

REPORT NUMBER 114-GTL-10-001

SAFETY COMPLIANCE TESTING FOR FMVSS NO. 114 THEFT PROTECTION

KIA MOTORS CORPORATION
2010 KIA FORTE KOUP, PASSENGER CAR
NHTSA NO. CA0506

GENERAL TESTING LABORATORIES, INC.
1623 LEEDSTOWN ROAD
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April 1, 2010

FINAL REPORT

PREPARED FOR

**U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
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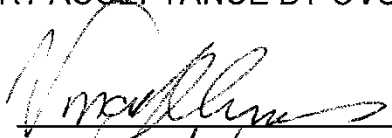
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16. Abstract Compliance tests were conducted on the subject 2010 Kia Forte Koup 2-door passenger car in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-114-03-DRAFT-GTL-REVC for the determination of FMVSS 114 compliance. Test failures identified were as follows: None		
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SECTION 1

PURPOSE OF COMPLIANCE TEST

1.0 PURPOSE OF TEST

A model year 2010 Kia Forte Koup 2-door passenger car was subjected to Federal Motor Vehicle Safety Standard (FMVSS) No. 114 testing to determine if the vehicle was in compliance with the requirements of the standard. FMVSS 114 specifies requirements to decrease the likelihood that a vehicle is stolen, or accidentally set in motion.

1.1 The test vehicle was a 2010 Kia Forte Koup 2-door Passenger Car. The vehicle was identified as follows:

A. Vehicle Identification Number: KNAFU6A26A5152934

B. NHTSA No.: CA0506

C. Manufacturer: KIA MOTORS CORPORATION

D. Manufacture Date: 10/09

E. Color: Titanium

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 114 testing on March 19, 2010.

SECTION 2

TEST PROCEDURE AND SUMMARY OF RESULTS

2.0 TEST PROCEDURE

All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Procedure TP-114-03-DRAFT-GTL-REVC and General Testing Laboratories, Inc. (GTL) Test Procedure, TP-114-03-Draft, "Theft Protection and Rollaway Prevention".

2.1 SUMMARY OF RESULTS

Test data indicate the FMVSS 114 requirements appear to have been satisfied. All test data resulting from the tests were recorded on test data sheets in Section 3.

SECTION 3

TEST DATA

3.0 TEST RESULTS

The following data sheets document the results of FMVSS 114 testing on the 2010 Kia Forte Koup.

FMVSS 114, THEFT PROTECTION
DATA SHEET 1 – VEHICLE IDENTIFICATION

TEST DATE: 03/19/10 LAB.: General Testing Laboratories
 CONTRACT: DTNH22-06-C-00032 VEH. NHTSA NO.: CA0506
 VIN: KNAFU6A26A5152934 BUILD DATE: 10/09

MY/MAKE/MODEL/BODY STYLE: 2010 Kia Forte Koup

TRANSMISSION TYPE:
 Automatic ; Manual ; Other (describe: _____)

DRIVE TRAIN TYPE:
 Front Wheel ; Rear Wheel ; 4-Wheel

FUEL TANK LEVEL: 100 (% OF max.) MILEAGE: 13

VEHICLE STARTING SYSTEM:

Location of the starting system:
On Right Side of Steering Column

Selectable settings:
Lock, Accessory, On, Start

Explain how the system is activated:
Insert key into key slot and turn clockwise

KEY

Description of the key:
Traditional Metal Key

STARTING SYSTEM ACTIVATION

Describe how the key is inserted into the starting system:
Insert key into key slot

Describe how the key is used to activate the starting system:
Turn key clockwise

Describe how the key is removed from the starting system:
Turn key to lock position and pull out

FMVSS 114, THEFT PROTECTION
DATA SHEET 1 continued

GEAR SELECTION CONTROL

Describe the gear selection control:

5 Speed Manual gear selector with traditional "H" pattern

Describe how the gear selection control is activated:

Manually move gear selector to desired position

Describe all of the selectable settings:

1st, 2nd, 3rd, 4th, 5th, Neutral, Reverse

IMMOBILIZER

Is the vehicle equipped with an immobilizer YES _____ NO X

Describe the immobilizer device and how it prevents vehicle theft (if equipped):

N/A

OPTIONAL RELEASE DEVICES

Describe if the vehicle is equipped with optional release devices:

N/A

OPTIONAL RELEASE DEVICES:

Key Removal _____ Gear Selection Control _____ None X Other _____

VEHICLE FLUIDS

Check all vehicle fluids and adjust to the proper levels for operation: Full

VEHICLE TIRE PLACARD INFORMATION

Vehicle Mfg. Recommended Tire Inflation Pressure

(kPa): Front 220 Rear 220

TIRE INFLATION PRESSURES:

Measured (kPa): LF 220 LR 220 RF 220 RR 220

WEIGHT

Vehicle Curb Weight(kg): 1259.5 Weight of Driver (kg): 91 (target = 91kg)

FMVSS 114, THEFT PROTECTION
DATA SHEET 2

REQUIREMENT S5.1.1	PASS	FAIL
Engine cannot be started without using the key <u> </u> Yes <u> X </u> No	X	
<p>With key removed, steering wheel locks: Yes: <u> X </u> No: <u> </u></p> <p>Identify locking position(s) on wheel using arrow(s)</p> <p>Clockwise: <u> 115 </u> (degrees) Counterclockwise: <u> 320 </u> (degrees)</p> <div style="text-align: right; margin-top: 20px;"> </div>		
<p>Key removal prevents forward self-mobility: Yes: <u> X </u> No: <u> </u></p> <p>If yes describe: Vehicle will not start without key in vehicle and the steering locks.</p>		
When key is removed from the starting system, starting of the engine or motor and either steering or self mobility is prevented. YES	X	

REMARKS:

FMVSS 114, THEFT PROTECTION
DATA SHEET 2 continued

REQUIREMENT S5.1.3	PASS	FAIL
<p>An audible warning is activated whenever the key is in any starting system position with the exception of "on" and "start" and the door closest to the driver's designated seating position is opened.</p> <p style="text-align: right;">Yes <u> X </u> No _____</p> <p>Identify ALL key/starting system position setting: <u>Lock, Accessory, On, Start</u></p>	X	

REQUIREMENT S5.1.4	PASS	FAIL
<p>With the vehicle engine or motor shut down and the transmission gear selection control in any position other than "park";</p> <p>The steering wheel can rotate without locking? Yes <u> X </u> No _____</p>	X	
<p>The vehicle is free to roll forward? Yes <u> X </u> No _____</p>	X	

REMARKS:

RECORDED BY: G. Farrand
APPROVED BY: D. Messick

DATE: 03/19/10

FMVSS 114, ROLLAWAY PREVENTION
DATA SHEET 3
(for vehicles equipped with transmission with a "park" position)

VEH. NHTSA NO.: CA0506

TEST DATE: 03/19/10

REQUIREMENT S5.2.1	PASS	FAIL
<p>The starting system prevents key removal in ALL gear selection control positions except "park". Yes _____ No _____</p> <p>Can the gear selection control be placed between each gear selection position and will it remain there without assistance? Yes _____ No _____</p> <p>If yes, can the key be removed from the starting system? Yes _____ No _____</p> <p>If the key can be removed from the vehicle starting system when the gear selection control is not locked in "park", a mechanism shall exist which, upon key removal, the vehicle transmission or gear selection control shall become locked in "park" as the direct result of removing the key. If such a mechanism exists, describe the mechanism and its function:</p>	N/A	

REQUIREMENT S5.2.2	PASS	FAIL
<p>The gear selection control is locked in the "park" position when the key is removed from the starting system. Yes _____ No _____</p>	N/A	

REMARKS: Manual Transmission

DATA SHEET 3 continued

REQUIREMENT S5.2.3	PASS	FAIL
<p><u>ELECTRICAL FAILURE (Battery Discharge)</u></p> <p>In the event of an electrical failure, key removal from the starting system when the transmission or gear selection control is not locked in “park” is permitted”. Yes_____ No _____</p> <p>The vehicle is equipped with an override device that permits key removal from the starting system when the transmission or gear selection control is not locked in “park”. Yes_____ No ___X</p> <p>If yes, select the type of override device equipped: Opaque Cover_____ No Cover_____</p> <p>Describe the override device design and mode of activation (if equipped):</p>	N/A	
	X	
	N/A	
<p>FILL IN THE SECTION BELOW THAT APPLIES:</p> <p><u>OVERRIDE WITH AN OPAQUE COVER:</u></p> <p>The opaque surface cover prevents sight of and use of override device. Yes_____ No_____</p> <p>The opaque surface cover can only be removed by using a screwdriver or other tool. Yes_____ No_____</p> <p>As a direct result of removing the key from starting system, the following is prevented: Steering_____ or Self-Mobility_____</p> <p><u>OVERRIDE WITH NO COVER</u></p> <p>The override device requires the use of a tool to activate. Yes_____ No_____</p> <p>Simultaneous activation of the override device and removal of key from starting system is required. Yes_____ No_____</p> <p>As a direct result of removing the key from the starting system, the following is prevented: Steering_____ or Self-Mobility_____</p>	N/A	

REMARKS: Not equipped with a key removal override device

DATA SHEET 3 continued

REQUIREMENT S5.2.4	PASS	FAIL
<p><u>GEAR SELECTION CONTROL OVERRIDE DEVICE</u></p> <p>The vehicle is equipped with an override device that allows the user to move the gear selection control from “park” after the key has been removed from the starting system. Yes_____ No <u>X</u></p> <p>If yes, select the type of override device that is equipped: Override operated with a: Key_____ Opaque Cover _____ No Cover_____</p> <p>Describe the override device design and mode of activation (if equipped):</p> <p>FILL IN THE SECTION BELOW THAT APPLIES:</p> <p><u>VERRIDE OPERATED WITH KEY:</u></p> <p>The key is required to operate the override device that allows the user to move the gear selection control from “park” after the key has been removed from the starting system. Yes_____ No_____</p> <p><u>VERRIDE WITH AN OPAQUE COVER</u></p> <p>The opaque surface cover prevents sight of and use of override device. Yes_____ No_____</p> <p>The opaque surface cover can only be removed by using a screwdriver or other tool. Yes_____ No_____</p> <p>As a direct result of removing the key from the starting system, the following is prevented: Steering_____ or Self-Mobility_____</p> <p><u>VERRIDE WITH NO COVER</u></p> <p>The override device requires the use of a tool to operate. Yes_____ No_____</p> <p>Simultaneous activation of the override device and removal of key from starting system is required. Yes_____ No_____</p> <p>As a direct result of removing the key from the starting system, the following is prevented: Steering_____ or Self-Mobility_____</p>	<p>X</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>	

REMARKS: Not equipped with a gear selection control override device

DATA SHEET 3 continued

REQUIREMENTS S5.2.5	PASS	FAIL
<p><u>VEHICLE FACING UPHILL ON 10% GRADE</u></p> <p>With the gear selection control in “park” measure movement of the vehicle down the slope upon releasing the service brake.</p> <p>Test grade: _____ % (9% to 15%) Measured movement: _____ mm (150mm maximum)</p> <p>NOTE: Repeat procedure if vehicle fails on grade in excess of 10%.</p> <p>Test grade: _____ % (9% to 10%) Measured movement: _____ mm (150 mm maximum)</p> <p><u>VEHICLE FACING DOWNHILL ON 10% GRADE</u></p> <p>With the gear selection control in “park” measure movement of the vehicle down the slope upon releasing the service brake.</p> <p>Test grade: _____ % (9% to 15%) Measured movement: _____ mm (150mm maximum)</p> <p>NOTE: Repeat procedure if vehicle fails on grade in excess of 10%.</p> <p>Test grade: _____ % (9% to 10%) Measured movement: _____ mm (150 mm maximum)</p>	<p>N/A</p> <p>N/A</p>	<p><u>see note</u></p>

REMARKS: Manual Transmission

DATA SHEET 3 continued

REQUIREMENTS S5.3	PASS	FAIL
<u>VEHICLE FACING UPHILL ON 10% GRADE</u>		
With the key in the "off" position, the transmission will shift out of "park" without the service brake being applied. Yes_____ No _____	N/A _____	
With the key in the "acc" position, the transmission will shift out of "park" without the service brake being applied. Yes_____ No _____	N/A _____	
With the key in the "on" position (engine off), the transmission will shift out of "park" without the service brake being applied. Yes_____ No _____	N/A _____	
With the key in the "start" position, the transmission will shift out of "park" without the service brake being applied. Yes_____ No _____	N/A _____	
With the key in the "other" position (please specify), the transmission will shift out of "park" without the service brake being applied. Yes_____ No _____	N/A _____	
Does the key stay between starting system positions without being held by operator? Yes_____ No _____ If so, please describe.	N/A _____	
Brake force readings (force required to allow the transmission to shift out of "park"):		
The vehicle is equipped with adjustable pedals: Yes_____ No _____		
Fore Position:	Aft Position (if applicable)	
Reading 1 _____	Reading 1 _____	
Reading 2 _____	Reading 2 _____	
Reading 3 _____	Reading 3 _____	
Reading 4 _____	Reading 4 _____	
Reading 5 _____	Reading 5 _____	
Avg. _____	Avg. _____	
	N/A _____	

REMARKS: Manual Transmission

RECORDED BY: G. Farrand
 APPROVED BY: D. Messick

DATE: 03/19/10

SECTION 4
TEST EQUIPMENT LIST

ITEM	MFR	MODEL	S/N	CAL. PERIOD	DATE OF NEXT CALIB.	REMARKS
SLR DIGITAL CAMERA	NIKON	D50	N/A	N/A	N/A	
TIRE PRESSURE GAUGE	WESKLER	45-0/100	107	12 MO.	04/03/10	
INCLINOMETER	MITUTOYO	PRO 360	950-315	N/A	BEFORE USE	
STEEL TAPE	STANLEY	FAT MAX	33-890	12 MO.	03/29/10	
WHEEL SCALES	INTERCOMP	SERIES 94	199744	12 MO.	03/02/11	
WHEEL SCALES	INTERCOMP	SERIES 94	199744	12 MO.	03/02/11	
WHEEL SCALES	INTERCOMP	SERIES 94	199744	12 MO.	03/02/11	
WHEEL SCALES	INTERCOMP	SERIES 94	199744	12 MO.	03/02/11	
SPRING SCALE	CHATILLON	DPP-10	4729	12 MO.	BEFORE USE	

SECTION 5
PHOTOGRAPHS



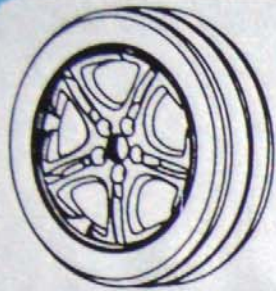
2010 KIA FORTE KOUP
NHTSA NO. CA0506
FMVSS NO. 114

FIGURE 5.1
¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE



2010 KIA FORTE KOUP
NHTSA NO. CA0506
FMVSS NO. 114

FIGURE 5.2
VEHICLE CERTIFICATION LABEL



TIRE AND LOADING INFORMATION
RENSEIGNEMENTS SUR LES PNEUS ET LE CHARGEMENT

SEATING CAPACITY NOMBRE DE PLACES	TOTAL 5	FRONT AVANT 2	REAR ARRIÈRE 3
--------------------------------------	---------	------------------	-------------------

The combined weight of occupants and cargo should never exceed 385 kg or 849 lbs.
 Le poids total des occupants et du chargement ne doit jamais dépasser 385 kg ou 849 lb.

TIRE PNEU	SIZE DIMENSIONS	COLD TIRE PRESSURE PRESSION DES PNEUS À FROID
FRONT AVANT	P205/55R16	220kPa, 32psi
REAR ARRIÈRE	P205/55R16	220kPa, 32psi
SPARE DE SECOURS	T125/80D15	420kPa, 60psi

**SEE OWNER'S
 MANUAL FOR
 ADDITIONAL
 INFORMATION**
**VOIR LE MANUEL
 DE L'USAGER
 POUR PLUS DE
 RENSEIGNEMENTS**

FIGURE 5.3
 VEHICLE TIRE INFORMATION LABEL



2010 KIA FORTE KOUP
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FIGURE 5.4
CLOSE-UP VIEW OF IGNITION KEY



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FMVSS NO. 114

FIGURE 5.5
STARTING SYSTEM CONTROL



2010 KIA FORTE KOUP
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FMVSS NO. 114

FIGURE 5.6
TRANSMISSION GEAR SELECTION CONTROL