

2 Technical data

2.1 General

- Product Exalto windshield wiper
- Types 223 BD – 12 Volt and 24 Volt
- Catalogue numbers 12V 2165.30/32/35/40
- Catalogue numbers 24V 2166.30/32/35/40

2.2 Electrical data 12 Volt

- Torque (max.) 23 Nm
- Voltage 12 Volt
- Current 3 A
- Power consumption (max.) 36 W
- Number of revolutions Low 38 rpm, high 59 rpm
- Recommended cable 5 wires, 1½ (16 g) or 2½ mm² (14 g)
..... up to 10 m long
- Recommended fuse 6 A slow blow
- Grounding Not insulated, negative earth

2.3 Electrical data 24 Volt

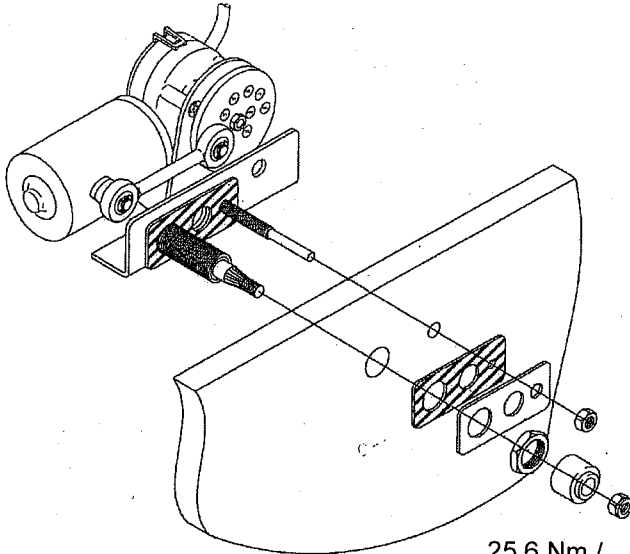
- Torque (max.) 23 Nm
- Voltage 24 Volt
- Current 1.5 A
- Power consumption (max.) 36 W
- Number of revolutions Low 35 rpm, high 56 rpm
- Recommended cable 5 wires, 1½ (16 g) or 2½ mm² (14 g)
..... up to 10 m long
- Recommended fuse 4 A slow blow
- Grounding Not insulated, negative earth

2.4 Mechanical data

- Dimensions l x w x h = 173 x 107 x 100 mm
- Bearing diameters Drive shaft Ø 20 / support shaft Ø 8 mm
- Mounting In bulkhead (20, 35, 55 or 75 mm)
- Bearing Bronze housing, self-lubricating
- Wiperarms Model PU up to 750 mm
- Wiperblades Up to 800 mm
- Wipe arc Wipe arc disc 40°-90° adjustable per 5°
- Weight approx. 2.3 kg

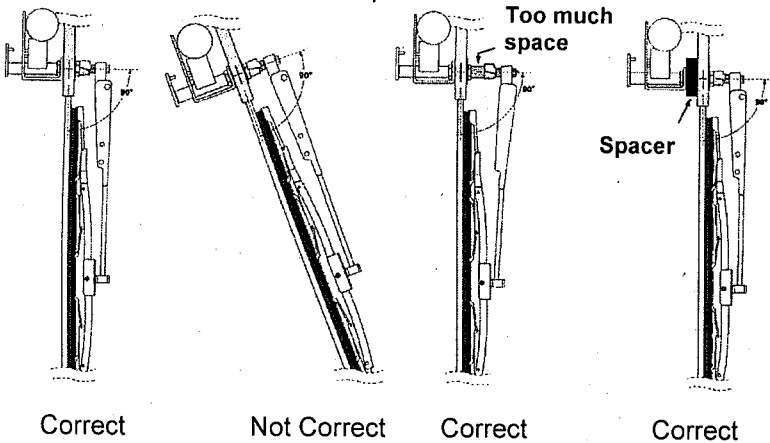
Attention!

When installing the wiper, reserve space for a housing or cover.



25.6 Nm / 16.3 Nm /
tightening torque : 18.88 ft.lbs 12.02 ft.lbs

2. Place the windshield wiper in the pre-drilled holes of the bulkhead (see above figure). A nitrile plate must be placed at both sides of the bulkhead.
3. To ensure that the arm has the right spring pressure, install the wiper arm in such a way that the shaft makes a 90° angle with the window and fuse a spacer from the inside when there is too much space between the bulkhead and the rubber dust cap.



Correct

Not Correct

Correct

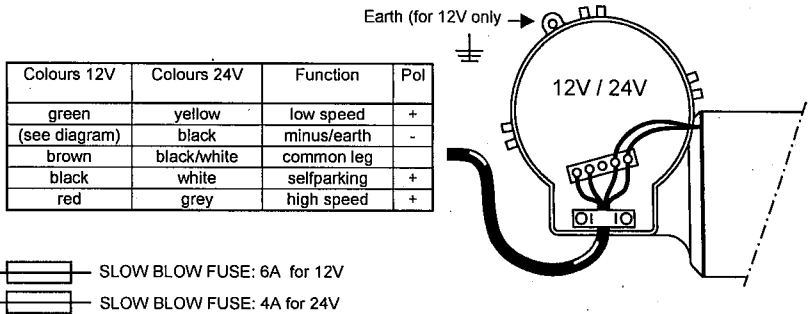
Correct

4. Do not fit the wiper arm before finishing the electrical connections.

3.3. Electrical installation

5. Install a wiper switch in the dashboard.

Wiring diagram 223 BD 12/24 Volt



6. Connect the wiper to the ship's electrical installation; see the schemes above. Use a cable consisting of 5 wires with cross-sections of at least 1½ mm² (16 g) up to a maximum of 10 m. Use larger cross-sections when using longer cables.
7. Place a slow blow fuse of 6 A (12 Volt) or 4 A (24 Volt) in the main cable.
8. Connect a switch to the wiper (refer to that specific manual for installation).

3.4. Final installation

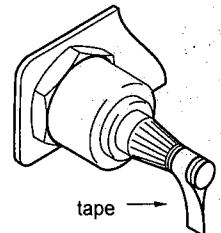
9. Test the motor briefly. Wait until the motor stops after turning off the switch. If the motor is installed correctly and a switch with park feature is used, it will stop in the park position. The standard park position is shown in the figure under point 9.

Hint!

If you have doubts regarding the park position, make a vane with tape to simulate the position of the arms.

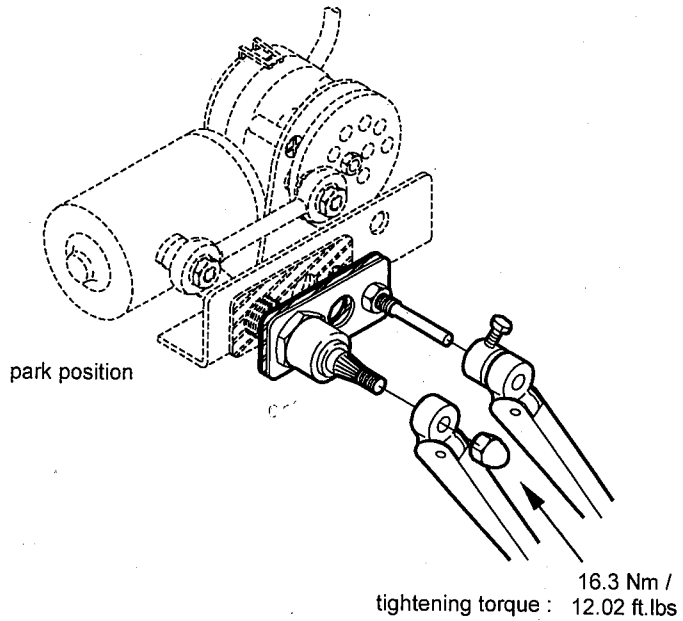
Attention!

The 223 BD is suitable for wiper arms model PU up to 750 mm with wiper blades up to 800 mm.



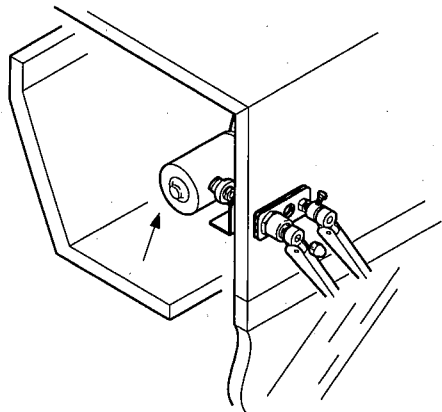
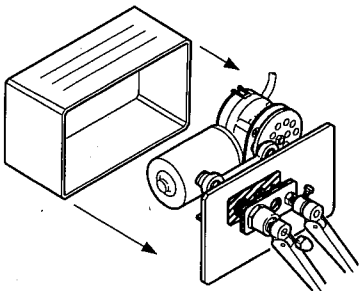
10. Place the wiper arm with the blade on the shafts. Fasten the nuts onto the shafts, but not too tight yet.
11. Test the motor again to check the wiped area.

12. If the wipe arc is correct, adjust the position and the length of the arm if necessary. Tighten the nuts properly now.



13. To complete the installation, the wiper must be enclosed by means of a panel or cover. Provide the wiper motor with sufficient ventilation.

Place a protection cover or panel.
Provide sufficient ventilation.



4 Operation and use

4.1 Preparation for first use

If the wiper has been installed and been adjusted, the system can be prepared for first use. We recommend a thorough inspection of the system to ensure proper operation.

Check:

- ... if there are no leaks where the shafts go through the bulkhead;
- ... if the wipe arc cleans the entire window;
- ... if the park position is correct.

If the wipe arc or the park position is wrong, adjust them again. Follow the procedure in section 5.3.

4.2 Use

All Exalto windshield wipers are provided with the following functions:

- low speed;
- high speed;
- self parking.

Don't use the wiper on a dry window; excessive wear of the blades and the motor may occur in this case.

Because of the big variety of wiper switches, we refer to the user manual of the installed switch to learn about the functions of that specific switch.