Quick Reference Guide # 22

**Motorized Windshield Shade Specs, features and operation:**

Each AMS motor is designed and engineered to meet the highest technical standards in the industry. It goes through stringent testing at AMS' ISO 9001-2015 certified facilities.

All Motors are tested for over 30,000 life cycles.

**Motor Specs and features:**

There are two options of Motors to use on windshield Shade. One is AMS standard Motor 4280P, and the other option is Ignition-Lock Motor 4270P.

The Standard Motor 4280P, features internal mechanical limit switches rather than electronic ones to prevent accidental loss or change of limits due to power surge, noise or power outages. The motor has a built-in thermal /stall protection.

Limit switches can be adjusted individually and allow accurate positioning of a shade. Motors come with Molex connector, for easy replacement.

The Ignition-Lock Motor 4270P, features internal Electronic Limit. To adjust the limits, you need a programmer. Ignition-Lock feature is designed somehow that while driving, if you press Dash switch down, the shade does not go down farther than sun-visor line (called ignition line), but on standard motor you are always capable to move the shade up or down, even while driving.

No maintenance required on the motor.

For more details including removal and replacement of the motor, or wiring diagram, or troubleshooting, refer to AMS website.
Push the tab on the Molex connector to disconnect wires. Never cut the wires.
Motor Specs for 4280P-1230:

- Motor Model: 4280P-1230
- Voltage: 12VDC
- Speed: 30 RPM
- Diameter: 1”
- Torque: 1 N.m.
- Watt: 10W
- Wire gauge: AWG 22

Note: in real practice it takes almost 300mA per motor, while working.

Motor Model No: 4280P-1230 (for 12VDC)

Motor Model No: 4280P-1230+216P External RF module (for RF remote controlled)

Motor Specs for 4270P-1230:

- Motor Model: 4270P-1230
- Voltage: 12VDC
- Speed: 30 RPM
- Diameter: 1”
- Torque: 1 N.m.
- Watt: 10W
- Wire gauge: 22 AWG

Motor features:

Both motors are equipped with following features:

1. Molex connector for easy replacement.

2. Safety spring loaded integrated inside the motor. Our motors are equipped with a safety spring that if for any reason the shaft of motor broken, the shade locks into its position and shade does not drops down. This is crucial feature for windshield shade that prevents the shade to fall while driver is driving.

3. Both motors equipped with metal planetary Gearbox. Note all gears in the gearbox are metal while most of the tubular motors in market having nylon gears in the gearbox.
**Motor Operation:**

1. If No-Voltage to motor, the shade stopped and locks to the current shade position.

2. If +12VDC to motor, then the shade moves up until it reaches to top limit. When it reaches to top limit, if you keep +12VDC, the shade does not move farther than top limit.

3. If -12VDC to motor (the two wires of motor is connected to reversed polarity), then the shade moves down to bottom limit. When it reaches to bottom limit, if you keep -12VDC, the shade does not move farther than bottom limit.

4. Only for Ignition-Lock Motor 4270P, If Ignition Key is ON, if you press Dash switch down, the shade does not go down farther than sun-visor line (called ignition line), but on standard motor you are always capable to move the shade up or down, even while driving.

**Size of Tubular Motor:**

Diameter of motor: 1.0 inch

Length of motor: 12.5 inches goes inside the aluminium Tube.

The Aluminium tube has to match with this motor drive and we supply it with our shades. The Aluminium tube external diameter is 1 3/16 inch.