F-MAX USER MANUAL

Koç

Ford TRUCKS
Sharing the load

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It shall not be translated into another language, modified or supplemented in any way. The points specified above are valid for the sections of this manual, too.

This manual intended to inform Ford owners of about the maintenance and operation of the vehicle and despite the fact that maximum efforts have been made to ensure that the information contained during the preparation of this manual was correct and complete, Ford Otosan shall not be held responsible for any missing or incorrect information.

Some of the illustrations in this manual may show features as used in different models, thus some features may appear different on your vehicle, however, the essential information in the illustrations is always correct.

This manual describes product features and options available throughout the range, sometimes even before they are generally available. Thus, some of the features here may not be available in the vehicle you purchased.
The information contained in this manual does not constitute an offer for sales or a guarantee that such features are available on the vehicle.

The pictures, technical information and descriptions contained in this manual were valid at the time of print. In the interest of continuous development the right is reserved to change specifications, design or equipment at any time without notice and without incurring any obligations.

If you have any doubts about the features of your vehicle, please consult a Ford Otosan dealer considering that the standard and optional features of the vehicles are subject to change from time to time.

Important: Ford genuine parts and accessories have been specifically designed for Ford vehicles. These are suitable for your vehicle.

We would like to point out that other parts and accessories than mentioned above have not been examined and approved by Ford unless explicitly stated by Ford. In spite of continuous market product monitoring, we cannot certify the suitability of such products. Ford is not liable for any damage caused by the use of such products.

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About This Manual

ABOUT THIS MANUAL

Thank you for choosing Ford. We recommend that you take some time to get to know your vehicle by reading this manual. The more that you know about it, the greater the safety and pleasure you will get from driving it.

Also some features may be explained although they are not introduced because of the time periods between the dates of issue.

Regular servicing of your vehicle helps maintain both its roadworthiness and its resale value.

More than 100 Ford Authorized Dealerships around the world will offer you help with their professional service experience.

Authorized Dealerships provide you the best expert service with their specifically trained personnel. Moreover, they are supported with a wide range of tools and equipment specially developed for applying service on Ford vehicles.

Note: Remember to pass on the Owner's manual when reselling the vehicle. It is an integral part of the vehicle.

All technical information and data included in this manual are valid in the issue date of this manual. However, we reserve the right to make changes without prior information due to our continous product development policy as FORD OTOSAN.

Some features described in the user manual may not be present in your vehicle depending on the vehicle model.

Regards,
FORD OTOMOTİV SANAYİ A. Ş.

For Diesel Vehicles
CAUTION !
Use only EN590 compliant, high quality fuel (Eurodiesel) with low ratio of sulphur. Fuel-related faults that may occur when EN590 compliant, high quality fuel (Eurodiesel) with low ratio of sulphur is not used shall be considered out of warranty cover.

FORD OTOSAN

INTRODUCTION 1

1 INTRODUCTION

Accessories and Parts

PARTS AND ACCESSORIES

Your Ford has been built to the highest standards using high quality Ford Original Parts. You may enjoy driving your vehicle for years.

We advise you to use Ford Original Parts only when an unexpected situation occurs and a part should be replaced.

The use of Ford Original Parts ensures that your vehicle is repaired to its pre-accident condition and maintains its maximum residual value.

Ford Original Parts complies with the strictest safety conditions and highest safety standards of Ford. Thus, they offer the best total repair cost including the costs of parts and labor.

Now it is much more easier to understand if the part offered to you is a Ford Original Part. Ford Original Parts listed below have a Ford logo on them.
Inspect whether the part has a Ford logo in case of a repair, and make sure that Ford Original Parts are used.

Symbols on your vehicle

When you see these symbols, refer to the relevant section of this manual before touching any part or attempting an adjustment of any kind.

SYMBOLS GLOSSARY

Symbols in this manual

WARNING

You risk death or serious injury to yourself and others if you do

CAUTION

You risk damaging your vehicle, if you do not follow the instructions highlighted by the caution symbol.

ACCESSORIES, SPARE PARTS AND MODIFICATIONS

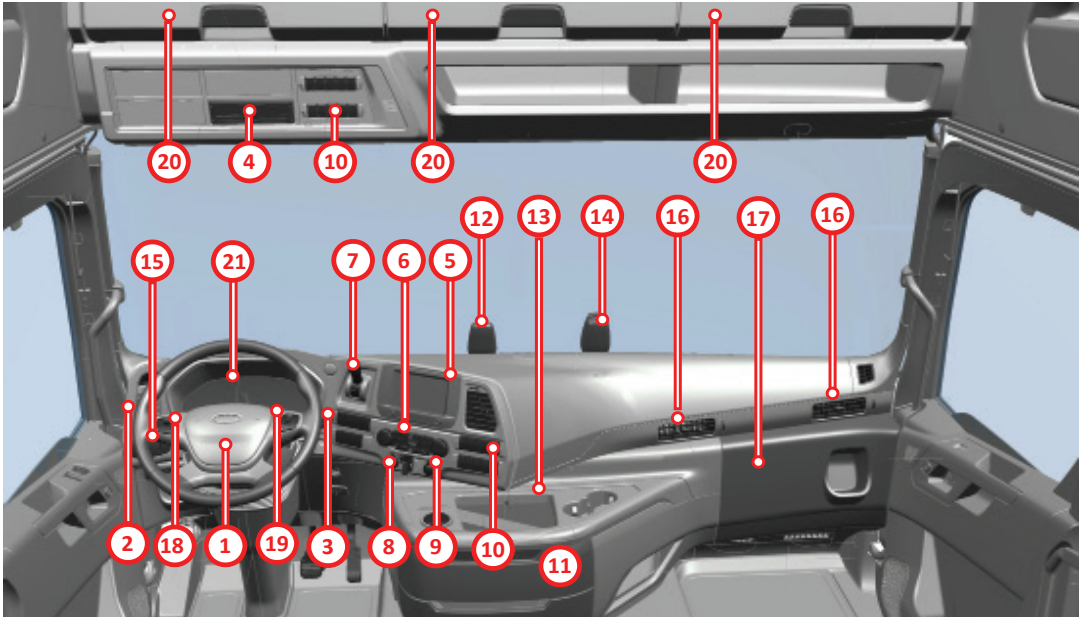
Today, there are many non-original parts and accessories are being sold in the market for FORD CARGO vehicles. Using these type of non-original FORD CARGO parts and accessories (even these parts are authorized by some institutions in your country) may have an adverse effect on the safety of your vehicle. Therefore, non-original FORD TRUCKS parts and accessories and problems likely to result from the usage of these are not considered under warranty and this does not put FORD CARGO under any liability.

No modifications should be performed on this vehicle. Any modification on your vehicle could effect your vehicle's performance, safety, and durability, and it might also be against legal regulations. Additionally, any damage and performance problems due to the modification of your vehicle are not considered under warranty cover.

FORD OTOMOTİV SANAYİ A. Ş.

1 INTRODUCTION

Dashboard



Dashboard

1	Steering Wheel
2	Multi-functional handle (left)
3	Multi-functional handle (right)
4	Tachograph
5	Information and Entertainment display
6	Climate-Control
7	Parking brake
8	Lighter / 12V outlet-20A
9	24V outlet-15A
10	Control Panel/Control Buttons
11	Centre console storage com partments

12	Camera
13	Centre console / Bottle holders
14	Rain sensor
15	Headlamp control panel
16	Ventilation and A/C heater air outlets
17	Fuse cover
18	Cruise control
19	Audio control
20	Storage compartments
21	Digital indicator

Safety

2

Seat Belts

Seat belts provided with your vehicle are the most important on-board safety equipment.
Seat belts minimize the risk of injury by reducing the movement of the occupants in the direction of impact and their contact with the interior in case of a crash.

Always fasten your seat belts while driving. Seat belt shall not loose or bent or shall not be blocked by another occupant or load.

WARNING

Seat belt cannot provide its protection function if you do not fasten it correctly or ensure that the belt lock is engaged properly. Otherwise, you may get seriously or fatally injured in case of an accident. Ensure that all occupants of the vehicle have properly fastened their seat belts to prevent this.

WARNING

Always ensure that the seat belt passes over the hip area, not over the abdominal area; that it is tensioned, and not bent in any way; that it passes from the center of the shoulders, not from the neck area or from the armpits; that it is pulled upwards from the chest area and that it is tensioned on the hip area. Do not fasten the belt with heavy items and avoid wearing thick clothes.
Do not fasten the seat belt over fragile objects in or on your clothes such as glasses, keys, pens etc.
Use a seat belt for only one person.
Never travel with your children on your lap and do not fasten the seat belt over them.

WARNING

Seat belts provide safety inside the vehicle when the occupants are seated in vertical position while the backrests of the seat are in vertical position.

Avoid seating position that prevent correct operation of the seat belts.

Do not drive while the backrest is leaned backwards excessively.

2

Seat Belts

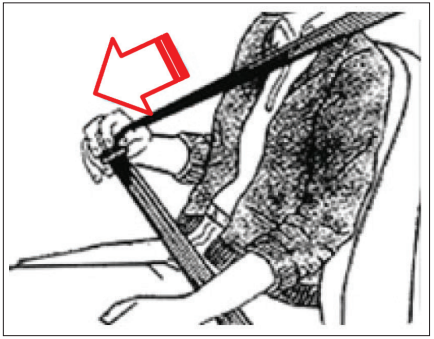
WARNING

Seat belt cannot provide proper functionality when the belt or lock of the seat belt is damaged. To prevent this, check the seat belts for damage or jamming periodically.

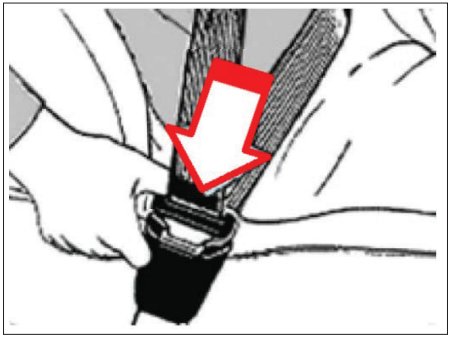
Otherwise, seat belt may be torn in case of an accident and cause serious or fatal injuries.

Do not perform any repair or modification on the seat belts, contact the authorized service in case of a damage to the belt. Fasten your seat belt before starting your vehicle.

Fastening the seat belt



Pull the seat belt continuously from the reel. Seat belt may be locked when it is pulled too fast or when the vehicle is on a slope. In this case, relieve the seat belt and allow it to retract a little, then try again. Hear the locking click when you are inserting the latch of the seat belt to the buckle. Otherwise, seat belt is not locked. Adjust the height of the seat belt as per your your shoulder. (If height adjustment feature is available)



Press the red button on the buckle to release the seat belt. Then, release the belt slowly to allow that it is wound on the reel fully.

Seat belt shall pass through the middle of your shoulder. And, the waist part shall be seated firmly on your hips, not on your stomach.

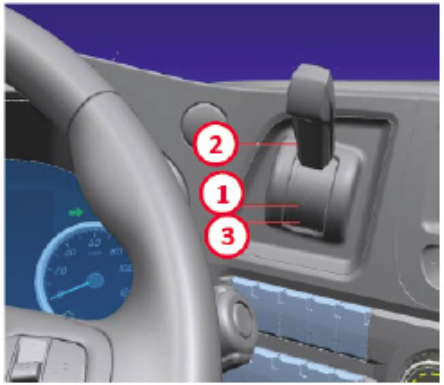
Park Brake Control

Park brake is placed on the front console. Always apply the park brake after parking the vehicle. Chock the tires if the vehicle is parked on a slope.

Park position

Bring the park brake lever to position 1. When the park brake is engaged, the display flashes red. (P)

Drive position:

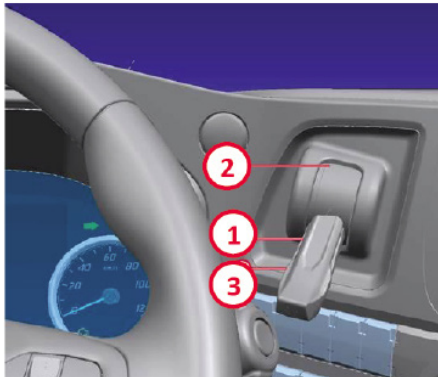


Bring the park brake lever to position 2.

WARNING

Do not apply the park brake while the brake drums or disks are very hot, wait for them to cool.

Test Position



After taking lever to position 1, check whether the vehicle with semi-trailer moves by pressing on the lever and pulling the lever down (position 3). Then, bring the lever to park position (position 1) again. Then, get off the vehicle and apply the trailer park brake.

Park Brake Control

WARNING

Park brake is spring type. If there is not enough pressure in the air tanks, park brake will not be released from the control lever.
There shall be enough air pressure on the tanks to release the brake. If it is not possible to provide the air required, you may discharge the brake by rotating the spring of the setting bolt on the park brake bellows.
Before releasing the park brake spring, ensure the safety of your vehicle by chocking the wheels. Do not drive the vehicle if any park brake circuits are not working. Bellows may be frozen if the brakes cannot be released while the lever is released on winter. Spring is installed by rotating the bellows installation bolt in the tightening direction. To ensure that the emergency spring is fully installed, the setting bolt shall be tightened until it does not turn any more.

General Safety Warnings

One of the most important safety elements on your vehicle is the tires. Check the tire pressure and condition periodically. Do not drive your vehicle with worn tires. When the tire pressure is very low, tires may get extremely heated and worn and these may cause excessive fuel consumption.
When the tire pressure is very high, this may cause longer braking distance, worse handling and excessive wear on tires.
If the pressure loss happens continuously, this may be caused by external damages, cracks, foreign material in the tires and faulty tire valves leaking air.

WARNING

Please, observe the prescribed tire pressure for your vehicle.
Very low tire pressure may cause blowout of the tire at high speeds and loads. You can cause an accident and thus injuries to others due to this.

Tire profiles
A minimum profile depth is prescribed for tires by law. Observe the legislation for the relevant country.
For safety reasons, change your tires before reaching the legally advised minimum profile depth.

WARNING

An excessively low tire profile may cause loss of handling at high speeds in case of rain or snow mud conditions. You may loose your handling and cause an accident in these conditions.

The Condition of the Tires
Check the following conditions regularly every 2 weeks and before a long haul to inspect the condition of the tires:
- External damage
- Cracks and bulges on the tires,
- Foreign material in the tire profile,
- Irregular wear of the profile.

WARNING

Do not forget that the external damages, bulges and cracks on the tires may cause blowout of the tire. You may cause an accident in these conditions.

The Aging of the Tires
Aging of the tires reduce the operation and traffic safety of the tires. Even unused tires are aged.
Always replace your tires if they are aged more than 6 years.

Tire Damages
Tire damages are usually caused by the following reasons:
- Aging of the tire
- Foreign material
- Usage conditions of the vehicle
- Weather conditions
- Oil, fuel, grease etc. - Contact with materials
-Dragging on the sidewalks
- Low or high tire pressure

WARNING

When your vehicle passes over the sides of the sidewalks or objects with sharp edges, this may cause damages that cannot be seen externally.
These damages can only be noticed in the future and cause a flat tire.
Do not park your vehicle with some part of the tire on the sidewalk.

2

General Safety Warnings

WARNING

Failure to observe following conditions may cause accidents which may result in serious injuries.
-Using a mobile phone while driving may distract you.
-Do not adjust the seat and steering wheel while driving.
-Occupants travelling on any other place than seats (e.g. on the bed) may cause serious injuries while braking.
-Do not put load on the beds inside the cab. This may cause serious injuries while braking.

WARNING

Make sure that the heater is off before refuelling of the vehicles with additional fuel tank for additional cab heater.

WARNING

Do not carry or store material harmful to the health inside the driver cab.
Examples of these materials are:
- Fuel
- Acid
- Lubricants and grease
-Cleaning agents

Vehicle Tracking Safety System
Fleet tracking systems are also used for finding the location of the vehicle in case of car theft.
However if the vehicle tracking module is removed, the location of the vehicle can not be found.

Vehicle Tracking Safety System eliminates this problem which is the weak point of the fleet tracking systems, since the module can not be removed and prevents the stolen vehicle from being driving away.

In vehicles with optional vehicle tracking safety system, starting may be last up to 35 seconds when the disconnecting switch shut off because of the safety package.

After the ignition is on, wait for the red immobilizer light  to dim out before starting.

If the instrument panel and FMS can not communicate while the ignition is on, the vehicle can not be started.

This prevents the starting of the vehicle without GPS tracking. Vehicle can not be started and indicates a warning in this case.

Cleaning of Exhaust Filter
The exhaust filter found in Euro 6 vehicles retains the smut coming from the exhaust gas and decreases the emission values. With the exhaust filter cleaning operation which can be performed automatically or manually, the smut retained in the filter is burned with regular intervals so that the filter is emptied before filling up and being clogged. In this operation, the exhaust gas is heated by the engine and smut is burned. Driver is informed about the exhaust filter cleaning of the vehicle through the messages displayed on the indicator panel and explained in detain in the Exhaust Filter Cleaning section

WARNING

Since the exhaust gas shall heat up during the exhaust filter cleaning; ensure that the vehicle is not in the same place with flammable, inflammable and explosive materials or in enclosed space

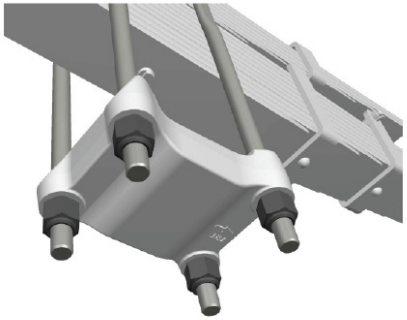
WARNING

Ensure that vehicle exhaust cleaning is not performed in locations like hazardous material loading and unloading places or fuelling stations. When necessary, activate the exhaust filter cleaning prevention using exhaust filter cleaning prevention button

CAUTION

Using exhaust filter cleaning prevention for prolonged time may cause the exhaust filter to be clogged and rendered unusable. Please observe the warnings provided in the indicator panel and do not use manual filter cleaning prevention unless necessary.

U-bolt nuts



WARNING

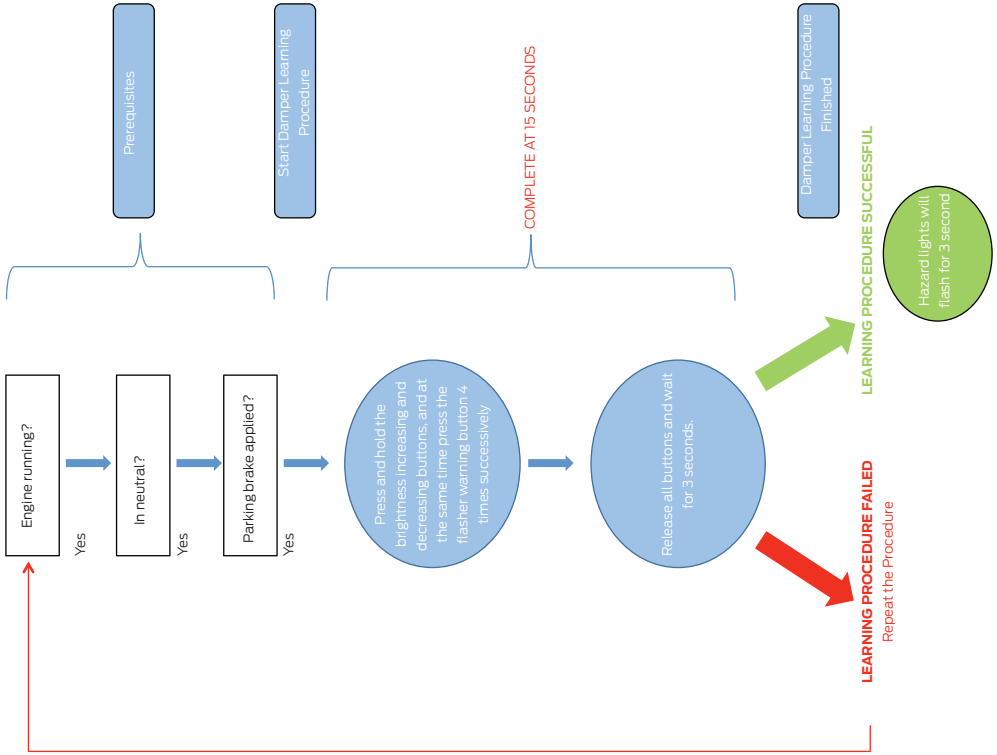
It is recommended, for a longer life of the springs, that you have the spring U-bolt nut torques checked between the first range of 2.000 km and 5.000 km (for once).

Emergency lock

There are emergency locks on both the left and right doors of your vehicle.
Lock is integrated to the door on the area shown in the figure, and if you need to leave the vehicle when your batteries have run out or in case of a power problem, you shall rotate the emergency lock to lock the doors.
Doors remain locked if the doors are closed after rotating the emergency
Emergency lock is rotated with the metal handle, it is possible to lock and unlock both.

2

Damper Learning Procedure



CONTROLS AND INDICATORS

3

CONTROLS AND INDICATORS

Instrument Panel

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1	Tachometer
2	Engine coolant temperature gauge
3	Fuel gauge
4	Trip computer
5	Urea level gage
6	Engine oil pressure/brake air pressure indicator
7	Speedometer

Instrument Panel

FUNCTION	SYMBOL	COLOR	BUZZER
Intarder		Green	n/a
Trailer ABS/EBS		Yellow	n/a
Park Brake Sign		Red	n/a
Engine brake		Yellow	n/a
Cleaning of Exhaust Filter		Green	n/a
Seat belt warning		Red	n/a
Cab raised warning		Red	n/a
Low urea level		Yellow	yes
Front Fog Light		Green	n/a
Trailer right/left turn signal warning		Green	n/a
Alternator		Red	yes
Park lamp indicator warning		Green	n/a
Rear Fog Lamp		Yellow	n/a
Main Beam		Blue	n/a

FUNCTION	SYMBOL	COLOR	BUZZER
Engine fault lamp		Yellow	n/a
Oil level warning		Yellow/Red	yes
Oil Pressure Warning		Green	yes
Hight Engine Water Temperature		Red	yes
High Exhaust Temperature		Yellow	yes
Cold Starting Aid		Yellow	n/a
Fuel Level warning		Yellow	yes
High Air Pressure 1		Red	n/a
Low brake air pressure		Yellow/Red	yes
High Air Pressure 2		Red	n/a
Icing warning		Yellow	n/a
Emergency braking system		Yellow	yes
Lane departure warning system warning		Yellow	n/a
ESP		Yellow	n/a

CONTROLS AND INDICATORS

Instrument Panel

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FUNCTION	SYMBOL	COLOR	BUZZER
Cruise Control		Grey/ Green	n/a
Adaptive speed control system		Grey/ Green	n/a
Exceeding of speed limit (Optional)	>120	Yellow	yes
Hill launch assist active		Yellow	n/a
Damper lifting		Red	yes
Information warning		Red/ Yellow	n/a
Tire pressure warning		Yellow	yes
MIL (malfunction indicator lamp)		Yellow	n/a
Map Assisted Speed Control System	PCC	Grey/ Green	n/a

FUNCTION	SYMBOL	COLOR	BUZZER
Map Assisted and Adaptive Speed Control System	PCC	Grey/ Green	n/a
Immobilizer		Red	n/a
Auxiliary heater (Dry type)		Yellow	n/a
Auxiliary heater (Wet type)	2	Yellow	n/a
Right Signal Lamp		Green	yes
Left Signal Lamp		Green	yes
Speed limiter	LIM	Grey/ Green	n/a
Auxiliary heater timing		Yellow	n/a
ESP Off		Yellow	n/a

Screen warning and error warnings...

SYMBOL	WARNING	WARNING DESCIRPTION
	Drive with fixed speed to clean exhaust filter	Exhaust smut filter saturation is above the expected level. This might be caused by the style of driving or the driving time. For the vehicle to be able to conduct automatic filter cleaning, it is advised that you drive the vehicle with a fixed speed above 30kph when you see the green exhaust filter cleaning symbol. If the road conditions are not suitable, it is recommended to perform manual exhaust filter cleaning.
	Park the vehicle. Perform exhaust filter cleaning using the button	Exhaust smut filter is filled to the extent that the vehicle cannot perform automatic cleaning. In this case; park the vehicle to a safe location and make sure that the vehicle is not in contact with any flammable material, and then perform manual cleaning using the manual cleaning button. You can find manual cleaning conditions in the manual exhaust filter cleaning section.
	Exhaust filter excessively full. Drive to an authorized service.	Exhaust smut filter is filled to the extent that the vehicle cannot perform manual or automatic cleaning. In that case, it is recommended that you immediately drive to the nearest service and have the exhaust smut filter cleaned before it is damaged. Drive vehicle under light load to prevent excessively full exhaust filter from being damaged.
	Remove the cancellation of exhaust filter cleaning when possible	Exhaust filter started to fill up excessively while the manual exhaust filter cleaning prevention is active. It is recommended that you lift the exhaust filter cleaning prevention before the filter is overloaded or allow manual filter cleaning. You can remove the filter cleaning prevention by keeping the filter cleaning prevention button for 3 seconds or by restarting the engine after turning off the ignition.
	Exhaust filter is being cleaned. Remaining: ... min.	Manual exhaust filter cleaning is active During exhaust filter cleaning, the exhaust gas temperature is increased to burn the soot inside the exhaust filter. Time remaining to the end of operation is shown in minutes.
	Conditions are not suitable for cleaning of the exhaust filter	Conditions are not suitable for manual exhaust filter cleaning. In this case, you have to ensure that the conditions written in the manual exhaust filter cleaning section are met
	Exhaust filter cannot be cleaned. Drive to an authorized service.	An error in the vehicle or the exhaust system automatically prevents the vehicle from performing exhaust filter cleaning. In this case, you should drive to the nearest service and have necessary checks performed. Otherwise, the exhaust filter will fill excessively and be damaged.
	Exhaust filter cleaning prevented by the driver.	Exhaust filter cleaning prevention is activated by the driver. You can activate the exhaust filter cleaning prevention while loading hazardous materials or while driving the vehicle in an environment with flammable materials like grass, hay, petroleum products etc. Please keep in mind that the exhaust filter will be damaged in long blocking durations.
	Exhaust gas is hot, pay attention during parking.	This warning is for the purpose of informing the driver. Exhaust gas temperature is high due to driving under heavy load or exhaust filter cleaning. This warning is activated when the exhaust gas temperature is high and the vehicle speed is low. It is normal to see this warning during exhaust filter cleaning. When the warning is active, please ensure that the vehicle and exhaust fumes are not in the same environment as flammable materials like grass, hay, petroleum products etc. and that the vehicle is not in an enclosed area. Otherwise, fire risk may occur!
	Faulty Urea detected	Material not conforming to ISO22241-1 standards detected in urea tank. Drain the urea tank and add urea that conforms to the standards. Resolve the problem as soon as possible to prevent power cut off.

CONTROLS AND INDICATORS

Instrument Panel

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SYMBOL	WARNING	WARNING DESCIRPTION
	Perform brake pedal test	Have the brake pedal test performed
	The battery level is low. Please start the engine.	Press the heater button to restart.
	AEBS faulty. Drive to an authorized service.	AEBS faulty. Drive to an authorized service.
	Brake Air pressure high	Brake Air pressure high
	Wheel sensor battery low.	Wheel sensor battery low.
	Engine will shut off. Press the pedal again to cancel.	Engine will shut off. Press the pedal again to cancel.
	ATG active	ATG active warning
	Warning, clutch overheated	Clutch lining failure
	Warning, clutch protection active	Clutch lining failure
	High Speed	High speed warning

SYMBOL	WARNING	WARNING DESCIRPTION
	Urea dosage error	Error detected in urea dosing system. Please drive to service to prevent power cut off.
	Critical emission error	Error detected in systems related to emission. Please drive to service to prevent power cut off.
	Fill the urea tank	There is not enough level of urea in the urea tank. Please add urea that conforms to the standards in order to prevent power cut off.
	Urea level low	Urea level low in urea tank. Please add urea that conforms to the standards in order to prevent power cut off.
	Check the engine oil.	Oil level warning
	ECAS warning active	Air suspension warning active
	Engine oil replacement time	Oil replacement warning
	Air filter blocked. Drive to an authorized service.	“Air cleaner shall be changed as soon as possible. Drive to workshop”
	Steering oil pressure is low.	Oil level shall be checked when lit. If there is a leakage, request road assistance. If there is no leakage, drive to the nearest workshop without exceeding 50 km/h speed.
	Fuel filter blocked. Drive to an authorized service.	Drive to an authorized service.

Instrument Panel

SYMBOL	WARNING	WARNING DESCIRPTION
	Engine coolant level low	If the warning lamp is not turned off after top up, the vehicle should be taken to the nearest workshop as soon as possible.
	Water has been detected in the fuel. Drive to an authorized service.	Drain the water in the pre fuel filter water container, and if the lamp is not turned odd, the vehicle should be taken to the nearest workshop as soon as possible.
	Front radar sensor blocked. Refer to the manual	Refer to the manual
	Front camera failure, drive to workshop	Front camera failure, drive to workshop
	Low front camera resolution. Refer to the manual	Low camera resolution. Refer to the manual
	Avoid idling for a long time to reduce fuel consumption.	Avoid idling for a long time to reduce fuel consumption.
	AEBS does not support the brake system of the trailer	AEBS does not support the brake system of the trailer
	Driving period of 4.5 hours has expired. Take a break.	Tachograph break time
	Oil level measurement problem. Drive to an authorized service.	Drive to an authorized service.
	Driver`s door open	Door open warning

SYMBOL	WARNING	WARNING DESCIRPTION
	Passenger door open	Door open warning
!	Speed limit shall be activated 60 seconds later.	Speed limit shall be activated 60 seconds later.
!	40 km/h overspeeding. Slow down.	40 km/h overspeeding. Slow down.
!	ACC cannot be used.	ACC cannot be used.
!	Dry type heater fault. Heater shall be disabled	Dry type heater fault. Heater shall be disabled
!	Wet type heater fault. Heater shall be disabled	Wet type heater fault. Heater shall be disabled
!	Park heater running.	Park heater running.
!	Please shift the transmission to neutral.	Please shift the transmission to neutral.
!	CC not available. Disengage auxiliary brakes.	CC not available. Disengage auxiliary brakes.
!	Too much MyView screens. Delete a screen to add a new screen.	Too much MyView screens. Delete a screen to add a new screen.

CONTROLS AND INDICATORS

Instrument Panel

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SYMBOL	WARNING	WARNING DESCIRPTION
	Brake Air Pressure low	Brake Air Pressure low
	Tire pressure low	Tire pressure low
	Tire pressure too low	Tire pressure too low
	Tire pressure high	Tire pressure high
	Tire temperature high	Tire temperature high
	Update conditions are not met. Refer to the user manual	Refer to the user manual
	Update error. Call the authorized service.	Call the authorized service.
	Software update in progress. Do not switch off the ignition.	Software update in progress. Do not switch off the ignition.
	Update not successful. Old version is used	Update not successful. Old version is used
	Update interrupted. Restart to continue.	Update interrupted. Restart to continue.

SYMBOL	WARNING	WARNING DESCIRPTION
	Update successful. Turn the ignition off and on.	Update successful. Turn the ignition off and on.
	ADAS map programming is resumed. Do not switch off the ignition.	ADAS map programming is resumed. Do not switch off the ignition.
	ADAS map update successful	ADAS map update successful
	ADAS map update is not successful	ADAS map update is not successful
	Avoid heavy acceleration	Avoid heavy acceleration
	Disengage auxiliary brakes.	Disengage auxiliary brakes.
	Use the auxiliary brakes.	Use the auxiliary brakes.
	Avoid heavy braking	Avoid heavy braking
	Perfect braking	Perfect braking
	Good braking	Good braking

SYMBOL	WARNING	WARNING DESCIRPTION
	Weak braking	Weak braking
	Consider using cruise control	Consider using cruise control
	Consider using adaptive cruise control	Consider using adaptive cruise control
	Consider using MaxCruise	Consider using MaxCruise
	There is a turn ahead. Reduce your speed.	Reduce your speed.
	There is a down slope ahead. Reduce your speed.	Reduce your speed.
	There is an up slope ahead. Increase your speed.	Increase your speed.
	Release the accelerator to reduce fuel consumption, reduce your speed.	Reduce your speed.
	Perfect foresight	Perfect foresight

SYMBOL	WARNING	WARNING DESCIRPTION
	Weak foresight	Weak foresight
	Reduce your speed to reduce fuel consumption.	Reduce your speed to reduce fuel consumption.
	Avoid pressing the accelerator fully to reduce fuel consumption.	Avoid pressing the accelerator fully to reduce fuel consumption.
	Maintain the speed of the vehicle.	Maintain the speed of the vehicle.
	Differential lock engaged.	Differential lock engaged.
	PTO active	PTO active
	Increasing the front suspension height of the vehicle	Increasing the front suspension height of the vehicle
	Vehicle suspension level 2 setting	Vehicle suspension level 2 setting
	Good foresight	Good foresight

CONTROLS AND INDICATORS

Instrument Panel

3

SYMBOL	WARNING	WARNING DESCIRPTION
	Vehicle drive height is not ideal	Vehicle drive height is not ideal
	Brake lining thickness critical. Braking performance low. Contact your authorized service.	Brake lining thickness critical. Braking performance low. Contact your authorized service.
	Brake lining thinned. Contact your authorized service.	Brake lining thinned. Contact your authorized service.
	Adaptive Cruise Control	Adaptive Cruise Control
!	Wheel sensor battery low.	Wheel sensor battery low.
✕	Sensor learning operation is not complete. Vehicle speed is not zero.	Sensor learning operation is not complete. Vehicle speed is not zero.
✕	Sensor learning operation is not complete. Speed is not zero.	Sensor learning operation is not complete. Speed is not zero.
✕	Sensor learning operation is not complete. Parking brake not applied.	Sensor learning operation is not complete. Parking brake not applied.
✓	Sensor learning operation is complete.	Sensor learning operation is complete.

SYMBOL	WARNING	WARNING DESCIRPTION
	Door Open. Apply the Parking Brake	Apply the Parking Brake
	Brake Temperature Too High	Brake Temperature Too High
	Advanced Emergency Braking	Advanced Emergency Braking
✕	Sensor learning operation is not complete. Session ended.	Sensor learning operation is not complete. Session ended.
✕	Sensor learning operation is not complete. Sensor ID conflict.	Sensor learning operation is not complete. Sensor ID conflict.
!	Sensor learning operation is in progress.	Sensor learning operation is in progress.
!	New software update(s) available.	New software update(s) available.
!	EOL Parameters are not restored. Contact your authorized service.	EOL Parameters are not restored. Contact your authorized service.
!	Your software is up-to-date.	Your software is up-to-date.

Instrument Panel

SYMBOL	WARNING	WARNING DESCIRPTION
!	MaxCruise disabled.	MaxCruise disabled.
!	Automatic braking turned off. Take over the brake.	Automatic braking turned off. Take over the brake.
!	Adaptive Cruise Control cancelled!	Adaptive Cruise Control cancelled!
!	ACC cannot be used. Brake temperature too high	ACC cannot be used. Brake temperature too high
!	ACC performance dropped. Brake temperature too high	ACC performance dropped. Brake temperature too high
!	Cruise control active. Automatic braking turned off.	Cruise control active. Automatic braking turned off.

SYMBOL	WARNING	WARNING DESCIRPTION
!	ACC cannot be used. Sensor blocked. Refer to the user manual.	ACC cannot be used. Sensor blocked. Refer to the user manual.
	Power (PWR) mode active	Power (PWR) mode active
	Recovery by swinging (ROC) mode active	Recovery by swinging (ROC) mode active
!	Crank system fault Please wait	Crank system fault Please wait
!	Key initialization error. Please try again.	Key initialization error. Please try again.
!	Crank system cooling period. Please wait	Crank system cooling period. Please wait

Instrument Panel

Odometer

Indicates the road speed (kilometer/hour).

Tachometer

CAUTION

Indicates the engine rpm. Operate your vehicle so that the indicator dial remains in the green zone as much as possible.
Drive your vehicle considering the engine speed. Keeping engine speed in the green zone provides economy. Avoid excessive speeds in the red danger zone. Otherwise, your engine may get damaged.
Ensure that the speed does not increase up to red danger zone, especially while driving down the hill.
Green zone: Economy zone
Blue zone: Zone where the engine brake is active
Red zone: Danger zone
Buzzer sounds when you exceed the maximum allowed engine speed. Lower the engine speed when you hear that warning. Engine brake is deactivated over 2400 rpm.

Engine coolant temperature gauge

Indicates engine coolant temperature.
If the dial of the indicator is in the red area, the engine may overheat.

Red warning light is illuminated on the indicator and the buzzer sounds when the engine coolant temperature reaches 109 ºC.
Your vehicle shall overheat when the temperature exceeds 107ºC, and it shall reduce torque when the temperature exceeds 108ºC. Perform the following when the red warning lamp is illuminated:

- Stop the vehicle and operate the engine in idle.
- Apply park brake, check for water leaks under the vehicle (do not get under the vehicle, check from the side.)
- Open the hood and check for the water level in the engine auxiliary water tank.
- If the water temperature does not drop, stop the engine and tilt the cab. Inspect whether the engine belt is broke.
- Check for water leaks in the thermostat area on the front of the engine.
- Ask the support of a Ford Trucks authorized dealership, if required.

Fuel gauge

Indicates the fuel level in the tank Yellow warning light indicates that the fuel in the tank is reduced. Refill fuel immediately. System will take air if the fuel is lowered.

Icing Warning
Icing warning light illuminates if the external temperature is below 4 degrees

Trip Computer

Air pressure indicator

There are 2 independent air system circuits that supply for the front and rear brake systems. You can read the pressures of these systems from a single air pressure indicator.

Indicator shows the pressure value of the line with low pressure automatically.

If the indicator 1 shows the air pressure of the circuit, the (1) light is illuminated.

If the indicator 2 shows the air pressure of the circuit, the (2) light is illuminated.

Air pressure indicator always shows the air pressure of the circuit with the lowest air pressure. Normal operating range of the system is 10.5-12.5 bars.

Air pressure audible warning

If the air pressure is reduced to a value under 5.5 bars, low pressure warning buzzer shall sound. Buzzer is turned off when system pressure reaches the normal operating pressure at both pressure circuits. Do not drive your vehicle before the audible warning is deactivated! If you hear the audible warning while driving stop your vehicle immediately. Block the wheels. Place road safety signs and call a Ford Trucks authorized dealer.

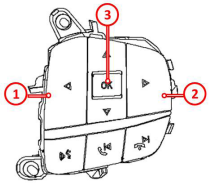
Oil pressure gauge with adapter

Indicates engine oil pressure in "bars". Oil pressure varies according to the oil temperature and engine speed Operating pressure:3 bar @ 90 ºC, 2500rpm Idle pressure: 1.5 bar @ 90 ºC, 550rpm The warning lamp will be illuminated when the oil pressure is low.
Perform the following when the red warning lamp is illuminated:

- Park the vehicle in a secure place, stop the engine.

Contact a Ford Trucks authorized dealership.

Trip Computer



Trip computer shows the information and the warnings. Trip computer data may be changed by the control panel on the steering wheel.
1-Left Direction Key: Allows returning to an upper menu and moving to the left in the menus.
2-Right Direction Key: Allows moving to the right in the main menus.
3-OK Key: This key, which may be pushed up and down, allows easy up and down navigation in the menus.
Also, it allows entering the menus and using the "OK" function in the menus required.

When you press and hold the OK key, and navigate to Indicator Selection from the Vehicle Information Menu, and press and hold the OK key, the upper right indicator is selected as one of the brake air pressure or engine oil pressure.

CONTROLS AND INDICATORS

Trip Computer

1 - Time: Indicates the time period passed in the relevant trip.
2 - Mileage: Indicates the mileage covered in the relevant trip.
3-Average Speed: Indicates the average speed of the vehicle in the relevant trip.
4-Average Fuel: Indicates the average fuel consumption of the vehicle for the relevant trip.

OK To reset the trip mileage, time and average fuel consumption information, press and hold the button on the screen in this menu.

1-Fuel Consumption -1: Indicates the fuel consumed information for the trip in Trip 1 menu.
2-Fuel Consumption -2: Indicates the fuel consumed information for the trip in Trip 2 menu.
3-Fuel Consumption -Total: Indicates the average fuel consumed information for the period starting with the first operation of the vehicle.
4-Average Fuel Consumption: Indicates the average fuel consumed information for the period starting with the first operation of the vehicle.

Exhaust smut level information

If the exhaust level is above 100%, the part between 0% and 200% of the bar will blink.

If the exhaust level is above 200%, the entire bar will blink.

WARNING

As changing trip computer display settings during driving can reduce the driving concentration and can pose a serious accident risk. Settings shall always be performed while the vehicle is parked.

Trip Computer

Tire Pressure and Temperature Monitoring System

WARNING

The fact that the vehicle is equipped with the tire pressure and temperature monitoring system does not cancel the requirement to check the tire pressures manually periodically. Check the tire pressures periodically using a pressure indicator. Failure to keep the tire pressures at correct value increases the risk for damage to tires, loss of handling, tripping over and personal injuries.

Inspect tire pressures (including the spare tire, if available) every two weeks while the tires are cold. Inflate the tires to the correct pressure.

Your vehicle is equipped with a tire pressure monitoring system as an assisting feature for the driver. A warning lamp is lit and an information message is displayed on the indicator if the pressure of one or more tire(s) is significantly raised or reduced, or if the temperature is significantly raised. Pressure and temperature values for each tire may be displayed on the relevant menu, and problematic values are indicated with orange and excessive reduction in pressure is indicated with red.

Stop the vehicle safely, inspect the tires and inflate them to correct pressure if the tire pressure low warning lamp is lit. This system does not replace correct tire maintenance procedures.

You may display tire temperatures by pressing the OK key on the steering wheel for a long time while displaying the tire pressures.

You shall ensure that the tire pressure are correct even if the tire pressure low warning lamp is not lit.

The tire pressure and temperature monitoring system is equipped with a system fault indicator to warn you when the system does not operate correctly. The function of the fault indicator and the tire pressure low warning lamp is common.

When the system detects a malfunction, the warning lamp shall flash for approximately one minute and then remain continuously illuminated. If the malfunction is resumed, this is repeated whenever you turn the ignition on.

System has detected a malfunction that requires servicing. If the fault indicator is lit, the system may not be able to detect or indicate a low tire pressure. Fault may be caused by many reasons such as installation of spare tires or rims that prevent the correct operation of the system.
Always check for tire pressure monitoring system fault warning after replacing one or more tires or rims on your vehicle.

Ensure that the spare tires or rims installed allow correct operation of the system.

With Tire Pressure Monitoring System Replacement of Tires

Always have your tires inspected. We recommend you to contact an authorized service station.

CAUTION

Note: Each road wheel and tire is installed with a tire pressure sensor inside the groove of the wheel and tire assembly. Pressure sensor is installed to the valve body. Tire covers the pressure sensor and it is not possible to see the sensor without removing the tire. Be careful to prevent damage to the sensor while replacing the tire.

Understanding Tire Pressure Monitoring System

System measures the pressure and temperature values on six tires at two axles and sends these values to the vehicle.
System detects the low pressure as significantly lower than the correct inflation pressure and the warning lamp is illuminated. Inflate the tires to the correct pressure.
An information message is displayed on the indicator when the system detects a high, low and excessively low tire pressure and a high tire temperature

WARNING

While the tires are inflating the system may not react immediately to the air added to the tires.

Sensor Learning Operation

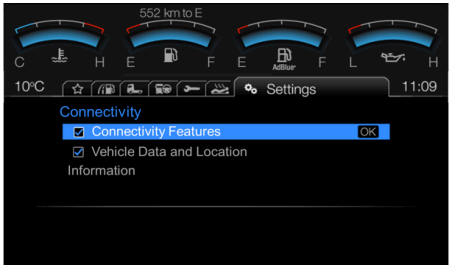
Sensors may be used after performing a learning operation when the tires are replaced, when a new a sensor is used and/or when their position on the vehicle are changed.
Select the location of the tire to be relearned after entering the TPMS “Tire Pressure Sensor Learning” under the “Maintenance” menu in the instrument panel, and keep the OK key pressed.
Sensor is activated by increasing/decreasing the air pressure of the relevant tire when the message indicating that the sensor learning operation is started is displayed. A message indicating that the operation is completely successfully is displayed on the screen. Then the new sensor is learned and its location is specified.
Spare tire does not have a sensor at this moment, and the following label is attached to the tire.

Trip Computer

Connectivity (ConnecTruck) Settings
In order to use the services provided via ConnecTruck, the connectivity services for your vehicle should be selected from the **“Connectivity”** menu on the instrument panel.
For this purpose, the **“Connectivity”** sub-menu under the “Settings” menu shall be selected.

When the **“Connectivity”** submenu is opened, two options - **“Connectivity Features”** and **“Vehicle Data and Location”** - will be shown.
The **“Connectivity Features”** option is the main option and when it is turned off, all connectivity features of the vehicle will be completely disabled.

The **“Vehicle Data and Location”** option provides the option to send your vehicle’s location and other information to ConnecTruck servers. When this option is turned off, no ConnecTruck service will be available for location and vehicle information (example: **MyFordTrucks mobile app**) until you re-enable this option.



CAUTION

In case of problems with ConnecTruck services, first make sure that both “Connectivity” options are selected.

Following the activation of ConnecTruck services, an active SIM card and icon will appear on the display panel. This icon indicates that the GSM modem is active and operating.

When **“Connectivity”** and **“Vehicle Data and Location”** options are selected together, the icon indicates that your vehicle’s location and other information are being sent to ConnecTruck servers.

Control Buttons

CONTROLS AND INDICATORS

Control Buttons

FIGURE	SYMBOL	DESCRIPTON
1		EMPTY
2		SEMI-TRAILER BRAKE
3		INSPECTION OF FRONT SUSPENSION LEVEL
3		INSPECTION OF SUSPENSION LEVEL
4		TIPPER LIFTING
5		AUXILIARY HEATER (DRY TYPE)
5		AUXILIARY HEATER (WET TYPE)
6		TRAILER AXLE LIFTING
7		EMERGENCY BRAKING SYSTEM
8		LANE DEPARTURE WARNING SYSTEM
9		MANOEUVRE MODE SELECTION
10		TRANSMISSION POWER MODE SELECTION

When the keys specified with an asterisk (*) are pressed more than 1 or 2 seconds, it is possible to achieve an illumination starting at a low level and increasing to higher levels.
Some features may not be available on your vehicle depending on the vehicle version.

FIGURE	SYMBOL	DESCRIPTON
10		TRANSMISSION POWER MODE SELECTION
11		EBS CANCEL / EBS ACTIVE
12		DIFFERENTIAL LOCK
13		HILL LAUNCH ASSIST
14		AUTOMATIC HYBRID BRAKE
15		DIESEL PARTICULATE CLEANING ACTIVE
15		DIESEL PARTICULATE CLEANING DEACTIVED
*16		CENTRAL LAMPS / READING LAMP ON/OFF (LEFT) BUTTON
*16		ON /OFF (RIGHT) BUTTON OF THE READING LAMP OF THE CENTER LAMPS
17		WARNING SWITCH HAZARD FLASHER
18		HANDBRAKE
19	STOP	ELECTRICAL CIRCUIT BREAKER

Bed control buttons

FIGURE	SYMBOL	DESCRIPTON
1		ALL LAMPS OFF
*1		BED COMPARTMENT LAMPS ON/OFF
2		AMBIENCE LAMP ON/OFF
*2		FRONT LAMP AND CENTRAL LAMPS ON/OFF
3		RADIO VOLUME UP/DOWN
4		AUXILIARY HEATER ON/OFF
5		ROOF ON/OFF

Lower left control panel control buttons

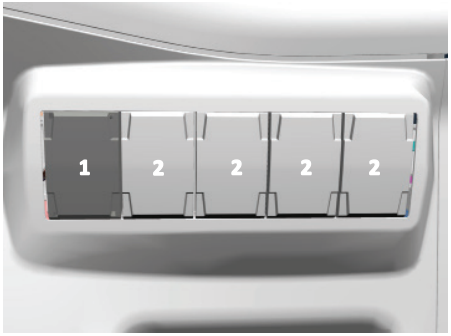


FIGURE	SYMBOL	DESCRIPTON
1		LIGHTING WORKING LAMP
2		EMPTY

Upper panel control buttons

FIGURE	SYMBOL	DESCRIPTON
1		EMPTY
*2		FRONT LAMP AND CENTRAL LAMPS ON/OFF
2		AMBIENCE LAMP ON/OFF
3		DOOR OPEN WARNING
4		ROOF ON/OFF
5		MOVING FRONT SUNSHADE (AUTOMATIC) UPWARDS
5		MOVING FRONT SUNSHADE (AUTOMATIC) DOWNWARDS
6		SIREN BUTTON
6		DOME LAMPS

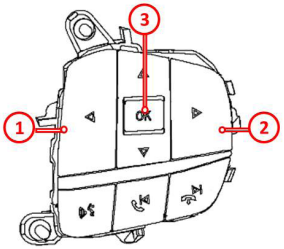
When the keys specified with an asterisk (*) are pressed more than 1 or 2 seconds, it is possible to achieve an illumination starting at a low level and increasing to higher levels.

CONTROLS AND INDICATORS

Control Buttons

3

Control buttons
Audio and volume control buttons
Select the source you want to use for audio With the controls on the steering wheel you can operate the following functions in the music and sound system:



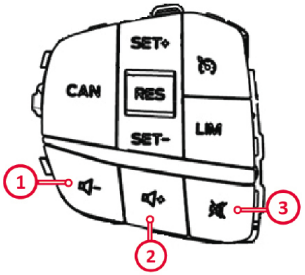
1- Activates the voice command function of your phone if a phone is connected to your vehicle.
This system allows you to control many features using voice command. And this allows you to keep your hands on the steering wheel and focus on the road.
2- Seeking frequencies forward or next.

2- Rejects the call .
3- Seeking frequencies backward or previous .

3- Accepts the call .

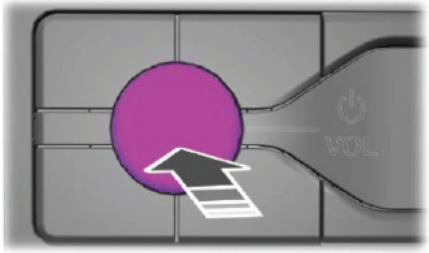
By pressing the Call, Next or Previous buttons:
- You may tune the radio to the next or previous stored preset station
- You may play the next or the previous track.

Press and hold the seek button to:
- tune the radio to the previous or next station.
- seek through a track.

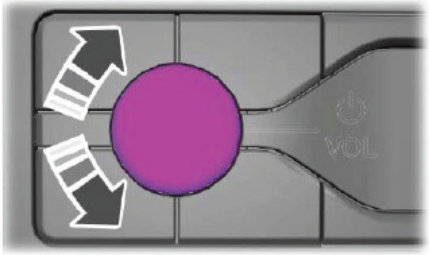


1- Volume down
2- Volume up
3- Mute and unmute

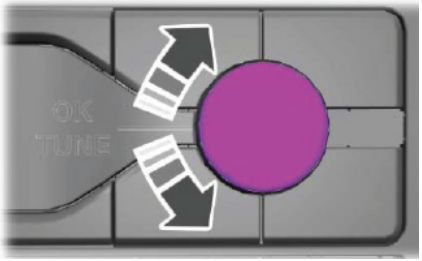
Audio Unit (Model-1)
Turning the audio unit on and off.



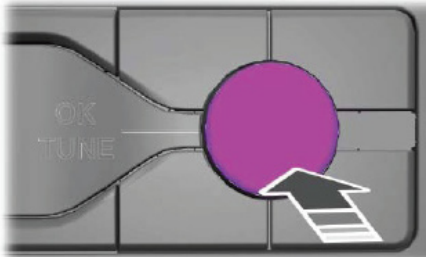
Setting Volume



Navigating in the Menu Options



Selecting a Menu Option



Returning to Previous Screen

Press the button to return to the previous menu.

Selecting Radio

Press the button to select radio mode. Press the button again to display available radio sources.

Press the button continuously or rotate the right-hand knob menu to switch between available radio sources.

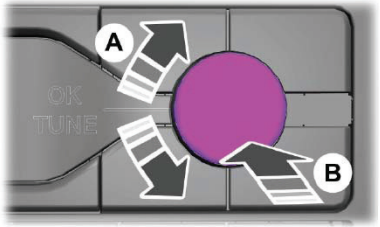
Apps like Siri or Svoice on the phones shall be launched when you press the push-to-talk button on the steering wheel after connecting the phone and the radio with a USB cable.

MULTIMEDIA

Audio Unit

3

Changing the Radio Station



A **Automatic or manual setting B Setting a station name.**
Note: You may switch between automatic and manual setting with the knob using system settings.
Note: You may switch radio stations with the scanning buttons.
Note: You may switch radio stations with the preset number buttons.

Selecting Media

Press the button to select media mode. Press the button continuously or rotate the right-hand knob menu to switch between available media sources.

Forward Scan and Next Track Button

Press the button to select the next indexed frequency (in radio mode) or the next track (in USB or BT mode).

Backward Scan and Previous Track Button

Press the button to select the previous indexed frequency (in radio mode) or the previous track (in USB or BT mode).

Pausing or Playing Media

Press the button to mute the signal in radio mode. Press the switch again to turn the volume of the signal on.

Press the button to pause the track playing in media mode. Press the button again to resume playing.

System Settings

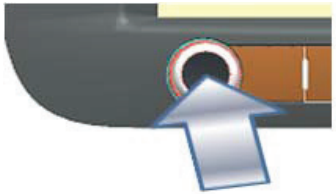
Sound Adjustments

Press the button to adjust volume settings. You may also activate adaptive or speed compensated volume and adjust its precision.

Using Mobile Phones

You may make a call using the last calls list or from the persons list or dial a number.

Audio Unit (Model-2)
Turning the audio unit on and Off.



Radio is turned on when you press shortly while the ignition is on.
Audio system is turned on/off when you press shortly while the radio is on.
This is displayed when you press for a short time while you are in the Audio system menu.

Navigation applications available in the Weblink or Carplay functions in the radio may not be suitable for heavy commercial vehicles. Therefore, you shall prefer the navigation program designed for heavy commercial vehicles on the main menu for navigation purposes.

Setting Volume

Rotate the knob to increase/decrease volume.

Navigating in the Menu Options

Rotate the knob to change the frequency with increments of 0.05MHz.

Selecting a Menu Option

Press the button to stop automatic scan feature.

Forward Scan and Next Track Button

Press the button to select the next indexed frequency (in radio mode) or the next track (in USB or BT mode).

Audio Unit

Backward Scan and Previous Track Button

Press the button to select the previous indexed frequency (in radio mode) or the previous track (in USB or BT mode).

Mute Button

Press the button to mute the source. Press the button again to turn the volume of the source on.

Screen On/Off Button

Press this button to turn the screen on or off.

Main Page (Software Button)

Press this button to switch to the main page screen.

Audio System Menu (Software Button)

Press the button to select audio system mode.

Using Mobile Phone (Software Button)

You may make a call using the last calls list or from the persons list or dial a number.

NAVIGATION SYSTEM (Software Button)

Press the button to open the Navigation system application.

Mobile Applications (Software Button)

Press the button to access Weblink and Carplay applications manually.

System Settings (Software Button)

Press the button to adjust the volume settings, radio settings, screen settings and to access the camera and mobile applications.

Multi-functional Handles

Multi-functional handle (left)

It is placed on the left side of the steering.

1 - High Beam (Continuous)
Push the lever forward to turn the main beams on.
Push the lever forward again or pull towards you to turn the main beams off.

2 - High Beam (Flasher)
To open the selector, pull the lever slightly towards you and release.

3. Right/Left Turn Signal
Push the lever up or down to use the turn signal lamps.

4. Windshield Water Spray
Press the button to activate the washers and spray water to the windshield.

5. Wipers

6. Wiper position

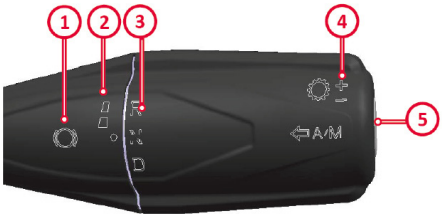
CONTROLS AND INDICATORS

Multi-functional Handles

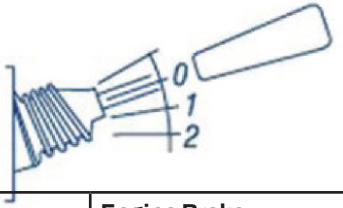
Multi-functional handle (right)

This handle has the following functions:
- Gear
- Engine brake and intarder

On vehicles without intarder



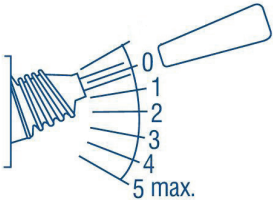
1. Engine brake
2. Engine brake range
3. Gear selection
4. Upshifting/downshifting
5. Automatic / Manual gear selection



	Engine Brake
1. Range	Reduced Brake Power
2. Range	High Brake Power

Vehicles with Intarder

1. Intarder
2. Intarder Range
3. Gear selection
4. Upshifting/downshifting
5. Automatic / Manual gear selection



	Engine Brake	Intarder
Intarder 1	50% Max. Brake Power	20% Max. Brake Power
Intarder 2	50% Max. Brake Power	40% Max. Brake Power
Intarder 3	100% Max. Brake Power	60% Max. Brake Power
Intarder 4	100% Max. Brake Power	80% Max. Brake Power
Intarder 5	100% Max. Brake Power	100% Max. Brake Power

Activation of the gradual continuous braking operations

Bring the gradual braking lever from 1 to max. position.
The vehicle is continually decelerated according to the selected position.
Position 1 = low deceleration
Max. Position = more deceleration.

Deactivation of the gradual continuous braking operations

- Gradual braking lever:
- OFF position

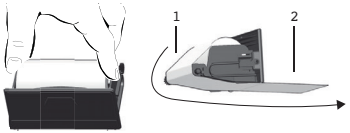
CONTROLS AND INDICATORS

Tachograph

Insert paper roll

► Presstheunlockingsurfaceontheprinterpanel,theprinterdrawer opens.

► Pull the printer drawer out of the DTCO.

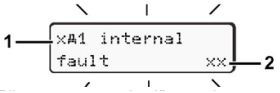


► Insert new paper roll according to the illustration and guide it via the pulley **(1).**

☞ Make sure that the paper roll does not become jammed in the printer drawer and the start of the paper (1) extends beyond the edge of the printer drawer!

► Push printer drawer into the printer compartment until it engages.
► The printer is ready for operation.
► You can start a printout.

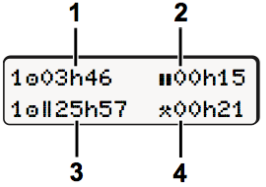
Messages



(1) Pictogram and plain text of the message
! = Event, example **[!⊙▮ driving without card]**
x = Fault, example **[x⊿ sensor fault]**
↯ = Driving time warning **[↯⊙1 break!**
Operational note, example
(2) Error code
For further messages and measures refer to the operating instructions.

Acknowledge message:
► Presskey OK 2times,themessagedisappears.

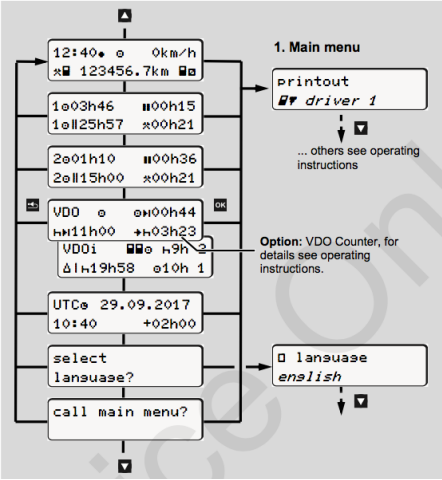
Times of the driver card(s)



(1) Driving time "⊙" since a valid break time.
(2) Valid break time "▮▮" in accordance with regulation (EU) no. 561/2006.
(3) Driving time over two weeks "⊙▮▮".
(4) Duration of the set activity.

☞ **These brief instructions shall not, under any circumstances, be regarded as a substitute for the exhaustive operating instructions for the DTCO 1381 prescribed by EU Regulation (EEC) no. 3821/85, Annex I B.**

Calling up menu functions
Possible only when the vehicle is stationary!



- ► Use the buttons ▲ /▼ to select the desired display.
- ► Use button OK to call up the main menu.
- ► Use / to select the listed ▲ /▼ functions step by step.

Print daily value:

- ► [printout driver 1] ... [24h day] ... [25.10.2017] ... [printout in UTC yes/no]

Enter "Out of scope" beginning / end:

- ► [entry My vehicle] ... [OUT+ begin] or [+OUT end]

Enter Beginning of ferry / train:

- ► [entry My vehicle] ... [OUT+ begin] or [+OUT end]
- ► Set the current activity.

Set Local time:

[entry My vehicle] ... [local time] ...

- ► Set Local time in steps of ± 30minutes.

CONTROLS AND INDICATORS

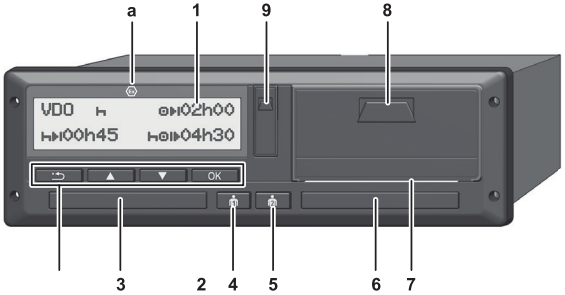
Tachograph

3

Brief instructions Driver

DTCO® 1381 - Release 3.0
A2C13870700/41024284 OPM 000 AA
BA00.1381.30 500 102 (GB) www.fleet.vdo.com

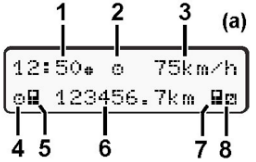
Operational elements



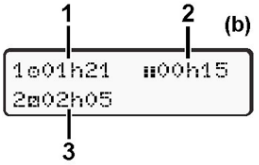
(1) Display
(2) Menu buttons
▲/▼ Select function / selection
OK Confirm function / selection
Exit, abort menu
(3) Card slot 1
(4) Combination key Driver 1
Setting of activities and ejection of the driver card
(5) Combination key Driver 2
Setting of activities and ejection of the driver card
(6) Card slot 2
(7) Cutting edge
(8) Printer drawer
(9) Download interface
(a) Symbol for ADR variant

Standard display(s) during trip

► Press any menu key, change to the desired display.



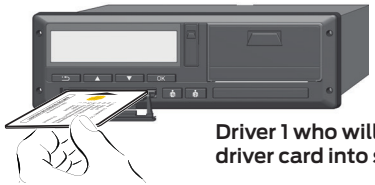
(1) Time (with "*" i= set local time)
(2) "Operational mode"
(3) Speed
(4) Activity, driver 1
(5) Card symbol, driver 1
(6) Toplam kilometre
(7) Card symbol, driver 2
(8) Activity, driver 2



(1) Driving time "⏲" Driver 1 since a valid break time.
(2) Valid break time "⏸", in accordance with regulation (EU) no. 561/2006.
(3) Time of driver 2; availability time "⧈".

The option "VDO Counter" allows another standard display; for details refer to the operating instructions.

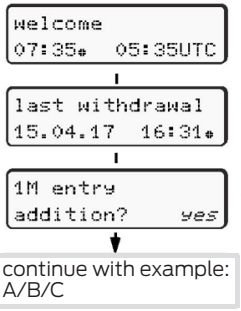
Insert driver card / Manual entries



Driver 1 who will drive the vehicle inserts his driver card into slot 1.

- ► If necessary, switch on the ignition in case of the ADR variants.
- ► KeepthecombinationkeyDriver1formorethan2seconds.
- ► Set, acknowledge day, hours, minutes. Set, acknowledge the next activity.
  The card slot is opened.
- ► Open the card slot cover.
- ► Insert driver card into the card slot.
- ► Close card slot and push it in.
- ► Follow the menu guidance.

Always keep the card shafts closed – except for the insertion or removal of your driver card!



The set local time "07:35•" and the UTC time "05:35UTC" appear (time offset = 2 hours).
The date and time of the most recent card withdrawal will be displayed in local time (symbol "•").

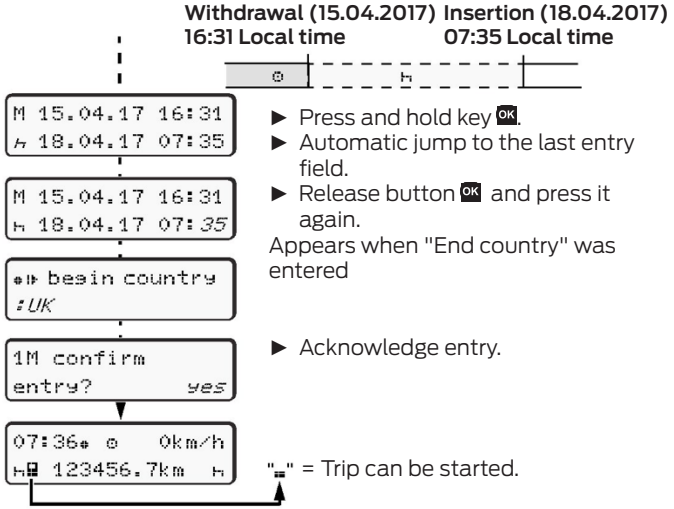
Please ensure the continuous recording of the activities on your driver card!
Make manual entries with **"Yes".**
If you **do not want** to add any activities/rest periods, select **"No".**

CONTROLS AND INDICATORS

Tachograph

3

Example A:



- ► Press and hold key OK.
- ► Automatic jump to the last entry field.
- ► Release button OK and press it again.

Appears when "End country" was entered

- ► Acknowledge entry.

"⏤" = Trip can be started.

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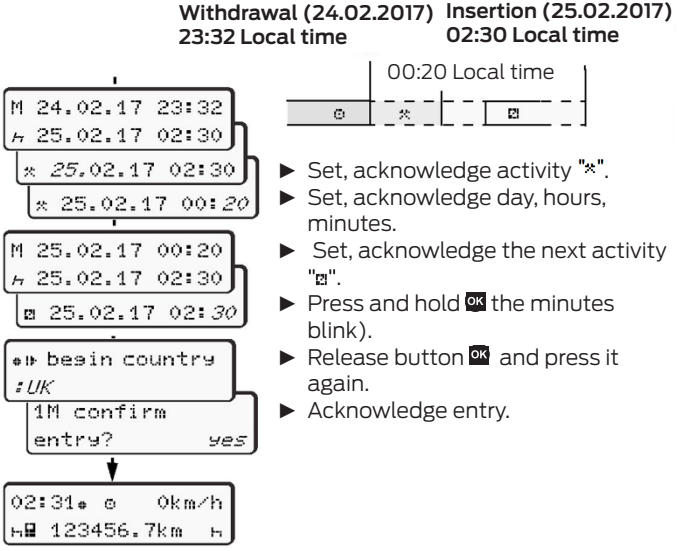
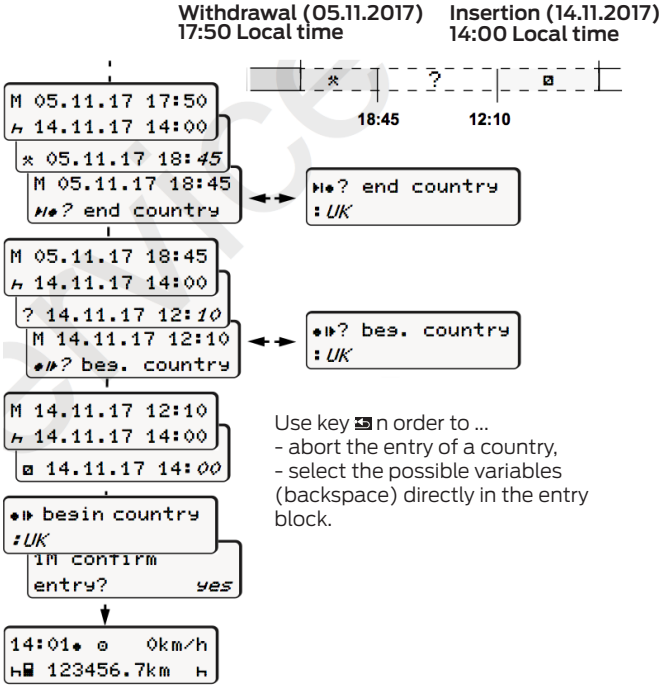
Example B:



- ► Set, acknowledge activity "⚒".
- ► Set, acknowledge day, hours, minutes.
- ► Set, acknowledge the next activity "⧈".
- ► Press and hold OK the minutes blink).
- ► Release button OK and press it again.
- ► Acknowledge entry.

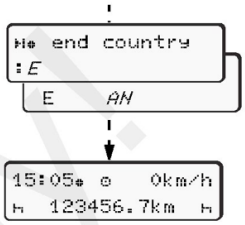
Example C:



Use key n order to ...
- abort the entry of a country,
- select the possible variables (backspace) directly in the entry block.

Withdrawing driver card

- ► If necessary, switch on the ignition in case of the ADR variants.
- ► Press the corresponding combination button for more than 2 seconds. Follow the menu guidance.



- ► Select, acknowledge the country.
- ► If present, select region, acknowledge.
- ► With button you can abort the entry of a country if you, for example, want to continue your work shift.
- ► The card shaft is opened to withdraw the driver card.
- ► Withdraw driver card.
- ► Close card slot and push it in.

CONTROLS AND INDICATORS

Tachograph

Setting activities

= Driving time (automatic when driving)

= All other working times (Automatically when the vehicle is stopped, for driver 1)

= Availability: Waiting times, co-driver time, sleeper-cab time during the trip (Automatically when driving or when the vehicle is stopped, for driver 2)

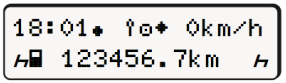
= Break times and rest periods

► **Driver1:** Press the combination key Driver1 repeat edly for ashort time until the desired activity ( ) is shown in the display.

► **Driver 2:** Press the combination key Driver 2 repeatedly for a short time until the desired activity ( ) is shown in the display.

☞ At the end of a shift or during a break, always set activity " " !

Automatic setting after ignition on/off (option):



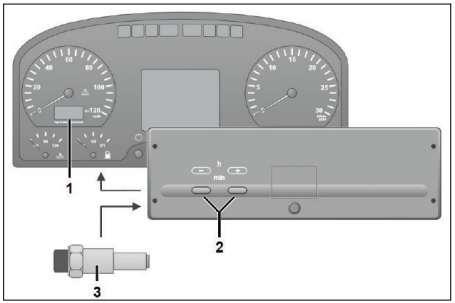
Signalled by flashing of the activity or activities for approx. 5 seconds in the standard display **(a).** Then, the previous display will appear again.

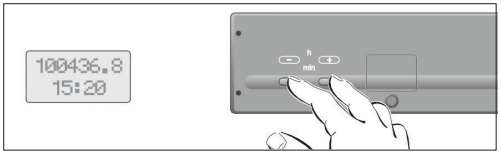
► Asrequired,change the activity accordingly!

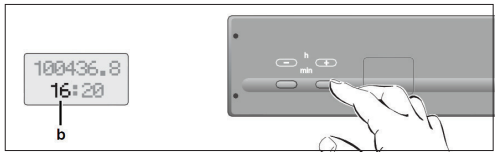
Symbol "" after ignition off means: IMS function (Independent Motion Signal) available.

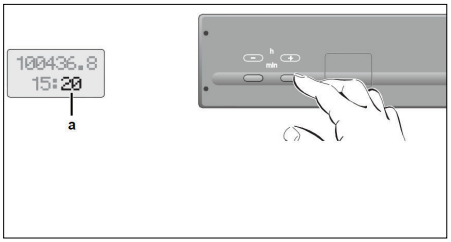
Symbol "" after ignition off means: The recording of position and vehicle data is switched on.

Tachograph Simulator Unit









OPERATION

4

Switch
2 keys are supplied with the vehicle, one for your use, and one as a spare.

- Door lock
- Ignition

Spare switch

- Fuel tank
- Urea tank

WARNING

Ignition key has an immobilizer feature against vehicle theft. New keys shall be programmed by Ford Otosan authorized dealerships.

Door Control

You can lock and unlock doors with the remote control.
1- Locking button
2- Unlocking button

Central locks are opened when the open button of the control is pressed. They are closed when the close button is pressed. If the direction indicators flash twice: Doors are locked. When any of the doors are not closed for any reason (mechanical or electrical), error is detected and both doors are brought to open position.

However, central locking function on manual opening and closing is temporarily disabled until central locks are brought to the same position. Error is resolved when the doors are closed fully.

WARNING

New remote controls shall be introduced to the vehicle when a new control is purchased. Please visit a Ford authorized dealer for the introduction of the controls. Doors are locked again if the central lock is opened with remote control and doors are not opened physically. Doors are locked automatically when vehicle speed exceeds 10 km/h.

WARNING

Module switches to protection mode if opening and closing operation is performed successively for 8 times in central locks both manually and via the remote control. System stops manual operation and operations by the control for 7 seconds. It performs the operations received after that 7 seconds later. This condition ends if you wait for 1 minute without any intervention.

OPERATION

Opening and closing of the vehicle

4

Opening the Window with Remote Control
Doors are unlocked and windows are lowered to the minimum level when opening button on the remote control is pressed for more than 3 seconds.
This feature also includes the opening of sunroof with the windows on vehicles with power roof.

Closing the Window with Remote Control
Doors are locked and windows are closed automatically when closing button on the remote control is pressed for more than 3 seconds.
This feature also includes the closing of sunroof after the doors on vehicles with power roof.
Window closing operation is not performed if the “Quick Window Closing” feature is not set on the windows.

Battery Replacement

Make sure that you dispose of old batteries in an environmentally friendly way. Seek advice from your local authority regarding recycling.

1. Insert a suitable tool, e.g. a screwdriver in the position shown and gently push the clip.
2. Press the clip down to release the battery cover.

3. Remove the battery cover.

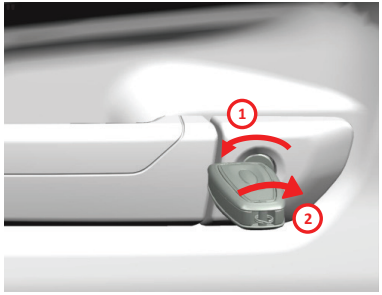
Note: Do not touch the battery terminals or the printed circuit board with the screwdriver.

4. Turn the remote control over to remove the battery.
5. Install a new battery with the + terminal facing upwards.
6. Install the battery cover back.

Note: Do not remove the grease on the battery terminals or on the rear surface of the circuit board.

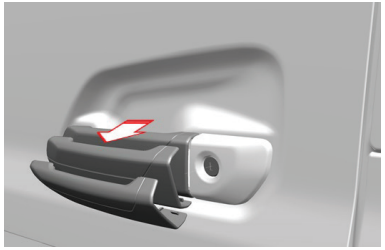
Note: You do not need to reprogram the remote control after replacing its battery; remote control shall operate normally.

Opening and closing the external door with key

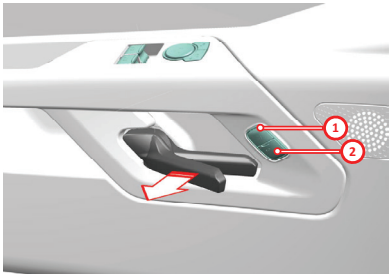


Turn the key clockwise to lock the door with the key. (2.
Turn the key counter-clockwise to unlock the door with the key. (1st

Outer Handle



Pull the latch towards you to open the door.



Pull the latch towards you to open the door from the inside.
Press button no. (2) to lock the doors from inside and press button no. (1) to unlock them.

Getting In and Off the Vehicle

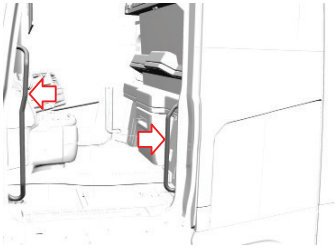
Use the 3 points principle while getting in and out of the vehicle. Do not hold the steering wheel while getting in the vehicle.

WARNING

Handles are designed so that the user shall face the vehicle while getting on/off the vehicle. Do not attempt to get on/off the vehicle facing outwards.

Don't:

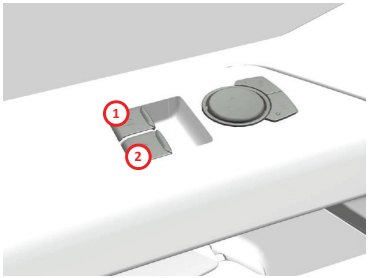
Do not try to get in the vehicle by holding the steering wheel instead of the handle.
Do not get off the vehicle facing outwards.
Do not get off the vehicle by jumping from the steps.
Do not step over the door. Do not use the door as a support while getting in and out of the vehicle, use the climbing pipe as a support. Do not pull or push the door from interior door opening handle. Use interior door opening handle.



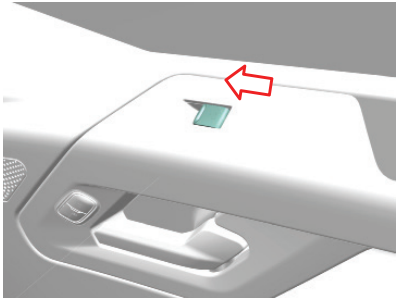
Do not hold handles for purposes other than getting on/off the vehicle to prevent your hand from being caught while the door is closed. Prefer the handles on the door while the vehicle is moving.

Opening and closing of the vehicle

Windows



1- Driver side window opening and closing button 2- Passenger side window opening and closing button



Window opening and closing
Window moves to opening or closing direction while the opening/closing buttons are pressed. Power provided to the motors is turned off automatically when the window reaches uppermost or lowermost position.

Buttons are active while the ignition is on. If the door is not opened after the ignition is switched off, the buttons will remain active for 10 minutes. Buttons are not functional until the ignition is on after the end of this period.

Quick Window Raising

Window is closed automatically when the window closing button is pressed 1 time for a short time. Windows are returned for 10-15 cm if a jamming condition is detected while closing.

Quick Window Lowering

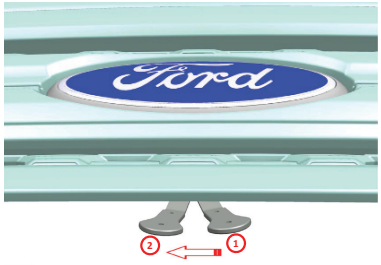
Window is opened automatically when the window opening button is pressed 1 time for a short time.

CAUTION

If the window is jammed three times in a row while quick closing, window quick raising feature is deactivated.
To re-activate the quick raising feature:
1. When the window is in the middle level, the switch on the window is to be held down and the window will be lowered completely. Continue to press the switch for 3 seconds while the window glass is at the bottom position.
2. Press and hold the switch on the window to raise the window completely. Continue to press the switch for 3 seconds while the window glass is at the top position.
3. Finally, press and hold the switch and lower the window completely to define the the window calibration for the lowering & raising function of the automatic window.
4. This operation should be performed separately for both windows.
5. If a jam occurs in the window 2 times (e.g., when the driver's arm gets stuck), the calibration is disrupted and should be done again.

Your vehicle is suitable for using with a fuel with a bio-diesel ratio of 7% (B7).

Opening/closing the front hood



To open:
Bring the opening lever under the hood from position (1) to position (2) as shown with an arrow. Raise the hood slightly, pistons shall open the cover.

To close:
- Pull the hood from open position by the strap.
- To latch the hood, push from the marked side points.

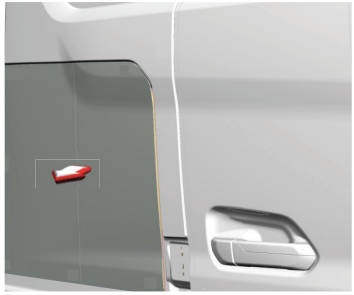
CAUTION

Make sure the hood is fully latched.

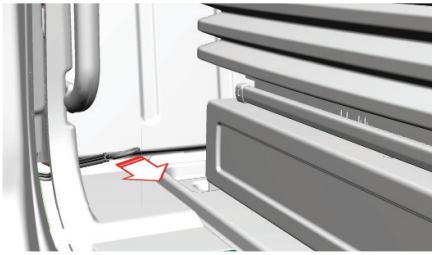
WARNING

Pull/push the hood from center only for opening and closing operations.
Do not push the hood at center area for locking operations.

Toolbox



Toolbox is located behind the driver and passenger doors as shown in the figure.



You may open it by pulling the ring on the side of the driver and passenger seats while the door is open.

Note: When the toolbox is opened for 90 degrees, it shall be kept open at 90 degrees thanks to the tensioner, it may be closed when it is pulled with a certain force.

OPERATION

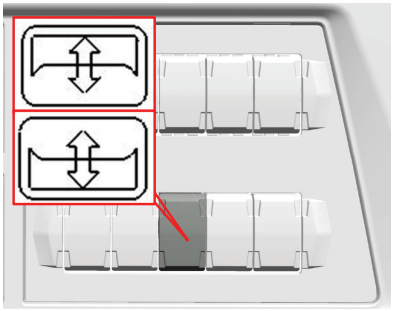
Cab Ventilation

4

Power Roof Flap

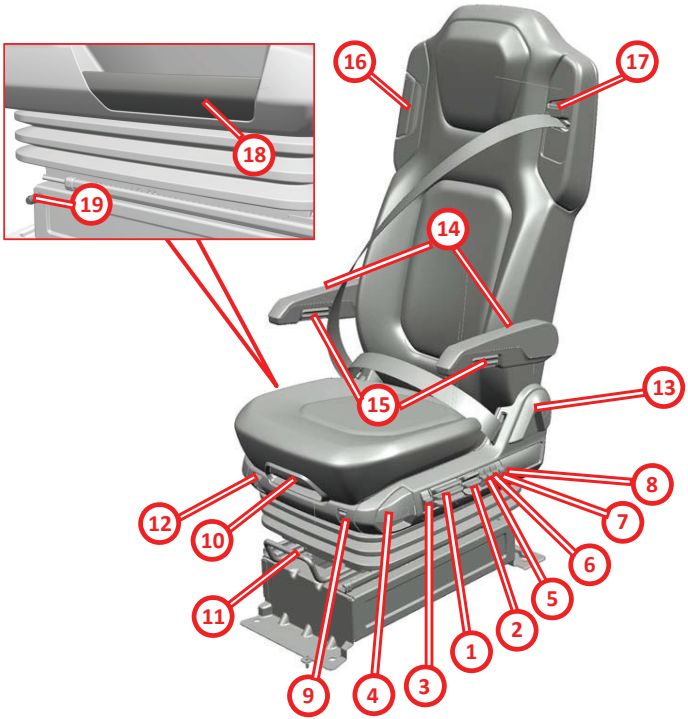
Power roof moves to opening or closing direction while the opening/closing buttons are pressed.
Operation is stopped automatically when the power roof reaches uppermost or lowermost position. Buttons are active while the ignition is on.
Power roof is closed automatically when the control switch is pressed once for a short period while it is open.
Power roof is opened automatically when the control switch is pressed once for a short period while it is closed.

Power roof is controlled by a control switch located on the upper panel.



4

Seats – Driver's Seat



1	Height adjustment
2	Shock absorber adjustment
3	Fast lowering
4	Seat inclination adjustment
5	Side support adjustment
6	Lower lumbar support adjustment
7	Upper lumbar support adjustment
8	Backrest inclination adjustment
9	Heater
10	Cushion forward/backward adjustment
11	Seat forward/back adjustment
12	Forward-backward stretching
13	Back angle adjustment
14	Armrests
15	Armrest inclination adjustment
16	Quick back tilting adjustment
17	Seat belt height adjustment
18	Side pocket
19	Air outlet

OPERATION

Seats and Beds

Seats – Passenger Seat

1	Height adjustment
2	Seat forward/back adjustment
3	Back angle adjustment
4	Armrests
5	Armrest inclination adjustment
6	Quick back tilting adjustment

Fast lowering

Seat may be lowered to the bottom position by moving the button down. Seat shall release all air when the button is moved down.
Seat may be returned to the last stored height level by moving the button up.

CAUTION

Quick lowering button shall be used while getting on/off the vehicle. It shall not be used otherwise.

Height adjustment

Height adjustment may be applied in 7 steps. By moving the height adjustment button up or down, you may change the seat height a step up or down.

Shock absorber adjustment

The absorbing harshness of the seat may be adjusted without any steps between soft and hard using the harshness adjustment button.
Taking the harshness setting lever to uppermost position provides minimum harshness; and taking it to the bottom position provides maximum harshness.

Forward-backward stretching

It may be helpful to activate horizontal stretching in some operating conditions. Then, the impacts on the movement direction of the vehicle may be absorbed better.
ON: Horizontal yield ON
OFF: Horizontal yield OFF

Seat forward/back adjustment

Fore and aft adjustment is performed by moving the seat forward or backward while pulling the lock lever.
Seat shall be locked with an audible click when the lever is released.
Seat may be moved completely forward or backward.

Do not perform the fore and aft adjustment when the seat is lowered. Seat shall always be lifted for the fore and aft adjustment.

Seat inclination adjustment

Pull the button on the left upwards to adjust the seat inclination. Seat may be adjusted to the desired position by applying your weight forward or backward at the same time.

WARNING

Risk of accident!
Do not operate the lock lever while driving.

Seats and Beds

Cushion forward/backward adjustment

Pull the button in front of the seat upwards to adjust the cushion forward/backward. Desired position may be achieved buy pushing the cushion forward or backward at the same time.

Armrests
Armrests can be raised when required.

Armrest inclination adjustment

The inclination of armrests on the fore-aft direction may be changed by rotating the wheel.
Inclination of the armrest is increased upwards when the wheel is rotated outwards, and reduced downwards when the wheel is rotated inwards.

CAUTION

Do not use the armrests to climb up the upper bed.

Heater

Electrical heaters on the backrest and seat cushion are operated in two steps by pressing the seat heater switch.

WARNING

It is recommended that persons who cannot feel increasing temperature shall not use the heater function as it shall cause various injuries and health issues.

Backrest inclination adjustment

Press and hold the button to perform backrest inclination adjustment. Backrest may be adjusted to the desired position by moving it forward or backward at the same time. Release the button again to lock it.

Lumbar adjustment
By moving the buttons up or down, you may adjust the upper and lower lumbar supports to the person.

Air chambers are filled when the mentioned buttons are moved up, and discharged when the buttons are moved down.

If the back cushion does not continue to inflate when the buttons are moved up, this means that you have reached the maximum setting in lumbar support adjustment.

Side support adjustment
By moving the button up or down, you may adjust the curve setting of the side cushions to the person.

Air chambers are filled when the mentioned button is moved up, and discharged when the button is moved down.

If the side cushions do not continue to inflate when the button is moved up, this means that you have reached the maximum setting in side support adjustment.

Back angle adjustment

To adjust the back inclination angle while sitting on the seat, desired position is obtained by pulling the lever on the left of the seat upwards and moving your back forward or backward.

Quick back tilting adjustment

Move the lever on the inner upper area of the seat clockwise in order to adjust the quick back tilting function.

Seat belt height adjustment

Height adjustment of the seat belt may be adjusted at 4 levels by moving the belt up or down by pressing and holding the button.

Maintenance

Dirt may hinder the operation of the driver seat. Keep your seat clean to prevent this!

CAUTION

There is a risk of injury if the backrest bounces forward!

WARNING

Discharge the air by pressing the rapid lowering button when you are getting off the vehicle. This would increase the service life of the seat mechanism.

CAUTION

If the seat is used without air charge, this would damage the internal mechanism of the seat
and render the seat out of warranty cover.
Adjustment of the seat while driving may cause unwanted steering movements and injuries.
-Adjust the seat when the vehicle is stationary only.
-Adjust the seat when you are sitting on the seat when there is no one in the setting range of the seat.

General safety notes

Do not keep cutting, piercing tools or items on the upper and lower beds, on the seat and in the side pocket of the seat so that the items do not cause damage inside the cab when the cab is tilted to the front.

Do not use the seat heating function to dry the seat fabric it it is wet.
Do not try to push the seat bellow with your hand as it may cause a risk of injury.

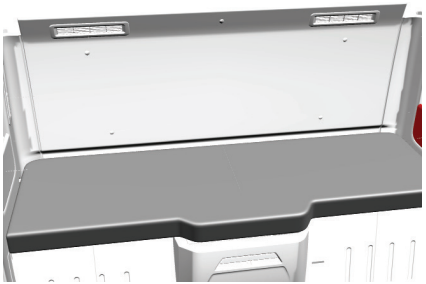
General cleaning notes

Dirt may hinder the operation of the driver seat. Therefore, apply the required care for cleaning of the seat and keep your seat clean.
Do not try to push the seat bellow with your hand as it may cause a risk of injury.
Do not try to remove seat fabric while cleaning the seat. Bedding may be removed for cleaning of the bed. The cleaning instructions on the mattress cover shall be followed.
When cleaning the fabric or the plastics of the seat, the bed and the seat belts, apply the cleaning material to a small area first to test the suitability of the material. Do not use flammable or abrasive cleaning materials.
Do not use high pressure cleaners to clean your seat, bed and the seat belts.

OPERATION

Seats and Beds

Single Bed

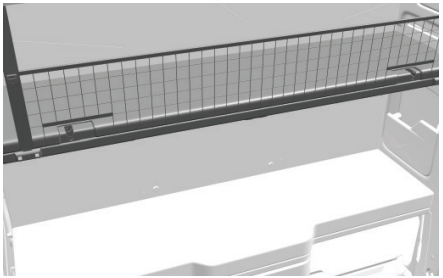


There is a foldable compartment at the right end of the lower bed. Pull the handle up to raise the compartment. Pull the handle up to the top and release it to lower the compartment.

Curtains

There are three curtains on the vehicle, namely the left, right and the center curtains. The left and right curtains shall be installed so that their Velcro parts are placed at the center of the vehicle.

Upper Bearing



Upper bed is optional.
The upper bed be brought to vertical position and locked thanks to the locking mechanisms. Make sure that the upper bed is locked.

WARNING

Do not carry load or occupants while the vehicle is moving. There is a serious risk of injury for the occupant and the driver as the occupant shall be dashed away.

Rotate the lever clockwise to unlock the upper bed.
When you shall unlock the upper bed, rotate the lever with one hand to prevent the bed from falling over you while holding the upper bed with your other hand.

CAUTION

The upper bed netting shall be removed from the belt connections and stored under the bed while driving.
Use the handles on the bed to climb to the upper bed.
The upper bed shall always be closed during driving.
No jackets, weight or objects should be hanged on the upper bearing latch. Otherwise, the bed might open and compromise your safety.

In-cab storage compartments

There are 3 covered storage compartments and 2 open storage compartment on the upper console of the windshield. There are open compartments under the covered compartments that allow storage of documents, maps etc.

WARNING

Do not put heavy items on upper console.
You may load the closed storage compartments of the windshield upper console up to 7.5 kg and load the lower compartment up to 5 kg.

WARNING

The upper glove compartment covers shall not be opened while the vehicle is moving.
Do not insert piercing, cutting and damaging materials in the compartments of the upper console without a cover.

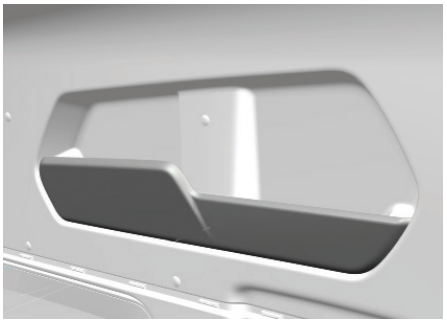
Bed top

You may load up to 5 kg on the bed top storage area.

Center console compartments

These are located in the center console between the driver and the passenger seat. Pull it towards you to open it.

Shelves

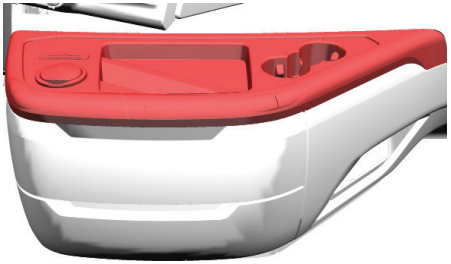


There are 2 shelves on each of the right-hand and left-hand sides of the vehicle. Total weight of the material placed on each shelf shall not exceed 2 kg.

In-cab storage compartments

Centre console

The multifunctional center console, located between the driver's seat and the passenger seat, has map compartments and compartments for cups, pet bottles and other materials.



Do not press on the console. Any damage that may occur if you press on it shall not be covered under warranty.

Ashtray

Ashtray is placed on the center of the console. Removable ashtray mechanism provides ease of use in the desired position for the driver.

In-cab storage compartments

Under-bed storage compartments

There is a one compartment drawer in the bed area. Pull it towards you to open it. The capacity of the under-bed storage compartment is 45 kg without a refrigerator and 30 kg with a refrigerator.

12 v outlet - 24 V outlet lighter

1-12 V outlet
24 V outlet lighter

CAUTION

12 V outlet may provide power for devices up to 100W.

CAUTION

24V lighter/power outlet shall be used for operation of the devices other than the lighter.

CAUTION

Hold the heated cigar lighter only from its handle.
Only use the lighter when the traffic allows you to; otherwise it may distract you and cause an accident.

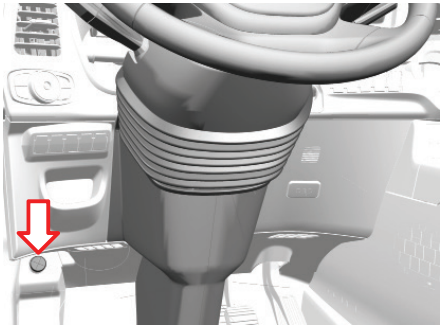
CAUTION

Do not hold the cigar lighter element pressed in after it is released.

There is a 12 V outlet on the bed area of your vehicle.

Steering Wheel

You can adjust the steering angle and height in the most comfortable position for you while driving.

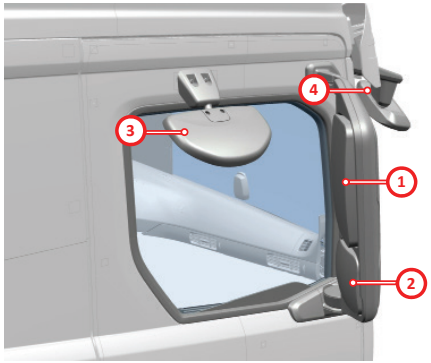


1. Press the button on the lower left side of the steering column with your foot. Thus, power assist to the system shall be activated and setting shall be allowed.
2. Adjust the steering to a proper position by moving it back and forth.
3. Move your foot off without changing the position of the steering wheel.

CAUTION

A minimum of 7.8 bar air pressure is required to adjust the steering mechanism. If the vehicle air pressure is low, operate the vehicle to fill up to the air tubes.

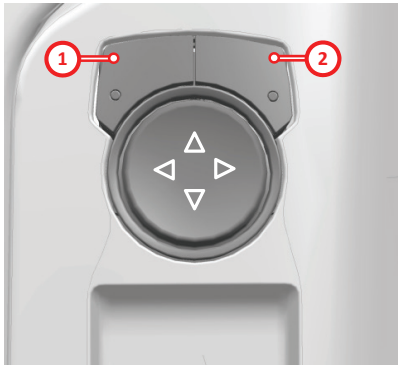
Mirrors



There are 4 different types of mirrors on your vehicle:
1- Rear view mirror
2- Short-sight rear view mirror
3- Kerb mirror
4- Front view mirror

WARNING

Check the settings before operating your vehicle.



Press button no. 1 for the adjustment of the driver's side mirror.
Adjust the mirror by moving the arrows forward and backward and left and right, then press button no. 1.

Press button no. 2 for the adjustment of the passenger side mirror.
Adjust the mirror by moving the arrows forward and backward and left and right, then press button no. 2.

Mirror Heater

Mirrors 1 and 2 have heaters. Use the heater for ease of view on winter days.

To activate the heater:
Press "mirror heater" switch on the A/C panel while the ignition switch is at position 2.

To deactivate the heater: heater shall be deactivated automatically after 10 minutes.

Lighting

Headlamp Switch

Headlamp switch is placed on the console to the left of the steering.
0 Headlamps off
1 Park lamps and indicator illumination
2 Park lamps, indicator lamps and low beam headlamps
3 Automatic
4 increasing the interior lighting brightness
5 decreasing the interior lighting brightness

CAUTION

Operating park lamps for a long time while the ignition off causes the battery to discharge.

Headlamp levelling adjustment

Press the button on the headlamp switch to make it come out.
Rotate the button to set it to the required headlamp levelling adjustment.
Press the button on the headlamp switch to bring it to the closed position.

Headlamp levelling shall be performed as per the load of the vehicle.

WARNING

Headlamp levelling shall be adjusted before getting on the road to prevent dazzling the eyes of the drivers of the vehicles in the upcoming traffic in different road conditions.

CAUTION

The current capacity of the switch may only cover for the available system. Any additions may cause faults on the switch. If an additional illumination system is installed, additional lamps shall have wiring with relay control. Switch shall only control the relay. Audible warning signal is heard when the door is opened when the ignition is off and headlamps are on.

Automatic headlights

WARNING

Headlamps may not illuminate at all conditions that the field of vision is reduced even if automatic headlamp function is selected on the headlamp switch.
For example, automatic headlamp feature may not switch on the headlamps in case of a fog at daylight. Ensure that your headlamps are switched to automatic or to a suitable on position whenever the field of vision is reduced. Failure to consider this warning may cause a collision.

When the lighting control is on automatic headlamp position, low beam headlamps are turned on automatically when it gets dark on the evening and sensor detects that the ambient lighting level is not adequate.

Note: When the lighting control is on automatic headlamp position, headlamps may turn on and off automatically when you are passing under the bridges or viaducts, at low light conditions or under bad weather conditions.
Note: Headlamps shall be turned on by the driver in the entrances to tunnels and under some weather conditions.
Note: When the lighting control is on automatic headlamp position, low beam headlamps shall be turned in order to turn the fog lamps on.

Direction Indicator Lever

It is placed on the left side of the steering.

Push the lever up or down to use the turn signal lamps. Turn signal illuminates for 6 seconds and turns off automatically when you move the turn signal lever slightly up or down. This would increase attention on the road, especially when you are changing lanes.
High Beam (Flasher)
Flasher is operated by pulling the lever briefly and releasing it (1)
High Beam (Continuous)
Main beams illuminate continuously when the lever is pushed forward.
Push it forward in the same way to turn them off. (2.

OPERATION

Lighting

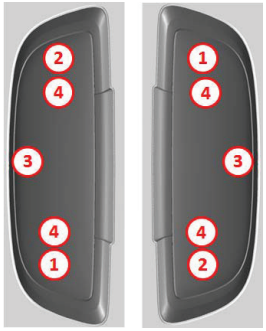
Front fog lamp

Front fog lamp is placed on the headlamp control panel.
Turn this switch on to obtain better visibility and be visible to the incoming traffic in foggy conditions and where the visibility is low. Front fog lamp icon is displayed on the indicator when the switch is pressed.

Rear fog lamp

Rear fog lamp switch is placed on the headlamp control panel. Turn this switch on to obtain better visibility and be visible to the incoming traffic in foggy conditions and where the visibility is low. Rear fog lamps are illuminated when the low and high beam headlamps are activated only. Rear fog lamp icon is displayed on the indicator when the switch is pressed.

Dome Lamps



There are 2 dome lamps, one on the driver side and the other on the passenger side, in the dome of the vehicle interior.

1 - Reading lamps (Right)

This is controlled by the switch marked with on the front control panel.

2 - Reading lamps (Left)

This is controlled by the switch marked with on the front control panel.

3- Ambience lamps

This is controlled by the switch marked with on the bed compartment control panel.

4- General lighting lamps

This is controlled by the switch marked with on the bed compartment and upper control panel.

Front interior lamp

Interior lamp is placed over the windshield on the center area.
This is turned on/off by the switch marked with .
General illumination of the dome and front interior illumination lamps is turned on/off by the status of the door with the switch on the upper control panel (that it is turned on/off).

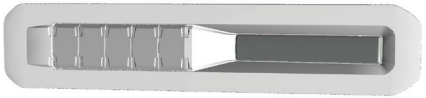
Work Lamp

Work lamp at the exterior of the vehicle is controlled by the switch marked with on the lower left control panel.

OPERATION

Lighting

Bed compartment lamp



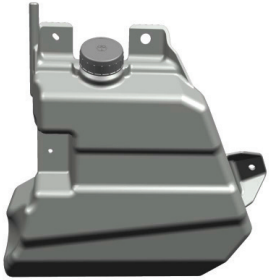
This is controlled by the switch marked with on the bed compartment control panel.

Window Washing and Heating Systems

Water spray

Press the button shown with an arrow on the left multifunctional lever to spray wiper fluid to the windshield. Spraying function shall be stopped when you release the button.

Windshield Washer Reservoir



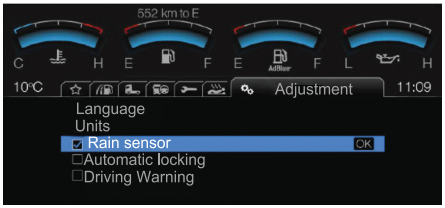
Windshield washer reservoir is placed on the front of your vehicle. You may access it by opening the hood. Add water and cleaning agent regularly before you run out of washer liquid.

Automatic Wipers

Automatic wiper function uses rain sensor. Sensor is placed on the rear bottom side of windshield. Rain sensor checks humidity level on the windshield and operates the wipers automatically. System adjusts the wiper speed according to the humidity level detected on the windshield by the sensor.

Wiper lever “Automatic wiper” position If your vehicle is equipped with an Automatic Wiper, wipers shall operate automatically as per the amount of rain when you bring the wiper lever to “Automatic Wiper” position  and select “Rain Sensor” from the settings tab on the instrument panel. Automatic wipers have 2 sensitivity levels.
When sensitivity level 1 selected, they shall activate when a high amount of rain is detected on the windshield. When sensitivity level 2 selected, they shall activate when a lesset amount of rain is detected on the windshield.

Window Washing and Heating Systems



Instrument panel rain sensor setting

When you bring the wiper lever to another position than the Automatic Wiper position, Automatic Wiper function shall be turned off and wipers shall operate as per your selection.

CAUTION

Defrost the windshield completely before operating the wipers.
Ensure that automatic wiper feature is turned off before having your vehicle washed.
Clean the wiper blades if your wipers start to leave traces on the windshield. Install new wiper blades if your wipers continue to leave traces.

If automatic wipers operate more quickly or slowly than you expect in case of rain, select the suitable speed yourself using the lever to prevent being distracted and to see the road better.
Bugs crashing on the area where the rain sensor is placed on the windscreen may cause unexpected operation of the wipers. We recommend you to keep the area on around the sensor on the windshield clean.
Water splashing on the windshield when the road is wet, and icing, snow or fog at winter may cause erratic or unexpected operation of automatic wipers or cause the automatic wipers to scatter the dirt and deteriorate the vision.
You may perform the following to keep the windshield clean.

- You may switch to normal or high speed wiping.
- You may turn the automatic wiper feature off.

Circuit Breakers

Use the circuit breakers to disconnect the electrical current in your vehicle.

Vehicles with ADR

An ADR switch shall be available on vehicles that transport flammable, explosive, combustible material. ADR switch cuts all electricity of the vehicle off. There are 2 ADR switches on your vehicle; one is inside the cab, and one is outside. Both switches have the same function. To cut the circuit off, it is adequate to turn off one.

Using the internal switch
To cut the circuit off; Raise the safety cover and raise the switch.

To re-activate the electricity supply of the vehicle:
Put the switch down. Close safety cover.

Using the external switch

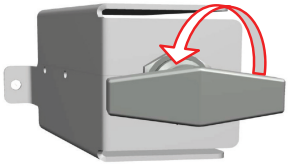
To cut the circuit off
Raise the safety cover and raise the switch.
To re-activate the electricity supply of the vehicle:
Put the switch down. Close the safety cover.

CAUTION

Using this switch frequently may damage electronic devices on the vehicle.

When any one of the cab interior and exterior breaker switches is activated, some electrical loads are deactivated within 1 second. After 10 seconds, all electrical connection shall be disconnected.

Vehicles without ADR



Turn the switch counter-clockwise to cut the circuit off. Turn the switch clockwise to re-activate the electricity supply of the vehicle.

CAUTION

Use the circuit breaker at least 2 minutes after you have stopped your vehicle. Otherwise, engine electronic control unit (and Denox control unit, if available) may be damaged.

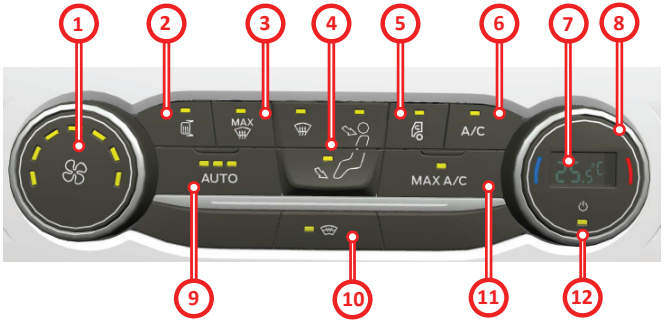
CAUTION

Disconnect the battery terminals in case of any welding operation on your vehicle.

OPERATION

A/C and Heater

Air conditioning



1- Blower speed control: Adjusts the amount of air to be blown to the interior of the vehicle.

2- Mirror heater: Use the heater to ensure ease of view and to defrost and demist the mirror on winter days.
Note: Do not clean the mirror housing or glass with harsh abrasives, fuel or other petroleum based cleaning products.

3- MAX Defrost: Press the button to turn the maximum defrost feature on. Air taken from the outside is blown from the air vents of the windshield, A/C automatically turns on and fan speed is set to maximum level automatically. You may use this setting for demisting and defrosting.

4 - Air distribution direction: You may use these buttons to take air from windshield, front console and/or footwell vents.
You may ensure blowing of air from these at the same time in various ways.

Note: Direct the air to your legs to ensure better comfort under cold conditions. Direct the air to the windshield and to the side windows to prevent misting under cold and humid ambient conditions. Direct the air to your face to ensure better comfort under hot conditions.

5- Recirculated air: Press this button to take the air to be blown to the cab either from inside or outside of the vehicle. Air is taken from the inside when the warning light on the button is illuminated. When air is taken from the inside, time required to cool the cab may be reduced and ingress of the unwanted odours outside to the cab are prevented. (When used together with the A/C). Operation of the recirculation mode for a long period in humid air conditions may cause misting on the windows.

6- Air-conditioner: Press the button to turn the A/C function on and off. Use air conditioning with recirculated air to improve cooling performance and efficiency.

Note: In some cases (such as maximum defrost), A/C compressor may continue to operate even if the A/C is turned off.

7- A/C temperature setting indicator screen:
Temperature values set are displayed on the screen.

8- High and low temperature setting:
You may set the temperature desired in the cab from 15° C and 30° C with intervals of 0.5° C.

9- Automatic Conditioning Selection button: Press the button to activate the automatic conditioning function. Set the desired temperature using the high and low temperature setting switch. System adjusts the blower speed, air distribution and the operation of A/C and selects external air or recirculation air in order to cool or heat the vehicle to maintain the desired temperature.

NOTE: While AUTO mode is selected in the A/C control unit, AUTO mode shall be deactivated if any key is activated on the control unit. However, the system shall be resumed to be controlled automatically to reach the desired temperature.

10 - Heated windshield (if available)
Press the button to defrost and demist the heated windshield.

Note: Ensure that the engine is on before switching the heated windshield on.
System shall not operate if the battery level is low.
And replacing the filter that dries air every 3 or 4 years shall prevent the performance loss of A/C.

Note 3: We recommend you to open the windows for a short a period in addition to operating the air conditioner when you get in your vehicle on very hot days. The temperature of the cab shall reach the comfort level in a shorter period in this way.

11 - MAX A/C Press the button again to maximize cooling. Air taken from the inside of the cab is blown from the air vents of the front console, A/C automatically turns on and fan speed is set to maximum level automatically.

12- Power: Press the button to switch the system on and off. Ingress of external air to your vehicle is prevented when the system is off.

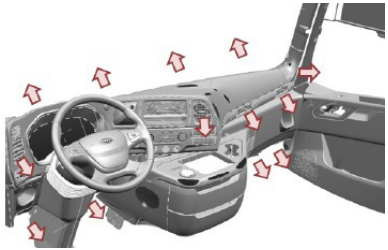
NOTE 1: To get a better performance from your vehicle's A/C, turn it on even in winter for 5 minutes every 15 days. It is not required to set the knob to cold position during this usage.

NOTE 2: Mist that forms on the windshield in cold weather conditions may be cleaned much more easily if the A/C and hot air is operated for a few minutes.
Then turn the A/C off.

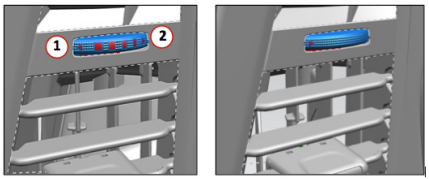
The gas type and amount of the gas used in A/C is printed on the sticker. (Adding oil to the A/C compressor is not necessary unless all gas drains from the A/C.

Your vehicle's A/C will not require maintenance under normal conditions. However, we may advise you to remove and clean the fly screen located in front of the radiator periodically to obtain a better efficiency.
And replacing the filter that dries air every 3 or 4 years shall prevent the performance loss of A/C.
Air Distribution: Conditioning air is distributed inside the cab with various blowers as per the desired operating conditions.

Note: Do not cover the blowers with items such as clothes, etc. Performance of the ventilation inside the cab may be reduced if the blowers are covered with any accessory or equipment.

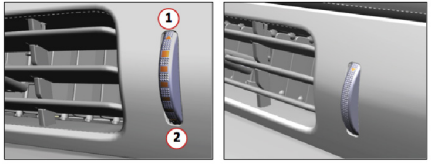


Setting the blowers:
Blowers on the driver's side:
1- Off (1)
2- On (2)



A/C and Heater

Blowers on the passenger side:
1- Off (1)
2- On (2)

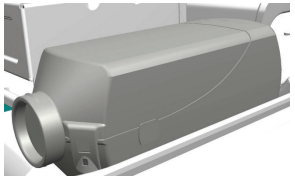


Use the control wheel to take adequate amount of air to the cab. Blowers on the driver and passenger sides have two positions, namely off and on. Air flow may be set as desired between these positions and the air flow may be directed vertically or horizontally using the setting feature on the center of the blower. Bring it to position 2 for maximum air flow.

Park Heater: Waste heat utilization system may be available on vehicles without a wet type heater, and it helps to keep the cab hot by passing the heated engine coolant from the radiator. If your vehicle is equipped with a waste heat utilization system, engine shall be off and the ignition shall be on to use the system. Additionally, ventilation control panel shall be activated and the ventilation fan shall be at blow position. System shall remain active as long as the coolant temperature is high enough to heat the cab after activating the system.

Simply turn the ignition off to switch the system off.

Auxiliary heater
Dry Type Heater



Eberspacher airtronic D2 dry type heater is used. This device is placed under the lower bed inside the cab.
On/off switch is located on the front console and the right wall of the lower bed. Detailed settings may be performed on the instrument panel. Auxiliary heater can also be operated when the ignition is off.

CAUTION

On vehicles with dry type cab heaters, air may enter to the fuel line and prevent system operation when the fuel level in the fuel tank is decreased to a certain level.

Review the error code table for the details of the error codes read on the instrument panel and the actions to be taken.
(Do not turn the heater switch off and on before filling the fuel tank)

CAUTION

Pump is sensitive. High quality diesel fuel shall be used against freezing.
Auxiliary heaters may be operated while the engine is running. However, auxiliary heaters shall be turned off automatically when the ignition is turned off if the auxiliary heaters are on while the engine is on. You may press the auxiliary heater on/off button to switch them on again.
If the dry type heater is operated when the engine is off, A/C control module activates for 5 minutes at every 30 minutes automatically to freshen the air inside the cab and ventilation control unit blows air from external environment to the cab.
If the auxiliary heaters are operated when the engine is off, heaters resume to be active until the cab reaches the desired temperature even if the engine is operated later.

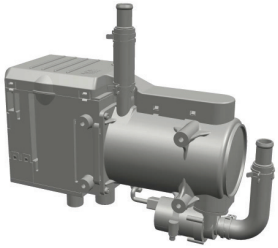
Fuel consumption: 0.28 l/h during the initial start-up when the temperature inside the cab is low; and 0.10 l/h for the operating phase.
Blowing temperature from the nozzle is 75ºC max.

Do not cover the blower and the intake nozzle inside the cab. This is important as it affects the service life and the speed of the motor.

CAUTION

In-cab auxiliary heater hot air outlets are behind the driver's seat and the passenger seat.
Therefore, dangerous material such as flammable or explosive material shall not be placed between the driver's seat and bed.

Wet type heater



Eberspacher hydronic M2 is used. Cab is heated by heating the engine coolant with diesel fuel.
This unit is placed under the right step on the vehicle.

This device has hoses on its own for exhaust and combustion air requirements.
It is operated with diesel fuel.
This unit adjust the cycle automatically and takes fuel from dosage pump with the help of an element sensible to the in-cab temperature.

Maintenance

- We recommend that the heater is inspected in Ford authorized workshops in the start of each winter season.
- Keep the heater air inlet and outlet ducts clean. Dirty air ducts cause overheating and deactivation of the heater control unit.
- Operate the heater once every month for 10 minutes to prevent the jamming of the mechanical components.

CAUTION

Turn off additional heating system(s) when refuelling.

CAUTION

Heater should not be operated in enclosed areas as it produces exhaust gas.

Malfunction

If the heater has a fault, check the fuse harness for safety. Contact an authorized service if the precautions below do not solve the problem.

Cab Air Filter Replacement:

Cab air filter catches the particles in the air incoming to the cab and ensure that the cab is free of said particles. If the air flow to the cab is decreased, the filter shall be replaced before the periodic maintenance intervals. Filter shall be replaced rather than having been cleaned.

OPERATION

A/C and Heater

4

Controls
Programming

1. **Start:** Set the schedule start time from this menu. Auxiliary heater shall operate at the time you have specified.
2. **Temperature:** Set the schedule operating temperature from this menu.
3. **Frequency of repetition:** Determines the frequency of repetition. Options: There are 2 options, namely once and repeated.
4. **Day:** You may set the operating day(s) of the schedule.

Options:
Mon, Tue, Wed, Thu, Fri, Sat, Sun, weekdays, weekend, every day

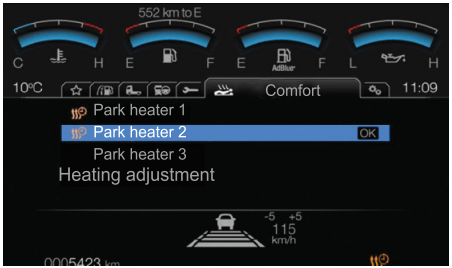
You may set the temperature desired in the cab from 15º C and 30º C with intervals of 0.5º C. You are not allowed to set a temperature other than these values.

Schedule On/Off

1- Turns the auxiliary heater schedule on or off.

2- Sets the heating mode

Options:
Cab - Wet type
Cab - Dry type
Cab - Wet and Dry type
Engine



1- If the auxiliary heater schedule is set, an orange marker is displayed before the relevant schedule.

2- If the auxiliary heater schedule is set, control lamp is illuminated on the digital display.

You may select the operating period of your heater as desired; you do not need to turn the ignition on for unlimited operation. Heater may be operated at desired period even if the ignition is off.

If the dry type or wet type heater is activated with the buttons on the front console or on the bed compartment, it shall be turned off automatically after 10 hours maximum. If the dry type or wet type heater is from the instrument panel, it shall be turned off automatically after 2 hours maximum.

CAUTION

Automatic scheduling for auxiliary heater is deactivated on vehicles carrying dangerous goods (vehicles with ADR) for safety reasons.

CAUTION

The main switch shall not be switched off before the auxiliary heater is stopped. If the button is turned off before the heater goes through a certain re-operation period, it may be damaged.

CAUTION

When both wet and dry heaters are used at the same time, we recommend you to cancel automatic mode for conditioning selection to achieve a better heating performance

OPERATION

A/C and Heater

Auxiliary heater error codes (Dry type)

Fault Code Read From the Heater	Malfunction description	Explanations ▪ Corrective action
4	Warning: Short circuit on the control box, at the fresh air outlet	Call the authorized service
5	Warning: Short circuit on the control box, at the vehicle alarm outlet	Call the authorized service
6	Warning: Unexplainable atmospheric altitude information	Call the authorized service
9	(Displayed in heaters with a “H-Kit” label on name plate only.)	Call the authorized service
10	ADR interrupted.	Call the authorized service
11	Over voltage - interruption	Call the authorized service
C	Low voltage - interruption	· Check hot air pipes against blockage —> remove the blockage.
	Excessive heating in the excessive heating sensor	Call the authorized service if the problem is not solved
D	Excessive heating in the flame detector	· Check hot air pipes against blockage —> remove the blockage.
E	Temperature difference between flame detector and excessive heating sensor	Call the authorized service if the problem is not solved
F	Operation locked	· Check hot air pipes against blockage —> remove the blockage.
11	Overheating	Call the authorized service if the problem is not solved
12	Starting power of the glow plug is very low (Displayed in heaters with a “H-Kit” label on name plate only.)	Call the authorized service
13	Ignition power is too low	Call the authorized service
14	Glow plug - interruption	Call the authorized service
15	Glow plug - short circuit, short circuit after overload or negative load	Call the authorized service
16	Glow plug, output (+) - short circuit after UB (battery voltage)	Call the authorized service
19	* Diagnostic cable bl/ws - short circuit after UB (battery voltage)	Call the authorized service
1F	Blower - interruption	Call the authorized service
20	Blower motor - short circuit after negative Please note! Provide compliance with the test voltage Part is destroyed if the voltage value is exceeded. Make sure that the power supply has adequate short circuit resistance (20 A minimum).	Call the authorized service

A/C and Heater

Fault Code Read From the Heater	Malfunction description	Explanations · Corrective action
21	Blower motor does not rotate or short circuit after negative	Call the authorized service
	Please note!	
	Provide compliance with the test voltage	
	Part is destroyed if the voltage value is exceeded.	
	Make sure that the power supply has adequate short circuit resistance (20 A minimum).	
22	Blower motor, output (+) - short circuit after UB (battery voltage)	Call the authorized service
2F	Metering pump - short-circuit or overload	Call the authorized service
30	Metering pump - interruption	Call the authorized service
31	Metering pump output (+) - short circuit after UB (battery voltage)	Call the authorized service
32	Too many failed operation attempts (operation locked)	Call the authorized service
33	Flame detected during operation	Call the authorized service
34	Safety time exceeded	No flame detected during operation cycle.
		· Check the exhaust and combustion air system.
		* Check the fuel supply / fuel amount
		Call the authorized service if the problem is not solved
35	Flame interruption during “POWER” control	Heater ignited during power stage (flame detected) and flame interruption signal issued.
		· Check the exhaust and combustion air system.
		* Check the fuel supply / fuel amount
		Call the authorized service if the problem is not solved
36	Flame interruption during “HIGH” control stage	Heater ignited during power stage (flame detected) and flame interruption signal issued.
		· Check the exhaust and combustion air system.
		* Check the fuel supply / fuel amount
		Call the authorized service if the problem is not solved
37	Flame interruption during “MEDIUM” control stage	Heater ignited during power stage (flame detected) and flame interruption signal issued.
		· Check the exhaust and combustion air system.
		* Check the fuel supply / fuel amount
		Call the authorized service if the problem is not solved

A/C and Heater

Fault Code Read From the Heater	Malfunction description	Explanations • Corrective action
38	Flame interruption during “LOW” control stage	Flame interruption detected during operation cycle. • Check the exhaust and combustion air system. * Check the fuel supply / fuel amount Call the authorized service if the problem is not solved
39	Flame interruption during operation stage (Displayed in heaters with a “H-Kit” label on name plate only.)	No flame detected during operation cycle. • Check the exhaust and combustion air system. * Check the fuel supply / fuel amount Call the authorized service if the problem is not solved
3C	External temperature sensor - interruption	Call the authorized service
3D	External temperature sensor - short circuit	Call the authorized service
3E	Control unit interruption	Call the authorized service
3F	Control unit short circuit Fault detection works at heating mode only. On the other hand, if the short circuit already happened and then the heater is turned on, “Ventilation” shall be activated (this is not an error code).	Call the authorized service
40	Flame detection - interruption	Call the authorized service
41	Flame detector - short circuit	Call the authorized service
47	Overheating detector - interruption	Call the authorized service
48	Overheating detector - short circuit	Call the authorized service
4A	Control box faulty	Call the authorized service
5A	Control box faulty (internal error)	Call the authorized service
5B	External interference voltage	Call the authorized service
5C	Control box faulty (ROM error)	Call the authorized service
5D	Control box faulty	Call the authorized service
5E	Control box faulty (EEPROM error)	Call the authorized service
5F	Control box faulty	Call the authorized service
60	Internal temperature sensor faulty	Call the authorized service
61	Control box faulty	Call the authorized service
62	Control box faulty	Call the authorized service
63	Too many successive resets Transistor error in the control box	Call the authorized service

Auxiliary heater error codes (water type)

Fault Code Read From the Heater	Malfunction description	Explanations • Corrective action
5	Warning Short circuit on the “Burglary Alarm” output	Call the authorized service
9	ADR / ADR99 off	Turn the heater off and on again.
A	Over voltage interruption	Call the authorized service if the problem is not solved
B	Low voltage interruption	Call the authorized service
C	Overheating	Call the authorized service
E	Difference between overheating detector and temperature sensor is too big	Call the authorized service
11	Overheating, Equipment threshold exceeded Control box locked	Call the authorized service
13	Glow plug 1, Ignition power is too low	Call the authorized service
14	Glow plug 1, interruption	Call the authorized service
15	Glow plug 1, overload / short circuit after grounding	Call the authorized service
16	Glow plug 1, short circuit after +UB	Call the authorized service
17	Glow plug 2, interruption	Call the authorized service
18	Glow plug 2, overload / short circuit	Call the authorized service
19	JE-K line fault	Call the authorized service
	Heater is kept ready for operation	Call the authorized service
1A	Glow plug 2, short circuit after +UB	Call the authorized service
1D	Glow plug 2,	Call the authorized service
	Ignition power is too low	Call the authorized service
1F	Combustion engine, interruption	Call the authorized service
20	Combustion engine, overload	Call the authorized service
21	Overload, speed error / blocked	Call the authorized service
22	Combustion engine, short circuit after +UB or grounding	Call the authorized service
25	Water pump does not operate	Call the authorized service
29	Water pump, interruption	Call the authorized service
2A	Water pump, Overload / short circuit	Call the authorized service
2B	Water pump, Short circuit after +UB	Call the authorized service
2F	Metering pump Overload / short circuit	Call the authorized service
30	Metering pump interruption	Call the authorized service

OPERATION

A/C and Heater

Fault Code Read From the Heater	Malfunction description	Explanations • Corrective action
31	Metering pump, Short circuit after +UB	Call the authorized service
34	Safety time exceeded	No flame detected during operation cycle. • Check the fuel supply, the exhaust and the combustion air system. Call the authorized service if the problem is not solved
35	Flame interruption: "POWER" control stage	Heater ignited during power stage (flame detected) and flame interruption signal issued. • Check the fuel amount, the blower speed, the fuel supply and the exhaust and the combustion air system. Call the authorized service if the problem is not solved
36	Flame interruption: "HIGH" control stage	Heater ignited during power stage (flame detected) and flame interruption signal issued. • Check the fuel amount, the blower speed, the fuel supply and the exhaust and the combustion air system. Call the authorized service if the problem is not solved
37	Flame interruption during “Medium” control stage (D 8 W / D 10 W) "Medium1" control stage (D 12 W)	Heater ignited during power stage (flame detected) and flame interruption signal issued. • Check the fuel amount, the blower speed, the fuel supply and the exhaust and the combustion air system. Call the authorized service if the problem is not solved
38	Flame interruption: "Medium 2" control stage (D 12 W)	Heater ignited during power stage (flame detected) and flame interruption signal issued. • Check the fuel amount, the blower speed, the fuel supply and the exhaust and the combustion air system. Call the authorized service if the problem is not solved

Fault Code Read From the Heater	Malfunction description	Explanations • Corrective action
39	Flame interruption:	Heater ignited during power stage (flame detected) and flame interruption signal issued.
	"Medium 3" control stage (D 12 W)	• Check the fuel amount, the blower speed, the fuel supply and the exhaust and the combustion air system.
		Call the authorized service if the problem is not solved
3A	Flame interruption:	Heater ignited during power stage (flame detected) and flame interruption signal issued.
	"LOW" control stage	• Check the fuel amount, the blower speed, the fuel supply and the exhaust and the combustion air system.
		Call the authorized service if the problem is not solved
3B	Water temperature increasing too quickly	Call the authorized service
3C	Temperature sensor interruption	Call the authorized service
3D	Temperature sensor short circuit	Call the authorized service
40	Flame detector interruption	Call the authorized service
41	Flame detector short circuit	Call the authorized service
47	Overheating detector interruption	Call the authorized service
48	Overheating detector short circuit	Call the authorized service
4A	Sensing equipment faulty on the overheating detector, operation locked	Call the authorized service
5A	External reset	Call the authorized service
5B	Internal reset	Call the authorized service
5C	ROM error	Call the authorized service
5D	RAM error, at least one RAM cell does not operate	Call the authorized service
5E	EEPROM error, operation data, diagnostic parameters or checksum error in the setting values field	Call the authorized service
5F	Invalid data record checksum error	Call the authorized service
60	Internal temperature sensor faulty	Call the authorized service
	/ ECU too hot	
61	Internal device error	Call the authorized service
62	Main relay faulty	Call the authorized service
63	Too many resets, operation locked	Call the authorized service

OPERATION

Driving

4

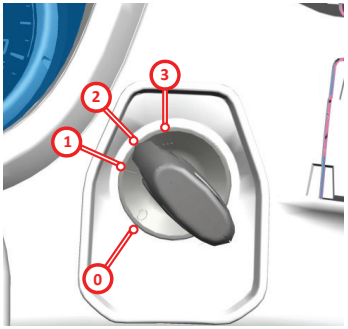
Before taking off

Check the air pressures on the brake circuits.

CAUTION

Visual and audible warnings are displayed on the screen when brake air level is low in the vehicle. Do not bring the parking brake to drive position and attempt to drive the vehicle before the stopping of the visual warning and the buzzer.

Starting the engine



Turn the ignition on.

- Bring the ignition switch to position 2 . Wait until the engine warning lamp is turned off. Refer to maintenance and service chapter MIL lamp.
- Switch the engine on by turning the ignition switch to 3 position while the gear is at neutral. (allowed for max. 15 seconds)
- Wait for 15 seconds if the engine does not start and repeat the same procedure in the same order.

CAUTION

Wait for the period determined by the electronic control unit (10 to 60 seconds) before starting again after a start failure. Do not attempt to start in this period.

Cold Starting of the Engine

Turn the ignition on. (position 2) cold starting lamp shall be continuously on.

- Start the engine (position 3) when the cold start lamp turns off,
- If the engine does not start, switch the ignition off, wait for 10 minute and repeat the steps above.

Starter Protection System

Starter Protection System is a system that prevents the burning of the starter due to unnecessary starting operations. Electronic control unit calculates the maximum appropriate duration of a starting operation by gathering many data via the sensors on the engine to protect the starter.
When the user exceeds the specified maximum start duration, he is prevented from starting again.
The system allows starting again at the end of the period determined by the electronic control unit.
Please follow the instructions below in such a case.

CAUTION

If your engine is not started after some attempts, there may another problem in another system of your engine. First complete the other checks, and attempt to start again.

To stop the engine
Do not stop the engine right after the vehicle is stopped, wait until the turbocharger speed is reduced by operating the engine in idle for 2 minutes. If the engine is stopped immediately when the vehicle is stopped, the turbo which is rotating in high speed shall not be adequately lubricated.

Air deflector
Adjust the air deflector on the cab according to the trailer.
Note: A correctly adjusted air deflector reduces the fuel consumption.

WARNING

There is a risk of falling down from the cab and being injured while adjusting the air deflector.
We advise you on that adjustments on the air deflector shall be performed by FORD OTOSAN authorized dealership with the required expertise and special equipment.

Smart acceleration feature:
Acceleration of the vehicle is controlled by limiting the engine acceleration profile to a specified percentage of the maximum weight that can be carried by the variant for trucks, and maximum load that can be drawn for the tractor trucks.
Abrupt and unintentional accelerator responses of the unloaded vehicle have been prevented, and thus driveability of the vehicle is improved besides providing fuel economy. Smart acceleration function is deactivated especially in uphill start and climbing manoeuvres and it is optimized to prevent adverse effect on the vehicle performance.

OPERATION

Driving

4

Cruise Control System
Principal of Operation

Cruise control system allows you to maintain the set speed without keeping your foot on the accelerator pedal. You may use cruise control system when your vehicle speed exceeds 30 km/h.

Operation of Cruise Control System

WARNING

Do not use cruise control in heavy traffic, on winding roads or when the road surface is slippery. This may cause the loss of the control of the vehicle and accidents that may cause serious injuries or death.

WARNING

When you are going downhill, your speed may exceed the set speed,
the system shall reactivate once the vehicle speed drops below the set speed. Change down a gear and press the SET- switch to assist the system in maintaining the set speed.
When the cruise control is activated, it is automatically deactivated in the following conditions:

- Applying the brake
- Activating the engine brake
- Pressing the accelerator pedal

shall deactivate cruise control system automatically.

Speed controls are located on the steering wheel.

Turning the Cruise Control System on

Press cruise control symbol and release it. The symbol shall be displayed on the indicator.

Adjustment of Drive Speed

1. Accelerate to the desired speed.
2. Press **SET+** or **SET -** and release.
3. Take your foot off the acceleration pedal.

Note: The colour of the display changes.

Changing the Set Speed

- Press and release the **SET+** or **SET-** button.
- Press the accelerator or brake pedal until you reach the desired speed. Press and release the **SET+** or **SET-** button.

Note: If you accelerate by pressing the accelerator pedal, the set speed shall not change. When you release the accelerator pedal, your vehicle shall return to the speed that you have previously set.

Cancelling the Set Speed
Press and release the CAN button or press the brake pedal. The set speed shall not be deleted.
Resuming the Set Speed
Press and release the RES button.
Turning the Cruise Control System off
Press cruise control symbol and release it when the system is at the waiting position or after turning the ignition off.
Note: Set speed is deleted when you turn the system off.

MaxCruise® - Predictive Speed Control System
Principal of Operation

MaxCruise® is a function that operates inside cruise control system and that affects the fuel economy by keeping the vehicle speed within the specified speed limits as per the information on the road. You may use this function while cruise control system is effective.

Using the MaxCruise® - Predictive Speed Control System
MaxCruise® adds the speed band values selected by the driver both as positive and negative based on the driving speed set in the cruise control system. The system tries to keep the vehicle speed within these values and at the same moves the vehicle at the speed with the minimum fuel consumption independent of the driver.

WARNING

Auxiliary brakes of the vehicle may be activated when the speed of the vehicle exceeds the upper limit specified for the MaxCruise® system. In such a case, the system is not deactivated.

WARNING

In some cases, vehicle speed may exceed the speed band values even if the auxiliary brakes are activated. Vehicle shall display a visual warning on the instrument panel in such cases. Ensure that the vehicle speed is kept at the safe level by changing the speed values set in this case.

Turning the MaxCruise® - Predictive Speed Control System on
To turn the MaxCruise® system on, you shall specify the upper and lower limit speeds for the system There are two ways to specify these values. You shall go the MaxCruise® system level selection screen under the drive assists tab in the instrument menu of the vehicle. Or you can go to this screen by pressing twice on the cruise control icon.
There are 4 levels in this screen. Off, Level 1, Level 2, Level 3

User may select these levels by using the bottom and top menu buttons. Value to be selected shall be selected by pressing the OK key in the menu. The leaves of the selected level shall turn from grey to green . These levels change the upper and lower limit of the set drive speed of the vehicle. Points to be considered while selecting the levels in this respect:

- While selecting the level, pay attention to the lower and upper speed values specific to that level on the indicator display. Vehicle shall add or remove these values to the drive speed and try to keep the speed between these values.
- The higher the level, the more fuel economy shall be obtained. This condition is shown on the display with fuel economy levaes . The more number of leaves, the more fuel economy.

Driving

- It is important that the driver selects especially the upper limit so that it shall be lower than the permissible speed limit as the upper and lower limits of the driving speed of the vehicle shall change. The driver is responsible for possible increases in the speed.

The level selection of the MaxCruise® system may be performed while the vehicle is moving or stopped, and the selected level shall be activated when the vehicle is restarted.

To operate the MaxCruise® system:
1. Set the MaxCruise® system level to a position other than OFF.
2. Turn the cruise control system on.
3. Set the vehicle speed to a certain value.
4. Remove your foot off the accelerator pedal.
5. Ensure that  or  symbol is displayed on the screen.
6. Make sure that the upper and lower speed values specified in the level selection appear on the display where the driving speed is displayed.

WARNING

While the MaxCruise® system is active, the cruise control system is also active at the same time. In this respect, adjustment and cancellation of the set speed of the cruise control system as described in the cruise control system are possible, and these changes shall also affect the MaxCruise® system.

WARNING

The upper speed limit values at different levels of the MaxCruise® system may vary according to the values specified for the driving speed of the vehicle in the cruise control system. In this respect, there is a maximum limit for the upper limit, and when the level is set, this limit is displayed to the driver on the level adjustment screen. Also, the upper band of the MaxCruise® system, which is actively displayed on the main screen of the instrument panel, may vary depending on the changing driving speed.

Changing the Set Level

The MaxCruise® system level set may be changed on the relevant screen by the method mentioned above regardless of whether the system is active or not. Changing the set speed of the cruise control system shall not change the level.

Turning the MaxCruise® - Predictive Speed Control System off

MaxCruise® system shall be deactivated when the set level is brought to OFF position.

Using Adaptive Speed Control System

Always pay attention to changing road conditions, especially when adaptive speed control system is used. The use of an adaptive cruise control system does not replace careful driving. Otherwise, you may cause an accident that could result in serious injuries or death.

Do not use the adaptive cruise control system when entering or exiting a highway, at intersections or roads with roundabouts, at traffic with no vehicle, or on rolling, slippery, unpaved roads or steep slopes.

Do not use the system in the case of bad visibility, for example when there is fog, heavy rain, drizzle or snow.

Do not use tires with dimensions other than those recommended as the normal operation of the system may be affected. If you use the system, you may lose control of the car in such a way that may result in serious injuries.

The adaptive cruise control system may not detect vehicles that are stationary or moving at a speed of less than 10 km/h.

The adaptive cruise control system does not detect the pedestrians or objects on the road.
The adaptive cruise control system does not detect oncoming vehicles at the same lane.

The adaptive cruise control system is not a collision warning or prevention system.

The system helps you to maintain the distance between you and the vehicle in front of you. The system adjusts the vehicle speed to maintain the distance between your car and the vehicle in front of you. The system applies brakes to slow down your vehicle in order to maintain the distance with the vehicle in front of you.
Note: It is your responsibility to stay alert, drive safely and be in control of the vehicle at all times.

Controls of the adaptive speed control system are located on the steering wheel.

Turning the Adaptive Speed Control System on

 Press and release the switch. Gray indicator light is displayed on the information display. System is now at stand-by.

Indicator, current distance setting and the set speed are displayed on the information display.

Adjustment of Drive Speed

Accelerate to the desired speed.

SET+ Push the button up to set the current speed.
1- Take your foot off the acceleration pedal.
2- Green indicator light and the current distance setting shall be displayed

Driving

3- Vehicle symbol is lit if a vehicle is detected in front of you.
Note: When the adaptive speed control system is activated, the speed displayed on the information display may be slightly different than the set speed.

Following a Vehicle

WARNING

While following a vehicle, your vehicle shall not slow down automatically to stop or slow down quickly to prevent a collision without interruption of the driver.
Apply brakes when required. Otherwise, you may cause an accident that could result in serious injuries or death.

The adaptive speed control system brakes up to 30% of the maximum deceleration of your vehicle. The adaptive speed control system shall give a visual warning and sound a buzzer if this deceleration is not adequate. There is a risk of accident in such a case.

Apply brakes yourself and attempt to make avoiding manoeuvres in such a case. The adaptive speed control system provides warnings on the vehicles detected with radar sensor only. In some cases there may be no warning or the warning may be delayed. You should always apply the brakes when necessary.

Otherwise, you may cause an accident that could result in serious injuries or death.

Vehicle speed is adjusted when a vehicle in front of you enters your lane or if there is a slower vehicle at the same lane to maintain the distance set.

Note: A sound may be heard when brakes are applied by the system.

When following a vehicle, the system may temporarily accelerate your vehicle slightly when you operate the turn signal towards the driver's side.

Your vehicle shall continue to maintain the distance from the vehicle in front of you until the following conditions occur:

- When the vehicle in front of you accelerates to a speed above the set speed.
- When the vehicle in front of you comes out of your lane or disappears from sight.
- When your vehicle speed drops below 30 km/h
- When a new following distance is set

The system applies auxiliary brakes and pedal brakes to slow down your vehicle in order to maintain the distance with the vehicle in front of you. The system carries out the maximum braking as limited. Press the brake pedal to deactivate the system. If the system decides that the maximum braking effect shall not be adequate, a warning buzzer is played and a message is displayed on the information display while the system continues to apply the brakes. You shall take precautions immediately.

Adjusting the Distance

By pressing the distance control you may reduce or increase the distance between your car and your vehicle in front of you.
Note: It is your responsibility to select a distance that is suitable for the driving conditions.

The selected distance is shown as a bar graph in the information display. You may select four distance values.

Graphic Display, Distance Between Vehicles is Displayed With Bars	Distance Between Vehicles	Dynamic Action
1	Closest.	Sport.
Emergency Management	Close.	Normal.
3	Medium.	Normal.
4	Distant.	Comfort.

The distance setting is set to Medium whenever you turn the ignition on.

Cancelling the Set Speed

WARNING

If you deactivate the system by pressing the accelerator pedal, it shall not brake automatically to maintain the distance from the vehicle in front of you.

Use the accelerator pedal in a normal way to exceed the set speed limit deliberately. Set Speed is displayed as invalid when you disable the system.
The system continues to work when you release the gas pedal. The vehicle speed falls to the set speed or falls to a lower speed if you are following a slower vehicle.

Changing the Set Speed

SET- Press the button down to decrease the set speed.
The set speed changes in small increments.
Note: Press and hold the button up or down to change the set speed at larger increments.
The system may apply brakes to bring the vehicle to the new set speed. When the system is activated, the set speed value is continuously displayed on the information display.

Cancelling the Set Speed

CAN Press and release the switch or press the brake pedal.
The last set speed and distance setting are displayed in grey, but they do not disappear from the screen.

Resuming the Set Speed

RES Press and release the switch.
The vehicle of your speed returns to the previously set speed and distance. The set speed is displayed on the information display as long as the system is active.
Note: Resume the set speed if you know the set speed and want to use this speed only.

Auto Cancellation

The system shall not operate at speeds below 30 km/h. If the vehicle in front is slower and the system starts to apply brakes to adjust the distance, a warning buzzer is sound and the automatic braking is continued in limited braking mode.
The system may also be deactivated automatically in the following situations:

- When you shift to neutral
- When you disable ESP
- When the wheels slip.
- When the engine speed is too low.
- When you apply the parking brake.
- When you activate the auxiliary brakes manually.
- When there is a fault in the brake system/electronic management system

Driving

Operation at Down Slopes

Note: If the brakes are applied for a long time, a warning buzzer is sound and system is deactivated. This allows cooling of the brakes. System operates normally again after the brakes are cooled.

If you are using the system in manual mode, you should select a lower gear to use the auxiliary brakes instead of the pedal brakes when the system is activated, for example when you are travelling long distances uphill or downhill, such as on mountainsides. If you use are using the system in automatic gear mode, the transmission: shall set the gear automatically.

Turning the Adaptive Cruise Control System off

 Press and release the switch.
Note: Set speed is deleted when you turn the system off.

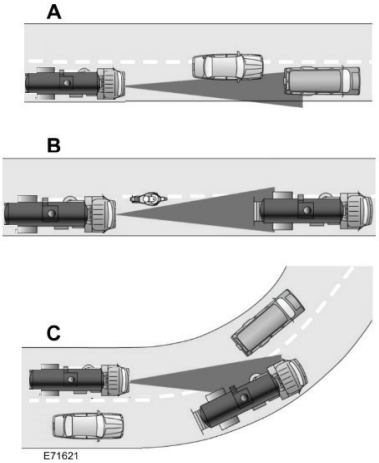
Problems of Detection

WARNING

For example, there may be detection problems due to infrastructures such as bridges, tunnels and safety barriers. In these cases the system may brake late or unexpectedly.

At all times you are responsible for controlling the vehicle, supervising the system and intervening, if required.

The radar sensor has a limited field of vision. In some cases vehicles may not be detected at all or detected as later than expected. Vehicle in front symbol is not displayed if the system does not detect a system in front of you.

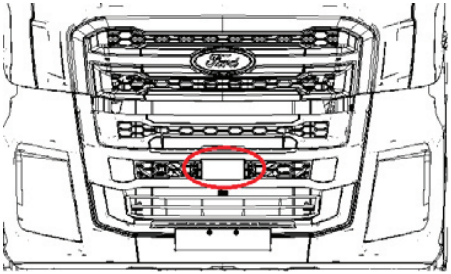


Detection issues can occur:

A. With vehicles on the edge of your lane that may only be detected once they have moved fully into your lane.
B. Motorcycles may be detected late, or not at all.
C. With vehicles in front when going into and coming out of a bend. The detection beam shall not follow sharp curves in the road.
In these cases the system may brake late or unexpectedly. You should stay alert and intervene if necessary.
Radar sensing area may change if the front of the vehicle gets damage or if something hits to the front of the vehicle. This may lead to incorrect detection or lack of detection. We recommend you to contact a Ford Authorized Service as soon as possible.

System cannot be used

Following are included in the conditions that cause the system to deactivate and that prevent activation of the system.
- Blocked sensor.
- High brake temperature.
- Malfunction in the system or in a relevant system.



A message is displayed when the radar signals taken from the sensor are blocked by an object. The sensor is located behind the grill. When the sensor is blocked, the system cannot detect the vehicle in front, and thus cannot operate.

Note: You cannot see the sensor, it is located under the panel.

Keep the front of your car clean and do not keep metal badges or other objects on the vehicle. Vehicle front protectors and retrofitted lamps may also block the sensor.

Reason	Procedure
The radar surface inside the grill is dirty or covered with something.	Clean the grill surface in front of the radar or remove the covering object.
Radar surface is clean, but there is still a message on the screen.	Wait for a short period of time. It may take a few minutes before the radar finds out there is nothing in front of it.
Excessive rain or snow blocks radar signals.	Do not use the system in such conditions as it shall not be able to detect the vehicles in front.
Water, snow or ice on the road surface may block the radar signals.	Do not use the system in such conditions as it shall not be able to detect the vehicles in front.
When you are in a desert or remote area where there are no other vehicles or road markings in your vicinity.	Wait for a short time or switch to normal speed control.

Switching to Normal Speed Control

WARNING

Speed control does not apply brakes when you are approaching slower vehicles. Always be aware of the operating mode you have selected and apply brakes when required.

You may switch from adaptive speed control to standard speed control using the information display.

If you select normal speed control, the adaptive speed control system indicator lamp shall be replaced with the normal speed control indicator lamp. Distance value is not indicated, the system does not automatically respond to vehicles in front, and automatic braking does not work. The system recalls the last setting you made when you have used your vehicle.

Driving

Speed Limiter

Principal of Operation

CAUTION

When you are going downhill, your speed may increase above the set speed. When you are going downhill, speed limiter brakes the vehicle automatically with auxiliary brake to resume the speed limit. LIM symbol flashes on the screen if the set speed is exceeded.

System is designed to support the driver. However, the system does not relieve you of the responsibility to be attentive and to decide correctly. The driver is always responsible for driving the vehicle with the required care and attention.

Speed limiter resumes to be active until the ECU sleeps after the engine is turned off, then it is deactivated.

The system allows you to set a speed value to limit your vehicle speed. The speed limit set shall be the active maximum speed of your vehicle. The speed limit set may be exceeded provisionally in cases such as overtaking.

Using the Speed Limiter

The buttons are located on the steering wheel.

Switching the System On and Off

LIM Press the LIM button to switch the system to stand-by mode. Press the LIM button again to turn the system off.

Setting the Speed Limiter

SET+ SET- While the system is at stand-by mode, press the speed up or down button to set the speed limiter to the current vehicle speed. The speed limit is recorded and displayed on the information display.
Speed limit may be set with smaller or larger increments. Press the up or down button to change the set speed with smaller increments. Press and hold the up or down button to change the set speed with larger increments.
To activate the speed limiter, activation conditions of the PTO speed controller shall not be met (PTO activation conditions are for example, vehicle at standstill, park brake applied, shift at neutral, brake pedal not pressed, etc.) Otherwise, PTO speed controller shall be activated.

Cancelling the Set Speed

CAN Press the cancel (CAN) button to cancel the set speed. System returns to Stand-by mode.

Resuming the Set Speed

RES Press the RES button to resume the set speed.

Intentionally Exceeding the Set Speed Limit

Press the accelerator pedal fully to provisionally exceed the set speed limit deliberately. System resumes the set speed when the current speed is lowered to a speed below the set speed or when you press the RES button.

Remote Software Update

Remote software update is a function that allows downloading new software that applies to your vehicle automatically and installing of such software with the approval of the user.

CAUTION

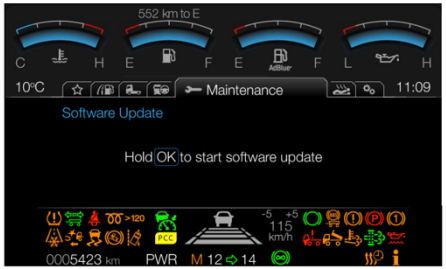
The SIM card in your vehicle shall be activated in order to use the remote software update function.

Using the Remote Software Update System

You shall be informed about a software update by the instrument panel when you turn the ignition on for the first time when there is a new software update for your vehicle. To start the software update, enter the software update sub-menu under the maintenance menu, and ensure that:

- Your vehicle is at standstill,
- Park brake is applied,
- Engine is not on and press and hold the OK key on the menu for 3 seconds.

If there are more than one software available for your vehicle, software update procedure shall start with the installation of the software with higher priority. Number of software updates available shall be displayed on your screen after each successful software update procedure. If the number of software updates is “0”, you have no new software remaining for your vehicle.



WARNING

When the software update is confirmed by the user, system shall check whether some other requirements are also met in addition to the requirements specified above.

If the prerequisites are not met (e.g., When the battery voltage is not adequate) software update procedure shall not be started.

WARNING

Do not turn the ignition off after starting the software update and do not start the engine until the procedure is completed. Your engine control unit may be restarted during the software update procedure. Wait until the relevant messages are displayed on the instrument panel and do not take any action before in such a case.

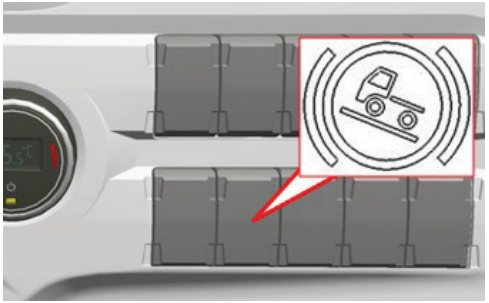
CAUTION

If you encounter any technical faults during software update or if you encounter a message indicating that the procedure has failed, attempt to restart the procedure first. If the procedure fails still, contact your nearest authorized service representative.

OPERATION

Driving

Hill launch assist



1- Stop the vehicle with service brake.
2- Activate the hill launch assist by pressing the button on the center console.
3- Release the brake pedal.

4- Hill launch assist holds the brake for a maximum of 2.5
seconds. If the engine torque reaches the specified level earlier, hill launch assist is deactivated before 2.5 seconds.
Hill start assist active warning is displayed on the instrument when the hill start assist is active.

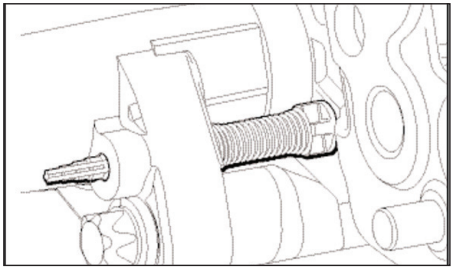
Disc brake system
Brake System: Arvin Meritor Elsa 225H air disc brake with sliding brake calliper.
Disc: 430 mm anti-conical disc with air ducts. System Air Pressure: 12,5 bar

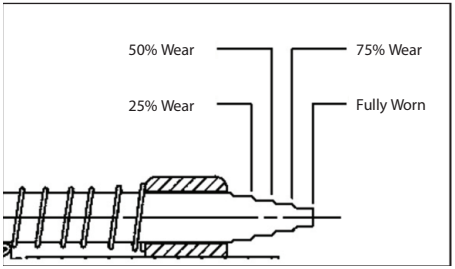
Brake friction pads

The thickness of the new linings is 19mm. Linings shall be replaced when the thickness becomes lower than 3 mm. On vehicles with disc brakes, a sensor that continuously measures the wear ratio is available on each brake. Remaining ratio of each brake lining is displayed in percents (%) on the indicator display. Driver is informed with a warning light when a lining on any brake is about to wear off. The vehicle should should be taken to the nearest workshop and the problem shall be resolved when the warning light is illuminated.

A difference of up to 25% between the left and right brake linings is acceptable. When there is a difference of more than 25%,
brake warning lamp on the indicator shall be illuminated. In such a case, you shall the drive to the service and have the brakes inspected. When the thickness of the lining falls below 20%, the value shall flash on the display. When the thickness falls below 6%, the brake warning light shall be illuminated on the indicator.
Drive to an authorized service to have the linings replaced.
Weared lining information is shown on the display. On which axle the brakes shall be replaced can be seen on the display. Linings of both left and right brakes on the relevant axle shall be replaced at the same time.

An indicator lever is available on the brake to allow monitoring of the lining thickness besides the percentage indication on the display. Linings shall be replaced when the indicator lever is fully worn.
Ss the service life of the lining shall differ greatly due to causes such as vehicle load, operating conditions etc., monitor the lining thickness periodically from the display or check it every month with the indicator lever on the brakes when it is not possible to monitor it from the display.





OPERATION

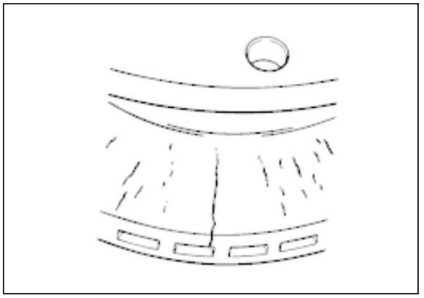
Braking

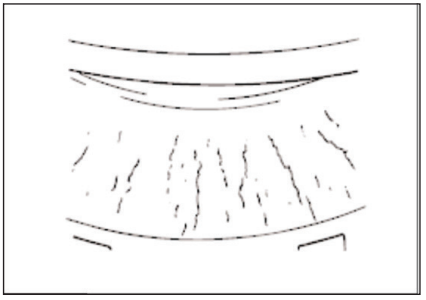
Disc Brake System

The thickness of the new discs is 45 mm. Discs shall be replaced when the thickness becomes lower than 39 mm. Check the disc thickness every three months as the service life of the disc shall differ greatly due to causes such as vehicle load, operating conditions etc. Inspect the disc surface against cracks during thickness inspection.

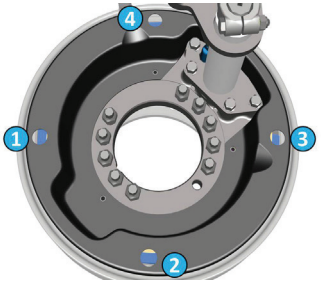
Replace the disc if the cracks on the surface has reached air ducts or grown up to 25% of the lining pressure surface. Cracks that have not grown up to 25% of the surface do not affect the performance, you may continue to use the disc.

Blue areas on the disc surfaces indicate that they have been subject to excessive heating. We recommend you to machine the disc as the structure of these areas have been deformed. Linings that have been subject to excessive heating shall also be replaced.



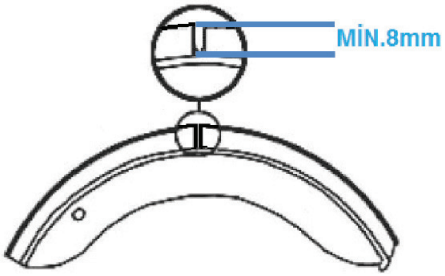


Drum Brake System



Z-cam brake system is a lining-drum type braking system. Brake lining wear is inspected from 4 holes on the brake plate. Remove the plugs on the plate for inspection, and replace them after inspection.

*Z-cam brake system is optional.



Lining wear inspection may also be performed visually from the inspection holes on the brake dust plate.
If the thickness of the lining remaining on the brake pad is less than 8mm, we recommend that you shall have your lining replaced in a Ford Trucks authorized service immediately.

CAUTION

Even if one of the mutual linings is worn, replace both linings.

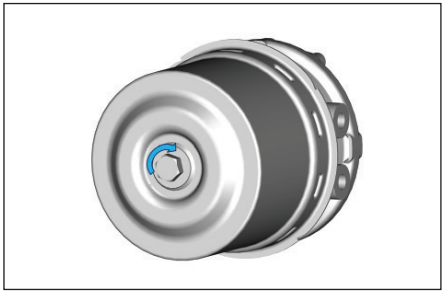
CAUTION

Install the plugs again after lining inspection. Otherwise, dust and dirt ingress between the lining and drum may cause premature lining wear and damage to the drum.

Braking

Emergency brake bellows
Brake air bellows on the drive axle of your vehicle have emergency feature. Emergency bellows are activated in 2 conditions:

- When the park brake is applied
- When there is not enough air in air tubes to brake the vehicle



Discharging the emergency bellows
To discharge the emergency bellows, turn the bolt behind the bellow in tightening direction (clockwise) completely.

CAUTION

No braking shall be available to hold the vehicle in place when the emergency bellows are discharged. Do not discharge the bellows before taking necessary safety precautions.

CAUTION

To start park brake mechanism again, please contact to the authorized workshops or refer to the repair catalogue. If the vehicle is going to be parked for more than a month, perform the following to protect the linings and drums.

- Park the vehicle, chock the wheels and release park brake lever.
- Drain air tanks completely.
- Release the park brake unit as specified depending on the vehicle model.
- Run park brake unit and refill the system with air when you will drive the vehicle again.

Engine brake (Standard)

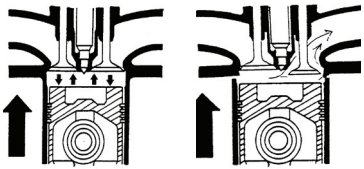
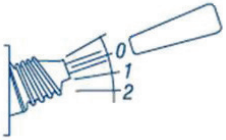


Fig. 1 Fig. 2

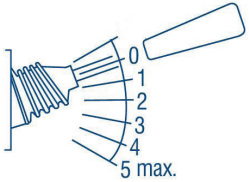
Your engine provides the engine brake feature as standard.
At the end of the compression cycle (Fig. 1), before several degrees from the Top Dead Center, a special equipment in engine pistons opens the exhaust valves a little and releases the pressure grown inside the cylinder (Fig. 2).
Thus, braking torque of the compression cycle is used.

Activation of the engine brake



	Engine Brake
1. Range	Reduced Brake Power
2. Range	High Brake Power

Engine brake is activated by the lever on the right of the steering.
warning is displayed on the indicator.
Intarder / optional
Intarder is a special brake system for decelerating the vehicle and maintaining the speed in downhill travels, and also known in the market as "drive shaft brake".
Intarder provided in your vehicle has a hydrodynamic braking system also known in the market as fluid type.
- Braking Moment: 3,500 Nm
- Braking Power: 600 kW
- Weight: 70 kg .
- Operating principle: Hydrodynamic braking
- Fully compliant with ABS-EBS system

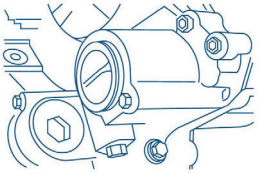


Intarder is activated by the 5 step lever on the right of the steering.

	Engine Brake	Intarder
Intarder 1	50% Max. Brake Power	20% Max. Brake Power
Intarder 2	50% Max. Brake Power	40% Max. Brake Power
Intarder 3	100% Max. Brake Power	60% Max. Brake Power
Intarder 4	100% Max. Brake Power	80% Max. Brake Power
Intarder 5	100% Max. Brake Power	100% Max. Brake Power

warning is displayed on the display when the intarder is activated. Bring the intarder lever to 0 (off) position when the required speed is reached.
When the intarder lever is pulled, rear brake lamps are turned on when the vehicle reaches a specified braking power. (-0.7 m/s2).

Braking



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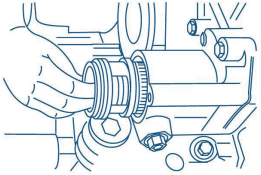


CAUTION

Intarder requires maintenance. The oil filter should always be changed at every replacement interval of the transmission oil.

WARNING

Intarder oil is cooled with the engine coolant. Check whether the coolant is heated excessively from the coolant temperature indicator especially when the intarder is used in long intervals.

When the coolant has reached 105 ºC, intarder is deactivated automatically to prevent excessive heating of the engine.

CAUTION

Using Intarder for any type of deceleration will extend service life of the brake linings.

Service Brakes Temperature Alert

In case of frequent use of service brakes, the yellow information lamp turns on (i) and; «Brakes overheating, reduce your speed and apply auxiliary brakes.» message along with The Brake Temperature Alert Symbol appears on the information display.
After this warning is given; the brake pedal should be pressed further in order to obtain the same amount of braking performance from the vehicle prior to the warning.
When the yellow information lamp (!) goes out, the service brake temperatures are reduced.

Brake Temperature Warning Symbol

CAUTION

Depending on the road and traffic conditions, the vehicle must be used in accordance with the following warnings, when the brake temperature alert appears:

- Reducing the speed of the vehicle
- Down shifting if necessary
- Use of auxiliary brakes primarily in situations where braking is required
- Use of service brakes only when the auxiliary brakes do not meet the need.

WARNING

Auxiliary brakes only affect the rear wheels. Using auxiliary brakes on slippery roads and during low load operation, may lock the rear wheels and cause the trailer to fold.
Do not accelerate under these conditions by using the service brakes. Taking traffic safety into consideration, the vehicle should be used more slowly and the service brake temperature should be decreased.

Braking

Automatic hybrid brake mode

When the “AUTO” button on the center console is pressed, intarder and engine brake may be activated by the foot brake. Thus, when the brake pedal is applied, intarder* and engine brake is applied as proportional to the pedal travel besides the service brakes. *intarder is not provided in standard vehicle package; it is optional.

CAUTION

If the right multifunction lever is brought to any position other than (0), automatic hybrid brake mode is deactivated until the lever is brought to position (0) again.

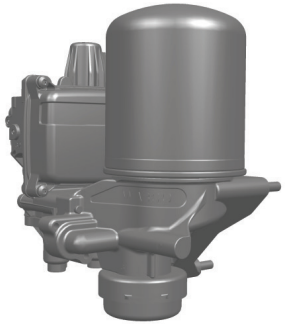
Air tubes

Volumes of the air tubes used in your vehicle are specified in their labels.

Drain the water in the tanks every day. Pull the ring attached to the cock until all air is discharged to drain the water inside the tanks.

When the air tanks are drained, low pressure warning should sound as the ignition is switched on. If the warning system is not operated due to a fault on the warning circuit, the fault on the system should be repaired immediately. Do not drive your vehicle until the normal pressure is displayed on the air pressure indicators. Air drier filter may be not operating if greasy mud deposit is seen during the air tank draining procedure. Replace the filter of the air dryer.

Air Dryer (APU)



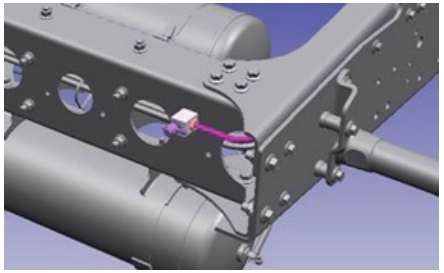
The air processing unit in your vehicle, is a unit that separates the oil inside the air, discharges the air besides the air drying function and that contains the multi-way safety valve.

Air drier filter shall be replaced in periodical maintenance intervals. If the drier filter does not operate properly, it may cause damage to itself and to the systems using air.
For this reason, it shall be replaced with a filter that offers a humidity and oil trapping feature in the service.

CAUTION

The electronic air processing unit cleans its filter at certain periods. During the cleaning process, the air level decreases and the compressor restarts.
This process may be continued for several times in succession, and it is possible to drive the vehicle while the filter cleaning process is in progress.

Auxiliary Air Line



CAUTION

You shall not draw air directly from the tubes. When it is required to draw air for special operations, the connection shown in the figure shall be used.
The pressure level here is the same as the brake pressure level displayed on the screen.

OPERATION

Braking

4

Brake pedal test:

There are some faults that cannot be directly detected by EBS and that can be detected by monitoring the behaviour of the vehicle and the brake system only. These monitoring functions are called plausibility checks.
If a plausibility error is detected by EBS, the system may be restored when the EBS performs a system test (called reverse test) according to legal requirements and the test result is positive (operation of the brake system is correct) only. This means that a reverse test is required when the cause of the fault corrected (in case of a temporary fault or when the vehicle is repaired).
In order for the EBS to perform the reverse test, the driver shall press the brake pedal once under a certain condition. When the EBS requires that the pedal shall be pressed in this way to resolve the fault, it shall send a request with the following fault code:

Path: 253 (Vehicle braking system)
Type: 201 (Request for pressing the brake pedal) (SPN 64969)

You shall press the pedal as follows:
After the detection of the fault, the ignition shall be switched off and on again to reset the EBS.

- To turn off the EBS, the ignition shall be off at least for 5 seconds and
- When the ignition is off, the brake pedal shall be released to avoid braking without resetting the EBS in waking mode.
- After the ignition is switched on, for at least 7 seconds:
- The vehicle shall remain stationary and the brake pedal shall be released.
- The EBS supply voltage shall be sufficient for electronically controlled braking.
- In case of TCM malfunctions, the parking brake shall be released.
- The warning light is on, system restriction is active.
- Pressing the brake pedal under following conditions:
- When the vehicle is stationary, a brake pedal request warning message appears on the display.
- Do not start to press the pedal within 7 seconds after the ignition is turned on.
- The pedal stroke shall be increased to the full brake position without any conditions.
- The full braking position shall be maintained for at least 3 seconds.
- The pedal shall be released to the full release position without any conditions.
- The brake pedal shall remain in the fully released position for at least 3 seconds.
- The warning light illuminates. System restriction during braking is not active. Braking is controlled by the electronic pressure control.

Brake pedal test successful:

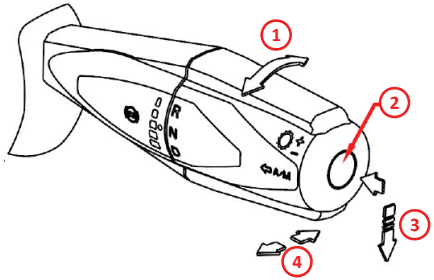
- No fault is detected during braking.
- Warning lamp is off, system restriction is not active.

Brake pedal test failed:

- When a fault is detected during braking or
- When the maximum braking period of 25 seconds has expired or
- If the car starts to move.
- The warning light remains on, system restriction is active.
- To restart the brake pedal test, the ignition shall be switched off and on again.

Automated transmission and shifting

Ford Trucks vehicles with automated transmission are equipped with a transmission with 12 forward and 2 reverse gears.
No clutch pedal is available in the vehicle. Clutch release/clutch operation is performed by the mechanism controlled by the electronic control module.
System components Shift Lever:



D: forward gear
N: EMPTY
R: Reverse
1 Selection of driving direction
2 Automatic / Manual gear selection
3 Auxiliary brake control
4 Upshifting / Downshifting

CAUTION

Operate the vehicle when the transmission is in neutral (N) and the parking brake is applied.

Do not move the shift lever in the opposite direction (D-> R; R-> D) of the movement direction or to idle position (N) while driving.

Before leaving the vehicle, bring the shift lever to (N) and apply the parking brake. Do not leave the vehicle when the gearbox is in position (D) or (R).

Press the manoeuvre button on the control panel during the parking manoeuvre.

Lock mechanism prevents switching from N to D or N to R in case of hitting the lever with your arm. This mechanism allows you to shift quickly from R to D.

Automatic and Manual Operation:
Automatic: Transmission electrical control unit selects the best gear according to the engine and load status. Gear selection and shifts are performed automatically. False gear selection is not possible.
• Transmission decides the take-off gear and the gearshifts.
Transmission model code can vary according to the features such as PTO and/or intarder.

Shifting

- If the engine brake is not active, the transmission shall automatically switch itself to the gear with the best economy (low engine speed).
- If the engine brakes is active, the transmission shall down-shift to increase the speed.
- Clutch movement and shifts are performed automatically.
- Gears may be corrected manually.
- False gear shifting is not possible.

First operation (taking off)
Moving the Vehicle
Make sure that the air is filled up. You can tell whether the air is filled or not by the air pressure section of the instrument panel. Or you may wait until the driver's seat is completely filled with air.
If the driver's seat is filled with air, this means that there is enough air for the transmission.
AL warning shall be displayed on the screen if the air in the vehicle is inadequate.

Shift to D for moving forward.

When you shift to D, the transmission shall start in automatic drive mode and shall select the starting gear itself, depending on load and inclination. D shall be displayed on the screen, indicating that the vehicle is started in automatic mode.

WARNING

In some cases, the transmission software may not be able to calculate the starting gear (when the vehicle is started recently, when no information received or due to calculation errors). If you think that the transmission can not select the appropriate gear according to the vehicle load and the inclination of the road, you may change the take-off gear with the + and - commands on the shift knob. (Max. 5th gear may be selected for take-off)

Release the park brake and press on the accelerator slowly. Transmission shall slowly release the clutch and allow the vehicle to move.

CAUTION

If the vehicle is on a slope when you release the park brake, it may slip backwards or forwards if you do not press the accelerator.

Keeping the vehicle uphill and slightly depressing the accelerator pedal shall cause the transmission to half-clutch, the clutch shall start to slip and it shall warm up.

CL shall be displayed on the screen if the clutch is overheated. If you see this warning, either press on the accelerator a little to allow the vehicle to move or press on the brake to hold the vehicle. Otherwise, clutch may burn out on early mileages.

CAUTION

If you see the CW warning on the screen, this means that the clutch is worn out. Vehicle shall not move in such a case. Call the authorized service.

Using in Manoeuvre Mode
The automatic transmission has manoeuvring modes to move the vehicle forward and backward precisely.

When in the manoeuvre mode, the transmission does not close the clutch fully or closes the clutch in a very a long time. This prevents the vehicle from moving forward abruptly and provides driving safety in approaching manoeuvres that require precise movement.
Shift to D and press the manoeuvre button on the control panel to use the vehicle in forward manoeuvre mode. Shift to R and press the manoeuvre button on the control panel to use the vehicle in reverse manoeuvre mode.

CAUTION

Manoeuvre modes are not auxiliary shift modes, they may cause damage to the clutch by overheating the clutch when the vehicle is operated under load or on a slope for a long period of time.

Initial Movement Downhill or Uphill
-If the gear is shifted and brakes are released while the engine is operated

- If the gear is shifted to D or to the manoeuvre mode and the vehicle is downhill, transmission closes the clutch slowly and vehicle starts to move slowly.

- If the gear is shifted to R or to the manoeuvre mode and the vehicle is uphill, transmission closes the clutch slowly and vehicle starts to move backwards slowly.

- If the gear is shifted to D or to the manoeuvre mode and the vehicle is uphill, transmission does not close the clutch, vehicle slips a little backwards and transmission starts to open and close the clutch and to shake the vehicle in order to warn the driver.

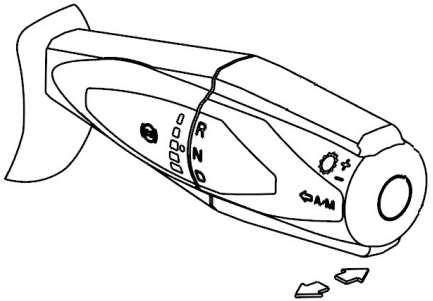
- If the gear is shifted to R or to the manoeuvre mode and the vehicle is downhill, transmission does not close the clutch, vehicle slips a little backwards and transmission starts to open and close the clutch and to shake the vehicle in order to warn the driver.

Driving

Automatic Driving Mode
Automatic transmission detects the road and load conditions and calculates and selects the appropriate gear according to the driver's pressing on the accelerator. When you think that the automatic transmission does not select the appropriate gear, you may upshift or downshift by pushing / pulling the gear lever in the + / - direction.

OPERATION

Shifting



M shall be displayed on the screen temporarily if the gear is upshifted or downshifted with the gear lever. After some time, transmission shall return to automatic mode again, and D shall be displayed on the screen.
On automatic drive mode (D), the transmission adjusts the shifting speed according to the pressing level on the accelerator. Shifts gear at low speeds for economy when the accelerator is pressed lightly, and shifts gear at high speeds for performance when the accelerator is pressed strongly.

When the accelerator is pressed fully, it finds another level that can be sensed with the foot, too. If you press beyond this level, transmission downshifts for higher power and allows the engine to reach a higher speed. This feature, called as “kick-down”, helps the vehicle to accelerate while overtaking another vehicle or when power is required.

CAUTION

Manoeuvre modes shall only be used for coasting, and only as it is required.

CAUTION

The duration of manoeuvre modes is limited by the transmission control unit. Maneuver mode (DM and RM) puts a strain on the clutch lining when it is used for a long time, then CL warning is displayed on the display; shift the transmission to neutral and wait for a while.

STOP Transmission is faulty. Stop the vehicle and contact a Ford Trucks authorized dealership.

Manual Use:

- Take-off gear is automatically determined.
- Clutch movement and gear shifting operation are automatic when the gear is shifted manually via the shift lever.
- False gear shifting is not possible.
- Manoeuvre operation is available in automatic mode only.

If the vehicle is driven in manoeuvre mode despite the CL warning on the display, transmission shifts to gear automatically. In this case, vehicle may be accelerated.

CAUTION

Do not to exceed the maximum engine speeds allowed during manual operation.

Display warnings:
Transmission warnings are displayed as 2 digit abbreviations on trip computer.

N Transmission in neutral

PN Shift to neutral.

4

Shifting

Reverse, high range

Reverse, low range

Air pressure inadequate: There is a separate air tube in your vehicle for the automated transmission. If the air pressure in the transmission air line goes below 5.8 bar, AL warning shall be displayed.

WARNING

- Forcing to change gear when the air pressure is low may cause transmission to switch to neutral. In this case, exhaust brake shall not be active.
- When the air pressure drops, it is not possible to disengage the clutch.

Clutch is overloaded.

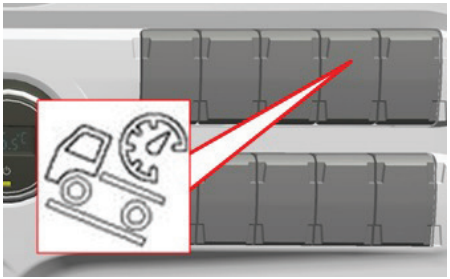
This is displayed when you attempt to take off the vehicle with a gear higher than required in manual mode. Select a lower gear and take off the vehicle in this condition.

Clutch lining wear

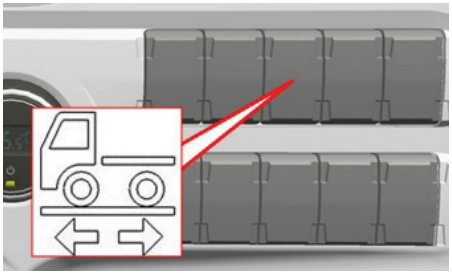
Clutch lining wear has reached limit value. Please visit a Ford Trucks authorized dealership in the shortest possible time.

Transmission oil temperature has reached upper limit. Stop the vehicle. Please contact a Ford Trucks authorized dealership.

High speed drive mode
Tractor and Road series vehicles may some times require to operate continuously at high speeds.
When high speed and power are required, you may turn on the power mode of the transmission, and allow the transmission to shift quicker at high speeds
To activate the power mode, press the power rocking switch on the front panel
Press on the switch again when you want to deactivate it.
PWR flashes on the information display when the power mode is active.



Off-road driving mode
Construction series vehicles may require to operate at high speeds continuously on off-road conditions and to prevent unnecessary shifting.
Unnecessary gearshift prevention or where quick shifting or operating at high speeds are required, you may turn on the off-road mode of the transmission and ensure that transmission shifts as per the soft ground and rough terrain conditions.
To activate the off-road mode, press the Off-road/Rocking switch on the front panel once. Press on the switch again when you want to deactivate it.
OFR flashes on the information display when the off-road mode is active.



OPERATION

Power take off

Power Take Off

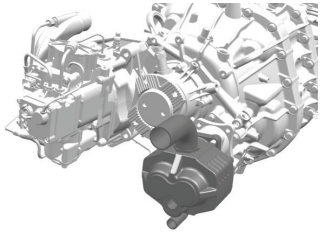


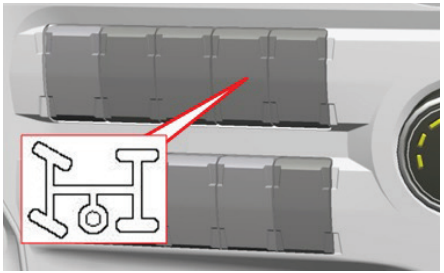
Illustration is for informational purposes only. There are no adaptors or pumps on the vehicle.
PTO is the unit connected to the transmission to operate the equipment that will be operated by taking power from the transmission (such as pumps). It transmits the power it takes from the transmission to the pump.
PTO installation is optional and can be performed on both manual and automated transmissions during production in the factory.
Contact a Ford Trucks authorized dealership for the retrospective PTO installations.

Engine electronic control unit allows that the engine is operated at a constant speed when PTO is activated. Maximum speed and function start parameters on the control unit may be set by a Ford Trucks authorized dealer.

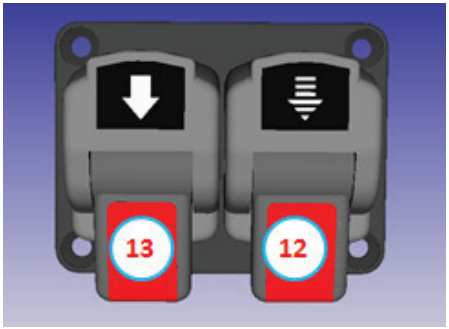
The following preconditions shall be met for engine speed control:
service. The vehicle shall be stationary,
service. Transmission shall be shifted to N,
service. The handbrake must be applied.

To activate the function:
service. Press the “RES” button on the steering wheel, engine speed shall switch to function start speed service. When you use tyhe “SET+” and “SET-” buttons, engine speed shall be increased and decreased with increments that may also be changed by the authorized service.

- PTO may only be activated when the vehicle is stationary and rotating knob is at position "N".
- PTO is activated by pressing the PTO button on the console.
- Shifting is not possible when PTO is activated and vehicle is moving.
- PTO cannot be activated when the vehicle is moving.
- symbol shall be illuminated on the functions section of instrument when PTO is active.



PTO valve switch



Control unit is used for lowering the bed in dump trucks. Button #12 is used for slow lowering, button #13 is used for fast lowering operation. Use the 'PTO (power take-off)' button in the panel to raise the bed.

WARNING

The driving, braking and manouvering behaviour of the vehicle varies according to the type, weight of the load, and the location of the center of gravity.
Make sure that the vehicle is loaded in a balanced way and avoid an unbalanced distribution of load.
Secure the load to prevent sliding when required. Otherwise, you may loose the control of the vehicle and cause and accident.

CAUTION

Observe the allowed axle loads, wheel loads (half of the axle load) and maximum total weight of the vehicle. Otherwise, damage to the tires, chassis and axles may occur. Observe the indicators on the instrument panel while driving.

WARNING

Make sure that the driven wheels are held on the road while driving, and especially on the off-road.
Prevent the spinning of the driven wheels (Differential damages).
Activate the differential lock.

CAUTION

Driving the too much off-road may cause damage to the vehicle.
The obstacles may not be noticed in time and the structure of the ground may not be assessed properly.
E.g. deep tracks formed before may damage:

- Axles
- Driveshafts
- Fuel tanks
- Compressed air tank
- Engine
- Transmission.

Therefore, always drive slowly off-road.
If you shall drive over the obstacles, co-driver shall provide directions.
Always observe the height of the vehicle from the ground. Avoid obstacles whenever possible.

While driving

WARNING

In the vehicles with engine driven power output (Engine-PTO), the angle of the shaft mounted at this point by the superstructure manufacturer with respect to engine shall not exceed the value of 3º. Make sure that the superstructure of your vehicle was constructed accordingly.
Otherwise, it may result in vibration, balance and thus serious engine and superstructure problems.

CAUTION

You may not observe the obstacles in time or assess the structure of the ground properly. Always drive slowly off-road to prevent damages to the vehicle. Vehicle may slip sideways or turned over. Never drive the vehicle in direct angle to the slope, always drive in parallel to the slope. Do not manoeuvre in the opposite direction. If your vehicle cannot take a slope, drive in the reverse gear. You may lose the control of the vehicle when you shift to neutral or press the clutch or try to brake the vehicle with the service brake only in slopes. Do not let your vehicle to move in neutral or with the clutch activated.

If you load your vehicle excessively, this would increase the risk of turning over. Do not exceed the maximum permissible axle load. Maintain the center of gravity as low as possible when you are loading your vehicle.
Materials that lower that the effect of braking, such as sand or water mixed with oil, may enter the brakes if you drive your vehicle on muddy or swampy areas frequently. This may cause excessive wear and a decrease in the braking effect. A risk of not being able to use the braking effect fully in emergency conditions is present.
Test the brakes after any off-road drives. If the braking effect is lowered or that rubbing noises are present in this test, make sure that your brake system is checked by a FORD OTOSAN authorized dealership.

WARNING

Acceleration forces act on your body from all directions due to the improper nature of the ground. There is a risk of bouncing off the seat and injuring yourself.
Always fasten your safety belt in the off-road drives, too.

Drive systems for off-road trips Driving systems and equipment described below allows you to drive your vehicle safely off-road:
• Disengagement of the ASR.
•Differential locks.

WARNING

The steering wheel may strike back and cause injuries on the thumbs of your hands when driving over obstacles or the tracks formed over the road. Hold the steering wheel tightly with your both hands. Consider the high forces occurring for a short period of time while driving over the obstacles.

- Stop the vehicle and engage a lower gear before driving off-road.
- Always drive the vehicle with the engine running and a gear engaged while driving off-road.
- Drive slowly and with a stable speed. Drive with the crawling speed if required.
- Make sure that the wheels are always held on the road.
- Activate the differential lock.
- Drive with extra care in an unknown or a non-visible area. Get off the vehicle first, and inspect the terrain for safety reasons.

- Check the depth of the water before driving through the water.
- Observe the obstacles like rocks, holes, trunks and trenches.
- Avoid skirts of the ground that the ground may be torn.

Before driving off-road

- Engagement of the differential lock
- Disengagement of the anti-skid control
- Equipment specified below should be available on the vehicle:
- Shovel
- Climbing rope with bolted Y anchor.

After driving off-road

WARNING

Faults caused by off-road driving may cause accidents or prevent some parts from operating. Clean and check your vehicle after driving off-road. Have the fault repaired before next operation of the vehicle.

- Disengage the differential lock
- Engage the anti-skid control (ASR)
- Clean the vehicle
- Check the vehicle for any damage.

Fuel consumption varies according to

Fuel consumption depends on the conditions below:

- Model of the vehicle
- Driving style
- Operating conditions
- Tire dimensions, tire profile, tire pressure, condition of the tires
- Upper structure, air deflector
- Drive train for the drive applications
- Auxiliary applications (A/C and heater, auxiliary power outlet, viscous fan)

Fuel consumption information may be displayed on the standard on-board computer.

Driving style

- To lower the fuel consumption:
- Avoid frequent acceleration and braking
- Drive carefully by paying attention on the road
- Drive within the economic engine speed limits

Workstations

It is not possible to provide a certain value for the fuel consumption of the vehicles operating under the following conditions:

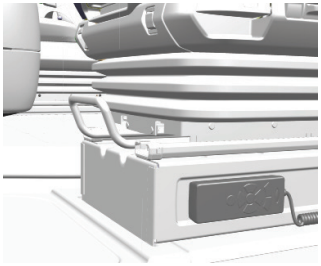
- Highland conditions
- Traffic in cities and short distances
- Vehicle load
- Operation while the vehicle is parked
- Frequent starting when the engine is cold

CAUTION

Stop lamps may flash quickly to warn the vehicles behind in case of harsh braking. Then the flashers may turn on after the vehicle has stopped.

ECAS (Electronically Controlled Air Suspension)

Manual Control Unit (On Vehicles with Air Suspension)

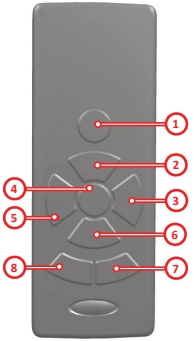


Chassis height of the vehicles with air bellows on rear axle may be adjusted by the control.
ECAS control is fixed to the metal surface on the lower left of the driver's seat with a magnet.

WARNING

⚠ Do not change the chassis height of your vehicle by the manual control unit when driving. Use the manual control unit when your vehicle is stationary and parking brake is applied. This is important for the safety of you and your vehicle.
⚠ If the vehicle air pressure is below 7 bar, ECAS shall not operate

Using the Manual Control Unit



1 - Stopping button (STOP)
2 - Lifting button
3 - Axle selection button (right)
4- Normal drive height button
5 - Axle selection button (left)
6 - Lowering button
7- M2 memory button
8- M1 memory button

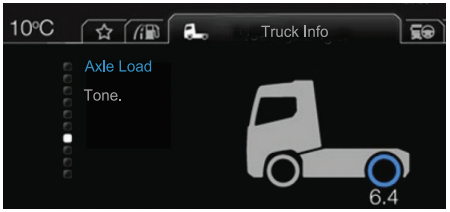
⚠ As the rear surface of the control is magnetized, it shall not be used in areas with metal burrs or where there is a risk of scratching without being cleaned after being used.

1. Ignition switch should be in position 2 to activate the air control system by the "manual control unit".
2. Drive axle selection is performed by using buttons no. 3 or 5. Axle selection may be activated or deactivated using the right or left arrows. Illumination shall be active as per the axle on the vehicle when the axle is selected. Control functions shall be available after performing this selection. You bring the vehicle to the desired height using the up, down and driving height buttons after this time.
3. Press the "STOP" button if you need to stop the operation during any procedure.
4. If you want to record a certain chassis height, press the "STOP+M1 or M2" buttons for 2 seconds at the same time. This would record the height to the system. In the future, when you want to adjust the vehicle to this height, use M1 or M2 buttons.

 symbol is illuminated on the instrument when the vehicle is not at driving height.

ECAS (Electronically Controlled Air Suspension)

ECAS indicator interface
Axle weight information shows the most correct information when the vehicle is at driving height.



If the lights of the ECAS control are not illuminated or it does not work, you may use the level adjustment function on the indicator until you drive to the service.

To use the ECAS adjustment function on the indicator;

1. Enter the ECAS adjustment screen using the direction
2. Press the OK button to enter the adjustment screen.
3. Press OK button again to bring the vehicle back to the driving height.
4. Use navigation keys to select raise or lower height expressions and keep “OK” key pressed to move the vehicle up or down. These functions lower or raise the vehicle while the keys are pressed as it is in the control.

5. Check the warning colour when “ECAS warning active” message is displayed on the Display Screen. Error is critical and no ECAS function shall operate if the red warning is active. ECAS functions resume to operate manually or as limited as per the status of the error if the yellow warning is active. However, we recommend you to drive to the authorized service in both cases.

Front Axle Height Adjustment Mechanism
Front axle lifting system shall be deactivated when the ignition is switched off and vehicle shall be lowered to drive level. In this case, use care for the relationship of the parts of the vehicle approaching the ground with the surroundings.

Front axle lifting system shall be deactivated when 30 km/h speed is exceeded and the vehicle shall automatically be adjusted to driving height.

Operating Instructions for Front Axle Height Adjustment Mechanism (Only for Vehicles that the height of the 5th wheel is lowered)
Ignition switch should be in position 2 to activate the air control system by the "Lifting Switch".
When the front axle lifting switch is pressed, front suspension bellows start to raise the front chassis of the vehicle. While the system is active, on vehicles with Manual transmission: An audible warning signal with a gong sound is heard. On vehicles with an automatic transmission: An audible warning signal with a gong sound is heard and symbol is displayed on the indicators.

When the rear axle lowered drive level control button is pressed, symbol is displayed on the indicator.

Allows lowering of the rear axle that is taken to the drive level in manual control to lower the level of the 5th.

EBS-ESP

CAUTION

ESP is an auxiliary brake system. Always remember that no system can change the physical laws. Driving safety is responsibility of the driver despite all auxiliary systems.

EBS (Electronic Brake System)
EBS (Electronic Brake System) is an integrated braking system that includes sub-systems.

1-Braking power control:
EBS control unit adjusts the braking power on the wheels automatically based on the information from the load sensor and the brake pedal travel applied by the driver.

2-Automatic braking power distribution between axles: EBS adjusts the braking power that will be applied to the axles based on the axle load.

3- ABS:
ABS maintains steering control by preventing the locking of wheels during brakes.

4-Automatic Traction Control:
Main purpose of this function is to prevent skidding of driven axle wheels.
a) Braking power control: The speeds of the wheels of the driven axle are equalized by decelerating the skidding wheel by braking.
b) engine torque is automatically limited to ensure that the vehicle moves stably.

5-Inertia torque control:
Wheels may skid due to the engine inertia in slippery surfaces. Especially, when the transmission is downshifted and/or intarder is activated, wheels may have an inclination to skid.
Inertia torque control system sends a signal to engine control unit and adjusts the engine torque to overcome the inertia of the engine.

CAUTION

Intarder may cause the vehicle to skid in slippery road conditions.

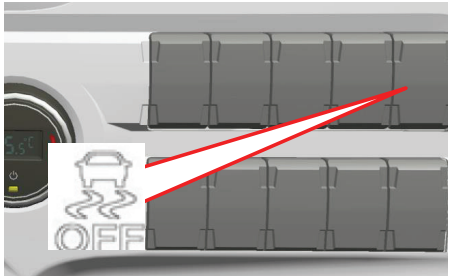
6- Emergency brake assist system:
System senses the braking operation and increases braking power according to the pedal travel.

CAUTION

Emergency brake assist cannot increase the maximum capacity of braking power. Vehicle shall be braked in the limits of maximum braking power.

7-Tilt prevention system: System senses the risk of tilting automatically when the brake is applied and decreases the braking power of front wheels and increases the braking power of rear axle. Thus, vehicle is prevented from tilting.

ESP Deactivation Mode:



You may want to disable ESP on soft road conditions. In this case, press the ESP cancel switch located in the centre console.

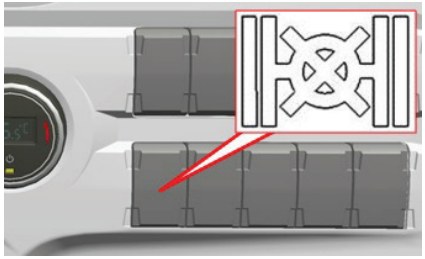
 light is illuminated on the display when this mode is active.

Differential Lock

What is differential lock?

Differential lock is a system that increases the capacity of transmission of power to the surface. Lock gear is consists of the yoke that moves the gear and an air operated piston.

When the differential lock is engaged, Engine torque transmitted to the left and right sides of the vehicle and wheel speeds are equalized. Activate the differential lock in bad and slippery road conditions where high and stable traction power is required.



Engagement of the differential lock

1) Activate the differential lock before running into worsening road conditions. Ensure that the road conditions are not slippery or any wheel is not slipping or skidding while it is being engaged.

Ensure that the wheels are not on slippery surface first and stop the vehicle completely.

2) Engage the differential lock button on the center console.

3) Differential lock light shall be illuminated on the instrument panel when differential lock is activated, and a warning buzzer shall sound if available.

CAUTION

If the differential lock is not used properly, there is a risk of heavy damage to the differential unit and/or a serious risk of accident. Differential faults caused by using improper use of differential lock are out of warranty cover.

Differential Lock

The points to be considered when the differential lock is activated:

The points to be considered when the differential lock is activated:
If required, the differential lock shall be engaged prior to go through the rough surface at the required distance and its engagement and disengagement shall be monitored via the illuminated warning sign on the instrument
cluster.

Vehicle may move outward of the curve in turns while the DCDL is completely activated.

Do not use differential lock on paved roads, and never perform turns when the locks are engaged.

When turning, make sure the differential lock is disengaged. Otherwise the differential of your vehicle may be damaged severely and you may have to call for AAA.

The maximum speed shall be 20 km/h when differential lock is engaged.

Deactivating the differential lock:
1) When it is safer to drive above certain speeds as soon as road conditions become normal, differential lock must be deactivated.
Vehicle shall be stopped and differential lock shall be disengaged after making sure that the vehicle moved far away from the slippery surface.
Ensure that the wheels are not on slippery surface first and stop the vehicle completely.
2) Deactivation of the differential lock is performed when the warning light on the instrument panel is turned off and this may take about 500 meters sometimes.
Turn the differential lock switch(es) on.
Drive the vehicle very slowly by applying the accelerator slowly to deactivate the differential lock.
3) The differential lock will disengage once the illuminated warning sign on the instrument cluster and the warning buzzer, if any, will stop.
4) You can continue driving observing the legal speed limits according to flow of the traffic.

WARNING

Vehicle should always be decelerated in sharp curves, and it is advised that the the differential lock is deactivated in sharp curves. User is informed by buzzer on that differential lock is activated.

CAUTION

Deactivate the differential lock when driving the tractor vehicles down the slopes. Trailer may be folded due to the loss of the vehicle dynamics.

Lane Departure Warning System

WARNING

⚠ Lane Departure Warning System is just a warning system and does not interfere with the vehicle dynamics. Always use your vehicle carefully and do not test the system on the road.
⚠ System shall not warn you if the hazard flashers are active.
⚠ System shall not warn you when the Lane Departure Warning Lamp  is illuminated solidly. Solid illumination of the warning lamp indicates a system fault or that the system is turned off by the driver.
⚠ Always activate the turn signal at the direction that your are leaving the lane, so that you do not receive a lane departure warning while changing lanes actively.
⚠ The Lane Departure Warning System does not mitigate your responsibility to use the car carefully and attentively.
⚠ The driver shall have the vehicle under control always and at all times. It is the driver's responsibility to intervene or disable the system when required.
Sensor may follow the lanes incorrectly, and may mistake them for other structures and objects. In such a case, the system may give false or incomplete warnings.

WARNING

⚠ The system may not work under bad weather conditions. Rain, snow, liquids splashing on the windshield, dirty or worn lane lines, and high contrast of the lighting may adversely affect the operation of the sensor.
⚠ The system may not work in areas where the road is under construction.
⚠ The system may not work in sharp bends and narrow lanes.
⚠ Do not repair the windscreen on the areas near the camera sensor.
⚠ The system may not work properly in the following situations:

- If the lane lines are not regular
- When the lights of the oncoming vehicles, the sunlight or the lights reflected from the wet surfaces come directly to the sensor
- If the lighting on the road is insufficient, or in case of snow, rain, fog or water splashes to the windshield
- If the lane lines are not detected when the distance from the vehicle in front is small.
- If the area where the camera is located on the windshield is dirty, fogged, damaged or covered by any object
- If there are no lane lines on the road or if there are multiple lane lines

Note: The system shall be activated when the vehicle speed is 60km/h or above.

Note: The system may only work when at least a lane is detected and followed.

Operating principle
The sensor of the Lane Departure Warning System located behind the windshield, on the lower center area of the windshield. When active, the system constantly monitors the road and driving conditions, warning the driver at high speeds when the vehicle inadvertently exits the lane. If the vehicle is moving above a speed of 60 km/h and there are visible lane lines on both sides of the road, lanes lines that indicate that the system is and ready to provide warning shall appear on the information display, on the area separated for the Lane Departure Warning System.

Lane Departure Warning System

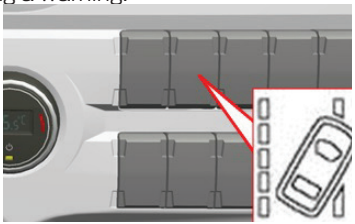
Lane Departure Warning System icon on the Information display

Lane departure warnings are given audibly and visually. The audible warning is issued directionally either from the right or left to indicate the direction from which the vehicle leaves the lane inadvertently.
In order to increase the audibility of the audible warning, the radio is muted and the fans of the air conditioning system are automatically switched off during the warning.
Once the system provides a warning, the vehicle shall return completely to the lane so that a second warning may be given.

Switching the System On and Off
Note: When the ignition is turned on, the system shall be activated automatically as long as there is no fault. To turn off the system, press the off button. The system shall be turned off and the warning lamp on the instrument panel shall be lit solidly. To turn the system on, press the Lane Departure Warning System button again and make sure that the warning light on the instrument panel is turned off.
Note: The system is only designed to provide warnings on inadvertent lane departures.
The attention of the driver is determined by evaluating a number of entries listed below. If these inputs clearly indicate that the driver is using the vehicle actively, the system shall not provide a warning.

- Lane departure speed
- Use of brake pedal
- Activation of the turn signal on the side that the vehicle comes out of the lane
- Activation of the hazard warning flashers

Note: If the right/left turn signals are active for longer than one minute, these signals shall not prevent the system from giving a warning.



Lane Departure Warning System on/off button

Lane Departure Warning System warning lamp

Note: When the camera's view is blocked, the following message shall appear on the instrument panel.

When the above message is displayed:

- If camera vision is blocked due to heavy snow or rain, the shall be operated at the proper speed or the automatic wiper function shall be activated. If the windshield is dirty, the windshield washer shall be activated and the dirt shall be removed.

Emergency braking system

- If there is mist on the windshield, operate the ventilation or the windshield heating function to remove the mist.

Note: The system may be deactivated if the camera's view is blocked. In such a case, the Lane Departure Warning System warning lamp shall be lit solidly.

Note: If you see the following warning on the instrument panel, you shall take your vehicle to a Ford Authorized service. The Lane Departure Warning System shall not be active until the vehicle is inspected by the service.

Note: If the warning light is illuminated solidly for a long time, there may have been an error in the system that would have caused the Lane Departure Warning System to turn off.

Lane Departure Warning System

Emergency braking system
If your vehicle is approaching a stationary vehicle or another vehicle that is moving in the same direction as you and the Emergency Braking System detects the possibility of a rear-end collision with the motor vehicle in front of you, system offers functionalities with the two levels specified
below:

1. Collision warning
2. Emergency braking

Collision Warning: If the system detects that a collision is possible, the warning lamps starts flashing, an intermittent warning buzzer is heard, and a collision warning is displayed on the screen. In order to increase the audibility of the audible warning, the radio is muted and the fans of the air conditioning system are automatically switched off during the warning. If the system detects that you have not taken control of your vehicle to prevent a collision and if it is still possible to determine that a collision is possible, the system may start partial braking to warn you and continues to provide collision warnings.

Emergency Braking: If the system continues to detect that you have not the control of vehicle to avoid any crash and is still capable of detecting any possibility of crash, the system may perform full braking to reduce the intensity of crash or to avoid crash completely and keeps giving warning to draw your attention.

Emergency braking system is active at speeds above 15 km/h approximately.

The Emergency Braking System does not become activated when the speed difference between you and the vehicle ahead of you is less than 10 km/h.

WARNING

Switching off the ESP function shall also cause the Emergency Braking System to turn off automatically.

The fact that the Emergency Braking System warning lamp is lit solidly indicates that the system has been shut down by the driver or that the system has shut down due to a fault.
In such a case, the system is turned off. It shall not warn you and shall not apply the brakes.

WARNING

A collision warning indicates that a possible collision is determined by the system. If you get this warning, always apply the brake yourself and make the necessary manoeuvres to prevent the collision, if required. Failure to observe this may result in loss of control, serious injuries or death.

WARNING

The Emergency Braking System is a collision avoidance system; however the system may never replace safe and careful driving. The system works within certain limits for certain traffic scenarios only. The system may not work as expected in all conditions and circumstances. The system certainly does not remove your responsibility to use your car safely and carefully. Failure to observe this warning may result in loss of control, serious injuries or death.

The system cannot predict what other drivers in the traffic will do. Always leave a safe distance with the vehicle in front of you while driving. Failure to observe this warning may result in loss of control, serious injuries or death.

Emergency braking system

⚠ The system is designed to provide active driver support only to prevent a possible frontal collision or to reduce the severity of the collision under real traffic conditions.

⚠ The system may not always detect the possibility of collision and/or may not be able to prevent the collision even if it detects it. The system is not designed to prevent all kinds of collisions or to detect complex traffic conditions. Careful driving is always the responsibility of the driver. Always use your vehicle with caution and be ready to apply the brakes. Failure to observe this warning may result in loss of control, serious injuries or death.

CAUTION

⚠ The system does not respond to bicycles, motorcycles, pedestrians, animals, or vehicles moving in a different direction. Failure to observe this may result in loss of control, serious injuries or death.

⚠ The system is not designed to prevent accidents that may occur with stationary vehicles. The system may only reduce the severity of rear-end collisions that may occur with stationary vehicles under certain circumstances only.

⚠ The system may not work while taking sharp turns.
Failure to observe this may result in accidents or personal injury.

⚠ Under cold or harsh conditions, the system may not operate or may operate with low performance. Snow, ice, rain, water and fog that splashes from the wheels of the vehicle in front of you or from the road in extreme amounts can adversely affect the operation of the system. Failure to observe this may result in loss of control, serious injuries or death.

⚠ If you replace the windshield with a windshield that is not produced by Ford, the system may not work correctly.
Do not perform windshield repairs in the areas in front of the camera sensor. Failure to observe this warning may result in accidents or injuries.

⚠ System may not detect objects with surfaces that absorb reflections. Failure to observe this may result in loss of control, serious injuries or death.

⚠ System performance may be deteriorated if the camera sensor's sensing capability is limited. For example, direct sunlight that dazzles the eyes, inadequate sunlight, vehicles with rear stop lights that do not work at night time, narrow vehicles and unusual vehicle types may not be detected by the system. Do not drive recklessly relying on the system and always pay attention to your speed and your distance from the car in front.

⚠ The effectiveness of the system vary depending on the speed, driver inputs, heavy rainfall, the behaviour of the vehicle in front of you, your vehicle's condition and road conditions.

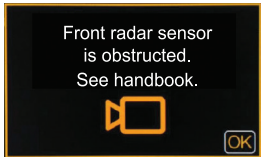
⚠ If you do not have the periodical maintenances of your vehicle performed by Ford authorized services, the system may not work correctly.

⚠ If your vehicle shall be towed by another vehicle, turn off the system by pressing the off button. If your vehicle is towed while the system is on, the system may cause your vehicle to provide warnings or to brake unexpectedly.

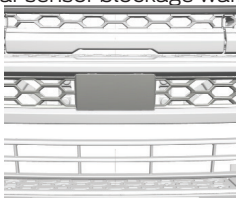
⚠ While driving your vehicle in terrain conditions, you shall turn off the system by pressing the off button. **How shall the driver maintain the system under normal operation conditions?**

Note: If you receive a warning that the radar sensor is blocked on the information display, this means that the radar signals are blocked. The radar sensor is located behind the flat surface in the lower center area of the top grill as shown below. If the radar is blocked, the emergency braking system shall not operate and detect the vehicle in front.

Emergency braking system



Radar sensor blockage warning



Radar and the flat surface in front of it

Note: It is the driver's responsibility that the radar sensor and the flat surface in front of it are clear and clean. Make sure there are no mud, heavy snow or any foreign objects on the front surface of the radar sensor and on the flat surface in front of the radar.

Note: Do not have any attachments installed to the front of the radar on your vehicle. The flat surface in front of the radar shall not be covered or painted. Any changes to the radar surface or the flat surface in front of it may cause the Emergency Braking System to malfunction or may reduce the functionality of the system.

Note: If the front of your vehicle is struck by an object or if the front of your vehicle is damaged, the radar vision setting may be impaired. This may cause the system to give false warnings or no warning at all. In order to ensure that the radar is working properly and to check the coverage area, you may contact a Ford Authorized Service Station

Note: If you see a warning about the "low front camera resolution" on the information display as follows, this means that the camera's view is blocked. Blocking of the camera view may cause the Emergency Braking System to loose its functionality or the may cause the system to turn off completely.

Camera sensor blockage warning

Note: The camera sensor is located in the lower center area of the windshield. If you see the warning above, clean the outside of the windshield in front of the camera by activating the windshield washer.

Note: Do not attach a sticker or a film on the part of the windshield in front of the camera to prevent the sunlight.

Note: Repair windshield damage in the camera's field of view.

What to do When a Trailer is Connected to the Vehicle

CAUTION

After you have connected a trailer to the vehicle and made sure that all the electrical connections between the trailer and the vehicle are made, if the ignition is still on, close and open the ignition completely. Otherwise, your vehicle's brake system and Emergency Braking System may not work properly.

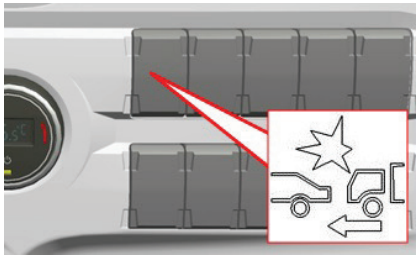
⚠ Emergency braking system shall automatically shut down if there is a fault in the brake system of the trailer or if the trailer you have connected to the vehicle is not equipped with an ABS feature.

Emergency braking system

⚠ Emergency braking system is designed with the assumption that it shall be connected to one trailer maximum. If more than one trailer is connected, the system shall be turned off by pressing the off button.

Switching the System Off and On
Note: The Emergency Braking System shall be on whenever the ignition is switched on as long as there is no fault in the system.

Note: To turn off the system, press the system off button on the front panel. The system warning lamp on the instrument panel shall be lit solidly when the system is turned off. To turn the system back on, press the system off button for a little while. In this case, warning lamp shall be turned off to indicate that the system is active again.



Emergency Braking System off button

Why may the Emergency Braking System be turned off?

- You may have turned the system off by pressing the off key.
- ESP function may have turned off.
- The system may have detected that the radar detection area setting has failed. In this case, the information screen shall display a warning that the system has failed. Your vehicle shall be inspected by a Ford Authorized Service to have the system activated again.
- The system may have turned itself off considering the possibility of a problem in the system if the system has switched over twice before the ignition is switched off. Your vehicle shall be inspected by a Ford Authorized Service to have the system activated again.

Emergency Braking System malfunction warning

Note: Faults in other systems or parts of the vehicle may cause the Emergency Braking System to turn off automatically.
If the system warning lamp has been lit solidly for a long time, your vehicle shall be inspected by a Ford Authorized Service.

How may the intervention of the emergency braking system be suppressed?

WARNING

The Emergency Brake System may warn you and brake your vehicle even if the traffic situation is not critical. Be prepared to suppress the system. You may stop the current Emergency Braking System warnings or suppress warnings that have not started yet by conducting one of the following actions:

- By signalling to left or right
- By pressing the brake pedal
- By pressing the accelerator pedal
- By pressing the system off button

You may cancel an emergency braking operation that is triggered by the Emergency Braking System with one of the following actions:

- By pressing the accelerator pedal fully, and activating the button at the end of the pedal
- By pressing the system off button
  If you are stopped by an emergency braking operation triggered by the Emergency Braking System, the system shall hold the brakes until you suppress the system with one of the following actions. To release the brakes in such a case:
- Depress the accelerator pedal.

or

- Press the system off button.

CAUTION

Important Note: In such a case, gain the control of your vehicle and make sure that you apply the parking brake before you leave the vehicle. Before leaving your vehicle, take all safety precautions to protect your vehicle and yourself.

Driver evaluation function

Driver evaluation function
Driver evaluation function is under the Driver Assistant menu. To activate this, scroll through the menu using the arrows and select the "Driver Evaluation" tab.

Driver Evaluation evaluates the fuel consumption performance of the driver in terms of driving, braking, acceleration and foresight. In general, at least one of the scores shall be updated at the set time intervals. In some cases, the function warns the driver by showing a hint and adds extra penalty points so that the scores are updated out of regular range. All scores are set to 100 when the vehicle is started. As the driver continues his/her trip, penalty points are calculated based on the driving style and applied to all four scores.
Please do not consider the changes observed in scores at the beginning of the trip, these values shall create an average over time. You may reset scores by holding down the "OK" button for 4 seconds.
You may see the driver evaluation screen below, together with the reset button and score types.

Driving: Evaluates the vehicle speed while the vehicle is not accelerated or decelerated. High average speed and high speed changes are evaluated as negative.

Braking: Evaluates the brake performance of the driver. Frequent use of the brake pedal is considered as negative.

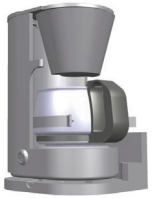
Acceleration: Evaluates the use of accelerator pedal and engine speed for a certain period of time. Severe use of the accelerator pedal, a long period of cruising at high engine speeds and excessive down-shifting are considered as negative.

Foresight: Evaluates the performance of the driver by anticipating the route. Frequent acceleration and deceleration and long waits at idle are considered negative.

Driving hints
Driving hints are a passive function that displays a warning based on the detection of specific conditions to improve fuel consumption. The function has an activation/deactivation button on the Driver Assist menu, shown in the figure below. If the function is disabled, the corresponding warnings shall not be displayed. The shortest period of time between successive hints displayed is limited.

Accessories

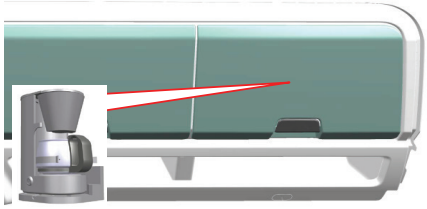
Coffee Maker



User manual of the coffee maker is delivered with the product.
Please read the user manual carefully before starting to use the coffee maker.

CAUTION

The position shown in the figure is designed to secure the product when it is not being used, and it shall be installed by an authorized service.



Refrigerator

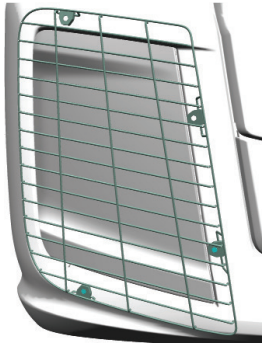
User manual of the refrigerator is delivered with the product.
Please read the user manual carefully before starting to use the refrigerator.

CAUTION

If you want to install a refrigerator on vehicles that are not equipped with a refrigerator ex-factory, you shall have the product installed by an authorized service.

Do not step on the refrigerator

Headlamp guard grill



The Headlamp Guard Grill may be purchased from the services as an accessory for your vehicle.

CAUTION

The product shall be installed by an authorized service.

CAUTION !

**YOUR TACHOGRAPH IS NOT CALIBRATED.
PLEASE HAVE YOUR TACHOGRAPH CALIBRATED IN AN APPROVED SERVICE SPECIFIED IN THE MANUAL PROVIDED.**

- You have made a right choice by purchasing a Ford Truck. Congratulations.
- Please consider the following points and read this manual to obtain best performance and service life from your vehicle.

1. Air and oil filters

- Replace the air filter element when air filter warning light is illuminated inside the cab. Always refer to the warranty and service manuals for the main filter element replacement intervals.
- Use oil and air filters approved by Ford Otomotiv Sanayi only.

2. Adding oil

- Do not add oil until the oil level is reduced to min. line.
- Never add oil over the max. line.
- Add oil to the engine when the oil level warning light is illuminated.

3. Engine

- Your vehicle is equipped with a system that prevents starting of the engine while transmission is shifted to a gear.
- Always observe starting instructions provided in the manual.
- Do not increase the engine speed until oil pressure is increased after starting.
- We advise you to operate your vehicle in the green zone tachometer to obtain best traction. (1050 to 1600 rpm)
- Operate your engine at idle for 1 minutes before stopping the engine in order to allow continued lubrication of the turbocharger unit.
- We advise you to use the vehicles with automated transmissions in automatic mode as much as possible.

4. Injector pump

- Injector pump available in your vehicle is completely adjusted and sealed in factory.
- Do not let tampering of injector pump by any other workshops other than authorized dealerships.

5. Wheel nuts

- Have the wheel nuts tightened to the specified torque values after 500 km from the first loading point of your vehicle. This operation should be repeated after each nut removal. (750 +- 50Nm)

6. Wheel alignment

- Have the front alignment adjustment of your vehicle checked, and have it adjusted by service support if needed in the first 1000 to 5000 km.

OPERATION

Useful Information

7. Braking system
- Drain the water in the air tanks every day.

8. Differential lock
- Contact authorized dealership when the differential lock warning lamps is illuminated while the differential lock switch is not pressed. The maximum speed shall be 20 km/h when differential lock is engaged.

9. Cab lift
- Ensure that park brake is applied, transmission is in neutral and hood is open before lifting the cab.

10. Upper bed
- Do not lower the upper bed while the vehicle is moving.

11. Refuelling
- Turn off the auxiliary cab heater before refilling fuel.

12. Tyre pressures
- Your vehicle is provided with low tire pressures from the factory. Adjust tire pressures according to the tire pressure values given in the manual before first loading.

Authorized dealerships
Have your vehicle maintained and repaired by our dealerships available countrywide and using genuine Ford spare parts. We wish you a safe trip and a prosperous business!

MAINTENANCE AND SERVICE

Attaching and Detaching a Trailer

5. Wheel (Platform) - Trailer Connection (for 5th wheels of SAF HOLLAND brand)

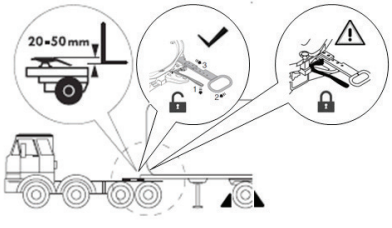


Figure-1

1- Block the wheels of the semi-trailer.
2- Check that 5th wheel lock is open. The port for the semi-trailer pin should be open. (see Figure 1)

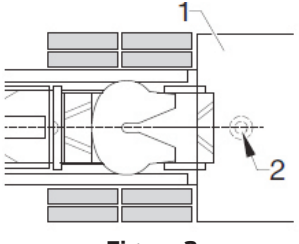


Figure-2

3-Position the truck in front of the semi-trailer. (see Figure 1 and Figure 2)

4-Position the vehicle so that there is a clearance of 20 to 50 mm between the bottom of the semi-trailer and the 5th wheel platform (see Figure 1)

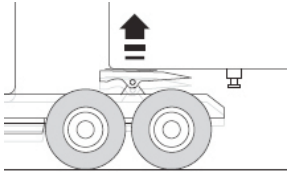


Figure-3

5-Lift 5th wheel with the help of the air suspension until the semi-trailer is slightly raised. (see Figure 3)

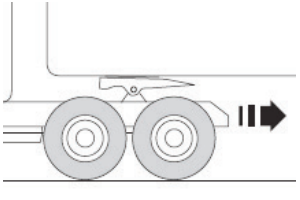


Figure-4

6- Reverse the vehicle slowly until 5th wheel coupling engages. (see Figure 4) The spring safety lever should return to its original position automatically. (see Figure 5)

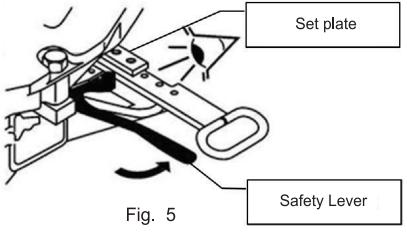


Fig. 5

7- Get off the vehicle and visually check that 5th wheel lock has fully engaged. If the lock is fully closed, the safety lever should be in the upper position and the small adjustment plate on the lock lever should contact 5th wheel platform. (see Figure 5 and Figure 6).

As shown in Figure 6, the latch on the safety lever should be in the upper position.

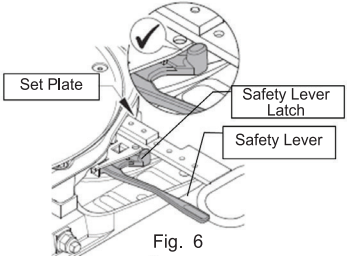


Fig. 6

Attaching and Detaching a Trailer

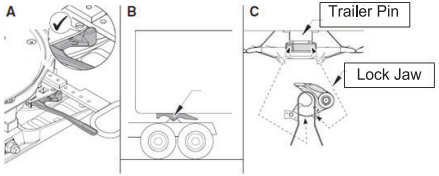


Fig. 7

8- As shown in Figure 7, carry out the visual check for fully locking in order (A, B, C).

Check A: Check the safety lever, the latch on the safety lever and the adjustment plate. The safety lever and the latch on the safety lever should be in the position shown in Figure 7-A.
Check B: There should be no gap between the semi-trailer and 5th wheel.
Check C: The Locking Jaw should cover the semi-trailer pin securely.

Figure-8

9-Perform a starting test. Apply the brakes of the semi-trailer and start the truck at low gear; the semi-trailer should not be detached.

CAUTION

If any of the above conditions are not met, restart the entire locking procedure from the 2nd step. The starting test is not sufficient for secure locking. Visual checks should be performed. If the locking procedure is not completed successfully, a secure connection cannot be made (see Figure 9). The tag on the lock lever should be checked during visual checks.

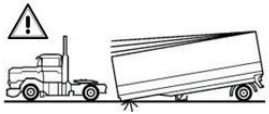


Figure-9

10- Connect the supply lines and connection cables between the truck and the semi-trailer.
11- Complete the procedure for attaching the semi-trailer as per the instructions of the vehicle manufacturer.

CAUTION

Attach the cables in such a manner that the pressure air and hydraulic hoses are not tense, they are not bent or rubbing and the canopy can easily follow the trailer in curves, etc. Pay attention to the voltage of the consumers on the semi-trailer before connecting the cable.

5. Wheel (Platform) - Detaching the Semi-Trailer (for 5th wheels of SAF HOLLAND brand)
1- Park the vehicle on flat and solid ground.
2- Secure and support the semi-trailer as per the instructions of the vehicle manufacturer.
3- Disconnect the supply lines and connection cables between the truck and the semi-trailer.
4- Unlock the 5th wheel lock with the opening lever. (see Figure 10-11)

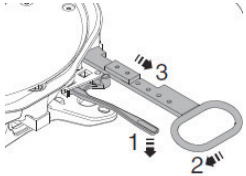


Figure-10

5- Press the safety lever down with your thumb -Arrow 1- and rotate the unlocking handle counter-clockwise - Arrow 2-. Extract the unlocking handle fully - Arrow 3- and attach the part near 5th wheel platform.
At this point, the adjustment plate should not contact 5th wheel platform, there should be a gap between them. (see Figure 10).

Attaching and Detaching a Trailer

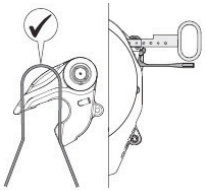


Figure-11

6- Make sure that the locking jaw is fully open for attaching/detaching the semi-trailer pin and the locking lever can be slid inside. (see Figure 11)

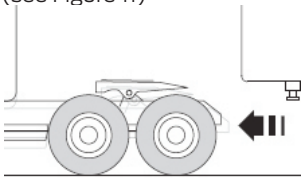


Figure-12

7- Drive the truck away from the semi-trailer slowly and straightly. (see Figure 12).

8- Complete the procedure for detaching the semi-trailer as per the instructions of the vehicle manufacturer.

Note: Once the 5th wheel lock has been unlocked, the locking lever is ready to be slid inside again automatically (the unlocking lever can be slid inside). (see Figure 13)

Figure-13

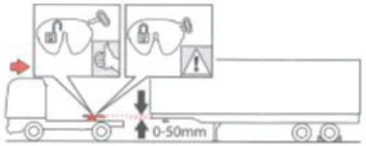
Note: Figure 13 shows the unlock position for the locking lever. At this point, the adjustment plate is away from 5th wheel body and the safety lever is down. Figure 14 shows the closed position of the lock. At this point, the adjustment plate is contacts 5th wheel body and the safety lever is up.

Figure-14

CAUTION

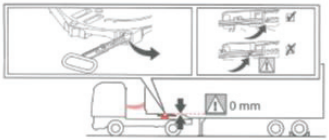
If there is a damage/flexion on 5th wheel locking lever and the safety lever, visit the workshop and do not attempt to attach a semi-trailer; a secure connection might not be established. Check all parts for wear/corrosion/ damage.

5. Wheel (Platform) - Trailer Connection (for 5th wheels of JOST brand)



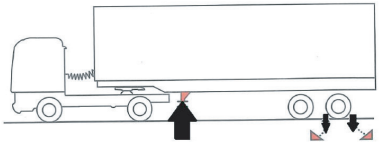
1- Block the wheels of the semi-trailer.

2-Pull the platform lock lever, this shall open the seat for semi-trailer pin.



Attaching and Detaching a Trailer

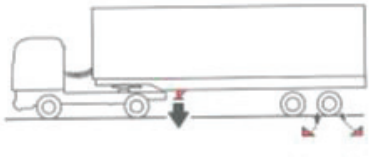
Drive the vehicle in reverse direction until the semi-trailer king pin fits on the housing on the 5th wheel.
Spring release lever will return to its original position.



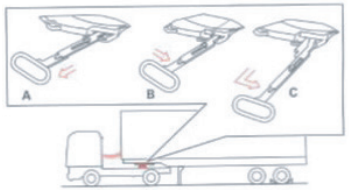
CAUTION

Attach the cables in such a manner that the pressure air and hydraulic hoses are not tense, they are not bent or rubbing and the canopy can easily follow the trailer in curves, etc. Pay attention to the voltage of the consumers on the canopy/trailer before connecting the cable.

Detaching the Semi-trailer



1- Block the wheels .
Lower the semi-trailer legs to the ground. Disconnect brake and electrical connections.



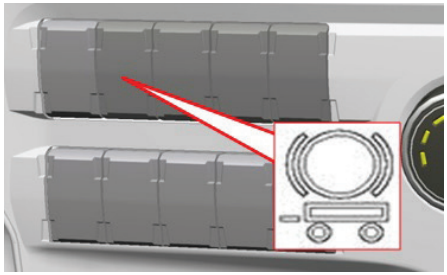
2- Pull the 5th wheel (platform) lock lever.

3- Drive the vehicle so that it will leave the trailer.

CAUTION

If there is a damage/flexion on 5th wheel locking lever, visit the workshop and do not attempt to attach a semi-trailer; a secure connection might not be established. Check all parts for wear/ corrosion/damage.

Trailer brake



This brakes the semi-trailer only while attaching or detaching the semi-trailer, thus facilitates the attaching and detaching operations. If the icon on the display is illuminated, this means that there is a fault in the system.

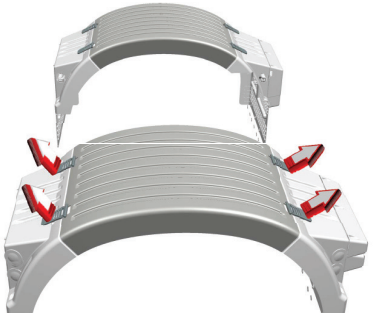
Attaching the Semi-Trailer:
1- Perform the semi-trailer to vehicle air connections.

Attaching and Detaching a Trailer

2- Press and hold the semi-trailer brake button on the center console, semi-trailer brakes shall be applied as long as the button is pressed.
3- Align the 5th wheel (platform) to semi-trailer connection pin and make the connection

CAUTION

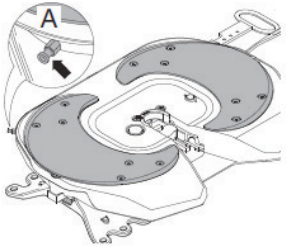
System shall not be activated when the button is pressed below 8 km/h.
A Dimmed light on the semi-trailer switch is illuminated continuously is for control purposes. A yellow light shall be illuminated when the switch is pressed.



CAUTION

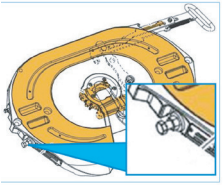
The upper mudguard can be removed when used below 1100 mm and with trailer.
In case of adding or not subtracting functions to the trailer connectors; check that the gasket which provides leak tightness in trailer connectors is fitted correctly in place.
Ignition shall be turned off when the electrical connection of the trailer is performed.

Greasing (for 5th wheels of SAF HOLLAND brand)



The surface of the platform should be greased with a sufficient quantity of durable, high pressure <NLGI Class 2> grease containing MoS2 or graphite additives prior to the first attachment of a trailer.
Without detaching the semi-trailer, grease through the nipple near the platform regularly at every 10.000 km.
• Clear the used grease on the surface with a scraper before each lubrication.
• However, the greasing periods should be adapted to the relevant operating conditions; shorter or longer intervals are possible.

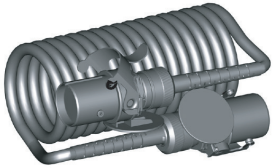
Greasing (for 5th wheels of JOST brand)



At every 10,000 km:
Apply grease from the grease fitting on the side of the 5th wheel (platform) without detaching the trailer.
Every 50,000 for vehicles used in normal operating conditions.

Attaching and Detaching a Trailer

Every 25,000 for vehicles used in heavy operating conditions;
Detach the semi-trailer. Remove the grease on 5th wheel (platform) and king pin. Apply grease to the areas shown with yellow color on the illustration.



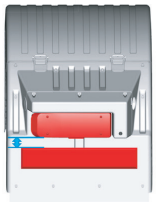
WARNING

Attach the cables in such a manner that the pressure air and hydraulic hoses are not tense, they are not bent or rubbing and the canopy can easily follow the trailer in curves, etc.
Pay attention to the voltage of the consumers on the canopy/trailer before connecting the cable.
A 15 – 15 pin connector shall be used in vehicles with ADR.
Contact Authorized Workshop when you want to install Trailer Axle Lifting function on the vehicle.

WARNING

Upper part of the live axle fender with 3 parts is advised for operation without trailer.
The upper part shall be removed when the vehicle is operated with trailer and during the removal/installation manoeuvres of the trailer to the vehicle.
FORD OTOSAN shall not be held responsible for any damages that occur in the upper part during use with a trailer.

WARNING



In tractor vehicles, the distance between lower side of the stop lamp on the rear left fender and upper side of the license plate's sheet plate.

Connection of a Trailer

CAUTION

If you shall connect a Trailer to your vehicle for the first time, have a brake compatibility test performed to prevent a brake force difference due to the difference of the systems. Otherwise, braking system of the Tractor or trailer may overheat and as a result, the life cycle of the system components may be reduced.

CAUTION

Always have the brake compatibility test performed at an Authorized brake test center that is capable of taking compatibility graphics.

Fuel Quality and Refuelling

Fuel Tank

Original steel and aluminium fuel tanks approved by Ford Otosan should be used in Ford Trucks vehicles.
Using third party fuel tanks other than the tanks designed and test by Ford Otosan may render the warranty void for any fault on the fuel injection system and the vehicle.

CAUTION

The engine of your vehicle is designed to operate with EURO DIESEL complying with EN590 standards. Thus, usage of cheap diesel fuel causes a high risk for the function of the engine and its components. Use of bad fuel known as cheap fuel oil reduce the service life and power of our engines. We advise using Euro Diesel (complying with EN 590 standards) to prevent any problem on the fuel system.

CAUTION

Do not mix petrol in the fuel tank.

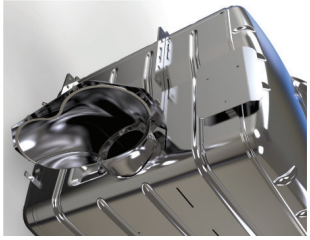
Fuel Tank Flap (lockable)

Ford Fuel tank flap opens counter clockwise in a single action in single-stage. The flap returns to the position where you will lock it in a single action in single-stage when turned clockwise.
Cleaning of the fuel tank is essential. Wipe the flap and surroundings without opening the fuel filler flap.

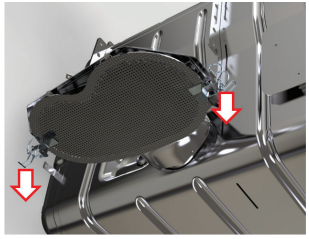
CAUTION

Paraffin forms in the cold weathers in fuels without any precautions.
Paraffin not only clogs the filter elements, but also clogs the fuel pipes. It is very difficult to melt the paraffin once it is formed. Therefore, winter type diesel fuel should be used in the areas where the weather is always cold in winter.

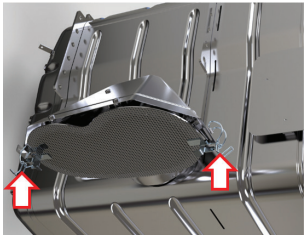
Spark Arrester



Spark arrester shall be installed at hazardous material loading, unloading locations and fuel stations during fuel filling or draining. When the vehicle is out of the station, the spark arrester shall be removed.



Put on a pair of gloves before installing spark arrester as the muffler is hot. Hook the spark arrestor from its clips to the hangers in the muffler. Close the clips and retain the spark arrestor to the exhaust.

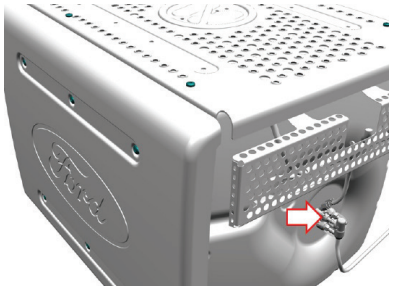


Put on a pair of gloves before removing spark arrester as the muffler and spark arrestor is hot.
The spark arrester is removed from the exhaust pipe by loosening the brackets on it.

Spark arrester shall be cleaned by water jet to cleanse its pores after every 25 uses.

CAUTION

Washing the exhaust muffler



Various sensors and urea injector shall be available on the exhaust muffler.
When you wash your vehicle, do not apply water jet on the urea injector on the muffler, sensors and the electric connections.
DOC, DPF and SCR catalyst are available in the exhaust muffler.
These parts are ceramic-based bricks, and it is definitely not allowed to wash these parts.
Do not attempt to wash inside the muffler from the muffler outlet or from the injector housing by removing the urea injector.

Cleaning of Exhaust Filter

Cleaning of Exhaust Filter
The exhaust filter retains the smut coming from the exhaust gas and decreases the emission values.
With the exhaust filter cleaning operation which can be performed automatically or manually, the smut retained in the filter is burned with regular intervals so that the filter is emptied before filling up and being clogged. In this operation, the exhaust gas is heated by the engine and smut is burned. Driver is informed about the exhaust filter cleaning of the vehicle through the messages displayed on the indicator panel and explained in detain in the following sections

WARNING

Since the exhaust gas temperature is high during the exhaust filter cleaning; ensure that the vehicle is not in the same place with flammable (dry grass, leaves), inflammable and explosive materials or in enclosed space Otherwise, fire risk may occur.

WARNING

Ensure that vehicle exhaust cleaning is not performed in locations like hazardous material loading and unloading places or fuelling stations. When necessary, activate the exhaust filter cleaning prevention using exhaust filter cleaning prevention button

WARNING

Changes may be observed in engine and exhaust sounds during exhaust filter cleaning.

WARNING

During exhaust filter cleaning and right after the cleaning; a metallic smell or crackling sounds may come out of the exhaust side.

Automatic Cleaning of Exhaust Filter
Exhaust filter cleaning requirement is automatically determined according to the amount of soot accumulated in the filter, the distance the vehicle has travelled, amount of fuel consumed and the engine running hours. In this case, exhaust filter cleaning starts automatically. During the automatic filter cleaning process, the instrument panel shall display green coloured exhaust filter cleaning symbol. When this symbol is displayed, vehicle should be driven normally.

WARNING

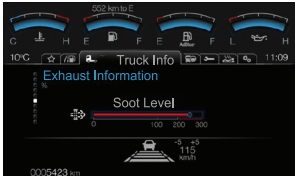
When you see the Exhaust filter cleaning symbol, you should continue driving normally; there's no need to idle the vehicle and wait.

WARNING

Fill rate of the exhaust filter is shown in the graphic available on 'Exhaust Information' screen. By this graphic, for which an example is given below, you may monitor the soot amount in the exhaust filter. When the graphic reaches 100%, your vehicle shall start the exhaust filter cleaning operation automatically, and the soot inside the filter shall be burned.

When the fill rate of exhaust filter exceeds 100%, 9th level of the graphic shall start to flash. You may continue normal operation of your vehicle in this case. Optionally, you may perform a manual exhaust filter cleaning on your vehicle. When the last level of the graphic is filled, final 2 levels of the graphic shall start to flash. In this case, your vehicle is prevented from performing an automatic exhaust filter cleaning to protect the exhaust filter. You shall have a manual exhaust filter cleaning performed as soon as possible. If the graphic does not go below 200% after a manual exhaust filter cleaning operation, you shall take your vehicle to the service.

Cleaning of Exhaust Filter

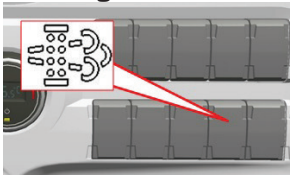


Graphic Example

WARNING

When the exhaust filter reaches a specific fill rate, automatic filter cleaning operation shall start and the soot inside the filter shall be burnt under high temperature. It may be difficult for exhaust gas to reach high temperatures and automatic filter cleaning may be required to be repeated in vehicles that are used with low loads, frequent start and stop operations, operated in idle for long periods and used in short distances (e.g. construction vehicles, mixer series). If your vehicle performs automatic exhaust filter cleaning 2 times (or more) in the same day, it is recommended to perform manual exhaust filter cleaning.

Manual Cleaning of Exhaust Filter



The button on the center console shown above is intended for manual exhaust cleaning. You can perform manual exhaust filter cleaning of the vehicle using this button.

WARNING

Exhaust gas temperature will be high during manual exhaust filter cleaning, so make sure that the vehicle is not in an enclosed space and the exhaust gases do not come into contact with any flammable, inflammable or explosive material.

Before starting manual exhaust cleaning, please make sure the following conditions are met.

- Vehicle speed shall be "0"
- Parking brake shall be applied
- Gear shall be at neutral
- Accelerator, brake and clutch pedals shall not be pressed
- PTO shall not be active
- Engine coolant temperature shall be above "40" or above
- There shall not be any error codes that prevent exhaust filter cleaning

After you ensure that the conditions above are met:

- Keep the manual exhaust cleaning button pressed for 3 seconds

After this operation, the vehicle checks for suitable conditions for filter cleaning and starts the manual filter cleaning.

When exhaust filter cleaning starts, the instrument panel shall display the exhaust filter cleaning symbol and "Exhaust filter is cleaning" warning for information. If the necessary conditions for exhaust cleaning are not met, "Conditions not suitable for exhaust filter cleaning" warning is displayed. If "conditions not suitable for exhaust filter cleaning" warning is received, the conditions above must be checked again.

When the manual exhaust filter cleaning starts, the engine revolution of the vehicle will increase automatically. The operation shall continue as below:

- Heating 1 - 1200rpm 1 minute (minimum)
- Heating 2 - 1800rpm 2 minutes (minimum)
- Filter cleaning mode - 1800rpm 15 minutes (minimum) - 45 minutes (maximum)
- Cooling mode - 1200rpm 3 minutes (maximum)

WARNING

You may monitor the time remaining to the end of manual exhaust filter cleaning from the message on the instrument panel. Time remaining to the end of exhaust filter cleaning is shown in minutes.

WARNING

Exhaust filter cleaning duration may change depending on the amount of smut in the filter and the heating time. Filter cleaning mode can take between 20 minutes minimum and 45 minutes maximum, depending on the amount of smut.

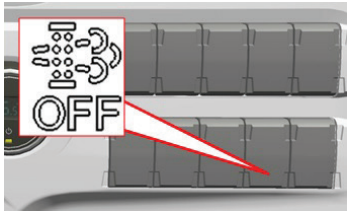
Cleaning of Exhaust Filter

When the manual exhaust filter cleaning operation is completed, the engine speed will again decrease to idle rpm. If you want to stop the cleaning operation; you can stop the operation by pressing gas, brake or clutch pedal or keeping the exhaust filter cleaning block button pressed for 3 seconds. In that case, vehicle shall decrease to normal idle rpm. Please see the details about Exhaust filter cleaning block button from the relevant chapter.

WARNING

Since exhaust gas temperature shall be high and vehicle speed shall be "0" during manual exhaust filter cleaning, the indicator panel may display "High exhaust gas temperature, please pay attention during parking" information warning. The detailed explanation about this warning can be found in the warnings section.

Exhaust Filter Cleaning Prevention



The button on the center console shown below is the exhaust filter cleaning prevention button. You can prevent the exhaust filter cleaning of the vehicle using this button. When exhaust filter cleaning is prevented, the instrument panel shall display "Exhaust filter cleaning is prevented by the driver" warning. The detailed explanation about this warning can be found in the warnings section.

WARNING

If exhaust filter cleaning is prevented by using Exhaust filter cleaning prevention button for a long time, the filter may fill with soot and clog up. When "Please remove exhaust filter cleaning prevention when possible" warning is displayed on the instrument panel, the prevention should be lifted and filter cleaning should be performed as soon as possible. Detailed information about this warning can be read in warnings section.

WARNING

The purpose of exhaust cleaning block button is to prevent the vehicle from cleaning the exhaust whenever the vehicle is near a flammable, inflammable or explosive material.

To activate exhaust filter cleaning prevention,

➢ Keep the exhaust filter cleaning prevention button pressed for 3 seconds.

When the blocking is activated, instrument panel displays "Exhaust filter cleaning is prevented by the driver" text.

To remove exhaust filter cleaning prevention,

➢ Keep the exhaust filter cleaning prevention button pressed for 3 seconds Keep the manual exhaust filter cleaning button pressed for 3 seconds (This will start manual exhaust filter cleaning operation) or,

➢ Shut off the engine of the vehicle and then restart it

You can confirm that the cleaning prevention is lifted when "Exhaust filter cleaning prevented by the driver" warning is not displayed on the instrument panel.

Urea System

Your Ford Trucks vehicle with Euro6 emission system is equipped with an Urea system.

Urea system is a selective reduction method that removes NOx gases, which are harmful to the environment and human health, from the exhaust gas.

Selective reduction method
Urea system operates by spraying urea solution to the exhaust gas. Urea solution used in the urea system is defined with DIN 70070 and ISO 22241-1 standards

Your Ford Trucks vehicle with Euro6 emission system is equipped with urea tanks with a capacity of 55L and 75L.

WARNING

Do not turn the switch of your vehicle off for 60 seconds when you stop the engine of your vehicle to allow that the urea left in the Urea system is returned back to urea tank. Urea left in the system may harm urea system components by freezing in cold weathers.

WARNING

Urea system is sensitive to contaminants.

Urea indicator

Important Points:
Urea system is sensitive to dirt, dust and soil. During urea filling, ensure that dirt, dust or contaminants do not go in the urea tank. Ensure to fill urea to your vehicle in a clean environment. Wipe the mud and dirt around the tank cap away before opening the cap. Fill urea fluid directly from its package (can). Make sure the funnel is clean if you will use a funnel. Do not use funnels contaminated with fuel.

If you prefer to filling with a funnel, keep a separate, clean funnel to fill urea available. Do not use funnels contaminated with diesel fuel to fill urea.

Urea System

Do not fill the urea tank with any material other than urea.
Fill the tank with urea complying with DIN 70070 / ISO 22241-1 standard only.

- Do not fill the tank with diesel fuel.
- Do not add water to the tank to increase urea level.

Quality of the fuel and engine oil used affects Urea system.

a-) Sulphur Content in the Fuel
Low quality fuel contains high sulfur ratio. Sulphur may cause blockage of catalyst, a component of the urea system. You should use EuroDiesel only in your vehicle.

b-) Engine Oil
Low quality and/or wrong viscosity oil increases the oil vapor in the exhaust. This may cause blockage of the catalyst.

Catalyst is a non-serviceable component that cannot be cleaned.
Exhaust box shall be replaced as a whole when it is blocked. Pay attention to the quality of the urea, fuel and engine oil used and apply all instructions about urea system with care in order to avoid damages with high costs.

If the exhaust temperature is consistently low (buses, delivery trucks), efficiency of Urea system may be reduced and ammonia may come out.
Contact your workshop if you continuously smell ammonia.

User shall carry out following precautions to prevent faults and damages in this system. Otherwise any faults occurring should be considered outside of the warranty cover and Ford Otosan will not take any responsibilities!

You shall comply with the regulations for preventing the accidents!

WARNING

Exhaust gas reaches very high temperatures during regeneration or while operating under high load. “HES” light  shall be illuminated on the warning panel of your vehicle in high exhaust gas temperatures.
Switching off your vehicle while this light is illuminated may cause damage to urea system components.

* Average urea consumption values depend on the test results of the vehicle and the dynamometer.
These values may vary for reasons such as vehicle's load condition, environmental factors (ambient temperature, air pressure, relative humidity), engine coolant temperature and urea quality.

Urea System

WARNING

When improper urea or fuel is used or urea system is rendered inoperable because of contaminants mixed in the urea system, “MIL” lamp shall be illuminated on the instrument cluster and engine power shall be reduced by the engine control unit as the targeted emission values cannot be reached.

CAUTION

In order to avoid accident risk or problem, it is recommended to refill urea before the urea level falls below a specified critical level.

Engine power shall be reduced %25 by the engine control unit when the urea level is reduced to a level under 3% in your vehicle with Euro 6 emission level. When the urea level is %0, vehicle speed shall be limited with 20km/h by the control unit.
The restrictions that are specified above and applied as a result of running out of urea shall be cancelled when urea is added.

Urea solution complying with DIN70070/ ISO22241 standards is used in your vehicle in order to reduce the exhaust emission. As this solution will be reduced in time, you shall check the urea solution level in your vehicle from the urea level indicator on the instrument panel and add urea before it is completely run off. Usage of this solution is legally mandatory; and penalties may apply if you do not comply with this requirement.

Tires and Wheels

Tire profiles
A minimum profile depth is prescribed for tires by law. Observe the legislation for the relevant country.

For safety reasons, change your tires before reaching the legally advised minimum profile depth.

WARNING

An excessively low tire profile may cause loss of handling at high speeds in case of rain or snow mud conditions. You may loose your handling and cause an accident in these conditions.

The Condition of the Tires
Check the following conditions regularly every 2 weeks and before a long haul to inspect the condition of the tires:
-External damage
-Cracks and bulges on the tires,
-Foreign material in the tire profile,
- Irregular wear of the profile.

WARNING

Do not forget that the external damages, bulges and cracks on the tires may cause blowout of the tire. You may cause an accident in these conditions.

CAUTION

Do not use radial and transversed tires mixed on your vehicle. Use same type of tires on both sides of the same axle. Do not use radial tires on front axles if the rear tires are transversed.

Follow the instructions below strictly:

Do not attempt to replace the tires if you are not familiar with the required tools, and always follow the instructions.
- Deflate the tires completely before removing the valve.
- Do not inflate the tires without a protection cage except normal pressure adjustments.
- Always check the tire pressures with the wheel is cold.

Check the wheel nut torque when you load the vehicle with full load for the first time. (750 Nm +- 50Nm for front and rear wheels) Tighten the wheel nuts alternately.

IMPORTANT :

1- If the wheel nuts are removed and fitted back for any reason, the wheel nuts shall be checked 50 km after the operation. Tighten to the proper torque value if torque values are not proper
2- When a new or newly painted rim is used, tighten the wheel nuts after 1000 to 5000 km of driving.

CAUTION

Please check the wheel nut torque when you load the vehicle fully for the first time. Check the tire pressure periodically to prevent irregular tire wear.

Do not use radial and transversed tires mixed on your vehicle. Use same type of tires on both sides of the same axle. Do not use radial tires on front axles if the rear tires are transversed. Wrong maintenance on the wheels may be extremely dangerous.

Follow the instructions below strictly:

Do not attempt to replace the tires if you are not familiar with the required tools, and always follow the instructions.
- Deflate the tires completely before removing the valve.
- Do not inflate the tires without a protection cage except normal pressure adjustments.
- Always check the tire pressures with the wheel is cold.

Tire pressure

Check the pressure of all tires including the spare wheel. All tires should have the specified pressure, and tread depth of the tires should never be under the limit value (6 mm). Also check for damage on the tires. Adjust the pressure of your vehicle's tires by referring to the "Tire pressure" table.

The Aging of the Tires

-Aging of the tires reduce the operation and traffic safety of the tires. Even unused tires are aged.
-Always replace your tires if they are aged more than 6 years.

Tire Damages

Tire damages are usually caused by the following reasons:
-Aging of the tire
-Foreign material
-Usage conditions of the vehicle
-Weather conditions
-oil, fuel, grease etc. - Contact with materials
-Dragging on the sidewalks

Tyre/wheel replacement

Your wheel is specially designed to maximize the appearance performance. Ensure that equipment used for tire replacement do not damage the wheel surface. If it is required to replace the valve during the replacement operation, ensure that alloy wheel valve is issued in Ford Workshops is used

Wheel maintenance

Clean your wheel frequently.
Thus, you may take maximum advantage of appearance performance. Never use brushes, sanders or acidic fluids that may cause scratches on the wheel during cleaning.
A damp soft cloth and cleaning agents commonly used for vehicle cleaning is adequate as a special transparent paint is used on the wheel surface.

MAINTENANCE AND SERVICE

Tires and Wheels

5

WARNING

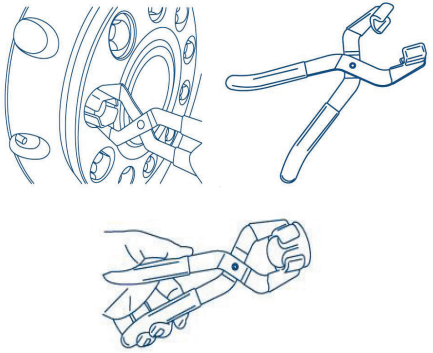
Your wheel is specially polished and covered with a transparent protection layer to protect its brightness. Never re-polish.
This polishing operation would damage the protective layer on the surface. On vehicles with alluminum alloy wheels, wheel but caps shall be removed with the wheel nut cap pliers delivered with the tools before removing the wheel nuts.

WARNING

Please, observe the prescribed tire pressure for your vehicle.
Very low tire pressure may cause blowout of the tire at high speeds and loads. You can cause an accident and thus injuries to others due to this.

CAUTION

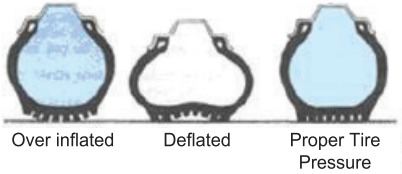
Use snow chains only on the outer tyres of your vehicle.



Remove the wheel nut caps with the special pliers provided in the toolbox of the vehicle for aluminum alloyed wheels.

Do not attempt to remove with sharp objects such as screwdrivers etc.

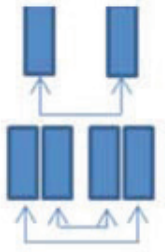
Check the tire pressure periodically to prevent irregular tire wear.



Low pressure cause wear on the shoulder areas of the tire. High pressure cause wear on the back areas of the tire.

Wheel position replacement

1. Axle
2. Axle



Wheel surfaces of your vehicle are polished specially and coated with protective transparent paint.
Use your wheels in their original positions only.
Or observe the following replacement chart. A wheel replacement other than the application specified below shall cause appearance problems.

CAUTION

As seen in the table, relocating your tyres at every 40,000 km will enhance the product life of your tyres.

MAINTENANCE AND SERVICE

Tires and Wheels

TYRE PRESSURE [Bar]															
Tyre Size	**Wheel Rim**	**Load Index**	**Tyre**	**6,0**	**6,25**	**6,5**	**6,75**	**7,0**	**7,25**	**7,5**	**7,75**	**8,0**	**8,25**	**8,5**	**8,75**	**9,00**
295/60 R22,5	9.00X22.5	150/147	Single	-	-	-	-	-	-	-	-	-	-	-	-	-
			Double	-	-	9000	-	10000	-	10500	-	11000	-	11600	12000	12300
315/60 R22,5	9.00X22.5	154/148	Single	5420	5600	5780	5955	6130	6305	6480	6650	6825	6990	7160	7330	7500
		152/148	Double	-	-	-	10000	10300	10600	10800	-	-	11600	12000	12300	12600
315/70R22,5	9,00x22,5	154/150	Single	5420	5600	5780	5955	6130	6305	6480	6650	6825	6990	7160	7330	7500
			Double	9685	10005	10325	10640	10955	11270	11580	11890	12195	12450	12800	-	-
295/80 R22,5	9.00X22.5	152/148	Single	-	-	-	-	6000	6200	6400	-	6700	6900	7100	-	-
			Double	-	-	10000	-	10700	11000	11400	11700	12000	12300	12600	-	-
315/80 R22,5	9.00X22.5	156/150	Single	-	6200	6400	6600	6800	7000	7200	7400	7600	7800	8000	-	-
			Double	-	10400	10800	11100	11400	11800	12000	12400	12700	13000	13400	-	-

- Contact your dealership to select the correct size when you replace the tire.
- Always check the tire pressures with the wheel is cold.

Tires and Wheels

DIAGNOSTIC CHART	
FAULT	**POSSIBLE CAUSE OF THE FAULT**
If the vehicle slips to the side when it is braked:	· Brake adjustment is faulty
	· Tires have different pressure values.
If the vehicle drags to left or right when the steering is released	· Incorrect tie-rod adjustment (toe angles)
	· Irregular wear on the tires
	· Tires have different pressure values
If it is difficult to steer the vehicle	· Tire is underinflated.
	· Vehicle is excessively loaded.
	· Steering system shall be checked.
If the steering excessive play or looseness	· Ball joints are loose
	· Bushings are worn
	· Track rod is loose/worn
	· Steering gears or bearings are worn
If the outer side of the tire is worn	· Excessive toe-out is applied
If the inner side of the tire is worn	· Excessive toe-in is applied
If the tire is worn on the shoulder areas	· Tire pressures are low.
If the tire is worn on the back areas	· Tire pressures are high.

DIAGNOSTIC CHART	
FAULT	**POSSIBLE CAUSE OF THE FAULT**
If the tires are worn on both sides	Vehicle is used with excessive load.
	Curves are taken with high speed.
	Vehicle is used with high speed.
	Wheel rotation is not applied.
If a tire is worn more than the other	· Pressure value of the worn tire is faulty.
	· Brake adjustment is faulty
	· Toe angles are faulty
	· Shock absorbers are faulty
	· Wheel rotation is not applied.
If the front wheels have excessive vibration	· Tire pressure is high.
	· Tires are flattened.
	· Balancing is faulty
	· Ball joints are worn
If the vehicle is shuddering	· Tire pressures are high.
	· Tires are flattened.
	· Balancing is faulty.

MAINTENANCE AND SERVICE

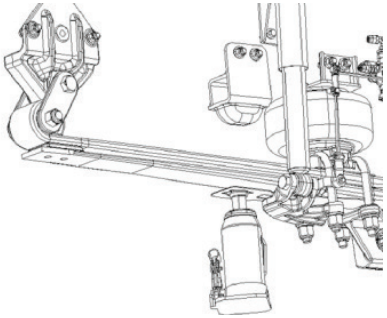
Tires and Wheels

Jacking The Vehicle

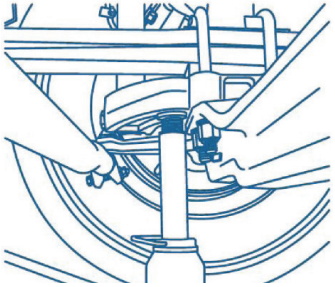
Jack can be mechanically geared type or hydraulic type. Before lifting the vehicle, park the vehicle on a level ground and apply the park brake. If the vehicle is on a slope and it is to be lifted without applying the parking brake, chock all other wheels. The jack should be placed under the leaf spring as shown in the figure and must be placed on the ground firmly

CAUTION

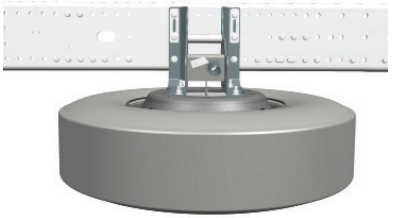
If you need to get under a vehicle lifted by a jack, provide additional support under the frame pedestals. There may not be enough space under the front axle while replacing a flat tire. Place the jack under the leaf springs on the closest point to the axle when there is not enough space.
Pay attention not to damage the steering linkages while lifting the vehicle with a jack. Use wooden blocks if required. Check for an obstacle under the vehicle when lowering the vehicle.
Do not jack the vehicle from the chassis arms.



On vehicles with lowered ride height:



Spare Wheel and Tire Replacement



Spare wheel is on the left side of the chassis on vehicles with single fuel tank.
To remove the spare wheel from its seat, loosen four bolts connecting it to the holder with the 24 spanner on the toolbox.
Spare wheel is hanged with a cable.
To release the cable, install the wheel brace to the rotating arm. Turn the brace anticlockwise.

Installation:
Check the connection cable before installing the spare tire. Cable shall be replaced if it is damaged.
Connect the end of the cable to the tire again. Lift the tire with the hexagon wrench and tighten all nuts.

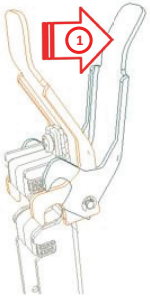
CAUTION

Carefully lower the spare tire. Take necessary precautions to prevent the tire from falling over your foot.

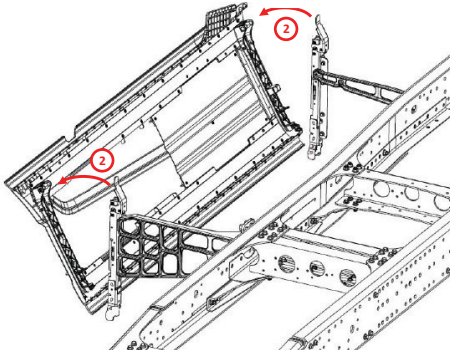
Spare wheel is on the chassis on vehicles with an optional secondary fuel tank. Side skirt shall be removed to take the spare wheel out.

Remove Upper Spare tire bracket before connecting a trailer to your vehicle.

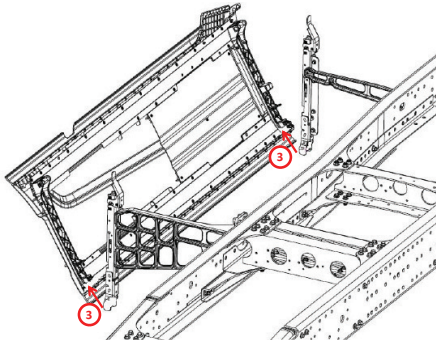
Side skirt opening mechanism



Side skirt panel is released of its locks with the movement of the locks on both front and rear sides to the direction of 1.



Side skirt panel is moved to the outwards of the vehicle on direction 2 after it is released of its locks.



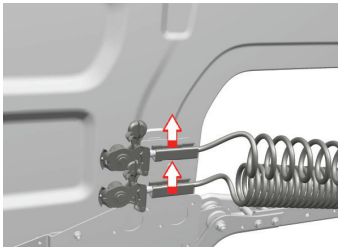
Side skirt panel is moved to the upwards on direction 3 after it is released from the rope hooks on the front and rear sides and it is released from its hinge connections.

Driver Cab

Tilting The Cab:
If you do not take the necessary precautions and pay necessary attention to the cab lifting procedures, this may cause fatal accidents.

Before tilting the cab:
- Ensure that no one is standing in front of the vehicle.
- Ensure that adequate space is available in front of the vehicle.

Ensure that no freely moving objects are available in the vehicle. Hard objects may break the windshield when they fall while the cab is being tilted.



Remove the coupling hoses from their hangers before tilting the cab and do not tilt the cab while the coupling hoses are hanged.

CAUTION

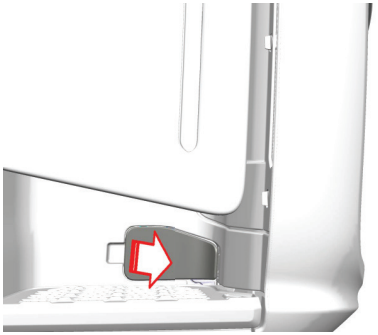
Do not work under the cab before tilting it completely. This brings a fatal accident risk.

CAUTION

Do not tilt the cab uphill.
As the gradient of the slope acts to move the cab in the closing direction, this may cause risk for the person under the cab. Always tilt the cab on a level surface.
If the conditions require that the cab is tilted on a slope, place a safety element between the cab and chassis.

WARNING

Doors are heavy components; if the doors are opened while the cab is tilted, abrupt opening of the doors may cause serious injuries. If the door should be opened, it shall be opened by supporting from the lower side and slowly.

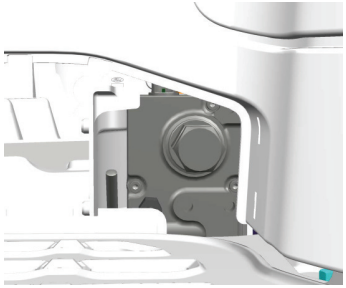


Cab tilt cylinder is located under the cover behind the step on the right side of the vehicle.
Use the brace provided in the toolbox of your vehicle to tilt the cab and then to bring it to the driving position.

CAUTION

Always open the hood before tilting the cab.
Do not open the doors while the cab is tilted.

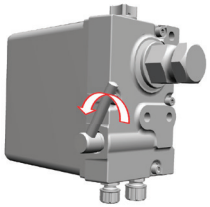
Driver Cab



To use the jack, remove the specified cover.

1- On vehicles with manually controlled cab tilt cylinder:
Tilting the cab:

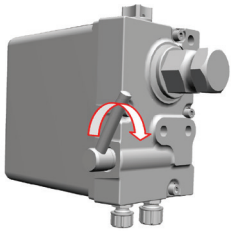
a) Open the hood of your vehicle.



b) Lift the latch on the cab tilt cylinder up.

c) Rotate the hexagonal bolt on the cab tilt cylinder in the direction of arrow until the cab is tilted completely with the wheel nut spanner delivered in the toolbox of your vehicle.

Returning the cab to driving position:



b) Lower the latch on the cab tilt cylinder down

c) Rotate the hexagonal bolt on the cab tilt cylinder with the wheel nut spanner delivered in the toolbox of your vehicle.

Driver Cab

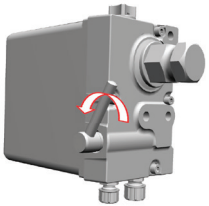
c) If the warning light is illuminated when you get into your vehicle, then the cab is not correctly locked. Please check.

CAUTION

Fully open and close the latch on the cab tilt cylinder while you are tilting and bringing the cab back to driving position, respectively. Do not tilt the cab or bring it back to driving position while the latch is in half-open or half-closed position. Otherwise, you may cause faults in the cab tilt cylinder.

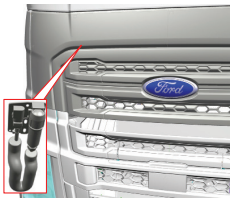
On vehicles with power cab tilt cylinder (optional)

Tilting the cab:



Open the bonnet of your vehicle.

1) Lift the latch on the cab tilt cylinder up.



2) Press and hold the cab tilt button under the bonnet. The cable of the button is flexible. Tilt the cab by moving to the side of the vehicle.

To operate the power cab lifting system, ignition switch shall be at position 1, park brake shall be applied and gear shall be shifted to neutral.

Returning the cab to driving position:

1) Lower the latch on the cab tilt cylinder down.

2) Hold the button pressed.

If the warning is illuminated on the display when you get in the vehicle, this means that cab is not locked correctly. Please check.

DIAGNOSTICS

On manually controlled tilt cylinders:

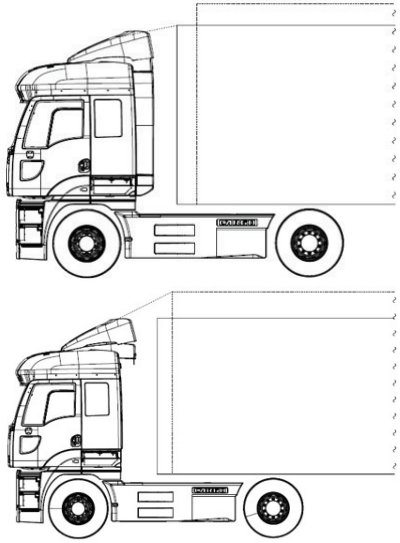
Cab cannot be tilted
Check the position of latch on the tilt cylinder. It shall be on the tilt direction.
• Tilt cylinder is also serves as the hydraulic oil tank.
Open the cover after cleaning the surroundings of the upper cover. Check with your finger, your finger shall touch the oil.
• Check for oil leaks through the tilt cylinder, hoses, lift hydraulic line.
• Please visit a Ford Trucks authorized dealership if the fault persists.

On power cab tilt cylinders:

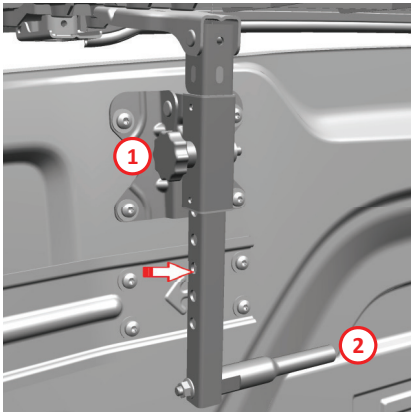
Cab cannot be tilted
- Check the position of latch on the tilt
- cylinder. It shall be on the tilt direction.
- Check the fuse of the tilt cylinder.
- Check for oil leaks through the tilt cylinder, hoses, lift hydraulic line.
- Please visit a Ford Trucks authorized dealership if the fault persists.

Air deflector

The air deflector of your vehicle may be adjusted for fuel economy as per different trailer dimensions.

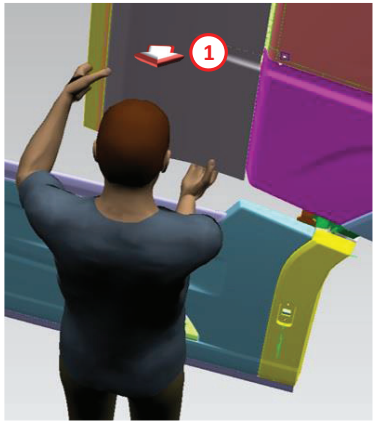


To adjust it,
After removing the adjustment bolt (1), it may be pushed and brought back by holding from the handle (2) to the hole with the desired height using the holes on the bracket (shown with an arrow).
Installation is complete when adjustment bolt is inserted through the desired hole on the bracket.

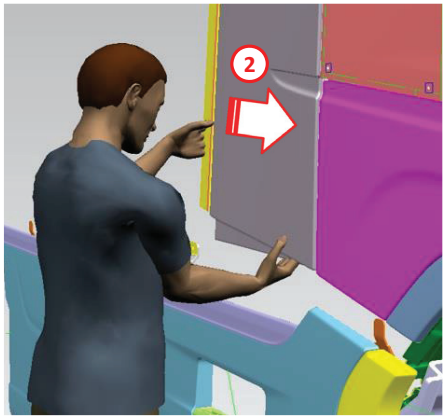


Driver Cab

Side shroud

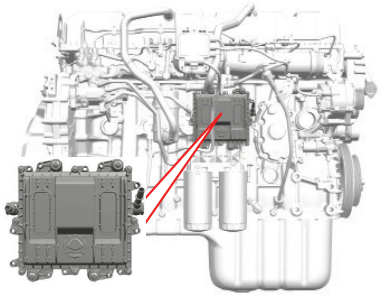


Side shroud is opened by holding it from the top and bottom as shown in the figure and then pulling it to the outside (2) of the vehicle and then to the front (2) of the vehicle.



Closing is complete by pulling it backwards only.

Engine



Engine management is provided by the state-of-the-art electronic control unit.

CAUTION

Remove the plugs of electronic control unit before welding on the vehicle. Otherwise, there is a risk of permanent damage to the electronic control unit. Welding operations shall be performed while the main switch is off.

Running-in

There is no need to perform a special application in the running-in period of the engine. Drive the vehicle with the proper gear so that tachometer remains in the green zone as always.

Daily Inspections

- Check the coolant level. If the level is at minimum or less, add 50% distilled water and 50% antifreeze (WSS M97B44 D) mixture.
- Check windshield washer liquid level, add clean water if the level is dropped.
- Check for any oil or liquid leaks in general.
- Check the operation of the service and park brakes.
- Drain the water and oil collected in the air tanks completely by pulling the drain ring.

Engine

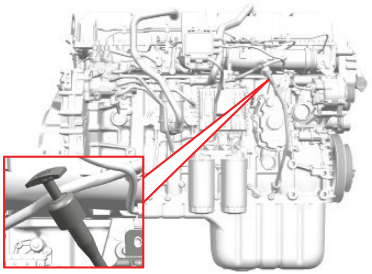
Weekly Inspections:

- Check the engine oil level.
- Check the tire pressures (while the wheel is cold), tread depth and damage condition on the tires.
- · Check the clutch hydraulic fluid level, add hydraulic fluid if the level is dropped.
- · Check the wear on the brake lining wear by looking through the lining inspection hole.
- Lubricate the semi-trailer connection platform.

Monthly Inspections

- Check the power steering fluid level.

Engine Oil Level Inspection



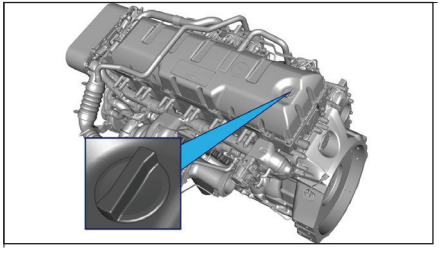
Engine oil level shall be inspected weekly. Engine oil dipstick is placed on the right side of the vehicle.

- · Park the vehicle on a level ground. Switch off the ignition, apply the parking brake, and take the necessary precautions.
- · Wait for 10 minutes to allow flowing of the oil to the oil pan.
- Tilt the cab.
- · Take the dipstick out.
- · Wipe with a lint-free clean cloth, install the dipstick again and secure it.

- The oil level must be between the MIN and MAX lines. The difference between “MIN” and “MAX” on the dipstick is 15 liters.

CAUTION

Use oil with the specifications approved by Ford Otosan only for your engine. Using improper oil for your engine may cause serious and costly faults.



Add oil if the level is less than MIN, engine oil filler cap is on the cylinder head cover. Wipe the surroundings of the cap before opening it. Pay attention to cleanliness if you would use equipment such as measuring container, funnel etc.

Fuel consumption value:
Oil consumption amount of the engine between 2 maintenances depends directly on the operating conditions of the vehicle (loaded-unloaded, short-long haul, fuel quality, engine oil quality). Under normal operating conditions, engine oil consumption up to 0.8 lt / 1,000 km between 2 maintenance operations is acceptable. These consumption values may vary under heavy operating conditions.

Adding Fluid
When the engine oil level is reduced to critical level, red "Engine oil low" warning shall be displayed on the instrument.

In this case, engine oil shall be brought to required level by adding engine oil within 500 km maximum. We advise you to have the engine oil adding operations performed in Ford Trucks authorized dealerships.

CAUTION

Do not replace engine filters and tamper with its connections when the ignition switch is at position 2. Important Points:
1- When the warning light illuminates, lacking amount of oil in the engine is about 15 liters. Oil shall be add until the level observed on the dipstick reaches a level between MIN and MAX marks. Add oil gradually and in a controlled manner. Run the engine for a few minutes after each oil adding operation. Stop the engine, wait for 10 minutes, and check the engine oil level with oil dipstick.
2- Do not add oil more than required. Excessive engine oil may cause faults such as deterioration of seals, excessive heating, blocking of catalyst, oil leaks from various points on the engine.
3- Engine oils may lose their specifications if engine oils with different specifications and different brands are mixed.
In order to prevent costly damages to your engine out of warranty cover, we recommend you to top up the oil in your engine with oils with the same brands and specifications when adding oil is required between 2 maintenance operations.

CAUTION

When the engine oil level is reduced to the minimum level, "engine oil level warning light" is illuminated on the display.

In this case:
1- It is possible to drive up to the first rest stop. Road assistance is not required.
2- Vehicle shall be parked on a level ground on the rest stop area, park brake shall be applied and required safety precautions shall be taken.
3- When the vehicle has rested for 75 minutes with ignition off, oil shall completely flown to the oil pan.
4- Without turning the ignition / engine on, cab shall be tilted and oil level shall be measured with the engine oil dipstick.

Engine

After the measurement:

If engine oil level is not blow the MIN level, drive the vehicle for a little more to allow the engine control unit to take new measurements and perform an evaluation. In order to evaluate new measurements, the vehicle shall be driven at a speed over 20km/h, usually between 550-1800rpm for 30 to 60 minutes. If the oil warning is still burning after this time, it will be enough to direct the car to the authorized service as soon as possible. Road assistance is not required.

If engine oil level is under MIN level, you shall add engine oil with the specifications recommended with the required amount. Drive the vehicle for a little more to allow the engine control unit to take new measurements and perform an evaluation. In order to evaluate new measurements, the vehicle shall be driven at a speed over 20km/h, usually between 550-1800rpm for 30 to 60 minutes. The oil level warning lamp shall be turned off after this period. Road assistance is not required for this application, too.

CAUTION

Excessive oil is harmful for your engine. This may cause overheating of the engine, damage to the seals and oil leaks from several points of the engine. It may also cause blockage of the exhaust catalyst pores.
We recommend you have your vehicle maintained at Ford Services by professionals.
Engine oil pressure and oil level is checked by the sensors, and the driver is informed with a warning light in case of an abnormal condition.

Low Engine Oil Pressure
Stop the engine. Contact a Ford Cargo Authorized Dealership.

Low engine oil level
Tilt the cab, and check the engine oil level with oil dipstick.

Oil maintenance interval reached
Take your vehicle to a Ford Cargo Authorized Dealership as soon as possible for oil maintenance.

Engine coolant temperature warning
This informs the driver about overheating of the engine. Stop the vehicle immediately and run the engine at idle for a few minutes.
Check for coolant leaks. Stop the engine if the coolant temperature does not drop. Check the water pump drive belt, fan and shroud, and the coolant level. Contact an authorized dealer.

Engine and drivetrain system malfunction

This indicates a malfunction in the engine and/or drivetrain components. Vehicle may continue normal operation or engine may reduce the power based on the severity of the fault.
Please visit the nearest Ford Trucks authorized dealership.

MIL (malfunction indicator lamp)
Before starting the engine: Engine malfunction lamp of your vehicle will self check by illuminating for 5 seconds when the ignition switch is on (before engine start).
This is the lamp check phase.
The lamp will be dim out for 10 seconds after that.

Then it will be illuminating again for 5 seconds. This is the preparation phase.

If all data is ready for examination the lamp will stay illuminated for 5 seconds, if not, it will blink 5 times in 5 seconds.
(This does not affect the function, and is not a sign of malfunction.)

Before going to the next phase, lamp will dim out for 5 seconds.
If a malfunction is detected, lamp will show one of the 4 following behaviours till the engine start:

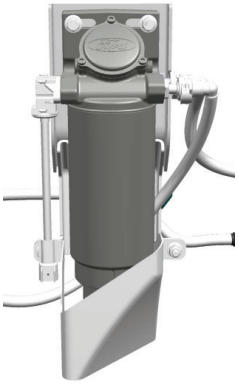
·Lamp shall light up continuously. **In this case it is recommended that you drive to an authorized workshop.**
·It shall light up for 3 seconds and dim out for 5 seconds.
It is recommended to you to drive to an authorized workshop in this case.
· Lamp shall light up 2 times in 3 seconds, and dim out for 5 seconds. **It is recommended to you to drive to an authorized workshop in this case.**
· If there are no errors, it shall light up for 1 second and dim out for 5 seconds.

After starting the engine:
If there is an error, lamp will light up in 2 ways according to the error type,
·Lamp shall light up continuously. **In this case it is recommended that you drive to an authorized workshop.**
·Lamp shall light up for 15 seconds, and dim out completely. **It is recommended to you to drive to an authorized workshop in this case.**
· If there is no error, lamp shall not light up.

Cleaning the engine:
Do not apply pressurized water to the sensors and electronic control unit while you are washing the outer surface of the engine with pressurized water. Water ingress to electronic units will cause short circuits on the electrical pins, thus malfunctions on the engine.

Engine

On-chassis fuel filter (Fuel pre-filter)



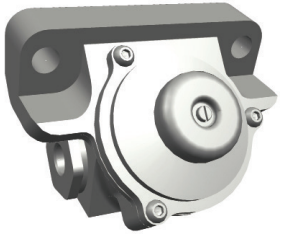
Fuel pre-filter performs the initial filtration of the fuel drawn from the fuel tank. Also, it separates the water inside the fuel and provides fuel separated from water to the engine.
Filtered water is collected in the container under the filter assembly.

If the “water in fuel” warning light illuminates when the ignition is on, loosen or unclip the integrated water sensor under the filter assembly and close it when clean fuel appears.
Tighten the water sensor securely when you are closing the tap. Otherwise, air may enter the engine, and this may cause fuel leak.

WARNING

Care that is shown for the cleaning of the fuel filters will contribute the service life of main fuel filter on engine and fuel system of the engine.

Fuel does not flow to the engine and system takes air when the vehicle runs out of fuel or when the low quality fuel is frozen in the filter. After performing the necessary corrective action, bleeding air from the system is performed by the hand pump.
Press until hand pump is stiffened, and start the engine when the pump is stiffened.



WARNING

Do not continue on starting attempts if the vehicle does not start in a few attempt. There may still be air inside the fuel line. Pump fuel with the hand pump, then restart again.

CAUTION

Fuel that will be taken for the vehicles operating in cold climates shall be cold climate fuel resistant to waxing in cold weather. Otherwise, water inside the fuel will freeze and prevent flow of fuel to the engine; and the engine will not start.

Engine coolant

Engine coolant contains 50% antifreeze and 50% distilled water. Coolant circulates inside the engine block and cools the engine components.
This fluid also cools the intarder oil in vehicles with intarder.

CAUTION

Antifreeze does not prevent freezing of the engine in winter only. It also lubricates the water pump and extends its service life. Ensure that the antifreeze complies with the Ford specifications when you are purchasing antifreeze. Lime and other chemicals in the non-distilled water cause corrosion in the cast engine block.

CAUTION

Freezing temperature of the 50% distilled water and 50% antifreeze mixture is -37 ºC. On colder climates, it is possible to achieve protection up to -50ºC by adjusting the mixture ratio to 40% distilled water and 60% antifreeze. Maximum antifreeze ratio is 60%, never exceed this ratio.

CAUTION

The cover of the coolant reservoir shall always be tightly closed.
Engine coolant reservoir is under the hood. The coolant level shall be between the MIN and the MAX marks when the engine is cold, and it shall be inspected daily.
If the coolant level is lower than the MIN mark, the warning light shall illuminate on the display. In this case:
• Stop the engine considering the road safety.
• Check the coolant level in the coolant reservoir under the hood.
• If the level is lower than the MIN mark, add 50% distilled water and 50% antifreeze until the level reaches between MIN and MAX marks.

In the case of a malfunction in the low temperature circuit, a malfunction in the electrical pump or a water leak; the vehicle will start cutting down the torque.

Engine

You may find more information on the maintenances and contact information for the Ford Trucks authorized dealerships in the Warranty Manual.

Distance and engine operating hours to the maintenance are displayed on the displays of your vehicle.
We advise you to have the periodical maintenance and repair operations on your vehicle performed in Ford Trucks authorized dealerships.

CAUTION

Risk of Serious Injury
Coolant is pressurized and VERY HOT. Do not open the cover immediately. Wait at least half an hour and open the cover with a thick cloth or protective gloves, if available. Open the cover slowly first to discharge the pressure in the reservoir; then open the cover completely.

- Check under the vehicle for any coolant leaks.
- Tilt the cab, check the belts for any broken or excessively loosened belt.

If the fan cable breaks, fan rotates in maximum rpm; since this will worsen the fuel economy, it is advised you to go to service after the warning light goes on.

CAUTION

Do not refill with water when the cooling system of a hot engine is empty or its coolant is missing. Add hot water if available, or wait until the engine is cooled.

Replacement interval of the air filters depend on the operating conditions of the vehicle.

1- Air filter shall be replaced in an authorized dealership when x light is illuminated.
2-Even if the warning light is not illuminated, filters shall be replaced at every 60,000km for construction series vehicles and every 120,000 km or 1 year for tractor and road trucks.
Filter safety element shall be replaced after 3 replacements of main element. The paper structure is distorted within one year and will not be performing the filtering function. The air filter clogged warning will be illuminated on the digital display when the air filter element is clogged. Contact a Ford Otosan Authorized Dealership for the replacement of the air filter elements after this warning is illuminated.

WARNING

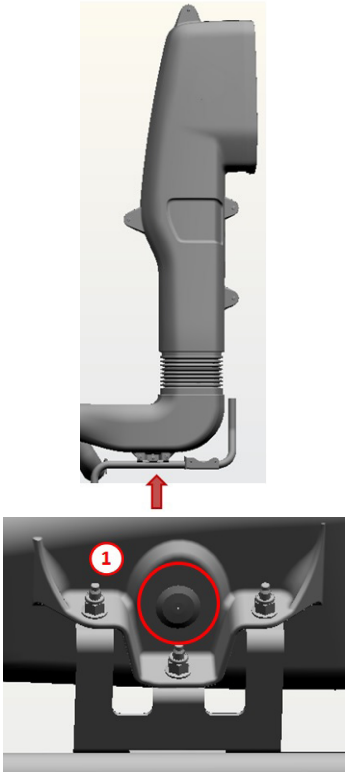
Always tilt the cab completely to replace air filters. Tilting the cab halfway may cause personal injuries.
Ensure that the air filter cover is installed so that the dust draining hole faces downward.

WARNING

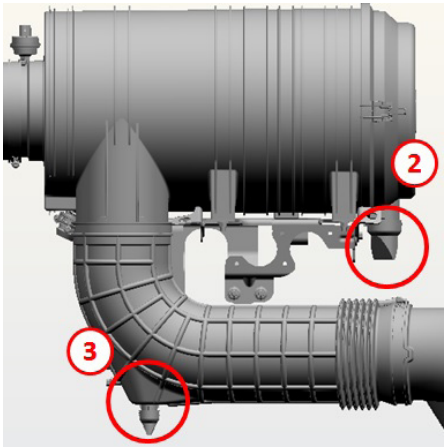
Do not operate the vehicle with air filters removed. As the air drawn to the turbocharger and thus the engine shall not be filtrated, this may cause serious and expensive malfunctions on components such as turbocharger and engine.

Cleaning of water separation valves on the air intake system
There are 3 valves for separation of water and dust in the air intake system of your vehicle. It is important that these valves are maintained once per month to ensure their correct operation. These maintenance operations shall be performed as follows:

Air outlet valve (1) is shaped like a plug. Without removing the valve, ensure that the dust and mud is cleaned by scraping the edges of the plug slightly.



Press on the air filter valve (1) and filter inlet pipe valve (3) from their external surfaces and ensure that the dust and mud inside the valves is drained.
Normal position of the valves is the closed position. Do not leave the valves at continously open position.



Engine

Inspection and Cleaning of the Flyscreen

Flyscreen, placed in front of the radiator, is a component that resembles a curtain and it can be cleaned.
Its purpose is to prevent objects such as flies, dust, bugs etc. from entering directly to the radiator. Inspect the flyscreen as per the working conditions and clean it if it is dirty. Cleaning is performed by removing the flyscreen from the radiator and applying pressurized water or air to the flyscreen.

Removal of the flyscreen:

Pull the spring connections of flyscreen lower bar downwards and take it out of it seats that it is connected to.
Then, by removing the butterfly bolts used in the upper and side joints, all the connections of the flyscreen are removed.
The flyscreen is pulled up from the radiator cavity and removed from the vehicle.

CAUTION

Dirty flyscreen prevents air flow to the intercooler, thus to the radiator, and reduces the cooling capacity of the engine. Therefore, the cleaning procedure described above is important.

Engine Start Stop buttons

Conditions for Starting the Engine

- The ignition shall be at position '2'.
- The cab shall be overturned
- Doors must be closed
- Parking brake must be applied
- Vehicle speed must be "0".

WARNING

Note: In an event where one of these conditions are not met, the engine will not be engaged with Start Button.

1-Start
2-Stop

You can do the following with Two Buttons:

- Engine Starting
- Engine speed increase
- Engine speed reducement
- Motor shutdown

The System Operation Principle is specified below:

The Function consists of 4 basic conditions;

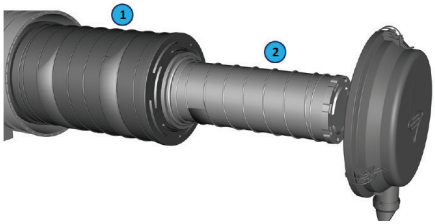
1-When the ignition is in position 2, by pressing the Start button, the engine is engaged.

2-When the engine is engaged, the first long pressing the Start button will increase the engine torque.

When the button is released, the engine torque is stabilized at the level.
3-After increasing the engine torque, with the first long press the engine torque will be creased with the same amount and when the button is released, the torque will be stabilized at the level.

4-Stop button is only used to halt the engine that is engaged.
In any event, when Stop button is pressed the engine halts.

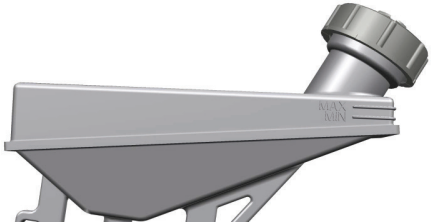
Engine



Air filter is composed of 2 components:
1- outer filter
2- inner safety element

WARNING

Note: Never expose the air filters to compressed air. Compressed air distorts the paper structure of the air filter elements and it may even tear them.



Clutch fluid reservoir is placed under the front hood. The level of fluid shall be up to the level mark on the reservoir.

Add fluid with proper specifications given if the level is low and close the cover tightly.

WARNING

Clutch fluid damages painted surfaces. Take necessary precautions to prevent spilling over the painted surfaces while adding fluid.

WARNING

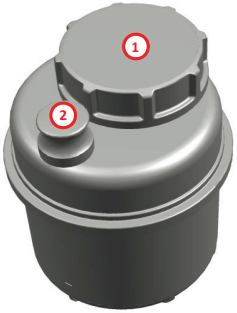
The cover of the clutch fluid reservoir shall always be tightly closed. Ingress of foreign material such as water or dirt causes damage to the fuel system. Ingress of air to the system may also cause malfunctions.

5

Steering Wheel

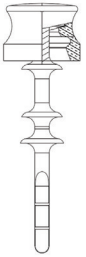
Steering Fluid

Steering fluid reservoir is located under the cab on the right side of the vehicle.



1-Cover
2- Oil dipstick

Fluid level check:
1- Tilt the cab
2- Wipe the dipstick with a clean cloth and open its clip.



3- Take the dipstick out, wipe with a clean cloth, install the dipstick securely and take it out again.

4- The oil level must be between the lines shown in the figure.

Add fluid if the fluid level is low.
Steering system is very sensitive to foreign material such as dust, dirt etc. Pay maximum attention to cleanliness while checking the fluid level and/or adding fluid. Prevent dirt ingress to the system.

Adding Fluid
1- Wipe the reservoir cover and surroundings with a cloth
2- Open the reservoir cover and add required amount of fluid.
3- Close the reservoir cover tightly.

WARNING

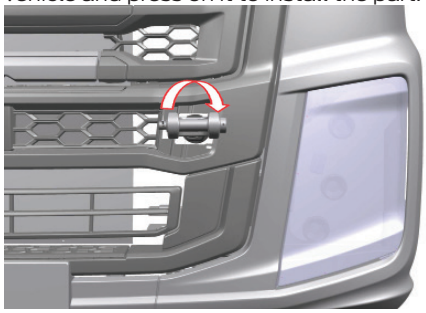
Steering gear upper area Steering column joint connection area shall be cleaned with non-pressurized water or a brush. The mentioned area shall be protected if it is cleaned with pressurized water.

Towing the Vehicle

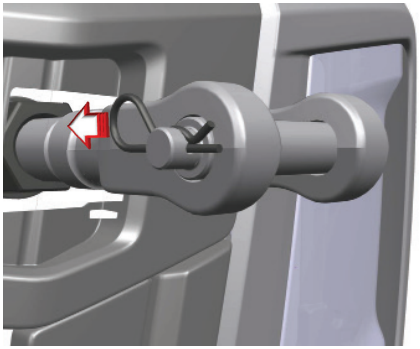
Towing of the vehicle requires specialist knowledge that is not explained in this manual. Make sure that the vehicle is towed by specialist staff.

Draw pin installation location on your vehicle is on the front grille panel.
Draw pin is designed for installation to the right-hand side only as standard. Draw pin system that may be installed to both sides may be procured as optional if requested at the time of ordering for the vehicle.

Press the draw pin cover from the side shown with an arrow. Cover shall rotate and open. Place it on its seat on the vehicle and press on it to install the part.



Install draw pin by rotating it clockwise as shown in the figure.



Remove the draw pin and attach the towing cable.

Make sure that the transmission is in neutral and in high range.

If the transmission cannot be shifted to neutral, you should remove the drive shafts connected to the axle.

If the vehicle should be transported on a trailer with a deep platform, the specified 4m height may be exceeded. Consider the maximum passing heights of the underpasses. You may cause an accident.

Towing the Vehicle

WARNING

Do not tow the vehicle crosswise.

Risk of Accident
If the vehicle is towed with the engine is not running, the steering assist and air supplies will not be operating.
As this would require more steering effort, you may get out of the road or bump the towing vehicle in curves.
You may install an emergency steering pump.
If you agree on special signs with the driver of the towing vehicle before towing the vehicle, it will prevent occurring of these kind of problems.

CAUTION

- Observe the legal requirements. Maximum towing speed is 25 km/h, and maximum towing distance is 100 km.
- If the conditions specified above are not applied, detach the driveshaft from the axle to prevent transmission damage.
- Detach the driveshaft from the axle to if you suspect any transmission damage.

While towing your vehicle

CAUTION

- The drive shaft needs to be removed first before towing your vehicle. If the drive shaft is not removed, the movement shall be transmitted from the wheels to the transmission and operate the internal components of the transmission that is not pumping oil. In such a case, you may experience serious transmission malfunctions. This is considered out of warranty cover.
- Transmission latch shall be in high range (up) and the transmission shall be in neutral.
- Vehicle can be towed for a maximum of 100 km.

CAUTION

- Have your vehicle towed by specialists only. Improper towing may cause damage to your vehicle and you may experience serious accidents.

Procedures to be Performed:

- If your engine is operating, have your vehicle towed as your engine is operated. If it is not possible to operate your engine, brake air pressure may be reduced after a while and this locks the emergency brakes. This may cause serious accidents and damages. To prevent this condition, discharge the emergency brakes before towing your vehicle or connect an air line to the air tubes of your vehicle if the specifications of the towing vehicle allows this.
- The drive shaft needs to be removed first before towing your vehicle.
- The key should be on the ignition switch and on position (1) as your vehicle has a steering lock.
- The vehicle should only be towed with a drawbar. Towing with soft, breakable materials cause a serious risk of accident.
  Do not exceed the speed limit specified by traffic law.

Batteries

WARNINGS

Danger of explosion
Explosive gases form when the batteries are charged. Charge the batteries in well ventilated places only.

Danger of explosion
Avoid sparks!
Do not work with open fires or lights near batteries. Do not smoke.

Battery acid may cause burns.
Use acid-resistant protective gloves!
Neutralize the skin or cloth that the battery acid is spilt on with soapy water or a neutralizing material and rinse with water.

Wear protective goggles.
Electrolyte may be spilt on the eyes while mixing it with water. Wash your eyes with plenty of water and seek medical help immediately.

Keep away from children
Children cannot decide the risks involved with batteries and acid.

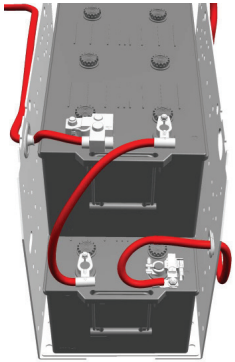
Observe the safety warnings, protection precautions and manners described in this manual when you are dealing with the battery.

DAMAGES TO THE ENVIRONMENT

Batteries contain hazardous material. Do not dispose with household waste.

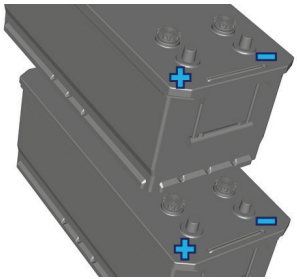
Dispose the batteries without harming the environment. Return the batteries to a FORD OTOSAN authorized dealership or a collecting facility for waste batteries.
Transport and store the batteries filled with electrolyte in upwards condition. Secure the batteries against turning over when you are carrying them. Battery acid may contaminate the environment by vaporizing from the air discharge holes.

Electrical Systems



Batteries should always be charged as required in order to have a long service life. We advise you to use the circuit breaker next to the battery tray to preserve the service life of the battery when the vehicle is not going to be used for a long time. Check the battery voltage level if the vehicle is parked for a long period of time. 12.2 V voltage level measured in a battery indicates that battery charge level is too low.
In this case, best method is to leave the vehicle running in the shortest possible time in order to charge the batteries.

Disconnecting the battery terminals



Disconnect the terminals after 5 minutes minimum when you stop the engine. This is needed to supply power to the Urea system that will operate after a while when the engine is stopped.
Otherwise, your Urea system (or vehicle) may be damaged.

- Remove the key from the ignition switch.
- Turn off all consumers.
- Open the battery housing cover and remove it.
- Disconnect the negative terminals.
- Disconnect the positive terminals.

WARNING

Risk of short circuit occurs when the positive terminal of the battery connected contacts the components of the vehicle. Thus, the gas mixture that may easily explode may ignite. You and other persons may get injured in such a condition. Do not place metal objects or tools on the battery.

Disconnect the negative terminal first, and then the positive terminal while disconnecting the terminals.

Connect the positive terminal first, and the negative terminal then while connecting the terminals.

Do not loosen or disconnect the terminals when the engine is running.

BATTERIES REQUIRE MAINTENANCE

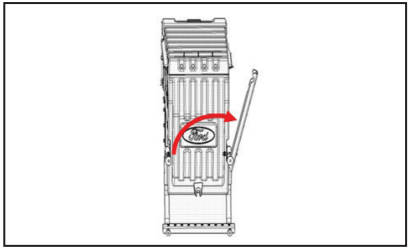
Connecting the battery terminals

CAUTION

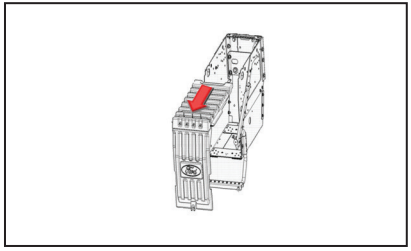
Remove the key from the ignition switch.
Turn off all consumers.
Connect the positive terminals. Do not confuse terminals!

- Connect the negative terminals.
- Fit the battery cover.
- Perform the following when the power is disconnected (e.g. when the terminals are disconnected and connected again).
- Set the clock.

Removing the battery cover



Open the upper connection profile of the step bracket under the battery cover in the direction of the arrow.

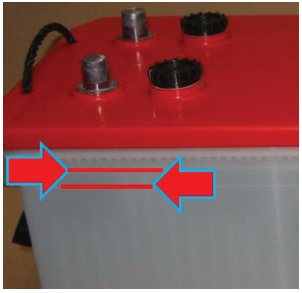


Then pull the battery cover to yourself in the arrow direction and remove easily.

After the battery replacement; if the replacement is made outside authorized service and parameter update is not performed, "replacement notification" signal is sent for 10 seconds.
In this case, the hazard lights button must be pressed 8 times within 14 seconds while the ignition is on.

Flashing of the battery condition indicator indicates that the battery charge level is very low. In this case, best method is to leave the vehicle running in the shortest possible time in order to charge the batteries.

Checking the electrolyte level



CAUTION

Battery box is coloured white to allow that the fluid can be seen from the outside. Refer to the min/max. signs to understand if the fluid level is adequate. Check the battery acid concentration level every six months or 40.000 km.

Tap water decreases battery power. Only add demineralized or distilled water.
Do not use a metal hone when you are filling the batteries. There is a risk of short circuit.

Electrical Systems

- Open the battery housing cover and remove it.
- Remove the plugs.
- Check the battery acid concentration level and correct if required.
- Install the plugs.
- Fit the battery cover.

WARNING

Batteries are very heavy. You may drop the battery and injure yourself or others when you are removing or installing a battery.
Thus, be careful when you are removing the battery and use the help of a second technician.

WARNING

Make sure that the battery housing cover is closed.
Ensure that the battery surface is always clean.

WARNING

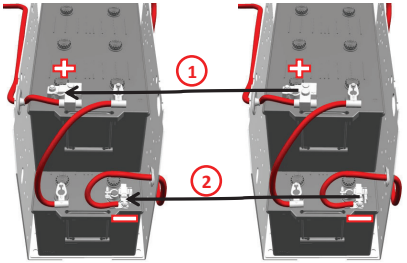
There is a risk of explosion because of the forming of explosive gases. Avoid sparks! Do not work with open fires or lights near batteries. Do not smoke.

Flashing of the battery condition indicator indicates that the battery charge level is very low. In this case, best method is to leave the vehicle running in the shortest possible time in order to charge the batteries.

Using Jumper Cables
When your battery is discharged, you may take starting aid from another vehicle.
If your battery is discharged and you want to start your engine with jumper cables, read the following instructions carefully to prevent damage to the charge system.

Provide starting aid from
- Two 12 V batteries connected in series
- Vehicles with 24 V power system only.

- Keep the spare batteries in a well-ventilated environment.
- Turn off all other consumers.



- Connect the positive (+) terminal of the spare battery to the positive terminal of the vehicle battery, and negative (-) terminal of the spare battery to the negative terminal of the vehicle battery.
- Connect the positive terminals of the batteries first, and then the negative terminals using starting aid cables.
- Start the engine. Run the engine under 1000 rpm.

- Disconnect the negative jumper cable from the spare battery first, and then the vehicle battery. Disconnect the positive cable in the same way.
- If two vehicles are used, make sure that their bodies or frames do not contact each other.
- Do not approach the batteries with sparks or naked flames as the hydrogen will always be available.
- Connect the jumper cables as specified above to prevent sparks in the vicinity of the batteries.
- Always use booster cables with insulated clamps and adequate size cable. Do not disconnect the battery from the vehiclefs electrical system.

To start the engine:

a- Run the engine of the vehicle with charged battery with a high speed.

b- Start the engine of the vehicle with the flat battery.

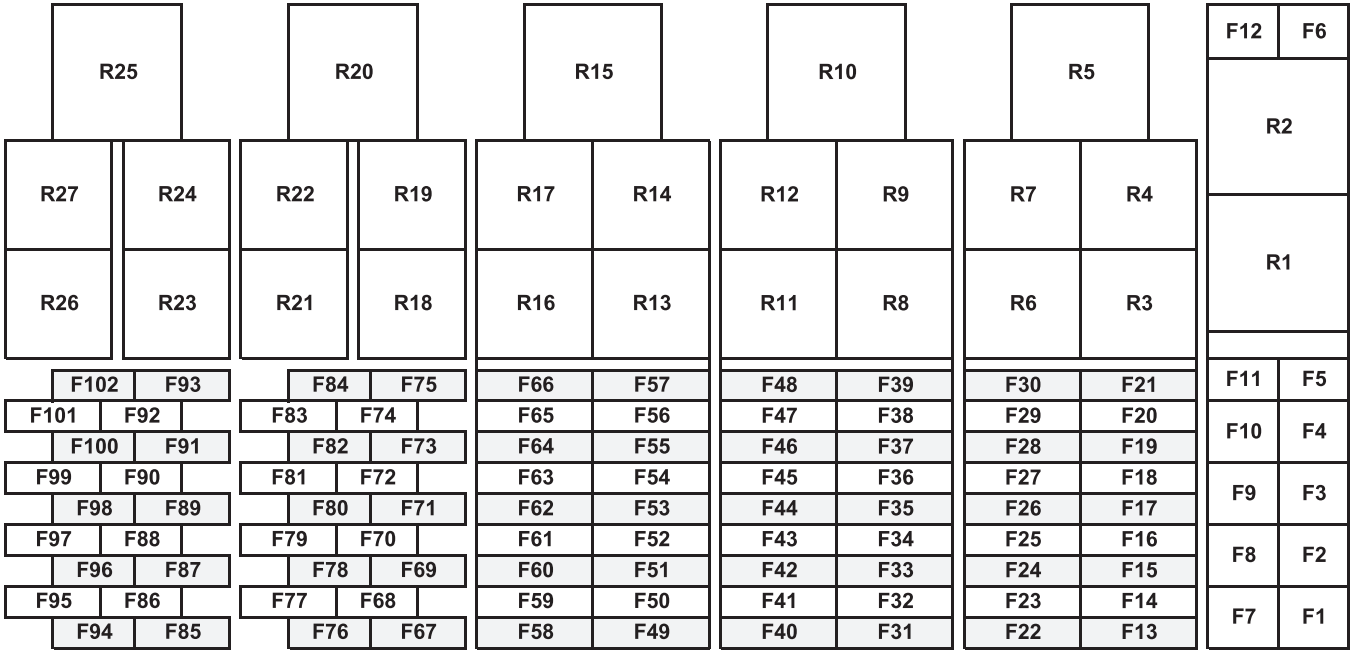
c-Run both vehicles for a minimum of tree minutes before disconnecting the

Otherwise, you may damage electronic equipment like the engine electronic control unit or the digital instrument cluster.

MAINTENANCE AND SERVICE

Electrical Systems

Fuse and Relay Table



Electrical Systems

NO	VALUE	SYSTEM
FS001	30 A	AUTOMATIC TRANSMISSION CONTROL UNIT - 1
FS002	40 A	WINDSHIELD HEATING - 1
FS003	40 A	WINDSHIELD HEATING - 2
FS004	40 A	PARK AIR CONDITIONER
FS006	20 A	12V POWER OUTLET
FS007	30 A	AIR CONDITIONER FAN
FS009	50 A	CAB LIFTING MOTOR
FS010	30 A	24V KL30 FOR FS101
FS011	40 A	24V POWER OUTLET PANEL AND BED
FS013	20 A	ENGINE CONTROL UNIT
FS014	10 A	AUTOMATIC TRANSMISSION CONTROL UNIT - 2
FS015	7.5 A	INTARDER
FS016	15 A	PARKING LAMPS
FS017	5 A	TACHOGRAPH
FS018	3 A	FRONT CAMERA
FS019	7.5 A	DOOR LOCK BUTTON
FS020	20 A	BODY CONTROL UNIT - 1

NO	VALUE	SYSTEM
FS021	5 A	ELECTRONIC AIR PRESSURE UNIT
FS022	20 A	BODY CONTROL UNIT - 2
FS023	10 A	BRAKE LAMPS
FS024	7.5 A	REFRIGERATOR
FS025	20 A	BODY CONTROL UNIT - 3
FS026	20 A	NOX SENSORS 1 & 2 & UREA QUALITY AND LEVEL SENSOR
FS027	20 A	WET TYPE HEATER
FS028	10 A	MIRROR HEATERS
FS029	7.5 A	TRIPLE DOME PARKING LAMPS & DOME BEACON
FS030	10 A	DRY TYPE HEATER
FS031	30 A	7 PIN TRAILER CONNECTOR
FS032	3 A	ERA GLONASS EMERGENCY CALL UNIT
FS033	20 A	BODY CONTROL UNIT - 4
FS034	20 A	BODY CONTROL UNIT - 5
FS035	20 A	BODY CONTROL UNIT - 6

Electrical Systems

NO	VALUE	SYSTEM
FS036	20 A	BODY CONTROL UNIT - 7
FS037	3 A	RIGHT AND LEFT ARM
FS038	10 A	OBD (ON BOARD DIAGNOSIS SYSTEM) CONNECTORS 1 & 2
FS039	20 A	BODY CONTROL UNIT - 8
FS040	7.5 A	SHADE MOTOR
FS041	25 A	CONVERTOR 2
FS042	5 A	MAP ASSISTED SPEED CONTROL UNIT
FS043	15 A	HORN
FS044	15 A	EBS UNIT
FS045	3 A	BUTTONS
FS046	25 A	CONVERTOR 2
FS047	15 A	DENOX CONTROL UNIT AND UREA HEATERS
FS048	20 A	AFTER SALES CHASSIS AND DOME CONNECTORS
FS050	20 A	24V POWER OUTLET - PANEL

NO	VALUE	SYSTEM
FS051	20 A	24V POWER OUTLET - BED
FS052	20 A	AFTER SALES CAB CONNECTOR & FLEET MONITORING UNIT
FS053	15 A	LIGHTER
FS054	5 A	TIRE PRESSURE DISPLAY UNIT
FS055	5 A	IGNITION SWITCH
FS056	10 A	INSTRUMENT PANEL
FS057	3 A	EXTERIOR CABINET LAMPS
FS058	3 A	ENGINE RPM
FS059	10 A	15-PIN TRAILER CONNECTOR & AFTER SALES CHASSIS AND DOME CONNECTORS - PARK
FS060	5 A	VEHICLE PARK LAMPS
FS061	1 A	SUNROOF WINDOW (HEADLINING CONSOLE SIDE) BUTTON - WAKING
FS062	1 A	SUNROOF WINDOW (BED SIDE) BUTTON - WAKING
FS063	1 A	BED LAMP BUTTON - WAKING
FS064	3 A	“TACHOGRAPH (FOR VEHICLES CARRYING DANGEROUS GOODS)”
FS066	5 A	“INTERIOR CABINET LAMPS & DOOR LOCKING BUTTONS”
FS067	7.5 A	EBS UNIT - IGNITION

Electrical Systems

NO	VALUE	SYSTEM
FS068	3 A	INSTRUMENT PANEL - IGNITION
FS069	3 A	ELECTRONIC AIR PRESSURE UNIT - IGNITION
FS070	7.5 A	INTARDER - IGNITION
FS071	5 A	TACHOGRAPH - IGNITION
FS072	3 A	LANE DEPARTURE WARNING SYSTEM BUZZER
FS073	7.5 A	RADAR & CAMERA & MAP ASSISTED SPEED CONTROL UNIT - IGNITION
FS074	7.5 A	AUTOMATIC TRANSMISSION CONTROL UNIT - IGNITION
FS075	5 A	ENGINE CONTROL UNIT - IGNITION
FS076	3 A	ELECTRONICALLY AIR SUSPENSION CONTROL
FS077	10 A	SEAT HEATER
FS079	3 A	BRAKE LAMPS
FS080	15 A	AFTER SALES CHASSIS AND DOME CONNECTORS & FLEET MONITORING UNIT - IGNITION
FS081	3 A	ERA GLONASS EMERGENCY CALL UNIT - IGNITION
FS082	7.5 A	WORKING LAMP - IGNITION
FS083	3 A	RIGHT AND LEFT ARM - IGNITION
FS084	5 A	BUTTONS & STEERING LOCK VALVE - IGNITION

NO	VALUE	SYSTEM
FS085	10 A	REVERSING LAMPS
FS087	20 A	FUEL HEATER
FS088	7.5 A	7-PIN TRAILER CONNECTOR - IGNITION
FS089	3 A	CONVERTORS 1 & 2 - IGNITION
FS090	10 A	NOX SENSORS 1 & 2
FS091	7.5 A	UREA QUALITY AND LEVEL SENSOR
FS092	15 A	TURBO & EXHAUST GAS RECIRCULATION
FS093	7.5 A	Front headlamp leveling motor &Rain sensor &IN-VEHICLE TEMPERATURE AND HUMIDITY SENSOR
FS094	5 A	WINDOW AND MIRROR BUTTON
FS097	20 A	BODY CONTROL UNIT - 12V SUPPLY
FS098	7.5 A	A/C CONTROL UNIT
FS099	7.5 A	EXTERIOR CABINET LAMPS
FS100	3 A	HEADLAMP SWITCH
FS101	7.5 A	HORN AND A/C MOTOR RELAY COIL (+)
FS102	20 A	RADIO

Electrical Systems

NO	VALUE	SYSTEM
R01	24V 40A	IGNITION/START - 1
R02	24V 40A	IGNITION/START - 2
R03	12V 20A	POWER OUTLETS (SEALED RELAY)
R04	24V 20A	LIGHTING WORKING LAMP
R05	24V 40A	IGNITION/ACCESSORY
R06	24V 20A	SHADE MOTOR - UP
R07	24V 20A	ENGINE OFF
R08	24V 20A	HORN
R09	24V 20A	UREA MODULE AND UREA HEATERS
R10	24V 40A	A/C MOTOR
R11	24V 20A	REVERSE LAMPS & REVERSE WARNING
R12	24V 20A	UREA QUALITY AND LEVEL SENSOR & NOX SENSORS & TURBO & EXHAUST GAS RECIRCULATION
R13		EMPTY

NO	VALUE	SYSTEM
R14		EMPTY
R15	24V 40A	CAB LIFTING MOTOR
R16		EMPTY
R17	24V 20A	BRAKE LAMPS
R18		EMPTY
R19	24V 20A	PARKING LAMPS
R20	24V 40A	WINDSHIELD HEATING - 1
R21	24V 20A	TRIPLE DOME PARK LAMPS
R22		EMPTY
R23	24V 20A	DOME BEACON
R24	24V 20A	MIRROR HEATERS
R25	24V 40A	WINDSHIELD HEATING - 2
R26	24V 20A	DOOR LOCKING BUTTONS
R27	24V 20A	SHADE MOTOR - DOWN

Fuse and Relay Table (On Engine)

F1	F2	F3

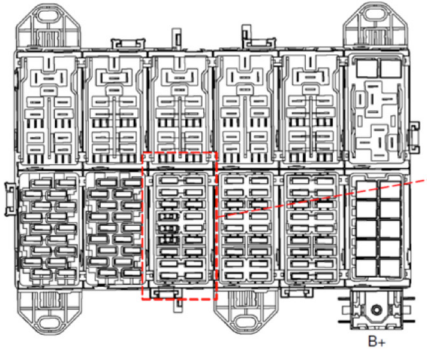
NO	VALUE	SYSTEM
F1		EMPTY
F2	150 A	MEGA FUSE - ALTERNATOR
F3	175 A	MEGA FUSE - GRILLED HEATER

Trailer installation kits

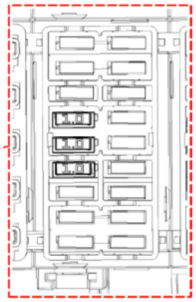
Trailer installation kits located in the trunk of your vehicle should be kept in the trunk or inserted into the parking sockets when not in use.

Diode directions

FUSE BOX FRONT VIEW



CARTRIDGE 4

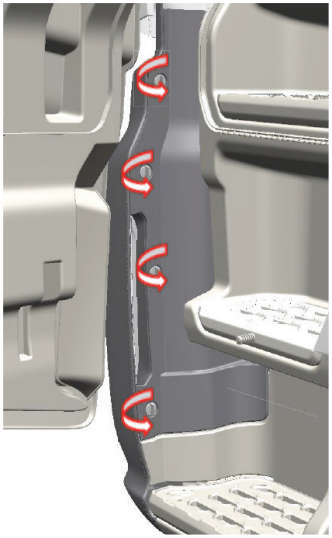


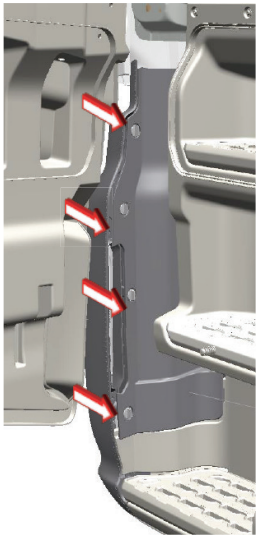
The diodes shall be fitted into the slots in clockwise order with a value of 1.0 shown on them.

Changing Bulbs

Removing the headlamp rear cover

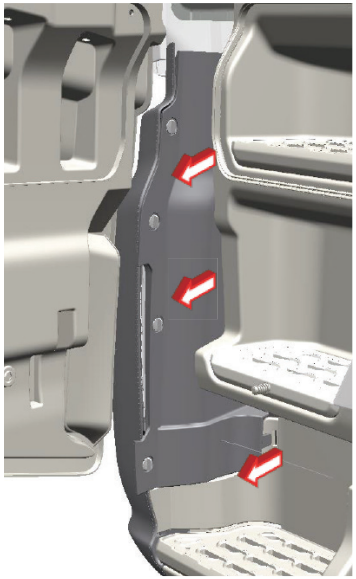
Open the door, rotate the removable locks on the part in the direction of the arrow.



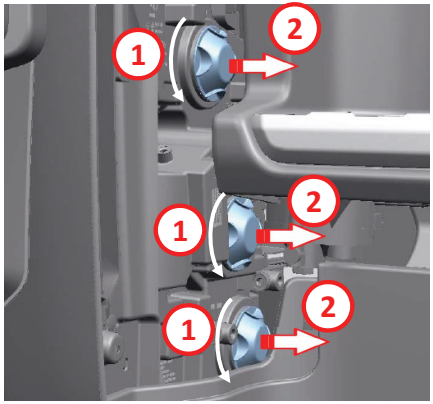


Pull backwards from the section of the part that are indicated with arrows.

Changing Bulbs



Release the part from its seat on the bottom and remove it.



Remove the cover by rotating it counter-clockwise and unlocking it for the main beam on the top, dipped beam in the center and fog lamp at the bottom.

Bulb types to be used:

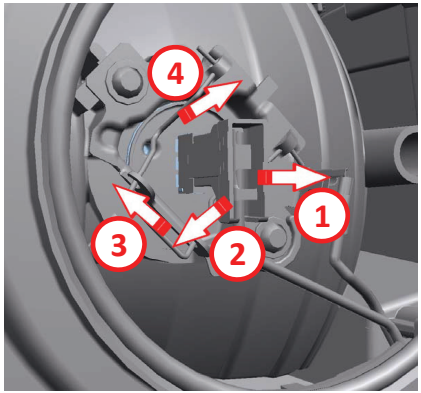
Main Beam: H1 24V 70W
Dipped Beam: H7 24V 70W
Fog Lamp: H11 24V 70W

CAUTION

Do not touch the bulbs with your hands when you are replacing the halogen bulbs, otherwise the bulbs will never work again.

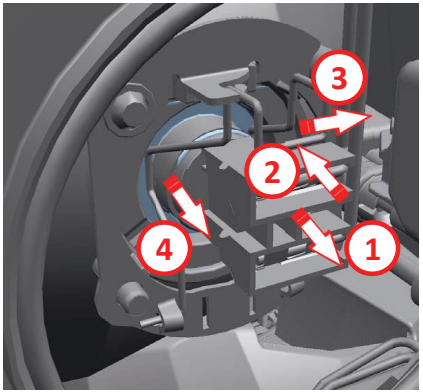
Changing Bulbs

High beam



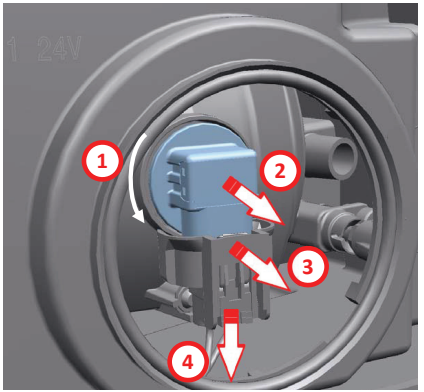
Remove the connector behind the bulb by pulling it out first to replace the main beam bulb. Then, press on the retaining spring wire and release and open it from tabs by sliding to the upper left side and remove the bulb. Insert the spring to the tabs and install the bulb connector after placing the new bulb.

Headlamp dipped beam



Remove the connector behind the bulb by pulling it out first to replace the dipped beam bulb. Then, press on the retaining spring wire and release and open it from the by sliding to the right-hand side and remove the bulb. Insert the spring to the tab and install the bulb connector after placing the new bulb.

Fog lamp



Remove the bulb by rotating it counter-clockwise and unlocking it to replace the fog lamp bulb. Then, release the bulb by pulling the connector tab out. Place the new bulb to its seat after installing it to the connector and lock by rotating clockwise.

Locations of the Tools in the Vehicle

PARTS	PART NAME	LOCATION
	JACK	ON THE TOOLBOX BEHIND THE PASSENGER SEAT
	TOOLBOX	ON THE TOOLBOX BEHIND THE PASSENGER SEAT
	WHEEL NUT WRENCH	ON THE TOOLBOX BEHIND THE PASSENGER SEAT
	LEVER	UNDER THE HOOD

PARTS	PART NAME	LOCATION
	TRAILER CONNECTION WIRE	ON THE TOOLBOX BEHIND THE DRIVER'S SEAT
	TIRE INFLATION HOSE	ON THE TOOLBOX BEHIND THE PASSENGER SEAT
	TOW HOOK	ON THE TOOLBOX BEHIND THE PASSENGER SEAT
	WARNINGLAMP	IN GLOVE BOX

MAINTENANCE AND SERVICE

Questions and Remedies

FAULT	CAUSE AND REMEDY
ENGINE IS STALLING	Transfer pump does not intake, check the front filter. Check main fuel filter. The hole on the fuel tank cover may be clogged. Open it. There is water in the fuel. Replace if necessary. There is air in the fuel injection system. Check the fuel pipes and hoses. Freezing or air ingress in the fuel settling bottle filter or fuel intake lines; check and clean if required.
ENGINE IS RUNNING ROUGHLY	There may be air or clogging in the fuel pipes. Bleed air. Incorrect valve adjustment Intake manifold or air filter may be clogged. Clean or replace. There is water in the fuel. Replace if necessary. There may be clogging or damage in the exhaust pipes or the muffler. Have them inspected. Injector pump intake may be insufficient. Contact an authorized dealer.
ENGINE IS DIFFICULT TO START	Air filter may be contaminated. Clean or replace. Starter is faulty. Have it repaired. Battery discharged. Have it charged. Exhaust system may be clogged. Have them inspected. Front heater is faulty. Have them inspected. Fuel level low. Top up. There may be air in the fuel system. Bleed air .

Questions and Remedies

FAULT	CAUSE AND REMEDY
ENGINE IS OVERHEATING	Coolant level is low. Top up. An object may be blocking the front of the radiator. Please check. Radiator cores may be dirty. Clean the radiator. Water pump belt adjustment is faulty Have them inspected. Exhaust system may be clogged, have it inspected. Thermostat is faulty. Check it (and replace it, if necessary). Water pump is faulty. Have it inspected by an authorized dealership.
LOW TRACTION	Engine compression level is low. Have them inspected. Air filter may be contaminated. Clean or replace. Incorrect valve adjustment Contact an authorized dealer.
BLACKSMOKE FROM THE EXHAUST	Air filter may be contaminated. Clean or replace. Intake manifold or exhaust system may be clogged. Have them inspected. Compression may be too low. Cylinder head gasket leaks. Incorrect valve adjustment or valves faulty Engine worn. Drive to an authorized dealer and have the necessary inspections performed. Turbo unit is faulty Drive to an authorized dealer. Air leak on the Intercooler and / or hose connections. Inspect the hose and clamps. Breakage of the diesel particulate filter (Euro-6 vehicles)

MAINTENANCE AND SERVICE

Questions and Remedies

FAULT	CAUSE AND REMEDY
LOW OIL PRESSURE	Oil pressure indicator is clogged or faulty Have them inspected. Oil filter element is clogged. Replace. Oil strainer may be clogged Clean it. Oil pump is faulty. Check the tread clearance, and the operation of drive shaft and safety valve.
POWER STEERING **POWERSTEERING NOISE ON THE STEERING WHEEL**	Hydraulic fluid levels are low, refill and bleed the air. Contact authorized service for a general inspection of the system.
STEERING WHEEL IS ROTATING ROUGHLY	Check tyre pressures Vehicle may be overloaded. Check the suitability for load capacity. Please visit the nearest authorized service if load limits are not exceeded.
CLEARANCE ON THE STEERING WHEEL	Check for looseness on the steering system. Also, have the setting checked in the authorized dealership. Have the front alignment adjustment of your vehicle checked, and have the tire pressures inspected.
ENGINE DOES NOT SUPPLY POWER	Engine is faulty. Contact an authorized dealership to have the fault repaired. Exhaust or intake manifold is loose Contact an authorized dealer. Wrapping on turbine shaft bearings. It should be repaired. Turbo pressure may be lower than necessary. You are recommended to contact nearest FORD OTOSAN authorized dealership.

TECHNICAL SPECIFICATIONS

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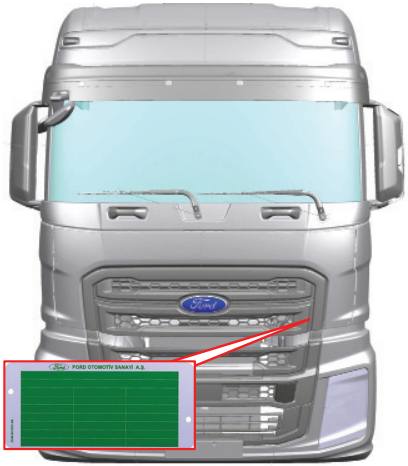
TECHNICAL SPECIFICATIONS

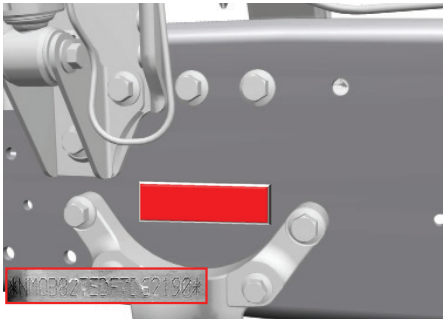
Labels

Vehicle Identification Plate



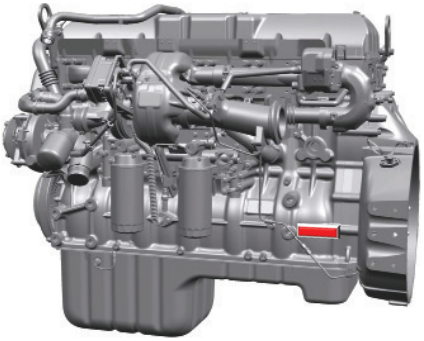
Vehicle identification plate is located under the hood in the front of the cab.

Over the right chassis arm of the vehicle:



Chassis number is located under the front bonnet and on the chassis right hand-hand side arm and on the right chassis lower flange beside the engine crossmember; it consists of 17 digits. Example: NM0K13TEDFBL12345

Engine label



Metal label with the engine type and serial number inscribed on it is placed on the lower right side of the turbocharger intake pipe.

Fluid Filling Capacities

USAGE AREA	DESCRIPTON	CAPACITY	SAE NO.	FORD SPECIFICATION NO.	SPECIFICATION NO.
ENGINE OIL (OIL FILTER INCLUDED)		46L	5W30	WSS-M2C213-A1	
TRANSMISSION	ZF 12 TX 2620	23.5L	75W80		Full Synthetic (TE-ML 02E ZF)
DIFFERENTIAL	FORD XSS-510	18.5L	85W140	BC46-19K261-AB	API GL-5
	FORD XSS-470	12.5 L	75W85	HC46-19K261-AA	
STEERING FLUID		5.5 L		WSS-M2C938-A	
	-35 ºC to -60 ºC	4.7L			
ENGINE COOLANT / ANTIFREEZE	With intarder	80 L		WSS-M97B44-D	50% Organic antifreeze + 50% pure water
	Without intarder	67 L			
CAB LIFTER OIL		0.58 L		SLM-6C9100-A	
HUB GREASE	Vehicles with disc brakes	400 g/wheel		WSS-M1C275-A	
	Vehicles with drum brakes			WSD-M1C228-A	
	Cold climate conditions			WSS-M1C275-A	
KINGPIN GREASE				WSD-M1C228-A	

TECHNICAL SPECIFICATIONS

Fluid Filling Capacities

USAGE AREA	DESCRIPTON	CAPACITY	SAE NO.	FORD SPECIFICATION NO.	SPECIFICATION NO.
	SPARE WIRE	(**)	Lithium-based	WSD-M1C228-A	
	AXLE PIN	15 g/pin	Lithium-based	WSD-M1C228-A	
	BATTERY TERMINALS	20 g	Petroleum jelly		ESE N99B144B
	BRAKE SHOE SLIDERS	(**)	With Copper Additive		
	CAB LOCK BUSHING	0.024 g/lock		WSD-M1C228-A	
	DOOR STRUT	75 g/door	Polyurea NLGI 2	WSD-M1C238-A	
	DOOR LOCKS, LATCHES	(**)	Lithium No. 1	SMIC-1021-A	
	DECELERATION				ISO 6743-9 L-XBEHB 2
					DIN 51502 KP2P-20
	-15 ºC to -40 ºC	(***)	Lithium-based	WSA-M1C160-D2 SS-M13P12-A	
CLUTCH FLUID		0.37 L	FMVSS No.116	WSS-M6C65-A2	SUPER DOT4
A/C SYSTEM REFRIGERANT		760 gr	J2776	WSH-M17B19-A	
A/C SYSTEM OIL		200 -0/+10 cc		WSH-M17B19-B	
FUEL		280L	TS EN590		
		410L			
		450L			
		510L			
		600L			
UREA		55 L	DIN 70070	WSS-M99C130-A	ISO 22241-1
		78 L			
WASHER TANK		8.5 L			

(*) Antifreeze ratio in the coolant shall be at least 30% to protect the engine cooling system against corrosion.
Engine coolant shall include at least 60% antifreeze to prevent freezing down to -52 ºC.
(**) This is used as required in maintenances.
(***) Instead of lithium based chassis greases in operating conditions from-15ºC to-40ºC
Refer to latest Ford Trucks Periodical Maintenance Sheet or contact a Ford authorized dealership for oil replacement intervals.

Engine Specifications

12.7 LT 500 PS	
Number of cylinders	6
Displacement	12700cc
Bore	130 mm
Compression ratio	17 / 0.5 /1
Minimum Engine Speed Without Load	550 ± 10
Maximum Engine Speed With Load	1800 ± 20
Valve Clearance	Intake: 0.4mm
	Exhaust: 2.4mm
Ignition Sequence	1-5-3-6-2-4
Turbo	Borgwarner BV70 with variable geometry
Oil Pressure (100 ºC)	600 rpm: 0.7 - 2 bar
	1100 rpm: 2.1 - 3bar
	Max speed: 6 bar
Engine brake	30 kW/l (2400 rpm)
Torque per unit liter	
PS per unit liter	

TECHNICAL SPECIFICATIONS

Transmission Specifications

Transmission gear ratios

12 TX 2620 TD					
	LOW	**HIGH RANGE**		**LOW**	**HIGH RANGE**
1ST GEAR	16,688	12,924	5TH GEAR	2,174	1,684
2ND GEAR	9,926	7,688	6TH GEAR	1,291	1
3RD GEAR	5,895	4,565	REVERSE GEAR	15,537	12,033
4TH GEAR	3,655	2,831			

Installation of Upper structure

You can access the web portal designed to be a guide for Ford Trucks upper structure manufacturers from the following address: https://wwwfordtrucksbb.com.

Portal requires a membership and provides the following:

- Urgent info bulletins

- Superstructure forms

- Technical bulletins

- Type approvals

- 2D and 3D technical drawings and models

- Vehicle specification sheets

- Electric and air outlet diagrams

- Advisory, monitory documents

-List of superstructure builders listed as recommended firm as per the inspections of Ford Otosan.

Visit

“Ford Otosan contact information” tab on the https://www.fordtrucksbb.com website to contact relevant persons for your questions.

For your questions on the portal, you may use the following address info@hakbim.com.tr.

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