SECTION WT
ROAD WHEELS & TYRES

CONTENTS

PRECAUTIONS

PFP:00011

Precautions for Supplemental Restraint System (SRS) “AIR BAG” and “SEAT BELT PRE-TENSIONER”

EES000MM

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SRS and SB section of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SRS section.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harness connectors.**

Wiring Diagrams and Trouble Diagnosis

EES000MK

When you read wiring diagrams, refer to the following:

- Refer to GI-14, "How to Read Wiring Diagrams" in GI section
- Refer to PG-3, "POWER SUPPLY ROUTING" for power distribution circuit in PG section

When you perform trouble diagnosis, refer to the following:

- Refer to GI-11, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES" in GI section
- Refer to GI-24, "How to Perform Efficient Diagnosis for an Electrical Incident" in GI section

NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

PFP:00003

NVH Troubleshooting Chart

EES000KI

Use the chart below to help you find the cause of the symptom. If necessary, repair or replace these parts.

Reference page			Refer to WT-5, "ROAD WHEEL"	—	—	—	—	—	—	NVH in MT, AT and CVT section.	NVH in FAX and FSU sections.	NVH in RAX and RSU sections.	Refer to TYRES in this chart.	Refer to ROAD WHEEL in this chart.	NVH in FAX section.	NVH in BR section.	NVH in PS section.
Possible cause and SUSPECTED PARTS			Out-of-round	Imbalance	Incorrect tyre pressure	Uneven tire wear	Deformation or damage	Non-uniformity	Incorrect tire size	DIFFERETIAL	FRONT AXLE AND FRONT SUSPENSION	REAR AXLE AND REAR SUSPENSION	TYRES	ROAD WHEEL	DRIVE SHAFT	BRAKE	STEERING
Symptom	TYRES	Noise	×	×	×	×	×	×		×	×	×		×	×	×	×
		Shake	×	×	×	×	×		×		×	×		×	×	×	×
		Vibration			×				×		×	×			×		×
		Shimmy	×	×	×	×	×	×	×		×	×		×		×	×
		Judder	×	×	×	×	×		×		×	×		×		×	×
		Poor quality ride or handling	×	×	×	×	×		×		×	×		×			
	ROAD WHEEL	Noise	×	×			×			×	×	×	×		×	×	×
		Shake	×	×			×				×	×	×		×	×	×
		Shimmy, judder	×	×			×				×	×	×			×	×
		Poor quality ride or handling	×	×			×				×	×	×				

×: Applicable

ROAD WHEEL

PFP:40300

Inspection

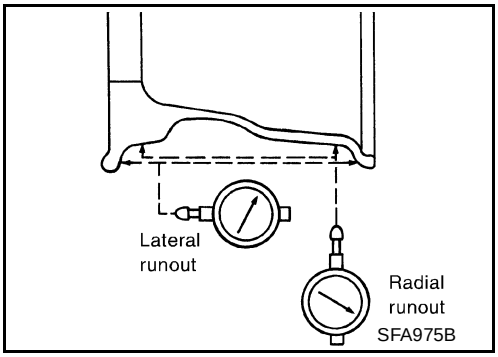
EES000KJ

ALUMINUM WHEEL

1. Check tyres for wear and improper inflation.
2. Check wheels for deformation, cracks and other damage. If deformed, remove wheel and check wheel runout.

a. Remove tire from aluminum wheel and mount on a tire balance machine.

b. Set dial indicator as shown in the illustration.



Wheel runout (Dial indicator value):

Refer to WT-41, "SERVICE DATA"

STEEL WHEEL

1. Check tyres for wear and improper inflation.
2. Check wheels for deformation, cracks and other damage. If deformed, remove wheel and check wheel runout.

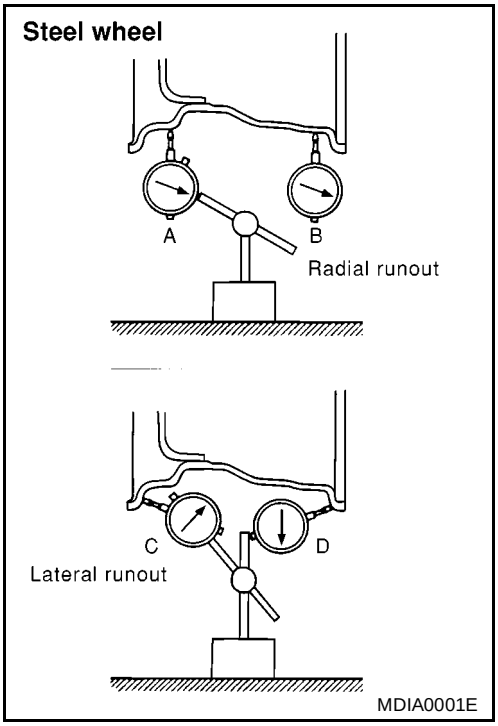
a. Remove tyre from steel wheel and mount wheel on a tyre balance machine.

b. Set two dial indicators as shown in the illustration.

c. Set each dial indicator to 0.

d. Rotate wheel and check dial indicators at several points around the circumference of the wheel.

e. Calculate runout at each point as shown below.



Radial runout = (A + B)/2 : 0.5 mm (0.020 in)

Lateral runout = (C + D)/2 : 0.8 mm (0.031 in)

f. Select maximum positive runout value and the maximum negative value.
Add the two values to determine total runout.
In case a positive or negative value is not available, use the maximum value (negative or positive) for total runout.
If the total runout value exceeds the limit, replace steel wheel.

Wheel runout:

Refer to WT-41, "SERVICE DATA"

ROAD WHEEL AND TYRE ASSEMBLY

PFP:40312

Balancing Wheels (Bonding Weight Type)

EES000MN

REMOVAL

1. Remove inner and outer balance weights from the road wheel.

CAUTION:

Be careful not to scratch the road wheel during removal procedures.

2. Using releasing agent, remove double-faced adhesive tape from the road wheel.

CAUTION:

Be careful not to scratch the road wheel during removal.

- After removing double-faced adhesive tape, wipe clean traces of releasing agent from the road wheel.

WHEEL BALANCE ADJUSTMENT

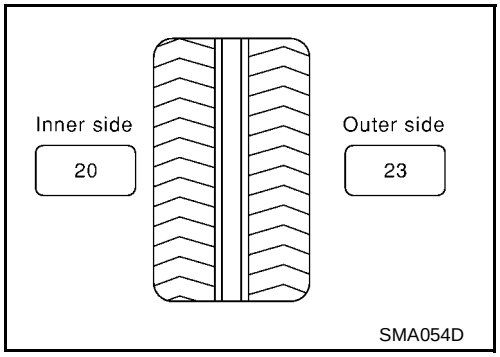
- If a tyre balance machine has adhesion balance weight mode settings and drive-in weight mode setting, select and adjust a drive-in weight mode suitable for road wheels.

1. Set road wheel on wheel balancer using the center hole as a guide. Start the tyre balance machine.
2. When inner and outer unbalance values are shown on the wheel balancer indicator, multiply outer unbalance value by 5/3 to determine balance weight that should be used. Select the outer balance weight with a value closest to the calculated value above and install it to the designated outer position of, or at the designated angle in relation to the road wheel.

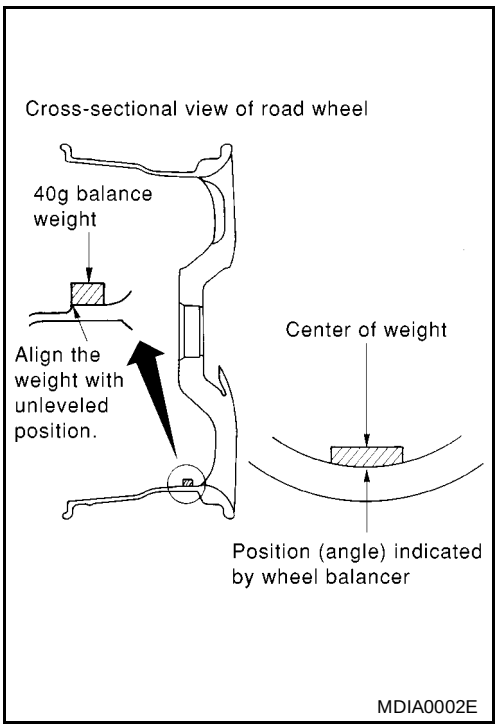
CAUTION:

- **Do not install the inner balance weight before installing the outer balance weight.**
- **Before installing the balance weight, be sure to clean the mating surface of the road wheel.**

Indicated unbalance value × 5/3 = balance weight to be installed
Calculation example:
23 g (0.81 oz) × 5/3 = 38.33 g (1.35 oz) = 40 g (1.41 oz) balance weight (closer to calculated balance weight value)
Note that balance weight value must be closer to the calculated balance weight value.
Example:
37.4 = 35 g (1.23 oz)
37.5 = 40 g (1.41 oz)

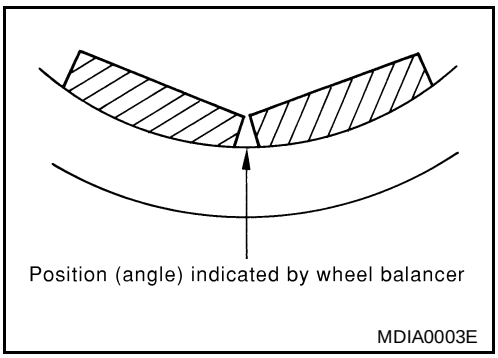


- Attach weight as shown in figure.
- When attaching weight to road wheel, align it with step on rear surface of wheel, as shown in figure. Attach so that center of weight and position (angle) of wheel balancer indicator are aligned.
- Do not attach more than 2 adhesive weights.



- If calculated value exceeds 50 g, attach two weights side by side, as shown in figure.

CAUTION:
When attaching two weights, do not attach them one on top of the other.



3. Start the wheel balancer again.
4. As before, attach drive-in weight to inner side of road wheel, according to amount and position (angle) of imbalance indicated by wheel balancer.
5. Start wheel balancer. Check that residual imbalance amount is 10 g or less for both outer and inner sides.

- If residual imbalance exceeds 10 g, then repeat procedure from start.

Permissible amount of residual imbalance

Dynamic (at lug)	**: 10 g or less (one side)**
Static (at lug)	**: 20 g or less**
Maximum balance weight correction	**: 100 g**

Balancing Wheels (Drive-in Weight Type)

EES000MO

WHEEL BALANCE ADJUSTMENT

1. Remove wheel from vehicle.
2. Set road wheel on wheel balancer and start balancer machine.

- Set with top/bottom reversed from vehicle installation position. After setting wheel on wheel balancer, make mark on top surface of wheel.
- Adjust wheel balance using a wheel balancer with straight cone attachment. Be sure cone contacts reverse side of wheel.
- If a general-purpose taper cone must be used to adjust wheel balance, place cone against reverse side of wheel and support it.
- Resin hammer must be used to drive in balance weights.

CAUTION:
Do not reuse balance weights after they are removed. Be sure to use new Nissan genuine weights designed for use with steel wheels.

Permissible amount of residual imbalance

Dynamic (at lug)	**: 10 g or less (one side)**
Static (at lug)	**: 20 g or less**
Maximum balance weight correction	**: 60 g**

3. Remove wheel from wheel balancer.
4. Install wheel to vehicle, with mark on lower side.

- Minimize imbalance by keeping same relative positions between hub-wheel contact points when installing to vehicle as when adjusting wheel balance.

CAUTION:
So as not to deform wheel, install by tightening at opposite angles, in 2 - 3 steps.

Tightening torque of wheel nut : 98 - 118 N·m (10 - 12 kg-m, 72 - 87 ft-lb)

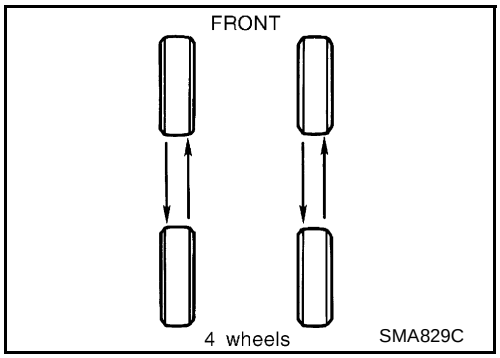
Rotation

EES000MP

- After rotating the tyres, adjust the tyre pressure.
- Retighten the wheel nuts when the vehicle has been driven for 1,000 km (600 miles) (also in cases of a flat tire, etc).
- Do not include the T-type spare tire when rotating the tires.

CAUTION:
When installing wheels, tighten them diagonally by dividing the work two to three times in order to prevent the wheels from developing any distortion.

Tightening torque of wheel nut : 98 - 118 N·m (10 - 12 kg-m, 72 - 87 ft-lb)

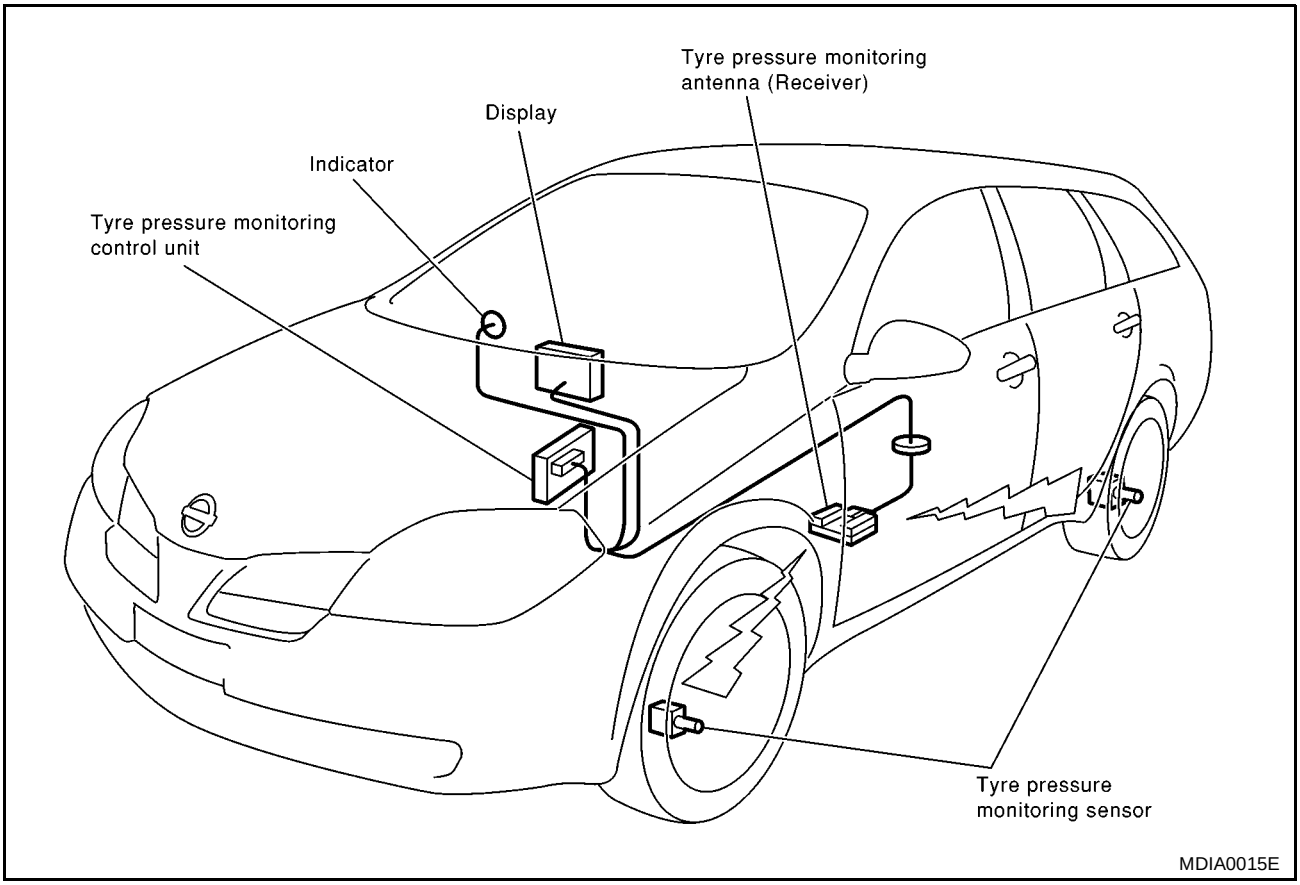


TYRE PRESSURE MONITORING SYSTEM

PFP:40720

System Components

EES000MQ

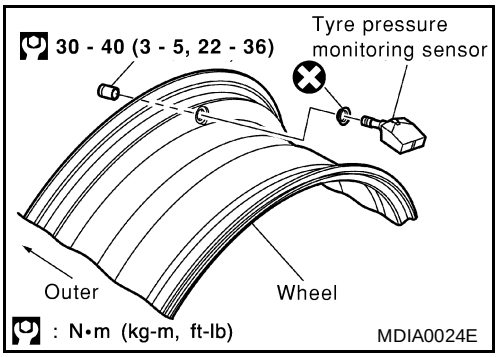


System Description

EES000MR

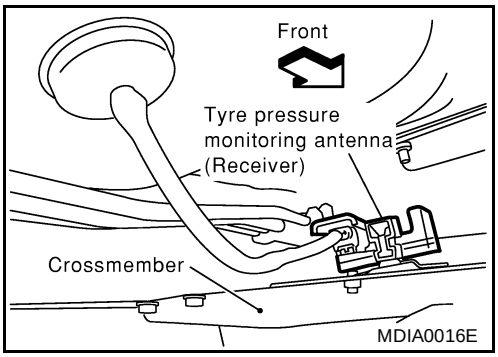
TYRE PRESSURE MONITORING SENSOR

A tyre pressure monitoring sensor integrated with a valve is installed on a wheel, and transmits a detected air pressure signal in the form of a radio wave.



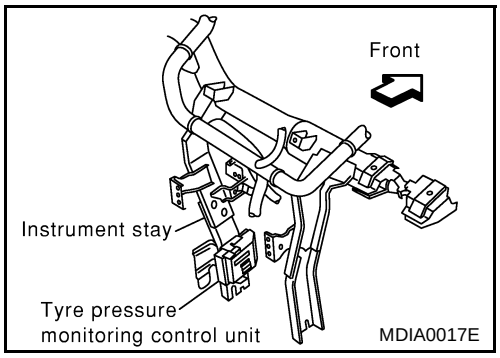
TYRE PRESSURE MONITORING ANTENNA (RECEIVER)

Receives the radio wave signal transmitted by the tyre pressure monitoring sensor.



TYRE PRESSURE WARNING CONTROL UNIT

Reads the radio wave signal received by the tyre pressure monitoring antenna (receiver), and controls the warning lamp operations as shown below. It also has a judgement function to detect a system malfunction.
The figure shown is for RHD models. The layout for LHD models is symmetrically opposite.

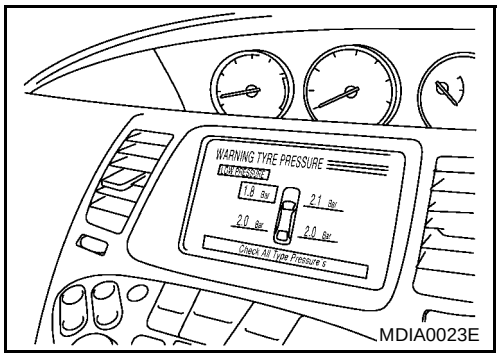


Condition	Warning lamp
Less than 180 kPa (1.8 kg/cm^2 , 26 psi) [Low pressure]	0.2 sec. OFF 0.2 sec. ON
Less than 70 kPa (0.7 kg/cm^2 , 10 psi) [Flat tyre]	ON
System malfunction	ON

DISPLAY

Displays the air pressure of each tire.

- After the ignition switch is turned ON, the pressure values are not be displayed until the data of all four wheels stabilizes.



Function	Warning lamp (Combination meter)	Display
System malfunction: missing tyre pressure monitoring antenna (receiver)	ON	WARNING TYRE PRESSURE “Detailed information”
System malfunction: missing tyre pressure monitoring sensor signal	ON	WARNING TYRE PRESSURE “Detailed information”
Slight pressure loss	FLASHING	WARNING TYRE PRESSURE “LOW PRESSURE” “Check all tyre pressures.”
Over inflation	FLASHING	WARNING TYRE PRESSURE “HIGH PRESSURE” “Check all tyre pressures.”
Strong deflation	FLASHING	WARNING TYRE PRESSURE “LOW PRESSURE” “Check all tyre pressures.”
Puncture	FLASHING	WARNING TYRE PRESSURE “FLAT TYRE” “Check all tyre pressures.”
Single wheel under inflated	ON **NOTE:** Stays ON if traveling at less than 20 km/h; Stays ON for 1 minute if traveling at greater than 20 km/h.	WARNING TYRE PRESSURE “LOW PRESSURE” “Check all tyre pressures.”
All four wheels under inflated		

Function	Warning lamp (Combination meter)	Display
Single wheel over inflated	ON **NOTE:** Stays ON if traveling at less than 20 km/h; Stays ON for 1 minute if traveling at greater than 20 km/h.	WARNING TYRE PRESSURE “HIGH PRESSURE” “Check all tyre pressures.”
All four wheels over inflated		
Disequilibrium	ON **NOTE:** Stays ON if traveling at less than 20 km/h; Stays ON for 1 minute if traveling at greater than 20 km/h.	“PRESSURE IMBALANCE” WARNING TYRE PRESSURE “Check all tyre pressures.”
Excessive vehicle speed for actual tyre pressure	OFF	WARNING TYRE PRESSURE “SPEED IS TOO HIGH FOR TYRE PRESSURE” “Slow down or adjust tyre pressures.”
Normal operation	OFF	TYRE PRESSURE INFO.

CAN COMMUNICATION

PFP:23710

System Description

EES000MG

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

LHD Models

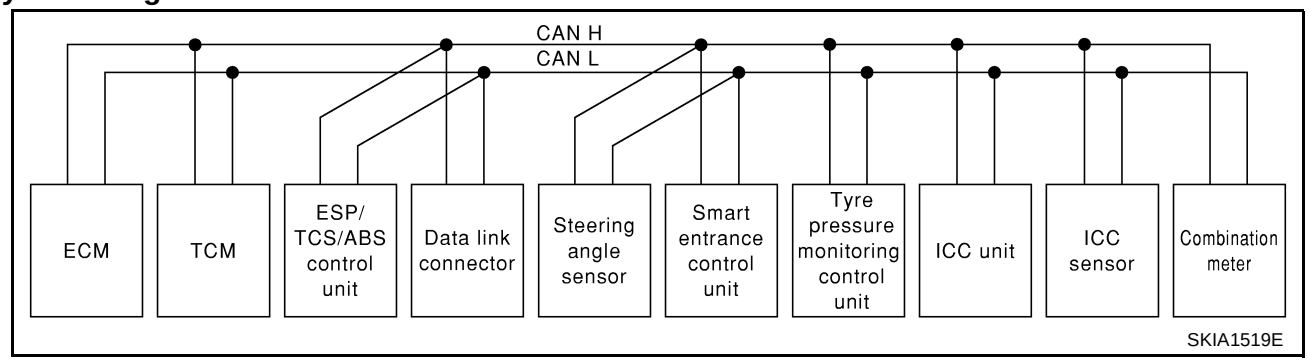
EES000MH

Go to CAN system, when selecting your car model from the following table.

Body type	Sedan/Wagon								
Axle	2WD								
Engine	QR20DE			QG18DE	QR20DE	QG16DE	QG18DE	QR20DE	YD22DD Ti
Transmission	CVT			A/T	6M/T	5M/T		6M/T	
Brake control	ESP		ABS		ESP	ABS			
ICC system	Applicable	Not applicable							
CAN communication unit									
ECM	×	×	×	×	×	×	×	×	×
TCM	×	×	×	×					
ESP/TCS/ABS control unit	×	×			×				
ABS actuator and electric unit (control unit)			×	×		×	×	×	×
Data link connector	×	×	×	×	×	×	×	×	×
Steering angle sensor	×	×			×				
Smart entrance control unit	×	×	×	×	×	×	×	×	×
Tyre pressure monitoring control unit	×	×	×	×	×	×	×	×	×
ICC unit	×								
ICC sensor	×								
Combination meter	×	×	×	×	×	×	×	×	×
CAN communication type	WT-13, "TYPE A"	WT-14, "TYPE B"	WT-15, "TYPE C"	WT-16, "TYPE D"	WT-17, "TYPE E"	WT-18, "TYPE F"			
Can system Trouble diagnosis	LAN-36, "CAN SYSTEM (TYPE 1)"	LAN-63, "CAN SYSTEM (TYPE 2)"	LAN-83, "CAN SYSTEM (TYPE 3)"	LAN-102, "CAN SYSTEM (TYPE 4)"	LAN-121, "CAN SYSTEM (TYPE 5)"	LAN-138, "CAN SYSTEM (TYPE 6)"			

TYPE A

System diagram



Input/output signal chart

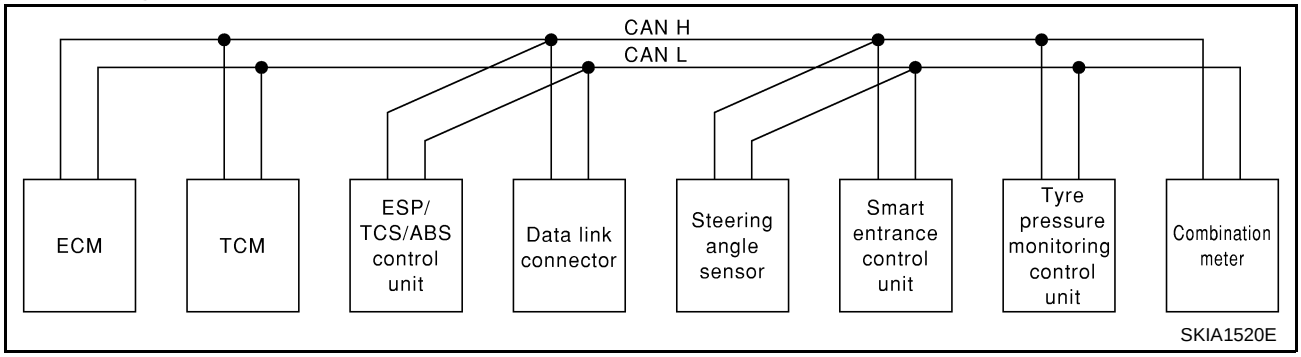
T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	ICC unit	ICC sensor	Combination meter
Engine speed signal	T	R	R				R		R
Accelerator pedal position signal	T	R	R				R		
Closed throttle position signal	T						R		
ICC steering switch signal	T						R		
Shift pattern signal		T					R		
Parking brake switch signal			T				R		
ICC system display signal							T		R
ICC sensor signal							R	T	
ESP operation signal	R		T				R		
TCS operation signal	R		T				R		
ABS operation signal	R	R	T				R		
Stop lamp switch signal		R	T						
Steering wheel angle sensor signal			R	T					
Wheel speed sensor signal			T				R		
Rear window defogger signal	R				T				
Heater fan switch signal	R								T
Air conditioner switch signal	R								T
Primary pulley revolution signal	R	T					R		
Secondary pulley revolution signal	R	T					R		
ICC operation signal	R						T		
Brake switch signal	R						T		
MI signal	T								R
Current gear position signal		T							R
Engine coolant temperature signal	T						R		R
Fuel consumption signal	T								R
Vehicle speed signal			T						R
	R								T
Seat belt reminder signal					R				T

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	ICC unit	ICC sensor	Combination meter
Headlamp switch signal					T				R
Flashing indicator signal					T				R
Engine cooling fan speed signal	T				R				
Child lock indicator signal					T				R
Door switches state signal					T				R
Key ID signal	R				T				
	T				R				
A/C compressor signal	T				R				
Tyre pressure signal						T			R

TYPE B

System diagram



Input/output signal chart

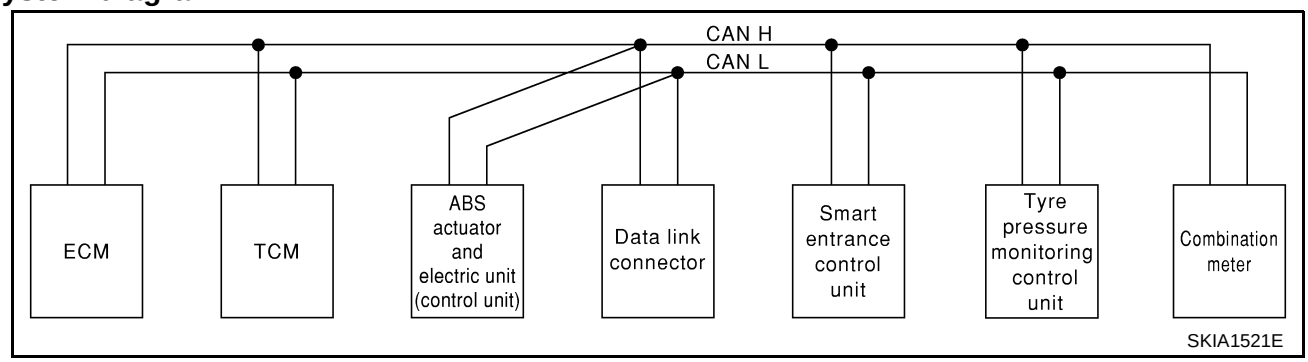
T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T	R	R				R
Accelerator pedal position signal	T	R	R				
ESP operation signal	R		T				
TCS operation signal	R		T				
ABS operation signal	R	R	T				
Stop lamp switch signal		R	T				
Steering wheel angle sensor signal			R	T			
Rear window defogger signal	R				T		
Heater fan switch signal	R						T
Air conditioner switch signal	R						T
Primary pulley revolution signal	R	T					
Secondary pulley revolution signal	R	T					
MI signal	T						R
Current gear position signal		T					R
Engine coolant temperature signal	T						R

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Fuel consumption signal	T						R
Vehicle speed signal			T				R
	R						T
Seat belt reminder signal					R		T
Headlamp switch signal					T		R
Flashing indicator signal					T		R
Engine cooling fan speed signal	T				R		
Child lock indicator signal					T		R
Door switches state signal					T		R
Key ID signal	R				T		
	T				R		
A/C compressor signal	T				R		
Tyre pressure signal						T	R

TYPE C

System diagram



Input/output signal chart

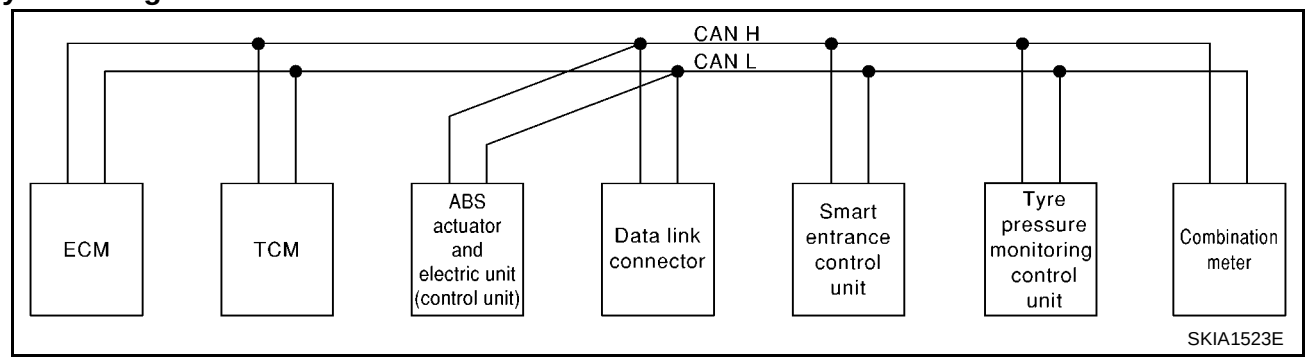
T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T	R				R
Stop lamp switch signal		R	T			
Rear window defogger signal	R			T		
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
Primary pulley revolution signal	R	T				
Secondary pulley revolution signal	R	T				
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Seat belt reminder signal				R		T
Headlamp switch signal				T		R
Flashing indicator signal				T		R
Engine cooling fan speed signal	T			R		
Child lock indicator signal				T		R
Door switches state signal				T		R
Key ID signal	R			T		
	T			R		
A/C compressor signal	T			R		
Tyre pressure signal					T	R

TYPE D

System diagram



Input/output signal chart

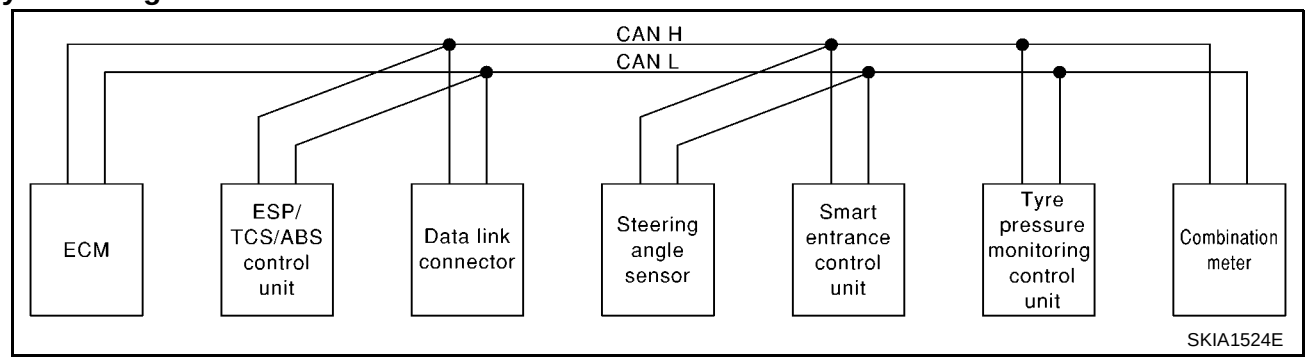
T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T	R				R
Stop lamp switch signal		R	T			
Rear window defogger signal	R			T		
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T
Seat belt reminder signal				R		T
Headlamp switch signal				T		R
Flashing indicator signal				T		R
Engine cooling fan speed signal	T			R		
Child lock indicator signal				T		R

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Door switches state signal				T		R
Key ID signal	R			T		
	T			R		
A/C compressor signal	T			R		
Tyre pressure signal					T	R

TYPE E

System diagram



Input/output signal chart

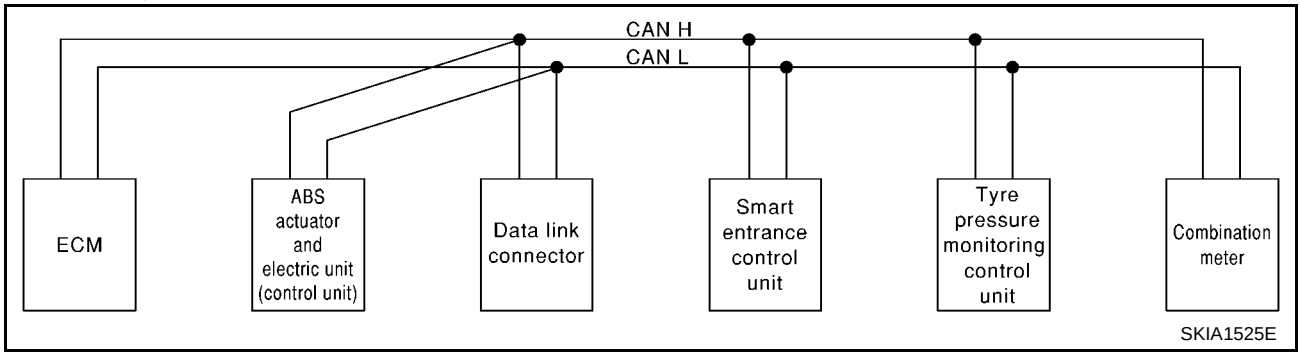
T: Transmit R: Receive

Signals	ECM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T	R				R
Accelerator pedal position signal	T	R				
ESP operation signal	R	T				
TCS operation signal	R	T				
ABS operation signal	R	T				
Steering wheel angle sensor signal		R	T			
Rear window defogger signal	R			T		
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
MI signal	T					R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal		T				R
	R					T
Seat belt reminder signal				R		T
Headlamp switch signal				T		R
Flashing indicator signal				T		R
Engine cooling fan speed signal	T			R		
Child lock indicator signal				T		R
Door switches state signal				T		R

Signals	ECM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Key ID signal	R			T		
	T			R		
A/C compressor signal	T			R		
Tyre pressure signal					T	R

TYPE F

System diagram



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T				R
Rear window defogger signal	R*1		T		
Heater fan switch signal	R*1				T
Air conditioner switch signal	R				T
MI signal	T				R
Glow lamp signal*2	T				R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R
Vehicle speed signal		T			R
	R				T
Seat belt reminder signal			R		T
Headlamp switch signal			T		R
Flashing indicator signal			T		R
Engine cooling fan speed signal	T		R		
Child lock indicator signal			T		R
Door switches state signal			T		R
Key ID signal	R		T		
	T		R		
A/C compressor signal	T		R		
Tyre pressure signal				T	R

*1: Except YD22DDTi engine model
*2: YD22DDTi engine model only

RHD Models

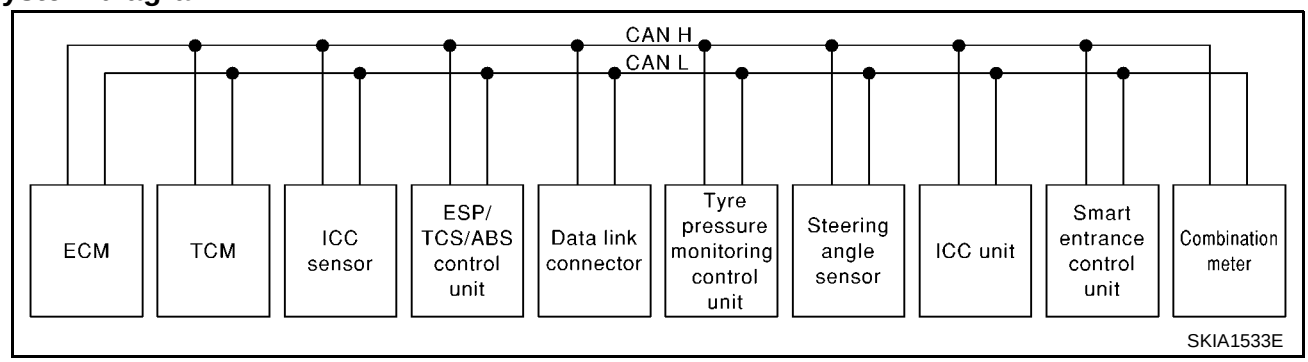
EES000MI

Go to CAN system, when selecting your car model from the following table.

Body type	Sedan/Wagon								
Axle	2WD								
Engine	QR20DE			QG18DE	QR20DE	QG16DE	QG18DE	QR20DE	YD22DD Ti
Transmission	CVT			A/T	6M/T	5M/T		6M/T	
Brake control	ESP		ABS		ESP	ABS			
ICC system	Applicable	Not applicable							
CAN communication unit									
ECM	×	×	×	×	×	×	×	×	×
TCM	×	×	×	×					
ICC sensor	×								
ESP/TCS/ABS control unit	×	×			×				
ABS actuator and electric unit (control unit)			×	×		×	×	×	×
Data link connector	×	×	×	×	×	×	×	×	×
Tyre pressure monitoring control unit	×	×	×	×	×	×	×	×	×
Steering angle sensor	×	×			×				
ICC unit	×								
Smart entrance control unit	×	×	×	×	×	×	×	×	×
Combination meter	×	×	×	×	×	×	×	×	×
CAN communication type	WT-19, "TYPE G"	WT-21, "TYPE H"	WT-22, "TYPE I"	WT-23, "TYPE J"	WT-24, "TYPE K"	WT-25, "TYPE L"			
Can system Trouble diagnosis	LAN-254, "CAN SYSTEM (TYPE 13)"	LAN-282, "CAN SYSTEM (TYPE 14)"	LAN-304, "CAN SYSTEM (TYPE 15)"	LAN-324, "CAN SYSTEM (TYPE 16)"	LAN-344, "CAN SYSTEM (TYPE 17)"	LAN-362, "CAN SYSTEM (TYPE 18)"			

TYPE G

System diagram



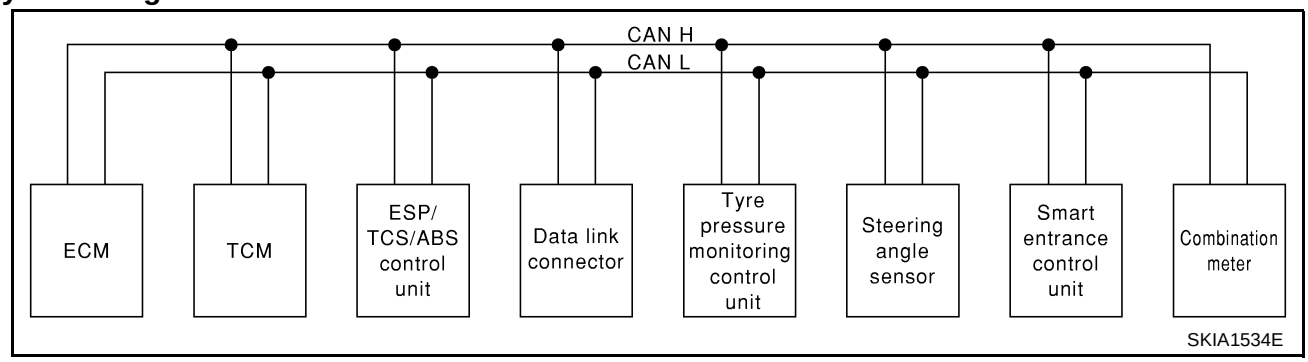
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ICC sensor	ESP/ TCS / ABS control unit	Tyre pressure monitoring control unit	Steering angle sensor	ICC unit	Smart entrance control unit	Combination meter
Engine speed signal	T	R		R			R		R
Accelerator pedal position signal	T	R		R			R		
Closed throttle position signal	T						R		
ICC steering switch signal	T						R		
Shift pattern signal		T					R		
Parking brake switch signal				T			R		
ICC system display signal							T		
ICC sensor signal			T				R		
ESP operation signal	R			T			R		
TCS operation signal	R			T			R		
ABS operation signal	R	R		T			R		
Stop lamp switch signal		R		T					
Steering wheel angle sensor signal				R		T			
Wheel speed sensor signal				T			R		
Rear window defogger signal	R							T	
Heater fan switch signal	R								T
Air conditioner switch signal	R								T
Primary pulley revolution signal	R	T					R		
Secondary pulley revolution signal	R	T					R		
ICC operation signal	R						T		
Brake switch signal	R						T		
MI signal	T								R
Current gear position signal		T							R
Engine coolant temperature signal	T						R		R
Fuel consumption signal	T								R
Vehicle speed signal				T					R
	R								T
Seat belt reminder signal								R	T
Headlamp switch signal								T	R
Flashing indicator signal								T	R
Engine cooling fan speed signal	T							R	
Child lock indicator signal								T	R
Door switches state signal								T	R
Key ID signal	R							T	
	T							R	
A/C compressor signal	T							R	
Tyre pressure signal					T				R

TYPE H

System diagram



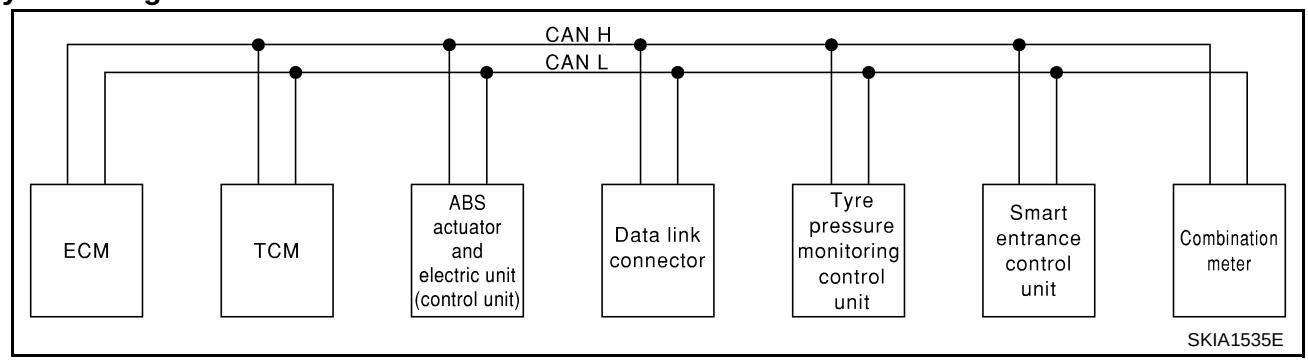
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Tyre pressure monitoring control unit	Steering angle sensor	Smart entrance control unit	Combination meter
Engine speed signal	T	R	R				R
Accelerator pedal position signal	T	R	R				
ESP operation signal	R		T				
TCS operation signal	R		T				
ABS operation signal	R	R	T				
Stop lamp switch signal		R	T				
Steering wheel angle sensor signal			R		T		
Rear window defogger signal	R					T	
Heater fan switch signal	R						T
Air conditioner switch signal	R						T
Primary pulley revolution signal	R	T					
Secondary pulley revolution signal	R	T					
MI signal	T						R
Current gear position signal		T					R
Engine coolant temperature	T						R
Fuel consumption signal	T						R
Vehicle speed signal			T				R
	R						T
Seat belt reminder signal						R	T
Headlamp switch signal						T	R
Flashing indicator signal						T	R
Engine cooling fan speed signal	T					R	
Child lock indicator signal						T	R
Door switches state signal						T	R
Key ID signal	R					T	
	T					R	
A/C compressor signal	T					R	
Tyre pressure signal				T			R

TYPE I

System diagram



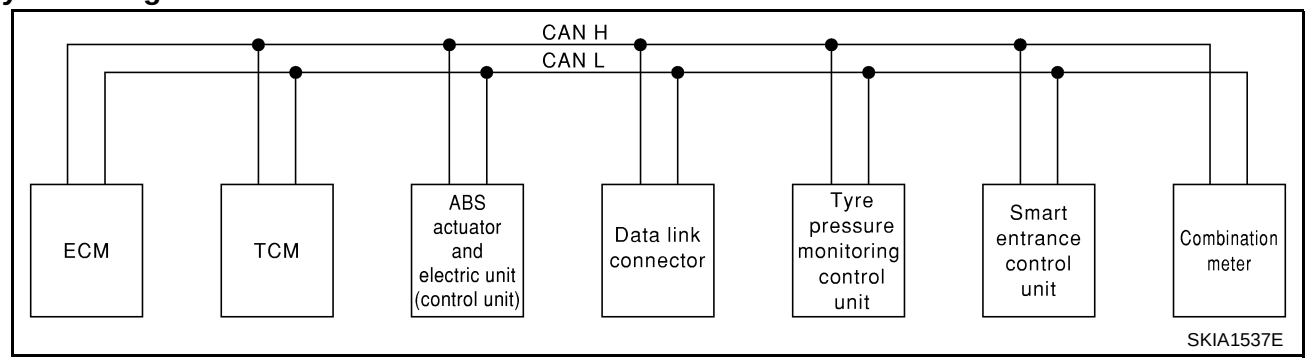
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Tyre pressure monitoring control unit	Smart entrance control unit	Combination meter
Engine speed signal	T	R				R
Stop lamp switch signal		R	T			
Rear window defogger signal	R				T	
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
Primary pulley revolution signal	R	T				
Secondary pulley revolution signal	R	T				
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T
Seat belt reminder signal					R	T
Headlamp switch signal					T	R
Flashing indicator signal					T	R
Engine cooling fan speed signal	T				R	
Child lock indicator signal					T	R
Door switches state signal					T	R
Key ID signal	R				T	
	T				R	
A/C compressor signal	T				R	
Tyre pressure signal				T		R

TYPE J

System diagram



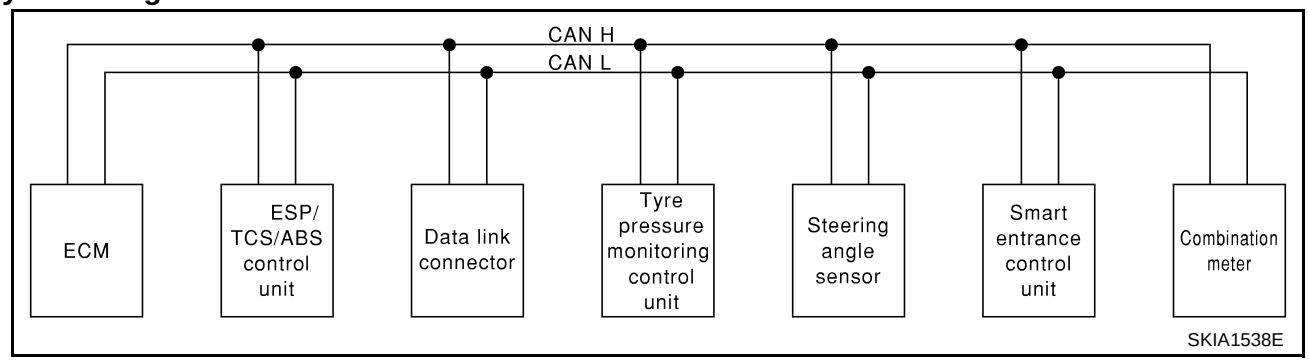
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Tyre pressure monitoring control unit	Smart entrance control unit	Combination meter
Engine speed signal	T	R				R
Stop lamp switch signal		R	T			
Rear window defogger signal	R				T	
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T
Seat belt reminder signal					R	T
Headlamp switch signal					T	R
Flashing indicator signal					T	R
Engine cooling fan speed signal	T				R	
Child lock indicator signal					T	R
Door switches state signal					T	R
Key ID signal	R				T	
	T				R	
A/C compressor signal	T				R	
Tyre pressure signal				T		R

TYPE K

System diagram



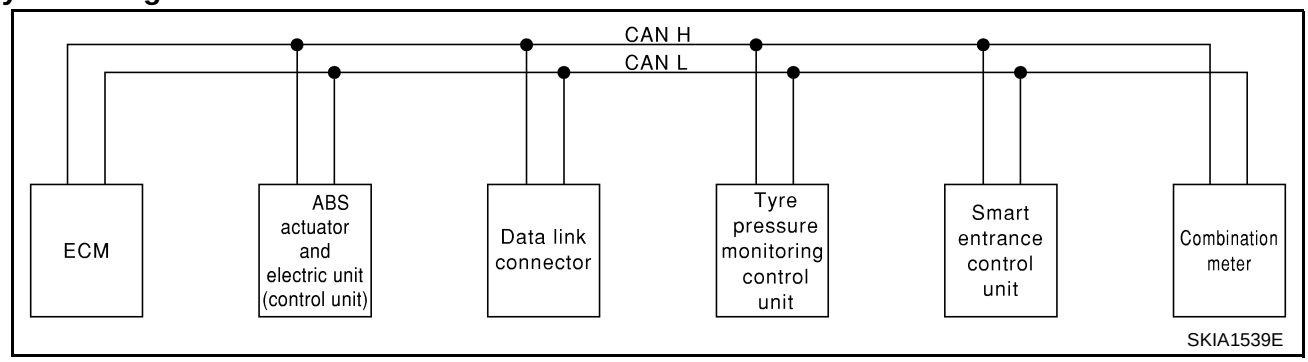
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	ESP/ TCS / ABS control unit	Tyre pressure monitoring control unit	Steering angle sensor	Smart entrance control unit	Combination meter
Engine speed signal	T	R				R
Accelerator pedal position signal	T	R				
ESP operation signal	R	T				
TCS operation signal	R	T				
ABS operation signal	R	T				
Steering wheel angle sensor signal		R		T		
Rear window defogger signal	R				T	
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
MI signal	T					R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal		T				R
	R					T
Seat belt reminder signal					R	T
Headlamp switch signal					T	R
Flashing indicator signal					T	R
Engine cooling fan speed signal	T				R	
Child lock indicator signal					T	R
Door switches state signal					T	R
Key ID signal	R				T	
	T				R	
A/C compressor signal	T				R	
Tyre pressure signal			T			R

TYPE L

System diagram



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	ABS actuator and electric unit (control unit)	Tyre pressure monitoring control unit	Smart entrance control unit	Combination meter
Engine speed signal	T				R
Rear window defogger signal	R*1			T	
Heater fan switch signal	R*1				T
Air conditioner switch signal	R				T
MI signal	T				R
Glow lamp signal*2	T				R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R
Vehicle speed signal		T			R
	R				T
Seat belt reminder signal				R	T
Headlamp switch signal				T	R
Flashing indicator signal				T	R
Engine cooling fan speed signal	T			R	
Child lock indicator signal				T	R
Door switches state signal				T	R
Key ID signal	R			T	
	T			R	
A/C compressor signal	T			R	
Tyre pressure signal			T		R

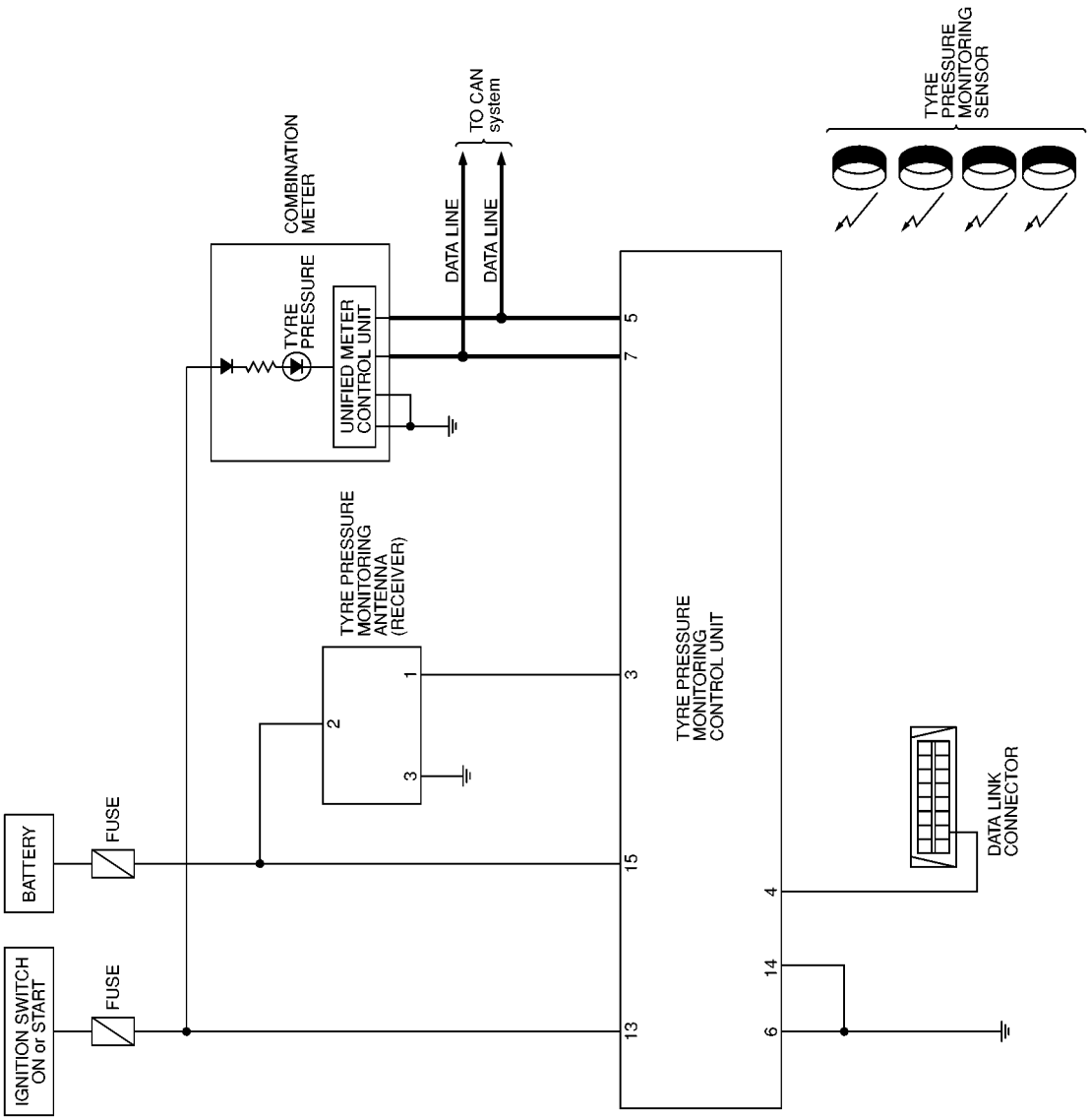
*1: Except YD22DDTi engine model
*2: YD22DDTi engine model only

TROUBLE DIAGNOSES

PFP:00004

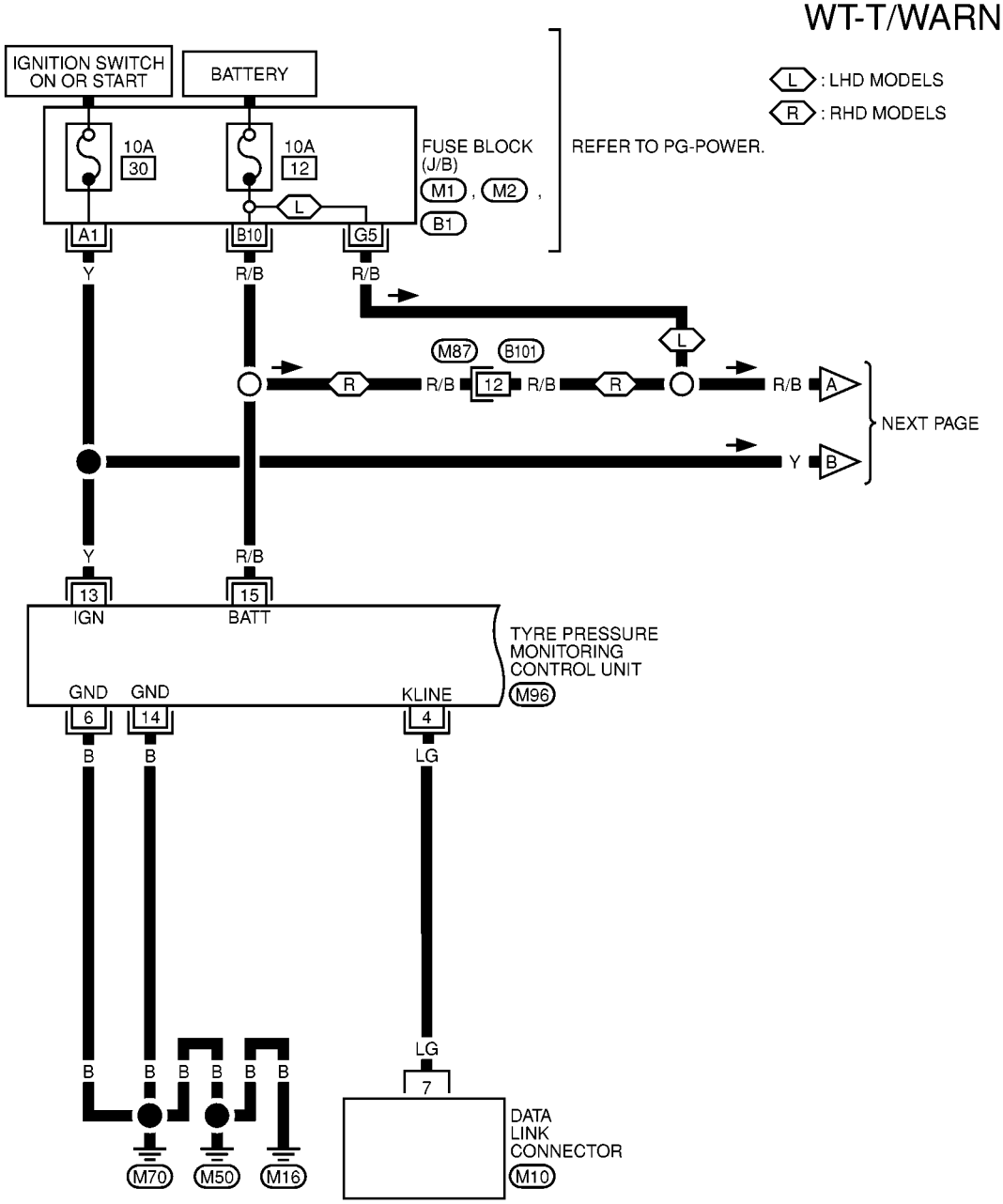
Wiring Diagram

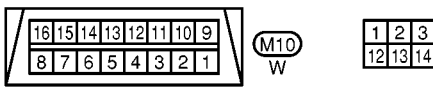
EES000KO

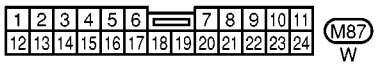


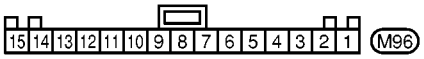
MKWA0359E

WT-T/WARN-01



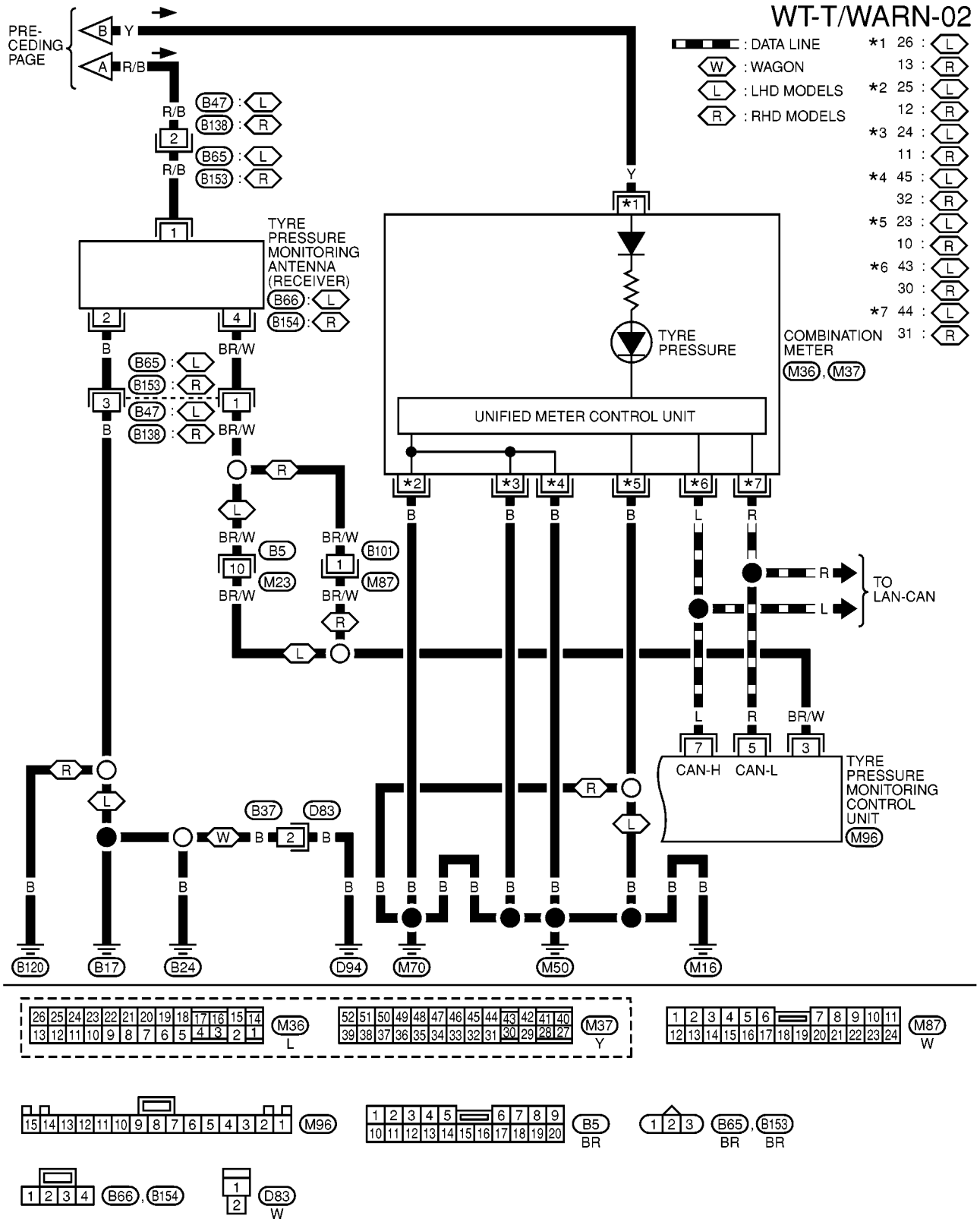






REFER TO THE FOLLOWING.
M1 , M2 , B1 -FUSE BLOCK-JUNCTION BOX (J/B)

MKWA0360E


WT-T/WARN-02
: DATA LINE
W : WAGON
L : LHD MODELS
R : RHD MODELS
*1 26 : L
13 : R
*2 25 : L
12 : R
*3 24 : L
11 : R
*4 45 : L
32 : R
*5 23 : L
10 : R
*6 43 : L
30 : R
*7 44 : L
31 : R
PRE-CEDING PAGE
TYRE PRESSURE MONITORING ANTENNA (RECEIVER)
B66 : L
B154 : R
B65 : L
B153 : R
B47 : L
B138 : R
TYRE PRESSURE
COMBINATION METER
M36, M37
UNIFIED METER CONTROL UNIT
TO LAN-CAN
CAN-H
CAN-L
TYRE PRESSURE MONITORING CONTROL UNIT
M96
B120
B17
B24
D94
M70
M50
M16
B37
D83
B5
B101
M23
M87
M36
L
M37
Y
M87
W
M96
B5
BR
B65, B153
BR BR
B66, B154
D83
W

MKWA0361E

ID Registration Procedure

EES000MT

The tyre pressure monitoring sensors ID for two sets of wheels can be registered as Summer tyre set and Winter tyre set. The ID registration is managed with CONSULT-II.

1. Before assemble the wheel (with the sensor) and tyre, record the ID number of each tyre pressure monitoring sensor which is mentioned on the sensor label.
2. Decide the sensor (the wheel) is installed which side, and install the wheels to the vehicle.
3. Turn ignition switch “OFF”.
4. Connect CONSULT-II to data link connector.
5. Turn ignition switch “ON”.
6. Touch “START”, “AIR PRESSURE MONITOR”, “WORK SUPPORT” and “ID REGIST (SUMMER)” or “ID REGIST (WINTER)”.
7. Register (input) the ID number of each sensor according to the CONSULT-II screen.

NOTE:
When “SUMMER” is selected in “TYRE SET SELECTION”, “WORK SUPPORT” mode, the ID registration screen (ID input screen) appears for “ID REGIST (SUMMER)” mode only.
Oppositely, “WINTER” is selected in “TYRE SET SELECTION” mode, the ID registration screen appears for “ID REGIST (WINTER)” only.

Self-Diagnosis

EES000KQ

DESCRIPTION

During driving, the tyre pressure monitoring system receives the signal transmitted from the tyre pressure monitoring sensor installed in each wheel, and gives warning when the tyre pressure becomes low. The control unit of this system has pressure judgement and trouble diagnosis functions.

FUNCTION

When the tyre pressure monitoring system detects low inflation pressure or another unusual symptom, the warning lamps in the combination meter comes on.

CONSULT-II

Function

Diagnostic test mode	Function
Work support	This mode enables a technician to initialize the sensor ID registration by following the indications on the CONSULT-II unit.
Self-diagnostic results	Self-diagnostic results can be read and erased quickly.
Data monitor	Input/Output data in the ECU can be read.
ECU part number	ECU part number can be read.

CONSULT-II Application to Tyre Pressure Monitoring System

ITEM	DATA MONITOR	SELF-DIAGNOSTIC RESULTS	WORK SUPPORT
Front - Left tyre pressure monitoring sensor	×	×	x
Front - Right tyre pressure monitoring sensor	×	×	x
Rear - Left tyre pressure monitoring sensor	×	×	x
Rear - Right tyre pressure monitoring sensor	×	×	x
Tyre pressure monitoring antenna (Receiver)	×	×	—
Vehicle speed signal	×	×	—
CAN communication line	×	×	—

×: Applicable
–: Not applicable

Data Monitor Mode

Item (CONSULT-II screen terms)	Description
IGN SW	Indicates [ON/OFF] condition from ignition switch.
VEHICLE SPEED	The vehicle speed computed from the vehicle speed signal is displayed.
WARNING LAMP	The warning lamp for Tyre Pressure Monitoring System condition is displayed.
DEFLATION CON	Indicates the condition of the tyre pressure deflation. ON ··· The tyre pressure is slightly deflating OFF Åc The tyre pressure is keeping
INFLATION CON	Indicates the condition of the tyre pressure inflation. ON ··· The tyre pressure is slightly inflating OFF ··· The tyre pressure is keeping
UNBLNC A/P RR	Indicates the umbalance condition of the tyres between Front LH and Front RH.
UNBLNC A/P FR	Indicates the umbalance condition of the tyres between Rear LH and Rear RH.
FL SEN STATUS FR SEN STATUS RR SEN STATUS RL SEN STATUS	Indicates the status of each tyre pressure monitoring sensor. TX ··· Transceiver problem. BAT ··· Low Battery voltage. REM ··· Switching of the sensor signal transmit timing. DEF··· This code is not used for service. WUP ··· Wake up the sensor to make short the signal transmit timing. NOR ··· Normal.
FL A/P STATUS FR A/P STATUS RR A/P STATUS RL A/P STATUS	Indicates the tyre pressure status of each tyre. OK ··· No problem. NO ··· No pressure signal is received form the sensor. OVR1 ··· The some of tyres are over inflated. OVR2 ··· The singular tyre is over inflated. UND1 ··· The singular tyre is under inflated. UND2 ··· The some of tyres are under inflated. UND3··· The some of tyres are strongly under inflated. LEAK ··· The tyre pressure is leaking.
AIR PRESS FL AIR PRESS FR AIR PRESS RR AIR PRESS RL	Indicates the value of the tyre pressure.
CAM COMM CAN CIRC 1 CAN CIRC 2	Indicates the communication condition of CAN communication line.

NOTE:
Before performing the self-diagnosis, be sure to register the ID. Or, the actual malfunction location may be different from that displayed on CONSULT-II.

Self Diagnostic Results Mode

Diagnostic item	Diagnostic item is detected when ...
FL WHL SEN MIS SIG	Tyre pressure monitoring sensor signal from front left wheel is missing.
FR WHL SEN MIS SIG	Tyre pressure monitoring sensor signal from front right wheel is missing.
RR WHL SEN MIS SIG	Tyre pressure monitoring sensor signal from back right wheel is missing.
RL WHL SEN MIS SIG	Tyre pressure monitoring sensor signal from back left wheel is missing.
VHCL SPEED SIGNAL	Vehicle speed signal is missing.
RECEIVER	Tyre pressure monitoring antenna (receiver) is missing.
CAN COMM CIRCUIT	CAN communication line is malfunctioning.
RECEIVER [PAST]	Missing tyre pressure monitoring antenna (receiver) is memorised.
FL WHL SEN [PAST]	Missing tyre pressure monitoring sensor signal from front left wheel is memorised.

Diagnostic item	Diagnostic item is detected when ...
FR WHL SEN [PAST]	Missing tyre pressure monitoring sensor signal from front right wheel is memorised.
RR WHL SEN [PAST]	Missing tyre pressure monitoring sensor signal from back right wheel is memorised.
RL WHL SEN [PAST]	Missing tyre pressure monitoring sensor signal from back left wheel is memorised.
CAN COMM [PAST]	Malfunctioning CAN communication line is memorised.

Work Support Mode

Mode	Description	Remarks
TYRE SET SELECTION	This mode can select Summer set or Winter set of wheels.	When the set of wheels are replaced with another set of wheels, the setting must be changed with this mode.
ID REGIST (SUMMER)	This mode can register Tyre Pressure Monitoring Sensor ID for Summer set of wheels	For details, refer to “ID Registration Procedure”
ID REGIST (WINTER)	This mode can register Tyre Pressure Monitoring Sensor ID for Winter set of wheels.	For details, refer to “ID Registration Procedure”
TPMS CANCELLATION	This mode can select Tyre Pressure Monitoring ON/OFF. ON ··· System is cancelled. OFF ··· System is running.	When the wheel set without Tyre Pressure Monitoring Sensor is installed, the system must be cancelled.
RECOMMENDED PRESS SETTING	This mode can initialize the standard value of tyre pressure.	The standard value is mentioned in the tyre pressure placard. When Tyre Pressure Monitoring Control Unit is replaced with new part, the standard value must be input

NOTE:
When “SUMMER” is selected in “SUM/WIN TYRES SETTING” mode, the ID registration screen (ID input screen) appears for “ID REGIST (SUMMER)” mode only.
Oppositely, “WINTER” is selected in “SUM/WIN TYRE SETTING” mode, the ID registration screen appears for “ID REGIST (WINTER)” only.

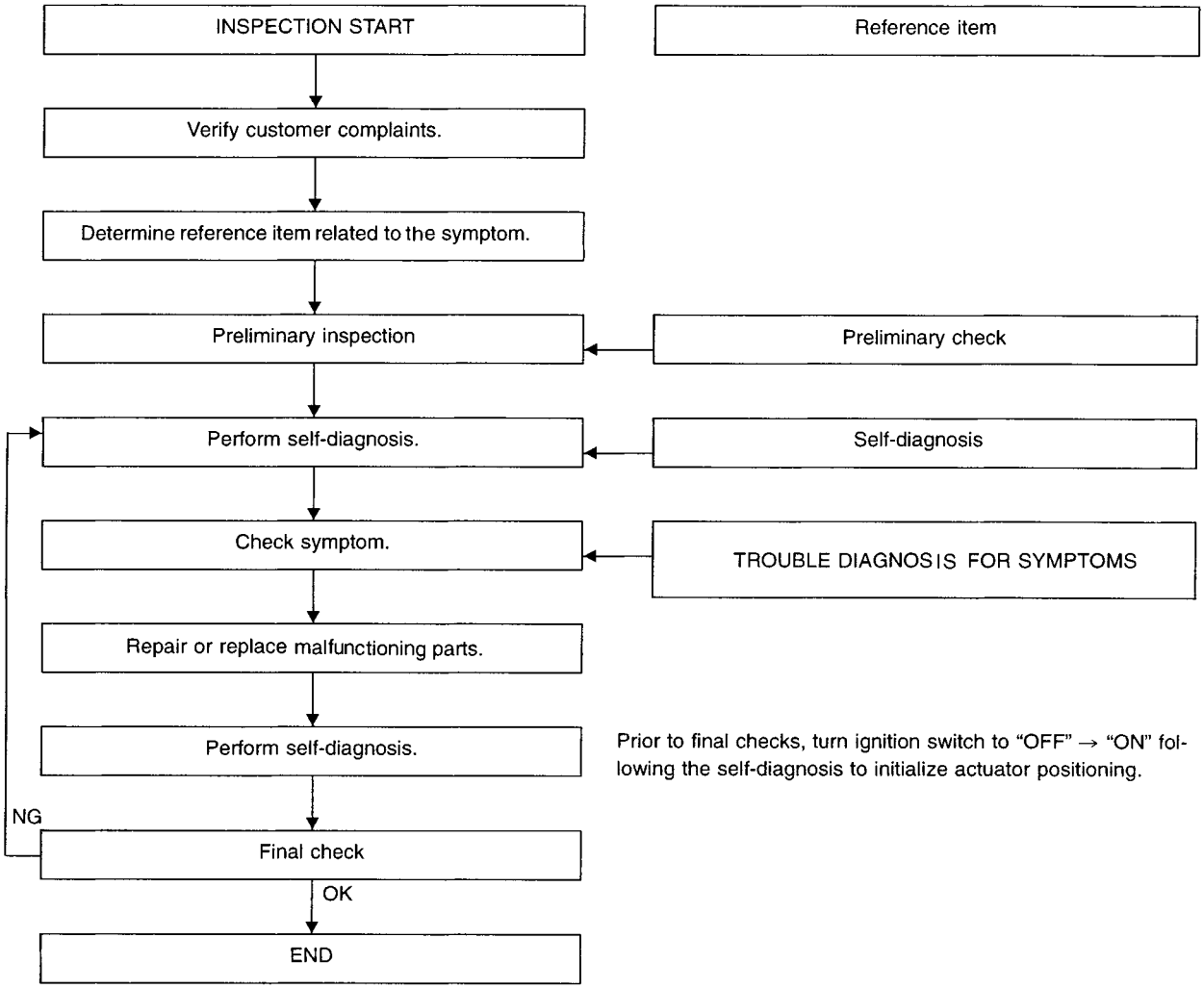
How to Perform Trouble Diagnosis for Quick and Accurate Repair

EES000KR

INTRODUCTION

- Before troubleshooting, verify customer complaints.
- If a vehicle problem is hard to reproduce, harnesses, harness connectors or terminals may often be malfunctioning. Hold and shake these parts by hand to make sure they are securely connected.
- When using a circuit tester to measure voltage or resistance of each circuit, be careful not to expand connector terminals.

WORK FLOW



SEIA0100E

Preliminary Check

EES000KS

BASIC INSPECTION

1. CHECK ALL TYRES PRESSURES

- Check all tyres pressures.

Tyre pressure : 220 kPa (2.2 kg/cm^2 , 32 psi)

Tyre pressure is OK?

OK >> GO TO 2.
NG >> Adjust tyre pressure to specified value. GO TO 2.

2. CHECK WARNING LAMP ACTIVATION

- Check warning lamp activation.
- Does warning lamp activate for 1 second when ignition switch is turned “ON”?

OK or NG?

OK >> ● Warning lamp turns off: GO TO 4
● Warning lamp turns off: GO TO 3

NG >> Check fuse and combination meter. Then repair or replace malfunctioning parts.

3. CHECK CONNECTOR

1. Disconnect tyre pressure monitoring control unit harness connector.
2. Check pin terminals for damage.
3. Reconnect harness connector.

Inspection results OK?

OK >> GO TO 4.
NG >> Repair or replace damaged parts.

4. CHECK TYRE PRESSURE MONITORING SENSOR ACTIVATION TOOL

- Check transmitter tool battery.

Inspection results OK?

OK >> Carry out self-diagnosis.
NG >> Replace transmitter activation tool battery.

Symptom Chart

EES000KT

Symptom	Malfunction part	Reference page
Missing sensor	Tyre pressure monitoring sensor no data (front - left) Tyre pressure monitoring sensor no data (front - right) Tyre pressure monitoring sensor no data (rear - right) Tyre pressure monitoring sensor no data (rear - left)	WT-34
Missing sensor	Tyre pressure monitoring sensor pressure data error (front - left) Tyre pressure monitoring sensor pressure data error (front - right) Tyre pressure monitoring sensor pressure data error (rear - right) Tyre pressure monitoring sensor pressure data error (rear - left)	WT-34
Warning lamp does not come on when ignition switch is turned on.	Fuse or combination meter Tyre pressure monitoring control unit connector or circuit Tyre pressure monitoring control unit	WT-36
Warning lamp stays on when ignition switch is turned on.	Fuse or combination meter Tyre pressure monitoring control unit connector or circuit Tyre pressure monitoring control unit	WT-37
“TYRE PRESSURE” information in display does not exist.	Fuse Display Tyre pressure monitoring control unit	WT-37
ID registration cannot be operated.	Tyre pressure monitoring sensor Tyre pressure monitoring antenna harness connector or circuit Tyre pressure monitoring antenna	WT-38

TROUBLE DIAGNOSIS FOR SELF-DIAGNOSTIC ITEMS

PFP:00000

Inspection 1: Tyre Pressure Monitoring Antenna

EES000KU

1. CHECK CONNECTOR

- Disconnect tyre pressure monitoring control unit connector. Check terminals for damage or loose connections. Then reconnect connector.
- Carry out self-diagnosis again.

Inspection results OK?

OK >> INSPECTION END.
NG >> GO TO 2.

2. CHECK TYRE PRESSURE MONITORING ANTENNA (RECEIVER) CONNECTOR

- Check tyre pressure monitoring antenna connector for damage or loose connections.

Inspection results OK?

OK >> GO TO 3.
NG >> Repair or replace tyre pressure monitoring antenna connector.

3. CHECK TYRE PRESSURE MONITORING ANTENNA (RECEIVER) CIRCUIT

- Check tyre pressure monitoring antenna circuit continuity.

Does continuity exit?

YES >> Check tyre pressure monitoring sensor. GO TO “Inspection 2”
NO >> Repair replace tyre pressure monitoring antenna circuit.

Inspection 2: Tyre Pressure Monitoring Sensor

EES000KV

1. ID REGISTRATION

- Carry out ID registration.
- Drive the vehicle for 5 minutes or longer.

Does warning lamp activate?

YES >> GO TO 2.
NO >> INSPECTION END.

2. REPLACE TYRE PRESSURE MONITORING SENSOR

- Replace the tyre pressure monitoring sensor of malfunctioning part.

Does warning lamp still activate again?

YES >> GO TO “Inspection 3”.
NO >> INSPECTION END.

Inspection 3: Tyre Pressure Monitoring Control Unit

EES000KW

1. SELF-DIAGNOSIS

- Carry out self-diagnosis.

Does warning lamp still activate again?

YES >> Replace tyre pressure monitoring control unit.
NO >> INSPECTION END.

Inspection 4: CAN Communication Line

EES000MS

1. INSPECTION START

1. Turn ignition switch “ON”.
2. Select “CAN COMM” in “DATA MONITOR” mode with CONSULT-II.
3. Print out the CONSULT-II screen.

>> Go to LAN-8, "CAN COMMUNICATION" .

TROUBLE DIAGNOSIS FOR SYMPTOMS

PFP:00007

Inspection 1: Warning Lamp Does Not Come On When Ignition Switch Is Turned On.

EES000KX

DIAGNOSTIC PROCEDURE

1. CHECK COMBINATION METER

- Check combination meter operation.

Inspection results OK?

OK >> GO TO 2.
NG >> Check combination meter and repair or replace.

2. CHECK WARNING LAMP

- Disconnect low pressure monitoring control unit connector.

Does the warning lamp activate?

YES >> Replace combination meter.
NO >> GO TO 3.

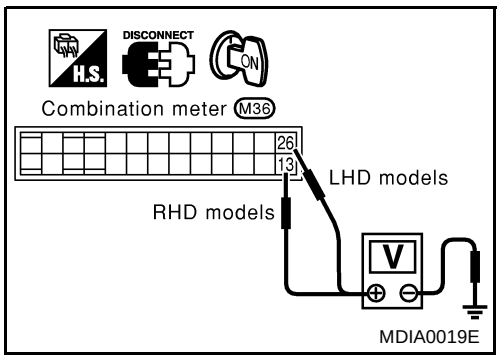
3. CHECK COMBINATION METER POWER SUPPLY CIRCUIT

- Check voltage between combination meter terminal No. 26 (LHD), No. 13 (RHD) and ground.

Battery voltage

Does battery voltage exist?

YES >> GO TO 4.
NO >> Repair or replace harness and harness connector.

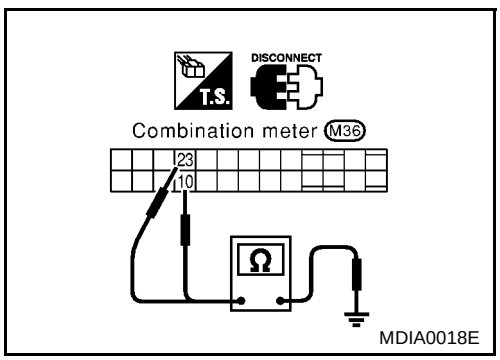


4. CHECK COMBINATION METER GROUND CIRCUIT

- Check continuity between combination meter terminal No. 23 (LHD), No. 10 (RHD) and ground.

Does continuity exist?

YES >> Check combination meter.
NO >> Repair or replace harness or connector.



Inspection 2: Warning Lamp Stays On When Ignition Switch Is Turned On.

EES000KY

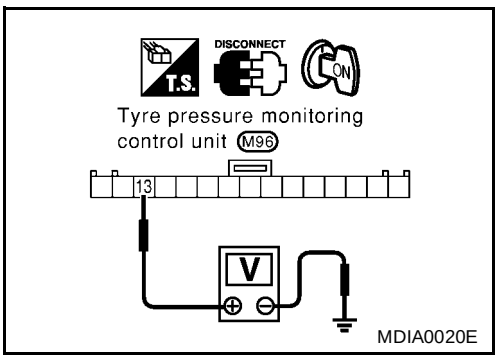
DIAGNOSTIC PROCEDURE

1. CHECK POWER SUPPLY CIRCUIT

- Check voltage between tyre pressure monitoring control unit terminal No. 13 and ground.
- Carry out self-diagnosis again.

Does battery voltage exit when ignition switch is turned “ON”?

YES >> GO TO 2.
NO >> Repair or replace power supply harness connector.



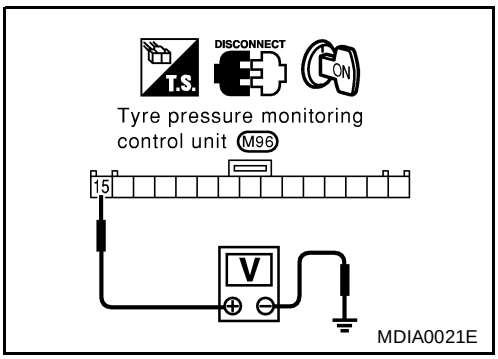
2. CHECK POWER SUPPLY CIRCUIT

- Check voltage between tyre pressure monitoring control unit terminal 2 and ground.

15 - Ground : Battery voltage

Does battery voltage exist?

YES >> GO TO 3.
NO >> Repair or replace harness connector.

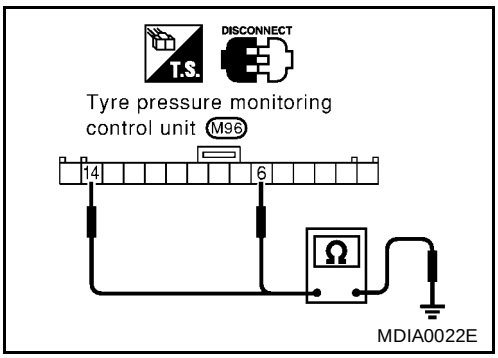


3. CHECK GROUND CIRCUIT

- Check continuity between tyre pressure monitoring control unit terminal No. 6, No. 14 and ground.
- Carry out self-diagnosis again.

Does continuity exist?

YES >> Replace low tire pressure monitoring control unit.
NO >> Repair or replace ground circuit harness connector.



Inspection 3: “TYRE PRESSURE” Information In Display Does Not Exist.

EES000L1

DIAGNOSTIC PROCEDURE

1. CHECK FUSE

- Check 10A fuse No. 12 for tyre pressure monitoring control unit.

Is fuse OK?

OK >> GO TO 2.
NG >> Replace fuse.

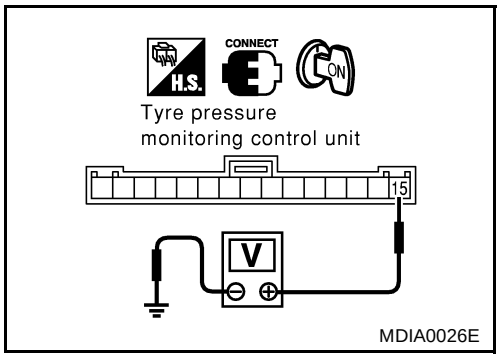
2. CHECK CIRCUIT

- Ignition switch is turned “ON”.
- Check voltage between tyre pressure monitoring control unit connector M96 terminal 15 and ground.

15- Ground : Battery voltage

Does battery voltage exist?

YES >> Check display. DI-65, "System Description"
NO >> GO TO 3.



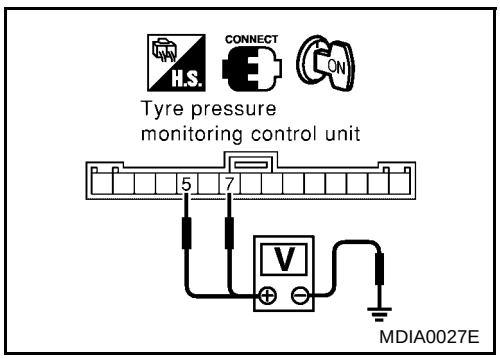
3. CHECK CONTROL UNIT INPUT SIGNAL

- Ignition switch is turned “ON”.
- Check voltage between tyre pressure monitoring control unit terminal No. 5 or No. 7 and ground.

5, 7 - Ground : 0V (Min.) and 5V (Max.) are alternately repeated

Inspection results OK?

OK >> Check combination meter.
NG >> Replace harness connector between tyre pressure monitoring control unit and display.



Inspection 4: ID Registration Can Not Be Completed

EES000L2

DIAGNOSTIC PROCEDURE

1. ID REGISTRATION (ALL)

- Carry out ID registration of all tyre pressure monitoring sensor.
- Can ID registration of all tyre pressure monitoring sensor be completed?

YES or NO?

YES >> INSPECTION END.
NO >> Go To Inspection 1: Tyre Pressure Monitoring Antenna in TROUBLE DIAGNOSIS FOR SELF-DIAGNOSTIC ITEMS.

REMOVAL AND INSTALLATION

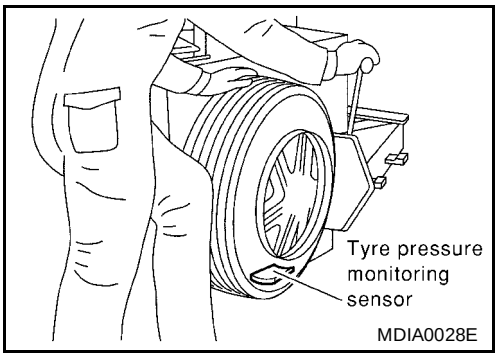
PFP:00000

Tyre Pressure Monitoring Sensor

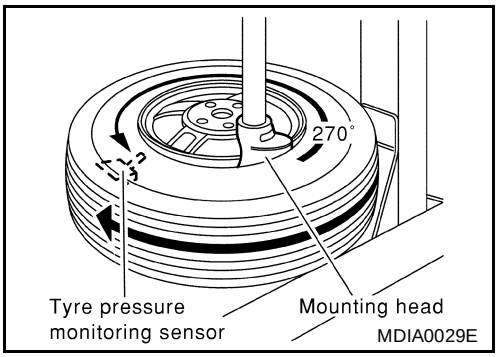
EES000L3

REMOVAL

1. Deflate tire. Unscrew transmitter retaining nut and allow transmitter to fall into tyre.
2. Gently bounce tyre so that transmitter falls to bottom of tire. Place on tyre changing machine and break both tire beads ensuring that the transmitter remains at the bottom of the tyre.

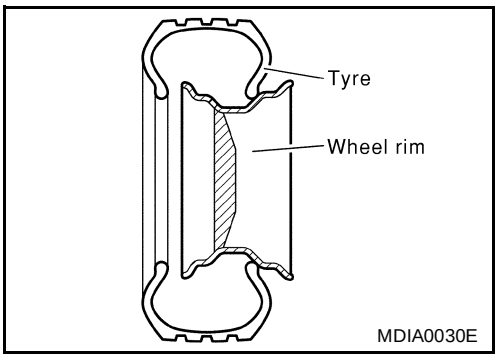


3. Turn tyre so that valve hole is at bottom and bounce so that tyre pressure monitoring sensor is near valve hole. Carefully lift tyre onto turntable and position valve hole (and transmitter) 270 degree from mounting/dismounting head.
4. Lubricate tyre well and remove first side of the tyre. Reach inside the tyre and remove the tyre pressure monitoring sensor. Remove second side of tyre.

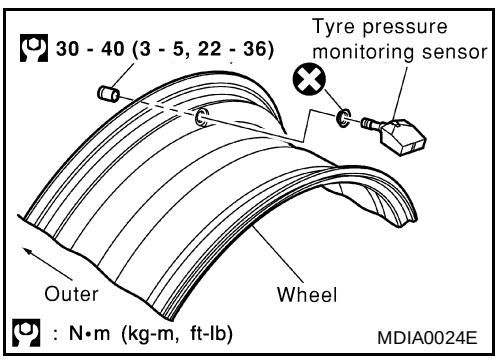


INSTALLATION

1. Put first side of tyre onto rim.

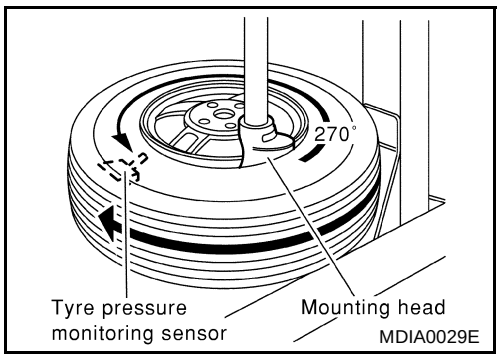


2. Mount tyre pressure monitoring sensor on rim and tighten nut.



3. Place wheel on turntable of tyre machine. Ensure that tyre pressure monitoring sensor is 270 degree from mounting head when second side of tyre is fitted.

   NOTE:
   Do not touch tyre pressure monitoring sensor at mounting head.



4. Lubricate tyre well and fit second side of tyre as normal. Ensure that tyre does not rotate relative to rim.
5. Inflate tyre and fit to appropriate wheel position.

SERVICE DATA

PFP:00030

Road Wheel

EES000L7

Kind of wheel		Aluminum	Steel
Deflection limit	Lateral deflection	Less than 0.3 mm (0.012 in)	Less than 0.5 mm (0.020 in)
	Vertical deflection	Less than 0.3 mm (0.012 in)	Less than 0.8 mm (0.031 in)
Allowable quantity of residual unbalance	Dynamic (On the ear part)	Less than 10 g (0.35 oz) (per side)	
	Static (On the ear part)	Less than 20 g (0.70 oz)	

Tyre

EES000L8

Unit: kPa (kg/cm^2 , psi)

Tyre size	Air pressure		
	Front wheel	Rear wheel	
		Sedan	Wagon
205/60R16 215/50R17	220 (2.2, 32)	200 (2.0, 29)	220 (2.2, 32)