



Subaru Service and Technical Support Line Newsletter

## **SPECIAL EDITION**

Interactive and Retrievable Diagnostic Service Manuals (ISM)

**Subaru of America, Inc.** is pleased to introduce **Interactive and Retrievable Diagnostic Service Manuals (ISM)** as a new feature at upcoming model changeovers. The first such manual will be integrated with the 2024 Crosstrek and Impreza online manuals in the Subaru Technical Information System (STIS).

The new features in the manual look and flow the same as the current version but incorporate several helpful features such as:

- The ability to communicate with the vehicle to retrieve basic vehicle information such as VIN and mileage and requested parameter ID data (PID data) while working through the trouble tree.
- The ability to save and store all responses in fault tracing sessions along with the ability to search and recall those sessions for future reference if needed.
- The ability to transmit saved sessions directly to the Subaru Technical Helpline to assist in fault tracing.

These features are only visible for a Subarunet retailer job role of Service Technician (DEALER\_SERVICE \_TECHNICIAN) at an assigned retailer. Other job titles will only see the static trouble trees but will be able to view saved sessions. Those with interactive access can still see the static view by clicking the **PRINT** button in the service manual menu. The print function should be used if not actively fault tracing a vehicle to avoid storing inaccurate or unwanted sessions. The ISM functions work by connecting through SSM4, so accessing the ISM through an SDS laptop is required. Certain other requirements with SSM4 also need to be met to allow this communication.

First, some basics apply as with all SSM4 communication. Connection to the SDS network is also required. The vehicle and laptop must be ON and connected to each other. SSM4, when displaying certain menus, attempts to communicate continuously with the vehicle. Because of this, only particular menus can be open. That, along with other basic conditions being met, will allow the ISM to communicate. They are:

## CONTINUED ON THE NEXT PAGE

CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.

The Subaru TechTIPS newsletter is intended for use by professional Technicians ONLY. Articles are written to inform those Technicians of conditions that may occur in some vehicles, or to provide information that could assist in the proper servicing of the vehicle. Properly trained Technicians have the equipment, tools, safety instructions, and know-how to do the job correctly and safely. If a condition is described, DO NOT assume that your vehicle has or will have that condition. Impreza, Legacy, Justy, Loyale, Outback, Forester, Subaru SVX, WRX, WRX STI, Baja, Tribeca, BRZ, XV Crosstrek and "Quality Driven" are Registered Trademarks.

## SUBARU OF AMERICA, INC. IS ISO 14001 COMPLIANT

ISO 14001 is the international standard for excellence in Environmental Management Systems. Please recycle or dispose of automotive products in a manner that is friendly to our environment and in accordance with all local, state and federal laws and regulations.



- SSM4 must have been running prior to attempting ISM communication. To clarify, a laptop
  restart will require SSM4 to have been opened at least once prior for this condition to be met.
  SSM4 does not need to be open during ISM communication but must have been running at least
  once prior to the ISM communication attempt. Opening SSM4 causes an applet subroutine
  called IIS to become active on the laptop. This applet is required for ISM communication.
- Only certain menus allow ISM communication while SSM4 is open. See figures 1-9 below for specific menu functionality. It is highly recommended to read DTCs from the Each System DTC results menu. Then click on any linkable DTC retrieved to access the ISM trouble tree for that DTC after the data has been saved.
- Other than the specific menus indicated below, it can be assumed that the ISM will not be able to communicate when any other menu is open. This includes the **Start, All DTC, Data Monitor, Cancel Code, Active Test,** and **Work Support** function menus and other sub-menus.
- Figures 1 through 8 below show various SSM4 menus and their ability (or not) to allow ISM communication.

To retrieve saved sessions, use the **Search Troubleshooting Sessions** button found in the Service Diagnostics menu of **STIS** [Figure A]. Use the search menu [Figure B] to filter the search. Results will reappear in the ISM as they were entered and saved. Results cannot be edited once a resolution is found and saved, but partially completed/saved results can be resumed. Modifying any previously entered responses will delete any subsequent entries in the trouble tree.

	COBANC	J. Technical Information System			Francais Home	User
	Information -	Online Reference	Service Diagnostics -			
2024	2023	2022	2021	2020	2019	
Crosstrek	Ascent	Ascent	Ascent	Ascent	Ascent	
Impreza	BRZ	BRZ	Crosstrek	BRZ	BRZ	
	Crosstrek	Crosstrek	Crosstrek	Crosstrek	Crosstrek	_
	Forester	Crosstrek	Hybrid	Crosstrek	Crosstrek	_
	Impreza	Hybrid	Forester	Hybrid	Hybrid	_
	Legacy	Forester	Impreza	Forester	Forester	-
	Outback	Impreza	Legacy	Impreza	Impreza	
	Solterra	Legacy	Outback	Legacy	Legacy	
	WRX	Outback	WRX	Outback	Outback	Clear
		WRX	WRX STI	WRX	WRX	
				WRX STI	WRX STI	
				WRX STI		
				(Series.White)		
				WRX		
		Search Troubleshooting	g Sessions	(Series.White)	View Full Archives	Clear

[Figure A]

•	IBARU	Technical Information System			Francais H	ome User's Guide
	Information -	Online Reference	Service Diagnostics -	Administration		
	Troubleshooting Searc	ch Criteria				•
	Enter at least one se	arch criteria.				
		st 8 or Full 17 or * for partial		DTC Use * for partial search		
		dd VIN		Add DTC		
	Carli	ne	Model Year			
		oose Carline 🗸	From	✓ To ✓		
		d Carline/Model Year				
		te Date				
	Fro	om 🗮	То	l		
	Tech	nician	Username			
	Se	elect Technician				
	Statu	IS	VIN Input			
	Ch	oose Status 🗸	Choose Input Method	~		
	Odor	neter				
	Fro	om (Leave blank or enter greater	than 0) To (Leave blank o	or enter greater than 0) O Miles O M	M	
					Se	arch Clear
[Figure B]						

The vehicle CAN communicate with the ISM from Start Diagnosis menu BEFORE clicking OK.

SUBARU Select Monitor	r 4 - Vehicle selection		-	0	×
Select Vehicle	Vehicle specifications VIN JF2CHYGU1U5000029	Vehicle settings			
	Vehicle information Vehicle Model Diagnostic software	IMPREZA / CROSSTREK 24MY SSM4			
15.62V					
Play Project	11			<b>√</b> ∘	ж

The vehicle CANNOT communicate with the ISM from the Vehicle – Main or any OBD System menu.

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Dagoois		
Webde Merezzi chossnek Main Menu		
ALOR:		
Each System		
Multiple         System         Anbes		
PA     Report       Pinit     Pinit		
OBD system		
Each System		
25.587         ■		
Service NATO		



The vehicle CAN communicate with the ISM from the Target Each System menu <u>BEFORE</u> entering an individual system.

System List	
Engine	Transmission
Brake Control	Tire Pressure Monitor
Body Control	Airbag
Air Conditioner	Power Steering
Steering Angle Sensor	Keyless Access with Push Button Start(Power Supply)
Keyless Access with Push Button Start(Collation)	EyeSight
Wide Angle Mono Camera	Automatic Light and Wiper
Combination Meter	Multi-function Display
Auto Start Stop	Headlight / Foglight
Immobilizer	Pedestrian Alert
Blind Spot Detection/Rear Cross Traffic Alert(RH)	Blind Spot Detection/Rear Cross Traffic Alert(LH)
Cockpit Control	Power Seat Memory
EyeSight Assist Monitor	Telematics
Power Window (Driver)	Power Window (Passenger)
Power Window (Rear Right)	Power Window (Rear Left)
Power Window (Switch)	Reverse Automatic Braking
Keyless Entry	Central Gateway
Front&Side Camera/Multi View Monitor	Electric Brake Booster
Driver Monitor	Front Relay Control Module
Door Mirror (Driver)	Door Mirror (Passenger)
Detail	



The vehicle CANNOT communicate with the ISM from any **System [individual] (any, ECM, TCM, etc.)** main menu.



The vehicle CAN communicate with the ISM from this menu <u>after saving DTC/FFD</u> info by clicking Save.

Description & trouble part         Tri ▲         Time Co           03411         593700           ility Malfunction         03389         2800			
		Code	Status▲
103389 2800	Can shall \$100 + \$ 40 \$6 - 10 - 10 - 10		10 and a second
Data save Data name Data - 11 System Engine Contents DTC/freeze frame data Date and time 3/27/2023 9:12 AM Memo	Startability Mailunction	<u>91604</u> S	History

[Figure 5]

It is **<u>RECOMMENDED</u>** to communicate with the ISM from the DTC Results menu by clicking the hyperlinked DTC and following the ISM trouble tree for that fault. STIS will open to the proper trouble tree.

	1		for 4 - DTC - Engine			
	itatus 🛦	Code	Description & trouble part	Time stan Tri 🛦 Time C		FFD
		couc			0 C	1
	listory	<u>P1604</u>	artability Malfunction	03389 2800		01
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		-				
10	_					
		-				
		-				
			ter a com Status			_
	Readin cod	e 🚺 Stop	Clear Status memory All			

[Figure 6]

If unable to communicate with ISM as illustrated in Figure 6, click the Stop DTC button and try again.

osis							
Charles A	Code	Description & trouble part		me stamp Time Co	G	FFD	
ZA / TREK		and the second	03411	1039900			
History	P1604 Startability Malfunct	ion	03389	2800	Co 🤇	102	
					_		
v							
						_	
ice CO CO CO CO CO CO CO CO CO CO	the little start	Clear All					

[Figure 7]

If trying to return to the **Each system** menu from other functions (a Data Monitor function, for example) click on the **Target Each System** menu button and save data if requested, before attempting to communicate using the ISM. This returns to [Figure 3] status.

Start Diagnosis	Item	Value Un	it Maximum	Minimum	Average
Vehicle IMPREZA /	FL Tire status	00001110	-	-	-
CROSSTREK	FR Tire status	00001110	-	-	-
Target Each System	RR Tire status	00001110	-	-	-
Each System	PL Tire status	00001110	-	-	-
Tire Pressure	air pressure	33.4 ps	i 33.4	33.4	33.4
Monitor	FR The pressure	33.0 ps	i 33.0	33.0	33.0
lect Function	RR Tire air pressure	32.4 ps	i 32.4	32.4	32.4
	RL Tire air pressure	32.6 ps	i 32.6	32.6	32.6
PI DTC	Vehicle Speed	0 MP	PH 0	0	0
Cancel Code	Pressure warning	28.4 ps	i 28.4	28.4	28.4
2	Return pressure	31.4 ps	i 31.4	31.4	31.4
Data Monitor	Transmitter power supply	ON MODE	-	-	-
Active Test	INDICATOR LAMP	OFF	-	-	-
Active lest	FL Registered ID	0106F119	-	-	-
Work 5 Support	FR Registered ID	0106F3A3	-	-	-
(	RR Registered ID	0106EFEA		-	-
Customize	RL Registered ID	0106F113	-	-	-
	Latest reception ID	0106F3A3		-	-
	Reception ID one ahead	0106F113	-	-	-
	Before reception ID2	0106F119	-	-	-
	Before reception ID3	0106EFEA		-	-
		010021231			
11.98V	Cursor position 1/11			Time (cursor po	
Service	N N N N				Den els
INFO	Split School Graph Setting		Trigger	🚵 Mark	F8

[Figure 8]

When the ISM is attempting to communicate, the screen will darken slightly and the communication **circle** will spin until the data is retrieved. If this is not visible for at least a short amount of time, the IIS function is not active. To correct this the laptop must be restarted and SSM4 must be opened and then closed, or opened to one of the acceptable menus listed above.

Also make note of the **Print** button to view a static version of the trouble tree.



[Figure 9]