



Battery Separator

Part Number 17-MBS200 and 17-MBS205

Part No. 17-MBS200 will activate only when the main battery system exceeds 13.2 volts*. **Part No. 17-MBS205** will activate when either the main **or** auxiliary battery system exceeds 13.2 volts*.

The **Wrangler NW Power Products Battery Separator** is designed for use in multi-battery applications as a solenoid priority system to protect the chassis charging system from excessively loading while allowing auxiliary batteries to be charged. The battery separator has two basic operational characteristics:



**Battery Separator
Part No. 17-MBS200**

ASSIST IN ENGINE STARTING

When the starter is activated the **WNW Battery Separator** compares the voltage of both battery banks. If the chassis' battery is lower than the auxiliary battery bank, the **WNW Battery Separator** will engage, allowing the auxiliary battery bank to aid in vehicle starting. The start signal must be at least three volts for the operation to occur.

PROTECT THE CHARGING SYSTEM

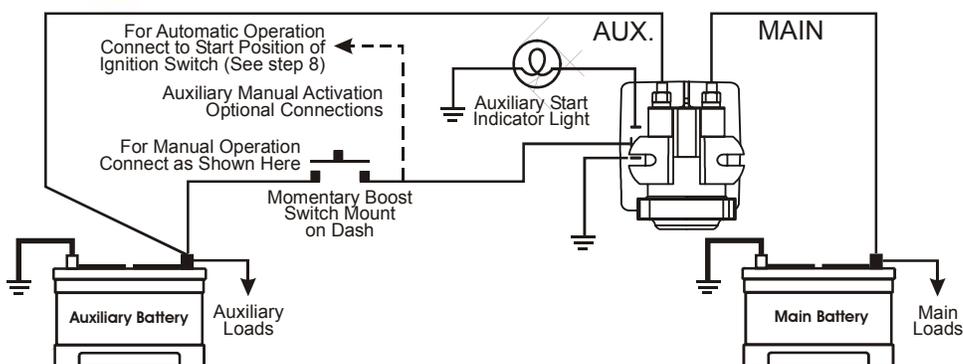
The **WNW Battery Separator** monitors the battery system to determine if the batteries are being charged. When the engine or auxiliary batteries (if 17-MBS205 is used), or the engine batteries (if 17-MBS200 is used) reaches 13.2 volts*, indicating charging is taking place, the battery separator will engage, joining the battery banks. If the drain on the charging system by the auxiliary or main battery bank reduces the system voltage below 12.8 volts*, the **WNW Battery Separator** will disconnect the battery banks from each other, thus protecting the respective battery banks from excessive drain.

A delay function has been incorporated in the control circuit to prevent the **WNW Battery Separator** from reacting to momentary voltage fluctuations and chattering.

The priorities are to assist in engine starting, if required, and to protect the charging system from excessive power drain.

*Typical voltage settings have $\pm 2\%$ tolerance.





Battery Separator Installation Instructions

1. Mount the Battery Separator in a convenient location near the main battery bank. Do not mount in direct engine heat. Drill 7/32" holes for 1/4" x 20 self threading screws and lock washer. For material less than 0.10" thick add a washer and nut (not included).
2. Connect one end of a new wire of the proper size (see wire size chart) to the main battery terminal of the Battery Separator.
3. Connect the opposite end of the wire installed in step #2 to the main battery positive (+) terminal.
4. Connect one end of wire of proper size (see wire size chart) to the auxiliary battery terminal of the Battery Separator.
5. Connect the opposite end of the wire installed in step #4 to the auxiliary battery positive (+) terminal.
6. Make sure the auxiliary battery is properly grounded to the vehicle chassis.
7. **Ground Connection.** Connect a #14 gauge wire between chassis ground and the Battery Separator ground terminal. This may momentarily activate the Battery Separator. This is normal.
8. **Auxiliary Start Connection** (optional). Automatic operation. Connect a #14 gauge wire from the start position of the ignition switch to the Start terminal of the Battery Separator. Make this connection at the ignition switch. This wire should only have voltage when the ignition switch is in the Start position. **Note:** The start signal must be able to produce at least 3 volts* in order to provide automatic boost, see connection diagram above for manual operation option.
9. **Lamp Connections** (optional). Connect a #14 gauge wire from the Lamp terminal of the Battery Separator to one end of an indicator lamp (250mA maximum current draw). Connect the opposite end of the lamp to the chassis ground. This lamp will illuminate when the auxiliary start function is activated.
10. **Checking the Operation:** The Battery Separator should now be operational. Start the vehicle or apply a charge to the main battery. Once the main battery rises to 13.2 volts* the Battery Separator should activate. Turn off the vehicle or remove the charge to the main battery. The Battery Separator should disconnect the auxiliary battery once the voltage on the main battery drops below 12.8 volts*.
11. If a model 17-MBS205 is used, apply a charge to the auxiliary battery. When auxiliary voltage rises above 13.2 volts*, the Battery Separator should activate. Remove charging unit, the Battery Separator should open when auxiliary battery is less than 12.8 volts*.
12. The auxiliary start function should activate the Battery Separator if the main battery voltage is lower than the auxiliary battery. The start terminal must see at least 3 volts to activate. The auxiliary battery must read at least 10 volts*.

Recommended Wire Size Chart

Wire Length	With Auxiliary Start	Without Auxiliary Start
Up to 10 feet	4 gauge	8 gauge
10 to 20 feet	2 gauge	6 gauge

*Typical voltage settings have $\pm 2\%$ tolerance

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