



NMTN2013-PASE-ILT



2013 Pathfinder & Sentra New Model Training



Second Edition - October 2012



This book is designed for instructional use only for authorized Nissan North America, Inc., Nissan, and Infiniti dealer personnel. For additional information contact:

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Course Procedures: 2013 Pathfinder/Sentra New Model Training

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Modules 1 through 9

SECTION 3: Notes



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2013 NISSAN PATHFINDER OVERVIEW



The all-new 2013 Pathfinder begins the fourth generation of Nissan's large sport utility vehicle and is significantly improved in many ways. The new Pathfinder is approximately 30% more fuel efficient than the third generation as a result of the following changes:

- New unibody structure replaces the previous body-on-frame design
- More efficient 3.5-liter VQ35DE engine replaces the 4.0-liter engine
- New XTRONIC Continuously Variable Transmission with wider gear ratio ranges
- Improved aerodynamics
- Weight reduction of approximately 500 pounds

The 2013 Pathfinder also excels in the areas of interior flexibility and roominess, safety, and advanced hospitality features. Pathfinder features best-in-class fuel economy, towing capacity, head and leg room, and passenger volume. Pathfinder also offers class-exclusive features like a heated steering wheel, Around View Monitor, Easy-Fill Tire Alert, 3rd-row reclining seats, and selectable 2WD, Auto, and 4WD modes.



Standard Features

Mechanical

- 3.5L V6 engine (2WD and 4WD) with 260 hp and 240 lb-ft torque (VQ35DE)
- Continuously Variable Transmission (CVT) with external fluid cooler
- Continuous Valve Timing Control System
- 5,000 lbs. standard towing capacity
- Tow Mode switch
- Front and rear stabilizer bars
- 19.5-gallon fuel tank (73L)
- Hydraulic Electric Power Steering (HEPS)

Exterior

- 18-inch alloy wheels
- 235/65R18 tires
- Chrome grille
- Chrome front and rear door handles
- Body colored bumpers and outside mirrors
- UV-reducing solar glass and rear privacy glass
- Front (chin) and rear (roof) spoilers
- Black roof molding
- Chrome accent on front and rear fascia

Interior

- Seven passenger seating capacity (2-3-2)
- Six-way manual driver seat with manual lumbar support
- Four-way manual front passenger seat
- Center console with armrest
- Silver IP (Instrument Panel) and door finishers
- 2nd row - 60/40 split, manual slide/recline/fold flat seats
- 3rd row - 50/50 split, manual recline/fold flat seats
- Chrome inside door handles



Comfort and Convenience

- Cruise control with steering wheel mounted controls
- Manual tilt and telescoping steering wheel
- Illuminated steering wheel controls (AUDIO and ASCD)
- Illuminated driver window switch
- Power windows with driver window one-touch auto-down
- Remote keyless entry
- Push button ignition
- Advanced Drive Assist Display (ADAD) with trip computer
- Front variable intermittent windshield wipers with washer
- Rear liftgate window intermittent wiper with washer
- Low washer fluid and low fuel warning lamps
- Rear window defroster with timer
- Dual power remote-controlled outside mirrors (manual fold)
- Manual anti-glare rear view mirror
- Eight cup holders and six bottle holders
- 2nd row center armrest (fold-down with storage and two cup holders)
- 2nd row walk-in function (with child seat secure)
- Full auto A/C (tri-zone - front L/R and rear)
- Rear center console vent for A/C and heater for 2nd row
- Driver and passenger sun visors with vanity mirrors and extenders
- Overhead console with sunglass storage
- Illuminated locking glove box
- Map lamp for front and personal lamps for rear
- Cargo area/trunk light
- Storage compartment underneath cargo floor
- Auto door lock function
- 12-volt power points (one IP and one cargo)
- Cabin microfilter
- Outside temperature display in ADAD
- Easy-Fill Tire Alert



Audio and Entertainment

- AM/FM/MP3, 6-CD, 6-speaker audio system
- In-glass antenna

Safety and Security

- Nissan Advanced Air Bag System (AABS) for driver and front passenger
 - With seat belt sensors and occupant classification sensors
- Roof-mounted, curtain side-impact air bags for front- and rear-outboard occupant head protection (includes rollover sensor)
- Driver and front passenger seat-mounted, side-impact supplemental air bags
- Seat belt reminder
- Three-point height adjustable front seat belts with pretensioners and load limiters
- Driver's seat Emergency Locking Retractor (ELR)
- Front passenger's seat ELR and Automatic Locking Retractor (ALR)
- Rear three-point seat belts with ELR and ALR
- Lower Anchors and Tethers for CHildren (LATCH) (second-row outboard only)
- Child seat top tether on second-row center seat and third-row passenger's side seat
- Electronic Brakeforce Distribution (EBD)
- Brake Assist
- Four-wheel, four-channel Anti-lock Braking System (ABS)
- Vehicle Dynamic Control (VDC) with traction control system
- Tire Pressure Monitoring System (TPMS) with individual tire pressure display and warning lamp in ADAD
- Nissan vehicle immobilizer system and vehicle security system



Grade Walk

SV (in addition to S)

- Automatic on/off headlights with auto hazard system
- One touch up/down (front passenger) + one touch up (driver) windows
- Illuminated vanity mirrors
- Illuminated steering wheel switches (Bluetooth switch added)
- Illuminated passenger window switch
- Two additional 12-volt outlets (center console and IP)
- Speed sensitive wipers
- I-key (Door Lock/Unlock)
- Leather wrapped steering wheel and shifter
- Eight-way power driver seat
- Painted roof rails without crossbars
- Bluetooth hands-free phone
- XM Satellite Radio - US/CAN only
- Color monitor - Seven-inch color display
- AM/FM/RDS/MP3, One CD audio system (delete six-CD) with speed-sensitive volume
- USB/iPod connector
- Rear view monitor
- Plug-in RCA jacks
- Front tow hook
- Rear sonar
- Independent TPMS
- Delete AUX input



SL (in addition to SV)

- Driver seat and outside mirror position memory
- Fog lights
- Remote Engine Start (RES)
- Heated outside rear view mirrors
- Auto dimming inside rear view mirror with compass
- Printed wood trim with accents and leather door trim inserts
- Kick plates - front and rear stainless steel
- Interior welcome lighting logic
- Leather seating surfaces with heated front and rear seats
- Driver seat power lumbar
- Four-way power front passenger seat
- Power liftgate
- Chrome body side molding

Platinum (in addition to SL)

- Power tilt and telescope, heated steering wheel with position memory
- Cooled front seats
- Around View Monitor system
- 20-inch painted alloy wheels with 235/55R20 tires
- Navigation (HDD, DVD/CD)
 - Voice recognition
 - XM NavTraffic and NavWeather capability
 - Zagat Survey restaurant guide
 - Bluetooth streaming audio
- Color monitor - 8-inch VGA display
- Audio - Bose (AM/FM, CD, MP3, USB, 13-speaker (from 6))
- 120-volt power outlet (US/CAN only)
- Trailer Tow Package
 - Tow hitch receiver with integrated finisher
 - Trailer harness



Optional Packages

SL Premium Package

- Bose® 13-speaker premium audio system, AM/FM/CD
- 120-volt power outlet
- Dual panorama moonroof
 - One-touch tilt/open/close controls (front)
 - Sunshade
 - Rear roof glass with power sunshade
- Trailer Tow Package
 - Tow hitch receiver with integrated finisher
 - CVT cooling fan
 - Trailer harness

Platinum Premium Package

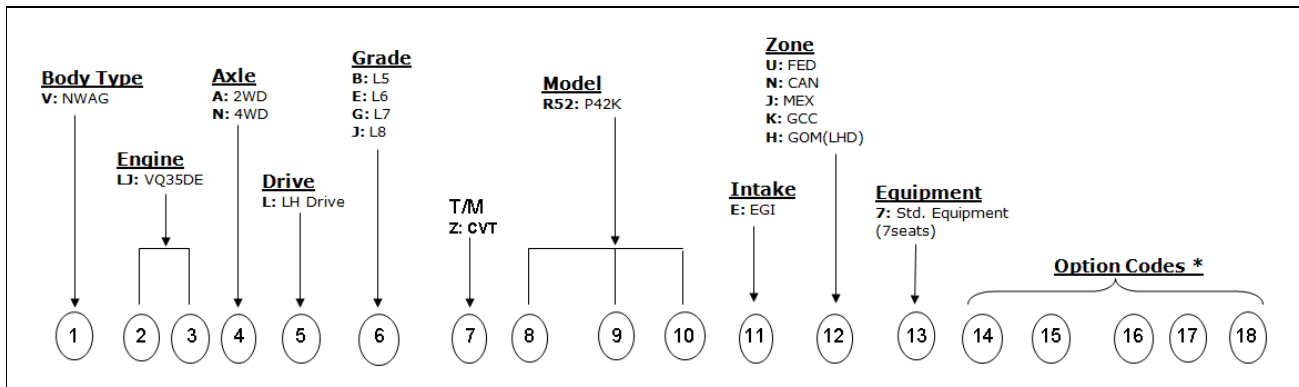
- Dual 7-inch headrest DVD Family Entertainment System (FES)
- Rear seat wireless headphones (two)
- Wireless remote control (two)
- RCA jacks
- Rear headphone jacks with volume control
- Dual panorama moonroof
 - One-touch tilt/open/close controls (front)
 - Sunshade
 - Rear roof glass with power sunshade

Trailer Tow Package

- Tow hitch receiver with integrated finisher
- Trailer harness



Model Identification



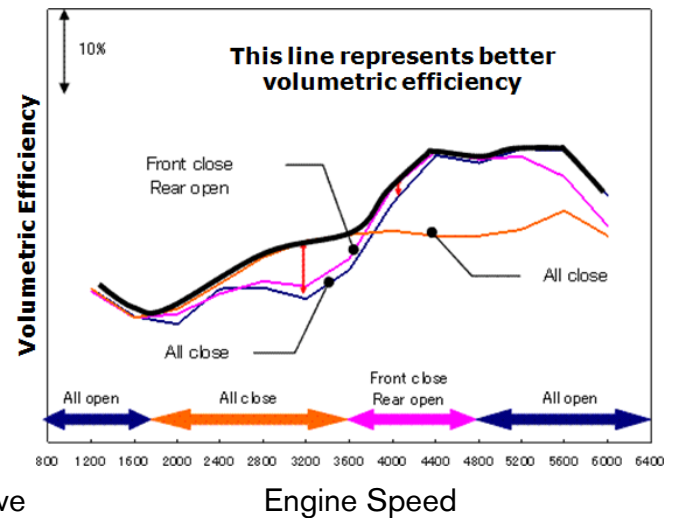
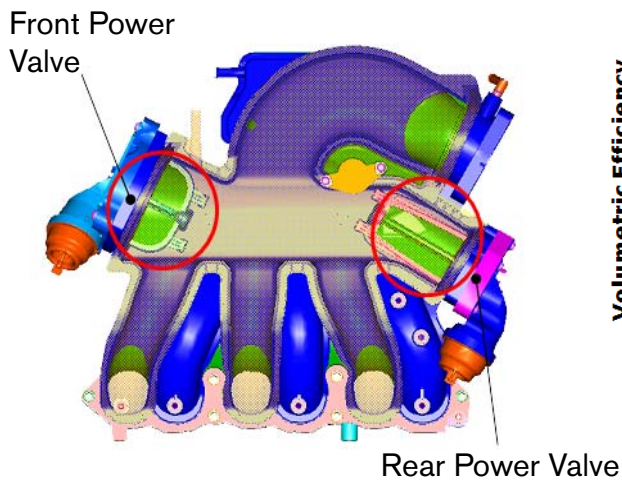
Summary of Option Codes

Option Code	Letter Designation	Option Content
14	A	TOW (GOM)
	B	Bose, Moonroof, Tow Package (US only)
	C	Moonroof, Dual 7-in. FES
	D	HD TOW (US/CAN)

ENGINE

Variable Induction Control System

The Pathfinder uses the 3.5L VQ35DE engine in both FWD and 4WD configurations. In addition, the VQ35DE utilizes a variable induction control system with front and rear power valve assemblies in the intake manifold. The ECM controls the opening and closing of these power valves independently, depending on engine load and RPM. As a result, volumetric efficiency is improved over the entire engine speed range.



Belt Routing

The Pathfinder is equipped with a hydraulic electric power steering system. As a result, the engine does not require a power steering pump pulley, simplifying belt layout and serviceability.



Conventional Belt Routing



Pathfinder Belt Routing (no power steering pulley)



Engine Specifications

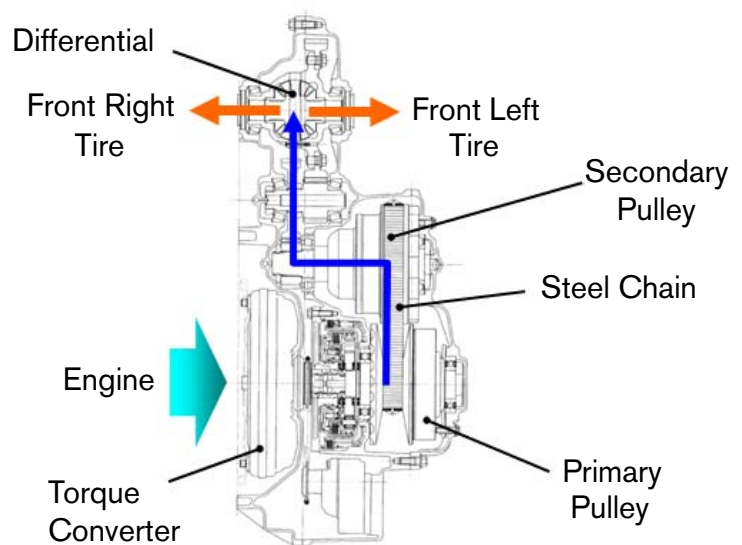
Engine Code	VQ35DE
Displacement	3.5 liters / 3498 cc
Horsepower @ rpm SAE	260 hp
Torque @ rpm (lb-ft) SAE	240 lb-ft
Bore & Stroke (mm)	96 x 81
Compression Ratio	10.3:1
Maximum Engine Speed (redline rpm)	6,600
Induction System	Naturally Aspirated
Intake Manifold Composition	Composite
Throttle Type	Electronically Controlled
Fuel Delivery System	Multipoint EFI
Water Pump Drive Type	Camshaft Timing Chain
Cooling Fan Type	Electric
Accessory Drive Type	Serpentine Belt
Recommended Fuel	Regular Unleaded

TRANSMISSION AND DRIVELINE

Continuously Variable Transmission (CVT)

Description

The model designation for the XTRONIC CVT used in the 2013 Pathfinder is RE0F10E, and is the same CVT used in the 2013 Altima 3.5 models. This CVT has approximately 40% less friction than previous CVTs as a result of reduced pulley pressure, a down-sized oil pump, and the use of NS-3 low viscosity fluid. The XTRONIC CVT uses a torque converter, primary and secondary pulleys, a steel chain, planetary gears, and a final drive/differential to provide ratio control and forward and reverse output.



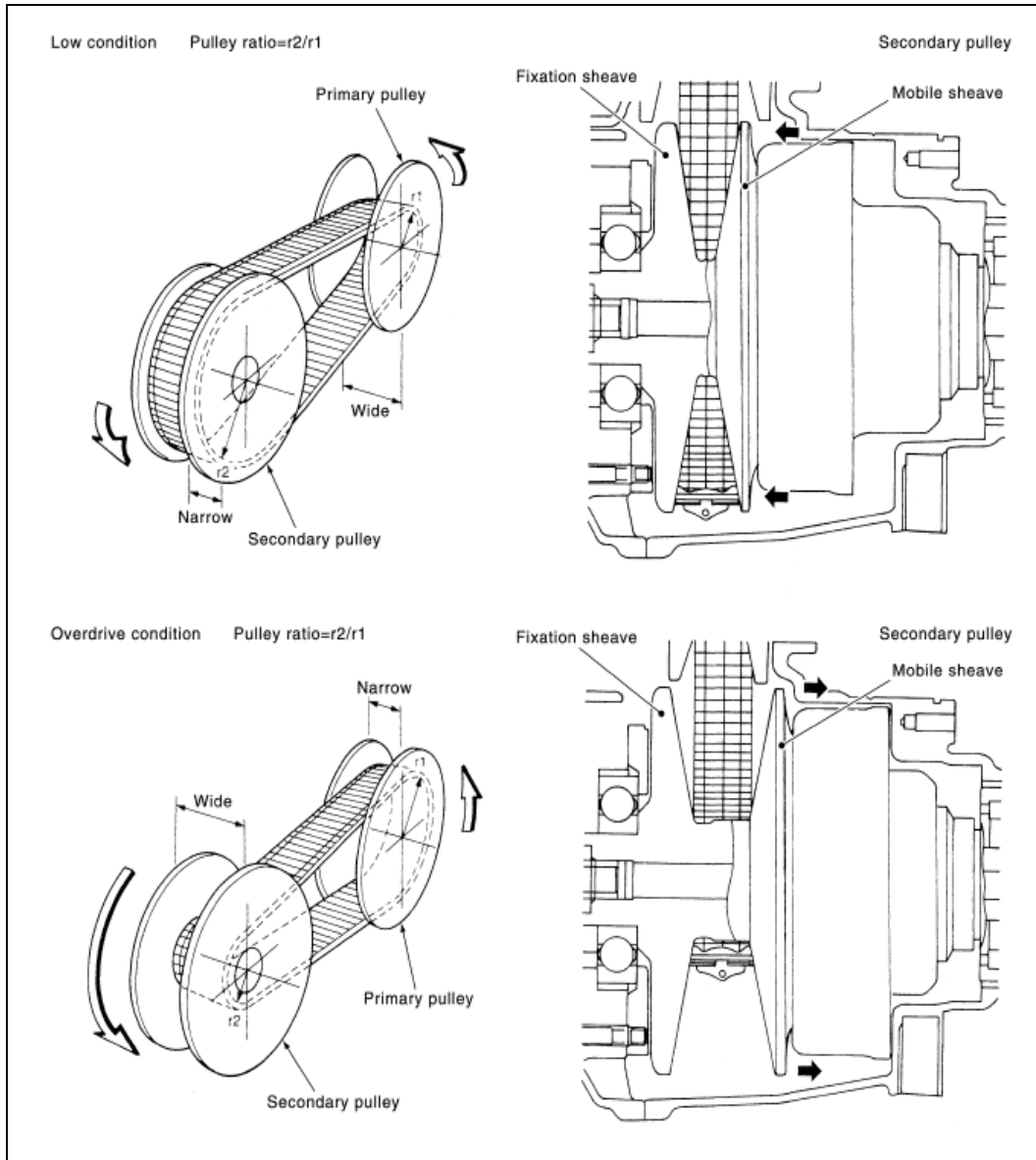
CVT Steel Chain

A significant difference between the RE0F10E transmission and previous CVTs is the use of a steel chain instead of a belt. The RE0F10E uses two pulleys with a steel chain running between them. To continuously vary the gear ratios, the transmission simultaneously adjusts the diameter of the drive pulley that transmits torque from the engine, and the driven pulley that transfers torque to the wheels.





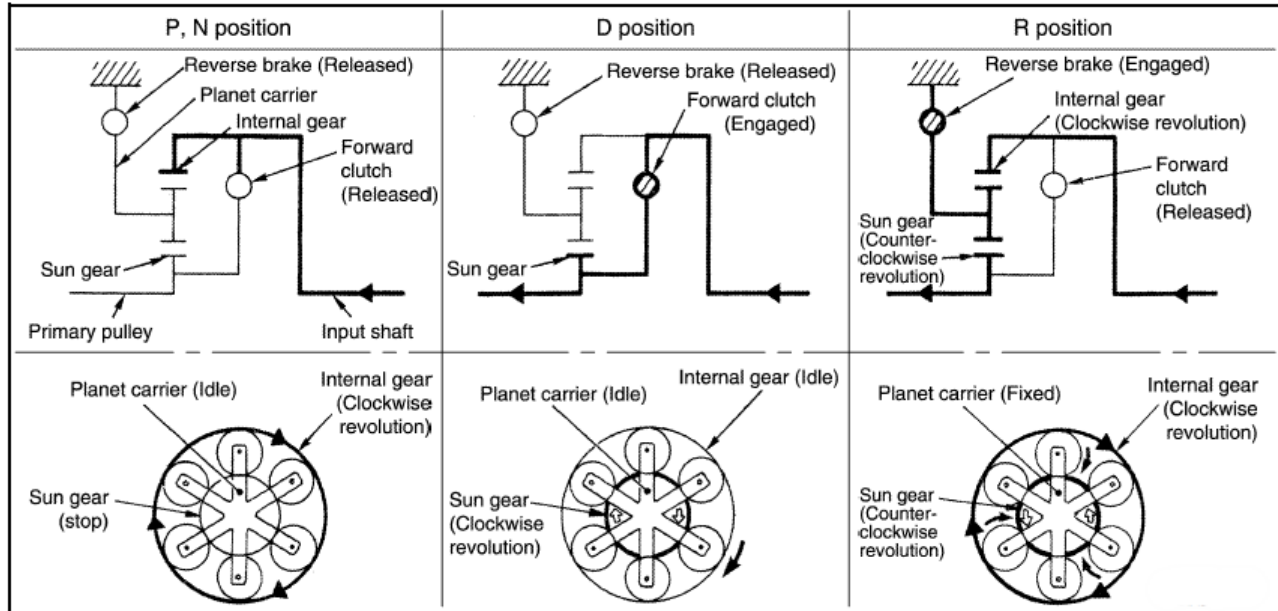
CVT Ratio Control



The RE0F10E uses larger pulleys mounted on smaller diameter shafts to allow for wider gear ratio ranges. Each pulley (primary and secondary) includes a fixed sheave, a shaft, a moveable sheave, and an oil pressure chamber at the back of the moveable sheave. The moveable sheave slides on the shaft to change the groove width of the pulley. Depending on engine load, primary pulley speed, secondary pulley speed, and other inputs, the TCM regulates the pressure in the oil chamber to control the width of the pulleys, in turn controlling the transmission gear ratios.

Planetary Gear Operation

Power from the torque converter is transmitted via the input shaft through a planetary gear set to the primary pulley. A forward clutch and reverse brake are used to hold or release planetary elements to allow neutral operation, and forward and reverse movement. In Drive, the forward clutch is engaged, connecting the input shaft to the sun gear and primary pulley. In Reverse, the reverse brake is engaged, fixing the planet carrier and spinning the sun gear and the primary pulley counter-clockwise.





CVT Fluid

Nissan NS-3 low viscosity fluid must be used in the Pathfinder CVT. NS-3 fluid is blue in color and should NOT be mixed with NS-2. There is no replacement interval for the transmission fluid unless the vehicle is used for towing. CONSULT-III plus is used to check fluid condition (deterioration) every 60,000 miles. Refer to the following TSB regarding use of the proper CVT fluid.



Technical Bulletin

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SERVICE BULLETIN

Classification:	Reference:	Date:
AT12-006	NTB12-068	August 20, 2012

NISSAN; CVT FLUID INFORMATION

APPLIED VEHICLES: All Nissan Vehicles Equipped with CVT
APPLIED TRANSMISSIONS: CVT

SERVICE INFORMATION

IMPORTANT: When servicing a Nissan vehicle equipped with a Continuously Variable Transmission (CVT) make sure to use the appropriate Nissan CVT Fluid specified in the Electronic Service Manual (ESM), Owner's Manual or Service and Maintenance Guide. Using fluid other than that specified may damage the CVT and is not covered by warranty.

- NISSAN CVT Fluid NS-2 ("green fluid") – applies to all Nissan vehicles equipped with CVT except MY13 Altima. Use NS-2 green fluid to service these vehicles.
 - New, unused service replacement CVTs may have some residual "blue" NS-3 fluid. However, these service replacement CVTs should be filled with NS-2 green fluid. No draining is necessary.
- NISSAN CVT Fluid NS-3 ("blue fluid") – applies to the 2013 Altima. Use NS-3 blue fluid to service these vehicles.
 - Use of any other type of fluid, including NS-2 green fluid, in the 2013 Altima vehicle may result in reduced fuel economy and/or affect drivability.

Please refer to the table below, the ESM, Owner's Manual or Service and Maintenance Guide.

Model	Model Year	CVT Fluid Recommendation
Altima	2013	NISSAN CVT Fluid NS-3 ("blue")
Altima	Prior to 2013	NISSAN CVT Fluid NS-2 ("green")
All Other Nissan Models	All Model Years	NISSAN CVT Fluid NS-2 ("green")



CVT Fluid Temperature Control

CVT fluid temperature is controlled in a number of ways on the 2013 Pathfinder. The following cooling components are standard on all models:

- CVT fluid cooler incorporated into the radiator
- Heat exchanger that can heat and cool fluid
- External fluid cooler in front of the front left wheel well

Heat generation on the RE0F10E CVT is lower than on previous CVTs and cooling capacity is greater due to an additional external fluid cooler, an improved flow radiator and larger radiator fans.



Trailer Towing

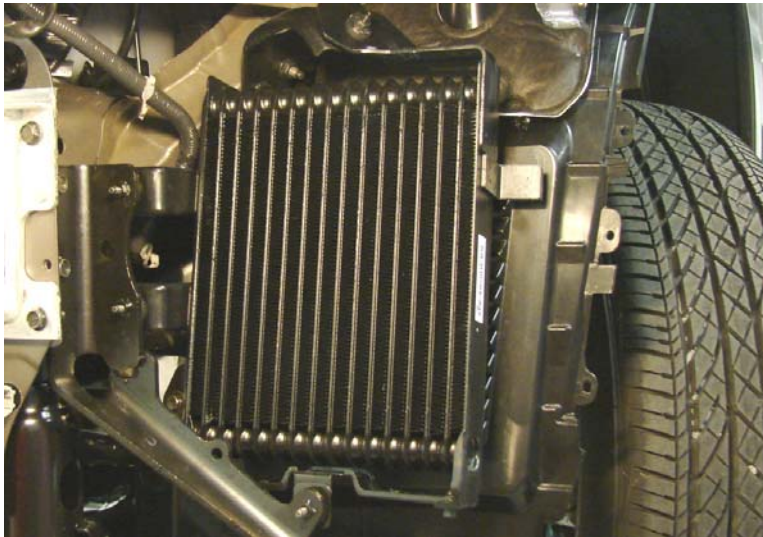
The Pathfinder has a standard towing capacity of 5,000 pounds. A radiator with increased flow and larger, higher wattage cooling fans maintain engine coolant and CVT fluid temperature.

A Trailer Tow Package is also available. The Trailer Tow package consists of a tow hitch receiver and a trailer harness.

NOTE: The Service and Maintenance Guide recommends replacing CVT fluid at 60,000 miles if the 2013 Pathfinder is used for towing.



CVT Cooler



An dedicated CVT fluid cooler is installed on the 2013 Pathfinder.

View with Front Bumper Cover Removed

CVT Towing Control

A Tow Mode switch is located on the lower left portion of the instrument panel. When the Tow Mode switch is activated, the following changes occur to the transmission control strategy:

- When driving uphill, the TCM may suppress the “upshift” by using gear ratio control to maintain engine RPM in a high-torque range for climbing grades.
- When starting from a stop, the TCM may select a lower gear range to assist in acceleration while towing.
- When driving downhill, the TCM may strengthen engine braking by controlling gear ratios to assist in controlling downhill speed.

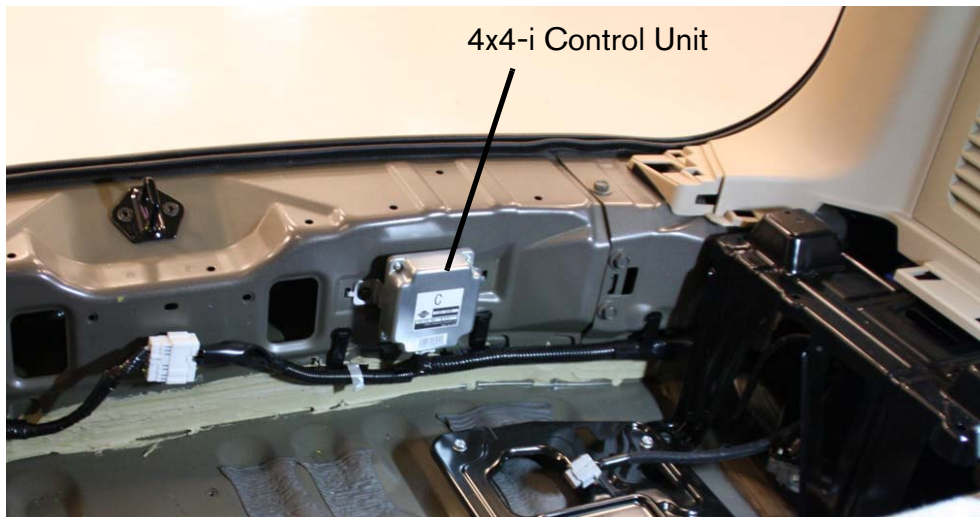




Driveline

Intuitive 4WD with All Mode 4x4-i System

The 2013 Pathfinder is the first Nissan vehicle to incorporate the Intuitive 4WD with All Mode 4x4-i system. The system features three modes that are selected by the driver using a rotary switch on the center console. 4WD operation is controlled by a 4x4-i control unit located behind the rear cargo area.

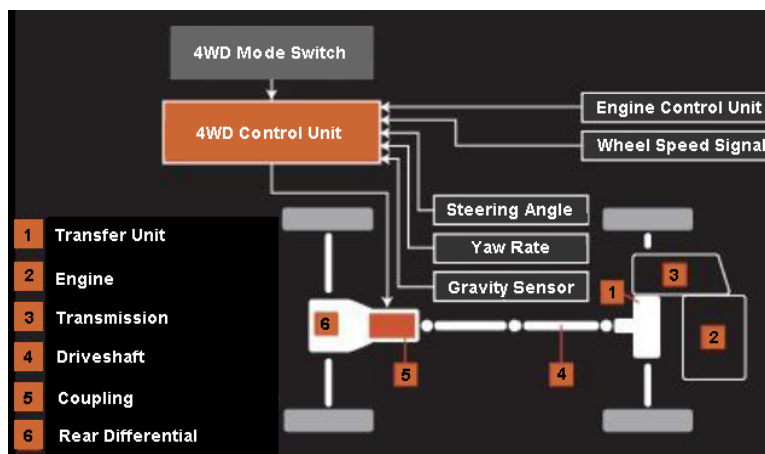


4WD Operation

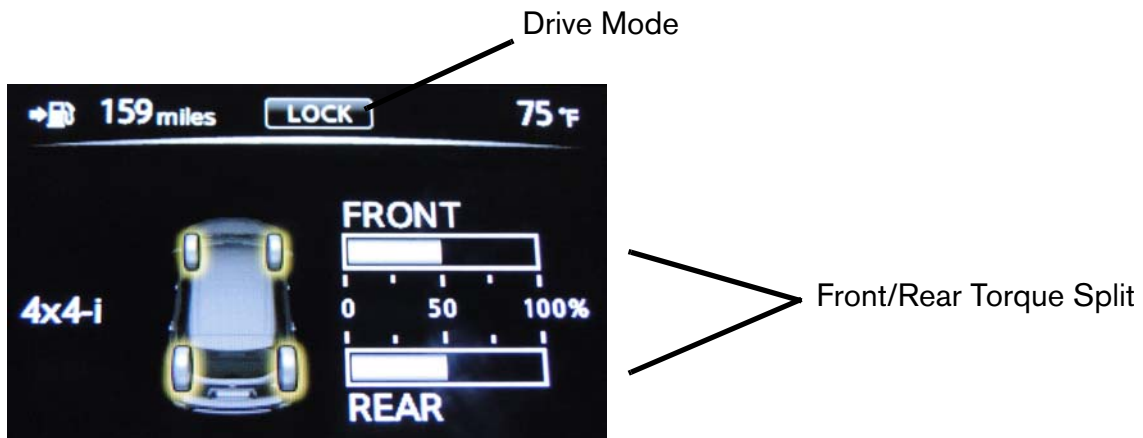
The system can operate in one of three distinct drive modes depending on the position of the rotary switch:

- 2WD - Allows the driver to lock the system in 2WD, sending 100% of the power to the front wheels for maximum fuel economy
- LOCK 4WD - Selection of this mode locks the system into a 50/50, front-to-rear torque split for maximum traction in inclement weather.
- AUTO - In the AUTO position, the system operates in FWD and automatically transfers power to the wheels with optimum traction as needed. The front-to-rear torque split can be varied anywhere from 100/0 to 50/50.

When in AUTO, the 4x4-i control unit uses input signals from various sensors including the wheel speed, steering angle, yaw rate, and G-sensors, as well as ECM data to control the distribution of torque during cornering. This is referred to as yaw moment control.

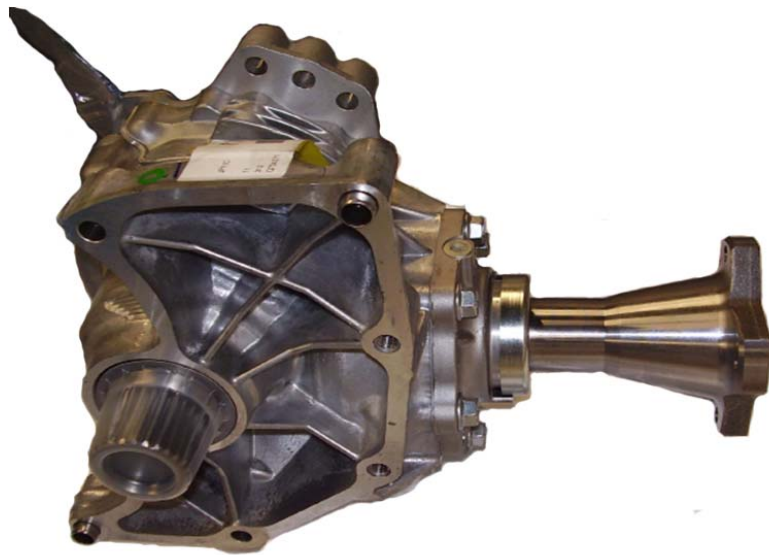


The 4WD mode is displayed in the ADAD, and the driver can select a screen to view instantaneous torque split between front and rear wheels.





Transfer Unit

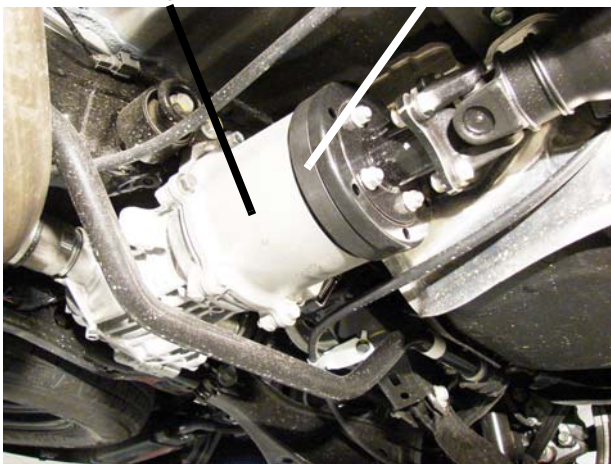


Vehicles equipped with 4WD include a transfer unit to distribute engine power through the driveshaft to the rear final drive unit.

Rear Final Drive Unit

Coupler

Torsional Damper



View from Front



View from Rear

On vehicles equipped with 4WD, a rear final drive unit is used to transfer torque from the driveshaft to the rear wheels. The rear final drive unit includes a torsional damper on the input flange for reduced NVH. Coupling capacity is increased, which in turn allows for increased towing capacity.



Fluid Specifications

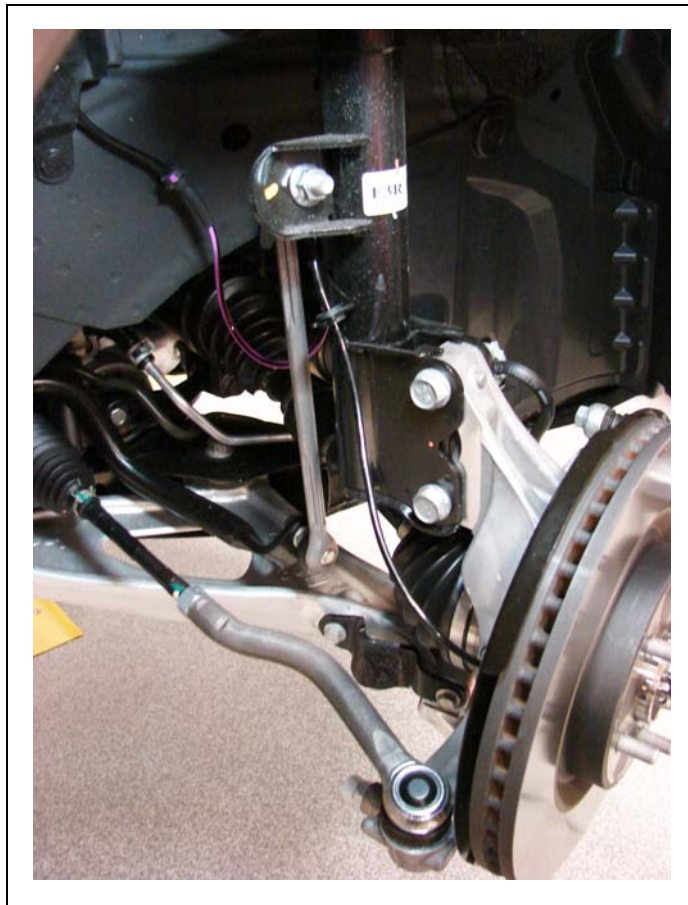
Component	Recommended Fluid
XTRONIC CVT	NS-3 (blue)
Transfer Unit	Genuine NISSAN Differential Oil Hypoid Super SS API GL-5, 80W-90
Rear Final Drive Unit	Genuine NISSAN Differential Oil Hypoid Super SS API GL-5, 75W-90



SUSPENSION

Front Suspension

The front suspension is a modified strut-type suspension with aluminum knuckles and control arms.



Rear Suspension

The rear suspension is a multi-link design utilizing aluminum knuckles and coil springs.



Wheels and Tires



18-inch Wheel (Standard)



20-inch Wheel (Optional)

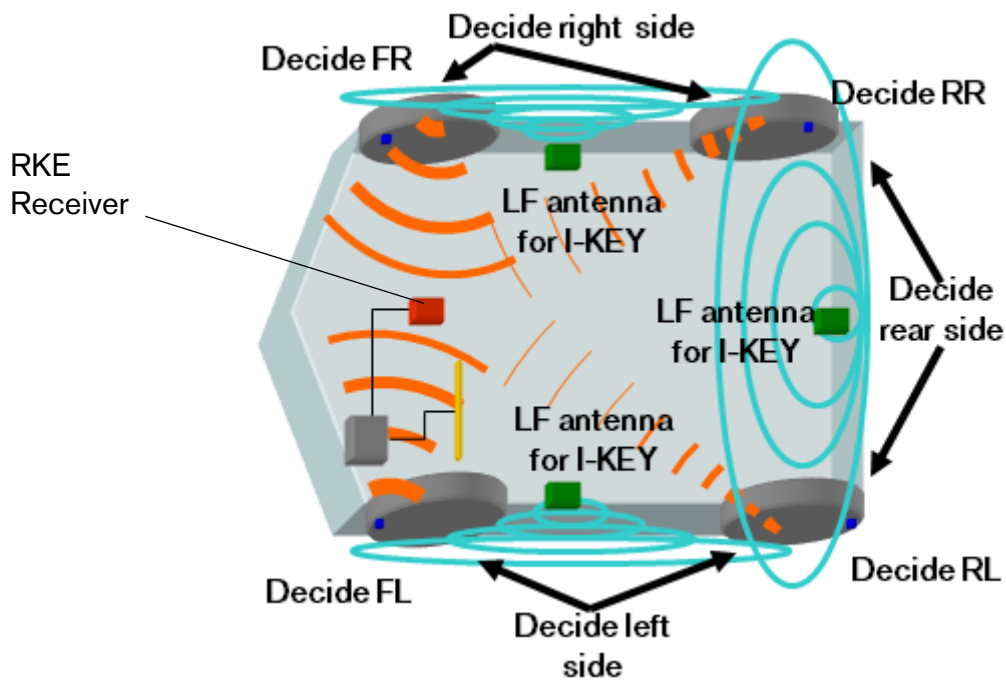


Tire Pressure Monitor System (TPMS)

The Pathfinder incorporates a four-corner TPMS with Easy-Fill Tire Alert. This system monitors tire pressures in real time and displays pressure readings for each tire in the ADAD. The system includes a transmitter in each wheel, three antennas, the BCM, ADAD, the horn, and the hazard signals.

Operation

The pressure sensor (transmitter) inside each wheel transmits detected air pressure via radio waves to the antennas. These three antennas are also used for I-key operation. Front left and right wheels are identified individually by the left and right antennas. The rear left and right wheels are identified using a combination of signals received by the front antennas and the single rear antenna. Based on the length of time it takes the signal to travel from the rear tire to the front and rear antennas, the system can identify its exact location. This concept is referred to as triangulation.



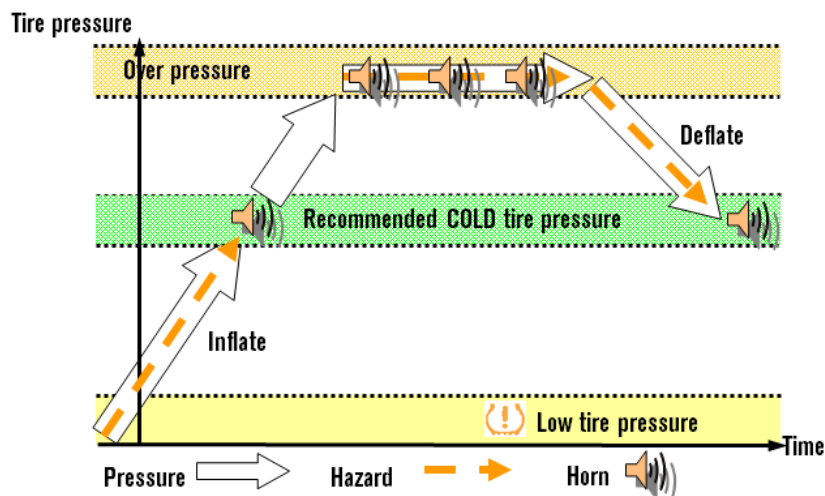
Easy-Fill Tire Alert

The TPMS incorporates several features that assist the driver in maintaining proper tire pressure without the need for a pressure gauge. The ADAD can display independent tire locations with corresponding pressure values. When the tire pressure falls below 25% of the recommended cold inflation pressure, a low tire pressure warning lamp in the cluster illuminates.

NOTE: On Pathfinder S models without I-Key transmitters, individual tire pressures are not displayed in the ADAD.



With the ignition ON, the customer can begin to inflate the tires. When adding air to the tires, the hazard lamps flash. When the recommended tire pressure is reached, the horn sounds. When the tire pressure exceeds more than 4 psi above the recommended pressure, the horn honks three times. In this case, after deflating the tires to the recommended pressure, the horn honks once.





Signal Tech II

During service, each TPMS transmitter must be registered or activated using Signal Tech II. The Signal Tech II is used for the following:

- Activate and display TPMS sensor IDs
- Display tire pressure reported by the TPMS sensor
- Read TPMS DTCs and register TPMS IDs
- Check intelligent key relative signal strength
- Test the remote keyless entry relative signal strength
- Confirm intelligent key antenna relative signal strength output





BRAKES

Brake System Features

The brake system electronics and diagnostics on the Pathfinder are very similar to those used on other current Nissan vehicles. The Pathfinder is available with the following brake related control systems:

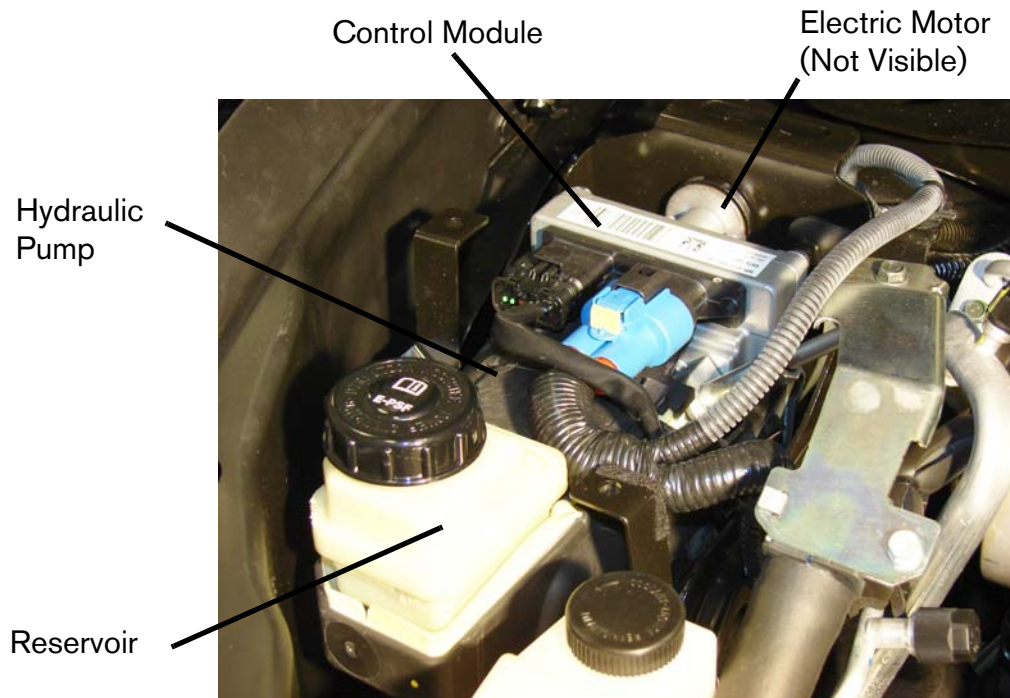
- Electronic Brakeforce Distribution (EBD) and Anti-lock Brake System (ABS) functions that reduce wheel lock by reducing hydraulic brake pressure to the calipers
- Traction Control System (TCS) function that works in conjunction with the engine management system to minimize engine power output to reduce wheel slip
- Vehicle Dynamic Control (VDC)
- Hill Start Assist (HSA) function that maintains brake hydraulic pressure on slopes for approximately two seconds when starting on a hill to prevent the vehicle from rolling



STEERING

Description

The Pathfinder uses a Hydraulic Electric Power Steering (HEPS) system to provide precise steering feel and to reduce engine load for improved fuel economy. Rather than using a conventional system with a belt-drive power steering pump, the HEPS system provides steering boost through an electrically-driven hydraulic pump. The power steering pump assembly integrates an electric motor, oil pump, reservoir tank, and a control module in one unit.



System Components

The HEPS system uses the following main system components:

- Power steering pump assembly
 - Power steering control module
 - Electric motor
 - Fluid pump and fluid reservoir
- Steering gear assembly
- Steering angle sensor

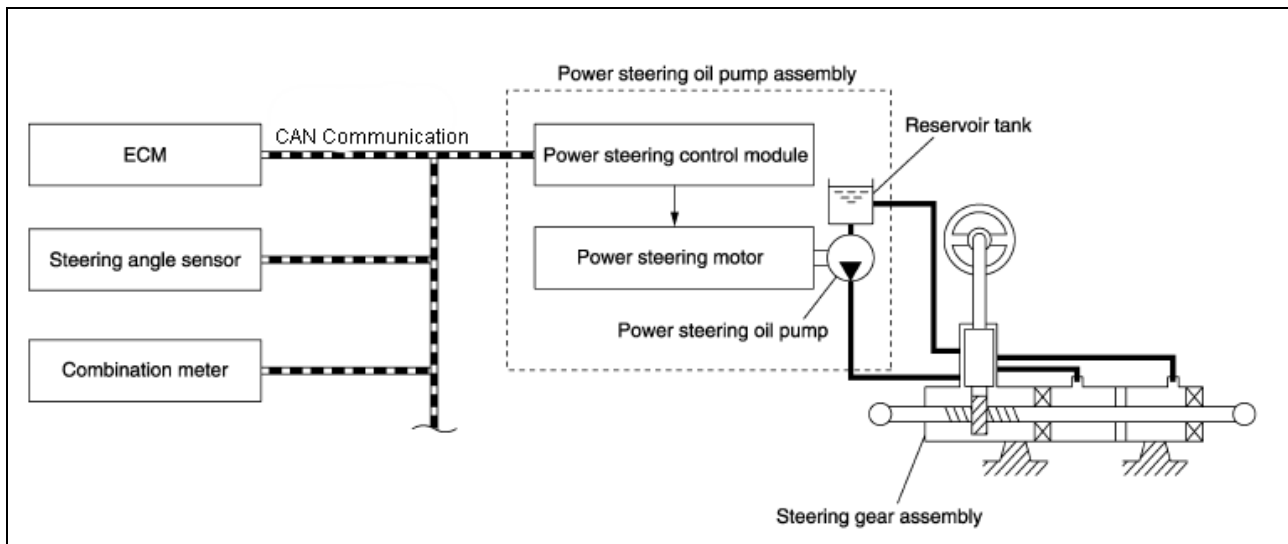


Component Functions

Component	Function
Power Steering Control Module	Receives signals from sensors, calculates hydraulic pressure of the system, and controls the power steering motor
Power Steering Motor	Drives the power steering pump based on commands from the power steering control module
Power Steering Pump	Driven by the power steering motor, the pump generates hydraulic pressure in the system
Steering Gear	Converts steering torque into mechanical motion to turn the wheels
Steering Angle Sensor	Detects the speed of steering wheel input and sends this signal to the power steering control module
ADAD (Combination Meter)	Transmits the vehicle speed signal to the power steering control module over the CAN network; this signal is used to calculate the amount of steering assist
ECM	Transmits the engine speed signal to the power steering control module



System Diagram



Input and output signals are communicated between modules via CAN communication.

Control unit	Signal status
ECM	Transmits engine status signal to power steering control module via CAN communication.
Steering angle sensor	Transmits steering angle sensor signal to power steering control module via CAN communication.
Combination meter	Transmits vehicle speed signal to power steering control module via CAN communication.
	Receives hydraulic pump electric power steering warning lamp signal from power steering control module via CAN communication.



Steering System Diagnostics

Power Steering System Warning Lamp

When the HEPS system enters the fail safe or protection modes and steering assist force is not being generated, the power steering system warning lamp turns ON to warn the driver that the system is in manual steering state. In addition, the power steering system warning lamp turns ON briefly when the ignition is turned ON for lamp and system checks. When the system is operating normally, the lamp turns OFF after the engine starts.

Protection Function

When the steering wheel is operated repeatedly or turned to an end stop for too long, the function of the power steering system becomes limited to prevent the system from overheating. If the steering wheel is operated further, the power steering system stops and the power steering system warning lamp may be turned ON. In this case, the steering wheel effort temporarily becomes hard. This is not a malfunction.

When the engine is turned OFF (ignition switch OFF) and steering operation is stopped for a while, the temperature of the hydraulic pump/electric motor decreases and steering operation returns to normal after restarting the engine.

Fail Safe Mode

When a fault occurs in the hydraulic pump electric power steering system, fail-safe brings the system to a halt (manual steering) or restricted (constant steering assist level) state. When the system is in a halt state, fail-safe turns ON the power steering system warning lamp to warn the driver that the hydraulic pump electric power steering system is in the manual steering state.

Fluid Requirements

The HEPS system requires the use of genuine NISSAN E-PSF. Using another power steering fluid not designed for this system will prevent the power steering system from working properly and may seriously deteriorate the system's ability to produce steering assist. Always check the fluid with the engine OFF.

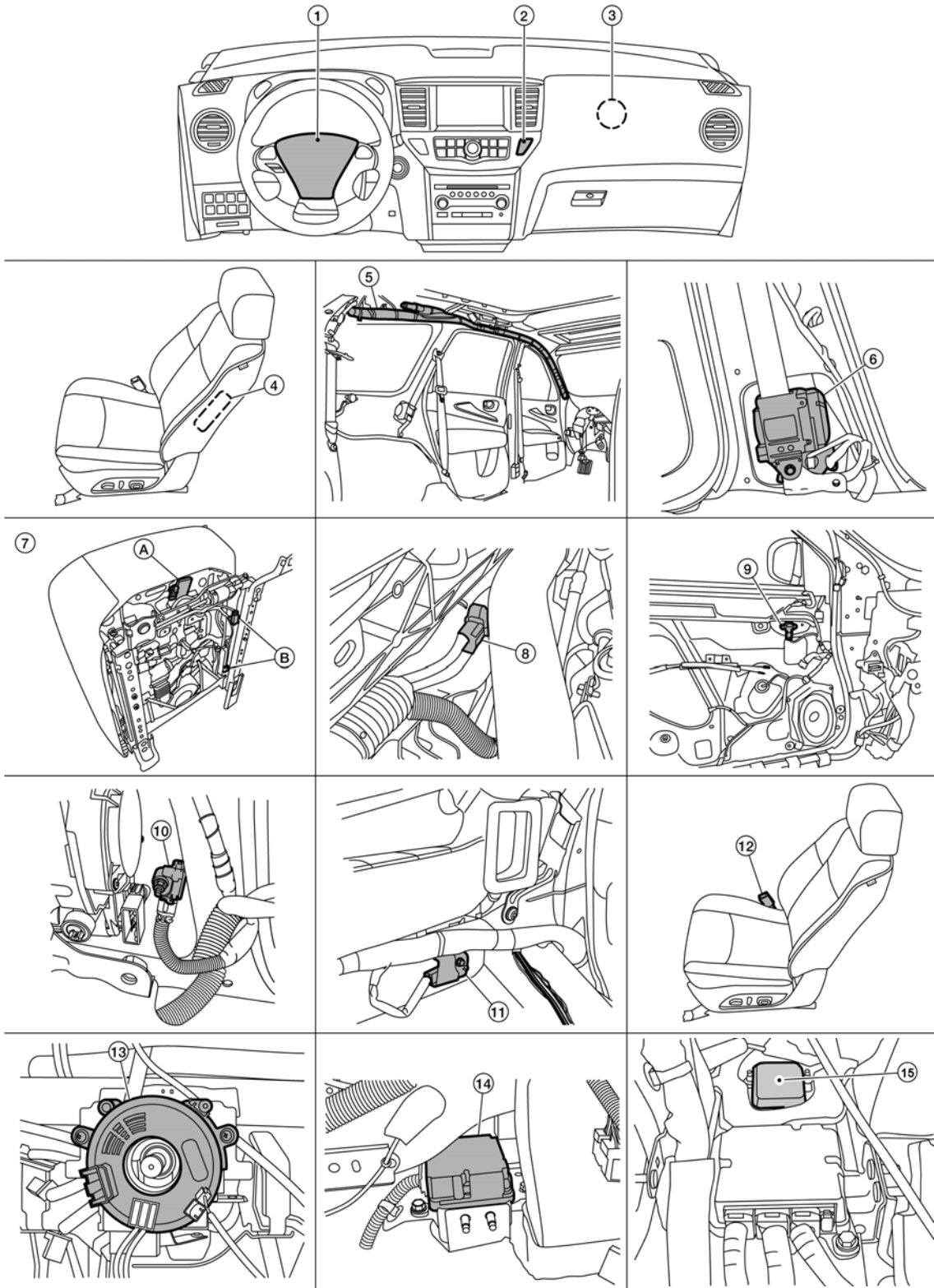
NOTE: EPS systems may produce a high-pitched noise from the pump/motor assembly during low-speed steering maneuvers when steering load is high. This is not a malfunction.



RESTRAINTS

SRS Component Locations

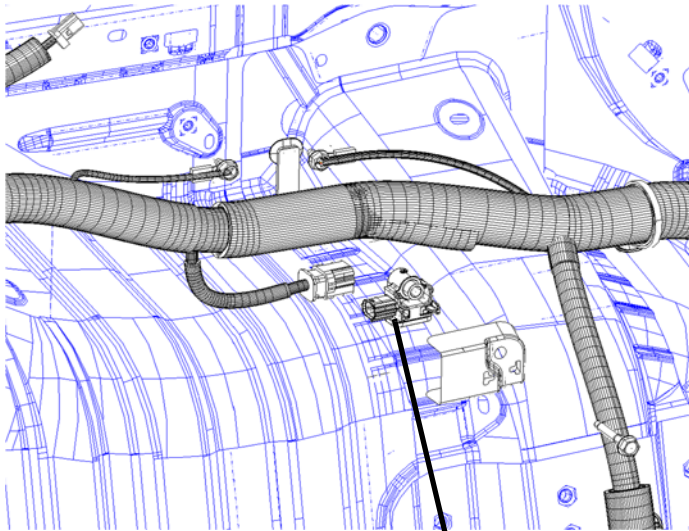
Number	Component
1	Driver air bag module
2	Front passenger air bag off indicator
3	Front passenger air bag module
4	Front LH side air bag module (RH similar)
5	LH side curtain air bag module (view with headliner removed) (RH similar)
6	Front RH seatbelt pre-tensioner (view with lower center pillar cover removed) (LH similar)
7A	Occupant classification system control unit
7B	Occupant classification system sensors (view with passenger seat removed)
8	Crash zone sensor (view with intake removed)
9	Front door satellite sensor LH (view with front door finisher LH removed) (RH similar)
10	Front air bag satellite sensor LH (view with lower center pillar removed) (RH similar)
11	Rear side air bag satellite sensor LH (view with luggage side lower finisher removed) (RH similar)
12	Seat belt buckle switch (driver seat) (passenger seat similar)
13	Spiral cable (view with steering wheel removed)
14	Air bag control unit (view with center console assembly removed)
15	Yaw rate sensor (in front of air bag control unit)



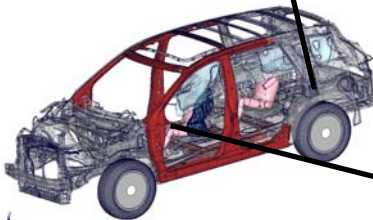


Side Impact Protection

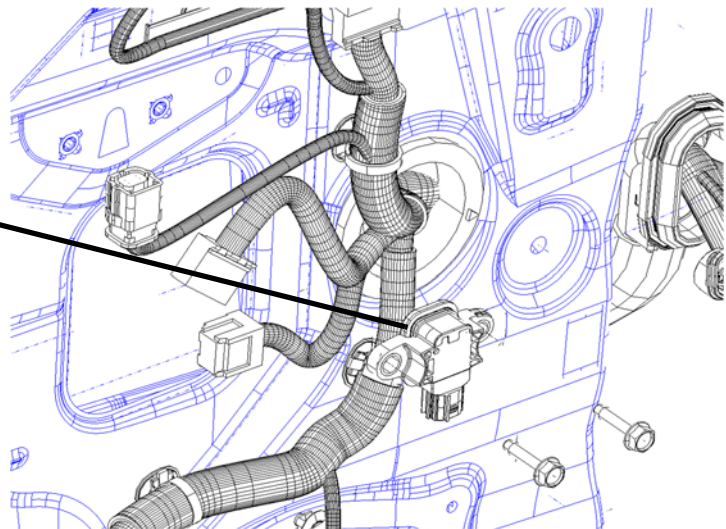
The Pathfinder offers advanced protection in side impact collisions by incorporating several new passive restraint system sensors. New rear side air bag satellite sensors have been added to the rear quarter panel area to improve sensing time for side collisions. In addition, a new front door satellite sensor has been added to the inside of each front door. These sensors detect rapid changes in pressure of the interior door panel and help improve sensing time for side collisions with narrow objects for the front row passengers.



Rear Side Air Bag Satellite Sensor



Front Door Air Bag Satellite
(Pressure) Sensor





Front Door Satellite Sensor Precautions

The addition of the front door air bag satellite sensor introduces several new DTCs that may set if these sensors are disconnected or reconnected with the ignition ON. Service Bulletin NTB12-004 provides information regarding these new DTCs.



Technical Bulletin

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SERVICE BULLETIN

Classification:	Reference:	Date:
RS11-004	NTB12-004	January 9, 2012

SUPPLEMENTAL RESTRAINT SYSTEM (SRS) FRONT DOOR SIDE SATELLITE SENSOR INTRODUCTION

APPLIED VEHICLES: All 2011-2012 Nissan vehicles with SRS DTC B1338 and/or B1345 logic

SERVICE INFORMATION

The Applied Vehicles now come equipped with a "Front Door Side Satellite Sensor", in addition to the pre-existing Side Air Bag Satellite Sensor found in the pillar.

These Sensors have new Diagnostic Trouble Codes (DTC) associated with them.

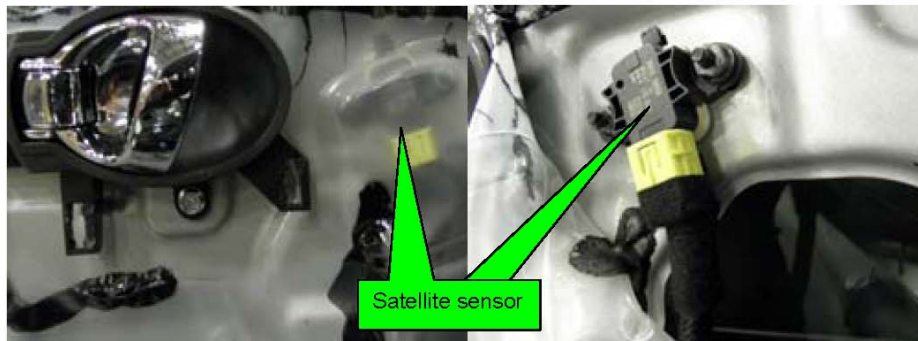
IMPORTANT: If the front door internals are being serviced for any reason, and this Sensor is unplugged or reconnected with the ignition ON, **the following codes could be stored:**

- B1338 and/or B1345 - SATELLITE SENSOR LH or RH.

And

- The code(s) is a "PAST" code **only**.

NOTE: When diagnosing the DTCs listed above, be aware of this potential sequence of events.

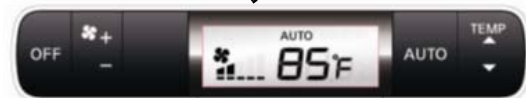
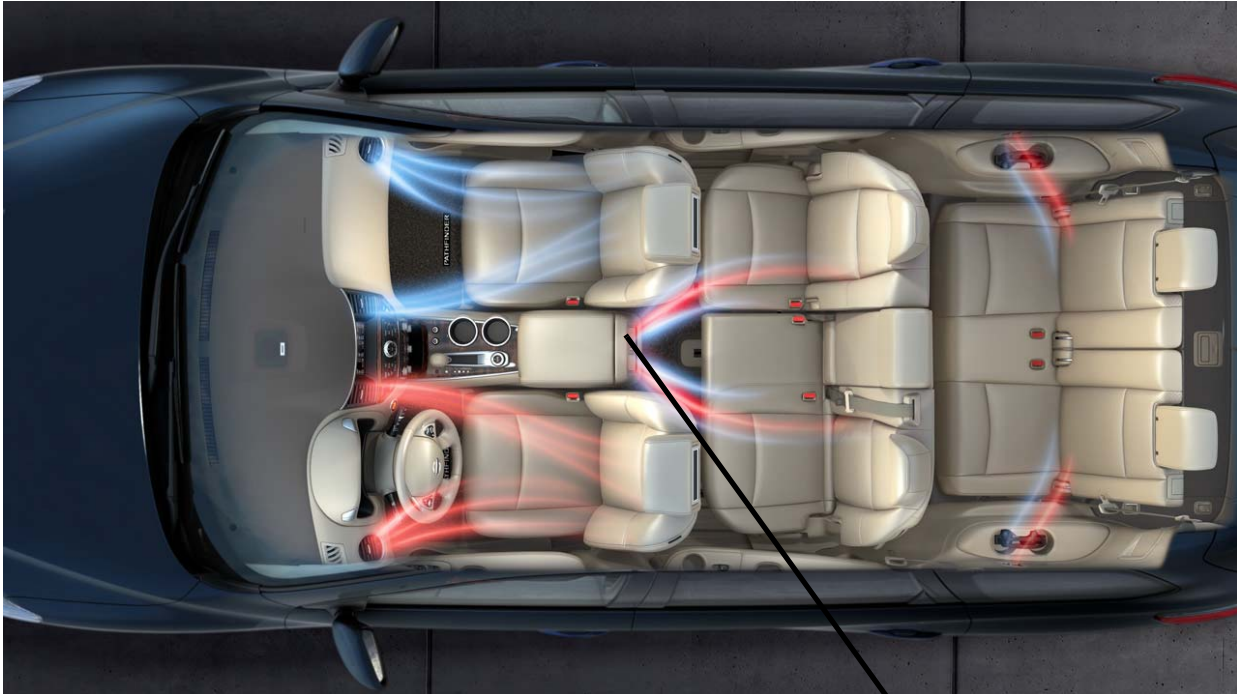


Nissan Bulletins are intended for use by qualified technicians, not 'do-it-yourselfers'. Qualified technicians are properly trained individuals who have the equipment, tools, safety instruction, and know-how to do a job properly and safely. NOTE: If you believe that a described condition may apply to a particular vehicle, DO NOT assume that it does. See your Nissan dealer to determine if this applies to your vehicle.



HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)

Tri-zone Temperature Control



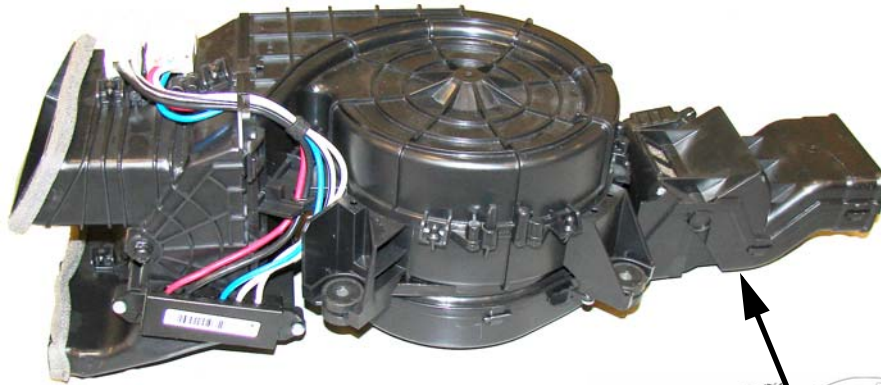
Tri-zone Features

- Front heating and A/C unit with separate driver and passenger controls
- Center blower motor/PTC heater with temperature and fan controls for second row passengers
- Rear blower motor and evaporator assembly with ventilation ducts for third row passengers

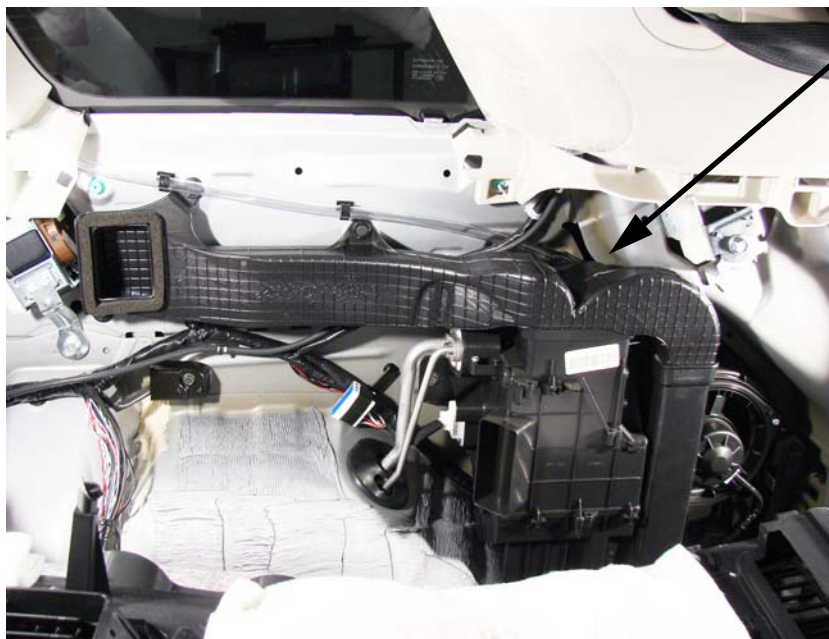
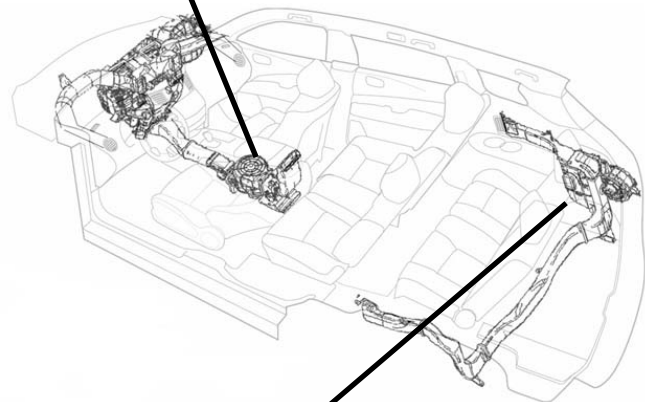
The front HVAC unit features a duct leading to the center blower motor. This enables the front HVAC system to provide heating and cooling for front and second row occupants. The center blower motor and mode door can be controlled by second row passengers to adjust desired temperature and air volume. The rear blower motor and evaporator assembly can also provide cooling through center vents in the rear quarter panels for third row passengers.

Driver controls for the HVAC system enable the rear controls in the center console to be enabled or disabled.

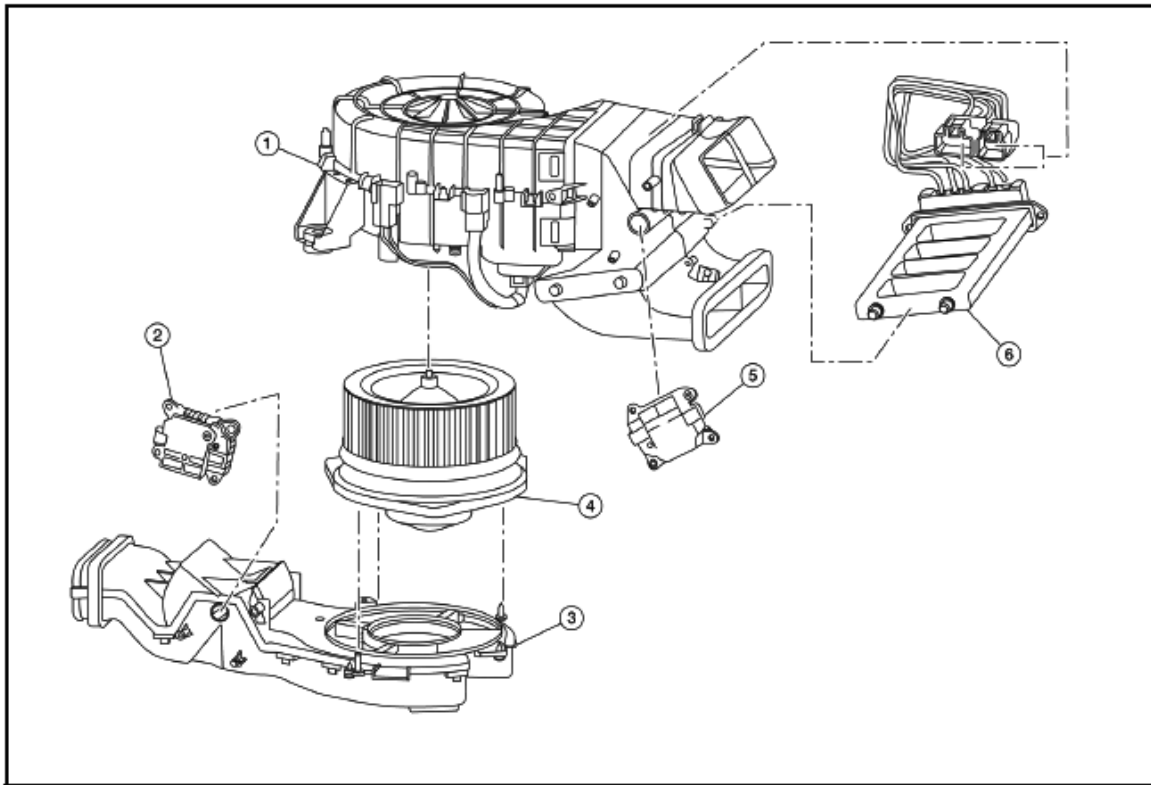
Second and third row airflow is supplemented by two auxiliary blower motors with additional ventilation ducts. Inside the center console is the center blower motor, a PTC heater, and ventilation ducts. Third row ventilation is provided by a rear blower motor, evaporator, and a series of ventilation ducts that supply air to the third row vents near the C-pillars.



Blower Motor/PTC Heater
(Within Center Console)



Rear Blower Motor/Evaporator
(Behind RH Rear Quarter Trim)



- | | | |
|----------------------------------|-----------------------------|----------------------------------|
| 1. Center blower unit upper case | 2. Rear shut-off door motor | 3. Center blower unit lower case |
| 4. Center blower motor | 5. Rear air mix door motor | 6. PTC elements heater |

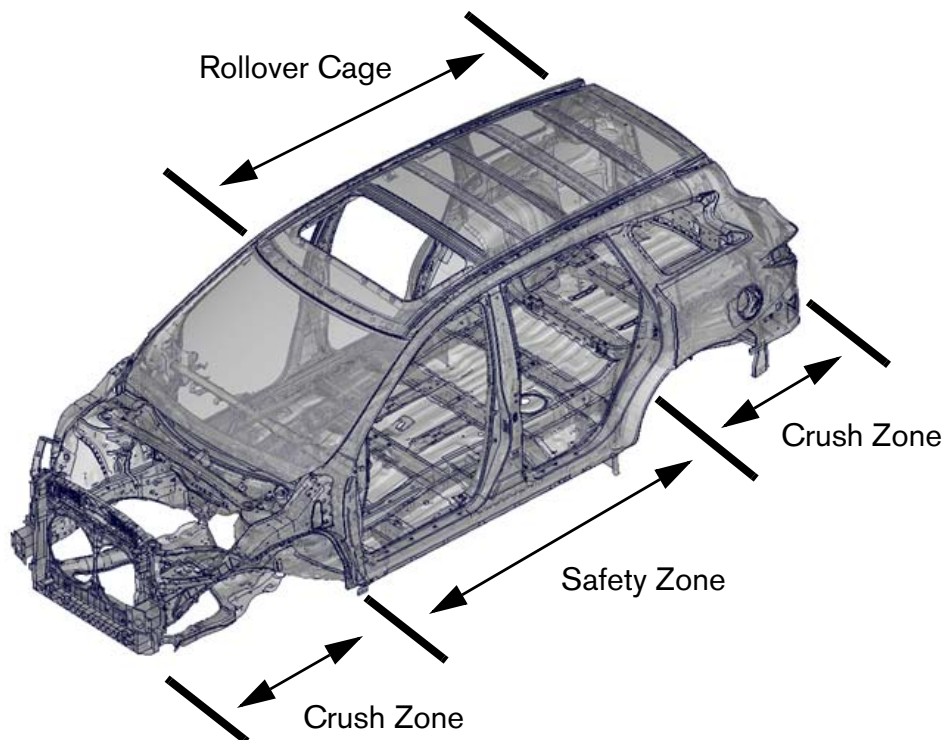
BODY

Exterior

The following information highlights several new or unique features of the body exterior.

Body Structure

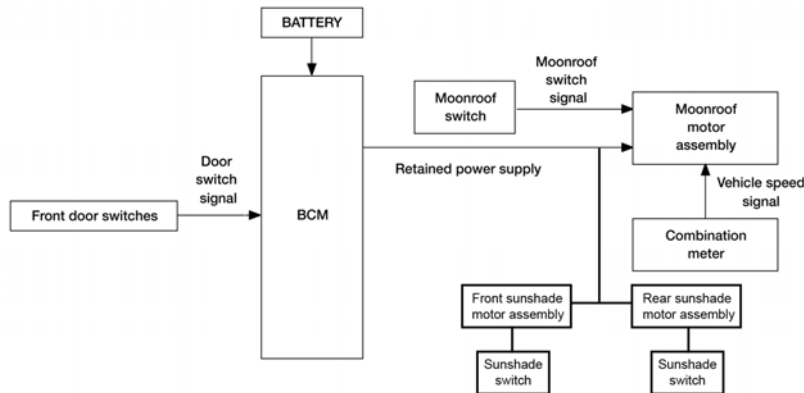
The Pathfinder's unibody design incorporates multi-load paths for impact force dispersion. The front and rear side members are designed as crash energy management zones (crushable zones) that absorb energy generated by front and rear impacts. The central portion of the lower body is a rigid zone designed to maintain its integrity with minimal deformation to protect the occupants and fuel tank. In addition, the body (rollover) cage construction minimizes intrusion into the interior during rollover impacts.





Moonroofs

The Pathfinder may be equipped with a front power sliding/tilting moonroof with sliding sunshade. An additional fixed glass moonroof with power sliding sunshade is available for second and third row positions. The front moonroof and rear sunshade include auto open and close functions. In addition, the moonroof and sunshade motors incorporate anti-pinch functionality.



Moonroof Initialization

If the moonroof does not open or close automatically, perform the following procedure to synchronize the moonroof assembly:

1. Turn the ignition switch ON.
2. Push and hold the moonroof tilt switch forward until the moonroof stops.
3. Release the moonroof switch.
4. Press and hold the tilt up switch within 6 seconds.
5. The roof glass will Tilt Down, Slide Close, Slide Open, Slide Close, Tilt Up, and Tilt Down.
6. Release the switch.

Sunshade Initialization

If the sunshade does not open or close automatically, use the following procedure to synchronize the sunshade assembly:

1. Switch the vehicle ignition to the ACCESSORY or RUN mode.
2. Press and hold the sunshade close switch.
3. The sunshade will begin moving towards the close position only when the switch is continually pressed. This disables the obstacle detection.
4. The sunshade will stop for approximately 4 seconds.
5. The sunshade drive cable will travel in the open direction for 10 mm (.394 in.) then reverse direction and stop at the normal close position.
6. Release the sunshade close switch.

Power Liftgate Open Position Setting



Liftgate (Height Limit Engaged)



Power Liftgate Master Switch



Power Liftgate Control Unit

In addition to manual and automatic opening and closing, the liftgate opening height limit can be adjusted to allow an opening height that is less than fully open. To adjust the opening height limit, use the following procedure:

NOTE: For all power liftgate functions to operate properly, the master power liftgate ON/OFF switch on the instrument panel must be in the ON position.

1. Manually move the liftgate door to the desired stop setting.
2. Press and hold the power liftgate close switch for 3 seconds while maintaining the liftgate door position.
3. The new opening limit is set when the buzzer beeps twice.
4. Fully close the liftgate door.

To cancel the programmed opening height limit, use the following procedure:

1. Manually move the liftgate door to the fully open position.
2. Press and hold the power liftgate close switch for 3 seconds.
3. The standard opening limit is set when the buzzer beeps twice.
4. Fully close the liftgate door.



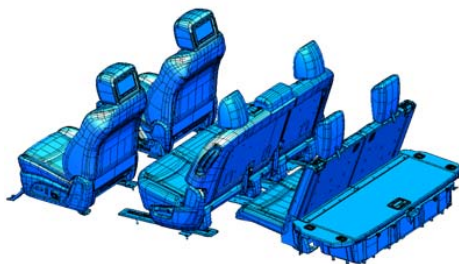
Interior

Seats

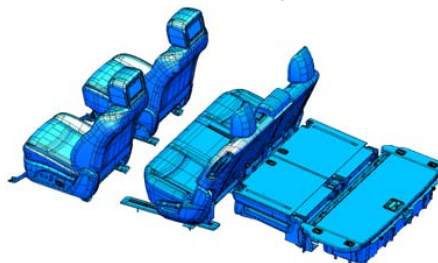


The Pathfinder offers seating for up to seven passengers with three rows of luxury seating. Multiple seating configurations allow maximum occupant seating and/or cargo carrying capacity.

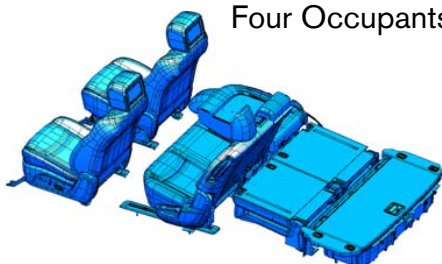
Seven Occupants



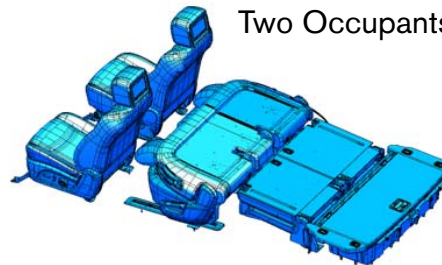
Five Occupants



Four Occupants



Two Occupants





Front Seats

Front seats come standard furnished in cloth fabric with manual driver and passenger adjustments. SV models step up to a driver seat with 8-way power adjustments. SL models are equipped with leather seating surfaces with heated front and 2nd row seats, power driver seat lumbar support, and a four-way power adjustable front passenger seat. Climate-controlled front seats are available on Platinum models. All front seat headrests are factory wired for DVD monitors to allow easy dealer installation of accessory monitors.

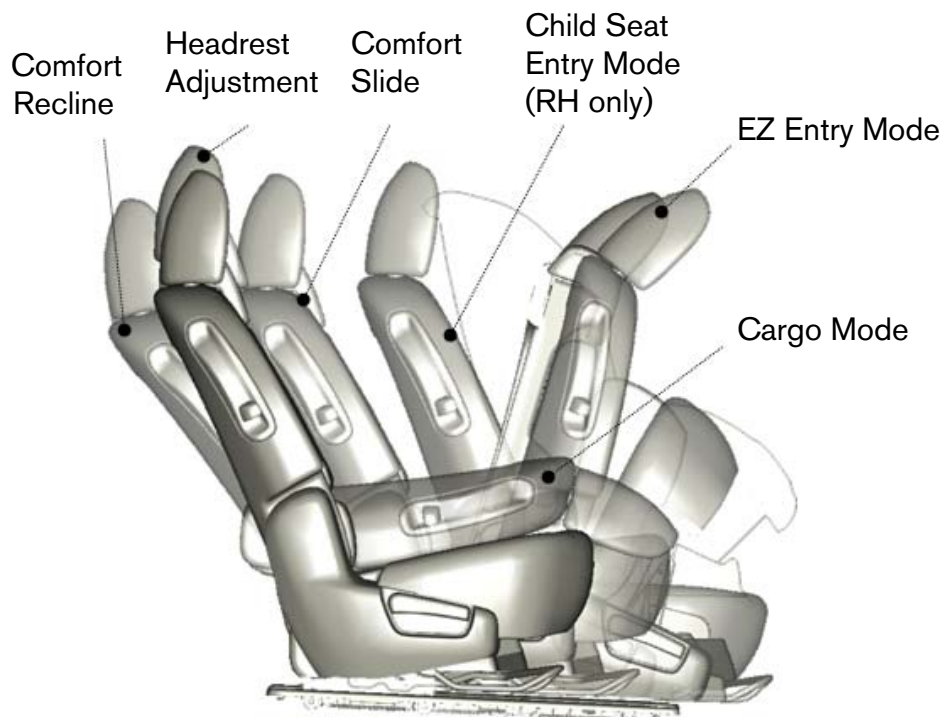




Second Row 60/40 Seats

The Pathfinder 2nd row seats offer an abundance of comfort and functionality. Key features of the 60/40 second row seats include:

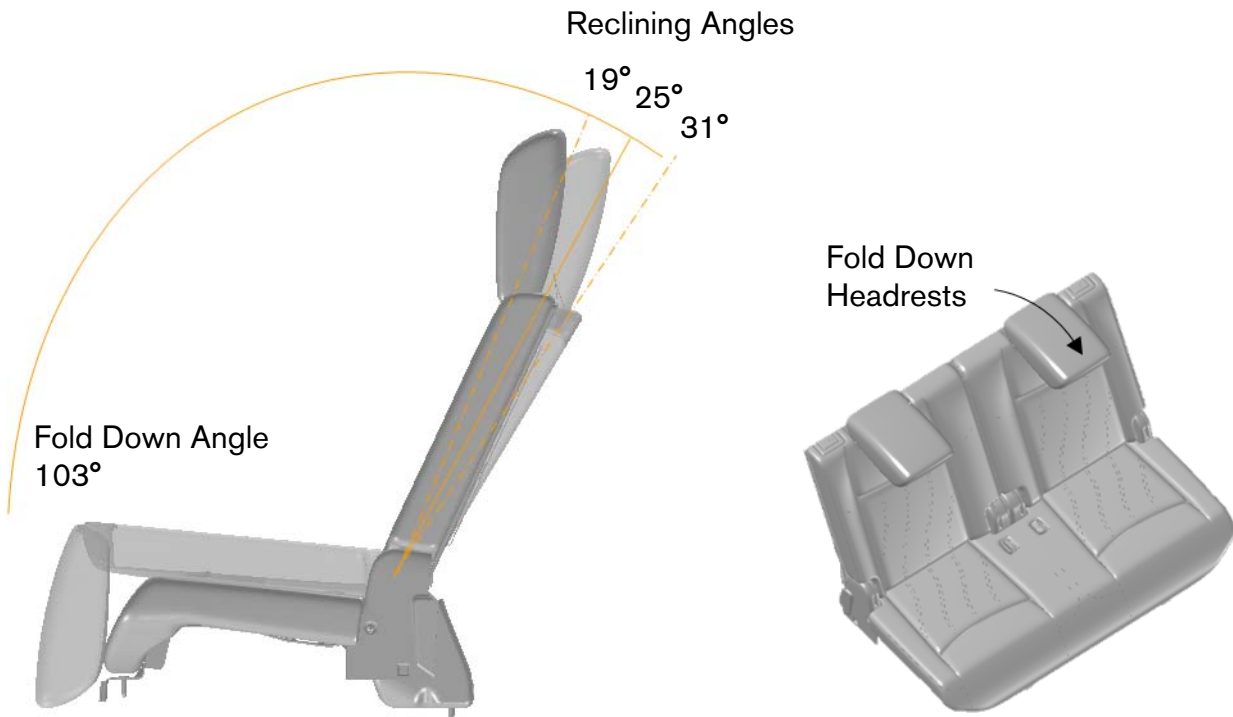
- Optional leather surfaces
- Optional heated seat cushions and seatbacks
- Reclining seatbacks with 20° of travel over 10 positions
- Adjustable headrests
- EZ entry mode for true easy access to third row seating
- Child seat entry (CRS) mode on the 2nd row passenger side seat to allow 3rd row access with a child seat installed
- Fold flat cargo mode
- Forward/backward comfort slide seat tracks
- 280 combinations of comfort adjusted seat positions





Third Row 50/50 Seats

The third row seats are a 50/50 split design with seatbacks that recline over a 12-degree range. Seatback headrests can be folded down to increase rear visibility or to allow the third row seats to fold flat for cargo.



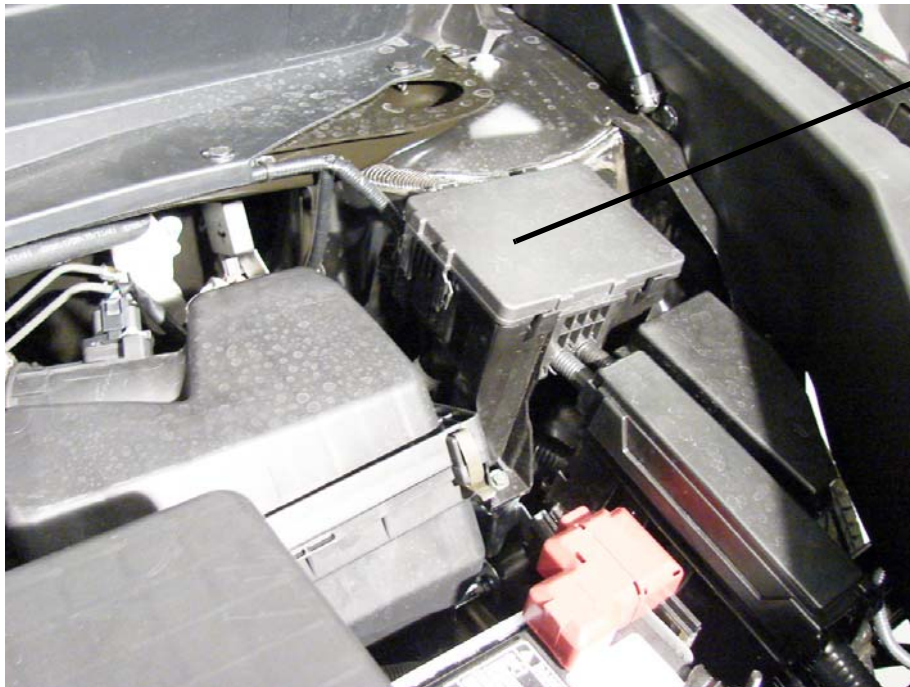


ELECTRICAL

The 2013 Pathfinder incorporates advanced electrical and electronic systems throughout the vehicle to provide intelligent control of vehicle comfort and safety systems. The following information highlights the features and operation of these electrical and electronic systems.

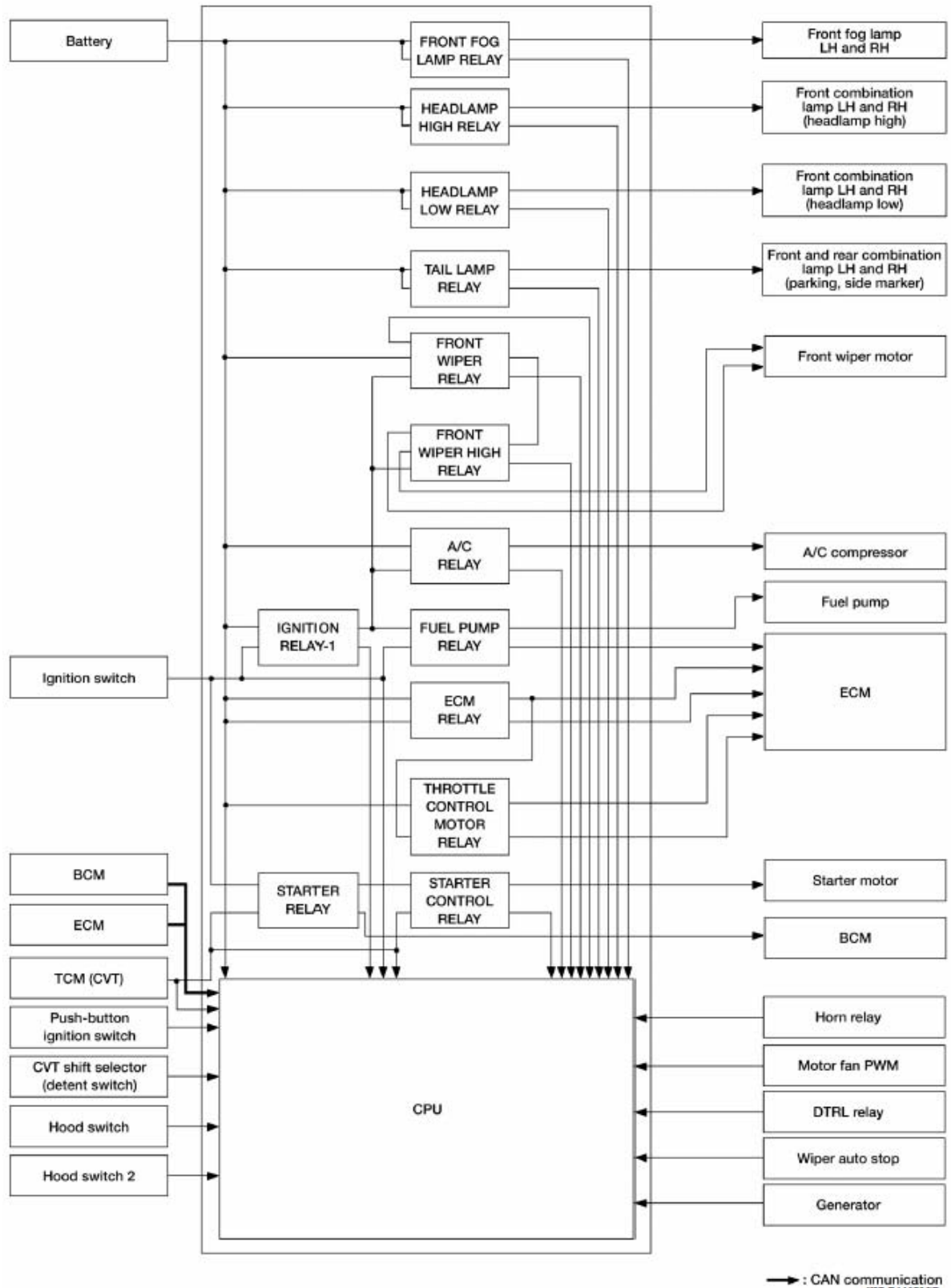
Intelligent Power Distribution Module Engine/Room (IPDM E/R)

Similar to other Nissan vehicles, the Pathfinder electrical system uses an IPDM E/R located in the left corner of the engine compartment. The IPDM E/R activates the internal control circuit to perform relay ON/OFF control according to the input signals from various sensors and control units via CAN communication. The IPDM E/R integrated relays cannot be removed.



IPDM E/R
Location

IPDM E/R

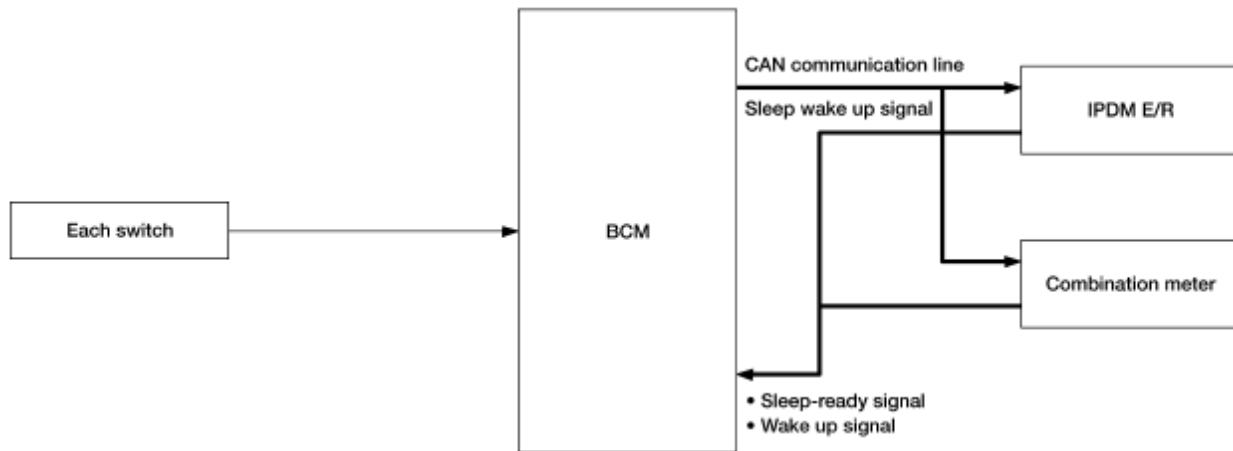




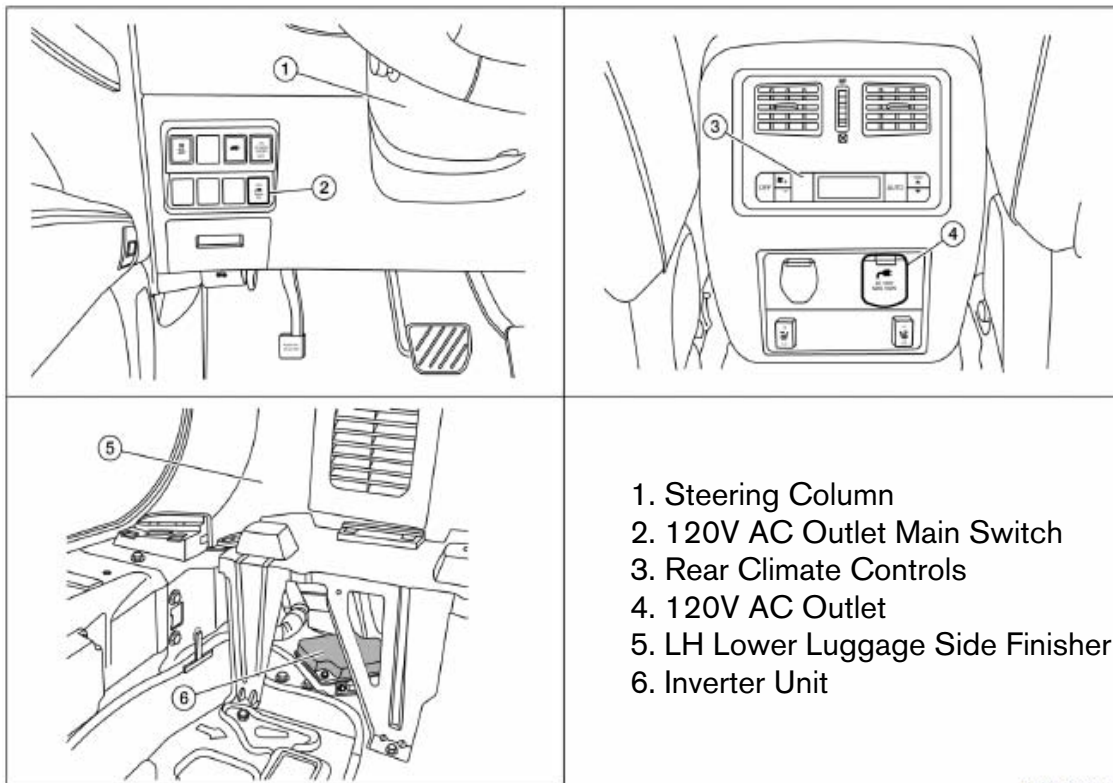
IPDM E/R Features

Some notable features of the Pathfinder IPDM E/R include:

- Processor control of the electric engine cooling fan. The IPDM E/R controls the Pulse Width Modulation (PWM) signal to the cooling fan to control fan speed
 - Power ON/Initial Value/Wake Up = 10% duty cycle
 - Low Speed = 11 to 50% duty cycle
 - High Speed = Greater than 50% duty cycle
- Additional hood switch input (Hood Switch 2) to IPDM E/R to accommodate remote engine start function
- Wiper auto stop function; during wiper operation, if the ignition is turned OFF, the wiper arms return to the stop position instead of remaining in current position
- Additional DTC - U1010 CAN Controller Failure
- Ignition battery saver control; if the ignition is ON for 30 minutes with the engine OFF, the IPDM E/R and BCM turn OFF to reduce battery drain
 - This feature can be defeated, if necessary for performing diagnostics, reprogramming modules, etc.



120V AC Power Outlet



1. Steering Column
2. 120V AC Outlet Main Switch
3. Rear Climate Controls
4. 120V AC Outlet
5. LH Lower Luggage Side Finisher
6. Inverter Unit

ALMIA0550ZZ

If equipped, the back of the center console includes a 120V AC outlet for powering small electronic devices (150-watt maximum load). An inverter unit located in the LH rear portion of the vehicle converts 12V DC to 120V AC. With the ignition ON and the AC outlet main switch in the instrument panel turned ON, the indicator turns ON and the inverter unit is activated. After approximately two seconds, AC current is available at the 120V AC outlet.

NOTE: To prevent excessive battery drain, the 120V AC outlet should be operated with the engine running.



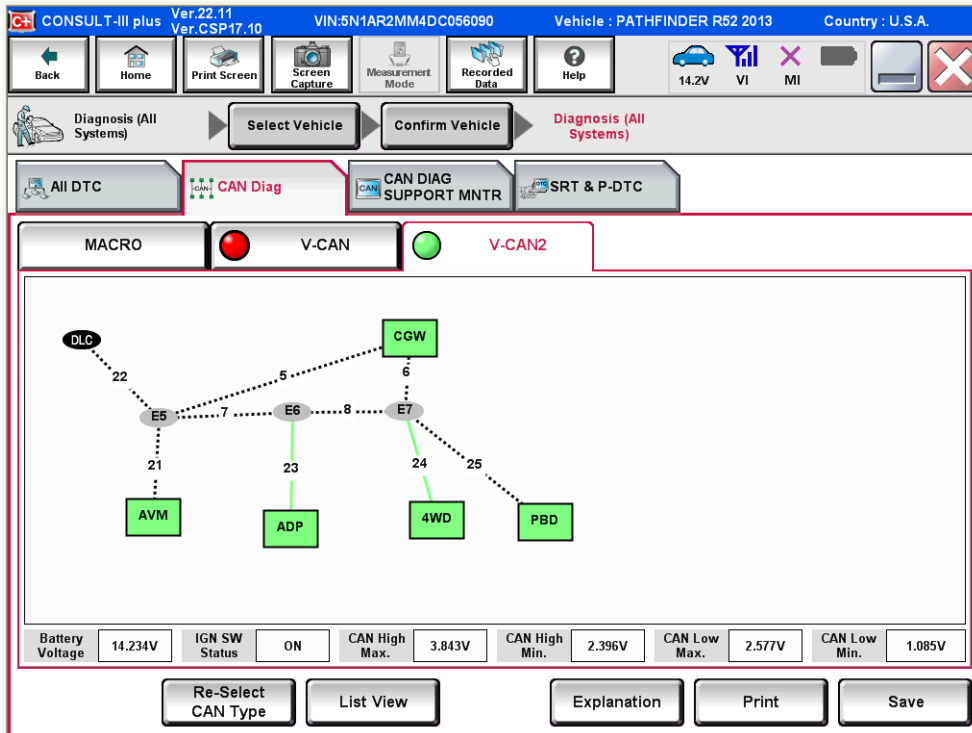
Vehicle Communication

The Pathfinder uses multiple communication lines and protocols to transfer signals from module to module. Depending on the equipment level, the following types of vehicle communication are used:

- V-CAN 1
- V-CAN 2
- M-CAN (entertainment and camera)
- LIN
- K-Line
- Serial (TPMS and I-Key)
- Diagnostic CAN

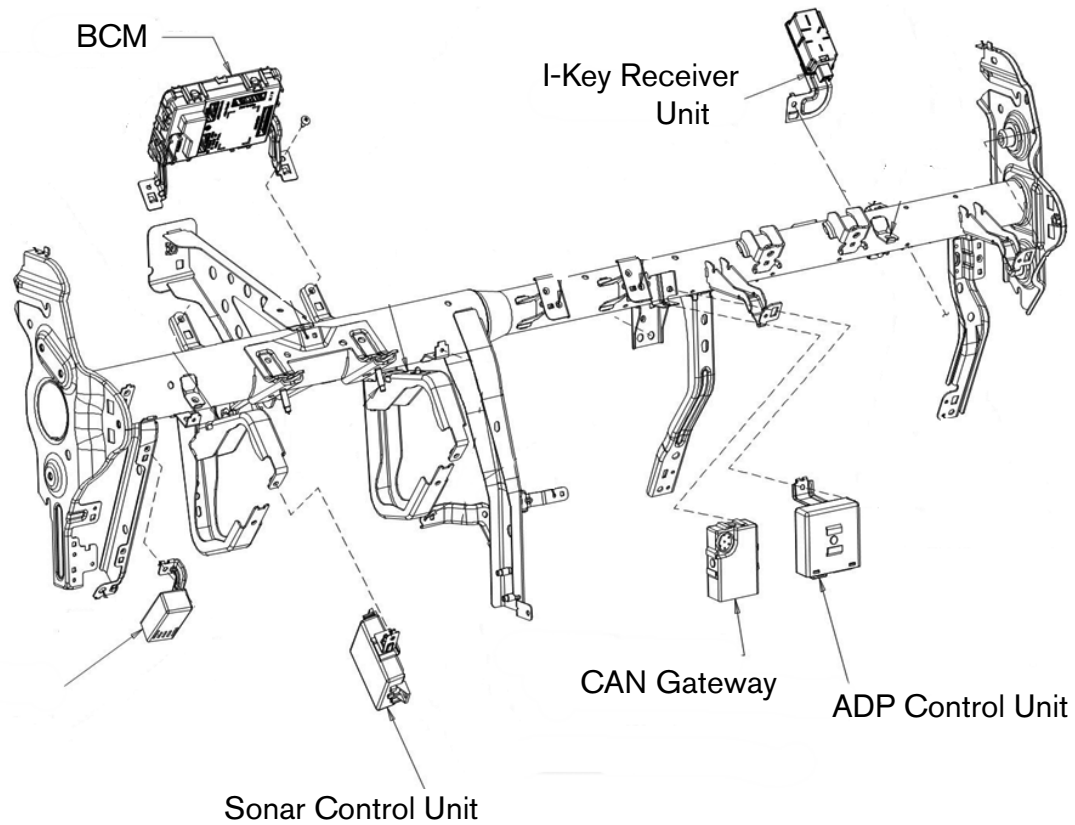
CAN Diagnostics

CONSULT-III plus V-CAN is the most effective way to diagnose the CAN circuits. CONSULT-III plus runs a global scan for all modules on the CAN circuits and displays the results in a color-coded diagram. If a module is not present on the vehicle, or the module is not communicating properly, it will be displayed on this screen.



CAN Gateway

A CAN gateway is located in the instrument panel behind the audio unit. The CAN gateway manages communication between the different CAN buses.





Family Entertainment System (FES)

Three audio/video entertainment systems are available on the Pathfinder:

- Base system with six speakers, AM/FM/MP3 radio with six-disc, in-dash CD player
- Optional AM/FM/RDS/MP3 radio with single-disc, in-dash CD player, XM Satellite radio, Bluetooth hands-free phone, USB/IPOD connector, and plug-in RCA jacks
- Bose 13-speaker premium system with AM/FM/RDS/MP3 radio with single-disc CD/DVD player and color 8-inch VGA display

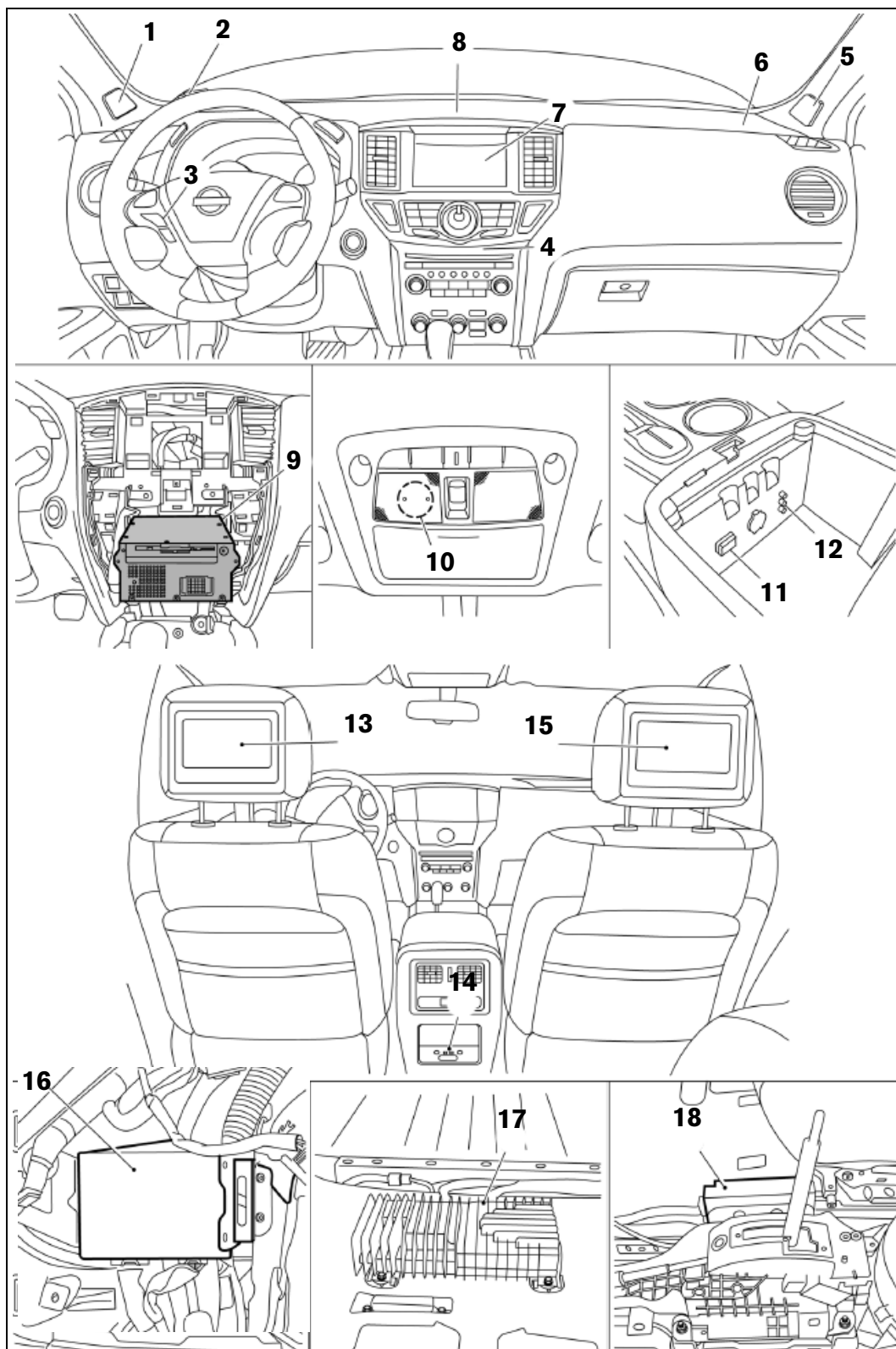
The Platinum Premium Package is available and includes dual 7-inch color monitors in the backs of the front seat headrests, two wireless headphones, a wireless remote control, auxiliary audio/video RCA jacks, a 120V AC power outlet, and rear headphone jacks with volume controls.

All models equipped with Bluetooth include a microphone located in the overhead map lamp console for Bluetooth hands-free phone and voice recognition operation. In addition, all vehicles include steering wheel audio controls.

Component Locations

Family entertainment components are located throughout the vehicle interior. For simplicity, the following locations are shown for the Bose system. Other audio/video systems are similar.

1. Front Tweeter
2. Instrument Panel Tweeter (LH)
3. Steering Wheel Switches
4. AV Switch Assembly
5. Front Tweeter (RH)
6. Instrument Panel Tweeter (RH)
7. Display Unit
8. Center Speaker
9. AV Control Unit (Center Stack Removed)
10. Microphone
11. USB Interface
12. Front Auxiliary Inputs
13. Headrest Display Unit
14. Rear Auxiliary RCA Input Jacks
15. Headrest Display Unit
16. Video Distributor
17. Speaker Amplifier
18. Around View Monitor Control Unit





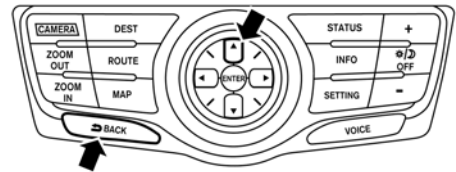
Self Diagnosis

The AV control unit and the AV switch assemblies include on-board diagnostic functionality. AV switch self diagnosis checks the ON/OFF operation (continuity) of each switch in the AV switch assembly. The AV control unit on-board diagnosis performs the following functions:

Mode		Description	
Self Diagnosis		<ul style="list-style-type: none"> • AV control unit diagnosis. • Diagnoses the connections across system components. 	
Confirmation/ Adjustment	Display Diagnosis	The following check functions are available: color tone check by color bar display and white display, light and shade check by gray scale display and touch panel calibration response check.	
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition, reverse, side view switch and room lamp.	
	Speaker Test	The connection of a speaker can be confirmed by test tone.	
	Navigation	Steering Angle Adjustment	When there is a difference between the actual turning angle and the vehicle mark turning angle, it can be adjusted.
		Speed Calibration	When there is a difference between the current location mark and the actual location, it can be adjusted.
	Error History	The system malfunction and the frequency when occurring in the past are displayed. When the malfunctioning item is selected, the time and place that the selected malfunction last occurred are displayed.	
	Synchronize FES Clock	—	
	Vehicle CAN Diagnosis	The transmitting/receiving of CAN communication can be monitored.	
	AV COMM Diagnosis	The communication condition of each unit of Multi AV system can be monitored.	
	Hands-free Phone	The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed.	
	Camera cont.	Camera guidelines can be adjusted and the factory configuration can be displayed.	
	Delete Unit Connection Log	Erase the connection history of unit and error history.	
	Initialize Settings	Initializes the AV control unit memory.	
Version Information	Version information of the AV control unit is displayed.		

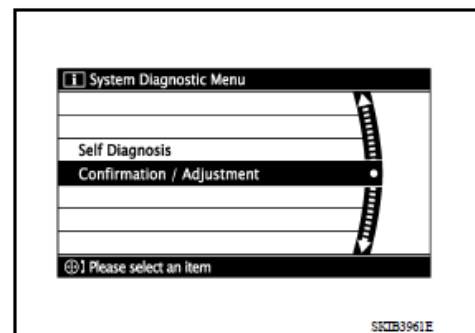
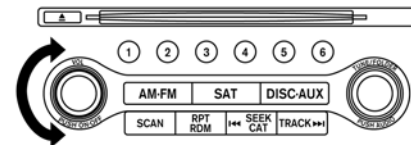
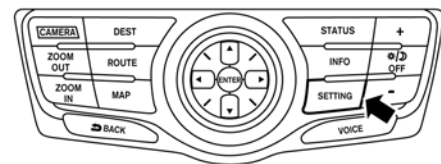
AV Switch Assembly Self Diagnosis

- Press the BACK and UP switches within 10 seconds after turning the ignition switch from OFF to ACC and hold them for 3 or more seconds.
- The buzzer sounds, all switch indicators illuminate, and the self diagnosis mode begins.
- The ON position continuity of each switch can be checked by pressing the switch. The buzzer sounds if continuity is present.
- The self diagnosis mode is cancelled when the ignition switch is turned OFF.



AV Control Unit Self Diagnosis

1. Turn the ignition ON.
2. Turn the audio system OFF.
3. While pressing the SETTING button, turn the volume control dial clockwise or counterclockwise for 40 clicks or more. When self-diagnosis mode begins, a short beep will be heard. Shifting from the current screen to the previous screen is performed by pressing the BACK button.
4. The trouble diagnosis initial screen is displayed, and Self Diagnosis or Confirmation/Adjustment can be selected.
5. For detailed information on diagnostic tests and results, and a list of available AV calibrations and adjustments, refer to the ESM.





CONSULT-III Plus Functions

In addition to AV control unit self diagnosis, CONSULT-III plus can perform the following functions via communication with the AV control unit.

Direct Diagnostic Mode	Description
ECU Identification	The AV control unit part number is displayed
Self Diagnostic Result	The AV control unit self diagnostic results are displayed
Data Monitor	The AV control unit input/output data is displayed in real time
Work Support	The settings for the AV control unit functions can be changed
Configuration	The vehicle specification can be read and saved The vehicle specification can be written when replacing the AV control unit
CAN Diag Support Monitor	The results of transmit/receive diagnosis or AV communication is displayed The results of transmit/receive diagnosis of CAN communication is displayed

AV Control Unit Configuration

If the AV control unit must be replaced, the current vehicle specification must be saved with CONSULT-III plus before removing the old control unit. After installing the new AV control unit, CONSULT-III plus must configure the new module with the correct vehicle configuration. The following table illustrates the CONSULT-III plus functions used before and after AV control unit replacement.

Function	Description
Before Replace ECU	Reads the vehicle configuration of current AV control unit Saves the read vehicle configuration
After Replace ECU	Writes the vehicle configuration with manual selection
Select Saved Data List	Writes the vehicle configuration with saved data



Remote Engine Start (RES)

Pathfinders in SL or higher levels include an optional factory-installed RES system. This system allows the customer to start the engine remotely using the I-key remote transmitter. Key features of the system include:

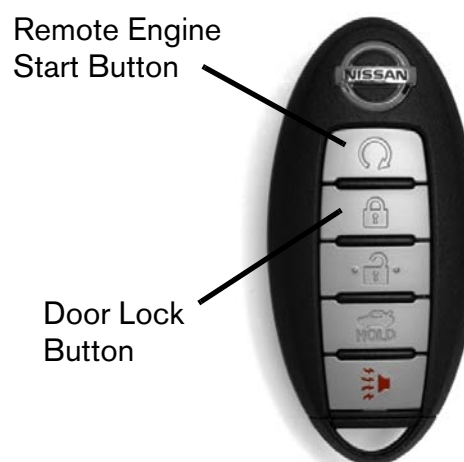
- Remote engine starting by simply pressing two buttons on the I-key remote
- 10-minute initial engine run time
- Extended engine run time of up to 20 minutes
- Remote cancelation of RES using the I-key remote transmitter
- An operating range of approximately 197 feet (60 meters) from vehicle

RES can also be installed as a dealer accessory. If RES is added at the dealer, all I-keys must be replaced with RES keys.

Normal RES Operation

To start the engine using RES:

1. Bring the I-key remote transmitter within 197 feet (60 meters) of the vehicle.
2. Press the door lock button on the remote.
3. Within 5 seconds, press and hold the RES button on the remote.
4. The engine starts and the parking lights illuminate.



Extended Time RES Operation

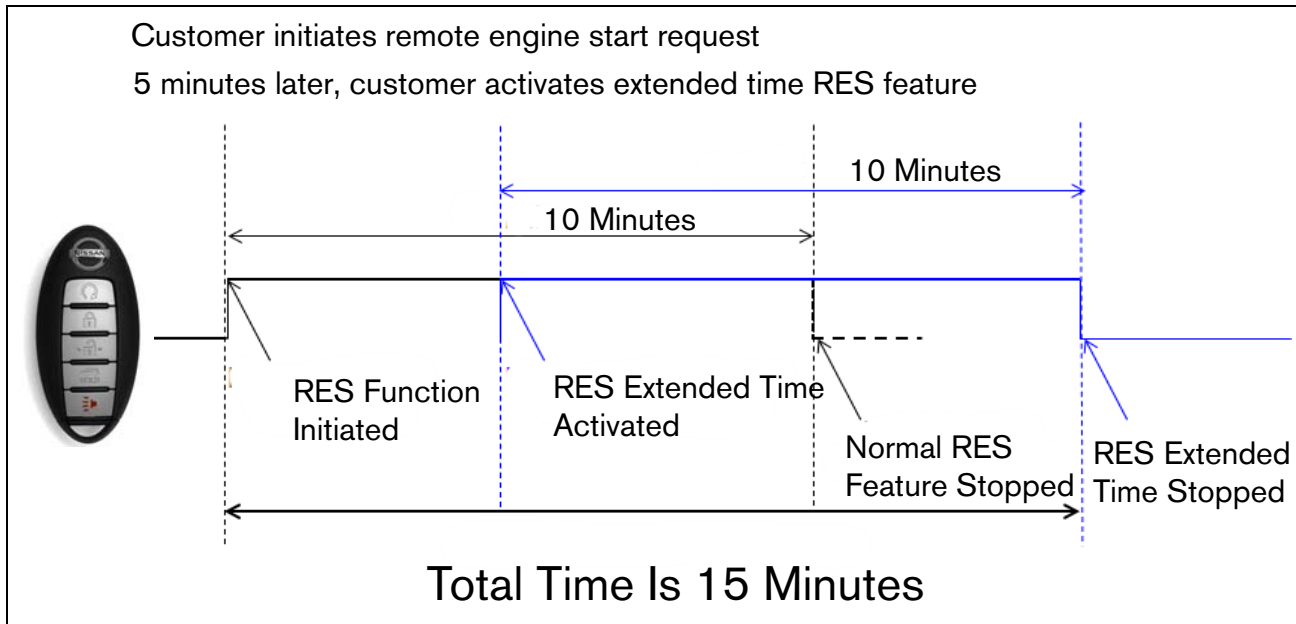
After the engine is started using the RES feature, it will remain running for 10 minutes. By using the extended time RES feature, the customer can keep the engine running for an additional 10 minutes, and for a maximum time of 20 minutes. The extended time RES feature is initiated when the engine has already been started using RES and the customer presses the door lock button on the remote and then, within 5 seconds, presses and holds the RES button.

Actual extended engine run time varies, depending on when the extended RES feature is initiated. Extended time RES increases the engine run time by 10 minutes beyond the time that has elapsed on the initial RES cycle.

A maximum of two remote engine start events can be performed. If a third attempt is made from the I-key, the engine will stall and RES is cancelled.



The following example illustrates the extended RES logic.



Cancelling RES

The RES feature can be cancelled manually at any time by pressing the RES button on the I-key transmitter. In addition, the RES feature is automatically cancelled when any of the following occur:

- Anti-theft alarm is activated by unauthorized entry
- The maximum RES engine run time has been reached
- The hazard lamps are turned ON
- The ignition START button is pressed without the I-key inside the vehicle and/or without pressing the brake pedal
- The hood is opened while the RES feature is activated
- A third consecutive RES attempt is made from the I-key

Driving After Remote Engine Start

- When entering the vehicle with an I-key after remote engine starting, you must apply the brake pedal and press the Start button before engaging the transmission.
- If you attempt to shift without applying the brake pedal and pressing the Start button, the engine will stall.



Immobilizer and I-Key Registration



The process for registering Intelligent keys has been updated.

- The new “Load PIN File” function is an automated feature that retrieves and loads the Immobilizer PIN during the Intelligent Key registration process
- Updated process is effective with CONSULT-III plus software updates after 8/19/2012
- The process requires an active internet connection
- “Load PIN File feature is only available on vehicles using a 20-character encrypted PIN



Key Registration Process

1. CONSULT-III plus retrieves and displays the encrypted PIN from the vehicle
2. With an active internet connection, CONSULT-III plus will display the following popup screen

The screenshot displays the CONSULT-III plus software interface. At the top, the title bar shows 'CONSULT-III plus Ver.22.31 Ver.CSP17.10' and 'Vehicle : ALTIMA sedan L33 2013 Country : U.S.A.'. The main window is titled 'ASIST-UTIL' and contains a warning message: 'Due to increased security requirements, all immobilizer reset PIN and KEY CODE transactions must now be logged and made available to law enforcement agencies and Nissan Motor Limited, Japan. You must provide the requested data before an immobilizer reset PIN and/or KEY CODE can be provided. All immobilizer PIN and KEY CODE transactions will now be logged and provided to the National Insurance Crime Bureau (NICB). Immobilizer reset PIN codes and KEY CODES are authorized solely for the repair of Nissan and Infiniti vehicles. To reduce the possibility of vehicle theft, this information must be strictly controlled and is not authorized for distribution.'

The form below the warning message includes the following fields and buttons:

- Dealer Code: vonehrj PC/KEY #: 3270
- Requester First Name: jimv
- Requester Last Name: testing
- VIN: 1N4AL3AP3DC125559
- Country: North America (dropdown menu)
- Pre-PIN: 2606EC09B7D73713DBC8
- Buttons: Request PIN, Close

Below the form, a red text instruction reads: 'Click the "Load PIN" button in CONSULT-III plus software to auto paste the PIN code or manually type the code below into the CONSULT-III plus software PIN field. Click "Close" to continue.'

The 'PIN:' field is currently empty. To the right of the popup, there is a 'Load PIN file' button and a 'Next' button. The background screen shows 'Initialization ECU' with instructions: 'Be careful that Encrypted PIN is not lost. Perform operation as follows: 1. When an Internet connection is available, touch the screen. (Wireless connection) When an Internet connection is not available, touch the screen. (Wired connection) Encrypted PIN is displayed. 2. When an Internet connection is available, touch the screen. When an Internet connection is not available, touch the screen. Immobilizer reset PIN is displayed. 3. Touch "Next". The system starts to communicate with the vehicle. When initialization completes normally, PIN file is deleted automatically.'

3. Enter technician information into the fields (same as when using ASIST)
4. Enter the vehicle VIN (because the software cannot auto-populate the VIN with the key in the OFF position, as required for programming)
5. Select the country from the drop down menu
6. Select **Request PIN**
7. The immobilizer PIN is displayed in the "PIN" field
8. Close the popup and select **Load PIN file**. The immobilizer PIN field is auto-populated
9. Select **Next** to continue registering keys

Around View Monitor (AVM) with Sonar


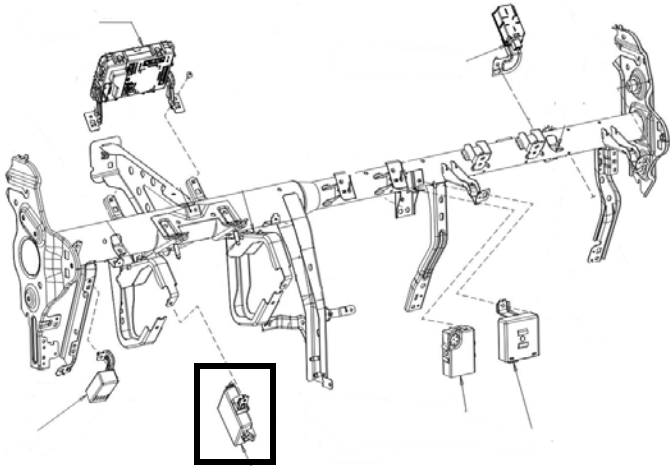






AVM System Description

The AVM system uses four wide angle cameras, and several control units to produce various 360-degree views of the vehicle surroundings on the AV center display. AVM includes various viewing angles that can be selected by pressing the CAMERA button on the AV control panel until the desired view is displayed. Available views include front view, bird's eye view, front-side view, and rear view. AVM distance views and predictive course lines will display from the front or rear views.

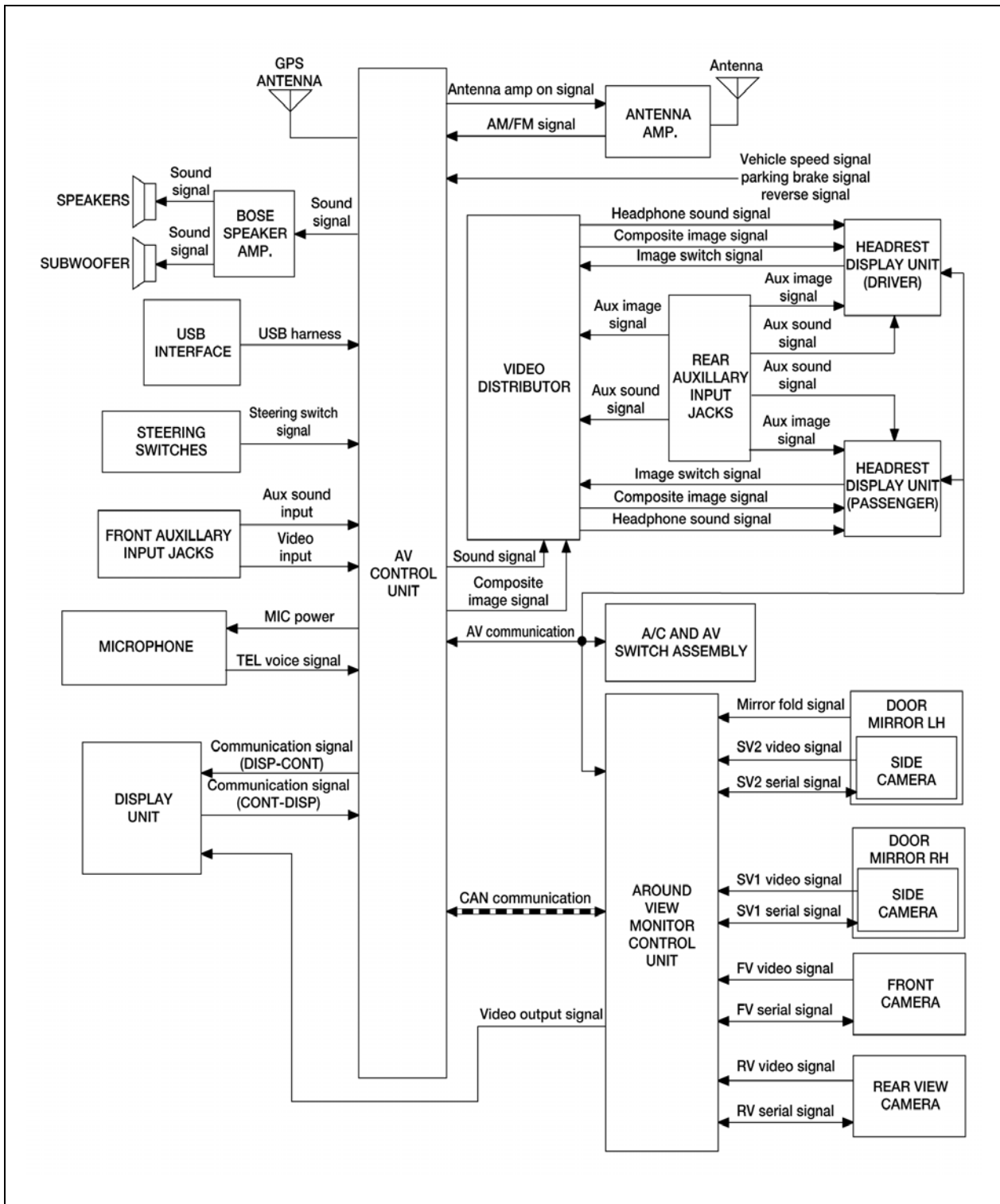




AVM and Sonar Component Locations

<p>AV Center Display</p> 	 <p>Sonar Control Unit (Instrument Panel Support)</p>	
<p>AVM Control Unit</p> 	<p>Sonar Buzzer (Below Left Rear Window)</p>   <p>Rear Sonar Sensors</p>	
<p>Front Camera</p> 	<p>Side Camera (LH similar)</p> 	<p>Rear Camera</p> 

AVM and Sonar System Diagram





AVM Operation

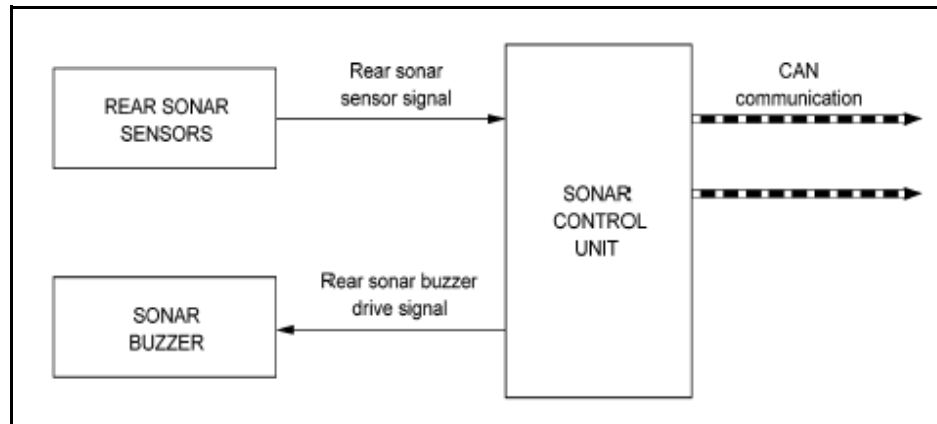
With the ignition switch in the ON position, press the CAMERA button or move the shift selector to the R (Reverse) position to operate the Around View Monitor. The monitor displays one of the various views along with zone lines, distance guide lines, vehicle width guide lines, and predictive guide lines if the steering wheel is turned.



With the ignition switch in the ON position and the shift selector in any position other than Reverse, pressing the CAMERA button will display the AVM view on the screen. The right side of the split screen can be switched between a bird's eye view and a front right side view.



Sonar Operation



The sonar system consists of the four sonar sensors in the rear bumper, the sonar control unit, and the sonar buzzer. The sonar system operates only when the camera screen is displayed in the center display. When the rear sonar sensors detect an obstacle, they send a signal to the sonar control unit. The sonar control unit converts the signal to a distance value and sends this data to the center display for visual warnings and also to the sonar buzzer for audible warnings.



Visual Warnings
Produced by Sonar
Signals



Advanced Drive Assist Display (ADAD)



The Pathfinder incorporates a new 3D meter display within the instrument cluster that is more intuitive and easier to read under all lighting conditions. The meter is a full-color 4.2-inch TFT display with 480 X 272 pixel resolution in a 16:9 aspect ratio. The meter includes animations and screen transition graphics, and can be customized by the customer for their particular needs and preferences.

The ADAD is connected to the CAN communication network and can display operating status for various vehicle systems, provide visual warnings, and request buzzer operation. The following provides some examples of the types of information that can be displayed on the ADAD.

ADAD Screens

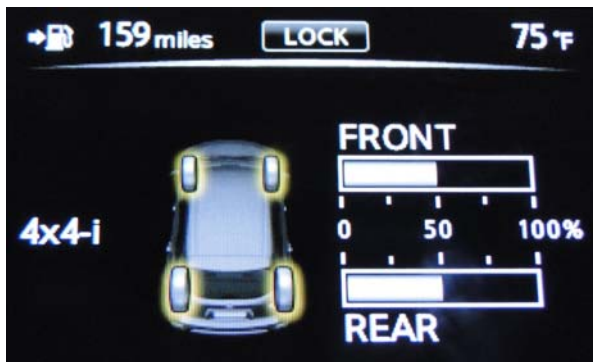
Welcome Screen



Settings Screen



Drive Mode Screen



Fuel Economy Screen



Sonar Screen



Main Menu Selection Screen





SPECIFICATIONS

Maximum Horsepower	260
Maximum Torque (lb-ft.)	240
Transmission	Continuously Variable Automatic
Fuel Tank Capacity (gallons)	19.5
Overall Length (inches)	197.2
Overall Width (inches)	77.2
Overall Height (inches) with Optional Roof Rack	70.2
Wheelbase (inches)	114.2
Track Width (inches)	Front: 65.7, Rear: 65.7
Interior Passenger Volume (ft ³)	119.9
Cargo Capacity with Second and Third Row Seats Folded Flat (ft ³)	79.8
Wheels and Tires	18" x 7.5", 235/65/R18 (Standard) 20" x 7.5", 235/55/R20 (Optional)
Brakes	4-Wheel Disc, 12.6-in. Front Rotors, 12.1-in. Rear Rotors
Towing Capacity	5000 lbs.



ACRONYMS

ADAD	Advanced Drive Assist Display
AVM	Around View Monitor
CVT	Continuously Variable Transmission
EBD	Electronic Brakeforce Distribution
FES	Family Entertainment System
HEPS	Hydraulic Electric Power Steering
HSA	Hill Start Assist
IPDM E/R	Intelligent Power Distribution Module - Engine Room
IVR	Interactive Voice Recognition
MOD	Moving Object Detection
PTC	Positive Temperature Coefficient
RES	Remote Engine Start
RFD	Rear Final Drive
TCU	Telematics Control Unit
TFT	Thin Film Transistor
TPMS	Tire Pressure Monitor System
VDC	Vehicle Dynamic Control





2013 NISSAN SENTRA OVERVIEW



The Nissan Sentra has been completely redesigned for the 2013 model year, and marks the seventh generation of the nameplate. The new Sentra includes a more upscale interior, redesigned exterior appearance, and a host of other standard and optional features that make the new model more competitive than ever. Some of these features include:

- Redesigned 1.8-liter engine and Continuously Variable Transmission that help contribute to a 12% increase in fuel economy over the previous generation Sentra
- Optional Easy-Fill Tire Alert system
- First-for-Sentra optional dual zone automatic temperature control
- Optional Smart Auto Headlights
- Optional NissanConnect system



Standard Features

Mechanical

- 1.8-liter DOHC, 16-valve, 4-cylinder engine with 130 hp @ 6,000 rpm
- Six-speed manual transmission
- Front engine, front-wheel drive
- Vehicle speed-sensitive electric power steering
- Power-assisted vented front disc/rear drum brakes
- Independent strut front suspension with front stabilizer bar
- Torsion beam rear suspension with integrated stabilizer bar
- 13.2-gallon fuel tank
- Eco mode and Sport mode

Exterior

- 16-inch steel wheels with full covers
- P205/55HR16 all-season tires
- Multi-reflector halogen headlights with LED accent lights
- Dual body-colored power outside, manual folding mirrors
- Chrome door handles
- Energy-absorbing, body-colored front and rear bumpers
- Green tinted glass
- LED taillights and Center High-Mounted Stoplight
- PUREDRIVE badge



Interior

- Five-passenger seating capacity
- Cloth seat and silver cloth door trim
- Six-way manual adjustable driver seat
- Four-way manual adjustable front passenger seat with seatback pocket
- Front and rear door pockets
- 60/40 split fold-down rear seats
- Front center console storage with armrest and front cup holders
- Rear seat center armrest with cup holders
- Air conditioning with in-cabin microfilter
- Tilt and telescopic steering column
- Power windows with driver's one-touch auto-up/down and auto-reverse
- Power door locks with auto-locking feature
- Remote keyless entry
- Remote trunk and fuel-filler door releases

Comfort and Convenience

- Two auxiliary 12-volt DV power outlets
- Rear window defroster with timer
- Battery-saver timing device (auto-off headlight and courtesy light)
- Folding front and rear passenger assist grips
- Variable intermittent windshield wipers
- Dual sun visors with vanity mirrors and extensions
- Manual day/night rearview mirror
- Trunk courtesy light

Audio and Entertainment

- AM/FM/CD audio system with MP3/WMA playback capability
- Four speakers (two 6.5-inch and two 6X9-inch)
- Auxiliary audio input jack



Safety and Security

- Nissan Advanced Air Bag System (AABS) with dual-stage supplemental front air bags with seat belt and occupant classification sensors
- Driver and front passenger seat-mounted side impact supplemental air bags
- Roof-mounted curtain side-impact supplemental air bags for front and rear-seat outboard occupant head protection
- Vehicle Dynamic Control (VDC) and Traction Control System (TCS)
- Three-point seat belts in all seating positions
- Front seat belts with pretensioners, load limiters, and adjustable upper anchors
- ALR/ELR seat belt system for all passenger seating positions
- Driver seat belt with ELR
- LATCH system (Lower Anchors and Tethers for CHildren)
- Child safety rear door locks
- Zone body construction with front and rear crumple zones
- Pipe-style steel side door guard beams
- Clutch interlock (M/T equipped)
- Emergency inside trunk release
- Anti-lock Brake System (ABS) and Electronic Brakeforce Distribution (EBD)
- Brake Assist
- Tire Pressure Monitoring System (TPMS)
- Nissan Vehicle Immobilizer System



Grade Walk

S (6MT)

S (CVT)

- Adds XTRONIC CVT

FE+S (compared to S (CVT))

- Rear spoiler
- Rear tire and underbody aerodynamic deflectors
- Low rolling resistance tires
- FE+ badge

SV (compared to S)

- Cruise control with illuminated steering wheel-mounted controls
- Six-speaker AM/FM/CD audio system (adds two 1-inch tweeters)
- Illuminated steering wheel audio controls
- Fine Vision electroluminescent gauges with chrome accents
- Vehicle security system
- Premium cloth seating and door trim
- SV badge (not applied to FE+ SV)

SR (compared to SV)

- 17-inch forked, five-spoke aluminum-alloy wheels
- P205/50VR17 all-season tires
- Sport front and rear fascias and sport front grille
- Lower body side sill extensions
- Rear spoiler with integrated LED brake light
- Chrome exhaust tip finisher
- Fog lights
- Sport silver interior trim
- Premium sport cloth seats
- SR badge



SL (compared to SV)

- 17-inch split seven-spoke aluminum-alloy wheels
- P205/50VR17 all-season tires
- Smart Auto Headlights
- Fog lights
- Heated outside mirrors with LED turn signals
- Nissan Intelligent Key with illuminated push button ignition
- Bluetooth Hands-free Phone System
- Six-speaker AM/FM/CD audio system with 4.3-inch color display
- SiriusXM Satellite Radio
- USB connection port for iPod interface and other compatible devices
- Leather-wrapped steering wheel and shift knob
- Maple wood-tone trim
- Dual Zone Automatic Temperature Control
- Heating ducts under front seats
- Tire Pressure Monitoring System (TPMS) with Easy-Fill Tire Alert
- SL badge



Optional Packages

SV Driver Package

- Nissan Intelligent Key with illuminated push button ignition
- Smart Auto Headlights
- Bluetooth Hands-free Phone SYstem
- Six-speaker AM/FM/CD audio system with 4.3-inch color display
- SiriusXM Satellite Radio
- USB connection port for iPod interface and other compatible devices
- Leather-wrapped steering wheel and shift knob
- Tire Pressure Monitoring System (TPMS) with Easy-Fill Tire Alert

SR Driver Package

- Rear disc brakes
- Nissan Intelligent Key with illuminated push button ignition
- Smart Auto Headlights
- Bluetooth Hands-free Phone SYstem
- Six-speaker AM/FM/CD audio system with 4.3-inch color display
- SiriusXM Satellite Radio
- USB connection port for iPod interface and other compatible devices
- Leather-wrapped steering wheel and shift knob
- Tire Pressure Monitoring System (TPMS) with Easy-Fill Tire Alert



Navigation Package

- Requires Driver Package on SV or SR Grade
- NissanConnect with Navigation
 - 5.8-inch color touch screen display
 - Nissan Voice Recognition for audio and navigations
 - NavTraffic and NavWeather
 - POIs powered by Google
 - Google Send-to-car
 - Pandora radio capability (iPhone only)
 - Streaming audio via Bluetooth
 - Hands-free text messaging assistant
- Rear View Monitor

Premium Package

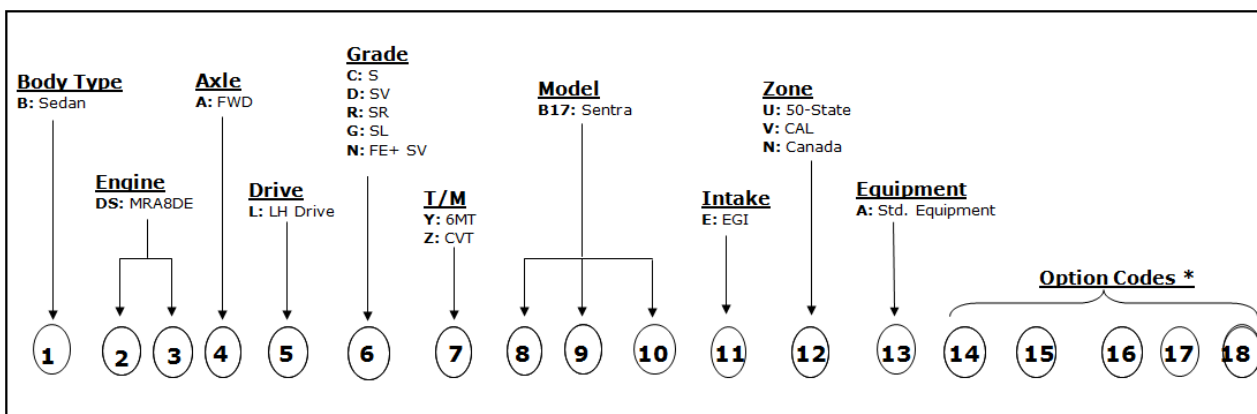
- Requires Navigation Package
- Power sliding glass moonroof with tilt feature
- Auto-dimming inside mirror with electronic compass
- Dual illuminated visor vanity mirrors
- Bose Premium audio system with eight speakers

Leather Package

- Leather-appointed seats
- Heated front seats
- Rear disc brakes



Model Identification



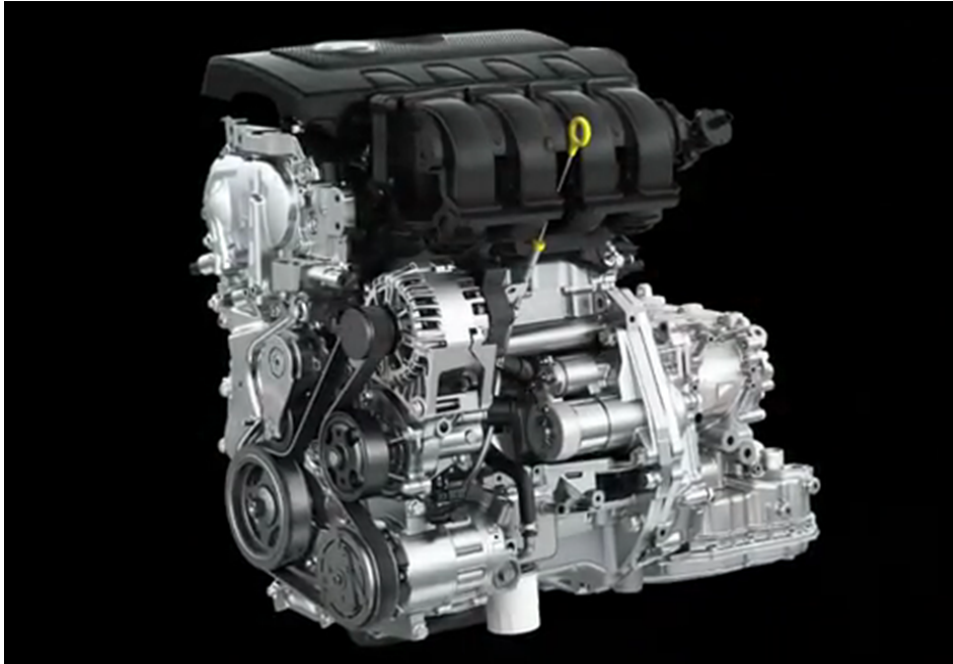
Summary of Option Codes

Option Code	Letter Designation	Option Content
14	A	Front A/C System (CAN)
	B	Heated Front Seats (Cloth) (CAN)
	C	Heated Front Seats (Cloth) (CAN) + 16-in. Alloy Wheel (CAN)
	D	16-in. Alloy Wheel (USA)
15	A	Moonroof and Vanity Mirror Illumination
	B	Moonroof and Vanity Mirror Illumination + Auto-dimming Mirror
16	A	Intelligent Key
	B	Intelligent Key + Leather Steering Wheel + Auto Headlights
	C	Leather Seating + Heated Front Seats
	D	I-key + Leather + Auto Headlights + Rear Disc Brakes (USA)
	E	Leather + Heated Front Seats + Rear Disc Brakes
17	A	Display Audio w/ six speakers
	B	Display Audio w/ Bose (CAN)
	C	Low Cost Navi
	D	Low Cost Navi + Bose Premium Audio
18	A	FE+ S Features



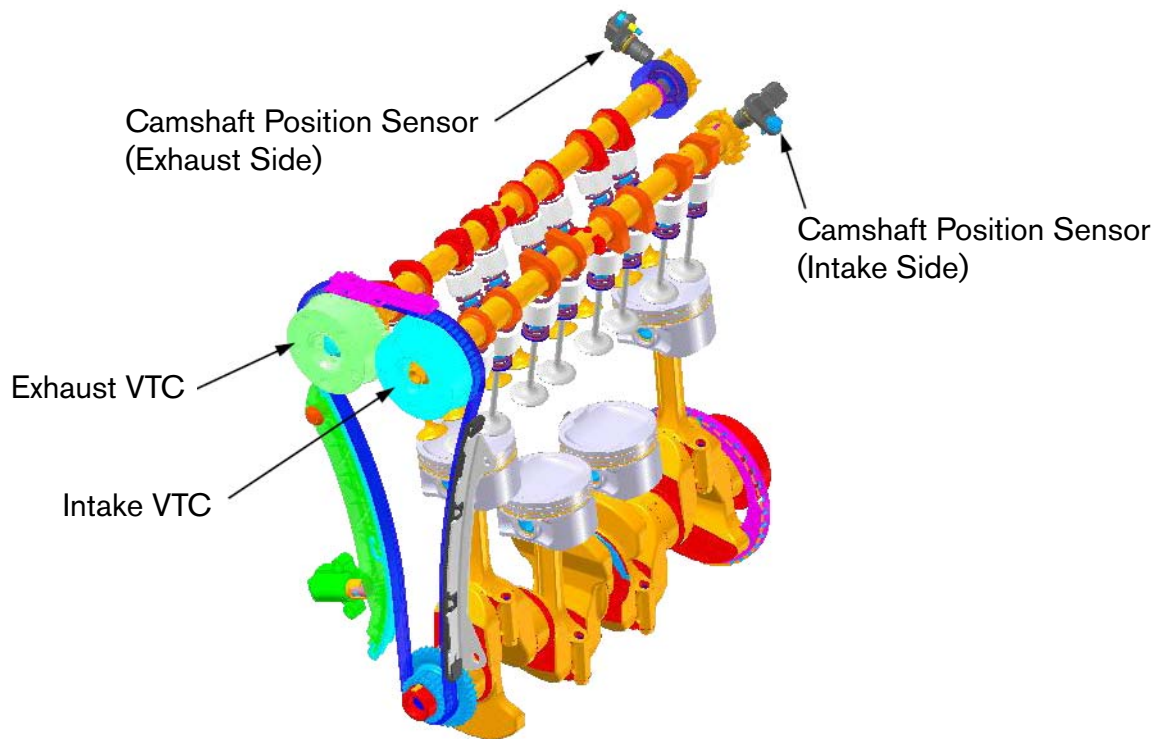
ENGINE (MRA8DE)

Description



The 2013 Sentra uses the MRA8DE engine in all grade levels. This engine is based on the MR family of engines but is modified in many ways to provide excellent performance and significantly improved fuel economy. For instance, the new MRA8DE retains the 1.8-liter displacement, but achieves this displacement using a smaller bore and longer stroke. The long-stroke design has some key benefits, including improved combustion speed, shortening of the combustion distance and cooling loss reduction due to the smaller bore. When mated with the revised XTRONIC CVT, the MRA8DE shows a fuel efficiency improvement of 12% over the previous generation Sentra.

Twin Continuous Valve Timing Control (CVTC)



In addition to intake variable timing control, the MRA8DE used in the 2013 Sentra now includes variable timing control of the exhaust valves. The addition of exhaust valve timing control helps reduce cold-start emissions and increase engine power at certain speeds.

Valve Springs

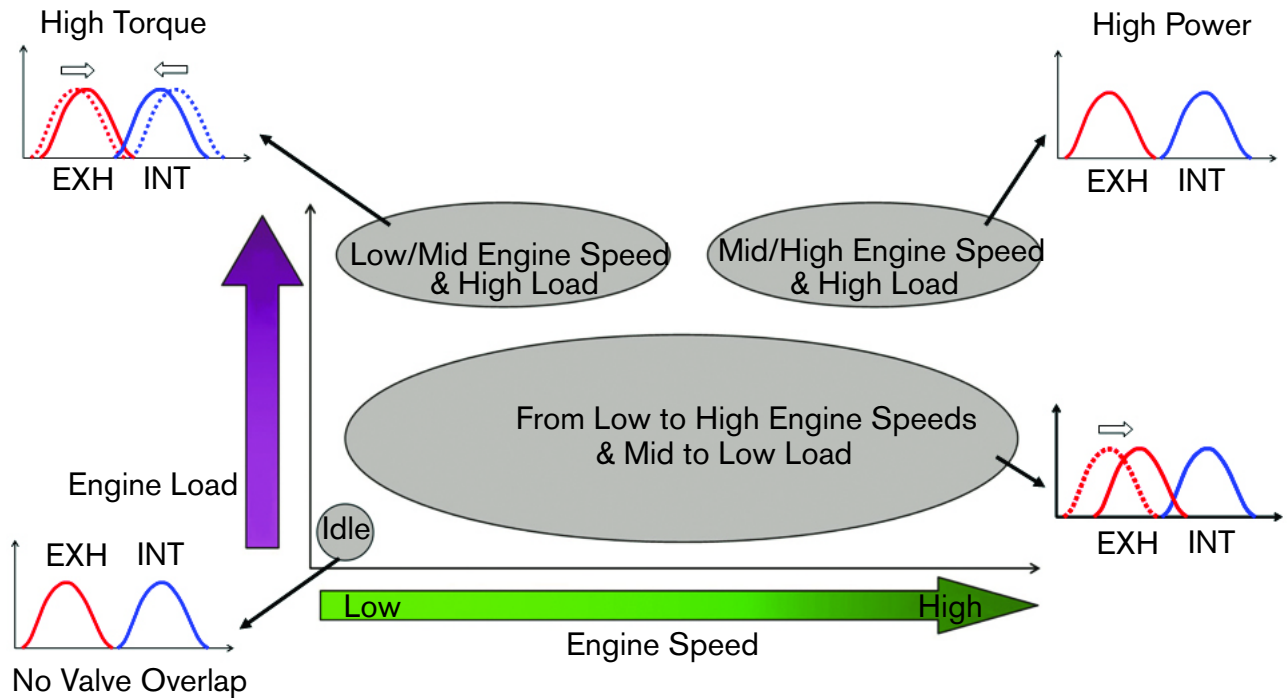
The valve springs on the MRA8DE are a new beehive design with a hydrogen-free Diamond-Like Coating (DLC) that reduces friction by approximately 50%. The beehive springs have a smaller top diameter that reduces valve train inertia, resulting in smoother engine operation and increased fuel economy.



Smaller Top Diameter

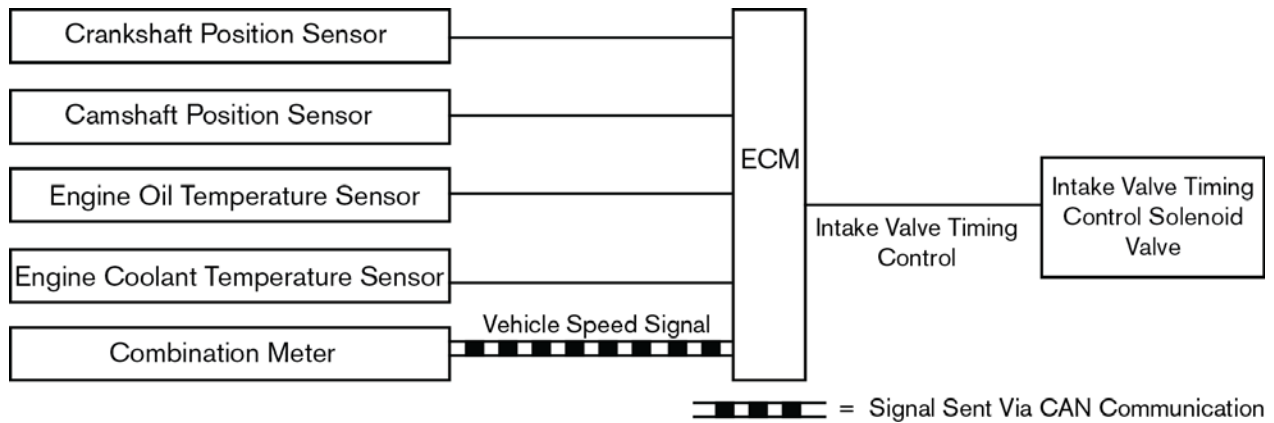


CVTC Operational Strategies



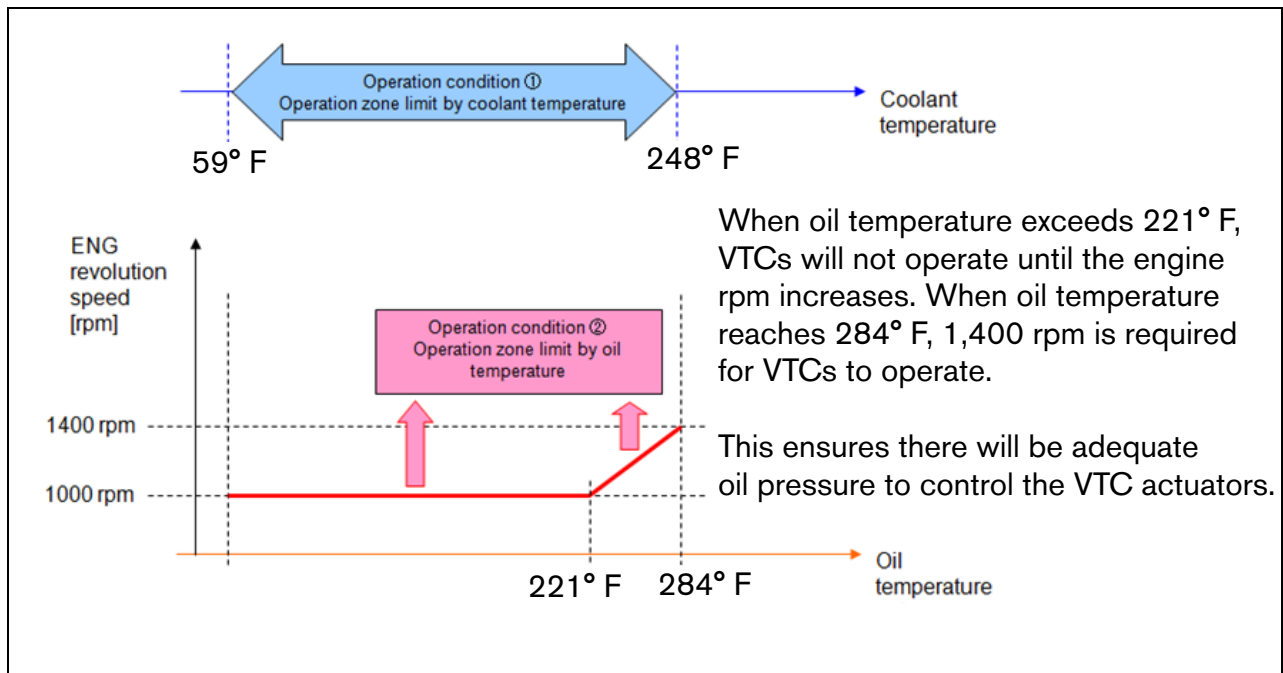
Idle (Low Load & Engine Speed)	At idle, no valve overlap occurs, ensuring a smooth and stable idle.
Low/Mid Engine Speed & High Load	This is a high-torque CVTC condition that causes an increase in the intake air volume due to the early closing of the intake valve and late closing of the exhaust valve.
From Low to High Engine Speeds & Mid to Low Loads	Valve overlap increases due to the late closing of the exhaust valve. This increases internal EGR and reduces engine pumping loss.
Mid/High Engine Speeds & Mid to Low Load	Intake air volume is increased due to the late closing of the intake valve that synchronizes the fluctuation of intake air

Valve timing is optimally-controlled according to engine load and engine speed. Intake and exhaust valve timing is controlled hydraulically, using a series of oil control valves that control the flow of engine oil pressure to the Valve Timing Control (VTC) components.



The engine oil temperature sensor is a new input to the ECM for intake and exhaust valve timing control. VTC is now available at lower oil temperatures (140° F or 60° C or greater.) VTC operates from 1000 rpm when oil temperature is 221° F (105° C) or less, from 1,200 rpm when oil temperature is 248° F (120° C), and from 1,400 rpm when oil temperature is 284° F (140° C).

Adding oil temperature control to VTC operation ensures that there will be adequate oil pressure to properly control VTC actuators.





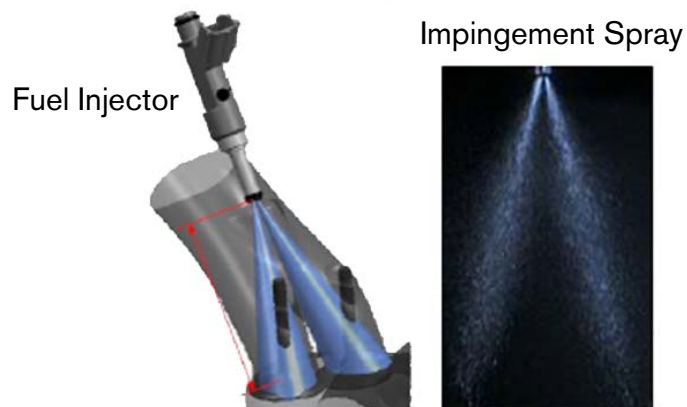
Fuel Injectors

Fuel injectors on the MRA8DE engine are mounted in the cylinder head instead of the intake manifold. A steel bar runs across the length of the injector rail to help prevent damage to the injectors in frontal collision.

There is one fuel injector per cylinder.



Because the fuel injectors are mounted in the cylinder head, the nozzles are closer to the intake valves. As a result, the spray pattern and speed have been modified to improve fuel atomization and combustion efficiency.



Intake Manifold

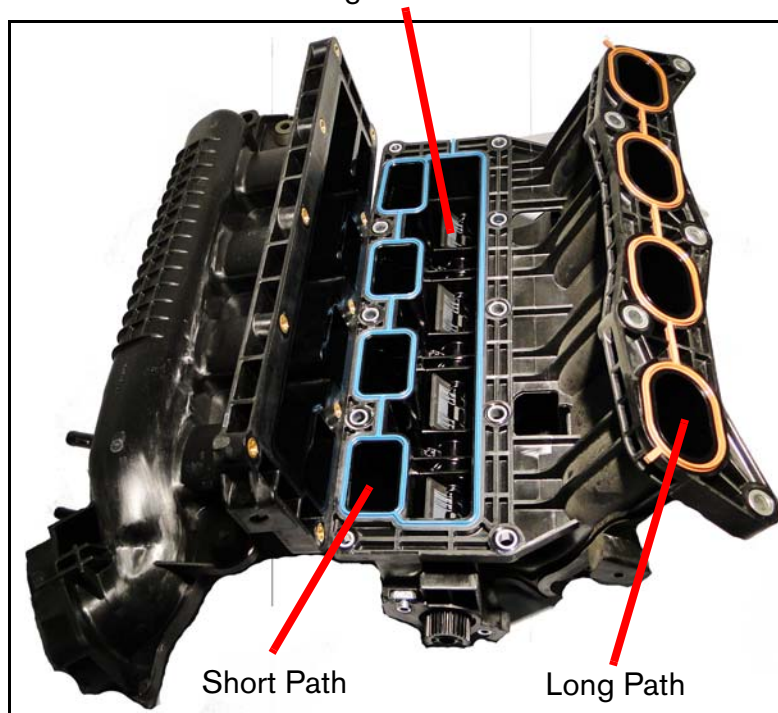
The MRA8DE engine in the 2013 Sentra uses an intake manifold tuning valve (power valve). The intake manifold tuning valve is used to redirect intake airflow, shortening or lengthening the air flow path into the intake manifold.

Below 5150 rpm, the intake manifold tuning valve is closed, making the air path longer for increased engine torque. Above 5150 rpm, the ECM opens the intake manifold tuning valve, creating a shorter air path and increased flow efficiency for high-rpm operation.

The intake manifold tuning valve only operates when the following conditions are met:

- Engine coolant temperature is at or above -22° F (-30° C)
- Battery voltage is between 11 and 16 volts

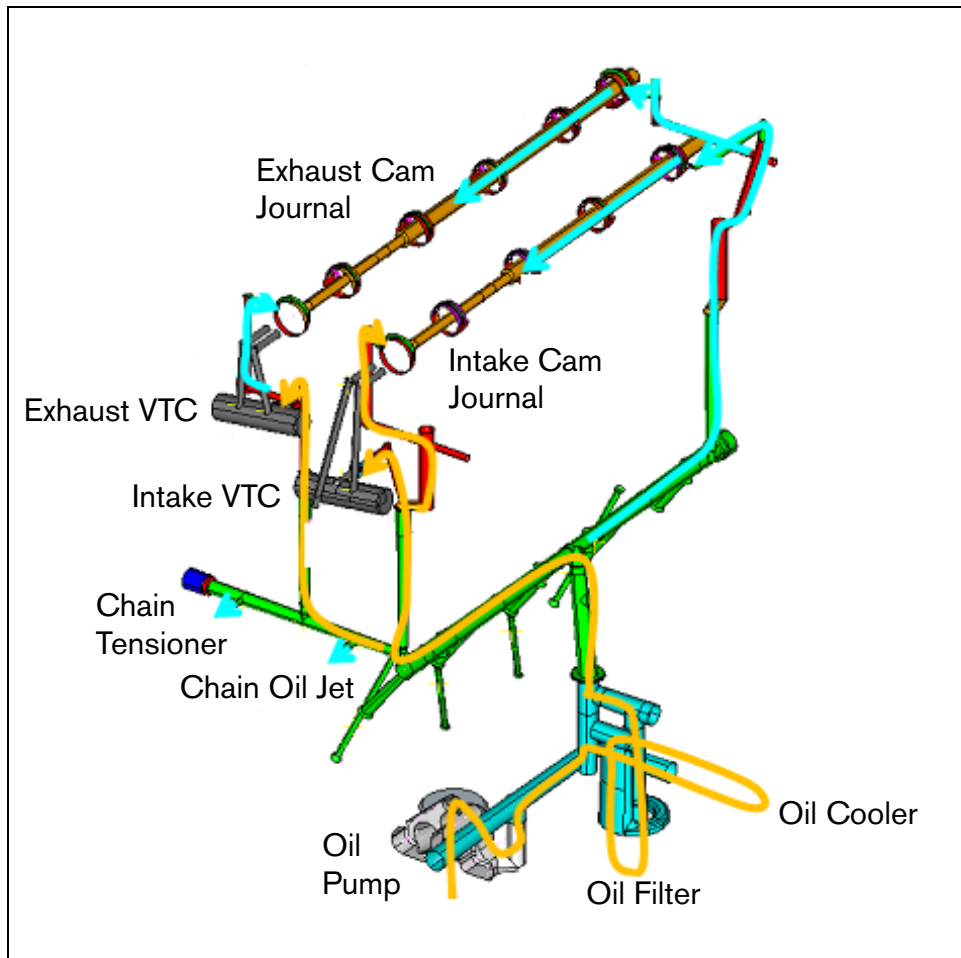
Intake Manifold Tuning Valve





Lubrication System

The MRA8DE engine in the 2013 Sentra uses a new front-feed oil lubrication system instead of a journal-feed system. This provides advantages for CVTC operation. In a journal-feed system, oil pressure drops before reaching the CVTC components. But in a front-feed lubrication system, pressure loss is minimized in the CVTC system.



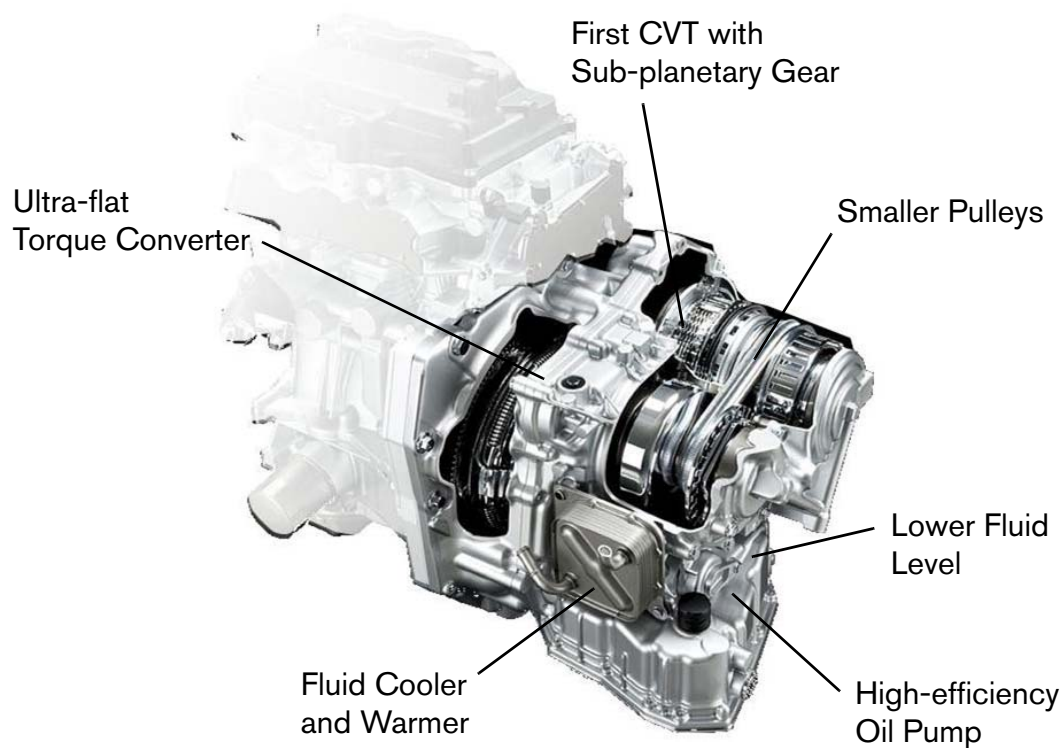


CVT TRANSMISSION (REOF11A)

For the 2013 model year, a very limited number of Sentra S models are equipped with a carryover six-speed manual transmission. The majority of Sentras are now equipped with a REOF11A XTRONIC CVT transmission. This transmission is very similar to the CVT used in the 2012 Nissan Versa.

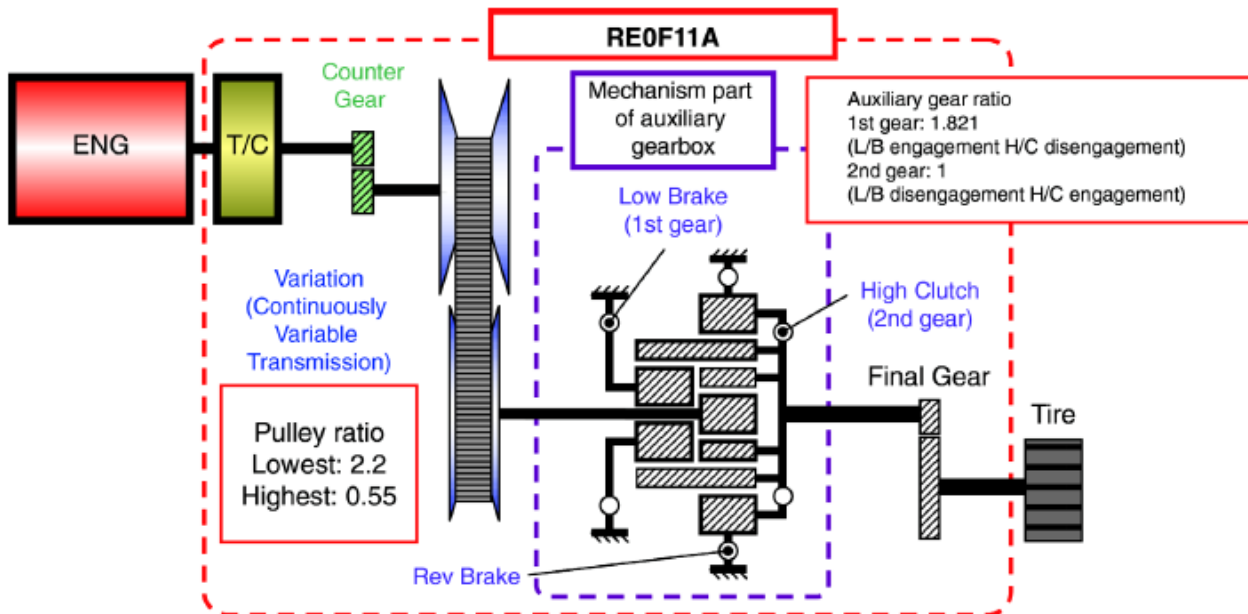
Compared to the previous generation CVT used in Sentra, the REOF11A has the following advantages:

- 30% less friction due to the use of NS-3 fluid and repositioned pulleys
- 10% lighter
- 10% more compact
- Increased fuel efficiency with wider gear ratio range





Auxiliary Gearbox (Sub-planetary Gearset)



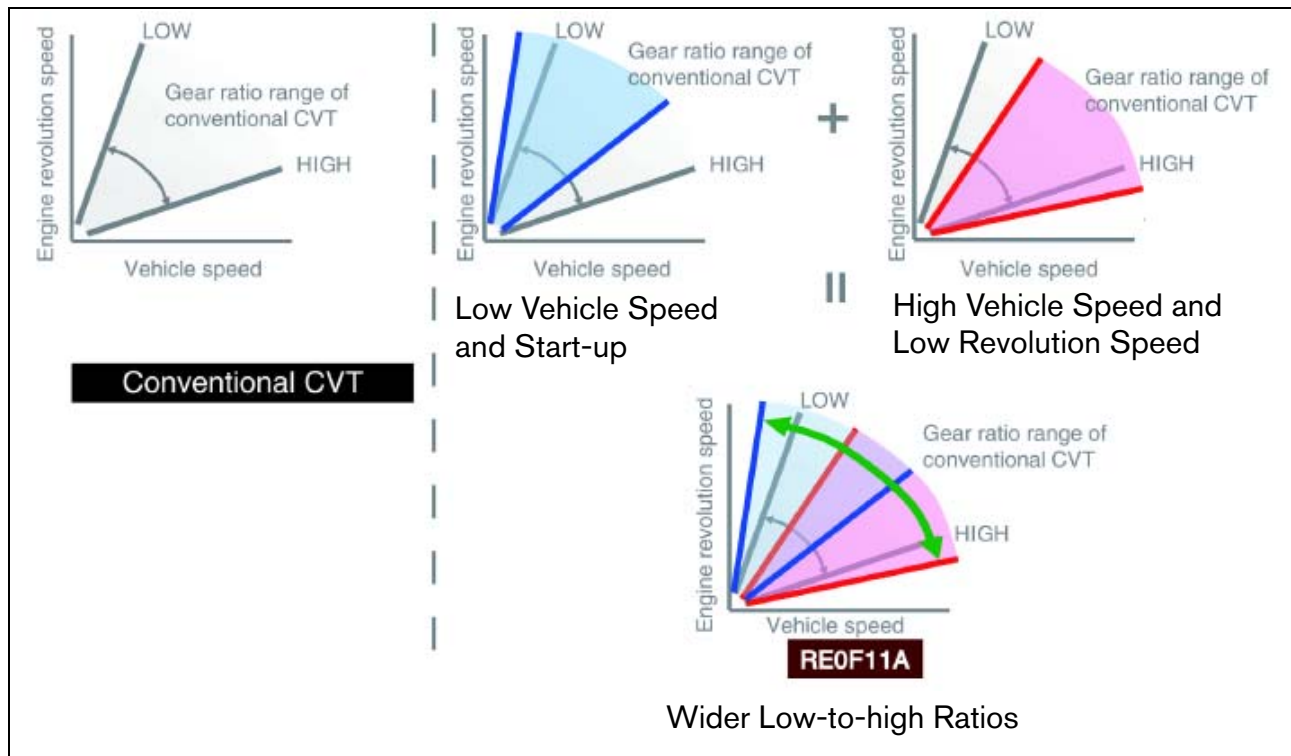
The variation (Continuously Variable Transmission) and the auxiliary gearbox (stepped transmission) are arranged in a series.

In a conventional CVT, gear ratios are changed from low to high using just two pulleys. On the new REOF11A transmission, an auxiliary gearbox (sub-planetary gearset) is used between the output pulley and the final drive. The auxiliary gearbox operates in two forward speeds, using a low brake for first gear and a high clutch for second gear. The auxiliary gearbox also provides reverse gear through the reverse brake.

With the vehicle stopped and the brake pedal applied, the CVT gear ratio is low and the auxiliary gearbox is in first gear with the low brake fully applied and the high clutch fully released. When the vehicle begins accelerating, the low brake remains partially applied as the high clutch begins to engage. When the vehicle reaches cruising speeds, the low brake has completely released and the high clutch is fully applied.

CVT Gear Ratio Coverage

By combining the pulley ratios with the auxiliary gear box ratios, the REOF11A transmission is capable of ratios that are both lower at low speeds and higher at high speeds than conventional CVTs, and even seven-speed automatic transmissions. The extra low ratios contribute to increased low speed acceleration, while the higher ratios at higher speeds help reduce engine rpm, reduce noise, and increase highway fuel economy.





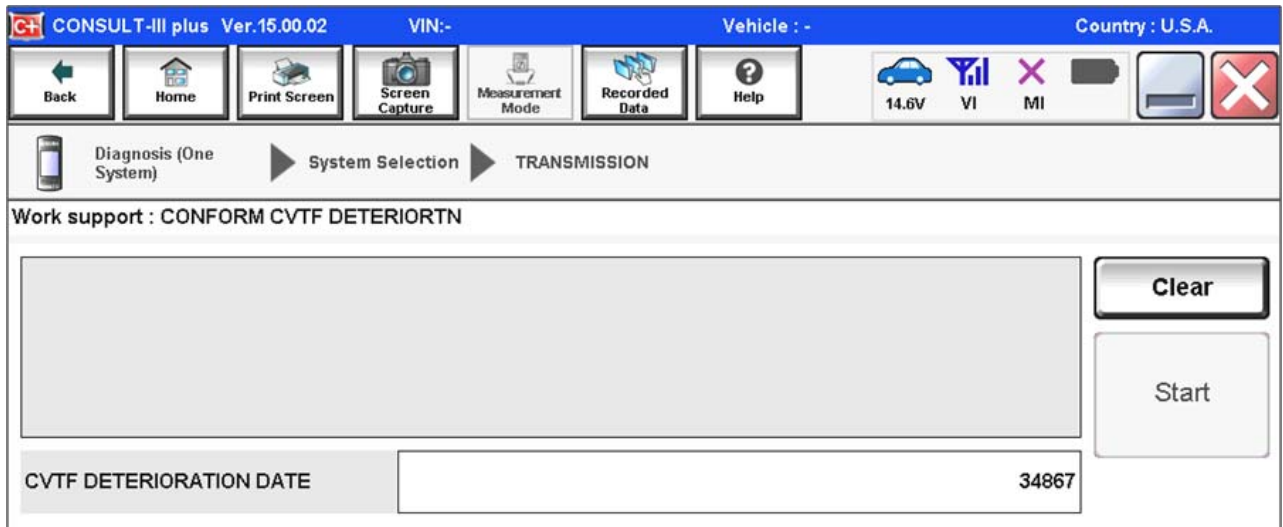
CVT Fluid

Nissan NS-3 low viscosity fluid (part number 999MP-NS300P) must be used in the 2013 Sentra. CONSULT-III plus is used to check the fluid condition (deterioration) every 60,000 miles. The use of incorrect fluid will damage the transmission, and the warranty policy will not cover the repairs. NS-3 fluid should not be mixed with other CVT fluid, such as NS-2. Mixing fluid will change the shift characteristics of the CVT and could cause noise-related issues.

NOTE: Refer to the latest TSB for CVT fluid information.

CVT Fluid Inspection

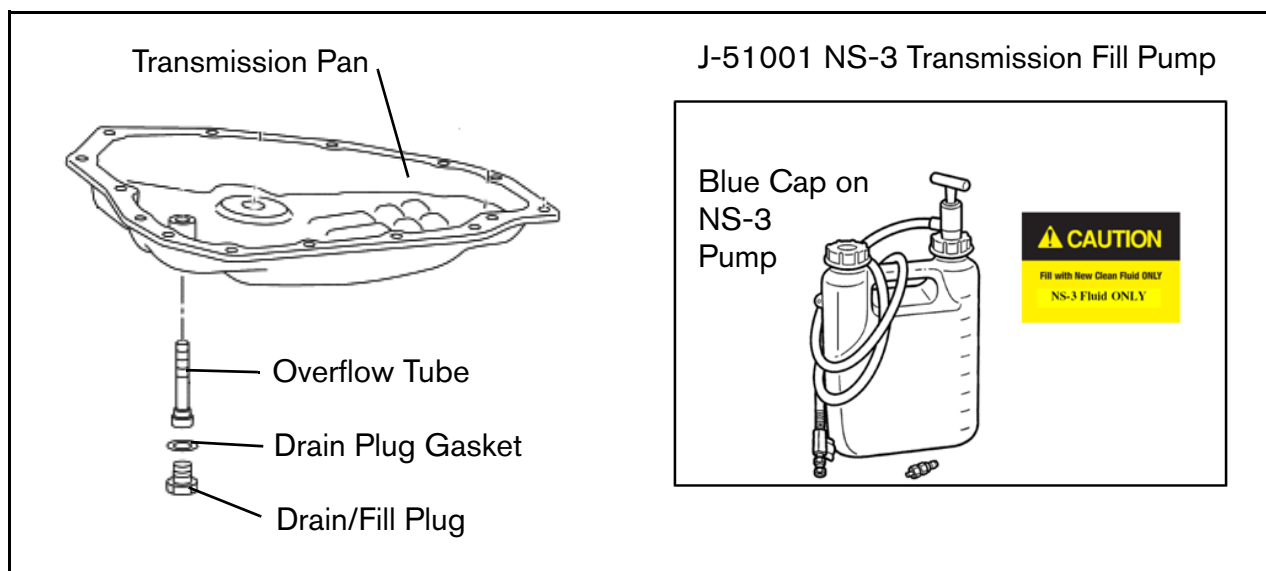
The cap on the factory fill tube is locked in place and should not be removed to fill the transmission or to inspect the fluid. To evaluate the condition of the CVT fluid, use CONSULT-III plus, CVT Work Support to view the CVTF DETERIORATION DATE. This number is not a date, but a number representing a deterioration level. If this number exceeds 210,000, the fluid must be changed.



Fluid Fill, Replacement, and Adjustment

Fluid service procedures on the 2013 Sentra may differ from past procedures. Always use the procedures in the ESM when performing fluid service. The following are some common points to remember:

- The CVT fluid fill and drain plug is located on the bottom of the transmission assembly
- Fluid drain, refill, and level inspection are all performed from this point
- The overflow tube is removed (unscrewed) to perform fluid draining
- Fluid fill and level checks are performed with the overflow tube in place
- Never try to remove the factory fill tube cap to add or inspect fluid
- Special tools are required for CVT fluid service
- Do not apply RTV sealant to the fluid pan
- Always connect the CONSULT-III plus and monitor fluid temperature during fluid service
 - CVT fluid temperature is critical for any fluid service procedure
- Use only Nissan NS-3 low viscosity fluid in the Sentra CVT
- If fluid must be replaced, remember to clear the CVTF Deterioration Date in CVT Work Support





SUSPENSION

Front and Rear Suspension

The front suspension is an independent strut design with front stabilizer bar. The rear suspension is a torsion beam design with integrated stabilizer bar. The addition of a gusset to the rear beam and revised bushings improve handling, response, and NVH.



Front Suspension



Rear Suspension



Gusset



Wheels and Tires

Available Tire Sizes

P205/55HR16

P205/50VR17



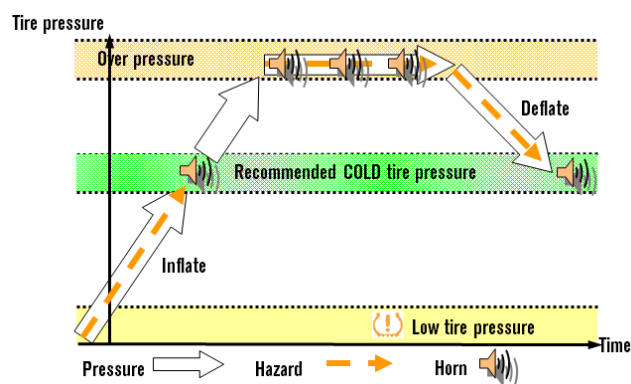
Premium 17-inch Wheel

Two different wheel and tire combinations are available on Sentra, depending on trim level. The S, SV, FE+S and FE+SV models are equipped with 16-inch steel wheels with full wheel covers. The SR and SL models step up to 17-inch aluminum alloy wheels. All-season, low-rolling resistance tires are used on all models. The spare tire is a T125/70D16.

Tire Pressure Monitor System (TPMS)

All 2013 Sentras are equipped with a four-corner TPMS. The system includes low tire pressure warning and CHECK TIRE PRESSURE warning indicators in the instrument cluster (Individual tire pressures are not displayed in the meter). The TPMS malfunction indicator is incorporated into the low tire pressure warning indicator. The TPMS monitors tire pressure at vehicle speeds above 16 mph (25 kph).

SL models and highly optioned SV and SR models are also equipped with the Easy-Fill Tire Alert System. With the ignition ON, the customer can begin to inflate the tires. The hazard lamps will flash, indicating the pressure is changing. When the recommended cold tire pressure is reached, the horn sounds. If the tire is inflated more than 4 psi above the recommended pressure, the horn sounds three times. If the tire is over-inflated, lowering the pressure causes the hazard lamps to flash, and the horn chirps once when the correct pressure is reached.





BRAKES



Front Disc Brakes



Rear Disc Brakes

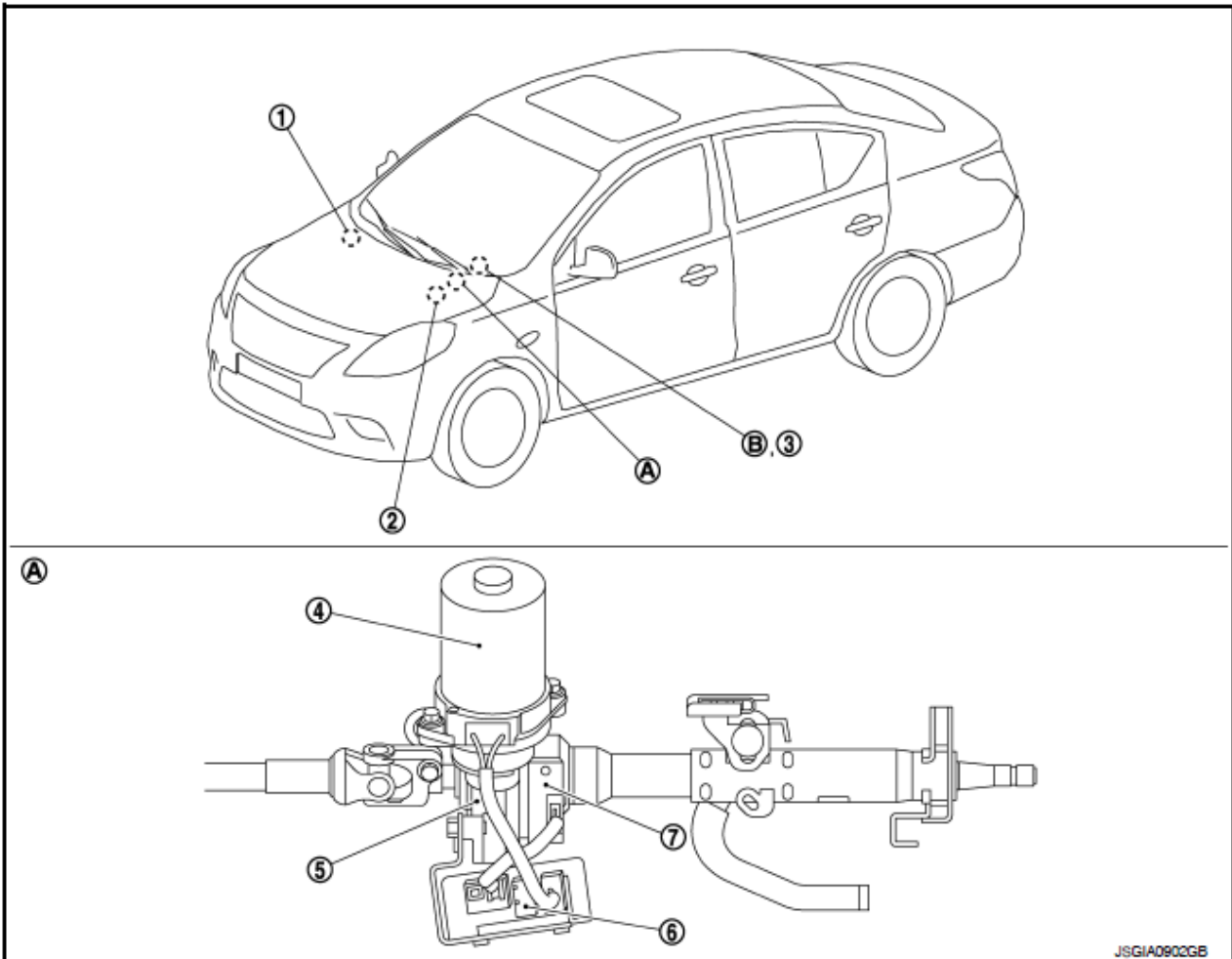
The standard braking system on Sentra includes ventilated front disc brakes and rear drum brakes. SR models with the SR Driver Package, and all models equipped with the Leather package include rear disc brakes (shown above).

The following brake system features are included on all models:

- Anti-lock Brake System (ABS)
- Electronic Brake force Distribution (EBD)
- Brake Assist
- Vehicle Dynamic Control (VDC)

STEERING

EPS System Component Locations



1. ABS Actuator and Control Unit
2. ECM
3. Combination Meter
4. EPS Motor
5. Reduction Gear
6. EPS Control Unit
7. Torque Sensor
- A. Steering Column Assembly
- B. EPS Warning Lamp



HVAC

A single-zone manual climate control system is standard on Sentra. A dual-zone automatic climate control system is available on SL models and includes ventilation ducts on the back of the center console for rear passenger comfort.



Dual-zone Climate Control (optional)

Automatic Climate Control Diagnosis

The optional dual-zone automatic climate control unit is now compatible with CONSULT-III plus. This includes viewing self-diagnostic results and monitoring the input and output data in real-time. Work Support can also be used to change the following basic settings:

- Temp Set Correct
- REC Memory Set
- FRE Memory Set
- Blow Set
- Target Evaporator

CONSULT-III plus and Active Test allows the technician to modify certain signals. For example, the compressor clutch can be requested ON and OFF.

ECU Identification provides the A/C Auto Amp part number. Configuration is used when replacing components such as the A/C Auto Amp when previously stored data must be written to the new component.



RESTRAINTS

The 2013 Sentra offers a comprehensive suite of active and passive restraints. All Sentra models include the following air bags:

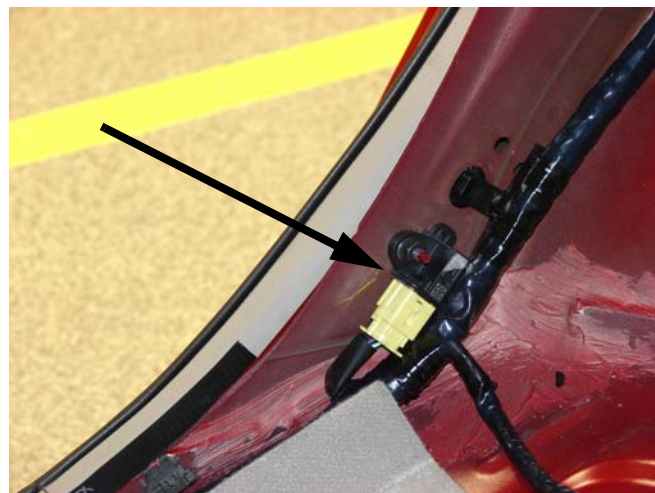
- Dual-stage driver air bag
- Dual-stage passenger front air bag
- Driver and passenger seat-mounted side impact air bags
- Roof-mounted curtain side air bags for front and rear outboard passengers

Advanced Side Impact Protection

In addition to the crash zone sensors and standard air bag sensors, the 2013 Sentra also includes additional side impact sensors to improve sensing time in side impact collisions. Pressure sensors are included in the front doors to detect a rapid change in pressure. Additional side impact satellite sensors have been added to the lower C-pillar area to help improve side impact sensing for rear passengers.



Front Door Pressure Sensors



C-pillar Satellite Sensors

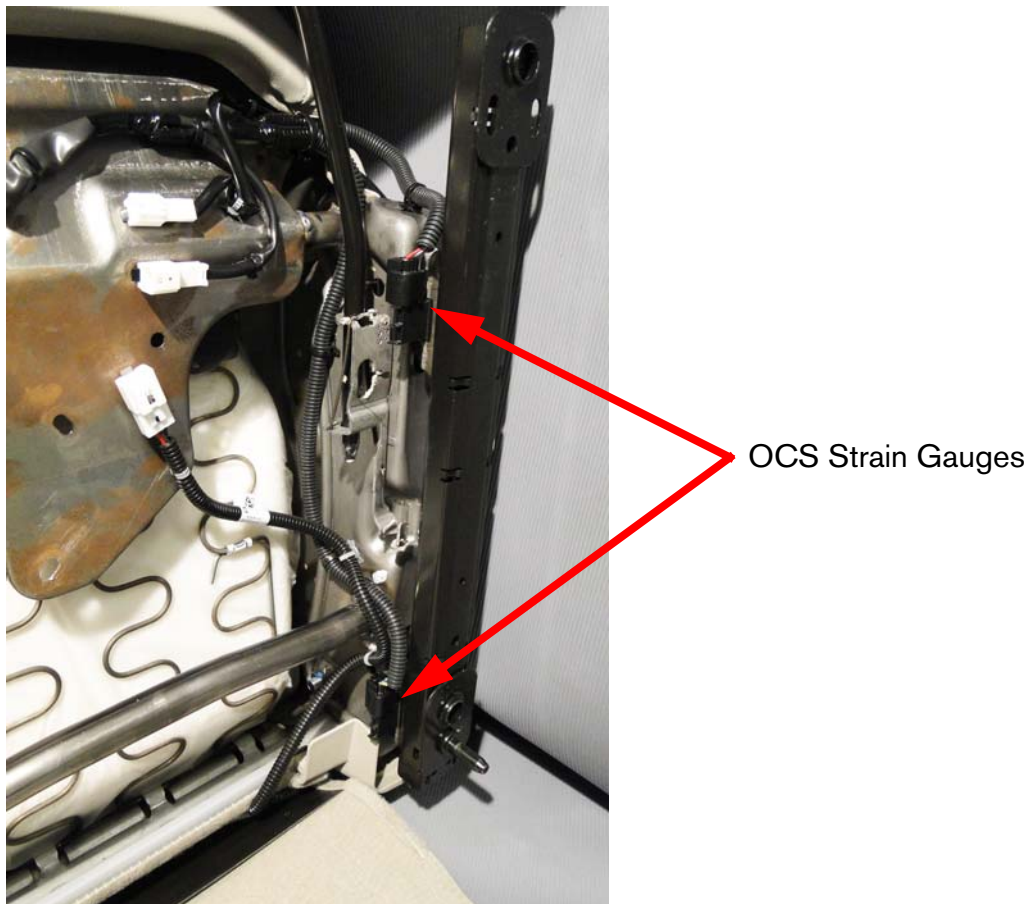


Front Door Pressure Sensor

The addition of the front door air bag satellite sensors introduces several new DTCs that may set if these sensors are disconnected or reconnected with the ignition ON. Refer to the Restraints section of the Pathfinder Text for information regarding these new DTCs.

Occupant Classification System (OCS)

The front passenger seat is equipped with a next-generation Occupant Classification System (OCS). The system uses two strain gauges along the inside seat track to sense whether the seat is occupied and, if occupied, how large of a passenger is occupying the seat. Based on this data, the air bag module determines whether to apply the air bag, and also how much air bag force should be applied.





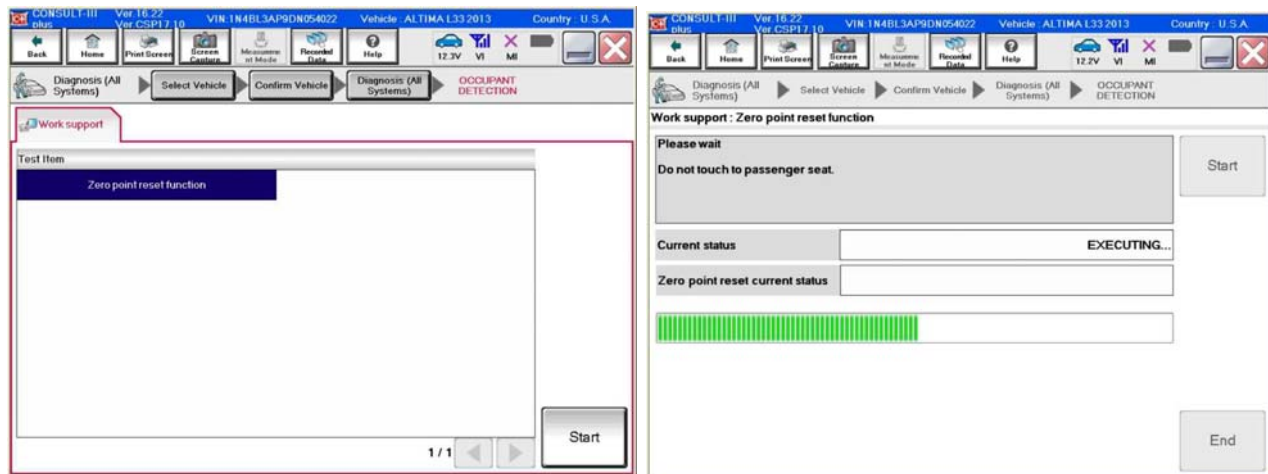
Zero Point Reset Procedure

Zero point reset is an initializing procedure for the Occupant Classification System (OCS) sensor that must be performed using CONSULT when removing and installing the passenger seat or servicing the OCS system. If zero point reset is not performed, the initialization is incomplete and OCS may not operate properly.

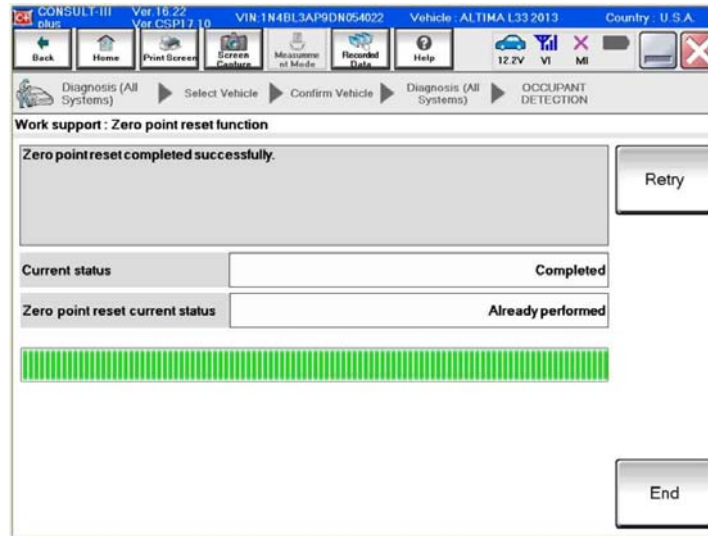
Always perform the following zero point reset procedure when removing and installing the passenger seat or servicing the Occupant Classification System (OCS).

NOTE:

- When reinstalling the passenger seat, the initial value for the OCS sensor may change, and the OCS may not operate properly.
 - When zero point reset is performed after removal and installation of the passenger seat, CONSULT displays “completed”.
1. Perform preliminary checks:
 - Level the vehicle
 - Minimize vibrations near the vehicle
 - Remove any objects on the passenger seat
 - Do not touch the vehicle during zero point reset



2. Select START on ZERO POINT RESET from WORK SUPPORT of OCCUPANT DETECTION
3. Zero point reset starts
4. Verify that Completed is displayed on Zero point reset status



CAUTION:

- The word **Completed** may be displayed if the seat has been reinstalled, or zero point reset has already been performed.
- The word **Incomplete** may be displayed if a new seat is installed.
- The air bag warning lamp blinks in user mode if the zero point reset is incomplete.

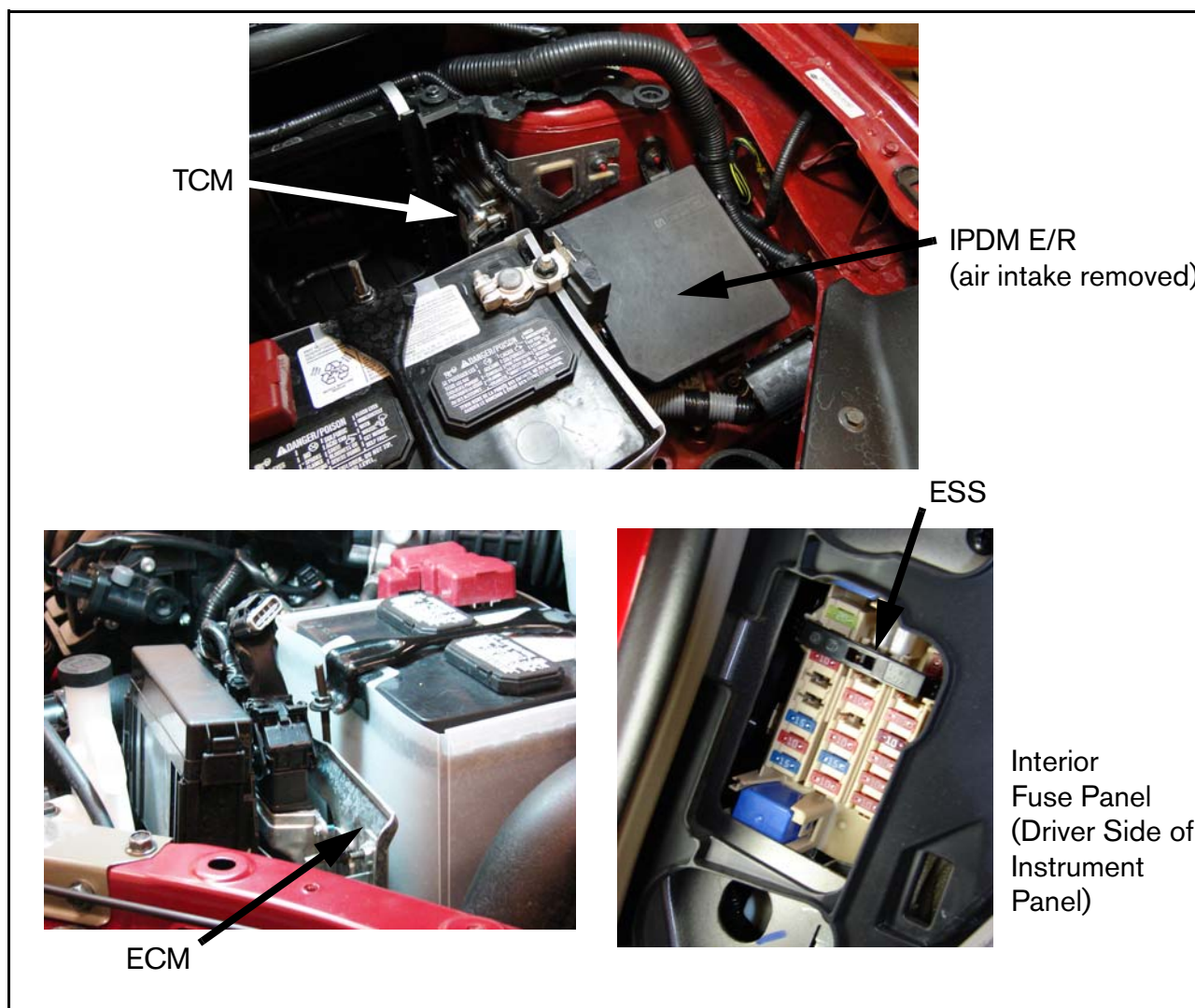


ELECTRICAL

Sentra incorporates advanced electrical and electronic systems throughout the vehicle to provide intelligent control of vehicle comfort and safety systems. The following information highlights the features and operation of these electrical and electronic systems.

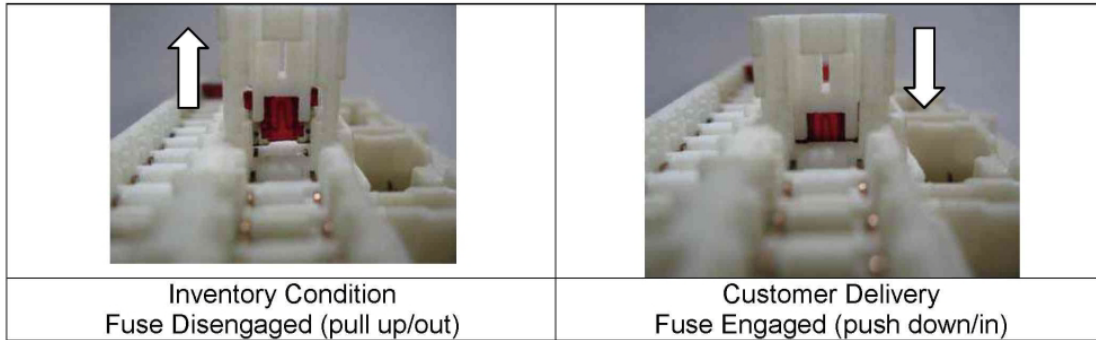
Fuses, Relays, and Control Modules

Similar to other Nissan vehicles, the Sentra electrical system uses an IPDM E/R located in the left corner of the engine compartment. The IPDM E/R activates the internal control circuit to perform relay ON/OFF control according to the input signals from various sensors and control units via CAN communication. The IPDM E/R integrated relays cannot be removed.





Extended Storage Switch (ESS)





Smart Auto Headlights



Many states now require headlights to operate in the on state when the wipers are operated full-time during rainy conditions. The new Sentra can be equipped with an automatic headlight-on function that illuminates the headlights during rain.

The auto headlight system also includes a more sensitive light sensor to ensure that headlights are turned on at twilight. To avoid unnecessary triggering in tree shade but secure immediate triggering at tunnel entrances, software was developed creating a smarter on-off system that responds precisely to various lighting situations. Sentras with the Smart Auto Headlight feature have an improved two-stage automatic-on headlight function.

Stage 1

In certain lighting conditions, with the headlight switch in the AUTO position, the headlights may illuminate but the instrument panel lights and gauges will remain in daytime mode.

Stage 2

With the headlight switch in the AUTO position, if the wipers are turned on, and the wiper arms complete four passes, the headlights will turn on.



Audio and Navigation Systems - Key Features

The 2013 Sentra can be equipped with a number of audio and navigation systems, depending on grade and option packages. The following is an overview of features that are included in the top-level Navigation Package.

Basic Features

Streaming Audio Via Bluetooth®

This allows the user to connect wirelessly and stream music from a Bluetooth® compatible device through the Sentra's sound system. The sound system controls are used to control the device.

Bluetooth Hands-Free Phone System

The Bluetooth Hands-free Phone System is activated via steering-wheel-mounted controls.

USB Connection Port

This allows the user to plug an iPod into the Sentra and take a music collection on the road. Steering-wheel-mounted controls provide full command of each track.

Pandora

Pandora provides control of an iPhone® or iPod® via the audio system controls and display screen. Pandora is a free internet radio service that helps the user find new music based on their old and current favorites. Thumbs up and thumbs down icons allow the user to rate songs. The Pandora menu allows the user to display a list of available Pandora stations, bookmark the current song, or delete the current station.

NissanConnect™ Features

NissanConnect™

The 2013 Sentra can be equipped with the available NissanConnect™ suite of technologies. NissanConnect™ uses the driver's mobile phone to connect to cloud services that enhance the driver's experience, increase safety, and minimize distraction. Hands-free phone capability, streaming audio, hands-free text messaging, navigation, and more are all accessible from Sentra's centrally located screen. New Nissan owners activate NissanConnect™ on the Nissan Owner Portal.

Hands-Free Text Messaging Assistant

This allows the driver to keep both hands on the wheel without having to look at the phone.



Google® Send-To-Car

Before leaving home, the user can use a connected device to send an address to the Nissan Navigation System. When the car is started and the user connects to the network, the address will be delivered and loaded into the Nissan system for routing.

POIS Powered by Google®

This allows use of the internet to find local businesses. A connected Google® local business search is based on the latest information from Google® and is always up-to-date. The user can search for a destination without knowing the specific name or category, then save it or begin routing.

XM™ Subscription Services

SiriusXM™ Satellite Radio

Available built-in SiriusXM™ Satellite Radio provides over 130 commercial-free music stations, talk radio, news, and sports.

NavWeather™

NavWeather™ shows current weather for the vehicle's location including temperature, humidity, wind speed, and precipitation. The 5-day forecast is provided. The forecast for other locations is also available.

NavTraffic™

The NavTraffic™ Menu can be used to show the closest traffic incident to the vehicle, regarding routing status. The user can view the On Route list to see traffic event information specific to the user's route. The All list provides all traffic event information regardless of routing. The user can use the Avoid Road option to select a road or segment of the route to avoid.



SPECIFICATIONS

Maximum Horsepower @ rpm SAE	130 @ 6,000 (50-State) 124 (California Emissions)
Maximum Torque (lb-ft.) @ rpm SAE	128 @ 3,600 (50-State) 125 (California Emissions)
Transmissions	6-Speed Manual (Standard) Continuously Variable Automatic (Optional)
Fuel Tank Capacity (gallons)	13.2
Overall Length (inches)	182.1
Overall Width (inches)	69.3
Overall Height (inches)	58.9
Wheelbase (inches)	106.3
Track Width (inches)	Front: 60.2 Rear: 60.2
Passenger Volume (ft ³)	95.9
Wheels and Tires	P205/55HR16 all-season tires, steel wheels P205/50VR17 all-season tires, alloy wheels
Brakes	11-in. Front Rotors 9-in. Rear Drum (Standard) 11.5-in. Rear Rotors (Optional)
Towing Capacity	TOWING IS NOT RECOMMENDED