

Description

The cruise control system is engaged by the cruise "ON/OFF" main switch located on right of steering wheel column. The system has the capability to cruise, coast, accelerate and resume speed.

It also has a safety interrupt, engaged upon depressing brake or shifting select lever.

The ECM is the control module for this system. The main components of cruise control system are mode control switches, transmission range switch, brake switch, vehicle speed sensor, ECM and ETS motor that connect throttle body.

The ECM contains a low speed limit which will prevent system engagement below a minimum speed of 40km/h (25mph).

The operation of the controller is controlled by mode control switches located on steering wheel.

Transmission range switch and brake switch are provided to disengage the cruise control system. The switches are on brake pedal bracket and transmission. When the brake pedal is depressed or select lever shifted, the cruise control system is electrically disengaged and the throttle is returned to the idle position.

Cruise main switch (CRUISE)

The cruise control system is engaged by pressing the cruise "ON/OFF" main switch. Pressing the cruise "ON/OFF" main switch again releases throttle, clears cruise memory speed, and puts vehicle in a non-cruise mode.

Set/Coast switch (SET/-)

The "SET/-" switch located on right of steering wheel column has two functions.

The set function - Push the "SET/-" switch and release it at the desired speed. The SET indicator light in the instrument cluster will illuminate. Release the accelerator pedal. The desired speed will automatically be maintained.

The coast function - Push the "SET/-" switch and hold it when the cruise control is on. The vehicle will gradually slow down. Release the switch at the desired speed. The desired speed will be maintained.

Push the "SET/-" switch and release it quickly. The cruising speed will decrease by 2km/h or 1mph.

Resume/Accel switch (RES/+)

The "RES/+" switch located on right of steering wheel column has two functions.

The resume function - If any method other than the cruise "ON/OFF" main switch was used to cancel cruising speed temporarily and the system is still activated, the most recent set speed will automatically resume when the "RES/+" switch is pushed. It will not resume, however, if the vehicle speed has dropped below approximately 40km/h (25mph).

The accel function - Push the "RES/+" switch and hold it when the cruise control is on. The vehicle will gradually accelerate. Release the switch at the desired speed. The desired speed will be maintained.

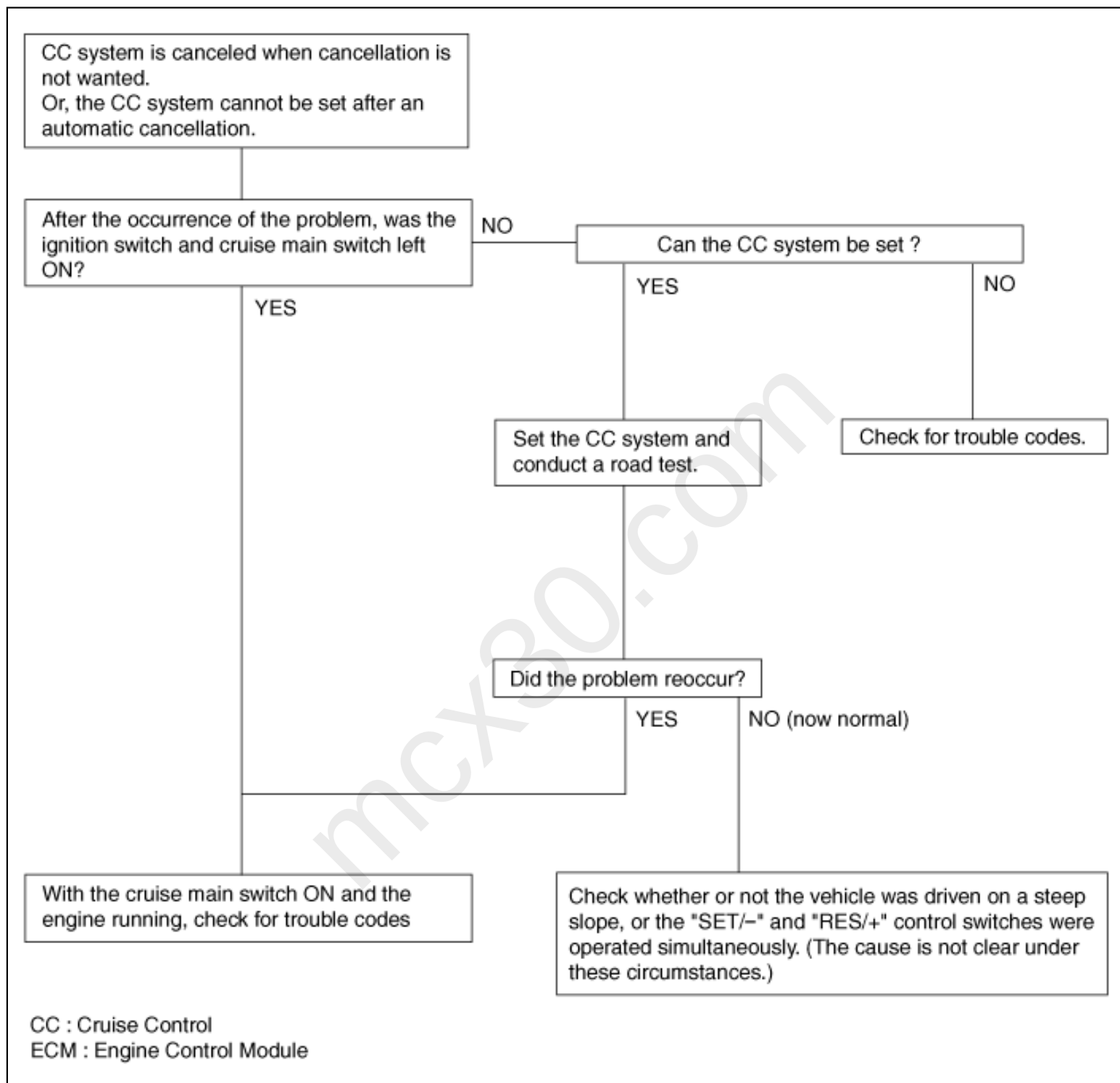
Push the "RES/+" switch and release it quickly. The cruising speed will increase by 2km/h or 1mph.

Cancel switch (CANCEL)

The cruise control system is temporarily disengaged by pushing the "CANCEL" switch.

Cruise speed canceled by this switch can be recovered by pushing the "RES/+" switch.

Trouble Symptom 1



Trouble Symptom 2

Trouble symptom	Probable cause	Remedy
The set vehicle speed varies greatly upward or downward "Surging" (repeated alternating acceleration and deceleration) occurs after setting	Malfunction of the vehicle speed sensor circuit	Repair the vehicle speed sensor system, or replace the part

	Malfunction of ECM	Check input and output signals at ECM
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Trouble Symptom 3

Trouble symptom	Probable cause	Remedy
The CC system is not canceled when the brake pedal is depressed	Damaged or disconnected wiring of the brake pedal switch	Repair the harness or replace the brake pedal switch
	Malfunction of the ECM signals	Check input and output signals at ECM

Trouble Symptom 4

Trouble symptom	Probable cause	Remedy
The CC system is not canceled when the shift lever is moved to the "N" position (It is canceled, however, when the brake pedal is depressed)	Damaged or disconnected wiring of inhibitor switch input circuit	Repair the harness or repair or replace the inhibitor switch
	Improper adjustment of inhibitor switch	
	Malfunction of the ECM signals	Check input and output signals at ECM

Trouble Symptom 5

Trouble symptom	Probable cause	Remedy
Cannot decelerate (coast) by using the "SET/−" switch	Temporary damaged or disconnected wiring of "SET/−" switch input circuit	Repair the harness or replace the "SET/−" switch
	Malfunction of the ECM signals	Check input and output signals at ECM

Trouble Symptom 6

Trouble symptom	Probable cause	Remedy
Cannot accelerate or resume speed by using the "RES/+" switch	Damaged or disconnected wiring, or short circuit, or "RES/+" switch input circuit	Repair the harness or replace the "RES/+" switch
	Malfunction of the ECM signals	Check input and output signals at ECM

Trouble Symptom 7

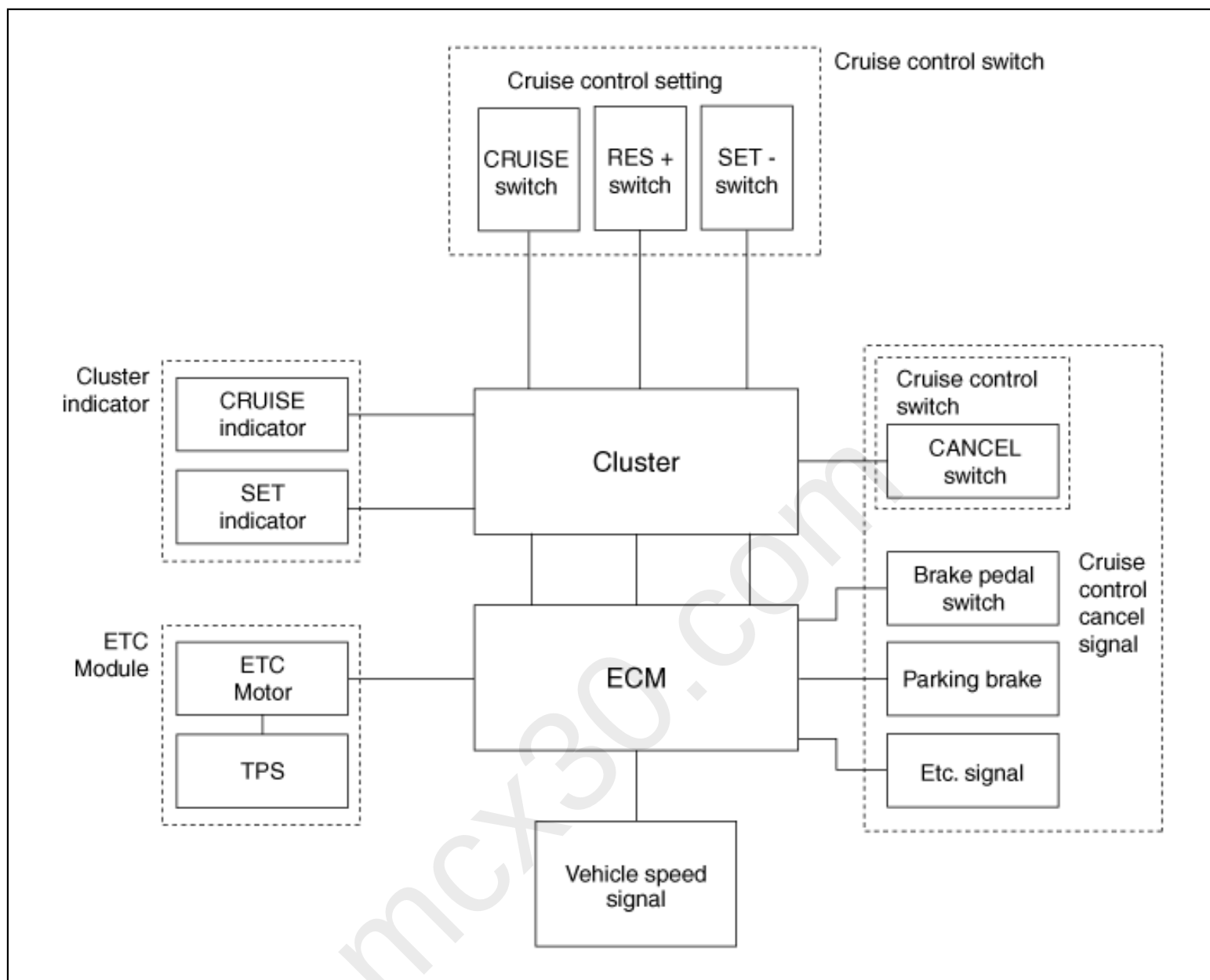
Trouble symptom	Probable cause	Remedy
CC system can be set while driving at a vehicle speed of less than 40km/h (25mph), or there is no automatic cancellation at that speed	Malfunction of the vehicle-speed sensor circuit	Repair the vehicle speed sensor system, or replace the part
	Malfunction of the ECM signals	Check input and output signals at ECM

Trouble Symptom 8

Trouble symptom	Probable cause	Remedy
The cruise main switch indicator lamp does not illuminate (But CC system is normal)	Damaged or disconnected bulb of cruise main switch indicator lamp	Repair the harness or replace the part.
	Harness damaged or disconnected	

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System Block Diagram



Component Parts And Function Outline

Component part		Function
Vehicle-speed sensor, ESP/ABS Control Module		Converts vehicle speed to pulse.
ECM		Receives signals from sensor and control switches.
Cruise control indicator		Illuminate when CRUISE main switch is ON (Built into cluster)
Cruise Control switches	CRUISE switch	Switch for automatic speed control power supply.
	Resume/Accel switch (RES +)	Controls automatic speed control functions by Resume/Accel switch (Set/Coast switch)

	Set/Coast switch (RES -)	
Cancel switches	Cancel switch	Sends cancel signals to ECM.
	Brake-pedal switch	
	Transaxle range switch (A/T)	
ETC Motor		Regulates the throttle valve to the set opening by ECM.

* ETC Motor : Electronic Throttle Control Motor

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Components

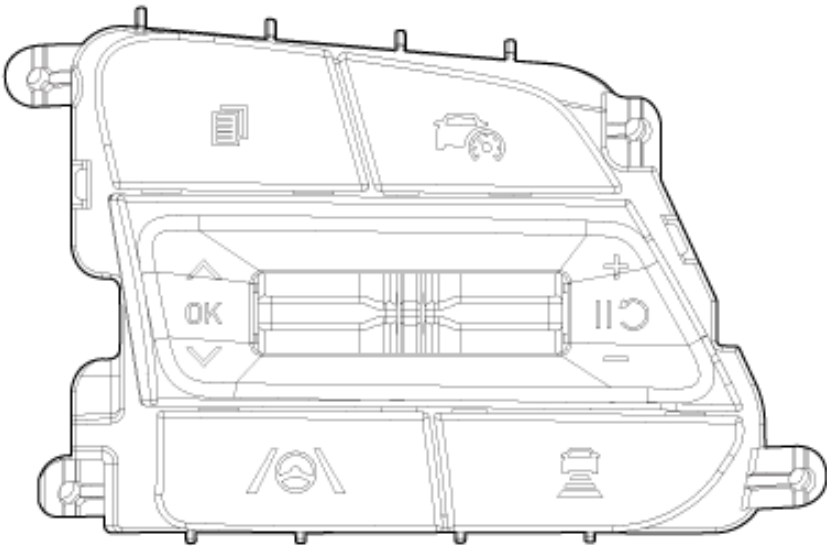


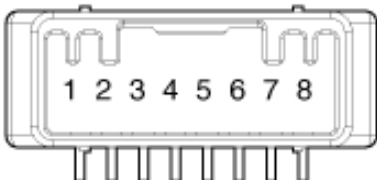
1. Remote control switch (Audio switch)

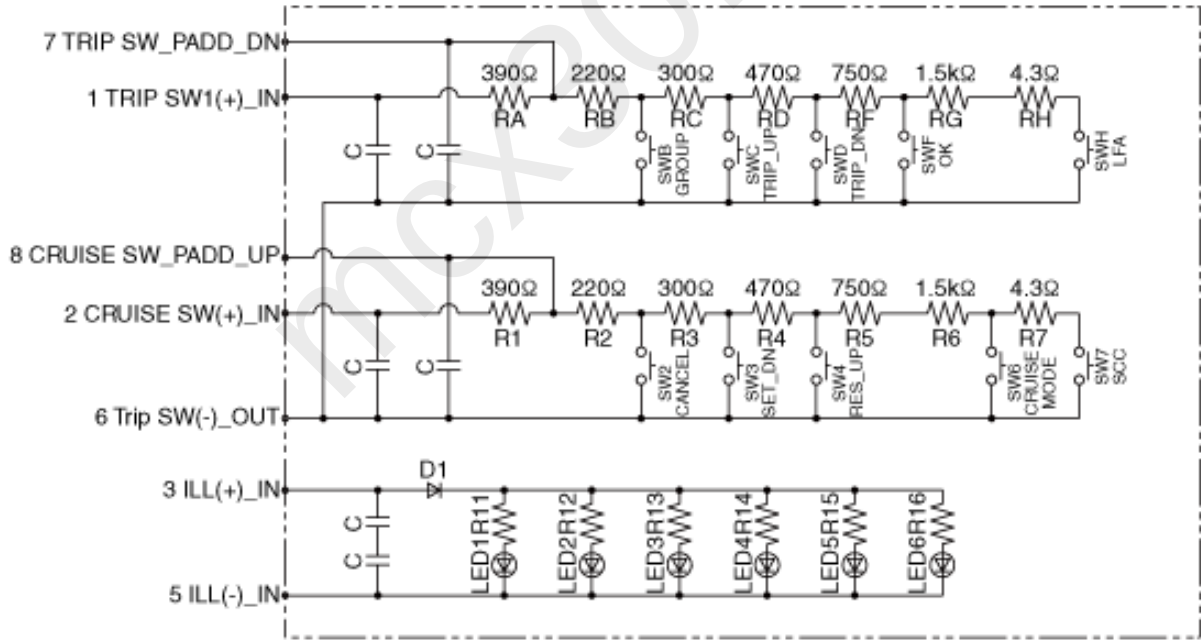
2. Remote control switch (Cruise control switch)

Circuit
Diagram

Trip+SCC+MSLA+LFA

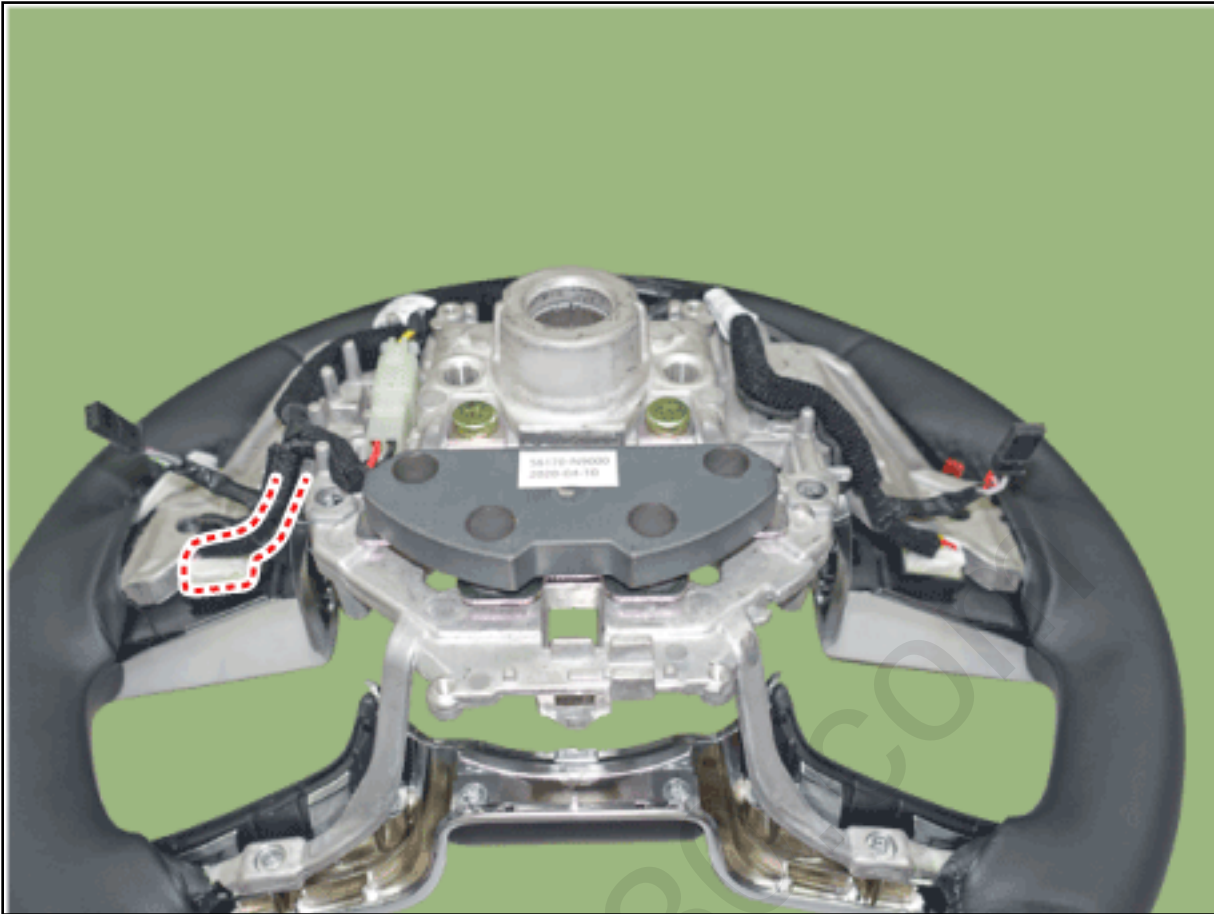


Connector	
	
Pin NO	Description
1	Trip switch (+)
2	Cruise switch (+)
3	Illumination (+)
4	-
5	Illumination (-)
6	Trip switch (-)
7	Paddle shift (Down)
8	Paddle shift (Up)



Inspection

1. Check for resistance between terminals in right switch position.



[Trip/Cruise]

Switch	Connector terminal	Resistance ($\pm 3\%$)
CANCEL	2 ~ 6	610 Ω
SET (-)	2 ~ 6	910 Ω
RES (+)	2 ~ 6	1.38 k Ω
Cruise ON/OFF	2 ~ 6	2.13 k Ω
Cruise & MSLA ON/OFF	2 ~ 6	3.63 k Ω
Smart Cruise	2 ~ 6	7.93 k Ω
Paddle shift (Down)	1 ~ 7	390 Ω
Trip Group	1 ~ 6	610 Ω
Trip Up	1 ~ 6	910 k Ω
Trip Down	1 ~ 6	1.38 k Ω

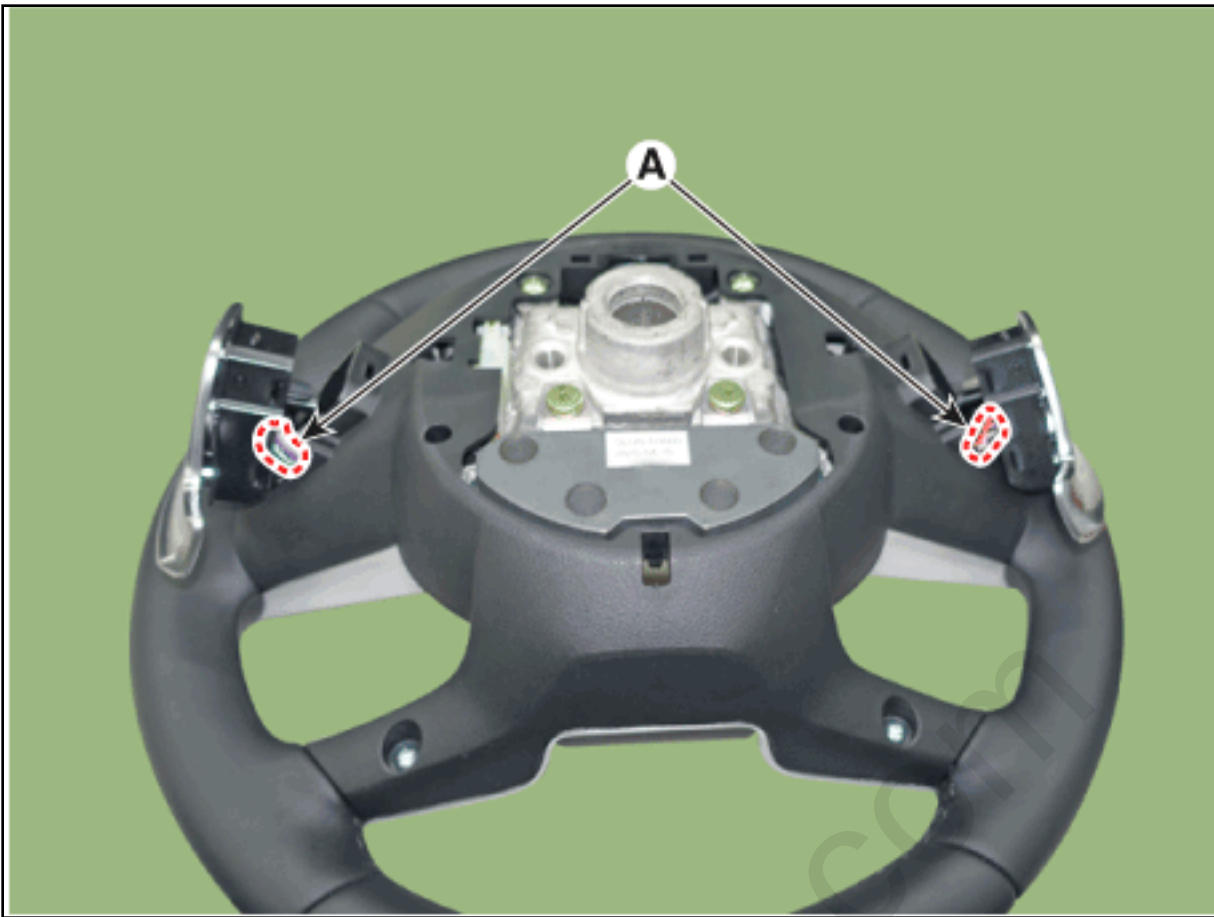
Trip OK	1 ~ 6	2.13 k Ω
LFA	1 ~ 6	7.93 k Ω

Removal

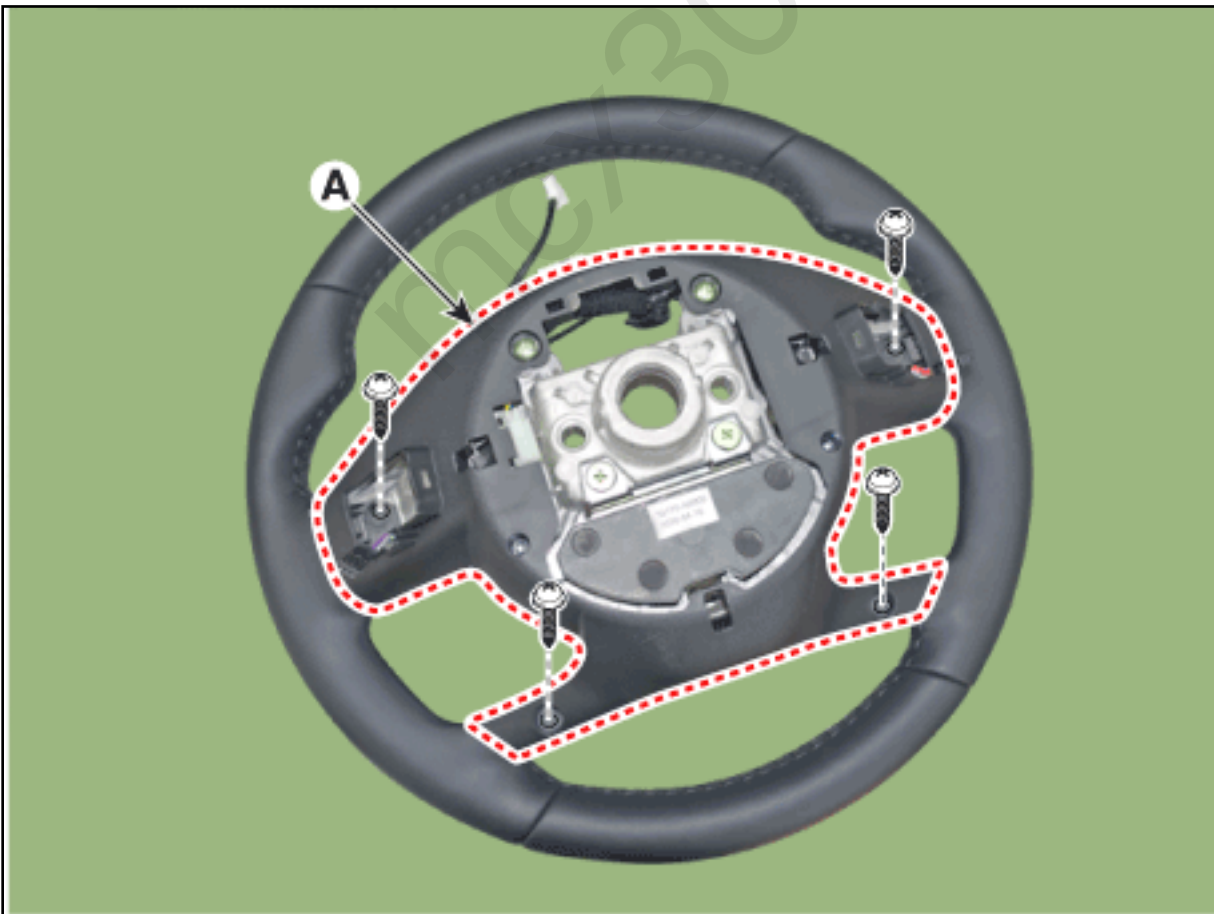
1. Disconnect the negative (-) battery terminal.
2. Remove the steering wheel.
(Refer to Steering System - "Steering Wheel")
3. Remove the paddle shift lever (A).



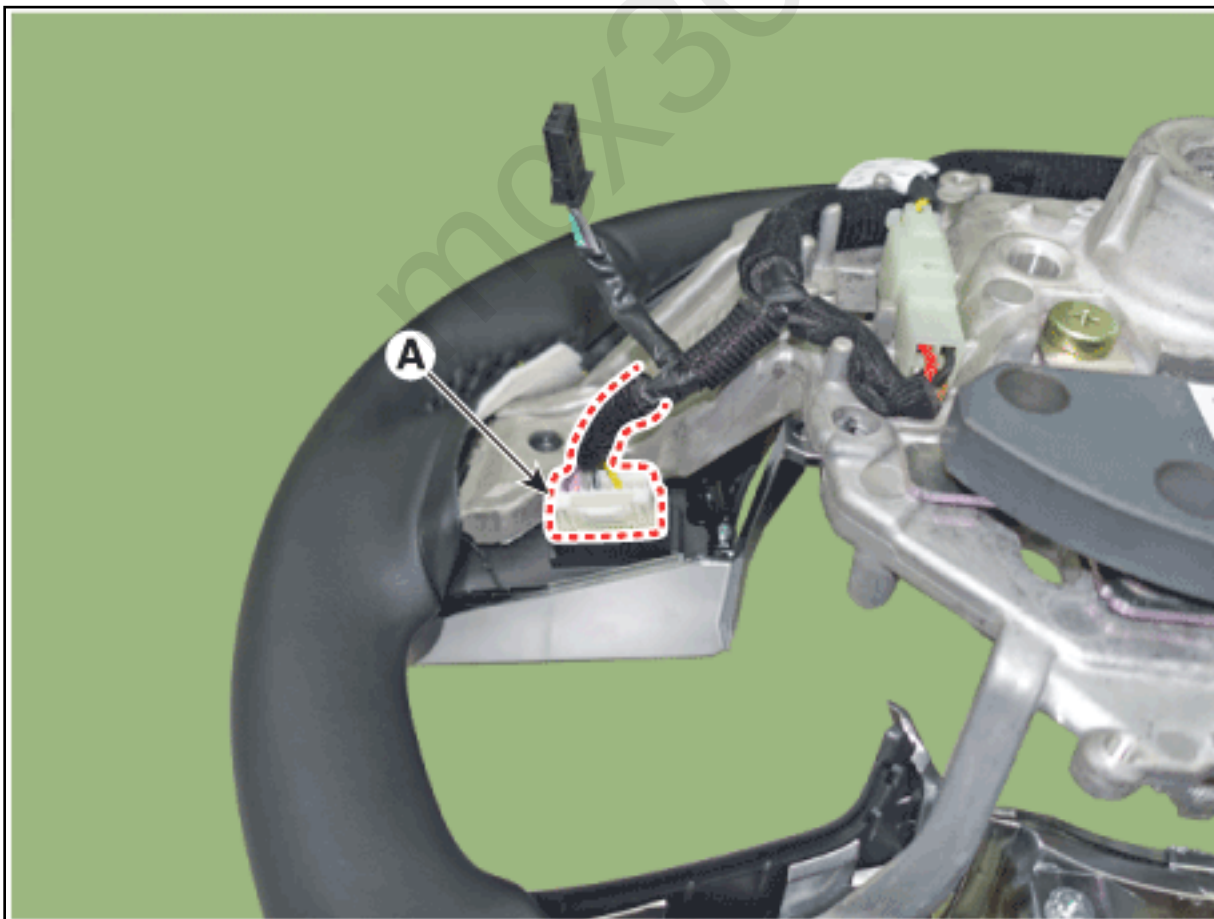
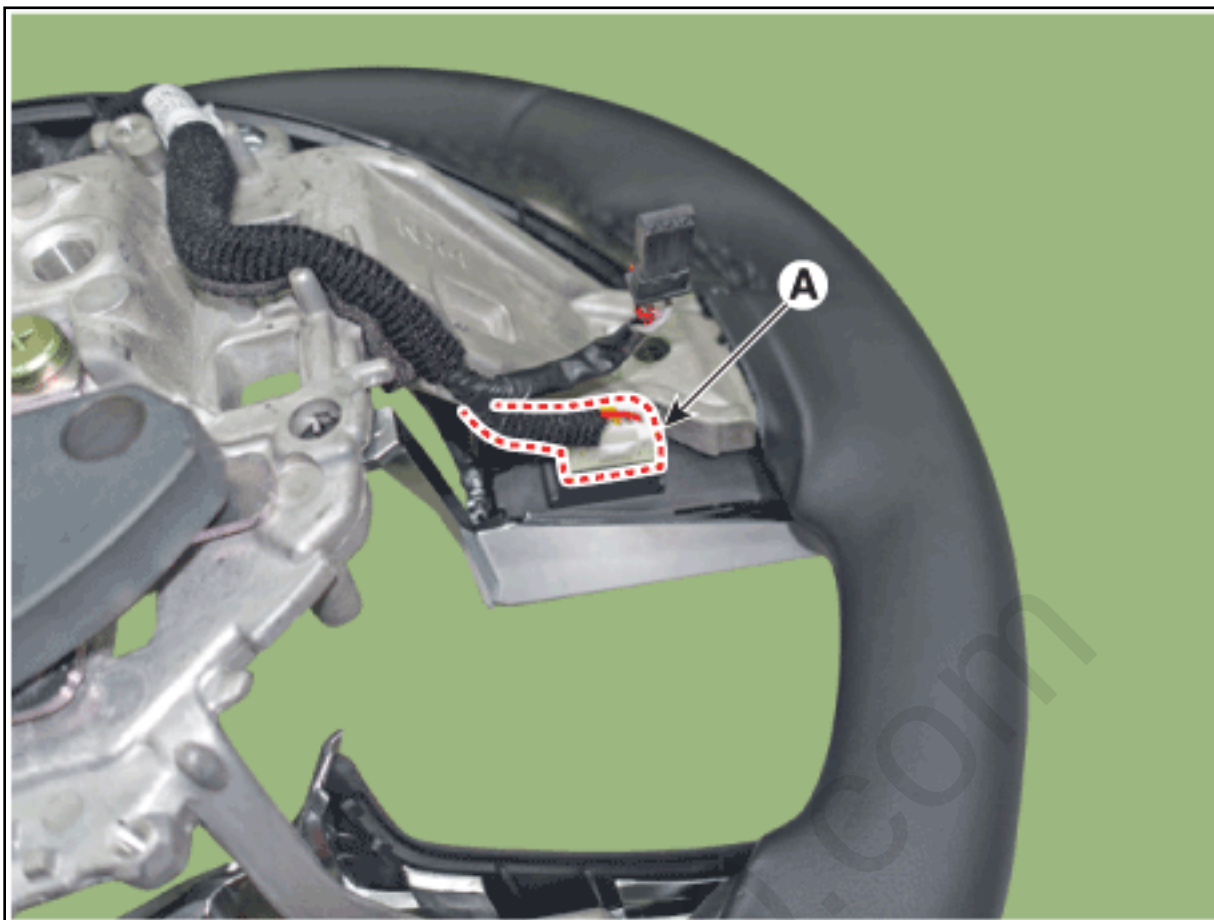
4. Disconnect paddle shift lever connector (A).



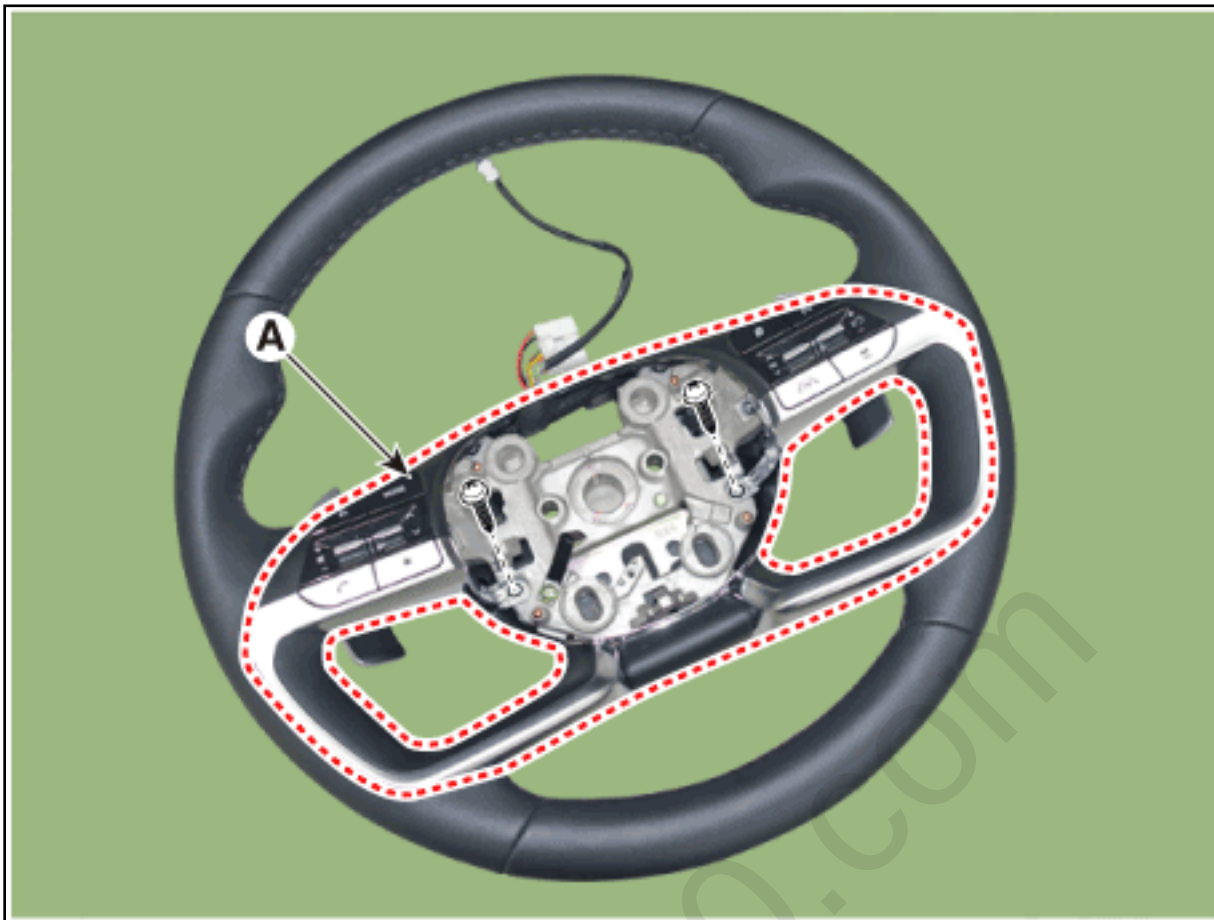
5. Remove the steering wheel cover (A) after loosening mounting screws.



6. Disconnect remote control switch connector (A) after loosening mounting screws.



7. Remove the remote control switch (A) after loosening mounting screws.



Installation

1. Install the remote control switch on the steering wheel.
2. Install the steering wheel lower cover.
3. Install the paddle shift lever.
4. Install the steering wheel.
5. Connect the negative (-) battery terminal.



- Make sure that the cables and connectors are plugged in properly.
- Check the AVN system for normal operation.