Self Study Program 892213

The 2022 Taos New Model Overview

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The Self-Study Program covers design and operation of the 2022 Taos.
It will not be updated after release.

Introduction

The All New Taos

The Taos is manufactured at the plant in the city of Puebla, Mexico. Every production process is carried out locally, from the stamping of body parts to the manufacture of axles and catalytic converters.

The new Taos is a 5-seat, mid-sized SUV that focuses on technology and safety. This model is based on the MQB platform.

Taos means “Our People” in the ancient Tiwa language spoken by the original inhabitants of New Mexico. In addition, the name embodies the nature of the vehicle and the town of Taos, New Mexico. Taos is a small city that offers big things - from outdoor adventure to arts and design and great cuisine.

Incidentally, Taos was also the home to John Muir, and engineer turned mechanic, and author of “How to Keep you Volkswagen Alive,” first published in 1969.

Highlights

LED headlights.
with LED light
conductors in the
radiator grill.

Black or silver roof rails
Panoramic sliding sunroof

Door and side panel
with synthetic
leather trims and
stitching

Heated front seats

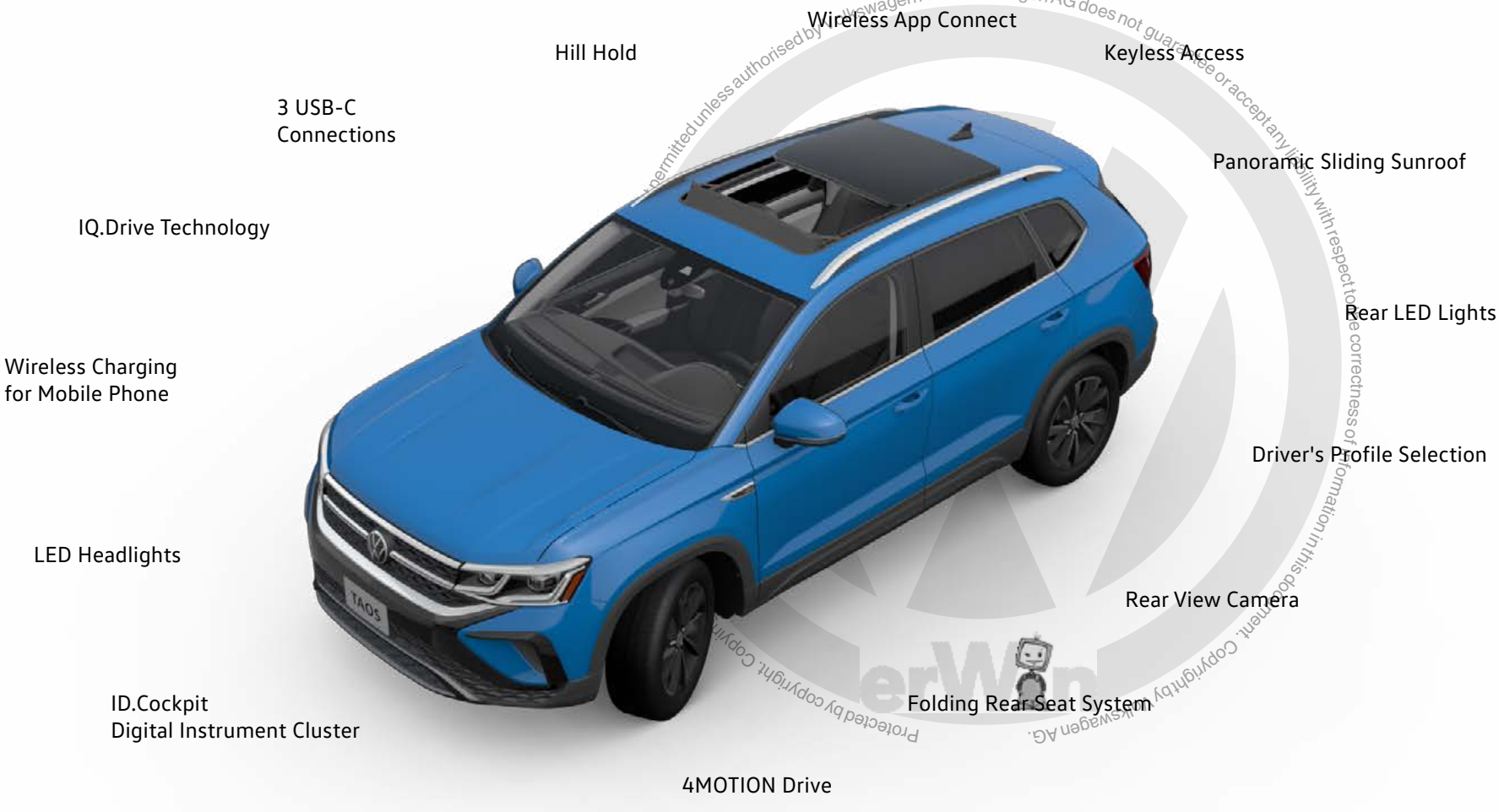
Digital Cockpit

Radio MIB Generation 3
Wireless App Connect

Rear LED lights
License-plate holder with LED
lighting

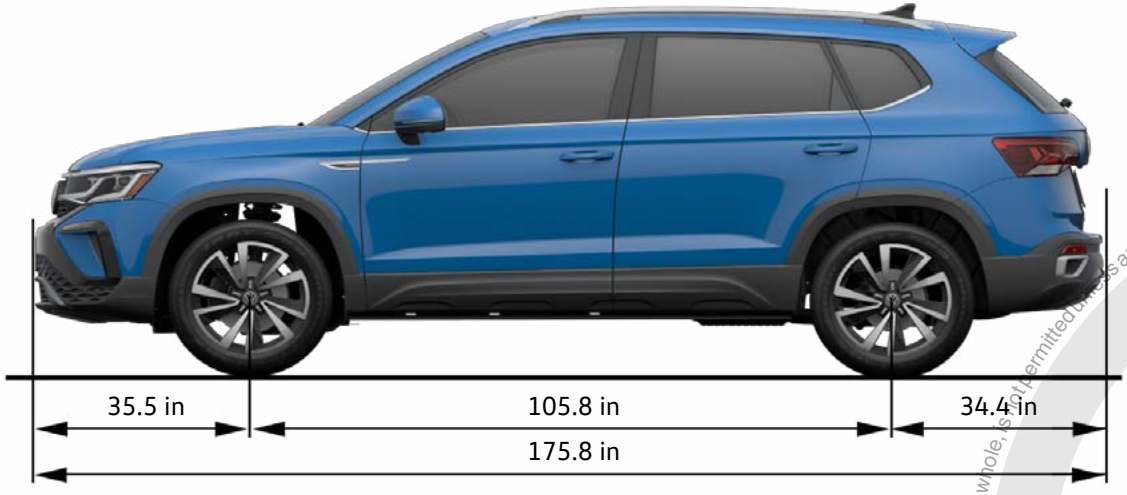
Product Features

This overview chart shows the innovative and attractive product features available at market introduction.



Introduction

Technical Data - External Dimensions and Weights



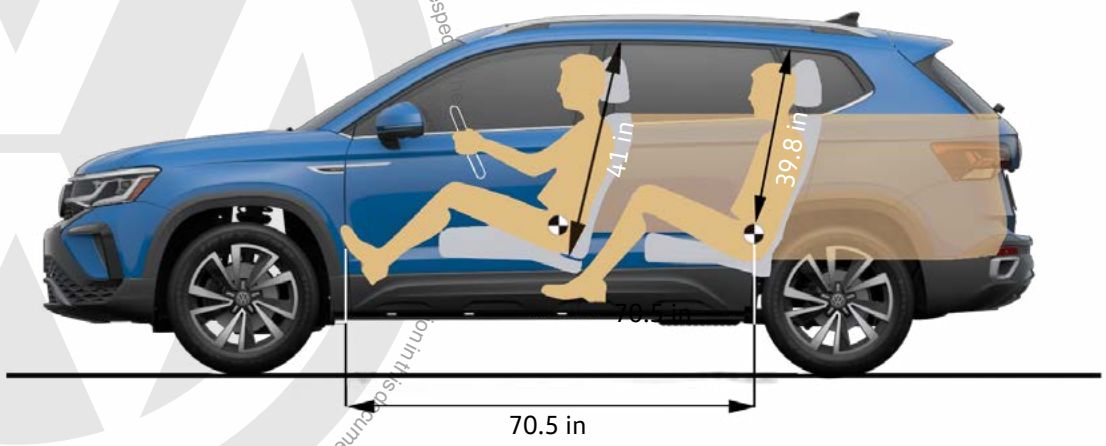
Weights and Other Data

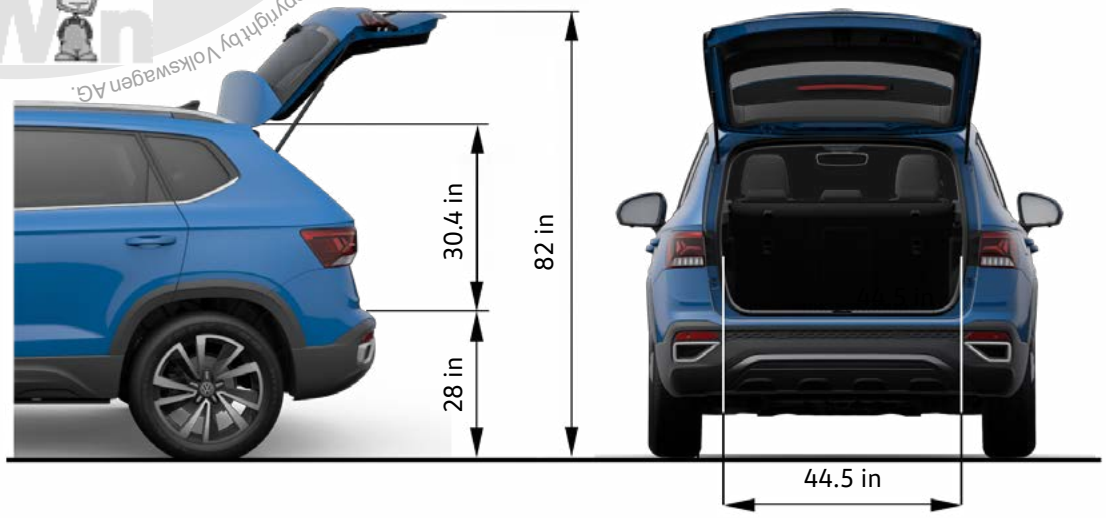
Turning circle	38 ft (11.5 m)
Gross Vehicle Weight Rating	FWD - 4343 lb (1970 kg) AWD - 4608 lb (2090 kg)
Curb Weight	FWD - 3175 lb (1440 kg) AWD - 3430 lb (1556 kg)
Max. load on the roof	165 lb (75 kg)
Drag coefficient**	0.326 cg

Technical Data - Passenger Compartment Dimensions and Volumes

Interior Dimensions and Capacities

Luggage compartment volume behind second row	27.0 cu ft (790 l)
Luggage compartment behind first row with second row folded	65.9 cu ft (1866 l)
Tank capacity	FWD - 13.2 gal (50 l) AWD - 14.5 gal (55 l)





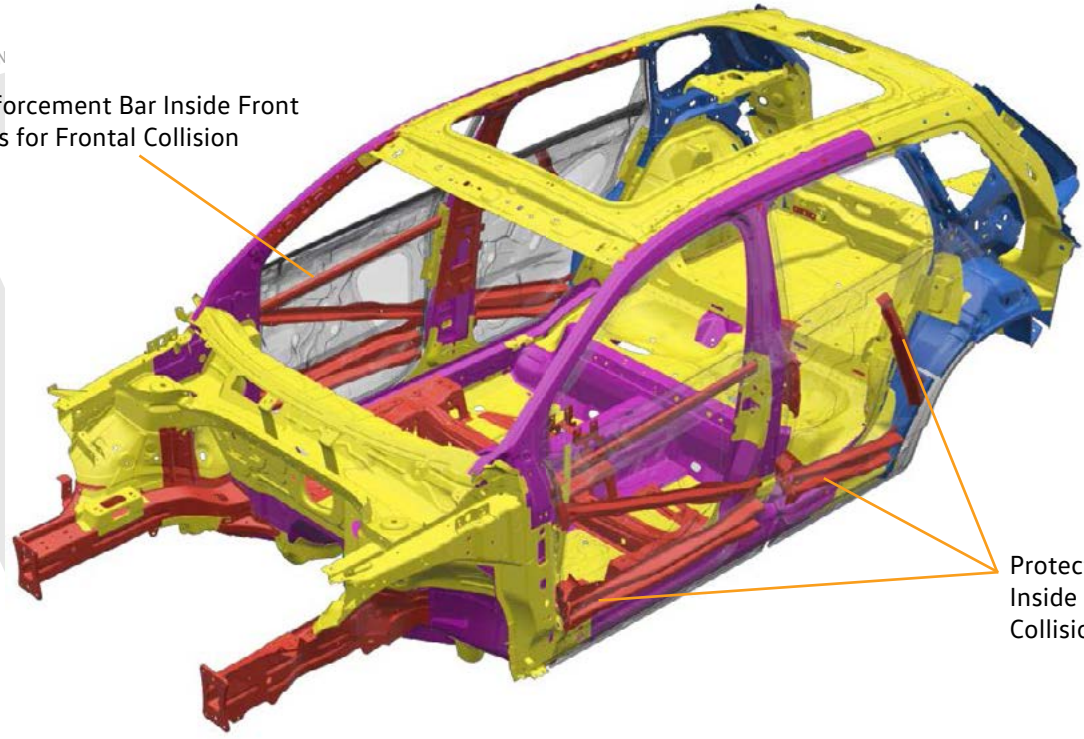
Body

Body Framework

The Taos chassis is built on the MQB platform. This platform provides greater interior space, body weight reduction, greater rigidity, and compliance with the most demanding occupant protection standards in the event of a collision.

The joining methods used are:

- Structural body adhesives
- Laser welding
- Resistance spot welding
- Clinching
- Riveting



- <160 MPa Mild steel
- <220 MPa High-strength steel
- <420 MPa Super-high-strength steel
- <1000 MPa Ultra-high-strength steel
- >1000 MPa Hot-formed steel

Instrument Dash Panel and Center Console

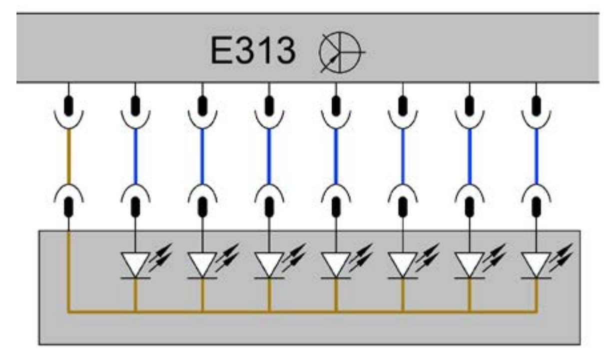
The Taos dash panel is a fully innovative design with a broad driving vision. The infotainment interface has been raised for easy sight and reach.

Y26 Shift Lever Position Display

The shifter display is a tiny electronic device with 7 LEDs on the shift lever knob where its actual position P, R, N, D, S, + or - turns on when moving the lever. The trim and cover are part of the lever knob.

- The E313 Shift Lever Control Module supplies power to the 7 internally-connected LEDs
- When moving the shift lever to each gear, the corresponding LED illuminates

E313 Selector lever



Y26 Shift lever position display

Front Driver Seat

The 2022 Taos has two driver's seat options available:

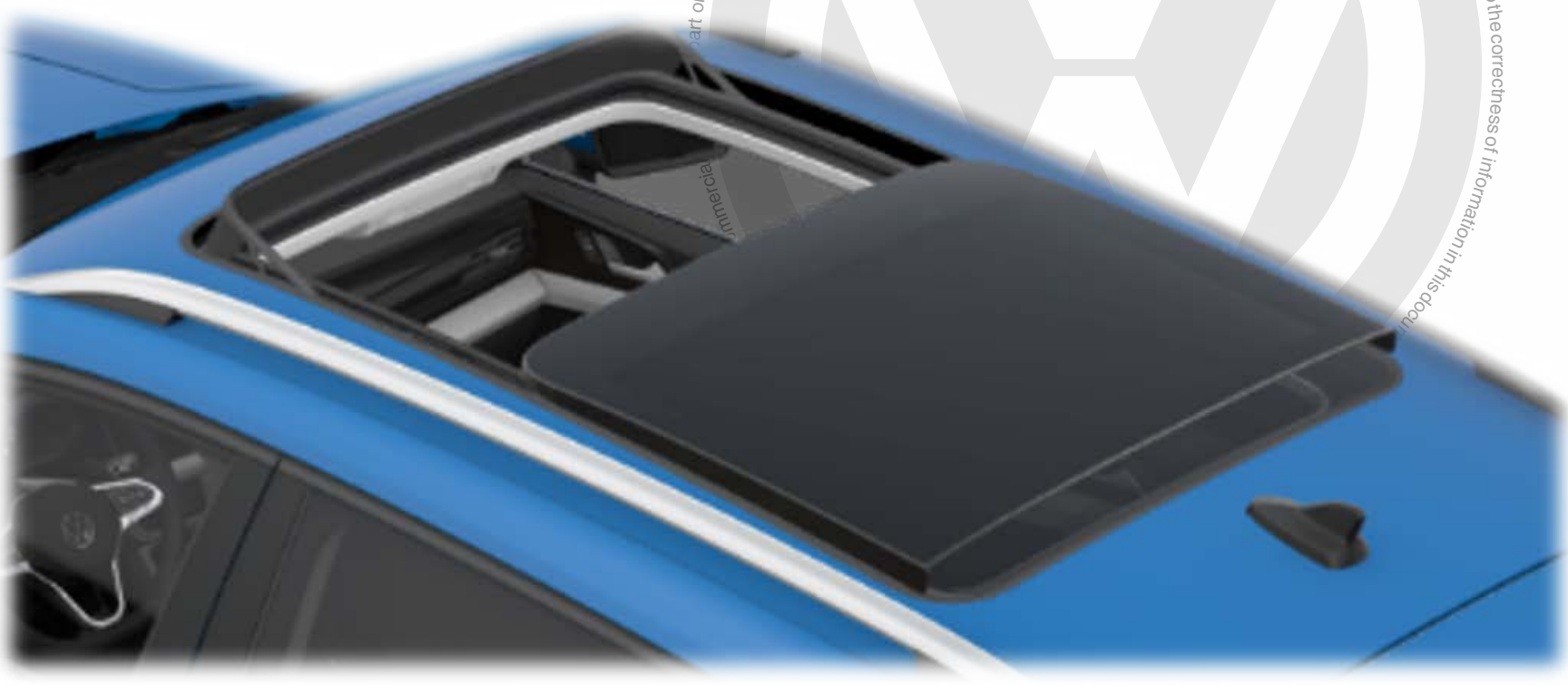
- Manual adjustment
- Power adjustment

Integrated ventilation is available for power versions.

Driver Seat with Integrated Ventilation

Panoramic Sliding Sunroof

The panoramic sliding roof is Bottom-Loaded (bolted to the roof frame from underneath). The front glass panel of the sliding roof has a lift-and-slide function, while the rear glass panel is fixed. This type of roof offers occupants a feeling of great spaciousness in the passenger compartment.



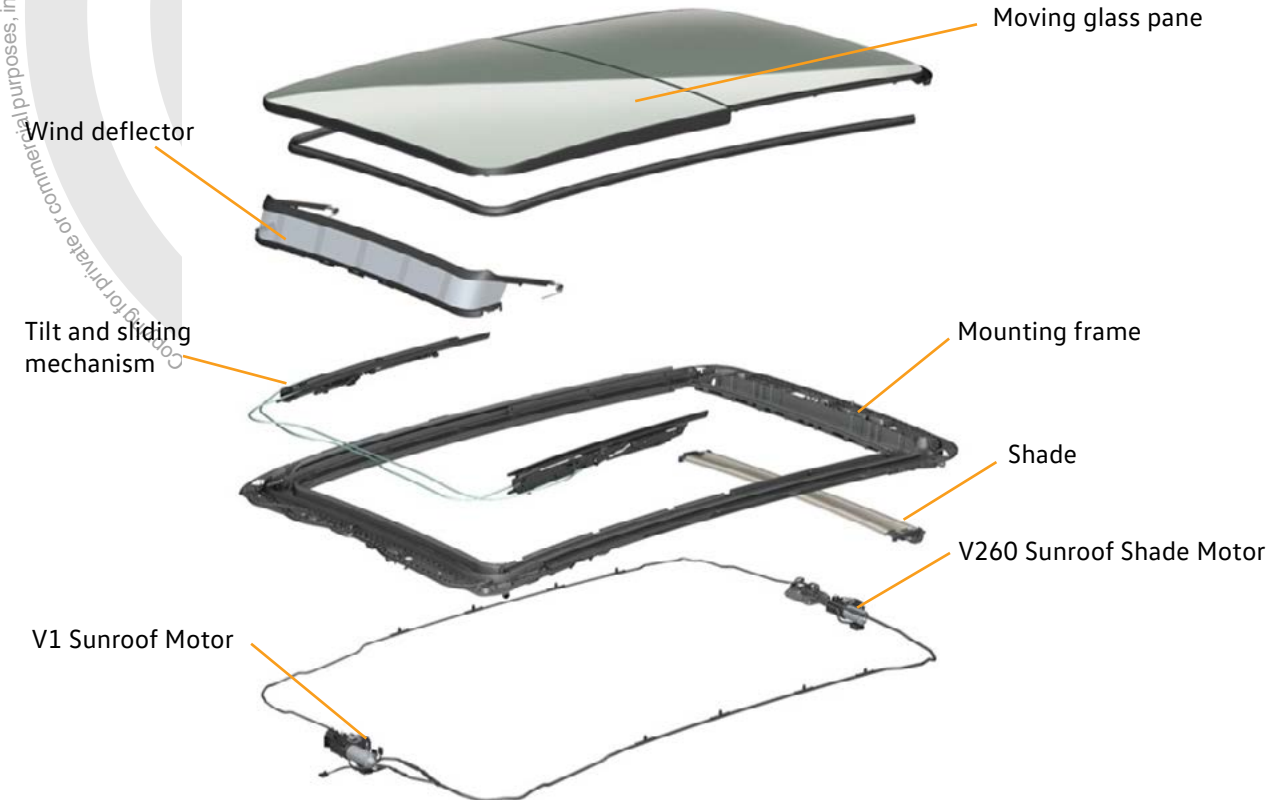
Panoramic Sliding Sunroof

There are two identical motors mounted underneath the sliding roof frame - one for moving the front glass panel and the other for sliding the roof shade. The shade is made of fabric and is electrically powered.

This shade is mounted from the top and opens automatically when the sliding roof glass panel is opened.

The panoramic sliding sunroof has four drains:

- Two forward on the A-pillars
- Two rearward along the D-pillars



Safety Equipment

Occupant Protection

- Front airbag modules for driver and front passenger
- Side airbag modules for driver and front passenger
- Head airbag module
- Acoustic and optical warning for driver to use safety belt
- Belt force limiter in the front seat
- Side collision sensors located inside the front doors
- Side collision sensors located inside the rear wheel arch bodywork
- Passenger seat occupant detection, in order to switch the passenger airbag into active mode
- Lap-and-shoulder belt with force limiter and three pyrotechnic charges in front seats
- Left and right front collision sensors located behind the front bumper
- Driver and front passenger seat position sensors

Safety Equipment

Front passenger airbag module

Front driver airbag module

Head airbag module

J706 Passenger Occupant Detection System Control Module

K145 Front Passenger Airbag -Disabled- Indicator Lamp

G256/ G257 Driver/ Passangers Side Rear Thorax Airbag Crash Sensor

Side airbag module

N153/N154, N297/N298 Driver/Passenger Seat Belt Tensioner Igniter 1/ 2 and G551/G552 Driver/ Passenger Belt Force Limiter

G283/ G284 Driver and Passanger Front Airbag Crash Sensor

N153/N154 Driver/Passenger Seat Belt Tensioner Igniter 1

J285 Instrument Cluster Control Module

G553/G554 Driver/ Passenger Seat Position Sensor

J234 Airbag Control Module

G179/G180 Driver/ Passenger Thorax Airbag Crash Sensor

Additionally, it has:

- Top Tether System
- Isofix System
- Multi-collision brake

1.5L 158 hp TSI Engine

The new 1.5L TSI 4-cylinder engine is being used in the 2022 Taos. This engine is part of the EA211 EVO2 (Evolution Generation 2) engine family. Generation 2 focuses on CO_2 reduction. In addition, it uses the Miller combustion process, which is very efficient during part-throttle conditions.

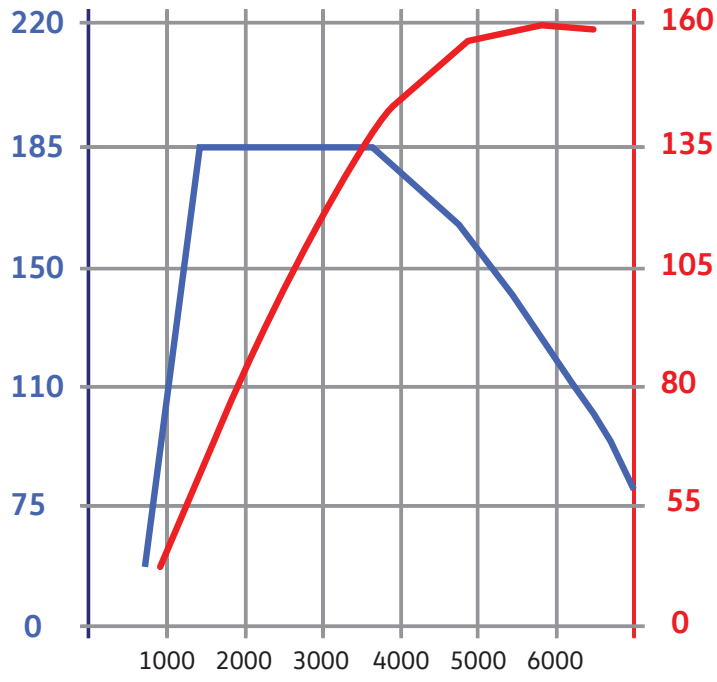
Technical Characteristics:

- Direct fuel injection
- Optimized Miller combustion process
- VTG (Variable Turbine Geometry) turbocharger with a 1740° F (950° C) temperature range
- Thermal management
- Cylinder head with integrated exhaust manifold
- Camshafts are driven by a toothed belt
- Intake camshaft timing (70° crankshaft, basic setting in “lag” position)
- Exhaust camshaft timing (40° crankshaft, basic setting in “advanced” position)
- Aluminum engine block with plasma-coated cylinder liners
- Tandem oil pump (with variable pressure control) serves as mechanical oil and vacuum pump
- Bosch MG1 engine management
- Electrically-driven coarse oil separator
- DMTL pump for fuel tank gas leak diagnosis
- Optimized intercooler
- Secondary air system

Powertrain

1.5L 158 hp TSI Engine

Torque and Power Diagram



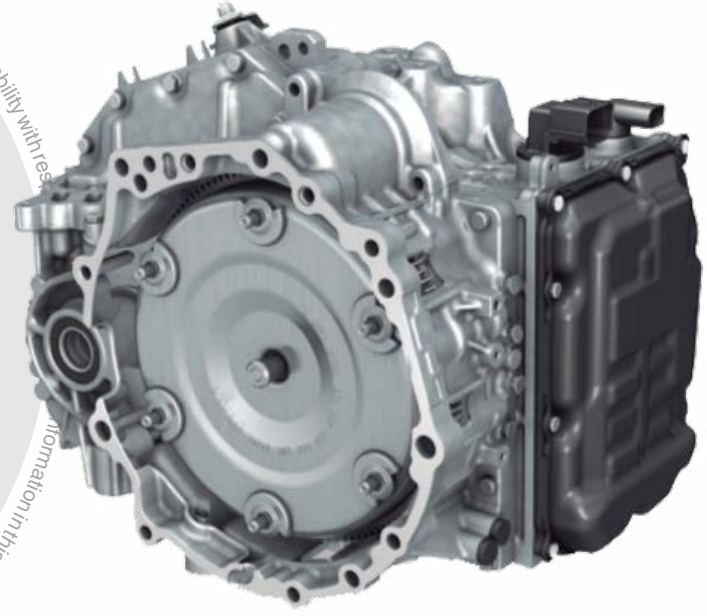
Technical Data

Type	Inline 4-cylinder Engine
Displacement	1,498 cm^3
Bore	74.5 mm
Stroke	85.9 mm
Valves per cylinder	4
Compression ratio	11.5:1
Max. power	158 hp (118 kW) at 5500-6000 RPM
Max. torque	184 lb/ft (250 Nm) at 1750-4000 RPM
Engine Management	Bosch MG1
Fuel	Regular unleaded
Exhaust Gas Treatment	Main 3-way catalytic converter. Lambda control with a broadband lambda probe upstream and a binary lambda probe downstream to the main catalytic converter with secondary air system
Exhaust Gas Emissions Standard	LEV 3/Tier 3 30

Transmission

8-speed Automatic Transmission 09S

The Japanese transmission manufacturer AISIN AW CO LTD. developed this automatic transmission, which has 8 forward speeds and one reverse speed. It is also capable of Start-Stop operation. Normally, an automatic transmission uses the rotation of the input shaft to create hydraulic pressure. Since the input shaft does not rotate when the engine is stopped, an electromagnetic pump called EMOP, provides pressure, allowing the first gear clutch to operate. This allows for smooth transition from engine switch-off to start-up.



Technical Data

Manufacturer	AISIN AW CO., LTD. Japan
Production Designation	AQ300_8F
Service Designation	09S
ATF Specification	G053001
Filling Capacity	6.3 l first fill in factory
Service period	Not yet planned

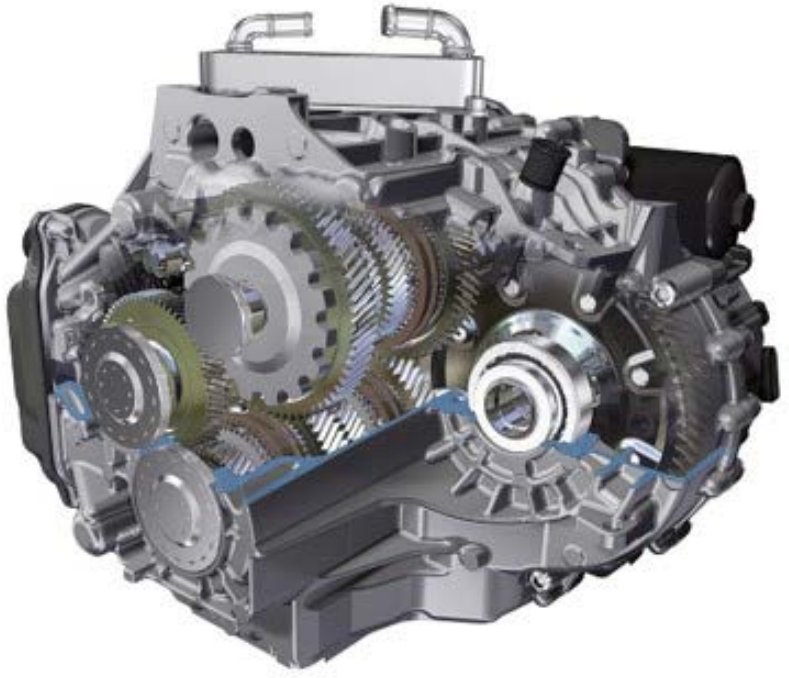
Transmission

7-speed 0GC Double-clutch Transmission

This double-clutch transmission has many enhancements that reduce CO_2 usage:

- When using the Start-Stop system, emissions are reduced by 1g/km
- The 7th gear provides an additional reduction of 3g/km.

Another feature of the 0GC is its capability for all-wheel drive.



Technical Data

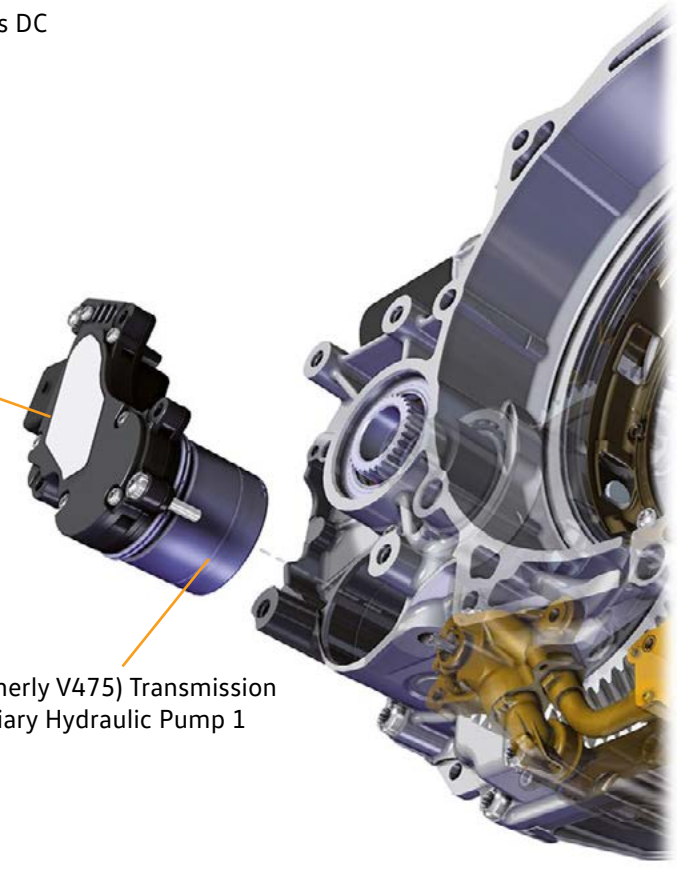
Production Designation	DQ381_7A
Service Designation	0GC
Number of Clutches	2 wet clutches
Maximum torque	420 Nm
Weight	85 kg + 2 kg additional hydraulic oil
Oil capacity	7 liters of synthetic oil

Transmission

7-speed 0GC Double-clutch Transmission

Electric Motor in Additional Hydraulic Pump 1 for Gear Oil V478 (formerly V475)

It is the transmission fluid auxiliary pump that keeps the transmission operational when the engine is not running during Start-Stop operation. It has a brushless DC motor with rotation position sensing.



Climate Control

A/C System

The Taos A/C system has two climate control systems:

- Electric manual climate control
- 2-zone Climatronic

Both systems have a dust-and-pollen filter with activated carbon. The following A/C controls are available depending on the equipment level:

- Front seat heating with three independent intensity levels. The selected level is displayed by 3 LEDs.
- For Climatronic versions, seat ventilation with 3 independent intensity levels is available. The selected level is displayed by 3 LEDs.

The Comfort CAN-Bus manages:

- The A/C control modules
- Connection with the G805 Refrigerant Circuit Pressure Sensor

The J126 Fresh Air Blower Control Module (which includes the V2 Fresh Air Blower) control takes place using LIN Bus communications.

Climate Control

Electric Manual Climate Control Unit

The manual climate control has:

- Electrically-driven flap motors
- "MAX A/C" function for maximum cooling power
- There are two versions depending on whether the vehicle has seat heating or no seat heating

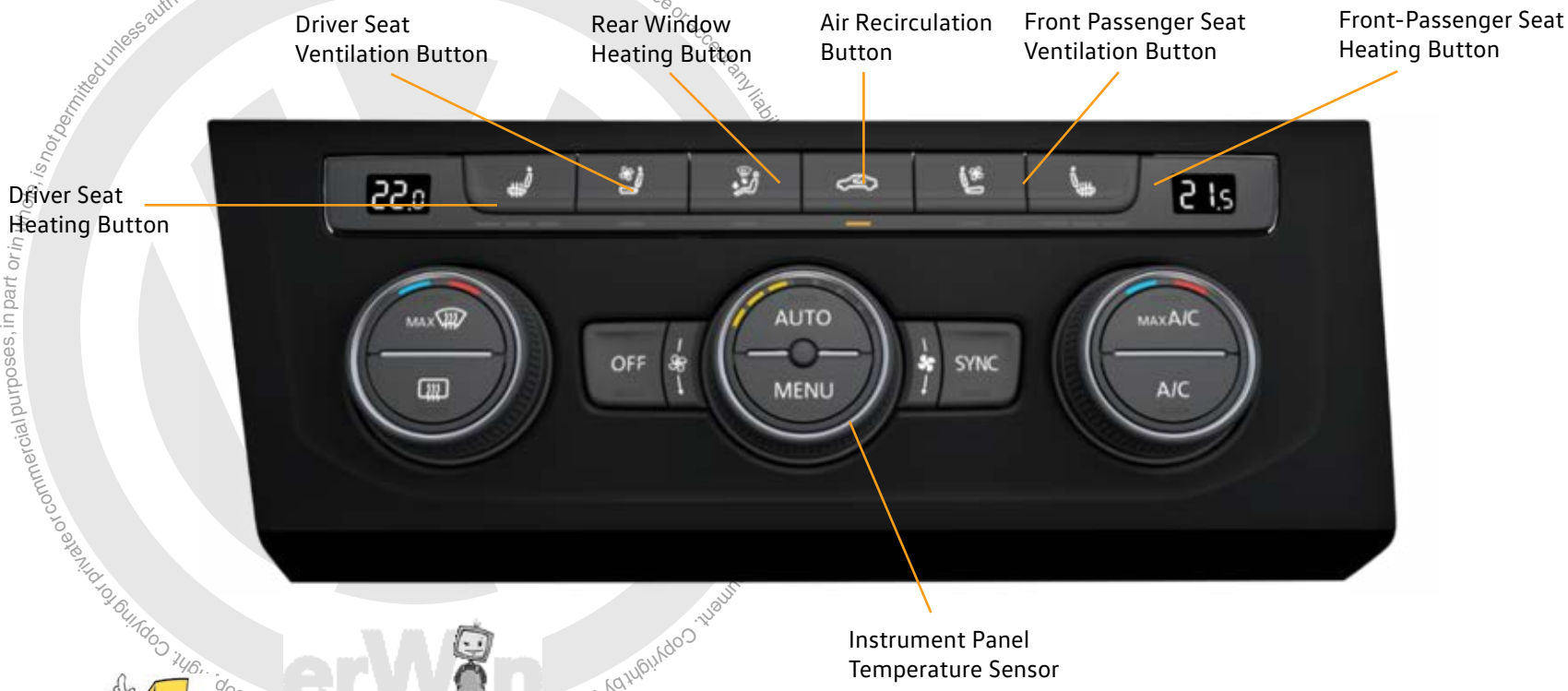
Climate Control

2-zone Climatronic Control Module

Cimatronic is an automatic two-zone system. This system controls temperature regulation, air distribution, air flow according to solar radiation and both interior and exterior temperature.

The Climatronic system has:

- Two indicator lights to show the selected temperature in each zone
- “MAX A/C” function for maximum cooling power
- A “SYNC” button to synchronize the temperatures of both zones



Depending on the equipment level, there are versions with seat heating and ventilation

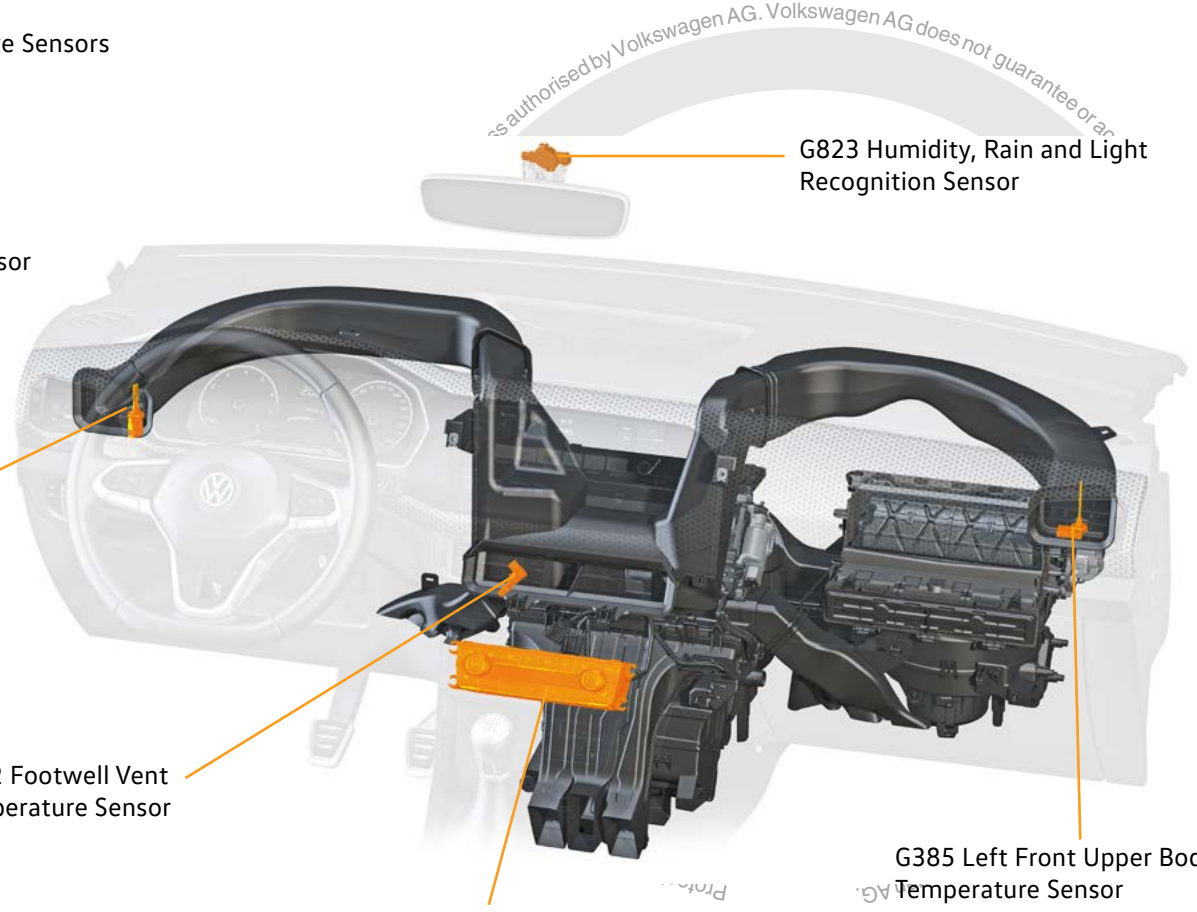
Climate Control

Temperature Sensors for the Climatronic System

Climatronic allows setting separate temperatures for the driver's and front passenger's zones. These temperatures can range between 61° F to 85° F (16° C to 29.5° C).

Temperatures are monitored and regulated using:

- The G151 and G150 Right and Left Vent Temperature Sensors
- The G65 High Pressure Sensor
- The G17 Outside Air Temperature Sensor
- The G134 Sunlight Photo Sensor 2
- The G135 Defroster Door Motor Position Sensor
- The G823 Humidity, Rain and Light Recognition Sensor
- The G308 Evaporator Temperature Sensor

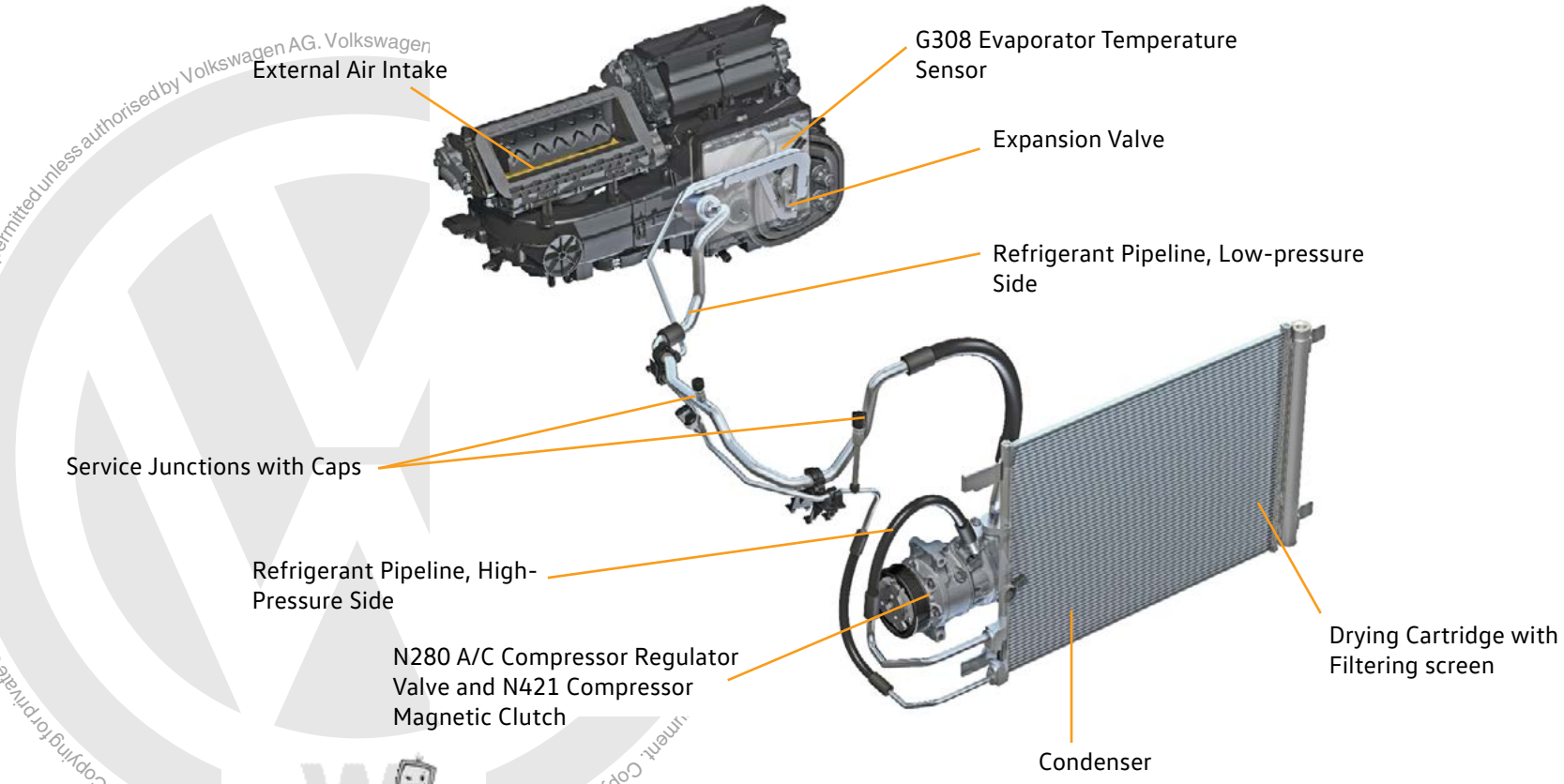


Climate Control

Refrigerant Circuit

The Taos uses R1234yf refrigerant, identified by gray service caps.

The A/C compressor has the N421 Compressor Magnetic Clutch and the N280 A/C Compressor Regulator Valve to reduce the engine load when the A/C is not connected, reducing fuel consumption and tailpipe emissions.



More information on refrigerant R1234yf can be found in the R1234yf Refrigerant in Volkswagen Vehicles Guide.

Running Gear

Running Gear Overview

Taos has two types of running gear:

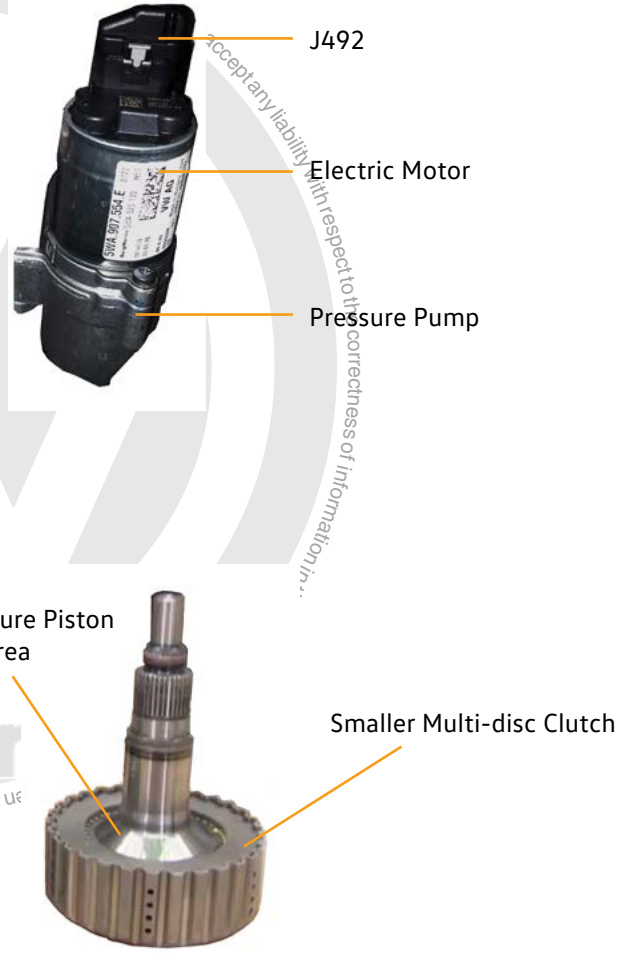
- Front-wheel drive running gear
- All-wheel drive running gear

The 6th Generation All-Wheel Drive Clutch

The 6th Generation all-wheel drive clutch has fewer components, less weight and a more dynamic behavior.

The changes to this system are:

- Electrically driven pressure pump with brushless DC motor
- All-wheel Drive Control Module J492 is integrated into the pressure pump
- Smaller multi-disc clutch, reduction of 3 discs
- Internal multi-disc clutch pressure piston with larger area



Driver Assist Systems Overview

Depending on the equipment, different assistance systems may be installed on the 2022 Taos:

Travel Assist

Front Assist with Autonomous Emergency Braking
- Pedestrian Monitoring
- Forward Collision Warning

Rear Traffic Alert

Dynamic Road Sign Display

Rear View Camera

Light Assist

Blind Spot Monitoring /
Active Blind Spot Monitoring

Adaptive Cruise Control
Stop and Go

Emergency Assist

Park Distance Control

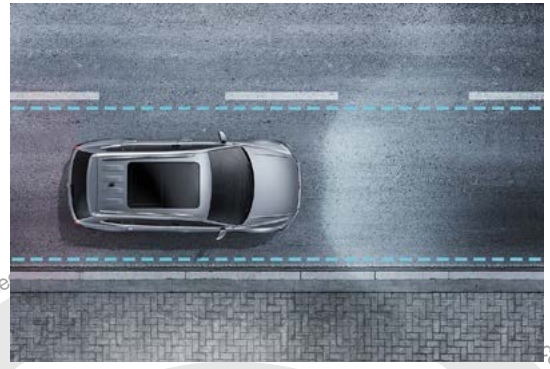
Multicollision Brake

The technology of the driver assistance systems cannot overcome the natural laws of physics and can operate only within the limits of the systems. Never allow the increased convenience to tempt you into taking risks. Careless or unintended use of these driver assistance systems can cause accidents and serious injuries. The systems cannot replace the driver's attention.

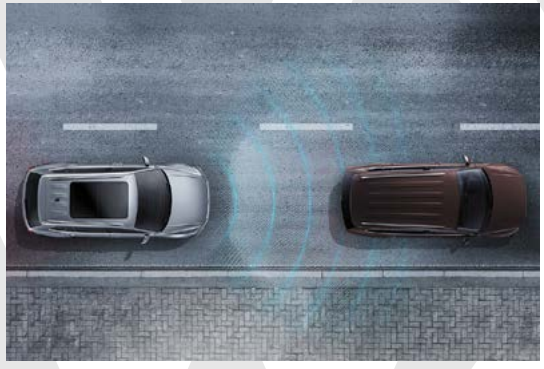
Volkswagen IQ.Drive Technology

IQ.Drive represents Volkswagen's state-of-the-art solution for semi-autonomous driving. IQ.Drive consists of multiple driver assistance functions and incudes:

- Travel Assist
- Lane Assist
- Front Assist
- Adaptive Cruise Control Stop & Go
- Emergency Assist
- Active Blind Spot Monitoring
- Rear Traffic Alert



Lane Assist



Adaptive Cruise Control

Active Blind Spot Monitoring

Rear Traffic Alert

Front Radar Sensor

The front radar sensor for ACC and Front Assist in Taos is mounted behind the radar-capable Volkswagen emblem.

The Taos features a new generation of radar sensors. These next-generation radar sensors can detect the distance and speed of the vehicles ahead with greater precision. The sensor's calculation capacity allows for better detection, evaluation and differentiation of objects than some radar sensors from previous driver assistance systems.

Dynamic Calibration

To calibrate this new generation of ACC sensors, there is a function that is enabled through the ODIS Service diagnostic equipment. When enabling the procedure, the car needs to run for the sensor to perform the self-adaptation process. The diagnostic equipment displays the progress and completion of this process.

However, if performing a dynamic calibration is not possible, a static calibration must be performed according to the repair instructions in ELSA.

Technical Data of Sensor:

- Mid-range radar sensor
- Manufacturer: Continental
- Frequency: 77 GHz
- Range: 160 m

J428 Control Module for Adaptive Cruise Control behind the radar-capable Volkswagen emblem

R242 Driver Assistance Systems Front Camera

The front camera is mounted on the windshield inside the car, in front of the rearview mirror. This has its own Z113 Window Defogger for Front Sensor System. This unit prevents the windshield area where the camera is mounted from fogging up or accumulating ice or snow.

Camera R242 provides visual information for some of the driver assistance systems. Detailed images of the front vehicle area are captured by this camera. This visual data is transferred to various systems via CAN-Bus data buses, and is evaluated by the systems.

Camera R242 is also a control module since it does not only supply signals for other systems, but also controls signals and data for Light Assist and other functions.

Overview of Electrical System and Infotainment Systems

There may be some differences depending on country and equipment.

Ambient Light with Dynamic Light Switching Depending on the Driver Profile

Start-Stop 2.0 system

5th-Generation Immobilizer with Component Protection

Rear Light Clusters with LED Technology as Standard Equipment

New-generation Information Display System MIB 3

LED Headlights with Dynamic Cornering Light

"BeatsAudio" Sound System

Digital Cockpit or Active Info Display Instrument Cluster

Keyless Entry and Keyless Access, optional

Driver Profile Selection

Electrical System

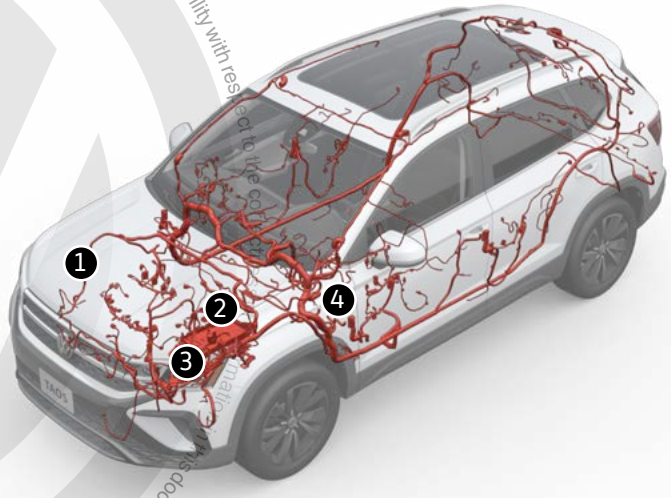
On-Board Network Locations

Depending on the equipment, an alternator rating between 110 - 140 amperes is used. Also depending on the equipment, either a 280 A/59 Ah or 320 A/59 Ah battery is used. The battery is located in the engine compartment for all models.

The alternator charge is controlled by the J533 Data Bus Onboard Diagnostic Interface by using a LIN-Bus network.

Three fuse holders distribute the electric current in the vehicle:

- A Multifuse SA pre-fuse holder in the left front of the engine compartment
- A relay holder and fuse holder SB in the electronic box
- A relay holder and fuse holder SC under the left side of the instrument panel, behind the storage compartment



❶ Alternator

❷ Engine Compartment 12V Battery

❸ Fuse Box SA/SB

❹ Relay Holder and Fuse Holder SC

Headlights

There are two types of headlights available for the Taos:

- LED headlights with LED daytime running lights
- LED "High" headlights with or without the IQ technology Light (DLA) which has dynamic and static curve light functions

Base LED Headlight

The Base LED headlight has the following light functions: Low beam, high beam, side light, turn signals and daytime running light. Except for the turn signals, every other light function uses LED technology.

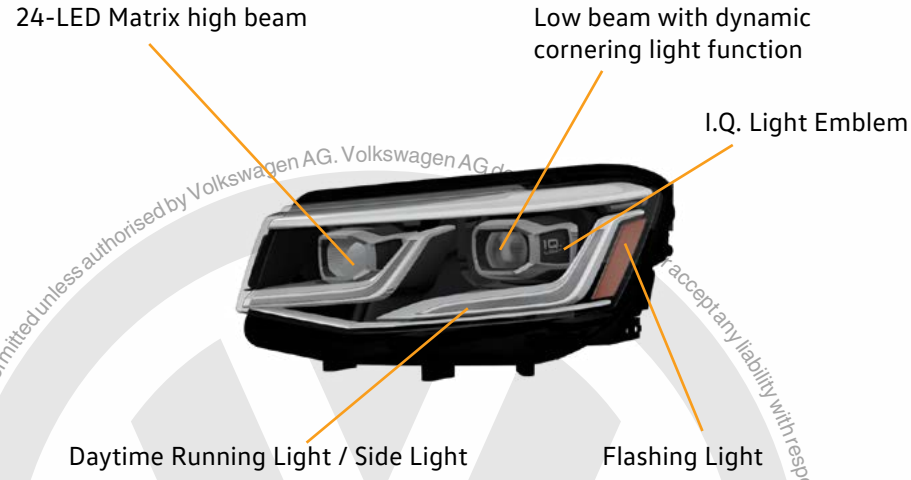
The LED for the daytime running light and the side light is dimmed down to 10%.

Electrical System

"High" LED Headlight

The “High” LED headlight with IQ Light technology available in Taos has the following technical specifications:

- Lens technology
- Only LED’s are used
- Dynamic turn signal
- Integrated static cornering light with “Bad-Weather Light” function
- Up to three light functions for the low beam:
  - City light
  - Back-road light
  - Highway light
- Dynamic light assist

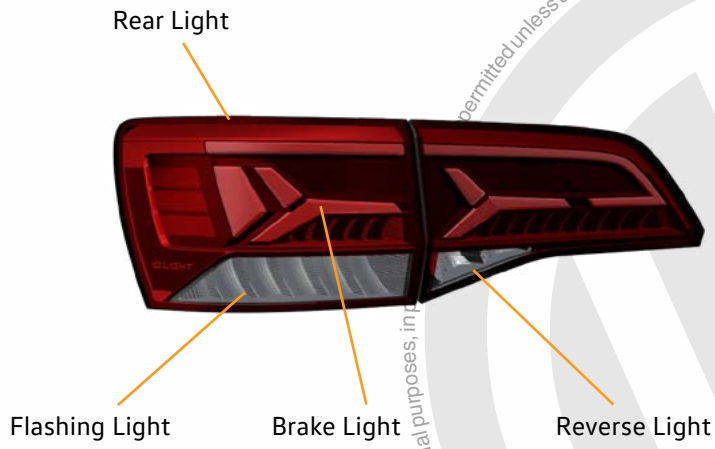


Front Daylight

Some versions of the Taos have a LED light which runs along the front grill, visually connecting both headlights.

Rear Light Clusters

The rear light clusters use only LED lighting technology.



Remote Start

Remote start is available for the new Taos.

To enable it, the following buttons must be pressed within 3 seconds:

- The lock button, one time
- The remote start button, two times

The turn signals will flash once for confirmation and the parking lights will remain illuminated when the vehicle is started. If the remote start function is not interrupted, the engine will run for approximately 10 minutes. Two remote starts in a row are possible before a starting cycle is required from inside the vehicle.

Electrical System

Instrument Cluster

Digital Cockpit

Base Taos versions have a digital instrument cluster. The VIEW button on the steering wheel is used to switch between the following four views:

- Classic
- Reduced
- Navigation
- Assistance systems

The selected view determines the central display. The contents to the left and right can only be changed using the multi-function steering wheel.

During operation, the following information is displayed continuously: Current speed, selected gear change, fuel level, autonomy level, driver profile and ambient temperature.

Specifications and Functions:

- 10.25"color TFT screen with 1280 x 480 resolution
- CAN Comfort Bus connections
- Round instrument display
- Media graphics display
- Animated representations

Some displays, such as tire pressure, are calculated using complex algorithms.

Instrument Cluster Active Info Display (AID)

In the Active Info Display (AID), the analog dial gauges are presented virtually.

The safety-related lamps are fixed displays and are located on each side of the virtual display.

The driver can choose customized information to be displayed at any given time. Additional driving data, navigation and assistance functions can be displayed in central areas of the speedometer and the tachometer.

Specifications and Functions:

- 10"color TFT screen with 1440 x 540 resolution
- It has all the basic instrument cluster functions
- Different screens can be selected
- Automatic screen switching based on active function
- 2-D and 3-D graphics display
- Media browsing and display

This instrument cluster displays the following basic information:

- Vehicle status
- Driving data
- Assistance systems
- Navigation
- Audio
- Additional view

These screens are accessed by using the steering wheel controls.

The following safety-related warning indicators are on the sides of the display:

- Turn signals
- Coolant temperature
- Fuel level
- Engine failure

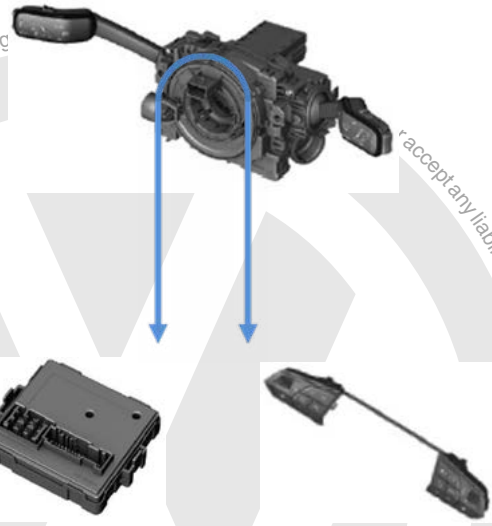
Electrical System

Multi-Function Steering Wheel

The steering wheel has the J453 Multi-function Steering Wheel Control Module integrated. The master control module is the J533 Data Bus Onboard Diagnostic Interface. The multi-function steering wheel control unit J453 is integrated into the left button assembly.

The steering column electronics control module does not process any information related to the multi-function steering wheel. It is only an pass-through bridge.

The multi-function steering wheel control module makes the driver assistance and Infotainment options easy to use.



Buttons for Driver Assistance Functions

Buttons for Infotainment

Multi-Function Steering Wheel Buttons

Depending on the equipment level, the driver assistance buttons may vary.

Buttons for Driver Assistance

Buttons for Infotainment

RES	Resuming the pre-set driving speed
SET	Set speed
	Activate CCS
	Activate Assists
	ACC distance setting
−	Lower speed
+	Increase speed
	Increase volume
	Decrease volume

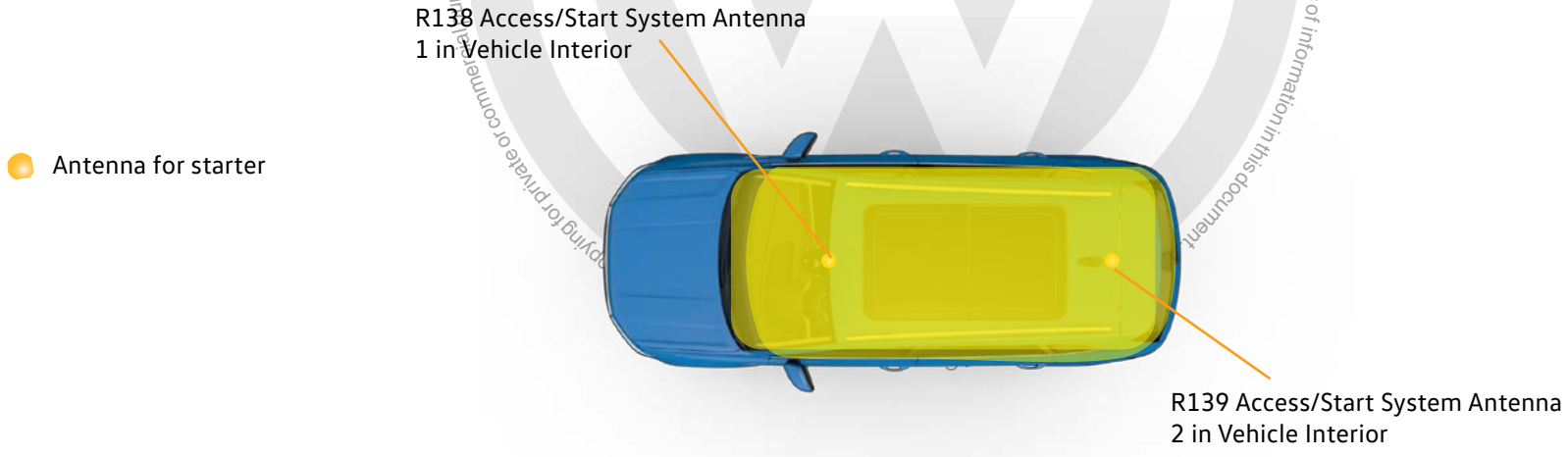
	One-step back (previous radio station, music track)
	One-step forward (next radio station, music track)
	Take phone call / Open phone menu
Δ	Go to previous entry
∇	Go to next entry
	Display previous menu
	Display the following menu
OK	OK button (confirm selection)

Keyless Access System

Taos can be equipped with one of two “Keyless Access” lock and start systems available: “Go” and “Entry.” The "Keyless Access Go" system is standard equipment.

"Keyless Access Go" System

The “Keyless Access Go” uses the remote control buttons to lock and unlock the vehicle. For starting the engine, the system has two antennas in the vehicle interior. One in the center console and the other in the trunk. These antennas check whether there is an authorized key inside the vehicle. The E378 Start System Button enables the ignition to be switched on and the engine started.

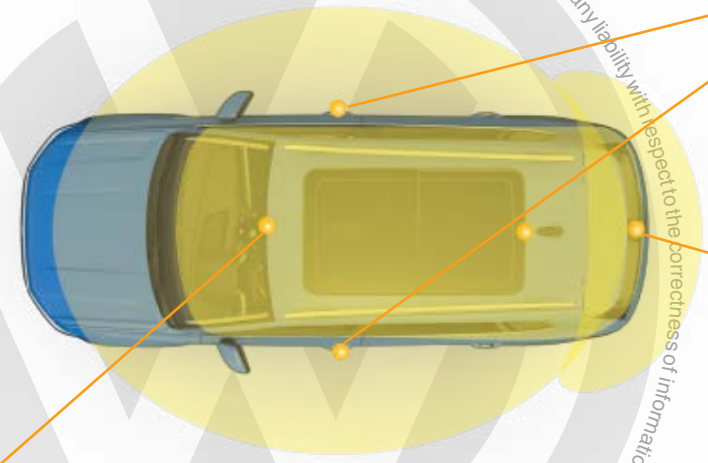


"Keyless Entry" System

The “Keyless Access Advanced” system includes all the features of the “Keyless Access Go” system. Additional features are:

- Keyless unlocking and locking of the vehicle
  - To support this function, there are two antennas for the access system that are located in both front door opening handles. These have a broader detection range than some other Volkswagen models with the “Keyless Access” system
- Unlocking automatically when the authorized key is detected within the detection range of the two side antennas for the access and start system
- Comfort vehicle locking function by means of a physical switch located on the door handle

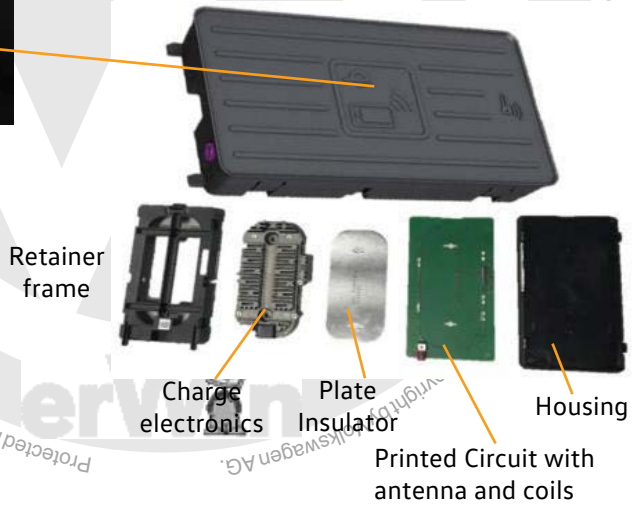
Antenna for Access and Start System



Physical switch on front door handles for comfort locking function.

Wireless Charging

Some Taos versions have a wireless phone charging system. The wireless charging plate is located at the base of the compartment in front of the shift lever.



Alternating voltage is applied to a coil in the charging unit, producing a constantly changing magnetic field.

Mobile telephones capable of wireless charging have an internal coil that creates voltage from this magnetic field. The electronics in the telephone include a rectifier which transmits this charging voltage to the battery in the mobile telephone.

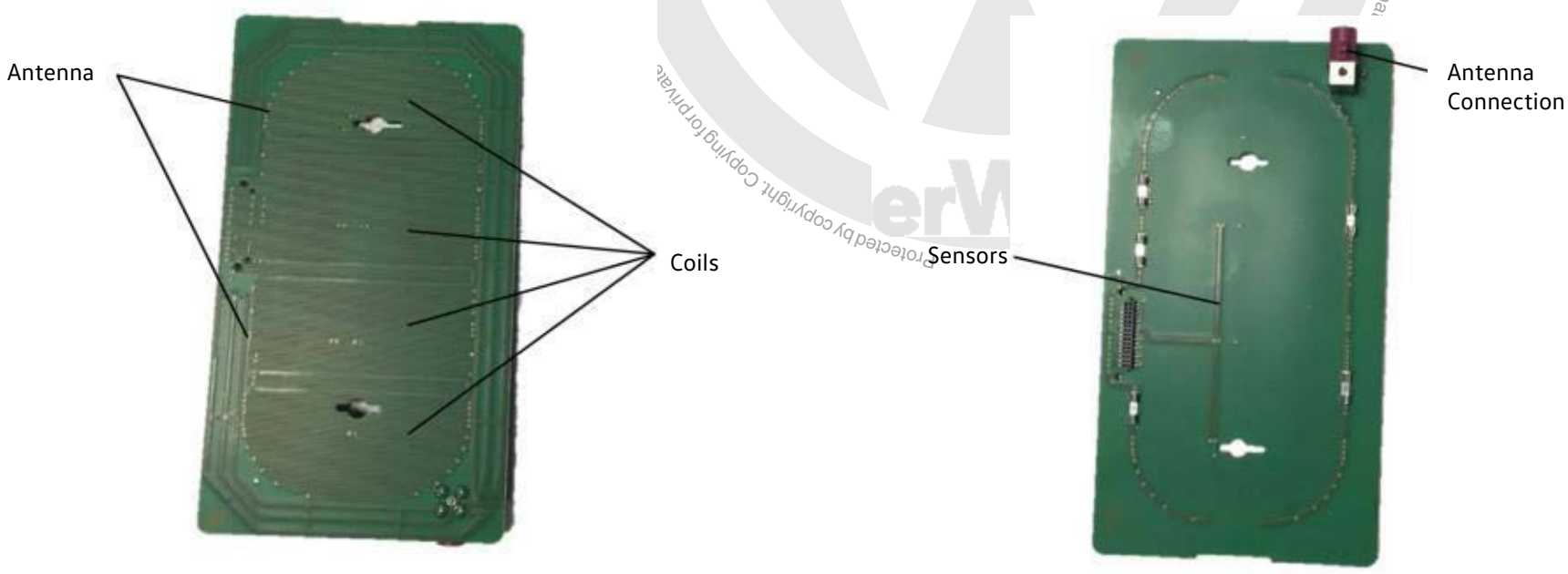
The maximum power that can be transmitted is 5 watts. Because smartphones usually operate at 5 volts, this means there is a maximum charging current of 1 amp.

Wireless Charging Operation

The printed circuit for the antenna has 4 separate coils for the charging function. The antenna for mobile telephone reception runs around the outside of the coils.

If the radio/navigation system (MIB) is ON, the charging electronics are active for a telephone connected via Bluetooth. The sensors on the printed circuit (inductive and capacitive) are used by the charging electronics to check whether an object is on the charger. If a mobile telephone that supports wireless charging is detected, a higher current flow starts and the charging process starts. In the event that a charging process is not needed, current flow is drastically reduced.

Only one coil is used at a time for a charging process. The charging electronics determine the optimal coil to be used and which is the coil that can transmit the most charging current. To use the optimal coil, the mobile telephone transmits information via Bluetooth to the charging electronics via the MIB. The charging electronics then increase the power of the specific coil, or switch to a different coil in the event of changes (position, mobile telephone).

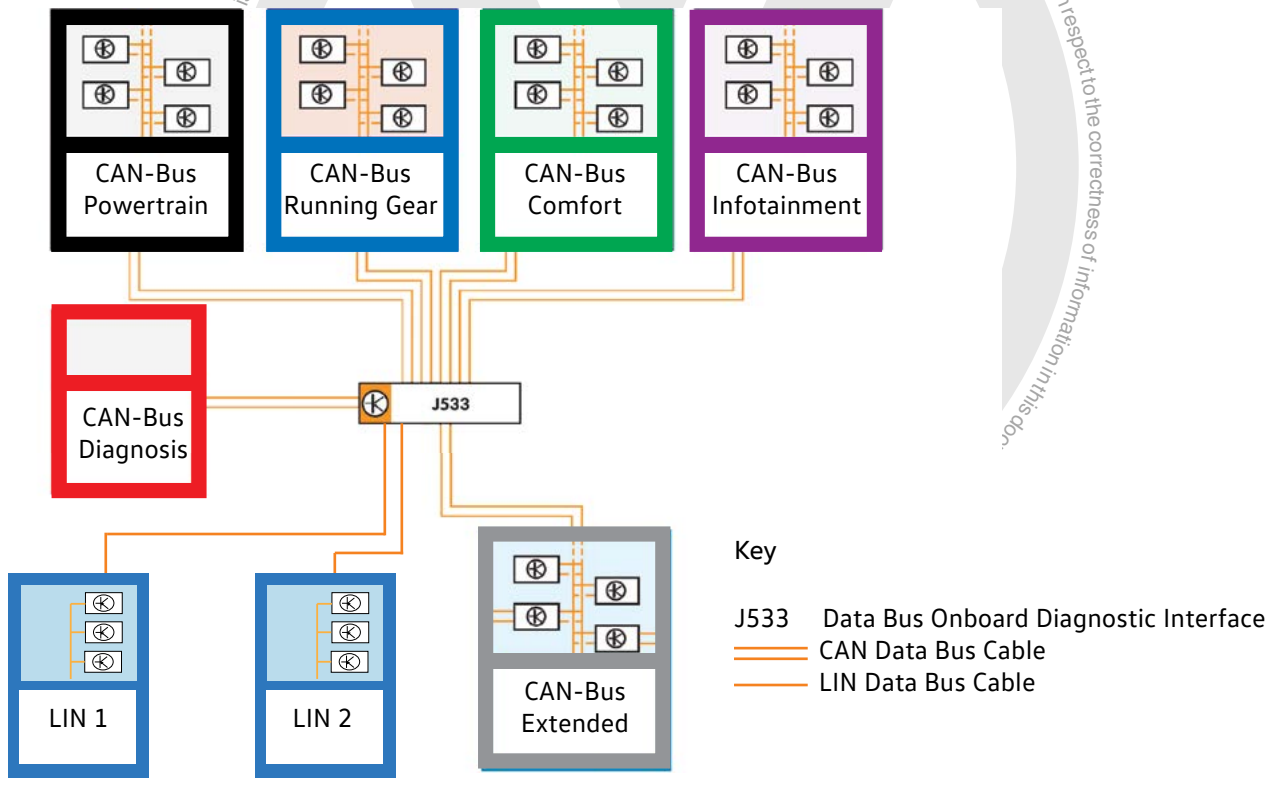


Networking

Overview of Data Bus Systems

The Taos networking system has 6 CAN-Buses. All of them communicate at 500 kBit/sec. There are two LIN-Bus systems that link to the CAN-Bus systems.

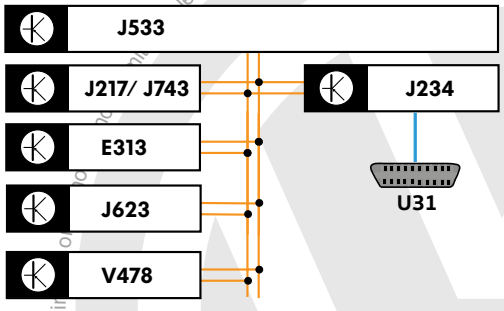
Other LIN-Busses are connected to various control units. LIN data buses transmit at 19.2 kBit/sec.



CAN Data Buses

Powertrain CAN-Bus

The Powertrain CAN-Bus has changed slightly when compared to other Volkswagen vehicles. The J500 Power Steering Control Module has been moved from the Powertrain CAN-Bus to the Running Gear CAN-Bus.

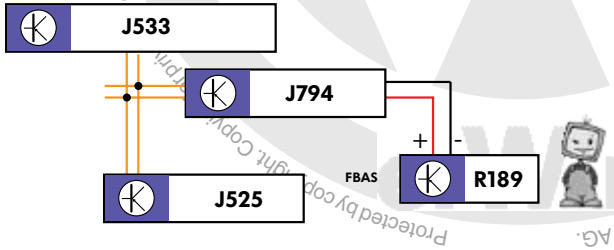


Key

E313 Selector Lever
J217 Transmission Control Module
J234 Airbag Control Module
J533 Data Bus Onboard Diagnostic Interface
J623 Engine/Motor Control Module
J743 Dual-Clutch Transmission Mechatronic
V478 Transmission Fluid Cooling Pump
U31 Diagnostic Connection

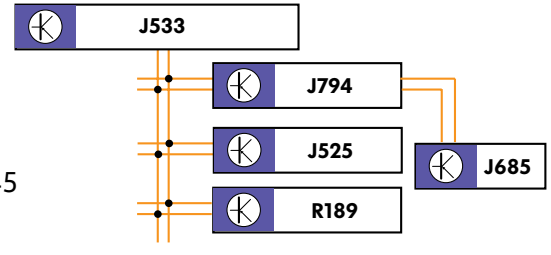
Infotainment CAN-Bus

There are two Infotainment CAN-Bus versions depending on the equipment.



Key

J525 Digital Sound System Control Module
J533 Data Bus Onboard Diagnostic Interface
J794 Information Electronics Control Module 1
R189 Rearview Camera

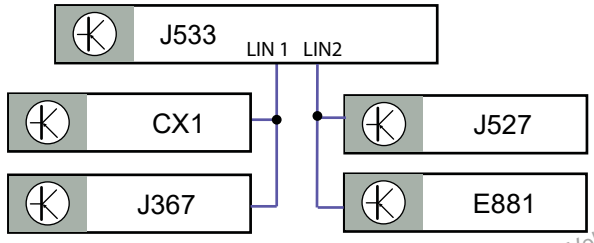


Key

J525 Digital Sound System Control Module
J533 Data Bus Onboard Diagnostic Interface
J685 Front Information Display Control Head
J794 Information Electronics Control Module 1
R189 Rearview Camera

LIN-Bus

The J533 Data Bus OnBoard Diagnostic Interface may have two LIN-Busses depending on the equipment level.

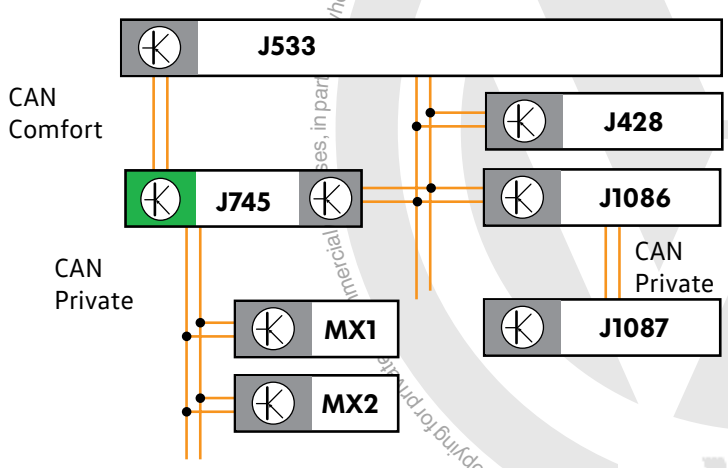


Key

C	Generator
E881	Driving Profile Selection Control Head
J367	Battery Monitoring Control Module
J527	Steering Column Electronics Control Module
J533	Data Bus Onboard Diagnostic Interface

Extended CAN-Bus

CAN-Bus Extended controls lighting and driver assistance systems. The J745 Cornering Lamp and Headlamp Range Control Module is connected to both the Extended and the Comfort CAN-Busses. In addition, there is a CAN-Bus for private communication.

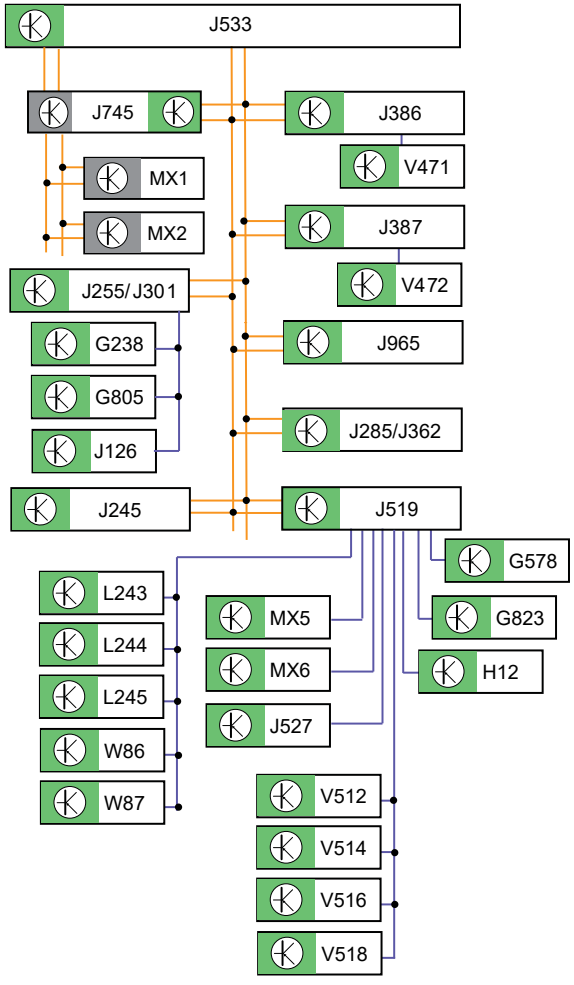


Key

J428	Control Module for Adaptive Cruise Control
J533	Data Bus Onboard Diagnostic Interface
J745	Cornering Lamp and Headlamp Range Control Module
J1086	Blind Spot Detection Control Module
J1087	Blind Spot Detection Control Module 2
MX1	Left Front Headlamp
MX2	Right Front Headlamp

Comfort CAN-Bus

The Comfort CAN-Bus is the largest CAN-Bus. In addition to CAN-Busses that connect the control modules, there is a more extended LIN data network, where the J519 Vehicle Electrical System Control Module acts as the master and the sensors and actuators are slaves.

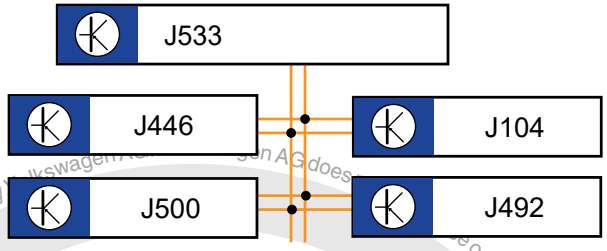


Key

G238	Air Quality Sensor
G578	Anti-Theft Alarm System Sensor
G805	Refrigerant Circuit Pressure Sensor
G823	Humidity, Rain and Light Recognition Sensor
H12	Alarm Horn (with battery)
J126	Fresh Air Blower Control Module
J245	Sunroof Control Module
J255	Climatronic Control Module
J285	Instrument Cluster Control Module
J301	A/C Control Module
J345	Towing Recognition Control Module
J362	Anti-Theft Immobilizer Control Module
J386	Driver Door Control Module
J387	Front Passenger Door Control Module
J519	Vehicle Electrical System Control Module
J527	Steering Column Electronics Control Module
J533	Data Bus Onboard Diagnostic Interface
J745	Cornering Lamp and Headlamp Range Control Module
J810	Driver Seat Adjustment Control Module
J965	Access/Start System Interface
L243, L244, L245	Instrument Panel Contour Illumination Lamp 1, 2, 3
MX1	Left Front Headlamp
MX2	Right Front Headlamp
MX5	Left Tail Lamp 2
MX6	Right Tail Lamp 2
V471	Driver Side Rear Window Regulator Motor
V472	Passenger Side Rear Window Regulator Motor
V512	Left Front Seat Backrest Fan 1
V514	Left Front Seat Cushion Fan 1
V516	Right Front Seat Backrest Fan 1
V518	Right Front Seat Cushion Fan 1
W86	Driver Side Door Ambient Lighting Lamp
W87	Passenger Side Door Ambient Lighting Lamp

Running Gear CAN-Bus

The Running Gear CAN-Bus contains control modules that are used for actuation of some driver assistance functions. .



Key

J104	ABS Control Module
J446	Parking Aid Control Module
J492	All Wheel Drive Control Module
J500	Power Steering Control Module
J533	Data Bus Onboard Diagnostic Interface

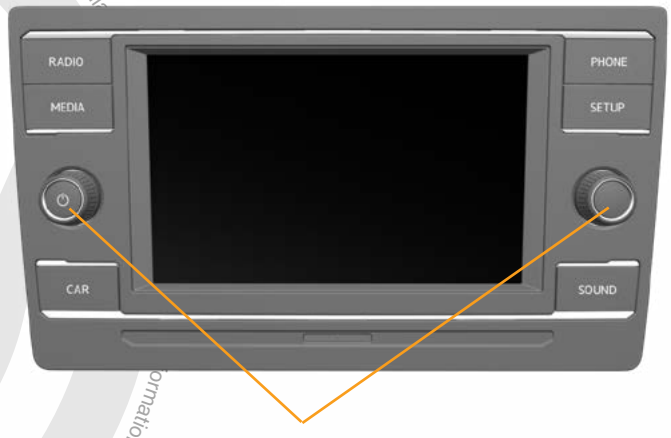
Modular Infotainment System (MIB)

Composition Color

Technical Specifications:

- 6.5" Touch screen
- Two rotary push knobs
- Display resolution 142 dpi (1088 x 480) pixels
- 4-channel amplifier
- FM radio with radio station logos
- Bluetooth hands-free device
- Two USB-C connections suitable for data transmission
- Pre-installation for reverse assist
- Wired AppConnect (optional)
- Data bus link: CAN Infotainment

Front view of Radio Composition



Rotary Knobs

Infotainment

Composition Media and Discover Media

The only difference between Composition Media and Discover Media is that Discover Media has navigation capability.

Technical Specifications:

- 8.0" Touch screen
- Screen resolution 1560 x 700 pixels (172 dpi)
- Central computer behind the glove compartment
- Map navigation in central screen and instrument cluster
- Navigation maps stored on the internal hard drive
- Proximity sensors (driver/front passenger detection, slide touch functions)
- Touch controls (Touch bar)
- Joint FM/DAB/on-line station list
- Wi-Fi access points
- Wireless Carplay
- Data bus link: Ethernet and CAN Infotainment
- No physical buttons

Front View of Discover Media

Features:

- Operation using MIB3 menu structure
- List of FM/DAB+ radio stations
- List of multimedia favorites
- Video play
- Touchless gesture recognition system
- Natural voice control
- Wireless use of CarPlay
- 2 USB C-type DC charging and data inputs in the center console
- 1 USB C-Type input on rear center console for DC charging only
- No SD or CD capability

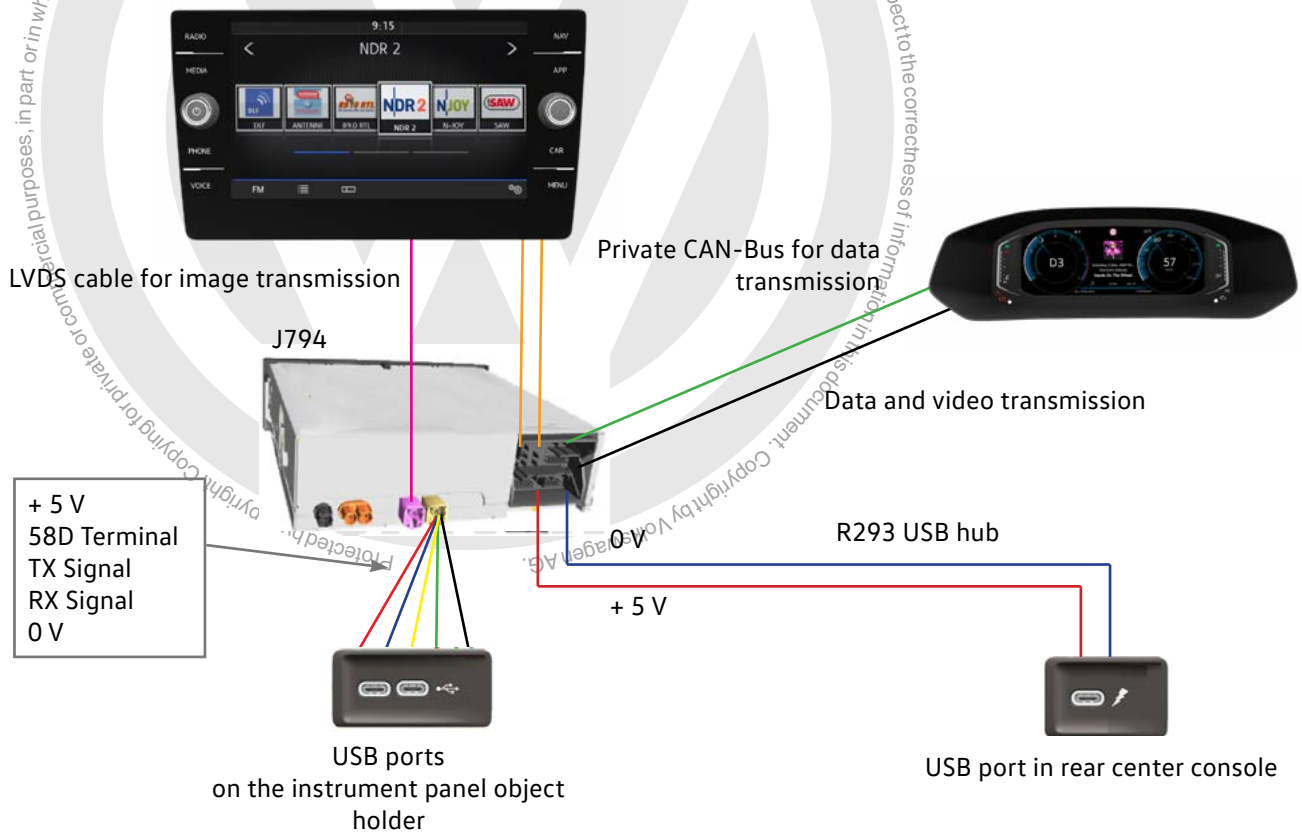
Infotainment

USB-C Ports:

The Taos has only USB-C connectivity ports. There are two USB-C media inputs and a charging socket in the rear center console, depending on the equipment level. Two ports in the center console provide connectivity for both data and charging. All USB inputs are connected to a USB hub located below the center console. This USB hub communicates with the J794 Information Electronics Control Module 1.

The J794 is responsible for:

- Receiving information from the USB ports and AUX-IN inputs
- Sending data, image and video information to the Infotainment screen and digital instrument cluster



Infotainment

BeatsAudio Sound System

Technical Specifications:

- 300 watts of power
- Amplifier
- 6 Loudspeakers
- 1 Subwoofer

BeatsAudio Diagram

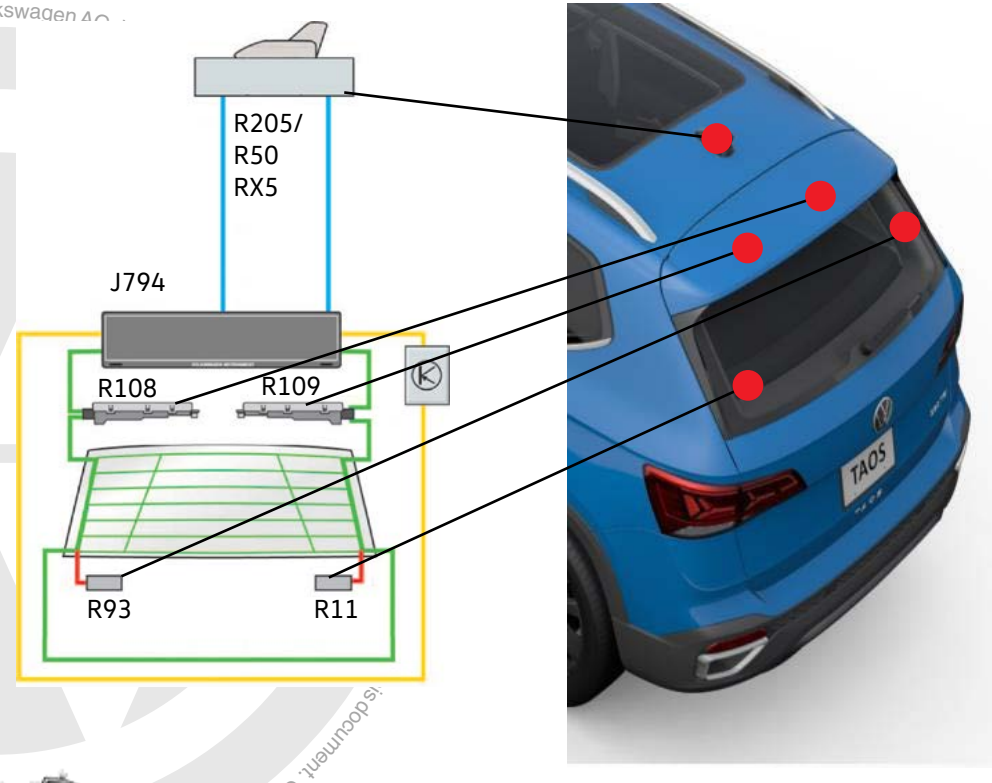
Antenna System

FM and DAB radio reception antennas are located in the rear window. The GPS antenna is integrated into a roof antenna.

If the car does not have a GPS system, the roof antenna assembly is inactive. The antenna used for telephone communication is the one in the mobile device.

Key

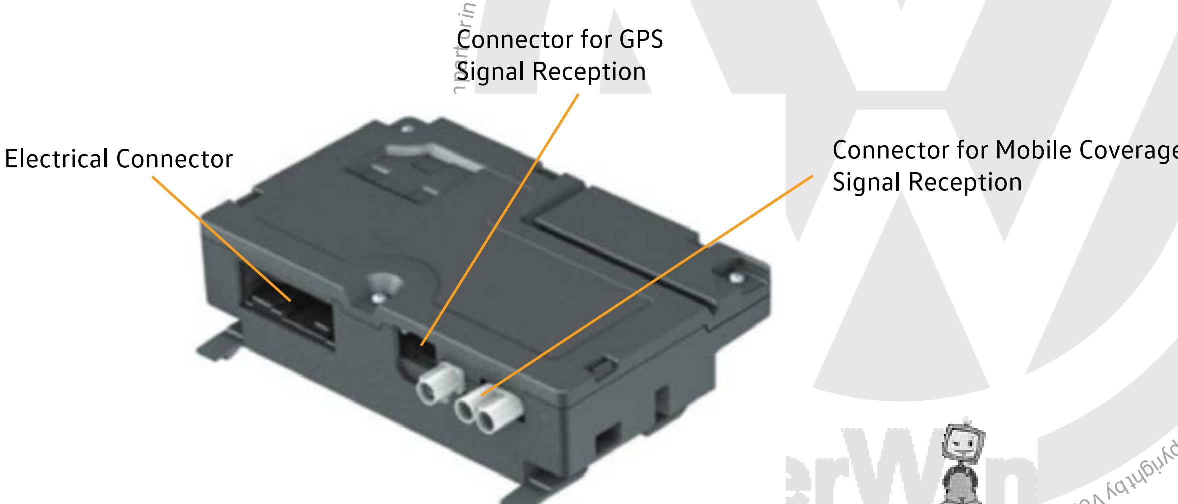
J794	Information Electronics Control Module 1
R50	GPS Antenna
R11	Antenna
R93	Radio Antenna 2
R108	Left Antenna Module
R109	Right Antenna Module
R205	GSM Antenna
RX5	Roof Antenna



J949 Control Module for Emergency Call Module and Communication Unit

The Taos incorporates the 3rd Generation of the Emergency Call Module and Communication Unit. The difference between the 1st and 3rd generations are the electrical connections, the internal battery and the Volkswagen Car-Net Safe & Security functions.

- The module has four connectors: The electrical connection and three FAKRA antenna connectors
- The electrical connector has terminals for the CAN-Bus, control module power supply, illumination power supply, signal for the loudspeaker and push button signals
- GPS signals and mobile coverage are received through the antenna connectors
- The J949 is located behind the Infotainment screen

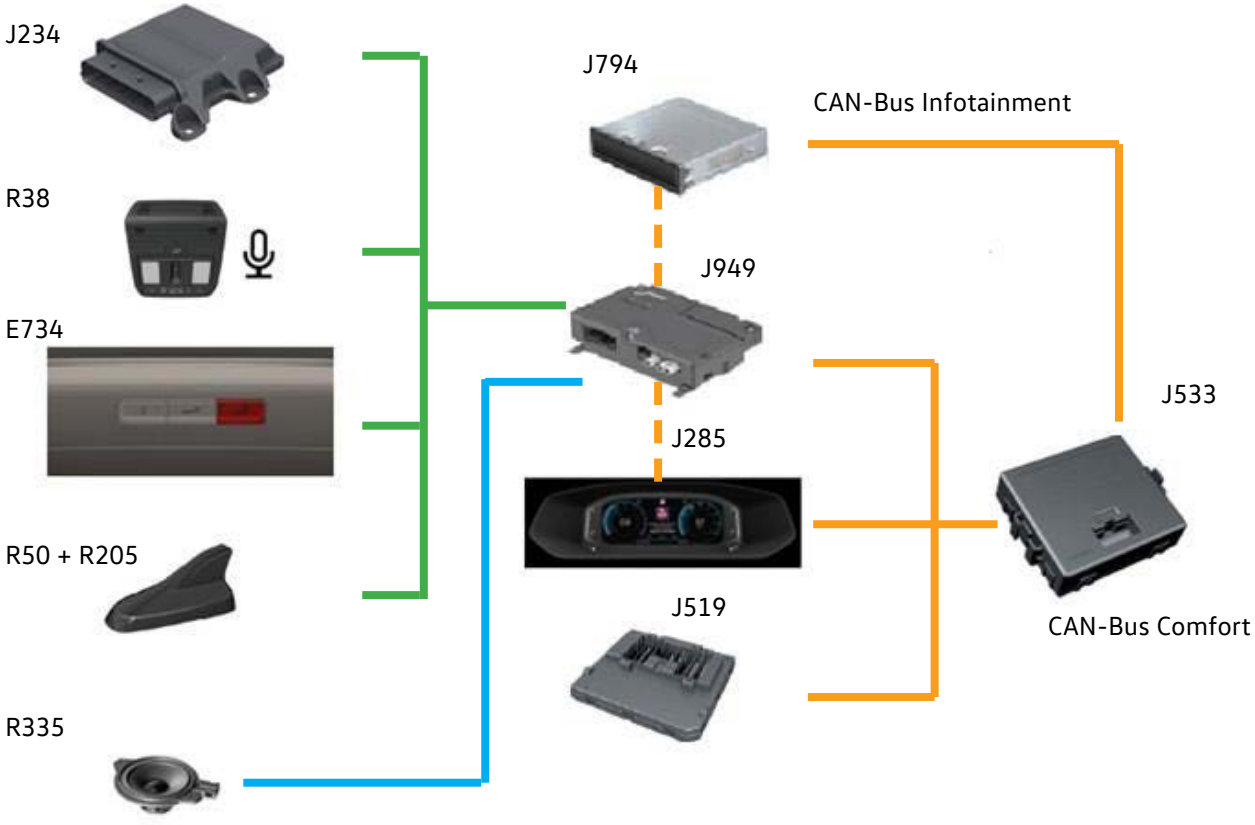


J949

There is an internal battery used for emergency calls if a vehicle voltage failure occurs.

Battery

Emergency Call Module High version (PR NZ4) Components



Key

E734	Telematics Button Module
J234	Airbag Control Module
J285	Instrument Cluster Control Module
J519	Vehicle Electrical System Control Module
J533	Data Bus Onboard Diagnostic Interface
J794	Information Electronics Control Module 1
J949	Control Module for Emergency Call Module and Communication Unit
R335	Emergency Call Module Speaker
R38	Telephone Microphone
R50	GPS Antenna
R205	GSM Antenna

Volkswagen Group of America
2200 Ferdinand Porsche Drive
Herndon, VA 20171
June 2021

Cautions & Warnings

Please read these WARNINGS and CAUTIONS before proceeding with maintenance and repair work. You must answer that you have read and you understand these WARNINGS and CAUTIONS before you will be allowed to view this information.

- If you lack the skills, tools and equipment, or a suitable workshop for any procedure described in this manual, we suggest you leave such repairs to an authorized Volkswagen retailer or other qualified shop. We especially urge you to consult an authorized Volkswagen retailer before beginning repairs on any vehicle that may still be covered wholly or in part by any of the extensive warranties issued by Volkswagen.

- Disconnect the battery negative terminal (ground strap) whenever you work on the fuel system or the electrical system. Do not smoke or work near heaters or other fire hazards. Keep an approved fire extinguisher handy.

- Volkswagen is constantly improving its vehicles and sometimes these changes, both in parts and specifications, are made applicable to earlier models. Therefore, part numbers listed in this manual are for reference only. Always check with your authorized Volkswagen retailer parts department for the latest information.

- Any time the battery has been disconnected on an automatic transmission vehicle, it will be necessary to reestablish Transmission Control Module (TCM) basic settings using the Volkswagen Factory Approved Scan Tool (ST).

- Never work under a lifted vehicle unless it is solidly supported on stands designed for the purpose. Do not support a vehicle on cinder blocks, hollow tiles or other props that may crumble under continuous load. Never work under a vehicle that is supported solely by a jack. Never work under the vehicle while the engine is running.

- For vehicles equipped with an anti-theft radio, be sure of the correct radio activation code before disconnecting the battery or removing the radio. If the wrong code is entered when the power is restored, the radio may lock up and become inoperable, even if the correct code is used in a later attempt.

- If you are going to work under a vehicle on the ground, make sure that the ground is level. Block the wheels to keep the vehicle from rolling. Disconnect the battery negative terminal (ground strap) to prevent others from starting the vehicle while you are under it

- Do not attempt to work on your vehicle if you do not feel well. You increase the danger of injury to yourself and others if you are tired, upset or have taken medicine or any other substances that may impair you or keep you from being fully alert.

- Never run the engine unless the work area is well ventilated. Carbon monoxide (CO) kills.

- Always observe good workshop practices. Wear goggles when you operate machine tools or work with acid. Wear goggles, gloves and other protective clothing whenever the job requires working with harmful substances.

- Tie long hair behind your head. Do not wear a necktie, a scarf, loose clothing, or a necklace when you work near machine tools or running engines. If your hair, clothing, or jewelry were to get caught in the machinery, severe injury could result.

- Do not re-use any fasteners that are worn or deformed in normal use. Some fasteners are designed to be used only once and are unreliable and may fail if used a second time. This includes, but is not limited to, nuts, bolts, washers, circlips and cotter pins. Always follow the recommendations in this manual - replace these fasteners with new parts where indicated, and any other time it is deemed necessary by inspection.

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Version 2.0

Cautions & Warnings

- Illuminate the work area adequately but safely. Use a portable safety light for working inside or under the vehicle. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.

- Friction materials such as brake pads and clutch discs may contain asbestos fibers. Do not create dust by grinding, sanding, or by cleaning with compressed air. Avoid breathing asbestos fibers and asbestos dust. Breathing asbestos can cause serious diseases such as asbestosis or cancer, and may result in death.

- Finger rings should be removed so that they cannot cause electrical shorts, get caught in running machinery, or be crushed by heavy parts.

- Before starting a job, make certain that you have all the necessary tools and parts on hand. Read all the instructions thoroughly; do not attempt shortcuts. Use tools that are appropriate to the work and use only replacement parts meeting Volkswagen specifications. Makeshift tools, parts and procedures will not make good repairs.

- Catch draining fuel, oil or brake fluid in suitable containers. Do not use empty food or beverage containers that might mislead someone into drinking from them. Store flammable fluids away from fire hazards. Wipe up spills at once, but do not store the oily rags, which can ignite and burn spontaneously.

- Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use these tools to tighten fasteners, especially on light alloy parts. Always use a torque wrench to tighten fasteners to the tightening torque listed.

- Keep sparks, lighted matches, and open flame away from the top of the battery. If escaping hydrogen gas is ignited, it will ignite gas trapped in the cells and cause the battery to explode.

- Be mindful of the environment and ecology. Before you drain the crankcase, find out the proper way to dispose of the oil. Do not pour oil onto the ground, down a drain, or into a stream, pond, or lake. Consult local ordinances that govern the disposal of wastes.

- The air-conditioning (A/C) system is filled with a chemical refrigerant that is hazardous. The A/C system should be serviced only by trained automotive service technicians using approved refrigerant recovery/recycling equipment, trained in related safety precautions, and familiar with regulations governing the discharging and disposal of automotive chemical refrigerants.

- Before doing any electrical welding on vehicles equipped with anti-lock brakes (ABS), disconnect the battery negative terminal (ground strap) and the ABS control module connector.

- Do not expose any part of the A/C system to high temperatures such as open flame. Excessive heat will increase system pressure and may cause the system to burst.

- When boost-charging the battery, first remove the fuses for the Engine Control Module (ECM), the Transmission Control Module (TCM), the ABS control module, and the trip computer. In cases where one or more of these components is not separately fused, disconnect the control module connector(s).

- Some of the vehicles covered by this manual are equipped with a supplemental restraint system (SRS), that automatically deploys an airbag in the event of a frontal impact. The airbag is operated by an explosive device. Handled improperly or without adequate safeguards, it can be accidentally activated and cause serious personal injury. To guard against personal injury or airbag system failure, only trained Volkswagen Service technicians should test, disassemble or service the airbag system.

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Version 2.0

Cautions & Warnings

- Do not quick-charge the battery (for boost starting) for longer than one minute, and do not exceed 16.5 volts at the battery with the boosting cables attached. Wait at least one minute before boosting the battery a second time.

- Never use a test light to conduct electrical tests of the airbag system. The system must only be tested by trained Volkswagen Service technicians using the Volkswagen Factory Approved Scan Tool (ST) or an approved equivalent. The airbag unit must never be electrically tested while it is not installed in the vehicle.

- Some aerosol tire inflators are highly flammable. Be extremely cautious when repairing a tire that may have been inflated using an aerosol tire inflator. Keep sparks, open flame or other sources of ignition away from the tire repair area. Inflate and deflate the tire at least four times before breaking the bead from the rim. Completely remove the tire from the rim before attempting any repair.

- When driving or riding in an airbag-equipped vehicle, never hold test equipment in your hands or lap while the vehicle is in motion. Objects between you and the airbag can increase the risk of injury in an accident.

I have read and I understand these Cautions and Warnings.

back OK

Version 2.0