



# Release Notes Programming

## Passenger Cars

ISTA	4.31.1x
ISTA Service Data	4.31.12
ISTA/P	3.68.1

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## 1 General notes

With the launch of ISTA 4, the functionality for programming has been integrated in ISTA.

The following series can be dealt with using ISTA/P:

- E Series

The following series can be dealt with using ISTA 4:

- F, G and I Series

These Release Notes contain information for both programming systems.

The Release Notes list all known faults and faults that are currently still unresolved, with possible workarounds which are important for the Retailer Organisation. Please contact Technical Support if additional faults occur on the vehicle. In particular in the following cases:

- vehicle-related programming faults / encoding faults and activation faults
- functional faults on the vehicle

With ISTA 4, it is now also possible to send feedback relating to programming directly to BMW AG. Selecting the "Feedback" symbol (envelope symbol) displays the feedback screen with input boxes.



If a new fault pattern is included in a release, this is indicated in the heading with **\*NEW\***. This is no longer indicated in the follow-up release.

## 2 Overview of the I levels contained

I levels newly added or updated in this ISTA version are marked in **BOLD** .

### F, G, I series (ISTA 4)

Series group	I level
F001 (F0x, RR4, RR5, RR6)	F001-21-07-510
F010 (F06, F1x)	F010-21-03-563
F020 (F2x, F3x, F80, F82, F83, F87)	F020-21-03-545
F025 (F15, F16, F25, F26, F85, F86)	F025-21-03-563
F056 (F39, F4x, F5x, F6x)	<b>F056-21-03-574</b>
S15A (G01, G02, G1x, G3x, RR1x, RR31, F90, F97, F98)	<b>S15A-21-07-540</b>
S15C (G08, G38)	<b>S15C-21-07-540</b>
S18A (G05, G06, G07, G14, G15, G16, G20, G21, G22, G23, G26, G28, G29, G42, G80, G82, G83, F40, F44, F91, F92, F93, F95, F96)	<b>S18A-21-07-540</b>
I001 (I01, I12, I15)	I001-21-03-530
I020 (I20)	<b>I020-21-07-540</b>
RR21 (RR21, RR22)	<b>RR21-21-07-537</b>

I levels correspond to the ISTA Service Data version on the front page.

### E Series (ISTA/P)

Series group	I level
E065 (E65, E66)	E065-17-11-545
E060 (E60, E61, E63, E64)	E060-16-11-500
E070 (E70, E71, E72)	E070-16-11-500
E89x (E81, E82, E84, E87, E88, E89, E90, E91, E92, E93)	E89x-18-07-520
R056 (R55, R56, R57, R58, R59, R60, R61)	R056-17-03-504
RR01 (RR1, RR2, RR3)	RR01-20-11-500



### Info on the integration levels



PuMA measures or similar documents sometimes refer to an I level for the solution to a problem. In this case it is important to know which ISTA release contains the I level.

The name of the I level indicates, if it

1. is contained in the current ISTA release,
2. was already contained in a previous ISTA release or
3. will be provided in a future ISTA release.

Series group e.g. **F020** - year**2017** - month (**3, 7 or 11**) - version (**>= 500**)

<b>Assuming the current release contains:</b>	<b>S15A-17-03-506</b>
Then the following I level is not available yet:	S15A-17-07-501
Then this I level was already contained in an older ISTA release:	S15A-16-11-503
Then this I level was already contained in an older ISTA release:	S15A-17-03-505

## 3 Innovations

The following interesting innovations are included, amongst others.

### ISTA 4

#### New models can be dealt with

Benefit: The new vehicles I20, G26, G42, G83 can be dealt with.

### 3.1 Innovations - Secure encoding

With the introduction of the I20 and subsequent models a new protection against tampering - the secure encoding - is introduced.

To date, the encoding data for programming was calculated by ISTA and written into the control units.

For the secure encoding, the necessary encoding data is calculated in a BMW back end sent to ISTA. ISTA writes the data into the control units.

#### Automatic process

This process can only **take place automatically**, with ISTA as part of programming, if the ISPI Admin Client is correctly configured and there is an online connection to the BMW back end.



The required settings for the ISPI Admin Client are described in the ISPI Administrator Manual (Application: ISPI Admin Client (administration area) / ISPI Admin Client: Functions / ISPI Admin Client: Certification management).

BMW Group internal location: In the ISPI Admin Client, the S-Gate environment (internal sites) needs to be set.

#### Manual process

If the prerequisites for the automatic process are not met, ISTA automatically cancels the measures plan and a file dialogue for saving the automatically generated file of type SecureCodingNCDCalculationRequest\_VIN\_XXX.json is opened.

This file must be sent to Technical Support via PuMA/TSARA.

Technical Support provides a validated encoding data record based on the above-mentioned file. This must then be imported into ISTA.

The encoding data record can be imported as follows:

1. Change to the "Vehicle modification" tab and select "Secure coding".

Operations	Vehicle information	Vehicle management	Service plan	Favourites	Workshop/ Operating fluids	Measuring devices
Repair/ maintenance	Troubleshooting	Service functions	Software update	Control Unit Replacement	Vehicle modification	
Retrofit	Conversion	Conversion (coding only)	Removal of Re- trofit/Conversion	Remove conver- sion (coding only)	Immediate actions	

Designation	Selection
Import vehicle order	<input type="checkbox"/>
Import encoding data record	<input type="checkbox"/>
Import Secure Feature Activation customer function	<input type="checkbox"/>
Initialisation of component protection	<input type="checkbox"/>
Import secure token	<input type="checkbox"/>
Control unit validation	<input type="checkbox"/>

Figure 1 Import encoding data record

2. A file dialogue for importing the file (of type \$YYYY-MM-DD\_VIN.zip ) provided by Technical Support is opened. Confirm the selection.
3. The file is checked. ISTA then automatically calculates a measures plan and changes to the "Measures plan" tab.
4. Check the calculated measures plan and then execute it.



### 3.2 Innovations - Secure Token

With the introduction of the I20 and subsequent models the use of the secure token is expanded.

The secure token is a further development of the enabling codes.

In comparison to the enabling codes it offers, it offers the advantage of being controlled via the BMW backend even without ISTA session.

This makes it possible for example to activate vehicle functions via the BMW ConnectedDrive Store.

Secure Tokens can be used for various applications.:

- Secure Feature Activation - for control of customer functions such as traffic sign recognition, etc.
- Locking Configuration Switch - for controlling control unit functions in case of a control unit exchange
- Component burglary protection - the extension of the component protection to further components and control units in case of a control unit exchange
- Diagnosis - for activating control unit mode or functions

The secure token becomes relevant when an affected control unit is replaced.

As in the past, the software functions of a new part control unit will be adjusted to the vehicle by the encoding.

In future, some of the software functions will be protected by the Locking Configuration Switch.

Customer functions are activated by the Secure Feature Activation.

It is ensured by the component burglary protection that the function of the new part control units is provided in the vehicle.

The secure token is requested by a BMW back end and written into the control units by ISTA.



With the I20 the classic enabling codes as well as the secure token are implemented.

#### Automatic process

This process is performed **automatically** by ISTA once the affected workshop systems (ISPI Admin Client) are correctly configured and there is an online connection to the BMW back end.

Operations	Vehicle information	Vehicle management	Service plan	Favourites	Workshop/ Operating fluids	Measuring devices
Repair/ Maintenance	Troubleshooting	Service functions	Software update	Control Unit Replacement	Vehicle modification	
Before Replacement	After Replacement					
Short name	Description	Replaced				
ACSM	Crash safety module	<input type="checkbox"/>				
AHM	Trailer module	<input type="checkbox"/>				
AL	Active steering	<input type="checkbox"/>				
AMPT	Top HiFi amplifier	<input type="checkbox"/>				
BDC	Body Domain Controller	<input type="checkbox"/>				
CON	Controller	<input type="checkbox"/>				
DDE	Digital diesel electronics	<input type="checkbox"/>				
DSC	Dynamic Stability Control	<input type="checkbox"/>				
EDC	Vertical Dynamics Management	<input type="checkbox"/>				
EGS	Electronic transmission control	<input type="checkbox"/>				
FHC	Electronic ride height control	<input type="checkbox"/>				
<p><b>Hint:</b> To finalize the replacement of the already installed ECU, select the corresponding control unit.</p>						
						Display measures plan

Figure 2 Control unit exchange - after exchange

To do so, select the corresponding control unit in the "After Replacement" tab and then execute the measures plan.

<b>i</b>	<p>To retrieve Secure Token, ISTA must be enabled for the application of vehicle certificates.</p> <p>The required settings for the ISPI Admin Client are described in the ISPI Administrator Manual (Application: ISPI Admin Client (administration area) / ISPI Admin Client: Functions / ISPI Admin Client: Certification management).</p> <p>BMW Group internal location: In the ISPI Admin Client, the S-Gate environment (internal sites) needs to be set.</p>
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Manual process

If the prerequisites for the automatic process are not met, the secure token must be imported with the assistance of Technical Support.

The process is similar to the control unit validation.

If ISTA could not automatically import the secure token, a warning message will be displayed.

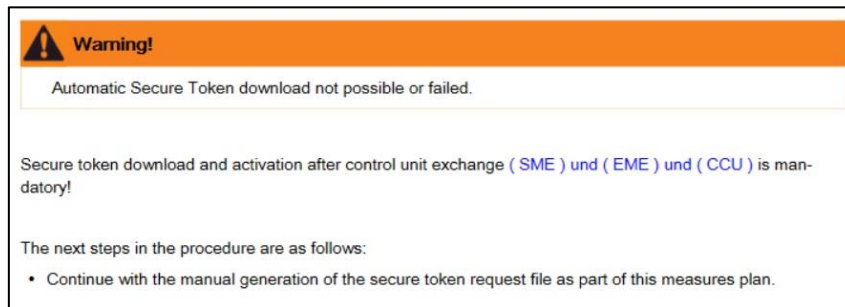


Figure 3 Secure token - warning

### Export Secure Token from ISTA

By clicking on the "OK" button, ISTA generates the required ZIP archive in the TokenRequest\_VIN17\_DealerData1\_DealerData2\_OutletNo\_YYYYMMDD\_HHMMSS\_.zip format and opens a file dialogue to save it. The file must be sent to technical support later via PuMA or TSARA.

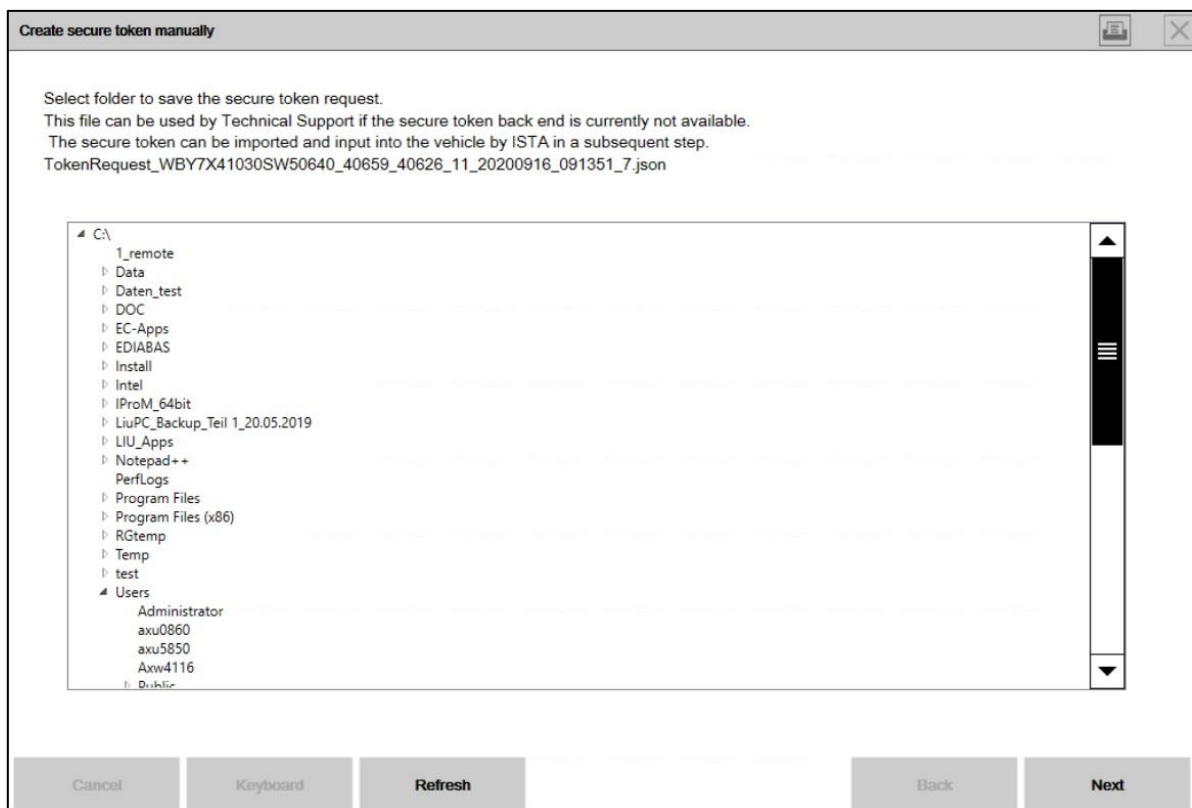


Figure 4 Secure token - file browser

The session can be terminated if necessary.

**PuMA/TSARA**

Please send the saved ZIP archive to Technical Support via PuMA/TSARA

Technical Support will send you back a validated version of the ZIP archive in the TokenRequest\_VIN17\_response.zip format for the affected vehicle. This is subsequently required by ISTA.

**Import Secure Token in ISTA**

Establish connection to the vehicle.

In order to import the ZIP archive, select "Import secure token" in the "Immediate actions" tab.

Operations	Vehicle information	Vehicle management	Service plan	Favourites	Workshop/ Operating fluids	Measuring devices
Repair/ maintenance	Troubleshooting	Service functions	Software update	Control Unit Replacement	Vehicle modification	
Retrofit	Conversion	Conversion (coding only)	Removal of Re- trofit/Conversion	Remove conver- sion (coding only)	Immediate actions	

Designation	Selection
Import vehicle order	<input type="checkbox"/>
Import encoding data record	<input type="checkbox"/>
Import Secure Feature Activation customer function	<input type="checkbox"/>
Initialisation of component protection	<input type="checkbox"/>
Import secure token	<input type="checkbox"/>
Control unit validation	<input type="checkbox"/>

Figure 5 Immediate measures - secure token import

Select the TokenRequest\_VIN17\_response.zip file in the file dialogue and confirm.

If the ZIP archive has been read successfully, ISTA automatically switches to the control unit exchange / after exchange tab.

There, mark the affected control unit as exchanged.

Calculate and execute the measures plan.

### 3.3 Innovations - Component burglary protection

With the introduction of the I20 and subsequent models a new protection against tampering - the component burglary protection - is introduced.

The component burglary protection should prevent the burglary of vehicle components.

It is achieved by coupling the components to the central control unit BCP of the vehicle.



This is a further development of the component protection.

The component protection couples the head unit to the central control unit BDC and works with enabling codes.

The following components are coupled on the I20 : Gear selector switch, controller, BZM, the head unit.

If one or more of the protected components are exchanged, the coupling with the BCP must be reinitialised.

This is done with the help of the secure tokens.

#### Automatic initialisation of the theft-proofing component when replacing a coupled component

After installing the new part and its instruction "after exchange" in ISTA, the required secure tokens are automatically downloaded and activated.

#### Manual process for initialisation of the component burglary protection

In case ISTA cannot reach the BMW backend systems, the secure tokens can be imported manually in ISTA.

The required zip archive is made available by the technical support.

To import, switch to the "Immediate actions" tab and select "Initialisation of component protection".

Operations	Vehicle information	Vehicle management	Service plan	Favourites	Workshop/ Operating fluids	Measuring devices
Repair/ maintenance	Troubleshooting	Service functions	Software update	Control Unit Replacement	Vehicle modification	
Retrofit	Conversion	Conversion (coding only)	Removal of Re- trofit/Conversion	Remove conver- sion (coding only)	Immediate actions	

Designation	Selection
Import vehicle order	<input type="checkbox"/>
Import encoding data record	<input type="checkbox"/>
Import Secure Feature Activation customer function	<input type="checkbox"/>
Initialisation of component protection	<input type="checkbox"/>
Import secure token	<input type="checkbox"/>
Control unit validation	<input type="checkbox"/>

Figure 6 Immediate measures - initialisation of theft-proofing component

In file explorer, select the zip archive and follow the instructions.

### 3.4 Component protection

The component protection serves the coupling of the head unit to the central control unit BDC of the vehicle. When a coupled head unit is installed in a different vehicle, it throws out the enabling codes and the functions such as Navigation, etc. are no longer available. This should prevent the burglary of head units.

The component protection was introduced on all vehicles with BDC in combination with the head units HU-H2 (NBT Evo), HU-B2 (Entry Evo) and HU-H3 (MGU).

In case of a replacement of the BDC the coupling in the head unit needs to be reset so that it can be coupled to the new part BDC afterwards.

An enabling code is required for the reset.

#### Automatic deblocking of the component protection when replacing the BDC

The activation code required to unlock the component protection is generated when a replacement part BDC is ordered. After installation of the new part BDC and its instruction "after exchange" in ISTA, the activation code is downloaded and activated.

The automatic process only works for replacement parts BDC ordered via ATLAS (Advanced ParTs Logistics in AfterSales).

This includes the following countries/markets as of 2020:

Austria	Luxembourg
Belgium	Malaysia (end of 2020)

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Denmark	Netherlands
Germany	Norway
Finland	Portugal
France	Switzerland
Italy	Spain
Japan	Sweden
Canada	USA

In all other countries, the activation code for deblocking must still be generated by Technical Support.

The download and activation of the enabling is done with ISTA analogue to the automatic process.

#### Manual process for deblocking component protection

The manual process is documented in the ISTA user guide, chapter Immediate measures.

The user guide can be opened in ISTA using the “?” button.

## 4 Known faults F, G, I Series

### 4.1 \* NEW \* TV module is required to be removed

**Fault description:**

The TV-module is required to be removed in the measures plan.

**Model series affected:**

Vehicles of type G01, G1x, G3x, F9x, RR11 with optional equipment of type 601.

**Measure / Workaround:**

1. Interrupt the power supply to the TV module.
2. Programming with ISTA.
3. Reconnect the TV module.



If the TV module has been replaced, contact Technical Support for an IRAP session.

**Fault corrected by:**

Currently open

**Affected application:**

ISTA 4



## 4.2 F0x, F1x, RR4 - control unit encoding not possible

### **Fault description:**

The encoding of the control units described fails repeatedly.

### **Model series affected:**

Vehicles F01, F02, F03, F04, F07, RR4 with production date until March 2011 and the following control units:

- TEL-ULF, TEL-E15GSM
- MMC-01
- AMP-HIFI, AMP-TOP
- SDARS
- LRR

Vehicles of type F10, F11 with production date up to December 2010 and the following control units:

- TEL-ULFTEL-E15GSM

### **Measure / Workaround:**

Vehicles of type F01, F02, F03, F04, F07, RR4: The vehicles can be dealt with using ISTA/P.

AN IBAC activate code is required for this. This can be requested from technical support.

Vehicles of type F10, F11: Contact Technical Support for an IRAP session.

### **Fault corrected by:**

Currently open

### **Affected application:**

ISTA 4

### 4.3 G08 Battery Electric Vehicle - fault memory for high-voltage components

**Fault description:**

In case of vehicle identification, the following service faults are displayed S0851, S0853, S0852.

The cause of this is missing LCS Locking Configuration Switches in the control units of type SME, EME, CCU.

**Model series affected:**

Vehicle G08 Battery Electric Vehicle.

**Measure / Workaround:**

Incorrectly configured Locking Configuration Switches can be corrected using ISTA.

For this purpose, calculate the test plan and process the service function offered for the service faults mentioned.

Note: Configurations in the ISPI Admin Client are required.

See the Innovations – Locking Configuration Switch chapter for details.

**Fault corrected by:**

Currently open

**Affected application:**

ISTA 4

#### **4.4 KAFAS does not respond any more after programming**

**Fault description:**

After programming, the KAFAS control unit no longer responds.

**Model series affected:**

G05, G07, G14, G15, G20, G29 vehicles with I level 18-11-5xx.

**Measure / Workaround:**

- 1) Let vehicle go to sleep. KAFAS then responds again.
- 2) Start new ISTA session, calculate and carry out measures plan.

**Fault corrected by:**

Currently open

**Affected application:**

ISTA 4

## 4.5 Notes on individual campaigns

**Fault description:**

If necessary, after vehicle programming, actions to restore individual data are completed with the result Warning, and ISTA reschedules them in the final work.

This behaviour can also occur if no control unit has been replaced.

The background is the update of the programming functions contained in ISTA for future derivatives.

**Model series affected:**

All series

**Measure / Workaround:**

The operations relating to the individual data can be ignored.

**Fault corrected by:**

Currently open

**Affected application:**

ISTA 4

## 4.6 RAM - activation code campaign when programming to 20-03 or more recent

### **Fault description:**

When programming to S18A-20-03-5xx or more recent, an activation code campaign for the RAM control unit is scheduled.

### **Model series affected:**

Vehicles G0x, G1x, G2x, F40, F44, F9x.

### **Measure / Workaround:**

Import the activation code into the vehicle

### **Fault corrected by:**

Affects vehicles with build level before March 2020.

### **Affected application:**

ISTA 4

## **4.7 G05, G06, G07 - activation code campaign when programming to 19-11 or more recent**

### **Fault description:**

When programming to S18A-19-11-5xx or more recent, an activation code campaign for the VIP control unit is scheduled.

### **Model series affected:**

Vehicles G07 and G05, G06 with special equipment 2VR, 2VW, 2VF.

### **Measure / Workaround:**

Import the activation code into the vehicle

### **Fault corrected by:**

Affects vehicles with version before November 2019.

### **Affected application:**

ISTA 4

## 4.8 High-beam Assistant - activation code campaign when programming to 19-07 or later

### **Fault description:**

When programming to S18A-19-07-5xx or S15A-19-07-5xx or later, an activation code campaign for the KAFAS control unit is scheduled.

The reason is that the function is activated retrospectively for the customer.

### **Model series affected:**

Vehicles G05, G07, G14, G15, G20, G29 and G11, G12 as of life cycle impulse with special equipment 5AC.

### **Measure / Workaround:**

Import the activation code into the vehicle

### **Fault corrected by:**

Affects vehicles with version before July 2019.

### **Affected application:**

ISTA 4

## 4.9 HU-H3 (Head Unit High 3) / RSE control unit cannot be encoded

**Fault description:**

Encoding the HU-H3 MGU-01 or RSE fails repeatedly.

**Model series affected:**

Vehicles of type G0x, G1x, G2x, F4x, F9x with control unit of type MGU-01

**Measure / Workaround:**

Assign HU-H3 control unit manually for programming in ISTA.

**Fault corrected by:**

Currently open

**Affected application:**

ISTA 4



## 4.10 ISTA 4 - Information on BDC exchange or programming cancellation gateway control units



The exchange of the BDC is again supported with ISTA 4.09.1x.

### **Fault description:**

When carrying out the special measures plan in the event of a BDC exchange, or due to a programming abort of the gateway control unit, the following pop-ups appear repeatedly:

- Requesting that the ignition be switched on
- SYS-0012 Identification Error
- Connection to control unit Unknown interrupted

### **Model series affected:**

Vehicles with the control units FEM or BDC.

### **Measure / Workaround:**

Confirm pop-ups until the special measures plan has been carried out.

### **Fault corrected by:**

Currently still open.

### **Affected application:**

ISTA 4

## 4.11 Invalid IP address for BN2020 Ethernet control units

### **Fault description:**

During vehicle management, one of the following Ethernet-capable control units should be programmed: HU-H, RSE, ATM, KOMBI, ACC, ICAM, KAFAS

At the start of the session, a note appears indicating that the IP address is invalid. The Ethernet programming can fail if the following steps are not followed:

### **Model series affected:**

All F, G, I Series

### **Measure / Workaround:**

1. End ISTA session
2. Carry out a battery reset
3. Restart the session
4. If fault message still appears: Check the Ethernet wiring in the vehicle using the wiring diagram in ISTA
5. If fault message still appears: Contact Technical Support

### **Fault corrected by:**

Currently still open

### **Affected application:**

ISTA 4

## 5 Known faults E Series (ISTA/P)

### 5.1 Vehicle order import fails due to antivirus software and firewall

**IMPORTANT!**

In individual cases, the vehicle order-import fails because of installed security software (antivirus software or firewall). After the session starts, the vehicle identification with ISTA/P fails. (BMW-internal locations are not affected by the fault)

**Measure / Workaround:**

For more details, see ISPI Dealer Self Support entry 51219.

**Affected application:**

ISTA/P