

MAHLE



RemotePRO
Remote Diagnostics

Multi
language
user manual

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1. General information

1.1

General notes

Thank you for purchasing this device RemotePRO.

The device is a device for remote automotive diagnostics.

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This manual may not be reproduced, in part or entirely, either in printed or digital form.

Printing is permitted for the exclusive use of user and operators of the device to which this manual refers.

MAHLE Aftermarket Italy S.r.l. and the resources employed in the production of this manual do not assume any responsibility deriving from the improper use of both the manual and the device, guaranteeing that the information contained in this manual has been carefully checked.

The product can be subject to changes and improvements. MAHLE Aftermarket Italy S.r.l. reserves the right to modify the information contained in the manual without notice.

The manufacturer assumes no responsibility for damage or injury to persons, animals and property in the following cases:

- Damage to the product due to factors external to the manufacturer or non-compliance with current legislation
- Modifications made to the product without express written authorization of the manufacturer
- Use for purposes other than those described in this manual

2. Identification

2.1

Manufacturer identification

The device is manufactured by:

MAHLE Aftermarket Italy S.r.l.

Via Diesel 10/A - 43122 Parma (Italy)

Phone 39 0521 954411 - Fax 39 0521 954490

email info.aftermarket@mahle.com

internet www.mahle-aftermarket.com

2.2

Model identification

The device covered by this manual is:

- Model: RemotePRO


2.3

Reference directives

The device is manufactured in compliance with the relevant EU Directives applicable to its marketing. Device data is indicated on its technical data plate.

European Union:  The equipment complies with the following applicable directives:

- 2014/30/EU - EMC

UKCA:  The product complies with the requirements of the following UK regulations:

- Electromagnetic Compatibility Regulations 2016 (S.I. 2016/1091)

3. About this manual

3.1

Purpose of the manual

This manual describes the device RemotePRO.

In case of any doubts about the correct interpretation of the instructions, please contact the Technical Assistance Service to obtain the necessary clarifications.

3.2

Recipients

This manual is intended for use by trained professionals who are responsible for operating the device RemotePRO.

3.3

Supply and storage

This manual is provided in electronic format.

Keep this manual with the equipment for easy reference.

This manual is an integral part of the security system, therefore:

- it must be kept intact
- it must be kept with the device until demolition

3.4 Symbols used in this manual

Symbols are used throughout this manual to emphasize key information. The following symbols are used:



Caution

Symbol used to identify important warnings for the operator and/or the device safety



Prohibition

Symbol used to identify operations that must not be performed or behavior that must not be adopted as it could cause personal injury or damage to the device



Obligation

Symbol used to identify information of particular importance in the manual

4. Safety

4.1

Precautions for device operation

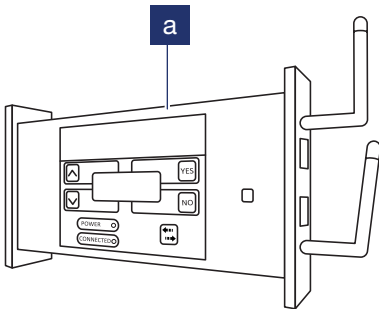
- Use this device in environments with temperatures within 0° to 60 °C.
 - Make sure the device is not subjected to extreme temperatures or prolonged exposure to direct sunlight, which could cause it to heat up
 - Do not expose the device to rain or excessive moisture, as this may cause irreparable damage to the unit
 - Do not use broken or damaged connecting cables
 - Do not use this device in direct contact with heat sources
 - Do not use this device in environments with an explosive atmosphere
- Do not immerse the device in water
 - Do not spill water or other fluids on the device
 - Do not expose the device to excessive dust
 - Do not place the device on live electrical terminals
 - If the following technical problems occur, do not use the equipment and contact the authorized service center or your dealer:
 - + The connecting cables are damaged
 - + A liquid was spilled on the device
 - + The device exhibits abnormal operation

5. Device Description

5.1 Description

RemotePRO is a device for remote automotive diagnostics.

The device RemotePRO, connected to a vehicle and a network with Internet access, allows a MAHLE remote service technician to perform diagnostic, calibration and programming functions on the vehicle itself.

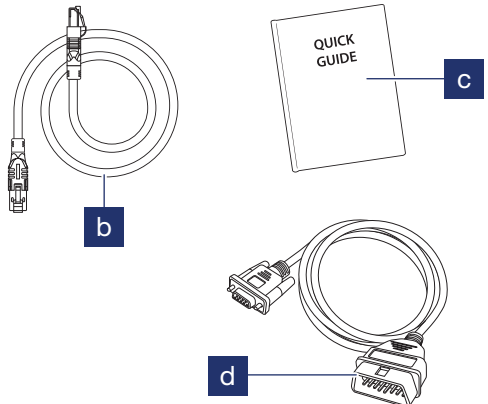


5.2 Supplied items

Depending on commercial configurations, standard supplied accessories may vary. Below are the items present in the standard configuration.

Supplied items

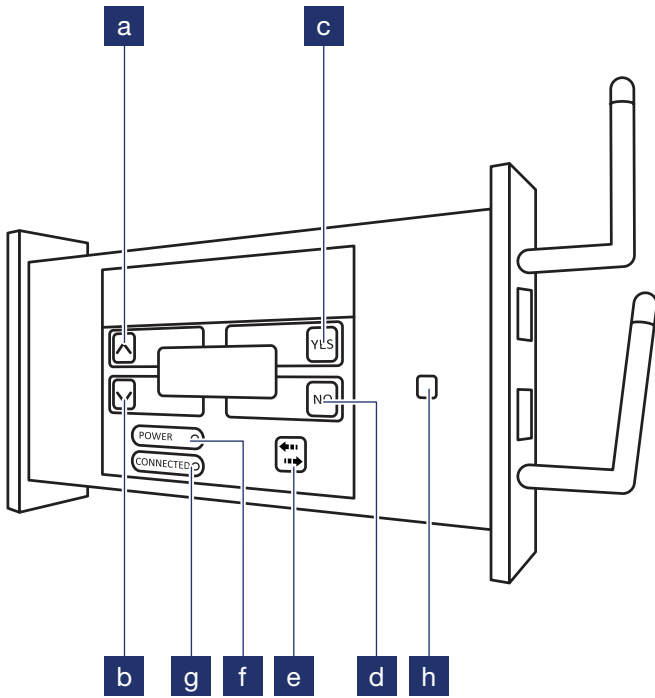
- | | |
|----------|-------------------|
| a | RemotePRO |
| b | LAN network cable |
| c | Quick Start Guide |
| d | OBD cable |



5.3

Main elements

Main elements		
a	Navigation arrow	Not used
b	Navigation arrow	Not used
c	Confirm	Press to confirm the display of the message on the LCD screen
d	Reject	Press to reject the display of the message on the LCD screen
e	WPS button	Press for 2 seconds to set up RemotePRO on a new Wi-Fi network with WPS functionality
f	Power LED	Steady green when the device is powered
g	LED connection	<ul style="list-style-type: none"> ■ Blinking green when the device is not connected to the Internet ■ Steady green when the device is connected to the Internet
h	Warning LED	Flashing if RemotePRO has uploaded a configuration file to a USB stick inserted in the device



6. Installation

6.1

Minimum requirements

- Internet connection with minimum 10 Mbps upload/download speed
- Ethernet port for RemotePRO's connection to the Internet
- Vehicle battery charge maintainer (min 70 Amp). Not supplied
- Valid email address in the "Settings | Personal | Account" menu of the diagnostic application
- Valid diagnosis license and sufficient credit from MAHLE Coins (MC) in the "Settings | System | License" menu of the diagnostic application
- Diagnosis terminal with active Internet connection
- PC with Internet browser for Wi-Fi configuration

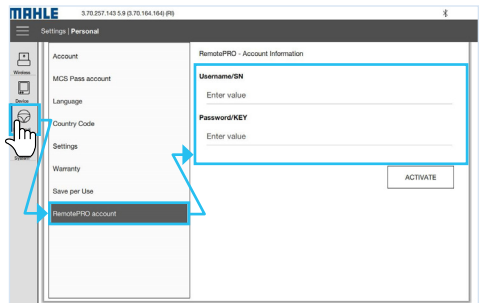
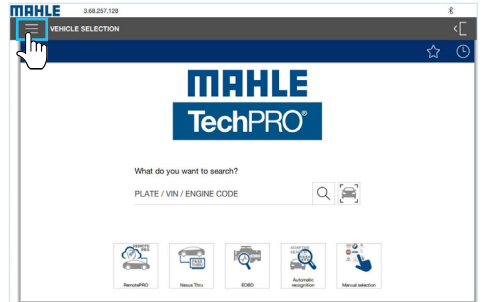
6.2

Device configuration

Device configuration

- 1 Login to the instrument
Note: For the first installation only, enter the SN# (User name) and KEY (Password) printed on the back of the RemotePRO in the "Settings | Personal | RemotePRO Account" section of the diagnostic application
- 2 After login, the Home page of the terminal is displayed. Click on the RemotePRO button to access the portal
- 3 The Login page of the portal is displayed

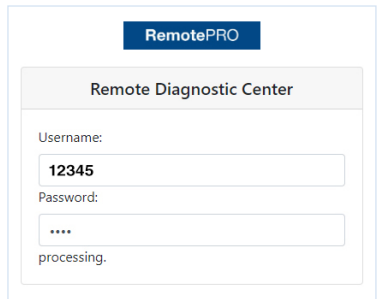
1



2



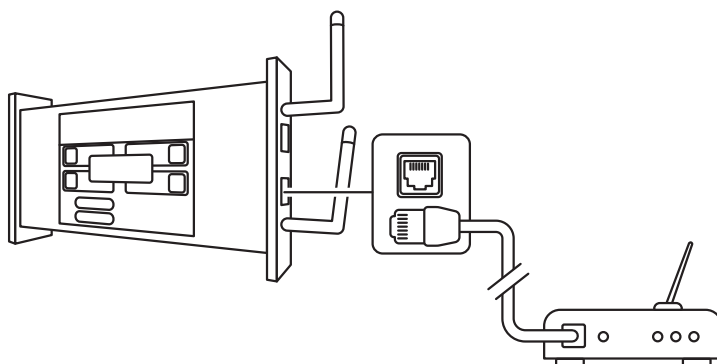
3



6.3 Connecting the RemotePRO to the LAN

Connecting the RemotePRO to the LAN

- 1 Connect the LAN network cable (supplied) to the VCI RemotePRO and the Ethernet port equipped with Internet access
- 2 Configure, if Wi-Fi is desired (see par. **"Wi-Fi configuration"**)



Wi-Fi configuration



You must have connected RemotePRO to the LAN and the vehicle in order to view the IP of the device.

Wi-Fi configuration

- 1 Open the Internet browser on a PC or smartphone.

Note: The PC or smartphone must be connected to the same Internet network as RemotePRO

- 2 Type the IP address of the RemotePRO device into the address bar of the Internet browser being used

Note: The IP address is located on the second line of the RemotePRO device

- 3 Select the name of the Wi-Fi network from the SSID drop-down menu **(a)**

- 4 Write the password of the selected network in the PASS PHRASE field **(b)**

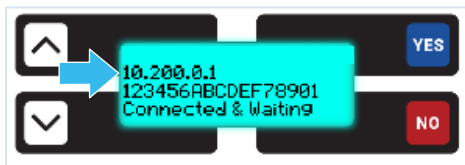
- 5 Select the security protocol from the SECURITY TAPE drop-down menu **(c)**

Note: It is recommended to use WPA / WPA2

- 6 Click on SEND **(d)**

- 7 The configuration confirmation page is displayed. You can disconnect the LAN cable and reboot the device

2



3

4

5

6

RemotePRO

[Click here for manual entry of credentials.](#)

SSID
MAHLE_SCANMAN

Pass Phrase

Security Type
WPA/WPA2

Submit

a
b
c
d



7

RemotePRO

[Click here for manual entry of credentials.](#)

WiFi Configuration Successful.
Remove the Ethernet Cable and restart your RemotePRO.

7. Usage



In case of complex procedures, be sure to keep the vehicle charged through the battery maintainer.



You must have connected RemotePRO to the Internet (via cable or Wi-Fi network) and the vehicle.



Check the availability of MAHLE Coins (MC) to take advantage of the service. In case new credit is needed, contact your Dealer.



Verify that you have a valid diagnostic license (of the associated diagnostic device).

The remaining credit and license status are displayed at the top of the HOME page of the RemotePRO portal (see figure below).

The screenshot shows the top navigation bar of the RemotePRO Diagnostic Center. On the left, there is a hamburger menu icon and the text "RemotePRO". In the center, the text "Remote Diagnostic Center" is displayed, with a sub-status "Credit: 000 Diagnostic License: Active" below it. On the right, there is a user profile icon, the number "21585", and a "Logout" link. Below the navigation bar, the main content area displays "Service Requests".

7.1 Connecting RemotePRO to the vehicle

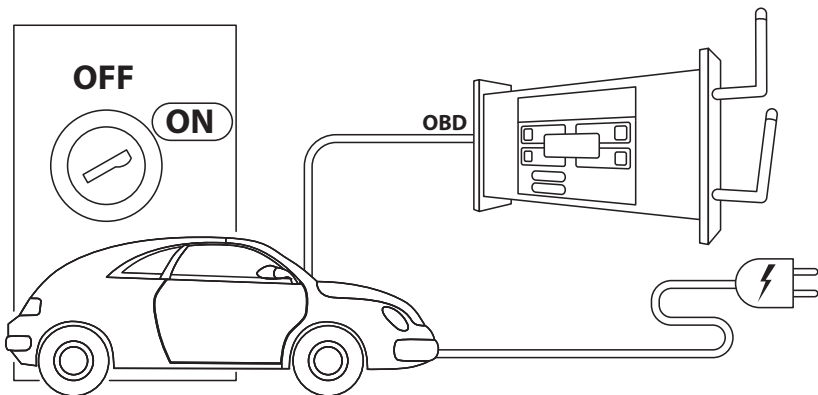
Connecting RemotePRO to the vehicle

- 1 With ignition key in the OFF position, connect the battery maintainer to the vehicle and start it
- 2 Next, turn the ignition key to the ON position and connect RemotePRO's OBD cable to the vehicle

- 3 RemotePRO starts and displays:
 - On the second line, the IP address assigned to the device
 - On the fourth line the words "Connected and standing by"
- 4 RemotePRO is now started and a remote service request can be sent



Do not disconnect RemotePRO with dashboard or engine ON.



7.2

Use of the portal

Elements of the portal		
a	Menu	Enables access to the following pages: <ul style="list-style-type: none">■ HOME■ NEW REQUEST■ DISCONNECT
b	Credit / License Status	View MAHLE Coins (MC) remaining credit and license status
c	Pending	Click to access the PENDING page
d	Submitted	Click to access the page with SUBMITTED
e	Completed	Click to go to the COMPLETED requests page
f	Chat	Click to go to the CHAT page

The screenshot shows the 'Remote Diagnostic Center' interface. At the top, there is a navigation bar with 'RemotePRO' on the left, 'Remote Diagnostic Center' in the center, and user information '21585 Logout' on the right. Below the navigation bar, the main content area is titled 'Service Requests' and includes a sub-header 'wait time is <1 min'. A table lists three request statuses: 'Pending' with a green arrow icon, 'Submitted' with a red pencil icon and a red '2' badge, and 'Completed' with a green checkmark icon and a red '159' badge. Below the table is a search bar with a magnifying glass icon. Callouts 'a' through 'f' point to various UI elements: 'a' points to the RemotePRO logo, 'b' points to the main content area, 'c' points to the Pending status, 'd' points to the Submitted status, 'e' points to the Completed status, and 'f' points to the search bar.

Status	Count
Pending	0
Submitted	2
Completed	159

7.3 Remote service request

Remote service request

- 1 Access the portal from your diagnostic application
- 2 Press PENDING.
The pre-filled form with data retrieved from the probe connection to the vehicle will be automatically displayed (example: VIN).

Note: If the vehicle is not displayed in the PENDING tab, see section "**Manual entry of a remote service request**"

- 3 Verify that all required fields on the PENDING REQUEST page are filled out
 - The JOB# field is for the internal number of the repair order
 - The fields YEAR, MAKER and MODEL are mandatory. Verify that they are accurately filled out

- 4 Select the type of service to be performed. See section "**Remote-PRO services table**" for the type and description of available services

- 5 Supplement the request using the NOTES field

- 6 When finished, press SUBMIT






- 7 The request is put on hold. Press VIEW CHAT and the MAHLE technician will confirm when the service will start

2

RemotePRO Remote Diagnostic Center Credit: 695 Diagnostic License: Active 21585 Logout 21585

Service Requests

wait time is < 1 min

 Pending	
 Submitted	
 Completed	

3

RemotePRO Remote Diagnostic Center Credit: 695 Diagnostic License: Active 21585 Logout 21585

Pending Request

Ticket #: 770266

RemotePRO: R&D Virtual

Remote Service:

Job #: Test (Mable User)

VIN:

Year: 2016

Make: Acura

Model: MDX

Plate #: 343D3

Odometer: 12333

Odometer Units: kilometers

Notes:

4

RemotePRO: *

Remote Service: *

Job #: *

VIN: *

Year: *

Special Configuration and Investigation
Pre Scan inc. DTC clear
Post Scan inc. DTC clear
Calibration
Calibration with Programming
Programming / Coding
Service Reset
Key Programming

5

Notes:

6

Notes:

7

Chat for #770255

RemotePRO services table

Remote service	Reason for service	Service offered
<p>Pre scan including DTC deletion</p>	<p>Global scan to be performed before repair</p>	<p>This scan is used to determine what faults are present in the vehicle before repair. Therefore, a necessary repair is recommended if the fault codes are not cleared</p>
<p>Post scan including DTC deletion</p>	<p>Global scan to be performed after repair execution</p>	<p>This scan is used to determine what faults are present in the vehicle after repair. Therefore, a necessary repair is recommended if the fault codes are not cleared</p>
<p>Calibration</p>	<p>ADAS modules require calibration after replacement, trim adjustments, and windshield replacement. Seats, windows, engine components may also require calibration</p>	<p>ADAS calibrations are performed to ensure proper functioning of all safety systems. Other components such as engine intake fin calibration help the engine run more efficiently and smoothly. A seat calibration teaches the seat where the end stops are on the adjustment mechanism</p>

<p>Calibration with Programming</p>	<p>Most modern vehicles require modules to be programmed on the vehicle before they can be calibrated, such as ADAS modules and window control modules</p>	<p>Programming a module is done with connection to the OEM server to ensure that the module works as intended by the manufacturer. Calibration teaches the module how to operate properly</p>
<p>Programming/Coding</p>	<p>Most modern vehicles require modules to be programmed on the vehicle; some modules must be reconfigured after battery removal or when installing new sensors, such as parking sensors</p>	<p>Programming a module is done with connection to the OEM server to ensure that the module works as intended by the manufacturer</p>
<p>Service reset</p>	<p>Perform vehicle service maintenance reset (oil service, AdBlue refill). Perform basic vehicle functions (bleed brake fluid or fuel system, TPMS reset warning). Restore functionality after replacing a sensor or actuator (12V battery, DPF pressure sensor, crankshaft sensor, NOX sensor)</p>	<p>Resetting is used to reset/ assist in general vehicle maintenance, e.g., for retraction of brake caliper motors prior to replacement of rear brakes</p>
<p>Surveys and special configurations</p>	<p>Perform a diagnostic support or survey</p>	<p>To perform more in-depth requests where special configuration is required, DPF regenerations or perform special functional tests on components</p>
<p>Key Programming</p>	<p>Perform key programming on the vehicle</p>	<p>Perform key programming on the vehicle</p>

7.4

Manual entry of a remote service request

Manual entry of a remote service request

1 Press the MENU icon (3 blue lines) in the upper left corner of the screen. The menu is displayed

2 Press NEW REQUEST

Note: The NEW REQUEST page is displayed

3 Fill in all required fields on the NEW REQUEST page

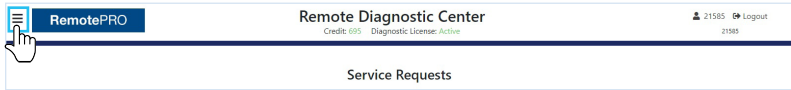
- The JOB# field is the workshop work order (internal reference)
- The fields YEAR, MAKER and MODEL are mandatory. Verify that they are accurately filled out

If necessary, fill in the Notes field as described in par. **"Remote service request"**

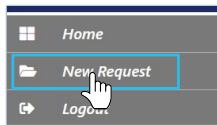
4 Press SUBMIT

5 The request has been sent and the MAHLE technician will initiate a chat momentarily

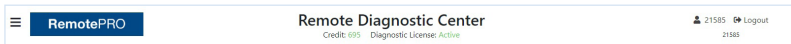
1



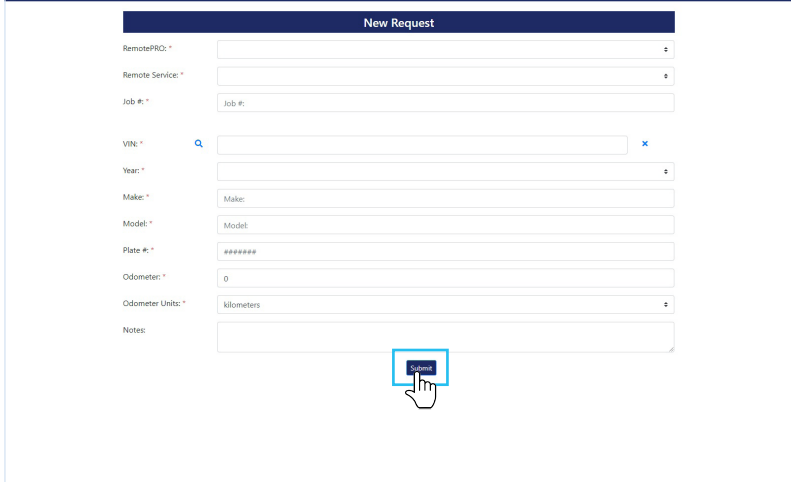
2



3



4



7.5 Sending reports

When the operation is completed, the technician will send a Report of the intervention to the email address linked to the instrument.

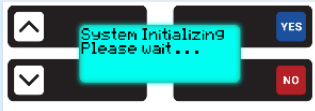
RemotePRO 		MAHLE
GENERAL INFO		
WorkOrder:	863661	
Serial Number:	22080200303	
Date:	2/1/2023 4:10:46 PM +01:00	
Service type:	Mahle Programming / Coding	
Service status:	Submitted	
WORKSHOP		
Name:	YURI YYY	
Address:		
City:	parma	
E-Mail:	paolo.menoni@mahle.com	
Tel.:		
VEHICLE DATA		
Make:	Audi	
Model:	A4	
Type:		
Year:	2019	
VIN:	WAUZZZF44KA090193	
Mileage:	0	
NOTE		
Radar programming 2019 AUDI A4 WAUZZZF44KA090193		
SERVICES DETAIL		
Health check performed with AUDI ODIS diagnostic tool No fault codes reported in the camera module. Initiated the static radar calibration with diagnostic tool. Diagnostic tool provided confirmation that calibration completed Successfully Performed the post scan on the calibrated module clearing the codes, 0 fault codes returned at this time.		
DIAG ERRORS		
0		

8. Displayable messaging

8.1

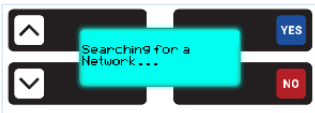
General pages

General pages



System initialization wait

Screen displayed when turning on the RemotePRO device



Searching for a network

Screen displayed when RemotePRO tries to connect to an Ethernet-connected network



Searching for a Wi-Fi network

Screen displayed when RemotePRO tries to connect to the configured Wi-Fi network



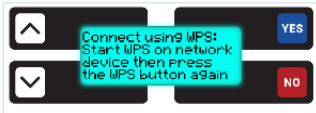
Connection to the Wi-Fi network

Screen displayed when RemotePRO has communicated with the configured Wi-Fi network and is trying to authenticate with the configured Wi-Fi credentials




Unable to connect to Wi-Fi network

Screen displayed when RemotePRO failed to connect to the configured Wi-Fi network using the configured Wi-Fi credentials



Connecting to Wi-Fi via WPS

Screen displayed on RemotePRO when pressing the WPS button 



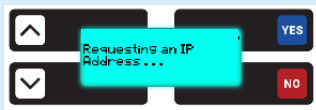
Connecting to Wi-Fi via WPS

Screen displayed on RemotePRO after the initial WPS prompt



Unable to connect to Wi-Fi via WPS

Screen displayed on RemotePRO if it fails to connect to Wi-Fi network using WPS



Requesting an IP address

Screen displayed on RemotePRO when it is connected to the Ethernet / Wi-Fi network and is waiting to be assigned an IP address by the network



Static IP provided in use

Screen displayed on RemotePRO when the configured static IP is already in use by another device on the network

Note: Review the device configuration and change the static IP address to an available IP address



Contacting the server

Screen displayed on RemotePRO when trying to establish a connection to the connection server



Locating the server

Screen displayed on RemotePRO when trying to locate the connection server



Failed connection to RemotePRO server

Screen displayed on RemotePRO when it fails to connect to the connection server



Unable to resolve server address

Screen displayed on RemotePRO when it fails to connect to the Internet. RemotePRO has connected to a network, either Ethernet or Wi-Fi, however it is unable to communicate through the Internet

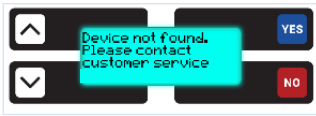
Note: Check the Internet connection - external client side



Unable to connect to the server

Screen displayed on RemotePRO when it is connected to the Internet but cannot authenticate to the connection server

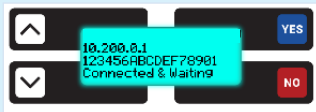
Note: Contact technical support



Device not found

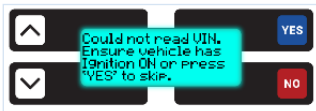
Screen displayed on RemotePRO when it is connected to the Internet and the connection server refuses to connect to RemotePRO

Note: Contact technical support



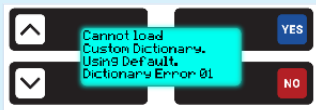
Connected and waiting (vehicle side)

Screen displayed on RemotePRO when it has read the VIN of the vehicle and successfully connected to the connection server



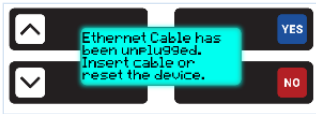
Unable to read VIN

Screen displayed on RemotePRO when it cannot read the VIN of the vehicle. This occurs if RemotePRO has been connected to the vehicle and the ignition has not been turned on within 60 seconds. This can also occur if the vehicle does not report the VIN using the CAN bus on pins 6 and 14. Generally, vehicles produced after 2008 carry the VIN on the CAN bus on pins 6 and 14



Unable to load custom dictionary

Screen displayed on RemotePRO if a problem occurs while loading the custom dictionary. If it fails to load, the default dictionary will be loaded



Ethernet cable has been disconnected

Screen displayed on RemotePRO if the Ethernet cable is disconnected from the device while it is still powered by the vehicle. If the cable has not been disconnected, check the cable for damage. When the Ethernet cable is connected, a click should be heard



Device reboot!

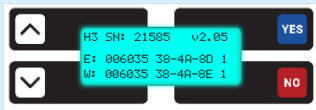
Screen displayed on RemotePRO in case of connection loss. Reboot the device



Session completed

Screen displayed on RemotePRO once a scanning session is completed. Once this screen appears, you can disconnect RemotePRO from the vehicle

Note: Legacy Screen - currently not in use



Show MAC address on RemotePRO

Screen displayed on RemotePRO after the user presses the NO button 3 times. Shows MAC address for both Ethernet and Wi-Fi

Note: E = Ethernet and W = Wi-Fi

9. Cleaning

Do not use any acid-based or abrasive cleaners to clean the plastic shell. Use a soft, clean, dry cloth, spray a modest amount of detergent, and wipe gently.

10. Disposal

10.1

Device disposal



The product meets the requirements of EU Directive 2012/19/EU. Disposal must be carried out in compliance with local waste disposal regulations: do not dispose of this product with normal household waste, take it to specific collection centers in your area, in accordance with the laws in force.

Electrical and electronic equipment must never be disposed of with household waste, but must undergo a special recycling process.

10.2

Packaging disposal

The packaging must be disposed of in accordance with the regulations in force. This contributes to protecting the environment.

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