

SUZUKI

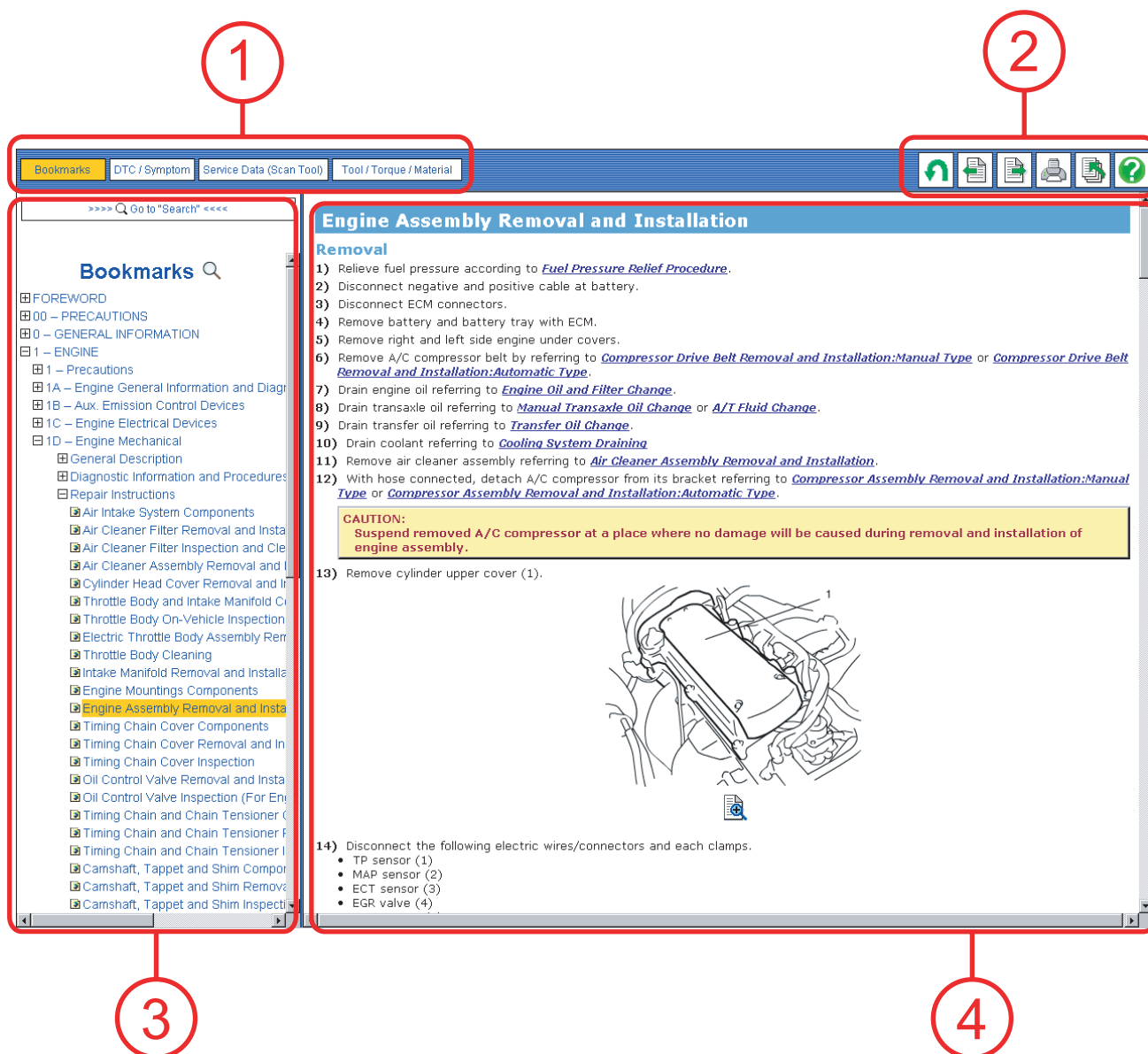
Service Manual

How to Read

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● Main Window (Manual Display Window)



- ① **Select / Search Type Select Buttons**  Refer to [Select / Search Type Select Button].

By selecting the Select / Search type (Bookmarks, DTC / Symptom, Service Data (Scan tool) and Tool / Torque / Material), the method for searching the target contents is changed.

- ② **Action Icon Buttons**  Refer to [Action Icon Buttons].

"Action for display item on the main frame", "Print" or "How to read file display" is performed according to the button clicked.

- ③ **Sub (Select / Search Information) Frame**  Refer to [Sub Frame].

"Input box for the character to be searched", "Search results" or "Select Items" according to the type selected in [Select / Search Type Select Buttons] is displayed.

- ④ **Main Frame**  Refer to [Main Frame].

The contents selected in Sub (Select / Search Information) Frame are displayed.

● Select / Search Type Select Buttons



NOTE

The selected Select / Search Type Select Buttons are displayed in orange.

■ Bookmarks

When this button is selected, the list of all the contents (*SIE) is displayed on Sub Frame.

■ DTC / Symptom

● DTC

When this button is selected, only the list of *SIE of DTC (Diagnosis Trouble Code) is displayed on Sub Frame.

● Symptom

When this button is selected, only the list of *SIE related to the Symptom Diagnosis is displayed on Sub Frame.

■ Service Data (Scan Tool)

● Service Data

When this button is selected, the list of section where the Service Data is described, is displayed on Sub Frame.

● Specification

When this button is selected, the list of section where the Specification is described, is displayed on Sub Frame.

● Scan Tool

When this button is selected, the list of section where the parameter information displayed in Scan Tool is described, is displayed on Sub Frame.

■ Tool / Torque / Material

● Tool

When this button is selected, the list of the section where the Service Tool is described, is displayed on Sub Frame.

● Torque

When this button is selected, the list of the section where the Tightening Torque Specification is described, is displayed on Sub Frame.

● Material

When this button is selected, the list of the section where the Recommended Service Material is described, is displayed on Sub Frame.

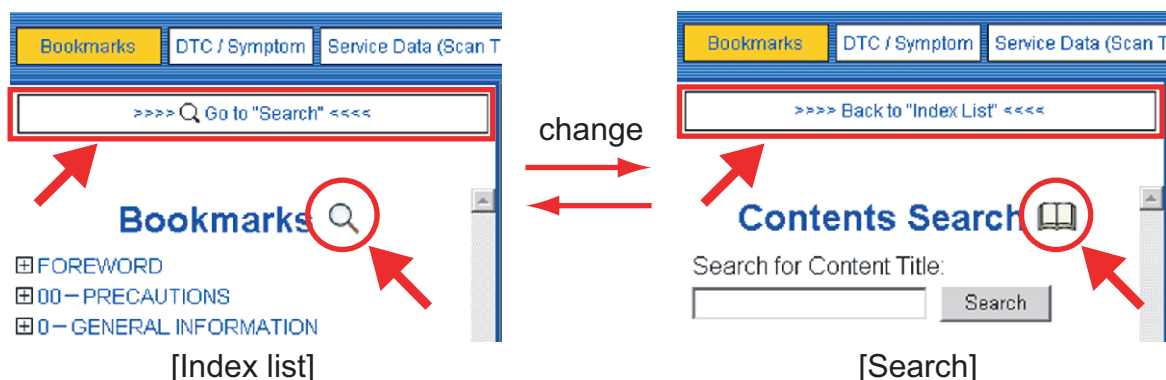
◆ [Index List] Procedure

 Refer to [Sub (Select / Search Information) Frame].

◆ [Search] Procedure

NOTE

Clicking the part that the following arrow points out, changes between [Index list] and [Search] in Sub Frame.



a) Enter the character string to be searched in the input box for [Search for ***] in the Sub Frame.

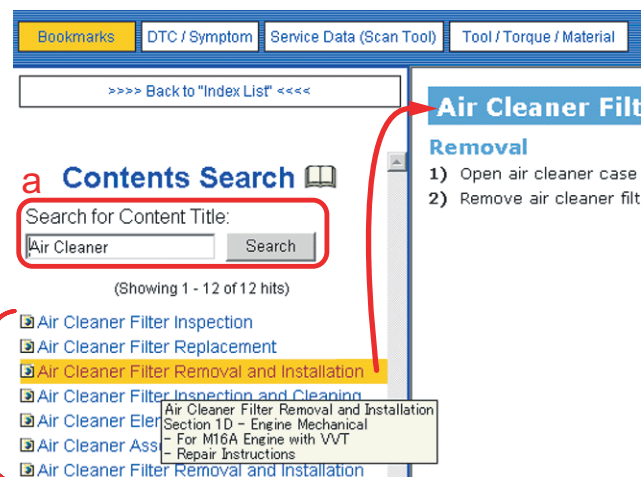
b) Click the "Search" button.

NOTE

The target to be searched is only the *SIE title for each content.
The search for the character string within the body text is not available.

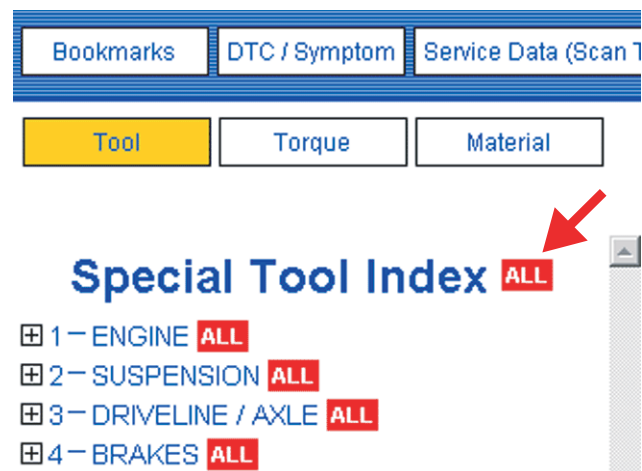
The *SIE title including the searched character string will be displayed.


c) Click the *SIE title, the contents of the *SIE is displayed in the Main Frame.



◆ [ALL] icon

When this icon is clicked, all contents in the title with [ALL] icon is displayed in the Main Frame.



*SIE: Service Information Element
It means the unit of the data composing the manual.
 Refer to [Sub Frame].

● Action Icon Buttons



... "Back to last page" Icon

When this icon is clicked, the *SIE displayed immediately before, is returned.

NOTE

When the "Top" icon is clicked, the "Back to last page" data is cleared. In such case, returning to the window displayed immediately before is not available.



... "Previous" or "Next" Icon

Using this icon goes forward or backward title by title on the orderly arranged *SIE titles in the Manual.



... "Print" Icon

When this icon is clicked, the [Print Window] based on the OS (Operating System) is displayed and the contents displayed on the Main Frame or Reference Window are printed.

NOTE

- When the printing is to be performed, perform it always by clicking the "Print" icon. If the [Print] in the File menu is used, correct printing is not available.
- When printing only the illustration, print it referring to "illustration menu description".
- For settings for the printer and printing procedure, follow the instructions for each printer.



... "Top" Icon

When this icon is clicked, the top page of your viewing manual is displayed.

NOTE

When the "Top" icon is clicked, the "Back to last page" data is cleared. In such case, the return to the window displayed immediately before is not available.



... "Help" Icon

When this icon is clicked, this "How to Read" file is opened.

*SIE: Service Information Element
It means the unit of the data composing the manual.
☞ Refer to [Sub Frame].

● Sub (Select / Search Information) Frame

The contents in the manual consist of max. five layers.

Clicking the title in the higher layers displays the titles in the lower layers.

A: SCT (Service Category Type)

B: SC (Service Category)

*C: Variation

D: IT (Information Type)

E: SIE (Service Information Element)

NOTE

The "Variation" layers might not exist according to the "Model" and "Section".

NOTE

- ⊕ Diagnostic Information and Procedures
- ⊖ Repair Instructions
- 🔍 Oil Pan and Oil Pump Strainer Comp
- 🔍 Oil Pan and Oil Pump Strainer Remc
- 🔍 Oil Pump, Oil Pump Chain and Gask

By clicking the title with the icon, the contents in the title are displayed in the Main Frame.

Bookmarks 🔍

- A {
 - ⊕ FOREWORD
 - ⊕ 00 – PRECAUTIONS
 - ⊕ 0 – GENERAL INFORMATION
 - ⊖ 1 – ENGINE
- B {
 - ⊕ 1 – Precautions
 - ⊕ 1A – Engine General Information and Diagn
 - ⊕ 1B – Aux. Emission Control Devices
 - ⊕ 1C – Engine Electrical Devices
 - ⊕ 1D – Engine Mechanical
 - ⊖ 1E – Engine Lubrication System
- *C {
 - ⊕ For M16A Engine with VVT
 - ⊕ For J20 Engine
 - ⊖ For F9Q Engine
- D {
 - ⊕ General Description
 - ⊕ Diagnostic Information and Procedures
 - ⊖ Repair Instructions
- E {
 - 🔍 Oil Pan and Oil Pump Strainer Comp
 - 🔍 Oil Pan and Oil Pump Strainer Remc
 - 🔍 Oil Pump, Oil Pump Chain and Gask
 - 🔍 Oil Pump, Oil Pump Chain and Gask
 - 🔍 Oil Pump, Oil Pump Chain and Gask
 - 🔍 Heat Exchanger Removal and Install
 - ⊕ Specifications
 - ⊕ Special Tools and Equipment

NOTE

- 🔍 Heat Exchanger Removal and Install
- ⊕ Specifications
- ⊕ Special Tools and Equipment

Moving the mouse pointer (🖱️) onto each title displays the full text of the title in the Pop-up window.

- 🔍 Heat Exchanger Removal and Installation
- Heat Exchanger Removal and Installation
Section 1E – Engine Lubrication System
– For F9Q Engine
– Repair Instructions

In the case of search results, the all titles of the higher layers, including the SIE, are also displayed in the Pop-up window.

● Main Frame - Link, Reference Window -

◆ About "Link"

A link has been set for each of the underlined blue character strings and finger mark icons. When the mouse pointer moves onto the link, it changes to a finger mark pointer (☞). When it is clicked, the reference page is displayed in the separated window (Reference Window).

Underlined Blue Character String Link

Precautions for Engine

Air Bag Warning

Refer to [Air Bag Warning](#).



Air Cleaner Removal and Installation

Reference: [Air Cleaner Components:For F9Q Engine](#)

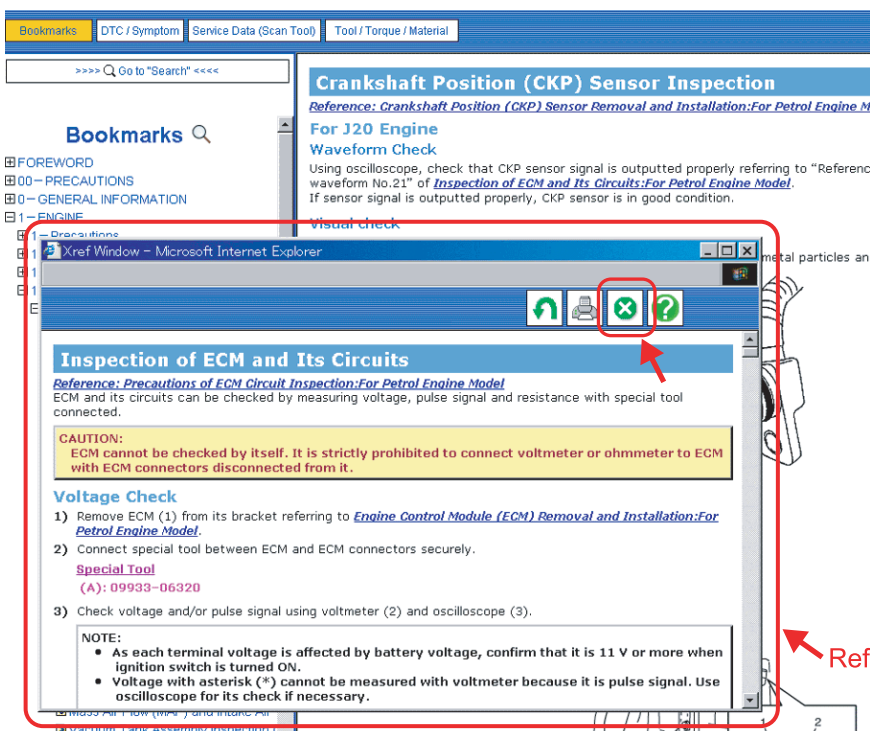
Finger Mark Icon Link

Fail-Safe Table

When any of the following DTCs is detected, ECM enter canceled when ECM detects normal condition after that

DTC No.	Detected item
 P0030	HO2S heater control circuit (Sensor-1)
 P0031	HO2S heater control circuit low (Sensor

NOTE



Cranksaft Position (CKP) Sensor Inspection
Reference: [Cranksaft Position \(CKP\) Sensor Removal and Installation:For Petrol Engine Model](#)

For J20 Engine
Waveform Check
Using oscilloscope, check that CKP sensor signal is outputted properly referring to "Referenc waveform No.21" of [Inspection of ECM and Its Circuits:For Petrol Engine Model](#). If sensor signal is outputted properly, CKP sensor is in good condition.

Visual Check
Check for metal particles and


Inspection of ECM and Its Circuits
Reference: [Precautions of ECM Circuit Inspection:For Petrol Engine Model](#)
ECM and its circuits can be checked by measuring voltage, pulse signal and resistance with special tool connected.

CAUTION:
ECM cannot be checked by itself. It is strictly prohibited to connect voltmeter or ohmmeter to ECM with ECM connectors disconnected from it.

Voltage Check
1) Remove ECM (1) from its bracket referring to [Engine Control Module \(ECM\) Removal and Installation:For Petrol Engine Model](#).
2) Connect special tool between ECM and ECM connectors securely.
Special Tool
(A): 09933-06320
3) Check voltage and/or pulse signal using voltmeter (2) and oscilloscope (3).

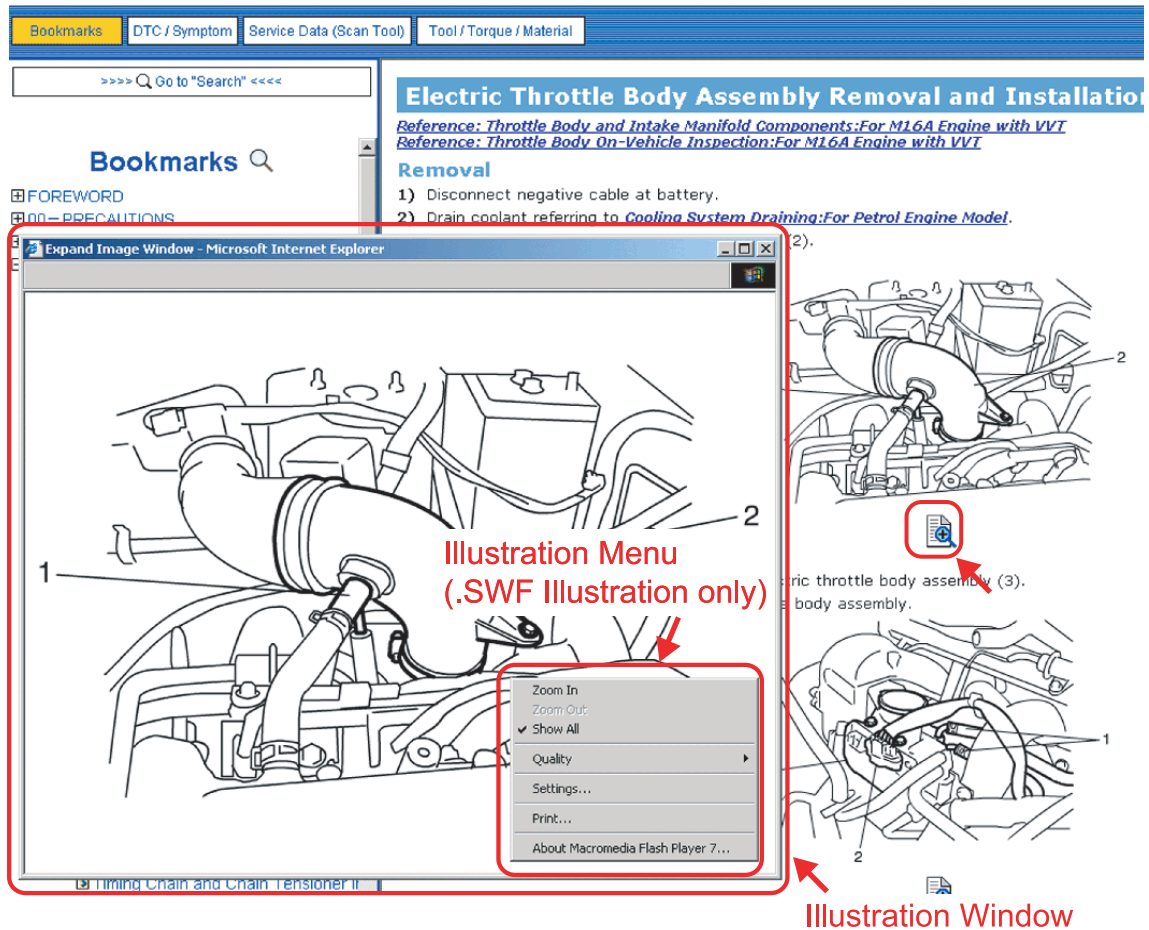
NOTE:
• As each terminal voltage is affected by battery voltage, confirm that it is 11 V or more when ignition switch is turned ON.
• Voltage with asterisk (*) cannot be measured with voltmeter because it is pulse signal. Use oscilloscope for its check if necessary.

When the link displayed on the Main Frame is clicked, the reference page is displayed in the separated window (Reference Window). Then, the link in the Reference Window is clicked, the indication in the Reference Window is changed to the reference. By clicking the "Back to last page" Icon, you can return to the SIE of the link source.


The "Close" Icon () is prepared only in the Reference Window. By clicking this button, the Reference Window is closed.

Reference Window

● Main Frame - Illustration, Illustration Window -



◆ About Illustration

By clicking the magnifier icon () on the lower section of the each Illustration, the expanded illustration is displayed in the separated window (Illustration Window). When the mouse pointer is right-clicked on the illustration image, the Illustration Menu is displayed. (.SWF illustration only)

◆ Illustration Menu Description (.SWF illustration only)

- Zoom In
The illustration is expanded in the window.
- Zoom out
The illustration is reduced in the window.

NOTE

This menu item is available only after the "Zoom In".


- Show All
The illustration is returned to the standard size.

NOTE

This menu item is available only after the "Zoom In".

- Print
The illustration can be printed based on the environment.

NOTE

- After the "Zoom In" has been executed, the mouse pointer is changed to palm icon () in the illustration window. The image can be moved in the direction as you like by dragging it.
- For settings for the printer and printing procedure, follow the instructions for each printer.
- [Quality] and [Settings...] are not used.
- .SWF: Image file which is viewable by Adobe® Flash® Player.