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NISSAN NOTE COMMUNITY KENYA

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Nissan Note Service Guide

- Model: E11, E12, NISMO, e-Power, E13
- Engine: HR15DE, HR16DE, HR16DE NISMO-S, HR12DE, HR12DDR, HR12DE e-Power
- Rev. 8.1 (AUG 2025)

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Contents

Models, Features and Specs

*Some content in the following pages was acquired from Nissan Japan.

About the E11

- Highlights of the E11 Note include:
  - Spirited driving from the HR15DE engine and XTRONIC CVT with confident handling.
  - A stylish, comfortable interior with a roomy cabin and cargo area.
  - A double-decker multi-configurable trunk providing flexible convenience.

E11 Trims

15X/SV+ Plasma/V Selection/SV/G/16X/Four

Equipment

double ring white meter

lcd od/ twin trip meter (with fuel economy display function)

Rear Armrest with Cupholders

Intelligent Key System (optional)

Front Armrest

Auto Light System

Front Speed Sensing Intermittent Wiper

ozone safe manual air conditioner

optional: fully automatic air conditioner with plasma cluster (skin moisturizing, disinfection function)

ECO Mode Switch (later models)

Nissan Note E12 Comparison

NISSAN OWNERS CLUB

MODEL CODE	E12	E12	E12	E12	E12	E12	E12
	PURE DRIVE	PURE DRIVE DIG-S	nismo	nismo S	e-POWER	e-POWER nismo	e-POWER nismo S
Model Alias	Puredrive	DIG-S	NISMO	NISMO-S	e-Power	e-Power NISMO	e-Power NISMO-S
Engine	HR12DE	HR12DDR	HR12DDR	HR16DE	HR12DE-EM57	HR12DE-EM57	HR12DE-EM57
Displacement (cc)	1198	1198	1198	1598	0 (1198 for Generator/Engine)	0 (1198 for Generator/Engine)	0 (1198 for Generator/Engine)
Cylinders	3	3	3	4	3 (for Generator/Engine)	3 (for Generator/Engine)	3 (for Generator/Engine)
Power Source	Engine (ICE)	Engine (ICE)	Engine (ICE)	Engine (ICE)	Electric/Motor (ER-EV)	Electric/Motor (ER-EV)	Electric/Motor (ER-EV)
Induction/Charging Type	Naturally Aspirated	Supercharged	Supercharged	Naturally Aspirated	EV	EV	EV
Spark Plug Manufacturer	NGK	NGK	NGK	NGK	NGK (for Generator/Engine)	NGK (for Generator/Engine)	NGK (for Generator/Engine)
Spark Plug Number	DILKAR6A11	DILKAR7E11HS	DILKAR7E11HS	DILZKAR6A11	LZKAR6AP11	LZKAR6AP11	LZKAR6AP11
NGK Plug Stock #	9029	97439	97439	91691	6643	6643	6643
Plug Heat Range	Hot	Cold	Cold	Hot	Hot	Hot	Hot
Plug Thread Reach	26.5mm	28.5mm	28.5mm	26.5mm	26.5mm	26.5mm	26.5mm
Fuel Type	Petrol – Regular	Petrol – Regular unleaded	Petrol – Regular unleaded	Petrol – Premium	Electric (petrol generator)	Electric (petrol generator)	Electric (petrol generator)
Fuel System	Indirect Injection	Direct Injection	Direct Injection	Indirect Injection	Indirect Injection	Indirect Injection	Indirect Injection
RON	91	91	91	95	N/A (91 for Engine/Generator)	N/A (91 for Engine/Generator)	N/A (91 for Engine/Generator)
Transmission	CVT	CVT	CVT	5MT	N/A (Reducer Unit)	N/A (Reducer Unit)	N/A (Reducer Unit)
Transmission Fluid	NS-3	NS-3	NS-3	Gear Oil	Matic-S (Reducer)	Matic-S (Reducer)	Matic-S (Reducer)
Power (HP)	78	97	97	138	107	107	136
Torque (Nm)	106	142	142	163	254	254	320
Weight (Kg)	1040	1090	1090	1080	1220	1220	1220
JCO8 Consumption City/Urban/Combined (est.)	13/21/16	14/24/18	13/22/16	10/16/13	27/35/31	25/32/29	25/30/27
0-100Kph (s)(est.)	14	11	11	8.7	8.7	8.5	7

About the E12

- Featuring an energetic exterior design and spacious interior, the E12 Note combines a newly developed 1.2L engine with an aerodynamic lightweight body, achieving top level fuel economy. The E12 Note also provides outstanding comfort and user-friendliness and includes an advanced Around View Monitor.
- The E12 Note is powered either by a supercharged, direct-injection HR12DDR Miller-cycle engine or HR12DE engine, with XTRONIC CVT (Continuously Variable Transmission) installed in all grades. An Idling Stop System is included for 2WD models.
- Utilizing the responsiveness of a supercharger, the newly-developed HR12DDR engine delivers agile and exhilarating driving equivalent to that of a 1.5L engine, and great fuel economy of 25.2 km/L (on JC08 mode).
- In the highest grade, **MEDALIST**, the E12 Note provides a premium feel for both interior and exterior. The exterior features plated door handles and an exclusive Beatnic Gold body color that offers a higher quality appearance than typically found in its class. Inside, the premium feel continues, with suede-like cloth seats and artificial leather, piano-like center cluster finisher and genuine leather-wrapped steering wheel. The Around View Monitor is standard.
- Based on the dual-pillar strategy of "zero emissions" and PURE DRIVE, Nissan continues its efforts to reduce CO2 emissions throughout its product lineup. The E12 Note with HR12DDR engine or HR12DE engine is one of the Nissan's PURE DRIVE models. Pure Drive is the designation given to Nissan's most fuel efficient, lowest emissions vehicles.

NISMO Update

- In order to satisfy the needs of both the hardcore motorsports fan as well as the casual sports driving enthusiast, there will be two grades offered for the Note NISMO, the standard model and the Note NISMO-S.
- The standard NISMO Note will satisfy customers who appreciate sporty styling, as well as those who enjoy spirited driving in a compact fuel-efficient vehicle. The upgrade NISMO S caters to the pure high-performance enthusiast, one who desires to experience the fruits of NISMO's motorsports heritage.
- "The development concept of this model was to build a car that makes you want to keep driving, no matter where your destination may be. NISMO is confident that the Note NISMO will enhance your driving experience; it offers top level performance in a compact package," NISMO's Chief Product Specialist, Hiroshi Tamura, said.
- Highlights of the Note NISMO include:
    - High level performance with total balance
      Powertrain, chassis, tire, suspension and aerodynamic technologies all accumulated from NISMO's experience in motorsports that offers high performance with flawless balance.
    - The NISMO-S is equipped with a specially-tuned HR16DE engine mated to a 5-speed manual gearbox, a combination that allows the driver to tap into the powerplant's fruitful supply of low-end torque, resulting in a thoroughly pleasurable driving experience.
    - Head-turning NISMO styling accentuated with NISMO Red
      Custom front grille, front and rear bumpers, side sill protectors, roof spoiler and the NISMO Red electronic folding side mirrors highlights the exterior along with the custom NISMO badge.
    - Enforced body rigidity maximizes the performance potential of each part
      Enforced body rigidity and the smooth engine performance make the driver want to continue driving endlessly. It offers performance and quality that can only come from a factory-tuned vehicle.
    - Multiple seat variations
      Custom sports seats are standard on the Note NISMO-S and offered as a factory option on the standard Note NISMO. Additionally, special NISMO Recaro sports bucket seats are offered as a factory option on the Note NISMO-S.

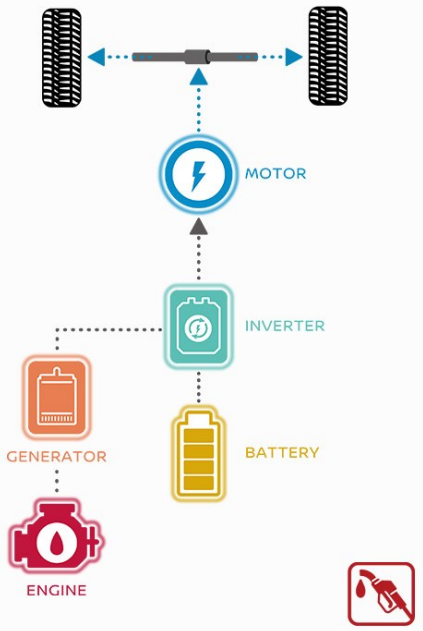
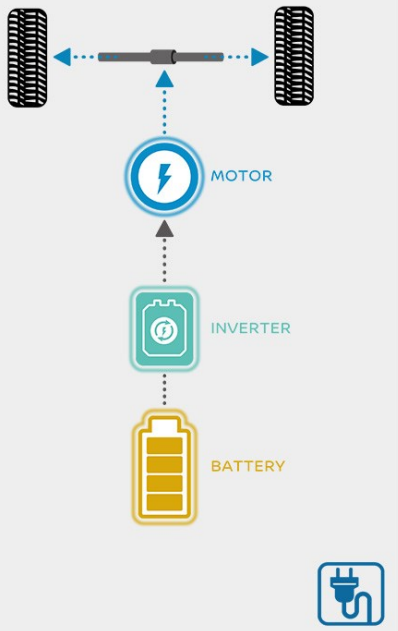
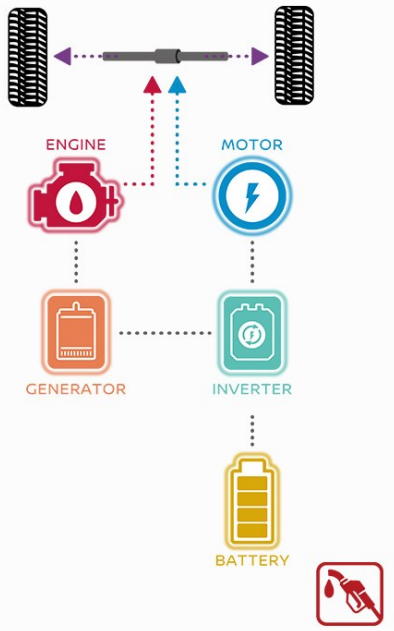
E-Power Update

e-POWER

What is e-Power?

- e-POWER is Nissan's unique electric-drive powertrain that integrates a gasoline engine and motor.
- Since the engine only generates electricity and the system is 100% driven by a high-output motor, it is possible to enjoy the driving experience of an EV.
- e-POWER utilizes motor control technology cultivated in past EV development activities, powertrain integration technology, and energy management technology. By changing the combination of electric-drive motors and power-generation engines, it delivers quiet driving with excellent response over a wide range of vehicles from compact cars to minivans and SUVs.

e-Power vs EV vs Hybrid Technology

	e-POWER	100% electric vehicle	Conventional hybrid
Drive	100% electric motor	100% electric motor	Electric motor + engine
Electric motor	High output	High output	Low output
Energy source	Gasoline (No Plug-in)	Electricity (Plug-in)	Gasoline
System structure			

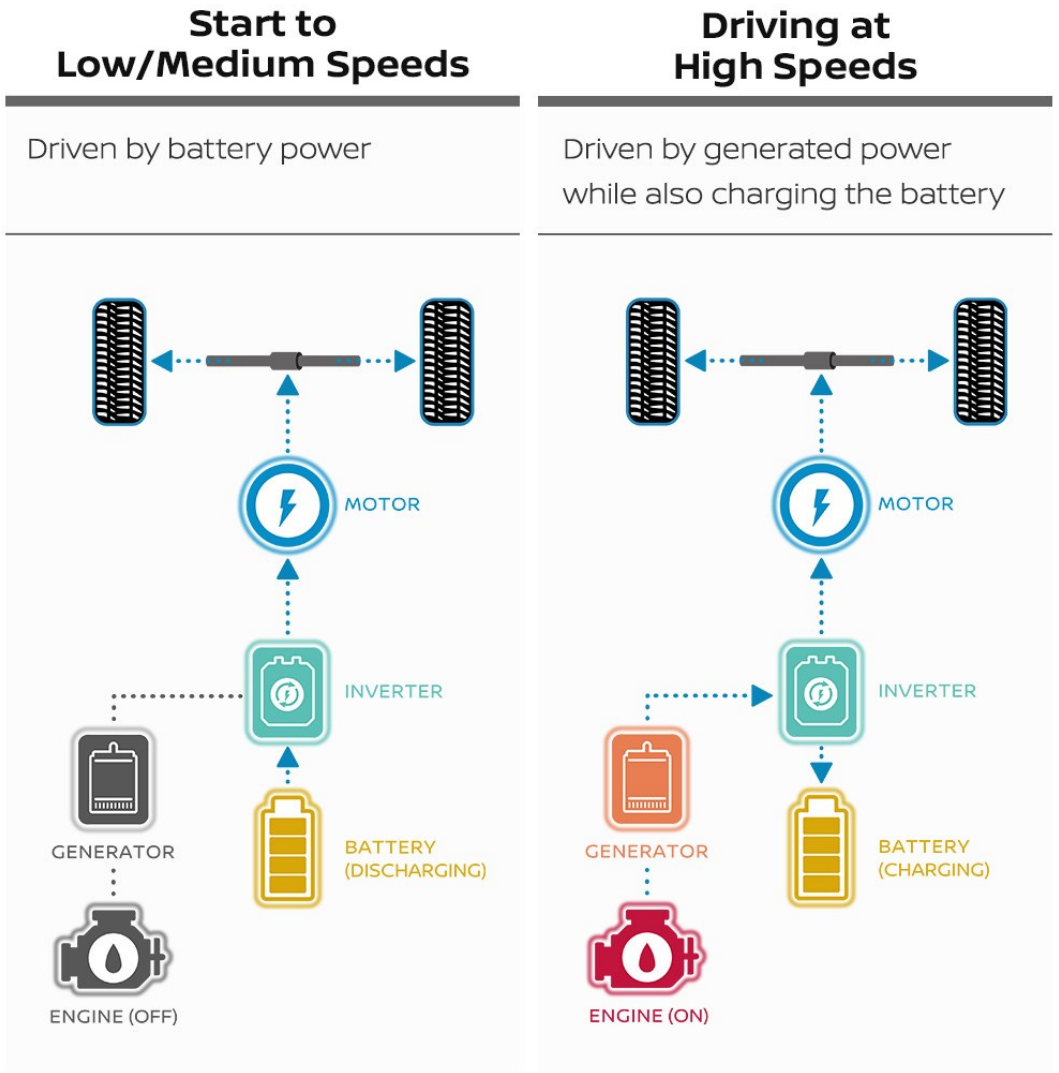
Technology of e-Power

- The e-POWER system is comprised of a high-voltage battery and the powertrain, which is integrated with a high-power motor, inverter, gasoline engine, and a generator. In conventional hybrid systems, the wheels are driven by an electric motor and a gasoline engine. However, in the e-POWER system, the wheels are driven by a high-output electric motor like an EV.

- Since the engine connected to the generator only charges the battery and does not directly drive the wheels, it is possible to freely set the start timing and efficient RPM. Generated electricity charges the high-voltage battery and directly drives the motor.

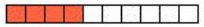
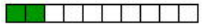
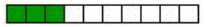
e-Power System Operation

- Since e-POWER is 100% motor-driven, it provides a responsive and powerful driving experience, by taking advantage of the characteristic that the motor can generate maximum torque from when it starts. The system can freely control engine start timing because the engine is not directly connected to the wheels. It provides very quiet driving with reduced engine operation time by driving the vehicle with just the motor from start to low/mid-range speed and starting the engine and generating electricity in fast speed areas with elevated road noise. It also achieves low fuel consumption because it generates electricity at efficient engine RPM.



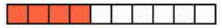
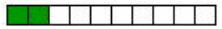
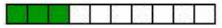
E-Power Drive Modes

Stock Car

range	Drive Mode		acceleration	deceleration		Fuel Efficiency
					Pedal operation	
D	e-POWER Drive	S	 Accelerator response is better than in NORMAL mode, and high acceleration performance (a characteristic that highlights the characteristics of motor drive)	 Demonstrates a strong deceleration effect and can decelerate to 0 km/h	One Pedal (Accelerator Pedal)	
D		ECO	 Gradual acceleration with an emphasis on fuel efficiency	 Demonstrates a strong deceleration effect and can decelerate to 0 km/h		
D	NOMAL		 Powerful motor-driven vehicles with good response and smooth acceleration	 As with gasoline cars, brake and accelerator pedal back to slow down	Brakes and accelerator pedals	
B			 Good response and smooth acceleration unique to motor-driven vehicles	 Somewhat strong		

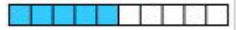
E-Power Drive Modes

Mode Premier Touring Package/C-Gear Touring Package

range	Drive Mode		acceleration	deceleration		Fuel Efficiency
					Pedal operation	
D	e-POWER Drive	S	 Strength + good stretch, higher acceleration than NOMAL mode	 Stronger deceleration effect when the vehicle speed is high *Does not decelerate until the vehicle speed is 0 km/h, and creep occurs just before stopping	Brakes and accelerator pedals	
D		ECO	 Acceleration equivalent to the standard car	 Deceleration equivalent to that of the standard car	One Pedal (Accelerator Pedal)	
D	NOMAL		 Emphasis on growth, acceleration +α than the standard car	 +α deceleration than the standard car	Brakes and accelerator pedals	
B			 Emphasis on growth, acceleration +α than the standard car	 Strong deceleration effect when the vehicle speed is high		

E-Power Drive Modes

NISMO/AUTECH SPORT/C-GEAR TOURING PACKAGE

range	Drive Mode		acceleration	deceleration	Pedal operation	Fuel Efficiency
D	e-POWER Drive	S	Strength + good stretch, higher acceleration than NOMAL mode	When the vehicle speed is high, it exerts a strong deceleration effect and can decelerate to 0 km/h.	One Pedal (Accelerator Pedal)	
D		ECO	Acceleration equivalent to the standard car	Deceleration equivalent to that of the standard car		
D	NOMAL		Emphasis on growth, acceleration +α than the standard car	+α deceleration than the standard car	Brakes and accelerator pedals	
B			Emphasis on growth, acceleration +α than the standard car	Strong deceleration effect when the vehicle speed is high		

E-Power Drive Modes

NIMSO-S

range	Drive Mode		acceleration	deceleration	Pedal operation	Fuel Efficiency
D	e-POWER Drive	S	Strength + good stretch, higher acceleration than NOMAL mode	When the vehicle speed is high, it exerts a strong deceleration effect and can decelerate to 0 km/h.	One Pedal (Accelerator Pedal)	
B			Stronger acceleration	Strong vehicle speed can be decelerated to 0 km/h		
D		ECO	Acceleration equivalent to the standard car	Deceleration equivalent to that of the standard car		
B			ECO mode of the standard car Acceleration equivalent to the "D" range	Strong vehicle speed can be decelerated to 0 km/h		
D	NOMAL		Emphasis on growth, acceleration +α than the standard car	+α deceleration than the standard car	Brakes and accelerator pedals	
B			Emphasis on growth, acceleration +α than the standard car	Strong deceleration effect when the vehicle speed is high		

E-Power NISMO Update

- The Note e-POWER NISMO, based on the Note e-POWER mass-production model is tuned specifically for NISMO in order to offer NISMO models not only to hardcore motorsports fans and sports driving enthusiasts but also to a wider range of car lovers.
- Furthermore, the Note NISMO and the Note NISMO S now come with improved specifications featuring new interior and exterior design. Safety features, such as Intelligent Emergency Braking and Lane Departure Warning (LDW), are also installed in the Note NISMO.
- Maximizing the characteristics of the e-POWER's motor drive system by NISMO tuning, the Note e-POWER NISMO, featuring new advanced driving feel, exhilarating acceleration performance and great quietness, is targeted to customers who want to experience new NISMO.
- With custom structural enhancements and the adoption of custom suspension with carefully selected springs, high-quality driving and sportiness are optimally balanced, delivering one-class-above ride comfort and handling stability. In addition, custom tuning computer (VCM) utilizing the e-POWER's characteristics of being powered by electricity, which produces highly responsive acceleration feel in any situation, offers joy of driving NISMO cars. In normal and S modes, acceleration response and regenerative power unique to the Note e-POWER NISMO allow drivers to enjoy exhilarating driving from everyday situations to winding roads.

  The Note NISMO with improved specifications meet the needs of customers who want to express him/herself with stylish, sophisticated sporty design while the Note NISMO S with enhanced features satisfies customers who like sports driving and want to get performance that NISMO gained in motorsports.
- With the new Garnet Red (CP) (special color) added to existing exterior colors, the Note NISMO series is now available in five colors.

E12 Facelift/Updates

2014 - 2016 Exterior Update

2016+ Exterior Update

Medalist Facelift/Updates

1st Gen (before 2014)

2nd Gen (2014 – 2016)

3rd Gen (2016+)

E12 Rider Update

Pre-2014

2014 - 2016

Axis Update

Pre-2014

2014+

Rider/Axis to Mode Premier to Autech

Mode Premier

Autech

E-Power Trims

Bumper Differences – S,X vs Medalist

Wheel Differences – S,X vs Medalist

Note E13

Note E13 Facelift

Note E13
AURA

Note E13 Aura NISMO

Interior E11

Interior E12

S

S DIG-S

Interior E12

X

X-Four

Interior E12

X DIG-S

Medalist

Interior - Axis

Interior NISMO

Interior NISMO-S

Interior – e-Power

Interior Cabin – E13

Drivers View – E11

From the Drivers Seat – E12

S

S DIG-S

From the Drivers Seat – E12

X

X-Four

From the Drivers Seat – E12

X DIG-S

Medalist

E-12 Interior Update

2015

2016 – e-Power

From the Drivers Seat – NISMO-S

From the Drivers Seat e-Power

Seats – E12

S · S DIG -S

X · X DIG -S · X FOUR

Medalist

Seats NISMO

NISMO

NISMO/NISMO-S

NISMO-S

Instrument Cluster

Puredrive

DIG-S/NISMO

Instrument Cluster – NISMO-S

Instrument Cluster

e-Power

E-Power NISMO

Instrument Cluster E13

Normal

NISMO

Engines E11

HR15DE

MAX. POWER：80kW（109PS）/6000rpm
MAX. TORQUE: 148N·m (15.1kgf·m)/4400rpm

JC08 Fuel Econ Rating: 18.0km/l (14.4km/l 4WD variant)

HR16DE

MAX. POWER：80kW（109PS）/6000rpm
MAX. TORQUE: 152N·m (15.5kgf·m)/4400rpm

JC08 Fuel Econ Rating: 15.4km/l

Engines – E12

HR12DDR (Supercharged)

MAX. POWER：72kW（98PS）/5600rpm
MAX. TORQUE: 142N·m (14.5kgf·m)/4400rpm

JC08 Fuel Econ Rating: 24.0km/l (25.2km/l for S DIG-S)

HR12DE

MAX. POWER：58kW（79PS）/6000rpm
MAX. TORQUE: 106N·m (10.8kgf·m)/4400rpm

JC08 Fuel Econ Rating: 22.6km/l (18.2km/l 4WD variant)

Transmission Options

Equipped on: **E11 Note**
Transmission Type: **XTRONIC CVT or 4AT**
Engine: **HR15DE**

New GENERATION XTRONIC CVT

REOF11A CVT on HR12 engines

Equipped on: **E11 Note, E12 NISMO-S**
Transmission Type: **Manual, 5-Speed**
Engine: **HR16DE**

Engine Room – E11

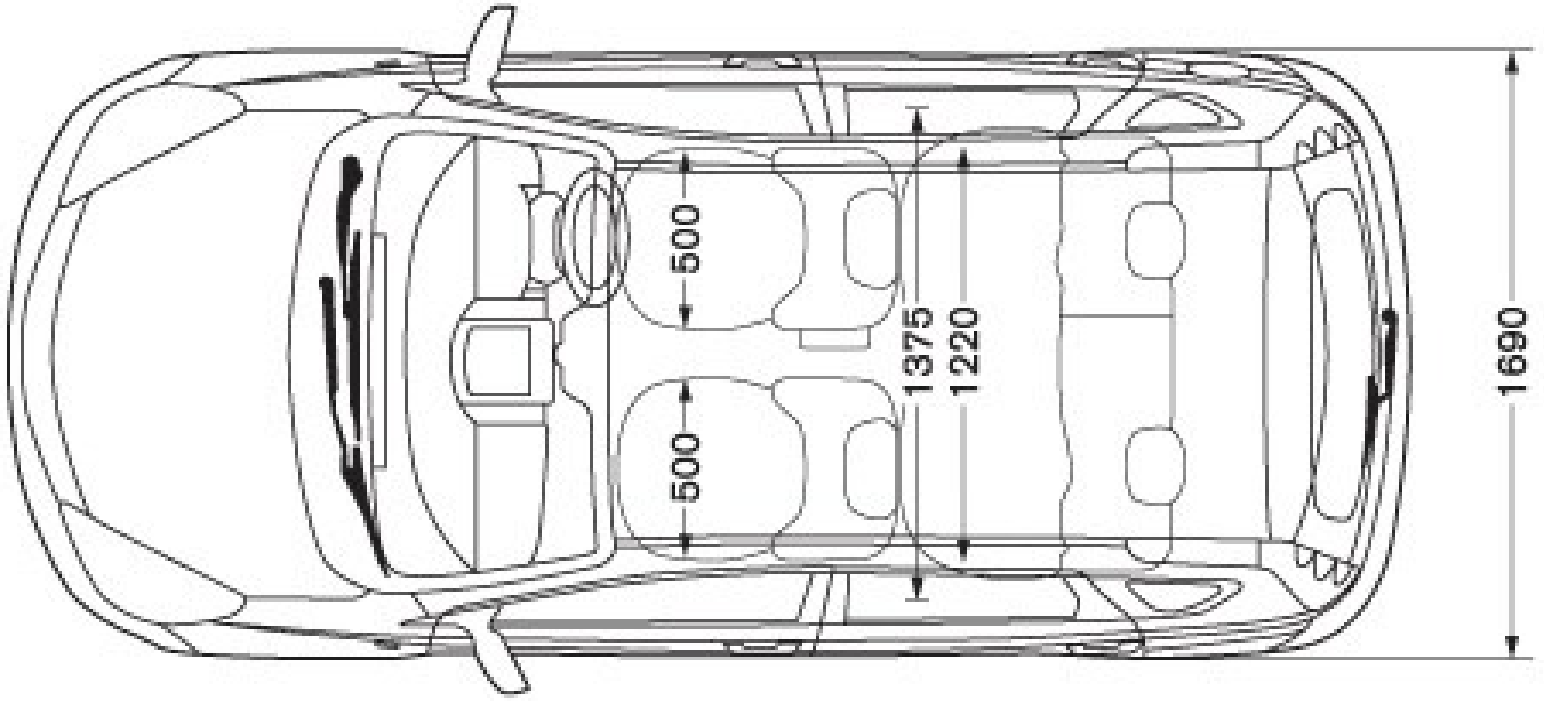
Engine Room – E12 Puredrive

Engine Room – E12 DIG-S

Engine Room – E12 NISMO-S

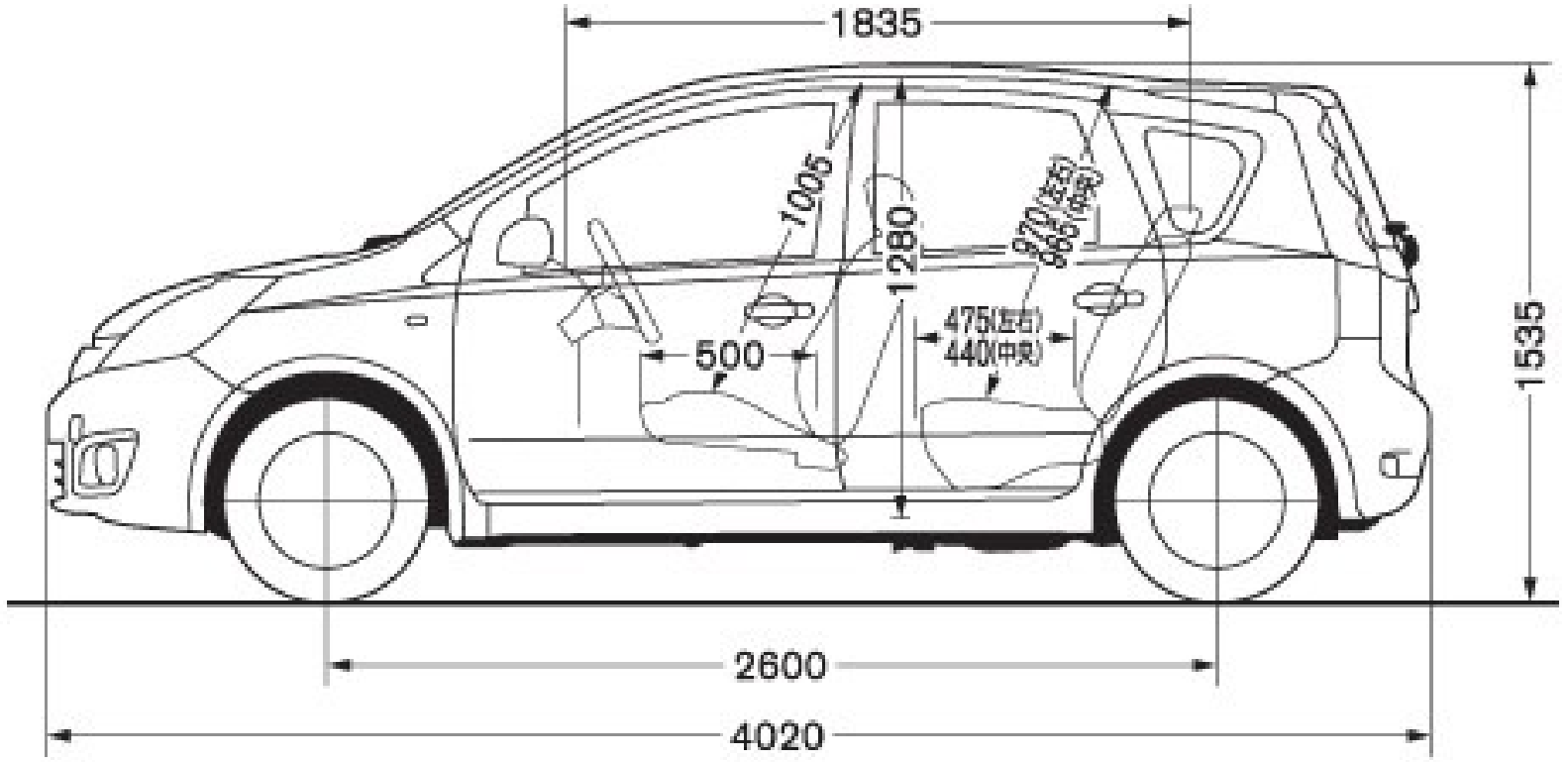
Engine Room – E12 e-Power

E11 Dimensions - Top



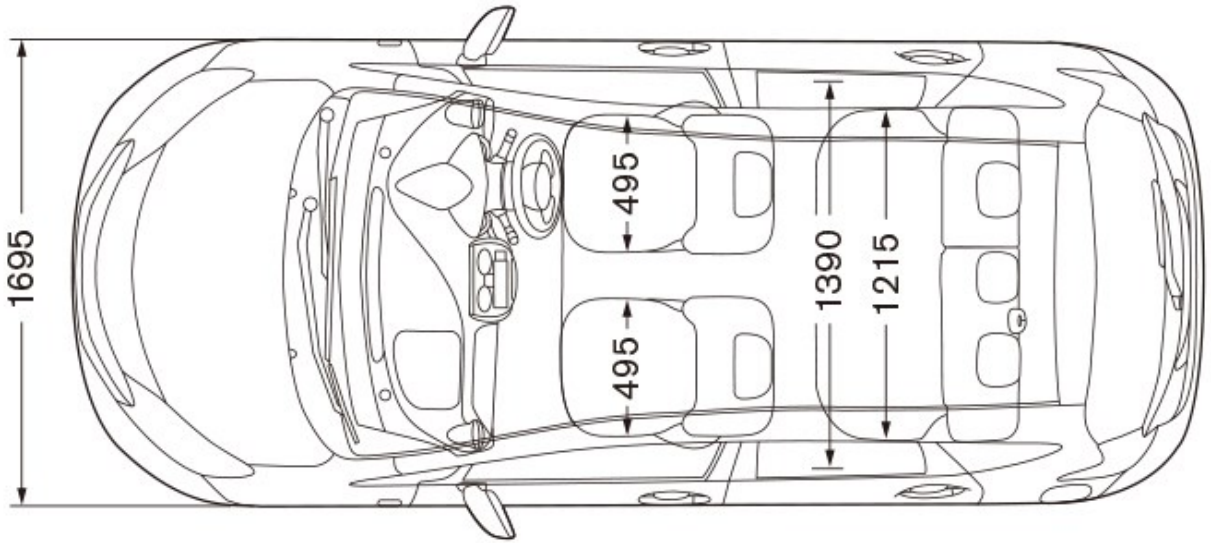
（15X SV） 単位：mm

E11 Dimensions - Side



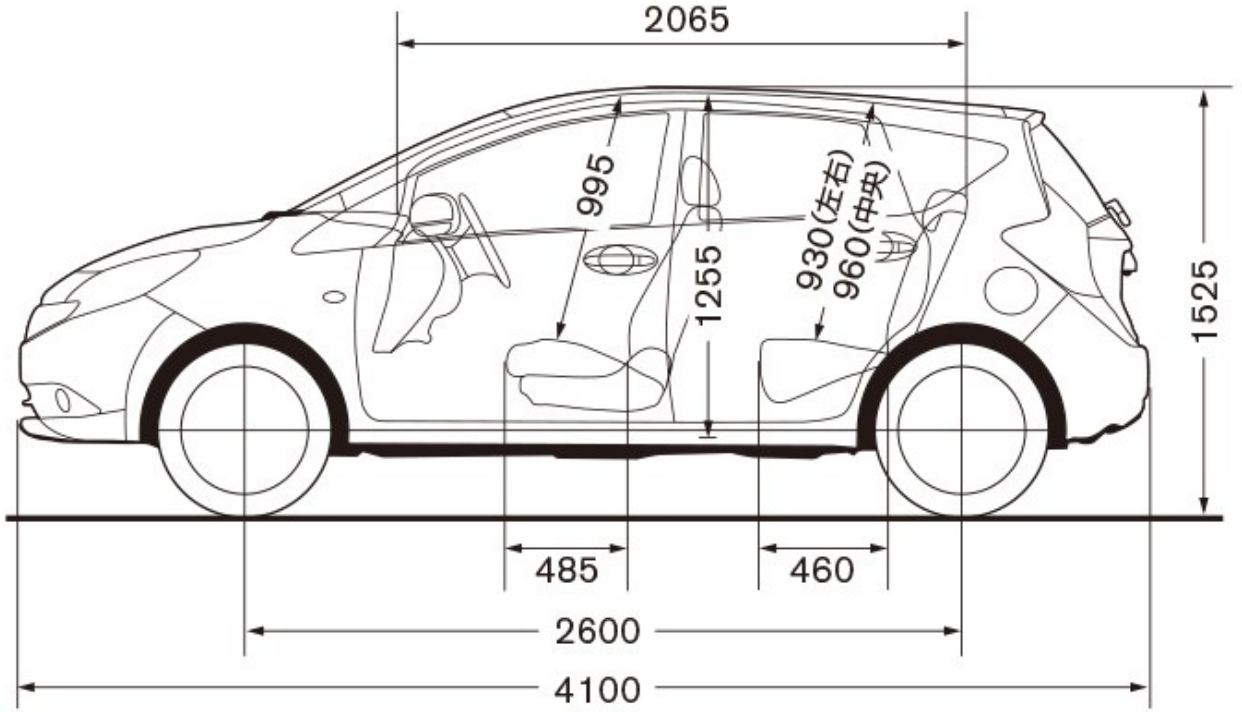
（15X SV） 単位：mm

E12 Dimensions - Top

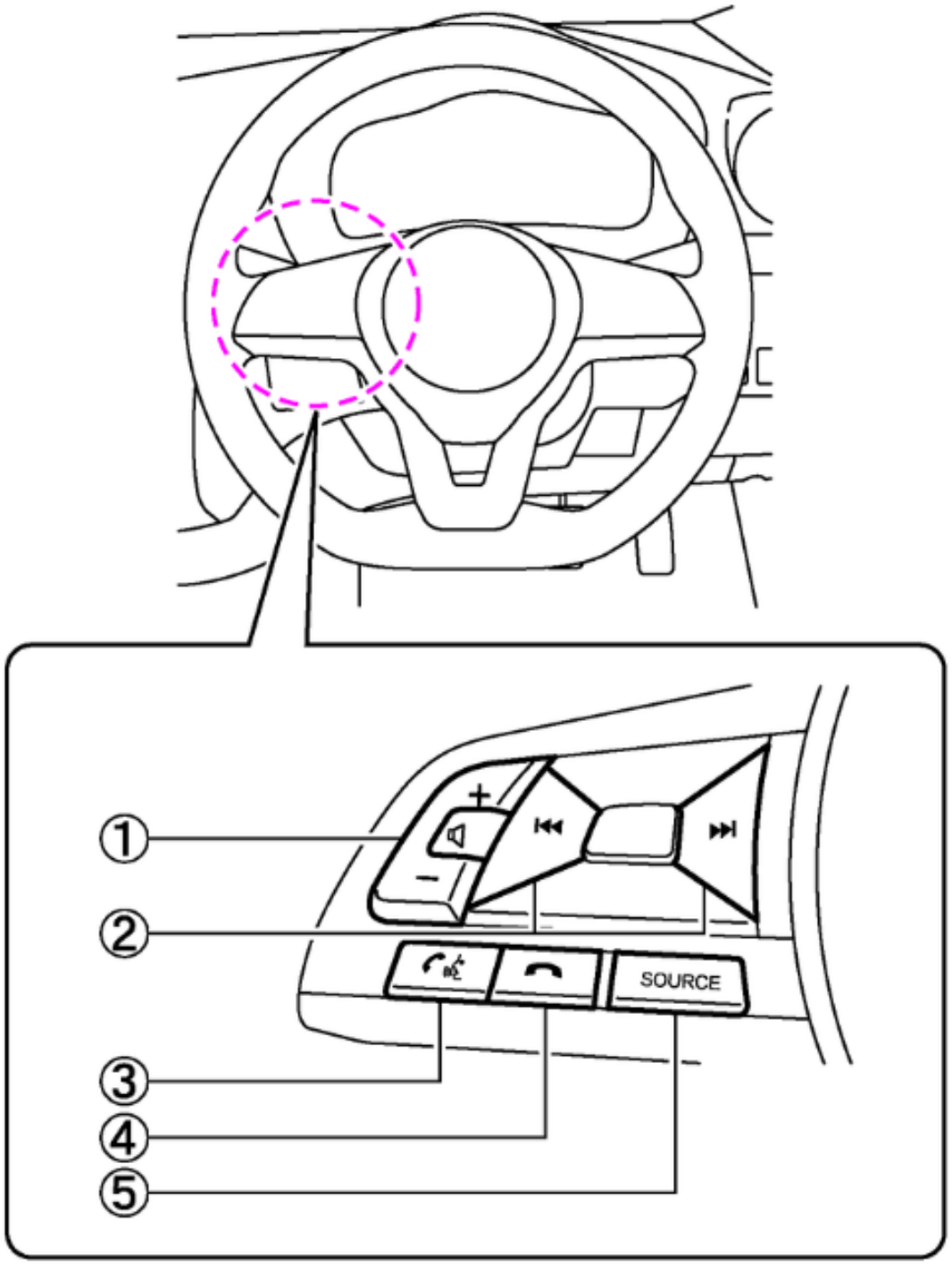


(X DIG-S) 単位:mm

E12 Dimensions - Side



(X DIG-S) 単位:mm



E12 Steering Wheel Controls

1. Volume Control Switch
2. Song/Station Selection Switch
3. Call Start Switch
4. Call End Switch
5. AV/Media Source Switch

Fluid Guide E11

			Capacity (ℓ)	Description
Fuel			45.0	Regular (RON 89 Minimum)
Engine Oil				
HR15DE	Including Oil Filter		3.0	SAE 0W20, 5W20, 5W30 or 10W30 (API SM/ILSAC GF-4 or newer)
	Oil Only		2.8	
HR16DE	Including Oil Filter		3.0	
	Oil Only		2.8	
Coolant (including 0.7L reserve tank capacity)				
HR15DE	2WD		5.7	Genuine Japanese (JASO Grade/Spec) Long Life Coolant (Blue or Green) 50/50 Premix (-40c)
	4WD		5.8	
HR16DE			5.4	
AT Fluid		4AT	7.7	Genuine Nissan Matic J (or Matic S for later models 2011 - 2012)
CVT Fluid		CVT	6.9	Genuine Nissan NS-2 or an Equivalent quality NS-2 CVT Fluid
MT (Gear Oil)		M/T	2.6	Genuine Transmission/Gear Oil (API: GL-4, SAE:75W-85)
Rear Diff-Oil (4WD Only)			1.0	Genuine Matic D Fluid
Brake Fluid			-	Drain and Fill with DOT 3 or better (DOT 4,DOT 4 Plus/DOT 5.1) and fill to capacity.

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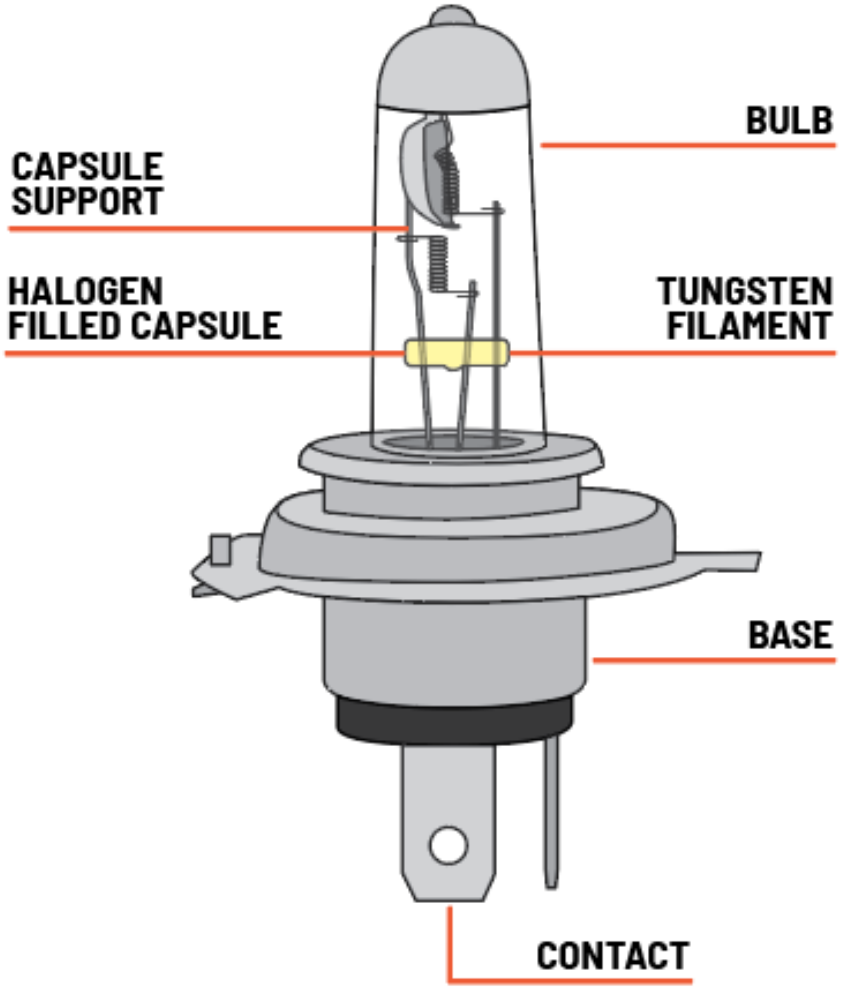
Fluid Guide – E12

		Capacity (ℓ)	Description
Fuel		41 ℓ	Use Regular - RON 91 or higher for E12 and Premium - RON 95 or Higher for NISMO-S E12
Engine Oil			
PURE DRIVE	Oil + Filter	3.0 ℓ	**Recommended** to use: • 0W16 (HR12DDR from 2016) • 0W20 (HR12DE, HR12DDR, e-Power) • 5W20 (HR12DE, HR12DDR, e-Power) • 5W30 (HR12DE, HR12DDR, HR15, HR16) • 10W30 (HR12DE, HR12DDR, HR15, HR16) (API SN/ILSAC GF-5 or API SP/ILSAC GF-6A) or (API SM/GF-4 or Higher for E11) **API SP/GF-6A** Oils are Recommended for **DIG-S/HR12DDR** to provide additional Low Speed Pre-Ignition (LSPI) protection.Use **Fully Synthetic Oils** for long engine life of HR12, HR15 and HR16 engines.
	Oil Only	2.8 ℓ	
PURE DRIVE DIG-S	Oil + Filter	3.5 ℓ	
	Oil Only	3.3 ℓ	
e-POWER	Oil + Filter	3.4 ℓ	
	Oil Only	3.2 ℓ	
nismo S	Oil + Filter	4.3 ℓ	
	Oil Only	4.1 ℓ	
Coolant (including 0.7L reserve tank capacity)			
PURE DRIVE	2WD	5.8 ℓ	**ORGANIC ACID TECHNOLOGY (OAT)** COOLANTS RECOMMENDED • Silicate and Borate Free, • (JASO Grade/Spec) Long Life Coolant (Blue or Green) • 50/50 Premix, 40/60 or 30/70 (Glycol/Water ratio) • ASTM D-3306 • JIS K 2234 and • JASO M325
	4WD	6 ℓ	
PURE DRIVE DIG-S		5.2 ℓ	
e-POWER	Inverter	4.2 ℓ	
	Engine	6.96 ℓ	
nismo S		6.2 ℓ	
CVT Fluid (PURE DRIVE, PURE DRIVE DIG-S)		6.9 ℓ	
ATF (e-POWER, nismo S)		1.94 ℓ	Nissan Matic - S
Manual Gear Oil		2.3 ℓ	TRANSFER NFJ 75W-80
Rear Diff-Oil (4WD Only)		1 ℓ	Genuine Matic D Fluid
Brake Fluid		-	Drain and Fill with DOT 3 or better (DOT 4, DOT 4 Plus/DOT 5.1) and fill to capacity.
Air Conditioner System Refrigerant		-	HFC-134a (R-134a)

Lighting

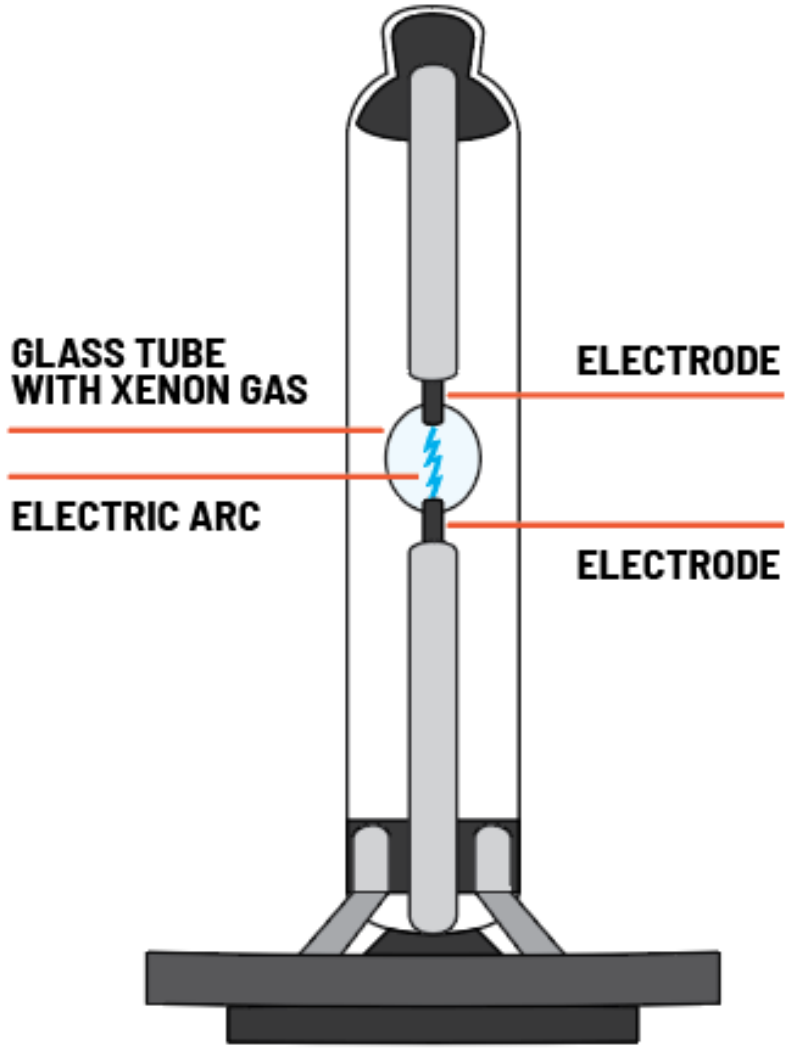


Type of Bulb - Halogen

- Used in both the E11 and the E12 and other Nissan models.
- Most common type of Bulb.
- Most affordable type of bulb.

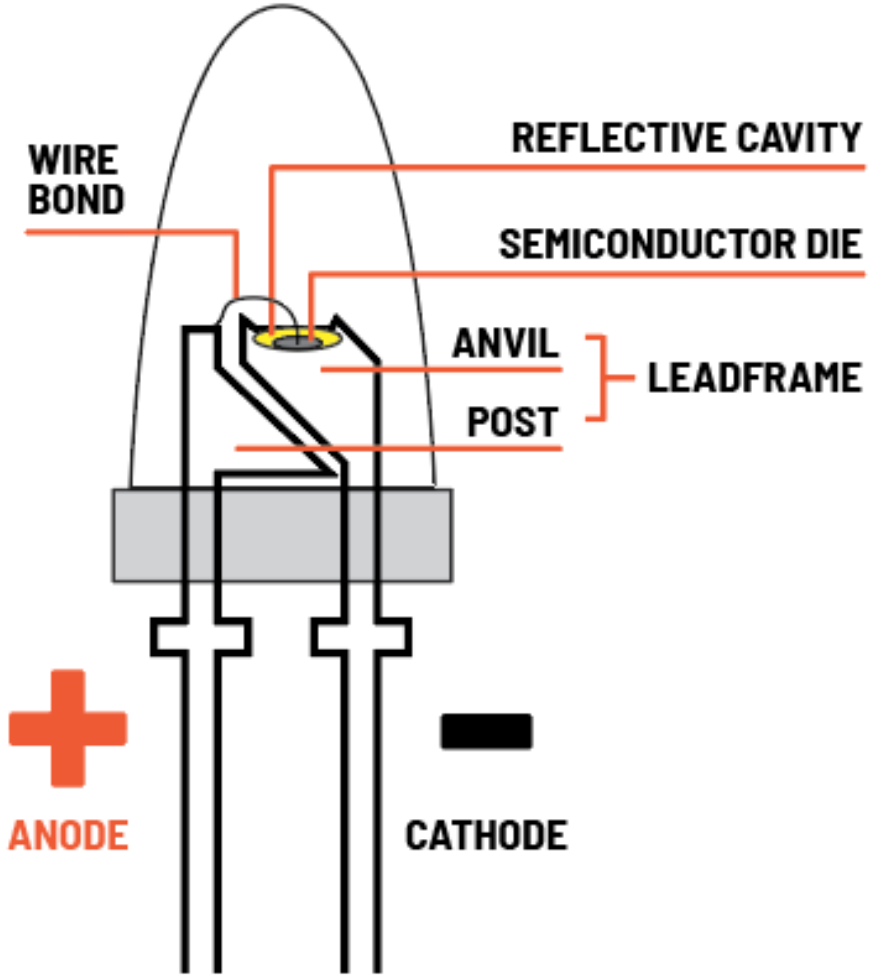
Type of Bulb - HID

- Used on some E11 Models and select Nissan Models
- Can be equipped with a projector or without.
- Very good visibility.
- Moderately expensive to replace.



Type of Bulb - LED

- Equipped in newer generation (2015+) E12 and in other Nissan models with higher tier headlight configurations.
- The most efficient bulb.
- The most expensive to replace if faulty.
- Excellent visibility.



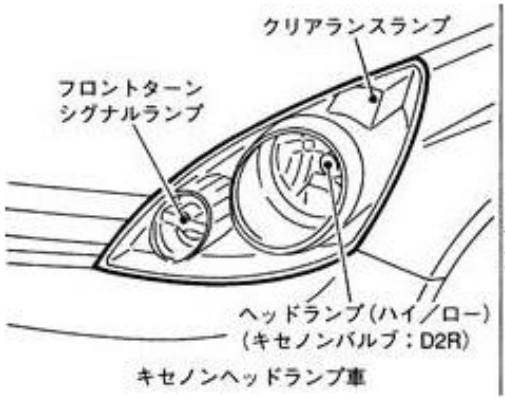
Types of Headlights – E11

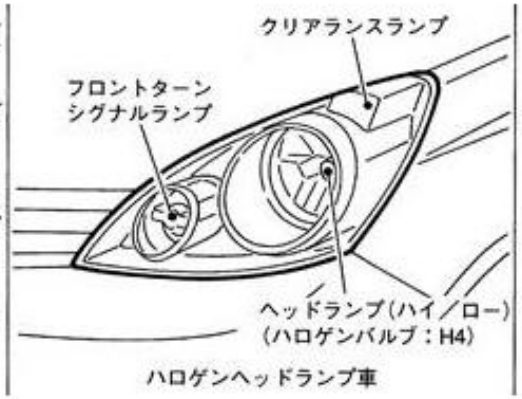
- High/Low-Beam
  - H4 Halogen – 60/55W, or
  - D2R Xenon HID (only for cars with a HID setup) – 35W

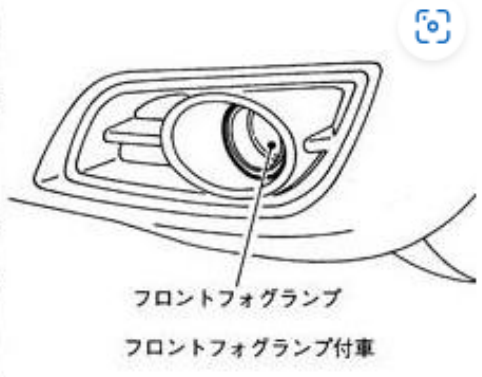
E11 Headlight

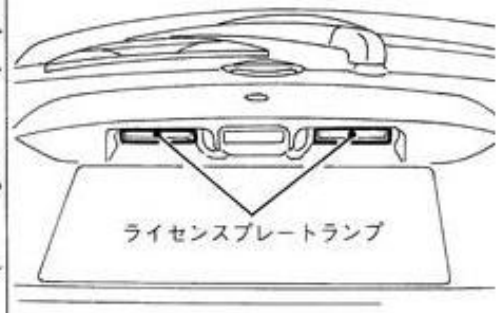
Lamp	Wattage (W)	Valve/Bulb Type
Halogen Headlight - High Beam/Low Beam	60/55	H4
HID/Xenon Headlight	35	D2R
Front turn signal light	21 (amber)	PY21W
Side Light	5	W5W
Fog Lights	35	H8
Side Indicator Light	5 (amber)	WY5W
Rear Combination Lights		
Turn Signal	18 (amber)	921A
Brake Light	21	W21W
Taillight	5	W5W
Reverse Backlight	18	W18W
High Mounted Stop/Brake Light	18	W18W
Number Plate Light	5	W5W

E11 Headlight Diagram







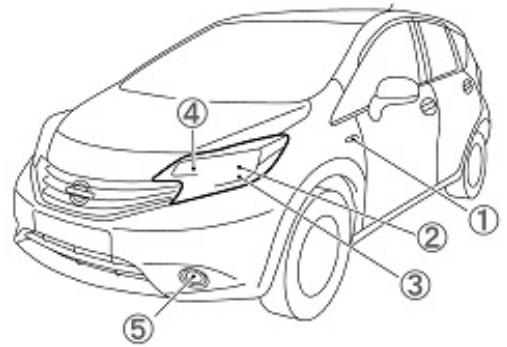


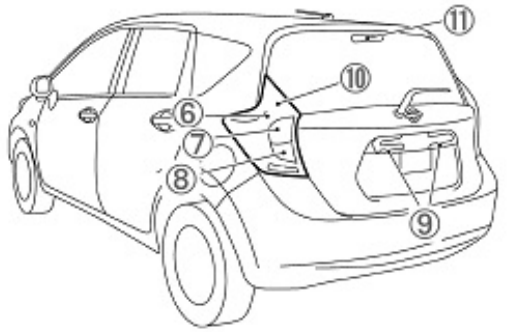
Types of Headlights – E12 Halogen

- High/Low Beam
  - H4 Halogen 60/55W

Nissan Note E12 Halogen Headlight – v1

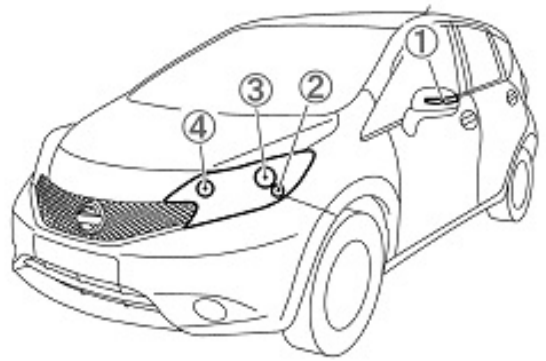
#	Lamp	Wattage (W)	Valve/Bulb Type
1	Side Indicator Light	5 (amber)	WY5W
2	Halogen Headlight - High Beam/Low Beam	60/55	H4
3	Parking/Clearance Light	5	W5W
4	Front turn signal light	21 (amber)	PY21W
5	Fog Lights	55	H11
6	Taillight	5	W5W
7	Turn Signal	21 (amber)	WY21W
8	Reverse Backlight	21	W21W
9	License Plate Light	5	W5W
10	Brake Light	0.8	LED
11	High Mounted Stop/Brake Light	2.4 (0.85 without tint)	LED





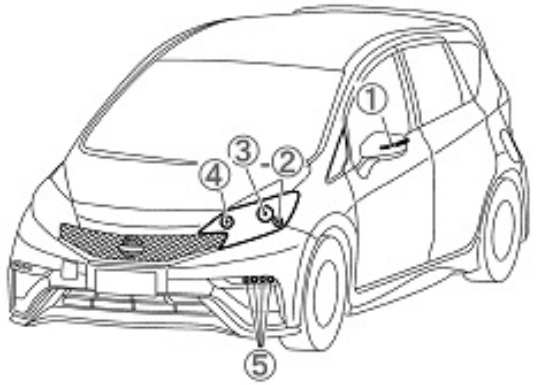
Nissan Note E12 Halogen Headlight – v2

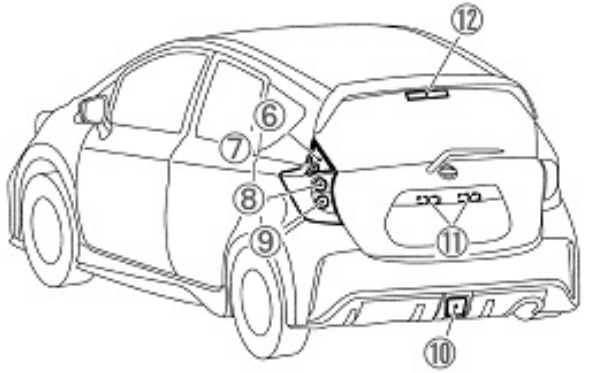
#	Lamp	Wattage (W)	Valve/Bulb Type
1	Side Indicator Light	-	LED
2	Parking/Clearance Light	5	W5W
3	Halogen Headlight - High Beam/Low Beam	60/55	H4
4	Front turn signal light	21 (amber)	PY21W
5	Brake Light	0.8	LED
6	Taillight	5	W5W
7	Turn Signal	21 (amber)	WY21W
8	Reverse Backlight	21	W21W
9	High Mounted Stop/Brake Light	2.4 (0.85 without tint)	LED
10	License Plate Light	5	W5W



Nissan Note E12 Halogen Headlight – NISMO v1

#	Lamp	Wattage (W)	Valve/Bulb Type
1	Side Indicator Light	-	LED
2	Parking/Clearance Light	5	W5W
3	Halogen Headlight - High Beam/Low Beam	60/55	H4
4	Front turn signal light	21 (amber)	PY21W
5	LED hyper daylight	-	LED
6	Brake Light	0.8	LED
7	Taillight	5	W5W
8	Turn Signal	21 (amber)	WY21W
9	Reverse Backlight	21	W21W
10	Rear fog lamp	21	W21W
11	License Plate Light	5	W5W
12	High Mounted Stop/Brake Light	2.4 (0.85 without tint)	LED





E12 Note Halogen Bulb Comparison

NISSAN OWNERS CLUB
www.nissanownersclub.co.ke

What are Watts, LUX and Lumens?
- **Watts** = Measure of Power Consumption. Higher the Watts, higher the power consumption, higher the heat output, higher the energy lost = less efficient the bulb.
- **LUX** = Intensity of light in a given area. One LUX = 1 Lumen/m2. Affects the brightness we actually see when driving as the total area illuminated by a bulb. Higher is better.
- **Lumens** = Total amount of light that a light source is able to emit. Higher the Lumen, brighter the light. However, usable brightness/light must be focused through reflectors to measure total usable Lumens on a surface, calculated as LUX.

E12 Note
Halogen Headlight System – H4 Bulb
- Current - 10A H, 15A L
- Voltage - 12V
- Maximum Peak Output - 120W/180W
- TDP Output - **75/68W**
- Nominal Output - **60W/55W**

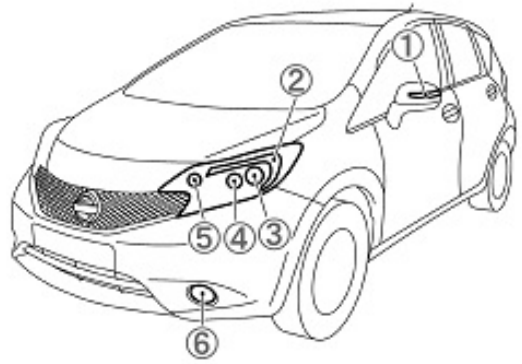
	Power Consumption	LUX		Lumens	Est. life	Colour Temp (k)
Description	Watts	Low Beam	High Beam	Total Output	Hrs.	Kelvin
OE/Stock	60W/55W	350	850	1500	1000	3300
Osram Original	60W/55W	373	876	1564	1209	3425
Osram Coolblue Intense NextGen	60W/55W	391	1054	1496	660	4750
Osram Nightbreaker Silver - 100%	60W/55W	405	1011	1638	740	3400
Osram Nightbreaker Laser - 150%	60W/55W	439	1078	1618	459	3625
Osram Nightbreaker 200	60W/55W	536	1312	1740	414	3550
Philips Racing Vision GT200	60W/55W	496	1224	1963	222	3750
Hella HighWattage 100W bulb	100W/90W	574	1204	1974	1349	3325
Osram SuperBright Premium	100W/90W	501	1075	2317	1523	3350

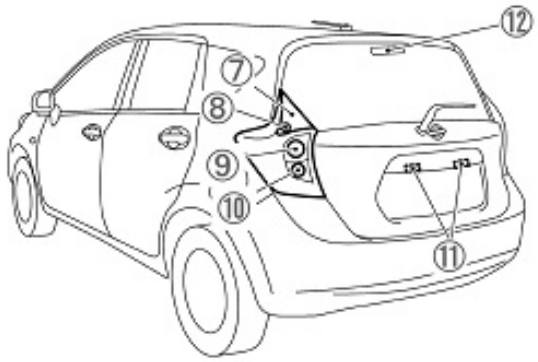
Types of Headlights – E12 LED

- High/Low Beam
  - LED Projector + LED DRL Bar
- Equipped with some E12 Models from 2015

Nissan Note E12 LED Headlight – v1

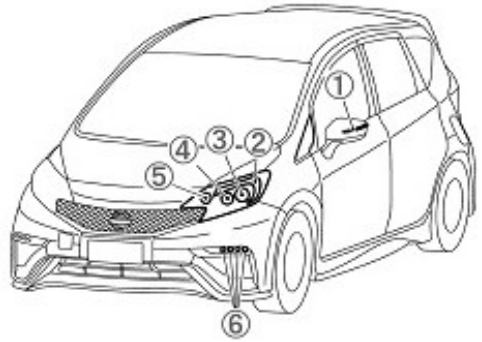
#	Lamp	Wattage (W)	Valve/Bulb Type
1	Side Indicator Light	-	LED
2	Parking/Clearance Light	-	LED
3	Headlight - Low Beam	-	LED
4	Headlight - High Beam	60	HB3
5	Front turn signal light	21 (amber)	PY21W
6	Fog Lights	55	H11
7	Brake Light	0.8	LED
8	Taillight	5	W5W
9	Turn Signal	21 (amber)	WY21W
10	Reverse Backlight	21	W21W
11	License Plate Light	5	W5W
12	High Mounted Stop/Brake Light	2.4 (0.85 without tint)	LED

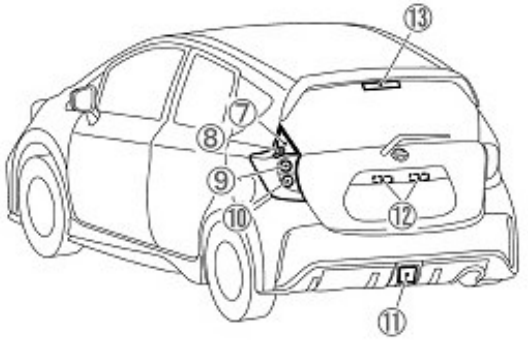




Nissan Note E12 LED Headlight – NISMO v1

#	Lamp	Wattage (W)	Valve/Bulb Type
1	Side Indicator Light	-	LED
2	Parking/Clearance Light	-	LED
3	Headlight - Low Beam	-	LED
4	Headlight - High Beam	60	HB3
5	Front turn signal light	21 (amber)	PY21W
6	LED hyper daylight	-	LED
7	Brake Light	0.8	LED
8	Taillight	5	W5W
9	Turn Signal	21 (amber)	WY21W
10	Reverse Backlight	21	W21W
11	Rear fog lamp	21	W21W
12	License Plate Light	5	W5W
13	High Mounted Stop/Brake Light	2.4 (0.85 without tint)	LED



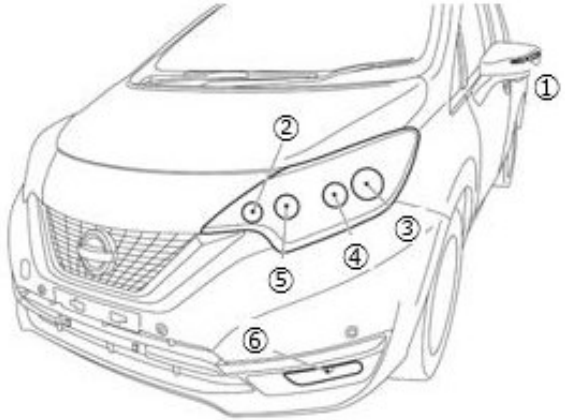


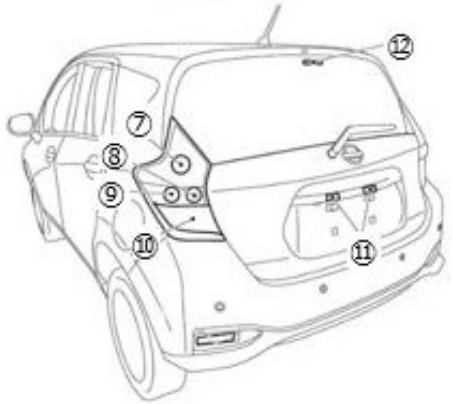
Types of Headlights – E12 + e-Power Update

- High/Low Beam – V3 Halogen
  - Halogen Projector - No LED DRL Bar

Nissan Note E12 Halogen Headlight – v3

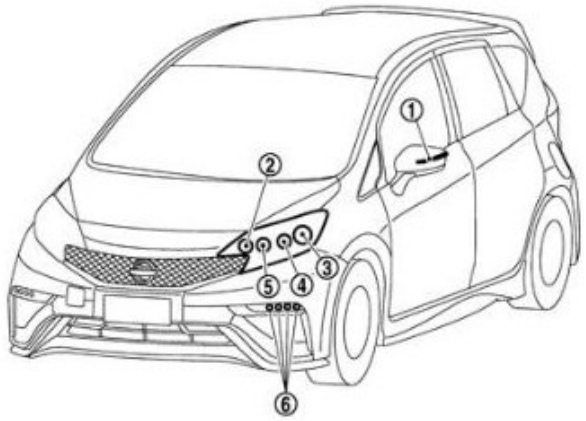
#	Lamp	Wattage (W)	Valve/Bulb Type
1	Side Indicator Light	-	LED
2	Parking/Clearance Light	5	W5W
3	Halogen Headlight - Low Beam	55	H11
4	Halogen Headlight - High Beam	60	HB3
5	Front turn signal light	21 (amber)	PY21W
6	Fog Lights	35	H8
7	Taillight	5	W5W
8	Reverse Backlight	16	W16W
9	Turn Signal	21 (amber)	WY21W
10	Brake Light	-	LED
11	License Plate Light	5	W5W
12	High Mounted Stop/Brake Light	-	LED

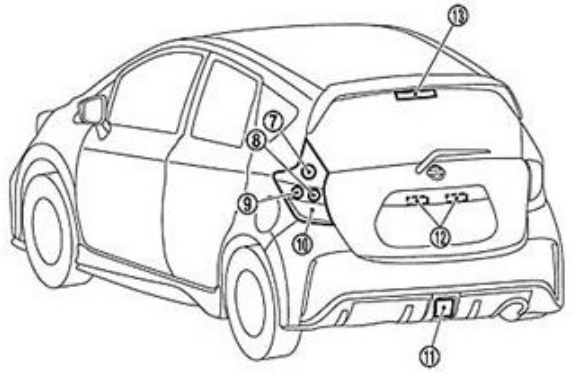




Nissan Note E12 Halogen Headlight – NISMO v2

#	Lamp	Wattage (W)	Valve/Bulb Type
1	Side Indicator Light	-	LED
2	Parking/Clearance Light	5	W5W
3	Halogen Headlight - Low Beam	55	H11
4	Halogen Headlight - High Beam	60	HB3
5	Front turn signal light	21 (amber)	PY21W
6	LED hyper daylight	-	LED
7	Taillight	5	W5W
8	Reverse Backlight	16	W16W
9	Turn Signal	21 (amber)	WY21W
10	Brake Light	-	LED
11	Rear fog lamp	21	W21W
12	License Plate Light	5	W5W
13	High Mounted Stop/Brake Light	-	LED



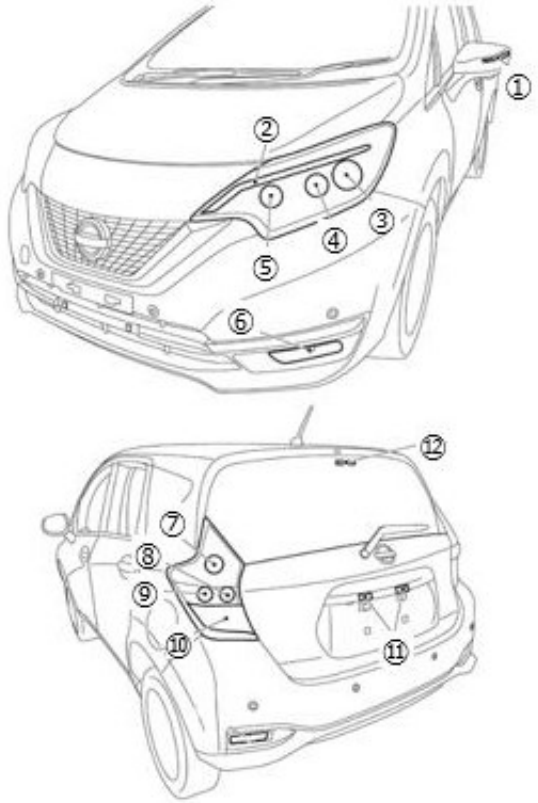


Types of Headlights – E12 e-Power Update

- High/Low Beam – option 1
  - LED Projector + LED DRL Bar

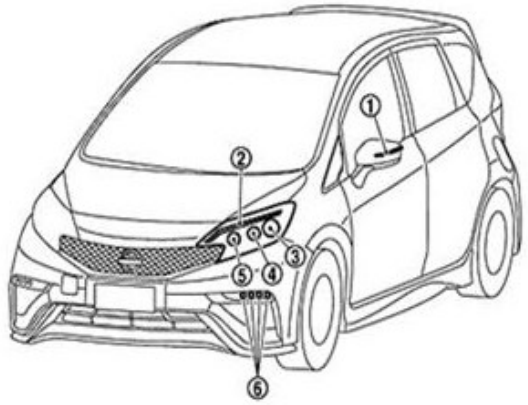
Nissan Note E12 LED Headlight – v2

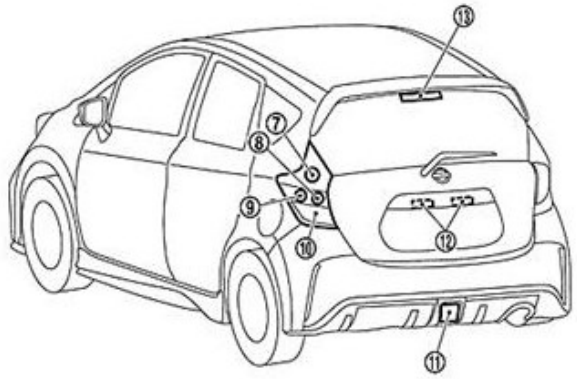
#	Lamp	Wattage (W)	Valve/Bulb Type
1	Side Indicator Light	-	LED
2	Parking/Clearance Light	-	LED
3	Headlight - Low Beam	-	LED
4	Headlight - High Beam	60	HB3
5	Front turn signal light	21 (amber)	PY21W
6	Fog Lights	35	H8
7	Taillight	5	W5W
8	Reverse Backlight	16	W16W
9	Turn Signal	21 (amber)	WY21W
10	Brake Light	-	LED
11	License Plate Light	5	W5W
12	High Mounted Stop/Brake Light	-	LED



Nissan Note E12 LED Headlight – NISMO v2

#	Lamp	Wattage (W)	Valve/Bulb Type
1	Side Indicator Light	-	LED
2	Parking/Clearance Light	-	LED
3	Headlight - Low Beam	-	LED
4	Headlight - High Beam	60	HB3
5	Front turn signal light	21 (amber)	PY21W
6	LED hyper daylight	-	LED
7	Taillight	5	W5W
8	Reverse Backlight	16	W16W
9	Turn Signal	21 (amber)	WY21W
10	Brake Light	-	LED
11	Rear fog lamp	21	W21W
12	License Plate Light	5	W5W
13	High Mounted Stop/Brake Light	-	LED

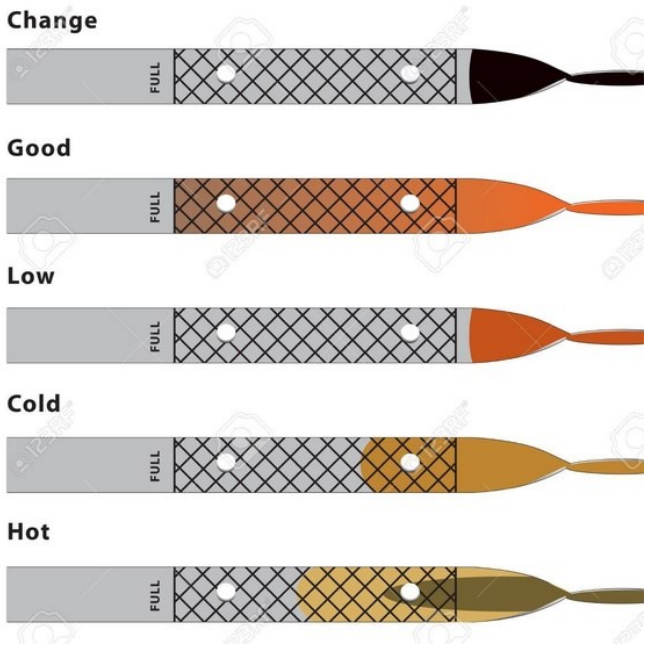




Types of Headlights – E13 e-Power

- High/Low Beam – option 1
  - Full LED Projector + LED DRL Bar
- High/Low Beam – option 2
  - Partial LED Projector + LED DRL Bar

Engine Oil & Oil Filtration



Engine Oil

10W30, 5W30, 5W20 or 0W20 or lighter, API SN/ILSAC-GF5 or GF-6A Fully Synthetic ILSAC certified oils are Recommended.

See Fluid Guide for fill capacity (including filter)

Change Intervals:

- Fully Synthetic – Resource Conserving Oils – up-to 15,000 Kms with additional fuel savings.
- Fully Synthetic – up-to 15,000 kms
- Semi-Synthetic – up-to 7,500 kms
- Mineral – Not Recommended for Use in E12 engines.

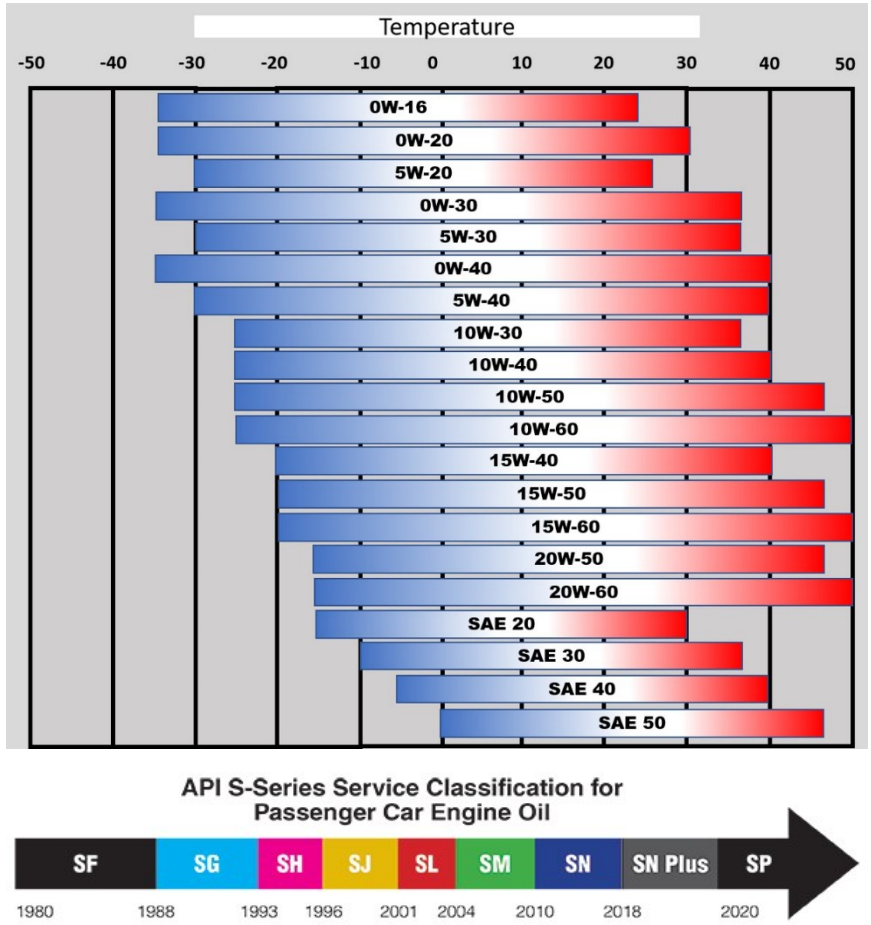
HR12DE, HR12DDR & HR16DE (NISMO-S) engines should only be filled up with Synthetic Base oils for best performance and long life. Only use oils with an API rating of SN or SP, and an ILSAC rating of GF-5 or GF-6A. In the absence of these oils, ACEA rated oils (commonly found in local petrol stations) may be used but are Not Recommended.

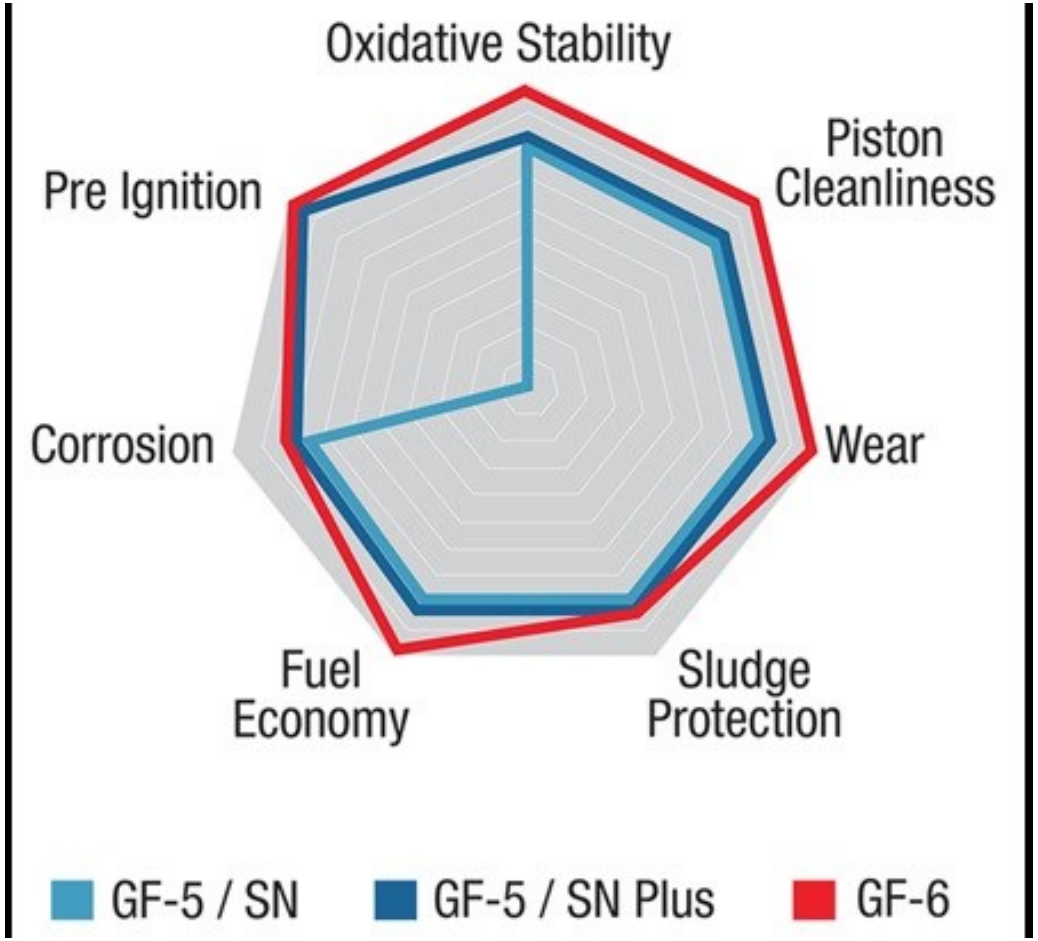
Drain interval is also subject to quality of filters used and external driving conditions.

Recommended Oil Rating: ILSAC

Name	Status	Service
ILSAC GF-6A	Current	Introduced in May 2020. Designed to provide protection against low-speed pre-ignition (LSPI), timing chain wear protection, improved high temperature deposit protection for pistons and turbochargers, more stringent sludge and varnish control, improved fuel economy, enhanced emission control system protection and protection of engines operating on ethanol-containing fuels up to E85.
ILSAC GF-6B	Current	Introduced in May 2020. As above for ILSAC GF-6A, but applies only to oils having an SAE viscosity grade of 0W-16.
ILSAC GF-5	Obsolete on May 1 2021	Use GF-6A where GF-5 is recommended
ILSAC GF-4	Obsolete	Use GF-6A where GF-4 is recommended
ILSAC GF-3	Obsolete	Use GF-6A where GF-3 is recommended
ILSAC GF-2	Obsolete	Use GF-6A where GF-2 is recommended
ILSAC GF-1	Obsolete	Use GF-6A where GF-1 is recommended

Engine Oil External Temp and Quality Guide





Oil Purchase Guide

Go with low viscosity oils if:

- Use SAE 20 (0w20/5w20) or SAE 30 (5w30/10w30) oils if:
  - You live in an area where external ambient temps never go past 40c
  - You drive a lot in the city/town
  - You frequently drive over short distances or over long distances with little load.
  - Are interested in maximum fuel economy, thus save money
  - Are looking at protecting your cars emissions systems for a long time
  - Are looking to keep within the cars manufacturer recommendations for fluids used
  - Have an Eco-Turbocharger or Eco-Supercharger

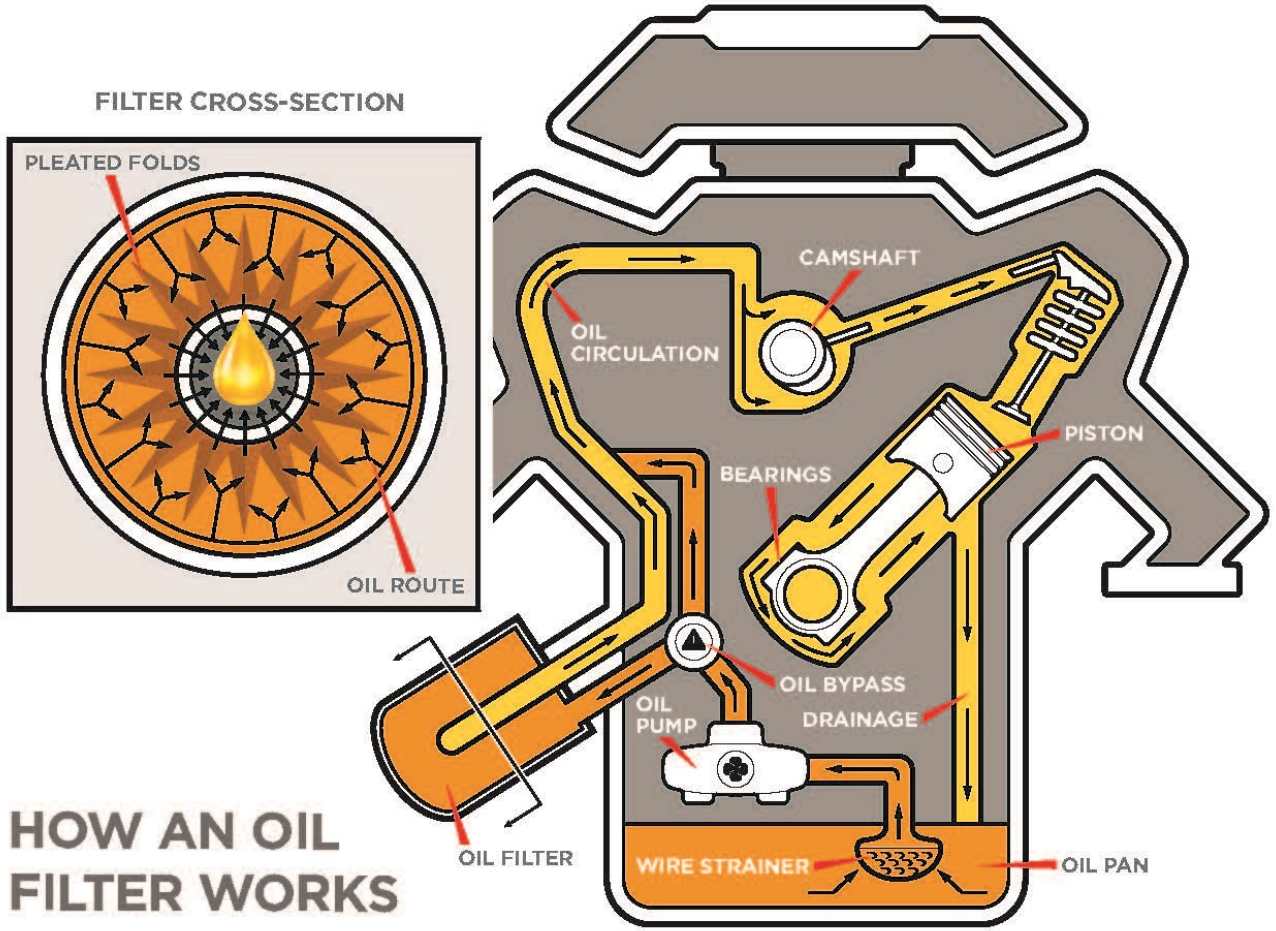
Go with higher viscosity oils if:

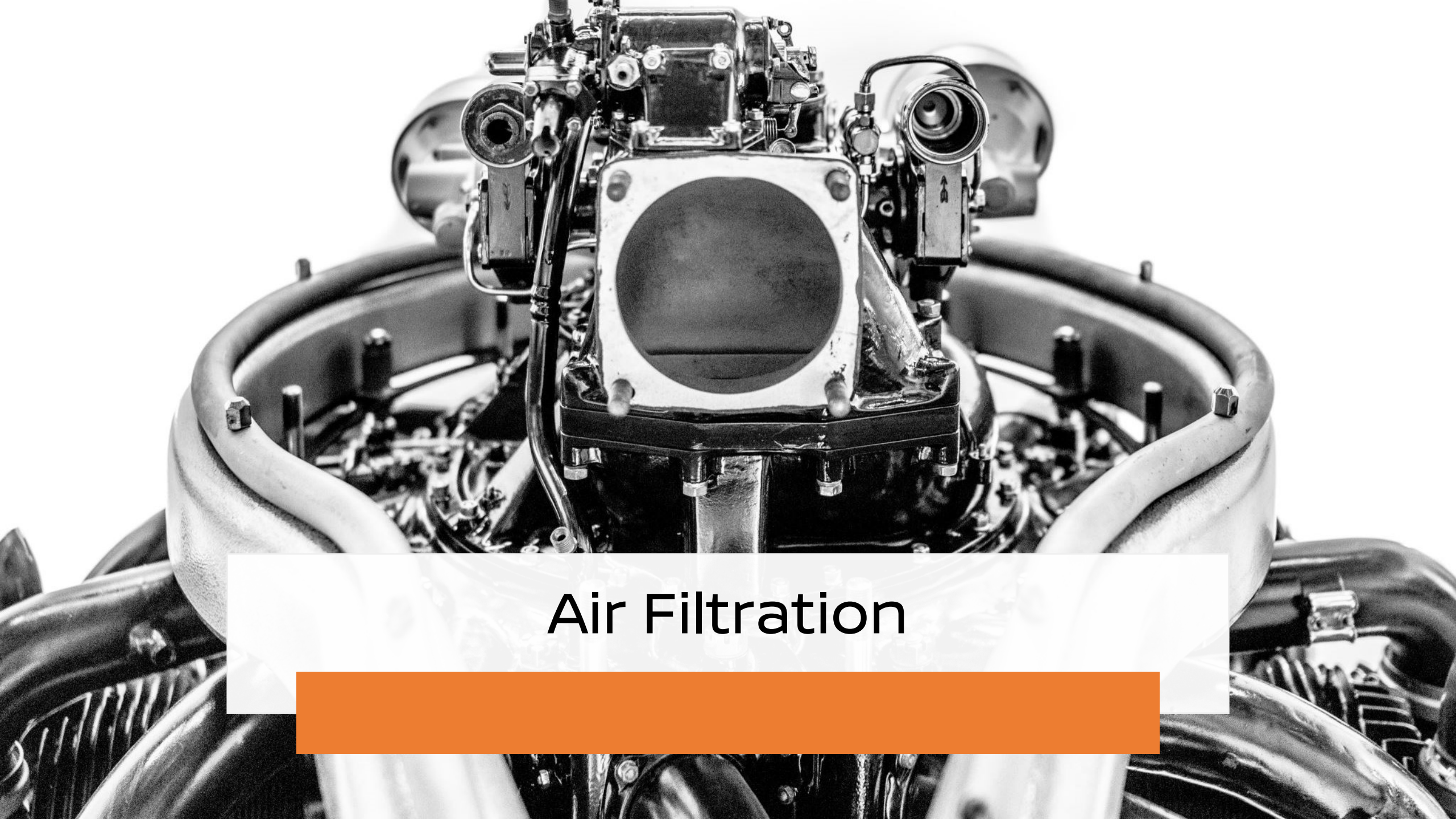
- Use SAE 40 (5w40 - 15w40) or SAE 50 (5w50 - 20w50) oils if:
  - You live in an area where external ambient temps often exceed 40c
  - Drive over very long distances continuously with few stops and while loaded
  - Drive a car that is heavily laden over medium to long distances and or over hilly or steep roads
  - Drive off-road over extended periods of time or over 50% of the time
  - You use your vehicle for racing

Oil Filter

- Oil Filter Nissan/Pitwork – AY100 – NS004
  - Other Part Numbers:
    - Nissan 15208-65F0A
    - Nissan 15208-65F0B
    - Any Oil Filter with a similar specification as the above.

How an oil Filter works





Air Filtration

E11 - Air Cleaner/Air Filter

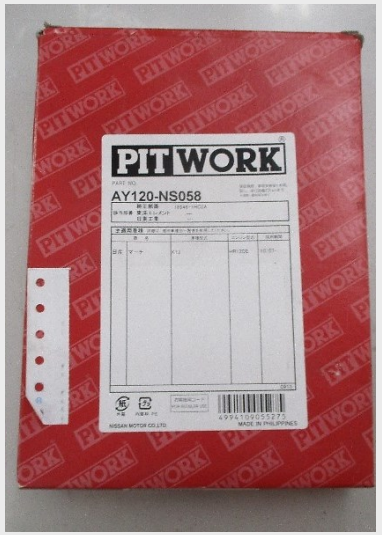
- Nissan/Pitwork AY120-NS045
  - Other Part Numbers :
    - Nissan 16546-ED000
    - Nissan 16546-ED500

Air Cleaner/Air Filter – E12 DIG-S

- Nissan Air Filter 16546-3VA0A
  - Other Part Numbers :
    - Nissan 16546-3HD0A
    - Nissan AY120-NS060

Air Cleaner/Air Filter – E12 Puredrive

- Nissan/Pitwork AY120-NS058
  - Other Part Numbers :
    - Nissan 16546-1HC0A
    - Nissan 16546-1HC2A



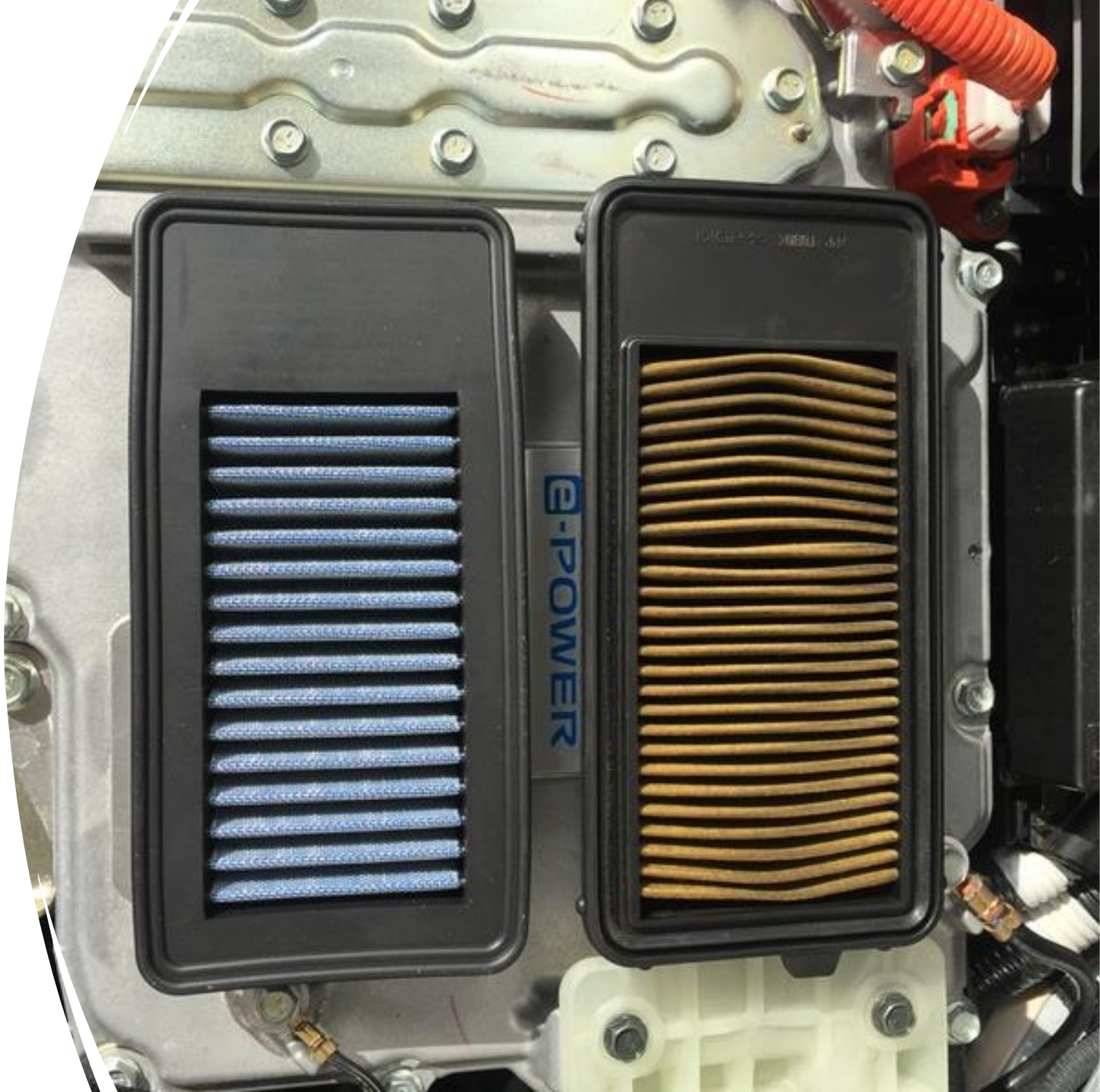
Air Cleaner/Air Filter – e-Power

- Nissan/Pitwork AY120-NS067
  - Other Part Numbers :
    - Nissan 16546-5WK0A

e-POWER

e-POWER NISMO

e-POWER NISMO S



A/C Cabin Filter/Pollen Filter

- E12 Note - Nissan 27277-1HDKE
  - **Recommended** Alternatives
    - Nissan 27277-1HD0B
    - Nissan AY685-NS018
- E11 Note - AY684-NS008
  - **Recommended Alternatives**
    - Nissan B7891-ED50A
    - Nissan 27891-ED025

Spark Plugs

Spark Plug – E11 (1.5) and E12 NISMO-S (1.6 Manual)

- Nissan 22401-1KT1B (NGK DILZKAR6A11)
  - Other Alternatives:
    - Nissan 22401-ED71B (also known as DENSO FXE20HE11)
    - Nissan 22401-ED71A (DENSO FXE16HE11) (early models up-to 2005)
- Nissan 22401-ED814 (also known as NGK LZKAR5AP-11) – HR16DE
  - Other Alternatives:
    - Nissan 22401-ED815 (NGK LZKAR6AP-11)
    - Nissan 22401-ED816 (NGK LZKAR7AP-11)

Spark Plug – DIG-S (supercharged)

- NGK DILKAR7E11HS
  - (OE Part Number: Nissan 22401-1HA1C)
  - Fits: HR12DDR

Spark Plug - Puredrive E12

- Nissan 22401-JA01B (also known as NGK DILKAR6A-11)
  - Other Alternatives:
    - Nissan 22401 – JD01B (Denso FXE20HR11)

Spark Plug – e-Power

- Nissan 22401-CK81B (also known as NGK LZKAR6AP-11) – NGK Stock Number 6643
  - Other Alternatives:
    - Nissan 22401 – JD01B (Denso FXE20HR11)

e-POWER e-POWER nismo e-POWER nismo S

Spark Plug Specifications

PURE DRIVE

DILKAR6A11 (9029)	Specification
Hex (mm)	14
Thread diameter (mm)	12
Thread pitch (mm)	1.25
Thread reach (mm)	26.5
Terminal	Solid
Centre electrode	Iridium
Ground material	Platinum pin
Sealing type	Standard gasket
Resistance	Resisted
Torque (dry thread)	15 - 20 Nm

e-POWER

LZKAR6AP-11 (6643)	Specification
Hex (mm)	14
Thread diameter (mm)	12
Thread pitch (mm)	1.25
Thread reach (mm)	26.5
Terminal	Solid
Centre electrode	Platinum
Ground material	Standard
Sealing type	Standard gasket
Resistance	Resisted
Torque (dry thread)	15 - 20 Nm

Spark Plug Specifications

nismo S

DILZKAR6A11 (91691)	Specification
Hex (mm)	14
Thread diameter (mm)	12
Thread pitch (mm)	1.25
Thread reach (mm)	26.5
Terminal	Solid
Centre electrode	Iridium
Ground material	Platinum pin
Sealing type	Standard gasket
Resistance	Resisted
Torque (dry thread)	15 - 20 Nm

PURE DRIVE DIG-S

nismo

DILKAR7E11HS (97439)	Specification
Hex (mm)	14
Thread diameter (mm)	12
Thread pitch (mm)	1.25
Thread reach (mm)	28.5
Terminal	Solid
Centre electrode	Iridium
Ground material	Platinum pin
Sealing type	Copper gasket
Resistance	Resisted
Torque (dry thread)	15 - 20 Nm

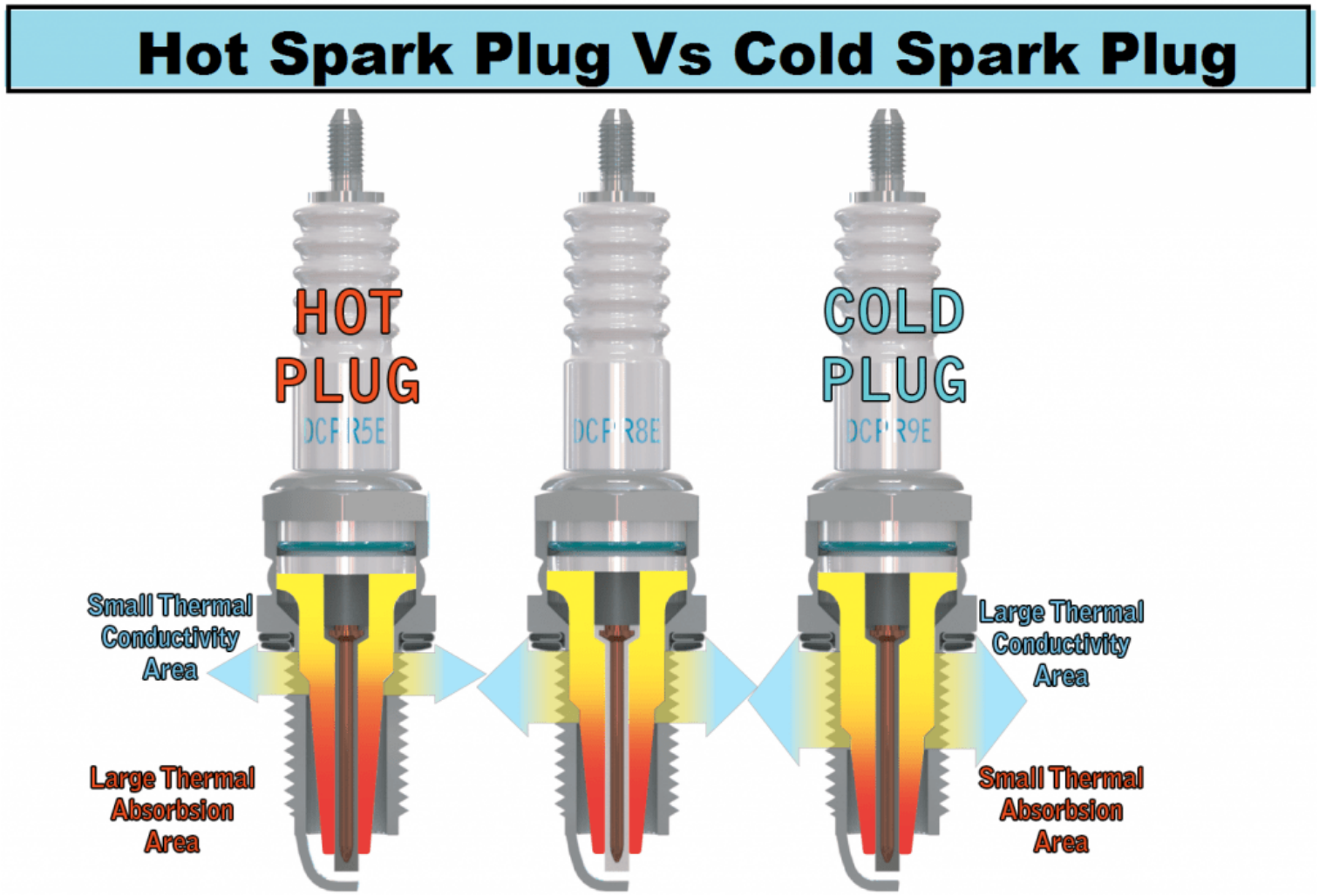
Spark Plug Heat Range Guide

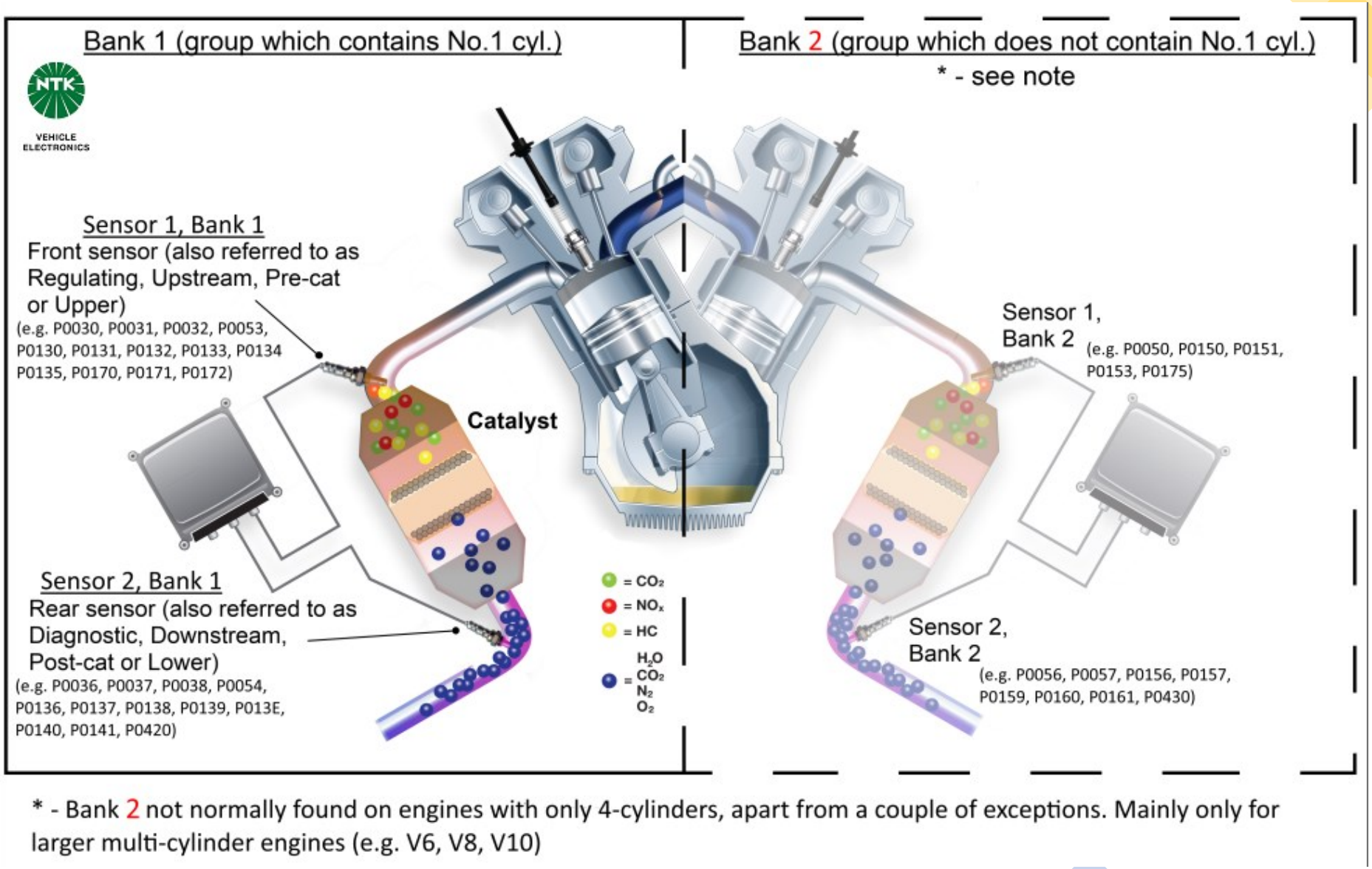
SPARK PLUG HEAT RANGE CROSS REFERENCE CHART

NGK SPARK PLUGS	DENSO	CHAMPION	BOSCH
2	9	18,19	10
4	14	14,16	9
5	16	11,12	8
6	20	9,10	6,7
7	22	7,8	5
8	24	6,61,63	4
9	27	4,59	3
9.5	29	57	
10	31	55	2
10.5	32	53	
11	34		
11.5	35		
12	37		

NISSAN OWNERS CLUB

Spark Plug Heat Range – Plug Difference



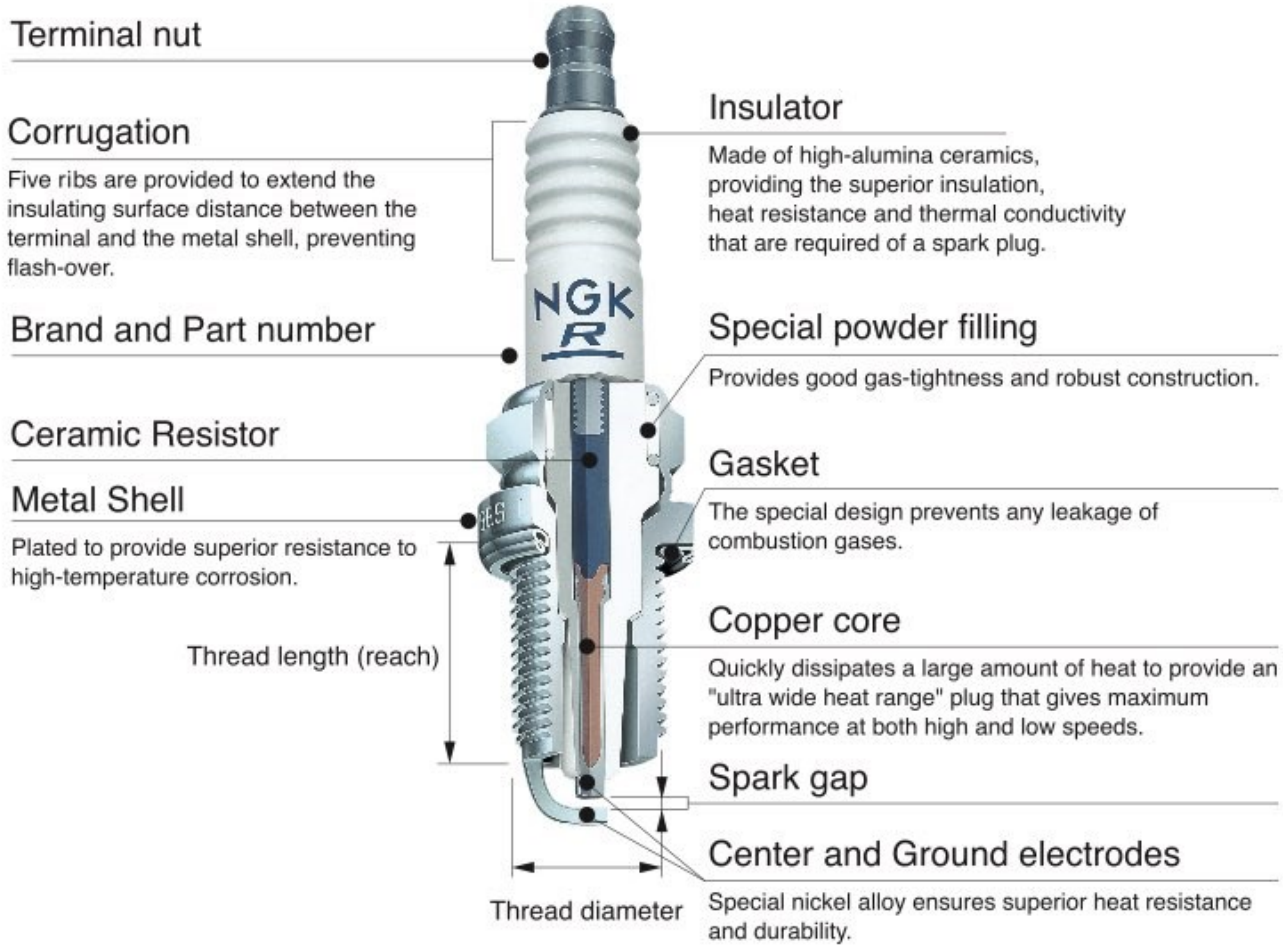


* - Bank 2 not normally found on engines with only 4-cylinders, apart from a couple of exceptions. Mainly only for larger multi-cylinder engines (e.g. V6, V8, V10)

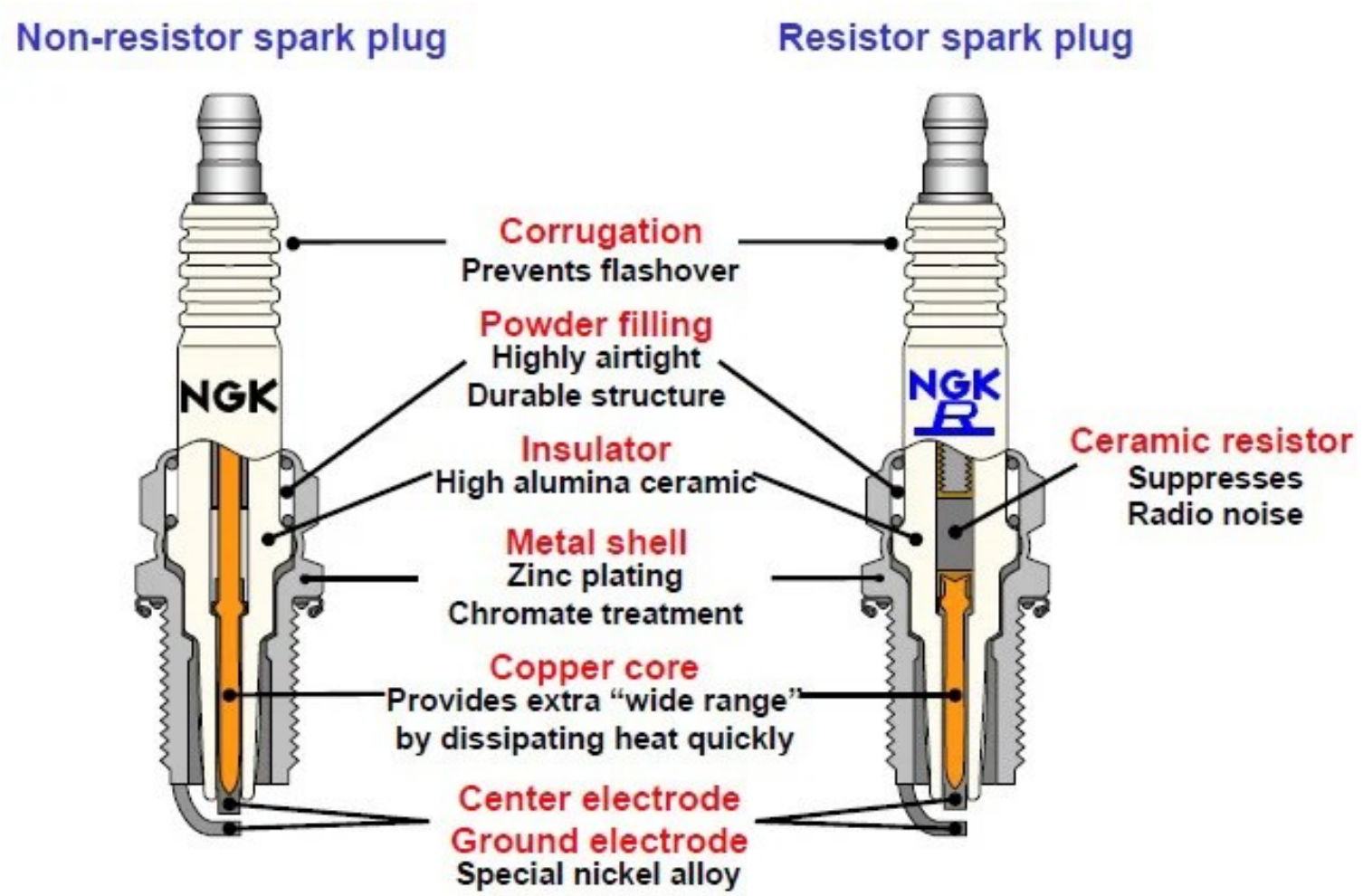
Common Issues resulting from Plug failure/Fake/Incorrect Plugs

- Decreased Efficiency and or High Fuel consumption
- Poor engine running, surging and jerking
- Lack of power and poor acceleration
- Trouble starting the car
- Engine Misfiring and Higher Emissions (common cause of P0420 and P0400 issues)

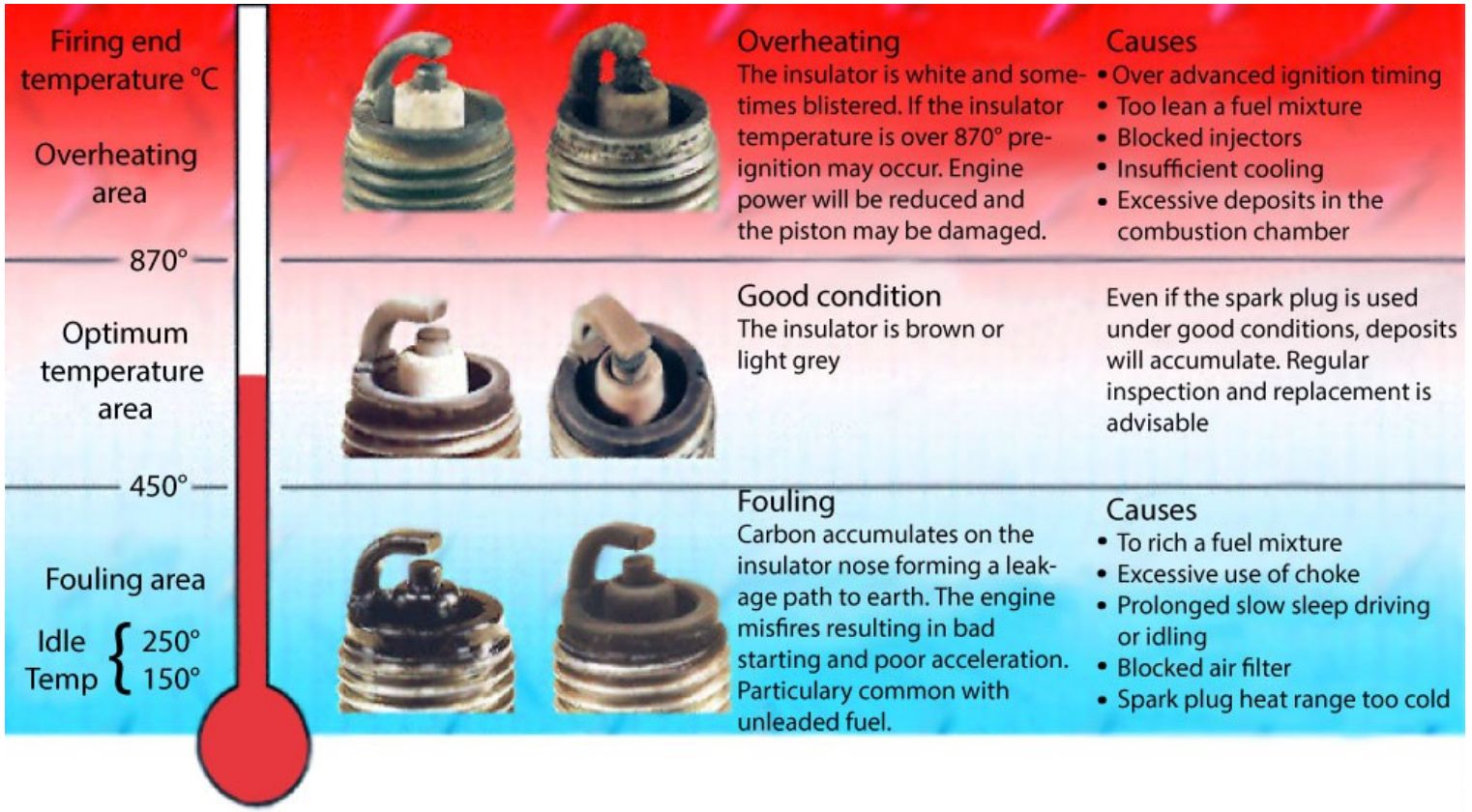
Plug Structure



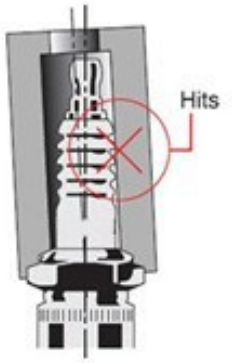
Plug Type – Resistor Type vs Non-Resistor Type



Plug Temperature & Impact



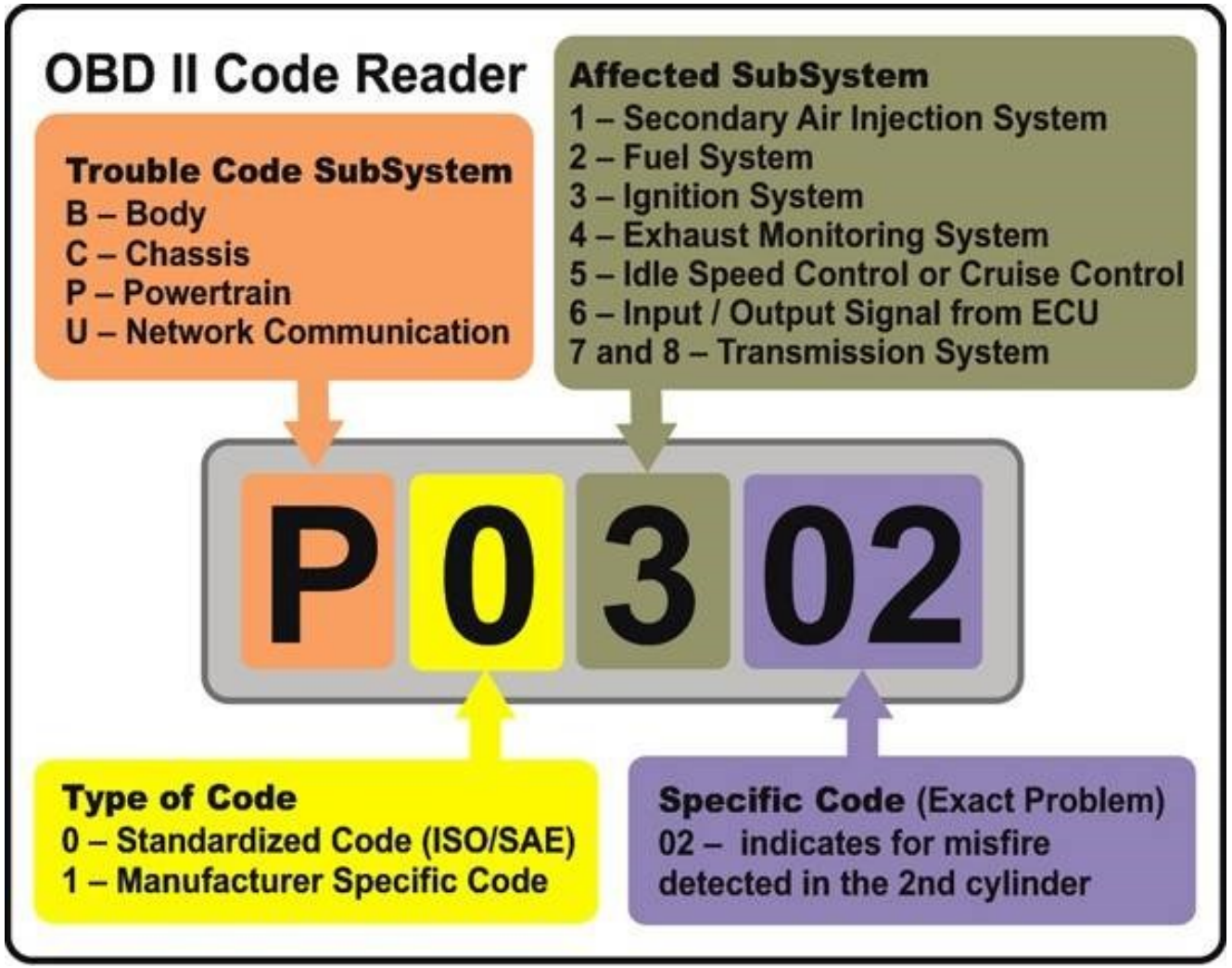
Common Spark Plug Damage during Installation

Thread damage from installation	Metal shell damage	Cracked insulator	Examples of bad spark plug wrench usage
			
Spark plug is inserted at an angle during installation	Excessive tightening torque	Spark plug wrench slipped or used at an angle	Spark plug wrench hits the insulator during installation
Do not use the wrench at first. Start by installing the spark plug by hand.	Tighten to recommended torque.	Use a hex-type wrench that is less likely to slip.	Be careful to avoid any hits.

Vehicle Diagnostics

Understanding Vehicle Diagnostics

- A Check Engine Light/ Engine Malfunction Light (MIL) comes on when there is an issue with one or more of the cars systems and thus driving the car in such conditions may cause irreparable damage to the car or affected systems.
- Modern cars have integrated On-Board Diagnostics capabilities that collect data through inbuilt vehicle sensors that alert the driver whenever there is a malfunction to avoid guesswork during repairs and simplify vehicle repairs.
- When you get a Check Engine Light/ Engine Malfunction Light (MIL);
    - Take the Vehicle to the nearest service center for computer Diagnosis
    - **DO NOT** remove the battery as this will reset the MIL and might erase any Diagnostic Trouble Codes (DTC), making it difficult for a Diagnostics expert to know what the issue was with the vehicle.
    - Disconnecting the Battery **DOES NOT** fix the issue.



What Does a DTC Code Mean

List of Systems

List of Systems. These will vary by trim/model.

1	engine control	11	radar sensor	21	combination meter
2	Engine control (E-POWER vehicles)	12	electric parking brake system	22	sonar control
3	EV control	13	EPS	23	Around view monitor system
4	EV battery system	14	auto air conditioner	24	body control
5	drive motor system	15	PTC heater control	25	IPDM
6	generator motor system	16	SRS	26	Driving assistance (ADAS)
7	TCM (transmission control)	17	Auto sliding door control (left)	27	front camera control
8	electric shift control	18	Auto sliding door control (right)	28	right side radar
9	ABS	19	ALH control	29	left side radar
10	chassis control	20	Vehicle proximity notification system (VSP) control		

V-Belt System

E11 - V-Belt/Serpentine Belt/Alternator Belts

- 2WD (HR15DE & HR16DE): Nissan/Pitwork AY14N-71140-01
  - (Belt Part No. 7PK1140)
  - **Recommended Alternative**:
    - Nissan 11720-ED00C
- 4WD: Nissan AY14N-72119
  - (Belt Part No. 7PK2120)

E12 DIG-S - V-Belt/Serpentine Belt/Alternator Belts

- DIG-S E12 has 2 Belts that require replacement together.
  - Belt #1: Alternator:
    - Nissan 11720-3VA0A
    - Nissan 11720-3VA0B
    - Nissan 11720-3VA0C
    - Nissan 11720-3HD0A
    - **Belt Part Number**:
      - 6PK2080 – 6PK2083
  - Belt #2: Supercharger:
    - Nissan 11920-3VA0A
    - **Belt Part Number**:
      - 3PK800 or similar

E12 Puredrive V-Belt/Serpentine Belt/Alternator Belts

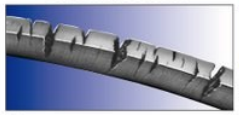
- 2WD: Nissan/Pitwork AY14N-71165 – 2WD
  - Belt Part No. 7PK1165
- 4WD: Nissan 11720-3VE0A – 4WD
  - Belt Part No. 7PK1990 or closer belt

PURE DRIVE

Types of Belt Wear or Failure

V-BELT DRIVE TROUBLESHOOTING

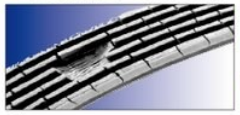
Cracked V-Belt



Cause:
- Sheave diameter too small
- Back side idler diameter too small
- Slippage
- High temperature

Prevention:
- Redesign drive
- Replace with an inside idler on slack side or
- Redesign retension drive
- Remove heat source

Cracking or Chunking



Cause:
- Severe back-bend idlers
- Improper or prolonged storage
- Excessive ambient operating temperature

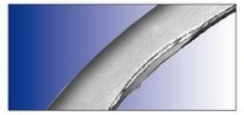
Prevention:
Check storage conditions and age of belt. If back-bend idler cannot be avoided, install idler of larger diameter. Avoid ambient temperature over 1400 °F.

Missing Cog

Cause:
- Excessive Heat
- Sheaves Too Small
- Backside Idler
- Sheaves Misaligned
- Improper or Prolonged Storage

Prevention:
- Check storage conditions
- If backend idler cannot be avoided, install one of larger diameter
- Avoid ambient temperature over 1400
- Redesign drive using sheaves of proper size

Rapid Sidewall Wear



Cause:
- Worn or damaged sheaves
- Sheaves misaligned

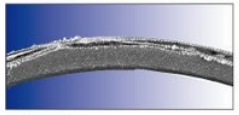
Prevention:
- Replace sheaves
- Align sheaves

Glazed Belt

Cause:
- V-Belt Slippage

Prevention:
- Check tension, increase if necessary
- Overloaded drive, Reduce loads
- Sheave worn, belt bottoming in groove - shiny sheave groove bottom - Replace Sheave
- Oily drive conditions

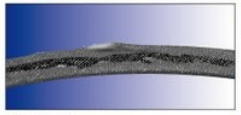
Worn Belt Sides



Cause:
- Misalignment
- Grit or Dirt
- Normal Wear

Prevention:
- Align sheaves
- Replace belts as required

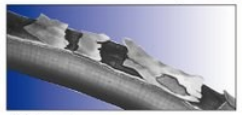
Belt Swelling



Cause:
- Oil softened rubber

Prevention:
Splash guards will protect drives against oil. Even with oil resistant belts, excessive oil can cause damage.

Cover Fabric Rupture



Cause:
Cover fabric ruptured when belt was pried over sheave during installation.

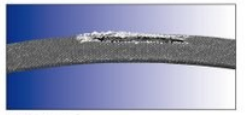
Prevention:
Proper installation of belts by moving motor so belts do not have to be pried into the grooves.

Slip or Spin Burn

Cause:
- Belt too loose
- Belt slips under starting or stalling load.
- Load miscalculated - Drive under designed

Prevention:
- Maintain proper tension on drive
- Redesign drive

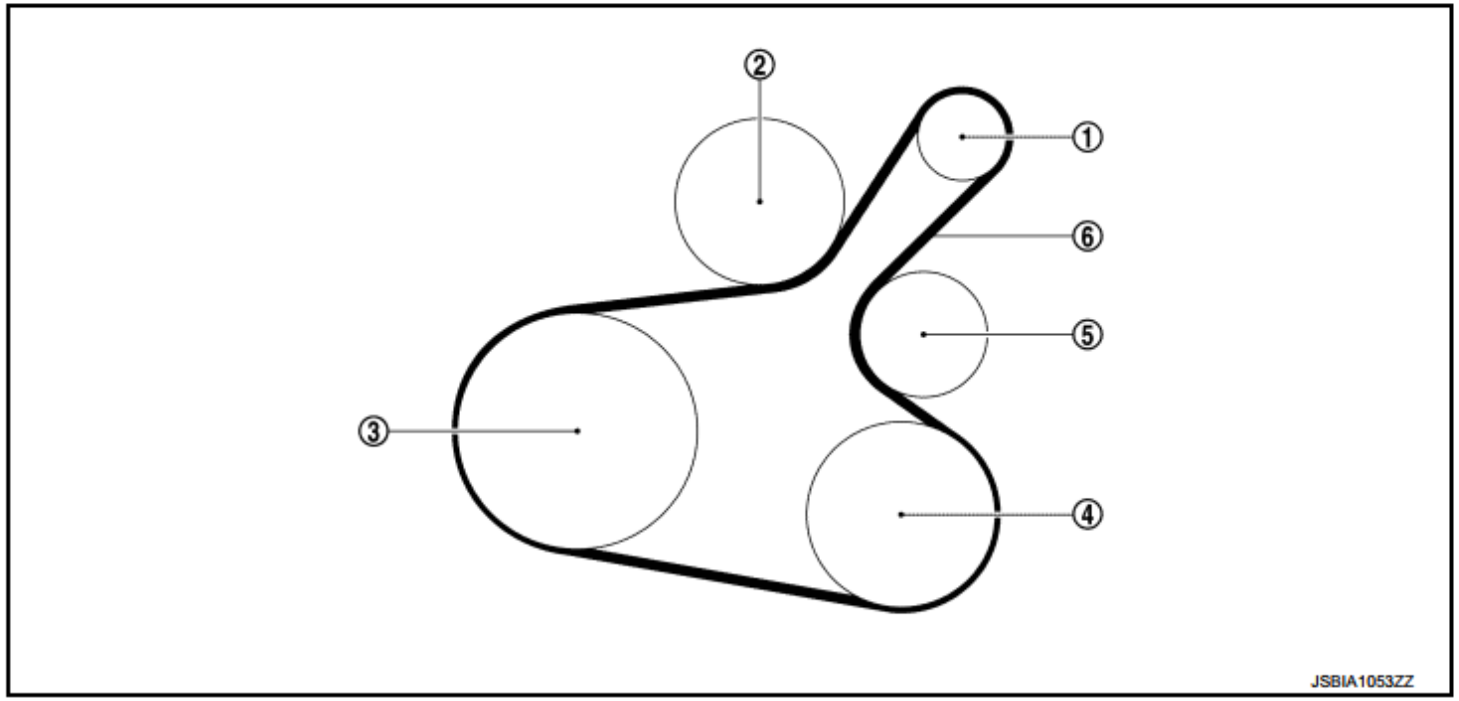
Belt Cover Splits



Cause:
- Belt pried or misplaced slack
- Foreign object in groove

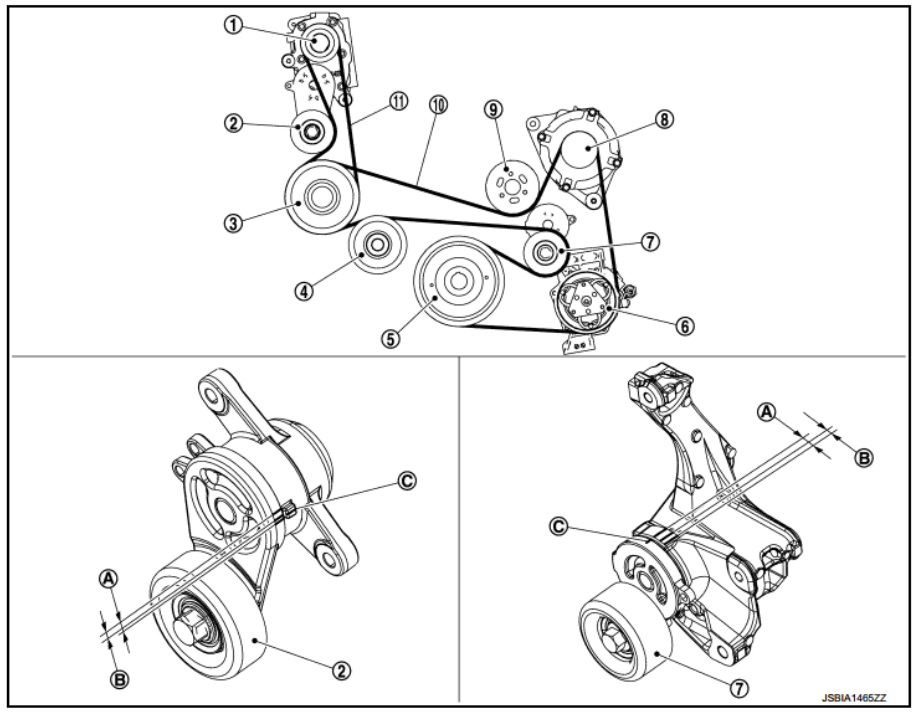
Prevention:
- Maintain proper tension on drive
- Proper installation of belts by moving motor so belts do not have to be pried into the grooves
- Dust guards help protect against foreign particles

Belt Layout E11 and E12 Puredrive (HR15DE/HR12DE)



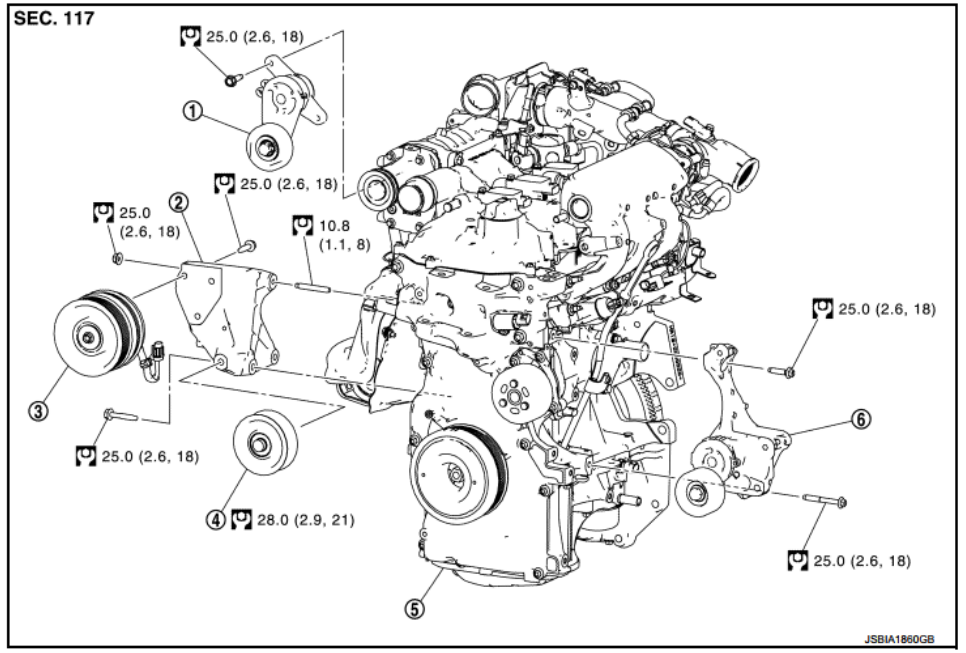
1. Alternator
2. Water pump
3. Crankshaft pulley
4. A/C compressor (with A/C models) Idler pulley (without A/C models)
5. Idler pulley
6. Drive belt

Belt & Auto-Tensioner Layout – DIG-S



1. Supercharger
2. Supercharger belt auto-tensioner
3. Supercharger magnetic clutch
4. Idler pulley
5. Crankshaft pulley
6. A/C compressor
7. Drive belt auto-tensioner
8. Alternator
9. Water pump
10. Drive belt
11. Supercharger belt

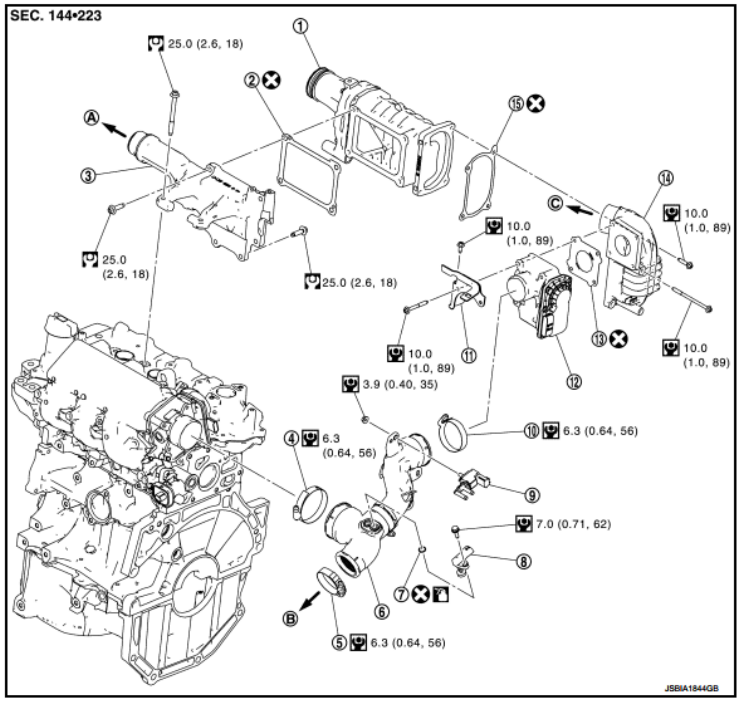
A. Possible use range
B. Range when new drive belt is installed
C. Indicator



1. Supercharger belt auto-tensioner
2. Supercharger magnetic clutch bracket
3. Supercharger magnetic clutch
4. Idler pulley
5. Front cover
6. Drive belt auto-tensioner

: N·m (kg-m, ft-lb)

DIG-S Supercharger & Charging Airflow



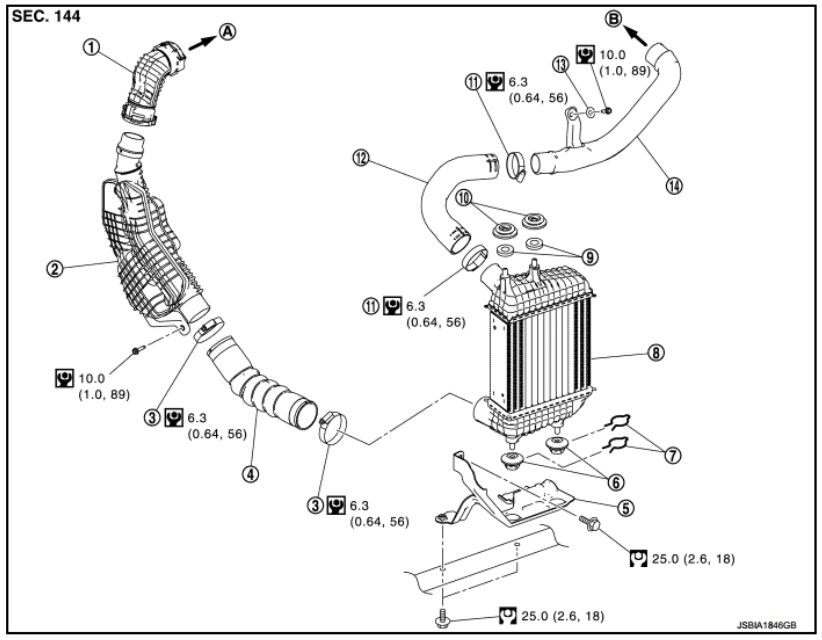
1. Supercharger
2. Gasket
3. Supercharger support
4. Clamp
5. Clamp
6. Inlet tube
7. O-ring
8. Supercharger boost sensor
9. EVAP canister purge volume control solenoid valve
10. Clamp
11. Bracket
12. Supercharger bypass valve control actuator
13. Gasket
14. Air inlet
15. Gasket
A. To air inlet tube 3
B. To air inlet tube 1
C. To air duct

: N·m (kg-m, ft-lb)

: N·m (kg-m, in-lb)

: Always replace after every disassembly.

: Should be lubricated with oil.



1. Air inlet tube 3
2. Air inlet tube 2
3. Clamp
4. Air inlet hose 2
5. Charge air cooler bracket
6. Mounting rubber
7. Clip*
8. Charge air cooler
9. Bush*
10. Mounting rubber
11. Clamp
12. Air inlet hose 1
13. Mass damper
14. Air inlet tube 1
A. To supercharger
B. To electric throttle control actuator

: N·m (kg-m, ft-lb)

: N·m (kg-m, in-lb)

*First production models only.

Brakes

Brake Pads (NISSAN/PITWORK) – E11

- Front Axle
- Brake Pads Kit – AY040-NS120

Brake Pads (NISSAN/PITWORK) – E12

- Brake Pads Kit – AY040-NS161
  - **Recommended Alternatives** (Front Axle):
    - NISSAN D1060-1HJ0A
    - NISSAN D1M6M-1FA0A
    - NISSAN D1060-3VA9B
    - NISSAN D1060-1HL0B

Rear Brake Shoes (NISSAN/PITWORK) – E11

- Rear Brake Shoes – CVT Variants - AY360-NS089
- Rear Brake Shoes – 4AT Variants - AY360-NS103
    - Recommended Alternatives:
        - Nissan D4060-ZW80A
        - Nissan D406001UY6A
        - Nissan AY360-NS106 (post 2010 models)

Rear Brake Shoes (NISSAN/PITWORK) – E12

- Rear Brake Shoes - AY360-NS115
- Rear Brake Shoes – D4060-1HLOB
- Rear Brake Shoes – D4060-AX600

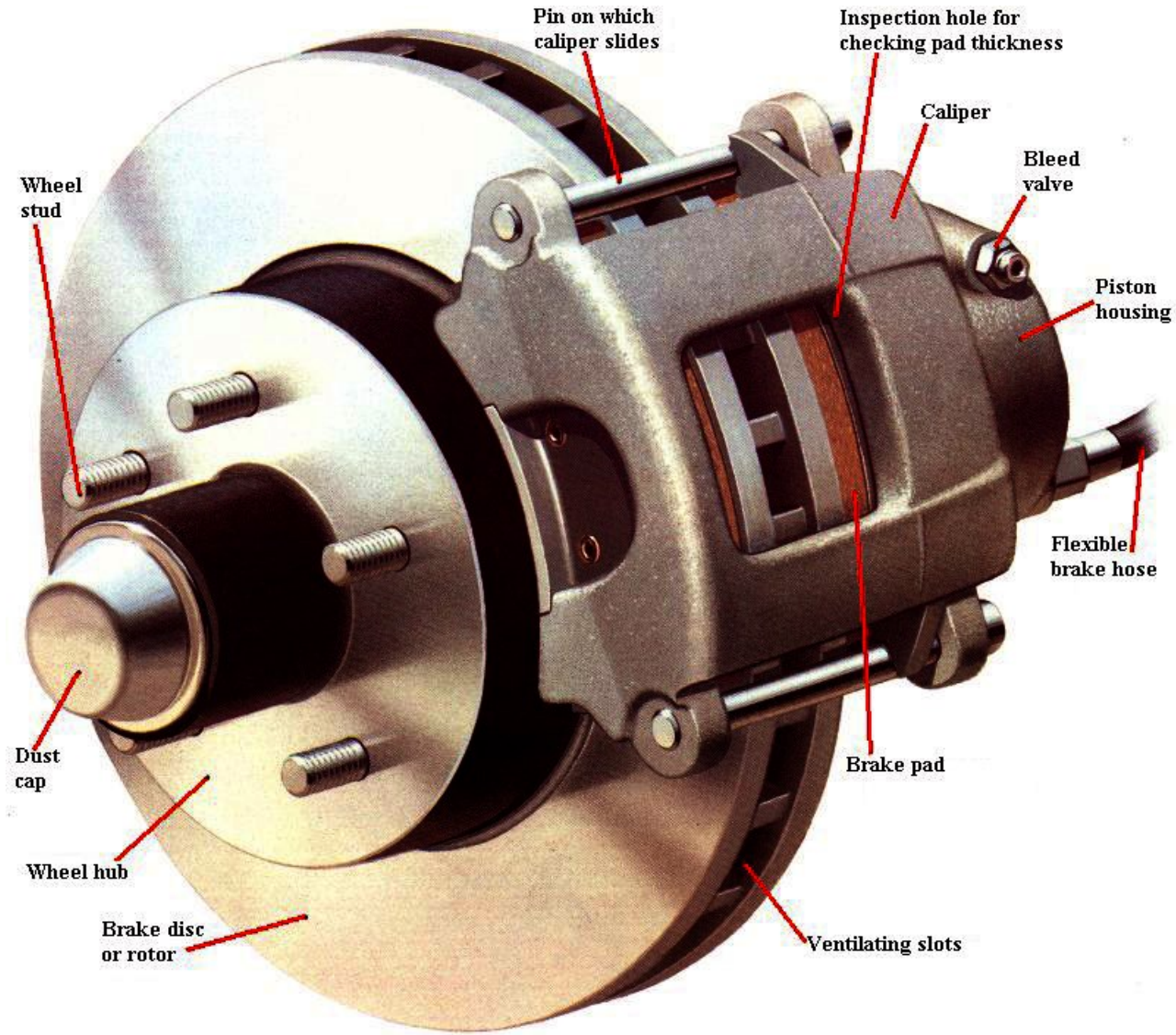
Brake Disc Set – E11

- Nissan 40206-CT40A (front)
  - **Recommended Alternatives**:
    - Nissan 40206-AX000

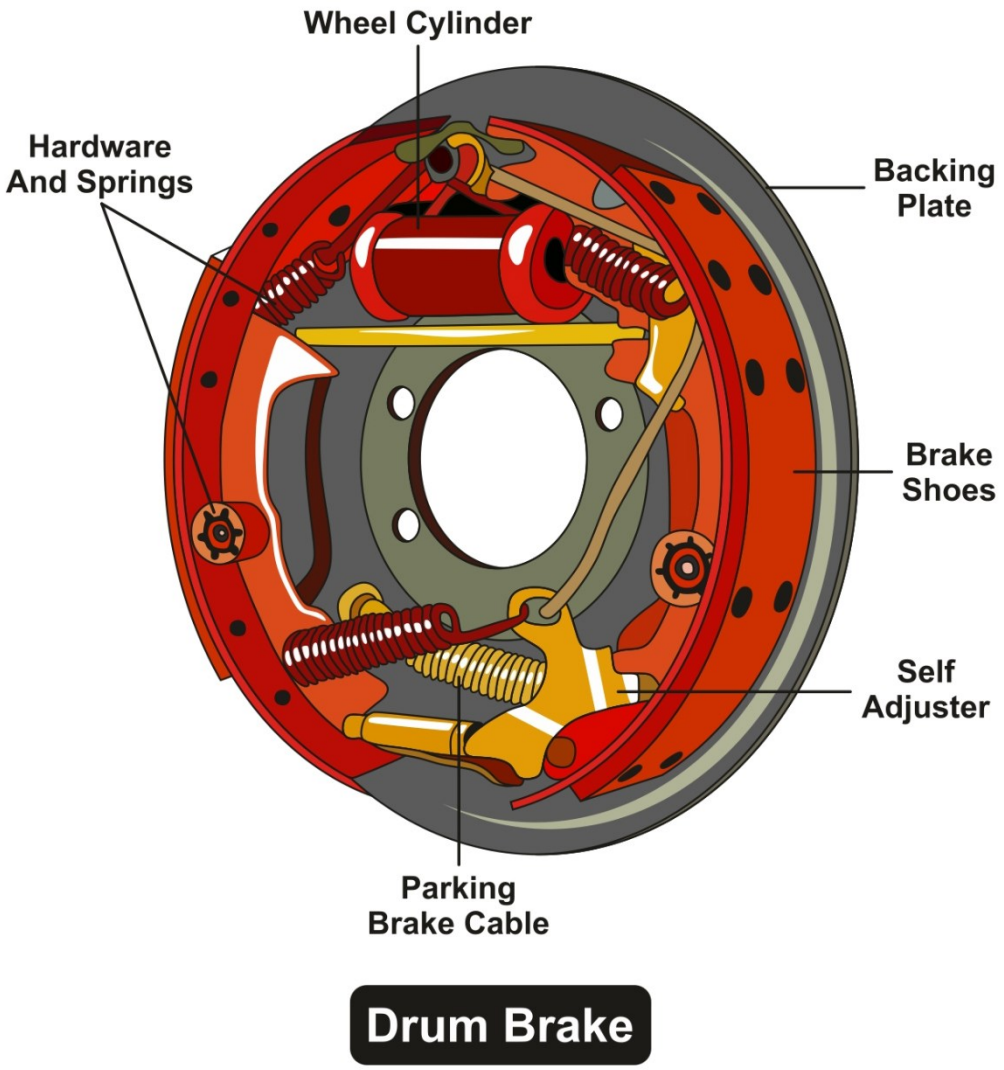
Brake Disc Set – E12

- Nissan 40206-3U80A (front)
  - **Recommended Alternatives**:
    - Nissan 40206-1HL0A
    - Nissan 40206-3HA0A

Brake Disc – Front Brake System

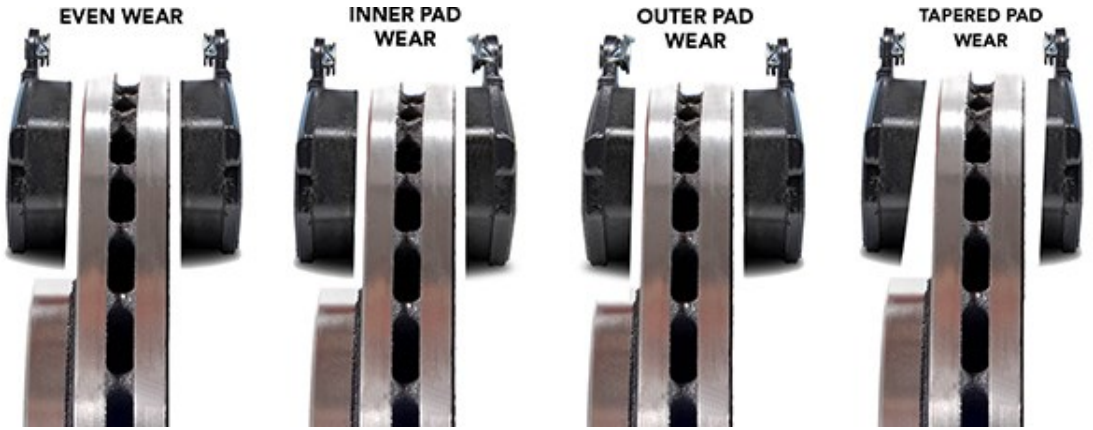


Brake Drum – Rear Brake System



Brake Pad Wear

- Normal: Both brake pads wear at the same rate evenly. Everything works perfectly.
- Inner: Most common wear fault where the inner brake pads wears faster. Indicates a piston inefficiency when producing braking force or a stuck piston on the caliper that fails to fully return to its rest position. Check for piston rubber boot damage when inspecting this fault as well as guide pins.
- Outer: Outer brake pad is wearing out faster than the inner brake pad. Usually caused by sticky guide pins or slides or the seizing of the outer pistons.
- Tapered: brake pads wear like a wedge. Usually an indicator that the caliper has too much movement and or a pad has seized in place on one side. Poor brake pad installation can also cause this.



Brake Fluid

Use

- DOT 3 (minimum)
- DOT 4,
- DOT 4+/DOT 4 Premium
- DOT 5.1

DO NOT USE DOT 5.0 Brake Fluid as it is not compatible with ABS Systems.

DOT 5 Brake fluid must also not be mixed with any of the Brake Fluids listed above, they are not backwards compatible.

Transmission

Transmission Fluid – E11

- For CVT variants - Nissan NS-2
  - Recommended Alternatives:
    - Mitasu NS-2
    - Benzol NS-2
  - Fill Capacity – 6.9L
- For 4AT Variants – Nissan Matic J
  - Recommended Alternatives:
    - Mitasu Matic J
    - Totachi ATF
  - Fill Capacity – 7.7L
- For Manual Transmission – MTF (Nissan HQ Multi MTF SAE 75W-85 API: GL-4
  - Use any quality Gear oil or MTF with similar spec.

CVT Transmission Fluid – E12

- Nissan NS-3
  - Recommended Alternatives:
    - Benzol NS-3
    - Totachi NS-3
    - Mitasu NS-3
    - Fukuoka NS-3
    - Tani NS-3
    - MANNOL NS-3
- Fill Capacity – 6.9L

CVT Transmission Filter/LUB Filter – E12

- Gearbox Model: **REOF11A**
- Gearbox Code: **JATCO CVT7**
- Gearbox Type: **CVT**
- Manufacturer: **JATCO**
- Part Number:
  - 31726-28X0A
  - 31726-3JX0A

e-POWER

E-Power Reducer/Diff Transmission

- Gearbox Type: **Reducer**
- Fluid Type: **Matic-S**
- Fill Capacity: **1.9L**

NISMO-S Manual Gear Oil

- Gearbox Type: **5MT**
- Fluid Type: **TRANSFER NFJ 75W-80**
- Gears: **5- Speed**
- Fill Capacity: **2.3L**

Cooling System

Coolant

- PITWORK/Nissan Long Life Coolant KQ301-34002 50% Premix, Blue
  - **Recommended Alternatives**:
    - Nissan Long-life Coolant (green) KQ202-20102
    - Nissan Long-life Coolant 999MP-L25500P, 50/50 Premix, Blue
    - Totachi Super Long-life Coolant -40c (green) – 50/50
    - Eneos Long-life Coolant (green) – 40%
    - Prestone Asian Vehicles (blue) 50/50
    - Abro EC-501/EC-503/EC-554 All Season Green Coolant
    - Havoline EasyCool 33
    - Total Coolelf

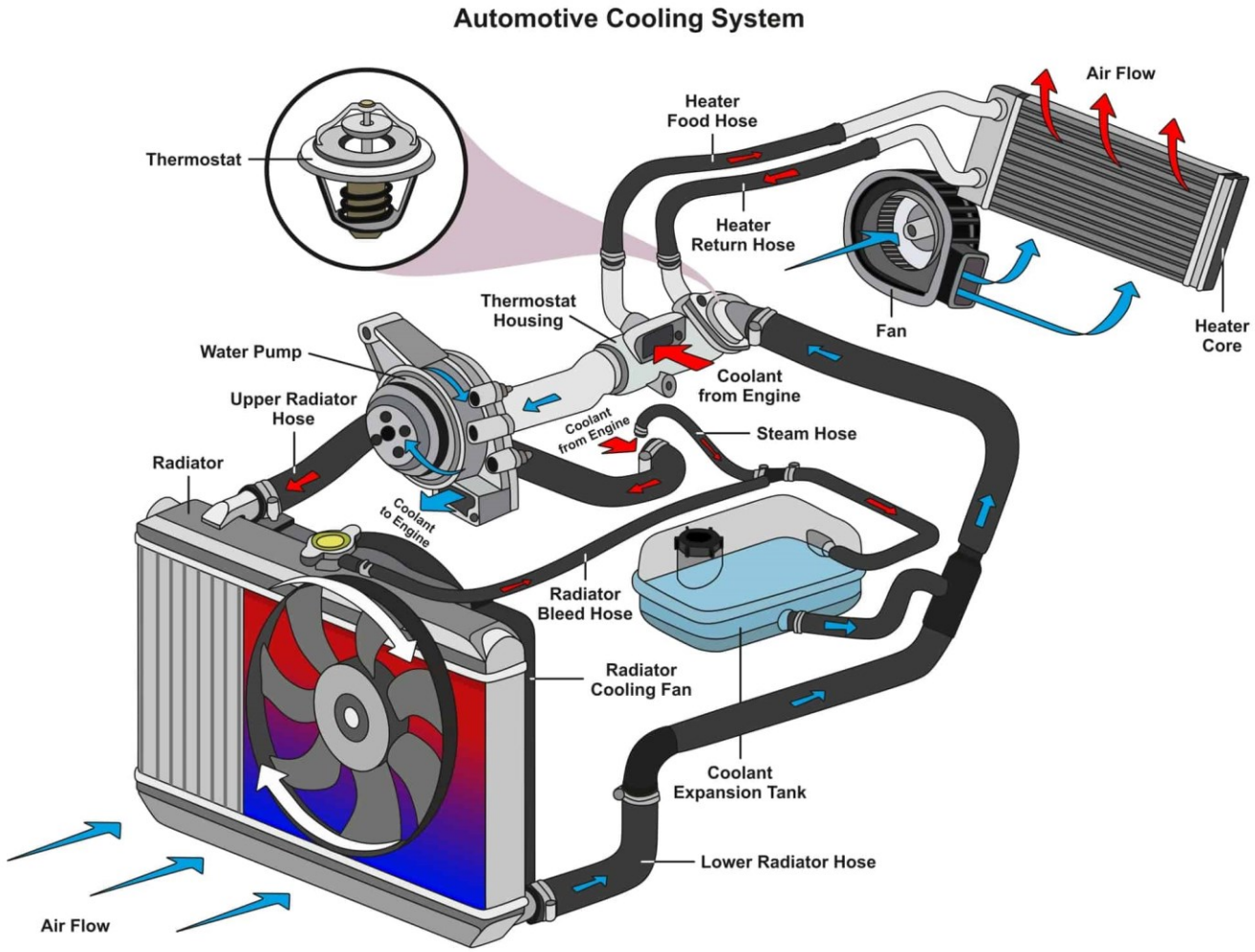
Coolant Types (Nissan Recommends OAT Coolants without Silicates and Borates)

Type	Inorganic	Organic Acid Technology (OAT)	Hybrid Organic Acid Technology (HOAT)
Color(s)	Green (default)	Long Life - Green/Red Ultra Long Life – Blue/Pink	Yellow/Green/Blue/Pink/Purple/Red
Lifespan	Short Use (less than 2 years lifespan)	Medium to Longterm (4 to 8 Years Lifespan)	Medium to Longterm (6 to 10 Years Lifespan)
Protection: Corrosion	Strong	Medium	Strong
Aluminium Protection	Poor	Strong	Strong
Steel/Iron Protection	Strong	Medium	Strong
Application	Older Engines	Modern/Newer Engines	Modern Engines
Additive: Borate	Commonly Used	Optional	Optional
Additive: Silicate	N/A	Commonly Used (with the exception being Asian made vehicles). Not recommended for Asian Made cars.	Substituted with Phosphates
Additive: Phosphates	Commonly Used	N/A	Commonly Used
Additive: Nitrite	Commonly Used	N/A	Only for Modern Diesel Engines
Price-point	Very Cheap	Medium to Expensive	Expensive

Thermostat

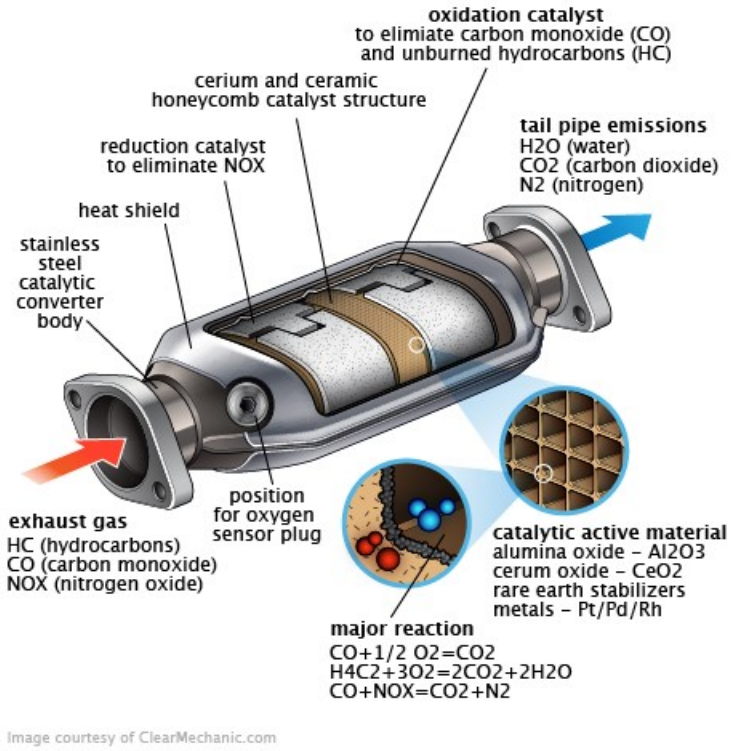
- Advantages/benefits of a Thermostat
  - Keeps the engine temperatures within optimal operating range (not too cold and not too hot), which keeps the engine running efficiently. Thus it is paramount to always maintain a functioning thermostat.
- Effects of a bad thermostat or no thermostat
  - Bad Fuel consumption (engine running too cold thus ECU keeps engine running in warm-up mode which burns more fuel to try get engine to optimal operating temps) (causes - thermostat stuck open or no thermostat)
  - Poor engine lubrication at startup due to slower fluid warm-up and poor fluid viscosity (causes - thermostat stuck open or no thermostat)
  - Overheating of the engine (causes - thermostat stuck closed)
- Part Number (E12):
  - Nissan 21200-ED00A

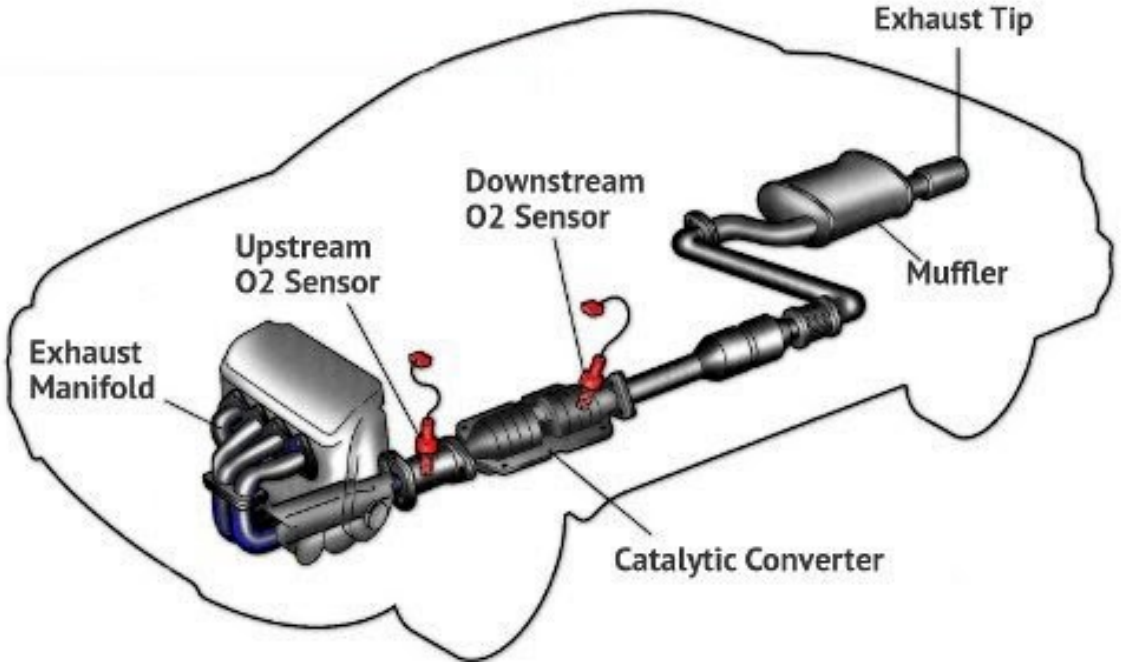
How the cooling system works



Emissions System

Three Way Catalyst (TWC) System





Three Way Catalyst (TWC) System

Prevent TWC Failure by:

- Running good condition Plugs and Ignition Coils
- Running the correct Plugs/Ignition coils
- Running Clean (low lead) fuel
- Running good quality engine oils
- Avoid driving with a misfire
- Running an optimized engine i.e. ignition timing should be ok, air fuel ratios within acceptable range. Don't drive the car in extremes (too lean/too lean A/F conditions)
- Service the car with quality engine service parts

Common TWC Failure Issues

- Low Efficiency – P0420
- TWC Failure – Permanent P0420 and Poor engine Performance
- O2 sensor Failure due to overheating as a result of TWC Clogging
- Exhaust Failure or Damage
- EGR System Failure

EGR (Exhaust Gar Recirculation)

Prevent EGR Issues by;

- Running Higher quality engine oils
- Running Genuine engine parts, especially spark plugs and coils
- Running on clean fuel
- Maintaining a properly functioning fuel delivery system
- Avoid unnecessary idling, use idling stop if the car is equipped with it or eco-mode in slow moving traffic.

Effects of a bad EGR Valve/System

- Check Engine light illuminates
- Engine Knocking due to excess temps in the combustion chamber (EGR Stuck closed)
- Poor performance or engine stalling due to less oxygen or combustible air (EGR stuck open)
- Rough Idling and vibrations due to less combustible air in the engine (EGR Struck open)
- EGR System Function Failure – P0400
- EGR Valve Failure – P0403
- EGR Temp Sensor Failure – P0405/P0406

P0400 – EGR Function (close)

Detecting Condition

No EGR flow is detected under conditions that require the EGR system to function.

Possible Cause

- Electrical (Harness or Connectors) of the EGR Volume control valve may be dirty or the circuit is open or shorted.
- EGR volume control valve is stuck closed.
- Weak or dead car battery or low voltage of the battery.
- EGR passage is clogged
- EGR Temperature sensor is not running efficiently
- EGR temperature sensor circuit is open or shorted
- You are leaking exhaust gases before or within the EGR system.

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P0420

THREE WAY CATALYST FUNCTION

DTC: P0420 – TW CATALYST SYS-B1

TYPE: UNIVERSAL (ALL MANUFACTURERS)

P0420 – TW CATALYST SYS-B1

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DETECTION CONDITIONS

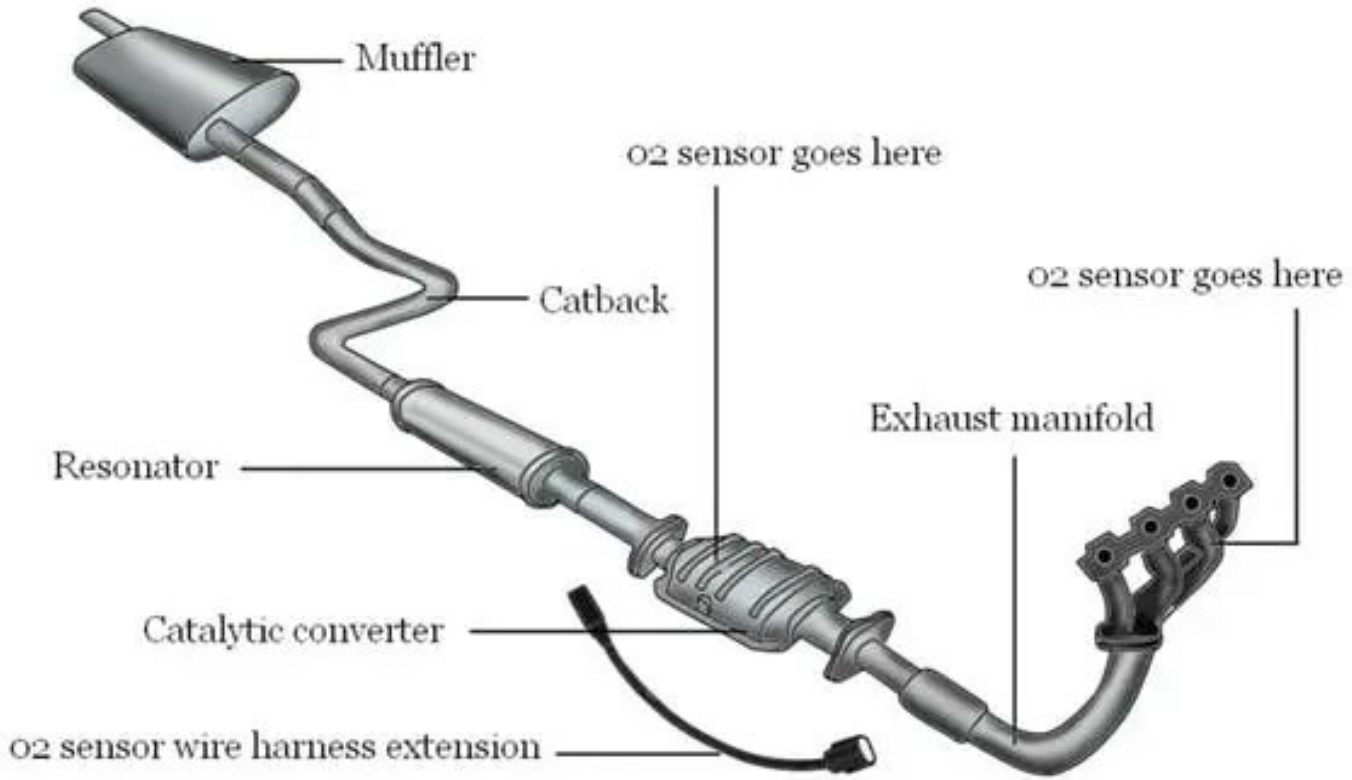
- TWC/Catalytic Converter in the exhaust manifold does not operate properly.
- TWC/Catalytic Converter in the exhaust manifold does not have enough oxygen storage capacity.
- DTC is detected by both air fuel ratio (A/F) sensor 1 (aka S1B1) and oxygen sensor 2 (diagnostic 02 sensor or S2B1) when the frequency switching ratio of both sensors exceeds a set limit value (manufacturer specific) indicating either higher than normal or lower than normal oxygen storage capacity of the TWC. This does not indicate a failure of either Oxygen sensors S1B1 or S2B1 and either sensors must not be misdiagnosed unless a specific oxygen sensor related code (P013x) is also detected alongside the P0420.

POSSIBLE CAUSES

- TWC/Catalytic Converter contamination or failure (engine oil/coolant/overheating/fuel or carbon deposit)
- Exhaust Leaks or damage along the exhaust
- Intake system leaks/running rich (less air in the engine)
- Fuel System leaks/running rich (more fuel than needed or fuel injected when not needed)
- Spark Plug wear or incorrect spark plug use leading to improper ignition timing
- Ignition coil failure or wrong spec ignition coil leading to improper ignition timing
- Inefficient engine control due to power failure, electrical fault or inefficient operation of a control component/sensor in the engine control sub-system.
- Extended engine idling or short distance driving (less than 8km/drive cycle) Can be remedied by use of Idling stop in equipped cars when stopped or taking the vehicle for regular highway drives (at-least 100kms with fuel additives).
- Running with poor quality fuels.

Exhaust System

- Possible Issues Include:
  - Air Leaks resulting in Foul smell and or noise
  - Exhaust Blockage resulting in poor engine performance
  - Exhaust damage resulting in exhaust gasses escaping and fire hazard.



Suspension Components

Common Suspension Component Failure symptoms

- Car swaying too much when cornering.
- Car leaning or extreme nosedive when braking.
- Car steering itself to one side when driving or braking.
- Suspension noise.
- Uncomfortable/Harsh ride
- Bouncy ride

Stabilizer Links

- Part Number:
  - Nissan 54618-JX00A (x2)

Control Arm

- Control Arm – Right - 54500-3VA0A
- Control Arm –Left - 54501-3VA0A

Control Arm Bushes

- Large - 54570-1HA0B
- Small - 54560-1HA0B

Ball Joint

- Ball Joint – Right/Left –
  - 54500-3VU0A
  - 54501-3VU0A
  - 54500-1HA7A
  - 54501-1HA0C

Suspension: Spring – E11

- Nissan 54010-1U61A (front)
  - Recommended Alternative:
    - OBK C4N-11621
    - Nissan 54010-1U60A
    - Nissan 54010-1U60B
    - OBK C4N-11721 (4WD)
    - Nissan 54010-1U71A (4WD)
    - Nissan 54010-1U70A or B (4WD)
- Nissan 55020-8Y50A/55020-1U60A (rear)
  - Recommended Alternative:
    - OBK C4N-11612
    - OBK C4N-11172 (4WD)
    - Nissan 55020-1U70A (4WD)

Suspension: Spring E12

- Nissan 54010-3VA0A (front)
  - Recommended Alternative:
    - OBK 32121
- Nissan 55020-3VA1A (rear)
  - Recommended Alternative:
    - OBK 32112

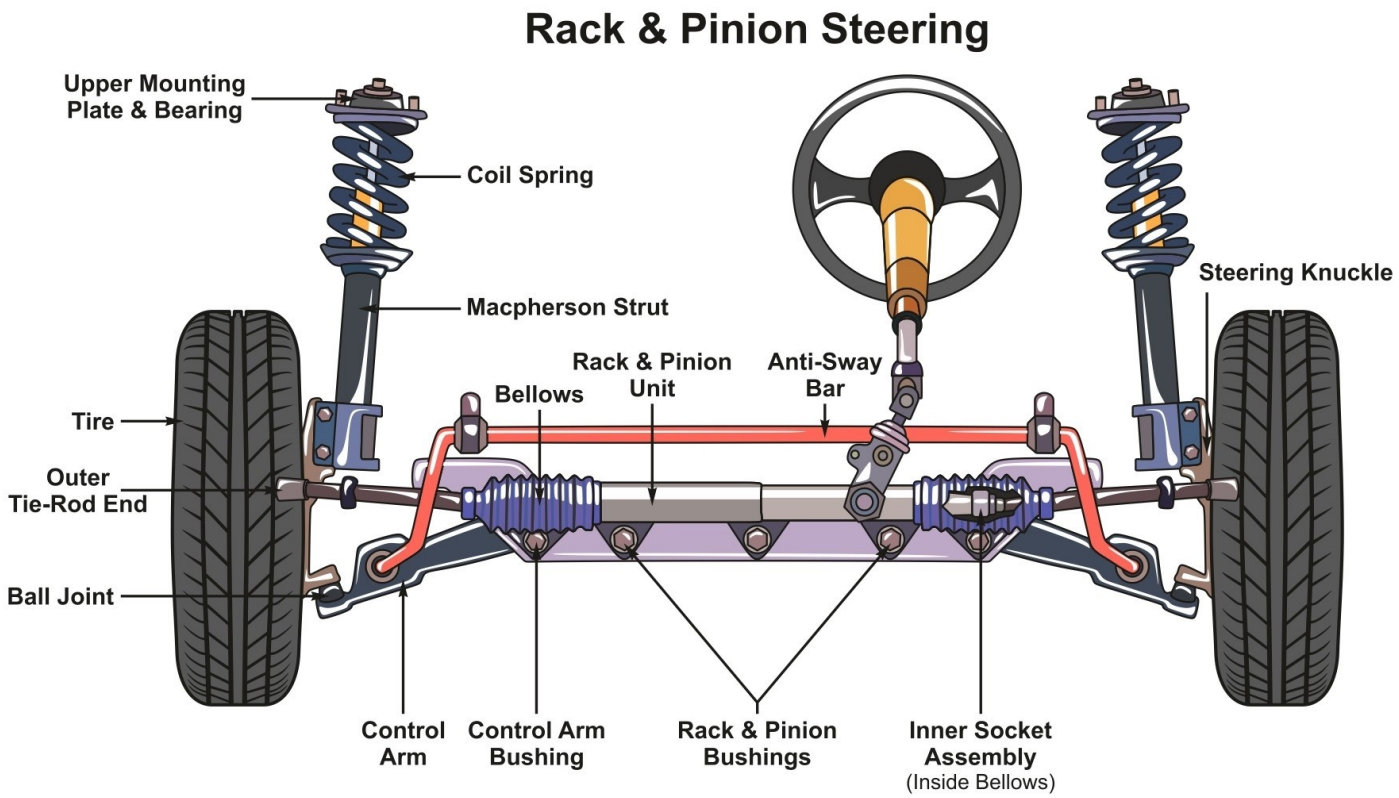
Suspension: Shock - E11

- FRONT: Nissan E4302-1U61B
  - **Recommended Alternative**:
    - Nissan E4302-1V10A
    - Nissan E4302-8Y50A
    - KYB 333748 – Left
    - KYB 333747 – Right
- REAR: Nissan E6B10-1V15A (CVT), E6B10-1V25A (4AT)
  - **Recommended Alternative**:
    - Nissan E6210-1U61D
    - Nissan E6210-1U65A
    - Nissan E6210-1V15A (CVT)
    - Nissan E6210-1V20A (4AT)
    - KYB 343810

Suspension: Shock

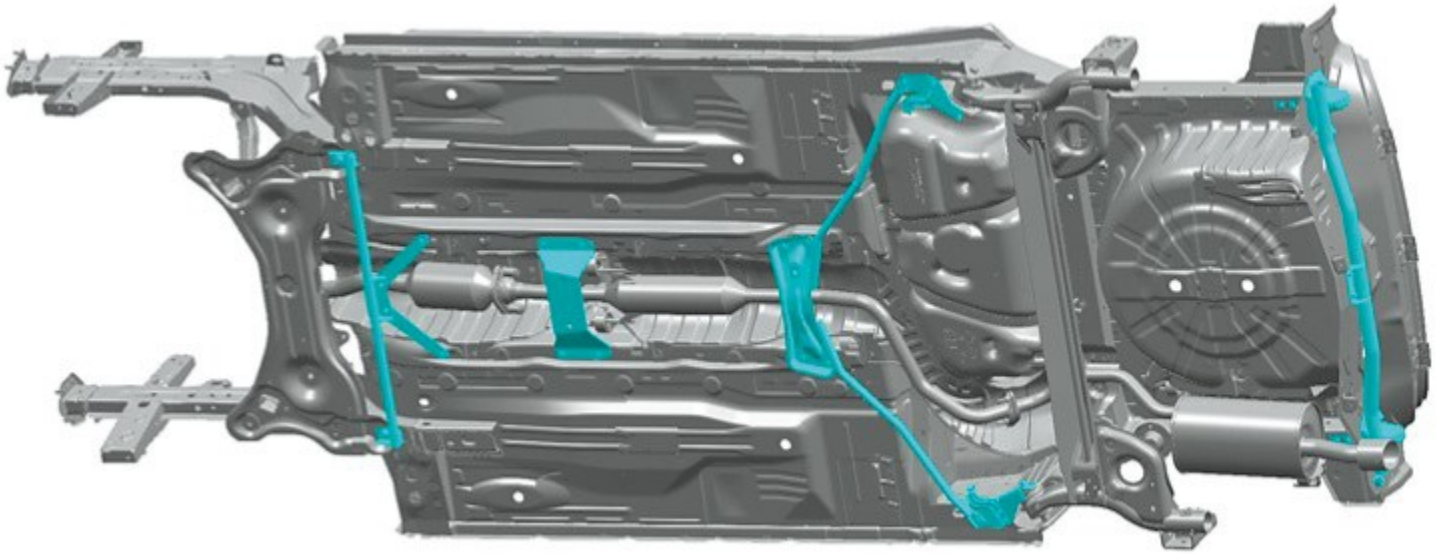
- Nissan E4302-3VA1A (front)
  - Recommended Alternative:
    - KYB 332149 – Left
    - KYB 332148 – Right
    - Monroe G7028 – Left
    - Monroe G7027 – Right
- Nissan E6210-3VA2A (rear)
  - Recommended Alternative:
    - KYB 3430043
    - Monroe – G1134

Common Suspension Diagram



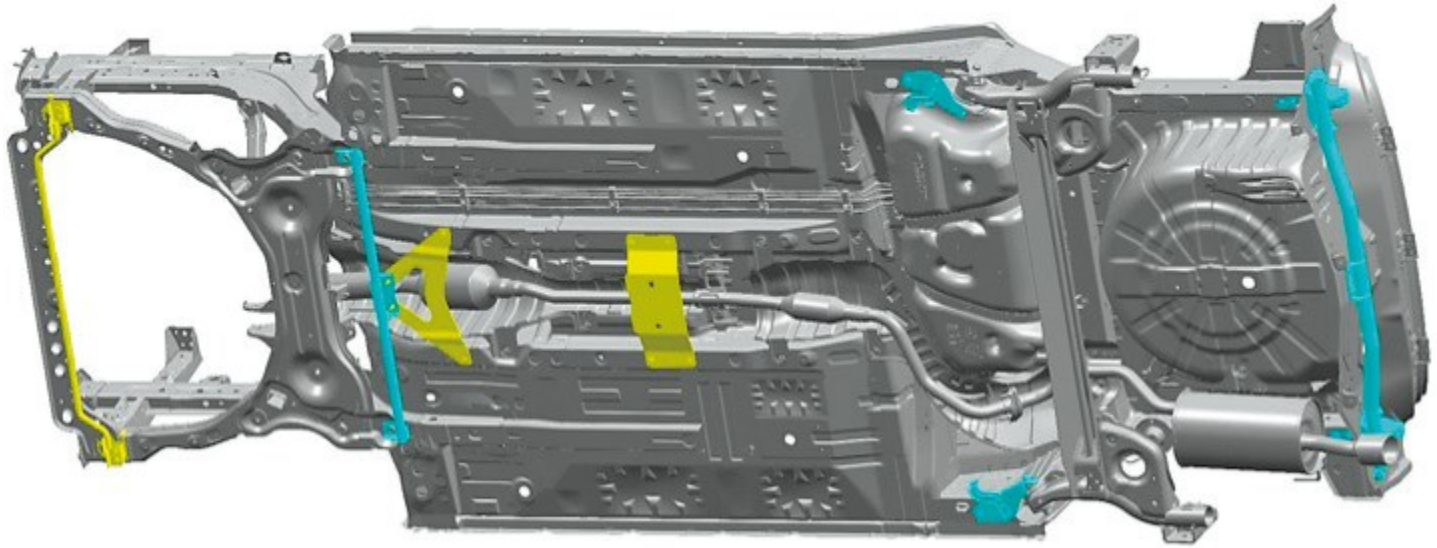
NISMO/MODE PREMIER/AUTECH TOURING

Suspension/Body Enhancement (front crossbar/front suspension member stay (tunnel stay)/tunnel stay/rear suspension member stay/rear crossbar)



NISMO-S

Suspension/Body Enhancement (front tunnel stay/ Rear tunnel stays / front suspension member stays /rear crossbar / rear underfloor V-bar / rear suspension member stay)



Wipers

Wipers (length in inches) – E11

- Driver Side –24 " (600mm)
- Passenger Side –14"(350mm
- Rear – 12" (300mm)

Wipers (length in inches)

- Driver Side – 26” (650mm) or 24 “ (600mm)
- Passenger Side – 12”(300mm)(if using 26”DS) or 14”(350mm)(if using 24”DS)
- Rear – 12” (300mm)

PURE DRIVE
アイドリングストップ

PURE DRIVE
DIG-S
エコ スーパーチャージャー

Battery/Power

Battery Type by Note model

Battery compatibility chart by Nissan Note Model						
Model	Other Model Code	Engine	Displacement	Drive System	Battery model	Local Battery Code
E11	-	HR15DE	1500cc	2WD	46B24L	NS60L
E11	-	HR15DE	1500cc	2WD/4WD	55B24L-HR	NS60L
E11	-	HR16DE	1600cc	2WD	40B19L	NS40ZL
E12	-	HR12DE	1200cc	4WD	55B24L-HR	NS60L
E12	Puredrive	HR12DE	1200cc	2WD	95D23L	Q-85
E12	DIG-S	HR12DDR	1200cc	2WD	95D23L	Q-85
E12	e-Power	HR12DE-EM57	1200cc	2WD/4WD	LN2	L2
E12	NISMO-S	HR16DE	1600cc	2WD	55B24L-HR	NS60L

Types of Battery Terminals

JIS (Japanese Industrial Standard) Type

DIN (Deutsches Institut für Normung) Type

Battery – E11/E12 X-Four/E12 NISMO-S

- 12v Lead Acid battery
  - OEM Part – **NS60L (55B24L)**
  - Capacity: **45A**
  - cold cranking amps/starting power : **300A CCA or higher**
  - Type: **Lead Acid.**
  - Terminal Type – **JIS**
  - Layout – **Left +**
  - Buy any brand that meets these specs.

Battery – Idling Stop Cars

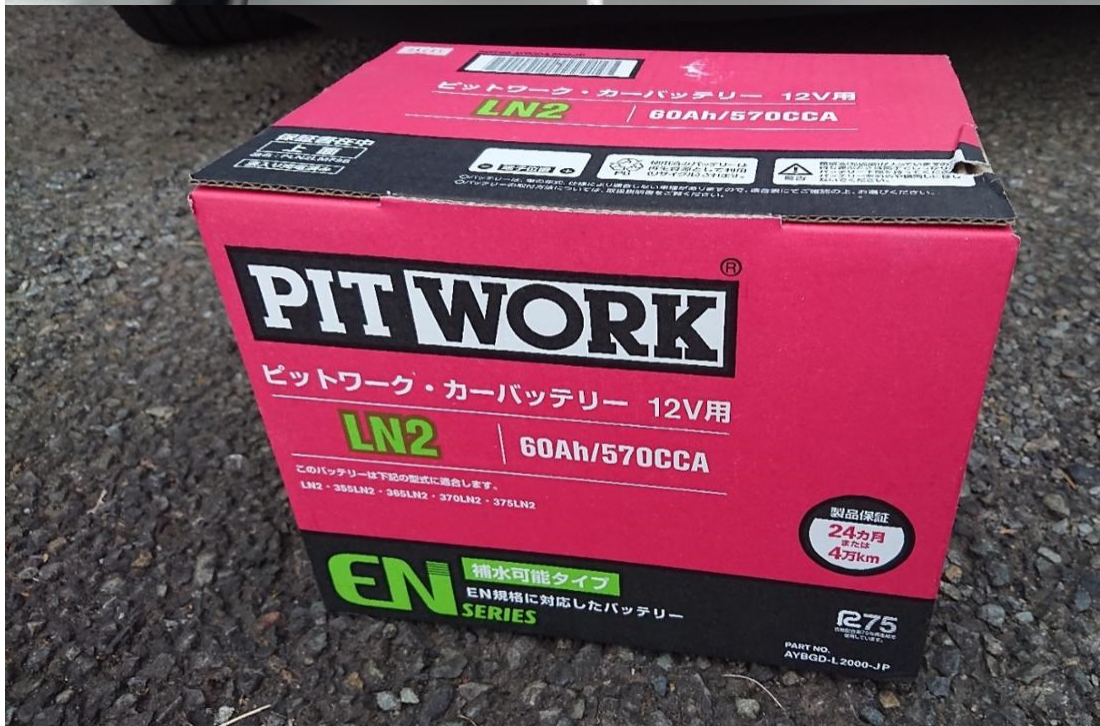
- 12v EFB or AGM battery for Auto Stop/Start or Idling Stop compatible cars.
  - OEM Part – **Q85 (or an equivalent EFB) with Stop/Start**
  - Capacity: **65A or higher**
  - cold cranking amps/starting power : **650A CCA or higher**
  - Type: **Enhanced Flooded Battery (EFB).**
  - Terminal Type – **JIS**
  - Layout – **Left +**
  - Buy any brand that meets these specs (Amaron Q85, Bost Q85, etc).

PURE DRIVE PURE DRIVE DIG-S nismo

Battery e-Power

- 12v LN2 battery for Hybrid cars.
  - OEM Part – **LN2**
    - **DIN55 L2 EFB**
    - **DIN60 L2 AGM**
  - Capacity: **55Ah or higher**
  - cold cranking amps/starting power : **500A CCA or higher**
  - Terminal Type – **EN/DIN**
  - Buy any brand that meets these specs.

e-POWER e-POWER nismo e-POWER nismo S



Key FOB Battery: CR2025

Common Power/Battery Voltage Related Issues

- P0039 – Supercharger Bypass Valve Voltage issue
- P0400 – EGR system function issues due to power failure to the valve or EGRT sensor
- P0420 – power failure of the o2 and related engine sensors that affects the air/fuel ratio thus causing inefficient combustion and poor catalyst efficiency
- Transmission Limp Mode, 1M error when you shift to D (Drive) gear.
- Low Pressure Fuel Pump (LPFP – in tank Fuel Pump) Failure/poor performance and or Fuel Pump related DTC due to voltage issues.
- Idling Stop Failure and blinking auto sign
- Transmission issues due to electric oil pump failure when trying to engage idling stop.
- Car lock/Unlock issues.

Jumpstart E11/E12 (models with current sensors)

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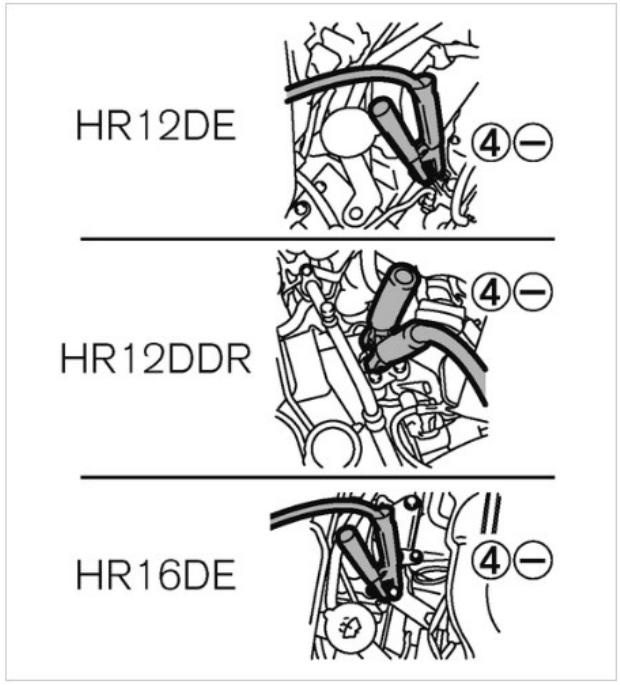
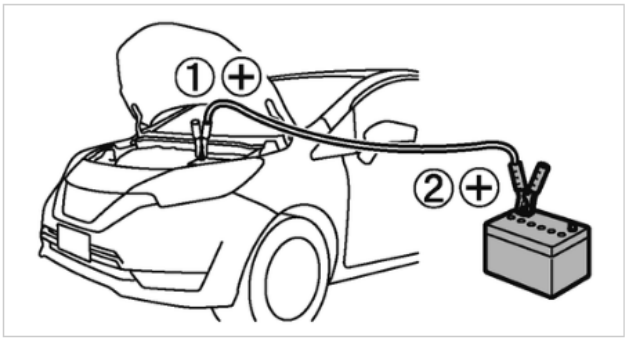
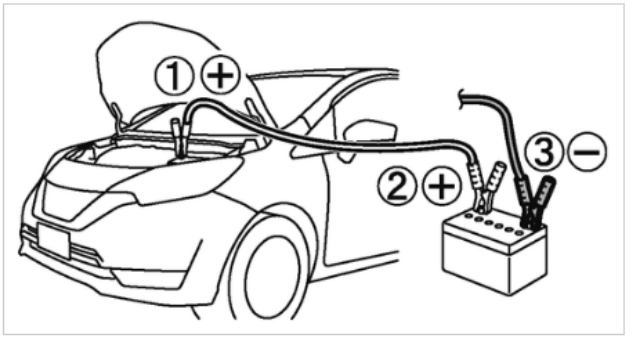
1. Turn off the key switch (power position) of your car and the rescue vehicle.
2. Pull the hood opener in the lower right corner of the driver's seat of your car to open the hood.
3. Connect the booster cable to the ⊕ terminal of your vehicle's 12V battery (main).
4. Connect the other side of the cable connected in step 3 to the ⊕ terminal of the rescue vehicle's battery.
5. Connect the other booster cable to the ⊖ terminal of the rescue vehicle's battery.
6. Connect the other side of the cable connected in step 5 to the body of your vehicle (the unpainted metal part of the engine mounting away from the position connected in step 3).
7. Start the engine of the rescue vehicle and increase the engine speed a little higher (1500 – 2500 rpm).
8. Start your car's engine. When the engine starts, disconnect the booster cables in the reverse procedure as when connecting it.

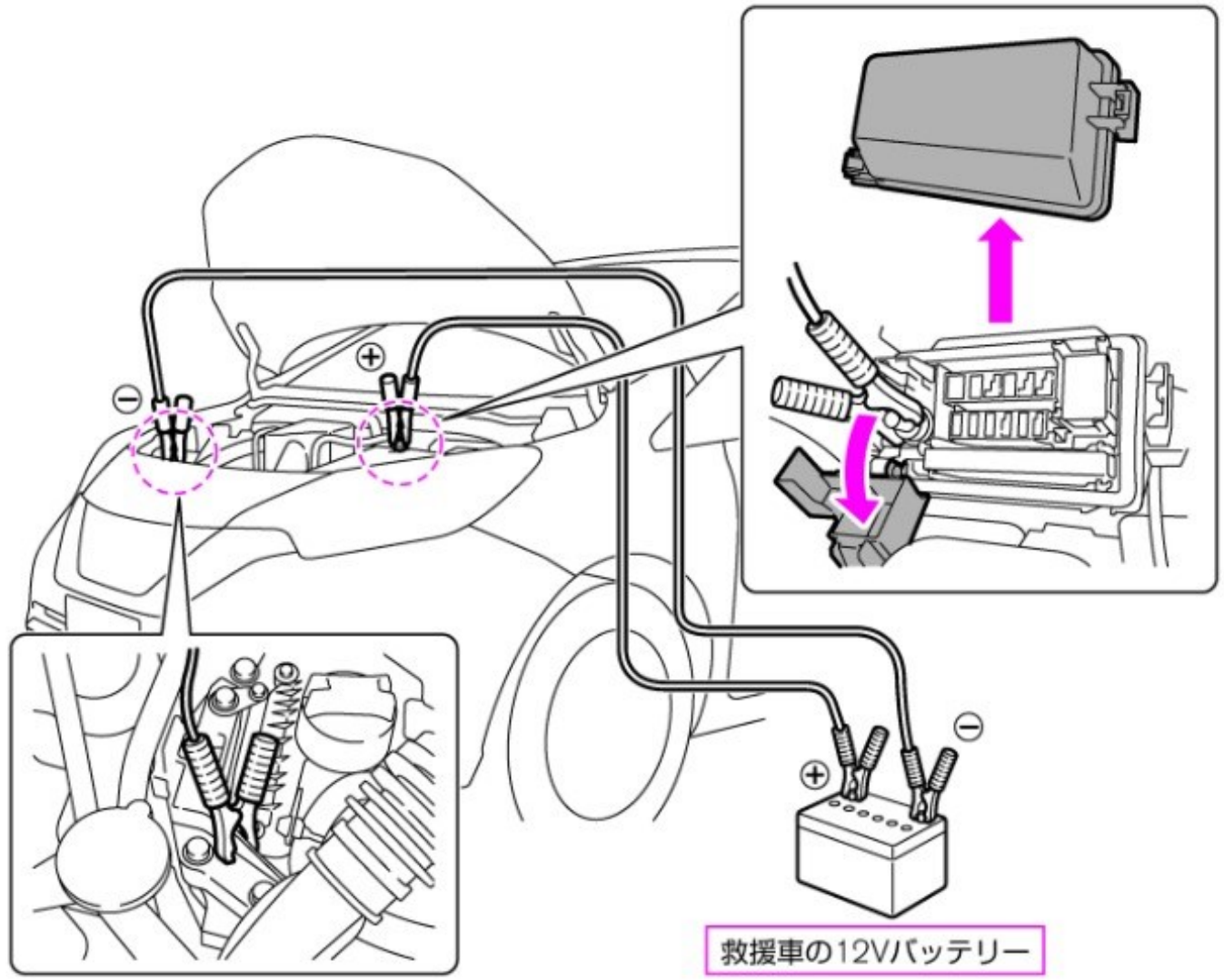
Jumpstart E11 & E12 – ICE Vehicles



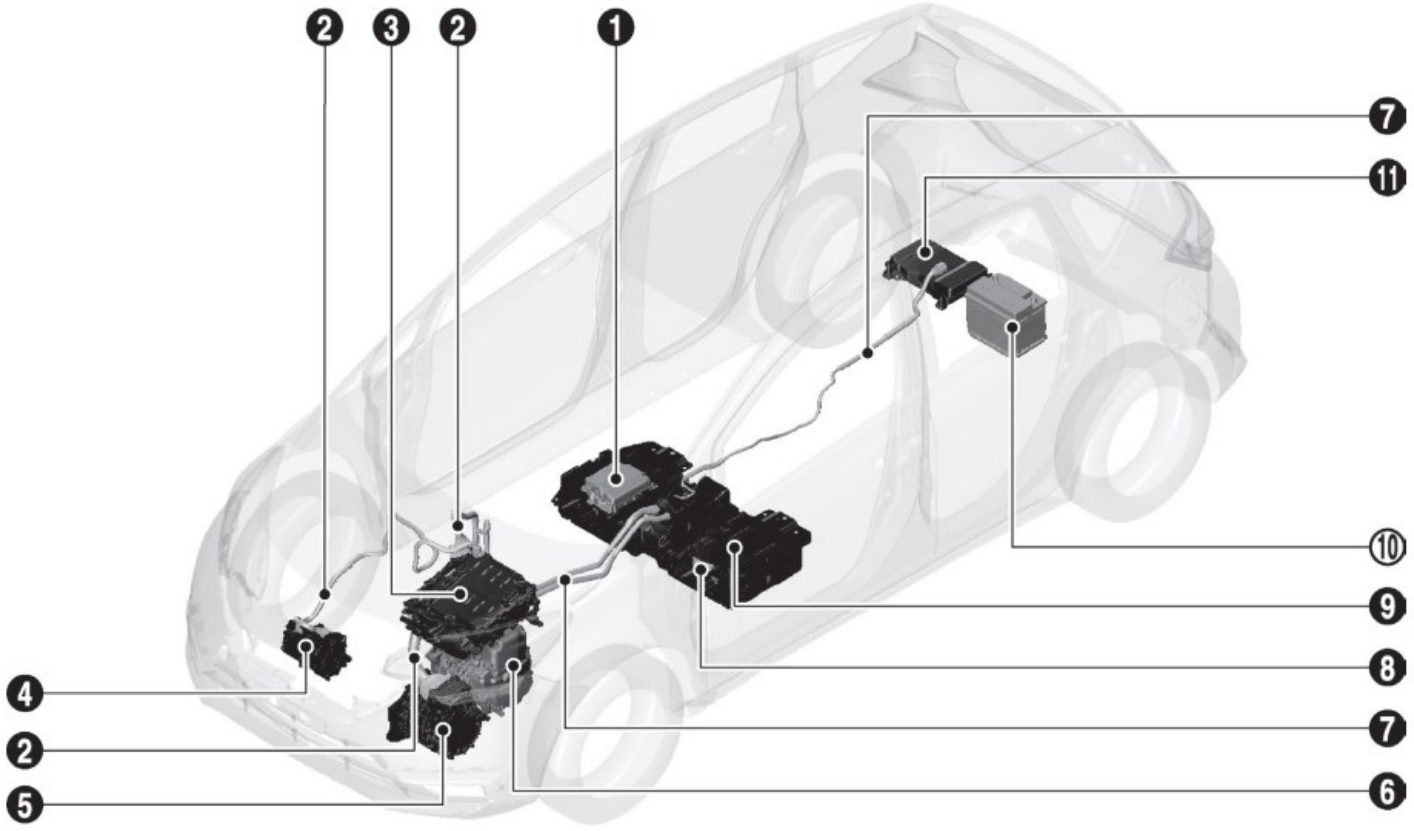




Jumpstart E12 e-Power



E-Power Component Location

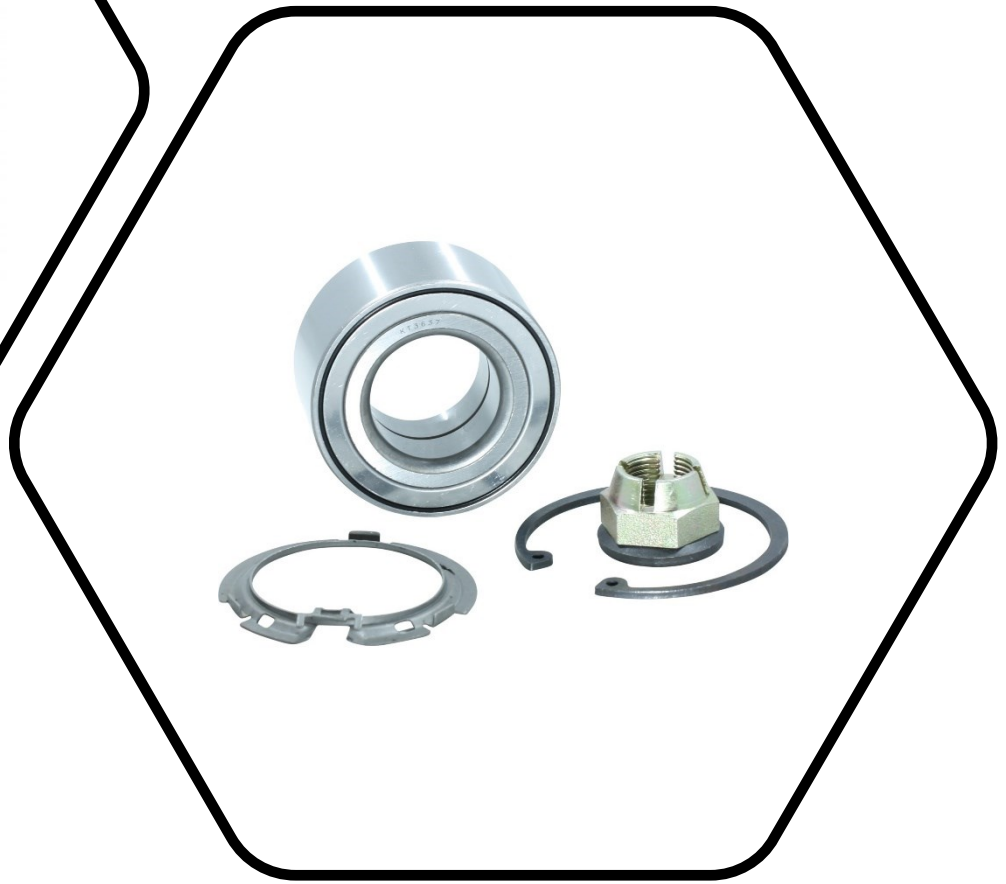


E-Power Component Location

#	Component	Arrangement	Description
1.	DC/DC Converter	Li-Ion Battery RHS	Convert High Voltage from the Li-Ion battery and Supply it to the 12v Battery.
2.	High Voltage (HV) Harness	Engine Room	Connects Li-Ion Battery to High Voltage Components. Harness color – Orange.
3.	Inverter	Engine Room	Convert Alternating (AC) current from the generation motor into DC Current to drive the Drive Motor.
4.	Electric Compressor	Engine Room	High Voltage motor for compressing A/C gas to high pressure
5.	Generator Motor	Engine Room	Converts engine rotation power into electricity.
6.	Drive Motor	Engine Room	Converts 3-phase AC Power into Mechanical Power to drive the car
7.	HV Harness	Vehicle Underside	Connects Li-Ion Battery to High Voltage Components. Harness color – Orange.
8.	Service Plug	Under the Passenger Seat	Disconnects the HV Circuit from the Li-Ion Battery
9.	Li-Ion Battery	Under the Front Seats	Stores and Outputs power to drive the vehicle
10.	12V Battery	Under the Luggage Floorboard	Supply power to electrical components operating at 12V
11.	4WD DC/DC Converter	Under the Luggage Floorboard	Convert High Voltage from the Li-Ion battery and Supply it to the 4WD motor. 4WD vehicles only.

Wheels & Tyres

Wheel Hub Assembly

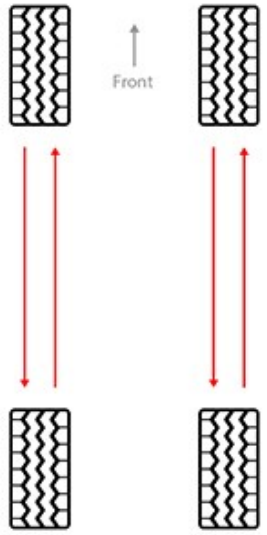


- Wheel Hub
- Hub Bearing Kit – Front - 40210-1HA1A
- Hub Bearing Kit – Rear - 43210-1HA1A

Tyre Guide – Pressure Converter and Rotation

PSI	BAR	PSI	BAR	PSI	BAR
10	0.7	**29**	2.0	**48**	3.3
11	0.8	**30**	2.1	**49**	3.4
12	0.8	**31**	2.1	**50**	3.4
13	0.9	**32**	2.2	**51**	3.5
14	1.0	**33**	2.3	**52**	3.6
15	1.0	**34**	2.3	**53**	3.7
16	1.1	**35**	2.4	**54**	3.7
17	1.2	**36**	2.5	**55**	3.8
18	1.2	**37**	2.6	**56**	3.9
19	1.3	**38**	2.6	**57**	3.9
20	1.4	**39**	2.7	**58**	4.0
21	1.4	**40**	2.8	**59**	4.1
22	1.5	**41**	2.8	**60**	4.1
23	1.6	**42**	2.9	**61**	4.2
24	1.7	**43**	3.0	**62**	4.3
25	1.7	**44**	3.0	**63**	4.3
26	1.8	**45**	3.1	**64**	4.4
27	1.9	**46**	3.2	**65**	4.5
28	1.9	**47**	3.2	**66**	4.5

STRAIGHT ROTATION



Tyre Wear Patters

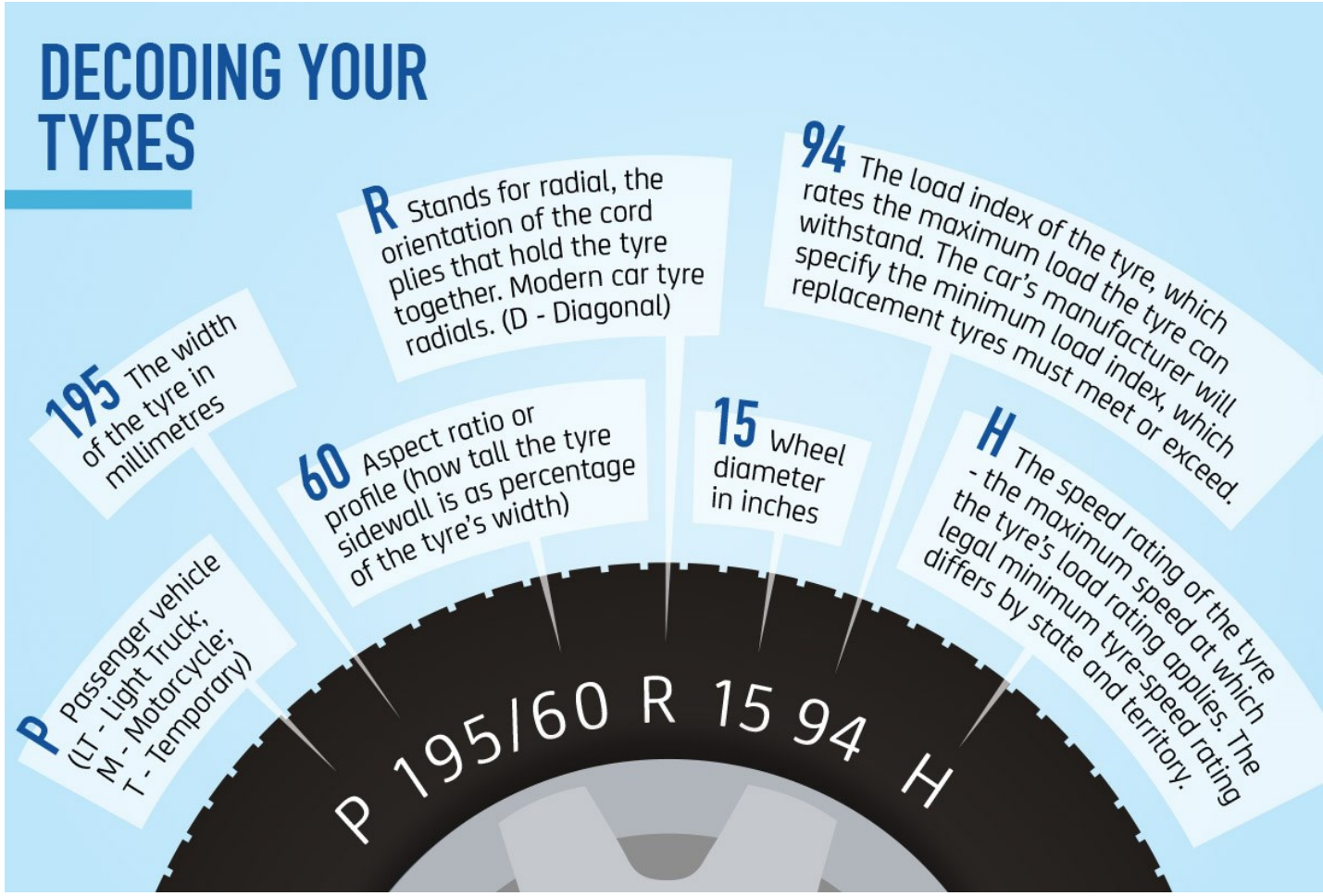
Tyre Size – E11

- E11 – Tyre Size
  - 175/65R14
  - 175/60R15
  - 185/55R15
- E11 - Rim Size
  - 14 Inch – 5Jx14
  - 15 Inch – 5.5Jx15
- PCD (mm)
  - 100 x 4 Holes
- OFFSET
  - ET40 – 14”
  - ET45 – 15”
- Hub Hole Diameter (mm)
  - 60

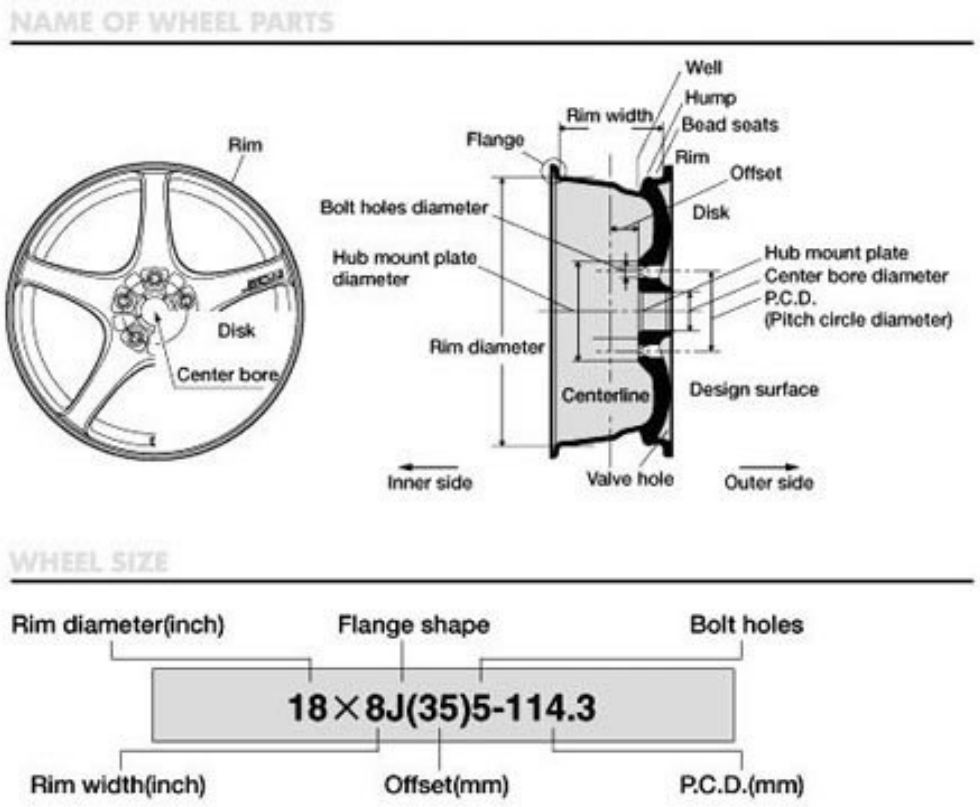
Tyre Size – E12

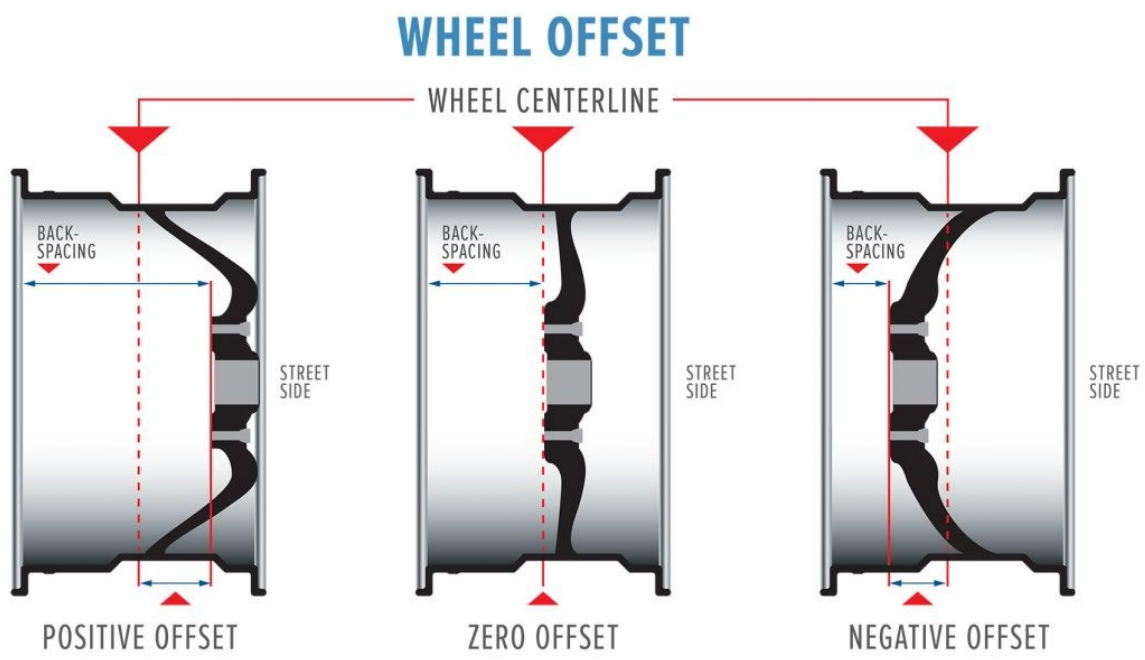
- E12 – Tyre Size
  - 185/70R14
  - 185/65R15
  - 195/55R16 – NISMO/AUTECH
  - 205/45ZR17 – NISMO-S
- E12 – Rim Size
  - 14 Inch – 5.5Jx14
  - 15 Inch – 5.5Jx15
  - 16 Inch – 6.5Jx16 NISMO/AUTECH
  - 17 Inch – 7Jx17 NISMO-S
- PCD (mm)
  - 100 x 4 Holes
- OFFSET
  - ET40 – 14/15”
  - ET46 – 16”
  - ET47 – 17”
- Hub Hole Diameter (mm)
  - 60

How to Read details on a Tyre

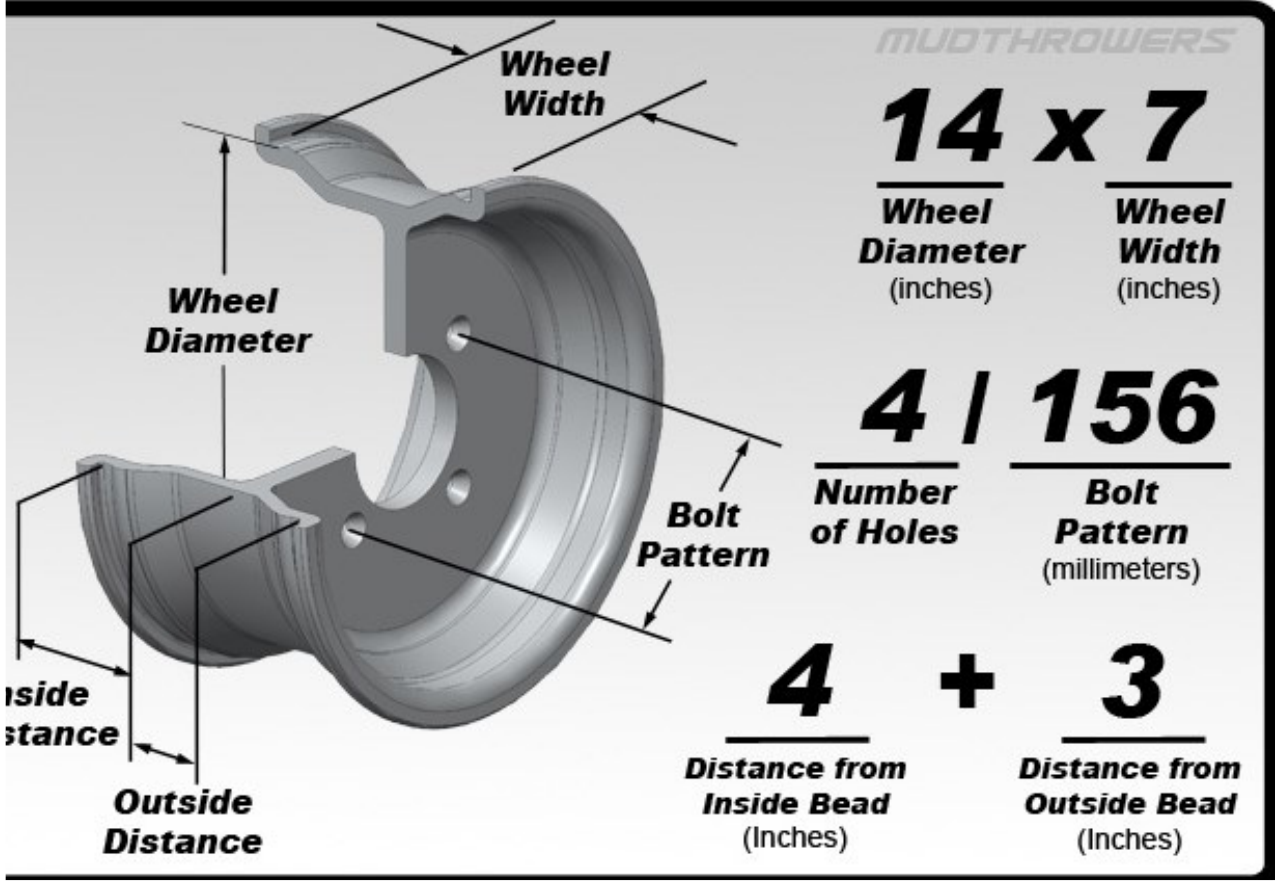


Understanding Rims






18X8J 55


MUDTHROWERS
Wheel Width
Wheel Diameter
Bolt Pattern
Outside Distance
14 x 7
Wheel Diameter (inches)
Wheel Width (inches)
4 | 156
Number of Holes
Bolt Pattern (millimeters)
4 + 3
Distance from Inside Bead (Inches)
Distance from Outside Bead (Inches)

Rim Size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Mode Premier
e-POWER