# GI

# DAIHATSU



# **GENERAL INFORMATION**

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NO. 9710-JE

# IMPORTANT SAFETY NOTICE

The vehicle is a machine comprising a great number of parts. Basically speaking, the vehicle is potentially hazard. However, one can handle it safely if he has the required knowledge.

Correct service methods and repair procedures are very vital for assuring not only the safety and reliability of a vehicle, but also the safety of service personnel concerned.

The methods and procedures contained in this manual describe in a general way the techniques which the manufacturer has recommended. Thus, they will contribute to ensuring the reliability of the products. The contents of the servicing operations come in a wide variety of ways. Moreover, techniques, tools and parts necessary for each operation are different widely from each other.

This manual does not cover all details of techniques, procedures, parts, tools and handling instructions which are necessary for these operations, for such coverage is impossible. Hence, any one who obtains this manual is expected first to make his responsible selection as to techniques, tools and parts which are necessary for servicing the vehicle concerned properly. Furthermore, he must assume responsibility for his actions in connection with his own safety.

Therefore, one should not perform any service if he is not capable of making responsible selection and/or if he can not understand the contents herein described, for this manual has been prepared for experienced service personnel.

## **WARNINGS, CAUTIONS AND NOTES**

All these symbols have their specific purposes, respectively.

#### WARNING:

• This symbol means that there is the possibility of personal injury of the operator himself or the nearby workers if the operator fails to follow the operating procedure prescribed in this manual.

#### CAUTION:

 This symbol means that there is the possibility of damage to the component being repaired if the operator fails to follow the operating procedure prescribed in this manual.

#### NOTE:

• To accomplish the operation in an efficient manner, additional instructions concerning the operation are given in this section.

The following list describes general WARNINGS:

- Always wear safety glasses for eye protection.
- Use safety stands whenever a procedure requires you to be under the vehicle.
- Be sure that the ignition switch is always in the OFF position, unless otherwise required by the procedure.
- Set the parking brake when working on the vehicle.
- Operate the engine only in a well-ventilated area to avoid the danger of carbon monoxide.
- Keep yourself and your clothing away from moving parts, when the engine is running, especially from the fan and belts.
- To prevent serious burns, avoid contact with hot metal parts, such as the radiator, exhaust manifold, tail pipe, catalytic converter and muffler.
- Do not smoke while working on a vehicle.
- To avoid injury, always remove rings, watches, loose hanging jewelry, and loose clothing before beginning to work on a vehicle.
- Keep hands and other objects clear of the radiator fan blades! The electric cooling fan is mounted on the radiator and can start to operate at anytime by a rise in coolant temperature or turning ON of the air conditioner switch in the case of vehicles equipped with an air conditioner. The electric cooling fan is also mounted on the condenser for air conditioner and starts to operate anytime when the air conditioner switch is turned "ON". For this reason care should be taken to ensure that the electric cooling fan motor is completely disconnected when working under the hood.

The UNITS used in this manual are showed as the SI UNIT (International System of Unit), and alternatively showed in the metric system.

"Example" 24.5 - 34.3 N·m (2.5 - 3.5 kgf-m)

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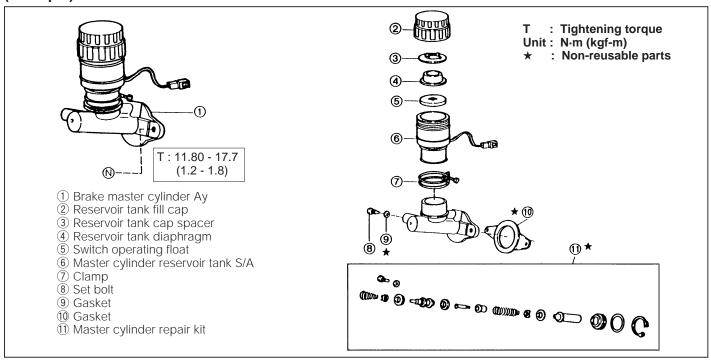
# **HOW TO USE THIS MANUAL**

## **CONTENTS OF EXPLANATION**

# 1. Schematic Diagram of Components

- (1) The schematic diagram of components that appears at the beginning of each section describes the nomenclature and installed conditions of each component. Furthermore the tightening torque is posted in the figure.
- (2) Those parts whose reuse is not permitted bear a "★" mark for an identification purpose. Be certain to replace these parts with new ones during the assembly.
- (3) During the assembly, be sure to apply grease to those parts indicated by the mark in the figure.

## (Example)

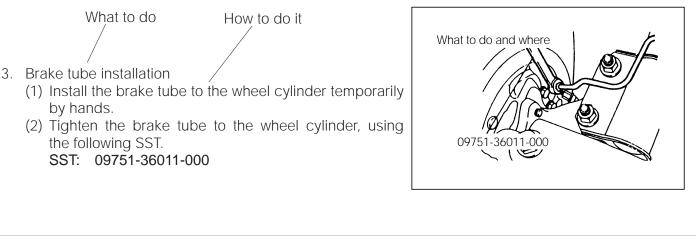


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#### 2. Servicing Procedure

- In principle, the servicing procedure is described in the following sequence given below: Removal →
  Inspection → Installation, and Disassembly → Inspection → Assembly.
- (2) The explanation covers detailed servicing methods, specifications and notes.
- (3) The main point of each item explains the servicing section and servicing procedure, using illustrations.

## (Example)



(4) The inspection in this manual describes only checking operation. Therefore, if you find any malfunction, replace any defective parts with new ones.

#### 3. SST

For those operations which require the use of any SST, the SST numbers concerned are given in bold letters.

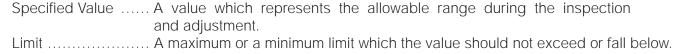
# 4. Service Specifications

Service specifications are indicated in bold letters or enclosed by heavy lines. Be certain to confirm the specifications concerned.

# 5. Tightening Torque

For those operations which require the control of tightening torque, the relevant tightening torque is given in bold letters. Be certain to confirm the tightening torque concerned.

# 6. Definitions of Terms



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# **ABBREVIATION CODES**

The abbreviation codes that appear in this workshop manual stand for the following, respectively.

Abbreviation code	Original word	Meaning
A/C	Air Conditioner	Refers to air conditioner.
A/T, AT	Automatic Transmission	Refers to automatic transmission
A/Y or Ay	Assembly	Refers to an assembled component comprising more than two single parts or sub-assembly parts.
API	American Petroleum Institute	The standards set forth by the American Petroleum Institute (abbreviated as API Classification) have been employed to evaluate and classify properties of various oils. Engine oils for gasoline engines are classified as SD, SE, SF and so on, whereas engine oils for diesel engines are classified as CC, CD and so on.
ECU	Electronic Control Unit	Refers to electronic control unit.
EFI	Electronic Fuel Injection	Refers to electronic fuel injection.
F/L	Fusible Link	Refers to fusible link.
L.H.D.	Left-Hand Drive	Left-hand drive vehicle.
LH	Left Hand	Refers to left side.
M/T, MT	Manual Transmission	Refers to manual transmission.
MP	Multipurpose	Means that the following item has multi-purposes.
O/S	Oversize	In instances where fitting becomes too loose due to wear resulting from use for a long period of time or due to frequent removal/installation operations, if the fitting part (e.g. piston) is replaced with a part having larger dimensions, the other mating part may be put into use again. "Oversized" parts denote those parts having larger dimensions compared with the standard parts.
PR	Ply Rating	Represents strength of tires. The larger the ply rating number, the stronger the tire strength.
R.H.D.	Right-Hand Drive	Right hand drive vehicle
RH	Right Hand	Refers to right side.
S/A	Sub-Assembly	Refers to a component comprising more than two single parts which are welded, staked, or studded to each other to form a single component.
SAE	Society of Automotive Engineers	For example, automotive oils are designated as SAE so and so number. These designation numbers have been set forth by the Society of Automotive Engineers in the United States of America (SAE). The larger the SAE number, the higher the oil viscosity. Conversely, the smaller the SAE number, the lower the oil viscosity.
SST	Special Service Tool	Refers to a tool designed for a specific purpose.
STD	Standard	When referring to automotive parts, "standard" represents those parts which have been installed originally by the manufacturer and which have standard dimensions.
Т	Torque	Refers to tightening torque.
U/S	Under Size	In the same manner as with the "oversized" parts, if fitting part (e.g. bush and bearing) is replaced with a part having smaller bore dimensions, the other mating part may be put into use again. "Under sized" parts denote those parts having smaller dimensions compared with standard parts.
VSV	Vacuum Switching Valve	Refers to vacuum switching valve.
W/	With	Denotes that the following part is attached.
ETR	Electronic Tuning Radio	Radio which incorporates variable capacitance, etc. which varies the value according to an applied voltage or current.
		JGI00006-00000

The abbreviation codes that appear in the figure stand for the following, respectively.

B	Bolt	S	Screw
N	Nut	W	Washer

# GENERAL SERVICE INSTRUCTION

1. Use fender covers, seat covers and floor sheets so that the vehicle may not get dirty or be scratched.

#### 2. Jacking up

- (1) When only the front section or rear section of the vehicle is jacked up, be sure to place chocks at the wheels so as to insure safe operations.
- (2) When the vehicle has been jacked up, be sure to support the vehicle at the specified section using safety stands. (See page GI-9)

#### 3. Handling instructions related to battery.

(1) Before you start performing the electrical works, make certain to disconnect the battery ground cable terminal from the negative (–) terminal of the battery.

#### NOTE:

- Before disconnecting the battery ground cable terminal from the negative (–) terminal of the battery, be sure to read out the diagnosis code of the EFI, Airbag and immobilizer system etc., if the vehicle is equipped with such systems, when necessary.
- After reconnecting the battery ground cable terminal to the negative terminal of the battery, be sure to reset the watch or radio, if the vehicle is equipped with such equipment.
- (2) When it becomes necessary to disconnect the battery power supply for the purpose of carrying out checks or repairs, always disconnect the battery ground cable terminal from the negative terminal of the battery first.
- (3) To avoid damaging battery plates, after the terminal nut has been loosened, pull out the battery ground cable terminal straight upward, rather than turning or prying the terminal.

#### NOTE:

- Be sure to employ a battery terminal puller (commercially available) to remove the battery ground cable terminal from the negative terminal of the battery, if encountered any difficulty.
- (4) Clean the battery terminal posts or battery ground terminals, using a cloth. Never use a file or other adhesive agents.
- (5) When connecting the battery ground cable terminal to the battery, first the battery ground cable terminal should be fitted onto the battery post with the attaching nut in a loose state.

  Then, tighten the nut. Never tap the terminal onto the battery post, using a hammer or spanner wrench
- or the like.

  (6) As for the cover at the positive (+) terminal side, be sure to install it at the correct position.

#### 4. Repairs of fuel system

- (1) The EFI equipped vehicles employ a high fuel pressure. Therefore, the following notes should be observed.
  - 1) Be sure to prevent the fuel from splashing with a cloth or the like, when the union bolt or other connected section of the fuel line is loosened or slackened.
- (2) When connecting/disconnecting the fuel line.
  - 1 Tighten each connecting section to the specified torque.
  - 2 Attach new specified clips to each connecting section.
  - 3 Be certain to place a suitable container or a cloth, etc. under the connected section of the fuel line before disconnecting the fuel line.
  - 4 Before the fuel line is disconnected, be sure to release the inner pressure of the fuel tank by detaching the fuel filler cap.
  - (5) Be sure to follow the instruction mentioned in the main text when disconnect or connect the quick type connectors.
- (3) Never work near open flames.
- 5. For increased work efficiency and improved accuracy, be sure to utilize SSTs (Special Service Tools) effectively.

# HANDLING INSTRUCTIONS ON CATALYTIC CONVERTER

#### WARNING:

- When a great amount of unburnt gas is admitted into the catalytic converter, overheating is prone to occur, resulting in a fire hazard.
  - To avoid such trouble in advance, be certain to observe the following precautions. Also, be sure to explain such precautions to your customers.
- 1. Use only unleaded gasoline.
- 2. Avoid idling the engine for a prolonged length of time.

Do not run the engine continuously at idle speed for more than 20 minutes.

#### WARNING:

- Immediately check and repair the vehicle if the fast idle speed or idle speed is unstable or the system exhibits malfunction. Failure to observe this warning may result in a fire hazard.
- 3. Be sure to observe the following points when performing the spark jump tests.
  - (1) The spark jump test must be limited to cases where such test is absolutely necessary. Also, be sure to finish the test in the shortest possible time.
  - (2) Be sure to shut off the fuel supply when performing the spark jump test in advance.
- 4. Do not run the engine when the fuel tank becomes nearly empty.

  Failure to observe this caution will cause misfiring. Also, it will apply excessive load to the catalytic converter, even leading to catalyst damage.
- 5. Do not dispose of the waste catalyst along with parts contaminated with gasoline or oil.

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# JACKING POINTS AND SUPPORTING POINTS OF SAFETY STANDS

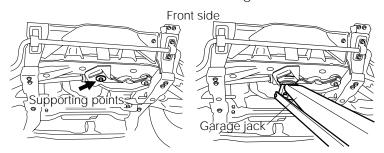
## **CAUTION:**

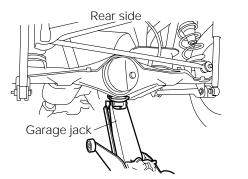
- Be sure to support the vehicle at the flat surface of the rocker panel.
- Do not support the vehicle at the edge part rocker panel.

# Jacking Points

Front side ..... Differential mount bracket

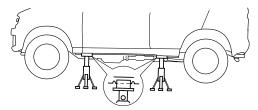
Rear side ..... Rear axle housing





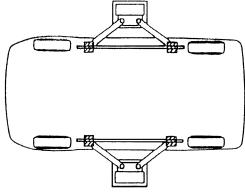
# Supporting points of safety stands

Four supporting points are located at the right and left sides. (The supporting points have been strengthened by spot-welding reinforcements. Never support the vehicle at points other than the specified points.)



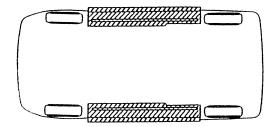
## Supporting points of tow-post lift

Align the supporting pads of a two-post lift with the supporting points of safety stands, as indicated in the figure above.



# Supporting points of plate supporting type lift

A vehicle should be placed at the center of the supporting plates of the lift. When lifting up the vehicle, be sure to support the front section of the vehicle.



#### **TOWING INFORMATION**

When towing the model J100 follow the manner mentioned below.

## **CAUTION:**

Never perform towing, using sling type equipment. Failure to observe this caution may lead to severe damage on the vehicle body.

IGI00020-00000

#### Flat bed type

We recommend this as the most desirable method.

#### CAUTION:

- Apply the parking brake securely.
- Be sure to tie-down the vehicle body to the carrier, using a tie-down wires. However, never apply excessive force to each hook on the vehicle body, for vehicle body may be severely damaged.

#### Wheel lift type

Use a towing dolly when towing the vehicle with the front wheels or rear wheels on ground.

#### WARNING:

Never allow anyone to be in the vehicle being towed.

#### CAUTION:

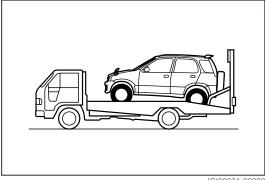
- Be sure to secure the front or rear tires on the towing dolly.
- Never perform the towing, using sling type equipment. Failure to observe this caution may severely damage the vehicle body.

# Emergency towing

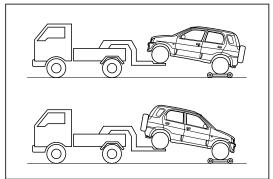
This manner can be employed if the vehicle is equipped with a manual transmission and the road surface is hard and smooth. In this case, be certain to follow the WARNING and CAUTION mentioned below.

#### WARNING:

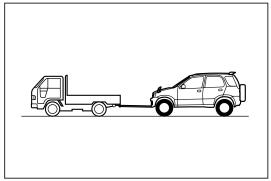
The driver in the vehicle to be towed should always keep in mind that braking will require more force than usual when the engine is stopped, because the brake booster is not functioning when the engine is stopped.



JGI00021-00008



JG100022-00009



JGI00023-00010

- Never tow the vehicle at speed more than 30 km/h.
- Turn the ignition switch of the vehicle to be towed in the "ACC" position during the towing. Never pull out the key or turn the ignition switch to the "LOCK" position during the towing. Failure to observe this warning will loose controllability, causing an accident.
- Never tow the vehicle in this manner unless the wheels, axles, drive train, steering, and brakes are in a good condition.

#### CAUTION:

- Never tow an automatic transmission vehicle in this manner. Be sure to always use a towing dolly.
- Always pull the hook in a straight-ahead direction to prevent it from being damaged. Never pull it from side or in a vertical direction. Also, never pull it sharply.
- Never connect the towing rope, cable or such to the parts other than the hooks provided on the vehicle shell. Connection of the towing rope, cable or such to other pants than hooks may damage these components
- Ensure that the hooks are installed on the vehicle shell securely before towing.
- 1. Attach a sturdy rope, towing strap or cable to the towing hook.
- 2. A driver must ride in the vehicle being towed and control it.
- 3. Release the parking brake and shift the shift lever of manual transmission to the neutral position.
- 4. Select the center differential lock switch in the free position.

#### NOTE:

- If you cannot start the engine, ensure that the center differential lock mechanism is free by jacking up
  one of the wheels and making sure that the wheel turns freely.
   Even if the indicator lamp in the combination meter shows that the differential lock is free, there is the
  possibility that it is not free actually.
- 5. Set the ignition switch to the "ACC" position.
- 6. Perform the towing.

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#### **DIAGNOSIS CONNECTOR**

The diagnosis connector is provided under the instrument panel at the driver's seat side as shown.

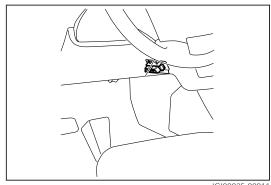
#### Terminal table

Terminal number and name				
① IG For DS-21	9 T (ITC)			
3 ABST	10 SIO For DS-21			
4 ECUT	① EFIT			
® REV	13 Body ground			
	16 VF			

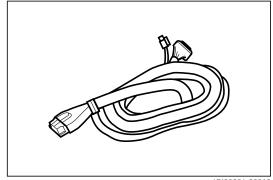
1. Be sure to connect the following SST when utilizing this connector, in order to prevent the terminals in the diagnosis connector from being damaged.

The shape of the SST end is the same as the diagnosis connector.

SST: 09991-87401-000



JGI00025-00011

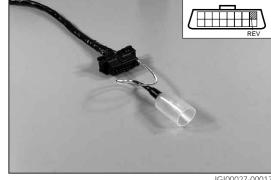


JGI00026-00012

# **GI-12**

2. When measuring the engine tachometer, connect the following SST to the No.8 (REV) terminal of the above SST.

SST: 09991-87402-000



JGI00027-00013

3. Utilize the following SST when connecting the terminals in the SST for the diagnosis connector which is specified in the main text.

SST: 09991-87403-000



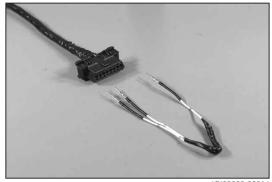
Never connect the terminals other than that specified in the main text in each section. Failure to observe this caution may lead to serlus damage or malfunction.



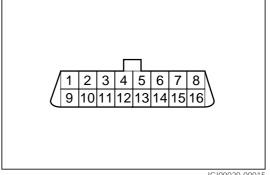
- (1) Output of diagnosis code of EFI system. Connect the 11(EFIT) and 13 (Body ground)
- (2) Output of diagnosis code of ABS system. Connect the 4(ECUT) and 13 (Body ground)
- (3) Switching to the test of ABS system. Connect the 3(ABST) and 13 (Body ground)
- (4) Vf output (oxygen sensor function) Connect the 16(VF) and 13(body ground)
- (5) Output of diagnosis code of air bag system. Connect the 4(ECUT) and 13 (Body ground)
- (6) To connect the tachometer Connect a tachometer to 8(REV) terminal.
- (7) Connection of the DS-21 Connect the DS-21 utilizing the following SST. The following SST is provided with the terminal for DS-21. SST: 09991-87401-000

#### **CAUTION:**

Never connect the DS-21 in another way than that manner specified.



JGI00028-00014



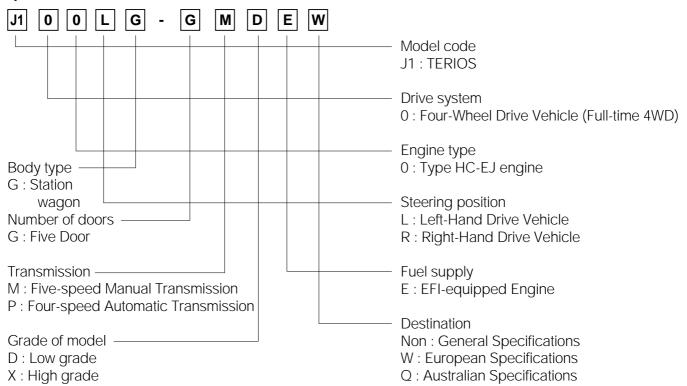
JGI00029-00015

# **MODEL VARIATION**

	Specification	General				AUS		EC			
Engine	Handle position	RHD		LHD		RHD		RHD		LHD	
	Grade	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi
	Model code	J100RG		J100LG		J100RG		J100RG		J100LG	
HC-EJ	5MT	GMDE	GMXE	GMDE	GMXE	GMDEQ	GMXEQ	GMDEW	GMXEW	GMDEW	GMXEW
	4AT	GPDE	GPXE	GPDE	GPXE	GPDEQ	GPXEQ	GPDEW	GPXEW	GPDEW	GPXEW

JGI00011-00000

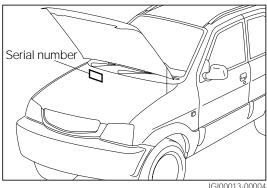
# Explanation of vehicle model code



JGI00012-00000

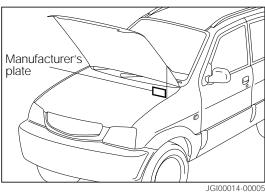
# **CHASSIS SERIAL NUMBER** STAMPED POSITION

The chassis number is stamped on the cowl panel at the right side in the engine compartment.

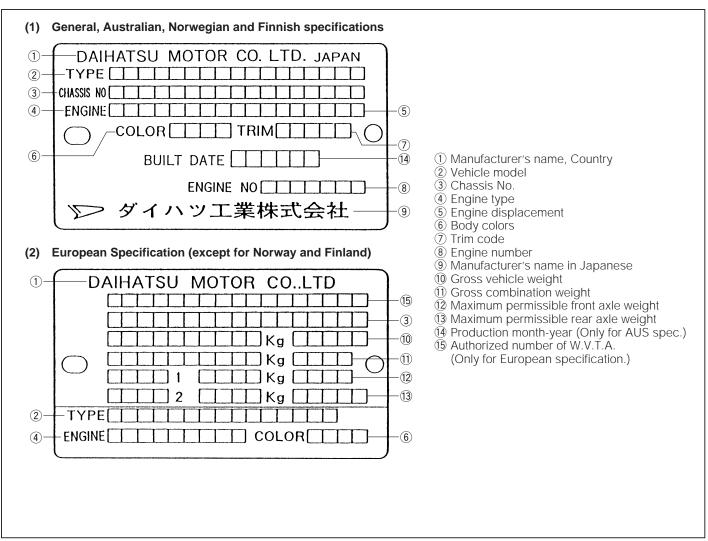


# **MANUFACTURER'S PLATE POSITION**

The manufacturer's plate is attached on the cowl panel.

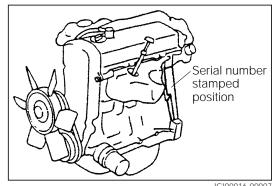


## **CONTENTS OF MANUFACTURER'S PLATE**



# **ENGINE NUMBER AND ENGINE TYPE STAMPED POSITIONS**

- The engine number is stamped on the cylinder block.
- The engine type is indicated by embossed letters on the cylinder block.



#### JGI00016-00007

# **BODY COLOR INFORMATION**

Body color name	Code
Silver metallic	S07
Black metallic	6A5
Red mica metallic	R24
Turquoise mica metallic	B36
Purplish blue mica	B38
Violet metallic	P05
Two-tone color Silver metallic / Silver metallic	NF7
Two-tone color Black metallic / Silver metallic	NF2
Two-tone color Red mica metallic / Silver metallic	NFO
Two-tone color Turquoise mica metallic / Silver metallic	ND9
Two-tone color Purplish blue mica / Silver metallic	NG1
Two-tone color Violet metallic / Silver metallic	NG2

JGI00017-00000

# **GI-16**

# **COLOR CODE IN THE WORLD**

	Color code							
Color name	DAIHATSU	AKZO	DUPONT	ICI	SPIES HECKER	STANDOX		
Silver metallic	S07	DAHS07	L8842	B127B	97076	S07		
Black metallic	6A5	DAH6A5	G8742	A403B	96326	6A5		
Red mica metallic	R24	DAHR24	F2213	FCN6B	33273	R24		
Turquoise mica metallic	B36	DAHB36	F2855	HMG7B	55174	B36		
Purplish blue mica	B38	DAHB38	F3425	JNE4B	55603	B38		
Violet metallic	P05	DAHP05	F3426	JNE5B	40868	P05		
White	W09	DAHW09	K9344	XM48	16461	W09		
Two-tone color	NF7 S07	DAHS07	L8824	B127B	97076	S07		
Silver metallic / Silver metallic	S07	DAHS07	L8842	B127B	97076	S07		
Two-tone color	NF2 6A5 S07	DAH6A5	G8742	A403B	96326	6A5		
Black metallic / Silver metallic	NF2 S07	DAHS07	L8842	B127B	97076	S07		
Two-tone color	NF0 R24 S07	DAHR24	F2213	FCN6B	33273	R24		
Red mica metallic / Silver metallic	S07	DAHS07	L8842	B127B	97076	S07		
Two-tone color	ND9 B36	DAHB36	F2855	HMG7B	55174	B36		
Turquoise mica metallic / Silver metallic	S07	DAHS07	L8842	B127B	97076	S07		
Two-tone color	NG1 B38 S07	DAHB38	F3425	JNE4B	55603	B38		
Purplish blue mica / Silver metallic	S07	DAHS07	L8842	B127B	97076	S07		
Two-tone color	NG2 P05 S07	DAHP05	F3426	JNE5B	40868	P05		
Violet metallic / Silver metallic	NG2 S07	DAHS07	L8842	B127B	97076	S07		
Two-tone color	NC1 W09	DAHW09	K9344	XM48	16461	W09		
White / Silver metallic	S07	DAHS07	L8842	B127B	97076	S07		

JGI00018-00000

# **TRIM CODE**



F: Fabric S: Gray

JGI00019-00000