



Easy Drivers Berndorf

Hainfelder Straße 20
2560 Berndorf

☎ & 📞 02672 85973
berndorf@easydrivers.at

Easy Drivers Bad Vöslau

Wr. Neustädterstraße 22
2540 Bad Vöslau

☎ & 📞 02252 75095
badvoeslau@easydrivers.at

B / L17

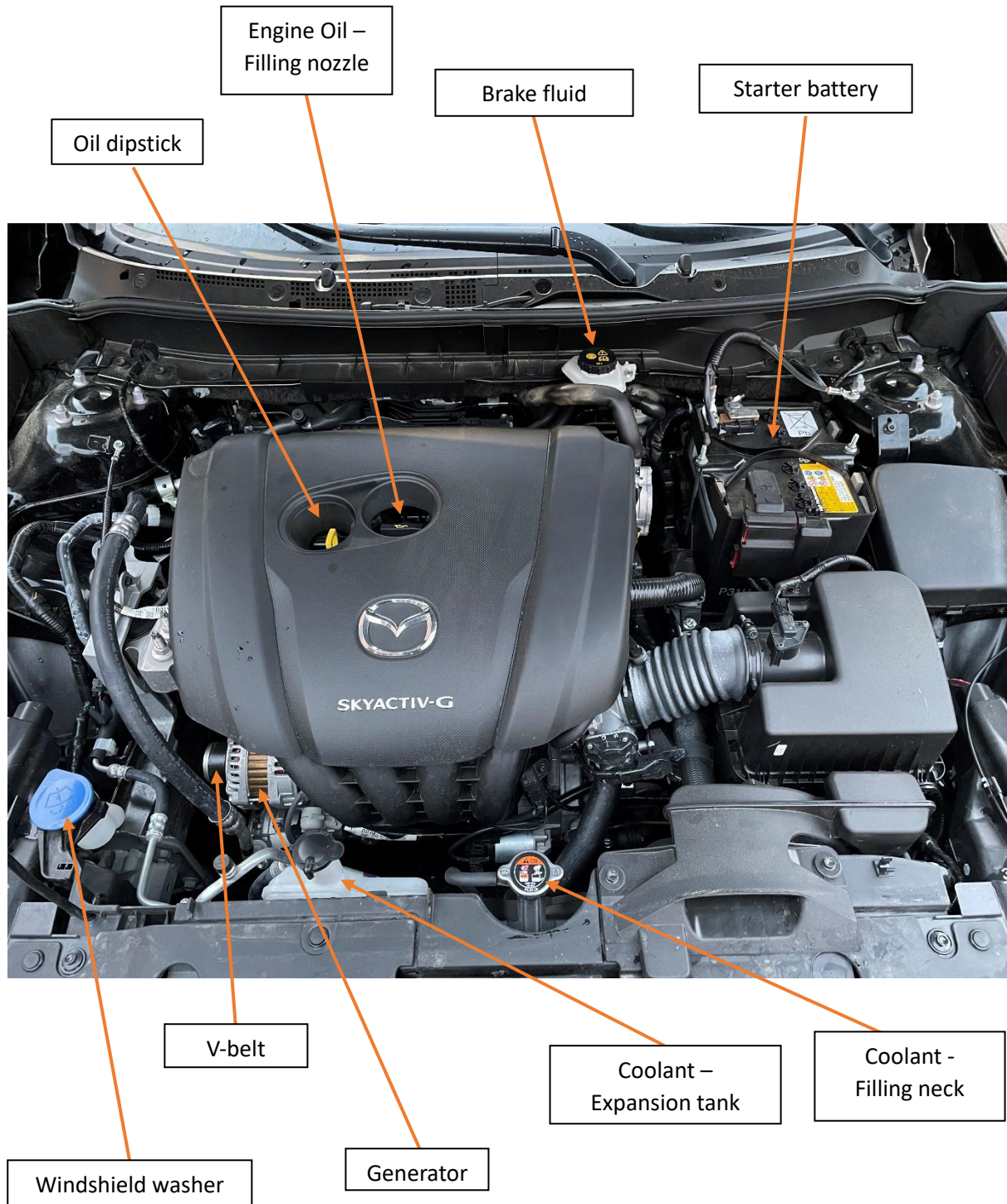
Technical Knowledge for the Driver's License Exam



Contents

The Engine Compartment (Mazda CX-3)	3
More Lights:	6
Inspections	7
Types	8
Brakes	10
The Parking Brake Test	10
The Evaluation (KFG § 57a)	11
The Highway Vignette	12
How to operate	13
Left-hand steering column switch	13
Right-hand steering column switch	14
Steering Play (Steering Clearance)	14
Shock Absorber	14
Warning Devices	15
Ventilation	16
Indicator Lights	16
Bord-Display (Mazda)	17

The Engine Compartment (Mazda CX-3)



Cooling:

Check the coolant level in the expansion tank (markings “F” for Full and “L” for Low).

Use coolant as specified by the manufacturer; water may be used if necessary (Caution! Risk of corrosion and freezing—DO NOT OPEN if the vehicle is too hot).

Engine Oil:

Check the oil level regularly using the dipstick. The vehicle should be parked on level ground and have been turned off for a few minutes. Top off the engine oil according to the manufacturer’s instructions as soon as the level reaches the minimum mark. Caution! Engine oil expands; do not fill beyond the maximum mark (especially when the vehicle is cold).

Brake fluid:

Check that the fluid level is between the minimum and maximum marks. If the minimum level is reached, perform a leak test. If the system is leak-free, the brake pads are worn. **Never top off the fluid yourself**—take the vehicle to a repair shop!

On average, the brake fluid should be completely replaced about every 2 years.

Battery:

If there are access caps and a mark is visible, distilled water can be added (maintenance battery). This is not the case with modern batteries (maintenance-free battery). Check that the poles are clean and that the battery and poles are securely connected.

Generator (obsolete term: alternator):

Generates electricity! Supplies power to the vehicle's electrical system and recharges the battery. If the charge warning light comes on: the generator is faulty or the V-belt has broken. Power is now being drawn solely from the battery, which is no longer being recharged.

Windshield washer fluid:

Refill when the on-board computer displays a message or when the fluid tends to foam during use.

Windshield washer fluid can be purchased pre-mixed with antifreeze or as a concentrate to be diluted yourself. In the summer, regular tap water can be used (Caution! Water with high calcium content can cause corrosion in the hoses).

The Lighting

Parking Lights – Low Beams – High Beams

Light Levels



Fog lights (optional) – Rear fog light – Turn signals

additional lighting



Parking Light:

Use only when the vehicle is stationary, provided the vehicle cannot be seen from 50 meters away (e.g., insufficient street lighting)

What lights up? Front – Parking lights or LED strips

Rear – Tail lights & license plate lights

Dashboard lights

Low beams:

Use in darkness, during precipitation, at dusk, in tunnels, and when towing. Beam range: at least 40 m (= stopping distance from 50 km/h)

What lights are on? Change to front parking lights only (low beams instead of parking lights). If the vehicle is heavily loaded in the rear, check whether you need to manually adjust the headlight aim to avoid blinding oncoming traffic.

If present = to the left of the steering wheel



High beams:

Use in the dark; always when driving on open roads; in built-up areas when traveling at speeds over 50 km/h and when street lighting is insufficient. Dim the headlights when oncoming traffic approaches, when being passed, and when pedestrians are present—no one should be blinded! Can only be turned on when the low beams are on (press the steering column switch in the direction of travel).

Fog light (optional):

Useful in fog or on winding roads (provides better illumination of the road edge)

Rear fog light:

Use only in very dense fog and only for as long as necessary! Very bright light—may blind succession traffic! At least one rear fog light must be installed (on the right side—two lights are optional: left and right)

Turn signal:

Six turn signal lights installed on the vehicle: front, rear, and side (side mirrors or fenders)

**More Lights:****Brake light:**

Three brake lights; they only come on when the brake pedal is pressed.

Rear-view headlights:

Emits a white light toward the rear; at least one is required (on the left side—two lights are optional: one on the left and one on the reverse side); illuminates when reverse gear is engaged

Check regularly for proper operation, external damage, and dirt!

The Tires

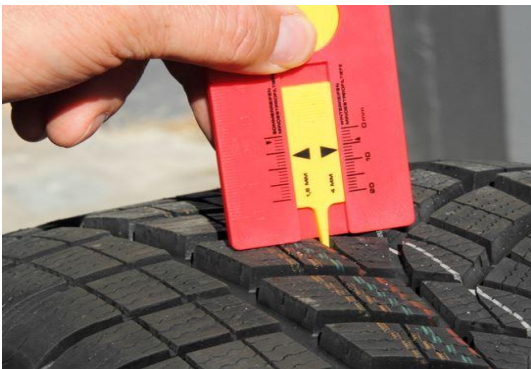
Inspections

Tire Tread:

Check whether the tire is wearing evenly. If it is more worn on one side than the other, the toe or camber may be incorrect (possibly due to hitting a curb). If it is more worn on the inside than the outside, the tire was driven with too much pressure—conversely, too little pressure. If the tread pattern is irregular, there is a problem with the suspension (shock absorbers, wheel imbalance, etc.).

Tread depth It can be measured using a tread depth gauge or checked using the wear indicators.

In addition to the 1.6-mm wear indicators, winter tires usually also have 4.00-mm wear indicators. However, these are not required!

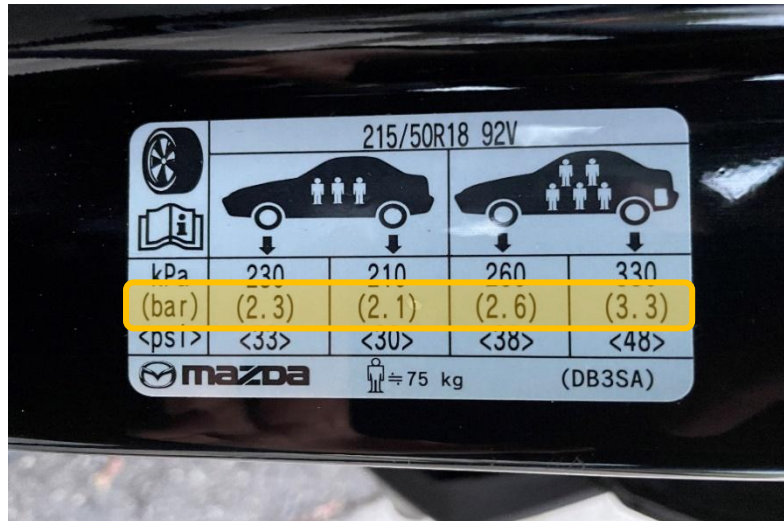


Summer indicators are marked on the tire with an arrow or “TWI,” and winter indicators (if present) are marked with a snowflake on the outside of the tire. The indicator itself is located on the tire's tread.



Tire Pressure:

Check tire pressure regularly (about every 2 months). The recommended pressure can be found in the operating manual. Often, a chart is also located inside the driver's door or on the fuel filler door. The easiest way to check is at a gas station using a tire pressure gauge. The tires should be cold when you check them.



	215/50R18 92V			
	Front Left	Front Right	Rear Left	Rear Right
kPa	230	210	260	330
(bar)	(2.3)	(2.1)	(2.6)	(3.3)
<psi>	<33>	<30>	<38>	<48>

Mazda logo, 75 kg, (DB3SA)

Damage:

The tire must not show any visible damage, such as cracks, cuts, or bulges. This must be checked before each use and after any contact with an obstacle (e.g., a curb) involving the vehicle.

Types

Summer Tires:

Minimum tread depth: 1.6 mm

Winter Tires:

Minimum tread depth: 4 mm (to qualify as winter tires); if the tread depth falls below this value, they may still be used in the summer (down to 1.6 mm)

Winter tires are required on a case-by-case basis from November 1st through April 15th - when winter driving conditions prevail. Identifiable by the M&S marking (mud & snow)

205/55 R 16 91 H

205	-	Tire width [mm]	
55	-	Tire height [%] (von der Breite)	
R	-	Radial tires	
16	-	Rim diameter [Zoll]	
91	-	Load-Carrying Capacity Index [kg]	(91 steht für 615 kg)
H	-	Speed Index [km/h]	(H steht für 210 km/h)

Balancing weight:

Tires are balanced after installation. This ensures that the tire runs “smoothly.” If a balancing weight is missing, vibrations and wear will occur at high speeds. Missing balancing weights on the front axle are particularly noticeable in the steering (flutter).

Balancing weights can be riveted onto steel rims or glued into aluminum rims.



Brakes

For safety reasons, the braking circuits are divided into two independent systems so that if one circuit fails, the other ensures braking force (e.g., front axle/rear axle or diagonal).

Modern cars usually have two brake circuits controlled by a master cylinder and often feature an axle-based or diagonal configuration to maintain braking performance in the event of a failure.

ATTENTION! If both brake circuits have failed, the vehicle **must NOT** be towed with a rope—only with a tow bar or a tow axle!

The Parking Brake Test

Brake Fluid Level

Check to see if the fluid level is between “Max” and “Min” (see Brake Fluid)

Brake lights

Check to see if all three brake lights are on. The easiest way is to have a second person help (but make sure yourself, as the driver, that the lights are on!) or to park next to a bright or glass wall and check via the mirrors.

TIP: If there’s no wall or similar surface available, you can place your cell phone behind the vehicle so that you can use the camera to film the brake lights and check them.

Free Travel

Check how far the brake pedal travels freely before you feel any resistance. This free travel must not exceed 1/3 of the total pedal travel (to the floor panel). If the free travel is 2/3, a brake circuit has failed; if the pedal travels all the way through freely, there is a total failure!

Resistance

The resistance after the free travel should be firm and consistent. If the brake pedal “bounces” or is not completely firm, there is air in the brake system.

Leak Test

Press the brake pedal firmly and hold it down for at least 30 seconds. The brake pedal must not give way! If it does, the brake system has a leak.

Brake booster

Pump the brake pedal several times (until there is no longer any noticeable free play). Keep the brake pedal firmly depressed and start the vehicle. Once the engine has started, the brake pedal should give way.

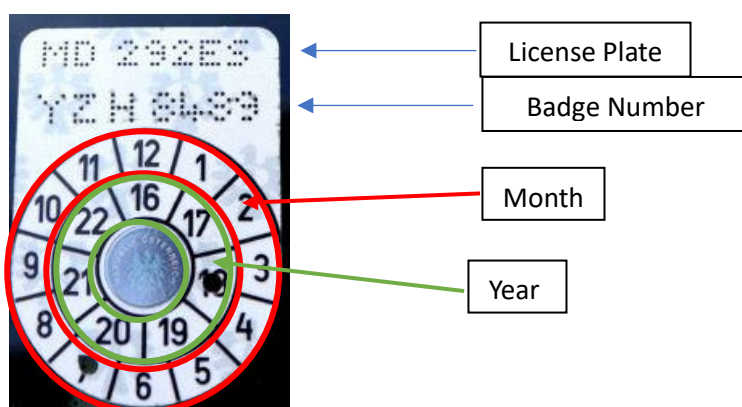
Parking Brake

Apply the parking brake 3–5 notches. For electric parking brakes, hold the parking brake lever in the engaged position. Try to drive off in first gear. The engine must stall, and the vehicle must not move.

In most vehicles, the electric parking brake disengages automatically when the car starts moving, provided you are wearing your seatbelt.

The Evaluation (KFG § 57a)

Annual Inspection pursuant to the Motor Vehicle Act (KFG §57a)



For used cars, the sticker must be renewed every year (inner circle). The date on the sticker depends on the month of initial registration. The earliest renewal date is one month before the date on the sticker (outer circle), and the latest is four months after that date. This means you have a total of 6 months to have the vehicle inspected!

For new cars, the 3-2-1 rule applies (valid for 3 years, then 2 years, and annually thereafter).

The following items are reviewed during the evaluation:

- Brake system
- Steering
- Visibility (windows, mirrors, windshield wipers)
- Lighting and electronic systems
- Axles, wheels, tires, suspension

The Highway Vignette

In Austria, on highways and expressways, a vignette is required for vehicles up to 3.5 metric tons, i.e., passenger cars.

There are adhesive vignettes and digital vignettes valid for 1 day, 10 days, 2 months, or 1 year.

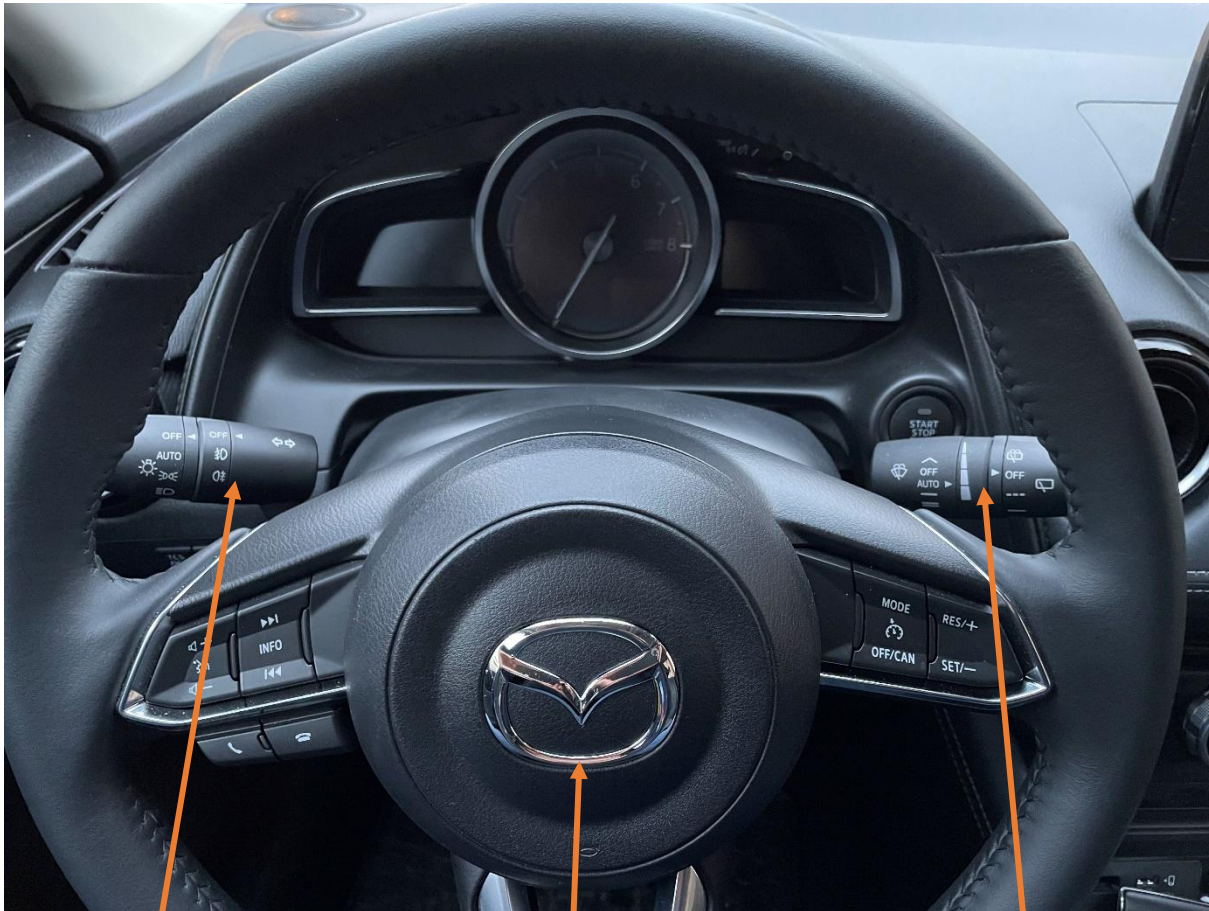
Vignettes are available from ASFINAG, the ÖAMTC, gas stations, or online.

Digital vignettes are valid immediately

.



How to operate



Light Switch
Turn signal
headlight flash

Horn

Windshield wiper
Rear wiper
Windshield Washer System

Left-hand steering column switch

Rotate: Light Switch – OFF – AUTO (Automatic Lights) – Parking Lights – Low Beams

Press: High beams (only when low beams are on)

Pull: High beam flash (jumps back)

Up/Down: Turn signal

Inner Ring (Rotate): Fog lights (only when low beams are on!) – Rear fog light (On/Off – toggles back)

Right-hand steering column switch

Rotate: Rear Wiper – OFF – Intermittent – Continuous – Rear Window Washer (returns to previous setting)

Pull: Windshield Washer System (jumps back)

Top: Swipe once (jumps back)

Below: Front Wipers – OFF – AUTO (Rain Sensor) – Continuous – Very Fast

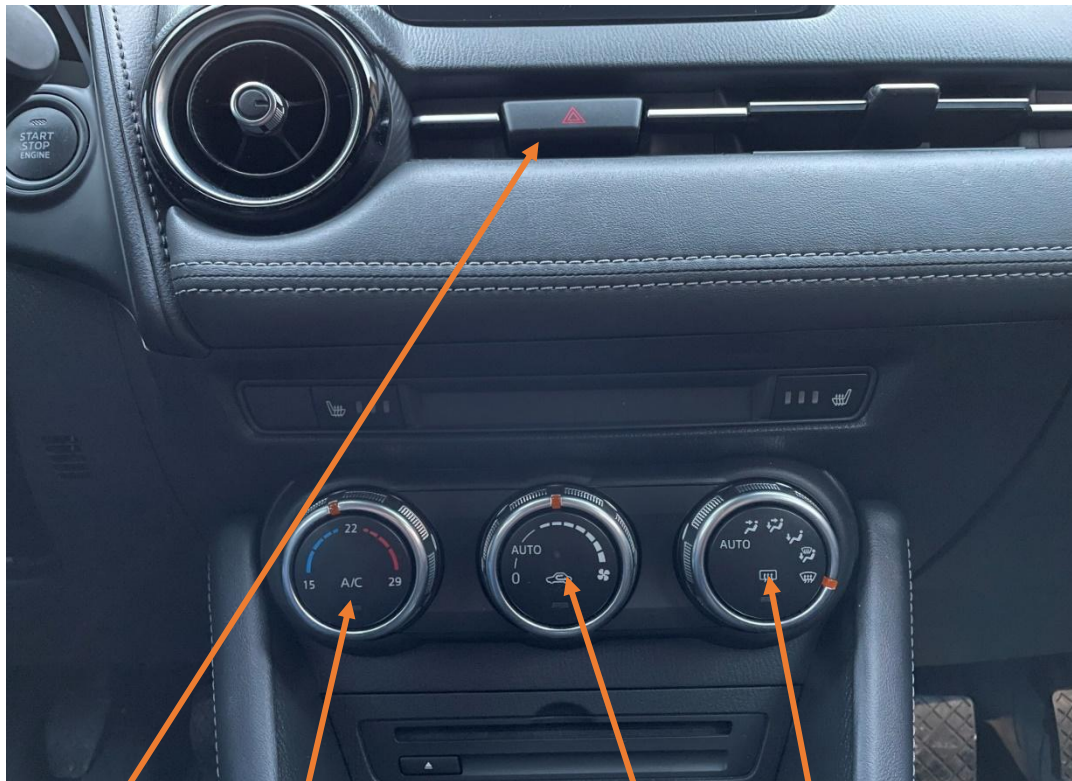
Inner Ring (rotate): Adjust the sensitivity of the rain sensor

Steering Play (Steering Clearance)

This refers to the play in the steering wheel when the front wheels are not turning—in modern cars, it should be barely noticeable or no more than 2–3 fingers wide, since excessive free play indicates wear and makes the steering imprecise. Play is checked with the engine running and the parking brake engaged by gently moving the steering wheel back and forth until the wheels respond.

Shock Absorber

To test shock absorbers, use the simple compression test—press down on the vehicle and see if it rebounds significantly—and a visual inspection (oil stains, uneven tire wear).



Hazard lights

Rotate: Temperature Control
Press: Air Conditioning

Rotate: Fan Control
Press: Recirculated air

Rotate: Air Distribution
Press: Rear Window Heater

Warning Devices

Hazard lights: To warn following traffic (all 6 turn signals flash)

Examples: Traffic jam, breakdown, securing an accident scene, towing, stopping when permitted—but “in the way”

headlight flash: To warn oncoming traffic (same light as high beams)

Examples: Reminder to switch to low beams, warning of danger (obstacle on the road), signaling to establish contact

Horn: If a danger cannot be averted in any other way

Example: A vehicle fails to see me while changing lanes

Ventilation

The windshield fogs up: Turn on the air conditioning, set the fan speed to maximum, and direct the airflow toward the windshield (as shown in the picture—far right)

Rear window fogs up: Turn on the rear window defroster—this heats the heating elements embedded in the rear window (black horizontal stripes in the window)

Recirculated air: Fresh air vents are closed; only air from the passenger compartment is recirculated. Use this mode when outdoor air quality is poor—e.g., in a tunnel.

Indicator Lights

Red Lights: **ATTENTION!** Technical malfunction—stop immediately

Yellow Lights: **Warning!** Malfunction or notice—refer to the user manual

Green Lights: An indicator that something is turned on (e.g., turn signal, headlight, etc.)

Blue Lights: High beams or coolant

Oil Pressure Warning Light



Imminent danger! Disengage the clutch immediately, stop, and turn off the engine! Insufficient lubrication—the engine could seize up.

Charging indicator light



The battery is no longer charging. Cause: V-belt or alternator (see generator)

Brake warning light



Lights up when the parking brake is engaged, the brake fluid is at the minimum level, or at least one brake circuit has failed.

Temperature Indicator Light



The coolant is too hot! Disengage the clutch immediately, pull over, and turn off the engine! The engine could seize. **WARNING!** If steam is escaping, do not open the hood or the reservoir -> Risk of burns

Bord-Display (Mazda)

We have two different versions of the Mazda CX-3. They also have different in-car displays.



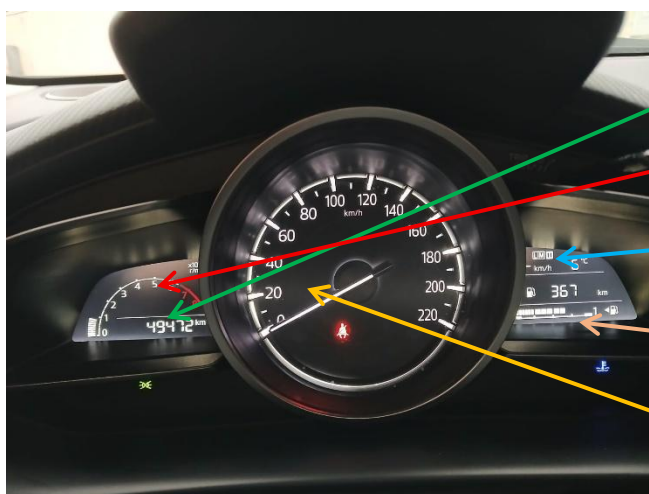
Mileage

Odometer

Average speed

Fuel Gauge
& Range

Speed Display



Mileage

Odometer

Average speed

Fuel Gauge
& Range

Speed Display

Summary

Engine compartment

Checking Fluids: Engine oil, coolant, windshield washer fluid, brake fluid
Do not top off the brake fluid!

Lighting

Check for proper function, dirt, and damage

Front: Parking lights, low beams, high beams, turn signals

Rear: Tail lights, brake lights (3), rear fog lights, reverse lights, turn signals, license plate lights

Tires

Check tire tread (depth and even wear), tire pressure, and damage

Minimum tread depth: 1.6 mm for summer tires and 4 mm for winter tires (M&S)

Winter tire requirement based on conditions: November 1st through April 15th

Parking Brake Test

Leak test: Press the brake pedal for 30 seconds—it must not give way

Brake booster: Pump the brake pedal 4–5 times, press it firmly, start the engine—the brake pedal must give way

Sticker

One month before, four months after—Outer hole: month; inner hole: year

New cars: 3-2-1 rule

Operation

Left steering column switch: Headlight switch, turn signals

Right steering column switch: Front and rear windshield wipers

Warning systems: Hazard lights, high-beam flash, horn

Ventilation

Windshield fogs up: Turn on the air conditioning, set the fan speed to maximum, and direct the airflow to the windshield (all the way to the right in a driving school car)

Rear window fogs up: Turn on the rear window defroster

Recirculation mode: The fresh air vents are closed, and only air from the passenger compartment is recirculated; use this mode when outside air quality is poor—e.g., in a tunnel

FAQ (to work out on your own)

What could happen if the brake fluid is at the minimum level?

How can you tell which tire is installed?

What does the generator do?

How can you tell if the brake system is leaking?

Where do you turn on the hazard lights? Can you give an example?

How do you turn on the high beams?

How do you check tire pressure, and how much pressure is needed?

How do you check the brake booster for proper operation?

What is a balancing weight?

What do you do when the window fogs up?