DCT(Dual Clutch Transmission) System / Transmission Gear Oil

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Repair procedures

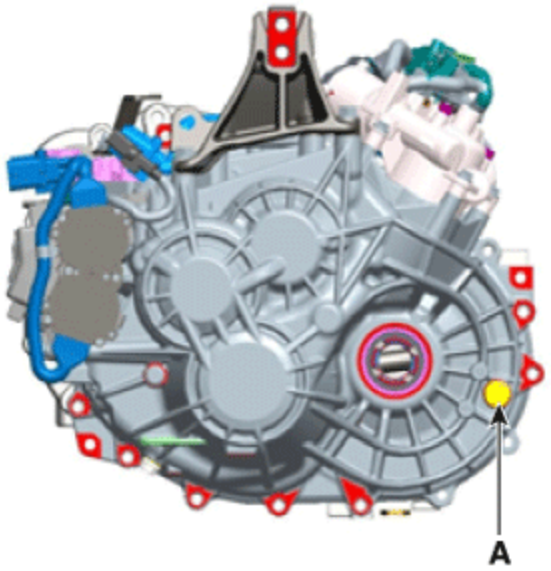
Inspection

Oil level check

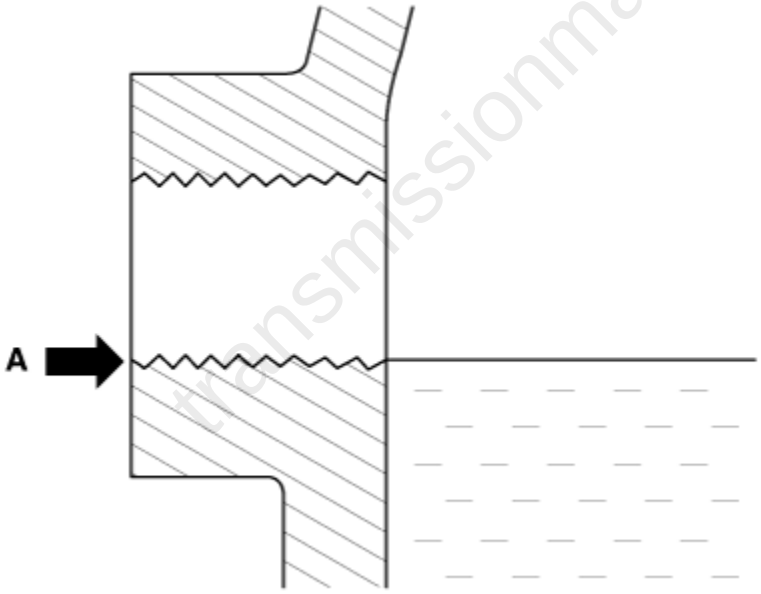
1. Remove the under cover.

   (Refer to Engine Mechanical System - "Engine Room Under Cover")

2. Remove the oil filler plug (A).



3. Check the condition of the oil and make sure that it is at the proper level (A).

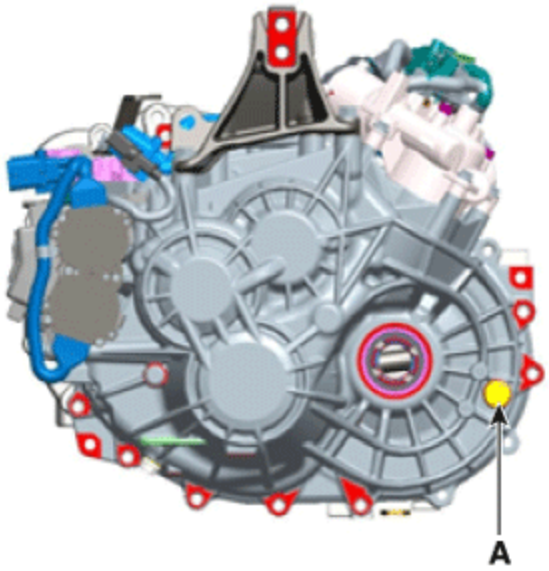


4. Install the oil filler plug (A).

Tightening torque :

58.9 - 78.5 N·m (6.0 - 8.0 kgf·m, 43.4 - 57.8 lb·ft)

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NOTICE

The existing oil filler plug gasket must be replaced with a new one. (Do not reuse it.)

5. Install the under cover.

   (Refer to Engine Mechanical System - "Engine Room Under Cover")

Replacement

1. Remove the under cover.

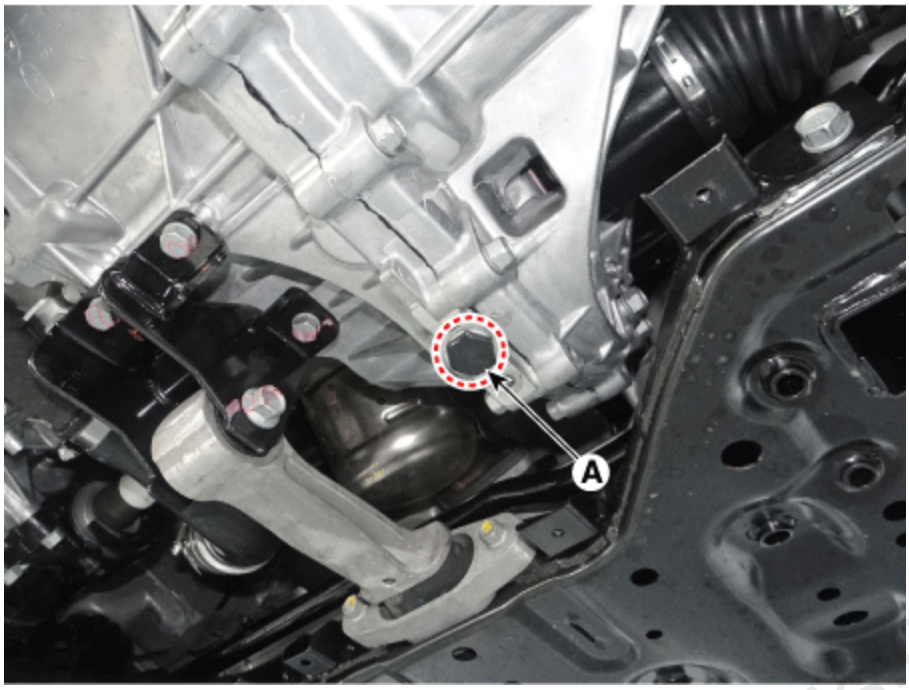
   (Refer to Engine Mechanical System - "Engine Room Under Cover")

2. Remove the drain plug (A), allow the oil to drain out and then reinstall the drain plug.

   Tightening torque :

   58.9 - 78.5 N·m (6.0 - 8.0 kgf·m, 43.4 - 57.8 lb·ft)

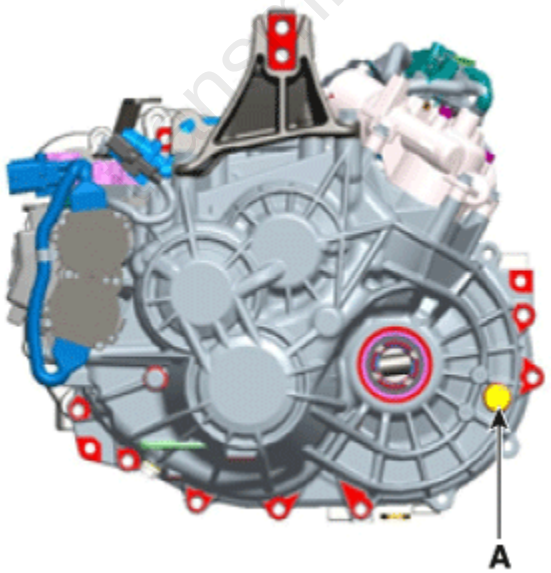
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NOTICE

The existing oil drain plug gasket must be replaced with a new one. (Do not reuse it.)

3. Remove the oil filler plug (A).



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4. Fill the transmission with transmission oil through the filler hole.

Recommended :

- SAE 70W, API GL-4

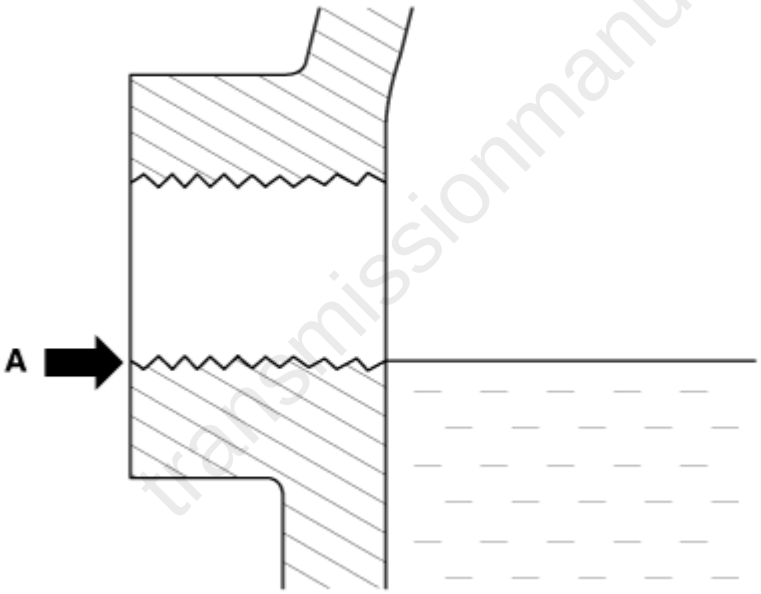
·Recommended transaxle oil: SK HK SYN DCTF 70W, SHELL SPIRAX S6 GHME 70W DCTF, GS CALTEX GS DCTF HD 70W

Capacity :

1.9 - 2.0 L (0.50 - 0.53 U.S.gal., 2.01 - 2.11 U.S. qt., 1.67 - 1.76 lmp qt.)

NOTICE

Make sure that oil level is at the proper level (A).

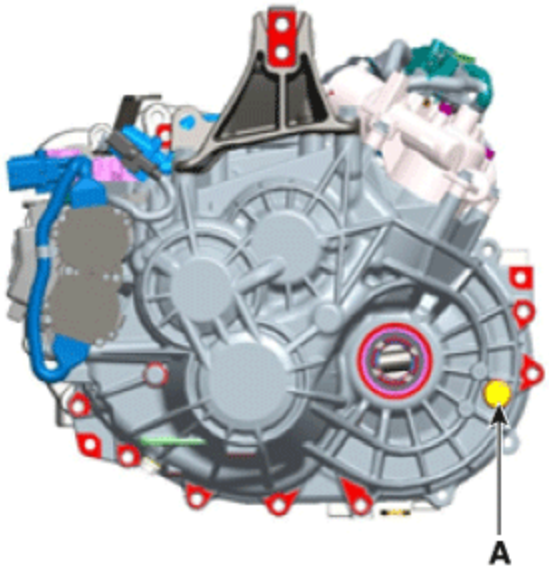


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5. Install the oil filler plug (A).

Tightening torque :

58.9 - 78.5 N·m (6.0 - 8.0 kgf·m, 43.4 - 57.8 lb·ft)



NOTICE

The existing oil filler plug gasket must be replaced with a new one. (Do not reuse it.)

6. Install the under cover.

   (Refer to Engine Mechanical System - "Engine Room Under Cover")

DCT(Dual Clutch Transmission)

Components and components location Components 1. DCT (Dual Clutch Transmission) assembly 2. Clutch actuator assembly 3. Gear actuator assembly 4. Roll rod su ...

Dual Clutch System

...

Other information:

Kia Forte 2019-2023 (BD) Service Manual: Ambient Temperature Sensor

Description and operation Description The ambient temperature sensor is located at the front of the condenser and detects ambient air temperature. It is a negative type thermistor; resistance will increase with lower temperature, and decrease with higher temperature. The sensor o ...

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Kia Forte 2019-2023 (BD) Owners Manual: Service Mode

Service in It calculates and displays (in mileage or days) when you need a scheduled maintenance service. If the remaining mileage or time reaches 1,500 km (900 mi.) or 30 days, a “Service in” message is displayed for several seconds each time you set the ignition switch or Engine ...

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LCD display for transmission temperature and warning message / Transmission ranges

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The indicator in the instrument cluster displays the shift lever position when the ignition switch is in the ON position.

P (Park)

Always come to a complete stop before shifting into P (Park).

To shift from P (Park), you must depress firmly on the brake pedal and make sure your foot is off the accelerator pedal.

If you have done all of the above and still cannot shift the lever out of P (Park), see “Shift-Lock Release” in this chapter.

The shift lever must be in P (Park) before turning the engine off.

WARNING

- *Shifting into P (Park) while the vehicle is in motion may cause you to lose control of the vehicle.*
- *After the vehicle has stopped, always make sure the shift lever is in P (Park), apply the parking*

brake, and turn the engine off.

- *When parking on an incline, chock the wheels to prevent the vehicle from rolling down.*
- *For safety, always engage the parking brake with the shift lever in the P (Park) position except for the case of emergency parking.*
- *Do not use the P (Park) position in place of the parking brake.*

R (Reverse)

Use this position to drive the vehicle backward.

CAUTION

Always come to a complete stop before shifting into or out of R (Reverse); you may damage the transmission if you shift into R (Reverse) while the vehicle is in motion.

N (Neutral)

The wheels and transmission are not engaged.

Use N (Neutral) if you need to restart a stalled engine, or if it is necessary to stop with the engine ON. Shift into P (Park) if you need to leave your vehicle for any reason.

Always depress the brake pedal when you are shifting from N (Neutral) to another gear.

WARNING

Do not shift into gear unless your foot is firmly on the brake pedal. Shifting into gear when the engine is running at high speed can cause the vehicle to move very rapidly.You may lose control of the vehicle and cause accidents.

WARNING

Do not drive with the shift lever in N (Neutral).

The engine brake may not work, which may lead to an accident.

- Parking in N (Neutral) gear

Follow the steps below when parking and you want the vehicle to move when pushed.

1.After parking your vehicle, step on the brake pedal and move the shift lever to [P] with the engine start/stop button in [ON] or while the engine is running.

2.If the parking brake is applied, unlock the parking brake.

- For EPB (Electronic Parking Brake) equipped vehicles, push the brake pedal with the engine start/stop button in [ON] or while the engine is running to disengage the parking brake. If [AUTO HOLD] function is used while driving (If [AUTO HOLD] indicator is on in the cluster), press [AUTO HOLD] switch and [AUTO HOLD] function should turn off.

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3.While pressing the brake pedal, turn the engine start/stop button [OFF].

- For smart key equipped vehicles, the ignition switch can be moved to [OFF] only when the shift lever is in [P].

4.Change the gear shift lever to [N] (Neutral) while pressing the brake pedal and pushing [SHIFT LOCK RELEASE] button or inserting, pressing down a tool (e.g. flathead screw-driver) into the [SHIFT LOCK RELEASE] access hole at the same time. Then, the vehicle will move when external force is applied.

CAUTION

- *With the exception of parking in neutral gear, always park the vehicle in [P] (Park) for safety and engage the parking brake.*
- *Before parking in [N] (Neutral) gear, first make sure the parking ground is level and flat. Do not park in [N] gear on any slopes or gradients. If parked and left in [N], the vehicle may move and cause serious damage and injury.*
- *After the ignition switch has been turned off, the electronic parking brake cannot be disengaged.*
- *For EPB (Electronic Parking Brake) equipped vehicles with [AUTO HOLD] function used while driving, if the engine start/stop button has been turned [OFF], the electronic parking brake will be engaged automatically. Therefore, [AUTO HOLD] function should be turned off before the engine start/stop button is turned off.*

D (Drive)

This is the normal driving position. The transmission will automatically shift through a seven-gear sequence, providing the best fuel economy and power.

For extra power when passing another vehicle or driving uphill, depress the accelerator pedal further until you feel the transmission downshift to a lower gear.

WARNING

Always fully depress the brake pedal before and while shifting out of the P (Park) position into another position to avoid inadvertent motion of the vehicle, which could injure persons in or around the car.

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DCT warning messages

◈■ Type A ■ Type B This warning message is displayed when the vehicle is driven slowly on a grade and the vehicle detects that the brake pedal is not applied. Steep grade Driving up ...

Paddle shifter

The paddle shifter is available when the shift lever is in the D (Drive) position or the manual mode. With the shift lever in the D position The paddle shifter will operate when the vehicle ...

Other information:

Kia Forte 2019-2023 (BD) Service Manual: Crankcase Emission Control System

Schematic diagrams Schematic Diagram Repair procedures Inspection 1. After disconnecting the vapor hose from the PCV valve, remove the PCV valve. 2. Reconnect the PCV valve to the vapor hose. 3. In ...

Kia Forte 2019-2023 (BD) Service Manual: ESCL(Electronic Steering Column Lock)

Schematic diagrams Connector and Terminal funciton Repair procedures Removal 1. Disconnect the negative(-) battery terminal. 2. Remove the crash pad lower panel. (Refer to Body - "Crash Pad Lower Panel") ...

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Instrument cluster / Transmission Shift Indicator

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Intelligent Variable Transmission



This indicator displays which intelligent variable transmission shift lever mode is selected.

- Park :P
- Reverse : R

- Neutral : N
- Drive :D
- Sports Mode : 1, 2, 3, 4, 5, 6

Manual transmission shift indicator



This indicator informs which gear is desired while driving to save fuel.

- Shifting up :▲2, ▲3, ▲4, ▲5, ▲6
- Shifting down : ▼1, ▼2, ▼3, ▼4, ▼5

For example

▲3: Indicates that shifting up to the 3rd gear is desired (currently the shift lever is in the 2nd or 1st gear).

▼4: Indicates that shifting down to the 4th gear is desired (currently the shift lever is in the 5th or 6th gear).

When the system is not working properly, the indicator is not displayed.

Dual clutch transmission shift indicator

Dual clutch transmission shift indicator

This indicator displays which shift lever mode is selected.

- Park :P
- Reverse : R
- Neutral : N
- Drive : D1, D2, D3, D4, D5, D6, D7
- Sports Mode : S1, S2, S3, S4, S5, S6, S7

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Odometer, Outside Temperature Gauge

Odometer Odometer The odometer indicates the total distance the vehicle has been driven. You will also find the odometer useful to determine when periodic maintenance should be performed. ...

LCD windows

Over view LCD windows show the following various information to drivers. - Trip information - LCD modes - Warning messages ...

Other information:

Kia Forte 2019-2023 (BD) Owners Manual: Wiper blades

Blade inspection Commercial hot waxes applied by automatic car washes have been known to make the windshield difficult to clean. Contamination of either the windshield or the wiper blades with foreign matter can reduce the effectiveness of the windshield wipers. Common sources of c ...

Kia Forte 2019-2023 (BD) Owners Manual: License plate lamp bulb replacement

1. Remove the lamp assembly by using a flat-blade screwdriver. 2. Remove the socket from the assembly by turning the socket counterclockwise until the tabs on the socket align with the slots on the assembly. 3. Remove the bulb from bulb-socket by pulling it out. 4. Insert a new bulb ...

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Remote keyless entry / Transmitter precautions

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The transmitter (or smart key) will not work if any of following occurs:

- The ignition key is in the ignition switch.
- You exceed the operating distance limit (about 30 m [90 feet]).
- The battery in the transmitter (or smart key) is weak.
- Other vehicles or objects may be blocking the signal.
- The weather is extremely cold.
- The transmitter (or smart key) is close to a radio transmitter such as a radio station or an airport which can interfere with normal operation of the transmitter.

When the transmitter (or smart key) does not work properly, open and close the door with the ignition key. If you have a problem with the transmitter (or smart key), contact an authorized Kia dealer.

• If the transmitter is in close proximity to your cell phone or smart phone, the signal from the transmitter could be blocked by normal operation of your cell phone or smart phone.This is especially important when the phone is active such as making calls, receiving calls, text messaging, and/or sending/ receiving emails. Avoid placing the transmitter and your cell phone or smart phone in the same pants or jacket pocket and maintain adequate distance between the two devices.

✻ *NOTICE*

Changes or modifications not expressly approved by the party responsible for compliance could void the

user's authority to operate the equipment. If the keyless entry system is inoperative due to changes or modifications not expressly approved by the party responsible for compliance, it will not be covered by your manufacturer's vehicle warranty.

Remote keyless entry system operations

■ Type A ■ Type B Lock (1) All doors are locked if the lock button is pressed. If all doors are closed, the hazard warning lights will blink and the chime will sound once to indicate ...

Battery replacement

A battery should last for several years, but if the transmitter or smart key is not working properly, try replacing the battery with a new one. If you are unsure how to use or replace the ba ...

Other information:

Kia Forte 2019-2023 (BD) Service Manual: Integrated Central Control Unit (ICU)

Components and components location Component Location 1. Integrated central control unit (ICU) Description and operation Description Communication Network Diagram Abbreviation Explanation ...

Kia Forte 2019-2023 (BD) Owners Manual: Fuses

A vehicle's electrical system is protected from electrical overload damage by fuses. This vehicle has 2 (or 3) fuse panels, one located in the driver's side panel bolster, the other in the engine compartment near the battery. If any of your vehicle's lights, accessories, or con ...

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Trip information (Trip computer) / Trip A/B (For type A cluster)

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Tripmeter (1)

- The tripmeter is the total driving distance since the last tripmeter reset.
  - Distance range : 0 ~ 1599999 km or 0 ~ 999999 mi.
- To reset the tripmeter, press the RESET button on the steering wheel for more than 1 second when the tripmeter is displayed.

- 4 hours after the ignition is turned off, the tripmeter will be reset automatically.

Elapsed Time (2)

- The elapsed time is the total driving time since the last elapsed time reset.
  - Time range (hh:mm) : 00:00 ~ 99:59
- To reset the elapsed time, press the RESET button on the steering wheel for more than 1 second when the elapsed time is displayed.

✻ *NOTICE*

Even if the vehicle is not in motion, the elapsed time keeps going while the engine is running.

Average Vehicle Speed (3)

- The average vehicle speed is calculated by the total driving distance and driving time since the last average vehicle speed reset.
  - Speed range : 0 ~ 250 km/h or MPH
- To reset the average vehicle speed, press the RESET button on the steering wheel for more than 1 second when the average vehicle speed is displayed.

✻ *NOTICE*

- *The average vehicle speed is not displayed if the driving distance is less than 300 meters (0.2 miles) or the driving time is less than 10 seconds since the ignition switch is turned to ON.*
- *Even if the vehicle is not in motion, the average vehicle speed keeps going while the engine is running.*

Trip Modes

- For type A cluster To change the trip mode, press the TRIP button. - For type B, C cluster To change the trip mode, scroll the MOVE scroll switch (/) or press the TRIP button in the t ...

Fuel Economy

■ Type A ■ Type B Average Fuel Economy (1) The average fuel economy is calculated by the total driving distance and fuel consumption since the last average fuel economy reset. ...

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Other information:

Kia Forte 2019-2023 (BD) Owners Manual: To help prevent corrosion

You can help prevent corrosion from beginning by observing the following: Keep your vehicle clean The best way to prevent corrosion is to keep your vehicle clean and free of corrosive materials. Attention to the underside of the vehicle is particularly important. If you live in a hig ...

Kia Forte 2019-2023 (BD) Service Manual: Gear Actuator Assembly

Components and components location Component Location 1. Gear actuator assembly 2. Shift motor (Even) 3. Shift motor (Odd) 4. Select solenoid (Even) 5. Select solenoid (Odd) Specifications

Specification Item ...

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LCD windows / Trip information (Trip computer)

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The trip computer is a microcomputer- controlled driver information system that displays information related to driving.

✻ *NOTICE*

Some driving information stored in the trip computer (for example Average Fuel Economy) resets if the battery is disconnected.

- Distance to empty
- Trip Modes
- Trip A/B (For type A cluster)
- Fuel Economy
- Accumulated driving information mode (For type B, C cluster)
- One time driving information mode (For type B, C cluster)

LCD windows

Over view LCD windows show the following various information to drivers. - Trip information - LCD modes - Warning messages ...

Distance to empty

■ Type A ■ Type B • The distance to empty is the estimated distance the vehicle can be driven with the remaining fuel. - Distance range: 1 ~ 9,9999 km or 1 ~ 9,999 mi. • If the e ...

Other information:

Kia Forte 2019-2023 (BD) Service Manual: Rear Shock Absorber

Components and components location Components 1. Shock absorber dust cap 2. Lock nut 3. Insulator assembly 4. Bumper rubber 5. Dust cover 6. Shock absorber Repair procedures Removal and Installation 1. Re ...

Kia Forte 2019-2023 (BD) Owners Manual: Map lamp (Bulb type) bulb replacement

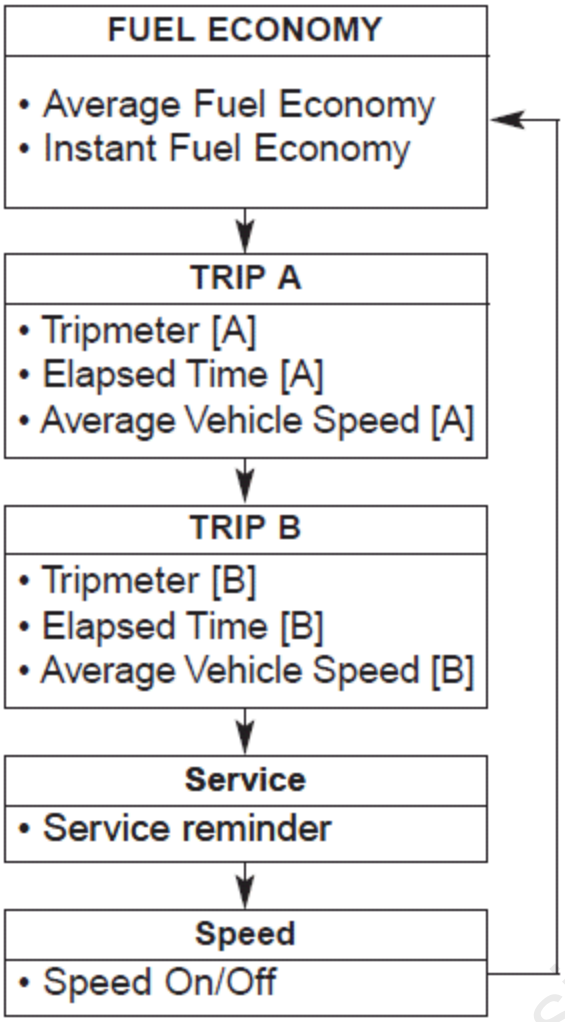
WARNING Prior to working on the Interior lamps, ensure that the “OFF” button is depressed to avoid burning your fingers or receiving an electric shock. 1. Using a flat-blade screwdriver, gently pry the lens cover from lamp housing. 2. Remove the bulb by pulling it straight out ...

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Trip information (Trip computer) / Trip Modes

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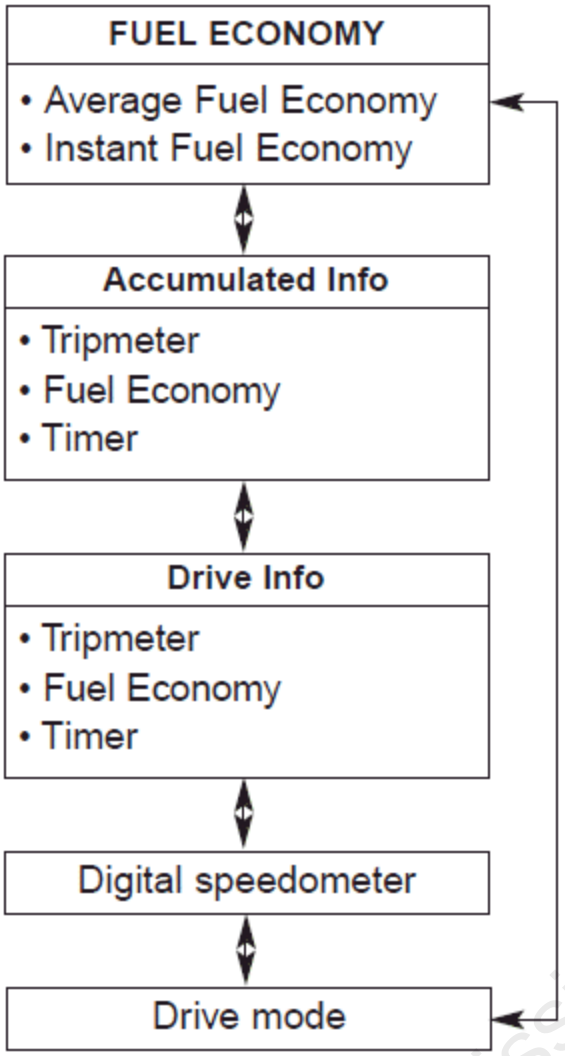
- For type A cluster



To change the trip mode, press the TRIP button.

- For type B, C cluster

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To change the trip mode, scroll the MOVE scroll switch (/) or press the TRIP button in the trip computer mode.

Distance to empty

■ Type A ■ Type B • The distance to empty is the estimated distance the vehicle can be driven with the remaining fuel. - Distance range: 1 ~ 9,9999 km or 1 ~ 9,999 mi. • If the e ...

Trip A/B (For type A cluster)

Tripmeter (1) The tripmeter is the total driving distance since the last tripmeter reset. - Distance range : 0 ~ 1599999 km or 0 ~ 999999 mi. To reset the tripmeter, press the R ...

Other information:

Kia Forte 2019-2023 (BD) Service Manual: Rear Hub - Carrier

Components and components location Components [Disc type - Couple Torsion Beam Axle] 1. Rear brake disc 2. Rear hub bearing 3. Dust cover 4. Extra bracket [Disc type - Multi link] 1. Rear brake disc 2. ...

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Kia Forte 2019-2023 (BD) Service Manual: Thermostat

Components and components location Components 1. Water inlet fitting 2. Thermostat Repair procedures Removal Disassembly of the thermostat would have an adverse effect, ...

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