

The 2015 Audi A3 Introduction Sales and Aftersales



Audi Academy

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Always check Technical Bulletins and the latest electronic service repair literature for information that may supersede any information included in this booklet.

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eMedia



This eSSP contains video links which you can use to access interactive media.

This eSelf Study Program teaches a basic knowledge of the design and functions of new models, new automotive components or technologies.

It is not a Repair Manual! All values given are intended as a guideline only. For maintenance and repair work, always refer to the current technical literature.





Introduction

The Audi A3 can look back on a 16-year success story. The first generation of the series, which debuted in 1996 as a three door, established an entirely new market segment - the premium compact class. In 1999 the five-door hatchback and the sporty Audi S3 completed the family. In total, around 990,000 vehicles were sold. The second generation, launched in 2003, was even more successful, achieving sales of approximately 1.8 million vehicles.

With the newest generation of the A3, the Group has set itself the goal of improving the fuel economy of its internal combustion engines, extending its product range to include alternative drive systems such as natural gas engines and electric motors, and equipping the vehicles with the latest technical innovations. The basis for implementing these objectives is the MQB or "modular transverse platform", a standardized architecture in which various vehicle components can be combined in any configuration on modular principles. This broadens the diversity of the model range, resulting in more efficient production, engines and combinations of materials.

The 2015 A3 sedan represents the cumulative technological expertise of Audi in a compact format. In its lightweight body, its interior architecture and its user interfaces, the A3 sedan will once again set standards in its class. Its engines impress with their efficiency and power, and the range of driver assistance systems and infotainment solutions is unparalleled in the premium compact class. The lightweight body and newly developed engines have had major consequential effects throughout the vehicle, reducing the weight of many suspension, exhaust and interior components. At launch, the vehicle will be offered with two recently refined engines from the EA888 family. The Modular Infotainment Platform (MIB) makes its debut in the A3 sedan. It represents a big step forward in mobile communication electronics.

The A3 also sets new standards in the premium compact class when it comes to driver assistance systems. One of the most important of these is Audi pre sense. In the event of an impending collision, the system warns the driver in progressive stages and, if necessary, can initiate partial braking in order to reduce the car's speed at impact.

The Audi A3 and S3 sedans are assembled in Györ, Hungary. The site in northwestern Hungary is one of the largest automobile factories in the world. This is where Audi has assembled the TT coupe, and in the near future will assemble the A3 cabriolet. It is an ultra modern facility with the capability of complete production work—from stamping to final assembly.



The A3 sedan body

Dimensions



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Dimensions and weight			
Length	175.4 in (4456 mm)	Front elbow room	57.2 in (1453 mm)
Width	70.7 in (1796 mm)	Rear elbow room	56.0 in (1423 mm)
Height	55.7 in (1416 mm)	Front head room	39.6 in (1006 mm)
Front track width	61.2 in (1555 mm)	Rear head room	36.3 (924 mm)
Rear track width	60.0 in (1526 mm)	Load pass-through width	39.3 in (1000 mm)
Wheelbase	103.8 in (2637 mm)	Load lift-over height	27.0 in (688 mm)
		Luggage compartment volume	15.0/31 ¹⁾ cu ft (425/880 ¹⁾ l)
Curb weight (approximate)	2899.0 lb (1325 kg)		
Permissible total vehicle weight	4111.6 (1865 kg)		

¹⁾ Rear seat folded



A3 sedan compared to A4 sedan

Vehicle architecture (MQB)

The Audi A3 sedan builds on the body structure of the three-door A3. It is part of the MQB strategy used by the Volkswagen Group of which Audi is a part. MQB stands for modular transverse baukasten or modular transverse platform.

It is not so much a platform per-se, but rather a system for introducing commonality across disparate platforms that share the same engine orientation — regardless of model,

vehicle size or brand. MQB uses a core group of components across a wide variety of platforms — for example, sharing a common engine-mounting for all drivetrains. The concept allows diverse models, including those from the company's various brands, to be manufactured at the same plant, further saving cost.



MQB and the Audi A3

The underbody of the A3 series consists of 3 modules:

- the front section
- Floor pan, center section
- Trunk floor

Compared to the three-door A3, the A3 sedan needed a longer central floor pan and a longer rear floor pan but are based on the same basic design and manufacturing processes.





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Notes



Materials - ultra lightweight construction

Body developers at Audi have broad-based engineering expertise spanning all relevant materials. This know-how is not limited to just a specific material, rather the motto is: "The right material at the right place for optimal function." The multi-material body of the Audi A3 lives up to this maxim.

All the ultra lightweight design principles that have made all A3 models lighter than their predecessors have been applied to the design of the new A3 sedan. At the same time, the A3 sedan meets the highest demands in the area of vehicle safety. The basis for this is that the materials used are only those that meet the high quality standards of Audi.

Ultra high-strength hot-formed steel components

Ultra high-strength hot-formed steel components provide approximately a 24% share of the A3 sedan body structure. Before the components are stamped, special steel is heated to nearly 1832 °F (1000 °C) in a continuous oven. After heating, it is immediately placed in a water cooled press tool. The steel is quickly cooled to approximately 392 °F (200 °C) before it is stamped. The rapid cooling of the steel changes its iron/carbon structure and creates a steel with high tensile strength which in turn allows thinner wall thicknesses for the particular components. Steels created in this manner require special care and procedures during repairs.



A3 sedan B pillar

The B-pillar with striker plate is partially tempered during the forming process. The component assembly is very hard at the top end and softer below a narrow transition zone. This enables side impact forces to be absorbed effectively.



Body panels

Some inner and outer body panels such as the fenders, doors, rear bumper, cross member, and the rear trunk lid are all made from light steel.

The following components are made from aluminum:

- the front bumper cross member
- the hood
- the rear hat shelf

The use of both light steel and aluminum further helps reduce the weight of the body.

In each A3 sedan there are over 196 ft (60 m) of glued joints.

The joint between the body side wall and roof is laser welded and then smoothed by brushes to produce a nearly invisible zero joint.

The water drainage paths in the area of the rear trunk lid are joined by Plasmatron welding.

To save more weight, doors and window frames are pressed in one piece. The inner and outer doors are welded by the ultra-modern remote laser technique.

Joining techniques

Both old and new body component joining techniques are in use. In addition to the 4803 classic resistance spot welds used during assembly of the body, the following joining methods are also used:

- MAG welding
- Laser welding
- Clinching (attachments only)
- Solid punch riveting



- Ultra high-strength hot-formed steel
- Modern high-strength steel
- High-strength steel
- Soft steel
- Sheet aluminum
 - Aluminum profile

Ultra high strength hot-formed steel components are installed in the following areas

Forming the backbone of the occupant cell is what are known as form-hardened steels. An extreme temperature change during forming process gives these steels extremely high strength; the parts can be designed with relatively thin walls, making them lightweight. Form-hardened steels represent a 26 percent share of body materials. They are used in the transition from the front of the vehicle to the occupant cell, in the A-pillars, B-pillars, roof arch, center tunnel, side sills and floor panels. Altogether, they lower the car's weight yet provide excellent strength.



- (1) Long members (2 left / 2 right)
- 2 Upper foot room crossmember
- (3) Lower foot room crossmember
- 4 Left and right inner A pillars
- 5 Left and right inner rocker panels
- (6) Center tunnel

- ⑦ Rear seat crossmember
- (8) Rear transverse crossmember
- (9) Left and right upper A pillars
- (1) Left and right rear long members
- (1) Left and right inner B pillars

Panorama tilt sunroof

The 2015 A3 sedan features an optional panorama slide/ tilt sunroof.

The roof opening is larger than that of an internally guided sunroof and creates a particularly airy and spacious interior feel for the occupants.



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Thermal insulation

The glass roof panel is tinted and provides additional thermal insulation. Thermal insulation is provided by the following reflective components:

- ▶ 99 % UV radiation reflection
- 92 % heat radiation reflection
- 90 % light radiation reflection

The panorama slide/tilt sunroof module meets the statutory requirements for anti-pinch protection.



Roof installation

The panorama slide/tilt sunroof is glued into the roof opening and thus is a major factor contributing to body rigidity.





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Bonded ring seam

Component overview



Bumper system

Front bumper



Underbody

The Audi A3 has a highly effective acoustic and aerodynamic underbody designed to withstand mechanical and thermal stresses. In addition to aerodynamics, attention was paid to sound absorption, body protection and thermal engine management during the development phase. The result is improved airflow around the engine and transmission capsule, the cross-members and the wheel arches, thus allowing a low drag coefficient (c_w) of 0.31 to be achieved.



Passive safety

Components

The passive occupant protection system has the following components:

- Airbag control module
- Driver and passenger airbags
- Front side airbags
- SIDEGUARD[®] head airbags
- Driver and passenger side knee airbag
- Front airbag crash sensor
- Crash sensors for side impact detection in the doors
- Crash sensors for side impact detection in the C pillars
- Front inertia reel seat belts with electric and pyrotechnic belt tensioners
- Safety belt warning for all seats
- Safety belt switches on all seats in the seat belt buckles
- Safety occupancy sensor in front passenger seat



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Optional equipment

Rear passenger side impact airbags

Vehicle Airbags



Passenger front airbag

The 2015 A3 sedan for the North American market will come equipped with a two-stage adaptive hybrid gas generator front passenger airbag.



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Driver and passenger knee airbags

The Audi A3 sedan is equipped with both driver and passenger knee air bags. Both airbags use tubular hybrid gas generators.

Driver Knee Airbag

Passenger Knee Airbag



Front safety belt tensioner

In combination with Audi pre sense basic, the 2015 Audi A3 is equipped with reversible safety belt tensioners driven by electric motors. This is in addition to the pyrotechnic belt tensioners.

When Audi pre sense basic detects specific driving situations, signals are sent to the data bus. The airbag control module evaluates the signals and, if necessary, instructs the seat belt tensioner control module to partially or fully tension the safety belts via an electric motor. For further information on Audi pre sense, refer to the chapter on Active safety, page 25.



Pelvic belt tensioner with locking buckle

The 2015 A3 will be equipped with pyrotechnic tensioning safety belts that help to reduce injury to the pelvic area during certain types of collisions.

Vehicles with this style safety belts will also have a new locking-type buckle.

In certain types of accidents, the pelvic belt tensioners, in conjunction with the new locking buckle, help protect the occupant in the following manner:

- To help separate the pelvic force from the thoracic force
- To help reduce the chest deflection force
- To help limit the movement of the pelvis
- To help improve the contact between the pelvis and seat



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Operation during an accident

When the Airbag Control Module determines the criteria for an accident severe enough to deploy the pyrotechnic safety belts has been exceeded, the shoulder portion of the safety belt is tensioned from the clamping point of the locking buckle in the direction of the belt tensioner by the pyrotechnic devices in the automatic safety belt retractor. At the same time, the retractors are triggered and the lap portion of the safety belt is tensioned by the movement of a steel cable attached to the safety belt.



Locking buckle

A newly designed safety belt buckle is used. The lock buckle prevents movement and forms a separate load path for the shoulder and lap portion of safety belt in the event of an accident.



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Design and operation

The locking buckle has a movable spring loaded piece that allows the safety belt to move freely under normal operating conditions.

During an accident in which the Pelvic belt tensioner has be triggered, the locking piece is displaced and blocks the safety belt from moving.



Not blocked



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Active Safety

Audi pre sense

Audi pre sense is able to detect critical driving situations, and initiate measures to prepare the vehicle and occupants for an impending collision.

This is made possible by networking various in-vehicle systems. The systems send data continuously to the data bus. Other control modules are able to evaluate this information and take appropriate action.

Please note that Audi pre sense cannot prevent collisions. It serves only to assist the driver and potentially reduce the severity of the collision.

Audi pre sense basic

Longitudinal dynamics function

When vehicle is moving forward at a speed greater than 18.6 mph (30 km/h) and the driver executes a "hazard braking maneuver" in which the brake pressure reaches a defined level, the reversible safety belt tensioners are partially tensioned.

If the ESP is set to "Sport" or "OFF" using either the ASR/ ESP Button, Driving Profile Selection Switch or if the Audi drive select is set to "dynamic" via the MMI, the safety belts will not be partially tensioned.





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Emergency braking function

During an "emergency braking" maneuver in which the brake pressure exceeds a defined value for a defined period of time, the reversible safety belt tensioners are fully tensioned by the electric motors.

In this scenario, the Airbag Control Module evaluates the signals sent on the data bus from the ABS/ESP Control Module, then it instructs the Seat Belt Tensioner Control Modules to fully tension the safety belts. Depending on the situation, the ABS/ESP Control Module can also activate the hazard warning flashers.

Transverse dynamics function

If the vehicle oversteers or understeers, the ESP system tries to stabilize it. If the vehicle becomes unstable because certain physical limits have been exceeded, the Airbag Control Module initiates a partial tensioning of the electrically reversible safety belt tensioners.

If the vehicle can no longer be stabilized, the safety belt tensioners are fully tensioned.

At the same time, the side windows and the tilt/slide sunroof (if installed) begin to close.

- If ESP is set to "Sport" or "Off" or if Audi drive select is set to "dynamic", the safety belts are **not** partially tensioned.
- If ESP is set to "Sport" mode or "Off", the safety belts are fully tensioned only if the driver actively applies the brakes.

If the Airbag Control Module detects a head-on collision with low vehicle deceleration (no airbag deployment), it decides whether or not to fully tension the safety belts based on a situation-specific control module algorithm.

Crash function in the low speed range

It does not take any other precautions, such as turning on the hazard warning flashers, or closing a window or sunroof.

Audi pre sense front

Audi pre sense front is optional and is offered only when the vehicle is equipped with Adaptive cruise control.

The Distance Regulation Control Module monitors the traffic in its path and continuously measures the distance between itself and a vehicle driving ahead.

The module evaluates relevant data from other control modules and transfers signals to the data bus. The ACC control module uses these signals to initiate various actions between the ABS/ESP Control Module and the Instrument Cluster Control Module as necessary.

Audi pre sense front is active even if the ACC system is not activated. It has the following functions:

- A Providing driver warning information when following a vehicle ahead at a critical distance in certain situations.
- B In the event of an impending collision with a moving or stopped vehicle, the driver is warned and assistance is provided by automatic braking or by increasing the braking force applied by the driver, which reduces reaction time and vehicle speed.
- C Full deceleration is provided in the event of an impending collision with a moving, stopped or stationary vehicle at a speed of less than 18.6 mph (30 km/h).



Function A

Approaching

The driver is warned visually by a message in the Driver Information System when approaching another vehicle ahead or when following this vehicle at a critical distance at a synchronized speed.

The critical distance is defined as the distance at which a collision is likely to occur in the event of sudden heavy braking of a vehicle driving ahead, even if the driver of the following vehicle reacts quickly.

vehicle driving ahead

Speed synchronization



including visual distance warning (ACC warning lamp)

Following at a critical distance

Collision



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Function B

When the vehicle approaches a moving vehicle, the Instrument Cluster Control Module warns the driver visually and audibly if certain defined limits are exceeded. These warnings are issued within a certain period of time prior to the last braking opportunity for collision avoidance before the actual collision.

The timing of warnings depends on the driver's degree of activity. Depending on steering, pedal and turn signal inputs, the system classifies the driver as active or inactive and, consequently, as attentive or inattentive. If the driver is attentive, the warning will be issued later than for an inattentive driver.

At the same time, the ABS/ESP Control Module prefills the brake system and modifies the deployment algorithms for Hydraulic Brake Assist. This means that Hydraulic Brake Assist begins to build up brake pressure even at low brake pedal actuation speeds.

If the driver does not respond to the warnings or, for example, eases off the accelerator, the ABS/ESP module performs a warning braking application.

The warning braking application is a very brief but easily noticeable braking operation and does not serve to slow the vehicle down. It alerts drivers to the traffic situation and indicates to drivers that they must react immediately in order to avoid an impending collision. Depending on how attentive the system evaluates the driver to be, the warning braking application occurs within a specific period of time ahead of the last opportunity for braking and evasive action in order to avoid a collision.

If the driver still fails to react or ease off the accelerator, the vehicle is braked by partial braking operation I, which applies up to 35% of maximum braking force.

If Driver Assistance Systems Front Camera also detects the obstacle, the braking force is increased to up to 60% of the maximum by partial braking operation II.

If the driver applies the brakes, a target braking action can be performed in all phases described above (prefill brake system, reconfiguration of Hydraulic Brake Assist, driver warning, warning braking application, partial braking operations I and II). During the target braking action, the Audi pre sense front system calculates whether the driver is applying sufficient braking force to be able to avoid a collision. If this is not the case, the required brake pressure is increased depending on the situation.

Prefill brake system Hydraulic Brake Assist reacts with higher sensitivity

Driver warning visual. audible (forward collision warning)

Warning braking

Partial braking operation I or partial braking operation II (on models with front camera for driver assistance systems)

Collision



Target braking

Function C

Audi pre sense front also includes a function for "full deceleration at speeds from 18.6 mph (30 km/h)."

If the Distance Regulation Control Module detects an impending collision when the vehicle is travelling at a speed of less than 18.6 mph (30 km/h), ABS/ESP Control Module pre-fills the brake system.

The deployment algorithms for Hydraulic Brake Assist are adjusted at the same time. Hydraulic Brake Assist thus begins to build up brake pressure even at low brake pedal actuation speeds. If the driver fails to brake or does not apply sufficient braking force in a critical situation, the ABS/ESP Control Module executes a braking action and applies near-maximum braking if necessary. Before the braking action occurs, the driver is alerted both audibly and visually through the DIS that the vehicle is about to brake independently or provide additional braking force.

If the vehicle has independently braked to a standstill without driver intervention, three more audible signals are given.

The three additional signals given alerts the drivers that they must actively take control over the vehicle by applying the brake. If the driver fails to take control (especially in a vehicle equipped with an automatic transmission) the vehicle will begin to roll.

Prefill brake system Hydraulic Brake Assists reacts with higher sensitivity Full deceleration with visual and audible driving warning prior to intervention



Collision

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System characteristics with respect to "full deceleration at speed of less than 18.4 mph (30 km/h)"

- ▶ The driver is not given advance warning.
- The system reacts to crossing or oncoming vehicles and objects with low radar scatter (for example, pedestrians).
- The system reacts to vehicles which are travelling in the same direction, have stopped or are stationary.

Driver prioritization over system

If the driver clearly takes evasive action, accelerates or brakes during the individual phases of Audi pre sense front (functions A to C), the action momentarily being taken by Audi pre sense front (for example, partial braking operation I) will be suppressed or cancelled.

If the obstacle is no longer relevant after evasive action has been taken, Audi pre sense front will cease to provide assistance in this case.

Settings and displays

There are two options for deactivating Audi pre sense front in the MMI.

- Option 1: Prewarning off the audible and visual warnings (distance and forward collision warnings) are deactivated.
- Option 2: System off the audible and visual warnings (distance and forward collision warnings), warning braking, partial and target braking and the "full deceleration at speeds of below 18.4 mph (30 km/h)" functions are deactivated. The functions remain deactivated until they are reactivated in the MMI.

If only the pre-warning has been deactivated, no text message is displayed in the DIS.

If the system has been deactivated, the driver is warned by a text message in the DIS - Audi pre sense off - whenever the ignition is switched on. This alerts the driver to the fact that the system is switched off.



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Both versions of Audi pre sense are activated



If the ESP is set to "Sport" or "OFF" using the ASR/ESP Button, then the audible and visual warnings, the warning braking, the partial and target braking, and the "full deceleration at speeds of below 30 kph" functions of Audi pre sense will also be deactivated. Audi pre sense remains deactivated until:

- ESP is reactivated with the ASR/ESP button.
- the ignition is switched off and on again, thereby reactivating ESP.
- ACC is activated, since this would result in automatic activation of ESP.

If ESP (Electronic Stabilization Program) is set to "Sport" or "Off", the following text is temporarily displayed in the DIS: "Audi pre sense: off".

Notes



Engines

1.8L and 2.0L TFSI engines

Technical feature overview



Both the 1.8L TFSI and 2.0L TFSI engines for the North American market will only have the FSI injection system. The dual injection may be introduced at a later date.

Combined FSI/MPI injection



Friction optimization and lightweight design



Diesel engines

2.0L Second generation TDI engine

Technical features





Oxidizing catalytic converter and diesel particulate filter



Cylinder head with variable valve timing



Oil pump with integral vacuum pump





Intake manifold module with integrated charge air cooler



Engine/transmission combinations

1.8L TFSI engine





2.0l TFSI engine



2.0l TDI engine



Transmission designations:

(MQ200_5F)
(MQ200_6F)
(MQ250_6F)
(MQ350_6F)
(MQ350_6A)
(DQ200_7F)
(DQ250_6A)



Explanation of manufacturer designation: Example: MQ350-6F

- M Manual transmission
- D Dual clutch transmission
- **Q** Transverse installation
- **350** Nominal torque capacity
- 6 Number of gears
- F Front wheel drive
- A All-wheel drive (quattro)

Notes



Power transmission

Overview

The drive train components of the 2015 A3 are based on proven technology and include the new 5th generation Haldex coupling on quattro models.


Parking lock emergency release mechanism

The parking lock emergency release mechanism can be accessed by unclipping the selector lever gate from the center console and pushing the insulating foam to the side.



609_140



5th generation Haldex coupling

Component overview

The most notable feature of the 5th generation Haldex coupling is a new pressure control system. The hydraulic pressure required for the Haldex coupling is produced by a pump with centrifugal governor. The new Haldex coupling is 3.7 lb (1.7 kg) lighter than the 4th generation coupling. An electric motor drives a six axial piston pump. The pistons are pushed against an inclined thrust plate. When the pump cylinder rotates, the pistons execute an axial stroke and move the Haldex oil to the pressure side of the pump.





Running gear

Design concept

A design goal for running gear of the A3 sedan was to have a finely balanced axle load distribution of 59% front to 41% rear. The forward placement of the front axle in relation to the body played a significant role in this accomplishment. The use of the same components across the worldwide A3 model line-up was also of major consideration.

Overview

The application of the Audi ultra lightweight strategy was also addressed by the use of aluminum axle components and smaller wheel offsets.



Electro-mechanical steering is standard equipment. Dynamic steering to be offered at a later date. MacPherson strut front axle in combination with aluminum sub frame and steering knuckle.



Four-link rear suspension is standard on all North American region vehicles except those with the 2.0L TDI engine. (Delayed introduction.)

Suspension variations



Dynamic suspension	The Dynamic suspension is standard equipment for the 2015 A3 sedan.	
Sport suspension	The sports suspension is optional. In models with sports suspension, ride height is 0.59 in (15 mn lower than in models with the standard suspension.	
S line suspension	The ride height is lowered .98 in (25 mm) compared to the standard suspension. The tuning is more sporty than the Sport suspension. The S line suspension comes with 18 inch wheels as standard.	
Suspension system with electronic damping control	This suspension system is available only on S3 models. It is based on the Audi magnetic ride system currently used in other Audi models.	

Tire Pressure Monitoring System

The 2015 Audi A3 uses the second generation tire pressure monitoring system. It functions based on information from the ABS/ESP control module. It is identical to the system currently in use on other Audi models in terms of design, operation, driver information provided, service operations and diagnostics.



Wheels and tires

Depending on equipment package, 16 and 17 inch wheels are used in the standard trim. The 17 and 18 inch wheels are optional.

The range of tires extends from the 205/60 R16 to the 225/40 R18. The "Tire Mobility System" is standard equipment; a minispare wheel is optional.













				A3		S3
Wheels & Tires	Code	Package	1.8T	2.0T	2.0TDI	
A. 7.5] x 17 5-spoke-Star-design	COX		_	_		
225/45 R17 all-season tires	H7K		-	-		
B. 7.5] x 17 10-spoke Dynamic-design	C5I				•	
225/45 R17 all-season tires	H7K					
C. 8.0] x 18 10-spoke-Design, Audi exclusive	CL7					
225/40 R18 all-season tires	HX9					
225/40 R18 summer performance tires	H]4					
D. 8.0J x 19 5-arm-Wing-design, Anthracite	C7D					—
polished 235/35 R19 summer performance tires	H13					
E. 8.0] x 18 5-arm double spoke S3 design	COJ					
225/40 R18 summer performance tires	H]4					•
225/40 R18 all-season tires	HX9					
F. 8.0] x 19 5-parallel spoke Cast Aluminum design	C6H					
225/35 R19 summer performance tires	H13					

= Standard

= Optional

— = Not Available

1 Tires are supplied and warranted by their manufacturer. High-performance tires are designed for optimum performance and handling in warm climates. They are not suitable for cold, snowy, or icy weather conditions. If you drive under those circumstances, you should equip your vehicle with all-season or winter tires, which offer better traction under those conditions. We suggest you use the recommended winter or all-season tire specified for your car or its equivalent. These high-performance tires also have a lower aspect ratio that aids performance and handling; however, in order to avoid tire, rim or vehicle damage, it is important that the inflation pressure is regularly checked and maintained at optimum levels. Please also remember in making your selection that, while these tires deliver responsive handling, they may ride less comfortably and make more noise than other choices. Finally, these tires may wear more quickly than other choices.

Electrical system

Audi drive select

The 2015 A3 is equipped with Audi drive select. At model introduction, the engine/transmission, power steering and Adaptive cruise control can be tailored to the driver through the Audi drive select feature. The driver can choose between three operating modes: comfort, auto and dynamic. In addition, the vehicle set-up can be customer configured using individual mode. More vehicle systems will be added to the Audi drive select at a later date.

Functional features:

- The mode previously selected is active when the vehicle restarts.
- The individual mode settings are automatically assigned to the vehicle key in use.
- The mode can be changed when the vehicle is stationary or while driving (requirement: terminal 15 "on").
- To activate a selected mode for the Transmission/engine, the accelerator pedal must briefly return to the idle position.

Depending on the infotainment system installed, Audi drive select can be configured either using the button in the instrument panel or via the Car menu in the MMI.

The selected mode of the system is indicated in the MMI display. Individual mode is only available with infotainment versions MMI Navigation and MMI Navigation with Audi connect.

Controllable systems at the 2015 A3 model introduction



Functional characteristics

	com	fort	aut	to	dyn	amic
Selector lever position	D	S	D	S	D	S
Engine						
Power/torque	normal	normal	normal	normal	normal	normal
Load change	balanced	sporty	balanced	sporty	balanced	sporty
Accelerator pedal	balanced	sporty	balanced	sporty	balanced	sporty
Transmission						
Shift characteristics	"D" ³⁾	"S" ²⁾	"D" ³⁾	"S" ²⁾	"D" ³⁾	"S" ²⁾

²⁾ sporty ³⁾ balanced

Driveline-independent vehicle systems

	comfort	auto	dynamic
Steering	comfortable	balanced	sporty
Damper control	comfortable	balanced	sporty
Reversible Safety Belt Tensioner	standard	standard	Deployment point adapted
Adaptive cruise control	comfortable	balanced	sporty

Climate control

Introduction

Heating / air conditioning system versions

Two heating and air conditioning systems are specified for the 2015 Audi A3 depending on model.

- manually controlled air conditioning system
- Climatronic

The Climatronic system has a moisture and enthalpy control system. The moisture control system is used to detect windshield fogging.

Enthalpy is a measure of the energy content in the air conditioning system. Air conditioning efficiency is ensured by precision control of the fresh air to recirculated air ratio inside the vehicle.



Operation

The two versions differ from one another with respect to their equipment specification. All versions are optionally available with seat heater control buttons. The seat heater is a three-stage system and the selected heating level is indicated by an LED in the respective button.

Some of the rotary controls in both versions have multiple functions, such as for turning cooling or automatic air conditioning ON and OFF.

Both versions have a dust and pollen filter. The Climatronic system has an activated charcoal dust and pollen filter. In combination with the Air Quality Sensor, the activated charcoal component in the filter works to reduce pollutant emissions in the fresh air inside the vehicle.

The dust and pollen filter can be replaced through the open glove compartment.

The table shows an overview of the main functions of the individual versions:

Manual air conditioning system	Climatronic
A/C Control Module	Climatronic Control Module
0.0.0	0.00
 Three rotary controls for: Temperature Blower Air distribution Manual air recirculation button Heated rear window button Optional seat heater button, three-stage AC button 	Two rotary controls for driver and passenger side outlet tem- perature AC button AUTO button Rotary blower control Defrost button Manual air recirculation button Heated rear window button Three buttons for setting the air distribution Optional seat heater button, three-stage
1	2
1 Defroster vents Instrument panel outlets, left- center-right Footwell outlets, right/left Rear footwell outlets, right/left	2 Defroster vents Instrument panel outlets, left- center-right Footwell outlets, right/left Rear footwell outlets, right/left Rear outlets
Defroster vents Instrument panel outlets, left- center-right Footwell outlets, right/left	Defroster vents Instrument panel outlets, left- center-right Footwell outlets, right/left Rear footwell outlets, right/left
Defroster vents Instrument panel outlets, left- center-right Footwell outlets, right/left Rear footwell outlets, right/left	Defroster vents Instrument panel outlets, left- center-right Footwell outlets, right/left Rear footwell outlets, right/left Rear outlets
Defroster vents Instrument panel outlets, left- center-right Footwell outlets, right/left Rear footwell outlets, right/left no	Defroster vents Instrument panel outlets, left- center-right Footwell outlets, right/left Rear footwell outlets, right/left Rear outlets yes Two AC modes Inormal
Defroster vents Instrument panel outlets, left- center-right Footwell outlets, right/left Rear footwell outlets, right/left no	Defroster vents Instrument panel outlets, left- center-right Footwell outlets, right/left Rear footwell outlets, right/left Rear outlets yes Two AC modes > normal > eco
Defroster vents Instrument panel outlets, left- center-right Footwell outlets, right/left Rear footwell outlets, right/left no no	Defroster vents Instrument panel outlets, left- center-right Footwell outlets, right/left Rear footwell outlets, right/left Rear outlets yes Two AC modes > normal > eco yes
Defroster vents Instrument panel outlets, left- center-right Footwell outlets, right/left Rear footwell outlets, right/left no no no	Defroster vents Instrument panel outlets, left- center-right Footwell outlets, right/left Rear footwell outlets, right/left Rear outlets yes Two AC modes ▶ normal ▶ eco yes
Defroster vents Instrument panel outlets, left- center-right Footwell outlets, right/left Rear footwell outlets, right/left no no no no	Defroster vents Instrument panel outlets, left- center-right Footwell outlets, right/left Rear footwell outlets, right/left Rear outlets yes Two AC modes > normal > eco yes yes
	A/C Control Module

Infotainment

In response to the speed at which the development cycles for information and entertainment systems occur, the automotive industry has had to shorten its development cycles as well. Keeping up to date with the latest advances is a growing challenge for car makers.

To meet this challenge, the Volkswagen Group has introduced the Modular Infotainment Platform (MIB).

Central to the development of the MIB, Information Electronics Control Module 1, has been re-designed as a modular component. The control module architecture

Overview of versions

In the North American market, the following versions of the MIB will be available on the 2015 Audi A3:

- Standard MIB MMI radio
- High-spec MIB
 - MMI navigation plus
 - MMI navigation plus with Audi connect

allows the hardware to be easily and economically updated so that it always incorporates the latest technological advances.

An important component is the graphics processor made by market-leader Nvidia, with whom Audi enjoys a very successful business relationship. The latest Nvidia processors will continue to be used in Audi vehicles in the future. The new platform means that it will be possible to use the same central processing units across the entire Group. So, in the future it will be possible to run brand specific variants on four standardized hardware platforms.

eMedia



Click here for a closer look at the Audi A3 sedan Modular Infotainment System.



For more information about the infotainment systems of the 2015 A3, please see eSelf-Study Program 970143, *Modular Infotainment Platform (MIB)*.

Standard MIB - MMI radio

High spec MIB MMI navigation plus

High spec MIB MMI navigation plus with Audi connect









5.8" TFT colour monitor with 400 x 240 pixel resolution	5.8" TFT colour monitor with 400 x 240 pixel resolution	7.0" TFT colour monitor with 800 x 480 pixel resolution
	2D navigation system	3D hard drive navigation system
		MMI touch
AM/FM radio with phase diversity	AM/FM radio with phase diversity and TMC tuner	AM/FM radio with phase diversity and back- ground tuner
Car menu	Car menu	Car menu
CD drive (MP3, WMA, AAC ¹⁾)	CD drive (MP3, WMA, AAC)	DVD drive (audio/video, MP3, AAC, WMA, MPEG4)
1 SD card reader (SDHC cards with up to 32 GB of memory)	2 SD card readers (SDHC cards with up to 32 GB of memory)	2 SD card readers (SDHC cards with up to 32 GB of memory)
		approximately 10 GB for jukebox
AUX (with AMI)	Audi music interface with iPod cable (UE7)	Audi music interface with iPod cable (UE7)
Audi Sound System (9VD)	Audi Sound System (9VD)	Audi Sound System (9VD)
	Bluetooth interface for HFP and A2DP (9ZX)	Bluetooth interface for HFP and A2DP (9ZX)
	Speech dialogue system	Premium speech dialogue system
		1 sim card reader
Bluetooth interface for HFP and A2DP (9ZX) and speech dialogue system		
Optional Audi music interface with iPod cable (UE7)		

		Bluetooth car phone BTA (market-dependent, Audi connect incl. car phone) (9ZK)
SDARS HD radioSDARS HD radio(QV3)(QV3)		SDARS HD radio (QV3)
	Bang & Olufsen Sound System (9VS)	Bang & Olufsen Sound System (9VS)

On a world-wide basis, Audi offers three main configuration levels for the Modular Infotainment Platform:

- Entry MIB
- Standard MIB
- High-spec MIB

Each of the main configurations has its own sub-configurations depending on the optional equipment installed. All of the MIB configurations use Information Electronics Control Module 1 as the central processing unit.

Depending on version, the module controls the following functions:

- Control of information and entertainment systems
- System master and diagnostics master for MOST
- Radio tuner
- Digital radio tuner (SDARS*)
- CD* or DVD* drive
- Internal audio amplifier for Audi sound system with 180 watts power (6 channels, 3 x 20W + 3 x 40W) (9VD)
- Up to two SD* card readers
- Bluetooth interface (*HFP**, *A2DP** and, with Bluetooth car phone, also SAP*)
- Telephone module and *SIM** card reader
- Navigation system
- Voice control
- WiFi hotspot

In the North American market, three versions of the MIB will be available beginning with the 2015 Audi A3*. They are:

- Standard MIB (Audi MMI® radio*) ►
- High spec MIB (Audi MMI[®] navigation plus**)
- High spec MIB (Audi MMI[®] navigation plus with Audi connect***)



Front panel of Entry MIB

Front panel of Entry plus MIB

618 004



Front panel of Standard MIB, navigation system version 618_006



Front panel of Standard MIB, radio version*

618_005



Front panel of High-spec MIB**



Front panel of High-spec MIB with Audi Connect***

618_008

Standard MIB

In terms of functionality and specifications, the Standard MIB is comparable with the RMC Radio Media Center. This will be marketed in the North American region as Audi MMI® radio.

The module for the Standard MIB always has a MOST bus connection. If no optional equipment requiring MOST data transfer is installed, the MOST connection is unused.

Standard MIB (MMI[®] radio)

MMI[®] radio is based on the Standard MIB and offers the following features:

- Radio with phase diversity module, FM twin tuner (fre-quency modulation) and AM tuner (amplitude modulation)
- Single CD drive which supports MP3, WMA and AAC* files
- An SD card reader for MP3, WMA and AAC files
- Car menu
- Motorized 5.8-inch color TFT screen with 400 x 240 pixel resolution
- A discrete control panel in the center console
- AUX IN socket (UE3)
- SDARS Tuner (digital radio) (OV3)
- Internal audio amplifier for Audi sound system with 180 watts power (6 channels, 3 x 20W + 3 x 40W) (9VD)
- Bluetooth interface for HFP and A2DP (9ZX)

Standard MIB can also be equipped with the following optional feature:

Audi music interface (UE7)

The PR number for the Standard MIB is i8D with the suffix 7Q0. Audi MMI[®] navigation plus is not available on the Standard MIB



MMI[®] screen for Standard MIB (Audi MMI[®] radio)

618_016a



Front panel for Standard MIB, (Audi MMI[®] radio)

618_005



High spec MIB with navigation

The High-spec MIB is the current high-end version of the Modular Infotainment Platform. Two versions will be available in the North American market. In both versions, Information Electronics Control Module 1 has a MOST bus connection. If no other optional equipment requiring a MOST connection is installed on the vehicle, the connection is not used.

The High-spec MIB represents a consistent step forward from the 3G + MMI and features new 3D screen views and SSD (solid state drive).

As mentioned earlier, Information Electronics Control Module 1 incorporates an Nvidia Tegra processor. It is a multi-core processor that generates ultra-high resolution graphics as well as offering faster rendering of current audio and video formats. The Tegra chip requires substantially less energy than previous multimedia processors and fits perfectly with the Audi efficiency philosophy.

The Tegra chip can display entire cityscapes in three-dimensional views – the driver sees the street that he is driving along in photo-realistic quality.

The High-spec MIB is also the only version of the MIB that can play video files directly.

The High-spec MIB offers the following features:

- Radio with phase diversity module, FM twin tuner (frequency modulation) and AM tuner (amplitude modulation)
- Single DVD drive for audio and video files
- Two SD card readers for audio and video files
- SSD solid state drive (64 GB)
- Jukebox (approximately 11GB on the 2015 Audi A3)
 3D navigation system with navigation data on SSD
- (data supplier: Navteq)
- Audi MMI® touch
- Audi music interface
- Car menu
- Bluetooth interface for HFP and A2DP
- Premium interactive voice control system
- Provision of predictive route data
- 7.0-inch motorized TFT display
- Discrete control panel with MMI® touch in center console
- AUX IN socket (UE3)
- SDARS tuner (NAR spec digital radio) (QV3)
- Internal audio amplifier for Audi sound system with 180 watts power (6 channels, 3 x 20W + 3 x 40W) (9VD)



Front panel for High-spec MIB without Audi connect (MMI® navigation plus)





Rear panel for High-spec MIB

618_027



Front panel for High-spec MIB with Audi connect (MMI[®] 618_008 navigation plus with Audi connect)



Rear panel for High-spec MIB with Bluetooth and Audi connect

Multimedia System Control Head

Two different versions of Multimedia System Control Head are available in the North American market. To allow even more intuitive operation, the number of buttons on the control units has been optimized compared to the previous systems. There are now two new rocker buttons which can be used to choose between two menus in each case.

The volume control also has a right/left rocker action. It can be used to skip backwards or forwards to the previous/next track on the Music menu, for example.

The control panels are connected to Information Electronics Control Module 1 via a private CAN bus.

If the vehicle is equipped with MIB Standard (MMI[®] radio), the following functions are available:

- Tone
- CAR
- Phone
- Media

If the vehicle is equipped with the High-spec MIB system (MMI[®] navigation plus, MMI[®] navigation plus with Audi connect), the left rocker button is used to choose between Telephone and Navigation. The rotary push-button is slightly larger than on the other versions.

Integrated in the rotary push-button is the touch-sensitive input zone (Audi MMI[®] touch). This can be used to control the following functions:

- Entry of letters, numbers and characters using automatic handwriting recognition
- Scrolling through album covers
- Operating DVD main menu
- Moving the navigation map

The combination of rotary push-button and MMI[®] touch is also referred to as the "touchwheel".



MMI[®] Standard control panel



High-spec control panel on vehicles with NAV(Audi MMI® touch is standard)618_062

MMI display

Front Information Display Control Head

The MMI display screen of the 2015 A3 is mounted in the instrument panel and is retracted electrically. The display is only 0.4 in (11 mm) thick. This was achieved by attaching the actual TFT screen directly to its ultra-light magnesium housing.

There are two versions of the screen with the following features:

- ▶ 5.8" TFT color monitor with 400 x 240 pixel resolution
- > 7.0" TFT color monitor with 800 x 480 pixel resolution

The operating mechanism for the display has the following electrical components:

- Display Opening/Closing Motor V301 (with Hall sensor)
- Two limit switches Display Open-Stop Switch F330 and Display Closed-Stop Switch F331

The number of motor revolutions is registered by the Hall sensor while the display is extending and retracting and then evaluated by Information Electronics Control Module. The number of motor revolutions dictates the end position of the display. In addition, both display limit switches are evaluated. The display extends and retracts automatically or if necessary, by pushing Display Unit Button.

If Display Open-Stop Switch is triggered while the display is extended (for example, by pushing down on the display) the electric motor is activated and the display retracts automatically. This safety function lessens the possibility of damage.



5.8" TFT color screen with MMI Radio

618_016a



7.0" TFT color screen with MMI Navigation plus 618_030a



MMI display

609_107



Display Opening/Closing Motor

MMI display mechanism

Display Open-Stop Switch

609_108

Audi Connect

Overview

Audi connect is a wireless/internet-based system which brings together applications that connect present-day and future Audi models with the internet. Audi connect brings the benefits of an increasingly networked world into the vehicle; services supported by Audi connect are tailored for in-vehicle use.

For the 2015 Audi A3, the vehicle must be equipped with Audi MMI navigation plus with Audi connect.

New services will be available for the 2015 A3 in addition to the existing Audi connect services.

Previous services and functions include:

- Audi traffic information online
- Google Earth
- WLAN hotspot

New services include:

- Facebook
- Twitter

Several services, such as "Google Earth", are already activated and ready for use on delivery of the vehicle. Other services, such as "Facebook", can only be used after they have been activated via "myAudi". For this purpose, customers must register online at "myAudi". Customers can then configure their vehicle here. If the configured vehicle meets the requirements for Audi connect, additional services available for this vehicle can also be activated.





Audi connect – Google Earth



Audi connect — activated additional services

609_097

On the A3 sedan equipped with MMI Navigation plus with Audi Connect, the UMTS-enabled phone module once responsible for telephone and Internet connection has been replaced by an LTE data module. This means shorter loading times for Audi connect services and a higher streaming speed for data from and to the Internet via the Wi-Fi hotspot.

LTE stands for long term evolution and is also referred to as the fourth generation of mobile communication standards. The name of LTE denotes that the development of this standard will continue in the future.

Antennas

The LTE antenna 1 is designed as a transmitting and receiving antenna. It is also responsible for the operation in the UMTS/GSM network. LTE antenna 2 is only a receiver antenna for LTE.

When travelling in an area that has only a UMTS/GSM network available, LTE antenna 1 switches its role to receiving those signals. Once the vehicle is in an area where LTE coverage is available, LTE antenna 2 assumes the reception duties.

Today, download speeds of up to 100 Mbit /sec are possible. It the future rates as high as 2 Gbit /sec may be reached.

Basically, LTE technology is based on UMTS. Since high data rates are achieved with LTE, two independent reception antennas are necessary. These provide the two receivers in the LTE module with cell phone signals. The data processed by the two receivers is then combined and summarized into a single unit. Then the data is used for the appropriate application (Google Earth ™, data download via Wi-Fi hotspot, etc.).

625_129



Information Electronics Control Module 1 with LTE antennas.

Note

The LTE module is used only for data receiving. To use a mobile phone it must be connected to the module using the Hands Free Profile (HFP).

Reception indicator

The LTE data module can exchange data via the LTE as well as via the UMTS or GSM network.

The following displays of signal strength and the current network connectivity are shown:

- 2 G GSM network with EDGE (max 220 kbit / s)
- 3 G UMTS network with HSPA (up 7.2 Mbit / s)
- 4 G UMTS network with HSPA + (max. 21 Mbit / s)
- LTE 4 G LTE network (max. 100 Mbit / s)



618_074a

Antenna overview

The aerials in the Audi A3 '13 are distributed across the rear window and the roof aerial. The boosters for the aerials in the rear window and in the rear spoiler are mounted to the rear hatch.

The boosters for the antennas in the rear window are mounted under the C-pillar trim panel.





LTE antennas

The Audi's A3 sedan with Audi connect has two LTE antennas mounted on the inside of the rear bumper.





625_132a

Sound systems

The Audi sound system is standard equipment for the 2015 A3 sedan. It features nine speakers and a hat-shelf mounted sub-woofer. The audio amplifier is integrated with Information Electronics Control Module and has a total power output of 180 watts.

Audi sound system



The optional Bang & Olufsen Sound System delivers a total power output of approximately 705 watts.

With its 5.1 Surround Sound speakers, it provides excellent sound quality. The external Bang & Olufsen audio amplifier (Digital Sound System Control Module) powers a total of 13 loudspeakers and the sub-woofer through its 15 channels. The sub-woofer is driven through two channels. The external audio amplifier is installed under the left front seat. It is connected to Information Electronics Control Module via the MOST bus. When the Bang & Olufsen system is installed, both bass front speakers in the doors are highlighted by indirect LED lighting controlled by the door control modules.

The subwoofer is located under the rear hat-shelf.



Audi A3 sedan with Bang & Olufsen Sound System

Service

Service interval overview for North American region

Service recommendations can be viewed through the MMI.

- Oil change service
- Mileage based service events
- time based service events



The first recommended oil change for A3 sedans in the North American region is at 5000 mi (8000 km) or at one year from the date of delivery. An oil change and inspection service is recommended at 15,000 mi (24,000 km) Oil change service is recommended 10,000 mi (16,000 km) thereafter with. See the chart below.



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Audi of America, LLC 2200 Ferdinand Porsche Drive Herndon, VA 20171