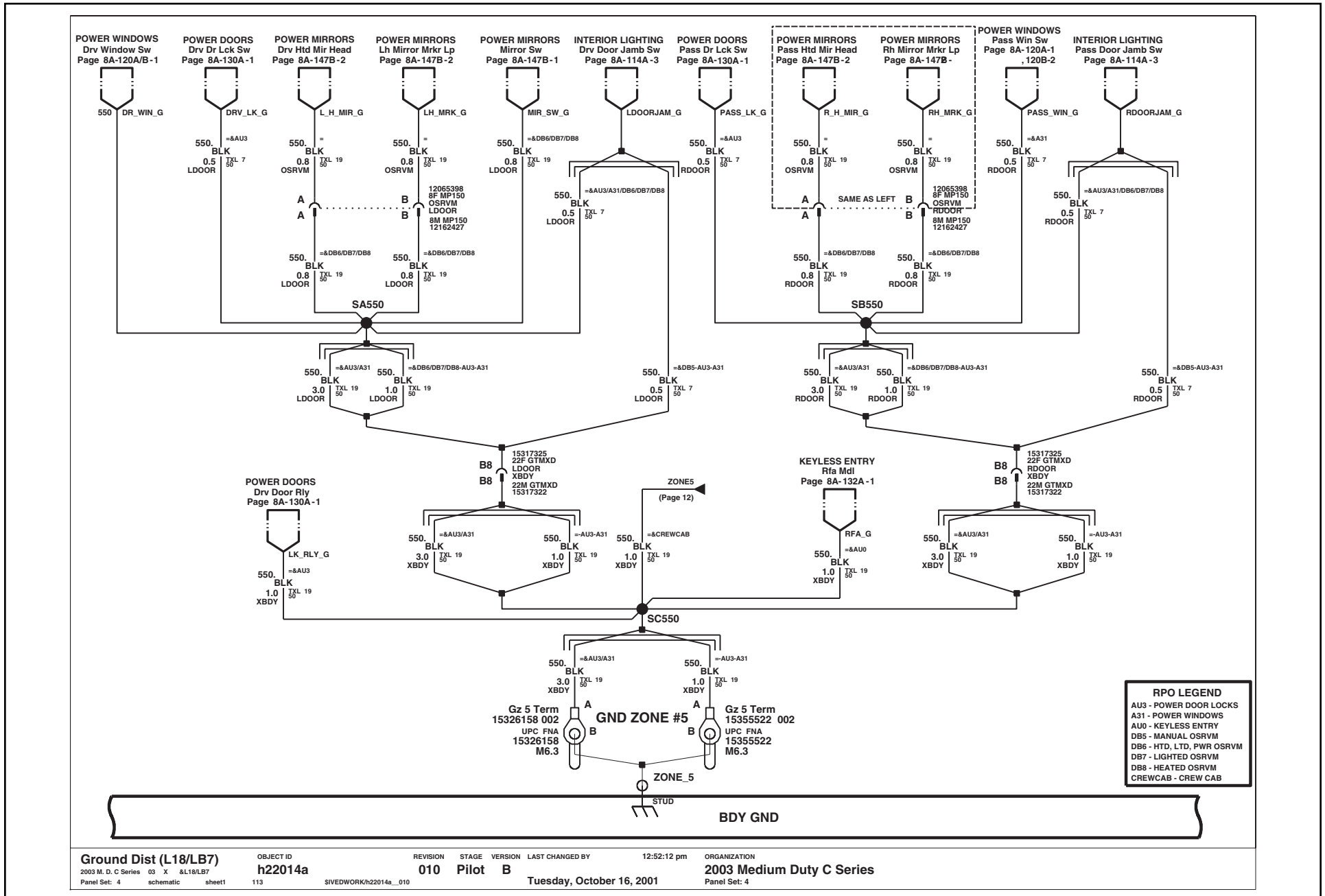
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (L18) 8.1L-Gas/NAPT – (LB7) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (L18) 8.1L-Gas/NAPT – (LB7) 6.6L-Diesel/Duramax



Ground Dist (L18/LB7)
 2003 M. D. C Series 03 X & L18/LB7
 Panel Set: 4 schematic sheet1

OBJECT ID
h22014a

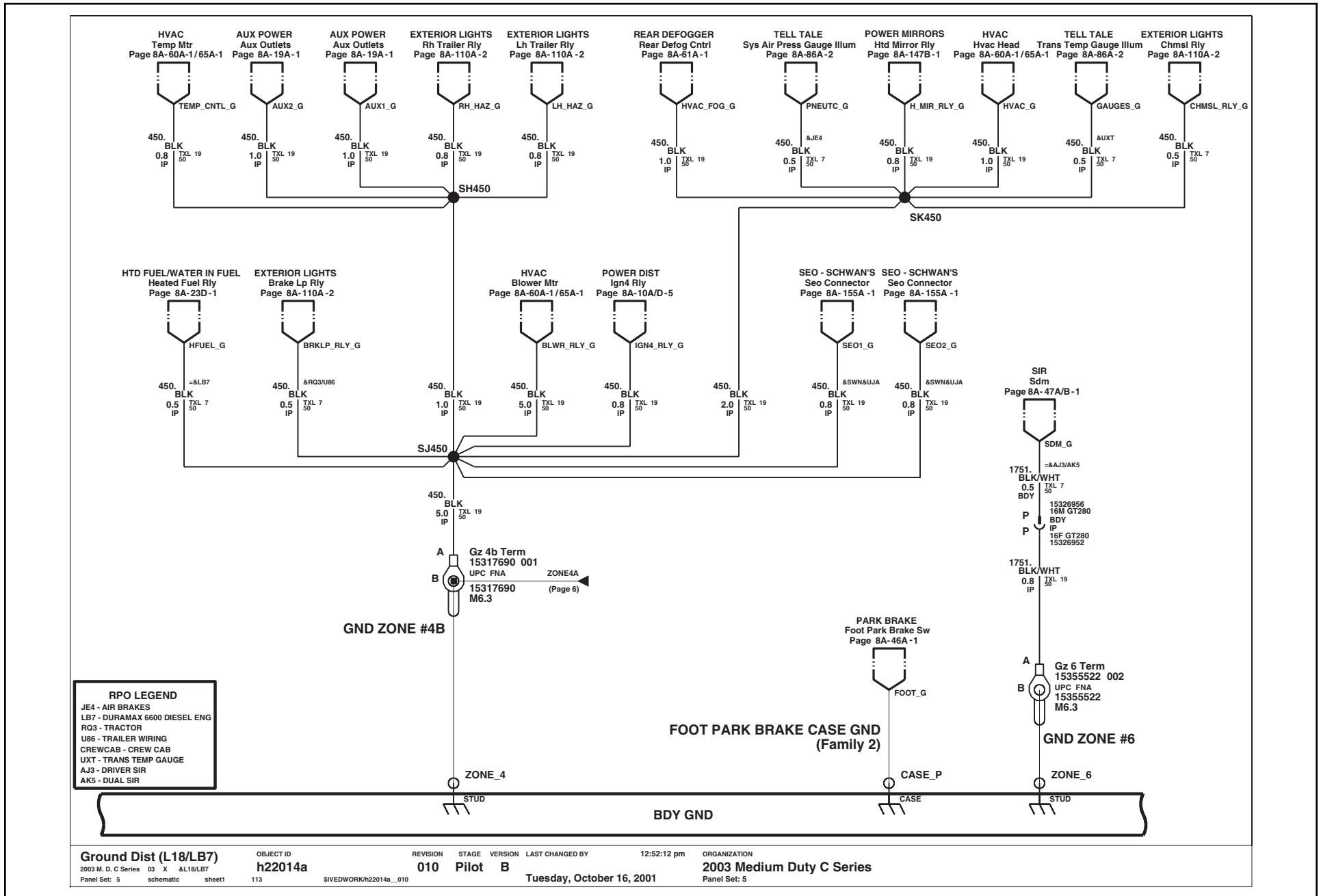
REVISION STAGE VERSION LAST CHANGED BY
010 Pilot B
 Tuesday, October 16, 2001

12:52:12 pm

ORGANIZATION
2003 Medium Duty C Series
 Panel Set: 4

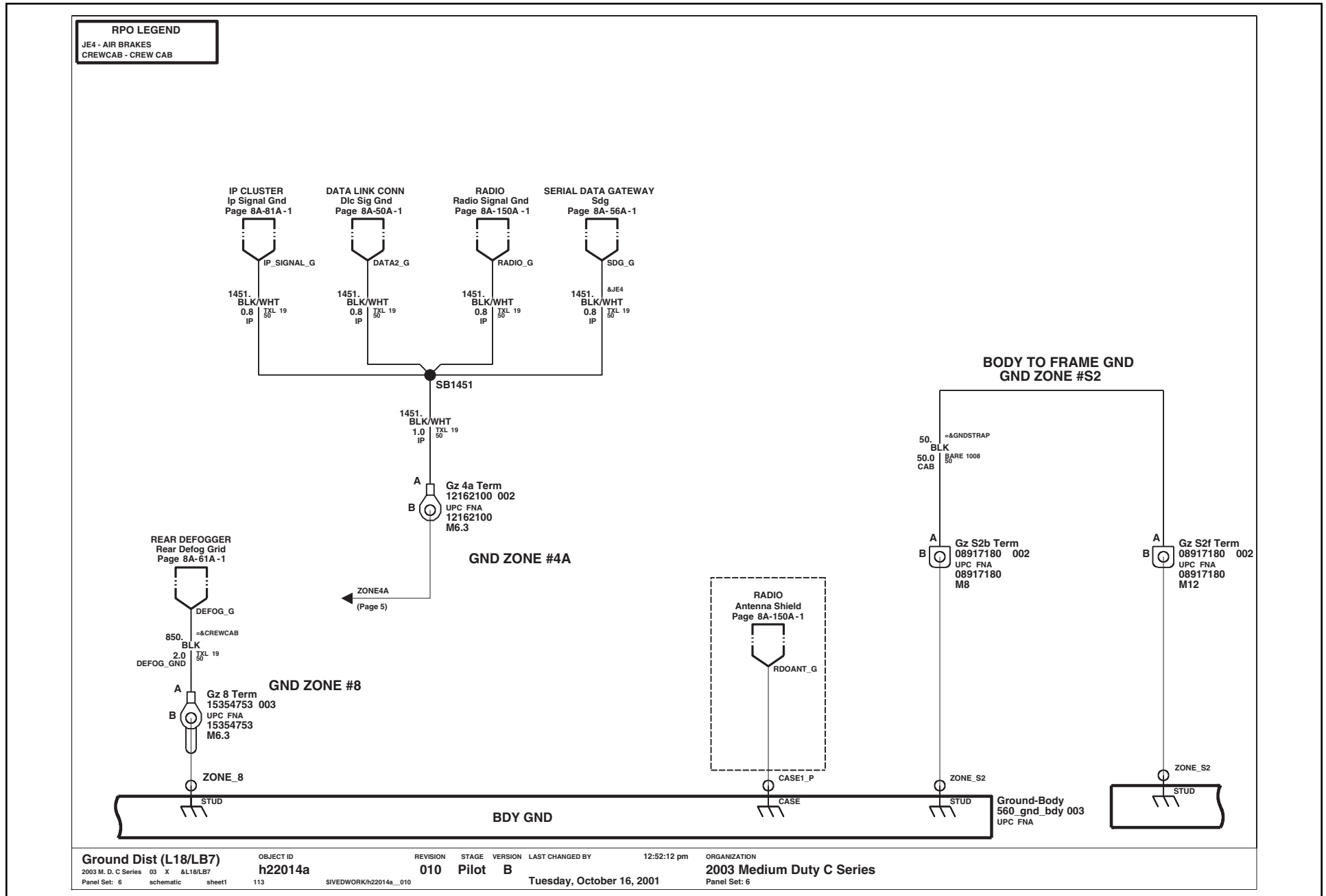
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (L18) 8.1L-Gas/NAPT – (LB7) 6.6L-Diesel/Duramax



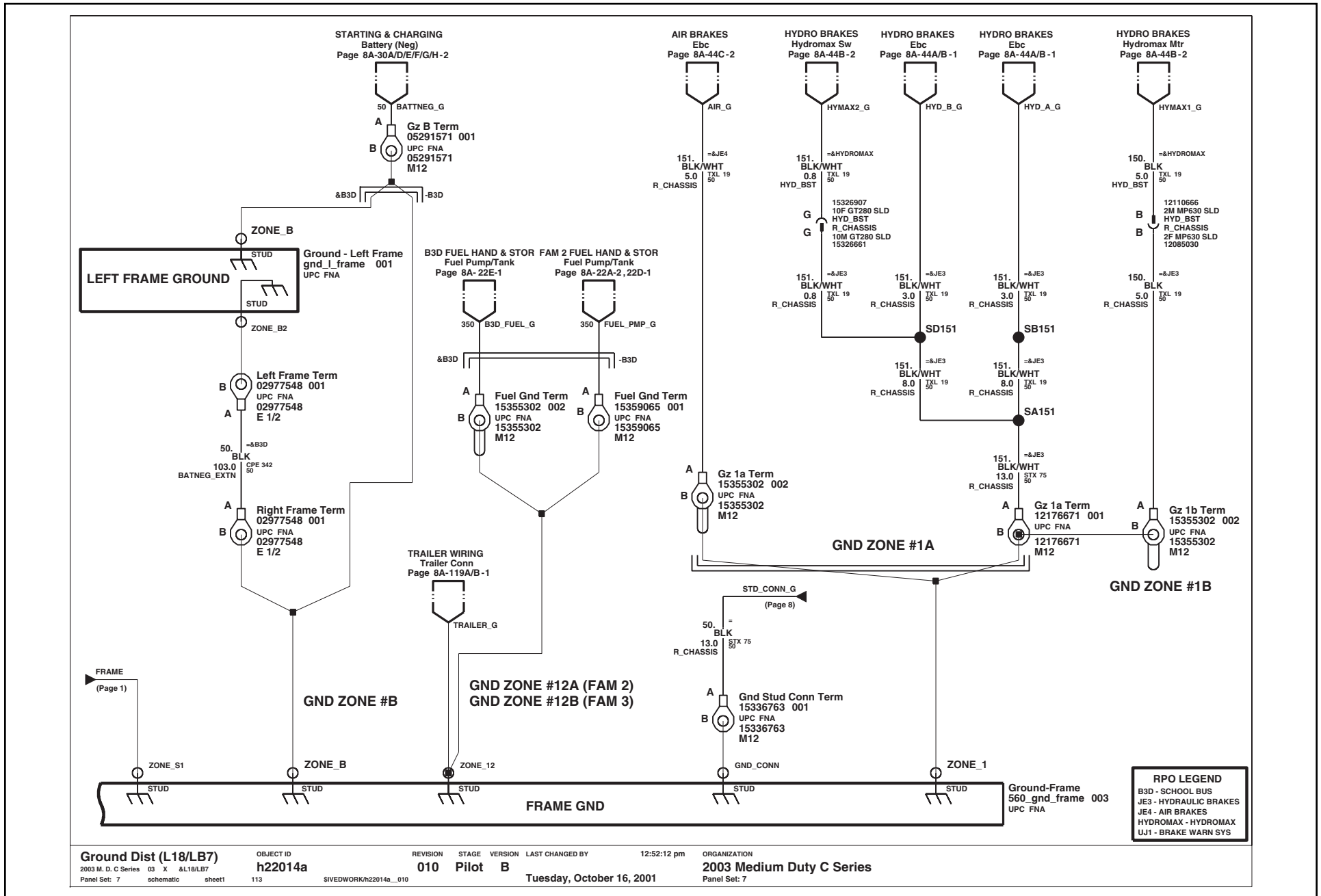
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (L18) 8.1L-Gas/NAPT – (LB7) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (L18) 8.1L-Gas/NAPT – (LB7) 6.6L-Diesel/Duramax



Ground Dist (L18/LB7)
 2003 M. D. C Series 03 X &L18/LB7
 Panel Set: 7 schematic sheet1

OBJECT ID
 h22014a
 113 SIVEDWORK/h22014a_010

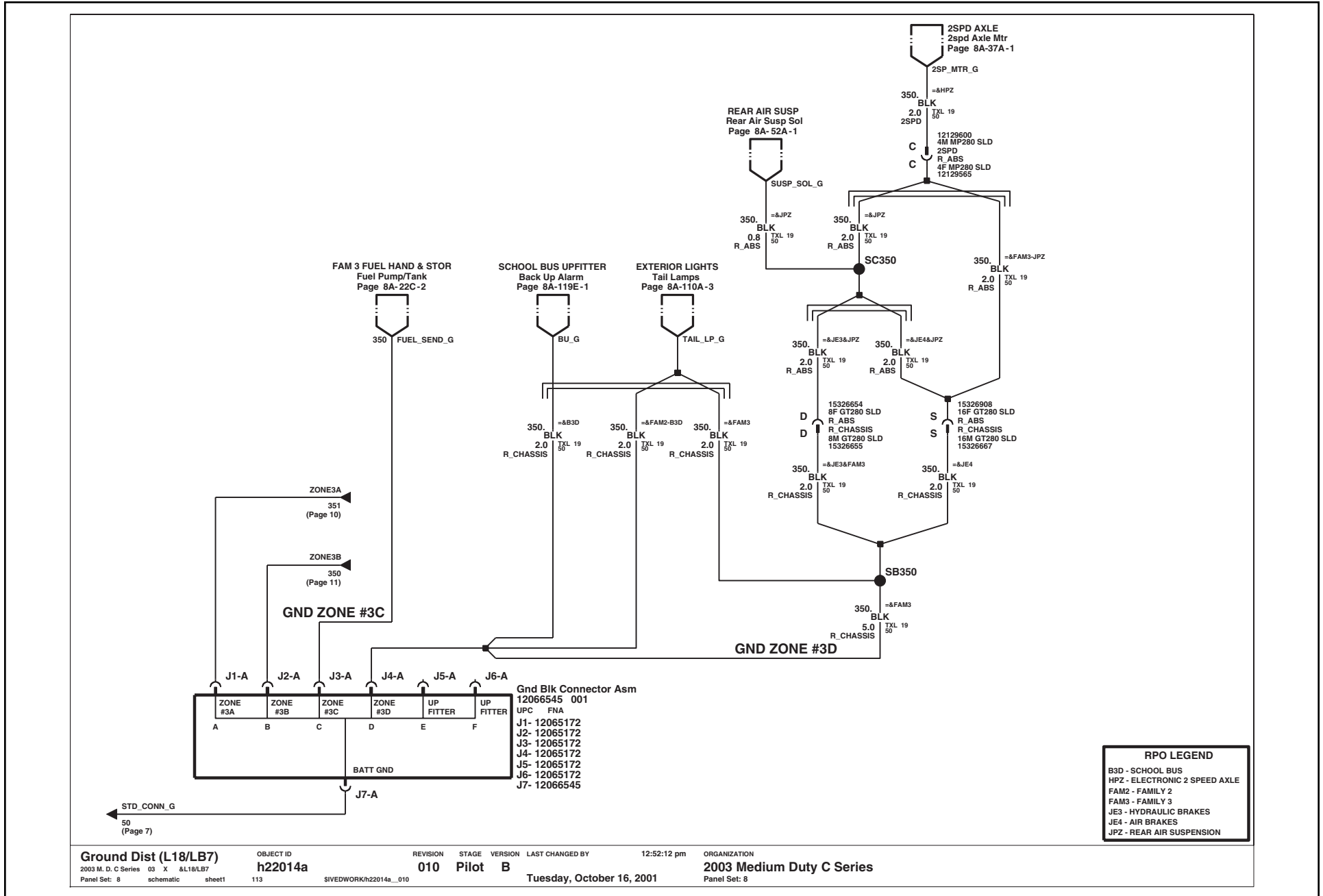
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12:52:12 pm

ORGANIZATION
 2003 Medium Duty C Series
 Panel Set: 7

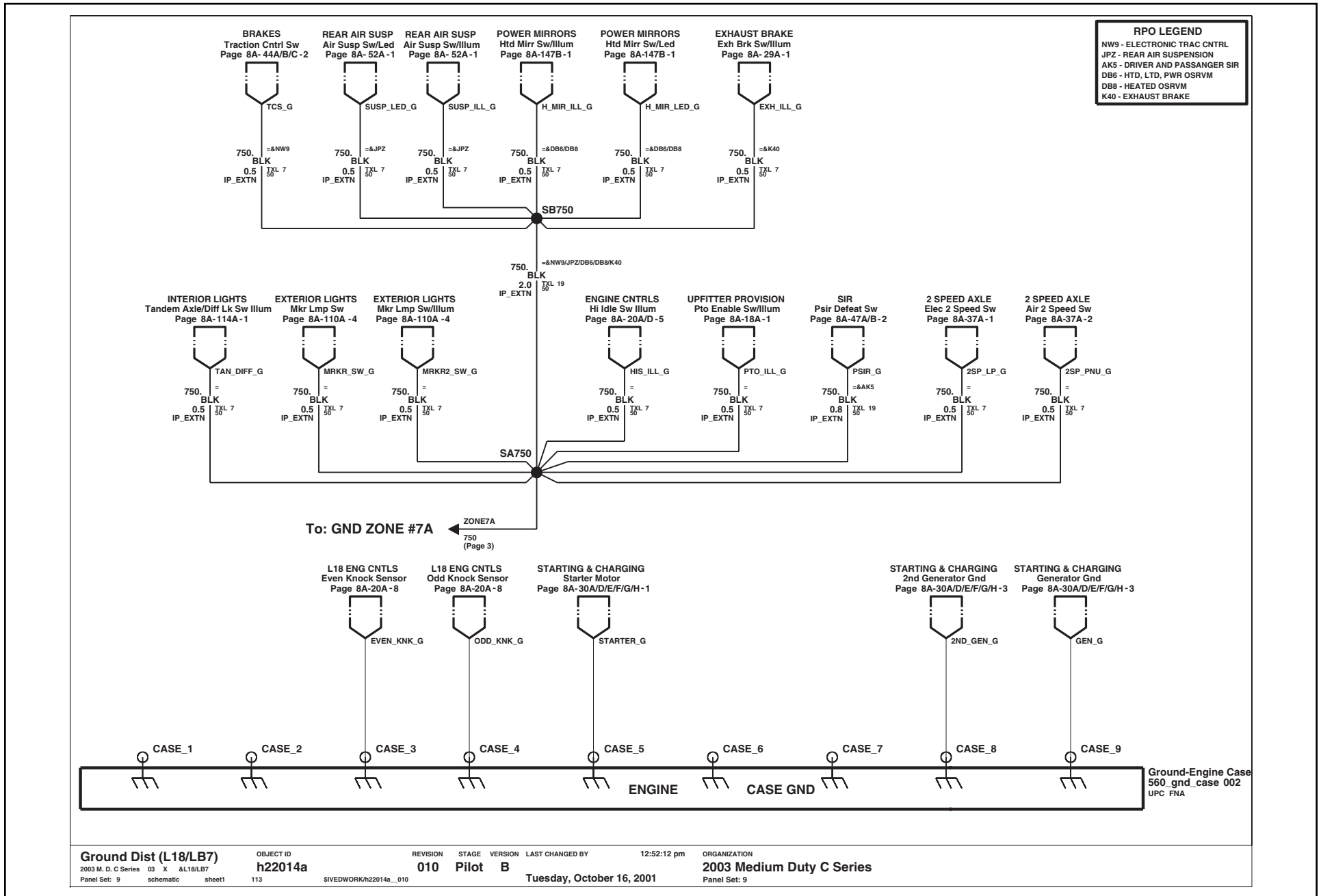
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (L18) 8.1L-Gas/NAPT – (LB7) 6.6L-Diesel/Duramax



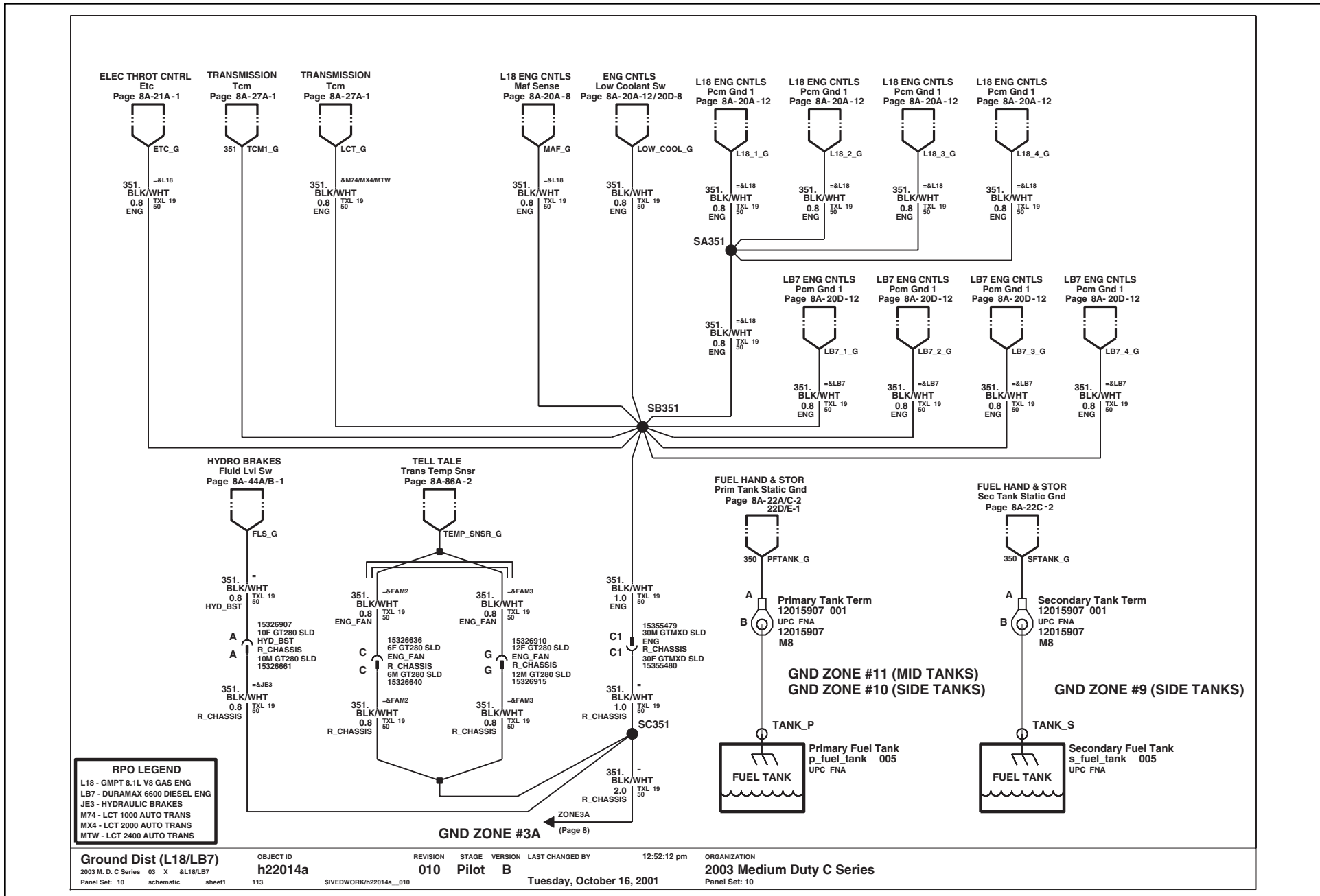
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (L18) 8.1L-Gas/NAPT – (LB7) 6.6L-Diesel/Duramax



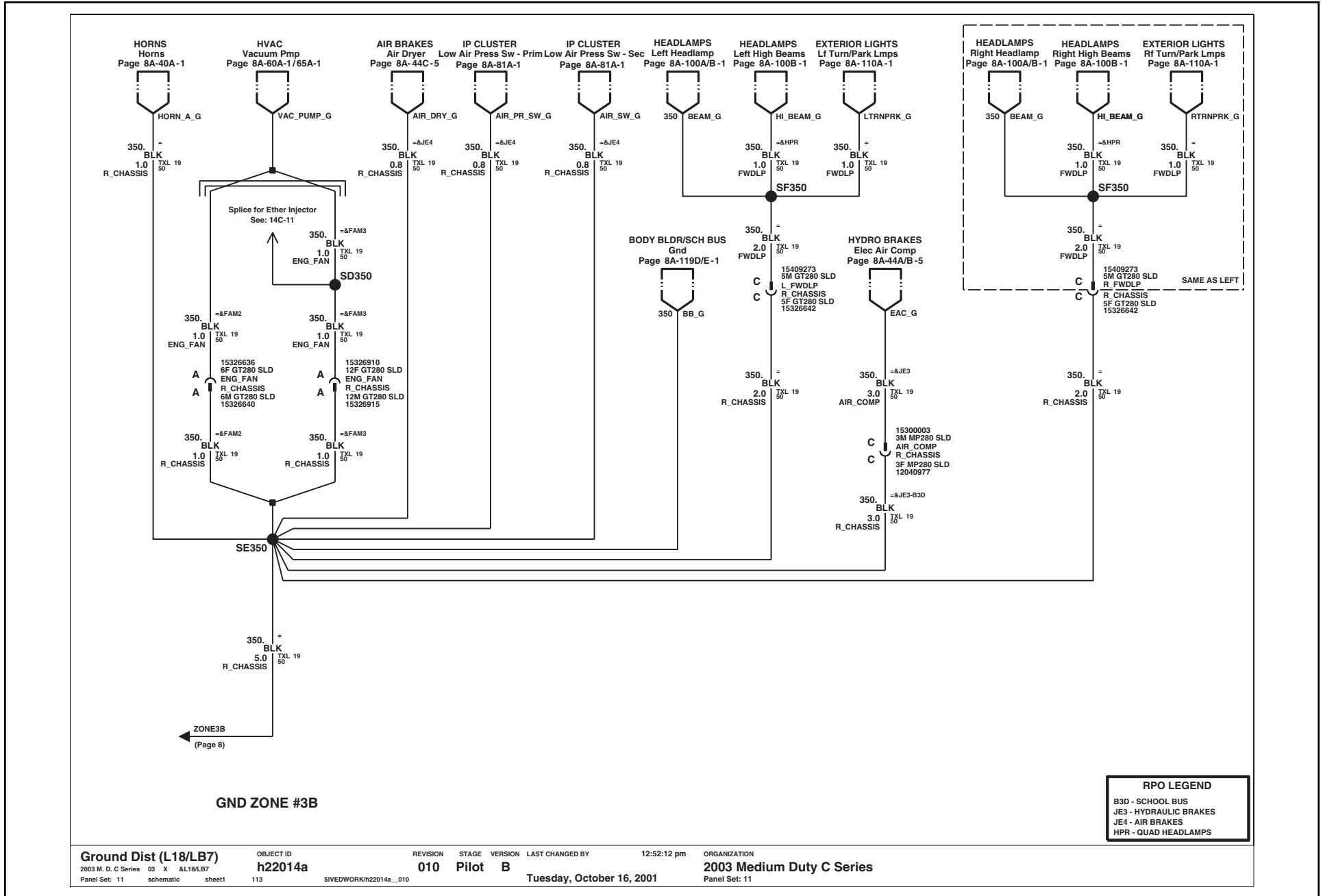
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (L18) 8.1L-Gas/NAPT – (LB7) 6.6L-Diesel/Duramax



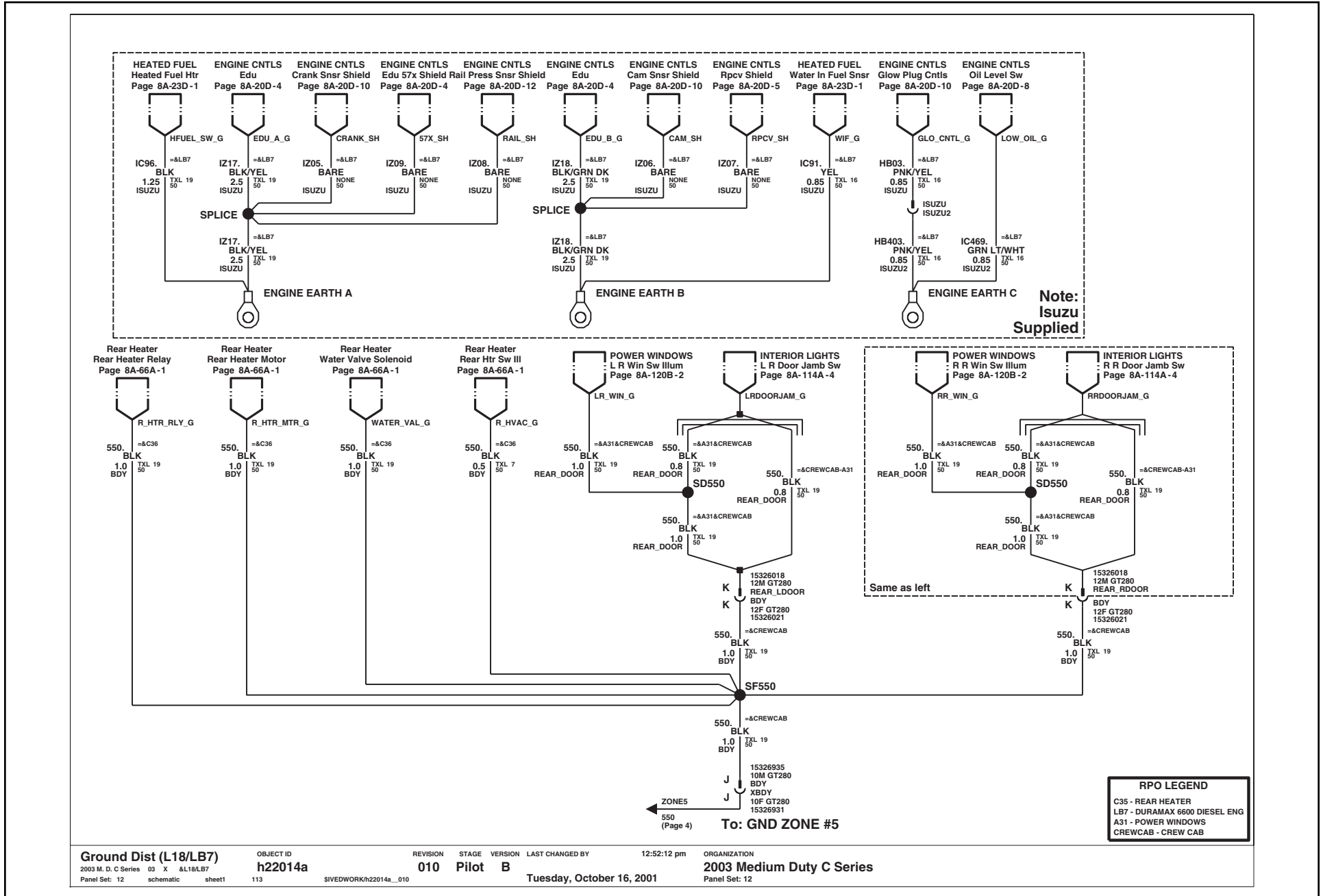
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (L18) 8.1L-Gas/NAPT – (LB7) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

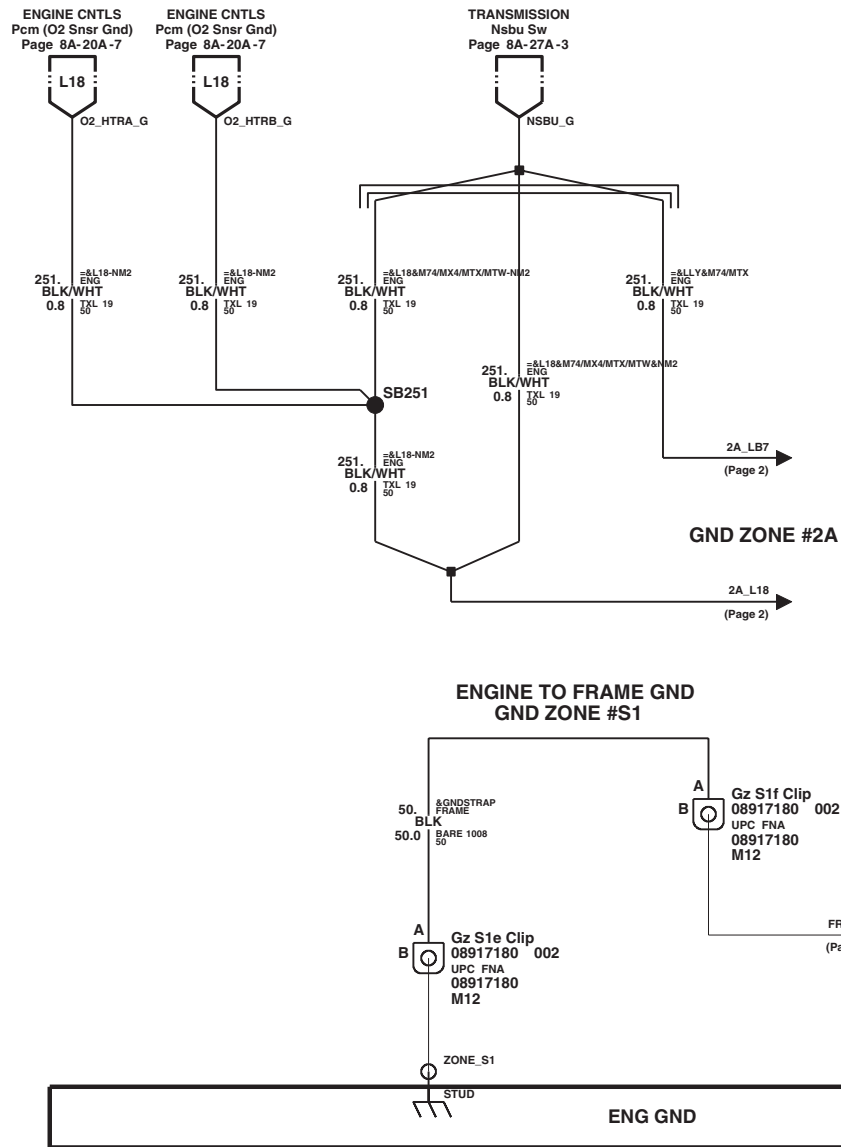
Ground Distribution – (L18) 8.1L-Gas/NAPT – (LB7) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

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Ground Distribution — (L18) 8.1L-Gas/NAPT — (LLY) 6.6L-Diesel/Duramax



RPO LEGEND	
L18 - GMPT 8.1L V8 GAS ENG	
LLY - DURAMAX 6600 DIESEL ENG	
M74 - LCT 1000 AUTO TRANS	
MX4 - LCT 2000 AUTO TRANS	
MTW - LCT 2400 AUTO TRANS	

Ground Dist (L18/LLY)
GMT560 041 X 8L18/LLY
Panel Set: 1 schematic sheet1 67

OBJECT ID
h44014a

SIVEDWORK/h44014a...001

REVISION 001
STAGE Beta
VERSION 0

LAST CHANGED BY
Monday, September 1, 2003

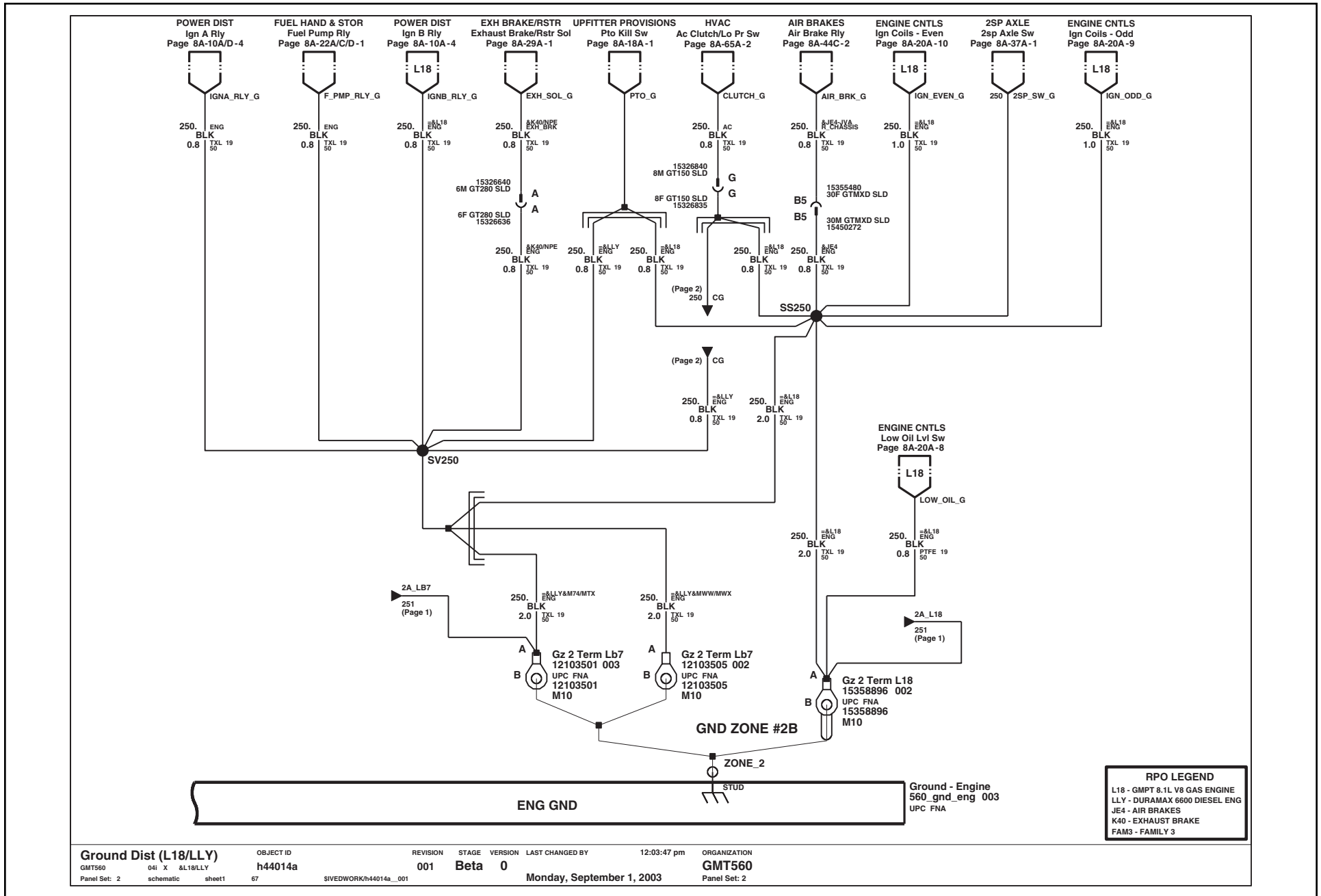
12:03:47 pm

ORGANIZATION
GMT560
Panel Set: 1

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

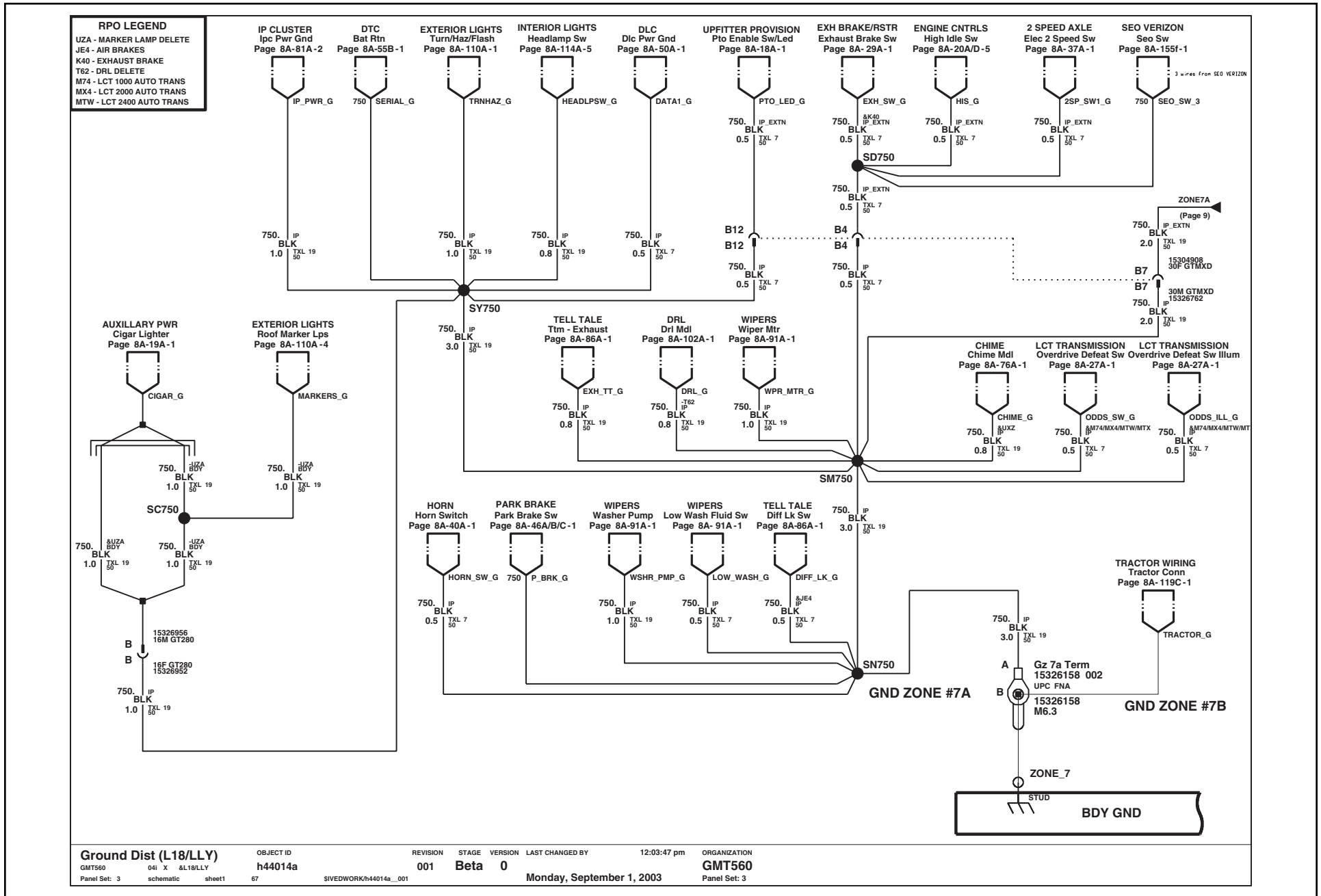
PAGE **D-64**

Ground Distribution — (L18) 8.1L-Gas/NAPT — (LLY) 6.6L-Diesel/Duramax



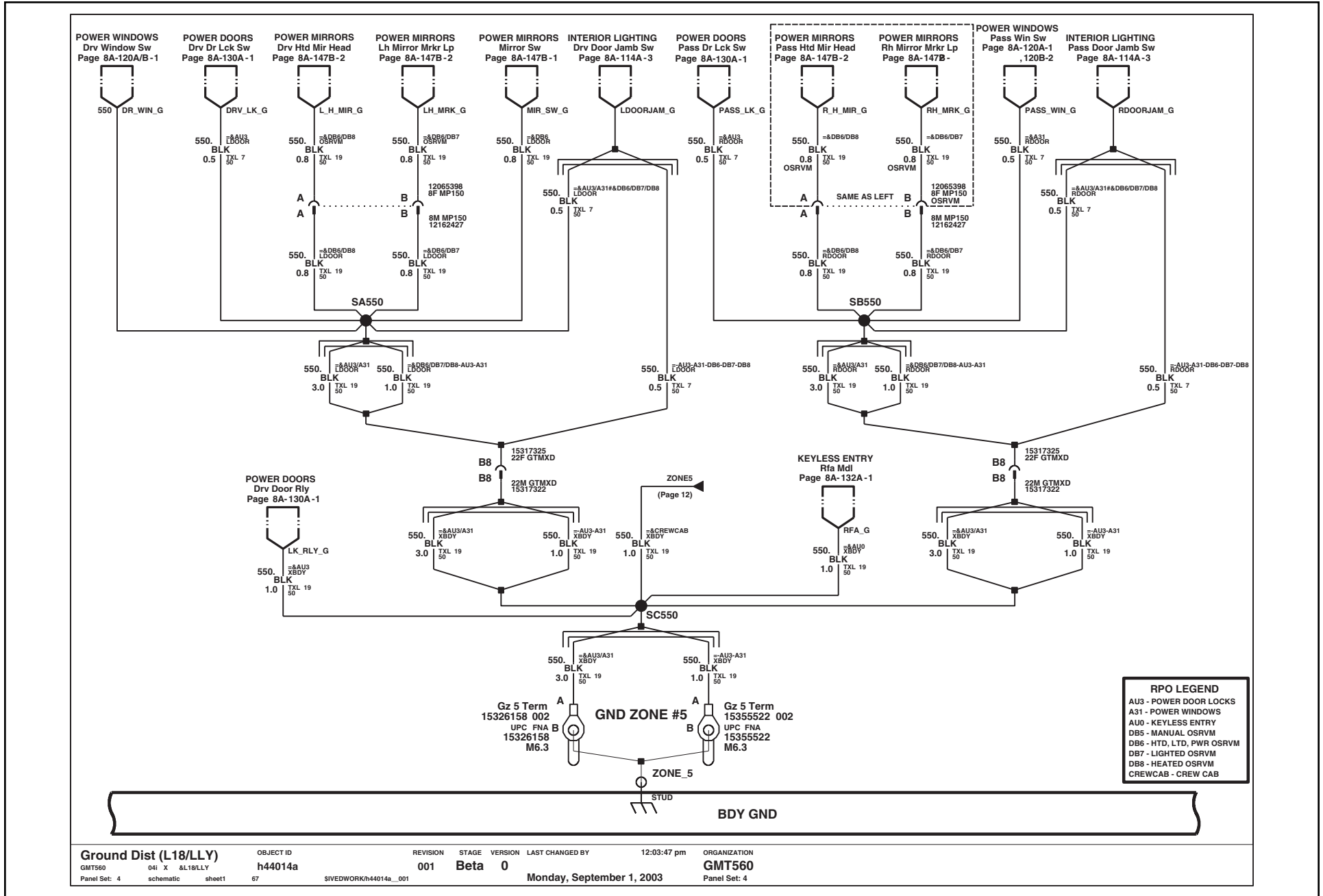
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (L18) 8.1L-Gas/NAPT – (LLY) 6.6L-Diesel/Duramax



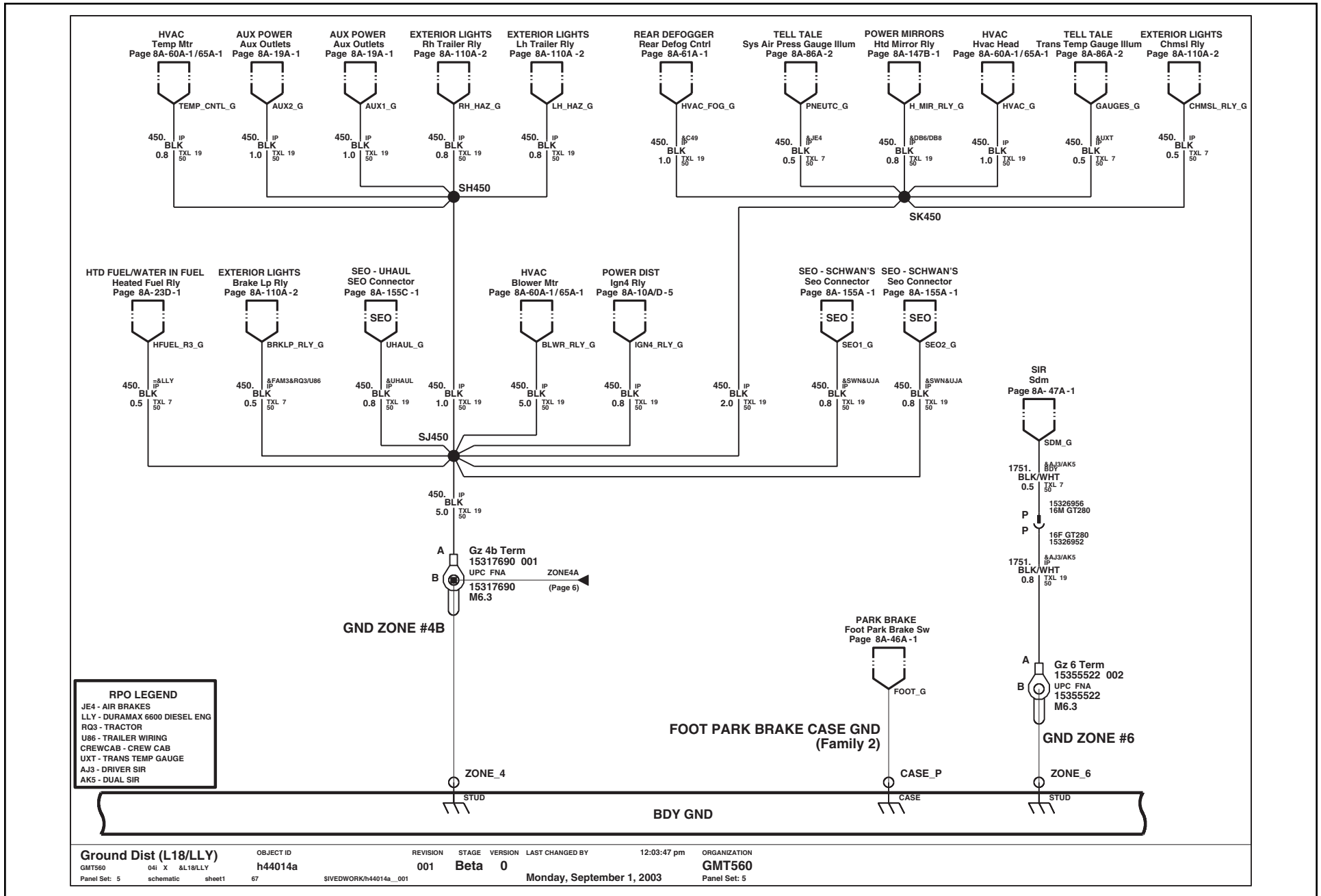
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (L18) 8.1L-Gas/NAPT — (LLY) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

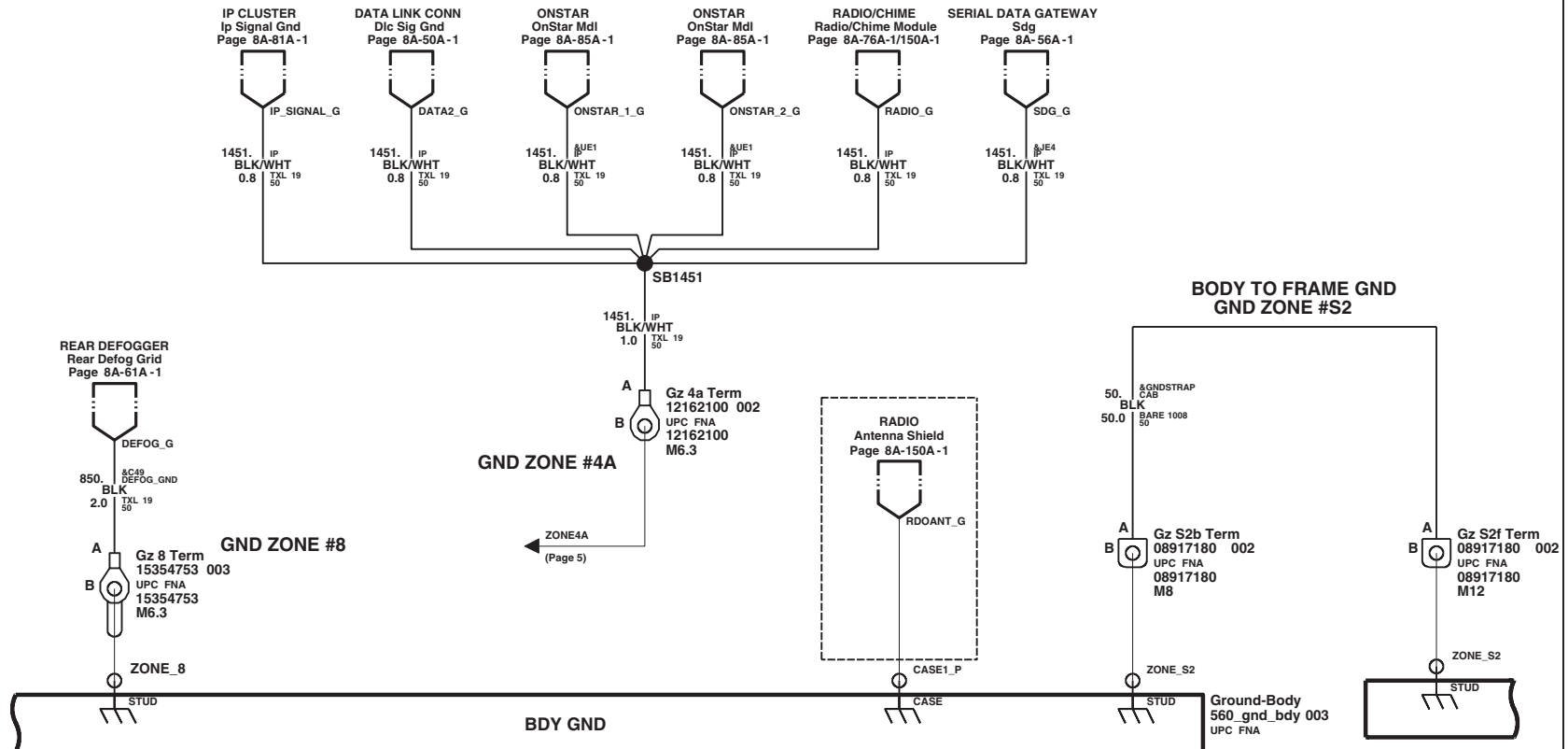
Ground Distribution — (L18) 8.1L-Gas/NAPT — (LLY) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (L18) 8.1L-Gas/NAPT — (LLY) 6.6L-Diesel/Duramax

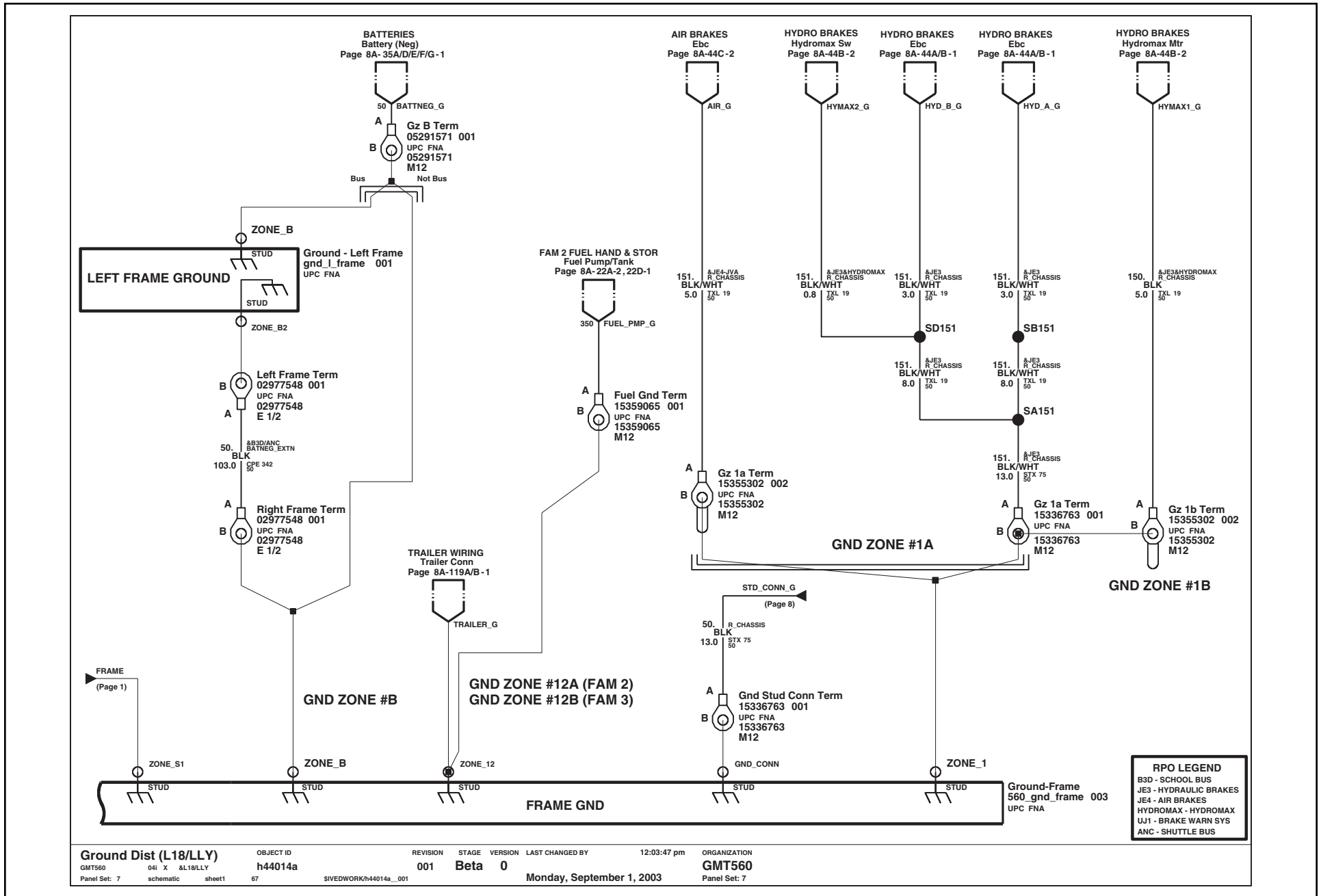
RPO LEGEND
 JE4 - AIR BRAKES
 CREWCAB - CREW CAB



Ground Dist (L18/LLY)	OBJECT ID	REVISION	STAGE	VERSION	LAST CHANGED BY	12:03:47 pm	ORGANIZATION
GMT560 Panel Set: 6	041 X SL18/LLY h44014a	001	Beta	0	SIVEDWORK/h44014a_001	Monday, September 1, 2003	GMT560 Panel Set: 6

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

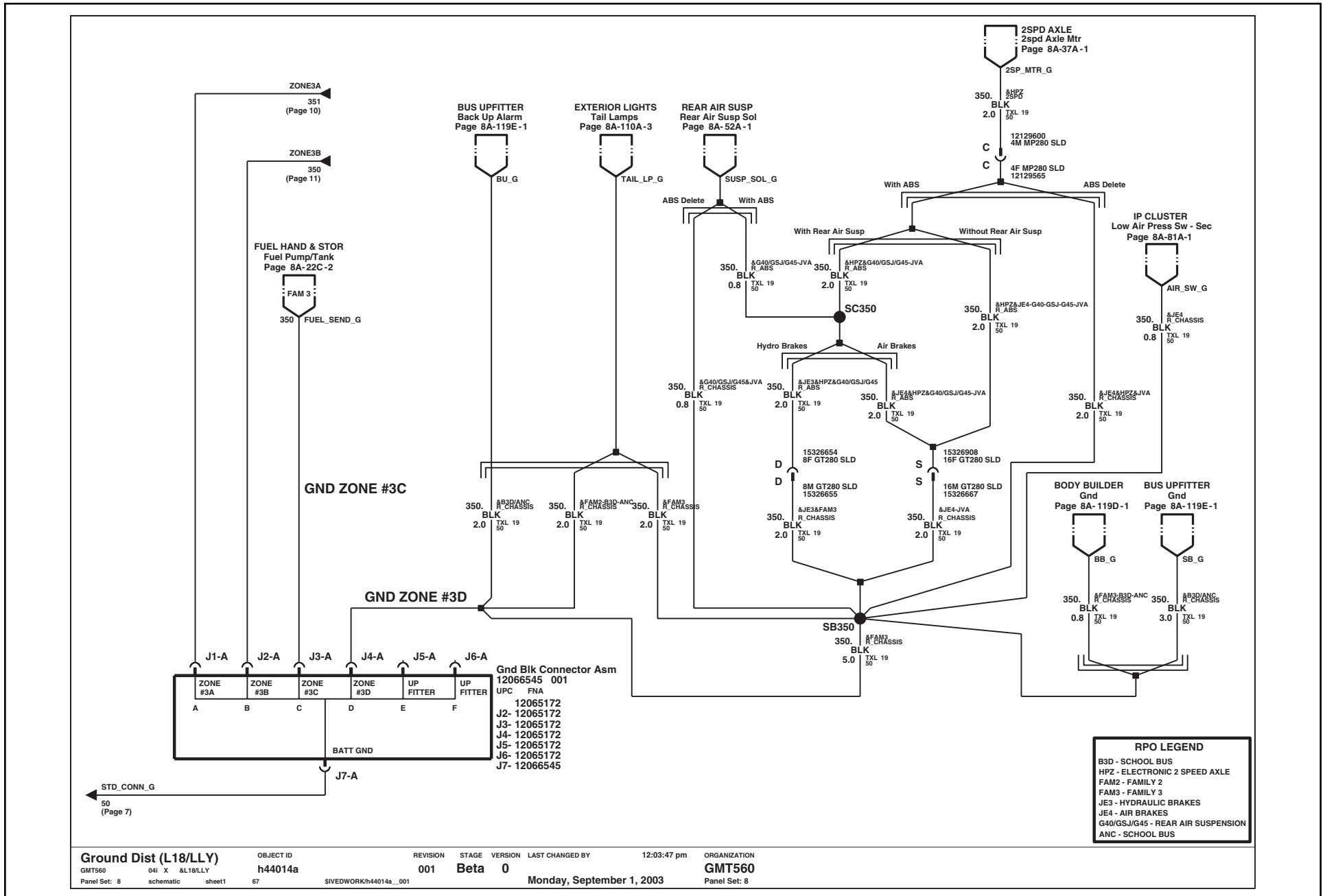
Ground Distribution — (L18) 8.1L-Gas/NAPT — (LLY) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

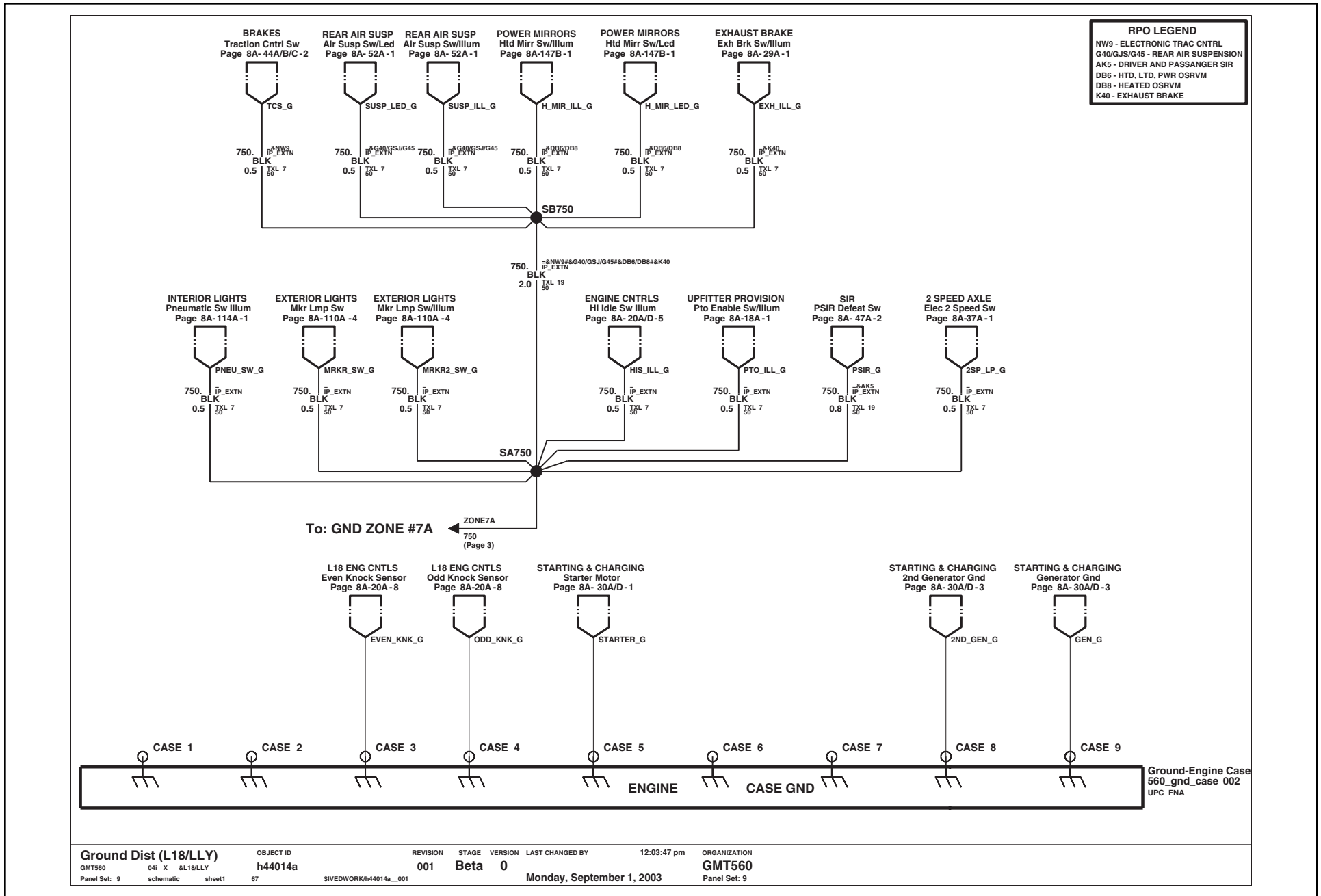
PAGE D-70

Ground Distribution — (L18) 8.1L-Gas/NAPT — (LLY) 6.6L-Diesel/Duramax



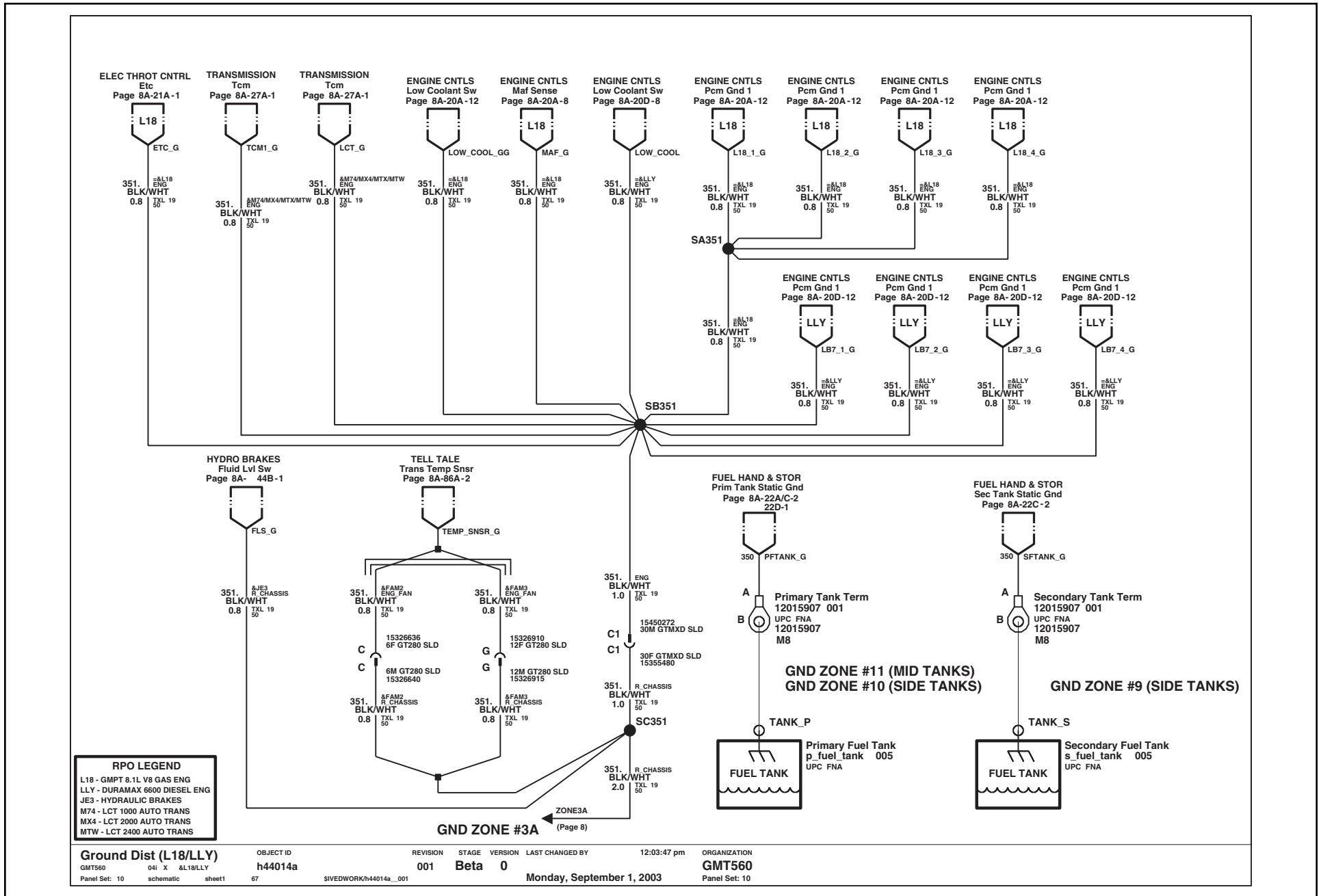
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (L18) 8.1L-Gas/NAPT — (LLY) 6.6L-Diesel/Duramax



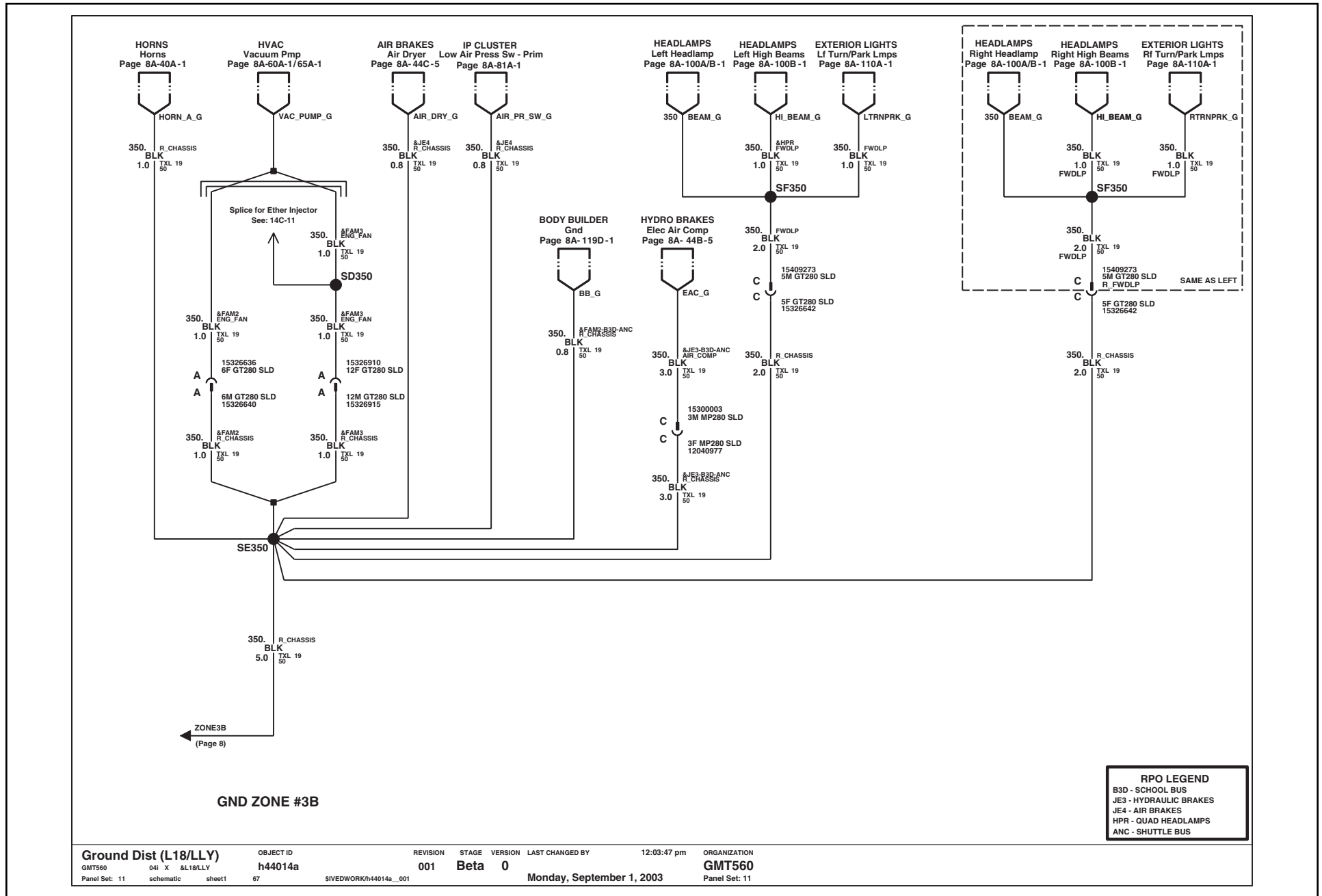
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (L18) 8.1L-Gas/NAPT – (LLY) 6.6L-Diesel/Duramax



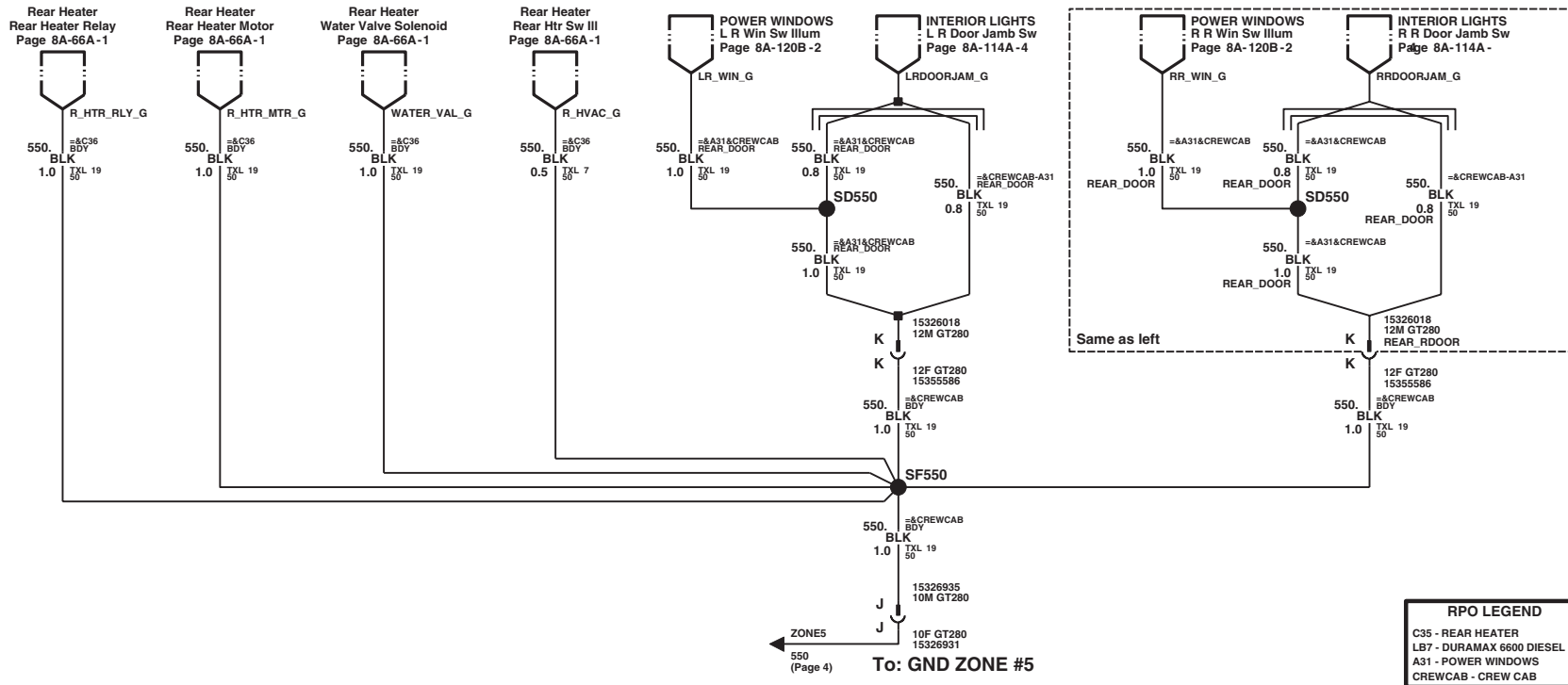
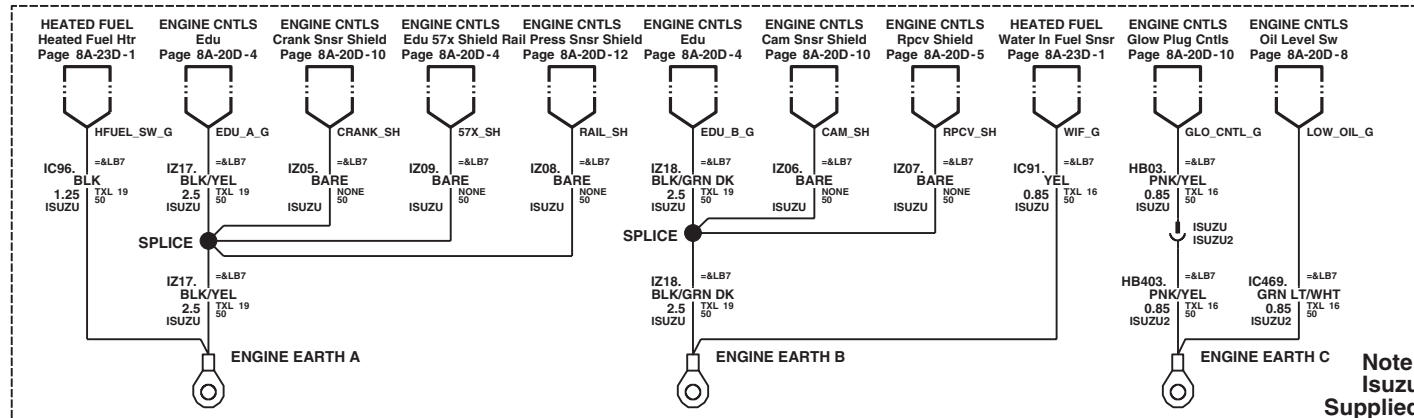
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (L18) 8.1L-Gas/NAPT — (LLY) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

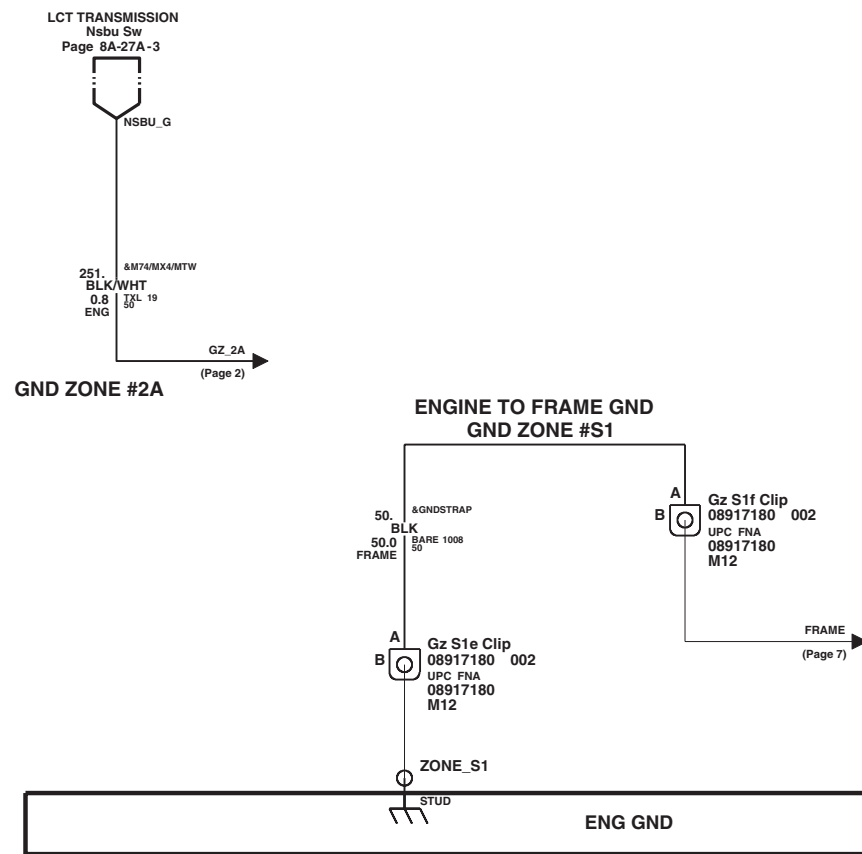
Ground Distribution — (L18) 8.1L-Gas/NAPT — (LLY) 6.6L-Diesel/Duramax



RPO LEGEND	
C35	- REAR HEATER
LB7	- DURAMAX 6600 DIESEL ENG
A31	- POWER WINDOWS
CREWCAB	- CREW CAB

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (LG4-'03-'04) 7.8L-Diesel/Duramax



RPO LEGEND	
M74	- LCT 1000 AUTO TRANS
MX4	- LCT 2000 AUTO TRANS
MPW	- LCT 2400 AUTO TRANS

Ground Dist (LG4)
2003 M. D. C Series 03 X &LG4
Panel Set: 1 schematic sheet1 55 SIVEDWORK/h22014b_009

OBJECT ID
h22014b

REVISION STAGE VERSION
009 Pilot B

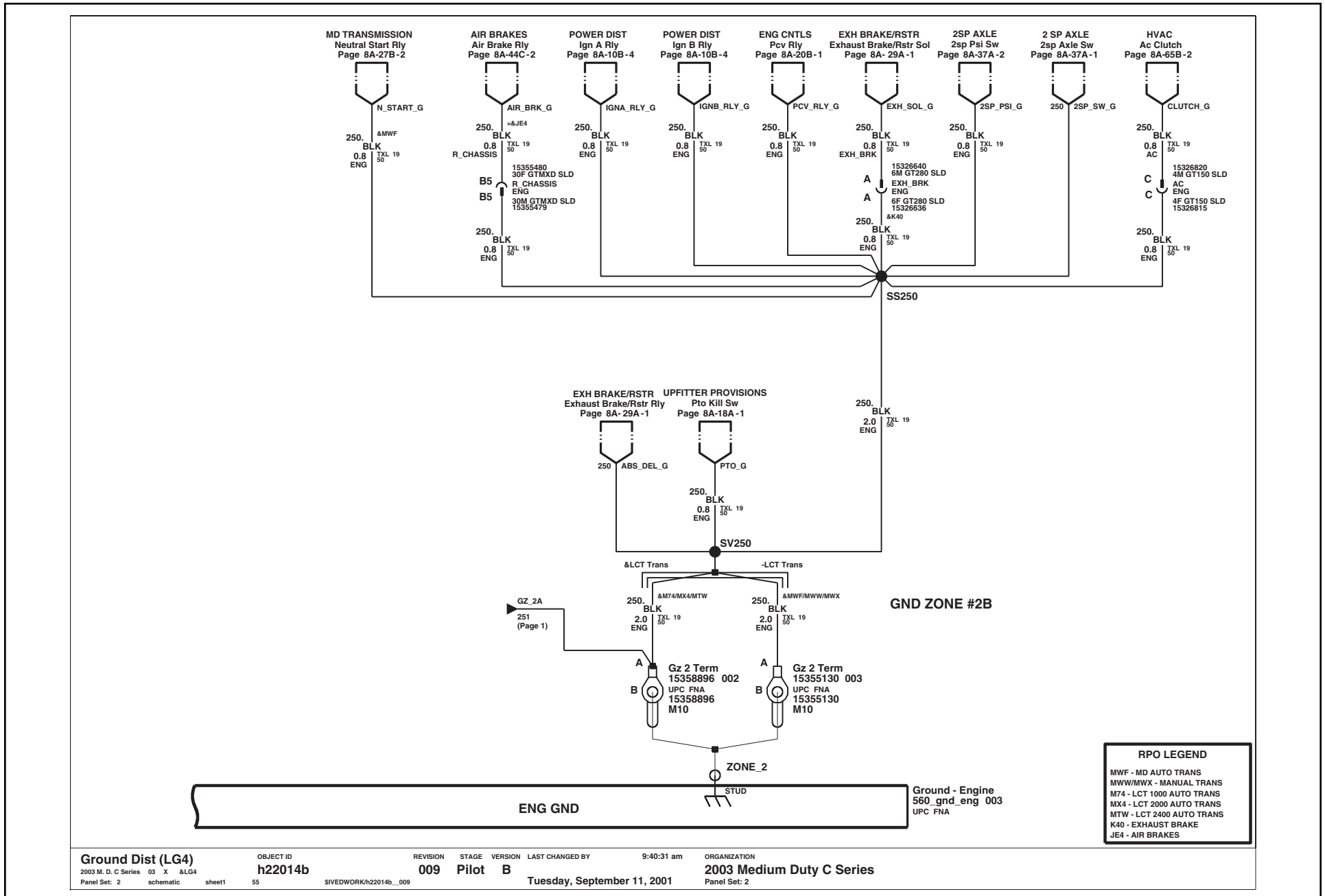
LAST CHANGED BY 9:40:31 am
Tuesday, September 11, 2001

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 1

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE D-76

Ground Distribution — (LG4-'03-'04) 7.8L-Diesel/Duramax



Ground Dist (LG4)
2003 M. D. C Series 03 X &LG4
Panel Set: 2 schematic sheet1

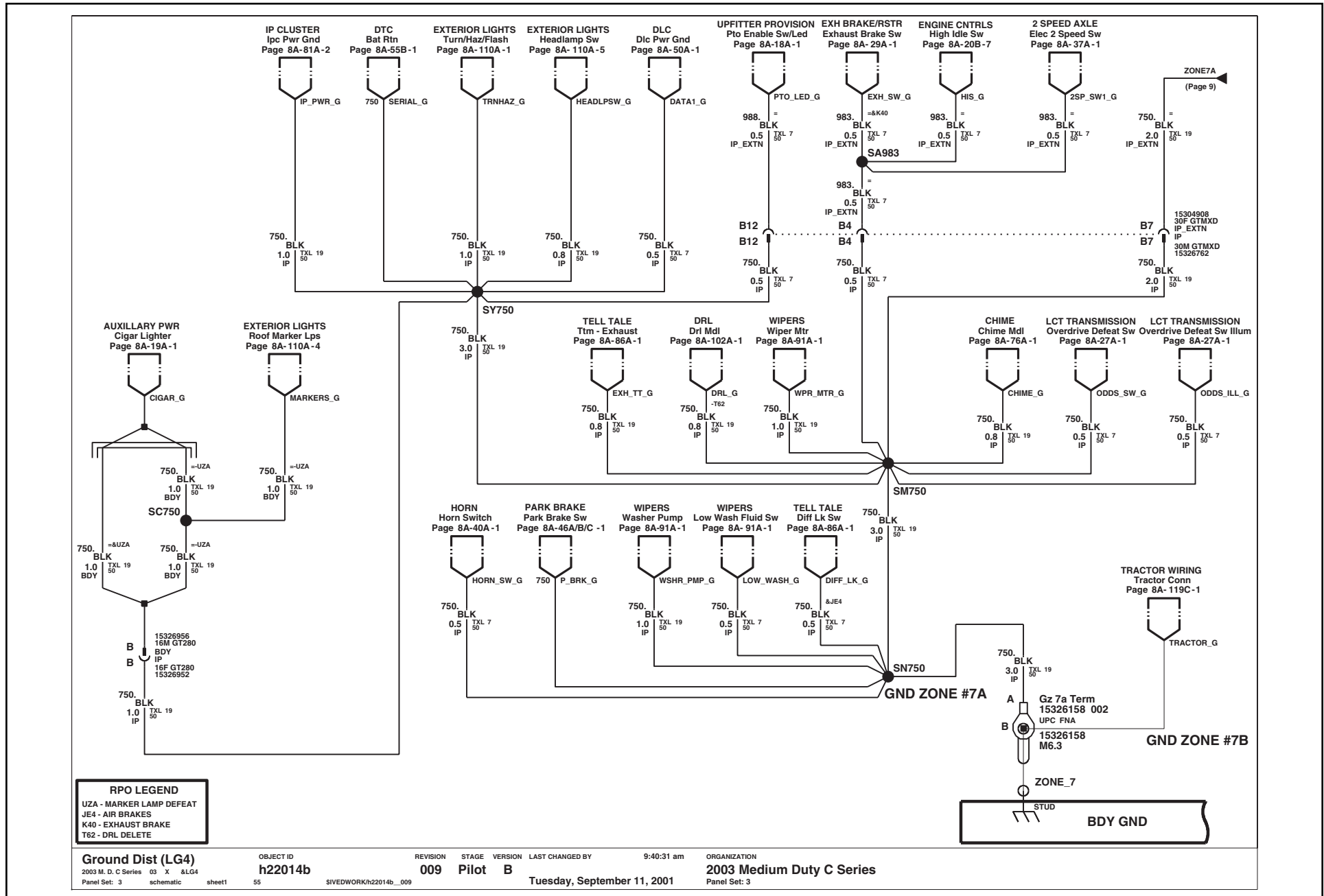
OBJECT ID
h22014b

REVISION STAGE VERSION LAST CHANGED BY
009 Pilot B
Tuesday, September 11, 2001

9:40:31 am
ORGANIZATION
2003 Medium Duty C Series
Panel Set: 2

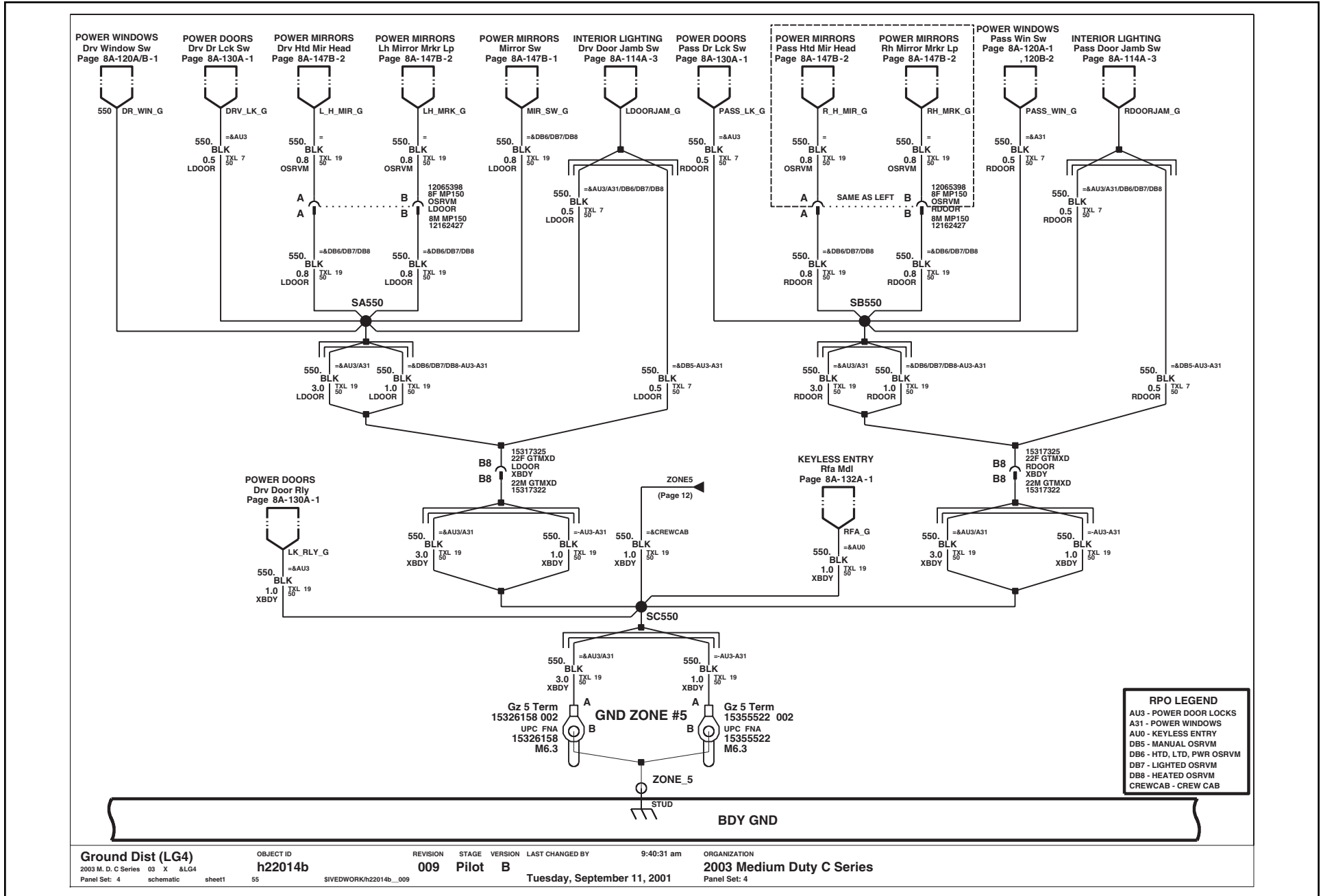
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (LG4-'03-'04) 7.8L-Diesel/Duramax



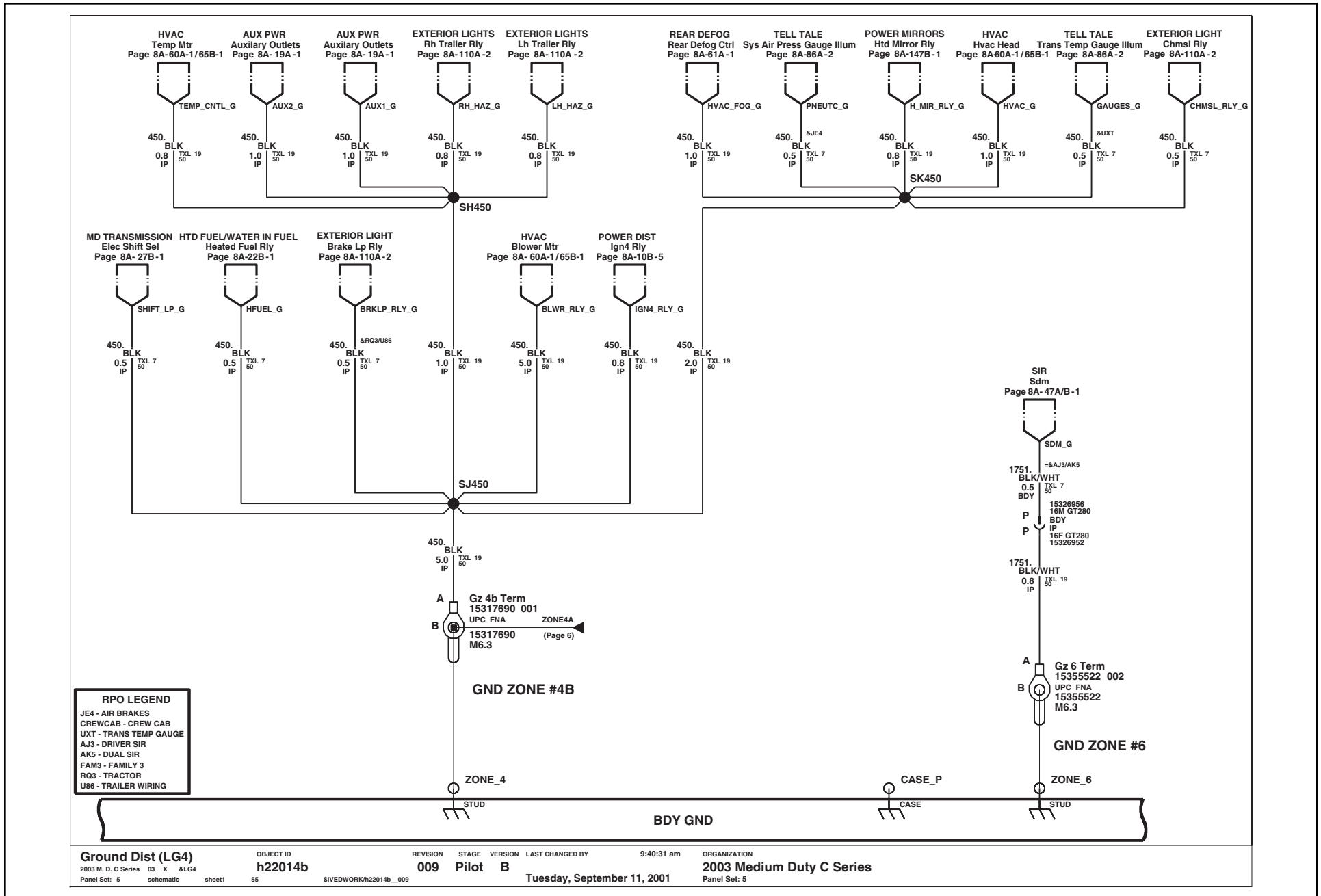
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (LG4-'03-'04) 7.8L-Diesel/Duramax



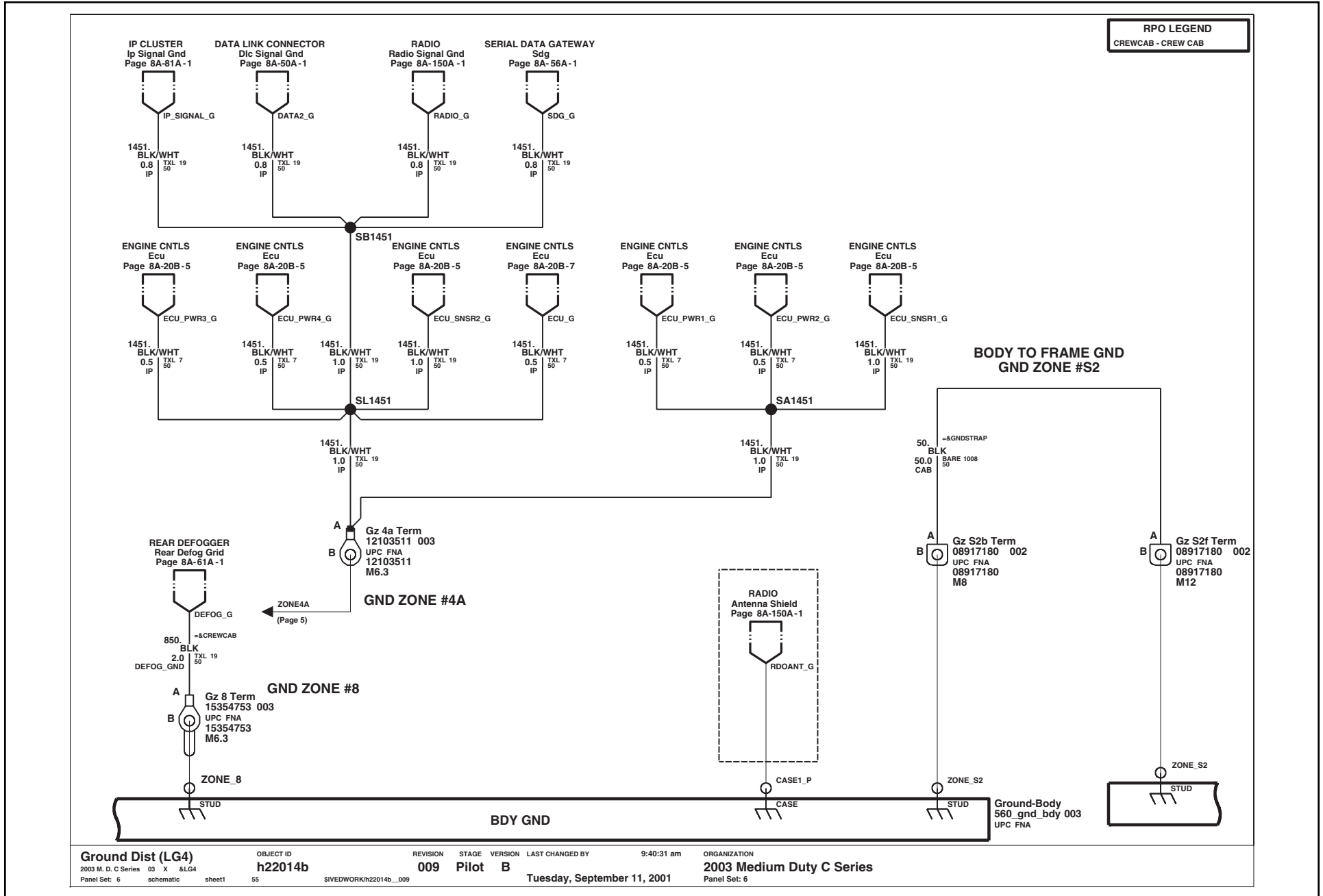
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (LG4-'03-'04) 7.8L-Diesel/Duramax



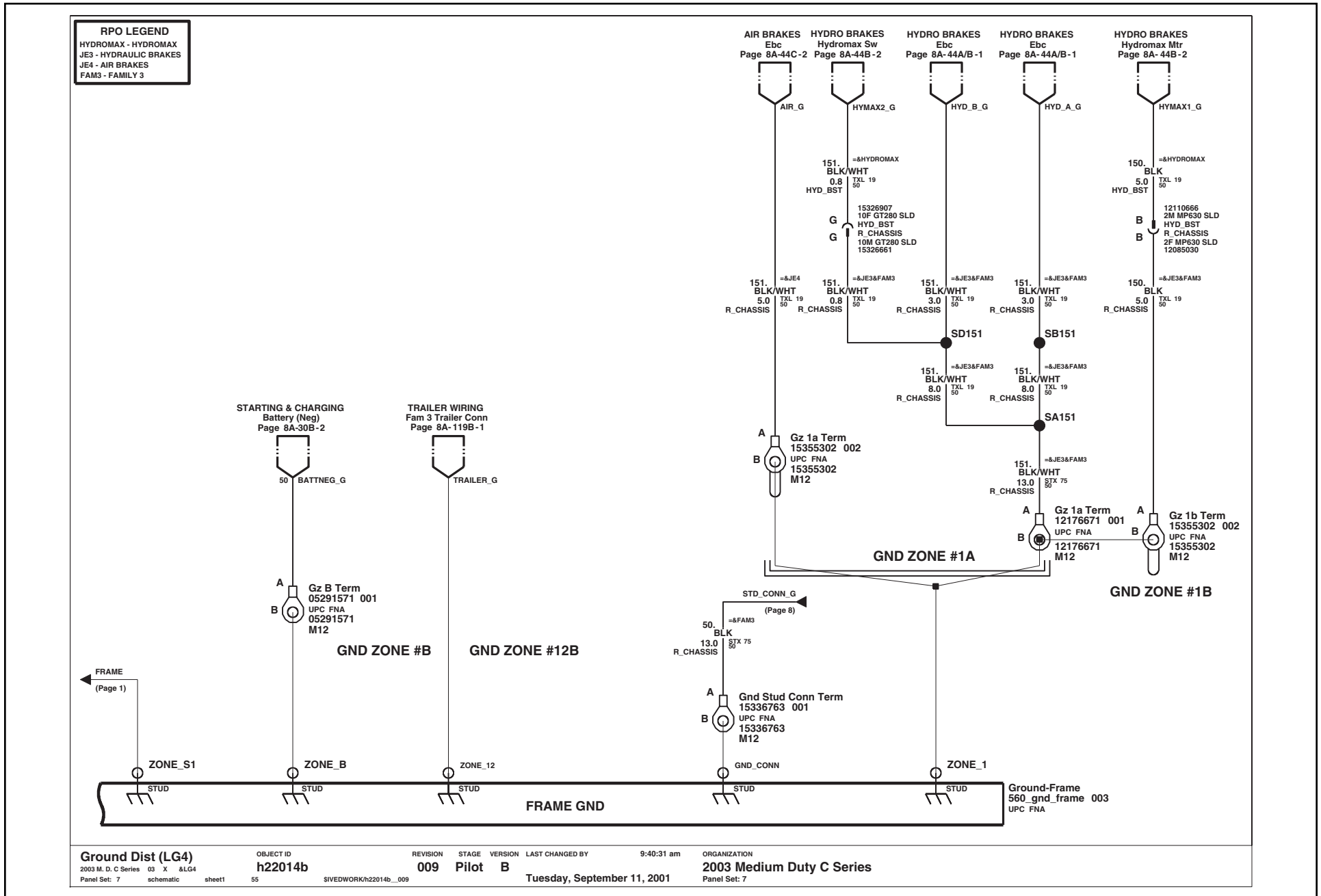
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (LG4-'03-'04) 7.8L-Diesel/Duramax



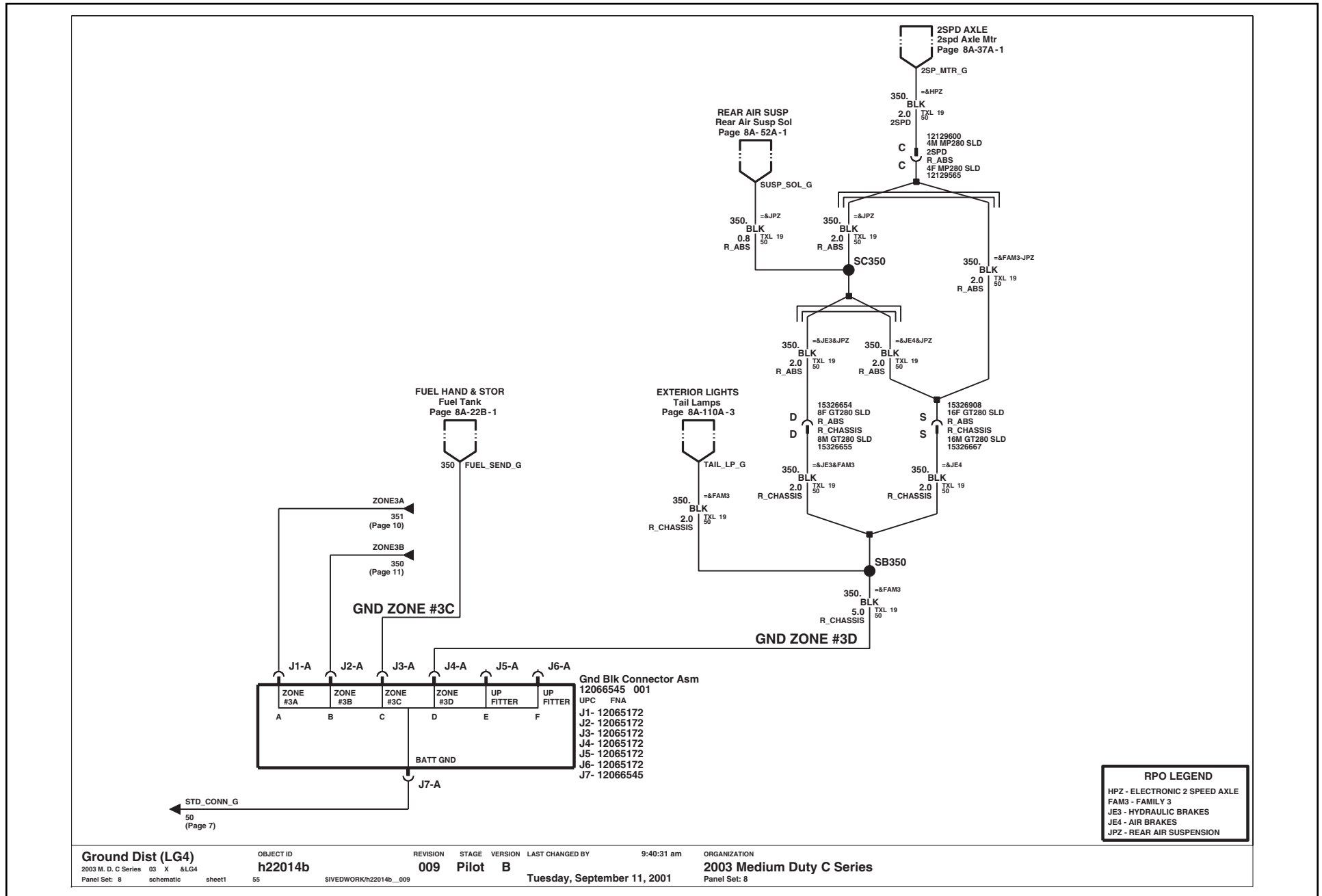
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (LG4-'03-'04) 7.8L-Diesel/Duramax



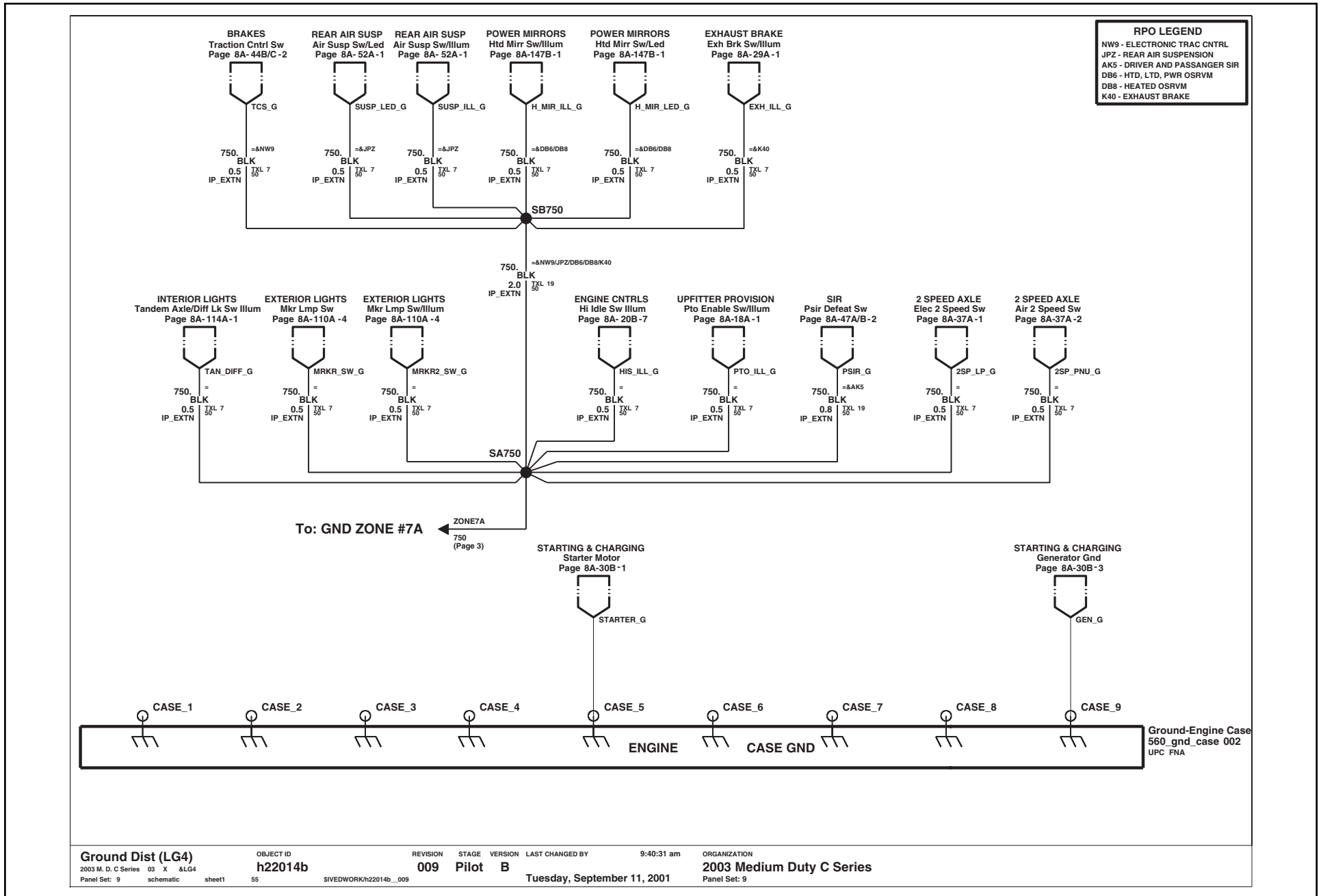
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (LG4-'03-'04) 7.8L-Diesel/Duramax



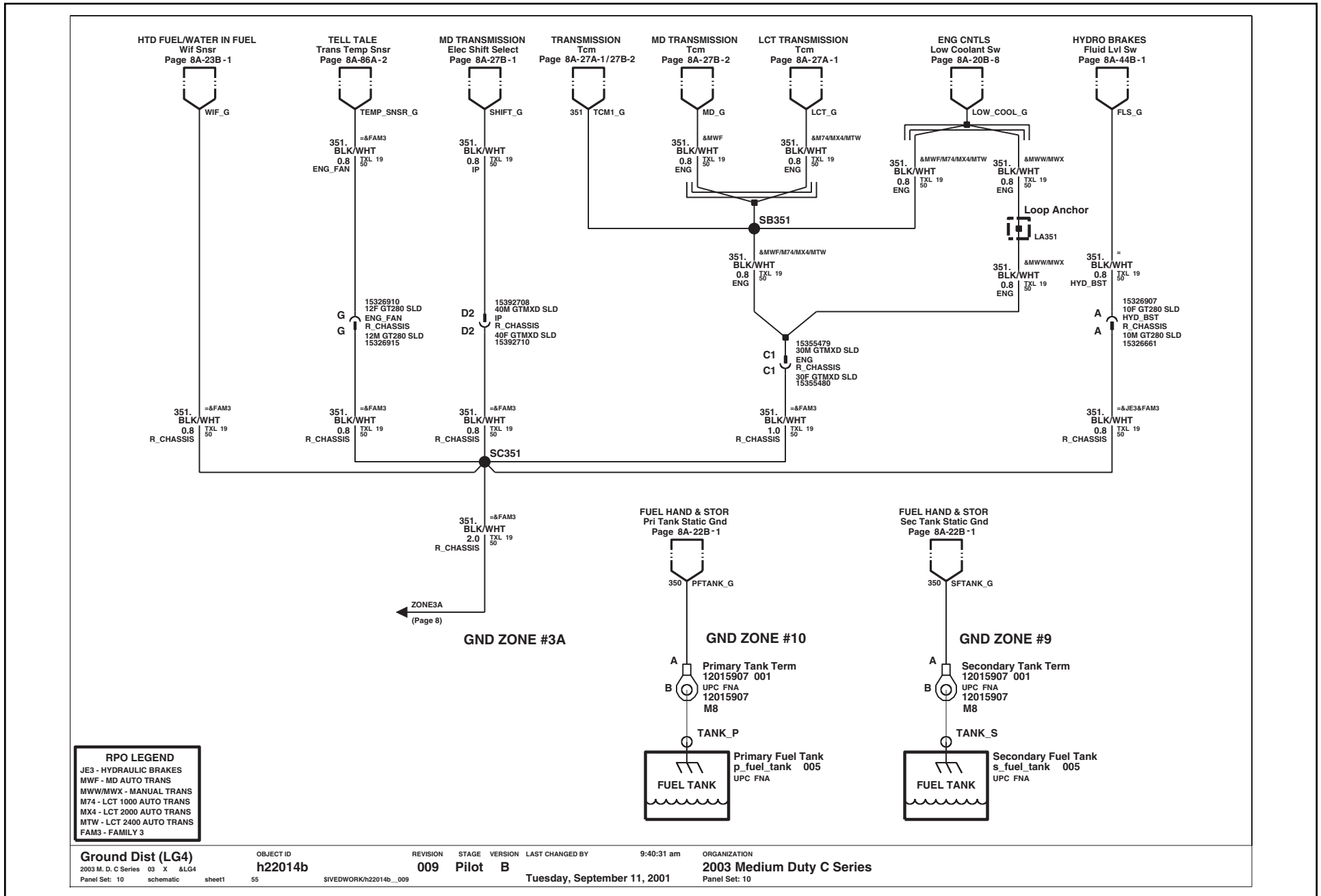
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (LG4-'03-'04) 7.8L-Diesel/Duramax



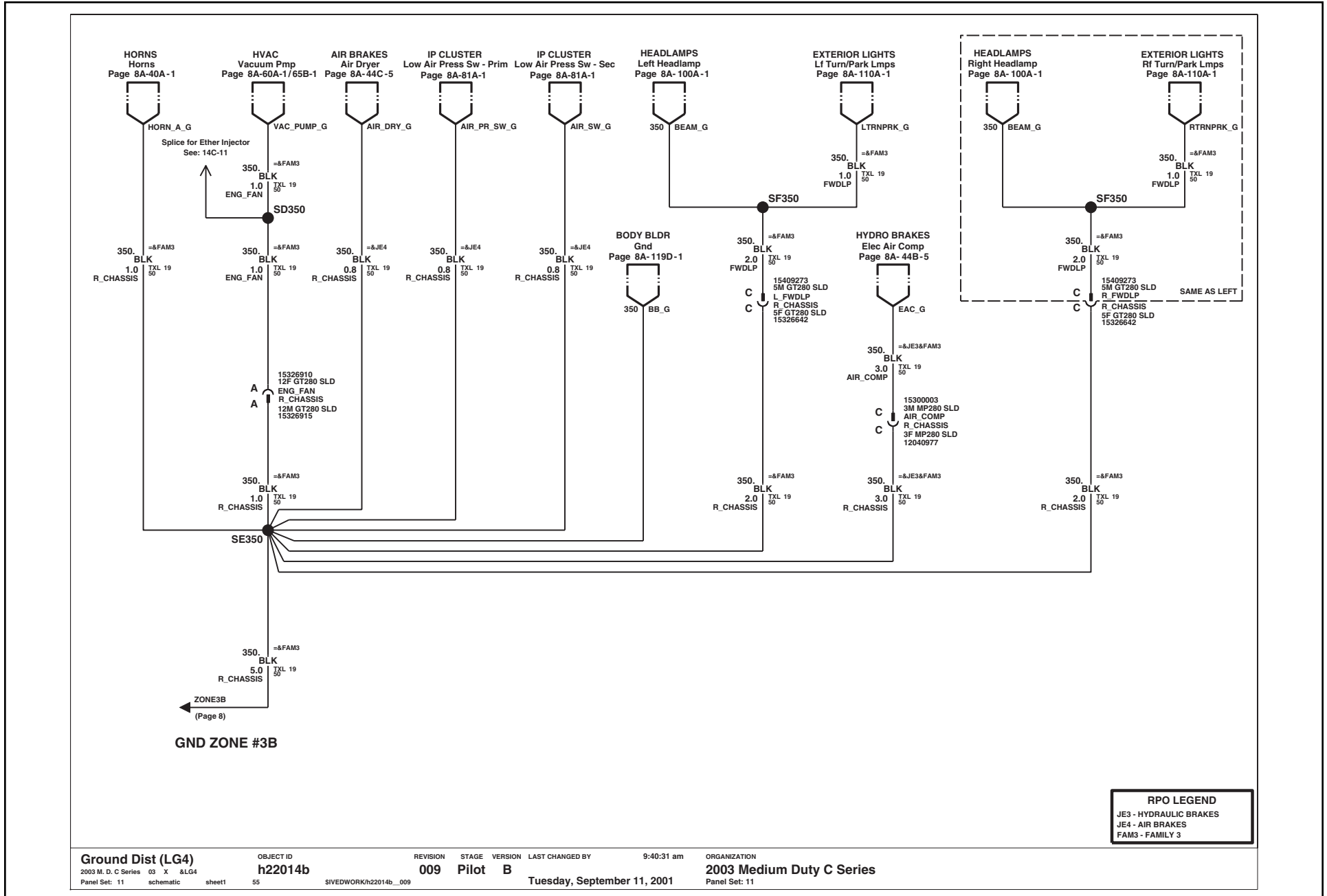
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (LG4-'03-'04) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

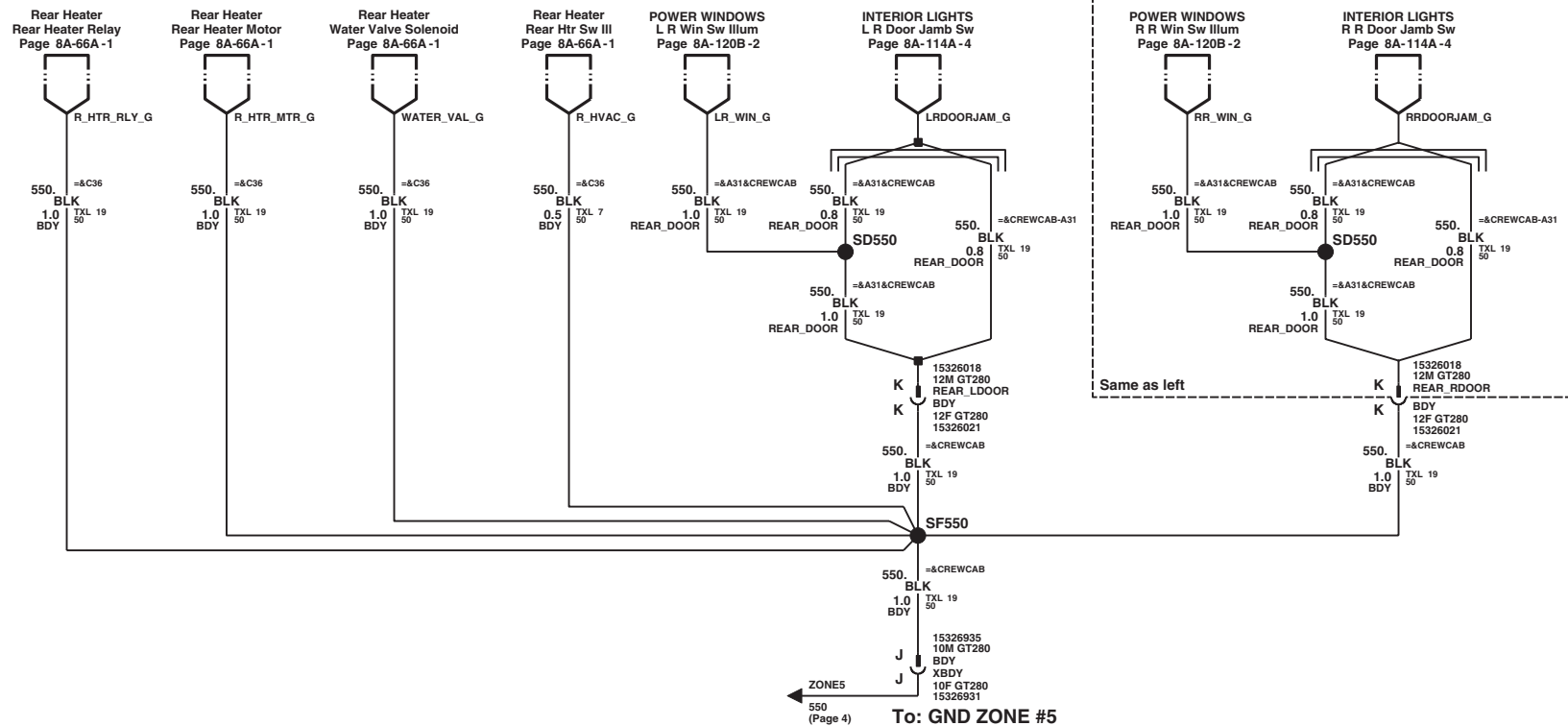
Ground Distribution — (LG4-'03-'04) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (LG4-'03-'04) 7.8L-Diesel/Duramax

03 560 000	JG	PILOT - INITIAL CREATION	09FE00	001
03 560 682	LR	REVISED PILOT MECH RELEASE REV A	15MY00	001
03 560 805	JG	Misc. Updates	30OC00	001
03 560 814	JG	R ABS to R CHASSIS inline update	02NO00	001
03 560 818	JG	Various Grounding Updates	28NO00	001
03 560 839	JG	Gz 6 Updates (Ring Term & Gauge)	19DE00	001
03 560 873	JG	Remove V04; Inline Update, Gauge Update	06FE01	001
03 560 983	JG	Engine Ground Strap Update	10AP01	001
03 560 1012	JG	Ground Zone 2 Ring Terminal Update	02MY01	001
03 560 1056	LR	REMOVE LC8	18JL01	001
03 560 1058	JG	Ground Block Ring Terminal Update	20JL01	001
03 560 1096	JG	Ground Zone #5 Ring Term Update	11SE01	001

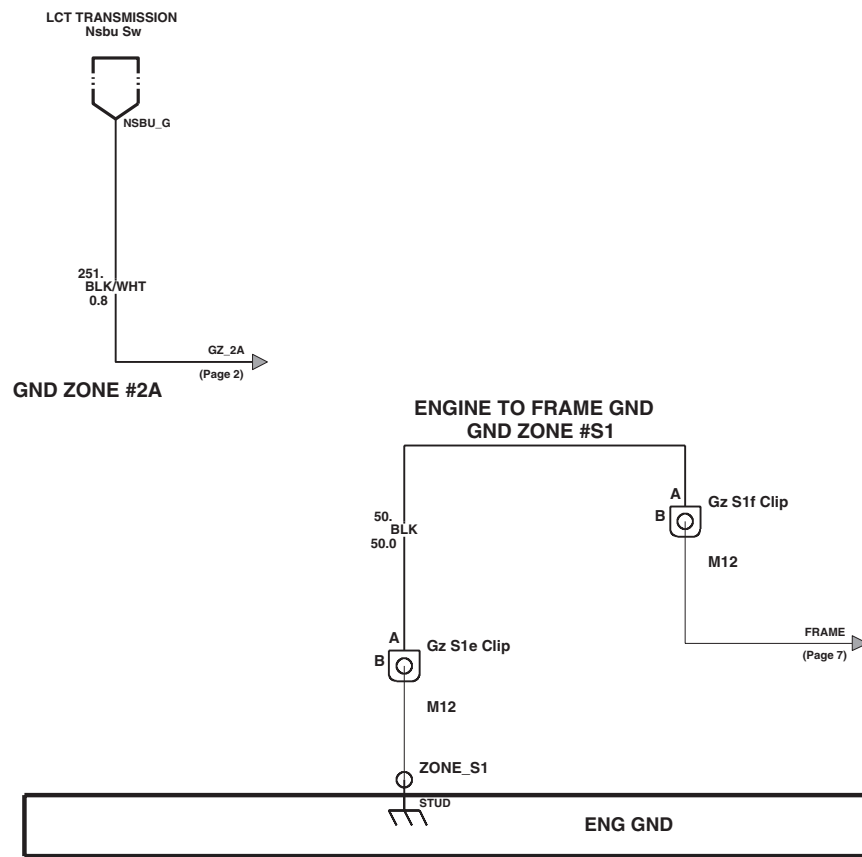


RPO LEGEND

A31	- POWER WINDOWS
C35	- REAR HEATER
CREWCAB	- CREW CAB

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (LG4-'04i) 7.8L-Diesel/Duramax



RPO LEGEND	
M74 - LCT 1000 AUTO TRANS	
MX4 - LCT 2000 AUTO TRANS	
MITW - LCT 2400 AUTO TRANS	

Ground Dist (LG4)
GMT560 041 X
Panel Set: 1 schematic sheet1

OBJECT ID
h44014b

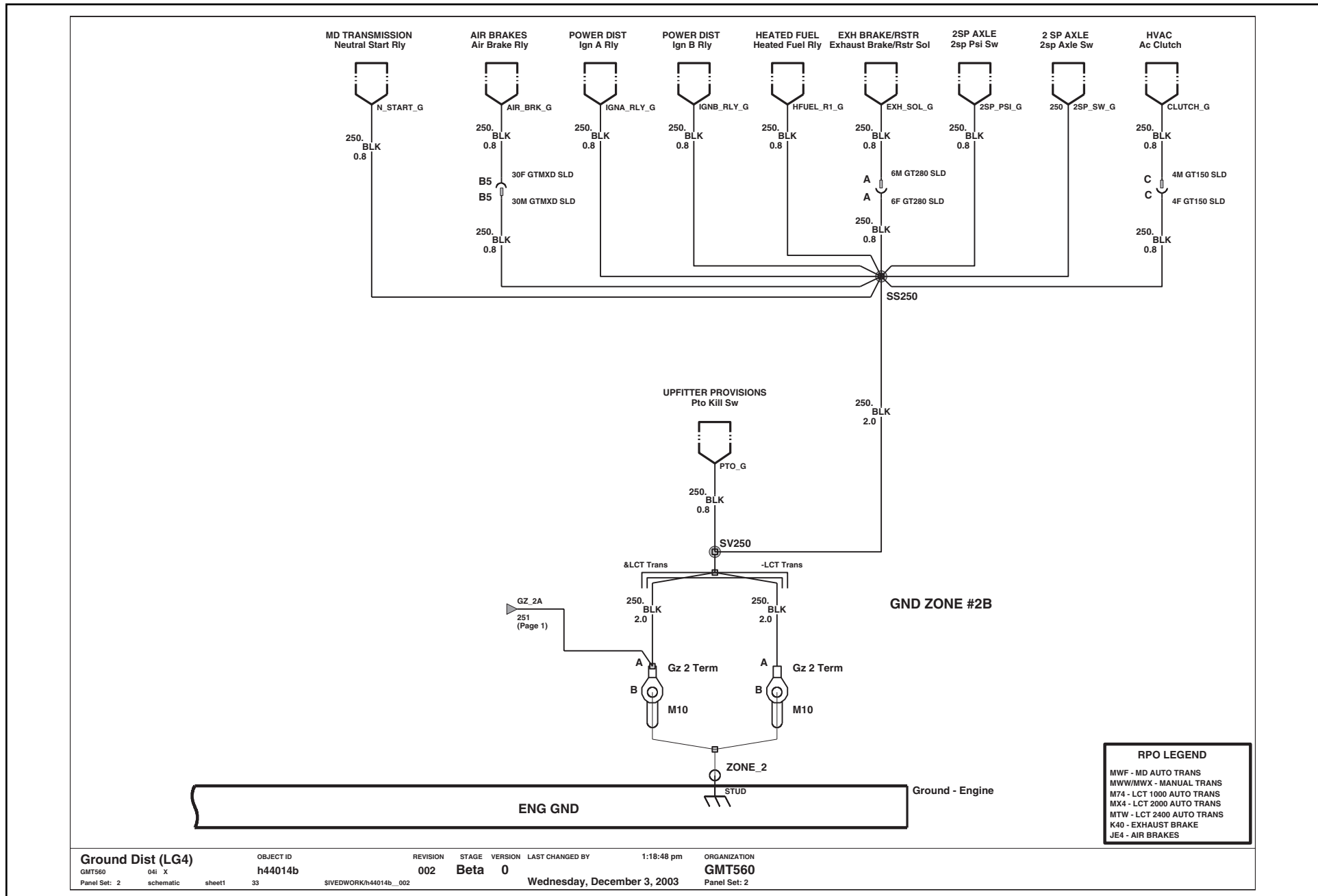
REVISION STAGE VERSION
002 Beta 0

LAST CHANGED BY
1:18:48 pm
Wednesday, December 3, 2003

ORGANIZATION
GMT560
Panel Set: 1

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (LG4-'04i) 7.8L-Diesel/Duramax



Ground Dist (LG4)
GMT560 041 X
Panel Set: 2 schematic sheet1 33

OBJECT ID
h44014b

REVISION STAGE VERSION LAST CHANGED BY
002 Beta 0

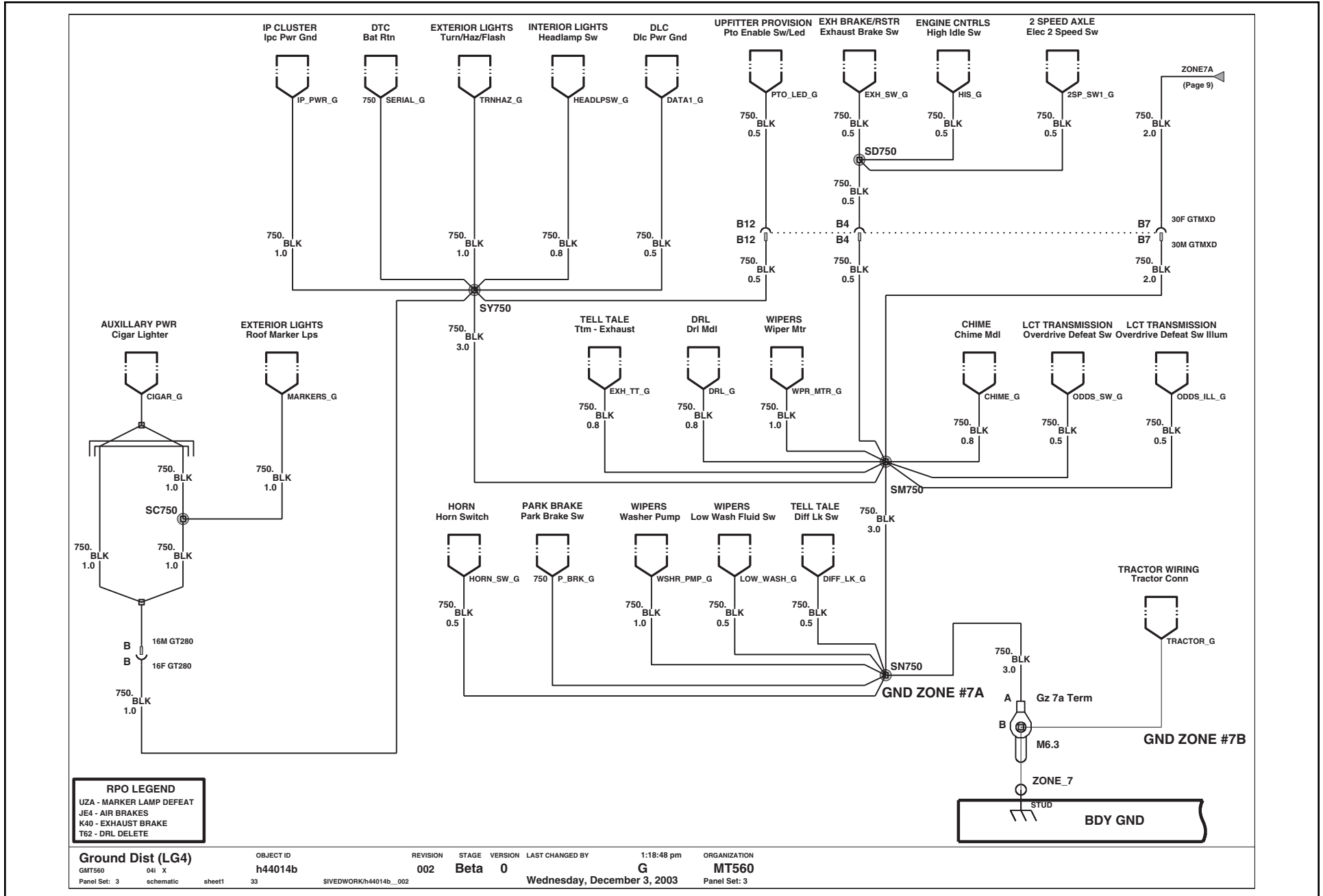
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ORGANIZATION
GMT560
Panel Set: 2

Wednesday, December 3, 2003

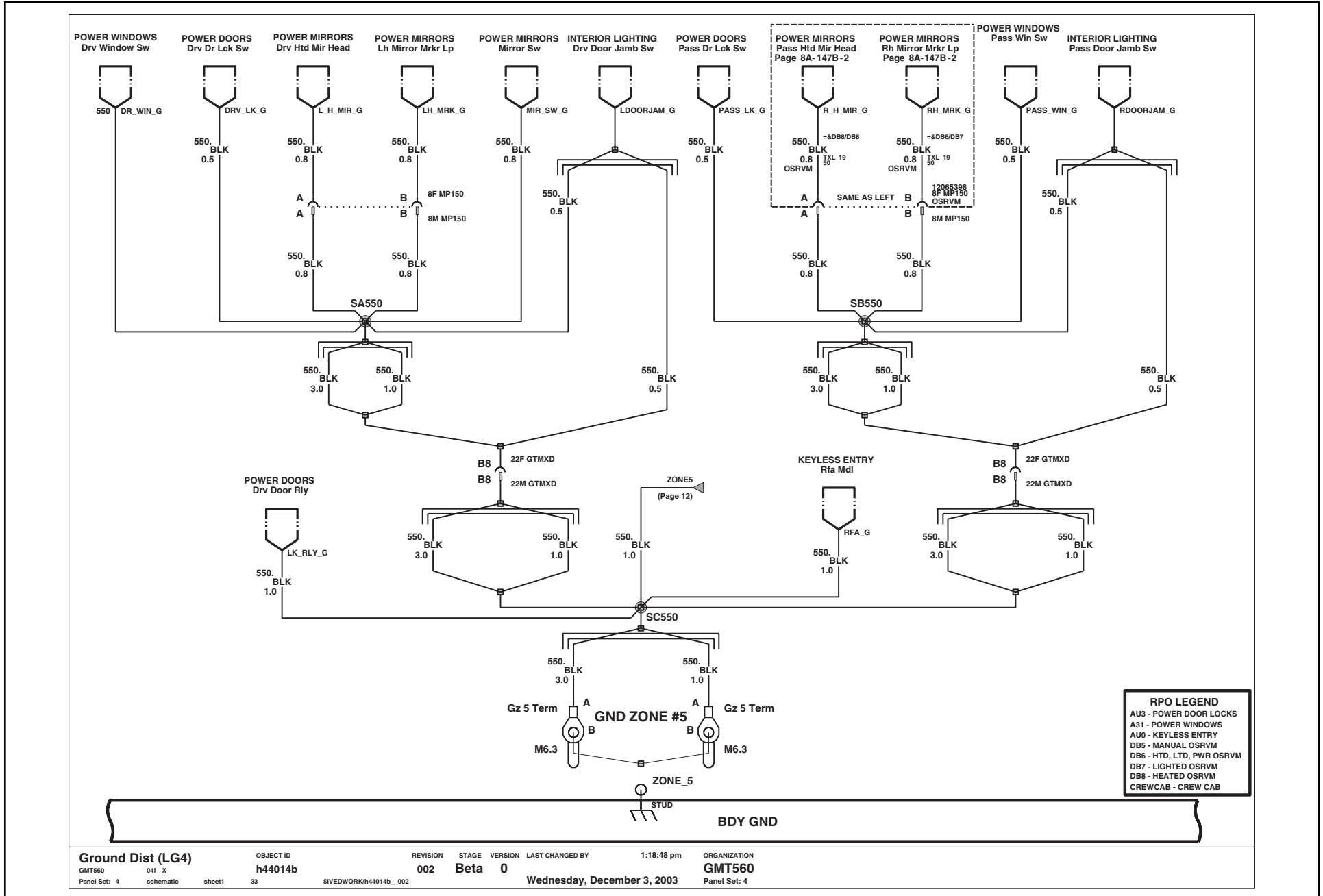
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (LG4-'04i) 7.8L-Diesel/Duramax



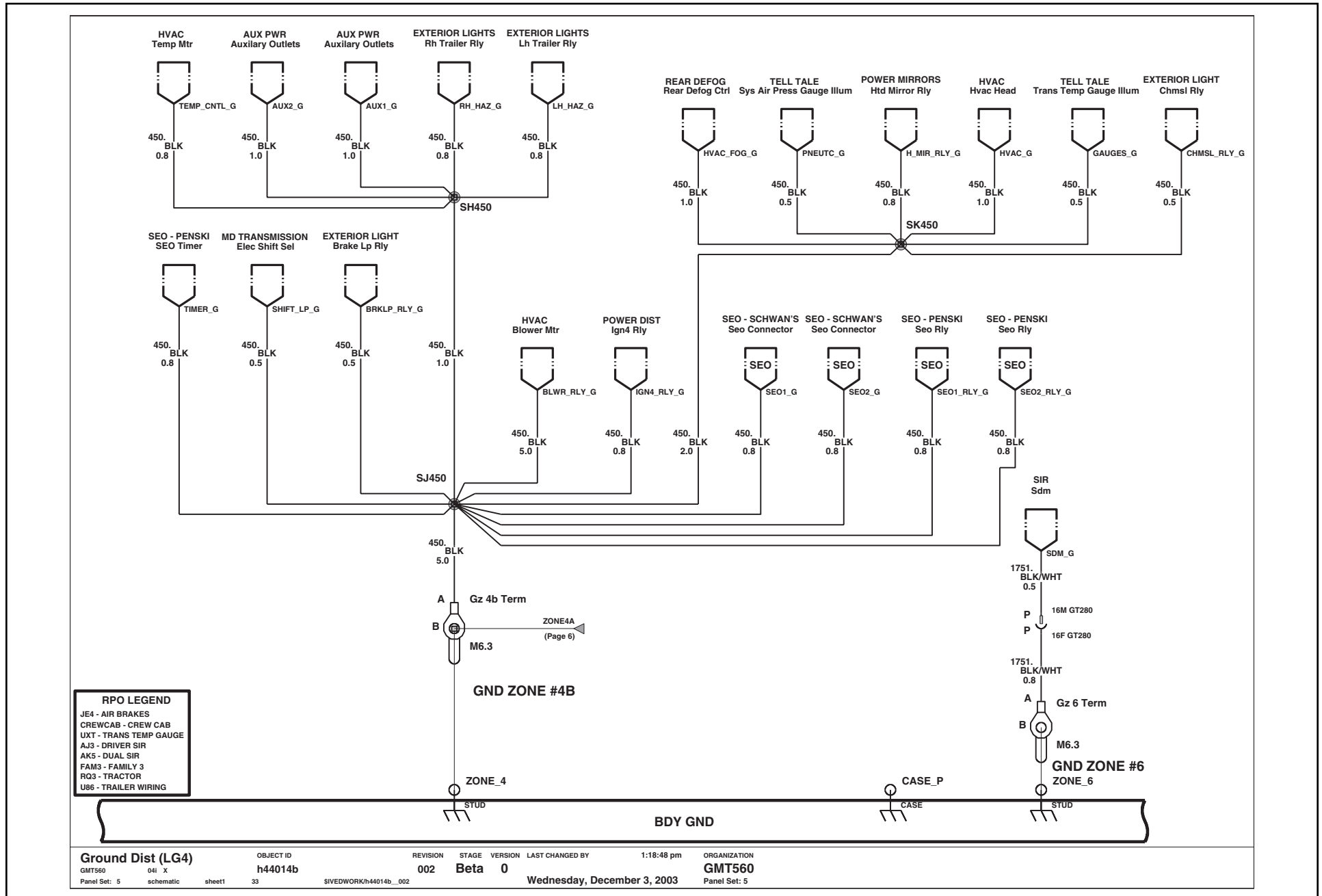
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (LG4-'04i) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

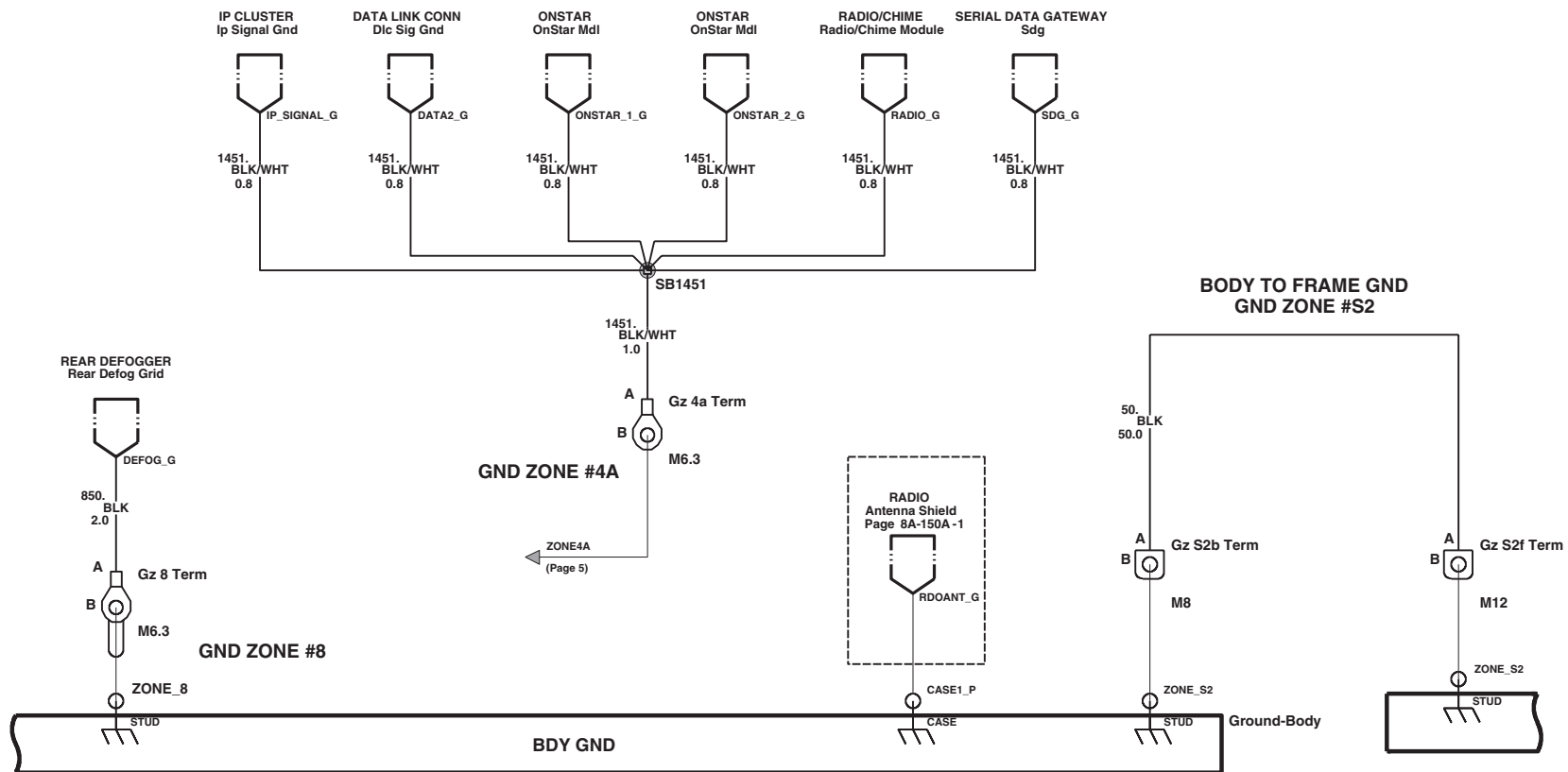
Ground Distribution – (LG4-'04i) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (LG4-'04i) 7.8L-Diesel/Duramax

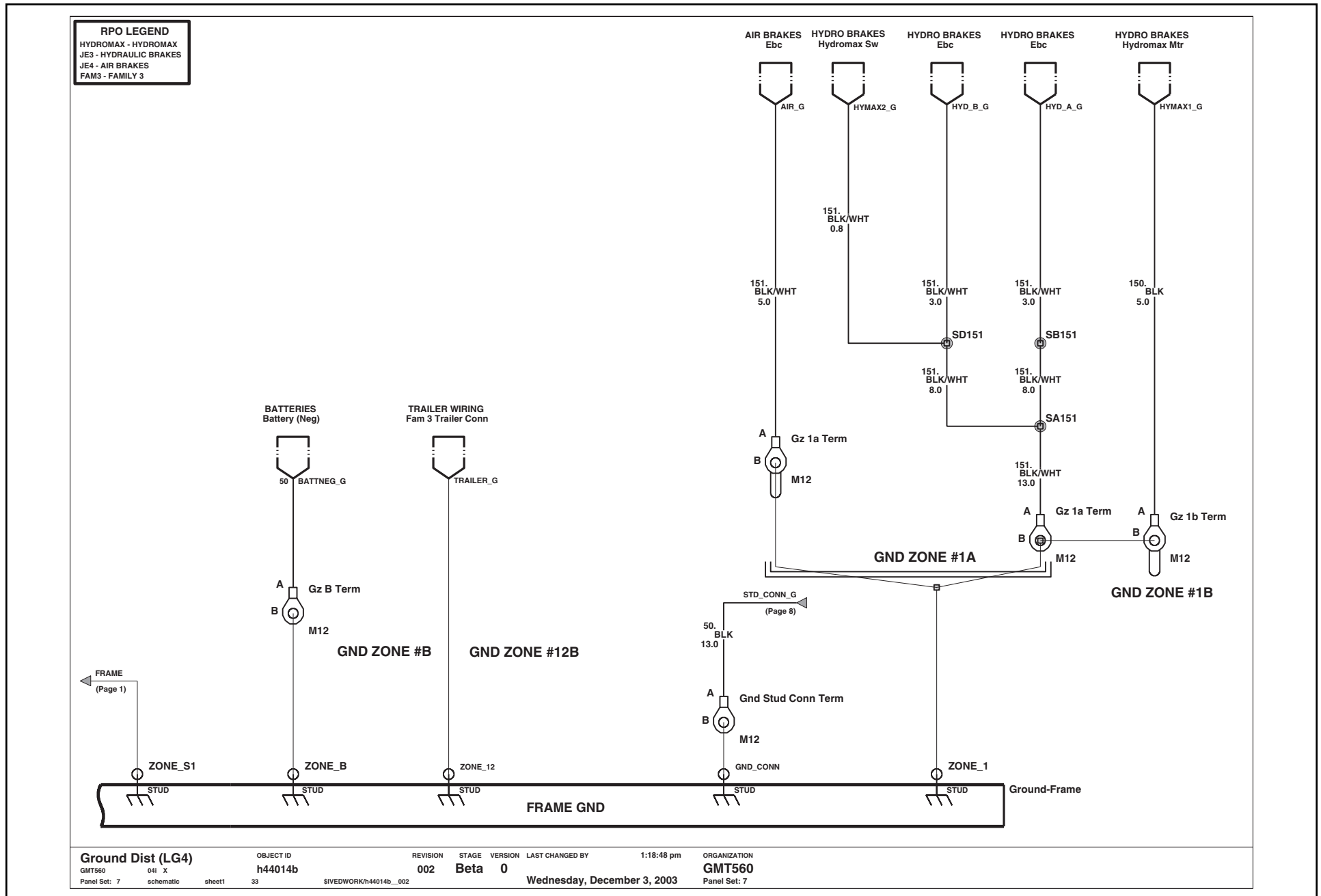
RPO LEGEND
CREWCAB - CREW CAB



Ground Dist (LG4)	OBJECT ID	REVISION	STAGE	VERSION	LAST CHANGED BY	1:18:48 pm	ORGANIZATION
GMT560	04i X	002	Prod	0			GMT560
Panel Set: 6	schematic	sheet1	33	SIVEDWORK/h44014b_002	Wednesday, December 3, 2003		Panel Set: 6

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (LG4-'04i) 7.8L-Diesel/Duramax



Ground Dist (LG4)
 GMT560 041 X
 Panel Set: 7 schematic sheet1 33

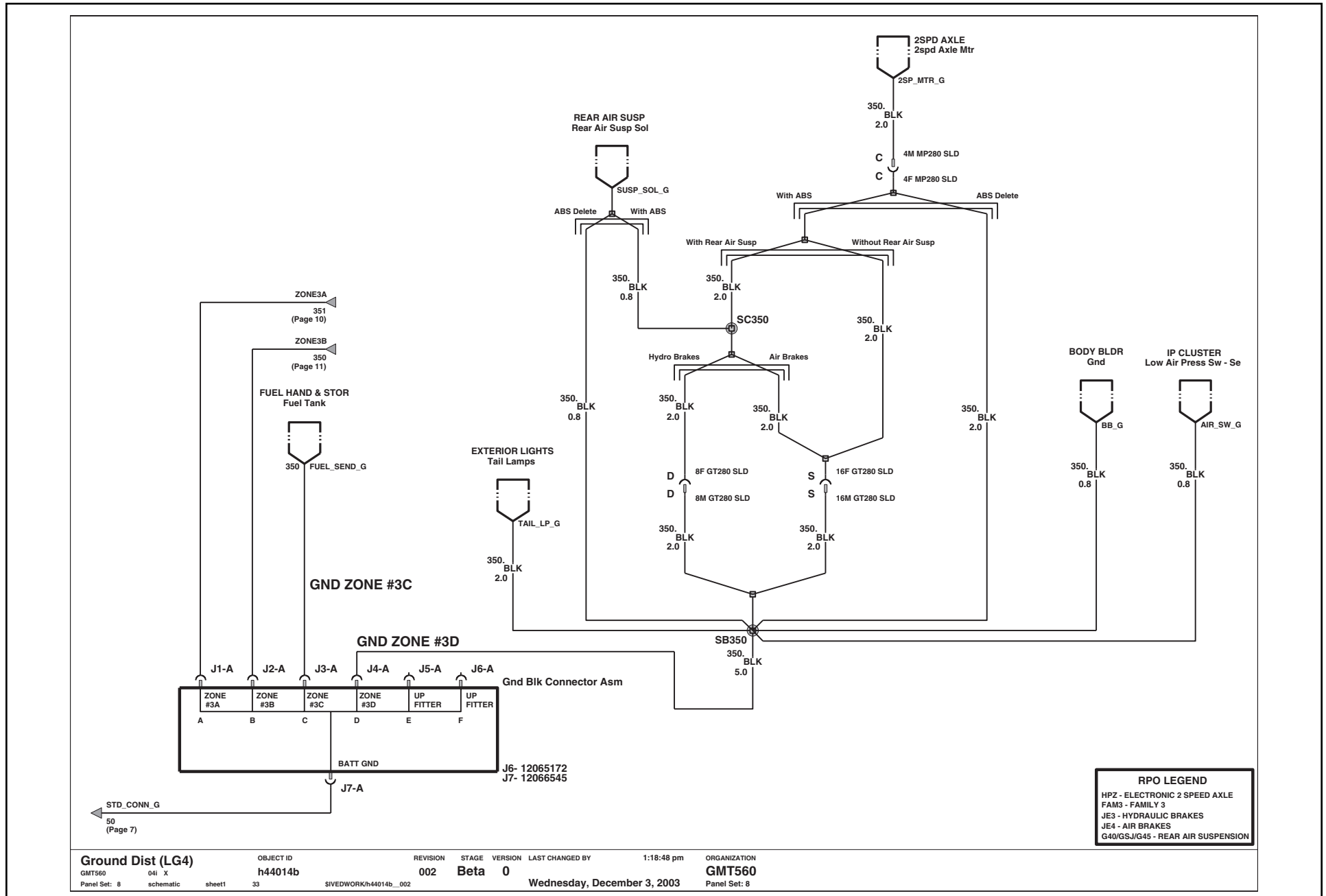
OBJECT ID
 h44014b
 SIVEDWORK/h44014b_002

REVISION STAGE VERSION LAST CHANGED BY
 002 Beta 0
 Wednesday, December 3, 2003 1:18:48 pm

ORGANIZATION
 GMT560
 Panel Set: 7

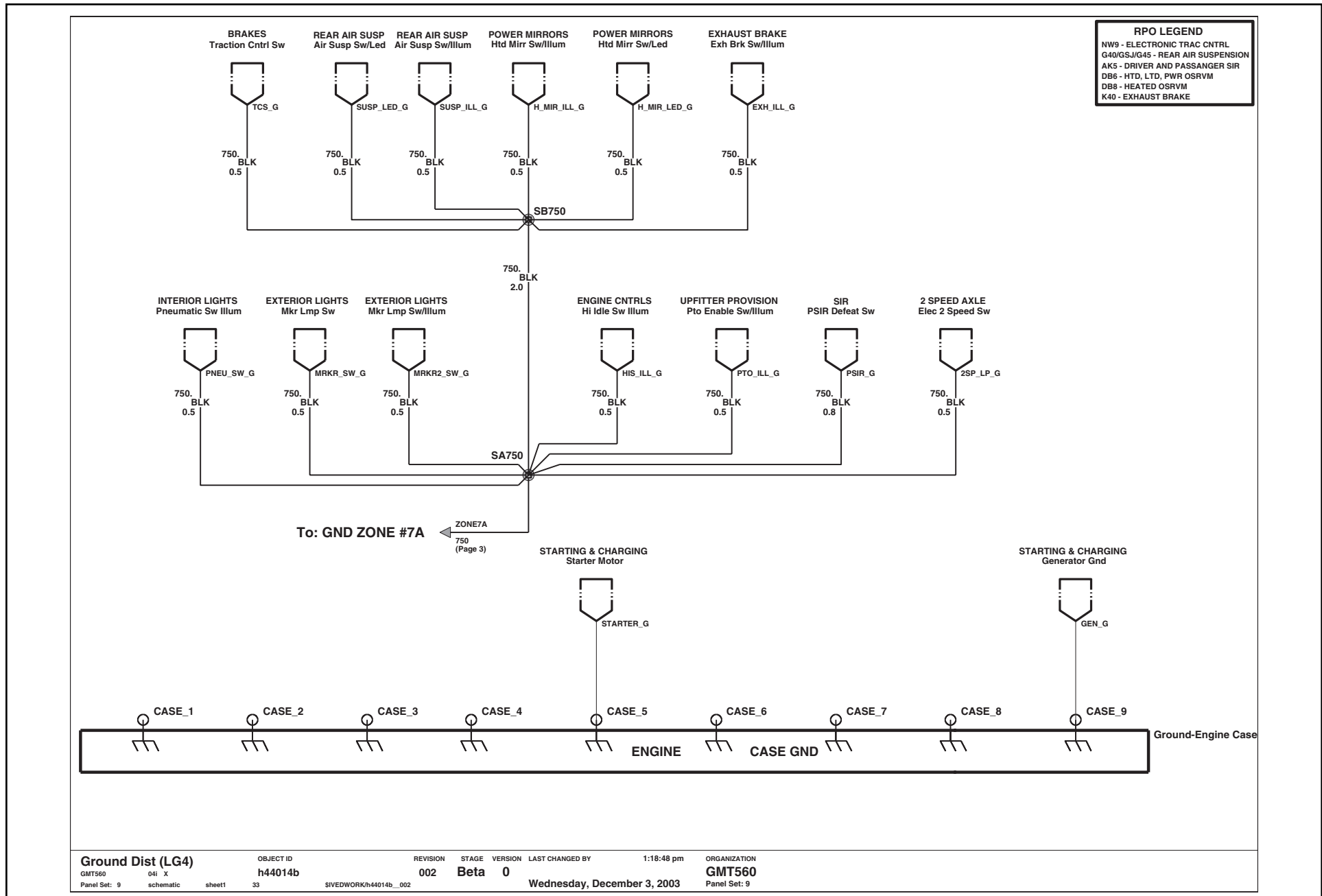
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (LG4-'04i) 7.8L-Diesel/Duramax



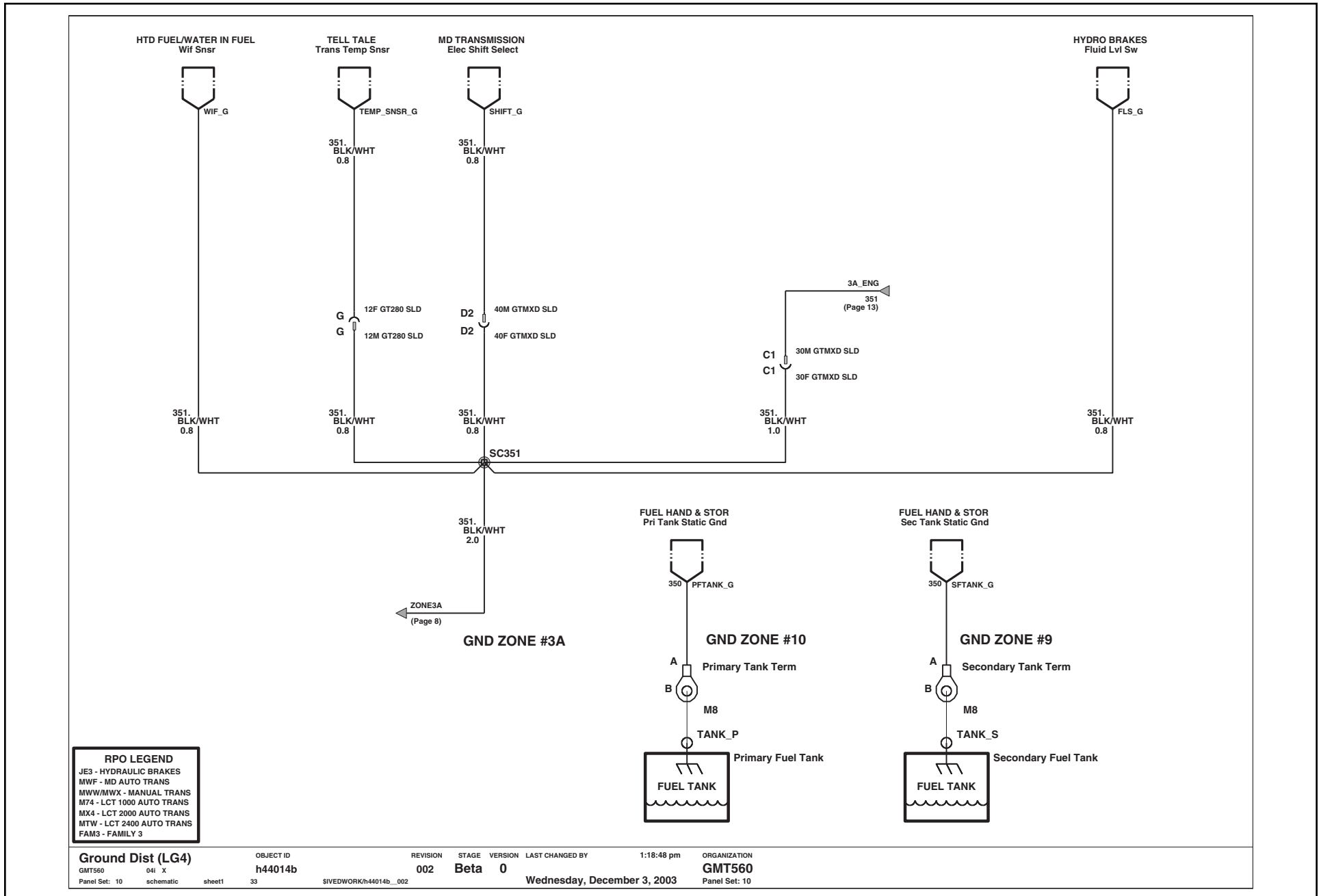
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (LG4-'04i) 7.8L-Diesel/Duramax



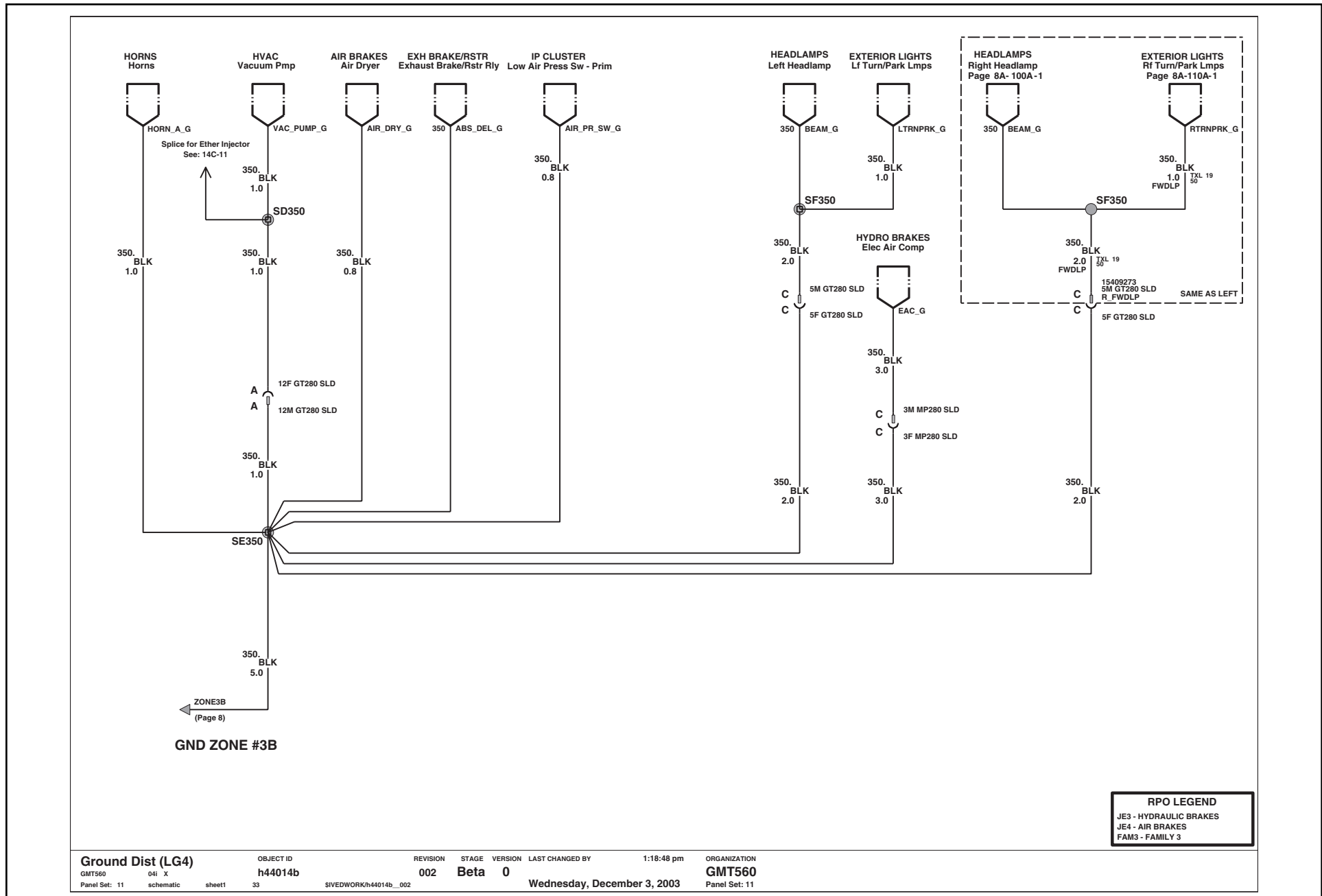
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (LG4-'04i) 7.8L-Diesel/Duramax



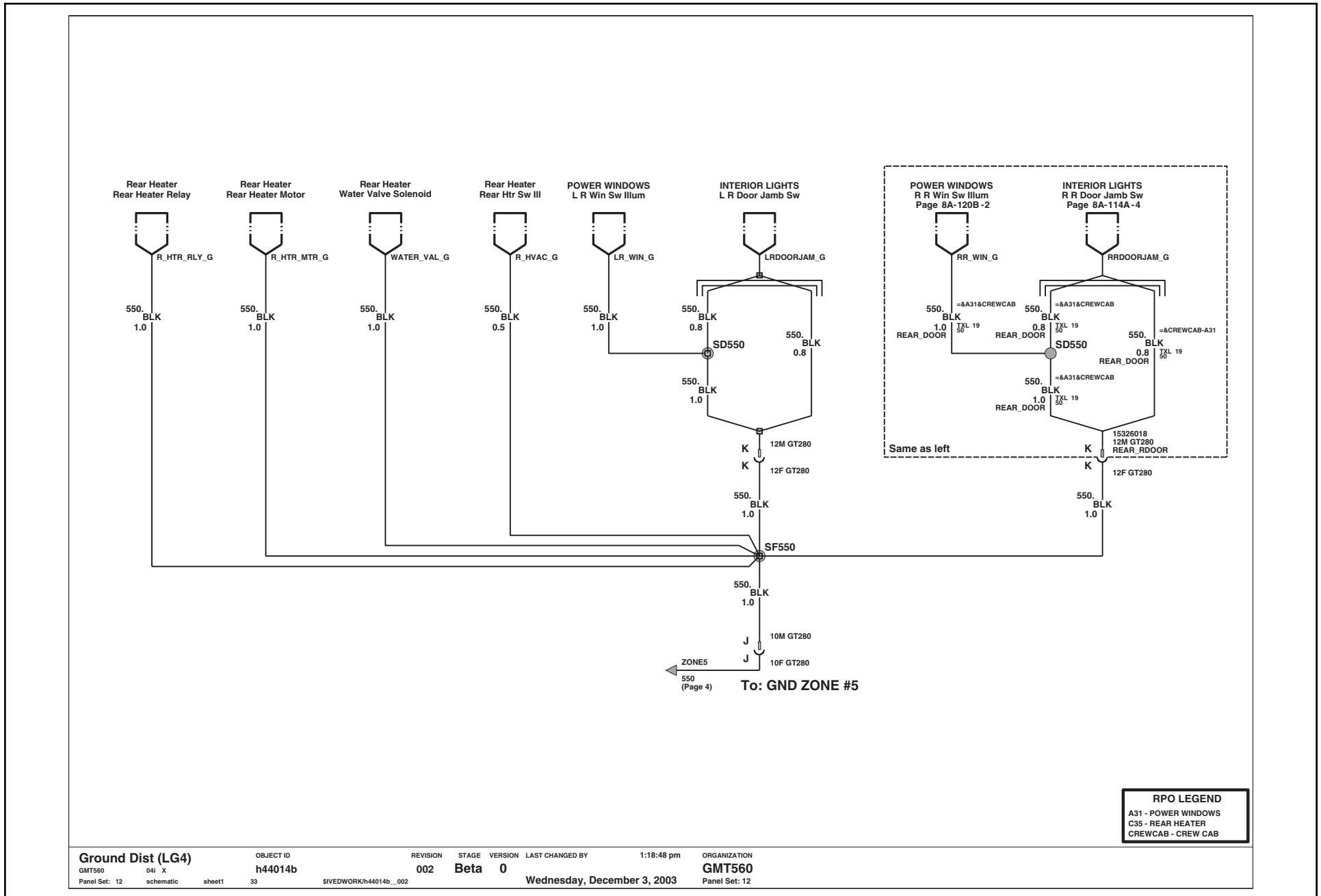
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (LG4-'04i) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

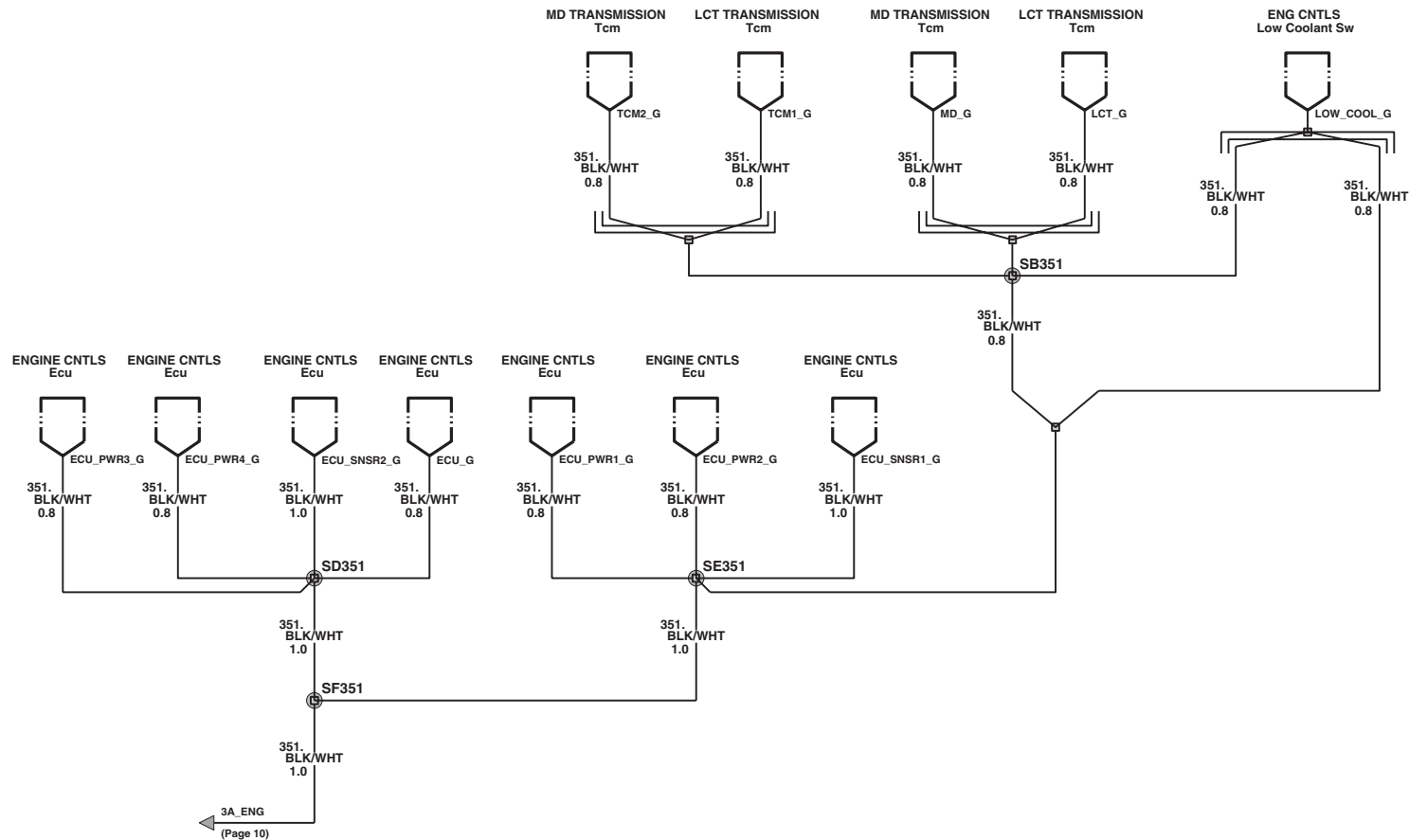
Ground Distribution — (LG4-'04i) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (LG4-'04i) 7.8L-Diesel/Duramax

04 560 000	TY	BETA - INITIAL CREATION	18SE01
04 560 1115	LR	REMOVE 2SPD AIR CKT.	08OC01
04 560 1136	JG	Pneumatic Switch Update	15NO01
04 560 1149	JG	TRANS RPO UPDATE	13DE01
03 560 1151	LR	REMOVE HYD BST JMPR	14DE01
04 560 1106	JG	Update 900 ckts	08FE02
04 560 000	JG	Obsolete Connector Update	13FE02
04 560 1228	JG	Delete R_ABS Harness with ABS Delete	02MY02



Ground Dist (LG4)

GMT560 04i X
Panel Set: 13 schematic sheet1

OBJECT ID
h44014b

33

SIVEDWORK/h44014b_002

REVISION
002

STAGE
Beta

0

VERSION
0

LAST CHANGED BY
1:18:48 pm

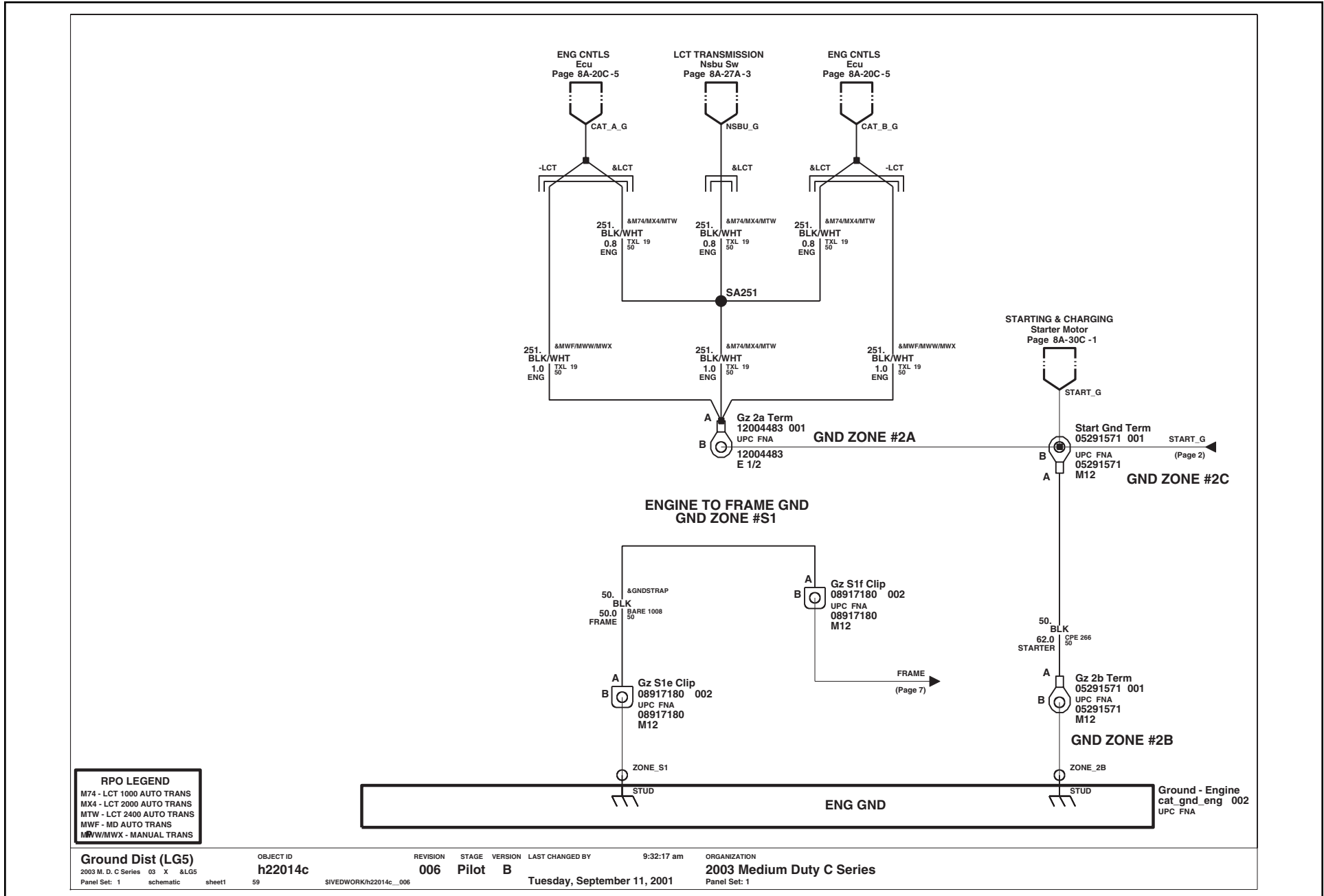
Wednesday, December 3, 2003

ORGANIZATION
GMT560

Panel Set: 13

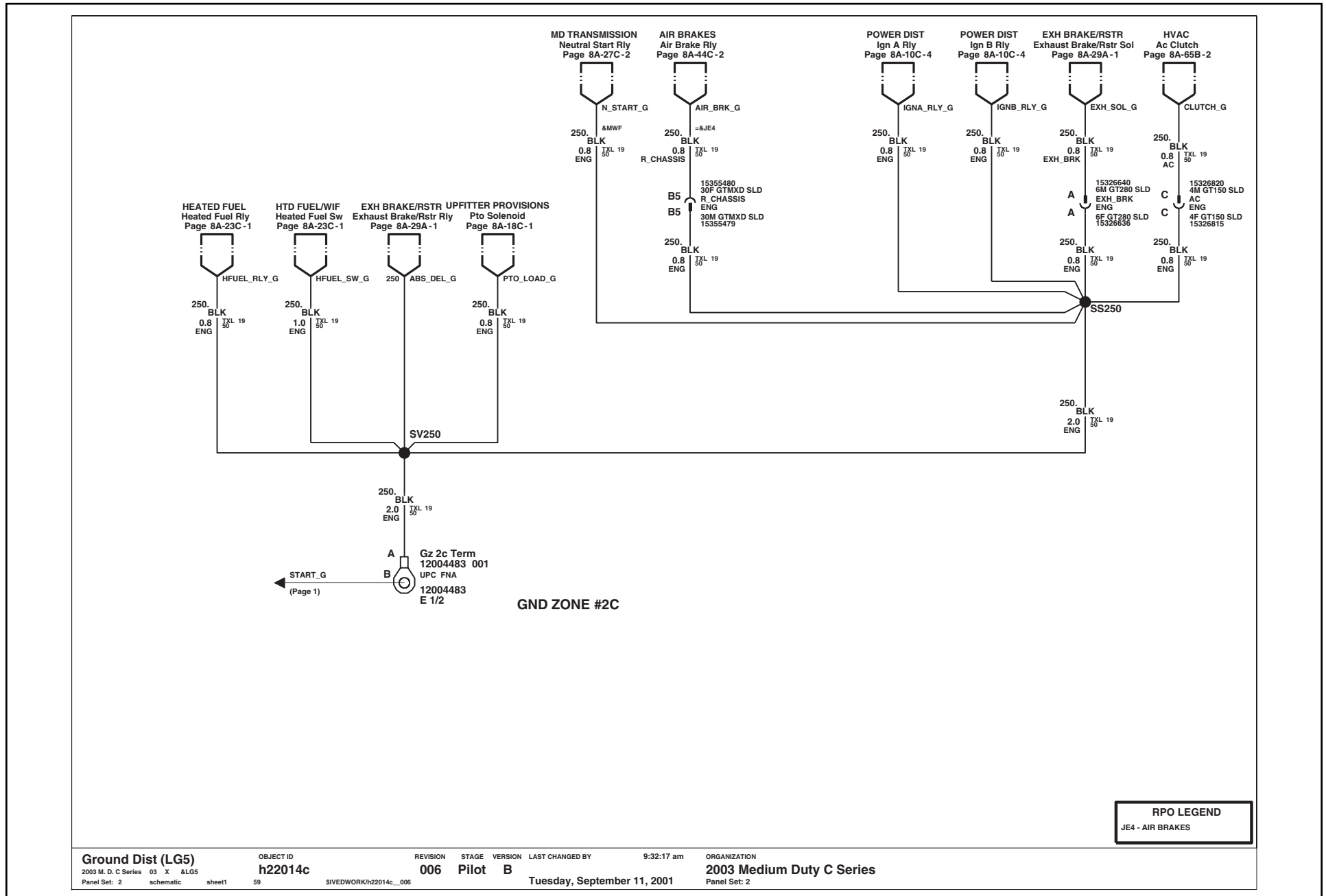
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (LG5) 7.2L-Diesel/CAT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (LG5) 7.2L-Diesel/CAT



Ground Dist (LG5)
2003 M. D. C Series 03 X &LG5
Panel Set: 2 schematic sheet1

OBJECT ID
h22014c

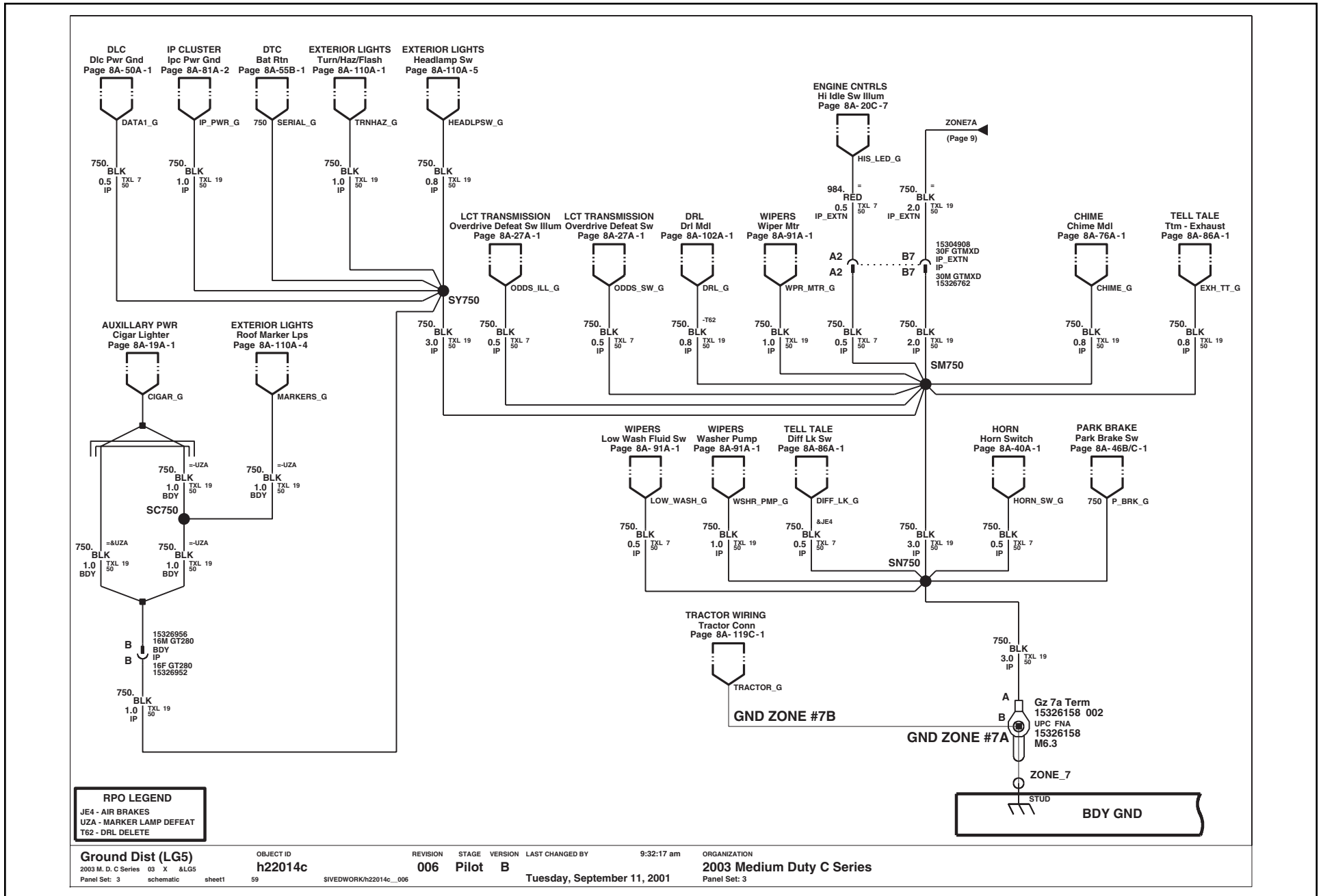
REVISION STAGE VERSION LAST CHANGED BY
006 Pilot B
Tuesday, September 11, 2001

9:32:17 am

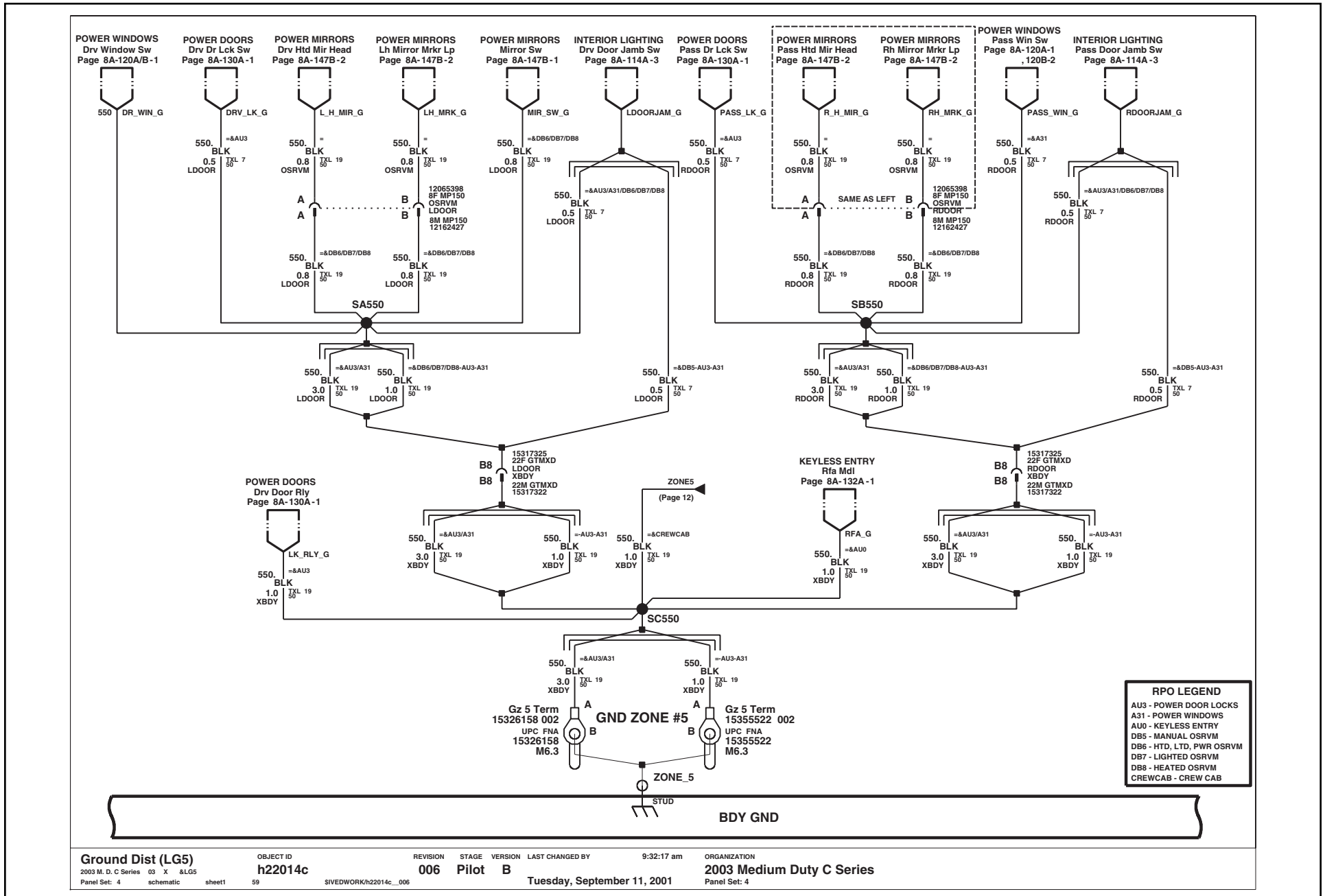
ORGANIZATION
2003 Medium Duty C Series
Panel Set: 2

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

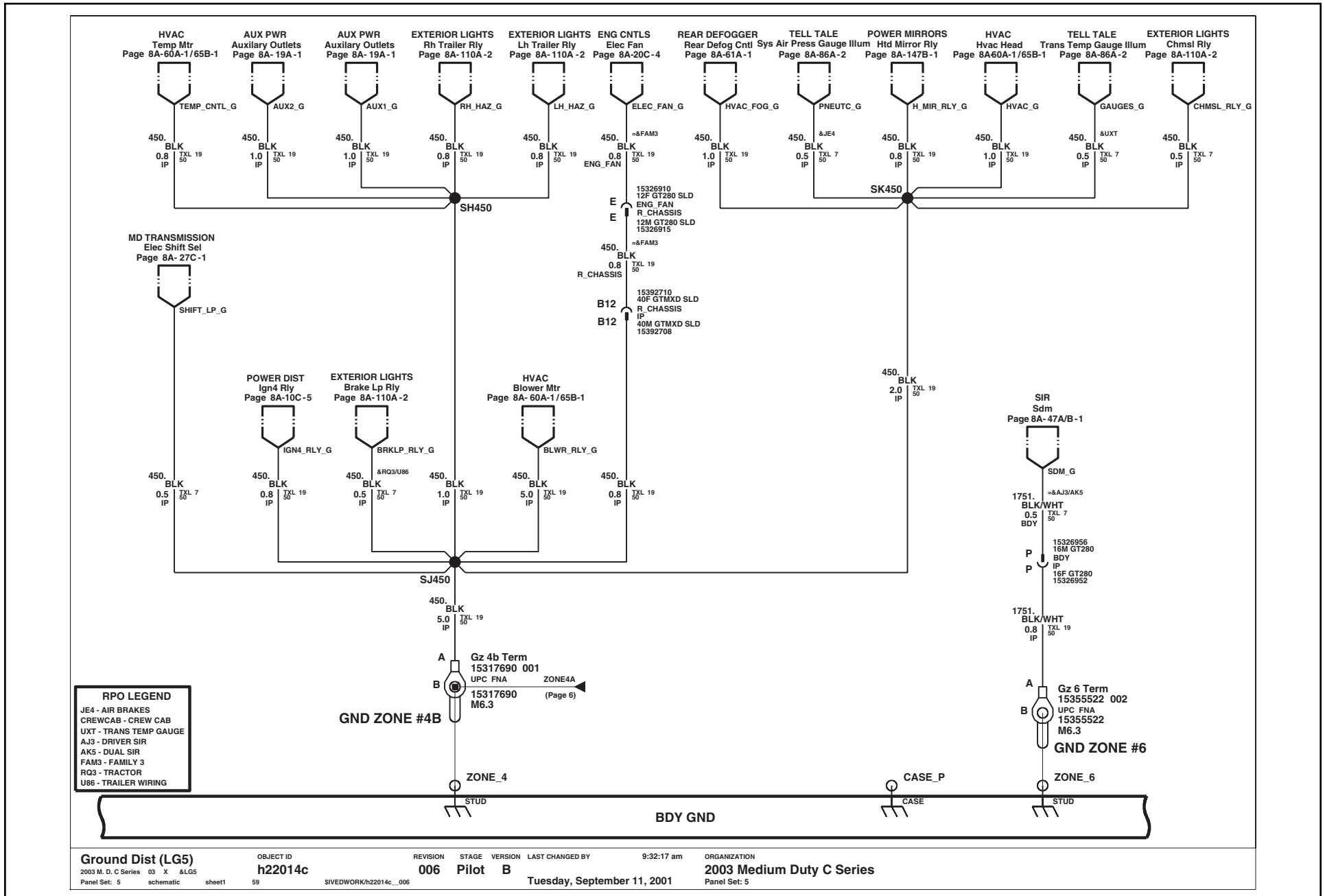
Ground Distribution — (LG5) 7.2L-Diesel/CAT



Ground Distribution – (LG5) 7.2L-Diesel/CAT

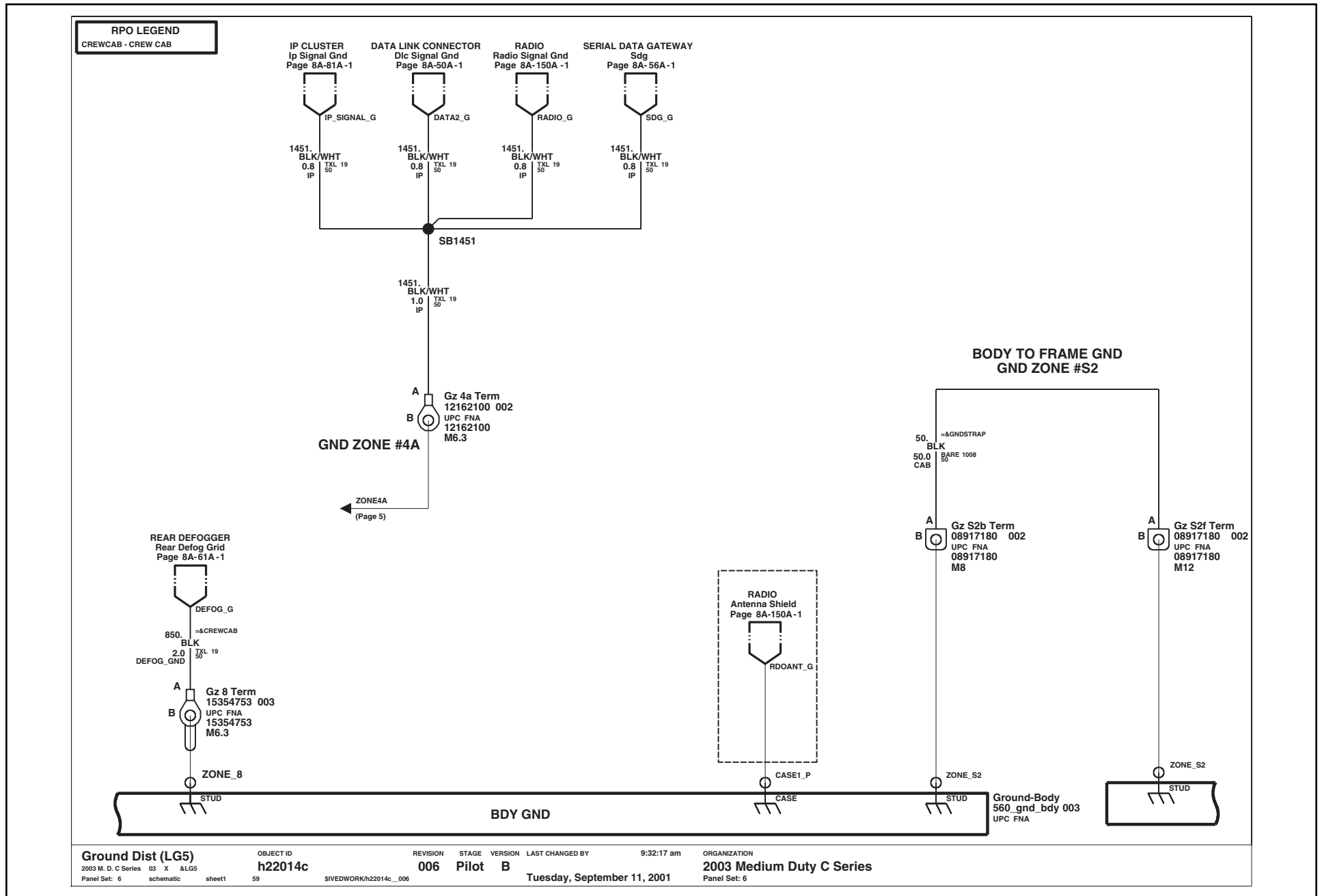


Ground Distribution — (LG5) 7.2L-Diesel/CAT



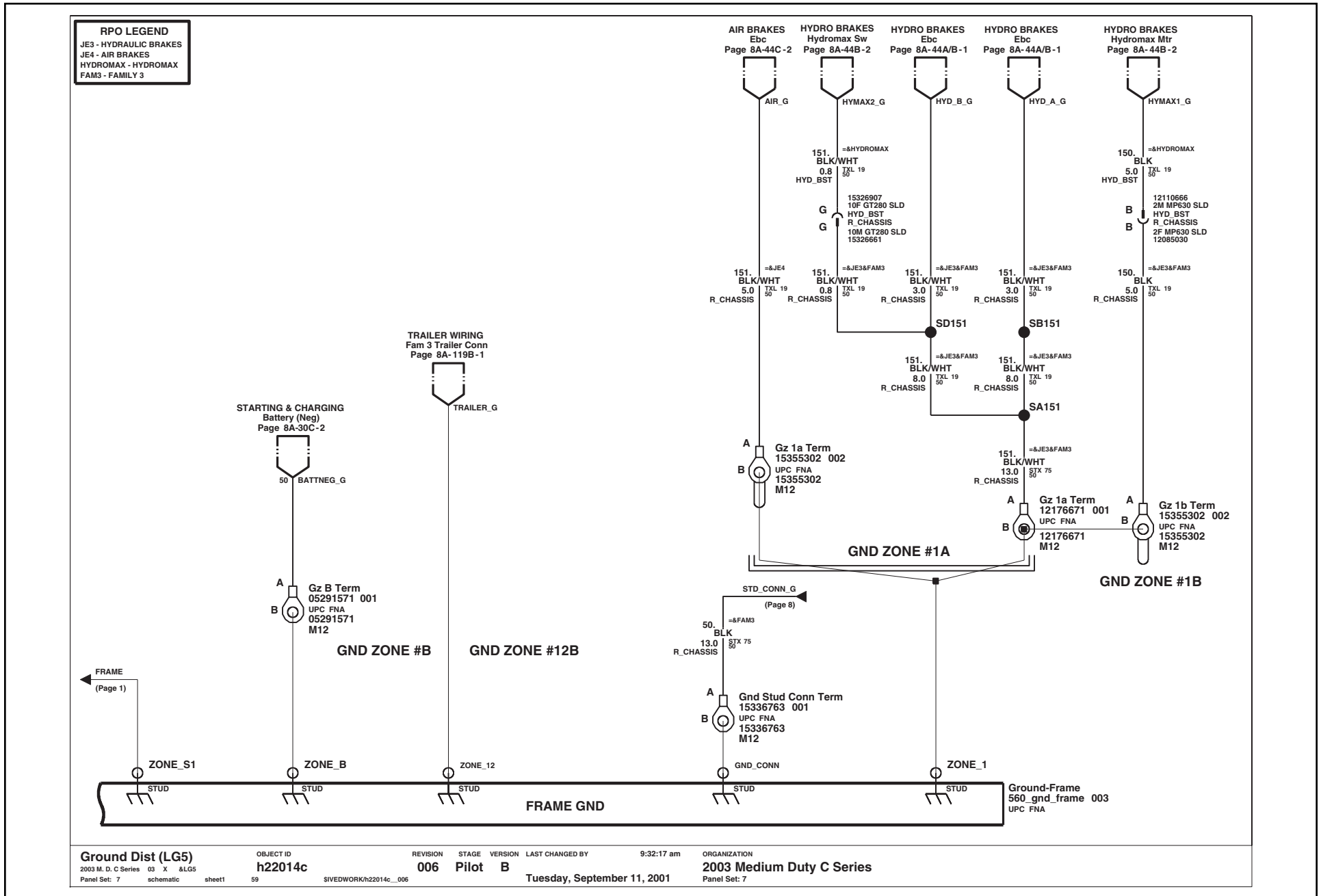
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (LG5) 7.2L-Diesel/CAT

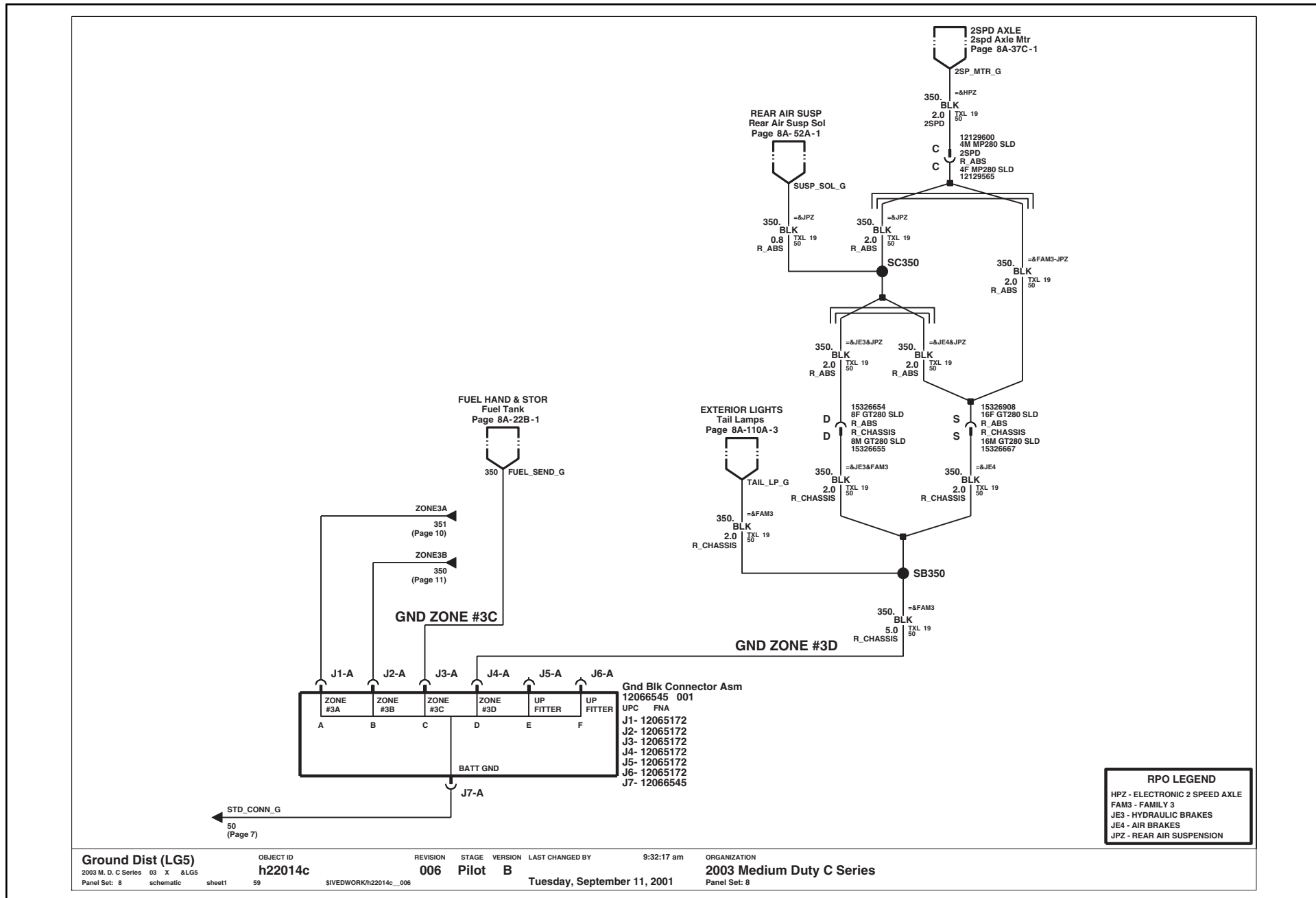


2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (LG5) 7.2L-Diesel/CAT

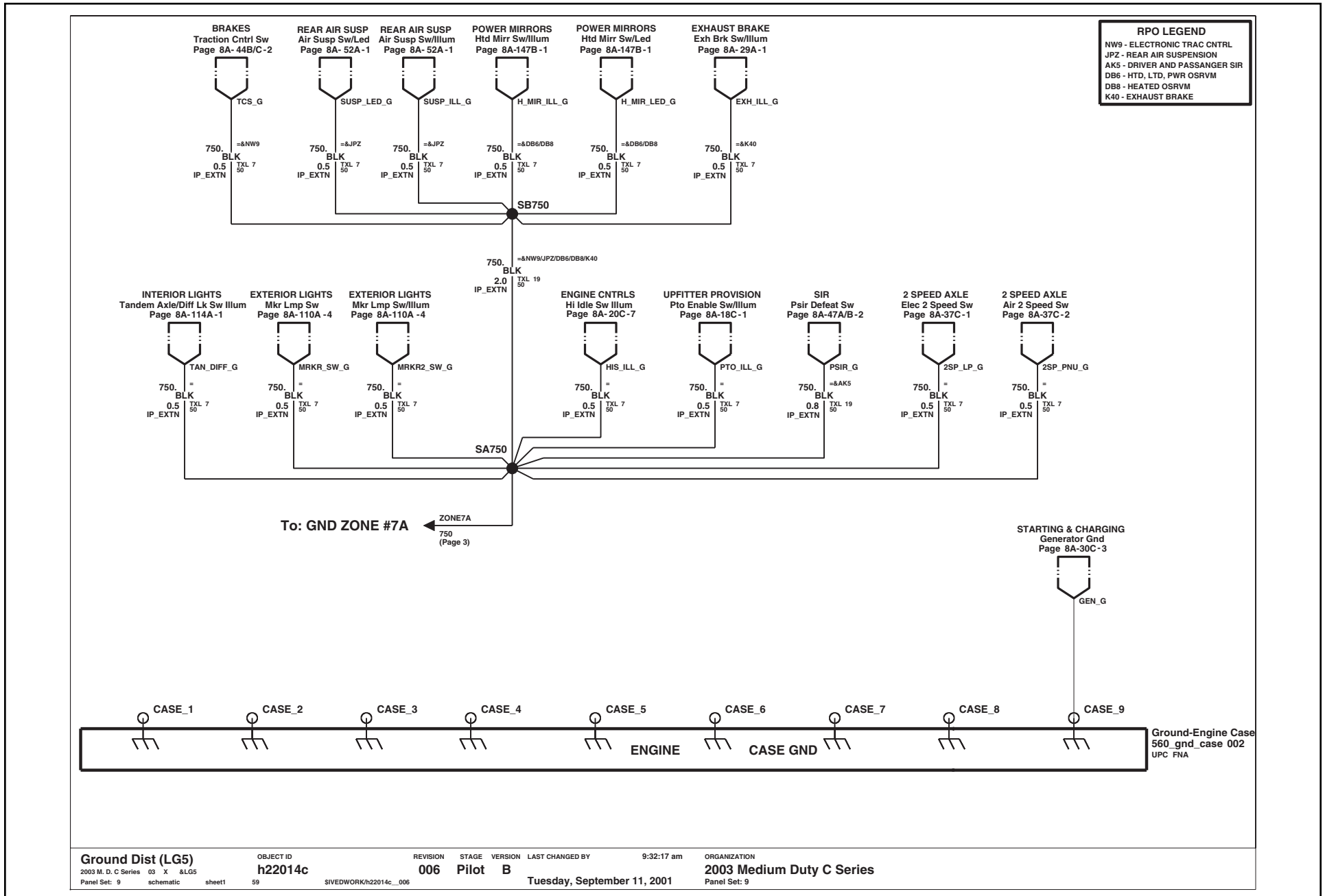


Ground Distribution — (LG5) 7.2L-Diesel/CAT



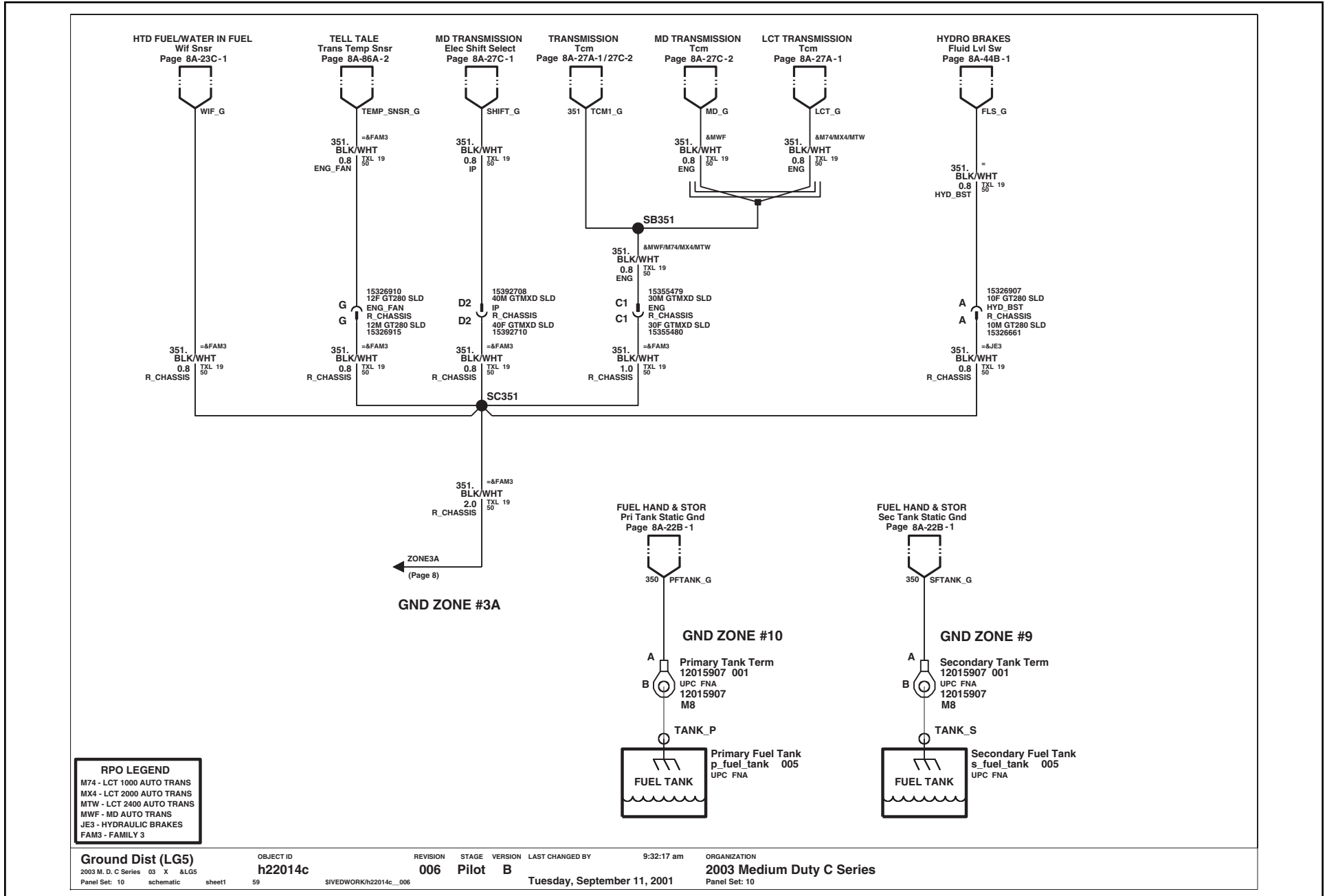
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution – (LG5) 7.2L-Diesel/CAT



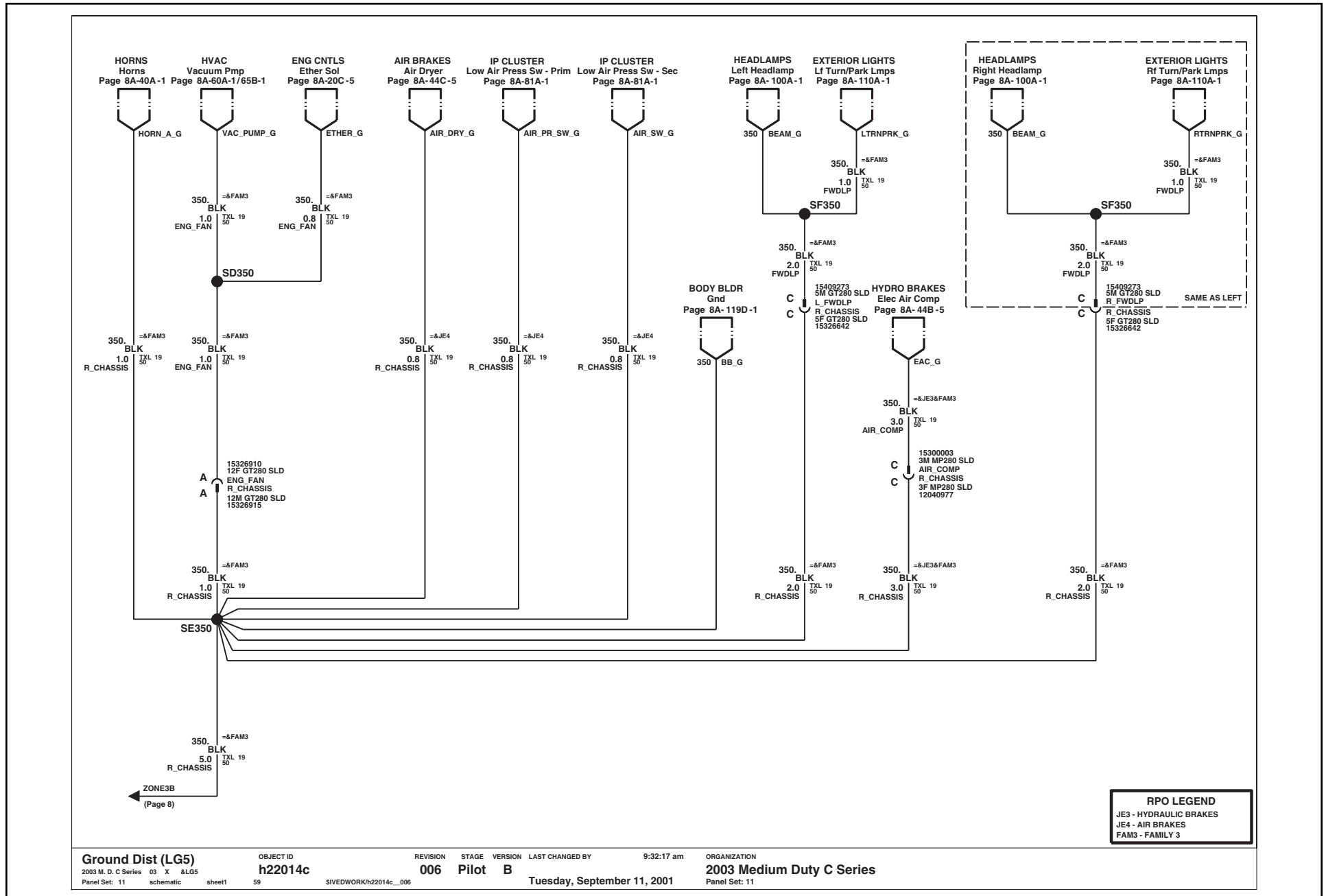
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (LG5) 7.2L-Diesel/CAT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Ground Distribution — (LG5) 7.2L-Diesel/CAT

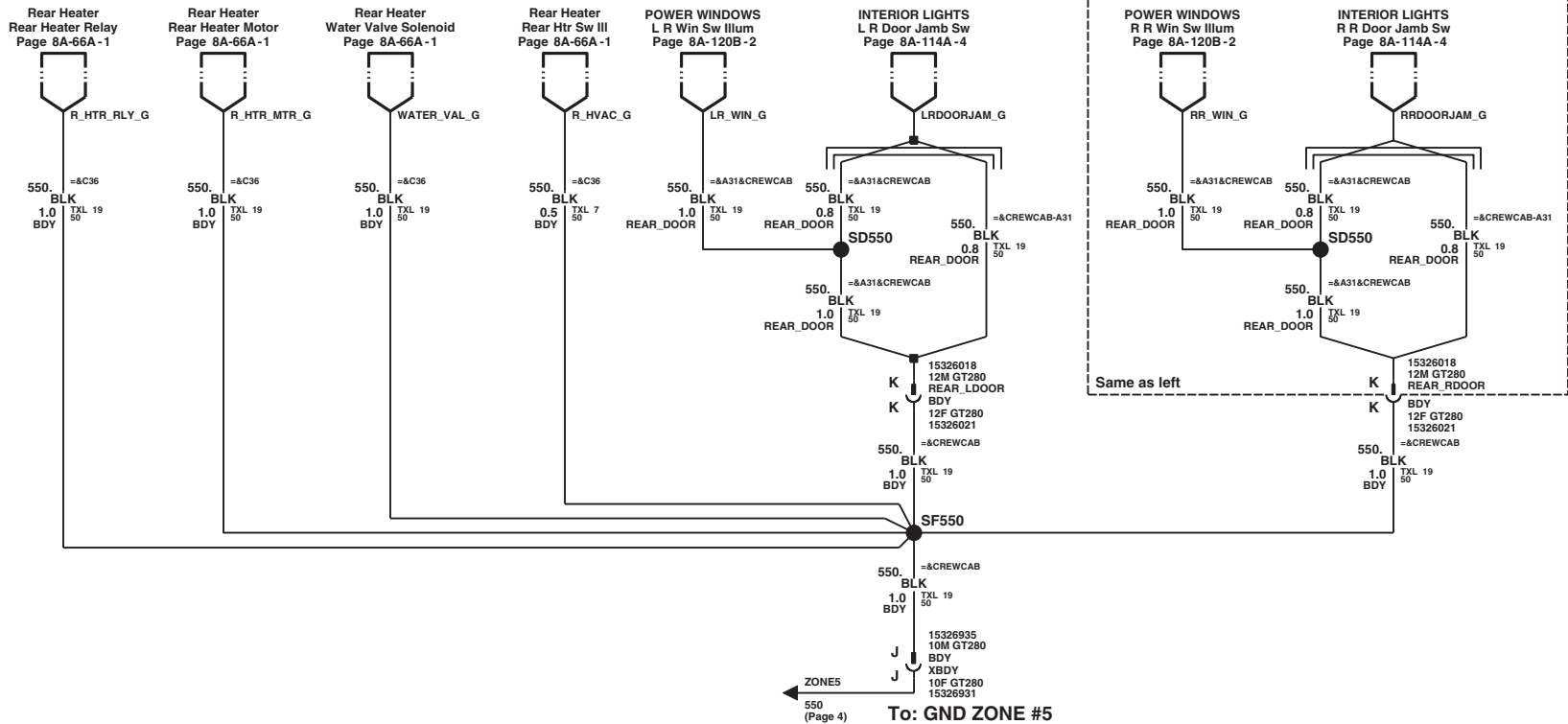


2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE D-111

Ground Distribution — (LG5) 7.2L-Diesel/CAT

03 560 000	TY	PILOT B - INITIAL CREATION	100C00	001
03 560 799	LR	Revised Heated Fuel and Water In Fuel	100C00	001
03 560 805	JG	Misc. Updates	300C00	001
03 560 814	JG	R ABS to R CHASSIS inline update	02NO00	001
03 560 818	JG	Various Grounding Updates	28NO00	001
03 560 839	JG	Gz 6 Updates (Ring Term & Gauge)	19DE00	001
03 560 873	JG	Remove V04, Gauge & Connector Update	06FE01	001
03 560 959	JG	Starter Ground Update	28MR01	001
03 560 1012	JG	Ground Zone 2A Ring Terminal Update	26AP01	001
03 560 1058	JG	Ground Block Ring Terminal Update	20JL01	001
03 560 1062	JG	Update Ether Injector Ground	25JL01	001
03 560 1096	JG	Ground Zone #5 Ring Term Update	11SE01	001

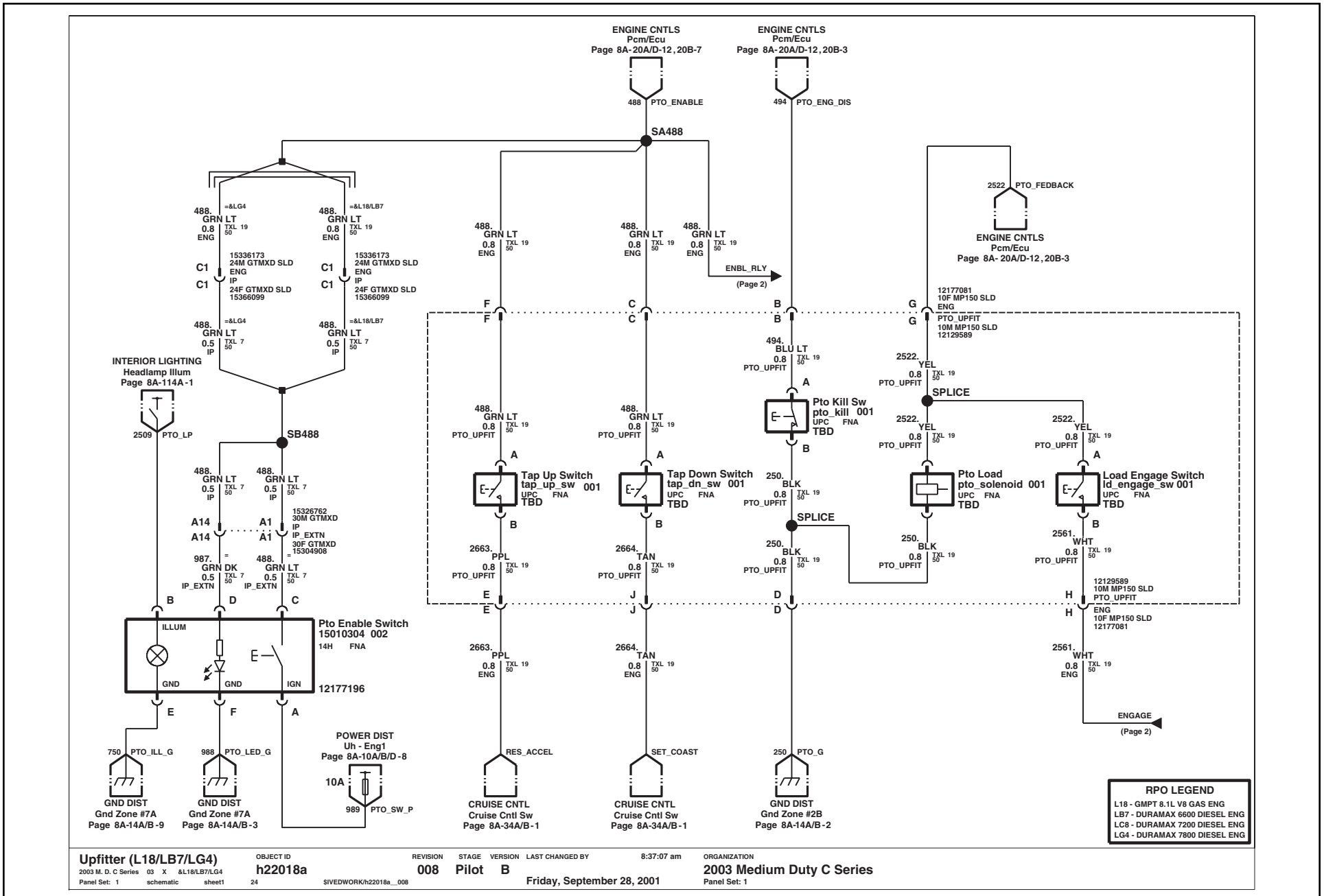


RPO LEGEND	
A31	- POWER WINDOWS
C35	- REAR HEATER
CREWCAB	- CREW CAB

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE D-112

Upfitter Provision-'04i – (L18) 8.1L-Gas/NAPT – (LB7) 6.6L-Diesel/Duramax – (LG4) 7.8L-Diesel/Duramax



RPO LEGEND	
L18 - GMPT 8.1L V8 GAS ENG	
LB7 - DURAMAX 6600 DIESEL ENG	
LC8 - DURAMAX 7200 DIESEL ENG	
LG4 - DURAMAX 7800 DIESEL ENG	

Upfitter (L18/LB7/LG4)

OBJECT ID
h22018a

REVISION STAGE VERSION LAST CHANGED BY
008 Pilot B

8:37:07 am

ORGANIZATION
2003 Medium Duty C Series

2003 M. D. C Series 03 X &L18/LB7/LG4

Panel Set: 1 schematic sheet1

24 SIVEDWORK/h22018a_008

Friday, September 28, 2001

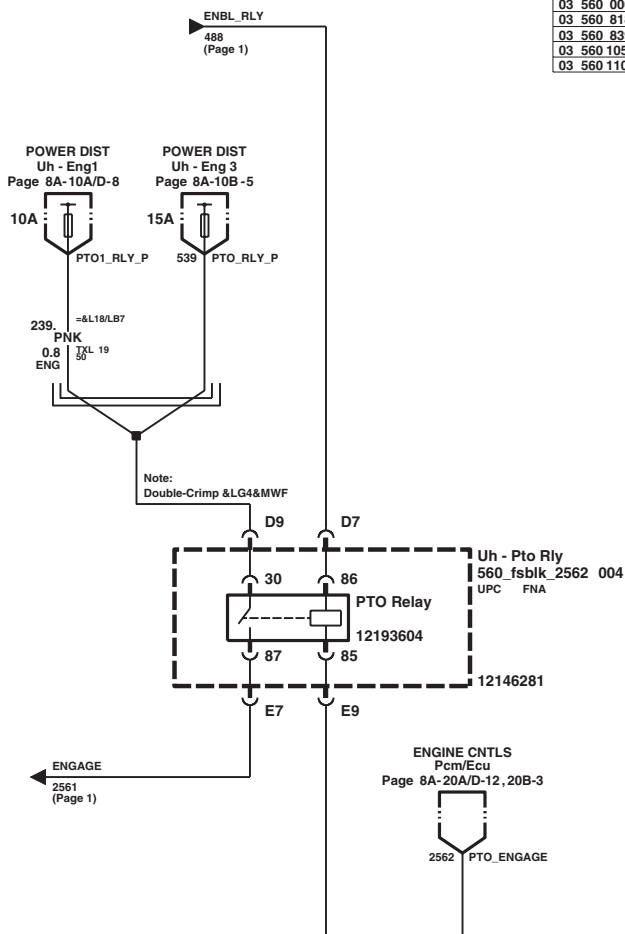
Panel Set: 1

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE **D-113**

Upfitter Provision-'04i – (L18) 8.1L-Gas/NAPT – (LB7) 6.6L-Diesel/Duramax – (LG4) 7.8L-Diesel/Duramax

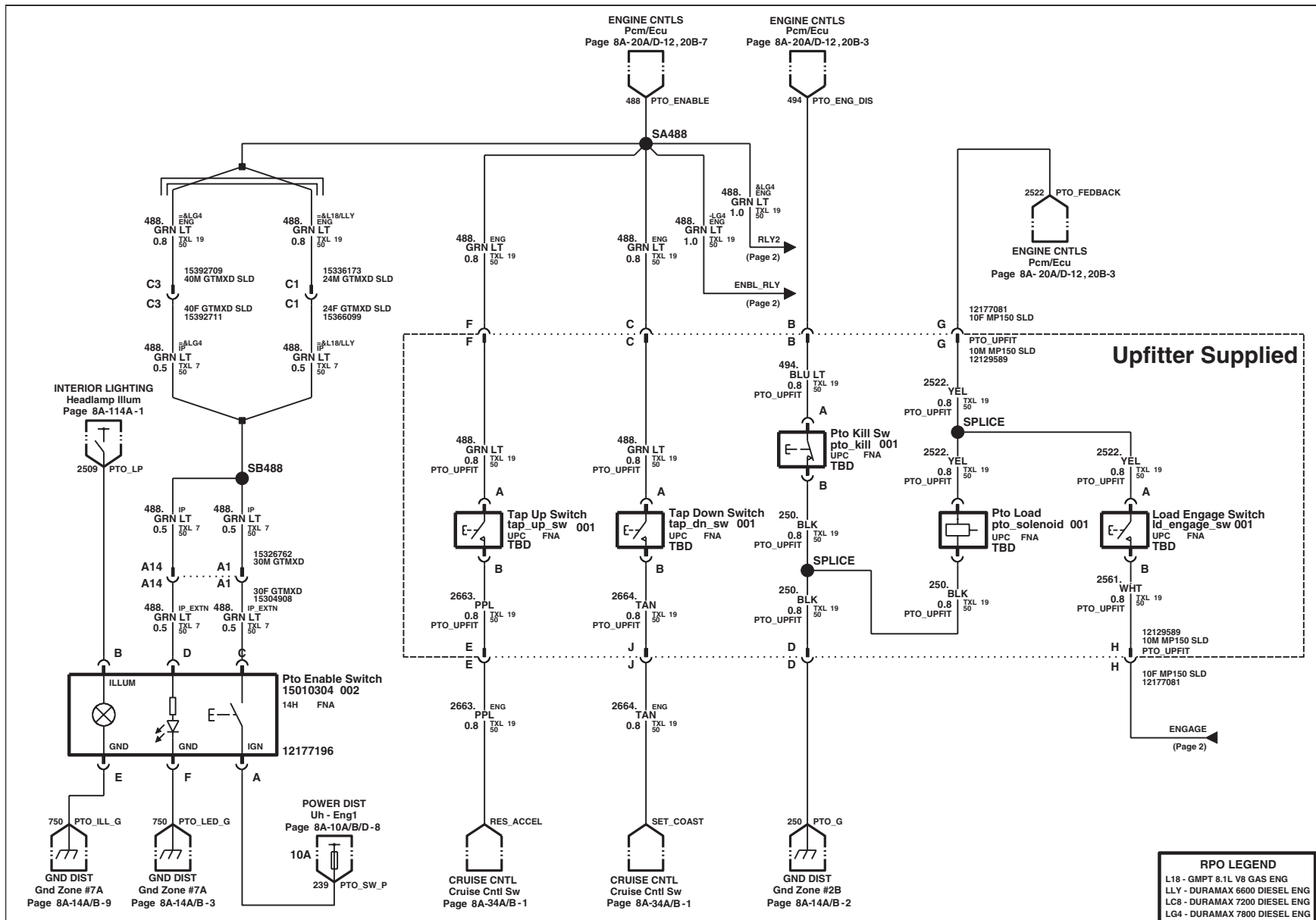
03 560 000	TY	PILOT B - INITIAL CREATION	27NO00	001
03 560 818	JG	REPLACED CBs WITH MINI-FUSES.	27NO00	001
03 560 839	JG	Inline Update	21DE00	001
03 560 1056	LR	REMOVE LC8	18JL01	001
03 560 1109	JG	Double-Crimp Update	28SE01	001



RPO LEGEND	
L18 -	GMPT 8.1L V8 GAS ENG
LB7 -	DURAMAX 6600 DIESEL ENG
LC8 -	DURAMAX 7200 DIESEL ENG
LG4 -	DURAMAX 7800 DIESEL ENG

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Upfitter Provision-'03-'04 – (L18) 8.1L-Gas/NAPT – (LLY) 6.6L-Diesel/Duramax – (LG4) 7.8L-Diesel/Duramax

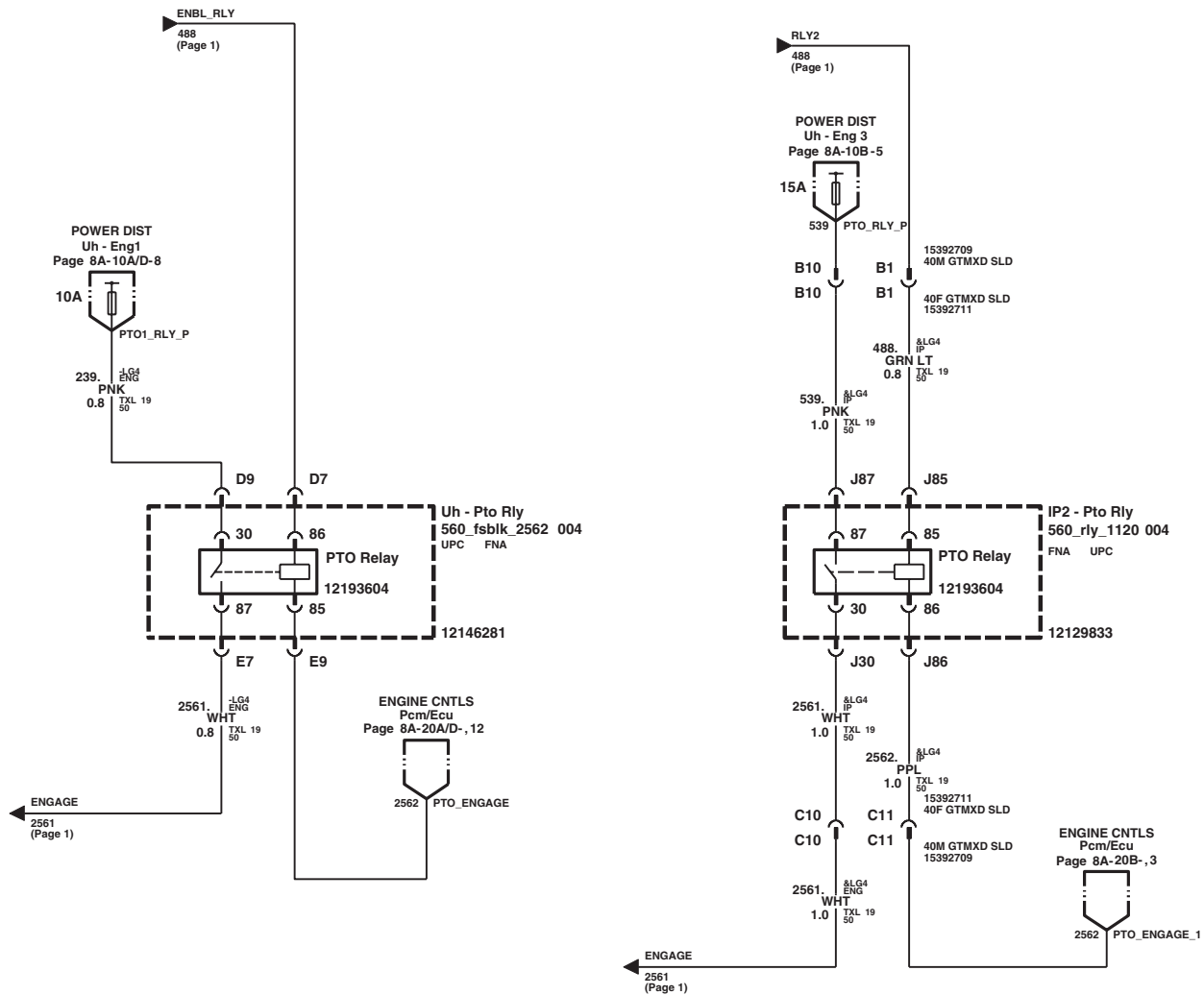


Pto (I18/Lly/Lg4)	OBJECT ID	REVISION	STAGE	VERSION	LAST CHANGED BY	7:56:39 am	ORGANIZATION
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Panel Set: 1	schematic	sheet1	6	SIVEDWORK/h44018a_002			Panel Set: 1

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

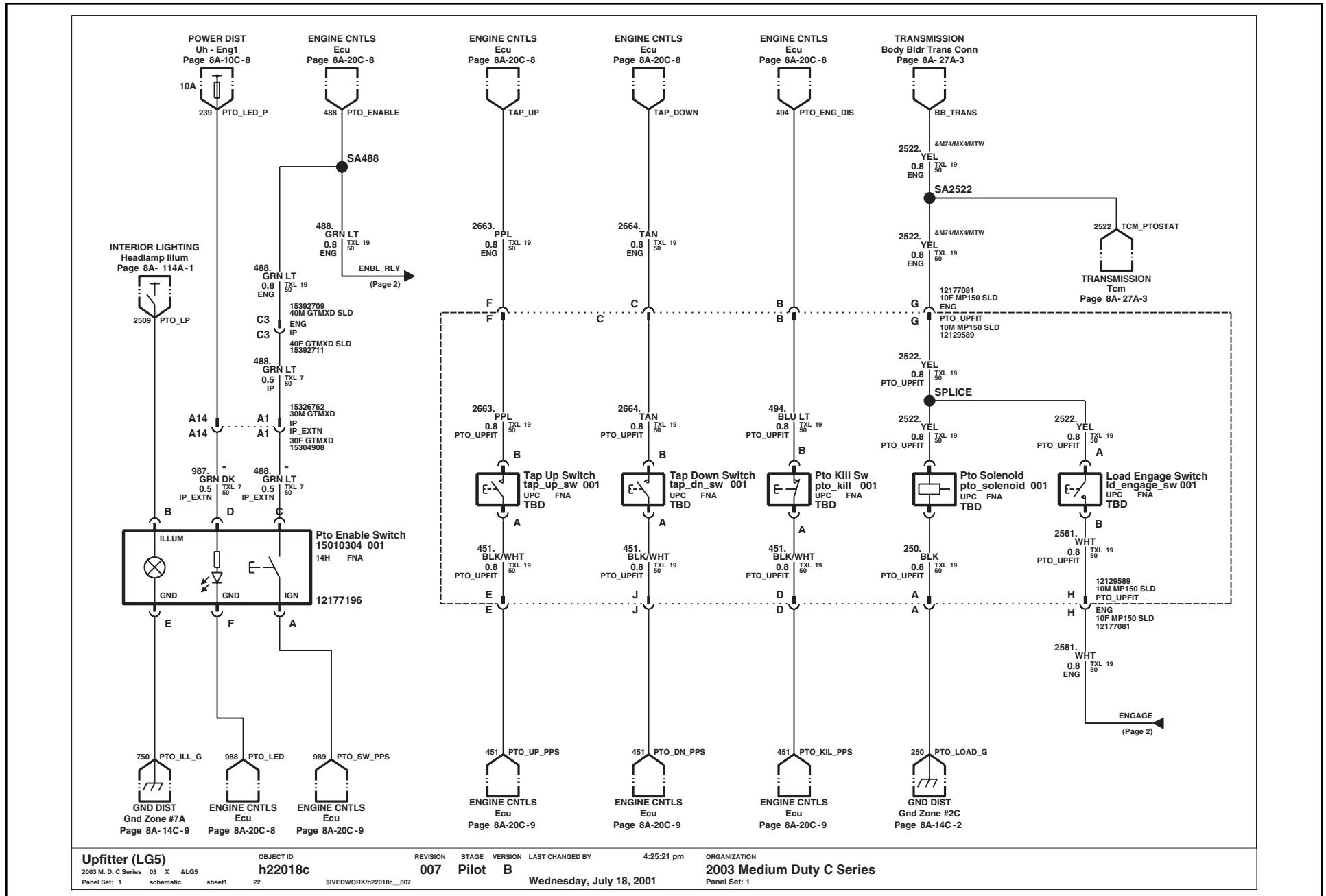
PAGE **D-115**

Upfitter Provision-'03-'04 – (L18) 8.1L-Gas/NAPT – (LLY) 6.6L-Diesel/Duramax – (LG4) 7.8L-Diesel/Duramax



RPO LEGEND	
L18 -	GMPT 8.1L V8 GAS ENG
LLY -	DURAMAX 6600 DIESEL ENG
LC8 -	DURAMAX 7200 DIESEL ENG
LG4 -	DURAMAX 7800 DIESEL ENG

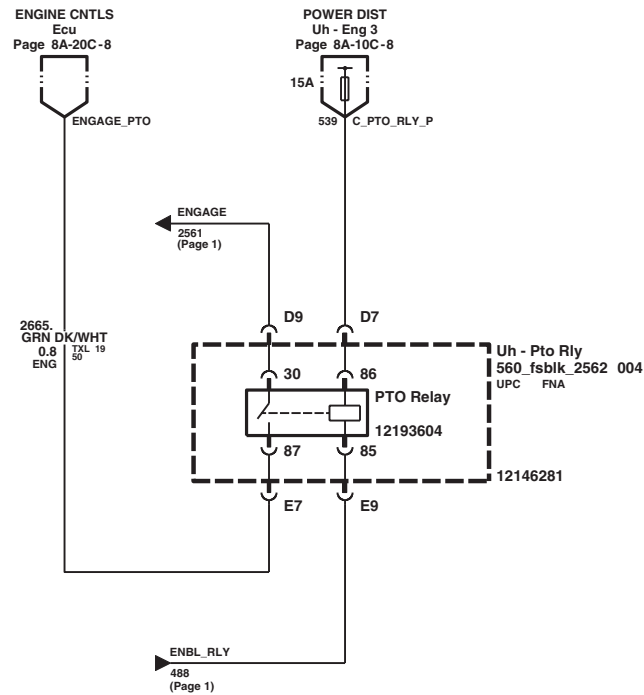
Upfitter Provision – (LG5) 7.2L-Diesel/CAT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Upfitter Provision — (LG5) 7.2L-Diesel/CAT

03 560 000	TY	PILOT B - INITIAL CREATION	27NO00	001
03 560 818	JG	REPLACED CBs WITH MINI-FUSES.	27NO00	001
03 560 1055	LR	Update RPO	18JL01	001



Upfitter (LG5)
2003 M. D. C Series 03 X & LG5
Panel Set: 2 schematic sheet1

OBJECT ID
h22018c

REVISION STAGE VERSION LAST CHANGED BY
007 Pilot B

4:25:21 pm

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 2

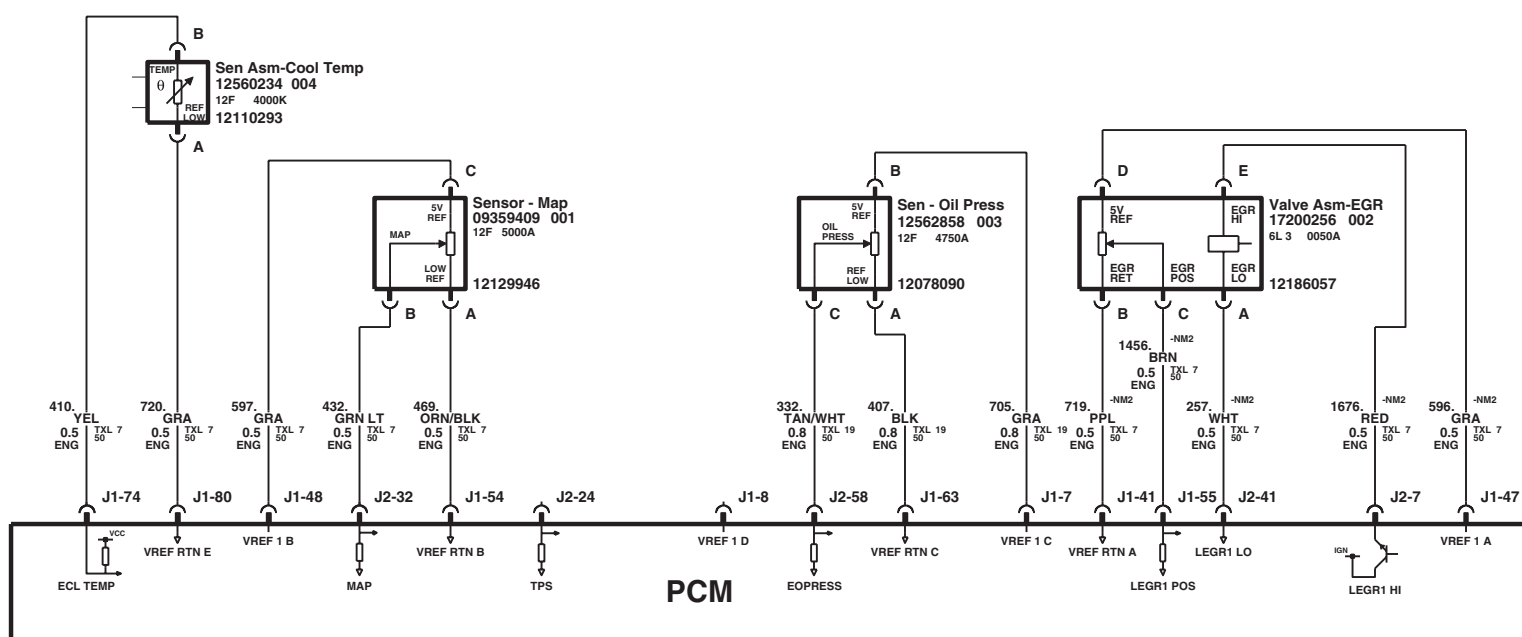
22 SIVEDWORK/h22018c_007

Wednesday, July 18, 2001

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (L18) 8.1L-Gas/NAPT

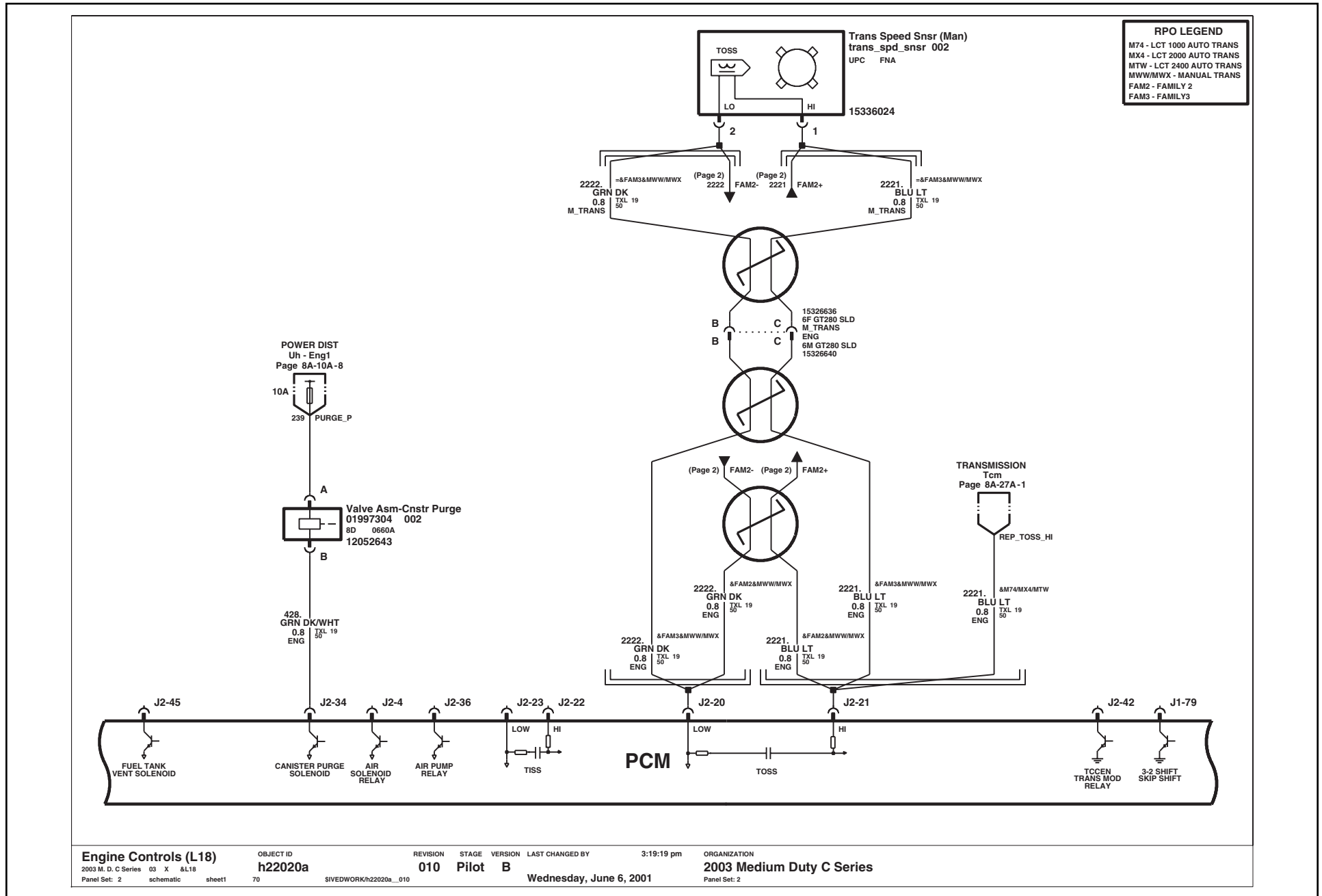
RPO LEGEND
NM2 - EXPORT EMISSION SYSTEM-LEADED FUEL



Engine Controls (L18)	OBJECT ID	REVISION	STAGE	VERSION	LAST CHANGED BY	3:19:19 pm	ORGANIZATION
2003 M. D. C Series 03 X &L18	h22020a	010	Pilot	B	Wednesday, June 6, 2001		2003 Medium Duty C Series
Panel Set: 1 schematic sheet1	70	SIVEDWORK/h22020a...010					Panel Set: 1

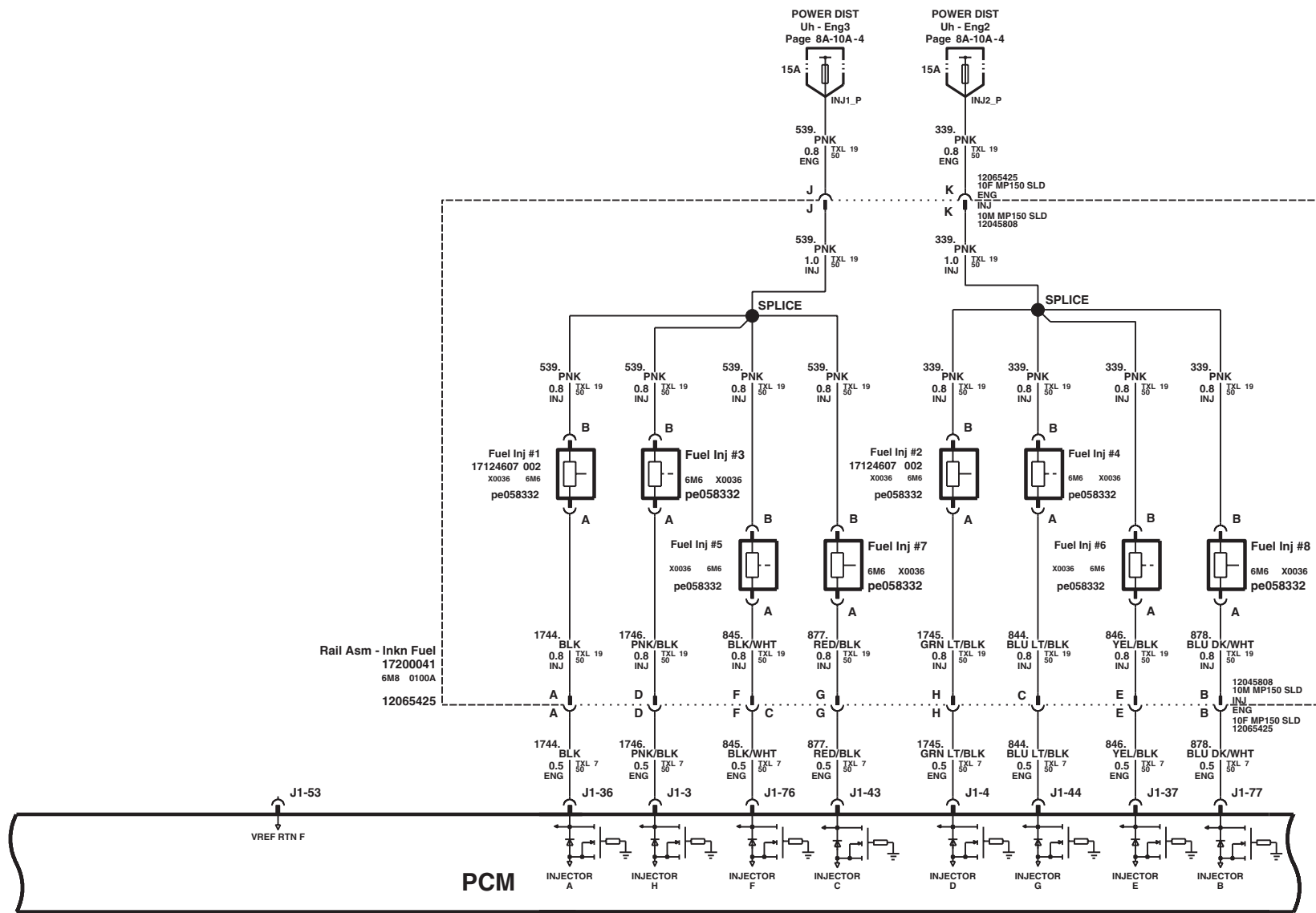
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (L18) 8.1L-Gas/NAPT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (L18) 8.1L-Gas/NAPT



Engine Controls (L18)
2003 M. D. C Series 03 X & L18
Panel Set: 3 schematic sheet1

OBJECT ID
h22020a

REVISION STAGE VERSION LAST CHANGED BY
010 Pilot B
Wednesday, June 6, 2001

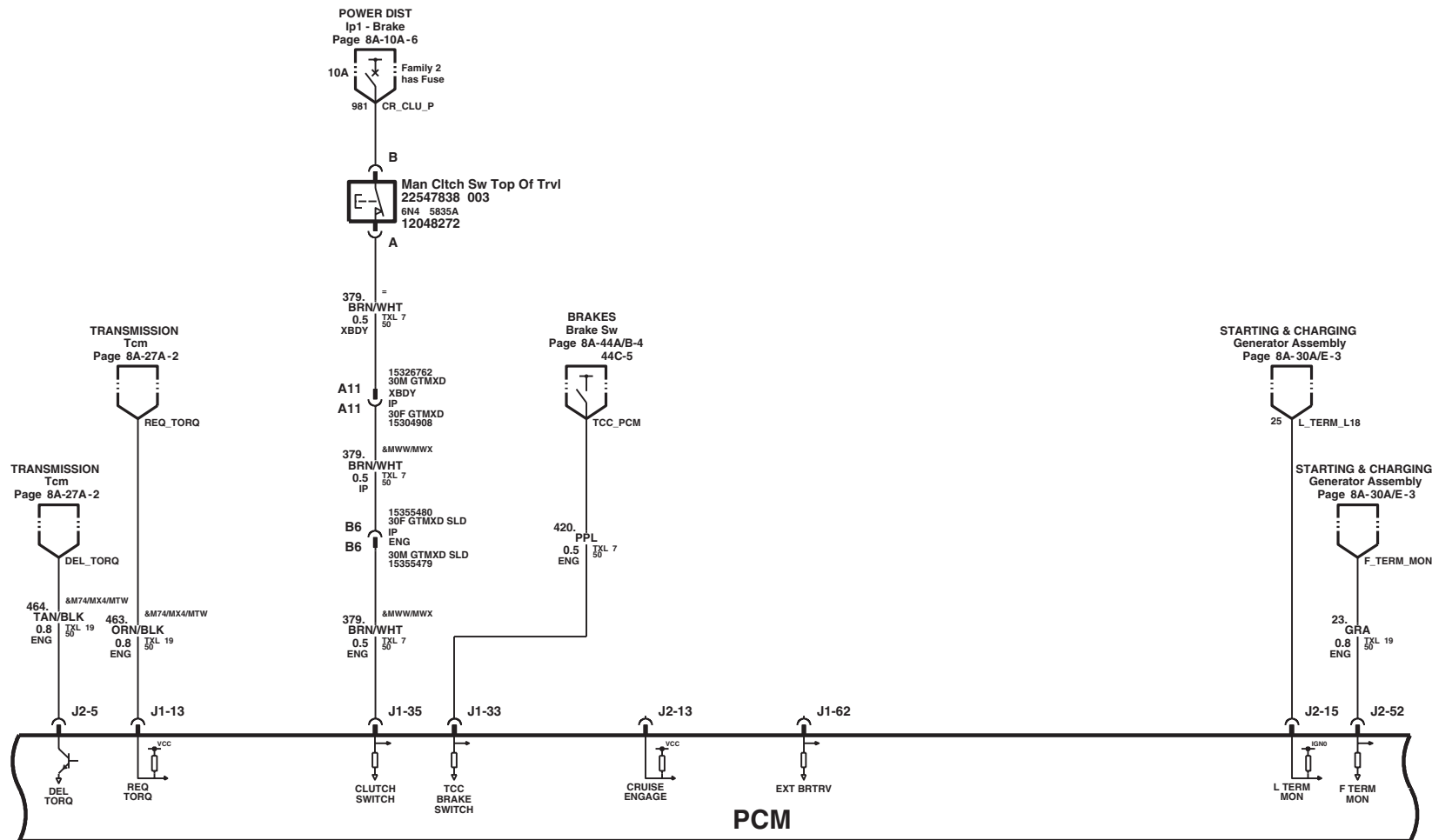
3:19:19 pm

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 3

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (L18) 8.1L-Gas/NAPT

RPO LEGEND	
M74	- LCT 1000 AUTO TRANS
MX4	- LCT 2000 AUTO TRANS
MTW	- LCT 2400 AUTO TRANS
MWW/MWX	- MANUAL TRANS



Engine Controls (L18)
 2003 M. D. C Series 03 X & L18
 Panel Set: 4 schematic sheet1

OBJECT ID
h22020a

REVISION STAGE VERSION LAST CHANGED BY
010 Pilot B

3:19:19 pm

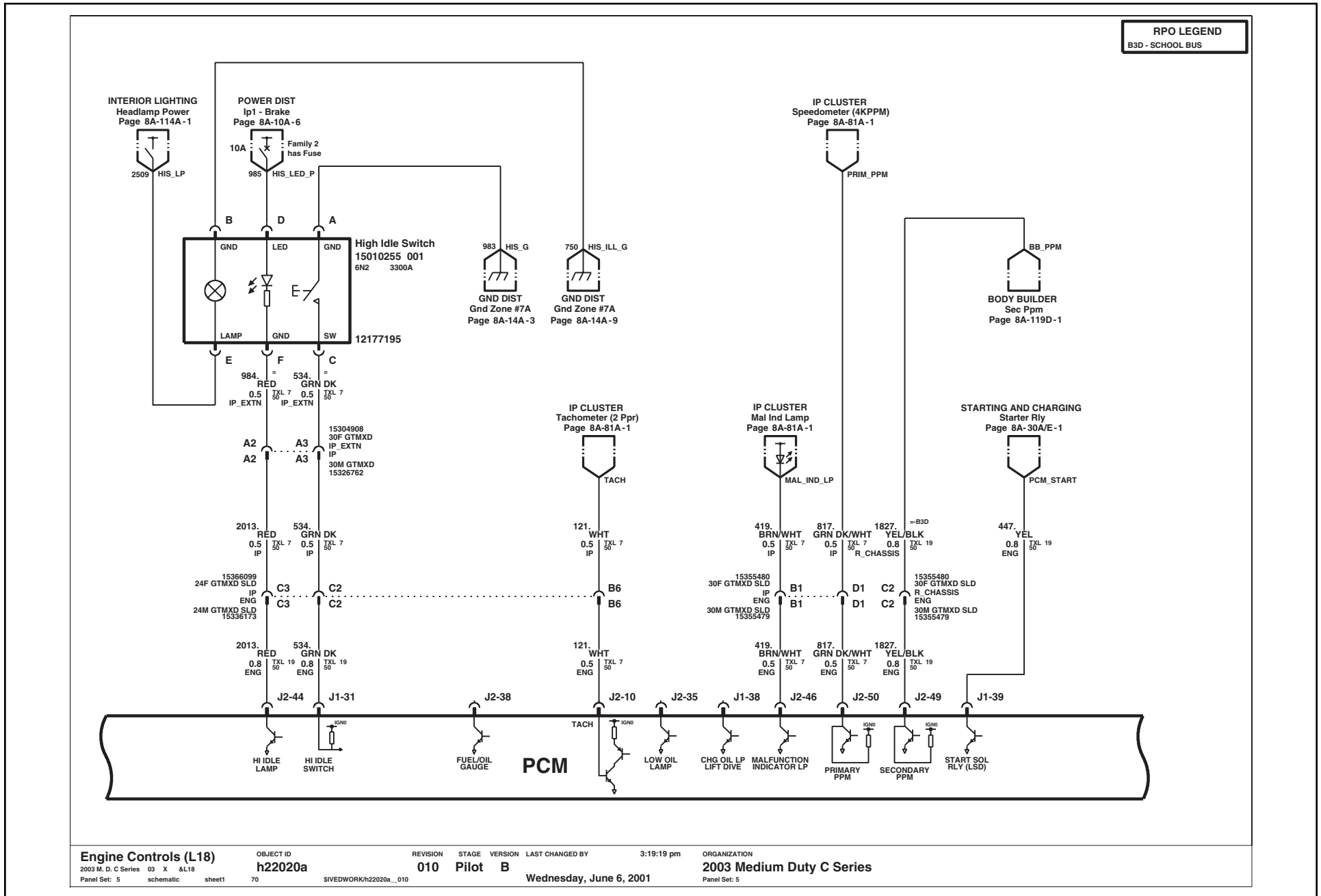
ORGANIZATION
2003 Medium Duty C Series
 Panel Set: 4

Wednesday, June 6, 2001

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

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Engine Controls – (L18) 8.1L-Gas/NAPT



Engine Controls (L18)

OBJECT ID
h22020a

REVISION STAGE VERSION LAST CHANGED BY
010 Pilot B

3:19:19 pm

ORGANIZATION
2003 Medium Duty C Series

2003 M. D. C Series 03 X &L18
Panel Set: 5 schematic sheet1

70

SIVEDWORK/h22020a_010

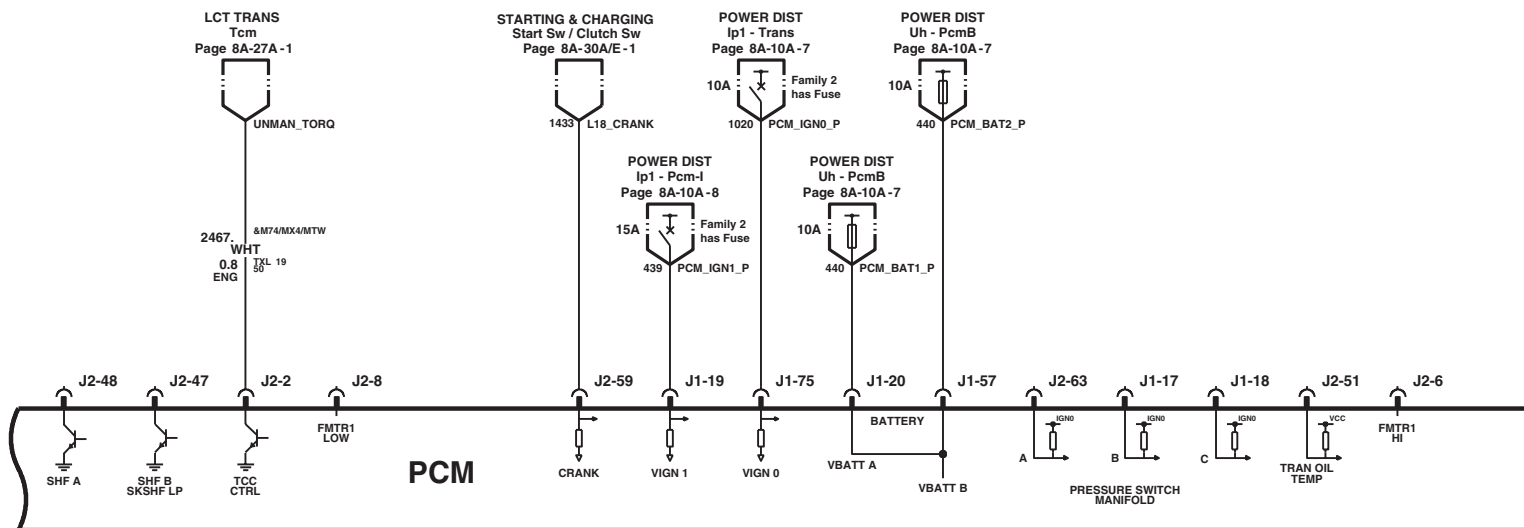
Wednesday, June 6, 2001

Panel Set: 5

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls — (L18) 8.1L-Gas/NAPT

RPO LEGEND	
M74	- LCT 1000 AUTO TRANS
MX4	- LCT 2000 AUTO TRANS
MTW	- LCT 2400 AUTO TRANS



Engine Controls (L18)
 2003 M. D. C Series 03 X & L18
 Panel Set: 6 schematic sheet1

OBJECT ID
h22020a

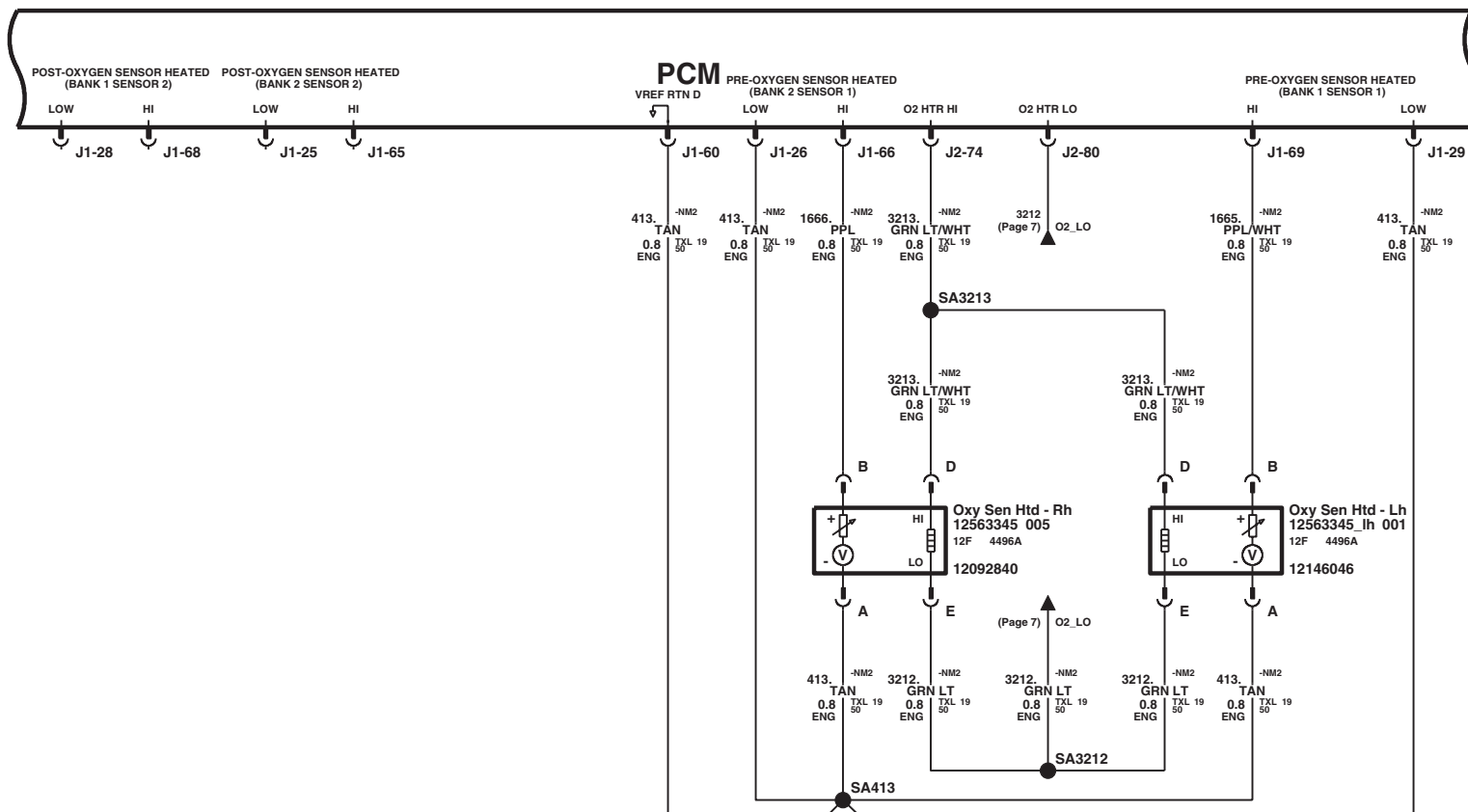
REVISION STAGE VERSION LAST CHANGED BY
010 Pilot B
 Wednesday, June 6, 2001

3:19:19 pm

ORGANIZATION
2003 Medium Duty C Series
 Panel Set: 6

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

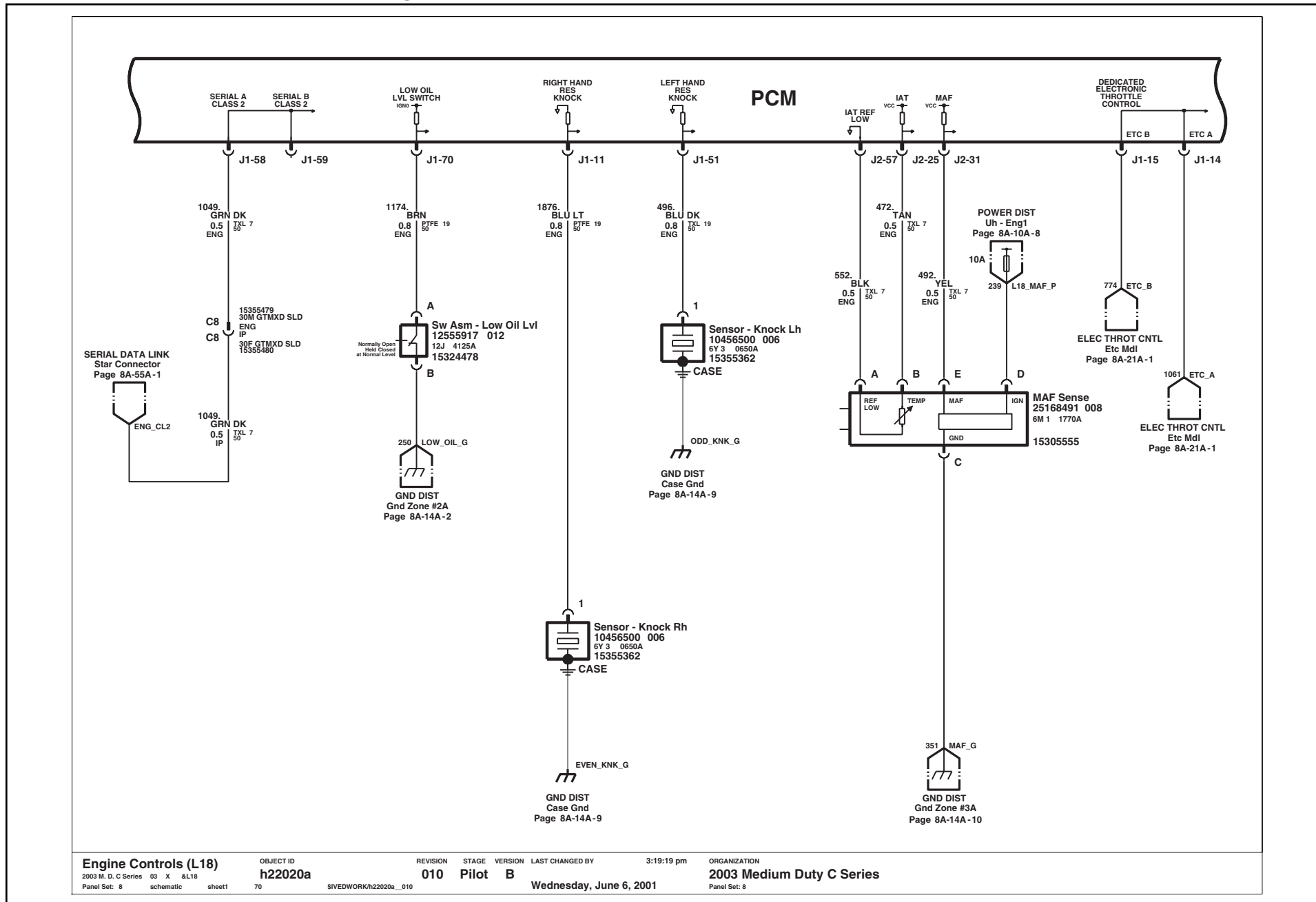
Engine Controls – (L18) 8.1L-Gas/NAPT



RPO LEGEND
 NM2 - EXPORT EMISSION SYSTEM-LEADED FUEL

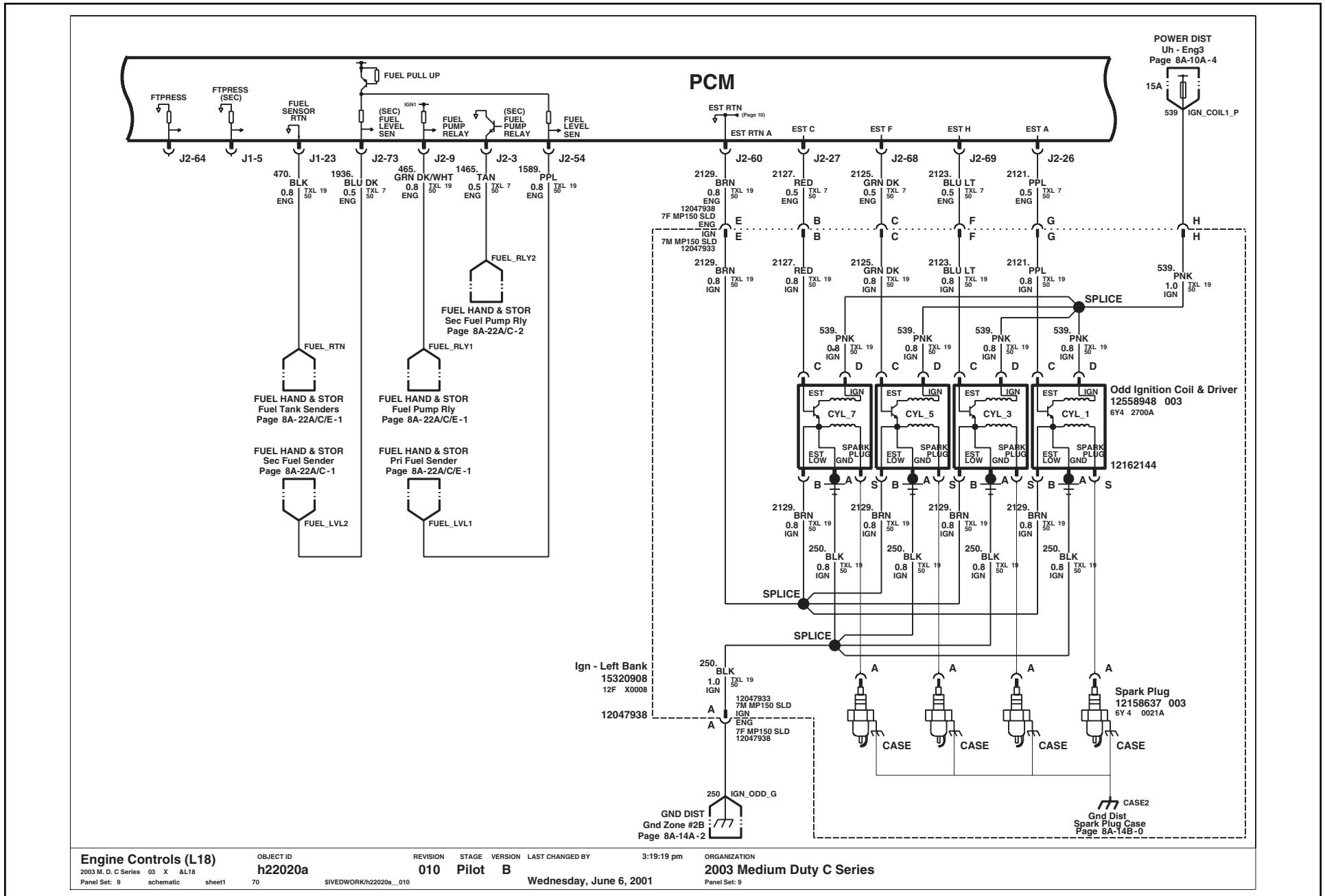
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (L18) 8.1L-Gas/NAPT



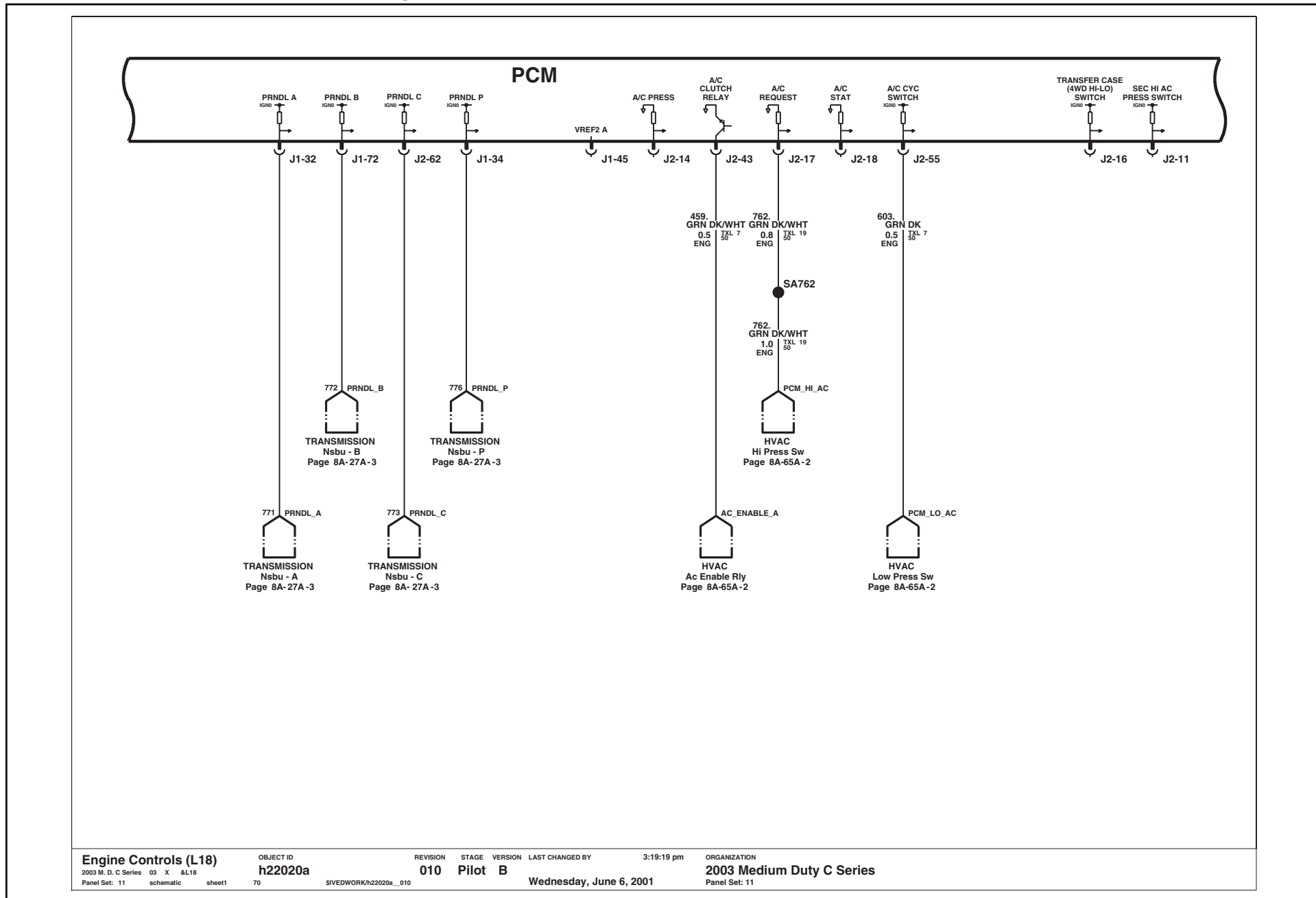
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (L18) 8.1L-Gas/NAPT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (L18) 8.1L-Gas/NAPT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (L18) 8.1L-Gas/NAPT

J1 [F] CONNECTOR

PCM CONNECTOR ASSY: 12191489
 TPA (BLUE) 2 REQ'D: 12176408
 COVER: 12191108

CAVITY	FUNCTION	CIRCUIT/COLOR	USAGE		
			Y	N	N. C.
J1-01	PWR GRD A	151 BLK/WHT	Y		
J1-02	CRANK SENSOR SUPPLY	1867 GRN LT	Y		
J1-03	INJ H	1746 PNK/BLK	Y		
J1-04	INJ D	1745 GRN LT/BLK	Y		
J1-05	FUEL TANK PRESS (SEC)	NC		N	
J1-06	EHC CURRENT MONITOR	NC		N	
J1-07	VREF SUP 1 C	705 GRA	Y		
J1-08	VREF SUP 1 D	NC		N	
J1-09	FLAT ODD HI	NC		N	
J1-10	FLAT EVEN HI	NC		N	
J1-11	RES KNOCK 2	1876 BLU LT	Y		
J1-12	CRANK 1 POS	1869 BLU DK/WHT	Y		
J1-13	REQUEST TORQ	463 ORN/BLK		N	
J1-14	ETC SDATA A	1061 ORN/BLK	Y		
J1-15	ETC SDATA B	774 BLU DK/WHT	Y		
J1-16	CRANK 2 POS	NC		N	
J1-17	TRANS PSM B	NC		N	
J1-18	TRANS PSM C	NC		N	
J1-19	IGN 1	439 PNK	Y		
J1-20	BATT A	440 ORN	Y		
J1-21	CRANK SEN RTN	1868 YEL/BLK	Y		
J1-22	PTO ENAB SW	488 GRN LT	Y		
J1-23	VREF RTN H	470 BLK		N	
J1-24	O2 F LO	NC		N	
J1-25	O2 D LO	NC		N	
J1-26	O2 B LO	413 TAN	Y		
J1-27	O2 E LO	NC		N	
J1-28	O2 C LO	NC	Y		
J1-29	O2 A LO	413 TAN	Y		
J1-30	LOW CLT SW/SIG	1478 GRN LT	Y		
J1-31	HI IDLE SW	534 GRN DK	Y		
J1-32	PRNDL A/CLUTCH SW	771 BLK/WHT		N	
J1-33	TCC BRAKE SW	420 PPL	Y		
J1-34	PRNDL P/P-N SW	776 WHT	Y		
J1-35	EXTENDED CLUTCH SW	379 BRN/WHT	Y		
J1-36	INJ A	1744 BLK	Y		
J1-37	INJ E	846 YEL/BLK	Y		
J1-38	CHNG OIL LPL/LIFT DIVE	NC	Y		
J1-39	START RELAY (LSD)	447 YEL	Y		
J1-40	PWR GRD B	151 BLK/WHT	Y		

J2 [S] CONNECTOR

PCM CONNECTOR ASSY: 12191488
 TPA (RED) 2 REQ'D: 12176410
 COVER: 12191108

CAVITY	FUNCTION	CIRCUIT/COLOR	USAGE		
			Y	N	N. C.
J1-41	VREF RTN A	719 PPL	Y		
J1-42	FAN1 RELAY/ENG SHTDWN	NC	Y		
J1-43	INJ C	877 RED/BLK	Y		
J1-44	INJ G	844 BLU LT/BLK	Y		
J1-45	VREF SUP 2 A	NC		N	
J1-46	VREF SUP 2 B	NC		N	
J1-47	VREF SUP 1 A	596 GRA	Y		
J1-48	VREF SUP 1 B	597 GRA	Y		
J1-49	FLAT ODD LO (SHIELD)	NC		N	
J1-50	FLAT EVEN LO (SHIELD)	NC		N	
J1-51	RES KNOCK 1	496 BLU DK	Y		
J1-52	PTO STATUS	2522 YEL	Y		
J1-53	VREF RTN F	NC		N	
J1-54	VREF RTN B	469 ORN/BLK	Y		
J1-55	LEGR 1 POS	1456 BRN	Y		
J1-56	FUEL COMPOSITION SEN	NC		N	
J1-57	BATT B	440 ORN	Y		
J1-58	CLASS 2 SDATA A	1049 GRN DK	Y		
J1-59	CLASS 2 SDATA B	NC		N	
J1-60	VREF RTN D	413 TAN	Y		
J1-61	CAM SENSOR RTN	632 PNK/BLK	Y		
J1-62	EXTENDED BRAKE SW	NC		N	
J1-63	VREF RTN C	407 BLK	Y		
J1-64	O2 F HI	NC		N	
J1-65	O2 D HI	NC		N	
J1-66	O2 B HI	1666 PPL	Y		
J1-67	O2 E HI	NC		N	
J1-68	O2 C HI	NC	Y		
J1-69	O2 A HI	1665 PPL/WHT	Y		
J1-70	LOW OIL SW	1174 BRN		N	
J1-71	PTO ENGINE KILL SW	494 BLU LT	Y		
J1-72	PRNDL B	772 YEL		N	
J1-73	CAM SEN POS	633 BRN/WHT	Y		
J1-74	ENG CLT TEMP	410 YEL	Y		
J1-75	IGN 0	1020 PNK		N	
J1-76	INJ F	845 BLK/WHT	Y		
J1-77	INJ B	878 BLU DK/WHT	Y		
J1-78	PTO ENGAGE	2562 PPL		N	
J1-79	3/2 SHIFT/SKIP SHIFT	NC		N	
J1-80	VREF RTN E	720 GRA	Y		

CAVITY	FUNCTION	CIRCUIT/COLOR	USAGE		
			Y	N	N. C.
J2-01	PWR GRD C	151 BLK/WHT	Y		
J2-02	TCC CONTROL SOL	2467 WHT		N	
J2-03	EHC COM/SEC F_PMP RLY	1463 TAN		N	
J2-04	AIR SOL RELAY	NC		N	
J2-05	DELIVERED TORQ	464 TAN/BLK		N	
J2-06	FMTR 1 HI	NC		N	
J2-07	LEGR 1 HI	1676 RED	Y		
J2-08	FMTR 1 LO	NC		N	
J2-09	FUEL PUMP RELAY	465 GRN DK/WHT	Y		
J2-10	TACH	121 WHT	Y		
J2-11	SEC A/C HI PRESS SW	NC	Y		
J2-12	LEGR 2 POS	NC		N	
J2-13	CRUISE ENGAGED	NC		N	
J2-14	A/C PRESS SEN	NC		N	
J2-15	ALT L TERM	25 BRN	Y		
J2-16	4WD LOW GEAR SW	NC		N	
J2-17	A/C REQUEST	762 GRN DK/WHT	Y		
J2-18	A/C STATUS	NC		N	
J2-19	FRT AXLE SW	1467 GRA/BLK	Y		
J2-20	TOSS LO	2222 GRN DK	Y		
J2-21	TOSS HI	2221 BLU LT	Y		
J2-22	TISS HI	NC		N	
J2-23	TISS LO	NC		N	
J2-24	TPS	NC		N	
J2-25	INDUCTION AIR TEMP	472 TAN	Y		
J2-26	EST A	2121 PPL	Y		
J2-27	EST C	2127 RED	Y		
J2-28	EST E	2126 BLU LT/WHT	Y		
J2-29	EST G	2124 GRN DK/WHT	Y		
J2-30	VATS	NC		N	
J2-31	MAF	492 YEL	Y		
J2-32	MAP	432 GRN LT	Y		
J2-33	FAN 2/CK GA LP/ACREC	NC	Y		
J2-34	CANISTER PURGE	426 GRN DK/WHT	Y		
J2-35	LOW OIL LP	NC		N	
J2-36	AIR PUMP RELAY	NC		N	
J2-37	SEE NOTES BELOW	NC	Y		
J2-38	FUEL/OIL PRESS GA	NC	Y		
J2-39	CAM SEN SUP	631 RED	Y		
J2-40	PWR GRD D	151 BLK/WHT	Y		

J2-37 REDUCED ENGINE PWR LP/CRUISE INHIBIT
 J2-47 SHIFT B/SHIP SHIFT LP/ENG/SPD LP/UPSHIFT LP

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls — (L18) 8.1L-Gas/NAPT

Pcm 32w97 Pin Map
97pinmap_mark 005

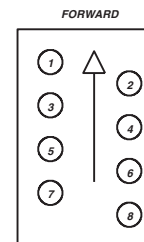
CAVITY	FUNCTION	CIRCUIT/COLOR	USAGE		
			Y	N	H. C.
J2-41	LEGR 1 LO	257 WHT	Y		
J2-42	TCC ENAB/TR MD RELAY	NC	Y		
J2-43	A/C CLUTCH RELAY	459 GRN DK/WHT	Y		
J2-44	HI ID LP/REVLKOUT SOL	2013 RED	Y		
J2-45	FUEL TANK VENT	NC		N	
J2-46	MALF IND LAMP	419 BRN/WHT	Y		
J2-47	SEE NOTES BELOW	NC	Y		
J2-48	SHIFT A	NC		N	
J2-49	SECONDARY PPM	1827 YEL/BLK		N	
J2-50	PRIMARY PPM	817 GRN DK/WHT	Y		
J2-51	TRANS OIL TEMP	NC		N	
J2-52	ALT F TERM	23 GRA	Y		
J2-53	TCS/SPK_RTD/MIL REQ	NC		N	
J2-54	FUEL LEVEL SEN	1589 PPL	Y		
J2-55	A/C PRESS CYC SW	603 GRN DK	Y		
J2-56	EHC DIAGNOSTIC	NC		N	
J2-57	VREF RTN G (IATREFLO)	552 BLK	Y		
J2-58	ENG OIL PRESS	332 TAN/WHT	Y		
J2-59	CRANK REQUEST	806 PPL	Y		
J2-60	EST RTN ODD	2129 BRN	Y		
J2-61	EST RTN EVEN	2130 BRN/WHT	Y		
J2-62	PRNDL C	773 GRA		N	
J2-63	TRANS PSM A	NC		N	
J2-64	FUEL TANK PRESS	NC		N	
J2-65	EHC VOLTAGE MONITOR	NC		N	
J2-66	EST B	2128 PPL/WHT	Y		
J2-67	EST D	2122 RED/WHT	Y		
J2-68	EST F	2125 GRN DK	Y		
J2-69	EST H	2123 BLU LT	Y		
J2-70	CAN SDATA HI	NC		N	
J2-71	CAN SDATA LO	NC		N	
J2-72	FMTR 2 LO	NC		N	
J2-73	FUEL LEVEL SEN (SEC)	1936 BLU DK		N	
J2-74	LEGR 2 HI	3213 GRN LT/WHT	Y		
J2-75	FMTR 2 HI	NC		N	
J2-76	IAC B HI	NC		N	
J2-77	IAC B LO	NC		N	
J2-78	IAC A LO	NC		N	
J2-79	IAC A HI	NC		N	
J2-80	LEGR 2 LO	3212 GRN LT	Y		

NOTE # 1
OXYGEN SENSORS REQUIRE AIR REFERENCE, WHICH SHALL BE PROVIDED THROUGH THE WIRES CONNECTING THE OXYGEN SENSOR TO THE PCM.

NOTE # 2
BRAKE SWITCHES SPECIFIC PRIORITIES AND DEPENDENCIES
DESCRIPTION ORDER OF STATE CHANGE
CC/TCC 1
BLS 2
BTS1 3

NOTE # 3
LEGEND FOR "OBJECT ID"
OBJECT ID = h22020a

NOTE # 4
FIRING ORDER 1 - 8 - 7 - 2 - 6 - 5 - 4 - 3
EST DRIVERS A - B - C - D - E - F - G - H
(GEN III & MARK)



Engine Controls (L18)

OBJECT ID
h22020a

REVISION STAGE VERSION
010 Pilot B

LAST CHANGED BY
3:19:19 pm

ORGANIZATION
2003 Medium Duty C Series

2003 M. D. C Series 03 X &L18
Panel Set: 14 schematic sheet1

70

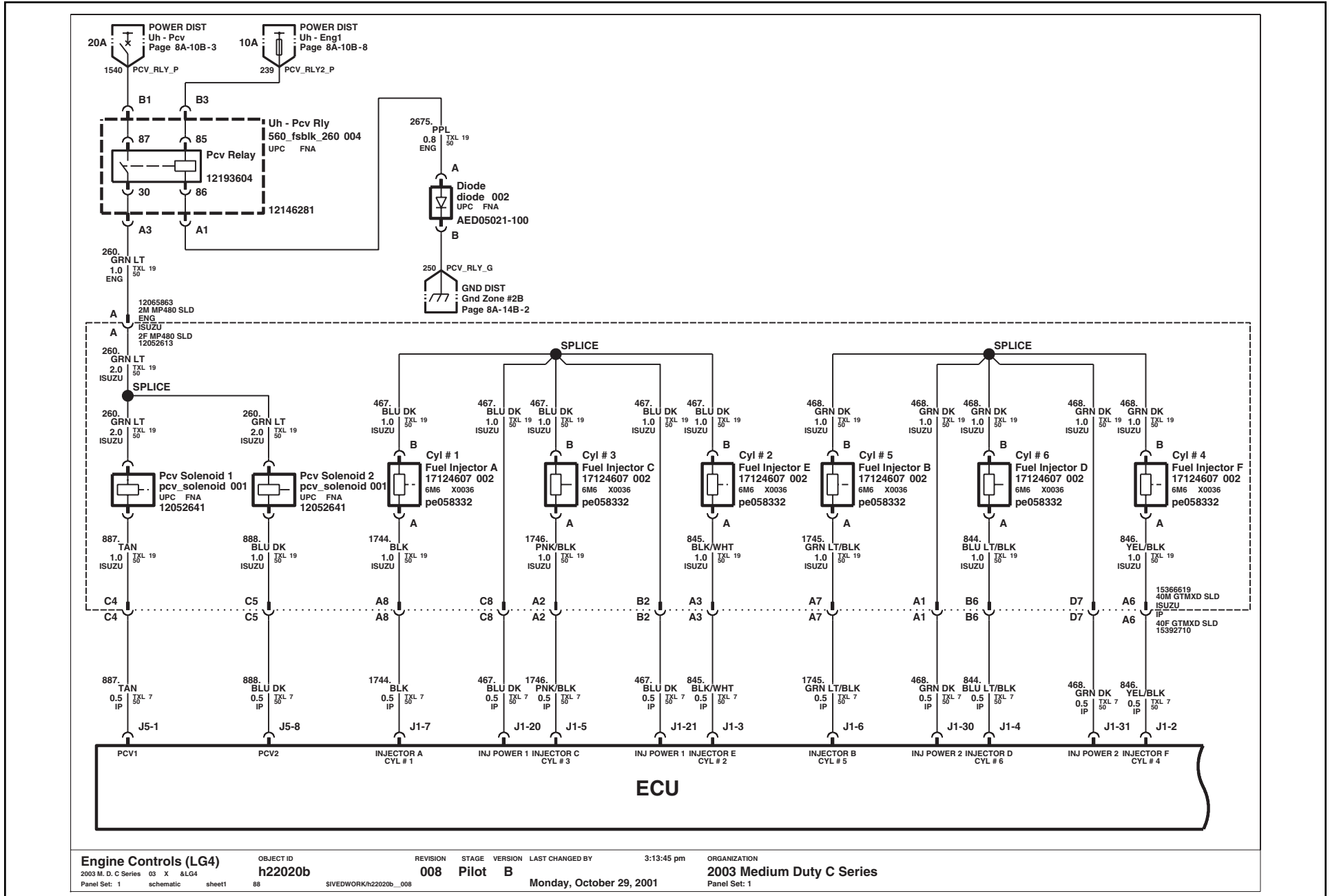
SIVEDWORK/h22020a_010

Wednesday, June 6, 2001

Panel Set: 14

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LG4-'03-'04) 7.8L-Diesel/Duramax



Engine Controls (LG4)
2003 M. D. C Series 03 X & LG4
Panel Set: 1 schematic sheet1

OBJECT ID
h22020b

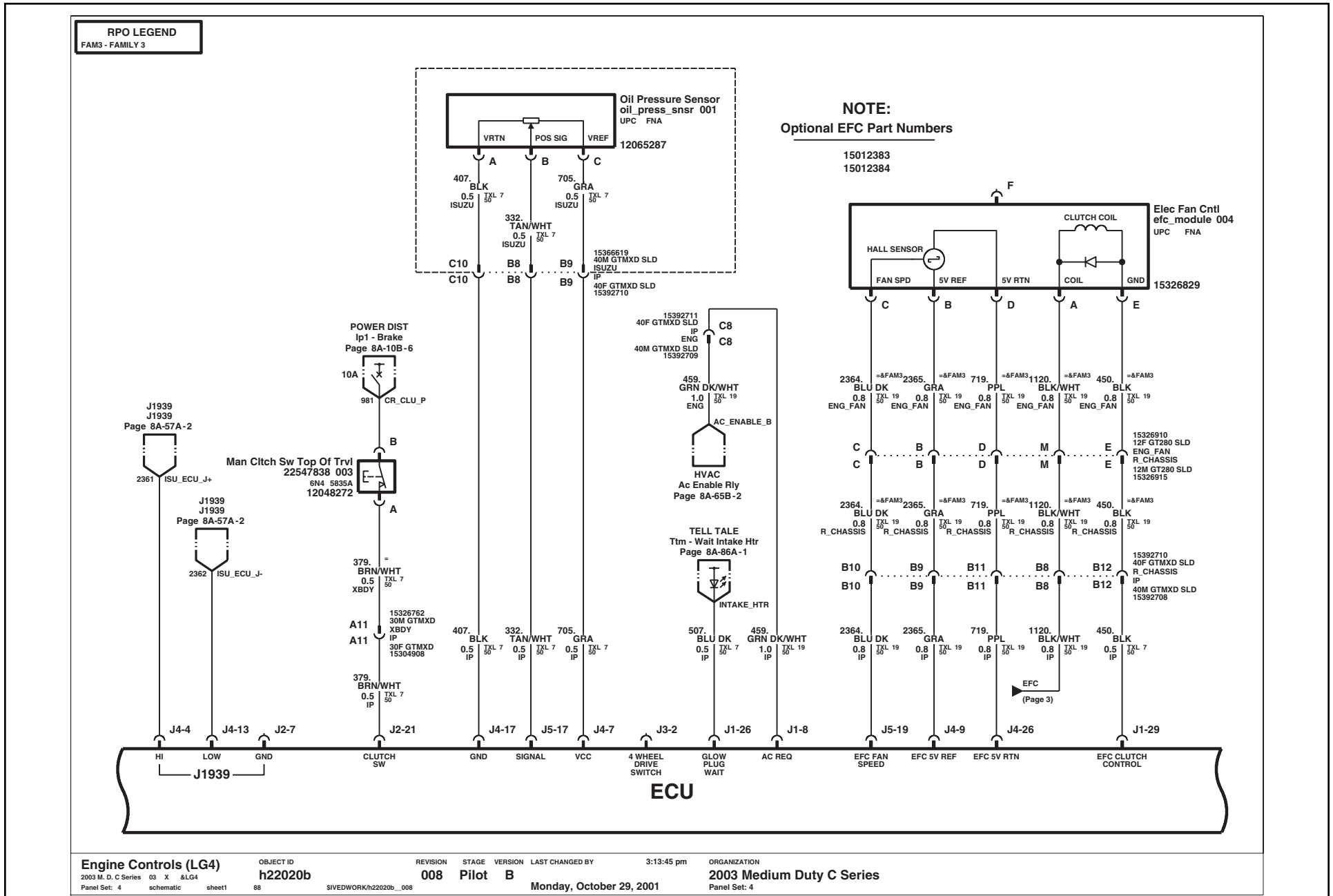
REVISION STAGE VERSION LAST CHANGED BY
008 Pilot B Monday, October 29, 2001

3:13:45 pm

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 1

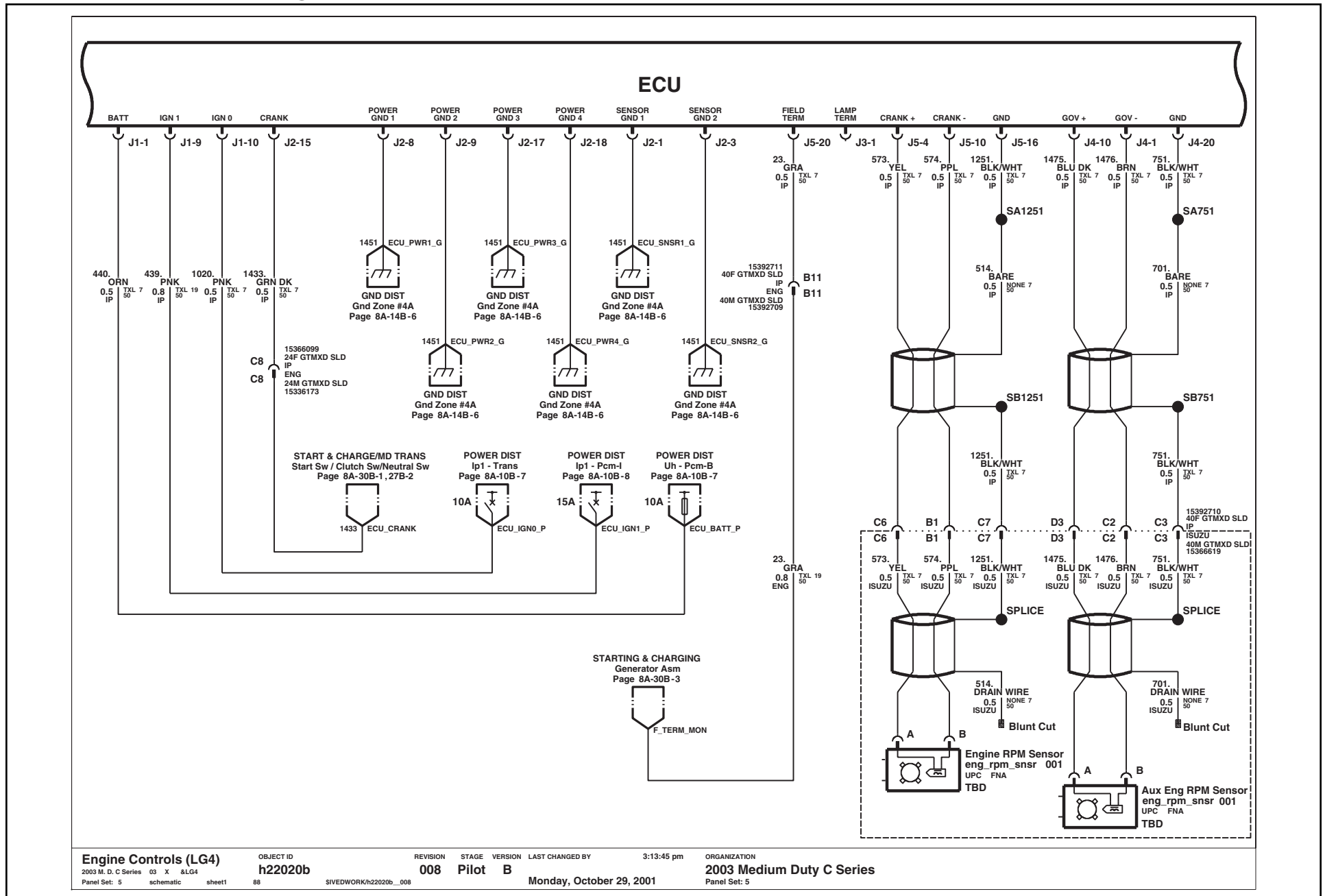
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LG4-'03-'04) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LG4-'03-'04) 7.8L-Diesel/Duramax



Engine Controls (LG4)
2003 M. D. C Series 03 X & LG4
Panel Set: 5 schematic sheet1

OBJECT ID
h22020b

REVISION STAGE VERSION
008 Pilot B

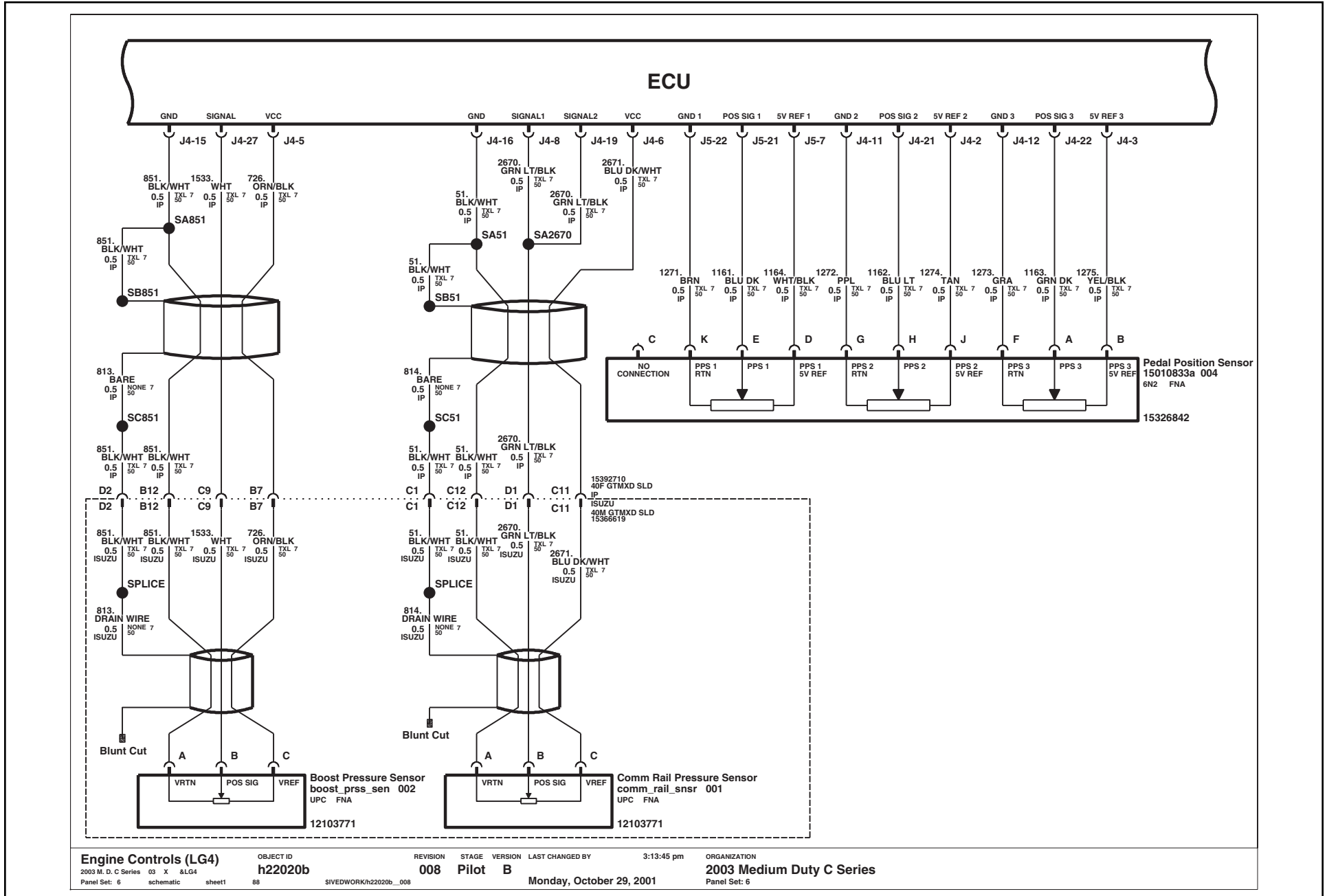
LAST CHANGED BY
Monday, October 29, 2001

3:13:45 pm

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 5

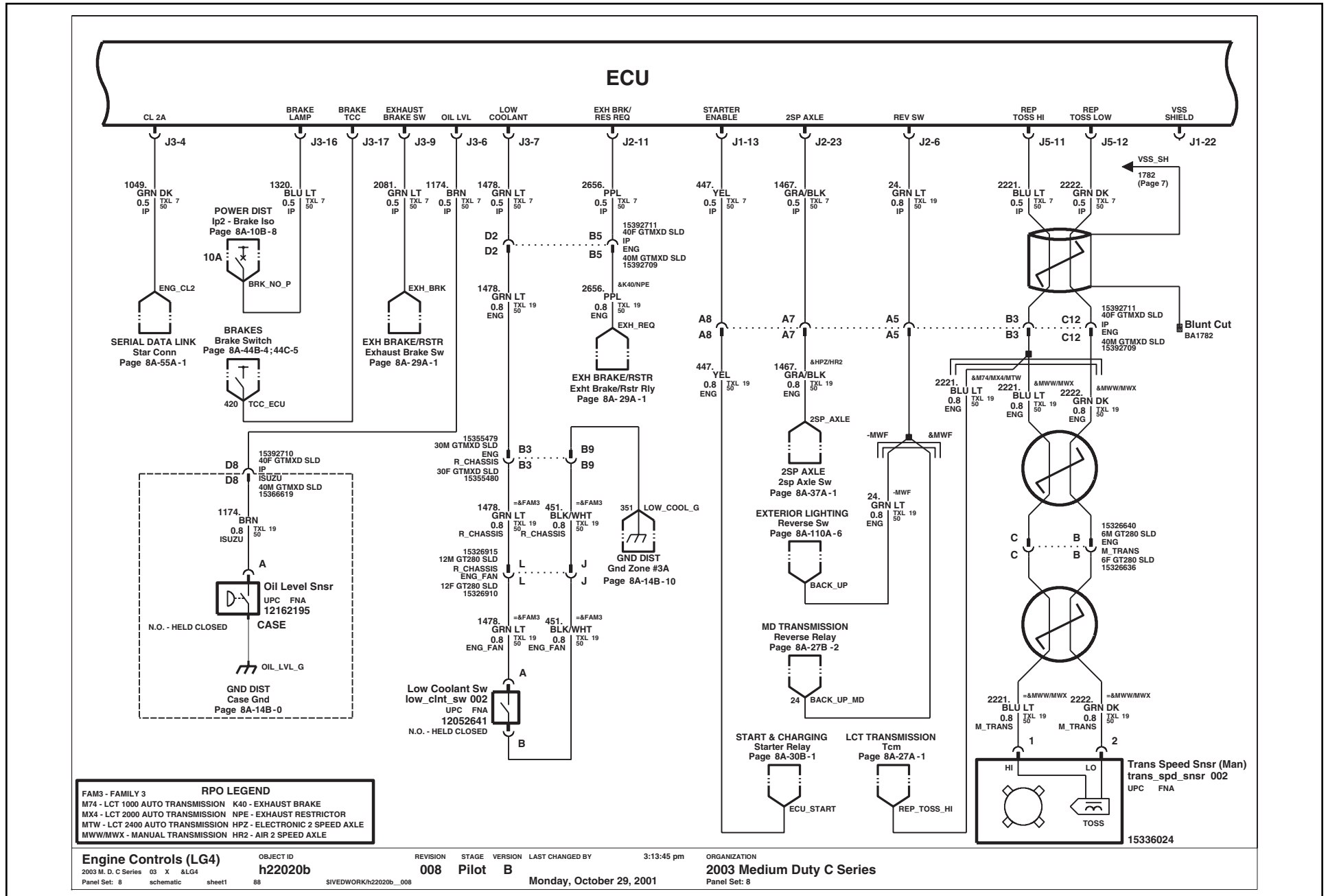
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LG4-'03-'04) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

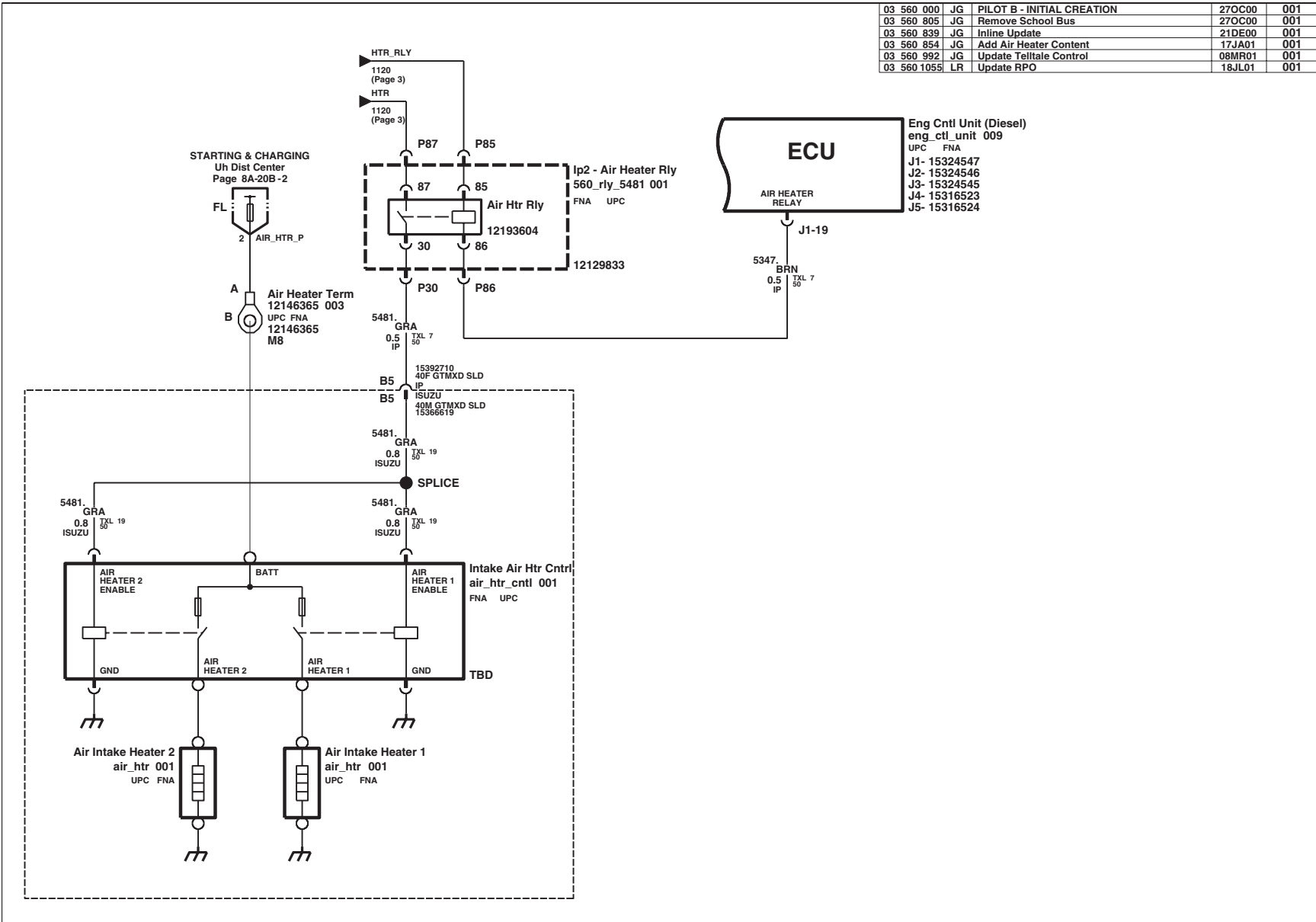
Engine Controls – (LG4-'03-'04) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

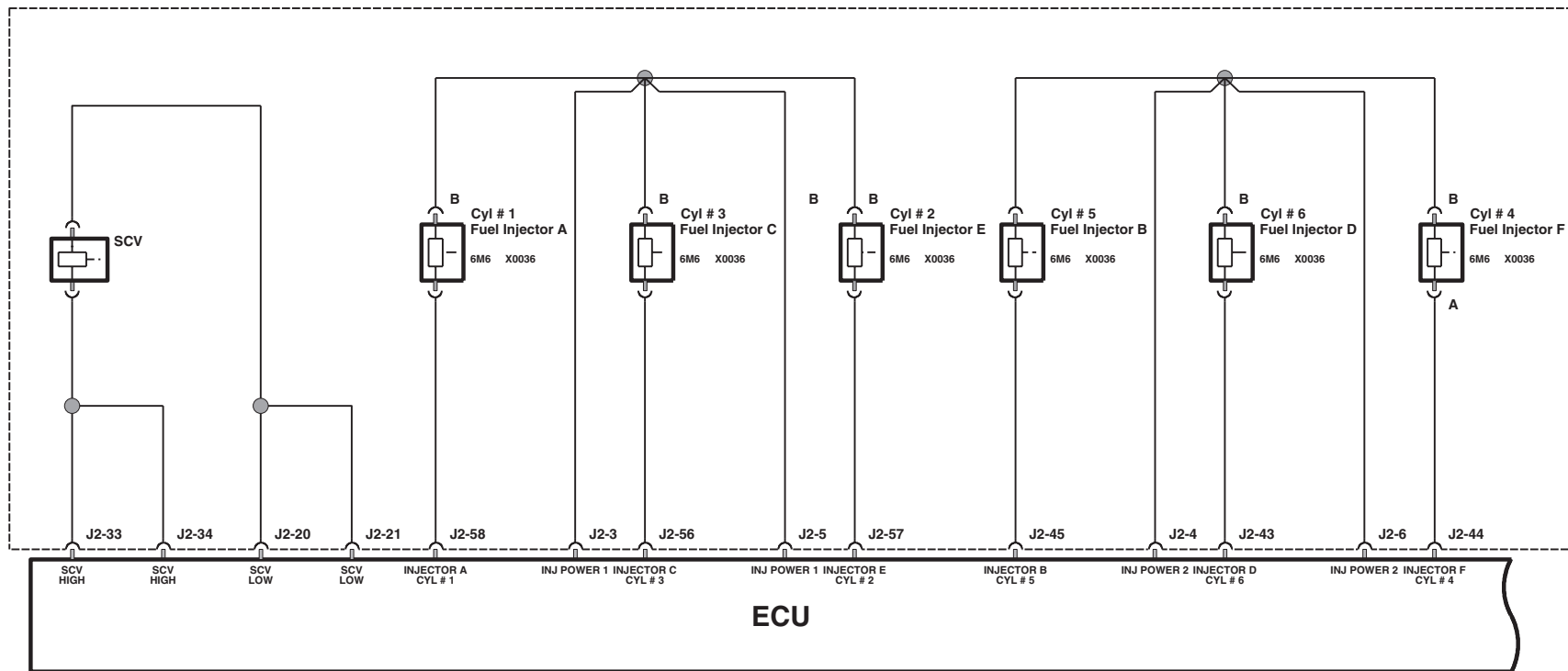
Engine Controls – (LG4-'03-'04) 7.8L-Diesel/Duramax

03 560 000	JG	PILOT B - INITIAL CREATION	27OC00	001
03 560 805	JG	Remove School Bus	27OC00	001
03 560 839	JG	Inline Update	21DE00	001
03 560 854	JG	Add Air Heater Content	17JA01	001
03 560 992	JG	Update Telltale Control	08MR01	001
03 560 1055	LR	Update RPO	18JL01	001



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

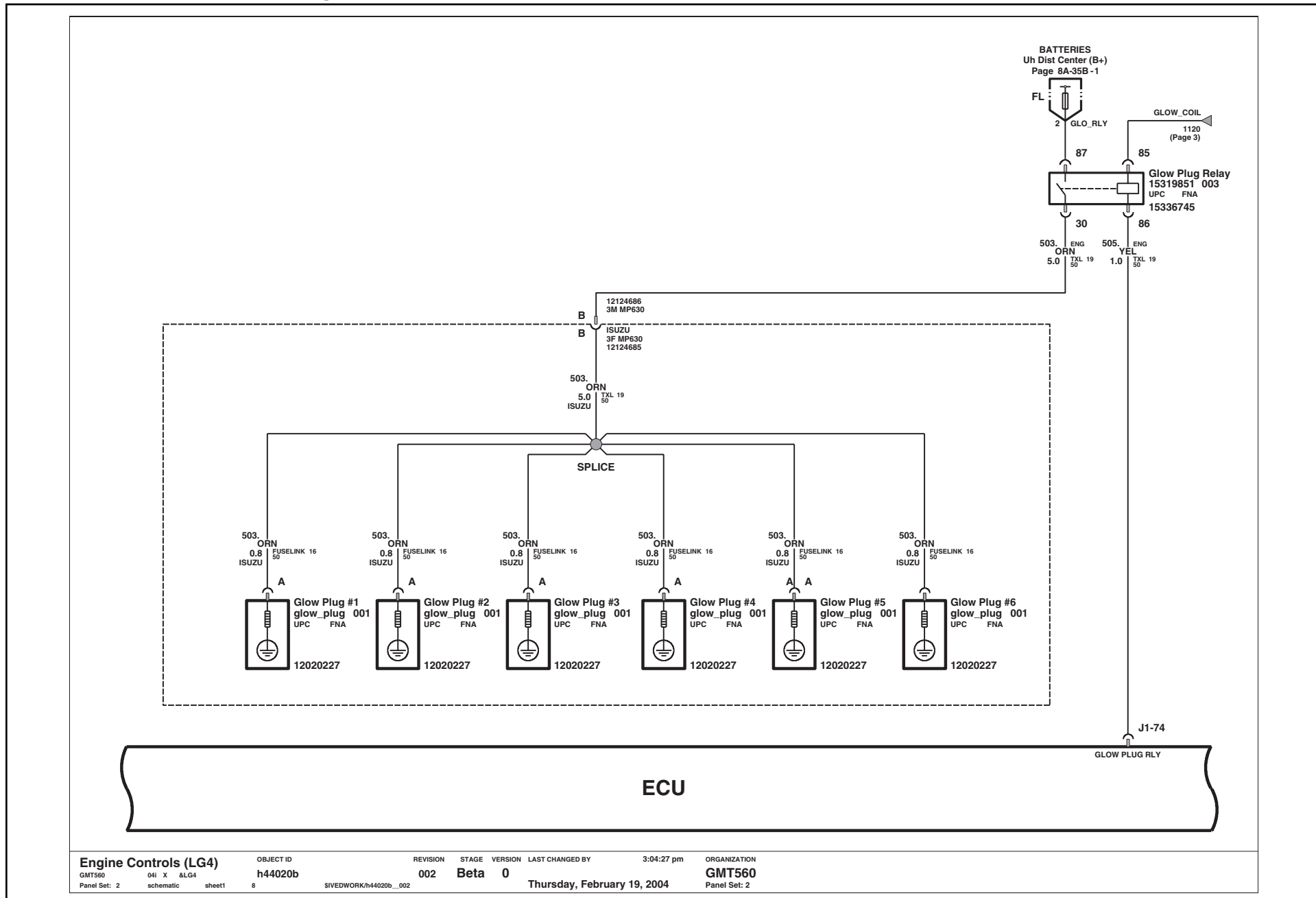
Engine Controls — (LG4-'04i) 7.8L-Diesel/Duramax



Engine Controls (LG4)	OBJECT ID	REVISION	STAGE	VERSION	LAST CHANGED BY	3:04:27 pm	ORGANIZATION
GMT560	h44020b	002	Beta	0	Thursday, February 19, 2004		GMT560
Panel Set: 1	schematic sheet1	8					Panel Set: 1

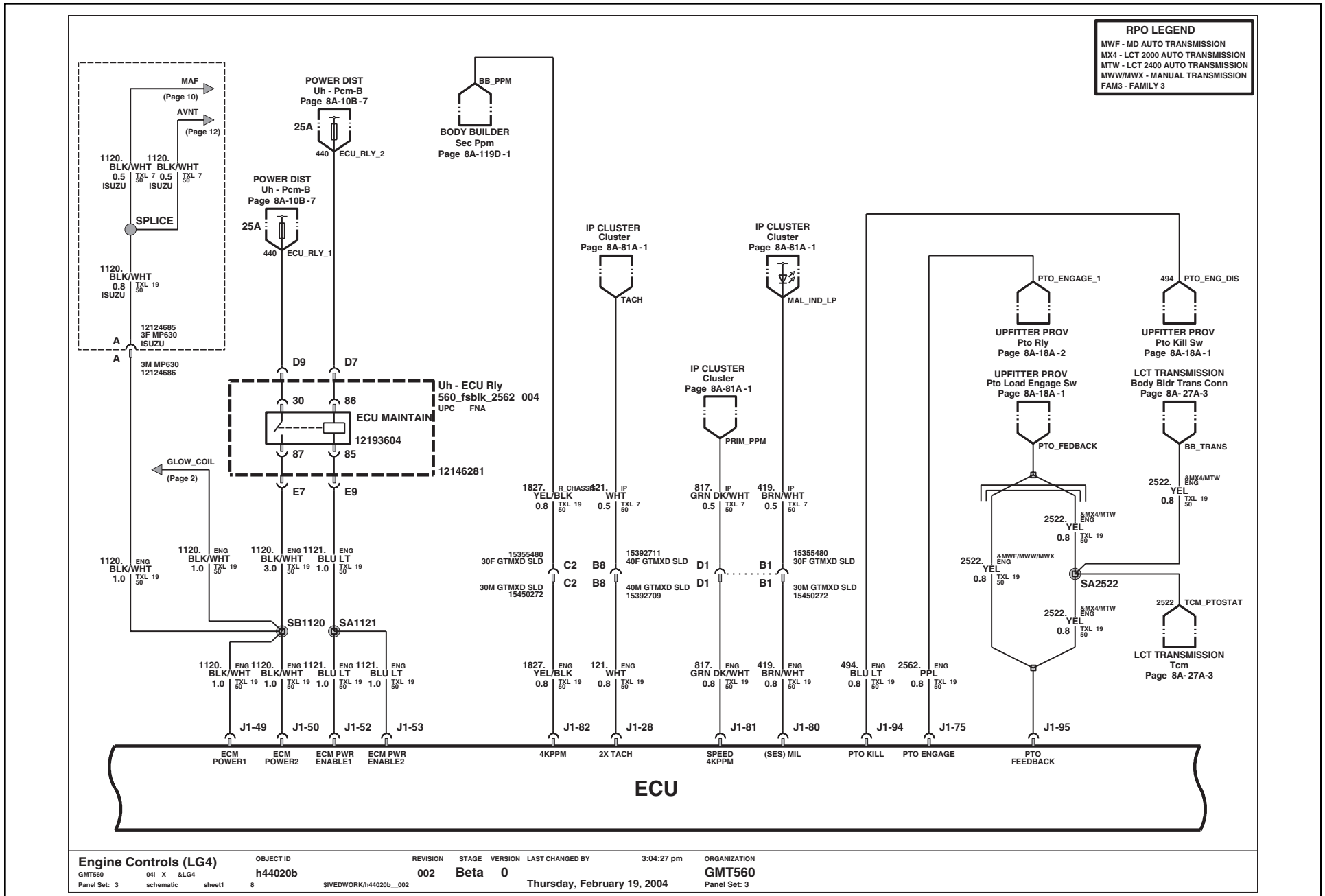
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LG4-'04i) 7.8L-Diesel/Duramax



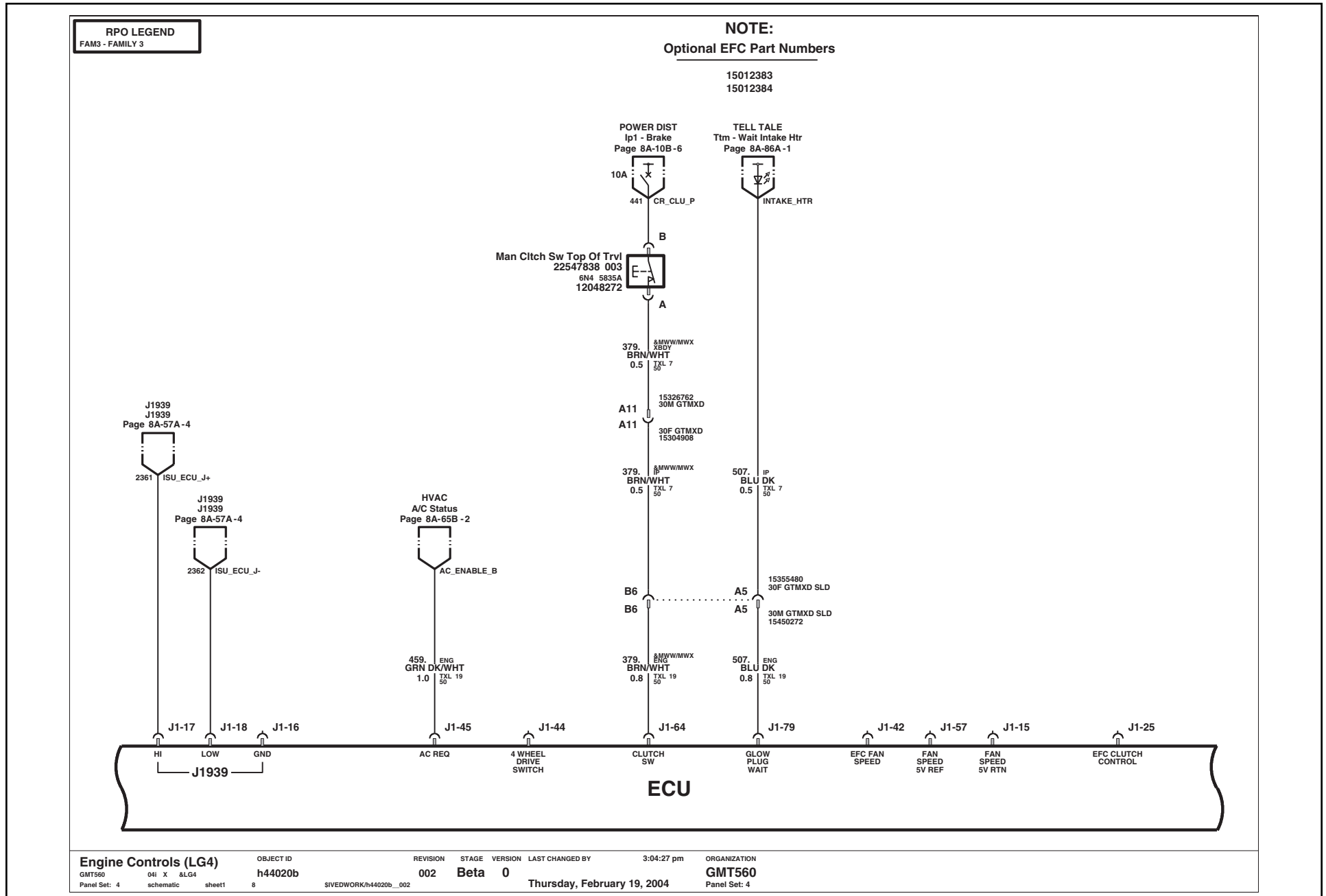
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LG4-'04i) 7.8L-Diesel/Duramax



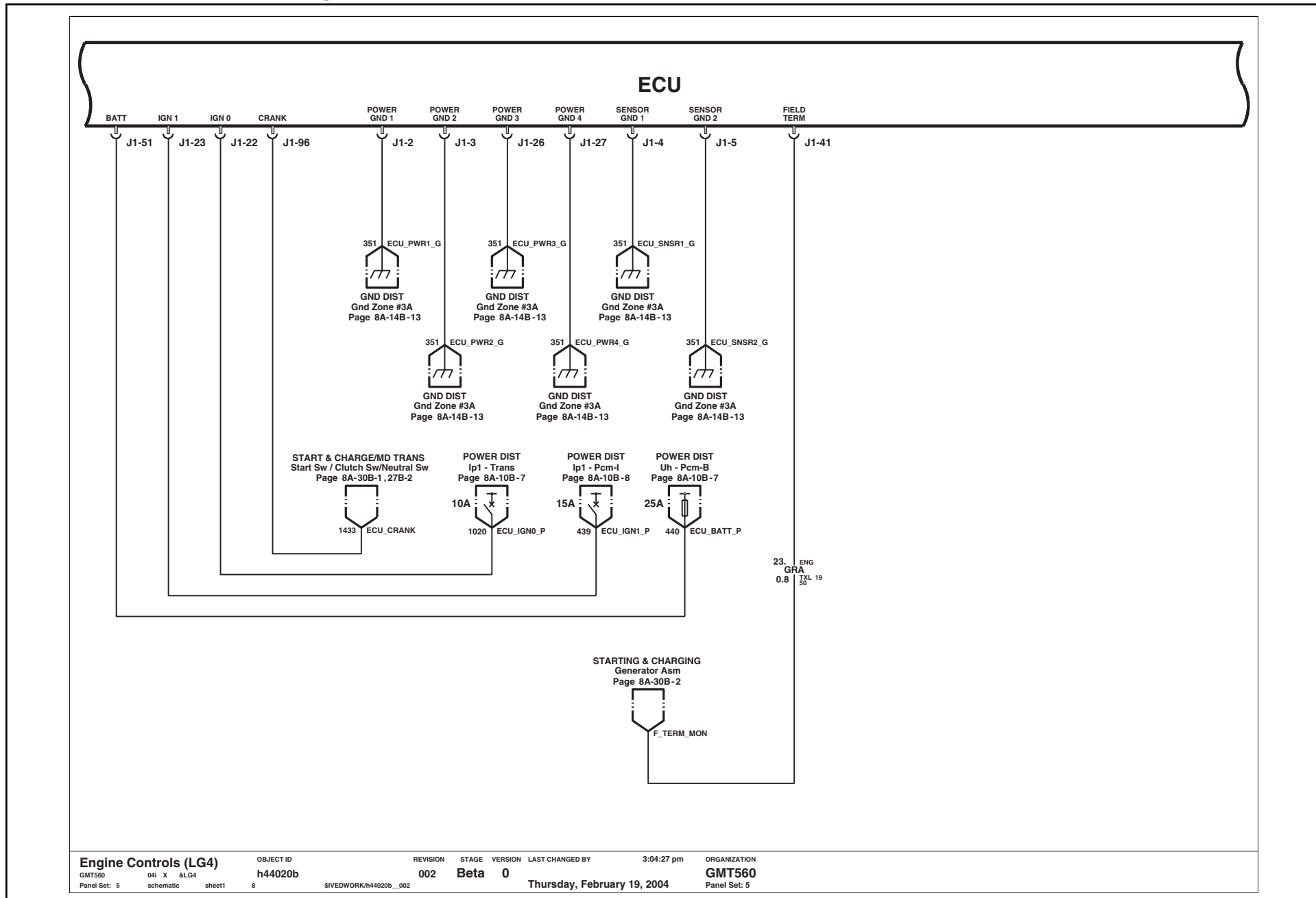
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LG4-'04i) 7.8L-Diesel/Duramax



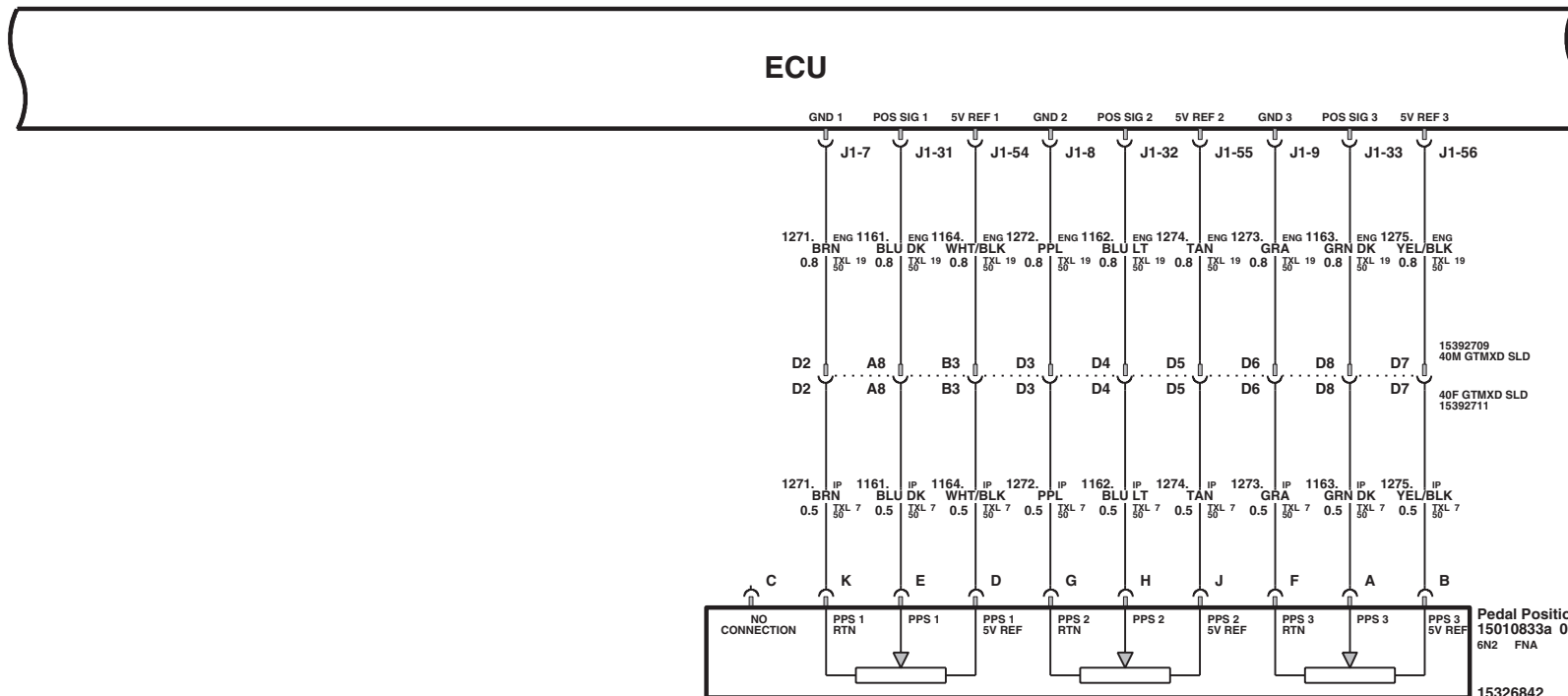
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls — (LG4-'04i) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LG4-'04i) 7.8L-Diesel/Duramax

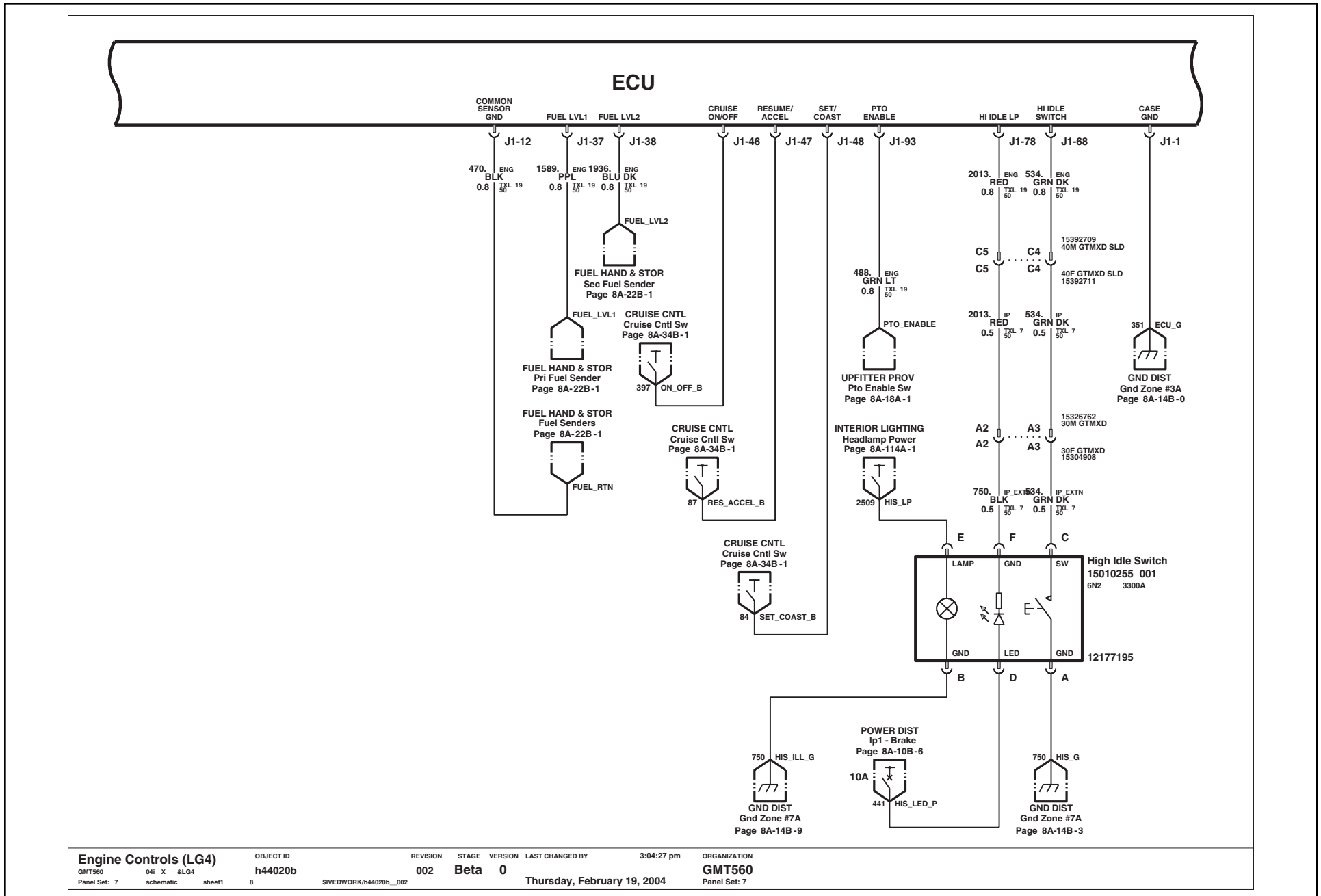


Pedal Position Sensor
15010833a 004
6N2 FNA
15326842

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE **D-147**

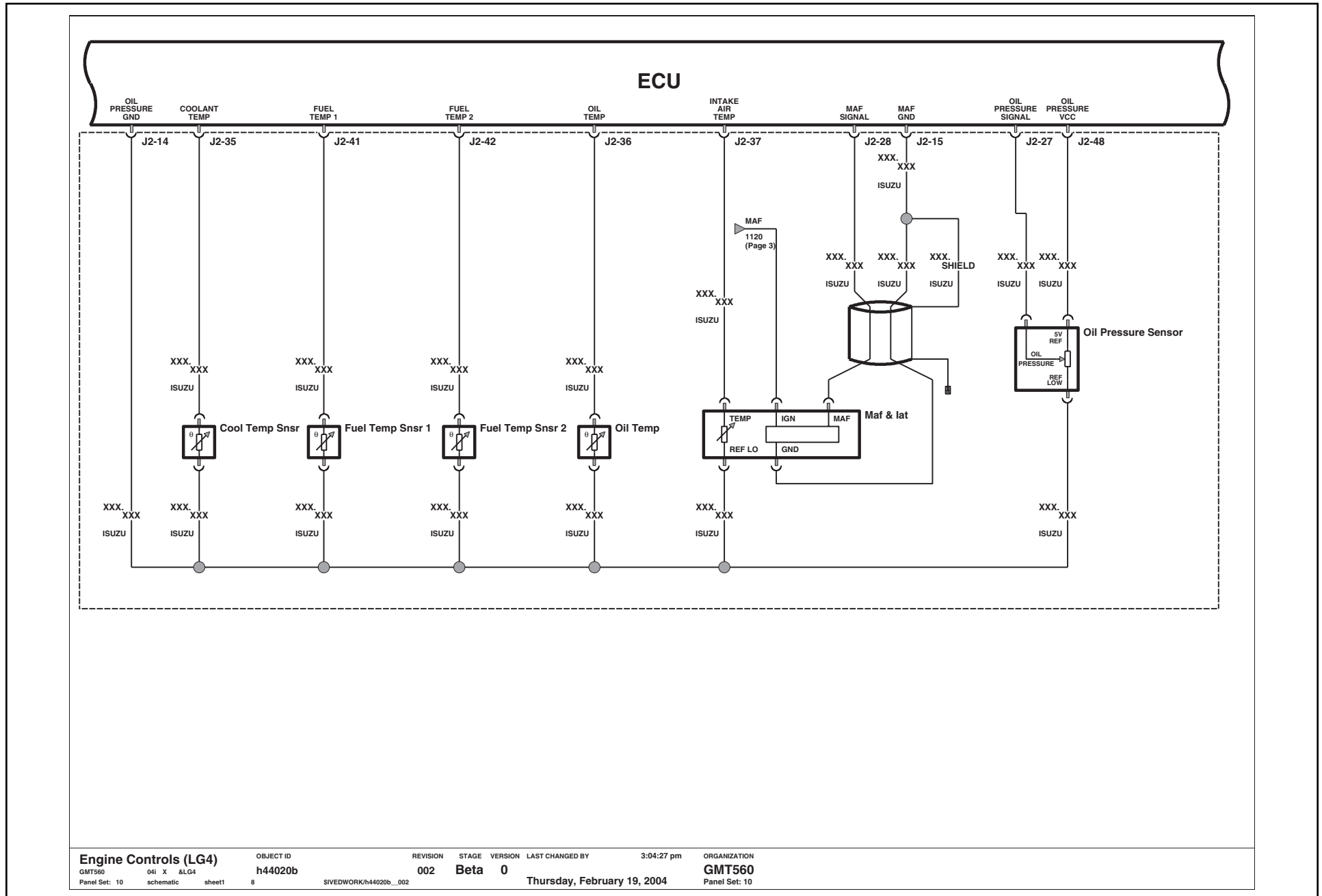
Engine Controls – (LG4-'04i) 7.8L-Diesel/Duramax



Engine Controls (LG4) OBJECT ID h44020b REVISION 002 STAGE Beta 0 VERSION 0 LAST CHANGED BY Thursday, February 19, 2004 3:04:27 pm

ORGANIZATION GMT560 Panel Set: 7

Engine Controls – (LG4-'04i) 7.8L-Diesel/Duramax



Engine Controls (LG4)

OBJECT ID
h44020b

REVISION STAGE VERSION LAST CHANGED BY
002 Beta 0 Thursday, February 19, 2004

3:04:27 pm

ORGANIZATION
GMT560
Panel Set: 10

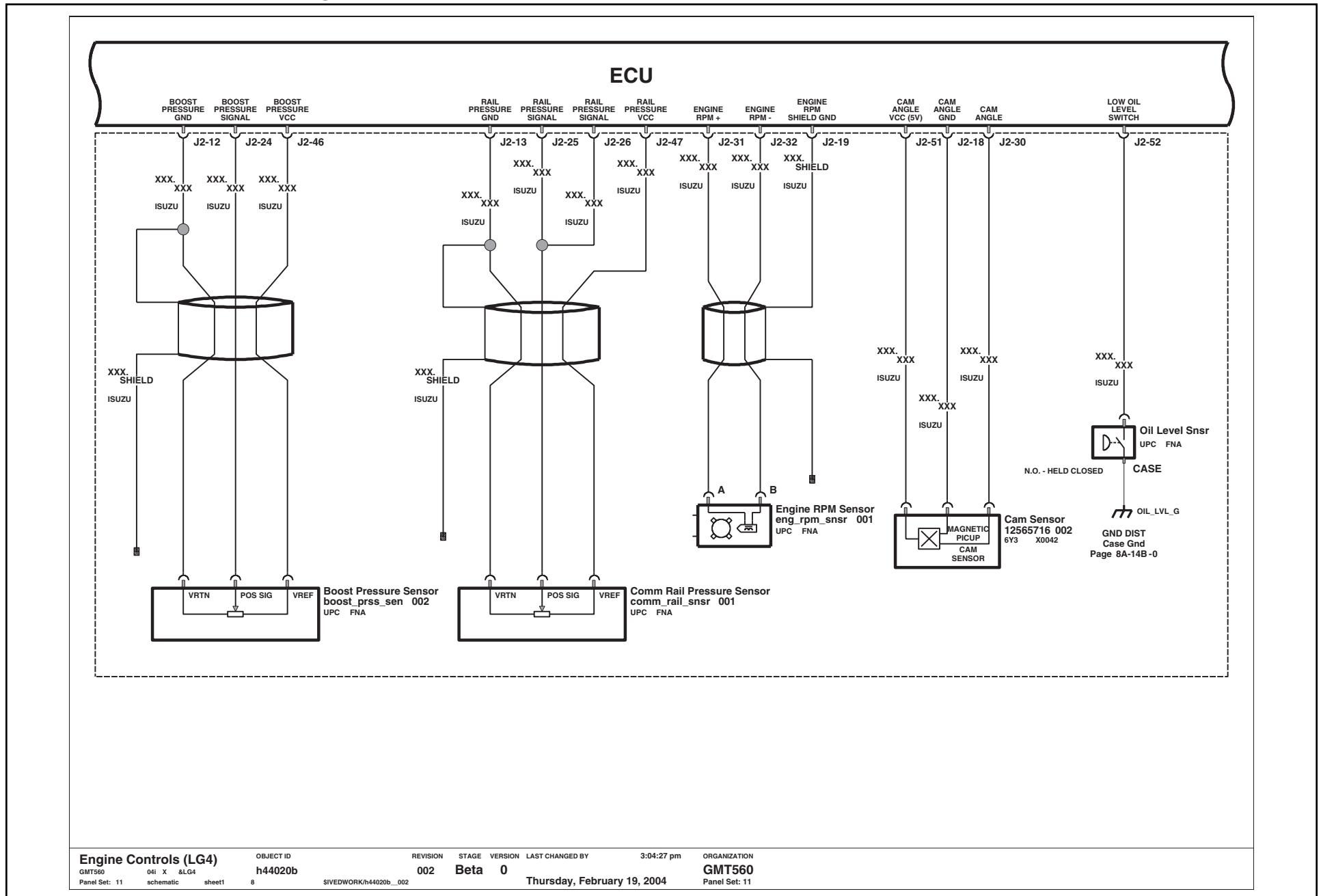
GMT560 04i X & LG4
Panel Set: 10 schematic sheet1

8

SIVEDWORK/h44020b_002

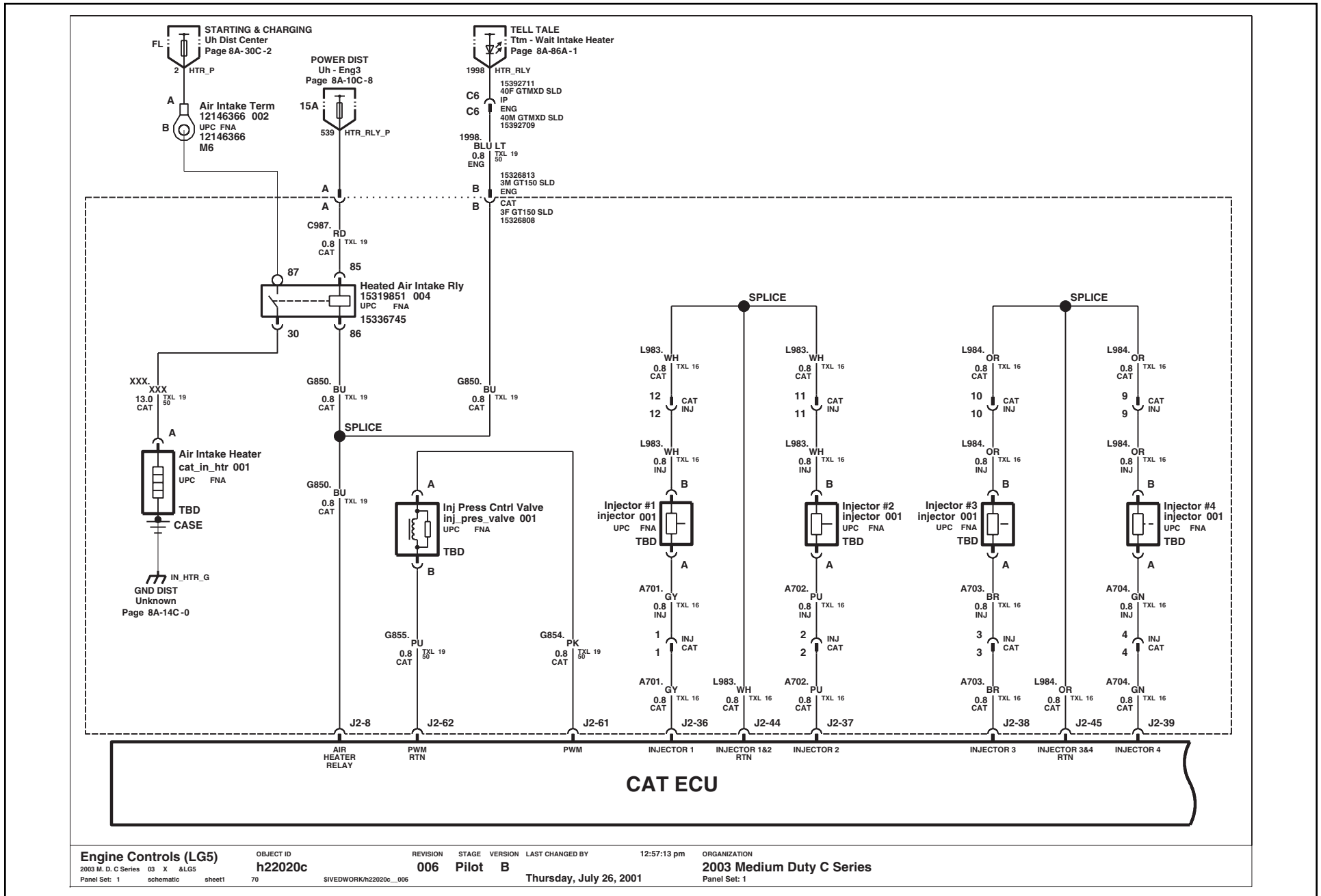
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LG4-'04i) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LG5) 7.2L-Diesel/CAT



Engine Controls (LG5)
2003 M. D. C Series 03 X & LG5
Panel Set: 1 schematic sheet1

OBJECT ID
h22020c

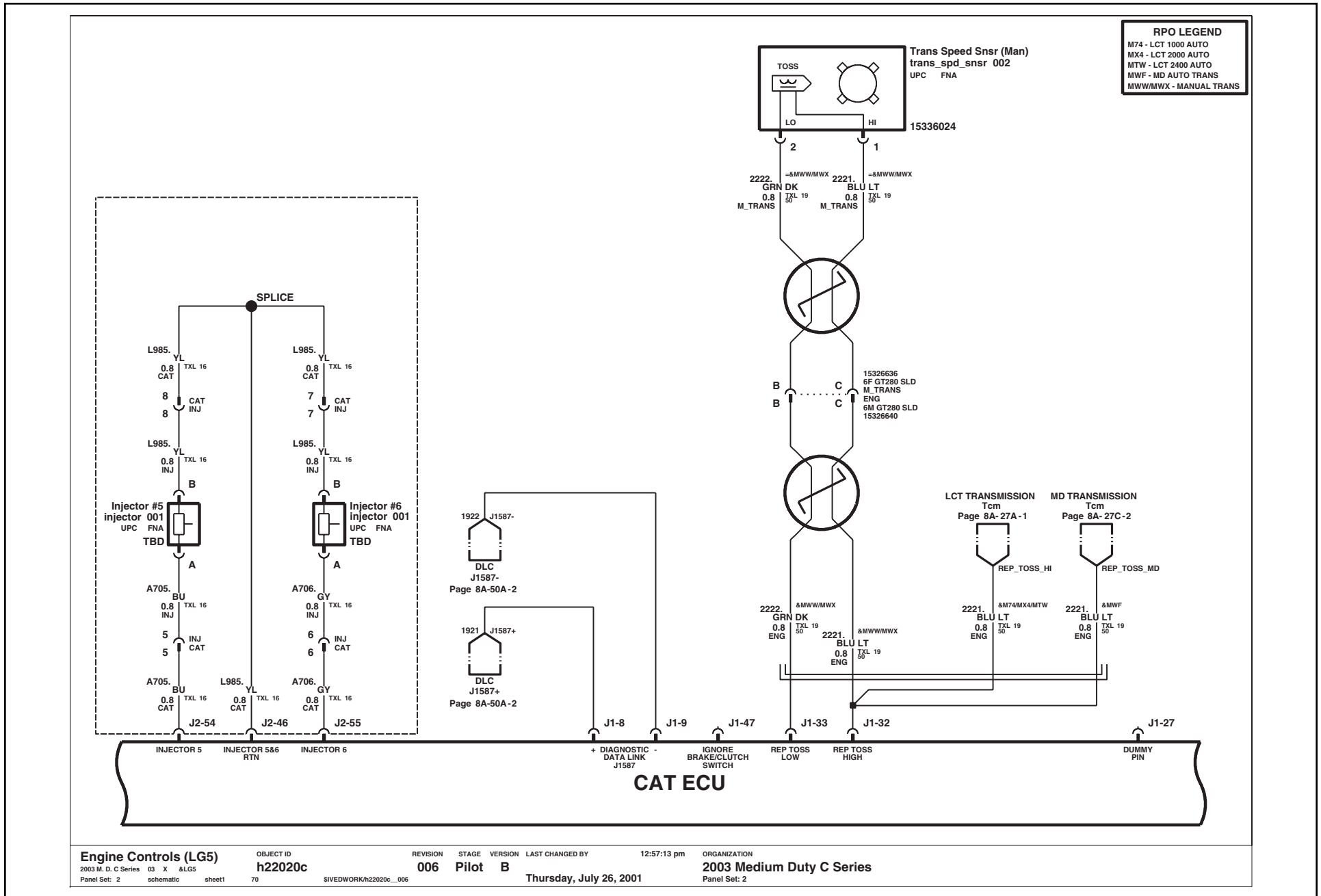
REVISION STAGE VERSION LAST CHANGED BY
006 Pilot B Thursday, July 26, 2001

12:57:13 pm

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 1

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

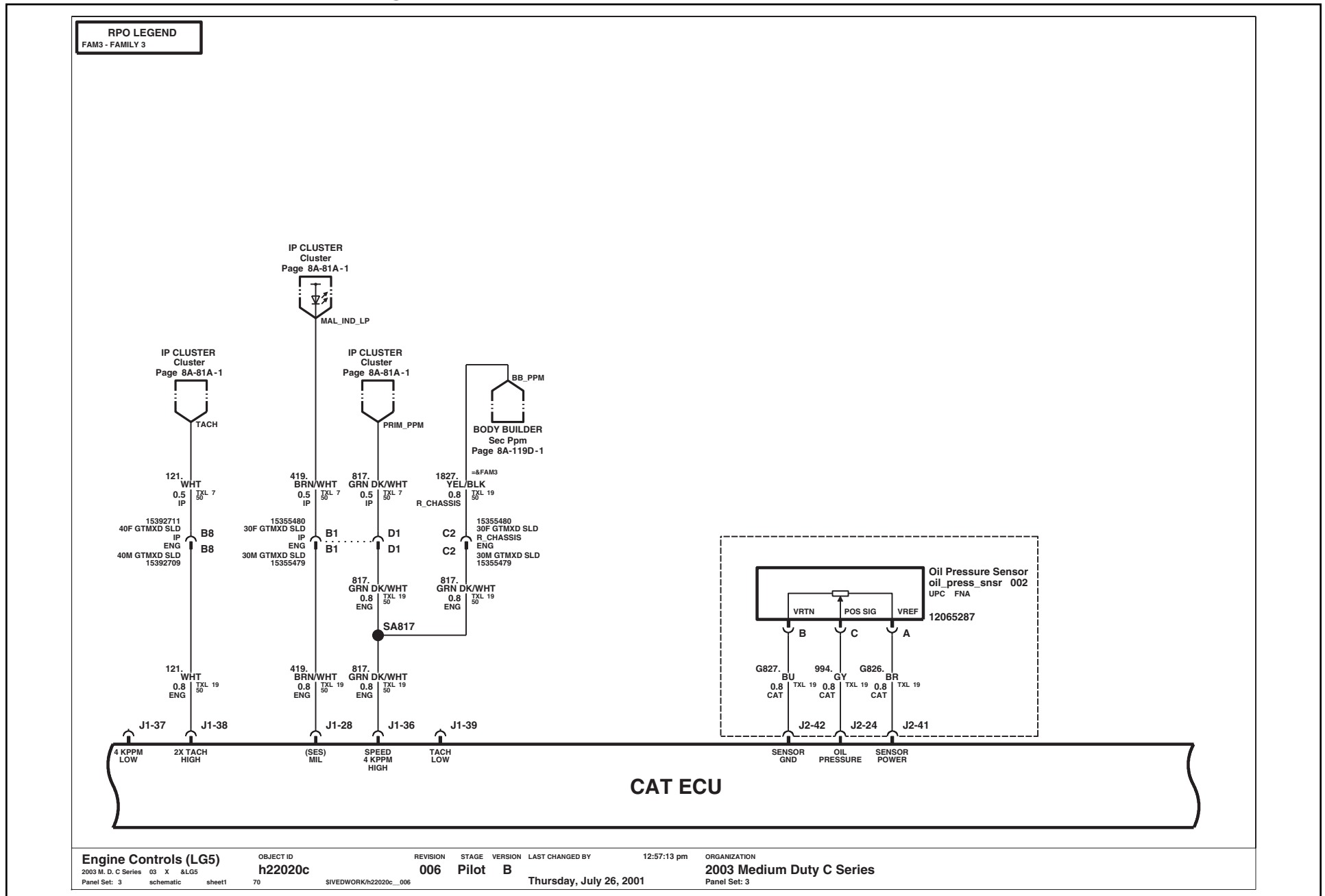
Engine Controls – (LG5) 7.2L-Diesel/CAT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

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Engine Controls – (LG5) 7.2L-Diesel/CAT



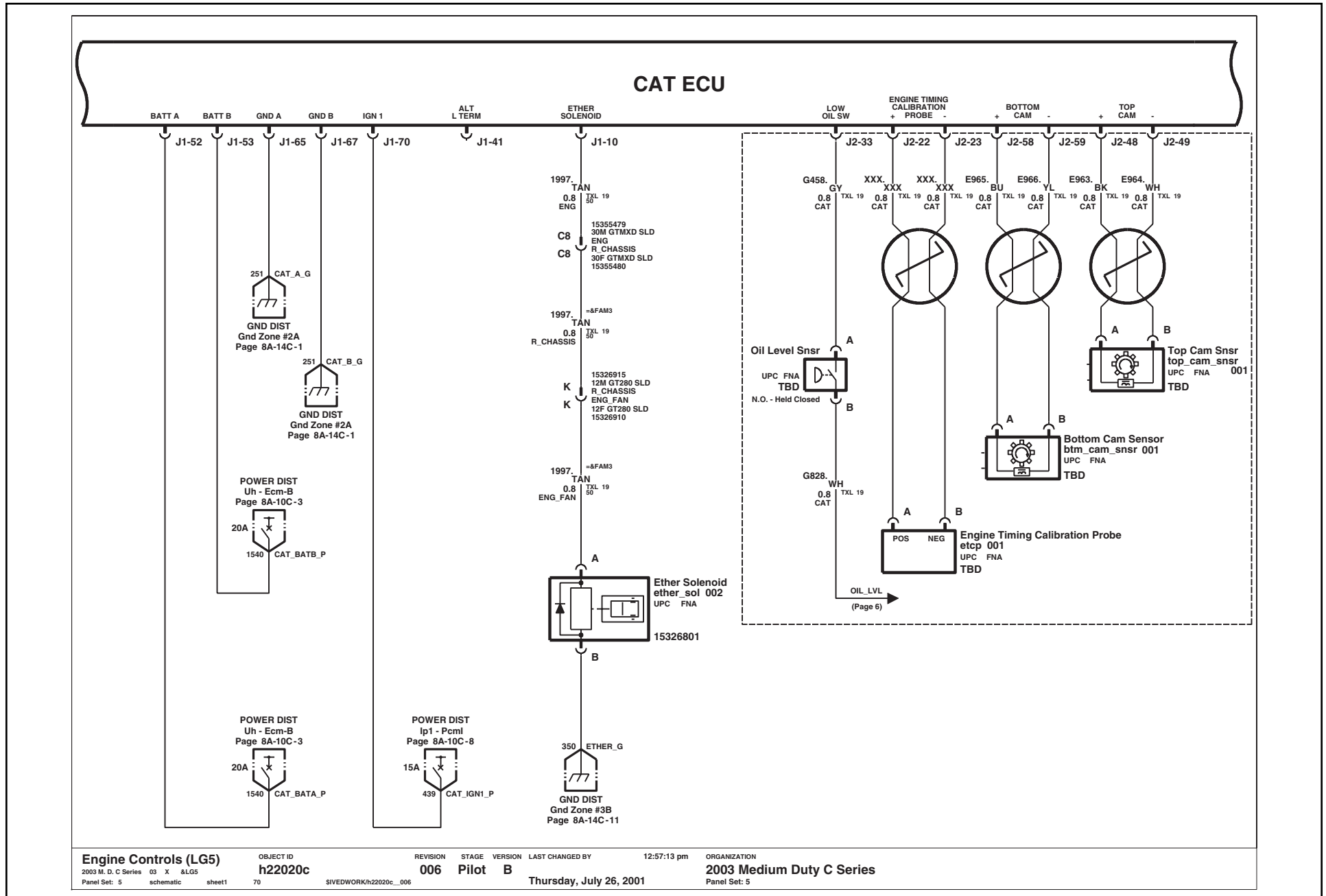
Engine Controls (LG5)
2003 M. D. C Series 03 X & LG5
Panel Set: 3 schematic sheet1

OBJECT ID
h22020c
70 SIVEDWORK/h22020c...006

REVISION STAGE VERSION LAST CHANGED BY
006 Pilot B
Thursday, July 26, 2001

12:57:13 pm ORGANIZATION
2003 Medium Duty C Series
Panel Set: 3

Engine Controls – (LG5) 7.2L-Diesel/CAT



Engine Controls (LG5)

OBJECT ID
h22020c

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006 Pilot B

12:57:13 pm

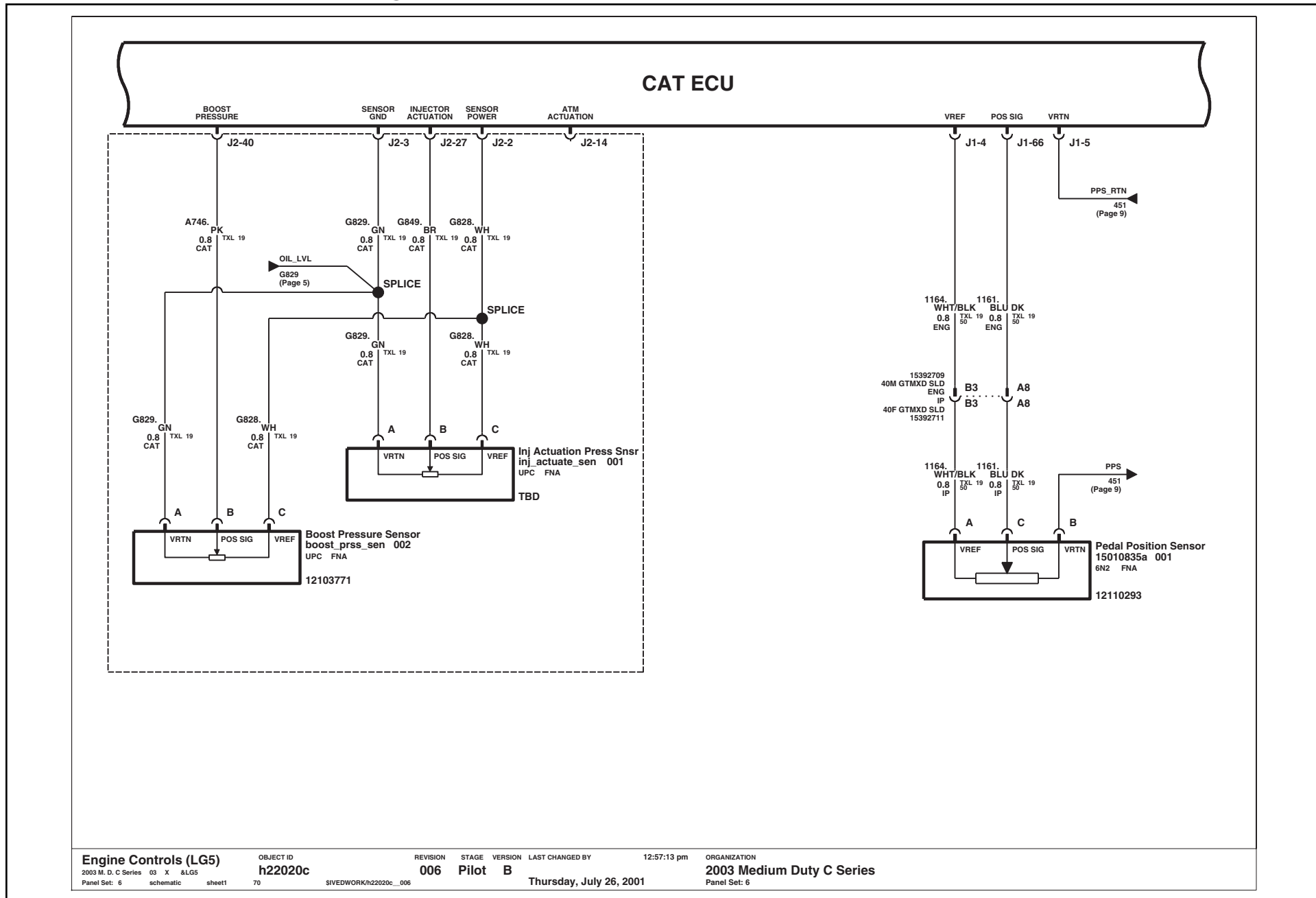
ORGANIZATION
2003 Medium Duty C Series

2003 M. D. C Series 03 X & LG5
Panel Set: 5 schematic sheet1 70 SIVEDWORK/h22020c_006

Thursday, July 26, 2001

Panel Set: 5

Engine Controls – (LG5) 7.2L-Diesel/CAT



Engine Controls (LG5)
2003 M. D. C Series 03 X & LG5
Panel Set: 6 schematic sheet1

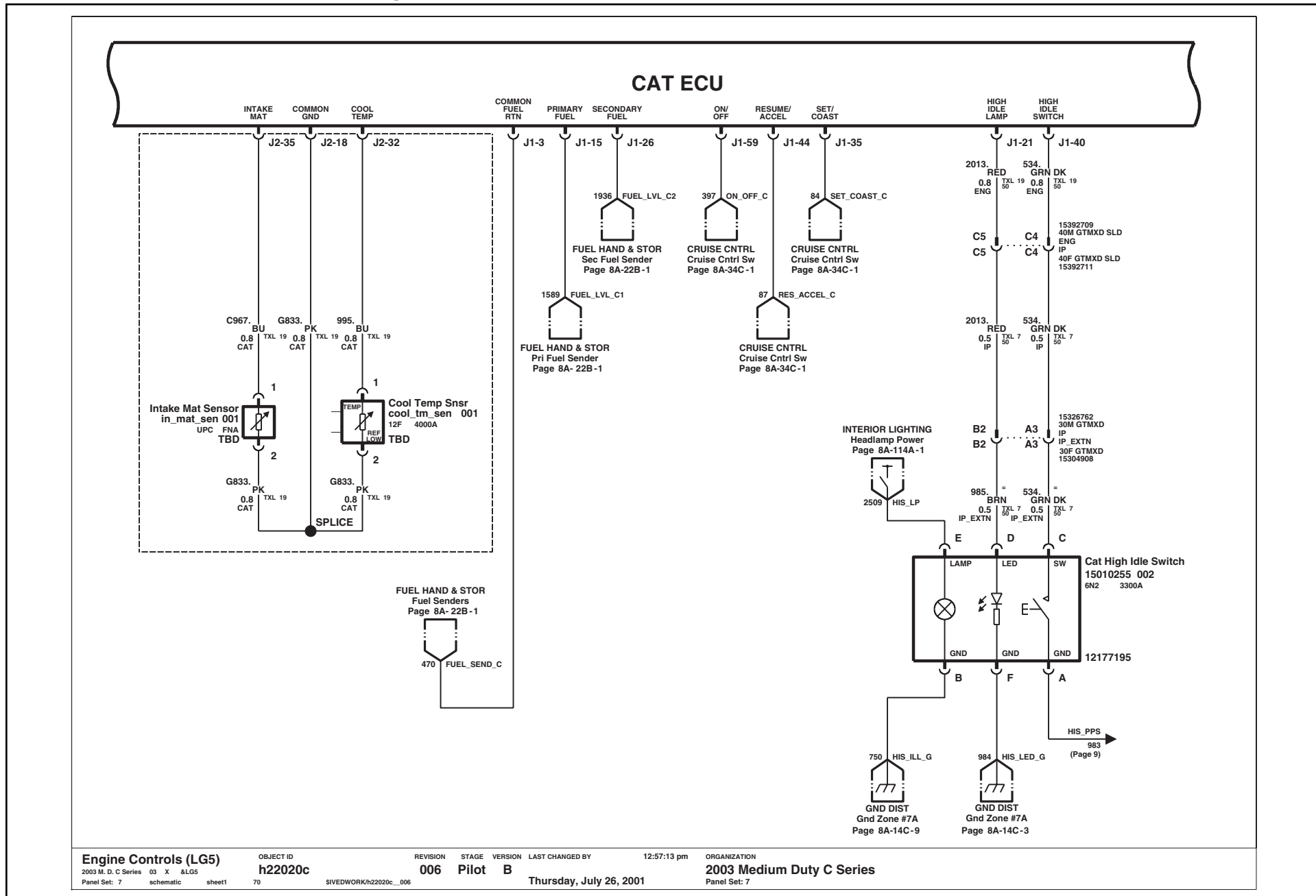
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REVISION STAGE VERSION LAST CHANGED BY
006 Pilot B Thursday, July 26, 2001

12:57:13 pm

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 6

Engine Controls – (LG5) 7.2L-Diesel/CAT



Engine Controls (LG5)
 2003 M. D. C Series 03 X & LG5
 Panel Set: 7 schematic sheet1

OBJECT ID
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006 Pilot B
 Thursday, July 26, 2001

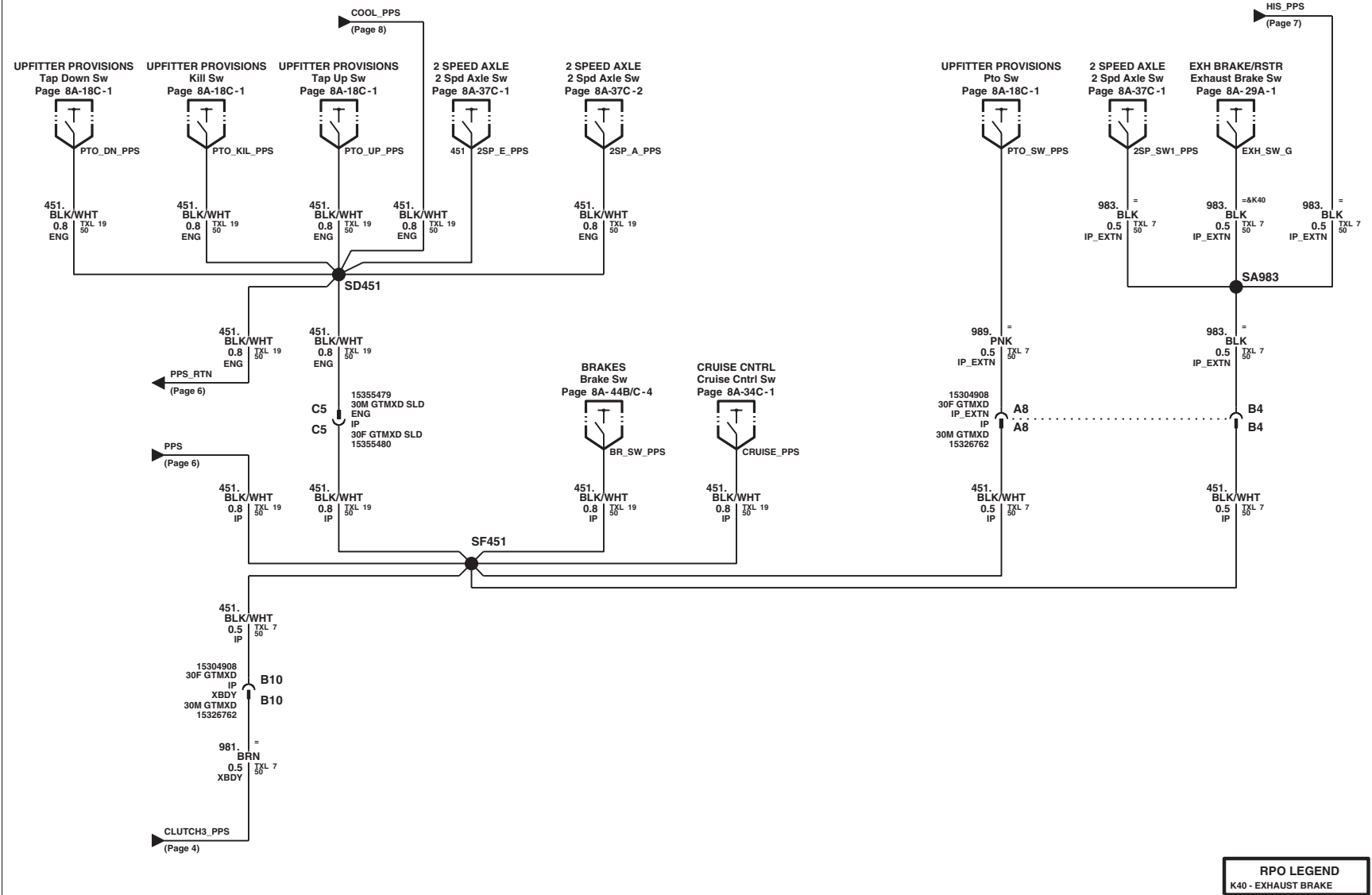
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ORGANIZATION
2003 Medium Duty C Series
 Panel Set: 7

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LG5) 7.2L-Diesel/CAT

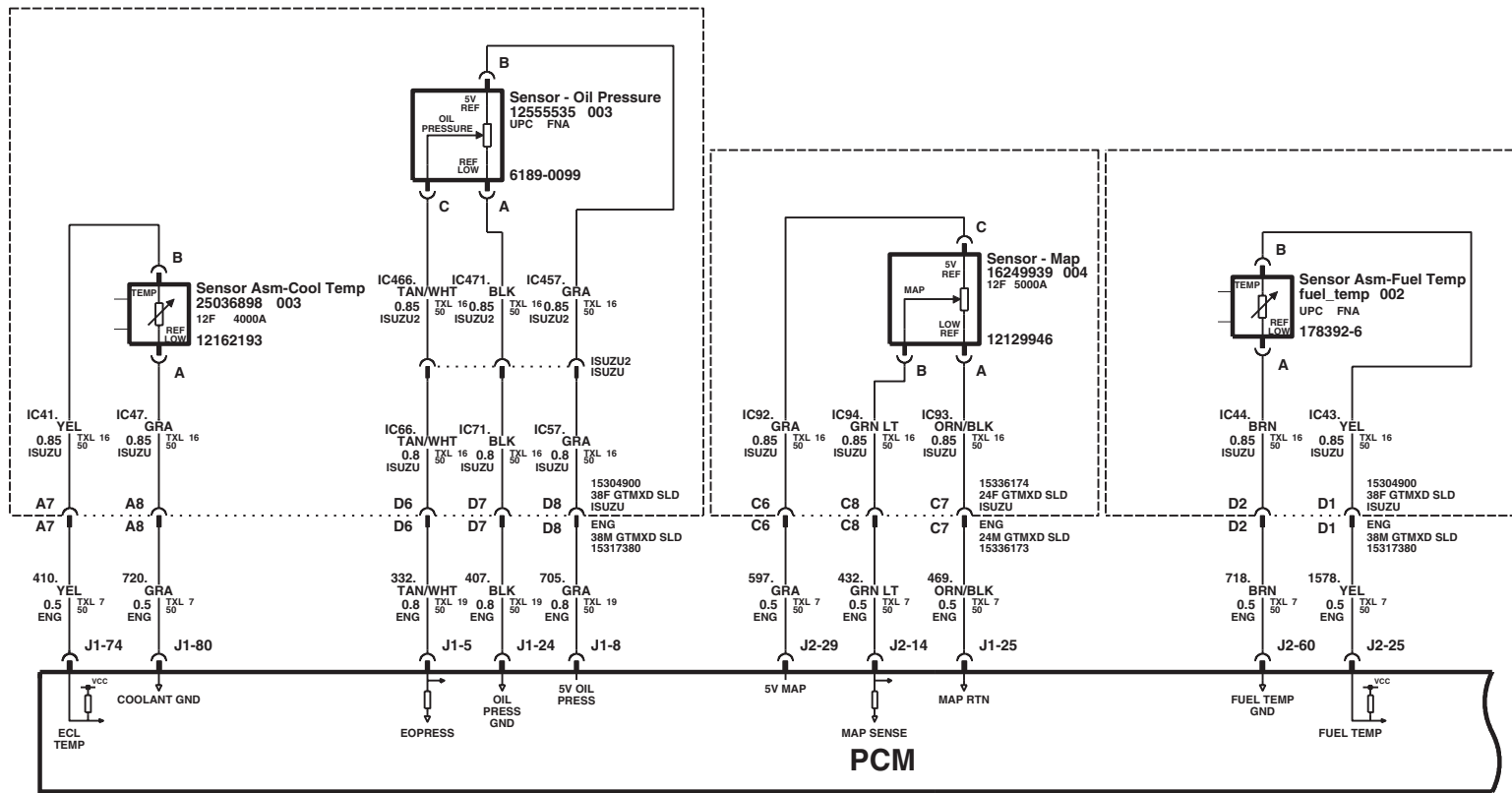
03 560 000	JG	PILOT B - INITIAL CREATION	06OC00	001
03 560 794	JG	ECU - Pinout Change J1-68 to J1-19	09SE00	001
03 560 805	JG	Remove School Bus	27OC00	001
03 560 992	JG	Update Telltale Control	08MR01	001
03 560 1062	JG	Update Ether Sol. Pin Label Update	25JL01	001



RPO LEGEND
K40 - EXHAUST BRAKE

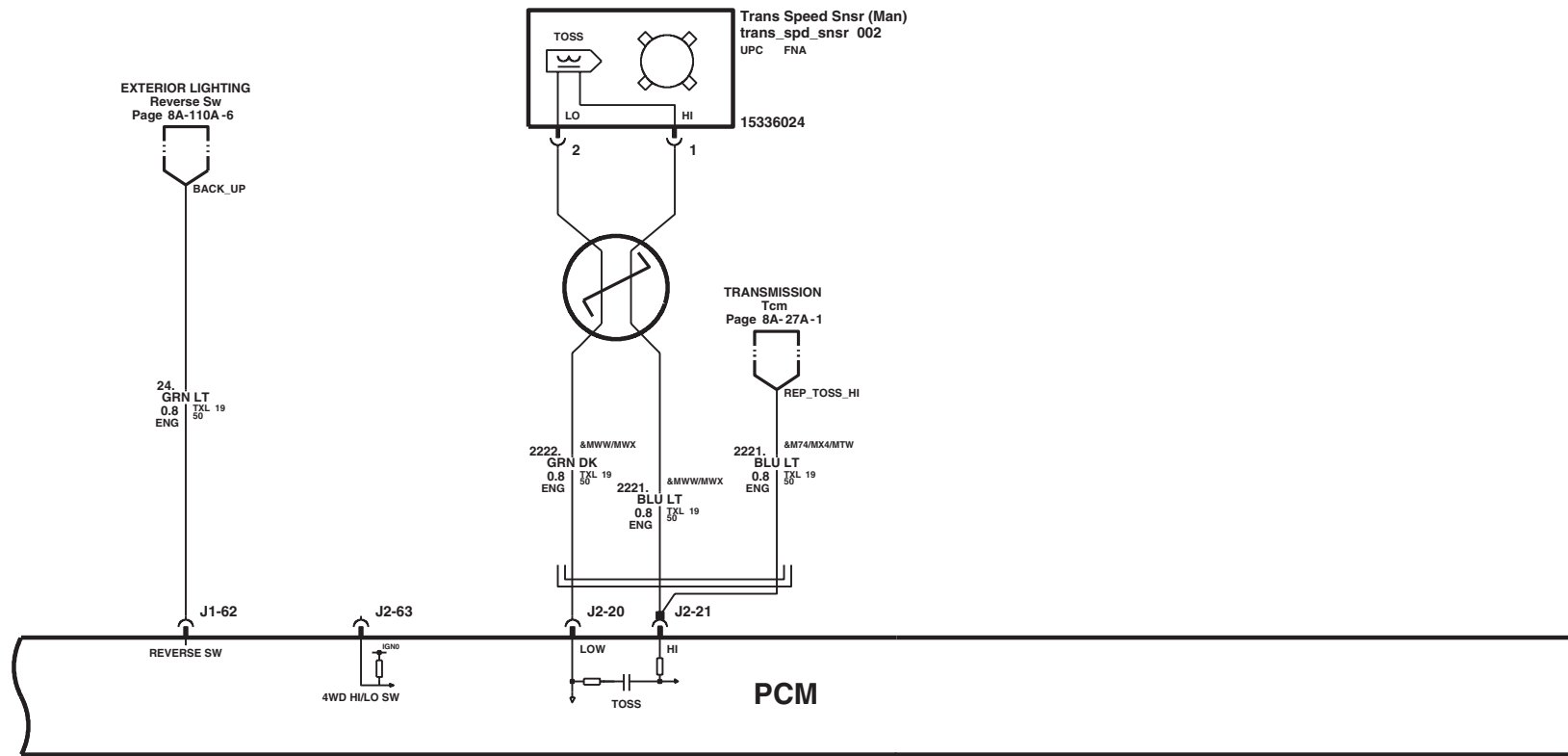
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LB7) 6.6L-Diesel/Duramax



Engine Controls – (LB7) 6.6L-Diesel/Duramax

RPO LEGEND	
M74	- LCT 1000 AUTO TRANS
MX4	- LCT 2000 AUTO TRANS
MTW	- LCT 2400 AUTO TRANS
MWW/MWX	- MANUAL TRANS



Engine Controls (LB7)
2003 M. D. C Series 03 X & LB7
Panel Set: 2 schematic sheet1

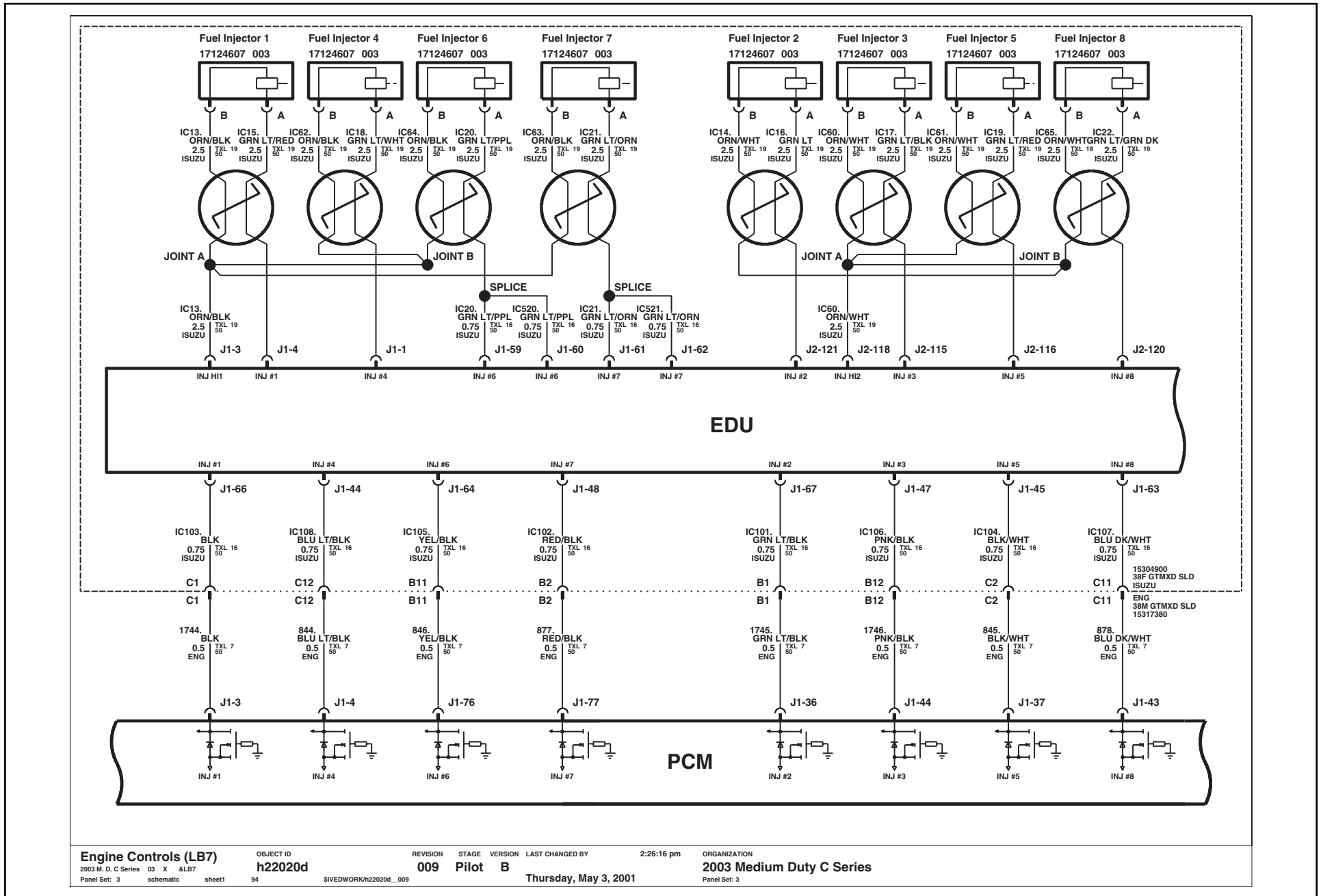
OBJECT ID
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94

REVISION STAGE VERSION LAST CHANGED BY
009 Pilot B Thursday, May 3, 2001

2:26:16 pm

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 2

Engine Controls – (LB7) 6.6L-Diesel/Duramax



Engine Controls (LB7)
2003 M. D. C Series 03 X & LB7
Panel Set: 3 schematic sheet1

OBJECT ID
h22020d

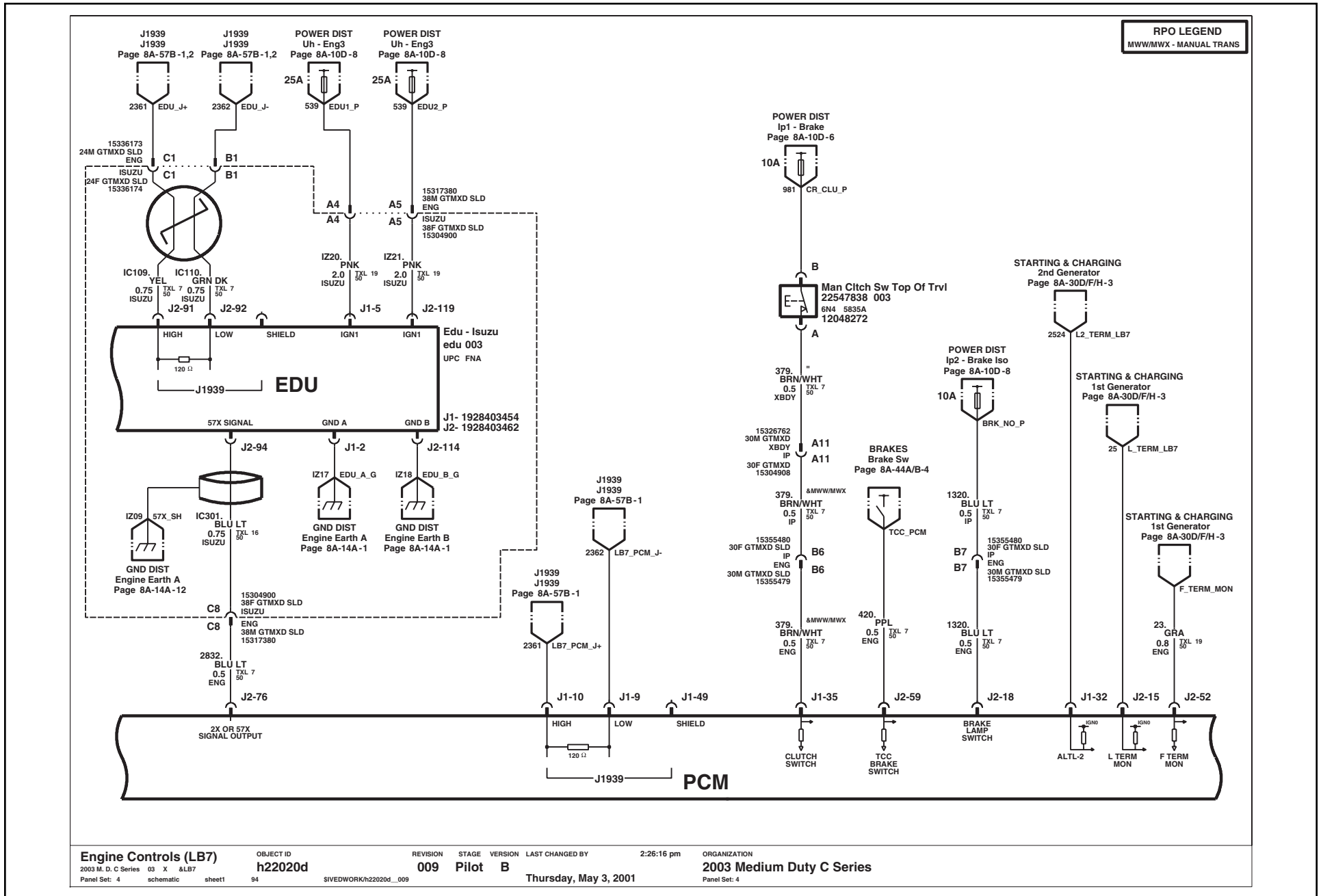
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009 Pilot B
Thursday, May 3, 2001

2:26:16 pm

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 3

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

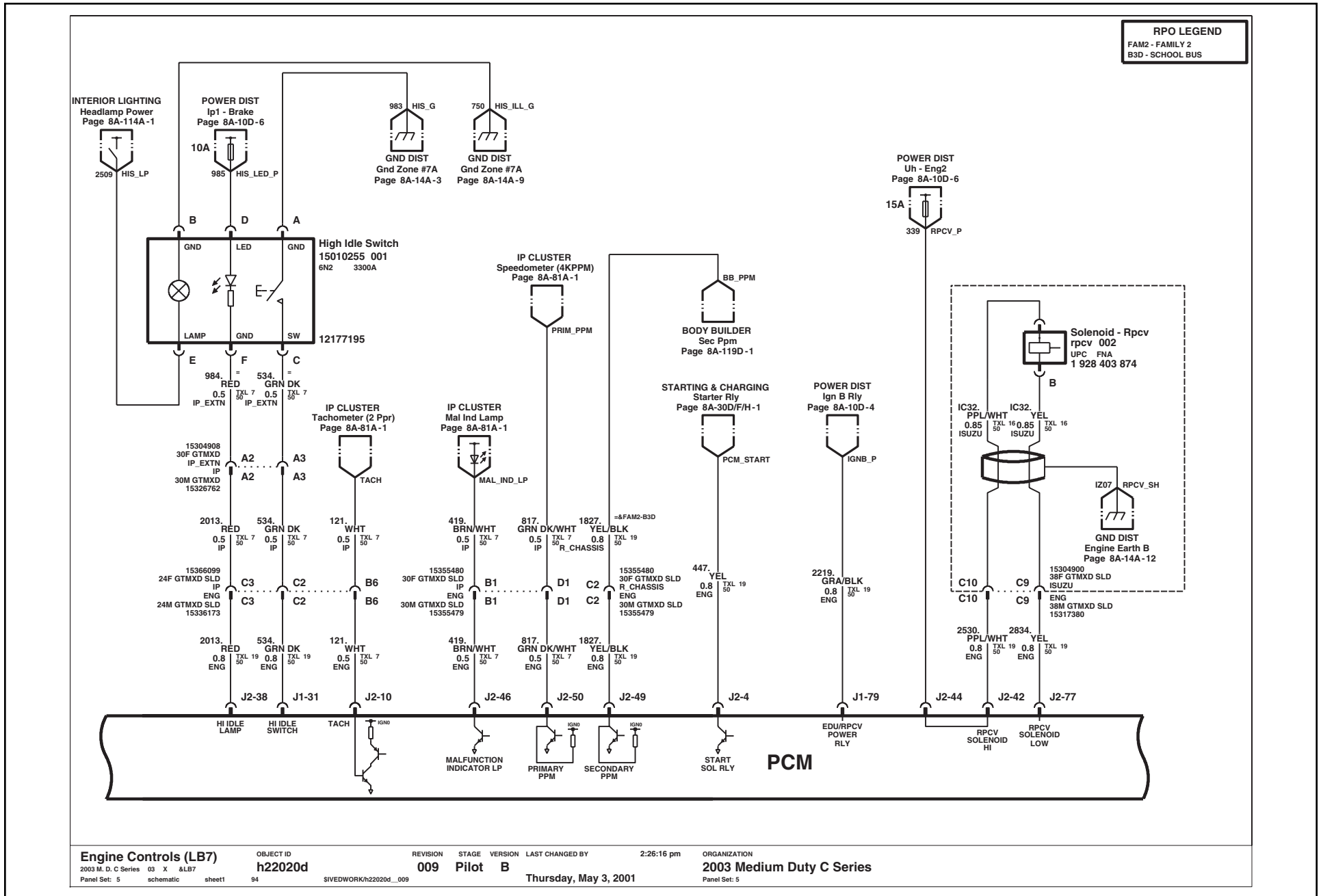
Engine Controls – (LB7) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

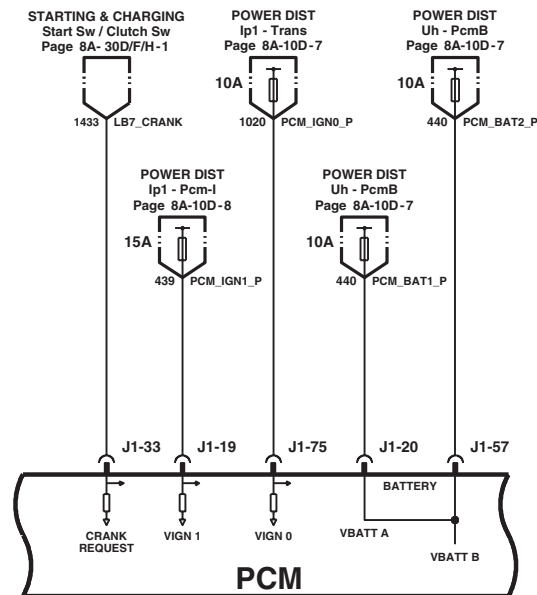
PAGE D-166

Engine Controls — (LB7) 6.6L-Diesel/Duramax

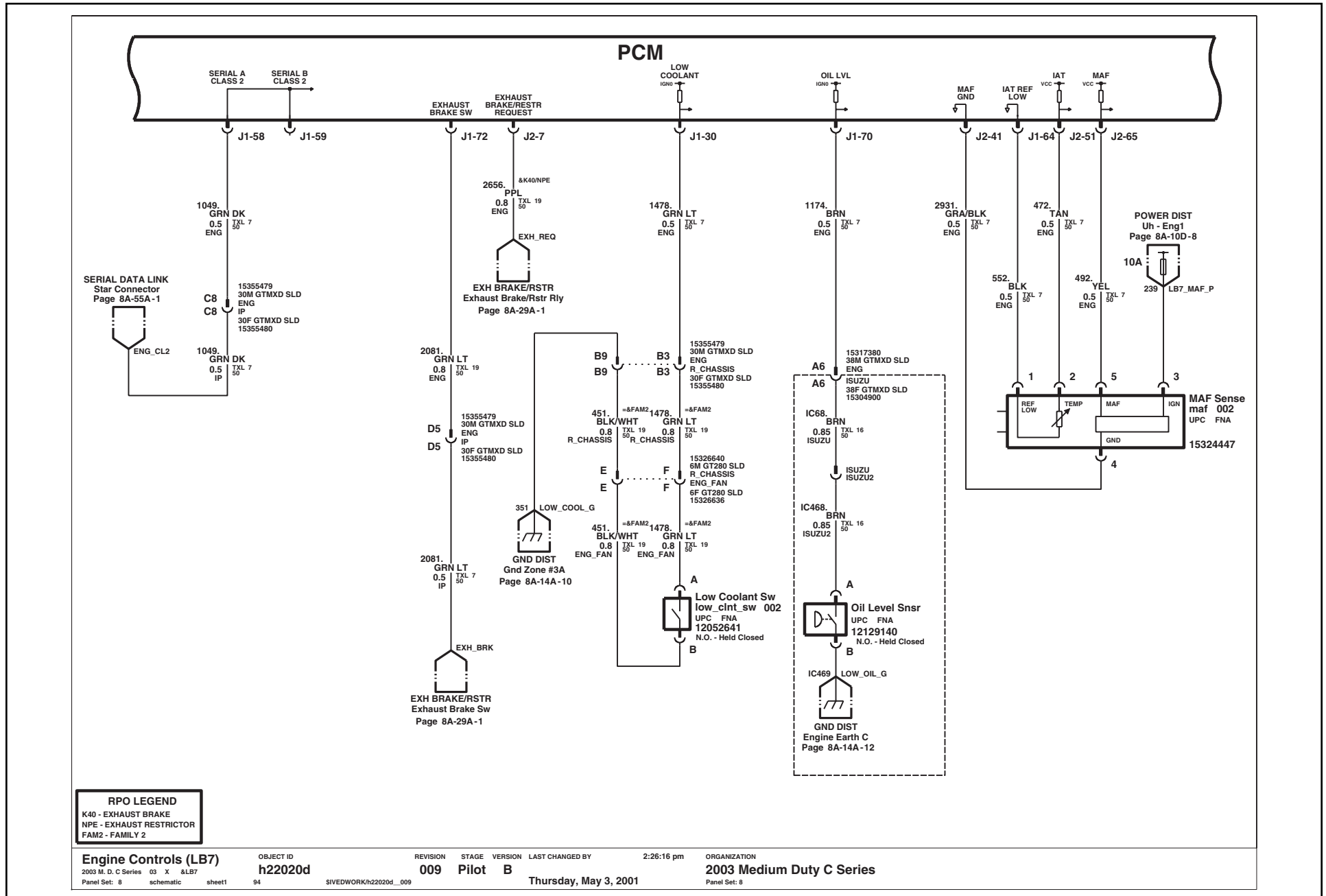


2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls — (LB7) 6.6L-Diesel/Duramax

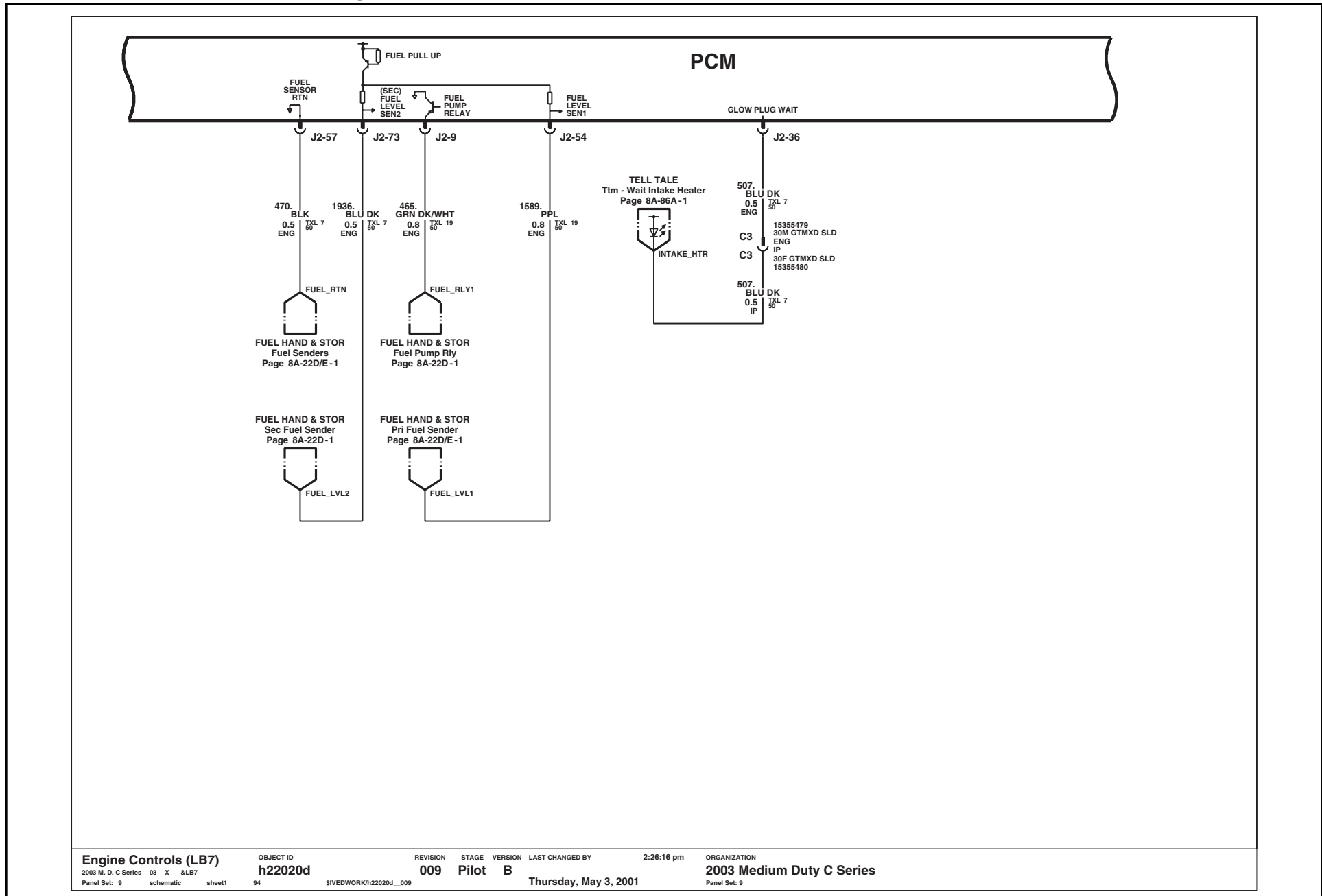


Engine Controls – (LB7) 6.6L-Diesel/Duramax



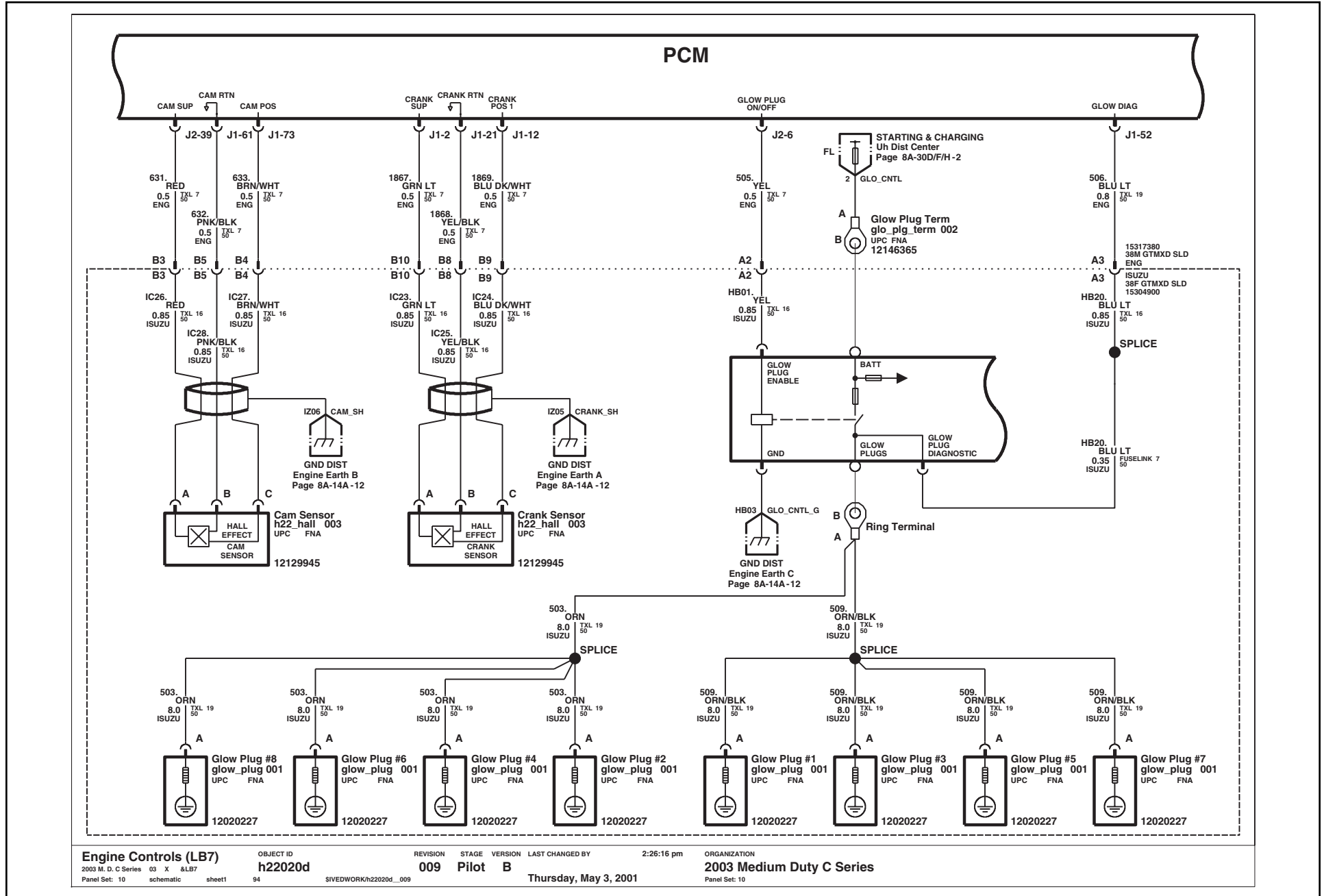
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LB7) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

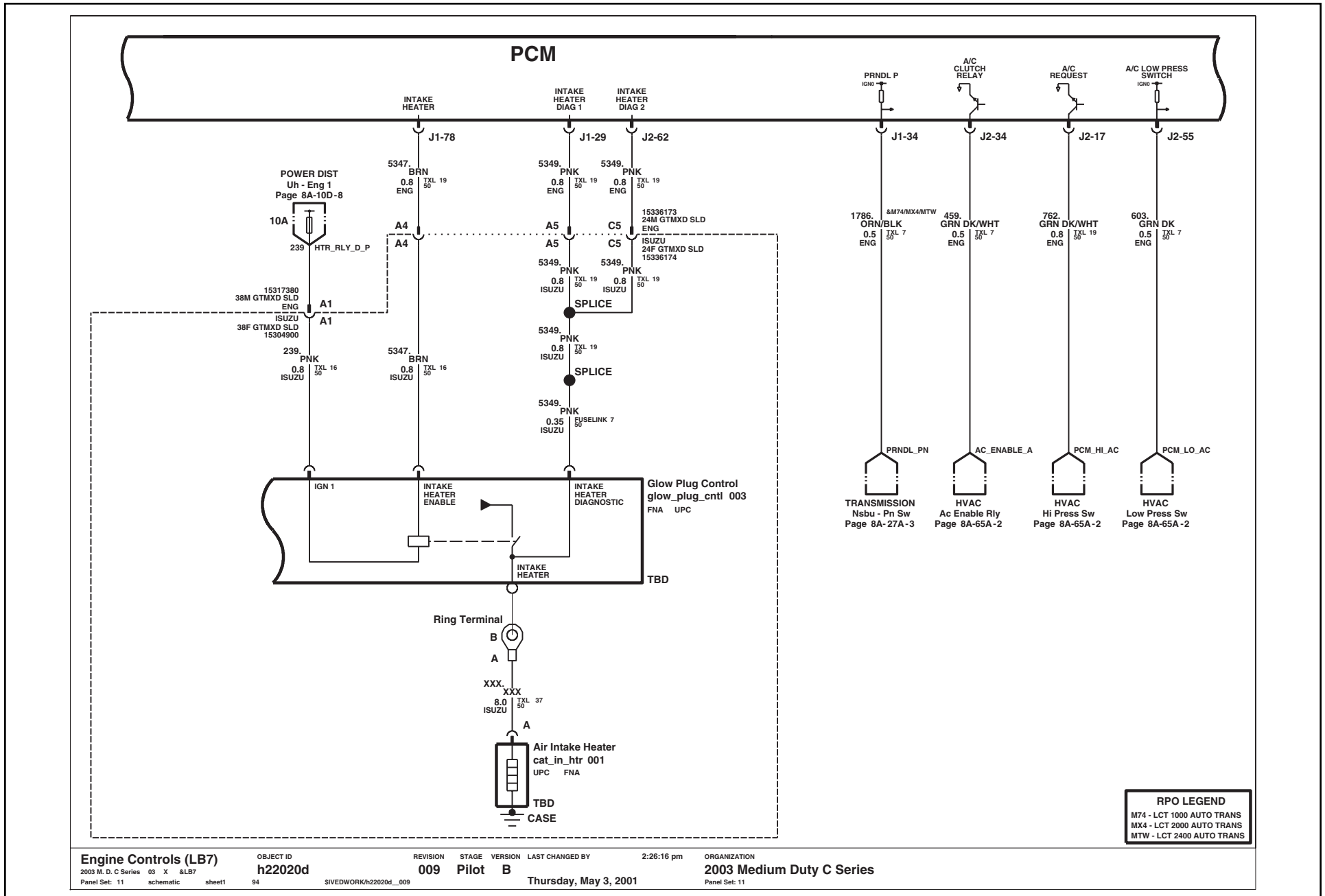
Engine Controls – (LB7) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE **D-172**

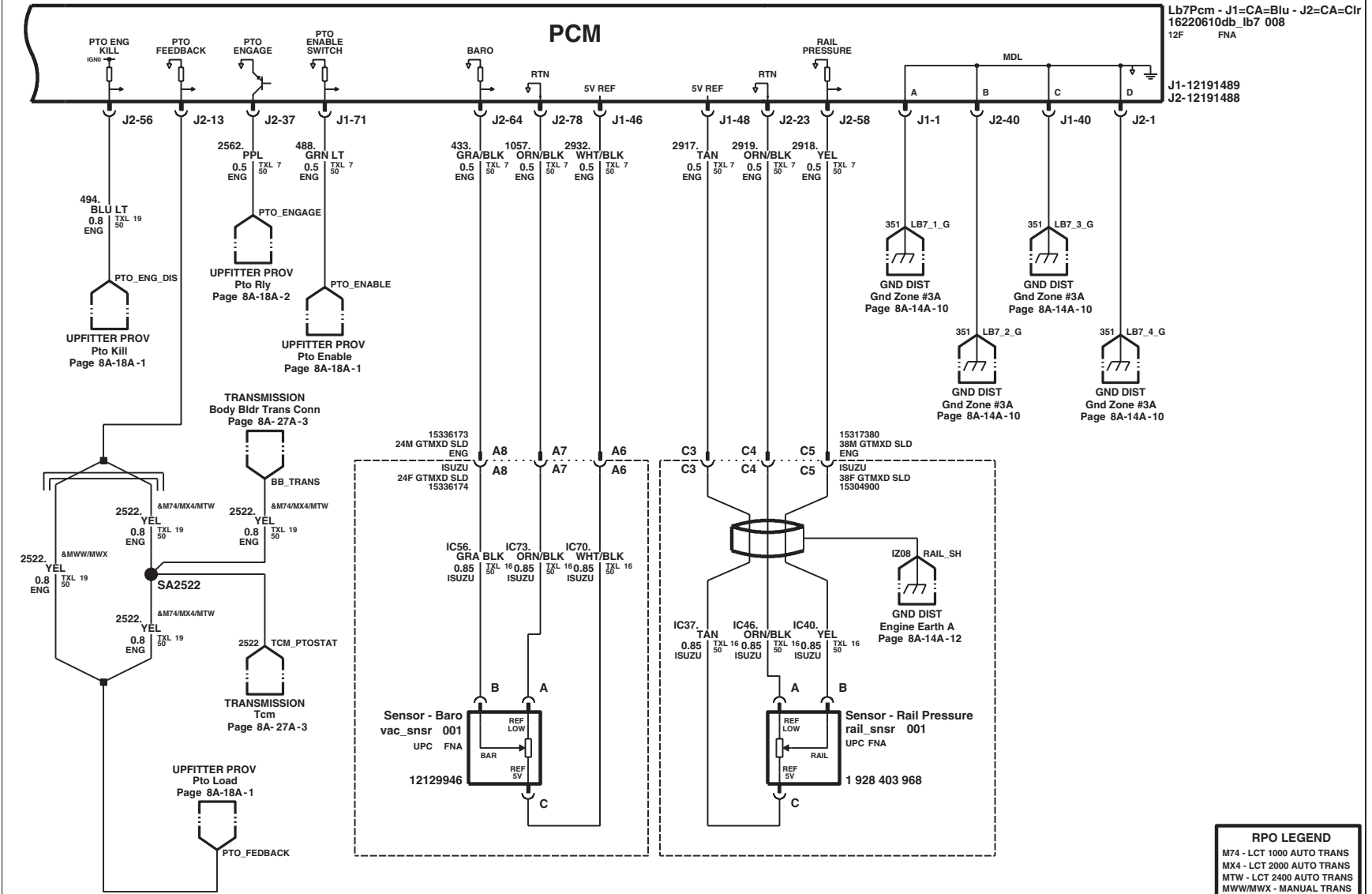
Engine Controls – (LB7) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LB7) 6.6L-Diesel/Duramax

03 560 000	TY	PILOT B - INITIAL CREATION	29AU00	001	03 560 439	JG	Inline Update	21DE00	001
03 560 805	JG	Connector Updates	26OC00	001	03 560 873	JG	Gauge Update	23FE01	001
03 560 000	TY	Added Terminating Resistor Graphics	16NO00	001	03 560 981	JG	Family 2 School Bus Update	03AP01	001



Engine Controls (LB7)		OBJECT ID	REVISION	STAGE	VERSION	LAST CHANGED BY	2:26:16 pm	ORGANIZATION	2003 Medium Duty C Series
2003 M. D. C Series 03 X & LB7		h22020d	009	Pilot	B	Thursday, May 3, 2001		2003 Medium Duty C Series	
Panel Set: 12	schematic	sheet1	94	SIVEDWORK/h22020d_009				Panel Set: 12	

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls — (LB7) 6.6L-Diesel/Duramax

GMTG/ISUZU INLINE CHART

I1 15317380 GMTG (MALE) 15304900 ISUZU (FEMALE)			I2 15336173 GMTG (MALE) 15336174 ISUZU (FEMALE)			Ring Terminal - 12146365	
CAVITY	FUNCTION	CIRCUIT NO.	CAVITY	FUNCTION	CIRCUIT NO.	FUNCTION	CIRCUIT NO.
A1	INTAKE HEATER RELAY IGN 1	239	A1	n/c	n/c	GLOW PLUG FEED	2
A2	GLOW DN	505	A2	CAN LINK ISOLATION	XXX		
A3	GLOW DIAG	506	A3	RESERVED (SWIRL CNRTL)	n/c		
A4	FUEL INJECTOR FEED (EDU)	539	A4	INTAKE HEATER ENABLE	5347		
A5	FUEL INJECTOR FEED (EDU)	539	A5	INTAKE HEATER DIAG 1	5349		
A6	LOW OIL SENSOR - SIGNAL	1174	A6	BARO - SV	2932		
A7	COOLANT TEMP SNSR - SIG	410	A7	BARO - RTN	1057		
A8	COOLANT TEMP - SV RTN	720	A8	BARO - SIGNAL	433		
B1	INJECTOR #2	1745	B1	CAN LINK LO (EDU)	2362		
B2	INJECTOR #7	877	B2	CAN LINK ISOLATION	XXX		
B3	VDEPSB - CAM	631	B3	RESERVED (Q-WARM)	n/c		
B4	CAM - SIGNAL	633	B4	n/c	n/c		
B5	DEPSGND - CAM	632	B5	n/c	n/c		
B6	n/c	n/c	B6	n/c	n/c		
B7	n/c	n/c	B7	n/c	n/c		
B8	VDEPSGND - CRANK	1868	B8	n/c	n/c		
B9	CRANK - SIGNAL	1869	C1	CAN LINK HI (EDU)	2361		
B10	VDEPSA - CRANK	1867	C2	CAN LINK ISOLATION	XXX		
B11	INJECTOR #6	846	C3	RESERVED (WASTEGATE)	n/c		
B12	INJECTOR #3	1746	C4	n/c	n/c		
C1	INJECTOR #1	1744	C5	INTAKE HEATER DIAG 2	5349		
C2	INJECTOR #5	845	C6	MAP - SV	597		
C3	RAIL PRESSURE - SV	2917	C7	MAP - RTN	469		
C4	RAIL PRESSURE - RTN	2919	C8	MAP - SIGNAL	432		
C5	RAIL PRESSURE - SIGNAL	2918					
C6	FUEL HEATER - FEED	2677					
C7	n/c	n/c					
C8	57X OUT	2832					
C9	RPCV - LO	2834					
C10	RPCV - HI	2530					
C11	INJECTOR #8	878					
C12	INJECTOR #4	844					
D1	FUEL TEMPERATURE	1578					
D2	FUEL TEMP - GROUND	718					
D3	WIF SENSOR	508					
D6	OIL PRESSURE	332					
D7	OIL PRESSURE - RTN	407					
D8	OIL PRESSURE SV - REF	705					

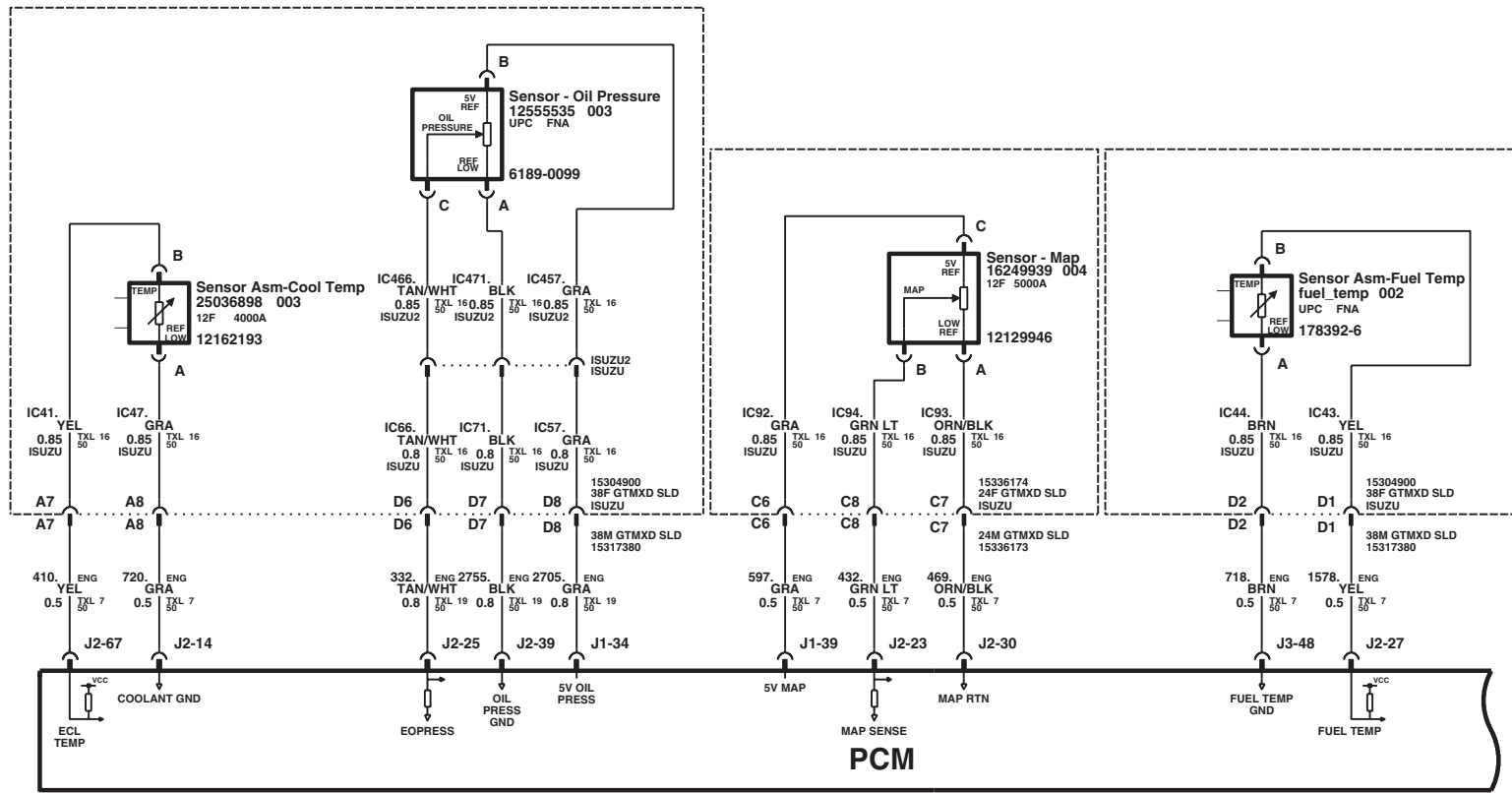
C6: See page h22023d ➡

D3: See page h22023d ➡

NOTE: XXX = Physical isolation for Can link
n/c = No connection

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

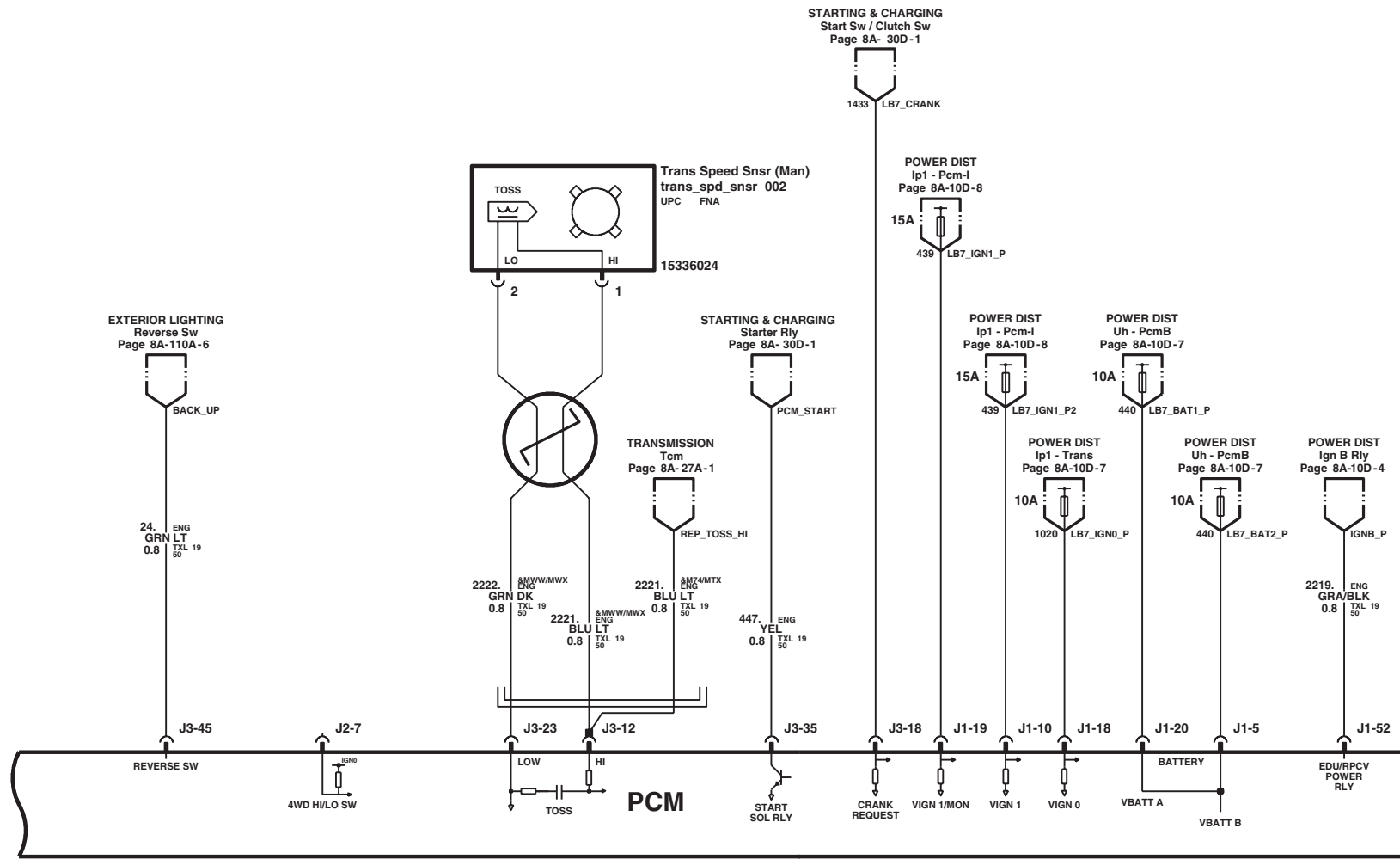
Engine Controls – (LLY) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

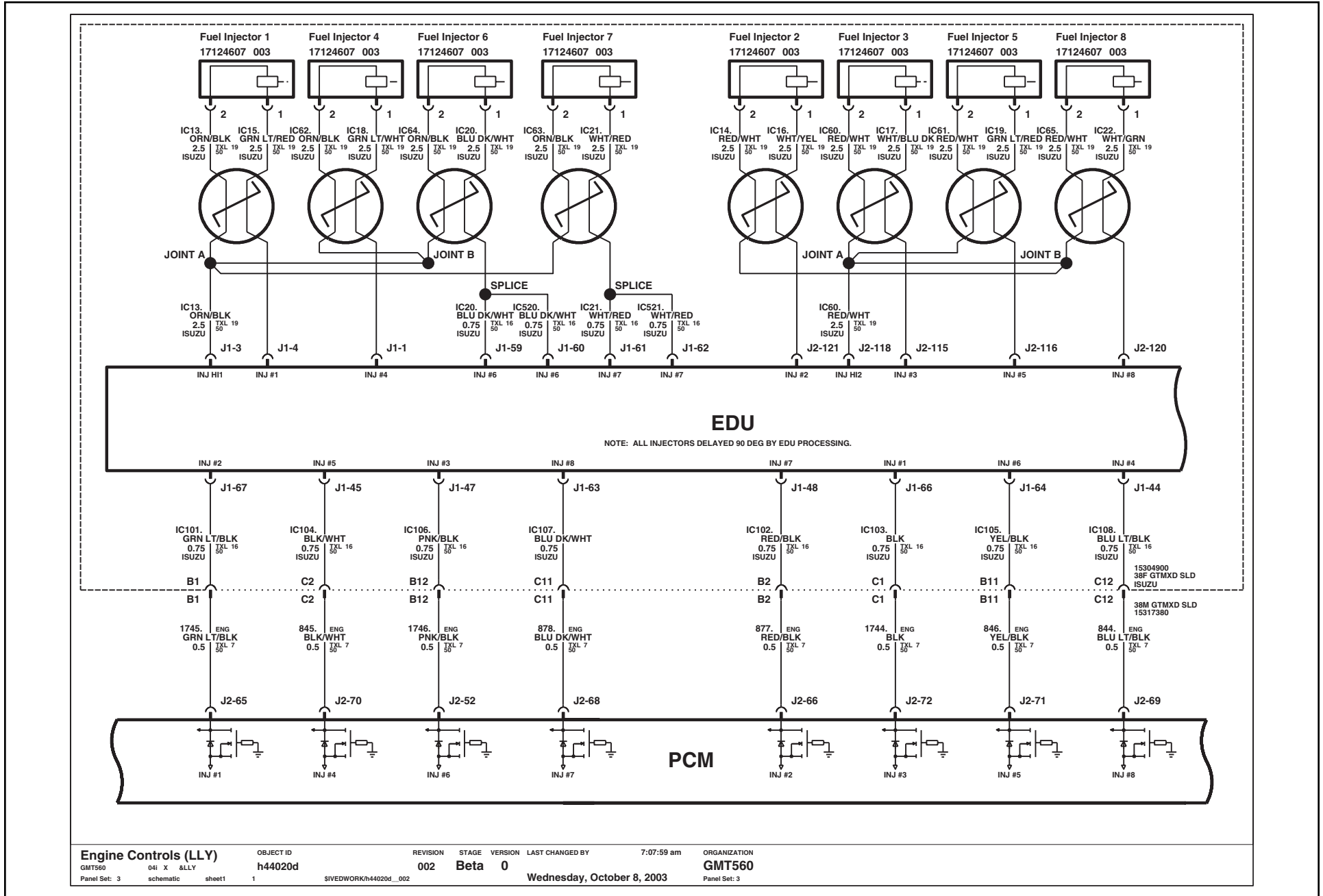
Engine Controls – (LLY) 6.6L-Diesel/Duramax

RPO LEGEND	
M74	LCT 1000 AUTO TRANS
MX4	LCT 2000 AUTO TRANS
MTW	LCT 2400 AUTO TRANS
MWW/MWX	MANUAL TRANS



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

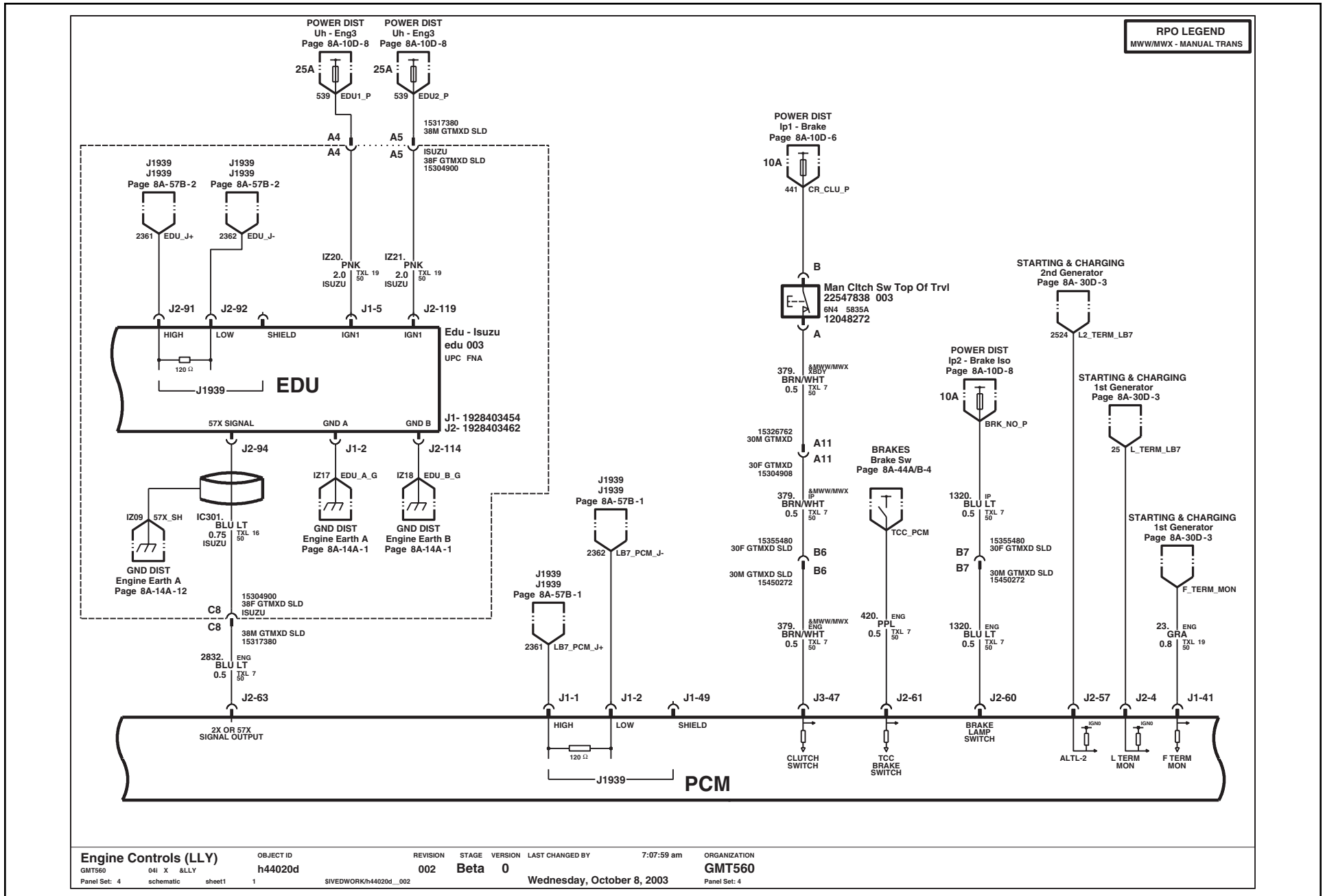
Engine Controls – (LLY) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

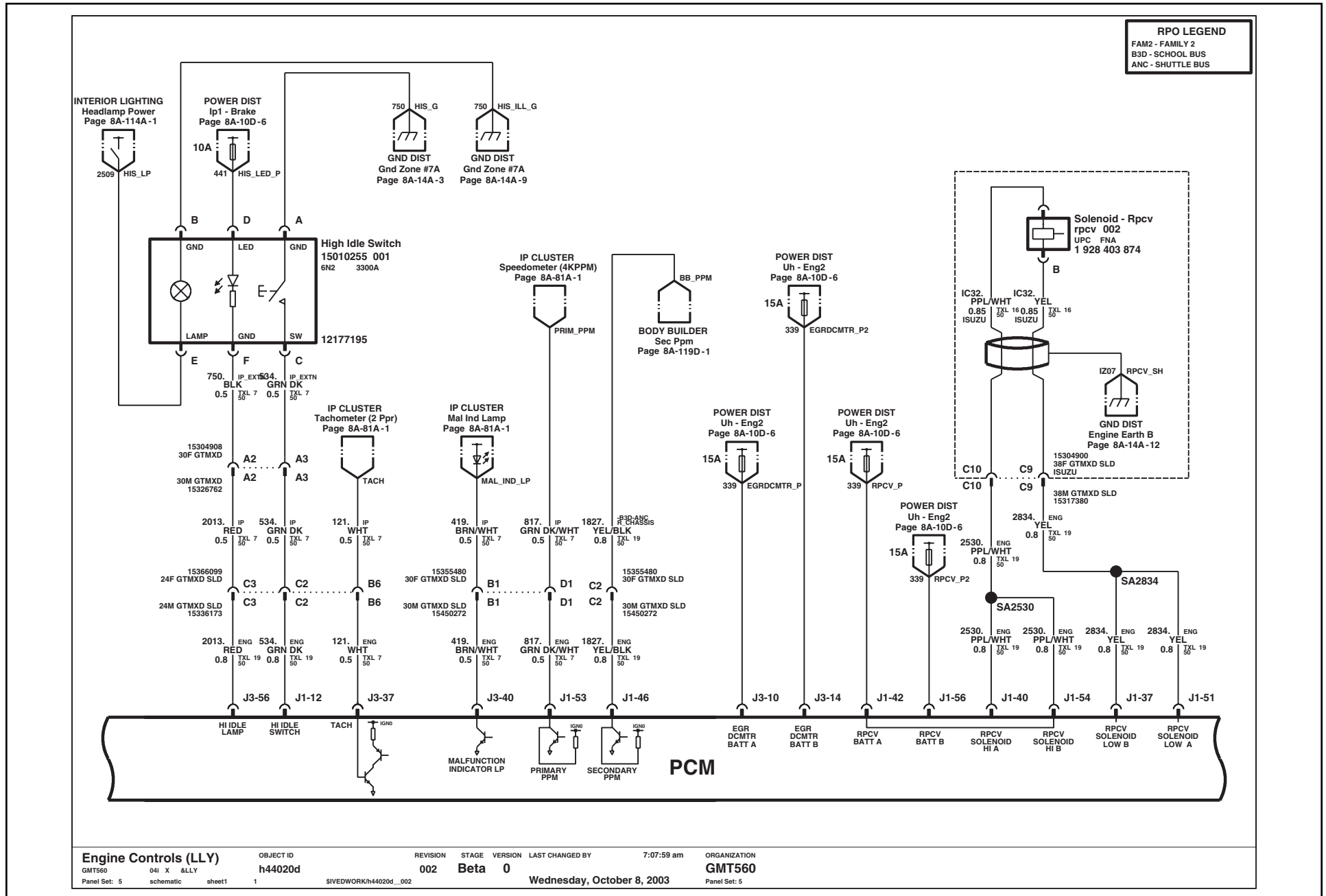
PAGE D-178

Engine Controls – (LLY) 6.6L-Diesel/Duramax



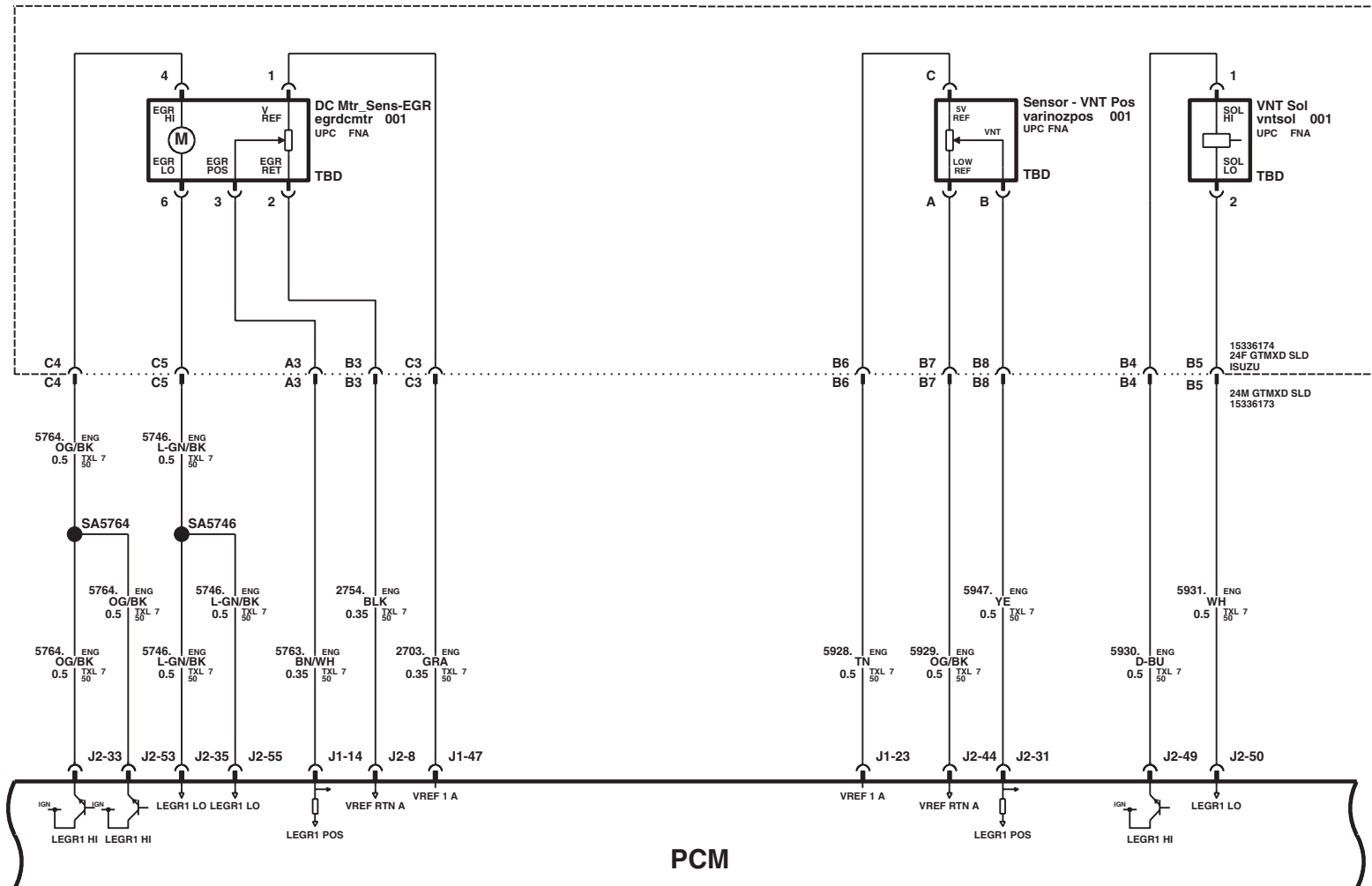
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LLY) 6.6L-Diesel/Duramax



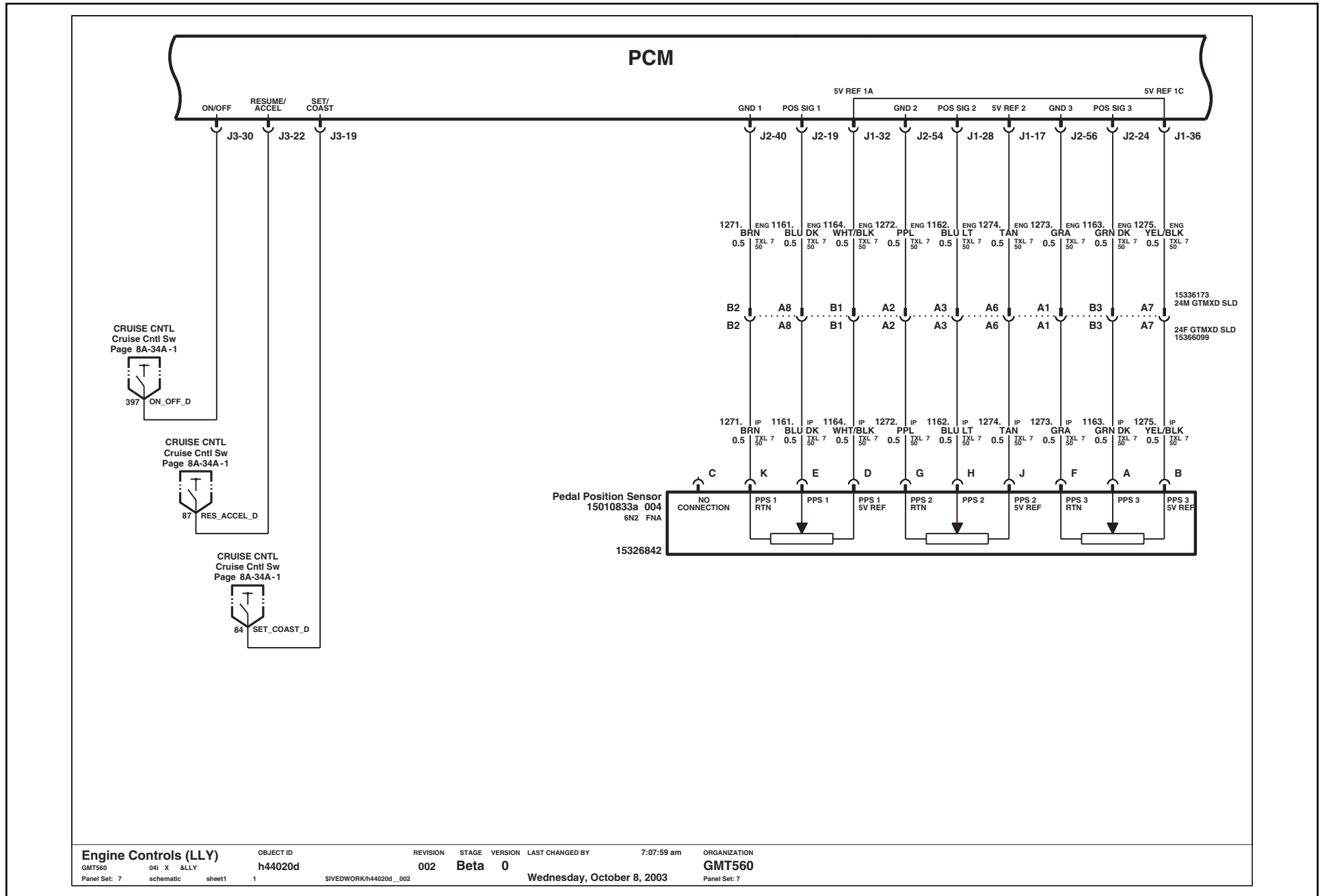
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LLY) 6.6L-Diesel/Duramax



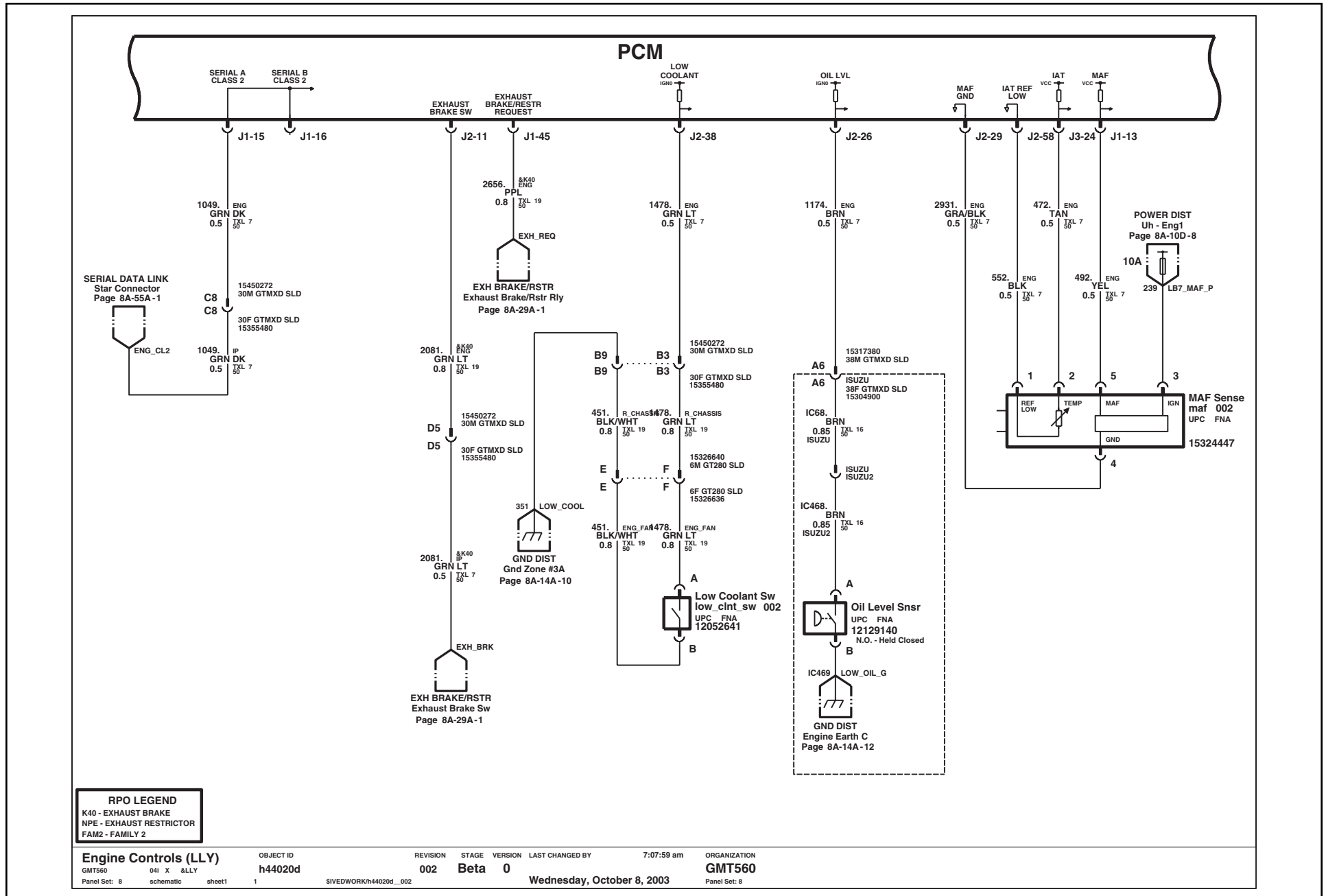
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LLY) 6.6L-Diesel/Duramax



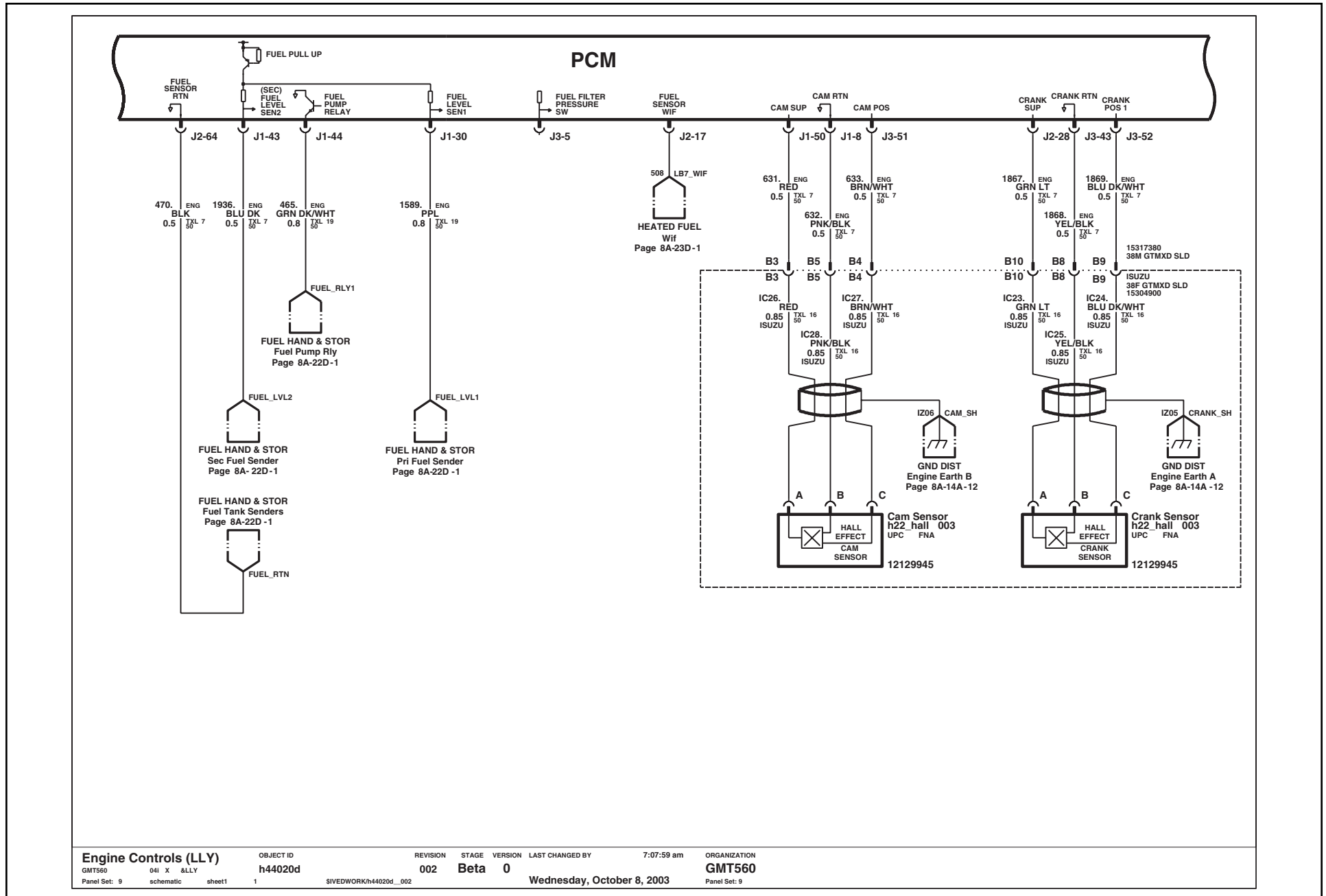
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LLY) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LLY) 6.6L-Diesel/Duramax



Engine Controls (LLY)

GMT560 041 X 3LLY

Panel Set: 9 schematic sheet1

OBJECT ID
h44020d

1

SIVEDWORK/h44020d_002

REVISION STAGE VERSION
002 Beta 0

LAST CHANGED BY
Wednesday, October 8, 2003

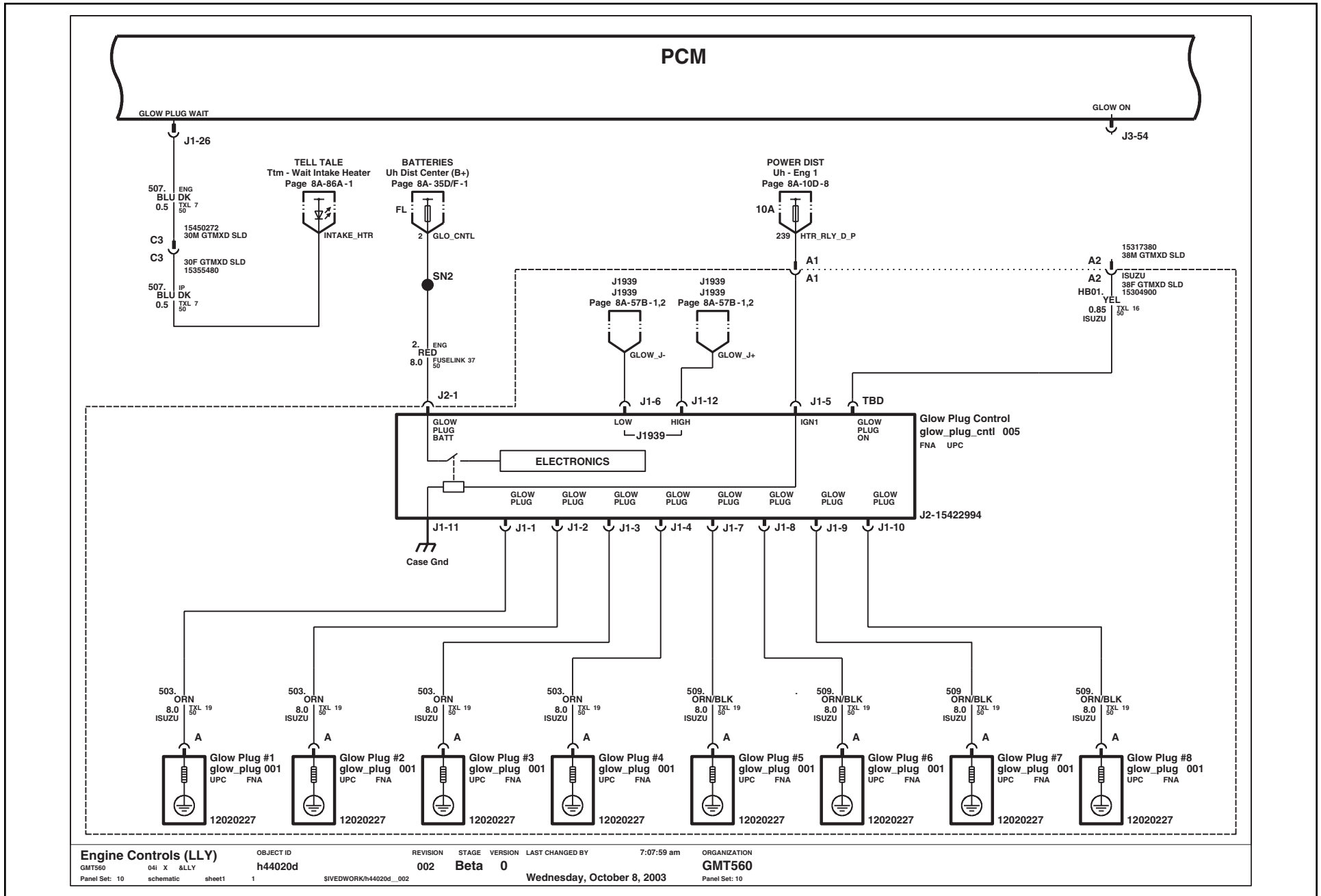
7:07:59 am

ORGANIZATION
GMT560

Panel Set: 9

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LLY) 6.6L-Diesel/Duramax



Engine Controls (LLY)
GMT560
Panel Set: 10

OBJECT ID
h44020d

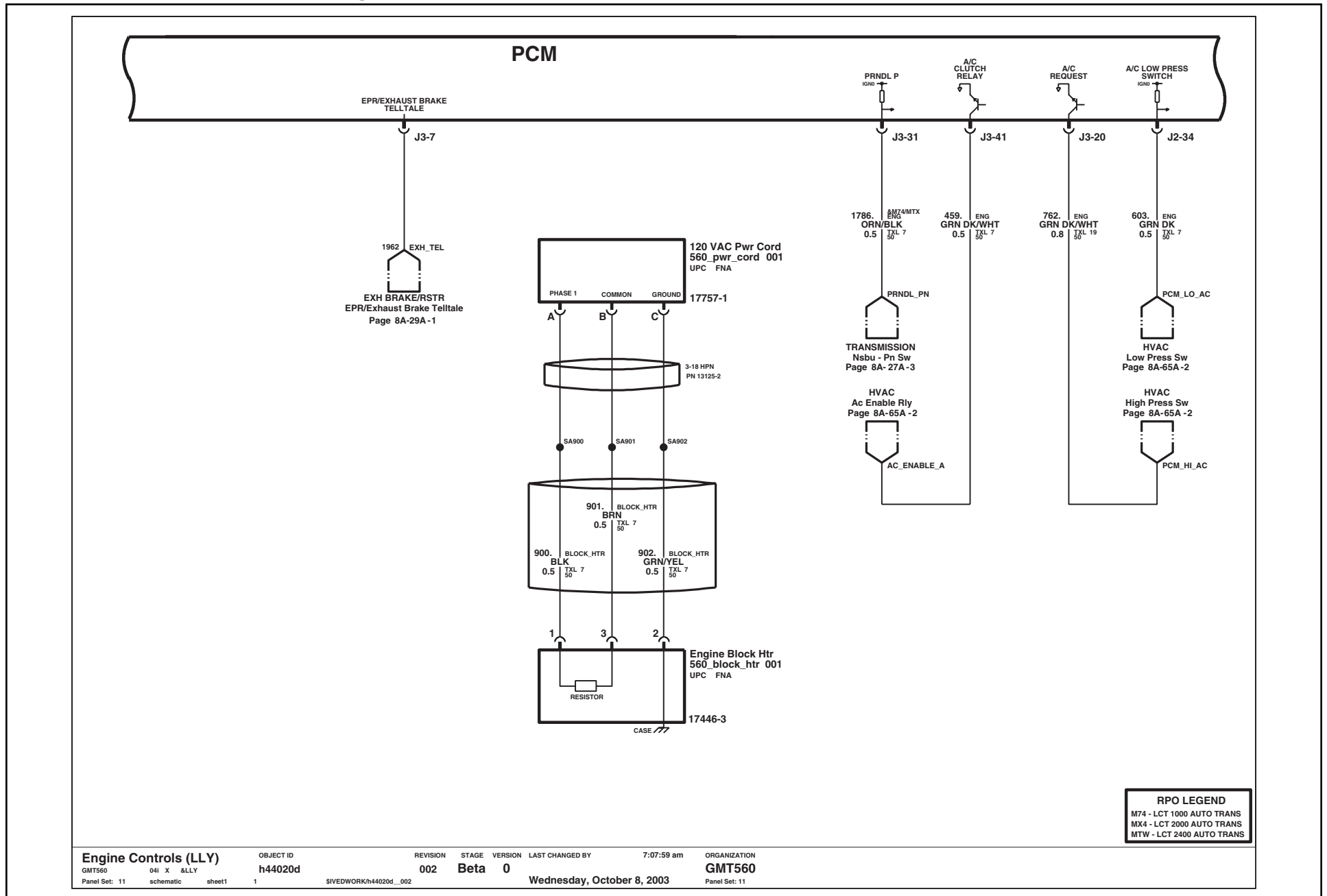
REVISION STAGE VERSION LAST CHANGED BY
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ORGANIZATION
GMT560
Panel Set: 10

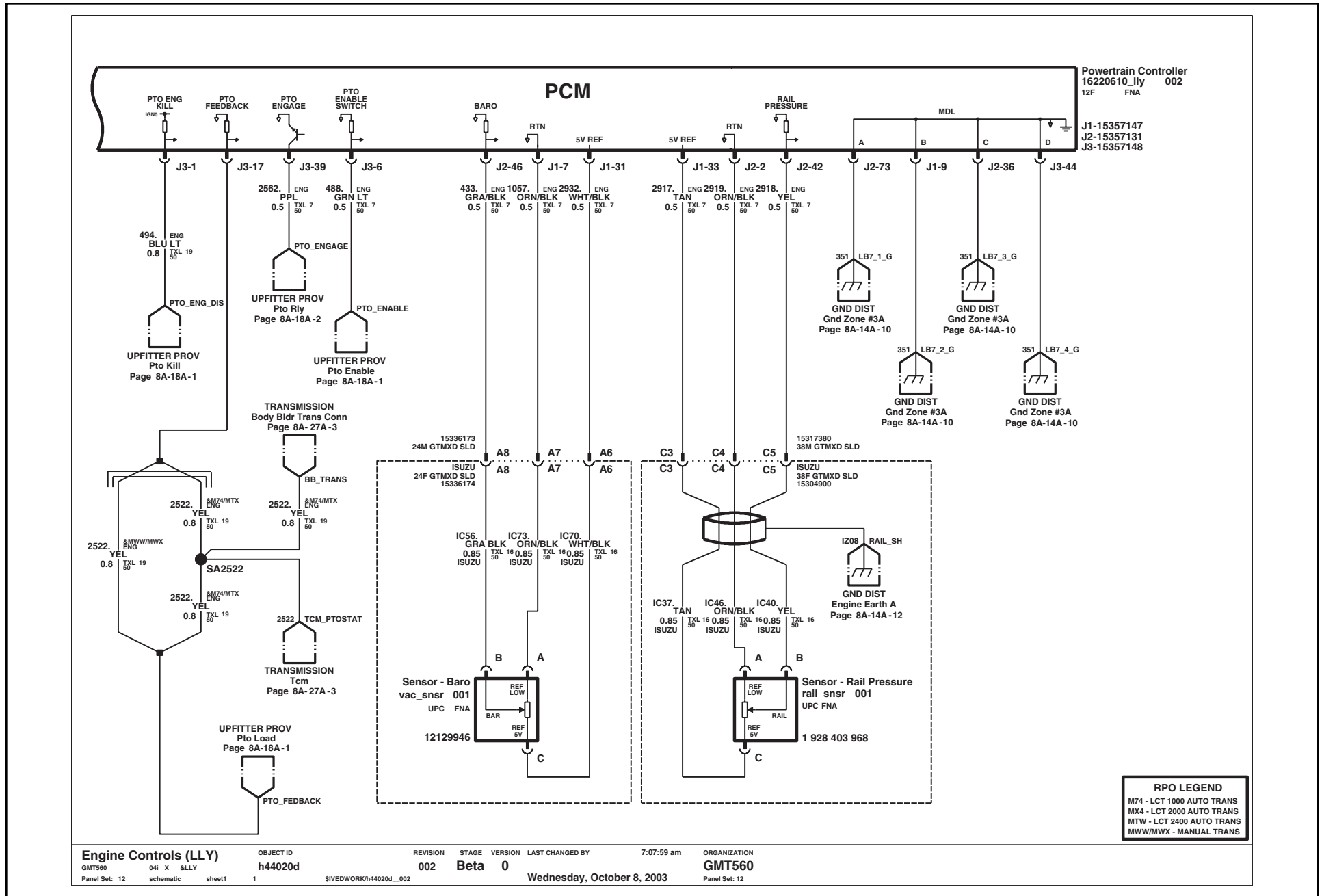
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LLY) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LLY) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Engine Controls – (LLY) 6.6L-Diesel/Duramax

04 560 000	TY	INITIAL CREATION	10SE01	001
04 560 1149	JG	TRANS RPO UPDATE	13DE01	001
04i 560 1198	JG	Changed LB7 to LLY	27MR02	001
03 560 1228	JG	Added RPO ANC	07MY02	001
04i 560 1230	JG	Insert Fusible Link into Glow Plug 2 ckt	09MY02	001

GMTG/ISUZU INLINE CHART

I1 15317380 GMTG (MALE) 15304900 ISUZU (FEMALE)			I2 15336173 GMTG (MALE) 15336174 ISUZU (FEMALE)			I3 15422994 GMTG	
CAVITY	FUNCTION	CIRCUIT NO.	CAVITY	FUNCTION	CIRCUIT NO.	FUNCTION	CIRCUIT NO.
A1	INTAKE HEATER RELAY IGN 1	239	A1	n/c	n/c	GLOW BATT CNTL	2
A2	GLOW ON	505	A2	n/c	n/c		
A3	n/c	n/c	A3	EGR POSITION F/B	5763		
A4	FUEL INJECTOR FEED (EDU)	539	A4	n/c	n/c		
A5	FUEL INJECTOR FEED (EDU)	539	A5	n/c	n/c		
A6	LOW OIL SENSOR - SIGNAL	1174	A6	BARO - 5V	2932		
A7	COOLANT TEMP SNSR - SIG	410	A7	BARO - RTN	1057		
A8	COOLANT TEMP - 5V RTN	720	A8	BARO - SIGNAL	433		
B1	INJECTOR #2	1745	B1	CAN LINK LO (EDU)	2362		
B2	INJECTOR #7	877	B2	n/c	n/c		
B3	VDEPSB - CAM	631	B3	EGR POSITION RTN	2754		
B4	CAM - SIGNAL	633	B4	VNT SOLENOID HI	5774		
B5	DEPSGNDB - CAM	632	B5	VNT SOLENOID LO	5773		
B6	n/c	n/c	B6	VNT POSITION 5V	5776		
B7	n/c	n/c	B7	VNT POSITION RTN	5777		
B8	VDEPSGNDA - CRANK	1868	B8	VNT POSITION F/B	5775		
B9	CRANK - SIGNAL	1869	C1	CAN LINK HI (EDU)	2361		
B10	VDEPSA - CRANK	1867	C2	FUEL FILTER PRESSURE SW	5765		
B11	INJECTOR #6	846	C3	EGR POSITION 5V	2703		
B12	INJECTOR #3	1746	C4	EGR DC MOTOR HI	5764		
C1	INJECTOR #1	1744	C5	EGR DC MOTOR LO	5746		
C2	INJECTOR #5	845	C6	MAP - 5V	597		
C3	RAIL PRESSURE - 5V	2917	C7	MAP - RTN	469		
C4	RAIL PRESSURE - RTN	2919	C8	MAP - SIGNAL	432		
C5	RAIL PRESSURE - SIGNAL	2918					
C6	FUEL HEATER - FEED	2677					
C7	n/c	n/c					
C8	57X OUT	2832					
C9	RPCV - LO	2834					
C10	RPCV - HI	2530					
C11	INJECTOR #8	878					
C12	INJECTOR #4	844					
D1	FUEL TEMPERATURE	1578					
D2	FUEL TEMP - GROUND	718					
D3	WIF SENSOR	508					
D6	OIL PRESSURE	332					
D7	OIL PRESSURE - RTN	407					
D8	OIL PRESSURE 5V - REF	705					

C6: See page 023d →

D3: See page 023d →

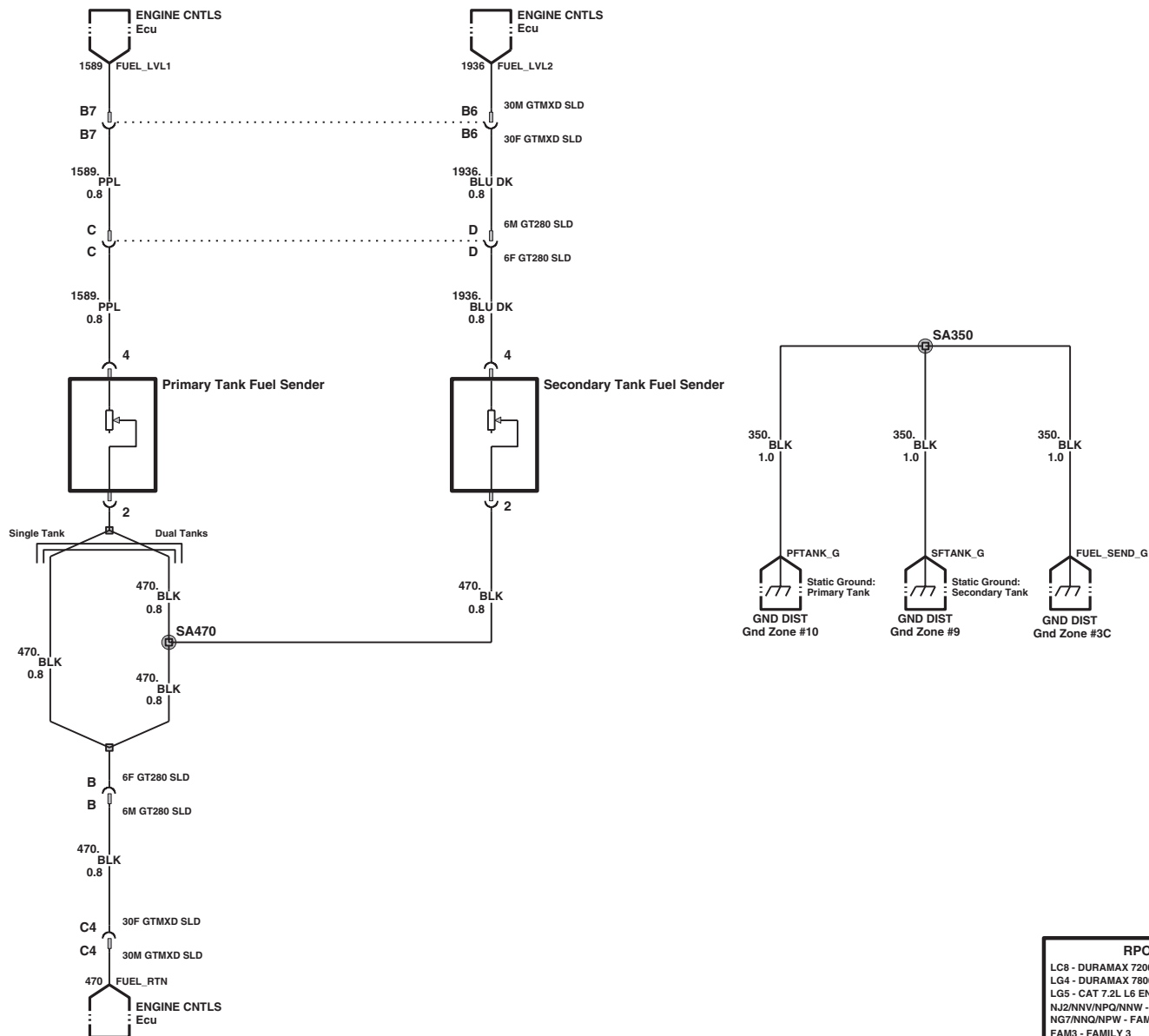
← B1: See page 057b

← C1: See page 057b

NOTE: XXX = Physical isolation for Can link
n/c = No connection

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Fuel – (LG4-'04i) 7.8L-Diesel/Duramax

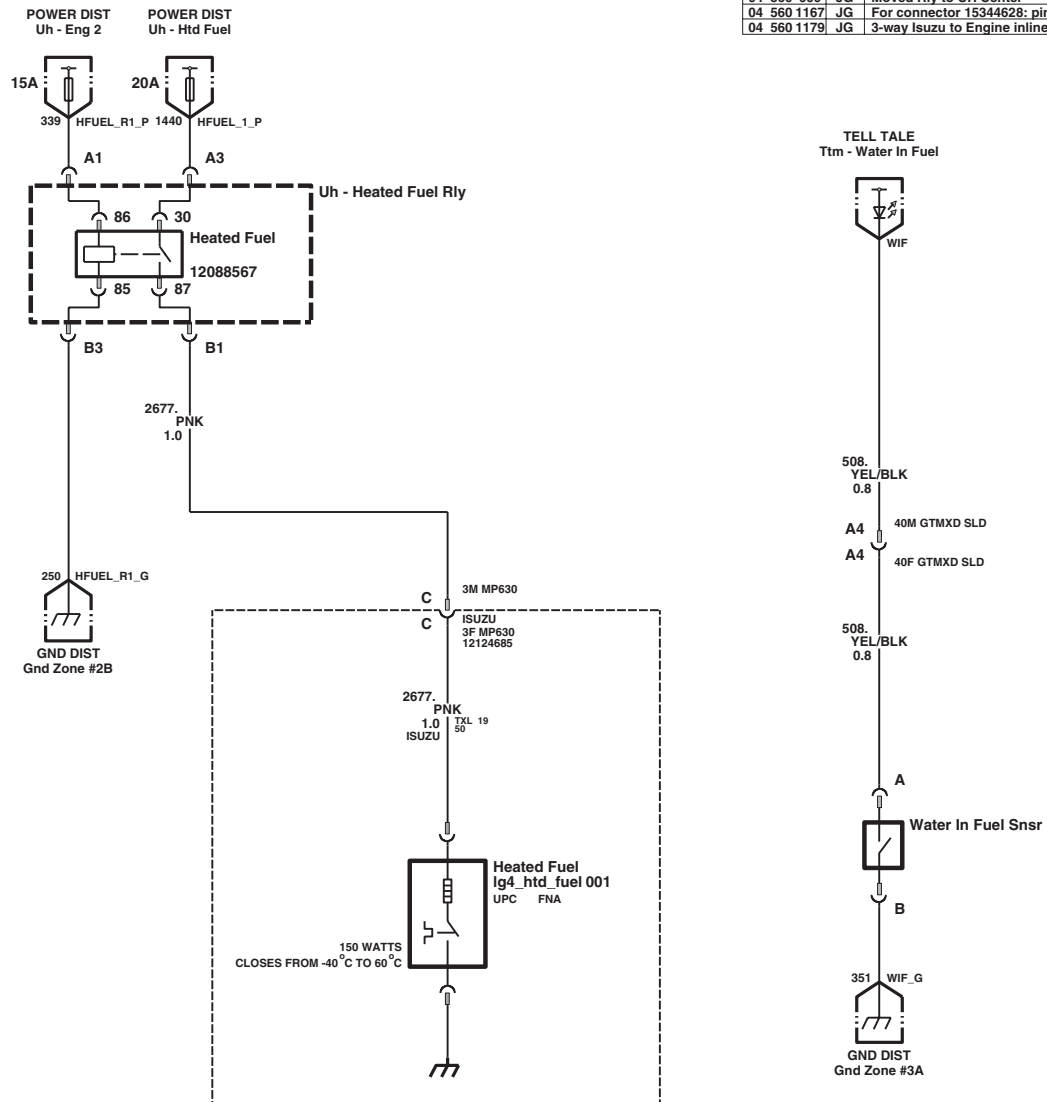


RPO LEGEND	
LC8 - DURAMAX 7200 DIESEL ENG	
LG4 - DURAMAX 7800 DIESEL ENG	
LG5 - CAT 7.2L L6 ENG	
NJ2/NNV/NPQ/NNW - FAMILY 3 SINGLE TANK	
NG7/NNQ/NPW - FAMILY 3 DUAL TANKS	
FAM3 - FAMILY 3	

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Heated Fuel/Water in Fuel – (LG4-'04i) 7.8L-Diesel/Duramax

04 560 000	JG	Beta - Initial Creation	02JA02
04 560 000	JG	Moved Rly to UH Center	04JA02
04 560 1167	JG	For connector 15344628: pins A,B,C to 1,2,3	19FE02
04 560 1179	JG	3-way Isuzu to Engine inline change	04MR02



NWB/KUK

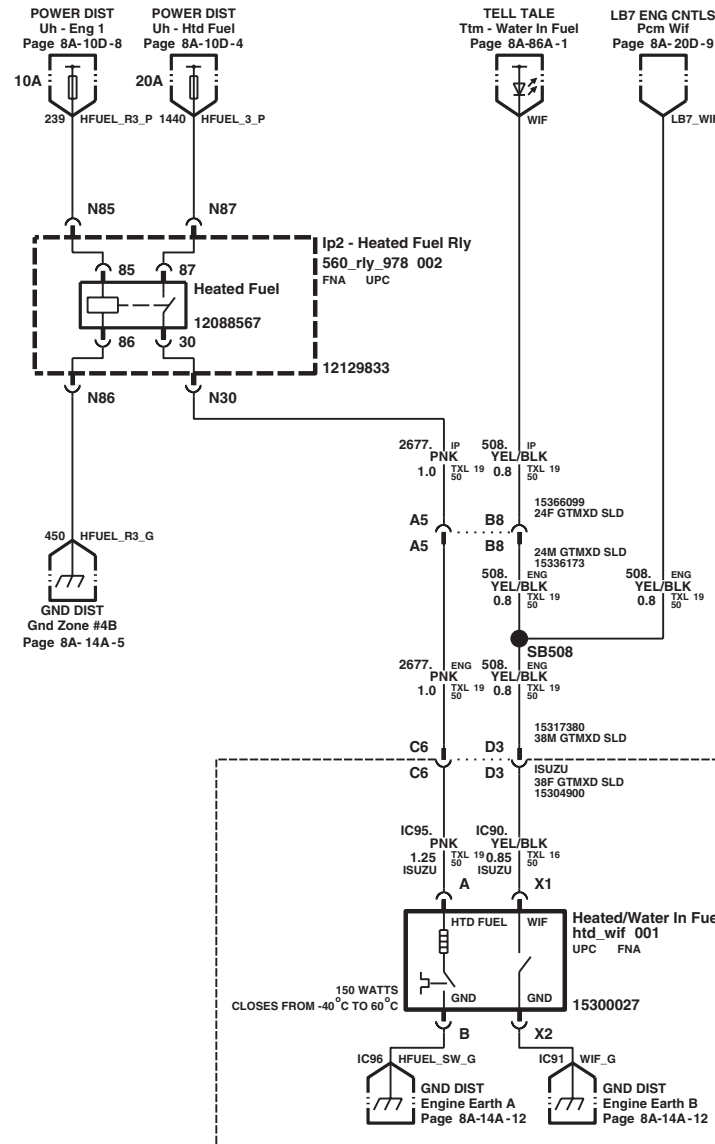
RPO LEGEND	
NWB	- WATER AND FUEL SEPARATOR
KUK	- WATER IN FUEL

Heated Fuel/WIF (LG4)		OBJECT ID	REVISION	STAGE	VERSION	LAST CHANGED BY	7:58:53 am	ORGANIZATION
GMT560	D41 X	h44023b	001	Beta	0	Thursday, August 15, 2002		GMT560
Panel Set: 1	schematic	sheet1	16	SIVEDWORK/h44023b_001				Panel Set: 1

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Heated Fuel/Water in Fuel – (LLY) 6.6L-Diesel/Duramax

04 560 000	JG	Beta - Initial Creation	04JA02	001
04i 560 1198	JG	Changed LB7 to LLY	27MR02	001



Heated Fuel/WIF (LLY)

GMT560 04i X & LLY
Panel Set: 1 schematic sheet1

OBJECT ID
h44023d

9

SIVEDWORK/h44023d_001

REVISION STAGE VERSION LAST CHANGED BY
001 Beta 0

Thursday, August 15, 2002

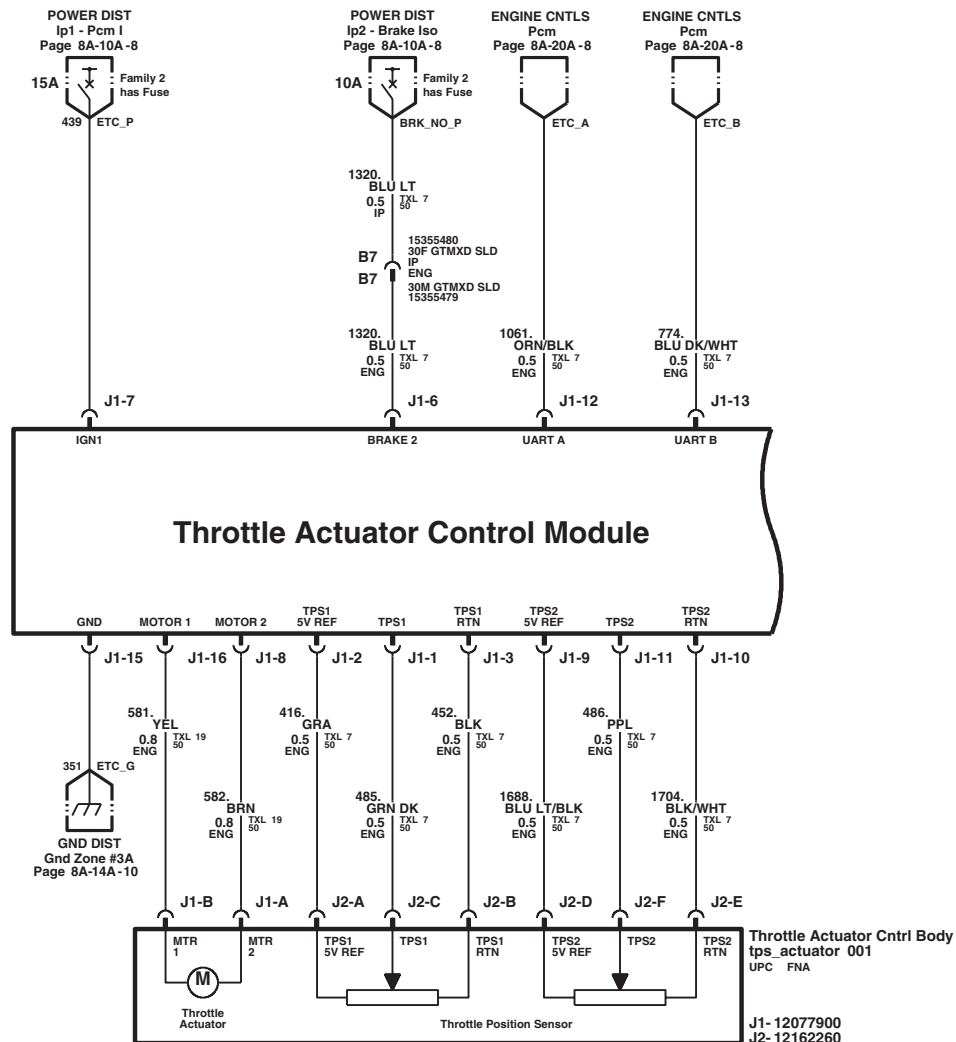
7:59:56 am

ORGANIZATION
GMT560

Panel Set: 1

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Electronic Throttle Control – (L18) 8.1L-Gas/NAPT



Etc (L18)

2003 M. D. C Series 03 X &L18
Panel Set: 1 schematic sheet1

OBJECT ID
h22021a

20

SIVEDWORK/h22021a_009

REVISION STAGE VERSION LAST CHANGED BY
009 Pilot B

Wednesday, December 6, 2000

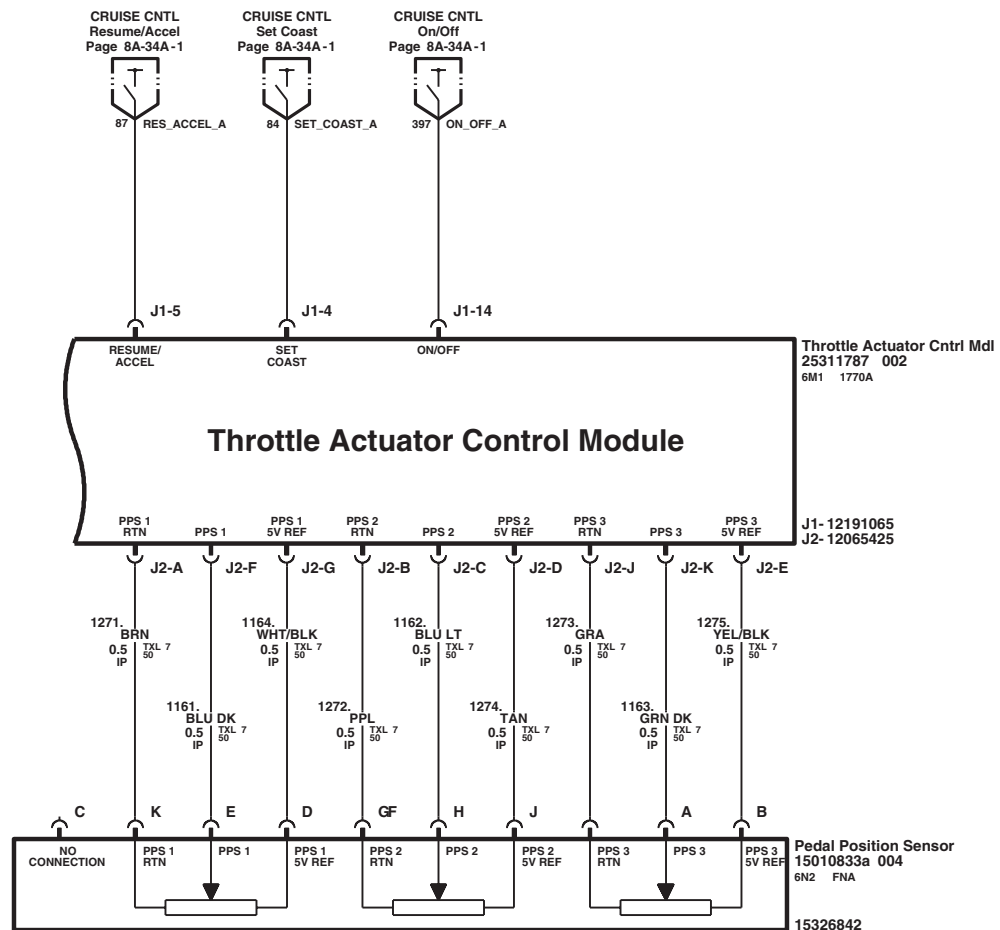
2:46:27 pm

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 1

Electronic Throttle Control – (L18) 8.1L-Gas/NAPT

03 560 000 JG PILOT B - INITIAL CREATION

20NO00 001



Etc (L18)

2003 M. D. C Series 03 X &L18
Panel Set: 2 schematic sheet1 20

OBJECT ID
h22021a

REVISION STAGE VERSION LAST CHANGED BY
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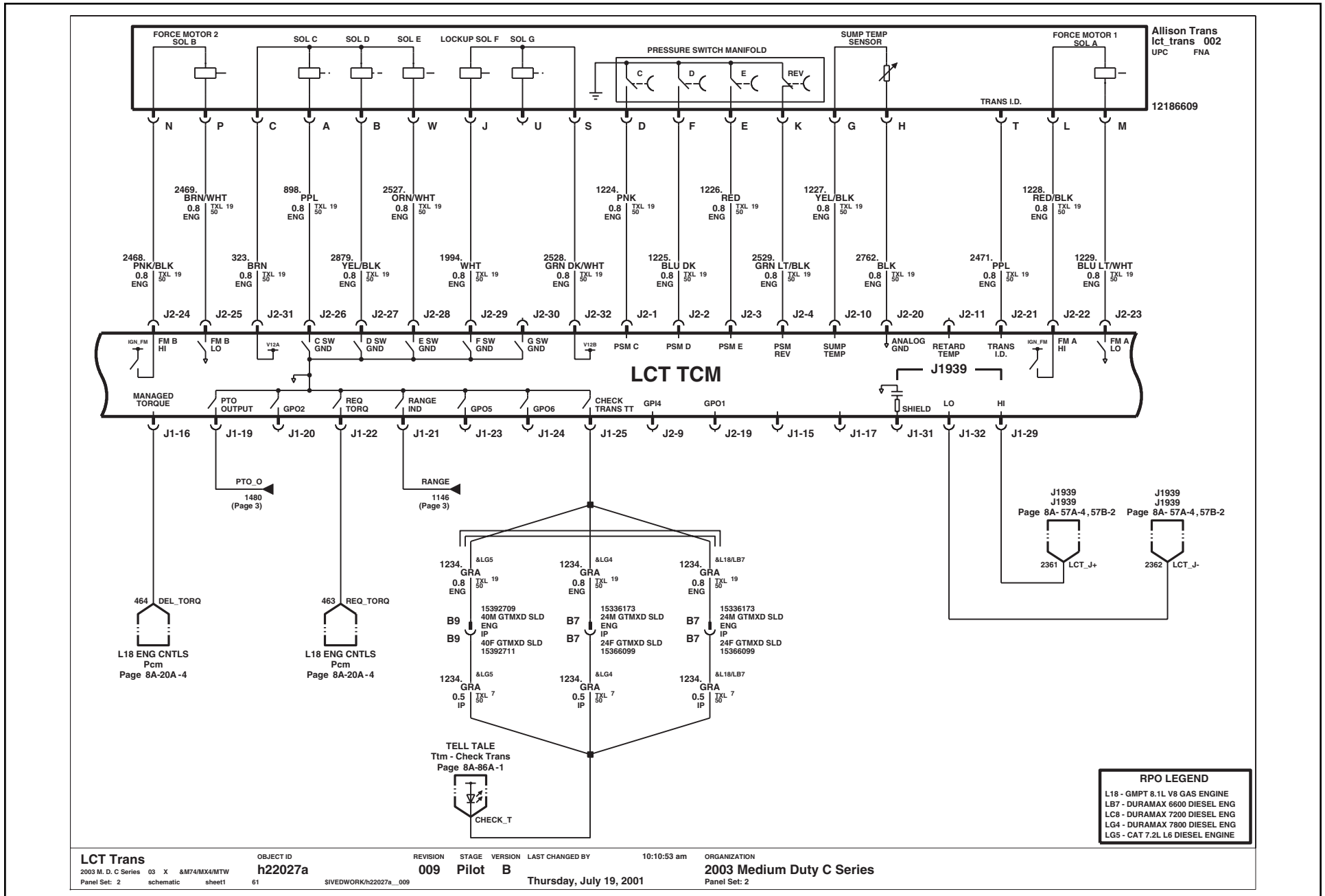
Wednesday, December 6, 2000

2:46:27 pm

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 2

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

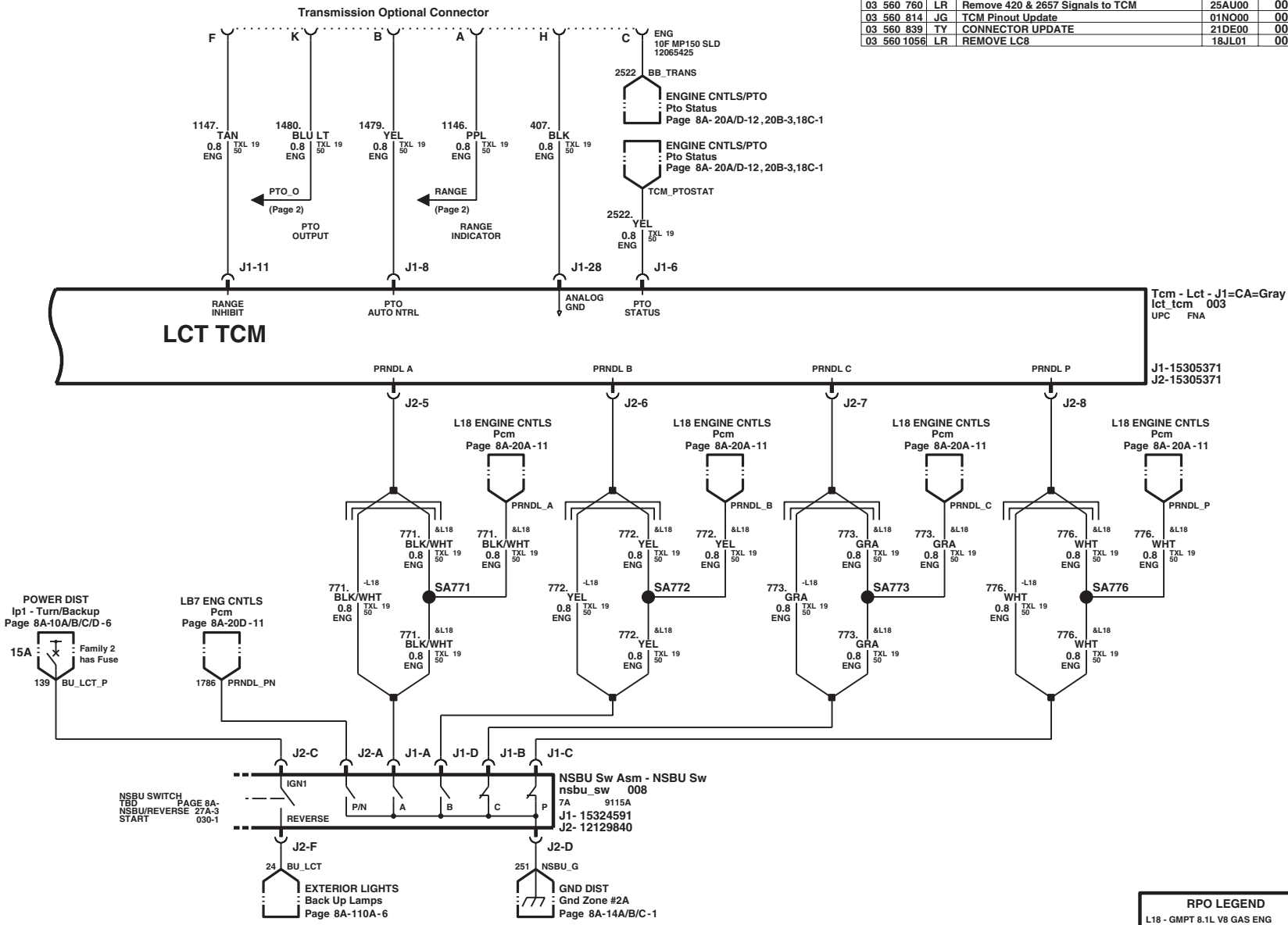
Automatic Transmission – TCM (LCT-'03-'04)



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

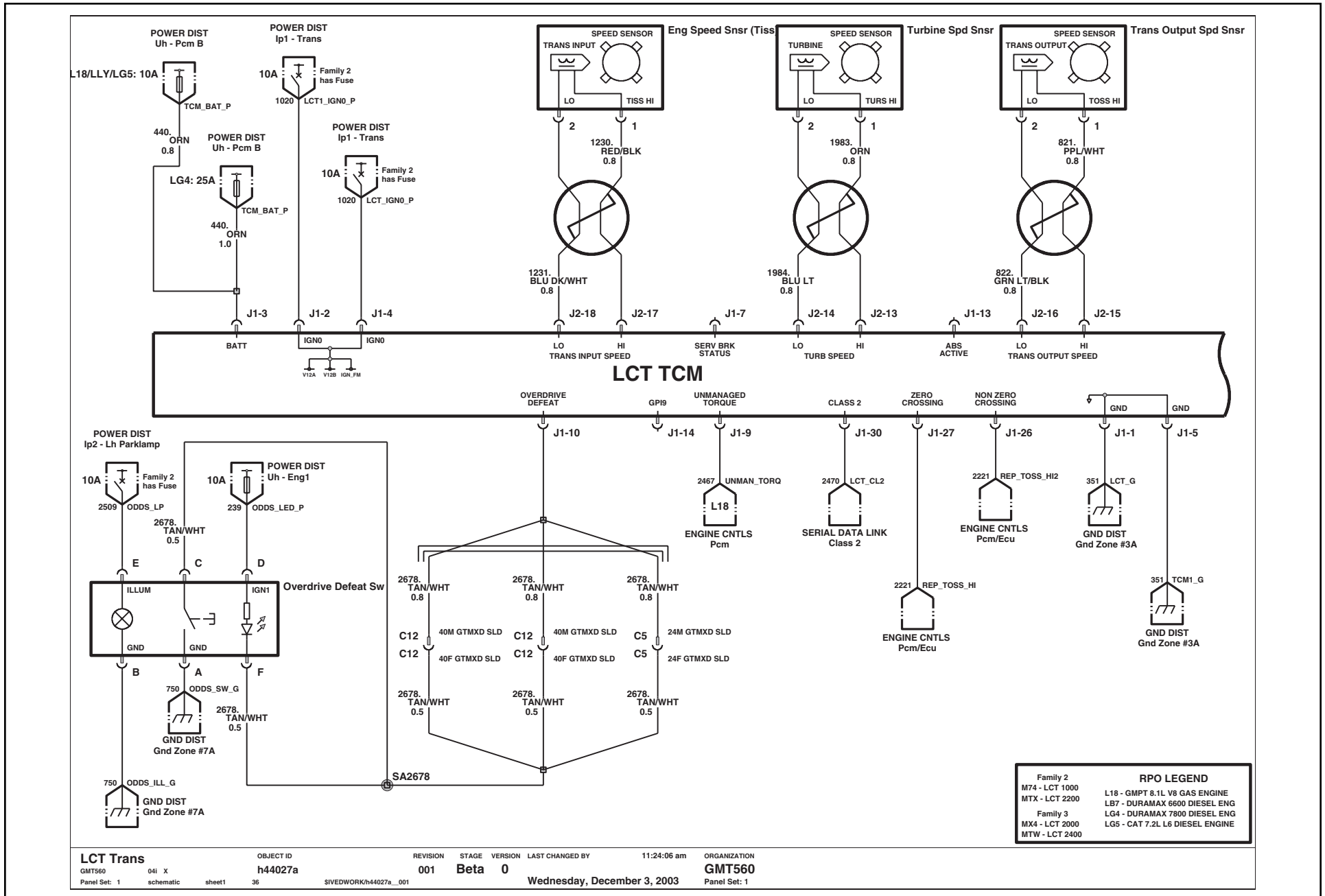
Automatic Transmission – TCM (LCT-'03-'04)

03 560 000	TY	PILOT - INITIAL CREATION	25AU00	001
03 560 760	LR	Remove 420 & 2657 Signals to TCM	25AU00	001
03 560 814	JG	TCM Pinout Update	01NO00	001
03 560 839	TY	CONNECTOR UPDATE	21DE00	001
03 560 1056	LR	REMOVE LC8	18JL01	001



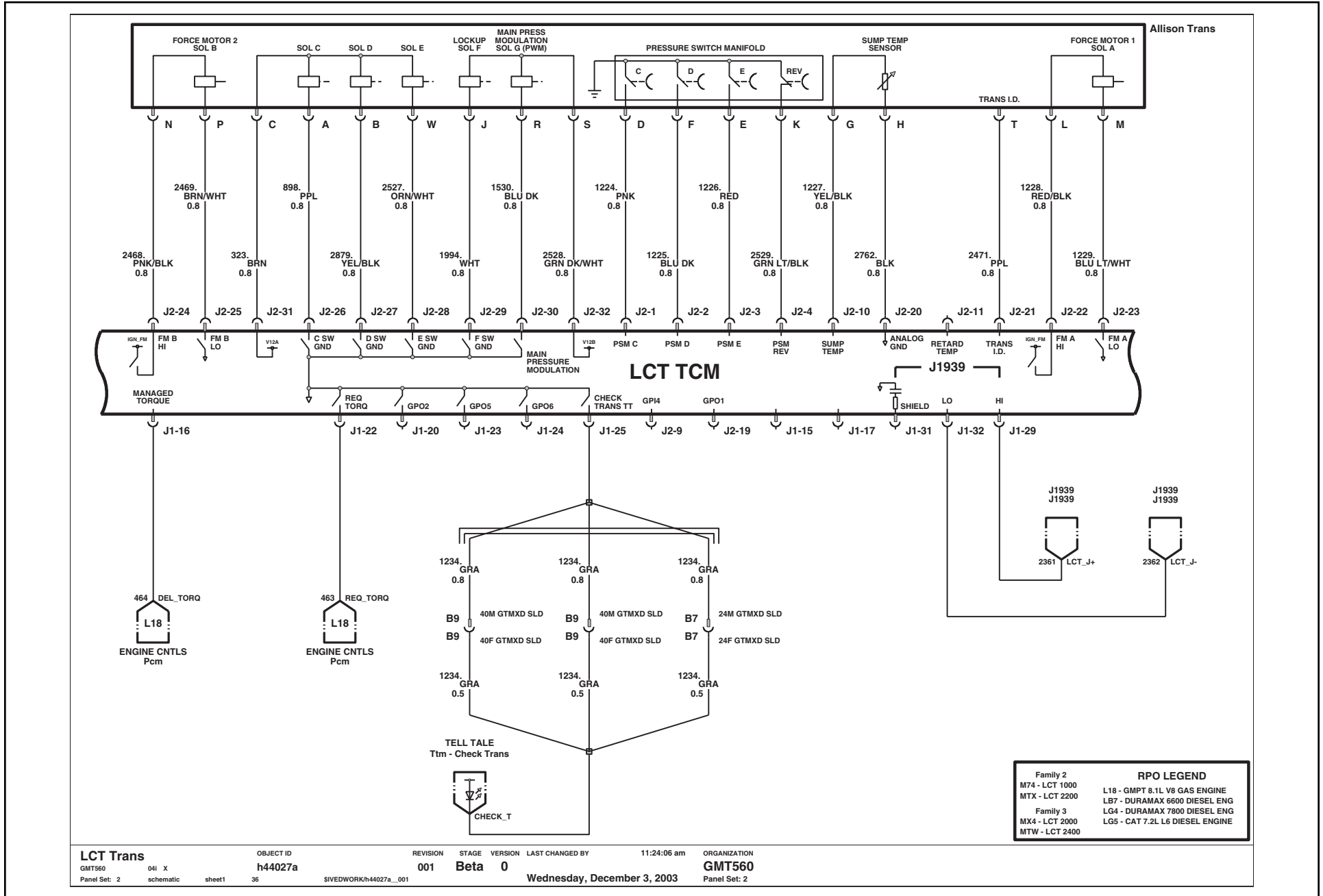
RPO LEGEND	
L18	- GMPT 8.1L V8 GAS ENG

Automatic Transmission – TCM (LCT-'04i)



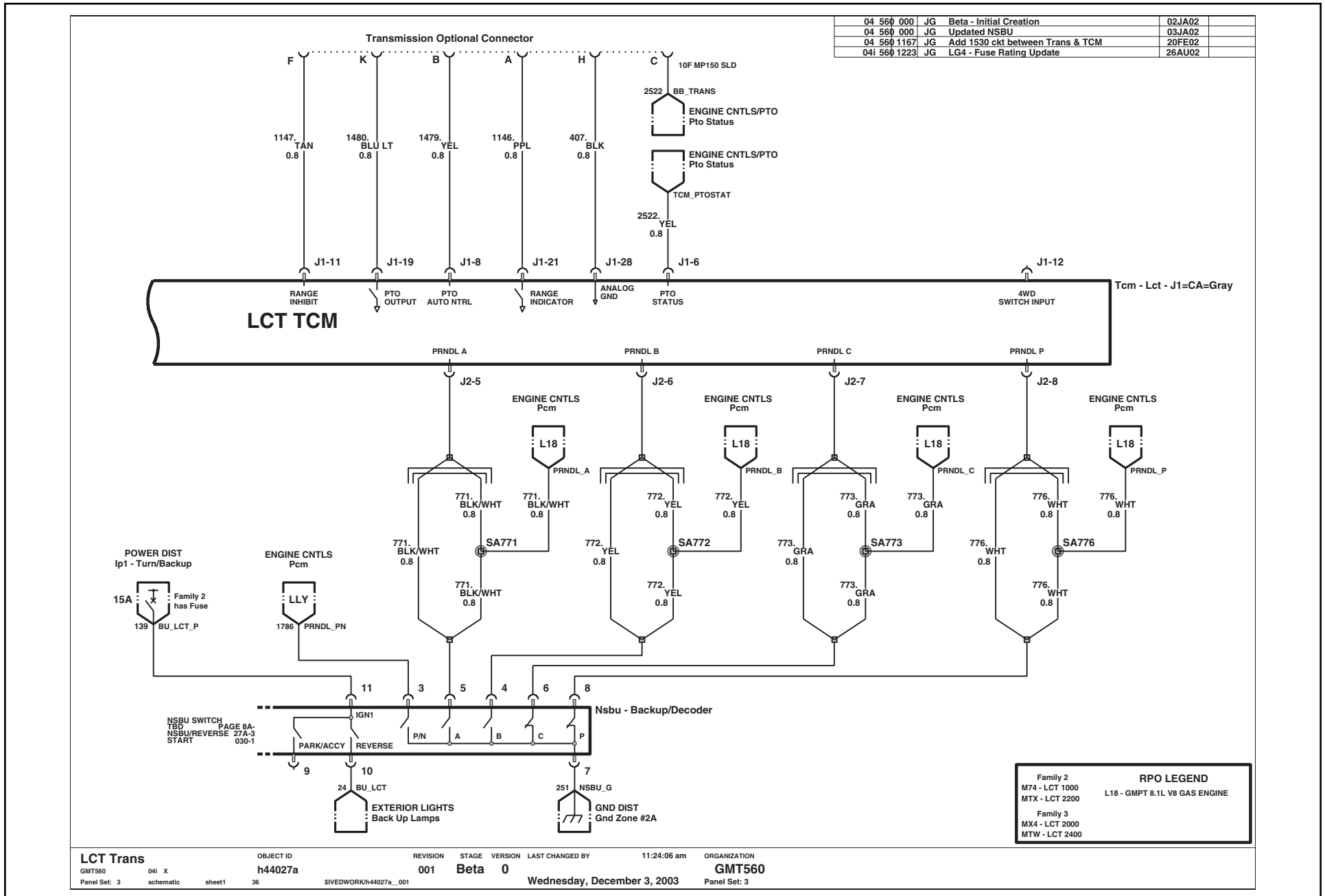
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Automatic Transmission – TCM (LCT-'04i)



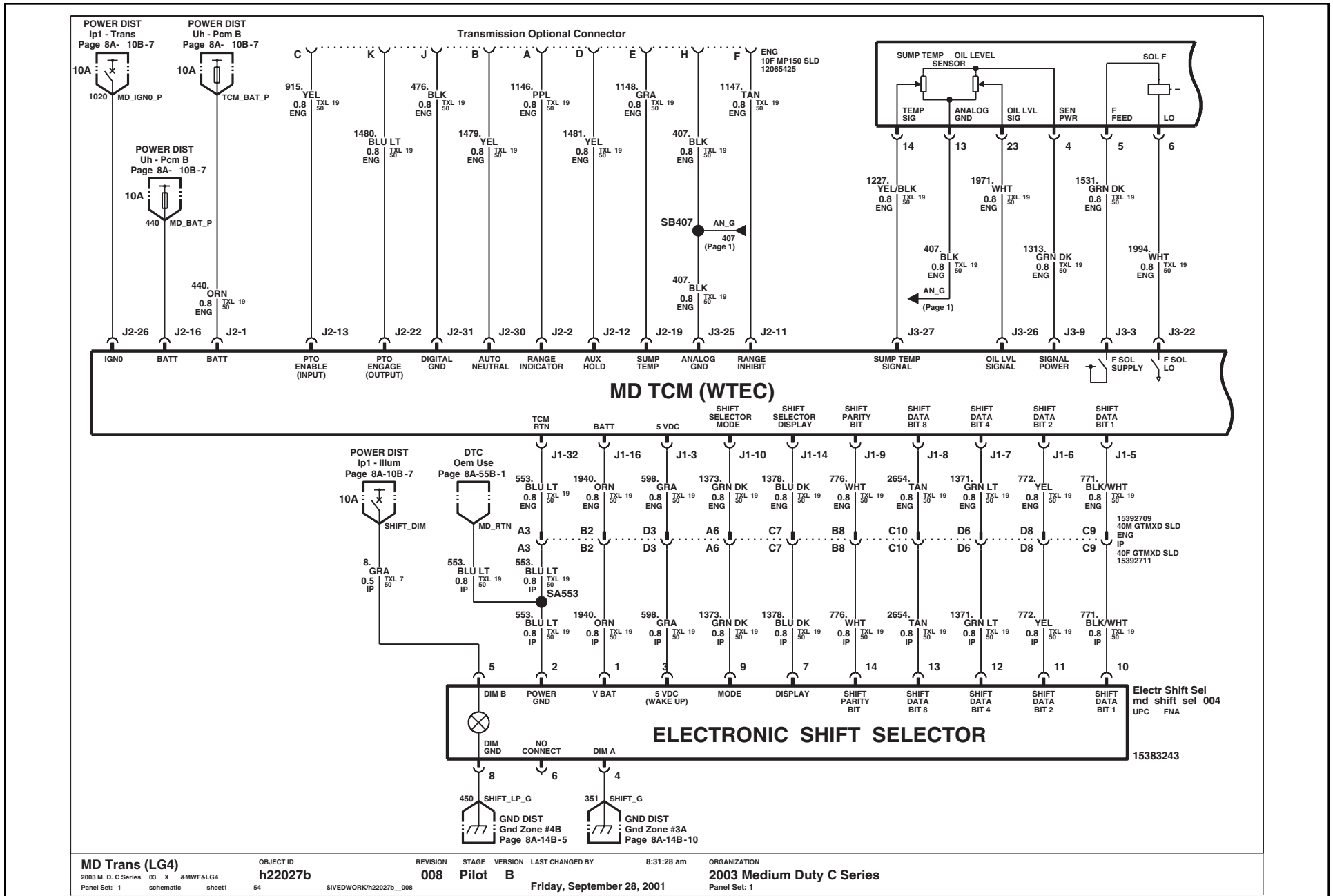
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Automatic Transmission – TCM (LCT-'04i)



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Automatic Transmission – TCM MD Trans (LG4-'03-'04) 7.8L-Diesel/Duramax



MD Trans (LG4)
2003 M. D. C Series 03 X &MWF&LG4
Panel Set: 1 schematic sheet1

OBJECT ID
h22027b

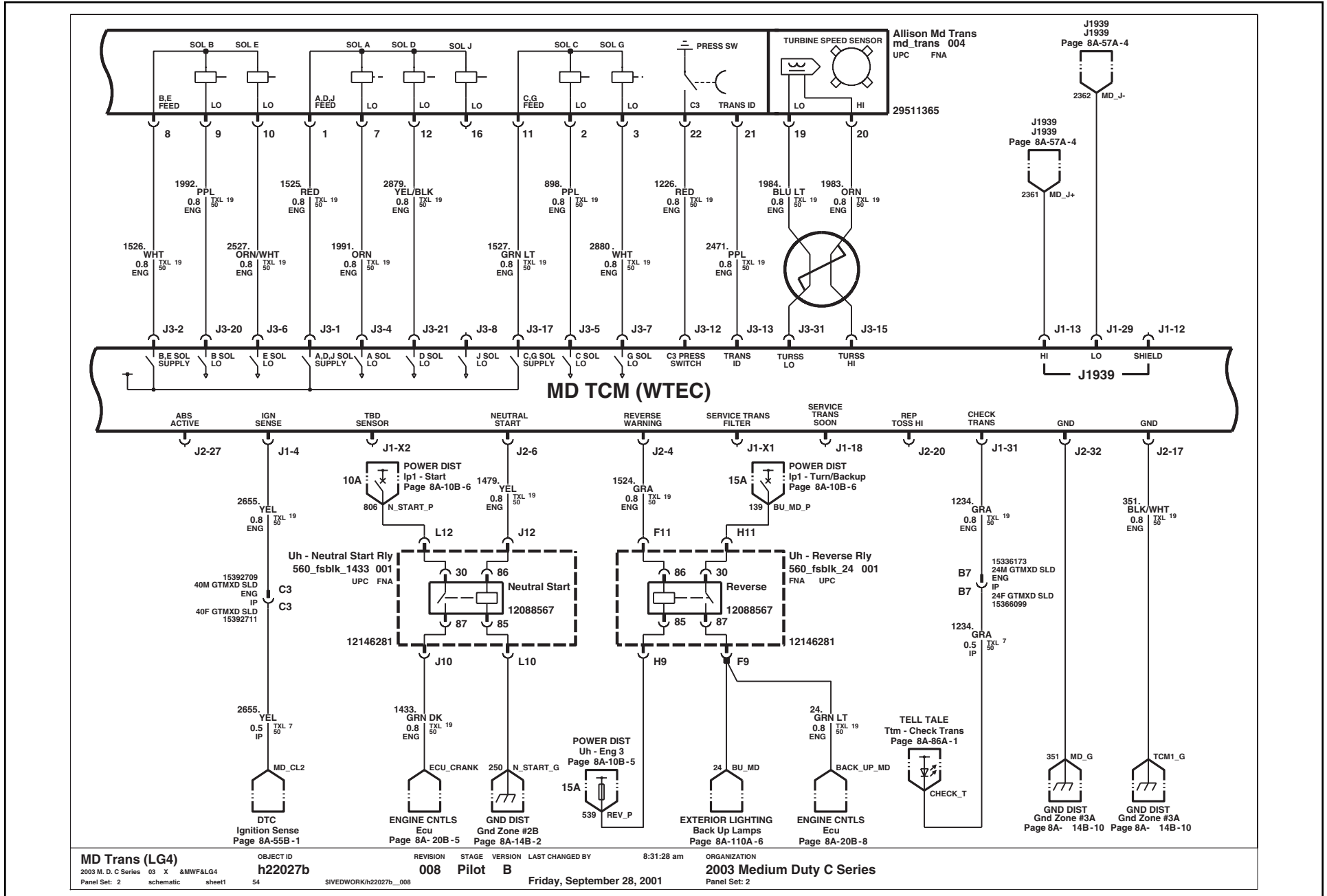
REVISION STAGE VERSION LAST CHANGED BY
008 Pilot B Friday, September 28, 2001

8:31:28 am

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 1

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Automatic Transmission – TCM MD Trans (LG4-'03-'04) 7.8L-Diesel/Duramax

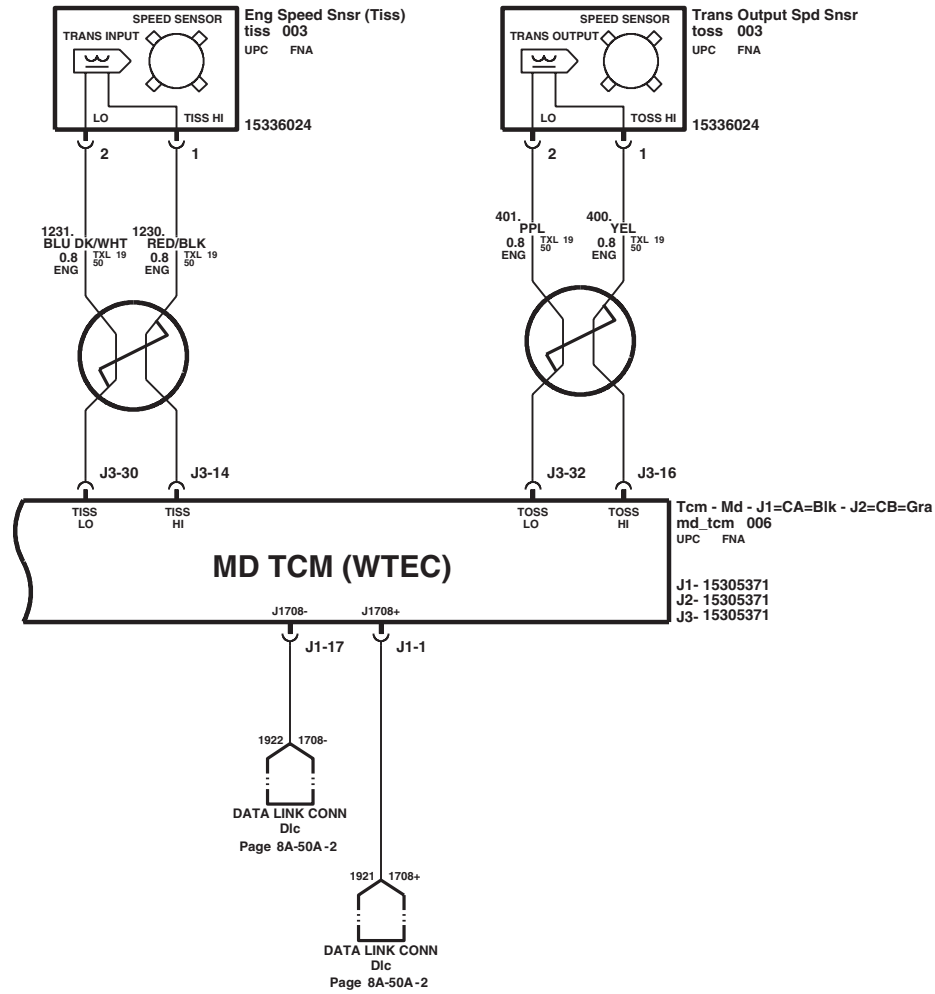


2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE **D-202**

Automatic Transmission – TCM MD Trans (LG4-'03-'04) 7.8L-Diesel/Duramax

03 560 000	TY	PILOT - INITIAL CREATION	25AU00	001
03 560 760	LR	Remove 420 & 2657 Signals to TCM	25AU00	001
03 560 839	TY	CONNECTOR UPDATE	21DE00	001
03 560 1055	LR	PTO Update	18JL01	001
03 560 1109	JG	Double Crimp Update	28SE01	001



MD Trans (LG4)
 2003 M. D. C Series 03 X &MWF&LG4
 Panel Set: 3 schematic sheet1

OBJECT ID
h22027b

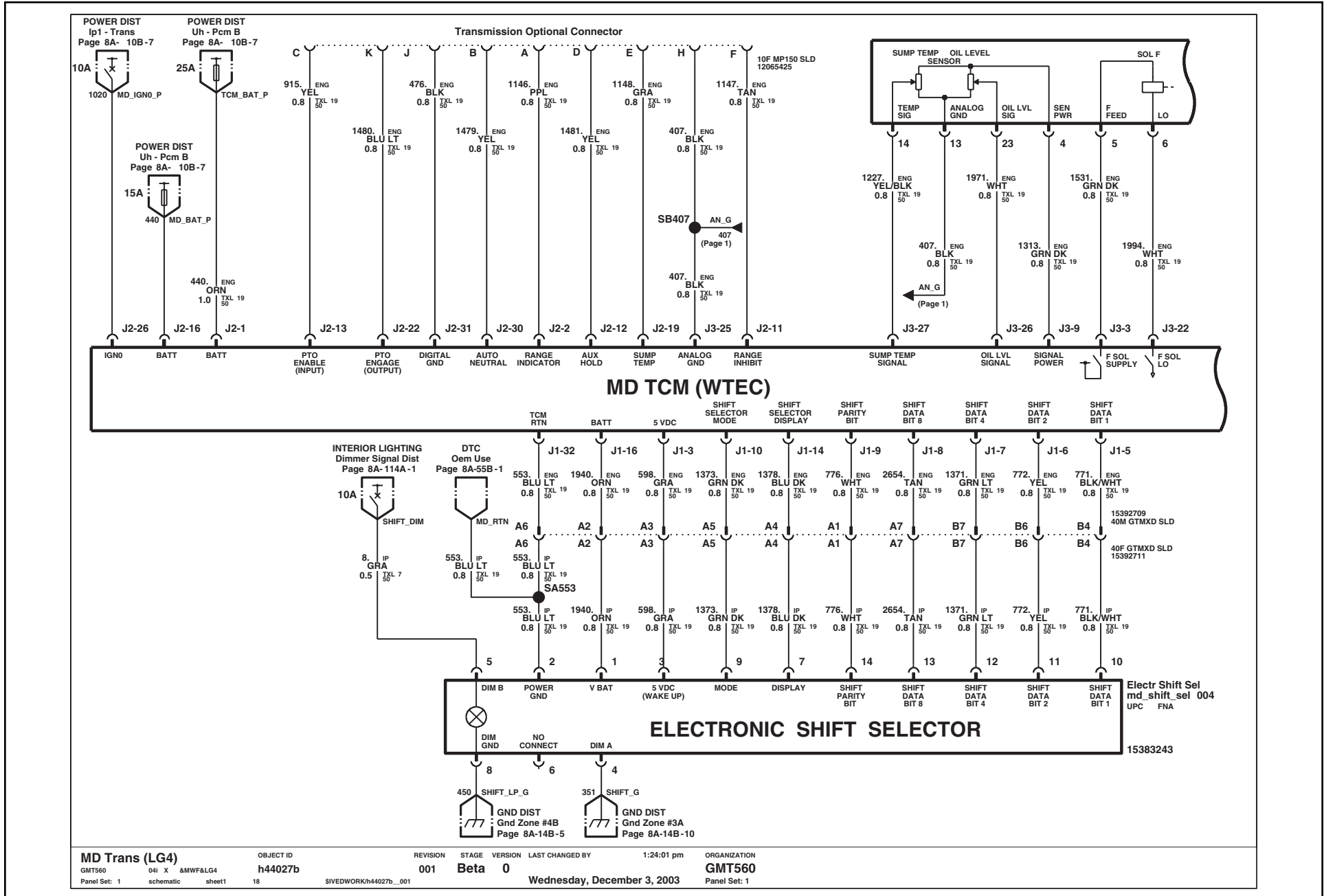
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008 Pilot B
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8:31:28 am

ORGANIZATION
2003 Medium Duty C Series
 Panel Set: 3

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

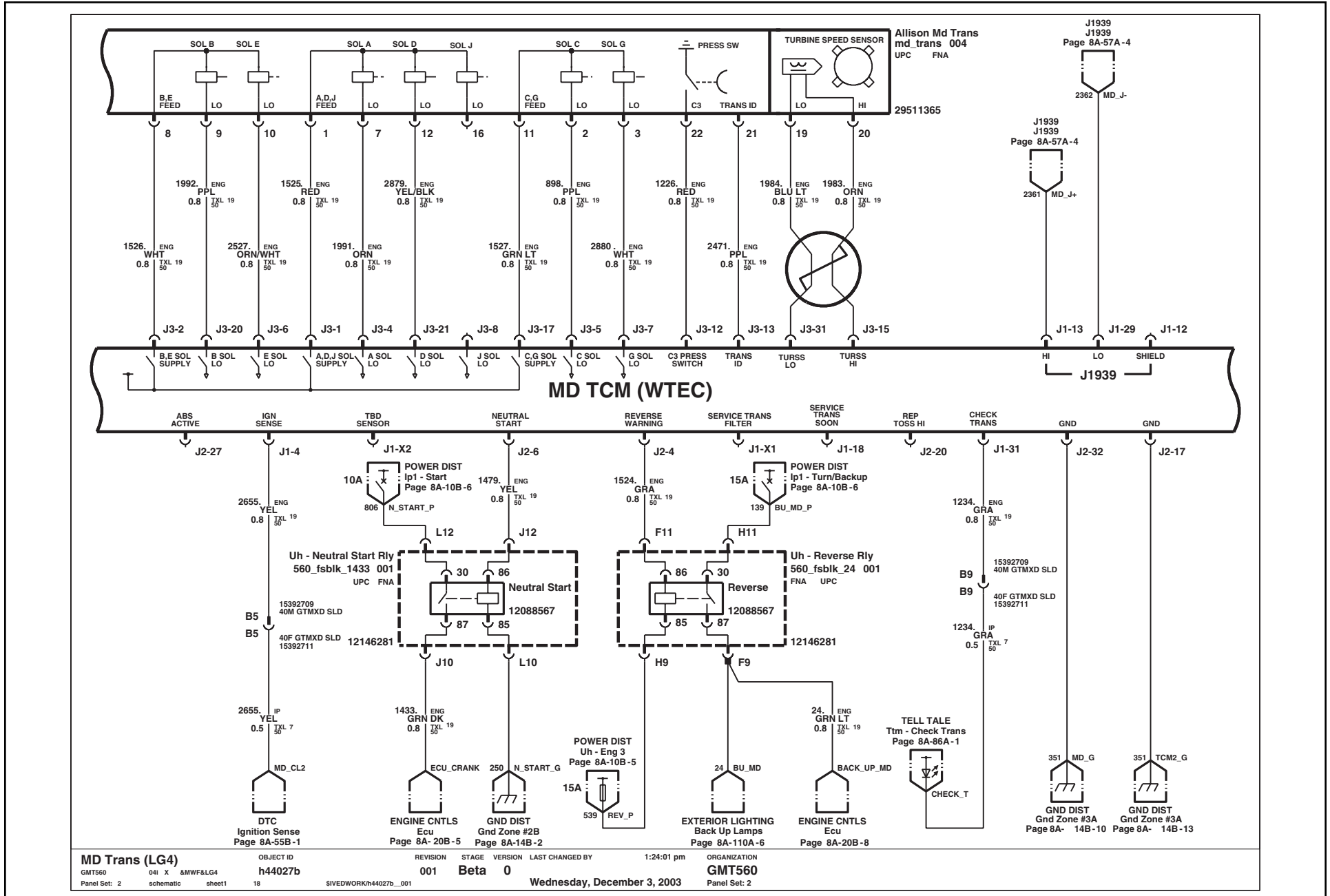
Automatic Transmission – TCM MD Trans (LG4-'04i) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE D-204

Automatic Transmission – TCM MD Trans (LG4-'04i) 7.8L-Diesel/Duramax

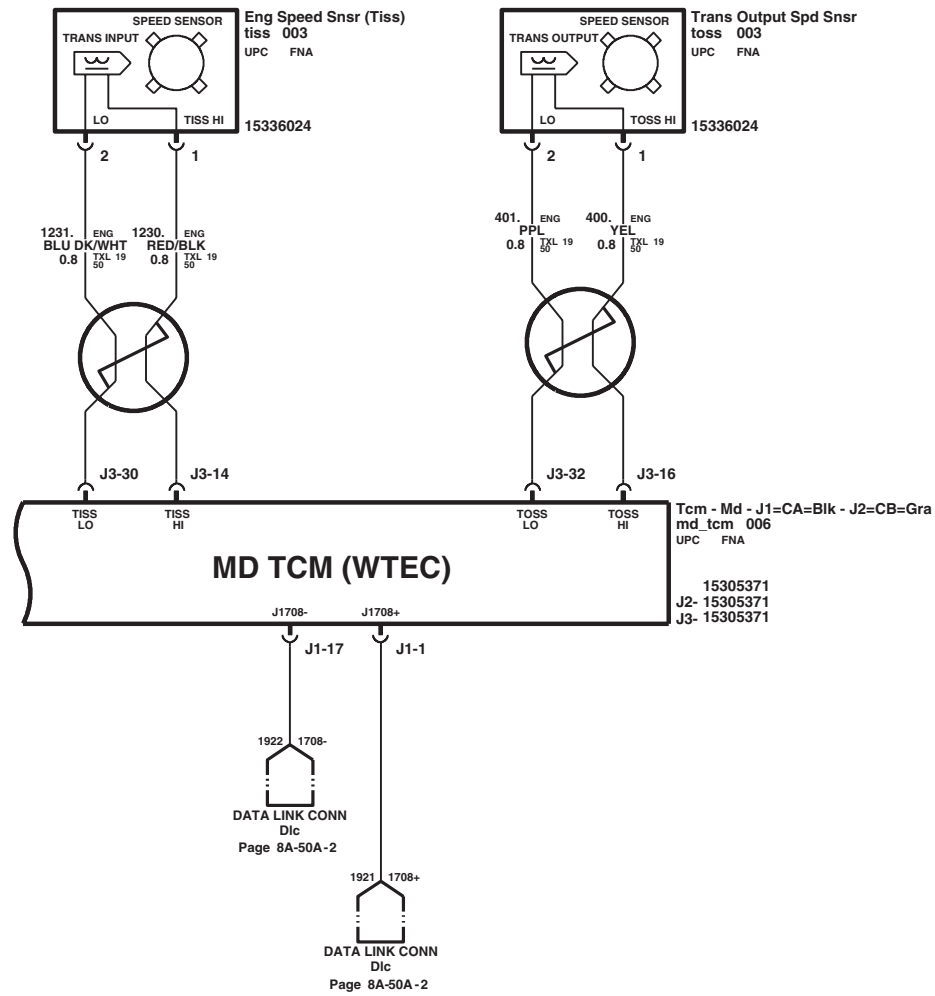


2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE **D-205**

Automatic Transmission – TCM MD Trans (LG4-'04i) 7.8L-Diesel/Duramax

04 560 000	JG	Beta - Initial Creation	02JA02	001
04i 560 1223	JG	LG4 - Fuse Rating Update	26AU02	001



MD Trans (LG4)
GMT560
Panel Set: 3

OBJECT ID
h44027b

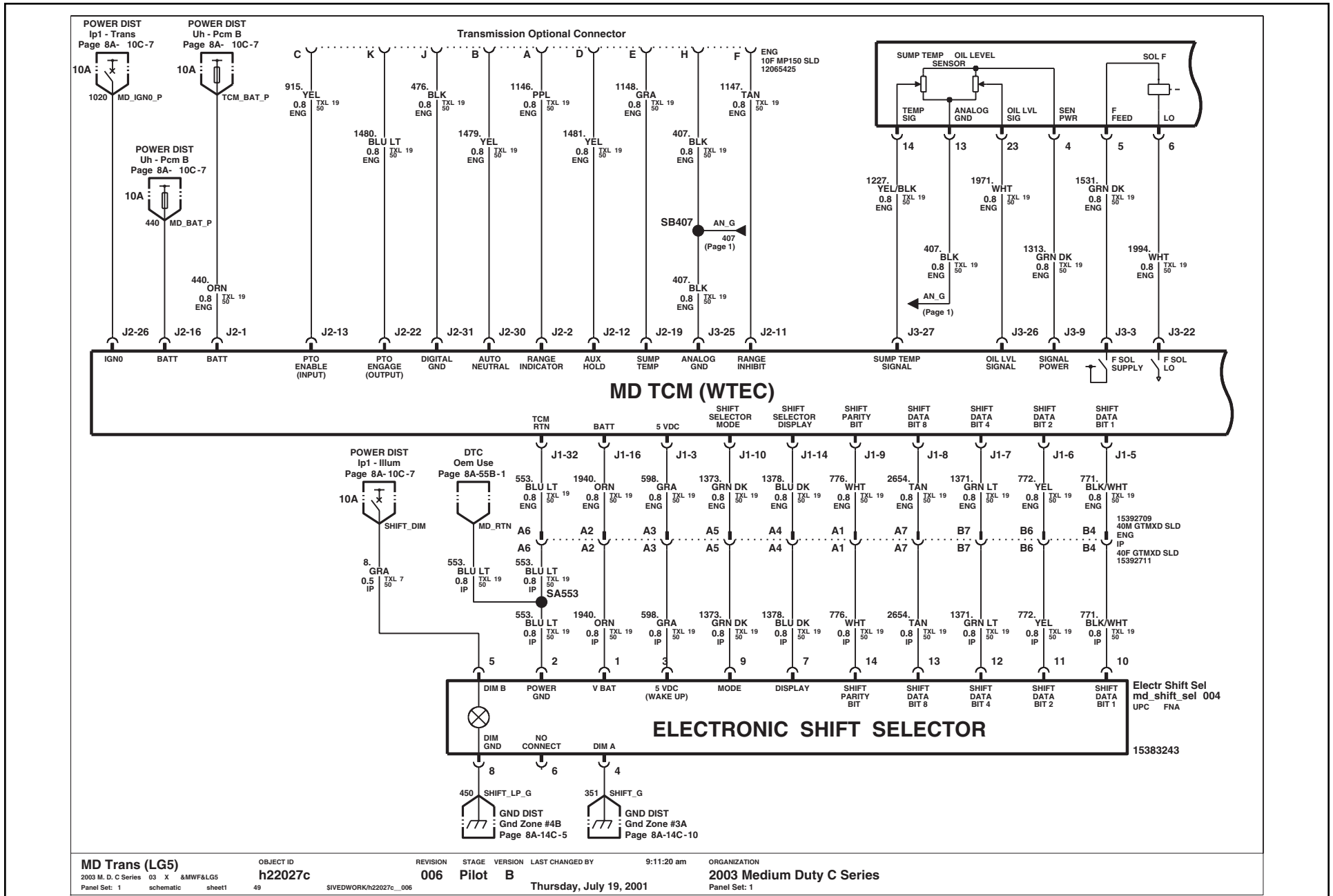
REVISION STAGE VERSION LAST CHANGED BY
001 Beta 0 Wednesday, December 3, 2003

1:24:01 pm

ORGANIZATION
GMT560
Panel Set: 3

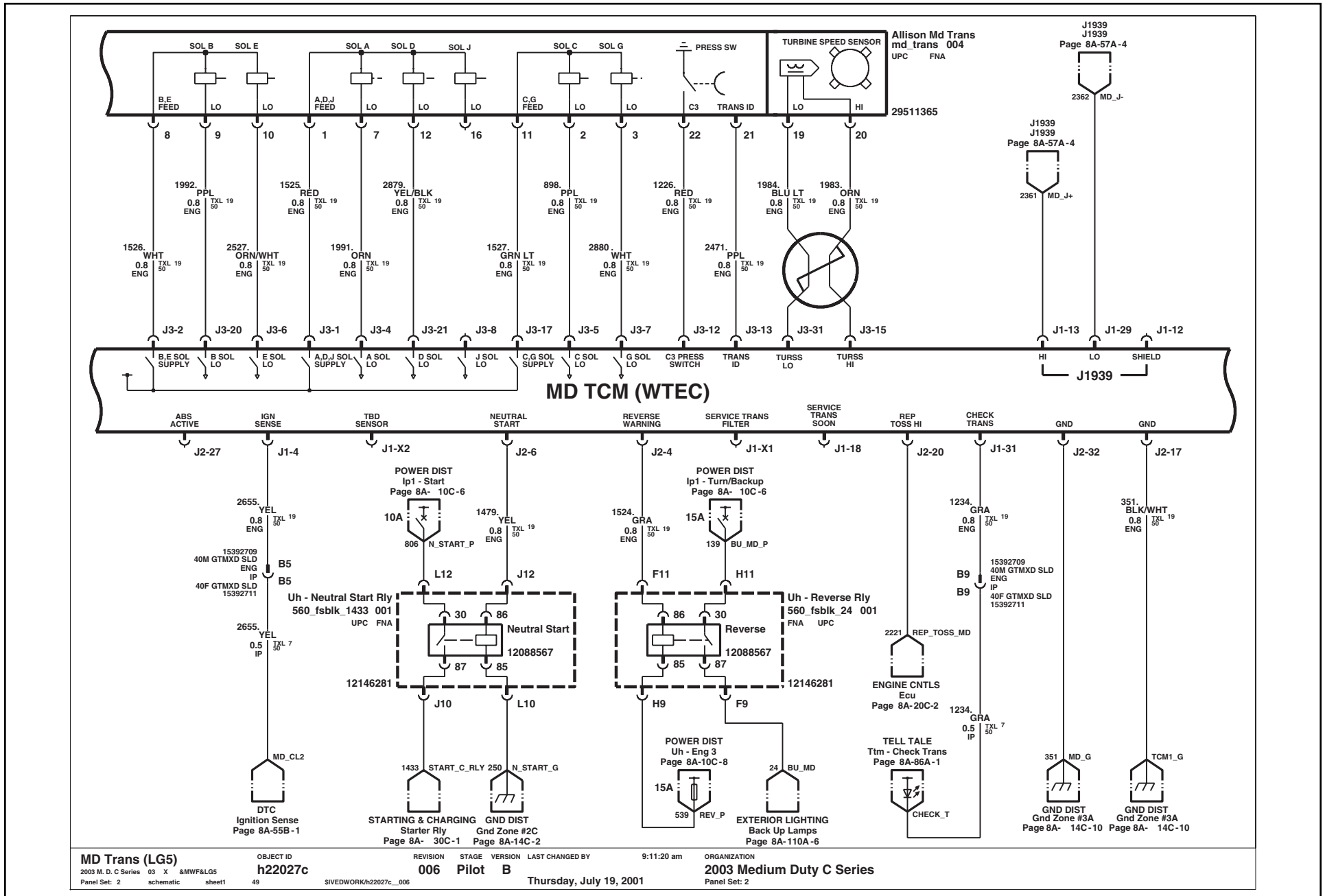
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Automatic Transmission – TCM MD Trans (LG5) 7.2L-Diesel/CAT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

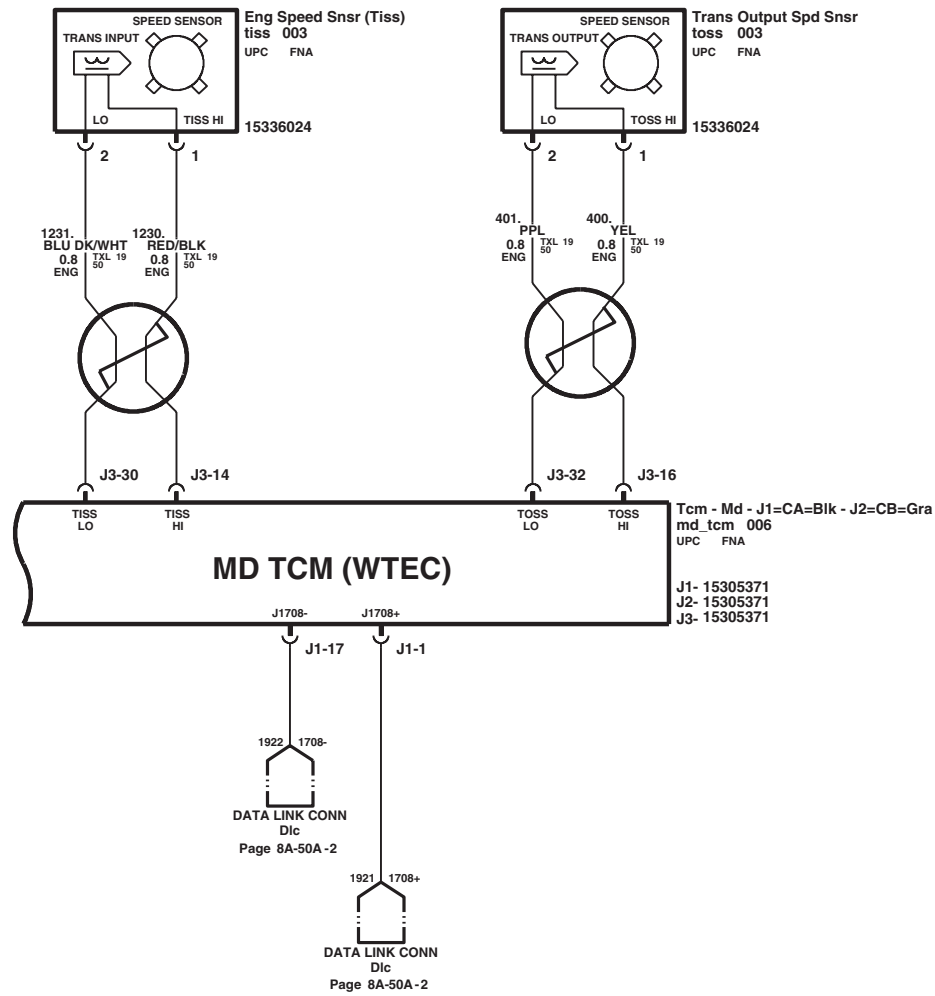
Automatic Transmission – TCM MD Trans (LG5) 7.2L-Diesel/CAT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Automatic Transmission – TCM MD Trans (LG5) 7.2L-Diesel/CAT

03 560 000	TY	PILOT - INITIAL CREATION	25AU00	001
03 560 760	LR	Remove 420 & 2657 Signals to TCM	25AU00	001
03 560 1055	LR	PTO Update	18JL01	001



MD Trans (LG5)
 2003 M. D. C Series 03 X &MWF&LG5
 Panel Set: 3 schematic sheet1

OBJECT ID
h22027c

REVISION STAGE VERSION LAST CHANGED BY
006 Pilot 0
 Thursday, July 19, 2001

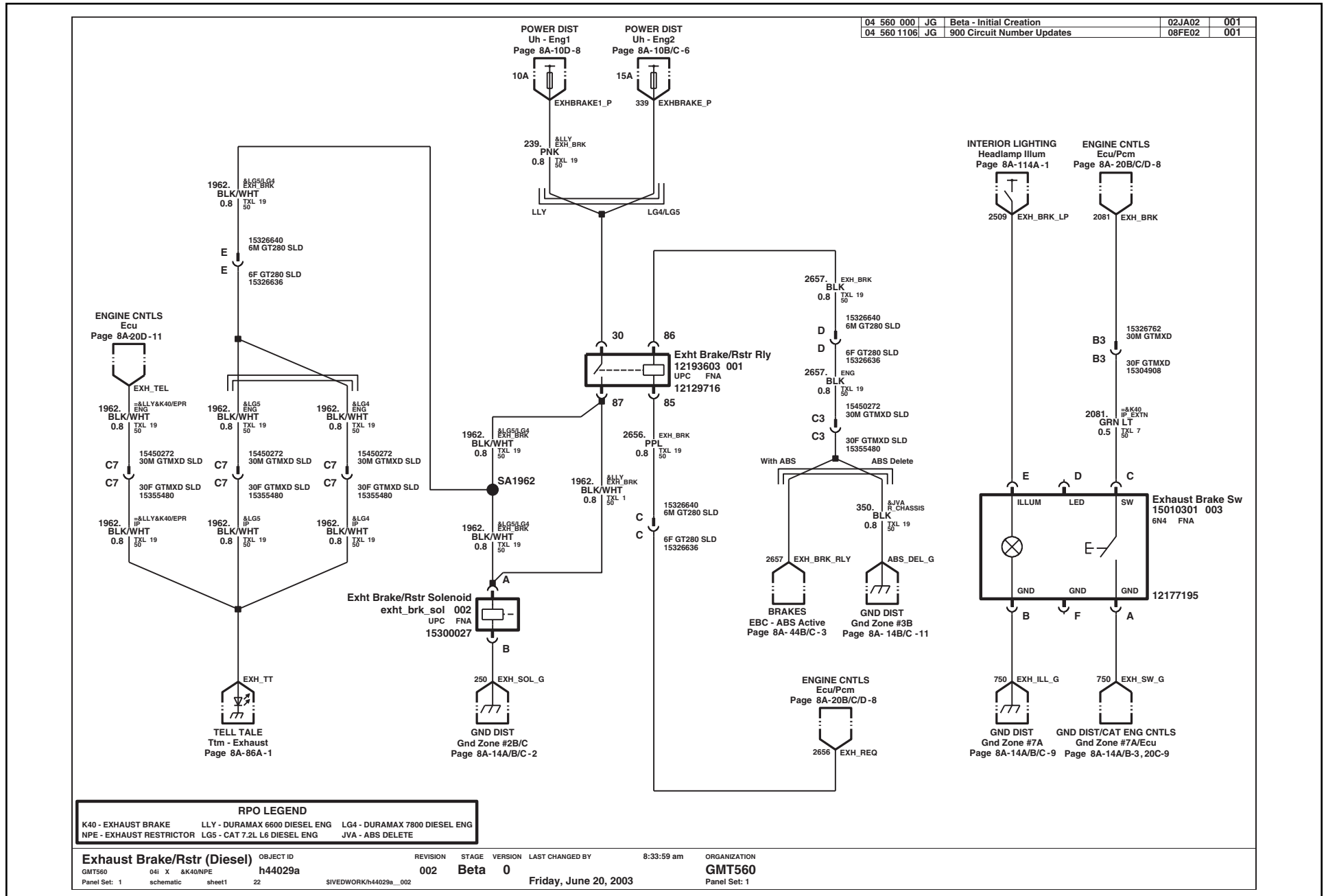
9:11:20 am

ORGANIZATION
2003 Medium Duty C Series
 Panel Set: 3

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

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Exhaust Brake/Restrictor (Diesel) – (LLY) 6.6L-Duramax – (LG4) 7.8L-Duramax – (LG5) 7.2L CAT



04 560 000	JG	Beta - Initial Creation	02JA02	001
04 560 1106	JG	900 Circuit Number Updates	08FE02	001

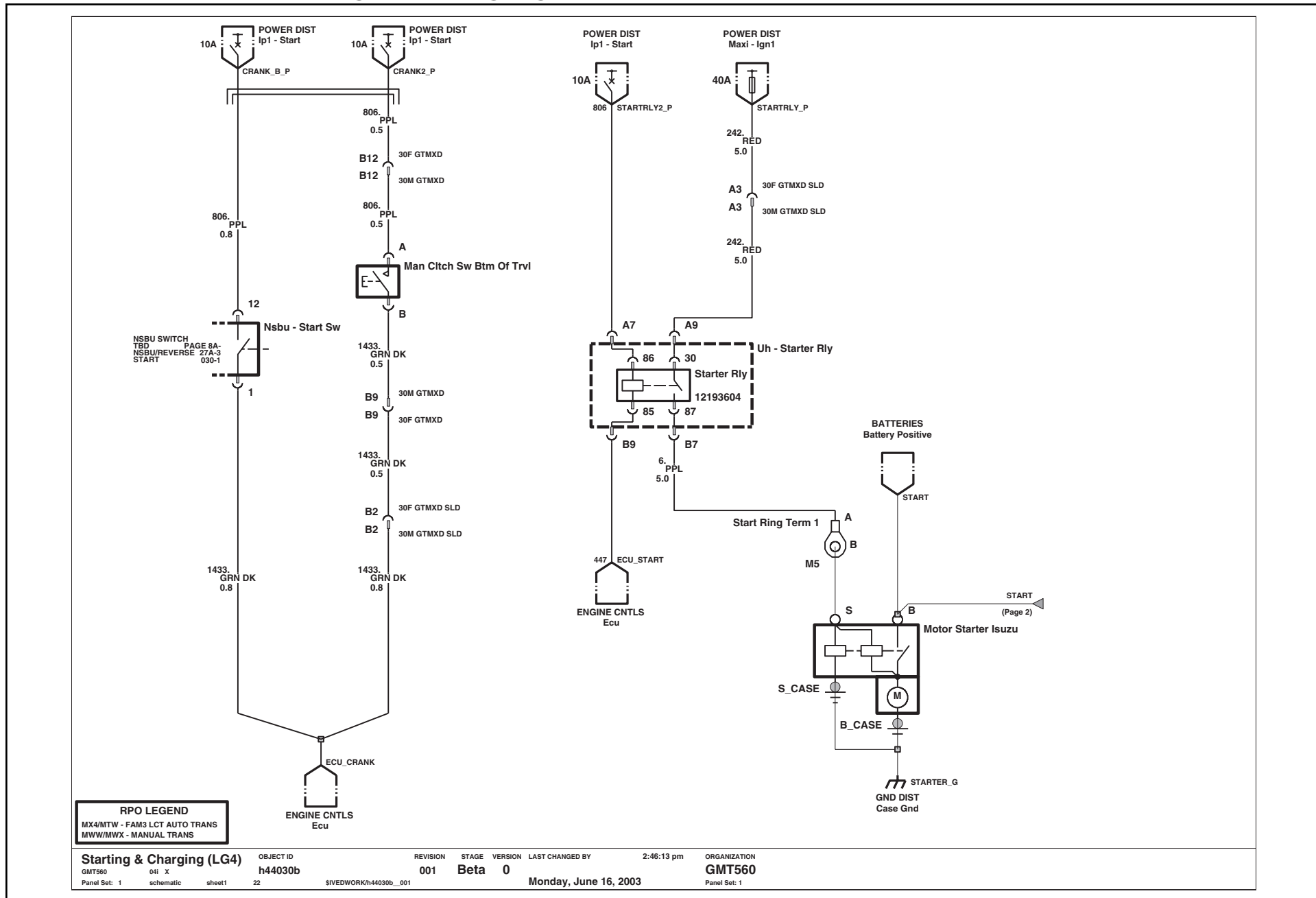
RPO LEGEND			
K40 - EXHAUST BRAKE	LLY - DURAMAX 6600 DIESEL ENG	LG4 - DURAMAX 7800 DIESEL ENG	
NPE - EXHAUST RESTRICTOR	LG5 - CAT 7.2L DIESEL ENG	JVA - ABS DELETE	

Exhaust Brake/Rstr (Diesel) GMT560 Panel Set: 1	OBJECT ID h44029a sheet1 22	REVISION 002 STAGE Beta VERSION 0 LAST CHANGED BY Friday, June 20, 2003	8:33:59 am ORGANIZATION GMT560 Panel Set: 1
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2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE D-210

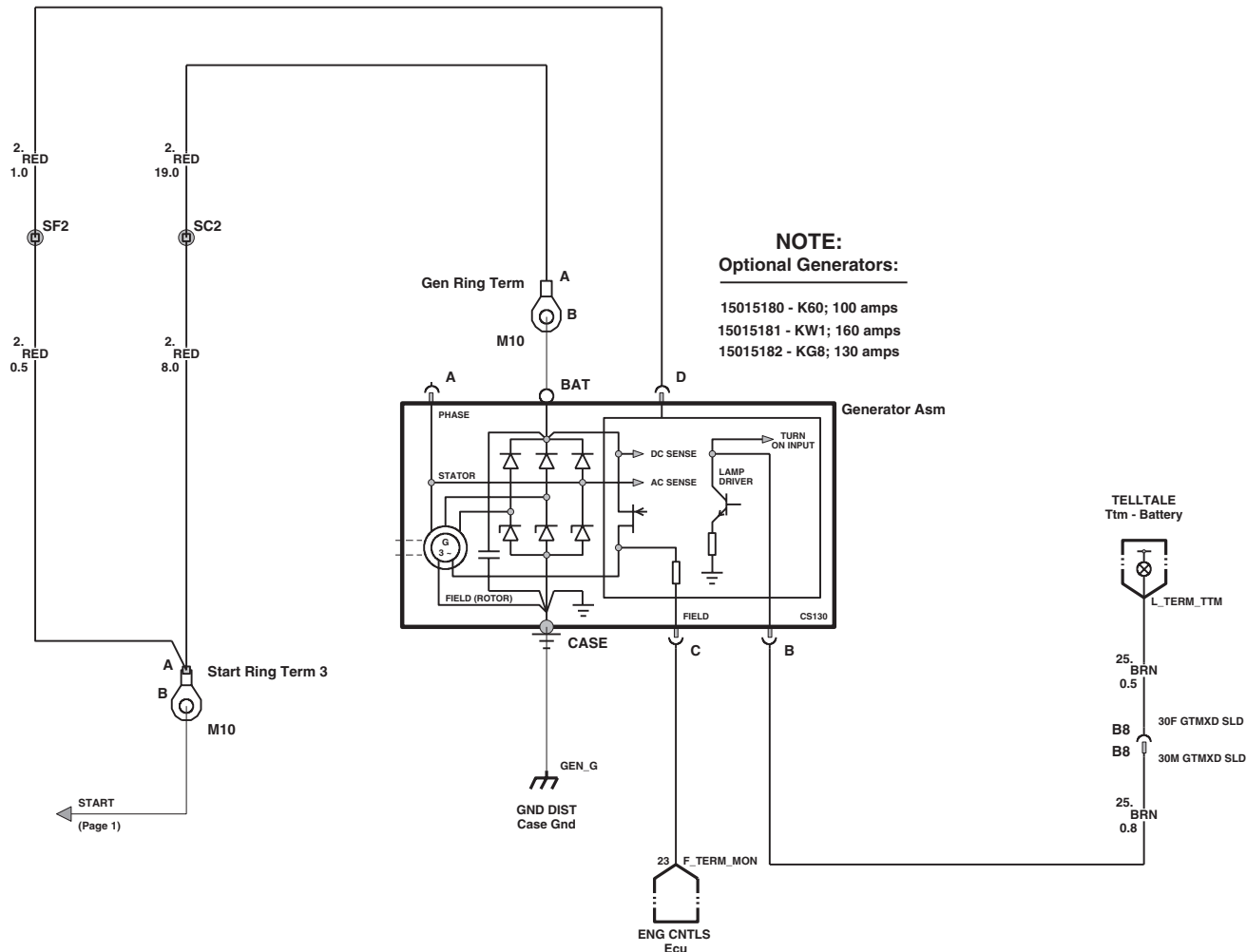
Starting & Charging – (LG4-'04i) 7.8L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Starting & Charging — (LG4-'04i) 7.8L-Diesel/Duramax

04i 560 000 JG Beta - Initial Creation 06MR02



Starting & Charging (LG4)

OBJECT ID
 h44030b

REVISION STAGE VERSION LAST CHANGED BY
 001 Beta 0

2:46:13 pm

ORGANIZATION
 GMT560

GMT560

D41 X

22

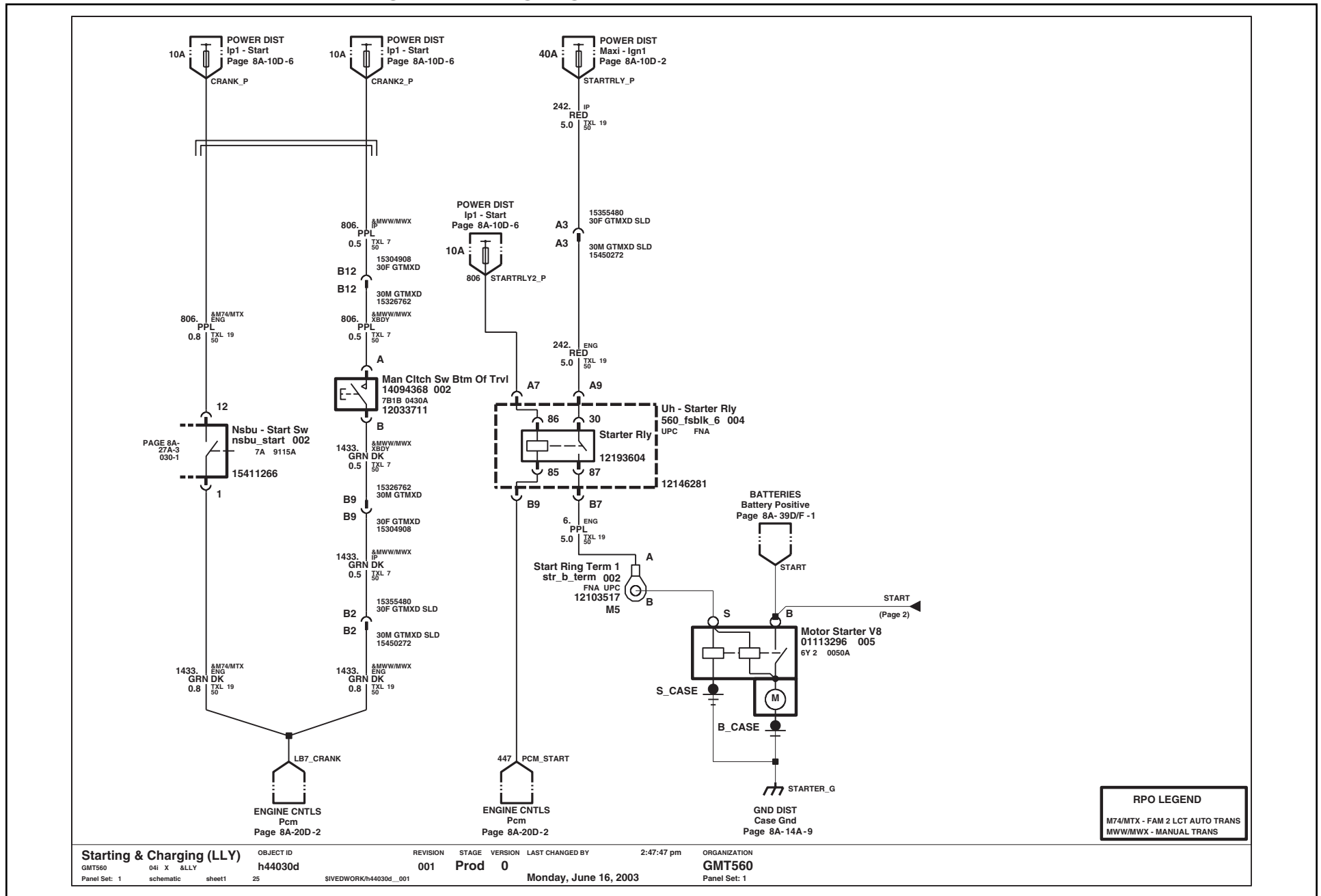
SIVEDWORK/h44030b_001

Monday, June 16, 2003

Panel Set: 2

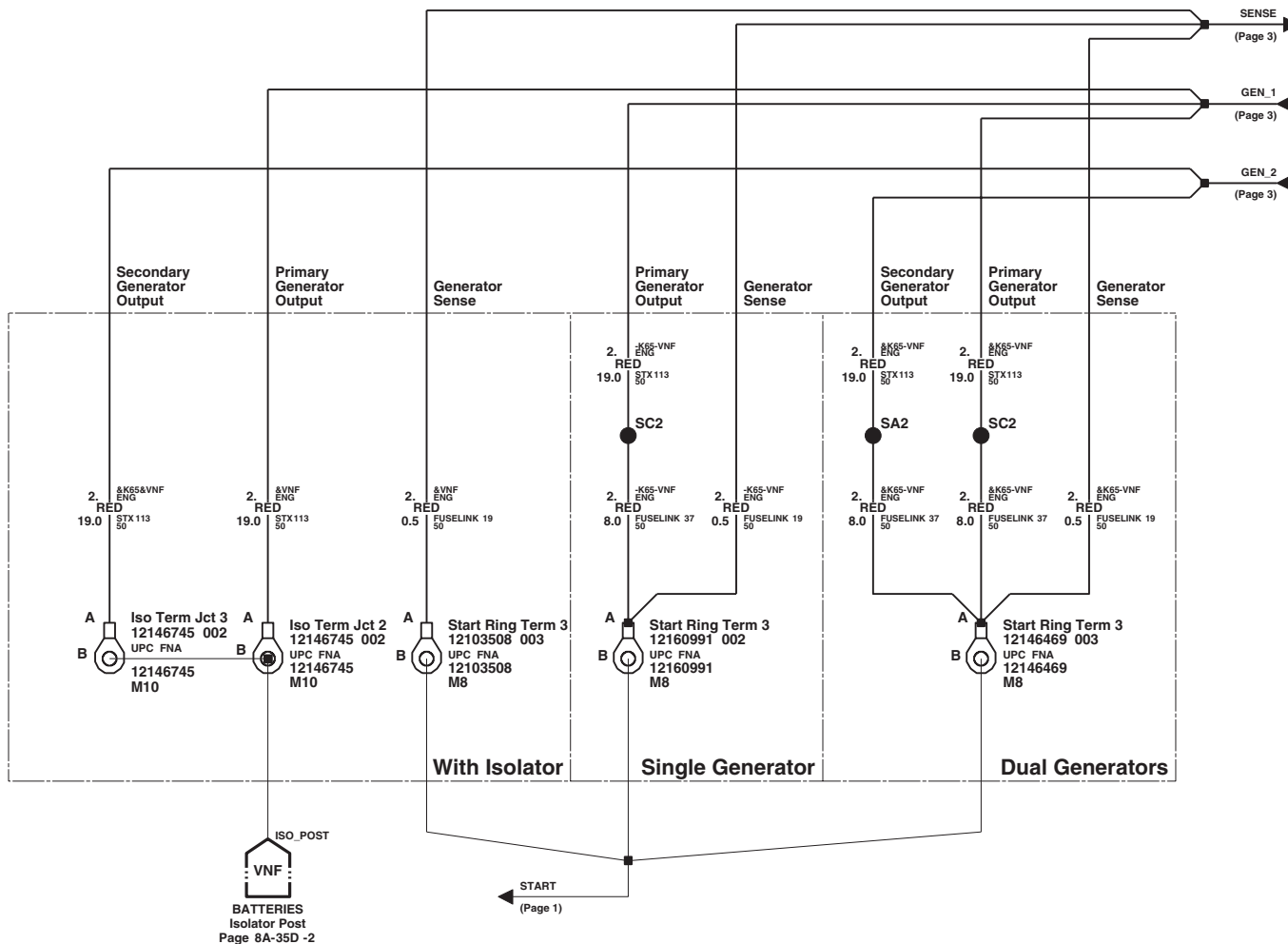
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Starting & Charging – (LLY) 6.6L-Diesel/Duramax



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

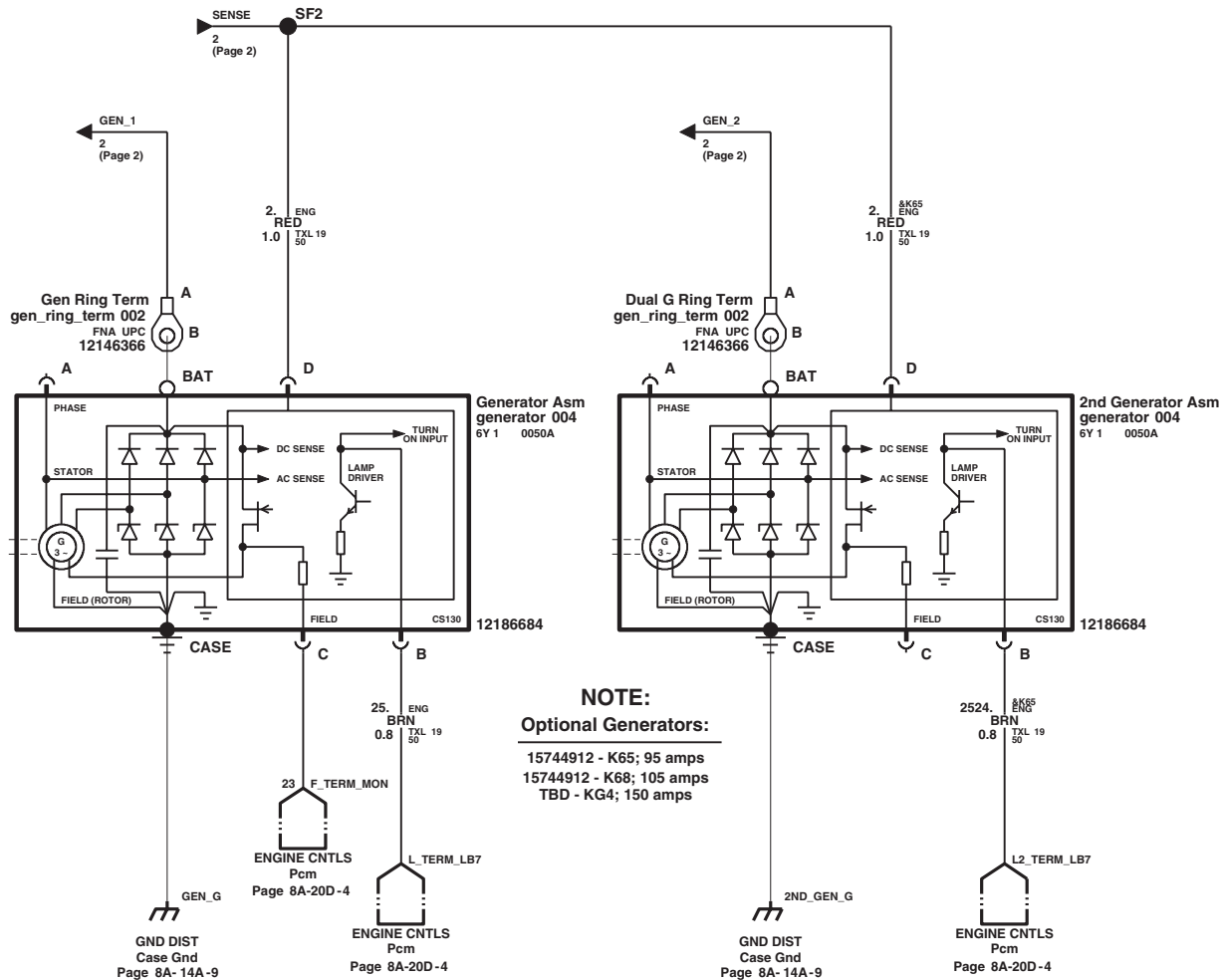
Starting & Charging – (LLY) 6.6L-Diesel/Duramax



Starting & Charging – (LLY) 6.6L-Diesel/Duramax

04i 560 000 JG Beta - Initial Creation

06MR02 001

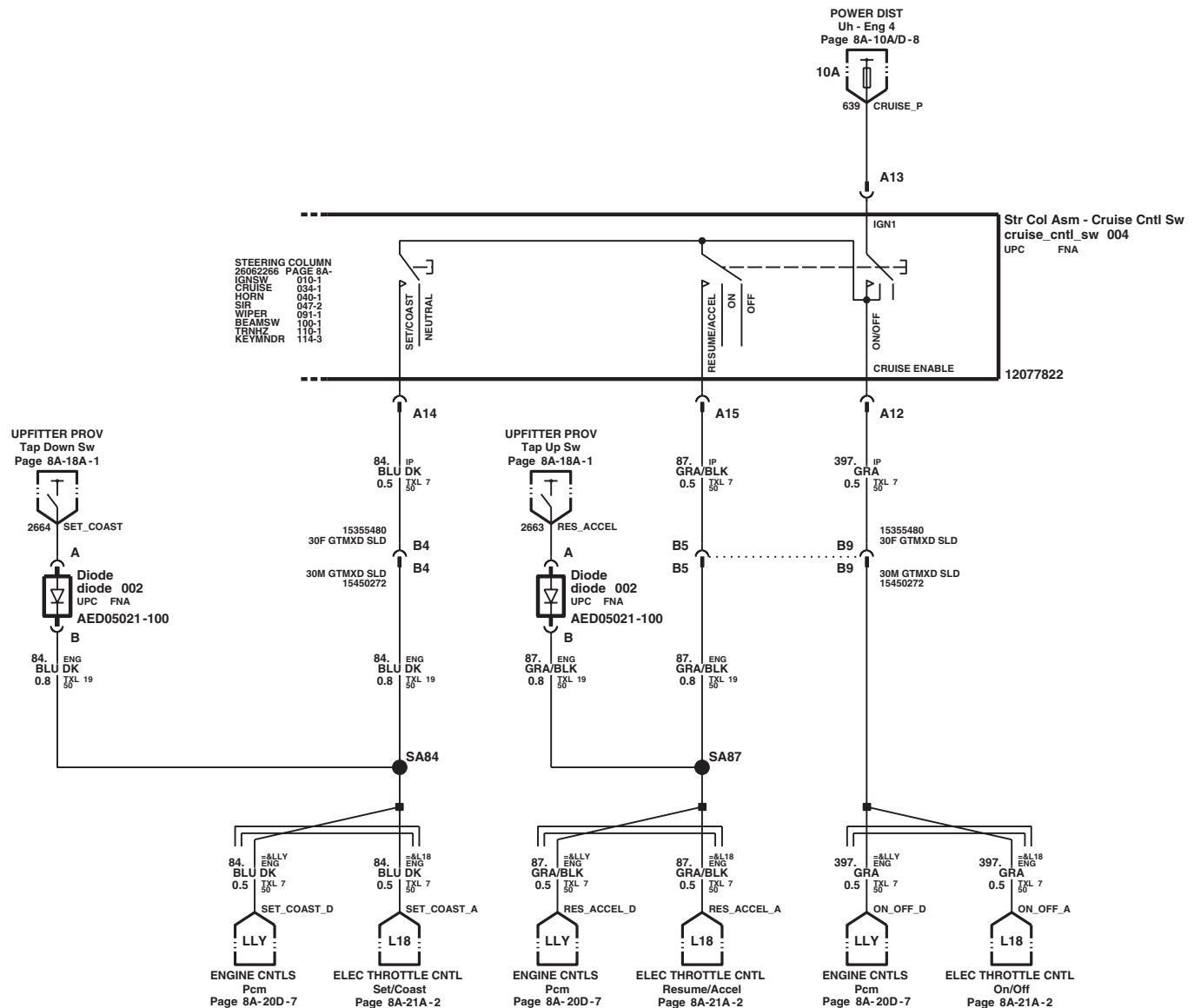


2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

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Cruise Control – (L18) 8.1L-Gas/NAPT – (LLY) 6.6L-Diesel/Duramax

03 560 000	TY	PILOT B - INITIAL CREATION	27NO00	001
03 560 818	JG	REPLACED CBs WITH MINI-FUSES.	27NO00	001

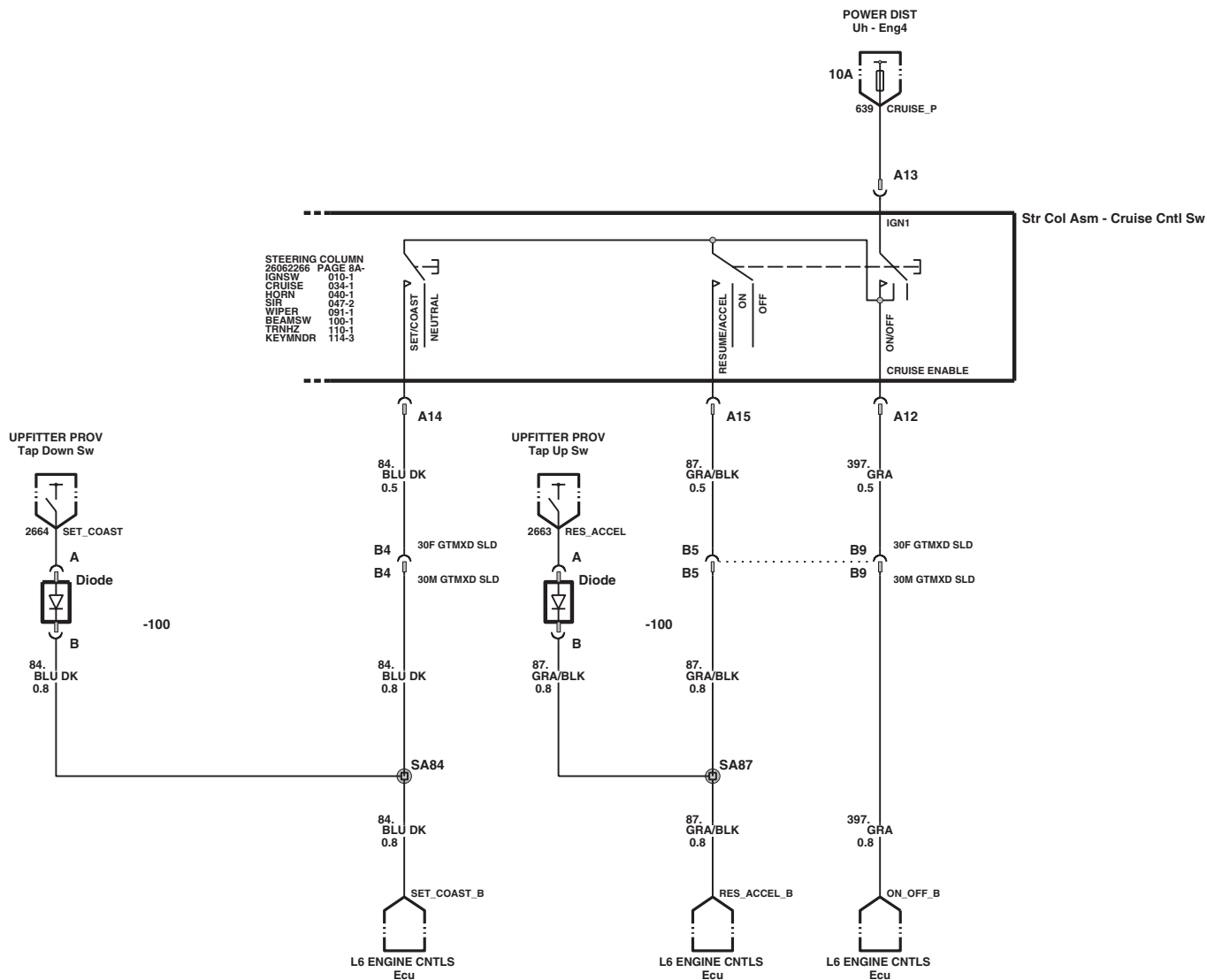


RPO LEGEND	
L87	- DURAMAX 6600 DIESEL ENG
L18	- GMPT 8.1L V8 GAS ENG

Cruise Control (L18/LLY)		OBJECT ID	REVISION	STAGE	VERSION	LAST CHANGED BY	ORGANIZATION
GMT560		h44034a	001	Pilot	B	2:32:59 pm	GMT560
Panel Set: 1	schematic	sheet1	7	SIVEDWORK/h44034a...001		Tuesday, June 17, 2003	Panel Set: 1

Cruise Control – (LG4-'04i) 7.8L-Diesel/Duramax

04 560 000 JG BETA - INITIAL CREATION 26AU01



Cruise Control (LG4)

GMT560 DH1 X
Panel Set: 1 schematic sheet1

OBJECT ID
h44034b

11

SIVEDWORK/h44034b_001

REVISION STAGE VERSION
001 Beta 0

Monday, June 16, 2003

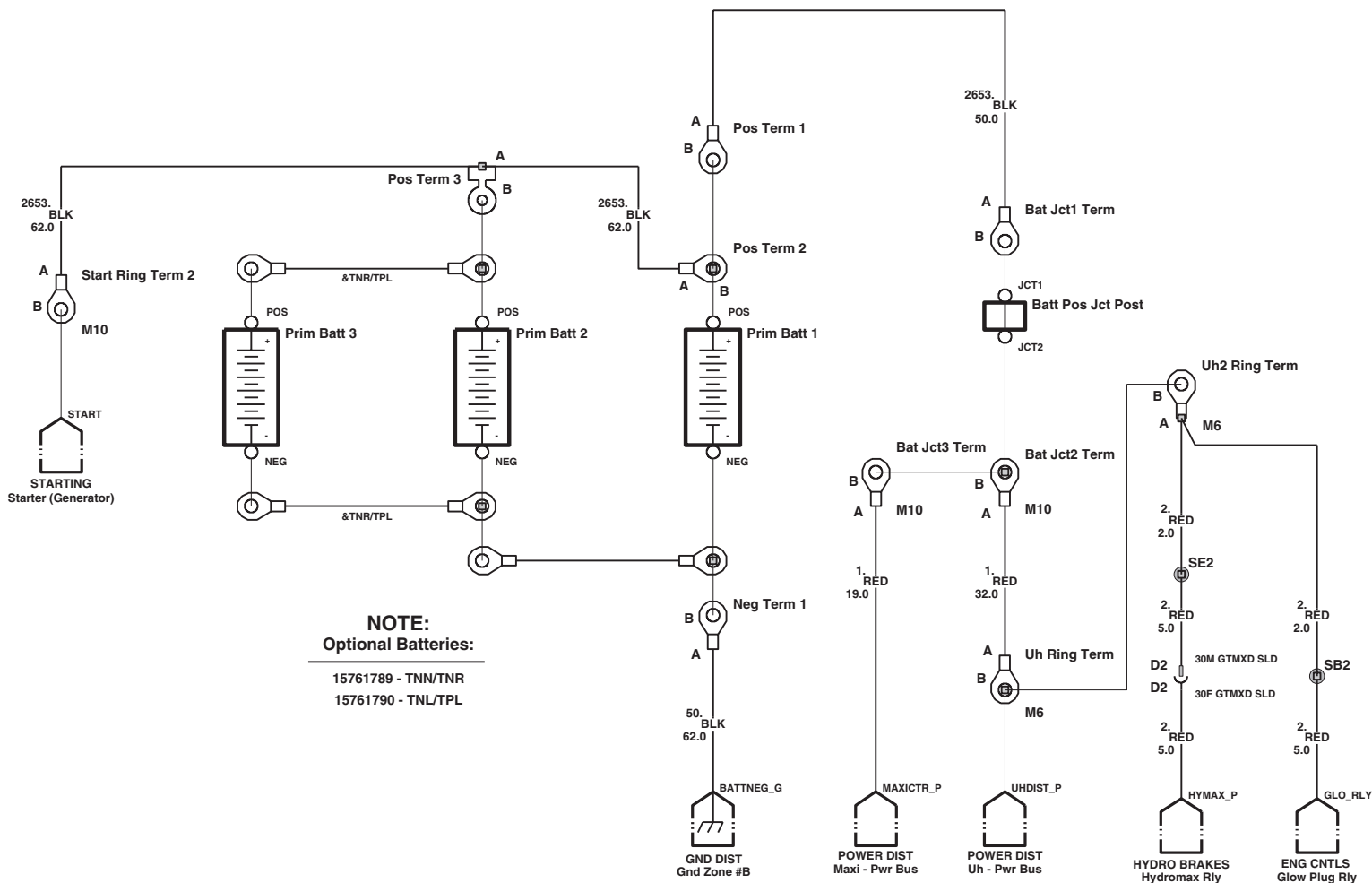
2:48:42 pm

ORGANIZATION
GMT560

Panel Set: 1

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Batteries — (LG4-'04i) 7.8L-Diesel/Duramax



NOTE:
Optional Batteries:

- 15761789 - TNN/TNR
- 15761790 - TNL/TPL

RPO LEGEND
 TNN/TNL - DUAL BATTERIES TOP POST
 TNR/TPL - TRIPLE BATTERIES TOP POST
 JE3 - HYDRAULIC BRAKES
 HYDROMAX - HYDROMAX

Batteries (LG4)

GMT560 041 X
 Panel Set: 1 schematic sheet1 1

OBJECT ID
 h44035b

SIVEDWORK/h44035b_001

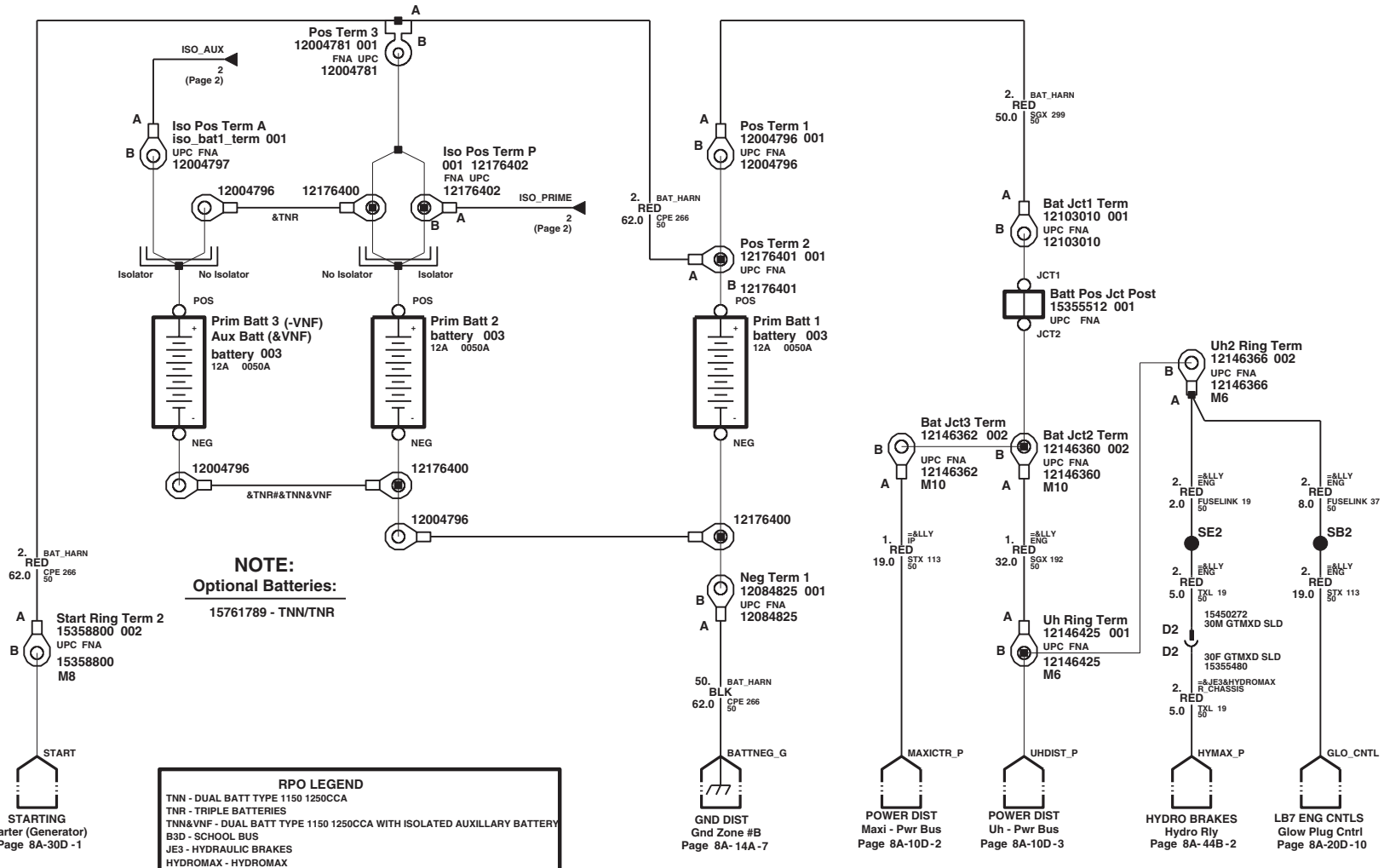
REVISION STAGE VERSION LAST CHANGED BY
 001 Prod 0

Monday, June 16, 2003

2:52:58 pm

ORGANIZATION
 GMT560
 Panel Set: 1

Batteries – (LLY) 6.6L-Diesel/Duramax



Batteries (LLY)

GMT560 03 X 8LLY-83D-ANC
Panel Set: 1 schematic sheet1

OBJECT ID
h44035d

REVISION STAGE VERSION LAST CHANGED BY
001 Prod 0

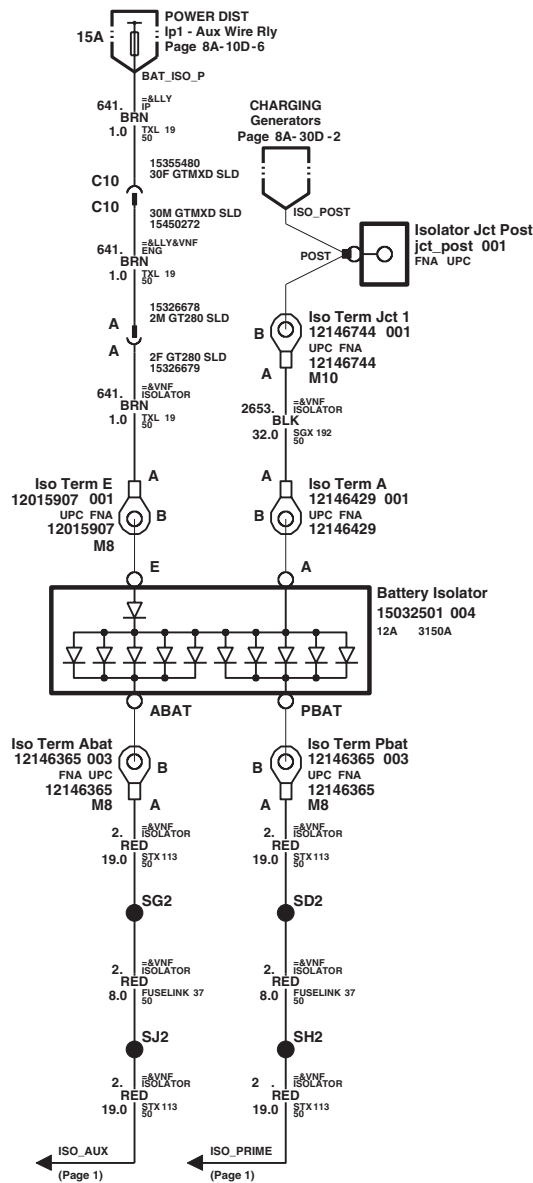
2:58:12 pm
Monday, June 16, 2003

ORGANIZATION
GMT560
Panel Set: 1

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Batteries – (LLY) 6.6L-Diesel/Duramax

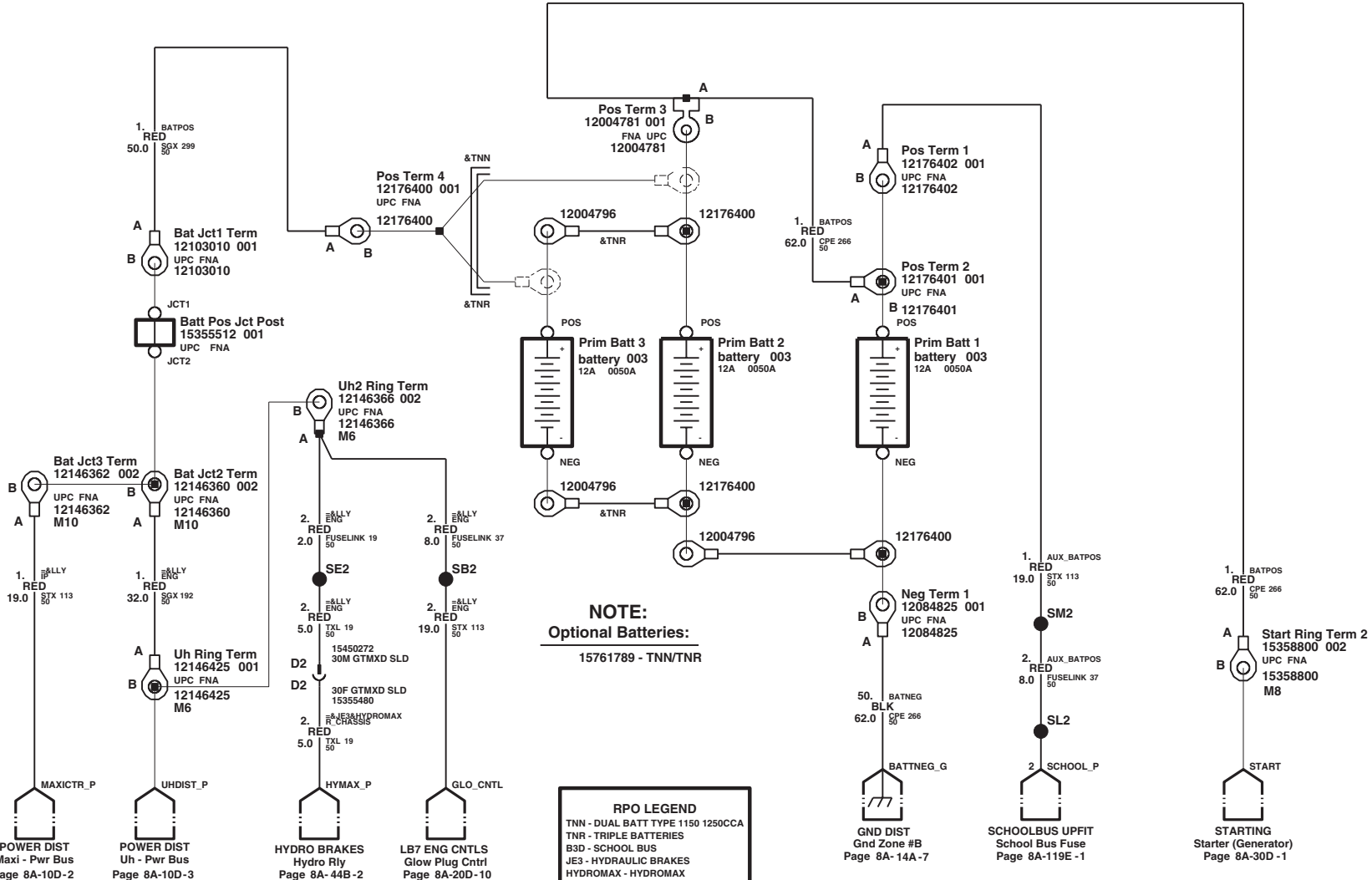
03 560 000	TY	PILOT B - INITIAL CREATION	27NO00	001
03 560 981	JG	Add Family 2 School Bus Content	03AP01	001
03 560 1142	JG	Battery Cable Updates	30NO01	001
03 560 000	JG	Production - Split from h22030	22FE02	001
03 560 1228	JG	Added RPO ANC	07MY02	001



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Batteries Bus – (LLY) 6.6L-Diesel/Duramax

03 560 000	TY	PILOT B - INITIAL CREATION	27NO00	001
03 560 981	JG	Add Family 2 School Bus Content	03AP01	001
03 560 1142	JG	Battery Cable Updates	30NO01	001
03 560 000	JG	Production - Split from h22030	22FE02	001
03 560 1228	JG	Added RPO ANC	07MY02	001



Batteries (LLY Bus)
GMT560
03 X &LLY&B3D/ANC
Panel Set: 1 schematic sheet1 11

OBJECT ID
h44035f

REVISION STAGE VERSION
001 Prod 0

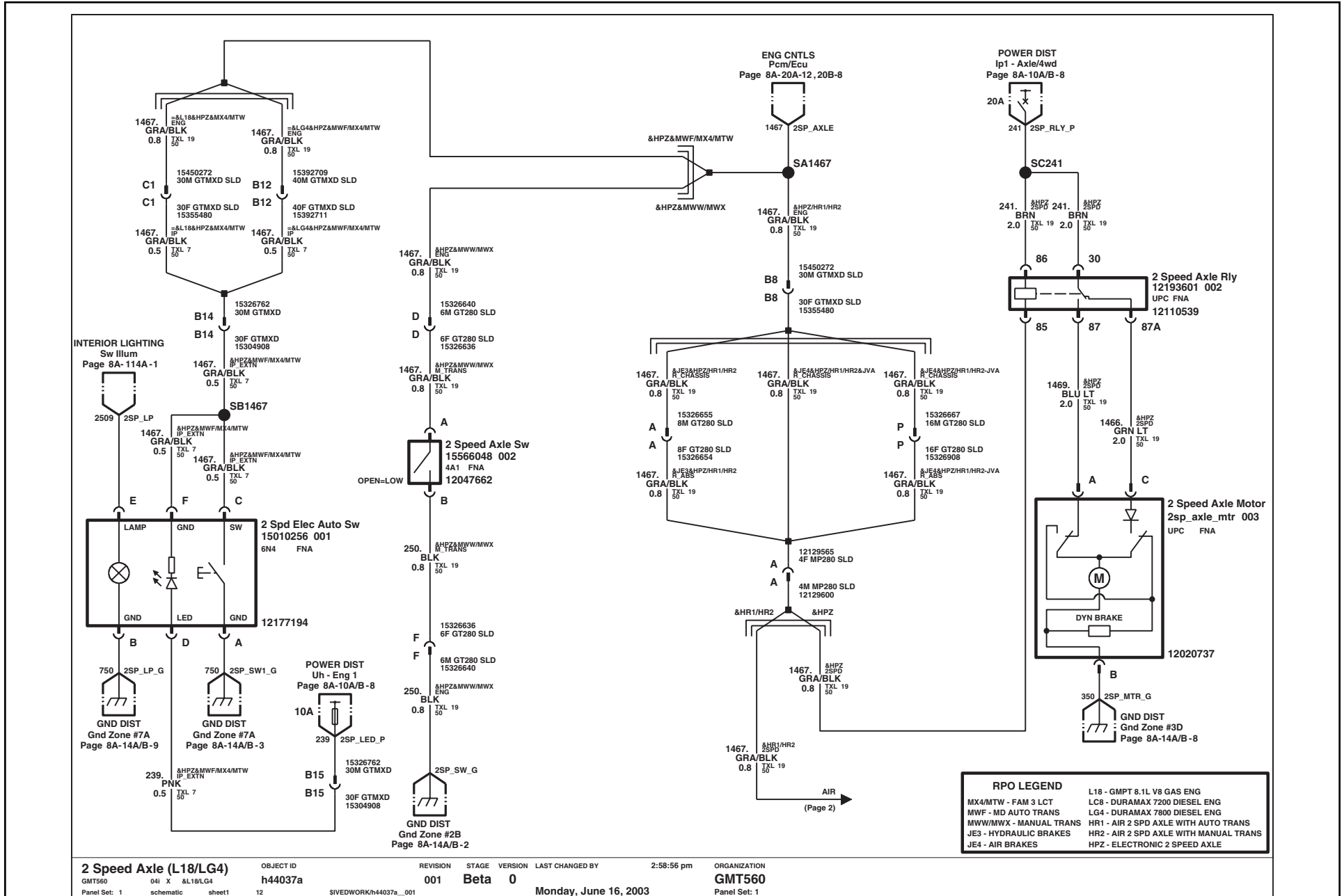
LAST CHANGED BY
2:57:15 pm
Monday, June 16, 2003

ORGANIZATION
GMT560
Panel Set: 1

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE D-221

2-Speed Axle – (L18) 8.1L-Gas/NAPT – (LG4-'04i) 7.8L-Diesel/Duramax

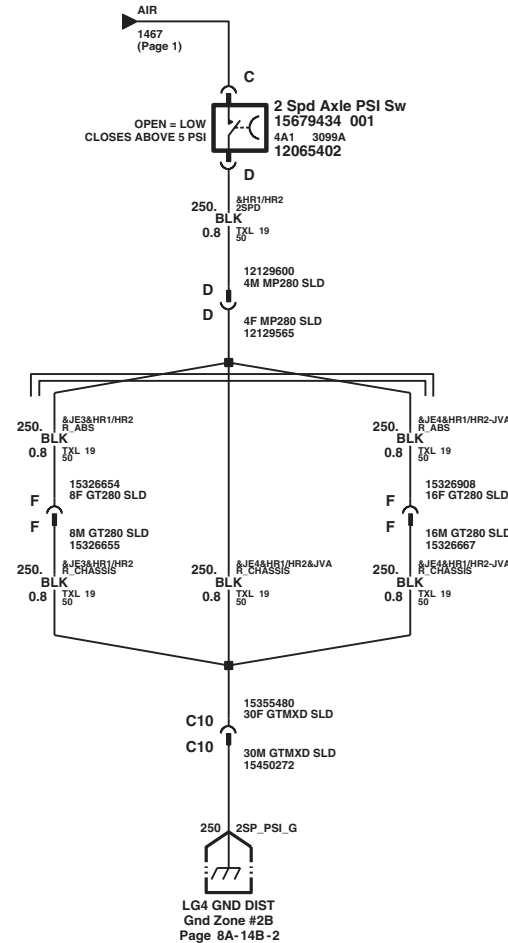


2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE **D-222**

2-Speed Axle – (L18) 8.1L-Gas/NAPT – (LG4-'04i) 7.8L-Diesel/Duramax

04 560 000	JG	Beta - Initial Creation	02JA02	001
04 560 1106	JG	900 Circuit Number Updates	08FE02	001
04 560 1228	JG	Add ABS delete option	03MY02	001



RPO LEGEND

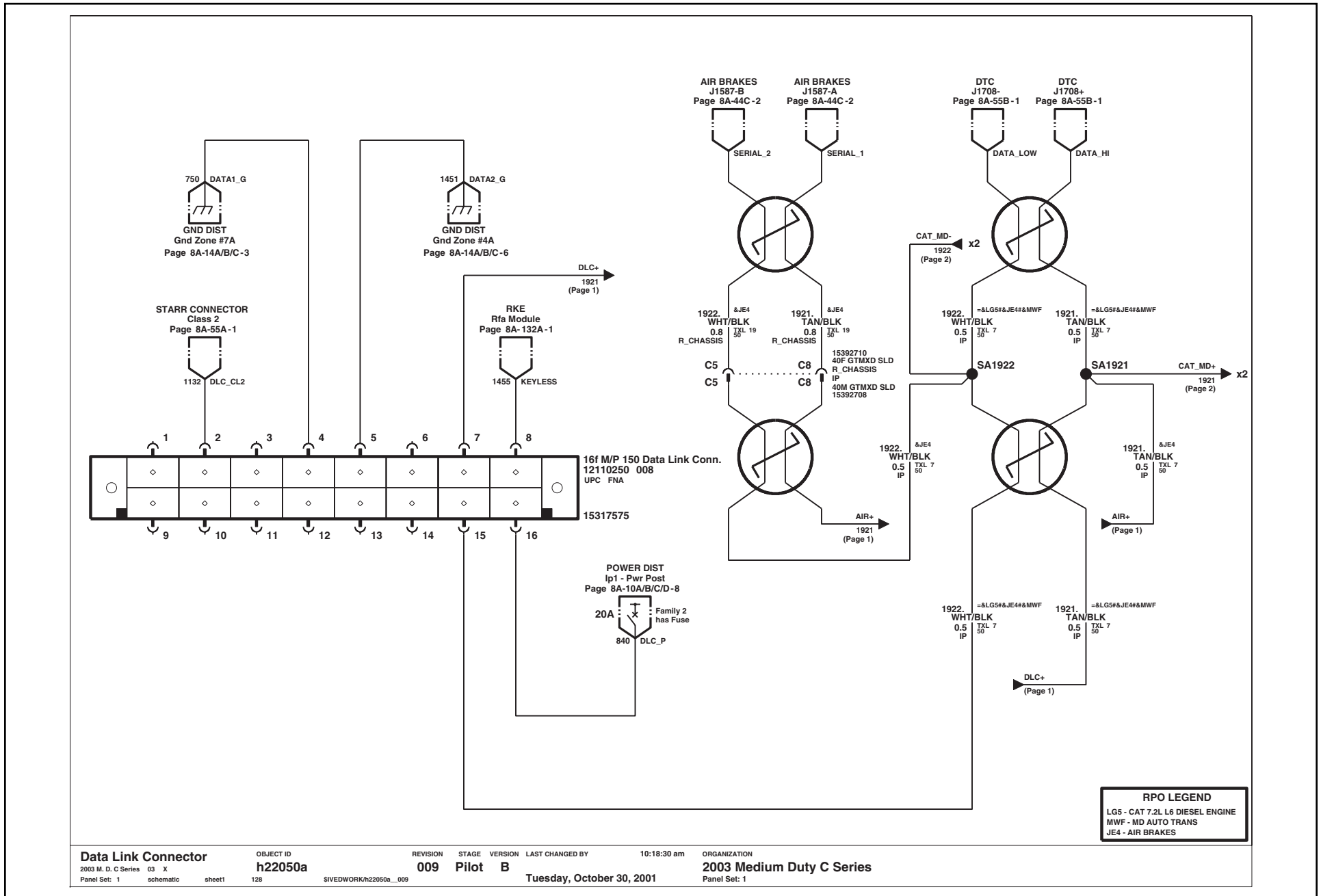
- HR1 - AIR 2 SPD AXLE WITH AUTO TRANS
- HR2 - AIR 2 SPD AXLE WITH MANUAL TRANS
- HPZ - ELECTRONIC 2 SPEED AXLE
- JE3 - HYDRAULIC BRAKES
- JE4 - AIR BRAKES

2 Speed Axle (L18/LG4)		OBJECT ID	REVISION	STAGE	VERSION	LAST CHANGED BY	2:58:56 pm	ORGANIZATION
GMT560	D41 X &L18/LG4	h44037a	001	Beta	0	Monday, June 16, 2003		GMT560
Panel Set: 2	schematic	sheet1	12	SIVEDWORK/h44037a...001				Panel Set: 2

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

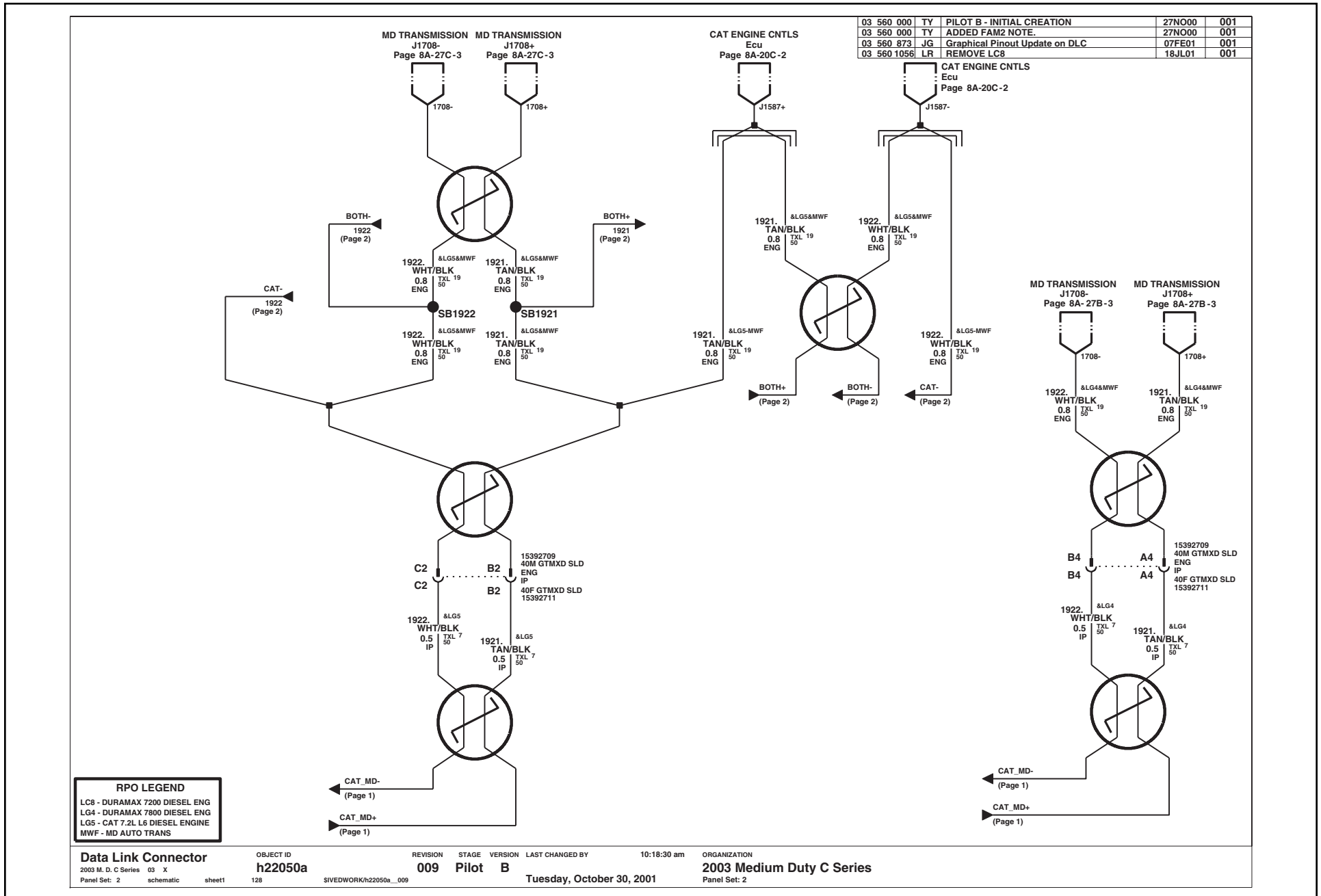
PAGE D-223

Serial Data – Diagnostic Tool Connector-'03-'04



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

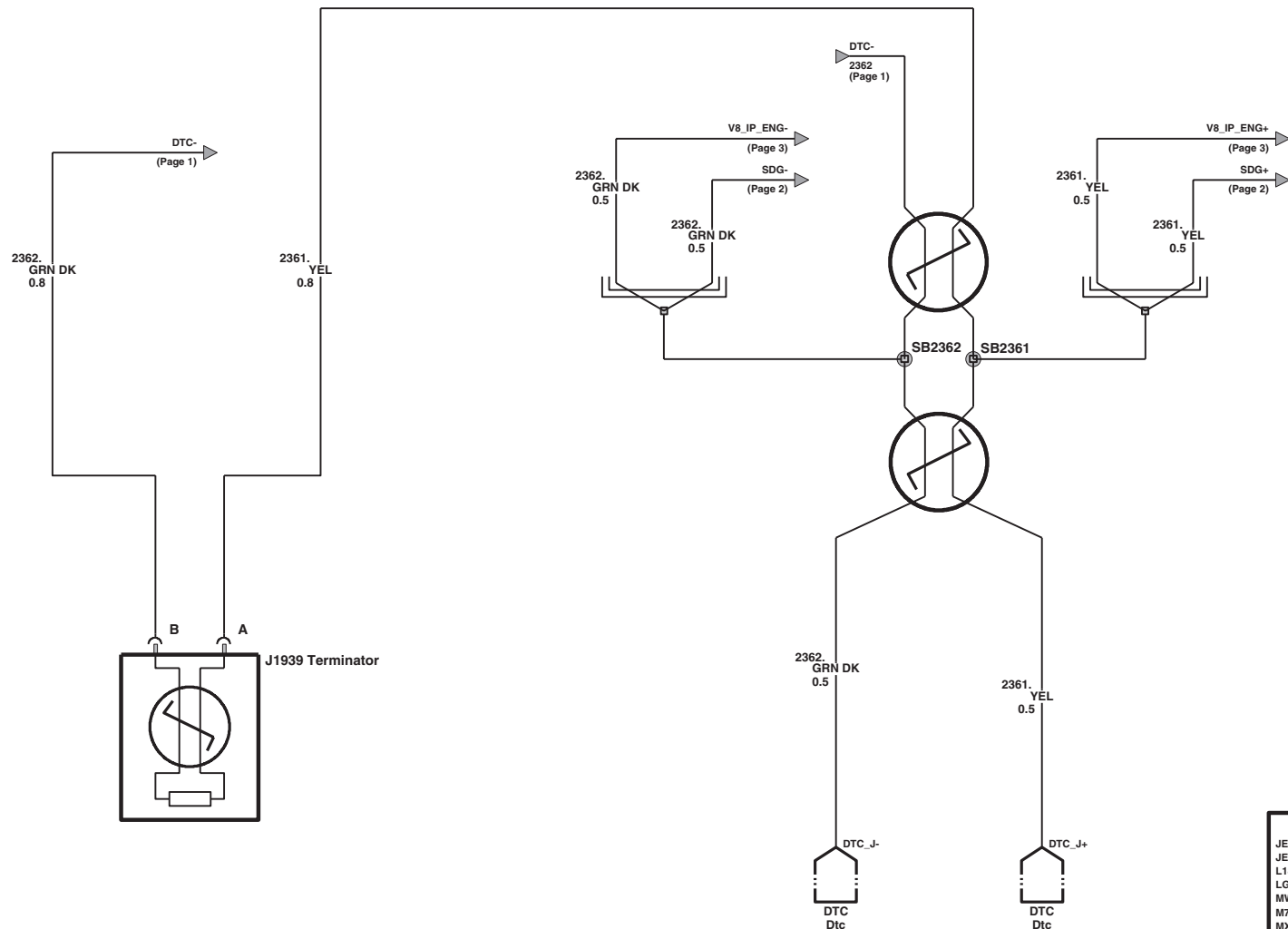
Serial Data – Diagnostic Tool Connector-'03-'04



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

PAGE **D-225**

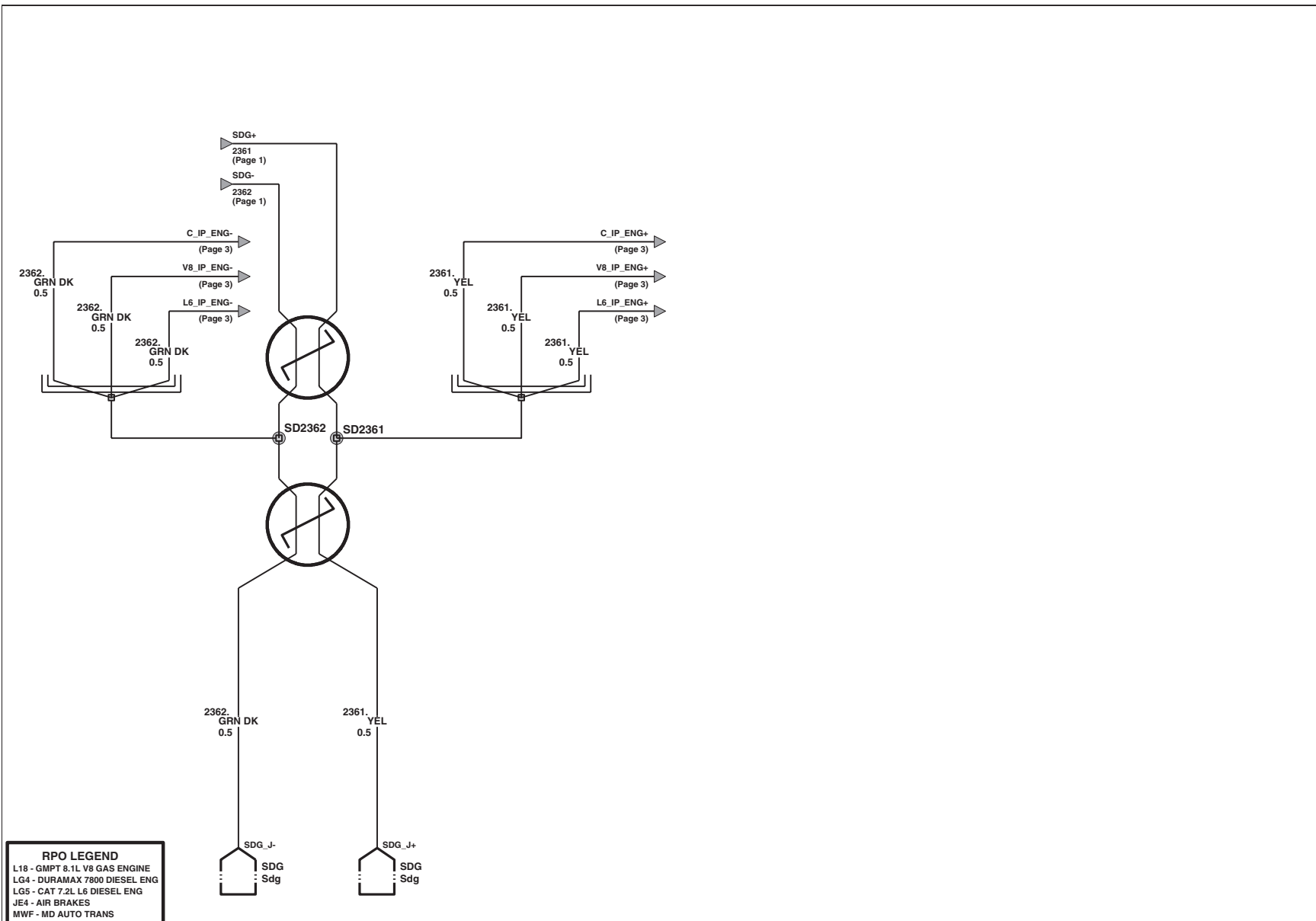
Serial Data – J1939 – (L18) 8.1L-Gas/NAPT – (LG4-'04i) 7.8L-Diesel/Duramax – (LG5) 7.2L CAT



RPO LEGEND	
JE3-	HYDRAULIC BRAKES
JE4-	AIR BRAKES
L18-	GMPT 8.1L V8 GAS ENGINE
LG5-	CAT 7.2L L6 DIESEL ENG
MWF-	MD AUTO TRANS
M74-	LCT 1000 AUTO TRANS (FAM 2)
MX4-	LCT 2000 AUTO TRANS (FAM 3)
MTX-	LCT 2200 AUTO TRANS (FAM 2)
MTW-	LCT 2400 AUTO TRANS (FAM 3)
MWW/MWX-	MANUAL TRANS
FAM3-	FAMILY 3

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Serial Data – J1939 – (L18) 8.1L-Gas/NAPT – (LG4-'04i) 7.8L-Diesel/Duramax – (LG5) 7.2L CAT

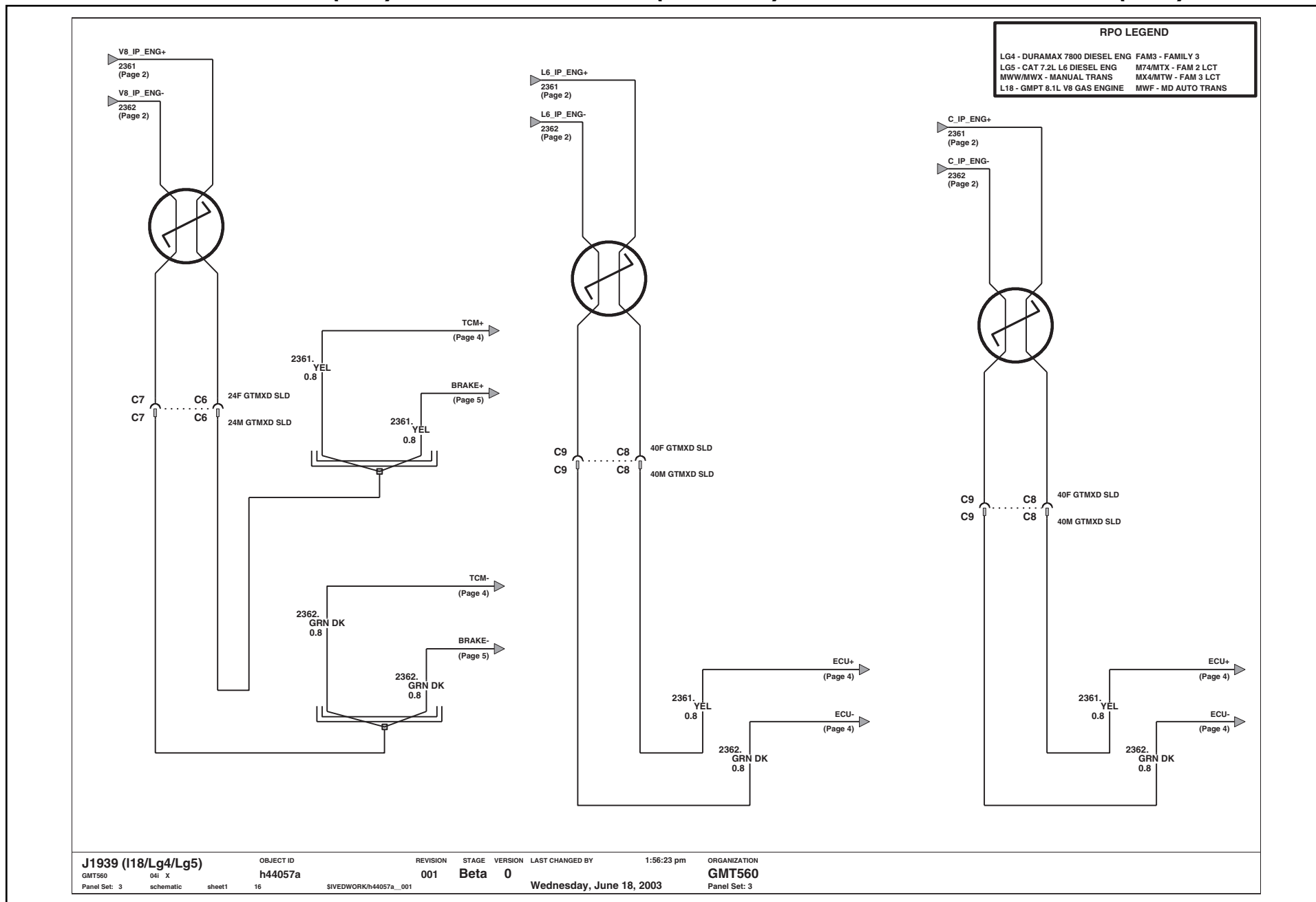


RPO LEGEND
 L18 - GMPT 8.1L V8 GAS ENGINE
 LG4 - DURAMAX 7800 DIESEL ENG
 LG5 - CAT 7.2L L6 DIESEL ENG
 JE4 - AIR BRAKES
 MWF - MD AUTO TRANS

J1939 (I18/Lg4/Lg5)	OBJECT ID h44057a	REVISION 001	STAGE Beta	VERSION 0	LAST CHANGED BY Wednesday, June 18, 2003	1:56:23 pm	ORGANIZATION GMT560
Panel Set: 2	schematic sheet1	16	SIVEDWORK/h44057a_001		Panel Set: 2		

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

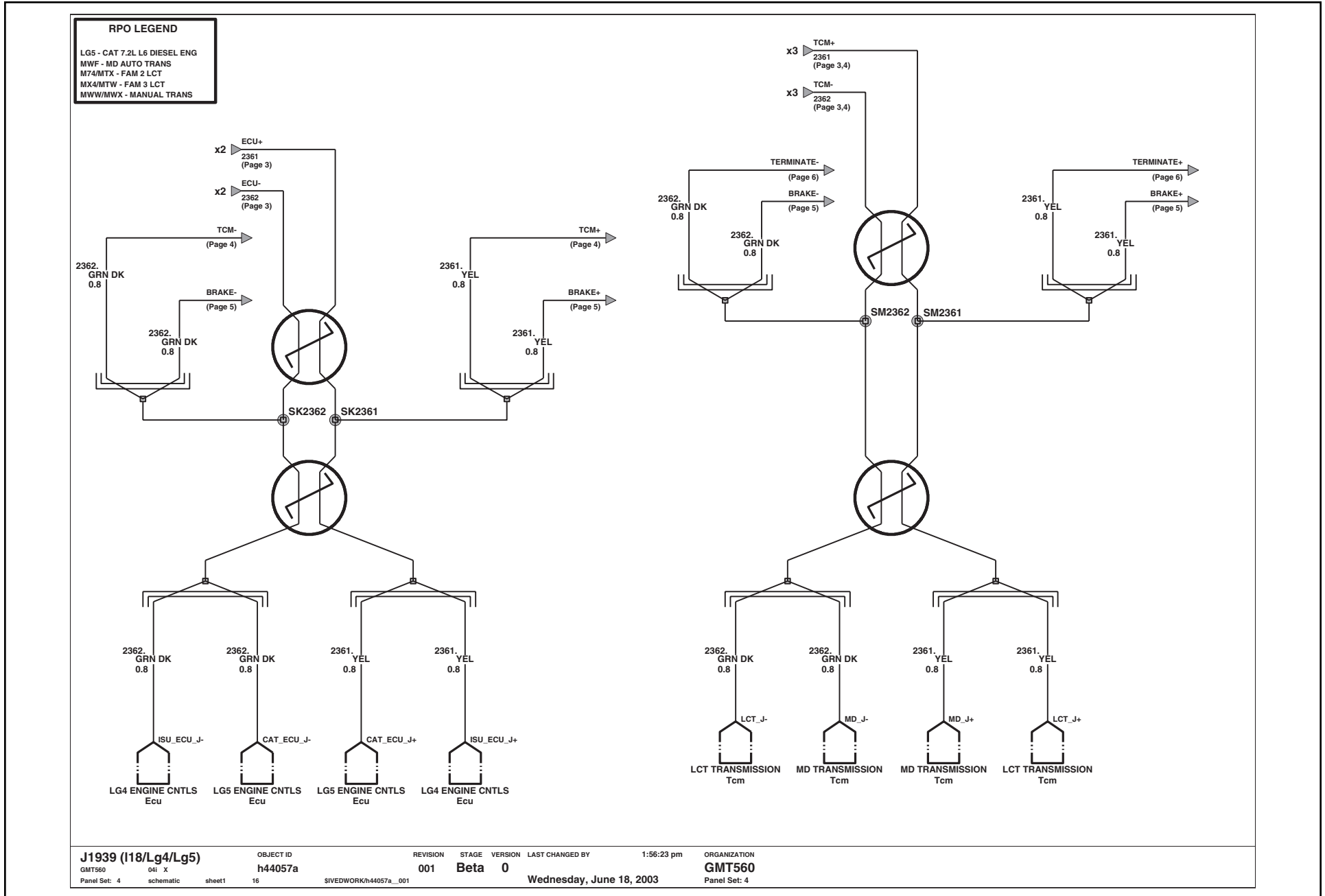
Serial Data – J1939 – (L18) 8.1L-Gas/NAPT – (LG4-'04i) 7.8L-Diesel/Duramax – (LG5) 7.2L CAT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

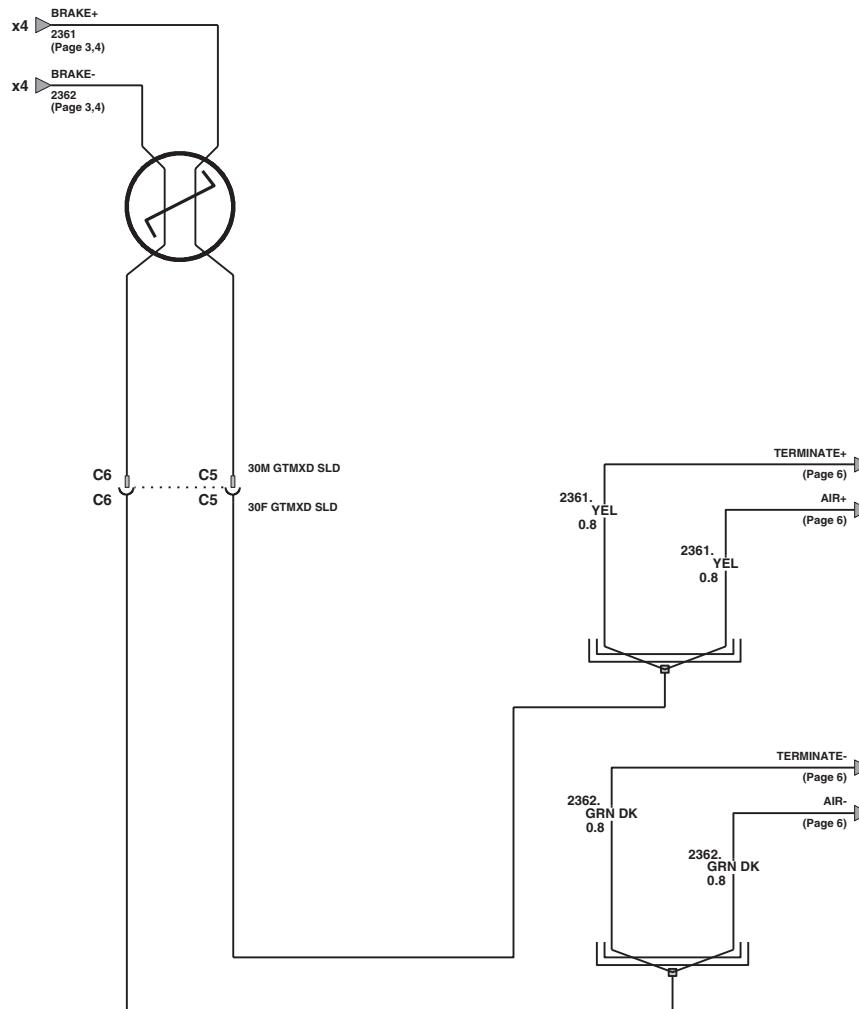
PAGE **D-228**

Serial Data – J1939 – (L18) 8.1L-Gas/NAPT – (LG4-'04i) 7.8L-Diesel/Duramax – (LG5) 7.2L CAT



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Serial Data – J1939 – (L18) 8.1L-Gas/NAPT – (LG4-'04i) 7.8L-Diesel/Duramax – (LG5) 7.2L CAT



RPO LEGEND
 JES - HYDRAULIC BRAKES
 JE4 - AIR BRAKES
 JVA - ABS DELETE

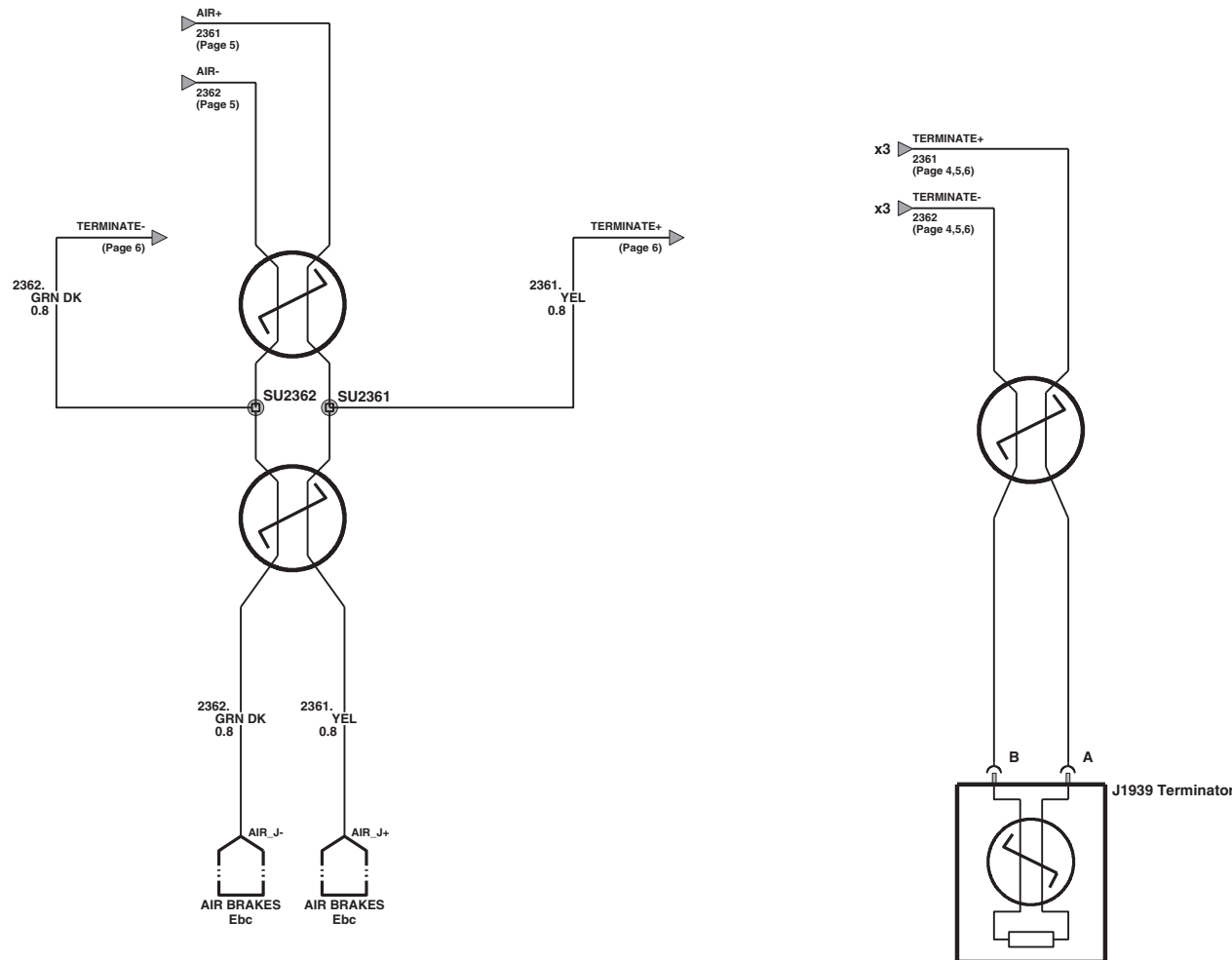
J1939 (I18/Lg4/Lg5)	OBJECT ID	REVISION	STAGE	VERSION	LAST CHANGED BY	1:56:23 pm	ORGANIZATION
GMT560	D41 X	001	Beta	0	Wednesday, June 18, 2003		GMT560
Panel Set: 5	schematic	sheet1	16	SIVEDWORK/h44057a_001			Panel Set: 5

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

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Serial Data – J1939 – (L18) 8.1L-Gas/NAPT – (LG4-'04i) 7.8L-Diesel/Duramax – (LG5) 7.2L CAT

04 560 000	JG	Beta - Initial Creation	21AU01
03 560 1149	JG	MTX replaces MTW (Fam 2)	12DE01

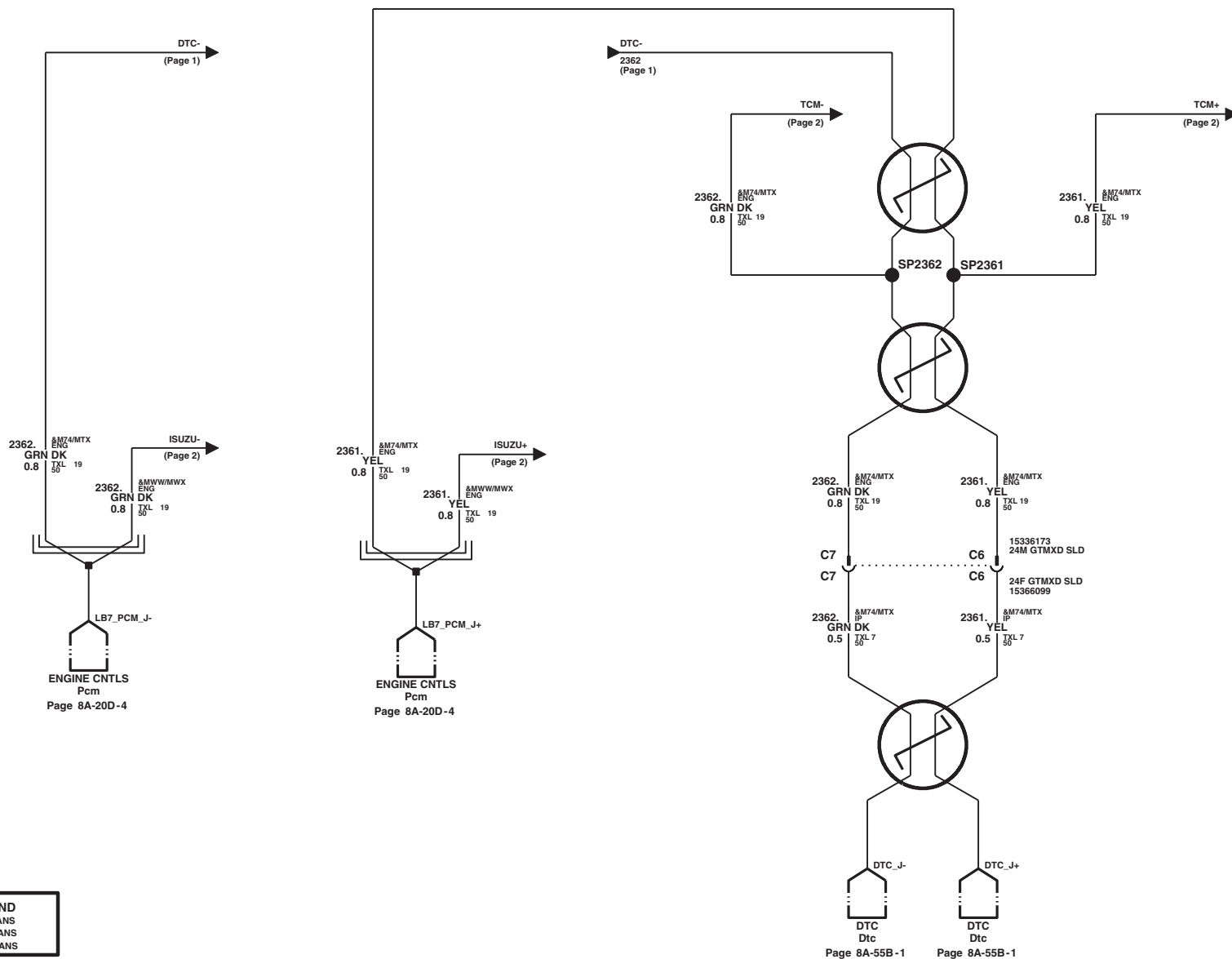


RPO LEGEND
 JE4 - AIR BRAKES
 JVA - ABS DELETE

J1939 (I18/Lg4/Lg5)	OBJECT ID	REVISION	STAGE	VERSION	LAST CHANGED BY	1:56:23 pm	ORGANIZATION
GMT560	D41 X	001	Beta	0	Wednesday, June 18, 2003		GMT560
Panel Set: 6	schematic	sheet1	16	SIVEDWORK/h44057a_001			Panel Set: 6

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Serial Data – J1939 – (LLY) 6.6L-Diesel/Duramax

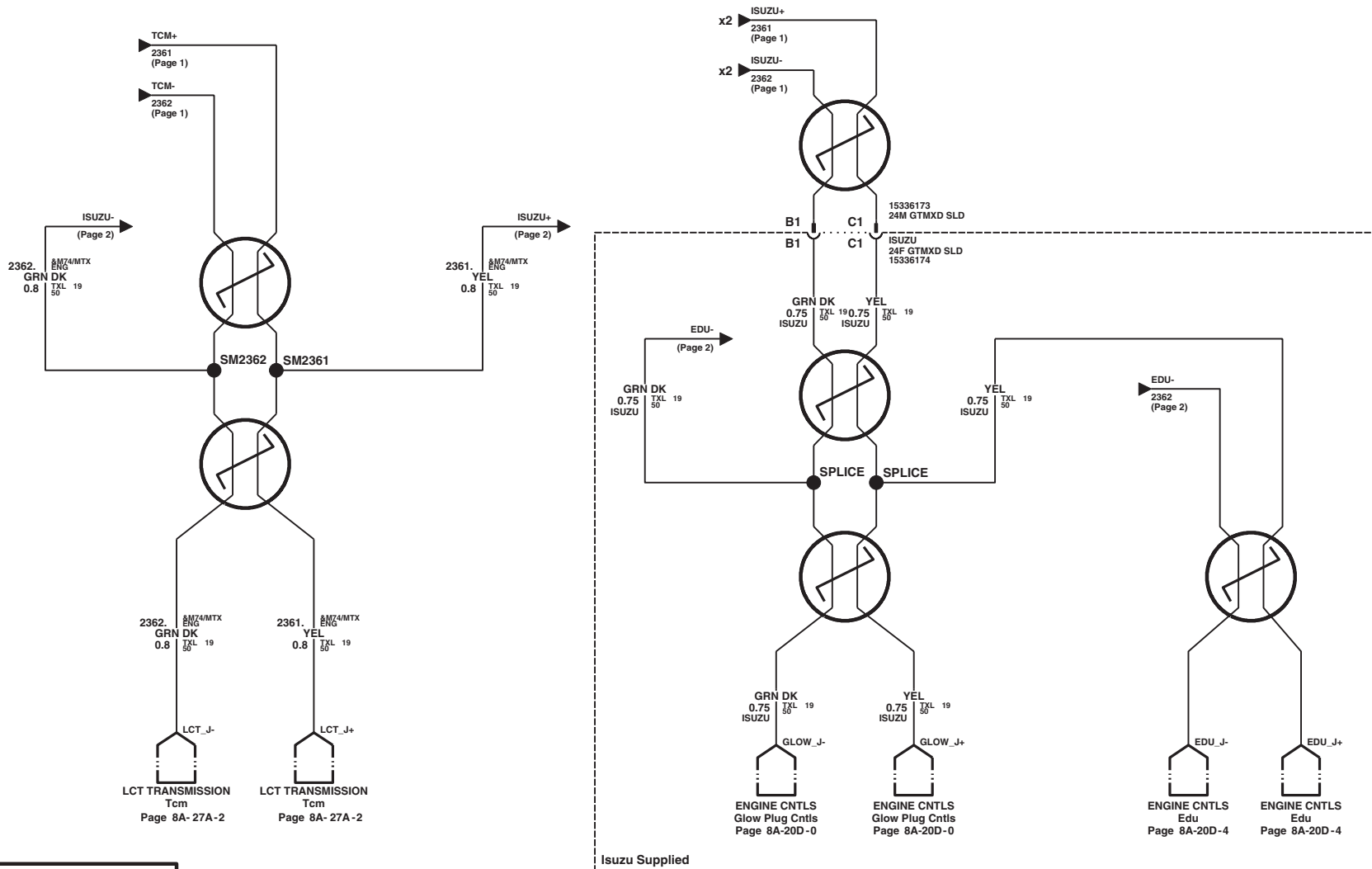


RPO LEGEND
 M74 - LCT 1000 AUTO TRANS
 MTX - LCT 2200 AUTO TRANS
 MWW/MWX - MANUAL TRANS

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Serial Data – J1939 – (LLY) 6.6L-Diesel/Duramax

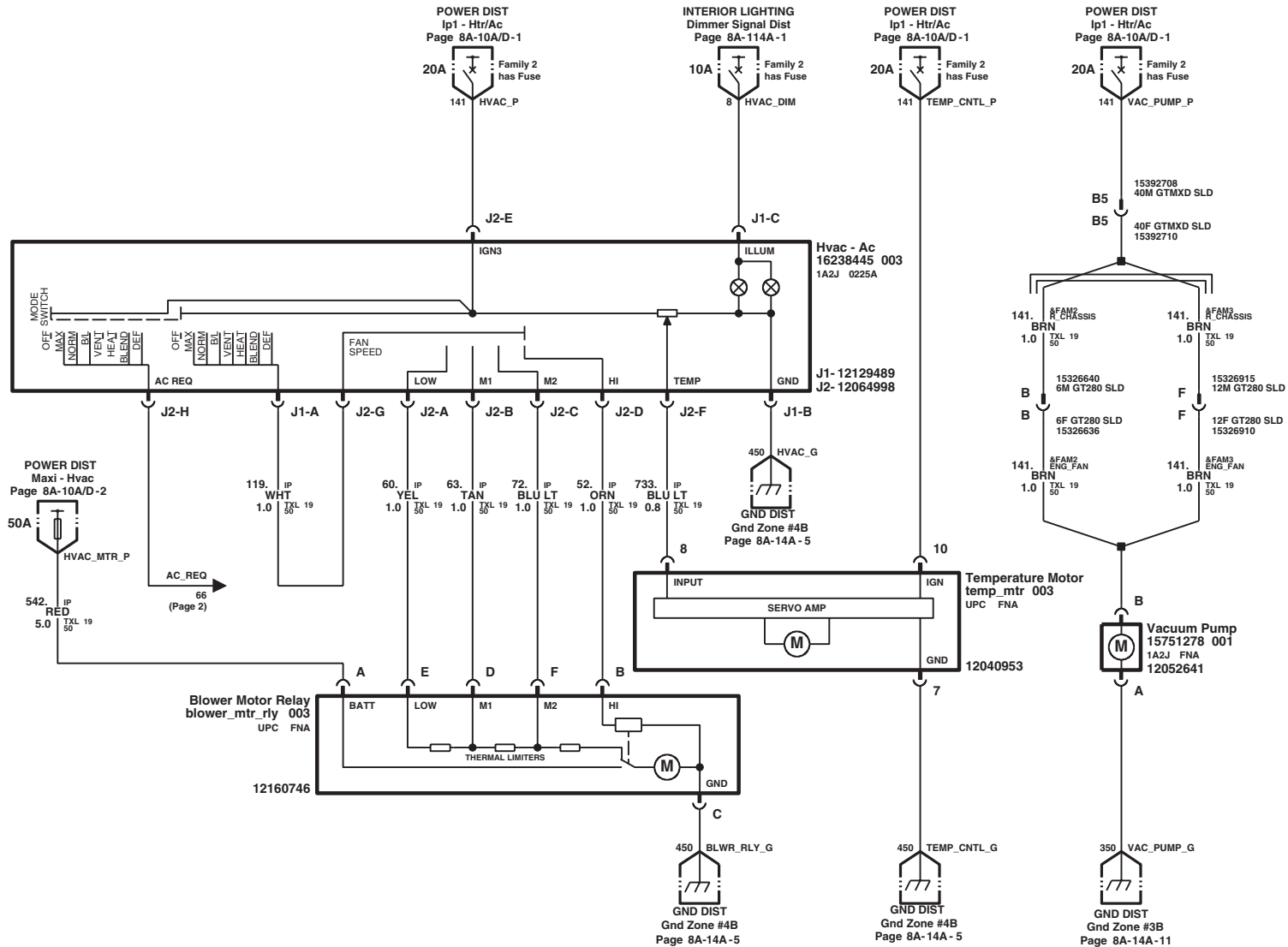
04 560 000	JG	Beta - Initial Creation	21AU01	001
03 560 1149	JG	MTX replaces MTW (Fam 2)	12DE01	001



RPO LEGEND
 M74 - LCT 1000 AUTO TRANS
 MTX - LCT 2200 AUTO TRANS

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

HVAC – Active – (L18) 8.1L-Gas/NAPT – (LLY) 6.6L-Diesel/Duramax



HVAC (Active L18/LLY)
GMT560 03 X 8L18/LLY
Panel Set: 1 schematic sheet1 7

OBJECT ID
h44065a
SIVEDWORK/h44065a_001

REVISION STAGE VERSION LAST CHANGED BY
001 Prod 0
Tuesday, June 17, 2003

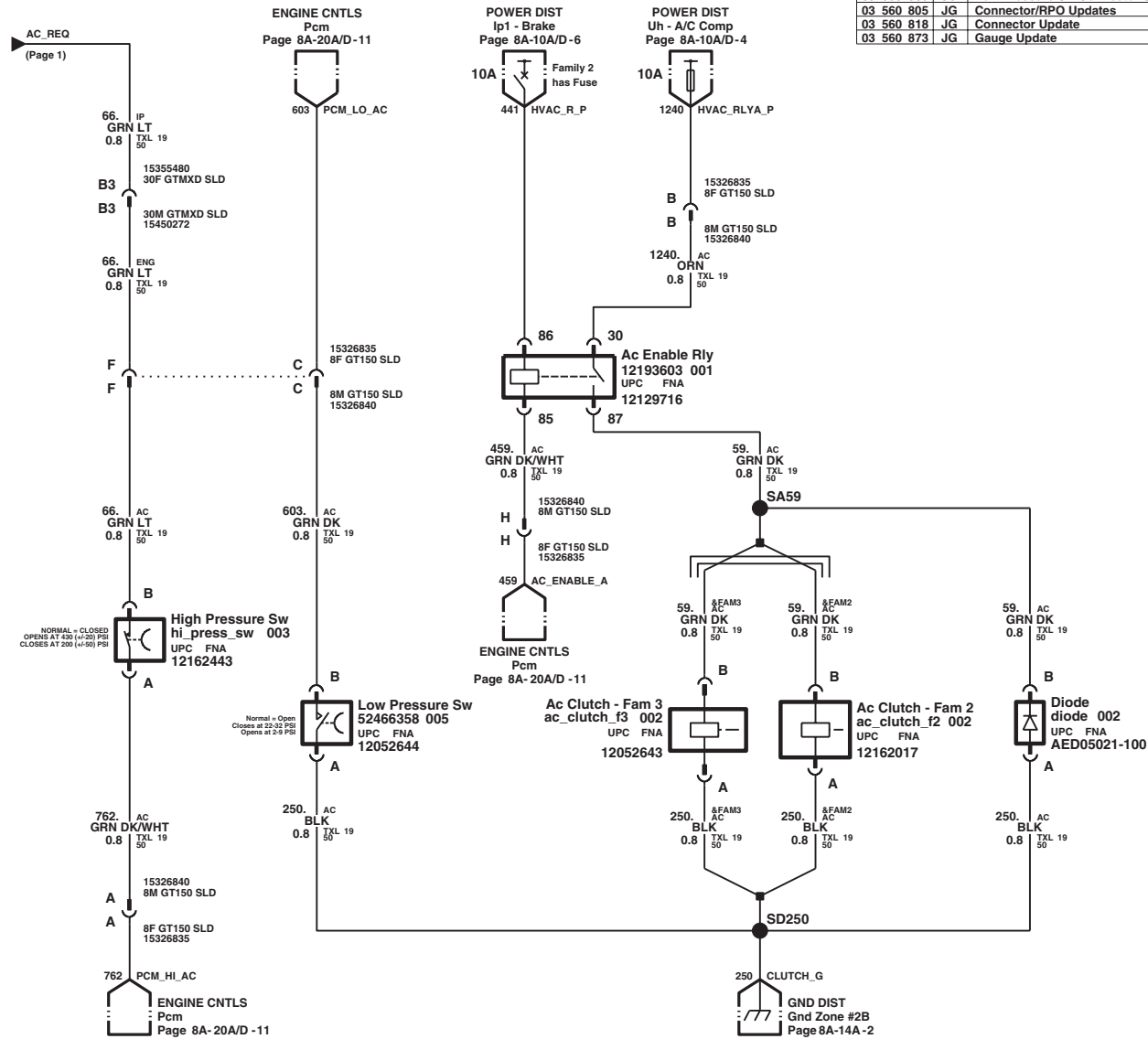
2:27:51 pm ORGANIZATION
GMT560
Panel Set: 1

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

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HVAC – Active – (L18) 8.1L-Gas/NAPT – (LLY) 6.6L-Diesel/Duramax

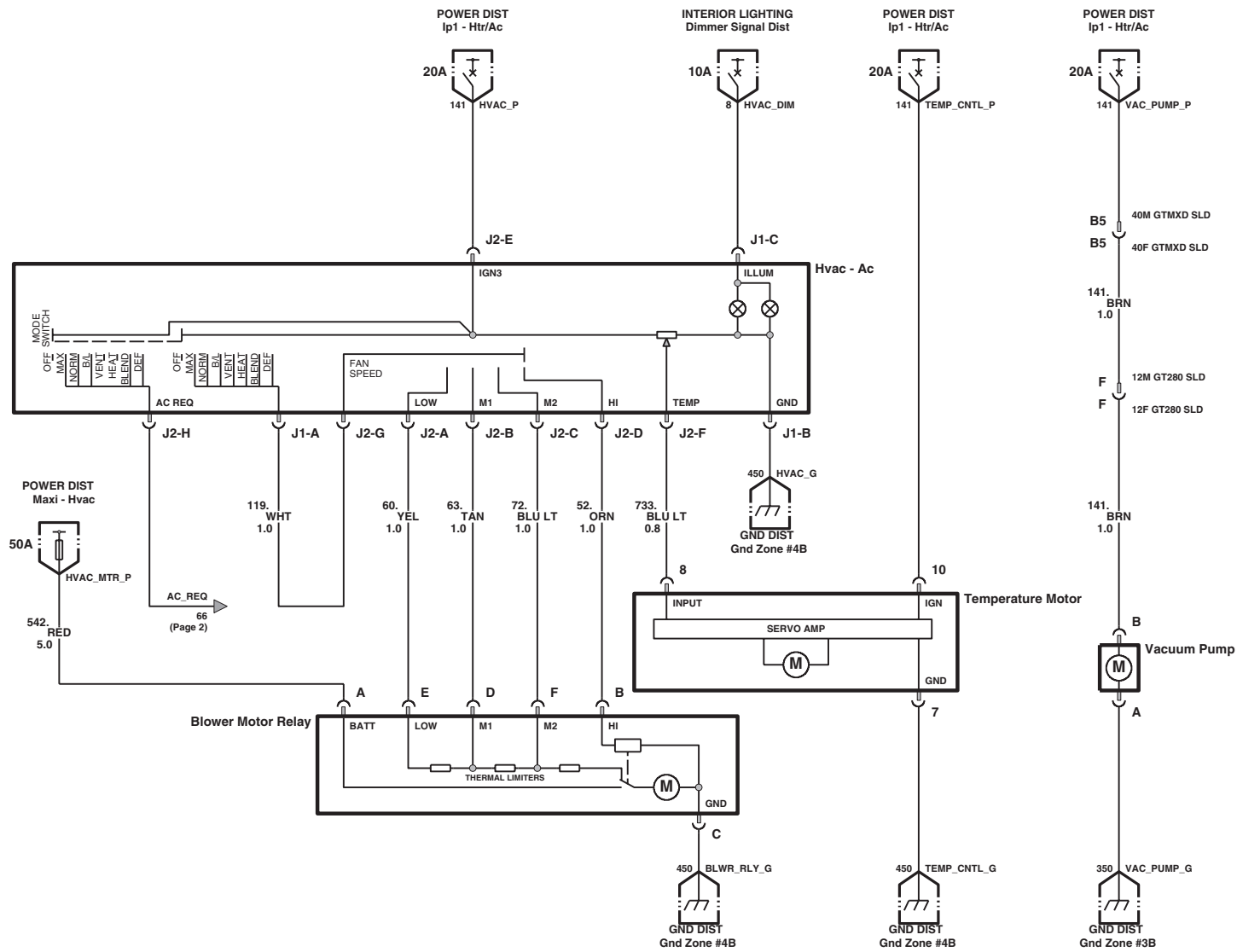
03 560 000	TY	PILOT B - INITIAL CREATION	20OC00	001
03 560 805	JG	Low Pressure Sw Connector Update	20OC00	001
03 560 805	JG	Connector/RPO Updates	27OC00	001
03 560 818	JG	Connector Update	22NO00	001
03 560 873	JG	Gauge Update	23FE01	001



RPO LEGEND
 FAM2 - FAMILY 2
 FAM3 - FAMILY 3

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

HVAC – Active – (LG4-'04i) 7.8L-Diesel/Duramax – (LG5) 7.2L CAT



HVAC (Passive LG4/LG5)
 GMT560
 Panel Set: 1

OBJECT ID
 h44065b
 sheet1

REVISION 001
 STAGE Beta
 VERSION 0
 LAST CHANGED BY
 Tuesday, June 17, 2003

2:28:31 pm
 ORGANIZATION
 GMT560
 Panel Set: 1

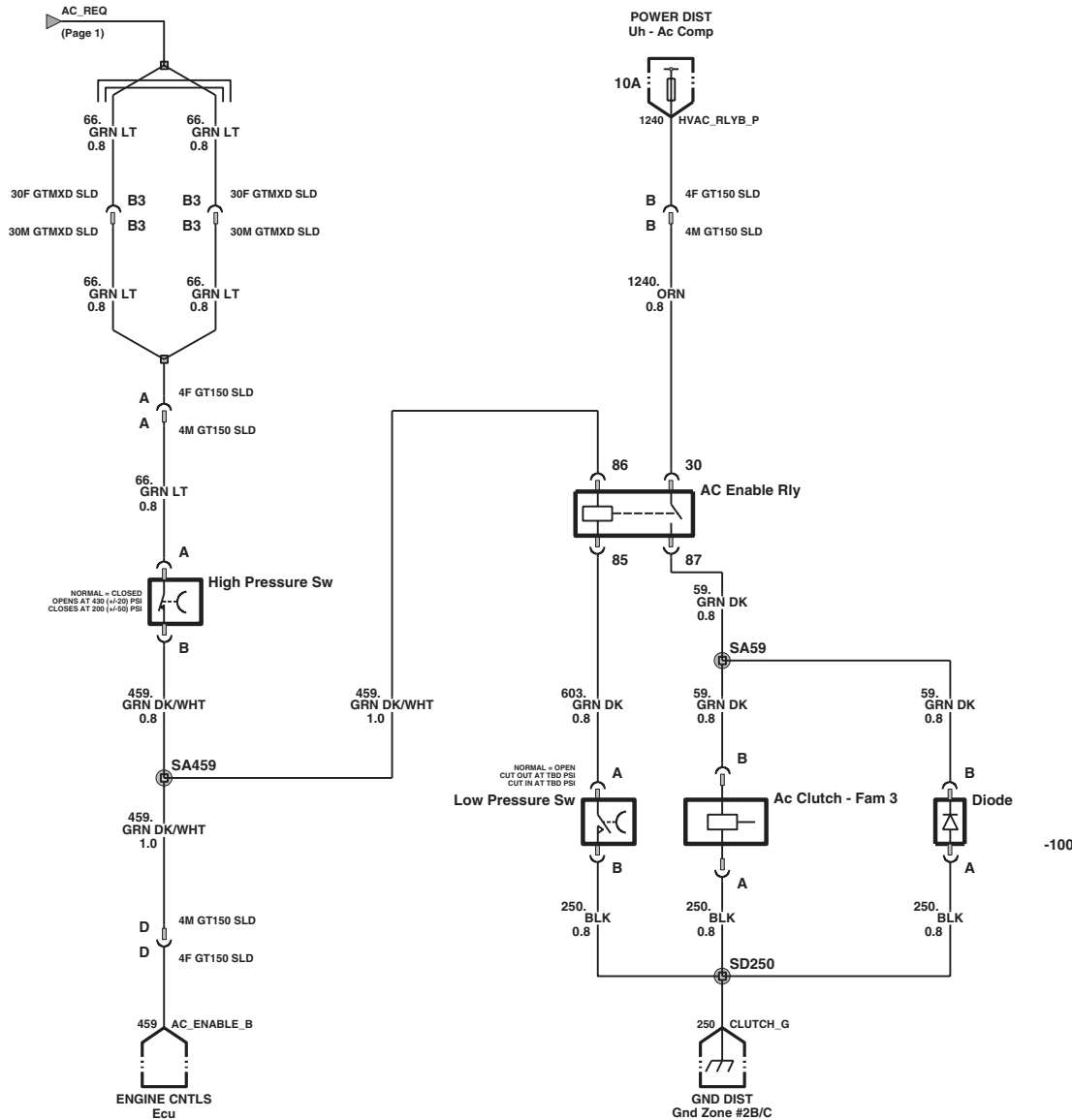
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

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HVAC – Active – (LG4-'04i) 7.8L-Diesel/Duramax – (LG5) 7.2L CAT

04 560 000 JG Beta - Initial Creation

02JA02



RPO LEGEND
 LC8 - DURAMAX 7200 DIESEL ENG
 LG4 - DURAMAX 7800 DIESEL ENG
 LG5 - CAT 7.2L L6 DIESEL ENG

HVAC (Passive LG4/LG5)

OBJECT ID
h44065b

REVISION STAGE VERSION LAST CHANGED BY
001 Beta 0

2:28:31 pm

ORGANIZATION
GMT560

GMT560

D41 X

schematic

sheet1

12

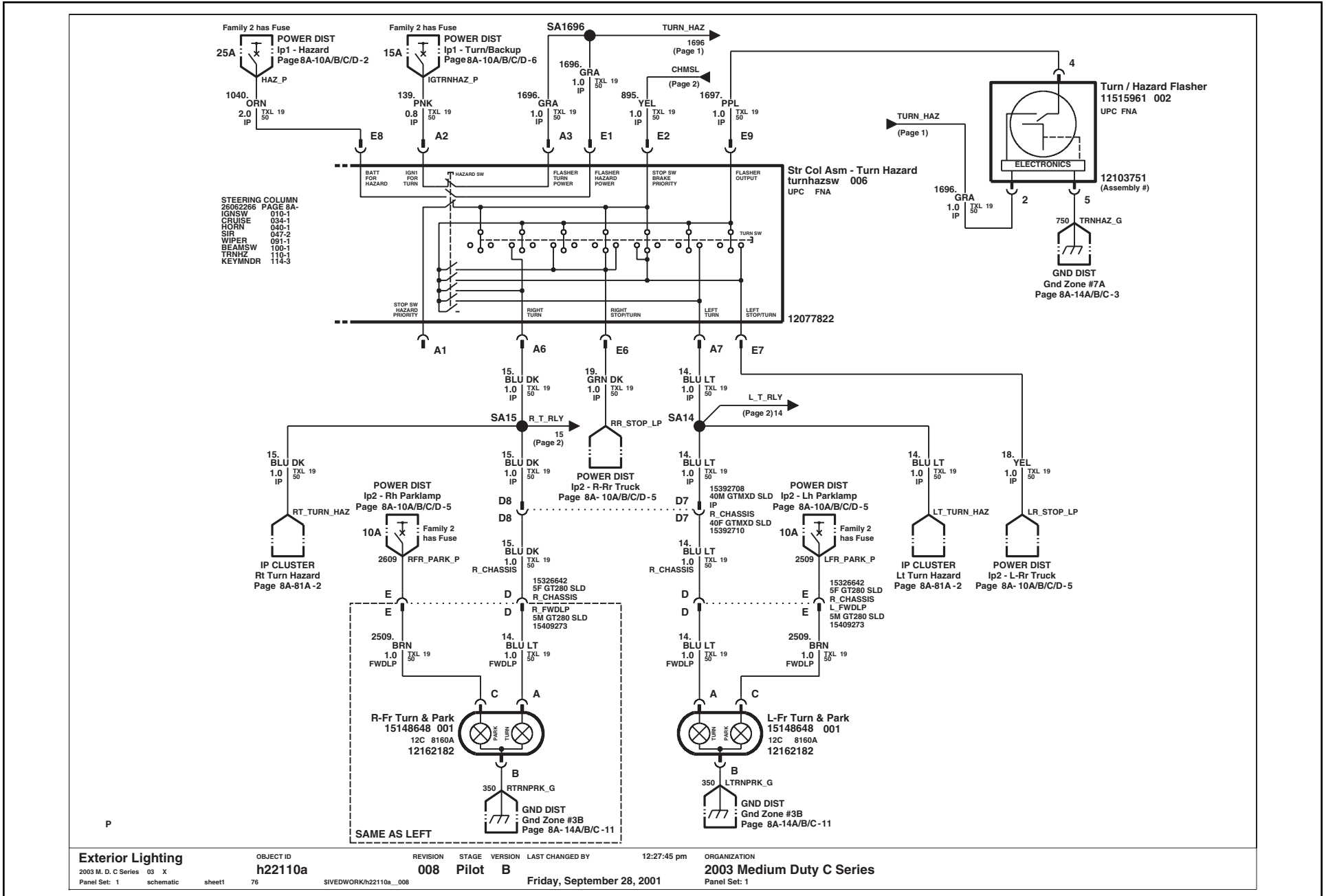
SIVEDWORK/h44065b_001

Tuesday, June 17, 2003

Panel Set: 2

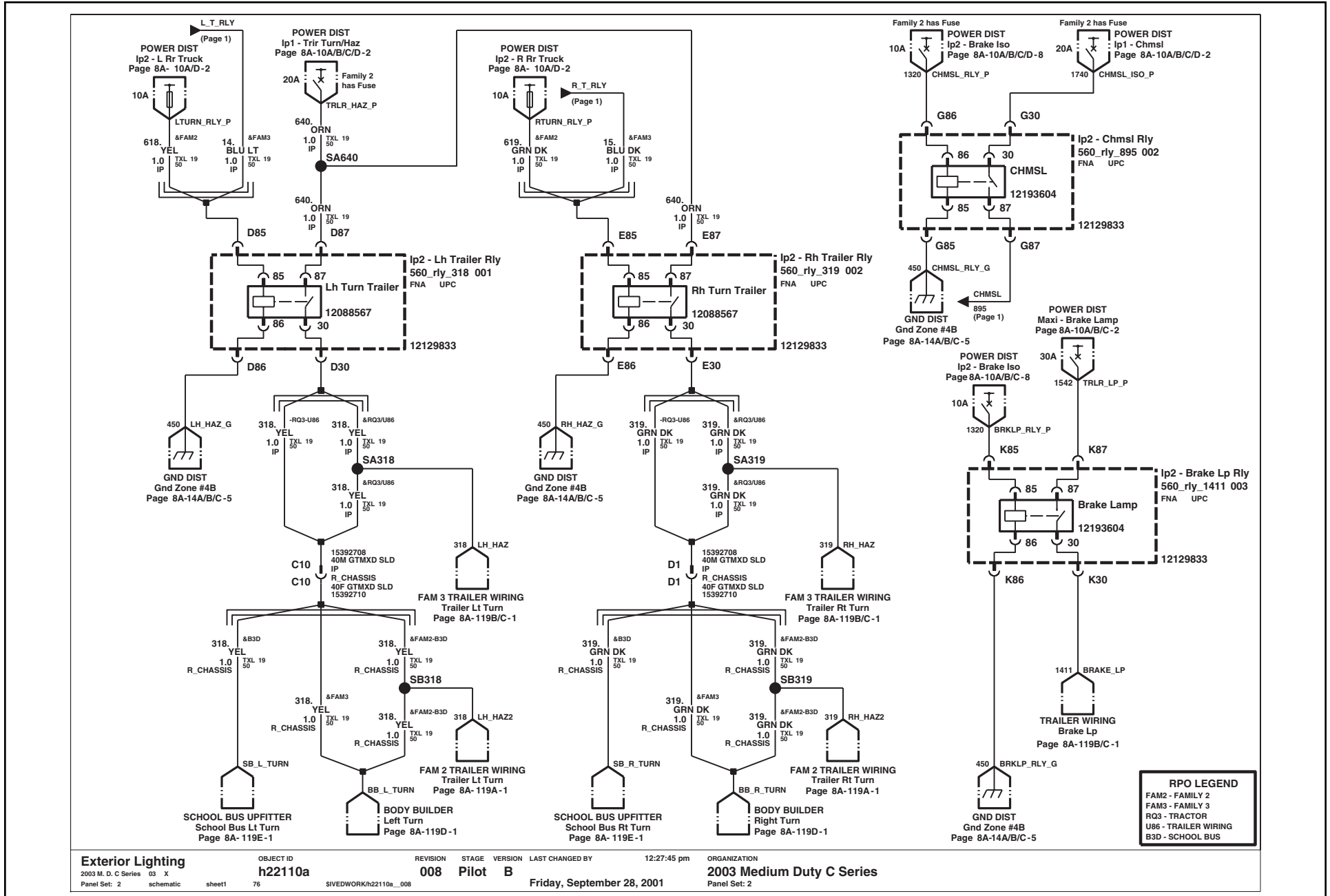
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Exterior Lighting



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

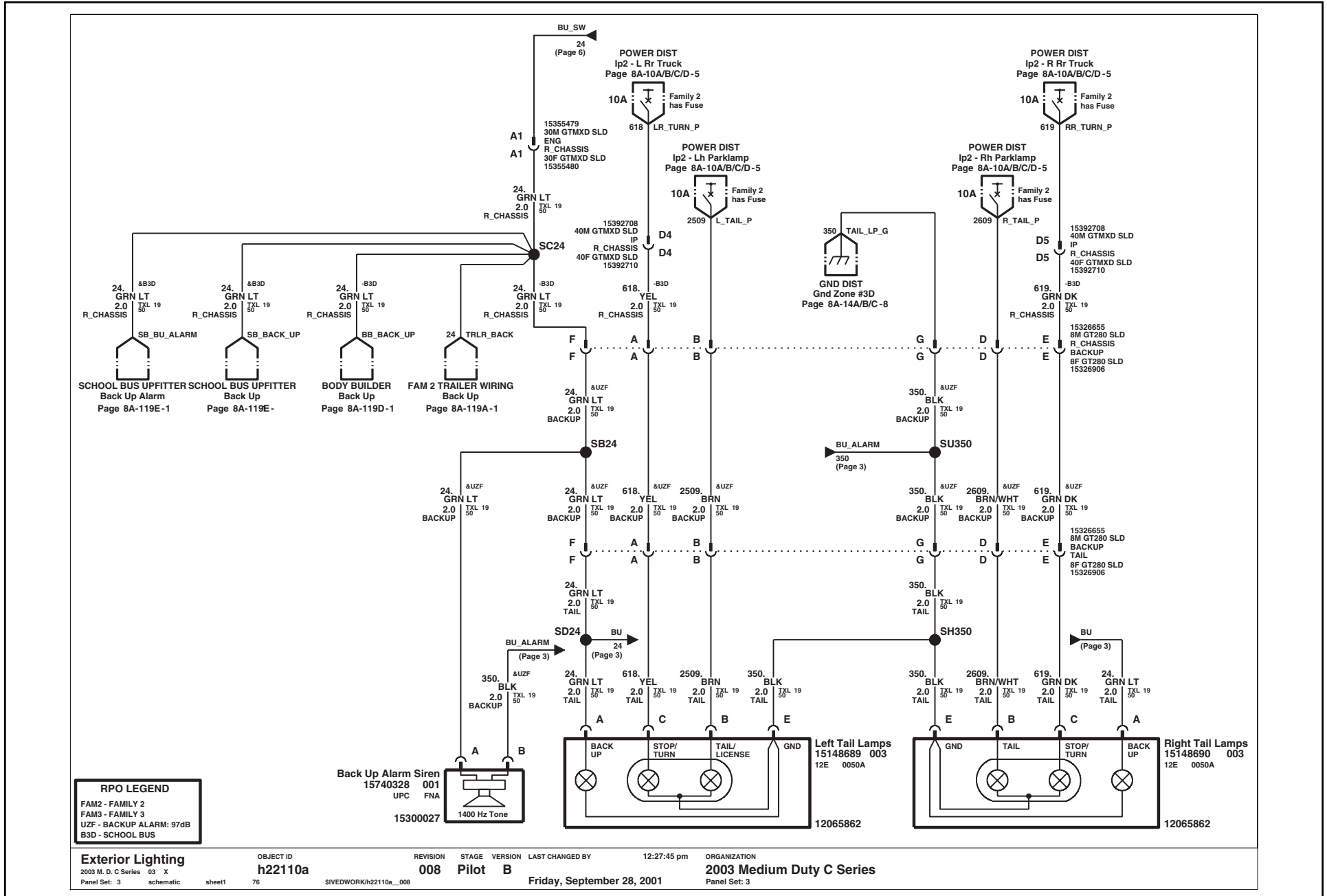
Exterior Lighting



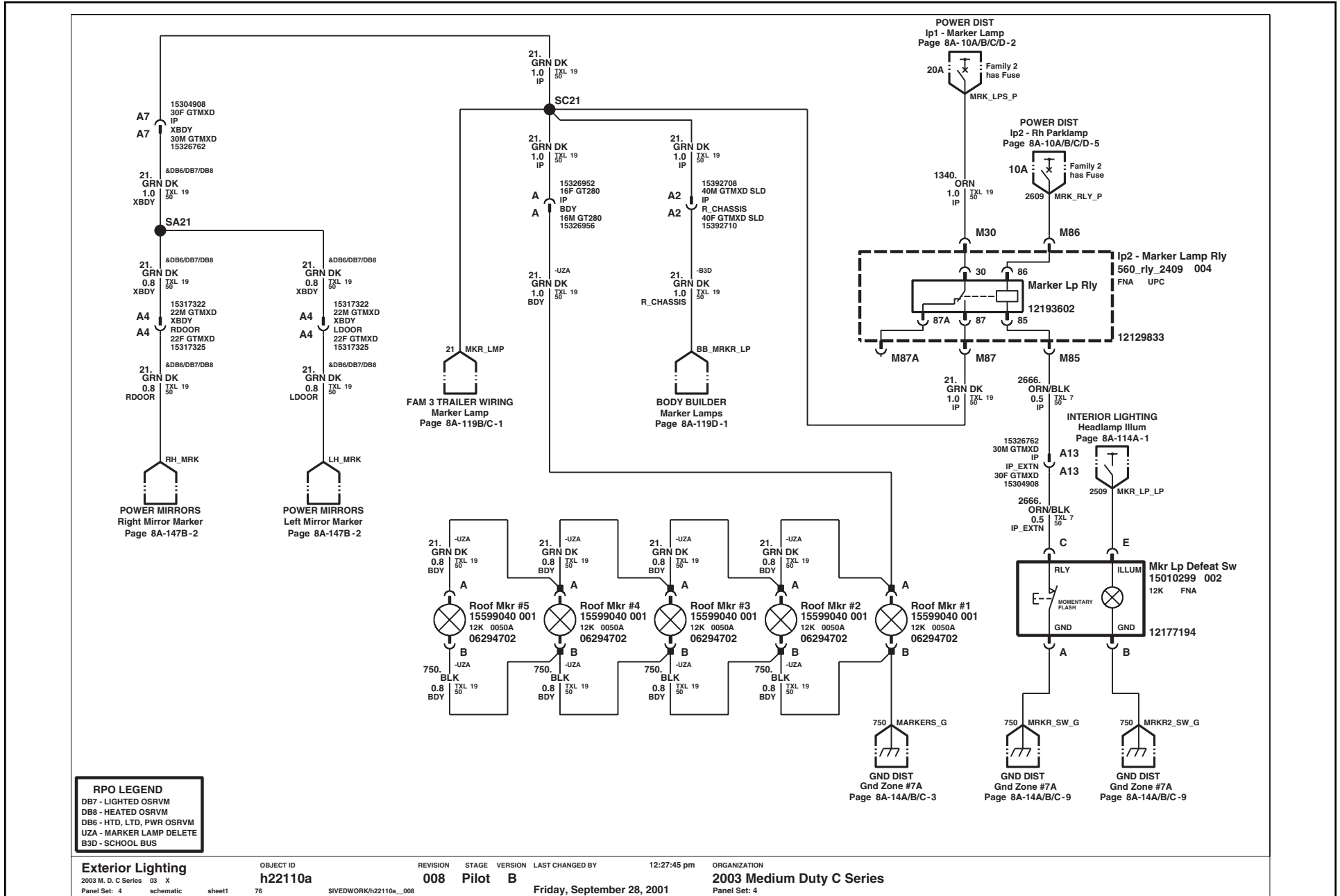
RPO LEGEND	
FAM2 - FAMILY 2	
FAM3 - FAMILY 3	
RO3 - TRACTOR	
U86 - TRAILER WIRING	
B3D - SCHOOL BUS	

Exterior Lighting
 OBJECT ID: h22110a
 REVISION: 008
 STAGE: Pilot
 VERSION: B
 LAST CHANGED BY: 12:27:45 pm
 ORGANIZATION: 2003 Medium Duty C Series
 Panel Set: 2

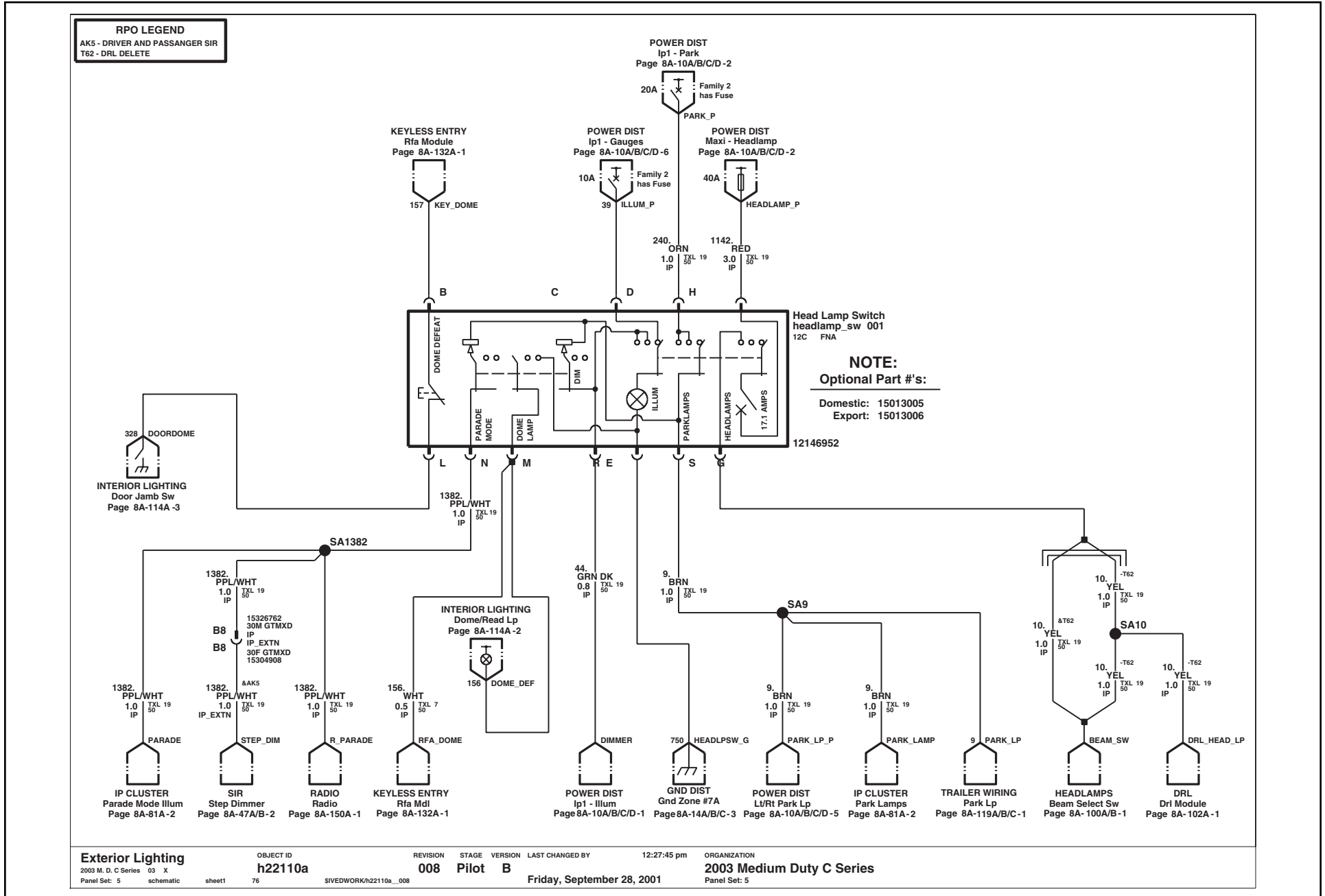
Exterior Lighting



Exterior Lighting



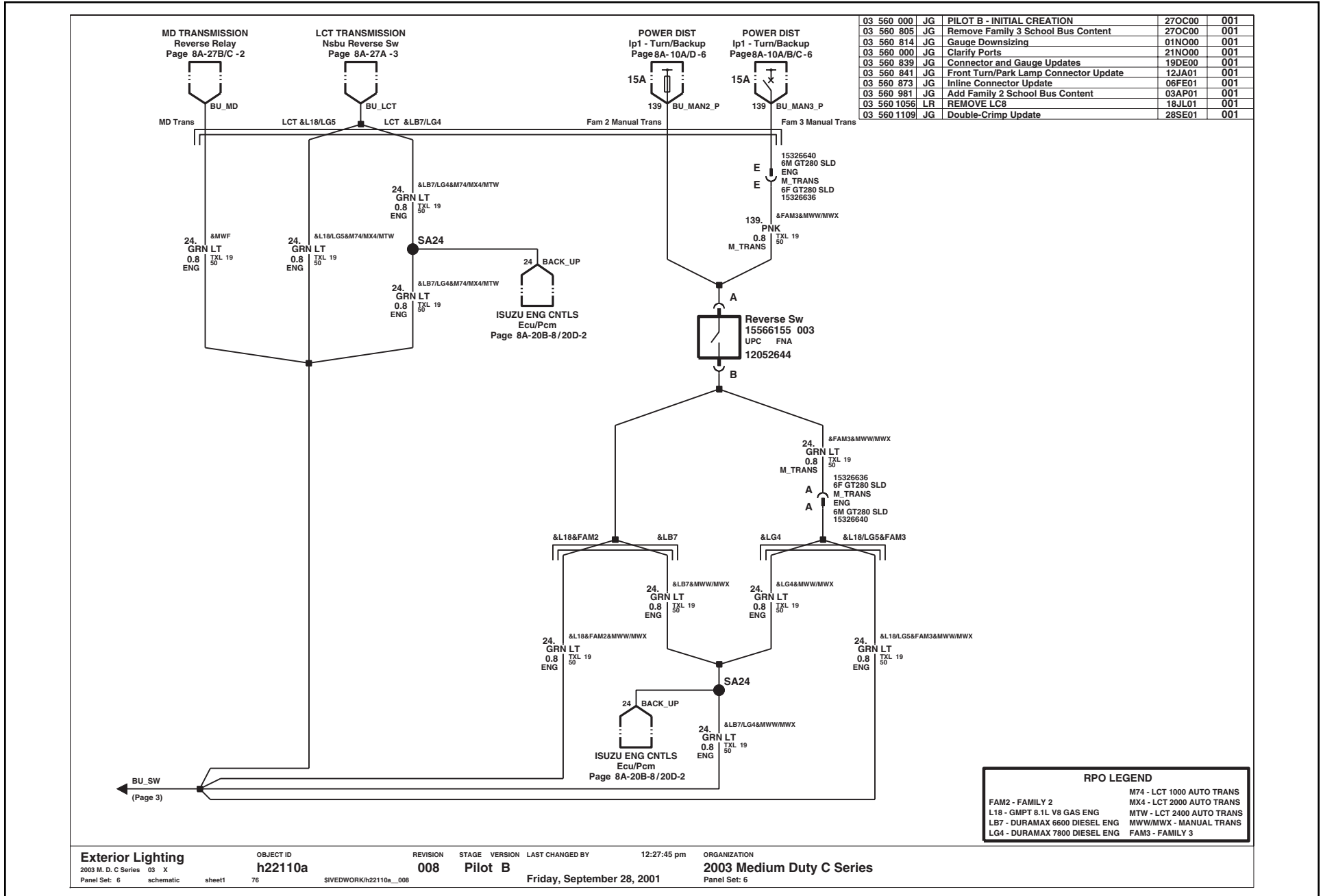
Exterior Lighting



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

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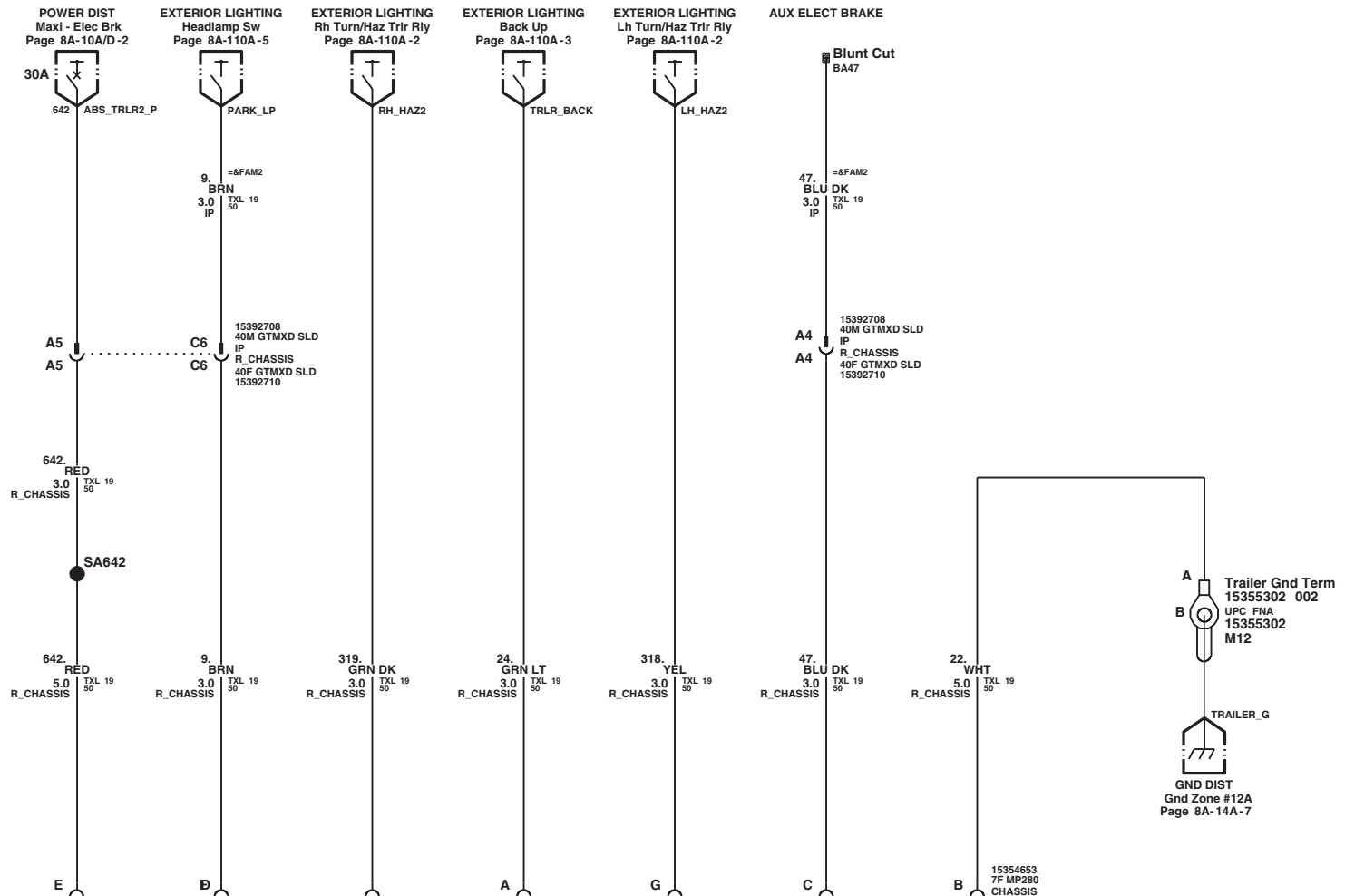
Exterior Lighting



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

Trailer Wiring Family 2 – Truck Trailer Wiring

03 560 000	JG	PILOT B - INITIAL CREATION	03AP01	001
03 560 981	JG	Add Family 2 School Bus Content	03AP01	001



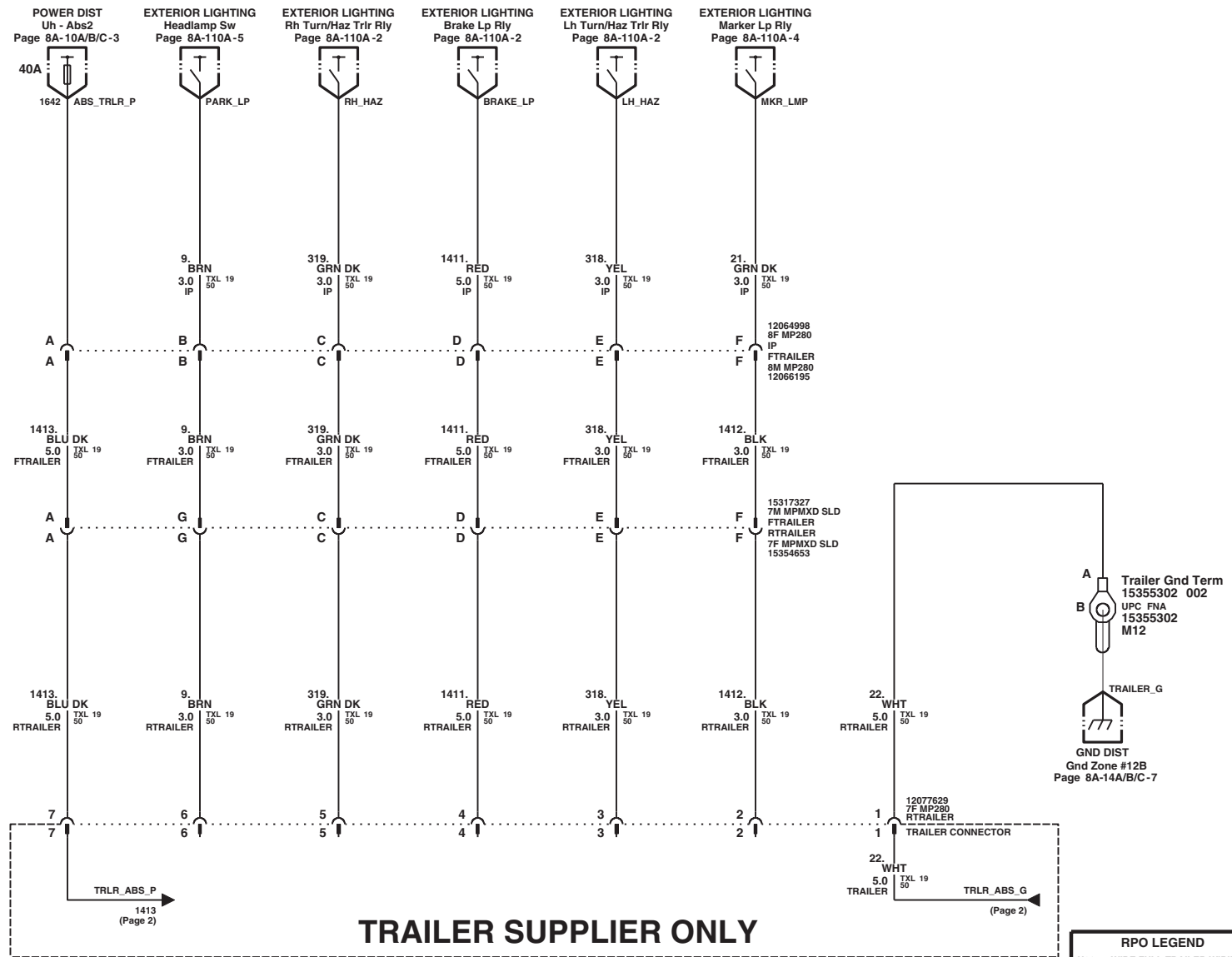
Truck Trailer Wiring (Fam 2) OBJECT ID
2003 M. D. C Series 03 X &FAM2-83D h22119a
Panel Set: 1 schematic sheet1 18 SIVEDWORK/h22119a_008

REVISION STAGE VERSION LAST CHANGED BY 9:17:35 am
008 Pilot B Thursday, October 11, 2001

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 1

2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

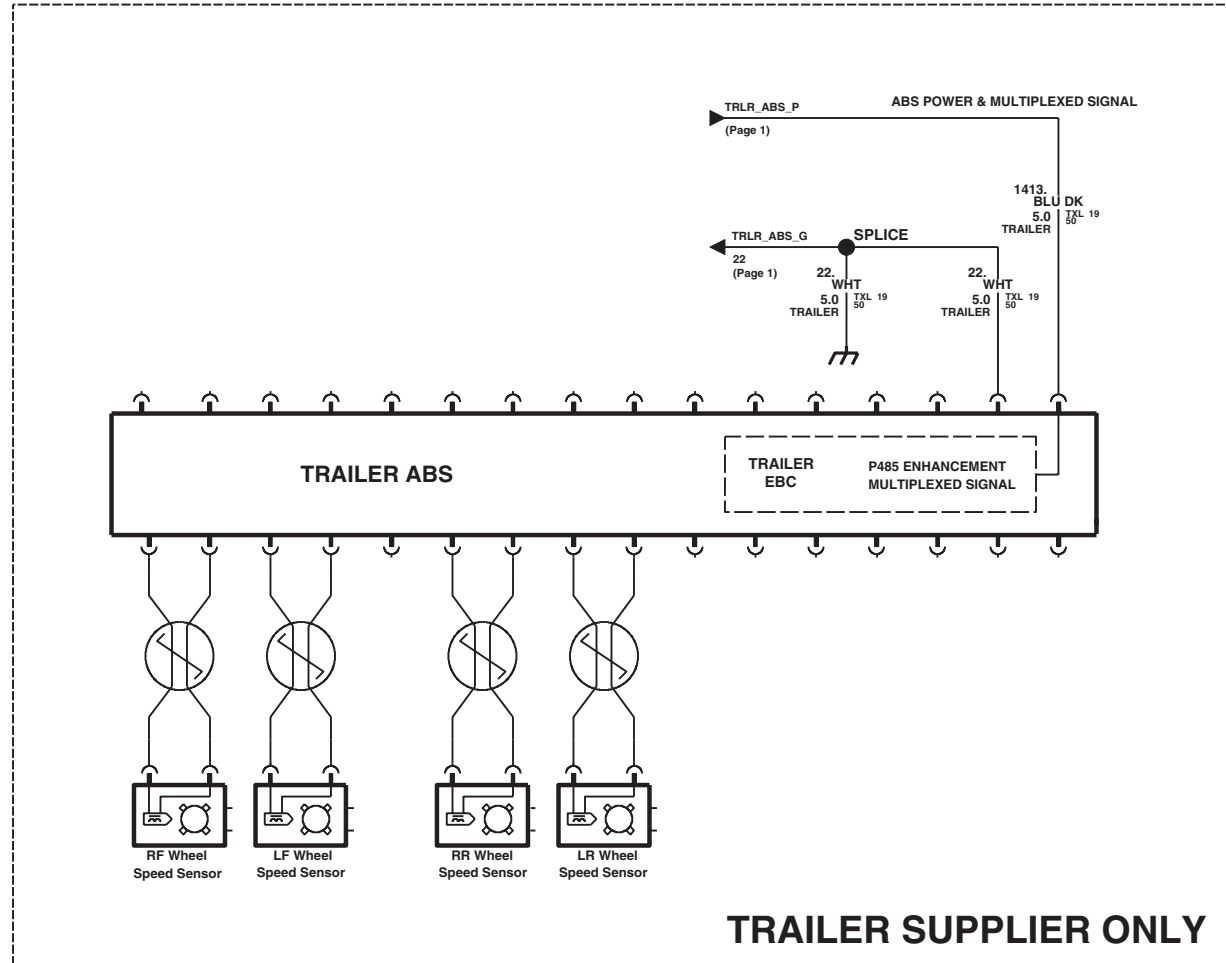
Trailer Wiring Family 3 – Truck Trailer Wiring



Trailer Wiring Family 3 – Truck Trailer Wiring

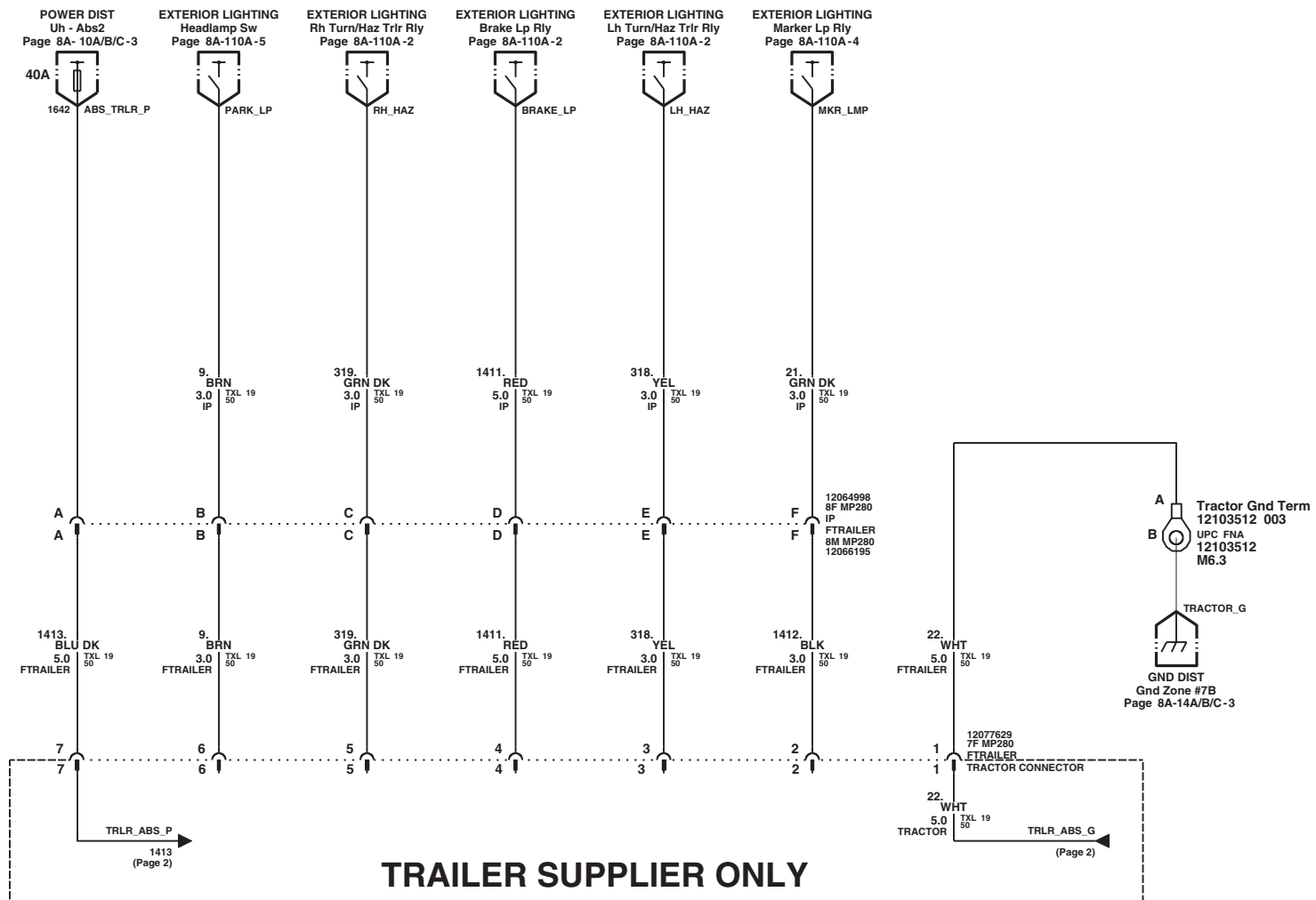
03 560 000 JG PILOT - INITIAL CREATION

09FE00 001



2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

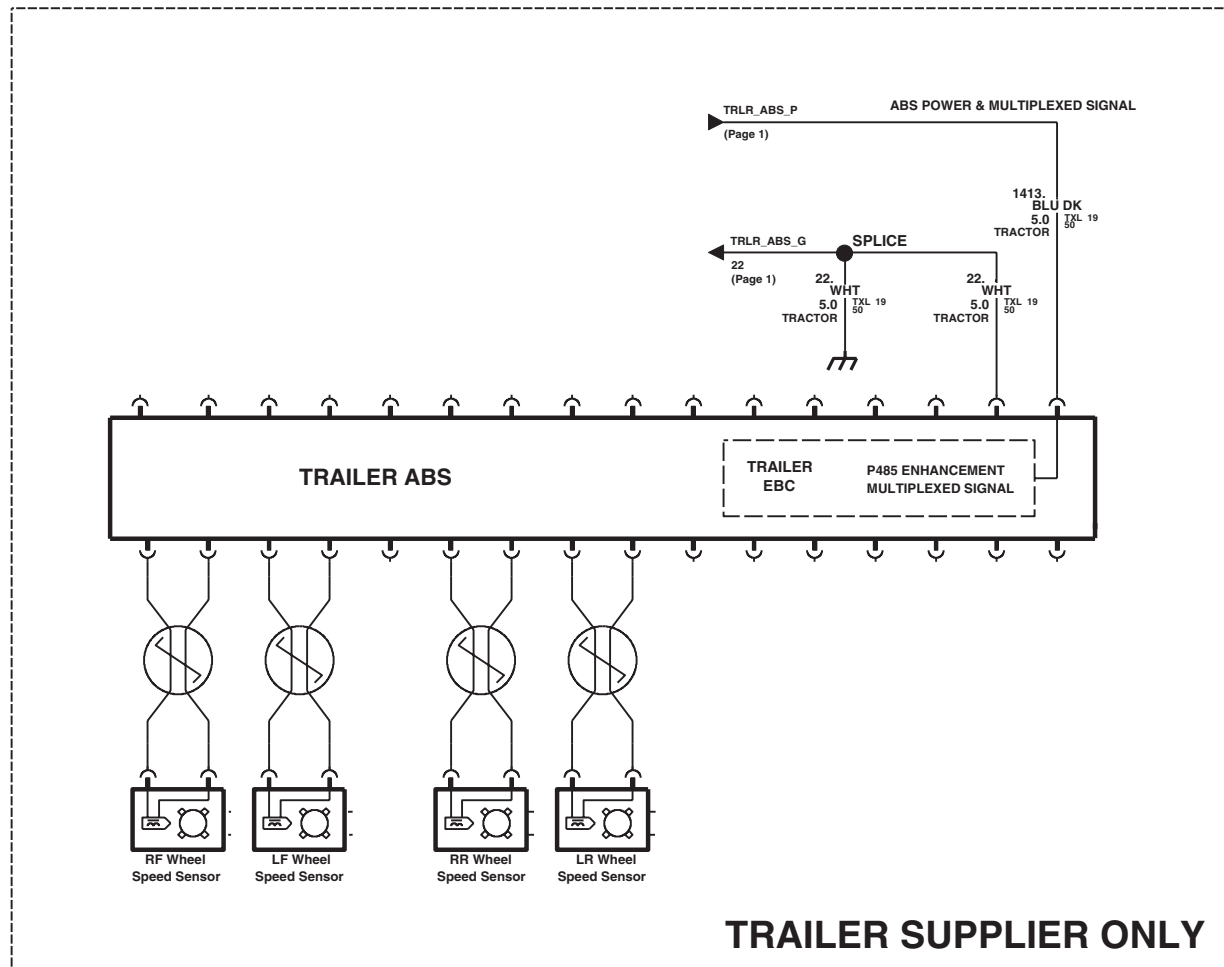
Trailer Wiring Family 3 – Tractor Wiring



RPO LEGEND
RQ3 - TRACTOR

Trailer Wiring Family 3 – Tractor Wiring

03 560 000 JG PILOT - INITIAL CREATION 09FE00 001

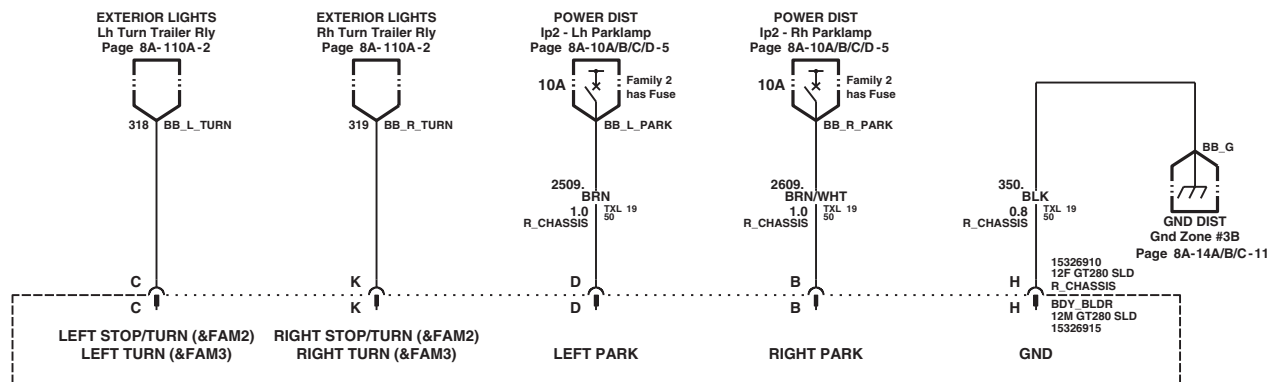
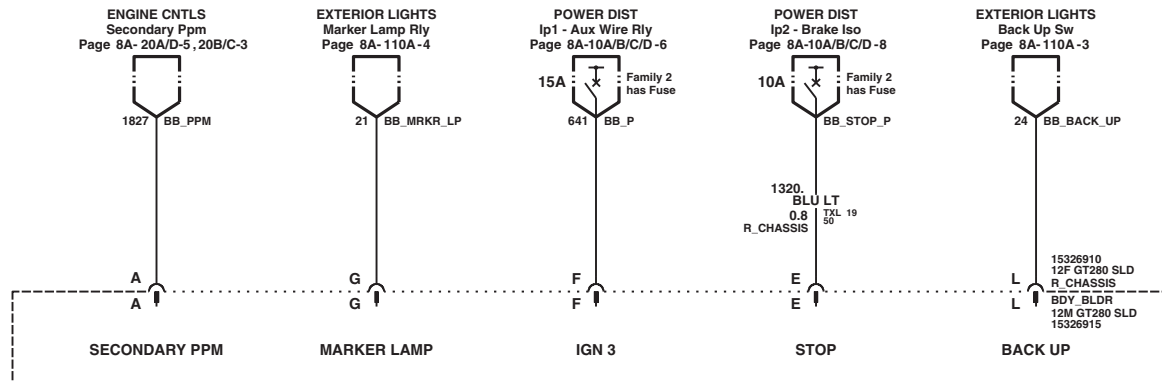


2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

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Body Builder Connector

03 560 000	TY	PILOT B - INITIAL CREATION	27OC00	001
03 560 805	JG	REMOVE SCHOOLBUS	27OC00	001
03 560 000	TY	ADDED FAM2 NOTE	27NO00	001
03 560 981	JG	Family 2 School Bus Update	03AP01	001



Body Builder Connector
2003 M. D. C Series 03 X -B3D
Panel Set: 1 schematic sheet1

OBJECT ID
h22119d

REVISION STAGE VERSION LAST CHANGED BY
006 Pilot B
Tuesday, April 3, 2001

4:19:30 pm

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 1

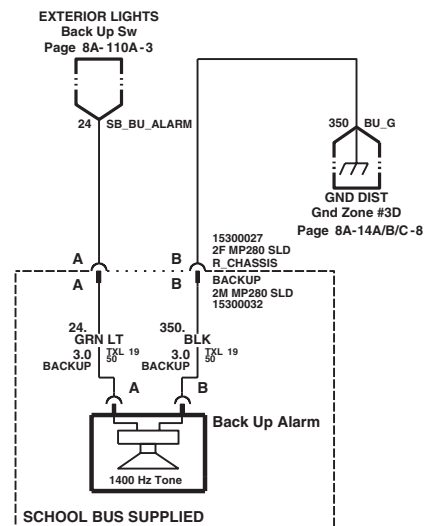
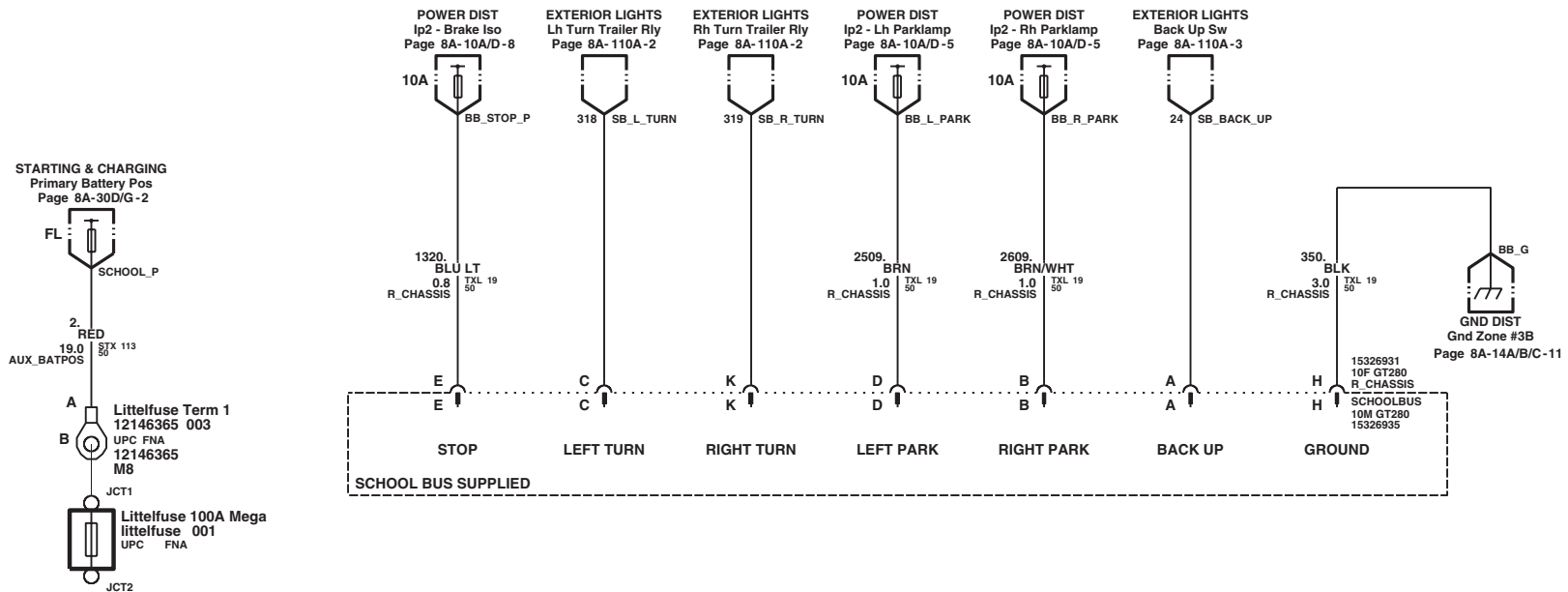
2003 & 2004 MEDIUM DUTY C SERIES ELECTRICAL

School Bus Upfitter

03 560 981 JG PILOT - INITIAL CREATION

02AP01

001



School Bus Upfitter

2003 M. D. C Series 03 X &B3D
Panel Set: 1 schematic sheet1 36 SIVEDWORK/h22119e_002

OBJECT ID
h22119e

REVISION STAGE VERSION
002 Pilot B

LAST CHANGED BY
Friday, April 20, 2001

12:52:05 pm

ORGANIZATION
2003 Medium Duty C Series
Panel Set: 1