REPORT NUMBER 103-GTL-07-003

SAFETY COMPLIANCE TESTING FOR FMVSS NO. 103 WINDSHIELD DEFROSTING AND DEFOGGING SYSTEMS

SUZUKI MOTOR CORPORATION
2007 SUZUKI AERIO, PASSENGER CAR
NHTSA NO. C70503

GENERAL TESTING LABORATORIES, INC.
1623 LEEDSTOWN ROAD
COLONIAL BEACH, VIRGINIA 22443

MARCH 3, 2008

FINAL REPORT

PREPARED FOR

U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
1200 NEW JERSEY AVE. S.E.
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Technical Report Documentation Page

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16. Abstract Compliance tests were conducted on the subject, 2007 Suzuki Aerio Passenger Car in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-103-13 for the determination of FMVSS 103 compliance. Test failures identified were as follows: None		
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SECTION 1

PURPOSE OF COMPLIANCE TEST

1.0 PURPOSE OF COMPLIANCE TEST

A 2007 Suzuki Aerio Passenger Car was subjected to Federal Motor Vehicle Safety Standard (FMVSS) No. 103 testing to determine if the vehicle was in compliance with the requirements of the standard. All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Procedure, TP-103-13 dated 26 June 1996 and General Testing Laboratories, Inc. (GTL) Test Procedure, "Windshield Defrosting and Defogging Systems – Passenger Vehicles, Mulitpurpose Vehicles, Trucks and Buses".

1.1 TEST VEHICLE

The test vehicle was a 2007 Suzuki Aerio Passenger Car. Nomenclature applicable to the test vehicle are:

A. Vehicle Identification Number: JS2RA62S675353819

B. NHTSA No.: C70503

C. Manufacturer: SUZUKI MOTOR CORPORATION

D. Manufacture Date: 12/06

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 103 testing on October 19-22, 2007.

SECTION 2

COMPLIANCE TEST PROCEDURE AND SUMMARY OF RESULTS

2.0 GENERAL

The 2007 Suzuki Aerio 4-door passenger car, NHTSA No. C70503 was subjected to FMVSS No. 103 tests on October 19-22, 2007. Photographs of the test vehicle are shown in Figures 5.1 through 5.4. The manufacturer's certification and tire information labels are shown in Figures 5.5 and 5.6. The test instrumentation and instrument panel setups are depicted in Figures 5.7 and 5.8. Figures 5.9 through 5.15 depict the windshield pre and post test defrost conditions.

2.1 TEST PROCEDURE

Prior to test the test vehicle was inspected for completeness, systems operability, and appropriate fuel and liquid levels, i.e., oil and coolant to include antifreeze protection. The vehicle was then photographically documented as required by the DOT/NHTSA test procedure. The windshield patterns for areas A, B, C, and D had been furnished prior to testing and these areas were outlined on the windshield with a marker. The vehicle was then installed in the cold chamber and pre-conditioned for a 14-hour minimum, 0º ±5º F temperature soak for the first test run. After the pre-condition, the hood was raised to assure engine coolant and lubricant were stabilized within the test temperature range for a minimum of 2 hours.

At the end of the 2-hour minimum stabilization period, the entire windshield was sprayed evenly with 0.010 ounces of water per square inch of glass area. Refer to Section 3, Compliance Test Data, for test specifics such as total amount of water sprayed, spray gun identification, and air pressure regulation. The vehicle soak continued for an additional 30 minutes minimum but no more than 40 minutes after the windshield was sprayed.

At the conclusion of the additional soak time the vehicle's engine was started and operated at a target speed of 1500-1600 rpm or at the manufacturer's specification if different as noted on data sheets. The defroster blower was turned on to the high speed setting with the heater selector in the de-ice (defrost) position, and the temperature control in the maximum temperature position. All doors and windows were closed. The heater air intake was fully open and the vehicle's hood closed. At no time during the test were the windshield wipers used.

SECTION 2 continued

At start of testing and during test, at each 5-minute interval after engine start, cold chamber, engine coolant, heater coolant in and defroster air left/defroster air right temperatures were recorded. Likewise at each 5-minute interval the boundary of the defrosted area was marked on the inside surface of the windshield. The test was run for a maximum of 40 minutes from engine start, or until such time as 100 percent windshield clearance was achieved. Photographs were made of the windshield at the pre-test frosted state and 20-minute and 25-minute intervals. Post test actions included placing a vellum pattern on the windshield and tracing the windshield's 5-minute interval defrosted area boundary lines onto the vellum pattern.

After the traces were obtained, the windshield was again thoroughly cleaned and the vehicle engine coolant and lubricant stabilization period at 0º ± 5º F temperature commenced for a repeat of the procedure discussed. The windshield patterns for both tests were used subsequently to determine the cleared area percentages.

2.2 SUMMARY OF RESULTS

Based on the test performed, the test vehicle appears to be in compliance with the requirements of FMVSS 103.

SECTION 3

COMPLIANCE TEST DATA

3.0 TEST RESULTS

The following data sheets document the results of testing on the 2007 Suzuki Aerio.

SUMMARY DATA SHEET
FMVSS 103, WINDSHIELD DEFROSTING AND DEFOGGING SYSTEMS

VEH. MOD YR/MAKE/MODEL/BODY: 2007 SUZUKI AERIO PASSENGER CAR
VEH. NHTSA NO: C70503; VIN: JS2RA62S675353819
VEH. BUILD DATE: 12/06 TEST DATE: OCTOBER 19-22, 2007
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

WINDSHIELD AREA: 1673 in^2 AREA C = 225.0 in^2 AREA D = 225.0 in^2 AREA A= 959.0 in^2

MANUFACTURER'S WINDSHIELD PATTERN USED: Yes X No

ENGINE THERMOSTAT NOMINAL REGULATING TEMPERATURE: 180 ºF

HEATER-DEFROSTER SYSTEM INCLUDES AIR CONDITIONER: YES X NO

DESCRIBE UNUSUAL FEATURES OF DEFROSTING SYSTEM: NONE

DESCRIBE UNUSUAL FEATURES OF TEST CAR: NONE

DESIGNATION	AREA PERCENT DEFROSTED					
	TEST 1	TEST 2	AVG	REQ'D	PASS	FAIL
CRITICAL AREA C AT 20 MINUTES	100%	100%	100%	80% MINIMUM	PASS	
PASSENGER AREA D AT 25 MINUTES	100%	100%	100%	80% MINIMUM	PASS	
TOTAL AREA A AT 40 MINUTES	100%	100%	100%	95% MINIMUM	PASS	

REMARKS:

RECORDED BY: G. FARRAND DATE: 10/22/07

APPROVED BY: D. MESSICK

FMVSS 103 TEST DATA RECORD – TEST RUN NO. 1

VEH. MOD YR/MAKE/MODEL/BODY: 2007 SUZUKI AERIO PASSENGER CAR
VEH. NHTSA NO: C70503; VIN: JS2RA62S675353819
VEH. BUILD DATE: 12/06; TEST DATE: OCTOBER 19, 2007
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

If 1st Test Run, chamber conditioned 24 hours @ 0º ±5º F (14 hrs. min.)

Cold Soak Period: 24 HOURS

Time engine coolant and lubricant remained stabilized at 0º F: 16 hrs. 0 minutes

Water Spray Gun and Nozzle Type: BINKS #66 S

Spray Gun Pressure: 50 psi (50 psi ± 3 psi)

Water used: 16.8 fluid oz. (0.010 ounces per square inch of windshield area)

Soak Period Between Ice Application and Test Start: 35 minutes (30 to 40 minutes)

Engine Speed: 1500 rpm (Target engine speed 1500 to 1600 rpm)

Wind at specified location in front of windshield: 1 mph (0 to 2 mph)

Number of Vehicle Occupants: 1 (2 maximum)

Describe window openings, if any: NONE

TIME FROM START (minutes)	MOTOR VOLTAGE (volts)	TEMPERATURE, ºF					DEFROSTED AREA, %		
		TEST ROOM	ENGINE WATER	HEATER WATER IN	DEFROSTER AIR				
					DRVR	PSGR	A	C	D
0	13.5	-1.4	-1.3	-1.3	-.5	-.5	0%	0%	0%
5	14.5	-1.0	60.6	88.7	64.6	67.9	0%	0%	0%
10	14.4	1.0	98.9	119.6	89.0	91.7	40.3%	35.8%	25.9%
15	14.4	2.5	118.3	138.1	104.4	106.5	91.3%	99.0%	99.5%
20	14.4	2.9	129.5	149.7	115.3	115.8	100%	100%	100%

REMARKS:

RECORDED BY: G. FARRAND DATE: 10/22/07

APPROVED BY: D. MESSICK

FMVSS 103 TEST DATA RECORD – TEST RUN NO. 2

VEH. MOD YR/MAKE/MODEL/BODY: 2007 SUZUKI AERIO PASSENGER CAR
VEH. NHTSA NO: C70503; VIN: JS2RA62S675353819
VEH. BUILD DATE: 12/06 ; TEST DATE: OCTOBER 22, 2007
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

If 1st Test Run, chamber conditioned 24 hours @ 0º ±5º F (14 hrs. min.)

Cold Soak Period: 24.0 HOURS

Time engine coolant and lubricant remained stabilized at 0º F: 18 hrs. ____ minutes

Water Spray Gun and Nozzle Type: BINKS #66S

Spray Gun Pressure: 50 psi (50 psi ± 3 psi)

Water used: 16.8 fluid oz. (0.010 ounces per square inch of windshield area)

Soak Period Between Ice Application and Test Start: 35 minutes (30 to 40 minutes)

Engine Speed: 1500 rpm (Target engine speed 1500 to 1600 rpm)

Wind at specified location in front of windshield: 1 mph (0 to 2 mph)

Number of Vehicle Occupants: 1 (2 maximum)

Describe window openings, if any: NONE

TIME FROM START (minutes)	MOTOR VOLTAGE (volts)	TEMPERATURE, ºF					DEFROSTED AREA, %		
		TEST ROOM	ENGINE WATER	HEATER WATER IN	DEFROSTER AIR				
					DRVR	PSGR	A	C	D
0	13.5	-2.2	-.3	-.2	.6	.6	0%	0%	0%
5	14.5	-.4	64.0	90.1	63.5	68.7	0%	0%	0%
10	14.5	-1.6	101.7	120.8	89.6	91.6	40.1%	39.2%	22.7%
15	14.4	-.4	117.4	140.0	106.2	107.8	92.4%	100%	97.3%
20	14.4	-.7	130.6	151.3	115.8	117.0	99.7%	100%	100%
25	14.4	.9	131.5	154.9	119.7	120.3	100%	100%	100%

REMARKS:

RECORDED BY: G. FARRAND DATE: 10/22/07

APPROVED BY: D. MESSICK

SECTION 4
INSTRUMENTATION AND EQUIPMENT LIST

TABLE 1 - INSTRUMENTATION & EQUIPMENT LIST

EQUIPMENT	DESCRIPTION	MODEL/ SERIAL NO.	CAL. DATE	NEXT CAL. DATE
TIMER	ACCU-SPLIT	ACT1	10/07	10/08
TAC/RECORDER	MONARCH	1444664	08/07	08/08
TEMPERATURE RECORDER	OMEGA	B/55662	06/07	06/08
SPRAY GUN	BINKS	66S	BEFORE USE	BEFORE USE
ANEMOMETER	OMEGA	53668	06/07	06/08
AIR PRESSURE GAGE	BINKS	0-160	10/07	10/08
SCALE	METTLER	H315/ 445951	BEFORE USE	BEFORE USE
GRADUATED BEAKER	PHOTAX	N/A	N/A	N/A
EVENT RECORDER	COMPUTER	GEO1	BEFORE USE	BEFORE USE

SECTION 5

PHOTOGRAPHS

2007 SUZUKI AERIO
NHTSA NO. C70503
FMVSS NO. 103

FIGURE 5.1
LEFT SIDE VIEW OF VEHICLE

2007 SUZUKI AERIO
NHTSA NO. C70503
FMVSS NO. 103

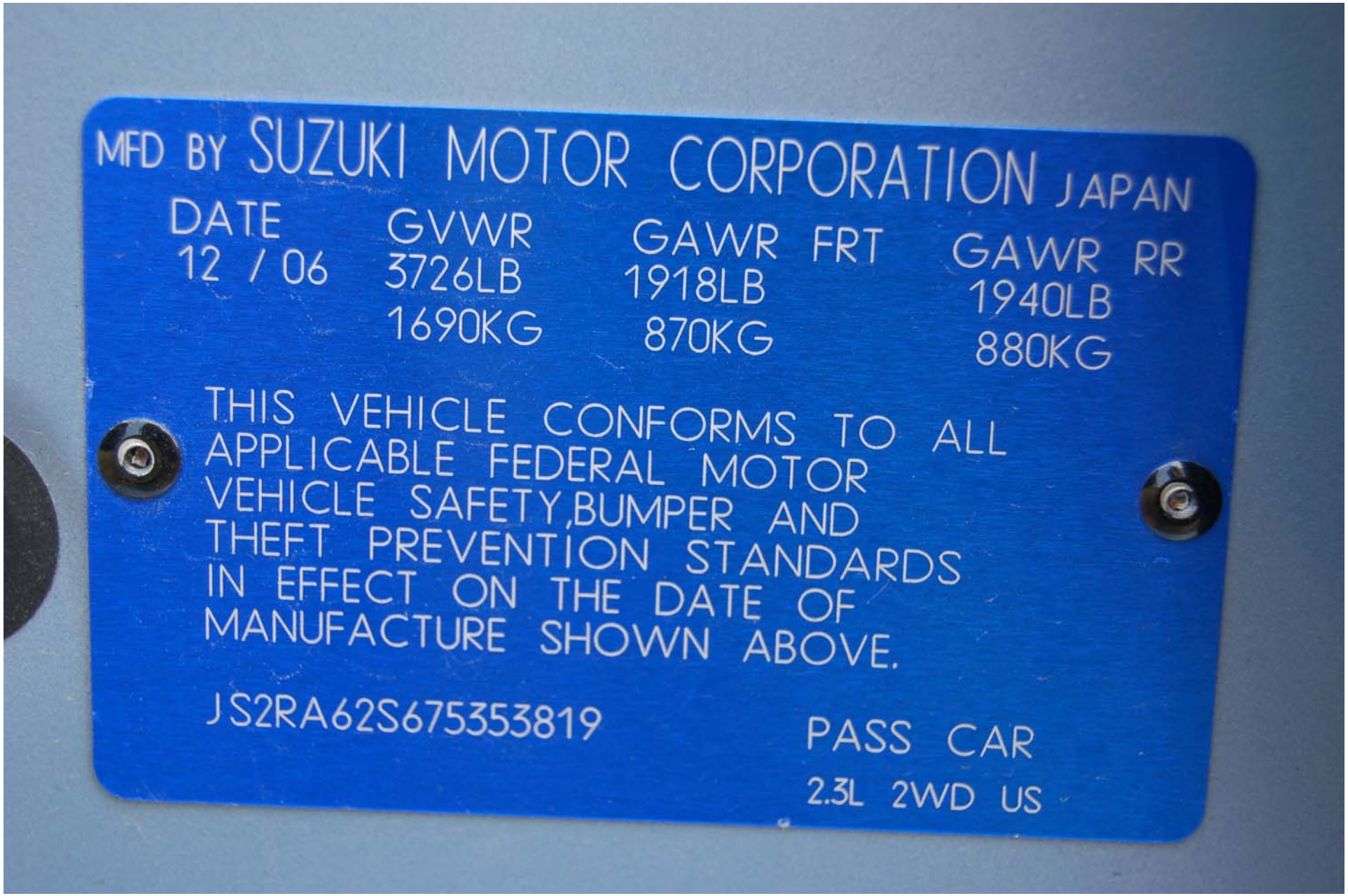
FIGURE 5.2
RIGHT SIDE VIEW OF VEHICLE

2007 SUZUKI AERIO
NHTSA NO. C70503
FMVSS NO. 103

FIGURE 5.3
¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE

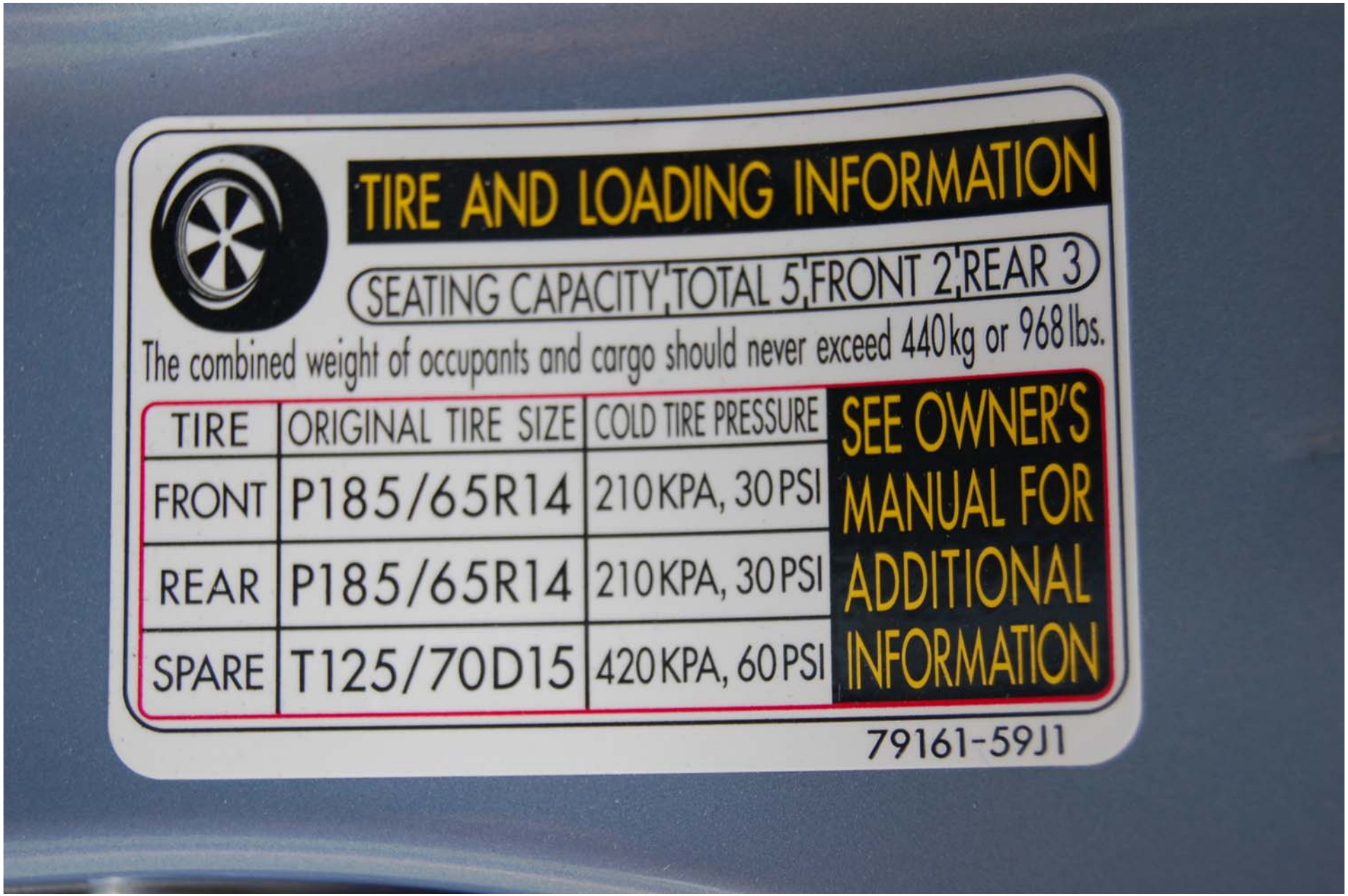
2007 SUZUKI AERIO
NHTSA NO. C70503
FMVSS NO. 103

FIGURE 5.4
¾ REAR VIEW FROM RIGHT SIDE OF VEHICLE



2007 SUZUKI AERIO
NHTSA NO. C70503
FMVSS NO. 103

FIGURE 5.5
VEHICLE CERTIFICATION LABEL



2007 SUZUKI AERIO
NHTSA NO. C70503
FMVSS NO. 103

FIGURE 5.6
VEHICLE TIRE INFORMATION LABEL

2007 SUZUKI AERIO
NHTSA NO. C70503
FMVSS NO. 103

FIGURE 5.7
CLOSE-UP VIEW OF DEFROSTER CONTROL SETTING
ON DASH

2007 SUZUKI AERIO
NHTSA NO. C70503
FMVSS NO. 103

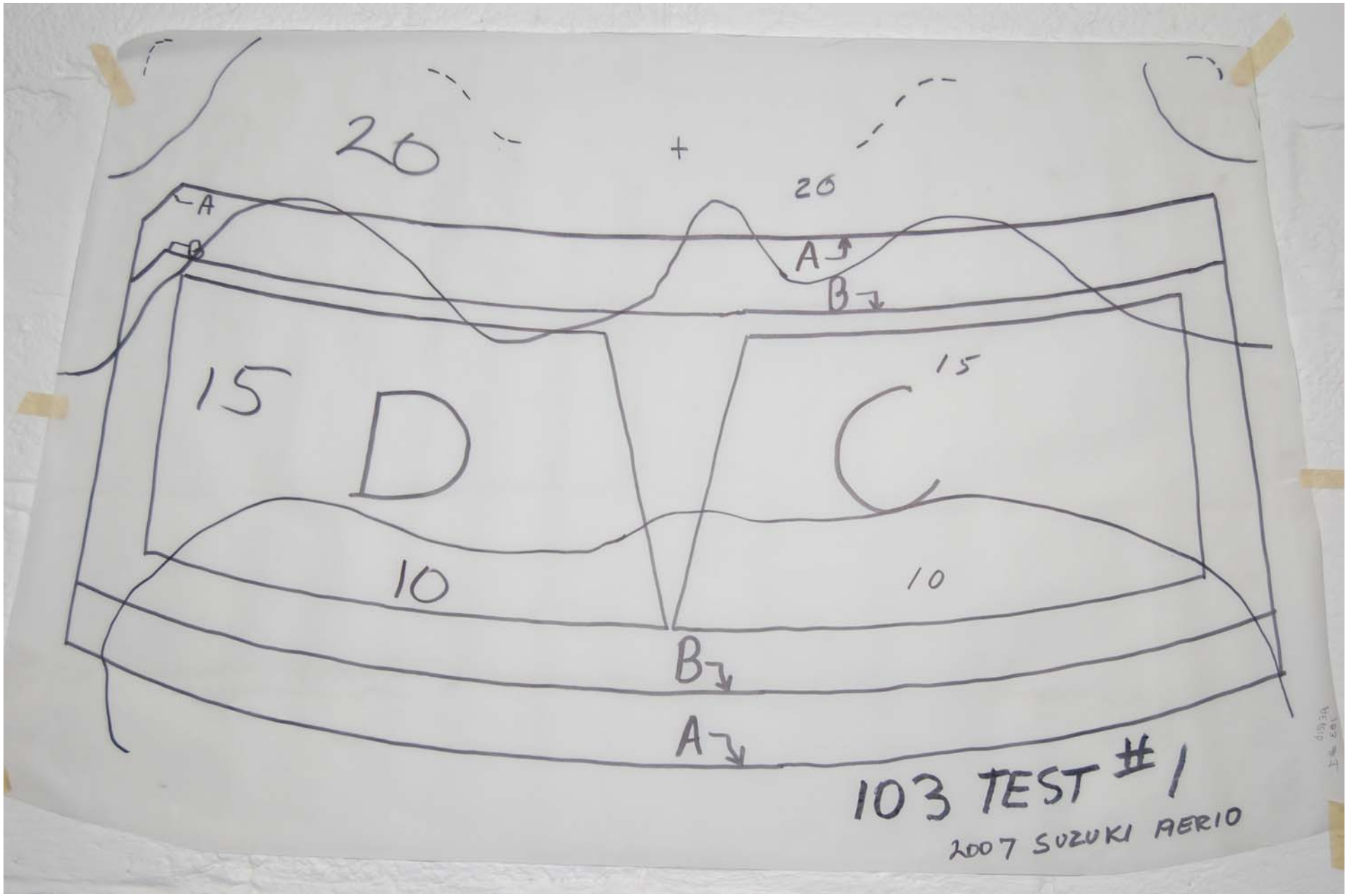
FIGURE 5.8
INSTRUMENTATION SET-UP

2007 SUZUKI AERIO
NHTSA NO. C70503
FMVSS NO. 103

FIGURE 5.9
WINDSHIELD, PRE-TEST FROSTED STATE TEST #1

2007 SUZUKI AERIO
NHTSA NO. C70503
FMVSS NO. 103

FIGURE 5.10
DEFROSTED AREA AT 20 MINUTES TEST #1



2007 SUZUKI AERIO
NHTSA NO. C70503
FMVSS NO. 103

FIGURE 5.11
WINDSHIELD VELLUM PATTERN, POST TEST #1

2007 SUZUKI AERIO
NHTSA NO. C70503
FMVSS NO. 103

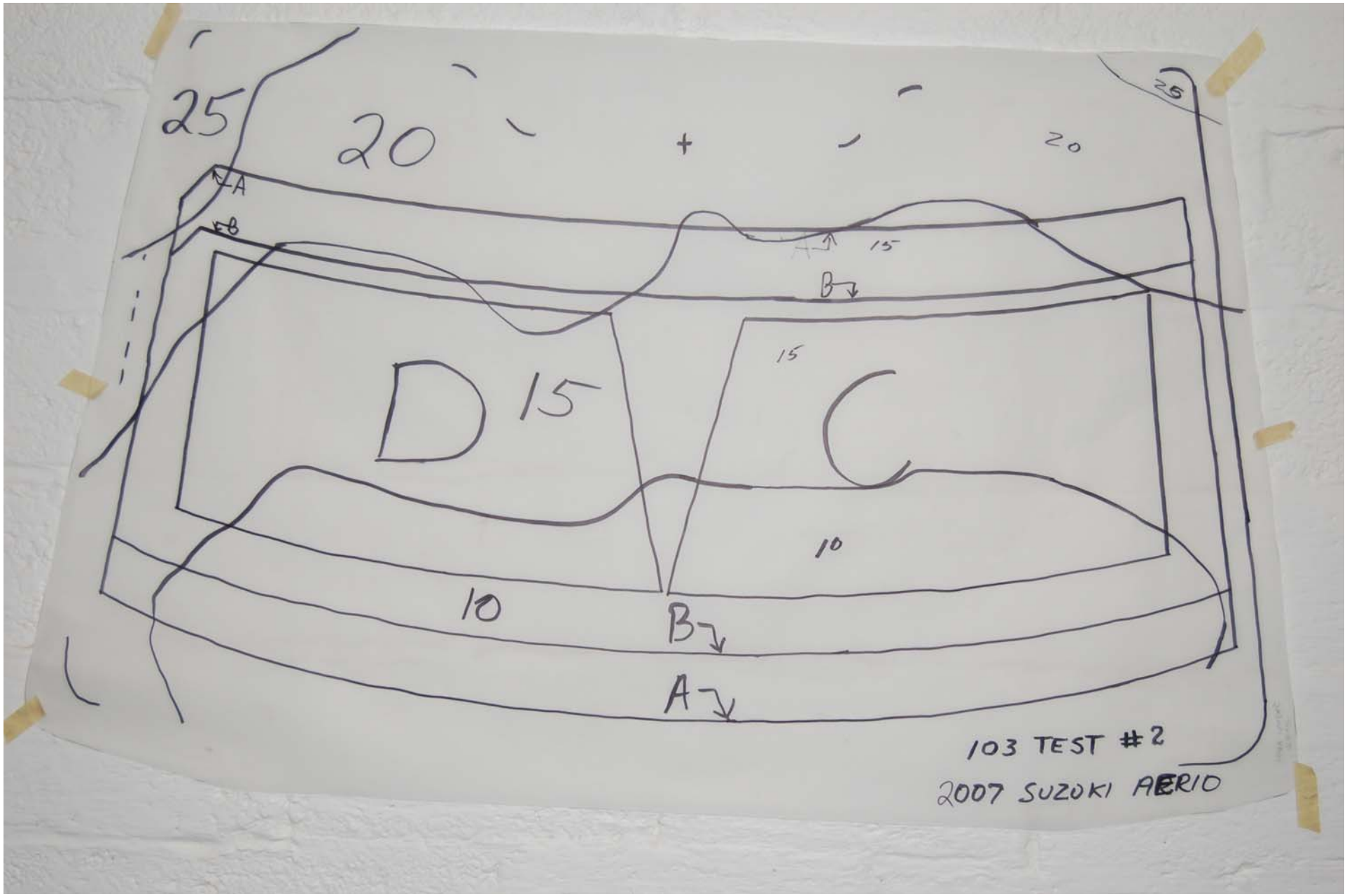
FIGURE 5.12
WINDSHIELD PRE-TEST FROSTED STATE TEST #2

2007 SUZUKI AERIO
NHTSA NO. C70503
FMVSS NO. 103

FIGURE 5.13
DEFROSTED AREA AT 20 MINUTES TEST #2

2007 SUZUKI AERIO
NHTSA NO. C70503
FMVSS NO. 103

FIGURE 5.14
DEFROSTED AREA AT 25 MINUTES TEST #2



2007 SUZUKI AERIO
NHTSA NO. C70503
FMVSS NO. 103

FIGURE 5.15
WINDSHIELD VELLUM PATTERN, POST TEST #2

SECTION 6

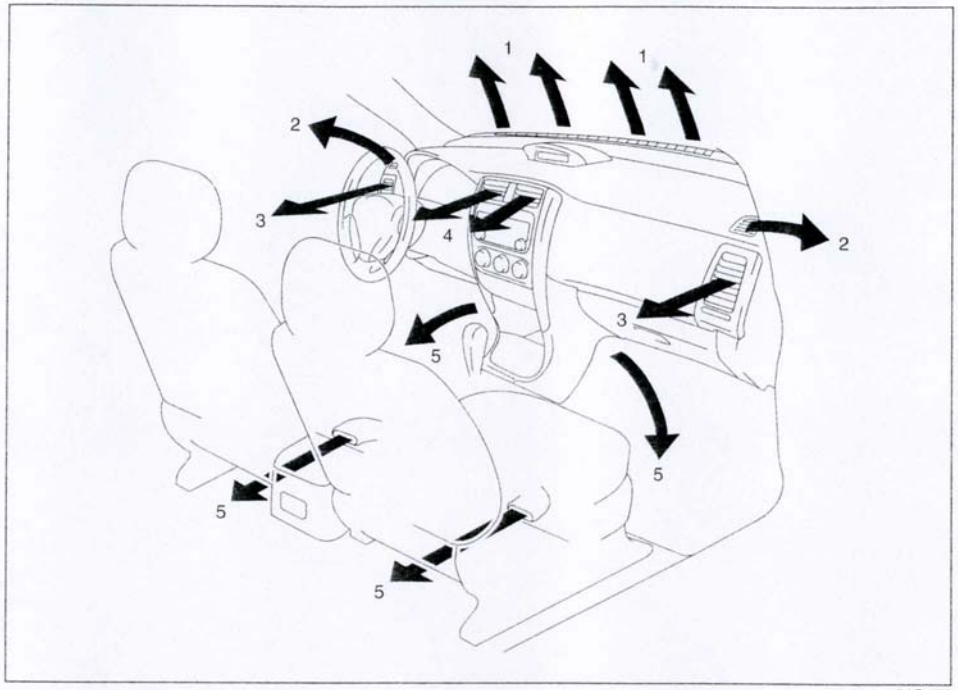
OWNER'S MANUAL DEFROSTER INSTRUCTIONS

Heating and Air Conditioning System

There are various types of heating and air conditioning system as follows:

- Heating System
- Manual Heating and Air Conditioning System
- Automatic Heating and Air Conditioning System (Climate Control)

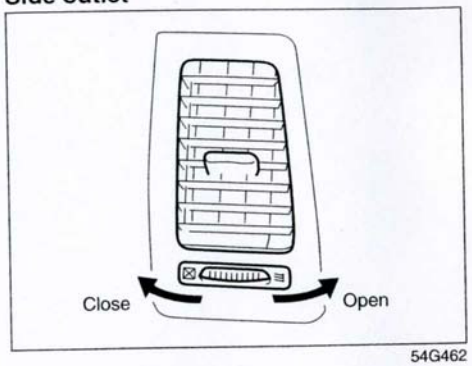
Air Outlet



54G476

1. Windshield defroster outlet
2. Side defroster outlet
3. Side outlet
4. Center outlet
5. Floor outlet

Side outlet

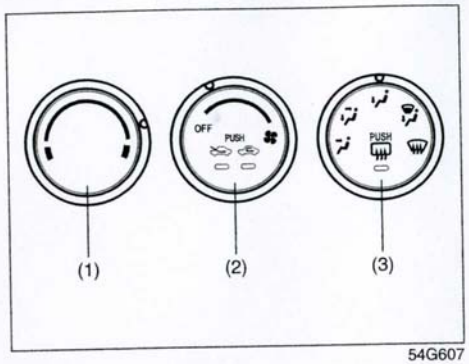


54G462

When "Open", air comes out regardless of the air flow selector position.

Heating System

Description of Controls

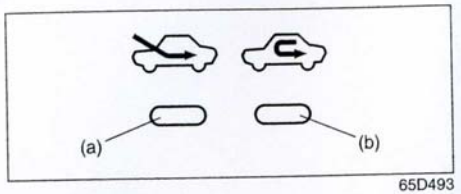


54G607

Temperature selector (1)
This is used to select the temperature by turning the selector.

Blower speed selector/Air intake selector (2)
This is used to turn on the blower and to select blower speed by turning the selector.

Also, this is used to select the following modes by pushing the selector.



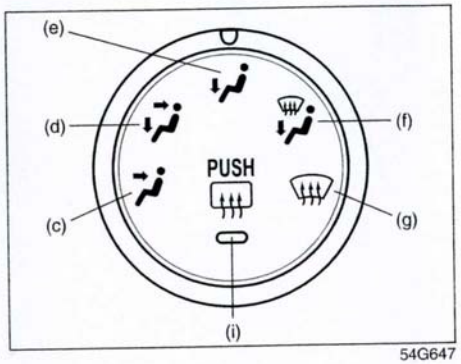
65D493

FRESH AIR
When this mode is selected, the indicator light (a) will come on and outside air is used.

RECIRCULATED AIR
When this mode is selected, the indicator light (b) will come on, outside air is shut out and inside air is recirculated. This mode is suitable when driving through dusty or polluted air such as in a tunnel, or when attempting to quickly cool down the interior.

"FRESH AIR" and "RECIRCULATED AIR" are switched alternately each time the air intake selector is pushed.

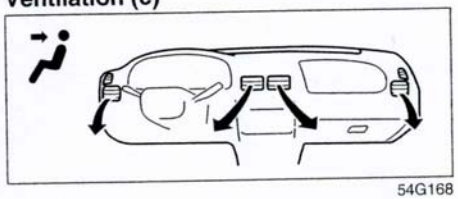
Air flow selector (3)



54G647

This is used to select one of the functions described below.

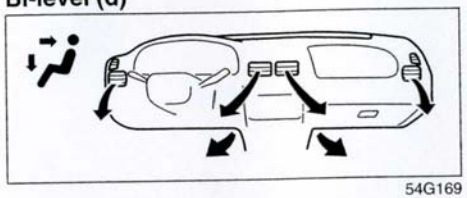
Ventilation (c)



54G168

Temperature-controlled air comes out of the center and side air outlets.

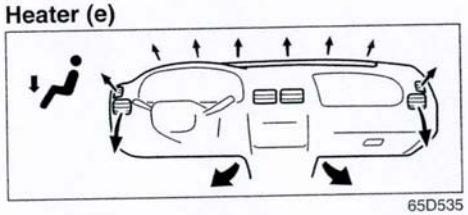
Bi-level (d)



54G169

Temperature-controlled air comes out of the floor outlets and cooler air comes out of the center and side outlets. When the temperature selector (1) is in the fully COLD position or fully HOT position, however, the air from the floor outlets and the air from the center and side outlets will be the same temperature.

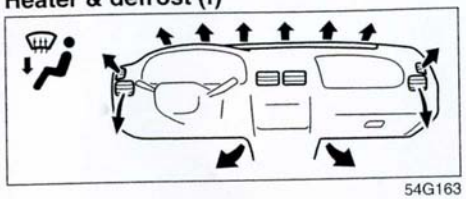
Heater (e)



65D535

Temperature-controlled air comes out of the floor outlets and the side outlets, also comes out of the windshield defroster outlets and the side defroster outlets slightly.

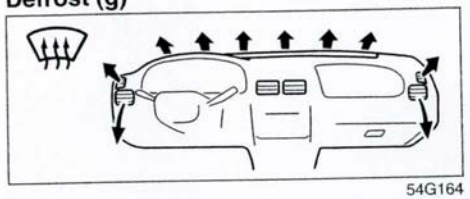
Heater & defrost (f)



54G163

Temperature-controlled air comes out of the floor outlets, the windshield defroster outlets, the side defroster outlets and the side outlets.

Defrost (g)



54G164

Temperature-controlled air comes out of the windshield defroster outlets, the side defroster outlets and the side outlets.

NOTE:
When the air flow selector (3) is turned either to "Heater & defrost (f)" or "Defrost (g)", the "FRESH AIR" mode will be selected automatically.

NOTE:
If the indicator light (i) blinks, there is a problem in the heating system. You should

have the system inspected by an authorized SUZUKI dealer.

System Operating Instructions

Natural ventilation
Select "VENTILATION" and "FRESH AIR", the temperature selector to the desired temperature position, and the blower speed selector to "OFF". Fresh air will flow through the vehicle during driving.

Forced ventilation
The control settings are the same as for natural ventilation except you set the blower speed selector to a position other than "OFF".

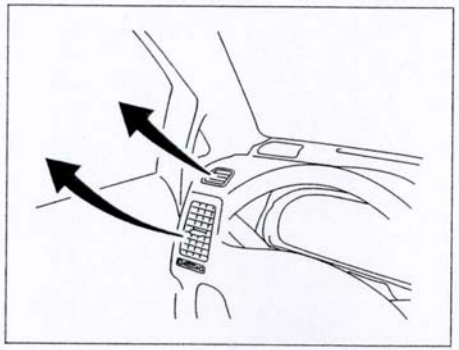
Normal heating (using outside air)
Select "HEATER" and "FRESH AIR", the temperature selector to the desired temperature position and the blower speed selector to the desired blower speed position. Setting the blower speed selector to a higher blower speed position increases heating efficiency.

Quick heating (using recirculated air)
The control settings are the same as for normal heating except you select "RECIRCULATED AIR". If you use this heating method for an extended period of time, the air in the vehicle can become contaminated and the windows can become misty. Therefore, use this method only for quick heating and change to the normal heating method as soon as possible.

Head cooled/Feet warmed heating
Select "BI-LEVEL" and "FRESH AIR", the temperature selector to the desired temperature position, and the blower speed selector to the desired blower speed position. Unless the temperature selector is in the fully COLD position or fully HOT position, the air that comes out of the center and side outlets will be cooler than the air that comes out of the floor outlets.

Defrosting/Feet warmed heating
Select "HEATER & DEFROST" and "FRESH AIR", the temperature selector to the desired temperature position, and the blower speed selector to HIGH. When the windshield has become clear, set the blower speed selector to the desired blower speed position.

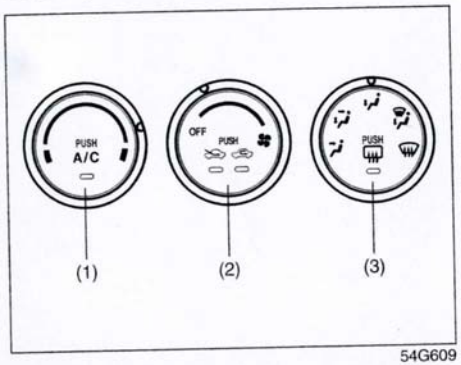
Defrosting
Select "DEFROST" and "FRESH AIR", the temperature selector to the desired temperature position (higher temperature provides more efficient defrosting), and the blower speed selector to HIGH. When the windshield has become clear, set the blower speed selector to the desired blower speed position.


54G571

NOTE:
*If you need maximum defrosting, adjust the temperature selector to the HOT end and adjust the side outlets so the air blows on the side window, in addition to the above **Defrosting** steps.*

Manual Heating and Air Conditioning System

Description of Controls



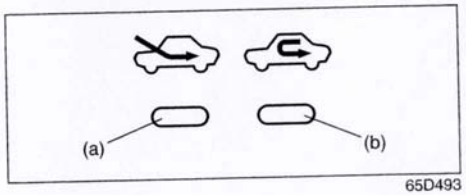
54G609

Temperature selector/Air conditioning switch (1)
This is used to select the temperature by turning the selector.

Also, this is used to turn on and off the air conditioning system by pushing the switch. To turn on the air conditioning system, push in the switch and the indicator light will come on. To turn off the air conditioning system, push in the switch again and the indicator light will go off.

Blower speed selector/Air intake selector (2)
This is used to turn on the blower and to select blower speed by turning the selector.

Also, this is used to select the following modes by pushing the selector.



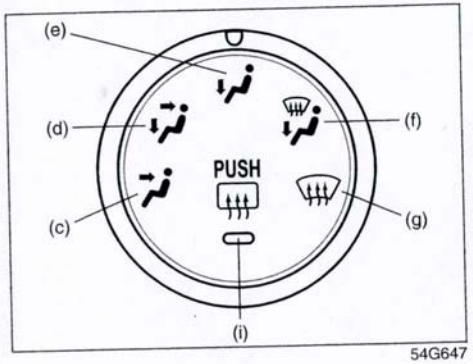
65D493

FRESH AIR
When this mode is selected, the indicator light (a) will come on and outside air is used.

RECIRCULATED AIR
When this mode is selected, the indicator light (b) will come on, outside air is shut out and inside air is recirculated. This mode is suitable when driving through dusty or polluted air such as in a tunnel, or when attempting to quickly cool down the interior.

"FRESH AIR" and "RECIRCULATED AIR" are switched alternately each time the air intake selector is pushed.

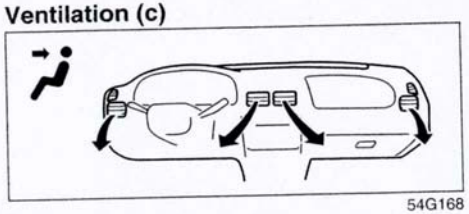
Air flow selector (3)



54G647

This is used to select one of the functions described below.

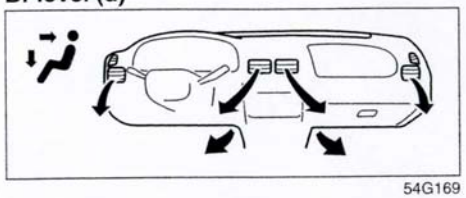
Ventilation (c)



54G168

Temperature-controlled air comes out of the center and side air outlets.

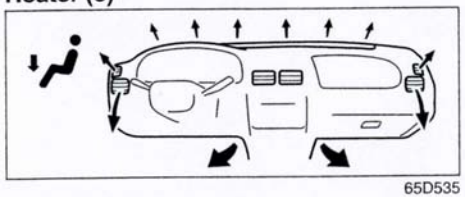
Bi-level (d)



54G169

Temperature-controlled air comes out of the floor outlets and cooler air comes out of the center and side outlets. When the temperature selector (1) is in the fully COLD position or fully HOT position, however, the air from the floor outlets and the air from the center and side outlets will be the same temperature.

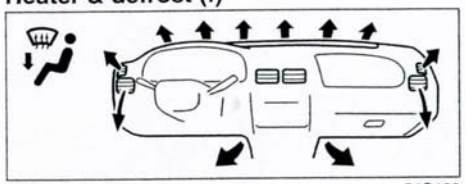
Heater (e)



65D535

Temperature-controlled air comes out of the floor outlets and the side outlets, also comes out of the windshield defroster outlets and the side defroster outlets slightly.

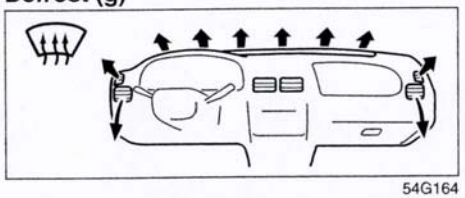
Heater & defrost (f)



54G163

Temperature-controlled air comes out of the floor outlets, the windshield defroster outlets, the side defroster outlets and the side outlets.

Defrost (g)



54G164

Temperature-controlled air comes out of the windshield defroster outlets, the side defroster outlets and the side outlets.

NOTE:
When the air flow selector (3) is turned either to "Heater & defrost (f)" or "Defrost (g)", the air conditioning system will come on and the "FRESH AIR" mode will be selected automatically. But in very cold weather, the air conditioning system will not turn on.

NOTE:
If the indicator light (i) blinks, there is a problem in the heating system and/or air conditioning system. You should have the system inspected by an authorized SUZUKI dealer.

System Operating Instructions

Natural ventilation
Select "VENTILATION" and "FRESH AIR", the temperature selector to the desired temperature position, and the blower speed selector to "OFF". Fresh air will flow through the vehicle during driving.

Forced ventilation
The control settings are the same as for natural ventilation except you set the blower speed selector to a position other than "OFF".

Normal heating (using outside air)
Select "HEATER" and "FRESH AIR", the temperature selector to the desired temperature position and the blower speed selector to the desired blower speed position. Setting the blower speed selector to a higher blower speed position increases heating efficiency.

Quick heating (using recirculated air)
The control settings are the same as for normal heating except you select "RECIRCULATED AIR". If you use this heating method for an extended period of time, the

air in the vehicle can become contaminated and the windows can become misty. Therefore, use this method only for quick heating and change to the normal heating method as soon as possible.

Head cooled/Feet warmed heating
Select "BI-LEVEL" and "FRESH AIR", the temperature selector to the desired temperature position, and the blower speed selector to the desired blower speed position. Unless the temperature selector is in the fully COLD position or fully HOT position, the air that comes out of the center and side outlets will be cooler than the air that comes out of the floor outlets.

Defrosting/Feet warmed heating
Select "HEATER & DEFROST" and "FRESH AIR", the temperature selector to the desired temperature position, and the blower speed selector to HIGH. When the windshield has become clear, set the blower speed selector to the desired blower speed position.

Defrosting
Select "DEFROST" and "FRESH AIR", the temperature selector to the desired temperature position (higher temperature provides more efficient defrosting), and the blower speed selector to HIGH. When the windshield has become clear, set the blower speed selector to the desired blower speed position.

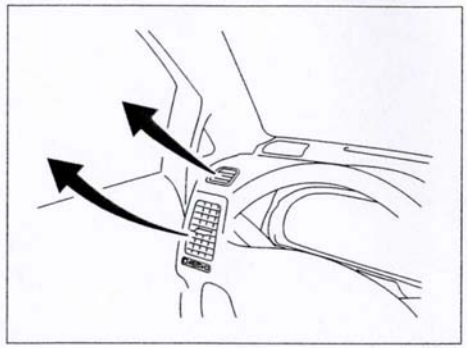
Normal cooling
Turn on the "A/C" switch, set the air flow selector to "VENTILATION", the temperature selector to the desired temperature position and the blower speed selector to the desired blower speed position. Setting the blower speed selector to a higher blower speed position increases cooling efficiency.
You can switch the air intake selector to either "FRESH AIR" or "RECIRCULATED AIR" as you desire. Choosing "RECIRCULATED AIR" increases cooling efficiency.

Quick cooling (using recirculated air)
The control settings are the same as for normal cooling except you select "RECIRCULATED AIR" and the highest blower speed.

NOTE:
- *If you select "RECIRCULATED AIR" for an extended period of time, the air in the vehicle can become contaminated. Therefore, you should occasionally select "FRESH AIR".*
- *If your vehicle has been left in the sun with the windows closed, it will cool faster if you open the windows briefly while you operate the air conditioner with the air intake selector at "FRESH AIR" and the blower at high speed.*

Dehumidifying
Turn on the "A/C" switch, set the air flow selector to a desired air flow selector position, and select "FRESH AIR", the temperature selector to the desired temperature position, and the blower speed selector to the desired blower speed position.

NOTE:
Because the air conditioner dehumidifies the air, turning it on will help keep the windows clear, even when blowing heated air using the "DEFROST" or "HEATER & DEFROST" functions.



54G571

NOTE:
If you need maximum defrosting:
- *set the air flow selector to "DEFROST" (the air conditioning system will come on and the "FRESH AIR" mode will be selected automatically),*
- *set the blower speed selector to HIGH,*
- *adjust the temperature selector to the HOT end, and*
- *adjust the side outlets so the air blows on the side windows.*

Maintenance

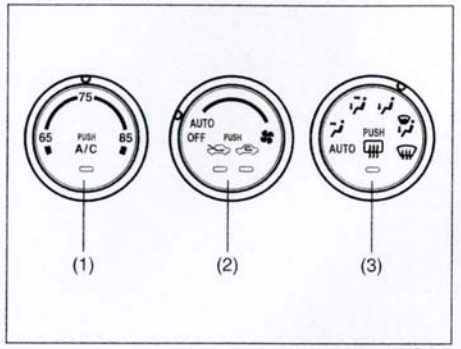
If you do not use the air conditioner for a long period, such as during winter, it may not give the best performance when you start using it again. To help maintain optimum performance and durability of your air conditioner, it needs to be run periodically. Operate the air conditioner at least once a month for one minute with the engine idling. This circulates the refrigerant and oil and helps protect the internal components.

NOTE:
Your vehicle uses the air conditioning refrigerant HFC-134a, commonly called "R-134a". R-134a replaced R-12 around 1993 for automotive applications. Other refrigerants are available, including recycled R-12, but only R-134a should be used in your vehicle.

CAUTION
Using the wrong refrigerant may damage your air conditioning system. Use R-134a only. Do not mix or replace the R-134a with other refrigerants.

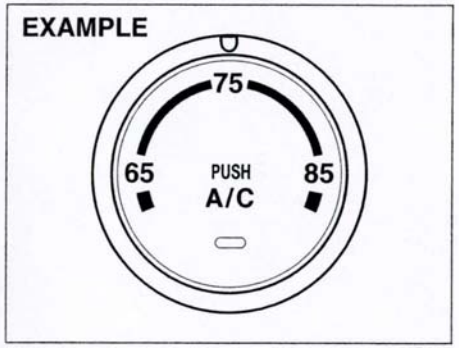
Automatic Heating and Air Conditioning System (Climate Control)

Description of Controls



52D309

Temperature selector/Air conditioning switch (1)

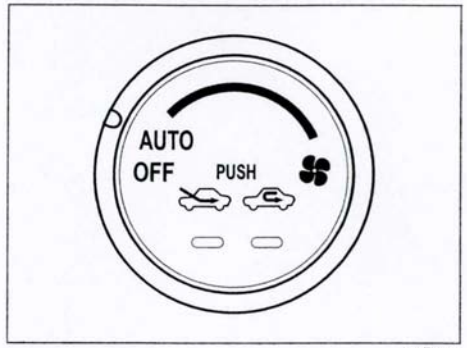


52D307

This is used to select the temperature by turning the selector.

Also, this is used to turn on and off the air conditioning system by pushing the switch. To turn on the air conditioning system, push in the switch and the indicator light will come on. To turn off the air conditioning system, push in the switch again and the indicator light will go off.

Blower speed selector/Air intake selector (2)

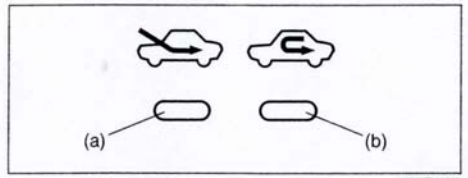


65D498

This is used to turn on the blower and to select blower speed.

If the selector is in "AUTO" position, the blower speed will vary as the climate control system maintains the selected temperature.

Also, this is used to select the following modes by pushing the selector.



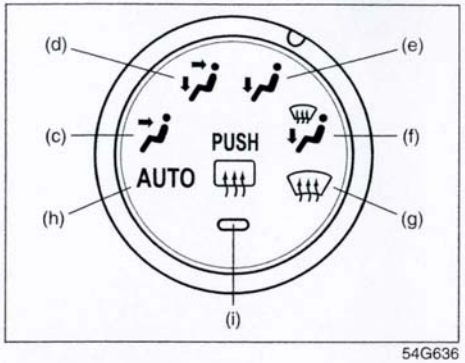
65D493

FRESH AIR
When this mode is selected, the indicator light (a) will come on and outside air is used.

RECIRCULATED AIR
When this mode is selected, the indicator light (b) will come on, outside air is shut out and inside air is recirculated. This mode is suitable when driving through the polluted air such as a tunnel, or attempting to quickly cool down.

"FRESH AIR" and "RECIRCULATED AIR" are switched alternately each time the air intake selector is pushed.

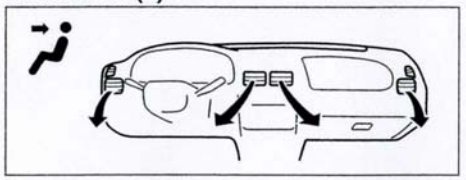
Air flow selector (3)



54G636

AUTO (h)
Temperature-controlled air comes out of various outlets automatically.

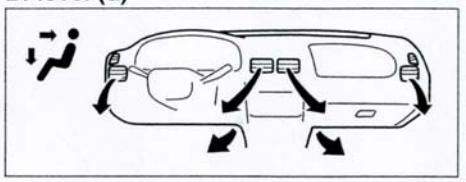
Ventilation (c)



54G168

Temperature-controlled air comes out of the center and side air outlets.

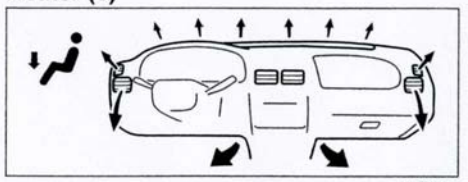
Bi-level (d)



54G169

Temperature-controlled air comes out of the floor outlets and cooler air comes out of the center and side outlets. When the temperature selector (1) is in the fully COLD position or fully HOT position, however, the air from the floor outlets and the air from the center and side outlets will be the same temperature.

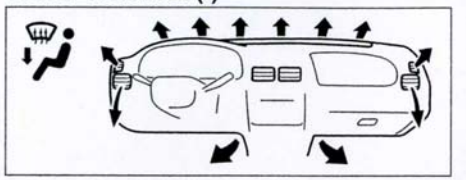
Heater (e)



65D535

Temperature-controlled air comes out of the floor outlets and the side outlets, also comes out of the windshield defroster outlets and the side defroster outlets slightly.

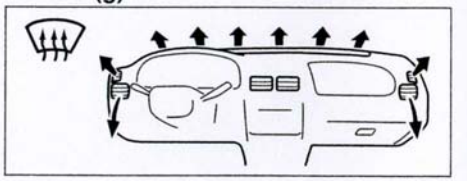
Heater & defrost (f)



54G163

Temperature-controlled air comes out of the floor outlets, the windshield defroster outlets, the side defroster outlets and the side outlets.

Defrost (g)



54G164

Temperature-controlled air comes out of the windshield defroster outlets, the side defroster outlets and the side outlets.

NOTE:
When the air flow selector (3) is turned either to "Heater & defrost (f)" or "Defrost (g)", the air conditioning system will come on and the "FRESH AIR" mode will be selected automatically. But in very cold weather, the air conditioning system will not turn on.