REPORT NUMBER: 114-CAL-08-08

# SAFETY COMPLIANCE TESTING FOR FMVSS No. 114 THEFT PROTECTION AND ROLLOWAY PREVENTION

SUZUKI MOTOR CORPORATION 2008 SUZUKI SX4 4-DOOR SEDAN

NHTSA NUMBER: C80512

CALSPAN TEST NUMBER: 8858-F114-08

CALSPAN CORPORATION P.O. BOX 400 BUFFALO, NEW YORK 14225



June 16, 2008

FINAL REPORT

U. S. DEPARTMENT OF TRANSPORTATION National Highway Traffic Safety Administration ENFORCEMENT Office of Vehicle Safety Compliance Room W43-481, NVS-220 1200 New Jersey Avenue, SE Washington, DC 20590 This publication is distributed by the U.S. Department of Transportation, National Highway Traffic Safety Administration, in the interest of information exchange. The opinions, findings and conclusions expressed in this publication are those of the author(s) and not necessarily those of the Department of Transportation or the National Highway Traffic Safety Administration. The United States Government assumes no liability for its contents or use thereof. If trade or manufacturers' names or products are mentioned, it is only because they are considered essential to the object of the publication and should not be construed as an endorsement. The United States Government does not endorse products or manufacturers.

Prepared By:	Vincet Me Palen
	Vincent M. Paolini, Project Engineer
Approved By:	David Travela
	David J. Travale, Program Manager Transportation Sciences Center
	Transportation Sciences Center
Approval Date:	October 9, 2008
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Door Sedan				
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David J. Travale, Program Manager				
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Compliance tests were conductive	ted on the subject 2008 Suzu	ki SX4 4	-Door Sedan in accorda	ance with the
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#### **SECTION 1**

#### PURPOSE OF COMPLIANCE TEST

This test is part of the Federal Motor Vehicle Safety Standard (FMVSS) 114 Compliance Test Program conducted for the National Highway Traffic Safety Administration (NHTSA) by Calspan under Contract No. DTNH22-06-C-00031. The purpose of this test was to determine if the subject vehicle, a 2008 Suzuki SX4 4-Door Sedan, was in compliance with FMVSS No. 114, Theft Protection and Rollaway Prevention. The purpose of this standard is to reduce the incidence of crashes resulting from unauthorized operation of vehicles by specifying requirements for theft protection. Additionally, FMVSS No. 114 specifies requirements to reduce the incidents of crashes from rollaway of parked vehicles with automatic transmissions as a result of children moving the shift mechanism out of the "park" position. This standard applies to passenger cars, trucks and multipurpose passenger vehicles having a Gross Vehicle Weight Rating (GVWR) of 4536 kilograms or less. This compliance test was conducted using the requirements found in the OVSC Laboratory Test Procedure No. TP-114-03, dated May 2, 2008.

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#### **SECTION 2**

#### TEST PROCEDURE AND DISCUSSION OF RESULTS

A 2008 Suzuki SX4 4-Door Sedan with a manual transmission was subjected to FMVSS No. 114 testing in accordance with the NHTSA Office of Vehicle Safety Compliance (OVSC) Laboratory Test Procedure TP-114-03, dated May 2, 2008. This test was performed by Calspan on June 16, 2008.

The test equipment used for this test included a standard metric tape ruler, a digital inclinometer with digital clinometer function, weight scales and a digital manometer. Testing was performed in the following sequence:

## **STARTING SYSTEM REQUIREMENT (S5.1.1):**

Normal activation of the vehicle engine was prevented with the key removed from the starting system. Both steering and forward self mobility were also prevented.

## **AUDIBLE ALARM REQUIREMENT (S5.1.3):**

With the key left in the vehicle starting system and the driver's door opened, an audible alarm was activated. This "warning to the driver" was verified in all ignition switch positions except "on" and "start".

## "PARK" POSITION REQUIREMENT (S5.1.4)

This requirement could not completed since the vehicle had a manual transmission

## **ROLLAWAY PREVENTION REQUIREMENT (S5.2.1)**

This requirement could not completed since the vehicle had a manual transmission

#### **GEAR SELECTION REQUIREMENT (S5.2.2):**

This requirement could not completed since the vehicle had a manual transmission

## **KEY REMOVAL OVERRRIDE REQUIREMENT (S5.2.3):**

This vehicle was not equipped with a key removal override option.

## GEAR SELECTION CONTROL OVERRRIDE REQUIREMENT (S5.2.4):

This vehicle was not equipped with a gear override option.

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# TEN PERCENT GRADE "PARK" REQUIREMENT (S5.2.5)

This requirement could not completed since the vehicle had a manual transmission

# BRAKE TRANSMISSION SHIFT INTERLOCK REQUIREMENT (S5.3)

This requirement could not completed since the vehicle had a manual transmission

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**SECTION 3** 

TEST DATA

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# DATA SHEET 1 – ALL VEHICLES

TEST DATE:	June 16, 2008	LAB:	Calspan	
CONTRACT:	DTNH22-06-C-00031	_ VEHICL	E NHTSA NUMBER:	C80512
VIN:	JS2YC412785103602	_ BUILD I	DATE:	02/08
MY/MAKE/MODEL/BO	DDY STYLE:	200	08 Suzuki SX4 4-Door Se	dan
TRANSMISSION TYP	E:			
Automatic	- ; Manual <u>X</u> ;	; Other	(describe: Not Applicab	ole )
DRIVE TRAIN TYPE:				**
Front Wheel	X; Rear V	Wheel	; Four W	/heel
OPTIONAL RELEASE	DEVICES.			
Key		- ;	None X	
· <u>-</u>	<u></u>			
VEHICLE STARTING Location of the start	ting system: The ignition switch	h is located	is on the right side of stee	ering column
Selectable settings:	"LOCK", "ACC", "ON", "STA	ART"		
	ig system: Place the key in the		tch, shift the transmission	to "N" (Neutral) and
depress the	clutch pedal all the way to the f	ю.		
<b>KEY:</b> Description of key:	The key device is the convention	onal style m	etal kev	
rate Programme			· · · · · · · · · · · · · · · · · · ·	
STARTING SYSTEM				
Insertion of key into	starting system: Insert the key	into the igi	nition switch like a conver	ntional lock and key.
A -4:4:	a contain with laser Dlace the in	:4: 1:	in the invitation contacts white	C4 41 - 4
(Neutral) and de	g system with key: Place the is press the clutch pedal all the wa	ay to the flo		
clockwise to the	"START" position to activate	the vehicle.		
	m starting system: Place the tra			mergency parking brake,
rotate the key co	ounter-clockwise to "LOCK" po	osition and	remove the key	
GEAR SELECTION (	CONTROL: ol: The gear selector is located	in the cente	er console hetween the fro	int seats
com selection cond	on The gear selector is rocated	in the cont	ar compose between the mo	nt seats.
Activation of gear se	election control: Depress the clu	utch all the	way to floor to shift the tr	ansmission to any gear.
Selectable settings:	"1", "2", "3", "4", "5", and	"N"		

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## DATA SHEET 1 (Continued)

IMMOBILIZER:						
Is the vehicle e	quipped with an imme	obilizer: Ye	es <u> </u>		No	X
	Immobilizer and how plicable	it prevents vehicle t	heft			
OPTIONAL RELI Key Remova		selection Control	Noi	ne X	Other	
If other, Expl	ain:					
	E:  Manufacturer Reconred (kPa): LF 23				Rear230	
TEST VEHICLE	DELIVERED WEI	GHT WITH MAX	IMUM FLUIDS	<u>:</u>		
	LEFT SIDE (kg)	RIGHT SIDE (k	g) TOTA	L (kg)	PERCENT	
FRONT =	376.0	368.0	744	1.0	60.4%	
REAR=	239.0	248.0	487	7.0	39.6%	

 $\textbf{TOTAL DELIVERED WEIGHT (UDW)}: \underline{\hspace{15mm} 1231.0 \hspace{15mm}} kg$ 

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# DATA SHEET 2 – THEFT PROTECTION

TEST DATE:	June 16, 2008	LAB: Calspan		
CONTRACT:	DTNH22-06-C-00031	VEHICLE NHTSA NUMBER:	C805	12
VIN:	JS2YC412785103602	—	02/0	3
MY/MAKE/MODEL/BO		2008 Suzuki SX4 4-Door Seda		
	REQUIREMENT S	5.1.1	PASS	FAIL
Engine cannot be started	l without using the key.	Yes <u>X</u> No	X	
With key removed, steep	ring locks:			
Yes _	X No	- 0E 45E		
	270日	90E		
Identify the steering who using arrows	eel locking position(s) on the c	ircle		
Clockwise:	(degrees)			
Counterclockwise:	63 (degrees)			
Key removal prevents for	orward self-mobility:			
Yes If <u>yes</u> , describe: Upon key removal from vehicle is self-mobile.	X No - the vehicle starting system, the	ere are no other means by which this	X	
When the key is remove steering or self mobility		rting of the engine or motor and either	X	

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## DATA SHEET 2 – THEFT PROTECTION

REQUIREMENT S5.1.3	PASS	FAIL
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.  Yes X No		
Identify ALL key/starting system position settings:  OFF ACCESSORY START ON POWER POWER POWER POWER		

REQUIREMENT S5.1.4		FAIL
With the vehicle engine or motor shut down and the transmission gear selection control in any position other than "park" or "rev";  The steering wheel can rotate without locking?  Yes No		_N/A
The vehicle is free to roll forward?  Yes No	N/A	N/A

Remarks: Section 5.1.4 is for only automatic transmission vehicles. This vehicle is a manual transmission

RECORDED BY:	Vincent M. Paolini	DATE:	June 16, 2008
APPROVED BY:	David Travale		

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## DATA SHEET 3 – ROLLAWAY PREVENTION

(For vehicles equipped with automatic transmission with a 'PARK' position)

TEST DATE:	June 16, 2008	LAB:	Calspan		
CONTRACT:	DTNH22-06-C-00031	VEHICI	LE NHTSA NUMBER:	C805	512
VIN:	JS2YC412785103602	BUILD	DATE:	02/0	08
MY/MAKE/MODEL/B	ODY STYLE:	20	008 Suzuki SX4 4-Door Sec	dan	
	REQUIREMENT S	S5.2.1		PASS	FAIL
"park".  Can the gear selection or remain there without as  If yes, can the key be referred to the selection of the selection	control be placed between each ssistance?  Yes emoved from the starting syster	Notes a gear selection Notes a gear selection Notes a gear selection m? Notes a gear selection graph g	on position and will it  o  o  he gear selection control is noval, the vehicle's k" as the direct result of	N/A	N/A
	REQUIREMENT S	S5.2.2		PASS	FAIL

Yes \_\_\_\_ No \_\_\_\_

The gear selection control is locked in the "park" position when the key is removed from the

starting system.

N/A

N/A

# DATA SHEET 3 – ROLLAWAY PREVENTION

(For vehicles equipped with automatic transmission with a 'PARK' position)

REQUIREMENT S5.2.3	PASS	FAIL
ELECTRICAL FAILURE (Battery Discharge)		
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	N/A	N/A
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  If <u>yes</u> , select the type of override device that is equipped:		
Override operated with a:  Opaque Cover No cover		
· · ·		
FILL IN THE SECTION BELOW THAT APPLIES:  OVERRIDE WITH AN OPAQUE COVER:		
The opaque surface cover prevents sight of and use of the override device  Yes - No -		
The opaque surface cover can be removed only by using a screwdriver or other tool.	NT/A	NT/A
Yes No	<u>N/A</u>	N/A
As a direct result of removing the key from the starting system, the following is prevented:  Steering self mobility		
OVERRIDE WITH NO COVER:		
The override device requires the use of a tool to activate.  Yes No		
Simultaneous activation of the override device and removal of the key from the starting system is required.	N/A	N/A
Yes No		
As a direct result of removing the key from the starting system, the following is prevented:  Steering self mobility		

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# DATA SHEET 3 – ROLLAWAY PREVENTION (For vehicles equipped with automatic transmission with a 'PARK' position)

REQUIREMENT S5.2.4	PASS	FAIL
GEAR SELECTION CONTROL OVERRIDE DEVICE		
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		
If <u>yes</u> , select the type of override device that is equipped:  Override operated with a:  Key Opaque Cover No cover		
Describe the device design and mode of activation (if equipped):  FILL IN THE SECTION BELOW THAT APPLIES:		
OVERRIDE OPERATED WITH A KEY:		
A 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  YesNo	N/A	N/A
OVERRIDE WITH AN OPAQUE COVER:		
The opaque surface cover prevents sight of and use of the override device  Yes No		
The opaque surface cover can be removed only by using a screwdriver or other tool.  Yes No	N/A	N/A
As a direct result of removing the key from the starting system, the following is prevented:  Steering self mobility		
OVERRIDE WITH NO COVER:		
The override device requires the use of a tool to activate.  Yes No		
Simultaneous activation of the override device and removal of the key from the starting system is required.  Yes No	N/A	N/A
As a direct result of removing the key from the starting system, the following is prevented:  Steering self mobility		

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# DATA SHEET 3 – ROLLAWAY PREVENTION

(For vehicles equipped with automatic transmission with a 'PARK' position)

REQUIREMENTS S5.2.5	PASS	FAIL
Vehicle facing uphill on 10% Grade: With the gear selection control in "park", measure movement of the vehicle down the slope upon releasing the service brake.		
Test grade:11.0_ % (9% to 15%) Measured movement:27_ mm (150mm maximum)		
<b>NOTE:</b> Repeat procedure if vehicle fails on grade in excess of 10%.		
Test grade: % (9% to 10%) Measured movement: mm (150 mm maximum)		
	N/A	N/A
Vehicle facing downhill on 10% Grade: With the gear selection control in "park", measure movement of the vehicle down the slope upon releasing the service brake.		
Test grade:10.5 % (9% to 15%) Measured movement:55 mm (150mm maximum)		
<b>NOTE:</b> Repeat procedure if vehicle fails on grade in excess of 10%.		
Test grade: % (9% to 10%) Measured movement: mm (150 mm maximum)		

Remarks: Vehicle is a standard transmission

RECORDED BY:	Vincent M. Paolini	_ DATE:	June 16, 2008
APPROVED BY:	David Travale	_	
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# FMVSS 114, ROLLAWAY PREVENTION DATA SHEET 3 – ROLLAWAY PREVENTION

(For vehicles equipped with automatic transmission with a 'PARK' position)

REQUIREMENTS S5.3	PASS	FAIL
With the key in the "off" position, the transmission will shift out of "park" without the service brake being applied  No	X	
With the key in the "acc" position, the transmission will shift out of "park" without the service brake being applied  No	X	
With the key in the "on" position (engine off), the transmission will shift out of "park" without the service brake being applied  No	X	
With the key in the "on" position (engine running), the transmission will shift out of "park" without the service brake being applied  No	X	
With the key in the "start" position, the transmission will shift out of "park" without the service brake being applied  No	X	
With the key in the "other" position (please specify), the transmission will shift out of "park" without the service brake being applied  No	X	
Does the key stay between starting system positions without being held by operator? If so, please describe	_N/A	_N/A
Brake force readings (force required to allow the transmission to shift out of "park"):  Reading 1   lbf Reading 2   lbf Reading 3   lbf Reading 4   lbf Reading 5   lbf Average   0.0   lbf	_N/A	_N/A
Remarks: Vehicle is a standard transmission		
RECORDED BY: Vincent M. Paolini DATE:	June 16, 200	)8
APPROVED BY: David Travale		

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# **SECTION 4**

# TEST EQUIPMENT LIST AND CALIBRATION DATES

Equipment	Manufacturer	Name	Range	Accuracy	Calibration	Calibration
					Date	Due
Clinometer	MD	Smart Level	0-100%	0.1%	04/2008	04/2009
Steel Tape	Stanley	Stanley 3137	3 meters	0.5mm	N/A	N/A
Weight	Long Acre	Computer Scales	0-12,000lbs.	0.2%	03/2008	03/2009
Scales		2000				
Manometer	Meriam	350 Smart	0-200 psi.	0.05%	02/2008	02/2009
	Instrument Co.	Manometer				
Plumb Bob	Stanley	Plumb bob	N/A	N/A	N/A	N/A

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# **SECTION 5**

# **PHOTOGRAPHS**

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Figure 1: Vehicle Left Front Three-Quarter View



Figure 2: Vehicle Certification Placard

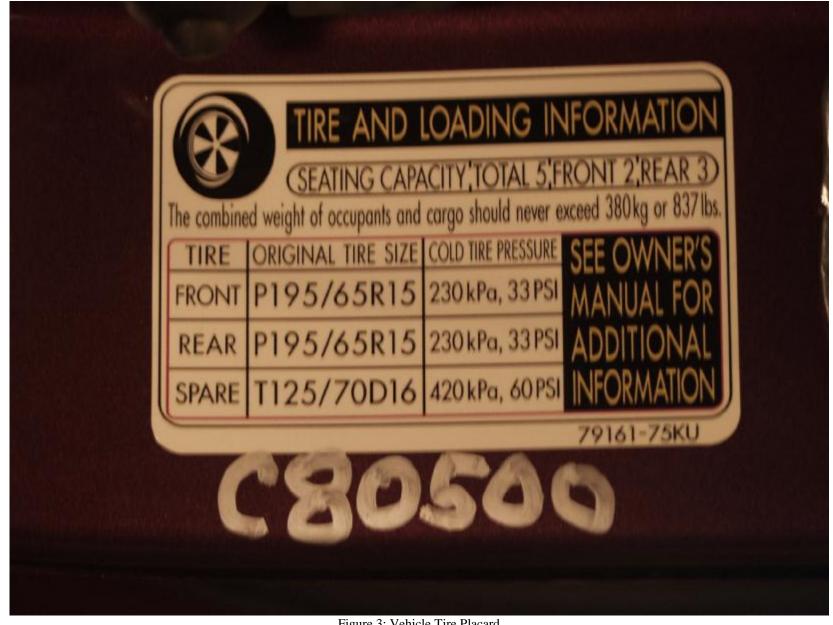


Figure 3: Vehicle Tire Placard

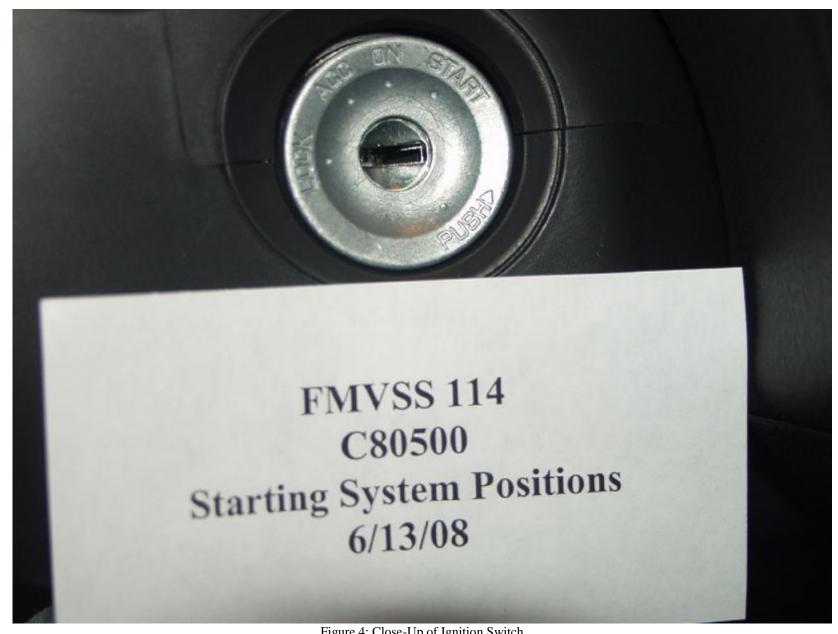


Figure 4: Close-Up of Ignition Switch



Figure 5: Close-Up of Transmission Shift Lever Mechanism

# NOT APPLICABLE

Figure 6: Close-Up of Special Device Which Allows For Key Removal

# NOT APPLICABLE

Figure 7: Close-Up of Special Device Which Allows Moving of Shift Lever

# **SECTION 6**

## VEHICLE OWNER'S MANUAL

2008 Suzuki SX4 4-Door Sedan NHTSA No.: C80512

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2008



# **OWNER'S MANUAL**

Keep With Vehicle At All Times. Contains Important Information On Safety, Operation & Maintenance.

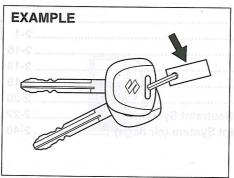
**SUZUKI**Caring for Customers

Part No. 99011-80J21-03E

C Ø

February, 2008

# Keys



54G489

Your vehicle comes with a pair of identical keys. Keep the spare key in a safe place. One key can open all of the locks on the vehicle.

The key identification number is stamped on a metal tag provided with the keys. Keep the tag in a safe place. If you lose your keys, you will need this number to have new keys made. Write the number below for your future reference.

KEY NUMBER:

**Ignition Key Reminder** 

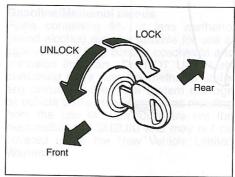
A buzzer sounds to remind you to remove the ignition key if it is in the ignition switch when the driver's door is opened.

## **Door Locks**

## **WARNING**

Always lock all doors when driving. Locking the doors helps to prevent occupants from being thrown from the vehicle in the event of an accident. It also helps prevent unintended opening of the doors.

#### Side Door Locks

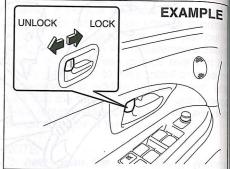


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To lock a front door from outside the vehicle:

- Insert the key and turn the top of the key toward the rear of the vehicle, or
- Turn the lock knob forward, then pull and hold the door handle as you close the door.

To unlock a front door from outside the vehicle, insert the key and turn the top of the key toward the front of the vehicle.



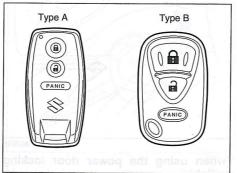
79.10

To lock a door from inside the vehicle, turn the lock knob forward. Turn the lock knob rearward to unlock the door.

To lock a rear door from outside the vehicle, turn the lock knob forward and close the door. You do not need to pull and hold the door handle as you close the door.



## Keyless Start System Remote Controller/Keyless Entry System Transmitter



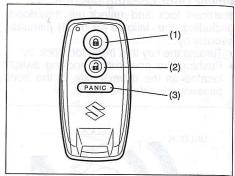
36,1111

Your vehicle is equipped with either a keyless start system remote controller (Type A) or a keyless entry system transmitter (Type B). The remote controller has a keyless entry system and a keyless start system. The transmitter has only a keyless entry system. For details, refer to the following explanations.

# Keyless Start System Remote Controller (Type A)

The remote controller enables the following operations:

- You can lock or unlock the doors by operating the LOCK/UNLOCK buttons on the remote controller. Refer to the explanation in this section.
- You can lock or unlock the doors by pushing the request switch on the door handle. For details, refer to the explanation in this section.
- You can start the engine without using an ignition key. For details, refer to "Ignition Switch" in the "STEERING COL-UMN CONTROLS" section and "Starting the Engine" in the "OPERATING YOUR VEHICLE" section.



66 1114

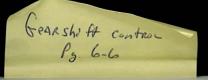
- (1) "LOCK" button
- (2) "UNLOCK" button
- (3) "PANIC" button

# "LOCK" button (1) / "UNLOCK" button (2) function

You can lock or unlock all doors (including the tailgate of SX4) simultaneously by operating the remote controller near the vehicle.

- To lock the doors, push the "LOCK" button (1).
- To unlock the driver's door, push the "UNLOCK" button (2) once.
- To unlock other doors, wait a second or two, then push the "UNLOCK" button (2) a second time. If you "double-click" too fast, the doors will not unlock.

When the doors are locked, the turn signal lights will flash once.



#### **BEFORE DRIVING**

When the doors are unlocked:

- The turn signal lights will flash twice.
- . If the interior light switch is in the middle position, the interior light will turn on for about 15 seconds and then fade out. If you push in the ignition switch or insert the key during this time, the light will start to fade out immediately.

Be sure the doors are locked after you operate the "LOCK" button. If no door is opened within about 30 seconds after the "UNLOCK" button is operated, the doors will automatically lock again.

#### NOTE:

- The maximum operating distance of the remote controller is about 5 m (16 ft.), but this can vary depending on the surroundings, especially near other transmitting devices such as radio towers or CB (Citizen's Band) radios.
- The door locks can not be operated with the remote controller if the ignition switch is in a position other than "LOCK", or the ignition key is inserted in the ignition switch, or if any door is open.

If any door is open, you cannot lock the door by operating the remote controller. however unlock the door.

 You cannot lock the door unless all of the door are closed completely. If you lose one of the remote controllers,

ask your SUZUKI dealer as soon as possible for a replacement. Be sure to have your dealer program the new remote

controller code in your vehicle's memory so that the old code is erased, or perform the programming procedure yourself according to the instructions in this section.

#### "PANIC" button (3) function

This function is to get the attention of oth-

Press the "PANIC" button (3) for more than 1 second. The headlights and taillights will blink for about 30 seconds. Also, the horn will sound intermittently for about 30 seconds at the same time.

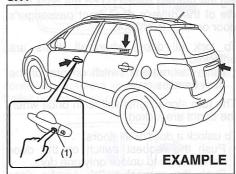
To cancel the "PANIC" mode, press any button (PANIC, LOCK or UNLOCK) on the remote controller. You can also insert the key in the ignition switch and turn to the "ON" position to cancel the "PANIC" mode.

#### NOTE:

The "PANIC" button function will not activate when the key is in the ignition switch.

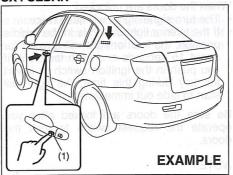
## Keyless unlocking/locking using the request switches disease again printing of

#### SX4



80JC054

#### SX4 SEDAN



#### BEFORE DRIVING

When the remote controller is within the operating range described in this section, you can lock or unlock the doors by pushing the request switch (1) on the door handle of the driver's door, front passenger's door or tailgate of SX4.

To lock all doors when all doors are unlocked:

 Push the request switch on one of the door handles once.

The turn signal lights will flash once when the doors are locked.

To unlock a door or all doors:

- Push the request switch on the door handle once to unlock only one door.
- Push the request switch on the door handle twice to unlock all doors.

When the doors are unlocked:

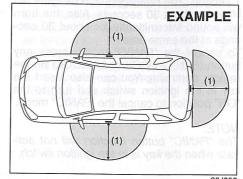
- The turn signal lights will flash twice.
- If the interior light switch is in the middle position, the interior light will turn on for about 15 seconds and then fade out. If you push in the ignition switch or insert the key during this time, the light will start to fade out immediately.

Be sure the doors are locked after you operate the request switch to lock the doors.

#### NOTE:

 The door locks can not be operated by the request switch under the following conditions:

- If any door is open or is not completely closed.
- If the ignition switch is in a position other than "LOCK".
- If the ignition key is inserted in the ignition switch,
- If no doors are opened within about 30 seconds after unlocking the doors by pushing the request switch, the doors will be locked again automatically.



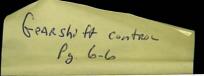
(1) 80 cm (2 1/2 feet)

When the remote controller is within approximately 80 cm (2 1/2 feet) from a front door handle or the tailgate switch, you can lock or unlock the doors by pushing the request switch.

#### NOTE:

 If the remote controller is outside the request switch operating range

- described above, you will not be able to operate the request switch.
- If the battery of the remote controller runs down or there are strong radio waves or noise, the request switch operating range may be reduced or the remote controller may be inoperative.
- If the remote controller is too close to the door glass, the request switches may not operate.
- If a spare remote controller is in the vehicle, the request switches may not operate normally.
- The remote controller will only operate a request switch if it is within the switch's operating range. For example, if the remote controller is within the operating range of the driver's door request switch but not the front passenger's door request switch or the tailgate request switch, the driver's door switch can be operated but the front passenger's door switch or tailgate switch can not be operated.



#### **BEFORE DRIVING**

#### CAUTION

The remote controller is a sensitive electronic instrument. To avoid damaging the remote controller:

- Do not expose it to impacts, moisture or high temperature such as by leaving it on the dashboard under direct sunlight.
- Keep the remote controller away from magnetic objects such as a television.

#### NOTE:

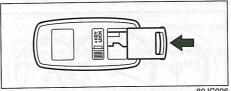
The keyless start system may not function correctly in certain environments or under certain operating conditions such as the following:

- · When there are strong signals coming from a television, power station or a cellular phone.
- When the remote controller is in contact with or covered by a metal object.
- · When a radio wave type remote keyless entry is used nearby.
- · When the remote controller is placed near an electronic device such as personal computer.

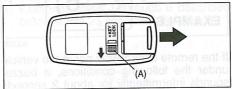
Some additional precautions you should take and information you should be aware of are:

· Make sure the ignition key is stowed in the remote controller. If the remote controller becomes unreliable, you will not be able to lock or unlock the doors or start the engine.

- · Be sure that the driver always carries the remote controller.
- If you lose one of the remote controllers, ask your SUZUKI dealer as soon as possible for a replacement. Be sure to have your dealer program the new remote controller code in your vehicle's memory so that the old code is erased, or perform the programming procedure yourself according to the instructions in this section.
- · You can use up to four remote controllers and ignition keys for your vehicle. Ask vour SUZUKI dealer for details.
- The battery life of the remote controller is about two years, but it can vary depending on usage conditions.

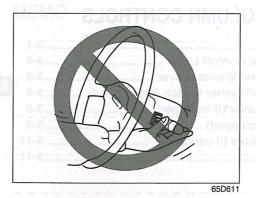


To stow the ignition key into the remote controller, push the key in the remote controller until you hear a click.



To remove the key from the remote controller, push the button (A) in the direction of the arrow and pull the key out from the remote controller.

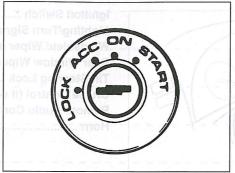
#### STEERING COLUMN CONTROLS



## **A** WARNING

To avoid possible injury, do not operate controls by reaching through the steering wheel.

# **Ignition Switch**



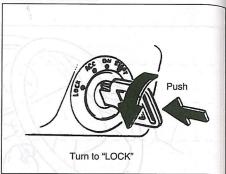
60B041

The ignition switch has the following four positions:

#### LOCK

This is the normal parking position. It is the only position in which the key can be removed.

#### Manual transaxle



60A055

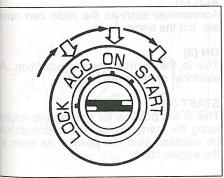
## Manual transaxle vehicles

You must push in the key to turn it to the "LOCK" position. It locks the ignition, and prevents normal use of the steering wheel after the key is removed.

#### Automatic transaxle vehicles

The gearshift lever must be in the "P" (Park) position to turn the key to the "LOCK" position. It locks the ignition and prevents normal use of the steering wheel and gearshift lever.

# STEERING COLUMN CONTROLS



## ACC

Accessories such as the radio can operate, but the engine is off.

This is the normal operating position. All electrical systems are on.

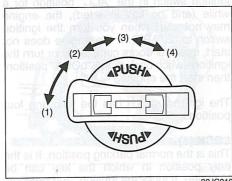
# START

This is the position for starting the engine using the starter motor. The key should be released from this position as soon as the engine starts.

Ignition key reminder

A buzzer sounds intermittently to remind you to remove the ignition key if it is in the Ignition switch when the driver's door is opened.

# **Vehicle With Keyless Start System**

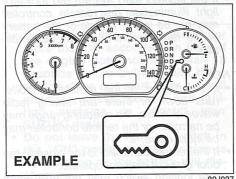


80JC010

The ignition switch can be operated without using an ignition key when the remote controller is in an area of the vehicle other than the rear luggage area. To turn the ignition switch, first push in the switch.

#### NOTE:

You must push in the ignition switch to turn it from the "LOCK" position to the "ACC" position. To return to the "LOCK" position from the "ACC" position, turn the ignition switch counterclockwise while pushing in the switch.



If the keyless start system blue indicator light illuminates on the instrument cluster, you can turn the ignition switch. If the red indicator light illuminates, you can not turn the ignition switch.

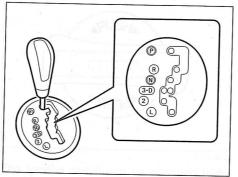
#### NOTE: Note of teaminization

· The ignition switch can be turned to the "ACC" position when the keyless start system blue indicator light illuminates. The blue indicator light will illuminate for several seconds when you push in the ignition switch and then will turn off to protect the system. In this case, you must release the ignition switch and push it in again to illuminate the blue indicator light.

# **OPERATING YOUR VEHICLE**

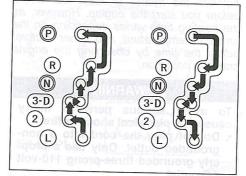
# **Using the Transaxle**

# **4-Speed Automatic Transaxle**



77J021

#### Gearshift lever



77J02

# **A** WARNING

Always depress the brake pedal before shifting from "P" (Park) (or "N" (Neutral) if the vehicle is stationary) to a forward or reverse gear, to help prevent the vehicle from moving unexpectedly when you shift.

Use the gearshift lever positions as described below:

## P (Park)

Use this position to lock the transaxle when the vehicle is parked or when starting the engine. Shift into Park only when the vehicle is completely stationary.

R (Reverse)

Use this position to reverse the vehicl from stop. Make sure that vehicle is completely stationary before shifting int Reverse.

## N (Neutral)

Use this position for starting the engine the engine stalls and you need to restart while the vehicle is moving. You may also shift into Neutral and depress the brake pedal to hold the vehicle stationary during idling.

## D (Drive)

Use this position for all normal driving.

With the gearshift lever in "D" range you can get an automatic downshift by pressing the accelerator pedal. The higher the vehicle speed is, the more you need to press the accelerator pedal to get a downshift.

## 3 (Low 3)

Use this position for driving on moderate uphill and downhill gradients. The engine braking effect on moderate downhills can be used in this position. The transaxle shifts up only to 3rd gear.

## 2 (Low 2)

Use this position to provide extra power when climbing hills, or to provide engine braking when going down hills.

# (Low 1) Wageman travels a Linchism

se this position to provide maximum wer when climbing steep hills or driving rough deep snow or mud, or to provide aximum engine braking when going own steep hills.

#### OTF.

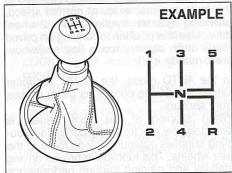
you move the gearshift lever to a lower par while driving faster than the maximum lowable speed for the lower gear, the ansaxle will not actually downshift until our speed drops below the maximum peed for the lower gear.

#### CAUTION

Be sure to take the following precaulions to help avoid damage to the automatic transaxle:

- Make sure that the vehicle is completely stationary before shifting into "P" or "R".
- Do not shift from "P" or "N" to "R", "D", "3", "2", or "L" when the engine is running above idle speed. Do not rev the engine with the transaxle in a drive position ("R", "D", "3", "2", or "L") and the front wheels not moving.
- Do not use the accelerator to hold the vehicle on a hill. Use the vehicle's brakes.

## Manual Transaxle



79J002

## Starting off

To start off, depress the clutch pedal all the way to the floor and shift into 1st gear. After releasing the parking brake, gradually release the clutch. When you hear a change in the engine's sound, slowly press the accelerator while continuing to gradually release the clutch.

#### Shifting

All forward gears are synchronized, which provides for quiet, and easy shifting. Always depress the clutch pedal all the way to the floor before shifting gears. Keep the engine speed does not rise into the red zone of the tachometer.

#### **A WARNING**

- Reduce your speed and downshift to a lower gear before going down a long or steep hill. Downshifting will allow the engine to provide braking. Avoid riding the brakes or they may overheat, resulting in brake failure.
- When driving on slippery roads, be sure to slow down before downshifting. Large and sudden changes in engine speed may cause loss of traction, which could cause you to lose control.
- Make sure that the vehicle is completely stopped before you shift into reverse.

#### CAUTION

- To help avoid clutch damage, do not use the clutch pedal as a footrest while driving or use the clutch to keep the vehicle stationary on a slope. Depress the clutch fully when shifting.
- When shifting or starting off, do not race the engine. Racing the engine can shorten engine life and affect smooth shifting.